

THE INTELLIGENT  
STAINLESS STEEL  
STOCK RANGE

STAINLESS, HIGHLY CORROSION  
AND HEAT RESISTANT STEELS

# A MATERIAL GRADE MAKES HISTORY.

Even at the end of the 19th century it was discovered that the corrosion behaviour of steel could be optimised considerably by adding nickel and chrome. But only in 1912 by means of the patent for „stainless steel“ the foundation stone for the industrial production of stainless steel was laid by the company Krupp. In the 50's the material started an incomparable triumphal march. Since 1958 the marking „Edelstahl Rostfrei“ has been a registered trademark. The importance of stainless steel is undiminished. The world-wide annual production has more than doubled between 2000 (approx. 18 million tons) and 2014 (approx. 41.7 million tons).



# WE HAVE A LOT AVAILABLE EX STOCK FOR YOU.

When it comes to stainless, highly corrosion and heat resistant steels, STAPPERT is your first choice. You will find round bars, hollow bars, flat bars, key steel, square and hexagonal bars. And tubes, fittings, angles, profiles and sheets are part of our broad range, too.

Since 2011 we have been repositioning under the umbrella of Jacquet Metal Service Group. And you will benefit from this, too: there are more products to choose from, optimised service and a clear focus on long products. Today, STAPPERT is represented in 11 European countries. By means of our 14 regional sites in Germany, we are on hand for you for any question about stainless steel.

High availability and uncompromising quality are STAPPERT's top priority. So today we offer our customers a varied and properly sophisticated range of about 15,000 stainless steel products. And all that ex stock – from the standard product to the tailor-made solution. For our customers this means: full satisfaction of demand and perfect service within a short while.

Our product catalogue gives you an overview about our offer. Do you need special dimensions, special certifications or samples or do you have questions about our products? No problem – the experts from our regional sales offices are looking forward to advise you.

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# **BARS**

# ROUND BARS HOT-FORMED



## Round bars

in random lengths of 4 to 6.2 m (hot-formed)

- \* solution annealed, mill finish or pickled
- \*\* hardened and tempered, peeled or turned, in some cases before heat treatment, partially in non-descaled finish
- \*\*\* annealed, peeled or turned, in some cases before heat treatment, partially in non-descaled finish

## Dimension standards

DIN EN 10060 or DIN 7527

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1/2.2



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (1/9)

	Grade	1.4006	1.4021	1.4028	1.4034	1.4057	1.4104	1.4112	1.4122
	AISI	410	420	420F	420	431	440F	440B	440B
mm	kg/m	**)	**)	**)	***)	**)	**)	***)	**)
6.00	0.22								
8.00	0.39								
10.00	0.62								
12.00	0.89								
13.00	1.04								
14.00	1.21								
15.00	1.39								
16.00	1.58								
18.00	2.00		x						x
20.00	2.47		x	x		x		x	x
22.00	2.98		x	x		x			x
23.00	3.26								
24.00	3.55		x			x			
25.00	3.85		x	x		x		x	x
26.00	4.17		x			x			x



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (2/9)

	Grade	1.4006	1.4021	1.4028	1.4034	1.4057	1.4104	1.4112	1.4122
	AISI	410	420	420F	420	431	440F	440B	440B
mm	kg/m	**)	**)	**)	***)	**)	**)	***)	**)
27.00	4.49		x						
28.00	4.83		x			x		x	x
28.60	5.04								
30.00	5.55	x	x	x	x	x		x	x
31.00	5.92					x			
32.00	6.31		x			x			
33.00	6.71								
34.00	7.13						x		
35.00	7.55	x	x	x	x	x		x	x
36.00	7.99		x			x		x	x
38.00	8.90		x			x			x
40.00	9.86	x	x	x	x	x	x	x	x
41.00	10.36								
42.00	10.88		x			x	x		x
45.00	12.48	x	x	x	x	x	x	x	x



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (3/9)

	Grade	1.4006	1.4021	1.4028	1.4034	1.4057	1.4104	1.4112	1.4122
	AISI	410	420	420F	420	431	440F	440B	440B
mm	kg/m	**)	**)	**)	***)	**)	**)	***)	**)
46.00	13.05		x			x			
47.00						x			
48.00	14.21		x			x			
50.00	15.41	x	x	x	x	x	x	x	x
51.20	16.16					x			
52.00	16.67		x			x			x
55.00	18.65	x	x	x	x	x	x	x	x
56.20	19.47								
60.00	22.20	x	x	x	x	x	x	x	x
61.20	23.09					x			
62.00	23.70								
63.00	24.47					x			
65.00	26.05	x	x	x	x	x	x	x	x
66.20	27.02								
70.00	30.21	x	x	x	x	x	x	x	x



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (4/9)

	<b>Grade</b>	<b>1.4006</b>	<b>1.4021</b>	<b>1.4028</b>	<b>1.4034</b>	<b>1.4057</b>	<b>1.4104</b>	<b>1.4112</b>	<b>1.4122</b>
	<b>AISI</b>	<b>410</b>	<b>420</b>	<b>420F</b>	<b>420</b>	<b>431</b>	<b>440F</b>	<b>440B</b>	<b>440B</b>
<b>mm</b>	<b>kg/m</b>	<b>**)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>
71.40	31.43								
75.00	34.68	x	x	x	x	x	x	x	x
76.40	35.99					x		x	
80.00	39.46	x	x	x	x	x	x	x	x
81.40	40.85								
85.00	44.54	x	x		x	x	x	x	x
86.40	46.02								
90.00	49.94	x	x	x	x	x	x	x	x
91.40	51.51								
95.00	55.64		x		x	x	x	x	x
96.40	57.29								
100.00	61.65	x	x	x	x	x	x	x	x
101.60	63.64								
102.00	64.14								
105.00	67.97		x			x	x	x	x



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (5/9)

	<b>Grade</b>	<b>1.4006</b>	<b>1.4021</b>	<b>1.4028</b>	<b>1.4034</b>	<b>1.4057</b>	<b>1.4104</b>	<b>1.4112</b>	<b>1.4122</b>
	<b>AISI</b>	<b>410</b>	<b>420</b>	<b>420F</b>	<b>420</b>	<b>431</b>	<b>440F</b>	<b>440B</b>	<b>440B</b>
<b>mm</b>	<b>kg/m</b>	<b>**)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>
107.00	70.59								
110.00	74.60	x	x	x	x	x	x	x	x
112.00	77.34								
115.00	81.54		x			x	x	x	x
117.00	84.40								
120.00	88.78	x	x	x	x	x	x	x	x
122.00	91.77								
125.00	96.33		x			x	x	x	x
127.00	99.44								
130.00	104.19	x	x	x	x	x	x	x	x
132.00	107.43								
135.00	112.36		x			x			x
140.00	120.84	x	x	x	x	x	x	x	x
143.00	126.08								
145.00	129.63		x			x			x
150.00	138.72	x	x	x	x	x	x	x	x



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (6/9)

	<b>Grade</b>	1.4006	1.4021	1.4028	1.4034	1.4057	1.4104	1.4112	1.4122
	<b>AISI</b>	410	420	420F	420	431	440F	440B	440B
<b>mm</b>	<b>kg/m</b>	<b>**)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>
153.00	144.33								
155.00	148.12					x			
160.00	157.83	x	x		x	x	x	x	x
163.00	163.81								
165.00	167.85		x			x			
170.00	178.18	x	x	x	x	x	x	x	x
173.00	184.52								
175.00	188.81		x						
180.00	199.76	x	x		x	x	x	x	x
184.00	208.73								
185.00	211.01								
190.00	222.57		x		x	x	x	x	x
193.00	229.65								
194.00	232.04								
195.00	234.44								
200.00	246.62	x	x	x	x	x	x	x	x





# ROUND BARS › HOT-FORMED

1.4006-1.4122 (7/9)

	<b>Grade</b>	<b>1.4006</b>	<b>1.4021</b>	<b>1.4028</b>	<b>1.4034</b>	<b>1.4057</b>	<b>1.4104</b>	<b>1.4112</b>	<b>1.4122</b>
	<b>AISI</b>	<b>410</b>	<b>420</b>	<b>420F</b>	<b>420</b>	<b>431</b>	<b>440F</b>	<b>440B</b>	<b>440B</b>
<b>mm</b>	<b>kg/m</b>	<b>**)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>
210.00	271.89	x	x			x	x	x	x
220.00	298.40	x	x		x	x	x	x	x
224.00	309.35								
225.00	312.12								
230.00	326.15	x	x			x	x	x	x
240.00	355.13	x	x		x	x	x	x	x
250.00	385.34	x	x		x	x	x	x	x
255.00	400.90								
260.00	416.78		x			x	x	x	x
270.00	449.46		x			x	x	x	x
275.00	466.26				x				
280.00	483.37		x			x	x	x	x
285.00	500.78								
290.00	518.51		x					x	x
300.00	554.88		x		x	x	x	x	x
310.00	592.49		x			x			



# ROUND BARS › HOT-FORMED

1.4006-1.4122 (8/9)

	<b>Grade</b>	1.4006	1.4021	1.4028	1.4034	1.4057	1.4104	1.4112	1.4122
	<b>AISI</b>	410	420	420F	420	431	440F	440B	440B
<b>mm</b>	<b>kg/m</b>	<b>**)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>	<b>**)</b>	<b>***)</b>	<b>**)</b>
320.00	631.33		x			x			
325.00	651.22				x	x	x	x	x
330.00	671.41		x						x
340.00	712.72		x						
350.00	755.26		x			x	x	x	x
360.00	799.03		x			x			
370.00	844.04		x						
375.00	867.01					x		x	
380.00	890.28		x						
390.00	937.75								
400.00	986.46		x			x	x	x	x
410.00	1036.40								
420.00	1087.57								
425.00	1113.62		x			x			
430.00	1139.98								
440.00	1193.62								

# ROUND BARS › HOT-FORMED

1.4006-1.4122 (9/9)

	Grade	1.4006	1.4021	1.4028	1.4034	1.4057	1.4104	1.4112	1.4122
	AISI	410	420	420F	420	431	440F	440B	440B
mm	kg/m	**)	**)	**)	***)	**)	**)	***)	**)
450.00	1248.49		x			x			x
460.00	1304.59								
470.00	1361.93								
475.00	1391.06		x						x
480.00	1420.50								
490.00	1480.31								
500.00	1541.34		x			x			x
510.00	1603.61								x
520.00	1667.12								
525.00	1699.33		x						x
530.00	1731.85								
540.00	1797.82								
550.00	1865.03		x						
575.00	2038.43								
600.00	2219.54								
625.00	2408.35								



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (1/9)

	Grade	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	AISI	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
mm	kg/m	*)	*) 1)	*) 1)	*)	*)	*)	*)	*)
6.00	0.22								
8.00	0.39								
10.00	0.62								
12.00	0.89								
13.00	1.04								
14.00	1.21								
15.00	1.39								
16.00	1.58								
18.00	2.00								
20.00	2.47	x	x				x	x	
22.00	2.98		x					x	
23.00	3.26		x						
24.00	3.55		x						
25.00	3.85	x	x		x		x	x	
26.00	4.17							x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (2/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
27.00	4.49								
28.00	4.83		x					x	
28.60	5.04								
30.00	5.55	x	x		x		x	x	
31.00	5.92								
32.00	6.31		x		x			x	x
33.00	6.71								
34.00	7.13		x					x	
35.00	7.55	x	x		x	x	x	x	
36.00	7.99		x		x			x	
38.00	8.90		x					x	
40.00	9.86	x	x	x	x	x	x	x	x
41.00	10.36								
42.00	10.88		x		x			x	
45.00	12.48	x	x	x	x	x	x	x	x

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (3/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
46.00	13.05				x				
47.00	13.62								
48.00	14.21		x					x	
50.00	15.41	x	x	x	x	x	x	x	x
51.20	16.16		x					x	
52.00	16.67							x	
55.00	18.65	x	x	x	x	x	x	x	x
56.20	19.47		x					x	
60.00	22.20	x	x	x	x	x	x	x	x
61.20	23.09		x					x	
62.00	23.70								
63.00	24.47								
65.00	26.05	x	x	x	x		x	x	x
66.20	27.02		x					x	
70.00	30.21	x	x		x	x	x	x	x

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (4/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
71.40	31.43		x					x	
75.00	34.68	x	x		x		x	x	x
76.40	35.99		x					x	
80.00	39.46	x	x	x	x	x	x	x	x
81.40	40.85		x					x	
85.00	44.54	x	x		x		x	x	
86.40	46.02		x					x	
90.00	49.94	x	x	x	x	x	x	x	
91.40	51.51		x					x	
95.00	55.64		x	x	x			x	
96.40	57.29		x					x	
100.00	61.65	x	x	x	x	x	x	x	
101.60	63.64								
102.00	64.14		x	x				x	
105.00	67.97		x		x			x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (5/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
107.00	70.59		x					x	
110.00	74.60	x	x	x	x	x	x	x	
112.00	77.34		x					x	
115.00	81.54		x		x			x	
117.00	84.40		x					x	
120.00	88.78	x	x	x	x	x	x	x	x
122.00	91.77		x					x	
125.00	96.33		x		x			x	
127.00	99.44								
130.00	104.19	x	x		x	x	x	x	
132.00	107.43								
135.00	112.36		x		x			x	
140.00	120.84	x	x		x	x	x	x	
143.00	126.08								
145.00	129.63		x		x			x	
150.00	138.72	x	x		x	x	x	x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability





# ROUND BARS › HOT-FORMED

1.4125-1.4404 (6/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
153.00	144.33								
155.00	148.12		x		x			x	
160.00	157.83	x	x		x	x	x	x	
163.00	163.81								
165.00	167.85		x		x			x	
170.00	178.18		x		x		x	x	
173.00	184.52								
175.00	188.81		x					x	
180.00	199.76	x	x		x		x	x	
184.00	208.73								
185.00	211.01		x						
190.00	222.57		x		x		x	x	
193.00	229.65								
194.00	232.04								
195.00	234.44		x						
200.00	246.62		x		x	x	x	x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (7/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
210.00	271.89		x		x			x	
220.00	298.40		x		x			x	
224.00	309.35								
225.00	312.12						x		
230.00	326.15		x		x			x	
240.00	355.13		x		x			x	
250.00	385.34		x		x		x	x	
255.00	400.90								
260.00	416.78		x		x			x	
270.00	449.46		x		x			x	
275.00	466.26						x		
280.00	483.37		x		x			x	
285.00	500.78		x						
290.00	518.51		x					x	
300.00	554.88		x		x		x	x	
310.00	592.49		x		x			x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (8/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
320.00	631.33		x					x	
325.00	651.22				x		x	x	
330.00	671.41		x					x	
340.00	712.72		x					x	
350.00	755.26		x		x		x	x	
360.00	799.03		x					x	
370.00	844.04		x					x	
375.00	867.01				x		x	x	
380.00	890.28		x					x	
390.00	937.75							x	
400.00	986.46		x		x		x	x	
410.00	1036.40		x					x	
420.00	1087.57							x	
425.00	1113.62		x		x		x	x	
430.00	1139.98							x	
440.00	1193.62							x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4125-1.4404 (9/9)

	<b>Grade</b>	1.4125	1.4301 / 1.4307	1.4301 Ugima	1.4305	1.4306	1.4313	1.4401 / 1.4404	1.4404 Ugima
	<b>AISI</b>	440C	304 / 304L	304 Ugima	303	304L	CA6-NM	316 / 316L	316 L Ugima
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*) 1)</b>	<b>*) 1)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
450.00	1248.49		x		x		x	x	
460.00	1304.59								
470.00	1361.93								
475.00	1391.06		x					x	
480.00	1420.50								
490.00	1480.31								
500.00	1541.34		x		x		x	x	
510.00	1603.61								
520.00	1667.12								
525.00	1699.33		x					x	
530.00	1731.85								
540.00	1797.82								
550.00	1865.03		x					x	
575.00	2038.43		x					x	
600.00	2219.54							x	
625.00	2408.35							x	

\* Finishes: page 12

1) For the most part in modified condition, i.e. S-content  $\geq 0,02\%$  to  $\leq 0,03\%$  to improve machinability



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (1/9)

	Grade	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	AISI	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
mm	kg/m	*)	*)	*)	*)	*)	*)	*)	*)
6.00	0.22								
8.00	0.39								
10.00	0.62								
12.00	0.89								
13.00	1.04								
14.00	1.21								
15.00	1.39								
16.00	1.58	x							x
18.00	2.00								
20.00	2.47	x			x		x		x
22.00	2.98						x		
23.00	3.26								
24.00	3.55								x
25.00	3.85		x		x		x	x	x
26.00	4.17								



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (2/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
27.00	4.49								
28.00	4.83						x		
28.60	5.04						x		
30.00	5.55	x	x	x	x		x	x	x
31.00	5.92					x			
32.00	6.31								
33.00	6.71								
34.00	7.13								
35.00	7.55		x	x	x		x	x	x
36.00	7.99			x		x	x		
38.00	8.90								
40.00	9.86	x	x	x	x		x	x	x
41.00	10.36					x			
42.00	10.88								
45.00	12.48		x	x			x	x	



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (3/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
46.00	13.05					x			
47.00	13.62								
48.00	14.21								
50.00	15.41	x	x	x	x		x	x	x
51.20	16.16					x			
52.00	16.67			x			x		
55.00	18.65		x	x			x		
56.20	19.47					x			
60.00	22.20	x	x	x	x		x	x	x
61.20	23.09					x			
62.00	23.70								
63.00	24.47								
65.00	26.05		x	x			x		
66.20	27.02					x			
70.00	30.21	x	x	x	x		x	x	x



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (4/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
71.40	31.43					x			
75.00	34.68		x	x			x	x	
76.40	35.99					x			
80.00	39.46	x	x	x	x		x	x	x
81.40	40.85					x			
85.00	44.54		x	x			x		
86.40	46.02					x			
90.00	49.94	x	x	x	x		x	x	
91.40	51.51					x			
95.00	55.64		x	x			x		
96.40	57.29					x			
100.00	61.65	x	x	x			x	x	x
101.60	63.64								
102.00	64.14					x			
105.00	67.97		x	x			x		





# ROUND BARS › HOT-FORMED

1.4410-1.4529 (5/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
107.00	70.59					x			
110.00	74.60	x	x	x	x		x	x	
112.00	77.34					x			
115.00	81.54			x			x		
117.00	84.40					x			
120.00	88.78	x	x	x			x	x	x
122.00	91.77					x			
125.00	96.33		x	x			x		
127.00	99.44					x			
130.00	104.19	x	x	x			x	x	
132.00	107.43					x			
135.00	112.36						x		
140.00	120.84	x	x	x	x		x	x	x
143.00	126.08					x	x		
145.00	129.63						x		
150.00	138.72	x	x	x			x	x	x



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (6/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
153.00	144.33					x			
155.00	148.12								
160.00	157.83	x	x	x	x		x	x	
163.00	163.81					x			
165.00	167.85						x		x
170.00	178.18	x	x	x			x	x	
173.00	184.52					x			
175.00	188.81								
180.00	199.76	x	x	x	x		x	x	
184.00	208.73						x		
185.00	211.01								x
190.00	222.57			x			x		
193.00	229.65								
194.00	232.04								
195.00	234.44								
200.00	246.62	x	x	x			x	x	x



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (7/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
210.00	271.89		x	x	x	x	x		
220.00	298.40		x	x			x		
224.00	309.35					x			
225.00	312.12							x	
230.00	326.15		x	x			x		
240.00	355.13		x	x			x		
250.00	385.34		x	x			x	x	
255.00	400.90					x			
260.00	416.78		x	x			x		
270.00	449.46			x			x		
275.00	466.26							x	
280.00	483.37		x	x			x		
285.00	500.78								
290.00	518.51			x			x		
300.00	554.88		x	x			x	x	
310.00	592.49					x	x		



# ROUND BARS › HOT-FORMED

1.4410-1.4529 (8/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
320.00	631.33						x		
325.00	651.22								
330.00	671.41		x				x		
340.00	712.72						x		
350.00	755.26		x	x			x	x	
360.00	799.03						x		
370.00	844.04					x	x		
375.00	867.01								
380.00	890.28						x		
390.00	937.75						x		
400.00	986.46			x			x	x	
410.00	1036.40								
420.00	1087.57								
425.00	1113.62						x		
430.00	1139.98								
440.00	1193.62								

# ROUND BARS › HOT-FORMED

1.4410-1.4529 (9/9)

	<b>Grade</b>	1.4410	1.4418	1.4435	1.4439	1.4460	1.4462	1.4501	1.4529
	<b>AISI</b>	S 32750		316 L	317 LMN	S 32900	S 31803	S 32760	N 08926
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
450.00	1248.49						x	x	
460.00	1304.59								
470.00	1361.93								
475.00	1391.06						x		
480.00	1420.50								
490.00	1480.31								
500.00	1541.34						x	x	
510.00	1603.61								
520.00	1667.12								
525.00	1699.33								
530.00	1731.85								
540.00	1797.82								
550.00	1865.03								
575.00	2038.43								
600.00	2219.54								
625.00	2408.35								



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (1/9)

	Grade	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	AISI	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
mm	kg/m	*)	*)	*)	*)	*)	*)	*)	*)
6.00	0.22	x							
8.00	0.39	x							
10.00	0.62	x							
12.00	0.89	x							
13.00	1.04	x							
14.00	1.21	x							
15.00	1.39	x							
16.00	1.58	x							x
18.00	2.00	x							
20.00	2.47	x	x		x	x	x		x
22.00	2.98	x	x				x		
23.00	3.26								
24.00	3.55	x	x				x		
25.00	3.85	x	x				x		x
26.00	4.17	x					x		



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (2/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
27.00	4.49						x		
28.00	4.83	x	x				x		x
28.60	5.04								
30.00	5.55	x	x	x	x	x	x		x
31.00	5.92								
32.00	6.31		x	x			x		
33.00	6.71						x		
34.00	7.13						x		
35.00	7.55	x	x	x			x		x
36.00	7.99		x				x		
38.00	8.90		x				x		
40.00	9.86	x	x	x	x	x	x		x
41.00	10.36								
42.00	10.88	x	x				x		
45.00	12.48	x	x	x			x	x	



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (3/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
46.00	13.05								
47.00	13.62								
48.00	14.21						x		
50.00	15.41	x	x	x	x	x	x	x	x
51.20	16.16								
52.00	16.67		x				x		
55.00	18.65	x	x	x			x	x	x
56.20	19.47								
60.00	22.20	x	x	x	x	x	x		x
61.20	23.09								
62.00	23.70						x		
63.00	24.47								
65.00	26.05	x	x	x			x	x	
66.20	27.02								
70.00	30.21	x	x	x	x	x	x	x	x





# ROUND BARS › HOT-FORMED

1.4539-1.4713 (4/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
71.40	31.43								
75.00	34.68	x	x	x			x		
76.40	35.99								
80.00	39.46	x	x	x	x	x	x	x	x
81.40	40.85								
85.00	44.54	x	x	x			x		
86.40	46.02								
90.00	49.94	x	x	x	x	x	x		
91.40	51.51								
95.00	55.64	x	x	x			x		
96.40	57.29								
100.00	61.65	x	x	x	x	x	x		x
101.60	63.64								
102.00	64.14								
105.00	67.97	x	x				x		



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (5/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
107.00	70.59								
110.00	74.60	x	x	x	x		x	x	
112.00	77.34								
115.00	81.54	x	x				x		
117.00	84.40								
120.00	88.78	x	x	x	x		x		
122.00	91.77								
125.00	96.33	x	x		x	x	x		
127.00	99.44								
130.00	104.19	x	x	x	x		x		
132.00	107.43								
135.00	112.36		x				x		
140.00	120.84	x	x	x	x		x		
143.00									
145.00	129.63								
150.00	138.72		x				x		



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (6/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
153.00	144.33								
155.00	148.12	x	x	x	x	x	x		
160.00	157.83								
163.00	163.81								
165.00	167.85		x				x		
170.00	178.18	x	x	x			x		
173.00	184.52								
175.00	188.81		x				x		
180.00	199.76	x	x	x			x		
184.00	208.73								
185.00	211.01		x				x		
190.00	222.57		x				x		
193.00	229.65		x						
194.00	232.04								
195.00	234.44								
200.00	246.62	x	x	x			x		



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (7/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
210.00	271.89	x	x				x		
220.00	298.40	x	x				x		
224.00	309.35								
225.00	312.12			x			x		
230.00	326.15		x				x		
240.00	355.13	x	x				x		
250.00	385.34	x	x	x			x		
255.00	400.900								
260.00	416.78		x				x		
270.00	449.46		x				x		
275.00	466.26	x		x					
280.00	483.37		x				x		
285.00	500.78						x		
290.00	518.51		x						
300.00	554.88	x	x	x			x		
310.00	592.49		x				x		



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (8/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
320.00	631.33						x		
325.00	651.22		x				x		
330.00	671.41						x		
340.00	712.72		x				x		
350.00	755.26	x	x				x		
360.00	799.03		x				x		
370.00	844.04						x		
375.00	867.01		x						
380.00	890.28						x		
390.00	937.75						x		
400.00	986.46	x	x				x		
410.00	1036.40						x		
420.00	1087.57						x		
425.00	1113.62		x				x		
430.00	1139.98						x		
440.00	1193.62						x		



# ROUND BARS › HOT-FORMED

1.4539-1.4713 (9/9)

	<b>Grade</b>	1.4539	1.4541	1.4542	1.4547	1.4550	1.4571	1.4571 Ugima	1.4713
	<b>AISI</b>	904 L	321	630	S 31254	347	316 Ti	316 Ti Ugima	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
450.00	1248.49		x				x		
460.00	1304.59						x		
470.00	1361.93						x		
475.00	1391.06		x						
480.00	1420.50						x		
490.00	1480.31						x		
500.00	1541.34		x				x		
510.00	1603.61						x		
520.00	1667.12						x		
525.00	1699.33		x						
530.00	1731.85						x		
540.00	1797.82						x		
550.00	1865.03						x		
575.00	2038.43						x		
600.00	2219.54						x		
625.00	2408.35						x		



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (1/9)

	Grade	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	AISI		446	309	S 30815	314	310 S	B 163	321 H
mm	kg/m	*)	*)	*)	*)	*)	*)	*)	*)
6.00	0.22			x		x	x		
8.00	0.39			x		x	x		
10.00	0.62			x		x	x		
12.00	0.89			x		x	x		
13.00	1.04								
14.00	1.21					x			
15.00	1.39			x		x	x		
16.00	1.58	x	x	x		x			
18.00	2.00			x		x			
20.00	2.47	x	x	x		x	x		x
22.00	2.98			x		x			
23.00	3.26								
24.00	3.55			x		x			x
25.00	3.85		x	x		x		x	x
26.00	4.17			x					



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (2/9)

	<b>Grade</b>	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	<b>AISI</b>		446	309	S 30815	314	310 S	B 163	321 H
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
27.00	4.49								
28.00	4.83		x	x		x			x
28.60	5.04								
30.00	5.55	x	x	x		x	x	x	x
31.00	5.92								
32.00	6.31			x		x			x
33.00	6.71								
34.00	7.13								
35.00	7.55	x	x	x		x			x
36.00	7.99			x		x			x
38.00	8.90								x
40.00	9.86	x	x	x		x	x	x	x
41.00	10.36								
42.00	10.88			x					x
45.00	12.48		x	x		x			x





# ROUND BARS › HOT-FORMED

1.4742-1.4878 (3/9)

	<b>Grade</b>	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	<b>AISI</b>		446	309	S 30815	314	310 S	B 163	321 H
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
46.00	13.05								
47.00	13.62								
48.00	14.21								
50.00	15.41	x	x	x		x	x	x	x
51.20	16.16								
52.00	16.67								x
55.00	18.65		x	x		x			x
56.20	19.47								
60.00	22.20	x	x	x		x	x		x
61.20	23.09								
62.00	23.70								
63.00	24.47								
65.00	26.05			x		x			x
66.20	27.02								
70.00	30.21		x	x		x			x



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (4/9)

	<b>Grade</b>	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	<b>AISI</b>		446	309	S 30815	314	310 S	B 163	321 H
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
71.40	31.43								
75.00	34.68		x	x		x			x
76.40	35.99								
80.00	39.46	x	x	x		x	x		x
81.40	40.85								
85.00	44.54			x		x			x
86.40	46.02								
90.00	49.94		x	x		x			x
91.40	51.51								
95.00	55.64			x		x			x
96.40	57.29								
100.00	61.65		x	x	x	x	x		x
101.60	63.64								
102.00	64.14								
105.00	67.97					x			x



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (5/9)

	<b>Grade</b>	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	<b>AISI</b>		446	309	S 30815	314	310 S	B 163	321 H
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
107.00	70.59								
110.00	74.60			x		x			x
112.00	77.34								
115.00	81.54								x
117.00	84.40								
120.00	88.78		x	x		x			x
122.00	91.77								
125.00	96.33						x		x
127.00	99.44								
130.00	104.19			x		x			x
132.00	107.43								
135.00	112.36								x
140.00	120.84			x		x			x
143.00	126.08								
145.00	129.63								x
150.00	138.72			x	x	x	x		x



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (6/9)

	<b>Grade</b>	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	<b>AISI</b>		446	309	S 30815	314	310 S	B 163	321 H
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
153.00	144.33								
155.00	148.12								x
160.00	157.83			x		x			x
163.00	163.81								
165.00	167.85								x
170.00	178.18			x		x			x
173.00	184.52								
175.00	188.81						x		x
180.00	199.76			x		x			x
184.00	208.73								
185.00	211.01								x
190.00	222.57			x					x
193.00	229.65								
194.00	232.04								
195.00	234.44								
200.00	246.62			x		x	x		x



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (7/9)

	Grade	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	AISI		446	309	S 30815	314	310 S	B 163	321 H
mm	kg/m	*)	*)	*)	*)	*)	*)	*)	*)
210.00	271.89			x		x			x
220.00	298.40								x
224.00	309.35								
225.00	312.12			x		x			
230.00	326.15								x
240.00	355.13								x
250.00	385.34			x		x			x
255.00	400.90								
260.00	416.78								x
270.00	449.46								x
275.00	466.26					x			
280.00	483.37								x
285.00	500.78								
290.00	518.51								x
300.00	554.88					x			x
310.00	592.49								x



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (8/9)

	<b>Grade</b>	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	<b>AISI</b>		446	309	S 30815	314	310 S	B 163	321 H
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
320.00	631.33								
325.00	651.22								x
330.00	671.41								
340.00	712.72								x
350.00	755.26								x
360.00	799.03								x
370.00	844.04								
375.00	867.01								x
380.00	890.28								
390.00	937.75								
400.00	986.46								x
410.00	1036.40								
420.00	1087.57								
425.00	1113.62								x
430.00	1139.98								
440.00	1193.62								



# ROUND BARS › HOT-FORMED

1.4742-1.4878 (9/9)

	Grade	1.4742	1.4762	1.4828	1.4835	1.4841	1.4845	1.4876	1.4878
	AISI		446	309	S 30815	314	310 S	B 163	321 H
mm	kg/m	*)	*)	*)	*)	*)	*)	*)	*)
450.00	1248.49								x
460.00	1304.59								
470.00	1361.93								
475.00	1391.06								x
480.00	1420.50								
490.00	1480.31								
500.00	1541.34								x
510.00	1603.61								
520.00	1667.12								
525.00	1699.33								x
530.00	1731.85								
540.00	1797.82								
550.00	1865.03								
575.00	2038.43								
600.00	2219.54								
625.00	2408.35								

&gt;

# ROUND BARS > HOT-FORMED

1.4923-1.4980 (1/9)

	Grade	1.4923	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
6.00	0.22		
8.00	0.39		
10.00	0.62		
12.00	0.89		
13.00	1.04		
14.00	1.21		
15.00	1.39		
16.00	1.58		
18.00	2.00		
20.00	2.47	x	
22.00	2.98		
23.00	3.26		
24.00	3.55		
25.00	3.85	x	
26.00	4.17		





# ROUND BARS › HOT-FORMED

1.4923-1.4980 (2/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
27.00	4.49		
28.00	4.83		
28.60	5.04		
30.00	5.55	x	
31.00	5.92		
32.00	6.31		
33.00	6.71		
34.00	7.13		
35.00	7.55	x	
36.00	7.99		
38.00	8.90		
40.00	9.86	x	
41.00	10.36		
42.00	10.88		
45.00	12.48	x	



# ROUND BARS › HOT-FORMED

1.4923-1.4980 (3/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
46.00	13.05		
47.00	13.62		
48.00	14.21		
50.00	15.41	x	
51.20	16.16		
52.00	16.67		
55.00	18.65	x	
56.20	19.47		
60.00	22.20	x	
61.20	23.09		
62.00	23.70		
63.00	24.47		
65.00	26.05	x	
66.20	27.02		
70.00	30.21	x	



# ROUND BARS › HOT-FORMED

1.4923-1.4980 (4/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
71.40	31.43		
75.00	34.68	x	
76.40	35.99		
80.00	39.46	x	
81.40	40.85		
85.00	44.54		
86.40	46.02		
90.00	49.94	x	
91.40	51.51		
95.00	55.64		
96.40	57.29		
100.00	61.65	x	
101.60	63.64		x
102.00	64.14		
105.00	67.97		



# ROUND BARS › HOT-FORMED

1.4923-1.4980 (5/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
107.00	70.59		
110.00	74.60		
112.00	77.34		
115.00	81.54		
117.00	84.40		
120.00	88.78	x	
122.00	91.77		
125.00	96.33		
127.00	99.44		
130.00	104.19	x	
132.00	107.43		
135.00	112.36		
140.00	120.84	x	
143.00	126.08		
145.00	129.63		
150.00	138.72	x	



# ROUND BARS › HOT-FORMED

1.4923-1.4980 (6/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
153.00	144.33		
155.00	148.12		
160.00	157.83		
163.00	163.81		
165.00	167.85		
170.00	178.18		
173.00	184.52		
175.00	188.81		
180.00	199.76	x	
184.00	208.73		
185.00	211.01		
190.00	222.57	x	
193.00	229.65		
194.00	232.04		
195.00	234.44		
200.00	246.62	x	

&gt;

# ROUND BARS > HOT-FORMED

1.4923-1.4980 (7/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
210.00	271.89		
220.00	298.40	x	
224.00	309.35		
225.00	312.12		
230.00	326.15	x	
240.00	355.13	x	
250.00	385.34	x	
255.00	400.90		
260.00	416.78		
270.00	449.46		
275.00	466.26		
280.00	483.37		
285.00	500.78		
290.00	518.51		
300.00	554.88	x	
310.00	592.49		



# ROUND BARS › HOT-FORMED

1.4923-1.4980 (8/9)

	<b>Grade</b>	<b>1.4723</b>	<b>1.4980</b>
	<b>AISI</b>		<b>S 66286</b>
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>
320.00	631.33		
325.00	651.22		
330.00	671.41		
340.00	712.72		
350.00	755.26		
360.00	799.03		
370.00	844.04		
375.00	867.01		
380.00	890.28		
390.00	937.75		
400.00	986.46		
410.00	1036.40		
420.00	1087.57		
425.00	1113.62		
430.00	1139.98		
440.00	1193.62		



# ROUND BARS › HOT-FORMED

1.4923-1.4980 (9/9)

	Grade	1.4723	1.4980
	AISI		S 66286
mm	kg/m	*)	*)
450.00	1248.49		
460.00	1304.59		
470.00	1361.93		
475.00	1391.06		
480.00	1420.50		
490.00	1480.31		
500.00	1541.34		
510.00	1603.61		
520.00	1667.12		
525.00	1699.33		
530.00	1731.85		
540.00	1797.82		
550.00	1865.03		
575.00	2038.43		
600.00	2219.54		
625.00	2408.35		



# SQUARE AND HEXAGONAL BARS HOT-FORMED



## Square and hexagonal bars

in random lengths of 4 to 6 m (hot-formed)

\* solution annealed, pickled, partly in non-descaled finish

\*\* hardened and tempered, pickled, partly in non-descaled finish

## Dimension standards

DIN EN 10059 (square bars)

DIN EN 10061 (hexagonal bars)

or DIN 7527, sheet 6

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1/2.2

# SQUARE BARS › HOT-FORMED

1.4057-1.4539 (1/2)

	Grade	1.4057	1.4104	1.4301/1.4307	1.4305	1.4401/1.4404	1.4435	1.4462	1.4539
	AISI	431	430F	304 / 304L	303	316/ 316L	316 L	S 31803	904 L
mm	kg/m	**)	**)	*)	*)	*)	*)	*)	*)
10.00	0.79								
12.00	1.13								
15.00	1.77			x		x			x
20.00	3.14			x		x		x	
25.00	4.91			x		x		x	
30.00	7.07			x		x	x	x	
32.00	8.04			x					
65.00	9.62			x		x			
40.00	12.56	x		x	x	x	x	x	x
45.00	15.90			x		x			
50.00	19.63	x		x	x	x	x	x	x
55.00	23.75			x					
60.00	28.26	x		x	x	x	x		x
65.00	33.17			x					
70.00	38.47			x		x			

# SQUARE BARS › HOT-FORMED

1.4057-1.4539 (2/2)

	Grade	1.4057	1.4104	1.4301/1.4307	1.4305	1.4401/1.4404	1.4435	1.4462	1.4539
	AISI	431	430F	304 / 304L	303	316/ 316L	316 L	S 31803	904 L
mm	kg/m	**)	**)	*)	*)	*)	*)	*)	*)
75.00	44.16			x					
80.00	50.24	x	x	x	x	x	x		
85.00	56.72			x					
90.00	63.59	x		x	x	x			
100.00	78.50	x		x	x	x			
110.00	94.99				x	x			
120.00	113.04			x	x	x			
135.00	143.07								
140.00	153.86			x					
150.00	176.63			x	x	x			
160.00	200.96								
180.00	254.34			x					
200.00	314.00			x					

# SQUARE BARS › HOT-FORMED

1.4541-1.4878 (1/2)

	Grade	1.4541	1.4571	1.4841	1.4878
	AISI	321	316 Ti	314	321 H
mm	kg/m	*)	*)	*)	*)
10.00	0.79			x	
12.00	1.13			x	
15.00	1.77		x	x	
20.00	3.14	x	x	x	
25.00	4.91	x	x	x	x
30.00	7.07	x	x	x	x
32.00	8.04				
35.00	9.62	x	x		x
40.00	12.56	x	x	x	x
45.00	15.90	x	x		x
50.00	19.63	x	x	x	x
55.00	23.75		x		
60.00	28.26	x	x	x	x
65.00	33.17	x	x		x
70.00	38.47	x	x		x

# SQUARE BARS › HOT-FORMED

1.4541-1.4878 (2/2)

	Grade	1.4541	1.4571	1.4841	1.4878
	AISI	321	316 Ti	314	321 H
mm	kg/m	*)	*)	*)	*)
75.00	44.16		x		
80.00	50.24	x	x	x	x
85.00	56.72		x		
90.00	63.59	x	x		x
100.00	78.50	x	x		x
110.00	94.99		x		
120.00	113.04	x	x		x
135.00	143.07	x			x
140.00	153.86		x		
150.00	176.63	x	x		x
160.00	200.96		x		
180.00	254.34		x		
200.00	314.00		x		



# FLAT BARS HOT-FORMED



## Flat bars

in random lengths of 4 to 6.2 m (hot-formed or slit from sheet or strip)

- \* solution annealed, pickled (slit flat bars before cutting), some in non-descaled finish
- \*\* hardened and tempered, pickled, partly in non-descaled finish
- \*\*\* annealed, in non-descaled finish

## Dimension standards

DIN EN 10058 for hot-formed products

For slit products and material thicknesses <5 mm, the above mentioned standard goes only for width and thickness tolerances

## Test certificates

DIN EN 10204 3.1 or works' test certificate 2.1/2.2

&gt;

# FLAT BARS > HOT-FORMED

1.4057 - 1.4828 (1/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
10 x 5	0.39		x				x		
10 x 6	0.47		x						
12 x 3	0.28		x						
12 x 4	0.38		x						
12 x 5	0.47		x						
12 x 6	0.57		x				x		
12 x 8	0.75						x		
12 x 10	0.94		x						
15 x 3	0.35		x						
15 x 4	0.47		x						
15 x 5	0.59		x				x		
15 x 6	0.71		x				x		
15 x 8	0.94		x				x		
15 x 10	1.18		x				x		
20 x 3	0.47		x				x		





# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (2/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
20 x 4	0.63		x				x		
20 x 5	0.79		x	x		x	x		
20 x 6	0.94		x	x		x	x		
20 x 8	1.26		x	x		x	x		x
20 x 10	1.57		x	x		x	x		x
20 x 12	1.88		x	x		x	x		
20 x 15	2.36		x	x		x	x		
25 x 3	0.59		x						
25 x 4	0.79		x				x		
25 x 5	0.98		x	x		x	x		
25 x 6	1.18		x	x		x	x		
25 x 8	1.57		x	x		x	x		
25 x 10	1.96		x	x		x	x		
25 x 12	2.36		x	x		x	x		
25 x 15	2.94		x	x		x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (3/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
25 x 20	3.93		x	x		x	x		
30 x 3	0.71		x						
30 x 4	0.94		x				x		
30 x 5	1.18		x	x	x	x	x		x
30 x 6	1.41		x	x	x	x	x		x
30 x 8	1.88		x	x	x	x	x		x
30 x 10	2.36		x	x	x	x	x		x
30 x 12	2.83		x	x	x	x	x		
30 x 15	3.53		x	x	x	x	x		x
30 x 20	4.71	x	x	x	x	x	x		
30 x 25	5.89		x	x	x	x	x		
35 x 3	0.82		x						
35 x 4	1.10		x						
35 x 5	1.37		x	x			x		
35 x 6	1.65		x	x		x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (4/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
35 x 8	2.20		x	x		x	x		
35 x 10	2.75		x	x		x	x		
35 x 12	3.30		x	x			x		
35 x 15	4.12		x	x		x	x		
35 x 20	5.50		x	x	x	x	x		
35 x 25	6.87		x	x	x	x	x		
35 x 30	8.24		x				x		
40 x 4	1.26		x	x			x		
40 x 5	1.57		x	x		x	x		x
40 x 6	1.88		x	x	x	x	x		x
40 x 8	2.51		x	x	x	x	x		x
40 x 10	3.14		x	x	x	x	x	x	x
40 x 12	3.77		x	x	x	x	x		
40 x 15	4.71		x	x	x	x	x		
40 x 20	6.28	x	x	x	x	x	x		x



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (5/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
40 x 25	7.85		x	x	x	x	x		
40 x 30	9.42	x	x	x	x	x	x		
40 x 35	10.99		x				x		
45 x 5	1.77		x						
45 x 6	2.12		x	x			x		
45 x 8	2.83		x			x	x		
45 x 10	3.53		x	x			x		
45 x 12	4.24		x				x		
45 x 15	5.30		x				x		
45 x 20	7.07		x			x	x		
45 x 25	8.83		x				x		
45 x 30	10.60		x				x		
45 x 35	12.36						x		
45 x 40	14.13						x		
50 x 4	1.57		x						



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (6/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
50 x 5	1.96		x	x	x	x	x		x
50 x 6	2.36		x	x	x	x	x		x
50 x 8	3.14	x	x	x	x	x	x		x
50 x 10	3.93	x	x	x	x	x	x		x
50 x 12	4.71		x	x	x	x	x		x
50 x 15	5.89		x	x	x	x	x		x
50 x 20	7.85	x	x	x	x	x	x		x
50 x 25	9.81		x	x	x	x	x		
50 x 30	11.78	x	x	x	x	x	x		
50 x 35	13.74		x	x		x	x		
50 x 35	15.70		x	x		x	x		
50 x 40	17.66						x		
55 x 8	3.45		x						
55 x 10	4.32		x				x		
55 x 15	6.48		x			x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (7/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
55 x 20	8.64		x				x		
55 x 25	10.79		x				x		
55 x 30	12.95		x				x		
60 x 4	1.88		x						
60 x 5	2.36		x	x		x	x		
60 x 6	2.83		x	x		x	x		x
60 x 8	3.77		x	x	x	x	x		x
60 x 10	4.71		x	x	x	x	x		x
60 x 12	5.65		x	x		x	x		x
60 x 15	7.07		x	x	x	x	x		x
60 x 20	9.42	x	x	x	x	x	x		x
60 x 25	11.78		x	x	x	x	x		
60 x 30	14.13		x	x	x	x	x		
60 x 35	16.49		x	x		x	x		
60 x 40	18.84		x	x	x	x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (8/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
60 x 45	21.20		x						
60 x 50	23.55		x	x		x	x		
65 x 8	4.08		x						
65 x 10	5.10		x						
65 x 12	6.12		x				x		
65 x 15	7.65		x			x	x		
65 x 20	10.21		x				x		
65 x 25	12.76		x				x		
65 x 30	15.31		x						
65 x 35	17.86		x				x		
65 x 40	20.41		x						
70 x 5	2.75		x				x		
70 x 6	3.30		x				x		
70 x 8	4.40		x	x		x	x		
70 x 10	5.50		x	x		x	x		x



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (9/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
70 x 12	6.59		x	x		x	x		
70 x 15	8.24		x	x		x	x		
70 x 20	10.99		x	x		x	x		
70 x 25	13.74		x	x		x	x		
70 x 30	16.49		x	x	x	x	x		
70 x 35	19.23		x	x		x	x		
70 x 40	21.98		x	x	x	x	x		
70 x 45	24.73		x	x					
70 x 50	27.48		x	x		x	x		
70 x 60	32.97		x	x			x		
75 x 8	4.71			x					
75 x 10	5.89		x				x		
75 x 12	7.07		x				x		
75 x 15	8.83		x			x	x		
75 x 20	11.78		x				x		





# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (10/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
75 x 25	14.72		x			x			
75 x 30	17.66		x						
75 x 35	20.61		x						
75 x 50	29.44		x						
80 x 5	3.14		x						
80 x 6	3.77		x	x			x		
80 x 8	5.02		x	x		x	x		x
80 x 10	6.28		x	x	x	x	x		x
80 x 12	7.54		x	x		x	x		
80 x 15	9.42		x	x	x	x	x		x
80 x 20	12.56	x	x	x	x	x	x		x
80 x 25	15.70		x	x	x	x	x		
80 x 30	18.84		x	x	x	x	x		
80 x 35	21.98		x	x		x	x		
80 x 40	25.12		x	x	x	x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (11/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
80 x 45	28.26		x				x		
80 x 50	31.40		x	x	x	x	x		
80 x 60	37.68		x	x			x		
90 x 6	4.24		x						
90 x 8	5.65		x						
90 x 10	7.07		x	x		x	x		
90 x 12	8.48		x			x	x		
90 x 15	10.60		x	x		x	x		
90 x 20	14.13		x	x		x	x		
90 x 25	17.66		x	x		x	x		
90 x 30	21.20		x	x			x		
90 x 35	24.73		x	x			x		
90 x 40	28.26		x	x		x	x		
90 x 45	31.79		x				x		
90 x 50	35.33		x	x		x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (12/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
90 x 60	42.39		x	x		x	x		
90 x 70	49.46					x			
100 x 5	3.93		x						
100 x 6	4.71		x				x		
100 x 8	6.28		x	x	x	x	x		x
100 x 10	7.85		x	x	x	x	x		x
100 x 12	9.42		x	x	x	x	x		
100 x 15	11.78		x	x	x	x	x		x
100 x 20	15.70	x	x	x	x	x	x		x
100 x 25	19.63		x	x			x		
100 x 30	23.55	x	x	x		x	x		
100 x 35	27.48		x	x			x		
100 x 40	31.40		x	x		x	x		
100 x 45	35.33		x				x		
100 x 50	39.25		x	x		x	x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (13/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
100 x 60	47.10		x	x		x	x		
100 x 70	54.95		x			x	x		
100 x 80	62.80		x						
110 x 8	6.91		x				x		
110 x 10	8.64		x				x		
110 x 12	10.36		x				x		
110 x 15	12.95		x				x		
110 x 20	17.27		x				x		
110 x 25	21.59		x				x		
110 x 30	25.91		x				x		
110 x 40	34.54		x						
110 x 50	43.18		x						
110 x 60	51.81		x						
120 x 6	5.65		x						
120 x 8	7.54		x	x			x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (14/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
120 x 10	9.42		x	x		x	x		
120 x 12	11.30		x	x		x	x		
120 x 15	14.13		x	x			x		
120 x 20	18.84		x	x		x	x		
120 x 25	23.55		x	x		x	x		
120 x 30	28.26		x	x		x	x		
120 x 40	37.68		x	x		x	x		
120 x 50	47.10		x	x		x	x		
120 x 60	56.52		x	x		x	x		
120 x 70	65.94		x			x	x		
130 x 8	8.16		x						
130 x 10	10.21		x	x			x		
130 x 12	12.25		x				x		
130 x 15	15.31		x	x			x		
130 x 20	20.41		x	x			x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (15/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
130 x 25	25.51		x	x		x	x		
130 x 30	30.62		x	x			x		
130 x 40	40.82		x	x		x	x		
130 x 50	51.03		x				x		
130 x 60	61.23								
130 x 70	71.44								
140 x 10	10.99		x	x			x		
140 x 12	13.19		x	x			x		
140 x 15	16.49		x	x			x		
140 x 20	21.98		x	x			x		
140 x 25	27.48		x				x		
140 x 30	32.97		x	x			x		
140 x 40	43.96		x	x					
140 x 50	54.95		x				x		
140 x 60	65.94						x		



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (16/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
150 x 8	9.42		x						
150 x 10	11.78		x	x		x	x		
150 x 12	14.13		x	x		x	x		
150 x 15	17.66		x	x			x		
150 x 20	23.55		x	x		x	x		
150 x 25	29.44		x	x		x	x		
150 x 30	35.33		x	x			x		
150 x 40	47.10		x	x			x		
150 x 50	58.88		x	x			x		
150 x 60	70.65		x						
160 x 15	18.84		x	x					
160 x 20	25.12		x	x					
160 x 25	31.40		x	x					
160 x 30	37.68		x	x					
160 x 40	50.24		x	x					



# FLAT BARS › HOT-FORMED

1.4057 - 1.4828 (17/17)

	Grade	1.4057	1.4301/1.4307	1.4401/1.4404	1.4462	1.4541	1.4571	1.4713	1.4828
	AISI	431	304 / 304 L	316 / 316 L	S 31803	321	316 Ti		308
mm	kg/m	**)	*)	*)	*)	*)	*)	***)	*)
180 x 10	14.13		x						
180 x 12	16.96		x	x					
180 x 15	21.20		x	x					
180 x 20	28.26		x	x					
180 x 25	35.33		x	x					
180 x 30	42.39		x	x					
180 x 40	56.52		x	x					
180 x 60	84.78		x						
200 x 10	15.70		x						
200 x 15	23.55		x	x					
200 x 20	31.40		x	x					
200 x 30	47.10		x	x					
200 x 40	62.80		x	x					



&gt;

# FLAT BARS > HOT-FORMED

1.4841 - 1.4878 (1/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
10 x 5	0.39		
10 x 6	0.47		
12 x 3	0.28		
12 x 4	0.38		
12 x 5	0.47		
12 x 6	0.57		
12 x 8	0.75		
12 x 10	0.94		
15 x 3	0.35		
15 x 4	0.47		
15 x 5	0.59	x	
15 x 6	0.71		
15 x 8	0.94		
15 x 10	1.18		
20 x 3	0.47		



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (2/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
20 x 4	0.63	x	
20 x 5	0.79		x
20 x 6	0.94	x	x
20 x 8	1.26	x	x
20 x 10	1.57	x	x
20 x 12	1.88		x
20 x 15	2.36		x
25 x 3	0.59		
25 x 4	0.79		
25 x 5	0.98	x	x
25 x 6	1.18		x
25 x 8	1.57	x	x
25 x 10	1.96	x	x
25 x 12	2.36		x
25 x 15	2.94		x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (3/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
25 x 20	3.93		x
30 x 3	0.71		
30 x 4	0.94		
30 x 5	1.18	x	x
30 x 6	1.41	x	x
30 x 8	1.88	x	x
30 x 10	2.36	x	x
30 x 12	2.83	x	x
30 x 15	3.53	x	x
30 x 20	4.71	x	x
30 x 25	5.89		x
35 x 3	0.82		
35 x 4	1.10		
35 x 5	1.37	x	
35 x 6	1.65		x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (4/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
35 x 8	2.20		x
35 x 10	2.75		x
35 x 12	3.30		
35 x 15	4.12		x
35 x 20	5.50		x
35 x 25	6.87		x
35 x 30	8.24		
40 x 4	1.26		
40 x 5	1.57	x	x
40 x 6	1.88	x	x
40 x 8	2.51	x	x
40 x 10	3.14	x	x
40 x 12	3.77	x	x
40 x 15	4.71	x	x
40 x 20	6.28	x	x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (5/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
40 x 25	7.85		x
40 x 30	9.42		x
40 x 35	10.99		
45 x 5	1.77		
45 x 6	2.12		
45 x 8	2.83		x
45 x 10	3.53		
45 x 12	4.24		
45 x 15	5.30		
45 x 20	7.07		x
45 x 25	8.83		
45 x 30	10.60		
45 x 35	12.36		
45 x 40	14.13		
50 x 4	1.57		



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (6/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
50 x 5	1.96	x	x
50 x 6	2.36	x	x
50 x 8	3.14	x	x
50 x 10	3.93	x	x
50 x 12	4.71	x	x
50 x 15	5.89	x	x
50 x 20	7.85	x	x
50 x 25	9.81	x	x
50 x 30	11.78	x	x
50 x 35	13.74		x
50 x 35	15.70		x
50 x 40	17.66		
55 x 8	3.45		
55 x 10	4.32		
55 x 15	6.48		x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (7/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
55 x 20	8.64		
55 x 25	10.79		
55 x 30	12.95		
60 x 4	1.88		
60 x 5	2.36	x	x
60 x 6	2.83	x	x
60 x 8	3.77	x	x
60 x 10	4.71	x	x
60 x 12	5.65	x	x
60 x 15	7.07	x	x
60 x 20	9.42	x	x
60 x 25	11.78		x
60 x 30	14.13		x
60 x 35	16.49		x
60 x 40	18.84	x	x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (8/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
60 x 45	21.20		
60 x 50	23.55		x
65 x 8	4.08		
65 x 10	5.10		
65 x 12	6.12		
65 x 15	7.65		x
65 x 20	10.21		
65 x 25	12.76		
65 x 30	15.31		
65 x 35	17.86		
65 x 40	20.41		
70 x 5	2.75		
70 x 6	3.30		
70 x 8	4.40		x
70 x 10	5.50	x	x





# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (9/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
70 x 12	6.59		x
70 x 15	8.24		x
70 x 20	10.99		x
70 x 25	13.74		x
70 x 30	16.49		x
70 x 35	19.23		x
70 x 40	21.98		x
70 x 45	24.73		
70 x 50	27.48		x
70 x 60	32.97		
75 x 8	4.71		
75 x 10	5.89		
75 x 12	7.07		
75 x 15	8.83		x
75 x 20	11.78		



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (10/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
75 x 25	14.72		x
75 x 30	17.66		
75 x 35	20.61		
75 x 50	29.44		
80 x 5	3.14		
80 x 6	3.77	x	
80 x 8	5.02	x	x
80 x 10	6.28	x	x
80 x 12	7.54	x	x
80 x 15	9.42	x	x
80 x 20	12.56	x	x
80 x 25	15.70		x
80 x 30	18.84		x
80 x 35	21.98		x
80 x 40	25.12		x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (11/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
80 x 45	28.26		
80 x 50	31.40		x
80 x 60	37.68		
90 x 6	4.24		
90 x 8	5.65		
90 x 10	7.07		x
90 x 12	8.48		x
90 x 15	10.60		x
90 x 20	14.13		x
90 x 25	17.66		x
90 x 30	21.20		
90 x 35	24.73		
90 x 40	28.26		x
90 x 45	31.79		
90 x 50	35.33		x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (12/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
90 x 60	42.39		x
90 x 70	49.46		x
100 x 5	3.93		
100 x 6	4.71		
100 x 8	6.28	x	x
100 x 10	7.85	x	x
100 x 12	9.42	x	x
100 x 15	11.78	x	x
100 x 20	15.70	x	x
100 x 25	19.63		
100 x 30	23.55		x
100 x 35	27.48		
100 x 40	31.40		x
100 x 45	35.33		
100 x 50	39.25		x



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (13/17)

mm	Grade	1.4841	1.4878
	AISI	314	321 H
	kg/m	**)	*)
100 x 60	47.10		x
100 x 70	54.95		x
100 x 80	62.80		
110 x 8	6.91		
110 x 10	8.64		
110 x 12	10.36		
110 x 15	12.95		
110 x 20	17.27		
110 x 25	21.59		
110 x 30	25.91		
110 x 40	34.54		
110 x 50	43.18		
110 x 60	51.81		
120 x 6	5.65		
120 x 8	7.54		



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (14/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
120 x 10	9.42		x
120 x 12	11.30		x
120 x 15	14.13		
120 x 20	18.84		x
120 x 25	23.55		x
120 x 30	28.26		x
120 x 40	37.68		x
120 x 50	47.10		x
120 x 60	56.52		x
120 x 70	65.94		x
130 x 8	8.16		
130 x 10	10.21		
130 x 12	12.25		
130 x 15	15.31		
130 x 20	20.41		



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (15/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
130 x 25	25.51		x
130 x 30	30.62		
130 x 40	40.82		x
130 x 50	51.03		
130 x 60	61.23		
130 x 70	71.44		
140 x 10	10.99		
140 x 12	13.19		
140 x 15	16.49		
140 x 20	21.98		
140 x 25	27.48		
140 x 30	32.97		
140 x 40	43.96		
140 x 50	54.95		
140 x 60	65.94		



# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (16/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
150 x 8	9.42		
150 x 10	11.78		x
150 x 12	14.13		x
150 x 15	17.66		
150 x 20	23.55		x
150 x 25	29.44		x
150 x 30	35.33		
150 x 40	47.10		
150 x 50	58.88		
150 x 60	70.65		
160 x 15	18.84		
160 x 20	25.12		
160 x 25	31.40		
160 x 30	37.68		
160 x 40	50.24		





# FLAT BARS › HOT-FORMED

1.4841 - 1.4878 (17/17)

	Grade	1.4841	1.4878
	AISI	314	321 H
mm	kg/m	**)	*)
180 x 10	14.13		
180 x 12	16.96		
180 x 15	21.20		
180 x 20	28.26		
180 x 25	35.33		
180 x 30	42.39		
180 x 40	56.52		
180 x 60	84.78		
200 x 10	15.70		
200 x 15	23.55		
200 x 20	31.40		
200 x 30	47.10		
200 x 40	62.80		

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# FLAT BARS > SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (1/11)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
10 x 3	0.24	x			x
10 x 4	0.31	x			
10 x 5	0.39	x			
12 x 3	0.28	x			x
12 x 4	0.38	x			
15 x 3	0.35	x			x
15 x 4	0.47	x			x
15 x 5	0.59	x		x	x
15 x 6	0.71	x			
20 x 2	0.31	x			
20 x 3	0.47	x	x	x	x
20 x 4	0.63	x	x	x	x
20 x 5	0.79	x	x	x	x
20 x 6	0.94	x	x		x
20 x 8	1.26	x	x		x



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (2/11)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
20 x 10	1.57	x	x		x
25 x 2	0.39	x			
25 x 3	0.59	x	x	x	x
25 x 4	0.79	x	x	x	x
25 x 5	0.98	x	x	x	x
25 x 6	1.18	x	x	x	x
25 x 8	1.57	x	x	x	x
25 x 10	1.96	x	x		x
30 x 2	0.47	x			
30 x 3	0.71	x	x	x	x
30 x 4	0.94	x	x	x	x
30 x 5	1.18	x	x	x	x
30 x 6	1.41	x	x	x	x
30 x 8	1.88	x	x	x	x
30 x 10	2.36	x	x	x	x



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (3/11)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
35 x 3	0.82	x			x
35 x 4	1.10	x			x
35 x 5	1.37	x	x	x	x
35 x 6	1.65	x		x	x
35 x 8	2.20	x			x
35 x 10	2.75	x			x
40 x 2	0.63	x			
40 x 3	0.94	x	x	x	x
40 x 4	1.26	x	x	x	x
40 x 5	1.57	x	x	x	x
40 x 6	1.88	x	x	x	x
40 x 8	2.51	x	x	x	x
40 x 10	3.14	x	x	x	x
40 x 12	3.77	x	x	x	x
45 x 3	1.06	x			



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (4/11)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
45 x 4	1.41	x			x
45 x 5	1.77	x	x		x
45 x 6	2.12	x			
45 x 8	2.83	x			x
45 x 10	3.53	x			x
45 x 12	4.24	x			
50 x 3	1.18	x	x		x
50 x 4	1.57	x	x	x	x
50 x 5	1.96	x	x	x	x
50 x 6	2.36	x	x	x	x
50 x 8	3.14	x	x	x	x
50 x 10	3.93	x	x	x	x
50 x 12	4.71	x	x	x	x
55 x 5	2.16	x			
55 x 6	2.59	x			



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (5/11)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
55 x 8	3.45	x			
55 x 10	4.32	x			
60 x 3	1.41	x	x		x
60 x 4	1.88	x	x	x	x
60 x 5	2.36	x	x	x	x
60 x 6	2.83	x	x	x	x
60 x 8	3.77	x	x	x	x
60 x 10	4.71	x	x	x	x
60 x 12	5.65	x	x	x	x
65 x 5	2.55	x			
65 x 8	4.08	x			
65 x 12	6.12	x			
70 x 3	1.65	x			
70 x 4	2.20	x			x
70 x 5	2.75	x	x	x	x

# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (6/11)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
70 x 6	3.30	x	x	x	x
70 x 8	4.40	x	x	x	x
70 x 10	5.50	x	x	x	x
70 x 12	6.59	x			x
75 x 5	2.94	x			
75 x 6	3.53	x			
75 x 8	4.71	x			x
75 x 10	5.89	x			
80 x 3	1.88	x			x
80 x 4	2.51	x			x
80 x 5	3.14	x	x	x	x
80 x 6	3.77	x	x	x	x
80 x 8	5.02	x	x	x	x
80 x 10	6.28	x	x	x	x
80 x 12	7.54	x	x	x	x



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (7/11)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
90 x 4	2.83	x			
90 x 5	3.53	x			x
90 x 6	4.24	x			x
90 x 8	5.65	x			x
90 x 10	7.07	x			x
90 x 12	8.48	x			x
100 x 3	2.36	x			x
100 x 4	3.14	x			x
100 x 5	3.93	x	x	x	x
100 x 6	4.71	x	x	x	x
100 x 8	6.28	x	x	x	x
100 x 10	7.85	x	x	x	x
100 x 12	9.42	x	x	x	x
110 x 5	4.32	x			
110 x 6	5.18	x			x





# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (8/11)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
110 x 8	6.91	x			x
110 x 10	8.64	x			x
110 x 12	10.36	x			x
120 x 4	3.77	x			
120 x 5	4.71	x			x
120 x 6	5.65	x	x		x
120 x 8	7.54	x	x		x
120 x 10	9.42	x	x		x
120 x 12	11.30	x			x
130 x 6	6.12	x			x
130 x 8	8.16	x			x
130 x 10	10.21	x			x
130 x 12	12.25	x			x
140 x 5	5.50	x			
140 x 6	6.59	x			x



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (9/11)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
140 x 8	8.79	x			x
140 x 10	10.99	x			x
140 x 12	13.19	x			x
150 x 5	5.89	x			x
150 x 6	7.07	x			x
150 x 8	9.42	x			x
150 x 10	11.78	x	x		x
150 x 12	14.13	x	x		x
160 x 5	6.28	x			
160 x 6	7.54	x			
160 x 8	10.05	x			x
160 x 10	12.56	x			x
160 x 12	15.07	x			x
160 x 15	18.84				x
180 x 6	8.48	x			



# FLAT BARS › SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (10/11)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
180 x 8	11.30	x			x
180 x 10	14.13	x			x
180 x 12	16.96	x			x
180 x 15	21.20				x
200 x 5	7.85	x			x
200 x 6	9.42	x	x		x
200 x 8	12.56	x			x
200 x 10	15.70	x	x		x
200 x 12	18.84	x			x
200 x 15	23.55	x			x
200 x 20	31.40				x
220 x 8	13.82	x			
250 x 6	11.78	x			
250 x 8	15.70	x			x
250 x 10	19.63	x			x

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# FLAT BARS > SLIT FROM SHEET OR STRIP

1.4304 - 1.4571 (11/11)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
250 x 12	23.55	x			x
250 x 15	29.44	x			x
300 x 6	14.13	x			
300 x 8	18.84	x			
300 x 10	23.55	x			
300 x 12	28.26	x			

# KEY STEEL



## Key steel

in random lengths of 3 to 3.2 m

\* solution annealed, sharp-edged, cold-drawn

## Dimension standards

DIN 6880

## Test certificates

DIN EN 1024 3.1

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# KEY STEEL > FLAT

1.4571 (1/2)

	Grade	1.4571
	AISI	316 Ti
mm	kg/m	*)
5 x 3	0.12	x
6 x 4	0.19	x
8 x 5	0.31	x
8 x 6	0.38	x
8 x 7	0.44	x
10 x 6	0.47	x
10 x 8	0.63	x
12 x 6	0.57	x
12 x 8	0.75	x
12 x 10	0.94	x
14 x 6	0.66	x
14 x 9	0.99	x
16 x 10	1.26	x
18 x 11	1.55	x
20 x 12	1.88	x

&gt;

# KEY STEEL > FLAT

1.4571 (2/2)

	Grade	1.4571
	AISI	316 Ti
mm	kg/m	*)
22 x 14	2.42	x
25 x 14	2.75	x
28 x 16	3.52	x
32 x 18	4.52	x
36 x 20	5.65	x
40 x 22	6.91	x
45 x 25	8.83	x





# ROUND BARS COLD-FORMED



## Round bars

in random lengths of 3 m, partly in lengths of 6 m

- \* solution annealed
- \*\* hardened and tempered
- \*\*\* annealed
- \*\*\*\* solution annealed in delivery condition, including notes on mechanical properties when precipitation-hardened

## Dimension standards

DIN EN 10278 h6, h8 or h9

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate



# ROUND BARS › COLD-FORMED

1.4021 - 1.4301 Ugima (1/5)

	Grade	1.4021	1.4034	1.4057	1.4104	1.4112	1.4122	1.4301/1.4307	1.4301 Ugima
	AISI	420	420	431	430 F	440 B	440 B	304 / 304 L	304 Ugima
mm	kg/m	**)	***)	**)	***)	***)	**)	*)	*)
2.00	0.02							x	
2.50	0.04							x	
3.00	0.06				x			x	
3.50	0.08							x	
4.00	0.10	x			x			x	
4.50	0.12							x	
5.00	0.15		x	x	x	x	x	x	
5.50	0.19							x	
6.00	0.22	x	x	x	x	x	x	x 1)2)	
6.50	0.26							x	
7.00	0.30		x		x	x		x	
7.50	0.35							x	
8.00	0.39	x	x	x	x	x	x	x 1)2)4)	x
9.00	0.50	x			x			x	
9.50	0.56								

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\* /\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4021 - 1.4301 Ugima (2/5)

	Grade	1.4021	1.4034	1.4057	1.4104	1.4112	1.4122	1.4301/1.4307	1.4301 Ugima
	AISI	420	420	431	430 F	440 B	440 B	304 / 304 L	304 Ugima
mm	kg/m	**)	***)	**)	***)	***)	**)	*)	*)
10.00	0.62	x	x	x	x	x	x	x 1)2)3)4)	x
11.00	0.75		x		x			x 1)	
12.00	0.89	x	x	x	x 5)	x	x	x 1)2)3)4)	x
12.70	0.99								
13.00	1.04	x			x		x	x 1)	
14.00	1.21	x	x	x	x 5)	x	x	x 1)4)	x
15.00	1.39	x	x	x	x	x	x	x 1)2)4)	x
15.87	1.55								
16.00	1.58	x	x	x	x 5)	x	x	x 1)2)3)4)	x
17.00	1.78			x	x	x		x 1)	
18.00	2.00	x	x	x	x	x	x	x 1)3)4)	x
19.00	2.23				x			x 1)	
19.05	2.24								
20.00	2.47	x	x	x	x 5)	x	x	x 1)2)3)4)	x
21.00	2.72	x		x	x			x 1)	x

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\* /\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4021 - 1.4301 Ugima (3/5)

	Grade	1.4021	1.4034	1.4057	1.4104	1.4112	1.4122	1.4301/1.4307	1.4301 Ugima
	AISI	420	420	431	430 F	440 B	440 B	304 / 304 L	304 Ugima
mm	kg/m	**)	***)	**)	***)	***)	**)	*)	*)
22.00	2.98	x	x	x	x 5)	x	x	x 1)	x
22.25	3.05								
23.00	3.26				x			x	
24.00	3.55	x	x	x	x		x	x 1)	x
25.00	3.85	x	x	x	x 5)	x	x	x 1)2)3)	x
25.40	3.98								
26.00	4.17	x	x	x	x	x	x	x 1)	x
27.00	4.49				x			x	
28.00	4.83	x	x	x	x	x	x	x 1)	x
29.00	5.19								
30.00	5.55	x	x	x	x 5)	x	x	x 1)2)3)	x
32.00	6.31	x	x	x	x	x	x	x 1)	x
33.00	6.71				x			x	
34.00	7.13				x			x	
35.00	7.55	x	x	x	x	x	x	x 1)2)3)	x

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\* /\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4021 - 1.4301 Ugima (4/5)

	Grade	1.4021	1.4034	1.4057	1.4104	1.4112	1.4122	1.4301/1.4307	1.4301 Ugima
	AISI	420	420	431	430 F	440 B	440 B	304 / 304 L	304 Ugima
mm	kg/m	**)	***)	**)	***)	***)	**)	*)	*)
36.00	7.99	x	x	x	x	x	x	x 1)	x
38.00	8.90	x		x	x 5)	x	x	x 1)	x
40.00	9.86	x	x	x	x 5)	x	x	x 1)2)3)	x
42.00	10.88	x	x	x	x		x	x 1)	x
43.00	11.40								
45.00	12.48	x	x	x	x 5)	x	x	x 1)2)3)	x
46.00	13.05	x							
48.00	14.21	x			x			x	
50.00	15.41	x	x	x	x	x	x	x 1)2)3)	x
52.00	16.67				x				
55.00	18.65	x	x	x	x 5)	x	x	x 1)2)	x
60.00	22.20	x	x	x	x 5)	x	x	x 1)2)	x
65.00	26.05	x	x	x	x 5)	x		x 1)	x
70.00	30.21	x	x	x	x	x	x	x 1)	x
75.00	34.68	x		x	x			x 1)	

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\* /\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4021 - 1.4301 Ugima (5/5)

	Grade	1.4021	1.4034	1.4057	1.4104	1.4112	1.4122	1.4301/1.4307	1.4301 Ugima
	AISI	420	420	431	430 F	440 B	440 B	304 / 304 L	304 Ugima
mm	kg/m	**)	***)	**)	***)	***)	**)	*)	*)
80.00	39.46	x	x	x	x 5)	x	x	x 1)	x
85.00	44.54	x		x	x			x 1)	
90.00	49.94	x	x	x	x		x	x 1)	x
95.00	55.64				x			x 1)	
100.00	61.65	x		x	x		x	x 1)	

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\* /\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4305 Ugima - 1.4541 (1/5)

	Grade	1.4305 Ugima	1.4401/1.4404	1.4404 Ugima	1.4418	1.4435 Ugima	1.4460	1.4462	1.4541
	AISI	303 Ugima	316 / 316 L	316 L Ugima		316 L Ugima	S 32900	S 31803	321
mm	kg/m	*)	*)	**)	**)	*)	*)	*)	*)
2.00	0.02								
2.50	0.04								
3.00	0.06		x						x
3.50	0.08								
4.00	0.10		x			x			x
4.50	0.12								
5.00	0.15		x			x			x
5.50	0.19								
6.00	0.22	x	x			x		x	x
6.50	0.26								
7.00	0.30		x						
7.50	0.35								
8.00	0.39	x	x	x		x		x	x
9.00	0.50								x
9.50	0.56								

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4305 Ugima - 1.4541 (2/5)

	<b>Grade</b>	1.4305 Ugima	1.4401/1.4404	1.4404 Ugima	1.4418	1.4435 Ugima	1.4460	1.4462	1.4541
	<b>AISI</b>	303 Ugima	316 / 316 L	316 L Ugima		316 L Ugima	S 32900	S 31803	321
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>**)</b>	<b>**)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
10.00	0.62	x	x	x		x		x	x
11.00	0.75								
12.00	0.89	x	x 1)	x	x	x		x	x
12.70	0.99								
13.00	1.04	x				x			x
14.00	1.21	x	x	x		x		x	x
15.00	1.39	x	x 1)	x	x	x	x	x	x
15.87	1.55								
16.00	1.58	x	x	x	x	x	x	x	x
17.00	1.78	x	x						x
18.00	2.00	x	x	x		x		x	x
19.00	2.23	x	x						x
19.05	2.24								
20.00	2.47	x	x 1)	x	x	x	x	x	x
21.00	2.72		x						

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123





# ROUND BARS › COLD-FORMED

1.4305 Ugima - 1.4541 (3/5)

	Grade	1.4305 Ugima	1.4401/1.4404	1.4404 Ugima	1.4418	1.4435 Ugima	1.4460	1.4462	1.4541
	AISI	303 Ugima	316 / 316 L	316 L Ugima		316 L Ugima	S 32900	S 31803	321
mm	kg/m	*)	*)	**)	**)	*)	*)	*)	*)
22.00	2.98	x	x	x	x	x	x	x	x
22.25	3.05								
23.00	3.26								
24.00	3.55	x	x			x			x
25.00	3.85	x	x 1)	x		x	x	x	x
25.40	3.98								
26.00	4.17	x	x	x		x		x	x
27.00	4.49								
28.00	4.83	x	x			x	x	x	x
29.00	5.19								
30.00	5.55	x	x 1)	x		x	x	x	x
32.00	6.31	x	x	x		x	x		x
33.00	6.71	x							
34.00	7.13	x							
35.00	7.55	x	x	x		x	x	x	x

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4305 Ugima - 1.4541 (4/5)

	<b>Grade</b>	1.4305 Ugima	1.4401/1.4404	1.4404 Ugima	1.4418	1.4435 Ugima	1.4460	1.4462	1.4541
	<b>AISI</b>	303 Ugima	316 / 316 L	316 L Ugima		316 L Ugima	S 32900	S 31803	321
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>**)</b>	<b>**)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
36.00	7.99	x	x	x		x			x
38.00	8.90	x	x			x			
40.00	9.86	x	x 1)	x		x	x	x	x
42.00	10.88		x	x		x			
43.00	11.40								
45.00	12.48	x	x	x		x	x	x	x
46.00	13.05								
48.00	14.21								
50.00	15.41	x	x 1)	x		x	x	x	x
52.00	16.67		x						
55.00	18.65	x	x	x		x			x
60.00	22.20	x	x 1)	x		x	x	x	x
65.00	26.05	x	x			x		x	x
70.00	30.21		x 1)			x	x	x	x
75.00	34.68		x						x

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4305 Ugima - 1.4541 (5/5)

	<b>Grade</b>	1.4305 Ugima	1.4401/1.4404	1.4404 Ugima	1.4418	1.4435 Ugima	1.4460	1.4462	1.4541
	<b>AISI</b>	303 Ugima	316 / 316 L	316 L Ugima		316 L Ugima	S 32900	S 31803	321
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>**)</b>	<b>**)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
80.00	39.46		x 1)			x	x	x	x
85.00	44.54		x						
90.00	49.94	x	x						x
95.00	55.64								x
100.00	61.65		x 1)						x

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4542 - 1.4923 (1/5)

	Grade	1.4542	1.4571	1.4571 Ugima	1.4841	1.4923
	AISI	630	316 Ti	316 Ti Ugima	314	
mm	kg/m	****)	*)		*)	**)
2.00	0.02		x			
2.50	0.04		x			
3.00	0.06		x		x	
3.50	0.08		x			
4.00	0.10		x		x	
4.50	0.12					
5.00	0.15		x		x	
5.50	0.19					
6.00	0.22		x 1)			
6.50	0.26					
7.00	0.30		x			
7.50	0.35					
8.00	0.39		x 1)	x		
9.00	0.50		x			
9.50	0.56					

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4542 - 1.4923 (2/5)

	Grade	1.4542	1.4571	1.4571 Ugima	1.4841	1.4923
	AISI	630	316 Ti	316 Ti Ugima	314	
mm	kg/m	****)	*)		*)	**)
10.00	0.62	x	x 1)	x		x
11.00	0.75		x			
12.00	0.89		x 1)	x		
12.70	0.99	x				
13.00	1.04		x			
14.00	1.21	x	x 1)	x		
15.00	1.39	x	x 1)	x		x
15.87	1.55	x				
16.00	1.58		x 1)	x		
17.00	1.78		x			
18.00	2.00		x 1)	x		
19.00	2.23		x			
19.05	2.24	x				
20.00	2.47	x	x 1)	x		x
21.00	2.72		x			

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4542 - 1.4923 (3/5)

	Grade	1.4542	1.4571	1.4571 Ugima	1.4841	1.4923
	AISI	630	316 Ti	316 Ti Ugima	314	
mm	kg/m	****)	*)		*)	**)
22.00	2.98		x	x		
22.25	3.05	x				
23.00	3.26					
24.00	3.55		x	x		
25.00	3.85		x 1)	x		
25.40	3.98	x				
26.00	4.17		x	x		
27.00	4.49		x			
28.00	4.83	x	x	x		
29.00	5.19					
30.00	5.55	x	x 1)	x		
32.00	6.31	x	x	x		
33.00	6.71					
34.00	7.13		x			
35.00	7.55	x	x 1)	x		

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4542 - 1.4923 (4/5)

	Grade	1.4542	1.4571	1.4571 Ugima	1.4841	1.4923
	AISI	630	316 Ti	316 Ti Ugima	314	
mm	kg/m	****)	*)		*)	**)
36.00	7.99		x	x		
38.00	8.90		x			
40.00	9.86	x	x 1)	x		
42.00	10.88		x			
43.00	11.40					
45.00	12.48		x 1)			
46.00	13.05					
48.00	14.21		x			
50.00	15.41		x 1)	x		
52.00	16.67					
55.00	18.65		x 1)			
60.00	22.20		x 1)	x		
65.00	26.05		x 1)			
70.00	30.21		x 1)			
75.00	34.68		x 1)			

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# ROUND BARS › COLD-FORMED

1.4542 - 1.4923 (5/5)

	Grade	1.4542	1.4571	1.4571 Ugima	1.4841	1.4923
	AISI	630	316 Ti	316 Ti Ugima	314	
mm	kg/m	****)	*)		*)	**)
80.00	39.46		x 1)			
85.00	44.54		x			
90.00	49.94		x 1)			
95.00	55.64		x			
100.00	61.65		x 1)			

1) Dimensions also available in lengths of 6 m

2) Also available acc. to DIN EN 10278 h8

3) Also available acc. to DIN EN 10278 h6

4) Also available with ground finish

5) Also available in QT 650

\*/\*\*/\*\*\*\*/\*\*\*\*\* Finishes: page 123



# SQUARE AND HEXAGONAL BARS COLD-FORMED



## Square- and hexagonal bars

in random lengths of 3 to 4 m, heat-treated and cold-formed

- \* solution annealed
- \*\* hardened and tempered
- \*\*\* annealed, pickled

## Dimension standards

DIN EN 10278 h11

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1/2.2

# SQUARE BARS › COLD-FORMED

1.4104 - 1.4571 (1/2)

	Grade	1.4104	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	430 F	304	303	316 / 316 L	316 Ti
mm	kg/m	***)	*)	*)	*)	*)
4.00	0.13		x			x
5.00	0.20		x	x		x
6.00	0.28	x	x	x		x
7.00	0.38		x	x		x
8.00	0.50	x	x	x		x
9.00	0.64		x	x		
10.00	0.79	x	x	x	x	x
11.00	0.95		x	x		
12.00	1.13	x	x	x	x	x
13.00	1.33		x	x		
14.00	1.54	x	x	x		x
15.00	1.77	x	x	x	x	x
16.00	2.01	x	x	x	x	x
18.00	2.54	x	x	x		x
20.00	3.14	x	x	x	x	x

# SQUARE BARS › COLD-FORMED

1.4104 - 1.4571 (2/2)

	Grade	1.4104	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	430 F	304	303	316 / 316 L	316 Ti
mm	kg/m	***)	*)	*)	*)	*)
22.00	3.80	x	x	x	x	x
24.00	4.52		x	x		x
25.00	4.91	x	x	x	x	x
27.00	5.72					x
30.00	7.07	x	x	x	x	x
32.00	8.04			x		x
35.00	9.62	x	x	x	x	x
40.00	12.56	x	x	x	x	x
45.00	15.90	x	x	x	x	x
50.00	19.63	x	x	x	x	x
55.00	23.75			x		
60.00	28.26	x	x	x	x	x
70.00	38.47		x	x		x
80.00	50.24		x	x		x
100.00	78.50		x	x		x

&gt;

# HEXAGONAL BARS > COLD-FORMED

1.4057 - 1.4539 (1/2)

	Grade	1.4057	1.4104	1.4301/1.4307	1.4301 Ugima	1.4305	1.4401/1.4404	1.4435	1.4539
	AISI	431	430 F	304 / 304L	304 Ugima	303	316 / 316 L	316 L	904L
mm	kg/m	**)	***)	*)	*)	*)	*)	*)	*)
5.00	0.17		x			x			
6.00	0.24					x			
7.00	0.33		x	x		x	x		
8.00	0.44		x	x		x	x		
9.00	0.55		x	x		x			
10.00	0.68		x	x		x	x		
11.00	0.82	x	x	x		x	x		
12.00	0.98		x	x		x			
13.00	1.15	x	x	x		x	x	x	
14.00	1.33		x	x		x	x	x	
15.00	1.53					x			
17.00	1.96	x	x	x		x	x	x	
19.00	2.45	x	x	x		x	x	x	x
22.00	3.29	x	x	x		x	x	x	x
24.00	3.92	x	x	x	x	x	x	x	x



# HEXAGONAL BARS › COLD-FORMED

1.4057 - 1.4539 (2/2)

	Grade	1.4057	1.4104	1.4301/1.4307	1.4301 Ugima	1.4305	1.4401/1.4404	1.4435	1.4539
	AISI	431	430 F	304 / 304L	304 Ugima	303	316 / 316 L	316 L	904L
mm	kg/m	**)	***)	*)	*)	*)	*)	*)	*)
27.00	4.96		x	x	x	x	x	x	x
30.00	6.12	x	x	x	x	x	x		x
32.00	6.96		x	x		x	x	x	x
x36.00	8.81	x	x	x		x	x		x
41.00	11.43	x	x	x	x	x	x	x	
46.00	14.39		x	x		x	x		
50.00	17.00		x	x		x	x		
55.00	20.56		x	x		x	x		
60.00	24.47		x	x		x	x		
65.00	28.72			x					
70.00	33.31								

&gt;

# HEXAGONAL BARS > COLD-FORMED

1.4541 - 1.4841 (1/2)

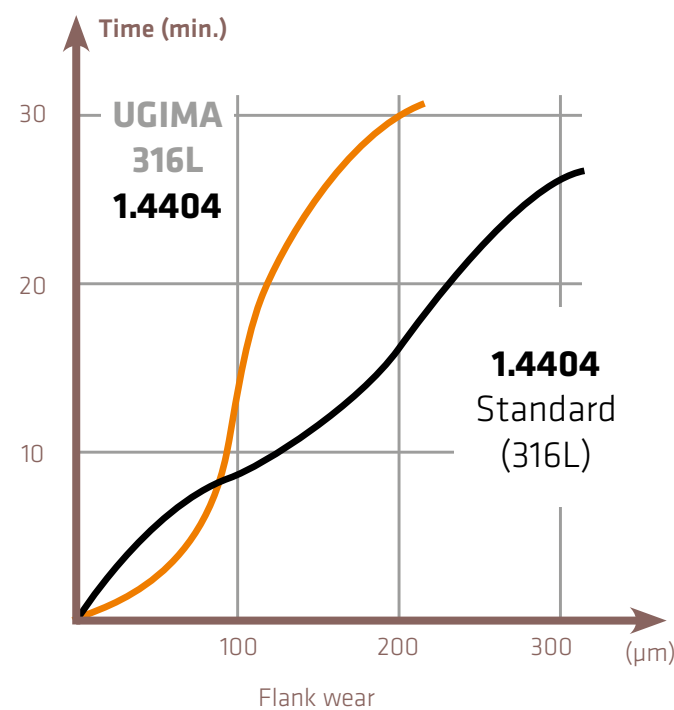
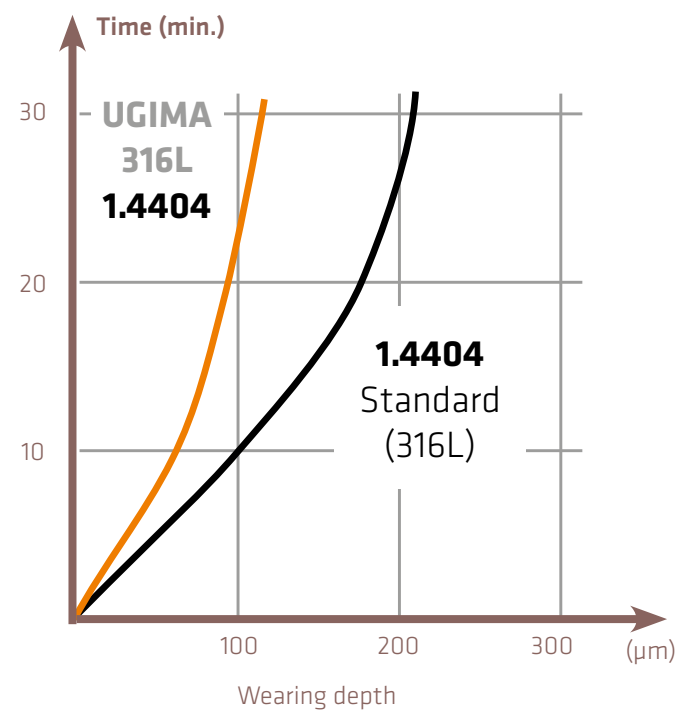
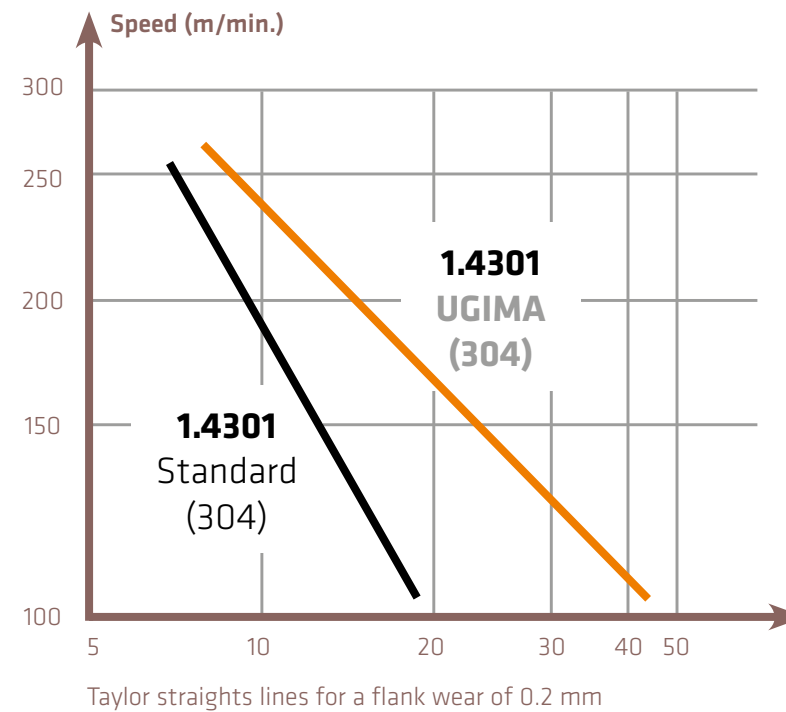
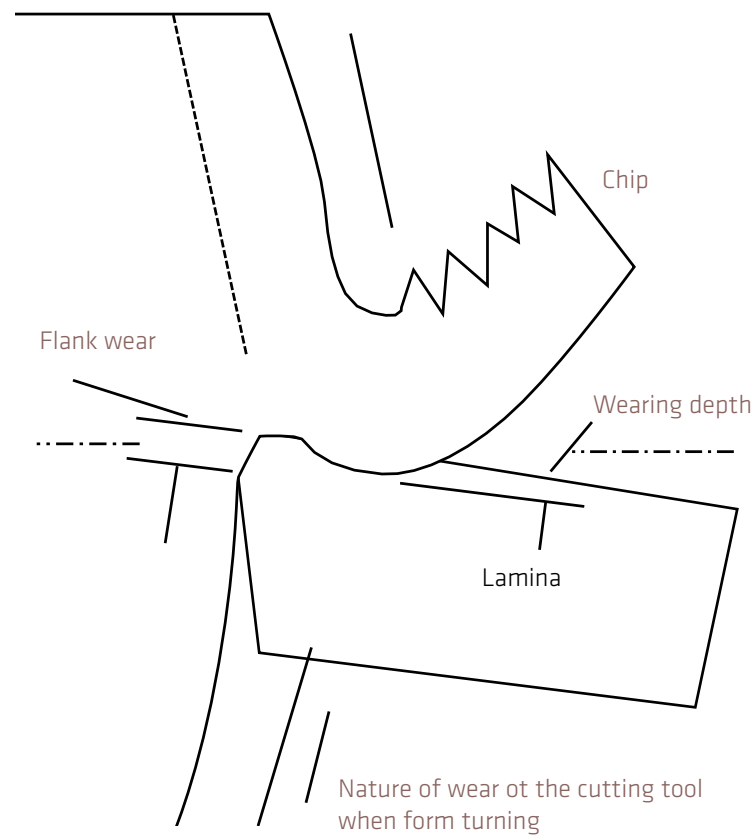
	Grade	1.4541	1.4571	1.4571 Ugima	1.4841
	AISI	321	316 Ti	316 Ti Ugima	314
mm	kg/m	*)	*)	*)	*)
5.00	0.17				
6.00	0.24		x		
7.00	0.33				
8.00	0.44		x		
9.00	0.55				
10.00	0.68		x		
11.00	0.82		x		
12.00	0.98		x		
13.00	1.15	x	x		x
14.00	1.33	x	x		
15.00	1.53				
17.00	1.96	x	x		
19.00	2.45	x	x		x
22.00	3.29	x	x	x	x
24.00	3.92	x	x		x

&gt;

# HEXAGONAL BARS > COLD-FORMED

1.4541 - 1.4841 (2/2)

	Grade	1.4541	1.4571	1.4571 Ugima	1.4841
	AISI	321	316 Ti	316 Ti Ugima	314
mm	kg/m	*)	*)	*)	*)
27.00	4.96	x	x	x	x
30.00	6.12	x	x		
32.00	6.96	x	x	x	
36.00	8.81	x	x	x	x
41.00	11.43	x	x	x	
46.00	14.39	x	x		
50.00	17.00	x	x	x	
55.00	20.56	x	x	x	
60.00	24.47	x	x		
65.00	28.72	x	x		
70.00	33.31		x		



## ROUND AND HEXAGONAL BARS with improved machinability

The improved machinability mainly takes effect when it comes to the turning, milling or drilling of workpieces. It doesn't matter which demands our round and hexagonal bars have to meet - our experts have the required know-how and they will find the optimal product for your need.

in random lengths of 3 to 6 m (round)  
in random lengths of 3 to 4 m (hexagonal)

\*solution annealed and quenched, hot-formed, peeled or drawn and/or machined (round)

heat-treated and cold-formed (hexagonal)

### Dimension standards:

round: DIN 10060 (hot-formed),

DIN EN 10278 h9 (cold-formed)

hexagonal: DIN EN 10278 h11 (cold-formed)

### Test certificates:

DIN EN 1024 3.1

Cutting material: Coated hard metal TiN

Advance: 0.16 mm

Cutting depth: 2 mm

Cutting material: P20 ISO

Speed: 180 m/min.

Advance: 0.25 mm

Cutting depth: 1.5 mm



# FLAT BARS COLD-FORMED



## Flat bars

in random lengths of 3 to 4 m, heat-treated and cold-formed

\* solution annealed

## Dimension standards

DIN EN 10278

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1 / 2.2

# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (1/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
8 x 4	0.25	x			
10 x 3	0.24	x			x
10 x 4	0.31	x			x
10 x 5	0.39	x			x
10 x 6	0.47	x			
10 x 8	0.63	x			
12 x 3	0.28	x			x
12 x 4	0.38	x			
12 x 5	0.47	x			
12 x 6	0.57	x			
12 x 8	0.75	x			
12 x 10	0.94	x			
15 x 3	0.35	x		x	x
15 x 4	0.47	x			x
15 x 5	0.59	x		x	x

\* Finishes: page 147



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (2/11)

	<b>Grade</b>	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	<b>AISI</b>	304 / 304 L	303	316 / 316 L	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
15 x 6	0.71	x			x
15 x 8	0.94	x			x
15 x 10	1.18	x		x	x
15 x 12	1.41	x			
16 x 6	0.75	x			
16 x 8	1.00	x			
20 x 3	0.47	x			x
20 x 4	0.63	x			x
20 x 5	0.79	x	x	x	x
20 x 6	0.94	x	x		x
20 x 8	1.26	x	x	x	x
20 x 10	1.57	x	x	x	x
20 x 12	1.88	x	x	x	x
20 x 15	2.36	x	x	x	x
25 x 3	0.59	x			



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (3/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
25 x 4	0.79	x			
25 x 5	0.98	x			x
25 x 6	1.18	x	x	x	
25 x 8	1.57	x	x		x
25 x 10	1.96	x	x	x	x
25 x 12	2.36	x	x		x
25 x 15	2.94	x	x		x
25 x 20	3.93	x	x		x
30 x 3	0.71	x			x
30 x 4	0.94	x			
30 x 5	1.18	x	x	x	x
30 x 6	1.41	x	x		x
30 x 8	1.88	x	x	x	x
30 x 10	2.36	x 1)	x	x	x
30 x 12	2.83	x	x		x

\* Finishes: page 147

1) Also polished grit 320 available



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (4/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
30 x 15	3.53	x 1)	x	x	x
30 x 20	4.71	x 1)	x	x	x
30 x 25	5.89	x		x	x
35 x 3	0.82	x			
35 x 4	1.10	x			
35 x 5	1.37	x			
35 x 6	1.65	x		x	x
35 x 8	2.20	x			
35 x 10	2.75	x			
35 x 12	3.30	x			
35 x 15	4.12	x			x
35 x 20	5.50	x			
35 x 25	6.87	x			
40 x 3	0.94	x			
40 x 4	1.26	x			

\* Finishes: page 147

1) Also polished grit 320 available



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (5/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
40 x 5	1.57	x		x	x
40 x 6	1.88	x	x	x	x
40 x 8	2.51	x	x	x	x
40 x 10	3.14	x 1)	x	x	x
40 x 12	3.77	x	x	x	x
40 x 15	4.71	x	x	x	x
40 x 20	6.28	x 1)	x	x	x
40 x 25	7.85	x	x		x
40 x 30	9.42	x	x	x	x
45 x 5	1.77	x			
45 x 6	2.12	x			
45 x 8	2.83	x			
45 x 10	3.53	x			
45 x 12	4.24	x			
45 x 15	5.30	x			

\* Finishes: page 147

1) Also polished grit 320 available



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (6/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
45 x 20	7.07	x			
50 x 3	1.18	x			
50 x 4	1.57	x			
50 x 5	1.96	x			x
50 x 6	2.36	x	x		x
50 x 8	3.14	x	x		x
50 x 10	3.93	x 1)	x	x	x
50 x 12	4.71	x	x		x
50 x 15	5.89	x	x	x	x
50 x 20	7.85	x 1)	x	x	x
50 x 25	9.81	x	x		
50 x 30	11.78	x 1)	x	x	x
50 x 35	13.74	x			
50 x 40	15.70	x	x		x
60 x 4	1.88	x			

\* Finishes: page 147

1) Also polished grit 320 available

# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (7/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
60 x 5	2.36	x			x
60 x 6	2.83	x	x	x	x
60 x 8	3.77	x	x		x
60 x 10	4.71	x 1)	x	x	x
60 x 12	5.65	x	x		x
60 x 15	7.07	x	x	x	x
60 x 20	9.42	x 1)	x	x	x
60 x 25	11.78	x	x		
60 x 30	14.13	x	x	x	
60 x 35	16.49	x	x		
60 x 40	18.84	x 1)	x	x	x
60 x 50	23.55	x			
70 x 5	2.75	x			
70 x 6	3.30	x			
70 x 8	4.40	x			

\* Finishes: page 147

1) Also polished grit 320 available



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (8/11)

	Grade	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	AISI	304 / 304 L	303	316 / 316 L	316 Ti
mm	kg/m	*)	*)	*)	*)
70 x 10	5.50	x	x		x
70 x 12	6.59	x			
70 x 15	8.24	x	x		
70 x 20	10.99	x	x		
70 x 25	13.74	x			
70 x 30	16.49	x	x		
70 x 40	21.98	x	x		
80 x 4	2.51	x			
80 x 5	3.14	x			
80 x 6	3.77	x 1)			
80 x 8	5.02	x 1)			x
80 x 10	6.28	x	x		x
80 x 12	7.54	x	x	x	x
80 x 15	9.42	x	x		x
80 x 20	12.56	x 1)	x	x	x

\* Finishes: page 147

1) Also polished grit 320 available

# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (9/11)

	<b>Grade</b>	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	<b>AISI</b>	304 / 304 L	303	316 / 316 L	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
80 x 25	15.70	x	x		
80 x 30	18.84	x	x	x	x
80 x 40	25.12	x	x		
90 x 6	4.24	x			
90 x 8	5.65	x			
90 x 10	7.07	x			
90 x 12	8.48	x			
90 x 15	10.60	x			
90 x 20	14.13	x			
90 x 25	17.66	x			
90 x 30	21.20	x			
100 x 5	3.93	x			
100 x 6	4.71	x			
100 x 8	6.28	x	x	x	
100 x 10	7.85	x 1)	x	x	x

\* Finishes: page 147

1) Also polished grit 320 available



# FLAT BARS › COLD-FORMED

1.4301 - 1.4571 (10/11)

	<b>Grade</b>	1.4301/1.4307	1.4305	1.4401/1.4404	1.4571
	<b>AISI</b>	304 / 304 L	303	316 / 316 L	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
100 x 12	9.42	x	x		
100 x 15	11.78	x	x	x	x
100 x 20	15.70	x 1)	x	x	
100 x 25	19.63	x	x		
100 x 30	23.55	x	x		
100 x 40	31.40	x	x		
100 x 50	39.25	x			
120 x 8	7.54	x			
120 x 10	9.42	x	x		x
120 x 12	11.30	x	x		
120 x 15	14.13	x	x		
120 x 20	18.84	x	x		
120 x 30	28.26	x			
140 x 8	8.79	x			
140 x 10	10.99	x			

\* Finishes: page 147

1) Also polished grit 320 available



# HALF-ROUND AND FLAT HALF-ROUND BARS



## Half-round and flat half-round bars

in random lengths of 3 to 3.5 m, bright, cold-formed and blank annealed

\* solution annealed

## Dimension standards

DIN 1018

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1/2.2

&gt;

# HALF-ROUND BARS › COLD-FORMED

1.4404 (1/1)

	Grade	1.4404
	AISI	316 L
mm	kg/m	*)
16 x 8	0.78	x
20 x 10	1.23	x
30 x 15	2.77	x
40 x 20	4.95	x
50 x 25	7.75	x

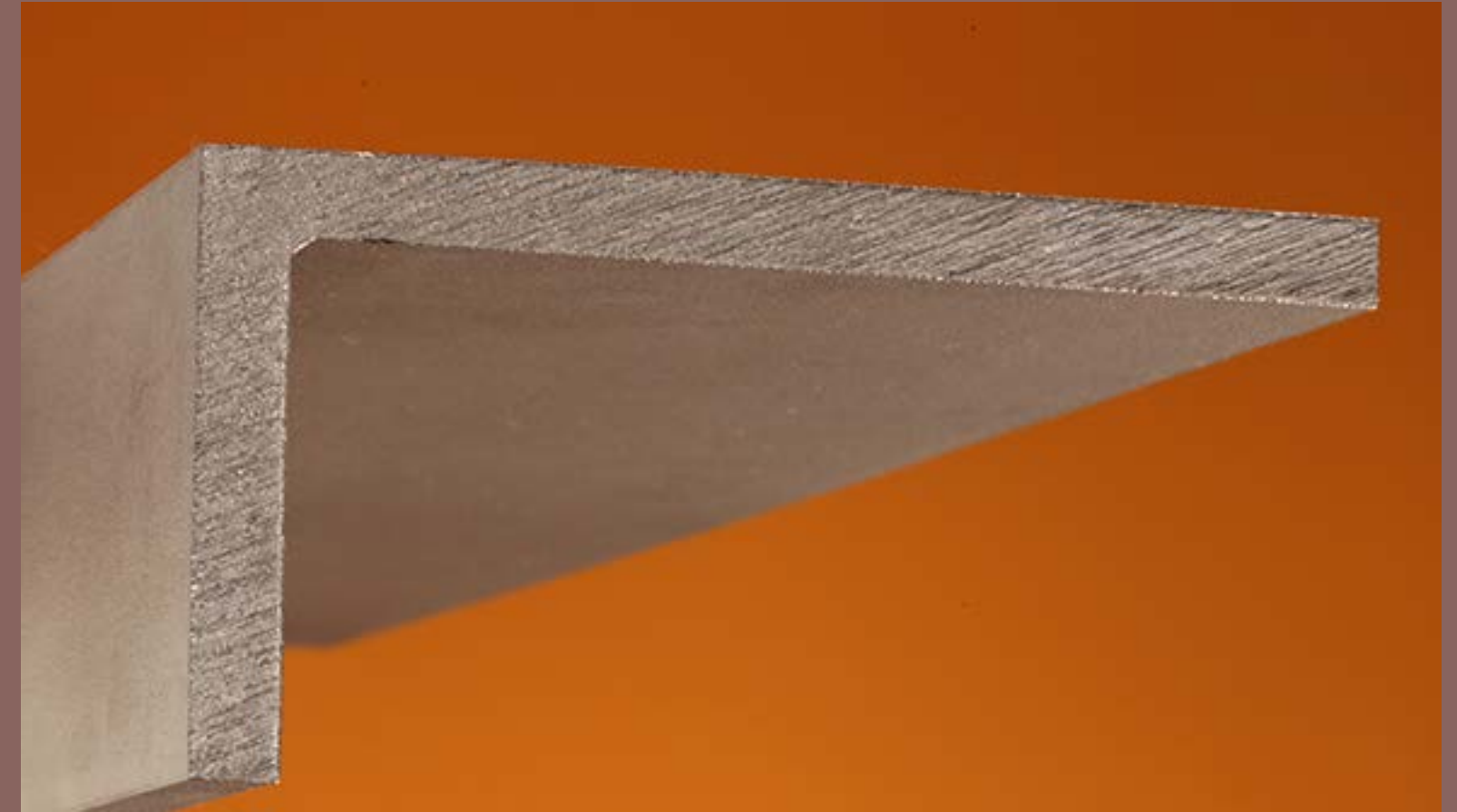




# ANGLES AND SPECIAL ANGLES



# ANGLES



## Angles

hot-formed in random lengths of 5 to 6 m (angles) and 4 to 7 m (special angles), cold-formed in random lengths of 3 to 3.5 m

\* solution annealed or quenched, pickled, hot-formed

## Dimension standards

DIN EN 10056-2 or DIN 1028

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1/2.2



# EQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (1/5)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
15 x 15 x 2	0.45	x			
15 x 15 x 3	0.65	x			
20 x 20 x 2	0.61	x			
20 x 20 x 3	0.89	x 1)	x	x	x
20 x 20 x 4	1.15	x			
20 x 20 x 5	1.40	x			
25 x 25 x 3	1.13	x 1)	x	x	x
25 x 25 x 4	1.47	x			
25 x 25 x 5	1.80	x			x
30 x 30 x 3	1.37	x 1)	x	x	x
30 x 30 x 4	1.79	x	x	x	x
30 x 30 x 5	2.20	x			
30 x 30 x 6	2.59	x			x
35 x 35 x 3	1.58	x			
35 x 35 x 4	2.11	x	x	x	x

\*Finishes: page 163;

1) Also polished grit 320 available



# EQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (2/5)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
35 x 35 x 5	2.60	x			
35 x 35 x 6	3.07	x			
40 x 40 x 3	1.85	x			
40 x 40 x 4	2.43	x 1)	x	x	x
40 x 40 x 5	3.00	x	x	x	x
40 x 40 x 6	3.55	x			
40 x 40 x 8	4.61	x 1)			
45 x 45 x 5	3.40	x			x
50 x 50 x 3	2.28	x			
50 x 50 x 4	3.07	x			
50 x 50 x 5	3.80	x 1)	x	x	x
50 x 50 x 6	4.51	x			
50 x 50 x 7	5.21	x			x
50 x 50 x 9	6.55	x			
50 x 50 x 10	7.20	x			x

\*Finishes: page 163;

1) Also polished grit 320 available



# EQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (3/5)

	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	kg/m	*)	*)	*)	*)
55 x 55 x 6	4.99	x			
60 x 40 x 6	4.51	x			
60 x 60 x 5	4.60	x			x
60 x 60 x 6	5.47	x 1)	x	x	x
60 x 60 x 7	6.33	x			
60 x 60 x 8	7.17	x			x
60 x 60 x 10	8.80	x			x
65 x 65 x 9	8.71				x
70 x 70 x 7	7.45	x	x	x	x
70 x 70 x 9	9.43	x			
70 x 70 x 11	11.35	x			
75 x 75 x 7	8.01	x			
75 x 75 x 6	6.91	x			x
80 x 80 x 6	7.39	x			x
80 x 80 x 8	9.73	x	x	x	x

\*Finishes: page 163;

1) Also polished grit 320 available



# EQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (4/5)

	<b>Grade</b>	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
	<b>AISI</b>	304 / 304 L	316 / 316 L	321	316 Ti
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
80 x 80 x 10	12.00	x			x
80 x 80 x 12	14.21	x			
90 x 90 x 9	12.31	x	x		x
100 x 100 x 6	9.31	x			
100 x 100 x 8	12.29	x			x
100 x 100 x 10	15.20	x	x	x	x
100 x 100 x 12	18.05	x			
110 x 110 x 10	16.80	x			x
120 x 120 x 10	18.40	x			x
120 x 120 x 13	23.61	x			x
130 x 130 x 12	23.81	x			x
140 x 140 x 13	27.77	x			
150 x 150 x 13	29.85	x			x
150 x 150 x 15	34.20	x			x
160 x 160 x 15	36.60	x			





# UNEQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (1/4)

mm	Grade	1.4301/1.4307	1.4571
	AISI	304 / 304 L	316 Ti
	kg/m	*)	*)
20 x 10 x 3	0.65	x	
25 x 15 x 3	0.89	x	
30 x 15 x 3	1.01	x	
30 x 20 x 3	1.13	x	x
30 x 20 x 4	1.47	x	x
40 x 20 x 3	1.37	x	x
40 x 20 x 4	1.79	x	x
40 x 20 x 5	2.20	x	
40 x 30 x 5	2.60	x	x
45 x 30 x 4	2.27	x	
45 x 30 x 5	2.80	x	
50 x 25 x 4	2.27	x	
50 x 30 x 4	2.43	x	
50 x 30 x 5	3.00	x	x
50 x 40 x 5	3.40	x	x

\*Finishes: page 163



# UNEQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (2/4)

mm	Grade	1.4301/1.4307	1.4571
	AISI	304 / 304 L	316 Ti
	kg/m	*)	*)
60 x 30 x 5	3.40	x	x
60 x 30 x 6	4.03	x	
60 x 30 x 7	4.65	x	
60 x 40 x 5	3.80	x	x
60 x 40 x 6	4.51	x	x
65 x 50 x 5	4.40	x	x
65 x 50 x 7	6.05	x	
65 x 50 x 9	7.63	x	
70 x 50 x 6	5.47	x	x
75 x 50 x 6	5.71	x	x
75 x 50 x 7	6.61	x	x
80 x 40 x 6	5.47	x	x
80 x 40 x 8	7.17	x	x
80 x 65 x 6	6.67	x	x
80 x 65 x 8	8.77	x	x

\*Finishes: page 163





# UNEQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (3/4)

mm	Grade AISI kg/m	1.4301/1.4307	1.4571
		304 / 304 L *)	316 Ti *)
80 x 65 x 10	10.80		x
90 x 60 x 6	6.91	x	
90 x 60 x 8	9.09	x	x
100 x 50 x 6	6.91	x	x
100 x 50 x 8	9.09	x	x
100 x 50 x 10	11.20	x	x
100 x 65 x 7	8.85	x	x
100 x 65 x 9	11.23	x	x
100 x 65 x 11	13.55	x	
100 x 75 x 6	8.11		x
100 x 75 x 9	11.95		x
120 x 80 x 8	12.29	x	x
120 x 80 x 10	15.20	x	x
120 x 80 x 12	18.05	x	x
130 x 65 x 8	11.97	x	x

\*Finishes: page 163



# UNEQUAL ANGLES › HOT-FORMED

1.4301 - 1.4571 (4/4)

mm	Grade	1.4301/1.4307	1.4571
	AISI	304 / 304 L	316 Ti
	kg/m	*)	*)
130 x 65 x 10	14.80	x	x
130 x 90 x 12	19.97	x	x
150 x 75 x 8	13.89	x	
150 x 75 x 10	17.20	x	x
150 x 100 x 10	19.20	x	x
150 x 100 x 12	22.85	x	x
160 x 80 x 10	18.40	x	
200 x 100 x 12	27.65	x	
200 x 100 x 13	29.85		x



# ANGLES › COLD-FORMED

1.4301 (1/2)

mm	Grade AISI kg/m	1.4301/1.4307 304 / 304 L *)
10 x 10 x 2.0	0.29	x
15 x 15 x 2.0	0.45	x
15 x 15 x 3.0	0.65	x
20 x 20 x 2.0	0.61	x
20 x 20 x 3.0	0.89	x
25 x 25 x 2.5	0.95	x
25 x 25 x 3.0	1.13	x
25 x 25 x 4.0	1.47	x
30 x 30 x 3.0	1.37	x
30 x 30 x 4.0	1.79	x
30 x 30 x 5.0	2.20	x
35 x 35 x 4.0	2.11	x
40 x 20 x 4.0	1.79	x
40 x 40 x 3.0	1.85	x
40 x 40 x 4.0	2.43	x

\*Finishes: page 163



# SPECIAL ANGLES



## Special angles

in random lengths of 4 to 6m (U-channels 4 to 7 m), hot-formed

\* solution annealed or quenched, pickled

## Dimension standards

DIN EN 10056-2 or DIN 1028

## Test certificates

DIN EN 10204 3.1 or  
works' test certificate 2.1/2.2



# U-CHANNELS › HOT-FORMED

1.4301 - 1.4571 (1/3)

mm	Grade	1.4301/1.4307	1.4571
	AISI	304 / 304 L	316Ti
	kg/m	*)	*)
20 x 10 x 3.0 x 3.5	0.87	x	
30 x 15 x 4.0 x 4.5	1.75	x	
30 x 33 x 5.0 x 7.0	4.34	x	
40 x 20 x 3.0 x 3.5	1.91	x	
40 x 20 x 4.0 x 4.5	2.43	x	x
40 x 35 x 5.0 x 7.0	4.96	x	x
50 x 25 x 3.0 x 3.0	2.26	x	
50 x 25 x 5.0 x 5.0	3.60	x	
50 x 25 x 5.0 x 6.0	3.92	x	x
50 x 38 x 5.0 x 7.0	5.70	x	x
60 x 30 x 6.0 x 6.0	5.18	x	x
65 x 42 x 5.5 x 7.5	7.24	x	x
80 x 40 x 5.0 x 5.0	6.00	x	x
80 x 40 x 6.0 x 6.0	7.10	x	x
80 x 45 x 6.0 x 8.0	8.83	x	x



# U-CHANNELS › HOT-FORMED

1.4301 - 1.4571 (2/3)

mm	Grade AISI kg/m	1.4301/1.4307	1.4571
		304 / 304 L *)	316Ti *)
100 x 50 x 4.0 x 4.0	6.14	x	
100 x 50 x 5.0 x 5.0	7.60	x	x
100 x 50 x 5.0 x 7.0	9.04	x	
100 x 50 x 6.0 x 6.0	9.02	x	x
100 x 50 x 6.0 x 8.5	10.78	x	x
120 x 55 x 7.0 x 9.0	13.63	x	x
120 x 60 x 6.0 x 6.0	10.94	x	x
140 x 60 x 7.0 x 10.0	16.32	x	x
140 x 70 x 7.0 x 7.0	14.90	x	x
150 x 75 x 9.0 x 9.0	20.30	x	x
160 x 65 x 7.5 x 10.5	19.26	x	x
160 x 80 x 8.0 x 8.0	19.46	x	x
180 x 70 x 8.0 x 11.0	22.43	x	x
180 x 90 x 8.0 x 8.0	22.02	x	
200 x 75 x 8.5 x 11.5	25.84	x	x

\*Finishes: page 175







# EQUAL T-SECTIONS (T)

1.4301 - 1.4571 (1/2)

mm	Grade	1.4301/1.4307	1.4571
	AISI	304 / 304 L	316Ti
	kg/m	*)	*)
20 x 20 x 3.0	0.90	x	
25 x 25 x 3.0	1.14	x	
25 x 25 x 4.0	1.49	x	
30 x 30 x 3.0	1.38	x	
30 x 30 x 4.0	1.81	x	x
35 x 35 x 4.0	2.13	x	
40 x 40 x 4.0	2.45	x	x
40 x 40 x 5.0	2.45	x	x
45 x 45 x 5.0	3.41	x	
50 x 50 x 3.0	2.34	x	
50 x 50 x 5.0	3.81	x	x
50 x 50 x 6.0	4.53	x	x
60 x 60 x 6.0	5.49	x	x
70 x 70 x 7.0	7.46	x	x
80 x 80 x 8.0	9.74	x	x



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# UNEQUAL T-SECTIONS (TB)

1.4301 (1/1)

	Grade	1.4301/1.4307
	AISI	304 / 304 L
mm	kg/m	*)
30 x 60 x 5.5	3.72	x
35 x 70 x 6.0	4.75	x
40 x 60 x 4.0	3.07	x
40 x 80 x 7.0	6.33	x
50 x 100 x 8.5	9.62	x
60 x 120 x 10.	13.60	x



# MEDIUM-WIDTH I-BEAMS IPE-SERIES

1.4301 - 1.4571 (1/1)

mm	Grade	1.4301/1.4307	1.4571
	AISI	304 / 304 L	316Ti
	kg/m	*)	*)
80 x 45 x 3.8 x 5.2	5.94	x	x
100 x 55 x 4.2 x 5.7	7.92	x	
120 x 64 x 4.5 x 6.3	10.23	x	x
140 x 73 x 4.7 x 6.9	12.80	x	x
160 x 82 x 5.0 x 7.4	15.52	x	x
180 x 91 x 5.3 x 8.0	18.60	x	
200 x 100 x 5.6 x 8.5	21.80	x	
240 x 120 x 10.0 x 12.0	40.32	x	









# PLATES AND SHEETS



# PLATES AND SHEETS



## Plates and sheets

cold-rolled (model type 2C or 2D or 2B or 2R)

hot-rolled (model type 1C or 1D)

cold-rolled dimensions can be also delivered polished  
(different grain sizes), brushed and coated with foil (one or both sides);  
hot-rolled dimensions available on request

\*solution annealed

## Dimension standards

cold-rolled: DIN EN 10259

hot-rolled: DIN EN 10051 or  
DIN EN 10029

## Test certificates

DIN EN 10204 3.1,  
some 3.2 TÜV approved

# SMALL FORMAT › 1,000 X 2,000 MM

1.4016 - 1.4746 (1/2)

	Grade	1.4016	1.4301 / 1.4307	1.4401 / 1.4404	1.4462	1.4539	1.4541	1.4571	1.4746
	AISI	430	304 / 304 L	316 / 316 L	S 31803	904 L	321	316 Ti	
mm	kg/m	*)	*)	*)	*)	*)	*)	*)	*)
0.50	3.93		x				x		
0.60	4.71		x				x		
0.70	5.50		x	x					
0.80	6.28	x	x	x			x		
1.00	7.85	x	x	x	x	x	x	x	
1.20	9.42		x						
1.25	9.81		x	x					
1.50	11.78	x	x	x	x	x	x	x	
2.00	15.70	x	x	x	x	x	x	x	x
2.50	19.63		x	x					x
3.00	23.55		x	x	x	x	x	x	x
4.00	31.40		x	x		x	x	x	x
5.00	39.25		x	x		x	x	x	x
6.00	47.10		x	x	x	x	x		x
8.00	62.80		x	x		x	x		x

\* Finishes: page 187

# SMALL FORMAT › 1,000 X 2,000 MM

1.4016 - 1.4746 (2/2)

	<b>Grade</b>	1.4016	1.4301 / 1.4307	1.4401 / 1.4404	1.4462	1.4539	1.4541	1.4571	1.4746
	<b>AISI</b>	430	304 /304 L	316 / 316 L	S 31803	904 L	321	316 Ti	
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
10.00	78.50		x	x			x		x
12.00	94.20		x	x			x		x
15.00	117.75		x	x			x		x
16.00	125.60		x						
18.00	141.30		x						
20.00	157.00		x	x					x
25.00	196.25		x						
30.00	235.50		x						
35.00	274.75		x						
40.00	314.00		x						

# SMALL FORMAT › 1,000 X 2,000 MM

1.4828 - 1.4845 (1/2)

	Grade	1.4828	1.4841	1.4845
	AISI	309	314	310 S
mm	kg/m	*)	*)	*)
0.50	3.93			
0.60	4.71			
0.70	5.50			
0.80	6.28	x		
1.00	7.85	x	x	
1.20	9.42			
1.25	9.81			
1.50	11.78	x	x	
2.00	15.70	x	x	x
2.50	19.63			
3.00	23.55	x	x	x
4.00	31.40	x	x	x
5.00	39.25	x	x	x
6.00	47.10	x	x	x
8.00	62.80	x	x	x

# SMALL FORMAT › 1,000 X 2,000 MM

1.4828 - 1.4845 (2/2)

	<b>Grade</b>	<b>1.4828</b>	<b>1.4841</b>	<b>1.4845</b>
	<b>AISI</b>	<b>309</b>	<b>314</b>	<b>310 S</b>
<b>mm</b>	<b>kg/m</b>	<b>*)</b>	<b>*)</b>	<b>*)</b>
10.00	78.50	x	x	x
12.00	94.20	x	x	
15.00	117.75			
16.00	125.60			
18.00	141.30			
20.00	157.00			
25.00	196.25			
30.00	235.50			
35.00	274.75			
40.00	314.00			

# MIDDLE FORMAT › 1,250 X 2,500 MM

1.4828 - 1.4845 (1/2)

	Grade	1.4828	1.4841	1.4845
	AISI	309	314	310 S
mm	kg/m	*)	*)	*)
0.60	4.71			
0.70	5.50			
0.80	6.28			
1.00	7.85			
1.20	9.42			
1.25	9.81			
1.50	11.78		x	
2.00	15.70	x		
2.50	19.63			
3.00	23.55	x	x	
4.00	31.40		x	
5.00	39.25	x		
6.00	47.10	x	x	
8.00	62.80	x		
10.00	78.50	x	x	



# LARGE FORMAT › 1,500 X 3,000 MM

1.4828 - 1.4845 (1/2)

	Grade	1.4828	1.4841	1.4845
	AISI	309	314	310 S
mm	kg/m	*)	*)	*)
0.80	6.28			
1.00	7.85	x		
1.20	9.42			
1.25	9.81			
1.50	11.78	x		
2.00	15.70	x	x	x
2.50	19.63			
3.00	23.55	x	x	x
4.00	31.40	x	x	x
5.00	39.25	x	x	x
6.00	47.10	x	x	x
8.00	62.80	x	x	x
10.00	78.50	x	x	x
12.00	94.20			
15.00	117.75	x		



# LARGE FORMAT › 1,500 X 3,000 MM

1.4828 - 1.4845 (2/2)

	Grade	1.4828	1.4841	1.4845
	AISI	309	314	310 S
mm	kg/m	*)	*)	*)
16.00	125.60			
18.00	141.30			
20.00	157.00			
25.00	196.25			
30.00	235.50			





# **PIPES, TUBES AND HOLLOW BARS**

# CONSTRUCTION TUBES



## Construction tubes

in random lengths of approx. 6 m

Round and square tubes from strip or sheet – not heat-treated: mill finish, pickled or ground on the outside; heat-treated and polished on the outside

\* solution annealed, pickled or mill finish

## Technical terms of delivery

Requirements according to agreement

## Test certificates

EN 10204 3.1 or 2.2  
acc. to agreement

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# CONSTRUCTION TUBES > ROUND

1.4301 - 1.4571 (1/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
10.00	1.50	0.32	x		x			
12.00	1.00	0.28	x					
12.00	1.50	0.39	x		x	x		
12.00	2.00	0.50	x		x			
14.00	1.00	0.33	x					
14.00	1.50	0.47	x		x			
14.00	2.00	0.60	x					
15.00	1.00	0.35	x	x	x			
15.00	1.50	0.51	x	x	x			
15.00	2.00	0.65	x		x			
16.00	1.00	0.38		x				
16.00	1.50	0.54	x	x	x	x		
16.00	2.00	0.70	x		x			
17.20	1.50	0.59		x				
17.20	2.00	0.76	x	x	x			



# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (2/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
18.00	1.00	0.43	x		x			
18.00	1.50	0.62	x	x		x		
18.00	2.00	0.80	x	x				
20.00	1.00	0.48	x	x	x			
20.00	1.50	0.69	x	x	x	x		
20.00	2.00	0.90	x	x	x	x		
20.00	2.50	1.10	x					
20.00	3.00	1.28	x					
21.30	1.50	0.74	x					
21.30	2.00	0.97	x	x	x	x		
21.30	2.50	1.18	x	x	x			
21.30	3.00	1.37	x					
22.00	1.00	0.53	x	x	x			
22.00	1.50	0.77	x	x	x	x		
22.00	2.00	1.00	x	x	x			



# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (3/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
23.00	1.50	0.81	x					
25.00	1.00	0.60	x	x				
25.00	1.20	0.72	x					
25.00	1.50	0.88	x	x	x	x		
25.00	2.00	1.15	x	x	x	x	x	
25.00	2.50	1.41	x					
25.00	3.00	1.65	x					
26.90	1.50	0.95	x	x				
26.90	2.00	1.25	x	x	x	x		
26.90	2.50	1.53	x	x	x			
26.90	2.60	1.58			x1)			
26.90	3.00	1.80	x					
28.00	1.00	0.68	x					
28.00	1.50	1.00	x	x	x			
28.00	2.00	1.30	x	x	x1)	x		

\* Finishes: page 198; 1) Heat-treated, 2) Industrial polished



# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (4/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
28.00	2.50	1.60			x 1)			
30.00	1.00	0.73	x					
30.00	1.50	1.07	x	x	x			
30.00	2.00	1.40	x	x	x	x		
30.00	2.50	1.72	x		x			
30.00	3.00	2.03	x		x 1)			
32.00	1.50	1.15	x	x				
32.00	2.00	1.50	x	x				
33.70	1.50	1.21	x	x	x			
33.70	2.00	1.59	x	x	x 1)	x	x 2)	x 1)
33.70	2.50	1.95	x	x	x			
33.70	2.60	2.02			x 1)			x 1)
33.70	3.00	2.31	x	x	x			
35.00	1.50	1.26	x	x				
35.00	2.00	1.65	x	x	x	x		

\* Finishes: page 198; 1) Heat-treated, 2) Industrial polished





# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (5/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
35.00	2.50	2.03	x		x 1)			
35.00	3.00	2.40	x		x 1)			
38.00	1.00	0.93	x		x 1)			
38.00	1.50	1.37	x	x	x			
38.00	2.00	1.80	x	x	x 1)			
38.00	2.50	2.22	x					
38.00	3.00	2.63	x	x				
40.00	1.00	0.98	x					
40.00	1.50	1.45	x	x	x	x		
40.00	2.00	1.90	x	x	x	x		
40.00	2.50	2.35	x					
40.00	3.00	2.78	x	x	x			
40.00	4.00	3.61	x					
42.40	1.50	1.54	x	x	x	x		
42.40	2.00	2.02	x	x	x 1)	x	x 2)	x 1)

\* Finishes: page 198; 1) Heat-treated, 2) Industrial polished



# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (6/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
42.40	2.50	2.50	x	x	x			
42.40	2.60	2.59			x 1)			x 1)
42.40	3.00	2.96	x	x	x			
42.40	4.00	3.85	x					
45.00	1.50	1.63	x					
45.00	2.00	2.15	x	x	x	x		
45.00	3.00	3.16	x					
48.30	1.50	1.76	x	x	x	x		
48.30	2.00	2.32	x	x	x 1)	x	x	x
48.30	2.50	2.87	x	x	x			
48.30	2.60	2.98			x 1)			
48.30	3.00	3.40	x	x	x			
48.30	4.00	4.44	x					
50.00	1.00	1.23	x					
50.00	1.50	1.82	x	x	x	x		

\* Finishes: page 198; 1) Heat-treated, 2) Industrial polished



# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (7/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
50.00	2.00	2.40	x	x	x			
50.00	3.00	3.53	x					
50.00	4.00	4.61	x					
50.80	1.50	1.85	x	x		x		
50.80	2.00	2.44	x					
50.80	3.00	3.59		x				
54.00	2.00	2.60	x					
60.30	1.50	2.21	x	x	x			
60.30	2.00	2.92	x	x	x	x		
60.30	2.50	3.62	x		x			
60.30	3.00	4.30		x	x			
60.30	4.00	5.64	x					
70.00	1.50	2.57	x					
70.00	2.00	3.41	x					
70.00	3.00	5.03	x					



# CONSTRUCTION TUBES › ROUND

1.4301 - 1.4571 (8/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
70.00	4.00	6.61	x					
76.10	1.50	2.80	x					
76.10	2.00	3.71	x	x	x	x		
76.10	2.50	4.61	x					
76.10	3.00	5.49	x	x	x			
76.10	4.00	7.22	x					
80.00	1.50	2.95			x			
80.00	2.00	3.91	x					
80.00	3.00	5.78	x					
80.00	4.00	7.61	x					
84.00	2.00	4.11						
88.90	2.00	4.35	x	x	x	x		
88.90	2.50	5.41	x					
88.90	3.00	6.45	x	x	x			
88.90	4.00	8.50	x		x			

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# CONSTRUCTION TUBES > ROUND

1.4301 - 1.4571 (9/9)

Outside Ø	Wall thickness	Grade	1.4301	1.4301	1.4301	1.4301	1.4404	1.4571
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m		brushed	polished grain 240 or 320	mirror polished	polished grain 240 or 320	polished grain 240 or 320
101.60	1.50	3.76	x					
101.60	2.00	4.99	x	x	x			
101.60	3.00	7.41	x	x	x			
101.60	4.00	9.78	x					
104.00	2.00	5.11	x					
114.30	2.00	5.62	x	x	x	x		
114.30	3.00	8.36	x	x	x			
114.30	4.00	11.05	x		x			
168.30	2.00	8.33	x					

&gt;

# CONSTRUCTION TUBES > SQUARE

1.4301 - 1.4404 (1/5)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
10 x 10	1.00	0.30	x					
15 x 15	1.50	0.68	x	x	x		x	
16 x 16	1.00	0.50					x	
20 x 20	1.00	0.63	x					
20 x 20	1.20	0.75	x				x	
20 x 20	1.50	0.92	x	x	x		x	
20 x 20	2.00	1.20	x	x	x	x	x	x
25 x 25	1.20	0.94	x				x	
25 x 25	1.50	1.16	x	x		x	x	x
25 x 25	2.00	1.53	x	x	x	x	x	x
25 x 25	2.50	1.88						
25 x 25	3.00	2.22	x			x		
30 x 30	1.20	1.14	x				x	
30 x 30	1.50	1.41	x	x		x	x	
30 x 30	2.00	1.85	x	x	x	x	x	x



# CONSTRUCTION TUBES › SQUARE

1.4301 - 1.4404 (2/5)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
35 x 35	1.50	1.65	x			x	x	
35 x 35	2.00	2.18	x	x		x	x	x
35 x 35	3.00	3.19	x			x		
40 x 40	1.20	1.53	x			x	x	
40 x 40	1.50	1.90	x	x	x	x	x	
40 x 40	2.00	2.50	x	x	x	x	x	x
40 x 40	3.00	3.68	x	x	x	x	x	x
40 x 40	4.00	4.81	x	x	x	x		
45 x 45	1.50	2.14				x		
45 x 45	2.00	2.83	x			x	x	
45 x 45	3.00	4.17	x					
50 x 50	1.50	2.39	x			x	x	
50 x 50	2.00	3.16	x	x	x	x	x	x
50 x 50	2.50	3.91	x				x	
50 x 50	3.00	4.66	x	x	x	x	x	x



# CONSTRUCTION TUBES › SQUARE

1.4301 - 1.4404 (3/5)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
50 x 50	4.00	6.11	x	x	x	x		
50 x 50	5.00	7.51	x		x	x		
60 x 60	2.00	3.81	x	x	x	x	x	x
60 x 60	3.00	5.63	x	x	x	x	x	x
60 x 60	4.00	7.41	x	x	x	x	x	x
60 x 60	5.00	9.14	x	x	x	x		
70 x 70	2.00	4.46	x			x		
70 x 70	3.00	6.61	x	x				
70 x 70	4.00	8.71	x	x				
70 x 70	5.00	10.77	x					
80 x 80	2.00	5.11	x		x	x	x	x
80 x 80	2.50	6.35					x	
80 x 80	3.00	7.59	x	x	x	x	x	x
80 x 80	4.00	10.02	x	x	x	x	x	x
80 x 80	5.00	12.39	x	x	x	x		





# CONSTRUCTION TUBES › SQUARE

1.4301 - 1.4404 (4/5)

Outside Ø	Wall thickness	Grade AISI	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
			304 *)	304 *)	304 *)	304 *)	316 L *)	316 Ti *)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
80 x 80	6.00	14.72	x					
100 x 100	2.00	6.41	x	x		x	x	x
100 x 100	3.00	9.54	x	x	x	x	x	x
100 x 100	4.00	12.62	x	x	x	x	x	
100 x 100	5.00	15.65	x	x	x	x		
100 x 100	6.00	18.63	x	x				
100 x 100	8.00	24.44	x					
100 x 100	10.00	30.05	x					
120 x 120	3.00	11.49	x	x	x	x	x	
120 x 120	4.00	15.22	x	x		x		
120 x 120	5.00	18.91	x	x		x		
120 x 120	6.00	22.54	x					
120 x 120	8.00	29.65	x					
150 x 150	3.00	14.42	x	x	x	x		
150 x 150	4.00	19.13	x	x	x	x		

&gt;

# CONSTRUCTION TUBES > SQUARE

1.4301 - 1.4404 (5/5)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
150 x 150	5.00	23.79	x	x	x	x		
150 x 150	6.00	28.40	x	x				
150 x 150	8.00	37.46	x	x				
150 x 150	10.00	46.32	x	x				
200 x 200	4.00	25.64	x			x		
200 x 200	5.00	31.93	x	x				



# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (1/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
20 x 10	1.50	0.68	x		x	x	x	
20 x 15	1.50	0.80	x					
25 x 15	1.50	0.92	x			x	x	
30 x 10	1.50	0.92	x				x	
30 x 15	1.50	1.04	x			x	x	
30 x 15	2.00	1.36				x		
30 x 20	1.20	0.94	x				x	
30 x 20	1.50	1.16	x			x	x	
30 x 20	2.00	1.53	x	x	x	x	x	x
40 x 10	1.50	1.16	x					
40 x 10	2.00	1.53	x			x		
40 x 15	1.50	1.29	x					
40 x 15	2.00	1.69	x					
40 x 20	1.20	1.14				x	x	
40 x 20	1.50	1.41	x		x	x	x	



# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (2/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
40 x 20	2.00	1.85	x	x	x	x	x	x
40 x 30	2.00	2.18	x	x	x	x	x	
40 x 30	3.00	3.19	x					
50 x 10	1.50	1.41	x					
50 x 20	1.50	1.65	x		x		x	
50 x 20	2.00	2.18	x	x		x	x	
50 x 25	1.50	1.77	x			x		
50 x 25	2.00	2.34	x	x	x	x	x	
50 x 30	1.50	1.90	x					
50 x 30	2.00	2.50	x	x	x	x	x	x
50 x 30	3.00	3.68	x	x	x	x		
50 x 40	2.00	2.83	x					
50 x 40	3.00	4.17	x					
60 x 20	2.00	2.50	x	x		x	x	
60 x 30	1.50	2.14				x	x	



# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (3/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
60 x 30	2.00	2.83	x	x	x	x	x	x
60 x 30	3.00	4.17	x	x	x	x		x
60 x 40	1.50	2.39	x				x	
60 x 40	2.00	3.16	x	x	x	x	x	x
60 x 40	3.00	4.66	x	x	x	x	x	x
60 x 40	4.00	6.11	x	x	x	x	x	
70 x 40	3.00	5.15				x		
80 x 20	2.00	3.16	x			x	x	
80 x 40	1.50	2.87					x	
80 x 40	2.00	3.81	x	x	x	x	x	x
80 x 40	3.00	5.63	x	x	x	x	x	x
80 x 40	4.00	7.41	x	x	x	x		
80 x 40	5.00	9.14	x	x				
80 x 50	3.00	6.12	x		x	x	x	
80 x 60	2.00	4.46	x			x	x	



# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (4/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
80 x 60	3.00	6.61	x	x	x	x	x	
80 x 60	4.00	8.71	x	x	x	x		
80 x 60	5.00	10.77	x	x	x		x	
100 x 20	2.00	3.81	x					
100 x 40	2.00	4.46	x	x		x	x	
100 x 40	3.00	6.61	x	x		x		
100 x 40	4.00	8.71	x			x		
100 x 40	5.00	10.77	x					
100 x 50	2.00	4.78	x	x	x	x	x	x
100 x 50	3.00	7.10	x	x		x	x	x
100 x 50	4.00	9.36	x	x		x		
100 x 50	5.00	11.58	x	x	x	x		
100 x 60	2.00	5.11	x			x		
100 x 60	3.00	7.59	x	x		x	x	
100 x 60	4.00	10.02	x	x		x		



# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (5/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
100 x 60	5.00	12.39	x	x				
100 x 80	3.00	8.56	x	x		x		
100 x 80	4.00	11.32	x	x		x		
120 x 40	2.00	5.11		x				
120 x 40	3.00	7.59	x	x		x	x	
120 x 40	4.00	10.02	x					
120 x 40	2.00	5.76	x			x		x
120 x 60	3.00	8.56	x	x		x	x	
120 x 60	4.00	11.32	x	x		x	x	
120 x 60	5.00	14.02	x	x		x		
120 x 60	6.00	16.68	x					
120 x 80	2.00		x			x		
120 x 80	3.00	9.54	x	x		x	x	
120 x 80	4.00	12.62	x	x		x	x	
120 x 80	5.00	15.65	x	x				



# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (6/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
140 x 80	3.00	10.52	x					
140 x 80	4.00	13.92	x	x	x			
140 x 80	5.00	17.28	x					
150 x 50	3.00	9.54	x	x		x	x	
150 x 50	4.00	12.62	x	x				
150 x 50	5.00	15.65		x				
150 x 100	3.00	11.98	x	x	x	x		
150 x 100	4.00	15.88	x	x		x		
150 x 100	5.00	19.72	x	x		x		
150 x 100	8.00	30.95	x					
150 x 100	10.00	38.19	x					
160 x 80	3.00	11.49	x			x		
160 x 80	4.00	15.22	x			x		
160 x 80	5.00	18.91	x	x		x		
200 x 100	3.00	14.42	x	x		x		





# CONSTRUCTION TUBES › RECTANGULAR

1.4301 - 1.4404 (7/7)

Outside Ø	Wall thickness	Grade	1.4301	1.4404	1.4571	1.4301	1.4301	1.4404
		AISI	304	304	304	304	316 L	316 Ti
			*)	*)	*)	*)	*)	*)
mm	mm	kg/m				brushed	polished grain 240 or 320	brushed
200 x 100	4.00	19.13	x	x		x		
200 x 100	5.00	23.79	x	x				
200 x 100	6.00	28.40	x	x				
200 x 100	8.00	37.46	x					
200 x 150	5.00	27.86	x					

# CORROSION PIPES AND TUBES | ROUND



## Corrosion pipes and tubes | round

in random lengths of 4 to 7 m

\* solution annealed, pickled or metal bright and not annealed,  
pickled or metal bright

## Seamless corrosion pipes and tubes

Hot- (HFD) or cold-formed (CFD or CFA), pickled or metal bright surface.

## Welded corrosion pipes and tubes

Tubes from strip or sheet, heat-treated and pickled or blank annealed; respectively not annealed, pickled or mill finish; model type „b“ or „g“ (removed welding seam) acc. to EN 10217-7 table 2 or table 6 or DIN 11850 acc. to agreement

## Dimension standards

### Seamless corrosion pipes and tubes:

DIN EN ISO 1127, tolerance classes:

Cold-formed pipes D2/T3 or D3/T3 or D4/T3.

Hot-formed pipes D1/T1 or D2/T2.

ASTM A 530, A 999. Cold-formed pipes

(hydraulic tubes) with an outer diameter from

6 to 42 mm, DIN EN ISO 1127 D4/T3 following

DIN EN 10305-1. ASTM A 269.

### Welded corrosion pipes and tubes:

EN 10217-7 TC 1/TC 2, also in combination

with AD 2000 leaflet W 2. EN 10296-2.

DIN 11850 in combination with EN 10217-7

TC1, ASTM A312 and ASTM A 778.

PAS 1057-11.

## Technical terms of delivery

### Seamless corrosion pipes and tubes:

EN 10305-1, EN 10216-5 TC1 and/or TC2,

also in combination with AD2000-leaflet W2.

VdTÜV sheet 418, VdTÜV sheet 421,

ASTM A 213, ASTM A 312.

### Welded corrosion pipes and tubes:

EN 10217-7 TC 1/TC 2, also in combination with

AD 2000-leaflet W 2/W 10. EN 10296-2.

DIN 11850/EN 10357:2013 in combination with

EN 10217-7 TC1. ASTM A312 and ASTM A 778,

PAS 1057-11

### Test certificates

DIN EN 10204 3.1 or 3.2 acc. to agreement



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (1/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
4.00	0.50		0.04						
4.00	1.00		0.08	x					
5.00	1.00		0.10	x					
6.00	0.50		0.07						
6.00	1.00		0.13	x		x			
6.00	1.50		0.17	x		x			
6.00	2.00		0.20	x		x			
6.35	0.71	1/4" x 0.028"	0.10	x		x			
6.35	0.81	1/4" x 0.032"	0.11			x			
6.35	0.89	1/4" x 0.035"	0.12	x		x			
6.35	1.24	1/4" x 0.049"	0.16	x		x			
6.35	1.65	1/4" x 0.065"	0.19			x			
8.00	0.50		0.09	x		x			
8.00	1.00		0.18	x		x			
8.00	1.50		0.24	x		x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (2/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
8.00	2.00		0.30	x		x			
9.00	1.00		0.20			x			
9.53	0.71	3/8" x 0.028"	0.16			x			
9.53	0.89	3/8" x 0.035"	0.19	x		x			
9.53	1.24	3/8" x 0.049"	0.26	x		x			
9.53	1.65	3/8" x 0.065"	0.33			x			
10.00	0.50		0.12	x		x			
10.00	1.00		0.23	x		x			
10.00	1.50		0.32	x		x			
10.00	2.00		0.40	x		x			
10.00	2.50		0.47	x					
10.20	2.00	1/8" GAS	0.41			x			
10.29	1.24	1/8" SCH 10S	0.28	x		x			
10.29	1.73	1/8" SCH 40S	0.37	x		x			
10.29	2.41	1/8" SCH 80S	0.48	x		x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (3/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
10.30	2.00		0.42						x
11.00	1.50		0.36			x			
11.00	2.00		0.45			x			
12.00	1.00		0.28	x	x	x			
12.00	1.50		0.39	x	x	x			
12.00	2.00		0.50	x	x	x			
12.00	2.50		0.59	x	x	x			
12.00	3.00		0.68	x		x			
12.70	0.71	1/2" x 0.028"	0.21			x			
12.70	0.89	1/2" x 0.035"	0.26	x		x			
12.70	1.24	1/2" x 0.049"	0.36	x		x			
12.70	1.65	1/2" x 0.065"	0.46	x		x			
12.70	2.11	1/2" x 0.083"	0.56	x		x			
13.00	1.00		0.30	x		x			
13.00	1.50		0.43	x		x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (4/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
13.50	1.60		0.48						
13.50	2.30	1/4" GAS	0.65	x	x	x			
13.50	2.60		0.71						
13.72	1.65	1/4" SCH 10S	0.50	x		x			
13.72	2.24	1/4" SCH 40S	0.64	x		x	x		x
13.72	3.02	1/4" SCH 80S	0.81	x		x			
14.00	1.00		0.33	x		x			
14.00	1.50		0.47	x		x			
14.00	2.00		0.60	x	x	x			
14.00	2.50		0.72						
14.00	3.00		0.83			x			
15.00	1.00		0.35	x		x			
15.00	1.50		0.51	x	x	x			
15.00	2.00		0.65	x	x	x			
15.00	2.50		0.78	x		x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (5/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
15.00	3.00		0.90	x		x			
16.00	1.00		0.38	x	x	x			
16.00	1.50		0.54	x	x	x			
16.00	2.00		0.70	x	x	x			
16.00	2.50		0.85	x		x			
16.00	3.00		0.98	x		x			
17.15	1.65	3/8" SCH 10S	0.64	x		x			
17.15	2.31	3/8" SCH 40S	0.86	x		x	x		x
17.15	3.20	3/8" SCH 80S	1.12	x		x			
17.20	1.60		0.62	X	x				
17.20	2.00		0.76	X	x				
17.20	2.30		0.86	x	x	x			
18.00	1.00		0.43	x	x	x			
18.00	1.50		0.62	x	x	x			
18.00	2.00		0.80	x	x	x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (6/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
18.00	2.50		0.97						
18.00	3.00		1.13			x			
18.00	4.00		1.40	x	x				
19.05	0.89	3/4" x 0.035"	0.40	x		x			
19.05	1.24	3/4" x 0.049"	0.55	x		x			
19.05	1.65	3/4" x 0.083"	0.72	x		x			
19.05	2.11	3/4" x 0.065"	0.90	x		x			
20.00	1.00		0.48	x		x			
20.00	1.50		0.69	x	x	x			
20.00	2.00		0.90	x	x	x			
20.00	2.50		1.10	x	x	x			
20.00	3.00		1.28	x	x	x			
20.00	4.00		1.60	x		x			
20.00	5.00		1.88	x		x			
20.00	6.00		2.10						





# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (7/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
21.30	1.60		0.79	x	x				
21.30	2.00		0.97	x	x	x			
21.30	2.60		1.22	x	x				
21.30	2.90		1.34						
21.30	3.20		1.45	x	x				
21.34	2.11	1/2" SCH 10S	1.02	x		x	x		x
21.34	2.77	1/2" SCH 40S	1.29	x	x	x	x	x	x
21.34	3.73	1/2" SCH 80S	1.64	x	x	x		x	
21.34	4.78	1/2" SCH 160	1.98	x		x			
21.34	7.47	1/2" XXS	2.59	x	x	x			
22.00	1.00		0.53			x			
22.00	1.50		0.77	x	x	x			
22.00	2.00		1.00	x	x	x			
22.00	3.00		1.43	x					
22.00	4.00		1.80	x					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (8/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
25.00	1.00		0.60	x		x			
25.00	1.50		0.88	x	x	x			
25.00	2.00		1.15	x	x	x			
25.00	2.50		1.41	x	x	x			
25.00	3.00		1.65	x	x	x			
25.00	4.00		2.10	x		x			
25.00	5.00		2.50	x	x	x			
25.40	1.24	1" x 0.049"	0.75	x		x			
25.40	1.65	1" x 0.065"	0.98	x		x			
25.40	2.11	1" x 0.083"	1.23	x		x			
26.67	2.11	3/4" SCH 10S	1.30		x	x	x		x
26.67	2.87	3/4" SCH 40S	1.71	x	x	x	x	x	x
26.67	3.91	3/4" SCH 80S	2.23	x	x	x		x	
26.67	5.56	3/4" SCH 160	2.94	x	x	x			
26.67	7.82	3/4" XXS	3.69	x	x	x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (9/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
26.70	3.91		2.23						
26.90	2.00		1.25	x	x				
26.90	2.30		1.42						
26.90	2.60		1.58	x	x	x			
26.90	3.20		1.90	x	x				
28.00	1.50		1.00	x	x	x			
28.00	2.00		1.30	x	x	x			
28.00	2.50		1.60						
28.00	3.00		1.88	x			x		
28.00	4.00		2.40	x					
30.00	1.50		1.07	x					
30.00	2.00		1.40	x	x	x			
30.00	2.60		1.78	x	x				
30.00	3.00		2.03	x	x	x			
30.00	4.00		2.60	x		x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (10/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
30.00	5.00		3.13	x	x	x			
32.00	2.00		1.50	x	x				
33.40	2.77	1" SCH 10S	2.12	x	x	x	x		x
33.40	3.38	1" SCH 40S	2.54	x	x	x	x	x	x
33.40	4.55	1" SCH 80S	3.29	x	x	x	x	x	x
33.40	6.35	1" SCH 160	4.30	x		x			
33.40	9.09	1" SCH XXS	5.53			x			
33.70	2.00		1.59	x	x				
33.70	2.60		2.02	x	x	x			
33.70	3.20		2.44	x	x	x			
33.70	3.60		2.71						
33.70	4.05		3.01	x	x				
35.00	2.00		1.65			x			
35.00	3.00		2.40			x			
35.00	5.00		3.76			x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (11/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
36.00	2.00		1.70	x	x				
38.00	2.00		1.80	x	x	x			
38.00	2.60		2.30	x	x				
38.00	3.00		2.63	x	x				
38.00	4.00		3.41	x		x			
38.00	5.00		4.13	x	x				
40.00	2.00		1.90	x	x	x			
40.00	2.50		2.35	x	x				
40.00	3.00		2.78	x	x	x			
40.00	4.00		3.61	x					
40.00	5.00		4.38	x	x	x			
42.00	3.00		2.93			x			
42.16	2.77	1 1/4" SCH 10S	2.73	x		x	x		x
42.16	3.56	1 1/4" SCH 40S	3.44	x	x	x	x	x	x
42.16	4.85	1 1/4" SCH 80S	4.53	x	x	x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (12/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
42.16	6.35	1 1/4" SCH 160	5.69	x	x	x			
42.16	9.70	1 1/4" SCH XXS	7.88			x			
42.40	2.00		2.02	x	x				
42.40	2.60		2.59	x	x	x			
42.40	3.20		3.14	x	x	x			
42.40	3.60		3.50	x					
42.40	4.05		3.89	x	x				
44.50	2.00		2.13	x	x				
44.50	2.60		2.73	x	x				
48.26	2.77	1 1/2" SCH 10S	3.16	x		x	x		x
48.26	3.68	1 1/2" SCH 40S	4.11	x	x	x	x	x	x
48.26	5.08	1 1/2" SCH 80S	5.49	x	x	x	x	x	x
48.26	7.14	1 1/2" SCH 160	7.35	x		x			
48.26	10.15	1 1/2" XXS	9.69	x	x	x			
48.30	2.00		2.32	x	x				



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (13/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
48.30	2.60		2.98	x	x	x			
48.30	3.20		3.61	x	x	x			
48.30	3.60		4.03	x					
48.30	4.00		4.44						
48.30	4.05		4.49	x	x				
50.00	2.00		2.40	x	x	x			
50.00	2.50		2.97	x					
50.00	3.00		3.53	x		x			
50.00	4.00		4.61						
50.00	5.00		5.63	x	x	x			
50.00	6.00		6.61	x	x				
51.00	2.60		3.15	x	x				
51.00	4.00		4.71						
54.00	2.00		2.60	x	x				
55.00	5.00		6.26	x	x				



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (14/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
57.00	2.00		2.75	x	x				
57.00	2.60		3.54						
57.00	2.90		3.93	x	x				
57.00	3.00		4.06						
60.00	5.00		6.89	x	x				
60.30	2.00		2.92	x	x	x			
60.30	2.60		3.76	x	x	x			
60.30	2.90		4.17	x	x				
60.30	3.00		4.30						
60.30	3.20		4.58			x			
60.30	3.60		5.11	x	x				
60.30	4.00		5.64	x					
60.30	4.50		6.29	x	x				
60.33	2.77	2" SCH 10S	3.99	x	x	x	x		x
60.33	3.91	2" SCH 40S	5.52	x	x	x	x	x	x





# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (15/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
60.33	5.54	2" SCH 80S	7.60	x	x	x	x	x	x
60.33	8.74	2" SCH 160	11.29	x	x	x			x
60.33	11.07	2" SCH XXS	13.65	x		x			
70.00	2.00		3.41						
70.00	2.90		4.87	x	x				
70.00	5.00		8.14	x					
73.03	3.05	2 1/2" SCH 10S	5.34	x	x	x	x		
73.03	5.16	2 1/2" SCH 40S	8.77	x	x	x	x		
73.03	7.01	2 1/2" SCH 80S	11.59	x	x	x			
73.03	9.53	2 1/2" SCH 160	15.15	x		x			
73.03	14.02	2 1/2" XXS	20.72	x	x	x			
76.10	2.00		3.71						
76.10	2.60		4.79	x	x	x			
76.10	2.90		5.32	x	x				
76.10	3.00		5.49						



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (16/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
76.10	3.20		5.84						
76.10	3.60		6.54	x	x	x			
76.10	3.65	2 1/2" GAS	6.62	x		x			
76.10	4.00		7.22						x
76.10	4.50		8.07	x	x				
76.10	5.00		8.90						
76.10	6.30		11.01						
80.00	5.00		9.39	x	x				
88.90	2.00		4.35	x					
88.90	2.60		5.62	x	x				
88.90	2.90		6.24	x	x				
88.90	3.00		6.45			x	x		x
88.90	3.05	3" SCH 10S	6.56	x	x	x	x	x	x
88.90	3.20		6.87	x	x				
88.90	3.60		7.69	x	x				



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (17/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
88.90	4.00		8.50						x
88.90	4.05		8.60	x	x		x		
88.90	4.50		9.51	x	x				
88.90	5.00		10.50						
88.90	5.49	3" SCH 40S	11.47	x	x	x	x	x	x
88.90	7.62	3" SCH 80S	15.51	x	x	x			x
88.90	11.13	3" SCH 160	21.67	x		x			
88.90	15.24		28.11	x					
90.00	5.00		10.64	x					
97.00	4.00		9.31						
101.60	3.05	3 1/2" SCH 10S	7.53	x	x	x			
101.60	4.00		9.78						
101.60	4.05	3 1/2" GAS	9.89	x	x				
101.60	5.00		12.09						
101.60	5.74	3 1/2" SCH 40S	13.78	x	x	x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (18/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
101.60	8.08	3 1/2" SCH 80S	18.92	x	x	x			
108.00	3.00		7.89	x	x				
108.00	4.00		10.42	x	x				x
108.00	5.00		12.90						
114.30	2.60		7.27						
114.30	3.00		8.36						
114.30	3.05	4" SCH 10S	8.50	x	x	x	x		x
114.30	3.60		9.98	x	x				
114.30	4.50		12.37	x	x				
114.30	5.00		13.68						
114.30	6.02	4" SCH 40S	16.32	x	x	x	x	x	x
114.30	7.11		19.08	x	x				
114.30	8.56	4" SCH 80S	22.66	x	x	x			x
114.30	13.49	4" SCH 160	34.05	x		x			
114.30	17.12	4" XXS	41.66			x			



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (19/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m						
121.00	4.00		11.72						
133.00	4.00		12.92	x	x				
133.00	6.30		19.99						
139.70	4.00		13.59						
139.70	5.00		16.86						
141.30	3.40	5" SCH 10S	11.74	x	x	x			
141.30	6.55	5" SCH 40S	22.10	x	x	x			
141.30	9.53	5" SCH 80S	31.44	x	x	x			
141.30	15.88	5" SCH 160	49.87	x		x			
141.30	19.05	5" SCH XXS	58.31	x	x	x			
159.00	4.50		17.41						
159.00	6.00		22.99						x
159.00	6.30		24.09						
168.30	4.50		18.46	x	x				
168.30	5.00		20.45	x	x				



# CORROSION PIPES AND TUBES › SEAMLESS

1.4301 - 1.4539 (20/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4501	1.4539
			AISI	304 / 304 L	304 L	316 / 316 L	S 31803	S 32760	904 L
			kg/m	*)	*)	*)	*)	*)	*)
mm	mm								
168.30	6.30		25.56						
168.33	3.40	6" SCH 10S	14.04	x	x	x	x		
168.33	7.11	6" SCH 40S	28.70	x	x	x	x	x	x
168.33	10.97	6" SCH 80S	43.23	x	x	x			
168.33	18.28	6" SCH 160	68.68	x		x			
168.30	21.95	6" SCH XXS	80.44	x	x				
219.08	3.76	8" SCH 10S	20.27	x	x	x			
219.08	6.30	8" SCH 20	33.57	x	x	x			
219.08	8.18	8" SCH 40S	43.20	x	x	x	x		x
219.08	12.70	8" SCH 80S	65.63	x	x	x			x
219.08	23.71	8" SCH 160	115.99	x		x			
273.05	4.19	10" SCH 10S	28.21	x		x			
273.05	9.27	10" SCH 40S	61.23	x	x	x			
273.05	12.70	10" SCH 80S	82.79	x	x	x			
323.85	4.57	12" SCH 10S	36.54	x		x			





# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (1/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
4.00	0.50		0.04		x			
4.00	1.00		0.08		x			
5.00	1.00		0.10		x			
6.00	0.50		0.07		x			
6.00	1.00		0.13	x	x	x		x
6.00	1.50		0.17	x	x			x
6.00	2.00		0.20					
6.35	0.71	1/4" x 0.028"	0.10					
6.35	0.81	1/4" x 0.032"	0.11					
6.35	0.89	1/4" x 0.035"	0.12					
6.35	1.24	1/4" x 0.049"	0.16					
6.35	1.65	1/4" x 0.065"	0.19					
8.00	0.50		0.09					
8.00	1.00		0.18	x	x	x		x
8.00	1.50		0.24	x	x	x		





# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (2/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
8.00	2.00		0.30	x	x			x
9.00	1.00		0.20					
9.53	0.71	3/8" x 0.028"	0.16					
9.53	0.89	3/8" x 0.035"	0.19					
9.53	1.24	3/8" x 0.049"	0.26					
9.53	1.65	3/8" x 0.065"	0.33					
10.00	0.50		0.12					
10.00	1.00		0.23	x	x	x		x
10.00	1.50		0.32	x	x			x
10.00	2.00		0.40	x	x			x
10.00	2.50		0.47					
10.20	2.00	1/8" GAS	0.41			x		
10.29	1.24	1/8" SCH 10S	0.28					
10.29	1.73	1/8" SCH 40S	0.37					
10.29	2.41	1/8" SCH 80S	0.48					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (3/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
10.30	2.00		0.42					
11.00	1.50		0.36					
11.00	2.00		0.45					
12.00	1.00		0.28	x	x			x
12.00	1.50		0.39	x	x			x
12.00	2.00		0.50	x	x	x		x
12.00	2.50		0.59					
12.00	3.00		0.68					
12.70	0.71	1/2" x 0.028"	0.21					
12.70	0.89	1/2" x 0.035"	0.26					
12.70	1.24	1/2" x 0.049"	0.36					
12.70	1.65	1/2" x 0.065"	0.46					
12.70	2.11	1/2" x 0.083"	0.56					
13.00	1.00		0.30					
13.00	1.50		0.43					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (4/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
			kg/m	*)	*)	*)	*)	*)
mm	mm							
13.50	1.60		0.48	x	x			x
13.50	2.30	1/4" GAS	0.65	x	x	x		
13.50	2.60		0.71					x
13.72	1.65	1/4" SCH 10S	0.50					
13.72	2.24	1/4" SCH 40S	0.64				x	
13.72	3.02	1/4" SCH 80S	0.81					
14.00	1.00		0.33					
14.00	1.50		0.47			x		
14.00	2.00		0.60	x	x			
14.00	2.50		0.72	x				
14.00	3.00		0.83					
15.00	1.00		0.35					
15.00	1.50		0.51	x	x			x
15.00	2.00		0.65	x	x	x		x
15.00	2.50		0.78					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (5/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
15.00	3.00		0.90					
16.00	1.00		0.38		x			
16.00	1.50		0.54	x	x			x
16.00	2.00		0.70	x	x			x
16.00	2.50		0.85	x	x			x
16.00	3.00		0.98	x	x			x
17.15	1.65	3/8" SCH 10S	0.64					
17.15	2.31	3/8" SCH 40S	0.86				x	
17.15	3.20	3/8" SCH 80S	1.12					
17.20	1.60		0.62		x			
17.20	2.00		0.76	x	x			x
17.20	2.30		0.86	x	x	x		x
18.00	1.00		0.43		x			
18.00	1.50		0.62	x	x			x
18.00	2.00		0.80	x	x			x



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (6/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
18.00	2.50		0.97	x	x			x
18.00	3.00		1.13	x	x			x
18.00	4.00		1.40	x				x
19.05	0.89	3/4" x 0.035"	0.40					
19.05	1.24	3/4" x 0.049"	0.55					
19.05	1.65	3/4" x 0.083"	0.72					
19.05	2.11	3/4" x 0.065"	0.90					
20.00	1.00		0.48					
20.00	1.50		0.69		x			
20.00	2.00		0.90	x	x	x		x
20.00	2.50		1.10	x	x			x
20.00	3.00		1.28	x				x
20.00	4.00		1.60	x	x			x
20.00	5.00		1.88	x	x			x
20.00	6.00		2.10	x				x



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (7/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
			kg/m	*)	*)	*)	*)	*)
mm	mm							
21.30	1.60		0.79		x			
21.30	2.00		0.97	x	x			x
21.30	2.60		1.22	x	x	x		x
21.30	2.90		1.34		x			
21.30	3.20		1.45	x	x			
21.34	2.11	1/2" SCH 10S	1.02	x	x			x
21.34	2.77	1/2" SCH 40S	1.29	x	x		x	x
21.34	3.73	1/2" SCH 80S	1.64	x	x		x	x
21.34	4.78	1/2" SCH 160	1.98	x	x			x
21.34	7.47	1/2" XXS	2.59					
22.00	1.00		0.53		x			
22.00	1.50		0.77	x	x			x
22.00	2.00		1.00	x	x	x		x
22.00	3.00		1.43	x				x
22.00	4.00		1.80					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (8/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
25.00	1.00		0.60					
25.00	1.50		0.88		x			
25.00	2.00		1.15	x	x	x		x
25.00	2.50		1.41	x	x			x
25.00	3.00		1.65	x	x			x
25.00	4.00		2.10	x	x			x
25.00	5.00		2.50	x	x			x
25.40	1.24	1" x 0.049"	0.75					
25.40	1.65	1" x 0.065"	0.98					
25.40	2.11	1" x 0.083"	1.23					
26.67	2.11	3/4" SCH 10S	1.30	x	x			
26.67	2.87	3/4" SCH 40S	1.71	x	x		x	x
26.67	3.91	3/4" SCH 80S	2.23	x	x	x	x	x
26.67	5.56	3/4" SCH 160	2.94		x			
26.67	7.82	3/4" XXS	3.69					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (9/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
26.70	3.91		2.23			x		
26.90	2.00		1.25	x	x	x		x
26.90	2.30		1.42		x			
26.90	2.60		1.58	x	x	x		x
26.90	3.20		1.90	x	x			x
28.00	1.50		1.00	x	x			x
28.00	2.00		1.30	x	x			x
28.00	2.50		1.60		x			
28.00	3.00		1.88	x	x			
28.00	4.00		2.40					
30.00	1.50		1.07					
30.00	2.00		1.40	x	x	x		x
30.00	2.60		1.78		x			
30.00	3.00		2.03	x	x			x
30.00	4.00		2.60	x	x			x





# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (10/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
			kg/m	*)	*)	*)	*)	*)
mm	mm							
30.00	5.00		3.13	x	x			x
32.00	2.00		1.50					
33.40	2.77	1" SCH 10S	2.12	x	x			
33.40	3.38	1" SCH 40S	2.54	x	x		x	
33.40	4.55	1" SCH 80S	3.29	x	x		x	x
33.40	6.35	1" SCH 160	4.30					
33.40	9.09	1" SCH XXS	5.53					
33.70	2.00		1.59	x	x	x		x
33.70	2.60		2.02	x	x			x
33.70	3.20		2.44	x	x	x		x
33.70	3.60		2.71	x				x
33.70	4.05		3.01	x	x			x
35.00	2.00		1.65					
35.00	3.00		2.40		x			
35.00	5.00		3.76					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (11/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
36.00	2.00		1.70		x			
38.00	2.00		1.80	x	x			x
38.00	2.60		2.30		x			
38.00	3.00		2.63		x			x
38.00	4.00		3.41	x	x			x
38.00	5.00		4.13	x	x			x
40.00	2.00		1.90	x				x
40.00	2.50		2.35					
40.00	3.00		2.78					
40.00	4.00		3.61					
40.00	5.00		4.38	x	x			x
42.00	3.00		2.93					
42.16	2.77	1 1/4" SCH 10S	2.73	x	x			x
42.16	3.56	1 1/4" SCH 40S	3.44	x	x		x	x
42.16	4.85	1 1/4" SCH 80S	4.53		x		x	



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (12/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
42.16	6.35	1 1/4" SCH 160	5.69					
42.16	9.70	1 1/4" SCH XXS	7.88					
42.40	2.00		2.02	x	x			x
42.40	2.60		2.59	x	x			x
42.40	3.20		3.14	x	x	x		x
42.40	3.60		3.50	x		x		
42.40	4.05		3.89	x	x			x
44.50	2.00		2.13		x			
44.50	2.60		2.73		x			
48.26	2.77	1 1/2" SCH 10S	3.16	x	x			x
48.26	3.68	1 1/2" SCH 40S	4.11	x	x		x	x
48.26	5.08	1 1/2" SCH 80S	5.49	x	x		x	x
48.26	7.14	1 1/2" SCH 160	7.35					
48.26	10.15	1 1/2" XXS	9.69					
48.30	2.00		2.32	x	x			x



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (13/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
48.30	2.60		2.98	x	x			x
48.30	3.20		3.61	x	x	x		x
48.30	3.60		4.03	x				
48.30	4.00		4.44			x		
48.30	4.05		4.49	x	x			x
50.00	2.00		2.40	x				x
50.00	2.50		2.97					
50.00	3.00		3.53					
50.00	4.00		4.61		x			
50.00	5.00		5.63	x	x			x
50.00	6.00		6.61		x			
51.00	2.60		3.15		x			
51.00	4.00		4.71	x				
54.00	2.00		2.60		x			
55.00	5.00		6.26					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (14/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
			kg/m	*)	*)	*)	*)	*)
mm	mm							
57.00	2.00		2.75		x			
57.00	2.60		3.54	x				x
57.00	2.90		3.93	x				x
57.00	3.00		4.06		x			
60.00	5.00		6.89		x			
60.30	2.00		2.92	x	x			x
60.30	2.60		3.76	x	x			x
60.30	2.90		4.17	x	x			x
60.30	3.00		4.30			x		
60.30	3.20		4.58	x	x			x
60.30	3.60		5.11	x	x	x		
60.30	4.00		5.64	x		x		
60.30	4.50		6.29	x	x			x
60.33	2.77	2" SCH 10S	3.99	x	x			
60.33	3.91	2" SCH 40S	5.52	x	x		x	x



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (15/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
60.33	5.54	2" SCH 80S	7.60	x	x		x	x
60.33	8.74	2" SCH 160	11.29	x	x			x
60.33	11.07	2" SCH XXS	13.65					
70.00	2.00		3.41		x			
70.00	2.90		4.87		x			
70.00	5.00		8.14	x	x			x
73.03	3.05	2 1/2" SCH 10S	5.34		x		x	
73.03	5.16	2 1/2" SCH 40S	8.77	x	x		x	x
73.03	7.01	2 1/2" SCH 80S	11.59	x				x
73.03	9.53	2 1/2" SCH 160	15.15					
73.03	14.02	2 1/2" XXS	20.72					
76.10	2.00		3.71	x	x			x
76.10	2.60		4.79			x		
76.10	2.90		5.32	x	x			x
76.10	3.00		5.49					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (16/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
			kg/m	*)	*)	*)	*)	*)
mm	mm							
76.10	3.20		5.84	x				x
76.10	3.60		6.54	x	x	x		x
76.10	3.65	2 1/2" GAS	6.62					
76.10	4.00		7.22					
76.10	4.50		8.07	x	x		x	x
76.10	5.00		8.90	x				
76.10	6.30		11.01	x	x			x
80.00	5.00		9.39		x			
88.90	2.00		4.35		x			
88.90	2.60		5.62	x				x
88.90	2.90		6.24	x				x
88.90	3.00		6.45			x		
88.90	3.05	3" SCH 10S	6.56	x	x			
88.90	3.20		6.87	x	x			x
88.90	3.60		7.69	x				x



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (17/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
88.90	4.00		8.50			x		
88.90	4.05		8.60	x	x		x	x
88.90	4.50		9.51	x	x			
88.90	5.00		10.50	x				
88.90	5.49	3" SCH 40S	11.47	x	x	x	x	x
88.90	7.62	3" SCH 80S	15.51	x	x			x
88.90	11.13	3" SCH 160	21.67					
88.90	15.24		28.11					
90.00	5.00		10.64		x			
97.00	4.00		9.31	x				
101.60	3.05	3 1/2" SCH 10S	7.53	x	x			x
101.60	4.00		9.78			x	x	
101.60	4.05	3 1/2" GAS	9.89	x				x
101.60	5.00		12.09	x				
101.60	5.74	3 1/2" SCH 40S	13.78	x	x		x	x





# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (18/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
101.60	8.08	3 1/2" SCH 80S	18.92					
108.00	3.00		7.89	x	x			x
108.00	4.00		10.42	x	x			x
108.00	5.00		12.90	x	x			
114.30	2.60		7.27	x	x			x
114.30	3.00		8.36			x		
114.30	3.05	4" SCH 10S	8.50	x	x			x
114.30	3.60		9.98	x	x			x
114.30	4.50		12.37	x	x		x	
114.30	5.00		13.68		x			
114.30	6.02	4" SCH 40S	16.32	x	x	x	x	x
114.30	7.11		19.08					
114.30	8.56	4" SCH 80S	22.66	x	x			x
114.30	13.49	4" SCH 160	34.05					
114.30	17.12	4" XXS	41.66					



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (19/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
121.00	4.00		11.72	x				x
133.00	4.00		12.92	x	x	x		x
133.00	6.30		19.99	x				
139.70	4.00		13.59	x	x	x		x
139.70	5.00		16.86				x	
141.30	3.40	5" SCH 10S	11.74	x				
141.30	6.55	5" SCH 40S	22.10	x	x		x	x
141.30	9.53	5" SCH 80S	31.44	x	x			x
141.30	15.88	5" SCH 160	49.87					
141.30	19.05	5" SCH XXS	58.31					
159.00	4.50		17.41	x	x			x
159.00	6.00		22.99					
159.00	6.30		24.09	x				
168.30	4.50		18.46	x	x	x	x	x
168.30	5.00		20.45	x	x			x



# CORROSION PIPES AND TUBES › SEAMLESS

1.4541 - 1.4878 (20/21)

Outside Ø	Wall thickness	ASME size	Grade	1.4541	1.4571	1.4841	1.4845	1.4878
			AISI	321	316 Ti	314	310 S	321 H
				*)	*)	*)	*)	*)
mm	mm		kg/m					
168.30	6.30		25.56	x				
168.33	3.40	6" SCH 10S	14.04		x			x
168.33	7.11	6" SCH 40S	28.70	x	x		x	x
168.33	10.97	6" SCH 80S	43.23	x	x			x
168.33	18.28	6" SCH 160	68.68					
168.30	21.95	6" SCH XXS	80.44					
219.08	3.76	8" SCH 10S	20.27					
219.08	6.30	8" SCH 20	33.57	x	x		x	x
219.08	8.18	8" SCH 40S	43.20	x	x			x
219.08	12.70	8" SCH 80S	65.63	x	x		x	x
219.08	23.71	8" SCH 160	115.99					
273.05	4.19	10" SCH 10S	28.21					
273.05	9.27	10" SCH 40S	61.23		x			
273.05	12.70	10" SCH 80S	82.79		x			
323.85	4.57	12" SCH 10S	36.54					



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# CORROSION PIPES AND TUBES › SEAMLESS › HYDRAULIC TUBES

1.4301 - 1.4571 (1/3)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4541	1.4571
		AISI	304 / 304 L	321	316 Ti
		kg/m	*)	*)	*)
mm	mm				
6.00	1.00	0.13	x	x	x
6.00	1.50	0.17			x
8.00	1.00	0.18	x	x	x
8.00	1.50	0.24	x		x
10.00	1.00	0.23	x	x	x
10.00	1.50	0.32	x	x	x
10.00	2.00	0.40	x	x	x
12.00	1.00	0.28	x	x	x
12.00	1.50	0.39	x	x	x
12.00	2.00	0.50	x	x	x
14.00	2.00	0.60			x
14.00	2.50	0.72	x		
15.00	1.00	0.35	x		x
15.00	1.50	0.51	x	x	x
15.00	2.00	0.65	x		x



# CORROSION PIPES AND TUBES › SEAMLESS › HYDRAULIC TUBES

1.4301 - 1.4571 (2/3)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4541	1.4571
		AISI	304 / 304 L	321	316 Ti
		kg/m	*)	*)	*)
mm	mm				
16.00	1.50	0.54	x	x	x
16.00	2.00	0.70	x	x	x
16.00	3.00	0.98	x		
18.00	1.50	0.62	x	x	x
18.00	2.00	0.80	x	x	x
18.00	2.50	0.97	x		x
20.00	1.00	0.48	x		
20.00	1.50	0.69	x		x
20.00	2.00	0.90	x	x	x
22.00	1.50	0.77	x		x
22.00	2.00	1.00	x		x
22.00	4.00	1.80	x		
25.00	1.50	0.88	x		x
25.00	2.00	1.15	x	x	x
28.00	1.50	1.00	x	x	x





# CORROSION PIPES AND TUBES › SEAMLESS › PRECISION TUBES

1.4301 - 1.4571 (1/5)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
mm	mm	AISI kg/m	304 / 304 L *)	316 / 316 L *)	321 *)	316 Ti *)
6.00	1.00	0.13	x	x	x	x
6.00	1.50	0.17	x		x	x
8.00	1.00	0.18	x		x	x
8.00	1.50	0.24	x	x	x	x
10.00	1.00	0.23	x	x	x	x
10.00	1.50	0.32	x	x	x	x
10.00	2.00	0.40	x		x	x
12.00	1.00	0.28	x	x	x	x
12.00	1.50	0.39	x	x	x	x
12.00	2.00	0.50	x	x	x	x
14.00	1.00	0.33		x		
14.00	1.5	0.47		x		
14.00	2.00	0.60	x	x	x	x
14.00	2.50	0.72				x
15.00	1.00	0.35		x		x





# CORROSION PIPES AND TUBES › SEAMLESS › PRECISION TUBES

1.4301 - 1.4571 (2/5)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
mm	mm	AISI kg/m	304 / 304 L *)	316 / 316 L *)	321 *)	316 Ti *)
15.00	1.50	0.51	x	x		x
15.00	2.00	0.65	x	x	x	x
16.00	1.00	0.38		x		
16.00	1.50	0.54	x	x		
16.00	2.00	0.70	x	x	x	x
16.00	2.50	0.85			x	
16.00	3.00	0.98	x		x	x
17.20	2.00	0.76			x	
18.00	1.50	0.62	x	x	x	x
18.00	2.00	0.80	x	x	x	x
18.00	2.50	0.97				x
20.00	1.00	0.48		x		x
20.00	1.50	0.69		x		
20.00	2.00	0.90	x	x	x	x
20.00	2.50	1.10	x		x	x



# CORROSION PIPES AND TUBES › SEAMLESS › PRECISION TUBES

1.4301 - 1.4571 (3/5)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
mm	mm	AISI kg/m	304 / 304 L *)	316 / 316 L *)	321 *)	316 Ti *)
20.00	3.00	1.28	x		x	x
21.30	3.20	1.45				x
22.00	1.50	0.77	x		x	x
22.00	2.00	1.00	x	x	x	x
25.00	1.50	0.88		x		
25.00	2.00	1.15	x	x	x	x
25.00	2.50	1.41	x		x	
25.00	3.00	1.65	x		x	x
25.00	4.00	2.10	x			x
28.00	1.50	1.00	x		x	
28.00	2.00	1.30	x	x	x	x
28.00	2.50	1.60				x
28.00	3.00	1.88				x
30.00	1.50	1.07		x		x
30.00	2.00	1.40	x	x		



# CORROSION PIPES AND TUBES › SEAMLESS › PRECISION TUBES

1.4301 - 1.4571 (4/5)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
mm	mm	AISI kg/m	304 / 304 L *)	316 / 316 L *)	321 *)	316 Ti *)
30.00	2.50	1.72	x		x	
30.00	3.00	2.03	x		x	x
30.00	4.00	2.60	x		x	x
30.00	5.00	3.13				x
32.00	1.50	1.15		x		x
32.00	2.00	1.50		x		x
35.00	2.00	1.65	x	x	x	x
35.00	3.00	2.40				x
38.00	2.00	1.80	x	x	x	x
38.00	4.00	3.41			x	x
38.00	5.00	4.13	x		x	x
42.00	2.00	2.00	x			x
42.00	3.00	2.93	x		x	x
42.40	2.60	2.59				x
48.30	2.60	2.98				x

&gt;

# CORROSION PIPES AND TUBES › SEAMLESS › PRECISION TUBES

1.4301 - 1.4571 (5/5)

Outside Ø	Wall thickness	Grade	1.4301/1.4307	1.4401/1.4404	1.4541	1.4571
		AISI	304 / 304 L	316 / 316 L	321	316 Ti
mm	mm	kg/m	*)	*)	*)	*)
50.00	5.00	5.63				x
50.00	6.00	6.61				x
57.00	2.00	2.75				x
57.00	2.90	3.93			x	
60.30	4.00	5.64				x
88.90	4.50	9.51				x

&gt;

# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (1/14)

Outside Ø	Wall thickness	ASME sizes	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
5.00	0.75		0.08	x				
6.00	1.00		0.13	x	x			
8.00	1.00		0.18	x	x			
8.00	1.50		0.24	x				
10.00	1.00		0.23	x	x			x
10.00	1.50		0.32	x				
12.00	1.00		0.28	x	x			x
12.00	1.50		0.39	x	x			x
14.00	1.00		0.33	x	x			x
14.00	1.50		0.47	x				x
15.00	1.00		0.35	x	x			
15.00	1.50		0.51	x	x			x
16.00	1.00		0.38	x				
16.00	1.50		0.54	x				x
17.20	1.60		0.62	x	x			



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (2/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
17.20	2.00		0.76	x	x			
17.20	2.30	3/8" GAS	0.86	x	x			x
18.00	1.00		0.43	x				
18.00	1.50		0.62	x				x
20.00	1.00		0.48	x				x
20.00	1.50		0.69	x	x			x
20.00	2.00		0.90	x	x			x
21.30	1.60		0.79	x	x			x
21.30	2.00		0.97	x	x		x	x
21.30	2.60		1.22	x	x		x	x
21.30	2.65	1/2" GAS	1.24	x	x			
21.34	2.11	1/2" SCH 10S	1.02	x				
22.00	1.00		0.53	x				
22.00	1.50		0.77	x	x			
22.00	2.00		1.00	x				



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (3/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
23.00	1.50		0.81	x	x			x
25.00	1.00		0.60	x				
25.00	1.50		0.88	x	x			
25.00	2.00		1.15	x	x			
26.90	1.60		1.01	x	x			x
26.90	2.00		1.25	x	x		x	x
26.90	2.60		1.58	x	x		x	x
26.90	2.65	3/4" GAS	1.61	x	x			
28.00	1.50		1.00	x	x			x
28.00	2.00		1.30	x	x			
30.00	1.50		1.07	x	x			
30.00	2.00		1.40	x	x			x
30.00	2.60		1.78		x			
30.00	3.00		2.03					x
32.00	1.50		1.15	x	x			



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (4/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
32.00	2.00		1.50	x	x			
33.00	1.50		1.18	x	x			
33.70	1.60		1.29	x	x			x
33.70	2.00		1.59	x	x		x	x
33.70	2.60		2.02	x	x		x	x
33.70	3.00		2.31	x	x			
33.70	3.20		2.44	x	x			x
33.70	3.25	1" GAS	2.48	x	x			
34.00	1.50		1.22	x	x			
35.00	1.50		1.26		x			
35.00	2.00		1.65	x	x			x
38.00	1.50		1.37					
38.00	2.00		1.80	x	x			
38.10	1.50		1.37	x	x			
38.10	2.00		1.81	x	x			





# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (5/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
40.00	1.50		1.45	x	x			
40.00	2.00		1.90	x	x			x
40.00	3.00		2.78	x				
42.40	1.60		1.63	x	x			x
42.40	2.00		2.02	x	x		x	x
42.40	2.60		2.59	x	x		x	x
42.40	3.00		2.96	x	x			
42.40	3.20		3.14	x	x			x
42.40	3.25	1 1/4" GAS	3.19	x	x			
42.40	4.00		3.85	x				
43.00	1.50		1.56	x	x			x
44.00	1.50		1.60		x			
44.50	1.50		1.62	x	x			
44.50	2.00		2.13	x	x			
44.50	2.60		2.73	x				



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (6/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
48.30	1.60		1.87	x	x			x
48.30	2.00		2.32	x	x		x	x
48.30	2.60		2.98	x	x		x	x
48.30	3.00		3.40	x	x			
48.30	3.20		3.61	x	x		x	x
48.30	3.25	1 1/2" GAS	3.67	x	x			
48.30	3.60		4.03	x				
48.30	4.00		4.44	x				
50.00	1.50		1.82	x	x			
50.00	2.00		2.40	x	x			x
50.00	3.00		3.53	x				
50.80	1.50		1.85	x	x			
50.80	2.00		2.44	x	x			
50.80	2.60		3.14	x	x			
52.00	1.50		1.90	x	x			



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (7/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
52.00	2.00		2.50	x	x			
53.00	1.50		1.93	x	x			
54.00	2.00		2.60	x	x			x
57.00	2.00		2.75	x	x			
57.00	3.00		4.06	x	x			
60.30	1.60		2.35	x	x			x
60.30	2.00		2.92	x	x		x	x
60.30	2.60		3.76	x	x		x	x
60.30	3.00		4.30	x	x		x	x
60.30	3.20		4.58	x				x
60.30	3.60		5.11	x	x			x
60.30	3.65	2" GAS	5.18	x	x			
60.30	4.00		5.64					x
60.33	2.77		3.99	x				
63.50	1.50		2.33	x				



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (8/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
63.50	2.00		3.08	x				
70.00	1.50		2.57	x				
70.00	2.00		3.41	x				x
70.00	2.90		4.87					
70.00	3.00		5.03	x	x			x
73.00	1.50		2.69	x	x			
76.10	1.60		2.98	x	x			
76.10	2.00		3.71	x	x		x	x
76.10	2.30		4.25		x			x
76.10	2.60		4.79	x	x		x	x
76.10	3.00		5.49	x	x	x		x
76.10	3.20		5.84	x				x
76.10	3.60		6.54	x	x			x
76.10	3.65	2 1/2" GAS	6.62	x	x			
76.10	4.00		7.22	x				x



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (9/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
80.00	1.50		2.95	x				
80.00	2.00		3.91	x				
80.00	3.00		5.78	x				
84.00	2.00		4.11	x	x			x
85.00	1.50		3.14	x				
85.00	2.00		4.16	x				
88.90	2.00		4.35	x	x		x	x
88.90	2.30		4.99		x			x
88.90	2.60		5.62	x	x		x	x
88.90	2.90		6.24					x
88.90	3.00		6.45	x	x		x	x
88.90	3.20		6.87	x				x
88.90	4.00		8.50	x	x			x
101.60	2.00		4.99	x	x		x	x
101.60	3.00		7.41	x	x			



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (10/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
104.00	2.00		5.11	x	x			x
106.00	3.00		7.74	x	x			
108.00	2.00		5.31	x	x			x
108.00	3.00		7.89	x	x			x
108.00	4.00		10.42	x	x			
114.30	1.50		4.24		x			
114.30	2.00		5.62	x	x		x	x
114.30	2.60		7.27	x	x		x	x
114.30	3.00		8.36	x	x		x	x
114.30	3.20		8.90	x				
114.30	3.60		9.98	x	x		x	x
114.30	4.00		11.05	x	x			x
129.00	2.00		6.36	x	x			x
131.00	3.00		9.62	x	x			
133.00	2.00		6.56	x				



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (11/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
133.00	3.00		9.77	x				x
133.00	4.00		12.92	x	x			
139.70	2.00		6.90	x	x		x	x
139.70	2.60		8.93	x	x		x	x
139.70	3.00		10.27	x	x		x	x
139.70	4.00		13.59	x	x		x	x
154.00	2.00		7.61	x	x			x
156.00	3.00		11.49	x	x			x
159.00	2.00		7.86	x				x
159.00	3.00		11.72	x	x		x	x
159.00	4.00		15.52	x	x			
168.30	2.00		8.33	x	x		x	x
168.30	2.60		10.79	x	x		x	x
168.30	3.00		12.42	x	x	x	x	x
168.30	4.00		16.46	x	x		x	x



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (12/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
168.30	5.00		20.45				x	x
204.00	2.00		10.12	x	x			x
205.00	2.50		12.68	x				x
206.00	3.00		15.25	x	x			x
208.00	4.00		20.43	x	x			
219.10	2.00		10.87	x	x		x	x
219.10	2.60		14.10	x	x		x	x
219.10	3.00		16.23	x	x		x	x
219.10	4.00		21.54	x	x		x	x
219.10	5.00		26.81				x	x
219.10	6.30		33.57				x	x
254.00	2.00		12.62	x	x			x
255.00	2.50		15.81					x
256.00	3.00		19.01	x	x			x
273.00	2.00		13.57	x	x			





# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (13/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
273.00	2.60		17.60	x	x			
273.00	3.00		20.28	x	x		x	x
273.00	4.00		26.94	x	x	x	x	x
273.00	5.00		33.55				x	x
273.00	6.00		40.11					x
273.00	6.30		42.07				x	x
304.00	2.00		15.12	x	x			x
306.00	3.00		22.76	x	x			x
323.90	2.00		16.12	x	x			
323.90	2.60		20.92	x	x			
323.90	3.00		24.11	x	x		x	x
323.90	4.00		32.04	x	x	x	x	x
323.90	5.00		39.93					x
323.90	6.30		50.10				x	x
355.60	3.00		26.49	x	x			x



# CORROSION PIPES AND TUBES › WELDED › NOT HEAT-TREATED

1.4301 - 1.4571 (14/14)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4539	1.4541	1.4571
			AISI	304 / 304 L	316 L		321	316 Ti
			kg/m	*)	*)		*)	*)
mm	mm							
355.60	4.00		35.22	x	x	x		x
406.40	3.00		30.30	x	x			x
406.40	4.00		40.30	x	x		x	x
406.40	5.00		50.26					x
457.20	2.90		32.99	x	x			
457.20	4.00		45.39	x				
508.00	3.00		37.94	x	x			x
508.00	4.00		50.48	x	x			x
508.00	5.00		62.98					x
609.60	3.00		45.57	x	x			
609.60	4.00		60.66	x	x			x
711.20	4.00		70.83	x	x			
812.80	4.00		81.01	x	x			



# CORROSION PIPES AND TUBES › WELDED › DAIRY TUBES

1.4301 - 1.4404 (1/3)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4301 / 1.4307	1.4301 / 1.4307	1.4404	1.4404	1.4404
			AISI	304 / 304 L	304 / 304 L	304 / 304 L	316 L	316 L	316 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m	execution CC	execution BC	annealed & polished	execution CC	execution BC	annealed & polished
18.00	1.00	DIN 15	0.43	x	x		x	x	
18.00	1.50	DIN 15	0.62	x	x	x	x	x	x
19.00	1.50	DIN 15	0.66	x	x		x	x	
22.00	1.00	DIN 20	0.53	x	x		x	x	
22.00	1.50	DIN 20	0.77	x	x	x	x	x	x
23.00	1.50	DIN 20	0.81	x	x		x	x	
25.40	1.25	1"	0.76	x	x	x	x	x	x
28.00	1.00	DIN 25	0.68	x	x	x		x	
28.00	1.50	DIN 25	1.00		x	x	x	x	x
29.00	1.50	DIN 25	1.03	x	x		x	x	
31.80	1.20	1 1/4"	0.92	x	x	x			x
34.00	1.00	DIN 32	0.83	x	x	x		x	
34.00	1.50	DIN 32	1.22	x	x	x	x	x	x
35.00	1.50	DIN 32	1.26	x	x	x	x	x	x
36.00	2.00	DIN 32	1.70						

\* Finishes: page 221; execution CC: pickled; execution BC: heat-treated, annealed



# CORROSION PIPES AND TUBES › WELDED › DAIRY TUBES

1.4301 - 1.4404 (2/3)

Outside Ø	Wall thickness	ASME size	Grade	1.4301 / 1.4307	1.4301 / 1.4307	1.4301 / 1.4307	1.4404	1.4404	1.4404
			AISI	304 / 304 L	304 / 304 L	304 / 304 L	316 L	316 L	316 L
				*)	*)	*)	*)	*)	*)
mm	mm		kg/m	execution CC	execution BC	annealed & polished	execution CC	execution BC	annealed & polished
38.10	1.25	1 1/2"	1.15	x	x	x	x	x	x
38.10	1.50	1 1/2"	1.37	x	x	x	x	x	x
40.00	1.00	DIN 40	0.98	x	x	x	x	x	
40.00	1.50	DIN 40	1.45	x	x	x	x	x	x
41.00	1.50	DIN 40	1.48	x	x		x	x	
50.80	1.25	2"	1.55	x	x	x			x
50.80	1.50	2"	1.85	x	x	x	x	x	x
52.00	1.00	DIN 50	1.28	x	x	x		x	
52.00	1.50	DIN 50	1.90	x	x	x	x	x	x
53.00	1.50	DIN 50	1.93	x	x	x	x	x	x
63.50	1.50	2 1/2"	2.33	x	x	x	x		x
70.00	2.00	DIN 65	3.41	x	x	x	x	x	x
76.10	1.50	3"	2.80	x	x	x	x	x	x
85.00	2.00	DIN 80	4.16	x	x	x	x	x	x
101.60	2.00	4"	4.99	x	x	x	x	x	x

\* Finishes: page 221; execution CC: pickled; execution BC: heat-treated, annealed



&gt;

# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (1/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
				*)	*)	*)	*)
mm	mm		kg/m				
6.00	1.00		0.13	x	x	x	x
8.00	1.00		0.18	x	x	x	x
8.00	1.50		0.24	x	x		
10.00	1.00		0.23	x	x	x	x
10.00	1.50		0.32	x	x		
12.00	1.00		0.28	x	x	x	x
12.00	1.50		0.39	x	x	x	x
12.00	2.00		0.50	x	x		
13.00	1.50		0.43	x			
13.72	1.65	1/4" SCH 10S	0.50	x	x		
13.72	2.24	1/4" SCH 40S	0.64	x	x		
14.00	1.00		0.33	x	x		x
14.00	1.50		0.47	x	x	x	x
14.00	2.00		0.60	x	x		x
15.00	1.00		0.35	x	x		



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (2/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
				*)	*)	*)	*)
mm	mm		kg/m				
15.00	1.50		0.51	x	x	x	x
15.00	2.00		0.65	x	x		x
16.00	1.00		0.38	x	x		x
16.00	1.50		0.54	x	x	x	x
16.00	2.00		0.70	x	x		
17.15	1.65	3/8" SCH 10S	0.64	x	x		
17.15	2.31	3/8" SCH 40S	0.86	x	x		
17.20	1.60		0.62	x	x		
17.20	2.00		0.76				x
17.20	2.30	3/8" GAS	0.86				x
18.00	1.00		0.43	x		x	x
18.00	1.50		0.62		x	x	x
18.00	2.00		0.80	x	x		x
20.00	1.00		0.48	x	x		x
20.00	1.50		0.69	x	x		x

\* Finishes: page 221;

1) Polished G320



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (3/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
			kg/m	*)	*)	*)	*)
mm	mm						
20.00	2.00		0.90	x	x	x	x
21.30	1.60		0.79		x		x
21.30	2.00		0.97	x 1)	x 1)	x	x
21.30	2.60		1.22	x			x
21.30	2.65	1/2" GAS	1.24	x	x		
21.34	1.65	1/2" SCH 5S	0.81	x	x		
21.34	2.11	1/2" SCH 10S	1.02	x	x		
21.34	2.77	1/2" SCH 40S	1.29	x	x		
22.00	1.00		0.53	x			
22.00	1.50		0.77		x		
22.00	2.00		1.00	x	x		
25.00	1.00		0.60	x			x
25.00	1.50		0.88	x	x		x
25.00	2.00		1.15	x	x	x	x
25.00	2.50		1.41	x			

\* Finishes: page 221;

1) Polished G320





# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (4/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
			kg/m	*)	*)	*)	*)
mm	mm						
26.67	1.65	3/4" SCH 5S	1.03	x	x		
26.67	2.11	3/4" SCH 10S	1.30	x	x		
26.67	2.87	3/4" SCH 40S	1.71	x	x		
26.90	1.60		1.01				x
26.90	2.00		1.25	x 1)	x 1)	x	x
26.90	2.60		1.58	x		x	x
26.90	2.65	3/4" GAS	1.61	x	x		
28.00	1.50		1.00	x			
28.00	2.00		1.30	x	x		x
30.00	1.00		0.73	x			
30.00	1.50		1.07		x		
30.00	2.00		1.40	x	x		
30.00	2.50		1.72	x			
32.00	1.50		1.15	x	x		
32.00	2.00		1.50	x	x		

\* Finishes: page 221;

1) Polished G320



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (5/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
			kg/m	*)	*)	*)	*)
mm	mm						
33.40	1.65	1" SCH 5S	1.31	x	x		
33.40	2.77	1" SCH 10S	2.12	x	x		
33.40	3.38	1" SCH 40S	2.54	x	x		
33.70	2.00		1.59	x1)	x1)	x	x
33.70	2.60		2.02	x	x	x	x
33.70	3.20		2.44	x	x	x	x
33.70	3.25	1" GAS	2.48	x	x		
35.00	1.50		1.26	x	x		x
35.00	2.00		1.65	x	x		
38.00	1.50		1.37	x		x	
38.00	2.00		1.80	x	x		
40.00	1.50		1.45	x	x		x
40.00	2.00		1.90	x			x
42.16	1.65	1 1/4" SCH 5S	1.67	x	x		
42.16	2.77	1 1/4" SCH 10S	2.73	x	x		

\* Finishes: page 221;

1) Polished G320



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (6/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
				*)	*)	*)	*)
mm	mm		kg/m				
42.16	3.56	1 1/4" SCH 40S	3.44	x	x		
42.40	1.60		1.63				x
42.40	2.00		2.02	x 1)	x 1)	x	x
42.40	2.60		2.59	x	x	x	x
42.40	3.20		3.14	x	x	x	x
42.40	3.25	1 1/4" GAS	3.19	x	x		
44.50	2.00		2.13	x			x
48.26	1.65	1 1/2" SCH 5S	1.93	x	x		
48.26	2.77	1 1/2" SCH 10S	3.16	x	x		
48.26	3.68	1 1/2" SCH 40S	4.11	x	x		
48.30	2.00		2.32	x 1)	x 1)	x	x
48.30	2.60		2.98	x	x	x	x
48.30	3.20		3.61	x	x	x	x
48.30	3.25	1 1/2" GAS	3.67	x	x		
48.30	3.60		4.03			x	x

\* Finishes: page 221;

1) Polished G320



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (7/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
			kg/m	*)	*)	*)	*)
mm	mm						
50.00	1.50		1.82	x			
50.00	2.00		2.40	x	x		x
50.80	2.00		2.44	x	x		
50.80	2.60		3.14	x			
52.00	1.50		1.90				x
53.00	1.50		1.93	x			
54.00	2.00		2.60	x 1)	x 1)	x	x
57.00	2.00		2.75	x	x		
57.00	3.00		4.06	x	x		
60.30	2.00		2.92	x 1)	x 1)	x	x
60.30	2.60		3.76	x		x	x
60.30	3.00		4.30	x		x	x
60.30	3.60		5.11	x	x	x	x
60.30	3.65	2" GAS	5.18	x	x		
60.33	1.65	2" SCH 5S	2.42	x	x		

\* Finishes: page 221;

1) Polished G320



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (8/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
			kg/m	*)	*)	*)	*)
mm	mm						
60.33	2.77	2" SCH 10S	3.99	x	x		
60.33	3.91	2" SCH 40S	5.52	x	x		
63.50	2.60		3.96	x			
70.00	3.00		5.03	x			
73.03	2.11	2 1/2" SCH 5S	3.75	x	x		
73.03	3.05	2 1/2" SCH 10S	5.34	x	x		
73.03	5.16	2 1/2" SCH 40S	8.77	x	x		
76.10	1.60		2.98				x
76.10	2.00		3.71	x 1)	x 1)	x	x
76.10	2.30		4.25		x	x	x
76.10	2.60		4.79	x		x	
76.10	3.00		5.49			x	x
76.10	3.60		6.54	x	x	x	
76.10	3.65	2 1/2" GAS	6.62	x	x		
88.90	2.00		4.35	x 1)	x	x	x

\* Finishes: page 221;

1) Polished G320



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (9/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
			kg/m	*)	*)	*)	*)
mm	mm						
88.90	2.11	3" SCH 5S	4.59	x	x		
88.90	2.30		4.99		x	x	x
88.90	2.60		5.62	x	x	x	
88.90	2.90		6.24		x		
88.90	3.00		6.45	x	x	x	x
88.90	3.05	3" SCH 10S	6.56	x	x		
88.90	3.20		6.87	x		x	x
88.90	4.00		8.50	x	x	x	x
88.90	5.49	3" SCH 40S	11.47	x	x		
101.60	2.00		4.99	x			
101.60	3.00		7.41	x	x		
101.60	3.05	3 1/2" SCH 10S	7.53	x	x		
101.60	4.00		9.78	x	x		
101.60	5.74	3 1/2" SCH 40S	13.78	x	x		
108.00	3.00		7.89				



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (10/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
				*)	*)	*)	*)
mm	mm		kg/m				
114.30	2.00		5.62	x 1)	x 1)	x	x
114.30	2.11	4" SCH 5S	5.93	x	x		
114.30	2.60		7.27	x	x	x	x
114.30	3.00		8.36	x	x	x	x
114.30	3.05	4" SCH 10S	8.50	x	x		
114.30	3.60		9.98		x		x
114.30	4.00		11.05	x	x	x	x
114.30	5.00		13.68			x	x
114.30	6.02	4" SCH 40S	16.32	x	x		
114.30	6.30		17.04				x
141.30	2.77	5" SCH 5S	9.61	x	x		
141.30	3.40	5" SCH 10S	11.74	x	x		
141.30	6.55	5" SCH 40S	22.10	x	x		
168.28	2.77	6" SCH 5S	11.48	x	x		
168.28	3.40	6" SCH 10S	14.04	x	x		



# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (11/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
				*)	*)	*)	*)
mm	mm		kg/m				
168.28	7.11	6" SCH 40S	28.69	x	x		
219.08	2.77	8" SCH 5S	15.00	x	x		
219.08	3.76	8" SCH 10S	20.27	x	x		
219.08	8.18	8" SCH 20	43.20	x	x		
219.08	8.18	8" SCH 40S	43.20	x	x		
273.05	3.40	10" SCH 5S	22.96	x	x		
273.05	4.19	10" SCH 10S	28.21	x	x		
273.05	6.35	10" SCH 20	42.41	x	x		
273.05	9.27	10" SCH 40S	61.23	x	x		
323.85	3.96	12" SCH 5S	31.72	x	x		
323.85	4.57	12" SCH 10S	36.54	x	x		
323.85	6.35	12" SCH 20	50.48	x	x		
323.85	9.53	12" SCH 40S	75.01	x	x		
355.60	4.78	14" SCH 10S	41.99	x	x		
355.60	6.35	14" SCH 10	55.53	x	x		





# CORROSION PIPES AND TUBES › WELDED › HEAT-TREATED

1.4301 - 1.4571 (12/12)

Outside Ø	Wall thickness	ASME size	Grade	1.4301/1.4307	1.4404	1.4541	1.4571
			AISI	304 / 304 L	316 L	321	316 Ti
				*)	*)	*)	*)
mm	mm		kg/m				
355.60	9.53	14" SCH 40S	82.58	x	x		
406.40	4.78	16" SCH 10S	48.07	x	x		
406.40	6.35	16" SCH 10	63.61	x	x		
406.40	9.53	16" SCH 40S	94.71	x	x		
457.20	4.78	18" SCH 10S	54.15	x	x		
457.20	6.35	18" SCH 10	71.69	x	x		
457.20	9.53	18" SCH 40S	106.83	x	x		
508.00	5.56	20" SCH 10S	69.95	x	x		
508.00	6.35	20" SCH 10	79.76	x	x		
508.00	9.53	20" SCH 40S	118.95	x	x		
609.60	6.35	24" SCH 10S	95.92	x	x		
609.60	9.53	24" SCH 40S	143.20	x	x		

# HOLLOW BARS



## Hollow bars | seamless | round

Hot or cold-formed, heat-treated, free of scale (pickled or machined)

\* solution annealed, pickled

## Technical terms of delivery

EN 10216-5, additional inspection on request

## Tolerances

ISO 2938 or Outside diameter: -0/+2%, at least -0/+1.0 mm; Inside diameter: +0/+2 %, at least +0/1.0 mm, Wall thickness: minimum 5% of nominal wall thickness, no maximum

## Test certificates

EN 10204 3.1/3.2  
acc. to agreement



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (1/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
32	16	4.81	x	x	x			x	
32	20	3.91	x	x	x		x	x	x
36	16	6.51	x	x	x			x	
36	20	5.61	x	x	x		x	x	x
36	25	4.20	x	x	x		x	x	x
40	20	7.51	x	x	x		x	x	x
40	25	6.10	x	x	x		x	x	x
40	28	5.11	x	x	x		x	x	x
45	20	10.17	x	x	x		x	x	x
45	25	8.76	x	x					
45	28	7.77	x	x	x		x	x	x
45	32	6.27	x	x	x		x	x	x
50	25	11.74	x	x	x	x		x	
50	28	10.74	x	x					
50	32	9.24	x	x	x		x	x	x



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (2/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
50	36	7.54	x	x	x		x	x	x
50	40	5.63	x	x				x	
56	20	17.13	x	x					
56	25	15.72	x	x					
56	28	14.72	x	x	x	x	x	x	x
56	30	14.00	x	x					
56	36	11.52	x	x	x		x	x	x
56	40	9.62	x	x	x		x	x	x
56	45	6.95	x	x				x	
60	40	12.52	x	x	x		x	x	x
60	45	9.86	x	x				x	
63	32	18.44	x	x	x	x	x	x	x
63	36	16.73	x	x	x			x	
63	40	14.83	x	x	x		x	x	x
63	45	12.17	x	x	x			x	

\*Finishes: page 301



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (3/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
63	50	9.20	x	x	x		x	x	x
70	50	15.02	x	x				x	
71	36	23.44	x	x	x	x	x	x	x
71	40	21.54	x	x	x			x	
71	45	18.88	x	x	x	x	x	x	x
71	56	11.93	x	x	x	x	x	x	x
75	40	25.20	x	x	x			x	
75	50	19.56	x	x	x				
75	56	15.58	x	x				x	
75	60	12.68	x	x	x			x	
80	40	30.05	x	x	x	x	x	x	x
80	45	27.39	x	x	x			x	
80	50	24.41	x	x	x	x	x	x	x
80	63	15.22	x	x	x		x	x	x
85	45	32.55	x	x	x		x	x	x

\*Finishes: page 301



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (4/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
90	50	35.06	x	x	x		x	x	x
90	56	31.07	x	x	x	x	x	x	x
90	63	25.86	x	x	x	x	x	x	x
90	68	21.76			x			x	
90	71	19.15	x	x	x		x	x	x
95	50	40.85	x	x	x			x	
100	56	42.97	x	x	x	x	x	x	x
100	63	37.75	x	x	x		x	x	x
100	71	31.04	x	x	x	x	x	x	x
100	80	22.54	x	x	x		x	x	x
106	56	50.71	x	x	x		x	x	x
106	63	45.49	x	x	x			x	
106	71	38.78	x	x	x	x	x	x	x
106	80	30.27	x	x	x	x	x	x	x
106	85	25.11						x	

\*Finishes: page 301



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (5/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
106	90	19.63	x	x					
112	63	53.68	x	x	x			x	
112	71	46.97	x	x	x		x	x	x
112	80	38.46	x	x	x		x	x	x
112	90	27.82	x	x	x	x	x	x	x
112	95	22.03						x	
118	63	62.32	x	x	x		x	x	x
118	71	55.61	x	x	x			x	
118	80	47.10	x	x	x	x		x	
118	90	36.46	x	x	x		x	x	x
125	71	66.26	x	x	x		x	x	x
125	80	57.75	x	x	x			x	
125	90	47.11	x	x	x	x	x	x	x
125	100	35.21	x	x	x	x	x	x	x
132	71	77.52	x	x	x		x	x	x

\*Finishes: page 301



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (6/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
132	80	69.01	x	x	x		x	x	x
132	90	58.37	x	x	x	x	x	x	x
132	106	38.74	x	x	x		x	x	x
140	80	82.63	x	x	x		x	x	x
140	90	71.99	x	x	x			x	
140	100	60.10	x	x	x	x	x	x	x
140	106	52.36	x	x					
140	112	44.17	x	x	x	x	x	x	x
150	80	100.79	x	x	x		x	x	x
150	95	84.35	x	x	x			x	
150	106	70.51	x	x	x	x	x	x	x
150	112	62.32	x	x	x			x	
150	125	43.04	x	x	x		x	x	x
150	132	31.78	x	x				x	
160	90	109.55	x	x	x			x	

\*Finishes: page 301





# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (7/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
160	112	81.73	x	x	x	x	x	x	x
160	120	70.11	x	x	x		x	x	x
160	132	51.18	x	x	x		x	x	x
170	100	118.31	x	x					
170	106	110.58	x	x	x		x	x	x
170	118	93.75	x	x	x		x	x	x
170	130	75.12	x	x	x	x	x	x	x
170	140	58.22	x	x	x	x	x	x	x
175	145	60.10						x	
180	125	105.01	x	x	x	x	x	x	x
180	130	97.03	x	x	x			x	
180	140	80.13	x	x	x	x		x	
180	150	61.97	x	x	x		x	x	x
190	106	155.65	x	x	x			x	
190	123	131.28	x	x	x		x	x	x

\*Finishes: page 301



# HOLLOW BARS › SEAMLESS › ROUND

1.4301- 1.4878 (8/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
190	132	116.91	x	x	x			x	
190	140	103.29	x	x	x		x	x	x
190	150	85.14	x	x	x			x	
190	160	65.73	x	x	x	x	x	x	x
200	140	127.70	x	x	x		x	x	x
200	150	109.55	x	x				x	
200	160	90.14	x	x	x	x	x	x	x
200	170	69.49	x	x	x				
212	130	175.56	x	x	x	x	x	x	x
212	150	140.50	x	x	x		x	x	x
212	170	100.44	x	x	x	x		x	
212	180	78.53	x	x	x				
224	140	191.41	x	x	x		x	x	x
224	160	153.85	x	x	x			x	
224	170	133.19	x	x	x			x	

\*Finishes: page 301

&gt;

# HOLLOW BARS › SEAMLESS › ROUND

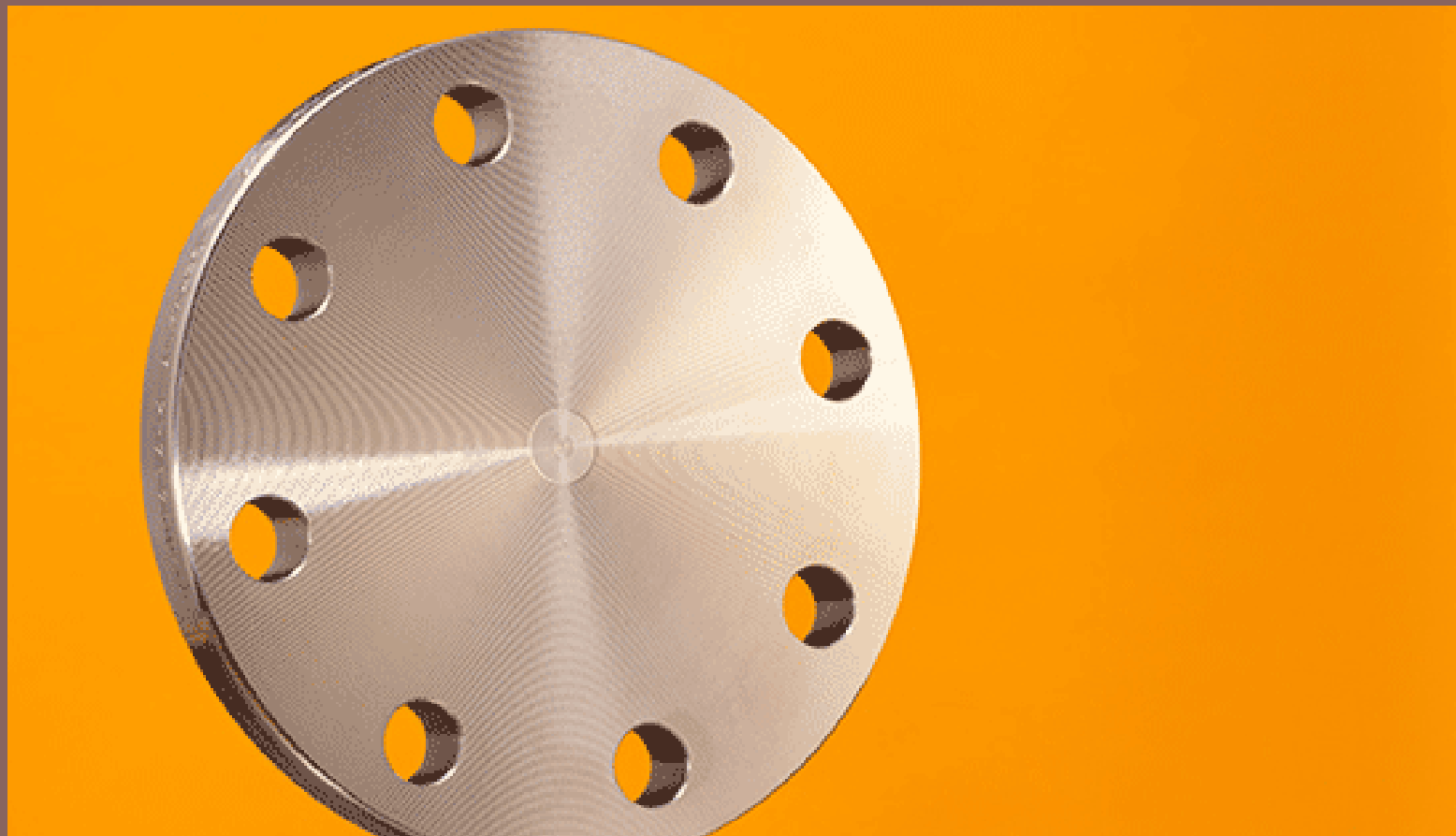
1.4301- 1.4878 (9/9)

Outside Ø	Inside-Ø	Grade	1.4301 / 1.4307	1.4306	1.4401 / 1.4404	1.4462	1.4541	1.4571	1.4878
		AISI	304 / 304 L	304 L	316 / 316 L	S31803	321	316 Ti	321H
mm	mm	kg/m	*)	*)	*)	*)	*)	*)	*)
224	180	111.28	x	x	x		x	x	x
236	150	207.81	x	x	x		x	x	x
236	190	122.67	x	x	x	x	x	x	x
240	170	179.66	x	x	x			x	
250	200	140.85	x	x	x	x	x	x	x
275	200	223.01			x				
300	200	313.00	x		x				
340	200	473.26	x		x				
380	230	572.79	x		x				
400	300	438.20	x		x				
420	300	540.86	x		x				



# FITTINGS

# FLANGES



## Flanges

\*solution annealed, metal bright, all sides turned

## Technical terms of delivery

DIN EN 10222-5, VdTÜV sheet 418 and 421 also in connection with AD-2000 leaflet  
W 2/W 9/W 10

## Tolerances

DIN EN 1092-1 and DIN 2527, 2566, 2576, 2632, 2633, 2635, 2642

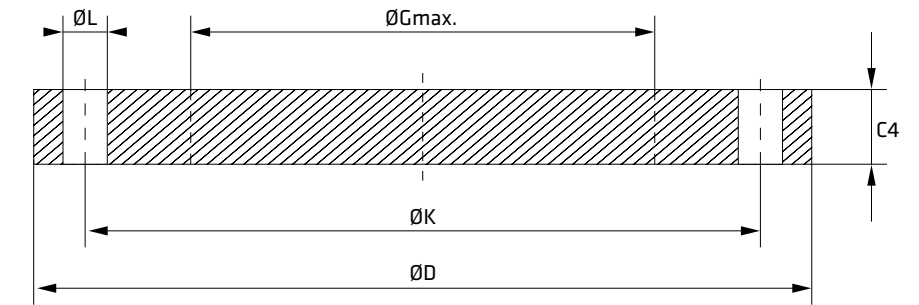
## Test certificates

DIN EN 10204 3.1, for welding collars only for base material (sheet or strip),  
DIN EN 10204 3.1 for the base material and the final product

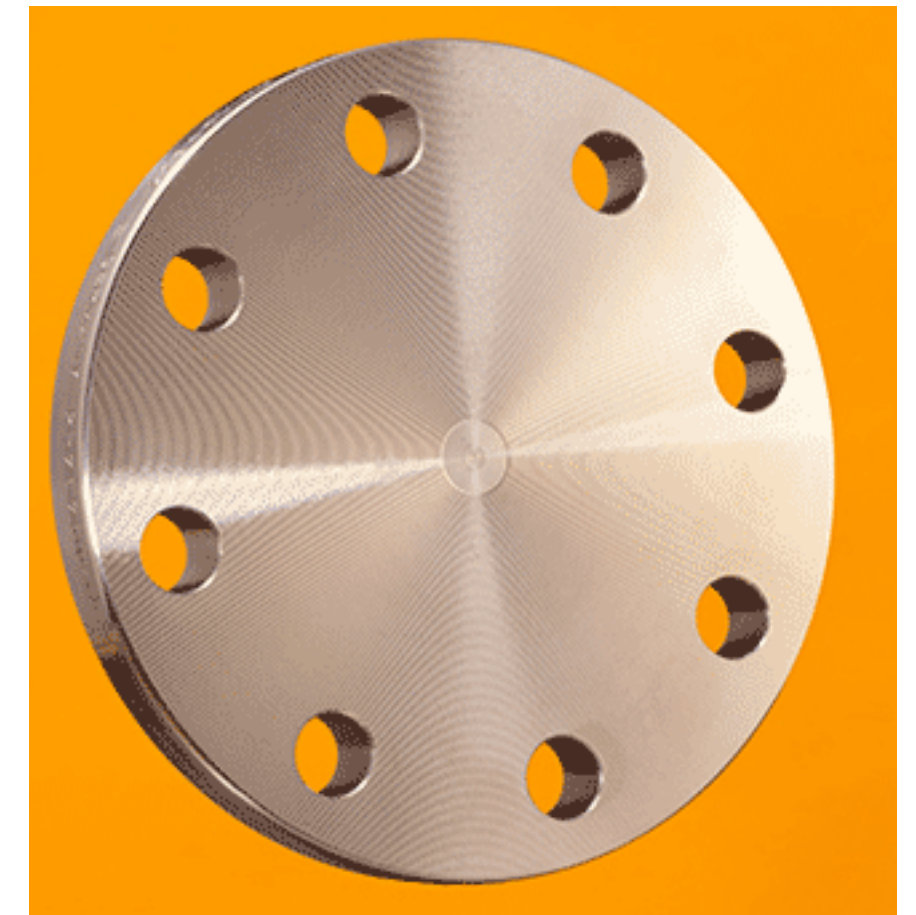
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4301 (1/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301 / 1.4307 304 / 304 L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	15	80	12	55	11		4	M10	0.5	x
6	20	90	14	65	11		4	M10	0.5	x
6	25	100	14	75	11		4	M10	1.0	x
6	32	120	14	90	14		4	M12	1.0	x
6	40	130	14	100	14		4	M12	1.5	x
6	50	140	14	110	14		4	M12	1.5	x
6	65	160	14	130	18	55	4	M16	2.0	x
6	80	190	16	150	18	70	4	M16	3.5	x
6	100	210	16	170	18	90	4	M16	4.0	x
6	125	240	18	200	18	115	8	M16	6.0	x

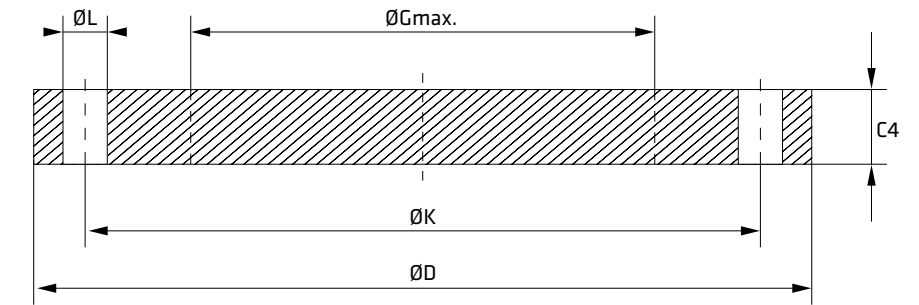


\* Finishes: page 311

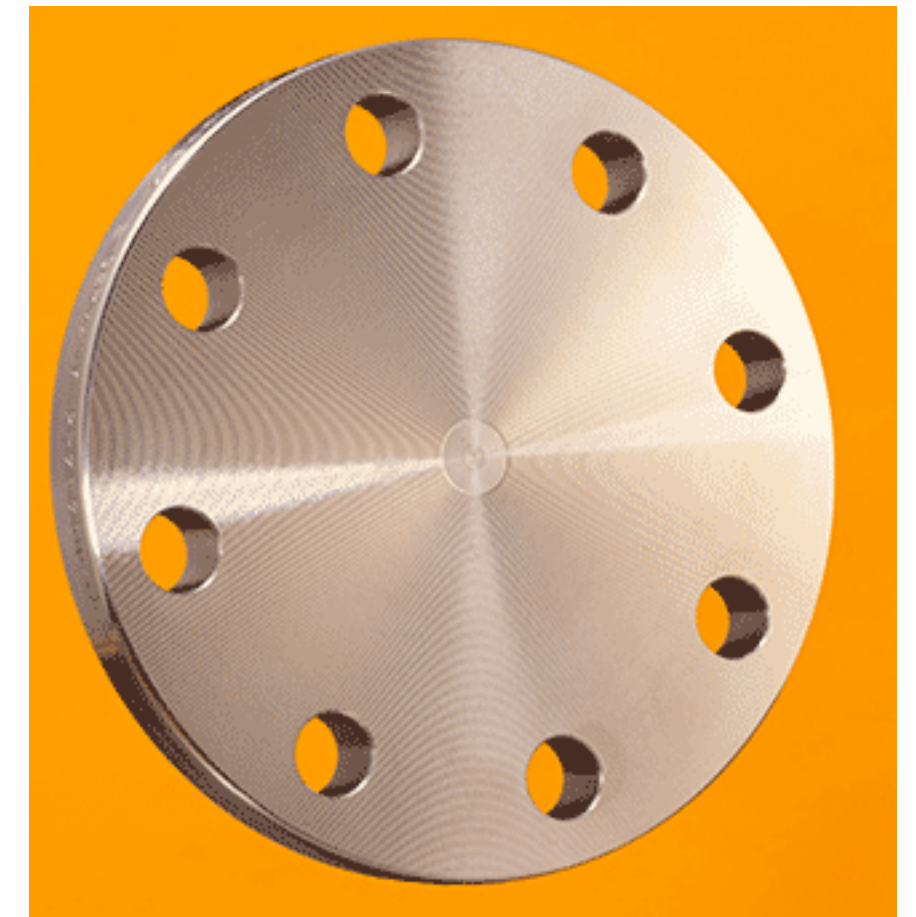
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4301 (2/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301 / 1.4307 304 / 304 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
6	150	265	18	225	18	140	8	M16	7.5	x
6	200	320	20	280	18	190	8	M16	12.5	x
6	250	375	22	335	22	235	12	M16	18.5	x
6	300	440	22	395	22	285	12	M20	25.5	x
6	350	490	22	445	22	330	12	M20	32.0	x
6	400	540	22	495	22	380	16	M20	38.5	x
6	450	595	24	550	22	425	16	M20	51.0	x
6	500	645	24	600	22	475	20	M20	60.0	x
6	600	755	30	705	26	575	20	M24	103.0	x
10	200	340	24	295	22	190	8	M20	16.5	x

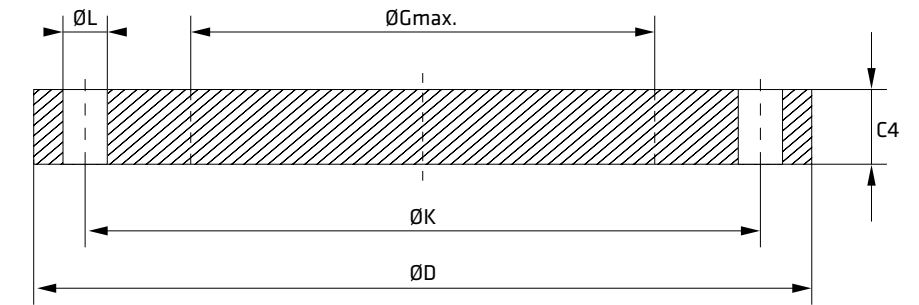


\* Finishes: page 311

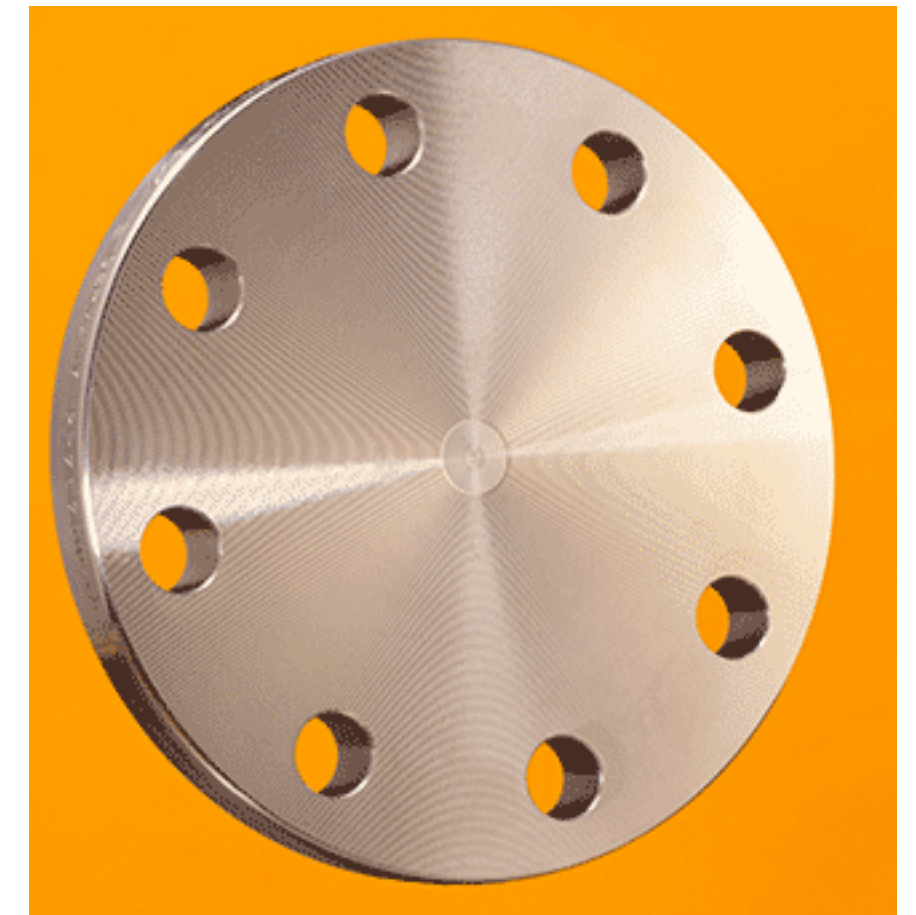
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4301 (3/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301 / 1.4307 304 / 304 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
10	250	395	26	350	22	235	12	M20	24.0	x
10	300	445	26	400	22	285	12	M20	31.0	x
10	350	505	26	460	22	330	16	M20	39.5	x
10	400	565	26	515	26	380	16	M24	49.5	x
10	450	615	28	565	26	425	20	M24	63.0	x
10	500	670	28	620	26	475	20	M24	75.5	x
10	600	780	34	725	30	575	20	M27	124.0	x
10	700									x
10	800									x
16	50	165	18	125	18		4	M16	3.0	x



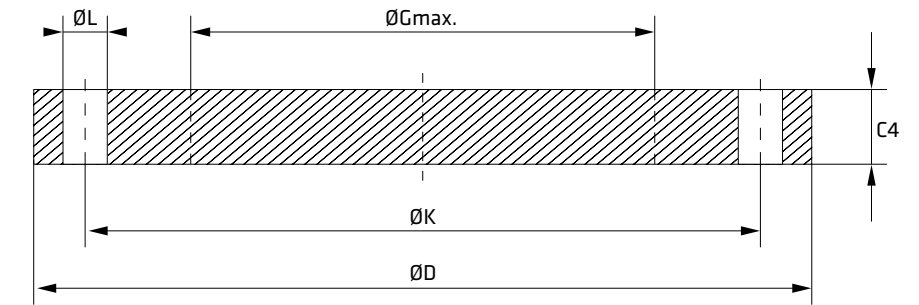
\* Finishes: page 311



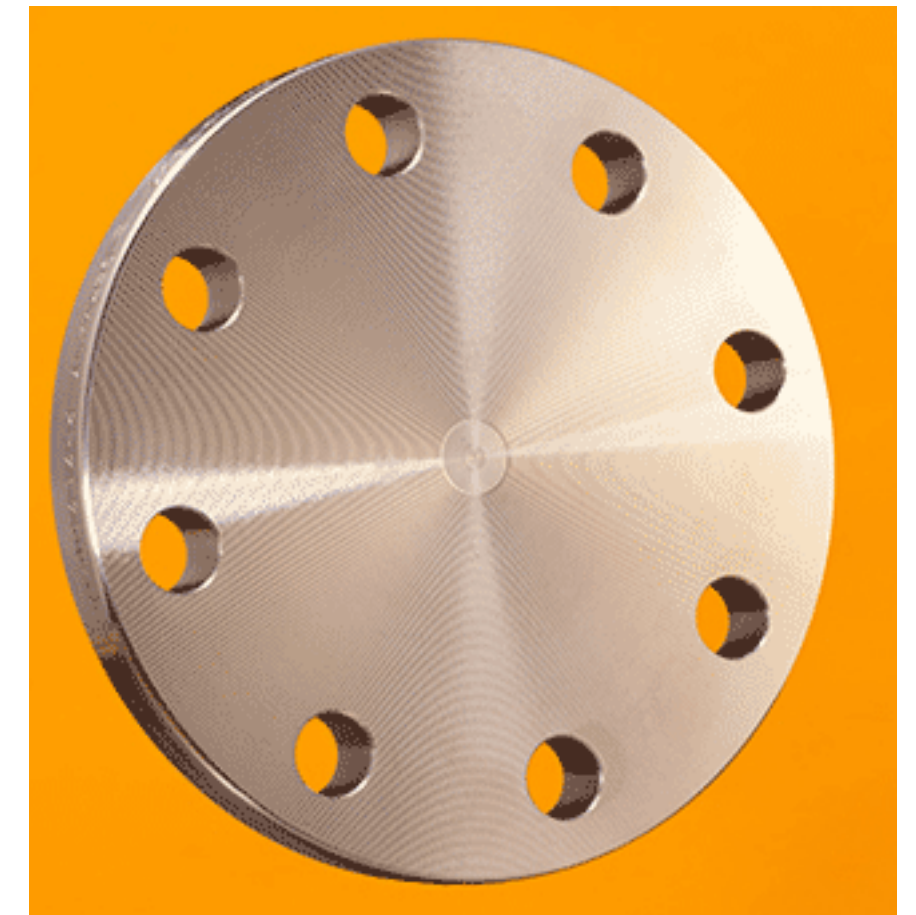
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4301 (4/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301 / 1.4307 304 / 304 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
16	65	185	18	145	18	55	4	M16	3.5	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	125	270	26	220	26	115	8		10.8	
16	150	285	22	240	22	140	8	M20	10.5	x
16	150	300	28	250	26	140	8		14.6	
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x

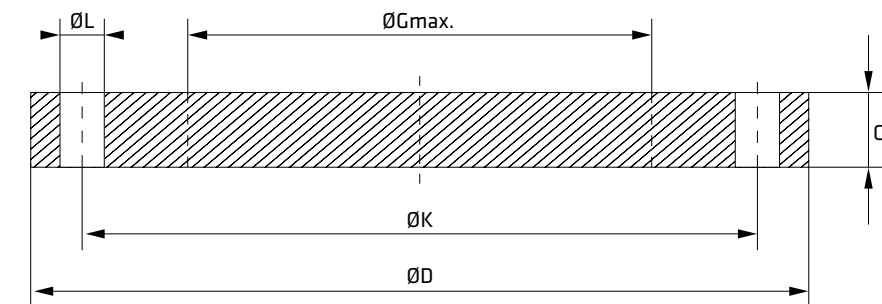


\* Finishes: page 311

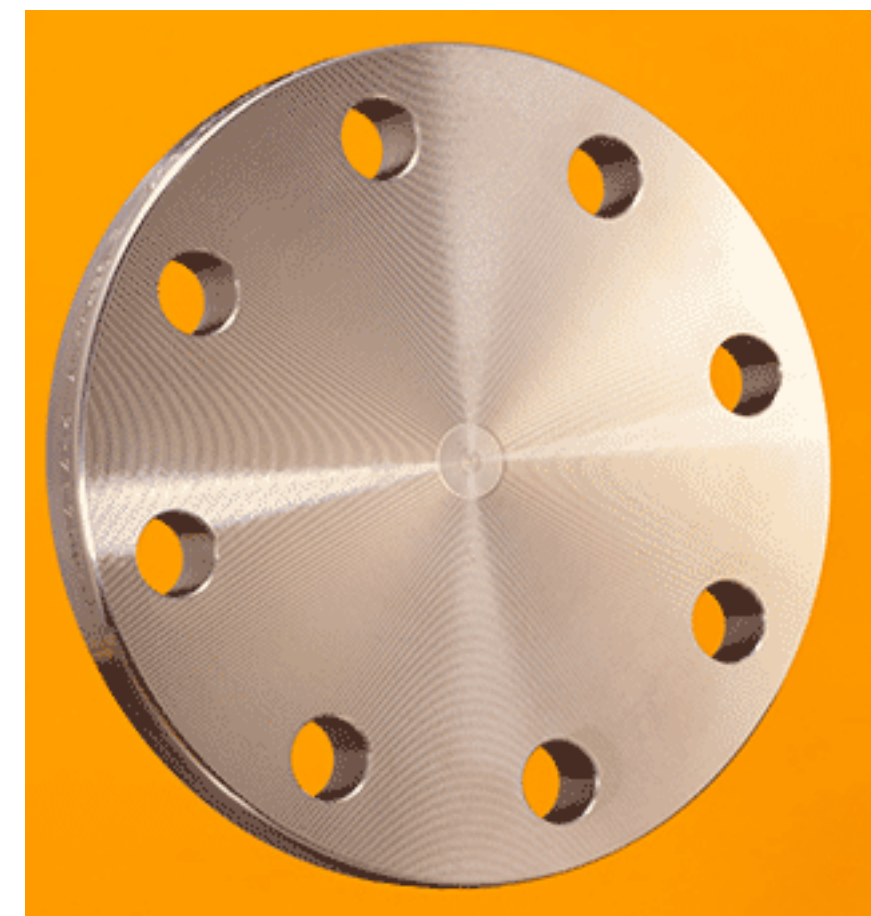
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4301 (5/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301 / 1.4307 304 / 304 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
16	300	460	28	410	26	285	12	M24	35.0	x
16	350	520	30	470	26	330	16	M24	48.0	x
16	400	580	32	525	30	380	16	M27	63.5	x
16	450									x
16	500									x
16	600									x
40	10	90	16	60	14		4	M12	1.0	x
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x

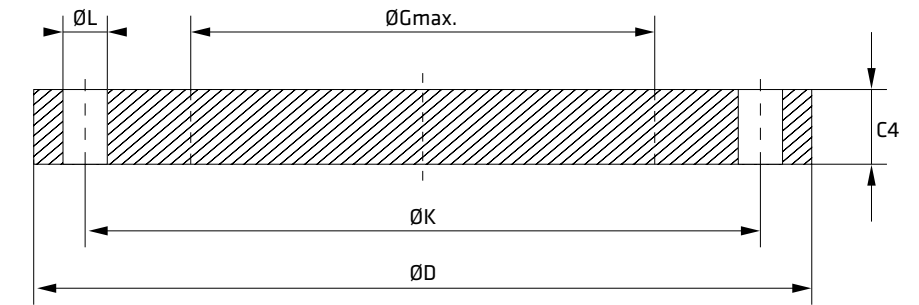


\* Finishes: page 311

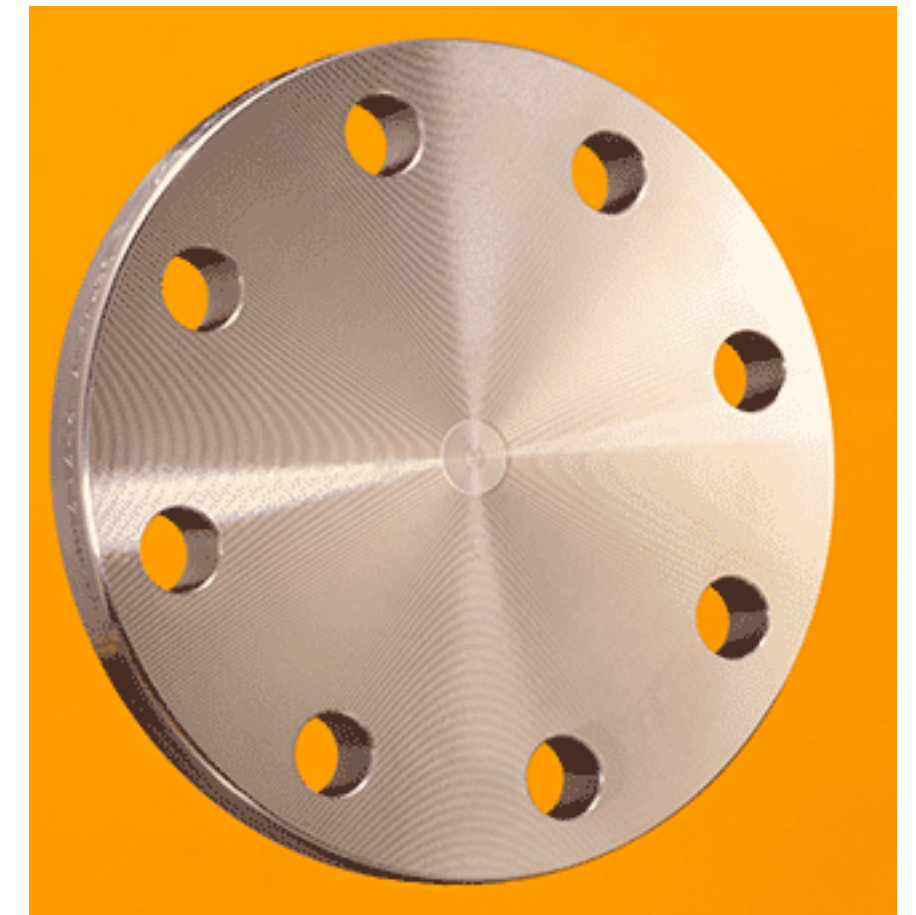
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4301 (6/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301 / 1.4307 304 / 304 L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	x
40	65	185	22	145	18	55	8	M16	4.5	x
40	80	200	24	160	18	70	8	M16	5.5	x
40	100	235	24	190	22	90	8	M20	7.5	x
40	125	270	26	220	26	115	8	M24	11.0	x
40	150	300	28	250	26	140	8	M24	14.5	x
40	200	375	36	320	30	190	12	M27	29.0	x

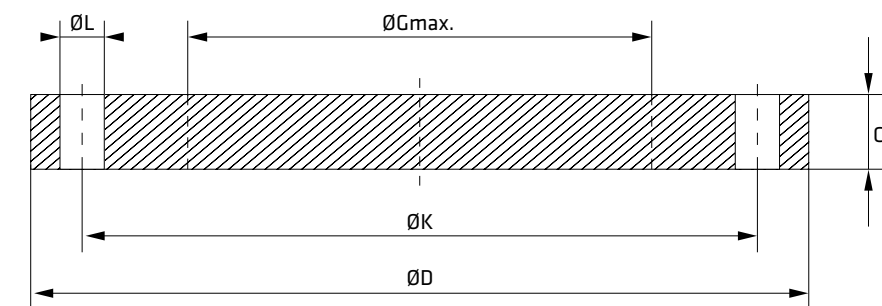


\* Finishes: page 311

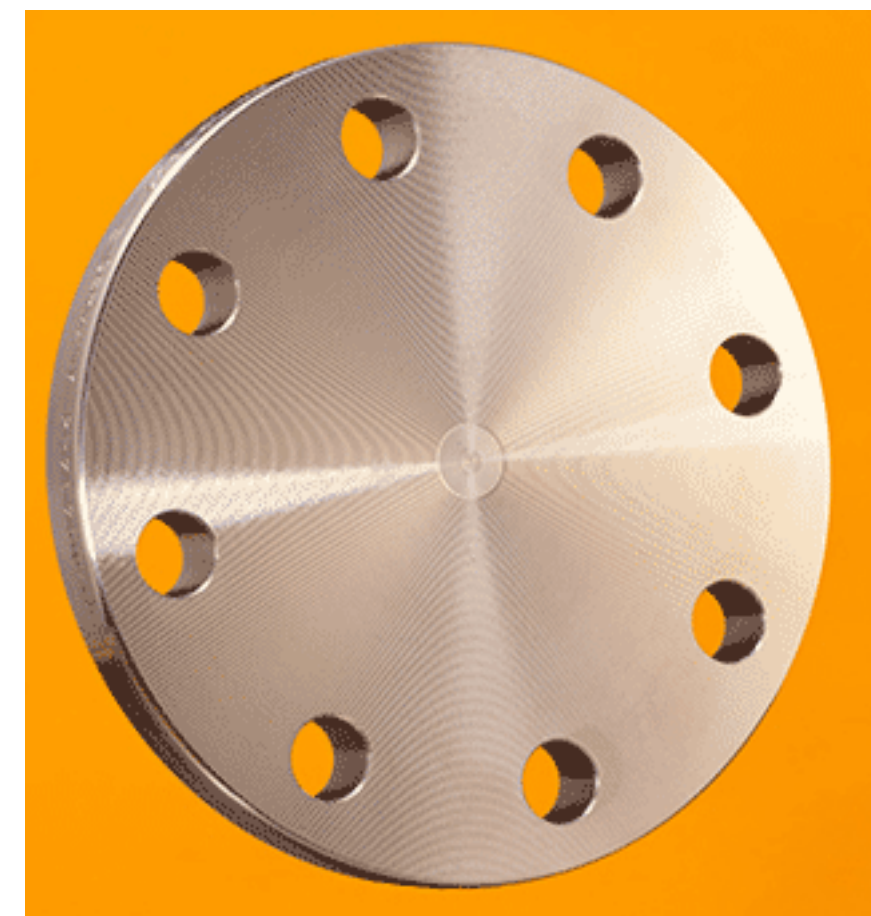
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4401 (1/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316 / 316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	15	80	12	55	11		4	M10	0.5	x
6	20	90	14	65	11		4	M10	0.5	x
6	25	100	14	75	11		4	M10	1.0	x
6	32	120	14	90	14		4	M12	1.0	x
6	40	130	14	100	14		4	M12	1.5	x
6	50	140	14	110	14		4	M12	1.5	x
6	65	160	14	130	18	55	4	M16	2.0	x
6	80	190	16	150	18	70	4	M16	3.5	x
6	100	210	16	170	18	90	4	M16	4.0	x
6	125	240	18	200	18	115	8	M16	6.0	x



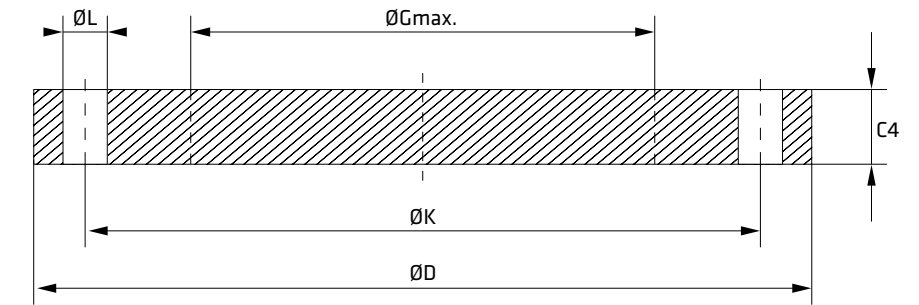
\* Finishes: page 311



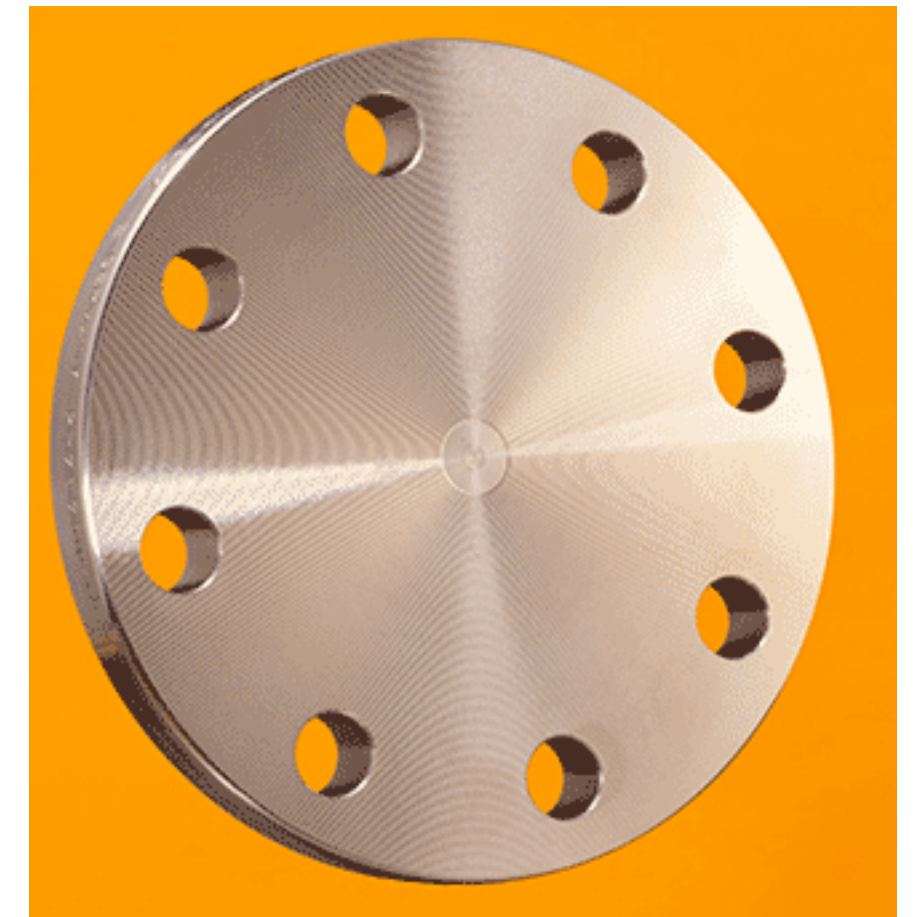
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4401 (2/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316 / 316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	150	265	18	225	18	140	8	M16	7.5	x
6	200	320	20	280	18	190	8	M16	12.5	x
6	250	375	22	335	22	235	12	M16	18.5	x
6	300	440	22	395	22	285	12	M20	25.5	x
6	350	490	22	445	22	330	12	M20	32.0	x
6	400	540	22	495	22	380	16	M20	38.5	x
6	450	595	24	550	22	425	16	M20	51.0	x
6	500	645	24	600	22	475	20	M20	60.0	x
6	600	755	30	705	26	575	20	M24	103.0	x
10	200	340	24	295	22	190	8	M20	16.5	x

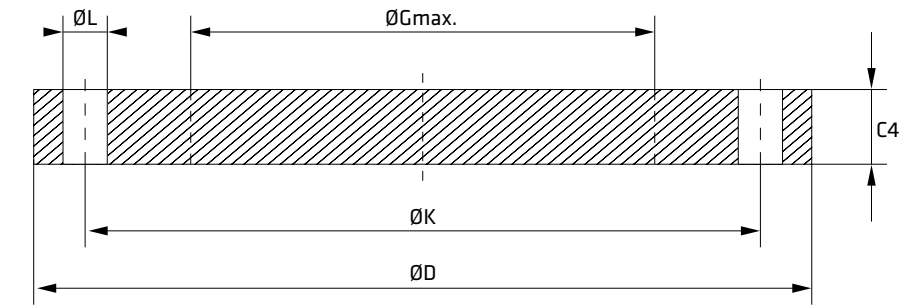


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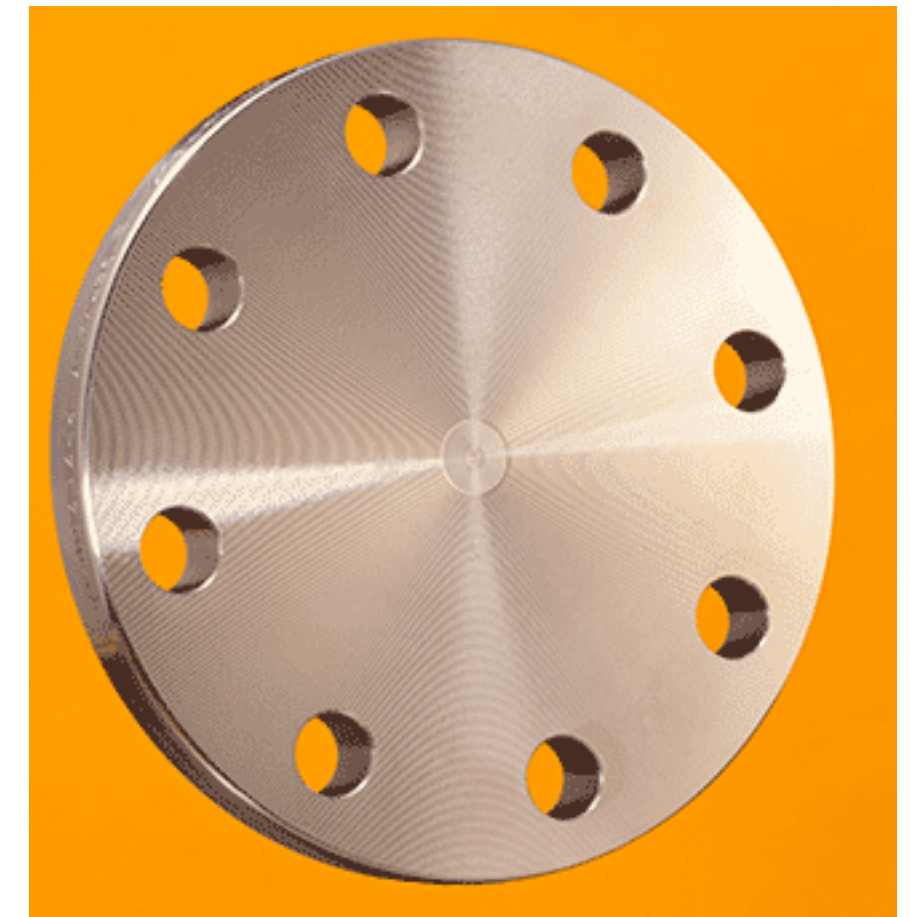
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4401 (3/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316 / 316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
10	250	395	26	350	22	235	12	M20	24.0	x
10	300	445	26	400	22	285	12	M20	31.0	x
10	350	505	26	460	22	330	16	M20	39.5	x
10	400	565	26	515	26	380	16	M24	49.5	x
10	450	615	28	565	26	425	20	M24	63.0	x
10	500	670	28	620	26	475	20	M24	75.5	x
10	600	780	34	725	30	575	20	M27	124.0	x
10	700									x
10	800									x
16	50	165	18	125	18		4	M16	3.0	x

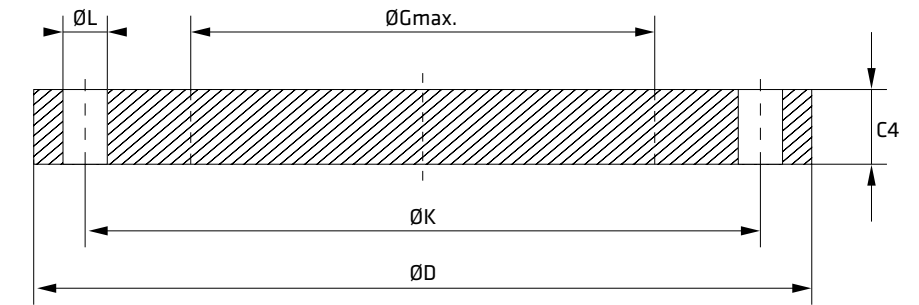


\* Finishes: page 311

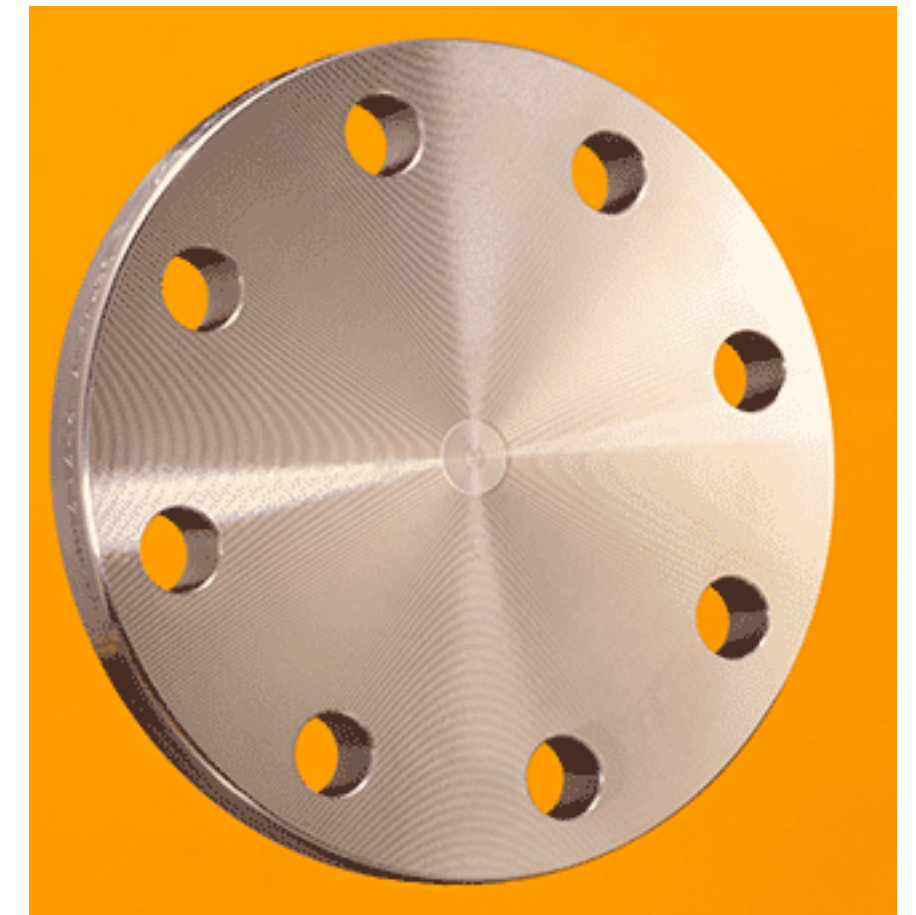
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4401 (4/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316 / 316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	65	185	18	145	18	55	4	M16	3.5	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	125	270	26	220	26	115	8		10.8	
16	150	285	22	240	22	140	8	M20	10.5	x
16	150	300	28	250	26	140	8		14.6	
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x

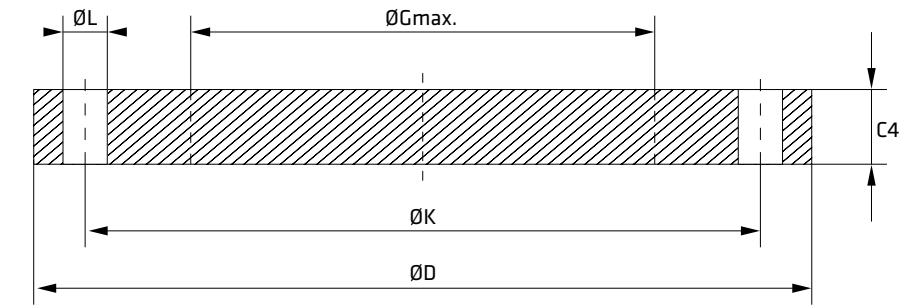


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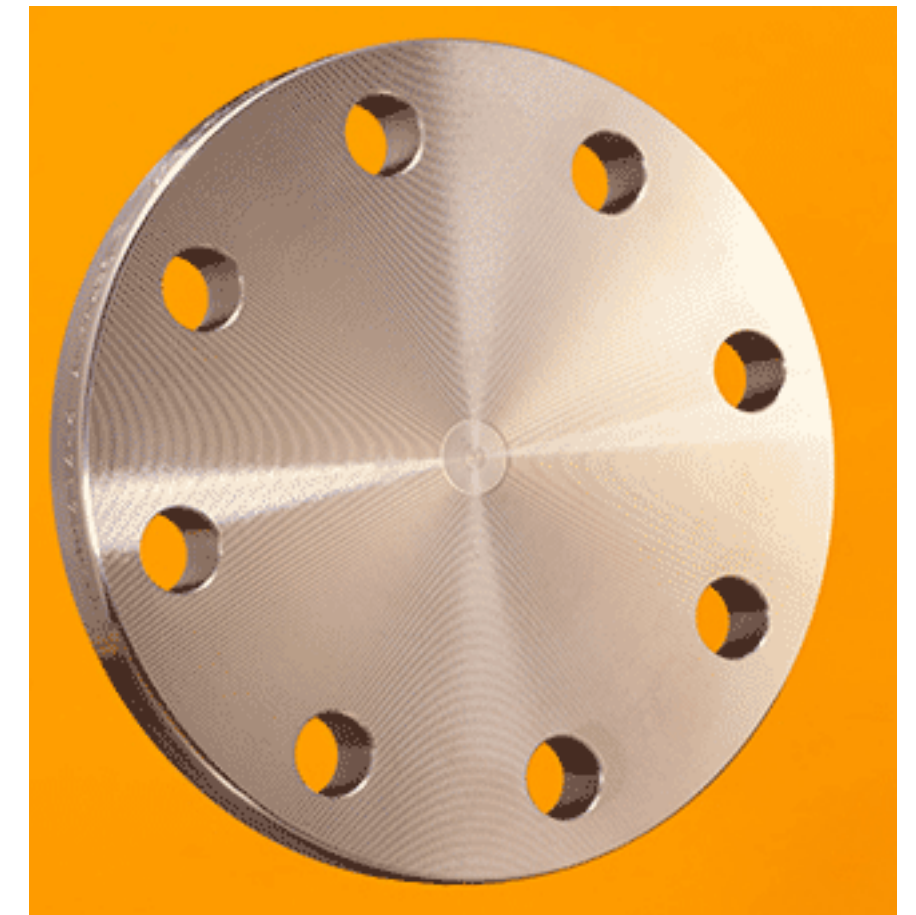
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4401 (5/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316 / 316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	300	460	28	410	26	285	12	M24	35.0	x
16	350	520	30	470	26	330	16	M24	48.0	x
16	400	580	32	525	30	380	16	M27	63.5	x
16	450									x
16	500									x
16	600									x
40	10	90	16	60	14		4	M12	1.0	x
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x



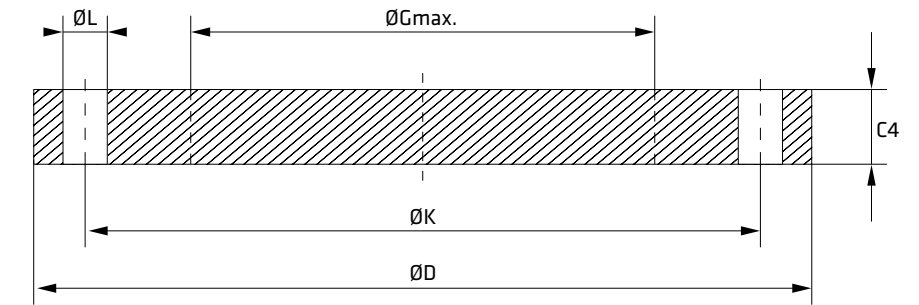
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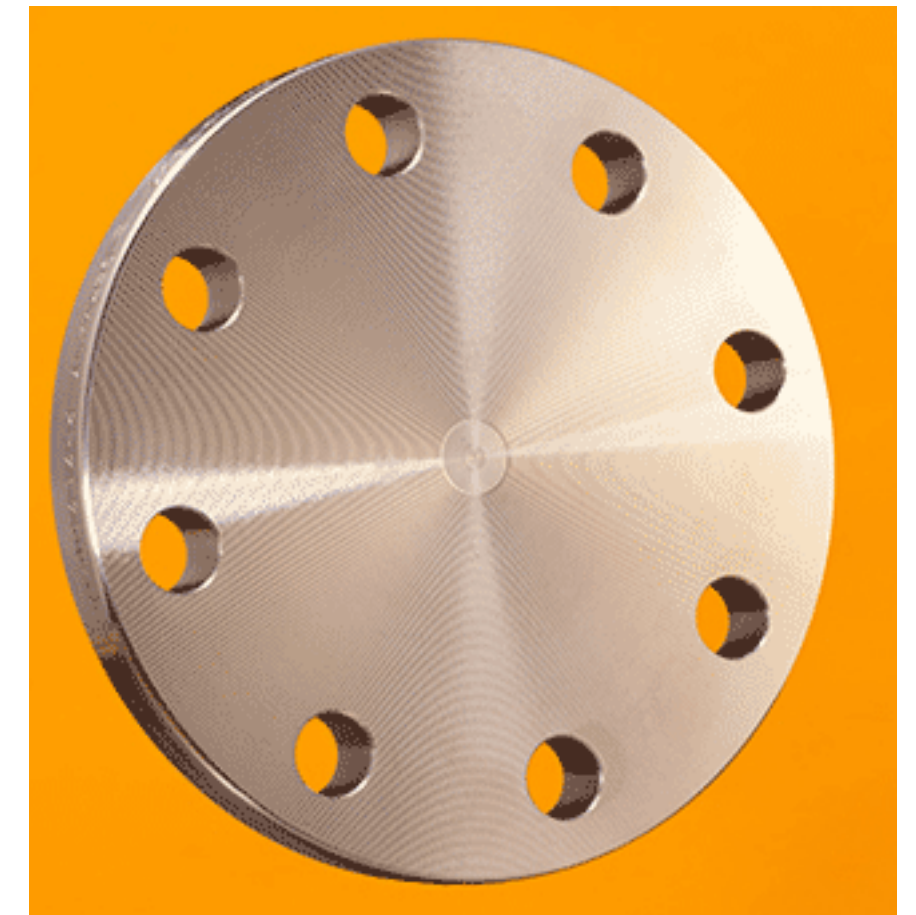
# BLIND FLANGES

EN 1092-1 type 05/A <sup>1)</sup>

1.4401 (6/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316 / 316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	x
40	65	185	22	145	18	55	8	M16	4.5	x
40	80	200	24	160	18	70	8	M16	5.5	x
40	100	235	24	190	22	90	8	M20	7.5	x
40	125	270	26	220	26	115	8	M24	11.0	x
40	150	300	28	250	26	140	8	M24	14.5	x
40	200	375	36	320	30	190	12	M27	29.0	x

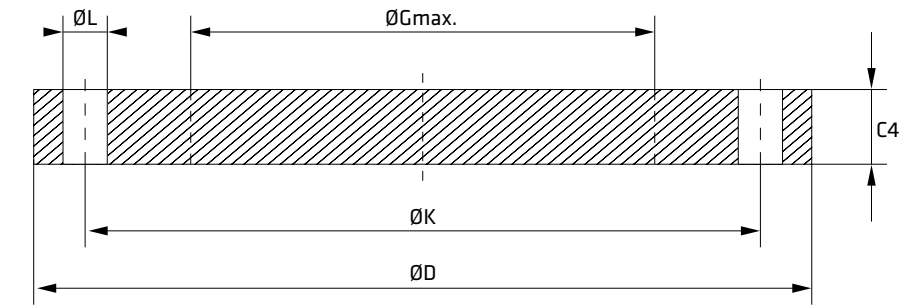


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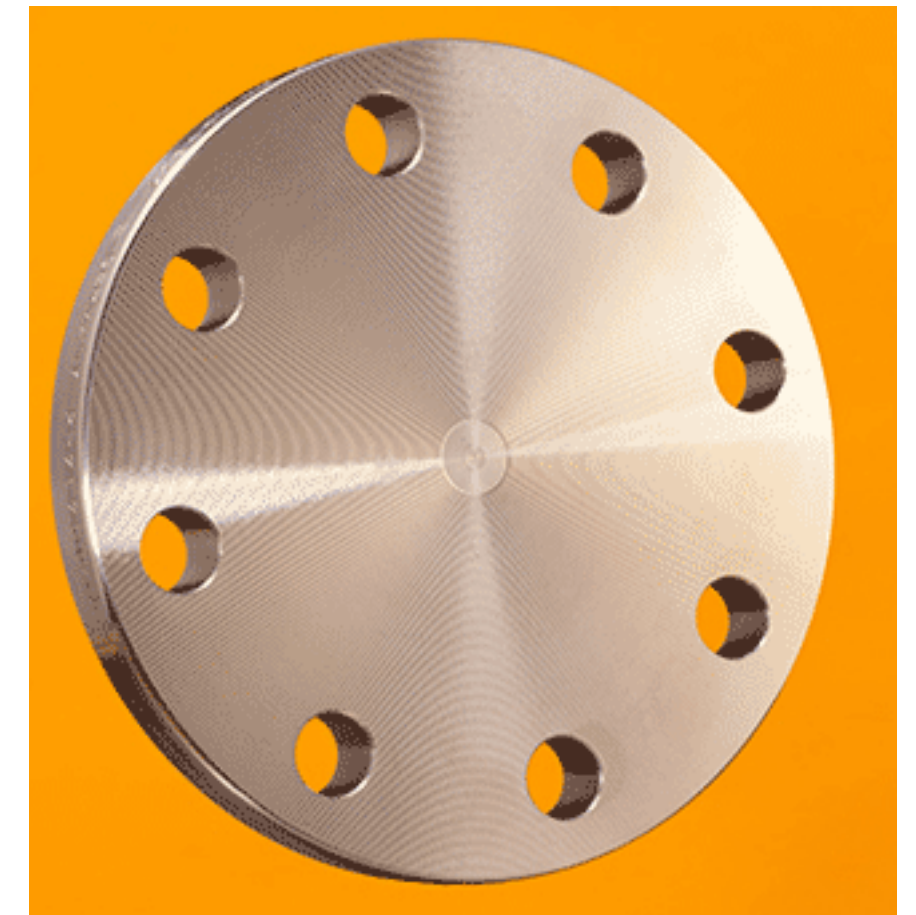
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EN 1092-1 type 05/A <sup>1)</sup>

1.4462 (1/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4462 S31803 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	15	80	12	55	11		4	M10	0.5	
6	20	90	14	65	11		4	M10	0.5	
6	25	100	14	75	11		4	M10	1.0	
6	32	120	14	90	14		4	M12	1.0	
6	40	130	14	100	14		4	M12	1.5	
6	50	140	14	110	14		4	M12	1.5	
6	65	160	14	130	18	55	4	M16	2.0	
6	80	190	16	150	18	70	4	M16	3.5	
6	100	210	16	170	18	90	4	M16	4.0	
6	125	240	18	200	18	115	8	M16	6.0	

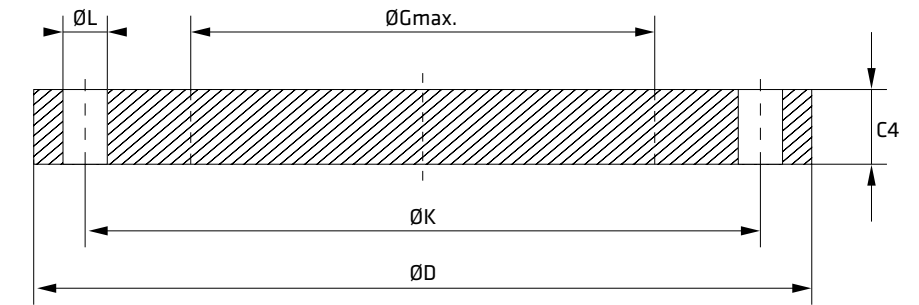


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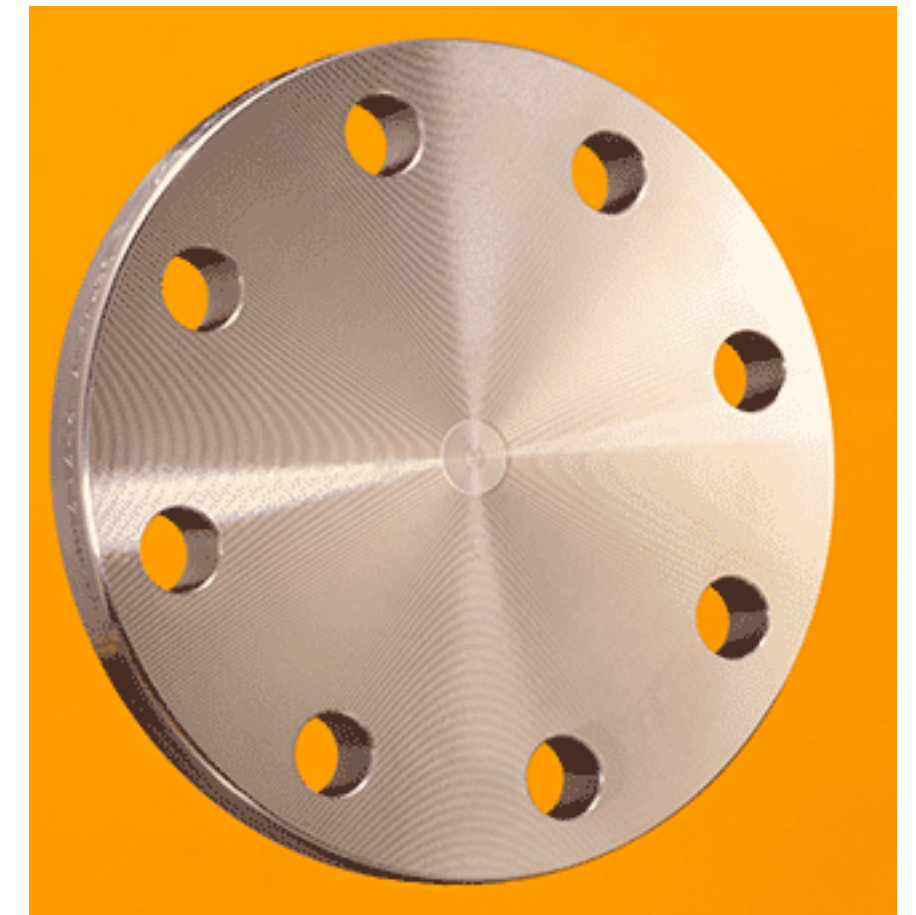
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EN 1092-1 type 05/A <sup>1)</sup>

1.4462 (2/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4462 S31803 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	150	265	18	225	18	140	8	M16	7.5	
6	200	320	20	280	18	190	8	M16	12.5	
6	250	375	22	335	22	235	12	M16	18.5	
6	300	440	22	395	22	285	12	M20	25.5	
6	350	490	22	445	22	330	12	M20	32.0	
6	400	540	22	495	22	380	16	M20	38.5	
6	450	595	24	550	22	425	16	M20	51.0	
6	500	645	24	600	22	475	20	M20	60.0	
6	600	755	30	705	26	575	20	M24	103.0	
10	200	340	24	295	22	190	8	M20	16.5	

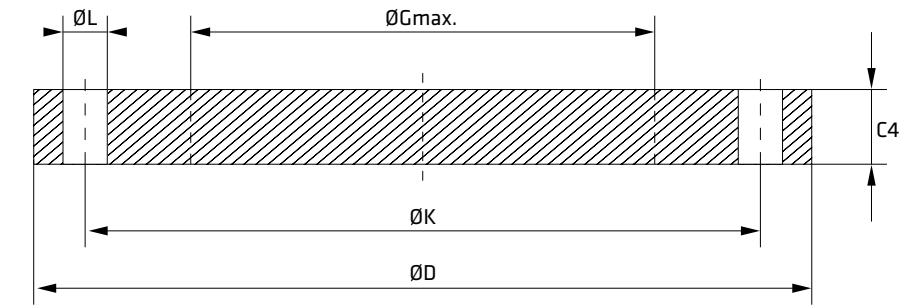


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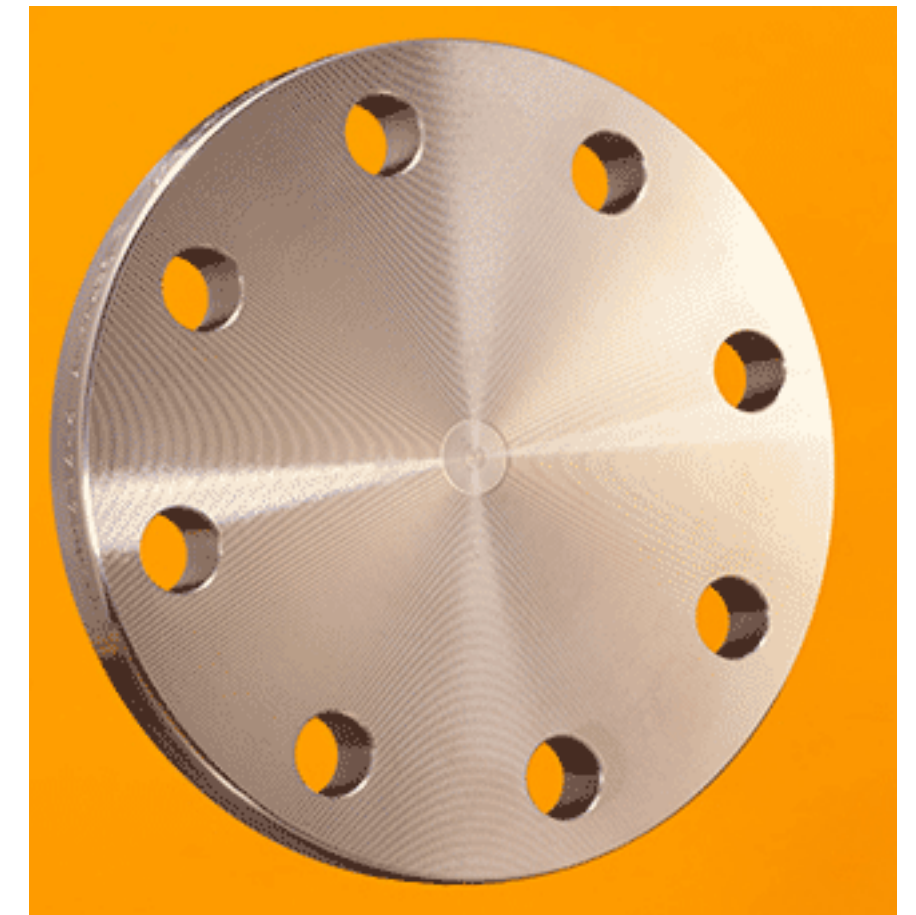
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EN 1092-1 type 05/A <sup>1)</sup>

1.4462 (3/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4462 S31803 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
10	250	395	26	350	22	235	12	M20	24.0	
10	300	445	26	400	22	285	12	M20	31.0	
10	350	505	26	460	22	330	16	M20	39.5	
10	400	565	26	515	26	380	16	M24	49.5	
10	450	615	28	565	26	425	20	M24	63.0	
10	500	670	28	620	26	475	20	M24	75.5	
10	600	780	34	725	30	575	20	M27	124.0	
10	700									
10	800									
16	50	165	18	125	18		4	M16	3.0	x



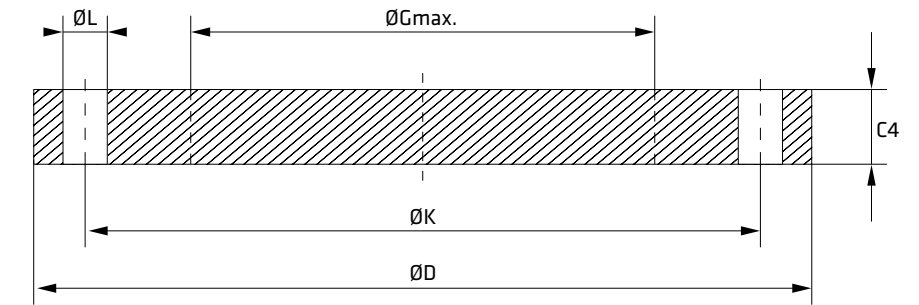
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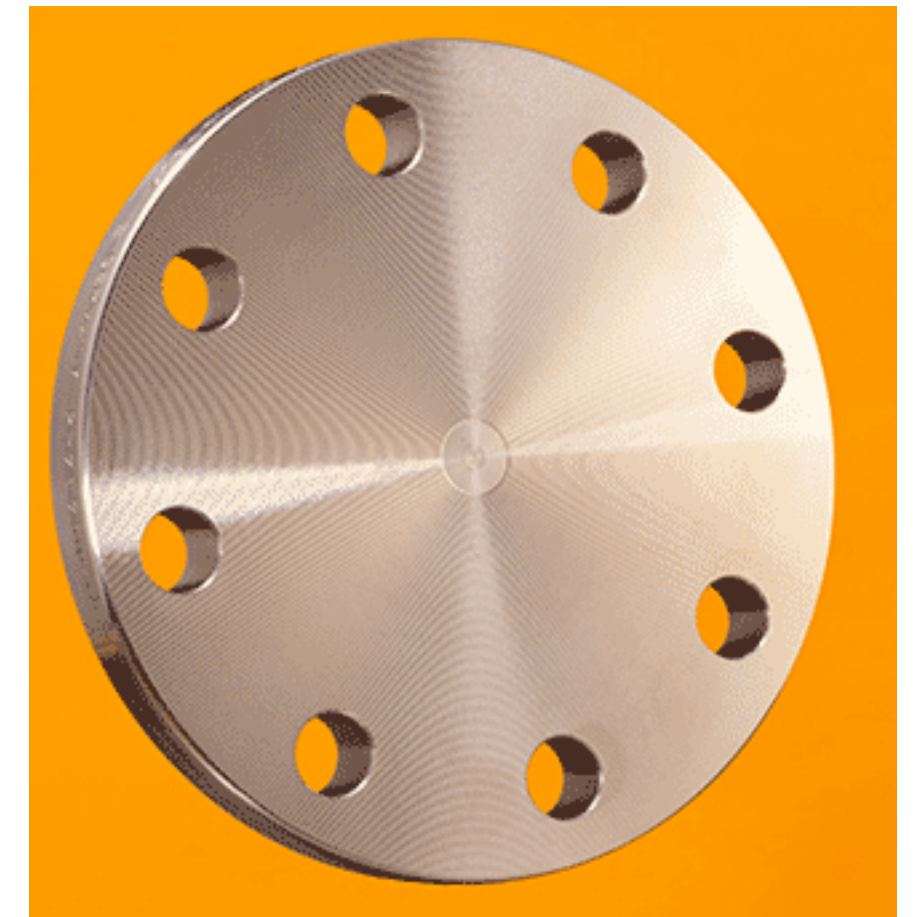
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EN 1092-1 type 05/A <sup>1)</sup>

1.4462 (4/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4462 S31803
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
16	65	185	18	145	18	55	4	M16	3.5	
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	125	270	26	220	26	115	8		10.8	
16	150	285	22	240	22	140	8	M20	10.5	x
16	150	300	28	250	26	140	8		14.6	
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	

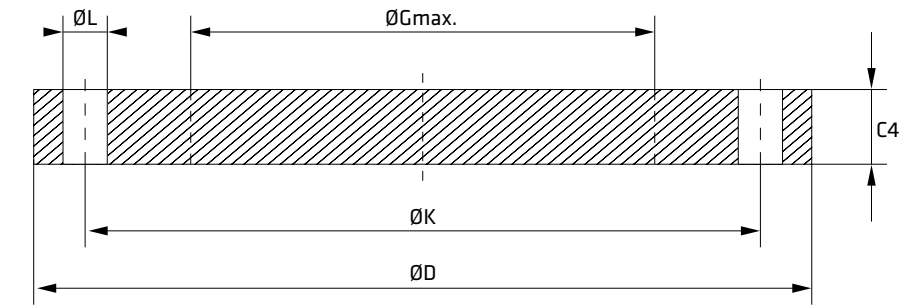


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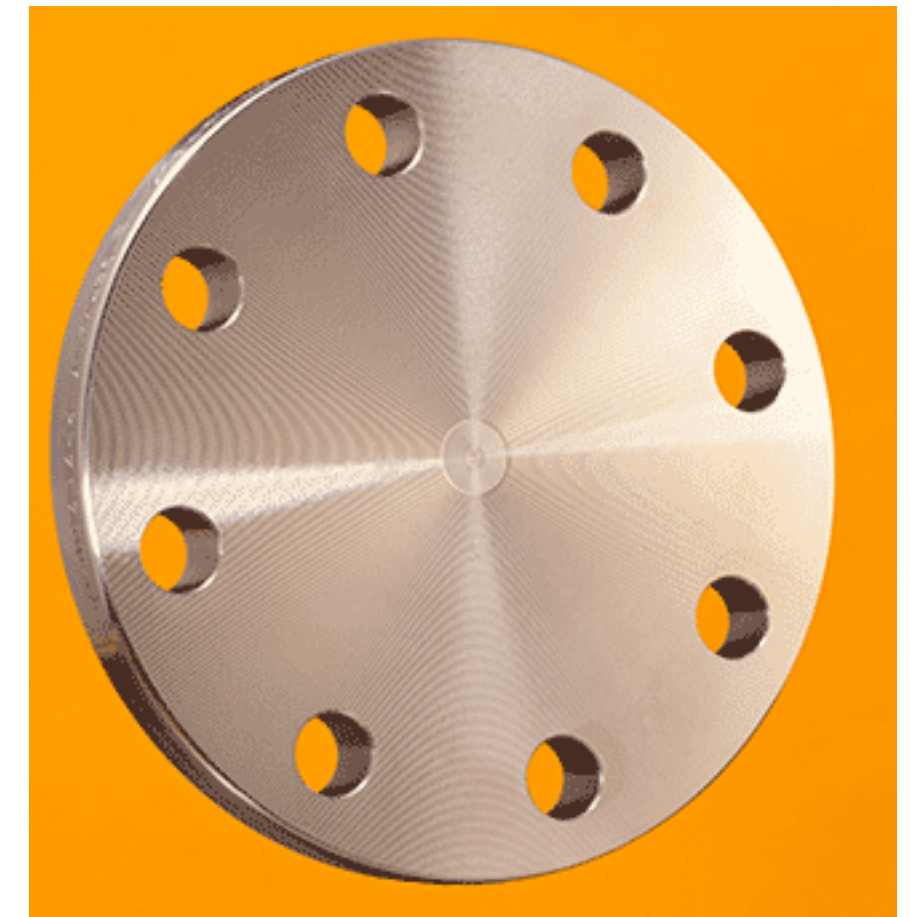
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EN 1092-1 type 05/A <sup>1)</sup>

1.4462 (5/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4462 S31803 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	300	460	28	410	26	285	12	M24	35.0	
16	350	520	30	470	26	330	16	M24	48.0	
16	400	580	32	525	30	380	16	M27	63.5	
16	450									
16	500									
16	600									
40	10	90	16	60	14		4	M12	1.0	
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x

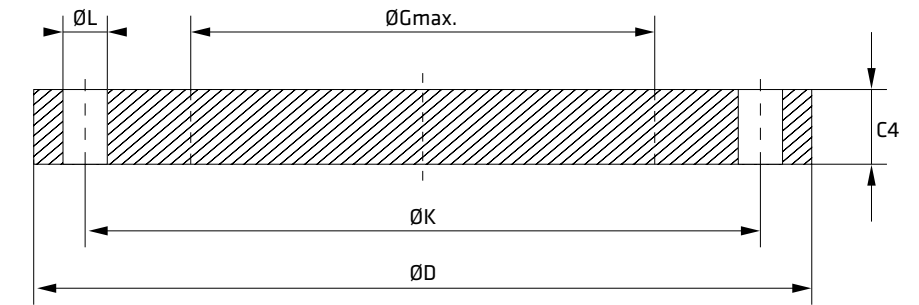


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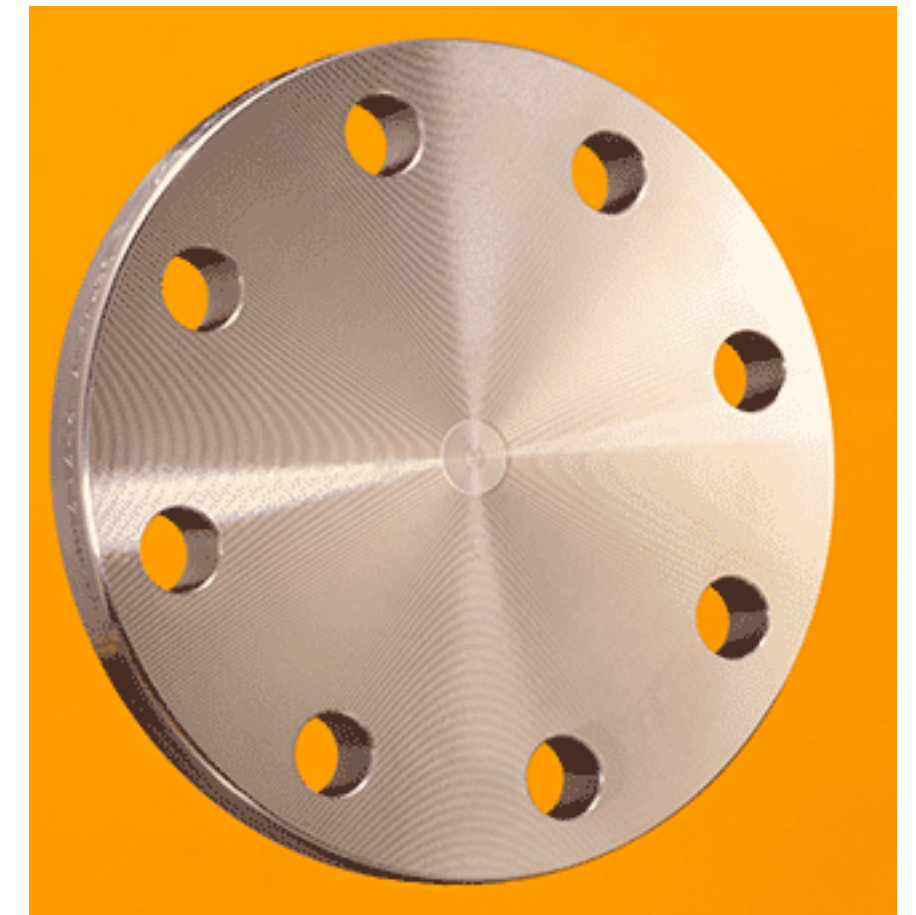
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EN 1092-1 type 05/A <sup>1)</sup>

1.4462 (6/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4462 S31803
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	
40	65	185	22	145	18	55	8	M16	4.5	
40	80	200	24	160	18	70	8	M16	5.5	
40	100	235	24	190	22	90	8	M20	7.5	
40	125	270	26	220	26	115	8	M24	11.0	
40	150	300	28	250	26	140	8	M24	14.5	
40	200	375	36	320	30	190	12	M27	29.0	

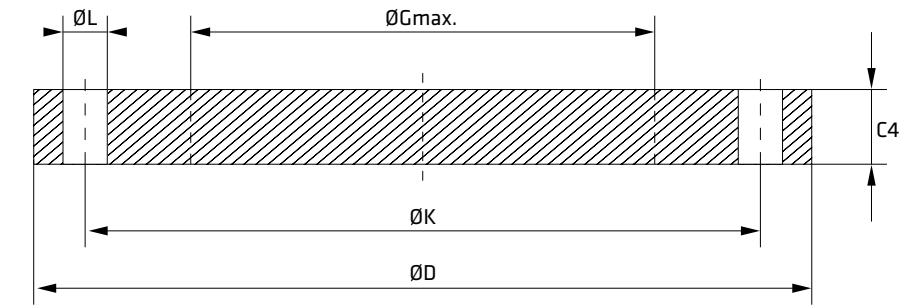


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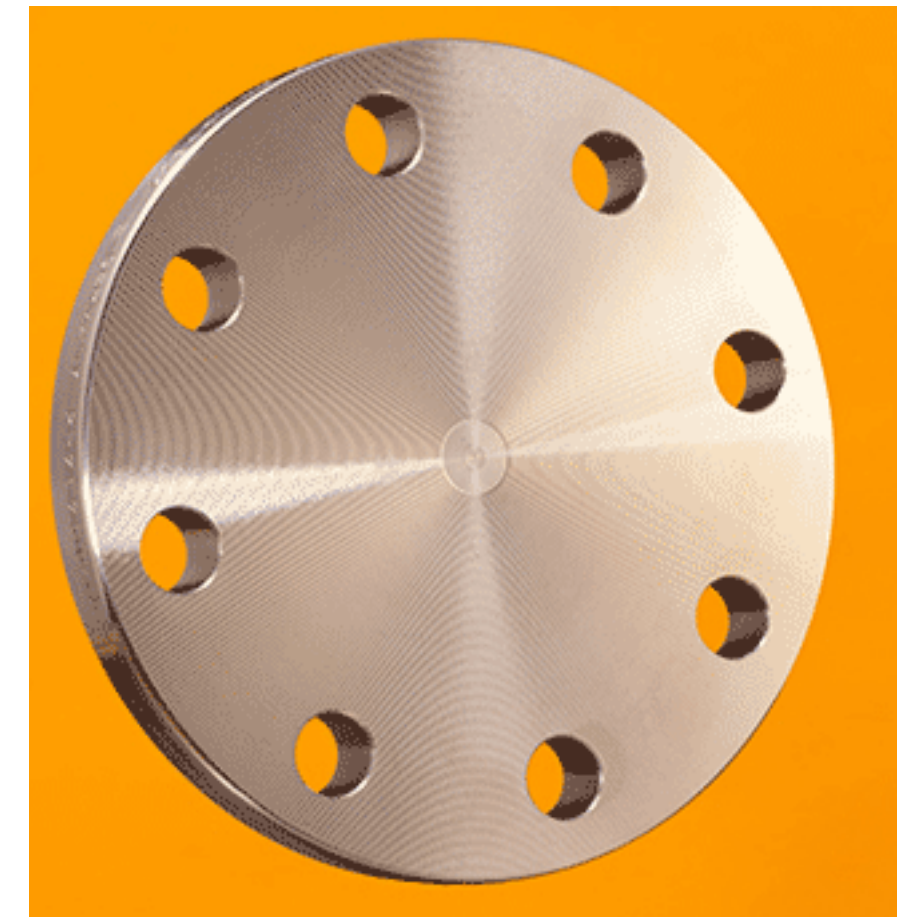
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EN 1092-1 type 05/A <sup>1)</sup>

1.4539 (1/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4539 904 L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	15	80	12	55	11		4	M10	0.5	
6	20	90	14	65	11		4	M10	0.5	
6	25	100	14	75	11		4	M10	1.0	
6	32	120	14	90	14		4	M12	1.0	
6	40	130	14	100	14		4	M12	1.5	
6	50	140	14	110	14		4	M12	1.5	
6	65	160	14	130	18	55	4	M16	2.0	
6	80	190	16	150	18	70	4	M16	3.5	
6	100	210	16	170	18	90	4	M16	4.0	
6	125	240	18	200	18	115	8	M16	6.0	



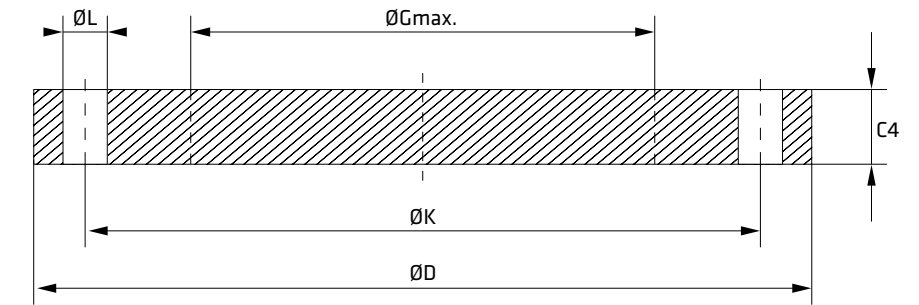
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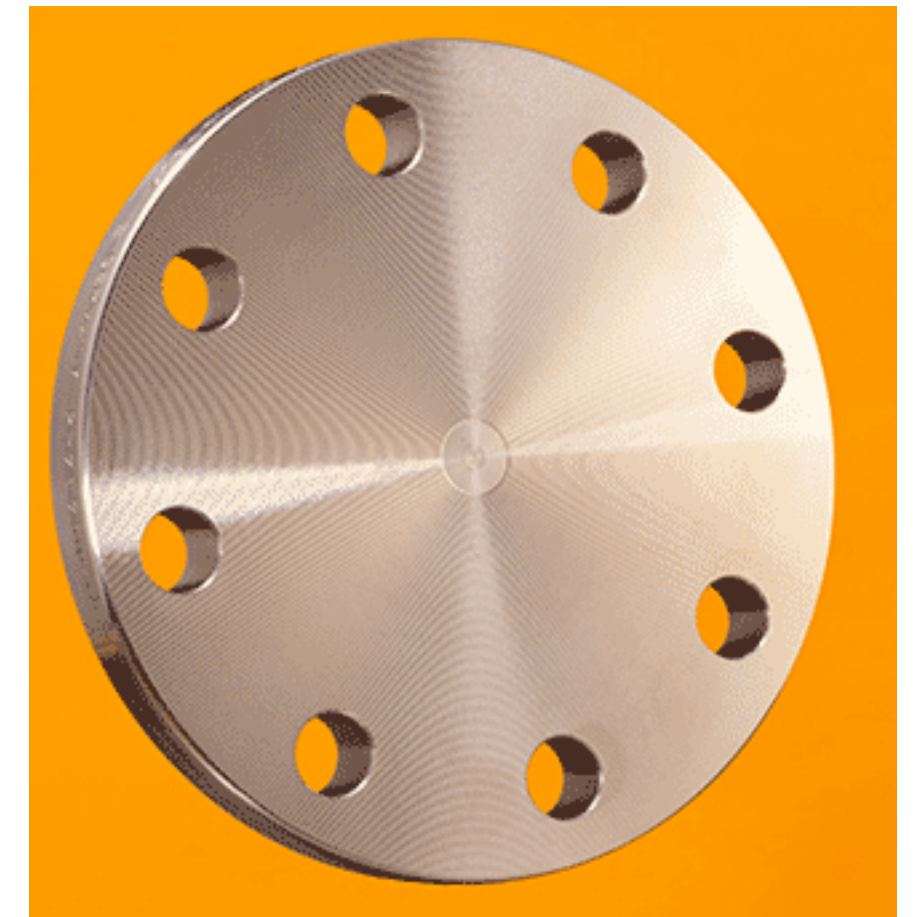
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EN 1092-1 type 05/A <sup>1)</sup>

1.4539 (2/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4539 904 L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	150	265	18	225	18	140	8	M16	7.5	
6	200	320	20	280	18	190	8	M16	12.5	
6	250	375	22	335	22	235	12	M16	18.5	
6	300	440	22	395	22	285	12	M20	25.5	
6	350	490	22	445	22	330	12	M20	32.0	
6	400	540	22	495	22	380	16	M20	38.5	
6	450	595	24	550	22	425	16	M20	51.0	
6	500	645	24	600	22	475	20	M20	60.0	
6	600	755	30	705	26	575	20	M24	103.0	
10	200	340	24	295	22	190	8	M20	16.5	

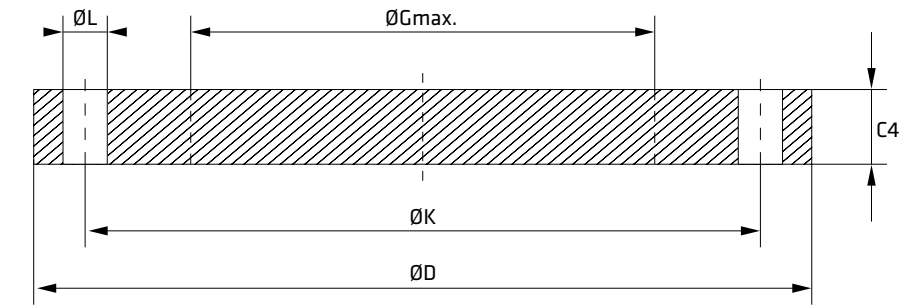


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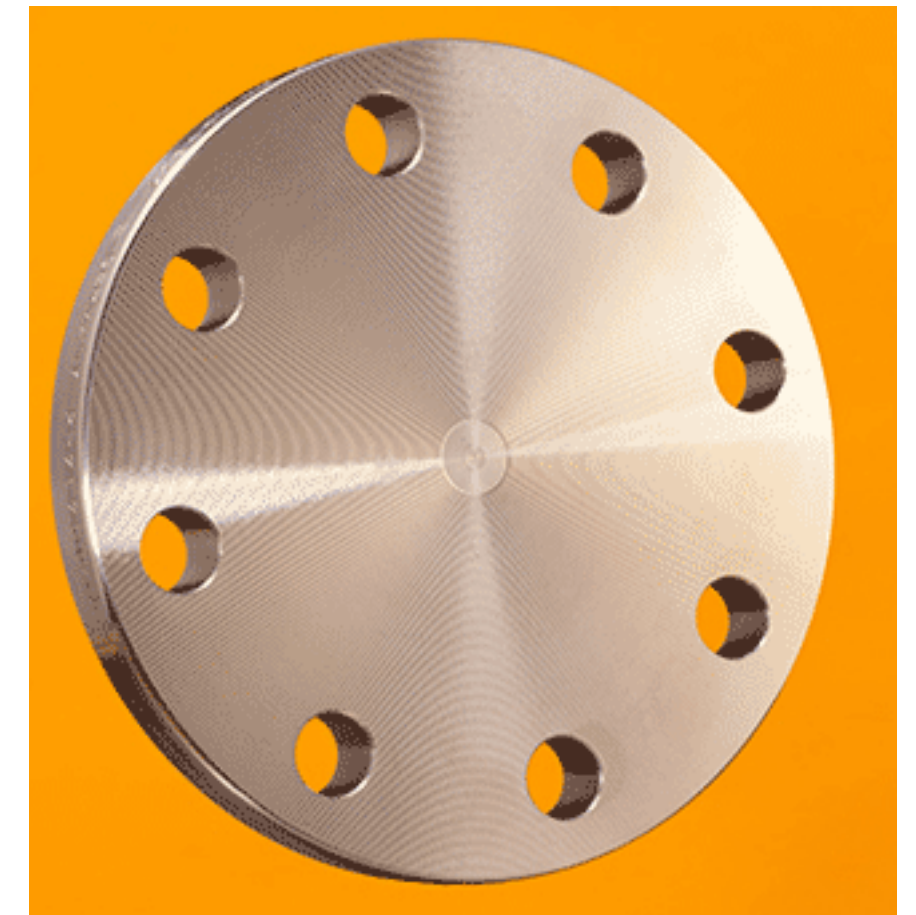
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EN 1092-1 type 05/A <sup>1)</sup>

1.4539 (3/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4539 904 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
10	250	395	26	350	22	235	12	M20	24.0	
10	300	445	26	400	22	285	12	M20	31.0	
10	350	505	26	460	22	330	16	M20	39.5	
10	400	565	26	515	26	380	16	M24	49.5	
10	450	615	28	565	26	425	20	M24	63.0	
10	500	670	28	620	26	475	20	M24	75.5	
10	600	780	34	725	30	575	20	M27	124.0	
10	700									
10	800									
16	50	165	18	125	18		4	M16	3.0	x

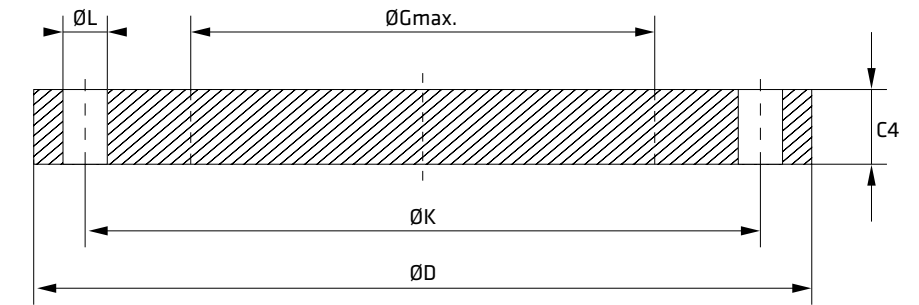


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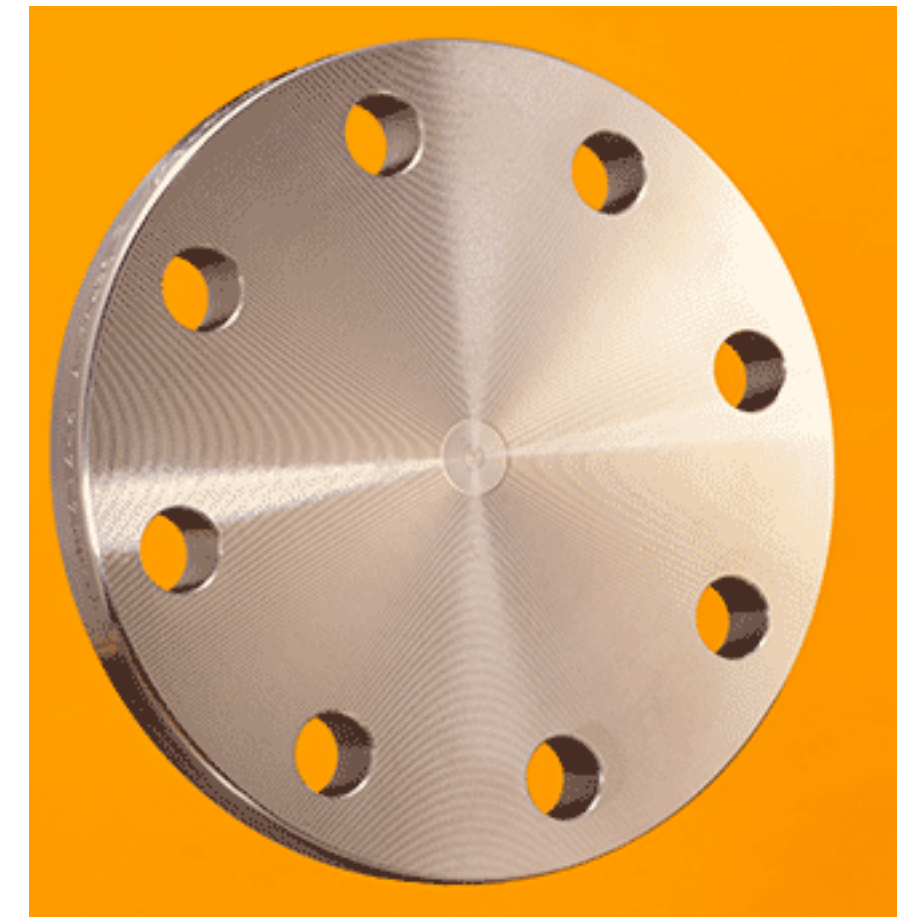
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EN 1092-1 type 05/A <sup>1)</sup>

1.4539 (4/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4539 904 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
16	65	185	18	145	18	55	4	M16	3.5	
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	125	270	26	220	26	115	8		10.8	
16	150	285	22	240	22	140	8	M20	10.5	x
16	150	300	28	250	26	140	8		14.6	
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	

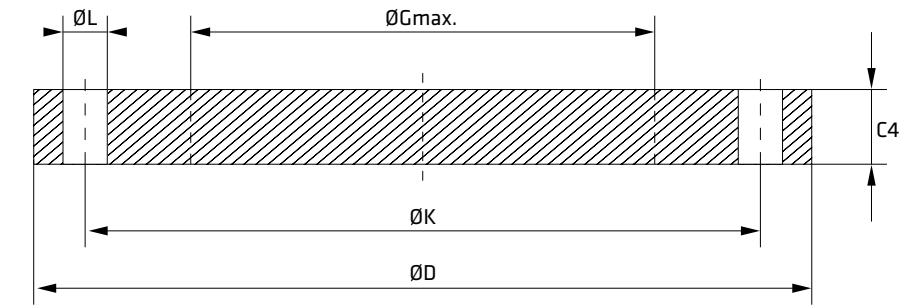


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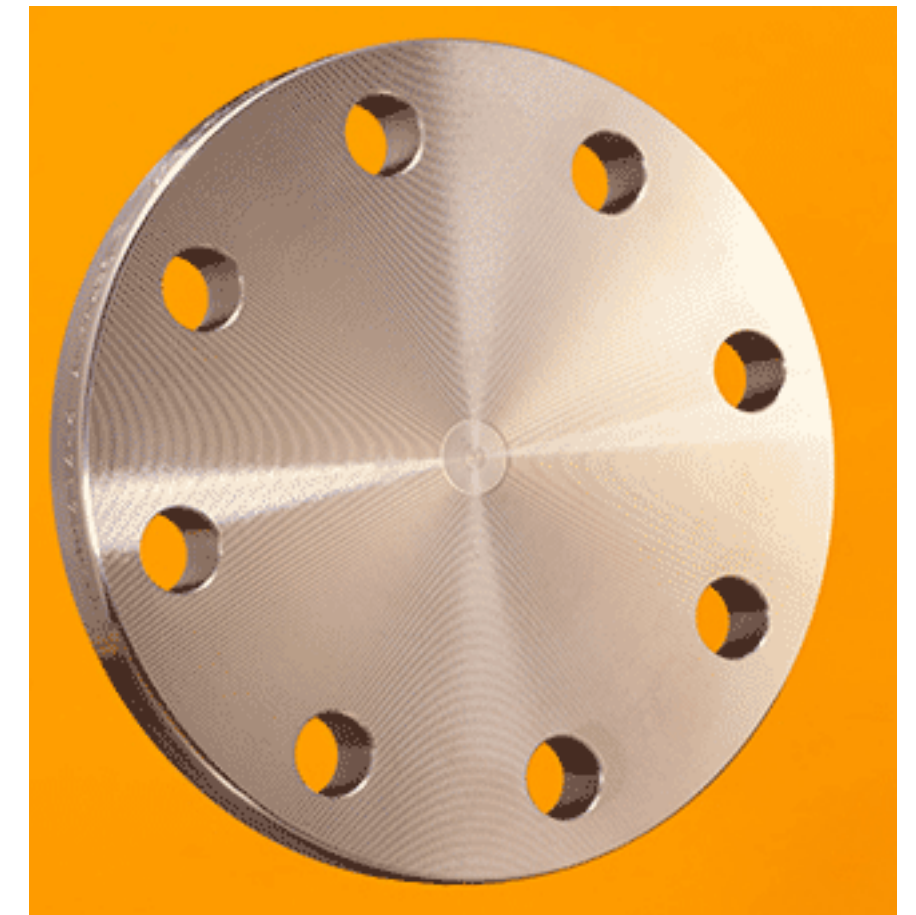
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EN 1092-1 type 05/A <sup>1)</sup>

1.4539 (5/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4539 904 L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	300	460	28	410	26	285	12	M24	35.0	
16	350	520	30	470	26	330	16	M24	48.0	
16	400	580	32	525	30	380	16	M27	63.5	
16	450									
16	500									
16	600									
40	10	90	16	60	14		4	M12	1.0	
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x



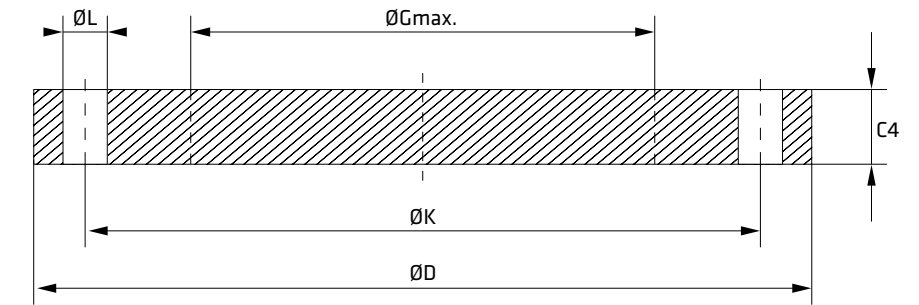
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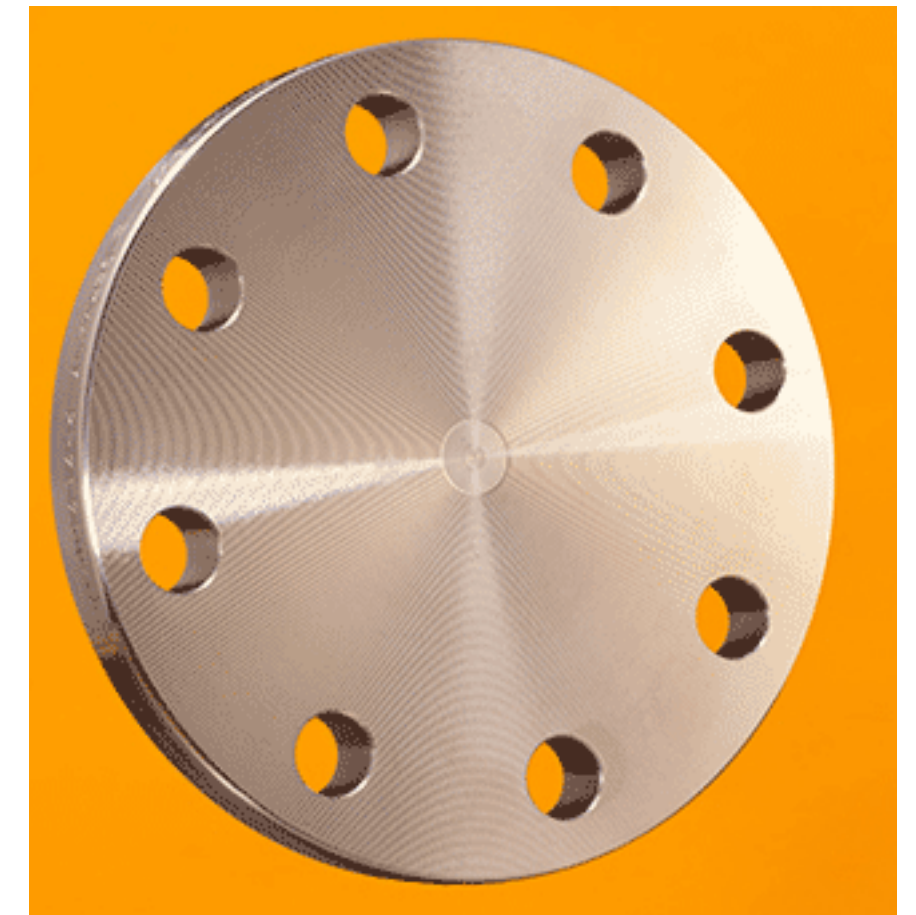
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EN 1092-1 type 05/A <sup>1)</sup>

1.4539 (6/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4539 904 L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	
40	65	185	22	145	18	55	8	M16	4.5	
40	80	200	24	160	18	70	8	M16	5.5	
40	100	235	24	190	22	90	8	M20	7.5	
40	125	270	26	220	26	115	8	M24	11.0	
40	150	300	28	250	26	140	8	M24	14.5	
40	200	375	36	320	30	190	12	M27	29.0	

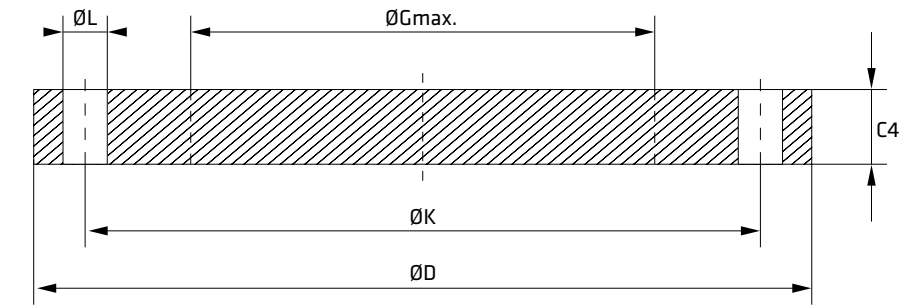


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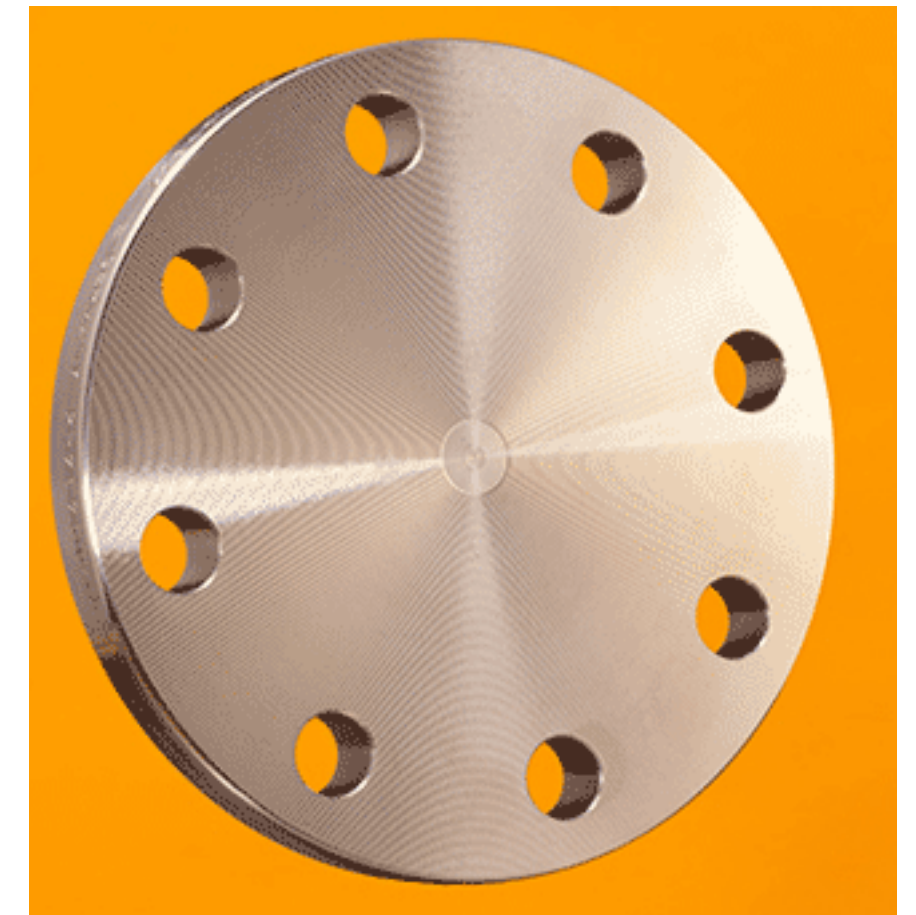
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EN 1092-1 type 05/A <sup>1)</sup>

1.4541 (1/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	15	80	12	55	11		4	M10	0.5	
6	20	90	14	65	11		4	M10	0.5	
6	25	100	14	75	11		4	M10	1.0	
6	32	120	14	90	14		4	M12	1.0	
6	40	130	14	100	14		4	M12	1.5	
6	50	140	14	110	14		4	M12	1.5	
6	65	160	14	130	18	55	4	M16	2.0	
6	80	190	16	150	18	70	4	M16	3.5	
6	100	210	16	170	18	90	4	M16	4.0	
6	125	240	18	200	18	115	8	M16	6.0	

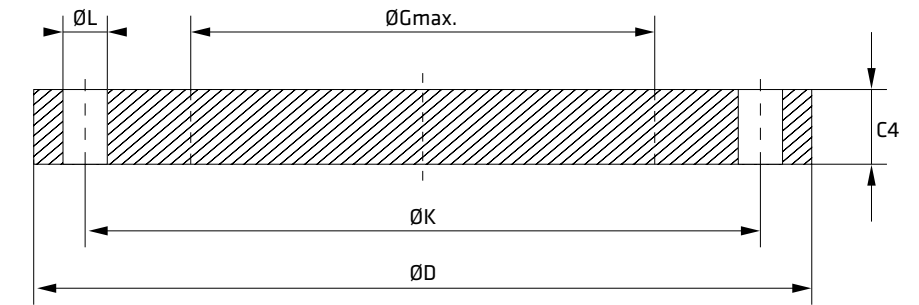


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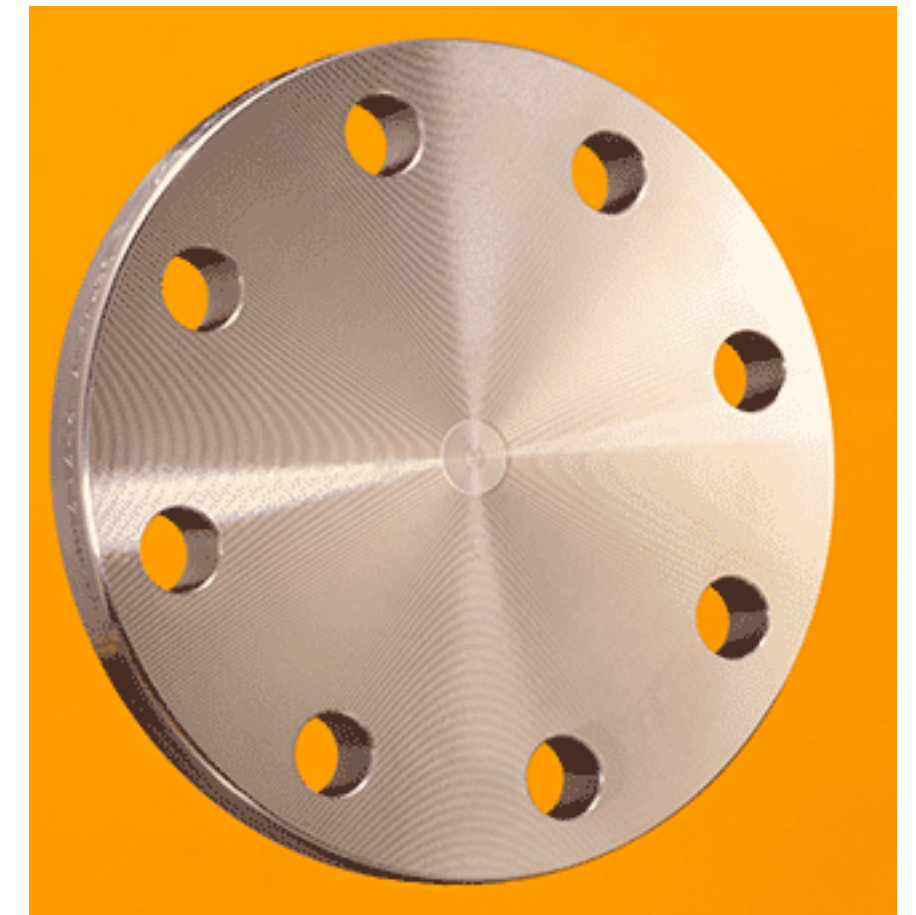
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EN 1092-1 type 05/A <sup>1)</sup>

1.4541 (2/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	150	265	18	225	18	140	8	M16	7.5	
6	200	320	20	280	18	190	8	M16	12.5	
6	250	375	22	335	22	235	12	M16	18.5	
6	300	440	22	395	22	285	12	M20	25.5	
6	350	490	22	445	22	330	12	M20	32.0	
6	400	540	22	495	22	380	16	M20	38.5	
6	450	595	24	550	22	425	16	M20	51.0	
6	500	645	24	600	22	475	20	M20	60.0	
6	600	755	30	705	26	575	20	M24	103.0	
10	200	340	24	295	22	190	8	M20	16.5	x

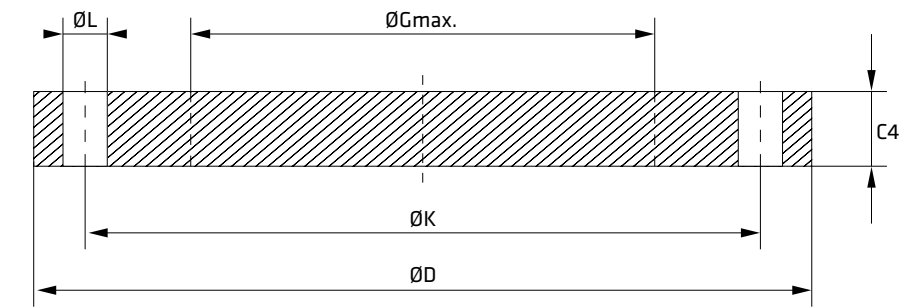


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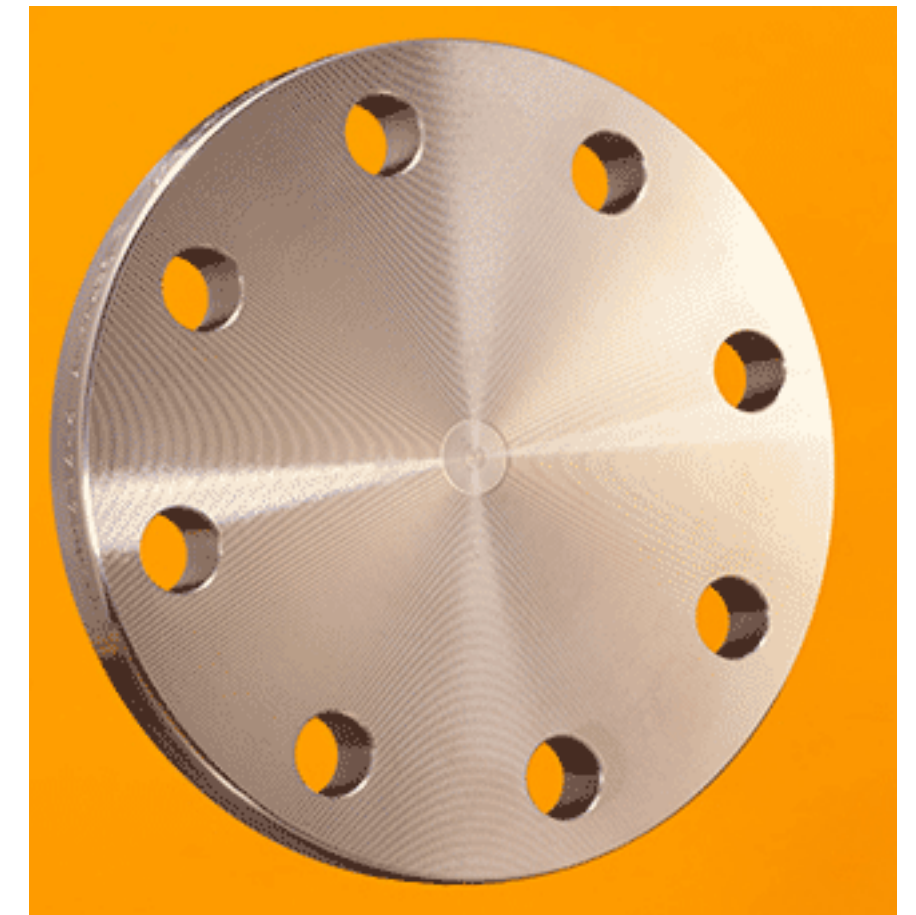
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EN 1092-1 type 05/A <sup>1)</sup>

1.4541 (3/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
10	250	395	26	350	22	235	12	M20	24.0	x
10	300	445	26	400	22	285	12	M20	31.0	x
10	350	505	26	460	22	330	16	M20	39.5	
10	400	565	26	515	26	380	16	M24	49.5	
10	450	615	28	565	26	425	20	M24	63.0	
10	500	670	28	620	26	475	20	M24	75.5	
10	600	780	34	725	30	575	20	M27	124.0	
10	700									
10	800									
16	50	165	18	125	18		4	M16	3.0	x



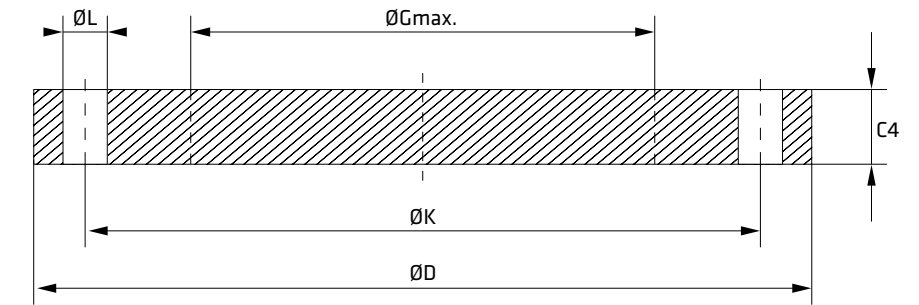
\* Finishes: page 311



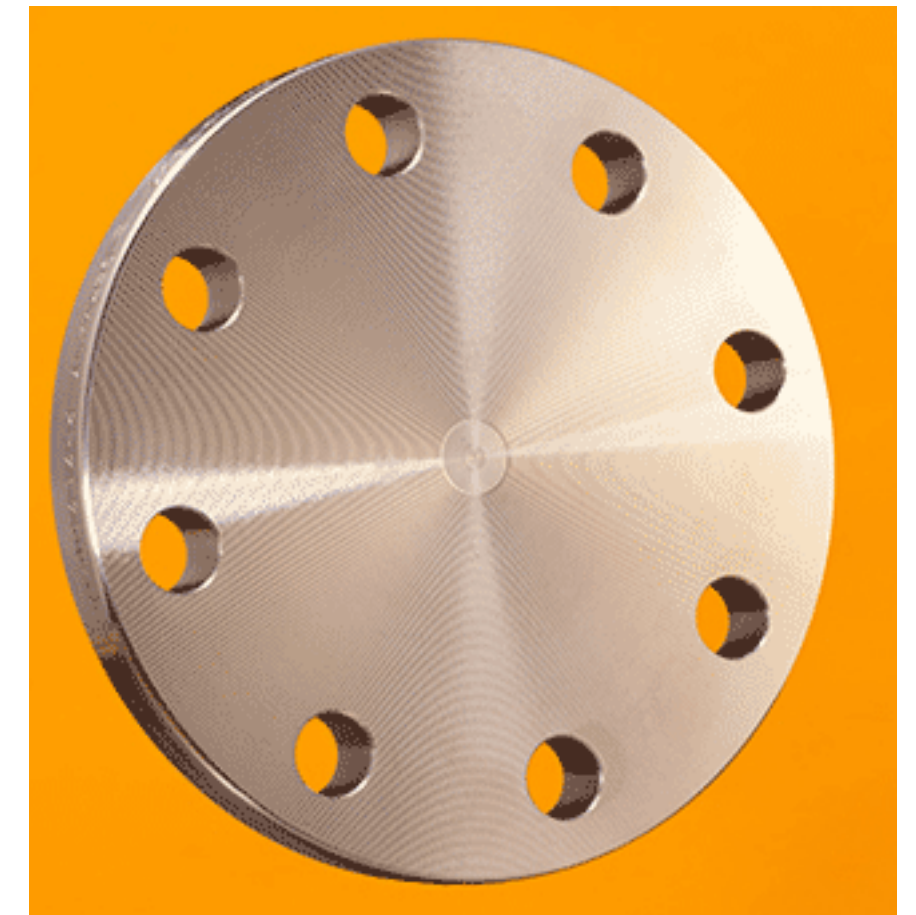
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EN 1092-1 type 05/A <sup>1)</sup>

1.4541 (4/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	65	185	18	145	18	55	4	M16	3.5	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	125	270	26	220	26	115	8		10.8	
16	150	285	22	240	22	140	8	M20	10.5	x
16	150	300	28	250	26	140	8		14.6	
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x

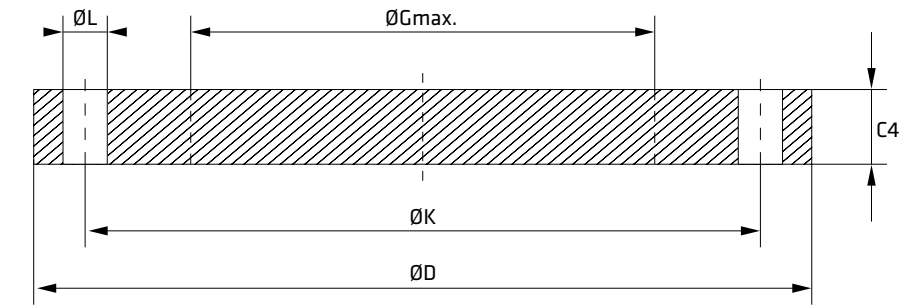


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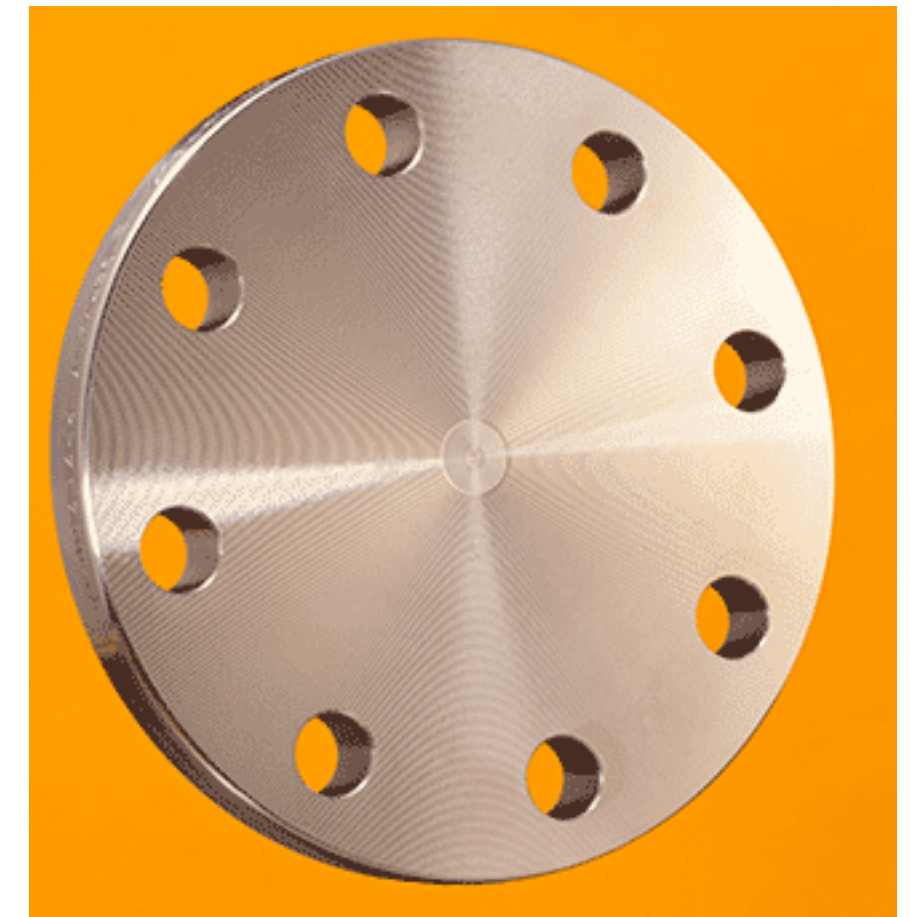
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EN 1092-1 type 05/A <sup>1)</sup>

1.4541 (5/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	300	460	28	410	26	285	12	M24	35.0	x
16	350	520	30	470	26	330	16	M24	48.0	
16	400	580	32	525	30	380	16	M27	63.5	
16	450									
16	500									
16	600									
40	10	90	16	60	14		4	M12	1.0	
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x

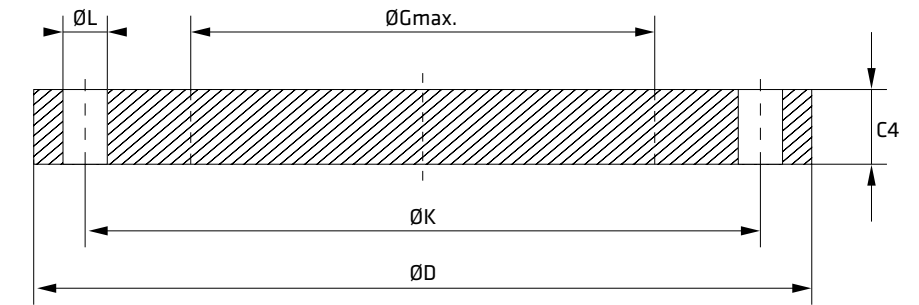


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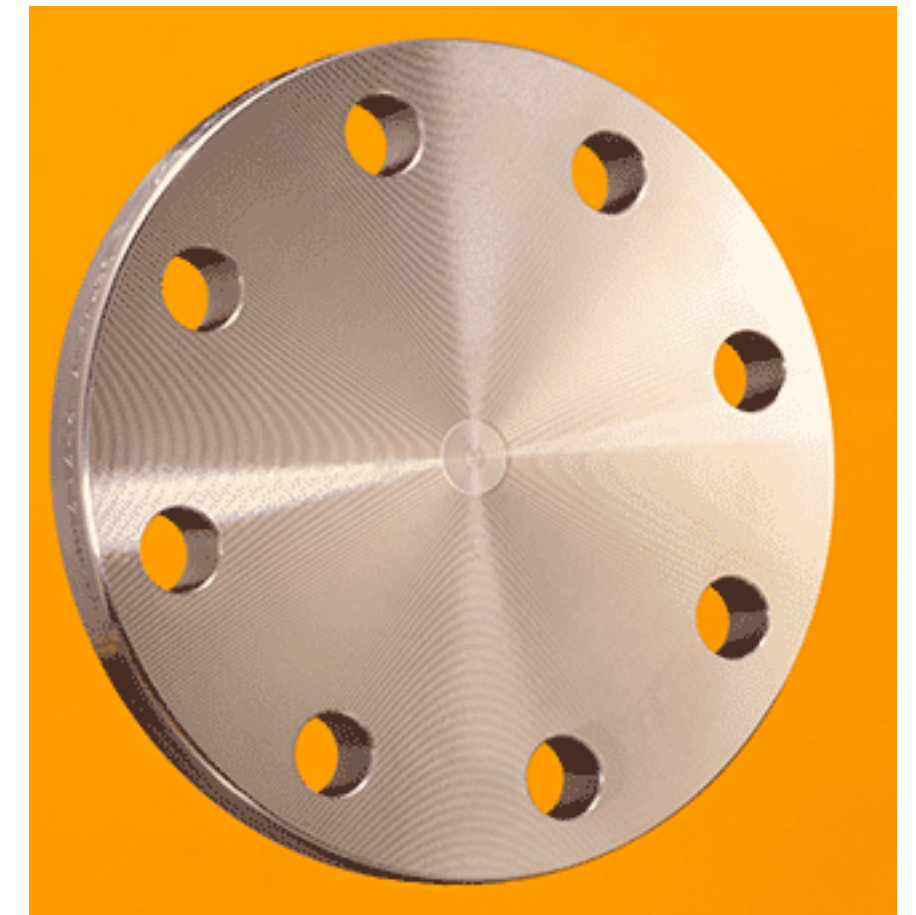
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EN 1092-1 type 05/A <sup>1)</sup>

1.4541 (6/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	
40	65	185	22	145	18	55	8	M16	4.5	
40	80	200	24	160	18	70	8	M16	5.5	
40	100	235	24	190	22	90	8	M20	7.5	
40	125	270	26	220	26	115	8	M24	11.0	
40	150	300	28	250	26	140	8	M24	14.5	
40	200	375	36	320	30	190	12	M27	29.0	

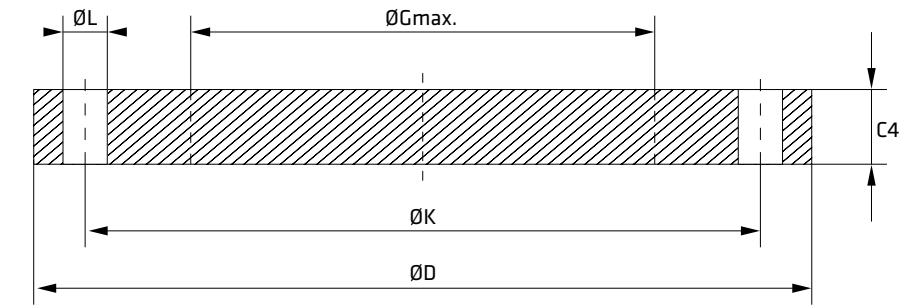


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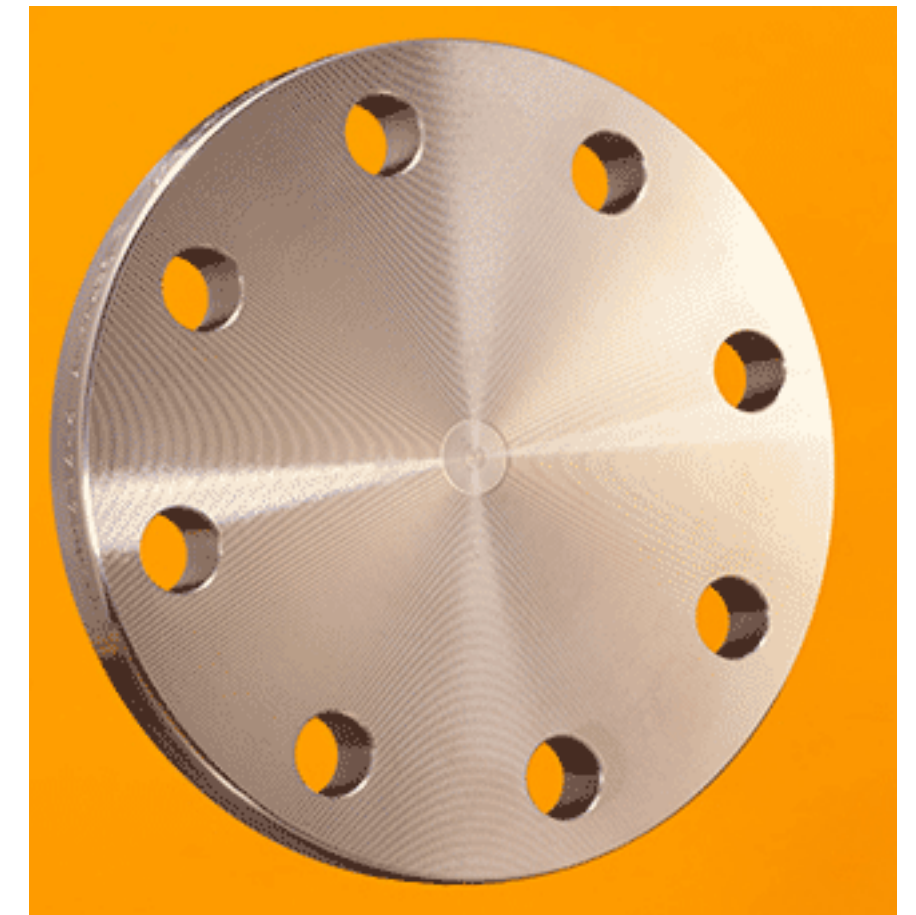
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EN 1092-1 type 05/A <sup>1)</sup>

1.4571 (1/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	15	80	12	55	11		4	M10	0.5	
6	20	90	14	65	11		4	M10	0.5	
6	25	100	14	75	11		4	M10	1.0	
6	32	120	14	90	14		4	M12	1.0	
6	40	130	14	100	14		4	M12	1.5	
6	50	140	14	110	14		4	M12	1.5	
6	65	160	14	130	18	55	4	M16	2.0	
6	80	190	16	150	18	70	4	M16	3.5	
6	100	210	16	170	18	90	4	M16	4.0	
6	125	240	18	200	18	115	8	M16	6.0	



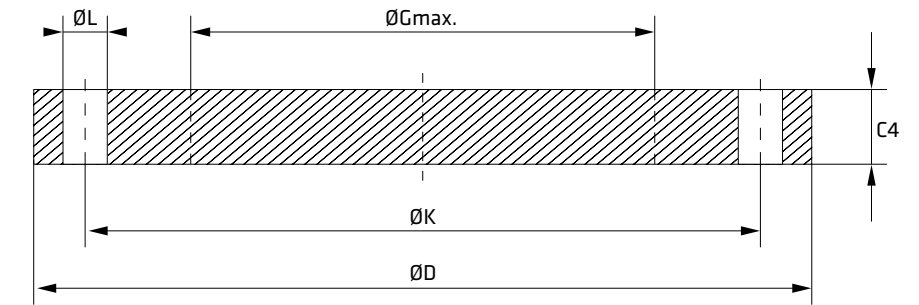
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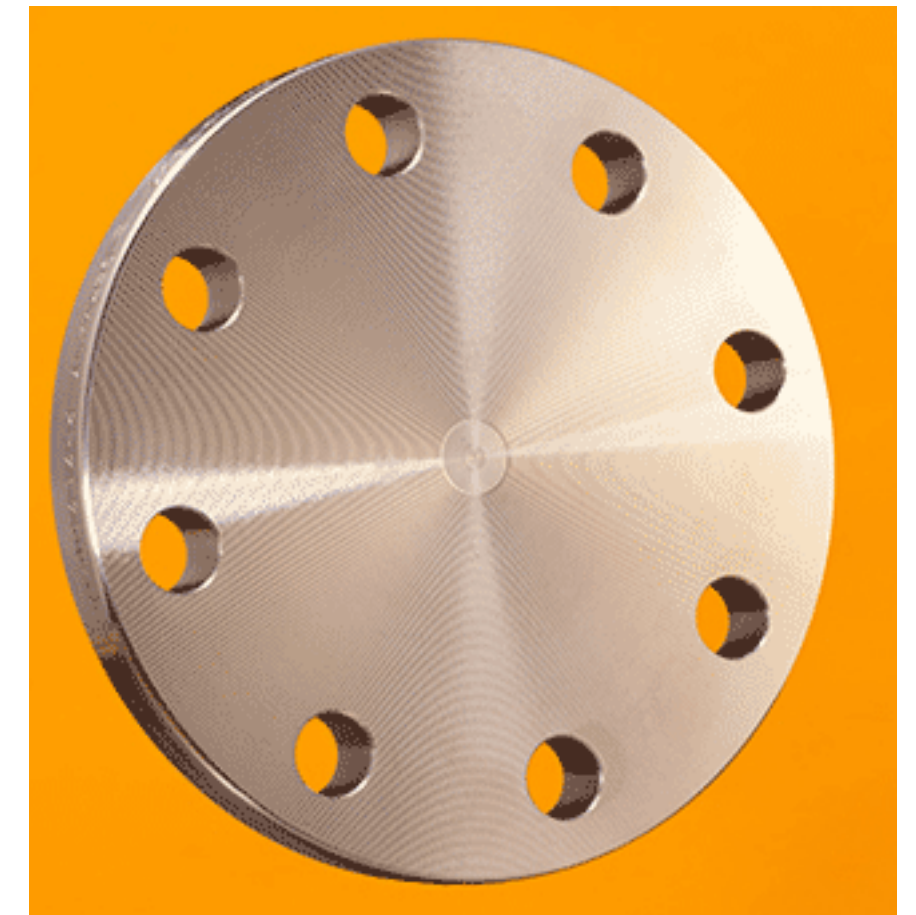
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EN 1092-1 type 05/A <sup>1)</sup>

1.4571 (2/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
6	150	265	18	225	18	140	8	M16	7.5	
6	200	320	20	280	18	190	8	M16	12.5	
6	250	375	22	335	22	235	12	M16	18.5	
6	300	440	22	395	22	285	12	M20	25.5	
6	350	490	22	445	22	330	12	M20	32.0	
6	400	540	22	495	22	380	16	M20	38.5	
6	450	595	24	550	22	425	16	M20	51.0	
6	500	645	24	600	22	475	20	M20	60.0	
6	600	755	30	705	26	575	20	M24	103.0	
10	200	340	24	295	22	190	8	M20	16.5	x

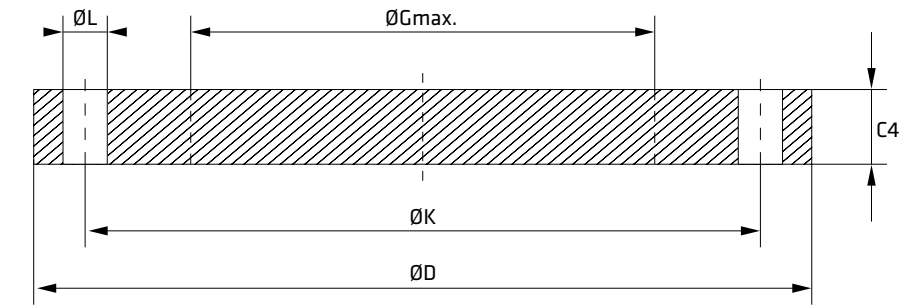


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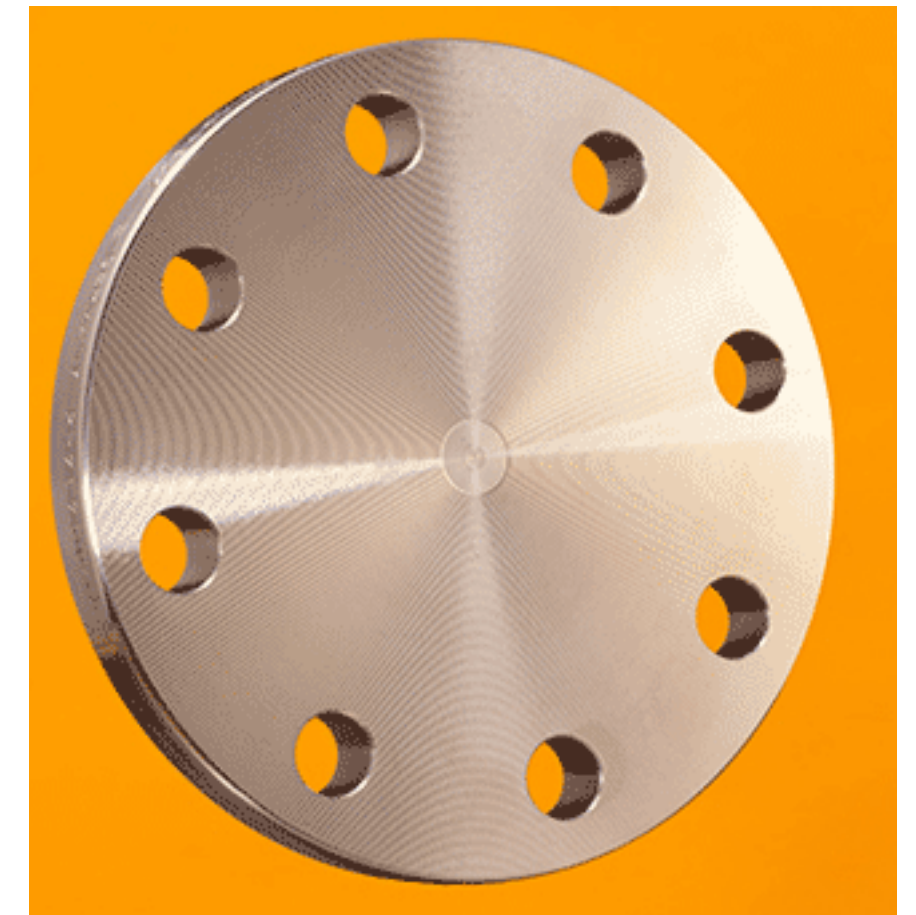
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EN 1092-1 type 05/A <sup>1)</sup>

1.4571 (3/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4571 316 Ti
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
10	250	395	26	350	22	235	12	M20	24.0	x
10	300	445	26	400	22	285	12	M20	31.0	x
10	350	505	26	460	22	330	16	M20	39.5	x
10	400	565	26	515	26	380	16	M24	49.5	x
10	450	615	28	565	26	425	20	M24	63.0	
10	500	670	28	620	26	475	20	M24	75.5	x
10	600	780	34	725	30	575	20	M27	124.0	
10	700									
10	800									
16	50	165	18	125	18		4	M16	3.0	x

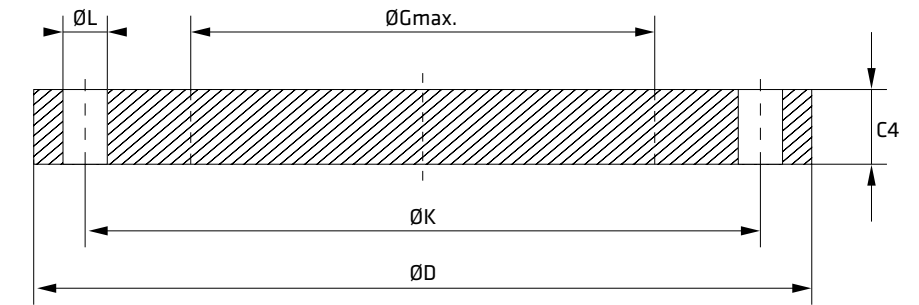


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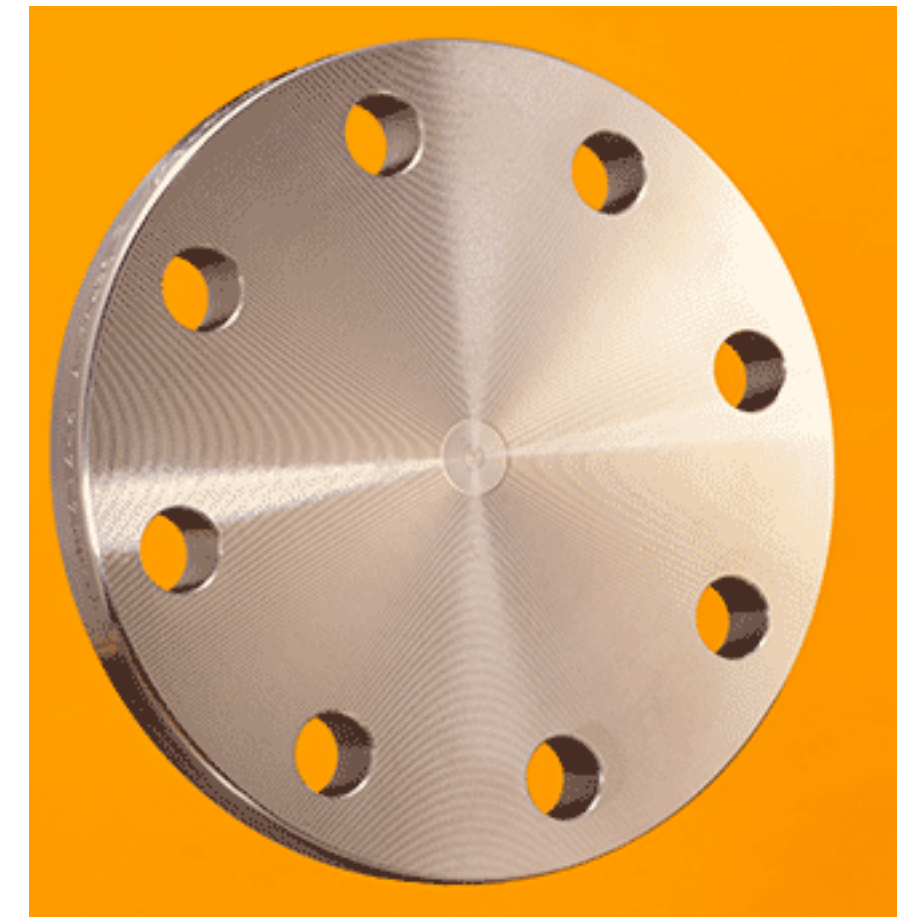
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EN 1092-1 type 05/A <sup>1)</sup>

1.4571 (4/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	65	185	18	145	18	55	4	M16	3.5	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	125	270	26	220	26	115	8		10.8	x
16	150	285	22	240	22	140	8	M20	10.5	x
16	150	300	28	250	26	140	8		14.6	x
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x

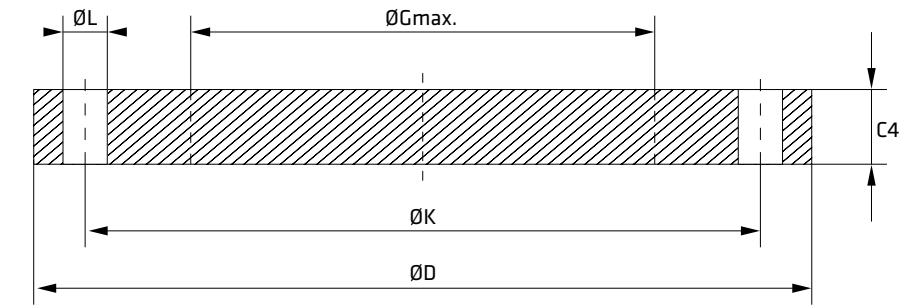


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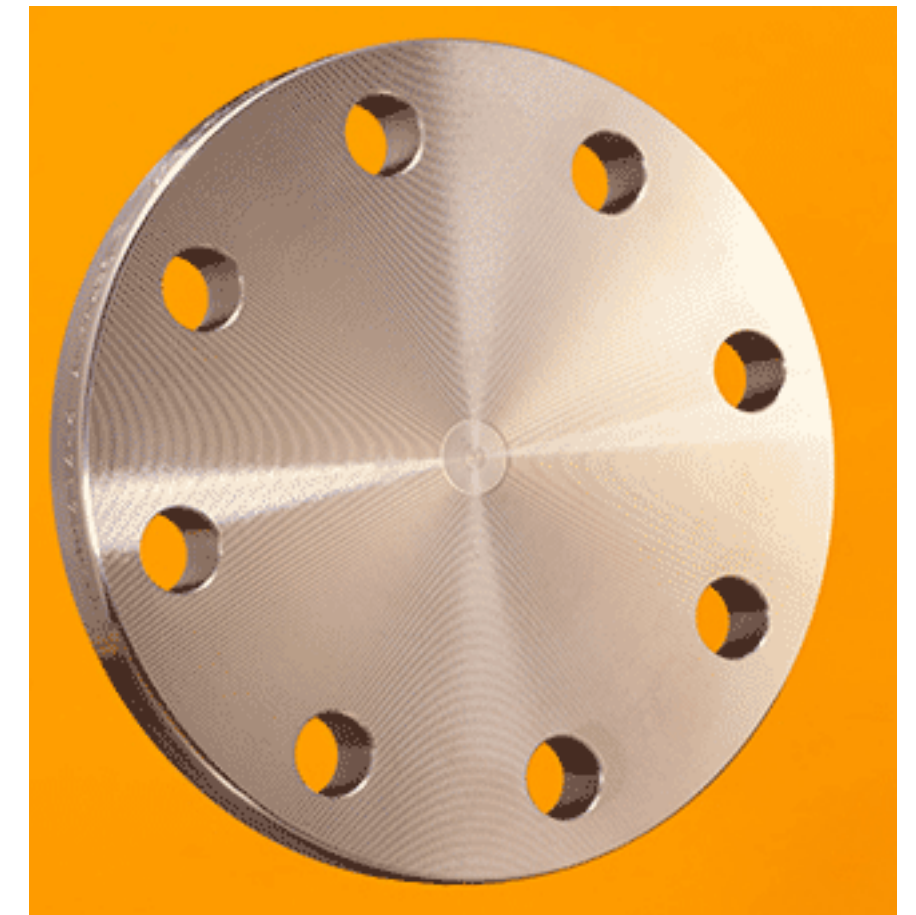
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EN 1092-1 type 05/A <sup>1)</sup>

1.4571 (5/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	300	460	28	410	26	285	12	M24	35.0	x
16	350	520	30	470	26	330	16	M24	48.0	
16	400	580	32	525	30	380	16	M27	63.5	
16	450									
16	500									
16	600									
40	10	90	16	60	14		4	M12	1.0	
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x



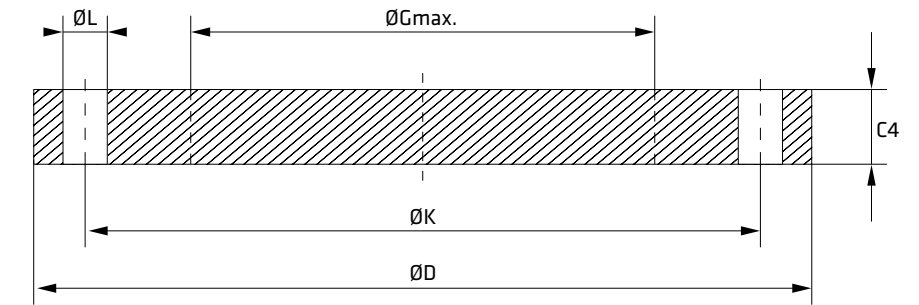
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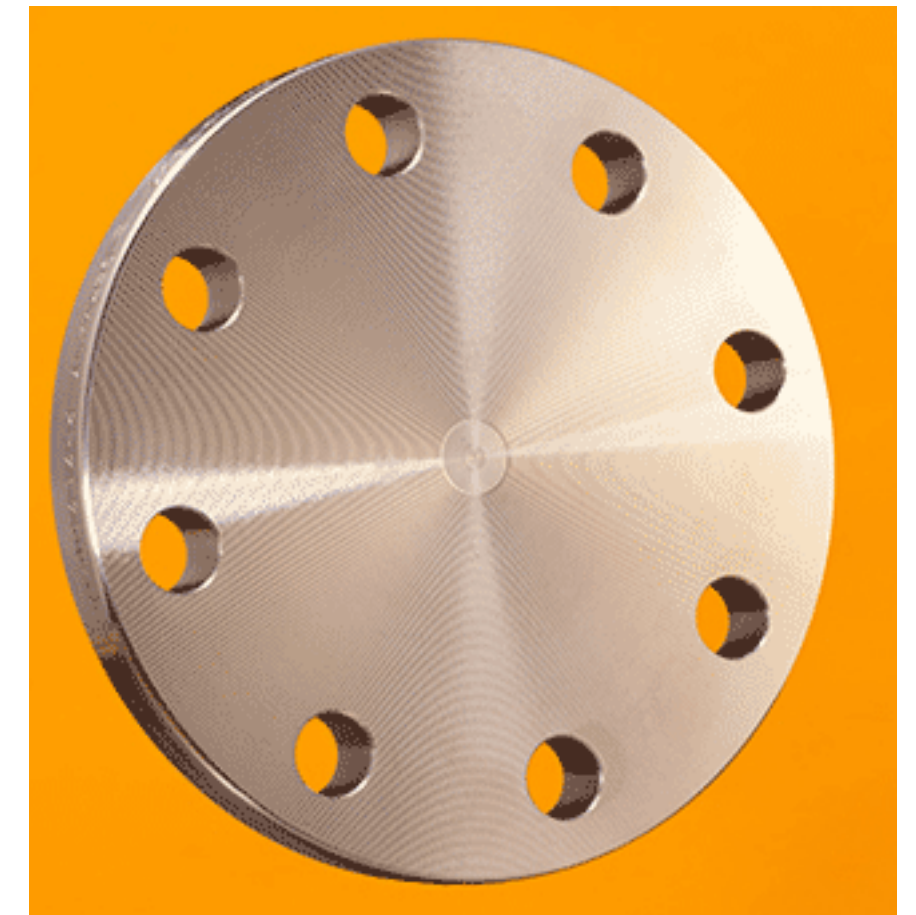
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EN 1092-1 type 05/A <sup>1)</sup>

1.4571 (6/6)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	x
40	65	185	22	145	18	55	8	M16	4.5	x
40	80	200	24	160	18	70	8	M16	5.5	x
40	100	235	24	190	22	90	8	M20	7.5	x
40	125	270	26	220	26	115	8	M24	11.0	
40	150	300	28	250	26	140	8	M24	14.5	
40	200	375	36	320	30	190	12	M27	29.0	x

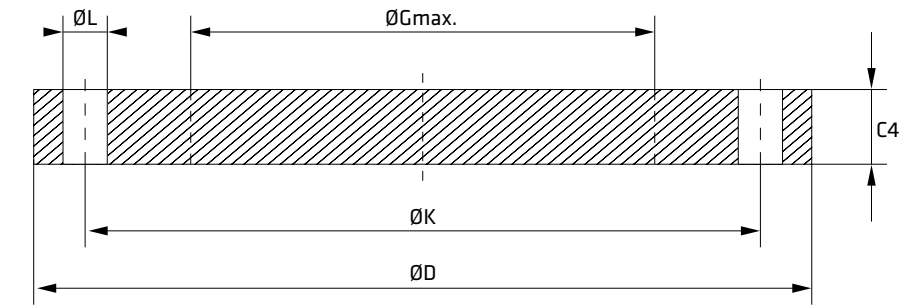


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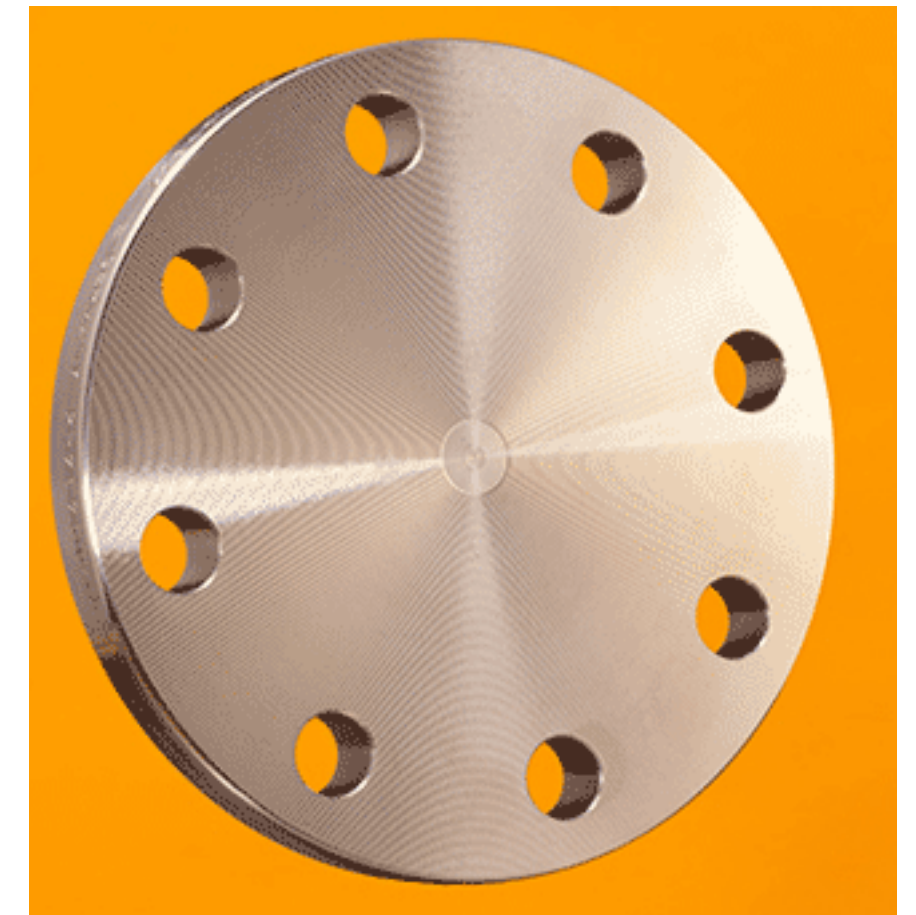
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EN 1092-1 type 05 B

1.4301 (1/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301/1.4307 304/304L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
16	50	165	18	125	18		4	M16	3.0	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	150	285	22	240	22	140	8	M20	10.5	x
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x
16	300	460	28	410	26	285	12	M24	35.0	x
16	350	520	30	470	26	330	16	M24	48.0	x

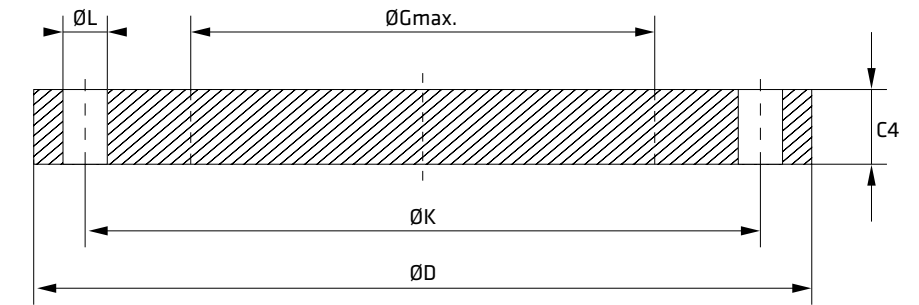


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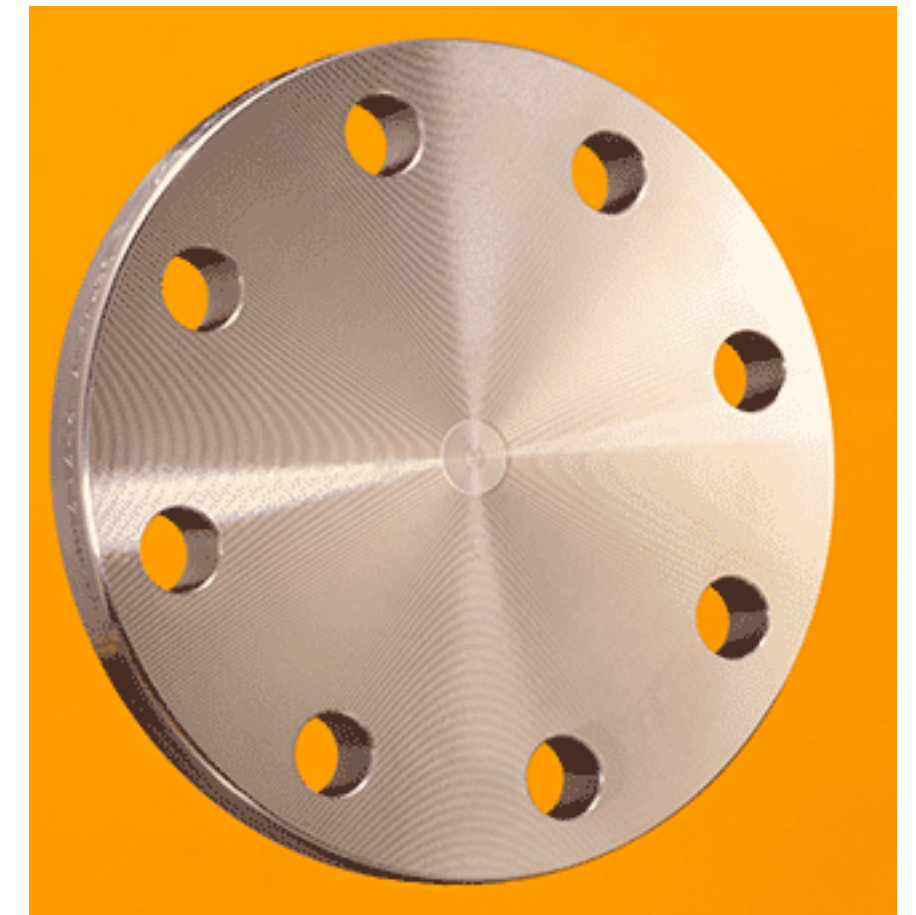
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EN 1092-1 type 05 B

1.4301 (2/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4301/1.4307 304/304L
PN	DN	mm	mm	mm	mm	mm			kg/pce.	*)
16	400	580	32	525	30		16	M27	63.5	x
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	x

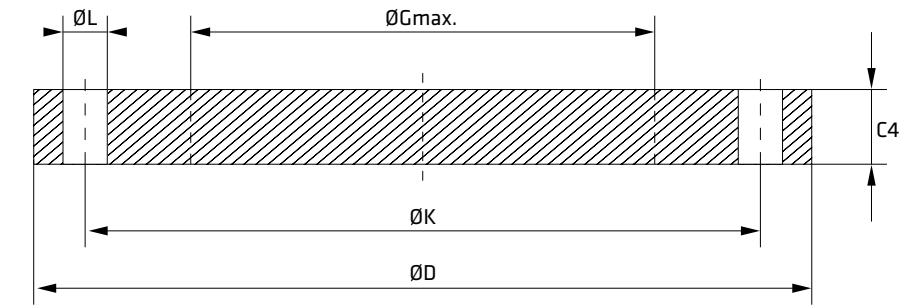


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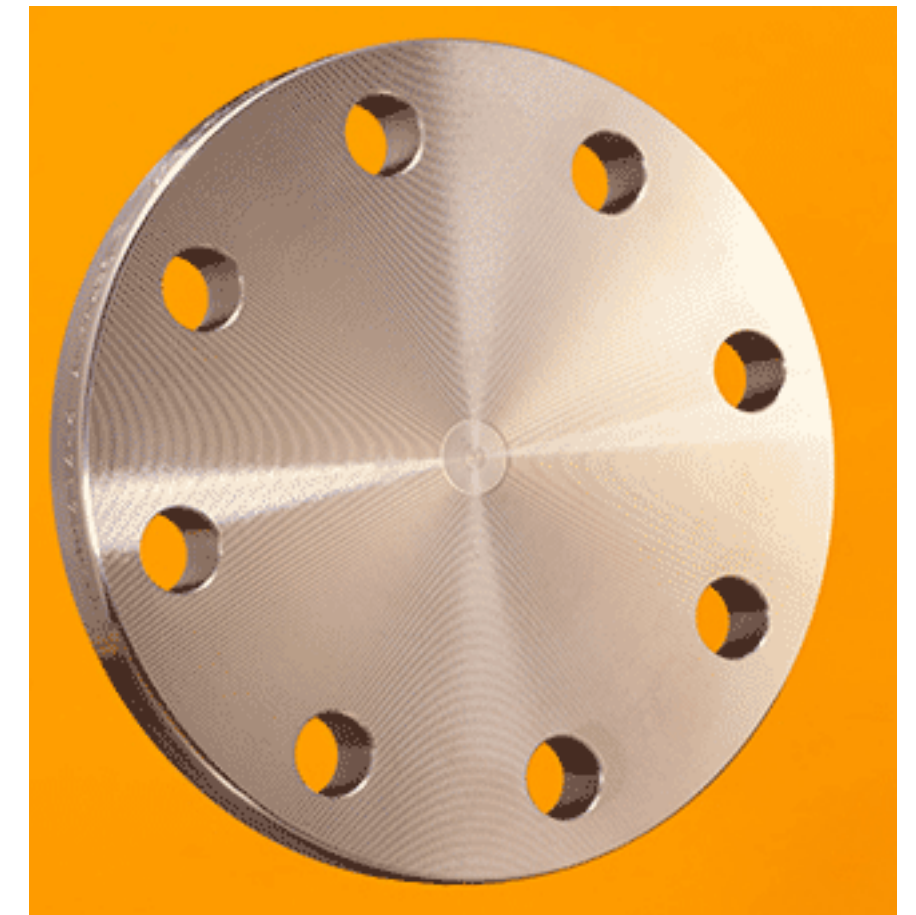
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EN 1092-1 type 05 B

1.4401 (1/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	50	165	18	125	18		4	M16	3.0	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	150	285	22	240	22	140	8	M20	10.5	x
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x
16	300	460	28	410	26	285	12	M24	35.0	
16	350	520	30	470	26	330	16	M24	48.0	



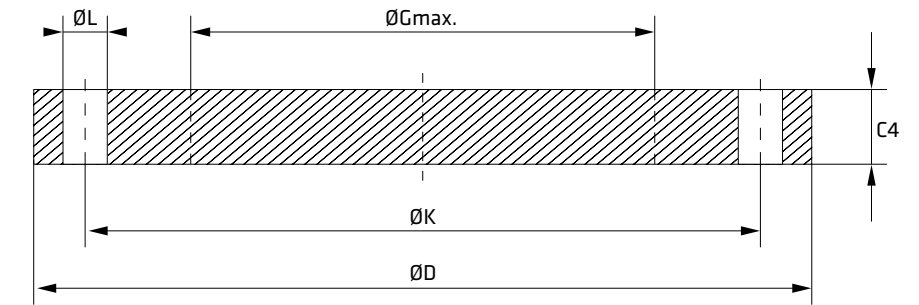
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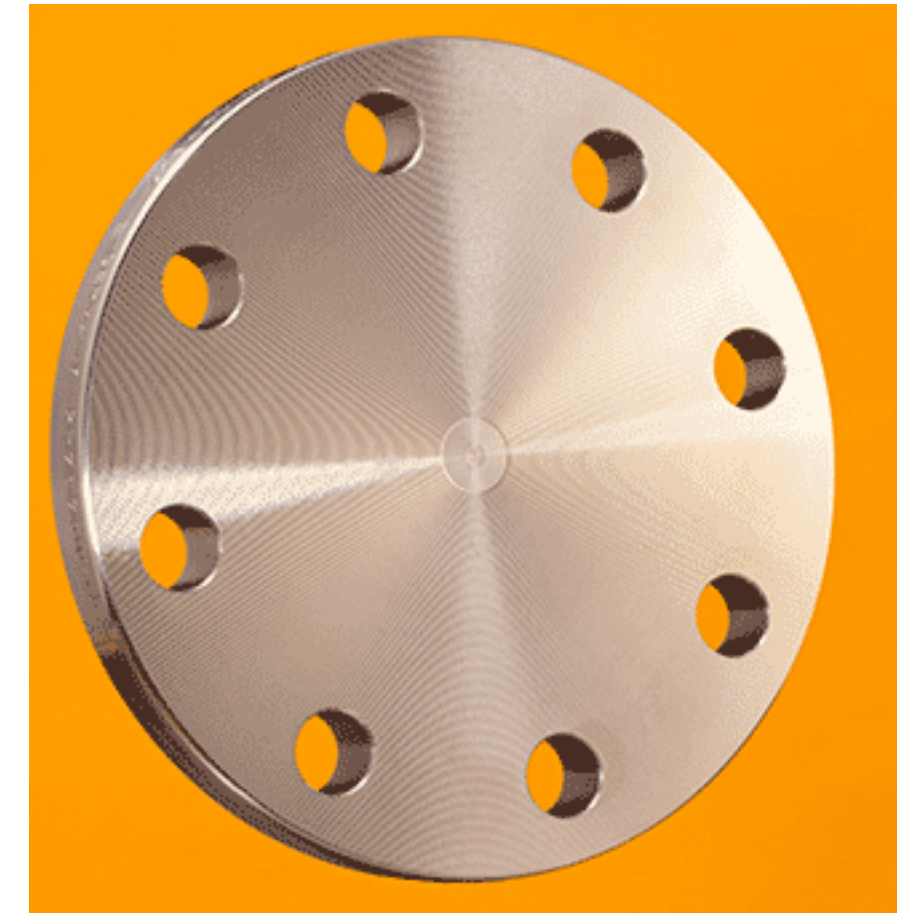
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EN 1092-1 type 05 B

1.4401 (2/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	400	580	32	525	30		16	M27	63.5	
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	x

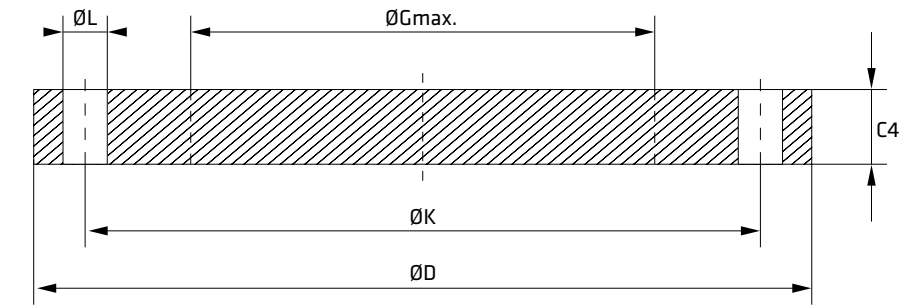


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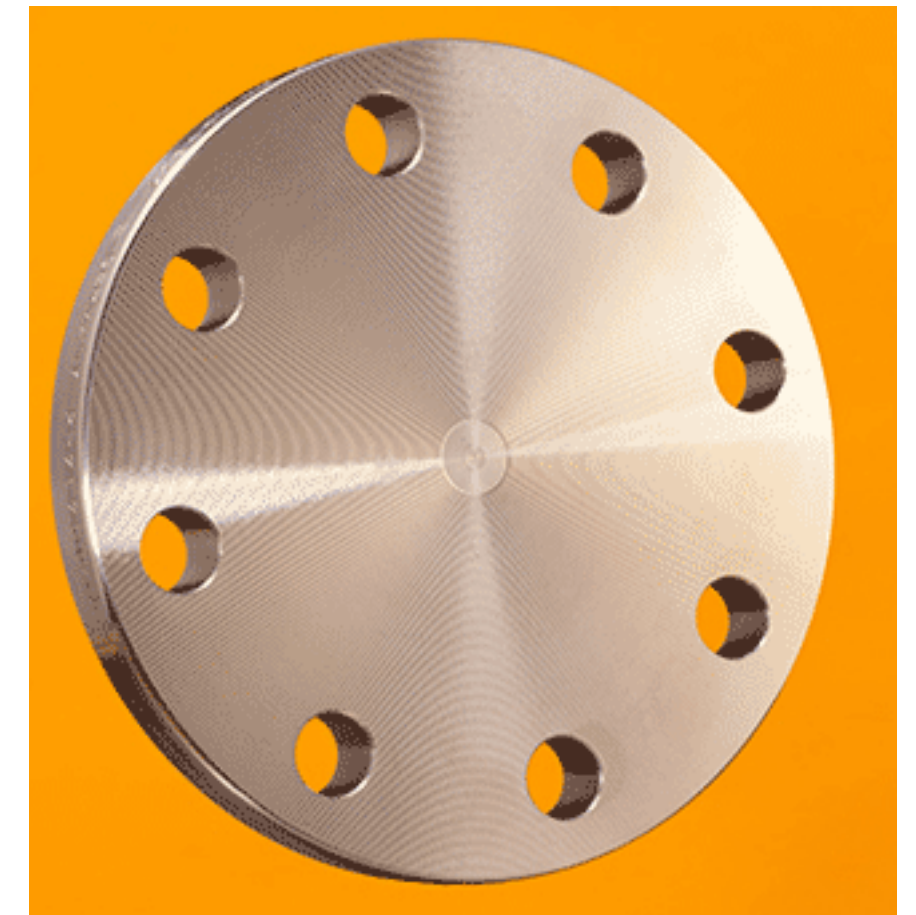
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EN 1092-1 type 05 B

1.4541 (1/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	50	165	18	125	18		4	M16	3.0	x
16	65	185	18	145	18	55	8	M16	3.5	x
16	80	200	20	160	18	70	8	M16	4.5	x
16	100	220	20	180	18	90	8	M16	5.5	x
16	125	250	22	210	18	115	8	M16	8.0	x
16	150	285	22	240	22	140	8	M20	10.5	x
16	200	340	24	295	22	190	12	M20	16.5	x
16	250	405	26	355	26	235	12	M24	25.0	x
16	300	460	28	410	26	285	12	M24	35.0	x
16	350	520	30	470	26	330	16	M24	48.0	x

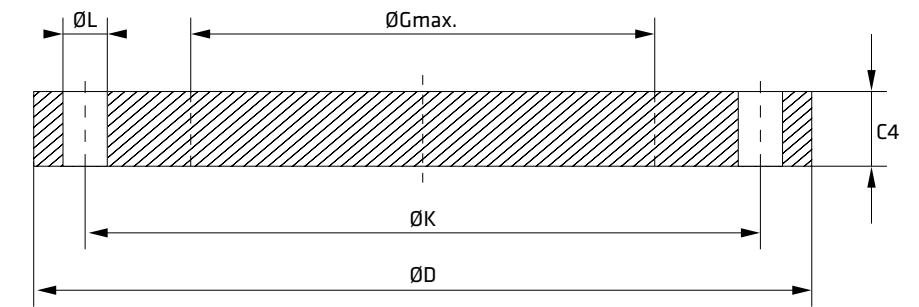


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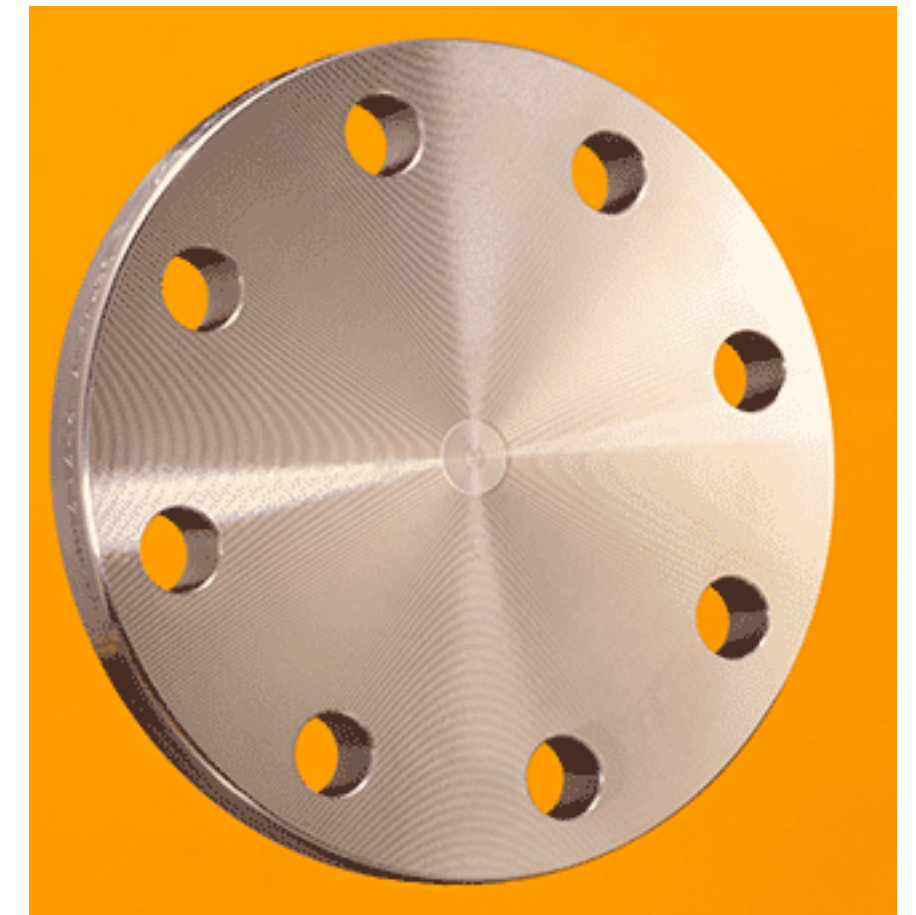
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EN 1092-1 type 05 B

1.4541 (2/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	ØGmax	Number of screw	AFM Size	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm			kg/pce.	
16	400	580	32	525	30		16	M27	63.5	x
40	15	95	16	65	14		4	M12	1.1	x
40	20	105	18	75	14		4	M12	1.2	x
40	25	115	18	85	14		4	M12	1.5	x
40	32	140	18	100	18		4	M16	2.0	x
40	40	150	18	110	18		4	M16	2.5	x
40	50	165	20	125	18		4	M16	3.0	x

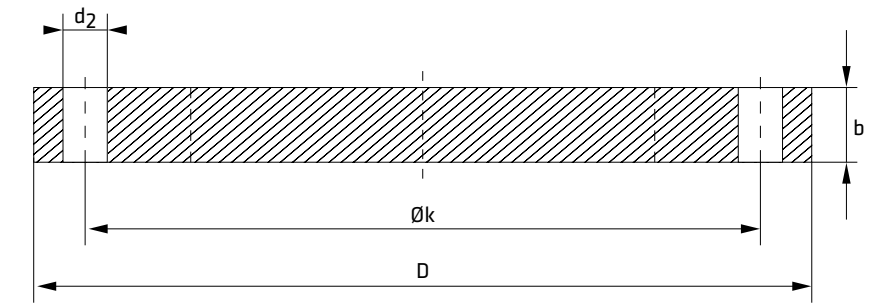


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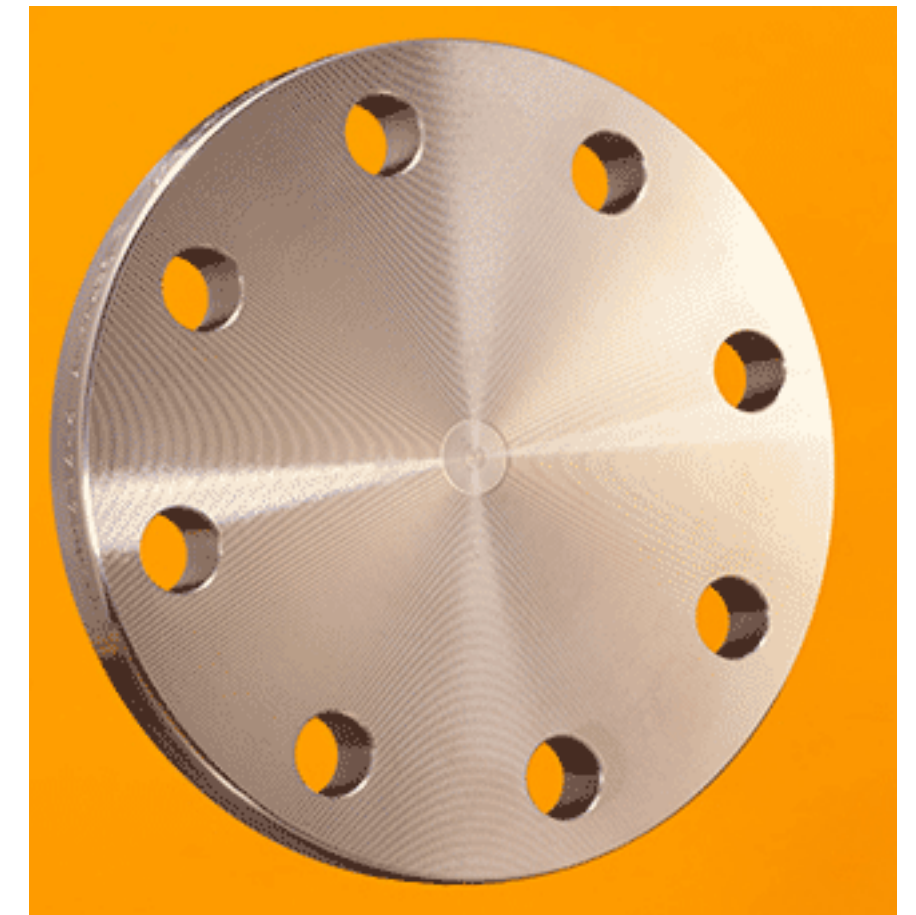
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DIN 2527 Form B

1.4462-1.4541 (1/1)



Nominal pressure/ diameter		$\text{Ø}D$	$C_4$	$\text{Ø}K$	$\text{Ø}L$	Number of screw	Grade AISI	1.4462	1.4539	1.4541
PN	DN	mm	mm	mm	mm			kg/pce.	*)	*)
16	10	90	14	60	14	4	0.63			
16	15	95	14	65	14	4	0.72	x	x	x
16	20	105	16	75	14	4	1.01	x	x	x
16	25	115	16	85	14	4	1.23	x	x	x
16	32	140	16	100	18	4	1.80	x	x	x
16	40	150	16	110	18	4	2.09	x	x	x



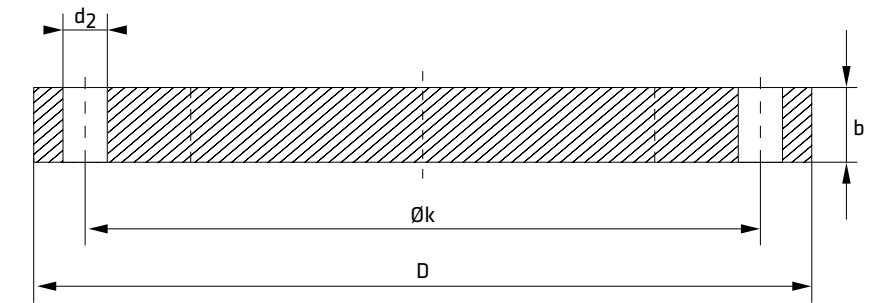
\* Finishes: page 311



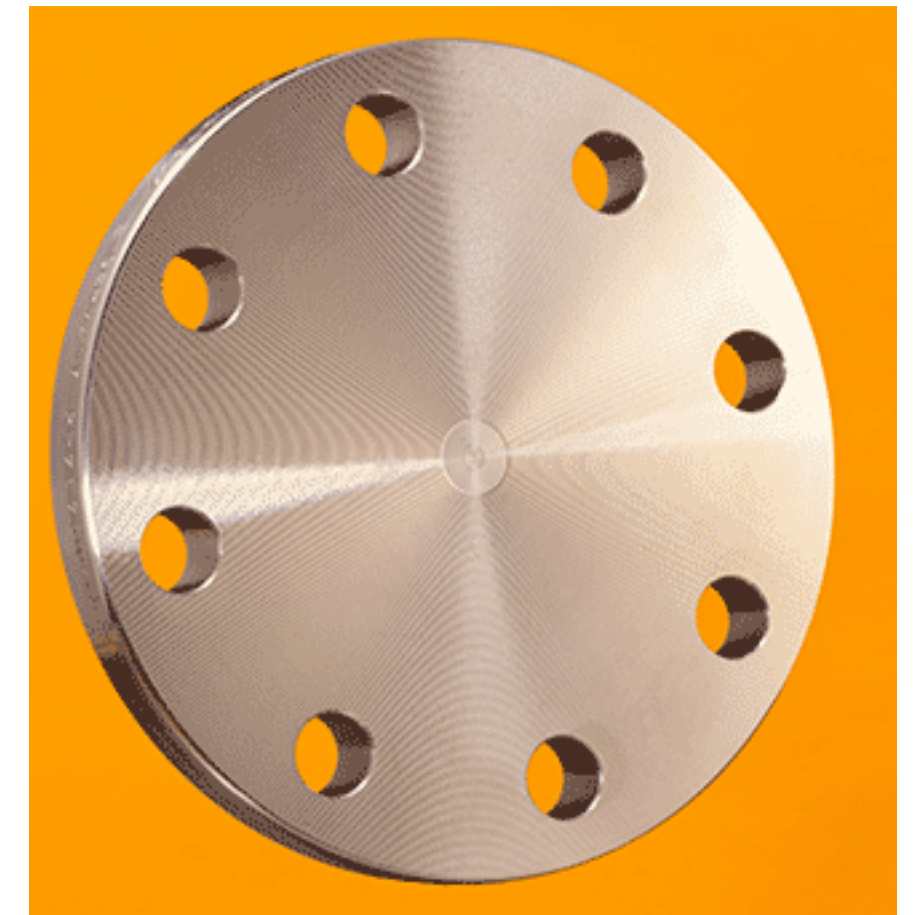
# BLIND FLANGES

DIN 2527 Form B

1.4571 (1/1)



Nominal pressure/ diameter		$\text{Ø}D$	$C_4$	$\text{Ø}K$	$\text{Ø}L$	Number of screw	Grade AISI	1.4571 316 Ti
PN	DN	mm	mm	mm	mm		kg/pce.	*)
16	10	90	14	60	14	4	0.63	x
16	15	95	14	65	14	4	0.72	x
16	20	105	16	75	14	4	1.01	x
16	25	115	16	85	14	4	1.23	x
16	32	140	16	100	18	4	1.80	x
16	40	150	16	110	18	4	2.09	x

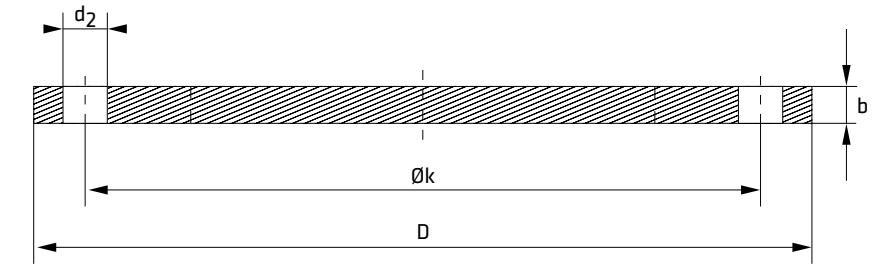


\* Finishes: page 311

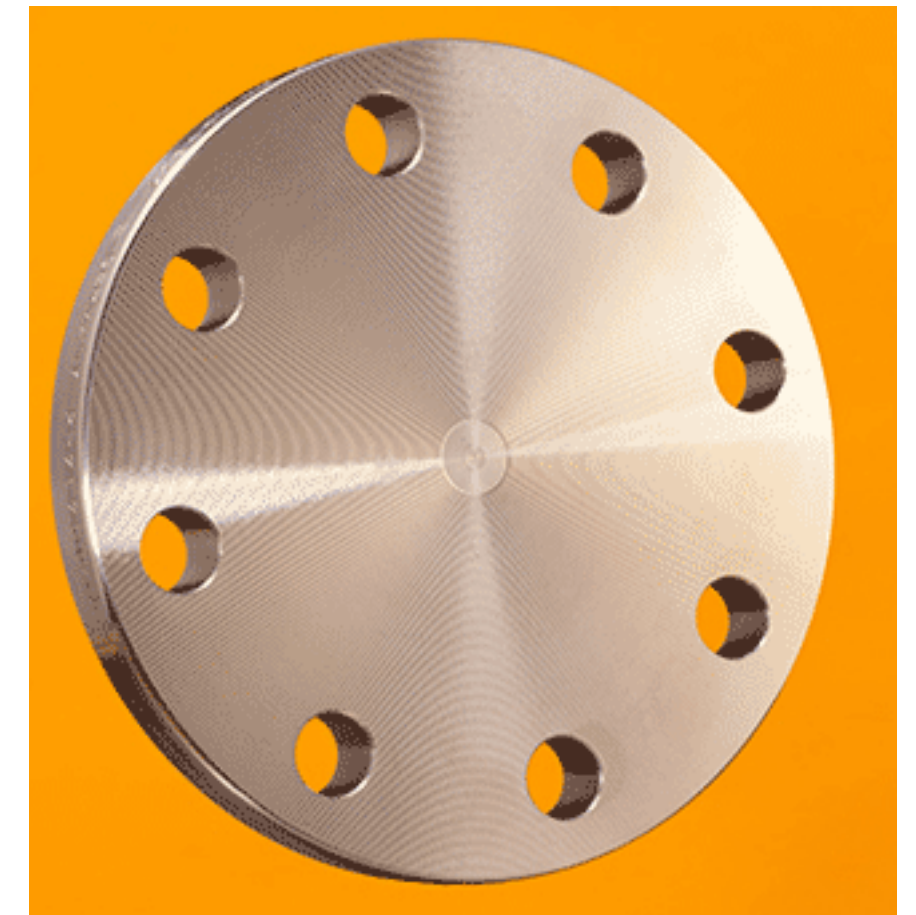
# BLIND FLANGES

DIN with reduced thickness

1.4301-1.4571 (1/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	Number of screw	Grade AISI kg/pce.	1.4301/1.4307	1.4404	1.4571
PN	DN	mm	mm	mm	mm			304/304L *)	316L *)	316Ti *)
10	200	340	12	295	22	8	8.25			x
10	200	340	15	295	22	8	10.31	x		
10	250	405	15	355	26	12	14.40	x		x
10	300	460	15	470	26	12	18.80	x		x
10	300	460	19.6	470	26	12	23.21	x	x	
10	350	505	15	460	22	16	24.17			x
10	350	505	21	460	22	16	29.70	x	x	
10	400	565	15	515	26	16	28.50			x
10	400	565	22.4	515	26	16	34.60	x	x	
10	450	615	22.4	565	26	20	39.20	x	x	

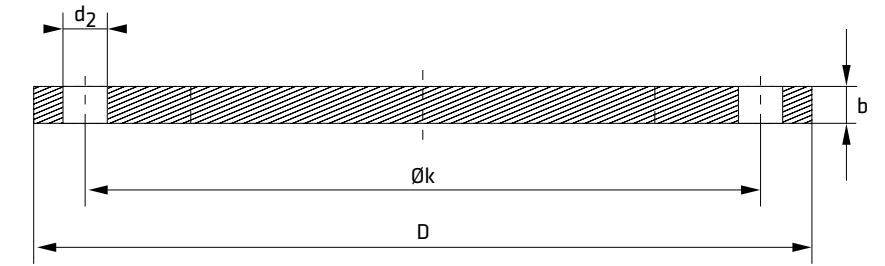


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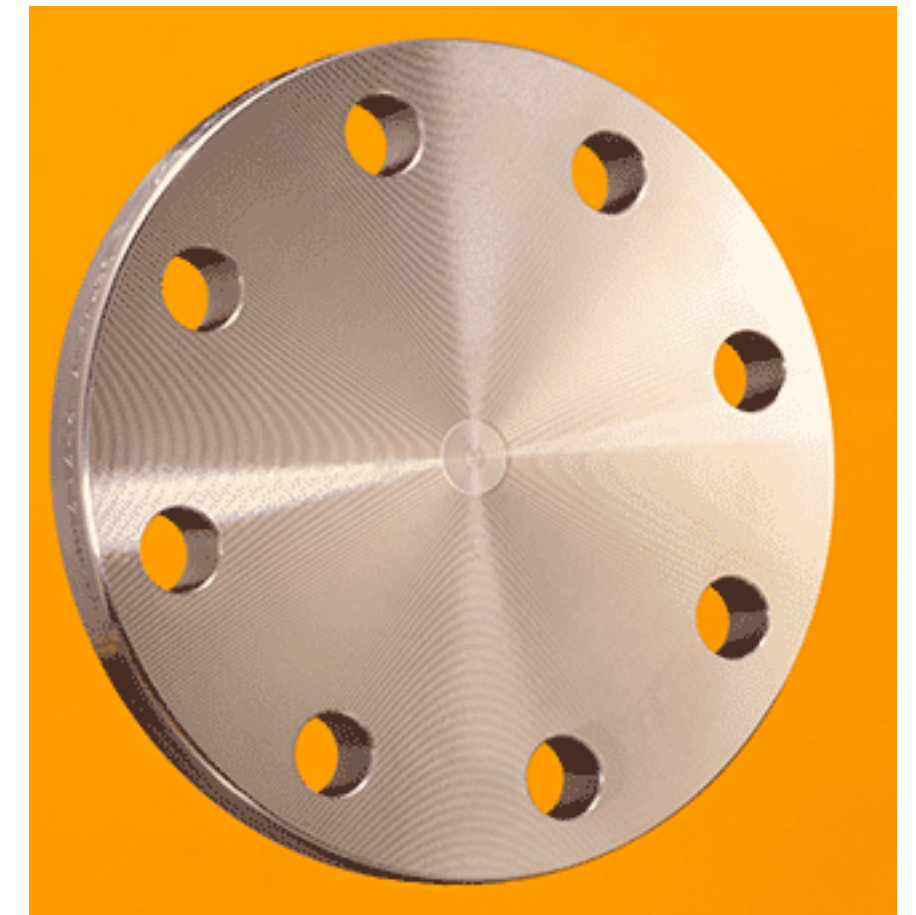
# BLIND FLANGES

DIN with reduced thickness

1.4301-1.4571 (2/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	Number of screw	Grade AISI kg/pce.	1.4301/1.4307	1.4404	1.4571
PN	DN	mm	mm	mm	mm			304/304L *)	316L *)	316Ti *)
10	500	670	20	620	26	20	53.57	x	x	x
10	500	670	23.8	620	26	20	47.00	x	x	
10	600	780	20	725	30	20	73.00			x
10	600	780	25.2	725	30	20	74.40	x	x	
16	100	220	10	180	18	8	2.83	x		x
16	125	250	12	210	18	8	4.60	x		x
16	150	285	12	240	22	8	4.68	x		x

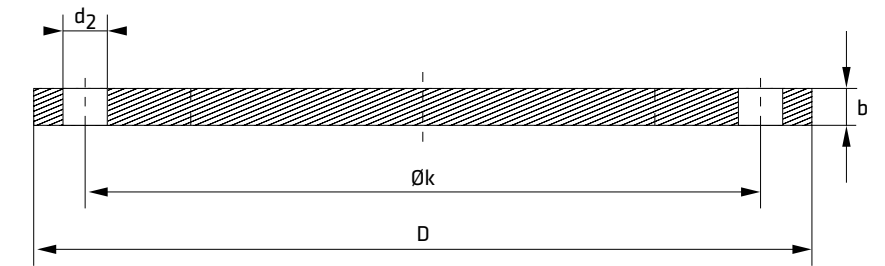


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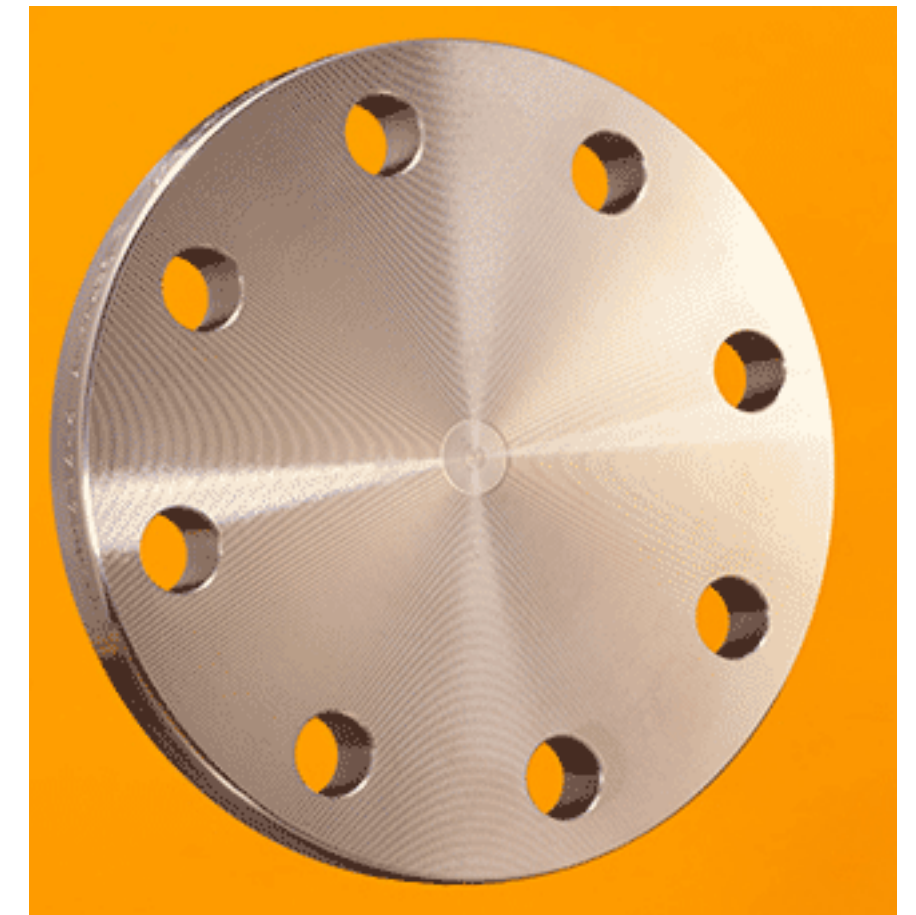
# BLIND FLANGES

EN1092-1 type 05 A with reduced thickness

1.4301-1.4571 (1/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	Number of screw	Grade AISI kg/pce.	1.4301	1.4541	1.4571
PN	DN	mm	mm	mm	mm			304 *)	321 *)	316Ti *)
10	15	95	10	65	14	4	0.51	x		
10	20	105	10	75	14	4	0.63	x		x
10	25	115	10	85	14	4	0.65	x	x	x
10	32	140	10	100	18	4	1.10	x	x	x
10	40	150	10	110	18	4	1.31	x	x	x
10	50	165	10	125	18	4	1.60	x	x	x
10	65	185	10	145	18	4	1.95	x	x	x
10	65	185	10	145	18	8	1.95	x	x	x
10	80	200	10	160	18	8	2.39	x	x	x
10	100	220	10	180	18	8	2.83	x	x	x



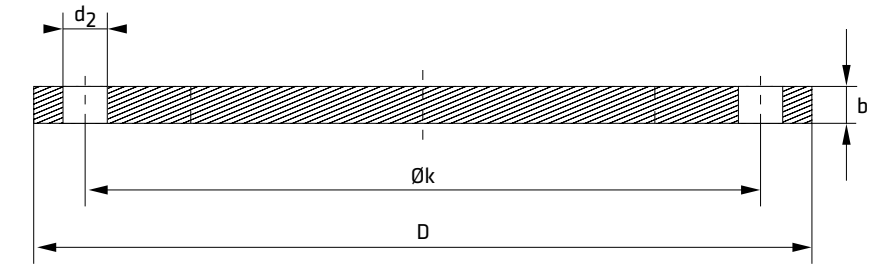
\* Finishes: page 311



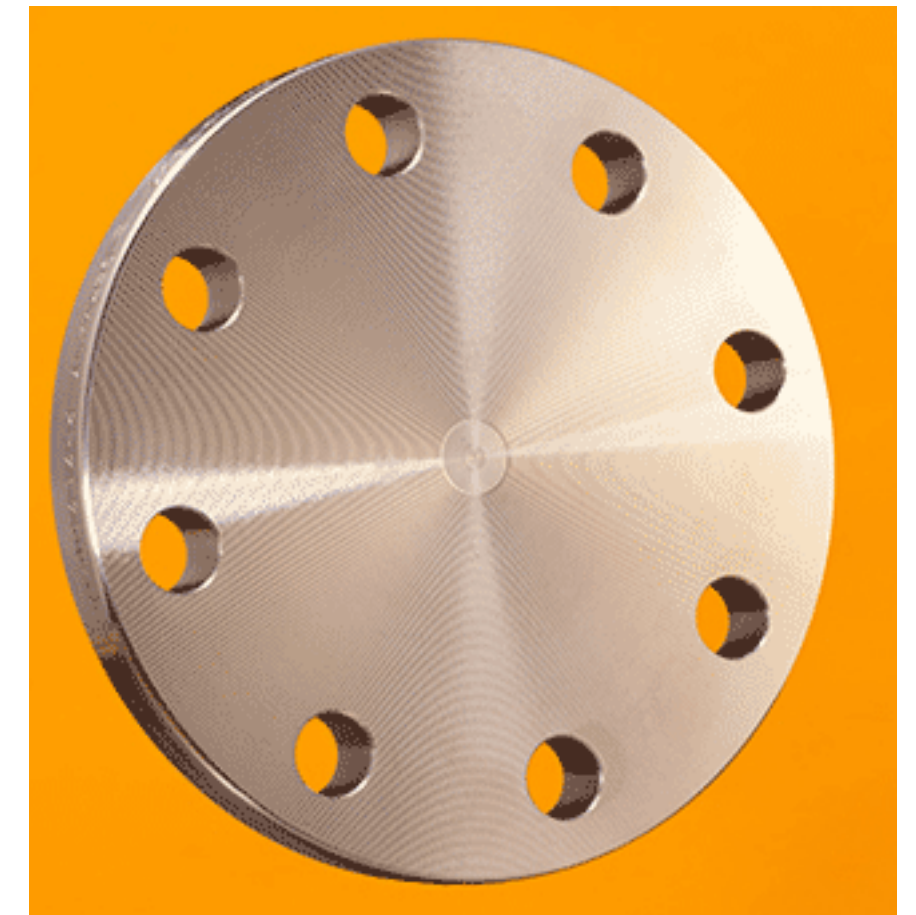
# BLIND FLANGES

EN1092-1 type 05 A with reduced thickness

1.4301-1.4571 (2/2)



Nominal pressure/ diameter		ØD	C4	ØK	ØL	Number of screw	Grade AISI	1.4301	1.4541	1.4571
PN	DN	mm	mm	mm	mm			304	321	316Ti
		mm	mm	mm	mm		kg/pce.	*)	*)	*)
10	125	250	12	210	18	8	4.60	x	x	x
10	150	285	12	240	22	8	4.68	x	x	x
10	200	340	12	295	22	8	8.25	x	x	x
10	250	395	15	350	22	12	14.40	x	x	x
10	300	445	15	400	22	12	18.80	x	x	x
10	350	505	15	460	22	16	24.17	x		
10	400	565	15	515	26	16	28.50	x		
10	450	615	15	565	26	20	36.40	x		
10	500	670	15	620	26	20	53.60	x		

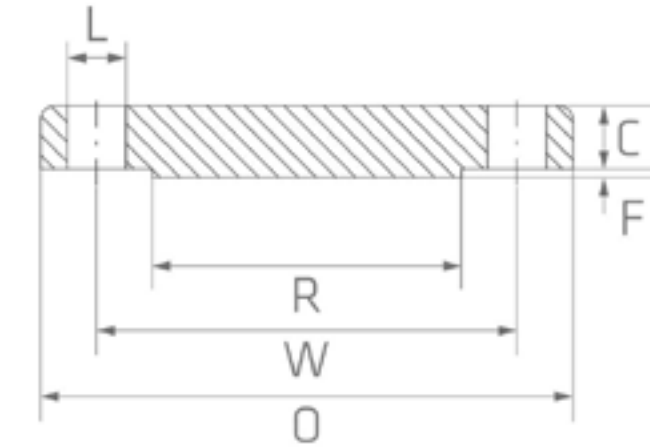


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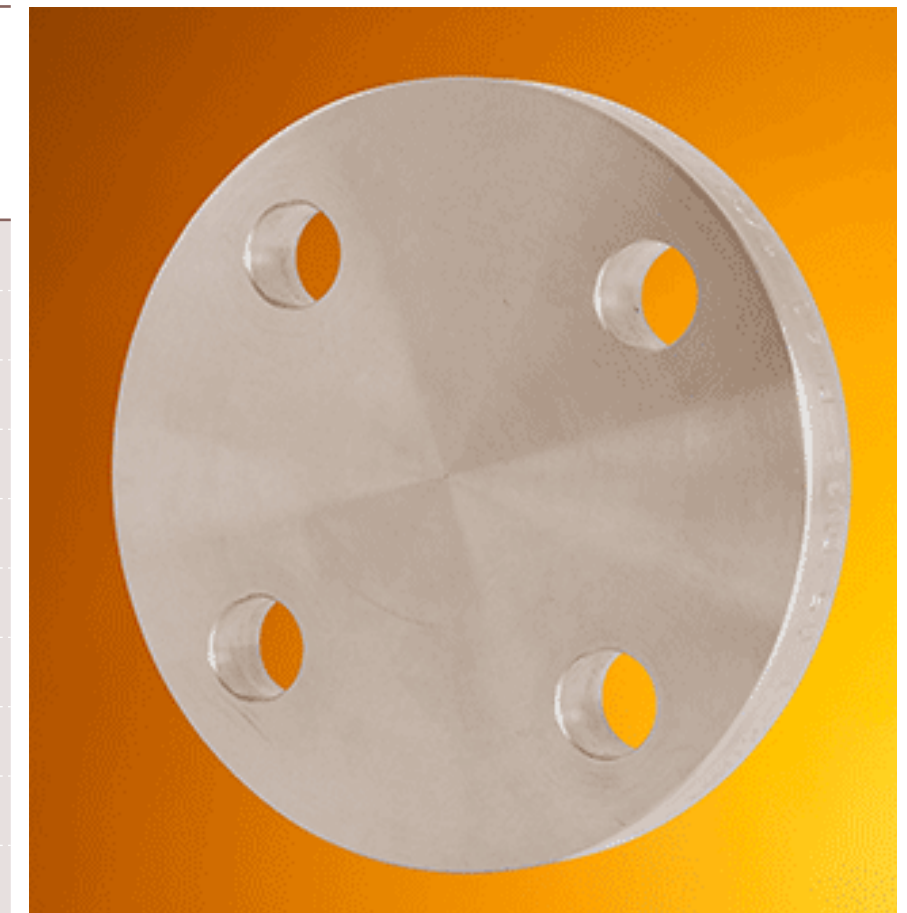
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4301 (1/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade	1.4301/1.4307
	INCH	mm								AISI	304/304L
										kg/pce.	*)
150	1/2"	21.3	90	9.6	60.3	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	100	11.2	69.9	42.9	2	4	15.9	0.63	x
150	1"	33.5	110	12.7	79.4	50.8	2	4	15.9	0.94	x
150	1 1/4"	42.2	115	14.3	88.9	63.5	2	4	15.9	1.23	x
150	1 1/2"	48.3	125	15.9	98.4	73.0	2	4	15.9	1.62	x
150	2"	60.5	150	17.5	120.7	92.1	2	4	19.1	2.64	x
150	2 1/2"	73.2	180	20.7	139.7	104.8	2	4	19.1	4.06	x
150	3"	88.9	190	22.3	152.4	127.0	2	4	19.1	4.90	x
150	3 1/2"	101.6	215	22.3	177.8	139.7	2	8	19.1	5.90	x
150	4"	114.3	230	22.3	190.5	157.2	2	8	19.1	7.41	x

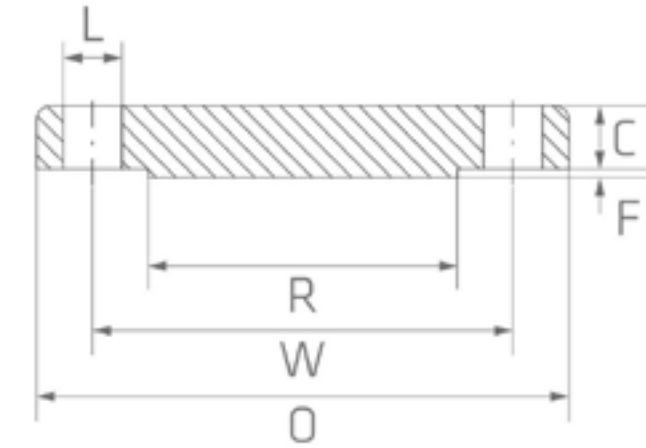


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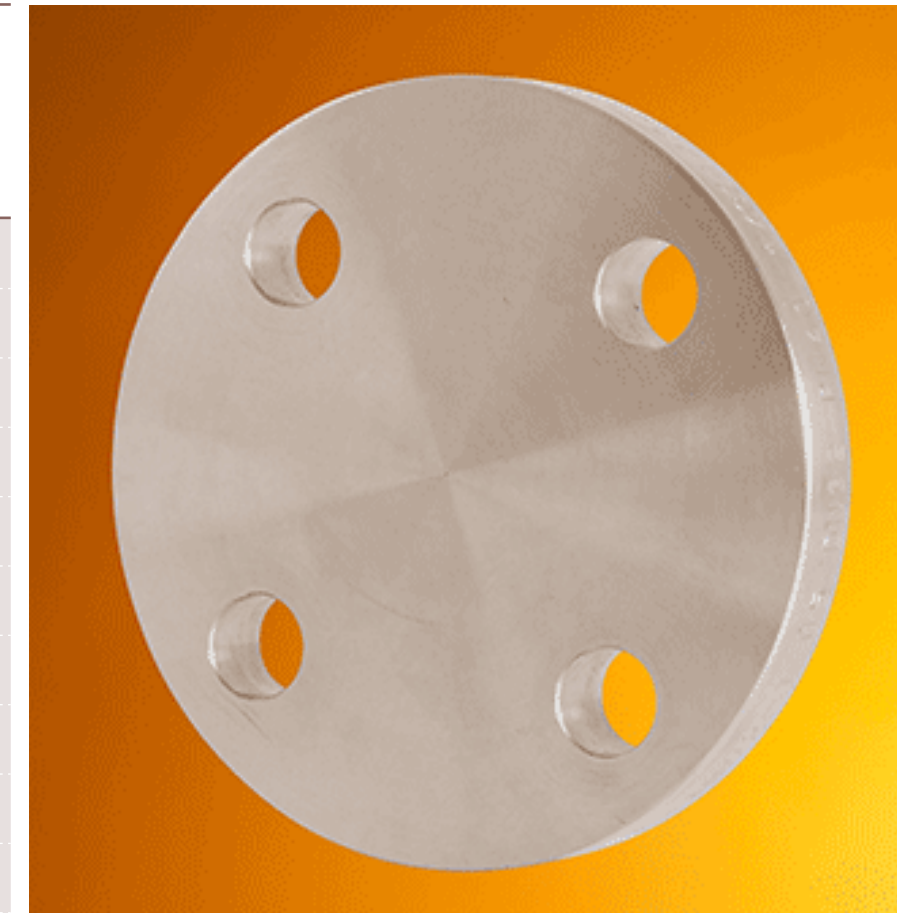
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4301 (2/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade AISI	1.4301/1.4307 304/304L *)
	INCH	mm									
150	5"	141.3	255	22.3	215.9	185.7	2	8	22.2	8.76	x
150	6"	168.4	280	23.9	241.3	215.9	2	8	22.2	11.31	x
150	8"	219.2	345	27.0	298.5	269.9	2	8	22.2	19.92	x
150	10"	273.1	405	28.6	362.0	323.8	2	12	25.4	29.39	x
150	12"	323.9	485	30.2	431.8	381.0	2	12	25.4	43.70	x
150	14"	355.6	535	33.4	476.3	412.8	2	12	28.6	59.42	x
150	16"	406.4	595	35.0	539.8	469.9	2	16	28.6	77.11	x
150	18"	457.2	635	38.1	577.9	533.4	2	16	31.8	94.80	x
150	20"	508.0	700	41.3	635.0	584.2	2	20	31.8	123.38	x
150	24"	609.6	815	46.1	749.3	692.2	2	20	34.9	188.24	x

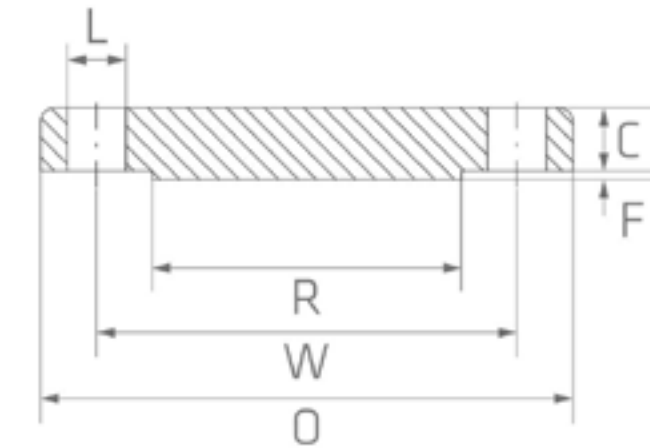


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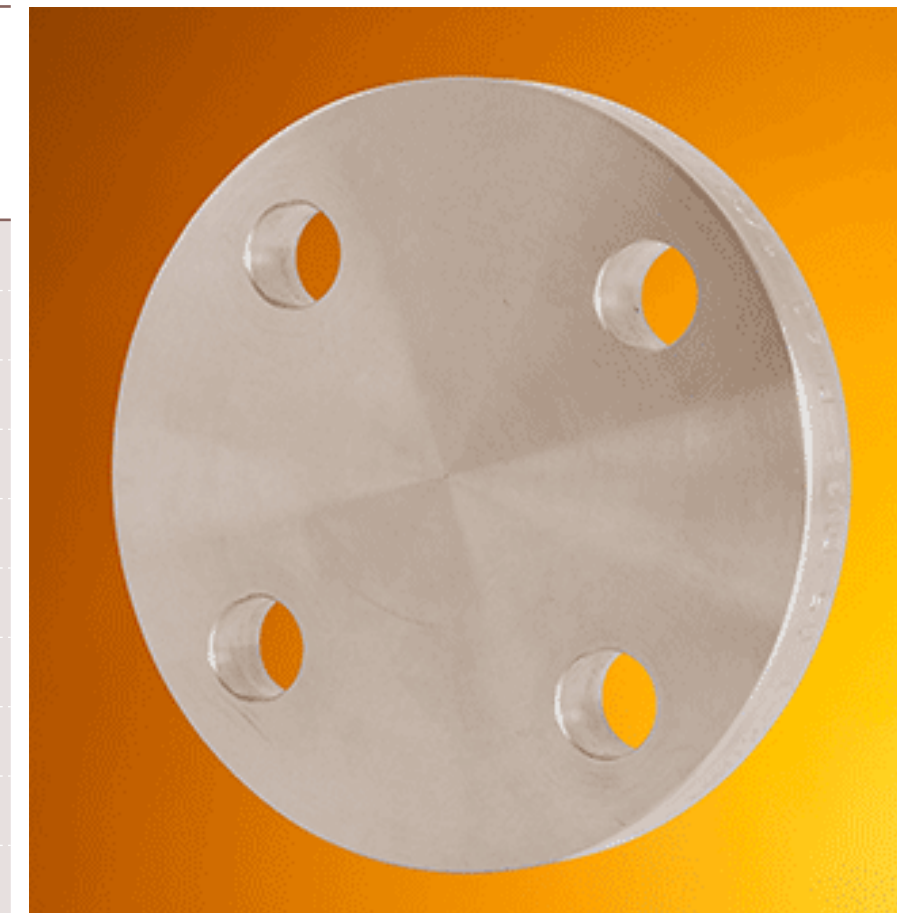
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4301 (3/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade	1.4301/1.4307
	INCH	mm								AISI	304/304L
		mm	mm	mm	mm	mm	mm		mm	kg/pce.	*)
300	1/2"	21.3	95	12.7	66.7	34.9	2	4	15.9	0.62	x
300	3/4"	26.7	115	14.3	82.6	42.9	2	4	19.1	1.16	x
300	1"	33.5	125	15.9	88.9	50.8	2	4	19.1	1.42	x
300	1 1/4"	42.2	135	17.5	98.4	63.5	2	4	19.1	1.79	x
300	1 1/2"	48.3	155	19.1	114.3	73.0	2	4	22.2	2.68	x
300	2"	60.5	165	20.7	127.0	92.1	2	8	19.1	3.09	x
300	2 1/2"	73.2	190	23.9	169.2	104.8	2	8	22.2	4.75	x
300	3"	88.9	210	27.0	168.3	127.0	2	8	22.2	6.79	x
300	3 1/2"	101.6	230	28.6	184.2	139.7	2	8	22.2	9.53	x
300	4"	114.3	255	30.2	200.0	157.2	2	8	22.2	12.00	x



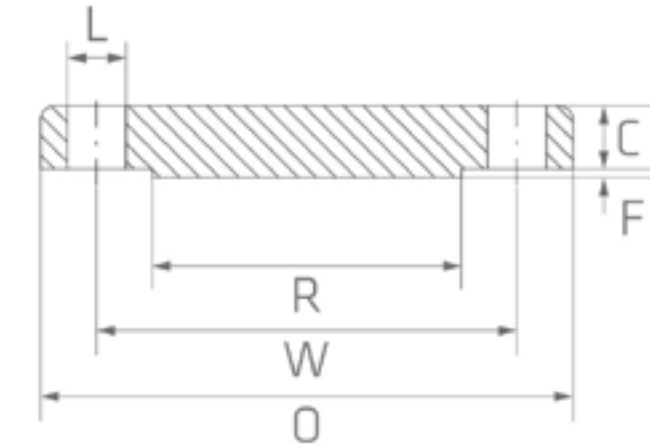
\* Finishes: page 311



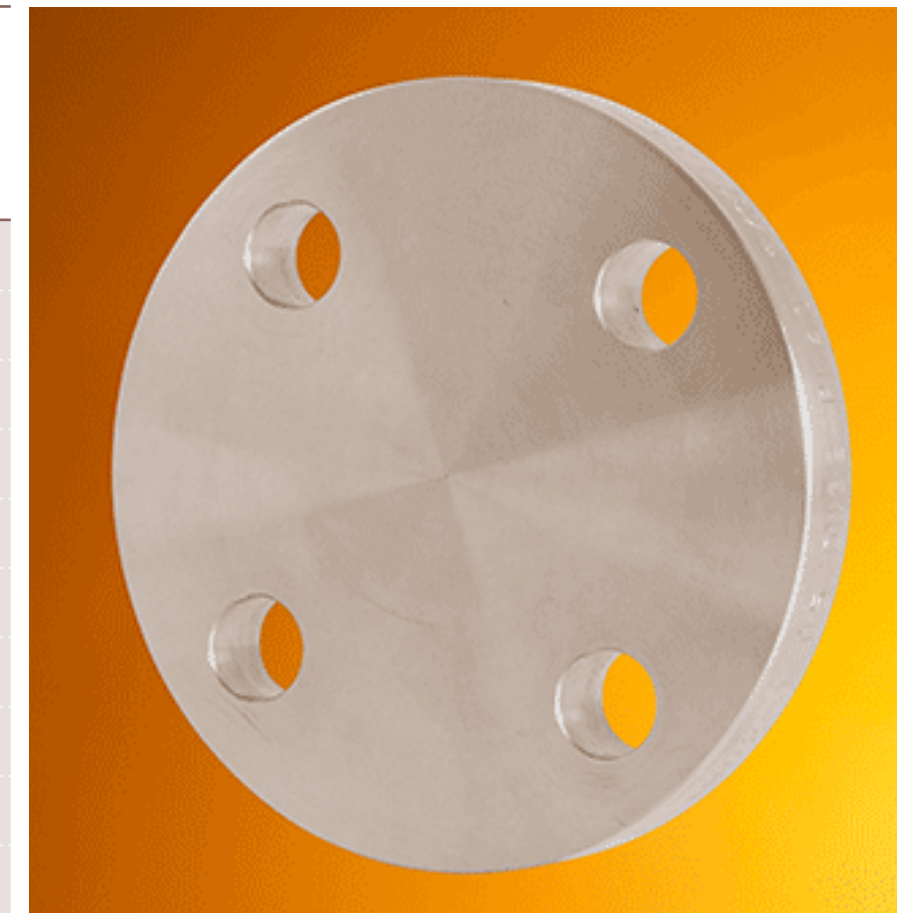
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4301 (4/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade AISI	1.4301/1.4307 304/304L *)
	INCH	mm									
300	5"	141.3	280	33.4	235.0	185.7	2	8	22.2	15.96	x
300	6"	168.4	320	35.0	269.9	215.9	2	12	22.2	21.20	x
300	8"	219.2	380	39.7	330.2	269.9	2	12	25.4	34.60	x
300	10"	273.1	445	46.1	387.4	323.8	2	16	28.6	55.34	x
300	12"	323.9	520	49.3	450.8	381.0	2	16	31.8	78.90	x
300	14"	355.6	585	52.4	514.4	412.8	2	20	31.8	107.05	x
300	16"	406.4	650	55.6	571.5	469.9	2	20	34.9	139.25	x
600	1/2"	21.3	95	14.3	66.7	34.9	7	4	15.9	0.91	x
600	3/4"	26.7	115	15.9	82.6	42.9	7	4	19.1	1.40	x
600	1"	33.5	125	17.5	88.9	50.8	7	4	19.1	1.81	x

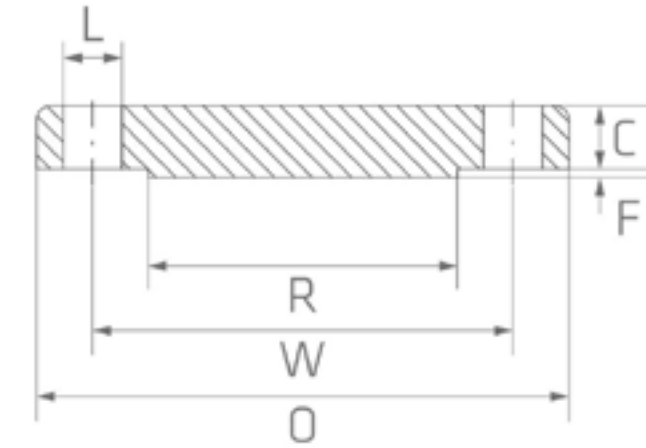


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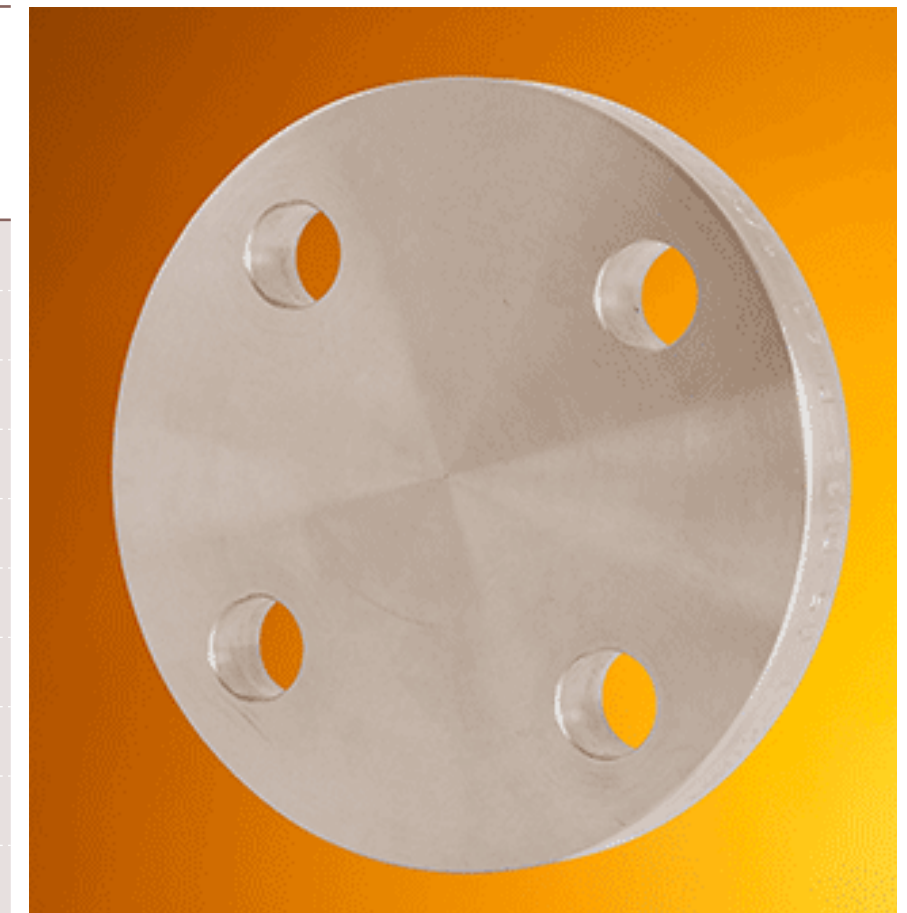
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4301 (5/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade	1.4301/1.4307
	INCH	mm								AISI	304/304L
										kg/pce.	*)
600	1 1/4"	42.2	135	20.7	98.4	63.5	7	4	19.1	2.40	x
600	1 1/2"	48.3	155	22.3	114.3	73.0	7	4	22.2	3.40	x
600	2"	60.5	165	25.4	127.0	92.1	7	8	19.1	4.40	x
600	2 1/2"	73.2	190	28.6	149.2	104.8	7	8	22.2	6.80	x
600	3"	88.9	210	31.8	168.3	127.0	7	8	22.2	8.90	x
600	3 1/2"	101.6	230	35.0	184.2	139.7	7	8	25.4	13.17	x
600	4"	114.3	275	38.1	215.9	157.2	7	8	25.4	18.60	x
600	5"	141.3	330	44.5	266.7	185.7	7	8	28.6	30.84	x
600	6"	168.4	355	47.7	292.1	215.9	7	12	28.6	38.00	x
600	8"	219.2	420	55.6	349.3	269.9	7	12	31.8	62.20	x

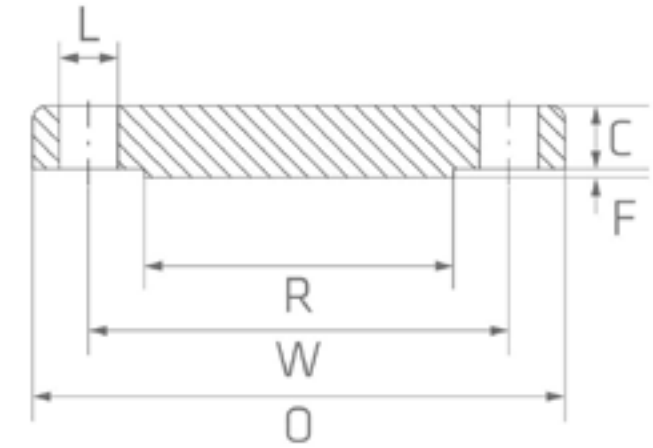


\* Finishes: page 311

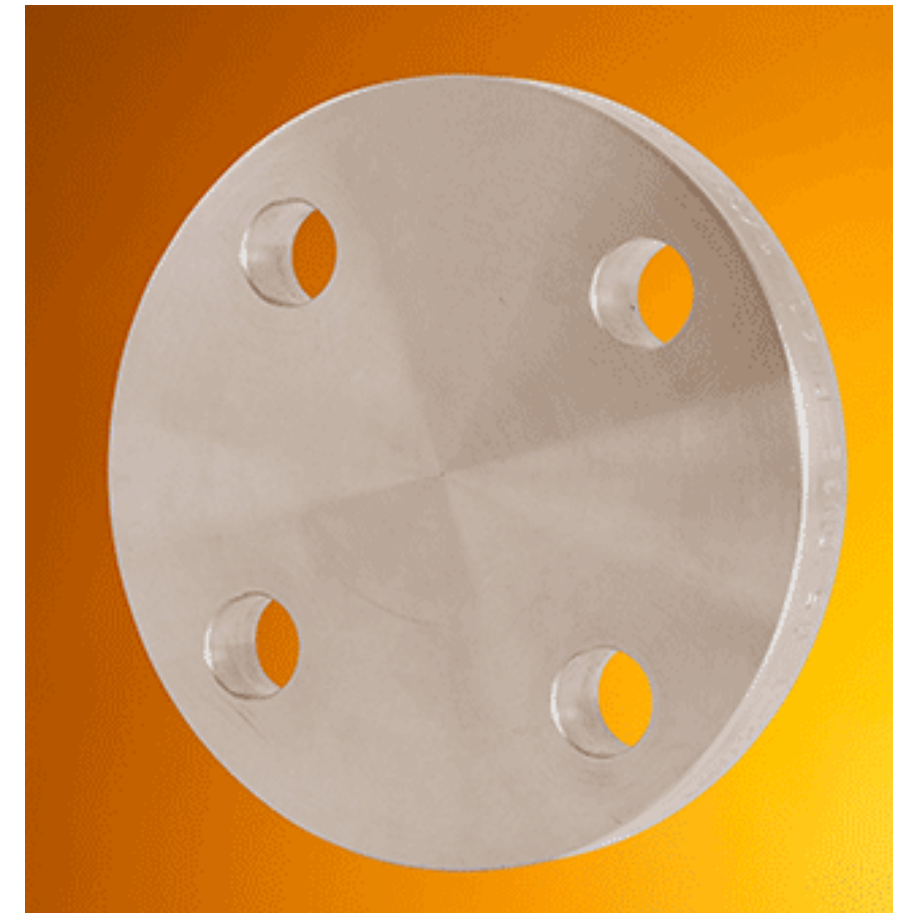
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4401 / 1.4404 (1/5)



CLASS	OD	O	C	W	R	f	Number of screw	ØL	Grade	1.4401/1.4404	
	INCH	mm	mm	mm	mm	mm		mm	AISI	316/316L	
		mm	mm	mm	mm	mm		mm	kg/pce.	*)	
150	1/2"	21.3	90	9.6	60.3	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	100	11.2	69.9	42.9	2	4	15.9	0.63	x
150	1"	33.5	110	12.7	79.4	50.8	2	4	15.9	0.94	x
150	1 1/4"	42.2	115	14.3	88.9	63.5	2	4	15.9	1.23	x
150	1 1/2"	48.3	125	15.9	98.4	73.0	2	4	15.9	1.62	x
150	2"	60.5	150	17.5	120.7	92.1	2	4	19.1	2.64	x
150	2 1/2"	73.2	180	20.7	139.7	104.8	2	4	19.1	4.06	x
150	3"	88.9	190	22.3	152.4	127.0	2	4	19.1	4.90	x
150	3 1/2"	101.6	215	22.3	177.8	139.7	2	8	19.1	5.90	x
150	4"	114.3	230	22.3	190.5	157.2	2	8	19.1	7.41	x

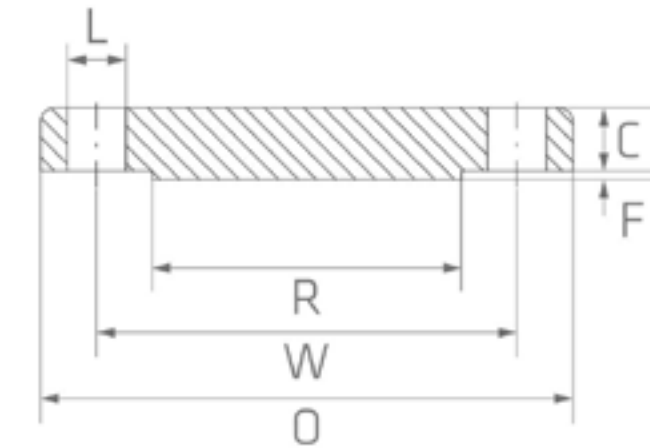


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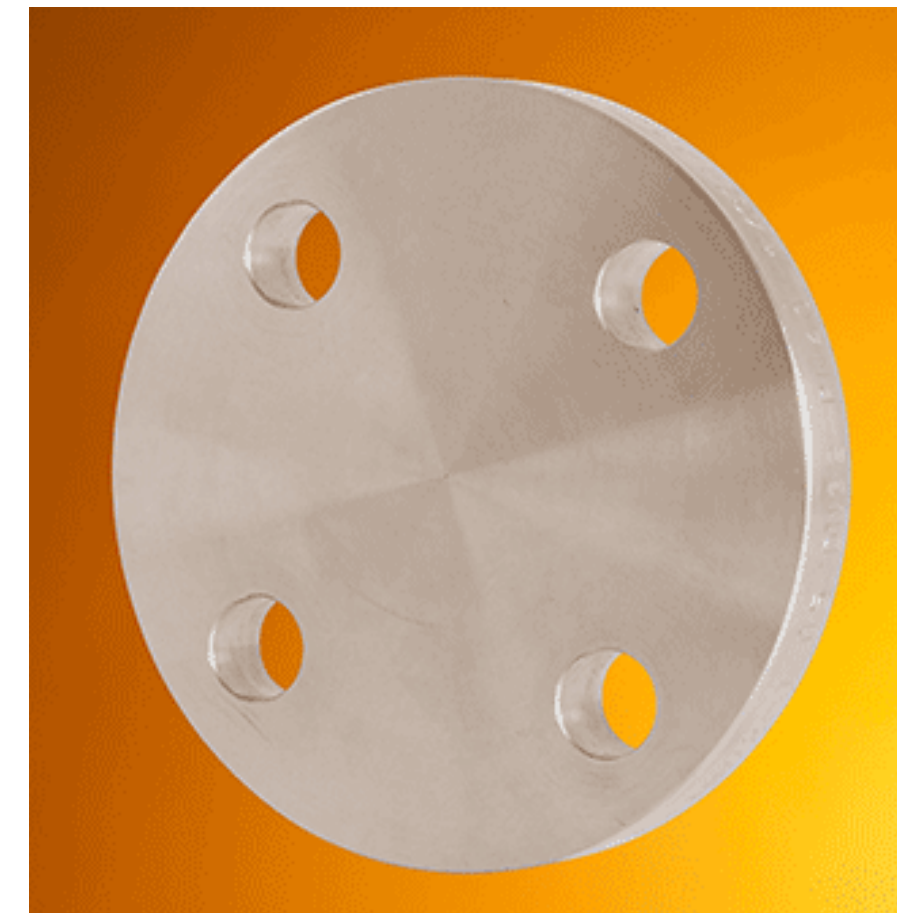
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4401 / 1.4404 (2/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade AISI	1.4401/1.4404 316/316L *)
	INCH	mm									
150	5"	141.3	255	22.3	215.9	185.7	2	8	22.2	8.76	x
150	6"	168.4	280	23.9	241.3	215.9	2	8	22.2	11.31	x
150	8"	219.2	345	27.0	298.5	269.9	2	8	22.2	19.92	x
150	10"	273.1	405	28.6	362.0	323.8	2	12	25.4	29.39	x
150	12"	323.9	485	30.2	431.8	381.0	2	12	25.4	43.70	x
150	14"	355.6	535	33.4	476.3	412.8	2	12	28.6	59.42	x
150	16"	406.4	595	35.0	539.8	469.9	2	16	28.6	77.11	x
150	18"	457.2	635	38.1	577.9	533.4	2	16	31.8	94.80	x
150	20"	508.0	700	41.3	635.0	584.2	2	20	31.8	123.38	x
150	24"	609.6	815	46.1	749.3	692.2	2	20	34.9	188.24	x

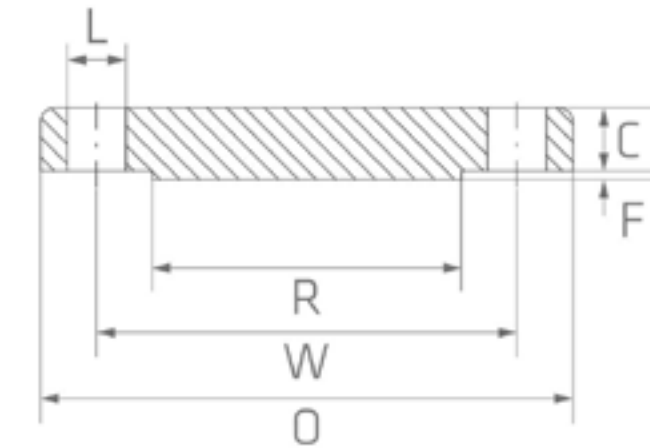


\* Finishes: page 311

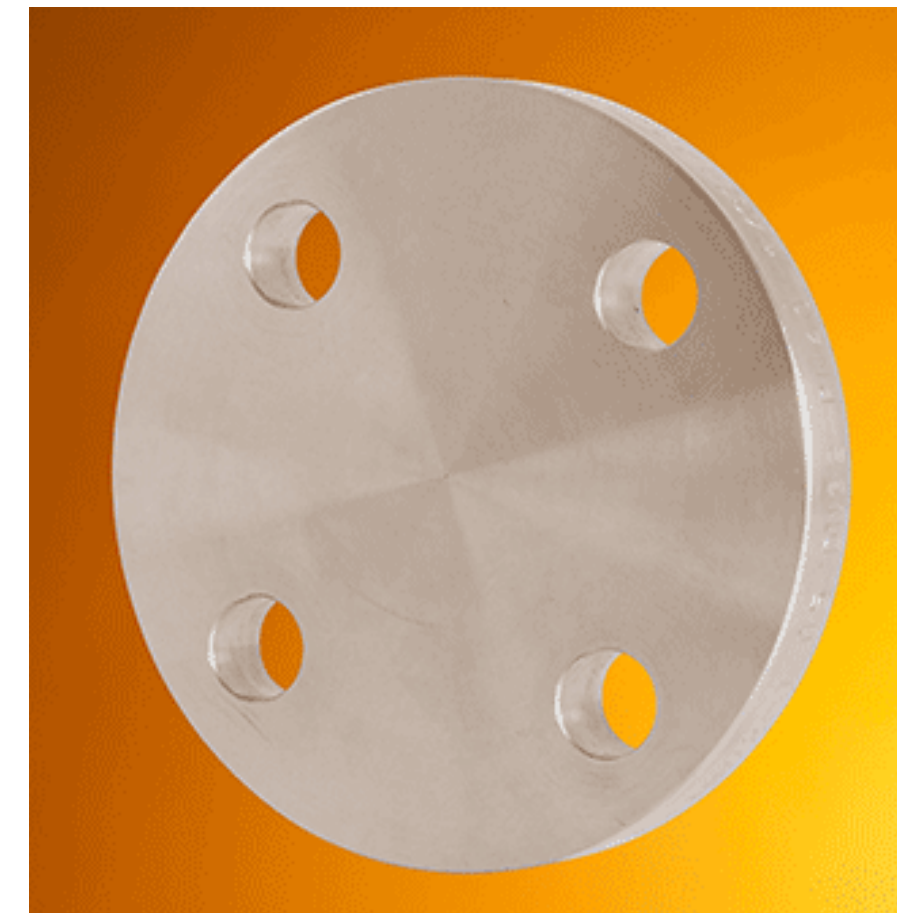
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4401 / 1.4404 (3/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade AISI	1.4401/1.4404
	INCH	mm									316/316L
		mm	mm	mm	mm	mm	mm		mm	kg/pce.	*)
300	1/2"	21.3	95	12.7	66.7	34.9	2	4	15.9	0.62	x
300	3/4"	26.7	115	14.3	82.6	42.9	2	4	19.1	1.16	x
300	1"	33.5	125	15.9	88.9	50.8	2	4	19.1	1.42	x
300	1 1/4"	42.2	135	17.5	98.4	63.5	2	4	19.1	1.79	x
300	1 1/2"	48.3	155	19.1	114.3	73.0	2	4	22.2	2.68	x
300	2"	60.5	165	20.7	127.0	92.1	2	8	19.1	3.09	x
300	2 1/2"	73.2	190	23.9	169.2	104.8	2	8	22.2	4.75	x
300	3"	88.9	210	27.0	168.3	127.0	2	8	22.2	6.79	x
300	3 1/2"	101.6	230	28.6	184.2	139.7	2	8	22.2	9.53	x
300	4"	114.3	255	30.2	200.0	157.2	2	8	22.2	12.00	x



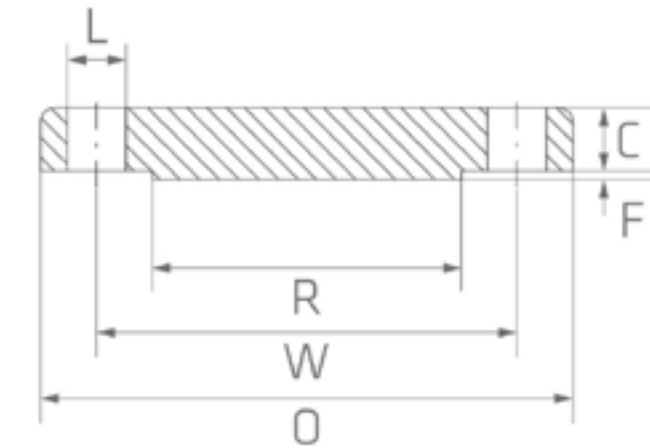
\* Finishes: page 311



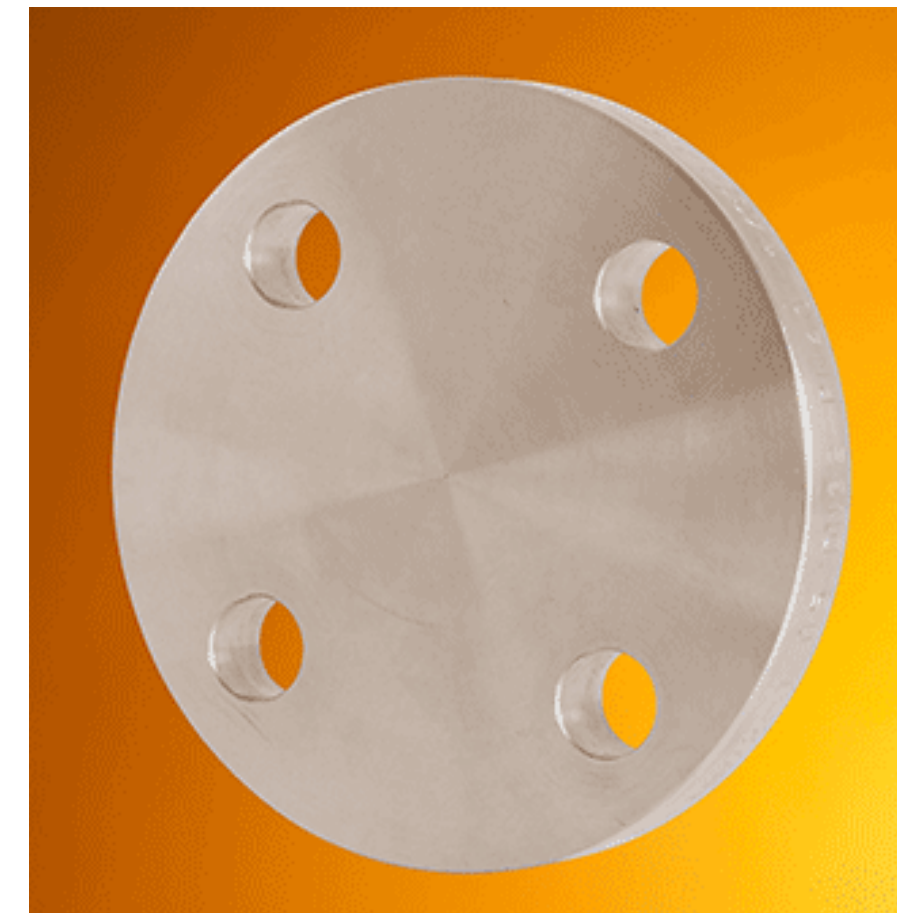
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4401 / 1.4404 (4/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade AISI	1.4401/1.4404 316/316L *)
	INCH	mm									
300	5"	141.3	280	33.4	235.0	185.7	2	8	22.2	15.96	x
300	6"	168.4	320	35.0	269.9	215.9	2	12	22.2	21.20	x
300	8"	219.2	380	39.7	330.2	269.9	2	12	25.4	34.60	x
300	10"	273.1	445	46.1	387.4	323.8	2	16	28.6	55.34	x
300	12"	323.9	520	49.3	450.8	381.0	2	16	31.8	78.90	x
300	14"	355.6	585	52.4	514.4	412.8	2	20	31.8	107.05	x
300	16"	406.4	650	55.6	571.5	469.9	2	20	34.9	139.25	x
600	1/2"	21.3	95	14.3	66.7	34.9	7	4	15.9	0.91	x
600	3/4"	26.7	115	15.9	82.6	42.9	7	4	19.1	1.40	x
600	1"	33.5	125	17.5	88.9	50.8	7	4	19.1	1.81	x

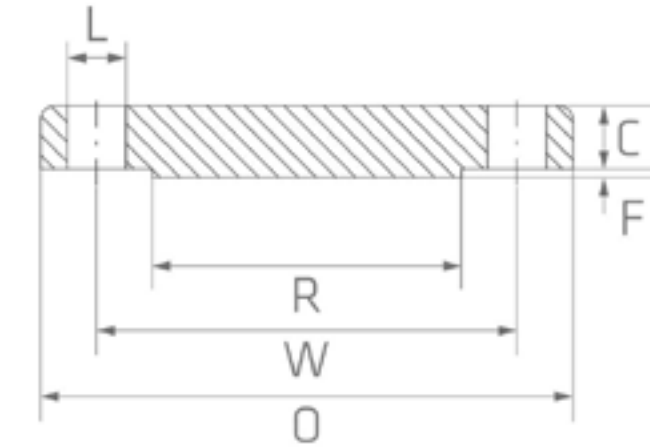


\* Finishes: page 311

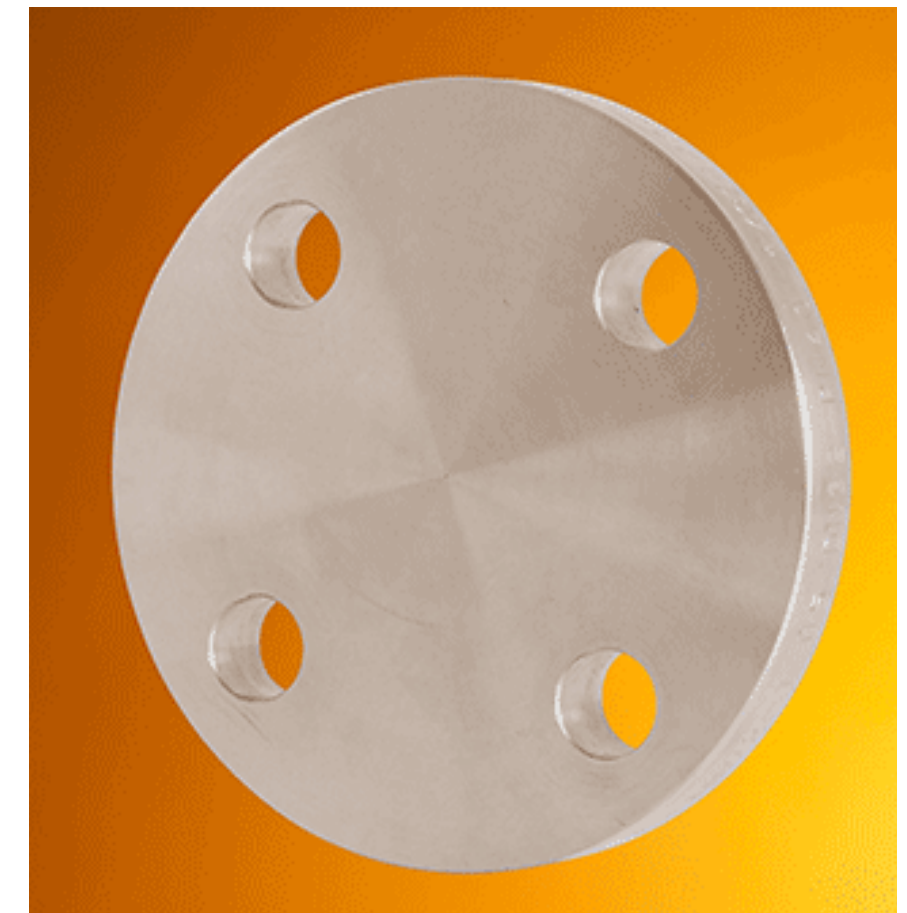
# BLIND FLANGES

ASTM-A 182 ASME B16.5

1.4401 / 1.4404 (5/5)



CLASS	OD		O	C	W	R	f	Number of screw	ØL	Grade AISI	1.4401/1.4404 316/316L *)
	INCH	mm									
600	1 1/4"	42.2	135	20.7	98.4	63.5	7	4	19.1	2.40	x
600	1 1/2"	48.3	155	22.3	114.3	73.0	7	4	22.2	3.40	x
600	2"	60.5	165	25.4	127.0	92.1	7	8	19.1	4.40	x
600	2 1/2"	73.2	190	28.6	149.2	104.8	7	8	22.2	6.80	x
600	3"	88.9	210	31.8	168.3	127.0	7	8	22.2	8.90	x
600	3 1/2"	101.6	230	35.0	184.2	139.7	7	8	25.4	13.17	x
600	4"	114.3	275	38.1	215.9	157.2	7	8	25.4	18.60	x
600	5"	141.3	330	44.5	266.7	185.7	7	8	28.6	30.84	x
600	6"	168.4	355	47.7	292.1	215.9	7	12	28.6	38.00	x
600	8"	219.2	420	55.6	349.3	269.9	7	12	31.8	62.20	x

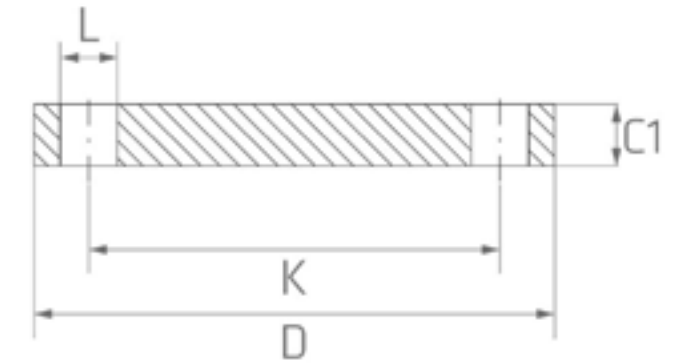


\* Finishes: page 311

# BLIND FLANGES

Aluminium DIN 2527

(1/2)



Nominal pressure/ diameter		ØD	ØK	C1	Number of screw	AFM Size	ØL	Grade AISI	blank	epox
PN	DN	mm	mm	mm				kg/pce.		
10	15	95	65	16	4	M12	14	0.20	x	
10	20	105	75	16	4	M12	14	0.27	x	
10	25	115	85	16	4	M12	14	0.30	x	
10	32	140	100	16	4	M16	18	0.60	x	
10	40	150	110	18	4	M16	18	0.70	x	x
10	50	165	125	18	4	M16	18	0.86	x	x
10	65	185	145	18	4	M16	18	1.10	x	x
10	80	200	160	20	8	M16	18	1.40	x	x
10	100	220	180	20	8	M16	18	1.72	x	x
10	125	250	210	22	8	M16	18	2.22	x	x



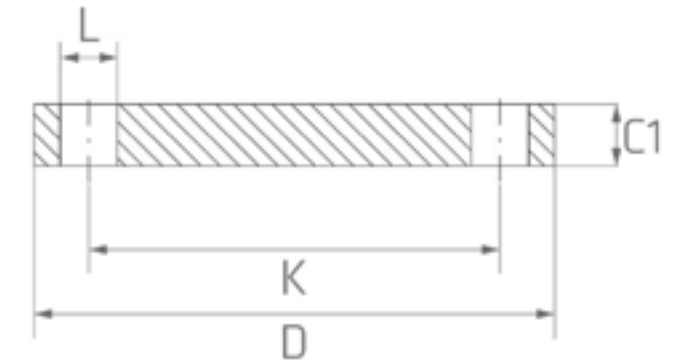
\* Finishes: page 311



# BLIND FLANGES

Aluminium DIN 2527

(2/2)



Nominal pressure/ diameter		ØD	ØK	C1	Number of screw	AFM Size	ØL	Grade AISI	blank	epox
PN	DN	mm	mm	mm				kg/pce.		
10	150	285	240	22	8	M20	22	2.86	x	x
10	200	340	295	24	8	M20	22	4.57	x	x
10	250	395	350	26	12	M20	22	6.85	x	x
10	300	445	400	26	12	M20	22	8.75	x	x

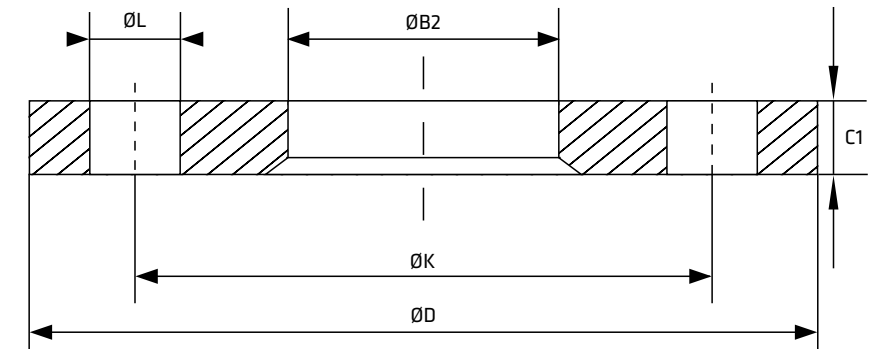


\* Finishes: page 311

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4301 (1/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4301 /1.4307 304 / 304 L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	200	204.0*	340	210	295	24	6	8	M20	22	9.7	x
10	200	206.0*	340	212	295	24	6	8	M20	22	9.5	x
10	200	208.0*	340	214	295	24	6	8	M20	22	9.3	
10	200	219.1	340	226	295	24	6	8	M20	22	9.0	x
10	250	254.0*	395	260	295	26	6	12	M20	22	12.3	x
10	250	256.0*	395	262	350	26	8	12	M20	22	13.0	x
10	250	273	395	281	350	26	8	12	M20	22	11.5	x
10	300	304.0*	445	310	400	26	8	12	M20	22	14.0	x
10	300	306.0*	445	312	400	26	8	12	M20	22	15.0	x
10	300	323.9	445	333	400	26	8	12	M20	22	13.0	x

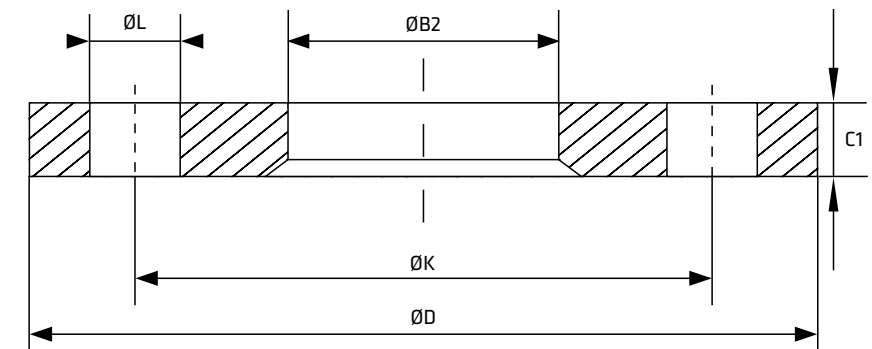


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4301 (2/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4301 /1.4307 304 / 304 L kg/pce. (*)
PN	DN	mm	mm	mm	mm	mm	mm					
10	350	355.6	505	365	460	30	8	16	M20	22	19.4	x
10	400	406.4	565	416	515	32	8	16	M24	26	26.5	x
10	450	457.2	615	467	565	36	8	20	M24	26	32.5	x
10	500	508.0	670	519	620	38	8	20	M24	26	39.0	x
10	600	609.6	780	622	725	42	8	20	M27	30	52.5	x
10	700	711.2	895	*	840	50	*	24	M27	30	80.4	x
10	800	812.8	1015	*	950	56	*	24	M27	30	113.2	x
16	50	50.8*	165	56	125	19	5	4	M16	18	2.8	x
16	50	54.0*	165	59	125	19	5	4	M16	18	2.7	x
16	50	57.0*	165	62	125	19	5	4	M16	18	2.6	x

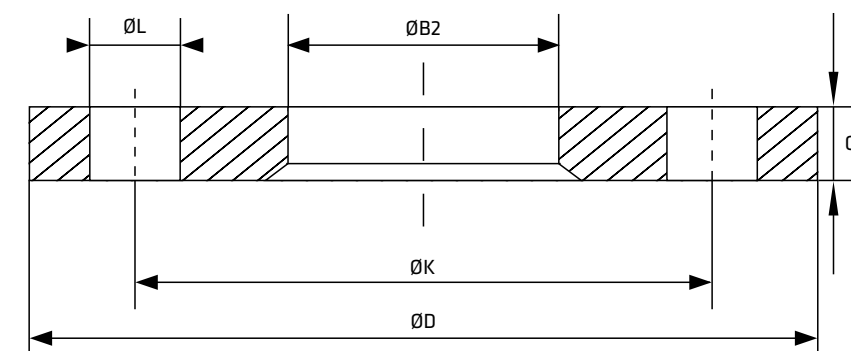


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4301 (3/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4301 /1.4307 304 / 304 L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	50	60.3	165	65	125	20	5	4	M16	18	2.6	x
16	65	70.0*	185	75	145	20	6	4	M16	18	3.2	x
16	65	76.1	185	81	145	20	6	4	M16	18	3.0	x
16	65	76.1	185	81	145	20	6	8	M16	18	3.0	x
16	80	84.0*	200	89	160	20	6	8	M16	18	3.6	x
16	80	88.9	200	94	160	20	6	8	M16	18	3.5	x
16	100	101.6*	220	107	180	22	6	8	M16	18	5.0	x
16	100	104.0*	220	109	180	22	6	8	M16	18	4.9	x
16	100	106.0*	220	111	180	22	6	8	M16	18	4.8	x
16	100	108.0*	220	113	180	22	6	8	M16	18	4.7	x

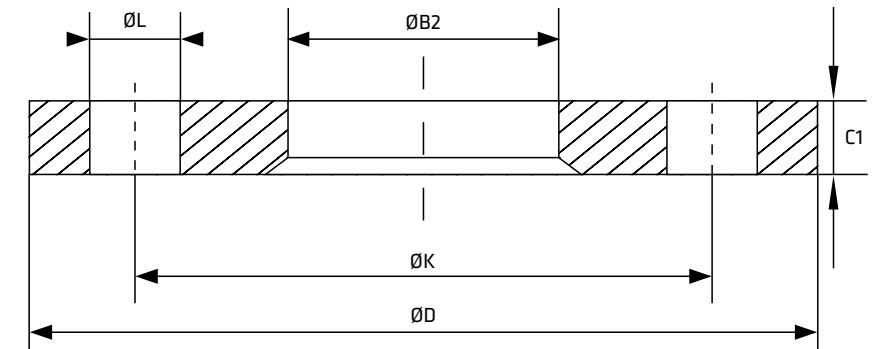


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4301 (4/6)



Nominal pressure/ diameter		A	$\varnothing D$	B2	K	C1	E	Number of screw	AFM Size	$\varnothing L$	Grade AISI	1.4301 /1.4307 304 / 304 L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	100	114.3	220	120	180	22	6	8	M16	18	4.2	x
16	125	129.0*	250	134	210	22	6	8	M16	18	6.0	x
16	125	133.0*	250	138	210	22	6	8	M16	18	5.8	x
16	125	139.7	250	145	210	22	6	8	M16	18	5.5	x
16	150	154.0*	285	159	240	24	6	8	M20	22	8.0	x
16	150	156.0*	285	161	240	24	6	8	M20	22	7.7	x
16	150	159.0*	285	164	240	24	6	8	M20	22	7.5	x
16	150	168.3	285	174	240	24	6	8	M20	22	7.0	x
16	200	219.1	340	226	295	26	6	12	M20	22	9.5	x
16	250	273.0	405	281	355	29	8	12	M24	26	13.5	



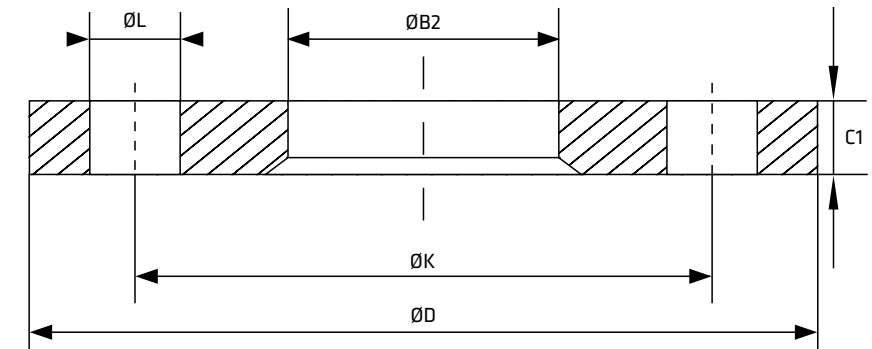
\* Finishes: page 311; no standard pipe connection



# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4301 (5/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4301 /1.4307 304 / 304 L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	10	17.2	90	21	60	14	3	4	M12	14	0.6	x
40	15	20.0*	95	22	65	14	3	4	M12	14	0.5	x
40	15	21.3	95	25	65	14	3	4	M12	14	0.5	x
40	20	25.0*	105	28	75	16	4	4	M12	14	1.0	x
40	20	26.9	105	31	75	16	4	4	M12	14	1.0	x
40	25	30.0*	115	33	85	16	4	4	M12	14	1.0	x
40	25	33.7	114	38	85	16	4	4	M12	14	1.1	x
40	32	38.0*	140	42	100	18	5	4	M16	18	2.0	x
40	32	42.4	140	47	100	18	5	4	M16	18	2.0	x
40	40	44.5*	150	50	110	18	5	4	M16	18	2.0	x

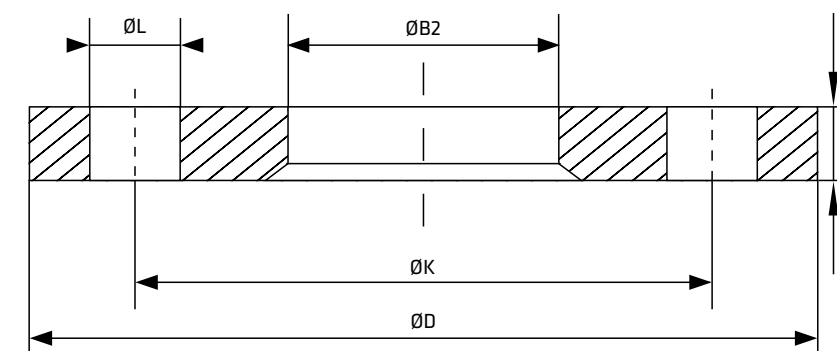


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4301 (6/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4301 /1.4307 304 / 304 L (*)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	40	48.3	150	53	110	18	5	4	M16	18	2.0	x
40	65	76.1	185	81	145	22	6	8	M16	18	3.1	
40	80	88.9	200	94	160	24	6	8	M16	18	3.9	
40	100	114.3	235	120	190	26	6	8	M20	22	5.2	
40	125	139.7	270	145	220	28	6	8	M24	26	7.2	
40	150	168.3	300	174	250	30	6	8	M24	26	8.6	
40	200	219.1	375	226	320	36	6	12	M27	30	15.2	

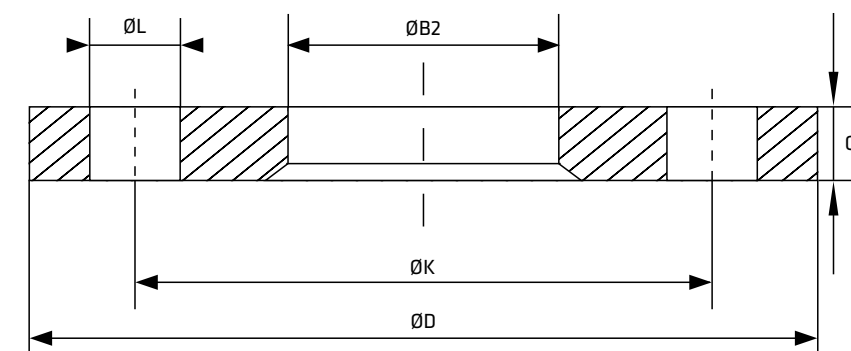


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4401 (1/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	200	204.0*	340	210	295	24	6	8	M20	22	9.7	x
10	200	206.0*	340	212	295	24	6	8	M20	22	9.5	x
10	200	208.0*	340	214	295	24	6	8	M20	22	9.3	x
10	200	219.1	340	226	295	24	6	8	M20	22	9.0	x
10	250	254.0*	395	260	295	26	6	12	M20	22	12.3	x
10	250	256.0*	395	262	350	26	8	12	M20	22	13.0	x
10	250	273	395	281	350	26	8	12	M20	22	11.5	x
10	300	304.0*	445	310	400	26	8	12	M20	22	14.0	x
10	300	306.0*	445	312	400	26	8	12	M20	22	15.0	x
10	300	323.9	445	333	400	26	8	12	M20	22	13.0	x



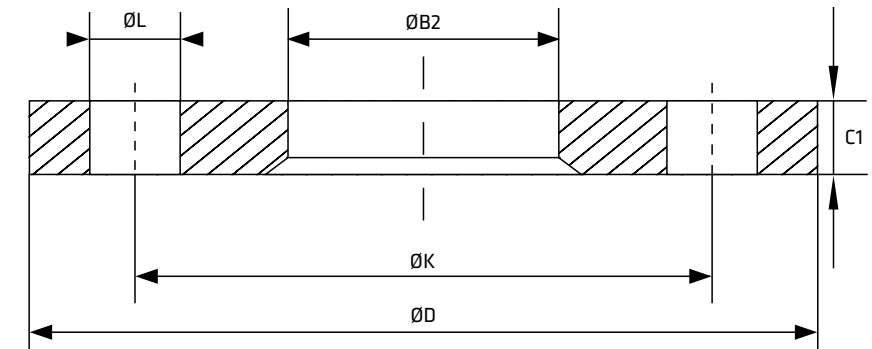
\* Finishes: page 311; no standard pipe connection



# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4401 (2/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	350	355.6	505	365	460	30	8	16	M20	22	19.4	x
10	400	406.4	565	416	515	32	8	16	M24	26	26.5	x
10	450	457.2	615	467	565	36	8	20	M24	26	32.5	x
10	500	508.0	670	519	620	38	8	20	M24	26	39.0	x
10	600	609.6	780	622	725	42	8	20	M27	30	52.5	x
10	700	711.2	895	*	840	50	*	24	M27	30	80.4	x
10	800	812.8	1015	*	950	56	*	24	M27	30	113.2	x
16	50	50.8*	165	56	125	19	5	4	M16	18	2.8	x
16	50	54.0*	165	59	125	19	5	4	M16	18	2.7	x
16	50	57.0*	165	62	125	19	5	4	M16	18	2.6	x

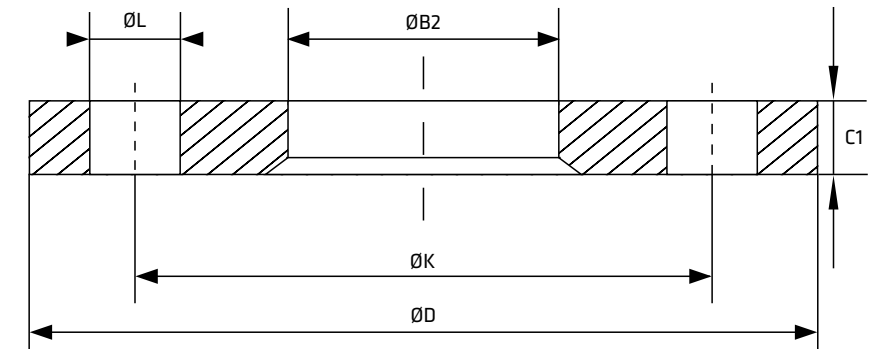


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4401 (3/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	50	60.3	165	65	125	20	5	4	M16	18	2.6	x
16	65	70.0*	185	75	145	20	6	4	M16	18	3.2	x
16	65	76.1	185	81	145	20	6	4	M16	18	3.0	x
16	65	76.1	185	81	145	20	6	8	M16	18	3.0	x
16	80	84.0*	200	89	160	20	6	8	M16	18	3.6	x
16	80	88.9	200	94	160	20	6	8	M16	18	3.5	x
16	100	101.6*	220	107	180	22	6	8	M16	18	5.0	x
16	100	104.0*	220	109	180	22	6	8	M16	18	4.9	x
16	100	106.0*	220	111	180	22	6	8	M16	18	4.8	x
16	100	108.0*	220	113	180	22	6	8	M16	18	4.7	x

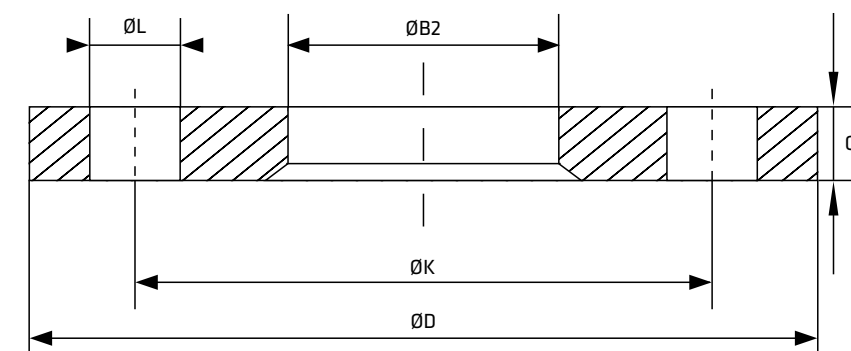


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4401 (4/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	100	114.3	220	120	180	22	6	8	M16	18	4.2	x
16	125	129.0*	250	134	210	22	6	8	M16	18	6.0	x
16	125	133.0*	250	138	210	22	6	8	M16	18	5.8	x
16	125	139.7	250	145	210	22	6	8	M16	18	5.5	x
16	150	154.0*	285	159	240	24	6	8	M20	22	8.0	x
16	150	156.0*	285	161	240	24	6	8	M20	22	7.7	x
16	150	159.0*	285	164	240	24	6	8	M20	22	7.5	x
16	150	168.3	285	174	240	24	6	8	M20	22	7.0	x
16	200	219.1	340	226	295	26	6	12	M20	22	9.5	x
16	250	273.0	405	281	355	29	8	12	M24	26	13.5	

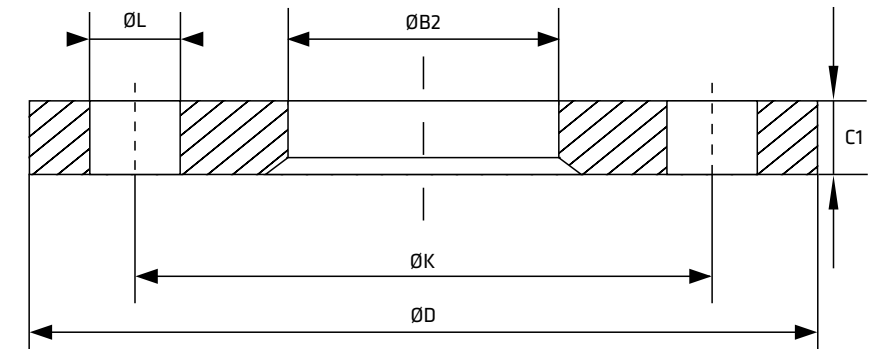


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4401 (5/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	10	17.2	90	21	60	14	3	4	M12	14	0.6	x
40	15	20.0*	95	22	65	14	3	4	M12	14	0.5	x
40	15	21.3	95	25	65	14	3	4	M12	14	0.5	x
40	20	25.0*	105	28	75	16	4	4	M12	14	1.0	x
40	20	26.9	105	31	75	16	4	4	M12	14	1.0	x
40	25	30.0*	115	33	85	16	4	4	M12	14	1.0	x
40	25	33.7	114	38	85	16	4	4	M12	14	1.1	x
40	32	38.0*	140	42	100	18	5	4	M16	18	2.0	x
40	32	42.4	140	47	100	18	5	4	M16	18	2.0	x
40	40	44.5*	150	50	110	18	5	4	M16	18	2.0	x



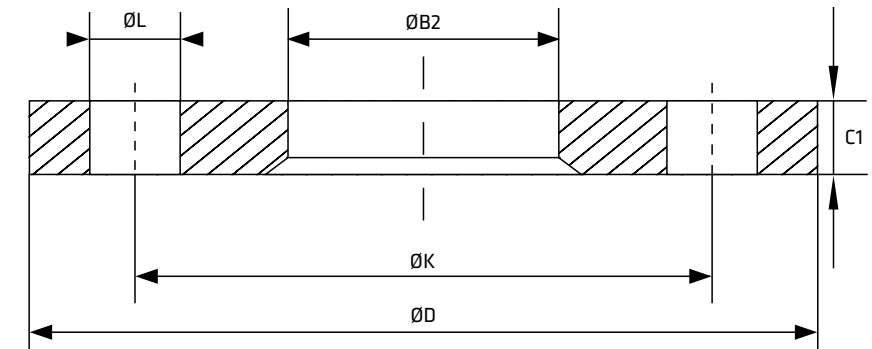
\* Finishes: page 311; no standard pipe connection



# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4401 (6/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	40	48.3	150	53	110	18	5	4	M16	18	2.0	x
40	65	76.1	185	81	145	22	6	8	M16	18	3.1	x
40	80	88.9	200	94	160	24	6	8	M16	18	3.9	x
40	100	114.3	235	120	190	26	6	8	M20	22	5.2	x
40	125	139.7	270	145	220	28	6	8	M24	26	7.2	x
40	150	168.3	300	174	250	30	6	8	M24	26	8.6	x
40	200	219.1	375	226	320	36	6	12	M27	30	15.2	x

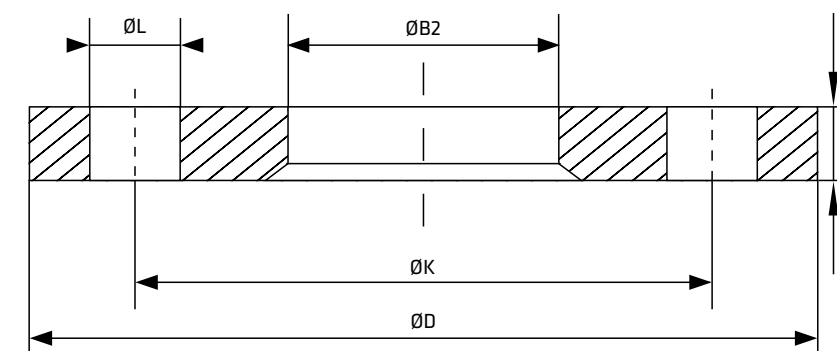


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4541 (1/6)



Nominal pressure/ diameter		A	$\varnothing D$	B2	K	C1	E	Number of screw	AFM Size	$\varnothing L$	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	200	204.0*	340	210	295	24	6	8	M20	22	9.7	
10	200	206.0*	340	212	295	24	6	8	M20	22	9.5	
10	200	208.0*	340	214	295	24	6	8	M20	22	9.3	
10	200	219.1	340	226	295	24	6	8	M20	22	9.0	x
10	250	254.0*	395	260	295	26	6	12	M20	22	12.3	
10	250	256.0*	395	262	350	26	8	12	M20	22	13.0	
10	250	273	395	281	350	26	8	12	M20	22	11.5	x
10	300	304.0*	445	310	400	26	8	12	M20	22	14.0	
10	300	306.0*	445	312	400	26	8	12	M20	22	15.0	
10	300	323.9	445	333	400	26	8	12	M20	22	13.0	x

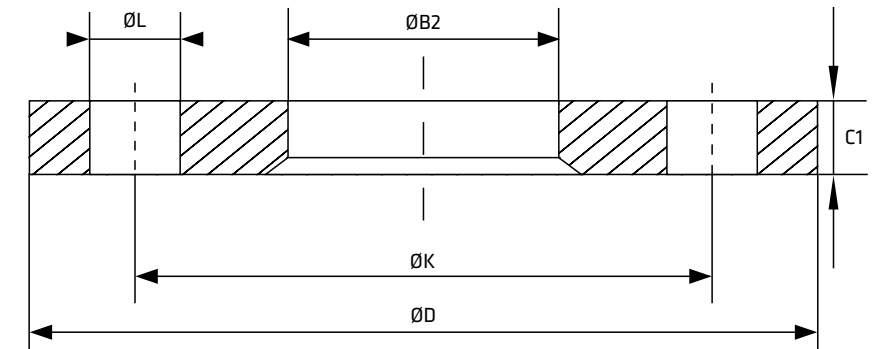


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4541 (2/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	350	355.6	505	365	460	30	8	16	M20	22	19.4	
10	400	406.4	565	416	515	32	8	16	M24	26	26.5	x
10	450	457.2	615	467	565	36	8	20	M24	26	32.5	
10	500	508.0	670	519	620	38	8	20	M24	26	39.0	x
10	600	609.6	780	622	725	42	8	20	M27	30	52.5	
10	700	711.2	895	*	840	50	*	24	M27	30	80.4	
10	800	812.8	1015	*	950	56	*	24	M27	30	113.2	
16	50	50.8*	165	56	125	19	5	4	M16	18	2.8	
16	50	54.0*	165	59	125	19	5	4	M16	18	2.7	
16	50	57.0*	165	62	125	19	5	4	M16	18	2.6	

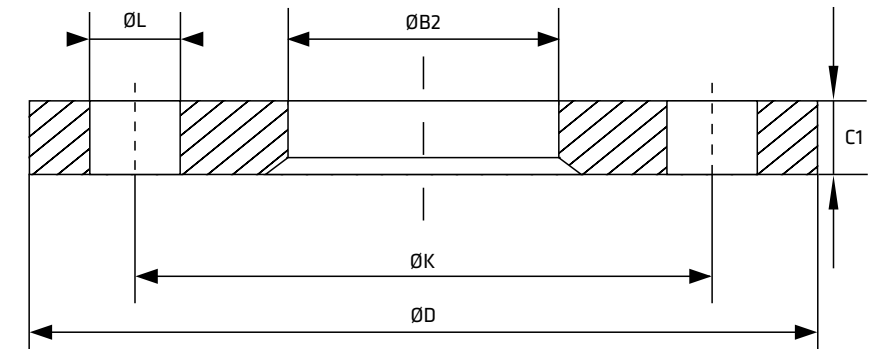


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4541 (3/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	50	60.3	165	65	125	20	5	4	M16	18	2.6	x
16	65	70.0*	185	75	145	20	6	4	M16	18	3.2	
16	65	76.1	185	81	145	20	6	4	M16	18	3.0	x
16	65	76.1	185	81	145	20	6	8	M16	18	3.0	x
16	80	84.0*	200	89	160	20	6	8	M16	18	3.6	
16	80	88.9	200	94	160	20	6	8	M16	18	3.5	x
16	100	101.6*	220	107	180	22	6	8	M16	18	5.0	
16	100	104.0*	220	109	180	22	6	8	M16	18	4.9	
16	100	106.0*	220	111	180	22	6	8	M16	18	4.8	
16	100	108.0*	220	113	180	22	6	8	M16	18	4.7	



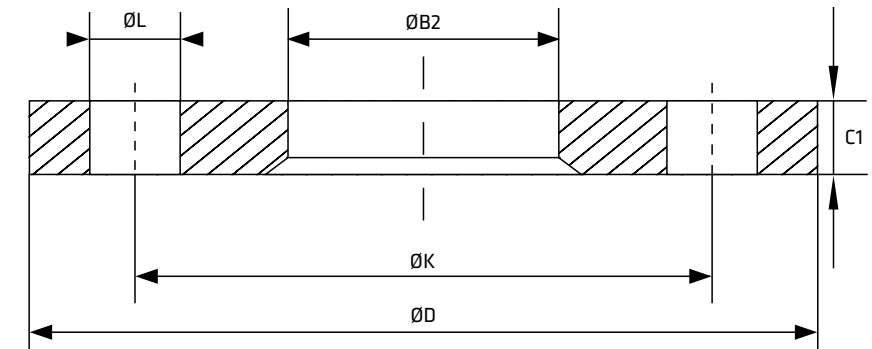
\* Finishes: page 311; no standard pipe connection



# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4541 (4/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	100	114.3	220	120	180	22	6	8	M16	18	4.2	x
16	125	129.0*	250	134	210	22	6	8	M16	18	6.0	
16	125	133.0*	250	138	210	22	6	8	M16	18	5.8	
16	125	139.7	250	145	210	22	6	8	M16	18	5.5	x
16	150	154.0*	285	159	240	24	6	8	M20	22	8.0	
16	150	156.0*	285	161	240	24	6	8	M20	22	7.7	
16	150	159.0*	285	164	240	24	6	8	M20	22	7.5	
16	150	168.3	285	174	240	24	6	8	M20	22	7.0	x
16	200	219.1	340	226	295	26	6	12	M20	22	9.5	
16	250	273.0	405	281	355	29	8	12	M24	26	13.5	

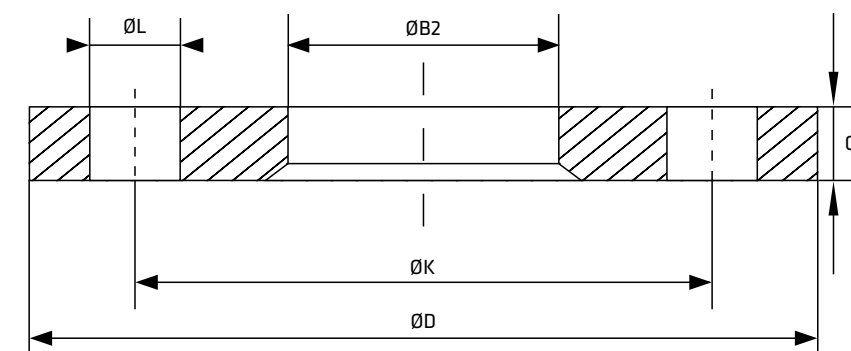


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4541 (5/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	10	17.2	90	21	60	14	3	4	M12	14	0.6	
40	15	20.0*	95	22	65	14	3	4	M12	14	0.5	
40	15	21.3	95	25	65	14	3	4	M12	14	0.5	x
40	20	25.0*	105	28	75	16	4	4	M12	14	1.0	
40	20	26.9	105	31	75	16	4	4	M12	14	1.0	x
40	25	30.0*	115	33	85	16	4	4	M12	14	1.0	
40	25	33.7	114	38	85	16	4	4	M12	14	1.1	x
40	32	38.0*	140	42	100	18	5	4	M16	18	2.0	
40	32	42.4	140	47	100	18	5	4	M16	18	2.0	x
40	40	44.5*	150	50	110	18	5	4	M16	18	2.0	

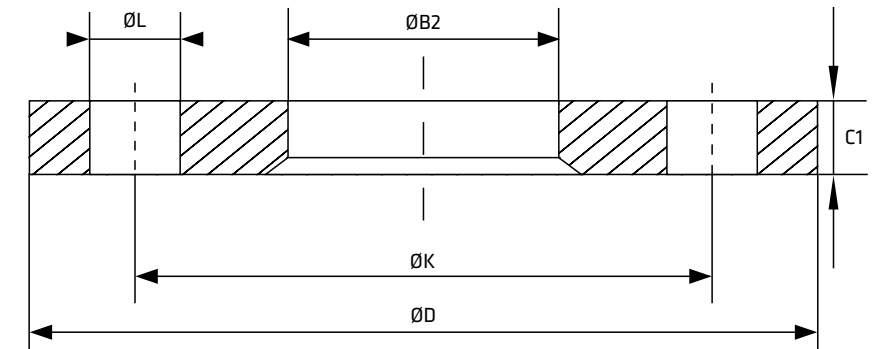


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4541 (6/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	40	48.3	150	53	110	18	5	4	M16	18	2.0	x
40	65	76.1	185	81	145	22	6	8	M16	18	3.1	
40	80	88.9	200	94	160	24	6	8	M16	18	3.9	
40	100	114.3	235	120	190	26	6	8	M20	22	5.2	
40	125	139.7	270	145	220	28	6	8	M24	26	7.2	
40	150	168.3	300	174	250	30	6	8	M24	26	8.6	
40	200	219.1	375	226	320	36	6	12	M27	30	15.2	

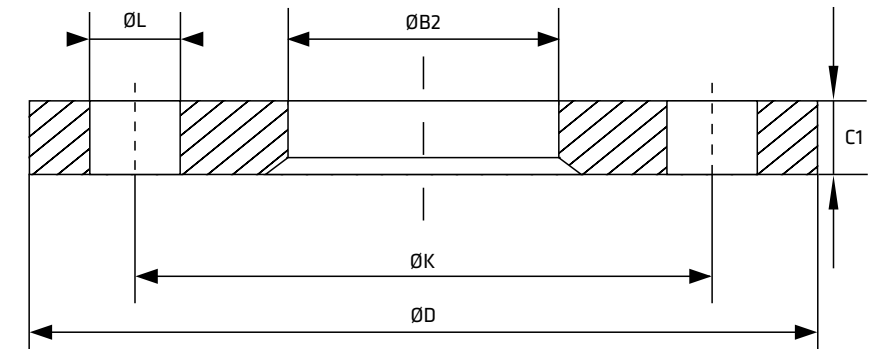


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4571 (1/6)



Nominal pressure/ diameter		A	$\varnothing D$	B2	K	C1	E	Number of screw	AFM Size	$\varnothing L$	Grade AISI	1.4571 316Ti *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	200	204.0*	340	210	295	24	6	8	M20	22	9.7	
10	200	206.0*	340	212	295	24	6	8	M20	22	9.5	
10	200	208.0*	340	214	295	24	6	8	M20	22	9.3	
10	200	219.1	340	226	295	24	6	8	M20	22	9.0	x
10	250	254.0*	395	260	295	26	6	12	M20	22	12.3	
10	250	256.0*	395	262	350	26	8	12	M20	22	13.0	
10	250	273	395	281	350	26	8	12	M20	22	11.5	x
10	300	304.0*	445	310	400	26	8	12	M20	22	14.0	
10	300	306.0*	445	312	400	26	8	12	M20	22	15.0	
10	300	323.9	445	333	400	26	8	12	M20	22	13.0	x



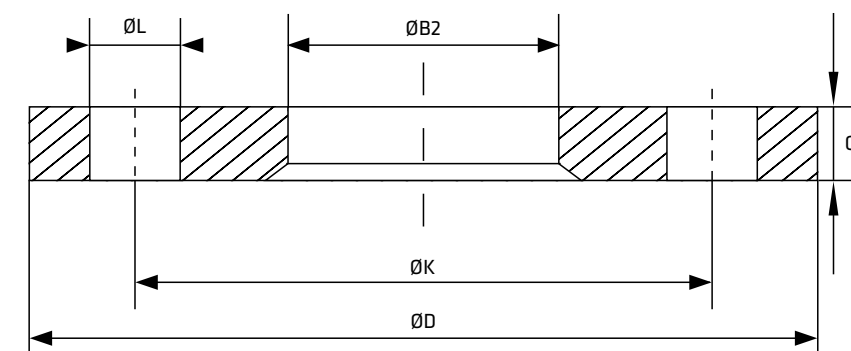
\* Finishes: page 311; no standard pipe connection



# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4571 (2/6)



Nominal pressure/ diameter		A	$\varnothing D$	B2	K	C1	E	Number of screw	AFM Size	$\varnothing L$	Grade AISI	1.4571 316Ti *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
10	350	355.6	505	365	460	30	8	16	M20	22	19.4	x
10	400	406.4	565	416	515	32	8	16	M24	26	26.5	x
10	450	457.2	615	467	565	36	8	20	M24	26	32.5	
10	500	508.0	670	519	620	38	8	20	M24	26	39.0	x
10	600	609.6	780	622	725	42	8	20	M27	30	52.5	x
10	700	711.2	895	*	840	50	*	24	M27	30	80.4	
10	800	812.8	1015	*	950	56	*	24	M27	30	113.2	
16	50	50.8*	165	56	125	19	5	4	M16	18	2.8	
16	50	54.0*	165	59	125	19	5	4	M16	18	2.7	
16	50	57.0*	165	62	125	19	5	4	M16	18	2.6	

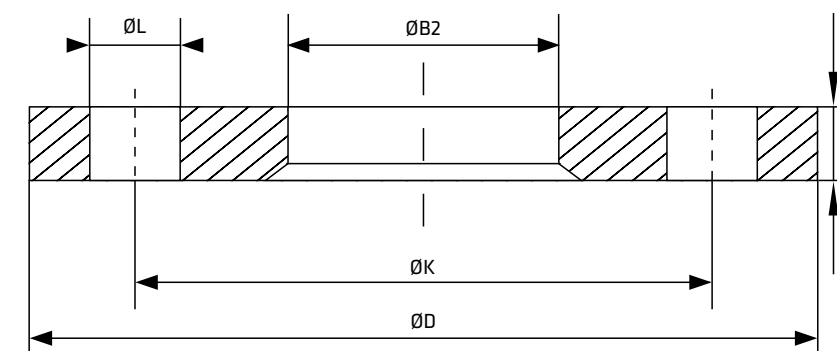


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4571 (3/6)



Nominal pressure/ diameter		A	$\varnothing D$	B2	K	C1	E	Number of screw	AFM Size	$\varnothing L$	Grade AISI	1.4571 316Ti *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	50	60.3	165	65	125	20	5	4	M16	18	2.6	x
16	65	70.0*	185	75	145	20	6	4	M16	18	3.2	
16	65	76.1	185	81	145	20	6	4	M16	18	3.0	x
16	65	76.1	185	81	145	20	6	8	M16	18	3.0	x
16	80	84.0*	200	89	160	20	6	8	M16	18	3.6	
16	80	88.9	200	94	160	20	6	8	M16	18	3.5	x
16	100	101.6*	220	107	180	22	6	8	M16	18	5.0	
16	100	104.0*	220	109	180	22	6	8	M16	18	4.9	
16	100	106.0*	220	111	180	22	6	8	M16	18	4.8	
16	100	108.0*	220	113	180	22	6	8	M16	18	4.7	

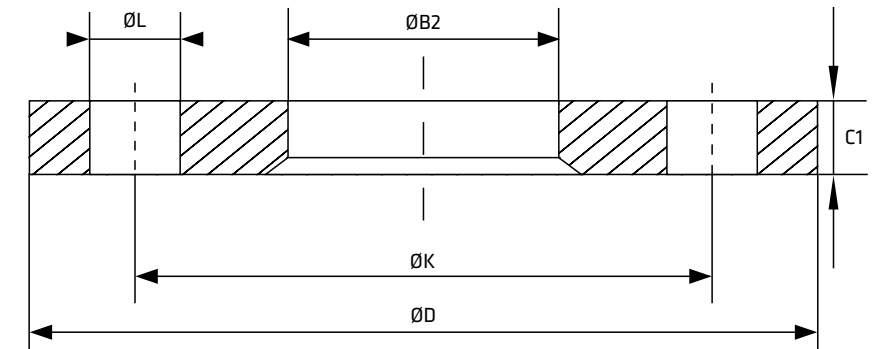


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4571 (4/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4571 316Ti *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
16	100	114.3	220	120	180	22	6	8	M16	18	4.2	x
16	125	129.0*	250	134	210	22	6	8	M16	18	6.0	
16	125	133.0*	250	138	210	22	6	8	M16	18	5.8	
16	125	139.7	250	145	210	22	6	8	M16	18	5.5	x
16	150	154.0*	285	159	240	24	6	8	M20	22	8.0	
16	150	156.0*	285	161	240	24	6	8	M20	22	7.7	
16	150	159.0*	285	164	240	24	6	8	M20	22	7.5	
16	150	168.3	285	174	240	24	6	8	M20	22	7.0	x
16	200	219.1	340	226	295	26	6	12	M20	22	9.5	x
16	250	273.0	405	281	355	29	8	12	M24	26	13.5	x

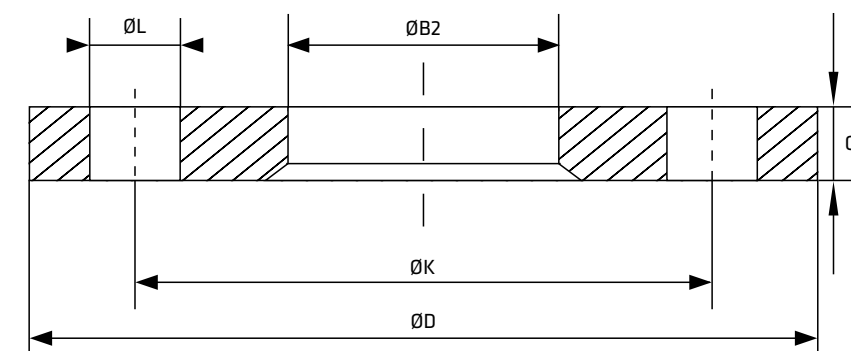


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4571 (5/6)



Nominal pressure/ diameter		A	ØD	B2	K	C1	E	Number of screw	AFM Size	ØL	Grade AISI	1.4571 316Ti *)
PN	DN	mm	mm	mm	mm	mm	mm				kg/pce.	
40	10	17.2	90	21	60	14	3	4	M12	14	0.6	
40	15	20.0*	95	22	65	14	3	4	M12	14	0.5	
40	15	21.3	95	25	65	14	3	4	M12	14	0.5	x
40	20	25.0*	105	28	75	16	4	4	M12	14	1.0	
40	20	26.9	105	31	75	16	4	4	M12	14	1.0	x
40	25	30.0*	115	33	85	16	4	4	M12	14	1.0	
40	25	33.7	114	38	85	16	4	4	M12	14	1.1	x
40	32	38.0*	140	42	100	18	5	4	M16	18	2.0	
40	32	42.4	140	47	100	18	5	4	M16	18	2.0	x
40	40	44.5*	150	50	110	18	5	4	M16	18	2.0	



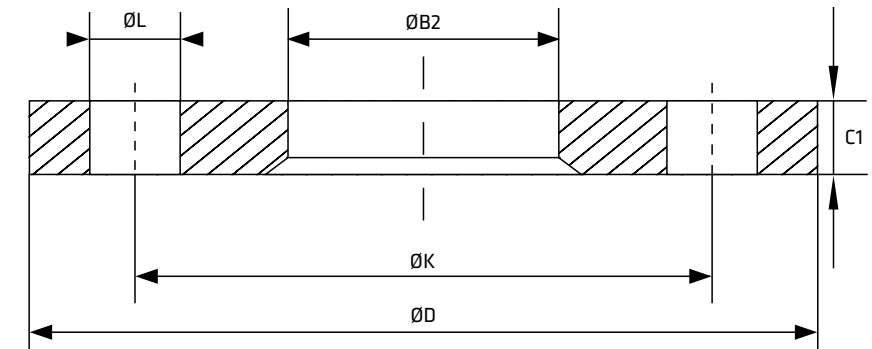
\* Finishes: page 311; no standard pipe connection



# LAP-JOINT FLANGES

EN 1092-1 type 02/A

1.4571 (6/6)



Nominal pressure/ diameter		A	$\varnothing D$	B2	K	C1	E	Number of screw	AFM Size	$\varnothing L$	Grade AISI	1.4571 316Ti kg/pce. *)
PN	DN	mm	mm	mm	mm	mm	mm					
40	40	48.3	150	53	110	18	5	4	M16	18	2.0	x
40	65	76.1	185	81	145	22	6	8	M16	18	3.1	
40	80	88.9	200	94	160	24	6	8	M16	18	3.9	
40	100	114.3	235	120	190	26	6	8	M20	22	5.2	
40	125	139.7	270	145	220	28	6	8	M24	26	7.2	
40	150	168.3	300	174	250	30	6	8	M24	26	8.6	
40	200	219.1	375	226	320	36	6	12	M27	30	15.2	

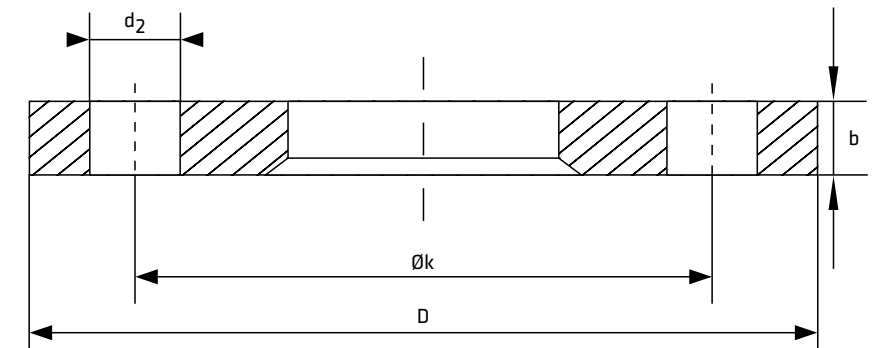


\* Finishes: page 311; no standard pipe connection

# LAP-JOINT FLANGES

DIN 2642

1.4541-1.4571 (1/2)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØL	ØD	drill holes	Grade	1.4541	1.4571
PN	DN	mm	mm	mm	mm			AISI	321	316 Ti
								kg/pce.	*)	*)
10	10	17.2	14	90	60	14	4	0.60	x	x
10	15	21.3	14	95	65	14	4	0.69	x	x
10	20	26.9	14	105	75	14	4	0.80	x	x
10	25	33.7	16	115	85	14	4	1.11	x	x
10	32	42.4	16	140	100	18	4	1.64	x	x
10	40	48.3	16	150	110	18	4	1.86	x	x
10	50	60.3	16	165	125	18	4	2.20	x	x
10	65	76.1	16	185	145	18	4	2.62	x	x
10	80	88.9	18	200	160	18	8	3.32	x	x
10	100	114.3	18	220	180	18	8	3.67	x	x

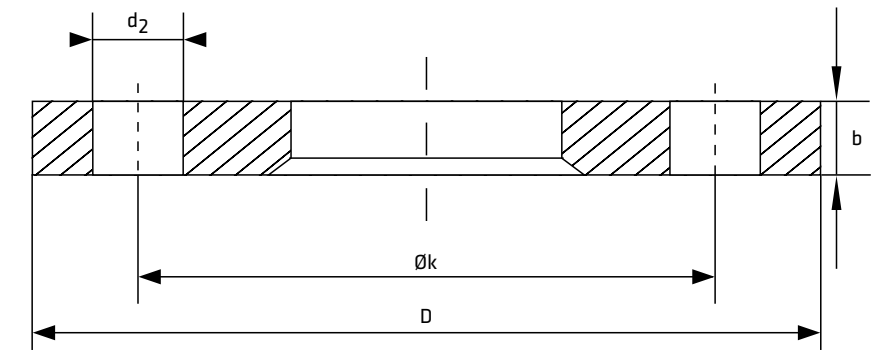


\* Finishes: page 311

# LAP-JOINT FLANGES

■ DIN 2642

1.4541-1.4571 (2/2)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØL	ØD	drill holes	Grade	1.4541	1.4571
PN	DN	mm	mm	mm	mm			AISI	321	316 Ti
								kg/pce.	*)	*)
10	125	139.7	18	250	210	18	8	4.54	x	x
10	150	168.3	18	285	240	22	8	5.60	x	x
10	200	219.1	20	340	295	22	8	7.46	x	x
10	250	273.0	22	395	350	22	12	10.30	x	x

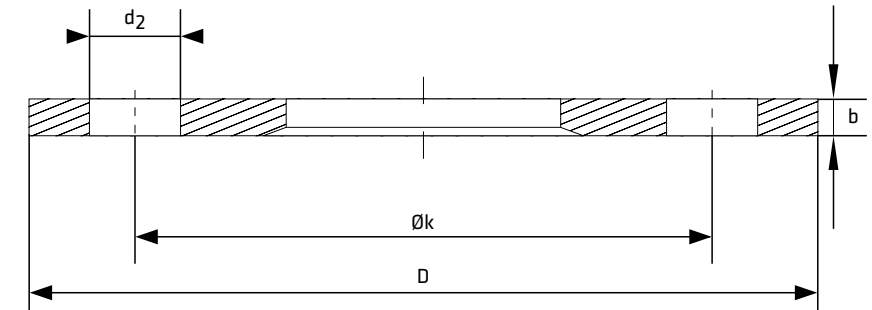


\* Finishes: page 311

# LAP-JOINT FLANGES

DIN 2642 with reduced thickness

1.4301-1.4404 (1/2)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4301/1.4307	1.4404
PN	DN		mm	mm	mm	mm		AISI	304/304L	316
			mm	mm	mm	mm		kg/pce.	*)	*)
10	50	60.3	10	165	125	18	4	1.42	x	
10	65	76.1	10	185	145	18	4	1.74	x	
10	80	88.9	10	200	160	18	8	1.95	x	
10	100	114.3	10	220	180	18	8	2.15	x	
10	125	139.7	12	250	210	18	8	3.05	x	
10	150	168.3	12	285	240	22	8	3.94	x	
10	200	219.1	12	340	295	22	8	4.48	x	
10	250	273.0	15	395	350	22	12	6.95	x	
10	300	323.9	15	445	400	22	12	9.19	x	
10	300	323.9	19.6	445	400	22	12	9.60	x	x

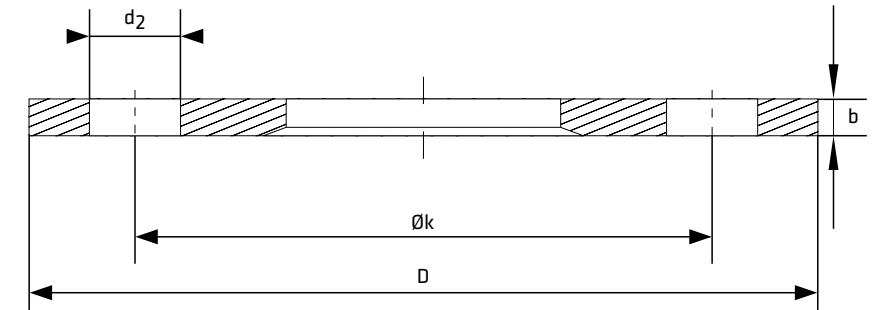


\* Finishes: page 311

# LAP-JOINT FLANGES

■ DIN 2642 with reduced thickness

1.4301-1.4404 (2/2)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4301/1.4307	1.4404
PN	DN		mm	mm	mm	mm		AISI	304/304L	316
								kg/pce.	*)	*)
10	350	355.6	15	505	460	22	16	11.24	x	
10	350	355.6	21	505	460	22	16	14.50	x	x
10	400	406.4	15	565	515	26	16	11.70	x	
10	400	406.4	22.4	565	515	26	16	18.50	x	x
10	450	457	22.4	615	565	26	20	20.00	x	x
10	500	508.0	15	670	620	26	20	14.61	x	
10	500	508.0	20	670	620	26	20	19.47	x	
10	500	508	23.8	670	620	26	20	24.10	x	x
10	600	609.6	20	780	725	30	20	25.60	x	
10	600	609.6	25.2	780	725	30	20	31.30	x	x



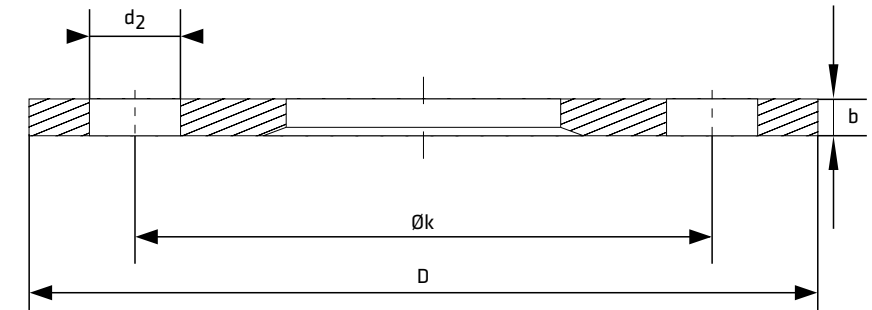
\* Finishes: page 311



# LAP-JOINT FLANGES

DIN 2642 with reduced thickness

1.4571 (1/2)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN		mm	mm	mm	mm		AISI	316 Ti
			mm	mm	mm	mm		kg/pce.	*)
10	50	60.3	10	165	125	18	4	1.42	x
10	65	76.1	10	185	145	18	4	1.74	x
10	80	88.9	10	200	160	18	8	1.95	x
10	100	114.3	10	220	180	18	8	2.15	x
10	125	139.7	12	250	210	18	8	3.05	x
10	150	168.3	12	285	240	22	8	3.94	x
10	200	219.1	12	340	295	22	8	4.48	x
10	250	273.0	15	395	350	22	12	6.95	x
10	300	323.9	15	445	400	22	12	9.19	x
10	300	323.9	19.6	445	400	22	12	9.60	

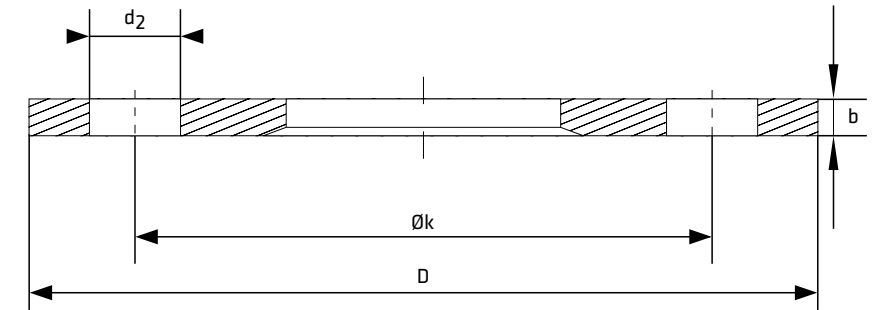


\* Finishes: page 311

# LAP-JOINT FLANGES

■ DIN 2642 with reduced thickness

1.4571 (2/2)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN		mm	mm	mm	mm		AISI	316 Ti
								kg/pce.	*)
10	350	355.6	15	505	460	22	16	11.24	x
10	350	355.6	21	505	460	22	16	14.50	
10	400	406.4	15	565	515	26	16	11.70	x
10	400	406.4	22.4	565	515	26	16	18.50	
10	450	457	22.4	615	565	26	20	20.00	
10	500	508.0	15	670	620	26	20	14.61	x
10	500	508.0	20	670	620	26	20	19.47	x
10	500	508	23.8	670	620	26	20	24.10	
10	600	609.6	20	780	725	30	20	25.60	x
10	600	609.6	25.2	780	725	30	20	31.30	

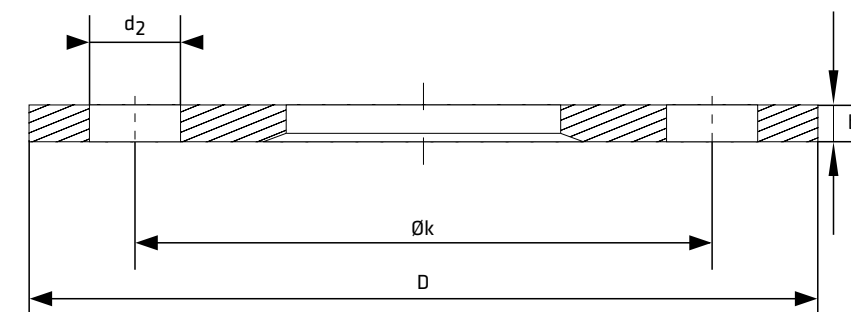


\* Finishes: page 311

# LAP-JOINT FLANGES

EN 1092-1 type 02 A with reduced thickness

1.4301-1.4541 (1/3)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4301	1.4541
PN	DN	mm	mm	mm	mm			AISI	304	321
								kg/pce.	*)	*)
10	15	21.3	10	95	65	14	4	0.51	x	x
10	20	26.9	10	105	75	14	4	0.65	x	x
10	25	28.0	10	115	85	14	4	0.75	x	
10	25	33.7	10	115	85	14	4	0.76	x	x
10	32	42.4	10	140	100	18	4	1.06	x	x
10	40	48.3	10	150	110	18	4	1.20	x	x
10	50	54.0	10	165	125	18	4	1.50	x	
10	50	60.3	10	165	125	18	4	1.42	x	x
10	65	70.0	10	185	145	18	4	1.80	x	
10	65	76.1	10	185	145	18	4	1.74	x	x



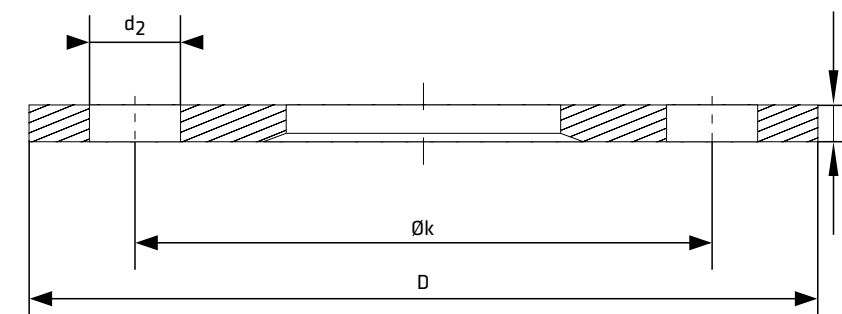
\* Finishes: page 311



# LAP-JOINT FLANGES

EN 1092-1 type 02 A with reduced thickness

1.4301-1.4541 (2/3)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4301	1.4541
PN	DN	mm	mm	mm	mm			AISI	304	321
								kg/pce.	*)	*)
10	80	84.0	10	200	160	18	8	2.05	x	
10	80	88.9	10	200	160	18	8	1.95	x	x
10	100	104.0	10	220	180	18	8	2.30	x	
10	100	114.3	10	220	180	18	8	2.15	x	x
10	125	129.0	12	250	210	18	8	3.40	x	
10	125	139.7	12	250	210	18	8	3.05	x	x
10	150	154.0	12	285	240	22	8	4.20	x	
10	150	168.3	12	285	240	22	8	3.94	x	x
10	200	204.0	12	340	295	22	8	4.60	x	
10	200	206.0	12	340	295	22	8	4.60	x	

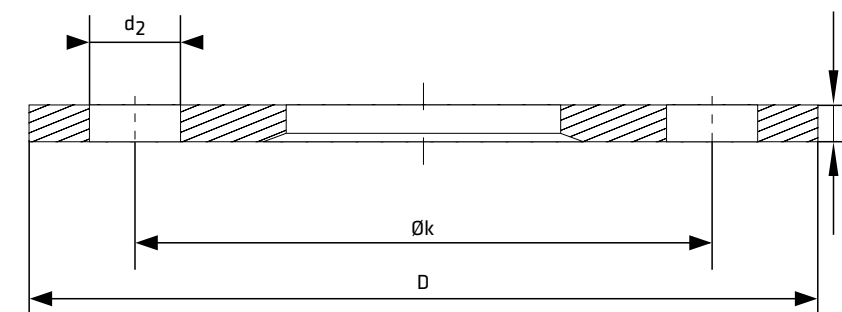


\* Finishes: page 311

# LAP-JOINT FLANGES

EN 1092-1 type 02 A with reduced thickness

1.4301-1.4541 (3/3)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4301	1.4541
PN	DN	mm	mm	mm	mm			AISI	304	321
								kg/pce.	*)	*)
10	200	219.1	12	340	295	22	8	4.48	x	x
10	250	254.0	12	395	350	22	12	6.40	x	
10	250	256.0	15	395	350	22	12	7.90	x	
10	250	273.0	12	395	350	22	12	6.95	x	x
10	300	306.0	15	445	400	22	12	9.50	x	
10	300	323.9	15	445	400	22	12	9.19	x	x
10	350	355.6	15	505	460	22	16	11.24	x	
10	400	406.4	15	565	515	26	16	11.70	x	
10	500	508.0	15	670	620	26	20	22.00	x	
10	600	609.6	20	780	725	30	20	25.60	x	

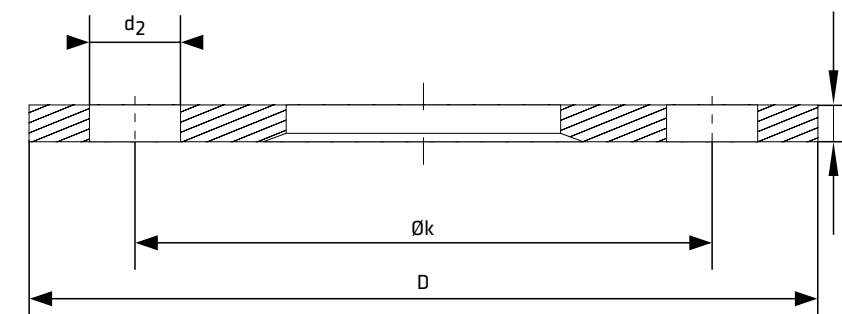


\* Finishes: page 311

# LAP-JOINT FLANGES

EN 1092-1 type 02 A with reduced thickness

1.4571 (1/3)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN	mm	mm	mm	mm			AISI	316 Ti
								kg/pce.	*)
10	15	21.3	10	95	65	14	4	0.51	x
10	20	26.9	10	105	75	14	4	0.65	x
10	25	28.0	10	115	85	14	4	0.75	
10	25	33.7	10	115	85	14	4	0.76	x
10	32	42.4	10	140	100	18	4	1.06	x
10	40	48.3	10	150	110	18	4	1.20	x
10	50	54.0	10	165	125	18	4	1.50	x
10	50	60.3	10	165	125	18	4	1.42	x
10	65	70.0	10	185	145	18	4	1.80	x
10	65	76.1	10	185	145	18	4	1.74	x

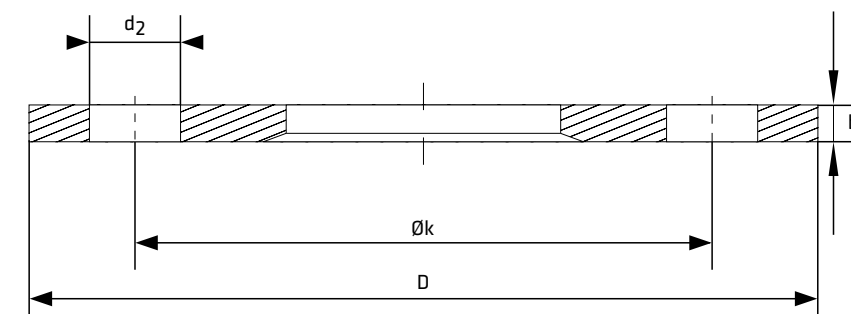


\* Finishes: page 311

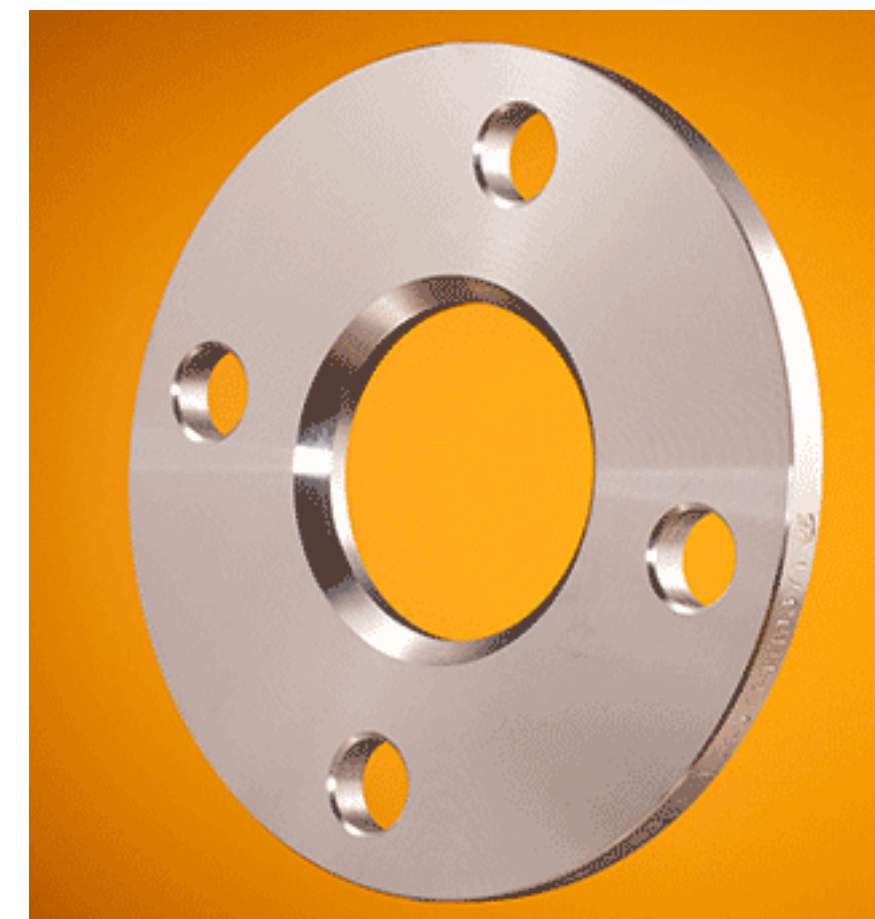
# LAP-JOINT FLANGES

EN 1092-1 type 02 A with reduced thickness

1.4571 (2/3)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN	mm	mm	mm	mm			AISI	316 Ti
								kg/pce.	*)
10	80	84.0	10	200	160	18	8	2.05	x
10	80	88.9	10	200	160	18	8	1.95	x
10	100	104.0	10	220	180	18	8	2.30	x
10	100	114.3	10	220	180	18	8	2.15	x
10	125	129.0	12	250	210	18	8	3.40	x
10	125	139.7	12	250	210	18	8	3.05	x
10	150	154.0	12	285	240	22	8	4.20	x
10	150	168.3	12	285	240	22	8	3.94	x
10	200	204.0	12	340	295	22	8	4.60	x
10	200	206.0	12	340	295	22	8	4.60	x

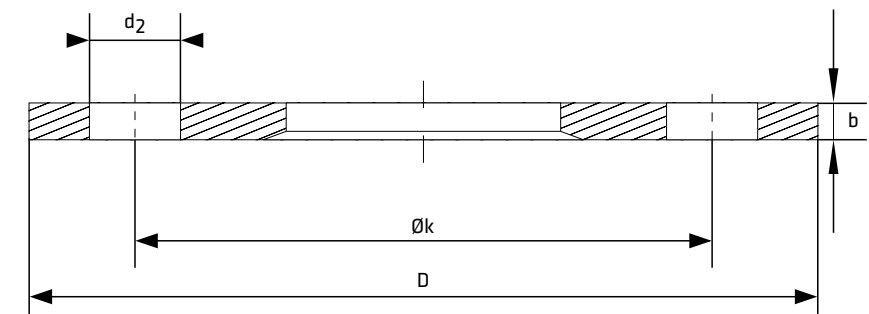


\* Finishes: page 311

# LAP-JOINT FLANGES

EN 1092-1 type 02 A with reduced thickness

1.4571 (3/3)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN	mm	mm	mm	mm			AISI	316 Ti
								kg/pce.	*)
10	200	219.1	12	340	295	22	8	4.48	x
10	250	254.0	12	395	350	22	12	6.40	x
10	250	256.0	15	395	350	22	12	7.90	x
10	250	273.0	12	395	350	22	12	6.95	x
10	300	306.0	15	445	400	22	12	9.50	x
10	300	323.9	15	445	400	22	12	9.19	x
10	350	355.6	15	505	460	22	16	11.24	
10	400	406.4	15	565	515	26	16	11.70	
10	500	508.0	15	670	620	26	20	22.00	
10	600	609.6	20	780	725	30	20	25.60	



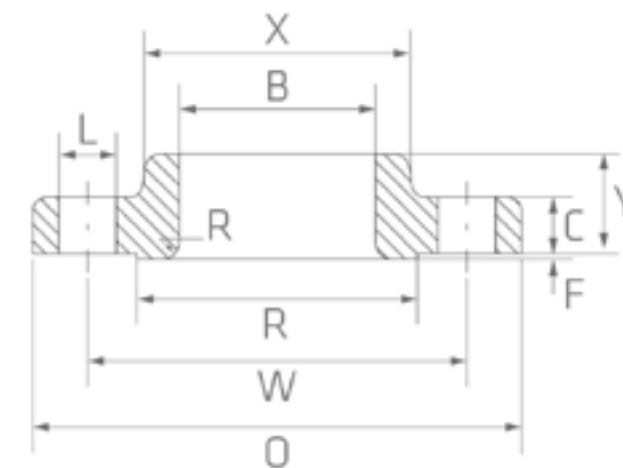
\* Finishes: page 311



# LAP-JOINT FLANGES

ASTM-A 182 ASME B16.5

1.4301 (1/2)



CLASS	OD		B	O	C	W	Y	X	R	R2	Number of screw	L	Grade	
	INCH	mm											1.4301/ AISI 1.4307	kg/pce. 304/304L
150	1/2"	21.3	22.9	90	11.2	60.3	16	30	34.9	3	4	15.9	0.51	x
150	3/4"	26.7	28.2	100	12.7	69.9	16	38	42.9	3	4	15.9	0.64	x
150	1"	33.5	34.9	110	14.3	79.4	17	49	50.8	3	4	15.9	0.93	x
150	1 1/4"	42.2	43.7	115	15.9	88.9	21	59	63.5	5	4	15.9	1.16	x
150	1 1/2"	48.3	50.0	125	17.5	98.4	22	65	73.0	6	4	15.9	1.51	x
150	2"	60.5	62.5	150	19.1	120.7	25	78	92.1	8	4	19.1	2.38	x
150	2 1/2"	73.2	75.4	180	22.3	139.7	29	90	104.8	8	4	19.1	3.60	x
150	3"	88.9	91.4	190	23.9	152.4	30	108	127.0	10	4	19.1	4.04	x
150	3 1/2"	101.6	104.1	215	23.9	177.8	32	122	139.7	10	8	19.1	4.99	x
150	4"	114.3	116.8	230	23.9	190.5	33	135	157.2	11	8	19.1	5.96	x

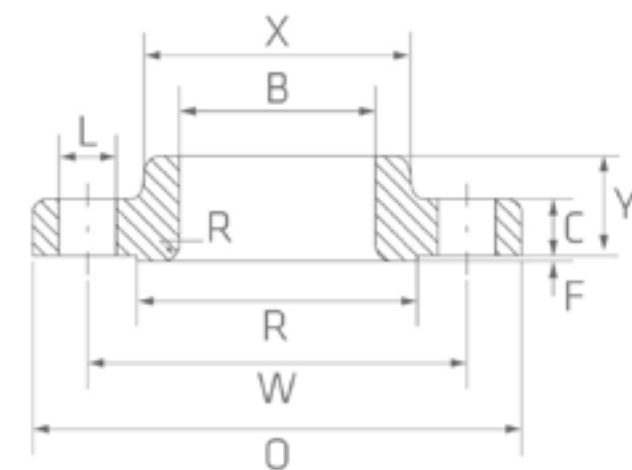


\* Finishes: page 311

# LAP-JOINT FLANGES

ASTM-A 182 ASME B16.5

1.4301 (2/2)



CLASS	OD		B	O	C	W	Y	X	R	R2	Number of screw	L	Grade	kg/pce.
	INCH	mm											1.4301/ AISI 1.4307	
150	5"	141.3	144.4	255	23.9	215.9	36	164	185.7	11	8	22.2	6.44	x
150	6"	168.4	171.4	280	25.4	241.3	40	192	215.9	13	8	22.2	7.59	x
150	8"	219.2	222.2	345	28.6	298.5	44	246	269.9	13	8	22.2	12.66	x
150	10"	273.1	277.4	405	30.2	362.0	49	305	323.8	13	12	25.4	16.78	x
150	12"	323.9	328.2	485	31.8	431.8	56	365	381.0	13	12	25.4	28.30	x
150	14"	355.6	360.2	535	35.0	476.3	79	400	412.8	13	12	28.6	41.50	x
150	16"	406.4	411.2	595	36.6	539.8	87	457	469.9	13	16	28.6	52.98	x
150	18"	457.2	462.3	635	39.7	577.9	97	505	533.4	13	16	31.8	59.00	x
150	20"	508.0	514.4	700	42.9	635.0	103	559	584.2	13	20	31.8	42.12	x
150	24"	609.6	616.0	815	47.7	749.3	111	663	692.2	13	20	34.9	99.02	x

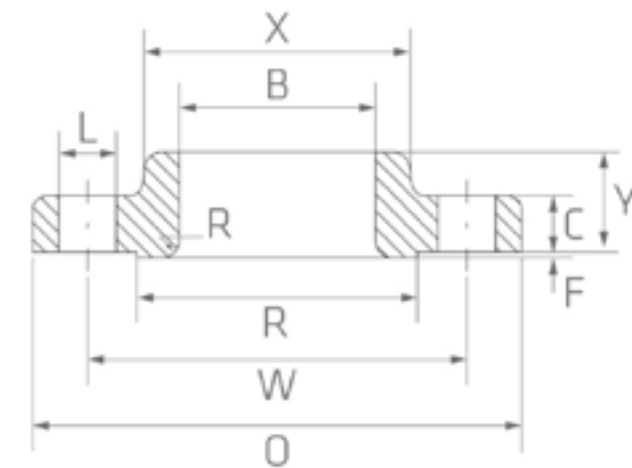


\* Finishes: page 311

# LAP-JOINT FLANGES

ASTM-A 182 ASME B16.5

1.4301 (1/2)



CLASS	OD		B	O	C	W	Y	X	R	R2	Number of screw	L	Grade	
	INCH	mm											1.4401/ AISI 1.4404	kg/pce. 316/316L
150	1/2"	21.3	22.9	90	11.2	60.3	16	30	34.9	3	4	15.9	0.51	x
150	3/4"	26.7	28.2	100	12.7	69.9	16	38	42.9	3	4	15.9	0.64	x
150	1"	33.5	34.9	110	14.3	79.4	17	49	50.8	3	4	15.9	0.93	x
150	1 1/4"	42.2	43.7	115	15.9	88.9	21	59	63.5	5	4	15.9	1.16	x
150	1 1/2"	48.3	50.0	125	17.5	98.4	22	65	73.0	6	4	15.9	1.51	x
150	2"	60.5	62.5	150	19.1	120.7	25	78	92.1	8	4	19.1	2.38	x
150	2 1/2"	73.2	75.4	180	22.3	139.7	29	90	104.8	8	4	19.1	3.60	x
150	3"	88.9	91.4	190	23.9	152.4	30	108	127.0	10	4	19.1	4.04	x
150	3 1/2"	101.6	104.1	215	23.9	177.8	32	122	139.7	10	8	19.1	4.99	x
150	4"	114.3	116.8	230	23.9	190.5	33	135	157.2	11	8	19.1	5.96	x



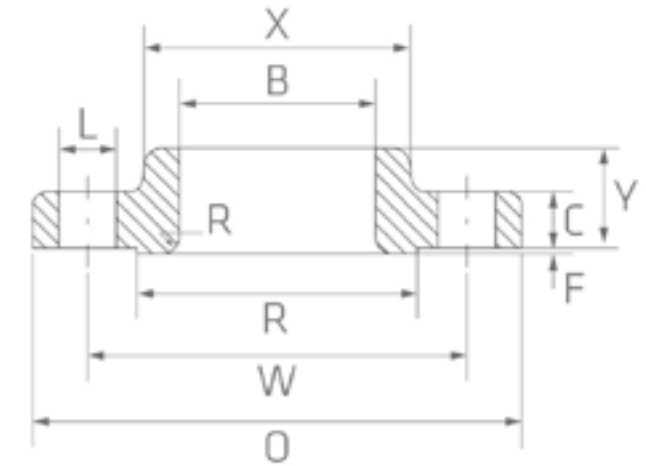
\* Finishes: page 311



# LAP-JOINT FLANGES

ASTM-A 182 ASME B16.5

1.4401 (2/2)



CLASS	OD		B	O	C	W	Y	X	R	R2	Number of screw	L	Grade	1.4401/ AISI 1.4404 kg/pce. 316/316L
	INCH	mm											1.4401/ AISI 1.4404	
150	5"	141.3	144.4	255	23.9	215.9	36	164	185.7	11	8	22.2	6.44	x
150	6"	168.4	171.4	280	25.4	241.3	40	192	215.9	13	8	22.2	7.59	x
150	8"	219.2	222.2	345	28.6	298.5	44	246	269.9	13	8	22.2	12.66	x
150	10"	273.1	277.4	405	30.2	362.0	49	305	323.8	13	12	25.4	16.78	x
150	12"	323.9	328.2	485	31.8	431.8	56	365	381.0	13	12	25.4	28.30	x
150	14"	355.6	360.2	535	35.0	476.3	79	400	412.8	13	12	28.6	41.50	x
150	16"	406.4	411.2	595	36.6	539.8	87	457	469.9	13	16	28.6	52.98	x
150	18"	457.2	462.3	635	39.7	577.9	97	505	533.4	13	16	31.8	59.00	x
150	20"	508.0	514.4	700	42.9	635.0	103	559	584.2	13	20	31.8	42.12	x
150	24"	609.6	616.0	815	47.7	749.3	111	663	692.2	13	20	34.9	99.02	x

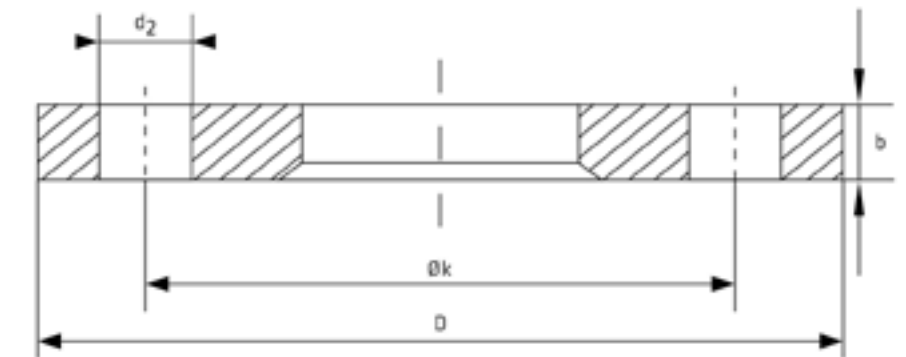


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium

(1/4)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØL	drill holes	ØL	Grade AISI	Alu bright metal	Alu coated
PN	DN	mm	mm	mm	mm			kg/pce.		
10	10	17.2	12	90	60	14	4	0.21	x	x
10	15	21.3	12	95	65	14	4	0.24	x	x
10	20	26.9	12	105	75	14	4	0.28	x	x
10	25	28.0	12	115	85	14	4	0.38	x	
10	25	33.7	12	115	85	14	4	0.38	x	x
10	32	35.0	16	140	100	14	4	0.56	x	
10	32	42.4	16	140	100	18	4	0.56	x	x
10	40	48.3	16	150	110	18	4	0.64	x	x
10	50	54.0	16	165	125	18	4	0.75	x	x
10	50	60.3	16	165	125	18	4	0.75	x	x

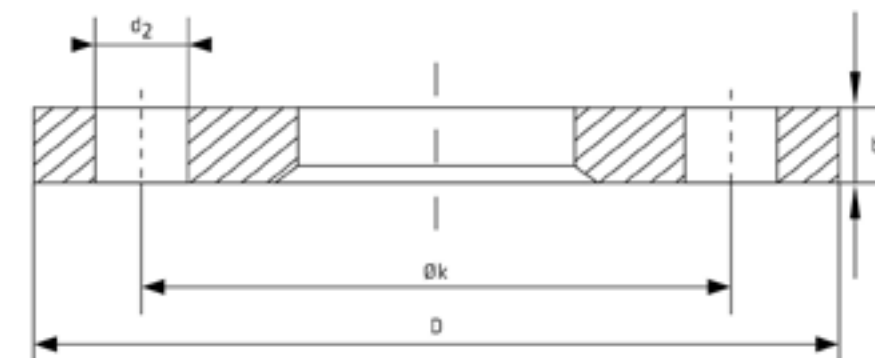


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium

(2/4)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØL	drill holes	ØL	Grade AISI	Alu bright metal	Alu coated
PN	DN	mm	mm	mm	mm			kg/pce.		
10	65	69.0	16	185	145	18	4	0.90	x	
10	65	76.1	16	185	145	18	4	0.90	x	x
10	80	84.0	18	200	160	18	8	1.10	x	x
10	80	88.9	18	200	160	18	8	1.10	x	x
10	100	104.0	18	220	180	18	8	1.23	x	x
10	100	114.3	18	220	180	18	8	1.23	x	x
10	125	129.0	18	250	210	18	8	1.55	x	x
10	125	139.7	18	250	210	18	8	1.55	x	x
10	150	154.0	18	285	240	22	8	1.88	x	x
10	150	168.3	18	285	240	22	8	1.88	x	x

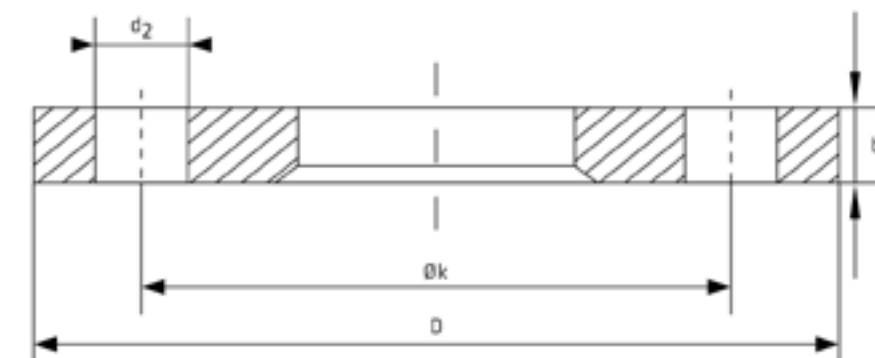


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium

(3/4)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØL	drill holes	ØL	Grade AISI	Alu bright metal	Alu coated
PN	DN	mm	mm	mm	mm			kg/pce.		
10	200	204.0	20	340	295	22	8	2.70	x	x
10	200	219.1	20	340	295	22	8	2.70	x	x
10	250	254.0	22	395	350	22	12	3.65	x	x
10	250	256.0	22	395	350	22	12	3.65	x	x
10	250	273.0	22	395	350	22	12	3.65	x	
10	300	304.0	22	445	400	22	12	4.30	x	x
10	300	323.9	22	445	400	22	12	4.30	x	x
10	350	355.6	22	505	460	22	16	5.20	x	x
10	400	406.4	25	565	515	26	16	7.17	x	x
10	500	508.0	28	670	620	26	20	9.70	x	x



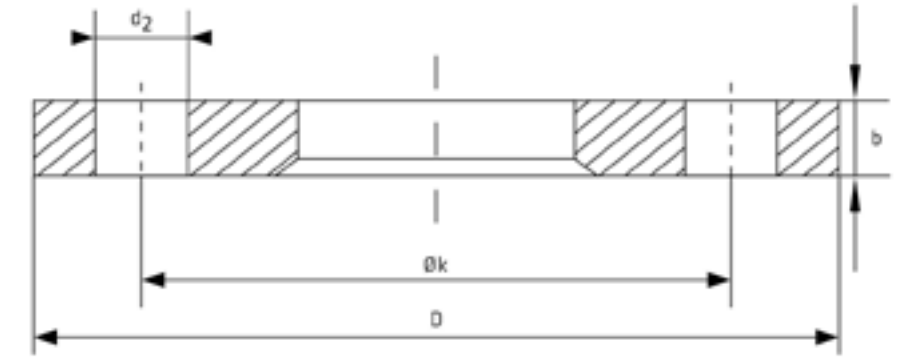
\* Finishes: page 311



# LAP-JOINT FLANGES

Aluminium

(4/4)



Nominal pressure/ diameter		RohrSize	C4	ØD	ØL	drill holes	ØL	Grade AISI	Alu bright metal	Alu coated
PN	DN	mm	mm	mm	mm			kg/pce.		
10	600	610.0	30	780	725	30	20	14.00		x



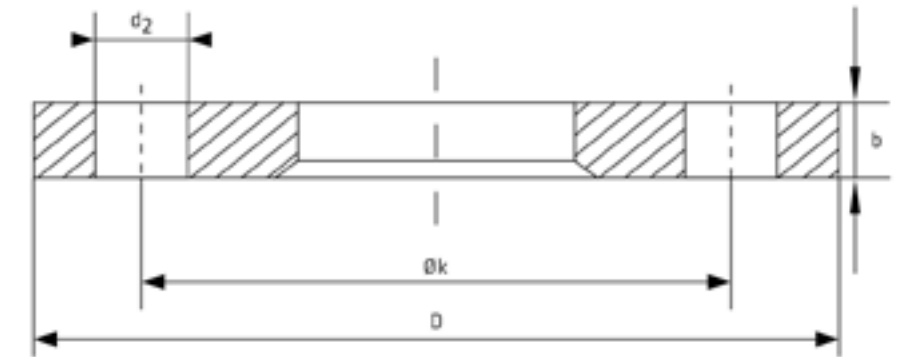
\* Finishes: page 311



# LAP-JOINT FLANGES

Aluminium DIN 2642

blank (1/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	blank
	PN	DN											
A	10	15	95	65	18-20	23	16	4	4	M12	14	0.26	x
A	10	20	105	75	22-25	28	16	4	4	M12	14	0.30	x
A	10	25	115	85	28-31.8	33	16	4	4	M12	14	0.27	x
A	10	32	140	100	35-38	42	16	4	4	M16	18	0.56	x
A	10	40	150	110	40-44.5	48	18	4	4	M16	18	0.62	x
A	10	50	165	125	50-54	60	18	4	4	M16	18	0.75	x
A	10	65	185	145	69-70	75	18	4	4	M16	18	0.90	x
A	10	80	200	160	80-86	90	20	5	8	M16	18	1.10	x
A	10	100	220	180	102-106	111	20	5	8	M16	18	1.23	x
A	10	125	250	210	129-131	136	22	5	8	M16	18	1.53	x

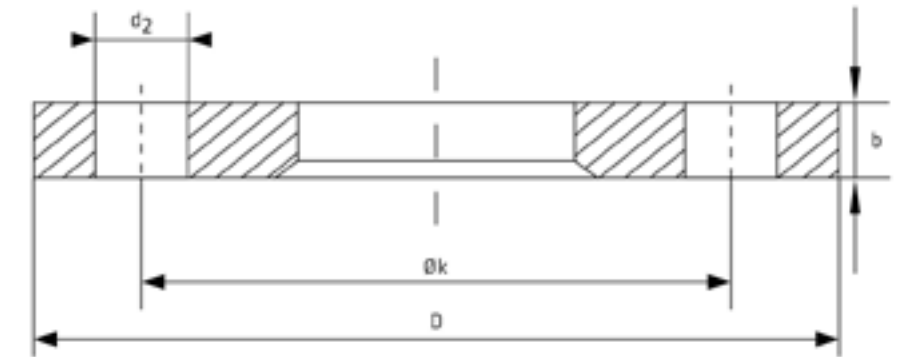


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium DIN 2642

blank (2/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	blank
	PN	DN											
A	10	150	285	240	154-156	161	22	5	8	M20	22	2.30	x
A	10	200	340	295	204-208	212	24	5	8	M20	22	2.70	x
A	10	250	395	350	254-258	264	26	5	12	M20	22	3.65	x
A	10	300	445	400	304-308	315	26	5	12	M20	22	4.27	x
C	10	10	90	60	17.2	19	16	4	4	M12	14	0.18	x
C	10	15	95	65	21.3	24	16	4	4	M12	14	0.19	x
C	10	20	105	75	26.9	30	16	4	4	M12	14	0.30	x
C	10	25	115	85	33.7	36	16	4	4	M12	14	0.27	x
C	10	32	140	100	42.4	46	16	4	4	M16	18	0.53	x
C	10	40	150	110	48.3	54	18	4	4	M16	18	0.60	x

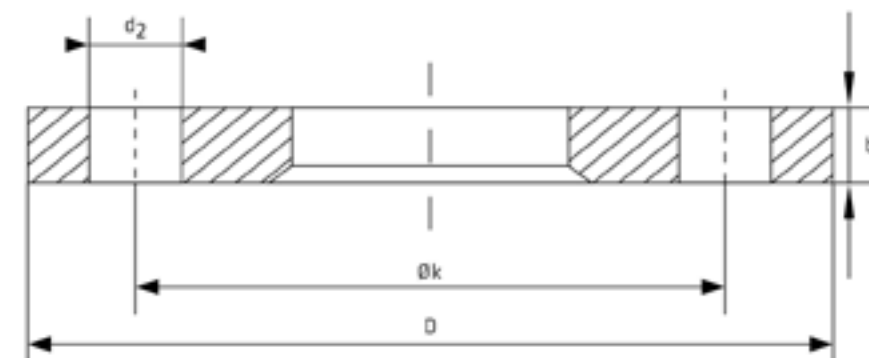


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium DIN 2642

blank (3/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	blank
	PN	DN											
C	10	50	165	125	57-60.3	65	18	4	4	M16	18	0.71	x
C	10	65	185	145	76.1	81	18	4	4	M16	18	0.83	x
C	10	80	200	160	88.9	94	20	5	8	M16	18	1.20	x
C	10	100	220	180	108-114.3	119	20	5	8	M16	18	1.27	x
C	10	125	250	210	133-139.7	145	22	5	8	M16	18	1.43	x
C	10	150	285	240	159-168.3	173	22	5	8	M20	22	1.66	x
C	10	200	340	295	219.1	225	24	5	8	M20	22	2.96	x
C	10	250	395	350	273	279	26	5	12	M20	22	3.22	x
C	10	300	445	400	323.9	329	26	5	12	M20	22	3.75	x
C	10	350	505	460	355.6	362	26	5	16	M20	22	5.13	x



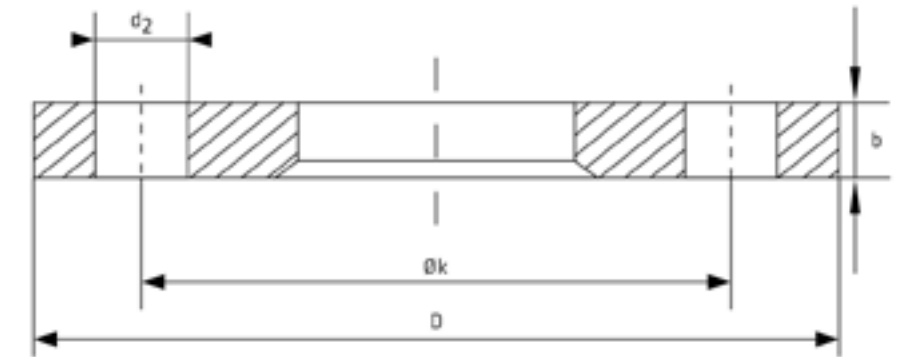
\* Finishes: page 311



# LAP-JOINT FLANGES

Aluminium DIN 2642

blank (4/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI	blank
	PN	DN											
C	10	400	565	515	406.4	413	32	6	16	M24	26	7.17	x
C	10	450	615	565	457.2	465	32	6	20	M24	26	9.50	x
C	10	500	670	620	508	517	34	6	20	M24	26	9.52	x
C	10	600	780	725	609.6	618	36	6	20	M27	30	13.00	x

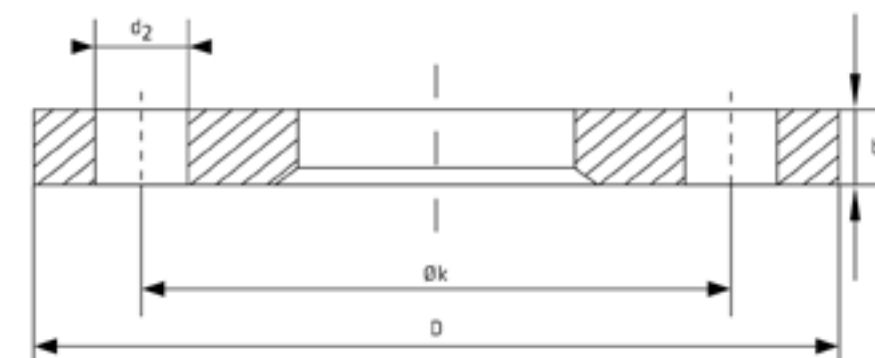


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium DIN 2642

epox (1/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	epox
	PN	DN											
A	10	15	95	65	18-20	23	16	4	4	M12	14	0.26	
A	10	20	105	75	22-25	28	16	4	4	M12	14	0.30	x
A	10	25	115	85	28-31.8	33	16	4	4	M12	14	0.27	x
A	10	32	140	100	35-38	42	16	4	4	M16	18	0.56	x
A	10	40	150	110	40-44.5	48	18	4	4	M16	18	0.62	x
A	10	50	165	125	50-54	60	18	4	4	M16	18	0.75	x
A	10	65	185	145	69-70	75	18	4	4	M16	18	0.90	x
A	10	80	200	160	80-86	90	20	5	8	M16	18	1.10	x
A	10	100	220	180	102-106	111	20	5	8	M16	18	1.23	x
A	10	125	250	210	129-131	136	22	5	8	M16	18	1.53	x

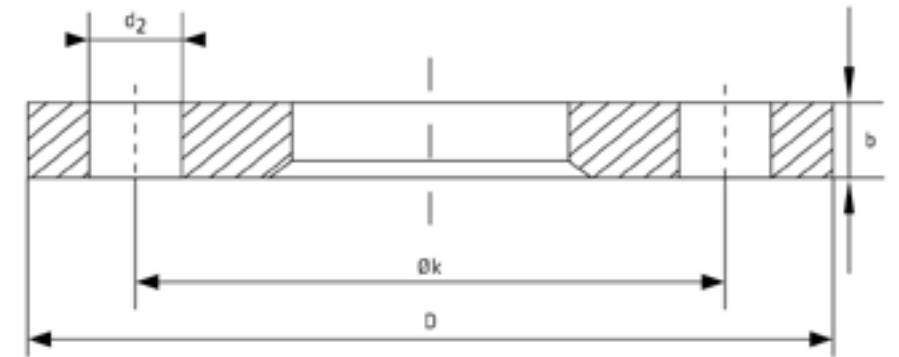


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium DIN 2642

epox (2/4)



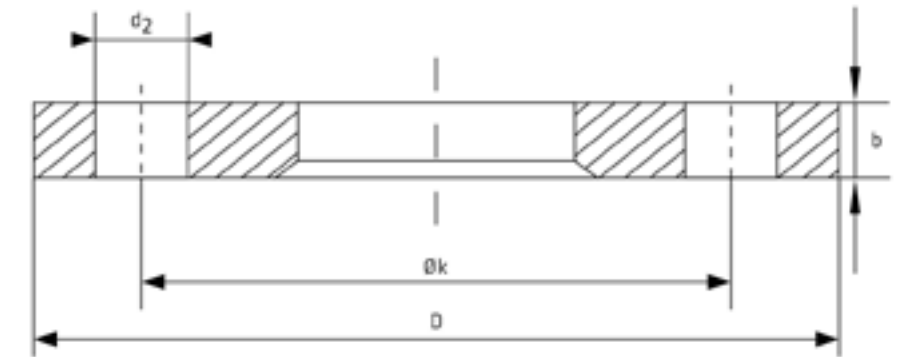
TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	epox
	PN	DN											
A	10	150	285	240	154-156	161	22	5	8	M20	22	2.30	x
A	10	200	340	295	204-208	212	24	5	8	M20	22	2.70	x
A	10	250	395	350	254-258	264	26	5	12	M20	22	3.65	x
A	10	300	445	400	304-308	315	26	5	12	M20	22	4.27	x
C	10	10	90	60	17.2	19	16	4	4	M12	14	0.18	x
C	10	15	95	65	21.3	24	16	4	4	M12	14	0.19	x
C	10	20	105	75	26.9	30	16	4	4	M12	14	0.30	x
C	10	25	115	85	33.7	36	16	4	4	M12	14	0.27	x
C	10	32	140	100	42.4	46	16	4	4	M16	18	0.53	x
C	10	40	150	110	48.3	54	18	4	4	M16	18	0.60	x



# LAP-JOINT FLANGES

Aluminium DIN 2642

epox (3/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	epox
	PN	DN											
C	10	50	165	125	57-60.3	65	18	4	4	M16	18	0.71	x
C	10	65	185	145	76.1	81	18	4	4	M16	18	0.83	x
C	10	80	200	160	88.9	94	20	5	8	M16	18	1.20	x
C	10	100	220	180	108-114.3	119	20	5	8	M16	18	1.27	x
C	10	125	250	210	133-139.7	145	22	5	8	M16	18	1.43	x
C	10	150	285	240	159-168.3	173	22	5	8	M20	22	1.66	x
C	10	200	340	295	219.1	225	24	5	8	M20	22	2.96	x
C	10	250	395	350	273	279	26	5	12	M20	22	3.22	x
C	10	300	445	400	323.9	329	26	5	12	M20	22	3.75	x
C	10	350	505	460	355.6	362	26	5	16	M20	22	5.13	x

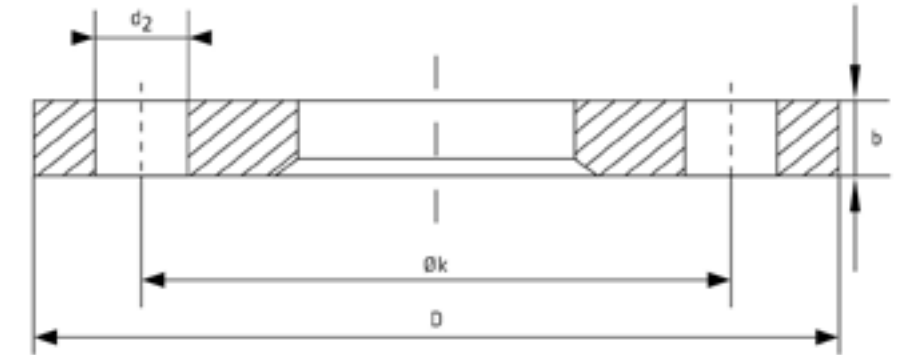


\* Finishes: page 311

# LAP-JOINT FLANGES

Aluminium DIN 2642

epox (4/4)



TYPE	Nominal pressure/ diameter		ØD mm	ØK mm	A mm	B2 mm	C1	E	AFM Size	ØL	INCH	Grade AISI kg/pce.	epox
	PN	DN											
C	10	400	565	515	406.4	413	32	6	16	M24	26	7.17	x
C	10	450	615	565	457.2	465	32	6	20	M24	26	9.50	x
C	10	500	670	620	508	517	34	6	20	M24	26	9.52	x
C	10	600	780	725	609.6	618	36	6	20	M27	30	13.00	x



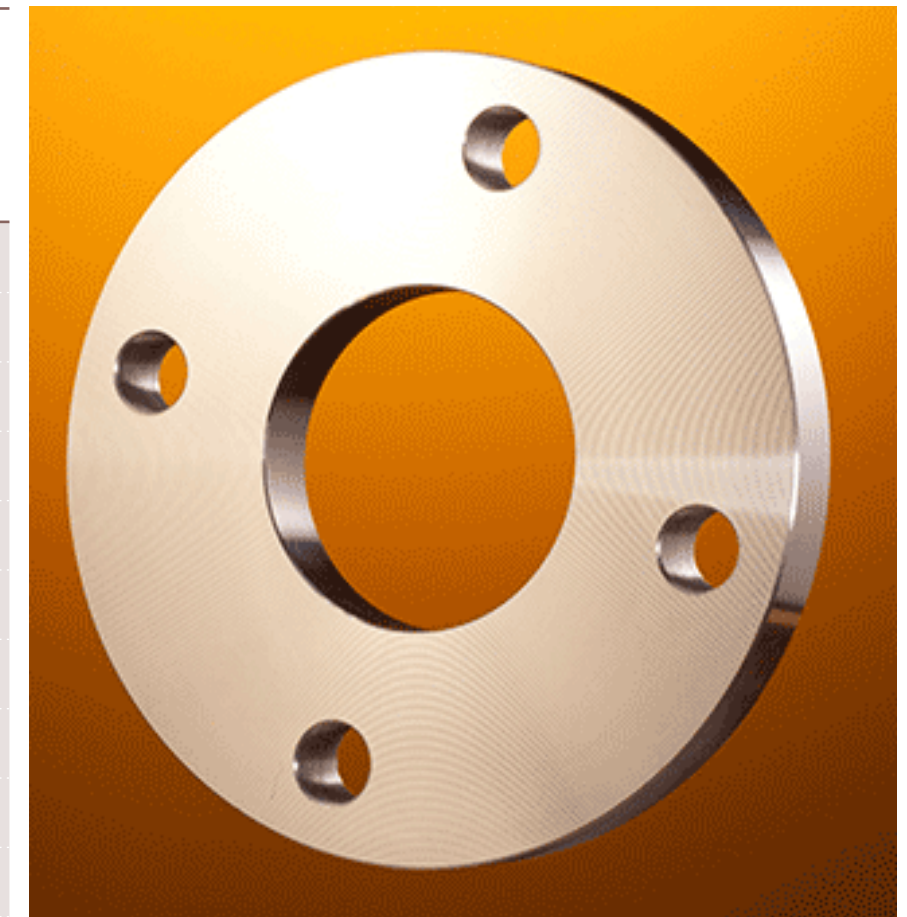
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (1/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
6	15	21.3	80	22.0	55	12	4	M10	11	0.5	x	x
6	20	26.9	90	27.5	65	14	4	M10	11	0.5	x	x
6	25	33.7	100	34.5	75	14	4	M10	11	0.5	x	x
6	32	42.4	120	43.5	90	16	4	M12	14	1.0	x	x
6	40	48.3	130	49.5	100	16	4	M12	14	1.5	x	x
6	50	60.3	140	61.5	110	16	4	M12	14	1.5	x	x
6	65	76.1	160	77.5	130	16	4	M12	14	2.0	x	x
6	80	88.9	190	90.5	150	18	4	M16	18	3.0	x	x
6	100	114.3	210	116.0	170	18	4	M16	18	3.5	x	x
6	125	139.7	240	141.5	200	20	8	M16	18	4.5	x	x



\* Finishes: page 311; no standard pipe connection



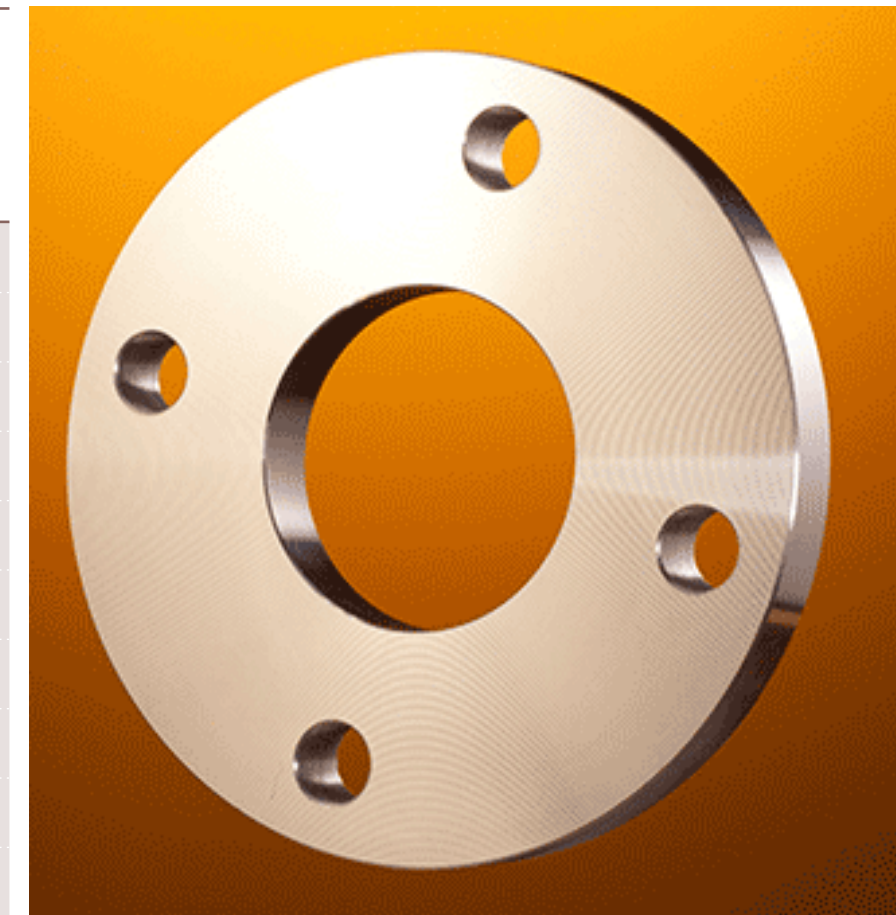
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (2/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
6	150	168.3	265	170.5	225	20	8	M16	18	5.0	x	x
6	200	219.1	320	221.5	280	22	8	M16	18	7.0	x	x
6	250	273.0	375	276.5	335	24	12	M16	18	9.0	x	x
6	300	323.9	440	327.5	395	24	12	M20	22	12.0	x	x
6	350	355.6	490	359.5	445	26	12	M20	22	17.0	x	x
6	400	406.4	540	411.0	495	28	16	M20	22	20.0	x	x
6	450	457.2	595	462.0	550	30	16	M20	22	24.5	x	x
6	500	508.0	645	513.5	600	30	20	M20	22	26.5	x	x
6	600	609.6	755	616.5	705	32	20	M24	26	35.0	x	x
10	200	204.0*	340	206.8	295	24	8	M20	22	10.5	x	x

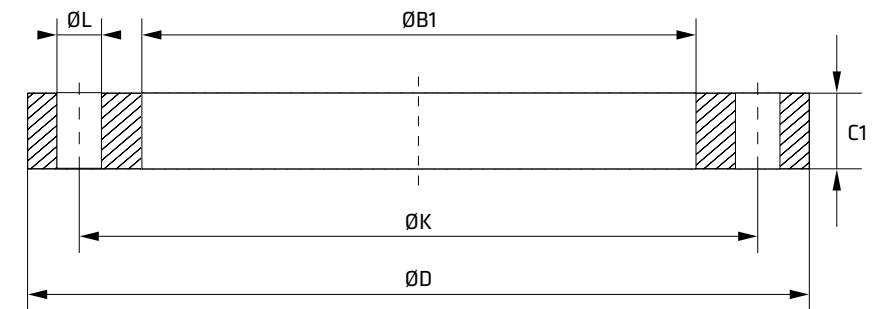


\* Finishes: page 311; no standard pipe connection

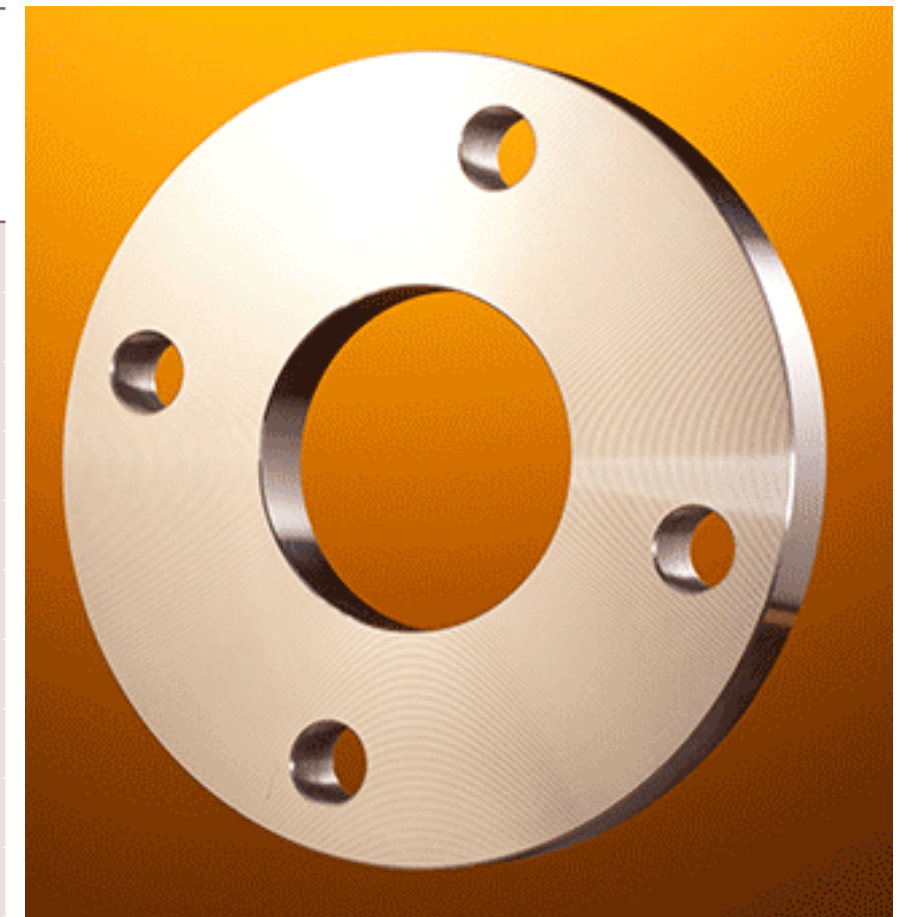
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (3/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
10	200	206.0*	340	208.7	295	24	8	M20	22	10.0	x	x
10	200	219.1	340	221.5	295	24	8	M20	22	9.5	x	x
10	250	254.0*	395	257.2	350	26	12	M20	22	13.5	x	x
10	250	256.0*	395	259.2	350	26	12	M20	22	13.0	x	x
10	250	273.0	395	276.5	350	26	12	M20	22	12.0	x	x
10	300	304.0*	445	307.7	400	26	12	M20	22	16.0	x	x
10	300	306.0*	445	309.7	400	26	12	M20	22	15.5	x	x
10	300	323.9	445	327.5	400	26	12	M20	22	13.5	x	x
10	350	355.6	505	359.5	460	30	16	M20	22	20.4	x	x
10	400	406.4	565	411.0	515	32	16	M24	26	27.5	x	x



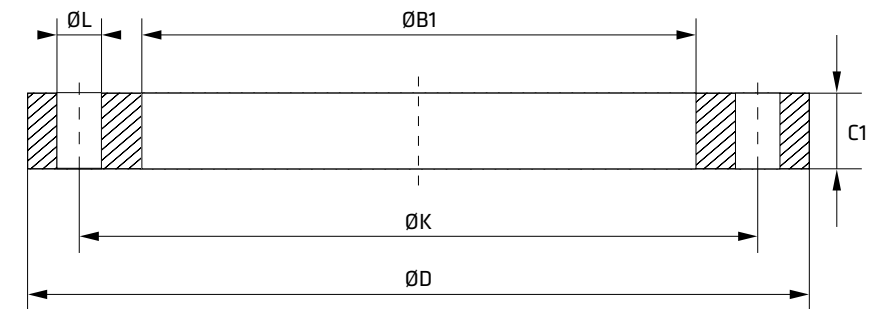
\* Finishes: page 311; no standard pipe connection



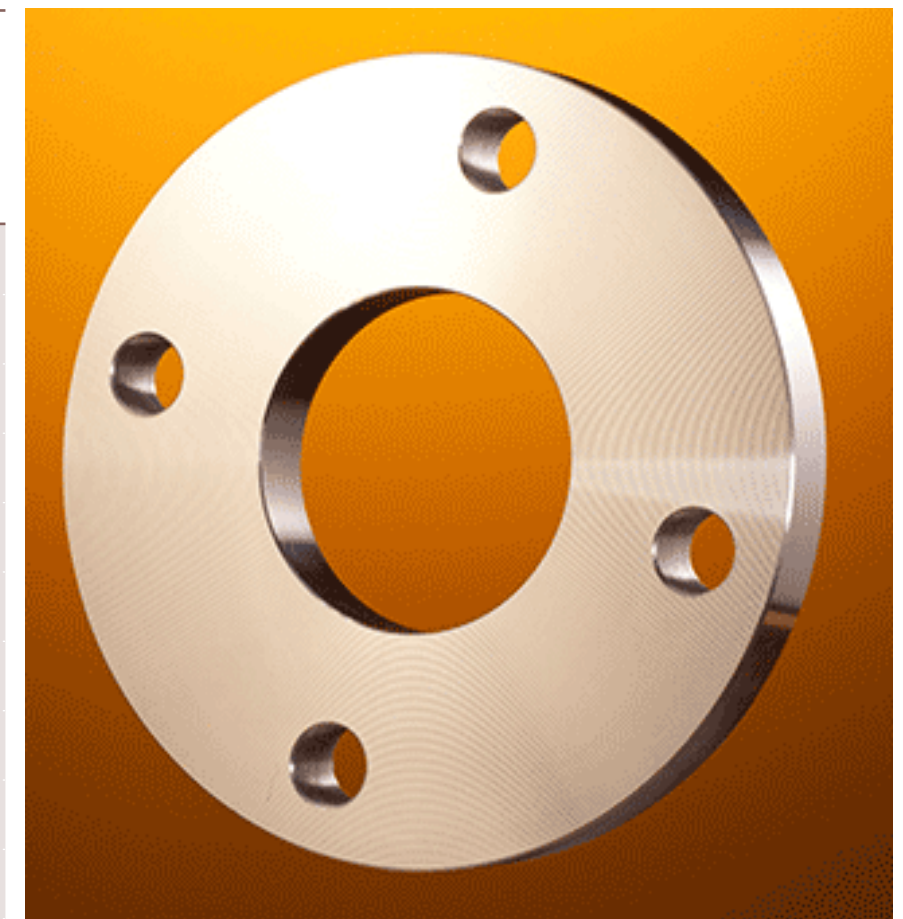
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (4/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
10	450	457.2	615	462.0	565	36	20	M24	26	33.5	x	x
10	500	508.0	670	513.5	620	38	20	M24	26	40.0	x	x
10	600	609.6	780	626.5	725	42	20	M27	30	54.5	x	x
10	700	711.2	895	721.0	840	50	24	M27	30	80.4	x	x
10	800	812.8	1015	824.0	950	56	24	M30	33	113.2	x	x
16	50	50.8*	165	51.9	125	19	4	M16	18	2.7	x	x
16	50	54.0*	165	55.1	125	19	4	M16	18	2.6	x	x
16	50	57.0*	165	58.1	125	19	4	M16	18	2.6	x	x
16	50	60.3	165	61.5	125	20	4	M16	18	2.7	x	x
16	65	63.5*	185	64.6	145	20	4	M16	18	3.5	x	x

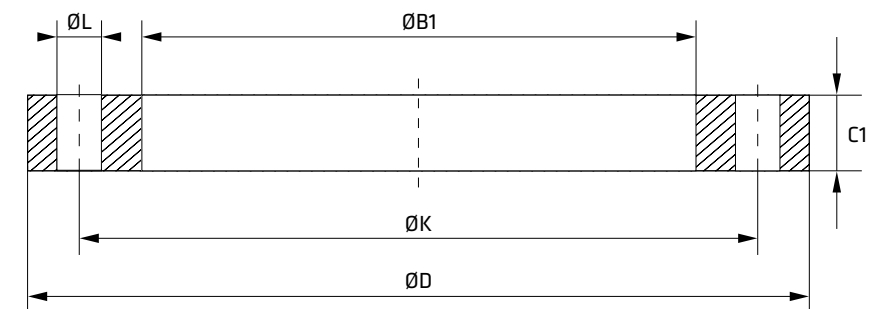


\* Finishes: page 311; no standard pipe connection

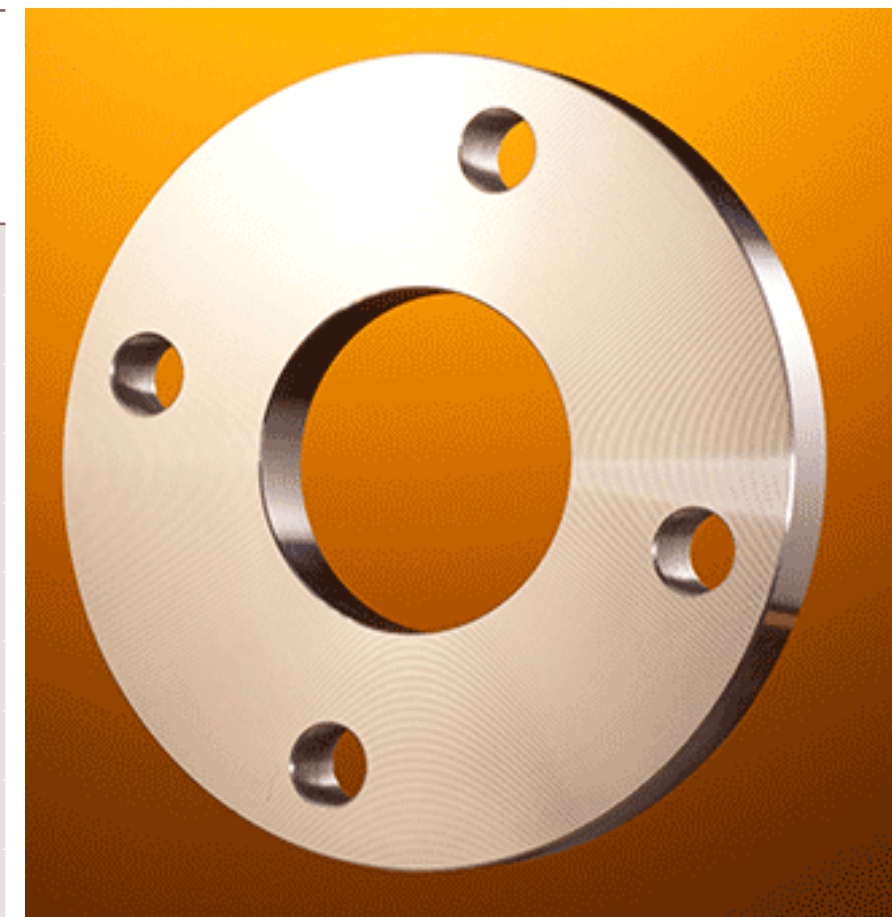
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (5/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	65	70.0*	185	71.1	145	20	4	M16	18	3.2	x	x
16	65	76.1	185	77.5	145	20	4	M16	18	3.0	x	x
16	65	76.1	185	77.5	145	20	8	M16	18	3.2		
16	80	84.0*	200	85.5	160	20	8	M16	18	4.0	x	x
16	80	88.9	200	90.5	160	20	8	M16	18	3.5	x	x
16	100	101.6*	220	103.2	180	22	8	M16	18	5.0	x	x
16	100	104.0*	220	105.6	180	22	8	M16	18	4.8	x	x
16	100	106.0*	220	107.6	180	22	8	M16	18	4.7	x	x
16	100	108.0*	220	109.6	180	22	8	M16	18	4.6	x	x
16	100	114.3	220	116.0	180	22	8	M16	18	4.5	x	x

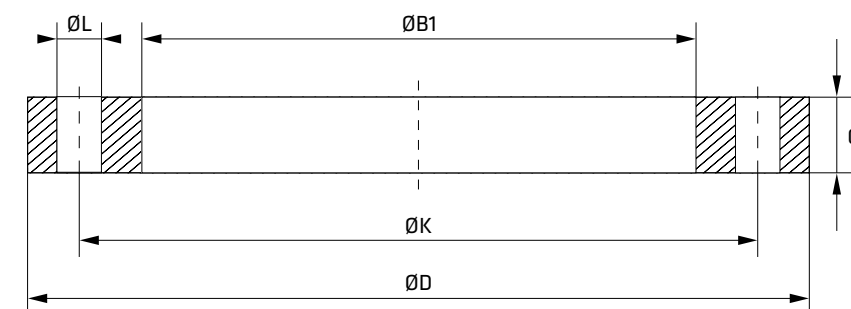


\* Finishes: page 311; no standard pipe connection

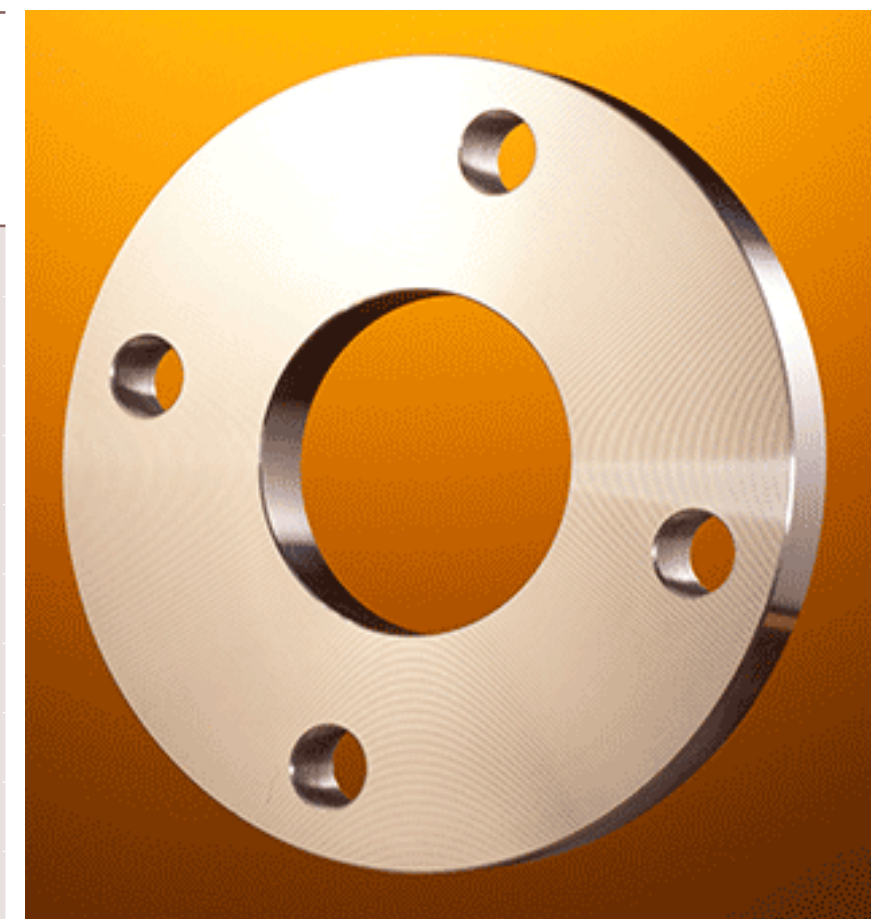
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (6/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	125	129.0*	250	130.8	210	22	8	M16	18	6.2	x	x
16	125	133.0*	250	134.8	210	22	8	M16	18	6.0	x	x
16	125	139.7	250	141.5	240	24	8	M16	18	5.5	x	x
16	150	154.0*	285	156.1	240	24	8	M20	22	7.8	x	x
16	150	156.0*	285	158.1	240	24	8	M20	22	7.7	x	x
16	150	159.0*	285	161.1	240	24	8	M20	22	7.5	x	x
16	150	168.3	285	170.5	240	24	8	M20	22	7.0	x	x
16	200	219.1	340	221.5	295	26	12	M20	22	9.5	x	x
16	250	273.0	405	276.5	355	29	12	M24	26	14.20	x	x
16	300	323.9	460	327.5	410	32	12	M24	26	19.00	x	x

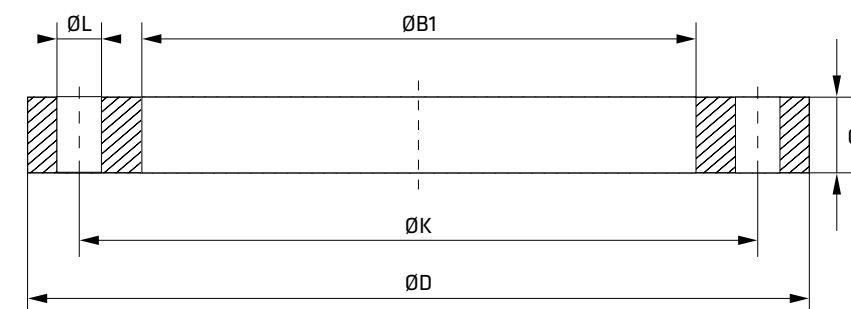


\* Finishes: page 311; no standard pipe connection

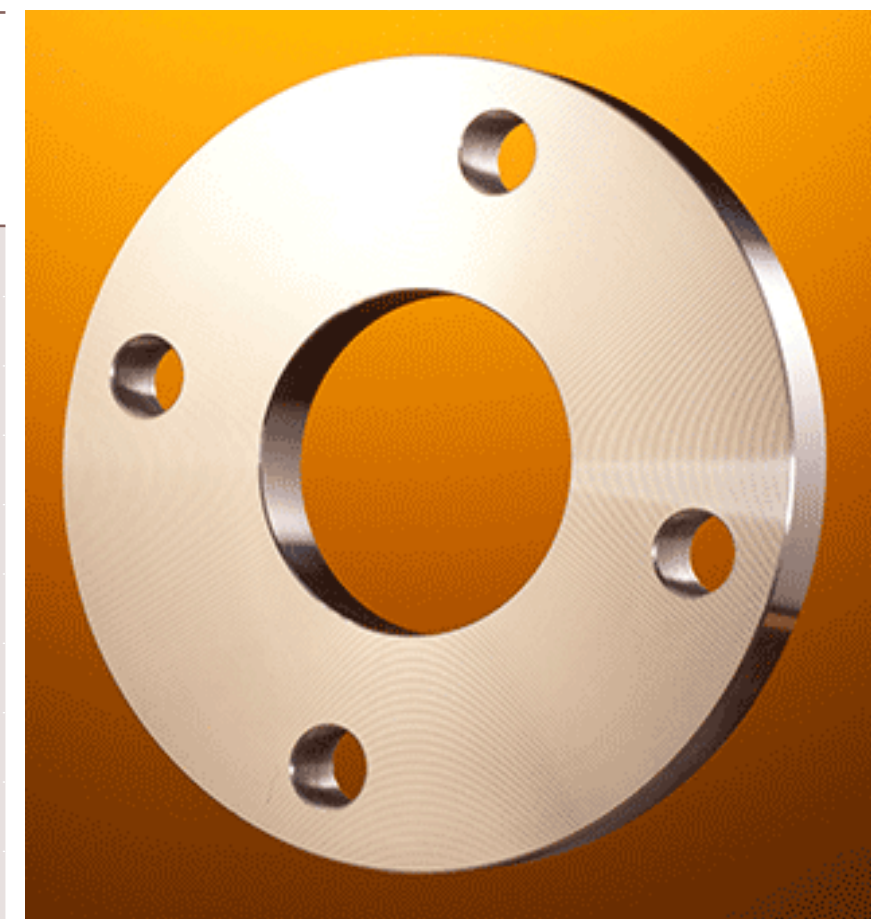
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (7/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	350	355.6	520	359.0	470	35	16	M24	26	28.0	x	x
16	400	406.4	580	411.0	525	38	16	M27	30	36.0	x	x
40	10	17.2	90	18.0	60	14	4	M12	14	0.6	x	x
40	15	20.0*	95	21.0	65	14	4	M12	14	0.5	x	x
40	15	21.3	95	22.0	65	14	4	M12	14	0.5	x	x
40	20	25.0*	105	26.0	75	16	4	M12	14	0.5	x	x
40	20	26.9	105	27.0	75	16	4	M12	14	1.0	x	x
40	25	30.0*	115	31.0	85	16	4	M12	14	1.0	x	x
40	25	33.7	115	34.5	85	16	4	M12	14	1.0	x	x
40	32	38.0*	140	39.0	100	18	4	M16	18	2.0	x	x



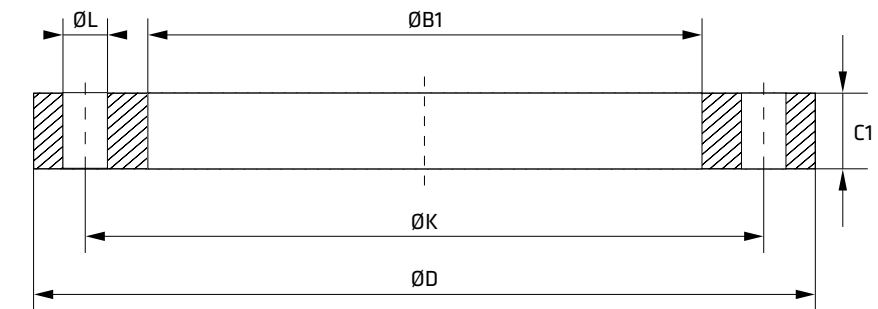
\* Finishes: page 311; no standard pipe connection



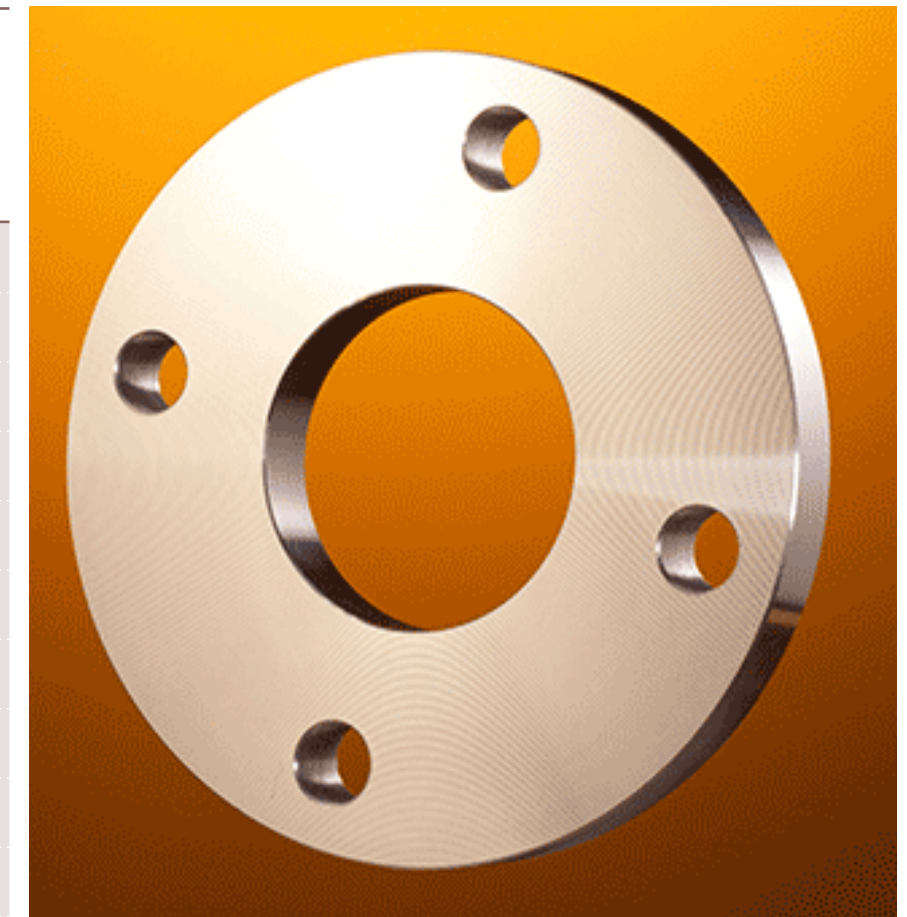
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4301-1.4401 (8/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
40	32	42.4	140	43.5	100	18	4	M16	18	2.0	x	x
40	40	44.5*	150	45.5	110	18	4	M16	18	2.0	x	x
40	40	48.3	150	49.5	110	18	4	M16	18	2.0	x	x

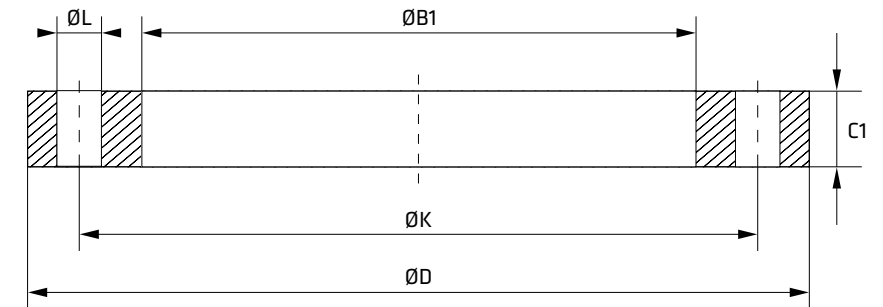


\* Finishes: page 311; no standard pipe connection

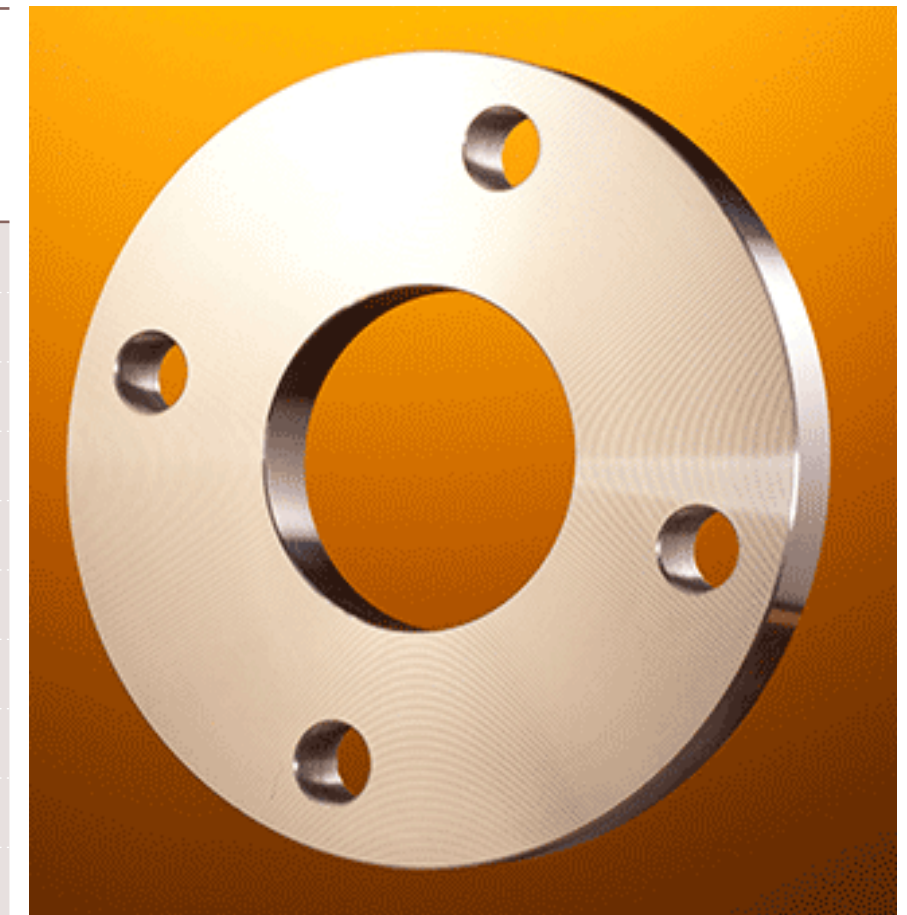
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (1/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
6	15	21.3	80	22.0	55	12	4	M10	11	0.5		
6	20	26.9	90	27.5	65	14	4	M10	11	0.5		
6	25	33.7	100	34.5	75	14	4	M10	11	0.5		
6	32	42.4	120	43.5	90	16	4	M12	14	1.0		
6	40	48.3	130	49.5	100	16	4	M12	14	1.5		
6	50	60.3	140	61.5	110	16	4	M12	14	1.5		
6	65	76.1	160	77.5	130	16	4	M12	14	2.0		
6	80	88.9	190	90.5	150	18	4	M16	18	3.0		
6	100	114.3	210	116.0	170	18	4	M16	18	3.5		
6	125	139.7	240	141.5	200	20	8	M16	18	4.5		

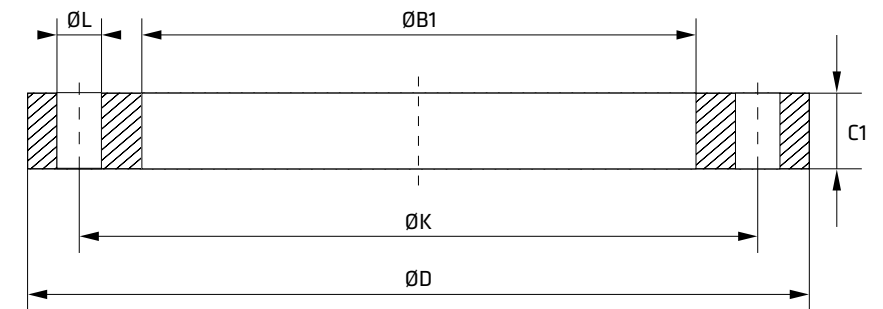


\* Finishes: page 311; no standard pipe connection

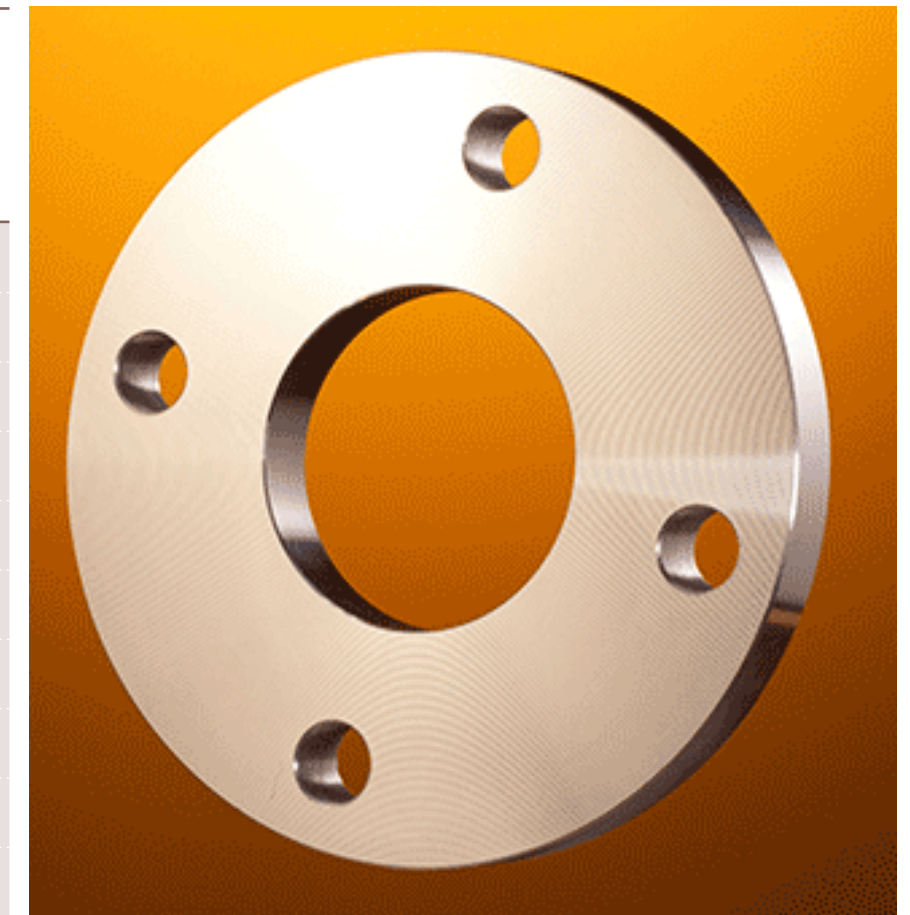
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (2/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
6	150	168.3	265	170.5	225	20	8	M16	18	5.0		
6	200	219.1	320	221.5	280	22	8	M16	18	7.0		
6	250	273.0	375	276.5	335	24	12	M16	18	9.0		
6	300	323.9	440	327.5	395	24	12	M20	22	12.0		
6	350	355.6	490	359.5	445	26	12	M20	22	17.0		
6	400	406.4	540	411.0	495	28	16	M20	22	20.0		
6	450	457.2	595	462.0	550	30	16	M20	22	24.5		
6	500	508.0	645	513.5	600	30	20	M20	22	26.5		
6	600	609.6	755	616.5	705	32	20	M24	26	35.0		
10	200	204.0*	340	206.8	295	24	8	M20	22	10.5		

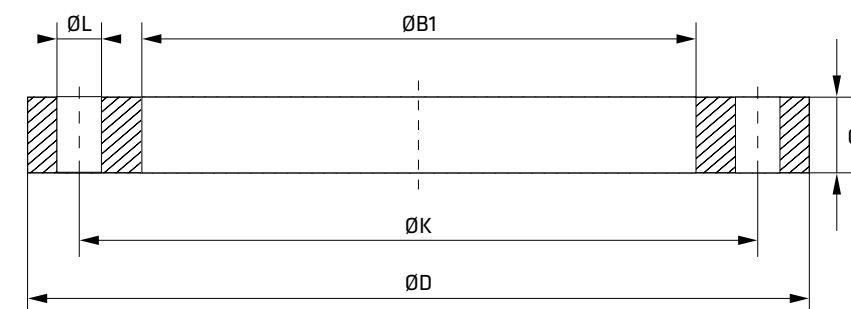


\* Finishes: page 311; no standard pipe connection

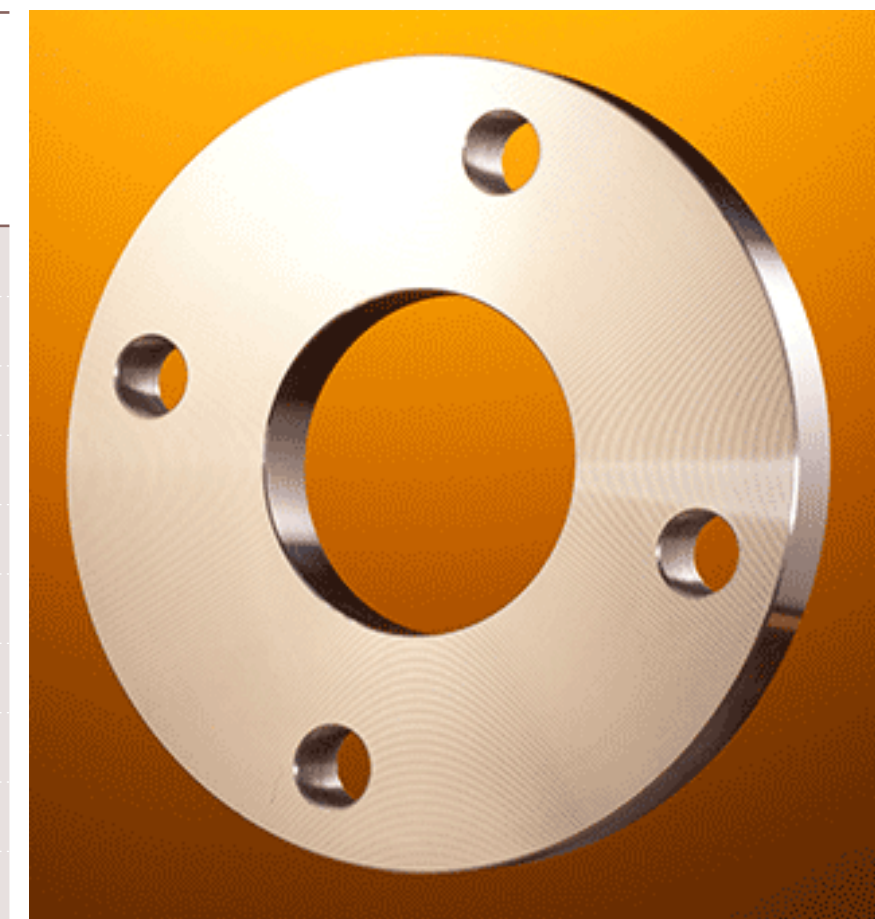
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (3/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
10	200	206.0*	340	208.7	295	24	8	M20	22	10.0		x
10	200	219.1	340	221.5	295	24	8	M20	22	9.5		x
10	250	254.0*	395	257.2	350	26	12	M20	22	13.5		
10	250	256.0*	395	259.2	350	26	12	M20	22	13.0		x
10	250	273.0	395	276.5	350	26	12	M20	22	12.0	x	x
10	300	304.0*	445	307.7	400	26	12	M20	22	16.0		x
10	300	306.0*	445	309.7	400	26	12	M20	22	15.5		
10	300	323.9	445	327.5	400	26	12	M20	22	13.5	x	x
10	350	355.6	505	359.5	460	30	16	M20	22	20.4	x	x
10	400	406.4	565	411.0	515	32	16	M24	26	27.5	x	x



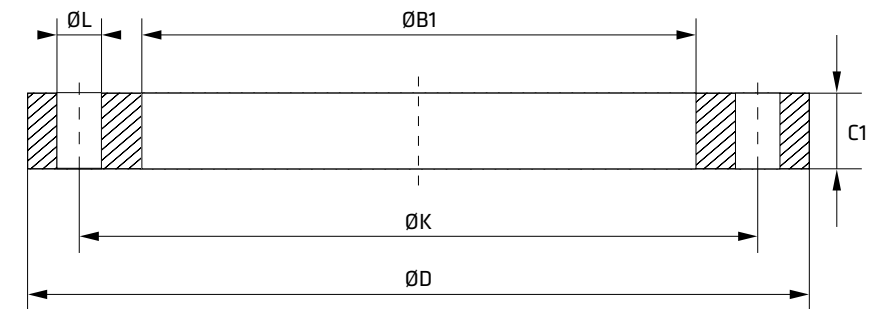
\* Finishes: page 311; no standard pipe connection



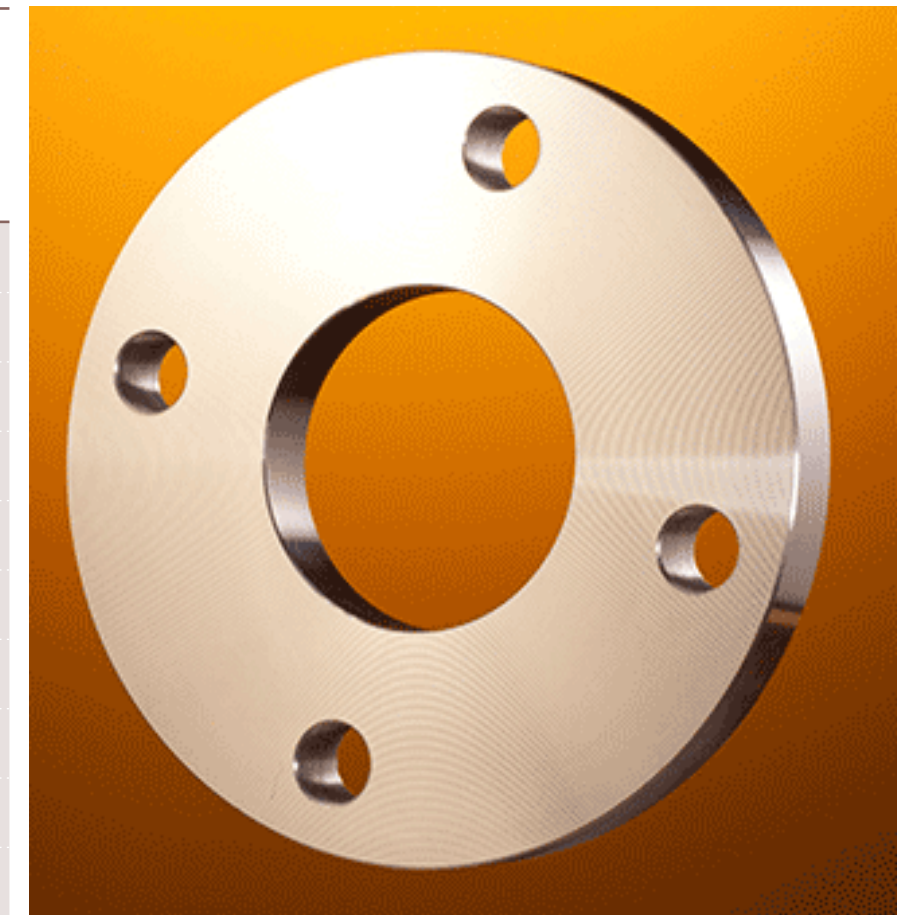
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (4/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
10	450	457.2	615	462.0	565	36	20	M24	26	33.5		
10	500	508.0	670	513.5	620	38	20	M24	26	40.0	x	x
10	600	609.6	780	626.5	725	42	20	M27	30	54.5		
10	700	711.2	895	721.0	840	50	24	M27	30	80.4		
10	800	812.8	1015	824.0	950	56	24	M30	33	113.2		
16	50	50.8*	165	51.9	125	19	4	M16	18	2.7		
16	50	54.0*	165	55.1	125	19	4	M16	18	2.6		x
16	50	57.0*	165	58.1	125	19	4	M16	18	2.6		
16	50	60.3	165	61.5	125	20	4	M16	18	2.7		x
16	65	63.5*	185	64.6	145	20	4	M16	18	3.5		

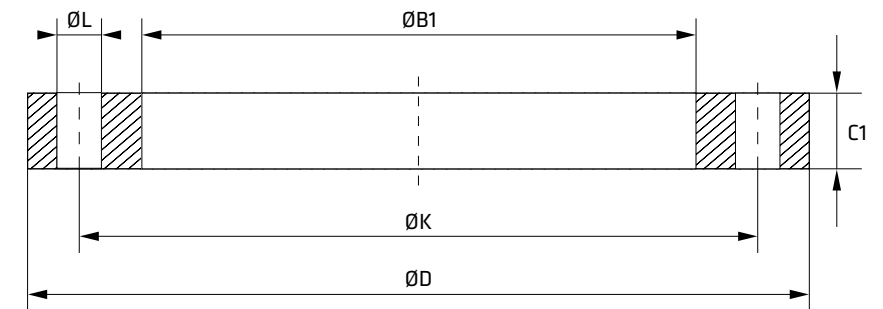


\* Finishes: page 311; no standard pipe connection

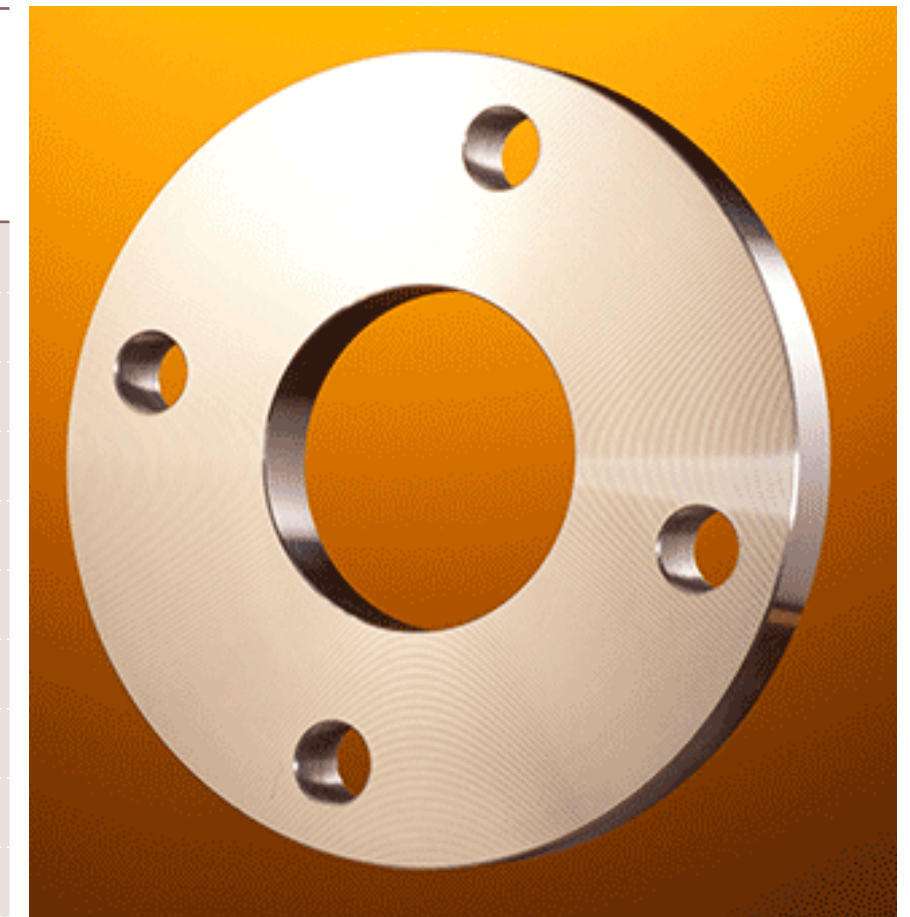
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (5/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	65	70.0*	185	71.1	145	20	4	M16	18	3.2		x
16	65	76.1	185	77.5	145	20	4	M16	18	3.0		x
16	65	76.1	185	77.5	145	20	8	M16	18	3.2		x
16	80	84.0*	200	85.5	160	20	8	M16	18	4.0		x
16	80	88.9	200	90.5	160	20	8	M16	18	3.5	x	x
16	100	101.6*	220	103.2	180	22	8	M16	18	5.0		
16	100	104.0*	220	105.6	180	22	8	M16	18	4.8		x
16	100	106.0*	220	107.6	180	22	8	M16	18	4.7		x
16	100	108.0*	220	109.6	180	22	8	M16	18	4.6		
16	100	114.3	220	116.0	180	22	8	M16	18	4.5		x

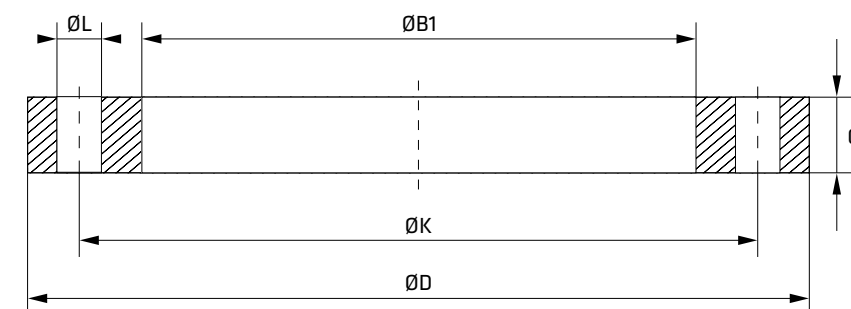


\* Finishes: page 311; no standard pipe connection

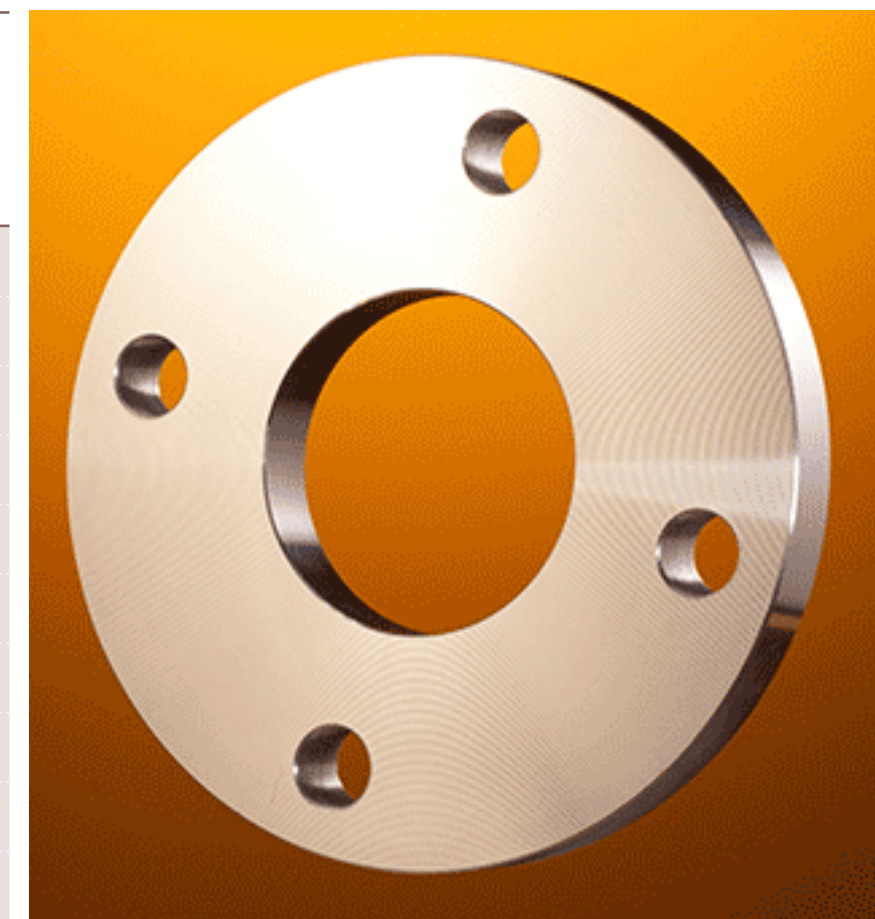
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (6/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	125	129.0*	250	130.8	210	22	8	M16	18	6.2		
16	125	133.0*	250	134.8	210	22	8	M16	18	6.0		
16	125	139.7	250	141.5	240	24	8	M16	18	5.5	x	x
16	150	154.0*	285	156.1	240	24	8	M20	22	7.8		
16	150	156.0*	285	158.1	240	24	8	M20	22	7.7		x
16	150	159.0*	285	161.1	240	24	8	M20	22	7.5		
16	150	168.3	285	170.5	240	24	8	M20	22	7.0		x
16	200	219.1	340	221.5	295	26	12	M20	22	9.5		
16	250	273.0	405	276.5	355	29	12	M24	26	14.20		x
16	300	323.9	460	327.5	410	32	12	M24	26	19.00		x

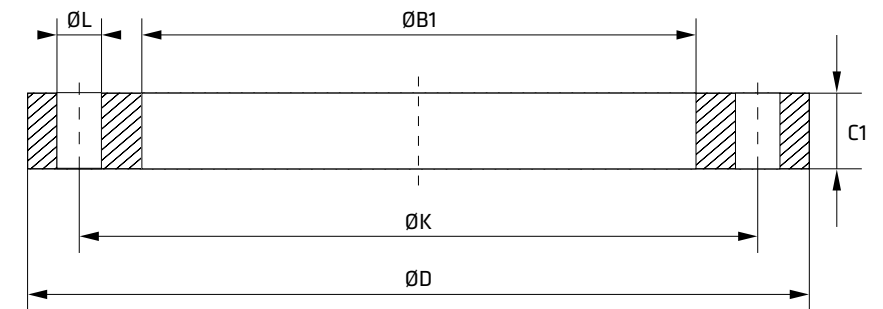


\* Finishes: page 311; no standard pipe connection

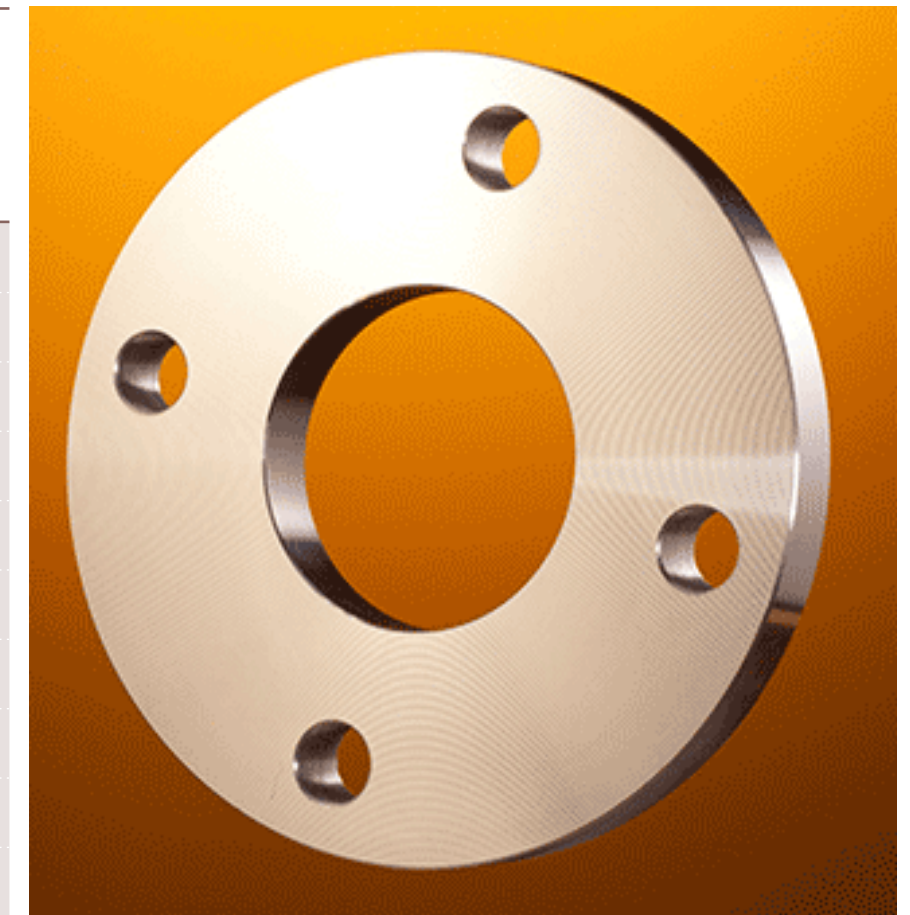
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (7/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	350	355.6	520	359.0	470	35	16	M24	26	28.0		
16	400	406.4	580	411.0	525	38	16	M27	30	36.0		
40	10	17.2	90	18.0	60	14	4	M12	14	0.6		
40	15	20.0*	95	21.0	65	14	4	M12	14	0.5		
40	15	21.3	95	22.0	65	14	4	M12	14	0.5		x
40	20	25.0*	105	26.0	75	16	4	M12	14	0.5		
40	20	26.9	105	27.0	75	16	4	M12	14	1.0		x
40	25	30.0*	115	31.0	85	16	4	M12	14	1.0		
40	25	33.7	115	34.5	85	16	4	M12	14	1.0		x
40	32	38.0*	140	39.0	100	18	4	M16	18	2.0		



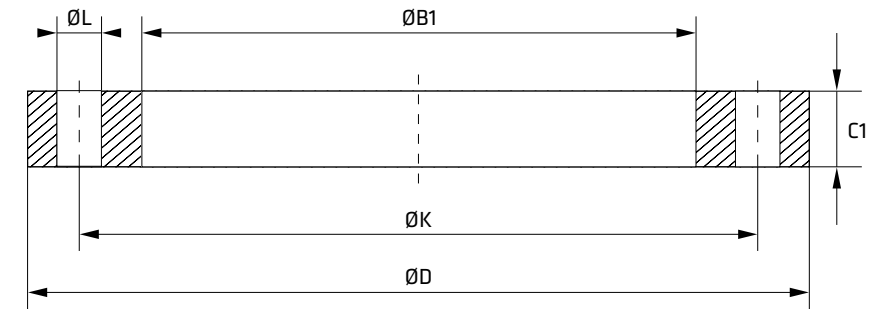
\* Finishes: page 311; no standard pipe connection



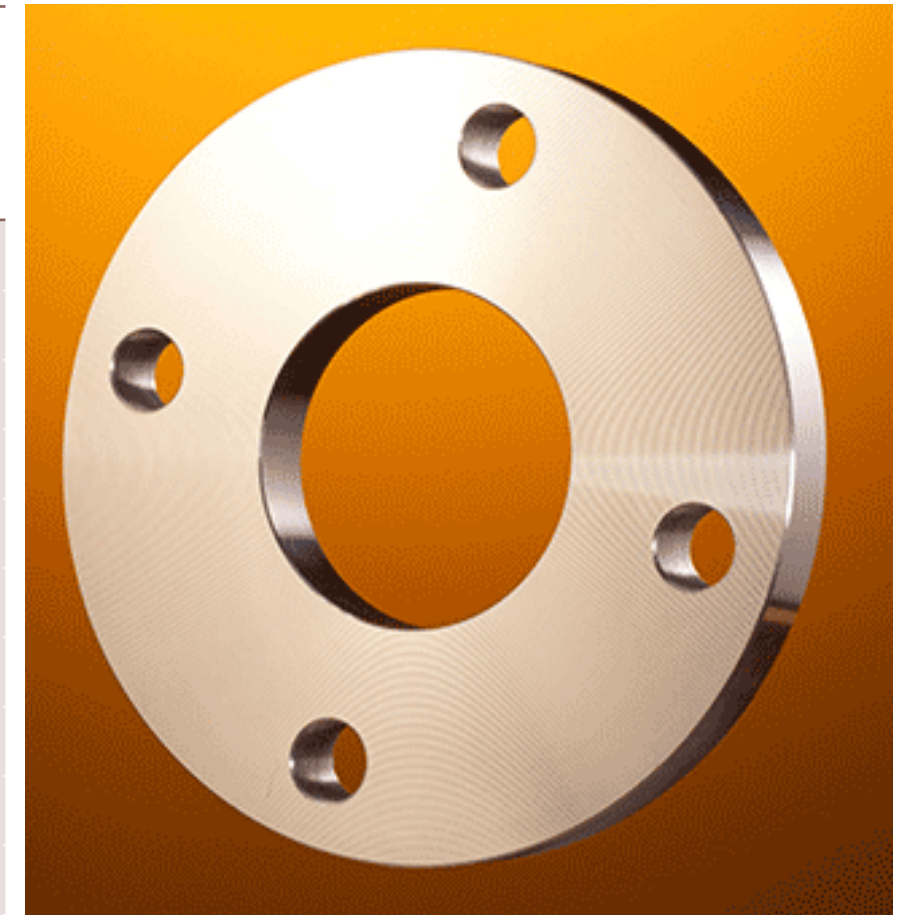
# SLIP-ON FLANGES

EN 1092-1 type 01 A

1.4541-1.4571 (8/8)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					kg/pce.		
40	32	42.4	140	43.5	100	18	4	M16	18	2.0		x
40	40	44.5*	150	45.5	110	18	4	M16	18	2.0		
40	40	48.3	150	49.5	110	18	4	M16	18	2.0		x

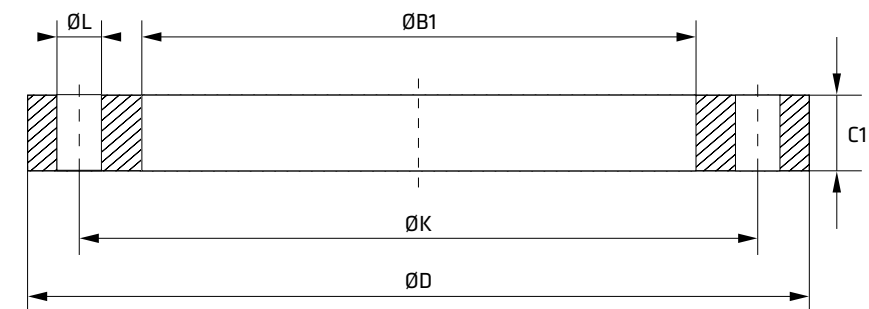


\* Finishes: page 311; no standard pipe connection

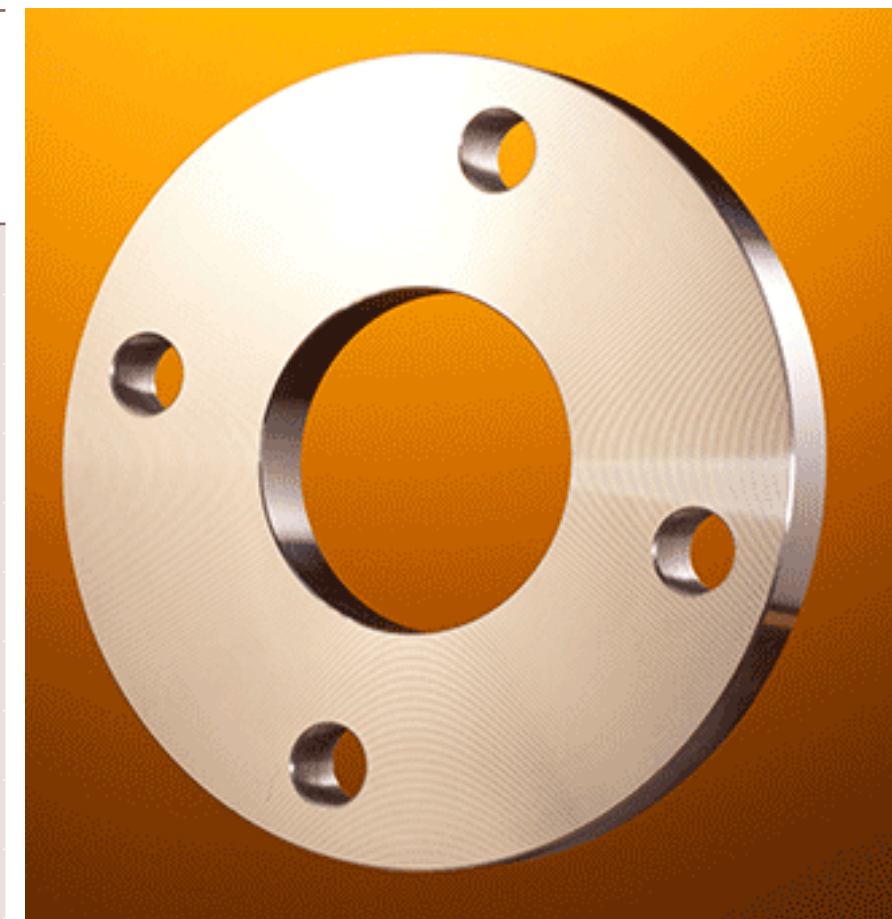
# SLIP-ON FLANGES

EN 1092-1 type 01 B

1.4301-1.4401 (1/2)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
16	50	60.3	165	61.5	125	20	4	M16	18	2.7	x	x
16	65	76.1	185	77.5	145	20	8	M16	18	3.2	x	x
16	80	88.9	200	90.5	160	20	8	M16	18	3.5	x	x
16	100	114.3	220	116.0	180	22	8	M16	18	4.5	x	x
16	125	139.7	250	141.5	240	24	8	M16	18	5.5	x	x
16	150	168.3	285	170.5	240	24	8	M20	22	7.0	x	x
16	300	323.9	460	327.5	410	32	12	M24	26	19.00	x	x
16	350	355.6	520	359.0	470	35	16	M24	26	28.0	x	x
16	400	406.4	580	411.0	525	38	16	M27	30	36.0	x	x
40	15	21.3	95	22.0	65	14	4	M12	14	0.5	x	x



\* Finishes: page 311; no standard pipe connection

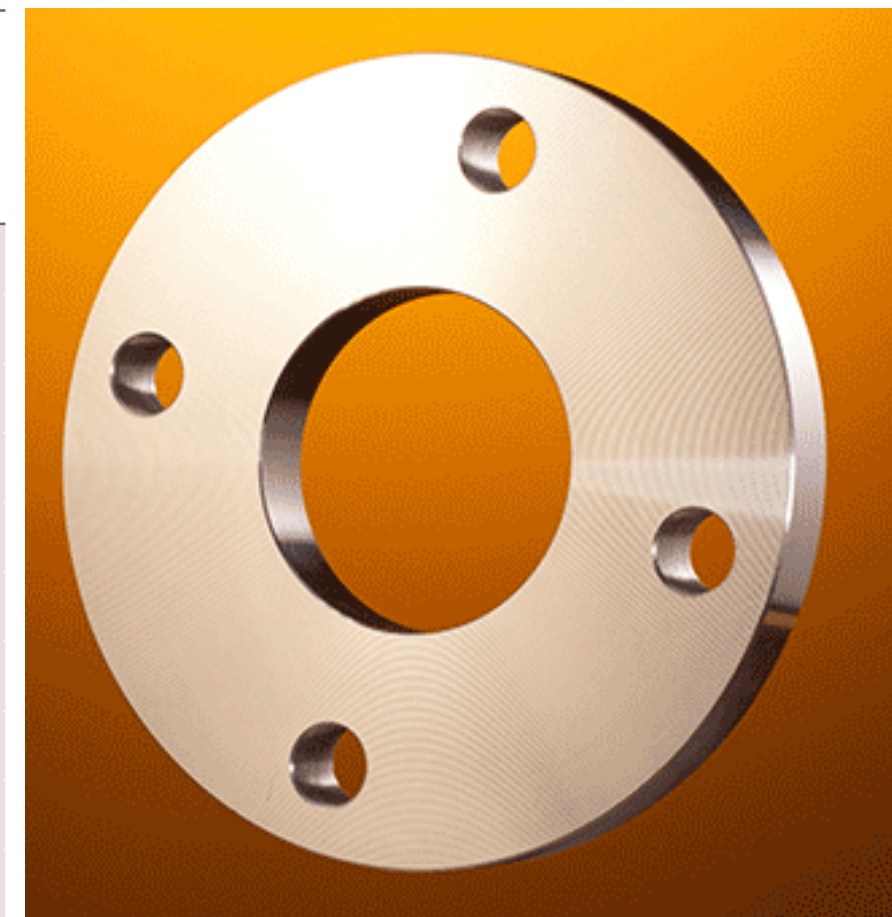
# SLIP-ON FLANGES

EN 1092-1 type 01 B

1.4301-1.4401 (2/2)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
PN	DN	mm	mm	mm	mm					kg/pce.		
40	20	26.9	105	27.0	75	16	4	M12	14	1.0	x	x
40	25	33.7	115	34.5	85	16	4	M12	14	1.0	x	x
40	32	42.4	140	43.5	100	18	4	M16	18	2.0	x	x
40	40	48.3	150	49.5	110	18	4	M16	18	2.0	x	x

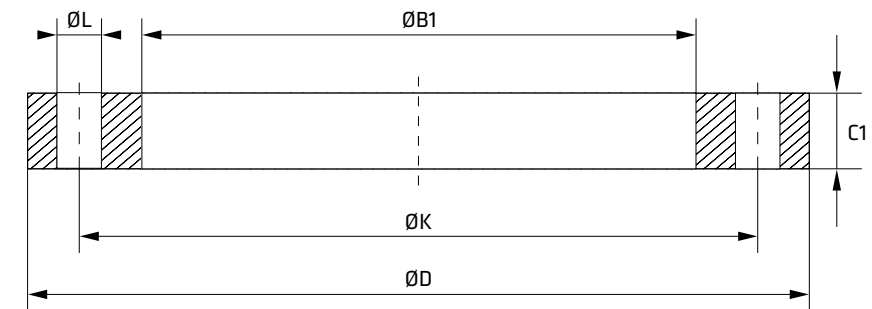


\* Finishes: page 311; no standard pipe connection

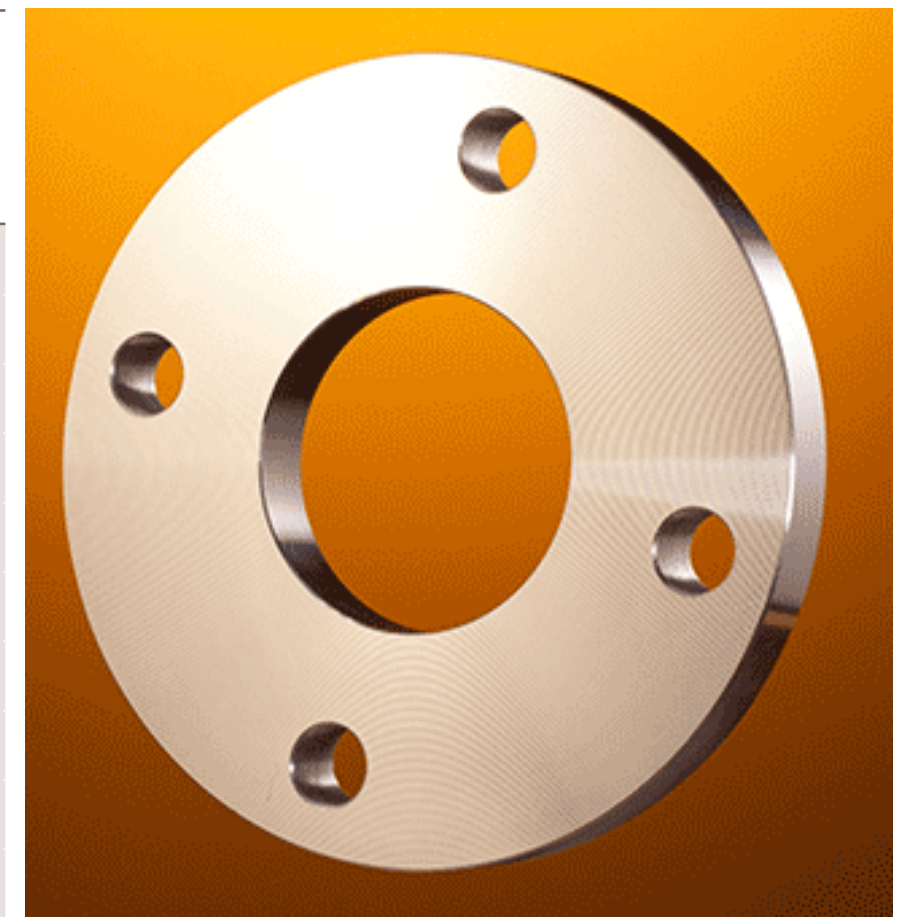
# SLIP-ON FLANGES

EN 1092-1 type 01 B

1.4541 (1/2)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm					kg/pce.	
16	50	60.3	165	61.5	125	20	4	M16	18	2.7	x
16	65	76.1	185	77.5	145	20	8	M16	18	3.2	x
16	80	88.9	200	90.5	160	20	8	M16	18	3.5	x
16	100	114.3	220	116.0	180	22	8	M16	18	4.5	x
16	125	139.7	250	141.5	240	24	8	M16	18	5.5	x
16	150	168.3	285	170.5	240	24	8	M20	22	7.0	x
16	300	323.9	460	327.5	410	32	12	M24	26	19.00	x
16	350	355.6	520	359.0	470	35	16	M24	26	28.0	x
16	400	406.4	580	411.0	525	38	16	M27	30	36.0	x
40	15	21.3	95	22.0	65	14	4	M12	14	0.5	x



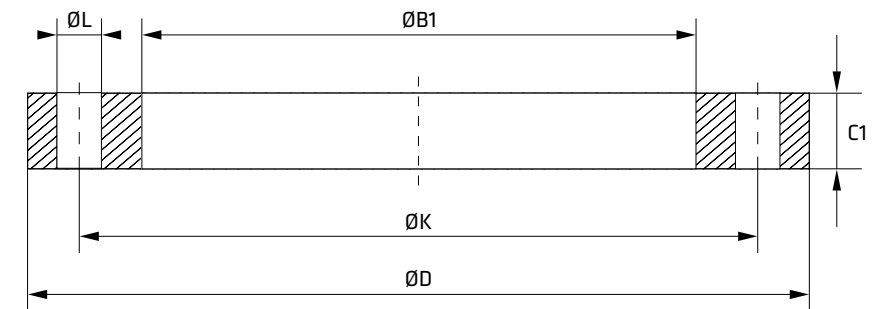
\* Finishes: page 311; no standard pipe connection



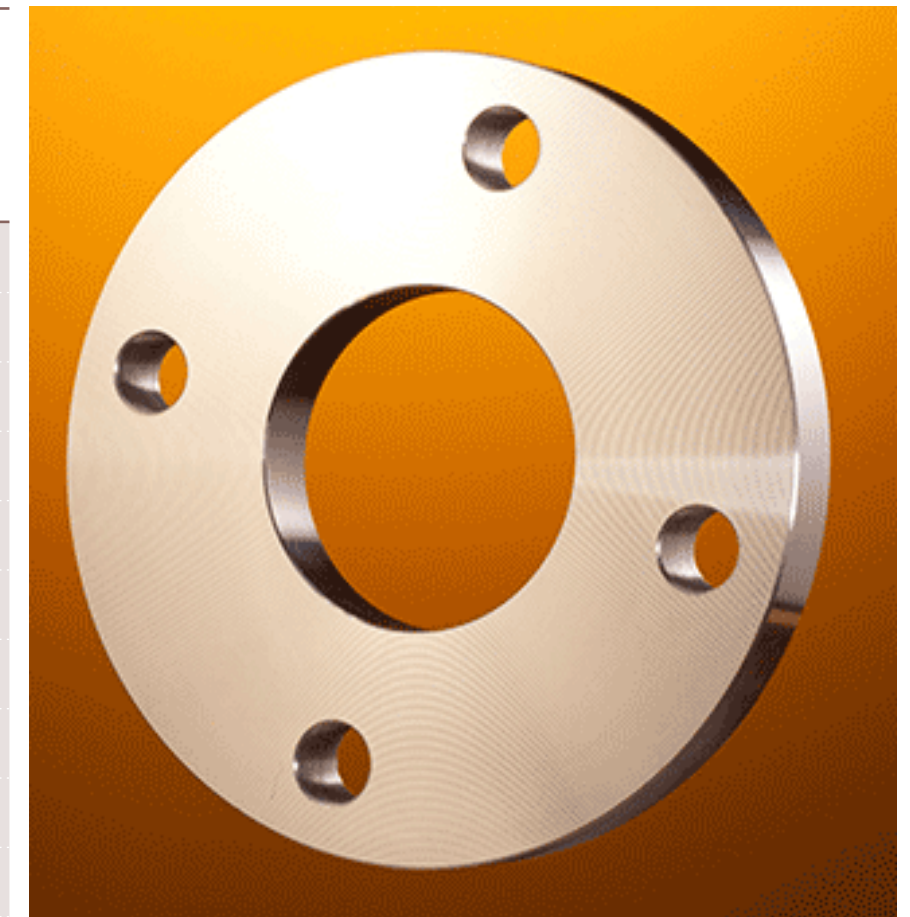
# SLIP-ON FLANGES

EN 1092-1 type 01 B

1.4541 (2/2)



Nominal pressure/ diameter		A	D	B1	K	C1	Number of screw	AFM Size	ØL	Grade AISI	1.4541 321 *)
PN	DN	mm	mm	mm	mm					kg/pce.	
40	20	26.9	105	27.0	75	16	4	M12	14	1.0	x
40	25	33.7	115	34.5	85	16	4	M12	14	1.0	x
40	32	42.4	140	43.5	100	18	4	M16	18	2.0	x
40	40	48.3	150	49.5	110	18	4	M16	18	2.0	x

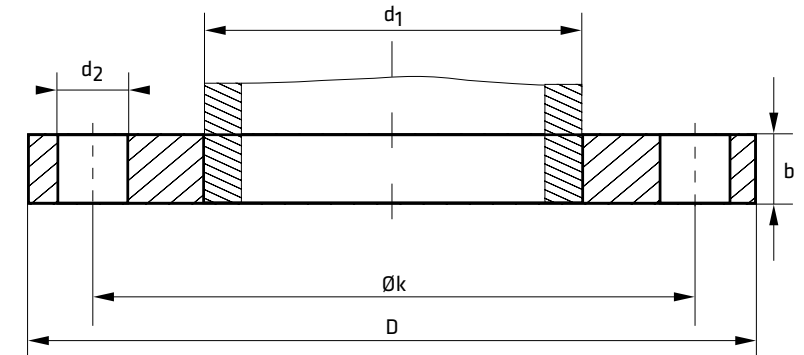


\* Finishes: page 311; no standard pipe connection

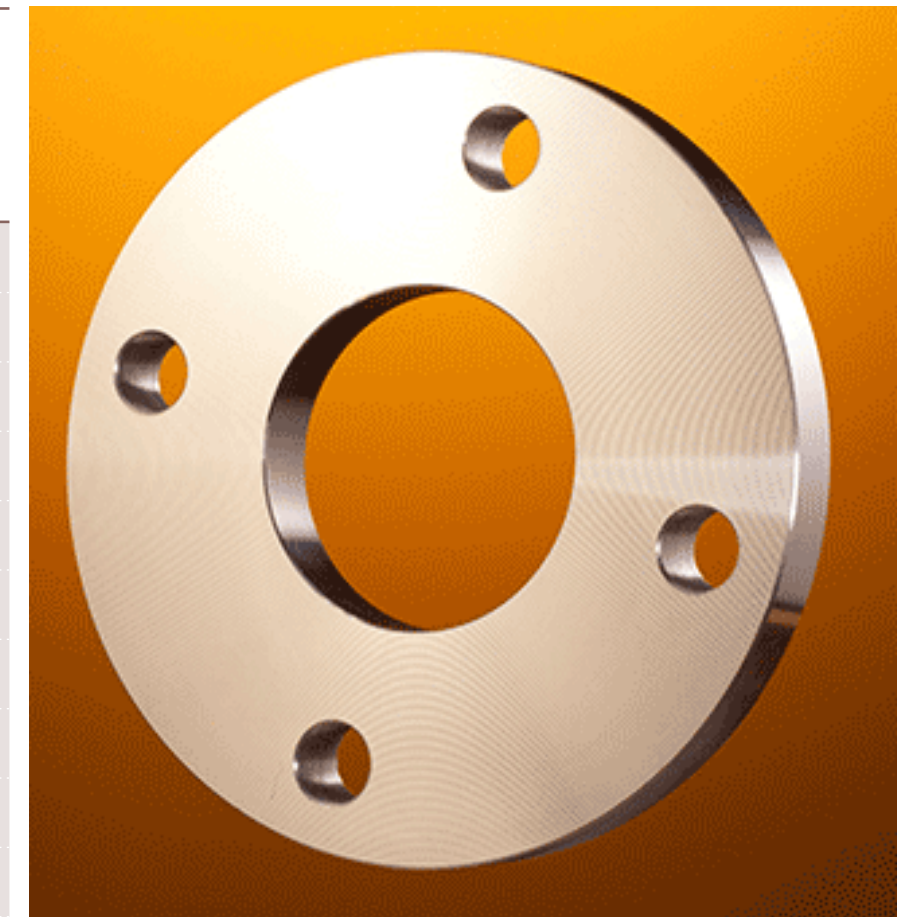
# SLIP-ON FLANGES

DIN 2576

1.4541 - 1.4571 (1/1)



Nominal pressure/ diameter		$d_1$	$b$	$D$	$\varnothing K$	$d_2$	drill holes	Grade AISI kg/pce.	1.4541 321 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm					
10	15	21.3	14	95	65	14	4	0.67	x	x
10	20	26.9	16	105	75	14	4	0.94	x	x
10	25	33.7	16	115	85	14	4	1.11	x	x
10	32	42.4	16	140	100	18	4	1.62	x	x
10	40	48.3	16	150	110	18	4	1.86	x	x
10	100	108.0	20	220	180	18	8	4.20	x	x
10	125	133.0	22	250	210	18	8	5.71	x	x
10	150	159.0	22	285	240	22	8	6.72	x	x
10	150	168.3	22	285	240	22	8	6.72	x	x
10	200	219.1	24	340	295	22	8	9.31	x	x

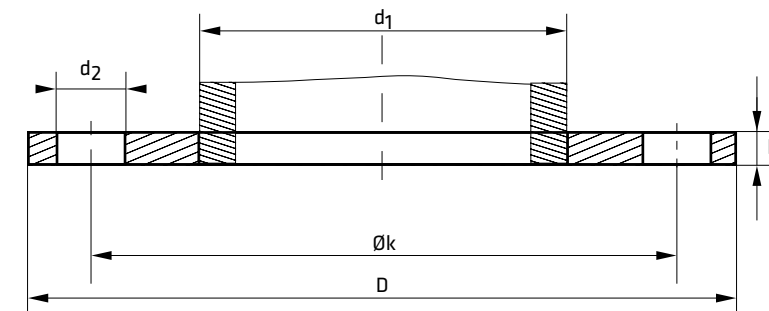


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

DIN 2576 with reduced thickness

1.4301 (1/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4301/1.4307 304/304L
PN	DN	mm	mm	mm	mm			kg/pce.	*)
10	50	60.3	10	165	125	18	4	1.37	x
10	65	76.1	10	185	145	18	4	1.67	x
10	80	88.9	10	200	160	18	8	1.89	x
10	80	88.9	12	200	160	18	8	2.27	
10	100	114.3	10	220	180	18	8	2.02	x
10	100	114.3	12	220	180	18	8	2.42	
10	125	139.7	10	250	210	18	8	2.48	
10	125	139.7	12	250	210	18	8	2.98	x
10	150	168.3	10	285	240	22	8	2.98	
10	150	168.3	12	285	240	22	8	3.58	x

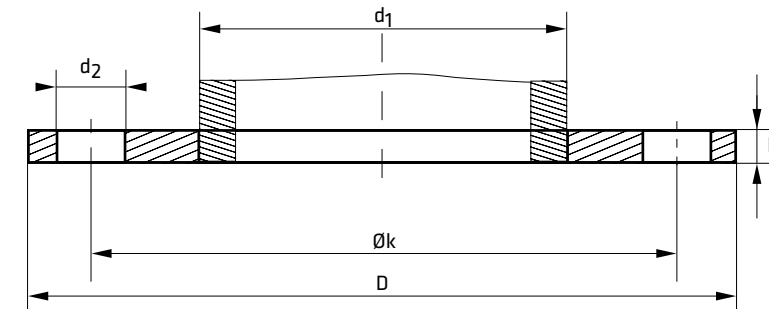


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

DIN 2576 with reduced thickness

1.4301 (2/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4301/1.4307 304/304L *)
PN	DN	mm	mm	mm	mm			kg/pce.	
10	200	219.1	12	340	295	22	8	4.66	x
10	200	219.1	15	340	295	22	8	5.82	
10	250	273.0	12	395	350	22	12	5.49	
10	250	273.0	15	395	350	22	12	6.86	x
10	300	323.9	12	445	400	22	12	6.36	
10	300	323.9	15	445	400	22	12	7.96	x
10	300	323.9	19.6	445	400	22	12	12.8	x
10	350	355.6	12	505	460	22	16	8.82	
10	350	355.6	15	505	460	22	16	11.04	x
10	350	355.6	21	505	460	22	16	18.00	x



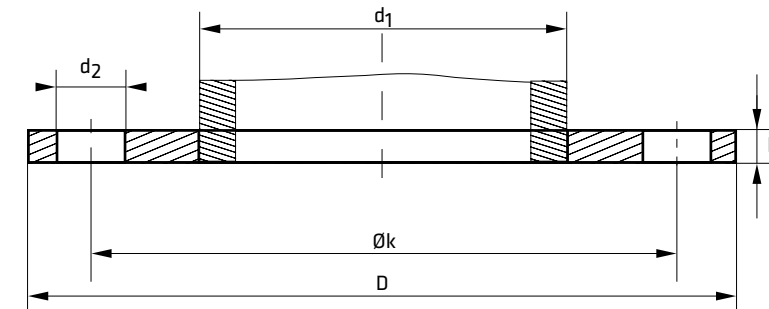
\* Finishes: page 311; no standard pipe connection



# SLIP-ON FLANGES

DIN 2576 with reduced thickness

1.4301 (3/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4301/1.4307 304/304L *)
PN	DN	mm	mm	mm	mm			kg/pce.	
10	400	406.4	12	565	515	26	16	10.46	
10	400	406.4	15	565	515	26	16	13.08	x
10	400	406.4	22.4	565	515	26	16	24.00	x
10	450	457	22.4	615	565	26	20	26.00	x
10	500	508.0	15	670	620	26	20	16.22	x
10	500	508.0	20	670	620	26	20	21.63	x
10	500	508	23.8	670	620	26	20	32.00	x
10	600	609.6	25.2	780	725	30	20	43.00	x
10	700	711	28	895	840	30	24	60.00	x
10	800	813	30.8	1015	950	33	24	84.00	x

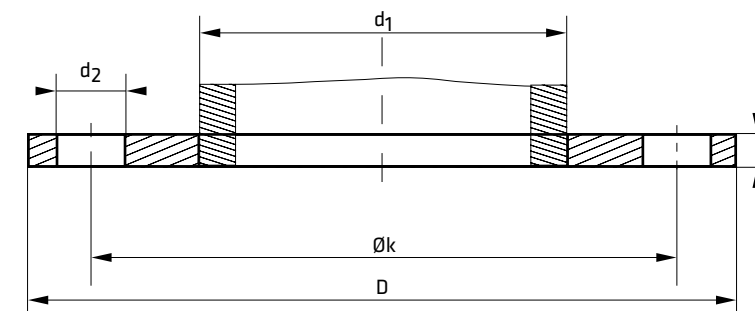


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

■ DIN 2576 with reduced thickness

1.4301 (4/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4301/1.4307 304/304L *)
PN	DN	mm	mm	mm	mm			kg/pce.	
10	1000	1016	35	1230	1160	36	28	127.00	x
16	65	76.1	10	185	145	18	8	1.37	
16	200	219.1	15	340	295	22	11	5.79	
16	250	273.0	15	395	355	26	12	6.81	
16	300	323.9	15	445	410	26	12	7.85	
16	350	355.6	15	505	470	26	16	10.20	
16	400	406.4	15	565	525	30	16	12.89	
16	500	508.0	15	670	650	33	20	15.87	
16	600	609.6	20	780	770	36	20	20.00	

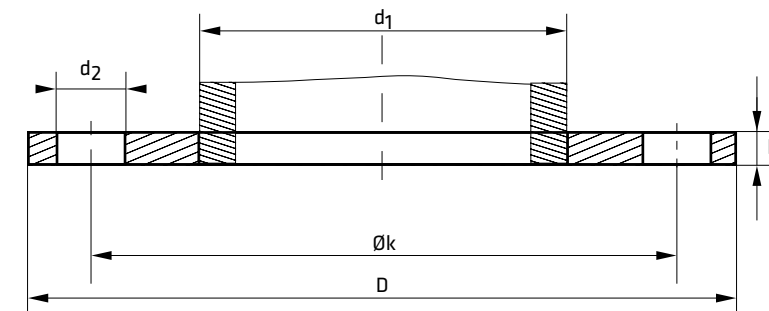


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

DIN 2576 with reduced thickness

1.4404-1.4571 (1/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4404 316 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm			kg/pce.		
10	50	60.3	10	165	125	18	4	1.37		x
10	65	76.1	10	185	145	18	4	1.67		x
10	80	88.9	10	200	160	18	8	1.89		x
10	80	88.9	12	200	160	18	8	2.27		x
10	100	114.3	10	220	180	18	8	2.02		x
10	100	114.3	12	220	180	18	8	2.42		x
10	125	139.7	10	250	210	18	8	2.48		x
10	125	139.7	12	250	210	18	8	2.98		x
10	150	168.3	10	285	240	22	8	2.98		x
10	150	168.3	12	285	240	22	8	3.58		x

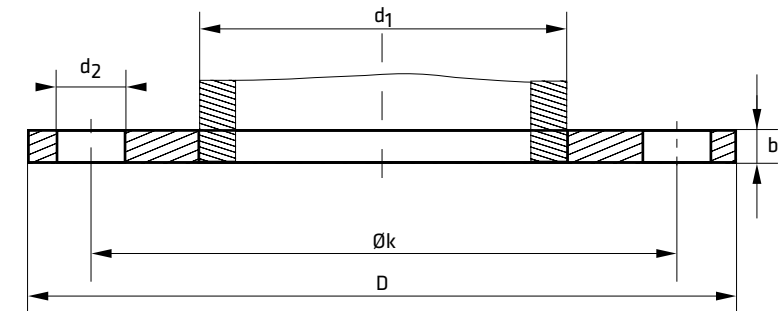


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

DIN 2576 with reduced thickness

1.4404-1.4571 (2/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4404 316 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm			kg/pce.		
10	200	219.1	12	340	295	22	8	4.66		x
10	200	219.1	15	340	295	22	8	5.82		x
10	250	273.0	12	395	350	22	12	5.49		x
10	250	273.0	15	395	350	22	12	6.86		
10	300	323.9	12	445	400	22	12	6.36		x
10	300	323.9	15	445	400	22	12	7.96		x
10	300	323.9	19.6	445	400	22	12	12.8	x	
10	350	355.6	12	505	460	22	16	8.82		x
10	350	355.6	15	505	460	22	16	11.04		x
10	350	355.6	21	505	460	22	16	18.00	x	



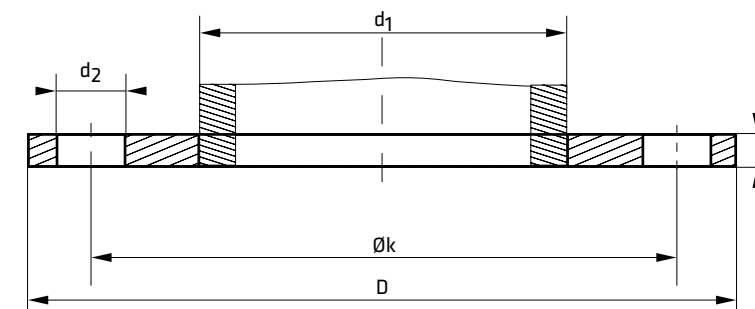
\* Finishes: page 311; no standard pipe connection



# SLIP-ON FLANGES

DIN 2576 with reduced thickness

1.4404-1.4571 (3/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4404 316 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm			kg/pce.		
10	400	406.4	12	565	515	26	16	10.46		x
10	400	406.4	15	565	515	26	16	13.08		x
10	400	406.4	22.4	565	515	26	16	24.00	x	
10	450	457	22.4	615	565	26	20	26.00	x	
10	500	508.0	15	670	620	26	20	16.22		x
10	500	508.0	20	670	620	26	20	21.63		x
10	500	508	23.8	670	620	26	20	32.00	x	
10	600	609.6	25.2	780	725	30	20	43.00	x	
10	700	711	28	895	840	30	24	60.00	x	
10	800	813	30.8	1015	950	33	24	84.00	x	

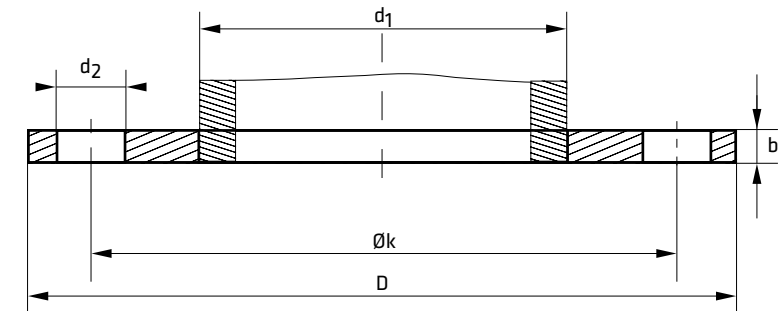


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

■ DIN 2576 with reduced thickness

1.4404-1.4571 (4/4)



Nominal pressure/ diameter		d1	b	D	ØK	d2	drill holes	Grade AISI	1.4404 316 *)	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm			kg/pce.		
10	1000	1016	35	1230	1160	36	28	127.00	x	
16	65	76.1	10	185	145	18	8	1.37		x
16	200	219.1	15	340	295	22	11	5.79		x
16	250	273.0	15	395	355	26	12	6.81		x
16	300	323.9	15	445	410	26	12	7.85		x
16	350	355.6	15	505	470	26	16	10.20		x
16	400	406.4	15	565	525	30	16	12.89		x
16	500	508.0	15	670	650	33	20	15.87		x
16	600	609.6	20	780	770	36	20	20.00		x

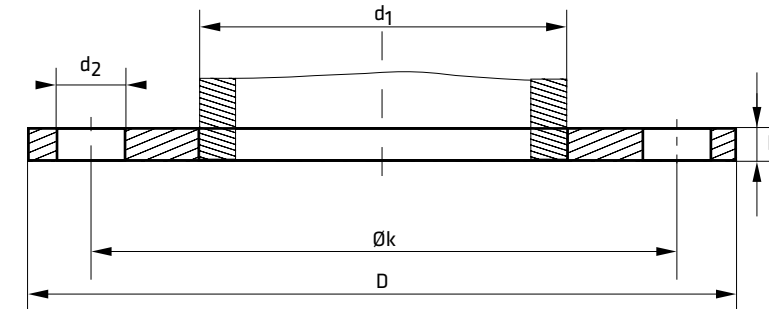


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4301-1.4541 (1/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4301	1.4541
PN	DN		mm	mm	mm	mm		kg/pce.		*)	*)
10	15	21.3	10	95	65	22.0	14	4	0.62	x	x
10	20	26.9	10	105	75	27.5	14	4	0.79	x	x
10	25	33.7	10	115	85	34.5	14	4	1.03	x	x
10	32	42.4	10	140	100	43.5	18	4	1.12	x	x
10	40	48.3	10	150	110	49.5	18	4	1.20	x	x
10	50	54.0	10	165	125	55.2	18	4	1.37	x	x
10	50	60.3	10	165	125	61.5	18	4	1.37	x	x
10	65	70.0	10	185	145		18	4	1.70	x	
10	65	76.1	10	185	145	77.5	18	4	1.67	x	x
10	80	84.0	10	200	160	85.6	18	8	1.89	x	x

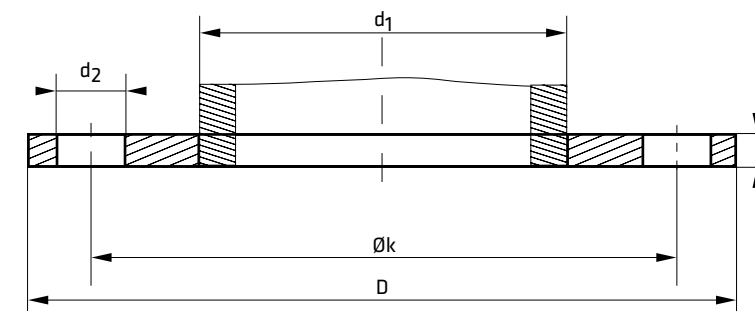


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4301-1.4541 (2/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4301	1.4541
PN	DN		mm	mm	mm	mm			kg/pce.	*)	*)
10	80	88.9	10	200	160	90.5	18	8	1.89	x	x
10	100	104.0	10	220	180	105.7	18	8	2.02	x	x
10	100	114.3	10	220	180	116.0	18	8	2.02	x	x
10	125	129.0	10	250	210	130.8	18	8	2.48	x	x
10	125	129.0	12	250	210		18	8	2.60	x	
10	125	139.7	12	250	210	141.5	18	8	2.48	x	x
10	150	154.0	12	285	240	156.2	22	8	2.98	x	x
10	150	168.3	12	285	240	170.5	22	8	2.98	x	x
10	200	204.0	12	340	295	206.4	22	8	4.66	x	x
10	200	206.0	12	340	295		22	8	4.80	x	



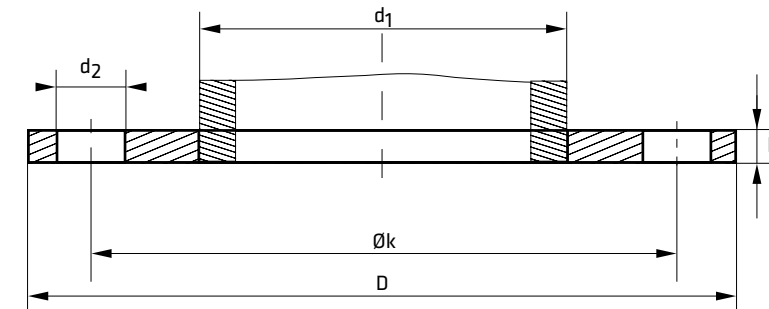
\* Finishes: page 311; no standard pipe connection



# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4301-1.4541 (3/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4301	1.4541
PN	DN		mm	mm	mm	mm			kg/pce.	*)	*)
10	200	219.1	12	340	295	221.5	22	8	4.66	x	x
10	250	254.0	12	395	350	255.9	22	12	5.49	x	x
10	250	256.0	12	395	350		22	12	5.70	x	
10	250	256.0	15	395	350		22	12	7.00	x	
10	250	273.0	12	395	350	276.5	22	12	5.49	x	x
10	250	273.0	15	395	350		22	12	6.86		
10	300	306.0	15	445	400	309.9	22	12	6.36	x	x
10	300	323.9	15	445	400	327.5	22	12	6.36	x	x
10	350	355.6	15	505	460	359.5	22	16	8.82	x	
10	400	406.4	15	565	515	411.0	26	16	10.46	x	

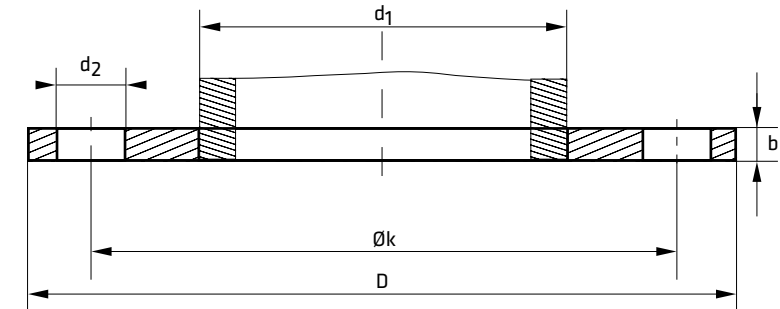


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4301-1.4541 (4/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4301	1.4541
PN	DN		mm	mm	mm	mm			kg/pce.	*)	*)
10	500	508.0	15	670	620	513.5	26	20	16.22	x	
10	600	608.0	20	780	725		30	20	26	x	x
10	600	610.0	15	780	725	626.5	30	20	21.40	x	

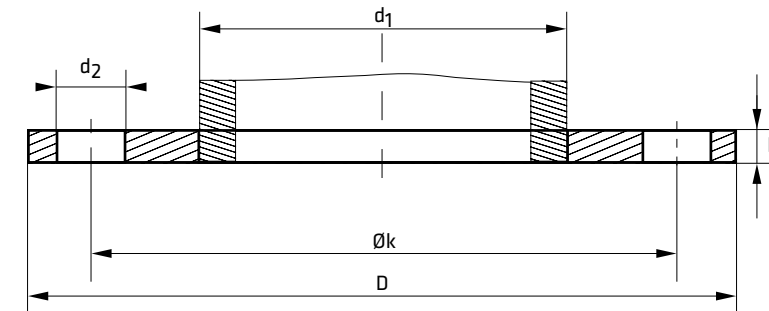


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4571 (1/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4571 316 Ti *)
PN	DN		mm	mm	mm	mm			kg/pce.	
10	15	21.3	10	95	65	22.0	14	4	0.62	x
10	20	26.9	10	105	75	27.5	14	4	0.79	x
10	25	33.7	10	115	85	34.5	14	4	1.03	x
10	32	42.4	10	140	100	43.5	18	4	1.12	x
10	40	48.3	10	150	110	49.5	18	4	1.20	x
10	50	54.0	10	165	125	55.2	18	4	1.37	x
10	50	60.3	10	165	125	61.5	18	4	1.37	x
10	65	70.0	10	185	145		18	4	1.70	x
10	65	76.1	10	185	145	77.5	18	4	1.67	x
10	80	84.0	10	200	160	85.6	18	8	1.89	x

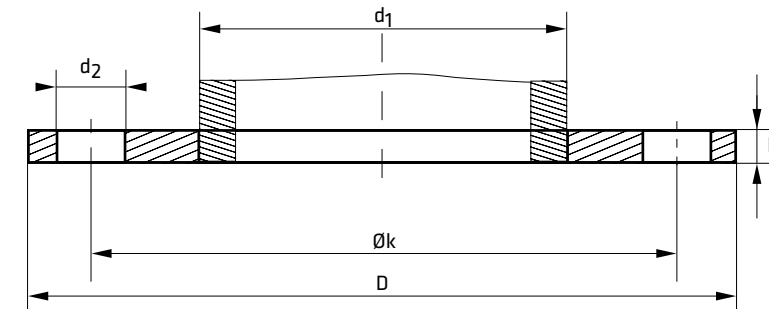


\* Finishes: page 311; no standard pipe connection

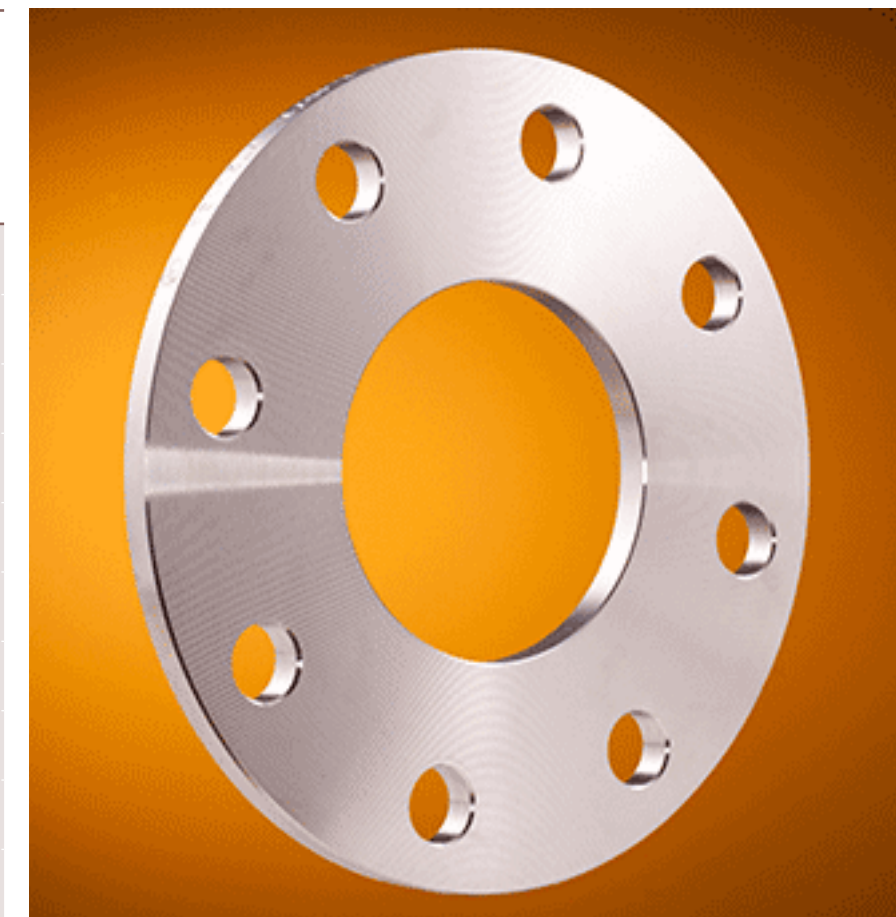
# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4571 (2/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4571 316 Ti *)
PN	DN		mm	mm	mm	mm			kg/pce.	
10	80	88.9	10	200	160	90.5	18	8	1.89	x
10	100	104.0	10	220	180	105.7	18	8	2.02	x
10	100	114.3	10	220	180	116.0	18	8	2.02	x
10	125	129.0	10	250	210	130.8	18	8	2.48	x
10	125	129.0	12	250	210		18	8	2.60	x
10	125	139.7	12	250	210	141.5	18	8	2.48	x
10	150	154.0	12	285	240	156.2	22	8	2.98	x
10	150	168.3	12	285	240	170.5	22	8	2.98	x
10	200	204.0	12	340	295	206.4	22	8	4.66	x
10	200	206.0	12	340	295		22	8	4.80	



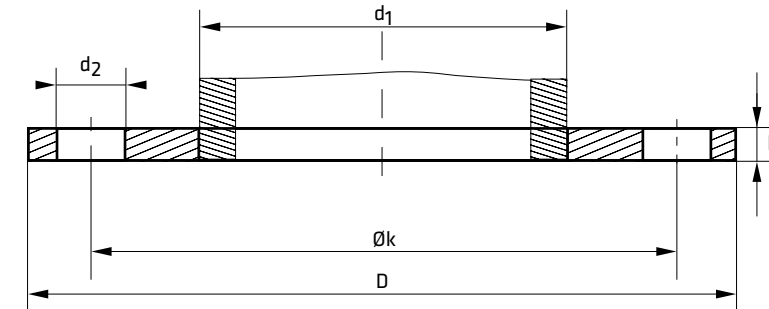
\* Finishes: page 311; no standard pipe connection



# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4571 (3/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4571 316 Ti *)
PN	DN		mm	mm	mm	mm			kg/pce.	
10	200	219.1	12	340	295	221.5	22	8	4.66	x
10	250	254.0	12	395	350	255.9	22	12	5.49	x
10	250	256.0	12	395	350		22	12	5.70	x
10	250	256.0	15	395	350		22	12	7.00	x
10	250	273.0	12	395	350	276.5	22	12	5.49	x
10	250	273.0	15	395	350		22	12	6.86	x
10	300	306.0	15	445	400	309.9	22	12	6.36	x
10	300	323.9	15	445	400	327.5	22	12	6.36	x
10	350	355.6	15	505	460	359.5	22	16	8.82	
10	400	406.4	15	565	515	411.0	26	16	10.46	

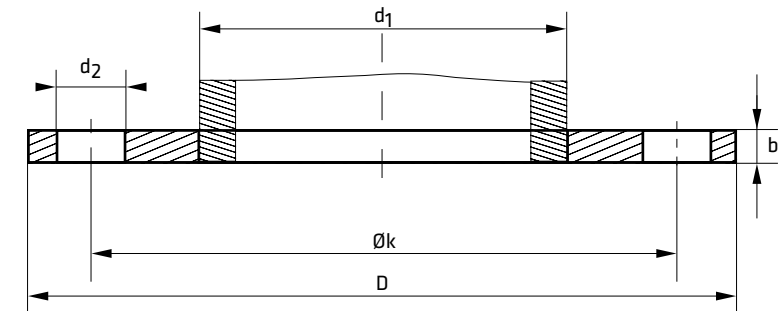


\* Finishes: page 311; no standard pipe connection

# SLIP-ON FLANGES

EN 1092-1 type 01 A with reduced thickness

1.4571 (4/4)



Nominal pressure/ diameter		Pipe size	b	D	ØK	d1	d2	drill holes	Grade AISI	1.4571 316 Ti *)
PN	DN		mm	mm	mm	mm			kg/pce.	
10	500	508.0	15	670	620	513.5	26	20	16.22	
10	600	608.0	20	780	725		30	20	26	x
10	600	610.0	15	780	725	626.5	30	20	21.40	

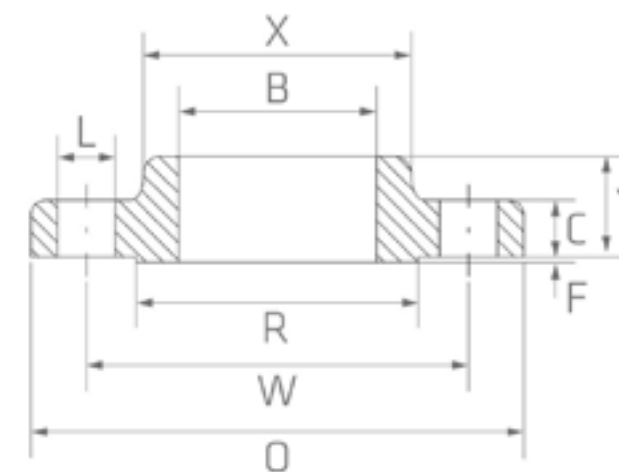


\* Finishes: page 311; no standard pipe connection

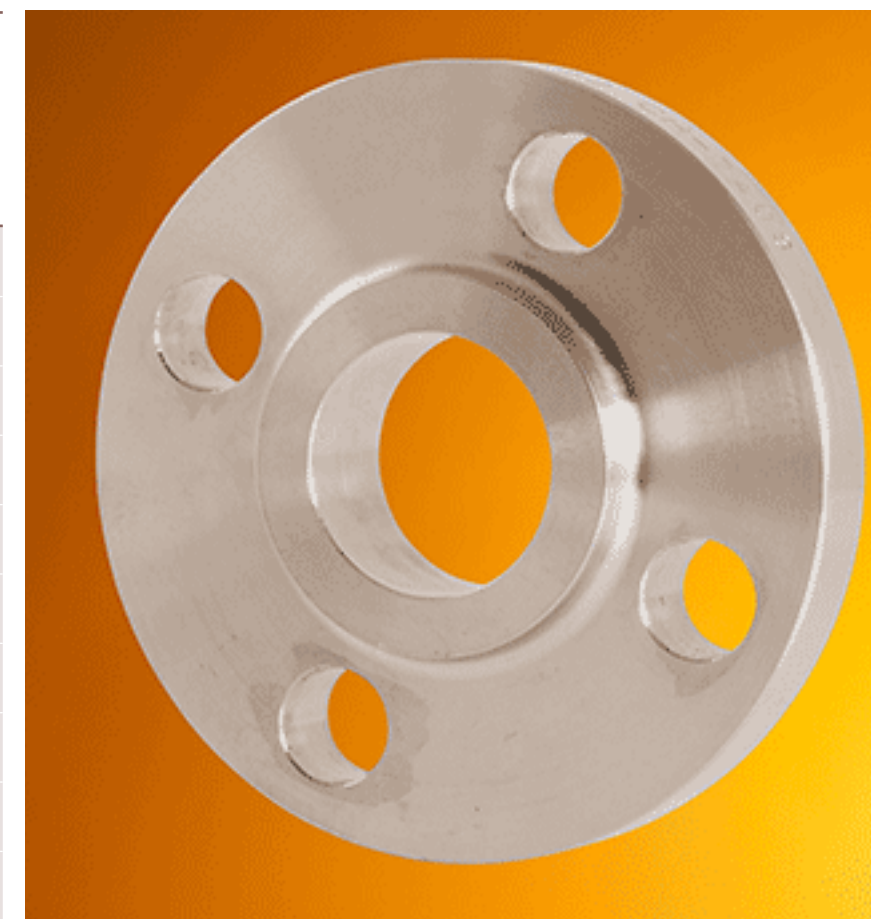
# SLIP-ON FLANGES

ASTM-A 182 ASME B16.5

1.4301 (1/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	
	INCH	mm											1.4301/ AISI 1.4307	kg/pce. 304/304L
150	1/2"	21.3	22.2	90	9.6	60.3	14	30	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	27.7	100	11.2	69.9	14	38	42.9	2	4	15.9	0.58	x
150	1"	33.5	34.5	110	12.7	79.4	16	49	50.8	2	4	15.9	0.86	x
150	1 1/4"	42.2	43.2	115	14.3	88.9	19	59	63.5	2	4	15.9	1.08	x
150	1 1/2"	48.3	49.5	125	15.9	98.4	21	65	73.0	2	4	15.9	1.41	x
150	2"	60.5	61.9	150	17.5	120.7	24	78	92.1	2	4	19.1	2.26	x
150	2 1/2"	73.2	74.6	180	20.7	139.7	27	90	104.8	2	4	19.1	3.43	x
150	3"	88.9	90.7	190	22.3	152.4	29	108	127.0	2	4	19.1	3.87	x
150	3 1/2"	101.6	103.4	215	22.3	177.8	30	122	139.7	2	8	19.1	4.99	x
150	4"	114.3	116.1	230	22.3	190.5	32	135	157.2	2	8	19.1	5.75	x

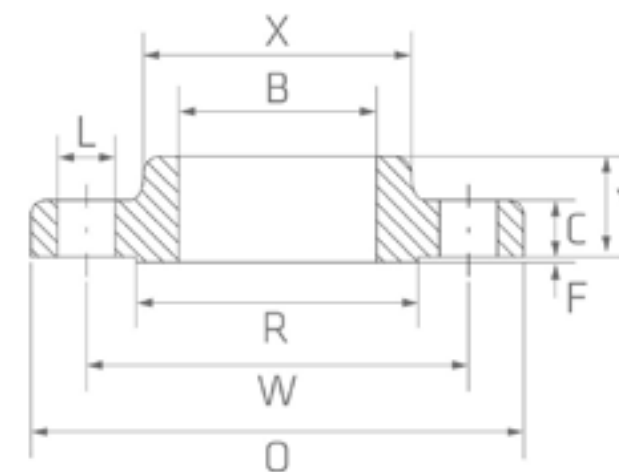


\* Finishes: page 311

# SLIP-ON FLANGES

ASTM-A 182 ASME B16.5

1.4301 (2/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	
	INCH	mm											1.4301/ AISI 1.4307	kg/pce. 304/304L
150	5"	141.3	143.8	255	22.3	215.9	35	164	185.7	2	8	22.2	6.22	x
150	6"	168.4	170.7	280	23.9	241.3	38	192	215.9	2	8	22.2	7.38	x
150	8"	219.2	221.5	345	27.0	298.5	43	246	269.9	2	8	22.2	12.36	x
150	10"	273.1	276.2	405	28.6	362.0	48	305	323.8	2	12	25.4	17.10	x
150	12"	323.9	327.0	485	30.2	431.8	54	365	381.0	2	12	25.4	27.68	x
150	14"	355.6	359.2	535	33.4	476.3	56	400	412.8	2	12	28.6	35.20	x
150	16"	406.4	410.5	595	35.0	539.8	62	457	469.9	2	16	28.6	42.18	x
150	18"	457.2	461.8	635	38.1	577.9	67	505	533.4	2	16	31.8	49.71	x
150	20"	508.0	513.1	700	41.3	635.0	71	559	584.2	2	20	31.8	65.50	x
150	24"	609.6	616.0	815	46.1	749.3	81	663	692.2	2	20	34.9	90.50	x

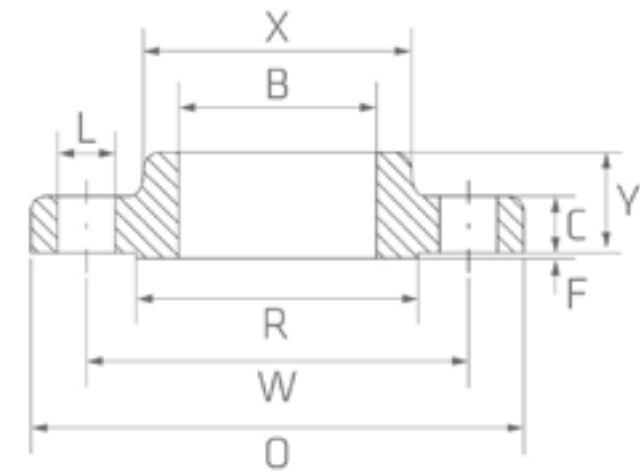


\* Finishes: page 311

# SLIP-ON FLANGES

ASTM-A 182 ASME B16.5

1.4301 (3/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	
	INCH	mm											AISI	kg/pce.
300	1/2"	21.3	22.2	95	12.7	66.7	21	38	34.9	2	4	15.9	0.62	x
300	3/4"	26.7	27.7	115	14.3	82.6	24	48	42.9	2	4	19.1	1.15	x
300	1"	33.5	34.5	125	15.9	88.9	25	54	50.8	2	4	19.1	1.39	x
300	1 1/4"	42.2	43.2	135	17.5	98.4	25	64	63.5	2	4	19.1	1.67	x
300	1 1/2"	48.3	49.5	155	19.1	114.3	29	70	73.0	2	4	22.2	2.53	x
300	2"	60.5	61.9	165	20.7	127.0	32	84	92.1	2	8	19.1	2.80	x
300	2 1/2"	73.2	74.6	190	23.9	149.2	37	100	104.8	2	8	22.2	4.25	x
300	3"	88.9	90.7	210	27.0	168.3	41	117	127.0	2	8	22.2	5.81	x
300	3 1/2"	101.6	103.4	230	28.6	184.2	43	133	139.7	2	8	22.2	7.72	x
300	4"	114.3	116.1	255	30.2	200.0	46	146	157.2	2	8	22.2	10.13	x



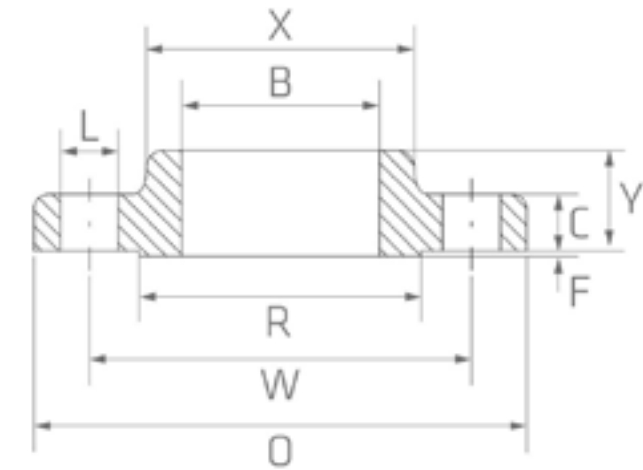
\* Finishes: page 311



# SLIP-ON FLANGES

■ ASTM-A 182 ASME B16.5

1.4301 (4/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	kg/pce.
	INCH	mm											1.4301/ AISI 1.4307	
300	5"	141.3	143.8	280	33.4	235.0	49	178	185.7	2	8	22.2	12.58	x
300	6"	168.4	170.7	320	35.0	269.9	51	206	215.9	2	12	22.2	16.04	x
300	8"	219.2	221.5	380	39.7	330.2	60	260	269.9	2	12	25.4	24.50	x
300	10"	273.1	276.2	445	46.1	387.4	65	321	323.8	2	16	28.6	34.16	x
300	12"	323.9	327.0	520	49.3	450.8	71	375	381.0	2	16	31.8	51.26	x

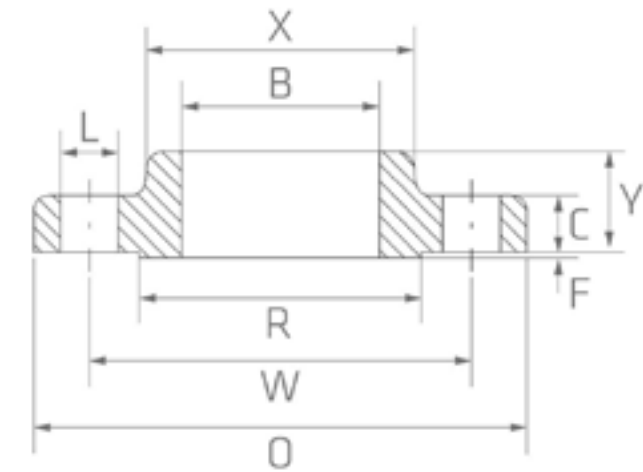


\* Finishes: page 311

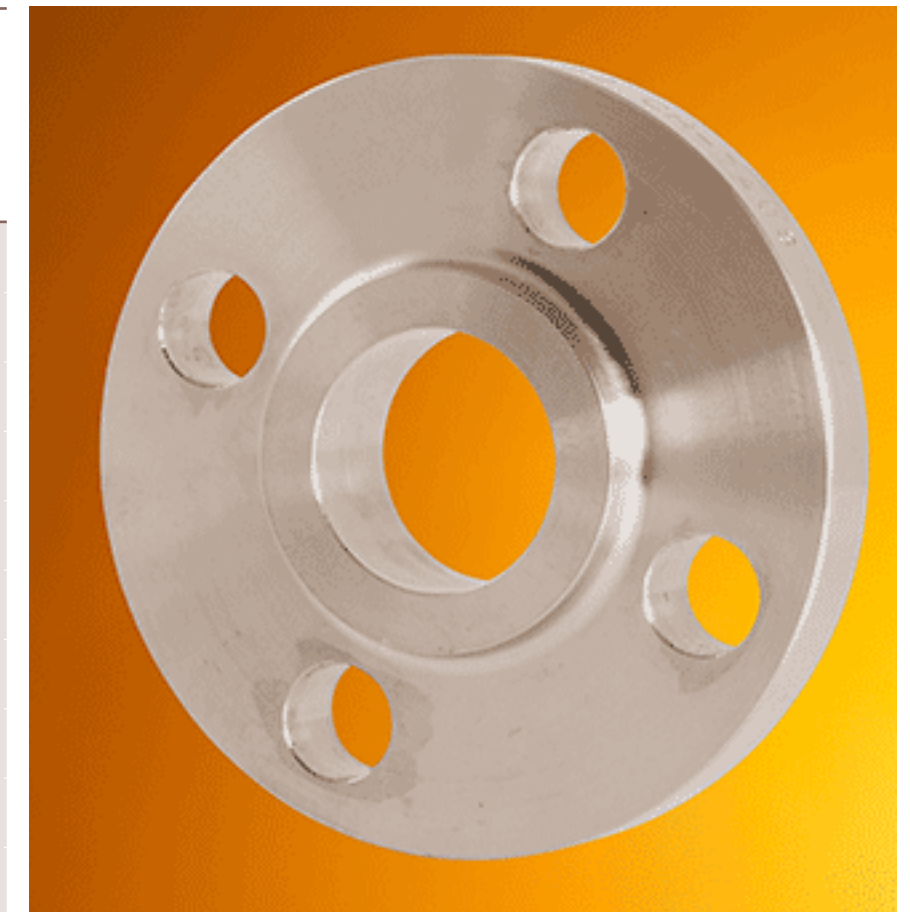
# SLIP-ON FLANGES

ASTM-A 182 ASME B16.5

1.4401 (1/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	
	INCH	mm											AISI	kg/pce.
150	1/2"	21.3	22.2	90	9.6	60.3	14	30	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	27.7	100	11.2	69.9	14	38	42.9	2	4	15.9	0.58	x
150	1"	33.5	34.5	110	12.7	79.4	16	49	50.8	2	4	15.9	0.86	x
150	1 1/4"	42.2	43.2	115	14.3	88.9	19	59	63.5	2	4	15.9	1.08	x
150	1 1/2"	48.3	49.5	125	15.9	98.4	21	65	73.0	2	4	15.9	1.41	x
150	2"	60.5	61.9	150	17.5	120.7	24	78	92.1	2	4	19.1	2.26	x
150	2 1/2"	73.2	74.6	180	20.7	139.7	27	90	104.8	2	4	19.1	3.43	x
150	3"	88.9	90.7	190	22.3	152.4	29	108	127.0	2	4	19.1	3.87	x
150	3 1/2"	101.6	103.4	215	22.3	177.8	30	122	139.7	2	8	19.1	4.99	x
150	4"	114.3	116.1	230	22.3	190.5	32	135	157.2	2	8	19.1	5.75	x

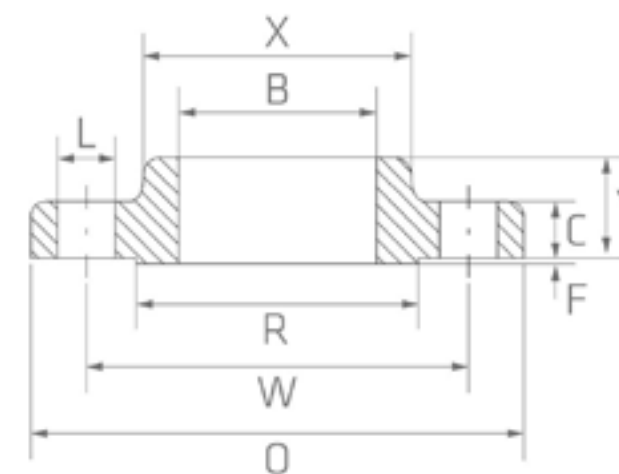


\* Finishes: page 311

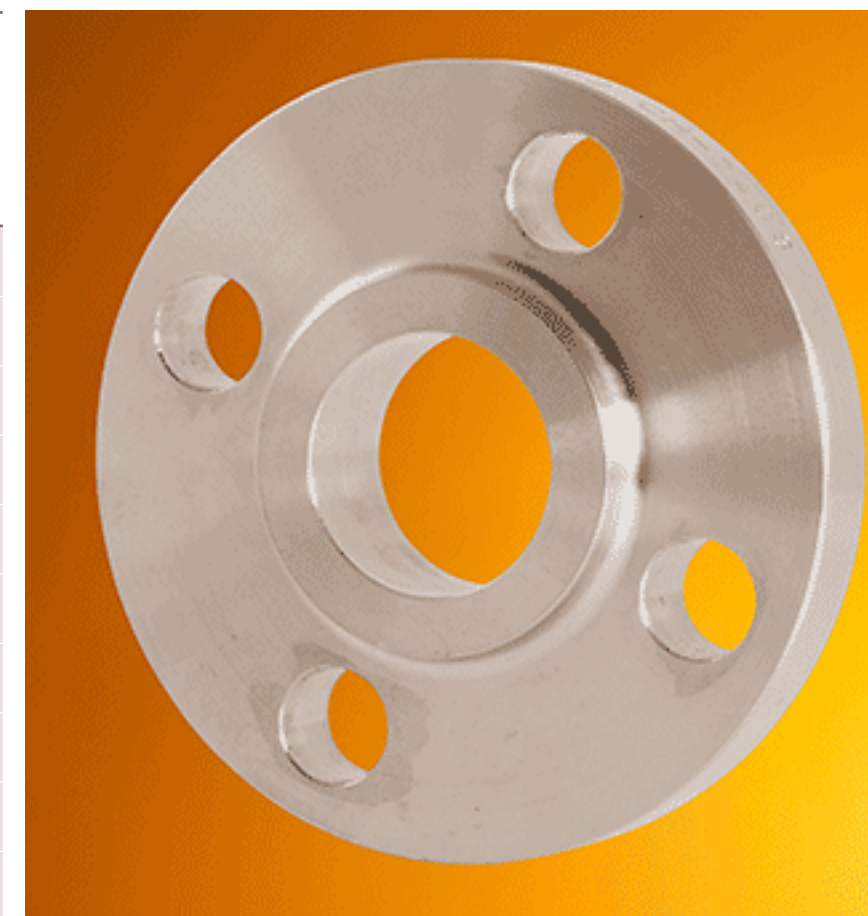
# SLIP-ON FLANGES

ASTM-A 182 ASME B16.5

1.4401 (2/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	1.4401/	
	INCH	mm												mm	mm
														kg/pce.	316/316L
150	5"	141.3	143.8	255	22.3	215.9	35	164	185.7	2	8	22.2	6.22	x	
150	6"	168.4	170.7	280	23.9	241.3	38	192	215.9	2	8	22.2	7.38	x	
150	8"	219.2	221.5	345	27.0	298.5	43	246	269.9	2	8	22.2	12.36	x	
150	10"	273.1	276.2	405	28.6	362.0	48	305	323.8	2	12	25.4	17.10	x	
150	12"	323.9	327.0	485	30.2	431.8	54	365	381.0	2	12	25.4	27.68	x	
150	14"	355.6	359.2	535	33.4	476.3	56	400	412.8	2	12	28.6	35.20	x	
150	16"	406.4	410.5	595	35.0	539.8	62	457	469.9	2	16	28.6	42.18	x	
150	18"	457.2	461.8	635	38.1	577.9	67	505	533.4	2	16	31.8	49.71	x	
150	20"	508.0	513.1	700	41.3	635.0	71	559	584.2	2	20	31.8	65.50	x	
150	24"	609.6	616.0	815	46.1	749.3	81	663	692.2	2	20	34.9	90.50	x	



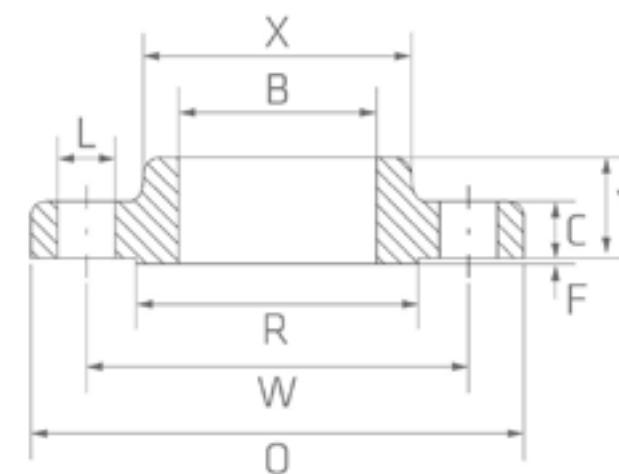
\* Finishes: page 311



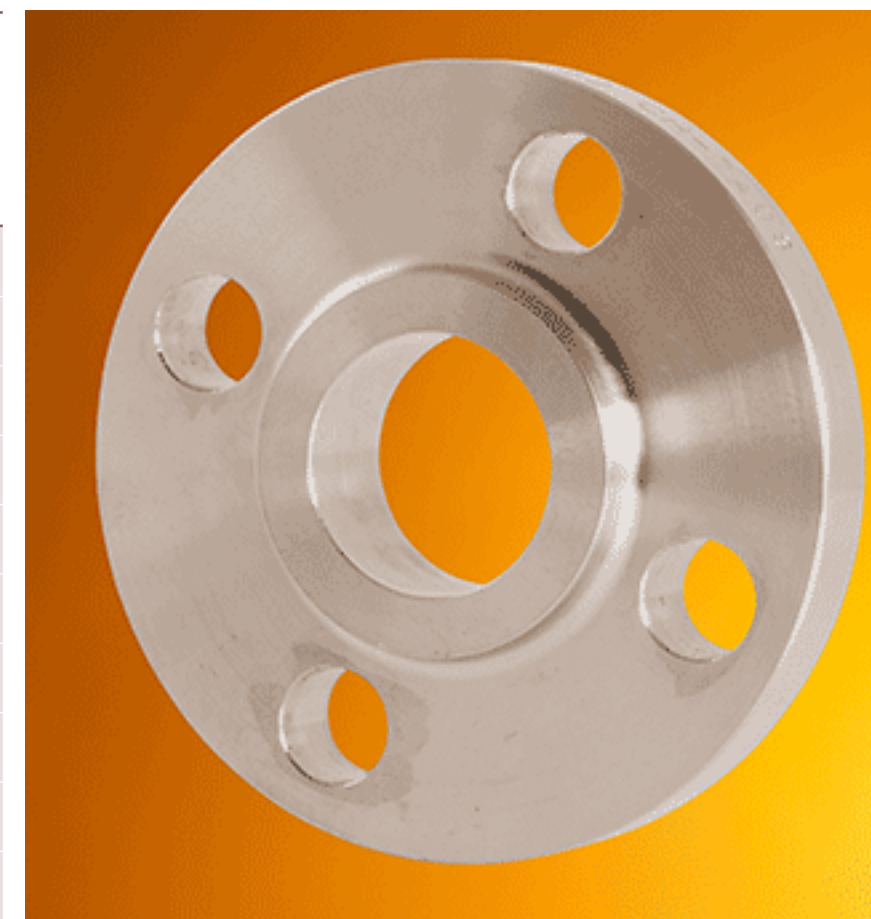
# SLIP-ON FLANGES

ASTM-A 182 ASME B16.5

1.4401 (3/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	1.4401/
	INCH	mm												mm
300	1/2"	21.3	22.2	95	12.7	66.7	21	38	34.9	2	4	15.9	0.62	x
300	3/4"	26.7	27.7	115	14.3	82.6	24	48	42.9	2	4	19.1	1.15	x
300	1"	33.5	34.5	125	15.9	88.9	25	54	50.8	2	4	19.1	1.39	x
300	1 1/4"	42.2	43.2	135	17.5	98.4	25	64	63.5	2	4	19.1	1.67	x
300	1 1/2"	48.3	49.5	155	19.1	114.3	29	70	73.0	2	4	22.2	2.53	x
300	2"	60.5	61.9	165	20.7	127.0	32	84	92.1	2	8	19.1	2.80	x
300	2 1/2"	73.2	74.6	190	23.9	149.2	37	100	104.8	2	8	22.2	4.25	x
300	3"	88.9	90.7	210	27.0	168.3	41	117	127.0	2	8	22.2	5.81	x
300	3 1/2"	101.6	103.4	230	28.6	184.2	43	133	139.7	2	8	22.2	7.72	x
300	4"	114.3	116.1	255	30.2	200.0	46	146	157.2	2	8	22.2	10.13	x

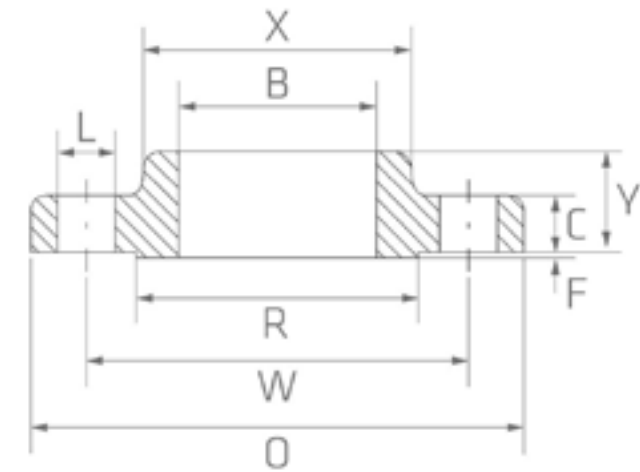


\* Finishes: page 311

# SLIP-ON FLANGES

■ ASTM-A 182 ASME B16.5

1.4401 (4/4)



CLASS	OD		B	O	C	W	Y	X	R	f	Number of screw	L	Grade	1.4401/ AISI 1.4404 kg/pce. 316/316L
	INCH	mm												
300	5"	141.3	143.8	280	33.4	235.0	49	178	185.7	2	8	22.2	12.58	x
300	6"	168.4	170.7	320	35.0	269.9	51	206	215.9	2	12	22.2	16.04	x
300	8"	219.2	221.5	380	39.7	330.2	60	260	269.9	2	12	25.4	24.50	x
300	10"	273.1	276.2	445	46.1	387.4	65	321	323.8	2	16	28.6	34.16	x
300	12"	323.9	327.0	520	49.3	450.8	71	375	381.0	2	16	31.8	51.26	x

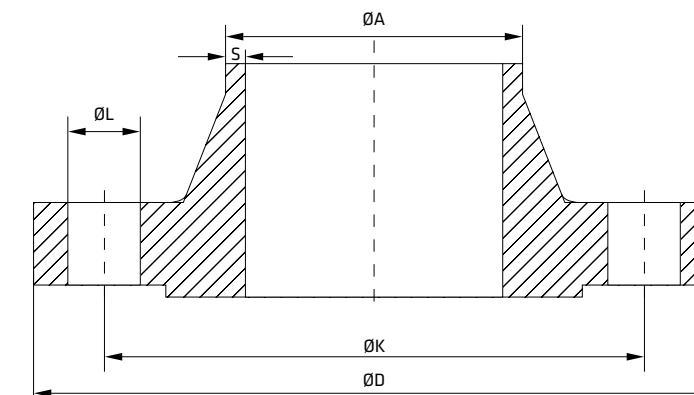


\* Finishes: page 311

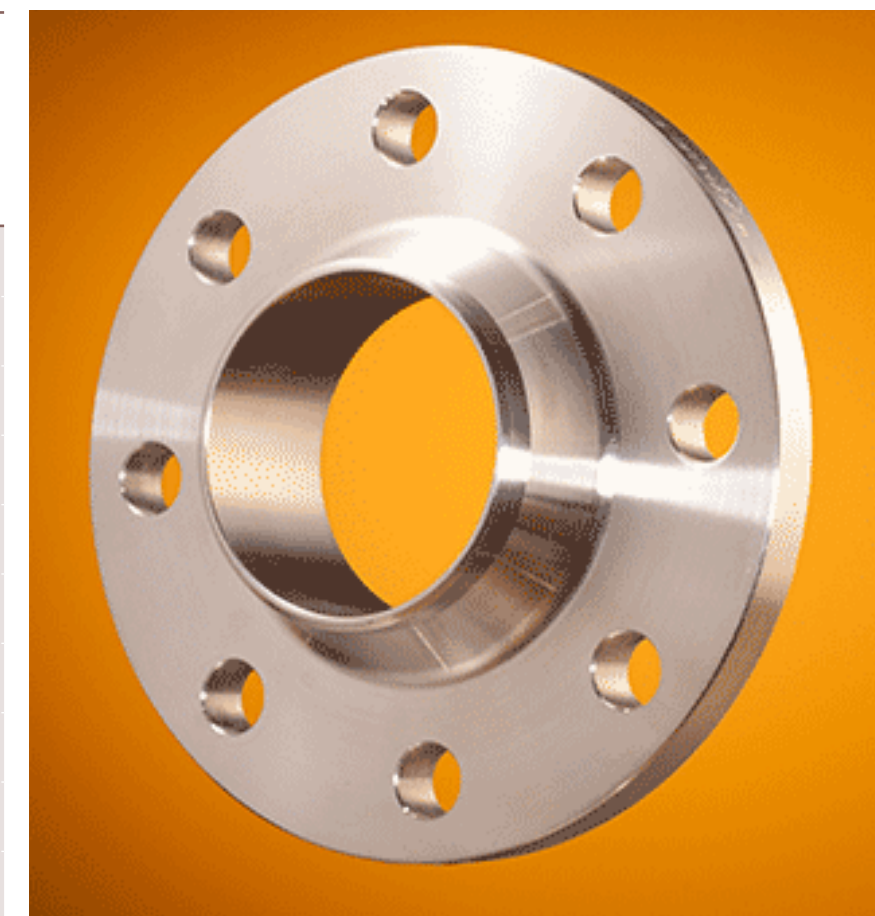
# FLANGES FOR AUTOMATIC WELDING

EN 1092-1 type 11 B1

1.4571 (1/3)



Nominal pressure/ diameter		ØA	S	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN		mm	mm	mm	mm	mm	AISI	316 Ti
								kg/pce.	*)
16	15	21.3	2.00	95	65	14	4	0.65	x
16	20	26.9	2.00	105	75	14	4	0.96	x
16	25	33.7	2.00	115	85	14	4	1.14	x
16	32	42.4	2.00	140	100	18	4	1.69	x
16	40	48.3	2.00	150	110	18	4	1.86	x
16	50	60.3	2.00	165	125	18	4	2.53	x
16	65	76.1	2.30	185	145	18	4	3.06	x
16	80	88.9	2.30	200	160	18	8	3.70	x
16	100	114.3	2.60	220	180	18	8	4.62	x
16	125	139.7	2.60	250	210	18	8	6.30	x

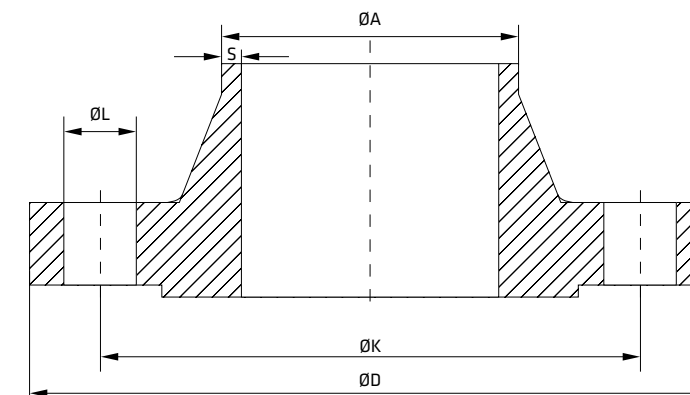


\* Finishes: page 311; no standard pipe connection

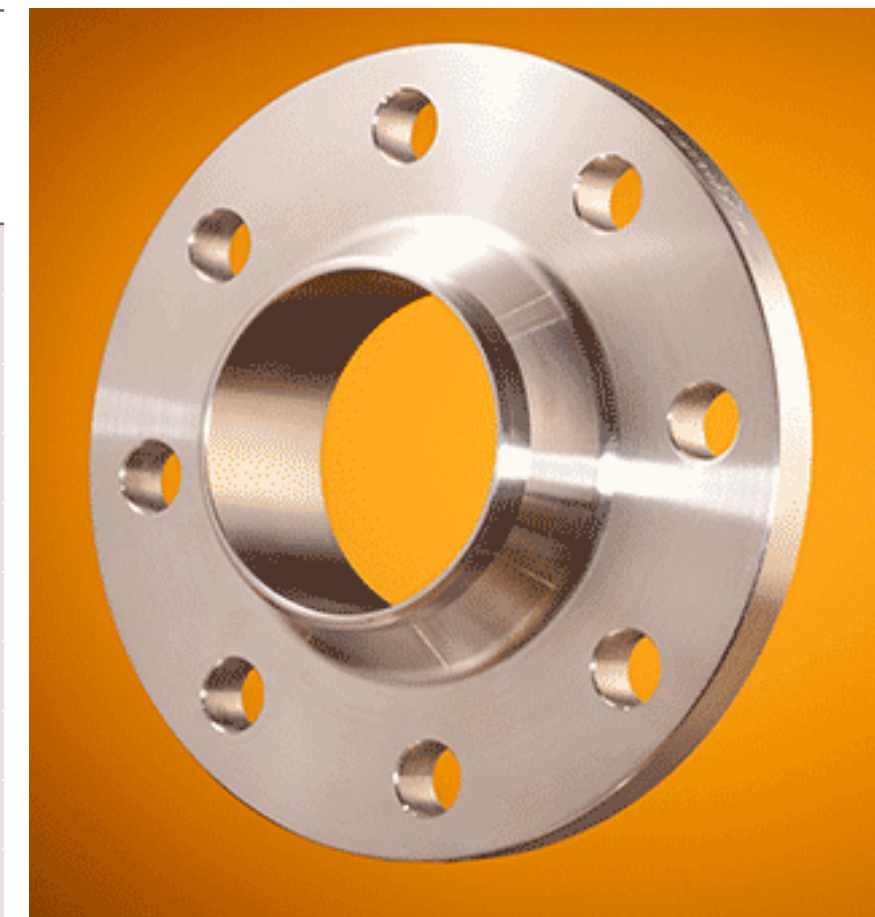
# FLANGES FOR AUTOMATIC WELDING

EN 1092-1 type 11 B1

1.4571 (2/3)



Nominal pressure/ diameter		ØA	S	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN		mm	mm	mm	mm	mm	AISI	316 Ti
								kg/pce.	*)
16	150	168.3	2.60	285	240	22	8	7.81	x
16	200	219.1	2.90	340	295	22	12	11.50	x
40	15	21.3	2.00	95	65	14	4	0.75	x
40	20	26.9	2.00	105	75	14	4	0.95	x
40	25	33.7	2.00	115	85	14	4	1.29	x
40	32	42.4	2.00	140	100	18	4	1.69	x
40	40	48.3	2.00	150	110	18	4	1.86	x
40	50	60.3	2.00	165	125	18	4	2.82	x
40	65	76.1	2.30	185	145	18	8	3.74	x
40	80	88.9	2.30	200	160	18	8	4.75	x

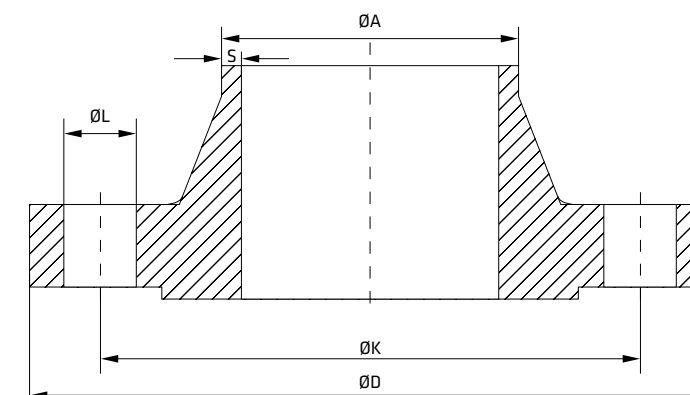


\* Finishes: page 311; no standard pipe connection

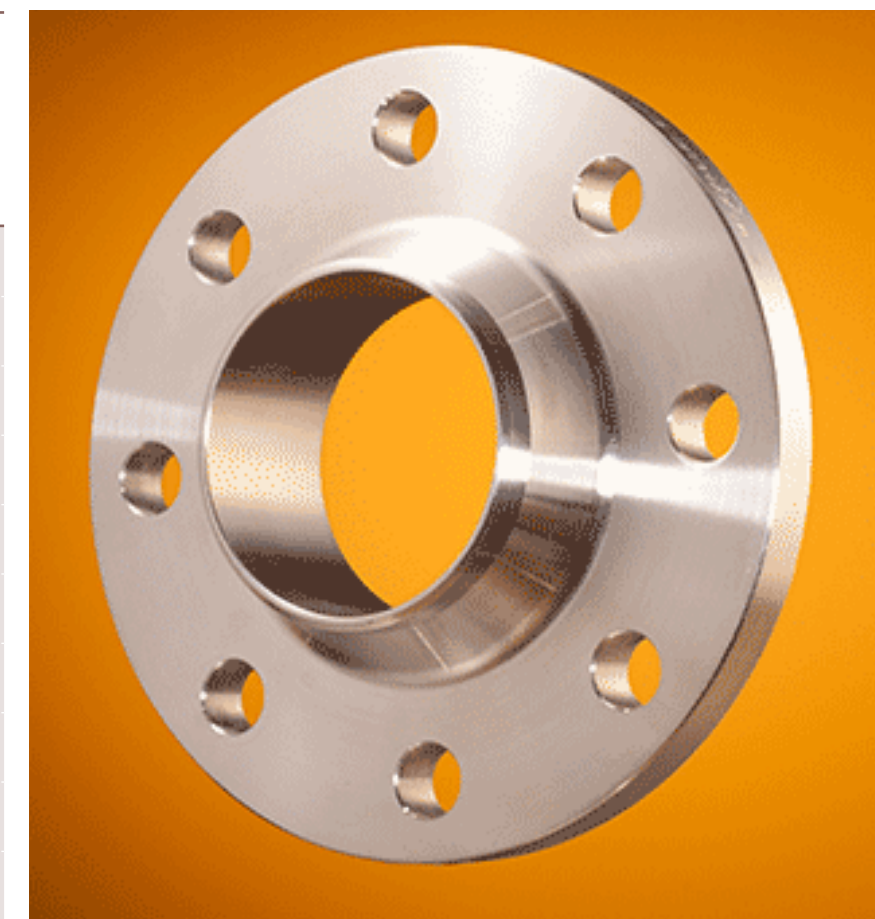
# FLANGES FOR AUTOMATIC WELDING

EN 1092-1 type 11 B1

1.4571 (3/3)



Nominal pressure/ diameter		ØA	S	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN		mm	mm	mm	mm	mm	AISI	316 Ti
								kg/pce.	*)
40	100	114.3	2.60	2.35	190	22	8	6.52	x
40	125	139.7	2.60	270	220	26	8	9.07	x
40	150	168.3	2.60	300	250	26	8	11.80	x



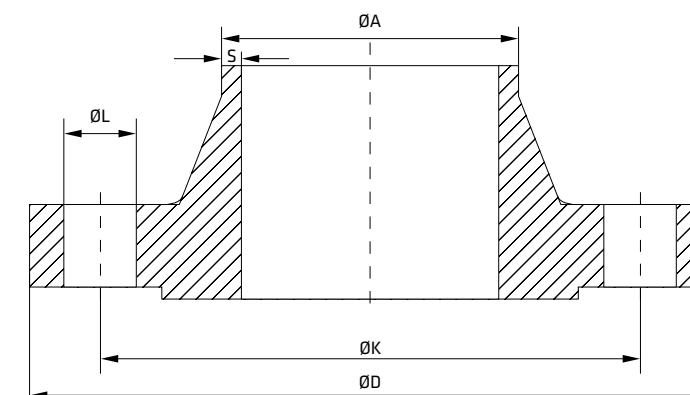
\* Finishes: page 311; no standard pipe connection



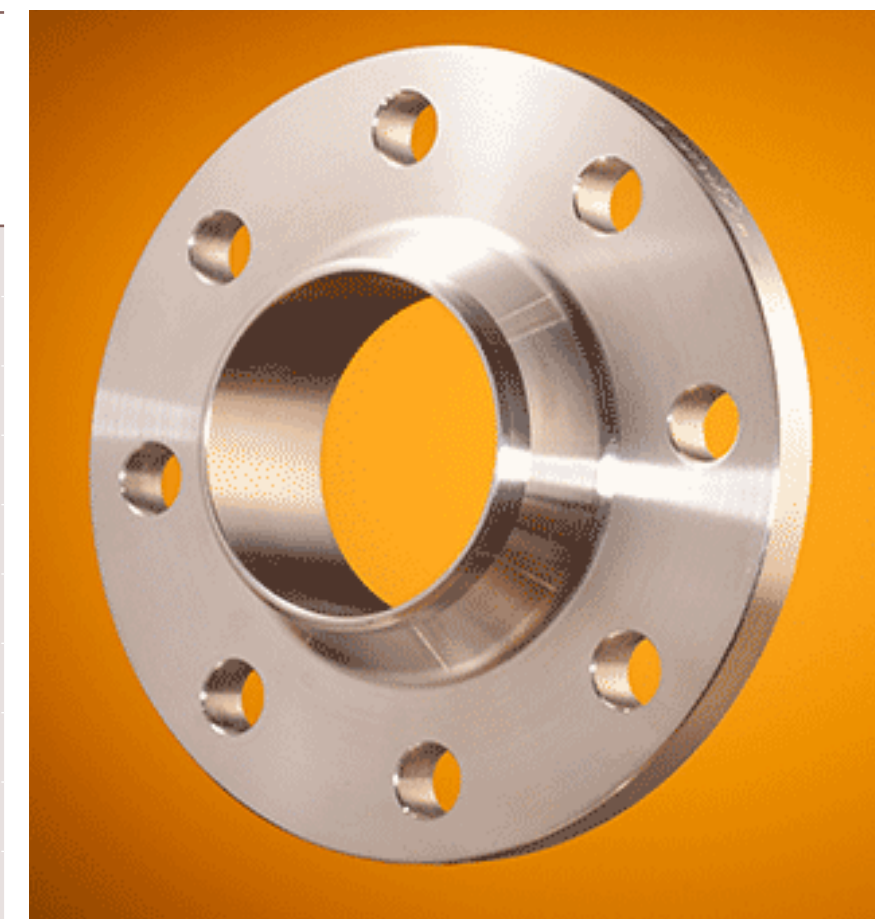
# FLANGES FOR AUTOMATIC WELDING

DIN 2633. acc. to IGR 12-02633

1.4571 (1/1)



Nominal pressure/ diameter		ØA	S	ØD	ØK	ØL	drill holes	Grade	1.4571
PN	DN		mm	mm	mm	mm	mm	AISI	316 Ti
								kg/pce.	*)
16	15	21.3	2.00	95	65	14	4	0.65	x
16	20	26.9	2.00	105	75	14	4	0.96	x
16	25	33.7	2.00	115	85	14	4	1.14	x
16	32	42.4	2.00	140	100	18	4	1.69	x
16	40	48.3	2.00	150	110	18	4	1.86	x
16	50	60.3	2.00	165	125	18	4	2.53	x



\* Finishes: page 311; no standard pipe connection



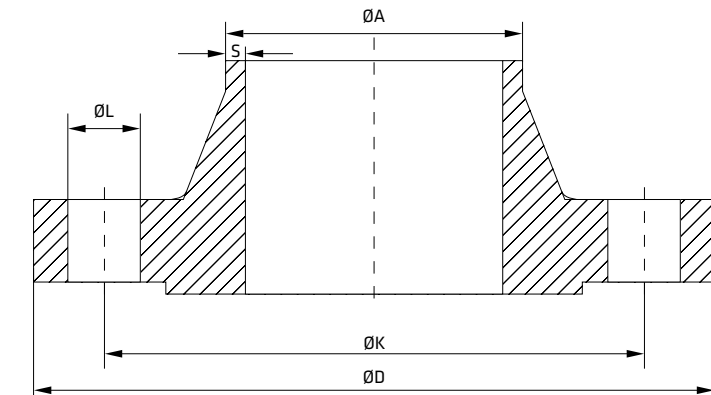




# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (3/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4301/ 1.4307 kg/pce. 304/304L	
PN	DN	mm	mm	mm	mm		mm										
10	200	206.0	340	24	295	62	234	3.0	10	16	268	2	8	M20	22	10.5	x
10	200	219.1	340	24	295	62	234	6.3	10	16	268	2	8	M20	22	11.5	x
10	250	254.0	395	26	350	68	292	2.0	12	16	320	2	12	M20	22	14.6	x
10	250	256.0	395	26	350	68	292	3.0	12	16	320	2	12	M20	22	14.8	x
10	250	273.0	395	26	350	68	292	6.3	12	16	320	2	12	M20	22	15.5	x
10	300	306.0	445	26	400	68	342	3.0	12	16	370	2	12	M20	22	15.2	x
10	300	323.9	445	26	400	68	342	7.1	12	16	370	2	12	M20	22	18.0	x
10	350	355.6	505	26	460	68	385	7.1	12	16	430	2	16	M20	22	24.5	x
10	400	406.4	565	26	515	72	440	7.1	12	16	482	2	16	M24	26	29.5	x
10	450	457.2	615	28	565	72	488	7.1	12	16	532	2	20	M24	26	34.0	x

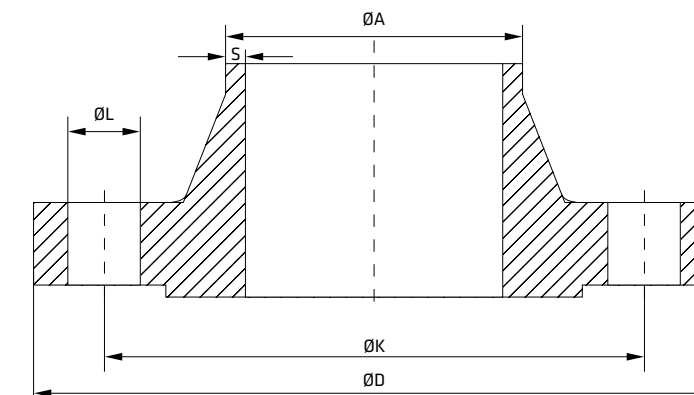


\* Finishes: page 311; no standard pipe connection

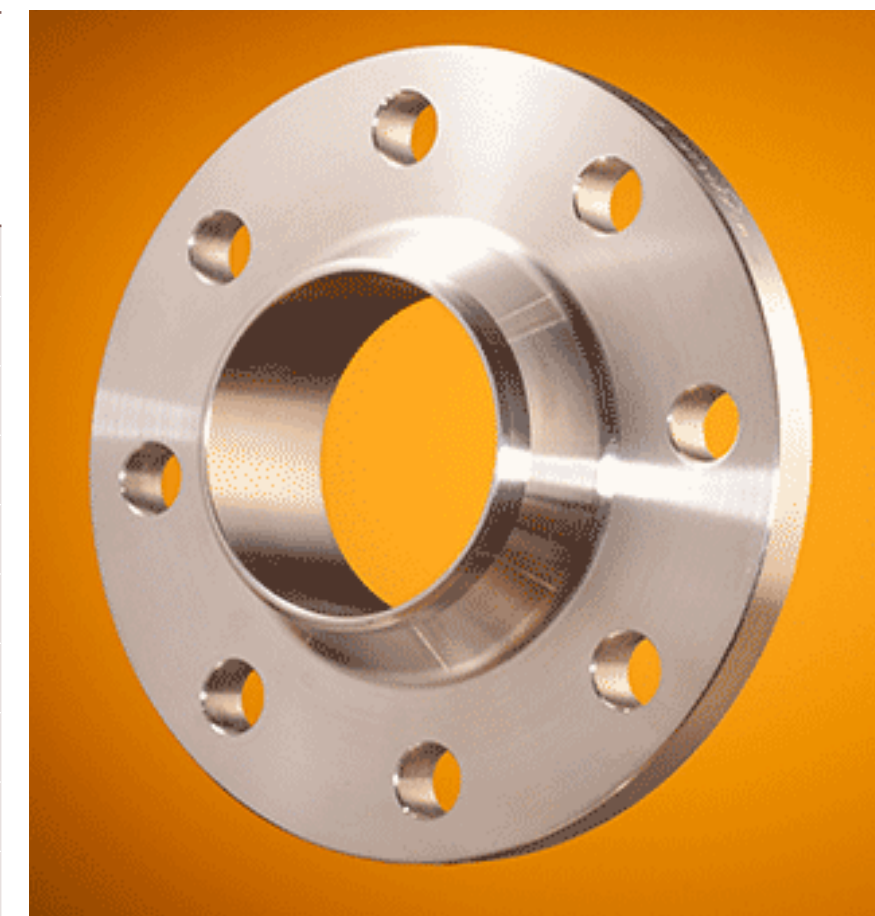
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (4/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4301/ 1.4307 kg/pce. 304/304L
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm					
10	500	508.0	670	28	620	75	542	7.1	12	16	585	2	20	M24	26	39.5 x
10	600	609.6	780	28	725	80	642	7.1	12	18	685	2	20	M27	30	56.0 x
10	700	711.2	895	30	840	80	746	8.0	12	18	800	2	24	M27	30	65.0 x
10	800	812.8	1015	32	950	90	850	8.0	12	18	905	2	24	M30	33	87.0 x
16	50	54.0*	165	16	125	45	72	2.0	5	8	102	2	4	M16	18	2.5 x
16	50	57.0*	165	18	125	45	72	2.9	5	8	102	2	4	M16	18	2.5 x
16	50	60.3	165		125			2.77					4		18	2.5
16	50	60.3	165	18	125	45	74	2.9	5	8	102	2	4	M16	18	2.5 x
16	50	60.3	165		125			3.91					4		18	2.5 x
16	50	60.3	165		125			5.54					4		18	2.6

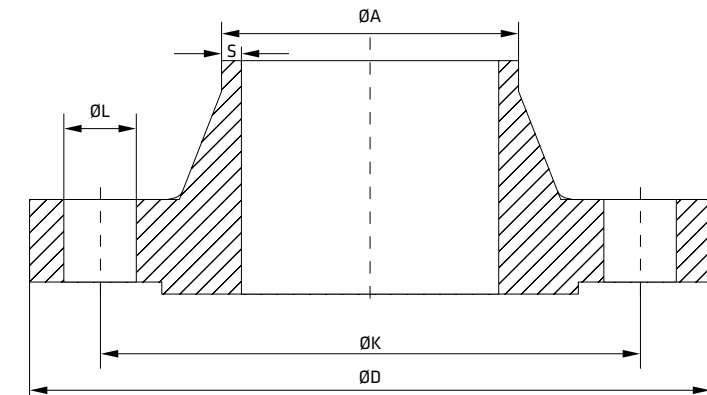


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (5/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4301/ AISI 1.4307	kg/pce. 304/304L
PN	DN	mm	mm	mm	mm		mm										
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	4	M16	18	3.0	x
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	8	M16	18	3.0	x
16	65	73.03	185		145			3.05					8		18	3.0	
16	65	73.03	185		145			5.16					8		18	3.2	
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	4	M16	18	3.0	x
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	8	M16	18	3.0	x
16	65	76.10	185		145			4.00					8		18	3.2	
16	80	84.0*	200	20	160	50	105	2.0	8	10	138	2	8	M16	18	4.0	x
16	80	88.90	200		160			3.05					8		18	4.0	
16	80	88.9	200	20	160	50	105	3.2	6	10	138	2	8	M16	18	4.0	x

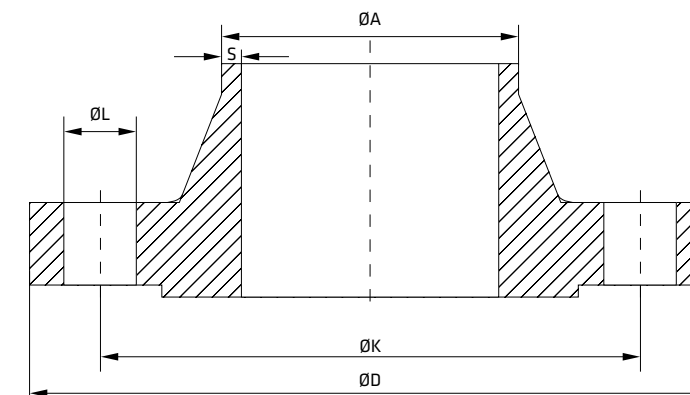


\* Finishes: page 311; no standard pipe connection

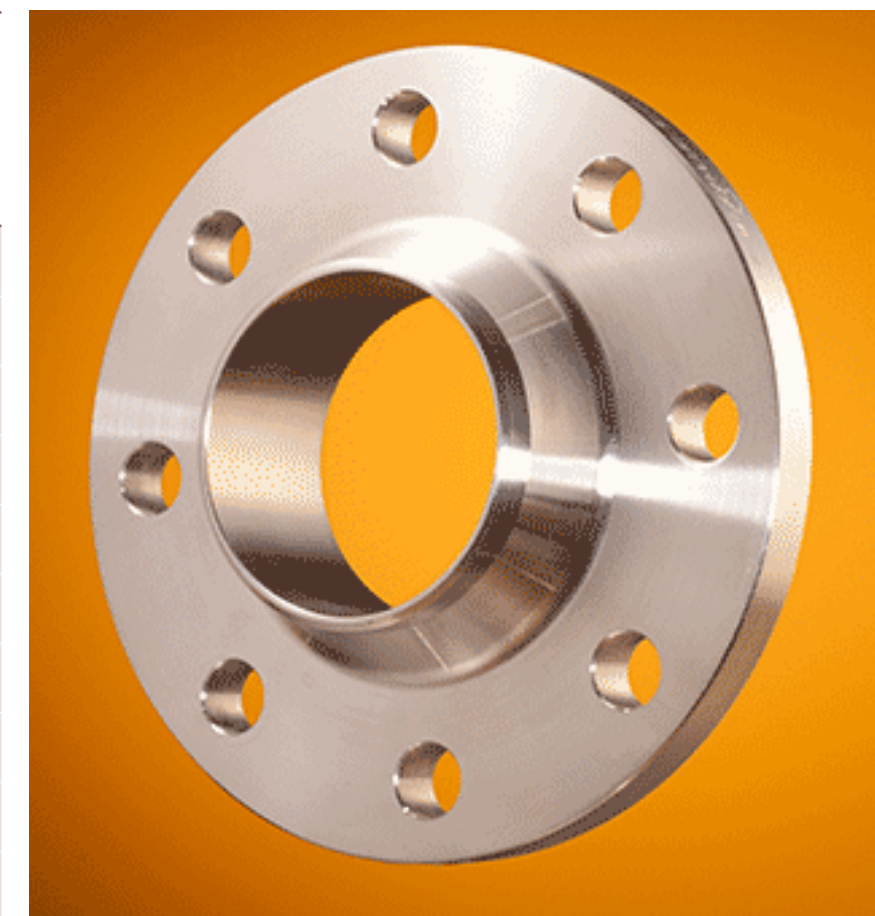
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (6/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4301/ AISI 1.4307	kg/pce. 304/304L
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
16	80	88.90	200		160		4.00					8		18	4.0		
16	80	88.90	200		160		5.49					8		18	4.9	x	
16	100	104.0*	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.5	x
16	100	106.0	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.8	
16	100	108.0*	220	20	180	52	125	3.6	8	12	158	2	8	M16	18	4.5	x
16	100	114.30	220		180		3.05					8		18	4.5		
16	100	114.3	220	20	180	52	131	3.6	8	12	158	2	8	M16	18	4.5	x
16	100	114.30	220		180		6.02					8		18	5.0	x	
16	125	129.0*	250	22	210	55	150	2.0	8	12	188	2	8	M16	18	6.5	x
16	125	133.0*	250	22	210	55	150	4.0	8	12	188	2	8	M16	18	6.5	x



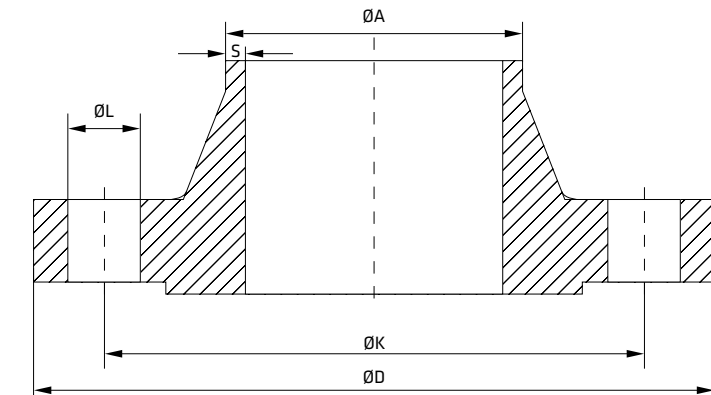
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (7/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4301/ 1.4307 kg/pce. 304/304L
PN	DN	mm	mm	mm	mm		mm									
16	125	139.7	250	22	210	55	156	4.0	8	12	188	2	8	M16	18	6.5 x
16	125	139.70	250		210			6.55				8			18	6.8
16	125	141.30	250		210			6.55				8			18	7.0
16	150	154.0*	285	22	240	55	175	2.0	10	12	212	2	8	M20	22	7.5 x
16	150	156.0*	285	22	240	55	175	3.0	10	12	212	2	8	M20	22	7.5 x
16	150	159.0*	285	22	240	55	175	4.5	10	12	212	2	8	M20	22	7.5 x
16	150	168.3	285	22	240	55	184	4.5	10	12	212	2	8	M20	22	7.5 x
16	150	168.30	285		240			7.11				8			22	8.4 x
16	200	219.1	340	24	295	62	235	6.3	10	16	268	2	12	M20	22	11.0 x
16	200	219.10	340		295			8.18				12			22	12.2

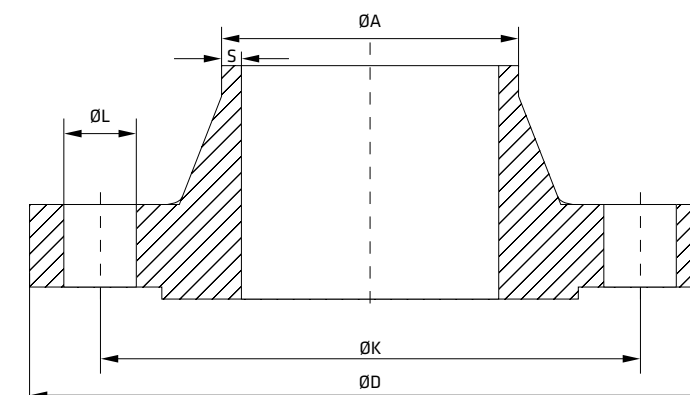


\* Finishes: page 311; no standard pipe connection

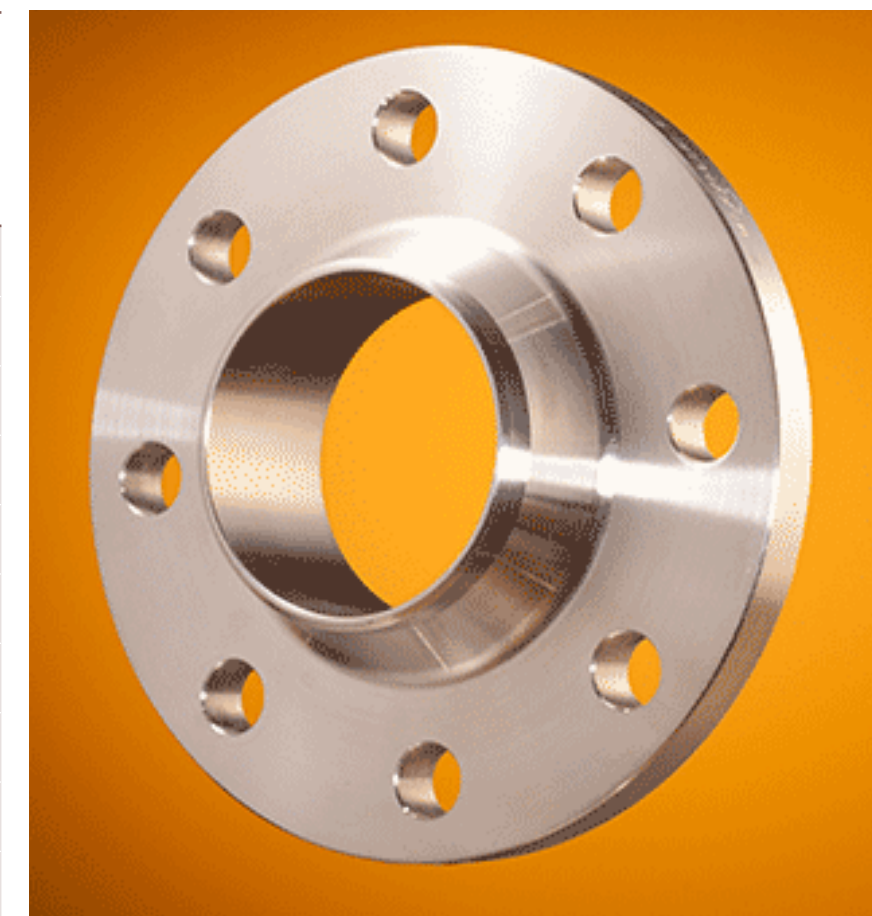
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (8/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4301/ AISI 1.4307	kg/pce. 304/304L
PN	DN	mm	mm	mm	mm		mm										
16	250	273.0	405	26	355	70	292	6.3	12	16	320	2	12	M24	26	16.7	x
16	300	323.9	460	28	410	78	344	7.1	12	16	378	2	12	M24	26	22.1	x
16	350	355.6	505		460			7.10					16		22	32.80	
16	350	355.6	520	30	470	82	390	8.0	12	16	438	2	16	M24	26	32.0	x
16	400	406.4	565		515			7.10					16		26	41.10	
16	400	406.4	580	32	525	85	445	8.0	12	16	490	2	16	M27	30	40.0	x
16	450	457.0	640	40	585	87	490	8.0	12	16	550	2	20	M27	30	54.5	x
16	500	508.0	670		620			7.10					20		26	66.20	
16	500	508.0	715	44	650	90	548	8.0	12	16	610	2	20	M30	33	74.0	x
16	600	609.6	840	54	770	95	652	8.8	12	18	725	2	20	M33	36	116.5	x

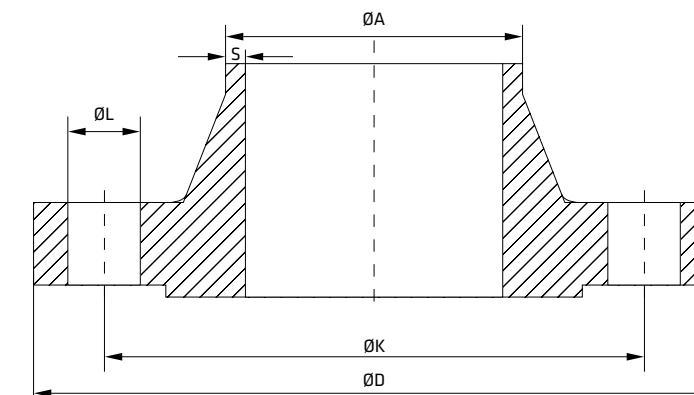


\* Finishes: page 311; no standard pipe connection

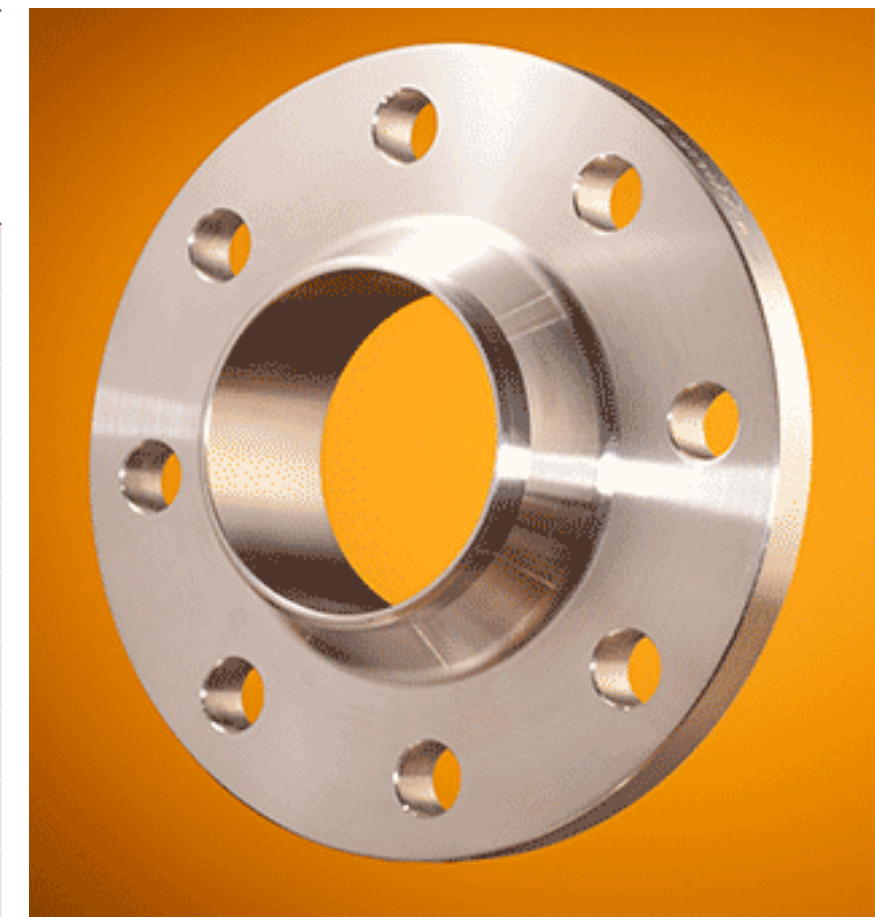
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (9/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4301/ AISI	1.4307 kg/pce.	304/304L
PN	DN	mm	mm	mm	mm		mm											
25	200	219.1	360	30	310	80	244	6.3	10	16	278	2	12	M24	26	17.0	x	
25	250	273.0	425	32	370	88	298	7.1	12	18	335	2	12	M27	30	24.0	x	
25	300	323.9	485	34	430	92	352	8.0	12	18	395	2	16	M27	30	31.5	x	
25	350	355.6	555	38	490	100	398	8.0	12	20	450	2	16	M30	33	48.0	x	
25	400	406.4	620	40	550	110	452	8.8	12	20	505	2	16	M33	36	63.0	x	
25	450	457.0	670	46	600	110	500	8.8	12	20	555	2	20	M33	36	75.5	x	
25	500	508.0	730	48	660	125	558	10.0	12	20	615	2	20	M33	36	96.5	x	
25	600	609.6	845	58	770	125	660	11.0	12	20	720	2	20	M36	39	138.6	x	
40	10	17.2	90	16	60	35	28	2.00	4	6	40	2	4	M12	14	0.7	x	
40	15	20.0*	95	16	65	38	30	2.0	4	6	45	2	4	M12	14	1.0	x	

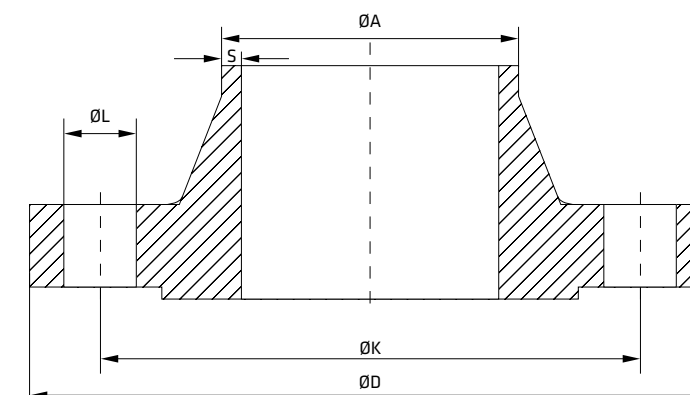


\* Finishes: page 311; no standard pipe connection

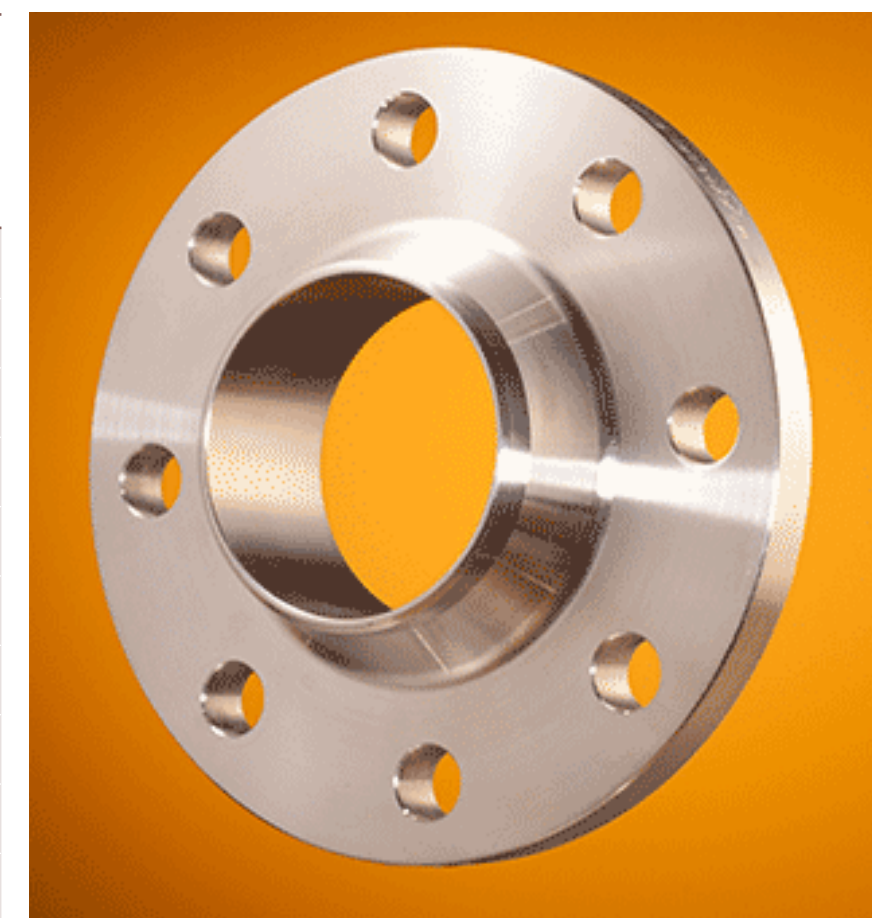
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (10/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4301/ 1.4307 kg/pce. 304/304L
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
40	15	21.3	95	16	65	38	32	2.0	4	6	45	2	4	M12	14	1.0 x
40	15	21.34	95		65			2.11					4		14	1.00
40	15	21.34	95		65			2.77					4		14	1.02
40	20	25.0*	105	18	75	40	38	2.3	4	6	58	2	4	M12	14	1.0 x
40	20	26.67	105		75			2.87					4		14	1.05
40	20	26.9	105	18	75	40	40	2.3	4	6	58	2	4	M12	14	1.0 x
40	25	30.0*	115	18	85	40	42	2.6	4	6	68	2	4	M12	14	1.0 x
40	25	33.40	115		85			2.77					4		14	1.31
40	25	33.40	115		85			3.38					4		14	1.32 x
40	25	33.7	115	18	85	40	46	2.6	4	6	68	2	4	M12	14	1.0 x



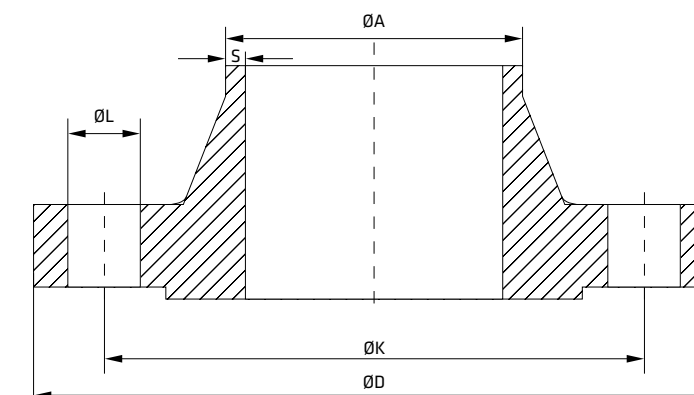
\* Finishes: page 311; no standard pipe connection



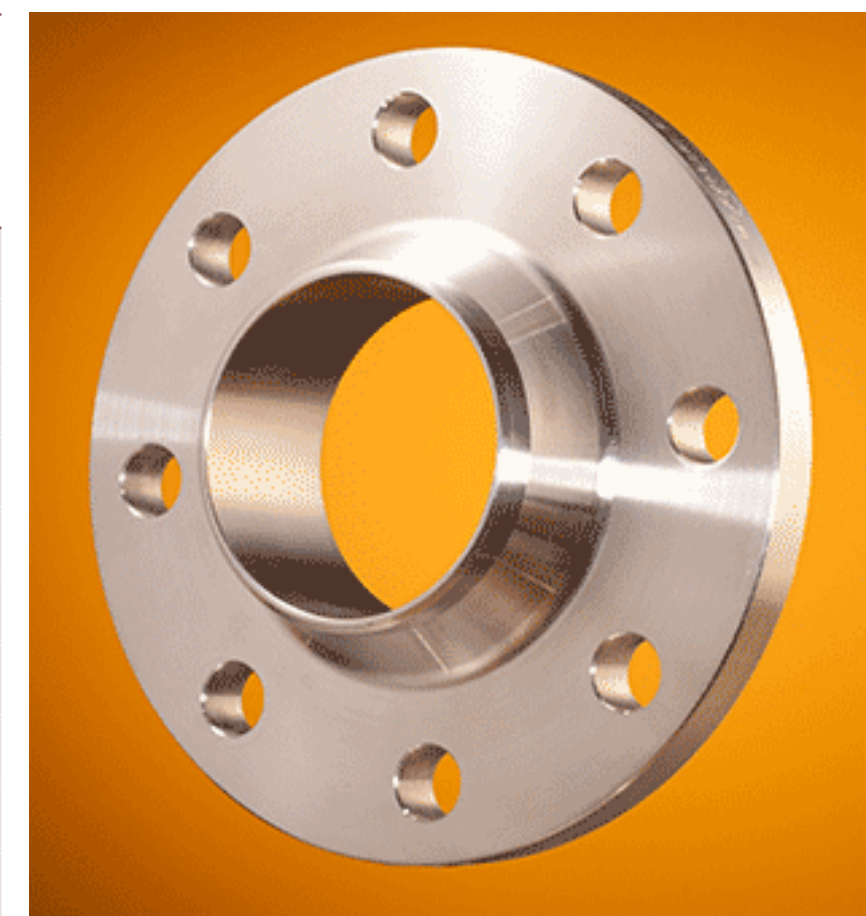
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (11/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4301/ 1.4307 kg/pce. 304/304L
PN	DN	mm	mm	mm	mm		mm									
40	32	38.0*	140	18	100	42	52	2.6	6	6	78	2	4	M16	18	2.0 x
40	32	42.16	140		100			2.77					4		18	1.95
40	32	42.16	140		100			3.56					4		18	1.92
40	32	42.4	140	18	100	42	56	2.6	6	6	78	2	4	M16	18	2.0 x
40	40	44.5*	150	18	110	45	60	2.6	6	7	88	2	4	M16	18	2.0 x
40	40	48.26	150		110			2.77					4		18	2.16
40	40	48.26	150		110			3.68					4		18	2.20
40	40	48.3	150	18	110	45	64	2.6	6	7	88	2	4	M16	18	2.0 x
40	50	57.0*	165	20	125	48	72	2.9	6	8	102	2	4	M16	18	3.0 x
40	50	60.3	165	20	125	48	75	2.9	6	8	102	2	4	M16	18	3.0 x

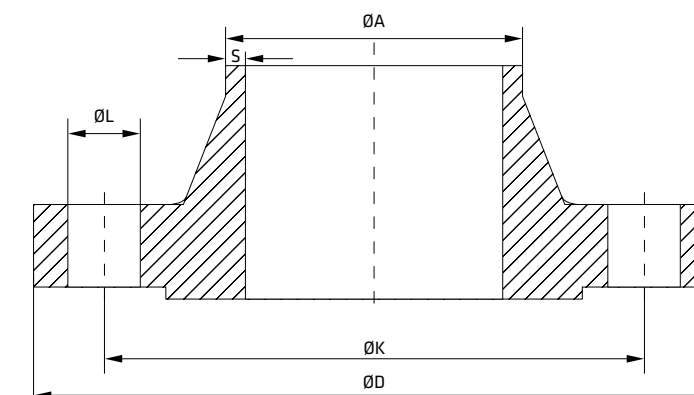


\* Finishes: page 311; no standard pipe connection

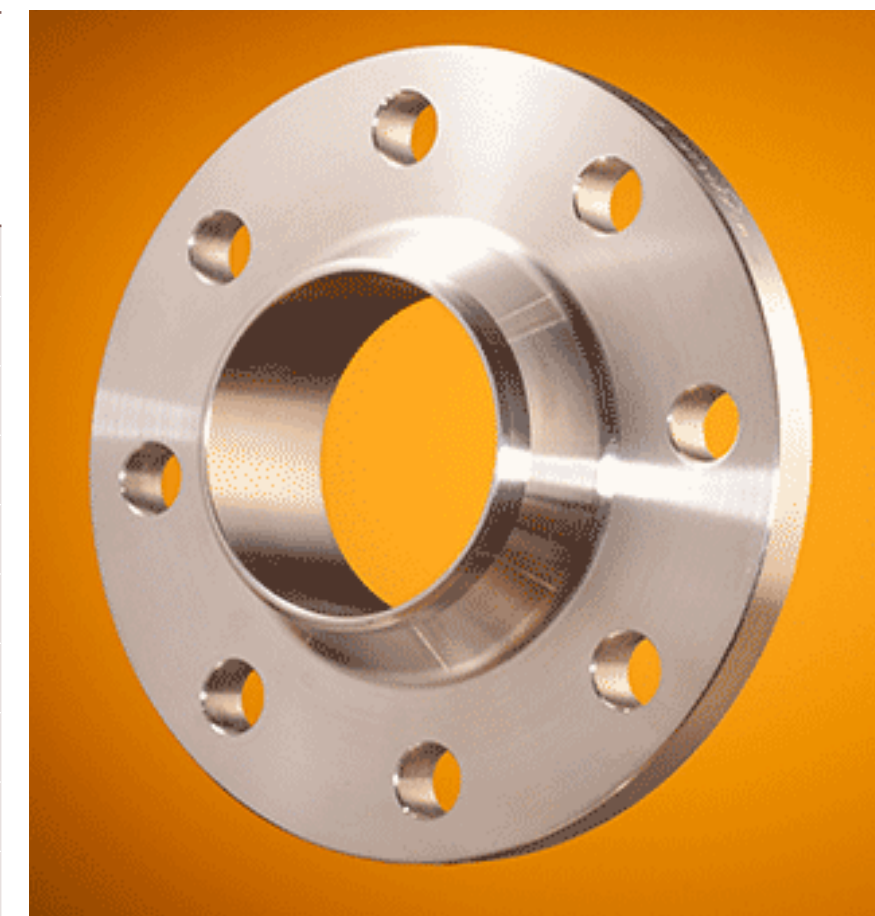
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4301 (12/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4301/ AISI 1.4307	kg/pce.	304/304L
PN	DN	mm	mm	mm	mm		mm											
40	65	76.1	185	22	145	52	90	2.9	6	10	122	2	8	M16	18	4.0	x	
40	80	88.9	200	24	160	58	105	3.2	8	12	138	2	8	M16	18	5.0	x	
40	100	114.3	235	24	190	65	134	3.6	8	12	162	2	8	M20	22	6.5	x	
40	125	139.7	270	26	220	68	162	4.0	8	12	188	2	8	M24	26	9.0	x	
40	150	168.3	300	28	250	75	192	4.5	10	12	218	2	8	M24	26	11.5	x	
40	200	219.1	375	34	320	88	244	6.3	10	16	285	2	12	M27	30	21.0	x	
40	250	273.0	450	38	385	105	306	7.1	12	18	345	2	12	M30	33	34.0	x	
40	300	323.9	515	42	450	115	362	8.0	12	18	410	2	16	M30	33	47.5	x	



\* Finishes: page 311; no standard pipe connection



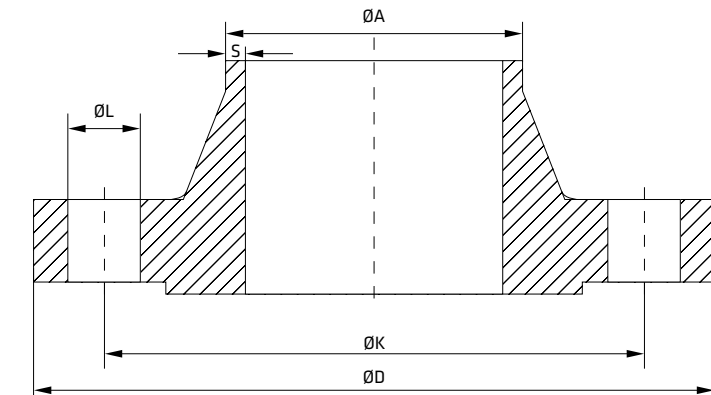




# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (3/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L
PN	DN	mm	mm	mm	mm		mm											
10	200	206.0	340	24	295	62	234	3.0	10	16	268	2	8	M20	22	10.5		
10	200	219.1	340	24	295	62	234	6.3	10	16	268	2	8	M20	22	11.5	x	
10	250	254.0	395	26	350	68	292	2.0	12	16	320	2	12	M20	22	14.6		
10	250	256.0	395	26	350	68	292	3.0	12	16	320	2	12	M20	22	14.8		
10	250	273.0	395	26	350	68	292	6.3	12	16	320	2	12	M20	22	15.5	x	
10	300	306.0	445	26	400	68	342	3.0	12	16	370	2	12	M20	22	15.2		
10	300	323.9	445	26	400	68	342	7.1	12	16	370	2	12	M20	22	18.0	x	
10	350	355.6	505	26	460	68	385	7.1	12	16	430	2	16	M20	22	24.5	x	
10	400	406.4	565	26	515	72	440	7.1	12	16	482	2	16	M24	26	29.5	x	
10	450	457.2	615	28	565	72	488	7.1	12	16	532	2	20	M24	26	34.0	x	

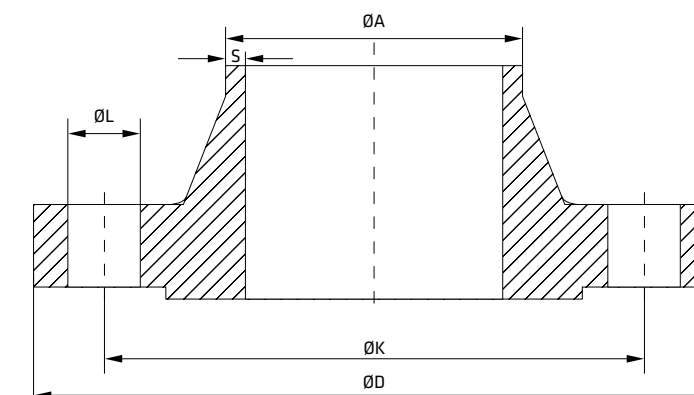


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (4/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce. 316/316L
PN	DN	mm	mm	mm	mm		mm										
10	500	508.0	670	28	620	75	542	7.1	12	16	585	2	20	M24	26	39.5	x
10	600	609.6	780	28	725	80	642	7.1	12	18	685	2	20	M27	30	56.0	x
10	700	711.2	895	30	840	80	746	8.0	12	18	800	2	24	M27	30	65.0	x
10	800	812.8	1015	32	950	90	850	8.0	12	18	905	2	24	M30	33	87.0	x
16	50	54.0*	165	16	125	45	72	2.0	5	8	102	2	4	M16	18	2.5	x
16	50	57.0*	165	18	125	45	72	2.9	5	8	102	2	4	M16	18	2.5	x
16	50	60.3	165		125			2.77					4		18	2.5	
16	50	60.3	165	18	125	45	74	2.9	5	8	102	2	4	M16	18	2.5	x
16	50	60.3	165		125			3.91					4		18	2.5	x
16	50	60.3	165		125			5.54					4		18	2.6	

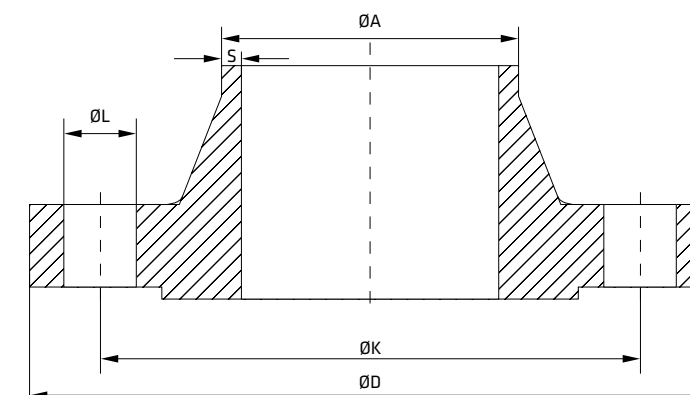


\* Finishes: page 311; no standard pipe connection

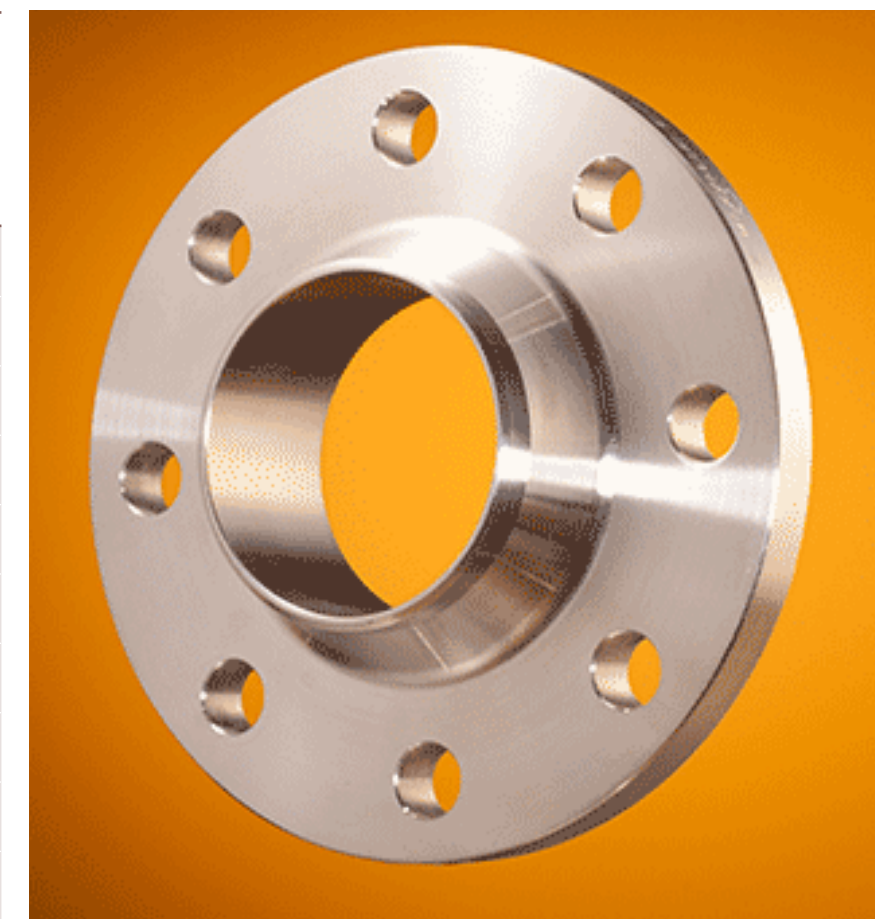
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (5/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L
PN	DN	mm	mm	mm	mm		mm											
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	4	M16	18	3.0		x
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	8	M16	18	3.0		
16	65	73.03	185		145			3.05					8		18	3.0		
16	65	73.03	185		145			5.16					8		18	3.2		
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	4	M16	18	3.0		x
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	8	M16	18	3.0		x
16	65	76.10	185		145			4.00					8		18	3.2		
16	80	84.0*	200	20	160	50	105	2.0	8	10	138	2	8	M16	18	4.0		x
16	80	88.90	200		160			3.05					8		18	4.0		
16	80	88.9	200	20	160	50	105	3.2	6	10	138	2	8	M16	18	4.0		x



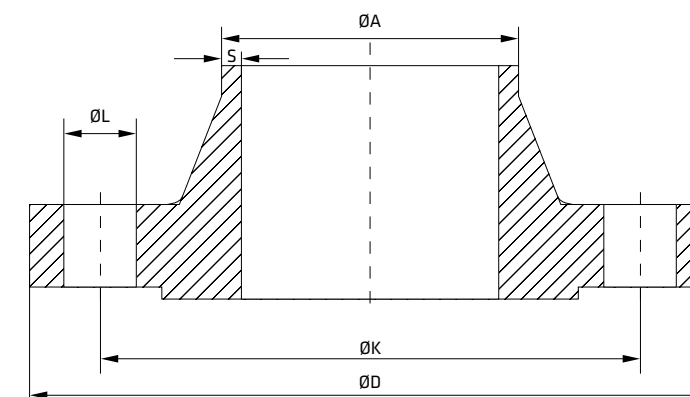
\* Finishes: page 311; no standard pipe connection



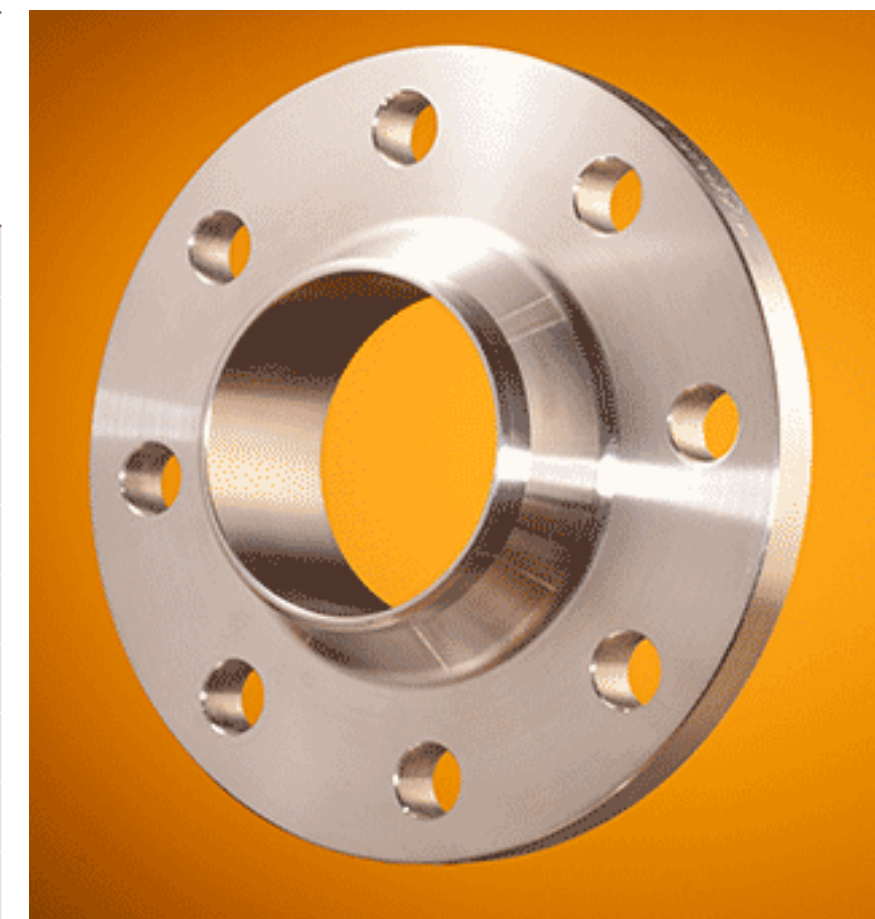
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (6/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L
PN	DN	mm	mm	mm	mm	mm	mm											
16	80	88.90	200		160		4.00					8		18	4.0			
16	80	88.90	200		160		5.49					8		18	4.9	x		
16	100	104.0*	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.5	x	
16	100	106.0	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.8		
16	100	108.0*	220	20	180	52	125	3.6	8	12	158	2	8	M16	18	4.5	x	
16	100	114.30	220		180			3.05				8		18	4.5			
16	100	114.3	220	20	180	52	131	3.6	8	12	158	2	8	M16	18	4.5	x	
16	100	114.30	220		180			6.02				8		18	5.0	x		
16	125	129.0*	250	22	210	55	150	2.0	8	12	188	2	8	M16	18	6.5	x	
16	125	133.0*	250	22	210	55	150	4.0	8	12	188	2	8	M16	18	6.5	x	



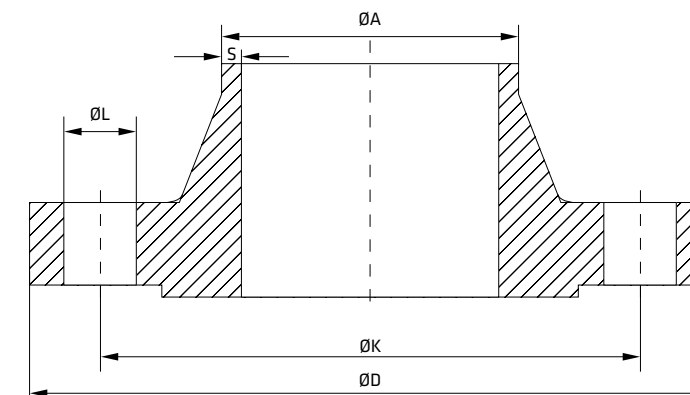
\* Finishes: page 311; no standard pipe connection



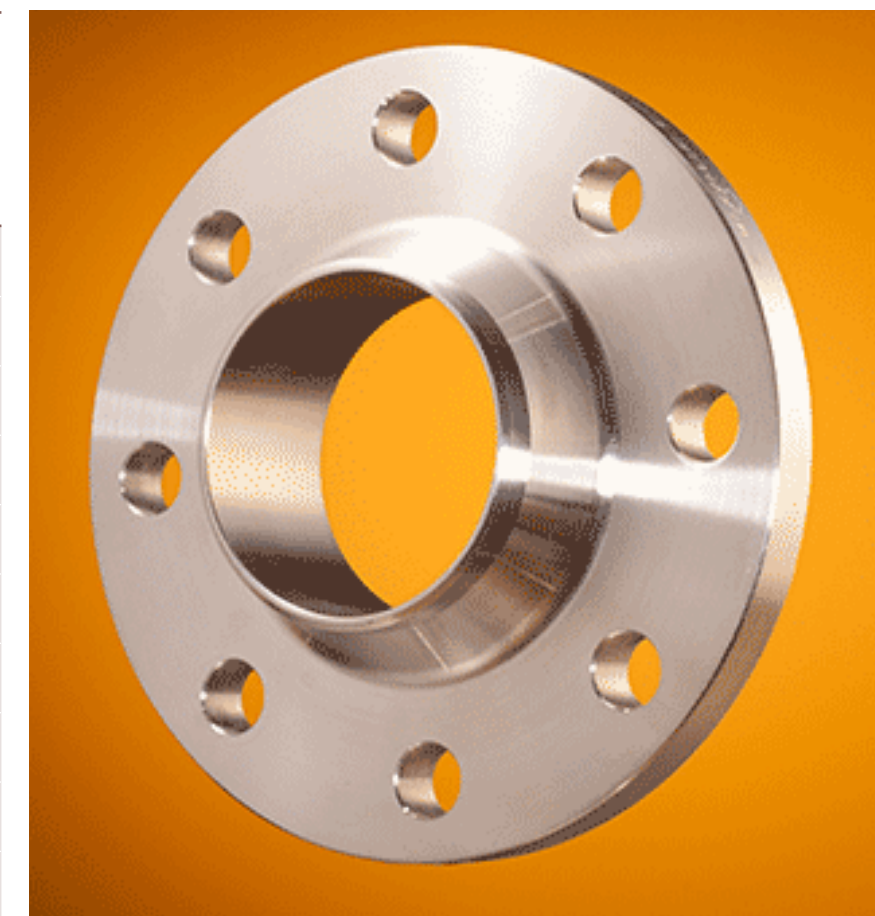
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (7/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
16	125	139.7	250	22	210	55	156	4.0	8	12	188	2	8	M16	18	6.5		x	
16	125	139.70	250		210			6.55					8		18	6.8			
16	125	141.30	250		210			6.55					8		18	7.0			
16	150	154.0*	285	22	240	55	175	2.0	10	12	212	2	8	M20	22	7.5		x	
16	150	156.0*	285	22	240	55	175	3.0	10	12	212	2	8	M20	22	7.5		x	
16	150	159.0*	285	22	240	55	175	4.5	10	12	212	2	8	M20	22	7.5		x	
16	150	168.3	285	22	240	55	184	4.5	10	12	212	2	8	M20	22	7.5		x	
16	150	168.30	285		240			7.11					8		22	8.4		x	
16	200	219.1	340	24	295	62	235	6.3	10	16	268	2	12	M20	22	11.0		x	
16	200	219.10	340		295			8.18					12		22	12.2		x	

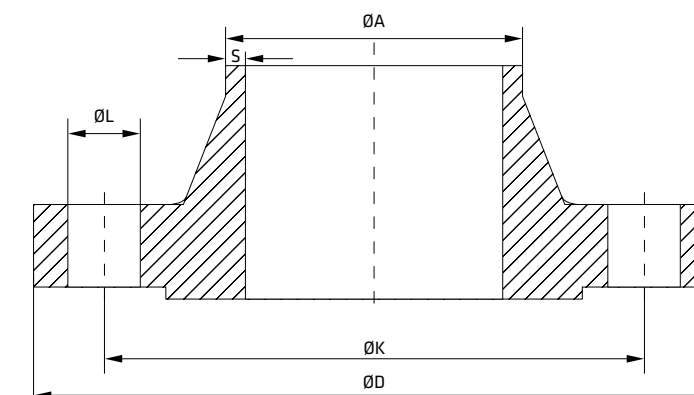


\* Finishes: page 311; no standard pipe connection

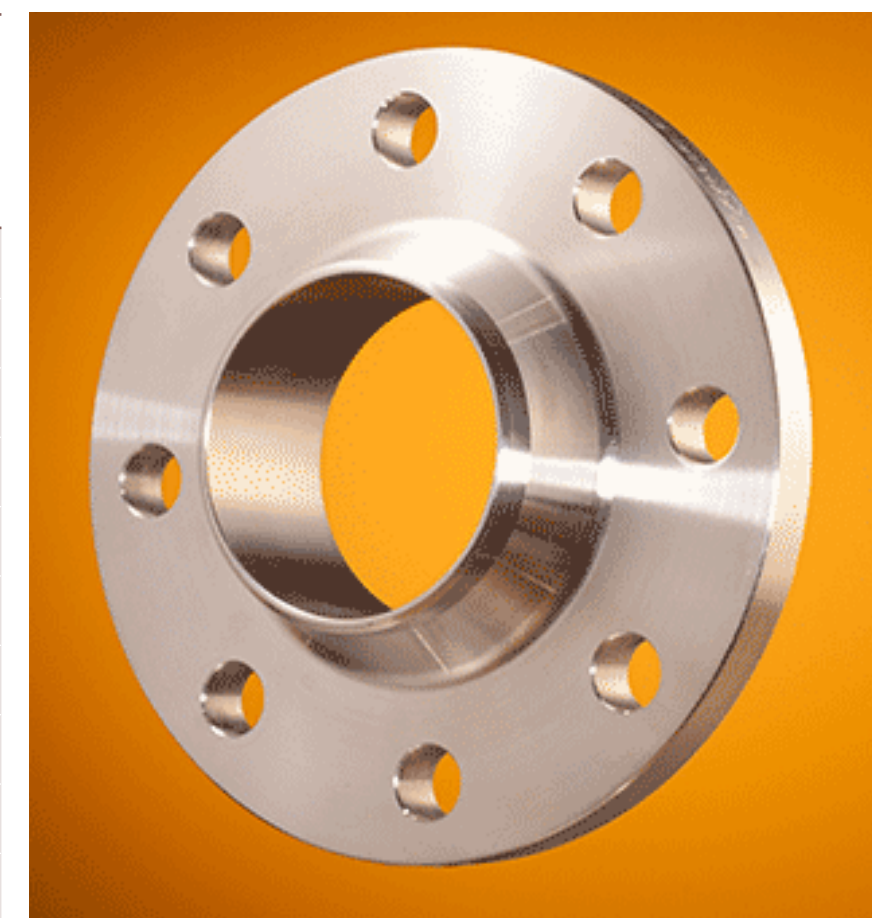
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (8/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4401/ 1.4404 kg/pce. 316/316L
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			mm		
16	250	273.0	405	26	355	70	292	6.3	12	16	320	2	12	M24	26	16.7 x
16	300	323.9	460	28	410	78	344	7.1	12	16	378	2	12	M24	26	22.1 x
16	350	355.6	505		460			7.10					16		22	32.80
16	350	355.6	520	30	470	82	390	8.0	12	16	438	2	16	M24	26	32.0 x
16	400	406.4	565		515			7.10					16		26	41.10
16	400	406.4	580	32	525	85	445	8.0	12	16	490	2	16	M27	30	40.0 x
16	450	457.0	640	40	585	87	490	8.0	12	16	550	2	20	M27	30	54.5 x
16	500	508.0	670		620			7.10					20		26	66.20
16	500	508.0	715	44	650	90	548	8.0	12	16	610	2	20	M30	33	74.0 x
16	600	609.6	840	54	770	95	652	8.8	12	18	725	2	20	M33	36	116.5 x

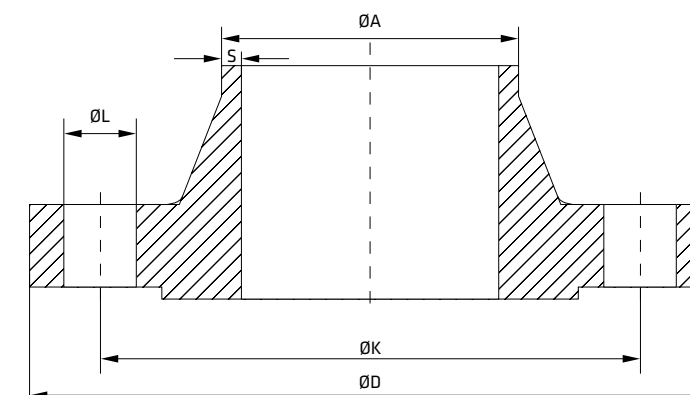


\* Finishes: page 311; no standard pipe connection

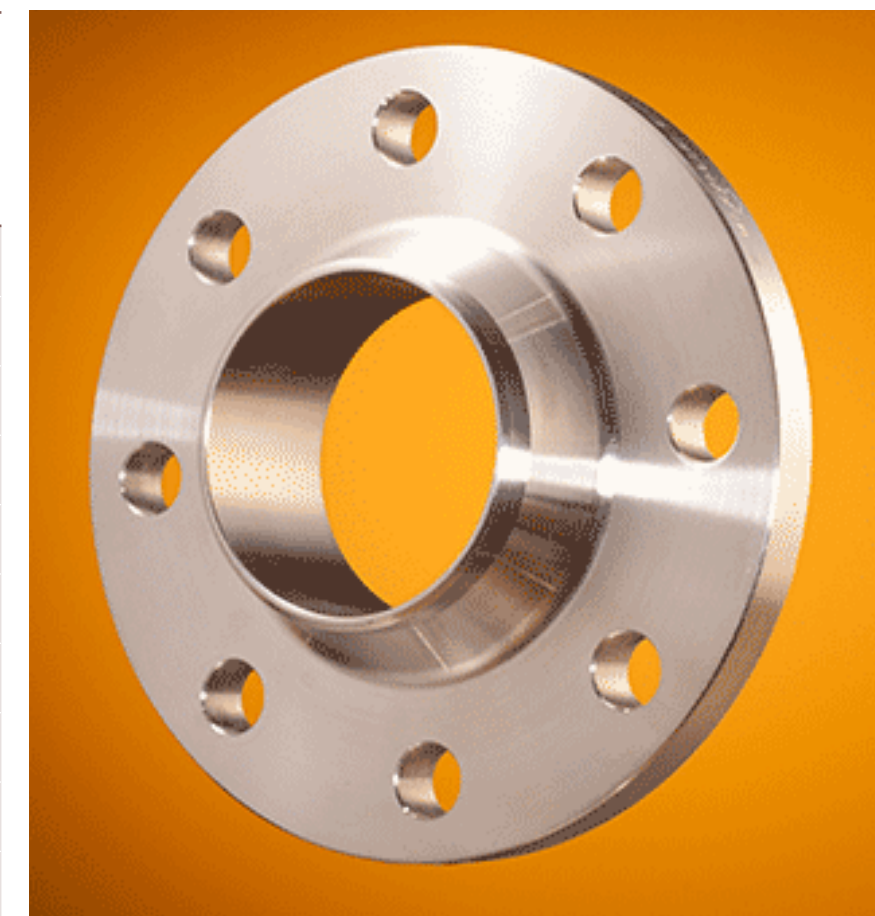
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (9/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
25	200	219.1	360	30	310	80	244	6.3	10	16	278	2	12	M24	26	17.0	x		
25	250	273.0	425	32	370	88	298	7.1	12	18	335	2	12	M27	30	24.0	x		
25	300	323.9	485	34	430	92	352	8.0	12	18	395	2	16	M27	30	31.5	x		
25	350	355.6	555	38	490	100	398	8.0	12	20	450	2	16	M30	33	48.0	x		
25	400	406.4	620	40	550	110	452	8.8	12	20	505	2	16	M33	36	63.0	x		
25	450	457.0	670	46	600	110	500	8.8	12	20	555	2	20	M33	36	75.5	x		
25	500	508.0	730	48	660	125	558	10.0	12	20	615	2	20	M33	36	96.5	x		
25	600	609.6	845	58	770	125	660	11.0	12	20	720	2	20	M36	39	138.6	x		
40	10	17.2	90	16	60	35	28	2.00	4	6	40	2	4	M12	14	0.7	x		
40	15	20.0*	95	16	65	38	30	2.0	4	6	45	2	4	M12	14	1.0	x		

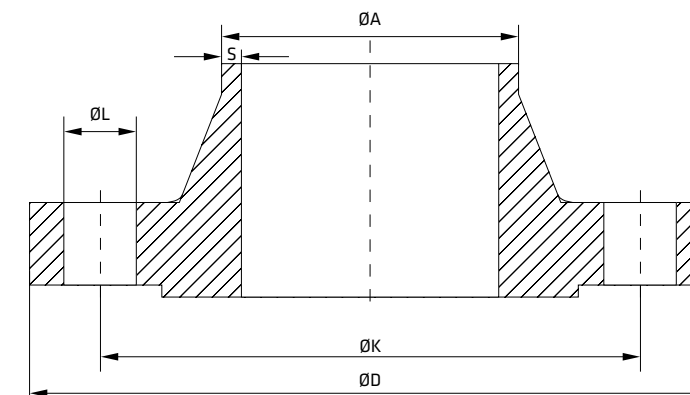


\* Finishes: page 311; no standard pipe connection

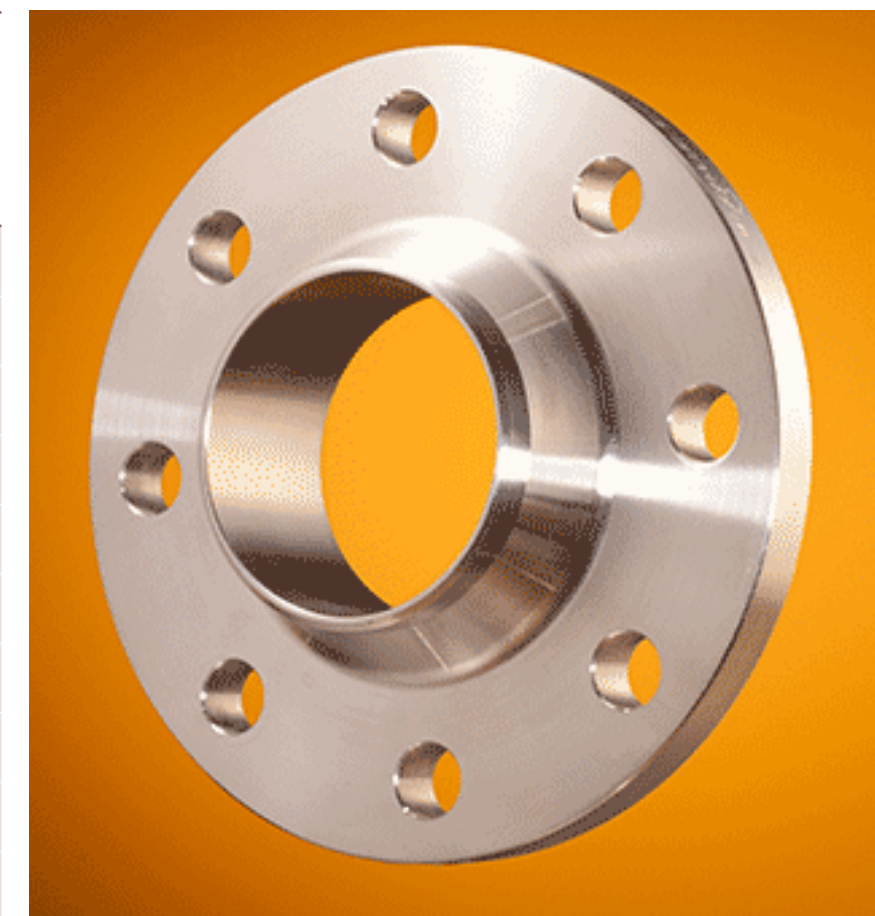
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (10/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
40	15	21.3	95	16	65	38	32	2.0	4	6	45	2	4	M12	14	1.0		x
40	15	21.34	95		65			2.11					4		14	1.00		
40	15	21.34	95		65			2.77					4		14	1.02		x
40	20	25.0*	105	18	75	40	38	2.3	4	6	58	2	4	M12	14	1.0		x
40	20	26.67	105		75			2.87					4		14	1.05		
40	20	26.9	105	18	75	40	40	2.3	4	6	58	2	4	M12	14	1.0		x
40	25	30.0*	115	18	85	40	42	2.6	4	6	68	2	4	M12	14	1.0		x
40	25	33.40	115		85			2.77					4		14	1.31		
40	25	33.40	115		85			3.38					4		14	1.32		x
40	25	33.7	115	18	85	40	46	2.6	4	6	68	2	4	M12	14	1.0		x



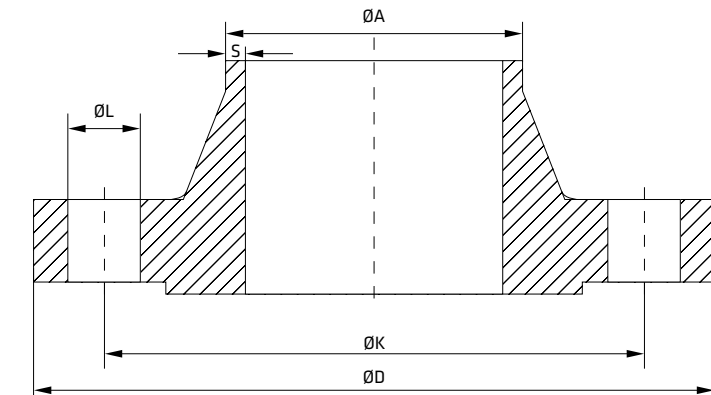
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (11/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L
PN	DN	mm	mm	mm	mm		mm											
40	32	38.0*	140	18	100	42	52	2.6	6	6	78	2	4	M16	18	2.0		x
40	32	42.16	140		100			2.77					4		18	1.95		
40	32	42.16	140		100			3.56					4		18	1.92		
40	32	42.4	140	18	100	42	56	2.6	6	6	78	2	4	M16	18	2.0		x
40	40	44.5*	150	18	110	45	60	2.6	6	7	88	2	4	M16	18	2.0		x
40	40	48.26	150		110			2.77					4		18	2.16		
40	40	48.26	150		110			3.68					4		18	2.20		x
40	40	48.3	150	18	110	45	64	2.6	6	7	88	2	4	M16	18	2.0		x
40	50	57.0*	165	20	125	48	72	2.9	6	8	102	2	4	M16	18	3.0		x
40	50	60.3	165	20	125	48	75	2.9	6	8	102	2	4	M16	18	3.0		x

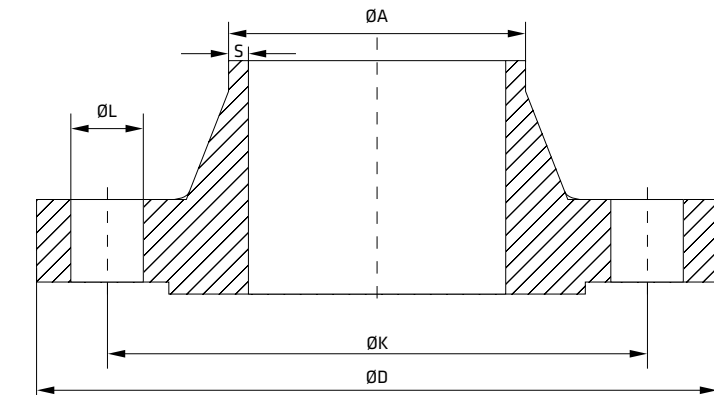


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4401 (12/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4401/ AISI 1.4404	kg/pce.	316/316L
PN	DN	mm	mm	mm	mm		mm											
40	65	76.1	185	22	145	52	90	2.9	6	10	122	2	8	M16	18	4.0	x	
40	80	88.9	200	24	160	58	105	3.2	8	12	138	2	8	M16	18	5.0	x	
40	100	114.3	235	24	190	65	134	3.6	8	12	162	2	8	M20	22	6.5	x	
40	125	139.7	270	26	220	68	162	4.0	8	12	188	2	8	M24	26	9.0	x	
40	150	168.3	300	28	250	75	192	4.5	10	12	218	2	8	M24	26	11.5	x	
40	200	219.1	375	34	320	88	244	6.3	10	16	285	2	12	M27	30	21.0	x	
40	250	273.0	450	38	385	105	306	7.1	12	18	345	2	12	M30	33	34.0	x	
40	300	323.9	515	42	450	115	362	8.0	12	18	410	2	16	M30	33	47.5	x	



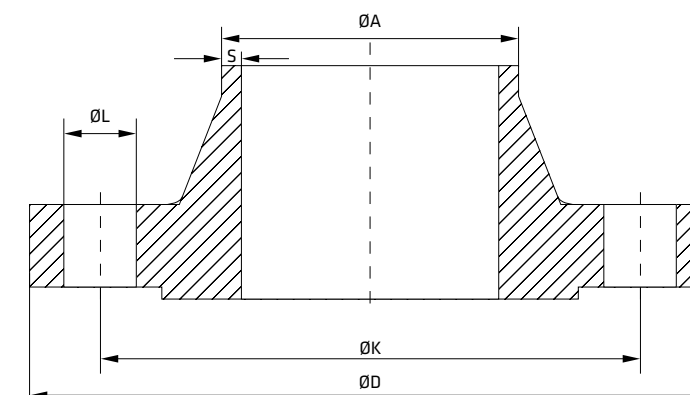
\* Finishes: page 311; no standard pipe connection



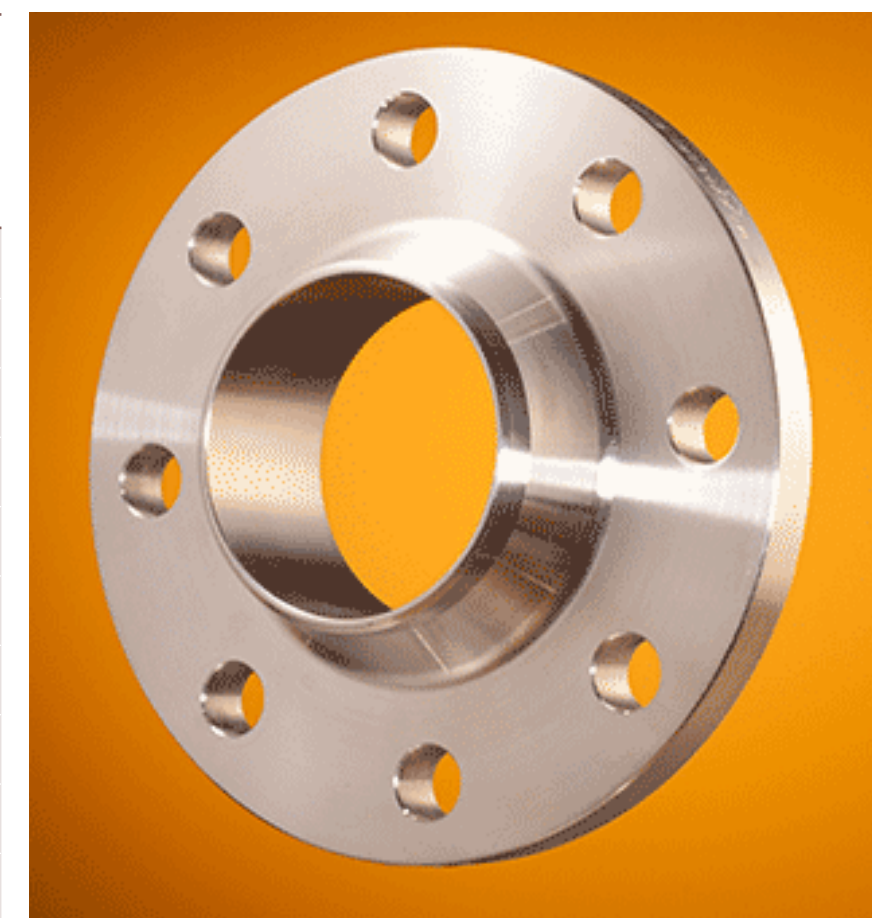
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (2/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4462 S31803
PN	DN	mm	mm	mm	mm		mm								kg/pce.	
6	150	168.3	265	18	225	48	184	4.5	10	12	202	2	8	M16	18	5.5
6	200	219.1	320	20	280	55	236	6.3	10	15	258	2	8	M16	18	8.0
6	250	273.0	375	22	335	60	290	6.3	12	15	312	2	12	M16	18	11.5
6	300	323.9	440	22	395	62	342	7.1	12	15	365	2	12	M20	22	15.0
6	350	355.6	490	22	445	62	385	7.1	12	15	415	2	12	M20	22	19.5
6	400	406.4	540	22	495	65	438	7.1	12	15	465	2	16	M20	22	22.0
6	450	457.2	595	22	550	65	492	7.1	12	15	520	2	16	M20	22	25.0
6	500	508.0	645	24	600	68	538	7.1	12	15	570	2	20	M20	22	29.5
6	600	609.6	755	30	705	70	640	7.1	12	16	670	2	20	M24	26	43.0
10	200	204.0	340	24	295	62	234	2.0	10	16	268	2	8	M20	22	10.4



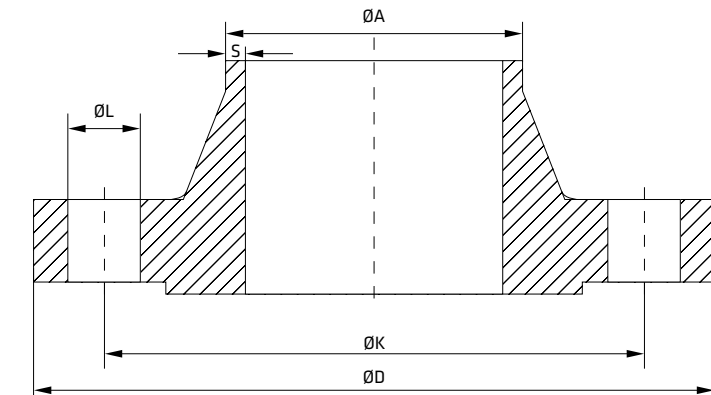
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (3/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4462
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI	S31803
10	200	206.0	340	24	295	62	234	3.0	10	16	268	2	8	M20	22	10.5
10	200	219.1	340	24	295	62	234	6.3	10	16	268	2	8	M20	22	11.5
10	250	254.0	395	26	350	68	292	2.0	12	16	320	2	12	M20	22	14.6
10	250	256.0	395	26	350	68	292	3.0	12	16	320	2	12	M20	22	14.8
10	250	273.0	395	26	350	68	292	6.3	12	16	320	2	12	M20	22	15.5
10	300	306.0	445	26	400	68	342	3.0	12	16	370	2	12	M20	22	15.2
10	300	323.9	445	26	400	68	342	7.1	12	16	370	2	12	M20	22	18.0
10	350	355.6	505	26	460	68	385	7.1	12	16	430	2	16	M20	22	24.5
10	400	406.4	565	26	515	72	440	7.1	12	16	482	2	16	M24	26	29.5
10	450	457.2	615	28	565	72	488	7.1	12	16	532	2	20	M24	26	34.0

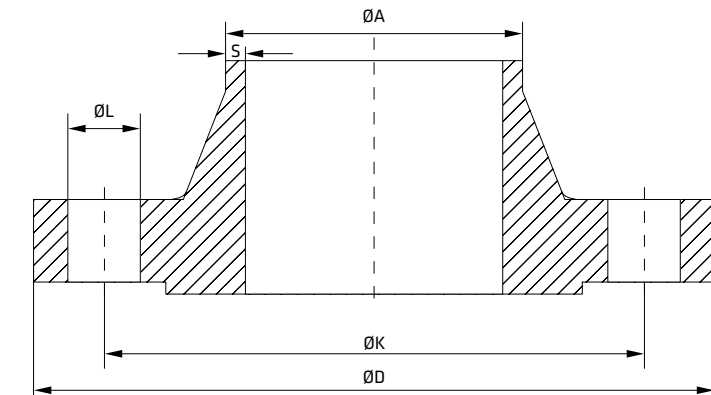


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (4/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4462 S31803	
PN	DN	mm	mm	mm	mm		mm								kg/pce.		
10	500	508.0	670	28	620	75	542	7.1	12	16	585	2	20	M24	26	39.5	
10	600	609.6	780	28	725	80	642	7.1	12	18	685	2	20	M27	30	56.0	
10	700	711.2	895	30	840	80	746	8.0	12	18	800	2	24	M27	30	65.0	
10	800	812.8	1015	32	950	90	850	8.0	12	18	905	2	24	M30	33	87.0	
16	50	54.0*	165	16	125	45	72	2.0	5	8	102	2	4	M16	18	2.5	
16	50	57.0*	165	18	125	45	72	2.9	5	8	102	2	4	M16	18	2.5	
16	50	60.3	165		125			2.77				4			18	2.5	x
16	50	60.3	165	18	125	45	74	2.9	5	8	102	2	4	M16	18	2.5	
16	50	60.3	165		125			3.91				4			18	2.5	x
16	50	60.3	165		125			5.54				4			18	2.6	x



\* Finishes: page 311; no standard pipe connection



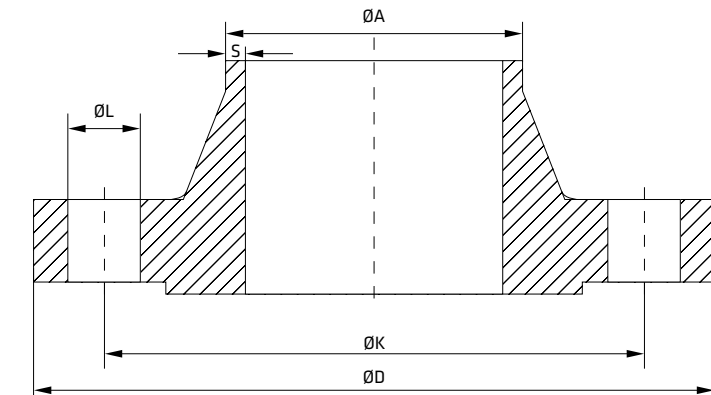




# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (7/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4462 S31803	
PN	DN	mm	mm	mm	mm		mm								kg/pce.		
16	125	139.7	250	22	210	55	156	4.0	8	12	188	2	8	M16	18	6.5	
16	125	139.70	250		210			6.55				8			18	6.8	x
16	125	141.30	250		210			6.55				8			18	7.0	x
16	150	154.0*	285	22	240	55	175	2.0	10	12	212	2	8	M20	22	7.5	
16	150	156.0*	285	22	240	55	175	3.0	10	12	212	2	8	M20	22	7.5	
16	150	159.0*	285	22	240	55	175	4.5	10	12	212	2	8	M20	22	7.5	
16	150	168.3	285	22	240	55	184	4.5	10	12	212	2	8	M20	22	7.5	
16	150	168.30	285		240			7.11				8			22	8.4	x
16	200	219.1	340	24	295	62	235	6.3	10	16	268	2	12	M20	22	11.0	
16	200	219.10	340		295			8.18				12			22	12.2	x



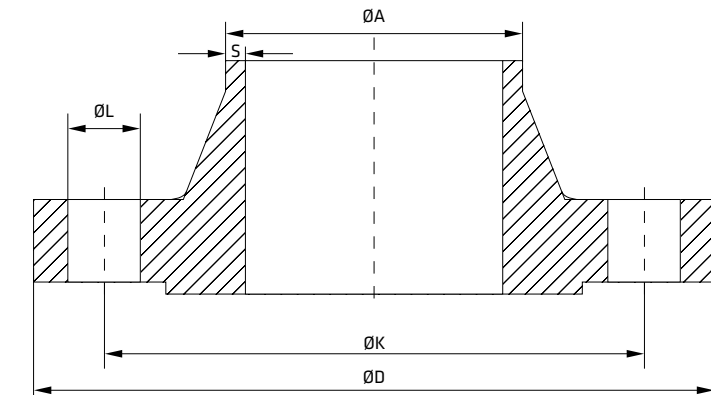
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (9/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4462 S31803
PN	DN	mm	mm	mm	mm		mm								kg/pce.	
25	200	219.1	360	30	310	80	244	6.3	10	16	278	2	12	M24	26	17.0
25	250	273.0	425	32	370	88	298	7.1	12	18	335	2	12	M27	30	24.0
25	300	323.9	485	34	430	92	352	8.0	12	18	395	2	16	M27	30	31.5
25	350	355.6	555	38	490	100	398	8.0	12	20	450	2	16	M30	33	48.0
25	400	406.4	620	40	550	110	452	8.8	12	20	505	2	16	M33	36	63.0
25	450	457.0	670	46	600	110	500	8.8	12	20	555	2	20	M33	36	75.5
25	500	508.0	730	48	660	125	558	10.0	12	20	615	2	20	M33	36	96.5
25	600	609.6	845	58	770	125	660	11.0	12	20	720	2	20	M36	39	138.6
40	10	17.2	90	16	60	35	28	2.00	4	6	40	2	4	M12	14	0.7
40	15	20.0*	95	16	65	38	30	2.0	4	6	45	2	4	M12	14	1.0

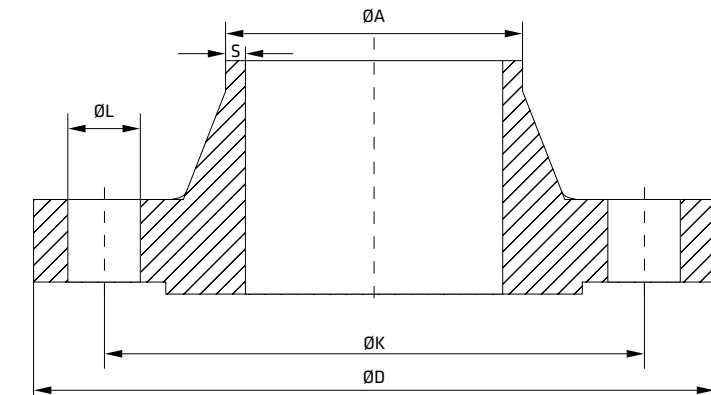


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (10/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4462 S31803	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.		
40	15	21.3	95	16	65	38	32	2.0	4	6	45	2	4	M12	14	1.0	
40	15	21.34	95		65			2.11					4		14	1.00	x
40	15	21.34	95		65			2.77					4		14	1.02	x
40	20	25.0*	105	18	75	40	38	2.3	4	6	58	2	4	M12	14	1.0	
40	20	26.67	105		75			2.87					4		14	1.05	x
40	20	26.9	105	18	75	40	40	2.3	4	6	58	2	4	M12	14	1.0	
40	25	30.0*	115	18	85	40	42	2.6	4	6	68	2	4	M12	14	1.0	
40	25	33.40	115		85			2.77					4		14	1.31	x
40	25	33.40	115		85			3.38					4		14	1.32	x
40	25	33.7	115	18	85	40	46	2.6	4	6	68	2	4	M12	14	1.0	



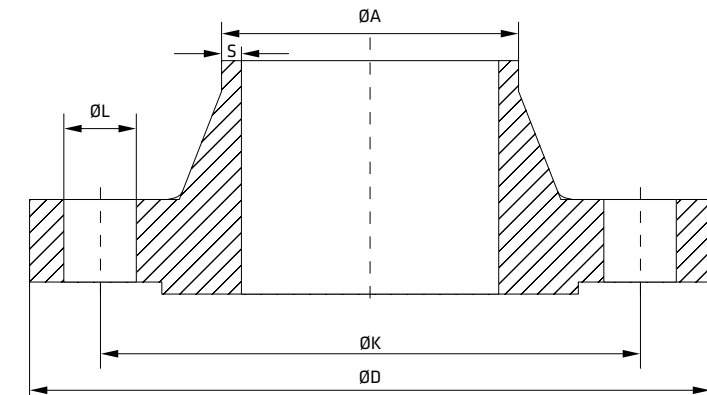
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (11/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4462	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI	S31803	
															kg/pce.		
40	32	38.0*	140	18	100	42	52	2.6	6	6	78	2	4	M16	18	2.0	
40	32	42.16	140		100			2.77					4		18	1.95	x
40	32	42.16	140		100			3.56					4		18	1.92	x
40	32	42.4	140	18	100	42	56	2.6	6	6	78	2	4	M16	18	2.0	
40	40	44.5*	150	18	110	45	60	2.6	6	7	88	2	4	M16	18	2.0	x
40	40	48.26	150		110			2.77					4		18	2.16	x
40	40	48.26	150		110			3.68					4		18	2.20	
40	40	48.3	150	18	110	45	64	2.6	6	7	88	2	4	M16	18	2.0	
40	50	57.0*	165	20	125	48	72	2.9	6	8	102	2	4	M16	18	3.0	
40	50	60.3	165	20	125	48	75	2.9	6	8	102	2	4	M16	18	3.0	

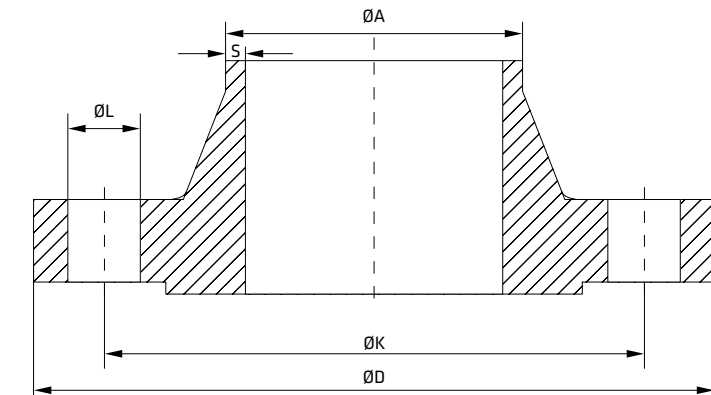


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4462 (12/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4462 S31803
PN	DN	mm	mm	mm	mm		mm								kg/pce.	
40	65	76.1	185	22	145	52	90	2.9	6	10	122	2	8	M16	18	4.0
40	80	88.9	200	24	160	58	105	3.2	8	12	138	2	8	M16	18	5.0
40	100	114.3	235	24	190	65	134	3.6	8	12	162	2	8	M20	22	6.5
40	125	139.7	270	26	220	68	162	4.0	8	12	188	2	8	M24	26	9.0
40	150	168.3	300	28	250	75	192	4.5	10	12	218	2	8	M24	26	11.5
40	200	219.1	375	34	320	88	244	6.3	10	16	285	2	12	M27	30	21.0
40	250	273.0	450	38	385	105	306	7.1	12	18	345	2	12	M30	33	34.0
40	300	323.9	515	42	450	115	362	8.0	12	18	410	2	16	M30	33	47.5

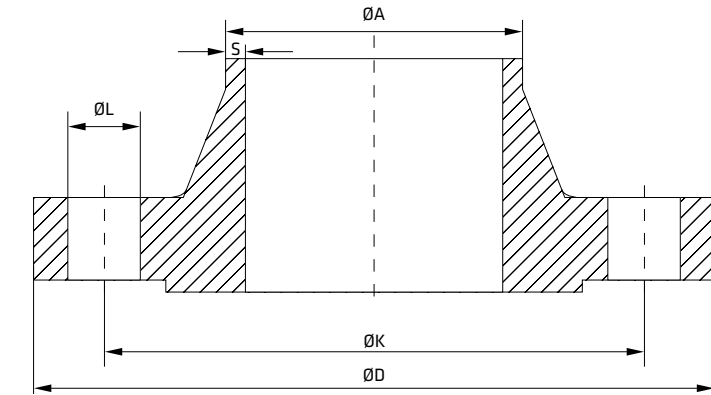


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (1/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4539
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			mm	AISI	904L
																	kg/pce.	*)
6	15	21.3	80	12	55	30	30	2.0	4	6	40	2	4	M10	11	0.5		
6	20	26.9	90	14	65	32	38	2.3	4	6	50	2	4	M10	11	0.5		
6	25	33.7	100	14	75	35	42	2.6	4	6	60	2	4	M10	11	1.0		
6	32	42.4	120	14	90	35	55	2.6	6	6	70	2	4	M12	14	1.0		
6	40	48.3	130	14	100	38	62	2.6	6	7	80	2	4	M12	14	1.5		
6	50	60.3	140	14	110	38	74	2.9	6	8	90	2	4	M12	14	1.5		
6	65	76.1	160	14	130	38	88	2.9	6	9	110	2	4	M12	14	2.0		
6	80	88.9	190	16	150	42	102	3.2	8	10	128	2	4	M16	18	3.0		
6	100	114.3	210	16	170	45	130	3.6	8	10	148	2	4	M16	18	3.5		
6	125	139.7	240	18	200	48	155	4.0	8	10	178	2	8	M16	18	4.5		

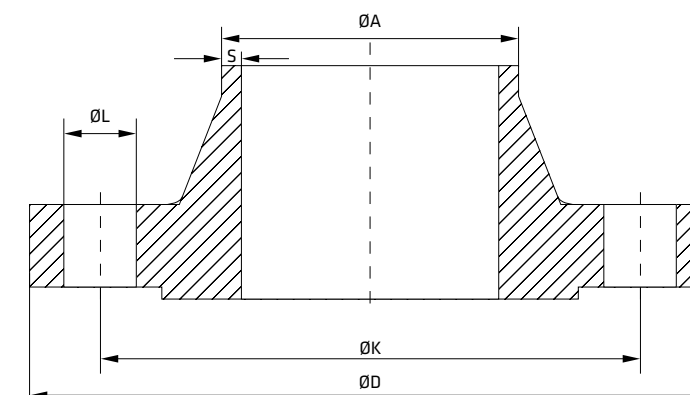


\* Finishes: page 311; no standard pipe connection

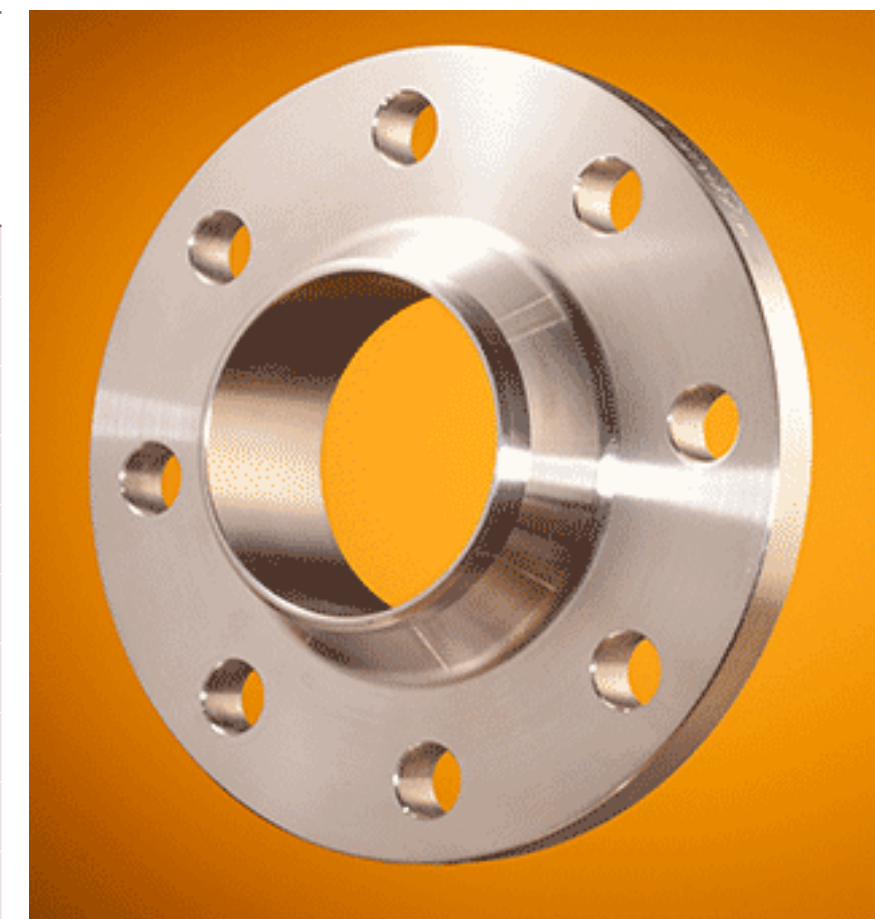
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (2/12)



PN	DN	OD mm	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1 mm	H3 mm	D1 mm	F1 mm	drill holes	AFM Size	L mm	Grade AISI	1.4539 904L kg/pce. *)
6	150	168.3	265	18	225	48	184	4.5	10	12	202	2	8	M16	18	5.5		
6	200	219.1	320	20	280	55	236	6.3	10	15	258	2	8	M16	18	8.0		
6	250	273.0	375	22	335	60	290	6.3	12	15	312	2	12	M16	18	11.5		
6	300	323.9	440	22	395	62	342	7.1	12	15	365	2	12	M20	22	15.0		
6	350	355.6	490	22	445	62	385	7.1	12	15	415	2	12	M20	22	19.5		
6	400	406.4	540	22	495	65	438	7.1	12	15	465	2	16	M20	22	22.0		
6	450	457.2	595	22	550	65	492	7.1	12	15	520	2	16	M20	22	25.0		
6	500	508.0	645	24	600	68	538	7.1	12	15	570	2	20	M20	22	29.5		
6	600	609.6	755	30	705	70	640	7.1	12	16	670	2	20	M24	26	43.0		
10	200	204.0	340	24	295	62	234	2.0	10	16	268	2	8	M20	22	10.4		



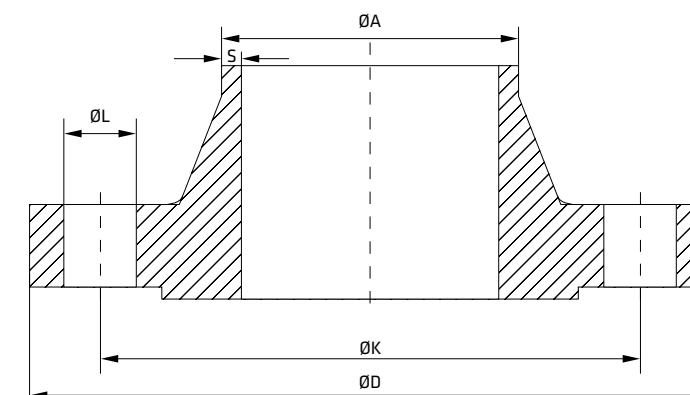
\* Finishes: page 311; no standard pipe connection



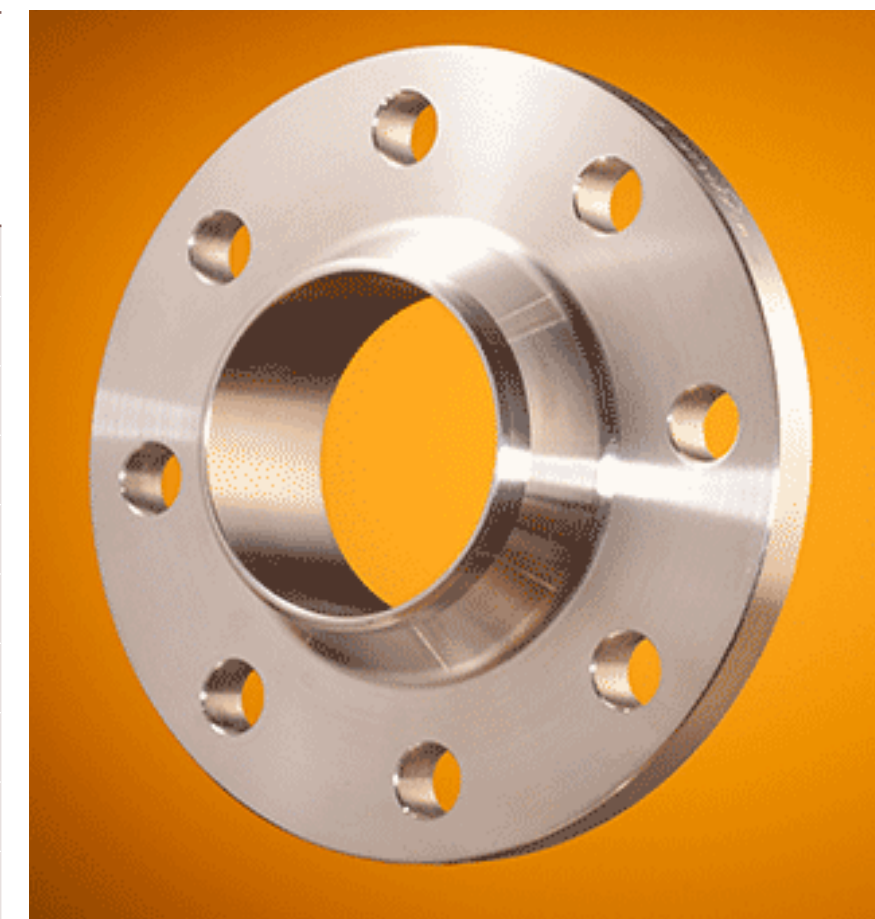
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (3/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4539	
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			mm	AISI	904L	
																		kg/pce.	*)
10	200	206.0	340	24	24	295	62	234	3.0	10	16	268	2	8	M20	22	10.5		
10	200	219.1	340	24	24	295	62	234	6.3	10	16	268	2	8	M20	22	11.5		
10	250	254.0	395	26	26	350	68	292	2.0	12	16	320	2	12	M20	22	14.6		
10	250	256.0	395	26	26	350	68	292	3.0	12	16	320	2	12	M20	22	14.8		
10	250	273.0	395	26	26	350	68	292	6.3	12	16	320	2	12	M20	22	15.5		
10	300	306.0	445	26	26	400	68	342	3.0	12	16	370	2	12	M20	22	15.2		
10	300	323.9	445	26	26	400	68	342	7.1	12	16	370	2	12	M20	22	18.0		
10	350	355.6	505	26	26	460	68	385	7.1	12	16	430	2	16	M20	22	24.5		
10	400	406.4	565	26	26	515	72	440	7.1	12	16	482	2	16	M24	26	29.5		
10	450	457.2	615	28	28	565	72	488	7.1	12	16	532	2	20	M24	26	34.0		



\* Finishes: page 311; no standard pipe connection

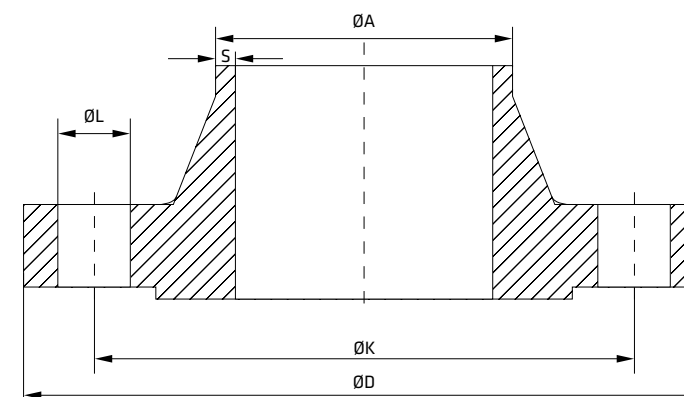




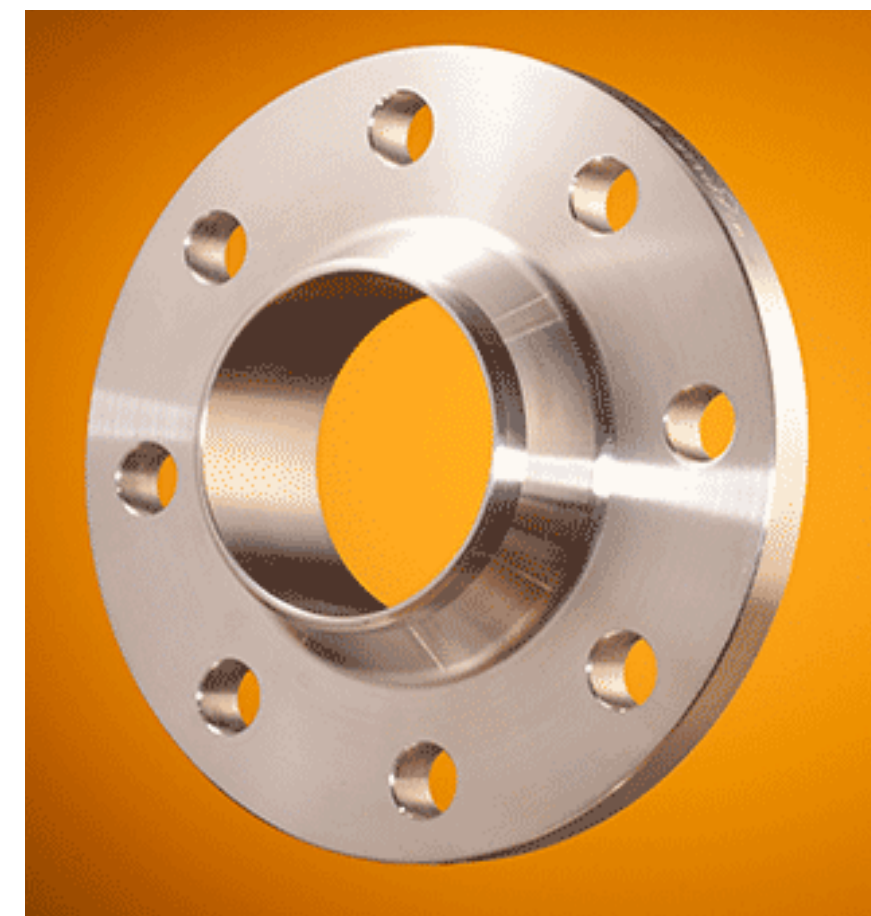
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (5/12)



PN	DN	mm	mm	mm	mm	mm		mm					drill holes	AFM Size	L	Grade	1.4539
																AISI	904L
																kg/pce.	*)
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	4	M16	18	3.0	
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	8	M16	18	3.0	
16	65	73.03	185		145			3.05					8		18	3.0	x
16	65	73.03	185		145			5.16					8		18	3.2	x
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	4	M16	18	3.0	
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	8	M16	18	3.0	
16	65	76.10	185		145			4.00					8		18	3.2	x
16	80	84.0*	200	20	160	50	105	2.0	8	10	138	2	8	M16	18	4.0	
16	80	88.90	200		160			3.05					8		18	4.0	x
16	80	88.9	200	20	160	50	105	3.2	6	10	138	2	8	M16	18	4.0	



\* Finishes: page 311; no standard pipe connection

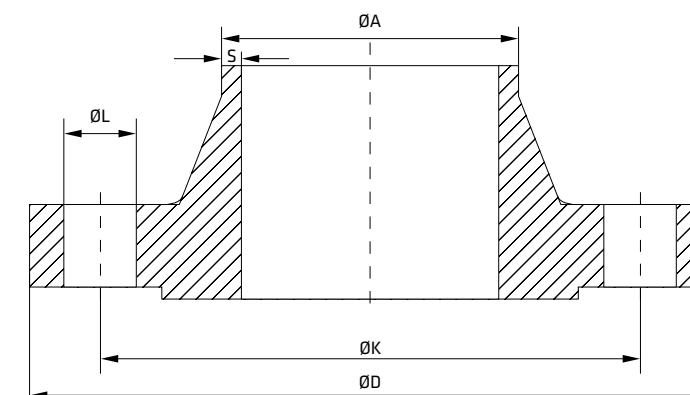




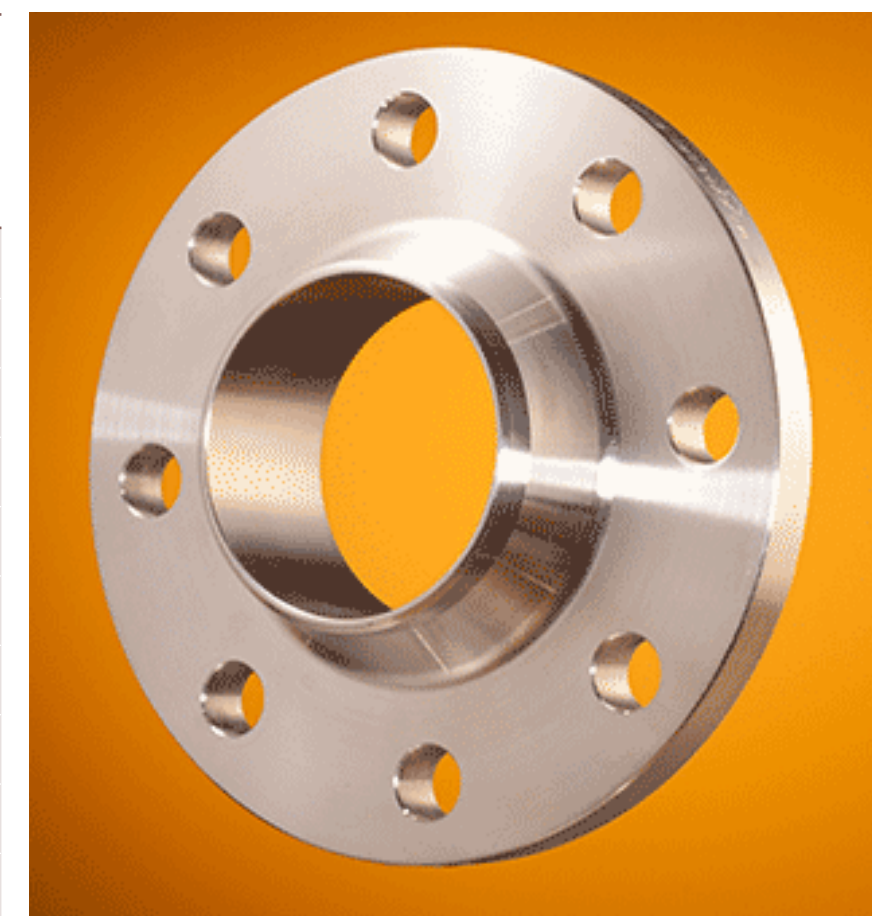
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (7/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4539
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			mm	AISI	904L
																	kg/pce.	*)
16	125	139.7	250	22	210	55	156	4.0	8	12	188	2	8	M16	18	6.5		
16	125	139.70	250		210				6.55					8		18	6.8	x
16	125	141.30	250		210				6.55					8		18	7.0	x
16	150	154.0*	285	22	240	55	175	2.0	10	12	212	2	8	M20	22	7.5		
16	150	156.0*	285	22	240	55	175	3.0	10	12	212	2	8	M20	22	7.5		
16	150	159.0*	285	22	240	55	175	4.5	10	12	212	2	8	M20	22	7.5		
16	150	168.3	285	22	240	55	184	4.5	10	12	212	2	8	M20	22	7.5		
16	150	168.30	285		240				7.11					8		22	8.4	x
16	200	219.1	340	24	295	62	235	6.3	10	16	268	2	12	M20	22	11.0		
16	200	219.10	340		295				8.18					12		22	12.2	x

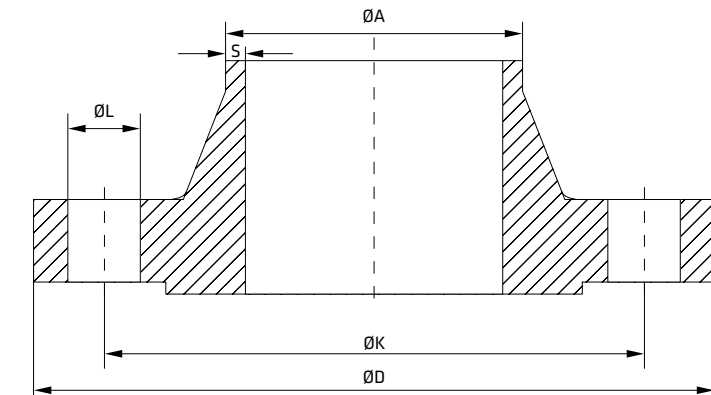


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (8/12)



PN	DN	OD mm	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1 mm	H3 mm	D1 mm	F1 mm	drill holes	AFM Size	L mm	Grade AISI	1.4539 904L	kg/pce. *)
16	250	273.0	405	26	355	70	292	6.3	12	16	320	2	12	M24	26	16.7			
16	300	323.9	460	28	410	78	344	7.1	12	16	378	2	12	M24	26	22.1			
16	350	355.6	505		460			7.10						16		22	32.80		
16	350	355.6	520	30	470	82	390	8.0	12	16	438	2	16	M24	26	32.0			
16	400	406.4	565		515			7.10						16		26	41.10		
16	400	406.4	580	32	525	85	445	8.0	12	16	490	2	16	M27	30	40.0			
16	450	457.0	640	40	585	87	490	8.0	12	16	550	2	20	M27	30	54.5			
16	500	508.0	670		620			7.10						20		26	66.20		
16	500	508.0	715	44	650	90	548	8.0	12	16	610	2	20	M30	33	74.0			
16	600	609.6	840	54	770	95	652	8.8	12	18	725	2	20	M33	36	116.5			

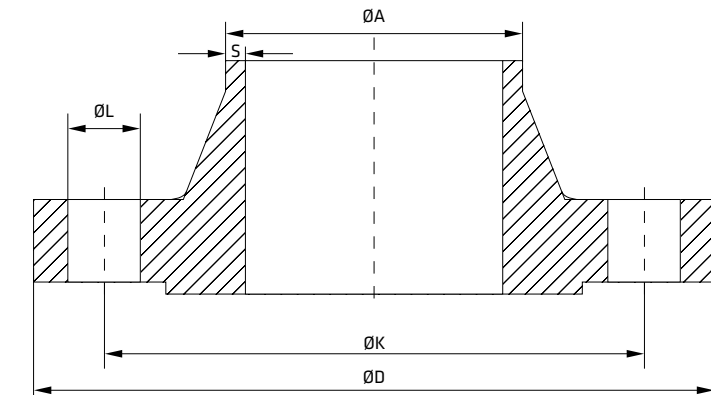


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (9/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4539
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI	904L
25	200	219.1	360	30	310	80	244	6.3	10	16	278	2	12	M24	26	17.0
25	250	273.0	425	32	370	88	298	7.1	12	18	335	2	12	M27	30	24.0
25	300	323.9	485	34	430	92	352	8.0	12	18	395	2	16	M27	30	31.5
25	350	355.6	555	38	490	100	398	8.0	12	20	450	2	16	M30	33	48.0
25	400	406.4	620	40	550	110	452	8.8	12	20	505	2	16	M33	36	63.0
25	450	457.0	670	46	600	110	500	8.8	12	20	555	2	20	M33	36	75.5
25	500	508.0	730	48	660	125	558	10.0	12	20	615	2	20	M33	36	96.5
25	600	609.6	845	58	770	125	660	11.0	12	20	720	2	20	M36	39	138.6
40	10	17.2	90	16	60	35	28	2.00	4	6	40	2	4	M12	14	0.7
40	15	20.0*	95	16	65	38	30	2.0	4	6	45	2	4	M12	14	1.0



\* Finishes: page 311; no standard pipe connection

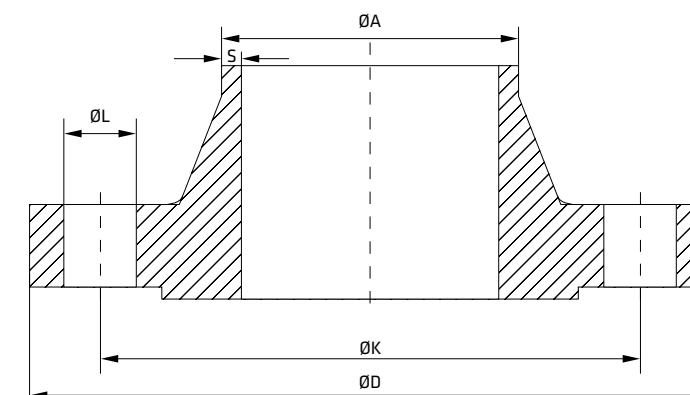




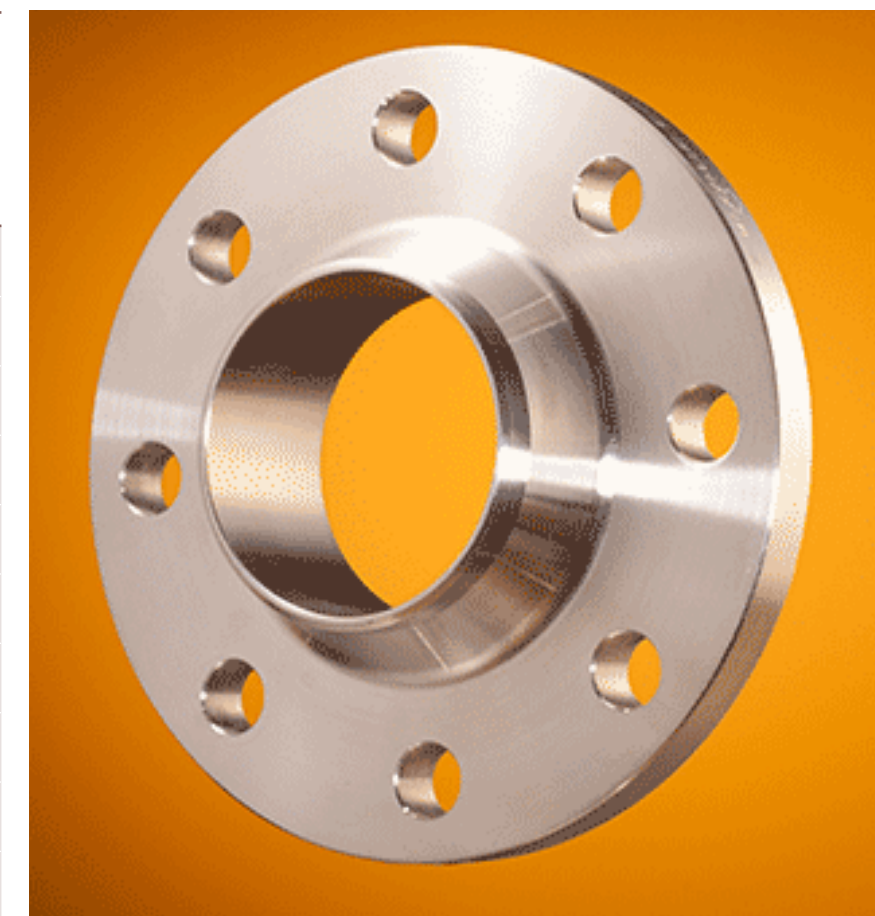
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (11/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4539 904L	
PN	DN	mm	mm	mm	mm		mm								kg/pce.	*)	
40	32	38.0*	140	18	100	42	52	2.6	6	6	78	2	4	M16	18	2.0	
40	32	42.16	140		100			2.77					4		18	1.95	x
40	32	42.16	140		100			3.56					4		18	1.92	x
40	32	42.4	140	18	100	42	56	2.6	6	6	78	2	4	M16	18	2.0	
40	40	44.5*	150	18	110	45	60	2.6	6	7	88	2	4	M16	18	2.0	x
40	40	48.26	150		110			2.77					4		18	2.16	x
40	40	48.26	150		110			3.68					4		18	2.20	
40	40	48.3	150	18	110	45	64	2.6	6	7	88	2	4	M16	18	2.0	
40	50	57.0*	165	20	125	48	72	2.9	6	8	102	2	4	M16	18	3.0	
40	50	60.3	165	20	125	48	75	2.9	6	8	102	2	4	M16	18	3.0	

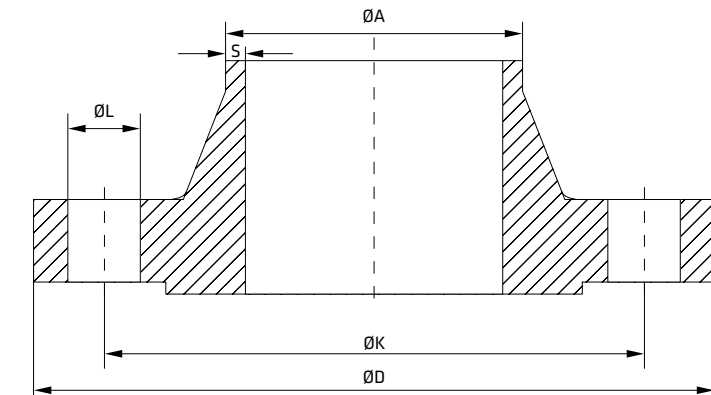


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4539 (12/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4539
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			mm	AISI	904L
40	65	76.1	185	22	145	52	90	2.9	6	10	122	2	8	M16	18	4.0		*
40	80	88.9	200	24	160	58	105	3.2	8	12	138	2	8	M16	18	5.0		
40	100	114.3	235	24	190	65	134	3.6	8	12	162	2	8	M20	22	6.5		
40	125	139.7	270	26	220	68	162	4.0	8	12	188	2	8	M24	26	9.0		
40	150	168.3	300	28	250	75	192	4.5	10	12	218	2	8	M24	26	11.5		
40	200	219.1	375	34	320	88	244	6.3	10	16	285	2	12	M27	30	21.0		
40	250	273.0	450	38	385	105	306	7.1	12	18	345	2	12	M30	33	34.0		
40	300	323.9	515	42	450	115	362	8.0	12	18	410	2	16	M30	33	47.5		



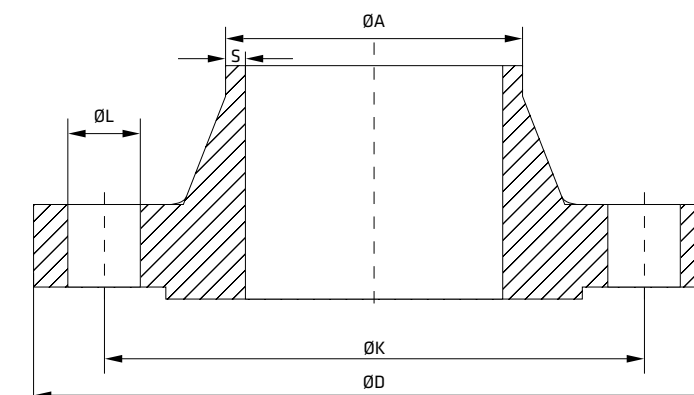
\* Finishes: page 311; no standard pipe connection



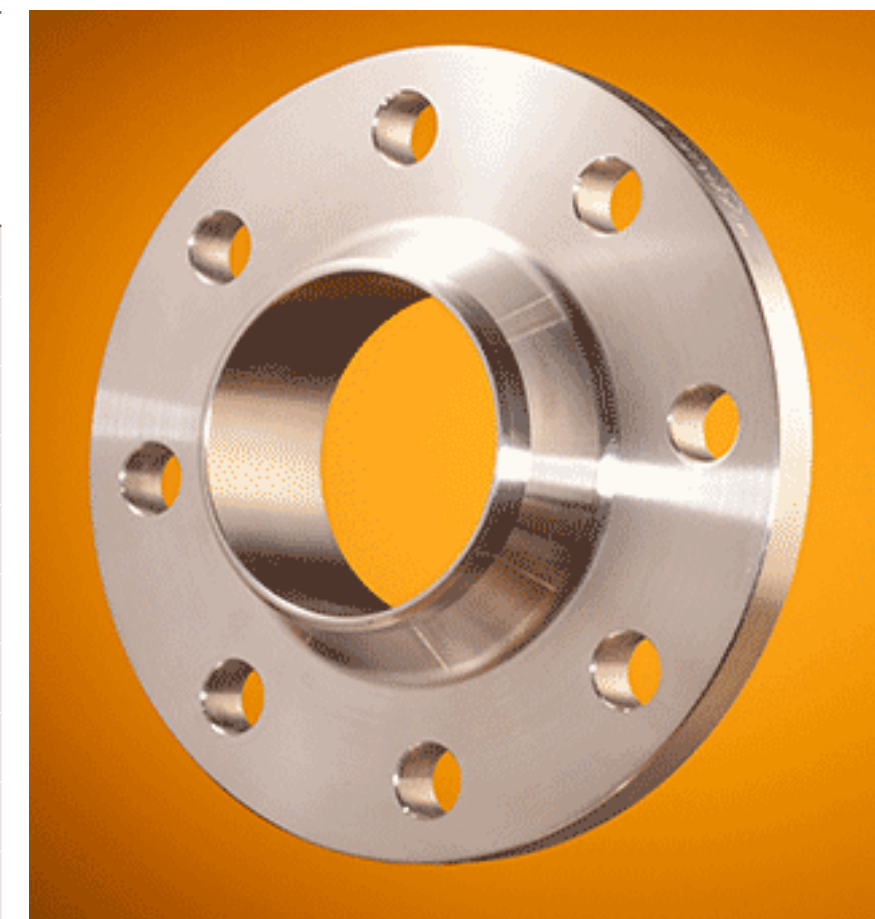
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (1/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4541
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			mm	AISI	321
																	kg/pce.	*)
6	15	21.3	80	12	12	55	30	30	2.0	4	6	40	2	4	M10	11	0.5	
6	20	26.9	90	14	14	65	32	38	2.3	4	6	50	2	4	M10	11	0.5	
6	25	33.7	100	14	14	75	35	42	2.6	4	6	60	2	4	M10	11	1.0	
6	32	42.4	120	14	14	90	35	55	2.6	6	6	70	2	4	M12	14	1.0	
6	40	48.3	130	14	14	100	38	62	2.6	6	7	80	2	4	M12	14	1.5	
6	50	60.3	140	14	14	110	38	74	2.9	6	8	90	2	4	M12	14	1.5	
6	65	76.1	160	14	14	130	38	88	2.9	6	9	110	2	4	M12	14	2.0	
6	80	88.9	190	16	16	150	42	102	3.2	8	10	128	2	4	M16	18	3.0	
6	100	114.3	210	16	16	170	45	130	3.6	8	10	148	2	4	M16	18	3.5	
6	125	139.7	240	18	18	200	48	155	4.0	8	10	178	2	8	M16	18	4.5	



\* Finishes: page 311; no standard pipe connection



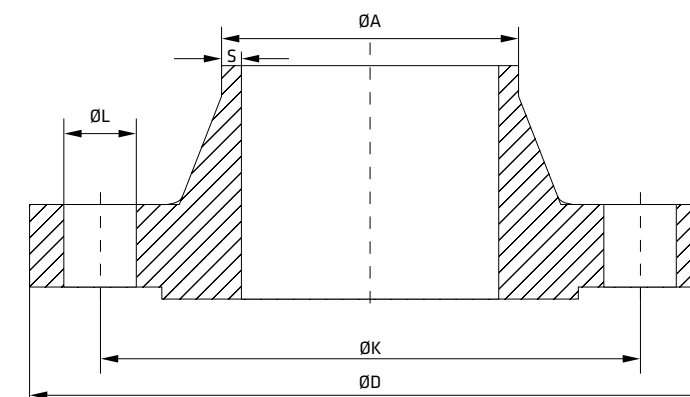




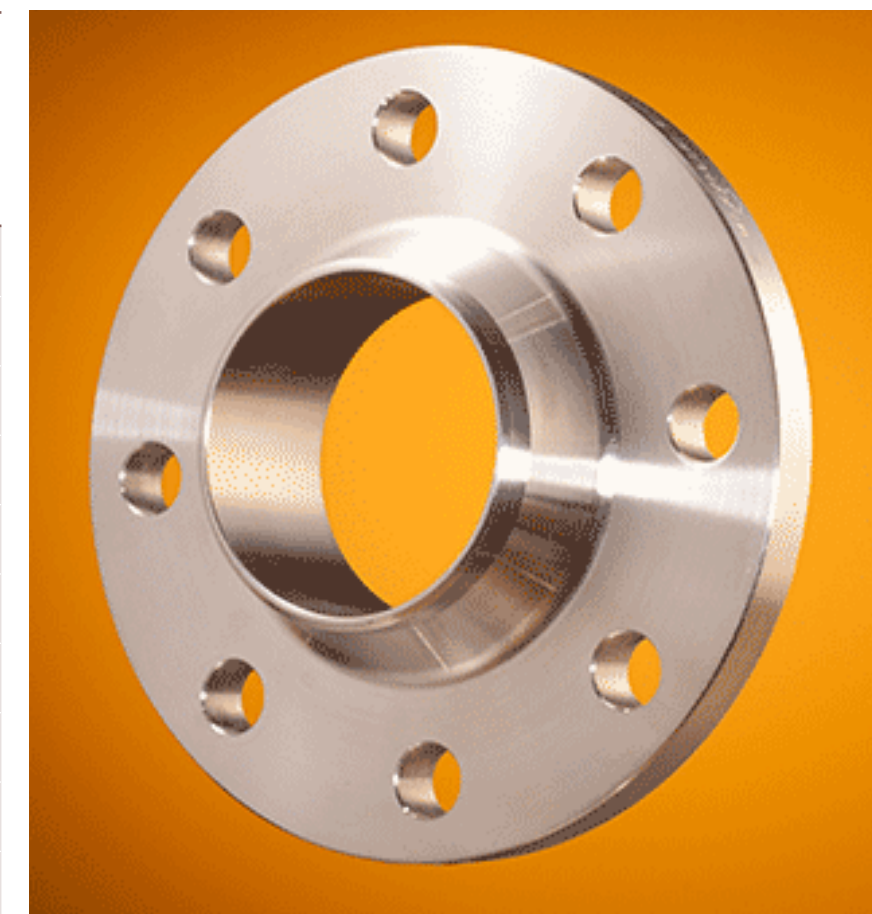
# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (3/12)



PN	DN	mm	mm	mm	mm	mm		mm										
10	200	206.0	340	24	295	62	234	3.0	10	16	268	2	8	M20	22	10.5		
10	200	219.1	340	24	295	62	234	6.3	10	16	268	2	8	M20	22	11.5	x	
10	250	254.0	395	26	350	68	292	2.0	12	16	320	2	12	M20	22	14.6		
10	250	256.0	395	26	350	68	292	3.0	12	16	320	2	12	M20	22	14.8		
10	250	273.0	395	26	350	68	292	6.3	12	16	320	2	12	M20	22	15.5	x	
10	300	306.0	445	26	400	68	342	3.0	12	16	370	2	12	M20	22	15.2		
10	300	323.9	445	26	400	68	342	7.1	12	16	370	2	12	M20	22	18.0	x	
10	350	355.6	505	26	460	68	385	7.1	12	16	430	2	16	M20	22	24.5	x	
10	400	406.4	565	26	515	72	440	7.1	12	16	482	2	16	M24	26	29.5	x	
10	450	457.2	615	28	565	72	488	7.1	12	16	532	2	20	M24	26	34.0		

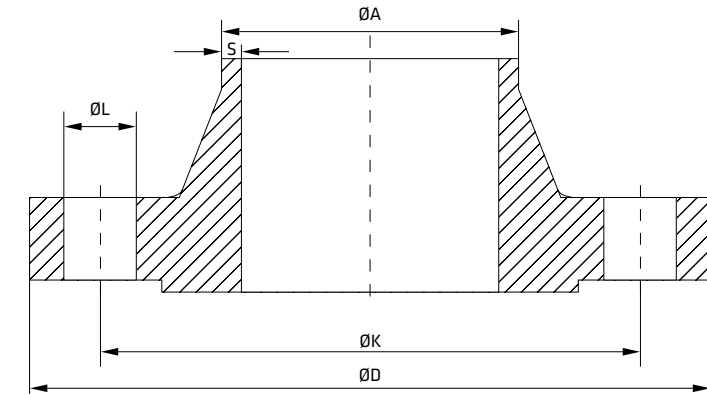


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (4/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4541	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				AISI	321	
															kg/pce.	*)	
10	500	508.0	670	28	620	75	542	7.1	12	16	585	2	20	M24	26	39.5	
10	600	609.6	780	28	725	80	642	7.1	12	18	685	2	20	M27	30	56.0	
10	700	711.2	895	30	840	80	746	8.0	12	18	800	2	24	M27	30	65.0	
10	800	812.8	1015	32	950	90	850	8.0	12	18	905	2	24	M30	33	87.0	
16	50	54.0*	165	16	125	45	72	2.0	5	8	102	2	4	M16	18	2.5	
16	50	57.0*	165	18	125	45	72	2.9	5	8	102	2	4	M16	18	2.5	
16	50	60.3	165		125			2.77				4			18	2.5	
16	50	60.3	165	18	125	45	74	2.9	5	8	102	2	4	M16	18	2.5	x
16	50	60.3	165		125			3.91				4			18	2.5	
16	50	60.3	165		125			5.54				4			18	2.6	

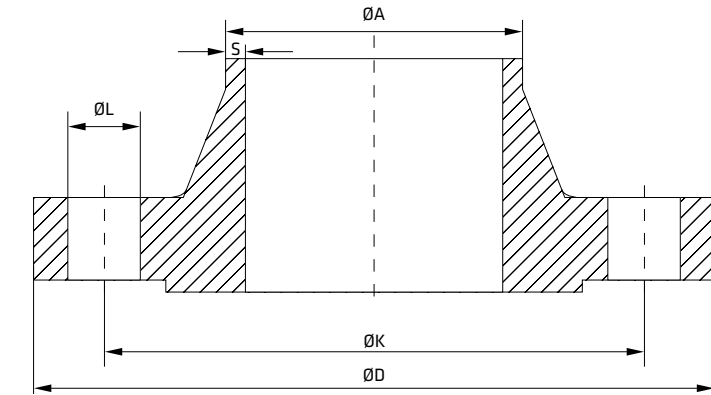


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (5/12)



PN	DN	A mm	D mm	C2 mm	K mm	H2 mm	N1	S mm	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4541 321 kg/pce. *)
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	4	M16	18	3.0	
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	8	M16	18	3.0	
16	65	73.03	185		145			3.05					8		18	3.0	
16	65	73.03	185		145			5.16					8		18	3.2	
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	4	M16	18	3.0	x
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	8	M16	18	3.0	x
16	65	76.10	185		145			4.00					8		18	3.2	
16	80	84.0*	200	20	160	50	105	2.0	8	10	138	2	8	M16	18	4.0	
16	80	88.90	200		160			3.05					8		18	4.0	
16	80	88.9	200	20	160	50	105	3.2	6	10	138	2	8	M16	18	4.0	x

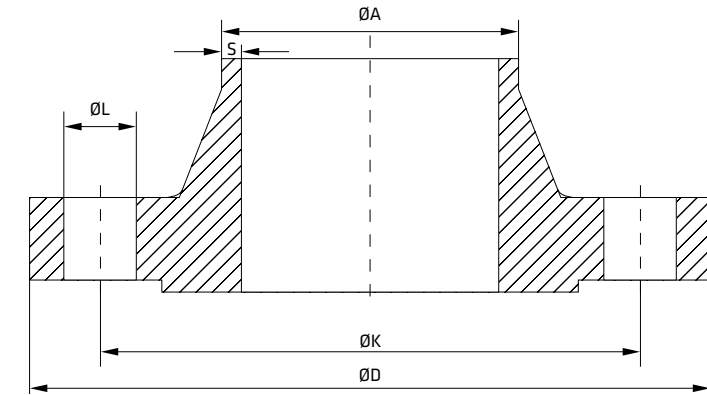


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (6/12)



PN	DN	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4541 321 kg/pce. *)
16	80	88.90	200		160			4.00					8		18	4.0	
16	80	88.90	200		160			5.49					8		18	4.9	
16	100	104.0*	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.5	
16	100	106.0	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.8	
16	100	108.0*	220	20	180	52	125	3.6	8	12	158	2	8	M16	18	4.5	
16	100	114.30	220		180			3.05					8		18	4.5	
16	100	114.3	220	20	180	52	131	3.6	8	12	158	2	8	M16	18	4.5	x
16	100	114.30	220		180			6.02					8		18	5.0	
16	125	129.0*	250	22	210	55	150	2.0	8	12	188	2	8	M16	18	6.5	
16	125	133.0*	250	22	210	55	150	4.0	8	12	188	2	8	M16	18	6.5	x



\* Finishes: page 311; no standard pipe connection

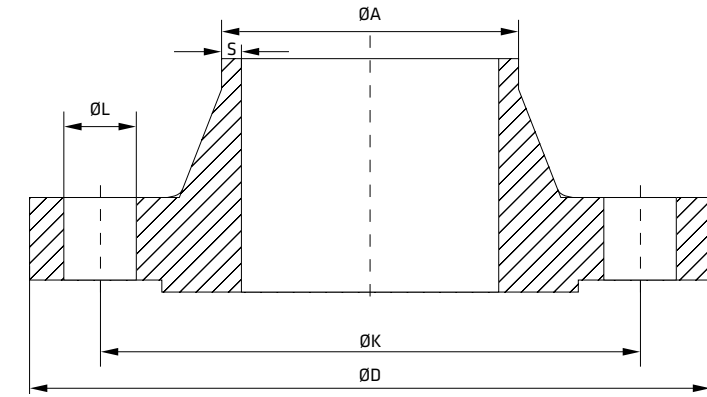




# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (8/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4541 321
		mm	mm	mm	mm	mm	mm	mm	mm		mm	mm	mm			mm	kg/pce.	*)
16	250	273.0	405	26	355	70	292	6.3	12	16	320	2	12	M24	26	16.7	x	
16	300	323.9	460	28	410	78	344	7.1	12	16	378	2	12	M24	26	22.1	x	
16	350	355.6	505		460			7.10					16		22	32.80		
16	350	355.6	520	30	470	82	390	8.0	12	16	438	2	16	M24	26	32.0	x	
16	400	406.4	565		515			7.10					16		26	41.10		
16	400	406.4	580	32	525	85	445	8.0	12	16	490	2	16	M27	30	40.0	x	
16	450	457.0	640	40	585	87	490	8.0	12	16	550	2	20	M27	30	54.5		
16	500	508.0	670		620			7.10					20		26	66.20		
16	500	508.0	715	44	650	90	548	8.0	12	16	610	2	20	M30	33	74.0		
16	600	609.6	840	54	770	95	652	8.8	12	18	725	2	20	M33	36	116.5		

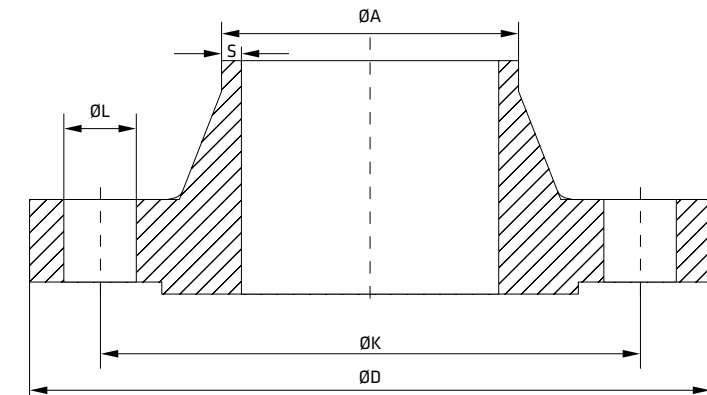


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (9/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4541 321 kg/pce. *)
PN	DN	mm	mm	mm	mm		mm									
25	200	219.1	360	30	310	80	244	6.3	10	16	278	2	12	M24	26	17.0
25	250	273.0	425	32	370	88	298	7.1	12	18	335	2	12	M27	30	24.0
25	300	323.9	485	34	430	92	352	8.0	12	18	395	2	16	M27	30	31.5
25	350	355.6	555	38	490	100	398	8.0	12	20	450	2	16	M30	33	48.0
25	400	406.4	620	40	550	110	452	8.8	12	20	505	2	16	M33	36	63.0
25	450	457.0	670	46	600	110	500	8.8	12	20	555	2	20	M33	36	75.5
25	500	508.0	730	48	660	125	558	10.0	12	20	615	2	20	M33	36	96.5
25	600	609.6	845	58	770	125	660	11.0	12	20	720	2	20	M36	39	138.6
40	10	17.2	90	16	60	35	28	2.00	4	6	40	2	4	M12	14	0.7
40	15	20.0*	95	16	65	38	30	2.0	4	6	45	2	4	M12	14	1.0

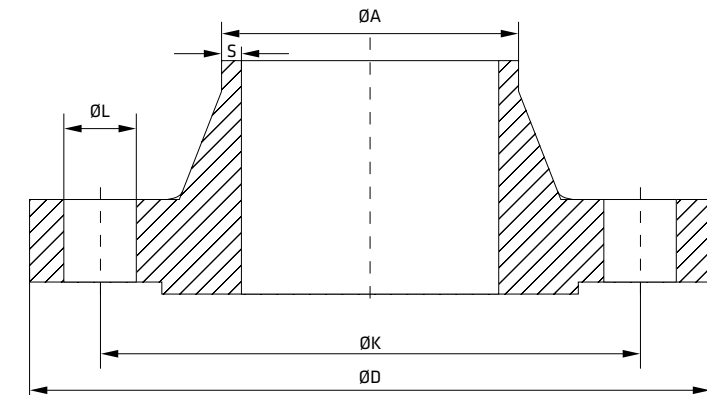


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (10/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4541 321	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				kg/pce.	*)	
40	15	21.3	95	16	65	38	32	2.0	4	6	45	2	4	M12	14	1.0	x
40	15	21.34	95		65			2.11					4		14	1.00	
40	15	21.34	95		65			2.77					4		14	1.02	
40	20	25.0*	105	18	75	40	38	2.3	4	6	58	2	4	M12	14	1.0	
40	20	26.67	105		75			2.87					4		14	1.05	
40	20	26.9	105	18	75	40	40	2.3	4	6	58	2	4	M12	14	1.0	x
40	25	30.0*	115	18	85	40	42	2.6	4	6	68	2	4	M12	14	1.0	
40	25	33.40	115		85			2.77					4		14	1.31	
40	25	33.40	115		85			3.38					4		14	1.32	
40	25	33.7	115	18	85	40	46	2.6	4	6	68	2	4	M12	14	1.0	x



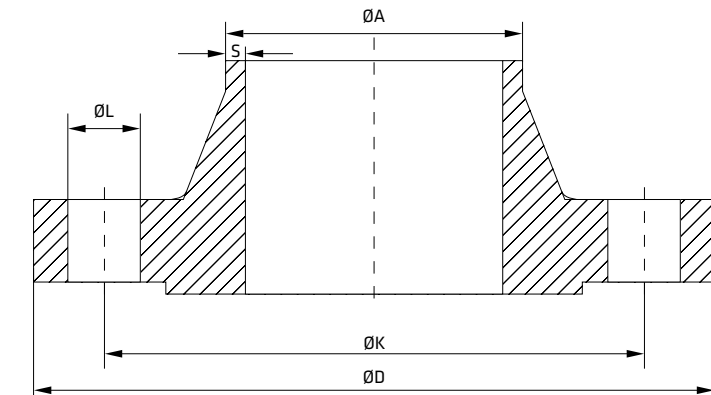
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (11/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4541	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI	321	
															kg/pce.	*)	
40	32	38.0*	140	18	100	42	52	2.6	6	6	78	2	4	M16	18	2.0	
40	32	42.16	140		100			2.77					4		18	1.95	
40	32	42.16	140		100			3.56					4		18	1.92	
40	32	42.4	140	18	100	42	56	2.6	6	6	78	2	4	M16	18	2.0	x
40	40	44.5*	150	18	110	45	60	2.6	6	7	88	2	4	M16	18	2.0	x
40	40	48.26	150		110			2.77					4		18	2.16	
40	40	48.26	150		110			3.68					4		18	2.20	
40	40	48.3	150	18	110	45	64	2.6	6	7	88	2	4	M16	18	2.0	x
40	50	57.0*	165	20	125	48	72	2.9	6	8	102	2	4	M16	18	3.0	
40	50	60.3	165	20	125	48	75	2.9	6	8	102	2	4	M16	18	3.0	

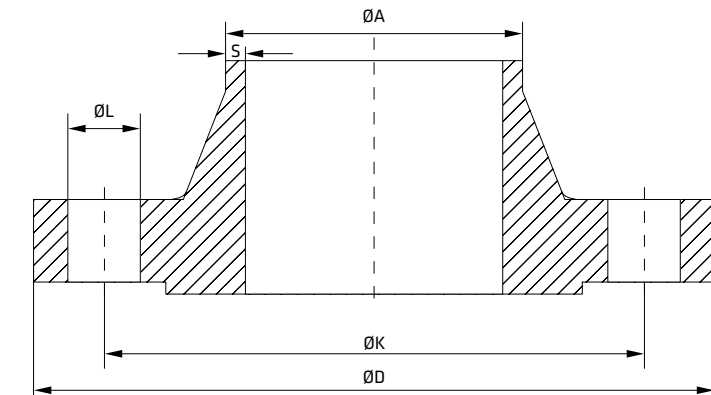


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4541 (12/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4541 321	
PN	DN	mm	mm	mm	mm		mm								kg/pce.	*)	
40	65	76.1	185	22	145	52	90	2.9	6	10	122	2	8	M16	18	4.0	x
40	80	88.9	200	24	160	58	105	3.2	8	12	138	2	8	M16	18	5.0	x
40	100	114.3	235	24	190	65	134	3.6	8	12	162	2	8	M20	22	6.5	
40	125	139.7	270	26	220	68	162	4.0	8	12	188	2	8	M24	26	9.0	
40	150	168.3	300	28	250	75	192	4.5	10	12	218	2	8	M24	26	11.5	
40	200	219.1	375	34	320	88	244	6.3	10	16	285	2	12	M27	30	21.0	
40	250	273.0	450	38	385	105	306	7.1	12	18	345	2	12	M30	33	34.0	
40	300	323.9	515	42	450	115	362	8.0	12	18	410	2	16	M30	33	47.5	

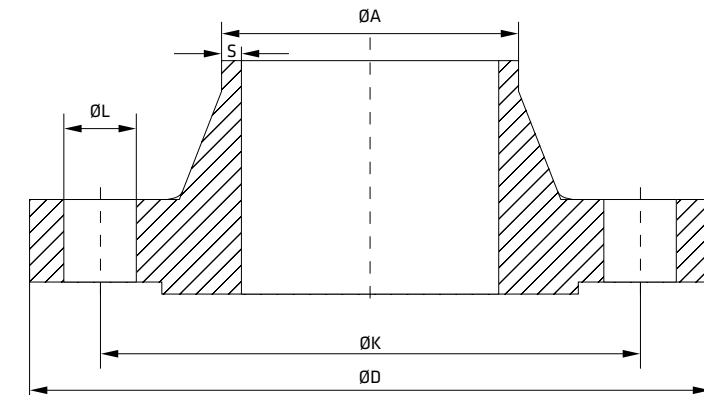


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (1/12)



PN	DN	OD mm	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1 mm	H3 mm	D1 mm	F1 mm	drill holes	AFM Size	L mm	Grade AISI	1.4571 316 Ti kg/pce. *)
6	15	21.3	80	12	12	55	30	30	2.0	4	6	40	2	4	M10	11	0.5	
6	20	26.9	90	14	14	65	32	38	2.3	4	6	50	2	4	M10	11	0.5	
6	25	33.7	100	14	14	75	35	42	2.6	4	6	60	2	4	M10	11	1.0	
6	32	42.4	120	14	14	90	35	55	2.6	6	6	70	2	4	M12	14	1.0	
6	40	48.3	130	14	14	100	38	62	2.6	6	7	80	2	4	M12	14	1.5	
6	50	60.3	140	14	14	110	38	74	2.9	6	8	90	2	4	M12	14	1.5	
6	65	76.1	160	14	14	130	38	88	2.9	6	9	110	2	4	M12	14	2.0	
6	80	88.9	190	16	16	150	42	102	3.2	8	10	128	2	4	M16	18	3.0	
6	100	114.3	210	16	16	170	45	130	3.6	8	10	148	2	4	M16	18	3.5	
6	125	139.7	240	18	18	200	48	155	4.0	8	10	178	2	8	M16	18	4.5	



\* Finishes: page 311; no standard pipe connection

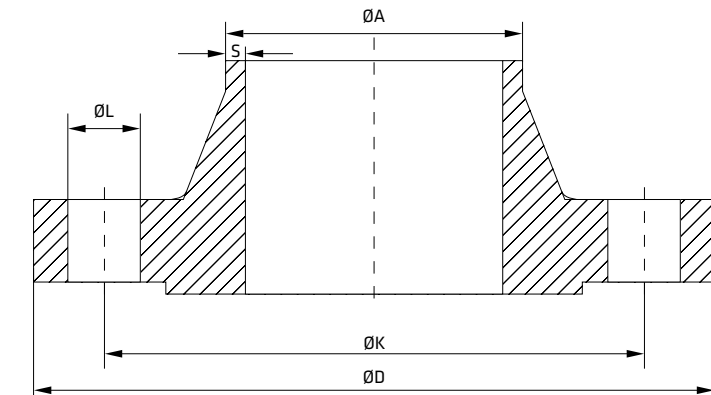




# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (3/12)



PN	DN	OD mm	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti kg/pce. *)
10	200	206.0	340	24	24	295	62	234	3.0	10	16	268	2	8	M20	22	10.5	x
10	200	219.1	340	24	24	295	62	234	6.3	10	16	268	2	8	M20	22	11.5	x
10	250	254.0	395	26	26	350	68	292	2.0	12	16	320	2	12	M20	22	14.6	x
10	250	256.0	395	26	26	350	68	292	3.0	12	16	320	2	12	M20	22	14.8	x
10	250	273.0	395	26	26	350	68	292	6.3	12	16	320	2	12	M20	22	15.5	x
10	300	306.0	445	26	26	400	68	342	3.0	12	16	370	2	12	M20	22	15.2	x
10	300	323.9	445	26	26	400	68	342	7.1	12	16	370	2	12	M20	22	18.0	x
10	350	355.6	505	26	26	460	68	385	7.1	12	16	430	2	16	M20	22	24.5	x
10	400	406.4	565	26	26	515	72	440	7.1	12	16	482	2	16	M24	26	29.5	x
10	450	457.2	615	28	28	565	72	488	7.1	12	16	532	2	20	M24	26	34.0	

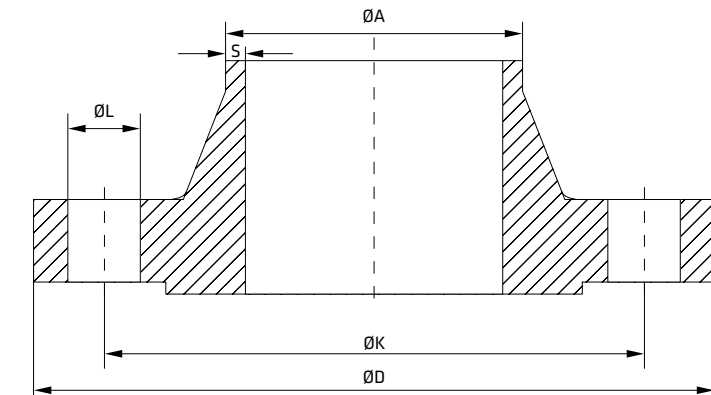


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (4/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti	
PN	DN	mm	mm	mm	mm		mm								kg/pce.	*)	
10	500	508.0	670	28	620	75	542	7.1	12	16	585	2	20	M24	26	39.5	x
10	600	609.6	780	28	725	80	642	7.1	12	18	685	2	20	M27	30	56.0	x
10	700	711.2	895	30	840	80	746	8.0	12	18	800	2	24	M27	30	65.0	
10	800	812.8	1015	32	950	90	850	8.0	12	18	905	2	24	M30	33	87.0	
16	50	54.0*	165	16	125	45	72	2.0	5	8	102	2	4	M16	18	2.5	x
16	50	57.0*	165	18	125	45	72	2.9	5	8	102	2	4	M16	18	2.5	
16	50	60.3	165		125			2.77					4		18	2.5	
16	50	60.3	165	18	125	45	74	2.9	5	8	102	2	4	M16	18	2.5	x
16	50	60.3	165		125			3.91					4		18	2.5	
16	50	60.3	165		125			5.54					4		18	2.6	

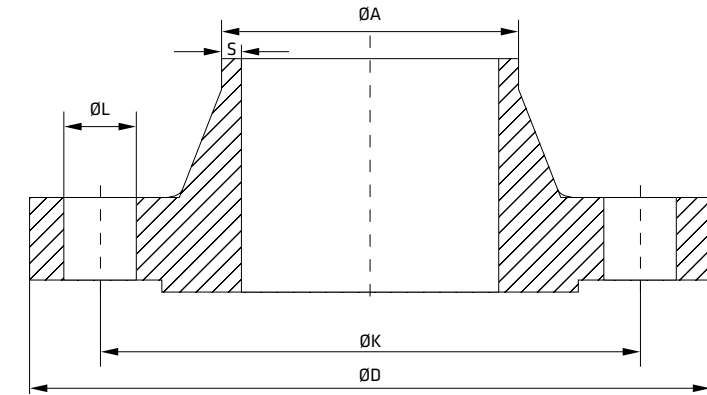


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (5/12)



PN	DN	mm	mm	mm	mm	mm		mm									
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	4	M16	18	3.0	x
16	65	70.0*	185	18	145	45	92	2.0	6	10	122	2	8	M16	18	3.0	
16	65	73.03	185		145			3.05					8		18	3.0	
16	65	73.03	185		145			5.16					8		18	3.2	
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	4	M16	18	3.0	x
16	65	76.1	185	18	145	45	92	2.9	6	10	122	2	8	M16	18	3.0	x
16	65	76.10	185		145			4.00					8		18	3.2	
16	80	84.0*	200	20	160	50	105	2.0	8	10	138	2	8	M16	18	4.0	x
16	80	88.90	200		160			3.05					8		18	4.0	
16	80	88.9	200	20	160	50	105	3.2	6	10	138	2	8	M16	18	4.0	x

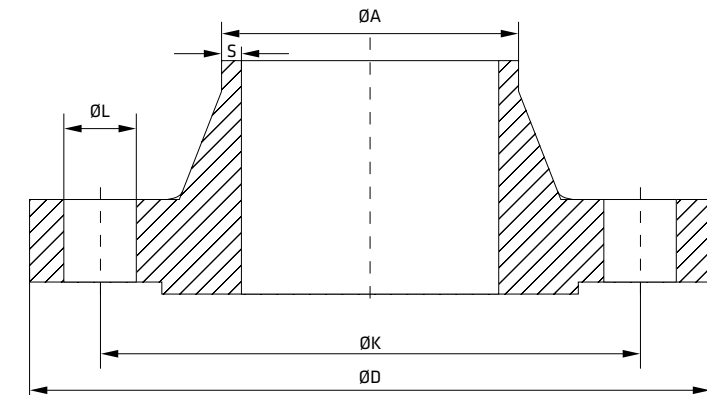


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (6/12)



PN	DN	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti	kg/pce. *)
16	80	88.90	200		160			4.00					8		18	4.0		
16	80	88.90	200		160			5.49					8		18	4.9		
16	100	104.0*	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.5	x	
16	100	106.0	220	20	180	52	125	2.0	8	12	158	2	8	M16	18	4.8	x	
16	100	108.0*	220	20	180	52	125	3.6	8	12	158	2	8	M16	18	4.5		
16	100	114.30	220		180			3.05					8		18	4.5		
16	100	114.3	220	20	180	52	131	3.6	8	12	158	2	8	M16	18	4.5	x	
16	100	114.30	220		180			6.02					8		18	5.0		
16	125	129.0*	250	22	210	55	150	2.0	8	12	188	2	8	M16	18	6.5	x	
16	125	133.0*	250	22	210	55	150	4.0	8	12	188	2	8	M16	18	6.5		



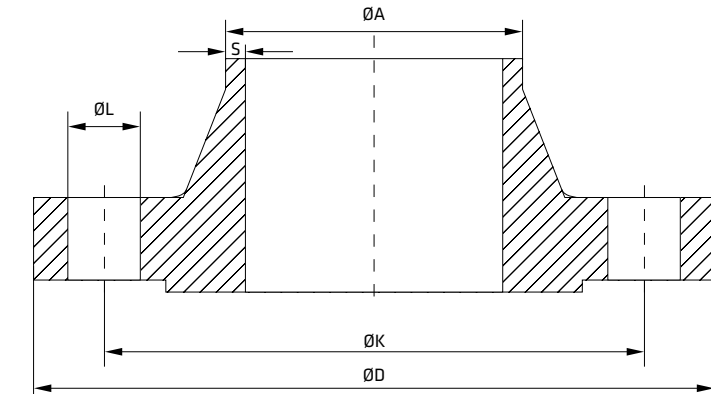
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (7/12)



PN	DN	OD mm	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti kg/pce. *)
16	125	139.7	250	22	210	55	156	4.0	8	12	188	2	8	M16	18	6.5	x	
16	125	139.70	250		210				6.55					8		18	6.8	
16	125	141.30	250		210				6.55					8		18	7.0	
16	150	154.0*	285	22	240	55	175	2.0	10	12	212	2	8	M20	22	7.5	x	
16	150	156.0*	285	22	240	55	175	3.0	10	12	212	2	8	M20	22	7.5	x	
16	150	159.0*	285	22	240	55	175	4.5	10	12	212	2	8	M20	22	7.5		
16	150	168.3	285	22	240	55	184	4.5	10	12	212	2	8	M20	22	7.5	x	
16	150	168.30	285		240				7.11					8		22	8.4	
16	200	219.1	340	24	295	62	235	6.3	10	16	268	2	12	M20	22	11.0	x	
16	200	219.10	340		295				8.18					12		22	12.2	

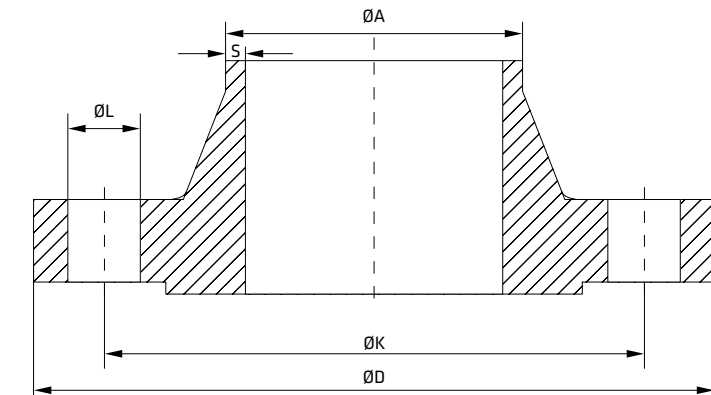


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (8/12)



PN	DN	OD mm	A mm	D mm	C2 mm	K mm	H2 mm	N1 mm	S mm	R1 mm	H3 mm	D1 mm	F1 mm	drill holes	AFM Size	L mm	Grade AISI	1.4571 316 Ti	kg/pce. *)
16	250	273.0	405	26	355	70	292	6.3	12	16	320	2	12	M24	26	16.7	x		
16	300	323.9	460	28	410	78	344	7.1	12	16	378	2	12	M24	26	22.1	x		
16	350	355.6	505		460			7.10					16		22	32.80	x		
16	350	355.6	520	30	470	82	390	8.0	12	16	438	2	16	M24	26	32.0			
16	400	406.4	565		515			7.10					16		26	41.10	x		
16	400	406.4	580	32	525	85	445	8.0	12	16	490	2	16	M27	30	40.0	x		
16	450	457.0	640	40	585	87	490	8.0	12	16	550	2	20	M27	30	54.5			
16	500	508.0	670		620			7.10					20		26	66.20	x		
16	500	508.0	715	44	650	90	548	8.0	12	16	610	2	20	M30	33	74.0			
16	600	609.6	840	54	770	95	652	8.8	12	18	725	2	20	M33	36	116.5			

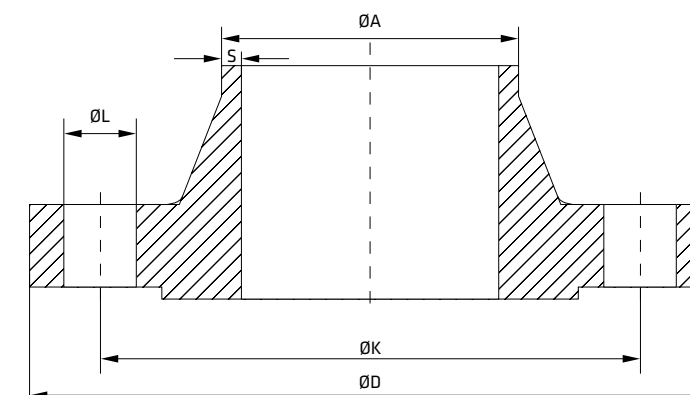


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (9/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti kg/pce. *)	
PN	DN	mm	mm	mm	mm		mm										
25	200	219.1	360	30	310	80	244	6.3	10	16	278	2	12	M24	26	17.0	
25	250	273.0	425	32	370	88	298	7.1	12	18	335	2	12	M27	30	24.0	
25	300	323.9	485	34	430	92	352	8.0	12	18	395	2	16	M27	30	31.5	
25	350	355.6	555	38	490	100	398	8.0	12	20	450	2	16	M30	33	48.0	
25	400	406.4	620	40	550	110	452	8.8	12	20	505	2	16	M33	36	63.0	
25	450	457.0	670	46	600	110	500	8.8	12	20	555	2	20	M33	36	75.5	
25	500	508.0	730	48	660	125	558	10.0	12	20	615	2	20	M33	36	96.5	
25	600	609.6	845	58	770	125	660	11.0	12	20	720	2	20	M36	39	138.6	
40	10	17.2	90	16	60	35	28	2.00	4	6	40	2	4	M12	14	0.7	x
40	15	20.0*	95	16	65	38	30	2.0	4	6	45	2	4	M12	14	1.0	

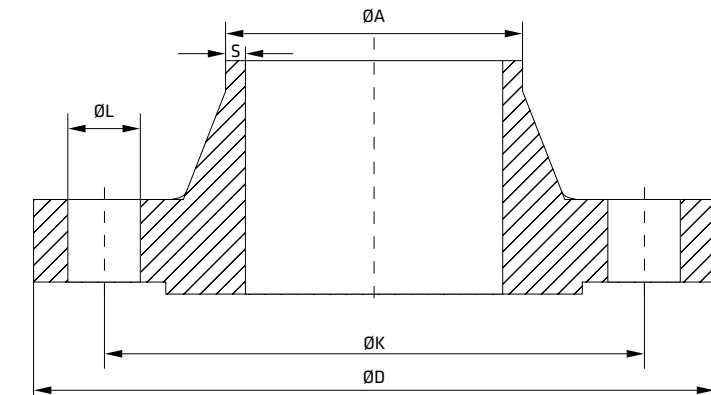


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (10/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti	
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)	
40	15	21.3	95	16	65	38	32	2.0	4	6	45	2	4	M12	14	1.0	x
40	15	21.34	95		65			2.11					4		14	1.00	
40	15	21.34	95		65			2.77					4		14	1.02	
40	20	25.0*	105	18	75	40	38	2.3	4	6	58	2	4	M12	14	1.0	
40	20	26.67	105		75			2.87					4		14	1.05	
40	20	26.9	105	18	75	40	40	2.3	4	6	58	2	4	M12	14	1.0	x
40	25	30.0*	115	18	85	40	42	2.6	4	6	68	2	4	M12	14	1.0	
40	25	33.40	115		85			2.77					4		14	1.31	
40	25	33.40	115		85			3.38					4		14	1.32	
40	25	33.7	115	18	85	40	46	2.6	4	6	68	2	4	M12	14	1.0	x



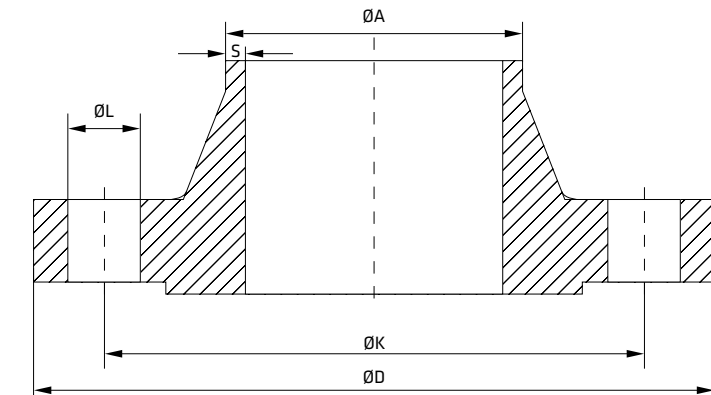
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (11/12)



PN	DN	OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade	1.4571	AISI	316 Ti	kg/pce.	*)	
32	38.0*	140	18	100	42	52	2.6	6	6	6	78	2	4	M16	18	2.0							
32	42.16	140		100				2.77					4		18	1.95							
32	42.16	140		100				3.56					4		18	1.92							
32	42.4	140	18	100	42	56	2.6	6	6	6	78	2	4	M16	18	2.0					x		
40	44.5*	150	18	110	45	60	2.6	6	7	7	88	2	4	M16	18	2.0							
40	48.26	150		110				2.77					4		18	2.16							
40	48.26	150		110				3.68					4		18	2.20							
40	48.3	150	18	110	45	64	2.6	6	7	7	88	2	4	M16	18	2.0					x		
50	57.0*	165	20	125	48	72	2.9	6	8	8	102	2	4	M16	18	3.0							
50	60.3	165	20	125	48	75	2.9	6	8	8	102	2	4	M16	18	3.0						x	

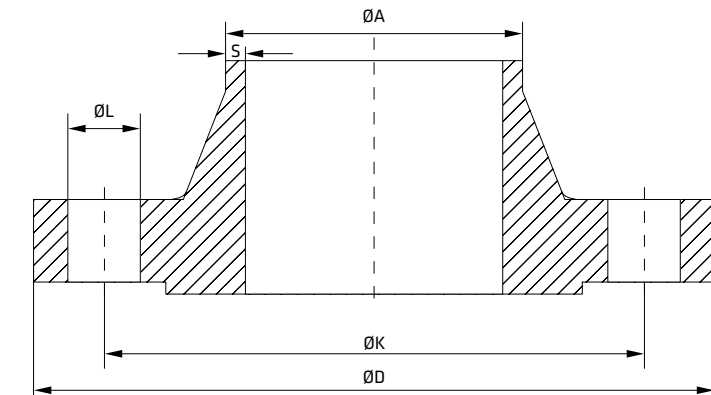


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1

1.4571 (12/12)



OD	A	D	C2	K	H2	N1	S	R1	H3	D1	F1	drill holes	AFM Size	L	Grade AISI	1.4571 316 Ti	
PN	DN	mm	mm	mm	mm		mm								kg/pce.	*)	
40	65	76.1	185	22	145	52	90	2.9	6	10	122	2	8	M16	18	4.0	x
40	80	88.9	200	24	160	58	105	3.2	8	12	138	2	8	M16	18	5.0	x
40	100	114.3	235	24	190	65	134	3.6	8	12	162	2	8	M20	22	6.5	x
40	125	139.7	270	26	220	68	162	4.0	8	12	188	2	8	M24	26	9.0	x
40	150	168.3	300	28	250	75	192	4.5	10	12	218	2	8	M24	26	11.5	x
40	200	219.1	375	34	320	88	244	6.3	10	16	285	2	12	M27	30	21.0	x
40	250	273.0	450	38	385	105	306	7.1	12	18	345	2	12	M30	33	34.0	
40	300	323.9	515	42	450	115	362	8.0	12	18	410	2	16	M30	33	47.5	

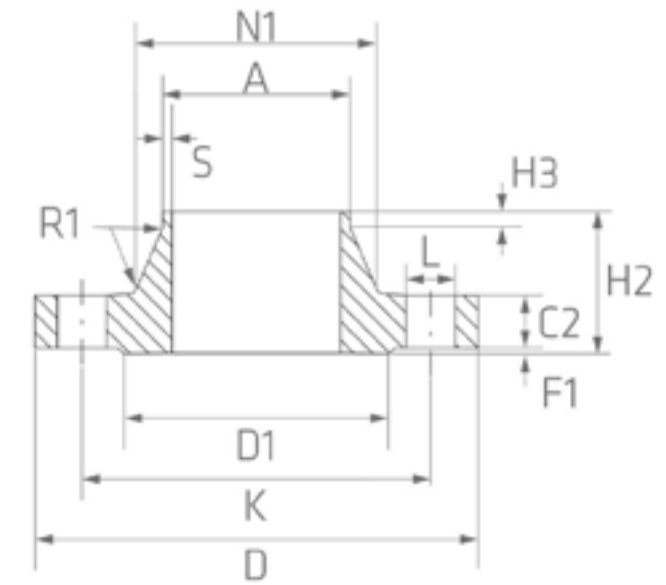


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

EN 1092-1 type 11 B1 with reduced s-dimension, V-seam

1.4571 (1/1)



OD	ØA	S	ØD	ØK	ØL	drill holes	Grade	1.4571	
PN	DN	mm	mm	mm	mm	mm	AISI	316 Ti	
		mm	mm	mm	mm	mm	kg/pce.	*)	
10	200	219.1	2.90	340	295	22	8	11.30	x
10	250	273.0	2.90	395	350	22	12	14.70	x

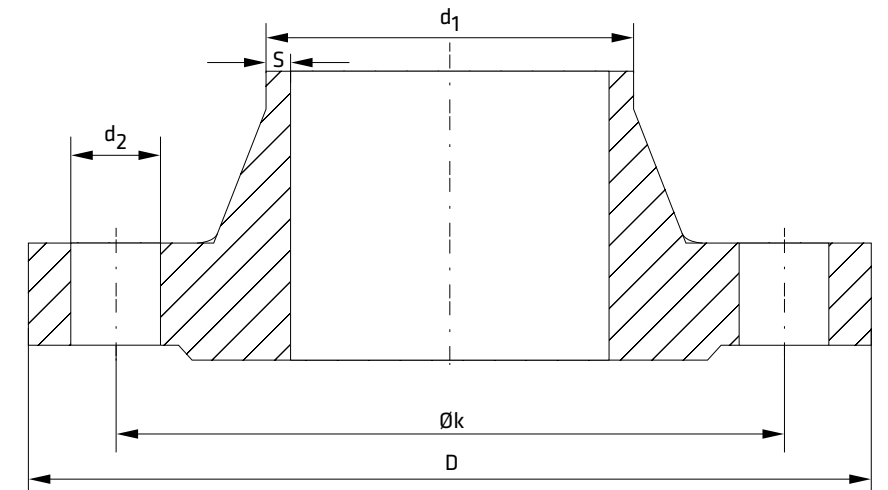


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

DIN 2633 Form C

1.4301 - 1.4541 (1/1)



OD		d1	S	D	ØK	d2	drill holes	Grade	1.4301	1.4541
PN	DN	mm	mm	mm	mm	mm		AISI	304	316
		mm	mm	mm	mm	mm		kg/pce.	*)	*)
16	10	17.2	1.8	90	60	14	4	0.58		x
16	15	21.3	2.0	95	65	14	4	0.65	x	x
16	20	26.9	2.0	105	75	14	4	0.95	x	x
16	25	33.7	2.6	115	85	14	4	1.14	x	x
16	32	42.4	2.6	140	100	18	4	1.69	x	x
16	40	48.3	2.6	150	110	18	4	1.86		x
16	100	108.0	3.6	220	180	18	8	4.62		
16	125	133.0	4.0	250	210	18	8	6.30		
16	150	159.0	4.5	285	240	22	8	7.75		



\* Finishes: page 311; no standard pipe connection

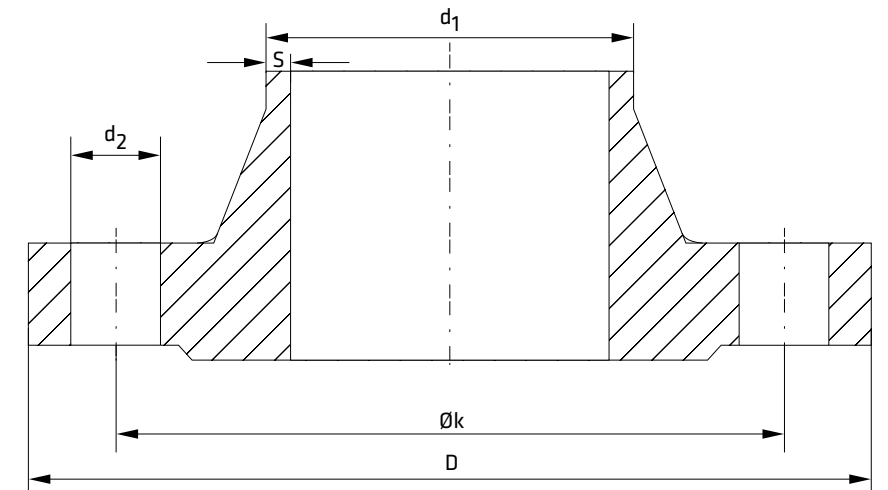




# WELDING NECK FLANGES

DIN 2633 Form C

1.4571 (1/1)



OD		d1	S	D	ØK	d2	drill holes	Grade	1.4571
PN	DN	mm	mm	mm	mm	mm		AISI	316 Ti
		mm	mm	mm	mm	mm		kg/pce.	*)
16	10	17.2	1.8	90	60	14	4	0.58	x
16	15	21.3	2.0	95	65	14	4	0.65	x
16	20	26.9	2.0	105	75	14	4	0.95	x
16	25	33.7	2.6	115	85	14	4	1.14	x
16	32	42.4	2.6	140	100	18	4	1.69	x
16	40	48.3	2.6	150	110	18	4	1.86	x
16	100	108.0	3.6	220	180	18	8	4.62	x
16	125	133.0	4.0	250	210	18	8	6.30	x
16	150	159.0	4.5	285	240	22	8	7.75	x



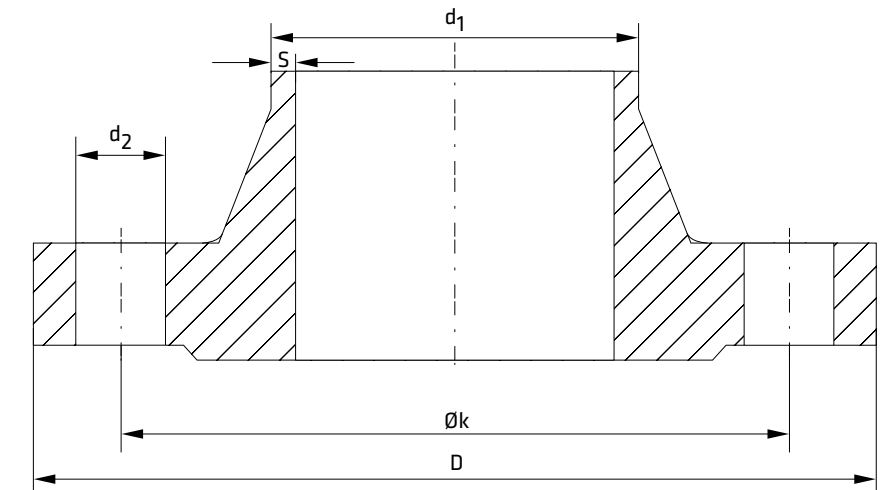
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (1/11)



CLASS	PN	DN	SCH	OD											Grade	1.4301 / 1.4307	AISI	304/304L	kg/pce.	*)
				WT	B	O	C	W	Y	X	R	f	NR	L						
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm				
150	1/2"	21.3	10S	2.11	17.08	90	9.6	60.3	46	30	34.9	2	4	15.9	0.51			x		
150			40S	2.77	15.76										0.51			x		
150			80S	3.73	13.84										0.51			x		
150	3/4"	26.7	10S	2.11	22.48	100	11.2	69.9	51	38	42.9	2	4	15.9	0.73			x		
150			40S	2.87	20.96										0.73			x		
150			80S	3.91	18.88										0.73			x		
150	1"	33.4	10S	2.77	27.86	110	12.7	79.4	54	49	50.8	2	4	15.9	1.07			x		
150			40S	3.38	26.64										1.07			x		
150			80S	4.55	24.30										1.07			x		
150	1 1/4"	42.2	10S	2.77	36.66	115	14.3	88.9	56	59	63.5	2	4	15.9	1.40			x		



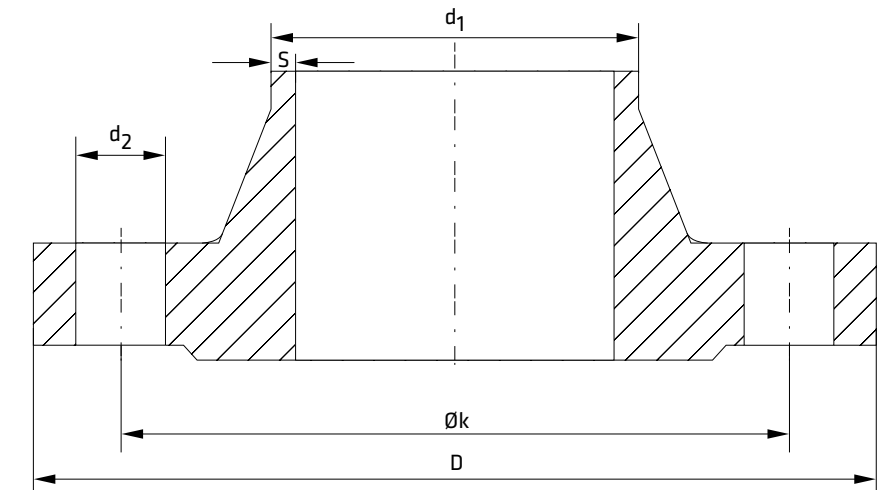
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (2/11)



CLASS	OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4301 / 1.4307	
	PN	DN	SCH	mm											mm	AISI
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150			40S	3.56	35.09										1.40	x
150			80S	4.85	32.50										1.40	x
150	11/2"	48.3	10S	2.77	42.76	125	15.9	98.4	60	65	73.0	2	4	15.9	1.81	x
150			40S	3.68	40.94										1.81	x
150			80S	5.08	38.14										1.81	x
150	2"	60.3	10S	2.77	54.76	150	17.5	120.7	62	78	92.1	2	4	19.1	2.59	x
150			40S	3.91	52.48										2.59	x
150			80S	5.54	49.22										2.59	x
150	2 1/2"	73	10S	3.05	66.90	180	20.7	139.7	68	90	104.8	2	4	19.1	4.28	x
150			40S	5.16	62.68										4.28	x



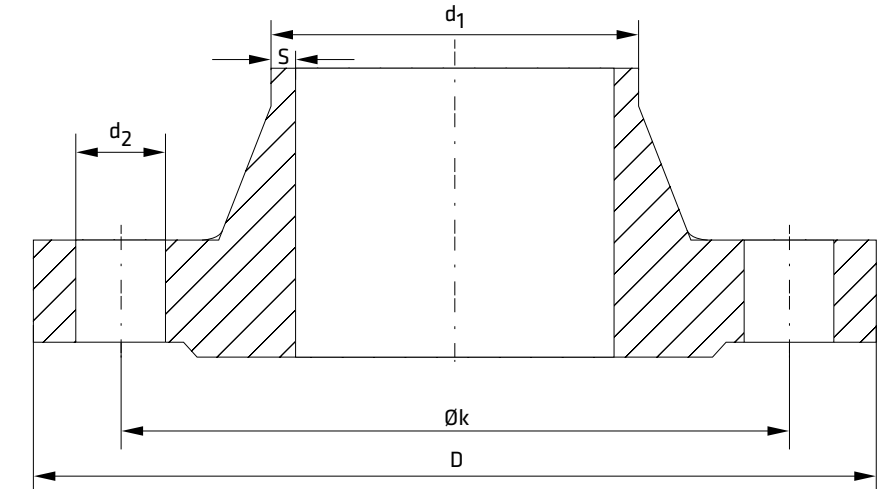
\* Finishes: page 311; no standard pipe connection



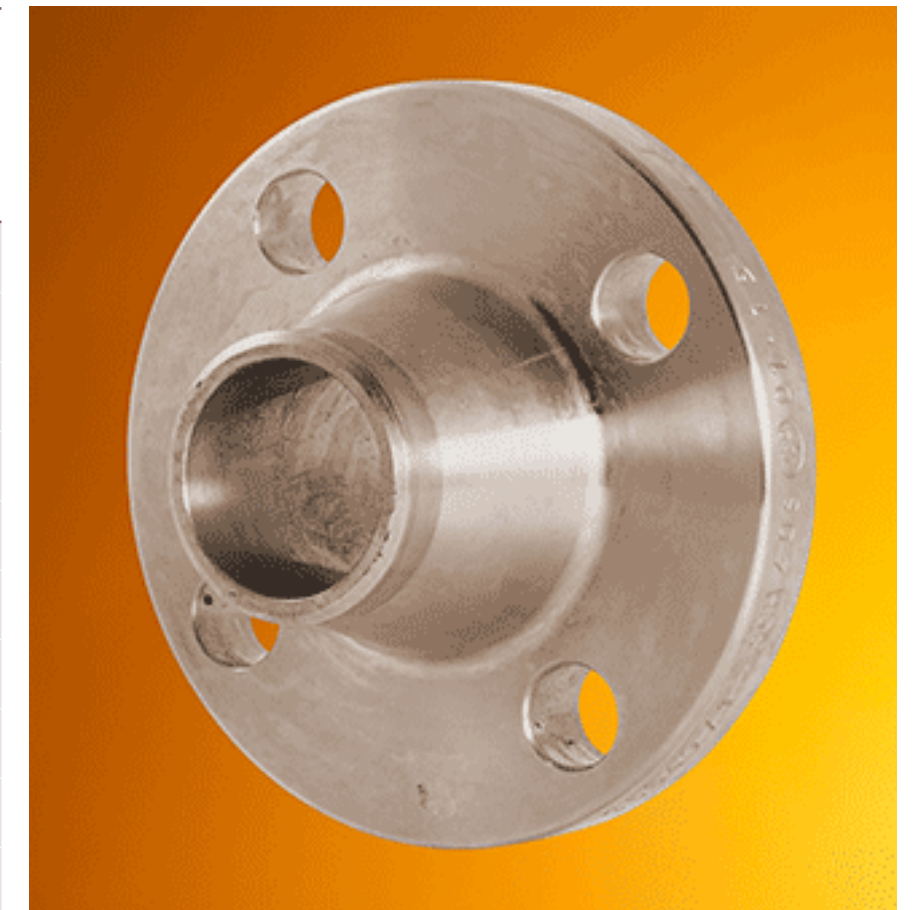
# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (3/11)



CLASS	OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4301 / 1.4307	
	PN	DN	SCH	mm											mm	AISI
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150			80S	7.01	58.98										4.28	x
150	3"	88.9	10S	3.05	82.80	190	22.3	152.4	68	108	127.0	2	4	19.1	5.18	x
150			40S	5.49	77.92										5.18	x
150			80S	7.62	73.66										5.18	x
150	3 1/2"	101.6	10S	3.05	95.50	215	22.3	177.8	70	122	139.7	2	8	19.1	5.45	x
150			40S	5.74	90.12										5.45	x
150			80S	8.08	85.44										5.45	x
150	4"	114.3	10S	3.05	108.20	230	22.3	190.5	75	135	157.2	2	8	19.1	7.32	x
150			40S	6.02	102.26										7.32	x
150			80S	8.56	97.18										7.32	x



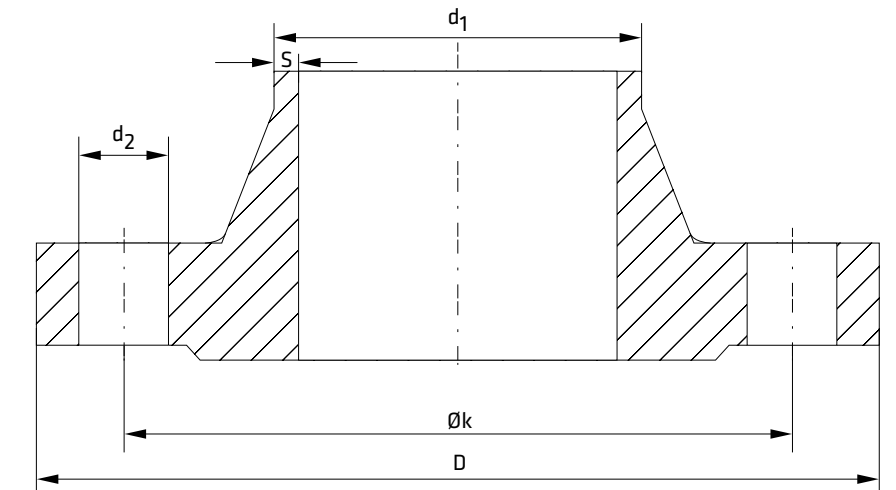
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (4/11)



CLASS	PN	DN	SCH	OD											Grade	1.4301 / 1.4307	AISI	304/304L	kg/pce.	*)		
				WT	B	O	C	W	Y	X	R	f	NR	L								
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm					
150	5"	141.3	10S	3.40	134.50	255	22.3	215.9	87	164	185.7	2	8	22.2	8.91						x	
150			40S	6.55	128.20										8.91							x
150			80S	9.53	122.24										8.91							x
150	6"	168.3	10S	3.40	161.50	280	23.9	241.3	87	192	215.9	2	8	22.2	11.26							x
150			40S	7.11	154.08										11.26							x
150			80S	10.97	146.36										11.26							x
150	8"	219.1	10S	3.76	211.58	345	27.0	298.5	100	246	269.9	2	8	22.2	17.68							x
150			40S	8.18	202.74										17.68							x
150			80S	12.70	193.70										17.68							x
150	10"	273.1	10S	4.19	264.72	405	28.6	362.0	100	305	323.8	2	12	25.4	24.79							x

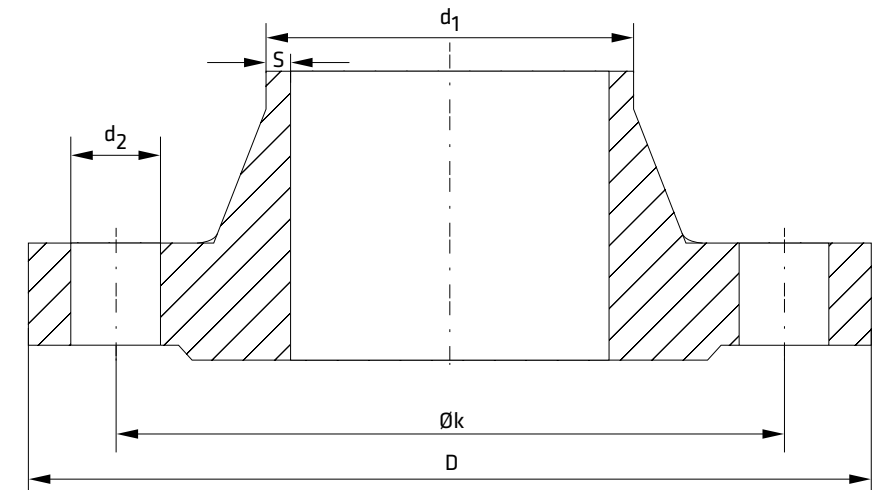


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (5/11)



CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150			40S	9.27	254.56											24.79	x
150			80S	12.70	247.70											24.79	x
150	12"	323.9	10S	4.57	314.76	485	30.2	431.8	113	365	381	2	12	25.4	38.98	38.98	x
150			40S	9.53	304.84										38.98	38.98	x
150			80S	12.70	298.50										38.98	38.98	x
150	14"	355.6	10S	4.78	346.04	535	33.4	476.3	125	400	412.8	2	12	28.6	51.71	51.71	x
150			40S	9.53	336.54										51.71	51.71	x
150			80S	12.70	330.20										51.71	51.71	x
150	16"	406.4	10S	4.78	396.84	595	35.0	539.8	125	457	469.9	2	16	28.6	64.41	64.41	x
150			40S	9.53	387.34										64.41	64.41	x

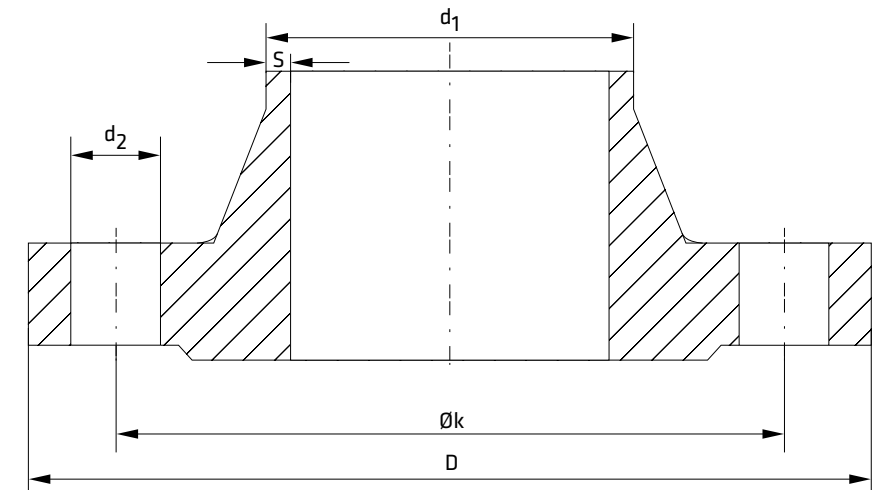


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (6/11)



CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Grade	1.4301 / 1.4307	AISI	304/304L	kg/pce.	*)
150			80S	12.70	381.00															64.41	x
150	18"	457.2	10S	4.78	447.64	635	38.1	577.9	138	505	533.4	2	16	31.8						74.84	x
150			40S	9.53	438.14															74.84	x
150	20"	508.0	10S	5.54	496.92	700	41.3	635.0	143	559	584.2	2	20	31.8						89.36	x
150			40S	9.53	488.94															89.36	x
150	24"	609.6	10S	6.35	596.90	815	46.1	749.3	151	663	692.2	2	20	34.9						119.66	x
150			40S	9.53	590.54															119.66	x
300	1/2"	21.3	40S	2.77	15.76	95	12.6	66.7	51	38	34.9	2	4	15.9						0.78	x
300			80S	3.73	13.84															0.78	x
300	3/4"	26.7	40S	2.87	20.96	115	14.1	82.6	56	48	42.9	2	4	19.1						1.34	x

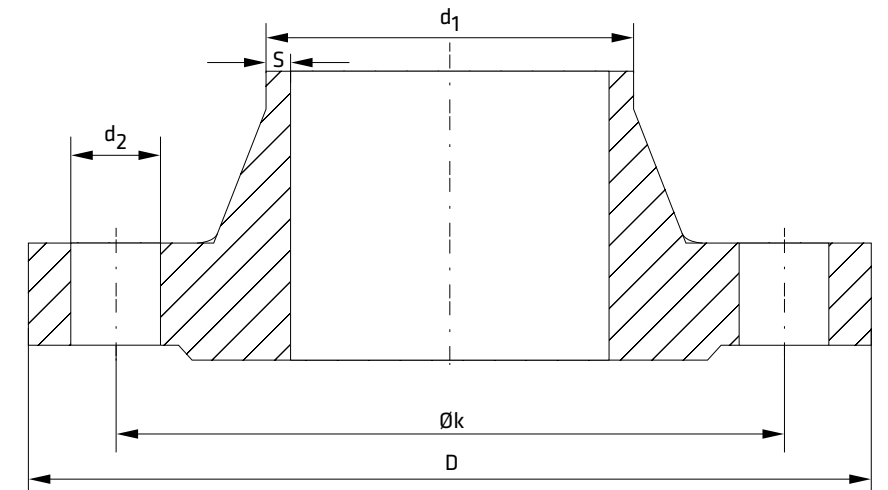


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (7/11)



CLASS	OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade		
	PN	DN	SCH	mm											mm	mm	mm
300			80S	3.91	18.88											1.4301 / 1.4307	x
300	1"	33.4	40S	3.38	26.64	125	15.9	88.9	60	54	50.8	2	4	19.1		AISI 304/304L	x
300			80S	4.55	24.30												x
300	1 1/4"	42.2	40S	3.56	35.08	135	17.5	98.4	64	64	63.5	2	4	19.1			x
300			80S	4.85	32.50												x
300	1 1/2"	48.3	40S	3.68	40.94	155	19.0	114.3	67	70	73	2	4	22.2			x
300			80S	5.08	38.14												x
300	2"	60.3	40S	3.91	52.48	165	20.8	127.0	68	84	92.1	2	8	19.1			x
300			80S	5.54	49.22												x
300	2 1/2"	73.0	40S	5.16	62.68	190	23.8	149.2	75	100	104.8	2	8	22.2			x



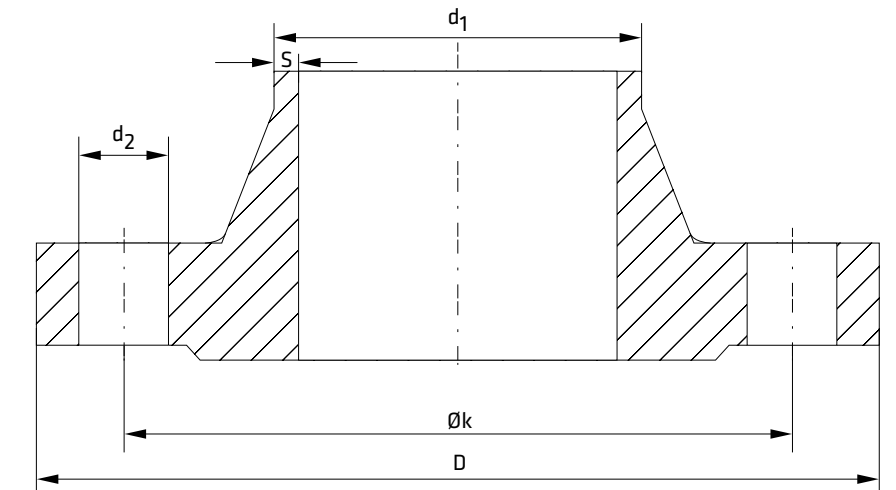
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (8/11)



CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
300			80S	7.01	58.98										5.31	x
300	3"	88.9	40S	5.49	77.92	210	26.8	168.3	78	117	127	2	8	22.2	7.32	x
300			80S	7.62	73.66										7.32	x
300	3 1/2"	101.6	40S	5.74	90.12	230	28.6	184.2	79	133	139.7	2	8	22.2	8.17	x
300			80S	8.08	85.44										8.17	x
300	4"	114.3	40S	6.02	102.26	255	30.2	200	84	146	157.2	2	8	22.2	11.30	x
300			80S	8.56	97.18										11.30	x
300	5"	141.3	40S	6.55	128.2	280	33.5	235	97	178	185.7	2	8	22.2	15.12	x
300			80S	9.53	122.24										15.12	x
300	6"	168.3	40S	7.11	154.08	320	35	269.9	97	206	215.9	2	12	22.2	19.68	x

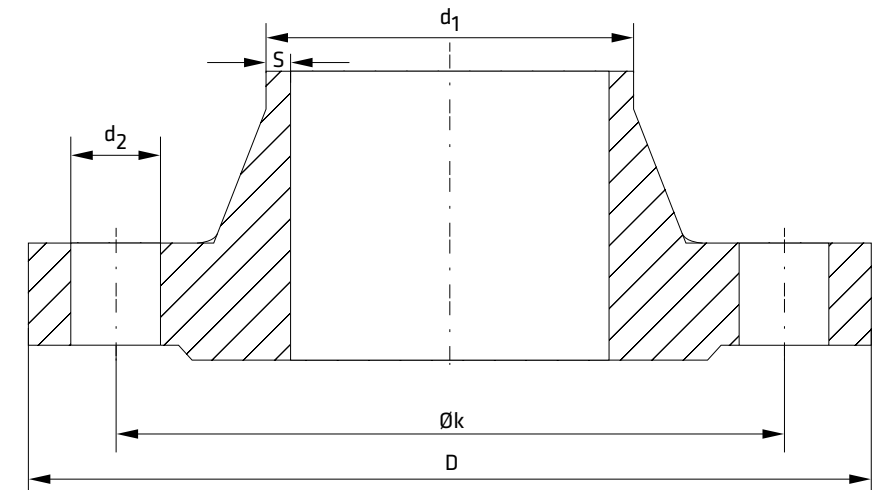


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (9/11)



CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
300			80S	10.97	146.36											19.68	x
300	8"	219.1	40S	8.18	202.74	380	39.5	330.2	110	260	269.9	2	12	25.4	30.48	30.48	x
300			80S	12.70	193.7											30.48	x
300	10"	273.1	40S	9.27	254.56	445	46.2	387.4	116	321	323.8	2	16	28.6	43.74	43.74	x
300			80S	12.70	247.7											43.74	x
300	12"	323.9	40S	9.53	304.84	520	59.2	450.8	129	375	381	2	16	31.8	64.41	64.41	x
300			80S	12.70	298.5											64.41	x
300	14"	355.6	40S	9.53	336.54	585	52.2	514.4	141	425	412.8	2	20	31.8	88.30	88.30	x
300			80S	19.10	317.4											88.30	x
300	16"	406.4	40S	9.53	387.34	650	55.6	571.5	144	483	469.9	2	20	34.9	112.94	112.94	x

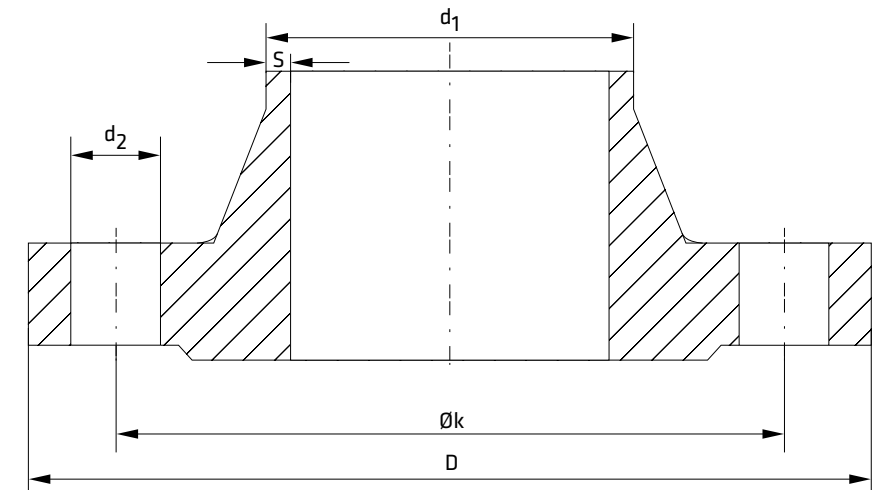


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (10/11)



OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade	1.4301 / 1.4307	
CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI	304/304L	
														kg/pce.	*)	
300			80S	21.40	363.6									112.94	x	
600	1/2"	21.3	80S	3.73	13.8	95	14.3	66.7	52	38	34.9	7	4	15.9	0.90	x
600	3/4"	26.7	80S	3.91	18.9	115	15.9	82.6	57	48	42.9	7	4	19.1	1.59	x
600	1"	33.5	80S	4.55	24.4	125	17.5	88.9	62	54	50.8	7	4	19.1	1.90	x
600	1 1/4"	42.2	80S	4.85	32.5	135	20.7	98.4	67	64	63.5	7	4	19.1	2.49	x
600	1 1/2"	48.3	80S	5.08	38.1	155	22.3	114.3	70	70	73.0	7	4	22.2	3.63	x
600	2"	60.5	80S	5.54	49.4	165	25.4	127.0	73	84	92.1	7	8	19.1	4.54	x
600	2 1/2"	73.2	80S	7.01	59.2	190	28.6	149.2	79	100	104.8	7	8	22.2	6.35	x
600	3"	88.9	80S	7.62	73.7	210	31.8	168.3	83	117	127.0	7	8	22.2	8.10	x
600	3 1/2"	101.6	80S	8.08	85.4	230	35.0	184.2	86	133	139.7	7	8	25.4	11.80	x



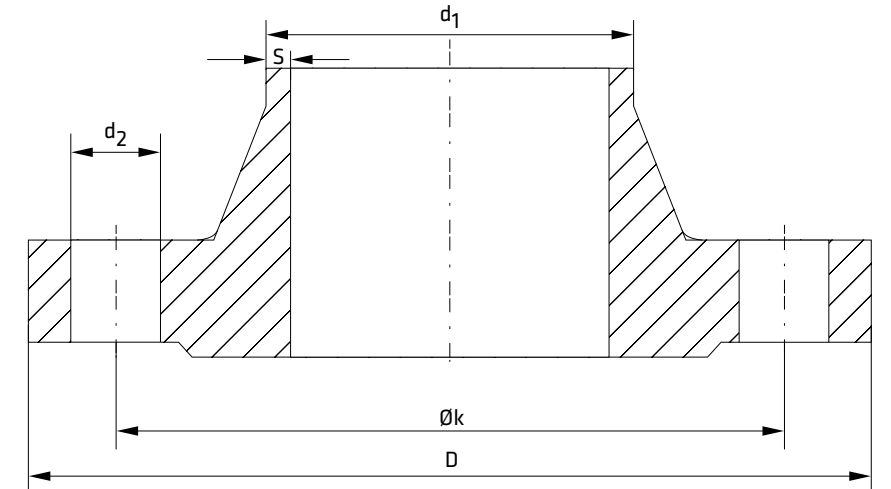
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4301 (11/11)



CLASS	PN	DN	SCH	OD		B	O	C	W	Y	X	R	f	NR	L	Grade	
				mm	mm											1.4301 / 1.4307	AISI 304/304L
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
600	4"	114.3	80S	8.56	97.2	275	38.1	215.9	102	152	157.2	7	8	25.4	16.78	x	
600	5"	141.3	80S	9.53	122.2	330	44.5	266.7	114	189	185.7	7	8	28.6	30.87	x	
600	6"	168.4	80S	10.97	146.5	355	47.7	292.1	117	222	215.9	7	12	28.6	36.77	x	
600	8"	219.1	80S	12.70	193.7	420	55.6	349.2	133	273	269.9	7	12	31.8	50.80	x	
600	10"	273.0	80S	15.10	242.8	510	63.5	431.8	152	343	323.8	7	16	34.9	86.26	x	
600	12"	323.8	80S	15.10	293.6	560	66.7	489.0	156	400	381.0	7	20	34.9	102.51	x	



\* Finishes: page 311; no standard pipe connection

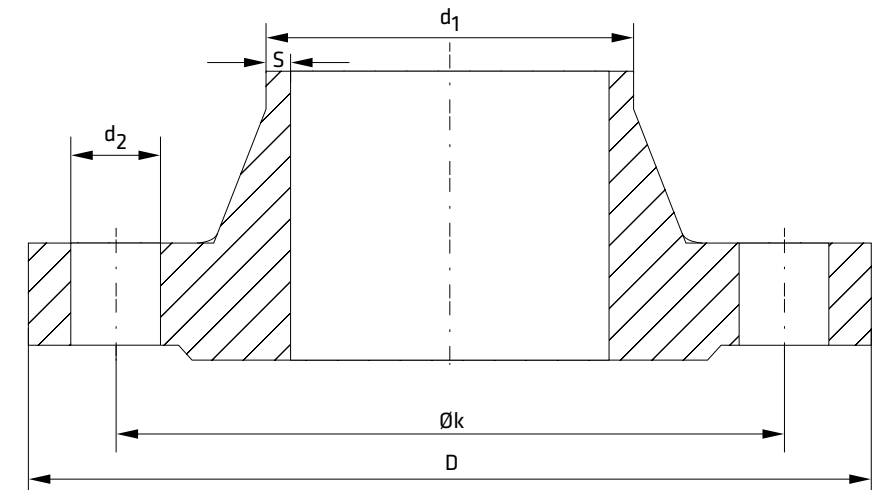




# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (1/11)



CLASS	PN	DN	SCH	OD											Grade 1.4401 / 1.4404		
				WT	B	O	C	W	Y	X	R	f	NR	L	AISI	316 / 316L	
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150	1/2"	21.3	10S	2.11	17.08	90	9.6	60.3	46	30	34.9	2	4	15.9	0.51	x	
150			40S	2.77	15.76										0.51	x	
150			80S	3.73	13.84										0.51	x	
150	3/4"	26.7	10S	2.11	22.48	100	11.2	69.9	51	38	42.9	2	4	15.9	0.73	x	
150			40S	2.87	20.96										0.73	x	
150			80S	3.91	18.88										0.73	x	
150	1"	33.4	10S	2.77	27.86	110	12.7	79.4	54	49	50.8	2	4	15.9	1.07	x	
150			40S	3.38	26.64										1.07	x	
150			80S	4.55	24.30										1.07	x	
150	1 1/4"	42.2	10S	2.77	36.66	115	14.3	88.9	56	59	63.5	2	4	15.9	1.40	x	



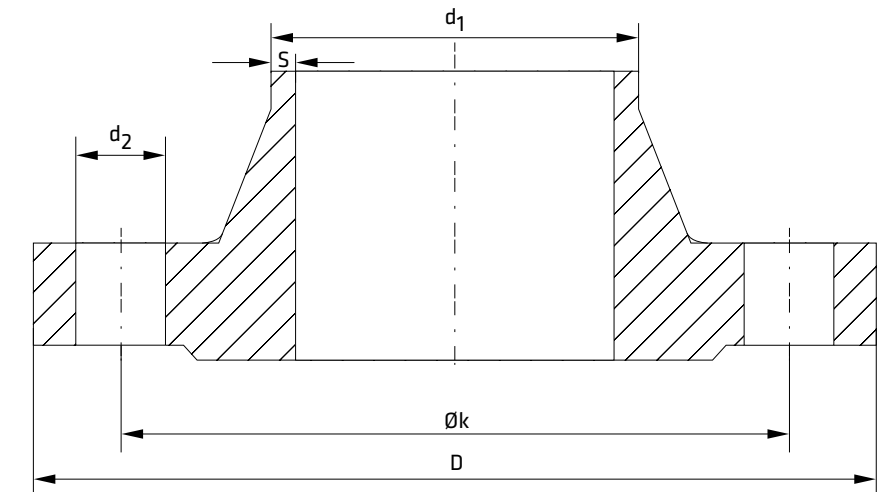
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (2/11)



CLASS	OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404	
	PN	DN	SCH	mm											mm	AISI
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150			40S	3.56	35.09										1.40	x
150			80S	4.85	32.50										1.40	x
150	11/2"	48.3	10S	2.77	42.76	125	15.9	98.4	60	65	73.0	2	4	15.9	1.81	x
150			40S	3.68	40.94										1.81	x
150			80S	5.08	38.14										1.81	x
150	2"	60.3	10S	2.77	54.76	150	17.5	120.7	62	78	92.1	2	4	19.1	2.59	x
150			40S	3.91	52.48										2.59	x
150			80S	5.54	49.22										2.59	x
150	2 1/2"	73	10S	3.05	66.90	180	20.7	139.7	68	90	104.8	2	4	19.1	4.28	x
150			40S	5.16	62.68										4.28	x

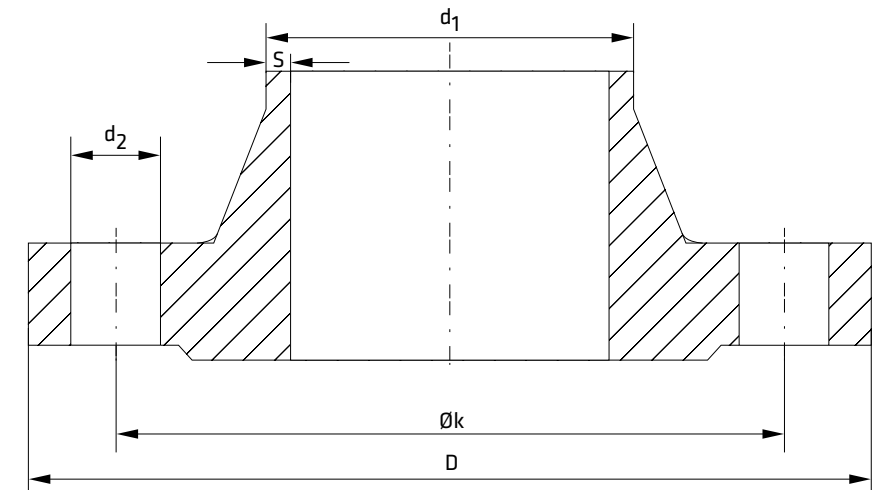


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (3/11)



CLASS	PN	DN	SCH	OD		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404	
				WT	mm											mm	AISI
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150			80S	7.01	58.98											4.28	x
150	3"	88.9	10S	3.05	82.80	190	22.3	152.4	68	108	127.0	2	4	19.1	5.18	5.18	x
150			40S	5.49	77.92											5.18	x
150			80S	7.62	73.66											5.18	x
150	3 1/2"	101.6	10S	3.05	95.50	215	22.3	177.8	70	122	139.7	2	8	19.1	5.45	5.45	x
150			40S	5.74	90.12											5.45	x
150			80S	8.08	85.44											5.45	x
150	4"	114.3	10S	3.05	108.20	230	22.3	190.5	75	135	157.2	2	8	19.1	7.32	7.32	x
150			40S	6.02	102.26											7.32	x
150			80S	8.56	97.18											7.32	x

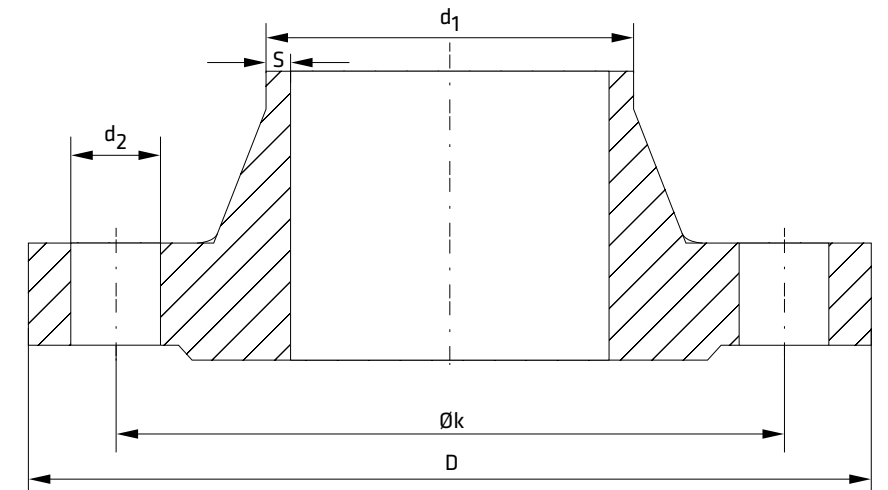


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (4/11)



CLASS	PN	DN	SCH	OD											Grade 1.4401 / 1.4404		
				WT	B	O	C	W	Y	X	R	f	NR	L	AISI	316 / 316L	
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150	5"	141.3	10S	3.40	134.50	255	22.3	215.9	87	164	185.7	2	8	22.2	8.91	x	
150			40S	6.55	128.20										8.91	x	
150			80S	9.53	122.24										8.91	x	
150	6"	168.3	10S	3.40	161.50	280	23.9	241.3	87	192	215.9	2	8	22.2	11.26	x	
150			40S	7.11	154.08										11.26	x	
150			80S	10.97	146.36										11.26	x	
150	8"	219.1	10S	3.76	211.58	345	27.0	298.5	100	246	269.9	2	8	22.2	17.68	x	
150			40S	8.18	202.74										17.68	x	
150			80S	12.70	193.70										17.68	x	
150	10"	273.1	10S	4.19	264.72	405	28.6	362.0	100	305	323.8	2	12	25.4	24.79	x	



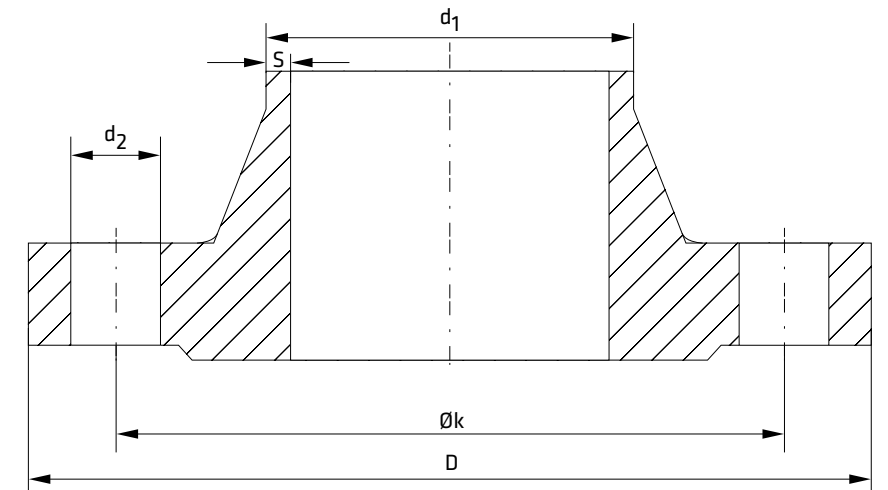
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (5/11)



OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404		
CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI 316 / 316L	*)	
150			40S	9.27	254.56									24.79	x	
150			80S	12.70	247.70									24.79	x	
150	12"	323.9	10S	4.57	314.76	485	30.2	431.8	113	365	381	2	12	25.4	38.98	x
150			40S	9.53	304.84									38.98	x	
150			80S	12.70	298.50									38.98	x	
150	14"	355.6	10S	4.78	346.04	535	33.4	476.3	125	400	412.8	2	12	28.6	51.71	x
150			40S	9.53	336.54									51.71	x	
150			80S	12.70	330.20									51.71	x	
150	16"	406.4	10S	4.78	396.84	595	35.0	539.8	125	457	469.9	2	16	28.6	64.41	x
150			40S	9.53	387.34									64.41	x	

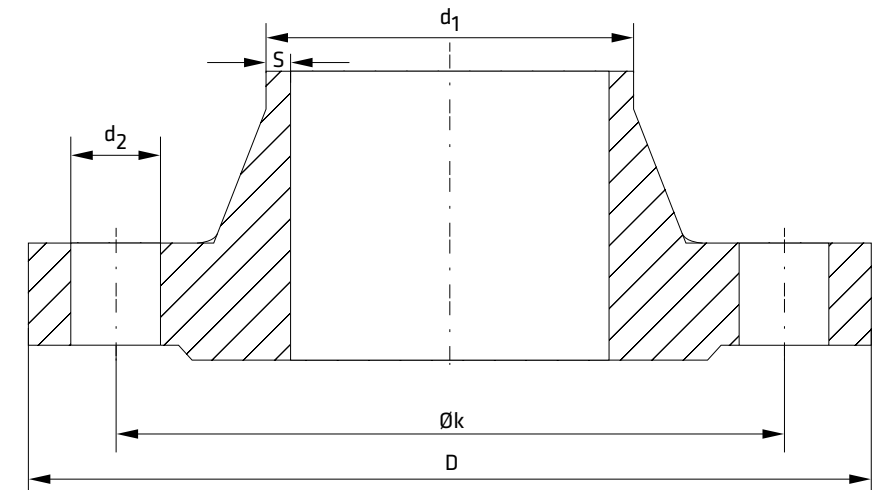


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (6/11)



CLASS	OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404	
	PN	DN	SCH	mm											mm	AISI
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
150			80S	12.70	381.00										64.41	x
150	18"	457.2	10S	4.78	447.64	635	38.1	577.9	138	505	533.4	2	16	31.8	74.84	x
150			40S	9.53	438.14										74.84	x
150	20"	508.0	10S	5.54	496.92	700	41.3	635.0	143	559	584.2	2	20	31.8	89.36	x
150			40S	9.53	488.94										89.36	x
150	24"	609.6	10S	6.35	596.90	815	46.1	749.3	151	663	692.2	2	20	34.9	119.66	x
150			40S	9.53	590.54										119.66	x
300	1/2"	21.3	40S	2.77	15.76	95	12.6	66.7	51	38	34.9	2	4	15.9	0.78	x
300			80S	3.73	13.84										0.78	x
300	3/4"	26.7	40S	2.87	20.96	115	14.1	82.6	56	48	42.9	2	4	19.1	1.34	x



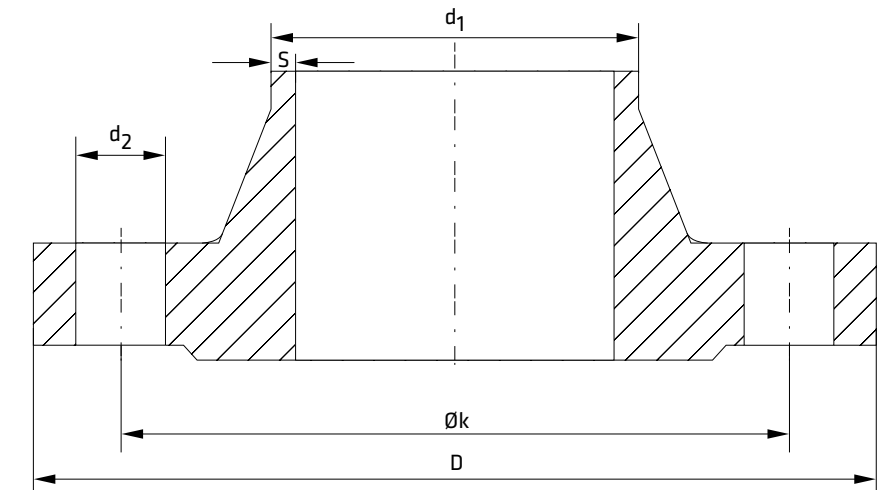
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (7/11)



OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404			
CLASS		PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI 316 / 316L	kg/pce.	*)	
300				80S	3.91	18.88									1.34	x	
300	1"	33.4		40S	3.38	26.64	125	15.9	88.9	60	54	50.8	2	4	19.1	1.64	x
300				80S	4.55	24.30									1.64	x	
300	1 1/4"	42.2		40S	3.56	35.08	135	17.5	98.4	64	64	63.5	2	4	19.1	2.06	x
300				80S	4.85	32.50									2.06	x	
300	1 1/2"	48.3		40S	3.68	40.94	155	19.0	114.3	67	70	73	2	4	22.2	3.06	x
300				80S	5.08	38.14									3.06	x	
300	2"	60.3		40S	3.91	52.48	165	20.8	127.0	68	84	92.1	2	8	19.1	3.40	x
300				80S	5.54	49.22									3.40	x	
300	2 1/2"	73.0		40S	5.16	62.68	190	23.8	149.2	75	100	104.8	2	8	22.2	5.31	x

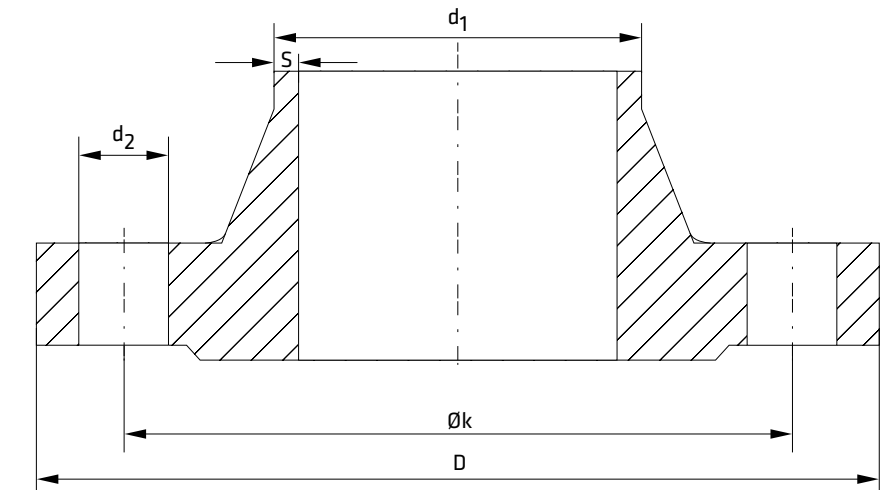


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (8/11)



CLASS	OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404	
	PN	DN	SCH	mm											mm	AISI
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
300			80S	7.01	58.98										5.31	x
300	3"	88.9	40S	5.49	77.92	210	26.8	168.3	78	117	127	2	8	22.2	7.32	x
300			80S	7.62	73.66										7.32	x
300	3 1/2"	101.6	40S	5.74	90.12	230	28.6	184.2	79	133	139.7	2	8	22.2	8.17	x
300			80S	8.08	85.44										8.17	x
300	4"	114.3	40S	6.02	102.26	255	30.2	200	84	146	157.2	2	8	22.2	11.30	x
300			80S	8.56	97.18										11.30	x
300	5"	141.3	40S	6.55	128.2	280	33.5	235	97	178	185.7	2	8	22.2	15.12	x
300			80S	9.53	122.24										15.12	x
300	6"	168.3	40S	7.11	154.08	320	35	269.9	97	206	215.9	2	12	22.2	19.68	x



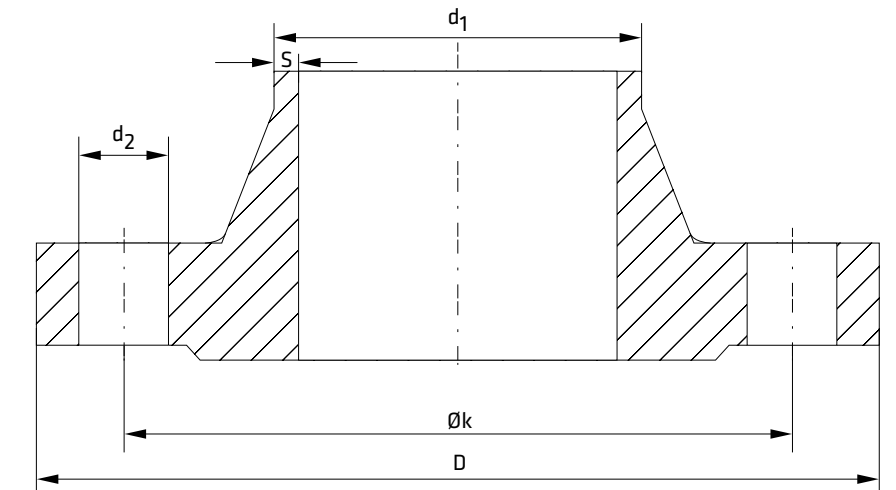
\* Finishes: page 311; no standard pipe connection



# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (9/11)



OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404		
CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI 316 / 316L	*)	
300			80S	10.97	146.36									19.68	x	
300	8"	219.1	40S	8.18	202.74	380	39.5	330.2	110	260	269.9	2	12	25.4	30.48	x
300			80S	12.70	193.7									30.48	x	
300	10"	273.1	40S	9.27	254.56	445	46.2	387.4	116	321	323.8	2	16	28.6	43.74	x
300			80S	12.70	247.7									43.74	x	
300	12"	323.9	40S	9.53	304.84	520	59.2	450.8	129	375	381	2	16	31.8	64.41	x
300			80S	12.70	298.5									64.41	x	
300	14"	355.6	40S	9.53	336.54	585	52.2	514.4	141	425	412.8	2	20	31.8	88.30	x
300			80S	19.10	317.4									88.30	x	
300	16"	406.4	40S	9.53	387.34	650	55.6	571.5	144	483	469.9	2	20	34.9	112.94	x

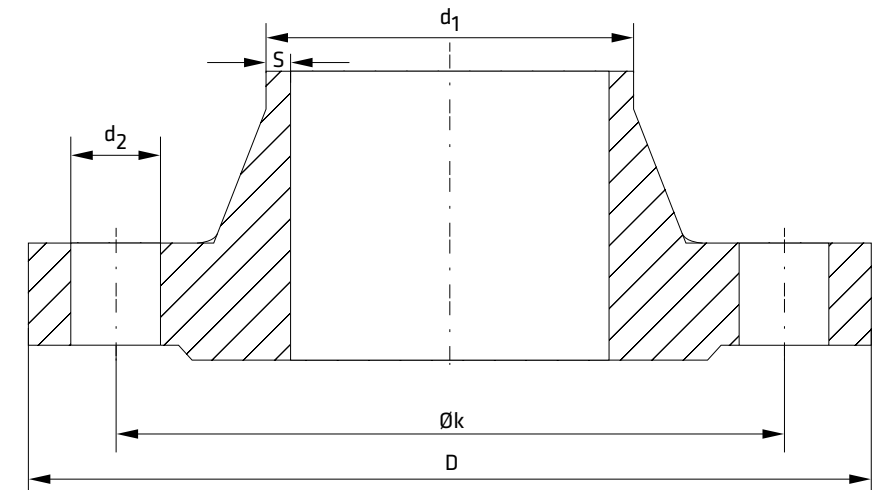


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (10/11)



OD		WT		B	O	C	W	Y	X	R	f	NR	L	Grade 1.4401 / 1.4404		
CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	AISI 316 / 316L	kg/pce.	*)
300			80S	21.40	363.6										112.94	x
600	1/2"	21.3	80S	3.73	13.8	95	14.3	66.7	52	38	34.9	7	4	15.9	0.90	x
600	3/4"	26.7	80S	3.91	18.9	115	15.9	82.6	57	48	42.9	7	4	19.1	1.59	x
600	1"	33.5	80S	4.55	24.4	125	17.5	88.9	62	54	50.8	7	4	19.1	1.90	x
600	1 1/4"	42.2	80S	4.85	32.5	135	20.7	98.4	67	64	63.5	7	4	19.1	2.49	x
600	1 1/2"	48.3	80S	5.08	38.1	155	22.3	114.3	70	70	73.0	7	4	22.2	3.63	x
600	2"	60.5	80S	5.54	49.4	165	25.4	127.0	73	84	92.1	7	8	19.1	4.54	x
600	2 1/2"	73.2	80S	7.01	59.2	190	28.6	149.2	79	100	104.8	7	8	22.2	6.35	x
600	3"	88.9	80S	7.62	73.7	210	31.8	168.3	83	117	127.0	7	8	22.2	8.10	x
600	3 1/2"	101.6	80S	8.08	85.4	230	35.0	184.2	86	133	139.7	7	8	25.4	11.80	x

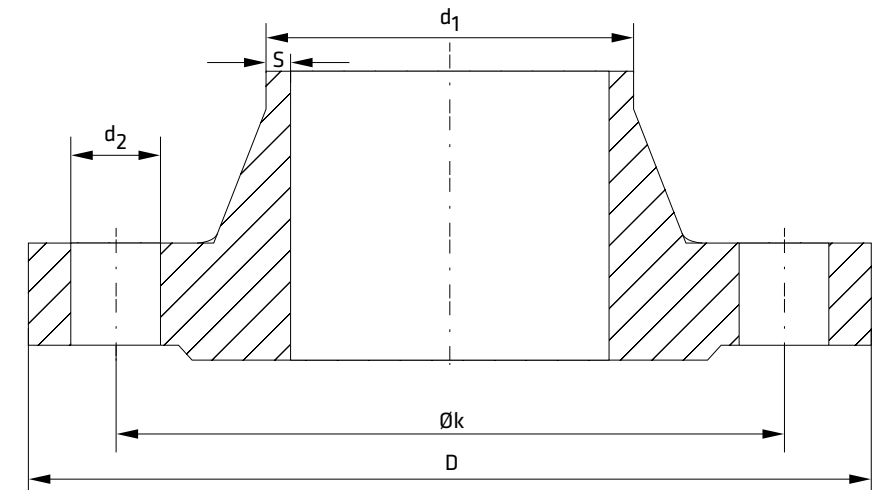


\* Finishes: page 311; no standard pipe connection

# WELDING NECK FLANGES

ASTM-A 182 ASME B16.5

1.4401 (11/11)



CLASS	PN	DN	SCH	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg/pce.	*)
600	4"	114.3	80S	8.56	97.2	275	38.1	215.9	102	152	157.2	7	8	25.4	16.78	x
600	5"	141.3	80S	9.53	122.2	330	44.5	266.7	114	189	185.7	7	8	28.6	30.87	x
600	6"	168.4	80S	10.97	146.5	355	47.7	292.1	117	222	215.9	7	12	28.6	36.77	x
600	8"	219.1	80S	12.70	193.7	420	55.6	349.2	133	273	269.9	7	12	31.8	50.80	x
600	10"	273.0	80S	15.10	242.8	510	63.5	431.8	152	343	323.8	7	16	34.9	86.26	x
600	12"	323.8	80S	15.10	293.6	560	66.7	489.0	156	400	381.0	7	20	34.9	102.51	x

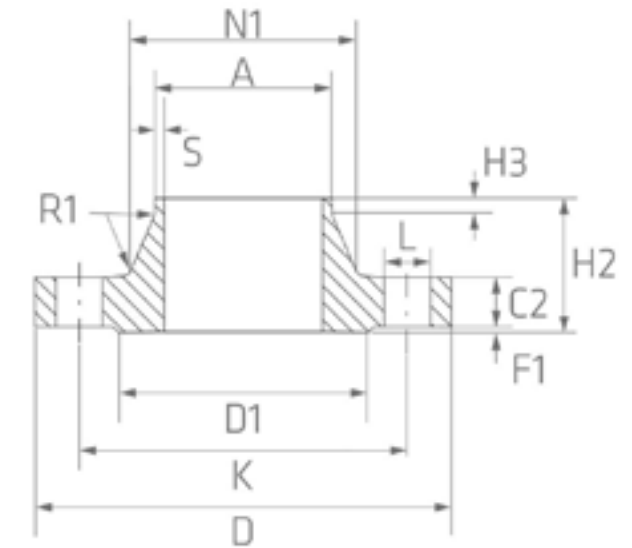


\* Finishes: page 311; no standard pipe connection

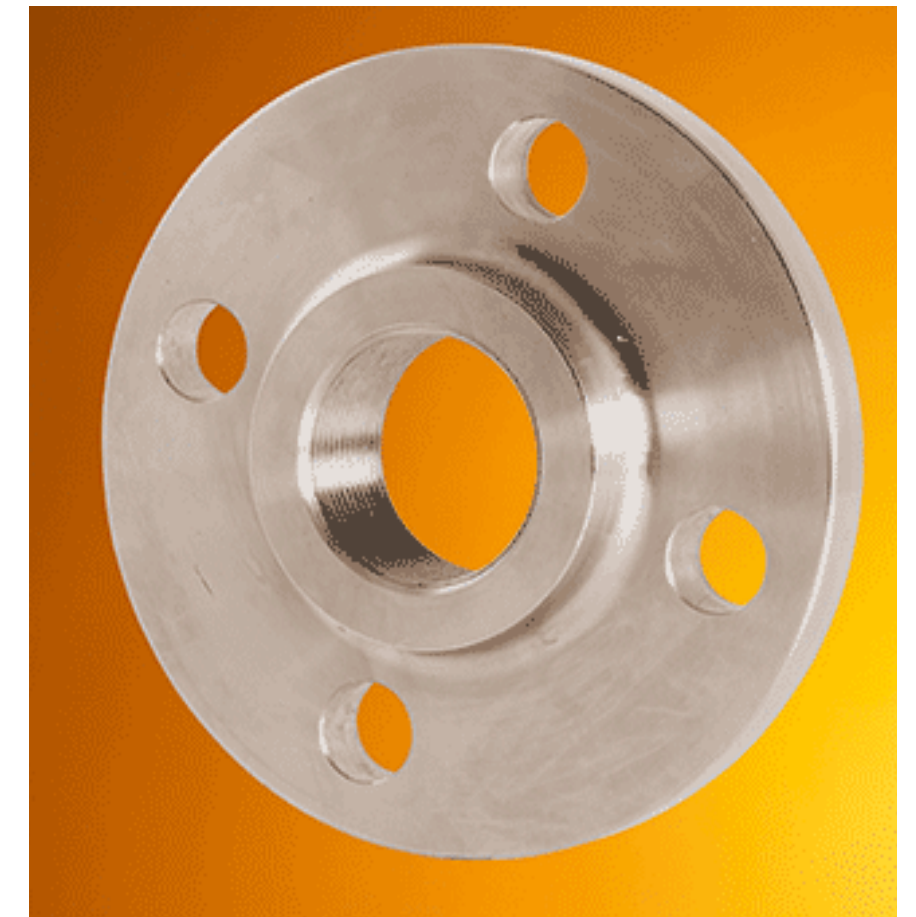
# BSP THREADED FLANGES WITH SOCKET

EN 1092-1 type 13 B

1.4301 (1/2)



OD	A	D	C2	K	N2	H1	Thread	d1	f	Number of screw	AFM Size	L	Grade	1.4301 / 1.4307
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm			AISI	304/304L
													kg/pce.	*)
16	50	60.3	165	18	125	84	R 2"	102	2	4	M16	18	2.50	x
16	65	76.1	185	18	145	104	R 2 1/2"	122	2	4	M16	18	3.50	x
16	65	76.1	185	18	145	104	R 2 1/2"	122	2	8	M16	18	3.50	
16	80	88.9	200	20	160	118	R 3"	138	2	8	M16	18	4.00	x
16	100	114.3	220	20	180	140	R 4"	158	2	8	M16	18	4.50	x
40	10	17.2	90	16	60	30	R 3/8"	40	2	4	M12	14	0.50	x
40	15	21.3	95	16	65	35	R 1/2"	45	2	4	M12	14	0.60	x
40	20	26.9	105	18	75	45	R 3/4"	58	2	4	M12	14	1.00	x
40	25	33.7	115	18	85	52	R 1"	68	2	4	M12	14	1.10	x
40	32	42.4	140	18	100	60	R 1 1/4"	78	2	4	M16	18	2.00	x



\* Finishes: page 311; no standard pipe connection

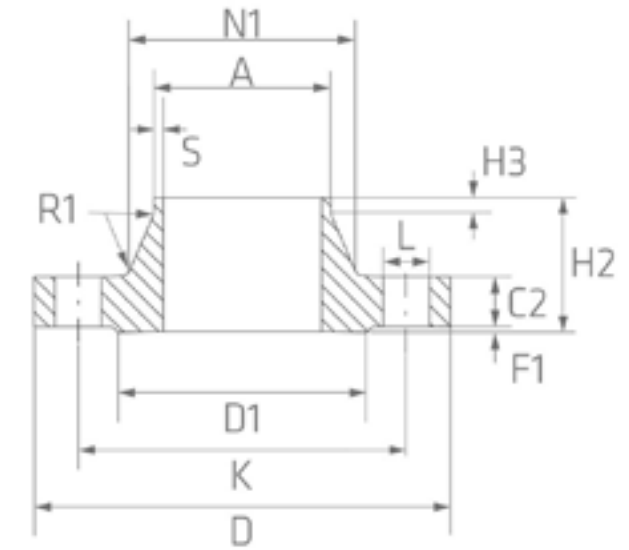




# BSP THREADED FLANGES WITH SOCKET

EN 1092-1 type 13 B

1.4301 (2/2)



OD	A	D	C2	K	N2	H1	Thread	d1	f	Number of screw	AFM Size	L	Grade	1.4301 / 1.4307
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm			AISI	304/304L
		mm	mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
40	40	48.3	150	18	110	70	R 1 1/2"	88	2	4	M16	18	2.10	x

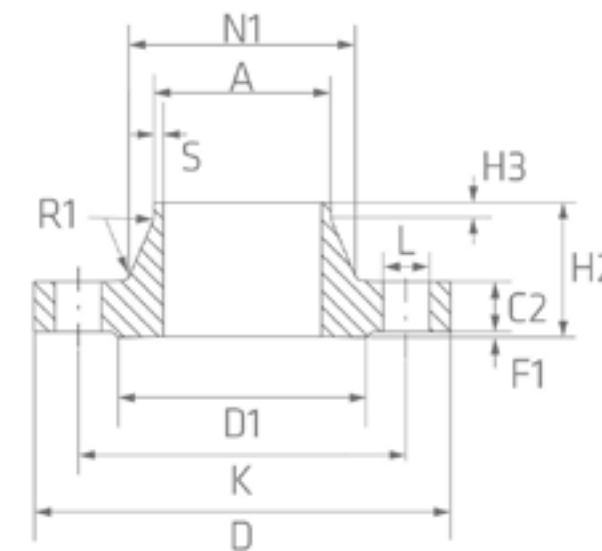


\* Finishes: page 311; no standard pipe connection

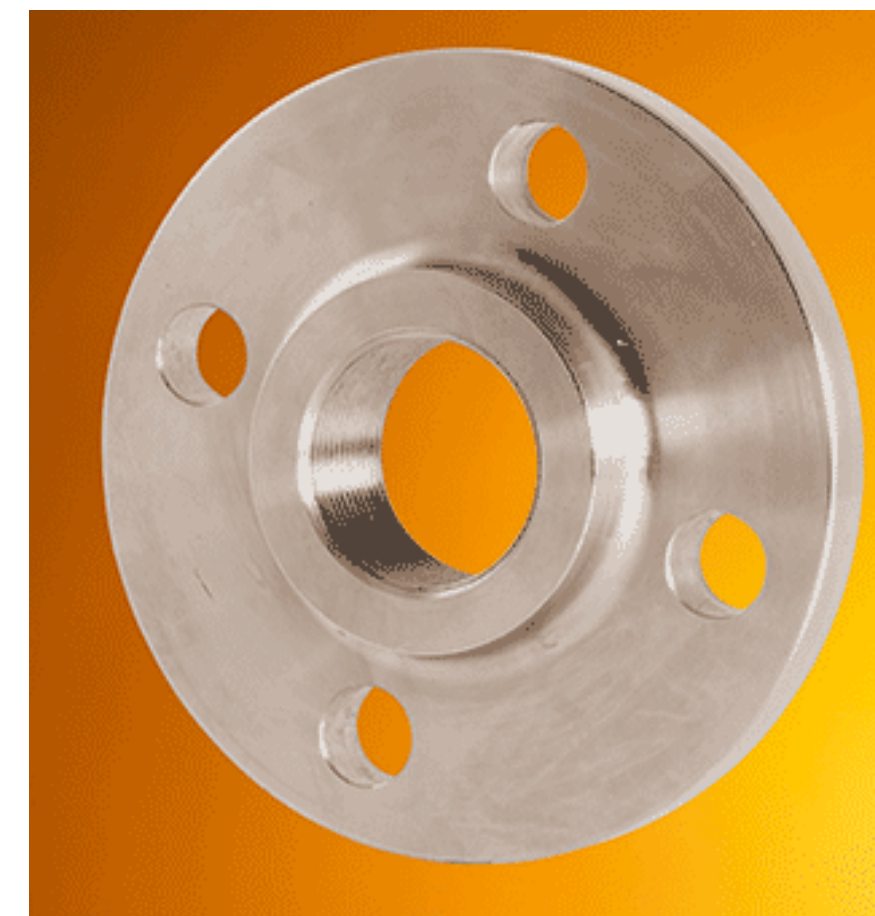
# BSP THREADED FLANGES WITH SOCKET

EN 1092-1 type 13 B

1.4401 (1/2)



OD	A	D	C2	K	N2	H1	Thread	d1	f	Number of screw	AFM Size	L	Grade 1.4401 / 1.4304 AISI 316 / 316L	kg/pce.	*)
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm					
16	50	60.3	165	18	125	84	28	R 2"	102	2	4	M16	18	2.50	x
16	65	76.1	185	18	145	104	32	R 2 1/2"	122	2	4	M16	18	3.50	x
16	65	76.1	185	18	145	104	32	R 2 1/2"	122	2	8	M16	18	3.50	
16	80	88.9	200	20	160	118	34	R 3"	138	2	8	M16	18	4.00	x
16	100	114.3	220	20	180	140	40	R 4"	158	2	8	M16	18	4.50	x
40	10	17.2	90	16	60	30	22	R 3/8"	40	2	4	M12	14	0.50	x
40	15	21.3	95	16	65	35	22	R 1/2"	45	2	4	M12	14	0.60	x
40	20	26.9	105	18	75	45	26	R 3/4"	58	2	4	M12	14	1.00	x
40	25	33.7	115	18	85	52	28	R 1"	68	2	4	M12	14	1.10	x
40	32	42.4	140	18	100	60	30	R 1 1/4"	78	2	4	M16	18	2.00	x

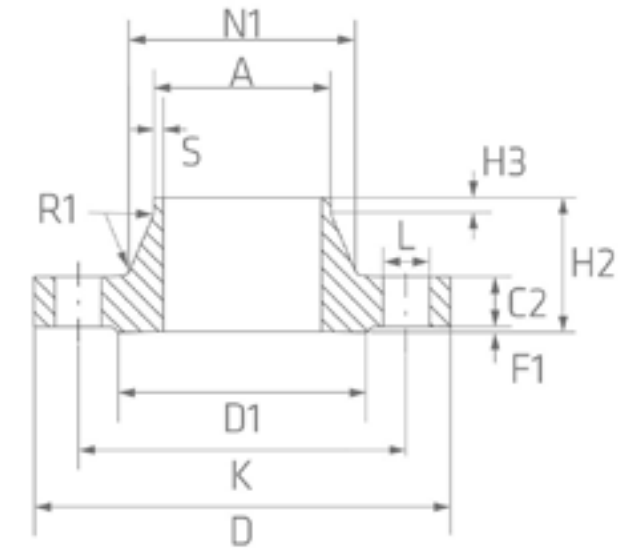


\* Finishes: page 311; no standard pipe connection

# BSP THREADED FLANGES WITH SOCKET

EN 1092-1 type 13 B

1.4401 (2/2)



OD	A	D	C2	K	N2	H1	Thread	d1	f	Number of screw	AFM Size	L	Grade	1.4401 / 1.4304
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm			AISI	316 / 316L
		mm	mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
40	40	48.3	150	18	110	70	R 1 1/2"	88	2	4	M16	18	2.10	x

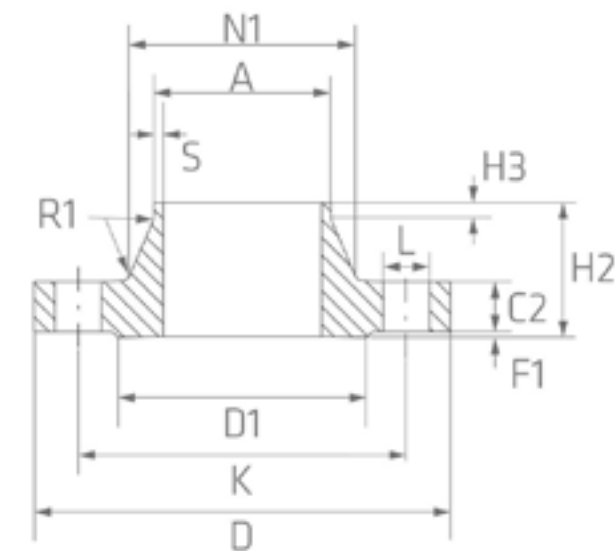


\* Finishes: page 311; no standard pipe connection

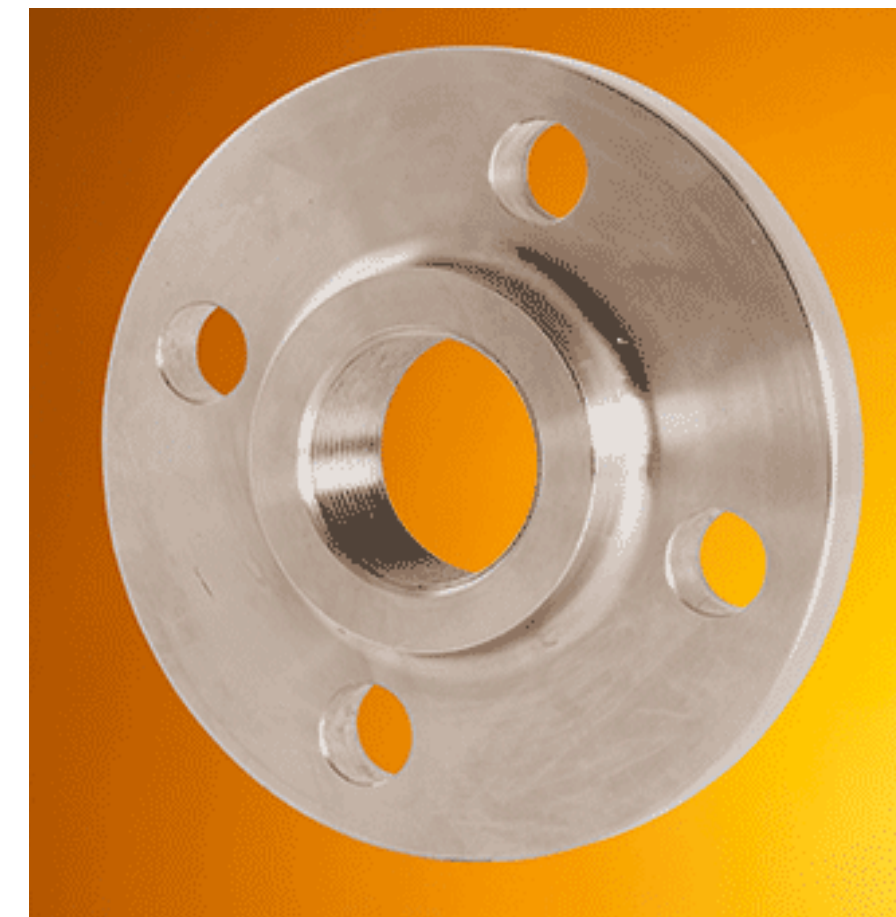
# BSP THREADED FLANGES WITH SOCKET

EN 1092-1 type 13 B

1.4571 (1/2)



OD	A	D	C2	K	N2	H1	Thread	d1	f	Number of screw	AFM Size	L	Grade AISI	1.4571 316 Ti kg/pce.	1.4571 316 Ti *)
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm					
16	50	60.3	165	18	125	84	R 2"	102	2	4	M16	18	2.50		x
16	65	76.1	185	18	145	104	R 2 1/2"	122	2	4	M16	18	3.50		
16	65	76.1	185	18	145	104	R 2 1/2"	122	2	8	M16	18	3.50		x
16	80	88.9	200	20	160	118	R 3"	138	2	8	M16	18	4.00		x
16	100	114.3	220	20	180	140	R 4"	158	2	8	M16	18	4.50		
40	10	17.2	90	16	60	30	R 3/8"	40	2	4	M12	14	0.50		x
40	15	21.3	95	16	65	35	R 1/2"	45	2	4	M12	14	0.60		x
40	20	26.9	105	18	75	45	R 3/4"	58	2	4	M12	14	1.00		x
40	25	33.7	115	18	85	52	R 1"	68	2	4	M12	14	1.10		x
40	32	42.4	140	18	100	60	R 1 1/4"	78	2	4	M16	18	2.00		x



\* Finishes: page 311; no standard pipe connection

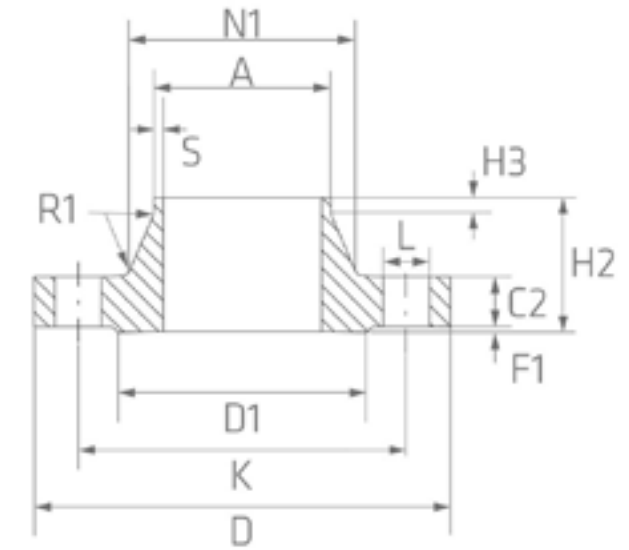




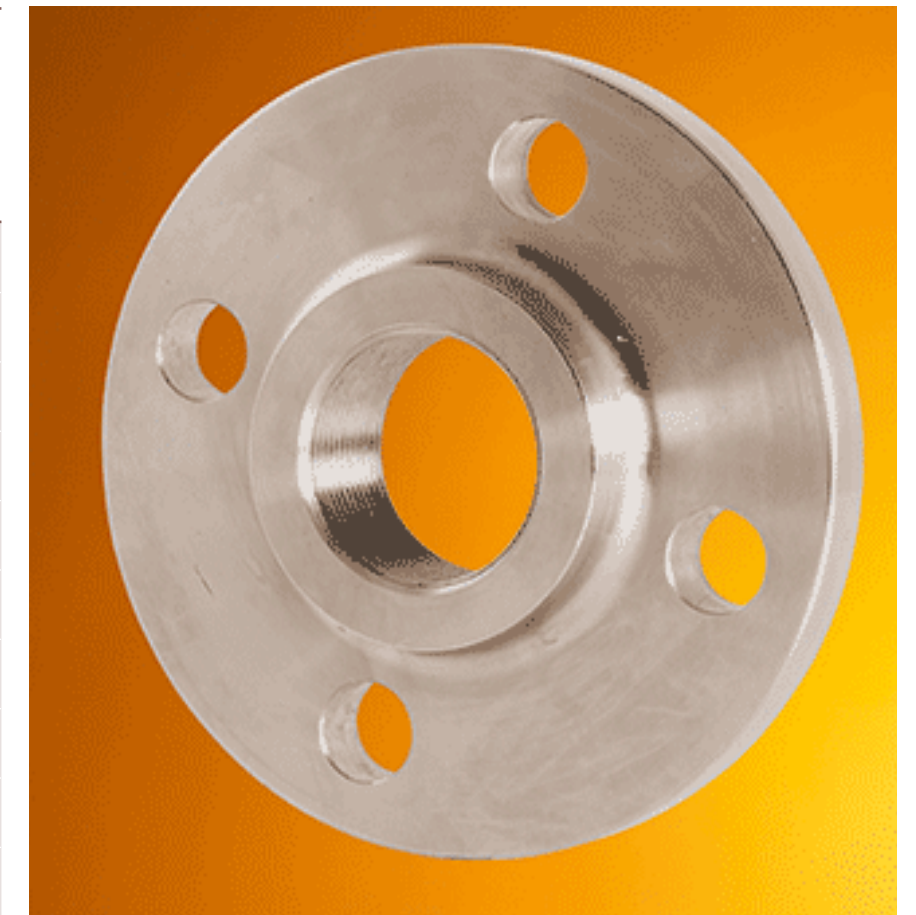
# BSP THREADED FLANGES WITH SOCKET

EN 1092-1 type 13 B

1.4571 (2/2)



OD	A	D	C2	K	N2	H1	Thread	d1	f	Number of screw	AFM Size	L	Grade AISI	1.4571 316 Ti
PN	DN	mm	mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
40	40	48.3	150	18	110	70	R 1 1/2"	88	2	4	M16	18	2.10	x

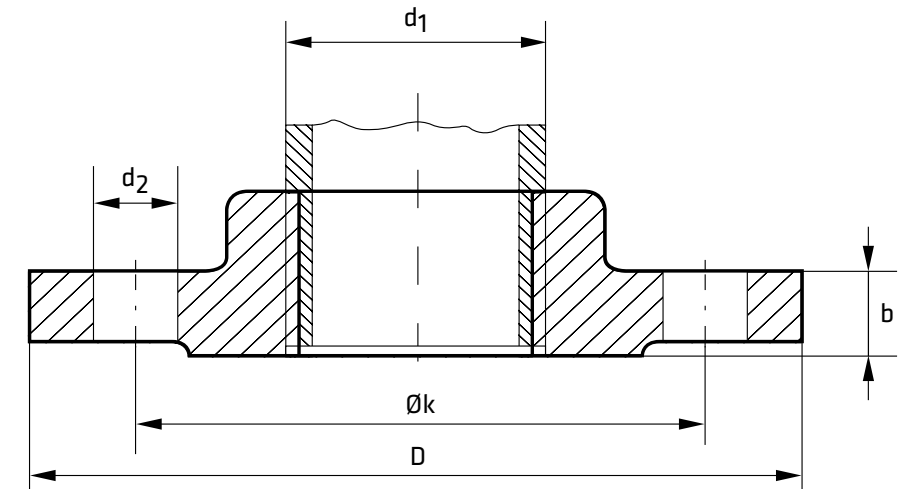


\* Finishes: page 311; no standard pipe connection

# THREADED FLANGES WITH SOCKET

DIN 2566

1.4571 (1/2)



OD		Thread	d1	D	b	ØK	d2	drill holes	Grade	1.4571
PN	DN	mm	mm	mm	mm	mm	mm		AISI	316 Ti
									kg/pce.	*)
10	15	R 1/2"	21.3	95	14	65	14	4	0.61	x
10	20	R 3/4"	26.9	105	16	75	14	4	0.91	x
10	25	R 1"	33.7	115	16	85	14	4	1.10	x
10	32	R 1 1/4"	42.4	140	16	100	18	4	1.60	x
10	40	R 1 1/2"	48.3	150	16	110	18	4	1.78	x
10	50	R 2"	60.3	165	18	125	18	4	2.43	x
10	65	R 2 1/2"	76.1	185	18	145	18	4	3.18	x
10	80	R 3"	88.9	200	20	160	18	8	4.12	x
10	100	R 4"	114.3	220	20	180	18	8	4.47	x
16	15	R 1/2"	21.3	95	14	65	14	4	0.61	x

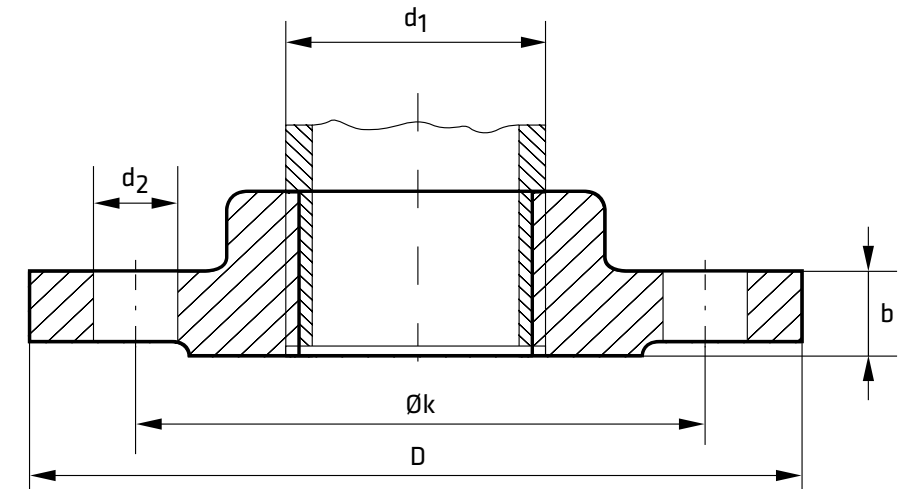


\* Finishes: page 311; no standard pipe connection

# THREADED FLANGES WITH SOCKET

DIN 2566

1.4571 (2/2)



OD		Thread	d1	D	b	ØK	d2	drill holes	Grade	1.4571
PN	DN	mm	mm	mm	mm	mm	mm		AISI	316 Ti
		mm	mm	mm	mm	mm	mm		kg/pce.	*)
16	20	R 3/4"	26.9	105	16	75	14	4	0.91	x
16	25	R 1"	33.7	115	16	85	14	4	1.10	x
16	32	R 1 1/4"	42.4	140	16	100	18	4	1.60	x
16	40	R 1 1/2"	48.3	150	16	110	18	4	1.78	x
16	50	R 2"	60.3	165	18	125	18	4	2.43	x
16	65	R 2 1/2"	76.1	185	18	145	18	4	3.18	x
16	80	R 3"	88.9	200	20	160	18	8	4.12	x
16	100	R 4"	114.3	220	20	180	18	8	4.47	x

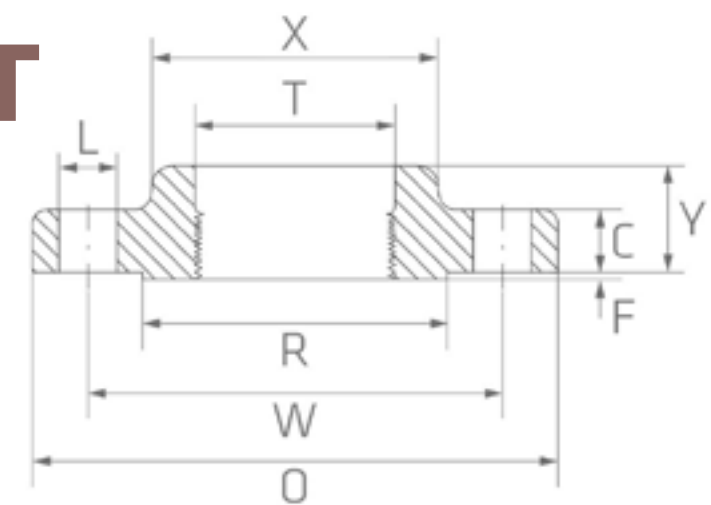


\* Finishes: page 311; no standard pipe connection

# NPT THREADED FLANGES WITH SOCKET

ASTM-A 182 ASME B16.5

1.4301 (1/2)



CLASS	OD		O	C	W	Y	X	T	R	f	Number of screw	L	Grade 1.4301/1.4307	
	INCH	MM											AISI	304/304L
			mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
150	1/2"	21.3	90	9.6	60.3	14	30	16	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	100	11.2	69.9	14	38	16	42.9	2	4	15.9	0.58	x
150	1"	33.5	110	12.7	79.4	16	49	17	50.8	2	4	15.9	0.86	x
150	1 1/4"	42.2	115	14.3	88.9	19	59	21	63.5	2	4	15.9	1.08	x
150	1 1/2"	48.3	125	15.9	98.4	21	65	22	73	2	4	15.9	1.41	x
150	2"	60.5	150	17.5	120.7	24	78	25	92.1	2	4	19.1	2.26	
150	3"	88.9	190	22.3	152.4	29	108	30	127	2	4	19.1	3.87	x
300	1/2"	21.3	95	12.7	66.7	21	38	23.6	34.9	2	4	15.9	0.62	x
300	3/4"	26.7	115	14.3	82.6	24	48	29	42.9	2	4	19.1	1.15	x
300	1"	33.5	125	15.9	88.9	25	54	35.8	50.8	2	4	19.1	1.36	x



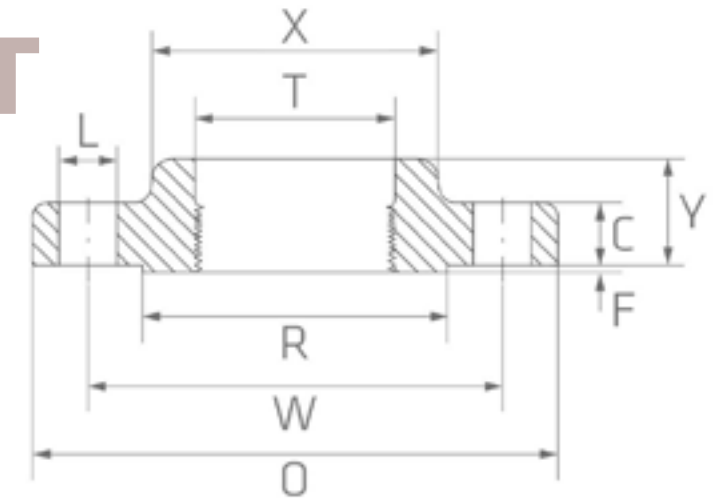
\* Finishes: page 311; no standard pipe connection



# NPT THREADED FLANGES WITH SOCKET

ASTM-A 182 ASME B16.5

1.4301 (2/2)



CLASS	OD		O	C	W	Y	X	T	R	f	Number of screw	L	Grade	
	INCH	MM											1.4301/1.4307	AISI 304/304L
			mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
300	1 1/4"	42.2	135	17.5	98.4	25	64	44.4	63.5	2	4	19.1	1.67	x
300	1 1/2"	48.3	155	19.1	114.3	29	70	50.3	73	2	4	22.2	2.53	x
300	2"	60.5	165	20.7	127.0	32	84	63.5	92.1	2	8	19.1	2.8	x

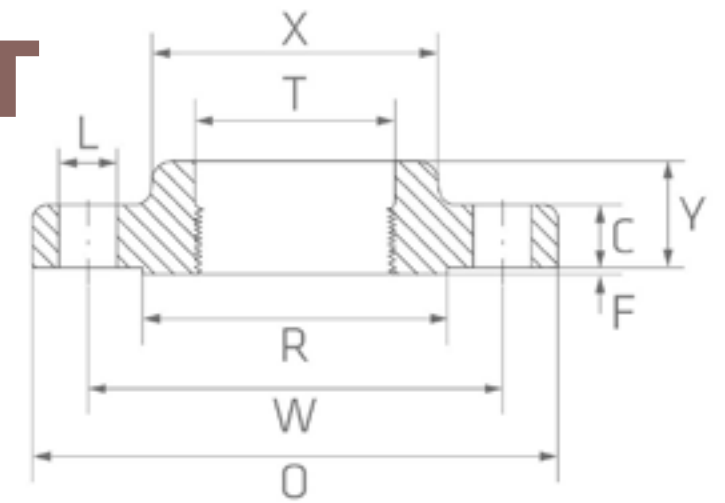


\* Finishes: page 311; no standard pipe connection

# NPT THREADED FLANGES WITH SOCKET

ASTM-A 182 ASME B16.5

1.4401 (1/2)



CLASS	OD		O	C	W	Y	X	T	R	f	Number of screw	L	Grade 1.4401/1.4404	
	INCH	MM											AISI	316/316L
			mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
150	1/2"	21.3	90	9.6	60.3	14	30	16	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	100	11.2	69.9	14	38	16	42.9	2	4	15.9	0.58	x
150	1"	33.5	110	12.7	79.4	16	49	17	50.8	2	4	15.9	0.86	x
150	1 1/4"	42.2	115	14.3	88.9	19	59	21	63.5	2	4	15.9	1.08	x
150	1 1/2"	48.3	125	15.9	98.4	21	65	22	73	2	4	15.9	1.41	x
150	2"	60.5	150	17.5	120.7	24	78	25	92.1	2	4	19.1	2.26	x
150	3"	88.9	190	22.3	152.4	29	108	30	127	2	4	19.1	3.87	x
300	1/2"	21.3	95	12.7	66.7	21	38	23.6	34.9	2	4	15.9	0.62	x
300	3/4"	26.7	115	14.3	82.6	24	48	29	42.9	2	4	19.1	1.15	x
300	1"	33.5	125	15.9	88.9	25	54	35.8	50.8	2	4	19.1	1.36	x



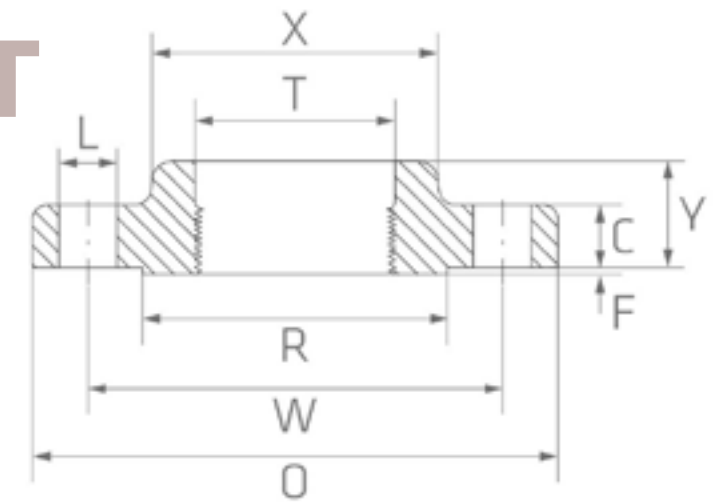
\* Finishes: page 311; no standard pipe connection



# NPT THREADED FLANGES WITH SOCKET

■ ASTM-A 182 ASME B16.5

1.4401 (2/2)



CLASS	OD		O	C	W	Y	X	T	R	f	Number of screw	L	Grade 1.4401/1.4404	
	INCH	MM											AISI	316/316L
			mm	mm	mm	mm	mm	mm	mm	mm			kg/pce.	*)
300	1 1/4"	42.2	135	17.5	98.4	25	64	44.4	63.5	2	4	19.1	1.67	x
300	1 1/2"	48.3	155	19.1	114.3	29	70	50.3	73	2	4	22.2	2.53	x
300	2"	60.5	165	20.7	127.0	32	84	63.5	92.1	2	8	19.1	2.8	x

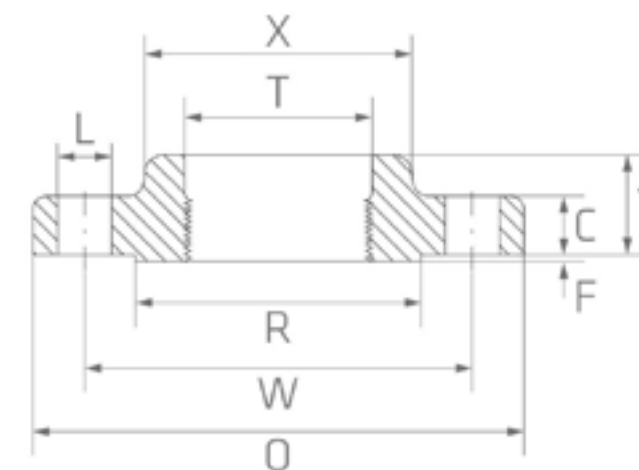


\* Finishes: page 311; no standard pipe connection

# SOCKET WELD FLANGES

ASTM-A 182 ASME B16.5

1.4401 (1/1)



CLASS	OD		WT		B1	B2	D	O	C	W	Y	X	R	f	Number of screw	L	Grade 1.4401/1.4404	
	INCH	MM	SCH	MM													AISI	kg/pce.
150	1/2"	21.3	40S	2.77	15.80	22.2	10.0	90.0	9.6	60.3	14.0	30	34.9	2	4	15.9	0.47	x
150	3/4"	26.7	40S	2.89	20.9	27.7	11.0	100	11.2	69.9	14	38	42.9	2	4	15.9	0.59	x
150	1"	33.5	40S	3.38	26.6	34.5	13.0	110	12.7	79.4	16	49	50.8	2	4	15.9	0.87	x
150	1 1/4"	42.2	40S	3.56	35.1	43.2	14.0	115	14.3	88.9	19	59	63.5	2	4	15.9	1.11	x
150	1 1/2"	48.3	40S	3.68	40.9	49.5	16.0	125	15.9	98.4	21	65	73.0	2	4	15.9	1.45	x
150	2"	60.5	40S	3.91	52.5	61.9	17.0	150	17.5	120.7	24	78	92.1	2	4	19.1	2.33	x
150	2 1/2"	73.2	40S	5.16	62.7	74.6	19.0	180	20.7	139.7	27	90	104.8	2	4	19.1	3.55	x
150	3"	88.9	40S	5.49	77.9	90.7	21.0	190	22.3	152.4	29	108	127.0	2	4	19.1	4.02	x
150	3 1/2"	101.6	40S	5.74	90.1	103.4	22.2	215	22.3	177.8	30	122	139.7	2	8	19.1	4.99	x
150	4"	114.3	40S	6.02	102.3	116.1	23.8	230	22.3	190.5	32	135	157.2	2	8	19.1	5.99	x



\* Finishes: page 311; no standard pipe connection



# PRESSED LAP-JOINT FLANGES

EN1092-1 & DIN 2642

1.4307 - 1.4404 (1/2)

OD		D	C	O	Number of screw	Grade AISI kg/pce.	1.4307	1.4404
PN	DN	mm	mm	mm			304L *)	316L *)
10	15	95	65	13.5	4	0.20	x	x
10	20	105	75	13.5	4	0.24	x	x
10	25	115	85	13.5	4	0.26	x	x
10	32	140	100	17.5	4	0.45	x	x
10	40	150	110	17.5	4	0.65	x	x
10	50	165	125	17.5	4	0.80	x	x
10	65	185	145	17.5	4	0.95	x	x
10	80	200	160	17.5	8	1.38	x	x
10	100	220	180	17.5	8	1.60	x	x
10	125	250	210	17.5	8	2.00	x	x

\* Finishes: page 311; no standard pipe connection



# PRESSED LAP-JOINT FLANGES

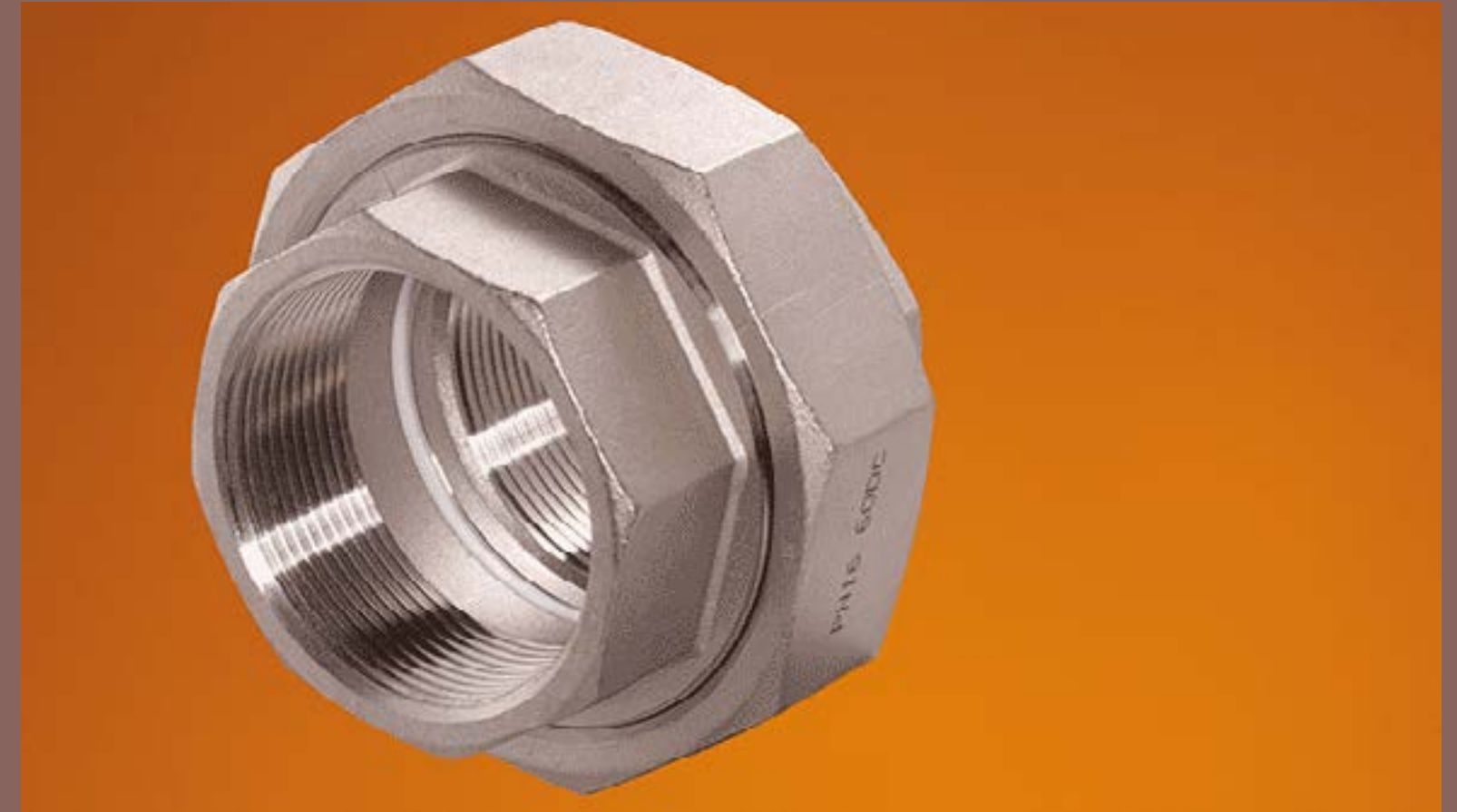
EN1092-1 & DIN 2642

1.4307 - 1.4404 (2/2)

OD		D	C	O	Number of screw	Grade AISI kg/pce.	1.4307	1.4404
PN	DN	mm	mm	mm			304L	316L
							*)	*)
10	150	285	240	21.5	8	2.60	x	x
10	200	340	295	21.5	8	3.20	x	x
10	250	395	350	21.5	12	4.40	x	x
10	300	445	400	21.5	12	5.80	x	x

\* Finishes: page 311; no standard pipe connection

# THREADED FITTINGS



## Threaded fittings

\* pickled or metal bright

## Technical terms of delivery

ISO 4144, ISO 7-1

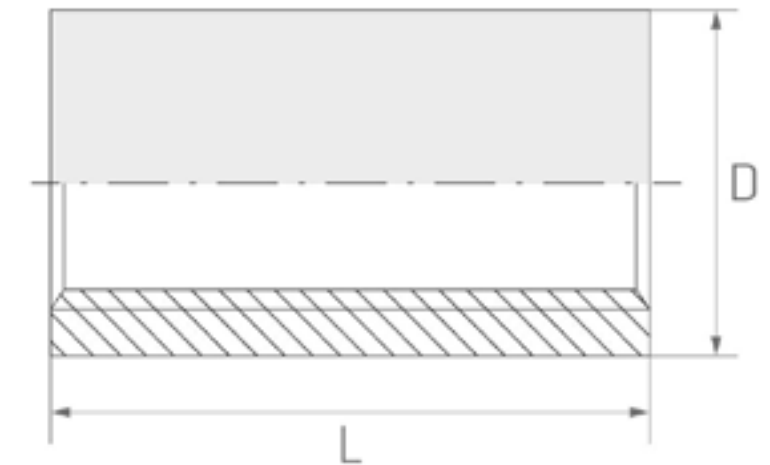
## Test certificates

DIN EN 10204 3.1  
for the cast analysis

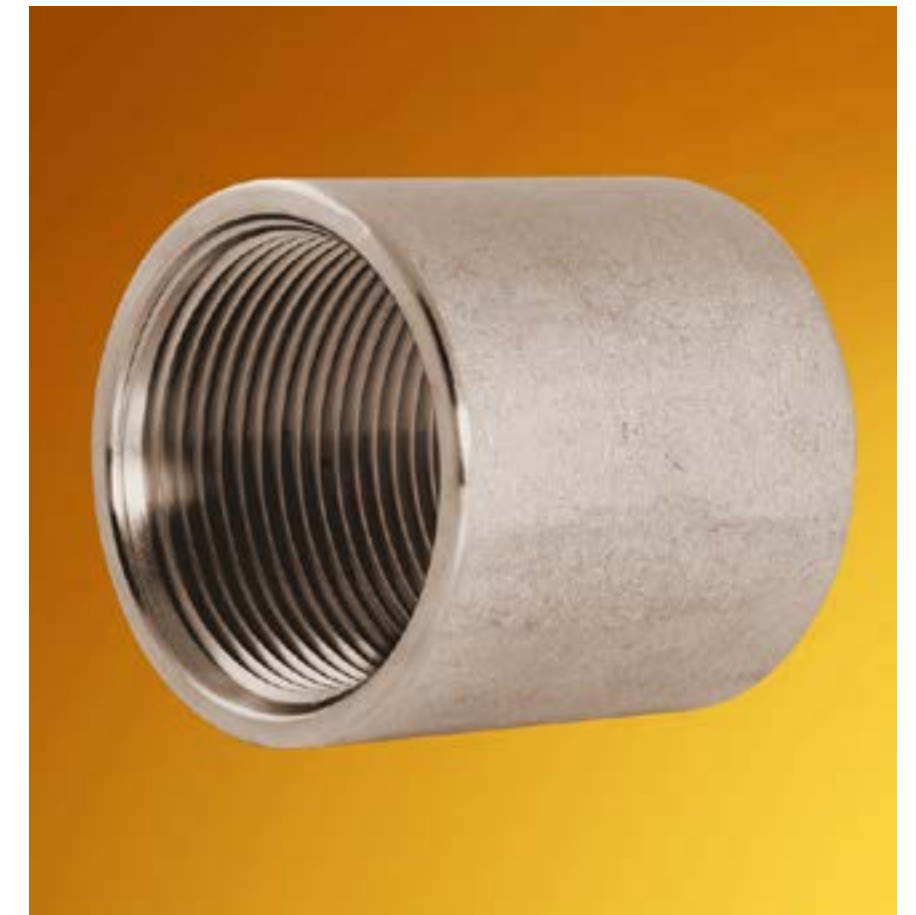


# SOCKET ISO 7-1R

1.4307 - 1.4571 (1/2)



INCH	NW	D	L	Grade AISI	1.4307 304L	1.4404 316L	1.4571
		mm		kg/pce.	*)	*)	*)
1/8"	6	14.0	20	0.012	x	x	x
1/4"	8	18.5	25	0.032	x	x	x
3/8"	10	21.5	26	0.034	x	x	x
1/2"	15	26.5	34	0.064	x	x	x
3/4"	20	32.0	36	0.094	x	x	x
1"	25	39.5	43	0.142	x	x	x
1 1/4"	32	48.5	48	0.194	x	x	x
1 1/2"	40	54.5	48	0.286	x	x	x
2"	50	66.5	56	0.434	x	x	x
2 1/2"	65	82.0	65	0.690	x	x	x

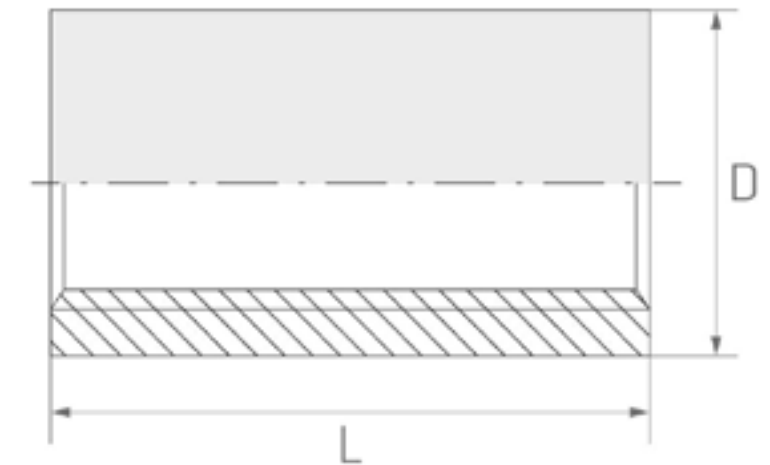


\* Finishes: page 585; no standard pipe connection



# SOCKET ISO 7-1R

1.4307 - 1.4571 (2/2)



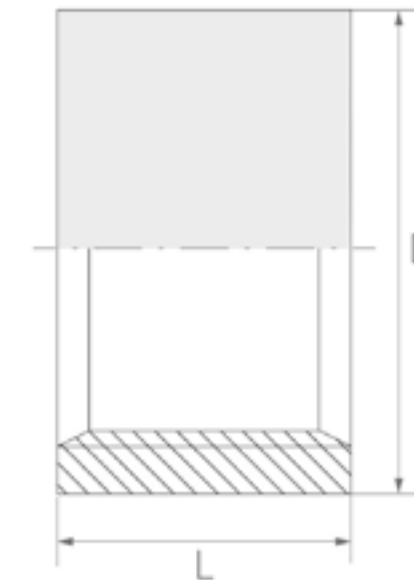
INCH	NW	D	L	Grade AISI	1.4307 304L	1.4404 316L	1.4571
		mm		kg/pce.	*)	*)	*)
3"	80	95.0	71	1.035	x	x	x
4"	100	122.0	83	1.160	x	x	x



\* Finishes: page 585; no standard pipe connection

# HALF SOCKET ISO 7-1R

1.4307 - 1.4571 (1/2)



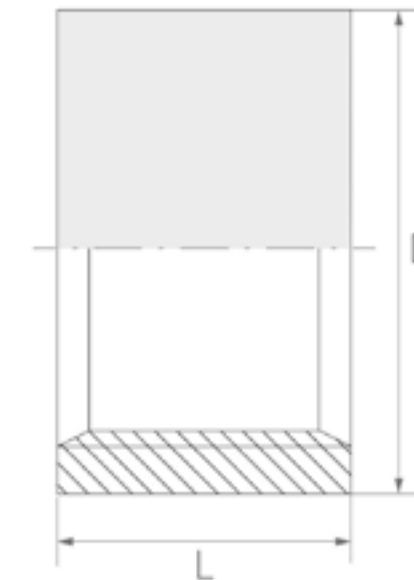
INCH	NW	D	L	Grade	1.4307	1.4404	1.4571
		mm		AISI	304L	316L	
				kg/pce.	*)	*)	*)
1/8"	6	14.0	11	0.006		x	
1/4"	8	18.5	13	0.012	x	x	x
3/8"	10	21.5	12	0.014	x	x	x
1/2"	15	26.5	15	0.028	x	x	x
3/4"	20	32.0	17	0.042	x	x	x
1"	25	39.5	19	0.062	x	x	x
1 1/4"	32	48.5	22	0.088	x	x	x
1 1/2"	40	54.5	22	0.114	x	x	x
2"	50	66.5	26	0.180	x	x	x
2 1/2"	65	82.0	30	0.278		x	



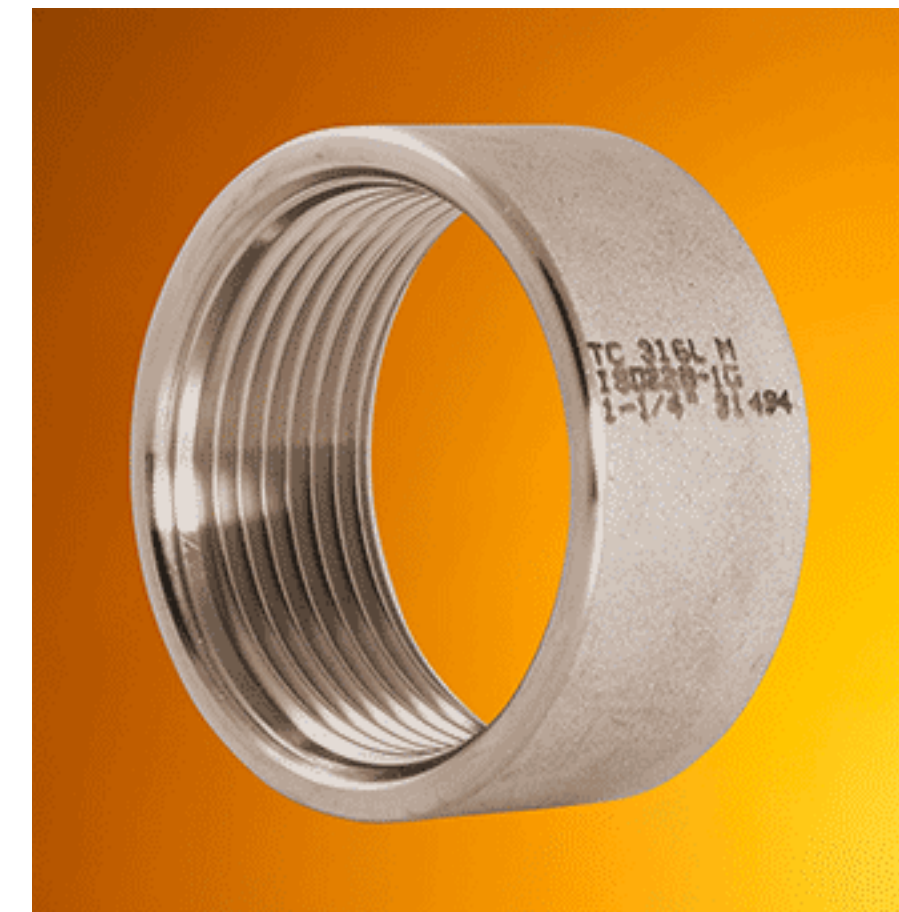
\* Finishes: page 585; no standard pipe connection

# HALF SOCKET ISO 7-1R

1.4307 - 1.4571 (2/2)



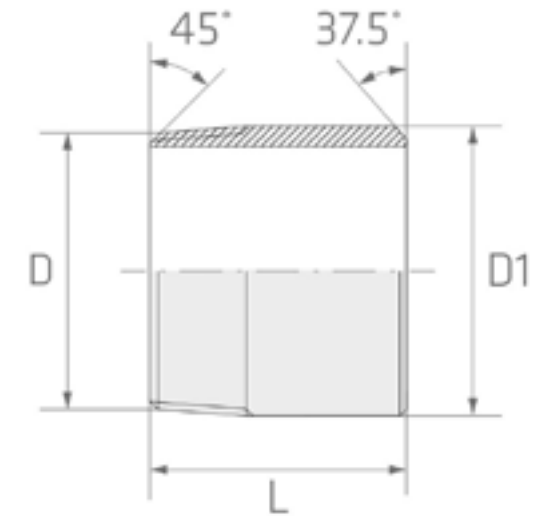
INCH	NW	D	L	Grade	1.4307	1.4404	1.4571
		mm		AISI	304L	316L	
				kg/pce.	*)	*)	*)
3"	80	95.0	33	0.432		x	
4"	100	122.0	40	0.500		x	



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=30-50 (1/2)



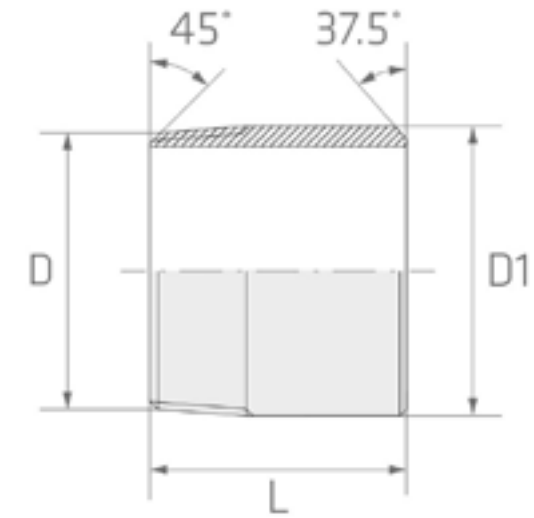
Grade AISI	INCH	NW	D	D1	L=30	L=35	L=40	L=50
316L	1/8"	6	10.2	10.0	x			
316L	1/4"	8	13.5	13.5	x		x	x
316L	3/8"	10	17.2	17.0	x		x	x
316L	1/2"	15	21.3	21.0		x	x	x
316L	3/4"	20	26.9	27.0			x	x
316L	1"	25	33.7	33.5			x	x
316L	1 1/4"	32	42.4	42.0				x
316L	1 1/2"	40	48.3	48.0				x
316L	2"	50	60.3	60.5				x
316L	2 1/2"	65	76.1	76.0				



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=30-50 (2/2)



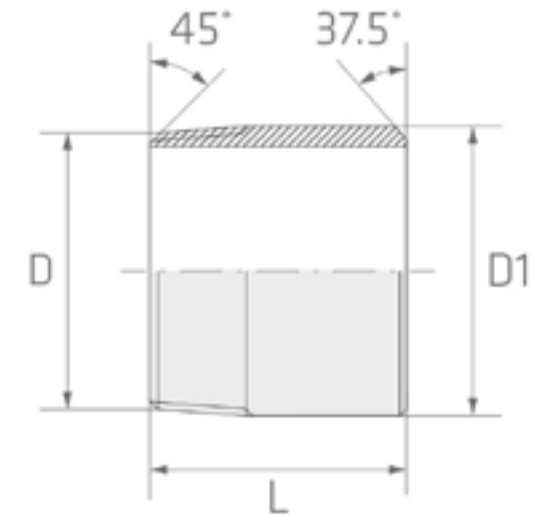
Grade AISI	INCH	NW	D	D1	L=30	L=35	L=40	L=50
		mm						
316L	3"	80	88.9	89.0				
316L	4"	100	114.3	114.0				
316L	5"	125	139.7					
316L	6"	150	168.3					



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=60-90 (1/2)



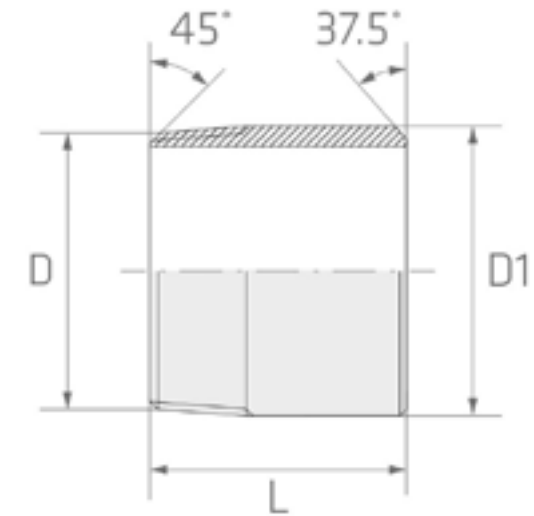
Grade AISI	INCH	NW	D	D1	L=60	L=70	L=80	L=90
316L	1/8"	6	10.2	10.0				
316L	1/4"	8	13.5	13.5	x	x	x	x
316L	3/8"	10	17.2	17.0	x	x	x	x
316L	1/2"	15	21.3	21.0	x	x	x	x
316L	3/4"	20	26.9	27.0	x	x	x	x
316L	1"	25	33.7	33.5	x	x	x	x
316L	1 1/4"	32	42.4	42.0	x	x	x	x
316L	1 1/2"	40	48.3	48.0	x	x	x	x
316L	2"	50	60.3	60.5	x	x	x	x
316L	2 1/2"	65	76.1	76.0	x			



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=60-90 (2/2)



Grade AISI	INCH	NW	D	D1	L=60	L=70	L=80	L=90
		mm						
316L	3"	80	88.9	89.0		x		
316L	4"	100	114.3	114.0			x	
316L	5"	125	139.7					x
316L	6"	150	168.3					

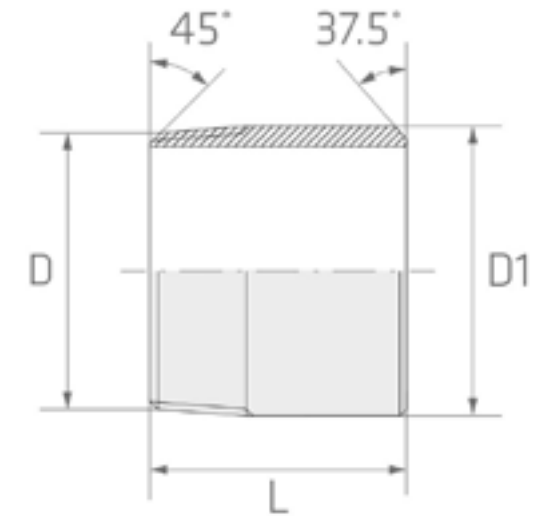


\* Finishes: page 585; no standard pipe connection



# WELDING NIPPLE ISO 7-1R

L=100-130 (1/2)



Grade AISI	INCH	NW	D	D1	L=100	L=110	L=120	L=130
316L	1/8"	6	10.2	10.0				
316L	1/4"	8	13.5	13.5	x	x	x	x
316L	3/8"	10	17.2	17.0	x	x	x	x
316L	1/2"	15	21.3	21.0	x	x	x	x
316L	3/4"	20	26.9	27.0	x	x	x	x
316L	1"	25	33.7	33.5	x	x	x	x
316L	1 1/4"	32	42.4	42.0	x	x	x	x
316L	1 1/2"	40	48.3	48.0	x	x	x	x
316L	2"	50	60.3	60.5	x	x	x	x
316L	2 1/2"	65	76.1	76.0				

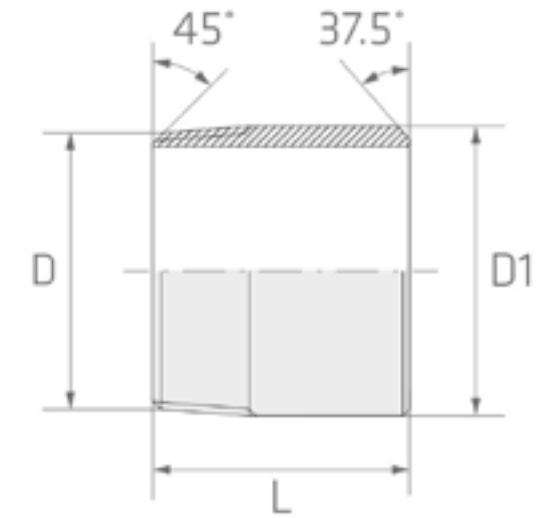


\* Finishes: page 585; no standard pipe connection



# WELDING NIPPLE ISO 7-1R

L=100-130 (2/2)



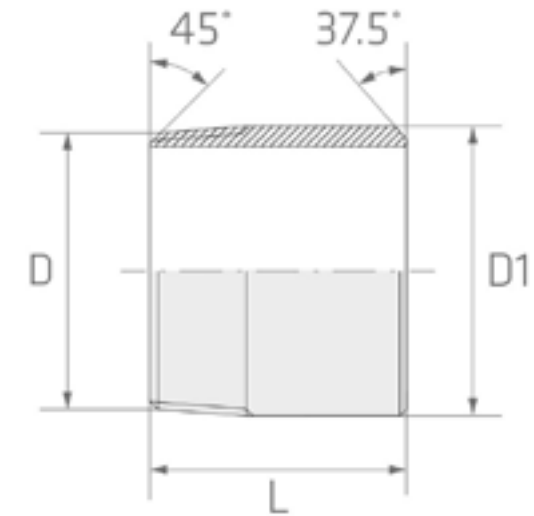
Grade AISI	INCH	NW	D	D1	L=100	L=110	L=120	L=130
		mm						
316L	3"	80	88.9	89.0				
316L	4"	100	114.3	114.0				
316L	5"	125	139.7		x			
316L	6"	150	168.3				x	



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=140-170 (1/2)



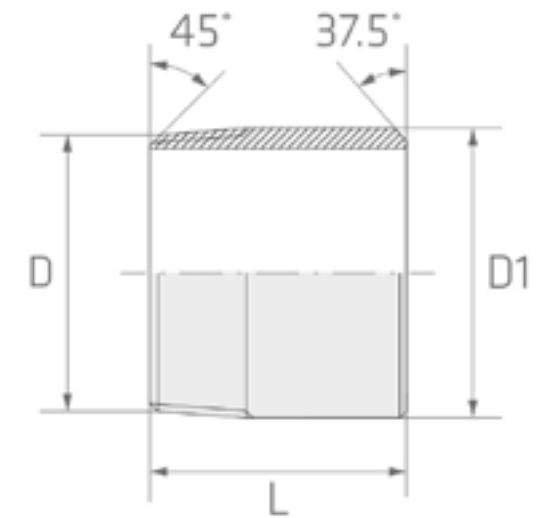
Grade AISI	INCH	NW	D	D1	L=140	L=150	L=160	L=170
		mm						
316L	1/8"	6	10.2	10.0				
316L	1/4"	8	13.5	13.5	x	x	x	x
316L	3/8"	10	17.2	17.0	x	x	x	x
316L	1/2"	15	21.3	21.0	x	x	x	x
316L	3/4"	20	26.9	27.0	x	x	x	x
316L	1"	25	33.7	33.5	x	x	x	x
316L	1 1/4"	32	42.4	42.0	x	x	x	x
316L	1 1/2"	40	48.3	48.0	x	x	x	x
316L	2"	50	60.3	60.5	x	x	x	x
316L	2 1/2"	65	76.1	76.0				



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=140-170 (2/2)

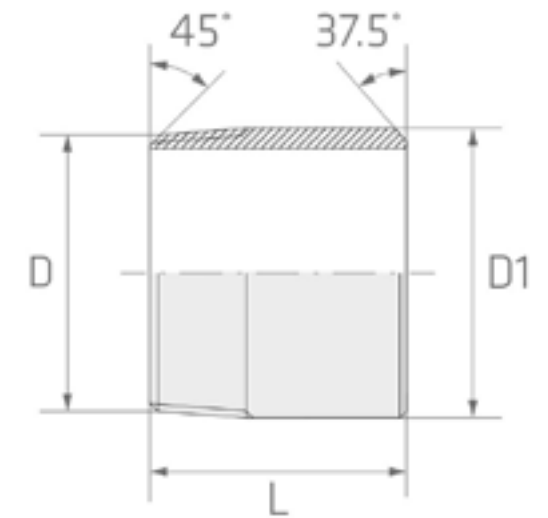


Grade AISI	INCH	NW	D	D1	L=140	L=150	L=160	L=170
		mm						
316L	3"	80	88.9	89.0				
316L	4"	100	114.3	114.0				
316L	5"	125	139.7					
316L	6"	150	168.3					



# WELDING NIPPLE ISO 7-1R

L=180-220 (1/2)



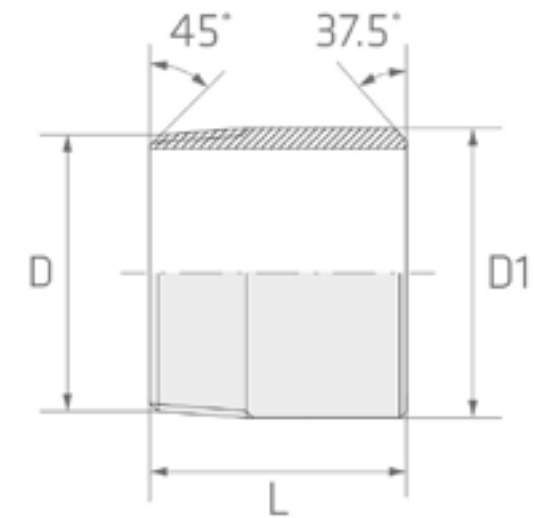
Grade AISI	INCH	NW	D	D1	L=180	L=190	L=200	L=220
316L	1/8"	6	10.2	10.0				
316L	1/4"	8	13.5	13.5	x		x	x
316L	3/8"	10	17.2	17.0	x		x	x
316L	1/2"	15	21.3	21.0	x	x	x	x
316L	3/4"	20	26.9	27.0	x		x	x
316L	1"	25	33.7	33.5	x		x	x
316L	1 1/4"	32	42.4	42.0	x		x	x
316L	1 1/2"	40	48.3	48.0	x		x	x
316L	2"	50	60.3	60.5	x		x	x
316L	2 1/2"	65	76.1	76.0				



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=180-220 (2/2)



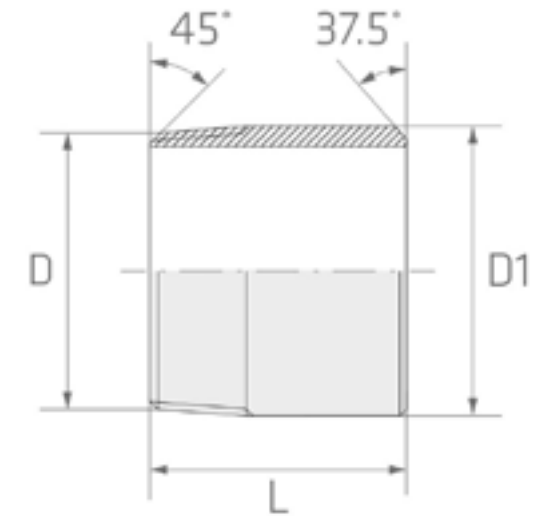
Grade AISI	INCH	NW	D	D1	L=180	L=190	L=200	L=220
		mm						
316L	3"	80	88.9	89.0				
316L	4"	100	114.3	114.0				
316L	5"	125	139.7					
316L	6"	150	168.3					



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=250-300(1/2)



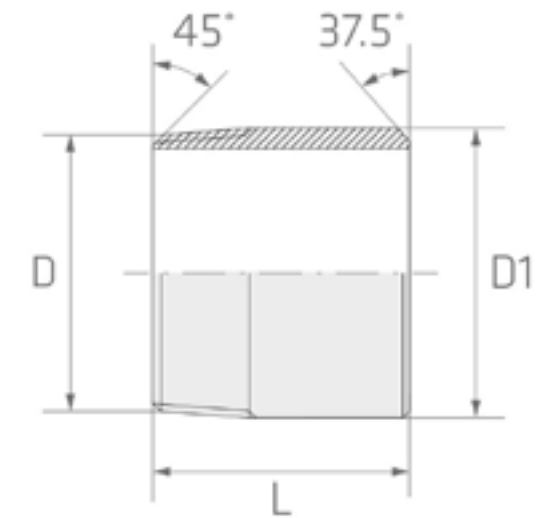
Grade AISI	INCH	NW	D	D1	L=250	L=300
316L	1/8"	6	10.2	10.0		
316L	1/4"	8	13.5	13.5	x	x
316L	3/8"	10	17.2	17.0	x	x
316L	1/2"	15	21.3	21.0	x	x
316L	3/4"	20	26.9	27.0	x	x
316L	1"	25	33.7	33.5	x	x
316L	1 1/4"	32	42.4	42.0	x	x
316L	1 1/2"	40	48.3	48.0	x	x
316L	2"	50	60.3	60.5	x	x
316L	2 1/2"	65	76.1	76.0		



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=250-300 (2/2)

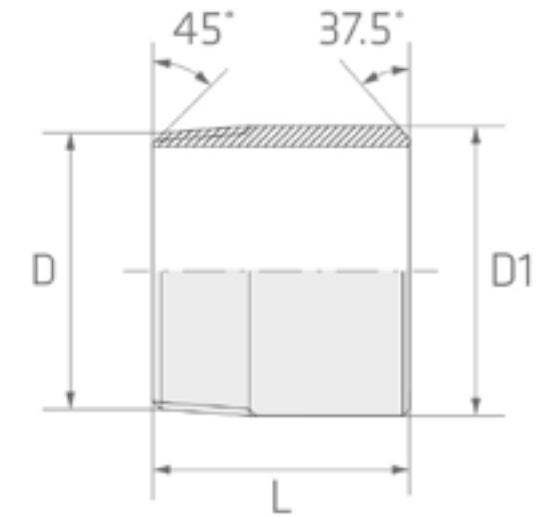


Grade AISI	INCH	NW	D	D1	L=250	L=300
		mm				
316L	3"	80	88.9	89.0		
316L	4"	100	114.3	114.0		
316L	5"	125	139.7			
316L	6"	150	168.3			



# WELDING NIPPLE ISO 7-1R

L=30-50 (1/1)



Grade AISI	INCH	NW	D	D1	L=50	L=35	L=40	L=50
		mm						
304	1/4"	8	13.5	13.5	x			
304	3/8"	10	17.2	17.0	x			
304	1/2"	15	21.3	21.0		x		
304	3/4"	20	26.9	27.0			x	
304	1"	25	33.7	33.5			x	
304	1 1/4"	32	42.4	42.0				x
304	1 1/2"	40	48.3	48.0				x
304	2"	50	60.3	60.5				x

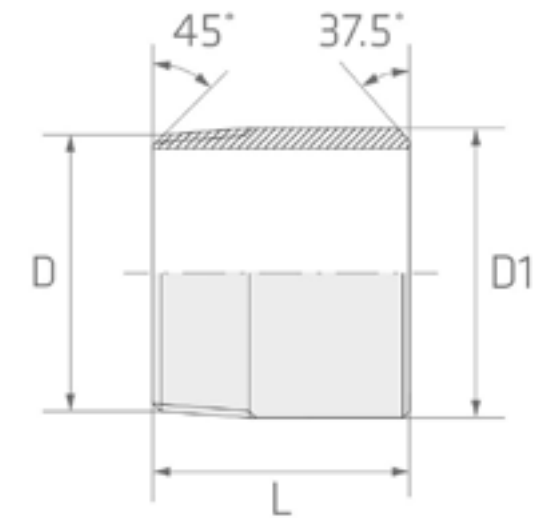


\* Finishes: page 585; no standard pipe connection



# WELDING NIPPLE ISO 7-1R

L=20-50 (1/2)



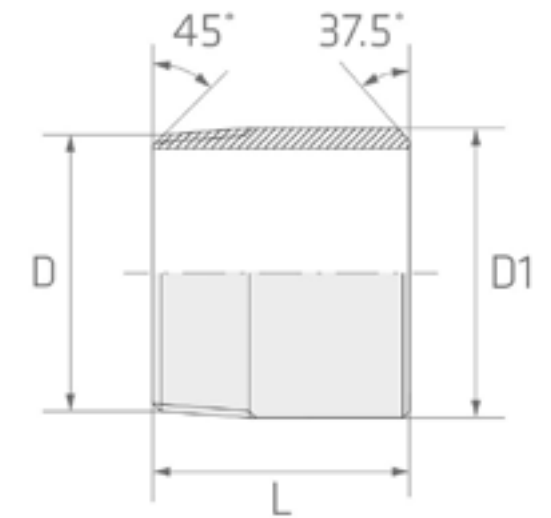
Grade AISI	INCH	NW	D	D1	L=20	L=30	L=35	L=40	L=50
1.4571	1/8"	6	10.2	10.0	x				
1.4571	1/4"	8	13.5	13.5		x			
1.4571	3/8"	10	17.2	17.0		x			
1.4571	1/2"	15	21.3	21.0			x		
1.4571	3/4"	20	26.9	27.0				x	
1.4571	1"	25	33.7	33.5				x	x
1.4571	1 1/4"	32	42.4	42.0					x
1.4571	1 1/2"	40	48.3	48.0				x	x
1.4571	2"	50	60.3	60.5					x
1.4571	2 1/2"	65	76.1	76.0					



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=20-50 (2/2)



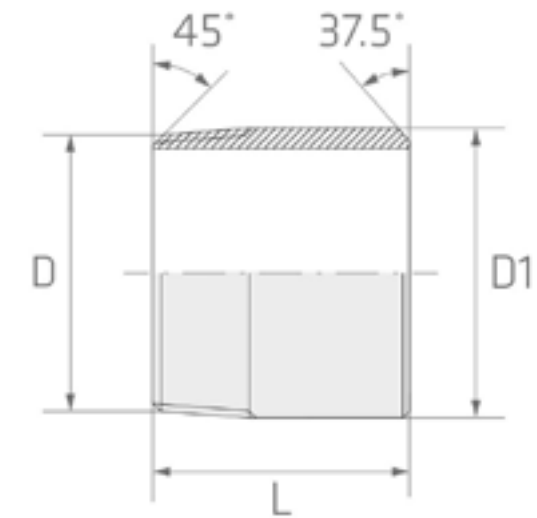
Grade AISI	INCH	NW	D	D1	L=20	L=30	L=35	L=40	L=50
		mm							
1.4571	3"	80	88.9	89.0					
1.4571	4"	100	114.3	114.0					



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=60-150 (1/2)



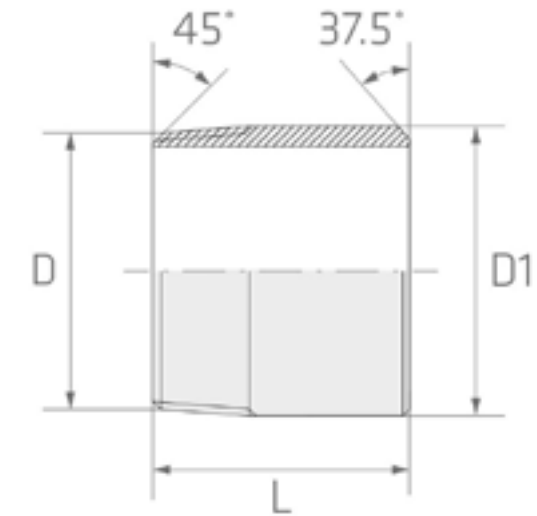
Grade AISI	INCH	NW	D	D1	L=60	L=70	L=80	L=100	L=150
1.4571	1/8"	6	10.2	10.0					
1.4571	1/4"	8	13.5	13.5					
1.4571	3/8"	10	17.2	17.0				x	
1.4571	1/2"	15	21.3	21.0			x	x	
1.4571	3/4"	20	26.9	27.0			x	x	
1.4571	1"	25	33.7	33.5	x		x	x	x
1.4571	1 1/4"	32	42.4	42.0	x			x	
1.4571	1 1/2"	40	48.3	48.0	x			x	
1.4571	2"	50	60.3	60.5			x	x	x
1.4571	2 1/2"	65	76.1	76.0	x				



\* Finishes: page 585; no standard pipe connection

# WELDING NIPPLE ISO 7-1R

L=60-150 (2/2)



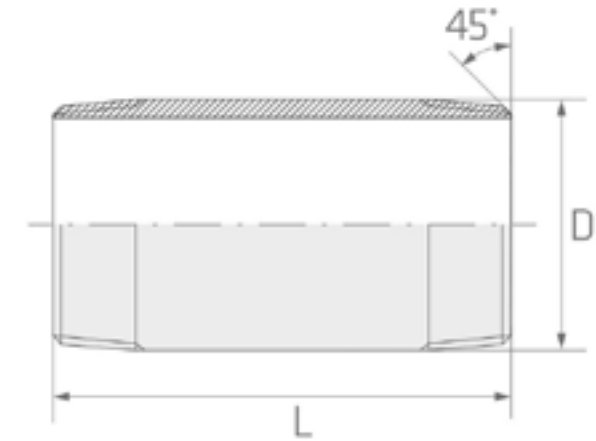
Grade AISI	INCH	NW	D	D1	L=60	L=70	L=80	L=100	L=150
		mm							
1.4571	3"	80	88.9	89.0		x		x	
1.4571	4"	100	114.3	114.0			x		



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=30-80 (1/2)



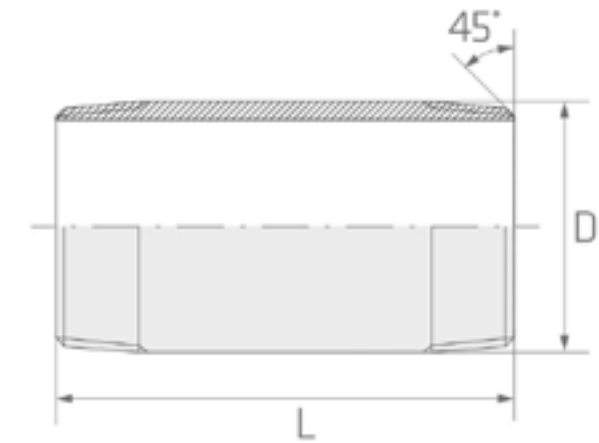
Grade AISI	INCH	NW	D	L=30	L=40	L=50	L=60	L=70	L=80
				mm					
316L	1/8"	6	10.2		x				
316L	1/4"	8	13.5	x	x	x	x	x	x
316L	3/8"	10	17.2		x	x	x	x	x
316L	1/2"	15	21.3		x	x	x	x	x
316L	3/4"	20	26.9		x	x	x	x	x
316L	1"	25	33.7		x	x	x		x
316L	1 1/4"	32	42.4				x	x	x
316L	1 1/2"	40	48.3				x	x	x
316L	2"	50	60.3						x
316L	2 1/2"	65	76.1						



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=30-80 (2/2)



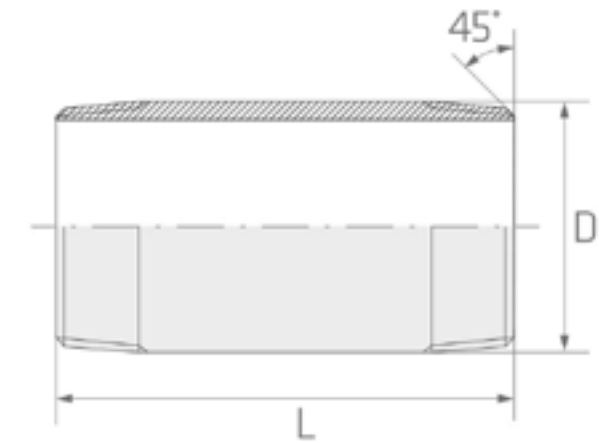
Grade AISI	INCH	NW	D	L=30	L=40	L=50	L=60	L=70	L=80
		mm							
316L	3"	80	88.9						
316L	4"	100	114.3						
316L	5"	125	139.7						
316L	6"	150	168.3						



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=90-140 (1/2)



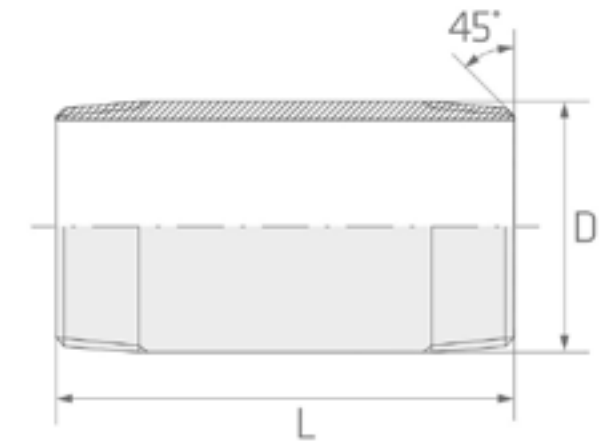
Grade AISI	INCH	NW	D	L=90	L=100	L=110	L=120	L=130	L=140
316L	1/8"	6	10.2						
316L	1/4"	8	13.5	x	x	x	x		x
316L	3/8"	10	17.2	x	x	x	x	x	x
316L	1/2"	15	21.3	x	x	x	x	x	x
316L	3/4"	20	26.9	x	x	x	x	x	x
316L	1"	25	33.7	x	x	x	x		
316L	1 1/4"	32	42.4	x	x	x	x	x	x
316L	1 1/2"	40	48.3	x	x	x	x	x	x
316L	2"	50	60.3	x	x	x	x	x	x
316L	2 1/2"	65	76.1		x				



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=90-140 (2/2)



Grade AISI	INCH	NW	D	L=90	L=100	L=110	L=120	L=130	L=140
		mm							
316L	3"	80	88.9				x		
316L	4"	100	114.3				x		
316L	5"	125	139.7						
316L	6"	150	168.3						

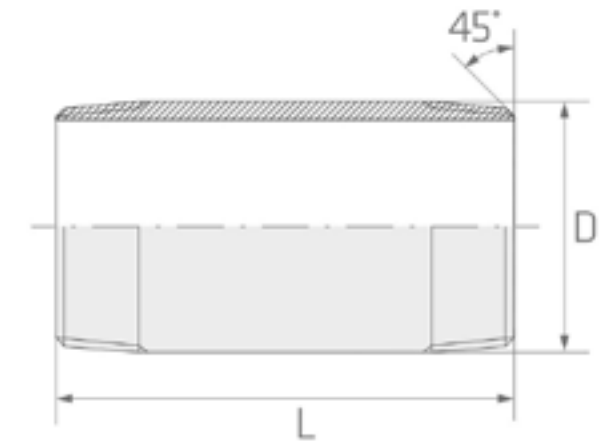


\* Finishes: page 585; no standard pipe connection



# DOUBLE-PIPE NIPPLE ISO 7-1R

L=150-220 (1/2)



Grade AISI	INCH	NW	D	L=150	L=160	L=170	L=180	L=200	L=220
316L	1/8"	6	10.2						
316L	1/4"	8	13.5	x	x	x	x	x	x
316L	3/8"	10	17.2	x	x	x	x	x	x
316L	1/2"	15	21.3	x	x	x	x	x	x
316L	3/4"	20	26.9	x	x	x		x	x
316L	1"	25	33.7	x	x	x	x	x	x
316L	1 1/4"	32	42.4	x	x	x	x	x	
316L	1 1/2"	40	48.3	x	x	x	x	x	x
316L	2"	50	60.3	x	x	x	x	x	x
316L	2 1/2"	65	76.1						

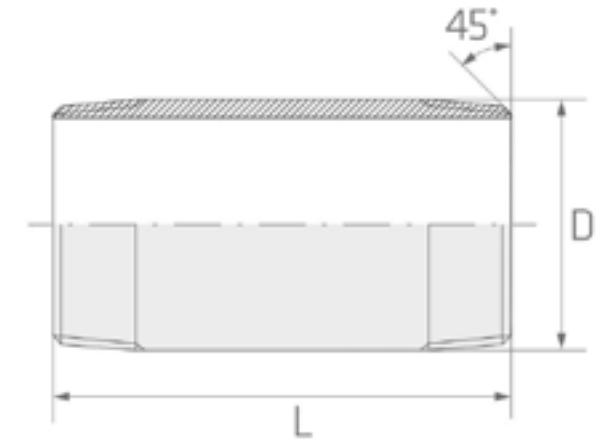


\* Finishes: page 585; no standard pipe connection



# DOUBLE-PIPE NIPPLE ISO 7-1R

L=150-220 (2/2)



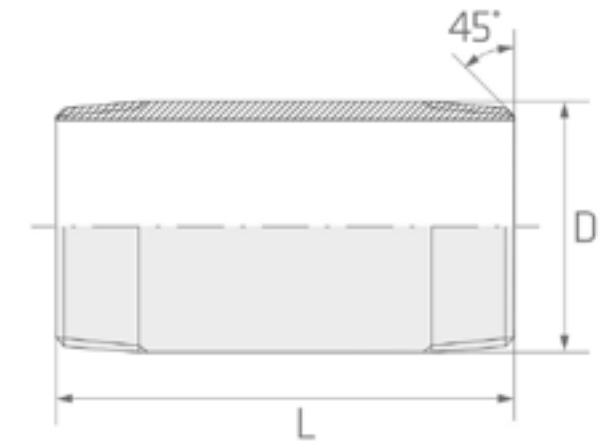
Grade AISI	INCH	NW	D	L=150	L=160	L=170	L=180	L=200	L=220
				mm					
316L	3"	80	88.9						
316L	4"	100	114.3						
316L	5"	125	139.7	x					
316L	6"	150	168.3	x					



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=250-300 (1/2)



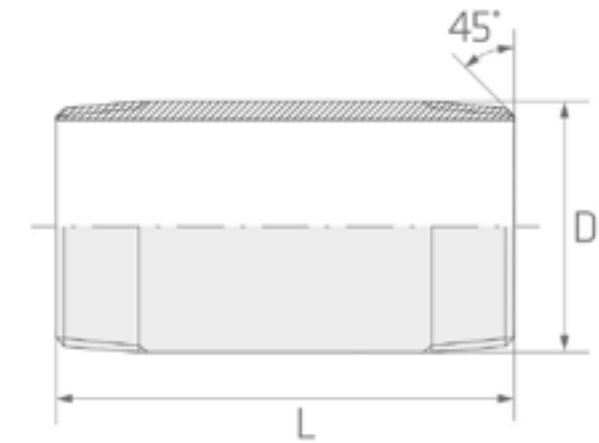
Grade AISI	INCH	NW	D	L=250		L=300	
				mm			
316L	1/8"	6	10.2				
316L	1/4"	8	13.5	x		x	
316L	3/8"	10	17.2	x		x	
316L	1/2"	15	21.3	x		x	
316L	3/4"	20	26.9	x		x	
316L	1"	25	33.7	x		x	
316L	1 1/4"	32	42.4	x		x	
316L	1 1/2"	40	48.3	x		x	
316L	2"	50	60.3	x		x	
316L	2 1/2"	65	76.1				



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=250-300 (2/2)



Grade AISI	INCH	NW	D	L=250	L=300
		mm			
316L	3"	80	88.9		
316L	4"	100	114.3		
316L	5"	125	139.7		
316L	6"	150	168.3		

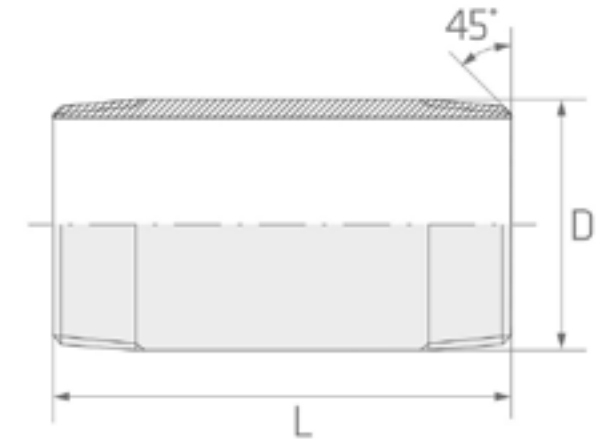


\* Finishes: page 585; no standard pipe connection

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# DOUBLE-PIPE NIPPLE ISO 7-1R

L=40-70 (1/1)



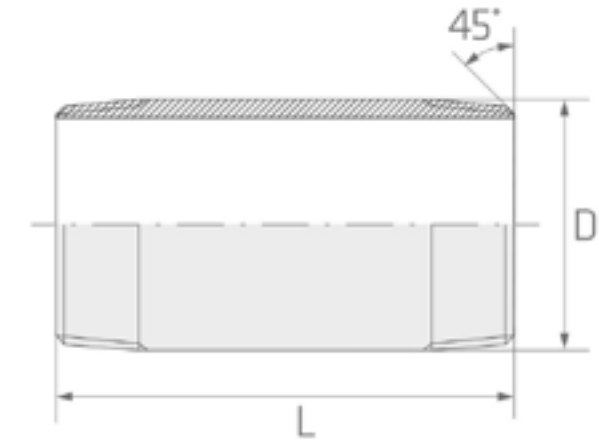
Grade AISI	INCH	NW	D	L=40	L=60	L=80	L=100	L=70
				mm				
304	1/4"	8	13.5	x				
304	3/8"	10	17.2	x				
304	1/2"	15	21.3		x			
304	3/4"	20	26.9		x			
304	1"	25	33.7		x			
304	1 1/4"	32	42.4			x		
304	1 1/2"	40	48.3			x		
304	2"	50	60.3				x	



\* Finishes: page 585; no standard pipe connection

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=30-150 (1/1)



Grade AISI	INCH	NW	D	L=30	L=50	L=60	L=80	L=100	L=150
				mm					
1.4571	1/4"	8	13.5	x					
1.4571	1/2"	15	21.3			x		x	
1.4571	3/4"	20	26.9		x	x		x	
1.4571	1"	25	33.7			x	x	x	x
1.4571	1 1/4"	32	42.4				x		
1.4571	1 1/2"	40	48.3				x	x	x
1.4571	2"	50	60.3					x	x

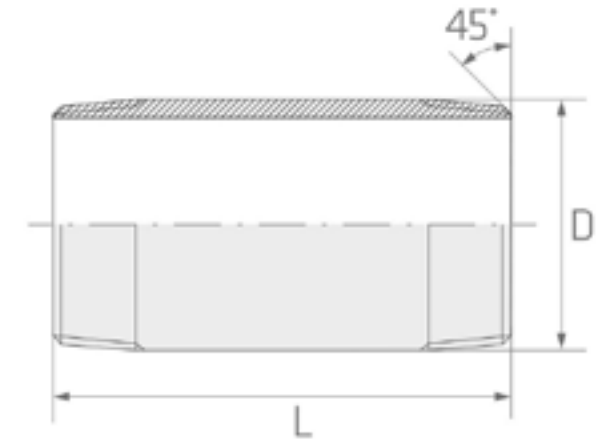


\* Finishes: page 585; no standard pipe connection

&gt;

# DOUBLE-PIPE NIPPLE ISO 7-1R

L=200 (1/1)



Grade AISI	INCH	NW	D	L=200
		mm		
1.4571	1/4"	8	13.5	
1.4571	1/2"	15	21.3	
1.4571	3/4"	20	26.9	
1.4571	1"	25	33.7	x
1.4571	1 1/4"	32	42.4	
1.4571	1 1/2"	40	48.3	
1.4571	2"	50	60.3	x

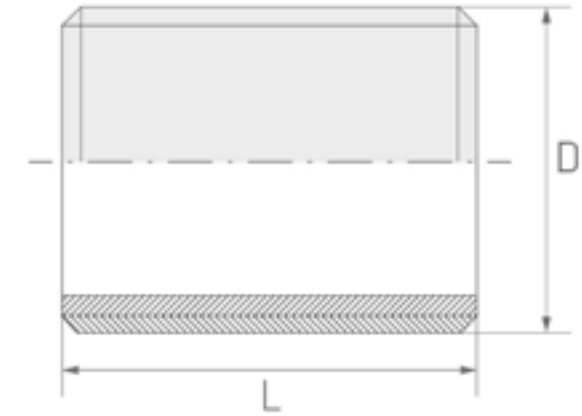


\* Finishes: page 585; no standard pipe connection

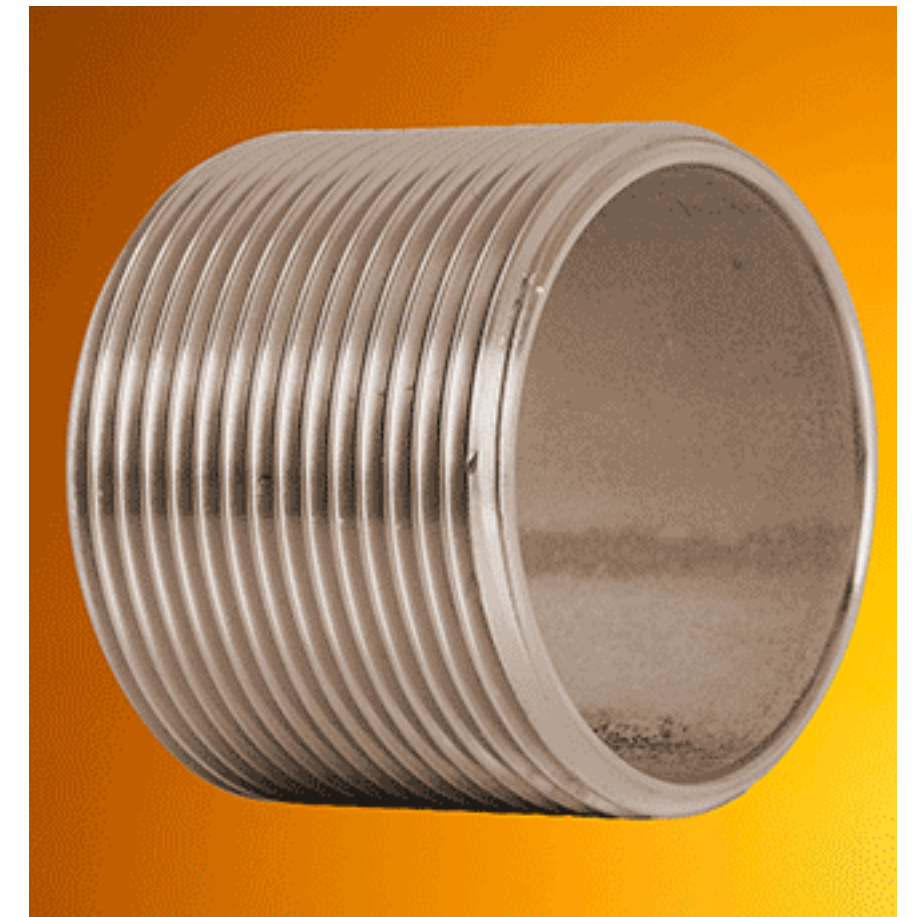


# PIPE NIPPLE ISO 7-1R

316L (1/1)



INCH	NW	D	L	Grade AISI	316L
	mm			kg/pce.	
1/8"	6	10.2	16	0.004	x
1/4"	8	13.5	18	0.008	x
3/8"	10	17.2	22	0.010	x
1/2"	15	21.3	25	0.012	x
3/4"	20	26.9	30	0.028	x
1"	25	33.7	35	0.052	x
1 1/4"	32	42.4	38	0.060	x
1 1/2"	40	48.3	38	0.082	x
2"	50	60.3	45	0.118	x

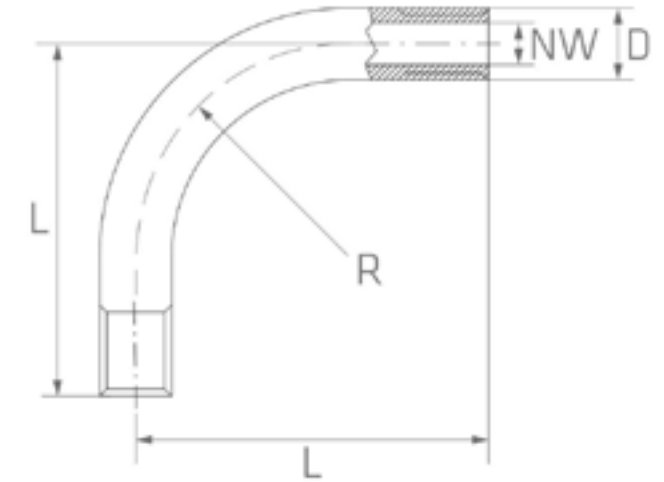


\* Finishes: page 585; no standard pipe connection



# BEND 90° M/M ISO 7-1R

316L (1/1)



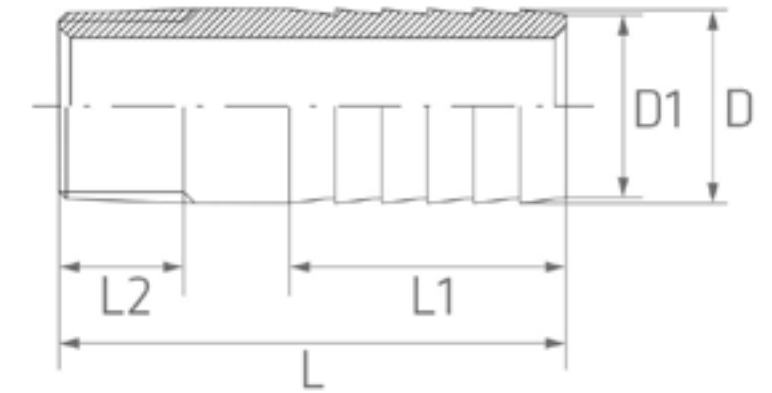
INCH	NW	D	L	R	Grade AISI	316L
	mm				kg/pce.	
1/8"	6	10.2	50	30	0.030	x
1/4"	8	13.5	60	40	0.060	x
3/8"	10	17.2	70	45	0.090	x
1/2"	15	21.3	80	55	0.140	x
3/4"	20	26.9	100	70	0.250	x
1"	25	33.7	120	80	0.462	x
1 1/4"	32	42.4	140	95	0.700	x
1 1/2"	40	48.3	160	115	0.950	x
2"	50	60.3	190	125	1.600	x



\* Finishes: page 585; no standard pipe connection

# HOSE NIPPEL M ISO 7-1R

316L (1/2)



INCH	NW	D	D1	L	L1	L2	Grade AISI	316L
	mm						kg/pce.	
1/8"	6	10.2	8.62	70	30	12	0.013	x
1/4"	8	13.5	11.92	70	30	12	0.018	x
3/8"	10	17.2	15.62	70	30	15	0.040	x
1/2"	15	21.3	19.45	75	35	20	0.100	x
3/4"	20	26.9	25.05	75	35	20	0.146	x
1"	25	33.7	31.59	80	37.5	20	0.200	x
1 1/4"	32	42.4	39.76	90	40	25	0.250	x
1 1/2"	40	48.3	45.67	90	40	25	0.293	x
2"	50	60.3	57.39	95	40	25	0.400	x
2 1/2"	65	76.1	72.67	105	60	30	0.686	x

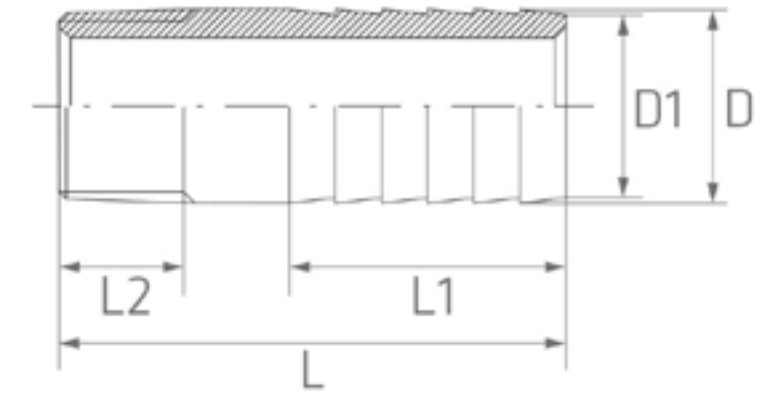


\* Finishes: page 585; no standard pipe connection



# HOSE NIPPEL M ISO 7-1R

316L (2/2)

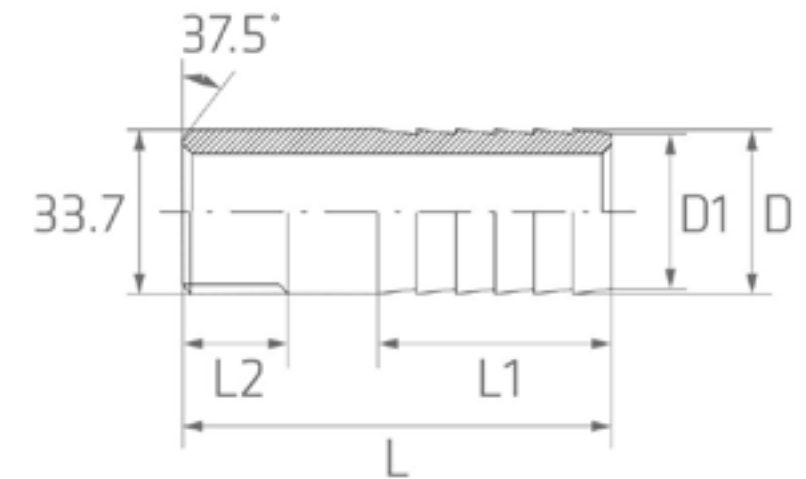


INCH	NW	D	D1	L	L1	L2	Grade AISI	316L
							kg/pce.	
							mm	
3"	80	88.9	85.23	110	60	30	0.720	x
4"	100	114.3	110.34	115	60	35	1.422	x



# HOSE NOZZLE WELDING ON ISO 7-1R

316L (1/1)



INCH	NW	D	D1	L	L1	L2	Grade AISI	316L
	mm						kg/pce.	
3/8"	10	17.2	15.62	70	30	15	0.040	x
1/2"	15	21.3	19.45	75	35	20	0.100	x
3/4"	20	26.9	25.05	75	35	20	0.146	x
1"	25	33.7	31.59	80	37.5	20	0.200	x
1 1/4"	32	42.4	39.76	90	40	25	0.250	x
1 1/2"	40	48.3	45.67	90	40	25	0.293	x
2"	50	60.3	57.39	95	40	25	0.400	x
2 1/2"	65	76.1	72.67	105	60	30	0.686	x
3"	80	88.9	85.23	110	60	30	0.720	x
4"	100	114.3	110.34	115	60	35	1.422	x

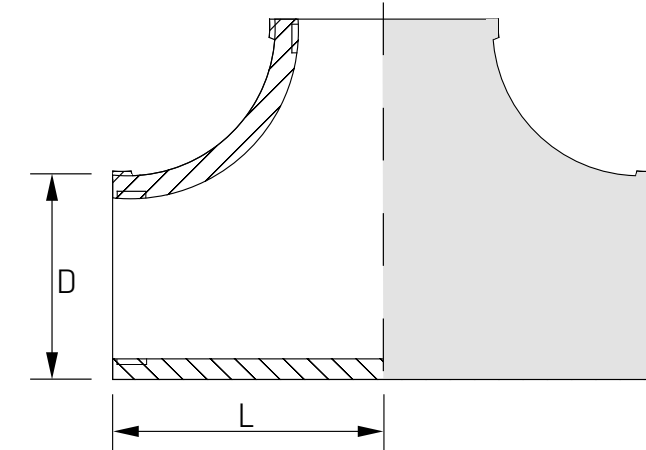


\* Finishes: page 585; no standard pipe connection

# EQUAL TEE

EN-ISO 4144

1.4308-1.4408 (1/2)



INCH	NW	D	L	Grade AISI	1.4308 304L	1.4408 316L
	mm			kg/pce.	*)	*)
1/8"	6	15.5	17.5	0.036		x
1/4"	8	19.0	19.5	0.080	x	x
3/8"	10	22.6	23.5	0.078	x	x
1/2"	15	27.5	27.5	0.134	x	x
3/4"	20	33.0	32.5	0.218	x	x
1"	25	40.5	38.5	0.316	x	x
1 1/4"	32	50.0	45.5	0.522	x	x
1 1/2"	40	65.5	48.5	0.690		x
2"	50	70.0	57.5	0.980		x
2 1/2"	65	86.5	69.5	1.455		x

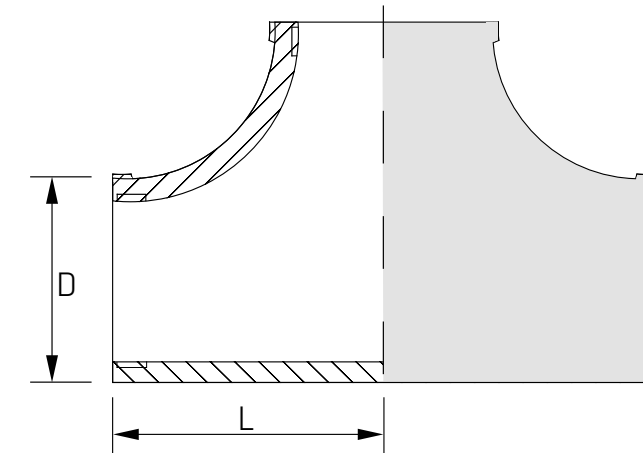


\* Finishes: page 585; no standard pipe connection

# EQUAL TEE

EN-ISO 4144

1.4308-1.4408 (2/2)



INCH	NW	D	L	Grade	1.4308	1.4408
				AISI	304L	316L
	mm			kg/pce.	*)	*)
3"	80	100.0	78.5	2.000	x	x
4"	100	126.0	96.5	3.500	x	x

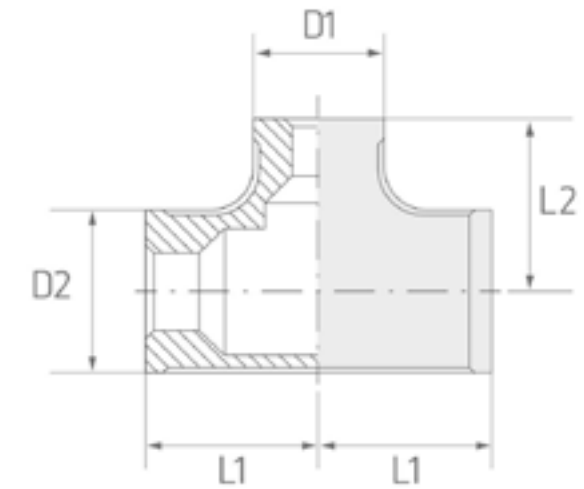


\* Finishes: page 585; no standard pipe connection

# REDUCING TEE F/F/F

EN-ISO 4144

1.4408 (1/3)



INCHxINCH		NWxNW		D1	D2	L1	L2	Grade AISI	1.4408 316L	kg/pce.	*)
3/8"	1/8"	10	6	15.5	22.5	19.5	20.5	0.072	x		x
1/2"	1/8"	15	6	15.5	27.5	23.5	23.5	0.090	x		x
1/2"	1/4"	15	8	19.0	27.5	24.5	24.5	0.017	x		x
1/2"	3/8"	15	10	22.5	27.5	26.5	25.5	0.012	x		x
3/4"	1/4"	20	8	19.0	33.0	26.5	27.5	0.156	x		x
3/4"	3/8"	20	10	22.5	33.0	28.5	28.5	0.160	x		x
3/4"	1/2"	20	15	27.5	33.0	29.5	30.5	0.240	x		x
1"	1/4"	25	8	19.0	40.5	27.5	30.5	0.260	x		x
1"	3/8"	25	10	22.5	40.5	30.5	32.0	0.156	x		x
1"	1/2"	25	15	27.5	40.5	32.5	33.5	0.320	x		x



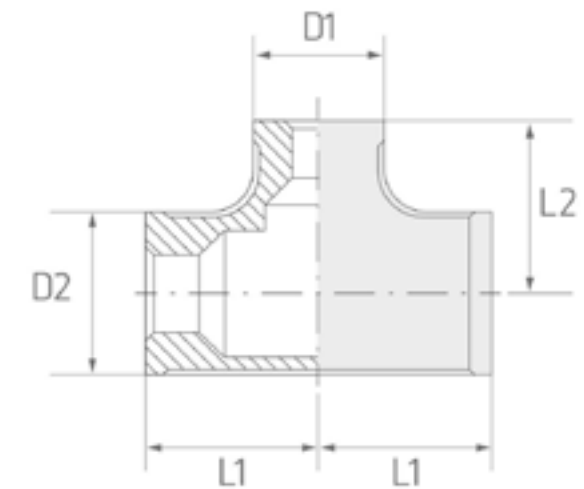
\* Finishes: page 585; no standard pipe connection



# REDUCING TEE F/F/F

EN-ISO 4144

1.4408 (2/3)



INCHxINCH		NWxNW		D1	D2	L1	L2	Grade AISI	1.4408 316L	kg/pce.	*)
1"	3/4"	25	20	33.0	40.5	34.5	35.5	0.300			x
1 1/4"	3/8"	32	10	22.5	50.0	34.0	36.5	0.305			x
1 1/4"	1/2"	32	15	27.5	50.0	36.0	38.5	0.335			x
1 1/4"	3/4"	32	20	33.0	50.0	38.5	40.5	0.380			x
1 1/4"	1"	32	25	40.5	50.0	40.5	42.5	0.420			x
1 1/2"	1/2"	40	15	27.5	56.5	36.0	41.5	0.420			x
1 1/2"	3/4"	40	20	33.0	56.5	38.5	43.5	0.800			x
1 1/2"	1"	40	25	40.5	56.5	41.5	45.5	0.315			x
1 1/2"	1 1/4"	40	32	50.0	56.5	45.5	48.5	0.580			x
2"	1/2"	50	15	27.5	69.0	39.0	47.5	0.600			x



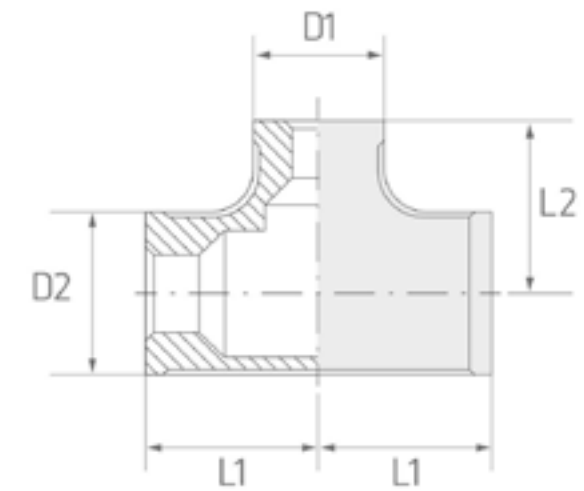
\* Finishes: page 585; no standard pipe connection



# REDUCING TEE F/F/F

EN-ISO 4144

1.4408 (3/3)



INCHxINCH		NWxNW		D1	D2	L1	L2	Grade AISI	1.4408 316L	kg/pce.	*)
2"	3/4"	50	20	33.0	69.0	41.5	49.5	0.660	x		
2"	1"	50	25	40.0	69.0	44.5	51.5	0.720	x		
2"	1 1/4"	50	32	50.0	70.0	48.5	54.5	1.466	x		
2"	1 1/2"	50	40	56.5	70.0	52.5	55.5	0.800	x		

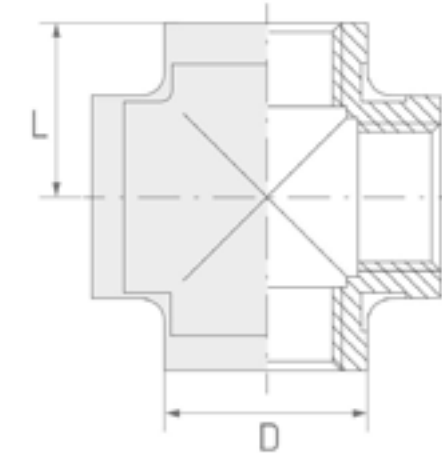


\* Finishes: page 585; no standard pipe connection

# CROSS

EN-ISO 4144

1.4408 (1/1)



INCH	NW	D	L	Grade AISI	1.4408 316L
				kg/pce.	*)
1/4"	8	19.0	19.5	0.104	x
3/8"	10	22.5	23.5	0.150	x
1/2"	15	27.0	27.5	0.200	x
3/4"	20	32.5	32.5	0.310	x
1"	25	40.0	38.5	0.420	x
1 1/4"	32	50.0	45.5	0.810	x
1 1/2"	40	56.5	48.5	1.070	x
2"	50	69.0	57.5	1.487	x

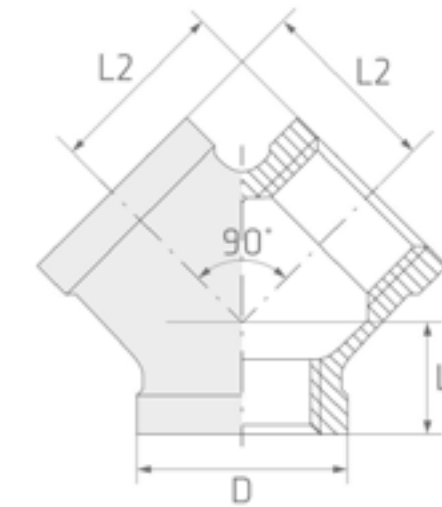


\* Finishes: page 585; no standard pipe connection

# Y-TEE

EN-ISO 4144

1.4408 (1/2)



INCH	NW	D	L	Grade AISI	1.4408 316L
				kg/pce.	*)
1/8"	6	17	10	0.040	x
1/4"	8	21	13	0.052	x
3/8"	10	25	14	0.078	x
1/2"	15	29	18	0.078	x
3/4"	20	35	20	0.218	x
1"	25	43	23	0.316	x
1 1/4"	32	52	28	0.522	x
1 1/2"	40	58	30	0.690	x
2"	50	71	34	0.980	x
2 1/2"	65	88	40	1.455	x

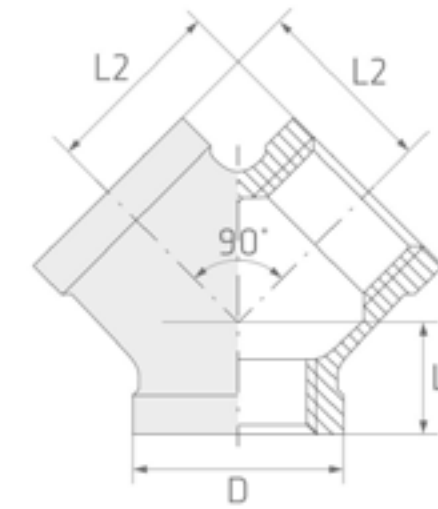


\* Finishes: page 585; no standard pipe connection

# Y-TEE

EN-ISO 4144

1.4408 (2/2)



INCH	NW	D	L	Grade	1.4408
				AISI	316L
				kg/pce.	*)
3"	80	101	45	2.000	x
4"	100	129	52	6.100	x



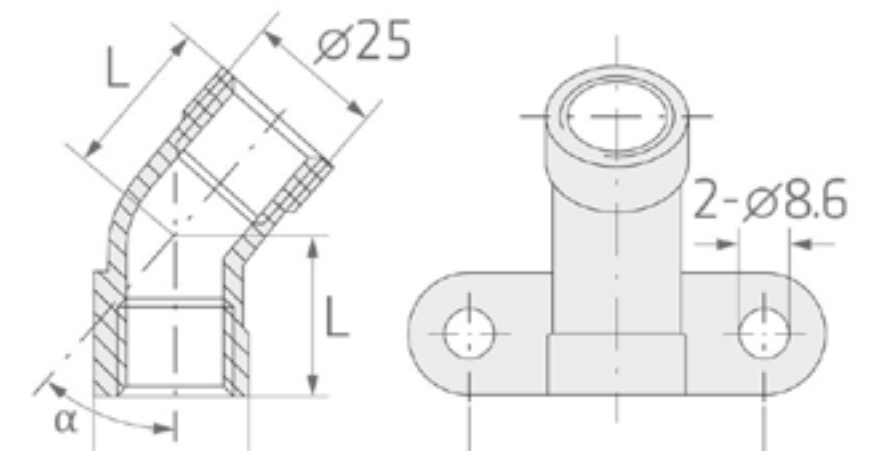
\* Finishes: page 585; no standard pipe connection



# ELBOW WITH BAR F/F

EN-ISO 4144

1.4308-1.4408 (1/1)



INCH	NW	D	L	Grade	1.4308	1.4408
				AISI	304L	316L
				kg/pce.	*)	*)
1/2"	15	45°	22.8	0.140	x	x
1/2"	15	90°	27.7	0.170	x	x

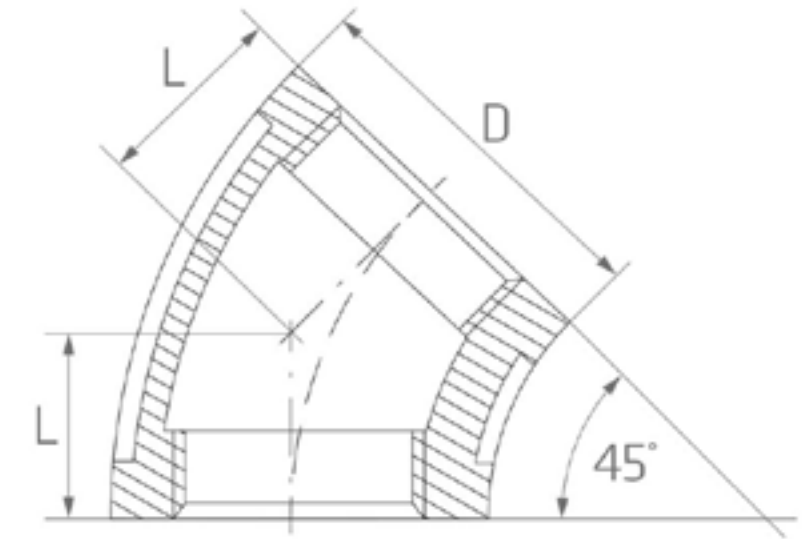


\* Finishes: page 585; no standard pipe connection

# ELBOW 45° F/F

EN-ISO 4144

1.4308-1.4408 (1/2)



INCH	NW	D	L	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	15.5	16.5	0.020		x
1/4"	8	19.0	17.5	0.030	x	x
3/8"	10	22.5	19.5	0.046	x	x
1/2"	15	27.0	21.5	0.082	x	x
3/4"	20	32.5	25.5	0.150	x	x
1"	25	40.0	29.5	0.238	x	x
1 1/4"	32	50.0	33.5	0.372	x	x
1 1/2"	40	56.5	37.5	0.608	x	x
2"	50	69.0	42.5	0.820	x	x
2 1/2"	65	86.5	49.5	0.920	x	x

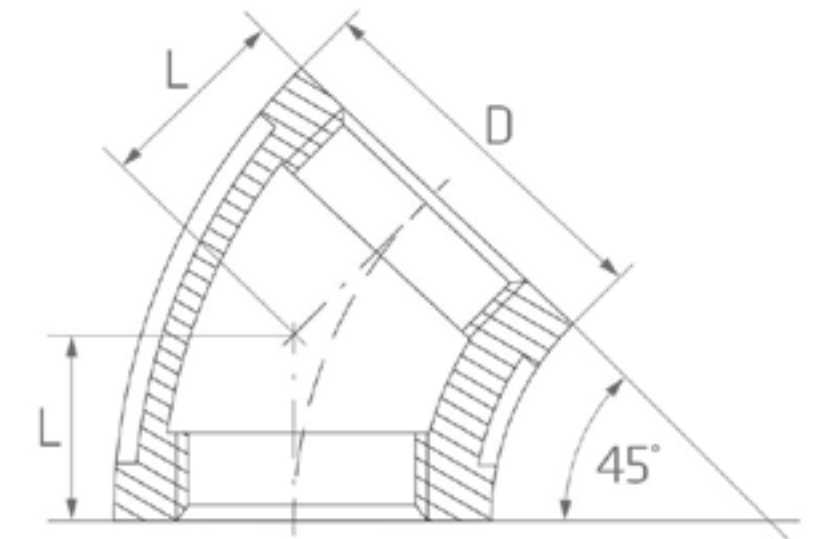


\* Finishes: page 585; no standard pipe connection

# ELBOW 45° F/F

EN-ISO 4144

1.4308-1.4408 (2/2)



INCH	NW	D	L	Grade	1.4308	1.4408
				AISI	304L	316L
				kg/pce.	*)	*)
3"	80	100.0	54.5	1.140	x	
4"	100	126.0	64.5	1.960	x	



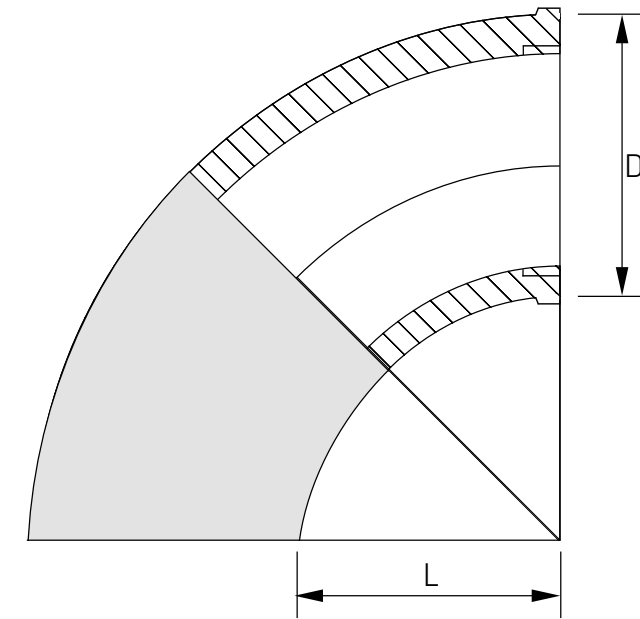
\* Finishes: page 585; no standard pipe connection



# ELBOW 90° F/F

EN-ISO 4144

1.4308-1.4408 (1/2)



INCH	NW	D	L	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	15.5	17.5	0.020		x
1/4"	8	19.0	19.5	0.030	x	x
3/8"	10	22.5	23.5	0.046	x	x
1/2"	15	27.5	27.5	0.082	x	x
3/4"	20	33.0	32.5	0.150	x	x
1"	25	40.5	38.5	0.238	x	x
1 1/4"	32	50.0	45.5	0.372	x	x
1 1/2"	40	56.5	48.5	0.608	x	x
2"	50	70.0	57.5	0.820	x	x
2 1/2"	65	86.5	69.5	1.465		x



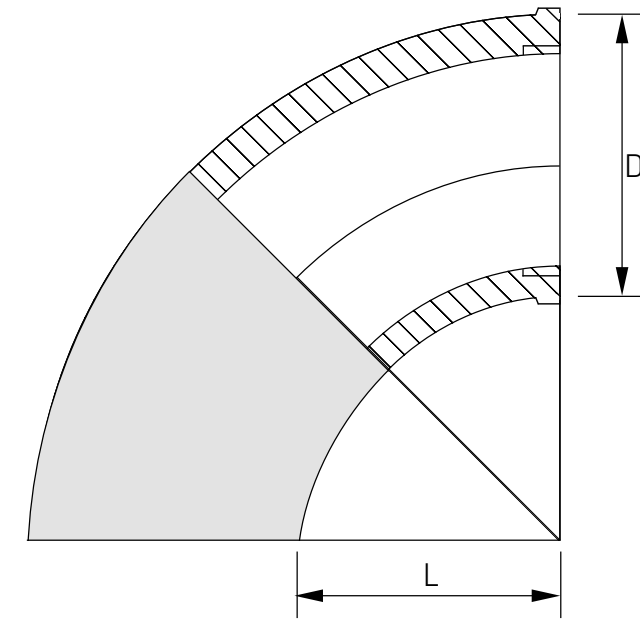
\* Finishes: page 585; no standard pipe connection



# ELBOW 90° F/F

EN-ISO 4144

1.4308-1.4408 (2/2)



INCH	NW	D	L	Grade	1.4308	1.4408
				AISI	304L	316L
				kg/pce.	*)	*)
3"	80	100.0	78.5	1.420	x	
4"	100	126.0	96.5	4.200	x	

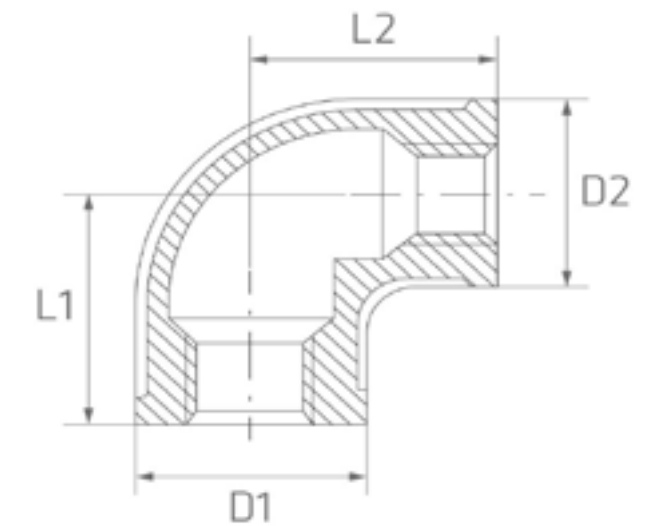


\* Finishes: page 585; no standard pipe connection

# REDUCING ELBOW 90° F/F

EN-ISO 4144

1.4408 (1/2)



INCHxINCH		NWxNW		D1	D2	L1	L2	Grade AISI	1.4408 316L	kg/pce.	*)
3/8"	1/4"	10	8	22.5	19.0	20.5	22.5	0.074	x		
1/2"	1/8"	15	6	27.5	15.5	22.5	23.5	0.076	x		
1/2"	1/4"	15	8	27.5	19.0	24.5	24.5	0.076	x		
1/2"	3/8"	15	10	27.5	22.5	26.5	25.5	0.076	x		
3/4"	1/4"	20	8	33.0	19.0	27.5	26.5	0.160	x		
3/4"	3/8"	20	10	33.0	22.5	28.5	28.5	0.160	x		
3/4"	1/2"	20	15	33.0	27.5	29.5	30.5	0.160	x		
1"	1/4"	25	8	40.5	19.0	28.5	30.5	0.178	x		
1"	3/8"	25	10	40.5	22.5	30.5	32.0	0.178	x		
1"	1/2"	25	15	40.5	27.5	32.5	33.5	0.178	x		

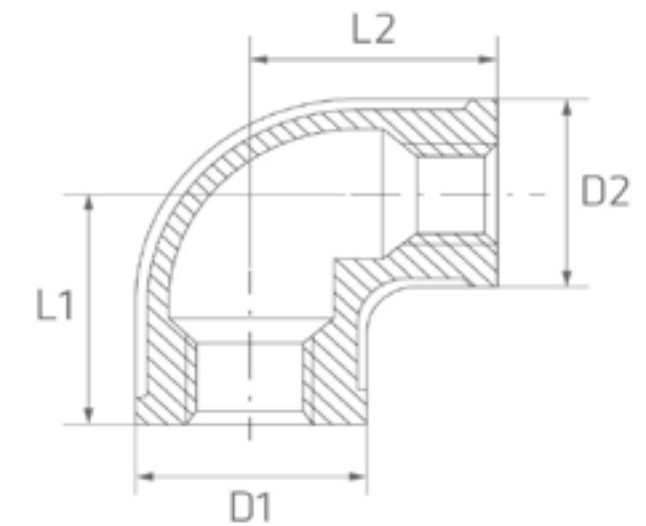


\* Finishes: page 585; no standard pipe connection

# REDUCING ELBOW 90° F/F

EN-ISO 4144

1.4408 (2/2)



INCHxINCH		NWxNW		D1	D2	L1	L2	Grade AISI	1.4408 316L	kg/pce.	*)
1"	3/4"	25	20	40.5	33.0	34.5	35.5	0.250	x		
1 1/4"	1/2"	32	15	50.0	27.5	36.5	38.5	0.294	x		
1 1/4"	3/4"	32	20	50.0	33.0	38.5	40.5	0.294	x		
1 1/4"	1"	32	25	50.0	40.5	40.5	42.5	0.320	x		
1 1/2"	1"	40	25	56.5	40.5	41.5	45.5	0.387	x		
1 1/2"	1 1/4"	40	32	56.5	50.0	45.5	48.5	0.560	x		
2"	1"	50	25	70.0	40.5	46.5	53.5	0.680	x		
2"	1 1/4"	50	32	70.0	50.0	48.5	54.5	0.680	x		
2"	1 1/2"	50	40	70.0	56.5	52.5	55.5	0.68	x		

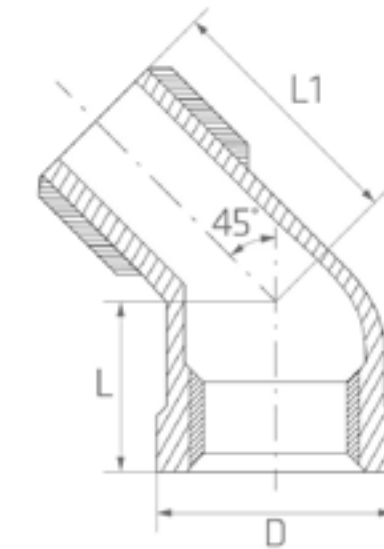


\* Finishes: page 585; no standard pipe connection

# THREADED BEND 45° F/M

EN-ISO 4144

1.4308-1.4408 (1/2)



INCH	NW	D	L	L1	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	17	16	21	0.028	x	x
1/4"	8	21	17	23	0.046	x	x
3/8"	10	25	19	27	0.076	x	x
1/2"	15	29	21	31	0.112	x	x
3/4"	20	35	25	36	0.170	x	x
1"	25	43	29	42	0.200	x	x
1 1/4"	32	52	34	49	0.488	x	x
1 1/2"	40	58	37	51	0.626	x	x
2"	50	71	42	59	0.900	x	x
2 1/2"	65	88	49	71	1.790	x	x

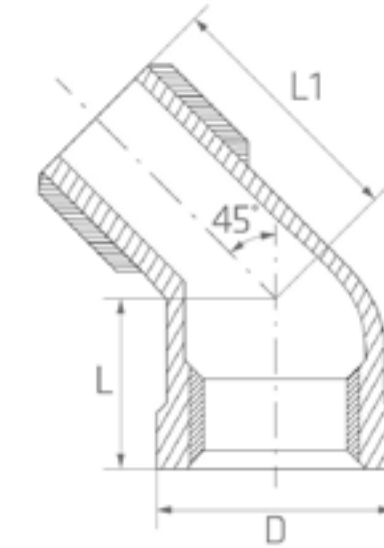


\* Finishes: page 585; no standard pipe connection

# THREADED BEND 45° F/M

EN-ISO 4144

1.4308-1.4408 (2/2)



INCH	NW	D	L	L1	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
3"	80	101	54	79	1.620	x	x
4"	100	129	65	96	4.500	x	x



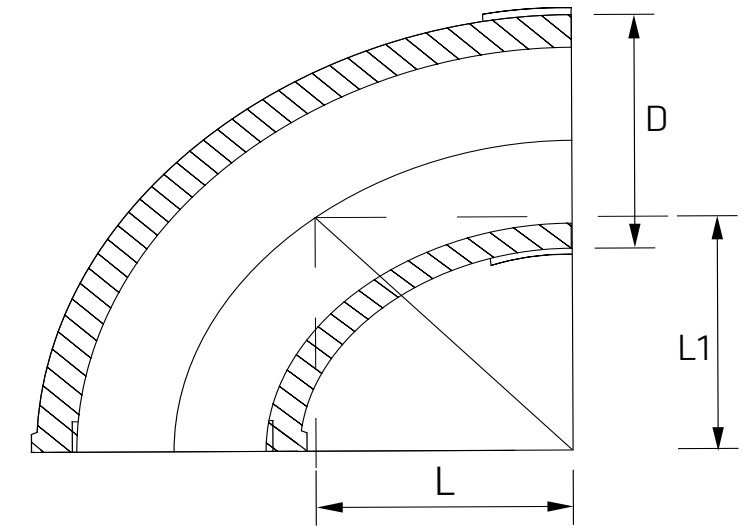
\* Finishes: page 585; no standard pipe connection



# THREADED BEND 90° F/M

EN-ISO 4144

1.4308-1.4408 (1/1)



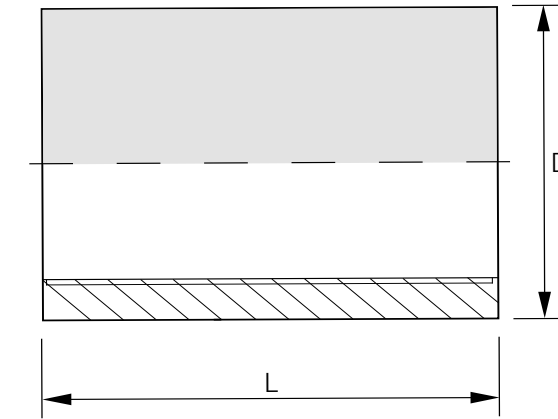
INCH	NW	D	L	L1	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	15.5	26.5	17.5	0.028		x
1/4"	8	19.0	27.5	19.5	0.046	x	x
3/8"	10	22.5	29.5	23.5	0.076	x	x
1/2"	15	27.0	35.5	27.5	0.112	x	x
3/4"	20	32.5	40.5	32.5	0.170	x	x
1"	25	40.0	46.5	38.5	0.328	x	x
1 1/4"	32	50.0	54.5	45.5	0.488	x	x
1 1/2"	40	56.5	57.5	48.5	0.626	x	x
2"	50	69.0	70.5	57.5	0.900	x	x



\* Finishes: page 585; no standard pipe connection

# SOCKET EN-ISO 4144

1.4308-1.4408 (1/1)



INCH	NW	D	L	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	16.0	18	0.012	x	x
1/4"	8	19.5	26	0.032	x	x
3/8"	10	22.3	27	0.034	x	x
1/2"	15	27.7	34	0.064	x	x
3/4"	20	33.6	36	0.094	x	x
1"	25	39.5	43	0.142	x	x
1 1/4"	32	48.3	48	0.194	x	x
1 1/2"	40	54.6	48	0.286	x	x
2"	50	66.3	56	0.434	x	x

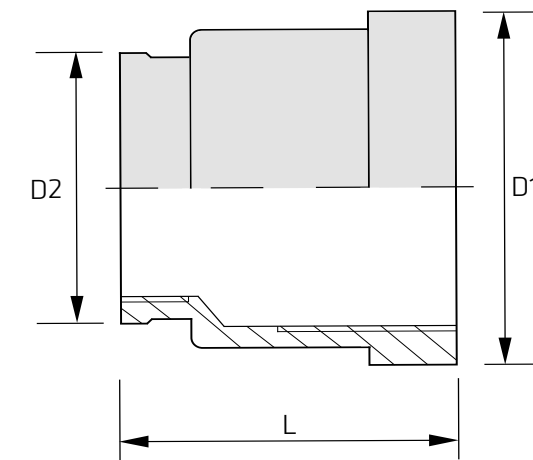


\* Finishes: page 585; no standard pipe connection

# REDUCING SOCKET

EN-ISO 4144

1.4408 (1/4)



INCHxINCH		NWxNW		D1	D2	L	Grade AISI	1.4408 316L
							kg/pce.	*)
1/4"	1/8"	8	6	21.5	19.0	26.0	0.038	x
3/8"	1/8"	10	6	25.0	17.0	28.3	0.048	x
3/8"	1/4"	10	8	26.0	21.5	29.0	0.050	x
1/2"	1/8"	15	6	29.0	17.0	34.0	0.068	x
1/2"	1/4"	15	8	29.0	21.0	34.0	0.076	x
1/2"	3/8"	15	10	29.0	22.4	34.0	0.068	x
3/4"	1/4"	20	8	35.0	21.0	38.0	0.090	x
3/4"	3/8"	20	10	35.0	25.0	38.0	0.102	x
3/4"	1/2"	20	15	37.0	28.1	37.0	0.098	x
1"	1/4"	25	8	43.0	20.0	42.0	0.160	x



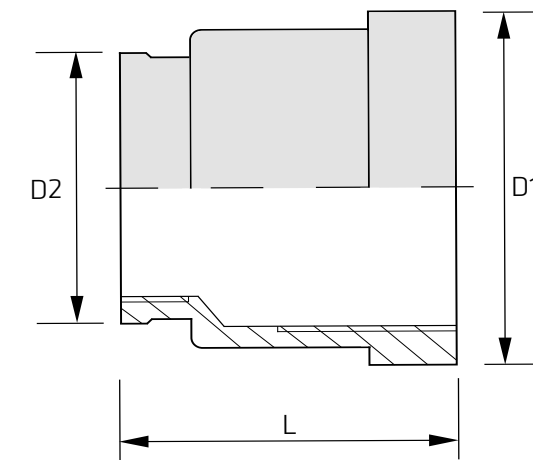
\* Finishes: page 585; no standard pipe connection



# REDUCING SOCKET

EN-ISO 4144

1.4408 (2/4)



INCHxINCH	NWxNW	D1	D2	L	Grade AISI	1.4408 316L	kg/pce.	*)
1"	3/8"	25	10	43.0	25.4	42.0	0.150	x
1"	1/2"	25	15	43.0	29.4	42.0	0.156	x
1"	3/4"	25	20	43.0	32.0	42.0	0.148	x
1 1/4"	1/2"	32	15	52.0	29.0	48.0	0.214	x
1 1/4"	3/4"	32	20	52.0	35.0	48.0	0.228	x
1 1/4"	1"	32	25	52.5	39.0	52.0	0.232	x
1 1/2"	1/2"	40	15	59.0	35.5	52.0	0.228	x
1 1/2"	3/4"	40	20	58.0	29.0	52.0	0.294	x
1 1/2"	1"	40	25	59.0	43.5	53.0	0.302	x
1 1/2"	1 1/4"	40	32	59.0	50.0	53.0	0.288	x

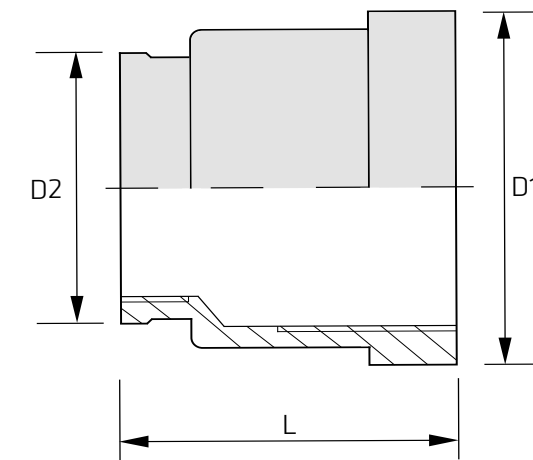


\* Finishes: page 585; no standard pipe connection

# REDUCING SOCKET

EN-ISO 4144

1.4408 (3/4)



INCHxINCH		NWxNW		D1	D2	L	Grade AISI kg/pce.	1.4408 316L *)
2"	1/2"	50	15	72.0	29.0	50.5	0.425	x
2"	3/4"	50	20	72.0	35.0	51.0	0.410	x
2"	1"	50	25	72.0	43.0	56.0	0.424	x
2"	1 1/4"	50	32	72.0	52.0	56.0	0.444	x
2"	1 1/2"	50	40	72.0	56.7	457.0	0.600	x
2 1/2"	1"	65	25	87.0	43.0	60.0	0.600	x
2 1/2"	1 1/4"	65	32	85.0	52.0	60.0	0.690	x
2 1/2"	1 1/2"	65	40	85.0	57.0	60.0	0.614	x
2 1/2"	2"	65	50	85.0	69.4	61.0	0.690	x
3"	1 1/2"	80	40	100.0	56.6	62.0	1.095	x

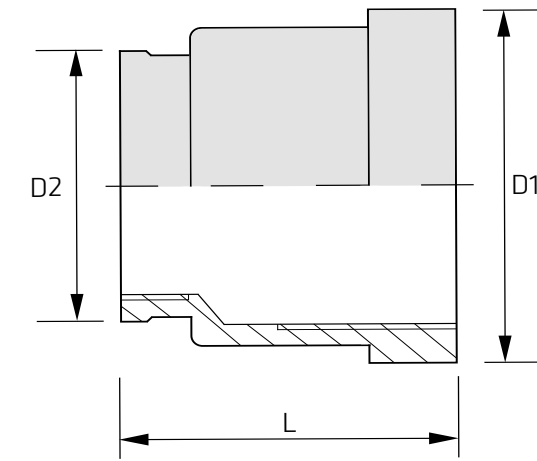


\* Finishes: page 585; no standard pipe connection

# REDUCING SOCKET

EN-ISO 4144

1.4408 (4/4)



INCHxINCH	NWxNW	D1	D2	L	Grade AISI	1.4408 316L	kg/pce.	*)
3"	2"	80	50	100.0	70.0	62.0	1.095	x
3"	2 1/2"	80	65	100.0	87.0	62.0	1.215	x
4"	2"	100	50	127.0	70.0	65.0	1.840	x
4"	2 1/2"	100	65	128.0	86.2	65.0	1.840	x
4"	3"	100	80	128.0	105.0	65.0	1.900	x

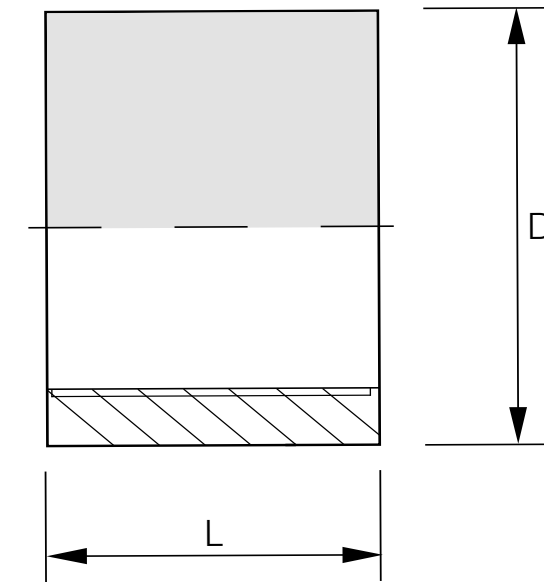


\* Finishes: page 585; no standard pipe connection

# HALF SOCKET

EN-ISO 4144

1.4308-4408 (1/1)



INCH	NW	D	L	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	16.0	11	0.008	x	x
1/4"	8	19.5	12	0.012	x	x
3/8"	10	22.3	13	0.014	x	x
1/2"	15	27.7	15	0.028	x	x
3/4"	20	32.6	17	0.042	x	x
1"	25	39.5	20	0.062	x	x
1 1/4"	32	48.3	22	0.088	x	x
1 1/2"	40	54.6	22	0.114	x	x
2"	50	66.3	26	0.180	x	x



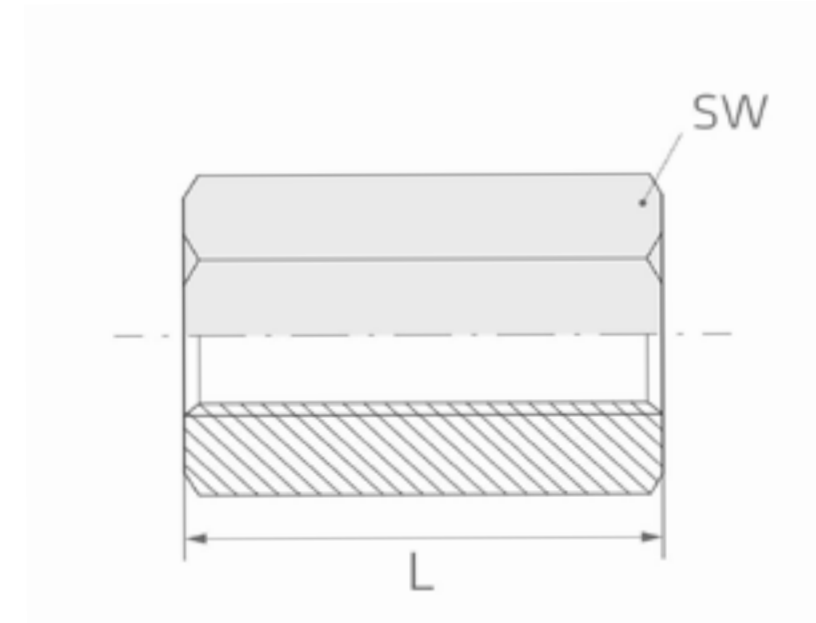
\* Finishes: page 585; no standard pipe connection



# HEXAGON SOCKET

EN-ISO 4144

1.4408 (1/1)



INCH	DN	L	SW	Grade AISI	1.4408 316L	kg/pce. *)
1/4"	8	25	17	0.035	x	
3/8"	10	26	21	0.037	x	
1/2"	15	34	26	0.070	x	



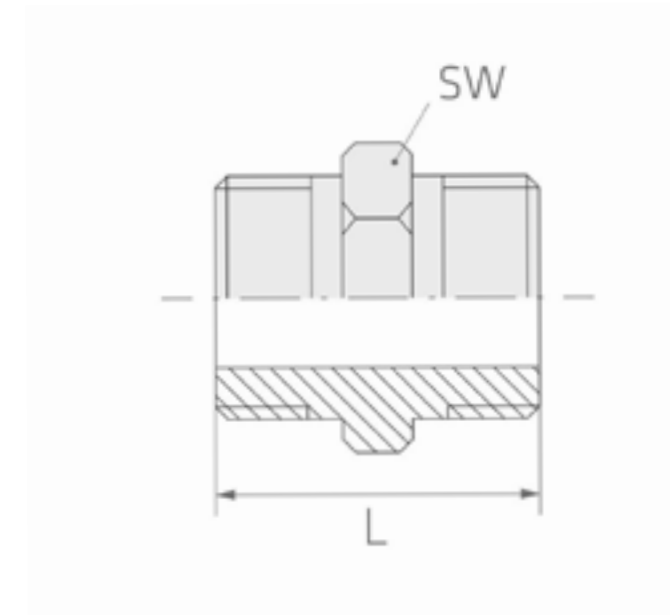
\* Finishes: page 585; no standard pipe connection



# HEXAGON DOUBLE NIPPLE

EN-ISO 4144

1.4571 (1/1)



INCH	NW	D	L	Grade AISI	1.4571 316 Ti
				kg/pce.	*)
1/4"	8	40	13.5	0.04	x
3/8"	10	40	17.2	0.04	x
1/2"	15	60	21.3	0.06	x
3/4"	20	60	26.9	0.15	x
1"	25	60	33.7	0.16	x
1 1/4"	32	80	42.4	0.27	x
1 1/2"	40	80	48.3	0.35	x
2"	50	100	60.3	0.50	x
					x

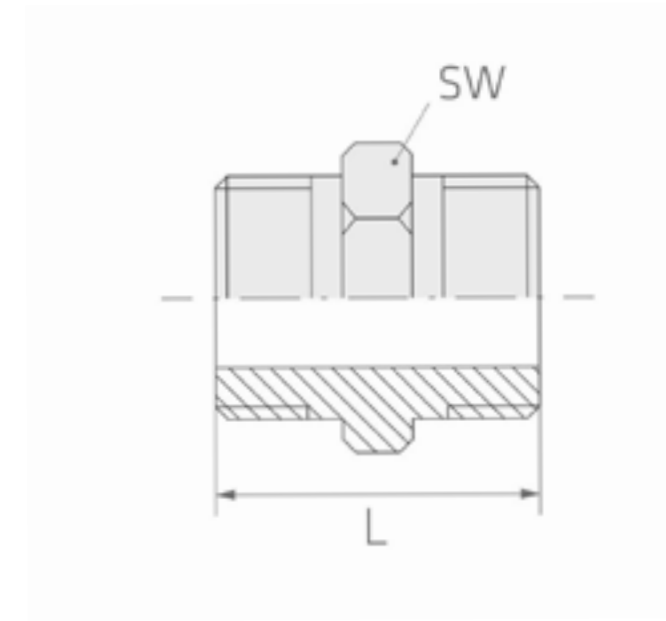


\* Finishes: page 585; no standard pipe connection

# HEXAGON DOUBLE NIPPLE

EN-ISO 4144

1.4308 - 1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4308 304L	1.4408 316L
				kg/pce.	*)	*)
1/8"	6	23.6	12.0	0.020		x
1/4"	8	27.8	16.0	0.020	x	x
3/8"	10	28.0	19.0	0.042	x	x
1/2"	15	34.0	21.6	0.064	x	x
3/4"	20	40.0	30.0	0.094	x	x
1"	25	46.0	36.0	0.144	x	x
1 1/4"	32	52.5	46.0	0.226	x	x
1 1/2"	40	54.0	50.0	0.290	x	x
2"	50	62.0	54.6	0.464	x	x
2 1/2"	65	70.0	79.5	0.965		x



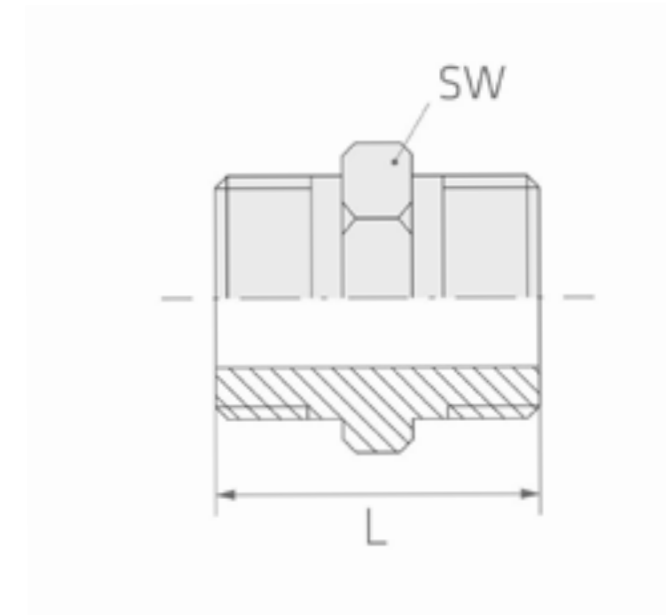
\* Finishes: page 585; no standard pipe connection



# HEXAGON DOUBLE NIPPLE

EN-ISO 4144

1.4308 - 1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4308 304L	1.4408 316L
				kg/pce.	*)	*)
3"	80	78.4	92.0	1.190		x
4"	100	94.0	120.0	1.825		x



\* Finishes: page 585; no standard pipe connection

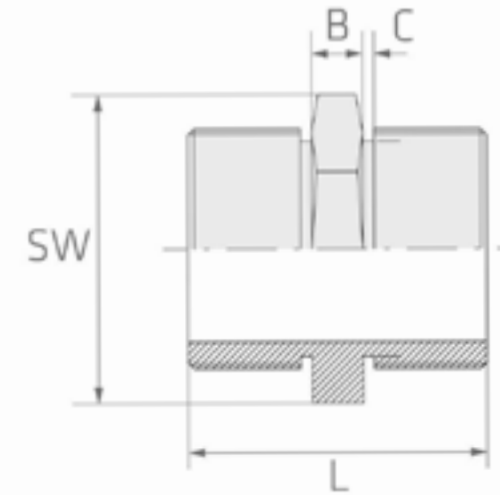




# HEXAGON DOUBLE NIPPLE

DIN 259

1.4308 - 1.4408 (1/2)



INCH	NW	L	SW	B	C	Grade AISI kg/pce.	1.4408 316L *)
1/8"	6	24	12	8.5	2	0.010	x
1/4"	8	28	16	11.4	3	0.018	x
3/8"	10	28	19	14.0	3	0.042	x
1/2"	15	34	22	18.0	4	0.072	x
3/4"	20	40	30	24.0	4	0.112	x
1"	25	46	36	30.0	4	0.166	x
1 1/4"	32	53	46	39.0	4	0.250	x
1 1/2"	40	54	50	45.0	4	0.362	x
2"	50	62	65	56.5	4	0.504	x
2 1/2"	65	70	80	72.0	4	0.800	x



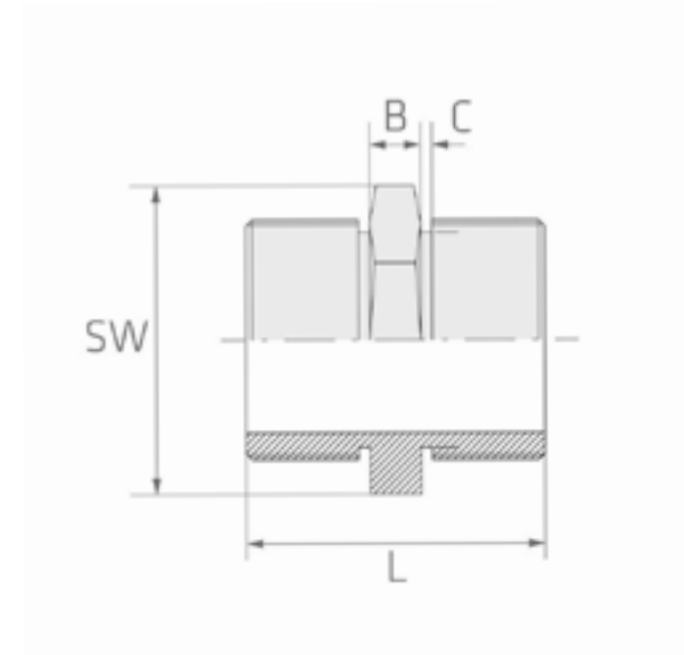
\* Finishes: page 585; no standard pipe connection



# HEXAGON DOUBLE NIPPLE

 DIN 259

1.4308 - 1.4408 (2/2)



INCH	NW	L	SW	B	C	Grade	1.4408
						AISI	316L
						kg/pce.	*)
3"	80	78	90	85.0	4	1.190	x

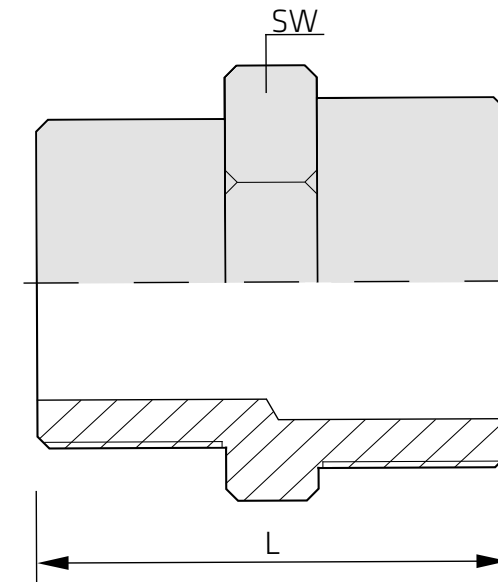


\* Finishes: page 585; no standard pipe connection

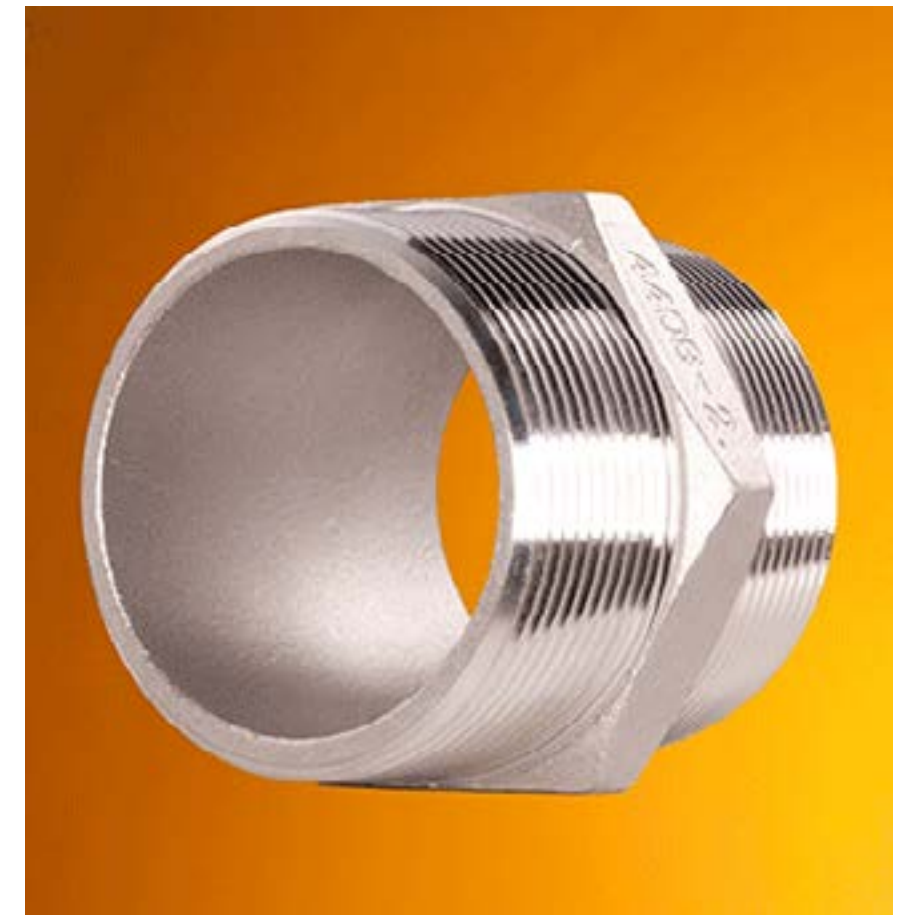
# HEXAGON REDUCING NIPPLE M/M

EN-ISO 4144

1.4308 - 1.4408 (1/4)



INCHxINCH		NWxNW		L	SW	Grade AISI	1.4308 304L	1.4408 316L
						kg/pce.	*)	*)
1/4"	1/8"	8	6	34.0	18.0	0.028	x	x
3/8"	1/8"	10	6	35.0	21.0	0.042		x
3/8"	1/4"	10	8	35.5	21.0	0.045	x	x
1/2"	1/8"	15	6	34.0	26.0	0.069		x
1/2"	1/4"	15	8	34.0	26.0	0.068	x	x
1/2"	3/8"	15	10	41.0	26.0	0.066	x	x
3/4"	1/8"	20	6	37.0	30.0	0.084		x
3/4"	1/4"	20	8	37.0	30.0	0.088	x	x
3/4"	3/8"	20	10	37.0	30.0	0.084	x	x
3/4"	1/2"	20	15	46.0	30.0	0.112	x	x

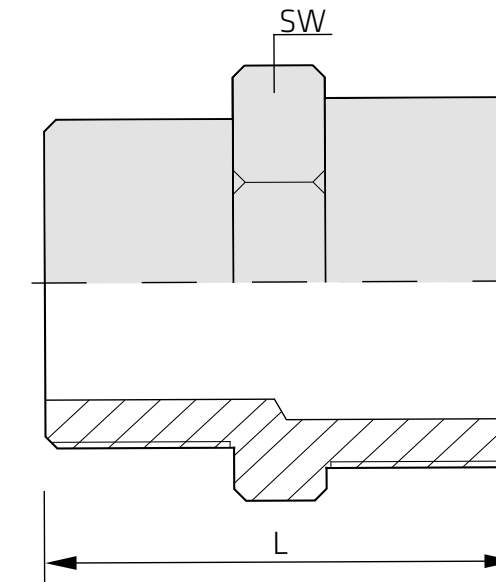


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCING NIPPLE M/M

EN-ISO 4144

1.4308 - 1.4408 (2/4)



INCHxINCH		NWxNW		L	SW	Grade AISI	1.4308 304L	1.4408 316L
						kg/pce.	*)	*)
1"	1/4"	25	8	39.0	35.0	0.100		x
1"	3/8"	25	10	40.0	35.0	0.124	x	x
1"	1/2"	25	15	44.2	35.0	0.158	x	x
1"	3/4"	25	20	50.0	37.0	0.166	x	x
1 1/4"	1/2"	32	15	49.5	46.0	0.204		x
1 1/4"	3/4"	32	20	52.0	46.0	0.246		x
1 1/4"	1"	32	25	54.0	46.0	0.246	x	x
1 1/2"	1/2"	40	15	49.0	50.0	0.256		x
1 1/2"	3/4"	40	20	53.0	50.0	0.384		x
1 1/2"	1"	40	25	53.0	50.0	0.352	x	x

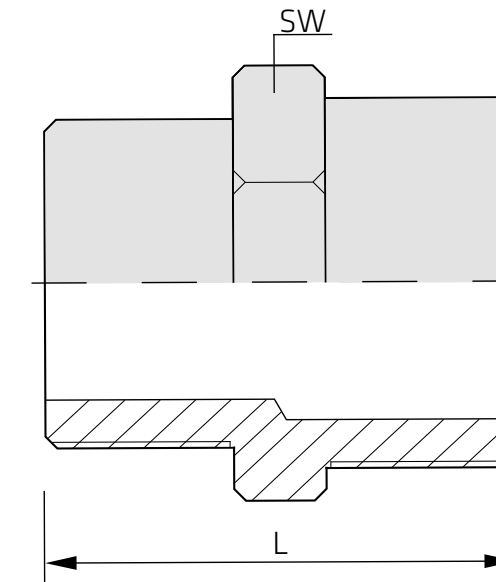


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCING NIPPLE M/M

EN-ISO 4144

1.4308 - 1.4408 (3/4)



INCHxINCH		NWxNW		L	SW	Grade AISI	1.4308 304L	1.4408 316L
						kg/pce.	*)	*)
1 1/2"	1 1/4"	40	32	59.0	51.5	0.372	x	x
2"	1/2"	50	15	52.0	63.0	0.404		x
2"	3/4"	50	20	56.0	63.0	0.414		x
2"	1"	50	25	57.0	63.0	0.434	x	x
2"	1 1/4"	50	32	58.0	63.0	0.464	x	x
2"	1 1/2"	50	40	65.4	64.0	0.524	x	x
2 1/2"	1"	65	25	63.0	80.0	0.960		x
2 1/2"	1 1/2"	65	40	66.0	80.0	0.935		x
2 1/2"	2"	65	50	77.0	76.3	0.945		x
3"	1 1/2"	80	40	72.0	95.0	0.980		x

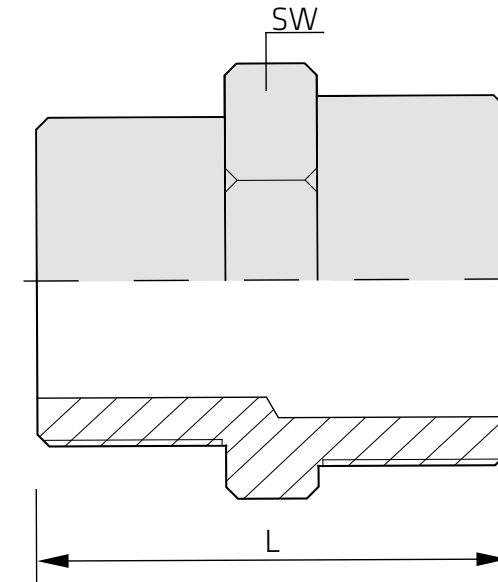


\* Finishes: page 585; no standard pipe connection

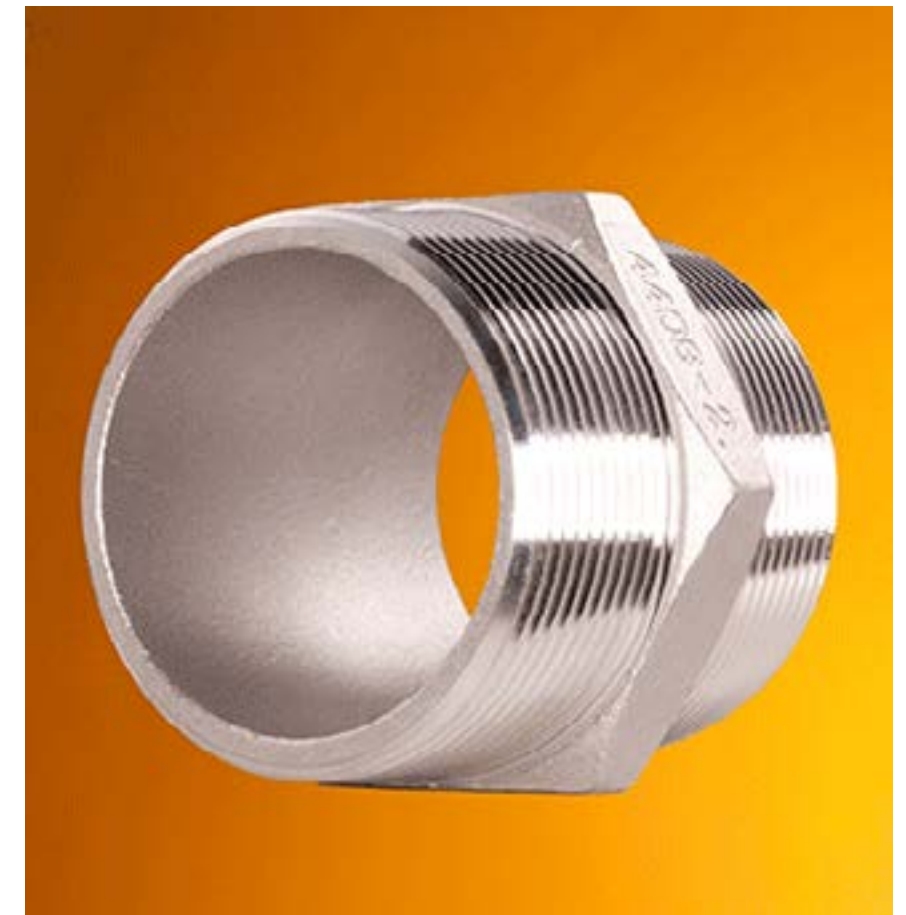
# HEXAGON REDUCING NIPPLE M/M

EN-ISO 4144

1.4308 - 1.4408 (4/4)



INCHxINCH		NWxNW		L	SW	Grade AISI	1.4308 304L	1.4408 316L
						kg/pce.	*)	*)
3"	2"	80	50	74.0	95.0	0.950		x
3"	2 1/2"	80	65	84.0	92.5	1.250		x
4"	2"	100	50	82.0	125.0	1.750		x
4"	2 1/2"	100	65	82.0	125.0	1.670		x
4"	3"	100	80	94.0	117.4	2.450		x



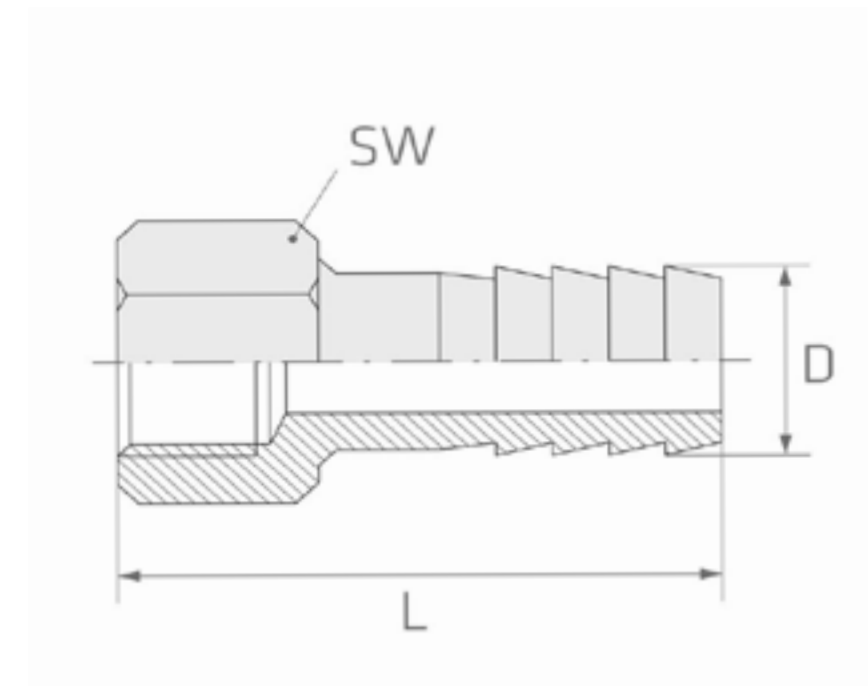
\* Finishes: page 585; no standard pipe connection



# HEXAGON HOSE NIPPLE F

EN-ISO 4144

1.4308 - 1.4408 (1/2)



INCH	NW	D	L	SW	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	6.5	39.0	15.0	0.020	x	
1/4"	8	6.3	42.0	19.0	0.040	x	x
1/4"	8	9.0	44.0	19.0	0.040	x	x
3/8"	10	9.5	53.0	22.0	0.060	x	x
3/8"	10	11.0	53.0	22.0	0.060	x	x
1/2"	15	12.7	62.0	27.0	0.100	x	x
1/2"	15	14.0	62.0	27.0	0.100	x	x
3/4"	20	19.0	64.0	32.0	0.120	x	x
3/4"	20	20.5	63.5	32.0	0.140	x	x
1"	25	25.4	66.0	38.0	0.200	x	x

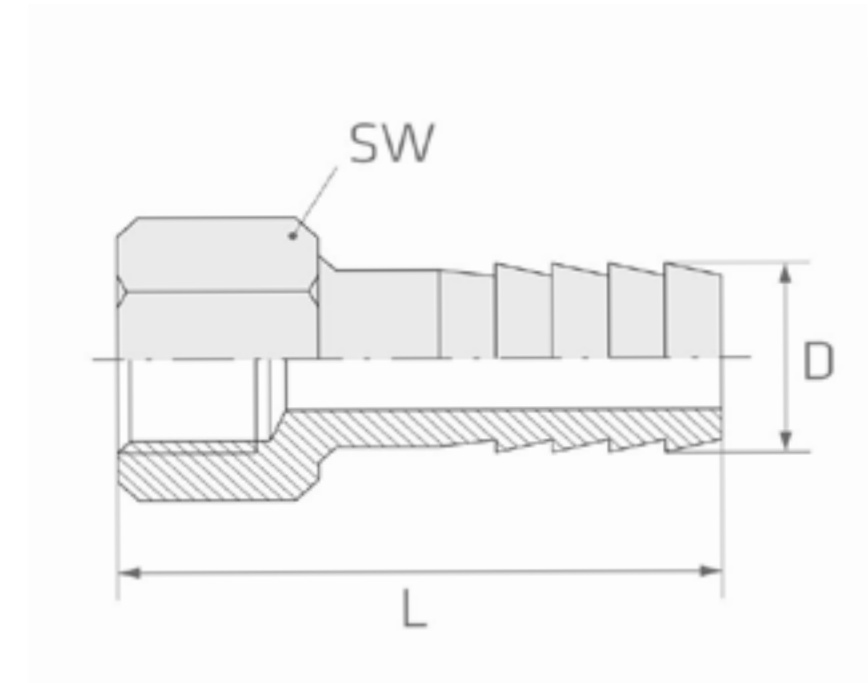


\* Finishes: page 585; no standard pipe connection

# HEXAGON HOSE NIPPLE F

EN-ISO 4144

1.4308 - 1.4408 (2/2)



INCH	NW	D	L	SW	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1"	25	27.0	66.0	38.0	0.220	x	x
1 1/4"	32	31.8	74.0	50.0	0.320	x	x
1 1/4"	32	33.0	74.0	50.0	0.340	x	x
1 1/2"	40	38.1	88.0	56.0	0.380	x	x
1 1/2"	40	39.5	87.5	55.5	0.420	x	x
2"	50	50.8	95.0	68.0	0.640	x	x
2"	50	52.0	94.5	67.5	0.680	x	x



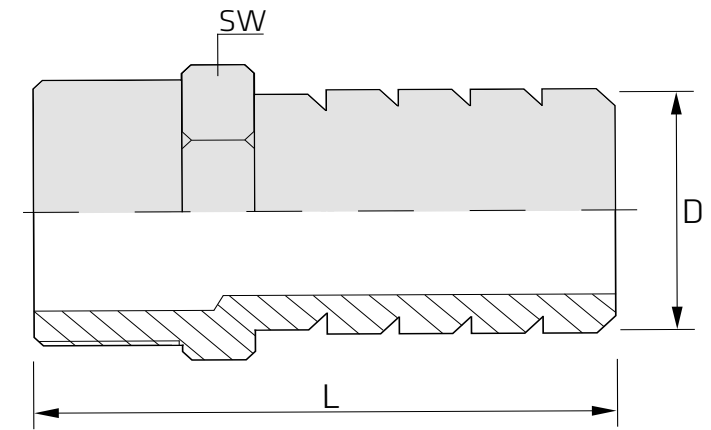
\* Finishes: page 585; no standard pipe connection



# HOSE NIPPEL M

EN-ISO 4144

1.4408 (1/4)



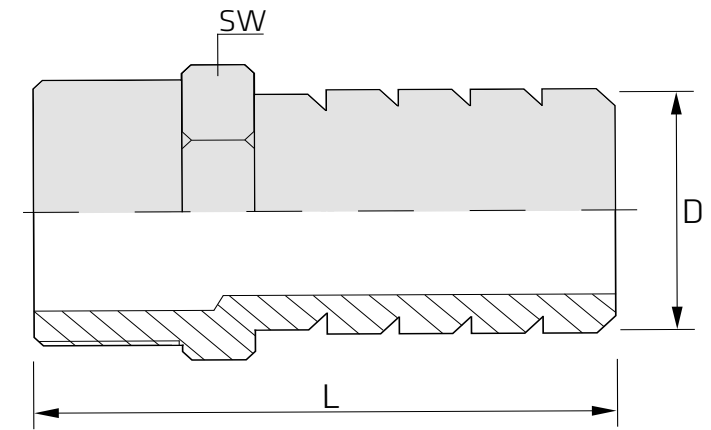
INCH	NW	D	L	SW	Grade AISI	1.4408 316L kg/pce. *)
1/8"	6	6.5	45	13	0.013	x
1/4"	8	6.3	47	17	0.020	x
1/4"	8	8.0	47	17	0.020	x
1/4"	8	9.0	47	17	0.028	x
1/4"	8	10.0	47	17	0.018	x
1/4"	8	11.0	47	17	0.277	x
1/4"	8	12.7	47	17	0.030	x
3/8"	10	6.3	55	20	0.030	x
3/8"	10	8.0	55	20	0.035	x
3/8"	10	9.5	55	20	0.035	x



\* Finishes: page 585; no standard pipe connection

# HOSE NIPPEL M EN-ISO 4144

1.4408 (2/4)



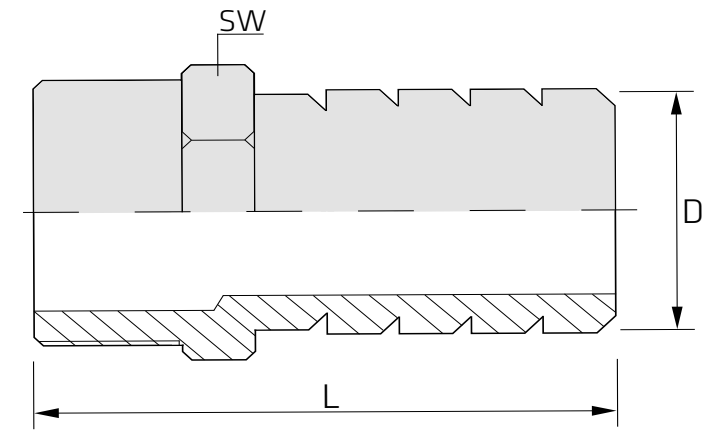
INCH	NW	D	L	SW	Grade AISI kg/pce.	1.4408 316L *)
3/8"	10	10.0	55	20	0.035	x
3/8"	10	11.0	55	20	0.040	x
3/8"	10	12.7	55	20	0.040	x
1/2"	15	6.3	64	24	0.040	x
1/2"	15	9.5	64	24	0.050	x
1/2"	15	10.0	64	24	0.048	x
1/2"	15	11.0	64	24	0.049	x
1/2"	15	12.7	64	24	0.049	x
1/2"	15	14.0	64	24	0.050	x
1/2"	15	19.0	64	24	0.08	x



\* Finishes: page 585; no standard pipe connection

# HOSE NIPPEL M EN-ISO 4144

1.4408 (3/4)



INCH	NW	D	L	SW	Grade AISI kg/pce.	1.4408 316L *)
3/4"	20	12.7	68	31	0.040	x
3/4"	20	19.0	68	31	0.136	x
3/4"	20	20.5	68	31	0.150	x
3/4"	20	25.4	68	31	0.160	x
1"	25	12.7	71	39	0.035	x
1"	25	19.0	71	39	0.232	x
1"	25	25.4	71	39	0.232	x
1"	25	27.0	71	39	0.250	x
1 1/4"	32	31.8	80	46	0.348	x
1 1/4"	32	33.0	80	46	0.370	x

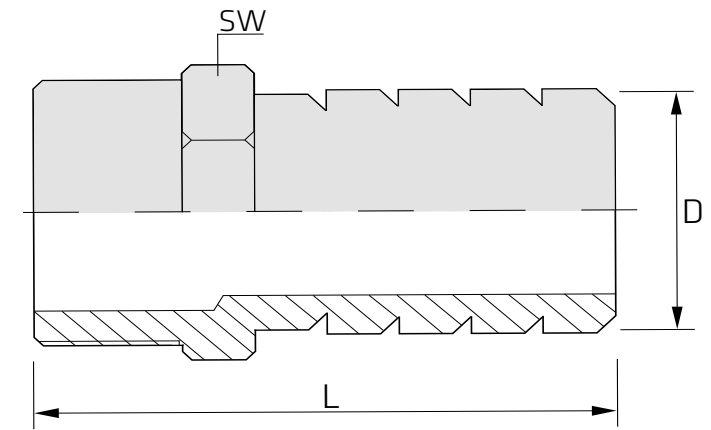


\* Finishes: page 585; no standard pipe connection

# HOSE NIPPEL M

EN-ISO 4144

1.4408 (4/4)



INCH	NW	D	L	SW	Grade AISI	1.4408 316L kg/pce.	*)
1 1/2"	40	38.1	95	52	0.482	x	
1 1/2"	40	39.5	95	52	0.490	x	
2"	50	50.8	105	62	0.680	x	
2"	50	52.0	105	62	0.720	x	
2 1/2"	65	63.5	107	80	1.000	x	
2 1/2"	65	67.0	107	80	1.2	x	
3"	80	76.1	112	91	1.350	x	
3"	80	80.0	112	91	0.25	x	
4"	100	101.6	130	117	2.950	x	

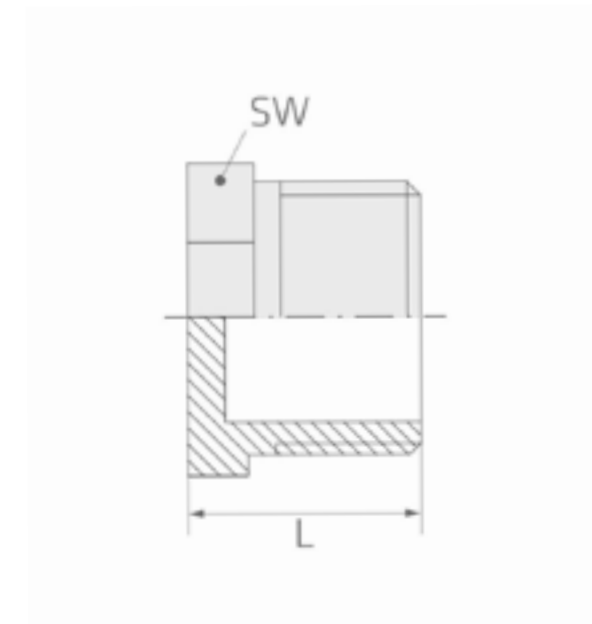


\* Finishes: page 585; no standard pipe connection

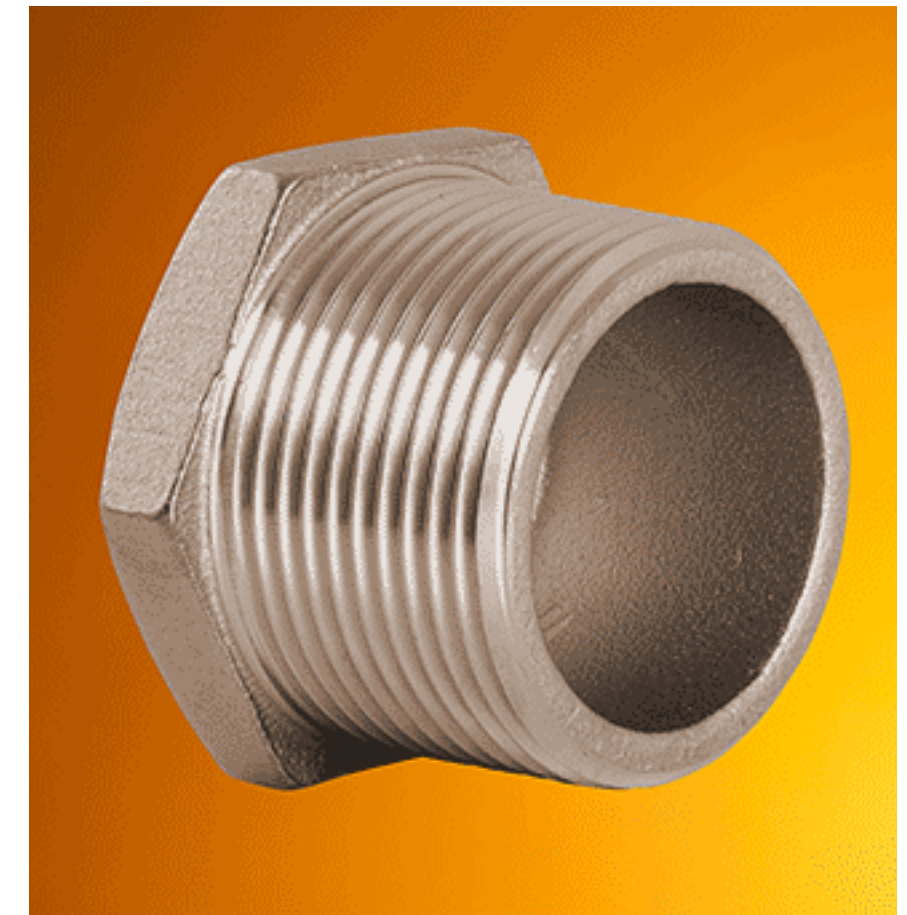
# HEXAGONAL PLUG CONICAL SEALING

EN-ISO 4144

1.4308-1.4408 (1/2)



INCH	NW	L	SW	Grade AISI kg/pce.	1.4308 304L *)	1.4408 316L *)
1/8"	6	17.0	12.0	0.010		x
1/4"	8	17.5	16.0	0.018		x
3/8"	10	18.0	20.0	0.042	x	x
1/2"	15	25.0	24.0	0.072	x	x
3/4"	20	26.0	30.0	0.112	x	x
1"	25	29.0	38.0	0.148	x	x
1 1/4"	32	35.0	46.0	0.260	x	x
1 1/2"	40	38.0	52.0	0.370	x	x
2"	50	39.0	65.0	0.504	x	x
2 1/2"	65	44.0	81.0	0.820		

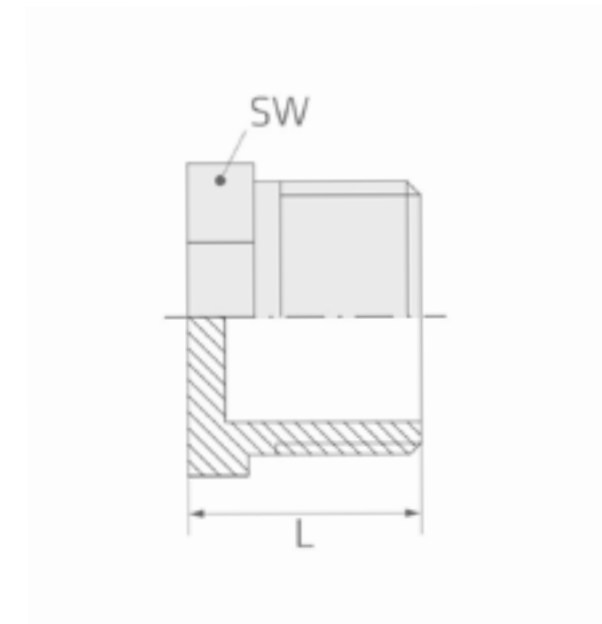


\* Finishes: page 585; no standard pipe connection

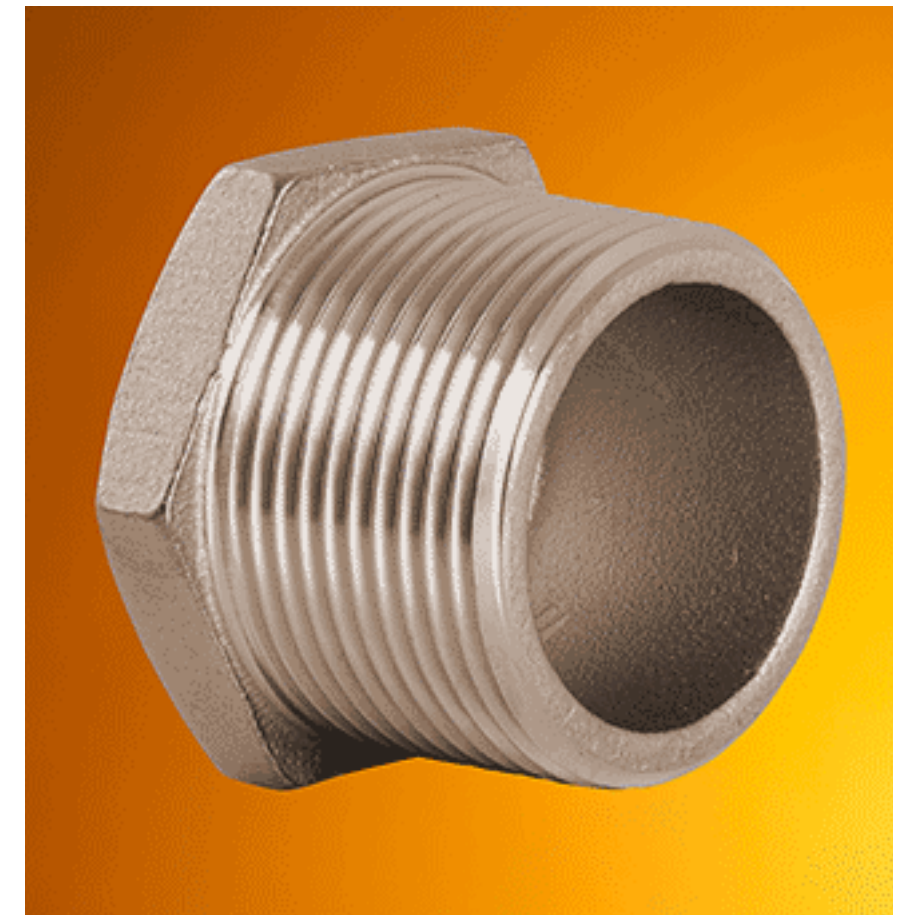
# HEXAGONAL PLUG CONICAL SEALING

EN-ISO 4144

1.4308-1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4308 304L	1.4408 316L
				kg/pce.	*)	*)
3"	80	54.0	94.0	1.190		x
4"	100	55.0	119.0	2.045		x



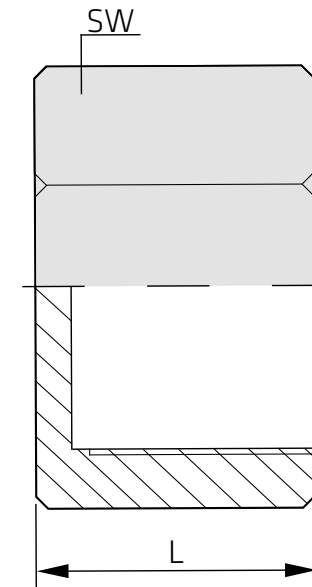
\* Finishes: page 585; no standard pipe connection



# HEXAGON CAP

EN-ISO 4144

1.4308 - 1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
		mm		kg/pce.	*)	*)
1/8"	6	14	15	0.014		x
1/4"	8	18	18	0.026	x	x
3/8"	10	19	21	0.040	x	x
1/2"	15	21	27	0.052	x	x
3/4"	20	24	30	0.080	x	x
1"	25	25	38	0.142	x	x
1 1/4"	32	28	50	0.198	x	x
1 1/2"	40	28	55	0.230	x	x
2"	50	34	70	0.444	x	x
2 1/2"	65	40	92	1.180		x

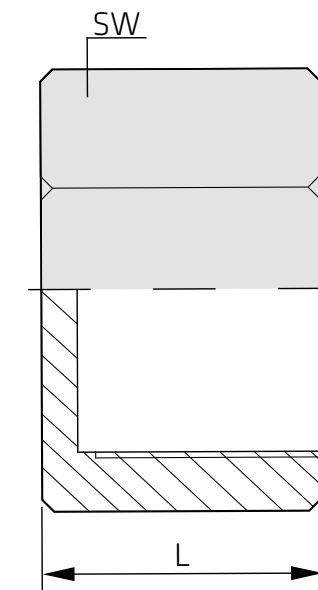


\* Finishes: page 585; no standard pipe connection

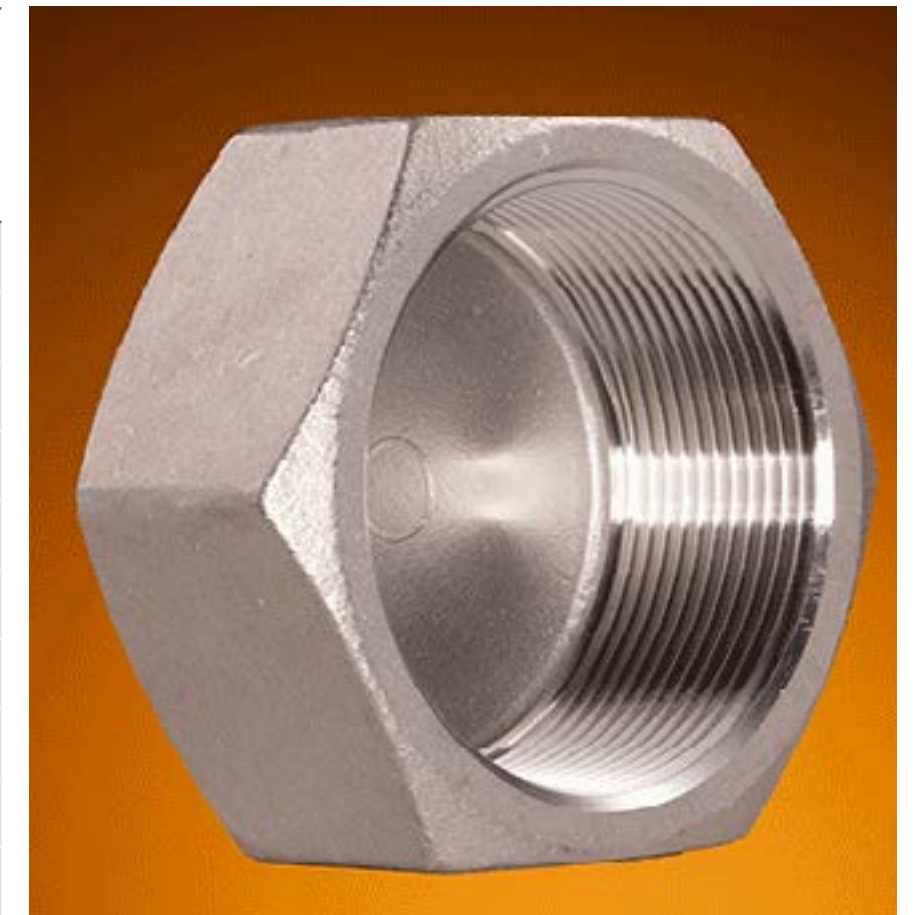
# HEXAGON CAP

EN-ISO 4144

1.4308 - 1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
		mm		kg/pce.	*)	*)
3"	80	45	109	1.880		x
4"	100	50	132	1.355		x



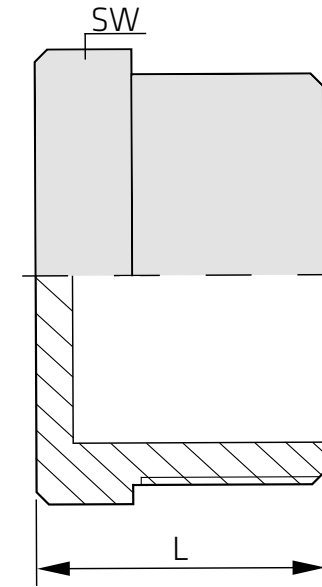
\* Finishes: page 585; no standard pipe connection



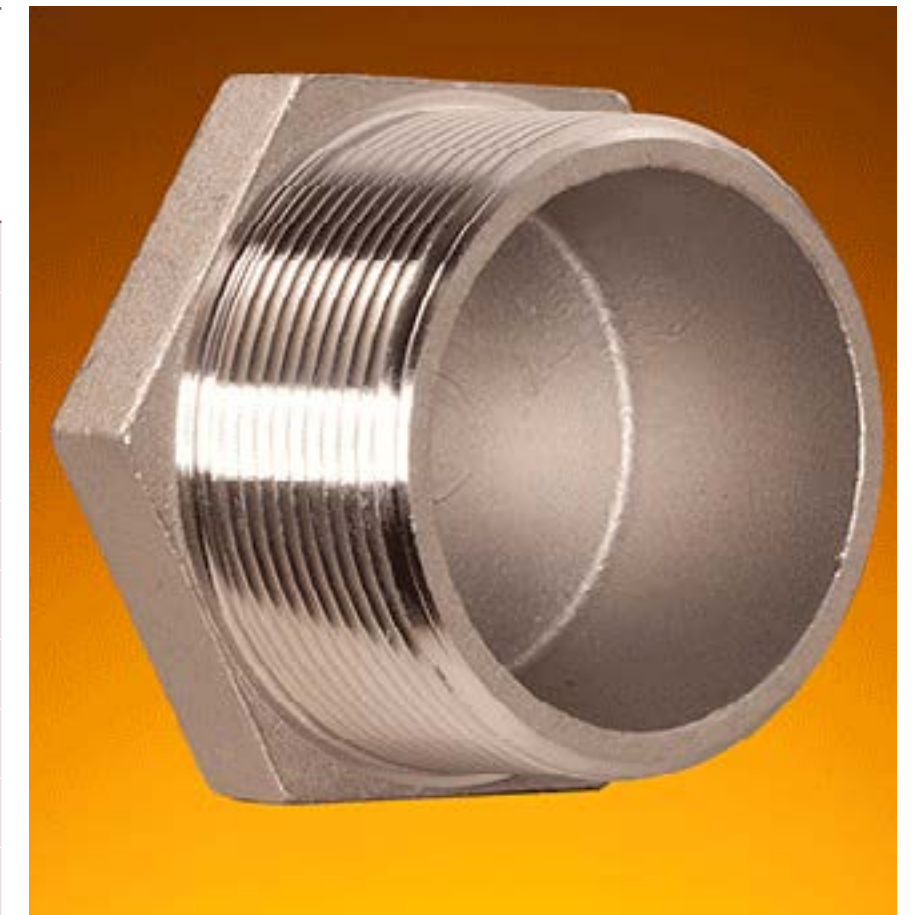
# HEXAGON HEAD PLUG

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L
		mm		kg/pce.	*)
1/8"	6	17.0	12.0	0.01	x
1/4"	8	17.5	16	0.02	x
3/8"	10	18.0	20	0.04	x
1/2"	15	25.0	24	0.07	x
3/4"	20	26.0	30	0.11	x
1"	25	29.0	38	0.15	x
1 1/4"	32	35.0	46	0.26	x
1 1/2"	40	38.0	52	0.37	x
2"	50	39.0	65	0.50	x
2"	50	39.0	65.0	0.50	x

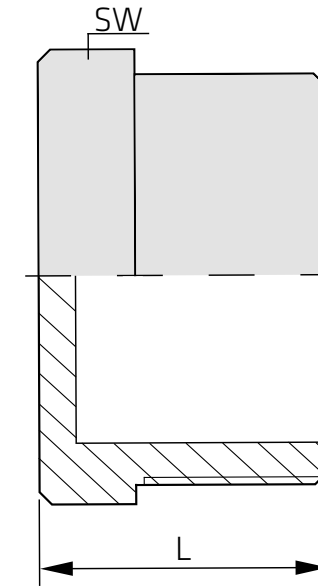


\* Finishes: page 585; no standard pipe connection

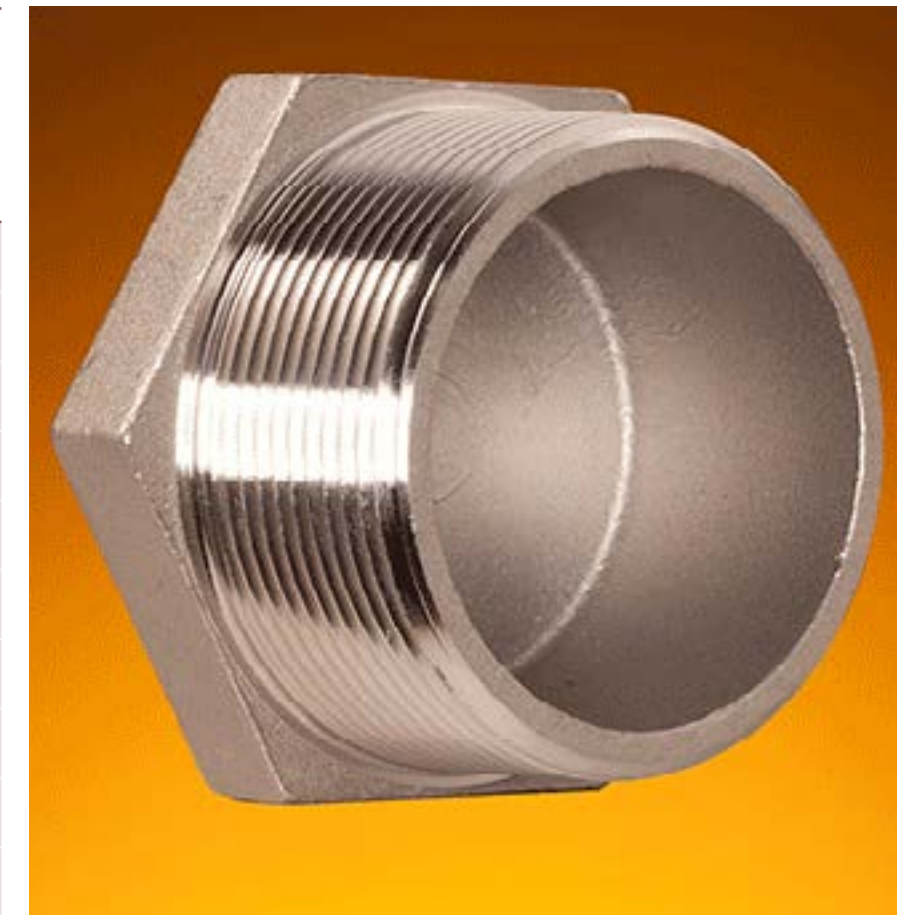
# HEXAGON HEAD PLUG

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L
		mm		kg/pce.	*)
2 1/2"	65	44.0	81.0	0.80	x
3"	80	54.0	94.0	1.19	x

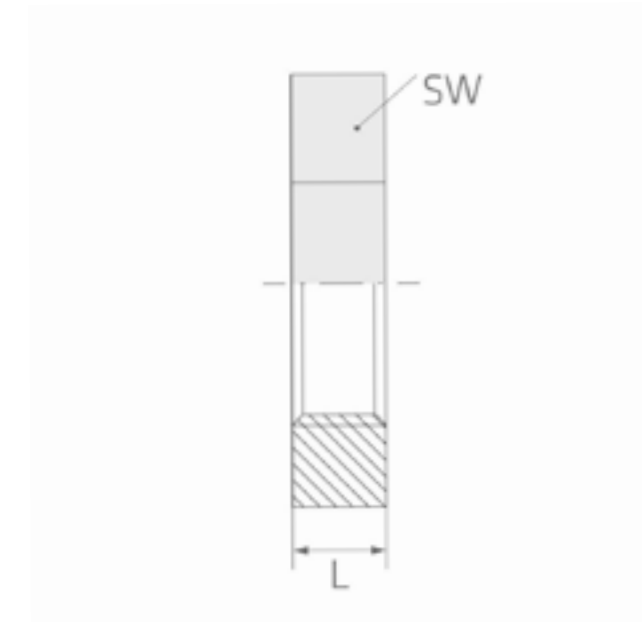


\* Finishes: page 585; no standard pipe connection

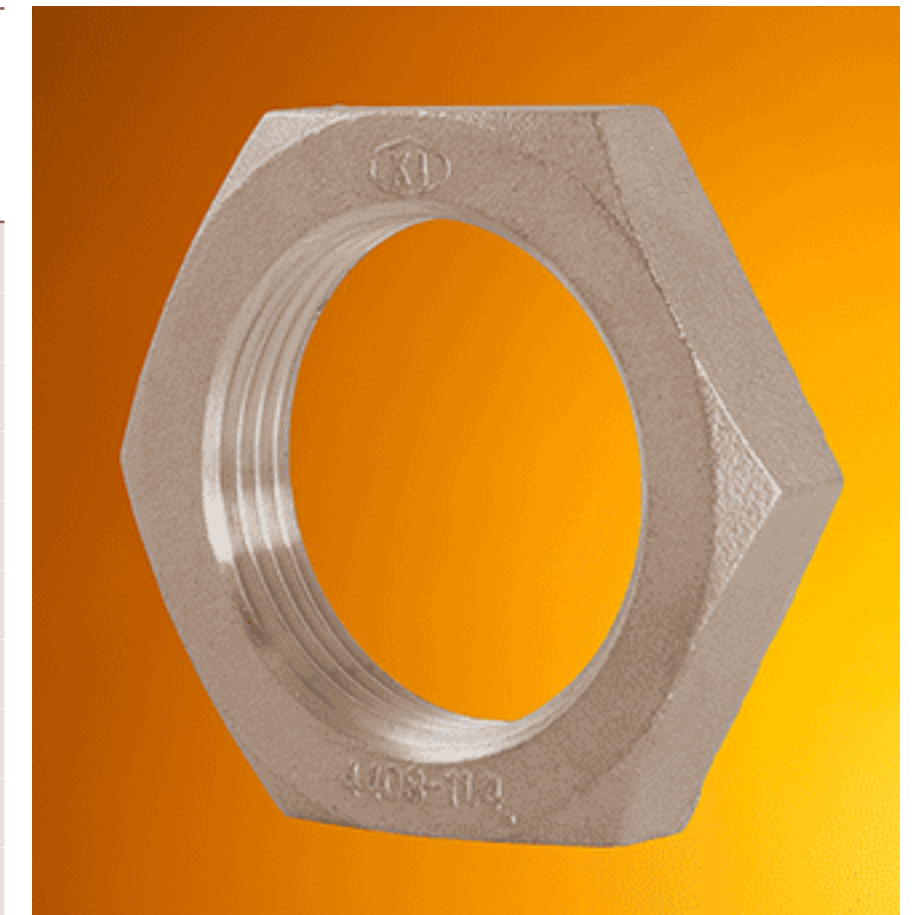
# HEXAGON NUT

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L
		mm		kg/pce.	*)
1/8"	6	6.2	14.6	0.010	x
1/4"	8	7.0	23.0	0.140	x
3/8"	10	8.0	26.0	0.018	x
1/2"	15	10.0	31.0	0.036	x
3/4"	20	11.0	37.0	0.042	x
1"	25	10.0	46.0	0.102	x
1 1/4"	32	11.0	55.0	0.156	x
1 1/2"	40	12.0	63.0	0.184	x
2"	50	13.0	76.0	0.262	x
2 1/2"	65	16.0	95.0	0.614	x

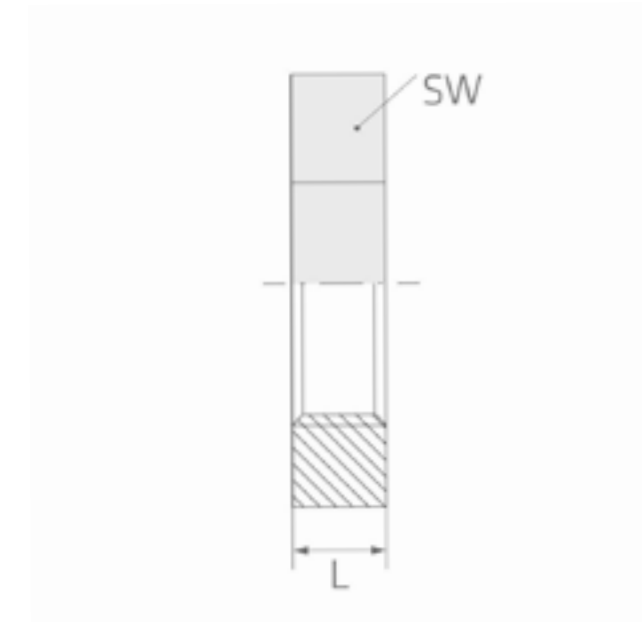


\* Finishes: page 585; no standard pipe connection

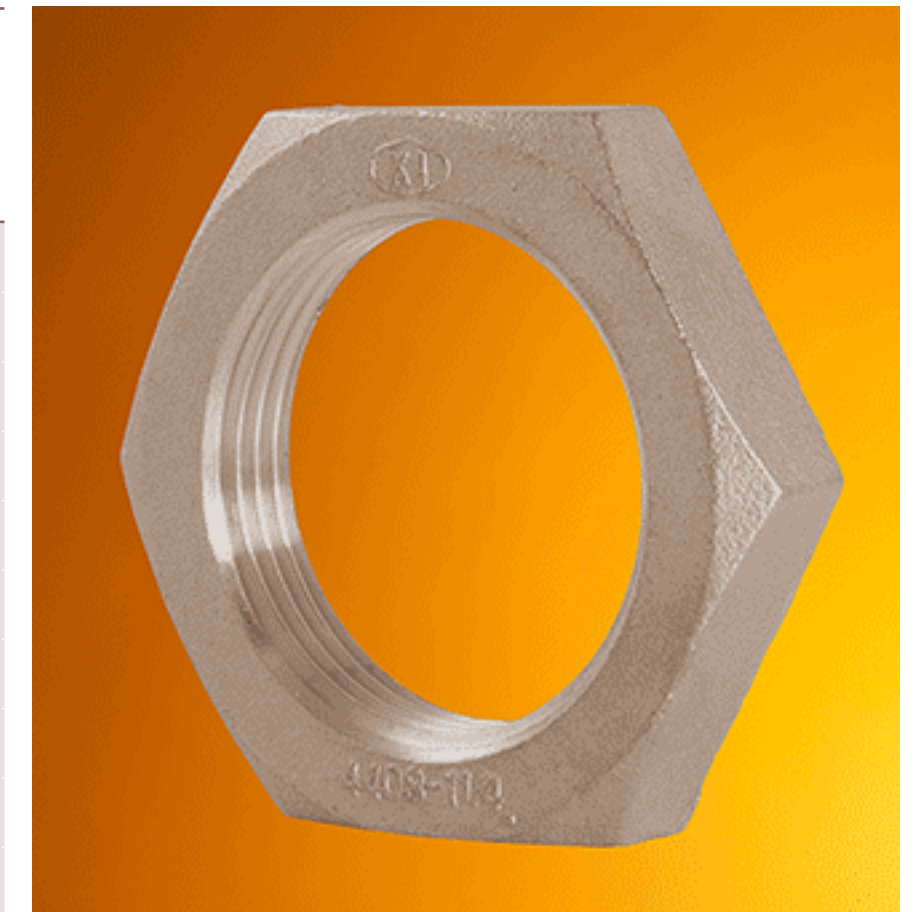
# HEXAGON NUT

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L kg/pce. *)
3"	80	19.0	105.0	0.895	x
4"	100	20.0	131.0	1.625	x

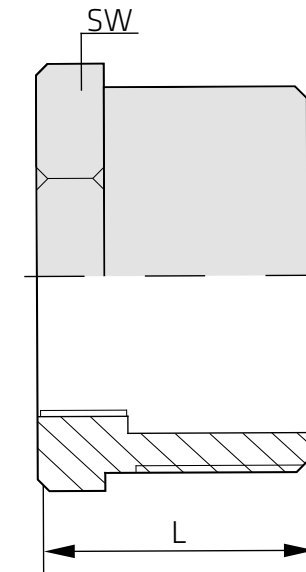


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCER M/F

EN-ISO 4144

1.4308 - 1.4408 (1/4)



INCHxINCH		NWxNW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
					kg/pce.	*)	*)
1/4"	1/8"	8	6	15.2	0.009	x	x
3/8"	1/8"	10	6	16.5	0.061	x	x
3/8"	1/4"	10	8	16.5	0.018	x	x
1/2"	1/8"	15	6	22.0	0.080		x
1/2"	1/4"	15	8	22.0	0.042	x	x
1/2"	3/8"	15	10	22.0	0.034	x	x
3/4"	1/8"	20	6	24.0	0.080		x
3/4"	1/4"	20	8	24.0	0.080	x	x
3/4"	3/8"	20	10	24.0	0.740	x	x
3/4"	1/2"	20	15	24.0	0.050	x	x



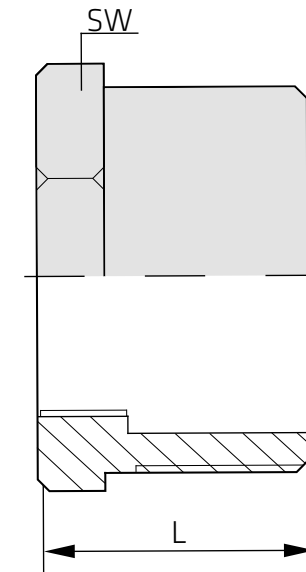
\* Finishes: page 585; no standard pipe connection



# HEXAGON REDUCER M/F

EN-ISO 4144

1.4308 - 1.4408 (2/4)



INCHxINCH		NWxNW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
					kg/pce.	*)	*)
1"	1/4"	25	8	27.0	35.0	0.130	x
1"	3/8"	25	10	27.0	35.0	0.124	x
1"	1/2"	25	15	27.0	35.0	0.094	x
1"	3/4"	25	20	27.0	35.0	0.086	x
1 1/4"	1/2"	32	15	30.0	45.0	0.202	x
1 1/4"	3/4"	32	20	30.0	45.0	0.182	x
1 1/4"	1"	32	25	30.0	45.0	0.142	x
1 1/2"	1/2"	40	15	38.0	52.0	0.304	x
1 1/2"	3/4"	40	20	38.0	52.0	0.282	x
1 1/2"	1"	40	25	38.0	52.0	0.258	x

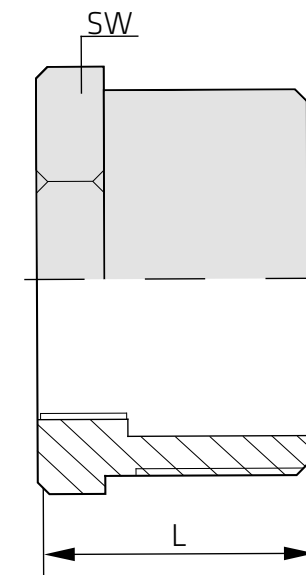


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCER M/F

EN-ISO 4144

1.4308 - 1.4408 (3/4)



INCHxINCH		NWxNW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L	
					kg/pce.	*)	*)	
1 1/2"	1 1/4"	40	32	38.0	52.0	0.166	x	x
2"	1/2"	50	15	36.0	63.0	0.380		x
2"	3/4"	50	20	36.0	63.0	0.466		x
2"	1"	50	25	37.0	63.0	0.452	x	x
2"	1 1/4"	50	32	37.0	63.0	0.392	x	x
2"	1 1/2"	50	40	37.0	63.0	0.332	x	x
2 1/2"	1"	65	25	45.0	81.0	0.850		x
2 1/2"	1 1/2"	65	40	45.0	81.0	0.770		x
2 1/2"	2"	65	50	45.0	81.0	0.560		x
3"	1 1/2"	80	40	47.0	95.0	1.035		x

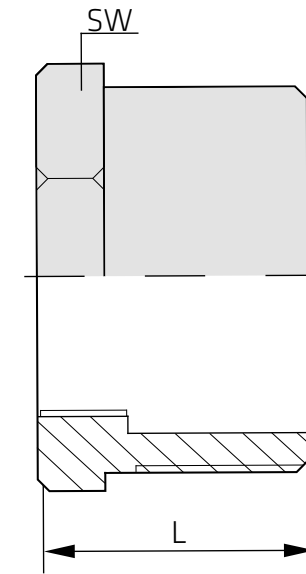


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCER M/F

EN-ISO 4144

1.4308 - 1.4408 (4/4)



INCHxINCH		NWxNW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
					kg/pce.	*)	*)
3"	2"	80	50	47.0	95.0	1.020	x
3"	2 1/2"	80	65	47.0	95.0	0.680	x
4"	2"	100	50	52.0	120.0	2.350	x
4"	2 1/2"	100	65	52.0	120.0	1.975	x
4"	3"	100	80	52.0	120.0	1.615	x



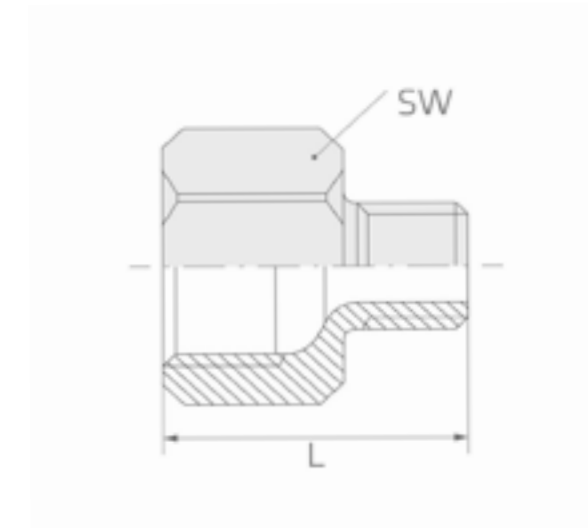
\* Finishes: page 585; no standard pipe connection



# HEXAGON REDUCER F/M

EN-ISO 4144

1.4408 (1/3)



INCHxINCH		L	SW	Grade AISI	1.4408 316/316L	kg/pce.	*)
1/4"	1/8"	27.0	17.0	0.028	x		
3/8"	1/8"	29.0	21.0	0.042	x		
3/8"	1/4"	30.5	21.0	0.045	x		
1/2"	1/8"	32.5	26.0	0.066	x		
1/2"	1/4"	34.0	26.0	0.068	x		
1/2"	3/8"	34.5	26.0	0.07	x		
3/4"	1/4"	35.0	32.0	0.088	x		
3/4"	3/8"	35.5	32.0	0.095	x		
3/4"	1/2"	38.5	32.0	0.112	x		
1"	1/4"	38.0	38.0	0.118	x		

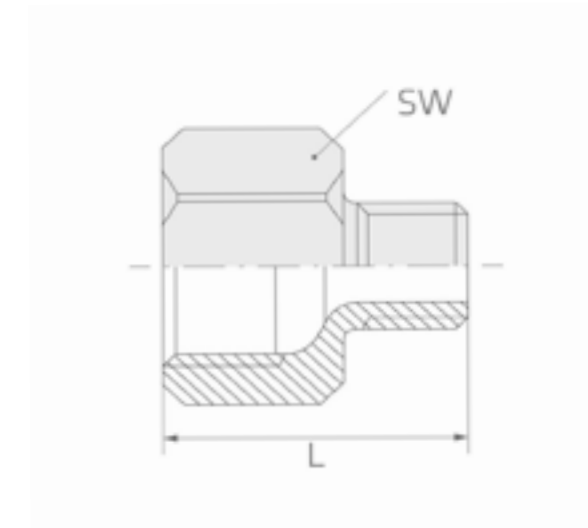


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCER F/M

EN-ISO 4144

1.4408 (2/3)



INCHxINCH		L	SW	Grade AISI	1.4408 316/316L	kg/pce.	*)
1"	1/2"	41.0	38.0	0.158	x		
1"	3/4"	44.0	38.0	0.166	x		
1 1/4"	1/2"	42.5	50.0	0.246	x		
1 1/4"	3/4"	45.0	50.0	0.246	x		
1 1/4"	1"	47.0	50.0	0.25	x		
1 1/2"	1/2"	45.0	54.0	0.256	x		
1 1/2"	3/4"	46.0	54.0	0.284	x		
1 1/2"	1"	48.0	54.0	0.352	x		
1 1/2"	1 1/4"	50.0	54.0	0.372	x		
2"	1/2"	49.0	68.0	0.414	x		

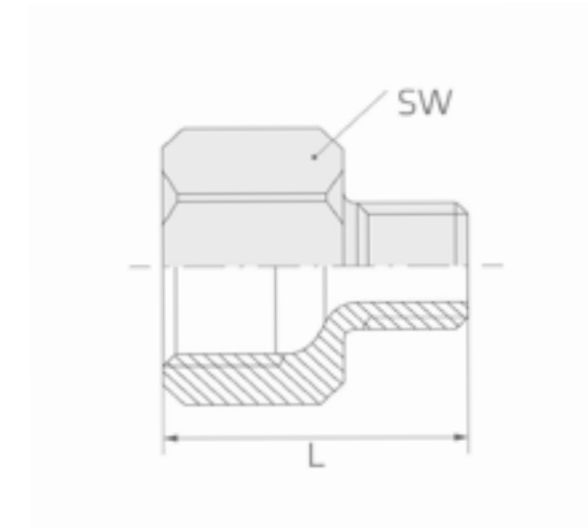


\* Finishes: page 585; no standard pipe connection

# HEXAGON REDUCER F/M

EN-ISO 4144

1.4408 (3/3)



INCHxINCH		L	SW	Grade AISI	1.4408 316/316L	kg/pce.	*)
2"	3/4"	51.0	68.0	0.42	x		
2"	1"	51.0	68.0	0.434	x		
2"	1 1/4"	53.0	68.0	0.464	x		
2"	1 1/2"	54.0	68.0	0.524	x		

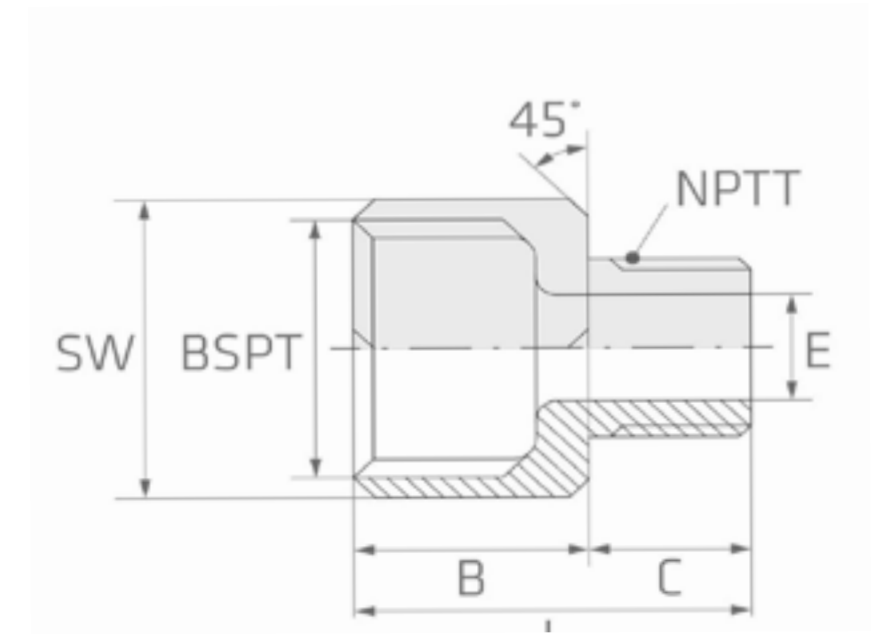


\* Finishes: page 585; no standard pipe connection

# ADAPTOR M NPT / F BSP

EN-ISO 4144

1.4408 (1/1)



INCH	L	SW	B	C	E	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	26.0	14.5	15.5	10.5	5.0	0.020	x
1/4"	28.5	17.0	16.5	12.0	8.0	0.025	x
3/8"	31.0	21.0	18.5	12.5	10.0	0.042	x
1/2"	37.5	26.0	22.0	15.5	13.5	0.064	x
3/4"	41.0	32.0	23.0	18.0	20.0	0.095	x
1"	46.0	38.0	26.0	20.0	26.0	0.144	x
1 1/4"	49.0	46.0	27.0	22.0	33.0	0.226	x
1 1/2"	51.0	54.0	28.0	23.0	39.0	0.290	x
2"	55.5	63.0	30.0	25.5	52.0	0.464	x



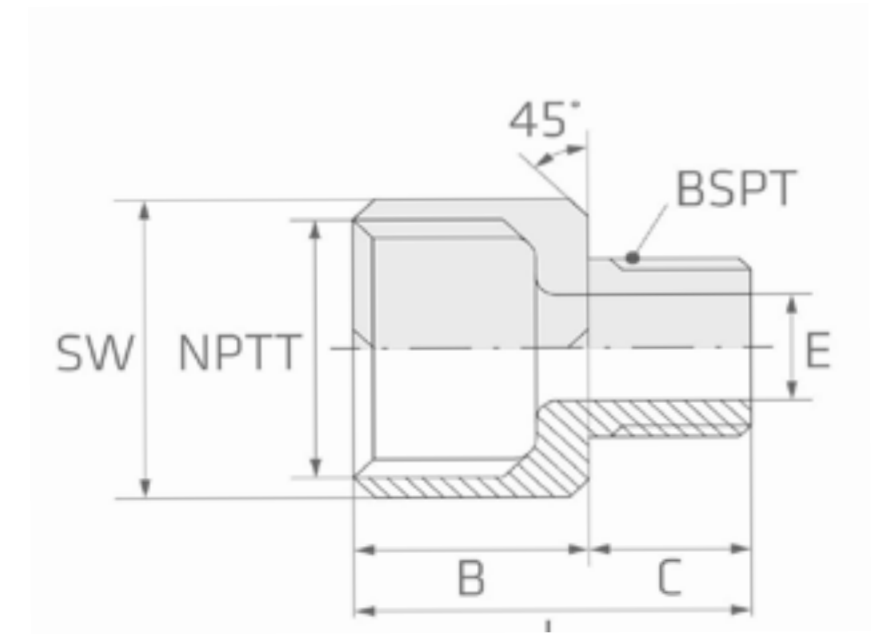
\* Finishes: page 585; no standard pipe connection



# ADAPTOR M BSP/ F NPT

EN-ISO 4144

1.4408 (1/1)



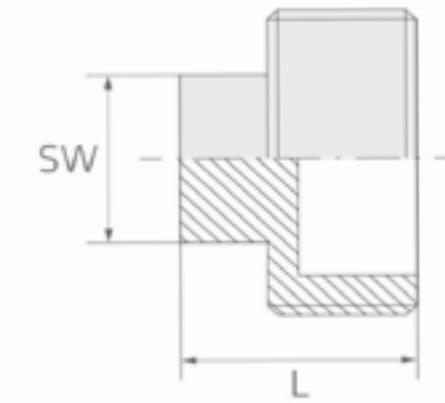
INCH	L	SW	B	C	E	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	26.0	14.5	15.5	10.5	5.0	0.020	x
1/4"	28.5	17.0	16.5	12.0	8.0	0.025	x
3/8"	31.0	21.0	18.5	12.5	10.0	0.042	x
1/2"	37.5	26.0	22.0	15.5	13.5	0.064	x
3/4"	41.0	32.0	23.0	18.0	20.0	0.095	x
1"	46.0	38.0	26.0	20.0	26.0	0.144	x
1 1/4"	49.0	46.0	27.0	22.0	33.0	0.226	x
1 1/2"	51.0	54.0	28.0	23.0	39.0	0.290	x
2"	55.5	63.0	30.0	25.5	52.0	0.464	x



\* Finishes: page 585; no standard pipe connection

# SQUARE HEAD PLUG EN-ISO 4144

1.4408 (1/2)



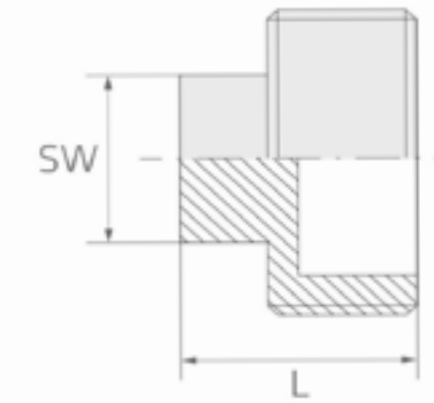
INCH	NW	L	SW	Grade AISI	1.4408 316/316L
				kg/pce.	*)
1/8"	6	16.5	7	0.006	x
1/4"	8	20.0	9	0.014	x
3/8"	10	23.0	11	0.024	x
1/2"	15	25.0	13	0.040	x
3/4"	20	27.0	16	0.068	x
1"	25	32.0	20	0.090	x
1 1/4"	32	35.0	24	0.156	x
1 1/2"	40	36.0	25	0.198	x
2"	50	38.0	32	0.320	x
2 1/2"	65	48.0	42	0.420	x



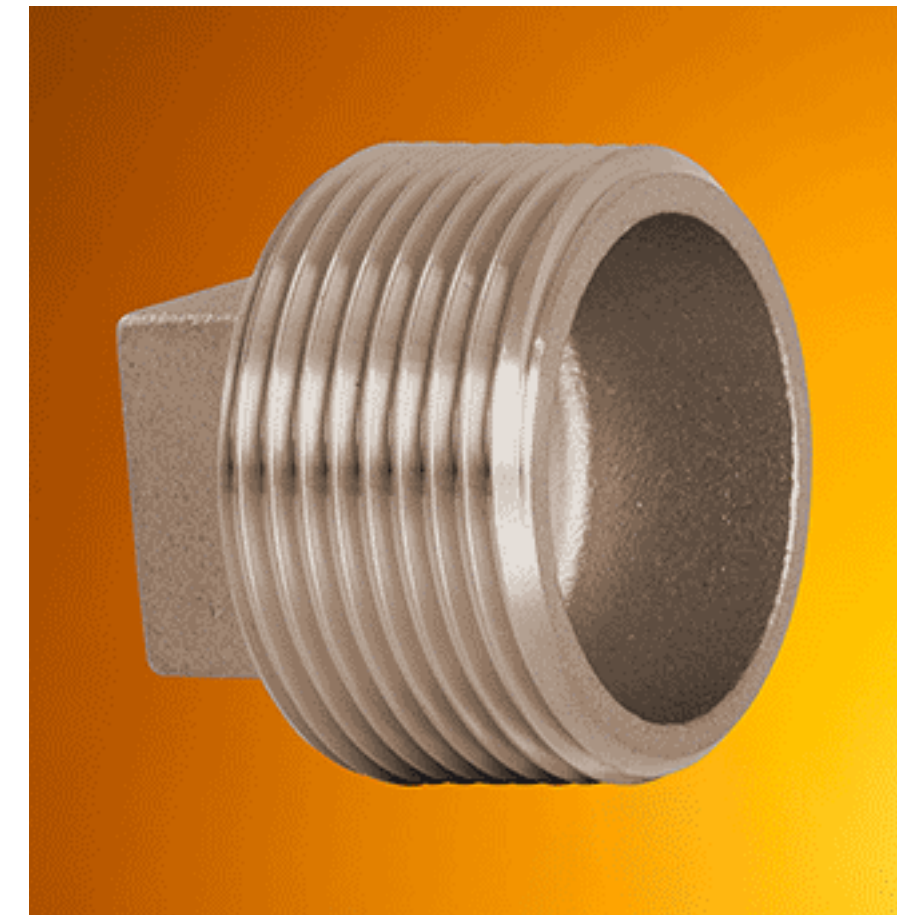
\* Finishes: page 585; no standard pipe connection

# SQUARE HEAD PLUG EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L
				kg/pce.	*)
3"	80	52.0	46	0.370	x
4"	100	62.0	58	0.540	x

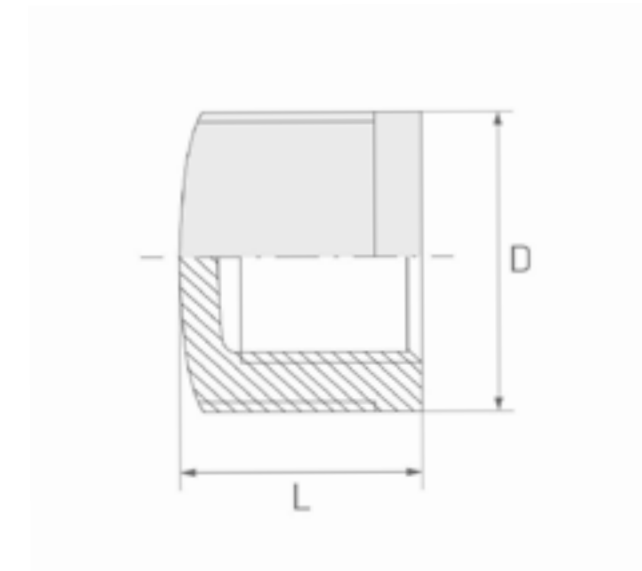


\* Finishes: page 585; no standard pipe connection

# ROUND CAP

EN-ISO 4144

1.4408 (1/2)



INCH	NW	D	L	Grade AISI	1.4408 316/316L
				kg/pce.	*)
1/8"	6	18.0	15	0.015	x
1/4"	8	21.0	18	0.028	x
3/8"	10	24.0	18	0.020	x
1/2"	15	27.3	21	0.062	x
3/4"	20	35.0	24	0.100	x
1"	25	42.0	29	0.170	x
1 1/4"	32	52.0	33	0.256	x
1 1/2"	40	57.5	34	0.306	x
2"	50	69.3	38	0.506	x
2 1/2"	65	92.0	41	0.620	x



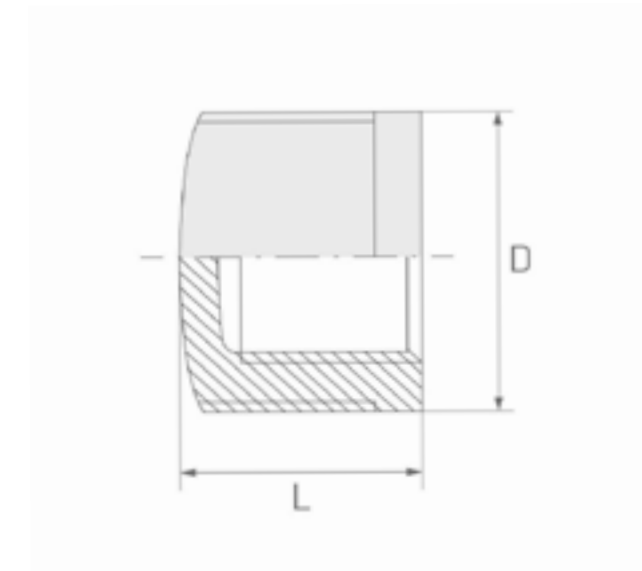
\* Finishes: page 585; no standard pipe connection



# ROUND CAP

EN-ISO 4144

1.4408 (2/2)



INCH	NW	D	L	Grade AISI	1.4408 316/316L
				kg/pce.	*)
3"	80	106.0	47	1.070	x
4"	100	134.0	53	1.450	x

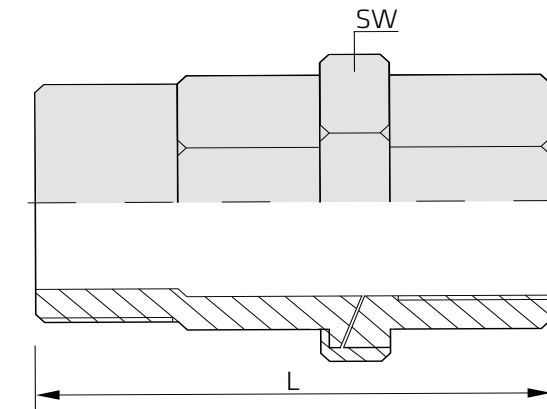


\* Finishes: page 585; no standard pipe connection

# UNIONS CONICAL F/F

EN-ISO 4144

1.4308-1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
				kg/pce.	*)	*)
1/8"	6	30.5	24	0.108		x
1/4"	8	34.0	30	0.148	x	x
3/8"	10	37.0	35	0.180	x	x
1/2"	15	40.5	41	0.186	x	x
3/4"	20	43.0	48	0.276	x	x
1"	25	50.5	54	0.416	x	x
1 1/4"	32	54.5	65	0.618	x	x
1 1/2"	40	58.5	72	0.815	x	x
2"	50	65.5	88	1.220	x	x
2 1/2"	65	76.0	109	1.900		x

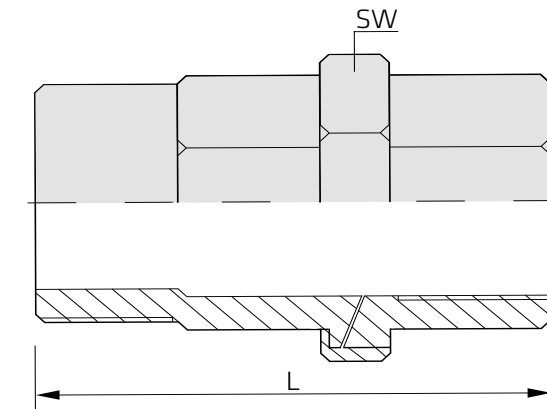


\* Finishes: page 585; no standard pipe connection

# UNIONS CONICAL F/F

EN-ISO 4144

1.4308-1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
				kg/pce.	*)	*)
3"	80	84.0	122	2.750	x	x
4"	100	111.0	150	4.200	x	x

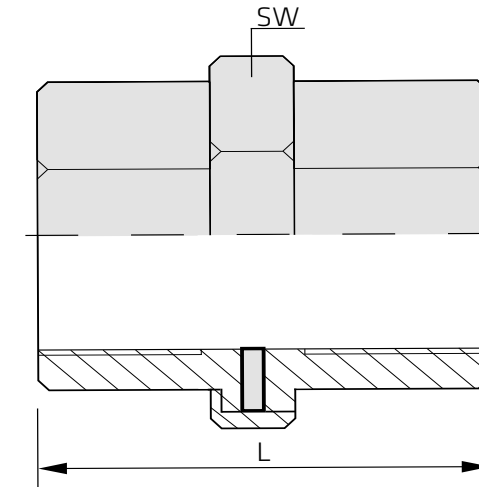


\* Finishes: page 585; no standard pipe connection

# UNIONS FLAT F/F

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L
				kg/pce.	*)
1/8"	6	30.5	24	0.102	x
1/4"	8	34.0	30	0.146	x
3/8"	10	37.0	35	0.186	x
1/2"	15	40.5	41	0.186	x
3/4"	20	43.0	48	0.400	x
1"	25	50.5	54	0.442	x
1 1/4"	32	54.5	65	0.628	x
1 1/2"	40	58.5	72	0.805	x
2"	50	65.5	88	1.160	x
2 1/2"	65	76.0	109	1.900	x

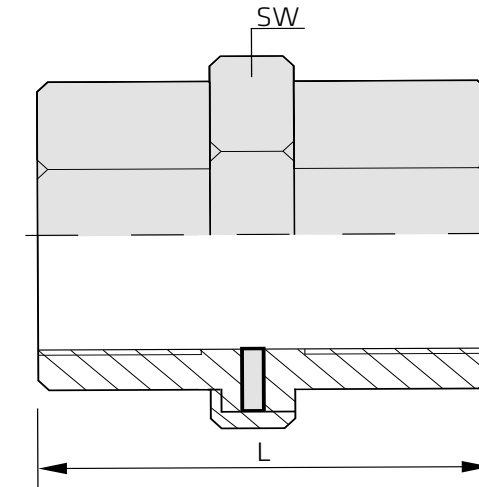


\* Finishes: page 585; no standard pipe connection

# UNIONS FLAT F/F

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L
				kg/pce.	*)
3"	80	84.0	122	1.900	x
4"	100	111.0	150	2.750	x



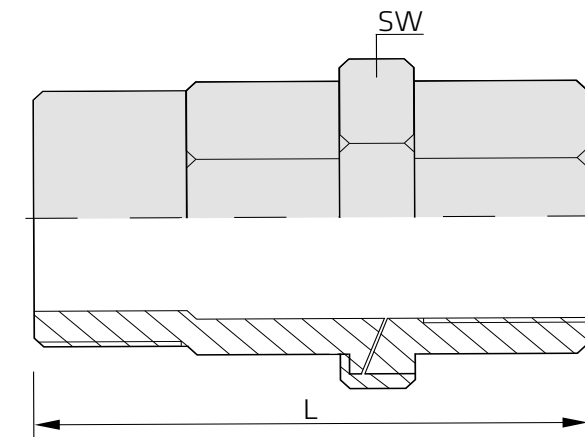
\* Finishes: page 585; no standard pipe connection



# UNIONS CONICAL F/M

EN-ISO 4144

1.4308 - 1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4308 304/304L	1.4408 316/316L
				kg/pce.	*)	*)
1/8"	6	39.0	24	0.062		x
1/4"	8	45.0	30	0.160	x	x
3/8"	10	48.5	35	0.202	x	x
1/2"	15	55.5	41	0.232	x	x
3/4"	20	59.0	48	0.356	x	x
1"	25	69.0	54	0.518	x	x
1 1/4"	32	75.5	65	0.765	x	x
1 1/2"	40	79.5	72	0.940	x	x
2"	50	91.0	88	1.405	x	x
2 1/2"	65	103.5	122	2.150		x



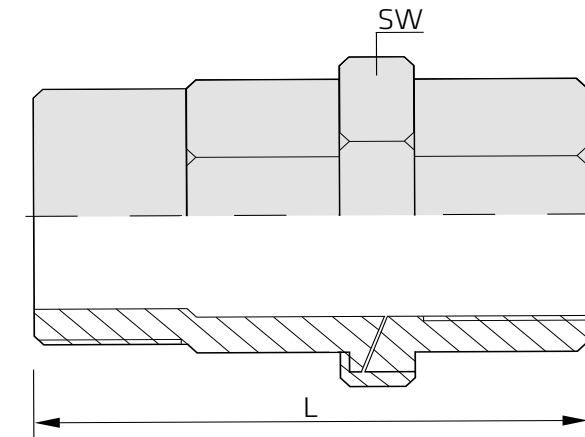
\* Finishes: page 585; no standard pipe connection



# UNIONS CONICAL F/M

EN-ISO 4144

1.4308 - 1.4408 (2/2)



INCH	NW	L	SW	Grade	1.4308	1.4408
				AISI	304/304L	316/316L
				kg/pce.	*)	*)
3"	80	114.5	150	3.050		x



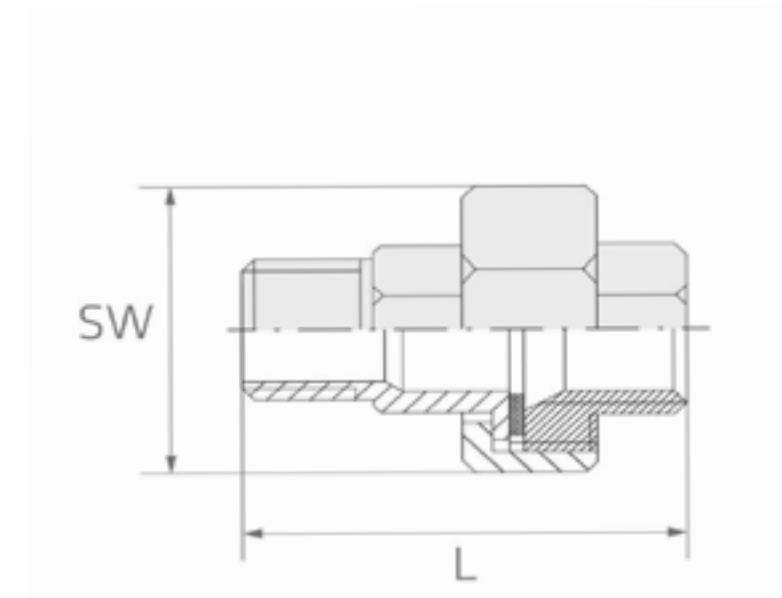
\* Finishes: page 585; no standard pipe connection



# UNIONS FLAT F/M

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L	kg/pce.	*)
1/8"	6	39.0	24	0.062	x		
1/4"	8	45.0	30	0.202	x		
3/8"	10	48.5	35	0.202	x		
1/2"	15	55.5	41	0.216	x		
3/4"	20	59.0	48	0.334	x		
1"	25	69.0	54	0.484	x		
1 1/4"	32	75.5	65	0.765	x		
1 1/2"	40	79.5	72	0.975	x		
2"	50	91.0	88	1.405	x		
2 1/2"	65	103.5	122	2.150	x		

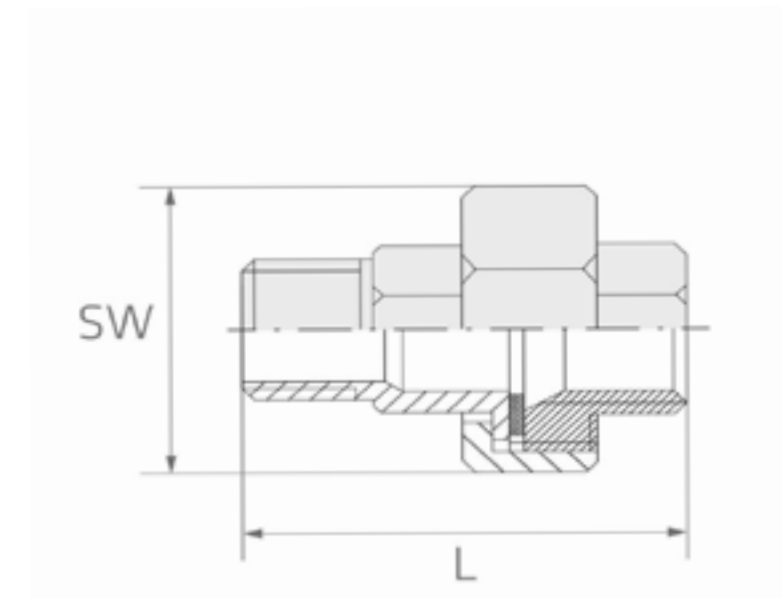


\* Finishes: page 585; no standard pipe connection

# UNIONS FLAT F/M

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	Grade	1.4408
				AISI	316/316L
				kg/pce.	*)
3"	80	114.5	150	3.050	x

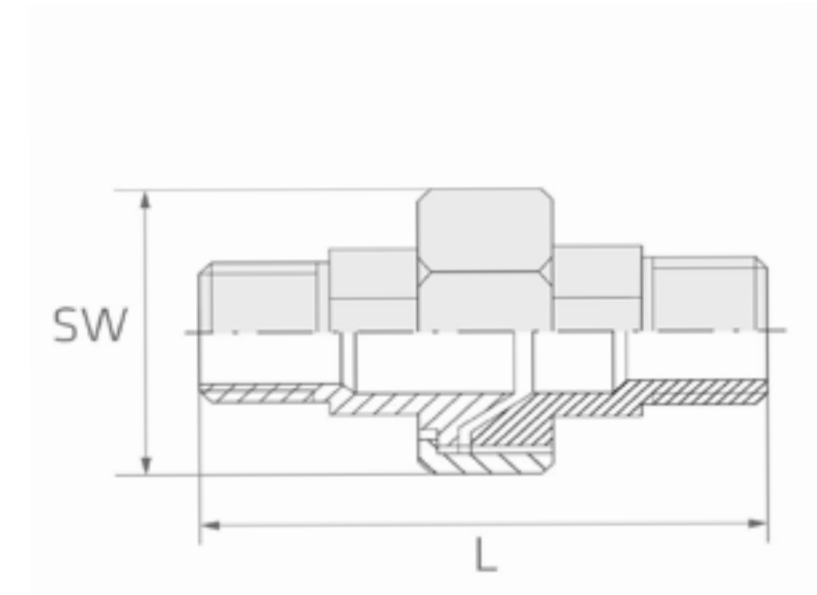


\* Finishes: page 585; no standard pipe connection

# UNIONS CONICAL M/M

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L	kg/pce.	*)
1/8"	6	52.0	25	0.406	x		
1/4"	8	61.0	30	0.180	x		
3/8"	10	62.5	35	0.232	x		
1/2"	15	73.0	42	0.256	x		
3/4"	20	82.0	47	0.406	x		
1"	25	90.0	53	0.562	x		
1 1/4"	32	104.0	71	0.832	x		
1 1/2"	40	109.6	78	1.100	x		
2"	50	118.0	92	1.936	x		
3"	80	164.0	126	5.300	x		

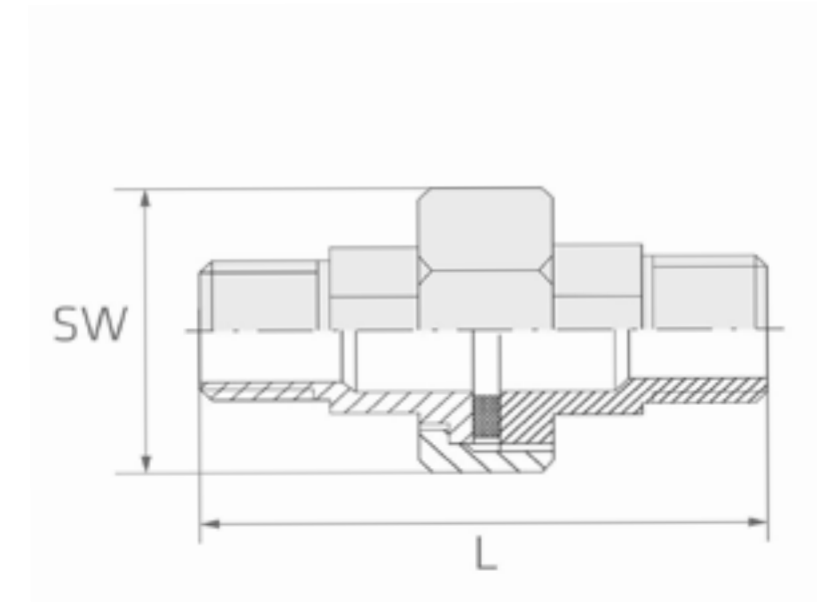


\* Finishes: page 585; no standard pipe connection

# UNIONS FLAT M/M

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L	SW	Grade AISI	1.4408 316/316L	kg/pce.	*)
1/2"	15	73.0	42	0.260	x		
3/4"	20	82.0	47	0.354	x		
1"	25	90.0	53	0.104	x		
1 1/4"	32	104.0	71	0.832	x		
1 1/2"	40	109.6	78	1.100	x		
2"	50	118.0	92	1.936	x		
2 1/2"	65	145.0	112	2.965	x		

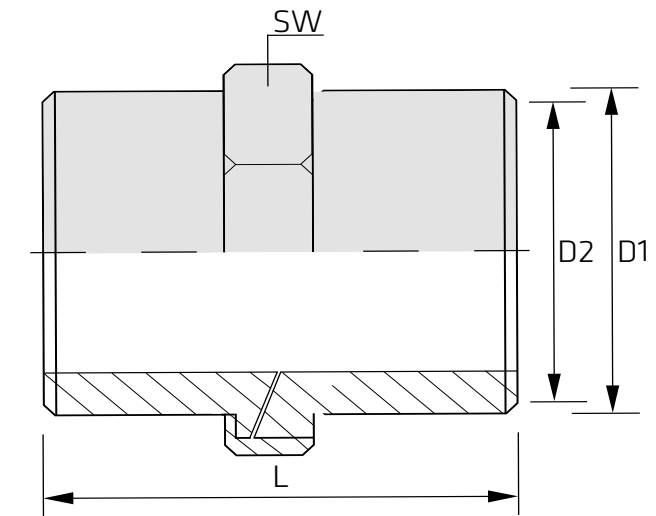


\* Finishes: page 585; no standard pipe connection

# UNIONS CONICAL AS/AS

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	29.0	25	10.2	8.1	0.108	x
3/8"	10	38.0	35	17.2	12.7	0.765	x
1/2"	15	42.0	42	21.3	16.7	0.200	x
3/4"	20	50.4	47	26.9	21.5	0.276	x
1"	25	48.0	53	33.7	26.5	0.408	x
1 1/4"	32	59.0	71	42.4	35.8	0.610	x
1 1/2"	40	64.0	78	48.3	42.0	0.785	x
2"	50	69.0	92	60.3	53.3	1.180	x
2 1/2"	65	80.0	112	76.1	66.5	2.150	x
3"	80	88.0	126	88.9	78.5	2.750	x



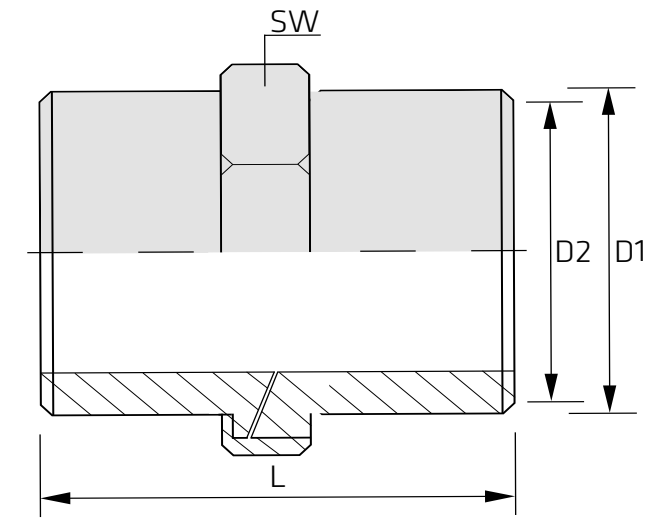
\* Finishes: page 585; no standard pipe connection

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# UNIONS CONICAL AS/AS

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
4"	100	108.0	157	114.3	104.0	4.200	x



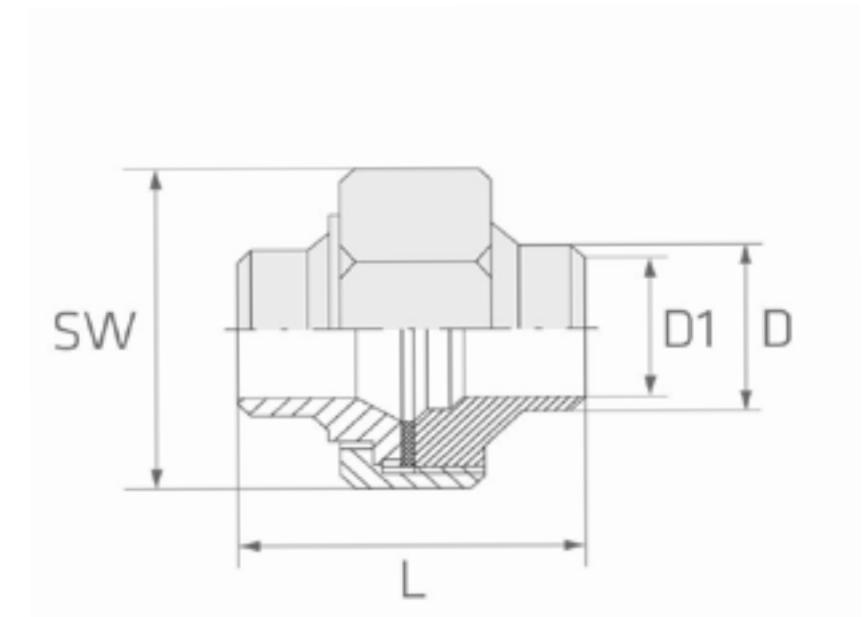
\* Finishes: page 585; no standard pipe connection



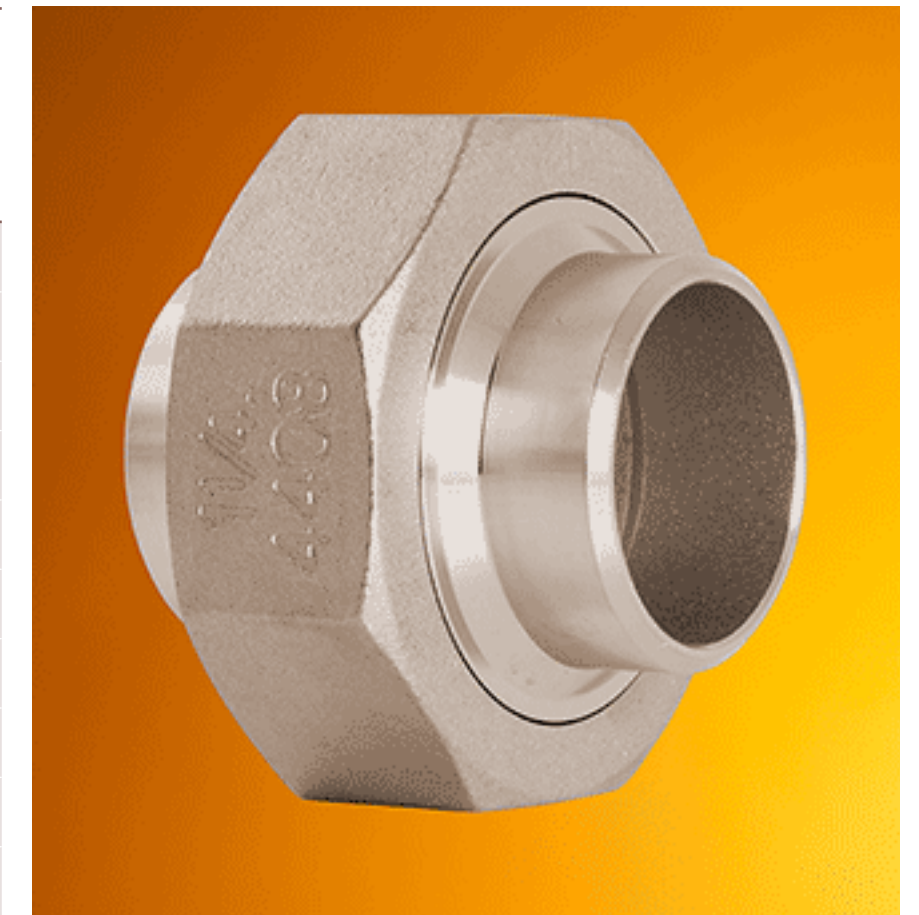
# UNIONS FLAT AS/AS

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	29.0	25	10.2	8.1	0.150	x
1/4"	8	35.5	30	13.5	10.0	0.150	x
3/8"	10	38.0	35	17.2	12.7	0.150	x
1/2"	15	42.0	42	21.3	16.7	0.200	x
3/4"	20	50.4	47	26.9	21.5	0.276	x
1"	25	48.0	53	33.7	26.5	0.104	x
1 1/4"	32	59.0	71	42.4	35.8	0.650	x
1 1/2"	40	64.0	78	48.3	42.0	0.700	x
2"	50	69.0	92	60.3	53.3	1.050	x
2 1/2"	65	80.0	112	76.1	66.5	1.648	x



\* Finishes: page 585; no standard pipe connection

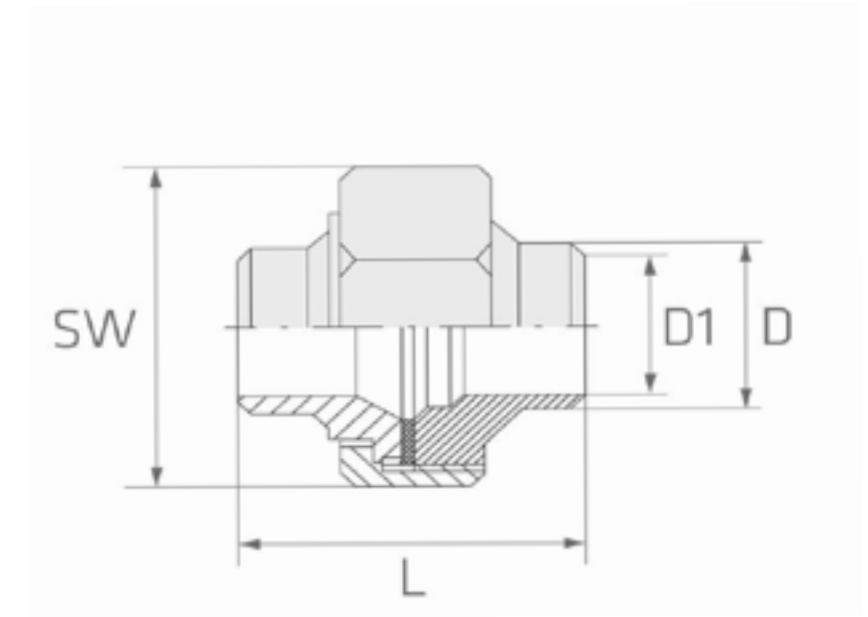




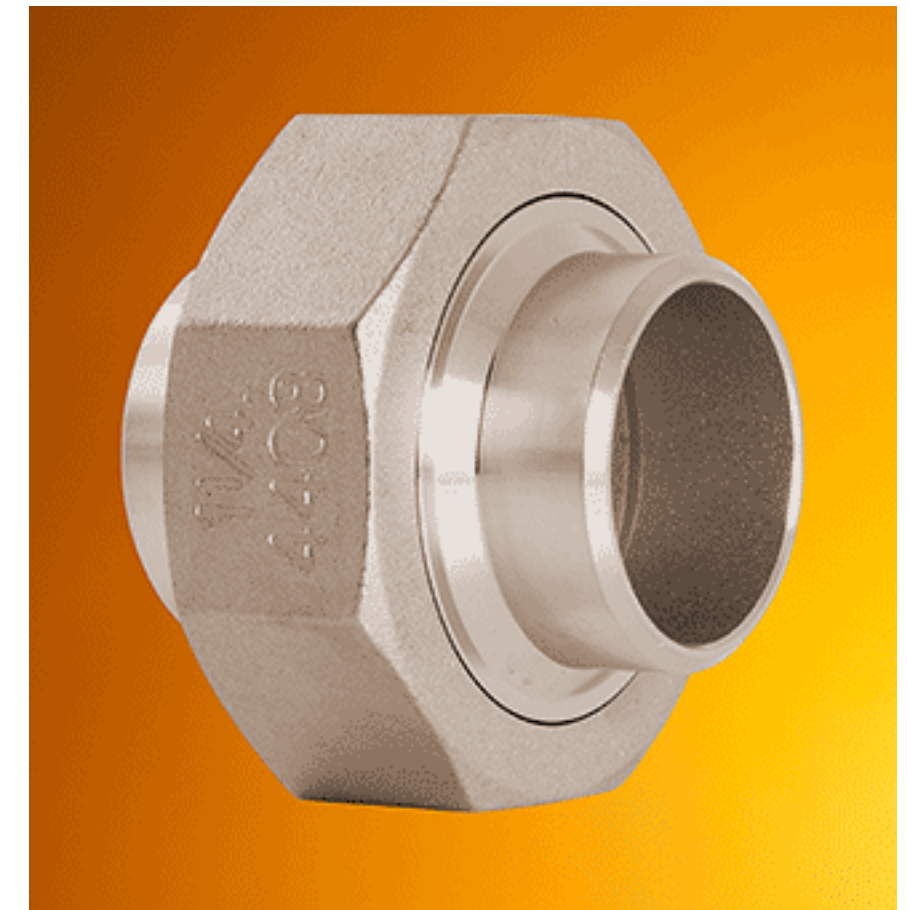
# UNIONS FLAT AS/AS

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
3"	80	88.0	126	88.9	78.5	2.400	x

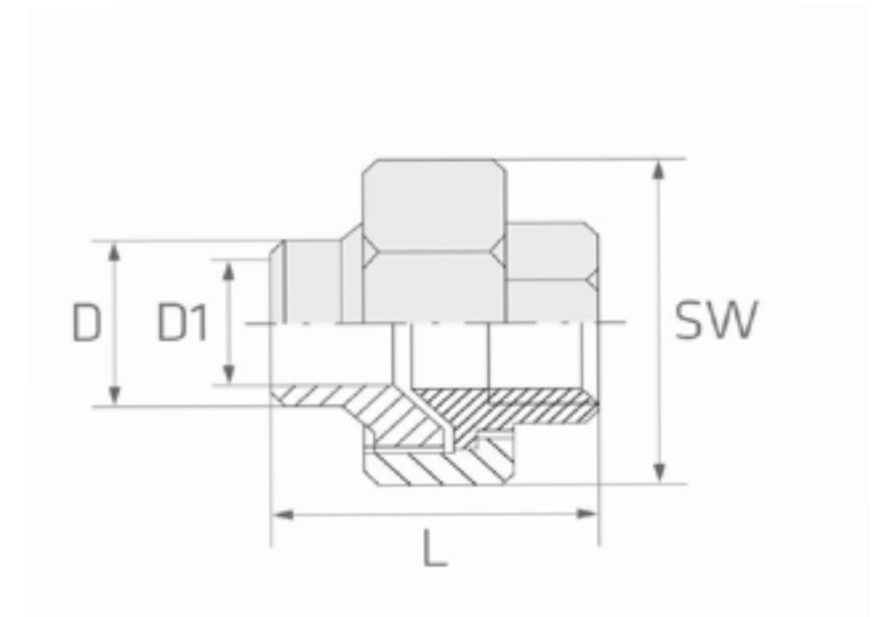


\* Finishes: page 585; no standard pipe connection

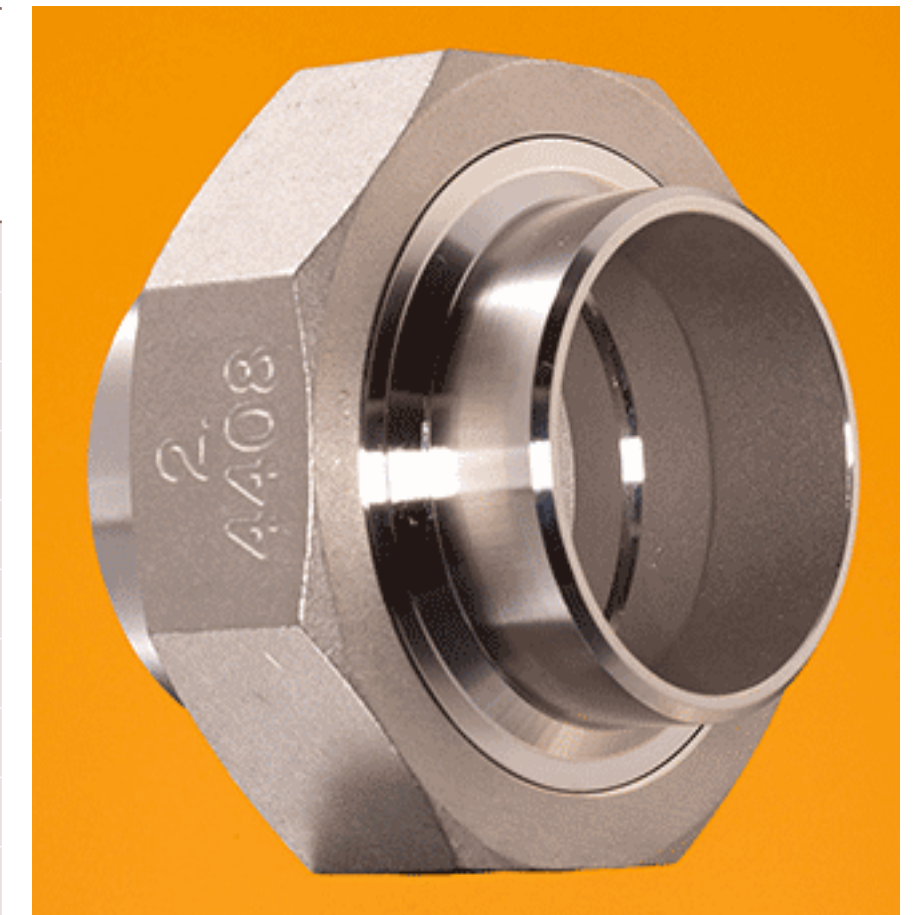
# UNIONS CONICAL AS/F

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	29.0	25	10.2	8.1	0.480	x
1/4"	8	35.5	30	13.5	10.0	0.180	x
3/8"	10	38.0	35	17.2	12.7	0.232	x
1/2"	15	42.0	42	21.3	16.7	0.100	x
3/4"	20	50.4	47	26.9	21.5	0.200	x
1"	25	48.0	53	33.7	26.5	0.300	x
1 1/4"	32	59.0	71	42.4	35.8	0.765	x
1 1/2"	40	64.0	78	48.3	42.0	0.940	x
2"	50	69.0	92	60.3	53.3	1.405	x
2 1/2"	65	80.0	112	76.1	66.5	1.950	x



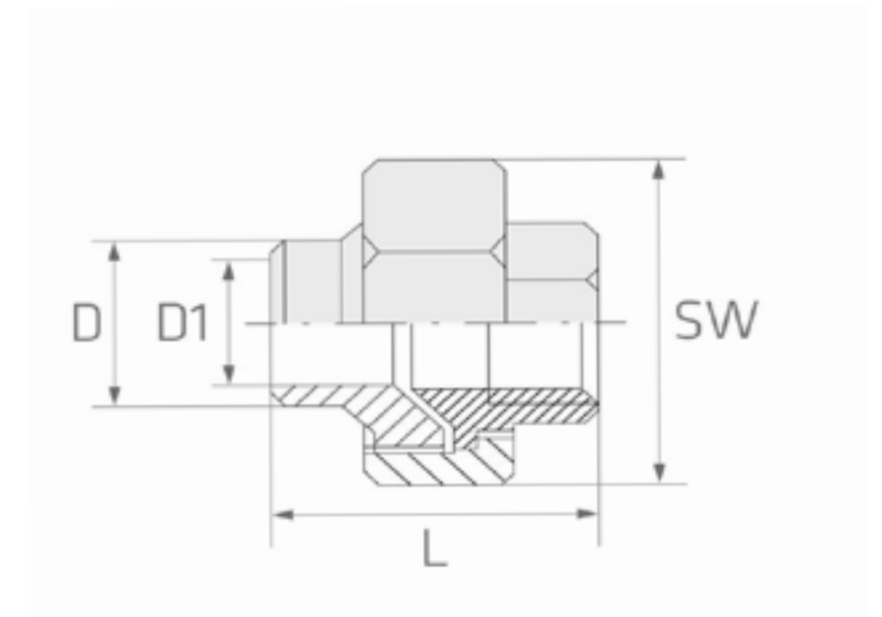
\* Finishes: page 585; no standard pipe connection



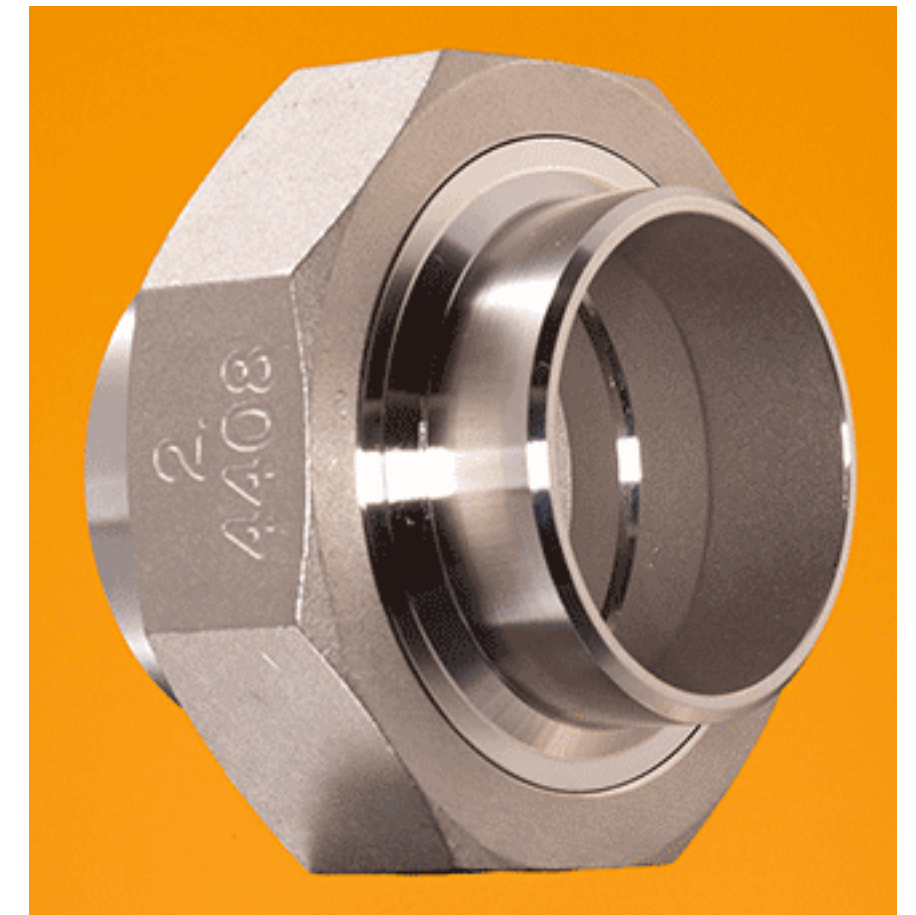
# UNIONS CONICAL AS/F

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
3"	80	88.0	126	88.9	78.5	2.000	x
4"	100	108.0	157	114.3	104.0	2.500	x

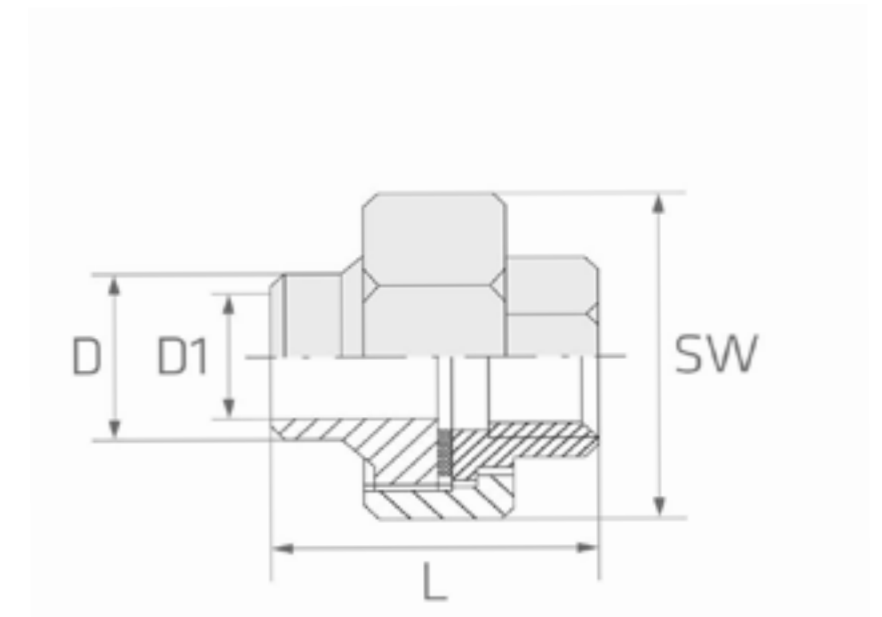


\* Finishes: page 585; no standard pipe connection

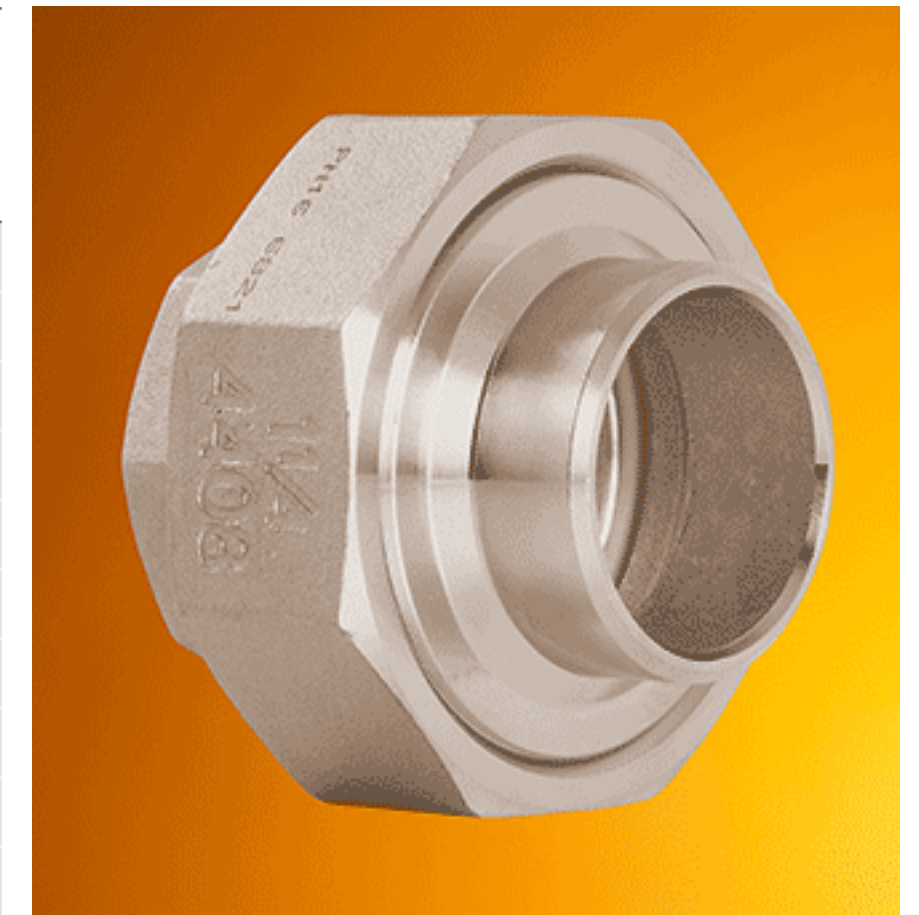
# UNIONS FLAT AS/F

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L	SW	D1	D2	Grade AISI	1.4408 316/316L
3/8"	10	38.0	35	17.2	12.7	0.958	x
1/2"	15	42.0	42	21.3	16.7	0.180	x
3/4"	20	50.4	47	26.9	21.5	0.200	x
1"	25	48.0	53	33.7	26.5	0.300	x
1 1/4"	32	59.0	71	42.4	35.8	0.664	x
1 1/2"	40	64.0	78	48.3	42.0	0.708	x
2"	50	69.0	92	60.3	53.3	1.100	x
2 1/2"	65	80.0	112	76.1	66.5	1.250	x
3"	80	88.0	126	88.9	78.5	3.050	x



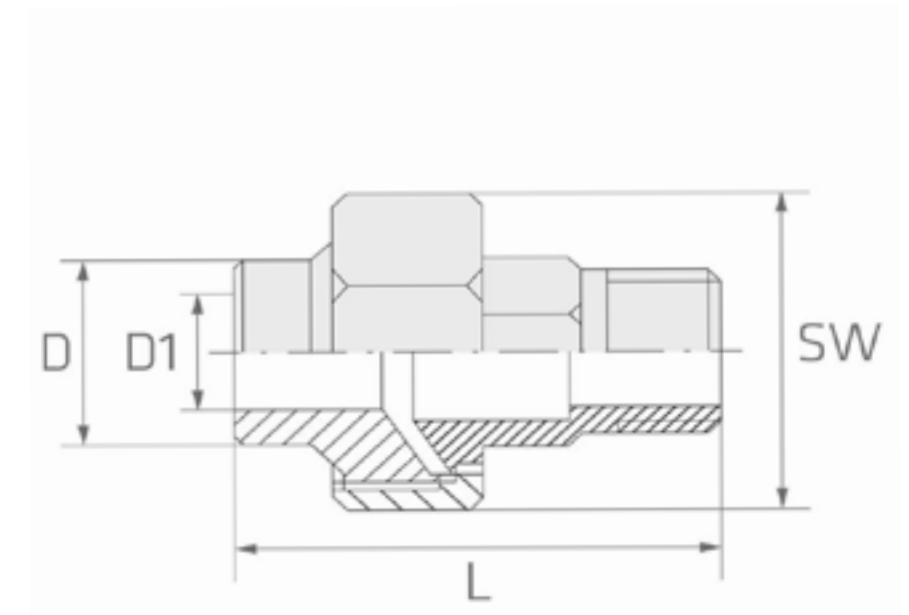
\* Finishes: page 585; no standard pipe connection



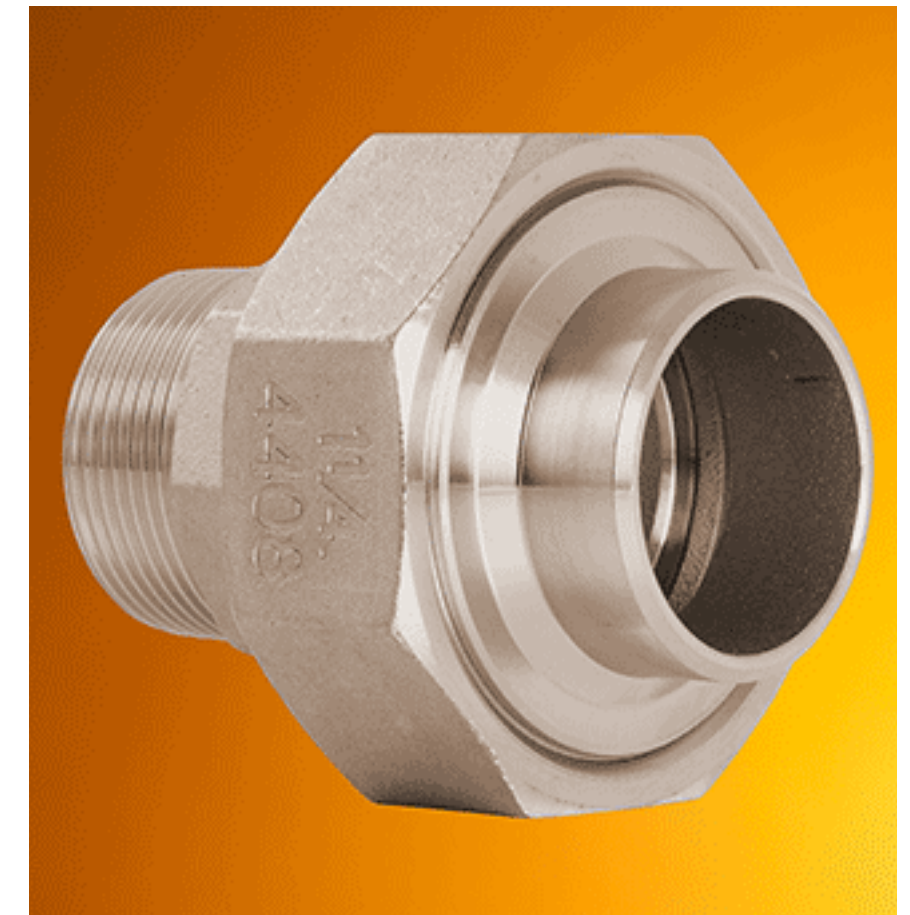
# UNIONS CONICAL AS/M

EN-ISO 4144

1.4408 (1/2)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	40.0	25	10.2	8.1	0.004	x
1/4"	8	50.0	30	13.5	10.0	0.100	x
3/8"	10	50.0	35	17.2	12.7	0.150	x
1/2"	15	58.4	42	21.3	16.7	0.200	x
3/4"	20	66.0	47	26.9	21.5	0.300	x
1"	25	68.3	53	33.7	26.5	0.406	x
1 1/4"	32	83.0	71	42.4	35.8	0.832	x
1 1/2"	40	86.3	78	48.3	42.0	1.100	x
2"	50	94.0	92	60.3	53.3	1.936	x
2 1/2"	65	113.3	112	76.1	66.5	1.250	x

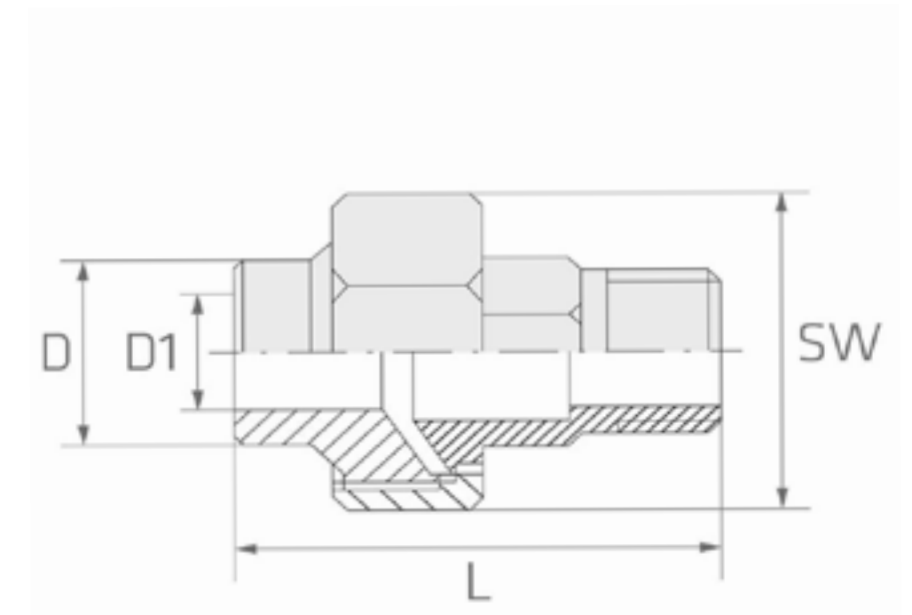


\* Finishes: page 585; no standard pipe connection

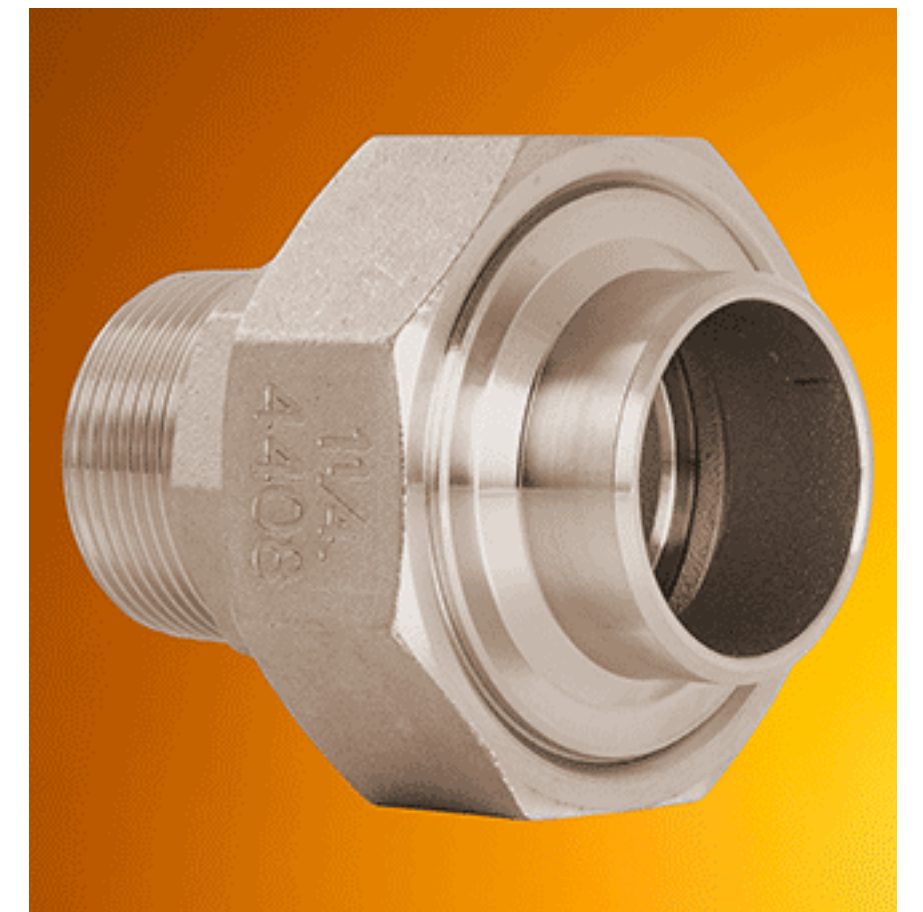
# UNIONS CONICAL AS/M

EN-ISO 4144

1.4408 (2/2)



INCH	NW	L	SW	D1	D2	Grade AISI	1.4408 316/316L
3"	80	126.3	126	88.9	78.5	kg/pce.	*) x

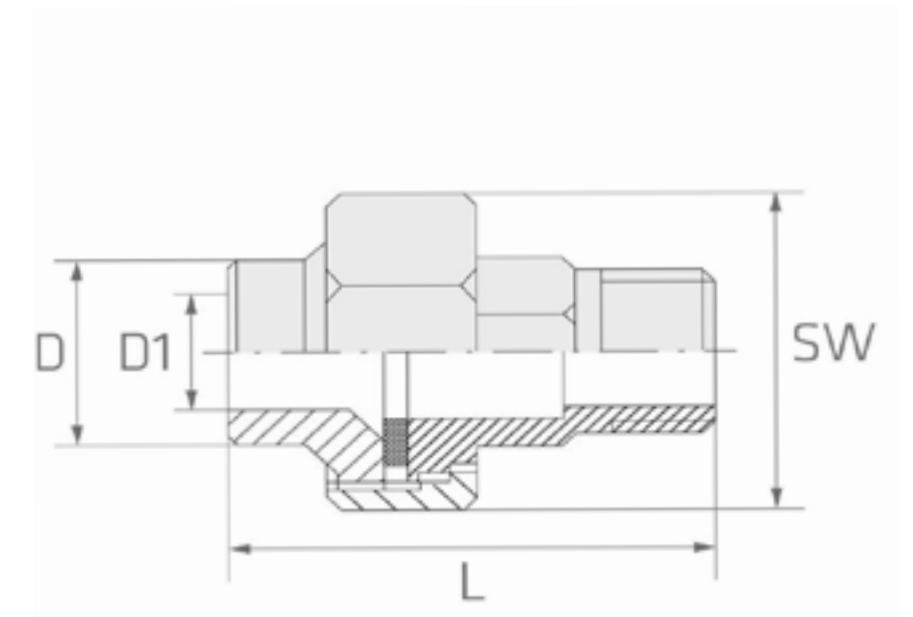


\* Finishes: page 585; no standard pipe connection

# UNIONS FLAT AS/M

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L	SW	D1	D2	Grade AISI kg/pce.	1.4408 316/316L *)
1/4"	8	50.0	30	13.5	10.0	0.146	x
3/8"	10	50.0	35	17.2	12.7	0.186	x
1/2"	15	58.4	42	21.3	16.7	0.2	x
3/4"	20	66.0	47	26.9	21.5	0.26	x
1"	25	68.3	53	33.7	26.5	0.35	x
1 1/4"	32	83.0	71	42.4	35.8	0.61	x
1 1/2"	40	86.3	78	48.3	42.0	0.8	x
2"	50	94.0	92	60.3	53.3	1.16	x
2 1/2"	65	113.3	112	76.1	66.5	1.455	x
4"	100	154.3	157	114.3	104.0	4.006	x



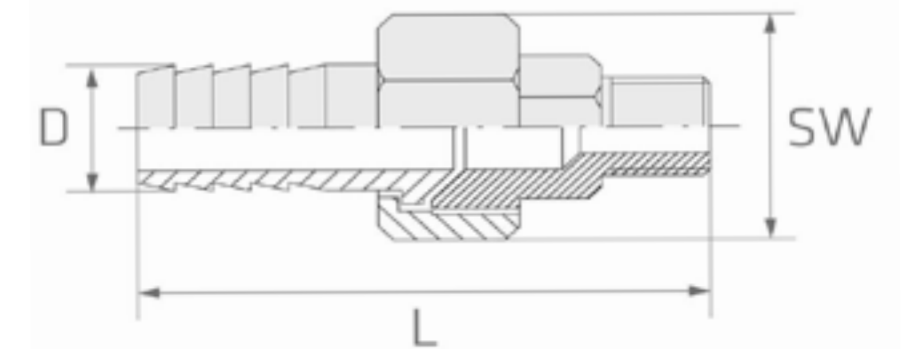
\* Finishes: page 585; no standard pipe connection



# UNIONS CONICAL HOSE/M

EN-ISO 4144

1.4408 (1/1)



INCH	NW	D	L	SW	Grade AISI kg/pce.	1.4408 316/316L *)
1/4"	8	9.0	59.0	30	0.120	x
1/2"	15	12.7	80.0	42	0.238	x
1/2"	15	14.0	80.0	42	0.248	x
3/4"	20	19.0	86.0	47	0.322	x
3/4"	20	20.5	85.7	47	0.350	x
1"	25	25.4	91.0	53	0.476	x
1 1/4"	32	31.8	104.0	71	0.914	x
1 1/2"	40	38.1	119.0	77	1.028	x

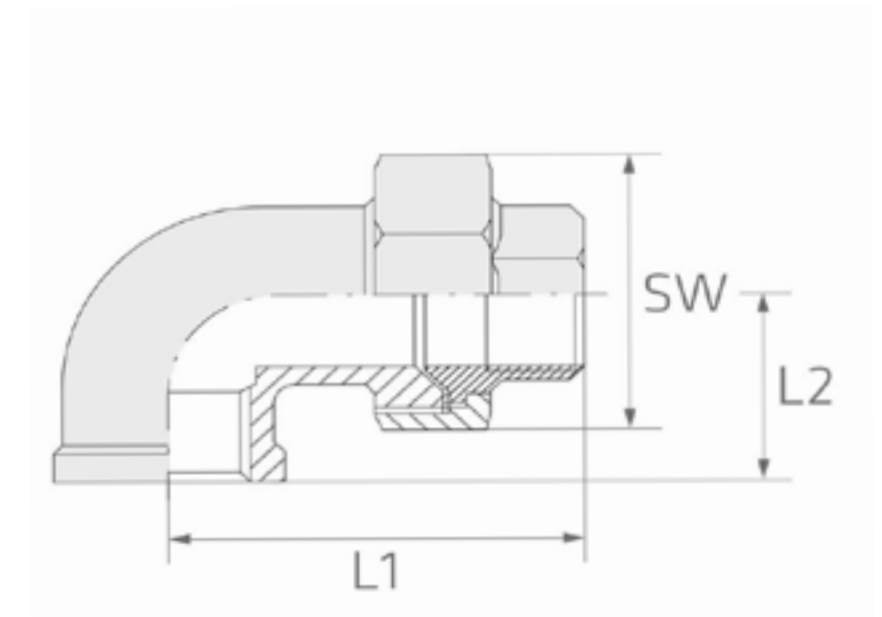


\* Finishes: page 585; no standard pipe connection

# ELBOW UNIONS CONICAL F/F

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L1	L2	SW	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	39.0	19	25	0.072	x
1/4"	8	46.2	21	30	0.148	x
3/8"	10	49.0	25	35	0.169	x
1/2"	15	56.0	28	42	0.270	x
3/4"	20	62.7	33	47	0.355	x
1"	25	68.0	38	53	0.503	x
1 1/4"	32	79.5	45	71	1.134	x
1 1/2"	40	88.0	50	78	1.149	x
2"	50	93.8	58	92	1.149	x

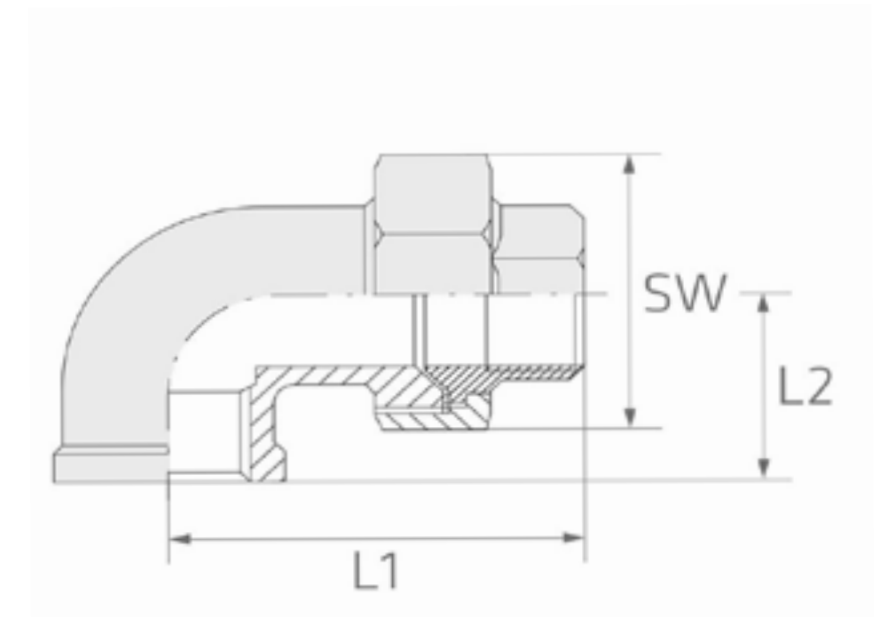


\* Finishes: page 585; no standard pipe connection

# ELBOW UNIONS FLAT F/F

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L1	L2	SW	Grade AISI	1.4408 316/316L kg/pce.	*)
1/8"	6	39.0	19	25	0.073	x	
1/4"	8	46.2	21	30	0.146	x	
3/8"	10	49.0	25	35	0.160	x	
1/2"	15	56.0	28	42	0.260	x	
3/4"	20	62.7	33	47	0.360	x	
1"	25	68.0	38	53	0.500	x	
1 1/4"	32	79.5	45	71	0.940	x	
1 1/2"	40	88.0	50	78	1.160	x	
2"	50	93.8	58	92	1.760	x	

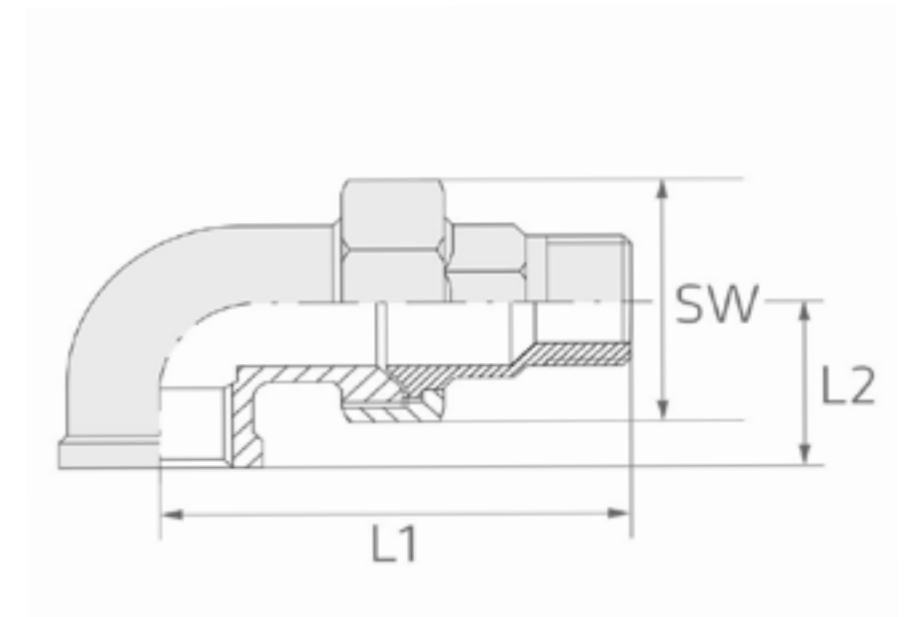


\* Finishes: page 585; no standard pipe connection

# ELBOW UNIONS CONICAL F/M

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L1	L2	SW	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	50.7	19	25	0.062	x
1/4"	8	58.6	21	30	0.134	x
3/8"	10	61.0	25	35	0.178	x
1/2"	15	71.0	28	42	0.291	x
3/4"	20	78.7	33	47	0.500	x
1"	25	88.4	38	53	0.600	x
1 1/4"	32	102.9	45	71	1.100	x
1 1/2"	40	110.3	50	78	1.299	x
2"	50	119.3	58	92	2.000	x

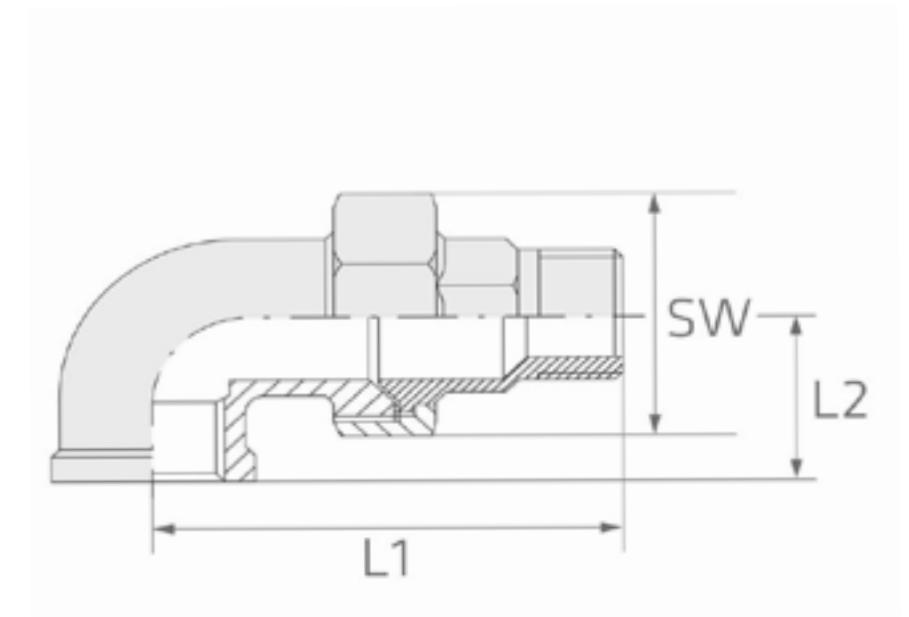


\* Finishes: page 585; no standard pipe connection

# ELBOW UNIONS FLAT F/M

EN-ISO 4144

1.4408 (1/1)



INCH	NW	L1	L2	SW	Grade AISI kg/pce.	1.4408 316/316L *)
1/8"	6	50.7	19	25	0.062	x
1/4"	8	58.6	21	30	0.650	x
3/8"	10	61.0	25	35	0.700	x
1/2"	15	71.0	28	42	0.280	x
3/4"	20	78.7	33	47	0.400	x
1"	25	88.4	38	53	0.540	x
1 1/4"	32	102.9	45	71	1.120	x
1 1/2"	40	110.3	50	78	1.300	x
2"	50	119.3	58	92	2.000	x



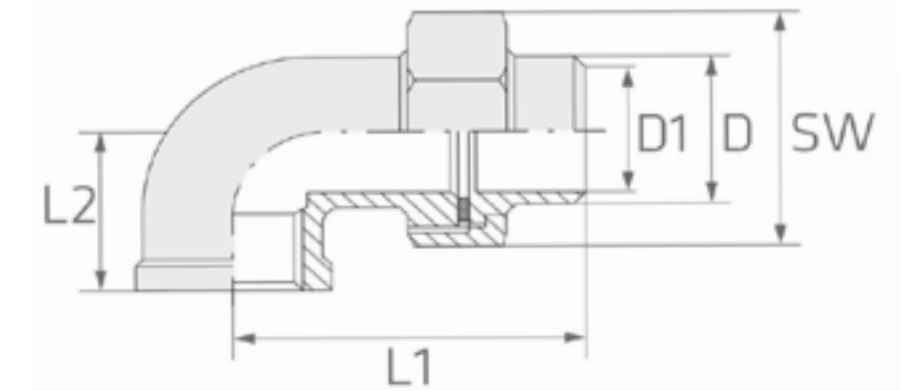
\* Finishes: page 585; no standard pipe connection



# ELBOW UNIONS FLAT F/AS

EN-ISO 4144

1.4408 (1/1)



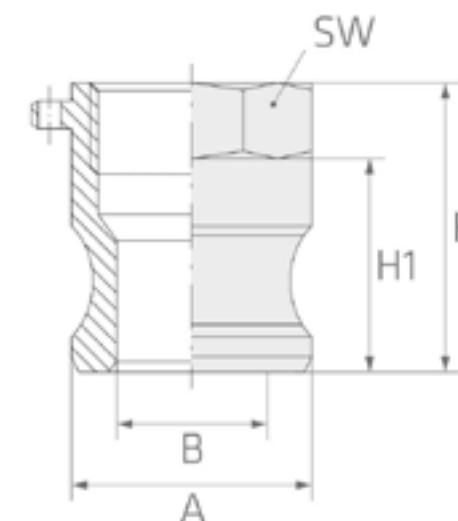
INCH	NW	L1	L2	SW	D	D1	Grade AISI	1.4408 316/316L
							kg/pce.	*)
3/8"	10	48.5	25	35	17.2	12.7	0.958	x
1/2"	15	54.6	28	42	21.3	16.7	0.238	x
3/4"	20	62.7	33	47	26.9	21.5	0.348	x
1"	25	68.0	38	53	33.7	26.5	0.508	x
1 1/4"	32	79.5	45	71	42.4	35.8	0.960	x
1 1/2"	40	88.0	50	78	48.3	42.0	1.101	x
2"	50	93.8	58	92	60.3	53.3	1.700	x



\* Finishes: page 585; no standard pipe connection

# QUICK COUPLING - A ADAPTER F

1.4408 (1/1)



INCH	NW	A	B	H1	H	SW	Grade AISI kg/pce.	1.4408 316/316L *)
1/2"	15	32.0	21.2	28.0	38.0	33.0	0.148	x
3/4"	20	32.0	21.2	28.0	38.0	33.0	0.108	x
1"	25	36.7	23.8	33.5	46.5	41.0	0.160	x
1 1/4"	32	45.5	28.6	40.0	55.0	48.0	0.264	x
1 1/2"	40	53.4	36.0	42.5	58.5	56.0	0.354	x
2"	50	63.0	45.5	47.5	62.3	67.5	0.468	x
2 1/2"	65	75.7	56.4	50.0	68.0	83.0	0.870	x
3"	80	91.5	73.5	51.0	70.0	96.5	0.860	x
4"	100	119.5	100.0	53.0	76.0	124.0	1.580	x

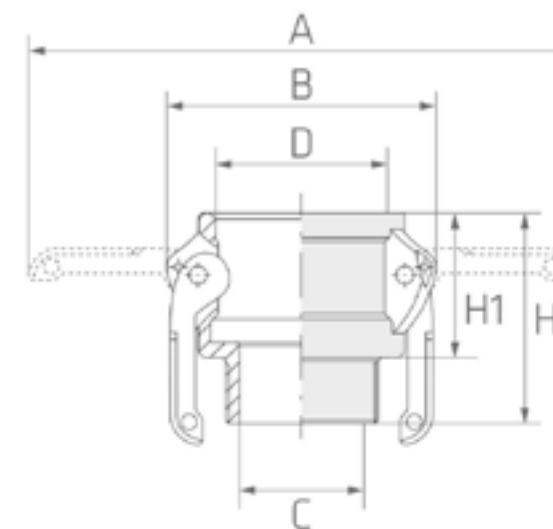


\* Finishes: page 585; no standard pipe connection



# QUICK COUPLING - B COUPLER M

1.4408 (1/1)



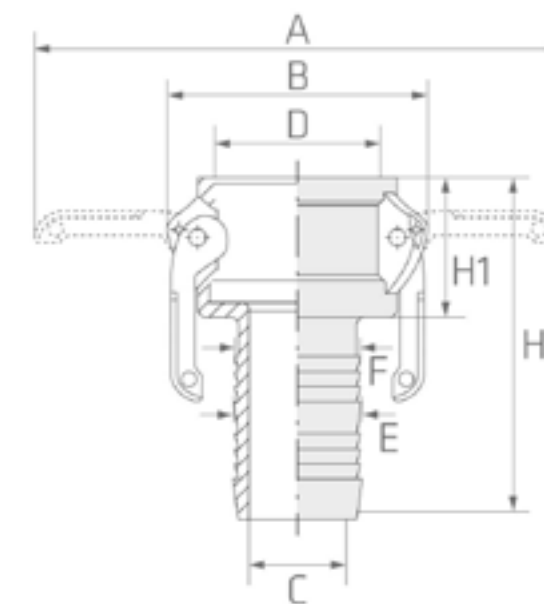
INCH	NW	A	B	C	H1	H	SW	Grade AISI	1.4408 316/316L
								kg/pce.	*)
1/2"	15	115	57.0	15.0	32.4	30.0	48.0	0.204	x
3/4"	20	115	57.0	21.2	32.4	30.0	48.0	0.210	x
1"	25	137	65.6	25.0	37.3	39.0	61.0	0.318	x
1 1/4"	32	183	77.0	28.0	46.0	46.0	68.0	0.544	x
1 1/2"	40	191	85.0	39.0	54.0	48.0	70.5	0.604	x
2"	50	201	96.0	50.0	63.7	53.0	78.7	0.805	x
2 1/2"	65	213	110.4	58.0	76.5	58.0	86.0	1.050	x
3"	80	267	133.0	73.2	92.2	58.0	89.0	1.450	x
4"	100	296	166.0	97.0	120.2	63.0	97.0	2.100	x



\* Finishes: page 585; no standard pipe connection

# QUICK COUPLING - C COUPLER HOSE SHANK

1.4408 (1/1)



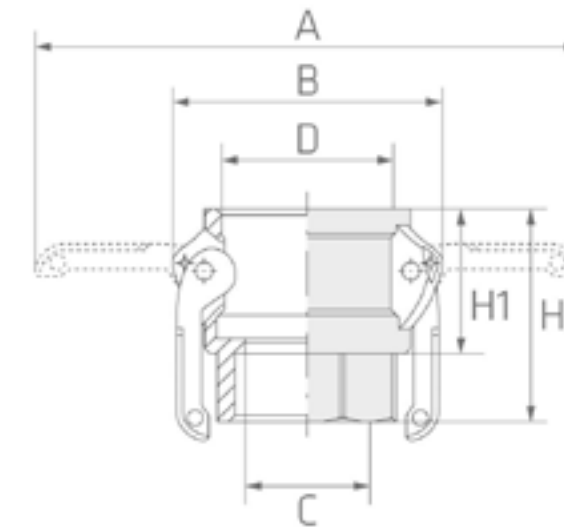
INCH	NW	A	B	C	D	E	F	H1	H	Grade AISI	1.4408 316/316L	
											kg/pce.	*)
1/2"	15	107	48.7	8.0	25.1	15.0	13.0	31.0	72	0.224	x	
3/4"	20	115	57.0	13.6	32.4	20.7	19.4	30.0	80	0.226	x	
1"	25	137	65.6	20.0	37.3	27.0	25.8	39.0	99	0.362	x	
1 1/4"	32	183	77.0	25.8	46.0	33.9	32.9	46.0	110	0.632	x	
1 1/2"	40	191	85.0	31.3	54.0	40.5	38.6	48.0	114	0.700	x	
2"	50	201	96.0	43.8	63.7	52.0	51.0	53.0	129	1.020	x	
2 1/2"	65	213	110.4	55.7	76.5	66.8	64.0	58.0	151	1.310	x	
3"	80	267	133.0	68.0	92.2	79.0	70.0	58.0	160	2.100	x	
4"	100	296	166.0	92.0	120.2	104.8	94.0	63.0	176	2.900	x	



\* Finishes: page 585; no standard pipe connection

# QUICK COUPLING - D COUPLER F

1.4408 (1/1)



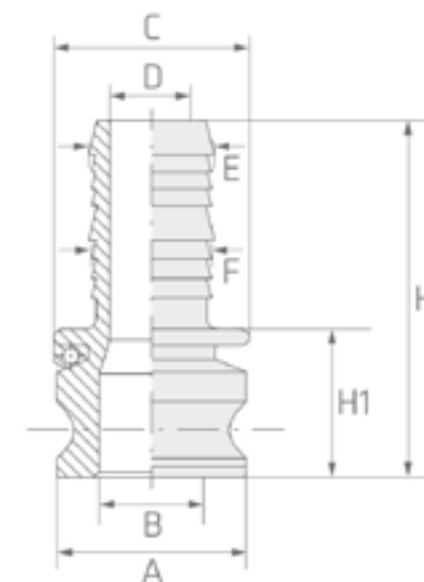
INCH	NW	A	B	C	D	H1	H	Grade AISI	1.4408 316/316L
								kg/pce.	*)
1/2"	15	115	57.0	17.0	32.4	30	46.0	0.266	x
3/4"	20	115	57.0	20.0	32.4	30	50.0	0.234	x
1"	25	137	65.6	26.0	37.3	39	60.0	0.362	x
1 1/4"	32	183	77.0	34.5	46.0	46	66.0	0.616	x
1 1/2"	40	191	85.0	40.0	54.0	48	70.5	0.725	x
2"	50	201	96.0	50.0	63.7	53	76.0	0.960	x
2 1/2"	65	213	110.4	61.0	76.5	58	82.0	1.150	x
3"	80	267	133.0	75.0	92.2	58	86.0	1.680	x
4"	100	296	166.0	100.0	120.2	63	92.0	2.850	x



\* Finishes: page 585; no standard pipe connection

# QUICK COUPLING - E ADAPTER HOSE SHANK

1.4408 (1/1)



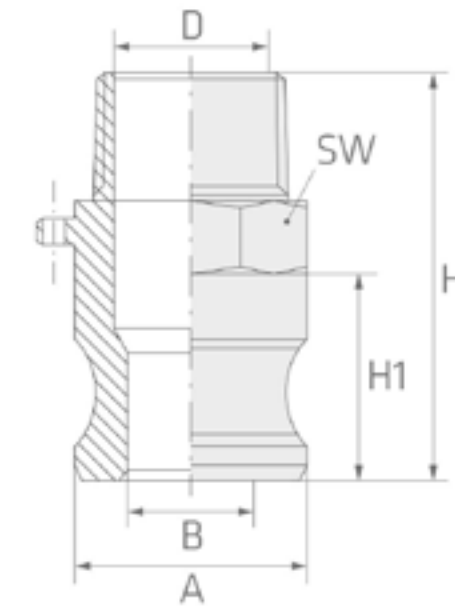
INCH	NW	A	B	C	D	E	F	H1	H	Grade AISI	1.4408 316/316L	
											kg/pce.	*)
1/2"	15	24.3	14.4	30.0	8.0	15.0	13.0	35	76	0.152	x	
3/4"	20	32.0	21.2	33.0	13.6	20.7	19.4	37	87	0.166	x	
1"	25	36.7	23.8	39.0	20.0	27.0	25.8	44	104	0.260	x	
1 1/4"	32	45.5	28.6	48.0	25.8	33.9	32.9	51	115	0.438	x	
1 1/2"	40	53.4	36.0	56.0	31.3	40.5	38.6	52	118	0.518	x	
2"	50	63.0	45.5	66.0	43.8	52.0	51.0	56	132	0.785	x	
2 1/2"	65	75.7	55.7	80.0	55.7	66.8	*	64	156	1.185	x	
3"	80	91.5	73.2	101.0	68.0	79.0	*	66	169	1.785	x	
4"	100	119.5	91.0	130.0	92.0	104.8	*	68	180	2.620	x	



\* Finishes: page 585; no standard pipe connection

# QUICK COUPLING - F ADAPTER M

1.4408 (1/1)



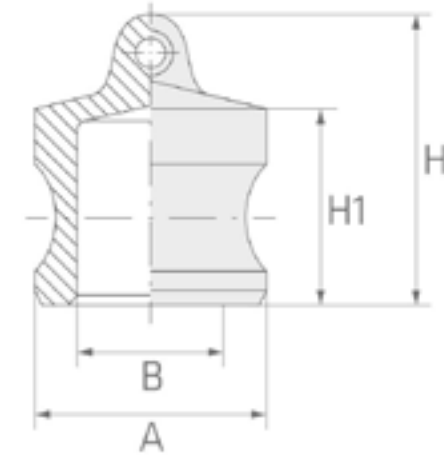
INCH	NW	A	B	D	H1	H	SW	Grade AISI	1.4408 316/316L	
									kg/pce.	*)
1/2"	15	32.0	21.2	15.0	28.0	56.0	33.0	0.172	x	
3/4"	20	32.0	21.2	21.2	28.0	56.0	33.0	0.174	x	
1"	25	36.7	23.8	23.8	33.5	69.0	41.0	0.246	x	
1 1/4"	32	45.5	28.6	33.0	40.0	77.0	48.0	0.428	x	
1 1/2"	40	53.4	36.0	39.6	42.5	80.0	56.0	0.558	x	
2"	50	63.0	45.5	50.0	47.5	89.0	65.0	0.750	x	
2 1/2"	65	75.7	56.4	56.4	50.0	98.0	82.5	1.030	x	
3"	80	91.5	73.2	77.5	51.0	101.0	95.8	1.405	x	
4"	100	119.5	100.0	100.0	53.0	114.0	124.0	2.250	x	



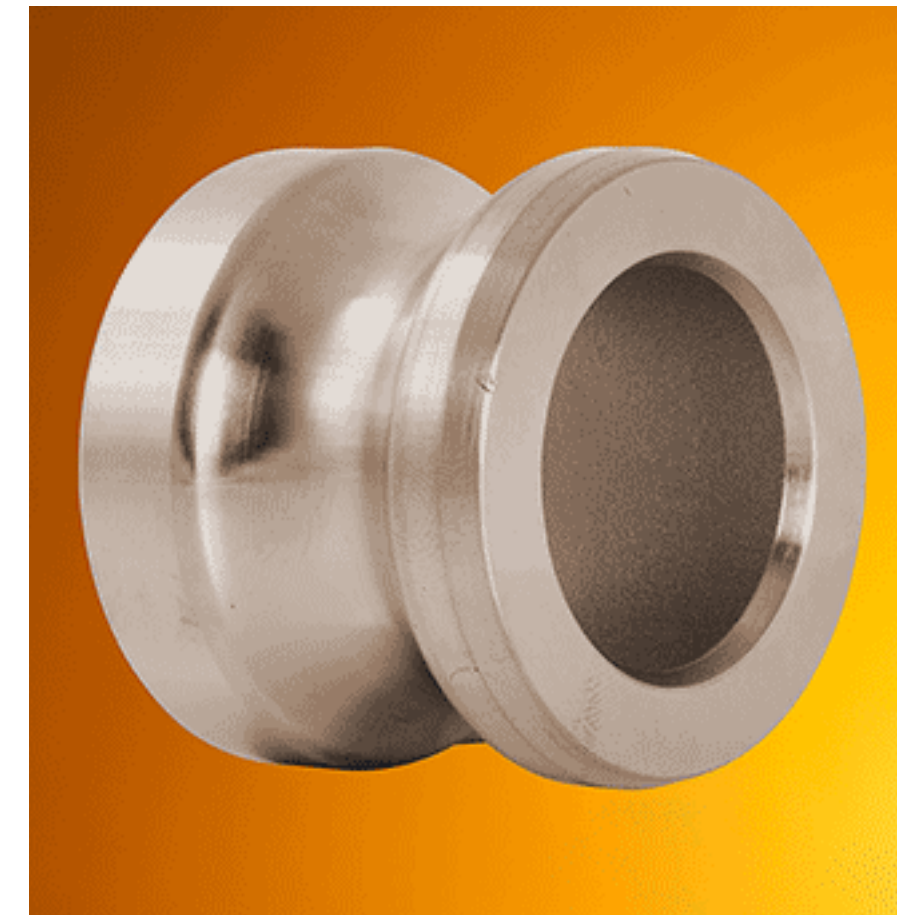
\* Finishes: page 585; no standard pipe connection

# QUICK COUPLING - DP DUSTPLUG

1.4408 (1/1)



INCH	NW	A	B	H1	H	Grade AISI kg/pce.	1.4408 316/316L *)
1/2"	15	24.3	14.2	26.3	36.0	0.090	x
3/4"	20	32.0	21.2	25.0	35.0	0.900	x
1"	25	36.7	23.8	30.5	44.5	0.132	x
1 1/4"	32	45.5	28.6	37.7	52.7	0.264	x
1 1/2"	40	53.4	36.0	38.7	53.7	0.288	x
2"	50	63.0	45.5	42.8	57.8	0.446	x
2 1/2"	65	75.7	56.4	46.0	71.0	0.655	x
3"	80	91.5	73.2	46.0	72.0	0.830	x
4"	100	119.5	100.0	50.0	76.0	1.205	x



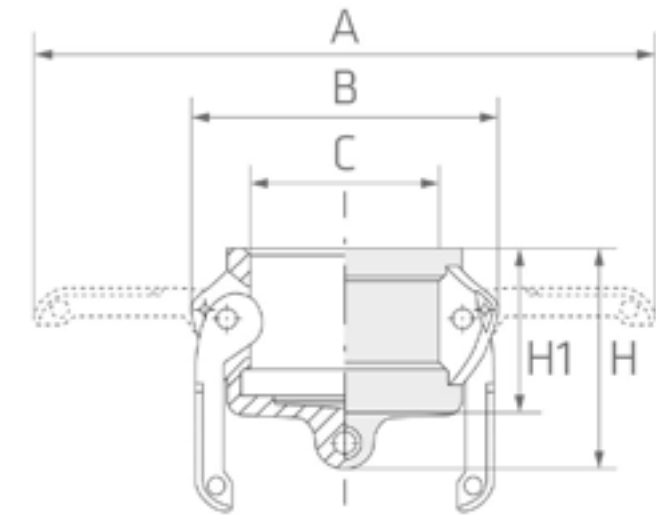
\* Finishes: page 585; no standard pipe connection





# QUICK COUPLING - DC DUSTCAP

1.4408 (1/1)



INCH	NW	A	B	C	H1	H	Grade AISI kg/pce.	1.4408 316/316L *)
1/2"	15	106.6	48.0	25.1	30.4	40.1	0.178	x
3/4"	20	115.0	57.0	32.4	30.0	40.0	0.178	x
1"	25	137.0	65.6	37.3	39.0	53.0	0.276	x
1 1/4"	32	183.0	77.0	46.0	46.0	61.0	0.498	x
1 1/2"	40	191.0	85.0	54.0	48.0	64.0	0.558	x
2"	50	201.0	96.0	63.7	53.0	68.0	0.735	x
2 1/2"	65	213.0	110.4	76.5	58.0	82.0	0.995	x
3"	80	267.0	133.0	92.2	58.0	83.0	1.530	x
4"	100	296.0	166.0	120.2	63.0	93.0	2.100	x



\* Finishes: page 585; no standard pipe connection



# FITTINGS FOR WELDING



## Fittings for welding

\* solution annealed, pickled or metal bright

1) Dimensions and finishes may vary due to production. Coordination evtl. necessary.

## Technical terms of delivery

DIN EN 10253-4 and DIN 2609, DIN EN 10217-7, DIN EN 10216-5 also in connection with AD-2000 leaflet W 2/W 9/W 10 for the base material used and the final product; VdTÜV sheet 1252 acc. to agreement

## Tolerances

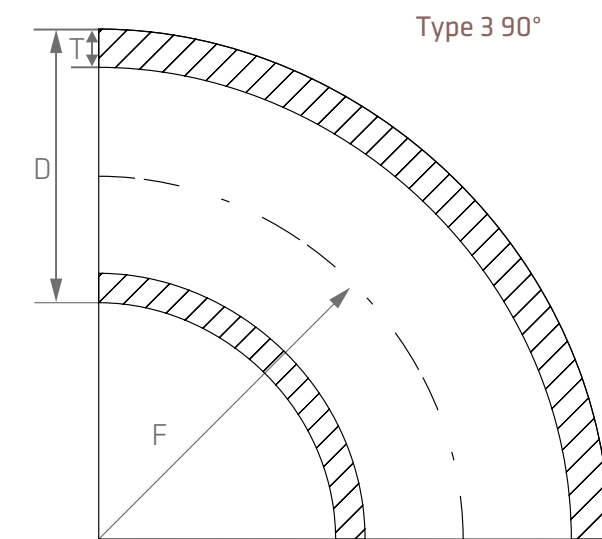
DIN EN 10253-4, DIN EN 1092-1 and DIN 2605, 2609, 2615, 2616 and similar 1) DIN 28011

## Test certificates

DIN EN 10204 3.1 for the base material and the final product

# PIPE ELBOW 90° SEAMLESS acc. to EN-10253-4

1.4462-1.4571 (1/5)



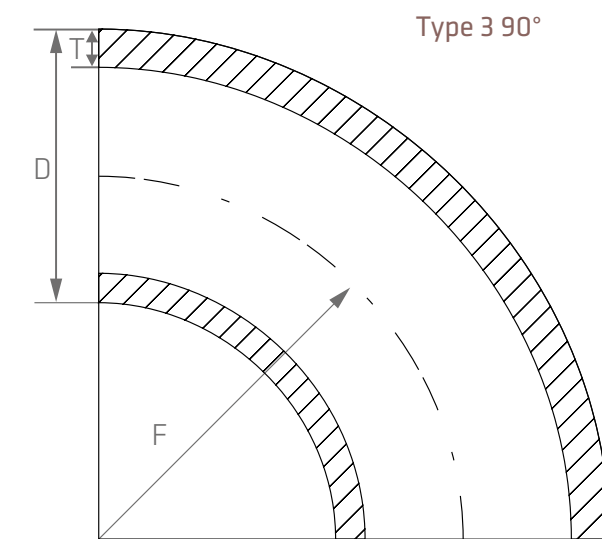
D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
12.00	1.50	15.0	0.02			x	x
15.00	1.50	27.5	0.02			x	x
17.20	2.30	27.5	0.04			x	x
21.30	2.00	28.0	0.04			x	x
21.30	2.60	28.0	0.06			x	x
21.34	2.11	28.0	0.04	x	x		
21.34	2.77	28.0	0.08	x	x		
26.67	2.11	29.0	0.06	x	x		
26.67	2.87	29.0	0.08	x	x		
26.90	2.00	29.0	0.06			x	x



\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° SEAMLESS acc. to EN-10253-4

1.4462-1.4571 (2/5)



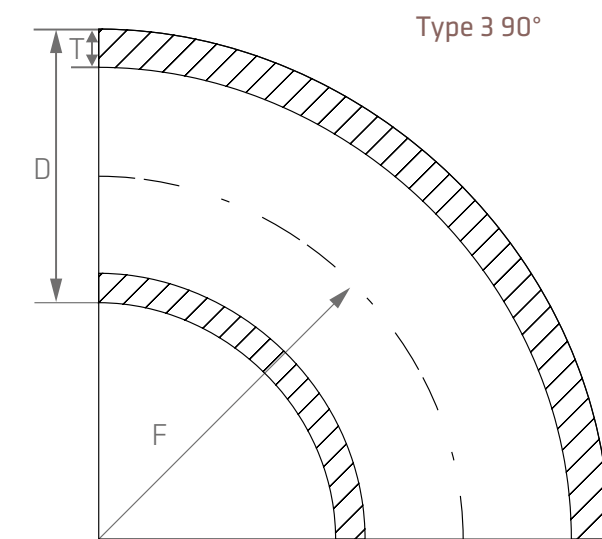
D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
26.90	2.60	29.0	0.08			x	x
33.40	2.77	38.0	0.12	x	x		
33.40	3.38	38.0	0.16	x	x		
33.70	2.00	38.0	0.10			x	x
33.70	2.60	38.0	0.12		x	x	x
33.70	3.20	38.0	0.14			x	x
42.16	2.77	48.0	0.19	x	x		
42.16	3.56	48.0	0.27	x	x		
42.40	2.00	48.0	0.16			x	
42.40	2.60	48.0	0.19		x	x	x



\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° SEAMLESS acc. to EN-10253-4

1.4462-1.4571 (3/5)



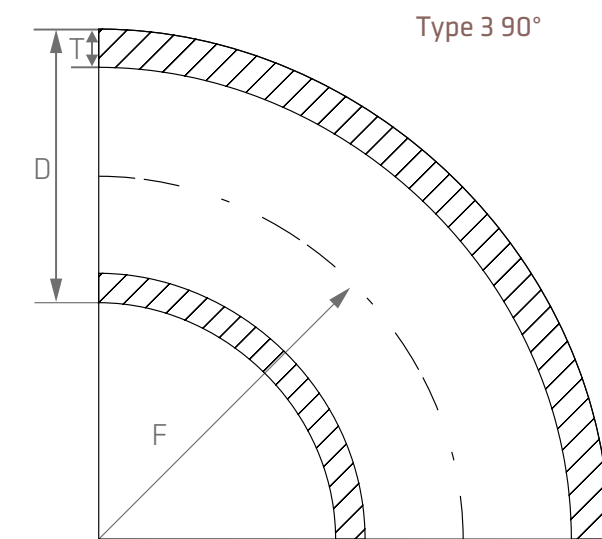
D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
42.40	3.20	48.0	0.23			x	x
48.26	2.77	57.0	0.28	x	x		
48.26	3.68	57.0	0.37	x	x		
48.30	2.00	57.0	0.26			x	x
48.30	2.60	57.0	0.26		x		x
48.30	2.90	57.0	0.32			x	x
60.30	2.00	76.0	0.34			x	x
60.30	2.90	76.0	0.49		x	x	x
60.30	3.60	76.0	0.62			x	x
60.33	2.77	76.0	0.49	x	x		



\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° SEAMLESS acc. to EN-10253-4

1.4462-1.4571 (4/5)



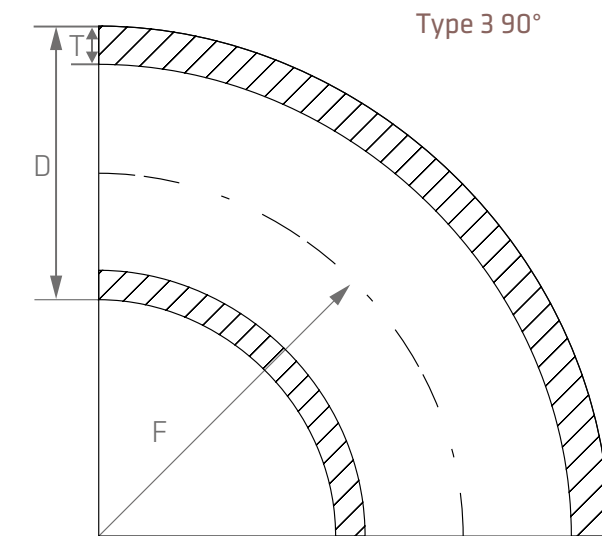
D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
60.33	3.91	76.0	0.70	x	x		
73.03	3.05	95.0	0.80	x	x		
73.03	5.16	95.0	1.30	x	x		
76.10	2.90	95.0	0.88		x	x	x
76.10	3.60	95.0	0.98			x	x
76.10	4.00	95.0	1.18			x	
88.90	2.60	114.0	1.02			x	x
88.90	3.20	114.0	1.15			x	x
88.90	4.00	114.0	1.57			x	x
88.90	5.49	114.0	2.14	x	x		



\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° SEAMLESS acc. to EN-10253-4

1.4462-1.4571 (5/5)



D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
88.90	7.62	114.0	2.75		x		
114.30	3.05	152.0	2.00	x	x		
114.30	3.60	152.0	2.35			x	x
114.30	6.02	152.0	4.00	x	x		
114.3	8.56	152.0	5.35		x		
139.70	4.00	190.0	4.09			x	x
168.30	4.50	229.0	7.00			x	x
168.30	7.11	229.0	10.25	x	x		
219.10	8.18	305.0	22.40	x	x		

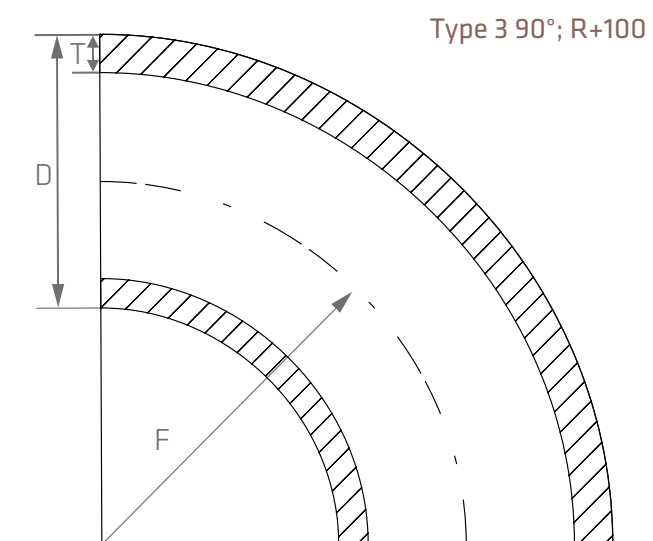


\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (1/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
12.0	1.50			26.0	1.5D	0.02	x	x	
13.5	1.60			20.0	1.5D	0.02	x	x	
13.5	2.35	1/4"	GAS	21.0	1.5D	0.02	x		
15.0	1.50			22.0	1.5D	0.02	x	x	
17.2	1.60			27.5	1.5D	0.03	x	x	
17.2	1.60			43.0	5S	0.04	x	x	
17.2	2.35	3/8"	GAS	28.5	1.5D	0.04	x	x	
18.0	1.50			22.5		0.02	x		
18.0	1.50			25.0	1.5D	0.03	x	x	
20.0	1.50			25.0	1.5D	0.03	x		



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

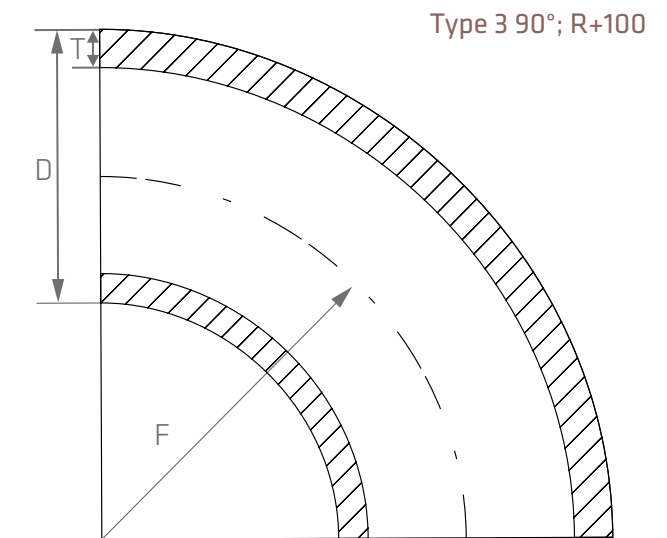
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (2/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
20.0	1.50			30.0	1.5D	0.03	x	x	
20.0	2.00			25.0	1.5D	0.04	x		
20.0	2.00			30.0	1.5D	0.04	x	x	
21.3	1.60			28.0		0.03		x	
21.3	1.60			45.0	5S	0.06		x	
21.3	2.00			28.0	1.5D	0.06	x	x	
21.3	2.00			45.0	5S	0.07	x	x	
21.3	2.60	1/2"	GAS	28.0	1.5D	0.06	x	x	
23.0	1.50			25.0		0.04			
23.0	1.50			34.5	1.5D	0.04	x	x	



1) With AD2000 W2

2) Also available with radius D+100

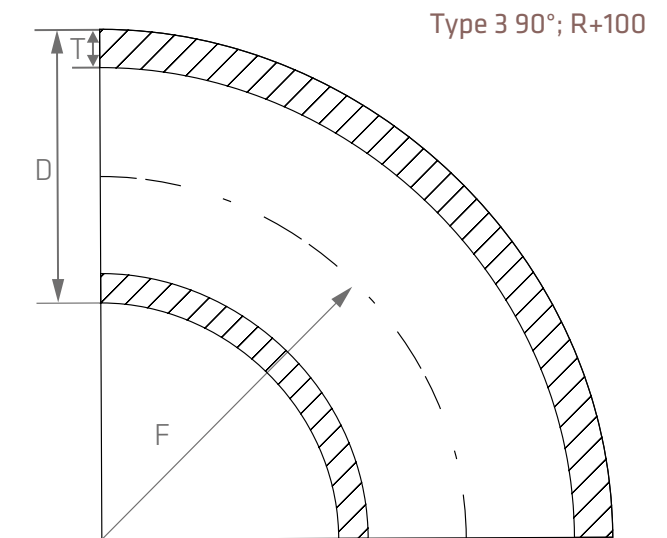
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (3/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
25.0	1.50			27.5	1.5D	0.05	x		
25.0	1.50			37.0	1.5D	0.05	x	x	
25.0	2.00			27.5	1.5D	0.06	x		
25.0	2.00			37.0	1.5D	0.06	x	x	
26.9	1.60			28.5	1.5D	0.05	x	x	
26.9	2.00			29.0	1.5D	0.06	x	x	x
26.9	2.00			57.0	5S	0.11	x	x	
26.9	2.60	3/4"	GAS	29.0	1.5D	0.08	x	x	
26.9	2.65	3/4"	GAS	57.0	5S	0.15	x	x	
28.0	1.50			32.5		0.06			



1) With AD2000 W2

2) Also available with radius D+100

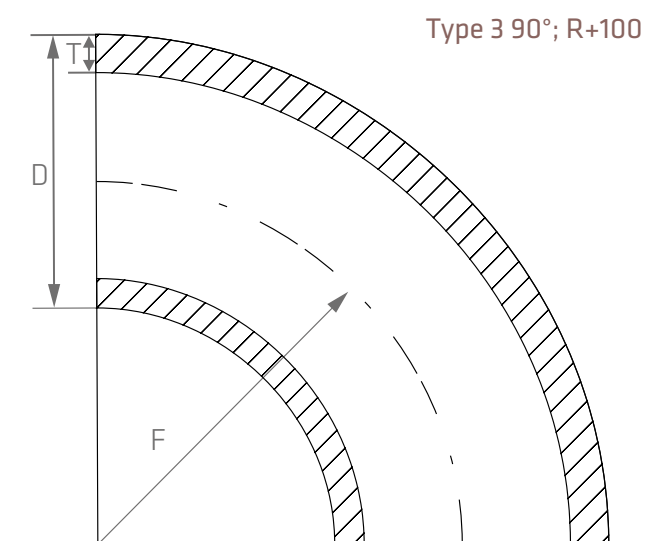
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (4/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
28.0	1.50			42.0	1.5D	0.07	x	x	
28.0	2.00			40.0	1.5D	0.09	x	x	
30.0	1.50			33.5	1.5D	0.05	x		
30.0	1.50			45.0	1.5D	0.08	x	x	
30.0	2.00			33.5		0.07	x		
30.0	2.00			45.0	1.5D	0.10	x	x	
32.0	1.50			35.0	1.5D	0.09	x	x	
32.0	2.00			35.0	1.5D	0.11	x	x	
33.7	1.60			38.0	1.5D	0.08	x	x	
33.7	2.00			38.0	1.5D	0.10	x	x	x



1) With AD2000 W2

2) Also available with radius D+100

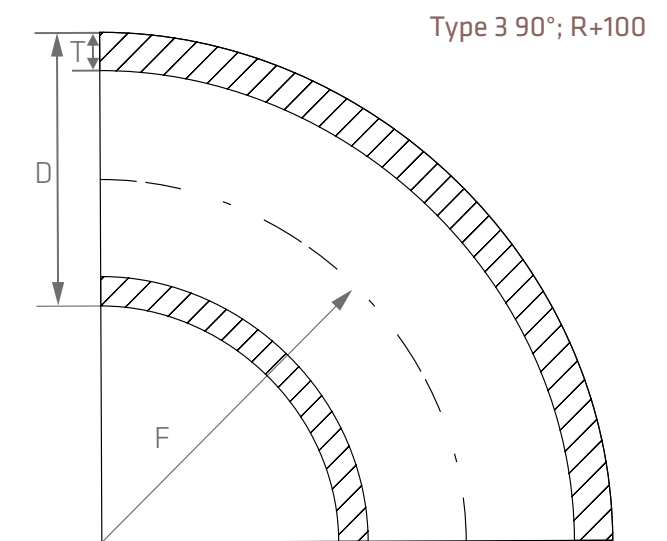
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (5/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
33.7	2.00			72.5	5S	0.18	x	x	
33.7	2.60			38.0	1.5D	0.12	x	x	
33.7	3.25	1"	GAS	38.0	1.5D	0.14	x	x	
33.7	3.25	1"	GAS	72.5	5S	0.28	x	x	
35.0	1.50			45.0		0.10			
35.0	1.50			52.5	1.5D	0.10	x	x	
35.0	2.00			45.0	1.5D	0.11	x		
35.0	2.00			52.5	1.5D	0.17	x	x	
38.0	2.00			45.0	1.5D	0.12	x		
38.0	2.00			57.0	1.5D	0.16	x	x	



1) With AD2000 W2

2) Also available with radius D+100

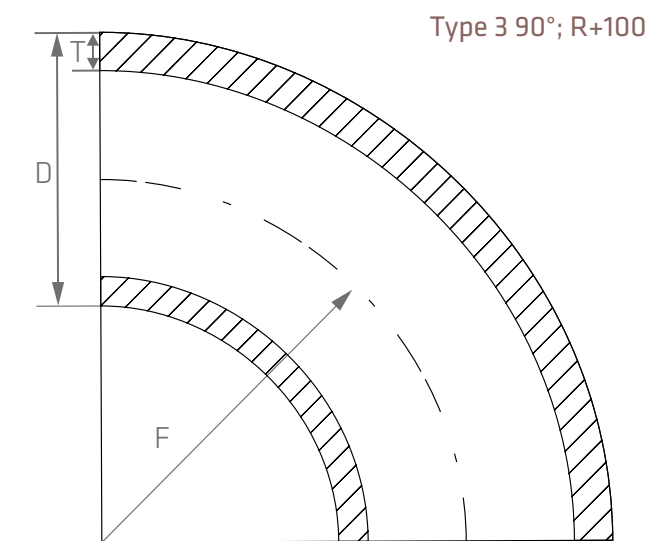
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (6/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
40.0	1.50			60.0	1.5D	0.11	x	x	
40.0	2.00			45.0		0.13	x		
40.0	2.00			60.0	1.5D	0.18	x	x	
42.4	1.60			47.6	1.5D	0.12	x	x	
42.4	2.00			48.0	1.5D	0.16	x	x	x
42.4	2.00			93.0	5S	0.28	x	x	
42.4	2.60			48.0	1.5D	0.19	x	x	
42.4	3.20			48.0	1.5D	0.23	x	x	
42.4	3.25	1 1/4"	GAS	93.0	5S	0.45		x	
43.0	1.50			47.5		0.15	x		



1) With AD2000 W2

2) Also available with radius D+100

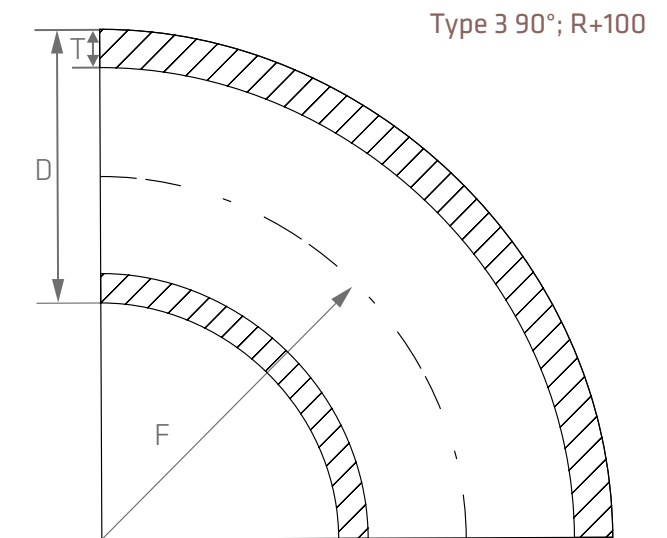
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (7/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
43.0	1.50			64.5	1.5D	0.16	x	x	
44.5	2.00			51.0	1.5D	0.16	x		
44.5	2.00			66.0	1.5D	0.22	x	x	
48.3	1.60			57.1	1.5D	0.17	x	x	
48.3	2.00			57.0	1.5D	0.22	x	x	x
48.3	2.00			108.0	5S	0.39	x	x	
48.3	2.60			57.0	1.5D	0.26	x	x	
48.3	3.20	1 1/2"	GAS	57.0	1.5D	0.32	x	x	
48.3	3.25	1 1/2"	GAS	108.0	5S	0.63	x	x	
50.0	1.50			75.0	1.5D	0.22	x	x	



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

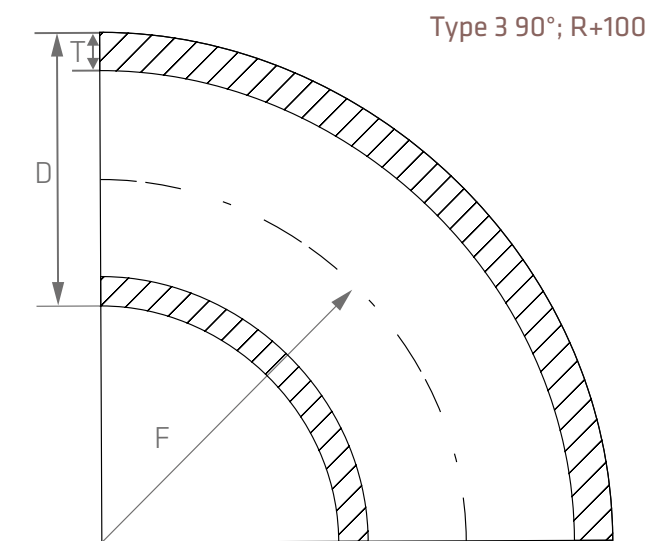
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (8/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
50.0	2.00			71.0	1.5D	0.27	x		
50.0	2.00			75.0	1.5D	0.22	x	x	
50.8	1.50			75.0	1.5D	0.09	x	x	
50.8	2.00			75.0	1.5D	0.22	x	x	
50.8	2.50			75.0	1.5D	0.28	x		
51.0	1.50			75.0	1.5D	0.09	x		
53.0	1.50			80.0	1.5D	0.24	x	x	
54.0	2.00			70.0		0.31	x		
54.0	2.00			75.0		0.31	x		
54.0	2.00			80.0	1.5D	0.31	x	x	



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

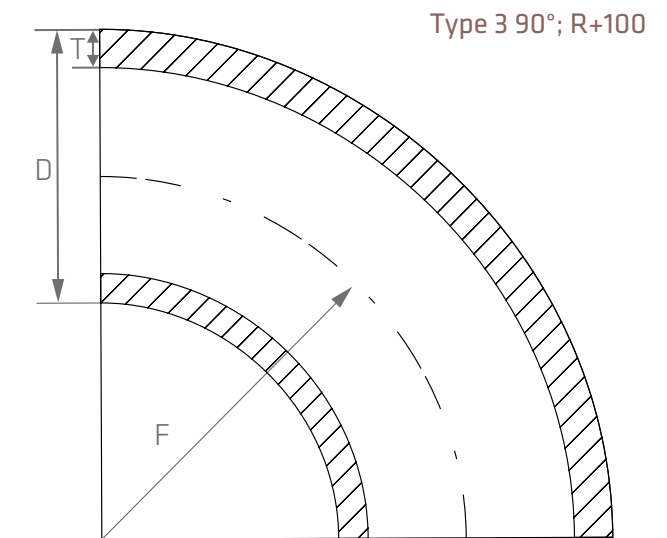
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (9/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
54.0	2.00			150.0	D+100	0.50	x		
57.0	2.00			77.0	1.5D	0.33	x	x	
57.0	3.00			77.0	1.5D	0.49	x	x	
60.3	1.60			76.2	1.5D	0.28	x		
60.3	2.00			76.0	1.5D	0.34	x	x	
60.3	2.00			135.0	5S	0.61	x	x	
60.3	2.60			76.0	1.5D	0.44	x	x	
60.3	2.90			76.0	1.5D	0.49	x	x	
60.3	3.00			135.0	5S	0.89	x	x	
60.3	3.60	2"	GAS	76.0	1.5D	0.62	x	x	



1) With AD2000 W2

2) Also available with radius D+100

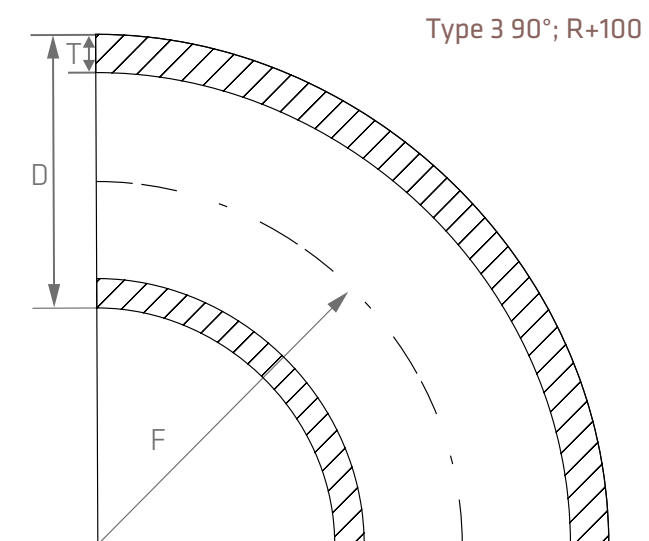
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (10/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
60.3	3.65	2"	GAS	135.0	5S	1.08		x	
63.5	2.00			94.5	1.5D	0.46	x	x	
69.0	2.00			95.0	1.5D	0.62	x		
70.0	2.00			92.0		0.47	x		
70.0	3.00			92.0	1.5D	0.78	x	x	
76.1	2.00			95.0	1.5D	0.62	x	x	
76.1	2.00			175.0	5S	0.99	x	x	
76.1	2.30			95.0		0.72			
76.1	2.60			95.0	1.5D	0.77	x	x	
76.1	2.9/3.0			95.0	1.5D	0.88	x	x	



1) With AD2000 W2

2) Also available with radius D+100

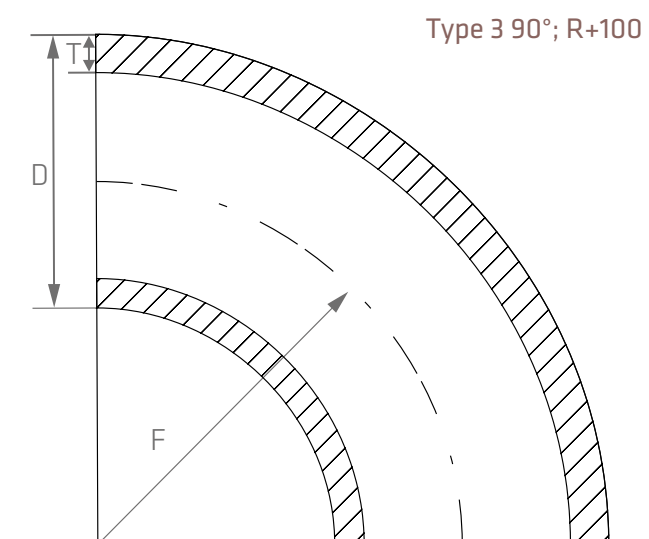
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (11/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
76.1	2.90			175.0	5S	1.44	x	x	
76.1	3.60	2 1/2"	GAS	95.0	1.5D	1.08	x	x	
76.1	3.65	2 1/2"	GAS	175.0	5S	1.77		x	
84.0	2.00			120.0		0.77	x	x	
84.0	2.00			126.0	1.5D	0.81	x	x	
84.0	2.00			180.0	D+100	1.20	x		x
88.9	2.00			114.0	1.5D	0.81	x	x	
88.9	2.00			205.0	5S	1.34	x	x	
88.9	2.30			114.0		0.94			
88.9	2.60			114.0	1.5D	1.02	x	x	



1) With AD2000 W2

2) Also available with radius D+100

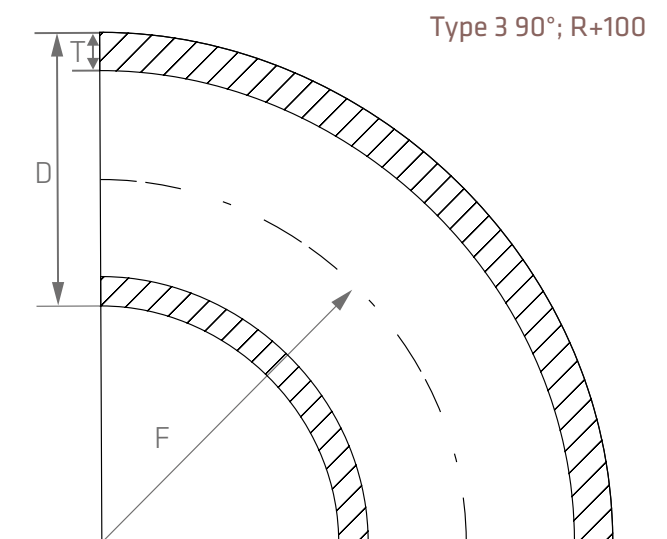
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (12/21)



D	T	INCH	GAS	F	TYPE	Grade	1.4301/1.4307	1.4404	1.4432
							AISI/UNS	304/304L	316
						kg/pce.	*)	*)	*)
88.9	2.9/3.0			114.0	1.5D	1.15	x	x	
88.9	3.00			205.0	5S	2.07	x	x	
88.9	3.20			114.0		1.22			
88.9	4.00			114.5	1.5D	1.53	x	x	
88.9	4.00			205.0	5S	2.72		x	
101.6	2.00			133.5	1.5D	1.04	x	x	
101.6	3.00			133.0	1.5D	1.56	x	x	
104.0	2.00			150.0	1.5D	1.20	x	x	
104.0	2.00			200.0	D+100	1.60	x		x
106.0	3.00			150.0	1.5D	1.82		x	x



1) With AD2000 W2

2) Also available with radius D+100

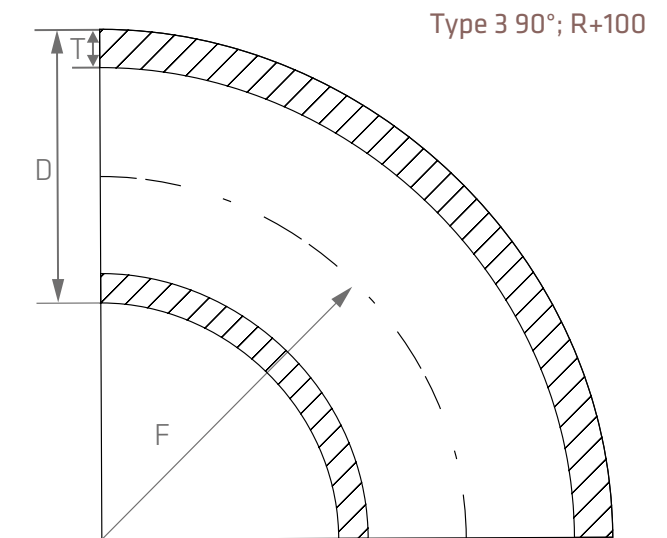
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (13/21)



D	T	INCH	GAS	F	TYPE	Grade	1.4301/1.4307	1.4404	1.4432
						AISI/UNS	304/304L	316	316L
						kg/pce.	*)	*)	*)
108.0	2.00			142.0	1.5D	1.18	x	x	
108.0	3.00			142.0	1.5D	1.76	x	x	
108.0	3.00			142.5	1.5D	1.25	x	x	
108.0	4.00			142.5	1.5D	2.20			
114.3	2.00			152.0	1.5D	1.35	x	x	
114.3	2.00			270.0	5S	2.36	x	x	
114.3	2.60			152.0		1.60	x	x	
114.3	2.90			152.0		1.95	x		
114.3	3.00			152.0	1.5D	2.00	x	x	
114.3	3.00			270.0	5S	3.45	x	x	



1) With AD2000 W2

2) Also available with radius D+100

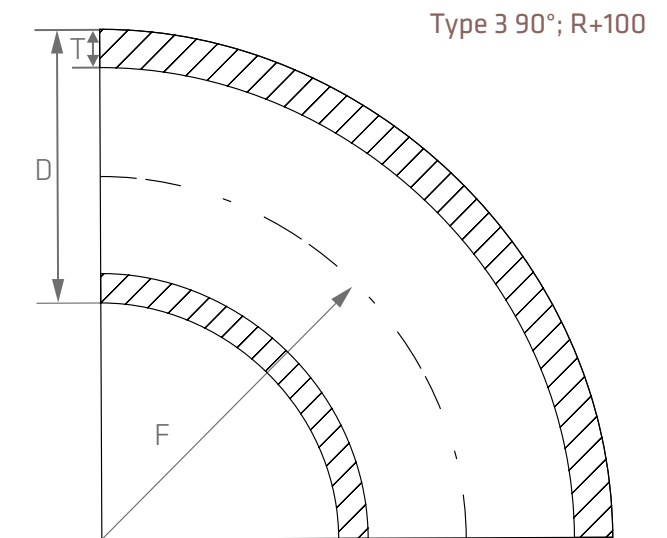
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (14/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
114.3	3.60			152.0		2.50			
114.3	4.00			152.5	1.5D	2.65	x		
129.0	2.00			187.5	1.5D	1.87	x	x	
129.0	2.00			225.0	D+100	2.40	x		
131.0	3.00			188.0	1.5D	2.84	x	x	
133.0	3.00			181.0		2.00		x	
139.7	2.00			190.0	1.5D	2.06	x	x	
139.7	2.60			190.0	1.5D	2.56	x		
139.7	2.60			330.0	5S	4.43	x	x	
139.7	2.90			190.0		2.85	x	x	



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

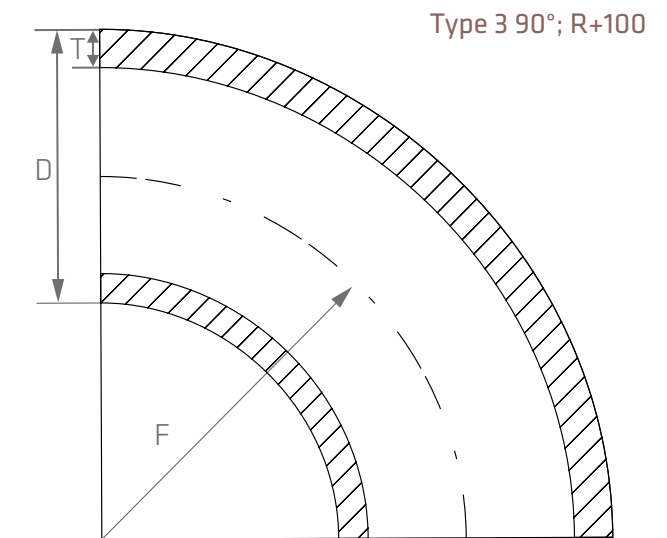
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (15/21)



D	T	INCH	GAS	F	TYPE	Grade	1.4301/1.4307	1.4404	1.4432
						AISI/UNS	304/304L	316	316L
						kg/pce.	*)	*)	*)
139.7	3.00			190.0	1.5D	3.08	x	x	
139.7	4.00			190.0	1.5D	4.09	x	x	
154.0	2.00			225.0	1.5D	2.68	x	x	
154.0	2.00			250.0	D+100	3.10	x	x	x
156.0	3.00			225.0	1.5D	4.06	x		x
156.0	3.00			250.0	D+100	4.60			x
159.0	3.00			216.0	1.5D	3.97	x	x	
159.0	4.00			216.0	1.5D	5.40		x	
168.3	2.00			229.0	1.5D	3.75	x	x	
168.3	2.60			229.0	1.5D	3.88	x		



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

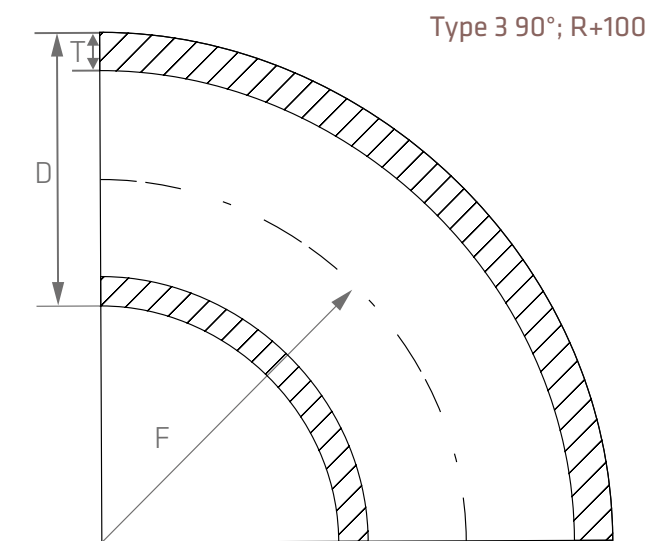
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (16/21)



D	T	INCH	GAS	F	TYPE	Grade	1.4301/1.4307	1.4404	1.4432
						AISI/UNS	304/304L	316	316L
						kg/pce.	*)	*)	*)
168.3	2.60			390.0	5S	6.33	x	x	
168.3	3.00			229.0	1.5D	4.47	x	x	
168.3	4.00			229.0	1.5D	5.90	x	x	
204.0	2.00			300.0	1.5D	4.75	x	x	
206.0	3.00			300.0	1.5D	7.18	x	x	
206.0	3.00			300.0	D+100	7.30	x	x	
219.1	2.00			305.0	1.5D	5.21	x	x	
219.1	2.60			305.0	1.5D	6.29	x		
219.1	3.00			305.0	1.5D	7.52	x		
219.1	3.00			510.0	5S	12.82		x	



1) With AD2000 W2

2) Also available with radius D+100

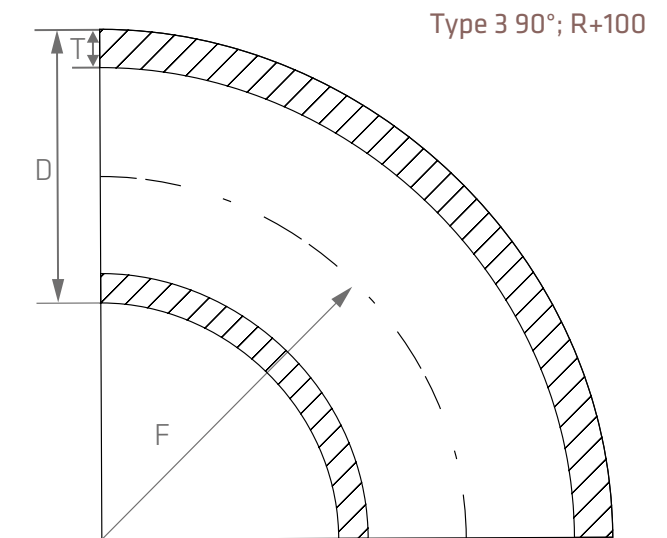
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (17/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
219.1	4.00			305.0	1.5D	10.38	x	x	
254.0	2.00			375.0	1.5D	7.41	x	x	
254.0	2.00			350.0	D+100	7.00	x	x	x
256.0	3.00			375.0	1.5D	11.19	x	x	
256.0	3.00			350.0	D+100	10.50	x		x
273.0	2.00			381.0	1.5D	8.12	x		
273.0	2.60			381.0	1.5D	10.13	x		
273.0	3.00			381.0	1.5D	12.00	x	x	
273.0	4.00			381.0	1.5D	16.10	x		
273.0	5.00			381.0		20.00			



1) With AD2000 W2

2) Also available with radius D+100

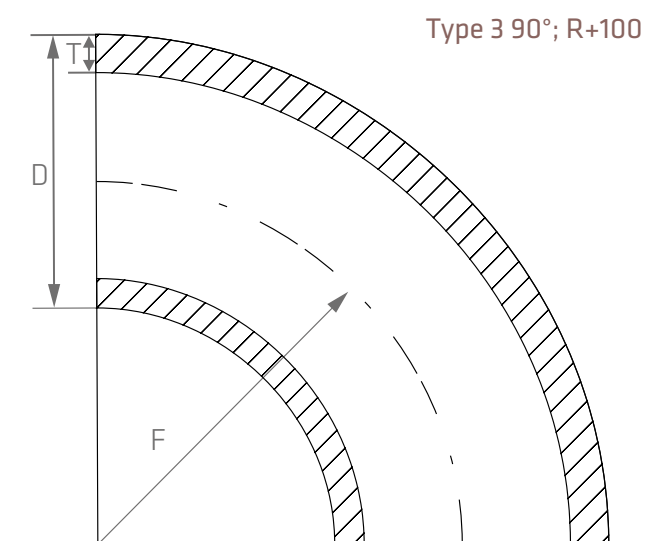
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (18/21)



D	T	INCH	GAS	F	TYPE	Grade	1.4301/1.4307	1.4404	1.4432
						AISI/UNS	304/304L	316	316L
						kg/pce.	*)	*)	*)
219.1	4.00			305.0	1.5D	10.38	x	x	
254.0	2.00			375.0	1.5D	7.41	x	x	
254.0	2.00			350.0	D+100	7.00	x	x	x
256.0	3.00			375.0	1.5D	11.19	x	x	
256.0	3.00			350.0	D+100	10.50	x		x
273.0	2.00			381.0	1.5D	8.12	x		
273.0	2.60			381.0	1.5D	10.13	x		
273.0	3.00			381.0	1.5D	12.00	x	x	
273.0	4.00			381.0	1.5D	16.10	x		
273.0	5.00			381.0		20.00			



1) With AD2000 W2

2) Also available with radius D+100

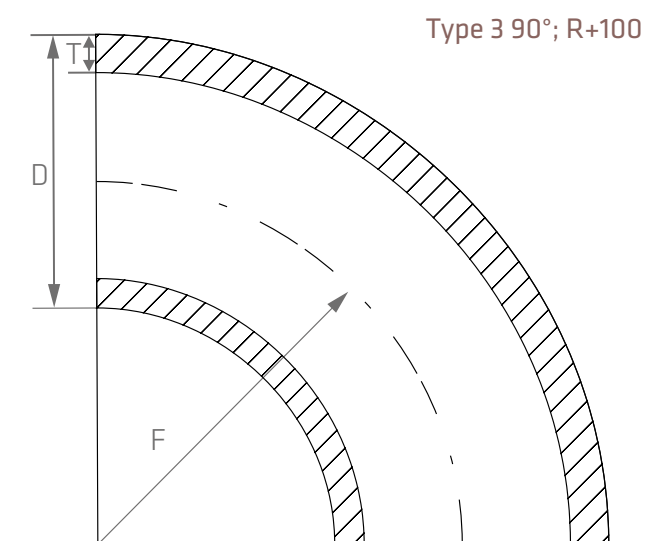
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (19/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS	1.4301/1.4307 304/304L	1.4404 316	1.4432 316L
						kg/pce.	*)	*)	*)
273.0	6.00			381.0					
304.0	2.00			450.0	1.5D	10.69	x		
304.0	2.00			400.0	D+100	9.60	x		x
306.0	3.00			450.0	1.5D	16.05	x		
306.0	3.00			400.0	D+100	14.40	x		x
323.9	2.00			457.0	1.5D	11.57	x	x	
323.9	3.00			457.0	1.5D	17.31	x	x	
323.9	4.00			457.0	1.5D	23.00	x		
323.9	5.00			457.0		28.63			
355.6	3.00			533.0	1.5D	22.30	x	x	



1) With AD2000 W2

2) Also available with radius D+100

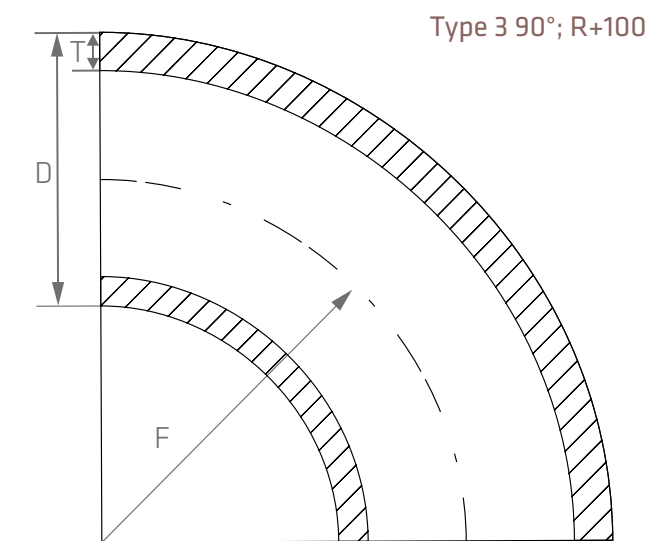
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (20/21)



D	T	INCH	GAS	F	TYPE	Grade	1.4301/1.4307	1.4404	1.4432
						AISI/UNS	304/304L	316	316L
						kg/pce.	*)	*)	*)
355.6	4.00			533.0	1.5D	35.30	x		
356.0	3.00			450.0	D+100	19.00	x		x
406.4	3.00			610.0	1.5D	29.02	x	x	
406.4	3.00			500.0	D+100	24.00	x		x
406.4	4.00			610.0	1.5D	38.10	x	x	
406.4	5.00			610.0		60.30			
408.0	4.00			500.0	D+100	32.00			x
456.0	3.00			550.0	D+100	32.00	x		x
457.2	2.90			686.0	1.5D	36.70	x	x	
457.2	4.00			686.0	1.5D	48.89	x		



1) With AD2000 W2

2) Also available with radius D+100

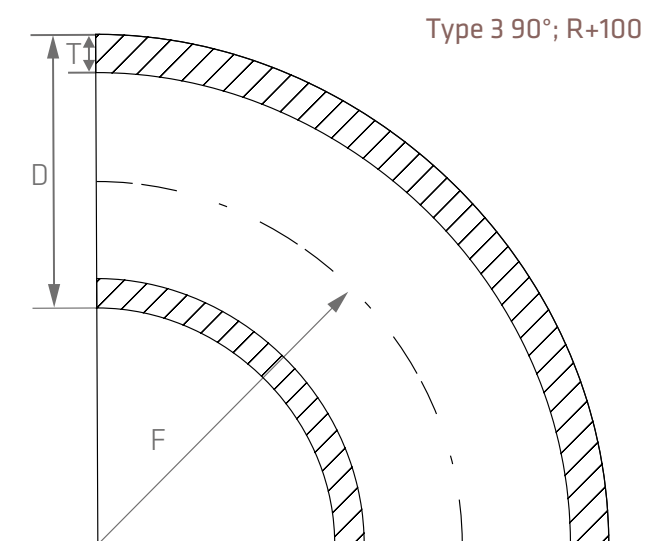
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4301-1.4432 (21/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4404 316 *)	1.4432 316L *)
506.0	3.00			600.0	D+100	37.00	x		x
508.0	3.00			762.0	1.5D	35.75	x	x	
508.0	4.00			762.0	1.5D	59.28	x	x	
508.0	4.00			600.0	D+100	48.00	x		x
606.0	3.00			700.0	D+100	49.00	x		x
608.0	4.00			700.0	D+100	66.00			x
609.6	2.90			914.0	1.5D	65.39	x	x	
609.6	4.00			914.0	1.5D	87.65	x		
711.2	4.00			1066.0	1.5D	78.40	x	x	
812.8	4.00			1219.0	1.5D	81.00	x	x	



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

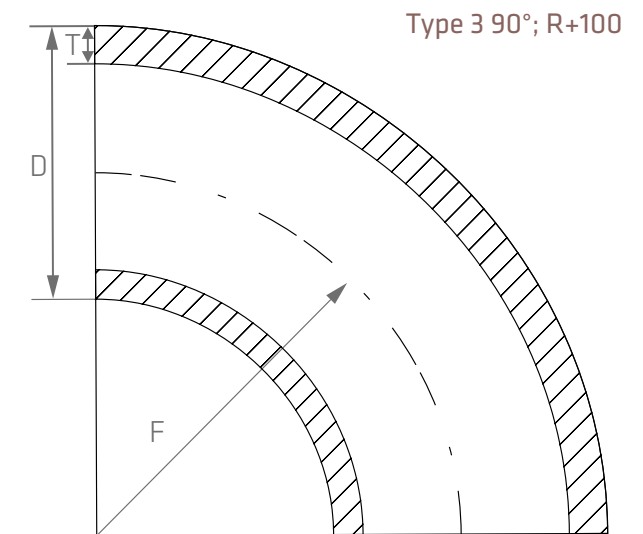
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (1/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
12.0	1.50			26.0	1.5D	0.02			
13.5	1.60			20.0	1.5D	0.02			
13.5	2.35	1/4"	GAS	21.0	1.5D	0.02			
15.0	1.50			22.0	1.5D	0.02			
17.2	1.60			27.5	1.5D	0.03		x	x
17.2	1.60			43.0	5S	0.04			
17.2	2.35	3/8"	GAS	28.5	1.5D	0.04			
18.0	1.50			22.5		0.02			
18.0	1.50			25.0	1.5D	0.03			
20.0	1.50			25.0	1.5D	0.03			



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

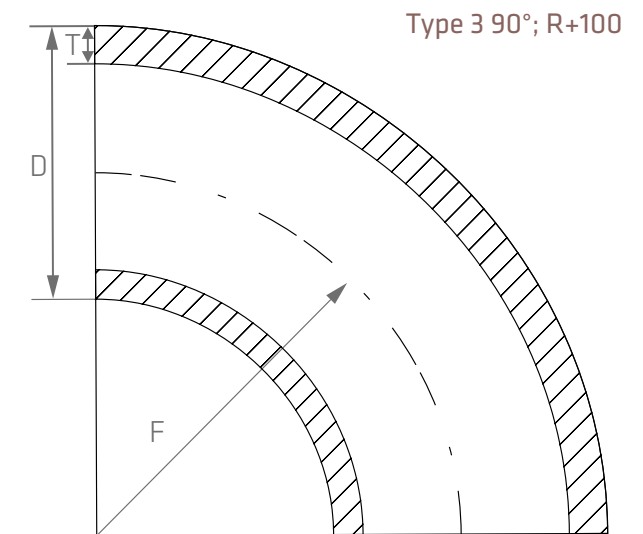
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (2/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
20.0	1.50			30.0	1.5D	0.03			
20.0	2.00			25.0	1.5D	0.04			
20.0	2.00			30.0	1.5D	0.04			
21.3	1.60			28.0		0.03			x 1)
21.3	1.60			45.0	5S	0.06			
21.3	2.00			28.0	1.5D	0.06		x	x 1)
21.3	2.00			45.0	5S	0.07			
21.3	2.60	1/2"	GAS	28.0	1.5D	0.06		x	x
23.0	1.50			25.0		0.04			x
23.0	1.50			34.5	1.5D	0.04			



1) With AD2000 W2

2) Also available with radius D+100

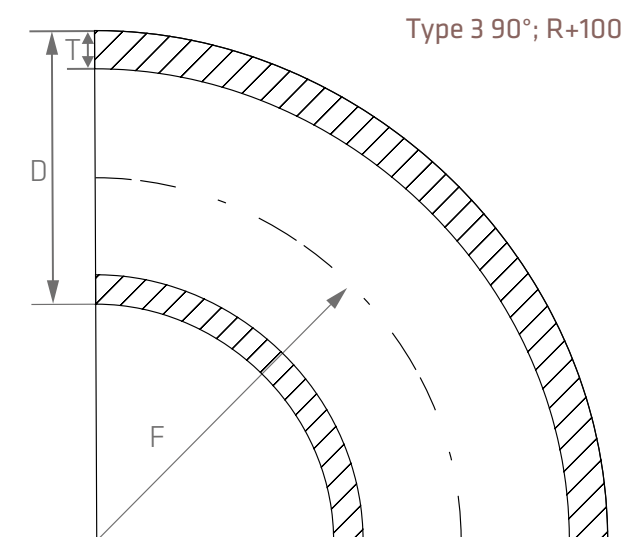
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (3/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
25.0	1.50			27.5	1.5D	0.05			
25.0	1.50			37.0	1.5D	0.05			
25.0	2.00			27.5	1.5D	0.06			x
25.0	2.00			37.0	1.5D	0.06			
26.9	1.60			28.5	1.5D	0.05		x	x
26.9	2.00			29.0	1.5D	0.06		x	x 1)
26.9	2.00			57.0	5S	0.11			
26.9	2.60	3/4"	GAS	29.0	1.5D	0.08		x	x
26.9	2.65	3/4"	GAS	57.0	5S	0.15			
28.0	1.50			32.5		0.06		x	x



1) With AD2000 W2

2) Also available with radius D+100

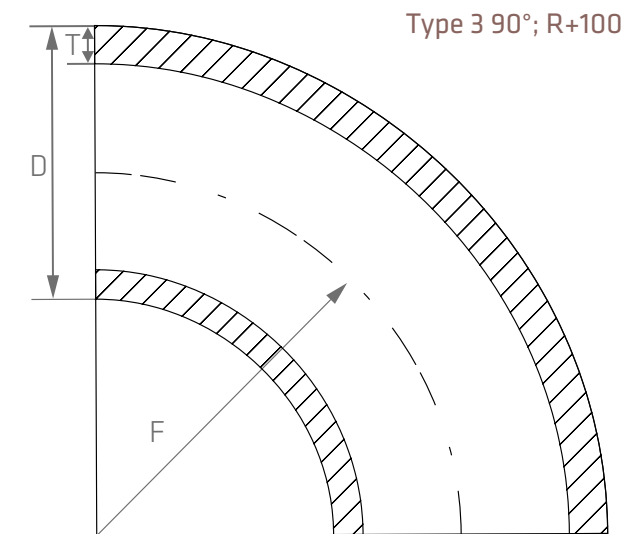
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (4/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
28.0	1.50			42.0	1.5D	0.07			
28.0	2.00			40.0	1.5D	0.09			
30.0	1.50			33.5	1.5D	0.05			
30.0	1.50			45.0	1.5D	0.08			
30.0	2.00			33.5		0.07		x	
30.0	2.00			45.0	1.5D	0.10			
32.0	1.50			35.0	1.5D	0.09			
32.0	2.00			35.0	1.5D	0.11			
33.7	1.60			38.0	1.5D	0.08			
33.7	2.00			38.0	1.5D	0.10		x	x 1)



1) With AD2000 W2

2) Also available with radius D+100

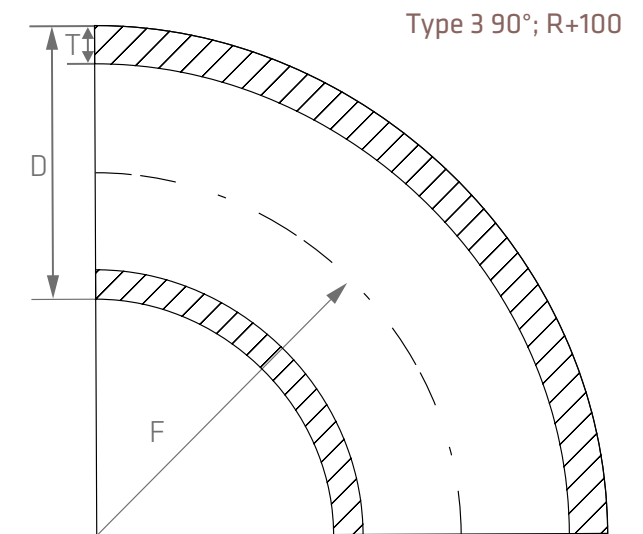
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (5/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
33.7	2.00			72.5	5S	0.18			
33.7	2.60			38.0	1.5D	0.12		x	x
33.7	3.25	1"	GAS	38.0	1.5D	0.14		x	x
33.7	3.25	1"	GAS	72.5	5S	0.28			
35.0	1.50			45.0		0.10			x
35.0	1.50			52.5	1.5D	0.10			
35.0	2.00			45.0	1.5D	0.11		x	
35.0	2.00			52.5	1.5D	0.17			
38.0	2.00			45.0	1.5D	0.12			
38.0	2.00			57.0	1.5D	0.16			



1) With AD2000 W2

2) Also available with radius D+100

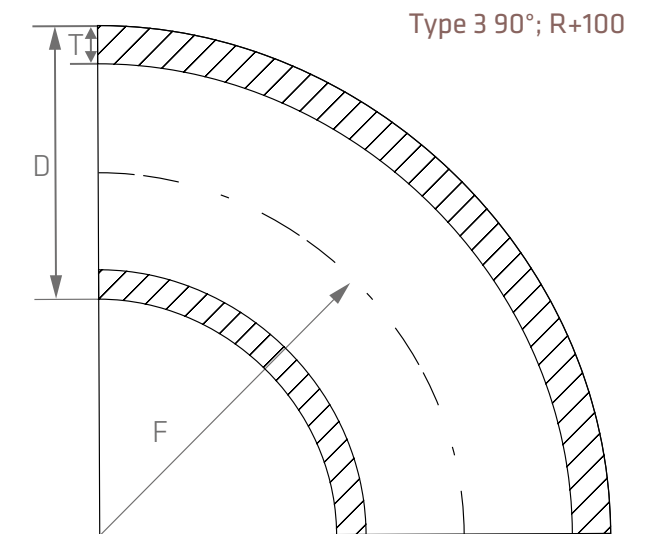
3) R=1D

\* Finishes: page 718; no standard pipe connection

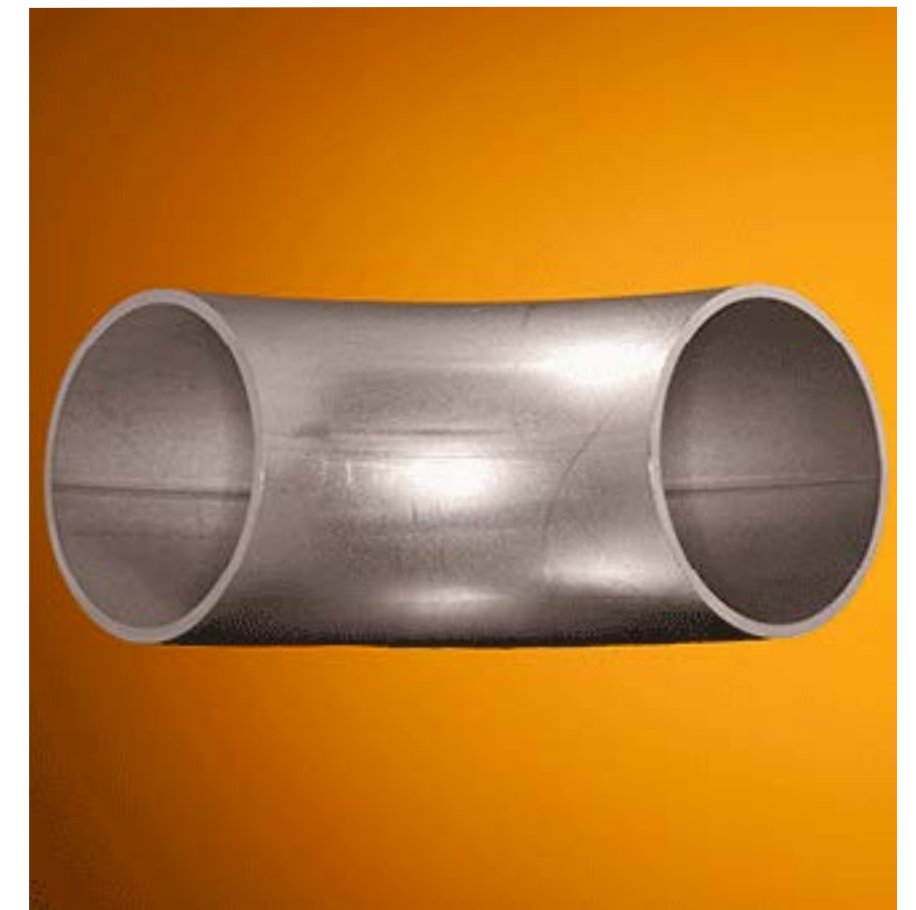
# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (6/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
40.0	1.50			60.0	1.5D	0.11			
40.0	2.00			45.0		0.13		x	x
40.0	2.00			60.0	1.5D	0.18			
42.4	1.60			47.6	1.5D	0.12			
42.4	2.00			48.0	1.5D	0.16		x	x 1)
42.4	2.00			93.0	5S	0.28			
42.4	2.60			48.0	1.5D	0.19		x	x
42.4	3.20			48.0	1.5D	0.23		x	x
42.4	3.25	1 1/4"	GAS	93.0	5S	0.45			
43.0	1.50			47.5		0.15			x



1) With AD2000 W2

2) Also available with radius D+100

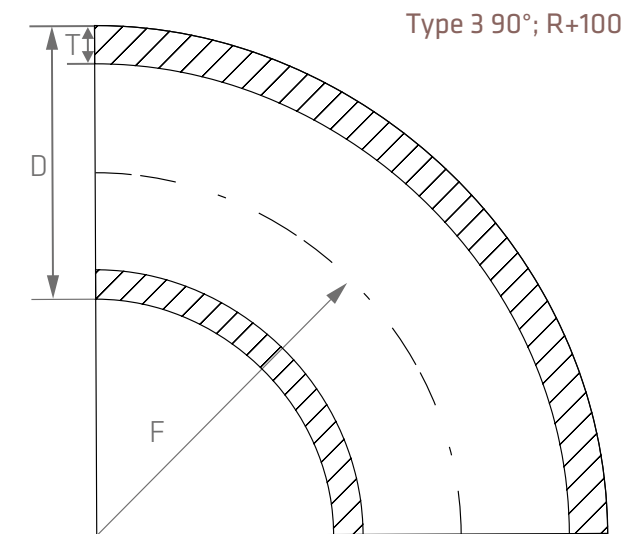
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (7/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
43.0	1.50			64.5	1.5D	0.16			
44.5	2.00			51.0	1.5D	0.16			x
44.5	2.00			66.0	1.5D	0.22			
48.3	1.60			57.1	1.5D	0.17			
48.3	2.00			57.0	1.5D	0.22		x	x 1)
48.3	2.00			108.0	5S	0.39			
48.3	2.60			57.0	1.5D	0.26		x	x
48.3	3.20	1 1/2"	GAS	57.0	1.5D	0.32		x	x
48.3	3.25	1 1/2"	GAS	108.0	5S	0.63			
50.0	1.50			75.0	1.5D	0.22			



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

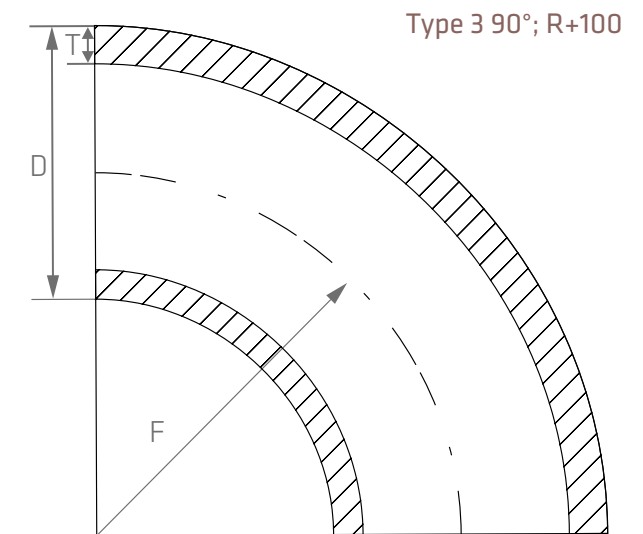
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (8/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS	1.4539 904L	1.4541 321	1.4571 316 Ti
						kg/pce.	*)	*)	*)
50.0	2.00			71.0	1.5D	0.27			
50.0	2.00			75.0	1.5D	0.22			
50.8	1.50			75.0	1.5D	0.09			
50.8	2.00			75.0	1.5D	0.22			
50.8	2.50			75.0	1.5D	0.28			
51.0	1.50			75.0	1.5D	0.09			
53.0	1.50			80.0	1.5D	0.24			
54.0	2.00			70.0		0.31		x	x
54.0	2.00			75.0		0.31			x
54.0	2.00			80.0	1.5D	0.31			



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

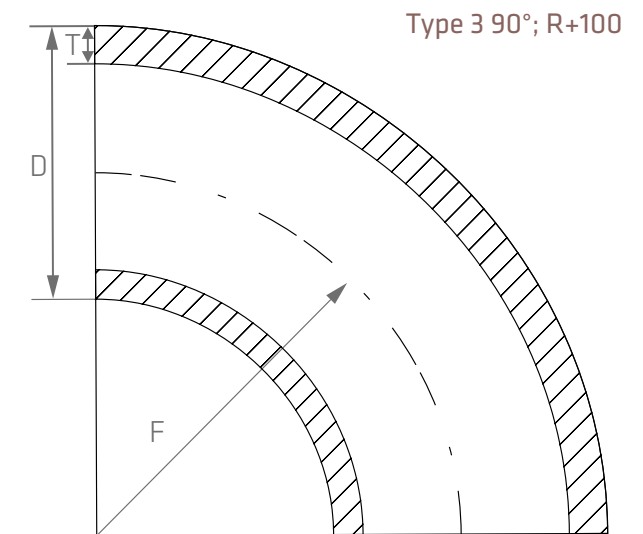
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (9/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
54.0	2.00			150.0	D+100	0.50			
57.0	2.00			77.0	1.5D	0.33		x	
57.0	3.00			77.0	1.5D	0.49			
60.3	1.60			76.2	1.5D	0.28			
60.3	2.00			76.0	1.5D	0.34		x	x 1)
60.3	2.00			135.0	5S	0.61			
60.3	2.60			76.0	1.5D	0.44		x	x
60.3	2.90			76.0	1.5D	0.49		x	x
60.3	3.00			135.0	5S	0.89			
60.3	3.60	2"	GAS	76.0	1.5D	0.62			x



1) With AD2000 W2

2) Also available with radius D+100

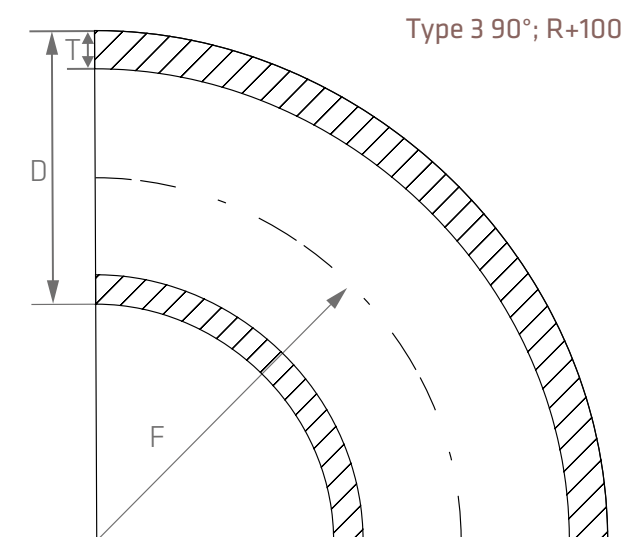
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (10/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
60.3	3.65	2"	GAS	135.0	5S	1.08			
63.5	2.00			94.5	1.5D	0.46			
69.0	2.00			95.0	1.5D	0.62			x
70.0	2.00			92.0		0.47		x	x
70.0	3.00			92.0	1.5D	0.78			
76.1	2.00			95.0	1.5D	0.62		x	x
76.1	2.00			175.0	5S	0.99			
76.1	2.30			95.0		0.72		x	x 1)
76.1	2.60			95.0	1.5D	0.77			x
76.1	2.9/3.0			95.0	1.5D	0.88	x	x	x



1) With AD2000 W2

2) Also available with radius D+100

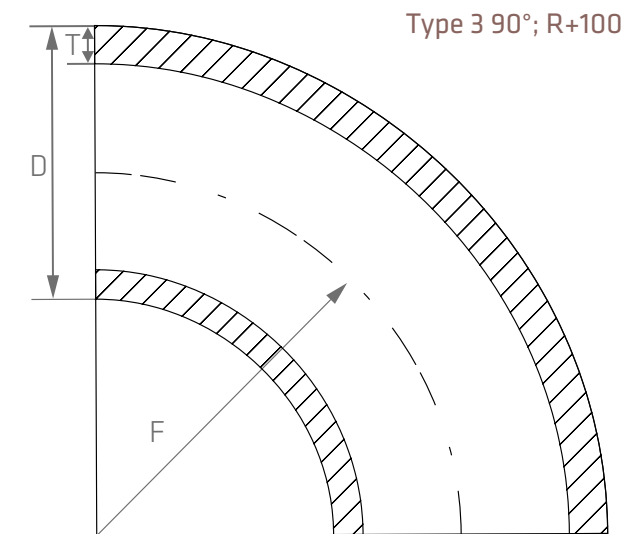
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (11/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
76.1	2.90			175.0	5S	1.44			
76.1	3.60	2 1/2"	GAS	95.0	1.5D	1.08			x
76.1	3.65	2 1/2"	GAS	175.0	5S	1.77			
84.0	2.00			120.0		0.77			x
84.0	2.00			126.0	1.5D	0.81			
84.0	2.00			180.0	D+100	1.20			
88.9	2.00			114.0	1.5D	0.81		x	x
88.9	2.00			205.0	5S	1.34			
88.9	2.30			114.0		0.94		x	x 1)
88.9	2.60			114.0	1.5D	1.02		x	x



1) With AD2000 W2

2) Also available with radius D+100

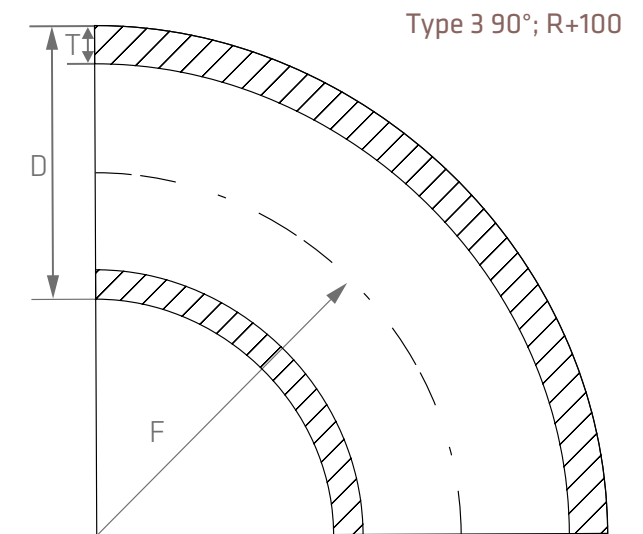
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (12/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
88.9	2.9/3.0			114.0	1.5D	1.15		x	x
88.9	3.00			205.0	5S	2.07			
88.9	3.20			114.0		1.22		x	x
88.9	4.00			114.5	1.5D	1.53			
88.9	4.00			205.0	5S	2.72			
101.6	2.00			133.5	1.5D	1.04			
101.6	3.00			133.0	1.5D	1.56			
104.0	2.00			150.0	1.5D	1.20			x
104.0	2.00			200.0	D+100	1.60			
106.0	3.00			150.0	1.5D	1.82			



1) With AD2000 W2

2) Also available with radius D+100

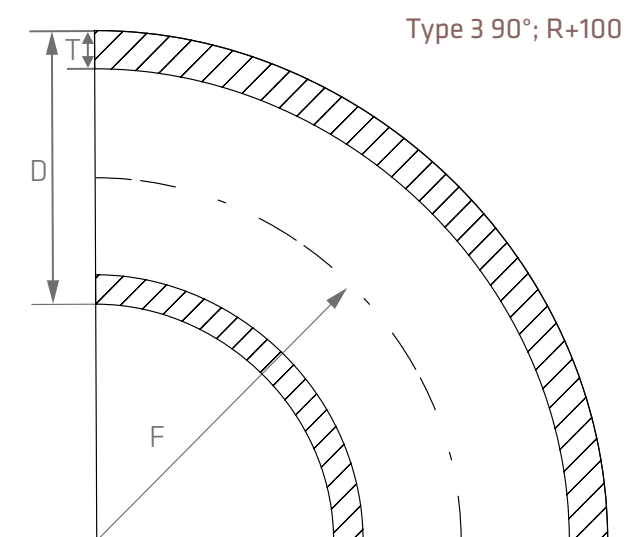
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (13/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
108.0	2.00			142.0	1.5D	1.18			
108.0	3.00			142.0	1.5D	1.76			
108.0	3.00			142.5	1.5D	1.25			x
108.0	4.00			142.5	1.5D	2.20			x
114.3	2.00			152.0	1.5D	1.35		x	x
114.3	2.00			270.0	5S	2.36			
114.3	2.60			152.0		1.60		x	x 1)
114.3	2.90			152.0		1.95		x	x
114.3	3.00			152.0	1.5D	2.00			x
114.3	3.00			270.0	5S	3.45			



1) With AD2000 W2

2) Also available with radius D+100

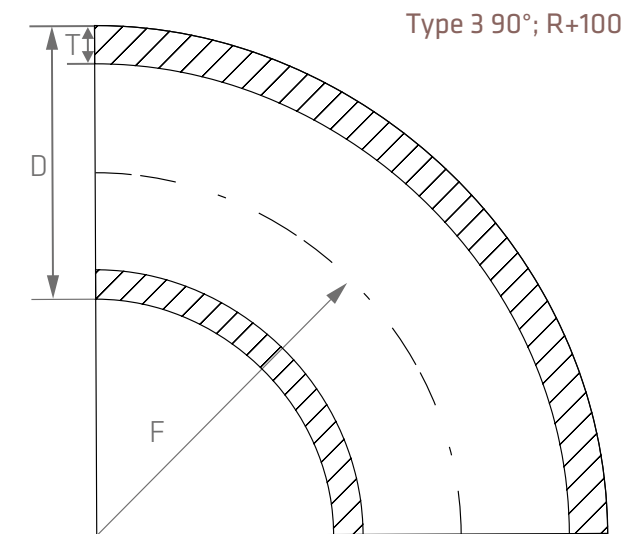
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (14/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
114.3	3.60			152.0		2.50		x	x
114.3	4.00			152.5	1.5D	2.65			
129.0	2.00			187.5	1.5D	1.87			x
129.0	2.00			225.0	D+100	2.40			
131.0	3.00			188.0	1.5D	2.84			
133.0	3.00			181.0		2.00			x
139.7	2.00			190.0	1.5D	2.06			x
139.7	2.60			190.0	1.5D	2.56		x	x 1)
139.7	2.60			330.0	5S	4.43			
139.7	2.90			190.0		2.85			



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

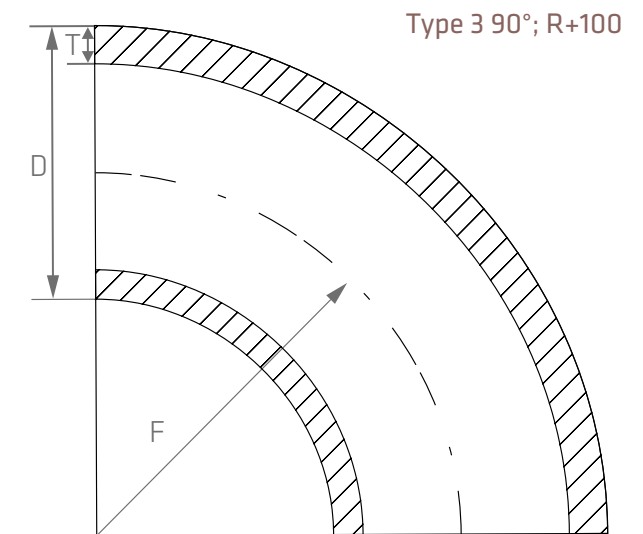
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (15/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
139.7	3.00			190.0	1.5D	3.08	x	x	x
139.7	4.00			190.0	1.5D	4.09			x 1)
154.0	2.00			225.0	1.5D	2.68			x
154.0	2.00			250.0	D+100	3.10			
156.0	3.00			225.0	1.5D	4.06			
156.0	3.00			250.0	D+100	4.60			
159.0	3.00			216.0	1.5D	3.97			x
159.0	4.00			216.0	1.5D	5.40			
168.3	2.00			229.0	1.5D	3.75			x
168.3	2.60			229.0	1.5D	3.88		x	x 1)



1) With AD2000 W2

2) Also available with radius D+100

3) R=1D

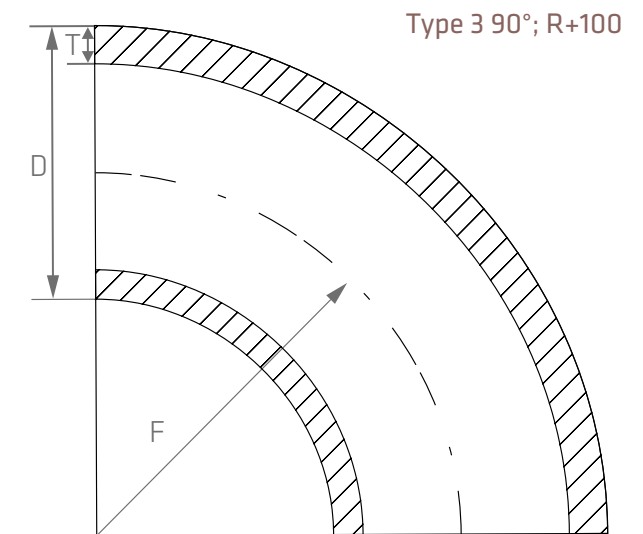
\* Finishes: page 718; no standard pipe connection



# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (16/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
168.3	2.60			390.0	5S	6.33			
168.3	3.00			229.0	1.5D	4.47		x	x
168.3	4.00			229.0	1.5D	5.90			x
204.0	2.00			300.0	1.5D	4.75			x
206.0	3.00			300.0	1.5D	7.18			x
206.0	3.00			300.0	D+100	7.30			
219.1	2.00			305.0	1.5D	5.21			x
219.1	2.60			305.0	1.5D	6.29			x
219.1	3.00			305.0	1.5D	7.52		x	x 1)3)
219.1	3.00			510.0	5S	12.82			



1) With AD2000 W2

2) Also available with radius D+100

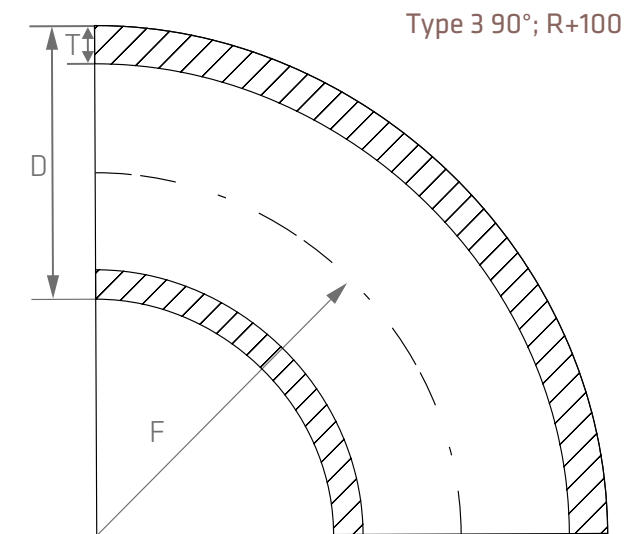
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (17/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
219.1	4.00			305.0	1.5D	10.38	x		x
254.0	2.00			375.0	1.5D	7.41			x 2)
254.0	2.00			350.0	D+100	7.00			
256.0	3.00			375.0	1.5D	11.19			
256.0	3.00			350.0	D+100	10.50			
273.0	2.00			381.0	1.5D	8.12			
273.0	2.60			381.0	1.5D	10.13			
273.0	3.00			381.0	1.5D	12.00		x	x 1)3)
273.0	4.00			381.0	1.5D	16.10	x		x
273.0	5.00			381.0		20.00			x



1) With AD2000 W2

2) Also available with radius D+100

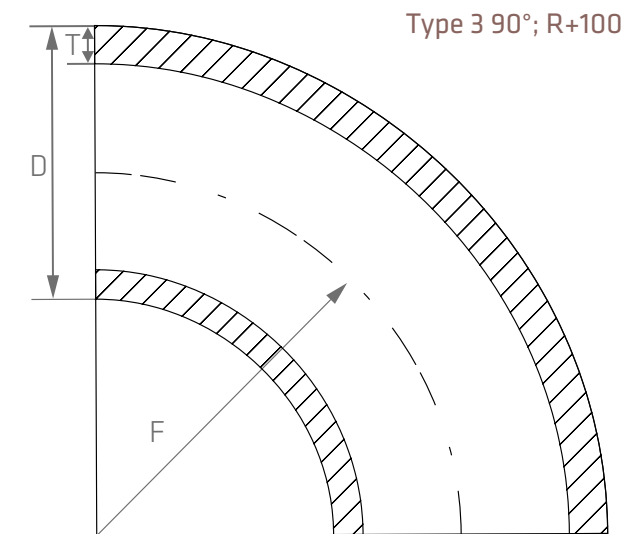
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (18/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
219.1	4.00			305.0	1.5D	10.38	x		x
254.0	2.00			375.0	1.5D	7.41			x 2)
254.0	2.00			350.0	D+100	7.00			
256.0	3.00			375.0	1.5D	11.19			
256.0	3.00			350.0	D+100	10.50			
273.0	2.00			381.0	1.5D	8.12			
273.0	2.60			381.0	1.5D	10.13			
273.0	3.00			381.0	1.5D	12.00		x	x 1)3)
273.0	4.00			381.0	1.5D	16.10	x		x
273.0	5.00			381.0		20.00			x



1) With AD2000 W2

2) Also available with radius D+100

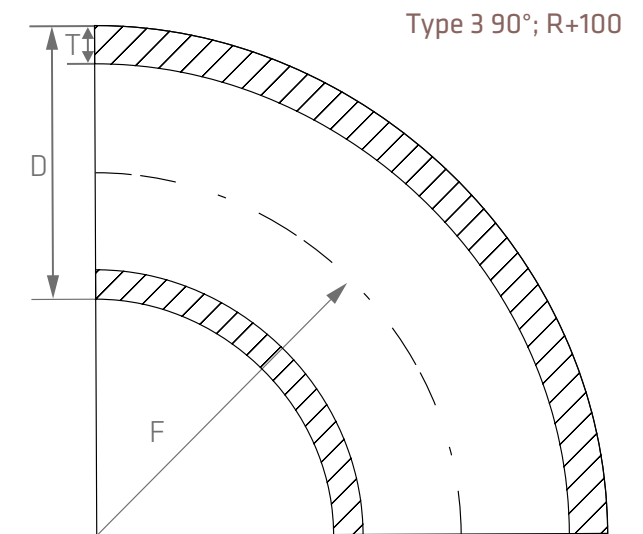
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (19/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS	1.4539 904L	1.4541 321	1.4571 316 Ti
						kg/pce.	*)	*)	*)
273.0	6.00			381.0		24.00			x
304.0	2.00			450.0	1.5D	10.69			
304.0	2.00			400.0	D+100	9.60			
306.0	3.00			450.0	1.5D	16.05			x 2)
306.0	3.00			400.0	D+100	14.40			
323.9	2.00			457.0	1.5D	11.57			
323.9	3.00			457.0	1.5D	17.31		x	x 3)
323.9	4.00			457.0	1.5D	23.00	x		x
323.9	5.00			457.0		28.63			x
355.6	3.00			533.0	1.5D	22.30		x	x 2)



1) With AD2000 W2

2) Also available with radius D+100

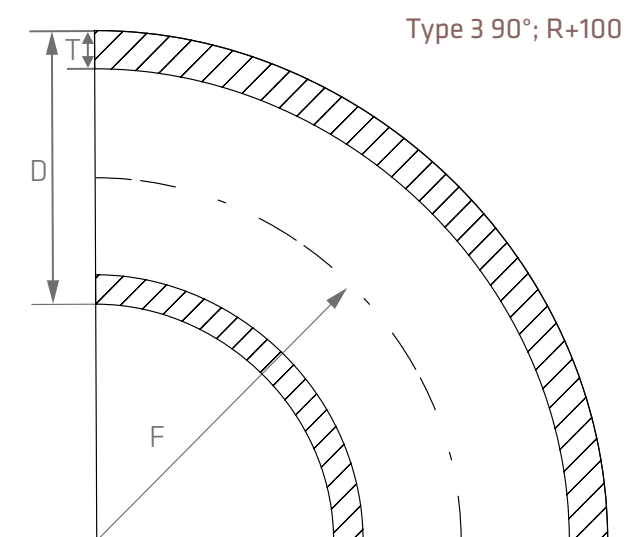
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (20/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS kg/pce.	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
355.6	4.00			533.0	1.5D	35.30			x
356.0	3.00			450.0	D+100	19.00			
406.4	3.00			610.0	1.5D	29.02		x	x 2)
406.4	3.00			500.0	D+100	24.00			
406.4	4.00			610.0	1.5D	38.10			x
406.4	5.00			610.0		60.30			x
408.0	4.00			500.0	D+100	32.00			x
456.0	3.00			550.0	D+100	32.00			x
457.2	2.90			686.0	1.5D	36.70			x
457.2	4.00			686.0	1.5D	48.89			x



1) With AD2000 W2

2) Also available with radius D+100

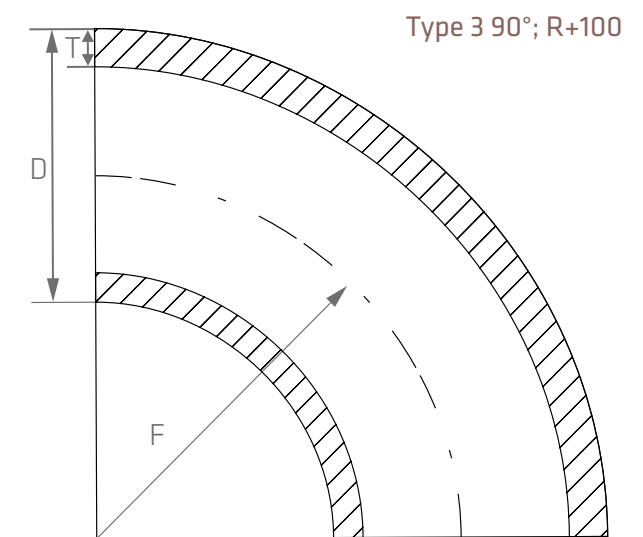
3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° WELDED

acc. to EN-10253-4

1.4539-1.4571 (21/21)



D	T	INCH	GAS	F	TYPE	Grade AISI/UNS	1.4539 904L	1.4541 321	1.4571 316 Ti
						kg/pce.	*)	*)	*)
506.0	3.00			600.0	D+100	37.00			
508.0	3.00			762.0	1.5D	35.75			x 2)
508.0	4.00			762.0	1.5D	59.28			x
508.0	4.00			600.0	D+100	48.00			
606.0	3.00			700.0	D+100	49.00			
608.0	4.00			700.0	D+100	66.00			
609.6	2.90			914.0	1.5D	65.39			
609.6	4.00			914.0	1.5D	87.65			x
711.2	4.00			1066.0	1.5D	78.40			
812.8	4.00			1219.0	1.5D	81.00			



1) With AD2000 W2

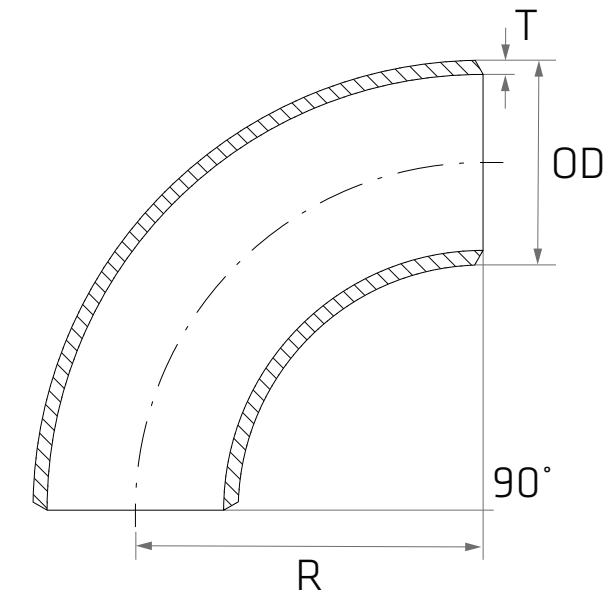
2) Also available with radius D+100

3) R=1D

\* Finishes: page 718; no standard pipe connection

# PIPE ELBOW 90° ASTM-A 403

304-316 (1/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						21.34	2.11	1/2" SCH 10S	38.10
21.34	2.77	1/2" SCH 40S	38.10	LR	0.078	x	x	x	x
21.34	3.73	1/2" SCH 80S	38.10	LR	0.100		x		x
21.34	4.78	1/2" SCH 160	38.10	LR	0.120		x		x
26.67	2.11	3/4" SCH 10S	38.10	LR	0.078	x	x	x	x
26.67	2.87	3/4" SCH 40S	38.10	LR	0.103	x	x	x	x
26.67	3.91	3/4" SCH 80S	38.10	LR	0.104		x		x
26.67	5.56	3/4" SCH 160	38.10	LR	0.140		x		x
33.40	2.77	1" SCH 10S	25.40	SR	0.094		x		x
33.40	3.38	1" SCH 40S	25.40	SR	0.118		x		x



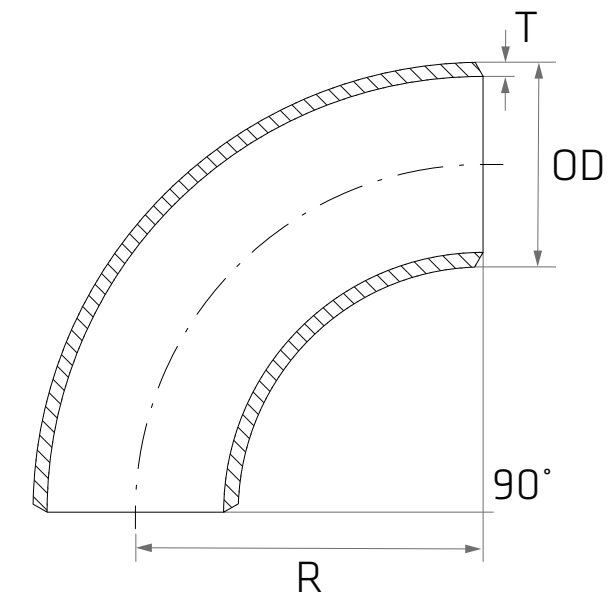
1) = 100% X-RAY

\* Finishes: page 718



# PIPE ELBOW 90° ASTM-A 403

304-316 (2/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						33.40	2.77	1" SCH 10S	38.10
33.40	3.38	1" SCH 40S	38.10	LR	0.154	x	x	x	x
33.40	4.55	1" SCH 80S	38.10	LR	0.204		x		x
33.40	6.35	1" SCH 160	38.10	LR	0.260		x		x
42.16	2.77	1 1/4" SCH 10S	31.75	SR	0.152		x		x
42.16	3.56	1 1/4" SCH 40S	31.75	SR	0.204		x		x
42.16	2.77	1 1/4" SCH 10S	47.75	LR	0.206	x	x	x	x
42.16	3.56	1 1/4" SCH 40S	47.75	LR	0.260	x	x	x	x
42.16	4.85	1 1/4" SCH 80S	47.75	LR	0.349		x		x
42.16	6.35	1 1/4" SCH 160	47.75	LR	0.400		x		x

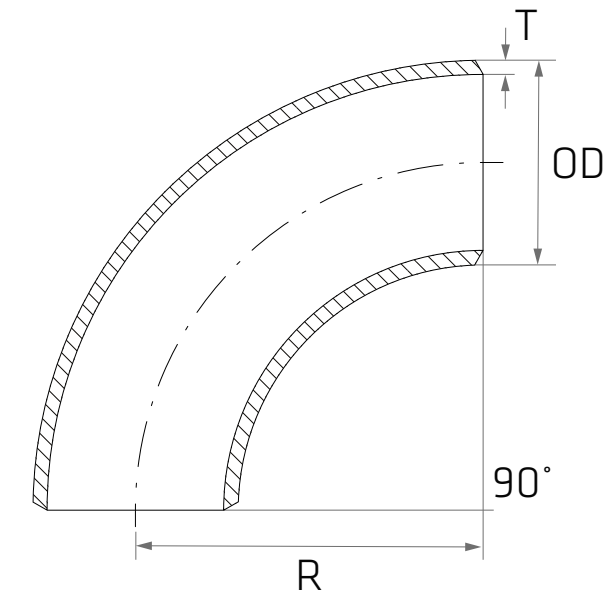


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (3/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						48.26	2.77	1 1/2" SCH 10S	38.10
48.26	3.68	1 1/2" SCH 40S	38.10	SR	0.245		x		x
48.26	2.77	1 1/2" SCH 10S	57.15	LR	0.283	x	x	x	x
48.26	3.68	1 1/2" SCH 40S	57.15	LR	0.368	x	x	x	x
48.26	5.08	1 1/2" SCH 80S	57.15	LR	0.507		x		x
48.26	7.14	1 1/2" SCH 160	57.15	LR	0.680		x		x
60.33	2.77	2" SCH 10S	50.80	SR	0.318		x		x
60.33	3.91	2" SCH 40S	50.80	SR	0.434		x		x
60.33	2.77	2" SCH 10S	76.20	LR	0.478	x	x	x	x
60.33	3.91	2" SCH 40S	76.20	LR	0.652	x	x	x	x

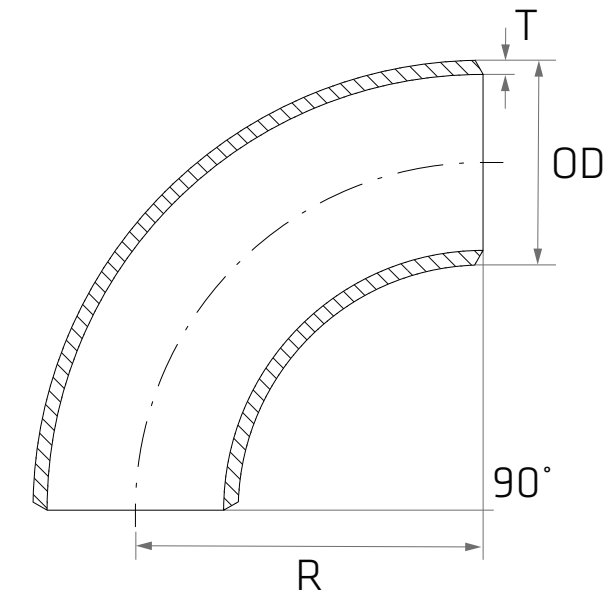


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (4/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						48.26	2.77	1 1/2" SCH 10S	38.10
48.26	3.68	1 1/2" SCH 40S	38.10	SR	0.245		x		x
48.26	2.77	1 1/2" SCH 10S	57.15	LR	0.283	x	x	x	x
48.26	3.68	1 1/2" SCH 40S	57.15	LR	0.368	x	x	x	x
48.26	5.08	1 1/2" SCH 80S	57.15	LR	0.507		x		x
48.26	7.14	1 1/2" SCH 160	57.15	LR	0.680		x		x
60.33	2.77	2" SCH 10S	50.80	SR	0.318		x		x
60.33	3.91	2" SCH 40S	50.80	SR	0.434		x		x
60.33	2.77	2" SCH 10S	76.20	LR	0.478	x	x	x	x
60.33	3.91	2" SCH 40S	76.20	LR	0.652	x	x	x	x

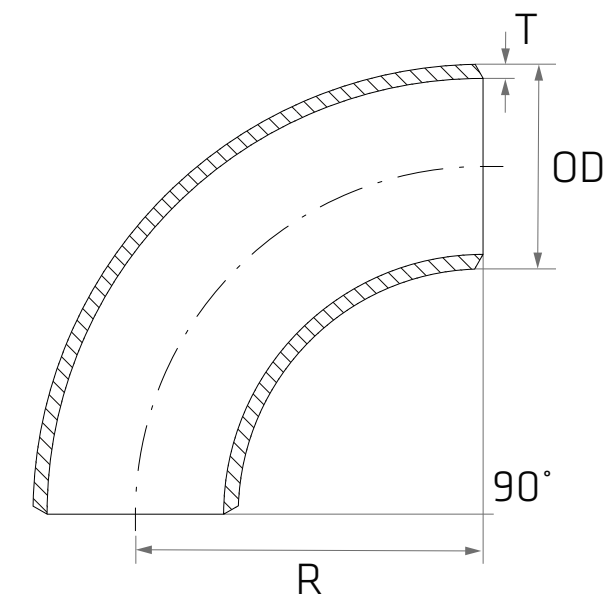


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (5/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						88.90	3.05	3" SCH 10S	114.30
88.90	5.49	3" SCH 40S	114.30	LR	2.040	x	x	x	x
88.90	7.62	3" SCH 80S	114.30	LR	2.870		x		x
88.90	11.13	3" SCH 160	114.30	LR	3.710		x		x
101.60	3.05	3 1/2" SCH 10S	88.90	SR	1.020		x		x
101.60	5.74	3 1/2" SCH 40S	88.90	SR	1.880		x		x
101.60	3.05	3 1/2" SCH 10S	133.35	LR	1.530		x		x
101.60	5.74	3 1/2" SCH 40S	133.35	LR	2.820		x		x
101.60	8.08	3 1/2" SCH 80S	133.35	LR	4.100		x		x
114.30	3.05	4" SCH 10S	101.60	SR	1.310		x		x

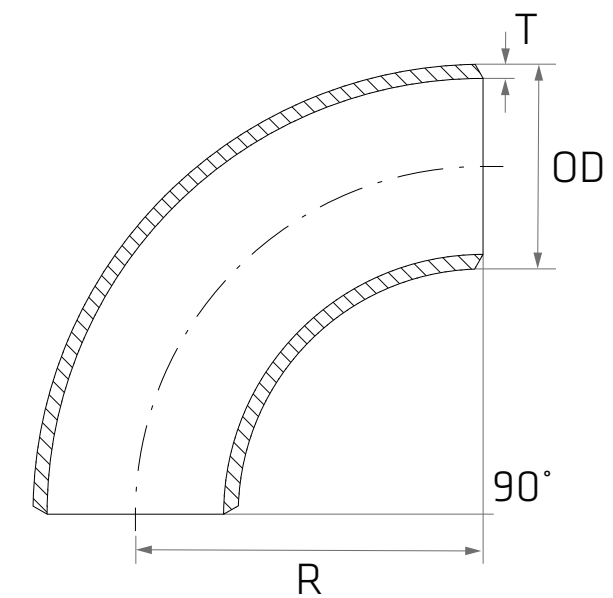


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (6/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						114.30	6.02	4" SCH 40S	101.60
114.30	3.05	4" SCH 10S	152.40	LR	1.970	x	x	x	x
114.30	6.02	4" SCH 40S	152.40	LR	3.840	x	x	x	x
114.30	8.56	4" SCH 80S	152.40	LR	5.620		x		x
114.30	13.49	4" SCH 160	152.40	LR	7.920		x		x
141.30	3.40	5" SCH 10S	127.00	SR	2.280		x		x
141.30	6.55	5" SCH 40S	127.00	SR	4.320		x		x
141.30	3.40	5" SCH 10S	190.50	LR	3.420	x	x	x	x
141.30	6.55	5" SCH 40S	190.50	LR	6.480	x	x	x	x
141.30	9.53	5" SCH 80S	190.50	LR	9.690		x		x

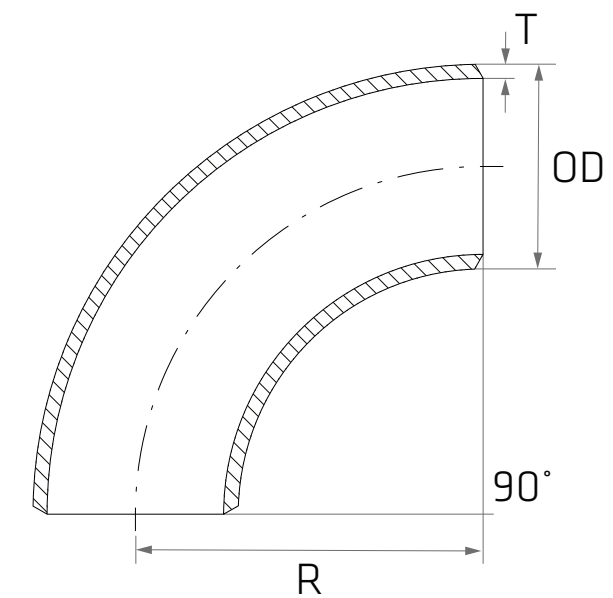


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (7/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						168.28	3.40	6" SCH 10S	152.40
168.28	7.11	6" SCH 40S	152.40	SR	6.630	x	x	x	x
168.28	3.40	6" SCH 10S	228.60	LR	4.870	x	x	x	x
168.28	7.11	6" SCH 40S	228.60	LR	9.940	x	x	x	x
168.28	10.97	6" SCH 80S	228.60	LR	15.990		x		x
219.08	3.76	8" SCH 10S	203.20	SR	6.680	x	x	x	x
219.08	8.18	8" SCH 40S	203.20	SR	13.400	x	x	x	x
219.08	3.76	8" SCH 10S	304.08	LR	10.000	x	x	x	x
219.08	6.35	8" SCH 20S	304.08	LR	13.915				x
219.08	8.18	8" SCH 40S	304.08	LR	20.100	x	x	x	x

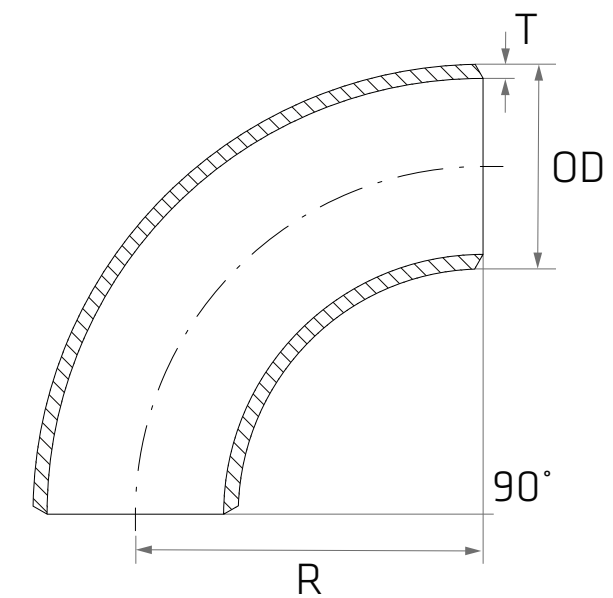


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (8/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
						219.08	12.70	8" SCH 80S	304.08
273.05	4.19	10" SCH 10S	254.00	SR	10.400	x		x	
273.05	9.27	10" SCH 40S	254.00	SR	23.600	x		x	
273.05	4.19	10" SCH 10S	381.00	LR	15.500	x	x	x	x
273.05	9.27	10" SCH 40S	381.00	LR	35.400	x	x	x	x
273.05	12.70	10" SCH 80S	381.00	LR	49.830		x		x
323.85	4.57	12" SCH 10S	304.80	SR	16.700	x		x	
323.85	9.53	12" SCH 40S	304.80	SR	37.500	x		x	
323.85	4.57	12" SCH 10S	457.20	LR	25.900	x	x	x	x
323.85	9.53	12" SCH 40S	457.20	LR	56.200	x	x	x	x



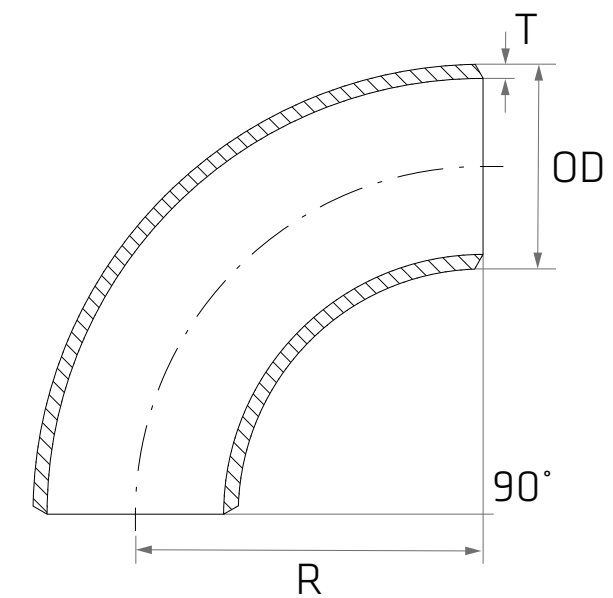
1) = 100% X-RAY

\* Finishes: page 718



# PIPE ELBOW 90° ASTM-A 403

304-316 (9/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
323.85	12.70	12" SCH 80S	457.20	LR	72.480		x		x
355.60	4.78	14" SCH 10S	355.60	SR	24.550	x 1)		x 1)	
355.60	9.53	14" SCH 40S	355.60	SR	48.330	x 1)		x 1)	
355.60	4.78	14" SCH 10S	533.40	LR	34.600	x 1)		x 1)	
355.60	9.53	14" SCH 40S	533.40	LR	66.360	x 1)		x 1)	
406.40	4.78	16" SCH 10S	406.40	SR	32.000	x 1)		x 1)	
406.40	9.53	16" SCH 40S	406.40	SR	63.370	x 1)		x 1)	
406.40	4.78	16" SCH 10S	609.60	LR	45.200	x 1)		x 1)	
406.40	9.53	16" SCH 40S	609.60	LR	87.110	x 1)		x 1)	
457.20	4.78	18" SCH 10S	685.80	LR	57.300	x 1)		x 1)	

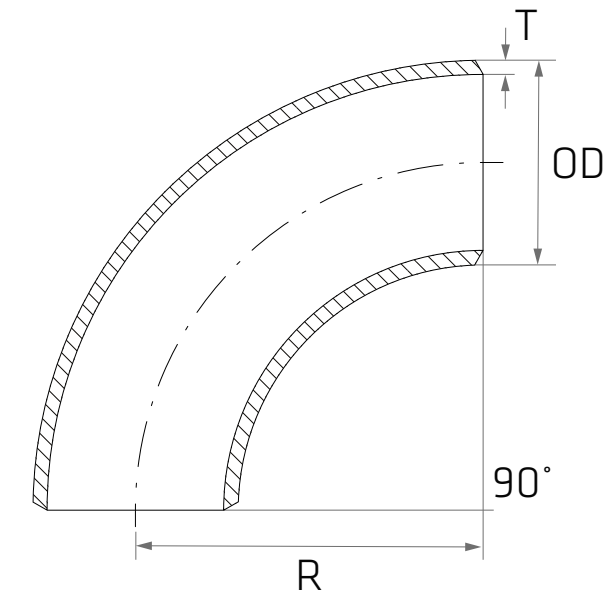


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 90° ASTM-A 403

304-316 (10/10)



D	T	INCH-SCH	F	TYPE	Grade AISI/UNS	304/304L		316/316L			
						kg/pce.		welded	seamless	welded	seamless
457.20	9.53	18" SCH 40S	685.80	LR	110.670	x 1)		x 1)			
508.00	5.56	20" SCH 10S	762.00	LR	82.000	x 1)		x 1)			
508.00	9.53	20" SCH 40S	762.00	LR	136.990	x 1)		x 1)			
609.60	6.35	24" SCH 10S	914.40	LR	136.000	x 1)		x 1)			
609.60	9.53	24" SCH 40S	914.40	LR	198.050	x 1)		x 1)			

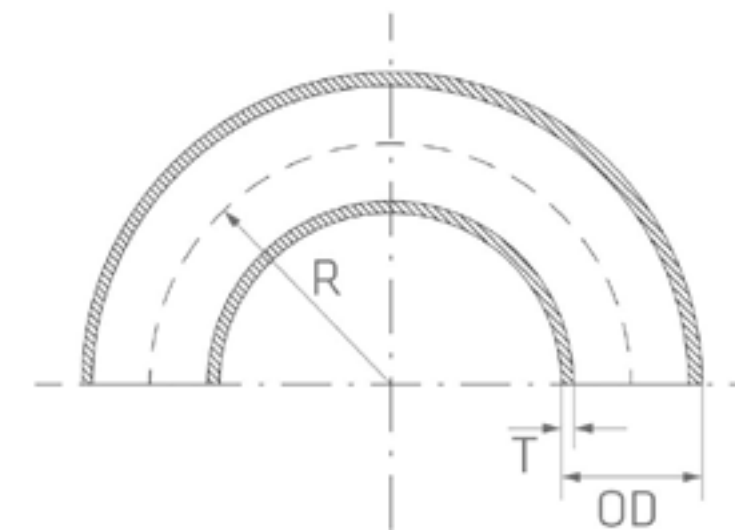


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 180° ASTM-A 403

304-316 (1/2)

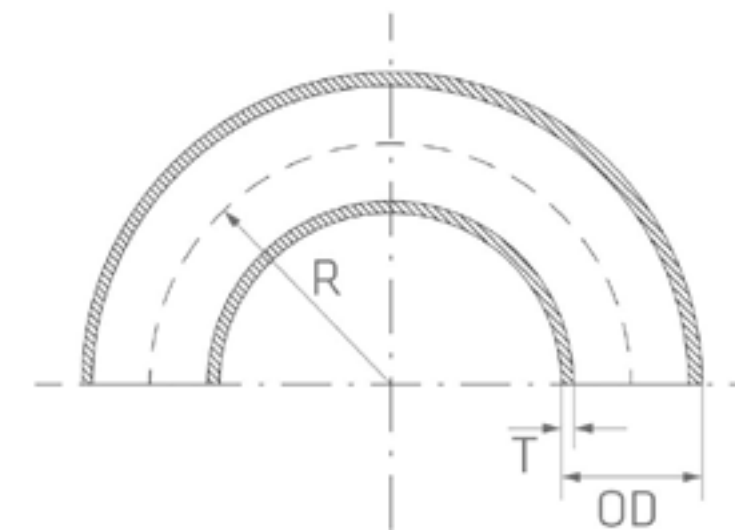


OD	T	INCH-SCH	R	TYPE	Grade	304/304L	316/316L
					AISI/UNS	seamless	seamless
					kg/pce.		
21.34	2.11	1/2" SCH 10S	38.10	LR	0.160	x	x
21.34	2.77	1/2" SCH 40S	38.10	LR	0.160	x	x
26.67	2.11	3/4" SCH 10S	38.10	LR	0.200	x	x
26.67	2.87	3/4" SCH 40S	38.10	LR	0.220	x	x
33.40	2.77	1" SCH 10S	38.10	LR	0.280	x	x
33.40	3.38	1" SCH 40S	38.10	LR	0.404	x	x
42.16	2.77	1 1/4" SCH 10S	47.75	LR	0.514	x	x
42.16	3.56	1 1/4" SCH 40S	47.75	LR	0.624	x	x
48.26	2.77	1 1/2" SCH 10S	57.15	LR	0.600	x	x
48.26	3.68	1 1/2" SCH 40S	57.15	LR	0.808	x	x



# PIPE ELBOW 180° ASTM-A 403

304-316 (2/2)

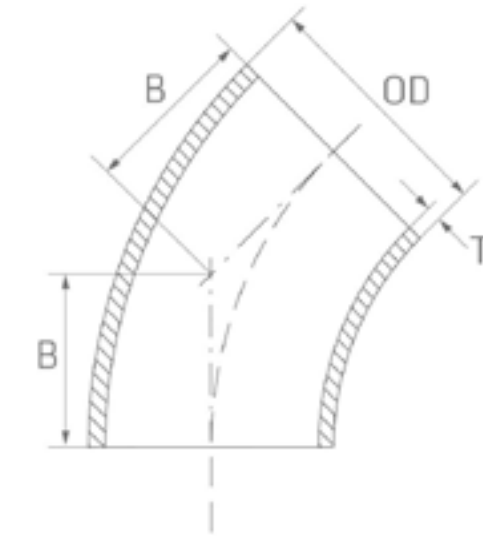


OD	T	INCH-SCH	R	TYPE	Grade AISI/UNS kg/pce.	304/304L seamless	316/316L seamless
60.33	2.77	2" SCH 10S	76.20	LR	1.000	x	x
60.33	3.91	2" SCH 40S	76.20	LR	1.640	x	x
73.03	3.05	2 1/2" SCH 10S	95.25	LR	1.580	x	x
88.90	3.05	3" SCH 10S	114.30	LR	2.930	x	x
114.30	3.05	4" SCH 10S	152.40	LR	5.850	x	x



# PIPE ELBOW 45° ASTM-A 403

304-316 (1/4)



D	T	INCH-SCH	B	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
21.34	2.11	1/2" SCH 10S	15.88	LR	0.030		x		x
21.34	2.77	1/2" SCH 40S	15.88	LR	0.039		x		x
26.67	2.11	3/4" SCH 10S	19.00	LR	0.039		x		x
26.67	2.87	3/4" SCH 40S	19.00	LR	0.052		x		x
33.40	2.77	1" SCH 10S	22.22	LR	0.064		x		x
33.40	3.38	1" SCH 40S	22.22	LR	0.077		x		x
42.16	2.77	1 1/4" SCH 10S	25.40	LR	0.103		x		x
42.16	3.56	1 1/4" SCH 40S	25.40	LR	0.130		x		x
48.26	2.77	1 1/2" SCH 10S	28.45	LR	0.142		x		x
48.26	3.68	1 1/2" SCH 40S	28.45	LR	0.184		x		x

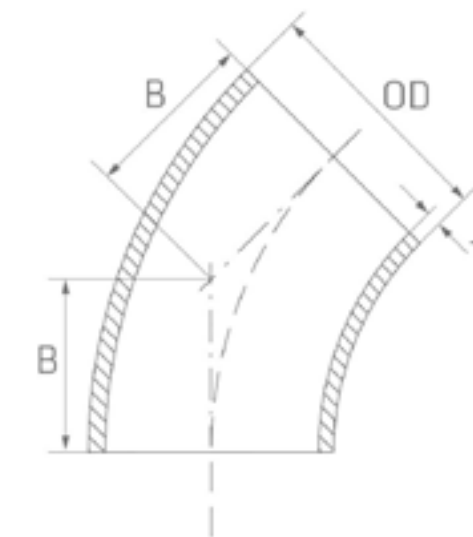


1) = 100% X-RAY

\* Finishes: page 718

# PIPE ELBOW 45° ASTM-A 403

304-316 (2/4)

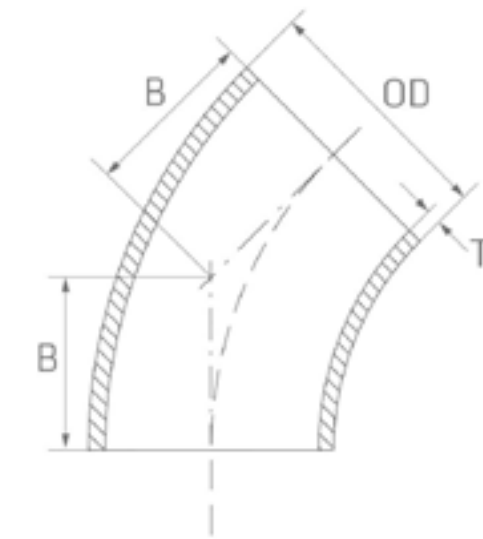


D	T	INCH-SCH	B	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
60.33	2.77	2" SCH 10S	35.05	LR	0.239		x		x
60.33	3.91	2" SCH 40S	35.05	LR	0.326		x		x
73.03	3.05	2 1/2" SCH 10S	44.45	LR	0.406		x		x
73.03	5.16	2 1/2" SCH 40S	44.45	LR	0.683		x		x
88.90	3.05	3" SCH 10S	50.80	LR	0.571		x		x
88.90	5.49	3" SCH 40S	50.80	LR	1.020		x		x
101.60	3.05	3 1/2" SCH 10S	57.15	LR	0.764		x		x
101.60	5.74	3 1/2" SCH 40S	57.15	LR	1.410		x		x
114.30	3.05	4" SCH 10S	63.50	LR	0.985		x		x
114.30	6.02	4" SCH 40S	63.50	LR	1.920		x		x



# PIPE ELBOW 45° ASTM-A 403

304-316 (3/4)



D	T	INCH-SCH	B	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
141.30	3.40	5" SCH 10S	79.25	LR	1.710		x		x
141.30	6.55	5" SCH 40S	79.25	LR	3.240		x		x
168.28	3.40	6" SCH 10S	95.25	LR	2.430	x	x	x	x
168.28	7.11	6" SCH 40S	95.25	LR	4.970	x	x	x	x
219.08	3.76	8" SCH 10S	127.00	LR	5.010	x	x	x	x
219.08	8.18	8" SCH 40S	127.00	LR	10.100	x	x	x	
273.05	4.19	10" SCH 10S	158.75	LR	7.770	x		x	
273.05	9.27	10" SCH 40S	158.75	LR	17.700	x		x	
323.85	4.57	12" SCH 10S	190.50	LR	12.500	x		x	
323.85	9.53	12" SCH 40S	190.50	LR	28.100	x		x	



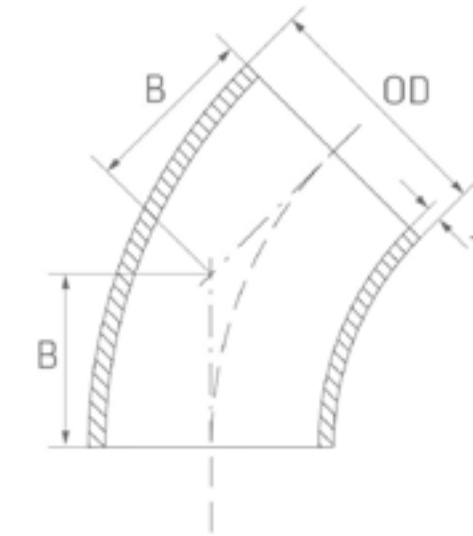
1) = 100% X-RAY

\* Finishes: page 718



# PIPE ELBOW 45° ASTM-A 403

304-316 (4/4)



D	T	INCH-SCH	B	TYPE	Grade AISI/UNS kg/pce.	304/304L		316/316L	
						welded	seamless	welded	seamless
355.60	4.78	14" SCH 10S	222.25	LR	28.630	x 1)		x 1)	
355.60	9.53	14" SCH 40S	222.25	LR	32.930	x 1)		x 1)	
406.40	4.78	16" SCH 10S	254.00	LR	34.840	x 1)		x 1)	
406.40	9.53	16" SCH 40S	254.00	LR	43.310	x 1)		x 1)	



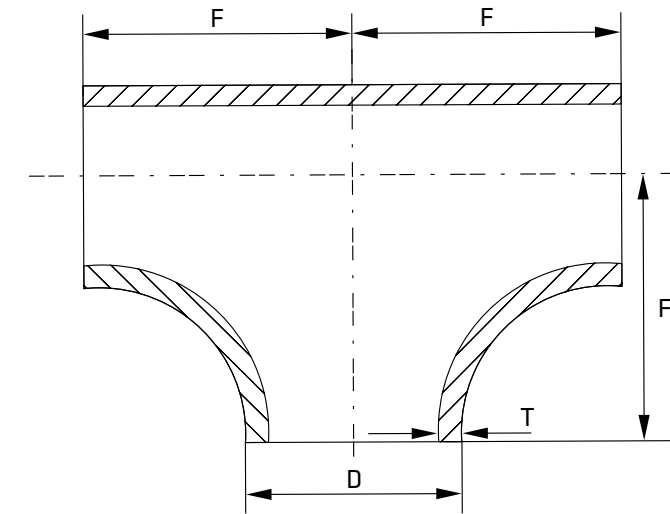
1) = 100% X-RAY

\* Finishes: page 718

# TEE SEAMLESS

EN-10253-4

1.4462-1.4571 (1/4)



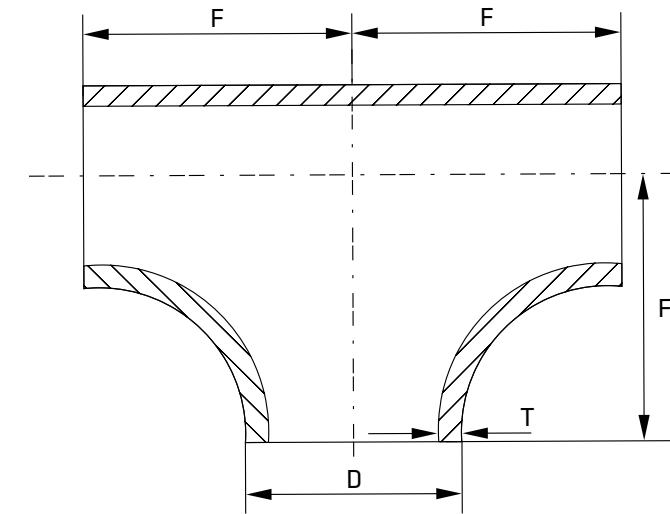
Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
17.20	2.30	17.20	2.30	20	0.06				x
21.30	1.60	21.30	1.60	25	0.08				x
21.30	2.00	21.30	2.00	25	0.09			x	x
21.30	2.90	21.30	2.90	25	0.12				x
21.34	2.11	21.34	2.11	25	0.10	x	x		
21.34	2.77	21.34	2.77	25	0.08	x	x		
26.67	2.11	26.67	2.11	29	0.13	x	x		
26.67	2.87	26.67	2.87	29	0.18	x	x		
26.90	2.00	26.90	2.00	29	0.15			x	x
33.40	2.77	33.40	2.77	38	0.24	x	x		



# TEE SEAMLESS

EN-10253-4

1.4462-1.4571 (2/4)



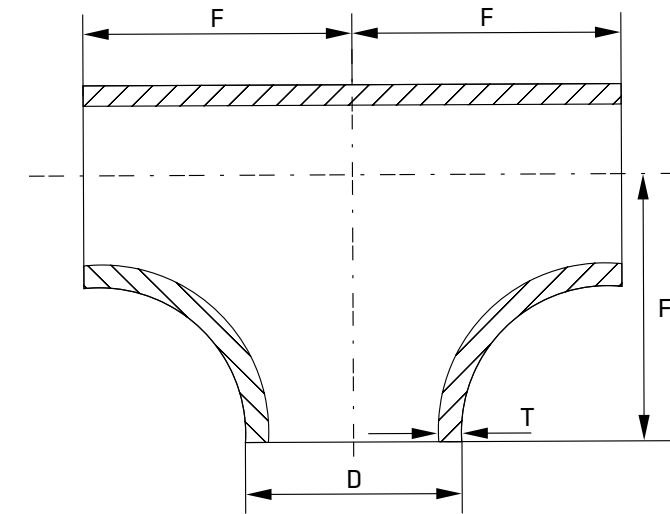
Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
33.40	3.38	33.40	3.38	38	0.28	x	x		
33.40	4.55	33.40	4.55	38	0.47		x		
33.70	2.00	33.70	2.00	38	0.22			x	x
33.70	2.60	33.70	2.60	38	0.29				x
42.16	2.77	42.16	2.77	48	0.46	x	x		
42.16	3.56	42.16	3.56	48	0.41	x	x		
42.40	2.00	42.40	2.00	48	0.34			x	x
42.40	2.60	42.40	2.60	48	0.42				x
48.26	2.77	48.26	2.77	57	0.65	x	x		
48.26	3.68	48.26	3.68	57	1.70	x	x		



# TEE SEAMLESS

EN-10253-4

1.4462-1.4571 (3/4)



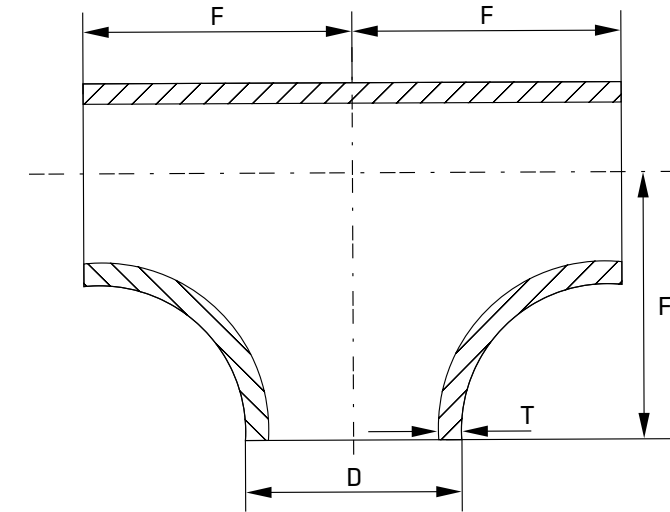
Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
48.30	2.00	48.30	2.00	57	0.47			x	x
48.30	2.60	48.30	2.60	57	0.59				x
60.30	2.00	60.30	2.00	64	0.64			x	x
60.30	2.90	60.30	2.90	64	0.90				x
60.33	2.77	60.33	2.77	64	0.63	x	x		
60.33	3.91	60.33	3.91	64	1.20	x	x		
60.33	5.54	60.33	5.54	64	2.10	x	x		
73.03	3.05	73.03	3.05	76	1.01	x	x		
73.03	5.16	73.03	5.16	76	2.40	x	x		
76.10	2.90	76.10	2.90	76	1.35				x



# TEE SEAMLESS

EN-10253-4

1.4462-1.4571 (4/4)



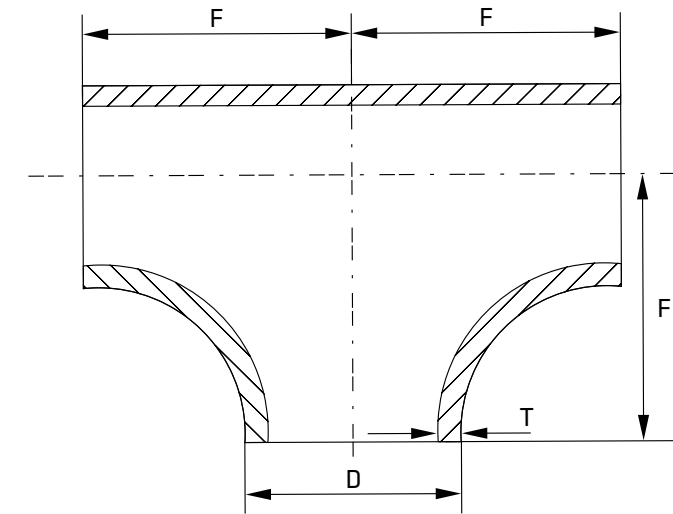
Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4462 S 31803 *)	1.4539 904L *)	1.4541 321 *)	1.4571 316 Ti *)
76.10	4.00	76.10	4.00	76	1.73	x	x		
88.90	3.05	88.90	3.05	86	1.80	x	x		
88.90	3.20	88.90	3.20	86	1.95				x
88.90	5.49	88.90	5.49	86	1.90	x	x		
88.90	7.62	88.90	7.62	86	4.90		x		
114.30	3.05	114.30	3.05	105	2.70	x	x		
114.30	3.60	114.30	3.60	105	3.30				x
114.30	6.02	114.30	6.02	105	4.13	x	x		
168.30	7.11	168.30	7.11	143	9.73	x	x		
219.10	8.18	219.10	8.18	178	23.20	x	x		



# TEE WELDED

EN-10253-4

1.4307-1.4571 (1/4)



Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4307 304 *)	1.4404 316 *)	1.4432 316L *)	1.4541 321 *)	1.4571 316 Ti *)
13.5	1.6	13.5	1.6	18	0.02		x			
17.2	1.6	17.2	1.6	20	0.04		x			
21.3	2.0	21.3	2.0	25	0.08	x	x	x	x	x
23.0	1.5	23.0	1.5		0.07		x			
26.9	2.0	26.9	2.0	29	0.10	x	x		x	x
33.7	2.0	33.7	2.0	38	0.22	x	x	x	x	x
33.7	2.6	33.7	2.6	38	0.26					x
42.4	2.0	42.4	2.0	48	0.34	x	x	x	x	x
42.4	2.6	42.4	2.6	48	0.42					x
48.3	2.0	48.3	2.0	57	0.47	x	x	x	x	x

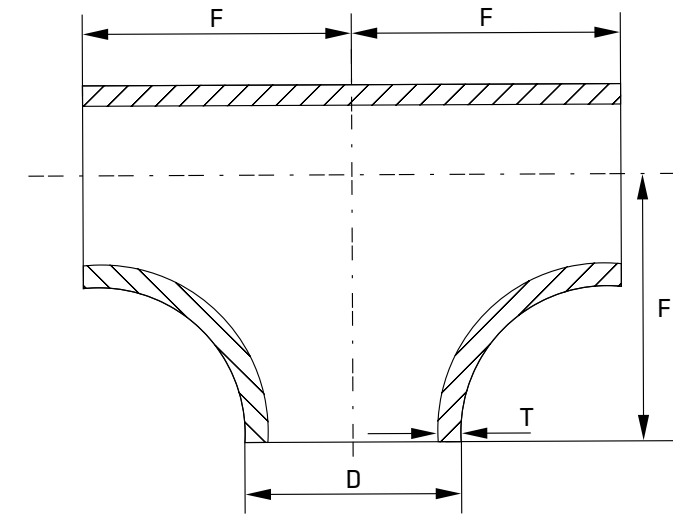




# TEE WELDED

EN-10253-4

1.4307-1.4571 (2/4)



Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4307 304 *)	1.4404 316 *)	1.4432 316L *)	1.4541 321 *)	1.4571 316 Ti *)
48.3	2.6	48.3	2.6	57	0.59		x			x
54.0	2.0	54.0	2.0	61	0.48					x
60.3	2.0	60.3	2.0	64	0.64	x	x		x	x
60.3	2.6	60.3	2.6	64	0.81		x			x
60.3	2.9	60.3	2.9	64	0.83					x
70.0	2.0	70.0	2.0	76	0.70	x				x
76.1	2.0	76.1	2.0	76	0.62	x	x	x		
76.1	2.3	76.1	2.3	76	1.10				x	x
76.1	2.9	76.1	2.9	76	1.29					x
84.0	2.0	84.0	2.0	82	0.94					x

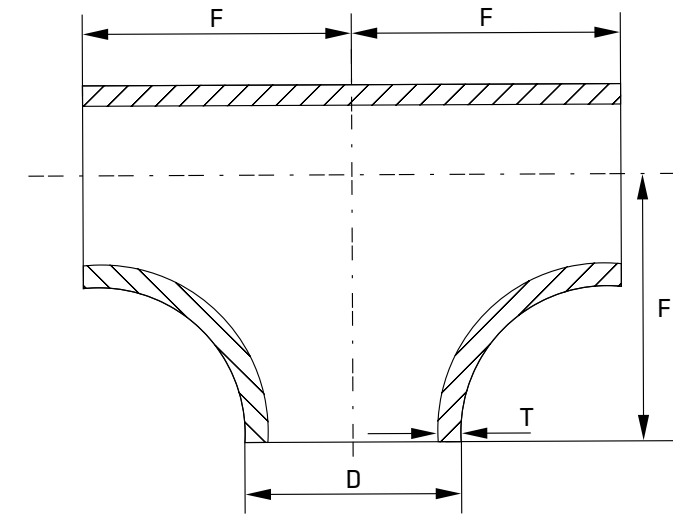




# TEE WELDED

EN-10253-4

1.4307-1.4571 (3/4)



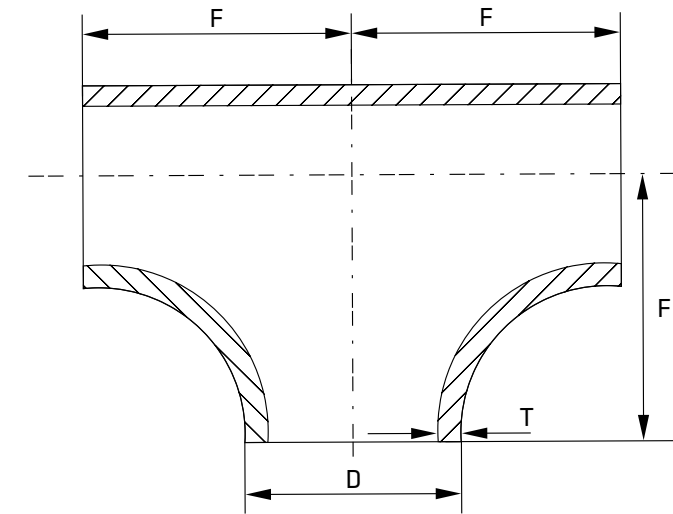
Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4307 304 *)	1.4404 316 *)	1.4432 316L *)	1.4541 321 *)	1.4571 316 Ti *)
88.9	2.0	88.9	2.0	86	0.83	x	x			x
88.9	2.3	88.9	2.3	86	1.45				x	x
88.9	2.6	88.9	2.6	86	1.07	x	x			
88.9	3.0	88.9	3.0	86	1.85		x			x
104.0	2.0	104.0	2.0	98	1.39					x
114.3	2.0	114.3	2.0	105	1.05	x	x			
114.3	2.6	114.3	2.6	105	2.40				x	x
114.3	3.0	114.3	3.0	105	2.67					x
129.0	2.0	129.0	2.0	115	2.24					x
139.7	2.6	139.7	2.6	124	3.40	x	x		x	x



# TEE WELDED

EN-10253-4

1.4307-1.4571 (4/4)



Outside diameter	Wall thickness	D	T	F	Grade AISI/UNS kg/pce.	1.4307 304 *)	1.4404 316 *)	1.4432 316L *)	1.4541 321 *)	1.4571 316 Ti *)
139.7	3.0	139.7	3.0	124	3.80	x	x			x
154.0	2.0	154.0	2.0	143	4.50					x
156.0	3.0	156.0	3.0		4.86			x		
168.3	2.6	168.3	2.6	143	4.80				x	x
168.3	3.0	168.3	3.0	143	5.40	x	x			x
168.3	4.0	168.3	4.0	143	6.00	x	x			
219.1	3.0	219.1	3.0	178	7.50	x	x		x	x
219.1	4.0	219.1	4.0	178	12.70					x
273.0	3.0	273.0	3.0	216	10.60					x
323.9	3.0	323.9	3.0	254	15.00					x



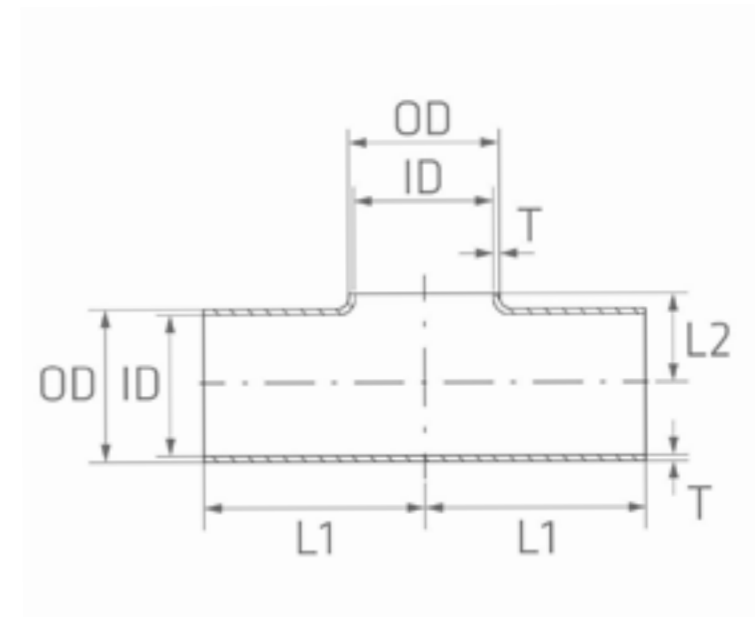
1) = 100% X-RAY

\* Finishes: page 718

# TEE WELDED WITH SHORT BRANCH

acc. to EN-10253-4

1.4307-1.4404 (1/4)



D1	T	H	L	TYPE	Grade AISI/UNS kg/pce.	1.4307	1.4404
						304 *)	316 *)
17.2	1.60	10.0	25.5	TB	0.024		x
20.0	2.00	11.3	25.5	TB	0.070		x
21.3	2.00	12.0	25.5	TB	0.044	x	x
25.0	2.00	14.0	28.5	TB	0.160	x	x
26.9	2.00	15.0	28.5	TB	0.063	x	x
30.0	2.00	17.0	38.0	TB	0.057		x
33.7	2.00	19.0	38.0	TB	0.107	x	x
38.0	2.00	20.5	47.5	TB	0.300	x	x
40.0	2.00	22.0	47.5	TB	0.310		x
42.4	2.00	24.0	47.5	TB	0.179	x	x

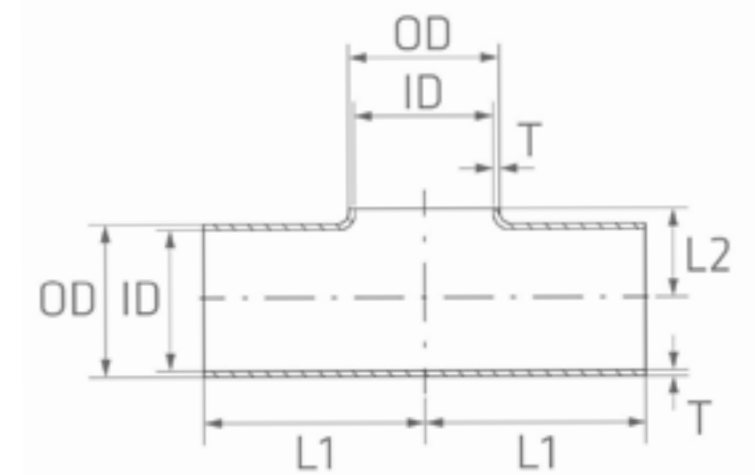




# TEE WELDED WITH SHORT BRANCH

acc. to EN-10253-4

1.4307-1.4404 (2/4)



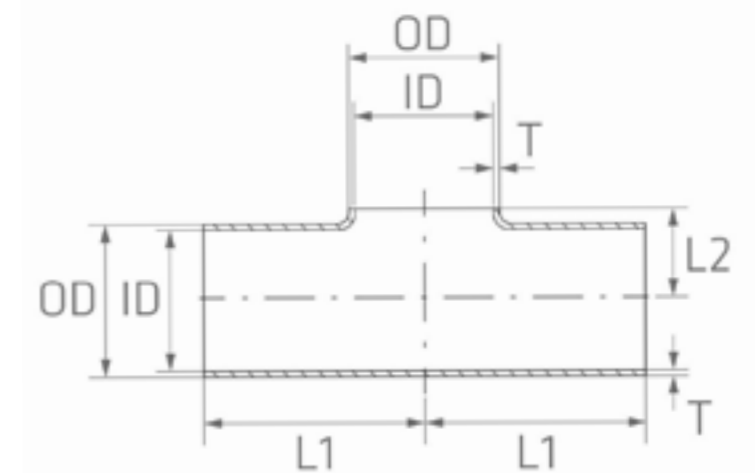
D1	T	H	L	TYPE	Grade AISI/UNS	1.4307	1.4404
						304	316
kg/pce.						*)	*)
44.5	2.00	25.6	47.5	TB	0.150	x	x
48.3	2.00	26.0	57.0	TB	0.242	x	x
54.0	2.00	30.0	57.0	TB	0.218	x	x
57.0	3.00	31.8	57.0	TB	0.900		x
60.3	2.00	34.0	63.5	TB	0.345	x	x
60.3	3.00	34.0	63.5	TB	0.509	x	x
70.0	2.00	38.0	63.5	TB	0.384	x	x
76.1	2.00	42.0	76.0	TB	0.532	x	x
76.1	3.00	42.0	76.0	TB	0.751	x	x
84.0	2.00	46.5	85.5	TB	0.633	x	x



# TEE WELDED WITH SHORT BRANCH

acc. to EN-10253-4

1.4307-1.4404 (3/4)



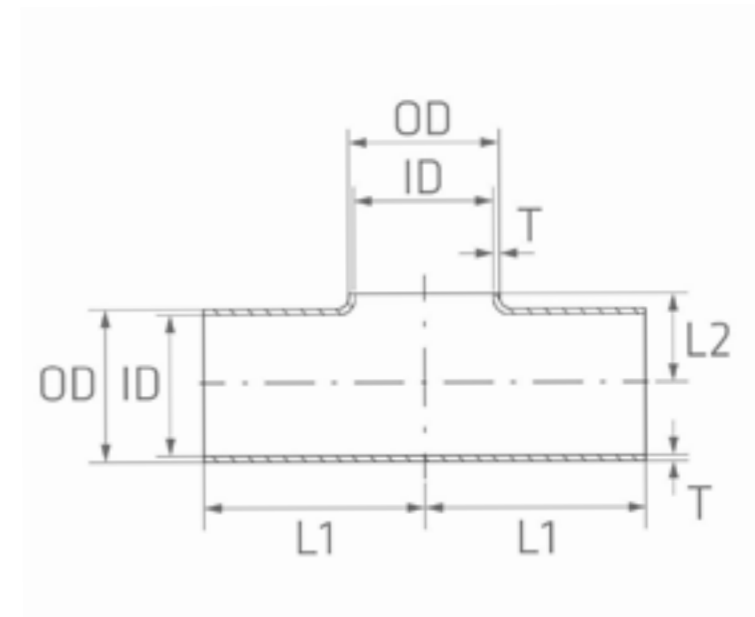
D1	T	H	L	TYPE	Grade AISI/UNS	1.4307	1.4404
						304	316
kg/pce.						*)	*)
88.9	2.00	48.5	85.5	TB	0.679	x	x
88.9	3.00	48.5	85.5	TB	0.970	x	x
104.0	2.00	56.3	105.0	TB	0.954	x	x
106.0	3.00	56.5	105.0	TB	1.431		x
108.0	2.00	58.3	105.0	TB	1.250	x	x
108.0	3.00	58.3	105.0	TB	1.900	x	x
114.3	2.00	63.0	105.0	TB	1.095	x	x
114.3	3.00	63.0	105.0	TB	1.642	x	x
114.3	4.00	63.0	105.0	TB	2.700		x
129.0	2.00	70.0	124.0	TB	1.423	x	x



# TEE WELDED WITH SHORT BRANCH

acc. to EN-10253-4

1.4307-1.4404 (4/4)



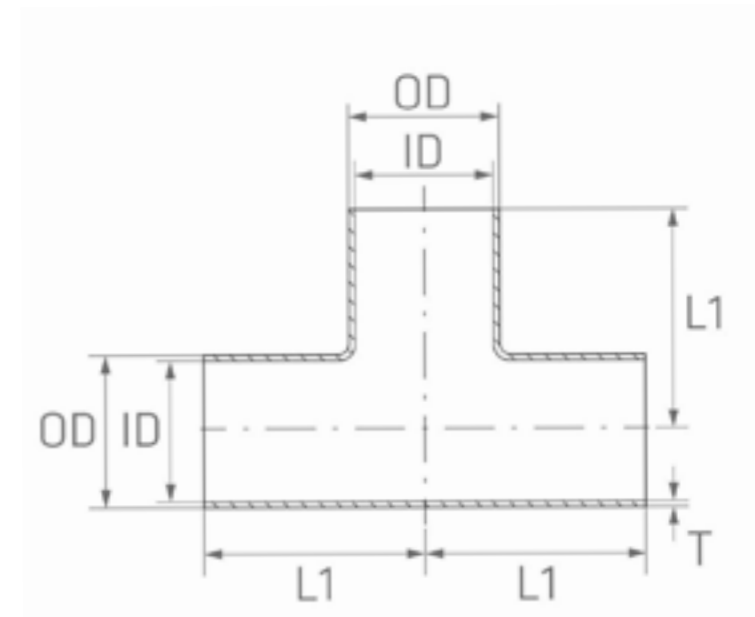
D1	T	H	L	TYPE	Grade AISI/UNS kg/pce.	1.4307	1.4404
						304 *)	316 *)
139.7	2.00	76.0	124.0	TB	1.514	x	x
139.7	3.00	76.0	124.0	TB	2.254	x	x
154.0	2.00	84.0	143.0	TB	2.030	x	x
156.0	3.00	85.0	143.0	TB	3.119	x	x
168.3	2.00	92.0	142.0	TB	2.129	x	x
168.3	3.00	92.0	142.0	TB	3.133	x	x
204.0	2.00	110.0	178.0	TB	3.794	x	x
206.0	3.00	110.0	178.0	TB	4.690		x
219.1	2.00	122.0	179.0	TB	3.371	x	x
219.1	3.00	122.0	179.0	TB	4.908	x	x



# TEE WELDED DC V-WELDED

acc. to EN-10253-4

1.4307-1.4404 (1/2)



D1	T	H	L	TYPE	Grade AISI/UNS kg/pce.	1.4307	1.4404
						304 *)	316 *)
254.0	2.00	140.0	250.0	TB	5.500		x
254.0	2.00	250.0	*	VW	7.210	x	x
256.0	3.00	250.0	*	VW	9.030	x	x
273.0	2.00	216.0	*	VW	5.800	x	x
273.0	3.00	151.0	216.0	TB	7.514	x	x
273.0	3.00	216.0	*	VW	8.700	x	x
304.0	2.00	300.0	*	VW	10.407	x	x
306.0	3.00	300.0	*	VW	15.610	x	x
323.9	2.00	254.0	*	VW	12.350	x	x
323.9	3.00	254.0	*	VW	18.530	x	x

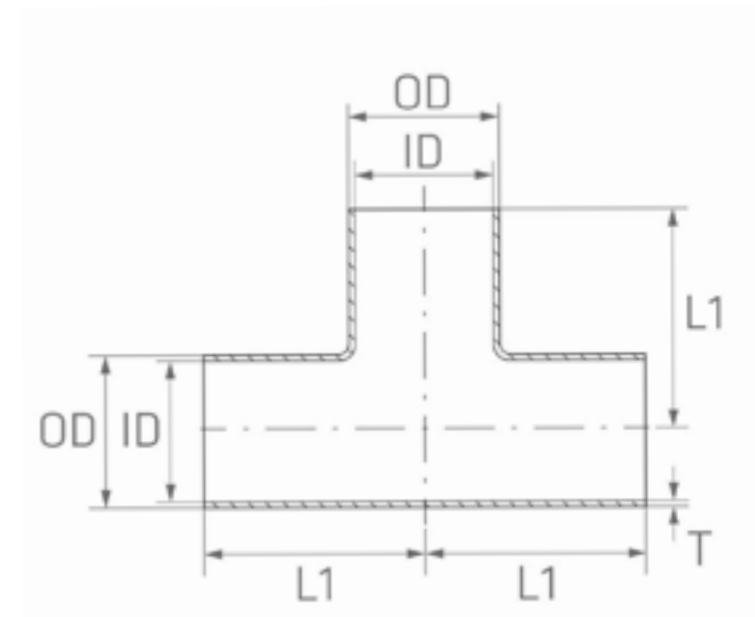




# TEE WELDED DC V-WELDED

acc. to EN-10253-4

1.4307-1.4404 (2/2)



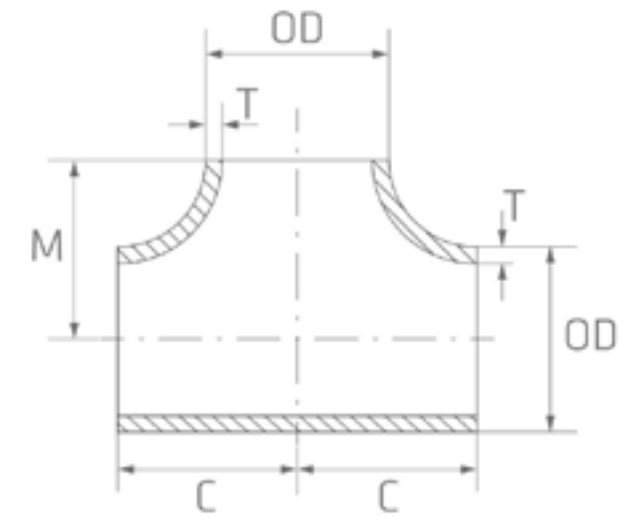
D1	T	H	L	TYPE	Grade	1.4307	1.4404
					AISI/UNS	304	316
					kg/pce.	*)	*)
355.6	3.00	279.0	*	VW	22.160	x	x
406.4	3.00	305.0	*	VW	27.920	x	x
457.2	2.90	343.0	*	VW	30.000	x	x
508.0	2.90	381.0	*	VW	60.000	x	x
609.6	2.90	432.0	*	VW	70.000	x	x



# EQUAL TEE

ASTM-A 403

304-316 (1/7)



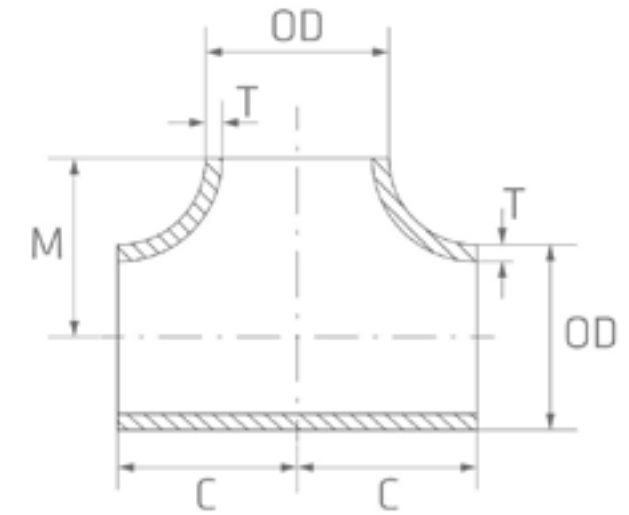
OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
21.34	2.11	1/2" SCH 10S	25.40	0.090	x	x	x	x
21.34	2.77	1/2" SCH 40S	25.40	0.181	x	x	x	x
21.34	3.73	1/2" SCH 80S	25.40	0.204		x		x
21.34	4.78	1/2" SCH 160	25.40	0.130		x		x
26.67	2.11	3/4" SCH 10S	28.70	0.129	x	x	x	x
26.67	2.87	3/4" SCH 40S	28.70	0.258	x	x	x	x
26.67	3.91	3/4" SCH 80S	28.70	0.294		x		x
26.67	5.56	3/4" SCH 160	28.70	0.220		x		x
33.40	2.77	1" SCH 10S	38.10	0.223	x	x	x	x
33.40	3.38	1" SCH 40S	38.10	0.256	x	x	x	x



# EQUAL TEE

ASTM-A 403

304-316 (2/7)



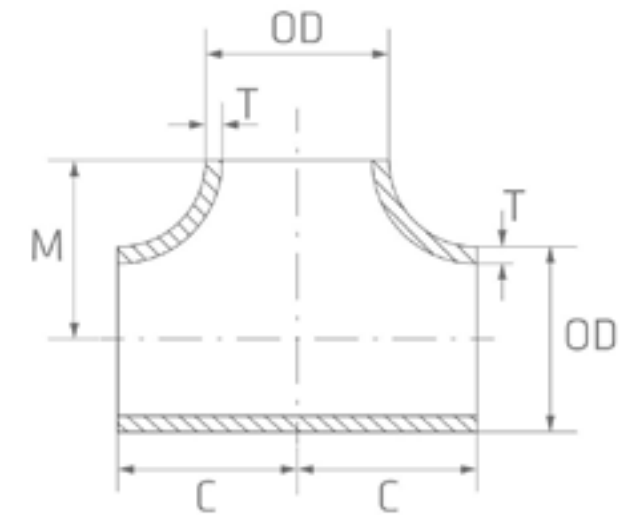
OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
33.40	4.55	1" SCH 80S	38.10	0.399		x		x
33.40	6.35	1" SCH 160	38.10	0.492		x		x
42.16	2.77	1 1/4" SCH 10S	47.75	0.356	x	x	x	x
42.16	3.56	1 1/4" SCH 40S	47.75	0.463	x	x	x	x
42.16	4.85	1 1/4" SCH 80S	47.75	0.725		x		x
42.16	6.35	1 1/4" SCH 160	47.75	0.808		x		x
48.26	2.77	1 1/2" SCH 10S	57.15	0.497	x	x	x	x
48.26	3.68	1 1/2" SCH 40S	57.15	0.648	x	x	x	x
48.26	5.08	1 1/2" SCH 80S	57.15	1.020		x		x
48.26	7.14	1 1/2" SCH 160	57.15	1.310				x



# EQUAL TEE

ASTM-A 403

304-316 (3/7)



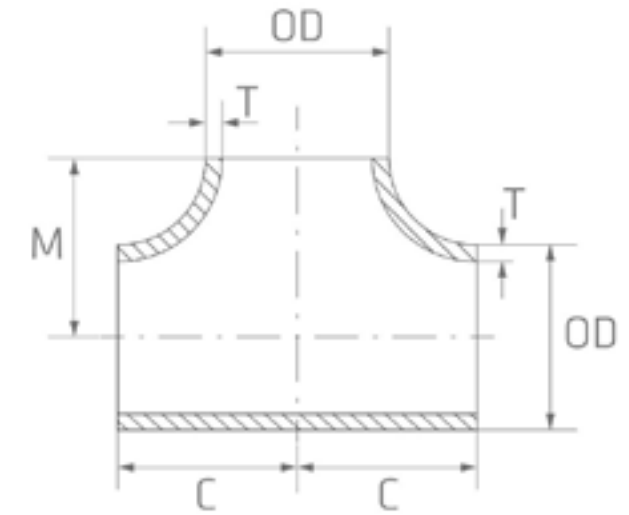
OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
					60.33	2.77	2" SCH 10S	63.50
60.33	3.91	2" SCH 40S	63.50	0.893	x	x	x	x
60.33	5.54	2" SCH 80S	63.50	1.810		x		x
60.33	8.74	2" SCH 160	63.50	1.930		x		x
73.03	3.05	2 1/2" SCH 10S	76.20	1.200	x	x	x	x
73.03	5.16	2 1/2" SCH 40S	76.20	1.980	x	x	x	x
73.03	7.01	2 1/2" SCH 80S	76.20	3.170		x		x
73.03	9.53	2 1/2" SCH 160	76.20	3.700		x		x
88.90	3.05	3" SCH 10S	85.85	1.570	x	x	x	x
88.90	5.49	3" SCH 40S	85.85	2.610	x	x	x	x



# EQUAL TEE

ASTM-A 403

304-316 (4/7)



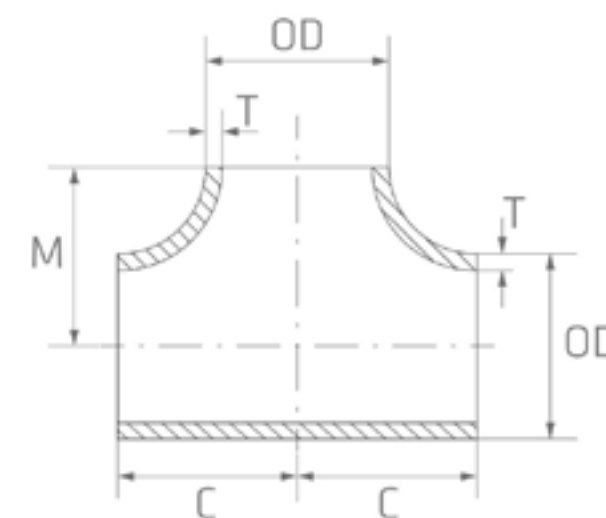
OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
88.90	7.62	3" SCH 80S	85.85	3.850		x		x
88.90	11.13	3" SCH 160	85.85	4.747		x		x
101.60	3.05	3 1/2" SCH 10S	95.00	1.920		x		x
101.60	5.74	3 1/2" SCH 40S	95.00	3.610		x		x
101.60	8.08	3 1/2" SCH 80S	95.00	5.080		x		x
114.30	3.05	4" SCH 10S	104.90	2.460	x	x	x	x
114.30	6.02	4" SCH 40S	104.90	4.760	x	x	x	x
114.30	8.56	4" SCH 80S	104.90	7.110		x		x
141.30	3.40	5" SCH 10S	123.95	4.040	x	x	x	x
141.30	6.55	5" SCH 40S	123.95	7.840	x	x	x	x



# EQUAL TEE

ASTM-A 403

304-316 (5/7)



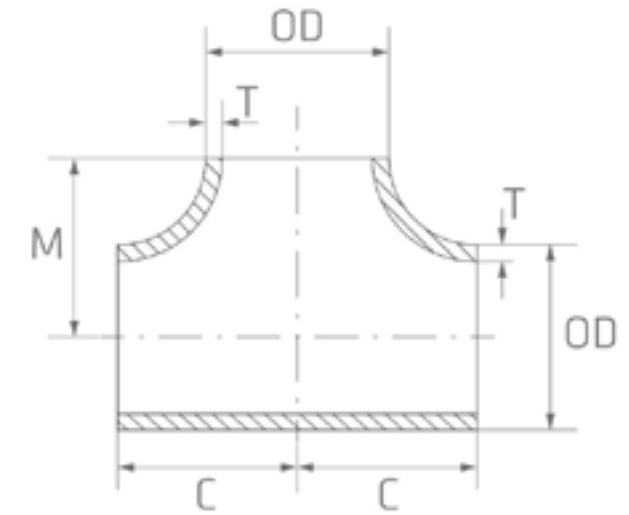
OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
					141.30	9.53	5" SCH 80S	123.95
168.28	3.40	6" SCH 10S	143.00	5.500	x	x	x	x
168.28	7.11	6" SCH 40S	143.00	9.540	x	x	x	x
168.28	10.97	6" SCH 80S	143.00	18.120		x		x
219.08	3.76	8" SCH 10S	177.80	11.070	x	x	x	x
219.08	8.18	8" SCH 40S	177.80	19.560	x	x	x	x
219.08	12.70	8" SCH 80S	177.80	33.980		x		x
273.05	4.19	10" SCH 10S	215.90	19.870	x	x	x	x
273.05	9.27	10" SCH 40S	215.90	32.610	x	x	x	x
273.05	12.70	10" SCH 80S	215.90	47.570		x		x



# EQUAL TEE

ASTM-A 403

304-316 (6/7)



OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
					x	x	x	x
323.85	4.57	12" SCH 10S	254.00	27.860	x	x	x	x
323.85	9.53	12" SCH 40S	254.00	56.650	x	x	x	x
323.85	12.70	12" SCH 80S	254.00	72.480		x		x
355.60	4.78	14" SCH 10S	279.40	35.980	x 1)		x 1)	
355.60	9.53	14" SCH 40S	279.40	71.210	x 1)		x 1)	
406.40	4.78	16" SCH 10S	304.80	44.690	x 1)		x 1)	
406.40	9.53	16" SCH 40S	304.80	88.560	x 1)		x 1)	
457.20	4.78	18" SCH 10S	342.90	46.520			x 1)	
457.20	9.53	18" SCH 40S	342.90	145.230			x 1)	
508.00	5.56	20" SCH 10S	381.00	68.850			x 1)	



1) = 100% X-RAY

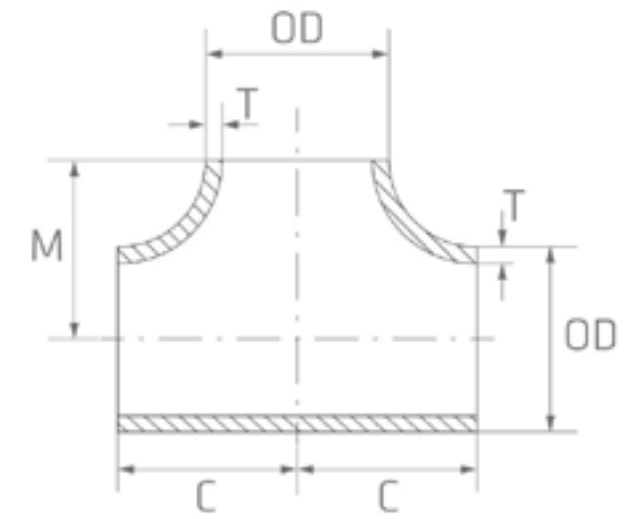
\* Finishes: page 718



# EQUAL TEE

ASTM-A 403

304-316 (7/7)



OD	T	INCH-SCH	C/M	Grade AISI/UNS kg/pce.	304/304L		316/316L	
					welded	seamless	welded	seamless
508.00	9.53	20" SCH 40S	381.00	179.950			x 1)	
609.60	6.35	24" SCH 10S	431.80	92.250			x 1)	
609.60	9.53	24" SCH 40S	431.80	300.370			x 1)	



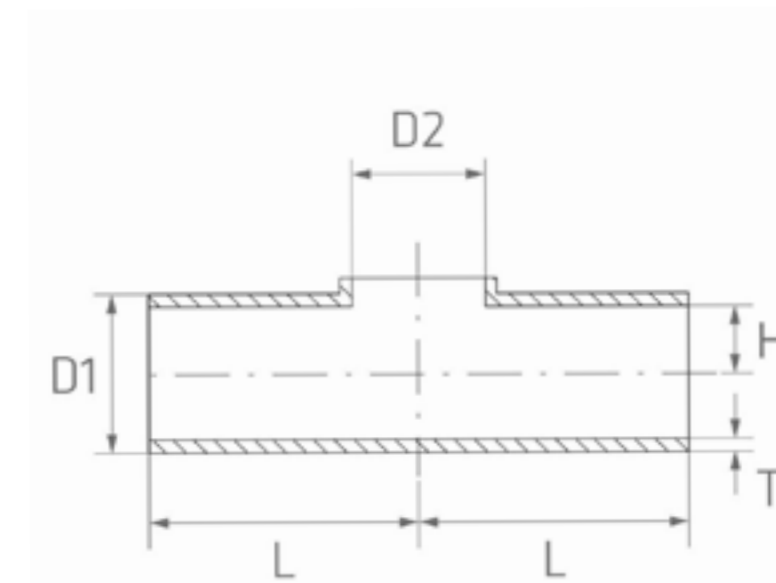
1) = 100% X-RAY

\* Finishes: page 718

# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (1/9)



D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
21.3	2.0	17.2	2.0	12	25.5	ISO drawn	0.04	x		
26.9	2.0	17.2	2.0	15	28.5	ISO drawn	0.06	x		
26.9	2.0	21.3	2.0		28.5		0.15			x
26.9	2.0	21.3	2.0	15	28.5	ISO drawn	0.06	x		x
33.7	2.0	17.2	2.0	19	38.0	ISO drawn	0.12	x		
33.7	2.0	21.3	2.0	19	38.0	ISO drawn	0.12	x		x
33.7	2.6	21.3	2.0		38.0		0.26			x
33.7	2.0	26.9	1.6		38.0		0.22			x
33.7	2.0	26.9	2.0		38.0		0.20			x
33.7	2.0	26.9	2.0	19	38.0	ISO drawn	0.11	x		

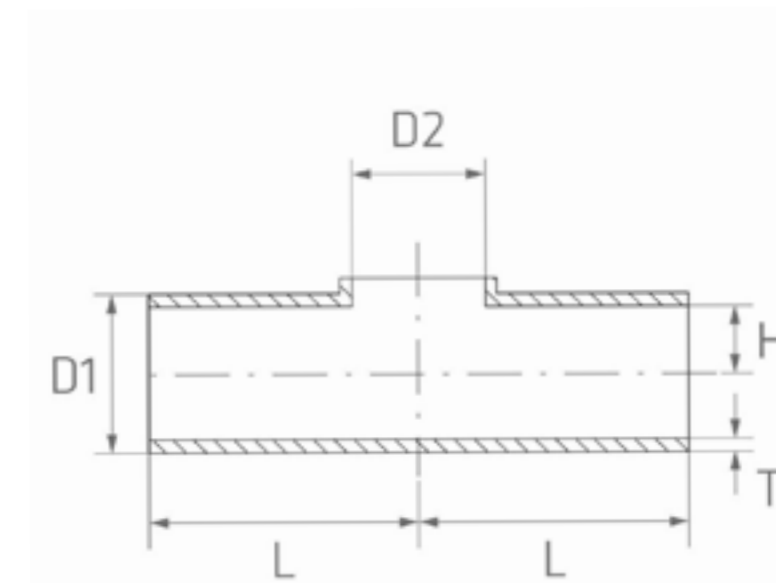




# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (2/9)



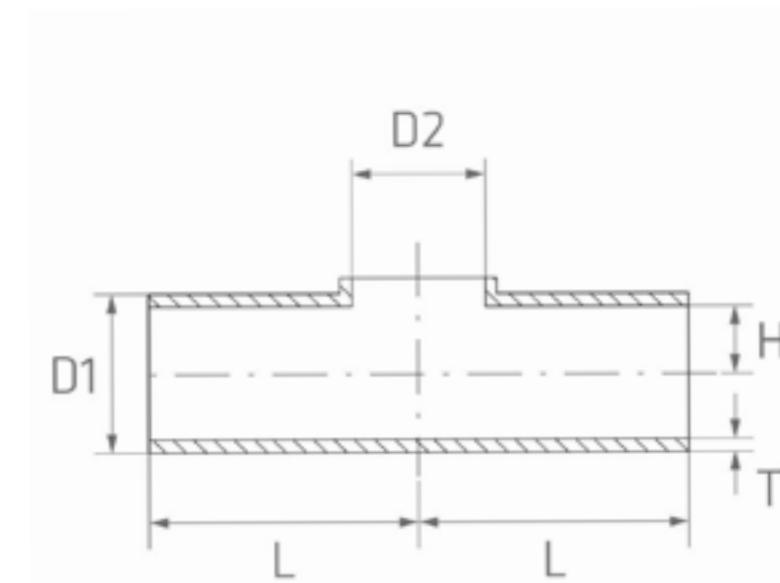
D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
42.4	2.0	21.3	2.0	24	47.5	ISO drawn	0.18	x		
42.4	2.0	26.9	2.0		47.5		0.32			x
42.4	2.0	26.9	2.0	24	47.5	ISO drawn	0.17	x		
42.4	2.0	33.7	2.0		47.5		0.32			x
42.4	2.0	33.7	2.0	24	47.5	ISO drawn	0.19	x		
48.3	2.0	21.3	1.6		57.0		0.32		x	
48.3	2.0	21.3	2.0	26	57.0	ISO drawn	0.25	x		
48.3	2.0	26.9	2.0	26	57.0	ISO drawn	0.25	x		
48.3	2.0	33.7	2.0		57.0		0.46		x	x
48.3	2.0	33.7	2.0	26	57.0	ISO drawn	0.10	x		



# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (3/9)



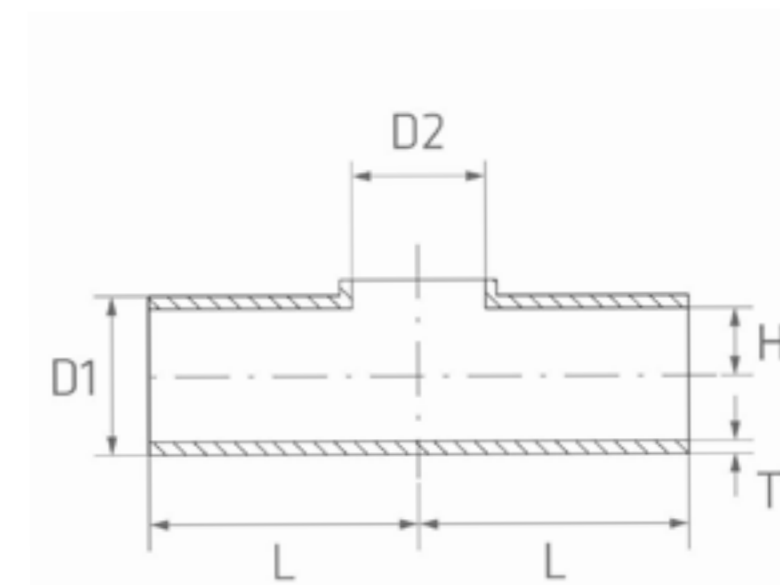
D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
48.3	2.0	42.4	2.0		57.0		0.46			x
48.3	2.0	42.4	2.0	26	57.0	ISO drawn	0.24	x		
60.3	2.0	21.3	2.0	34	63.5	ISO drawn	0.35	x		
60.3	2.0	26.9	2.0	34	63.5	ISO drawn	0.34	x		
60.3	2.0	33.7	2.0		64.0		0.50		x	x
60.3	2.0	33.7	2.0	34	63.5	ISO drawn	0.33	x		
60.3	2.0	42.4	2.0	34	63.5	ISO drawn	0.35	x		x
60.3	2.0	48.3	2.0	34	63.5	ISO drawn	0.33	x		x
60.3	2.0	48.3	2.0		64.0		0.57		x	
60.3	2.9	21.3	2.0		57.0		0.72			



# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (4/9)



D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
76.1	2.0	21.3	2.0	42	76.0	ISO drawn	1.18	x		
76.1	2.0	26.9	2.0	42	76.0	ISO drawn	0.53	x		
76.1	2.0	33.7	2.0	42	76.0	ISO drawn	0.55	x		x
76.1	2.0	42.4	2.0	42	76.0	ISO drawn	0.54	x		x
76.1	2.0	48.3	2.0	42	76.0	ISO drawn	0.51	x		
76.1	2.3	48.3	2.0		76.0		0.95			x
76.1	2.3	60.3	2.0	42	76.0	ISO drawn	0.52	x		
76.1	2.3	60.3	2.0		76.0		1.00			x
76.1	3.0	60.3	3.0	42	76.0	ISO drawn	1.68	x		
88.9	2.6	48.3	2.0		86.0		1.30			x

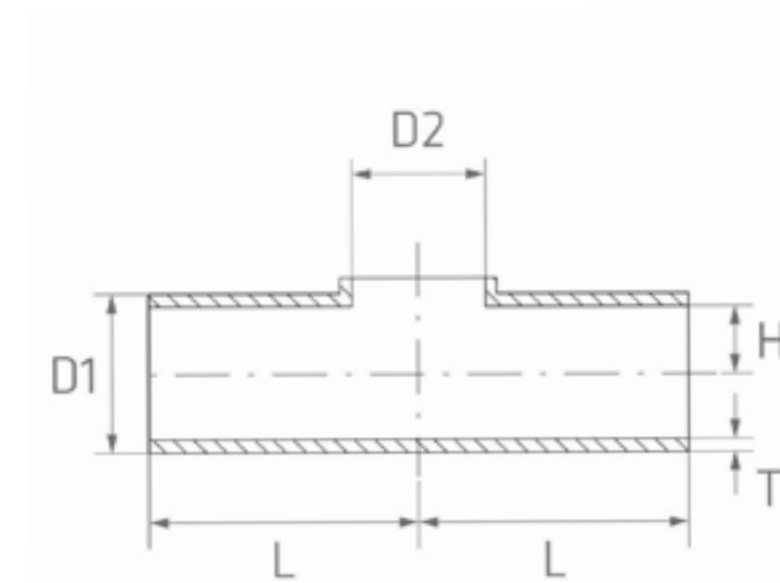




# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (5/9)



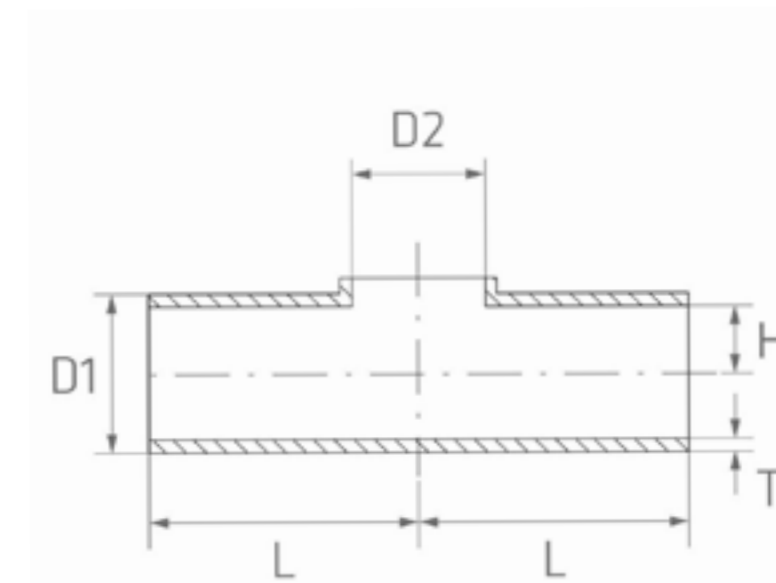
D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
88.9	2.0	33.7	2.0	48.5	85.5	ISO drawn	0.68	x		
88.9	2.0	42.4	2.0	48.5	85.5	ISO drawn	0.68	x		
88.9	2.0	48.3	2.0	48.5	85.5	ISO drawn	0.78	x		
88.9	2.3	48.3	2.0		86.0		0.69			x
88.9	2.0	60.3	2.0	48.5	85.5	ISO drawn	0.71	x		
88.9	2.3	60.3	2.0		86.0		1.35			x
88.9	2.6	60.3	2.0		86.0		1.35			x
88.9	3.0	60.3	3.0	48.5	85.5	ISO drawn	1.04	x		
88.9	2.0	76.1	2.0	48.5	85.5	ISO drawn	0.67	x		
88.9	2.6	76.1	2.0		86.0		1.40			x



# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (6/9)



D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
88.9	2.3	76.1	2.3		86.0		1.40			x
88.9	3.0	76.1	3.0	48.5	85.5	ISO drawn	0.97	x		
114.3	2.6	33.7	2.0		105.0		2.15			x
114.3	2.0	48.3	2.0	63	105.0	ISO drawn	1.09	x		
114.3	2.6	48.3	2.0				2.15			x
114.3	2.0	60.3	2.0	63	105.0	ISO drawn	1.08	x		
114.3	2.6	60.3	2.0		105.0		2.15			x
114.3	3.0	60.3	3.0	63	105.0	ISO drawn	1.60	x		
114.3	2.0	76.1	2.0	63	105.0	ISO drawn	1.07	x		
114.3	2.6	76.1	2.3		105.0		2.15			x

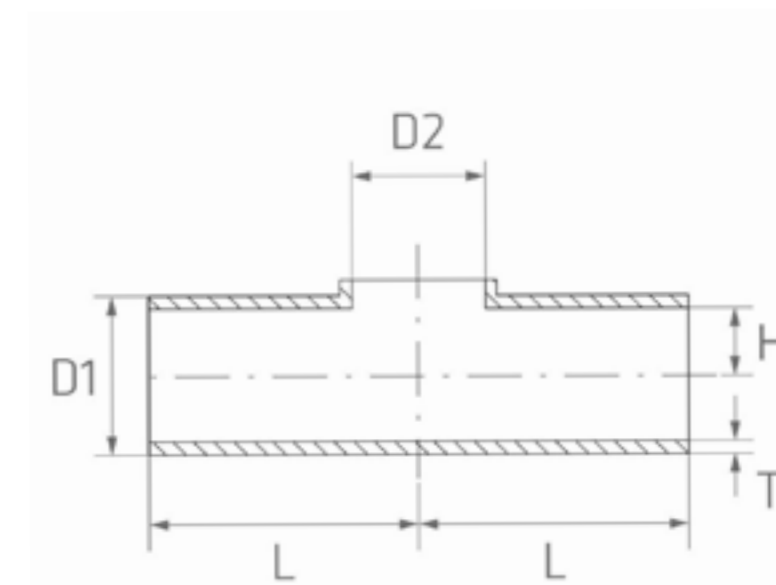




# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (7/9)



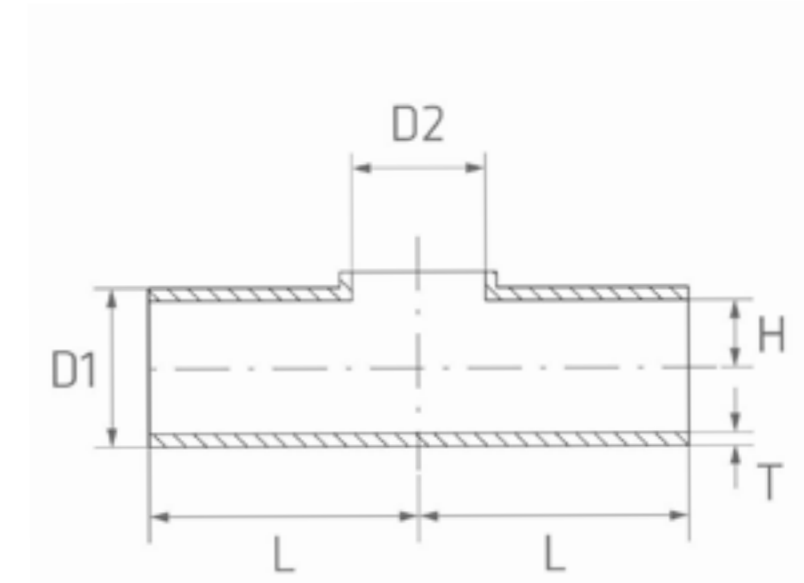
D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
114.3	3.6	76.1	2.9		105.0		2.90			x
114.3	3.0	76.1	3.0	63	105.0	ISO drawn	1.64	x		
114.3	2.0	88.9	2.0	63	105.0	ISO drawn	1.08	x		
114.3	2.6	88.9	2.3		105.0		2.25			x
114.3	3.0	88.9	3.0	63	105.0	ISO drawn	1.63	x		
139.7	2.0	60.3	2.0	76	124.0	ISO drawn	3.40	x		
139.7	3.0	60.3	3.0	76	124.0	ISO drawn	5.12	x		
139.7	2.0	76.1	2.0	76	124.0	ISO drawn	1.60	x		
139.7	3.0	76.1	3.0	76	124.0	ISO drawn	2.33	x		
139.7	2.0	88.9	2.0	76	124.0	ISO drawn	1.58	x		



# TEE WITH REDUCED BRANCH WELDED

acc. to EN-10253-4

1.4404-1.4571 (8/9)



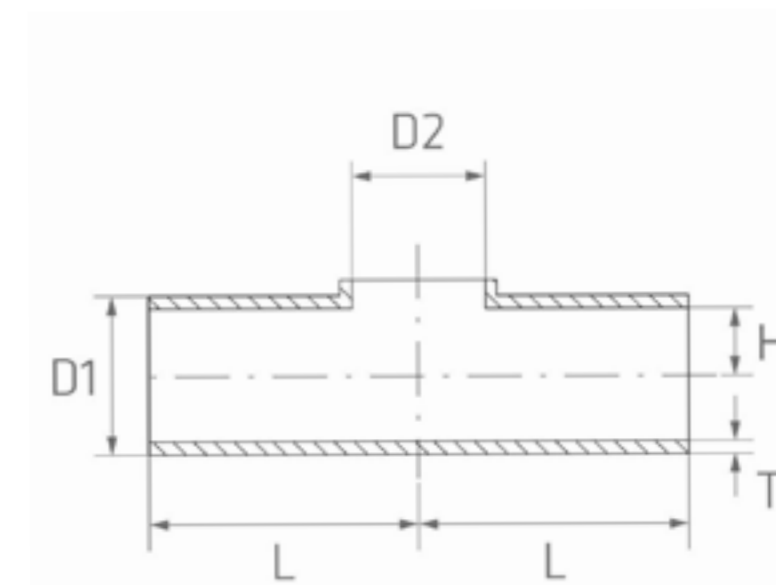
D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
139.7	3.0	88.9	3.0	76	124.0	ISO drawn	2.39	x		
139.7	2.0	114.3	2.0	76	124.0	ISO drawn	1.53	x		
139.7	3.0	114.3	3.0	76	124.0	ISO drawn	2.46	x		
168.3	2.0	76.1	2.0	92	142.0	ISO drawn	2.18	x		
168.3	3.0	76.1	3.0	92	142.0	ISO drawn	3.32	x		
168.3	2.0	88.9	2.0	92	142.0	ISO drawn	2.13	x		
168.3	2.6	88.9	2.3		124.0		4.05			x
168.3	3.0	88.9	3.0	92	142.0	ISO drawn	3.27	x		
168.3	2.0	114.3	2.0	92	142.0	ISO drawn	2.12	x		
168.3	2.6	114.3	2.6		124.0		5.20			x



# TEE WITH REDUCED BRANCH WELDED

■ acc. to EN-10253-4

1.4404-1.4571 (9/9)



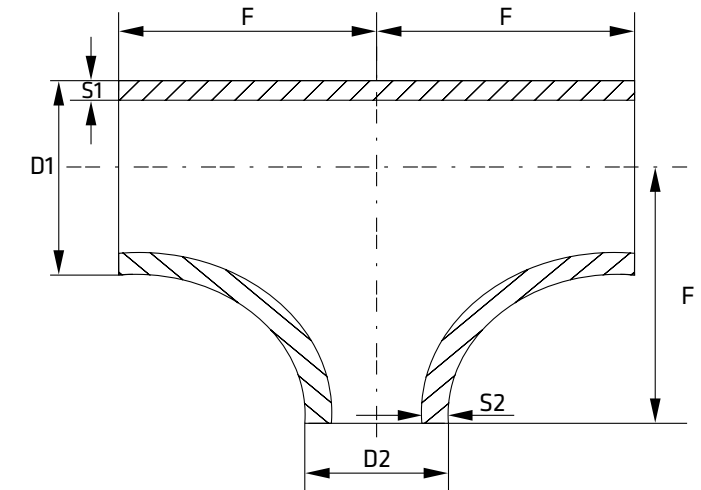
D1	S1	D2	S2	H	F	TYPE	Grade AISI/UNS kg/pce.	1.4404 316 *)	1.4541 321 *)	1.4571 316 Ti *)
168.3	3.0	114.3	3.0	92	142.0	ISO drawn	3.29	x		
168.3	2.0	139.7	2.0	92	142.0	ISO drawn	2.21	x		
168.3	3.0	139.7	3.0	92	142.0	ISO drawn	3.19	x		
219.1	2.0	114.3	2.0	122	179.0	ISO drawn	3.56	x		
219.1	3.0	114.3	3.0	122	179.0	ISO drawn	5.32	x		
219.1	2.0	139.7	2.0	122	179.0	ISO drawn	3.50	x		
219.1	3.0	139.7	3.0	122	179.0	ISO drawn	5.32	x		
219.1	2.0	168.3	2.0	122	179.0	ISO drawn	7.50	x		
219.1	3.0	168.3	3.0	122	179.0	ISO drawn	5.16	x		



# TEE WITH REDUCED BRANCH SEAMLESS

1.4541-1.4571 (1/2)

acc. to EN-10253-4



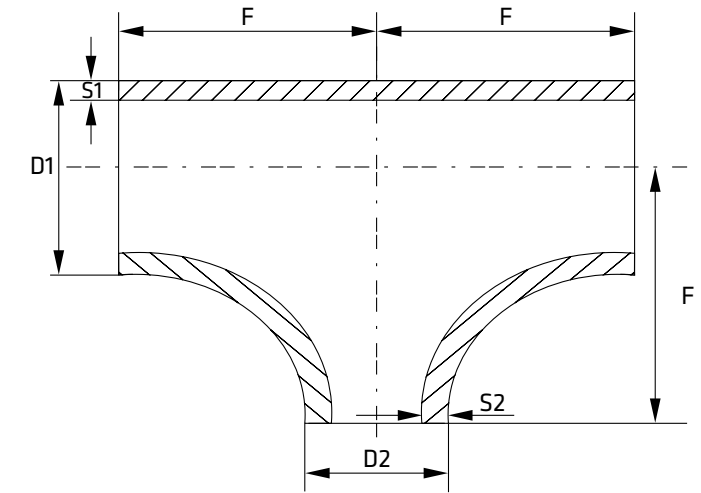
D1	S1	D2	S2	F	G	Grade AISI/UNS kg/pce.	1.4541 321 *)	1.4571 316 Ti *)
33.7	2.6	21.3	2.0	38.0	38.0	0.26	x	x
33.7	2.6	26.9	2.3	38.0	38.0	0.26		x
48.3	2.6	33.7	2.6	48.0	48.0	0.42		x
60.3	2.9	21.3	2.0	57.0	42.0	0.72	x	
60.3	2.9	48.3	2.6	57.0	60.0	0.79		x
76.1	2.9	48.3	2.6	76.0	67.0	1.16		x
76.1	2.9	60.3	2.9	76.0	70.0	1.25		x
88.9	3.2	48.3	2.6	86.0	73.0	1.70		x
88.9	3.2	60.3	2.9	86.0	76.0	1.80		x
88.9	3.2	76.1	2.9	86.0	83.0	1.85		x



# TEE WITH REDUCED BRANCH SEAMLESS

1.4541-1.4571 (2/2)

acc. to EN-10253-4



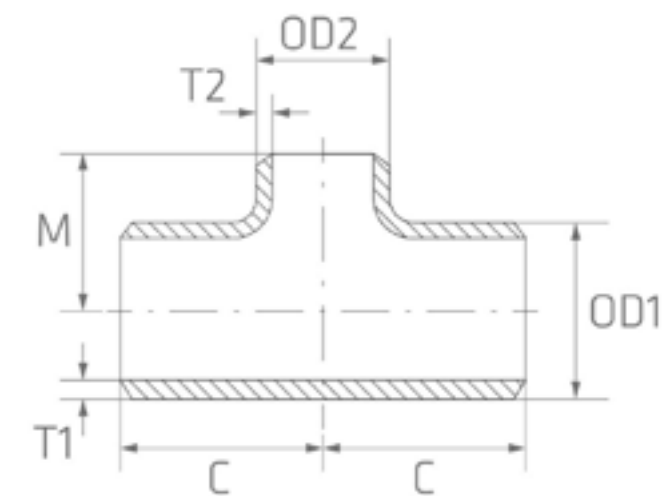
D1	S1	D2	S2	F	G	Grade	1.4541	1.4571
						AISI/UNS	321	316 Ti
						kg/pce.	*)	*)
114.3	3.6	48.3	2.6	105.0	86.0	3.30		x
114.3	3.6	60.3	2.9	105.0	89.0	2.90		x
114.3	3.6	76.1	2.9	105.0	95.0	2.90		x
114.3	3.6	88.9	3.2	105.0	98.0	3.00		x
168.3	4.5	88.9	3.2	143.0	124.0	6.60		x



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (1/14)

acc. to ASTM-A 403



OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
26.67	21.34	2.11	2.11	3/4" x 1/2" SCH 10S	29.00	29.00	0.123	x				x	
26.67	21.34	2.87	2.77	3/4" x 1/2" SCH 40S	29.00	29.00	0.200	x				x	
26.67	21.34	3.91	3.73	3/4" x 1/2" SCH 80S	29.00	29.00	0.230	x				x	
26.67	21.34	5.54	4.75	3/4" x 1/2" SCH 160	29.00	29.00	0.232					x	
33.40	21.34	2.77	2.11	1" x 1/2" SCH 10S	38.00	38.00	0.204	x				x	
33.40	21.34	3.38	2.77	1" x 1/2" SCH 40S	38.00	38.00	0.234	x				x	
33.40	21.34	4.55	3.73	1" x 1/2" SCH 80S	38.00	38.00	0.349	x				x	
33.40	21.34	6.35	4.75	1" x 1/2" SCH 160	38.00	38.00	0.454	x				x	
33.40	26.67	2.77	2.11	1" x 3/4" SCH 10S	38.00	38.00	0.212	x				x	
33.40	26.67	3.38	2.87	1" x 3/4" SCH 40S	38.00	38.00	0.244	x				x	

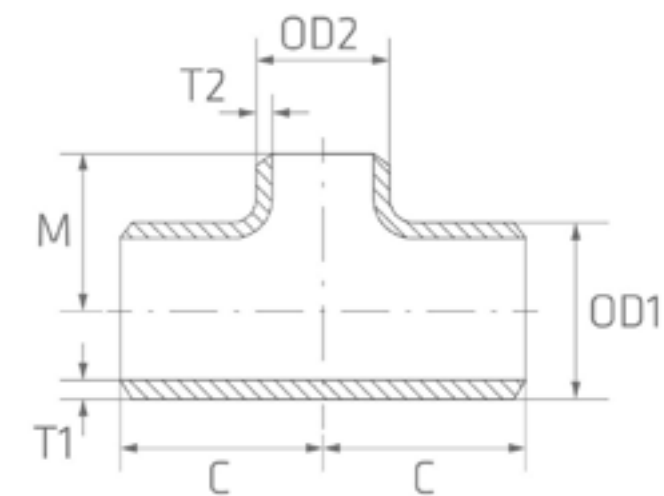




# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (2/14)

acc. to ASTM-A 403



OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
33.40	26.67	4.55	3.91	1" x 3/4" SCH 80S	38.00	38.00	0.353	x				x	
42.16	21.34	2.77	2.11	1 1/4" x 1/2" SCH 10S	48.00	48.00	0.310	x				x	
42.16	21.34	3.56	2.87	1 1/4" x 1/2" SCH 40S	48.00	48.00	0.380	x				x	
42.16	21.34	4.85	3.91	1 1/4" x 1/2" SCH 80S	48.00	48.00	0.600	x				x	
42.16	21.34	6.35	5.54	1 1/4" x 1/2" SCH 160	48.00	48.00	0.610					x	
42.16	26.67	2.77	2.11	1 1/4" x 3/4" SCH 10S	48.00	48.00	0.327	x				x	
42.16	26.67	3.56	2.87	1 1/4" x 3/4" SCH 40S	48.00	48.00	0.423	x				x	
42.16	26.67	4.85	3.91	1 1/4" x 3/4" SCH 80S	48.00	48.00	0.612	x				x	
42.16	33.40	2.77	2.77	1 1/4" x 1" SCH 10S	48.00	48.00	0.339	x				x	
42.16	33.40	3.56	3.38	1 1/4" x 1" SCH 40S	48.00	48.00	0.441	x				x	

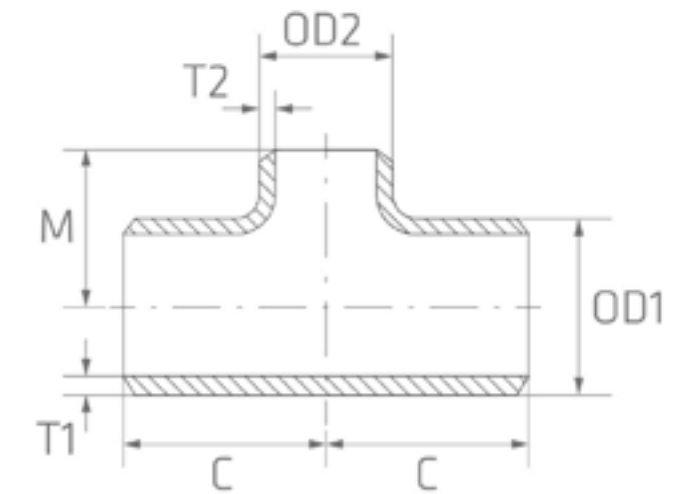




# TEE WITH REDUCED BRANCH SEAMLESS

acc. to ASTM-A 403

304-316 (3/14)



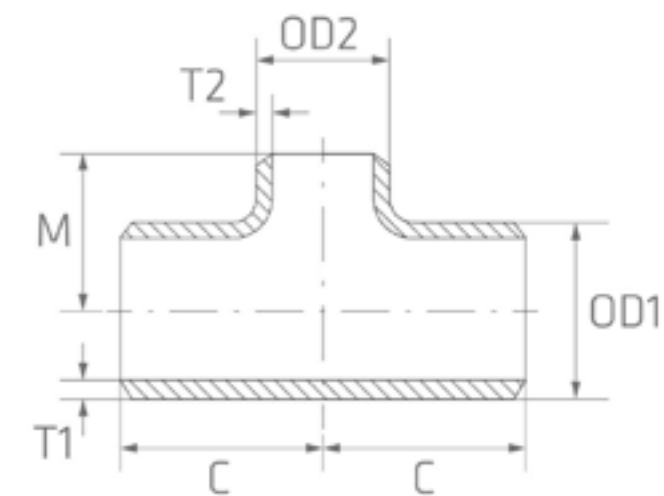
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
42.16	33.40	4.85	4.55	1 1/4" x 1" SCH 80S	48.00	48.00	0.643	x			x		
48.26	21.34	2.77	2.11	1 1/2" x 1/2" SCH 10S	57.00	57.00	0.431	x			x		
48.26	21.34	3.68	2.77	1 1/2" x 1/2" SCH 40S	57.00	57.00	0.561	x			x		
48.26	21.34	5.08	3.73	1 1/2" x 1/2" SCH 80S	57.00	57.00	0.897	x			x		
48.26	21.34	7.14	4.75	1 1/2" x 1/2" SCH 160	57.00	57.00	0.868				x		
48.26	26.67	2.77	2.11	1 1/2" x 3/4" SCH 10S	57.00	57.00	0.446	x			x		
48.26	26.67	3.68	2.87	1 1/2" x 3/4" SCH 40S	57.00	57.00	0.578	x			x		
48.26	26.67	5.08	2.11	1 1/2" x 3/4" SCH 80S	57.00	57.00	0.901	x			x		
48.26	26.67	7.14	5.54	1 1/2" x 3/4" SCH 160	57.00	57.00	1.010				x		
48.26	33.40	2.77	2.77	1 1/2" x 1" SCH 10S	57.00	57.00	0.461	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (4/14)

acc. to ASTM-A 403



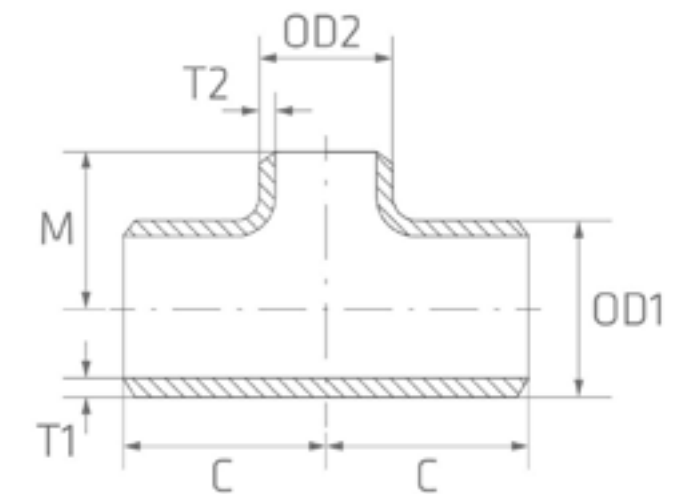
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
48.26	33.40	3.68	3.38	1 1/2" x 1" SCH 40S	57.00	57.00	0.600	x					x
48.26	33.40	5.08	4.55	1 1/2" x 1" SCH 80S	57.00	57.00	0.929	x					x
48.26	33.40	7.14	6.35	1 1/2" x 1" SCH 160	57.00	57.00	1.070						x
48.26	42.16	2.77	2.77	1 1/2" x 1 1/4" SCH 10S	57.00	57.00	0.482	x					x
48.26	42.16	3.68	3.56	1 1/2" x 1 1/4" SCH 40S	57.00	57.00	0.629	x					x
48.26	42.16	5.08	4.85	1 1/2" x 1 1/4" SCH 80S	57.00	57.00	0.978	x					x
60.33	21.34	2.77	2.11	2" x 1/2" SCH 10S	64.00	51.00	0.640	x					x
60.33	21.34	3.91	2.77	2" x 1/2" SCH 40S	64.00	51.00	0.866	x					x
60.33	21.34	5.54	3.73	2" x 1/2" SCH 80S	64.00	51.00	1.670	x					x
60.33	26.67	2.77	2.77	2" x 3/4" SCH 10S	64.00	44.00	0.702	x					x



# TEE WITH REDUCED BRANCH SEAMLESS

acc. to ASTM-A 403

304-316 (5/14)



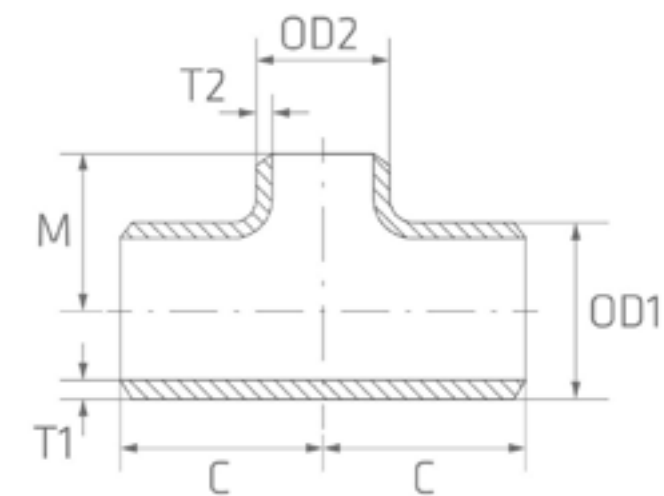
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
60.33	26.67	3.91	2.87	2" x 3/4" SCH 40S	64.00	44.00	1.110	x			x		
60.33	26.67	5.54	3.91	2" x 3/4" SCH 80S	64.00	44.00	1.440	x			x		
60.33	33.40	2.77	2.77	2" x 1" SCH 10S	64.00	51.00	0.725	x			x		
60.33	33.40	3.91	3.38	2" x 1" SCH 40S	64.00	51.00	1.140	x			x		
60.33	33.40	5.54	4.55	2" x 1" SCH 80S	64.00	51.00	1.460	x			x		
60.33	33.40	8.71	6.35	2" x 1" SCH 160	64.00	51.00	1.720	x			x		
60.33	42.16	2.77	2.77	2" x 1 1/4" SCH 10S	64.00	57.00	0.747	x			x		
60.33	42.16	3.91	3.56	2" x 1 1/4" SCH 40S	64.00	57.00	1.180	x			x		
60.33	42.16	5.54	4.85	2" x 1 1/4" SCH 80S	64.00	57.00	1.510	x			x		
60.33	48.26	2.77	2.77	2" x 1 1/2" SCH 10S	64.00	60.00	0.766	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (6/14)

acc. to ASTM-A 403



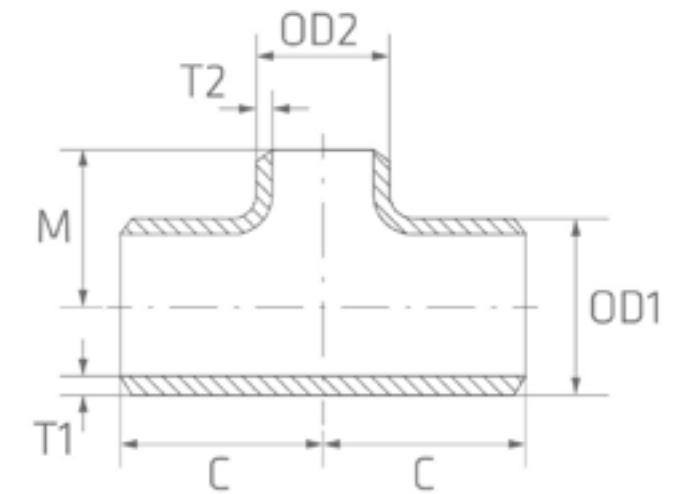
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
60.33	48.26	3.91	3.68	2" x 1 1/2" SCH 40S	64.00	60.00	1.230	x			x		
60.33	48.26	5.54	5.08	2" x 1 1/2" SCH 80S	64.00	60.00	1.570	x			x		
60.33	48.26	8.71	7.14	2" x 1 1/2" SCH 160	64.00	60.00	2.120	x			x		
73.03	33.40	3.05	2.77	2 1/2" x 1" SCH 10S	76.00	57.00	1.070	x			x		
73.03	33.40	5.16	3.38	2 1/2" x 1" SCH 40S	76.00	57.00	1.810	x			x		
73.03	33.40	7.01	4.55	2 1/2" x 1" SCH 80S	76.00	57.00	2.080	x			x		
73.03	42.16	3.05	2.77	2 1/2" x 1 1/4" SCH 10S	76.00	64.00	1.080	x			x		
73.03	42.16	5.16	3.56	2 1/2" x 1 1/4" SCH 40S	76.00	64.00	1.890	x			x		
73.03	42.16	7.01	4.85	2 1/2" x 1 1/4" SCH 80S	76.00	64.00	2.250	x			x		
73.03	48.26	3.05	2.77	2 1/2" x 1 1/2" SCH 10S	76.00	67.00	1.180	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (7/14)

acc. to ASTM-A 403



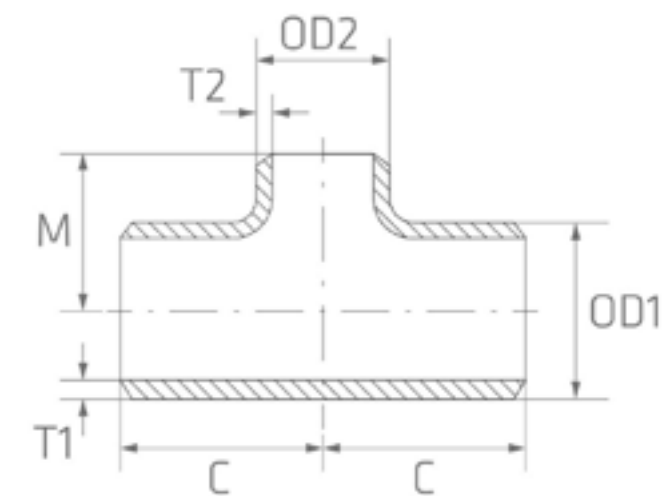
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
73.03	48.26	5.16	3.68	2 1/2" x 1 1/2" SCH 40S	76.00	67.00	2.080	x			x		
73.03	48.26	7.01	5.08	2 1/2" x 1 1/2" SCH 80S	76.00	67.00	2.610	x			x		
73.03	60.33	3.05	2.77	2 1/2" x 2" SCH 10S	76.00	70.00	1.210	x			x		
73.03	60.33	5.16	3.91	2 1/2" x 2" SCH 40S	76.00	70.00	2.120	x			x		
73.03	60.33	7.01	5.54	2 1/2" x 2" SCH 80S	76.00	40.00	2.660	x			x		
88.90	33.40	3.05	2.77	3" x 1" SCH 10S	86.00	70.00	1.380	x			x		
88.90	33.40	5.49	3.38	3" x 1" SCH 40S	86.00	70.00	2.460	x			x		
88.90	33.40	7.62	4.55	3" x 1" SCH 80S	86.00	70.00	3.310	x			x		
88.90	42.16	3.05	2.77	3" x 1 1/4" SCH 10S	86.00	70.00	1.450	x			x		
88.90	42.16	5.49	3.56	3" x 1 1/4" SCH 40S	86.00	70.00	2.600	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (8/14)

acc. to ASTM-A 403



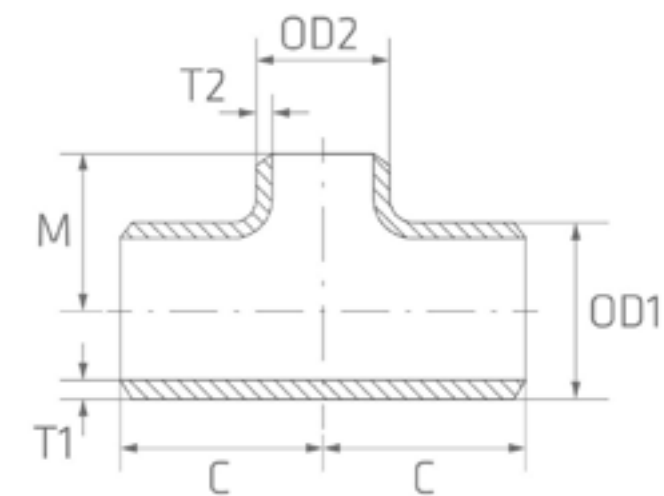
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
88.90	42.16	7.62	4.85	3" x 1 1/4" SCH 80S	86.00	70.00	3.600	x			x		
88.90	48.26	3.05	2.77	3" x 1 1/2" SCH 10S	86.00	73.00	1.600	x			x		
88.90	48.26	5.49	3.68	3" x 1 1/2" SCH 40S	86.00	73.00	2.980	x			x		
88.90	48.26	7.62	5.08	3" x 1 1/2" SCH 80S	86.00	73.00	3.840	x			x		
88.90	60.33	3.05	2.77	3" x 2" SCH 10S	86.00	76.00	1.630	x			x		
88.90	60.33	5.49	3.91	3" x 2" SCH 40S	86.00	76.00	3.010	x			x		
88.90	60.33	7.62	5.54	3" x 2" SCH 80S	86.00	76.00	3.860	x			x		
88.90	73.03	3.05	3.05	3" x 2 1/2" SCH 10S	86.00	83.00	1.690	x			x		
88.90	73.03	5.49	5.16	3" x 2 1/2" SCH 40S	86.00	83.00	3.150	x			x		
88.90	73.03	7.62	7.01	3" x 2 1/2" SCH 80S	86.00	83.00	3.970	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (9/14)

acc. to ASTM-A 403



OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
101.60	60.33	3.05	2.77	3 1/2" x 2" SCH 10S	95.00	83.00	1.730	x			x		
101.60	60.33	5.74	3.91	3 1/2" x 2" SCH 40S	95.00	83.00	3.250	x			x		
101.60	73.03	3.05	3.05	3 1/2" x 2 1/2" SCH 10S	95.00	89.00	1.760	x			x		
101.60	73.03	5.74	5.16	3 1/2" x 2 1/2" SCH 40S	95.00	89.00	3.320	x			x		
101.60	88.90	3.05	3.05	3 1/2" x 3" SCH 10S	95.00	92.00	1.820	x			x		
101.60	88.90	5.74	5.49	3 1/2" x 3" SCH 40S	95.00	92.00	3.430	x			x		
114.30	48.26	3.05	2.77	4" x 1 1/2" SCH 10S	105.00	86.00	2.510	x			x		
114.30	48.26	6.02	3.68	4" x 1 1/2" SCH 40S	105.00	86.00	5.040	x			x		
114.30	48.26	8.56	5.08	4" x 1 1/2" SCH 80S	105.00	86.00	6.630	x			x		
114.30	60.33	3.05	2.77	4" x 2" SCH 10S	105.00	89.00	2.530	x			x		

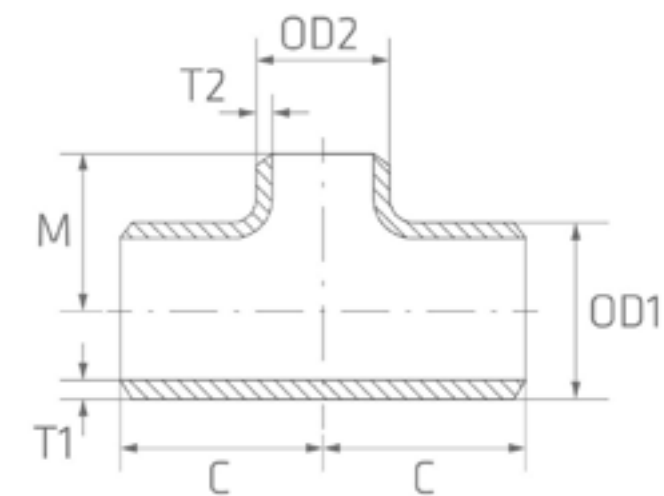




# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (10/14)

acc. to ASTM-A 403



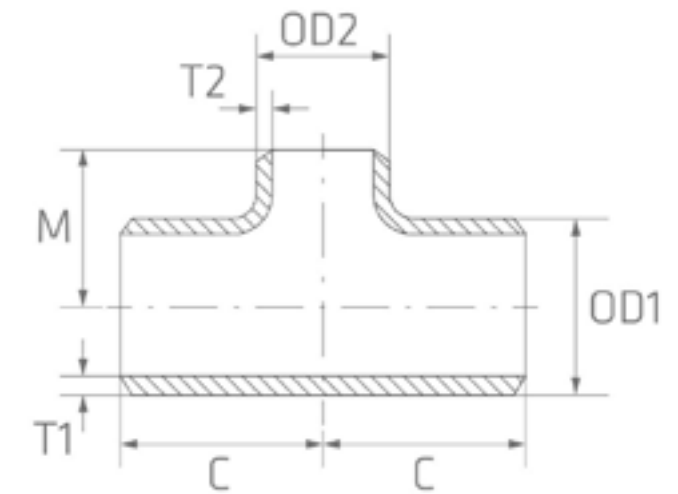
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
114.30	60.33	6.02	3.91	4" x 2" SCH 40S	105.00	89.00	5.080	x			x		
114.30	60.33	8.56	5.54	4" x 2" SCH 80S	105.00	89.00	6.700	x			x		
114.30	73.03	3.05	3.05	4" x 2 1/2" SCH 10S	105.00	95.00	2.590	x			x		
114.30	73.03	6.02	5.16	4" x 2 1/2" SCH 40S	105.00	95.00	5.220	x			x		
114.30	73.03	8.56	7.01	4" x 2 1/2" SCH 80S	105.00	95.00	6.790	x			x		
114.30	88.90	3.05	3.05	4" x 3" SCH 10S	105.00	99.00	2.610	x			x		
114.30	88.90	6.02	5.49	4" x 3" SCH 40S	105.00	99.00	5.270	x			x		
114.30	88.90	8.56	7.62	4" x 3" SCH 80S	105.00	99.00	6.930	x			x		
114.30	101.60	3.05	3.05	4" x 3 1/2" SCH 10S	105.00	102.00	2.790	x			x		
114.30	101.60	6.02	5.74	4" x 3 1/2" SCH 40S	105.00	102.00	4.700	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (11/14)

acc. to ASTM-A 403



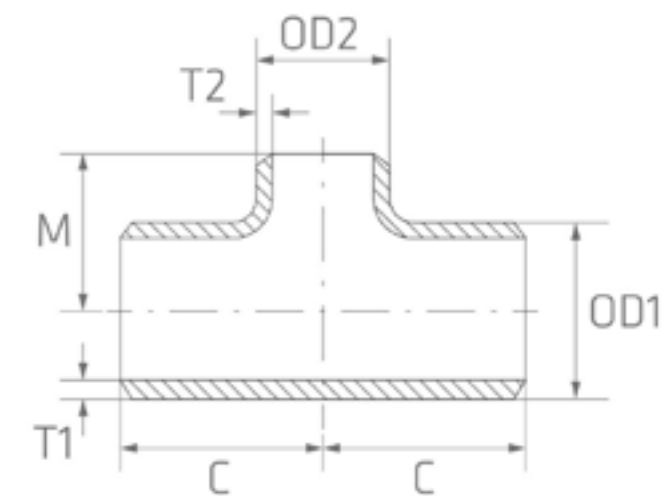
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
141.30	88.90	3.40	3.05	5" x 3" SCH 10S	124.00	111.00	4.170	x			x		
141.30	88.90	6.55	5.49	5" x 3" SCH 40S	124.00	111.00	8.130	x			x		
141.30	114.30	3.40	3.05	5" x 4" SCH 10S	124.00	118.00	4.240	x			x		
141.30	114.30	6.55	6.02	5" x 4" SCH 40S	124.00	118.00	8.360	x			x		
168.28	60.33	3.40	2.77	6" x 2" SCH 10S	143.00	119.00	5.930	x			x		
168.28	60.33	7.11	3.91	6" x 2" SCH 40S	143.00	119.00	10.010	x			x		
168.28	73.03	3.40	3.05	6" x 2 1/2" SCH 10S	143.00	121.00	5.690	x			x		
168.28	73.03	7.11	5.16	6" x 2 1/2" SCH 40S	143.00	121.00	11.870	x			x		
168.28	88.90	3.40	3.05	6" x 3" SCH 10S	143.00	124.00	5.750	x			x		
168.28	88.90	7.11	5.49	6" x 3" SCH 40S	143.00	124.00	11.920	x			x		



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (12/14)

acc. to ASTM-A 403



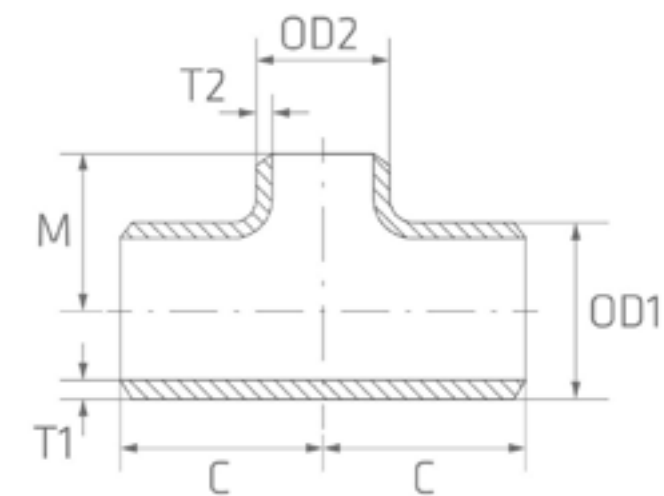
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
168.28	114.30	3.40	3.05	6" x 4" SCH 10S	143.00	130.00	5.850	x					x
168.28	114.30	7.11	6.02	6" x 4" SCH 40S	143.00	130.00	12.100	x					x
168.28	141.30	3.40	3.40	6" x 5" SCH 10S	143.00	137.00	5.920						x
168.28	141.30	7.11	6.55	6" x 5" SCH 40S	143.00	137.00	12.340						x
219.08	114.30	3.76	3.05	8" x 4" SCH 10S	178.00	156.00	9.800	x					x
219.08	114.30	8.18	6.02	8" x 4" SCH 40S	178.00	156.00	21.260	x					x
219.08	168.28	3.76	3.40	8" x 6" SCH 10S	178.00	168.00	9.900	x					x
219.08	168.28	8.18	7.11	8" x 6" SCH 40S	178.00	168.00	21.620	x					x
273.05	168.28	4.19	3.40	10" x 6" SCH 10S	216.00	194.00	17.280	x					x
273.05	168.28	9.27	7.11	10" x 6" SCH 40S	216.00	194.00	27.600	x					x



# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (13/14)

acc. to ASTM-A 403



OD1	OD2	T1	T2	INCH-SCH	C	M	Grade AISI/UNS	304/304L			316/316L		
								kg/pce.	seamless	welded	kg/pce.	seamless	welded
273.05	219.08	4.19	3.76	10" x 8" SCH 10S	216.00	203.00	18.610	x			x		
273.05	219.08	9.27	8.18	10" x 8" SCH 40S	216.00	203.00	36.490	x			x		
323.85	168.28	4.57	3.40	12" x 6" SCH 10S	254.00	219.00	27.770	x			x		
323.85	168.28	9.53	7.11	12" x 6" SCH 40S	254.00	219.00	45.640	x			x		
323.85	219.08	4.57	3.76	12" x 8" SCH 10S	254.00	229.00	29.400	x			x		
323.85	219.08	9.53	8.18	12" x 8" SCH 40S	254.00	229.00	48.340	x			x		
323.85	273.05	4.57	4.19	12" x 10" SCH 10S	254.00	241.00	26.300	x			x		
323.85	273.05	9.53	9.27	12" x 10" SCH 40S	254.00	241.00	51.740	x			x		
355.60	273.05	4.78	4.19	14" x 10" SCH 10S	279.00	257.00	27.920					x 1)	
355.60	273.05	9.53	9.27	14" x 10" SCH 40S	279.00	257.00	65.630					x 1)	



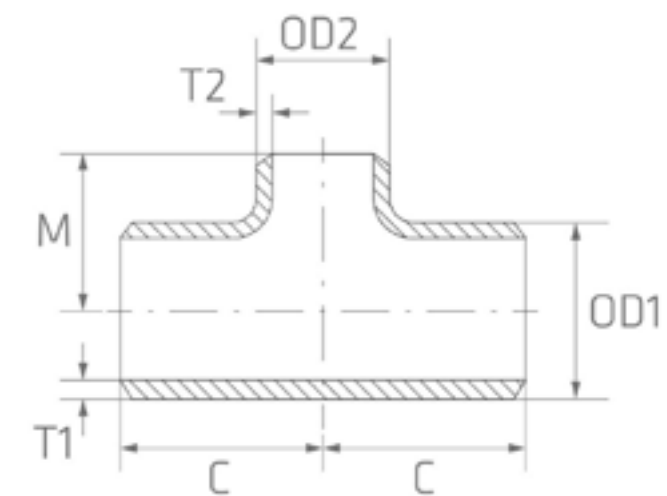
1) = 100% X-RAY

\* Finishes: page 718

# TEE WITH REDUCED BRANCH SEAMLESS

304-316 (14/14)

■ acc. to ASTM-A 403



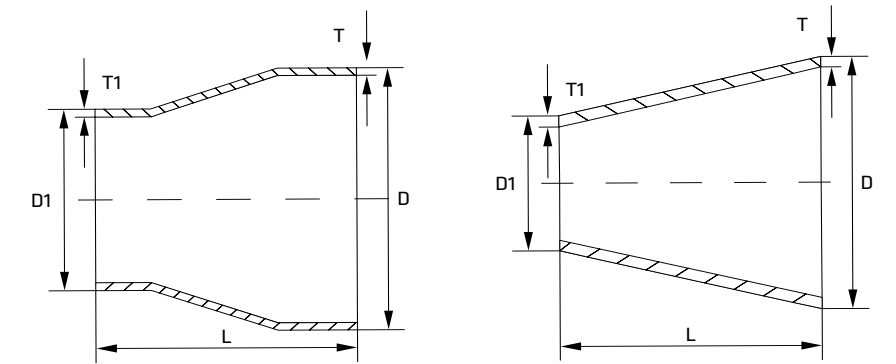
OD1	OD2	T1	T2	INCH-SCH	C	M	Grade		kg/pce.	seamless	welded	seamless
							304/304L	316/316L				
							AISI/UNS					
355.60	323.85	4.78	4.57	14" x 12" SCH 10S	279.00	270.00	28.960				x 1)	
355.60	323.85	9.53	9.53	14" x 12" SCH 40S	279.00	270.00	68.090				x 1)	
406.40	273.05	6.35	4.19	16" x 10" SCH 10S	305.00	283.00	40.920				x 1)	
406.40	273.05	12.70	9.27	16" x 10" SCH 40S	305.00	283.00	80.570				x 1)	
406.40	323.85	4.78	4.57	16" x 12" SCH 10S	305.00	295.00	42.170				x 1)	
406.40	323.85	9.53	9.53	16" x 12" SCH 40S	305.00	295.00	83.040				x 1)	
406.40	355.60	4.78	4.78	16" x 14" SCH 10S	305.00	305.00	43.140				x 1)	
406.40	355.60	9.53	9.53	16" x 14" SCH 40S	305.00	305.00	84.960				x 1)	



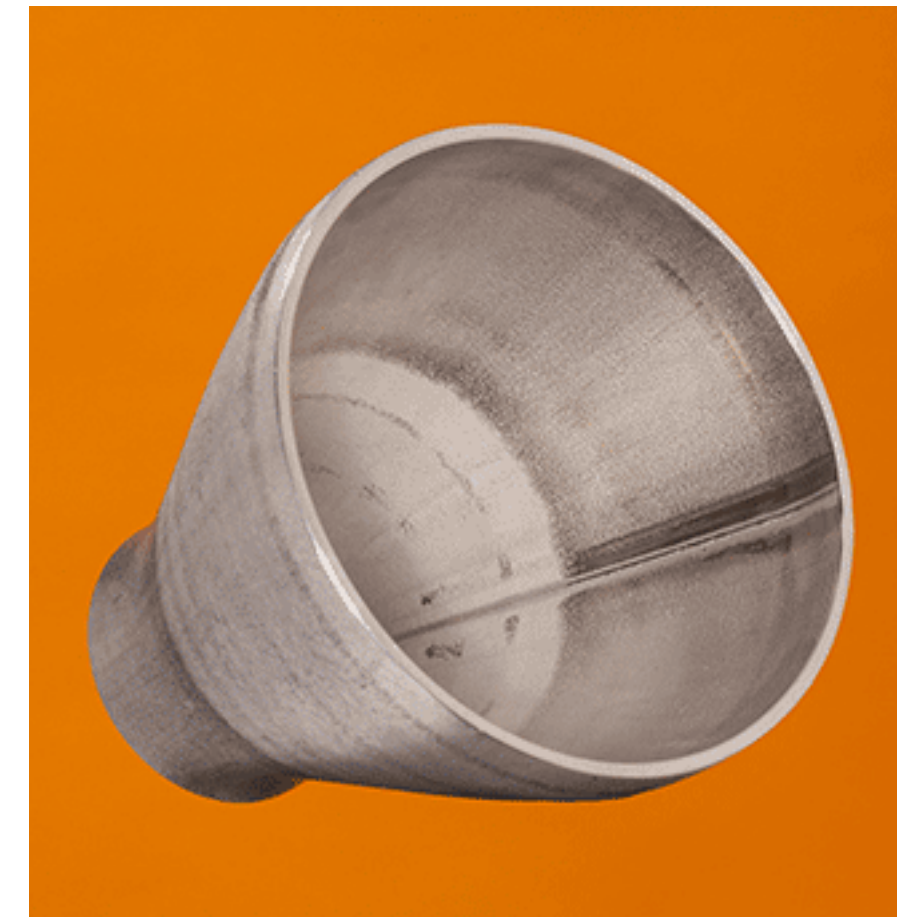
# REDUCER WELDED

acc. to EN-10253-4

concentric (1/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
17.2	13.5	2.0	2.0	11.0	3 (D-d)	0.008	x			
21.3	13.5	2.0	1.8	38.0		0.050				x
21.3	13.5	2.0	2.0	23.0	3 (D-d)	0.018	x	x		
21.3	17.2	2.0	1.8	38.0		0.050				x
21.3	17.2	2.0	2.0	12.0	3 (D-d)	0.012	x	x		
25.0	20.0	2.0	2.0	15.0	3 (D-d)	0.014		x		
26.9	13.5	2.0	2.0	40.0	3 (D-d)	0.040	x	x		
26.9	17.2	1.6	1.6	38.0		0.050			x	x
26.9	17.2	2.0	2.0	29.0	3 (D-d)	0.032	x	x		
26.9	21.3	1.6	1.6	38.0		0.040			x	x

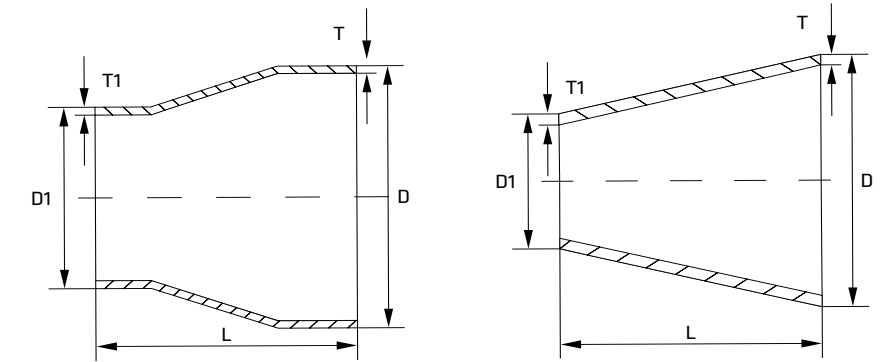




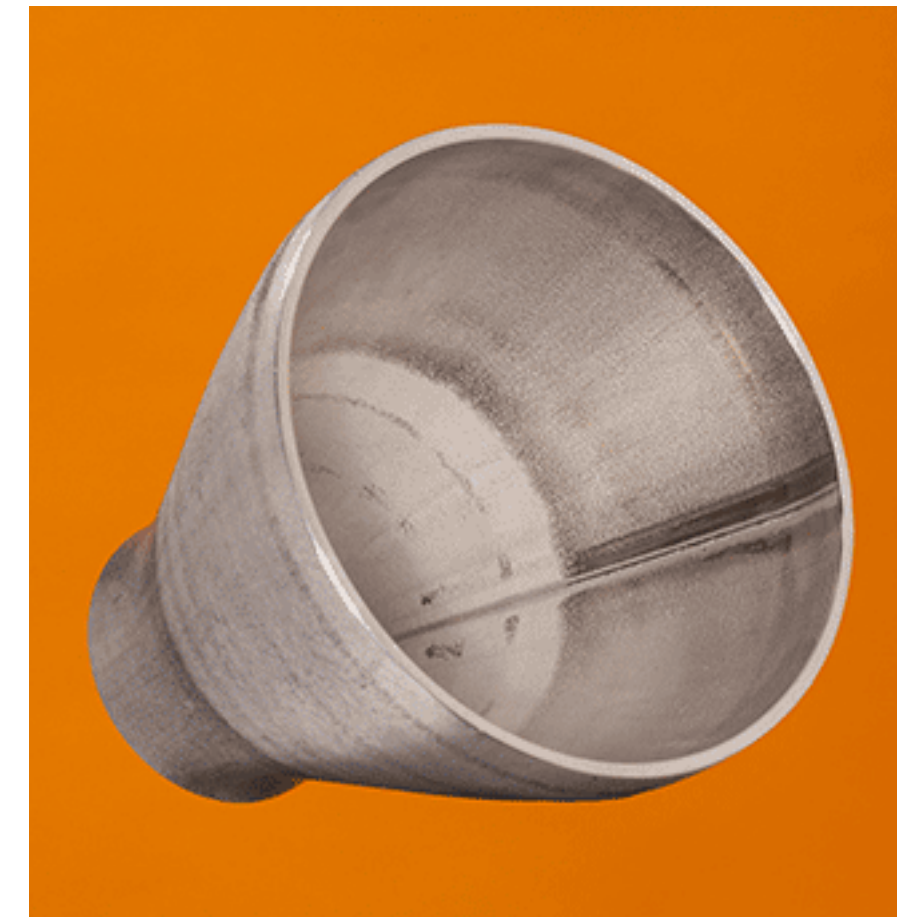
# REDUCER WELDED

acc. to EN-10253-4

concentric (2/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
26.9	21.3	2.0	2.0	38.0		0.060				x
26.9	21.3	2.0	2.0	17.0	3 (D-d)	0.020	x	x		
30.0	20.0	2.0	2.0	30.0	3 (D-d)	0.034	x	x		
30.0	25.0	2.0	2.0	15.0	3 (D-d)	0.018	x	x		
33.7	13.7	2.0	2.0	60.0	3 (D-d)	0.071	x	x		
33.7	17.2	2.0	1.6	51.0		0.100			x	x
33.7	17.2	2.0	2.0	50.0	3 (D-d)	0.063	x	x		
33.7	21.3	2.0	1.6	51.0		0.080			x	x
33.7	21.3	2.0	2.0	51.0		0.100				x
33.7	21.3	2.0	2.0	37.0	3 (D-d)	0.051	x	x		

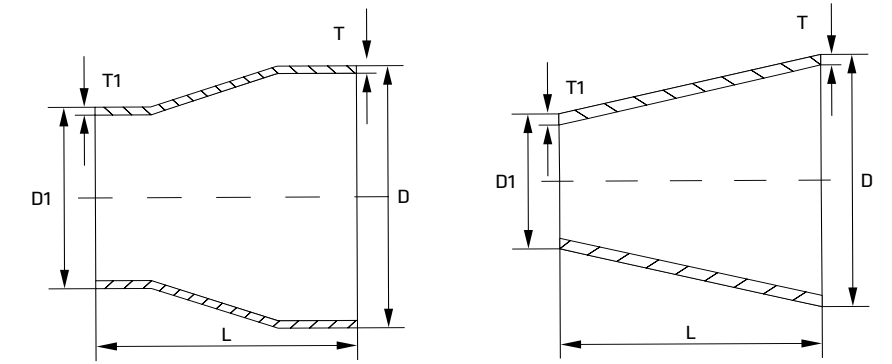




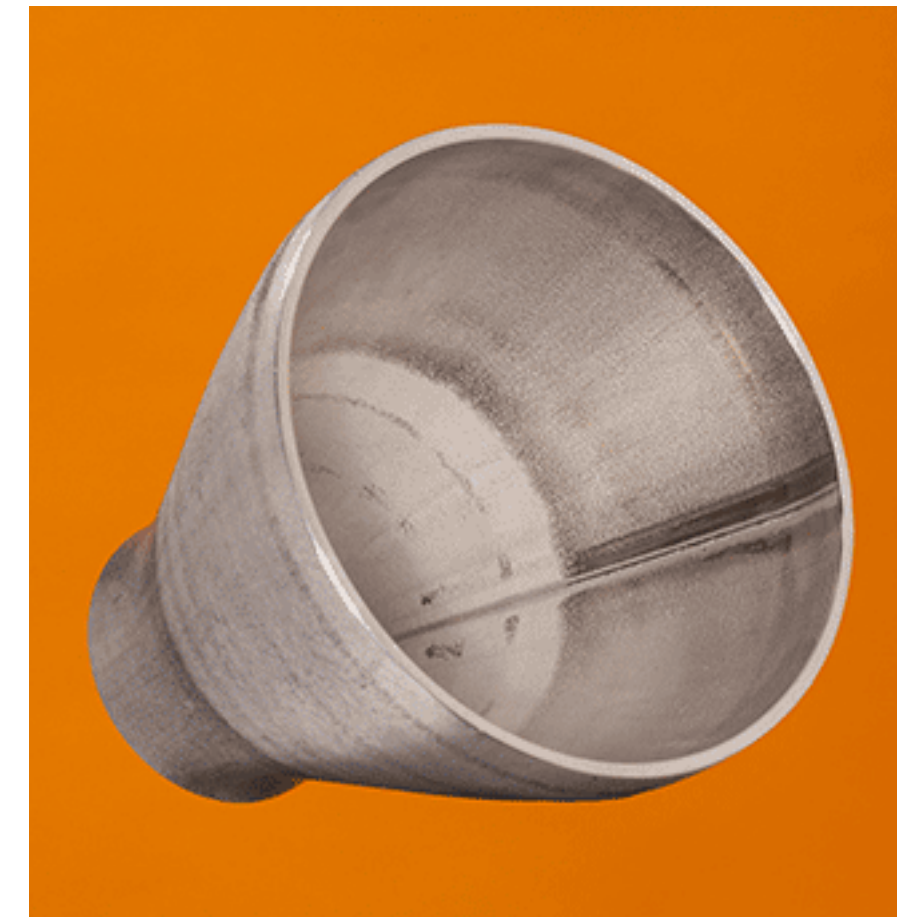
# REDUCER WELDED

acc. to EN-10253-4

concentric (3/28)



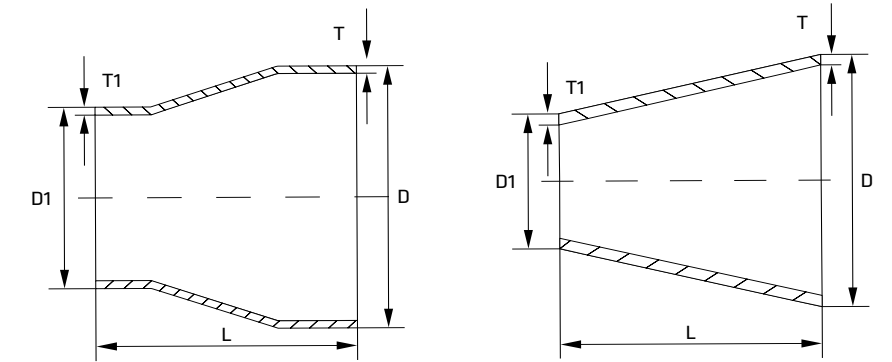
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
33.7	21.3	2.6	2.0	51.0		0.100				x
33.7	26.9	2.0	1.6	51.0		0.080			x	x
33.7	26.9	2.0	2.0	51.0		0.070			x	x
33.7	26.9	2.0	2.0	20.0	3 (D-d)	0.031	x	x		
38.0	20.0	2.0	2.0	24.0	3 (D-d)	0.076		x		
38.0	25.0	2.0	2.0	39.0	3 (D-d)	0.058	x	x		
40.0	28.0	2.0	2.0	36.0	3 (D-d)	0.600		x		
42.4	13.5	2.0	2.0	87.0	3 (D-d)	0.120	x	x		
42.4	17.2	2.0	2.0	76.0	3 (D-d)	0.113	x	x		
42.4	21.3	2.0	1.6	51.0		0.120			x	x



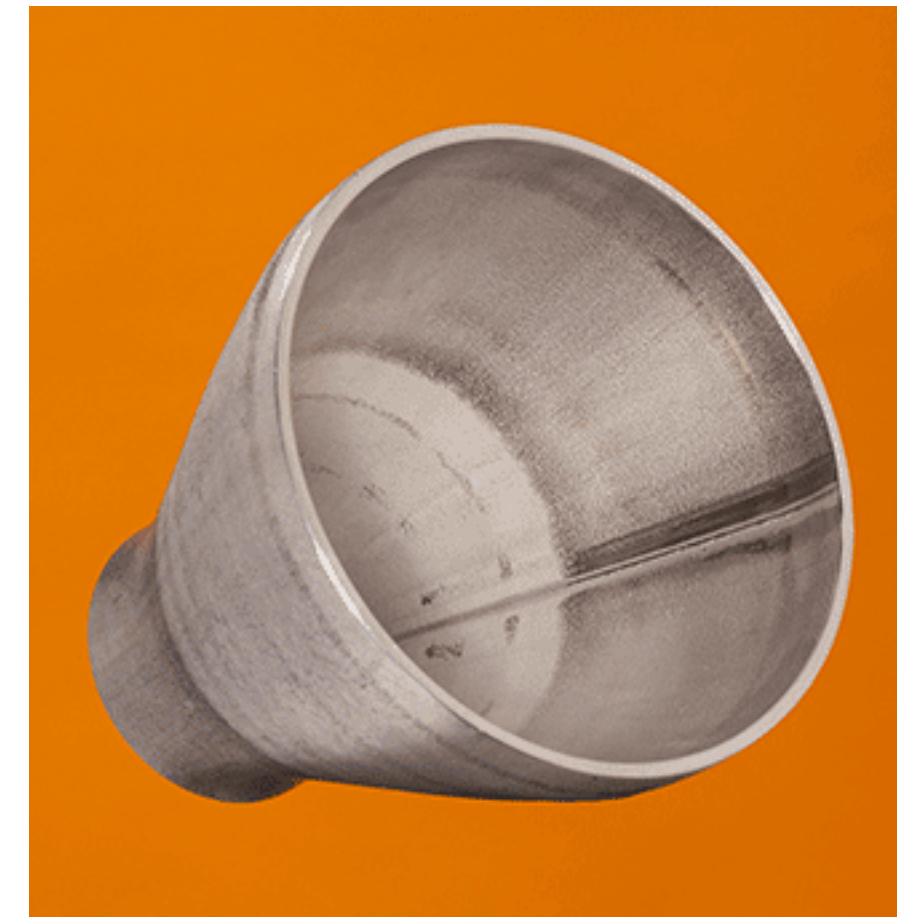
# REDUCER WELDED

acc. to EN-10253-4

concentric (4/28)



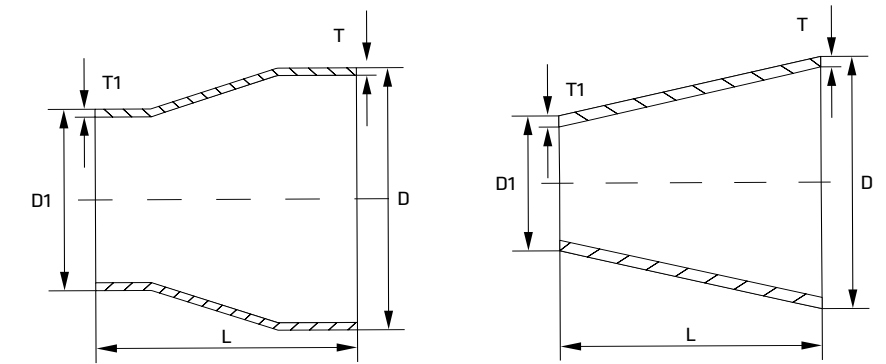
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
42.4	21.3	2.0	2.0	63.0	3 (D-d)	0.101	x	x		
42.4	26.9	2.0	1.6	51.0		0.120			x	x
42.4	26.9	2.0	2.0	50.0		0.120				x
42.4	26.9	2.0	2.0	46.0	3 (D-d)	0.080	x	x		
42.4	33.7	2.0	2.0	51.0		0.120			x	x
42.4	33.7	2.0	2.0	26.0	3 (D-d)	0.050	x	x		
42.4	33.7	2.6	2.3	50.0		0.120				x
42.4	33.7	3.6	3.6	51.0		0.190				x
44.5	20.0	2.0	2.0	74.0	3 (D-d)	0.116		x		
44.5	25.0	2.0	2.0	59.0	3 (D-d)	0.102	x	x		



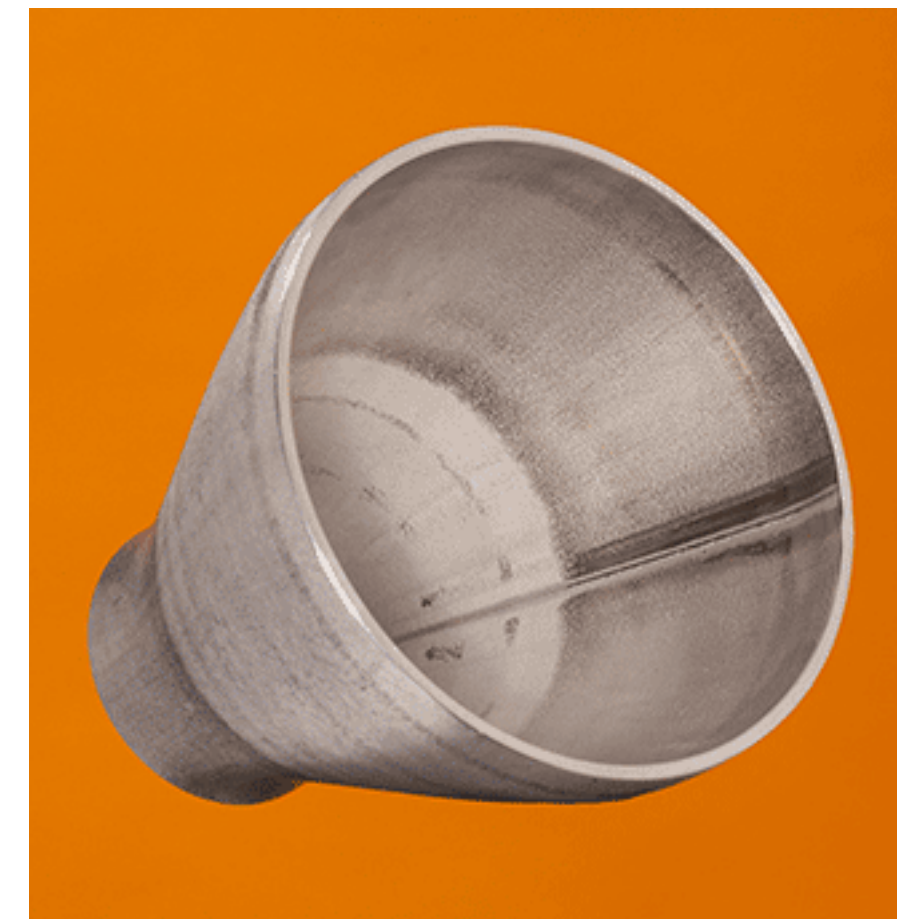
# REDUCER WELDED

acc. to EN-10253-4

concentric (5/28)



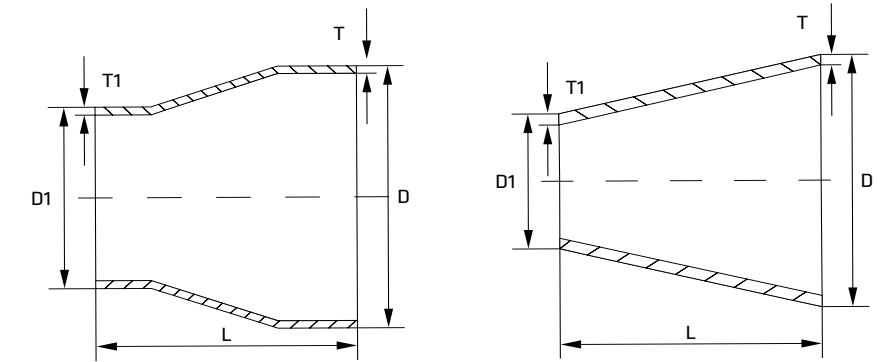
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
44.5	30.0	2.0	2.0	44.0	3 (D-d)	0.078	x	x		
48.3	21.3	2.0	1.6	64.0		0.170			x	x
48.3	21.3	2.0	2.0	64.0		0.170				x
48.3	21.3	2.0	2.0	81.0	3 (D-d)	0.142	x	x		
48.3	26.9	2.0	1.6	64.0		0.170			x	x
48.3	26.9	2.0	2.0	64.0		0.170			x	x
48.3	26.9	2.0	2.0	64.0	3 (D-d)	0.121	x	x		
48.3	26.9	2.6	2.0	64.0		0.170				x
48.3	33.7	2.0	2.0	44.0	3 (D-d)	0.090	x	x		
48.3	33.7	2.0	2.0	64.0		0.160			x	x



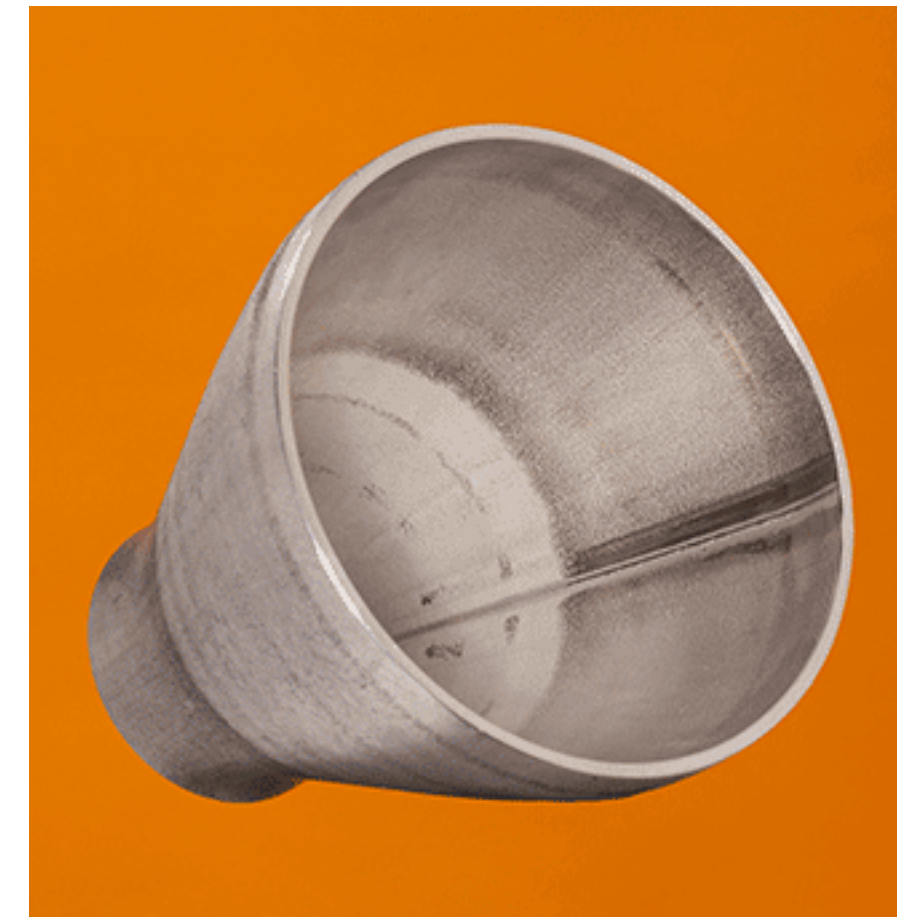
# REDUCER WELDED

acc. to EN-10253-4

concentric (6/28)



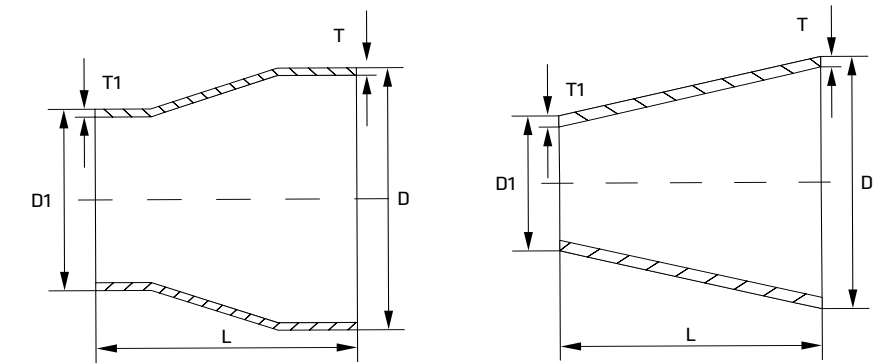
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
48.3	33.7	2.6	2.6	64.0		0.210				x
48.3	42.4	2.0	2.0	18.0	3 (D-d)	0.040	x	x		
48.3	42.4	2.0	2.0	64.0		0.160			x	x
54.0	25.0	2.0	2.0	87.0	3 (D-d)	0.100		x		
54.0	30.0	2.0	2.0	72.0	3 (D-d)	0.138	x	x		
54.0	44.0	2.0	2.0	30.0	3 (D-d)	0.074	x	x		
60.3	21.3	2.0	1.6	76.0		0.290			x	x
60.3	21.3	2.0	2.0	76.0		0.300				x
60.3	21.3	2.0	2.0	117.0	3 (D-d)	0.240	x	x		
60.3	26.9	2.0	1.6	76.0		0.200			x	x



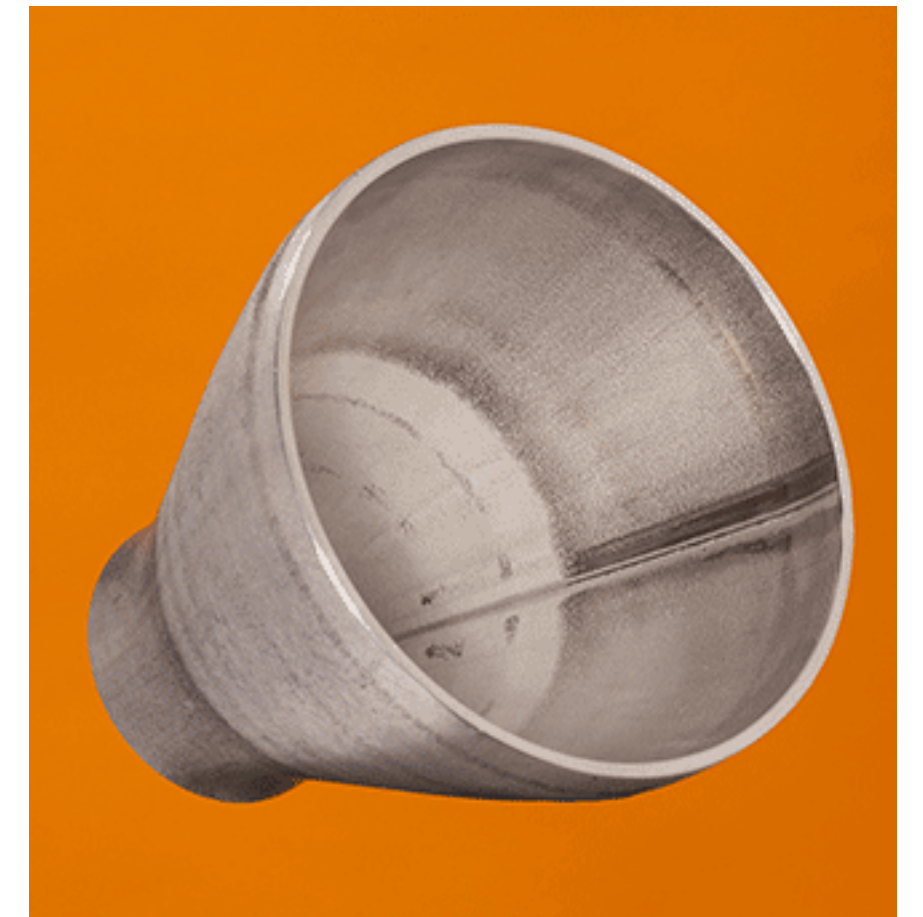
# REDUCER WELDED

acc. to EN-10253-4

concentric (7/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
60.3	26.9	2.0	2.0	76.0		0.230			x	
60.3	26.9	2.0	2.0	100.0	3 (D-d)	0.219	x	x		
60.3	33.7	2.0	2.0	80.0	3 (D-d)	0.188	x	x		
60.3	33.7	2.0	2.0	76.0		0.250			x	x
60.3	33.7	2.6	2.6	76.0		0.240				x
60.3	42.4	2.0	2.0	54.0	3 (D-d)	0.139	x	x		
60.3	42.4	2.0	2.0	76.0		0.230			x	x
60.3	48.3	2.0	2.0	76.0		0.230			x	x
60.3	48.3	2.0	2.0	36.0	3 (D-d)	0.098	x	x		
63.5	50.8	1.5	1.5	38.0	3 (D-d)	0.061		x		

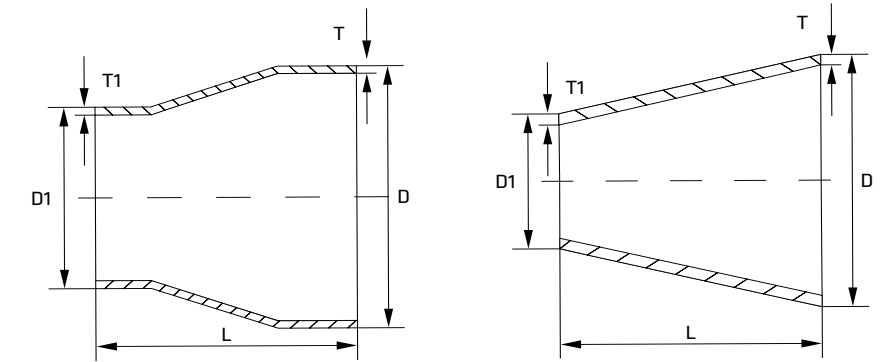




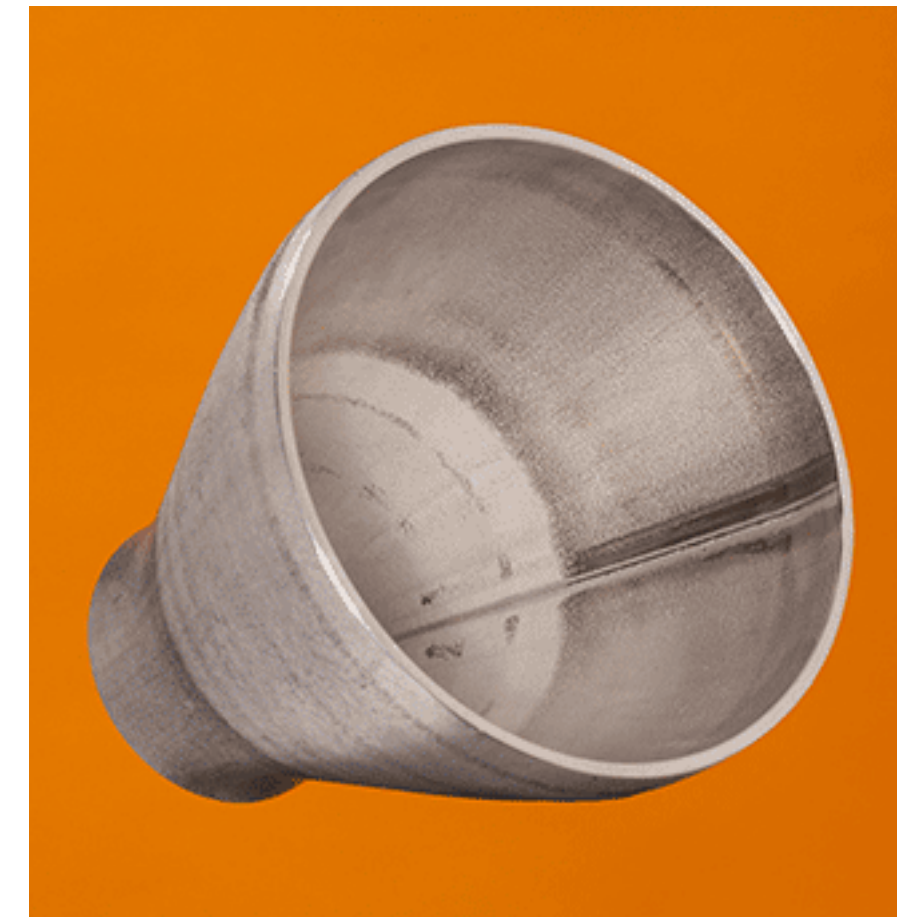
# REDUCER WELDED

acc. to EN-10253-4

concentric (8/28)



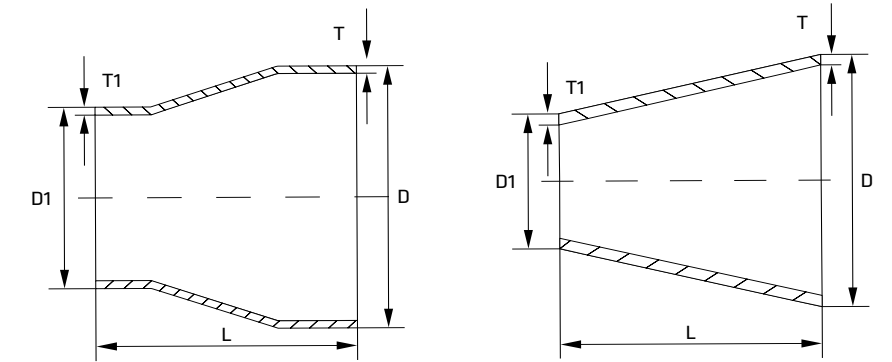
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
69.0	54.0	2.0	2.0	45.0	3 (D-d)	0.140	x	x		
70.0	44.5	2.0	2.0	77.0	3 (D-d)	0.130	x	x		
70.0	54.0	2.0	2.0	48.0	3 (D-d)	0.140	x	x		
76.1	26.9	2.0	2.0	148.0	3 (D-d)	0.382	x	x		
76.1	33.7	2.0	2.0	127.0	3 (D-d)	0.510	x	x		
76.1	33.7	2.3	2.0	89.0		0.420			x	x
76.1	42.4	2.0	2.0	101.0	3 (D-d)	0.301	x	x		
76.1	42.4	2.3	2.0	89.0		0.420			x	x
76.1	42.4	3.0	3.0	101.0	3 (D-d)	0.451	x	x		
76.1	48.3	2.0	2.0	83.0	3 (D-d)	0.261	x	x		



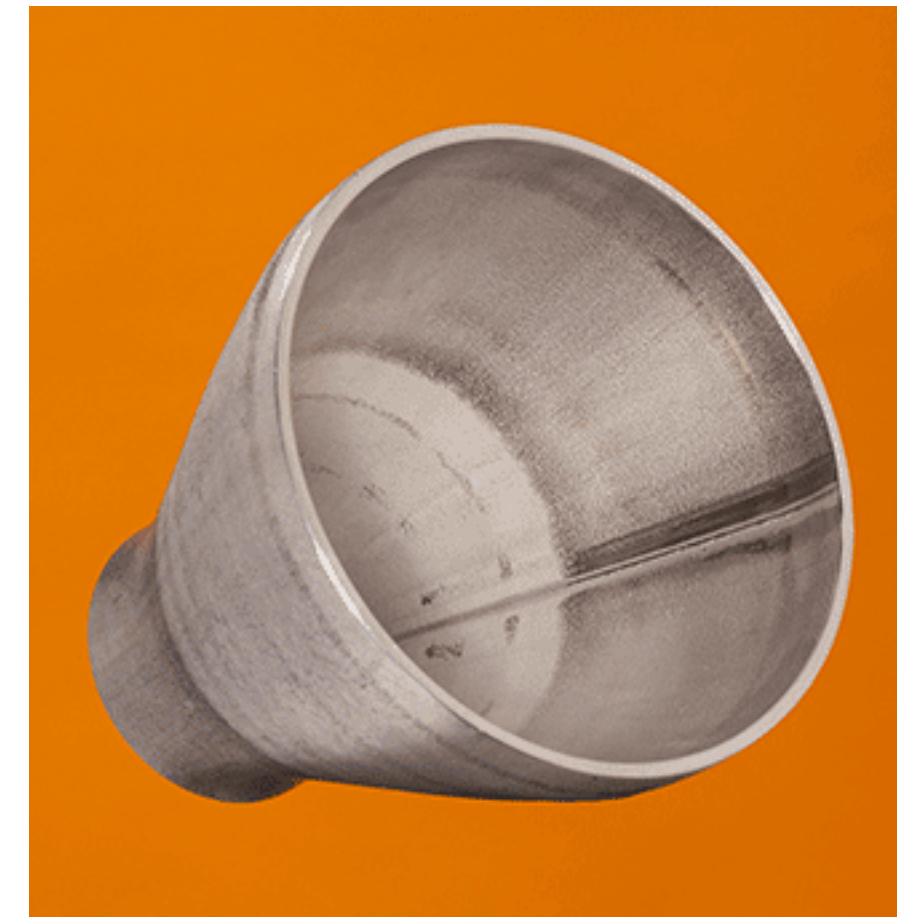
# REDUCER WELDED

acc. to EN-10253-4

concentric (9/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
76.1	48.3	2.3	2.0	89.0		0.400			x	x
76.1	48.3	3.0	3.0	83.0	3 (D-d)	0.391	x	x		
76.1	60.3	2.0	2.0	47.0	3 (D-d)	0.162	x	x		
76.1	60.3	2.3	2.0	89.0		0.390			x	x
76.1	60.3	3.0	3.0	47.0	3 (D-d)	0.244	x	x		
84.0	44.0	2.0	2.0	120.0	3 (D-d)	0.386	x	x		
84.0	54.0	2.0	2.0	90.0	3 (D-d)	0.312	x	x		
84.0	70.0	2.0	2.0	42.0	3 (D-d)	0.142	x	x		
88.9	33.7	2.0	2.0	166.0	3 (D-d)	0.510	x	x		
88.9	33.7	2.3	2.0	89.0		0.450			x	x

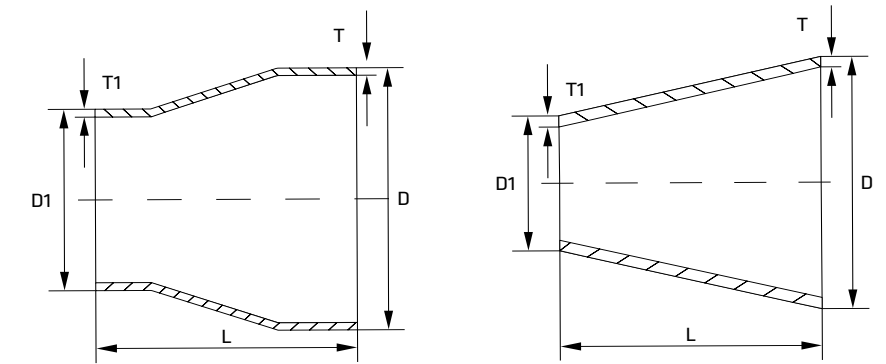




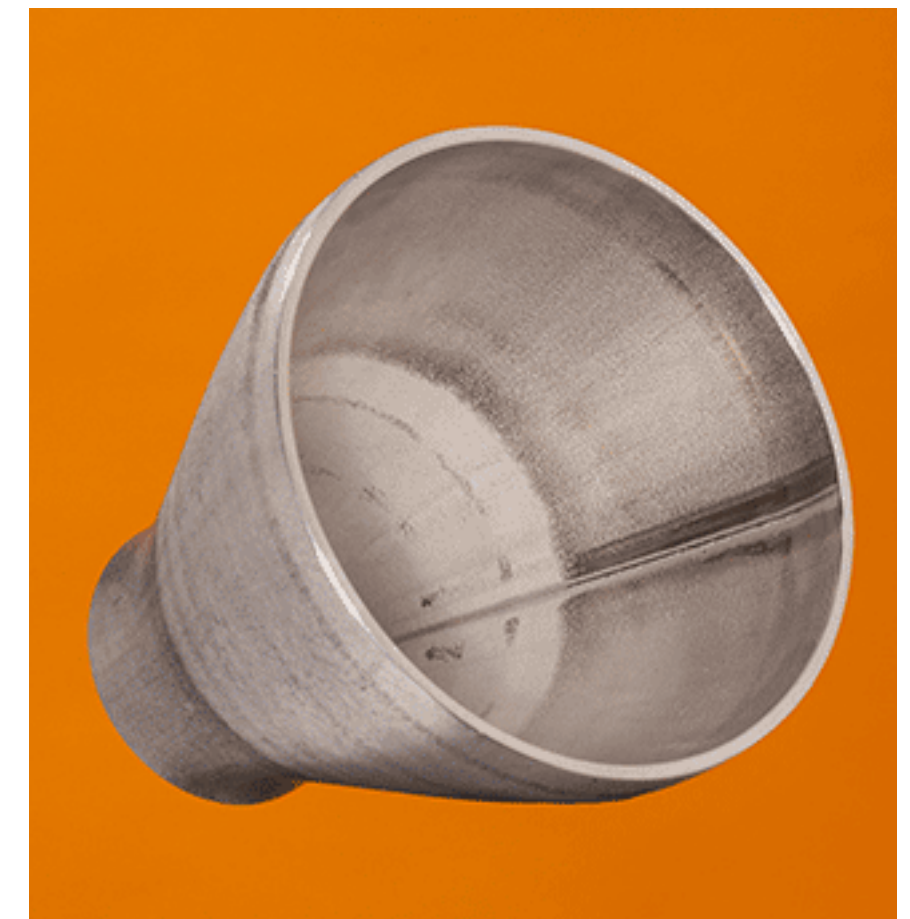
# REDUCER WELDED

acc. to EN-10253-4

concentric (10/28)



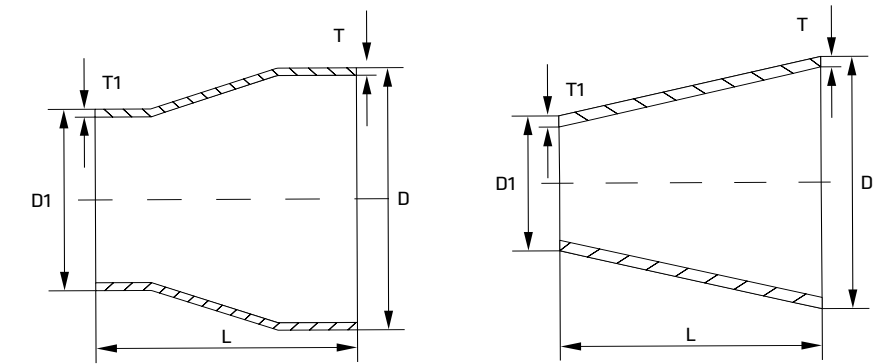
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
88.9	42.4	2.0	2.0	139.0	3 (D-d)	0.458	x	x		
88.9	42.4	2.3	2.0	89.0		0.500	x		x	x
88.9	48.3	2.0	2.0	122.0	3 (D-d)	0.420	x	x		
88.9	48.3	2.3	2.0	89.0		0.490			x	x
88.9	60.3	2.0	2.0	86.0	3 (D-d)	0.322	x	x		
88.9	60.3	2.3	2.0	89.0		0.460			x	x
88.9	60.3	3.0	3.0	86.0	3 (D-d)	0.482	x	x		
88.9	76.1	2.0	2.0	38.0	3 (D-d)	0.159	x	x		
88.9	76.1	2.3	2.3	89.0		0.460			x	x
88.9	76.1	3.0	3.0	38.0	3 (D-d)	0.239	x	x		



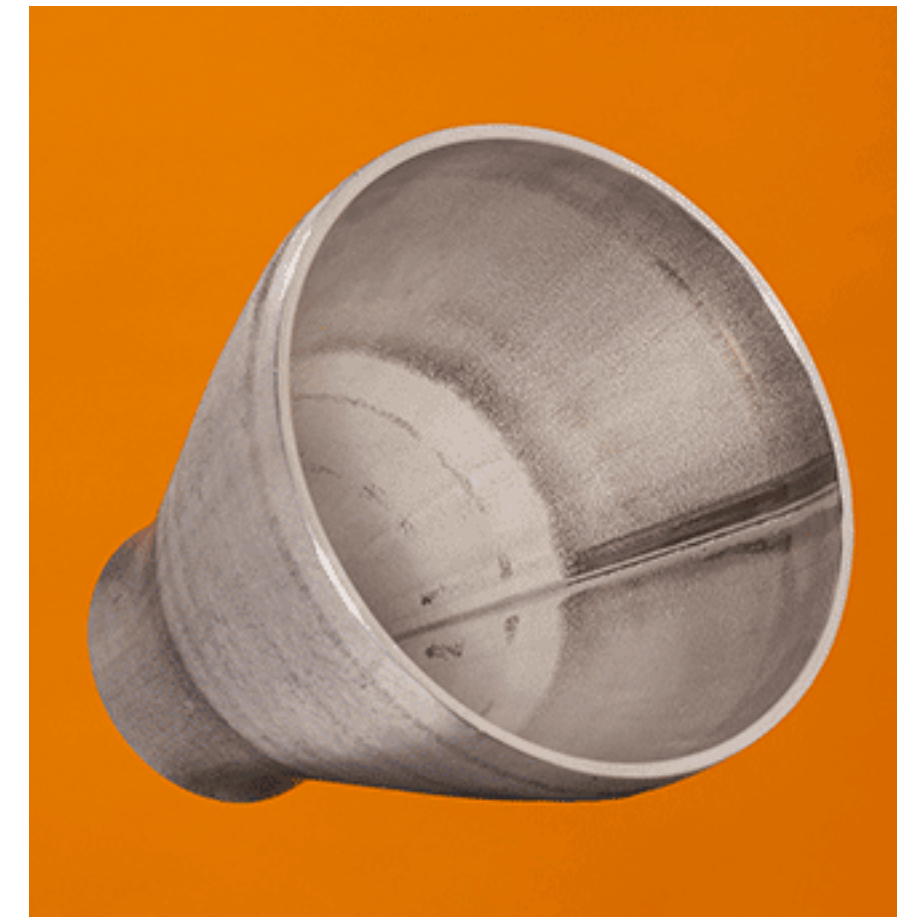
# REDUCER WELDED

acc. to EN-10253-4

concentric (11/28)



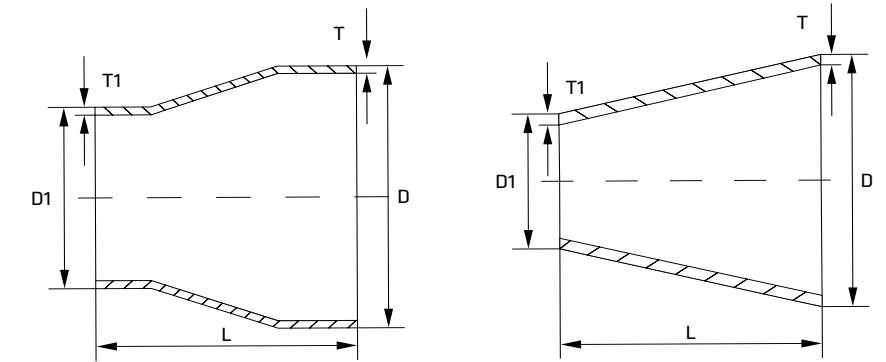
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
101.6	76.1	2.0	2.0	77.0	3 (D-d)	0.326	x	x		
104.0	54.0	2.0	2.0	150.0	3 (D-d)	0.595	x	x		
104.0	70.0	2.0	2.0	102.0	3 (D-d)	0.392	x	x		
104.0	76.1	2.0	2.0	84.0	3 (D-d)	0.342	x	x		
104.0	84.0	2.0	2.0	60.0	3 (D-d)	0.283	x	x		
114.3	33.7	2.0	2.0	242.0	3 (D-d)	0.899	x	x		
114.3	33.7	2.6	2.0	102.0		0.850			x	x
114.3	42.4	2.0	2.0	216.0	3 (D-d)	0.849	x	x		
114.3	42.4	2.6	6.0	102.0		0.850			x	
114.3	48.3	2.0	2.0	198.0	3 (D-d)	0.809	x	x		



# REDUCER WELDED

acc. to EN-10253-4

concentric (12/28)



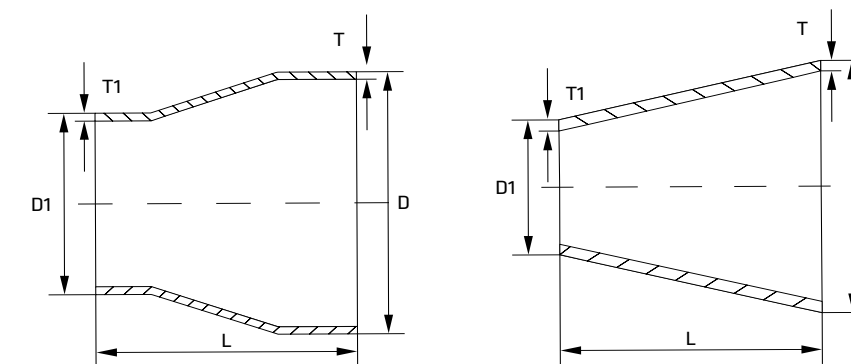
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
114.3	48.3	2.6	2.0	102.0		0.850			x	x
114.3	60.3	2.0	2.0	162.0	3 (D-d)	0.711	x	x		
114.3	60.3	2.6	2.0	102.0		0.800			x	x
114.3	60.3	3.0	3.0	162.0	3 (D-d)	1.066	x	x		
114.3	76.1	2.0	2.0	114.0	3 (D-d)	0.555	x	x		
114.3	76.1	2.6	2.3	102.0		0.780			x	x
114.3	76.1	3.0	3.0	114.0	3 (D-d)	0.832	x	x		
114.3	88.9	2.0	2.0	76.0	3 (D-d)	0.389	x	x		
114.3	88.9	2.6	2.3	102.0		0.720			x	x
114.3	88.9	2.6	2.6	102.0		0.820				x



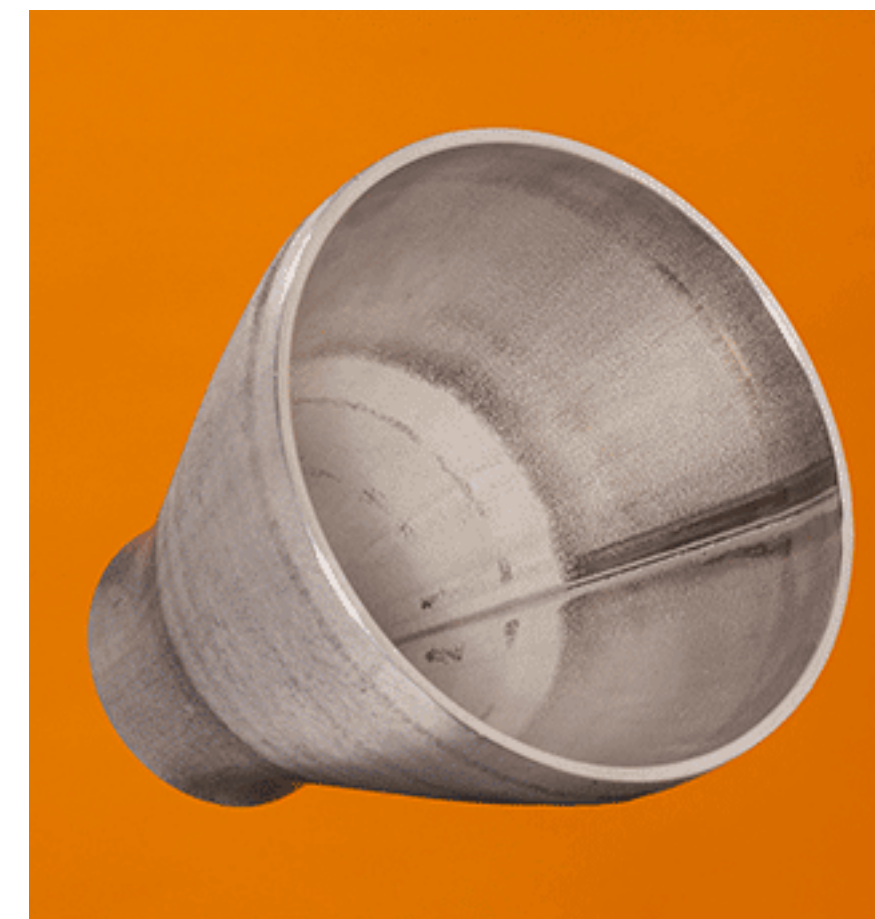
# REDUCER WELDED

acc. to EN-10253-4

concentric (13/28)



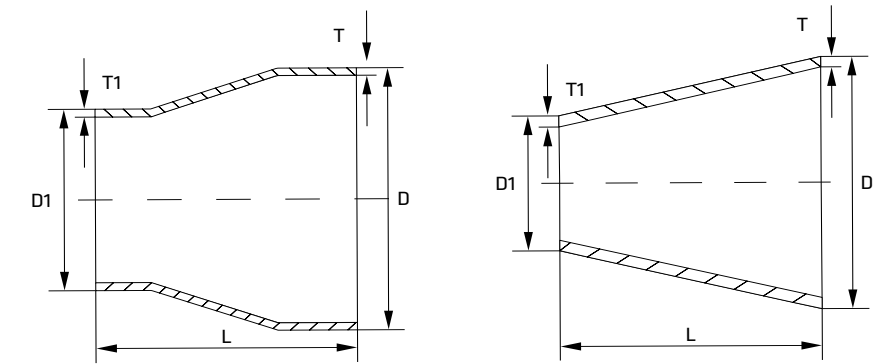
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
114.3	88.9	3.0	3.0	76.0	3 (D-d)	0.583	x	x		
114.3	88.9	3.6	3.2	102.0		1.000				x
114.3	88.9	4.0	4.0	76.0	3 (D-d)	0.720	x	x		
129.0	54.0	2.0	2.0	225.0	3 (D-d)	1.034	x	x		
129.0	70.0	2.0	2.0	177.0	3 (D-d)	0.306	x	x		
129.0	76.1	2.0	2.0	159.0	3 (D-d)	0.792	x	x		
129.0	84.0	2.0	2.0	135.0	3 (D-d)	0.722	x	x		
129.0	104.0	2.0	2.0	75.0	3 (D-d)	0.439	x	x		
139.7	48.3	2.0	2.0	274.0	3 (D-d)	1.295	x	x		
139.7	60.3	2.0	2.0	238.0	3 (D-d)	1.197	x	x		



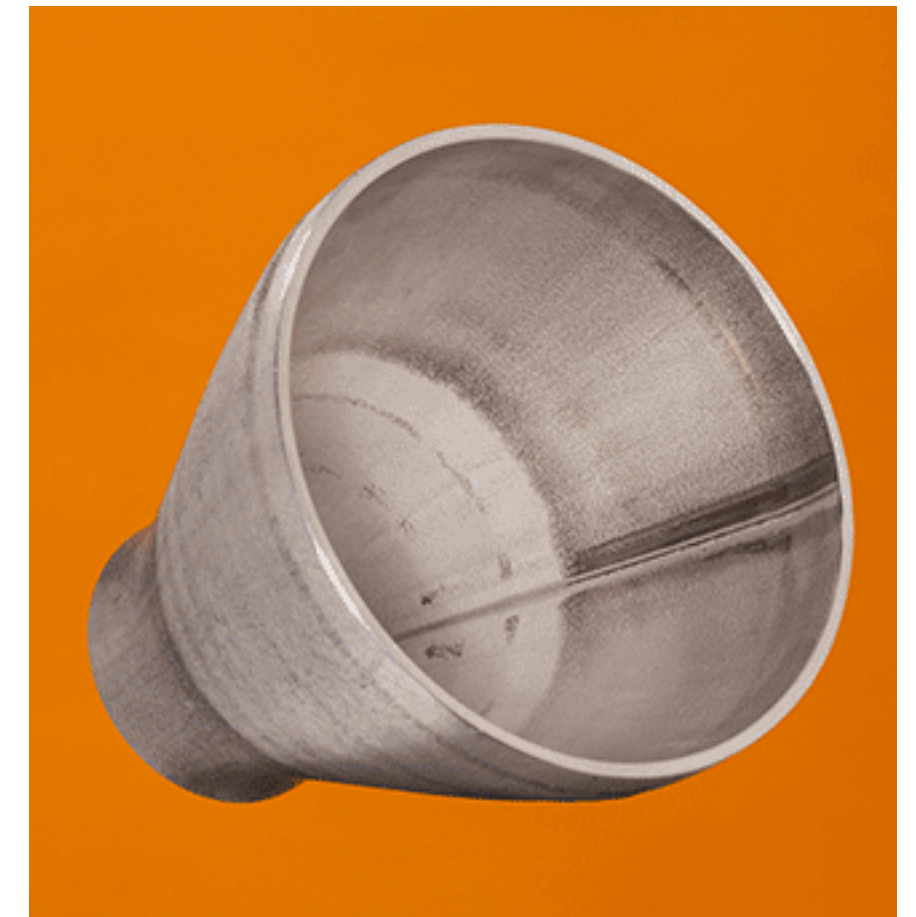
# REDUCER WELDED

acc. to EN-10253-4

concentric (14/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
139.7	60.3	2.6	2.0	127.0		1.400			x	x
139.7	60.3	3.0	3.0	238.0	3 (D-d)	1.795	x	x		
139.7	76.1	2.0	2.0	191.0	3 (D-d)	1.034	x	x		
139.7	76.1	2.6	2.3	127.0		1.400			x	x
139.7	76.1	3.0	3.0	191.0	3 (D-d)	1.551	x	x		
139.7	88.9	2.0	2.0	152.0	3 (D-d)	0.875	x	x		
139.7	88.9	2.6	2.3	127.0		1.350			x	x
139.7	88.9	2.9	2.3	127.0		1.500			x	
139.7	88.9	3.0	3.0	152.0	3 (D-d)	1.313	x	x		
139.7	114.3	2.0	2.0	76.0	3 (D-d)	0.486	x	x		

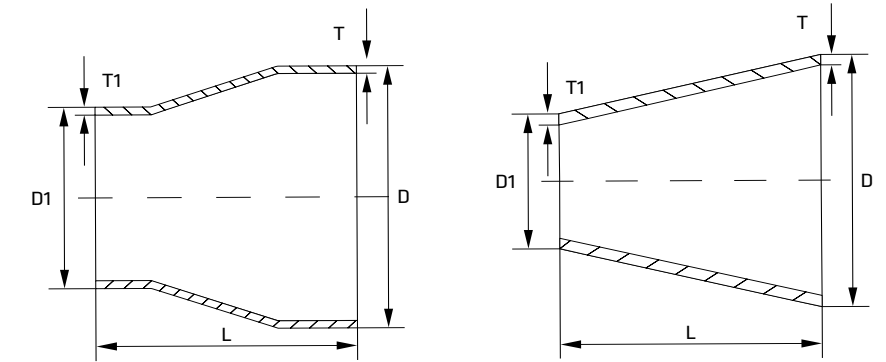




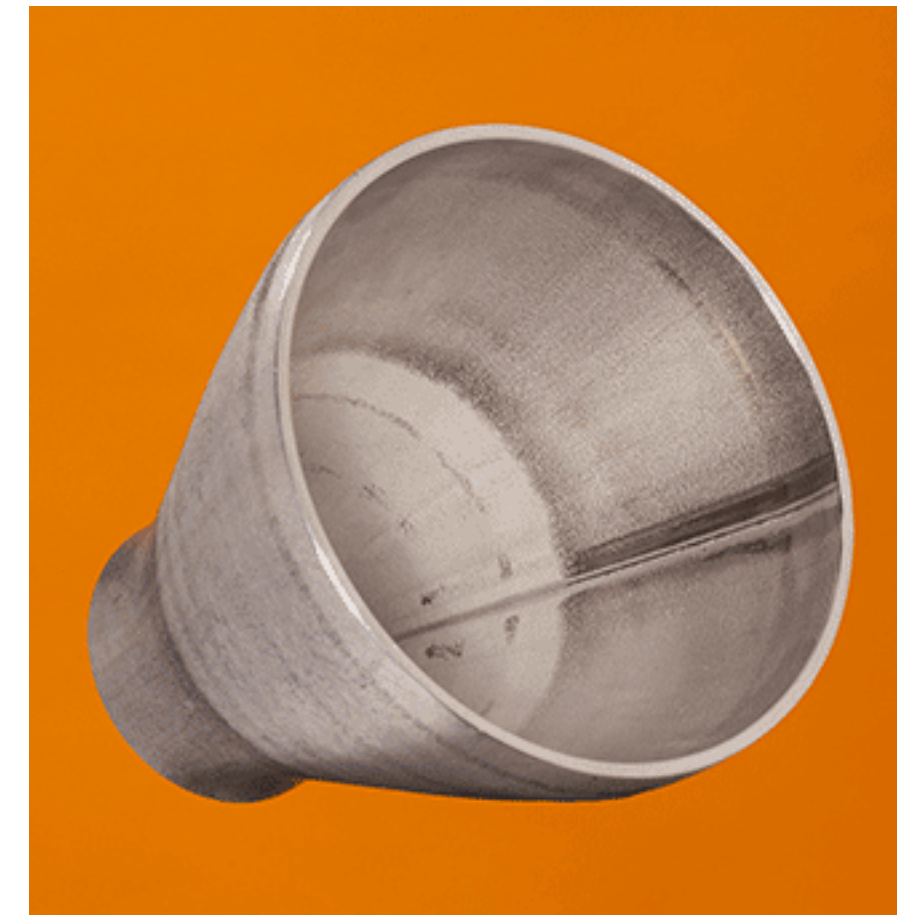
# REDUCER WELDED

acc. to EN-10253-4

concentric (15/28)



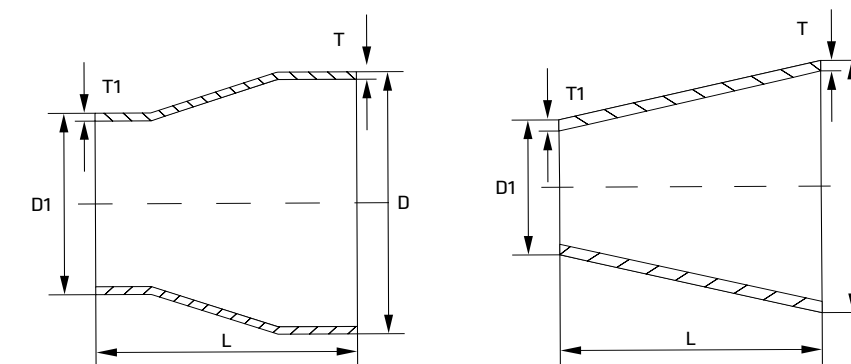
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
139.7	114.3	2.6	2.6	127.0		1.300			x	x
139.7	114.3	2.9	2.6	127.0		1.400			x	
139.7	114.3	3.0	3.0	76.0	3 (D-d)	0.729	x	x		
139.7	114.3	4.0	4.0	76.0	3 (D-d)	0.980	x	x		
154.0	54.0	2.0	2.0	300.0	3 (D-d)	1.567	x	x		
154.0	70.0	2.0	2.0	252.0	3 (D-d)	2.050	x	x		
154.0	84.0	2.0	2.0	210.0	3 (D-d)	1.255	x	x		
154.0	104.0	2.0	2.0	150.0	3 (D-d)	0.972	x	x		
154.0	129.0	2.0	2.0	75.0	3 (D-d)	0.533	x	x		
156.0	106.0	3.0	3.0	150.0	3 (D-d)	1.490		x		



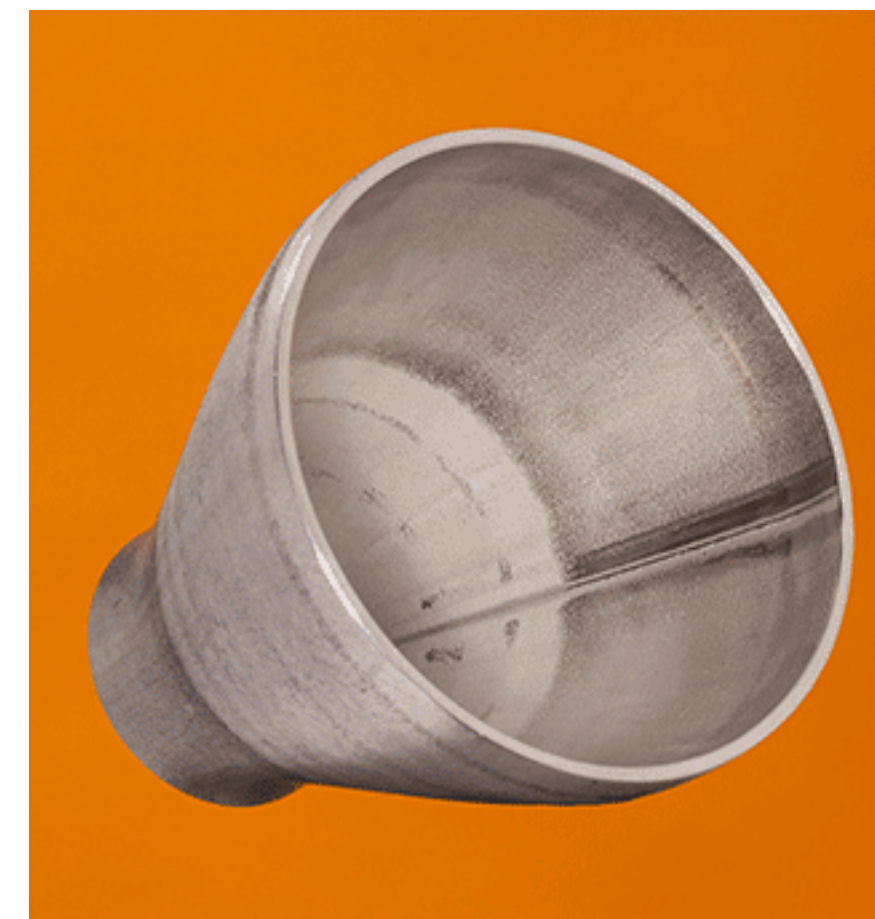
# REDUCER WELDED

acc. to EN-10253-4

concentric (16/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
168.3	60.3	2.0	2.0	324.0	3 (D-d)	0.861	x	x		
168.3	60.3	2.6	2.0	140.0		1.900			x	x
168.3	60.3	3.0	3.0	324.0	3 (D-d)	2.791	x			
168.3	76.1	2.0	2.0	277.0	3 (D-d)	1.698	x	x		
168.3	76.1	2.6	2.3	140.0		1.800			x	x
168.3	76.1	3.0	3.0	277.0	3 (D-d)	2.547	x	x		
168.3	88.9	2.0	2.0	238.0	3 (D-d)	1.539	x	x		
168.3	88.9	2.6	2.3	140.0		1.750			x	x
168.3	88.9	3.0	3.0	238.0	3 (D-d)	2.308	x	x		
168.3	114.3	2.0	2.0	162.0	3 (D-d)	1.150	x	x		

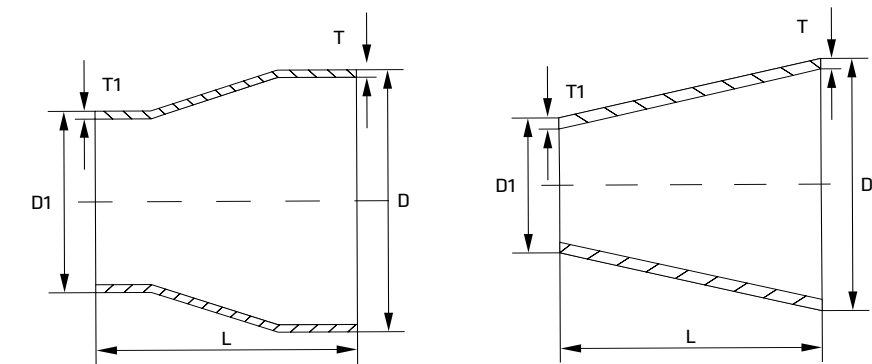




# REDUCER WELDED

acc. to EN-10253-4

concentric (17/28)



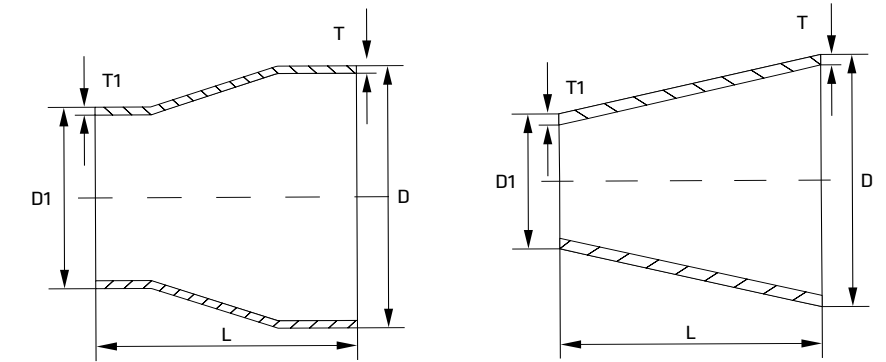
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
168.3	114.3	2.6	2.6	140.0		1.700			x	x
168.3	114.3	3.0	3.0	162.0	3 (D-d)	1.725	x	x		
168.3	114.3	4.0	4.0	162.0	3 (D-d)	2.350	x	x		
168.3	139.7	2.0	2.0	86.0	3 (D-d)	0.664	x	x		
168.3	139.7	2.6	2.6	140.0		1.700			x	x
168.3	139.7	3.0	3.0	86.0	3 (D-d)	0.996	x	x		
168.3	139.7	4.0	4.0	86.0	3 (D-d)	1.180	x	x		
204.0	84.0	2.0	2.0	360.0	3 (D-d)	2.604	x	x		
204.0	104.0	2.0	2.0	300.0	3 (D-d)	2.321	x	x		
204.0	129.0	2.0	2.0	225.0	3 (D-d)	1.882	x	x		



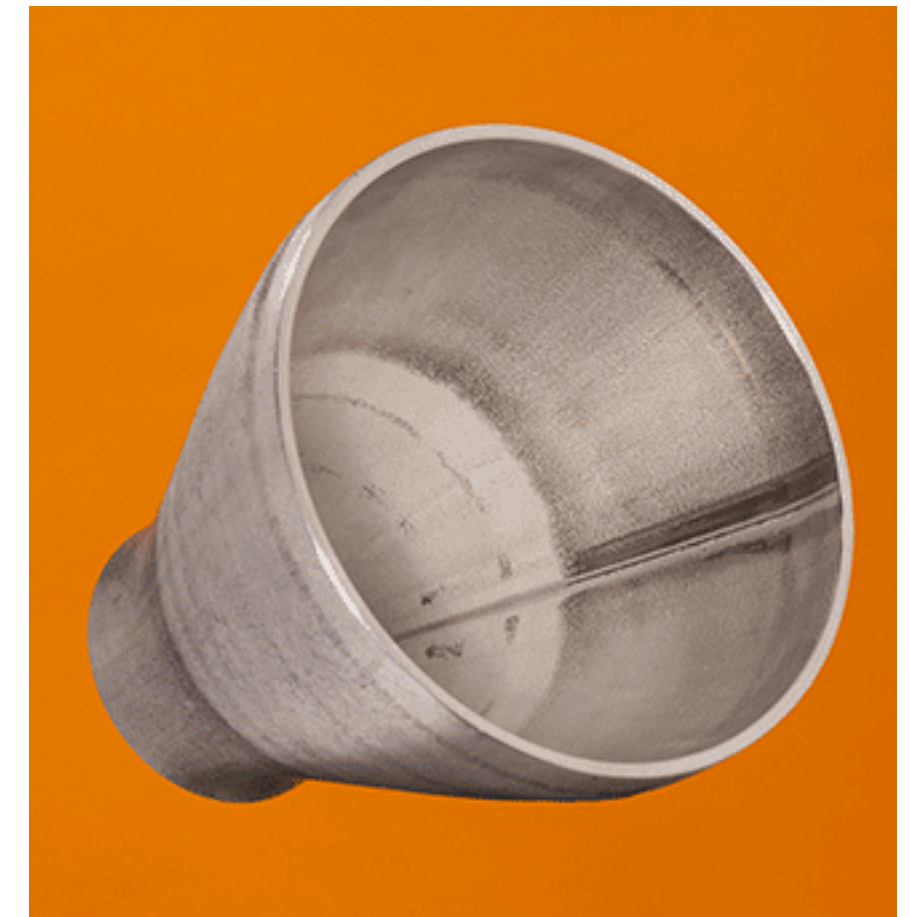
# REDUCER WELDED

acc. to EN-10253-4

concentric (18/28)



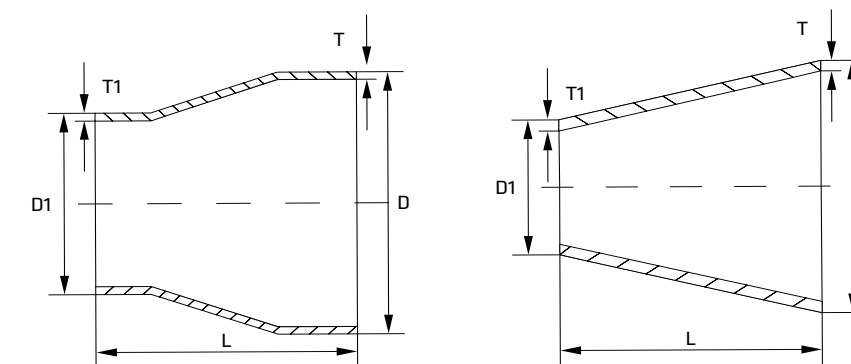
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
204.0	154.0	2.0	2.0	150.0	3 (D-d)	1.349	x	x		
206.0	106.0	3.0	3.0	300.0	3 (D-d)	3.527	x	x		
206.0	156.0	3.0	3.0	150.0	3 (D-d)	2.046	x	x		
219.1	88.9	2.0	2.0	391.0	3 (D-d)	3.022	x	x		
219.1	88.9	3.0	3.0	391.0	3 (D-d)	4.533	x	x		
219.1	114.3	2.0	2.0	314.0	3 (D-d)	2.633	x	x		
219.1	114.3	2.9	2.6	152.0		2.250				x
219.1	114.3	3.0	3.0	314.0	3 (D-d)	3.950	x	x		
219.1	114.3	4.0	4.0	314.0	3 (D-d)	5.220	x	x		
219.1	139.7	2.0	2.0	238.0	3 (D-d)	2.147	x	x		



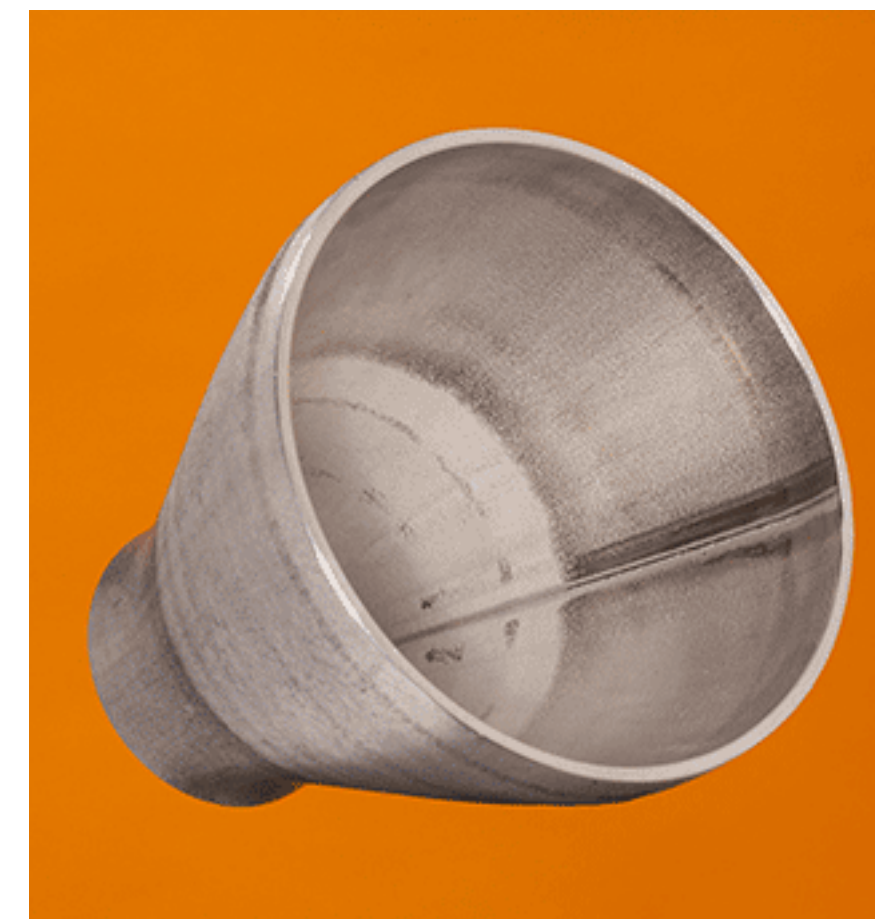
# REDUCER WELDED

acc. to EN-10253-4

concentric (19/28)



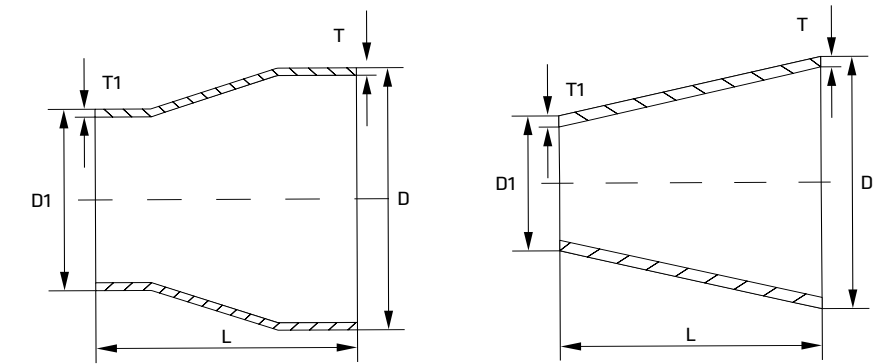
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
219.1	139.7	2.9	2.6	152.0		2.350				x
219.1	139.7	3.0	3.0	238.0	3 (D-d)	3.220	x	x		
219.1	139.7	4.0	4.0	238.0	3 (D-d)	3.920	x	x		
219.1	168.3	2.0	2.0	152.0	3 (D-d)	1.483	x	x		
219.1	168.3	2.9	2.6	152.0		2.250				x
219.1	168.3	2.9	2.9	152.0		3.300			x	
219.1	168.3	3.0	3.0	152.0	3 (D-d)	2.225	x	x		
219.1	168.3	4.0	4.0	152.0	3 (D-d)	2.810	x	x		
254.0	104.0	2.0	2.0	450.0	3 (D-d)	4.047	x	x		
254.0	129.0	2.0	2.0	375.0	3 (D-d)	3.608	x	x		



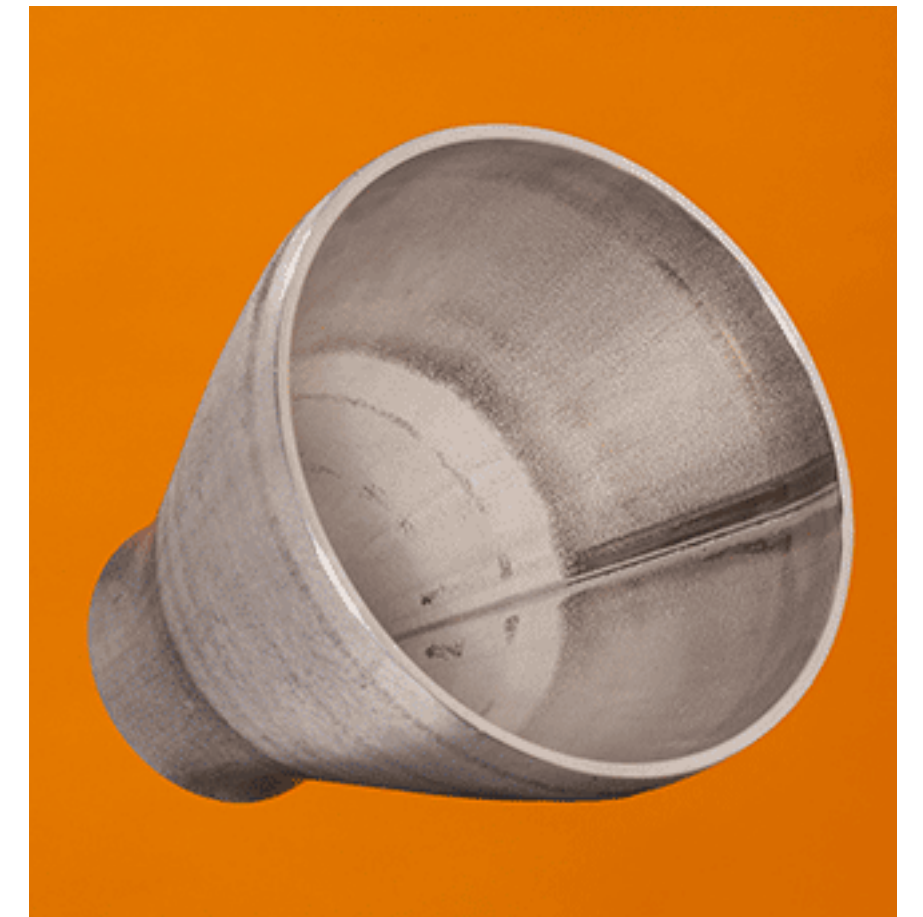
# REDUCER WELDED

acc. to EN-10253-4

concentric (20/28)



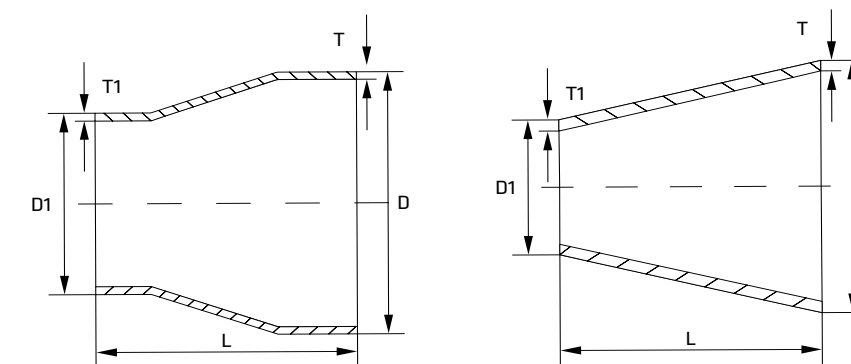
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
254.0	154.0	2.0	2.0	300.0	3 (D-d)	3.075	x	x		
254.0	204.0	2.0	2.0	150.0	3 (D-d)	1.726	x	x		
256.0	106.0	3.0	3.0	450.0	3 (D-d)	6.138	x	x		
256.0	156.0	3.0	3.0	300.0	3 (D-d)	4.657	x	x		
256.0	206.0	3.0	3.0	150.0	3 (D-d)	2.611	x	x		
273.0	114.3	2.0	2.0	476.0	3 (D-d)	4.632	x	x		
273.0	114.3	3.0	3.0	476.0	3 (D-d)	6.948	x	x		
273.0	114.3	4.0	4.0	476.0	3 (D-d)	7.000	x	x		
273.0	139.7	2.0	2.0	400.0	3 (D-d)	4.146	x	x		
273.0	139.7	3.0	3.0	400.0	3 (D-d)	6.219	x	x		



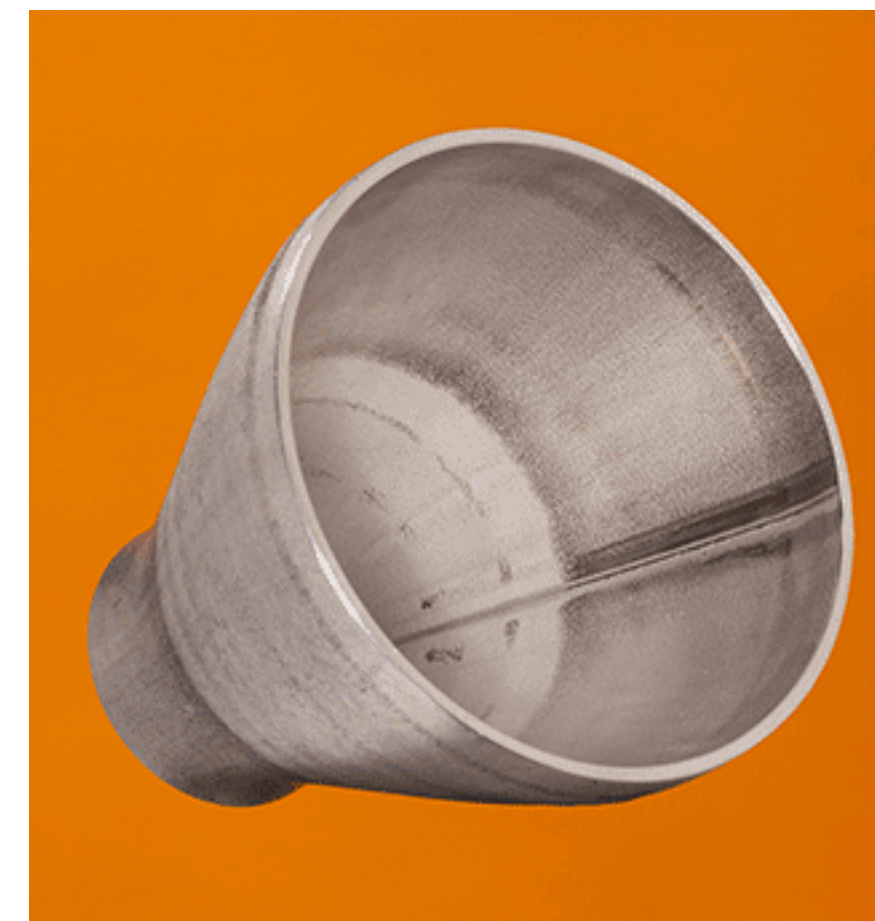
# REDUCER WELDED

acc. to EN-10253-4

concentric (21/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
273.0	139.7	4.0	4.0	400.0	3 (D-d)	8.300		x		
273.0	168.3	2.0	2.0	314.0	3 (D-d)	3.482	x	x		
273.0	168.3	3.0	3.0	178.0		3.800				x
273.0	168.3	3.0	3.0	314.0	3 (D-d)	5.223	x	x		
273.0	168.3	4.0	4.0	314.0	3 (D-d)	4.200	x	x		
273.0	219.1	2.0	2.0	162.0	3 (D-d)	1.999	x	x		
273.0	219.1	3.0	3.0	162.0	3 (D-d)	2.998	x	x		
273.0	219.1	3.0	3.0	178.0		3.600			x	x
273.0	219.1	4.0	4.0	178.0	3 (D-d)	3.620	x	x		
304.0	154.0	2.0	2.0	450.0	3 (D-d)	5.177	x	x		

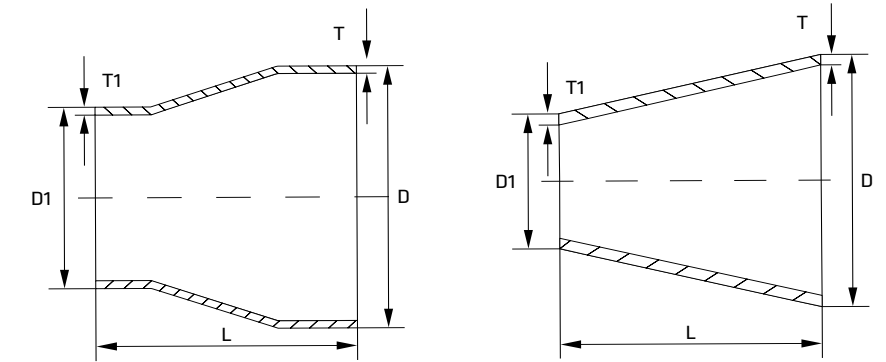




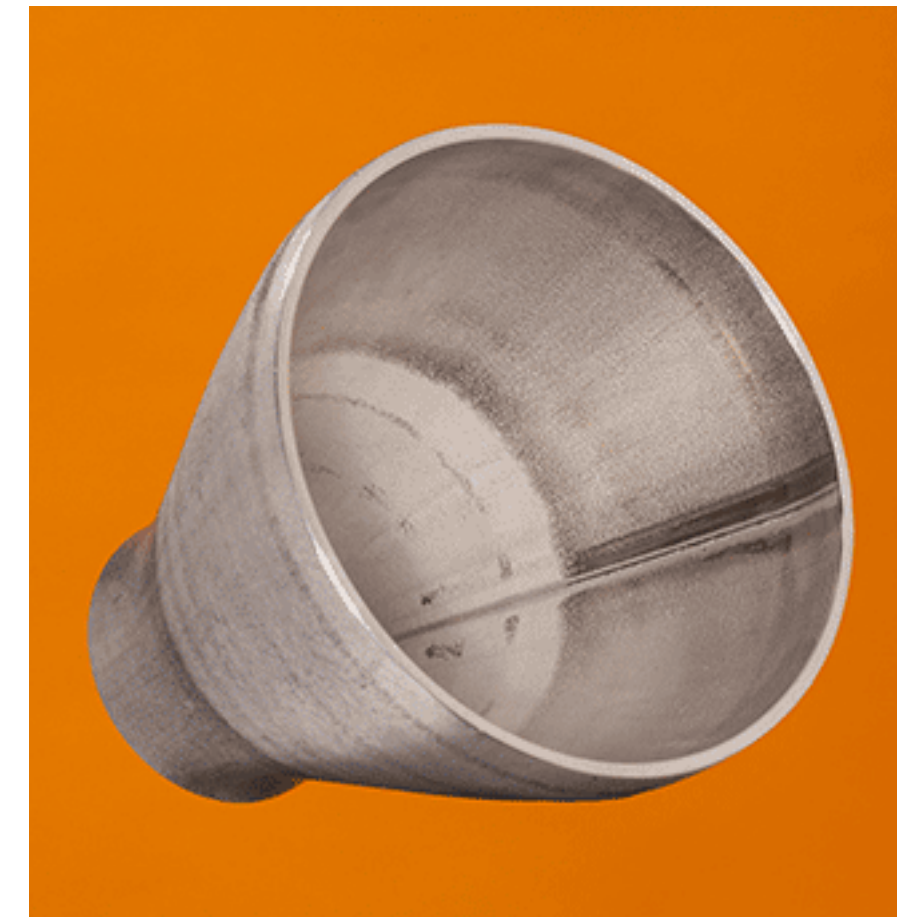
# REDUCER WELDED

acc. to EN-10253-4

concentric (22/28)



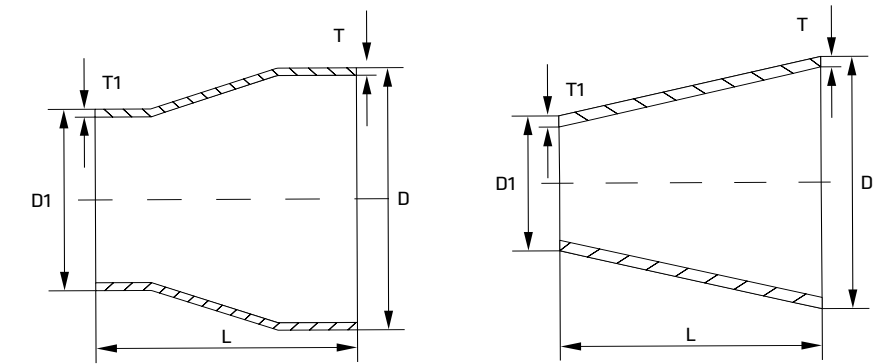
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
304.0	204.0	2.0	2.0	300.0	3 (D-d)	33.828	x	x		
304.0	254.0	2.0	2.0	150.0	3 (D-d)	2.103	x	x		
306.0	156.0	3.0	3.0	450.0	3 (D-d)	7.834	x	x		
306.0	206.0	3.0	3.0	300.0	3 (D-d)	5.788	x	x		
306.0	256.0	3.0	3.0	150.0	3 (D-d)	3.176	x	x		
323.9	114.3	2.0	2.0	629.0	3 (D-d)	6.922			x	
323.9	114.3	3.0	3.0	629.0	3 (D-d)	10.382			x	
323.9	139.7	2.0	2.0	553.0	3 (D-d)	6.435	x	x		
323.9	139.7	3.0	3.0	553.0	3 (D-d)	9.653	x	x		
323.9	168.3	2.0	2.0	467.0	3 (D-d)	5.772	x	x		



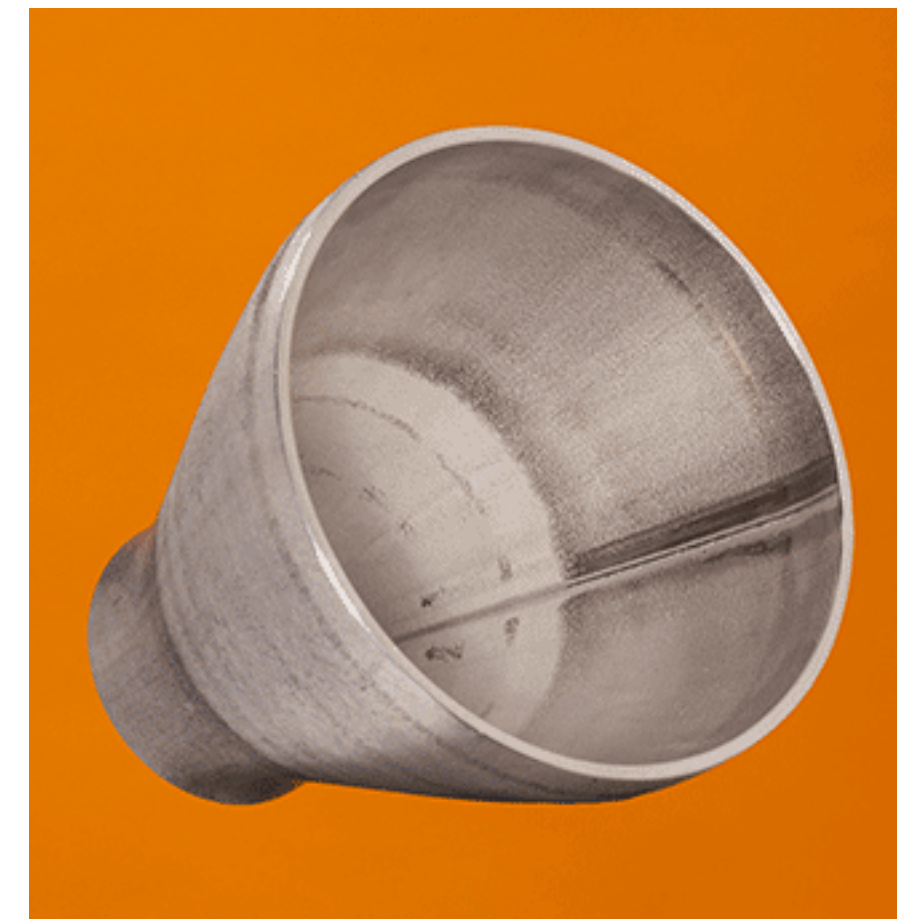
# REDUCER WELDED

acc. to EN-10253-4

concentric (23/28)



D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
323.9	168.3	3.0	3.0	467.0	3 (D-d)	8.657	x	x		
323.9	168.3	4.0	4.0	467.0	3 (D-d)	11.543	x			
323.9	219.1	2.0	2.0	314.0	3 (D-d)	4.288	x	x		
323.9	219.1	3.0	3.0	314.0	3 (D-d)	6.433	x	x		
323.9	219.1	3.0	3.0	203.0		5.500				x
323.9	219.1	4.0	4.0	314.0	3 (D-d)	8.577	x	x		
323.9	273.0	2.0	2.0	153.0	3 (D-d)	2.290	x	x		
323.9	273.0	3.0	3.0	153.0	3 (D-d)	3.434	x	x		
323.9	273.0	3.0	3.0	203.0		5.000				x
323.9	273.0	4.0	4.0	153.0	3 (D-d)	4.579	x	x		

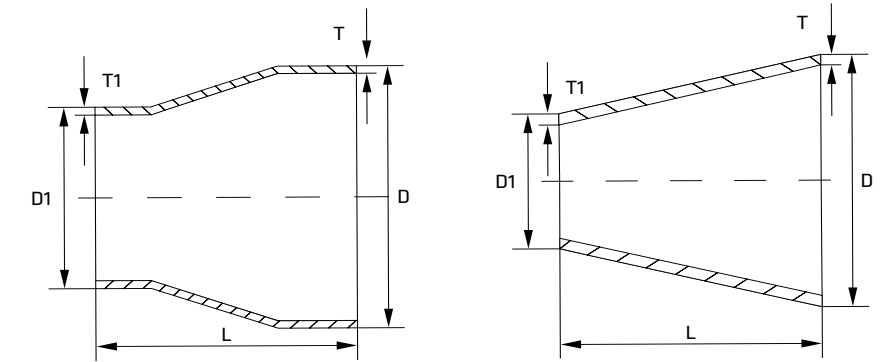




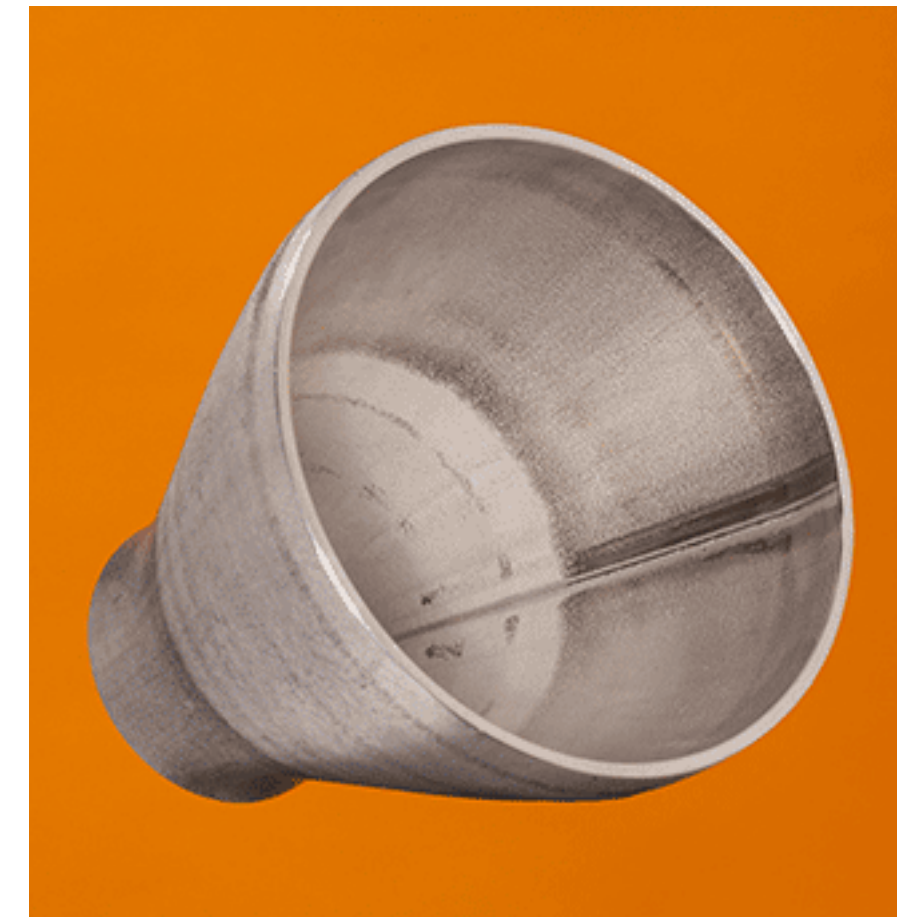
# REDUCER WELDED

acc. to EN-10253-4

concentric (24/28)



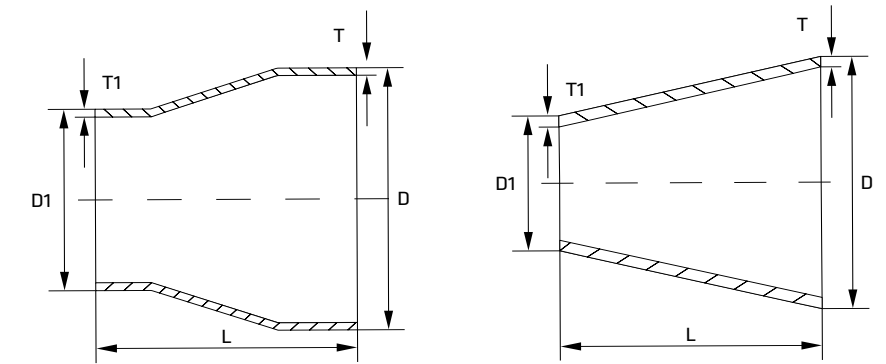
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
355.6	168.3	3.0	3.0	562.0	3 (D-d)	11.092	x	x		
355.6	168.3	4.0	4.0	562.0	3 (D-d)	14.790	x			
355.6	219.1	3.0	3.0	410.0	3 (D-d)	8.868	x	x		
355.6	219.1	4.0	4.0	410.0	3 (D-d)	11.823	x			
355.6	273.0	3.0	3.0	248.0	3 (D-d)	5.869	x	x		
355.6	273.0	4.0	4.0	248.0	3 (D-d)	7.826	x	x		
355.6	323.9	3.0	3.0	95.0	3 (D-d)	2.435	x	x		
355.6	323.9	4.0	4.0	95.0	3 (D-d)	3.247	x			
356.0	206.0	3.0	3.0	450.0	3 (D-d)	9.529	x	x		
356.0	256.0	3.0	3.0	300.0	3 (D-d)	6.918	x	x		



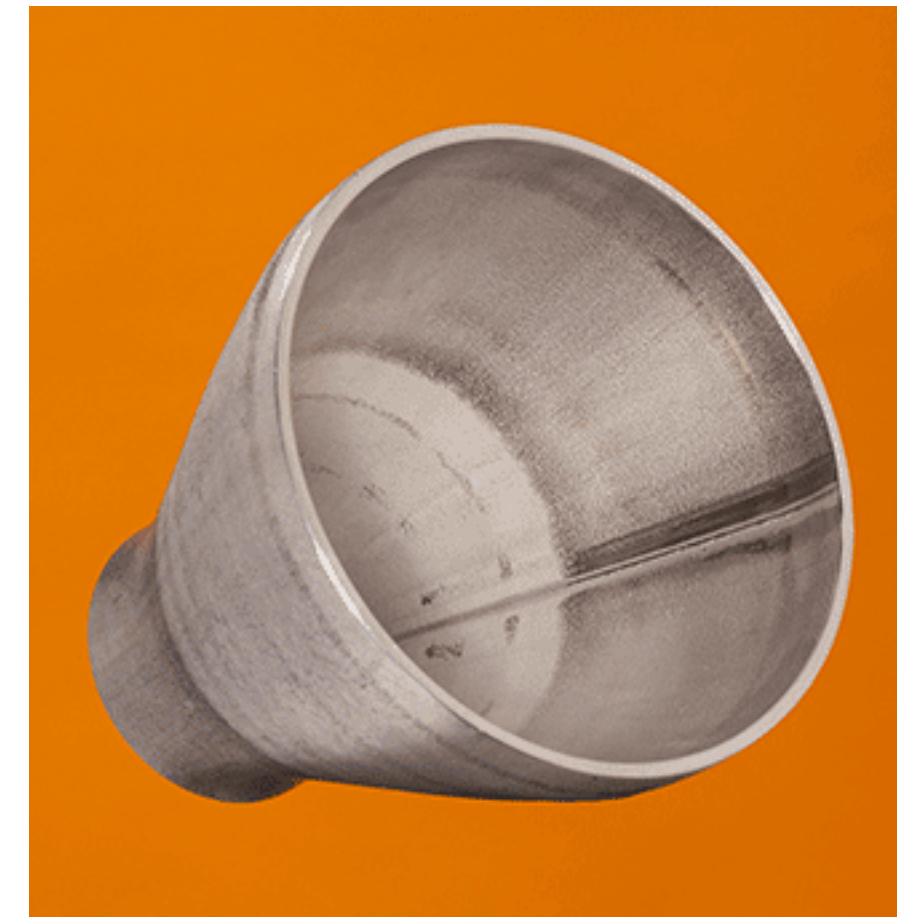
# REDUCER WELDED

acc. to EN-10253-4

concentric (25/28)



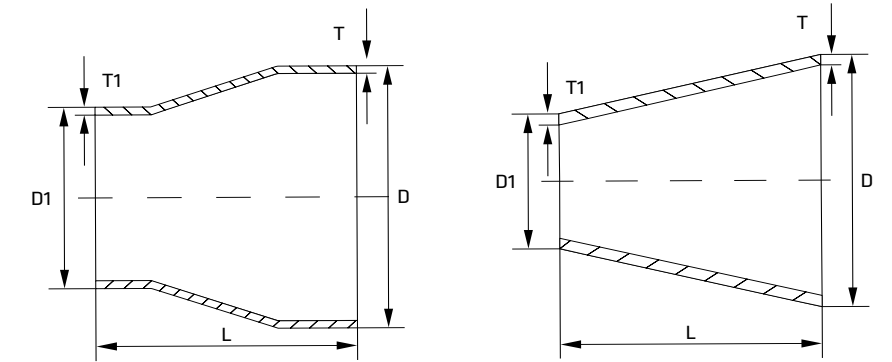
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
356.0	306.0	3.0	3.0	150.0	3 (D-d)	3.742	x	x		
406.0	206.0	3.0	3.0	600.0	3 (D-d)	13.836	x	x		
406.0	256.0	3.0	3.0	450.0	3 (D-d)	11.225	x	x		
406.0	306.0	3.0	3.0	300.0	3 (D-d)	8.048	x	x		
406.0	356.0	3.0	3.0	150.0	3 (D-d)	9.900	x	x		
406.4	219.1	3.0	3.0	562.0	3 (D-d)	13.243	x	x		
406.4	273.0	3.0	3.0	400.0	3 (D-d)	10.245	x	x		
406.4	273.0	4.0	4.0	400.0	3 (D-d)	13.660	x	x		
406.4	323.9	3.0	3.0	248.0	3 (D-d)	6.811	x	x		
406.4	323.9	4.0	4.0	248.0	3 (D-d)	9.081	x			



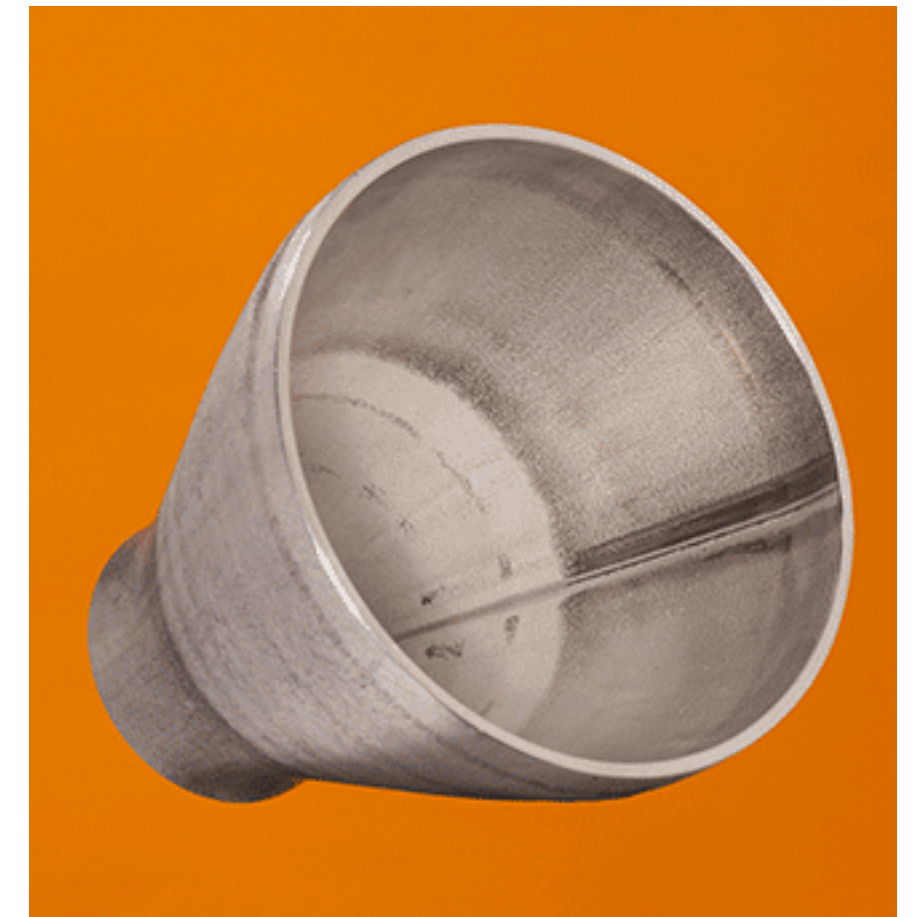
# REDUCER WELDED

acc. to EN-10253-4

concentric (26/28)



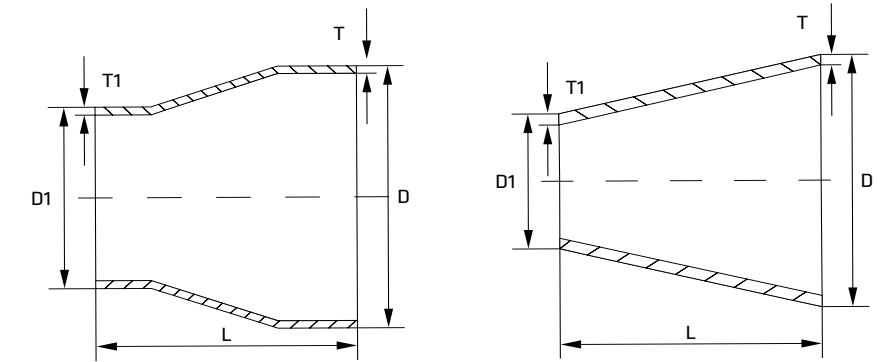
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
406.4	355.6	3.0	3.0	152.0	3 (D-d)	4.376	x	x		
406.4	355.6	4.0	4.0	152.0	3 (D-d)	5.834	x			
457.0	323.9	3.0	3.0	399.0	3 (D-d)	16.000	x	x		
457.0	323.9	4.0	4.0	399.0	3 (D-d)	15.693	x			
457.0	355.6	3.0	3.0	304.0	3 (D-d)	19.200	x			
457.0	406.4	3.0	3.0	152.0	3 (D-d)	6.420	x	x		
506.0	406.0	3.0	3.0	300.0	3 (D-d)	10.700	x			
508.0	323.9	3.0	3.0	552.0	3 (D-d)	17.312	x	x		
508.0	323.9	4.0	4.0	552.0	3 (D-d)	23.083	x			
508.0	355.6	3.0	3.0	457.0	3 (D-d)	14.877	x	x		



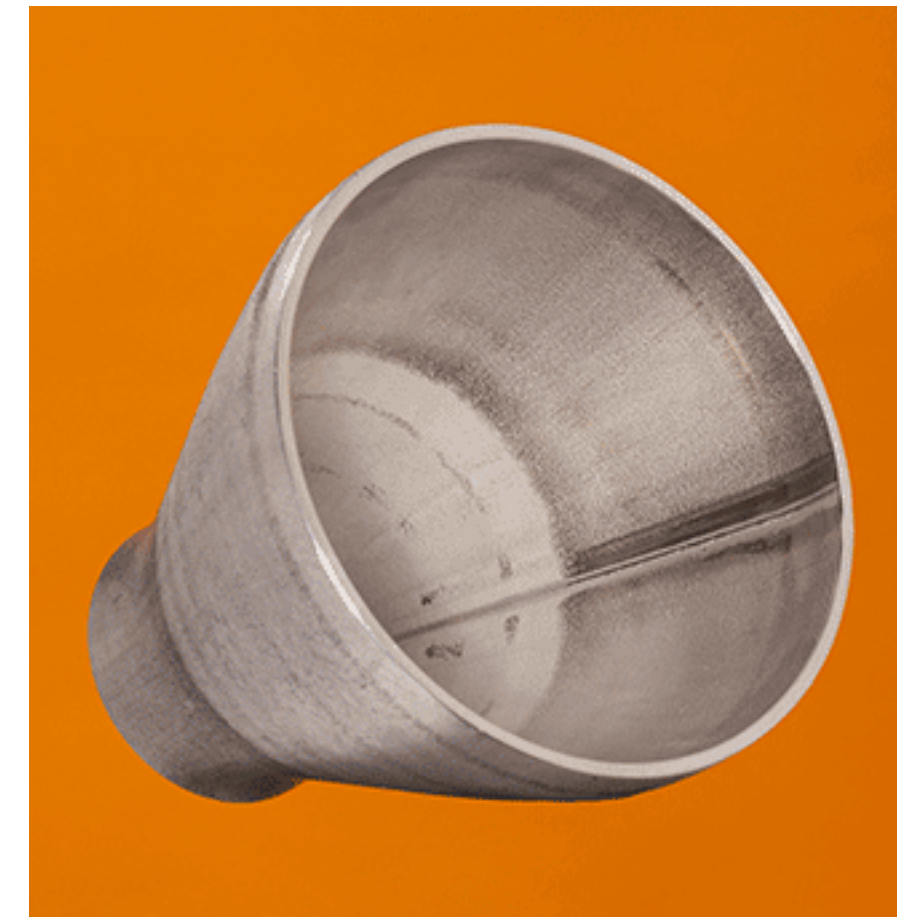
# REDUCER WELDED

acc. to EN-10253-4

concentric (27/28)



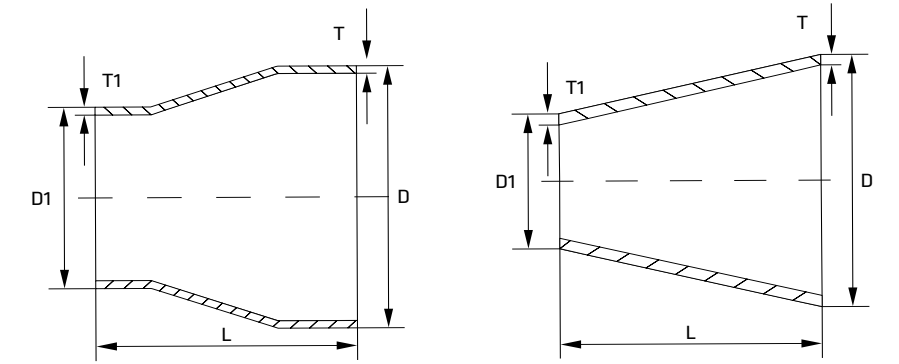
D	D1	T	T1	L	TYPE	Grade	concentric			
							AISI/UNS	1.4307	1.4404	1.4541
						kg/pce.	304L	316L	321	316 Ti
508.0	355.6	4.0	4.0	457.0	3 (D-d)	19.837	x			
508.0	406.4	3.0	3.0	305.0	3 (D-d)	10.502	x	x		
508.0	406.4	4.0	4.0	305.0	3 (D-d)	14.002	x			
508.0	457.0	3.0	3.0	153.0	3 (D-d)	15.000	x	x		
508.0	457.0	4.0	4.0	153.0	3 (D-d)	17.498	x			
606.0	506.0	3.0	3.0	300.0	3 (D-d)	12.670	x			
609.6	406.4	3.0	3.0	610.0	3 (D-d)	23.337	x	x		
609.6	406.4	4.0	4.0	610.0	3 (D-d)	31.116	x			
609.6	457.2	3.0	3.0	457.0	3 (D-d)	18.378	x			
609.6	508.0	3.0	3.0	305.0	3 (D-d)	12.835	x	x		



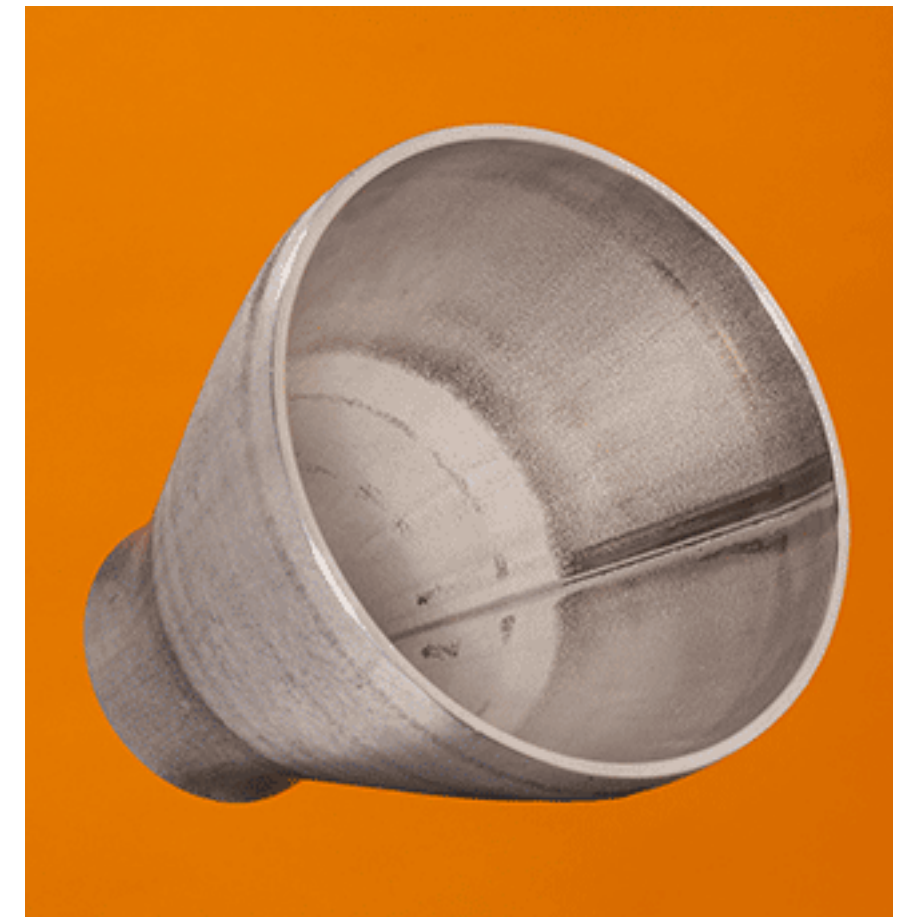
# REDUCER WELDED

acc. to EN-10253-4

concentric (28/28)



D	D1	T	T1	L	TYPE	concentric				
						Grade				
						AISI/UNS	1.4307	1.4404	1.4541	1.4571
						kg/pce.	304L	316L	321	316 Ti
609.6	508.0	4.0	4.0	305.0	3 (D-d)	17.114	x			



1) = 100% X-RAY

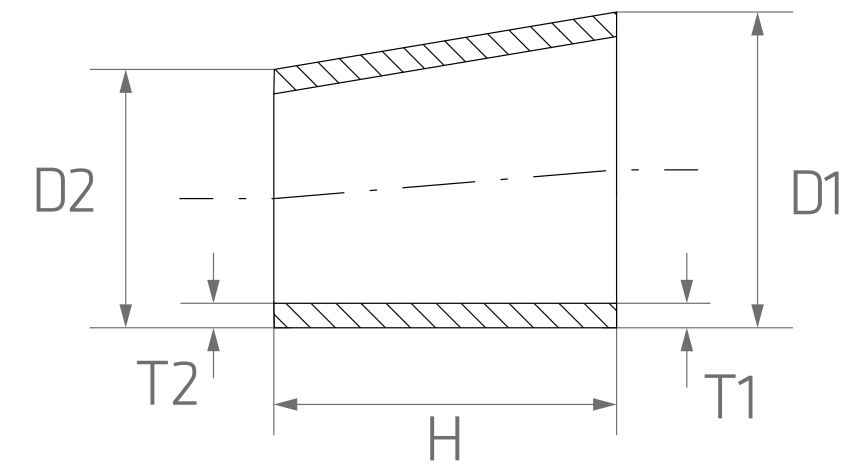
\* Finishes: page 718



# REDUCER WELDED

acc. to EN-10253-4

eccentric (1/28)



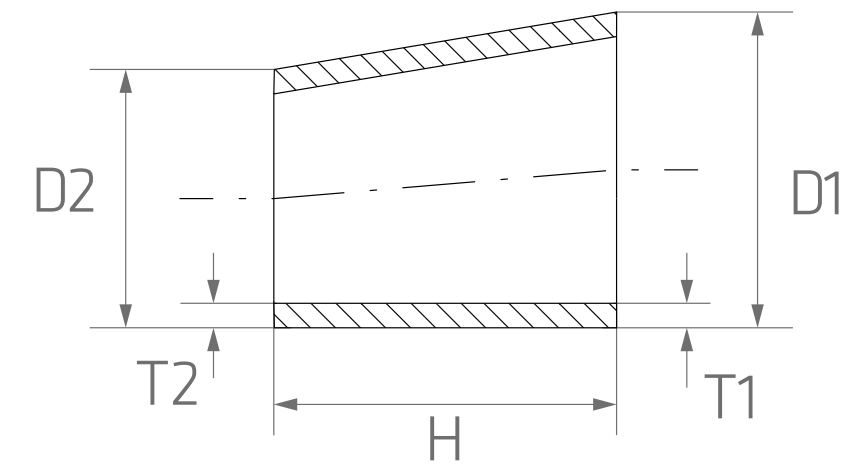
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
17.2	13.5	2.0	2.0	11.0	3 (D-d)		0.008		
21.3	13.5	2.0	1.8	38.0			0.050		
21.3	13.5	2.0	2.0	23.0	3 (D-d)		0.018		
21.3	17.2	2.0	1.8	38.0			0.050		
21.3	17.2	2.0	2.0	12.0	3 (D-d)		0.012	x	
25.0	20.0	2.0	2.0	15.0	3 (D-d)		0.014		
26.9	13.5	2.0	2.0	40.0	3 (D-d)		0.040		
26.9	17.2	1.6	1.6	38.0			0.050		
26.9	17.2	2.0	2.0	29.0	3 (D-d)		0.032	x	
26.9	21.3	1.6	1.6	38.0			0.040		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (2/28)



D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	316L
						kg/pce.	316L	316 Ti	
26.9	21.3	2.0	2.0	38.0		0.060			
26.9	21.3	2.0	2.0	17.0	3 (D-d)	0.020	x		
30.0	20.0	2.0	2.0	30.0	3 (D-d)	0.034			
30.0	25.0	2.0	2.0	15.0	3 (D-d)	0.018			
33.7	13.7	2.0	2.0	60.0	3 (D-d)	0.071			
33.7	17.2	2.0	1.6	51.0		0.100			
33.7	17.2	2.0	2.0	50.0	3 (D-d)	0.063			
33.7	21.3	2.0	1.6	51.0		0.080			
33.7	21.3	2.0	2.0	51.0		0.100		x	
33.7	21.3	2.0	2.0	37.0	3 (D-d)	0.051	x		

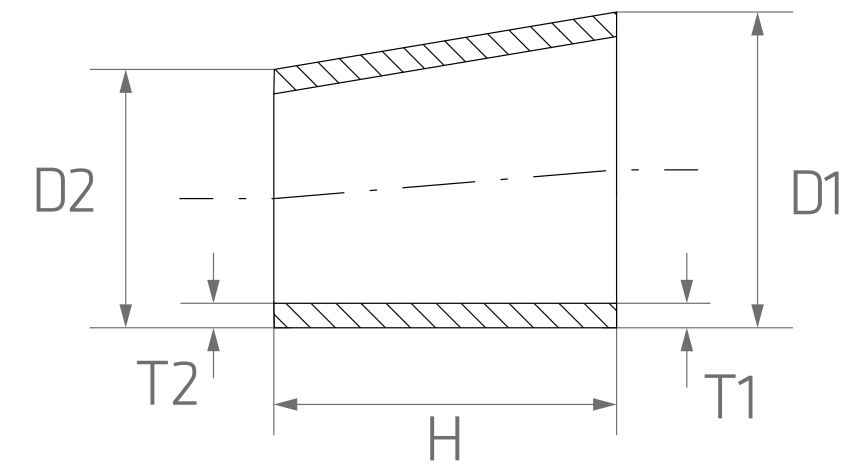




# REDUCER WELDED

acc. to EN-10253-4

eccentric (3/28)



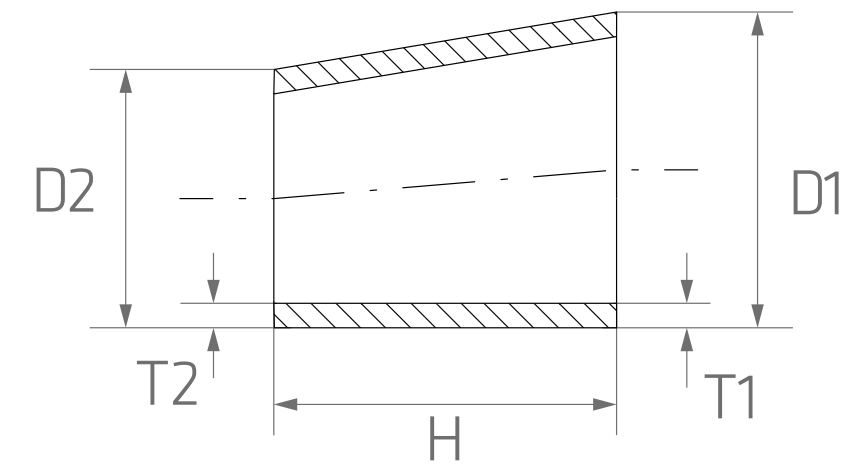
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
33.7	21.3	2.6	2.0	51.0			0.100		
33.7	26.9	2.0	1.6	51.0			0.080		
33.7	26.9	2.0	2.0	51.0			0.070		
33.7	26.9	2.0	2.0	20.0	3 (D-d)		0.031	x	
38.0	20.0	2.0	2.0	24.0	3 (D-d)		0.076		
38.0	25.0	2.0	2.0	39.0	3 (D-d)		0.058		
40.0	28.0	2.0	2.0	36.0	3 (D-d)		0.600		
42.4	13.5	2.0	2.0	87.0	3 (D-d)		0.120		
42.4	17.2	2.0	2.0	76.0	3 (D-d)		0.113		
42.4	21.3	2.0	1.6	51.0			0.120		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (4/28)



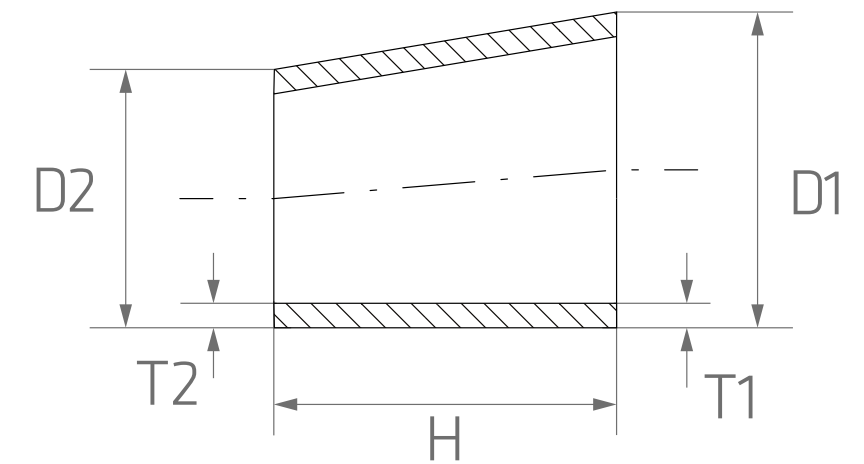
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	316L
						kg/pce.	316L	316 Ti	
42.4	21.3	2.0	2.0	63.0	3 (D-d)	0.101		x	
42.4	26.9	2.0	1.6	51.0		0.120			
42.4	26.9	2.0	2.0	50.0		0.120			
42.4	26.9	2.0	2.0	46.0	3 (D-d)	0.080		x	
42.4	33.7	2.0	2.0	51.0		0.120			
42.4	33.7	2.0	2.0	26.0	3 (D-d)	0.050		x	
42.4	33.7	2.6	2.3	50.0		0.120			
42.4	33.7	3.6	3.6	51.0		0.190			
44.5	20.0	2.0	2.0	74.0	3 (D-d)	0.116			
44.5	25.0	2.0	2.0	59.0	3 (D-d)	0.102			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (5/28)



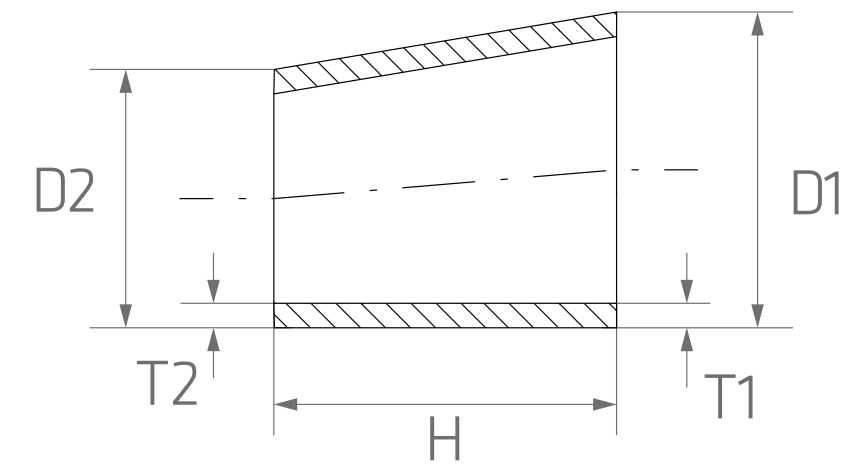
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
44.5	30.0	2.0	2.0	44.0	3 (D-d)	0.078			
48.3	21.3	2.0	1.6	64.0		0.170			
48.3	21.3	2.0	2.0	64.0		0.170			
48.3	21.3	2.0	2.0	81.0	3 (D-d)	0.142	x		
48.3	26.9	2.0	1.6	64.0		0.170			
48.3	26.9	2.0	2.0	64.0		0.170			
48.3	26.9	2.0	2.0	64.0	3 (D-d)	0.121	x		
48.3	26.9	2.6	2.0	64.0		0.170			
48.3	33.7	2.0	2.0	44.0	3 (D-d)	0.090	x		
48.3	33.7	2.0	2.0	64.0		0.160		x	



# REDUCER WELDED

acc. to EN-10253-4

eccentric (6/28)



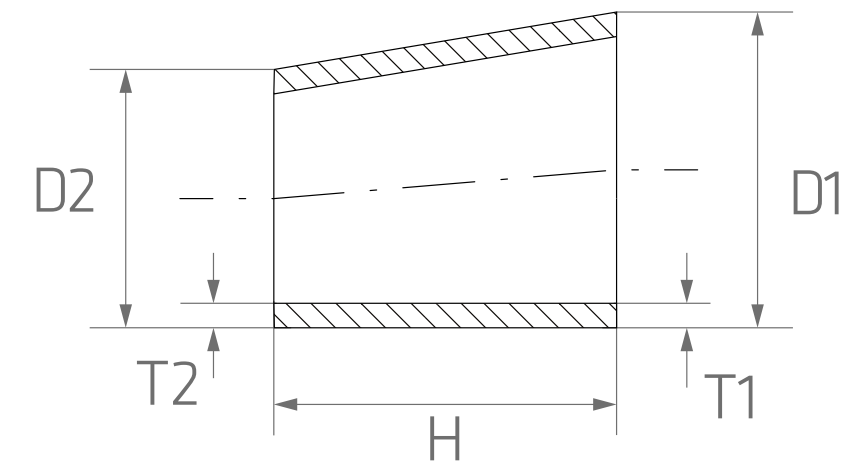
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	316L
						kg/pce.	316L	316 Ti	
48.3	33.7	2.6	2.6	64.0		0.210			
48.3	42.4	2.0	2.0	18.0	3 (D-d)	0.040	x		
48.3	42.4	2.0	2.0	64.0		0.160			
54.0	25.0	2.0	2.0	87.0	3 (D-d)	0.100			
54.0	30.0	2.0	2.0	72.0	3 (D-d)	0.138	x		
54.0	44.0	2.0	2.0	30.0	3 (D-d)	0.074			
60.3	21.3	2.0	1.6	76.0		0.290			
60.3	21.3	2.0	2.0	76.0		0.300			
60.3	21.3	2.0	2.0	117.0	3 (D-d)	0.240	x		
60.3	26.9	2.0	1.6	76.0		0.200			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (7/28)



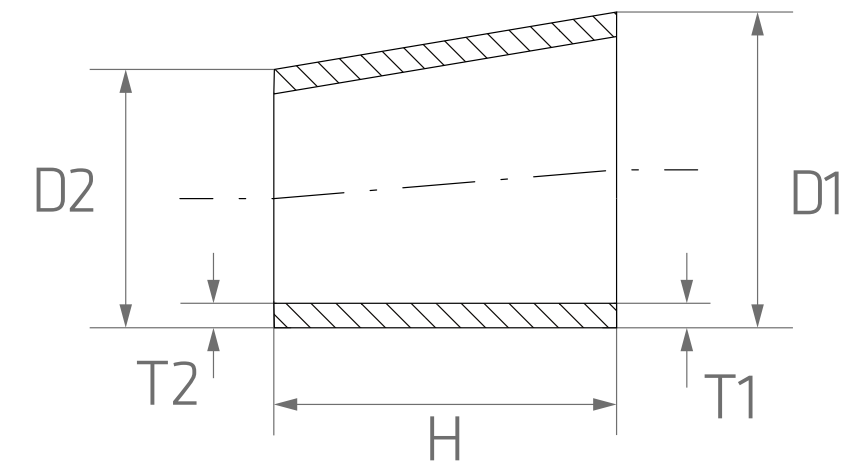
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
60.3	26.9	2.0	2.0	76.0		0.230			
60.3	26.9	2.0	2.0	100.0	3 (D-d)	0.219	x		
60.3	33.7	2.0	2.0	80.0	3 (D-d)	0.188	x		
60.3	33.7	2.0	2.0	76.0		0.250			
60.3	33.7	2.6	2.6	76.0		0.240			
60.3	42.4	2.0	2.0	54.0	3 (D-d)	0.139	x		
60.3	42.4	2.0	2.0	76.0		0.230			
60.3	48.3	2.0	2.0	76.0		0.230		x	
60.3	48.3	2.0	2.0	36.0	3 (D-d)	0.098	x		
63.5	50.8	1.5	1.5	38.0	3 (D-d)	0.061			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (8/28)



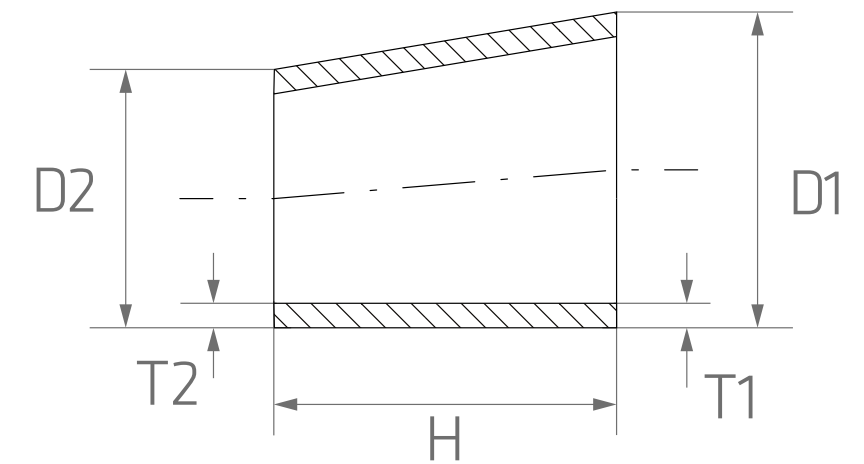
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	316L
						kg/pce.	316L	316 Ti	
69.0	54.0	2.0	2.0	45.0	3 (D-d)	0.140			
70.0	44.5	2.0	2.0	77.0	3 (D-d)	0.130			
70.0	54.0	2.0	2.0	48.0	3 (D-d)	0.140			
76.1	26.9	2.0	2.0	148.0	3 (D-d)	0.382			
76.1	33.7	2.0	2.0	127.0	3 (D-d)	0.510	x		
76.1	33.7	2.3	2.0	89.0		0.420			
76.1	42.4	2.0	2.0	101.0	3 (D-d)	0.301	x		
76.1	42.4	2.3	2.0	89.0		0.420			
76.1	42.4	3.0	3.0	101.0	3 (D-d)	0.451			
76.1	48.3	2.0	2.0	83.0	3 (D-d)	0.261	x		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (9/28)



D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
76.1	48.3	2.3	2.0	89.0		0.400			x
76.1	48.3	3.0	3.0	83.0	3 (D-d)	0.391			
76.1	60.3	2.0	2.0	47.0	3 (D-d)	0.162		x	
76.1	60.3	2.3	2.0	89.0		0.390			x
76.1	60.3	3.0	3.0	47.0	3 (D-d)	0.244			
84.0	44.0	2.0	2.0	120.0	3 (D-d)	0.386			
84.0	54.0	2.0	2.0	90.0	3 (D-d)	0.312		x	
84.0	70.0	2.0	2.0	42.0	3 (D-d)	0.142			
88.9	33.7	2.0	2.0	166.0	3 (D-d)	0.510		x	
88.9	33.7	2.3	2.0	89.0		0.450			

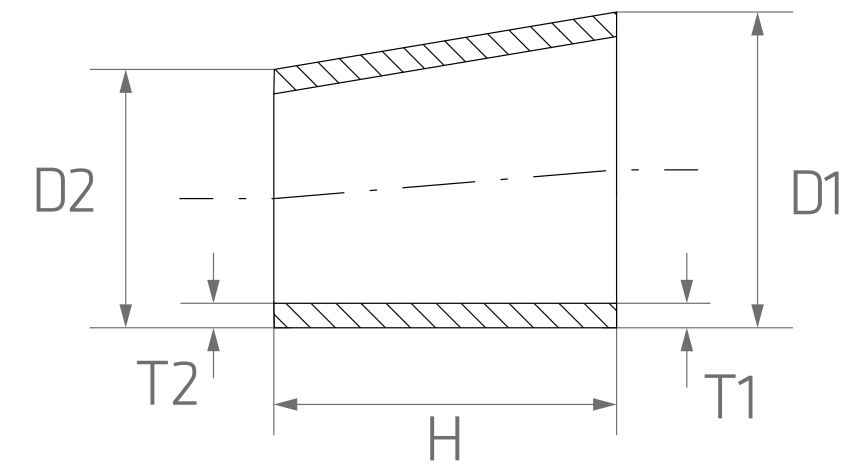




# REDUCER WELDED

acc. to EN-10253-4

eccentric (10/28)



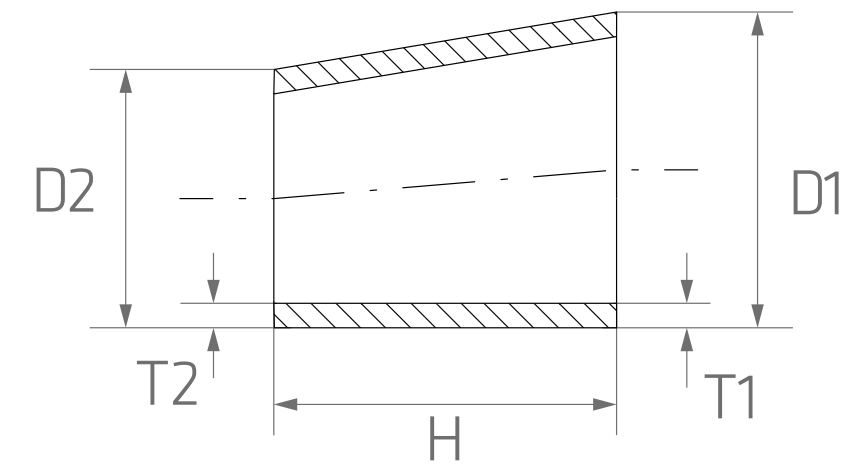
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
88.9	42.4	2.0	2.0	139.0	3 (D-d)	0.458	x		
88.9	42.4	2.3	2.0	89.0		0.500			
88.9	48.3	2.0	2.0	122.0	3 (D-d)	0.420	x		
88.9	48.3	2.3	2.0	89.0		0.490			
88.9	60.3	2.0	2.0	86.0	3 (D-d)	0.322	x		
88.9	60.3	2.3	2.0	89.0		0.460		x	
88.9	60.3	3.0	3.0	86.0	3 (D-d)	0.482			
88.9	76.1	2.0	2.0	38.0	3 (D-d)	0.159	x		
88.9	76.1	2.3	2.3	89.0		0.460			
88.9	76.1	3.0	3.0	38.0	3 (D-d)	0.239		x	



# REDUCER WELDED

acc. to EN-10253-4

eccentric (11/28)



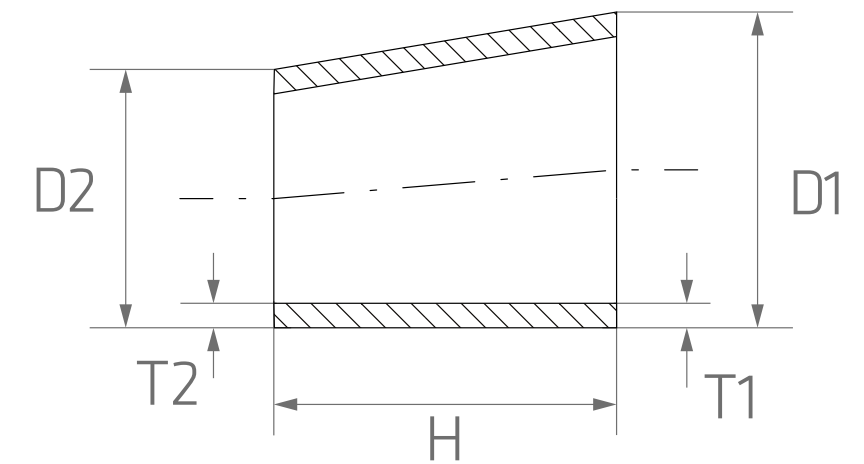
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS		1.4404	1.4571
						kg/pce.	316L	316 Ti	
101.6	76.1	2.0	2.0	77.0	3 (D-d)	0.326			
104.0	54.0	2.0	2.0	150.0	3 (D-d)	0.595			
104.0	70.0	2.0	2.0	102.0	3 (D-d)	0.392			
104.0	76.1	2.0	2.0	84.0	3 (D-d)	0.342			
104.0	84.0	2.0	2.0	60.0	3 (D-d)	0.283	x		
114.3	33.7	2.0	2.0	242.0	3 (D-d)	0.899			
114.3	33.7	2.6	2.0	102.0		0.850			
114.3	42.4	2.0	2.0	216.0	3 (D-d)	0.849			
114.3	42.4	2.6	6.0	102.0		0.850			
114.3	48.3	2.0	2.0	198.0	3 (D-d)	0.809			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (12/28)



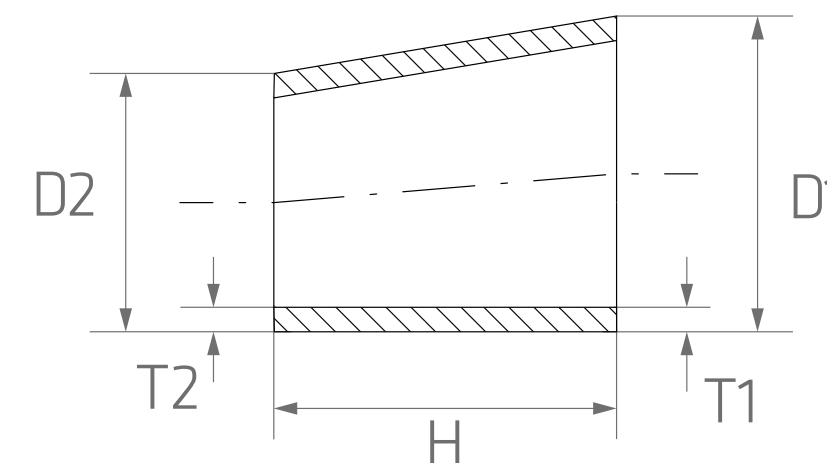
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
114.3	48.3	2.6	2.0	102.0		0.850			
114.3	60.3	2.0	2.0	162.0	3 (D-d)	0.711	x		
114.3	60.3	2.6	2.0	102.0		0.800			
114.3	60.3	3.0	3.0	162.0	3 (D-d)	1.066			
114.3	76.1	2.0	2.0	114.0	3 (D-d)	0.555	x		
114.3	76.1	2.6	2.3	102.0		0.780		x	
114.3	76.1	3.0	3.0	114.0	3 (D-d)	0.832			
114.3	88.9	2.0	2.0	76.0	3 (D-d)	0.389	x		
114.3	88.9	2.6	2.3	102.0		0.720		x	
114.3	88.9	2.6	2.6	102.0		0.820			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (13/28)



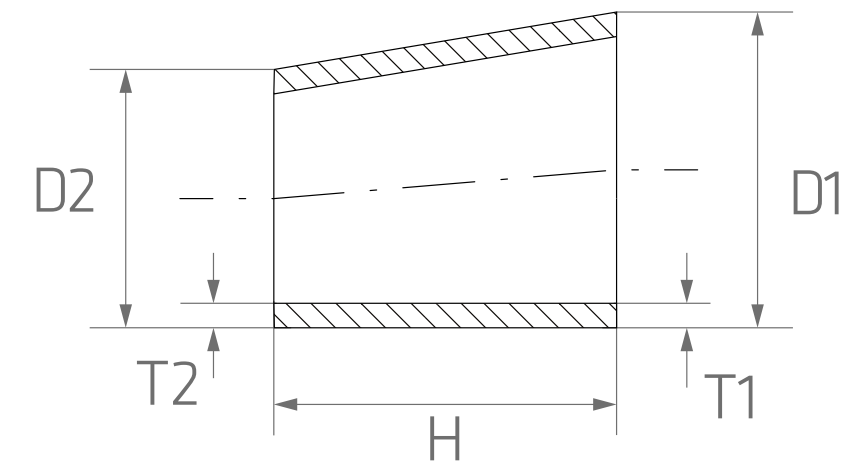
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
114.3	88.9	3.0	3.0	76.0	3 (D-d)		0.583		
114.3	88.9	3.6	3.2	102.0			1.000		
114.3	88.9	4.0	4.0	76.0	3 (D-d)		0.720		
129.0	54.0	2.0	2.0	225.0	3 (D-d)		1.034		
129.0	70.0	2.0	2.0	177.0	3 (D-d)		0.306		
129.0	76.1	2.0	2.0	159.0	3 (D-d)		0.792		
129.0	84.0	2.0	2.0	135.0	3 (D-d)		0.722	x	
129.0	104.0	2.0	2.0	75.0	3 (D-d)		0.439		
139.7	48.3	2.0	2.0	274.0	3 (D-d)		1.295		
139.7	60.3	2.0	2.0	238.0	3 (D-d)		1.197		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (14/28)



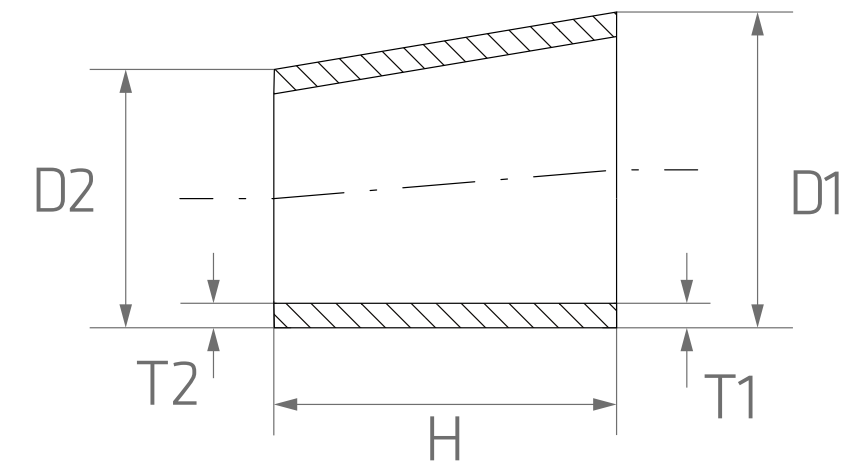
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
139.7	60.3	2.6	2.0	127.0					
139.7	60.3	3.0	3.0	238.0	3 (D-d)				
139.7	76.1	2.0	2.0	191.0	3 (D-d)				
139.7	76.1	2.6	2.3	127.0					
139.7	76.1	3.0	3.0	191.0	3 (D-d)				
139.7	88.9	2.0	2.0	152.0	3 (D-d)			x	
139.7	88.9	2.6	2.3	127.0					x
139.7	88.9	2.9	2.3	127.0					
139.7	88.9	3.0	3.0	152.0	3 (D-d)				
139.7	114.3	2.0	2.0	76.0	3 (D-d)			x	



# REDUCER WELDED

acc. to EN-10253-4

eccentric (15/28)



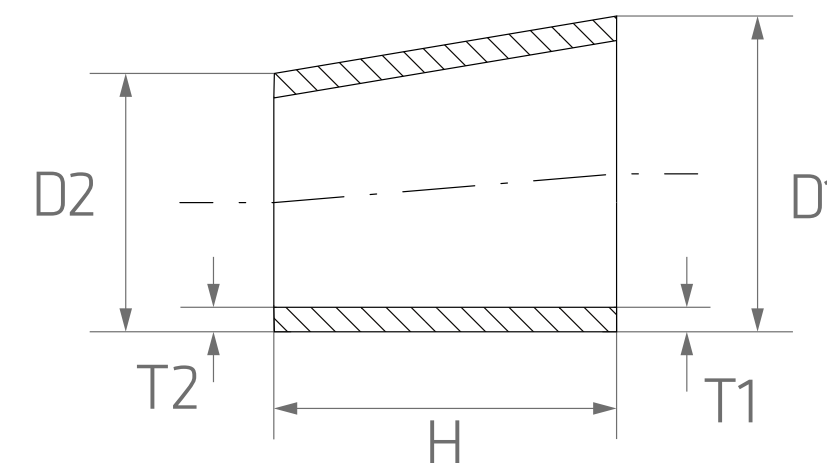
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
139.7	114.3	2.6	2.6	127.0		1.300		x	
139.7	114.3	2.9	2.6	127.0		1.400			
139.7	114.3	3.0	3.0	76.0	3 (D-d)	0.729	x		
139.7	114.3	4.0	4.0	76.0	3 (D-d)	0.980			
154.0	54.0	2.0	2.0	300.0	3 (D-d)	1.567			
154.0	70.0	2.0	2.0	252.0	3 (D-d)	2.050			
154.0	84.0	2.0	2.0	210.0	3 (D-d)	1.255			
154.0	104.0	2.0	2.0	150.0	3 (D-d)	0.972	x		
154.0	129.0	2.0	2.0	75.0	3 (D-d)	0.533	x		
156.0	106.0	3.0	3.0	150.0	3 (D-d)	1.490			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (16/28)



D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
168.3	60.3	2.0	2.0	324.0	3 (D-d)		0.861		
168.3	60.3	2.6	2.0	140.0			1.900		
168.3	60.3	3.0	3.0	324.0	3 (D-d)		2.791		
168.3	76.1	2.0	2.0	277.0	3 (D-d)		1.698		
168.3	76.1	2.6	2.3	140.0			1.800		
168.3	76.1	3.0	3.0	277.0	3 (D-d)		2.547		
168.3	88.9	2.0	2.0	238.0	3 (D-d)		1.539	x	
168.3	88.9	2.6	2.3	140.0			1.750		
168.3	88.9	3.0	3.0	238.0	3 (D-d)		2.308		
168.3	114.3	2.0	2.0	162.0	3 (D-d)		1.150	x	

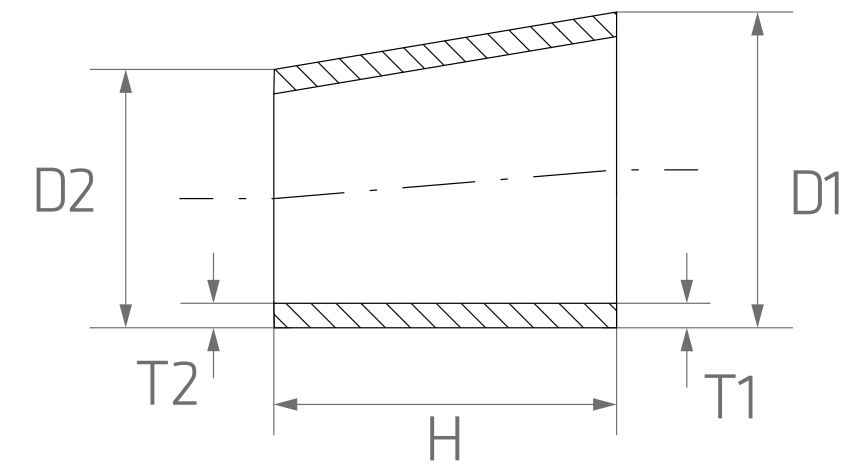




# REDUCER WELDED

acc. to EN-10253-4

eccentric (17/28)



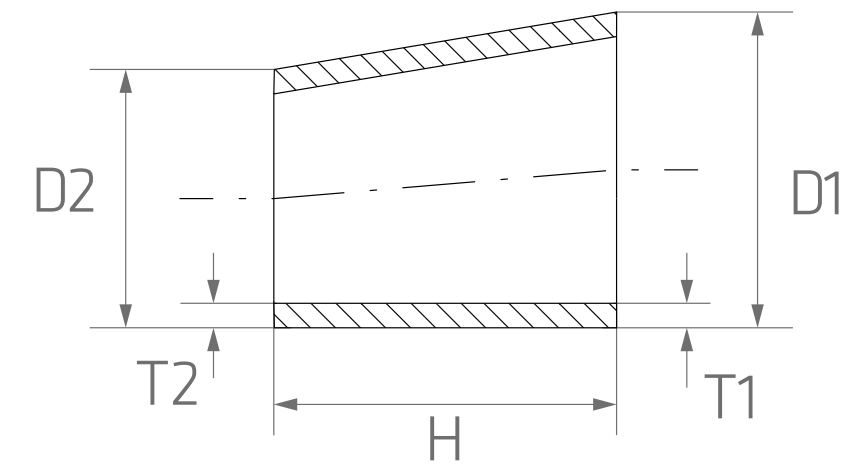
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
168.3	114.3	2.6	2.6	140.0		1.700			
168.3	114.3	3.0	3.0	162.0	3 (D-d)	1.725	x		
168.3	114.3	4.0	4.0	162.0	3 (D-d)	2.350			
168.3	139.7	2.0	2.0	86.0	3 (D-d)	0.664	x		
168.3	139.7	2.6	2.6	140.0		1.700		x	
168.3	139.7	3.0	3.0	86.0	3 (D-d)	0.996			
168.3	139.7	4.0	4.0	86.0	3 (D-d)	1.180			
204.0	84.0	2.0	2.0	360.0	3 (D-d)	2.604			
204.0	104.0	2.0	2.0	300.0	3 (D-d)	2.321			
204.0	129.0	2.0	2.0	225.0	3 (D-d)	1.882			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (18/28)



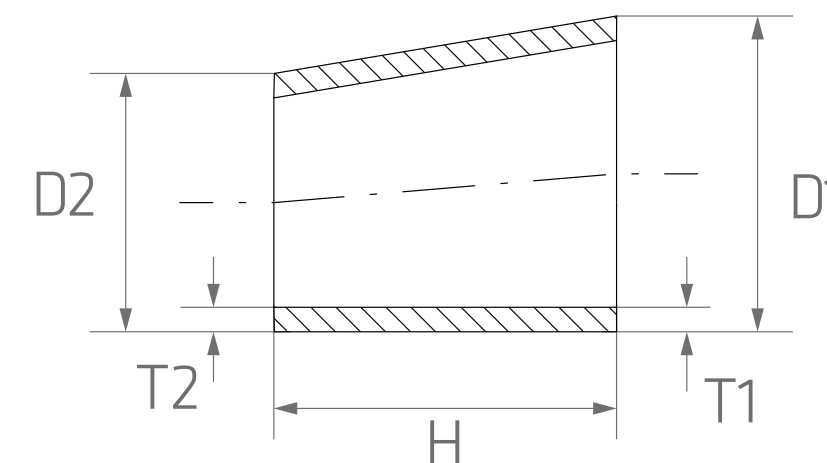
D	D1	T	T1	L	TYPE	eccentric	
						Grade AISI/UNS	1.4404 1.4571
						kg/pce.	316L 316 Ti
204.0	154.0	2.0	2.0	150.0	3 (D-d)	1.349	x
206.0	106.0	3.0	3.0	300.0	3 (D-d)	3.527	
206.0	156.0	3.0	3.0	150.0	3 (D-d)	2.046	
219.1	88.9	2.0	2.0	391.0	3 (D-d)	3.022	
219.1	88.9	3.0	3.0	391.0	3 (D-d)	4.533	
219.1	114.3	2.0	2.0	314.0	3 (D-d)	2.633	x
219.1	114.3	2.9	2.6	152.0		2.250	
219.1	114.3	3.0	3.0	314.0	3 (D-d)	3.950	x
219.1	114.3	4.0	4.0	314.0	3 (D-d)	5.220	
219.1	139.7	2.0	2.0	238.0	3 (D-d)	2.147	x



# REDUCER WELDED

acc. to EN-10253-4

eccentric (19/28)



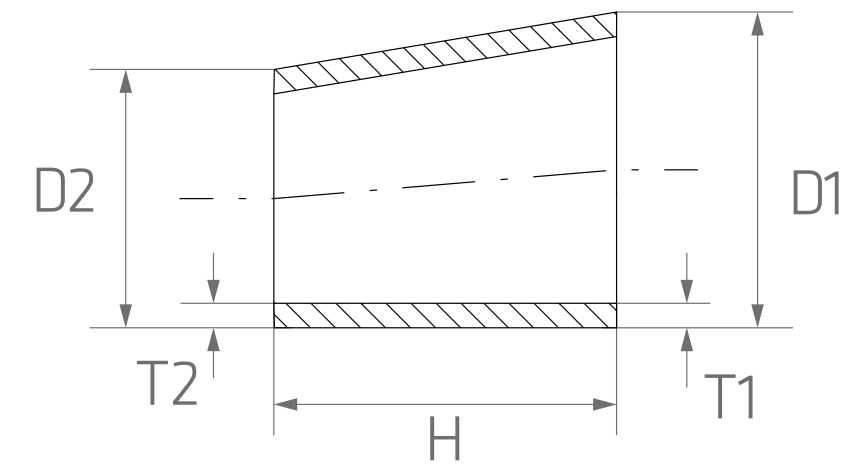
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	1.4404	1.4571	1.4404
						kg/pce.	316L	316 Ti	
219.1	139.7	2.9	2.6	152.0		2.350			
219.1	139.7	3.0	3.0	238.0	3 (D-d)	3.220	x		
219.1	139.7	4.0	4.0	238.0	3 (D-d)	3.920			
219.1	168.3	2.0	2.0	152.0	3 (D-d)	1.483	x		
219.1	168.3	2.9	2.6	152.0		2.250			
219.1	168.3	2.9	2.9	152.0		3.300		x	
219.1	168.3	3.0	3.0	152.0	3 (D-d)	2.225	x		
219.1	168.3	4.0	4.0	152.0	3 (D-d)	2.810			
254.0	104.0	2.0	2.0	450.0	3 (D-d)	4.047			
254.0	129.0	2.0	2.0	375.0	3 (D-d)	3.608			



# REDUCER WELDED

acc. to EN-10253-4

eccentric (20/28)



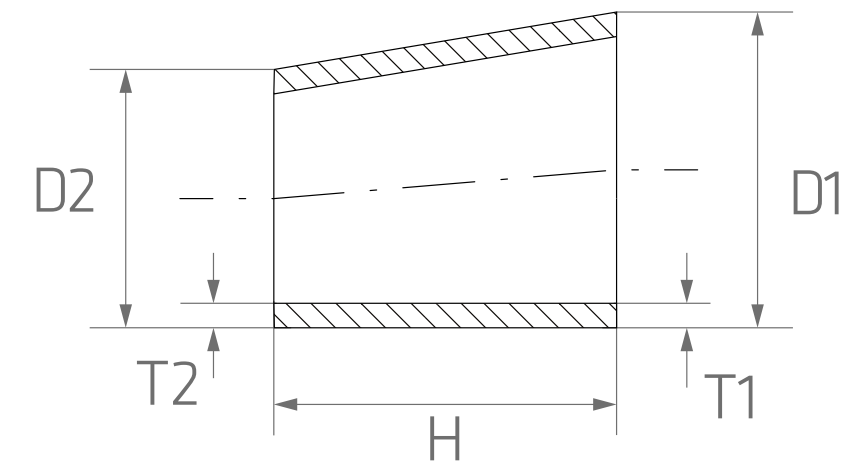
D	D1	T	T1	L	TYPE	eccentric	
						Grade AISI/UNS	1.4404 1.4571
						kg/pce.	316L 316 Ti
254.0	154.0	2.0	2.0	300.0	3 (D-d)	3.075	
254.0	204.0	2.0	2.0	150.0	3 (D-d)	1.726	x
256.0	106.0	3.0	3.0	450.0	3 (D-d)	6.138	
256.0	156.0	3.0	3.0	300.0	3 (D-d)	4.657	
256.0	206.0	3.0	3.0	150.0	3 (D-d)	2.611	
273.0	114.3	2.0	2.0	476.0	3 (D-d)	4.632	
273.0	114.3	3.0	3.0	476.0	3 (D-d)	6.948	x
273.0	114.3	4.0	4.0	476.0	3 (D-d)	7.000	
273.0	139.7	2.0	2.0	400.0	3 (D-d)	4.146	
273.0	139.7	3.0	3.0	400.0	3 (D-d)	6.219	x



# REDUCER WELDED

acc. to EN-10253-4

eccentric (21/28)



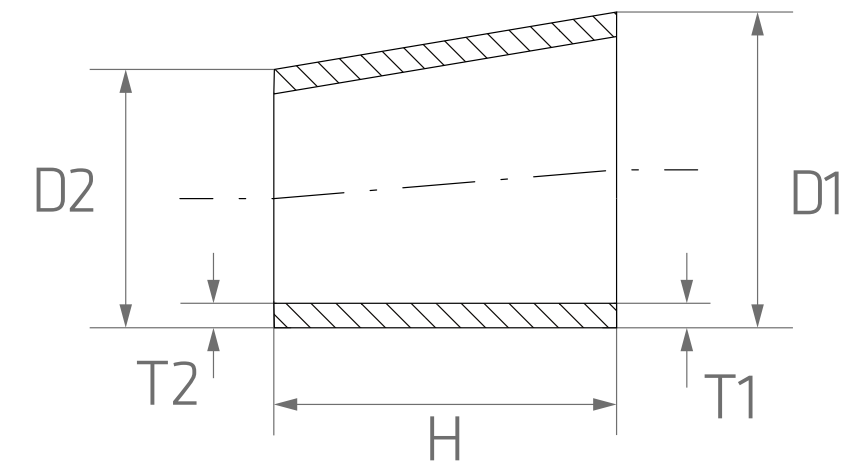
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
273.0	139.7	4.0	4.0	400.0	3 (D-d)		8.300		
273.0	168.3	2.0	2.0	314.0	3 (D-d)		3.482		
273.0	168.3	3.0	3.0	178.0			3.800		
273.0	168.3	3.0	3.0	314.0	3 (D-d)		5.223	x	
273.0	168.3	4.0	4.0	314.0	3 (D-d)		4.200		
273.0	219.1	2.0	2.0	162.0	3 (D-d)		1.999		
273.0	219.1	3.0	3.0	162.0	3 (D-d)		2.998	x	
273.0	219.1	3.0	3.0	178.0			3.600		
273.0	219.1	4.0	4.0	178.0	3 (D-d)		3.620		
304.0	154.0	2.0	2.0	450.0	3 (D-d)		5.177		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (22/28)



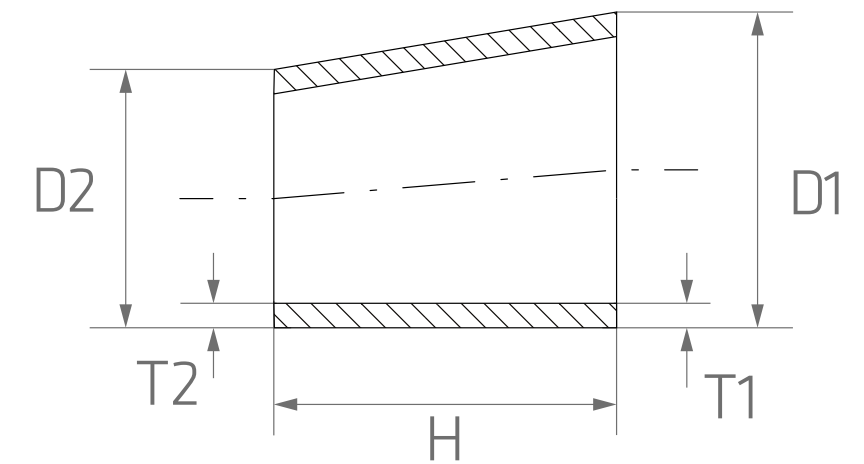
D	D1	T	T1	L	TYPE	Grade		eccentric	
						AISI/UNS	kg/pce.	1.4404	1.4571
304.0	204.0	2.0	2.0	300.0	3 (D-d)		33.828		
304.0	254.0	2.0	2.0	150.0	3 (D-d)		2.103		
306.0	156.0	3.0	3.0	450.0	3 (D-d)		7.834		
306.0	206.0	3.0	3.0	300.0	3 (D-d)		5.788		
306.0	256.0	3.0	3.0	150.0	3 (D-d)		3.176		
323.9	114.3	2.0	2.0	629.0	3 (D-d)		6.922		
323.9	114.3	3.0	3.0	629.0	3 (D-d)		10.382		
323.9	139.7	2.0	2.0	553.0	3 (D-d)		6.435		
323.9	139.7	3.0	3.0	553.0	3 (D-d)		9.653		
323.9	168.3	2.0	2.0	467.0	3 (D-d)		5.772		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (23/28)



D	D1	T	T1	L	TYPE	eccentric	
						Grade AISI/UNS	1.4404 1.4571
						kg/pce.	316L 316 Ti
323.9	168.3	3.0	3.0	467.0	3 (D-d)	8.657	x
323.9	168.3	4.0	4.0	467.0	3 (D-d)	11.543	
323.9	219.1	2.0	2.0	314.0	3 (D-d)	4.288	
323.9	219.1	3.0	3.0	314.0	3 (D-d)	6.433	x
323.9	219.1	3.0	3.0	203.0		5.500	
323.9	219.1	4.0	4.0	314.0	3 (D-d)	8.577	
323.9	273.0	2.0	2.0	153.0	3 (D-d)	2.290	
323.9	273.0	3.0	3.0	153.0	3 (D-d)	3.434	x
323.9	273.0	3.0	3.0	203.0		5.000	
323.9	273.0	4.0	4.0	153.0	3 (D-d)	4.579	

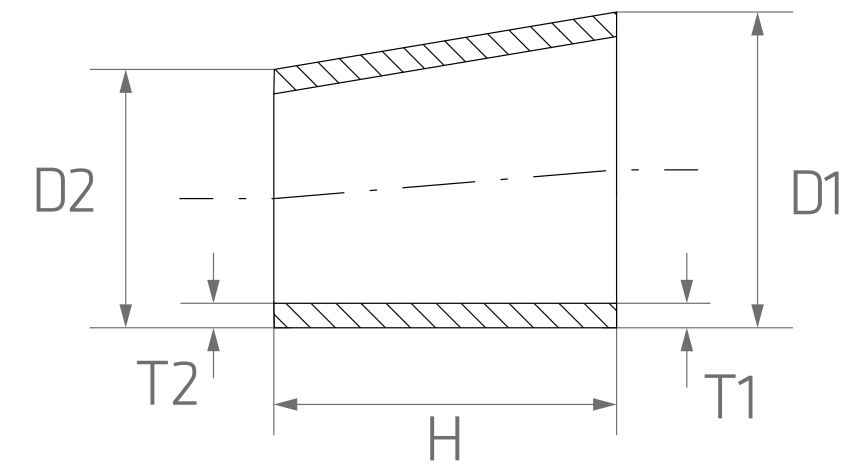




# REDUCER WELDED

acc. to EN-10253-4

eccentric (24/28)



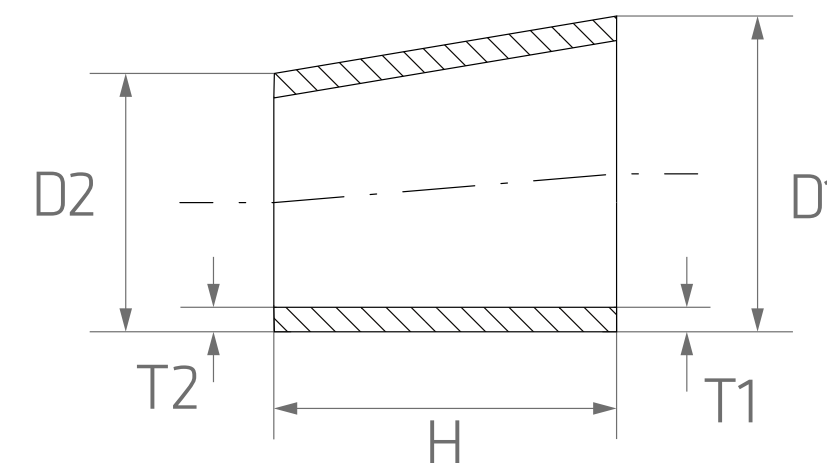
D	D1	T	T1	L	TYPE	Grade		eccentric
						AISI/UNS	1.4404	
						kg/pce.	316L	316 Ti
355.6	168.3	3.0	3.0	562.0	3 (D-d)	11.092		
355.6	168.3	4.0	4.0	562.0	3 (D-d)	14.790		
355.6	219.1	3.0	3.0	410.0	3 (D-d)	8.868		
355.6	219.1	4.0	4.0	410.0	3 (D-d)	11.823		
355.6	273.0	3.0	3.0	248.0	3 (D-d)	5.869		
355.6	273.0	4.0	4.0	248.0	3 (D-d)	7.826		
355.6	323.9	3.0	3.0	95.0	3 (D-d)	2.435		
355.6	323.9	4.0	4.0	95.0	3 (D-d)	3.247		
356.0	206.0	3.0	3.0	450.0	3 (D-d)	9.529		
356.0	256.0	3.0	3.0	300.0	3 (D-d)	6.918		



# REDUCER WELDED

acc. to EN-10253-4

eccentric (25/28)



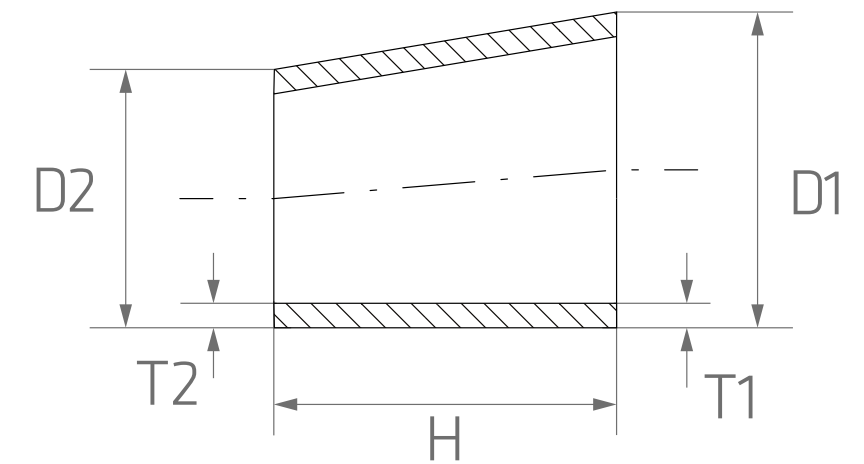
D	D1	T	T1	L	TYPE	Grade		kg/pce.
						AISI/UNS	eccentric	
						1.4404	1.4571	
						316L	316 Ti	
356.0	306.0	3.0	3.0	150.0	3 (D-d)			3.742
406.0	206.0	3.0	3.0	600.0	3 (D-d)			13.836
406.0	256.0	3.0	3.0	450.0	3 (D-d)			11.225
406.0	306.0	3.0	3.0	300.0	3 (D-d)			8.048
406.0	356.0	3.0	3.0	150.0	3 (D-d)			9.900
406.4	219.1	3.0	3.0	562.0	3 (D-d)			13.243
406.4	273.0	3.0	3.0	400.0	3 (D-d)			10.245
406.4	273.0	4.0	4.0	400.0	3 (D-d)			13.660
406.4	323.9	3.0	3.0	248.0	3 (D-d)			6.811
406.4	323.9	4.0	4.0	248.0	3 (D-d)			9.081



# REDUCER WELDED

acc. to EN-10253-4

eccentric (26/28)



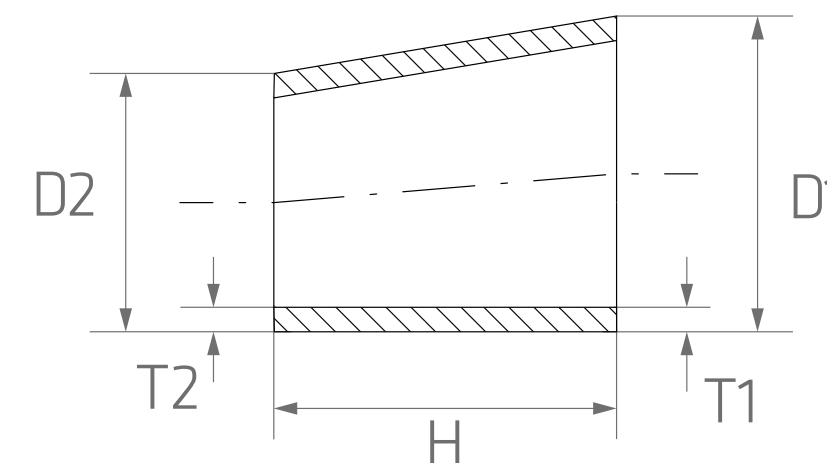
D	D1	T	T1	L	TYPE	eccentric	
						Grade AISI/UNS	1.4404 1.4571
						kg/pce.	316L 316 Ti
406.4	355.6	3.0	3.0	152.0	3 (D-d)	4.376	
406.4	355.6	4.0	4.0	152.0	3 (D-d)	5.834	
457.0	323.9	3.0	3.0	399.0	3 (D-d)	16.000	
457.0	323.9	4.0	4.0	399.0	3 (D-d)	15.693	
457.0	355.6	3.0	3.0	304.0	3 (D-d)	19.200	
457.0	406.4	3.0	3.0	152.0	3 (D-d)	6.420	
506.0	406.0	3.0	3.0	300.0	3 (D-d)	10.700	
508.0	323.9	3.0	3.0	552.0	3 (D-d)	17.312	
508.0	323.9	4.0	4.0	552.0	3 (D-d)	23.083	
508.0	355.6	3.0	3.0	457.0	3 (D-d)	14.877	



# REDUCER WELDED

acc. to EN-10253-4

eccentric (27/28)



D	D1	T	T1	L	TYPE	Grade	
						AISI/UNS	eccentric
						1.4404	1.4571
						316L	316 Ti
						kg/pce.	
508.0	355.6	4.0	4.0	457.0	3 (D-d)	19.837	
508.0	406.4	3.0	3.0	305.0	3 (D-d)	10.502	
508.0	406.4	4.0	4.0	305.0	3 (D-d)	14.002	
508.0	457.0	3.0	3.0	153.0	3 (D-d)	15.000	
508.0	457.0	4.0	4.0	153.0	3 (D-d)	17.498	
606.0	506.0	3.0	3.0	300.0	3 (D-d)	12.670	
609.6	406.4	3.0	3.0	610.0	3 (D-d)	23.337	
609.6	406.4	4.0	4.0	610.0	3 (D-d)	31.116	
609.6	457.2	3.0	3.0	457.0	3 (D-d)	18.378	
609.6	508.0	3.0	3.0	305.0	3 (D-d)	12.835	

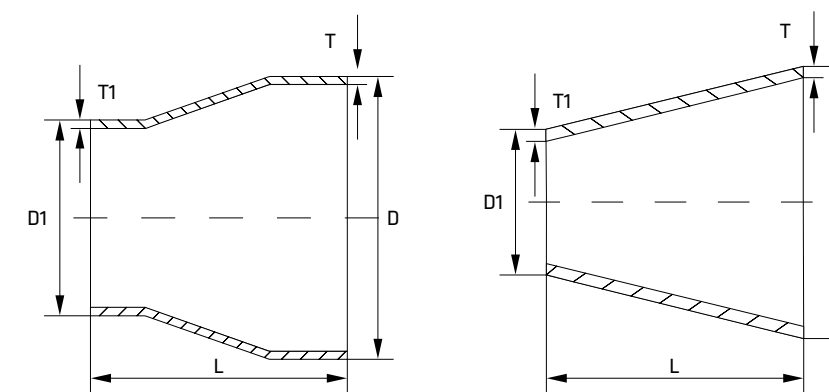




# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (1/10)



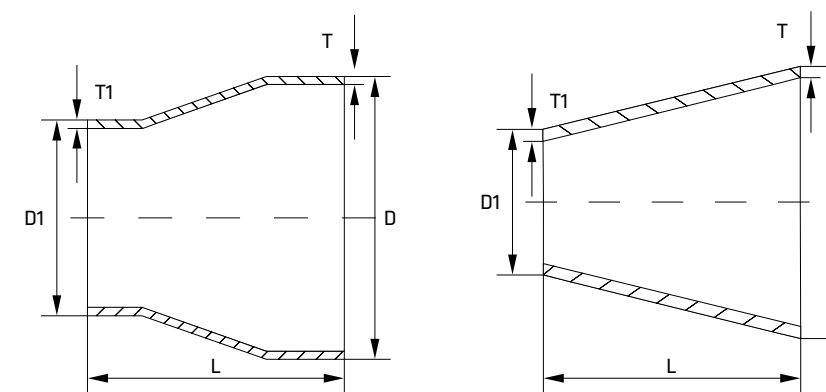
D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
21.30	2.00	17.20	1.80	38	0.03				x	
26.90	1.60	21.30	1.60	38	0.03			x		
26.90	2.00	21.30	2.00	38	0.06				x	
26.90	2.30	17.20	1.80	38	0.07				x	
26.90	2.60	17.20	2.30	38	0.06				x	
33.40	3.38	21.34	2.77	51	0.13	x	x			
33.40	3.38	26.67	2.87	51	0.13	x	x			
33.70	2.00	21.30	1.60	51	0.08				x	
33.70	2.00	21.30	2.00	51	0.08				x	
33.70	2.00	26.90	2.00	51	0.08				x	



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (2/10)



D	T	T1	L	TYPE	Grade	concentric				eccentric	
						AISI/UNS	1.4462	1.4539	1.4541		1.4571
						kg/pce.	S31803	904L	321	316 Ti	316 Ti
33.70	2.60	21.30	2.00	51	0.08					x	
33.70	2.60	21.30	2.30	51	0.10					x	
33.70	2.60	26.90	2.00	51	0.09					x	
33.70	2.60	26.90	2.30	51	0.10					x	
42.16	2.77	21.34	2.11	51	0.16			x			
42.16	2.77	26.67	2.11	51	0.16			x			
42.16	2.77	33.40	2.77	51	0.15			x			
42.16	3.56	21.34	2.87	51	0.19			x			
42.16	3.56	26.67	2.87	51	0.21			x			
42.16	3.56	33.40	3.38	51	0.19			x			

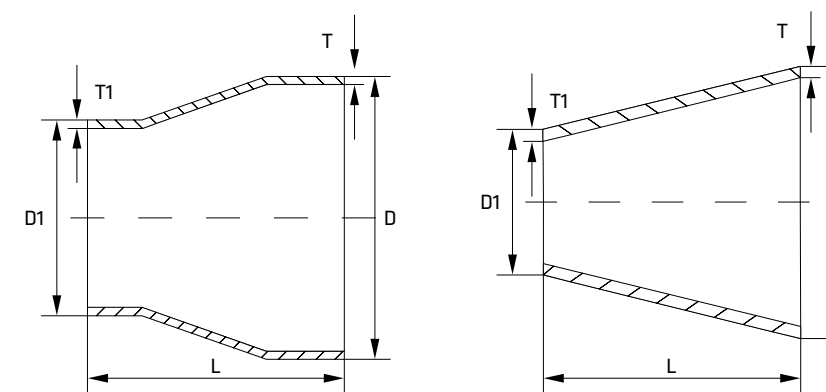




# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (3/10)



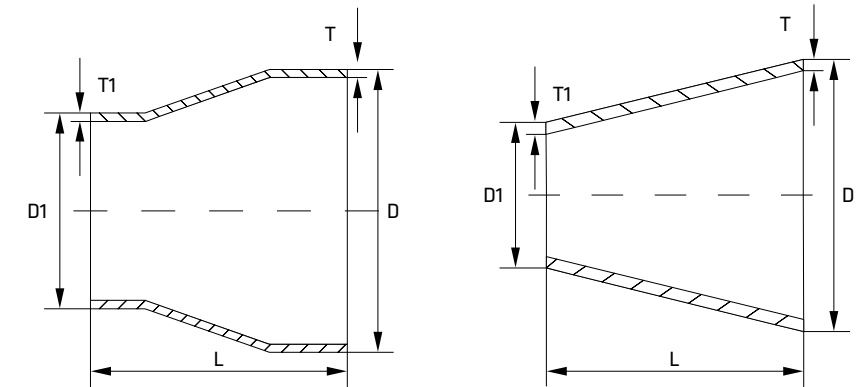
D	T	T1	L	TYPE	Grade	concentric				eccentric	
						AISI/UNS	1.4462	1.4539	1.4541		1.4571
						kg/pce.	S31803	904L	321	316 Ti	316 Ti
42.40	2.00	21.30	2.00	51	0.12					x	
42.40	2.00	26.90	2.00	51	0.12					x	
42.40	2.00	33.70	2.00	51	0.12					x	
42.40	2.60	21.30	2.00	51	0.15					x	
42.40	2.60	26.90	2.30	51	0.13					x	
42.40	2.60	33.70	2.60	51	0.13					x	
42.40	3.60	33.70	3.60	51	0.19					x	
48.26	2.77	26.67	2.11	64	0.22	x		x			
48.26	2.77	33.40	2.77	64	0.22	x		x			
48.26	2.77	42.16	2.77	64	0.28	x		x			



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (4/10)



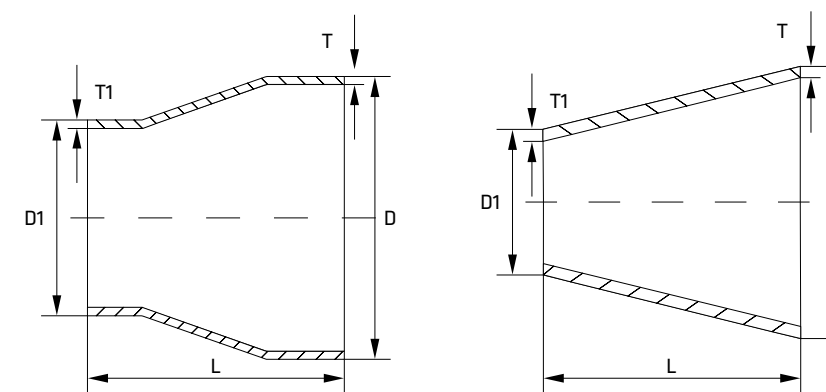
D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	1.4571
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
48.26	3.68	26.67	2.87	64	0.28	x	x			
48.26	3.68	33.40	3.38	64	0.28	x	x			
48.26	3.68	42.16	3.56	64	0.28	x	x			
48.30	2.00	21.30	2.00	64	0.25				x	
48.30	2.00	33.70	2.00	64	0.18				x	
48.30	2.60	21.30	2.00	64	0.25				x	
48.30	2.60	26.90	2.30	64	0.17				x	
48.30	2.60	33.70	2.60	64	0.21				x	
48.30	2.60	42.40	2.60	64	0.21				x	
60.30	2.00	26.90	1.60	76	0.30				x	



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (5/10)



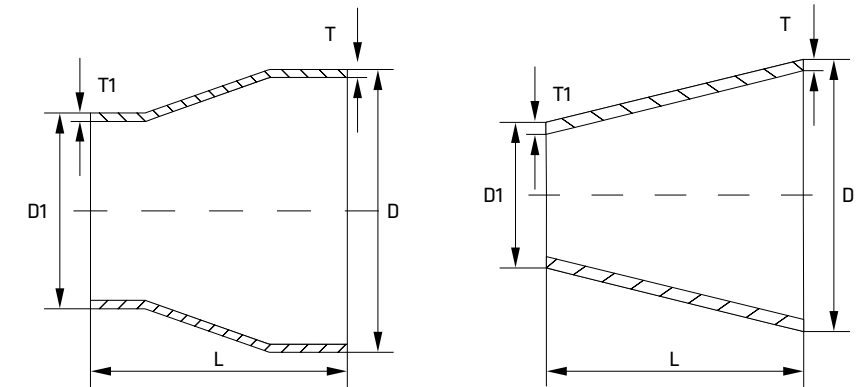
D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
60.30	2.00	33.70	2.00	76	0.30				x	
60.30	2.00	42.40	2.00	76	0.32				x	
60.30	2.00	48.30	2.00	76	0.30				x	
60.30	2.90	21.30	2.00	76	0.37				x	
60.30	2.90	26.90	2.30	76	0.37				x	
60.30	2.90	33.70	2.60	76	0.37				x	
60.30	2.90	42.40	2.60	76	0.34				x	
60.30	2.90	48.30	2.60	76	0.34				x	
60.33	2.77	33.40	2.77	76	0.35			x		
60.33	2.77	42.16	2.77	76	0.32	x		x		



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (6/10)



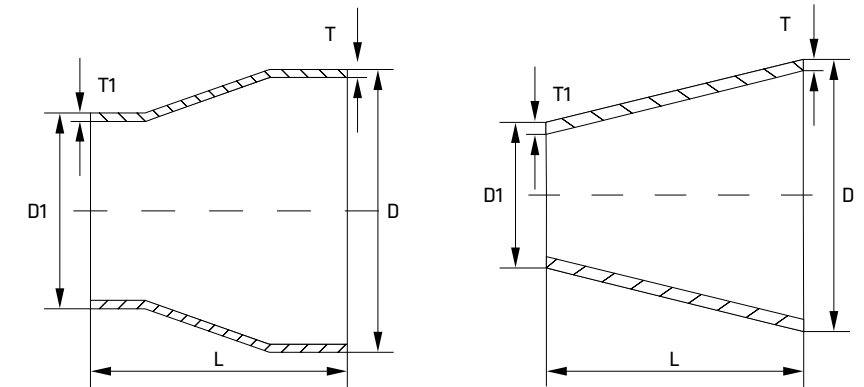
D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	1.4571
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
60.33	2.77	48.26	2.77	76	0.32	x	x			
60.33	3.91	33.40	3.38	76	0.48	x	x			
60.33	3.91	42.16	3.56	76	0.45	x	x			
60.33	3.91	48.26	3.68	76	0.45	x	x			
73.03	3.05	48.26	2.77	89	0.52	x	x			
73.03	3.05	60.33	2.77	89	0.50	x	x			
76.10	2.90	33.70	2.60	89	0.53				x	
76.10	2.90	42.40	2.60	89	0.53				x	
76.10	2.90	48.30	2.60	89	0.50				x	
76.10	2.90	60.30	2.90	89	0.47				x	



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (7/10)



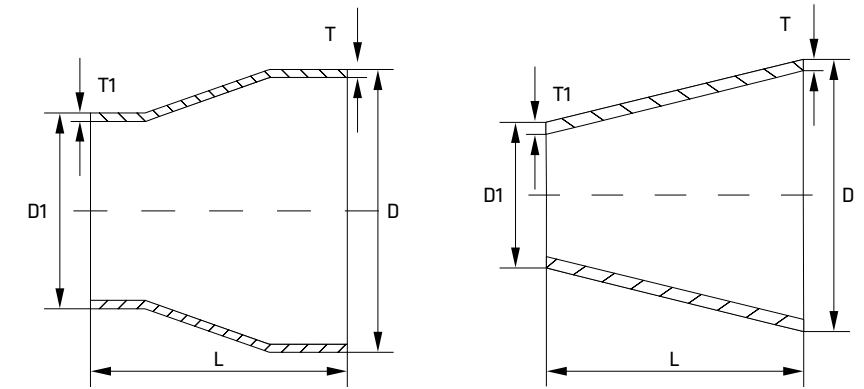
D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	1.4571
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
76.10	4.00	60.30	4.00	89	0.78			x		
88.90	3.00	73.10	3.00	89	0.52	x		x		
88.90	3.05	48.26	2.77	89	0.70	x		x		
88.90	3.05	60.33	2.77	89	0.60	x		x		
88.90	3.20	33.70	2.60	89	0.74				x	
88.90	3.20	42.40	2.60	89	0.70				x	
88.90	3.20	48.30	2.60	89	0.68				x	
88.90	3.20	60.30	2.90	89	0.64				x	x
88.90	3.20	76.10	2.90	89	0.64					
88.90	5.49	48.26	3.68	89	1.20	x		x		



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (8/10)



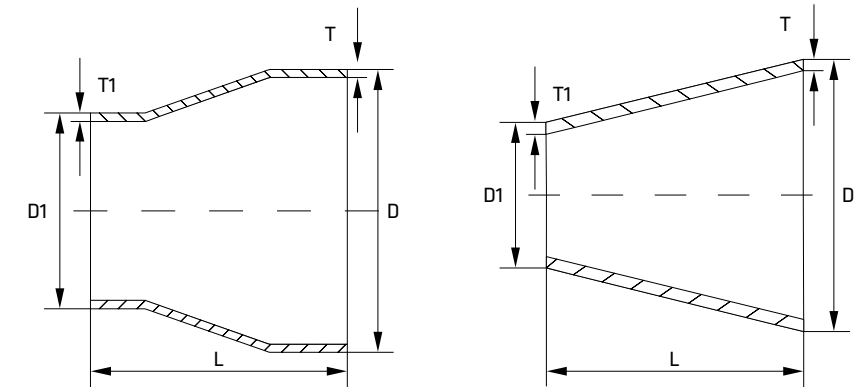
D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	1.4571
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
88.90	5.49	60.33	3.91	89	1.06	x		x		
88.90	5.49	73.03	5.16	89	1.06	x		x		
114.30	2.60	76.1	2.30	102	0.89			x		
114.30	3.05	60.33	2.77	102	0.98	x		x		
114.30	3.05	73.03	3.05	102	0.95	x		x		
114.30	3.05	88.90	3.05	102	0.90	x		x		
114.30	3.60	48.30	2.60	102	1.18				x	
114.30	3.60	60.30	2.90	102	1.10				x	
114.30	3.60	76.10	2.90	102	1.10				x	x
114.30	3.60	88.90	3.20	102	1.00				x	



# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (9/10)



D	T	T1	L	TYPE	Grade	concentric				eccentric
						AISI/UNS	1.4462	1.4539	1.4541	1.4571
					kg/pce.	S31803	904L	321	316 Ti	316 Ti
114.30	4.00	88.90	4.00	102	1.10			x		
114.30	6.02	60.33	3.91	102	1.90	x		x		
114.30	6.02	73.03	5.16	102	1.85			x		
114.30	6.02	88.90	5.49	102	1.75	x		x		
139.70	4.00	88.90	3.20	127	2.00				x	
139.70	4.00	114.30	3.60	127	1.80				x	
168.26	7.11	88.90	5.49	140	3.55	x		x		
168.26	7.11	114.30	6.02	140	4.50	x		x		
168.30	4.50	88.90	3.20	140	2.95				x	
168.30	4.50	114.30	3.60	140	2.86				x	

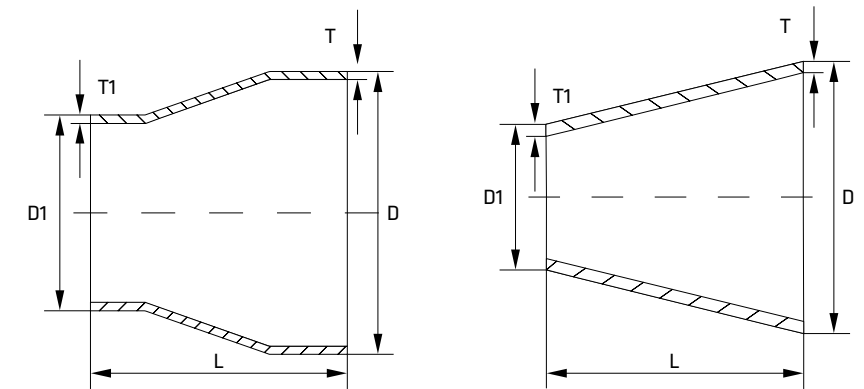




# REDUCER SEAMLESS

acc. to EN-10253-4

concentric - eccentric (10/10)



D	T	T1	L	TYPE	Grade	concentric				eccentric	
						AISI/UNS	1.4462	1.4539	1.4541	1.4571	1.4571
						kg/pce.	S31803	904L	321	316 Ti	316 Ti
168.30	4.50	139.70	4.00	140	2.86				x		
219.10	6.30	139.70	4.00	152	5.80				x		
219.10	8.18	114.30	6.02	152	7.60	x	x				
219.10	8.18	168.26	7.11	152	6.80	x	x				



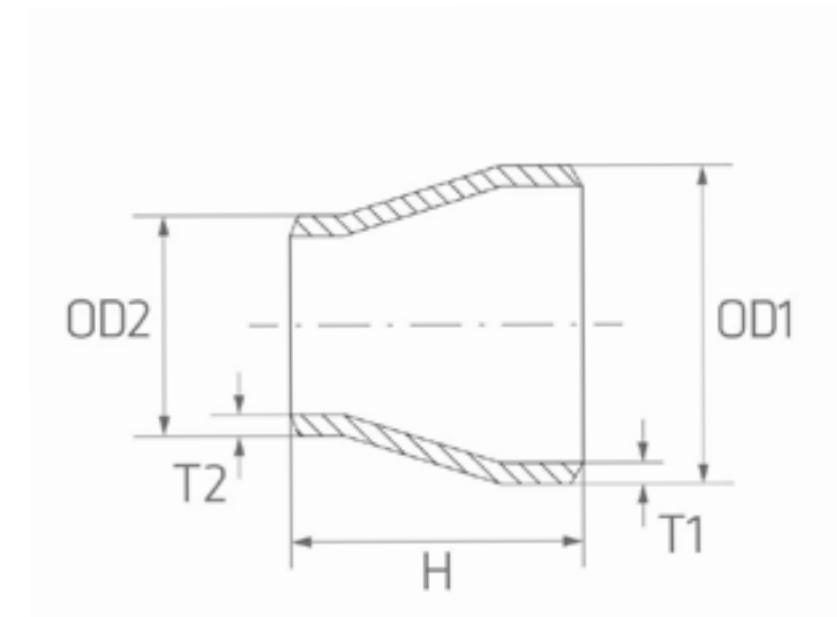
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

concentric (1/19)



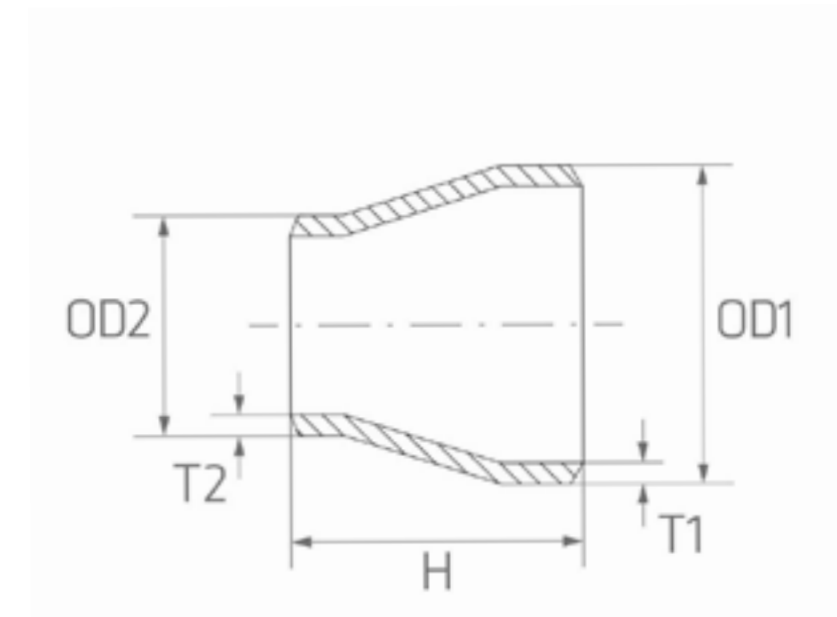
D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
26.67	17.14	2.87	2.31	3/4" x 3/8" SCH 40S	38.1	0.068		x		x
26.67	21.33	2.11	2.11	3/4" x 1/2" SCH 10S	38.1	0.043	x	x	x	x
26.67	21.33	2.87	2.77	3/4" x 1/2" SCH 40S	38.1	0.059	x	x	x	x
26.67	21.33	3.91	3.73	3/4" x 1/2" SCH 80S	38.1	0.075		x		x
26.67	21.33	5.56	4.78	3/4" x 1/2" SCH 160	38.1	0.092		x		x
33.40	21.33	2.77	2.11	1" x 1/2" SCH 10S	50.8	0.089	x	x	x	x
33.40	21.33	3.38	2.77	1" x 1/2" SCH 40S	50.8	0.105	x	x	x	x
33.40	21.33	4.55	3.73	1" x 1/2" SCH 80S	50.8	0.136		x		x
33.40	21.33	6.35	4.78	1" x 1/2" SCH 160	50.8	0.160		x		x
33.40	26.67	2.77	2.11	1" x 3/4" SCH 10S	50.8	0.098	x	x	x	x



# REDUCER

ASTM-A 403

concentric (2/19)



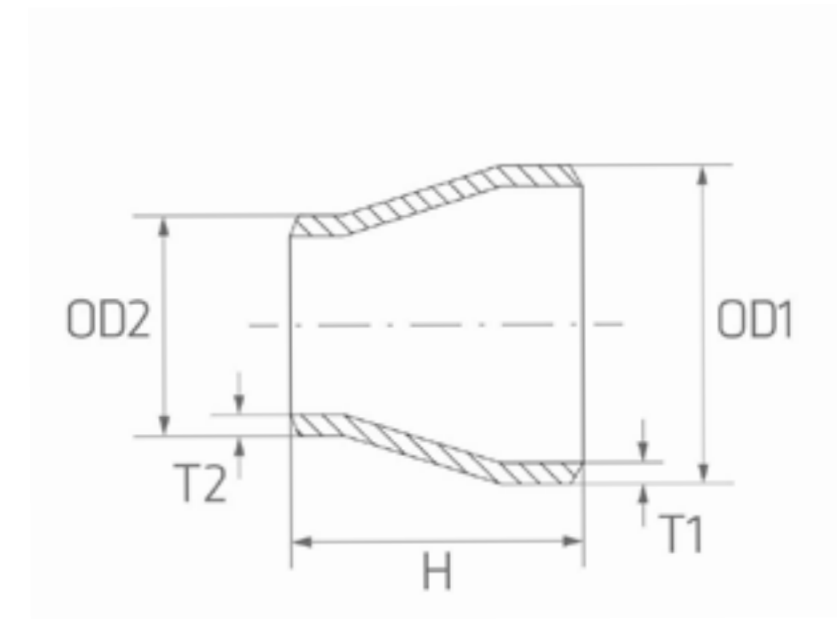
D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
33.40	26.67	3.38	2.77	1" x 3/4" SCH 40S	50.8	0.116	x	x	x	x
33.40	26.67	4.55	3.73	1" x 3/4" SCH 80S	50.8	0.168		x		x
33.40	26.67	6.35	5.56	1" x 3/4" SCH 160	50.8	0.174		x		x
42.16	21.30	2.77	2.11	1 1/4" x 1/2" SCH 10S	50.8	0.140	x	x	x	x
42.16	21.30	3.56	2.77	1 1/4" x 1/2" SCH 40S	50.8	0.146	x	x	x	x
42.16	21.30	4.85	3.73	1 1/4" x 1/2" SCH 80S	50.8	0.196		x		x
42.16	21.30	6.35	4.78	1 1/4" x 1/2" SCH 160	50.8	0.236				x
42.16	26.67	2.77	2.11	1 1/4" x 3/4" SCH 10S	50.8	0.138	x	x	x	x
42.16	26.67	3.56	2.77	1 1/4" x 3/4" SCH 40S	50.8	0.176	x	x	x	x
42.16	26.67	4.85	3.91	1 1/4" x 3/4" SCH 80S	50.8	0.212		x		x



# REDUCER

ASTM-A 403

concentric (3/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
42.16	26.67	6.35	5.56	1 1/4" x 3/4" SCH 160	50.8	0.246				x
42.16	33.40	2.77	2.77	1 1/4" x 1" SCH 10S	50.8	0.125	x	x	x	x
42.16	33.40	3.56	3.38	1 1/4" x 1" SCH 40S	50.8	0.157	x	x	x	x
42.16	33.40	4.85	4.55	1 1/4" x 1" SCH 80S	50.8	0.245		x		x
42.16	33.40	6.35	6.35	1 1/4" x 1" SCH 160	50.8	0.262		x		x
48.26	21.30	2.77	2.11	1 1/2" x 1/2" SCH 10S	63.5	0.154	x	x	x	x
48.26	21.30	3.68	2.77	1 1/2" x 1/2" SCH 40S	63.5	0.204	x		x	x
48.26	21.30	5.08	3.73	1 1/2" x 1/2" SCH 80S	63.5	0.276		x		x
48.26	26.67	2.77	2.11	1 1/2" x 3/4" SCH 10S	63.5	0.156	x	x	x	x
48.26	26.67	3.68	2.87	1 1/2" x 3/4" SCH 40S	63.5	0.201	x	x	x	x

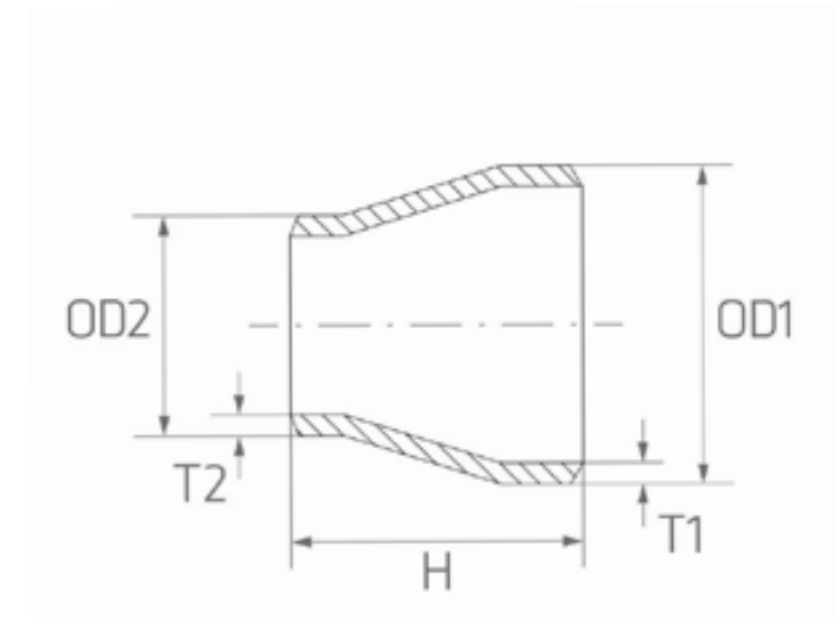




# REDUCER

ASTM-A 403

concentric (4/19)



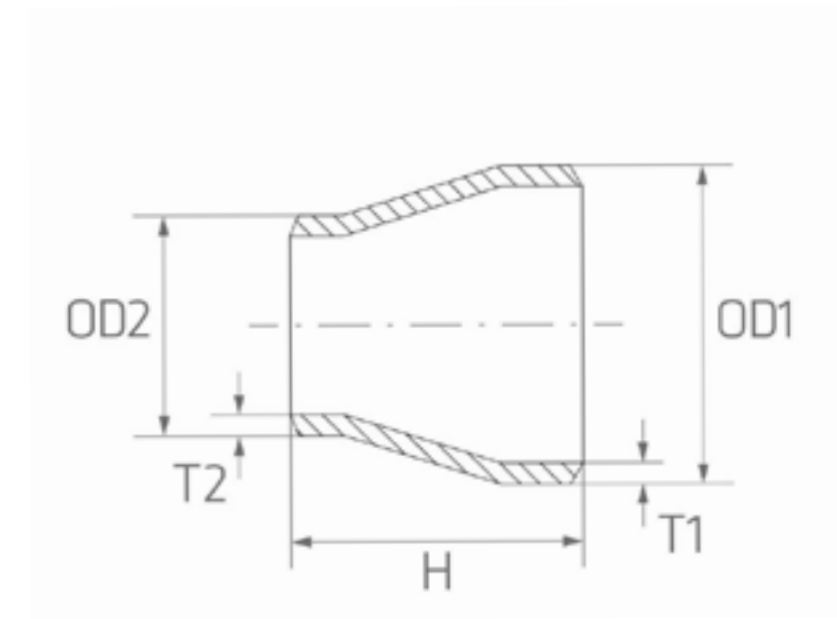
D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	concentric				
							304/304L		316/316L		
							kg/pce.	welded	seamless	welded	seamless
48.26	26.67	5.08	3.91	1 1/2" x 3/4" SCH 80S	63.5	0.294			x		x
48.26	26.67	7.14	5.56	1 1/2" x 3/4" SCH 160	63.5	0.388					x
48.26	33.40	2.77	2.77	1 1/2" x 1" SCH 10S	63.5	0.170	x	x	x	x	
48.26	33.40	3.68	3.38	1 1/2" x 1" SCH 40S	63.5	0.219	x	x	x	x	
48.26	33.40	5.08	4.55	1 1/2" x 1" SCH 80S	63.5	0.308			x		x
48.26	33.40	7.14	6.35	1 1/2" x 1" SCH 160	63.5	0.398			x		x
48.26	42.16	2.77	2.77	1 1/2" x 1 1/4" SCH 10S	63.5	0.195	x			x	x
48.26	42.16	3.68	3.56	1 1/2" x 1 1/4" SCH 40S	63.5	0.263	x	x	x	x	
48.26	42.16	5.08	4.85	1 1/2" x 1 1/4" SCH 80S	63.5	0.331			x		x
48.26	42.16	7.14	6.35	1 1/2" x 1 1/4" SCH 160	63.5	0.420					x



# REDUCER

ASTM-A 403

concentric (5/19)



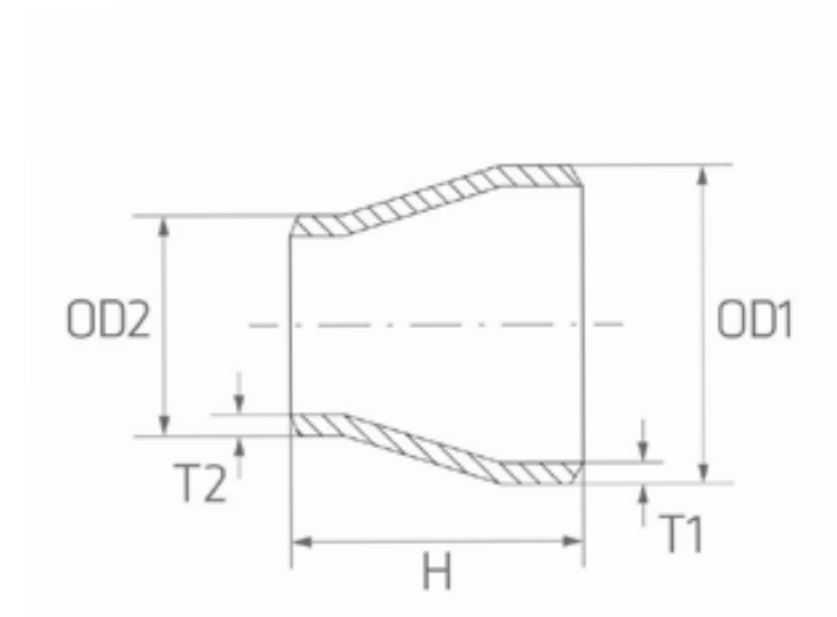
D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
60.33	21.30	2.77	2.11	2" x 1/2" SCH 10S	76.2	0.294	x	x	x	x
60.33	21.30	3.91	2.77	2" x 1/2" SCH 40S	76.2	0.344	x	x	x	x
60.33	21.30	5.54	3.73	2" x 1/2" SCH 80S	76.2	0.426		x		x
60.33	21.30	8.74	4.78	2" x 1/2" SCH 160	76.2	0.616				x
60.33	26.67	2.77	2.77	2" x 3/4" SCH 10S	76.2	0.214	x	x	x	x
60.33	26.67	3.91	2.87	2" x 3/4" SCH 40S	76.2	0.298	x	x	x	x
60.33	26.67	5.54	3.91	2" x 3/4" SCH 80S	76.2	0.458		x		x
60.33	26.67	8.74	5.56	2" x 3/4" SCH 160	76.2	0.668				x
60.33	33.40	2.77	2.77	2" x 1" SCH 10S	76.2	0.237	x	x	x	x
60.33	33.40	3.91	3.38	2" x 1" SCH 40S	76.2	0.322	x	x	x	x



# REDUCER

ASTM-A 403

concentric (6/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
60.33	33.40	5.54	4.55	2" x 1" SCH 80S	76.2	0.458		x		x
60.33	33.40	8.74	6.35	2" x 1" SCH 160	76.2	0.670		x		x
60.33	42.16	2.77	2.77	2" x 1 1/4" SCH 10S	76.2	0.258	x	x	x	x
60.33	42.16	3.91	3.56	2" x 1 1/4" SCH 40S	76.2	0.352	x	x	x	x
60.33	42.16	5.54	4.85	2" x 1 1/4" SCH 80S	76.2	0.525		x		x
60.33	42.16	8.74	6.35	2" x 1 1/4" SCH 160	76.2	0.744				x
60.33	48.26	2.77	2.77	2" x 1 1/2" SCH 10S	76.2	0.273	x	x	x	x
60.33	48.26	3.91	3.68	2" x 1 1/2" SCH 40S	76.2	0.372	x	x	x	x
60.33	48.26	5.54	5.08	2" x 1 1/2" SCH 80S	76.2	0.544		x		x
60.33	48.26	8.74	7.14	2" x 1 1/2" SCH 160	76.2	0.698		x		x

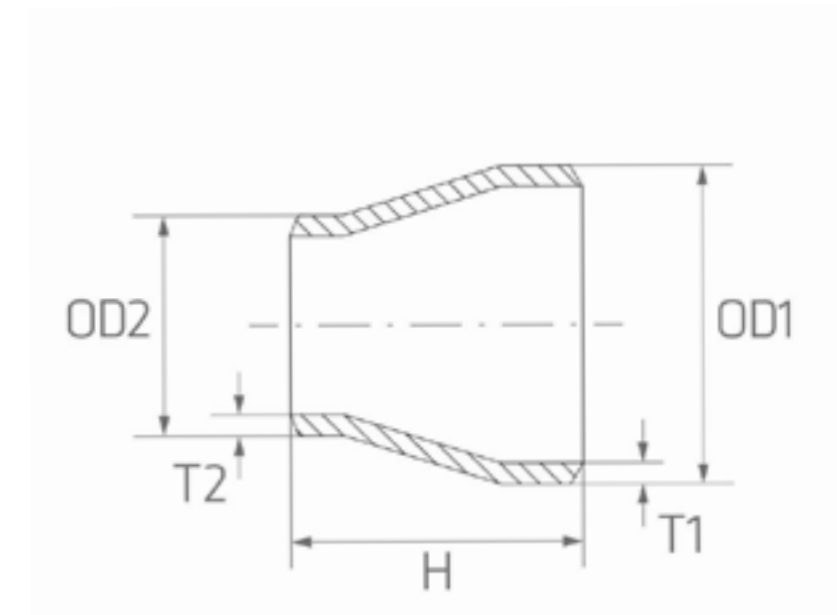




# REDUCER

ASTM-A 403

concentric (7/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
73.03	33.40	3.05	2.77	2 1/2" x 1" SCH 10S	88.9	0.370	x	x	x	x
73.03	33.40	5.16	3.38	2 1/2" x 1" SCH 40S	88.9	0.630	x	x	x	x
73.03	33.40	7.01	4.55	2 1/2" x 1" SCH 80S	88.9	0.739		x		x
73.03	42.16	3.05	2.77	2 1/2" x 1 1/4" SCH 10S	88.9	0.394	x	x	x	x
73.03	42.16	5.16	3.56	2 1/2" x 1 1/4" SCH 40S	88.9	0.670	x	x	x	x
73.03	42.16	7.01	4.85	2 1/2" x 1 1/4" SCH 80S	88.9	0.825		x		x
73.03	48.30	3.05	2.77	2 1/2" x 1 1/2" SCH 10S	88.9	0.396	x	x	x	x
73.03	48.30	5.16	3.68	2 1/2" x 1 1/2" SCH 40S	88.9	0.661	x	x	x	x
73.03	48.30	7.01	5.08	2 1/2" x 1 1/2" SCH 80S	88.9	0.856		x		x
73.03	60.30	3.05	2.77	2 1/2" x 2" SCH 10S	88.9	0.432	x	x	x	x



1) = 100% X-RAY

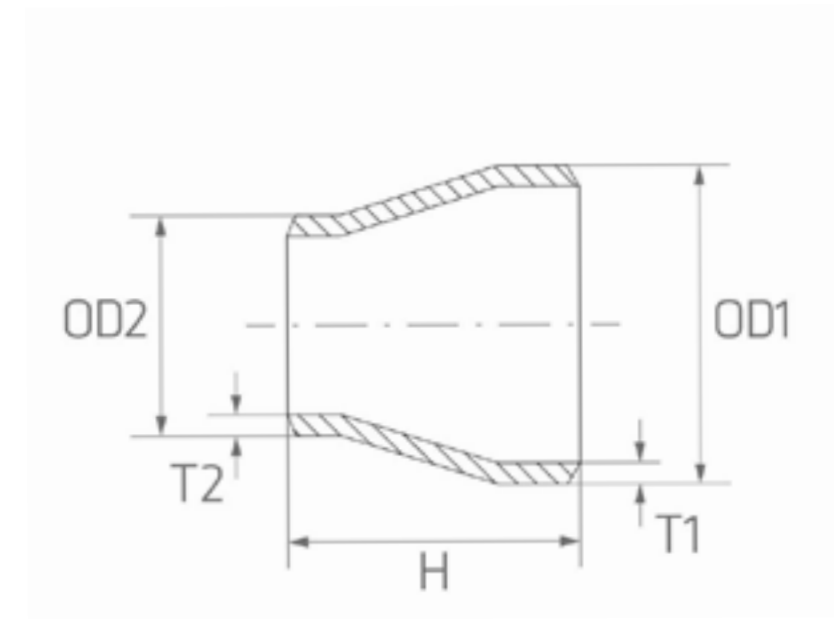
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# REDUCER

ASTM-A 403

concentric (8/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
73.03	60.30	5.16	3.91	2 1/2" x 2" SCH 40S	88.9	0.724	x	x	x	x
73.03	60.30	7.01	5.54	2 1/2" x 2" SCH 80S	88.9	0.938		x		x
88.90	33.40	3.05	2.77	3" x 1" SCH 10S	88.9	0.408	x	x	x	x
88.90	33.40	5.49	3.38	3" x 1" SCH 40S	88.9	0.716	x	x	x	x
88.90	33.40	7.62	4.55	3" x 1" SCH 80S	88.9	0.888		x		x
88.90	42.16	3.05	2.77	3" x 1 1/4" SCH 10S	88.9	0.430	x	x	x	x
88.90	42.16	5.49	3.56	3" x 1 1/4" SCH 40S	88.9	0.775	x	x	x	x
88.90	42.16	7.62	4.85	3" x 1 1/4" SCH 80S	88.9	1.037		x		x
88.90	48.26	3.05	2.77	3" x 1 1/2" SCH 10S	88.9	0.444	x	x	x	x
88.90	48.26	5.49	3.68	3" x 1 1/2" SCH 40S	88.9	0.783	x	x	x	x



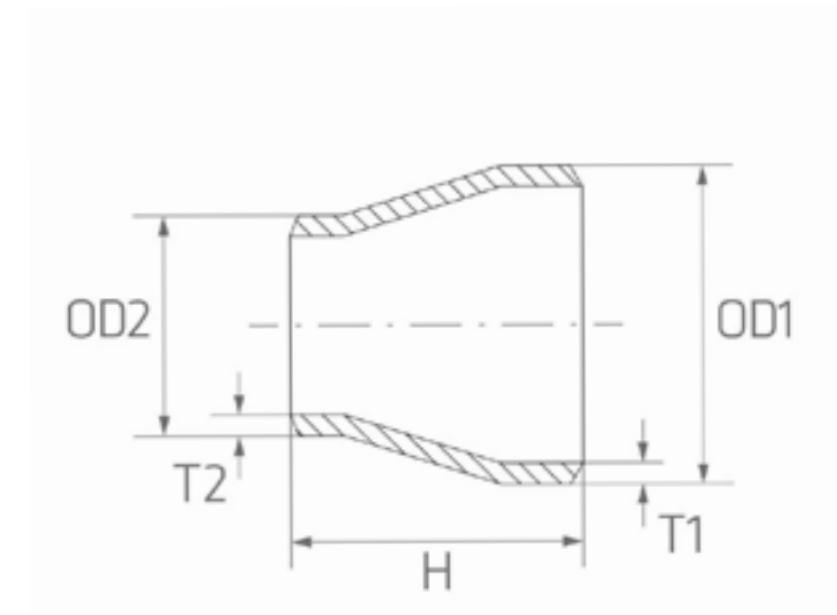
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

concentric (9/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
88.90	48.26	7.62	5.08	3" x 1 1/2" SCH 80S	88.9	1.105		x		x
88.90	60.30	3.05	2.77	3" x 2" SCH 10S	88.9	0.478	x	x	x	x
88.90	60.30	5.49	3.91	3" x 2" SCH 40S	88.9	0.846	x	x	x	x
88.90	60.30	7.62	5.54	3" x 2" SCH 80S	88.9	1.178		x		x
88.90	73.03	3.05	3.05	3" x 2 1/2" SCH 10S	88.9	0.548	x	x	x	x
88.90	73.03	5.49	5.16	3" x 2 1/2" SCH 40S	88.9	0.983	x	x	x	x
88.90	73.03	7.62	7.01	3" x 2 1/2" SCH 80S	88.9	1.291		x		x
101.60	60.30	3.05	2.77	3 1/2" x 2" SCH 10S	101.6	0.620		x		x
101.60	60.30	5.74	3.91	3 1/2" x 2" SCH 40S	101.6	1.100		x		x
101.60	60.30	8.05	5.54	3 1/2" x 2" SCH 80S	101.6	1.510		x		x



1) = 100% X-RAY

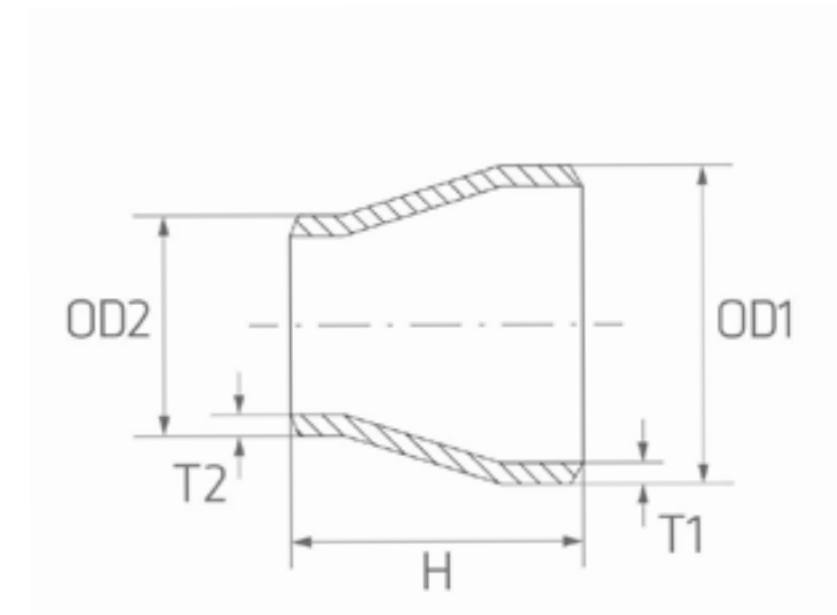
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# REDUCER

ASTM-A 403

concentric (10/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
101.60	73.30	3.05	3.05	3 1/2" x 2 1/2" SCH 10S	101.6	0.660		x		x
101.60	73.30	5.74	5.16	3 1/2" x 2 1/2" SCH 40S	101.6	1.120		x		x
101.60	73.30	8.05	7.01	3 1/2" x 2 1/2" SCH 80S	101.6	1.630		x		x
101.60	88.90	3.05	3.05	3 1/2" x 3" SCH 10S	101.6	0.774		x		x
101.60	88.90	5.74	5.49	3 1/2" x 3" SCH 40S	101.6	1.340		x		x
101.60	88.90	8.05	7.62	3 1/2" x 3" SCH 80S	101.6	1.780		x		x
114.30	48.26	3.05	2.77	4" x 1 1/2" SCH 10S	101.6	0.630	x	x	x	x
114.30	48.26	6.02	3.68	4" x 1 1/2" SCH 40S	101.6	1.241	x	x	x	x
114.30	48.26	8.56	5.08	4" x 1 1/2" SCH 80S	101.6	1.730		x		x
114.30	60.30	3.05	2.77	4" x 2" SCH 10S	101.6	0.656	x	x	x	x



1) = 100% X-RAY

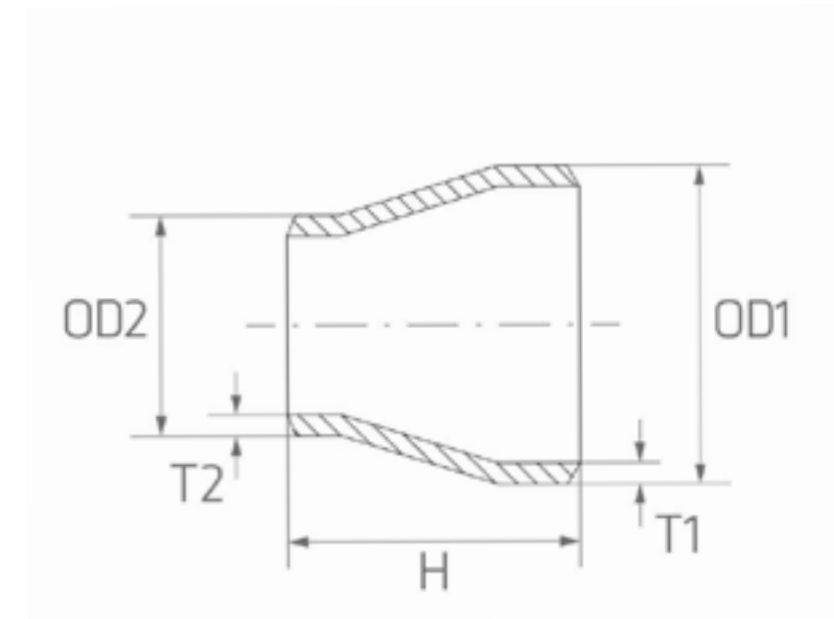
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# REDUCER

ASTM-A 403

concentric (11/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
114.30	60.30	6.02	3.91	4" x 2" SCH 40S	101.6	1.270	x	x	x	x
114.30	60.30	8.56	5.54	4" x 2" SCH 80S	101.6	1.780		x		x
114.30	73.03	3.05	3.05	4" x 2 1/2" SCH 10S	101.6	0.706	x	x	x	x
114.30	73.03	6.02	5.16	4" x 2 1/2" SCH 40S	101.6	1.370	x	x	x	x
114.30	73.03	8.56	7.01	4" x 2 1/2" SCH 80S	101.6	2.007		x		x
114.30	88.90	3.05	3.05	4" x 3" SCH 10S	101.6	0.748	x	x	x	x
114.30	88.90	6.02	5.49	4" x 3" SCH 40S	101.6	1.450	x	x	x	x
114.30	88.90	8.56	7.62	4" x 3" SCH 80S	101.6	2.129		x		x
114.30	101.60	3.05	3.05	4" x 3 1/2" SCH 10S	101.6	1.570		x		x
114.30	101.60	6.02	5.74	4" x 3 1/2" SCH 40S	101.6	1.595		x		x



1) = 100% X-RAY

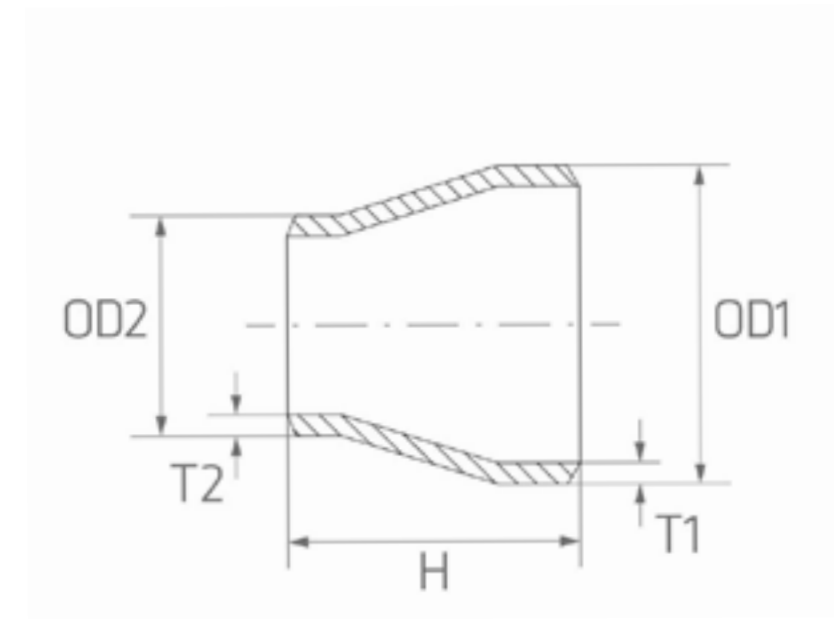
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# REDUCER

ASTM-A 403

concentric (12/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
114.30	101.60	8.56	8.05	4" x 3 1/2" SCH 80S	101.6	2.230		x		x
141.30	60.30	3.40	2.77	5" x 2" SCH 10S	127.0	1.270	x		x	
141.30	60.30	6.55	3.91	5" x 2" SCH 40S	127.0	2.440	x		x	
141.30	73.30	3.40	3.05	5" x 2 1/2" SCH 10S	127.0	1.490	x		x	
141.30	73.30	6.55	5.16	5" x 2 1/2" SCH 40S	127.0	2.190	x		x	
141.30	88.90	3.40	3.05	5" x 3" SCH 10S	127.0	1.200	x	x	x	x
141.30	88.90	6.55	5.49	5" x 3" SCH 40S	127.0	2.270	x	x	x	x
141.30	88.90	9.53	7.62	5" x 3" SCH 80S	127.0	3.547		x		x
141.30	101.60	3.40	3.05	5" x 3 1/2" SCH 10S	127.0	1.600		x		x
141.30	101.60	6.55	5.74	5" x 3 1/2" SCH 40S	127.0	2.260		x		x



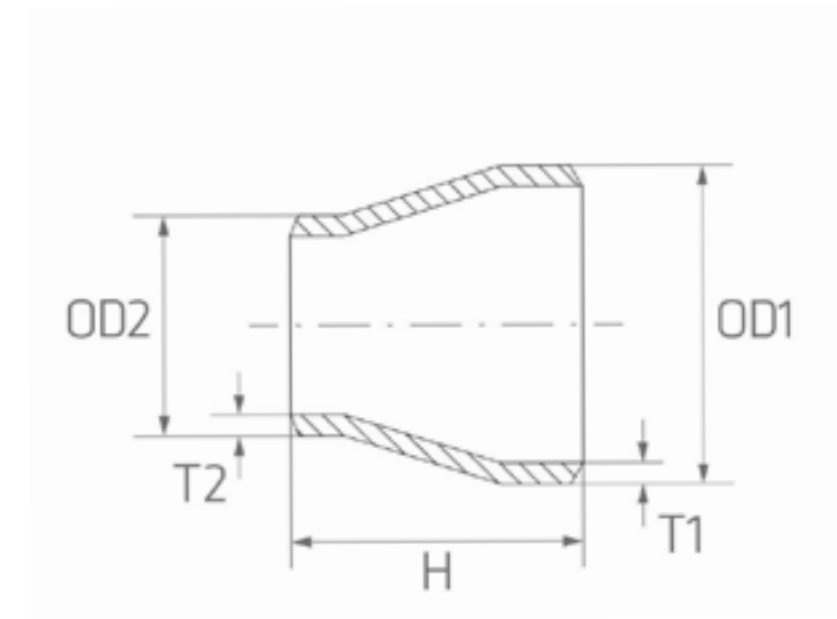
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

concentric (13/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
141.30	101.60	9.53	8.05	5" x 3 1/2" SCH 80S	127.0	3.770		x		x
141.30	114.30	3.40	3.05	5" x 4" SCH 10S	127.0	1.320	x	x	x	x
141.30	114.30	6.55	6.02	5" x 4" SCH 40S	127.0	2.500	x	x	x	x
141.30	114.30	9.53	8.56	5" x 4" SCH 80S	127.0	3.769		x		x
168.28	60.30	3.40	2.77	6" x 2" SCH 10S	139.7	1.740	x		x	x
168.28	60.30	7.11	3.91	6" x 2" SCH 40S	139.7	3.010	x		x	x
168.28	73.30	3.40	3.05	6" x 2 1/2" SCH 10S	139.7	1.350	x		x	
168.28	73.30	7.11	5.16	6" x 2 1/2" SCH 40S	139.7	2.740	x		x	
168.28	88.90	3.40	3.05	6" x 3" SCH 10S	139.7	1.500	x	x	x	x
168.28	88.90	8.18	5.49	6" x 3" SCH 40S	139.7	3.040	x	x	x	x



1) = 100% X-RAY

\* Finishes: page 718

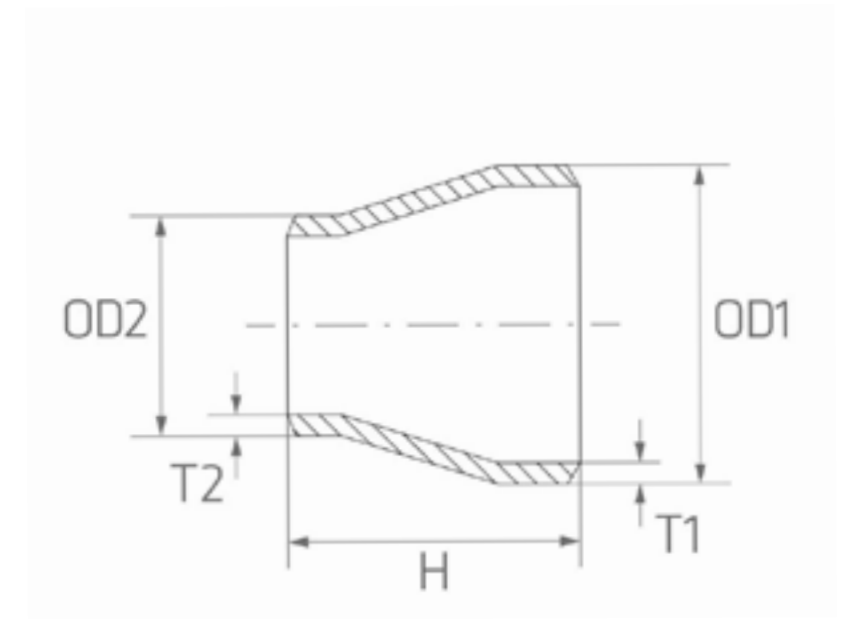


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# REDUCER

ASTM-A 403

concentric (14/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
168.28	88.90	10.97	7.62	6" x 3" SCH 80S	139.7	5.030		x		x
168.28	101.60	3.40	3.05	6" x 3 1/2" SCH 10S	139.7	1.485		x		x
168.28	101.60	7.11	5.74	6" x 3 1/2" SCH 40S	139.7	3.990		x		x
168.28	101.60	10.97	8.05	6" x 3 1/2" SCH 80S	139.7	5.530		x		x
168.28	114.30	3.40	3.05	6" x 4" SCH 10S	139.7	1.620	x	x	x	x
168.28	114.30	7.11	6.02	6" x 4" SCH 40S	139.7	3.300	x	x	x	x
168.28	114.30	10.97	8.56	6" x 4" SCH 80S	139.7	5.440		x		x
168.28	141.30	3.40	3.40	6" x 5" SCH 10S	139.7	1.750	x	x	x	x
168.28	141.30	7.11	6.55	6" x 5" SCH 40S	139.7	3.570	x	x	x	x
168.28	141.30	10.97	9.53	6" x 5" SCH 80S	139.7	5.710		x		x



1) = 100% X-RAY

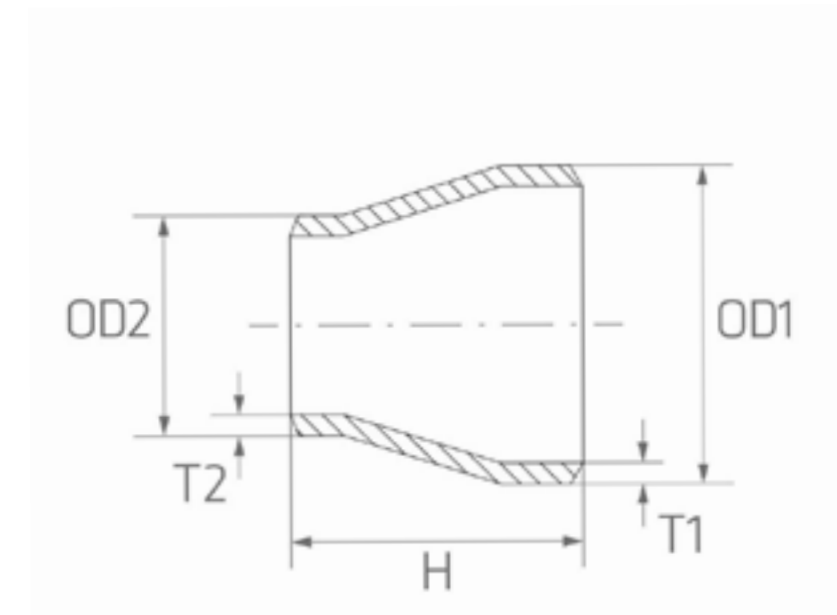
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# REDUCER

ASTM-A 403

concentric (15/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
219.08	114.30	3.76	3.05	8" x 4" SCH 10S	152.4	2.560	x	x		x
219.08	114.30	8.18	6.02	8" x 4" SCH 40S	152.4	5.100	x	x		x
219.08	114.30	12.70	8.56	8" x 4" SCH 80S	152.4	8.430		x		x
219.08	141.30	3.76	3.40	8" x 5" SCH 10S	152.4	2.700		x		x
219.08	141.30	8.18	6.55	8" x 5" SCH 40S	152.4	5.400		x		x
219.08	141.30	12.70	9.53	8" x 5" SCH 80S	152.4	8.830		x		x
219.08	168.28	3.76	3.40	8" x 6" SCH 10S	152.4	2.850	x	x	x	x
219.08	168.28	8.18	7.11	8" x 6" SCH 40S	152.4	5.710	x	x	x	x
219.08	168.28	12.70	10.97	8" x 6" SCH 80S	152.4	9.240		x		x
273.05	168.28	4.19	3.40	10" x 6" SCH 10S	177.8	3.870	x	x	x	x



1) = 100% X-RAY

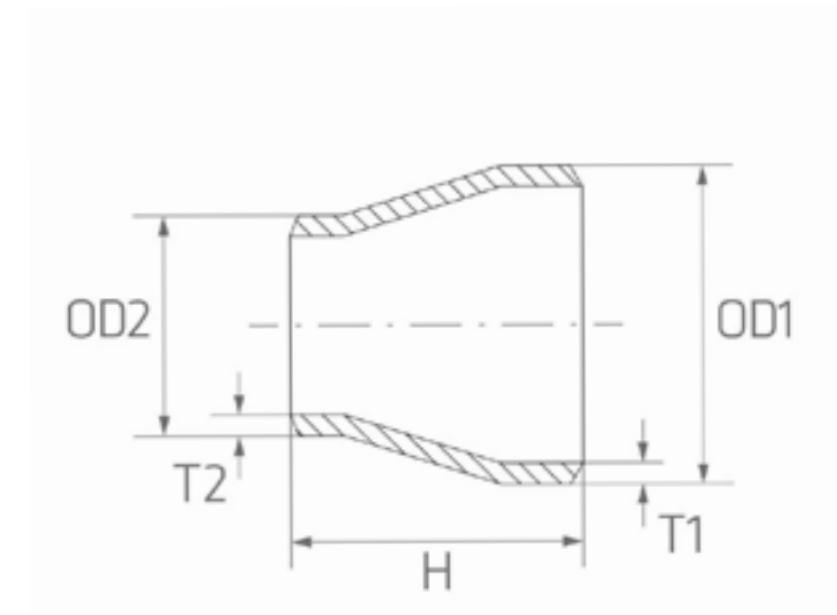
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# REDUCER

ASTM-A 403

concentric (16/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
273.05	168.28	9.27	7.11	10" x 6" SCH 40S	177.8	8.780	x	x	x	x
273.05	168.28	12.70	10.97	10" x 6" SCH 80S	177.8	13.500		x		x
273.05	219.08	4.19	3.76	10" x 8" SCH 10S	177.8	4.210	x	x	x	x
273.05	219.08	9.27	8.18	10" x 8" SCH 40S	177.8	9.580	x	x	x	x
273.05	219.08	12.70	12.70	10" x 8" SCH 80S	177.8	14.220		x		x
323.85	168.30	4.57	3.40	12" x 6" SCH 10S	203.2	5.730	x		x	x
323.85	168.30	10.31	7.11	12" x 6" SCH 40S	203.2	12.400	x		x	x
323.85	168.28	4.57	3.40	12" x 8" SCH 10S	203.2	6.110	x	x	x	x
323.85	168.28	9.53	7.11	12" x 8" SCH 40S	203.2	13.700	x	x	x	x
323.85	219.10	17.48	12.70	12" x 8" SCH 80S	203.2	19.070		x		x



1) = 100% X-RAY

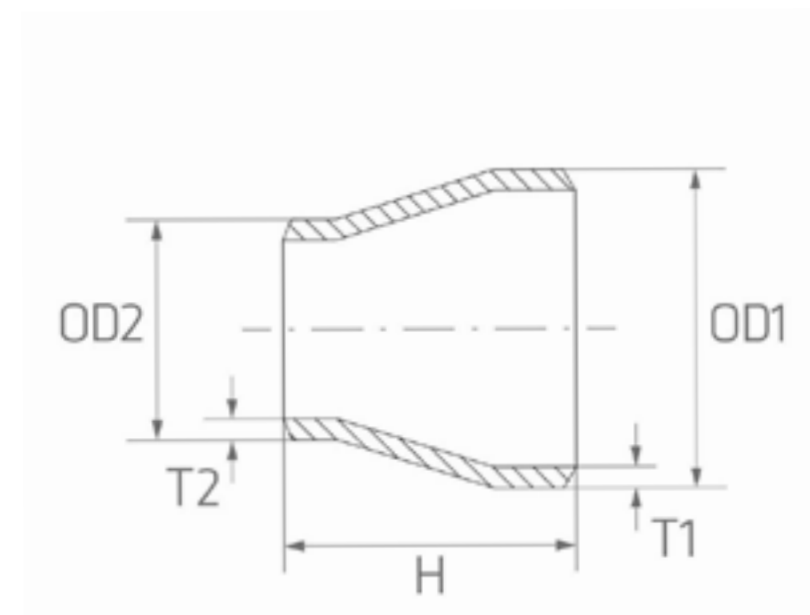
\* Finishes: page 718

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# REDUCER

ASTM-A 403

concentric (17/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
323.85	273.05	4.57	4.19	12" x 10" SCH 10S	203.2	6.550	x	x	x	x
323.85	273.05	9.53	9.27	12" x 10" SCH 40S	203.2	14.700	x	x	x	x
323.85	273.05	17.48	12.70	12" x 10" SCH 80S	203.2	19.480		x		x
355.60	273.05	4.78	4.19	14" x 10" SCH 10S	330.2	13.210	x 1)		x 1)	
355.60	273.05	9.53	9.27	14" x 10" SCH 40S	330.2	26.410	x 1)		x 1)	
355.60	323.85	4.78	4.57	14" x 12" SCH 10S	330.2	14.270	x 1)		x 1)	
355.60	323.85	9.53	9.53	14" x 12" SCH 40S	330.2	28.550	x 1)		x 1)	
406.40	273.05	6.35	4.19	16" x 10" SCH 10S	355.6	15.370	x 1)		x 1)	
406.40	273.05	12.70	9.27	16" x 10" SCH 40S	355.6	30.750	x 1)		x 1)	
406.40	323.85	4.78	4.57	16" x 12" SCH 10S	355.6	16.520	x 1)		x 1)	



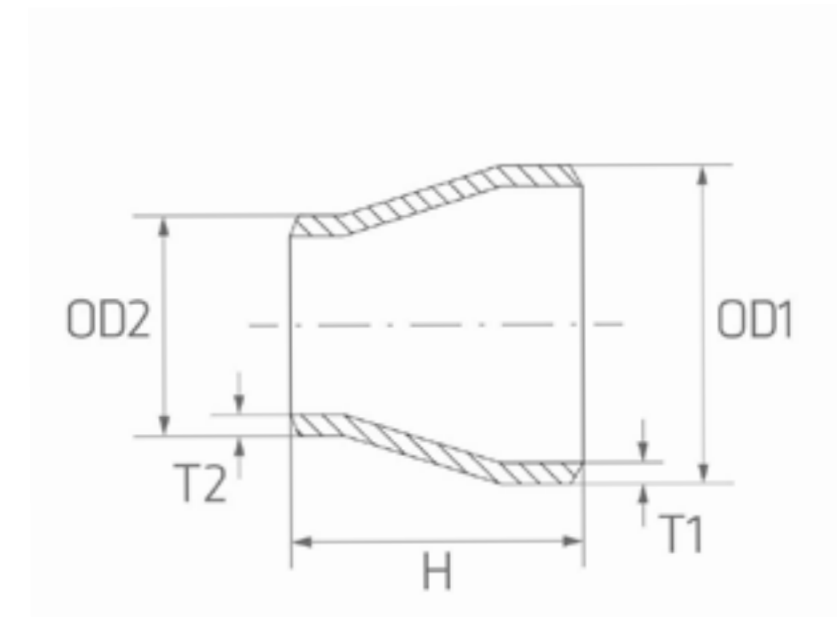
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

concentric (18/19)



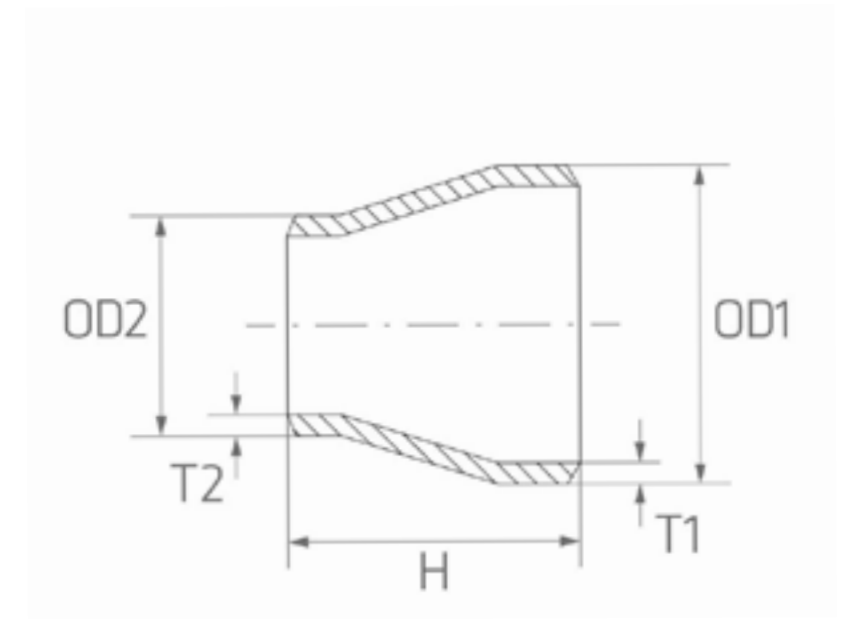
D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	concentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
406.40	323.85	9.53	9.53	16" x 12" SCH 40S	355.6	33.050	x 1)		x 1)	
406.40	355.60	4.78	4.78	16" x 14" SCH 10S	355.6	17.240	x 1)		x 1)	
406.40	355.60	9.53	9.53	16" x 14" SCH 40S	355.6	34.480	x 1)		x 1)	
457.20	355.60	4.78	4.78	18" x 14" SCH 10S	381.0	20.700			x 1)	
457.20	355.60	9.53	9.53	18" x 14" SCH 40S	381.0	66.230			x 1)	
457.20	406.40	4.78	4.78	18" x 16" SCH 10S	381.0	21.990			x 1)	
457.20	406.40	9.53	9.53	18" x 16" SCH 40S	381.0	70.370			x 1)	
508.00	406.40	5.56	4.78	20" x 16" SCH 10S	508.0	37.260			x 1)	
508.00	406.40	9.53	9.53	20" x 16" SCH 40S	508.0	99.350			x 1)	
508.00	457.20	5.56	4.78	20" x 18" SCH 10S	508.0	39.330			x 1)	



# REDUCER

■ ASTM-A 403

concentric (19/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	concentric			
							304/304L		316/316L	
						kg/pce.	welded	seamless	welded	seamless
508.00	457.20	9.53	9.53	20" x 18" SCH 40S	508.0	104.870			x 1)	
609.60	508.00	6.35	5.56	24" x 20" SCH 10S	508.0	45.540			x 1)	
609.60	508.00	9.53	9.53	24" x 20" SCH 40S	508.0	151.790			x 1)	



1) = 100% X-RAY

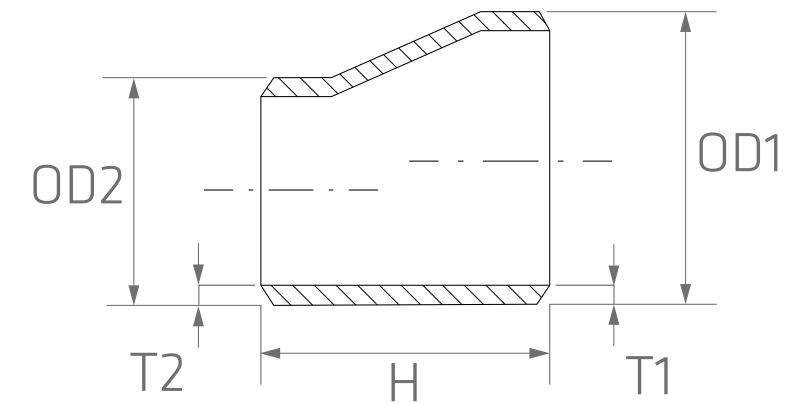
\* Finishes: page 718

# REDUCER



ASTM-A 403

eccentric (1/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
26.67	17.14	2.87	2.31	3/4" x 3/8" SCH 40S	38.1	0.068				
26.67	21.33	2.11	2.11	3/4" x 1/2" SCH 10S	38.1	0.043		x		x
26.67	21.33	2.87	2.77	3/4" x 1/2" SCH 40S	38.1	0.059		x		x
26.67	21.33	3.91	3.73	3/4" x 1/2" SCH 80S	38.1	0.075		x		x
26.67	21.33	5.56	4.78	3/4" x 1/2" SCH 160	38.1	0.092		x		
33.40	21.33	2.77	2.11	1" x 1/2" SCH 10S	50.8	0.089		x		x
33.40	21.33	3.38	2.77	1" x 1/2" SCH 40S	50.8	0.105		x		x
33.40	21.33	4.55	3.73	1" x 1/2" SCH 80S	50.8	0.136		x		x
33.40	21.33	6.35	4.78	1" x 1/2" SCH 160	50.8	0.160				
33.40	26.67	2.77	2.11	1" x 3/4" SCH 10S	50.8	0.098		x		x



1) = 100% X-RAY

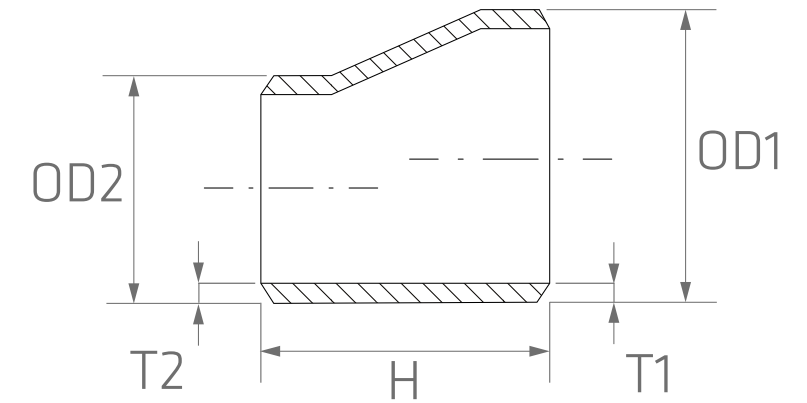
\* Finishes: page 718



# REDUCER

ASTM-A 403

eccentric (2/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
33.40	26.67	3.38	2.77	1" x 3/4" SCH 40S	50.8	0.116		x		x
33.40	26.67	4.55	3.73	1" x 3/4" SCH 80S	50.8	0.168		x		x
33.40	26.67	6.35	5.56	1" x 3/4" SCH 160	50.8	0.174		x		x
42.16	21.30	2.77	2.11	1 1/4" x 1/2" SCH 10S	50.8	0.140		x		x
42.16	21.30	3.56	2.77	1 1/4" x 1/2" SCH 40S	50.8	0.146		x		x
42.16	21.30	4.85	3.73	1 1/4" x 1/2" SCH 80S	50.8	0.196		x		x
42.16	21.30	6.35	4.78	1 1/4" x 1/2" SCH 160	50.8	0.236				
42.16	26.67	2.77	2.11	1 1/4" x 3/4" SCH 10S	50.8	0.138		x		x
42.16	26.67	3.56	2.77	1 1/4" x 3/4" SCH 40S	50.8	0.176		x		x
42.16	26.67	4.85	3.91	1 1/4" x 3/4" SCH 80S	50.8	0.212		x		x



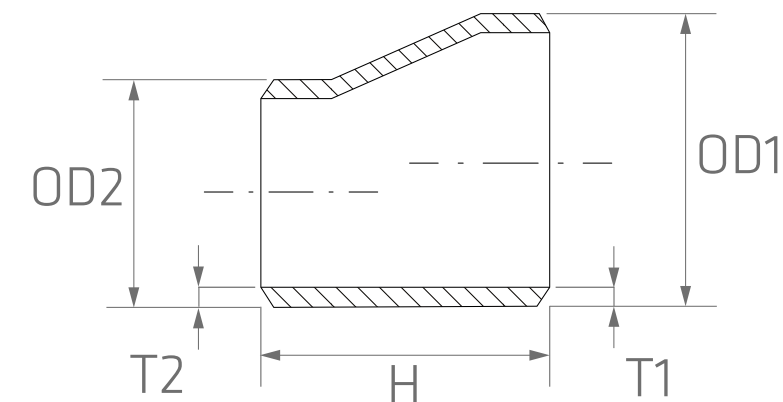
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (3/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
42.16	26.67	6.35	5.56	1 1/4" x 3/4" SCH 160	50.8	0.246				
42.16	33.40	2.77	2.77	1 1/4" x 1" SCH 10S	50.8	0.125		x		x
42.16	33.40	3.56	3.38	1 1/4" x 1" SCH 40S	50.8	0.157		x		x
42.16	33.40	4.85	4.55	1 1/4" x 1" SCH 80S	50.8	0.245		x		x
42.16	33.40	6.35	6.35	1 1/4" x 1" SCH 160	50.8	0.262				
48.26	21.30	2.77	2.11	1 1/2" x 1/2" SCH 10S	63.5	0.154		x		x
48.26	21.30	3.68	2.77	1 1/2" x 1/2" SCH 40S	63.5	0.204		x		x
48.26	21.30	5.08	3.73	1 1/2" x 1/2" SCH 80S	63.5	0.276		x		x
48.26	26.67	2.77	2.11	1 1/2" x 3/4" SCH 10S	63.5	0.156		x		x
48.26	26.67	3.68	2.87	1 1/2" x 3/4" SCH 40S	63.5	0.201		x		x



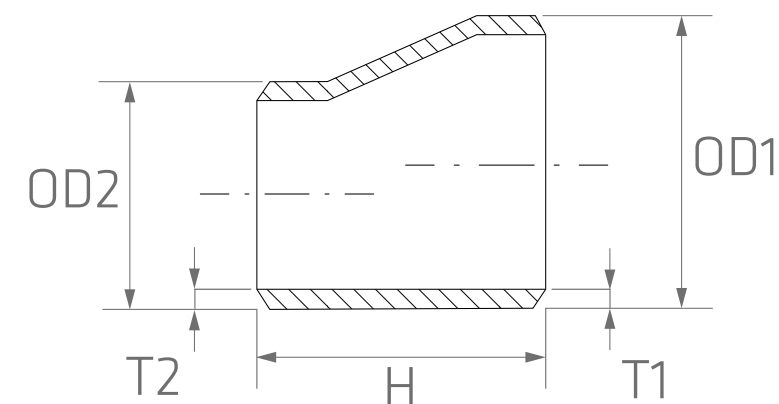
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (4/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
48.26	26.67	5.08	3.91	1 1/2" x 3/4" SCH 80S	63.5	0.294		x		x
48.26	26.67	7.14	5.56	1 1/2" x 3/4" SCH 160	63.5	0.388				
48.26	33.40	2.77	2.77	1 1/2" x 1" SCH 10S	63.5	0.170		x		x
48.26	33.40	3.68	3.38	1 1/2" x 1" SCH 40S	63.5	0.219		x		x
48.26	33.40	5.08	4.55	1 1/2" x 1" SCH 80S	63.5	0.308		x		x
48.26	33.40	7.14	6.35	1 1/2" x 1" SCH 160	63.5	0.398				
48.26	42.16	2.77	2.77	1 1/2" x 1 1/4" SCH 10S	63.5	0.195		x		x
48.26	42.16	3.68	3.56	1 1/2" x 1 1/4" SCH 40S	63.5	0.263		x		x
48.26	42.16	5.08	4.85	1 1/2" x 1 1/4" SCH 80S	63.5	0.331		x		x
48.26	42.16	7.14	6.35	1 1/2" x 1 1/4" SCH 160	63.5	0.420				



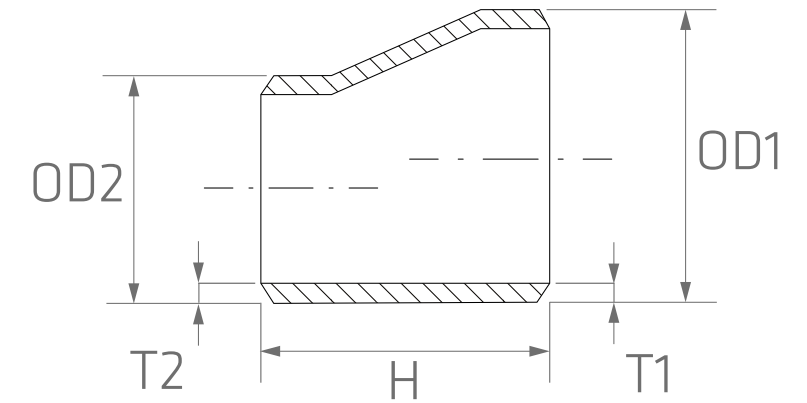
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (5/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
60.33	21.30	2.77	2.11	2" x 1/2" SCH 10S	76.2	0.294		x		x
60.33	21.30	3.91	2.77	2" x 1/2" SCH 40S	76.2	0.344		x		x
60.33	21.30	5.54	3.73	2" x 1/2" SCH 80S	76.2	0.426		x		x
60.33	21.30	8.74	4.78	2" x 1/2" SCH 160	76.2	0.616				x
60.33	26.67	2.77	2.77	2" x 3/4" SCH 10S	76.2	0.214		x		x
60.33	26.67	3.91	2.87	2" x 3/4" SCH 40S	76.2	0.298		x		x
60.33	26.67	5.54	3.91	2" x 3/4" SCH 80S	76.2	0.458		x		x
60.33	26.67	8.74	5.56	2" x 3/4" SCH 160	76.2	0.668				
60.33	33.40	2.77	2.77	2" x 1" SCH 10S	76.2	0.237		x		x
60.33	33.40	3.91	3.38	2" x 1" SCH 40S	76.2	0.322		x		x



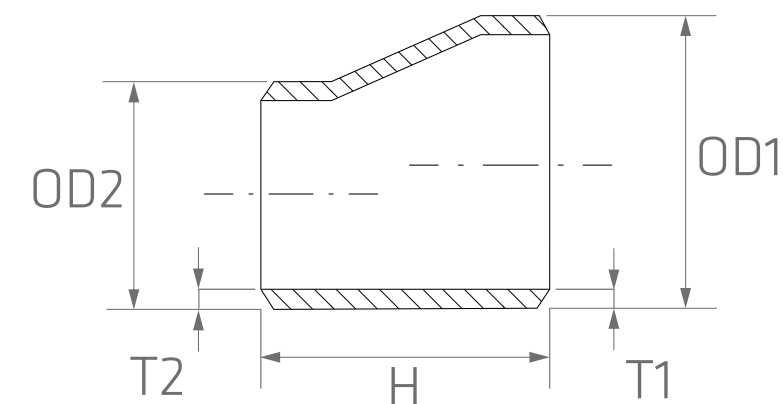
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (6/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
60.33	33.40	5.54	4.55	2" x 1" SCH 80S	76.2	0.458		x		x
60.33	33.40	8.74	6.35	2" x 1" SCH 160	76.2	0.670				x
60.33	42.16	2.77	2.77	2" x 1 1/4" SCH 10S	76.2	0.258		x		x
60.33	42.16	3.91	3.56	2" x 1 1/4" SCH 40S	76.2	0.352		x		x
60.33	42.16	5.54	4.85	2" x 1 1/4" SCH 80S	76.2	0.525		x		x
60.33	42.16	8.74	6.35	2" x 1 1/4" SCH 160	76.2	0.744				
60.33	48.26	2.77	2.77	2" x 1 1/2" SCH 10S	76.2	0.273		x		x
60.33	48.26	3.91	3.68	2" x 1 1/2" SCH 40S	76.2	0.372		x		x
60.33	48.26	5.54	5.08	2" x 1 1/2" SCH 80S	76.2	0.544		x		x
60.33	48.26	8.74	7.14	2" x 1 1/2" SCH 160	76.2	0.698				



1) = 100% X-RAY

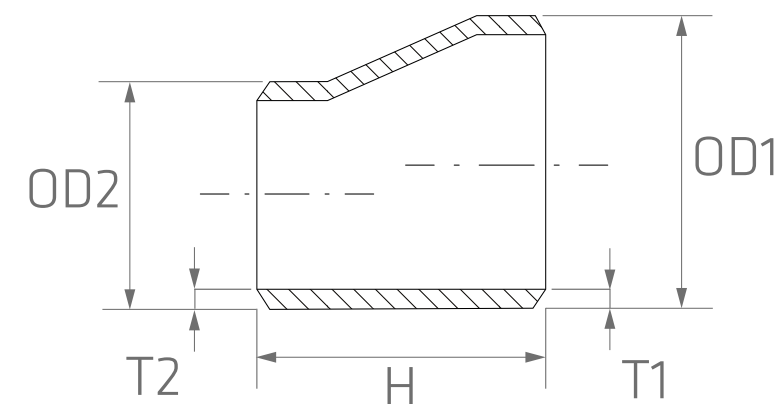
\* Finishes: page 718

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# REDUCER

ASTM-A 403

eccentric (7/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
73.03	33.40	3.05	2.77	2 1/2" x 1" SCH 10S	88.9	0.370				
73.03	33.40	5.16	3.38	2 1/2" x 1" SCH 40S	88.9	0.630				
73.03	33.40	7.01	4.55	2 1/2" x 1" SCH 80S	88.9	0.739				
73.03	42.16	3.05	2.77	2 1/2" x 1 1/4" SCH 10S	88.9	0.394				
73.03	42.16	5.16	3.56	2 1/2" x 1 1/4" SCH 40S	88.9	0.670				
73.03	42.16	7.01	4.85	2 1/2" x 1 1/4" SCH 80S	88.9	0.825				
73.03	48.30	3.05	2.77	2 1/2" x 1 1/2" SCH 10S	88.9	0.396		x		x
73.03	48.30	5.16	3.68	2 1/2" x 1 1/2" SCH 40S	88.9	0.661		x		x
73.03	48.30	7.01	5.08	2 1/2" x 1 1/2" SCH 80S	88.9	0.856		x		x
73.03	60.30	3.05	2.77	2 1/2" x 2" SCH 10S	88.9	0.432		x		x



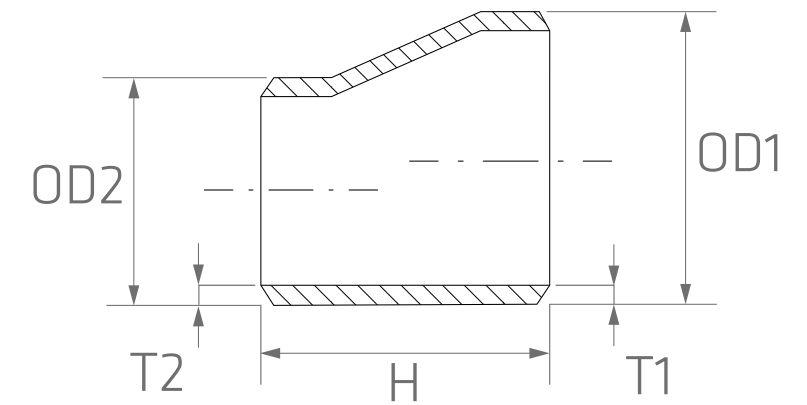
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (8/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
73.03	60.30	5.16	3.91	2 1/2" x 2" SCH 40S	88.9	0.724		x		x
73.03	60.30	7.01	5.54	2 1/2" x 2" SCH 80S	88.9	0.938		x		x
88.90	33.40	3.05	2.77	3" x 1" SCH 10S	88.9	0.408				
88.90	33.40	5.49	3.38	3" x 1" SCH 40S	88.9	0.716				
88.90	33.40	7.62	4.55	3" x 1" SCH 80S	88.9	0.888				
88.90	42.16	3.05	2.77	3" x 1 1/4" SCH 10S	88.9	0.430				
88.90	42.16	5.49	3.56	3" x 1 1/4" SCH 40S	88.9	0.775				
88.90	42.16	7.62	4.85	3" x 1 1/4" SCH 80S	88.9	1.037				
88.90	48.26	3.05	2.77	3" x 1 1/2" SCH 10S	88.9	0.444		x		x
88.90	48.26	5.49	3.68	3" x 1 1/2" SCH 40S	88.9	0.783		x		x



1) = 100% X-RAY

\* Finishes: page 718

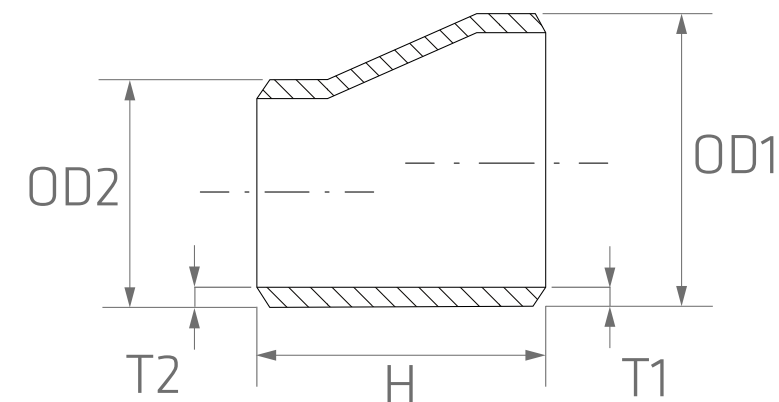


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# REDUCER

ASTM-A 403

eccentric (9/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	eccentric				
							304/304L		316/316L		
							kg/pce.	welded	seamless	welded	seamless
88.90	48.26	7.62	5.08	3" x 1 1/2" SCH 80S	88.9	1.105		x		x	
88.90	60.30	3.05	2.77	3" x 2" SCH 10S	88.9	0.478		x		x	
88.90	60.30	5.49	3.91	3" x 2" SCH 40S	88.9	0.846		x		x	
88.90	60.30	7.62	5.54	3" x 2" SCH 80S	88.9	1.178		x		x	
88.90	73.03	3.05	3.05	3" x 2 1/2" SCH 10S	88.9	0.548		x		x	
88.90	73.03	5.49	5.16	3" x 2 1/2" SCH 40S	88.9	0.983		x		x	
88.90	73.03	7.62	7.01	3" x 2 1/2" SCH 80S	88.9	1.291		x		x	
101.60	60.30	3.05	2.77	3 1/2" x 2" SCH 10S	101.6	0.620		x		x	
101.60	60.30	5.74	3.91	3 1/2" x 2" SCH 40S	101.6	1.100		x		x	
101.60	60.30	8.05	5.54	3 1/2" x 2" SCH 80S	101.6	1.510					



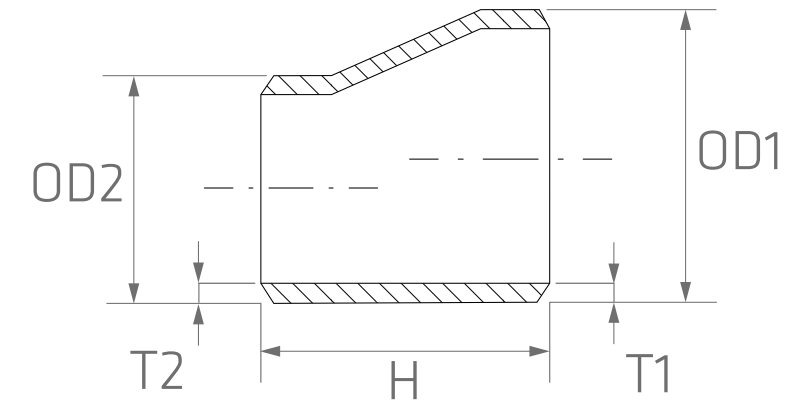
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (10/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
101.60	73.30	3.05	3.05	3 1/2" x 2 1/2" SCH 10S	101.6	0.660		x		x
101.60	73.30	5.74	5.16	3 1/2" x 2 1/2" SCH 40S	101.6	1.120		x		x
101.60	73.30	8.05	7.01	3 1/2" x 2 1/2" SCH 80S	101.6	1.630				
101.60	88.90	3.05	3.05	3 1/2" x 3" SCH 10S	101.6	0.774		x		x
101.60	88.90	5.74	5.49	3 1/2" x 3" SCH 40S	101.6	1.340		x		x
101.60	88.90	8.05	7.62	3 1/2" x 3" SCH 80S	101.6	1.780				
114.30	48.26	3.05	2.77	4" x 1 1/2" SCH 10S	101.6	0.630		x		x
114.30	48.26	6.02	3.68	4" x 1 1/2" SCH 40S	101.6	1.241		x		x
114.30	48.26	8.56	5.08	4" x 1 1/2" SCH 80S	101.6	1.730		x		x
114.30	60.30	3.05	2.77	4" x 2" SCH 10S	101.6	0.656		x		x



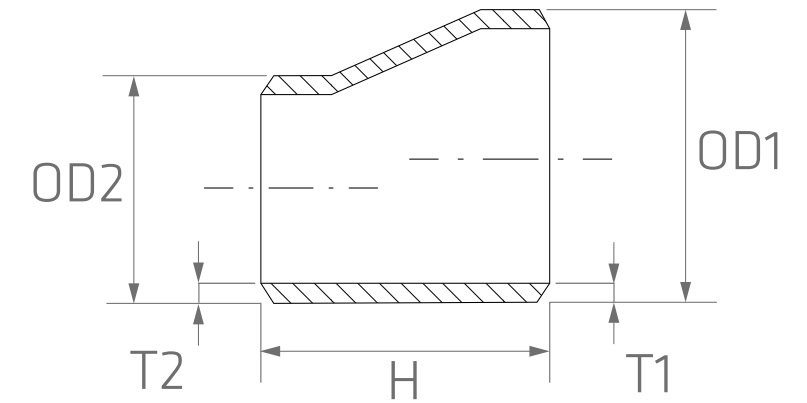
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (11/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
114.30	60.30	6.02	3.91	4" x 2" SCH 40S	101.6	1.270		x		x
114.30	60.30	8.56	5.54	4" x 2" SCH 80S	101.6	1.780		x		x
114.30	73.03	3.05	3.05	4" x 2 1/2" SCH 10S	101.6	0.706		x		x
114.30	73.03	6.02	5.16	4" x 2 1/2" SCH 40S	101.6	1.370		x		x
114.30	73.03	8.56	7.01	4" x 2 1/2" SCH 80S	101.6	2.007		x		x
114.30	88.90	3.05	3.05	4" x 3" SCH 10S	101.6	0.748		x		x
114.30	88.90	6.02	5.49	4" x 3" SCH 40S	101.6	1.450		x		x
114.30	88.90	8.56	7.62	4" x 3" SCH 80S	101.6	2.129		x		x
114.30	101.60	3.05	3.05	4" x 3 1/2" SCH 10S	101.6	1.570		x		x
114.30	101.60	6.02	5.74	4" x 3 1/2" SCH 40S	101.6	1.595		x		x



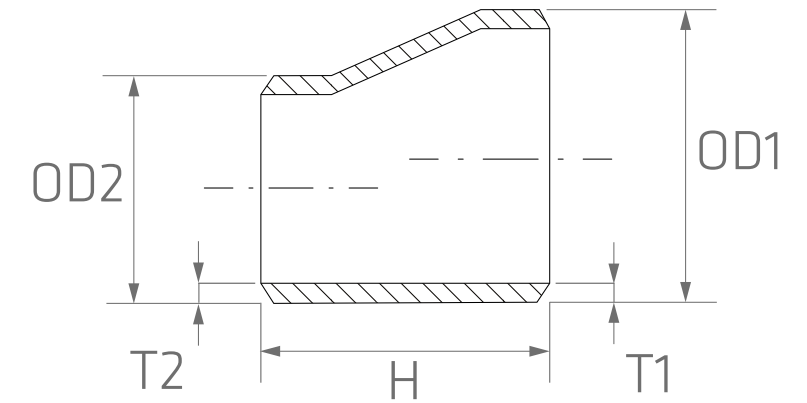
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (12/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	eccentric				
							304/304L		316/316L		
							kg/pce.	welded	seamless	welded	seamless
114.30	101.60	8.56	8.05	4" x 3 1/2" SCH 80S	101.6	2.230			x		x
141.30	60.30	3.40	2.77	5" x 2" SCH 10S	127.0	1.270					
141.30	60.30	6.55	3.91	5" x 2" SCH 40S	127.0	2.440					
141.30	73.30	3.40	3.05	5" x 2 1/2" SCH 10S	127.0	1.490					
141.30	73.30	6.55	5.16	5" x 2 1/2" SCH 40S	127.0	2.190					
141.30	88.90	3.40	3.05	5" x 3" SCH 10S	127.0	1.200			x		x
141.30	88.90	6.55	5.49	5" x 3" SCH 40S	127.0	2.270			x		x
141.30	88.90	9.53	7.62	5" x 3" SCH 80S	127.0	3.547					
141.30	101.60	3.40	3.05	5" x 3 1/2" SCH 10S	127.0	1.600					
141.30	101.60	6.55	5.74	5" x 3 1/2" SCH 40S	127.0	2.260					



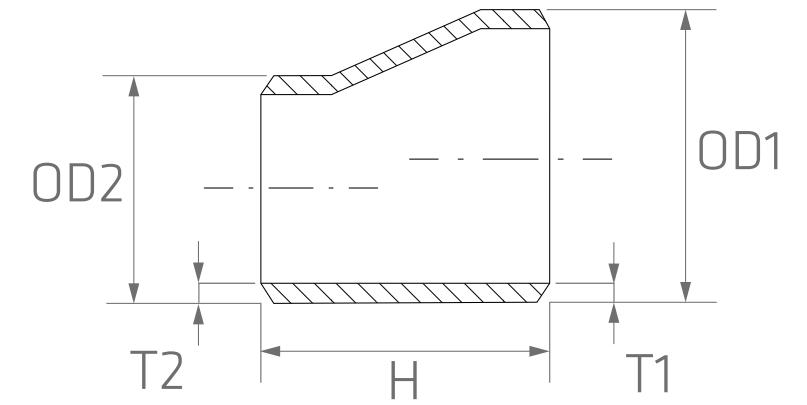
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (13/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	eccentric				
							304/304L		316/316L		
							kg/pce.	welded	seamless	welded	seamless
141.30	101.60	9.53	8.05	5" x 3 1/2" SCH 80S	127.0	3.770					
141.30	114.30	3.40	3.05	5" x 4" SCH 10S	127.0	1.320			x		x
141.30	114.30	6.55	6.02	5" x 4" SCH 40S	127.0	2.500			x		x
141.30	114.30	9.53	8.56	5" x 4" SCH 80S	127.0	3.769					
168.28	60.30	3.40	2.77	6" x 2" SCH 10S	139.7	1.740					
168.28	60.30	7.11	3.91	6" x 2" SCH 40S	139.7	3.010					
168.28	73.30	3.40	3.05	6" x 2 1/2" SCH 10S	139.7	1.350					
168.28	73.30	7.11	5.16	6" x 2 1/2" SCH 40S	139.7	2.740					
168.28	88.90	3.40	3.05	6" x 3" SCH 10S	139.7	1.500			x		x
168.28	88.90	8.18	5.49	6" x 3" SCH 40S	139.7	3.040			x		x



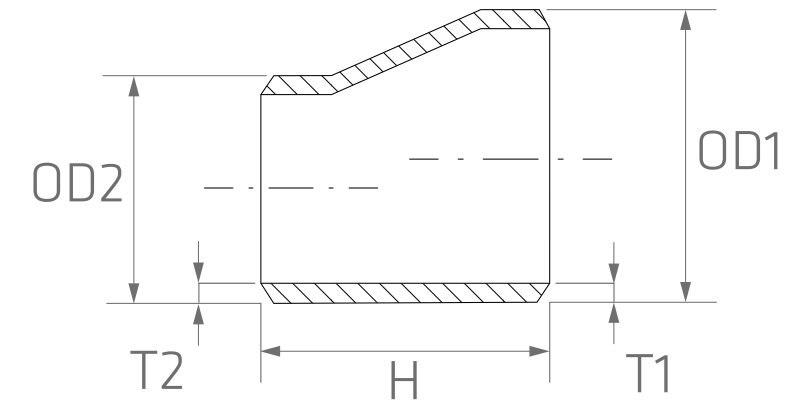
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (14/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	eccentric				
							304/304L		316/316L		
							kg/pce.	welded	seamless	welded	seamless
168.28	88.90	10.97	7.62	6" x 3" SCH 80S	139.7	5.030					
168.28	101.60	3.40	3.05	6" x 3 1/2" SCH 10S	139.7	1.485					
168.28	101.60	7.11	5.74	6" x 3 1/2" SCH 40S	139.7	3.990					
168.28	101.60	10.97	8.05	6" x 3 1/2" SCH 80S	139.7	5.530					
168.28	114.30	3.40	3.05	6" x 4" SCH 10S	139.7	1.620		x			x
168.28	114.30	7.11	6.02	6" x 4" SCH 40S	139.7	3.300		x			x
168.28	114.30	10.97	8.56	6" x 4" SCH 80S	139.7	5.440					
168.28	141.30	3.40	3.40	6" x 5" SCH 10S	139.7	1.750		x			x
168.28	141.30	7.11	6.55	6" x 5" SCH 40S	139.7	3.570		x			x
168.28	141.30	10.97	9.53	6" x 5" SCH 80S	139.7	5.710					



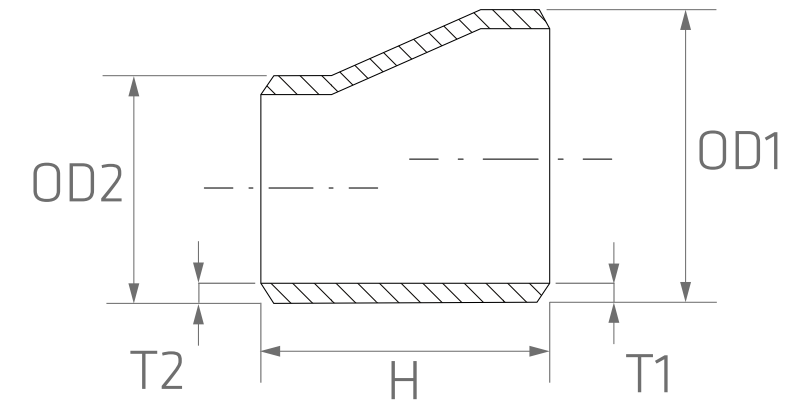
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (15/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
219.08	114.30	3.76	3.05	8" x 4" SCH 10S	152.4	2.560	x	x	x	x
219.08	114.30	8.18	6.02	8" x 4" SCH 40S	152.4	5.100	x	x	x	x
219.08	114.30	12.70	8.56	8" x 4" SCH 80S	152.4	8.430				
219.08	141.30	3.76	3.40	8" x 5" SCH 10S	152.4	2.700				
219.08	141.30	8.18	6.55	8" x 5" SCH 40S	152.4	5.400				
219.08	141.30	12.70	9.53	8" x 5" SCH 80S	152.4	8.830				
219.08	168.28	3.76	3.40	8" x 6" SCH 10S	152.4	2.850	x	x	x	x
219.08	168.28	8.18	7.11	8" x 6" SCH 40S	152.4	5.710	x	x	x	x
219.08	168.28	12.70	10.97	8" x 6" SCH 80S	152.4	9.240				
273.05	168.28	4.19	3.40	10" x 6" SCH 10S	177.8	3.870			x	x



1) = 100% X-RAY

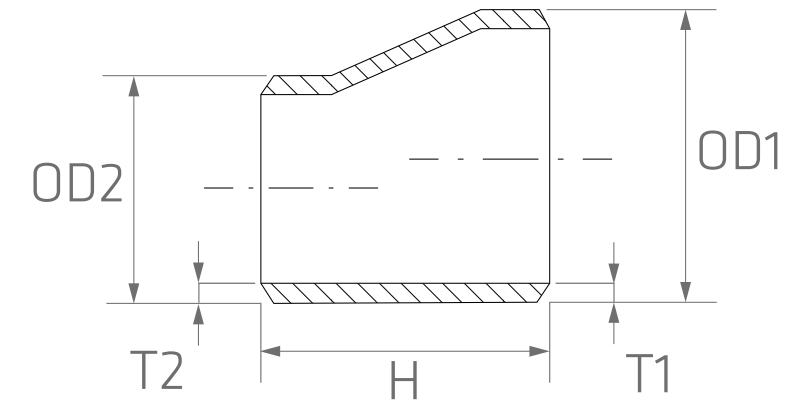
\* Finishes: page 718



# REDUCER

ASTM-A 403

eccentric (16/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
273.05	168.28	9.27	7.11	10" x 6" SCH 40S	177.8	8.780	x		x	x
273.05	168.28	12.70	10.97	10" x 6" SCH 80S	177.8	13.500				
273.05	219.08	4.19	3.76	10" x 8" SCH 10S	177.8	4.210	x		x	x
273.05	219.08	9.27	8.18	10" x 8" SCH 40S	177.8	9.580	x		x	x
273.05	219.08	12.70	12.70	10" x 8" SCH 80S	177.8	14.220				
323.85	168.30	4.57	3.40	12" x 6" SCH 10S	203.2	5.730	x	x	x	x
323.85	168.30	10.31	7.11	12" x 6" SCH 40S	203.2	12.400	x	x	x	x
323.85	168.28	4.57	3.40	12" x 8" SCH 10S	203.2	6.110	x		x	x
323.85	168.28	9.53	7.11	12" x 8" SCH 40S	203.2	13.700	x		x	x
323.85	219.10	17.48	12.70	12" x 8" SCH 80S	203.2	19.070				



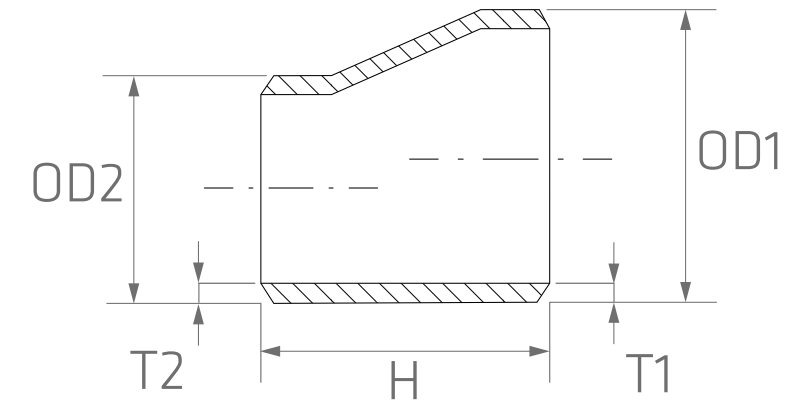
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (17/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS kg/pce.	eccentric			
							304/304L		316/316L	
							welded	seamless	welded	seamless
323.85	273.05	4.57	4.19	12" x 10" SCH 10S	203.2	6.550	x		x	x
323.85	273.05	9.53	9.27	12" x 10" SCH 40S	203.2	14.700	x		x	x
323.85	273.05	17.48	12.70	12" x 10" SCH 80S	203.2	19.480				
355.60	273.05	4.78	4.19	14" x 10" SCH 10S	330.2	13.210				
355.60	273.05	9.53	9.27	14" x 10" SCH 40S	330.2	26.410				
355.60	323.85	4.78	4.57	14" x 12" SCH 10S	330.2	14.270				
355.60	323.85	9.53	9.53	14" x 12" SCH 40S	330.2	28.550				
406.40	273.05	6.35	4.19	16" x 10" SCH 10S	355.6	15.370				x 1)
406.40	273.05	12.70	9.27	16" x 10" SCH 40S	355.6	30.750				x 1)
406.40	323.85	4.78	4.57	16" x 12" SCH 10S	355.6	16.520				x 1)



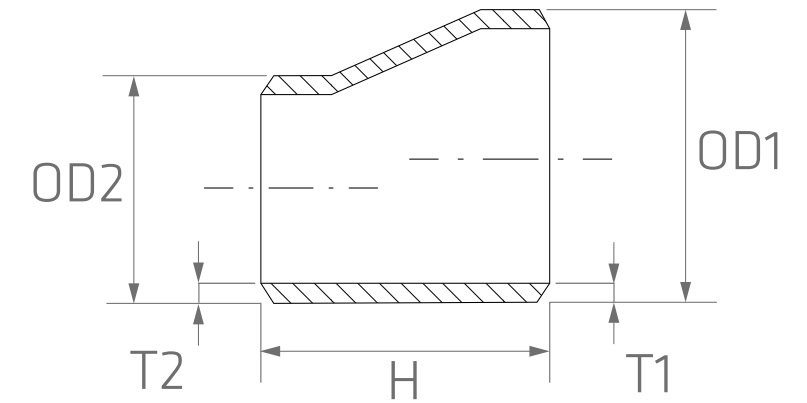
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

ASTM-A 403

eccentric (18/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	eccentric			
							304/304L		316/316L	
							kg/pce.	welded	seamless	welded
406.40	323.85	9.53	9.53	16" x 12" SCH 40S	355.6	33.050			x 1)	
406.40	355.60	4.78	4.78	16" x 14" SCH 10S	355.6	17.240			x 1)	
406.40	355.60	9.53	9.53	16" x 14" SCH 40S	355.6	34.480			x 1)	
457.20	355.60	4.78	4.78	18" x 14" SCH 10S	381.0	20.700				
457.20	355.60	9.53	9.53	18" x 14" SCH 40S	381.0	66.230				
457.20	406.40	4.78	4.78	18" x 16" SCH 10S	381.0	21.990				
457.20	406.40	9.53	9.53	18" x 16" SCH 40S	381.0	70.370				
508.00	406.40	5.56	4.78	20" x 16" SCH 10S	508.0	37.260				
508.00	406.40	9.53	9.53	20" x 16" SCH 40S	508.0	99.350				
508.00	457.20	5.56	4.78	20" x 18" SCH 10S	508.0	39.330				



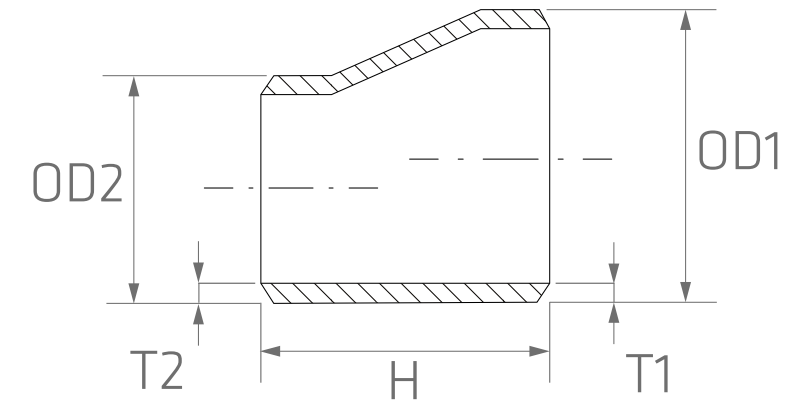
1) = 100% X-RAY

\* Finishes: page 718

# REDUCER

■ ASTM-A 403

eccentric (19/19)



D	D1	T	T1	INCH-GAS-SCH	H	Grade AISI/UNS	eccentric			
							304/304L		316/316L	
						kg/pce.	welded	seamless	welded	seamless
508.00	457.20	9.53	9.53	20" x 18" SCH 40S	508.0	104.870			x 1)	
609.60	508.00	6.35	5.56	24" x 20" SCH 10S	508.0	45.540			x 1)	
609.60	508.00	9.53	9.53	24" x 20" SCH 40S	508.0	151.790			x 1)	

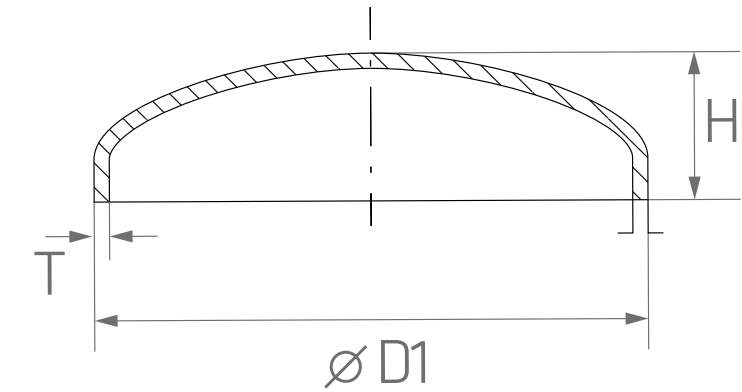


1) = 100% X-RAY

\* Finishes: page 718

# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (1/8)

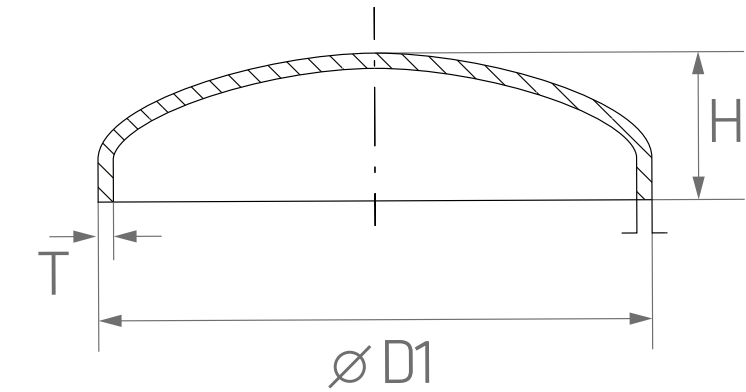


D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
17.2	2.0	11.5	ISO	0.009	x	x
20.0	2.0	12.0	Metric	0.011	x	x
21.3	2.0	9.0	ISO	0.015	x	x
25.0	2.0	12.0	Metric	0.016	x	x
26.9	2.0	10.5	ISO	0.015	x	x
28.0	2.0	12.0	Metric	0.022	x	x
30.0	2.0	12.0	Metric	0.024	x	x
33.7	2.0	12.5	ISO	0.023	x	x
33.7	3.0	14.5	ISO	0.035	x	x
38.0	2.0	15.0	Metric	0.034	x	x



# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (2/8)



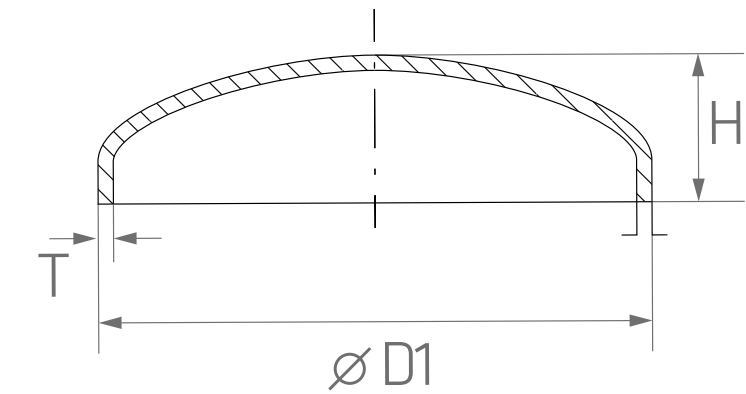
D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
40.0	2.0	14.0	Metric	0.033	x	x
42.4	2.0	17.0	ISO	0.042	x	x
42.4	3.0	18.0	ISO	0.063		x
44.5	2.0	16.0	Metric	0.042	x	x
48.3	2.0	17.0	ISO	0.050	x	x
48.3	3.0	23.0	ISO	0.087	x	x
50.8	2.0	19.0	ISO	0.055	x	x
54.0	2.0	19.0	Metric	0.058	x	x
60.3	2.0	20.0	ISO	0.076	x	x
60.3	3.0	22.0	ISO	0.115	x	x





# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (3/8)



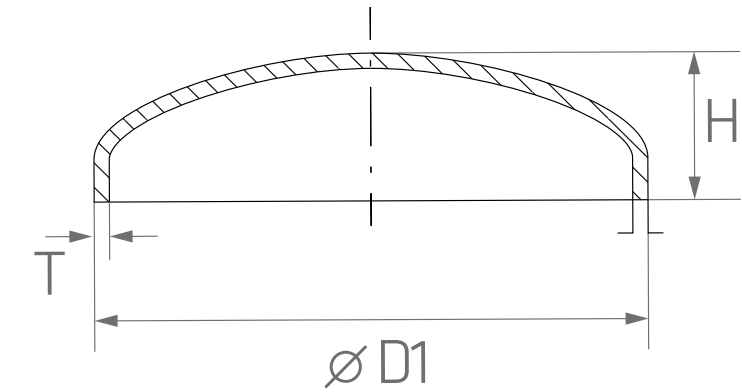
D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
63.5	2.0	19.0	Metric	0.076	x	x
70.0	2.0	21.0	Metric	0.097	x	x
76.1	2.0	27.0	ISO	0.131	x	x
76.1	3.0	29.0	ISO	0.196	x	x
84.0	2.0	23.0	Metric	0.131	x	x
88.9	2.0	29.0	ISO	0.166	x	x
88.9	3.0	30.0	ISO	0.249	x	x
101.6	2.0	26.0	ISO	0.187	x	x
101.6	3.0	27.0	ISO	0.280	x	x
104.0	2.0	24.0	Metric	0.187	x	x





# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (4/8)

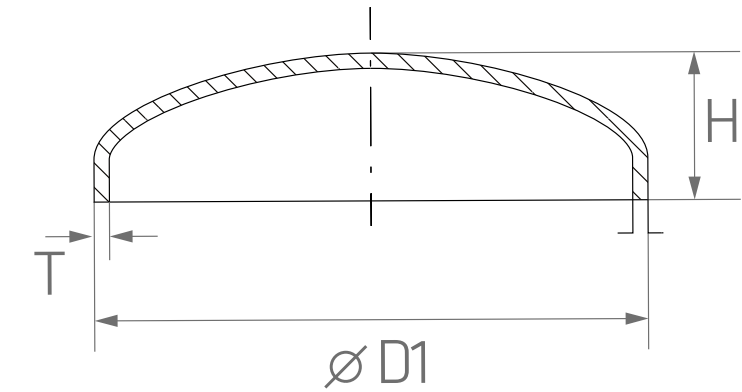


D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
108.0	2.0	32.0	Metric	0.246	x	x
108.0	3.0	34.0	Metric	0.370	x	x
114.3	2.0	32.0	ISO	0.246	x	x
114.3	3.0	32.0	ISO	0.369	x	x
114.3	4.0	32.0	ISO	0.492	x	x
129.0	2.0	34.0	Metric	0.314	x	x
131.0	3.0	35.0	Metric	0.470		x
133.0	2.0	34.0	Metric	0.314		x
133.0	3.0	34.0	Metric	0.470	x	x
139.7	2.0	35.0	ISO	0.372	x	x



# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (5/8)

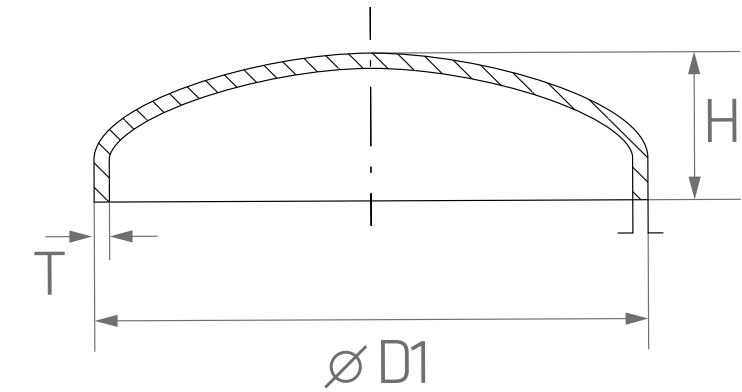


D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
139.7	3.0	36.0	ISO	0.532	x	x
139.7	4.0	36.0	ISO	0.709	x	x
154.0	2.0	41.0	Metric	0.444	x	x
156.0	3.0	42.0	Metric	0.670	x	x
159.0	2.0	42.0	Metric	0.444	x	x
159.0	3.0	42.0	Metric	0.670	x	x
159.0	4.0	42.0	Metric	0.785	x	
168.3	2.0	40.0	ISO	0.518	x	x
168.3	3.0	43.0	ISO	0.776	x	x
168.3	4.0	43.0	ISO	1.150	x	x



# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (6/8)

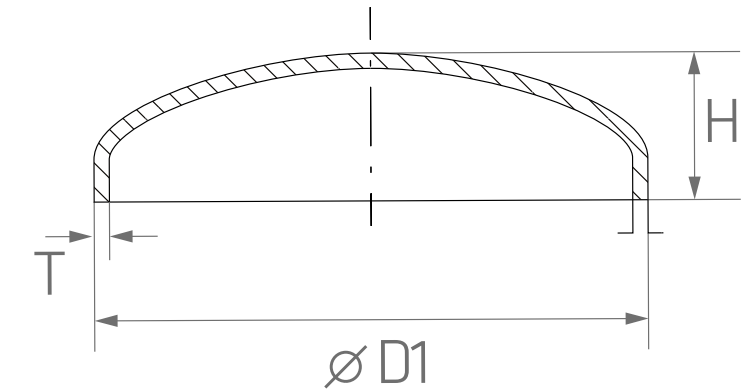


D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
204.0	2.0	50.0	Metric	0.754	x	x
206.0	3.0	50.0	Metric	1.130	x	x
219.1	2.0	50.0	ISO	0.849	x	x
219.1	3.0	51.0	ISO	1.274	x	x
219.1	4.0	51.0	ISO	1.872	x	x
254.0	2.0	55.0	Metric	1.078	x	x
256.0	3.0	55.0	Metric	1.620	x	
273.0	2.0	63.0	ISO	1.310	x	x
273.0	3.0	62.0	ISO	1.966	x	x
273.0	4.0	62.0	ISO	2.621	x	x



# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (7/8)

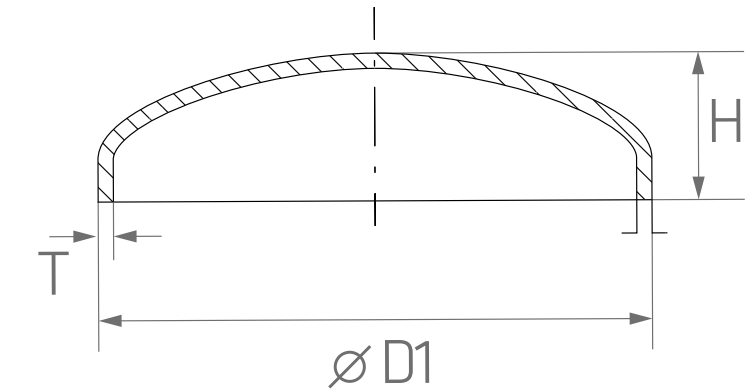


D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
304.0	2.0	68.0	Metric	1.646	x	x
306.0	3.0	70.0	Metric	2.470	x	x
323.9	2.0	72.0	ISO	1.814	x	x
323.9	3.0	72.0	ISO	2.720	x	x
323.9	4.0	72.0	ISO	3.627	x	x
355.6	3.0	89.0	ISO	3.516	x	x
355.6	4.0	89.0	ISO	5.315	x	
406.4	3.0	98.0	ISO	4.523	x	x
406.4	4.0	98.0	ISO	6.534	x	x
457.2	2.9	107.0	ISO	5.494	x	x



# PIPE CAP EN ISO OR METRIC

1.4307-1.4404 (8/8)



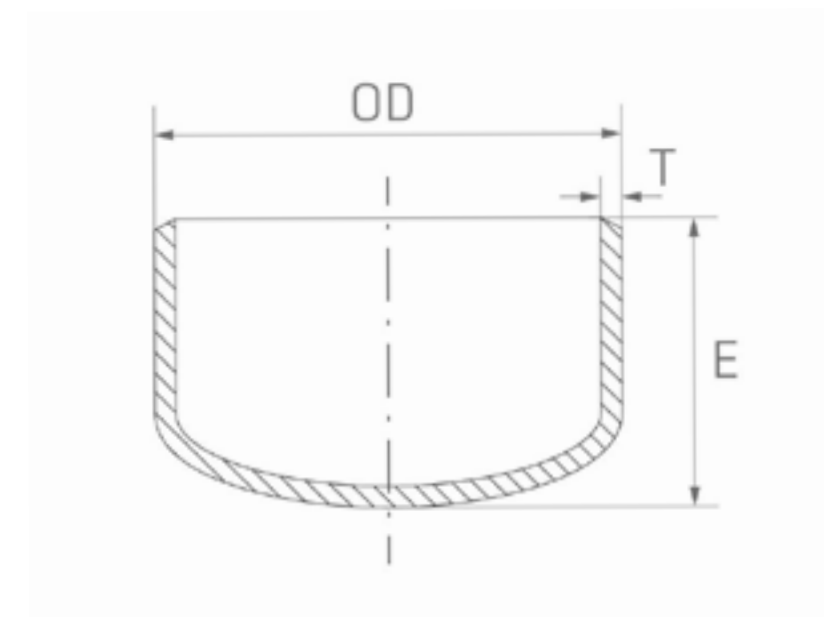
D1	T	H	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
457.2	4.0	107.0	ISO	7.878	x	
508.0	2.9	120.0	ISO	6.558	x	x
508.0	4.0	120.0	ISO	10.289	x	x
609.6	3.0	140.0	ISO	9.232	x	x
609.6	4.0	140.0	ISO	14.130	x	x
711.2	4.0	152.0	ISO	12.800	x	
812.8	4.0	160.0	ISO	17.360	x	



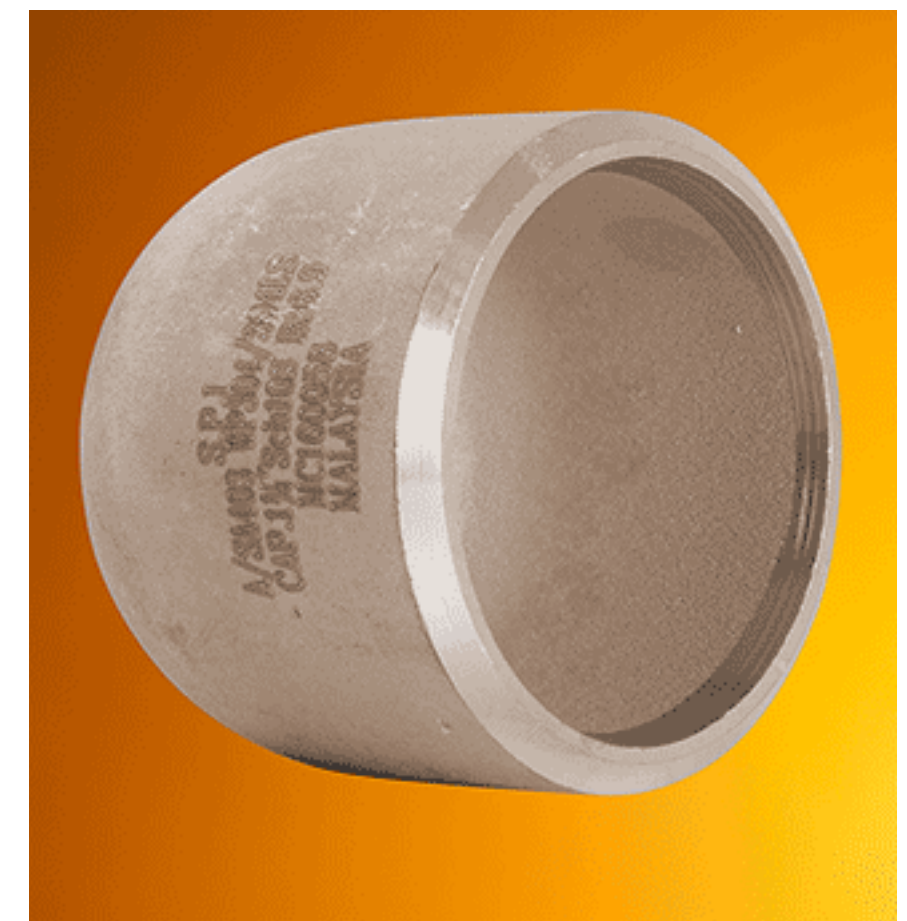


# PIPE CAP ASTM-A 403

304/304L - 316/316L (1/6)

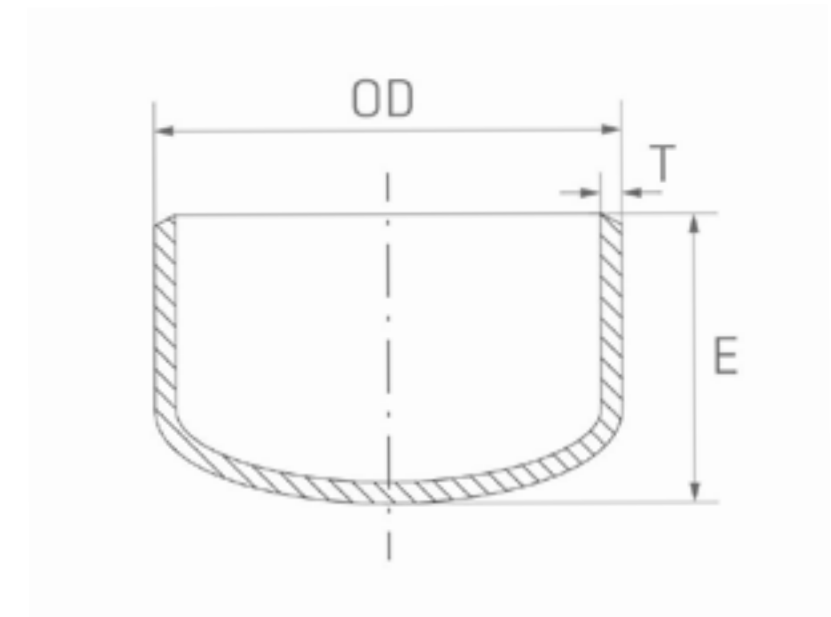


OD	T	ICH-GAS-SCH	E	Grade AISI/UNS kg/pce.	304/304L *)	316/316L *)
21.34	2.11	1/2" SCH 10S	25.4	0.050	x	x
21.34	2.77	1/2" SCH 40S	25.4	0.070	x	x
21.34	3.73	1/2" SCH 80S	25.4	0.080	x	x
26.67	2.11	3/4" SCH 10S	25.4	0.060	x	x
26.67	2.87	3/4" SCH 40S	25.4	0.080	x	x
26.67	3.91	3/4" SCH 80S	25.4	0.090	x	x
33.40	2.77	1" SCH 10S	38.1	0.075	x	x
33.40	3.38	1" SCH 40S	38.1	0.090	x	x
33.40	4.55	1" SCH 80S	38.1	0.110	x	x
42.16	2.77	1 1/4" SCH 10S	38.1	0.100	x	x

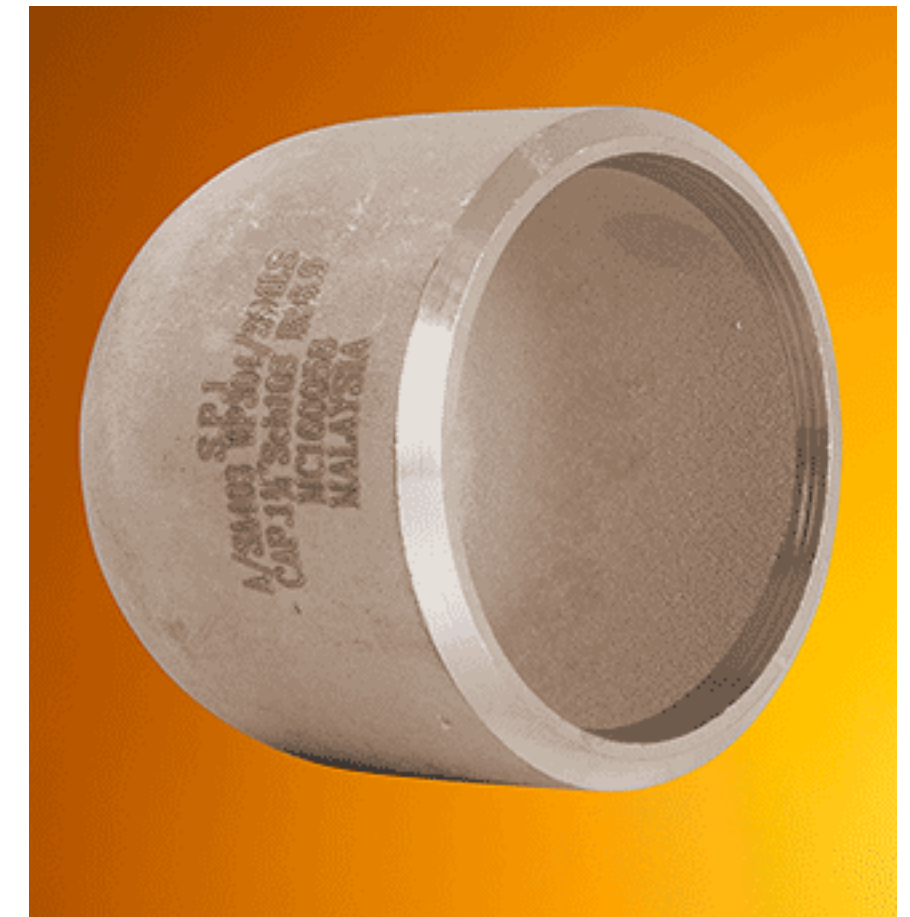


# PIPE CAP ASTM-A 403

304/304L - 316/316L (2/6)



OD	T	ICH-GAS-SCH	E	Grade AISI/UNS kg/pce.	304/304L *)	316/316L *)
42.16	3.56	1 1/4" SCH 40S	38.1	0.130	x	x
42.16	4.85	1 1/4" SCH 80S	38.1	0.160	x	x
48.26	2.77	1 1/2" SCH 10S	38.1	0.130	x	x
48.26	3.68	1 1/2" SCH 40S	38.1	0.170	x	x
48.26	5.18	1 1/2" SCH 80S	38.1	0.220	x	x
60.33	2.77	2" SCH 10S	38.1	0.190	x	x
60.33	3.91	2" SCH 40S	38.1	0.260	x	x
60.33	5.54	2" SCH 80S	38.1	0.350	x	x
73.03	3.05	2 1/2" SCH 10S	38.1	0.240	x	x
73.03	5.16	2 1/2" SCH 40S	38.1	0.410	x	x



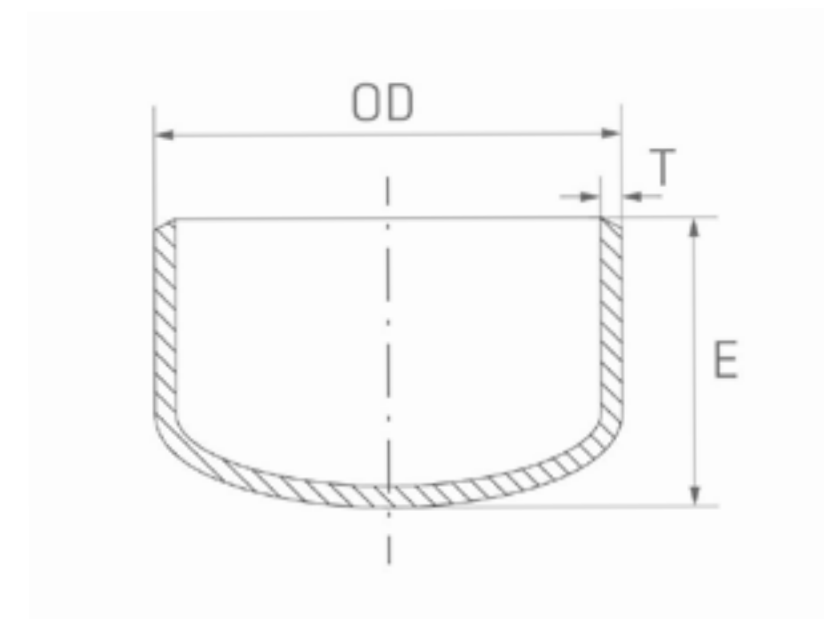
1) = 100% X-RAY

\* Finishes: page 718

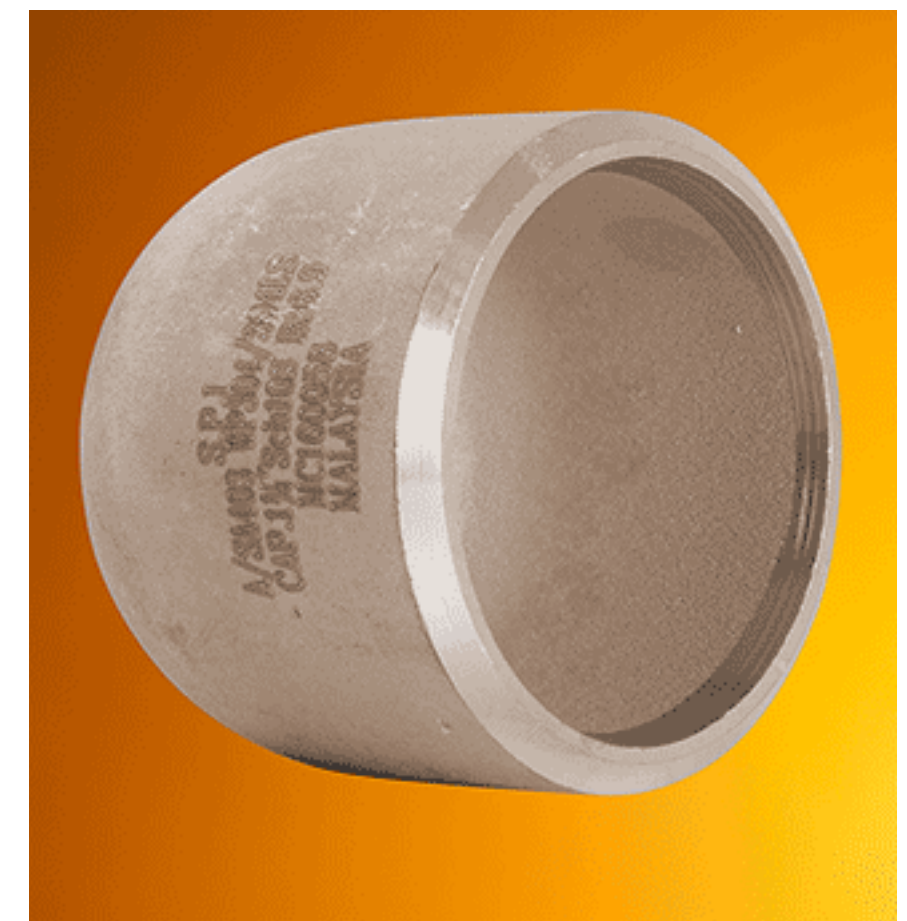


# PIPE CAP ASTM-A 403

304/304L - 316/316L (3/6)



OD	T	ICH-GAS-SCH	E	Grade AISI/UNS kg/pce.	304/304L *)	316/316L *)
73.03	7.01	2 1/2" SCH 80S	38.1	0.510	x	x
88.90	3.05	3" SCH 10S	50.8	0.370	x	x
88.90	5.49	3" SCH 40S	50.8	68.000	x	x
88.90	7.56	3" SCH 80S	50.8	0.920	x	x
101.60	3.05	3 1/2" SCH 10S	63.5	0.450	x	x
101.60	5.74	3 1/2" SCH 40S	63.5	0.960	x	x
101.60	8.08	3 1/2" SCH 80S	63.5	1.300	x	x
114.30	3.05	4" SCH 10S	63.5	0.570	x	x
114.30	6.02	4" SCH 40S	63.5	1.130	x	x
114.30	8.56	4" SCH 80S	63.5	1.510	x	x

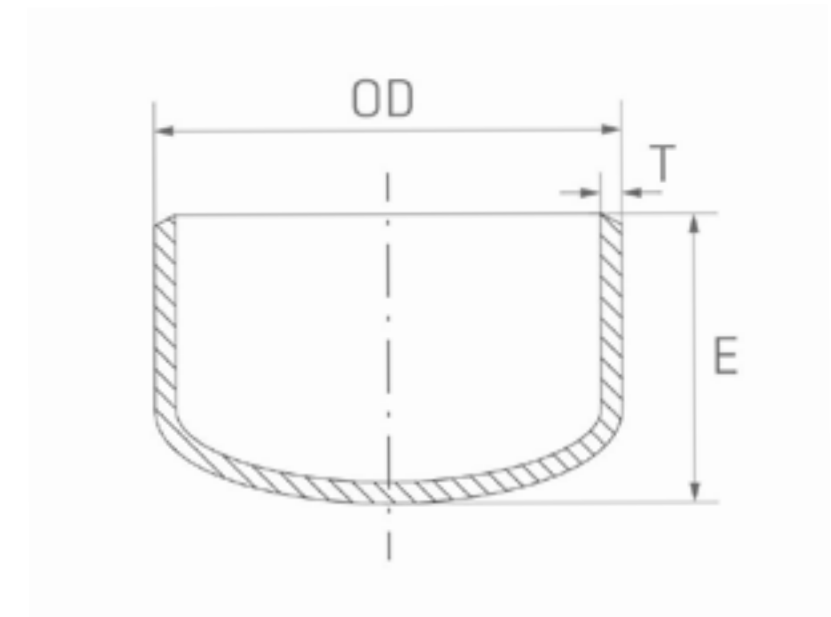


1) = 100% X-RAY

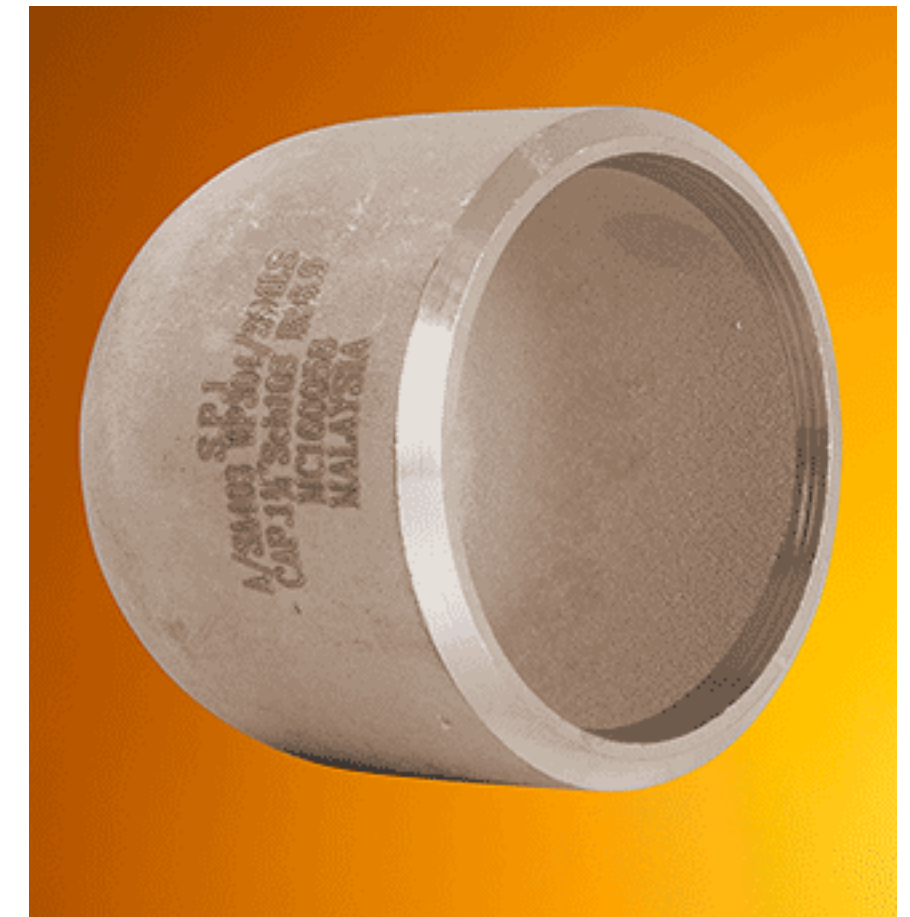
\* Finishes: page 718

# PIPE CAP ASTM-A 403

304/304L - 316/316L (4/6)



OD	T	ICH-GAS-SCH	E	Grade AISI/UNS kg/pce.	304/304L *)	316/316L *)
141.30	3.40	5" SCH 10S	76.2	1.100	x	x
141.30	6.55	5" SCH 40S	76.2	2.120	x	x
168.28	3.40	6" SCH 10S	88.9	1.410	x	x
168.28	7.11	6" SCH 40S	88.9	2.950	x	x
168.28	10.97	6" SCH 80S	88.9	4.240	x	x
219.08	3.76	8" SCH 10S	101.6	2.470	x	x
219.08	8.18	8" SCH 40S	101.6	5.400	x	x
219.08	12.70	8" SCH 80S	101.6	7.800	x	x
273.05	4.19	10" SCH 10S	127.0	4.510	x	x
273.05	9.27	10" SCH 40S	127.0	10.000	x	x

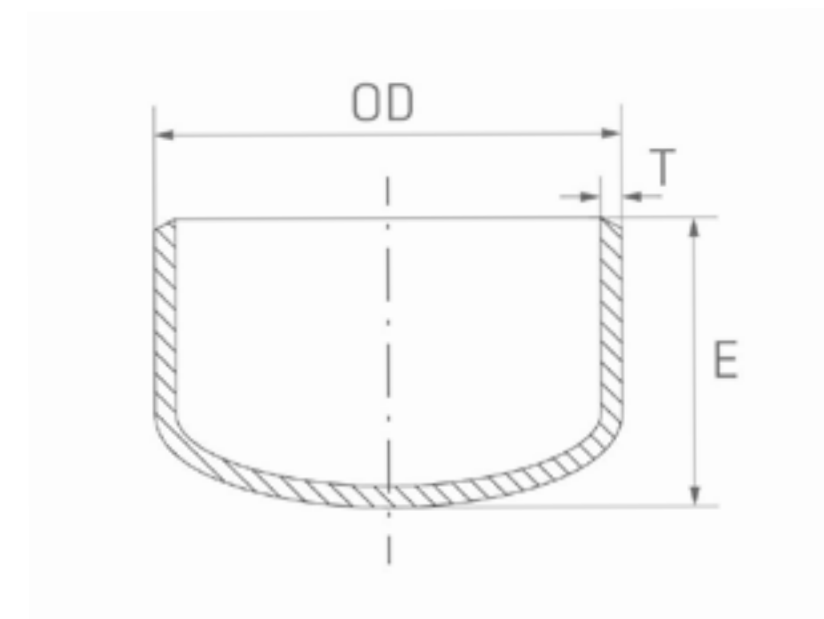


1) = 100% X-RAY

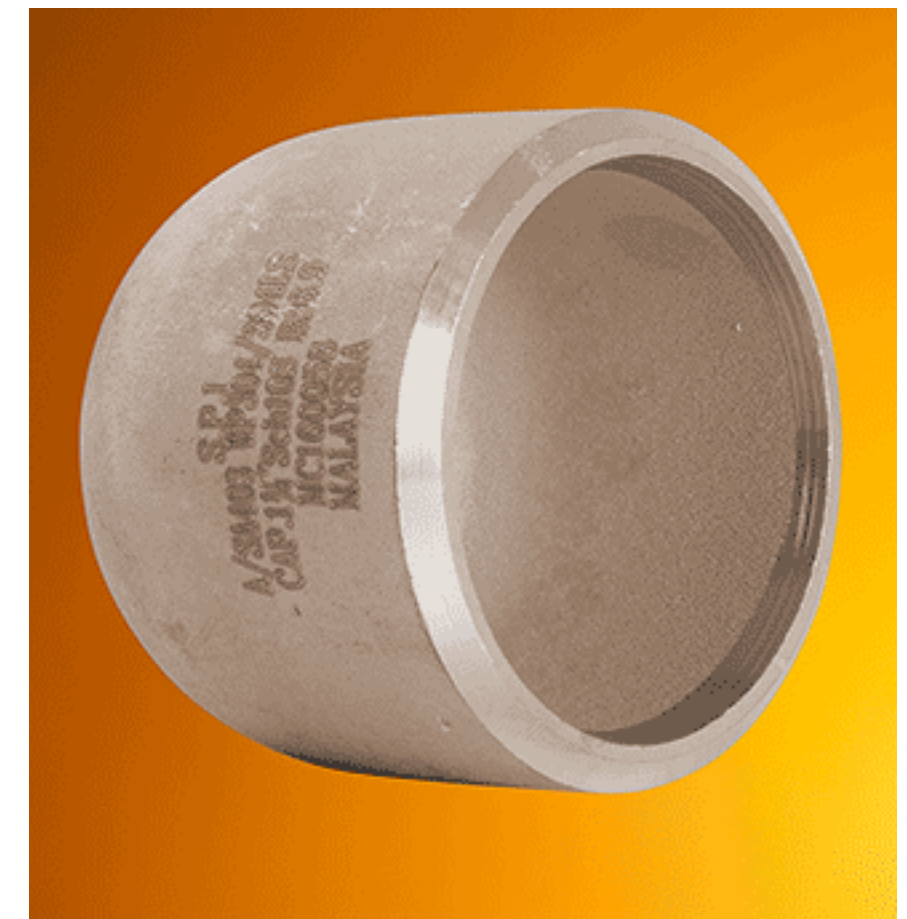
\* Finishes: page 718

# PIPE CAP ASTM-A 403

304/304L - 316/316L (5/6)



OD	T	ICH-GAS-SCH	E	Grade AISI/UNS kg/pce.	304/304L *)	316/316L *)
273.05	12.70	10" SCH 80S	127.0	13.100	x	x
323.85	4.57	12" SCH 10S	152.4	6.670	x	x
323.85	9.53	12" SCH 40S	152.4	13.900	x	x
323.85	12.70	12" SCH 80S	152.4	17.300	x	x
355.60	4.78	14" SCH 10S	165.1	4.780	x	x
355.60	9.53	14" SCH 40S	165.1	9.530	x	x
406.40	4.19	16" SCH 10S	177.8	14.510	x	x
406.40	9.53	16" SCH 40S	177.8	20.000	x	x
457.20	4.78	18" SCH 10S	203.2	17.960	x	x
457.20	9.53	18" SCH 40S	203.2	31.450	x	x

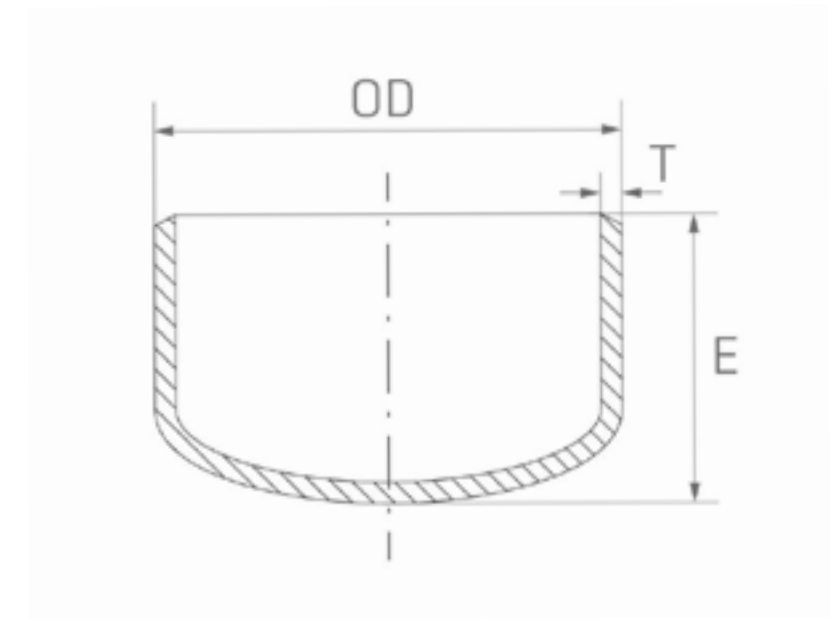


1) = 100% X-RAY

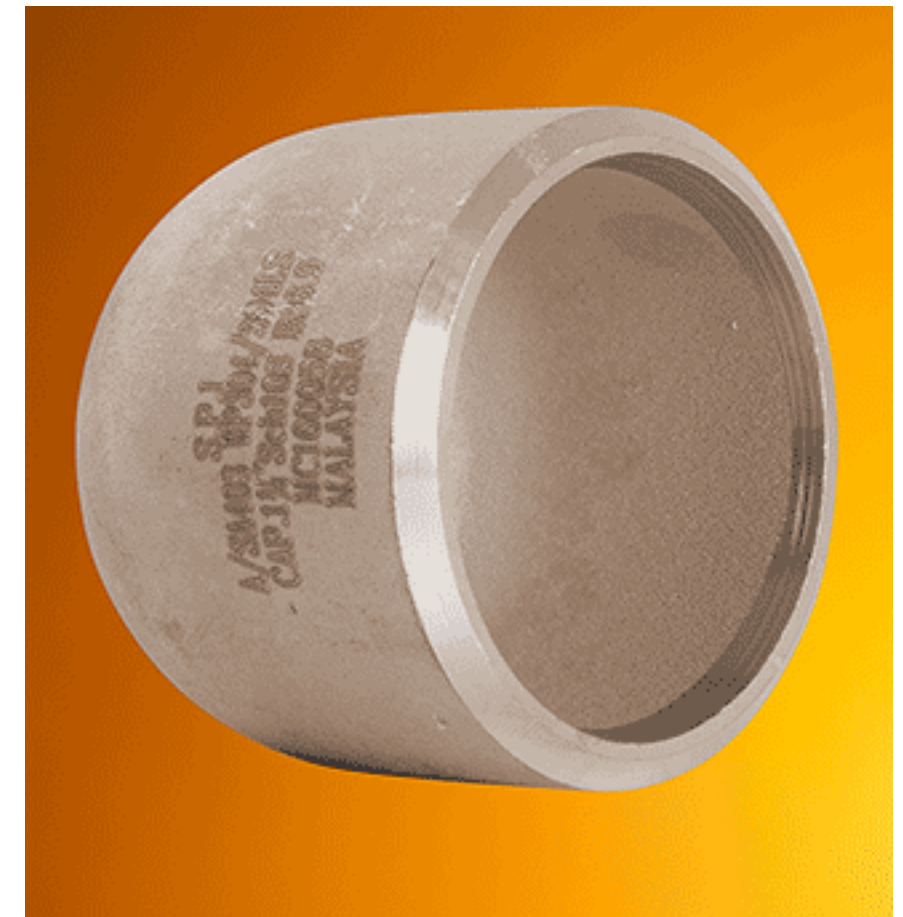
\* Finishes: page 718

# PIPE CAP ASTM-A 403

304/304L - 316/316L (6/6)



OD	T	ICH-GAS-SCH	E	Grade AISI/UNS kg/pce.	304/304L *)	316/316L *)
508.00	4.78	20" SCH 10S	228.6	27.220	x	x
508.00	9.53	20" SCH 40S	228.6	20.640	x	x
609.60	4.78	24" SCH 10S	266.7	34.470	x	x
609.60	9.53	24" SCH 40S	266.7	55.000	x	x



1) = 100% X-RAY

\* Finishes: page 718



&gt;

# PIPE CAP SIMILAR TO DIN 28011

1.4571 (1/2)

D	S	H	h1	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
21.3	2.0	15	10	0.02	x
26.9	2.0	17	11	0.02	x
33.7	2.0	18	10	0.04	x
42.4	2.0	20	11	0.05	x
48.3	2.0	20	10	0.06	x
60.3	2.0	25	12	0.09	x
76.1	2.5	27	11	0.17	x
88.9	3.0	39	20	0.31	x
114.3	3.0	44	20	0.48	x
139.7	3.0	49	20	0.67	x



1) = 100% X-RAY

\* Finishes: page 718



# PIPE CAP SIMILAR TO DIN 28011

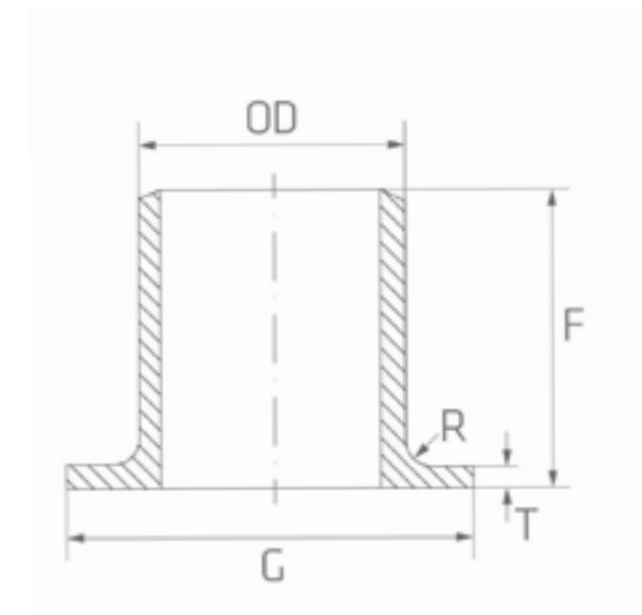
1.4571 (2/2)

D	S	H	h1	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
168.3	3.0	54	20	0.90	x
219.1	3.0	64	20	1.48	x
273.0	3.0	74	20	2.24	x
323.9	3.0	84	20	3.09	x
406.4	4.0	86	41	6.50	x
508.0	4.0	157	51	9.80	x

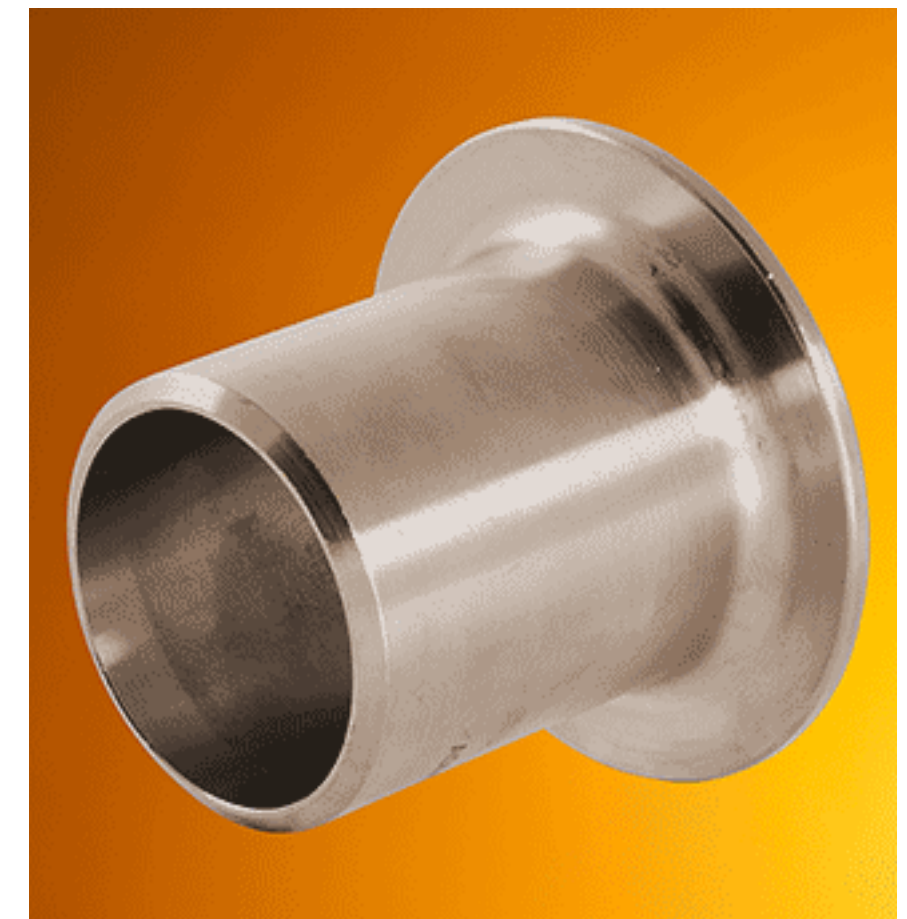


# STUB-END ASTM-A 403 SEAMLESS MSS SP 43 TYPE A

304/304L - 316/316L (1/5)



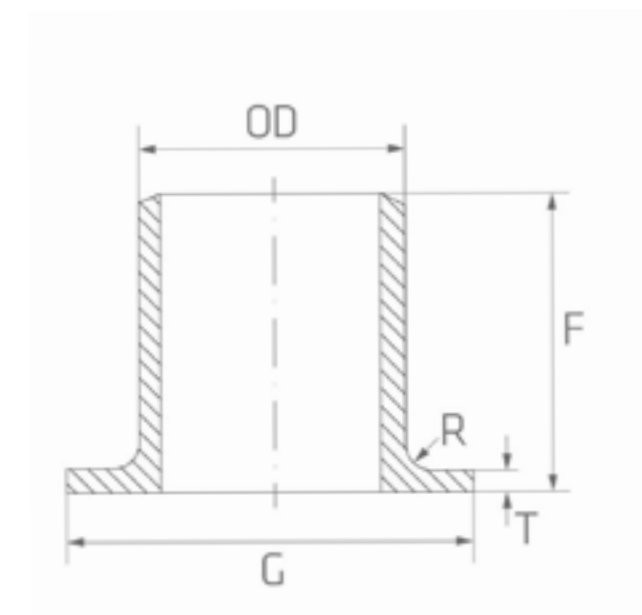
OD	T	ICH-SCH	F	G	R	Grade AISI/UNS kg/pce.	304/304L	316/316L
21.34	2.11	1/2" SCH 10S	50.8	34.93	3.30	0.078	x	x
21.34	2.77	1/2" SCH 40S	50.8	34.93	3.30	0.118	x	x
21.34	3.73	1/2" SCH 80S	50.8	34.93	3.30	0.127	x	x
26.67	2.11	3/4" SCH 10S	50.8	42.88	3.30	0.086	x	x
26.67	2.87	3/4" SCH 40S	50.8	42.88	3.30	0.154	x	x
26.67	3.91	3/4" SCH 80S	50.8	42.88	3.30	0.168	x	x
33.40	2.77	1" SCH 10S	50.8	50.80	3.30	0.140	x	x
33.40	3.38	1" SCH 40S	50.8	50.80	3.30	0.186	x	x
33.40	4.55	1" SCH 80S	50.8	50.80	3.30	0.240	x	x
42.16	2.77	1 1/4" SCH 10S	50.8	63.50	4.83	0.208	x	x



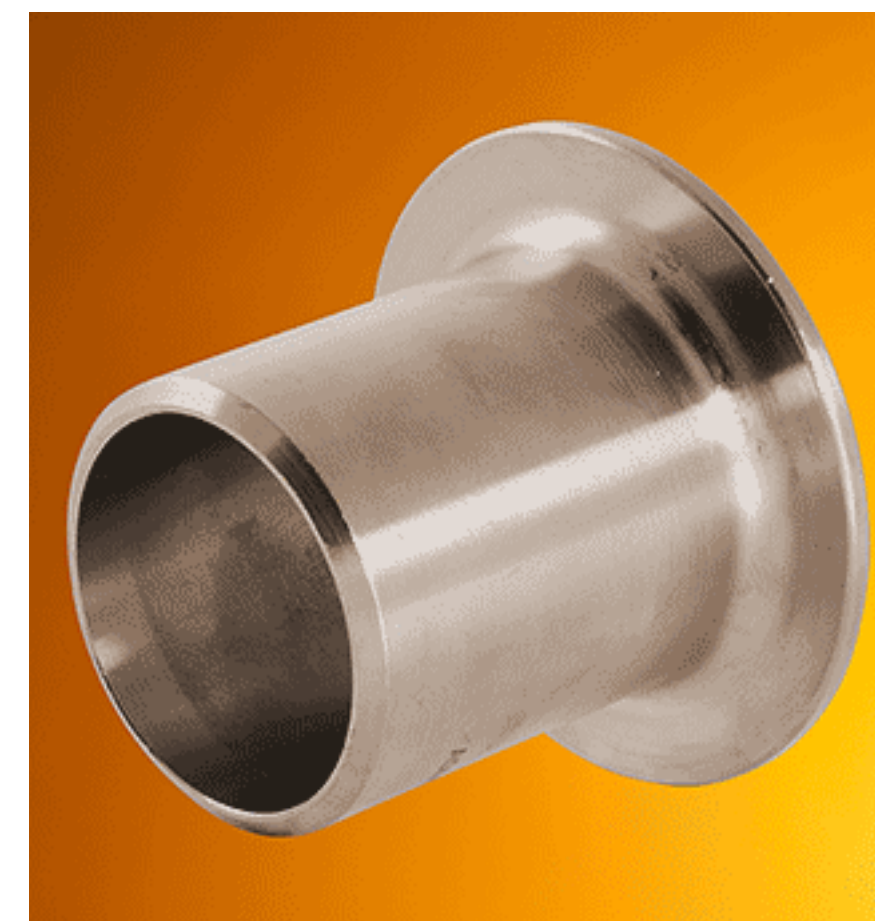


# STUB-END ASTM-A 403 SEAMLESS MSS SP 43 TYPE A

304/304L - 316/316L (2/5)

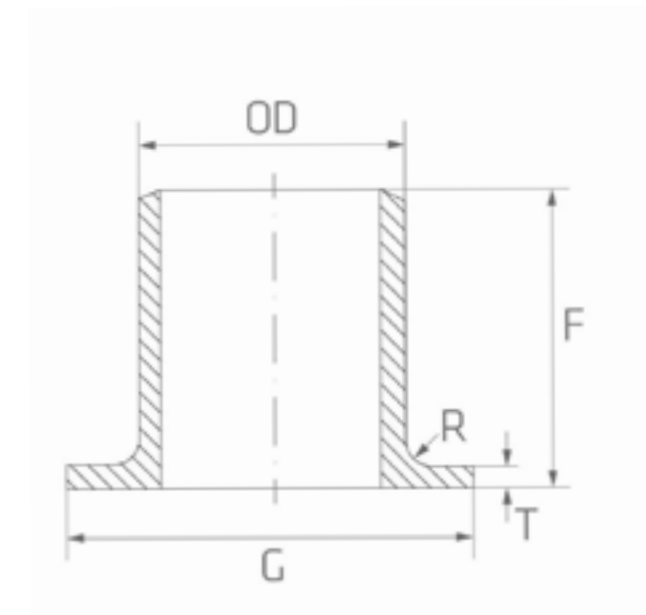


OD	T	ICH-SCH	F	G	R	Grade AISI/UNS kg/pce.	304/304L	316/316L
42.16	3.56	1 1/4" SCH 40S	50.8	63.50	4.83	0.263	x	x
42.16	4.85	1 1/4" SCH 80S	50.8	63.50	4.83	0.349	x	x
48.26	2.77	1 1/2" SCH 10S	50.8	73.03	6.35	0.249	x	x
48.26	3.68	1 1/2" SCH 40S	50.8	73.03	6.35	0.376	x	x
48.26	5.08	1 1/2" SCH 80S	50.8	73.03	6.35	0.458	x	x
60.33	2.77	2" SCH 10S	63.5	92.07	7.87	0.376	x	x
60.33	3.91	2" SCH 40S	63.5	92.07	7.87	0.539	x	x
60.33	5.54	2" SCH 80S	63.5	92.07	7.87	0.743	x	x
73.03	3.05	2 1/2" SCH 10S	63.5	104.77	7.87	0.471	x	x
73.03	5.16	2 1/2" SCH 40S	63.5	104.77	7.87	0.797	x	x

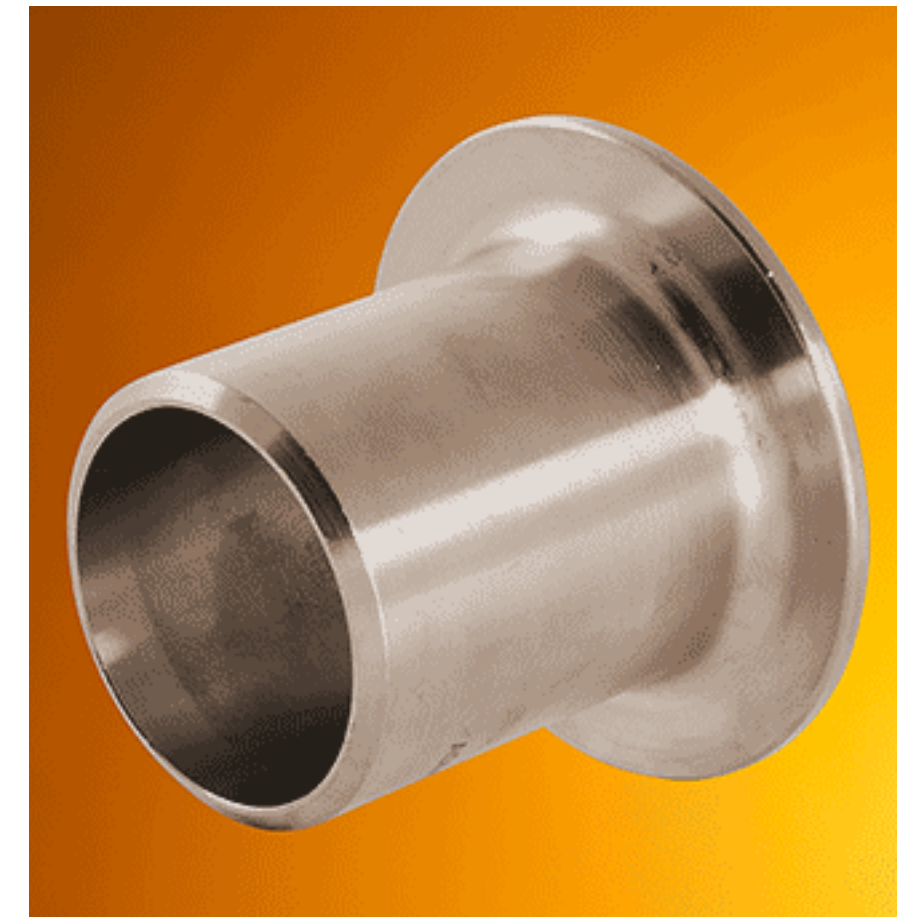


# STUB-END ASTM-A 403 SEAMLESS MSS SP 43 TYPE A

304/304L - 316/316L (3/5)

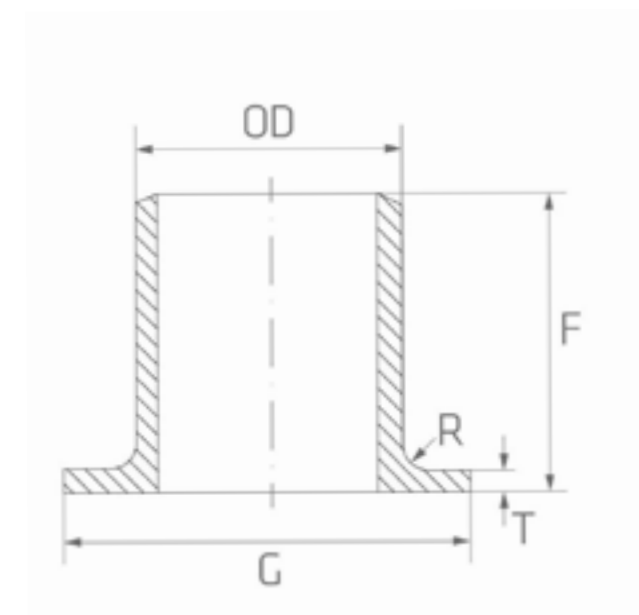


OD	T	ICH-SCH	F	G	R	Grade AISI/UNS kg/pce.	304/304L	316/316L
73.03	7.01	2 1/2" SCH 80S	63.5	104.77	7.87	1.060	x	x
88.90	3.05	3" SCH 10S	63.5	127.00	9.65	0.638	x	x
88.90	5.49	3" SCH 40S	63.5	127.00	9.65	1.133	x	x
88.90	7.62	3" SCH 80S	63.5	127.00	9.65	1.508	x	x
101.60	3.05	3 1/2" SCH 10S	76.2	139.70	9.65	0.650	x	x
101.60	5.74	3 1/2" SCH 40S	76.2	139.70	9.65	1.380	x	x
101.60	8.08	3 1/2" SCH 80S	76.2	139.70	9.65	2.000	x	x
114.30	3.05	4" SCH 10S	76.2	157.18	11.18	0.978	x	x
114.30	6.02	4" SCH 40S	76.2	157.18	11.18	1.812	x	x
114.30	8.56	4" SCH 80S	76.2	157.18	11.18	2.523	x	x

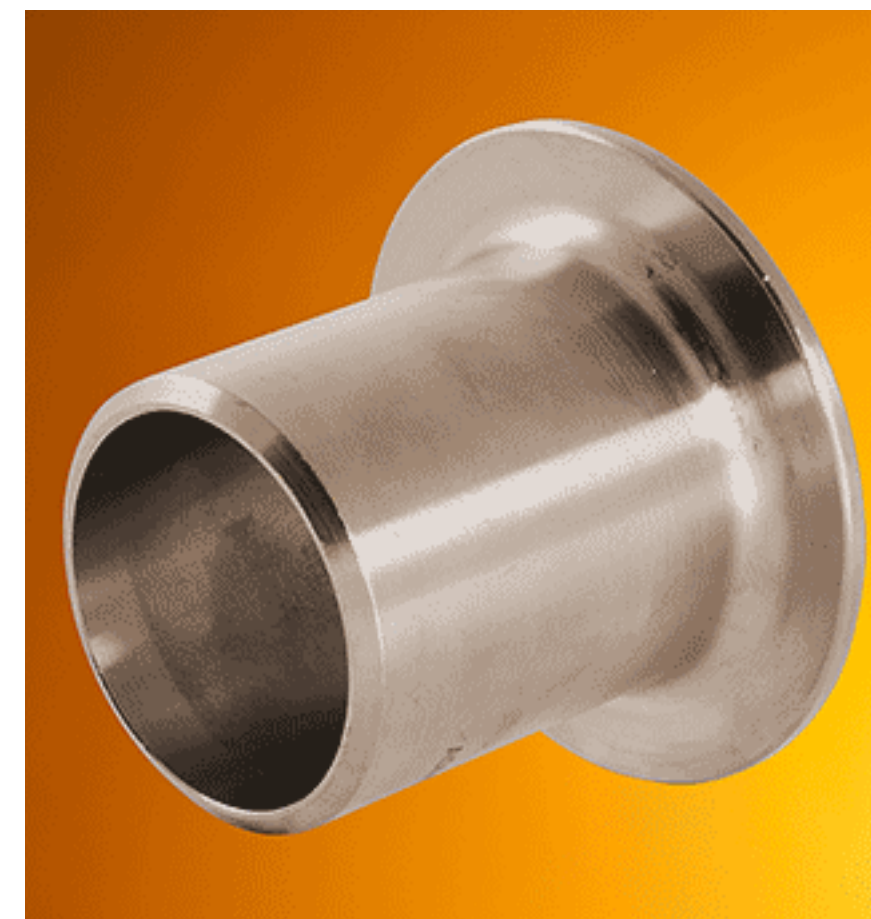


# STUB-END ASTM-A 403 SEAMLESS MSS SP 43 TYPE A

304/304L - 316/316L (4/5)

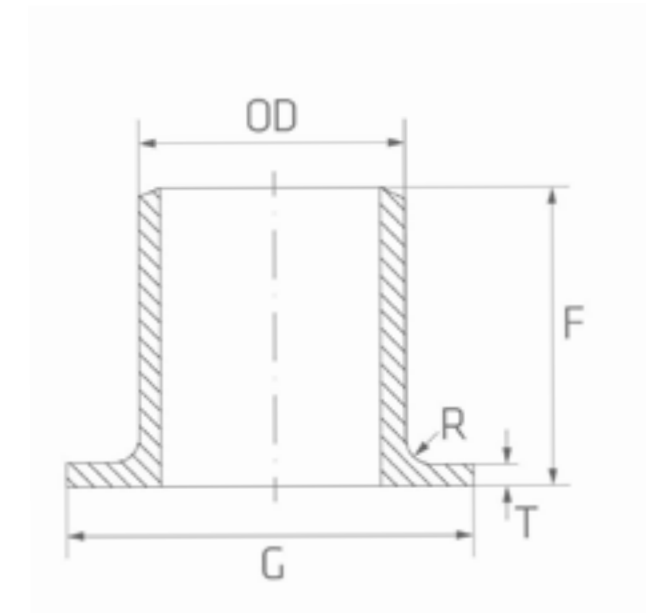


OD	T	ICH-SCH	F	G	R	Grade AISI/UNS kg/pce.	304/304L	316/316L
141.30	3.40	5" SCH 10S	76.2	185.75	11.18	1.237	x	x
141.30	6.55	5" SCH 40S	76.2	185.75	11.18	2.537	x	x
141.30	9.53	5" SCH 80S	76.2	185.75	11.18	3.601	x	x
168.28	3.40	6" SCH 10S	88.9	215.90	12.70	1.950	x	x
168.28	7.11	6" SCH 40S	88.9	215.90	12.70	3.720	x	x
219.08	3.76	8" SCH 10S	101.6	269.88	12.70	3.100	x	x
219.08	8.18	8" SCH 40S	101.6	269.88	12.70	5.890	x	x
273.05	4.19	10" SCH 10S	127.0	323.85	12.70	4.860	x	x
273.05	9.27	10" SCH 40S	127.0	323.85	12.70	10.420	x	x
323.85	4.57	12" SCH 10S	152.4	381.00	12.70	7.110	x	x

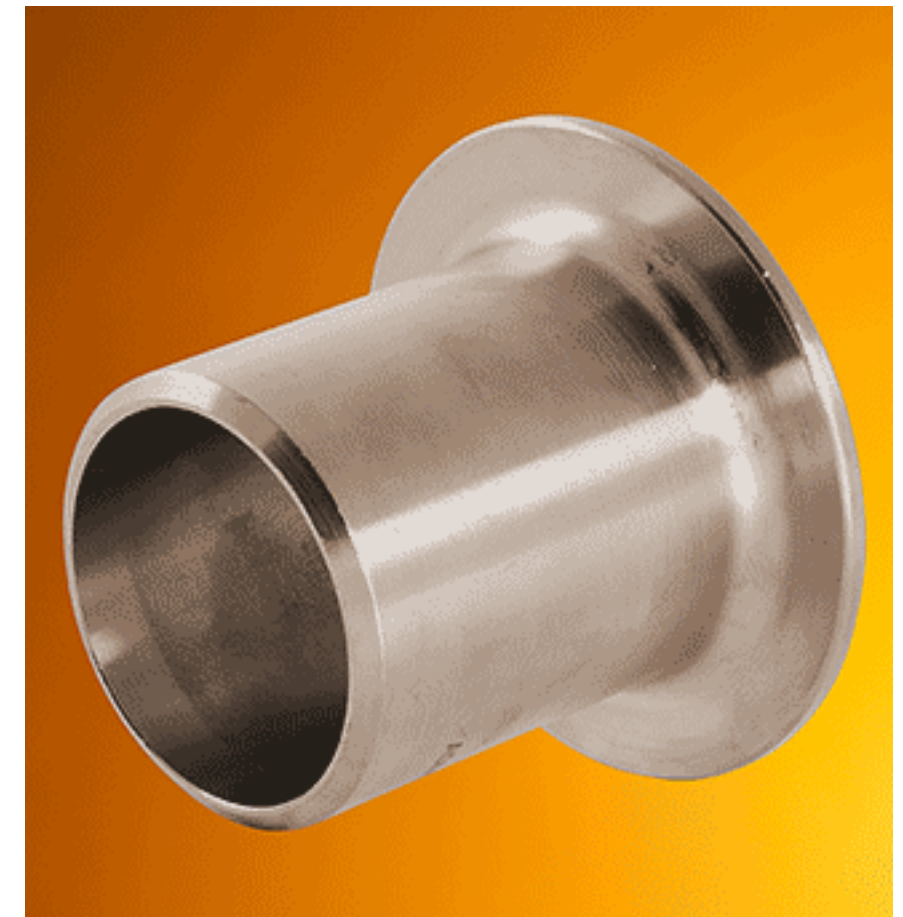


# STUB-END ASTM-A 403 SEAMLESS MSS SP 43 TYPE A

304/304L - 316/316L (5/5)

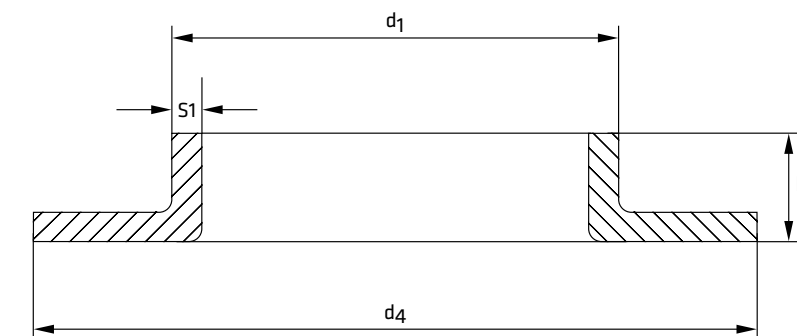


OD	T	ICH-SCH	F	G	R	Grade AISI/UNS kg/pce.	304/304L	316/316L
323.85	9.53	12" SCH 40S	152.4	381.00	12.70	14.950	x	x
355.60	4.78	14" SCH 10S	152.4	412.75	12.70	7.750	x	x
406.40	4.78	16" SCH 10S	152.4	469.00	12.70	9.020	x	x



# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (1/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
17.2	1.8	40	9		0.02				x	
17.2	2.0	40	9		0.02				x	x
17.2	2.0	43	6	ISO	0.02	x	x			
18.0	1.5	45	9		0.03				x	x
20.0	2.0	52	7	Metric	0.04	x	x			
21.3	2.0	45	9		0.04	x			x	x
21.3	2.0	47	6	ISO	0.03	x	x			
21.3	3.0	47	6	ISO	0.05	x	x			
23.0	1.5	58	12		0.05					x
25.0	2.0	58	7	Metric	0.03	x	x			



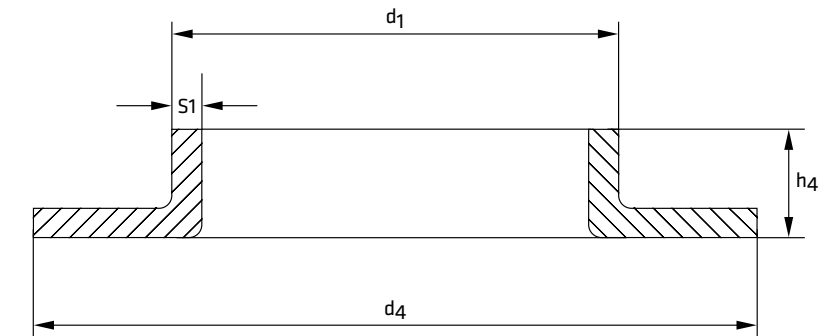
1) = 100% X-RAY

\* Finishes: page 718



# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (2/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
26.9	2.0	58	8	ISO	0.04	x	x			
26.9	2.0	58	12		0.06	x			x	x
26.9	3.0	58	8	ISO	0.06	x	x			
26.9	3.0	58	12		0.07			x		
28.0	1.5	68	15		0.07					x
28.0	2.0	68	8	Metric	0.05	x	x			
30.0	2.0	68	8	Metric	0.05	x	x			
32.0	2.0	68	9	Metric	0.06	x	x			
33.7	2.0	68	9	ISO	0.05	x	x			
33.7	2.0	68	15		0.09	x				

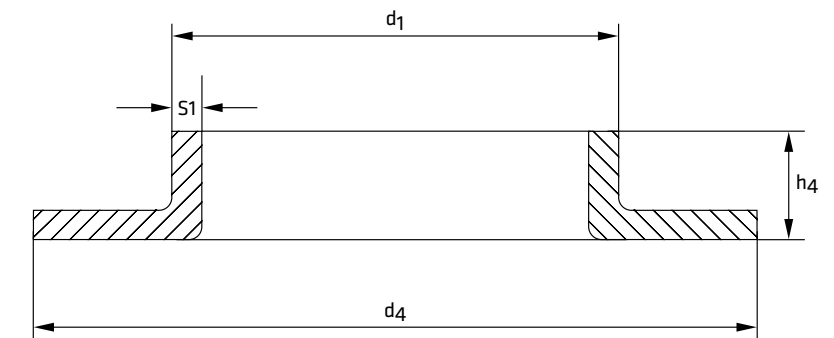


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (3/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
33.7	2.6	68	15		0.11				x	x
33.7	3.0	68	9	ISO	0.08	x	x	x		
35.0	1.5	78	15		0.09					x
38.0	2.0	78	10	Metric	0.06	x	x			
40.0	2.0	78	10	Metric	0.06	x	x			
42.4	2.0	78	10	ISO	0.07	x	x			
42.4	2.0	78	15		0.11	x			x	x
42.4	2.5	78	15		0.12				x	x
42.4	3.0	78	10	ISO	0.10	x	x			
42.4	3.0	78	15		0.14			x		



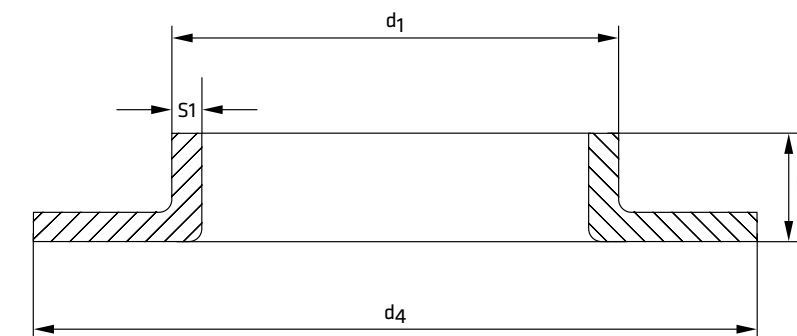
1) = 100% X-RAY

\* Finishes: page 718



# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (4/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
44.5	2.0	90	10	Metric	0.09	x	x			
48.3	2.0	88	10	ISO	0.08	x	x			
48.3	2.0	88	17		0.14	x			x	x
48.3	2.6	88	17		0.16				x	x
48.3	3.0	88	10	ISO	0.12	x	x	x		
51.0	2.0	102	11	Metric	0.12		x			
54.0	2.0	102	12	Metric	0.11	x	x			
54.0	2.0	102	21		0.19	x				x
56.0	3.0	102	15	Metric	0.17	x	x			
57.0	2.0	102	13	Metric	0.11					

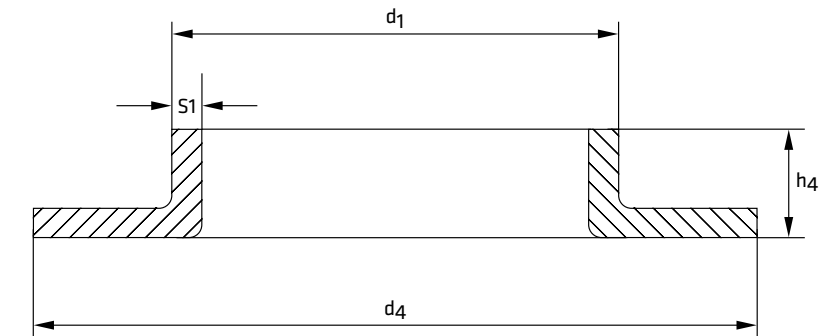


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (5/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
57.0	3.0	102	13	Metric	0.17	x	x			
60.3	2.0	102	12	ISO	0.11	x	x			
60.3	2.0	102	23		0.19	x			x	x
60.3	2.5	102	23		0.25					x
60.3	3.0	102	12	ISO	0.16	x	x			
60.3	3.0	102	23		0.24				x	x
60.3	3.0	102	20		0.24			x		
63.5	2.0	115	13	Metric	0.12	x	x			
70.0	2.0	122	12	Metric	0.15	x	x			
70.0	2.0	122	23		0.26	x				

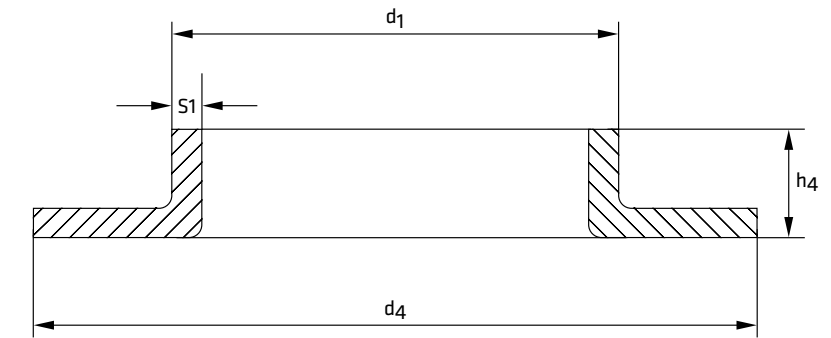


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (6/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
71.0	3.0	122	12		0.30		x			
76.1	2.0	122	12	ISO	0.15	x	x			
76.1	2.0	122	23		0.25	x			x	x
76.1	2.6	122	23		0.30				x	x
76.1	3.0	122	12	ISO	0.22	x	x			
76.1	3.0	122	23		0.34			x		x
84.0	2.0	138	13	Metric	0.19	x	x			
84.0	2.0	138	23		0.27	x				x
86.0	3.0	138	15	Metric	0.28	x	x			
88.9	2.0	138	23		0.26	x			x	x

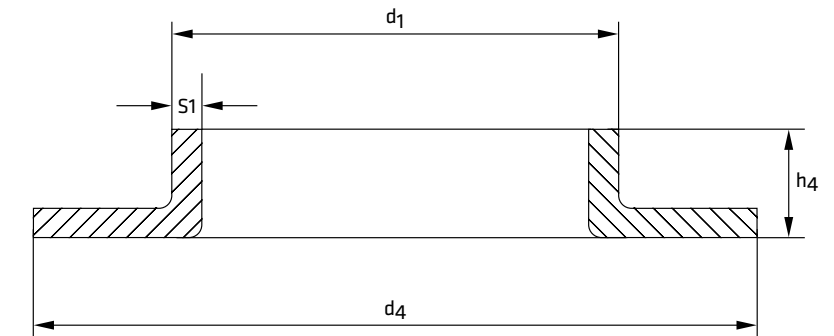


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (7/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
88.9	2.0	139	12	ISO	0.19	x	x			
88.9	2.6	138	23		0.37				x	x
88.9	3.0	138	23		0.40			x	x	x
88.9	3.0	139	12	ISO	0.28	x	x			
88.9	4.0	139	12	ISO	0.37	x	x			
101.6	2.0	150	14	Metric	0.21	x	x			
101.6	3.0	150	14	Metric	0.31	x	x			
104.0	2.0	158	16	Metric	0.24	x	x			
104.0	2.0	158	27		0.43	x				x
106.0	3.0	158	16	Metric	0.36	x	x			

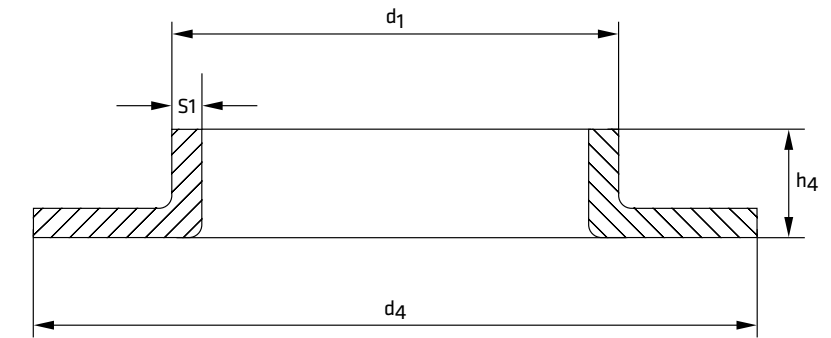


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (8/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
106.0	3.0	158	26		0.46					x
108.0	2.0	158	14	Metric	0.22	x	x			
108.0	3.0	158	14	Metric	0.36	x	x			
108.0	3.0	158	28		0.56					x
108.0	4.0	158	14	Metric	0.43	x	x			
114.3	2.0	158	16	ISO	0.21	x	x			
114.3	2.0	160	28		0.40	x			x	x
114.3	2.6	160	28		0.47				x	x
114.3	3.0	158	16	ISO	0.32	x	x			
114.3	3.0	160	28		0.51					x

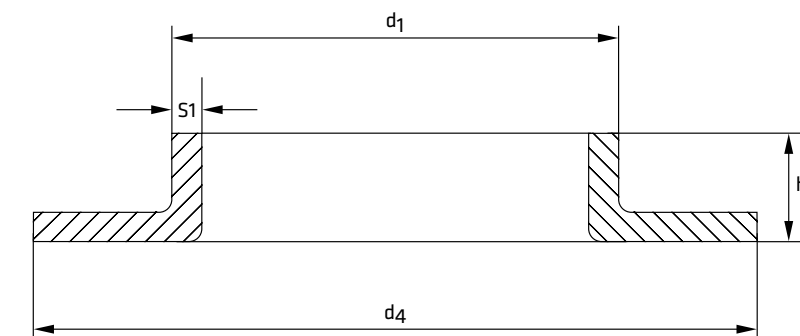


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (9/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
114.3	4.0	158	16	ISO	0.43	x	x			
129.0	2.0	188	15	Metric	0.31	x	x			
129.0	2.0	188	30		0.55	x				x
131.0	3.0	188	20	Metric	0.47	x	x			
133.0	2.0	188	19	Metric	0.31	x				
133.0	3.0	188	19	Metric	0.47	x	x			
133.0	3.0	188	30		0.72					x
133.0	4.0	188	19	Metric	0.65				x	
139.7	2.0	188	16	ISO	0.28	x	x			
139.7	2.6	188	30		0.52	x			x	x

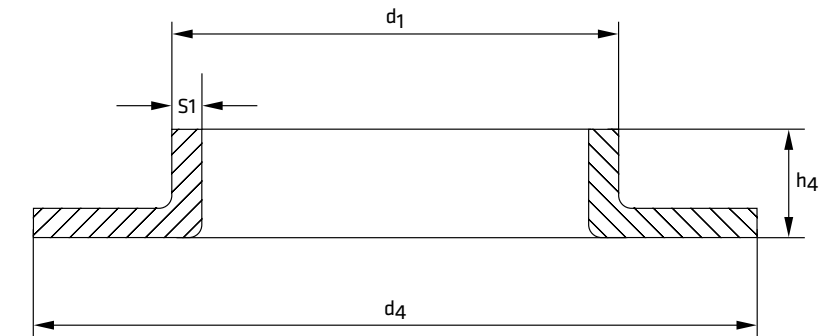


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (10/16)



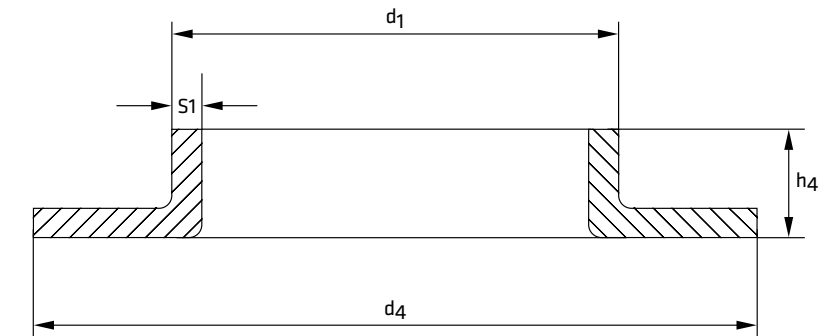
d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
139.7	3.0	188	16	ISO	0.42	x	x			
139.7	3.0	188	30		0.66			x		x
139.7	4.0	188	16	ISO	0.56	x	x			
154.0	2.0	212	19	Metric	0.38	x	x			
154.0	2.0	212	31		0.54	x				x
156.0	3.0	212	20	Metric	0.57	x	x			
156.0	3.0	212	30		0.64	x				x
159.0	2.0	212	17	Metric	0.34	x				
159.0	3.0	212	18	Metric	0.51	x	x			
159.0	3.0	212	30		0.52					x





# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (11/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
159.0	4.0	212	18	Metric	0.64	x	x			
168.3	2.0	212	17	ISO	0.32	x	x			
168.3	2.5	212	30		0.61					x
168.3	2.6	212	30		0.64	x			x	
168.3	3.0	212	17	ISO	0.48	x	x			
168.3	3.0	212	30		0.75			x	x	x
168.3	4.0	212	17	ISO	0.64	x	x			
179.0	2.0	230	19	Metric	0.39					
204.0	2.0	268	21	Metric	0.54	x	x			
204.0	2.0	270	30		0.77	x				

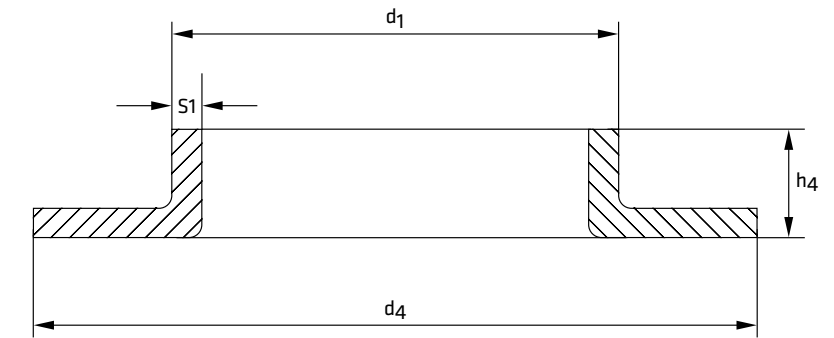


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (12/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
206.0	3.0	268	25		0.85	x				
206.0	3.0	268	25	Metric	0.82	x	x			
219.1	2.0	270	18	ISO	0.47	x	x			
219.1	2.0	268	30		0.70	x				x
219.1	2.6	270	30		0.82			x		
219.1	3.0	270	18	ISO	0.71	x	x			
219.1	3.0	270	30		1.08	x			x	x
219.1	4.0	270	18	ISO	0.94	x	x			
219.1	4.0	270	30		1.35					x
254.0	2.0	320	24	Metric	0.71	x	x			

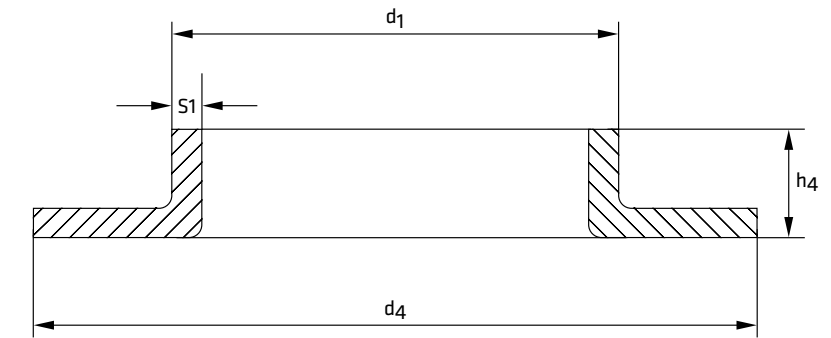


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (13/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
254.0	2.0	320	30		0.98	x				x
256.0	3.0	320	25	Metric	1.07	x	x			
256.0	3.0	320	26		1.08	x				x
273.0	2.0	323	18	ISO	0.56	x	x		x	
273.0	3.0	323	18	ISO	0.84	x	x			
273.0	3.0	320	30		1.34	x		x	x	x
273.0	4.0	323	18	ISO	1.11	x	x			
273.0	4.0	320	30		1.43					x
304.0	2.0	370	21	Metric	0.80	x	x			
306.0	3.0	370	21	Metric	1.21	x	x			

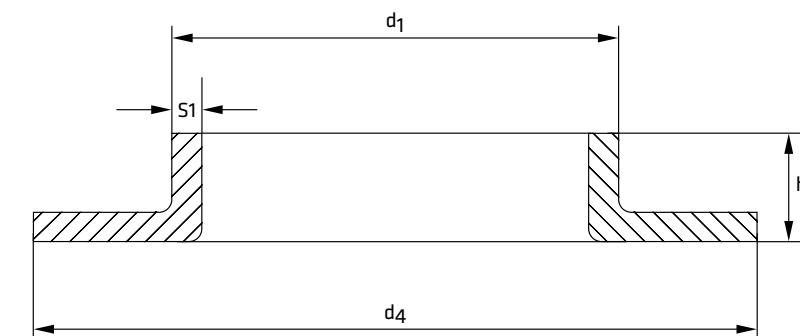


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (14/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
306.0	3.0	370	35		1.51	x				x
323.9	2.0	370	19	ISO	0.64	x	x			
323.9	3.0	370	19	ISO	0.96	x	x			
323.9	3.0	370	35		1.35	x		x	x	x
323.9	4.0	370	19	ISO	1.29	x	x			
323.9	4.0	370	35		1.80					x
355.6	3.0	430	21	ISO	1.52	x	x			
355.6	3.0	430	35		1.88	x			x	x
355.6	4.0	430	21	ISO	2.02	x	x			
355.6	4.0	430	35		2.51					x

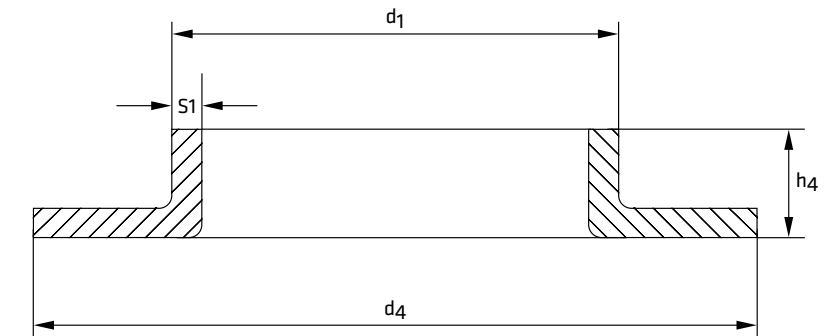


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (15/16)



d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
406.4	3.0	482	21	ISO	1.77	x	x			
406.4	3.0	482	37		2.15	x			x	x
406.4	4.0	482	21	ISO	2.36	x	x			
406.4	4.0	482	37		2.86				x	x
457.2	2.9	532	25	ISO	2.09	x	x			
457.2	4.0	532	25	ISO	2.78	x	x			
508.0	2.9	587	27	ISO	2.29	x	x			
508.0	3.0	585	37		2.77	x			x	x
508.0	4.0	587	27	ISO	3.05	x	x			
508.0	4.0	585	37		3.70	x			x	x

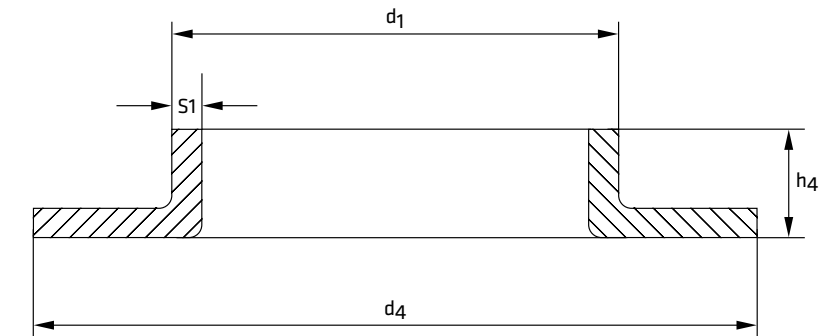


1) = 100% X-RAY

\* Finishes: page 718

# WELDING COLLAR SIMILAR TO DIN 262 - ISO OR METRIC

1.4307-1.4571 (16/16)



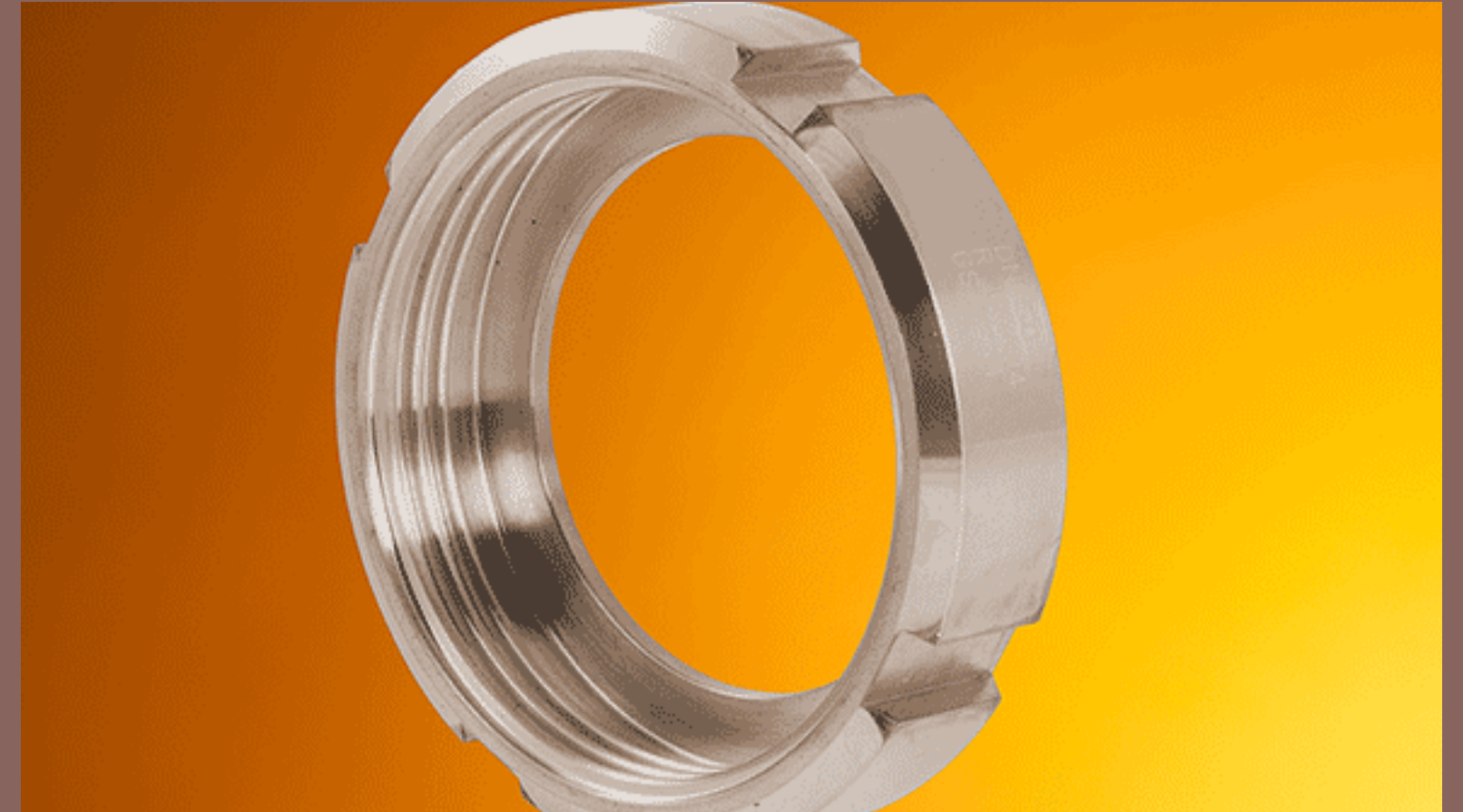
d1	S1	d4	h4	TYPE	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)	1.4539 904L *)	1.4541 321 *)	1.4571 316Ti *)
609.6	3.0	685	26	ISO	2.72	x	x			
609.6	4.0	685	26	ISO	3.63	x	x			
609.6	4.0	685	45		4.75	x				x
711.2	4.0	800	64	ISO	6.56	x				
812.8	4.0	905	64	ISO	6.80	x				



1) = 100% X-RAY

\* Finishes: page 718

# DAIRY PIPE FITTINGS



Dairy pipe fittings

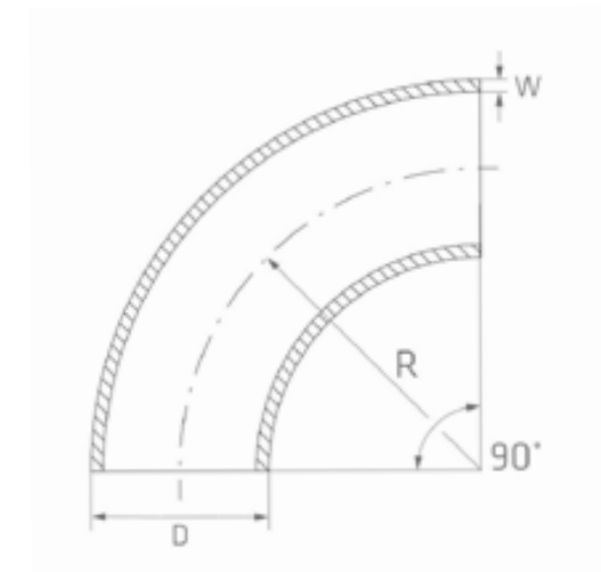
Tolerances

Test certificates

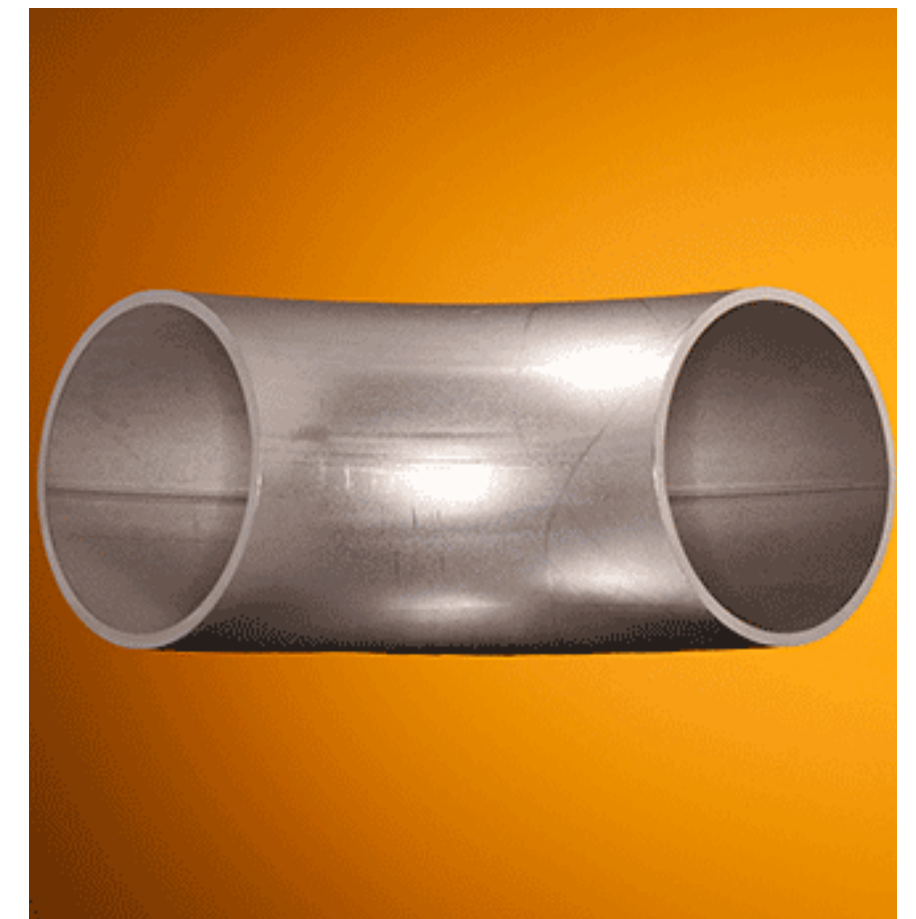


# ANGLE WELDED - PRODUCED FROM BEVERAGE PIPES

1.4307-1.4404 (1/3)



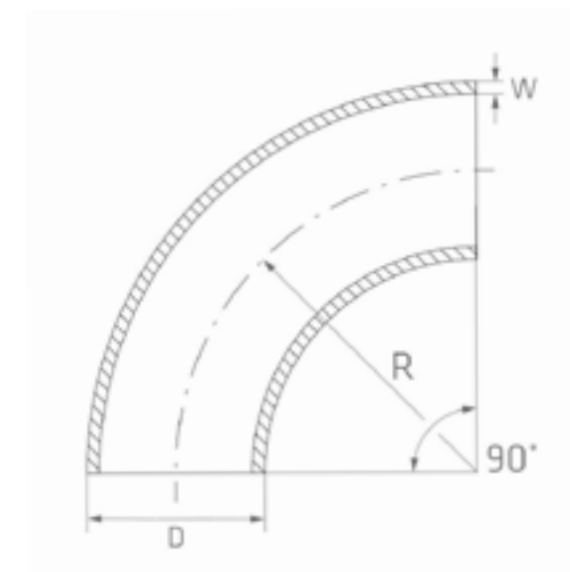
DN INCH	D	T	R	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4307 304L polished *)	1.4404 316L *)	1.4404 316L polished *)
DIN 15	18.00	1.50	35.00	0.020	x		x	x
DIN 15	21.30	2.00	28.00	0.040			x	
DIN 20	22.00	1.50	40.00	0.040	x	x	x	x
1"	25.40	1.25	38.00	0.030	x	x		
DIN 25	28.00	1.50	50.00	0.060	x	x	x	x
1 1/4"	31.80	1.25	35.00	0.090			x	x
DIN 32	34.00	1.50	55.00	0.150	x	x	x	x
1 1/2"	38.10	1.25	57.00	0.100	x		x	
1 1/2"	38.10	1.50	57.00	0.110	x	x		x
DIN 40	40.00	1.50	60.00	0.140	x	x	x	x



\* 1) = 100% X-RAY

# ANGLE WELDED - PRODUCED FROM BEVERAGE PIPES

1.4307-1.4404 (2/3)



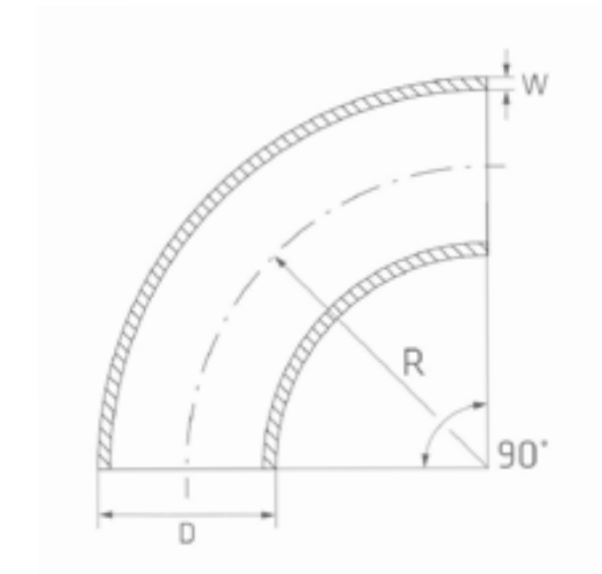
DN INCH	D	T	R	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4307 304L polished *)	1.4404 316L *)	1.4404 316L polished *)
DIN 40	41.00	1.50	60.00	0.090			x	
2"	50.80	1.25	75.00	0.200	x	x		
2"	50.80	1.50	75.00	0.220	x	x	x	x
DIN 50	52.00	1.50	70.00	0.260	x		x	x
DIN 50	52.00	1.50	80.00	0.260	x		x	x
2 1/2"	63.50	1.50	94.50	0.340	x	x	x	x
DIN 65	70.00	1.50	80.00	0.400	x	x		
DIN 65	70.00	2.00	80.00	0.500	x	x	x	x
3"	76.10	1.50	96.00	0.500	x	x		
3"	76.10	2.00	96.00	0.560	x			



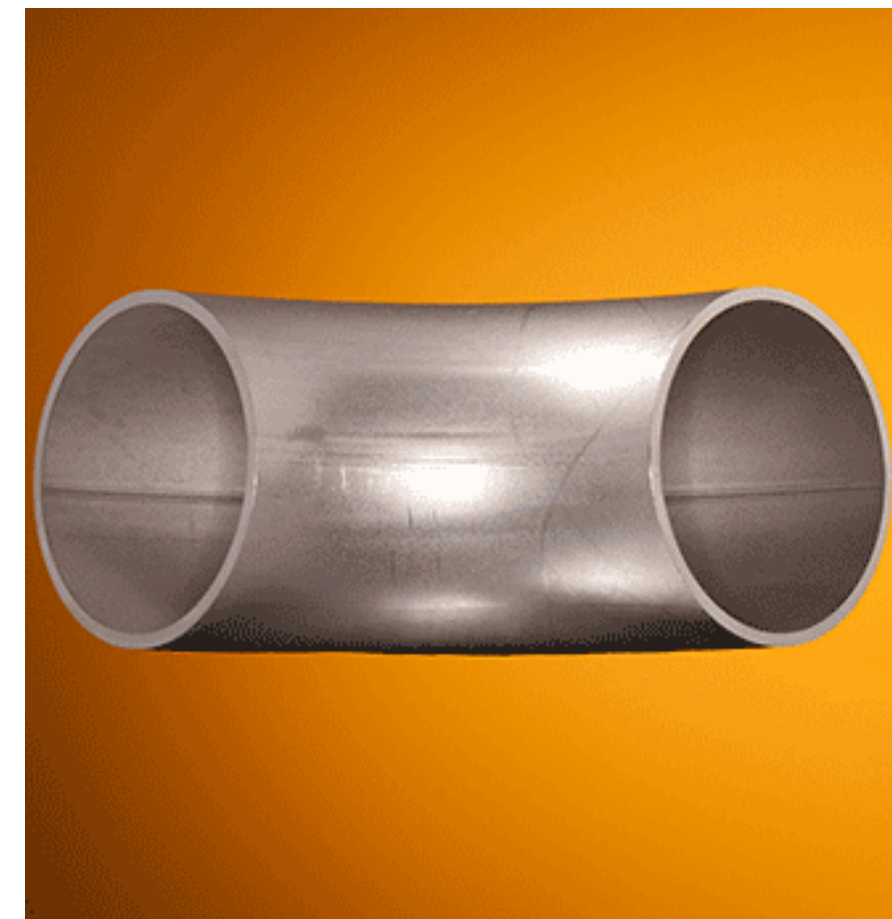
\* 1) = 100% X-RAY

# ANGLE WELDED - PRODUCED FROM BEVERAGE PIPES

1.4307-1.4404 (3/3)



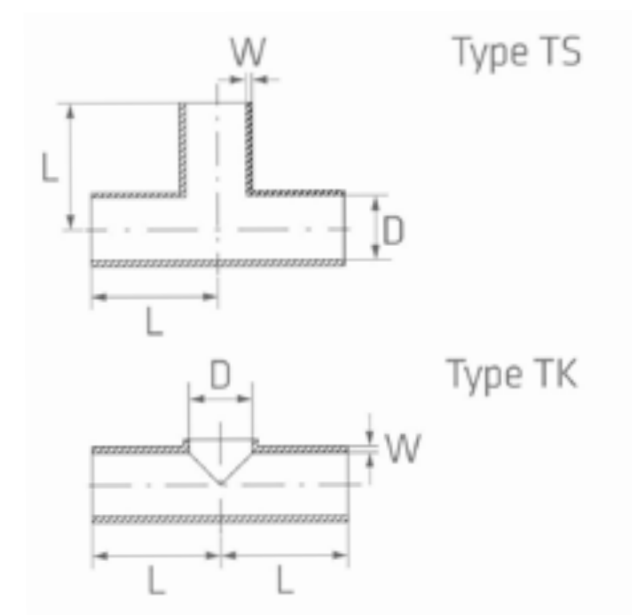
DN INCH	D	T	R	Grade AISI/UNS	1.4307	1.4307	1.4404	1.4404
					304L	304L	316L	316L
kg/pce.					*)	polished *)	*)	polished *)
DIN 80	85.00	2.00	90.00	0.570	x	x	x	x
4"	101.60	1.50	133.50	0.950	x		x	
4"	101.60	2.00	133.50	1.050	x	x	x	x
DIN 100	104.00	2.00	100.00	1.200	x	x	x	x



\* 1) = 100% X-RAY

# T-PIECE WELDED - PRODUCED FROM BEVERAGE PIPES

1.4307-1.4404 (1/2)



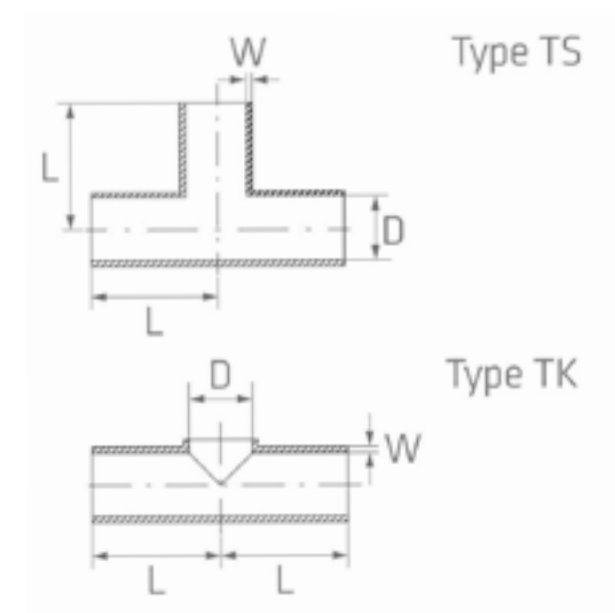
DN INCH	D	W	L	Grade AISI/UNS kg/pce.	TypeE TS			
					1.4307 304L *)	1.4307 304L polished *)	1.4404 316L *)	1.4404 316L polished *)
DIN 15	18.00	1.50	35.00	0.080		x	x	x
DIN 20	22.00	1.50	40.00	0.070		x	x	x
1"	25.40	1.25	60.00	0.090	x	x	x	x
DIN 25	28.00	1.50	50.00	0.090	x		x	x
1 1/4"	31.80	1.20	45.00	0.080	x	x		
DIN 32	34.00	1.50	55.00	0.120			x	
1 1/2"	38.10	1.50	57.00	0.160	x	x	x	x
DIN 40	40.00	1.50	60.00	0.150			x	x
2"	50.80	1.25	75.00	0.200	x	x		
2"	50.80	1.50	75.00	0.210		x	x	x



\* 1) = 100% X-RAY

# T-PIECE WELDED - PRODUCED FROM BEVERAGE PIPES

1.4307-1.4404 (2/2)



DN INCH	D	W	L	Grade AISI/UNS kg/pce.	TypeE TS			
					1.4307 304L *)	1.4307 304L polished *)	1.4404 316L *)	1.4404 316L polished *)
DIN 50	52.00	1.50	70.00	0.240	x	x	x	
2 1/2"	63.50	1.50	82.50	0.300	x	x	x	
DIN 65	70.00	2.00	80.00	0.400	x		x	x
76	76.10	1.50	96.00	0.940		x		x
DIN 80	85.00	2.00	90.00	1.070	x	x	x	
4"	101.60	2.00	133.50	1.780			x	
DIN 100	104.00	2.00	100.00	1.620	x	x	x	x



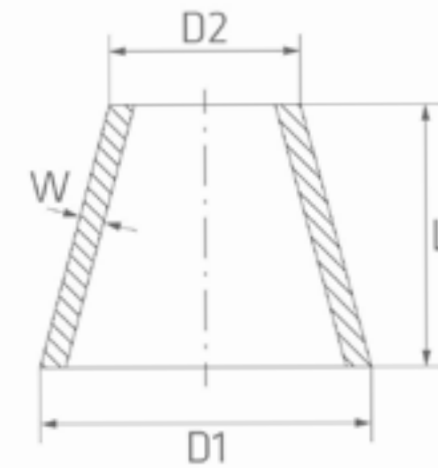
\* 1) = 100% X-RAY



# CONCENTRIC REDUCER

DIN 11852

1.4301-1.4404 (1/3)



DN INCH	D1	D2	W	L	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4404 316L *)	1.4404 316L polished *)
DIN 20x15	22.00	18.00	1.50	7.00	0.005	x	x	
DIN 25x15	28.00	18.00	1.50	18.00	0.015	x	x	x
DIN 25x20	28.00	22.00	1.50	11.00	0.010	x	x	x
DIN 32x20	34.00	22.00	1.50	22.00	0.022	x	x	
DIN 32x25	34.00	28.00	1.50	11.00	0.012	x	x	x
1 1/2" x 1"	38.10	25.40	1.20	22.00	0.020		x	x
1 1/2" x 1 1/4"	38.10	31.80	1.20	11.00	0.011			x
DIN 40x20	40.00	22.00	1.50	33.00	0.037		x	x
DIN 40x25	40.00	28.00	1.50	22.00	0.027	x	x	x
DIN 40x32	40.00	34.00	1.50	11.00	0.015	x		x

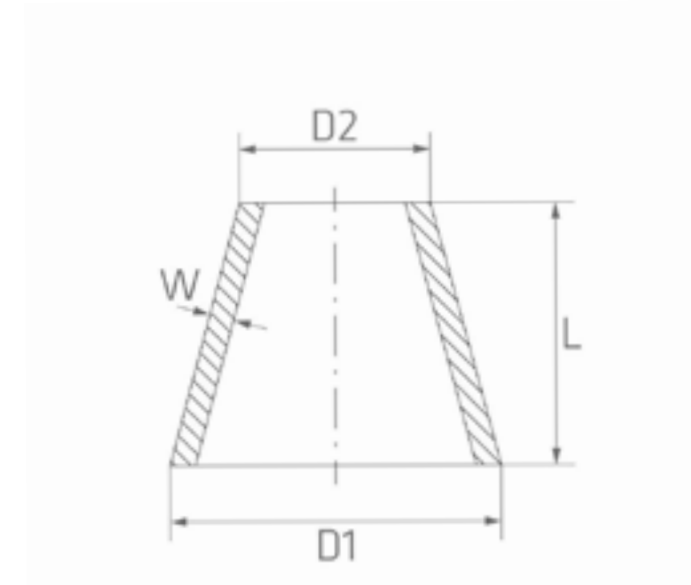


\* 1) = 100% X-RAY

# CONCENTRIC REDUCER

DIN 11852

1.4301-1.4404 (2/3)



DN INCH	D1	D2	W	L	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4404 316L *)	1.4404 316L polished *)
2" x 1"	50.80	25.40	1.20	55.00	0.061		x	x
2" x 1 1/4"	50.80	31.80	1.20	44.00	0.053		x	x
2" x 1 1/2"	50.80	38.10	1.50	33.00	0.053		x	
DIN 50x25	52.00	28.00	1.50	44.00	0.064		x	x
DIN 50x32	52.00	34.00	1.50	33.00	0.051	x	x	x
DIN 50x40	52.00	40.00	1.50	22.00	0.037	x	x	x
2 1/2" x 1 1/2"	63.50	38.10	1.50	51.00	0.094		x	x
2 1/2" x 2"	63.50	50.80	1.50	29.00	0.061		x	x
DIN 65x40	70.00	40.00	1.50	51.00	0.102	x	x	x
DIN 65x50	70.00	52.00	1.50	29.00	0.065	x	x	x



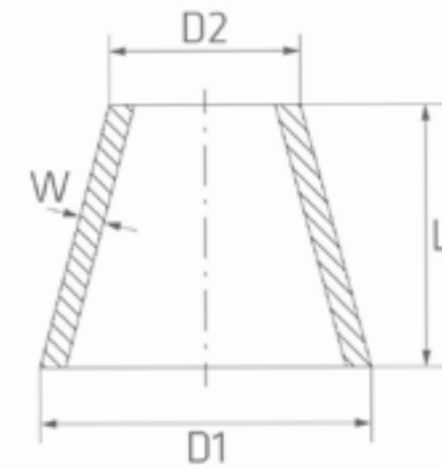
\* 1) = 100% X-RAY



# CONCENTRIC REDUCER

DIN 11852

1.4301-1.4404 (3/3)



DN INCH	D1	D2	W	L	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4404 316L *)	1.4404 316L polished *)
3" x 1 1/2"	76.10	38.10	1.50	89.00	0.186			x
3" x 2"	76.10	50.80	1.50	56.00	0.130		x	x
3" x 2 1/2"	76.10	63.50	1.50	27.00	0.069		x	x
DIN 80x50	85.00	52.00	2.00	56.00	0.186	x	x	x
DIN 80x65	85.00	70.00	2.00	27.00	0.102	x	x	x
4" x 2 1/2"	101.60	63.50	1.50	61.00	0.186			x
4" x 3"	101.60	76.10	2.00	34.00	0.112		x	
DIN 100x65	104.00	70.00	2.00	61.00	0.260	x	x	x
DIN 100x65	104.00	76.10	2.00	58.00	0.370			x
DIN 100x80	104.00	85.00	2.00	34.00	0.158	x		x



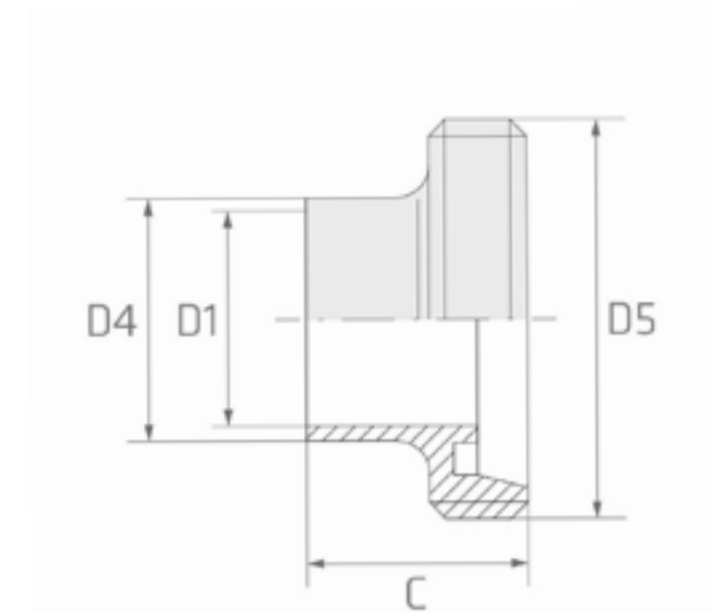
\* 1) = 100% X-RAY



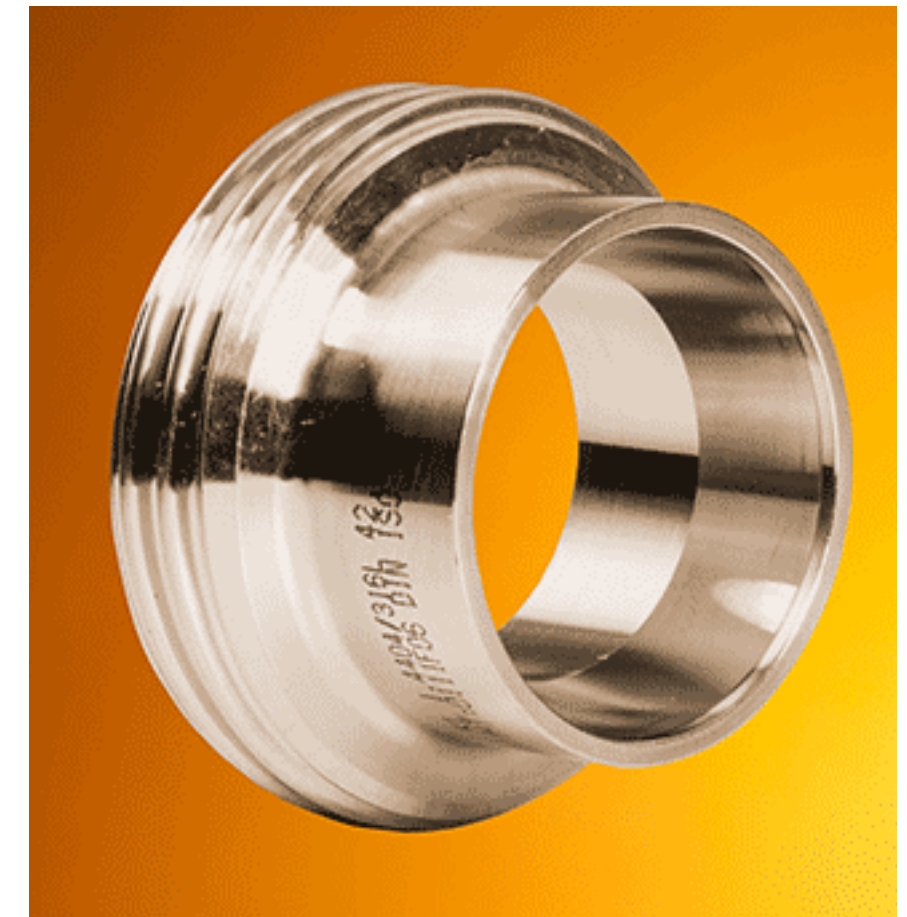
# THREADED UNION

DIN 11852

1.4307-1.4404 (1/2)



DN	c	d1	d4	d5	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
10	21	10	13	28x1/8"	0.04	x	x
15	21	16	19	34x1/8"	0.05	x	x
20	24	20	23	44x1/6"	0.09	x	x
25	29	26	29	52x1/6"	0.12	x	x
40	33	38	41	65x1/6"	0.16	x	x
50	35	50	53	78x1/6"	0.22	x	x
65	40	66	70	95x1/6"	0.38	x	x
80	45	81	85	110x1/4"	0.52	x	x
100	54	100	104	130x1/4"	0.62	x	x
125	46	125	129	160x1/4"	0.92	x	x



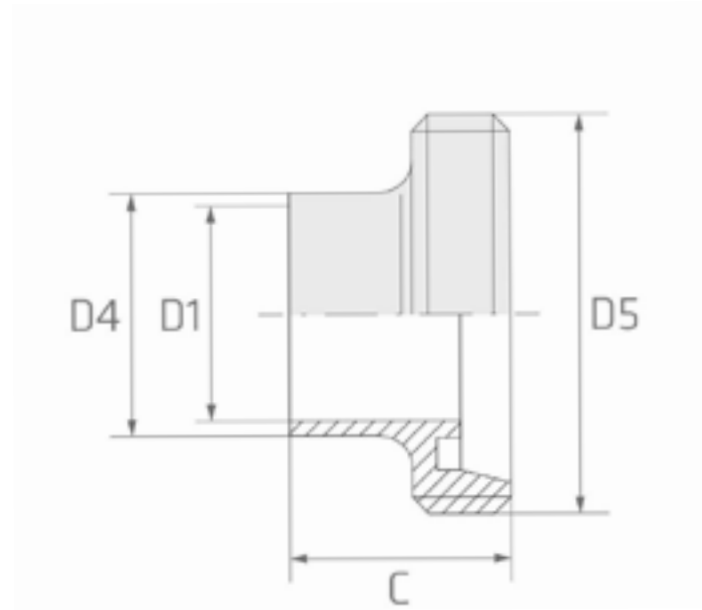
\* 1) = 100% X-RAY

# THREADED UNION

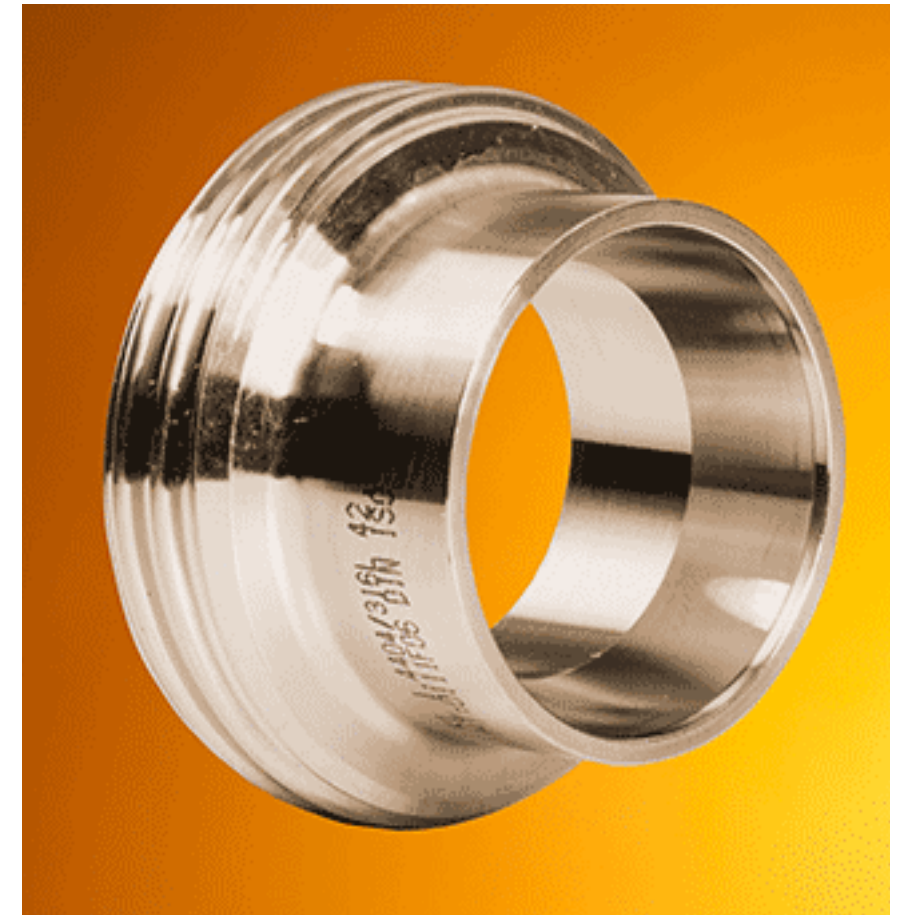
DIN 11852



1.4307-1.4404 (2/2)



DN	c	d1	d4	d5	Grade	1.4307	1.4404
					AISI/UNS	304L	316L
					kg/pce.	*)	*)
150	50	150	154	190x1/4"	1.55	x	x

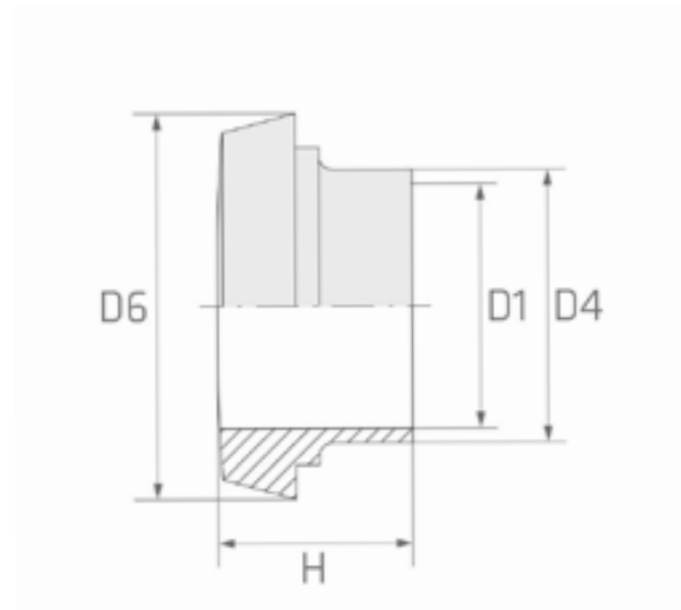


\* 1) = 100% X-RAY

# TAPERED UNION

DIN 11852

1.4307-1.4404 (1/2)



DN	d1	d4	d6	h	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
15	16	19	28.5	17	0.02	x	x
20	20	23	36.5	18	0.04	x	x
25	26	29	44.0	22	0.08	x	x
32	32	35	50.0	25	0.09		x
40	38	41	56.0	26	0.12	x	x
50	50	53	68.5	28	0.17	x	x
65	66	70	86.0	32	0.28	x	x
80	81	85	100.0	37	0.34	x	x
100	100	104	121.0	44	0.54	x	x
125	125	129	150.0	34	0.70	x	x



\* 1) = 100% X-RAY

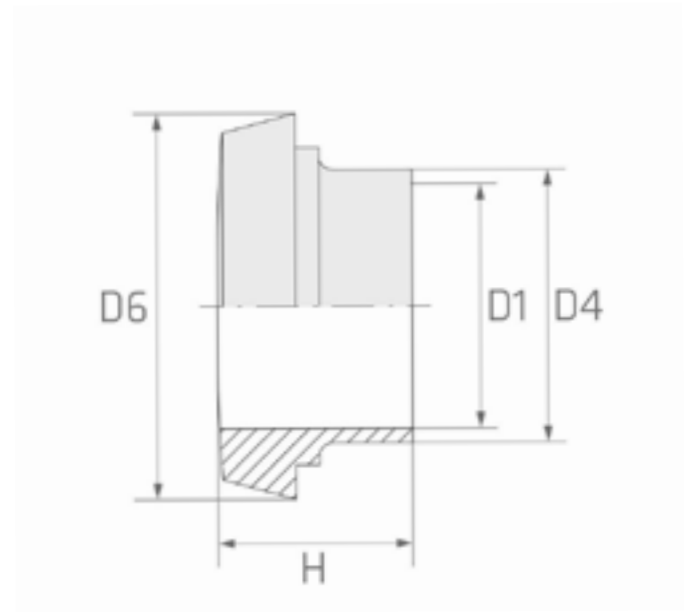


# TAPERED UNION

DIN 11852



1.4307-1.4404 (2/2)



DN	d1	d4	d6	h	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
150	150	154	176.0	37	0.92	*)	x



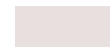
\* 1) = 100% X-RAY



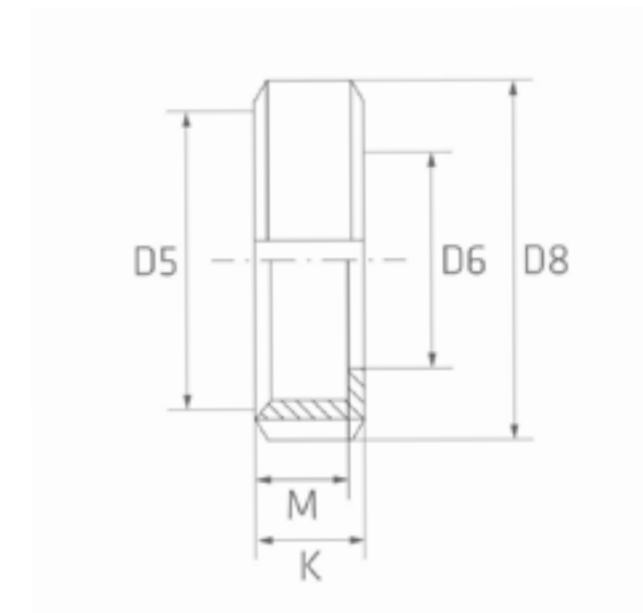


# NUT

DIN 11852



1.4307-1.4404 (1/2)



DN	d5	d6	d8	k	m	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
10	28x1/8"	19	38	18	15	0.07	x	x
15	34x1/8"	25	44	18	15	0.08	x	x
20	44x1/6"	31	54	20	17	0.13	x	x
25	52x1/6"	36	63	21	18	0.18	x	x
32	58x1/6"	42	70	21	18	0.22	x	
40	65x1/6"	49	78	21	18	0.25	x	x
50	78x1/6"	62	92	22	19	0.34	x	x
65	95x1/6"	80	112	25	21	0.55	x	x
75	104x1/6"	88	119	25	21	0.65	x	x
80	110x1/4"	94	127	29	25	0.80	x	x



\* 1) = 100% X-RAY

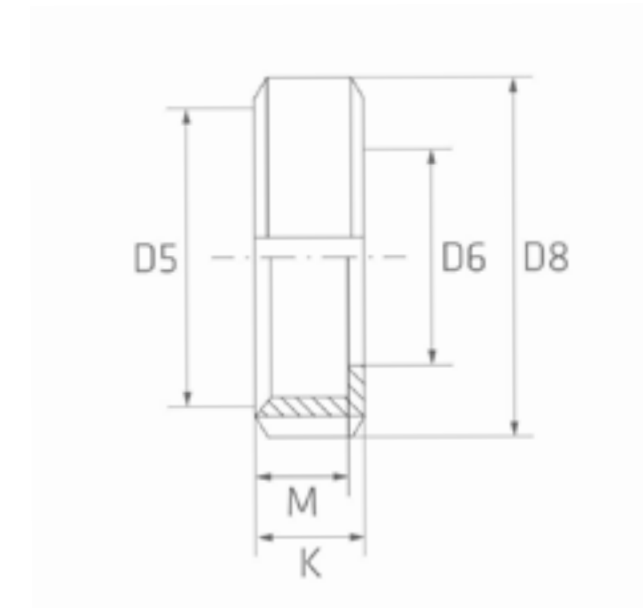


# NUT

DIN 11852



1.4307-1.4404 (2/2)



DN	d5	d6	d8	k	m	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
100	130x1/4"	115	148	31	26	1.08	x	x
125	160x1/4"	138	178	35	30	1.45	x	x
150	190x1/4"	164	210	40	34	1.88	x	



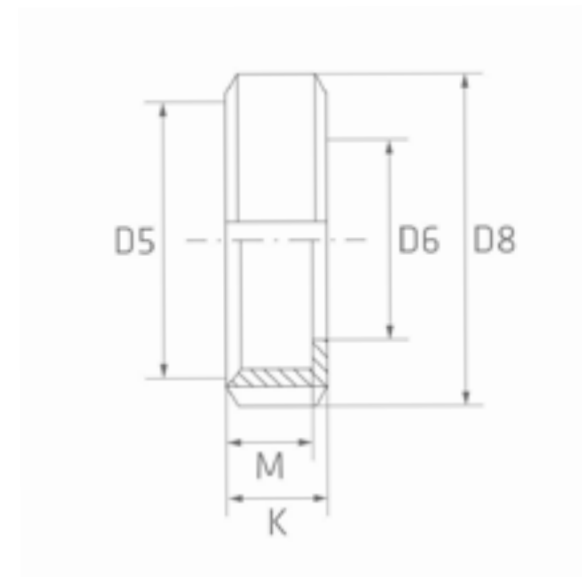
\* 1) = 100% X-RAY



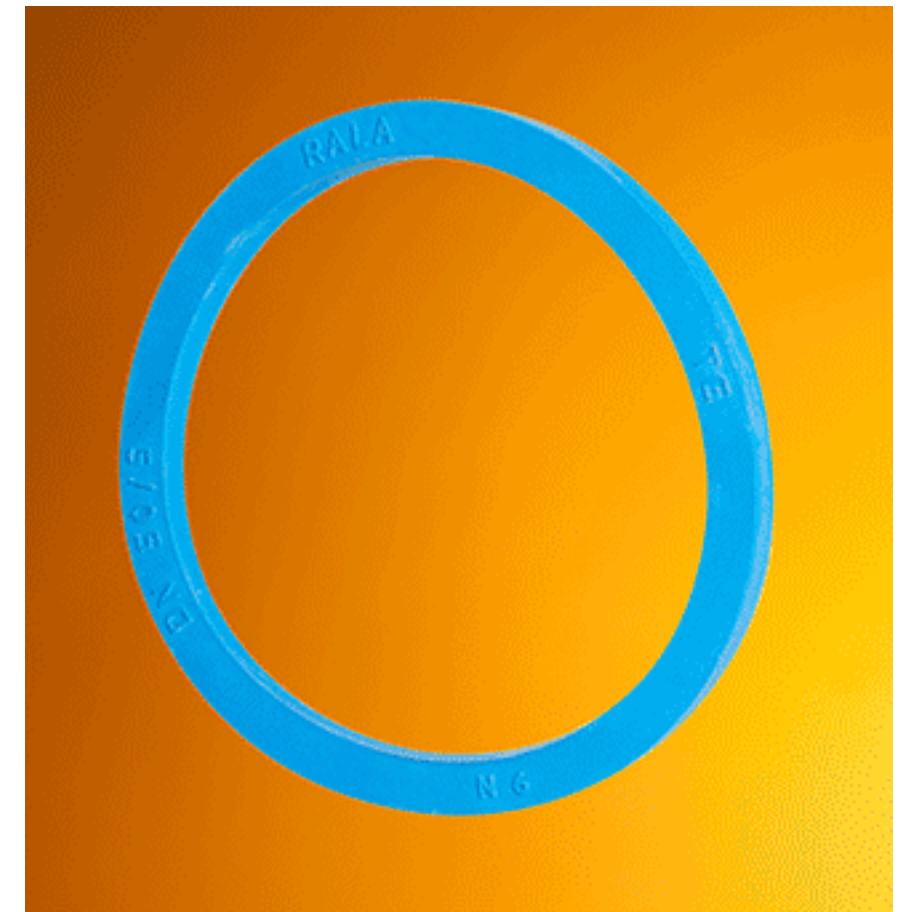
# GASKET

DIN 11852

VITON - PERB (1/2)



DN	A	B	C	Grade AISI/UNS kg/pce.	VITON *)	EPDM *)	PERB *)
10	4.5	12	20	0.001			x
15	4.5	18	26	0.001	x	x	x
20	4.5	23	33	0.001	x	x	x
25	5	30	40	0.001	x	x	x
32	5	36	46	0.001	x	x	x
40	5	42	52	0.001	x	x	x
50	5	54	64	0.001	x	x	x
65	5	71	81	0.001	x	x	x
75/3"	5	78	88	0.001	x	x	x
80	5	85	95	0.001	x	x	x



\* 1) = 100% X-RAY

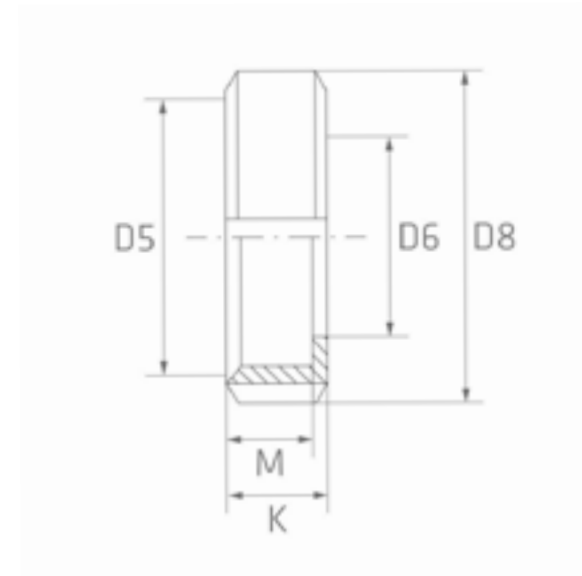


# GASKET

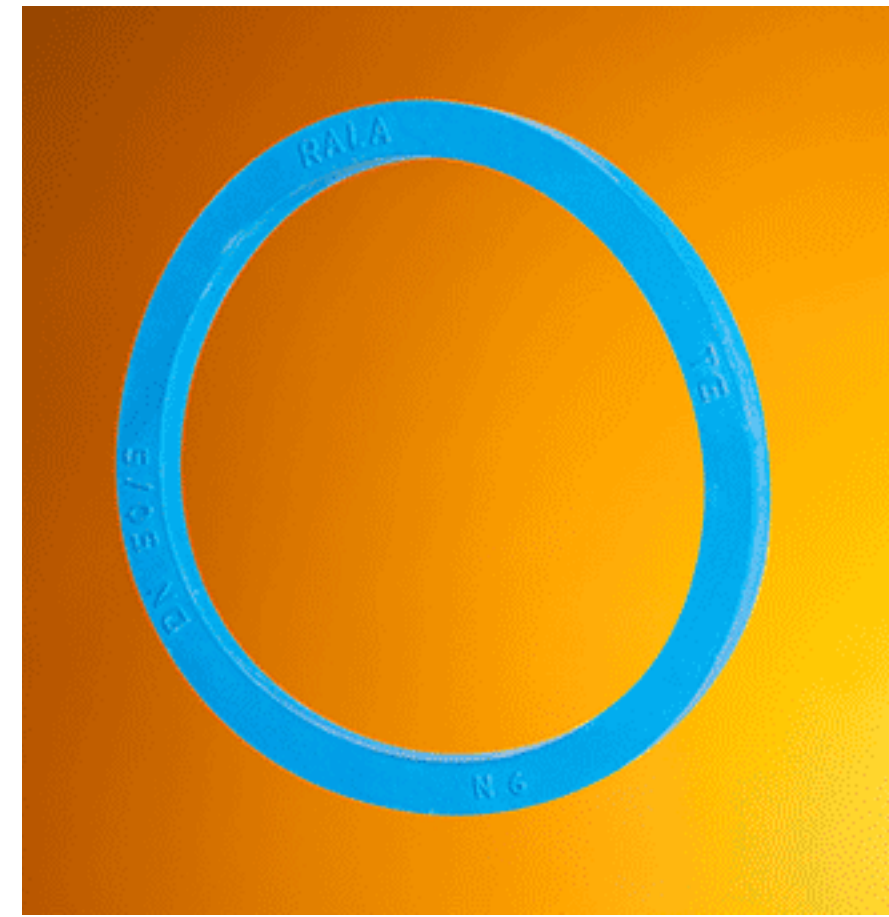
DIN 11852



VITON - PERB (2/2)



DN	A	B	C	Grade AISI/UNS kg/pce.	VITON *)	EPDM *)	PERB *)
100	6	104	114	0.001	x	x	x
125	7	130	142	0.002			x
150	7	155	167	0.004			x

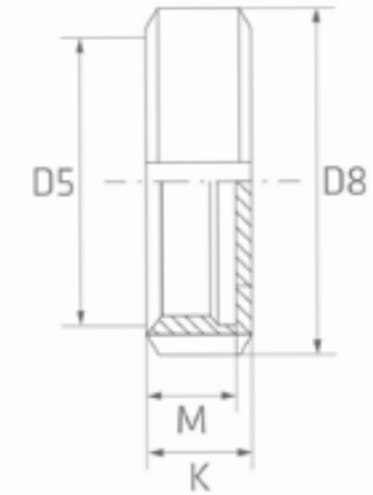


\* 1) = 100% X-RAY

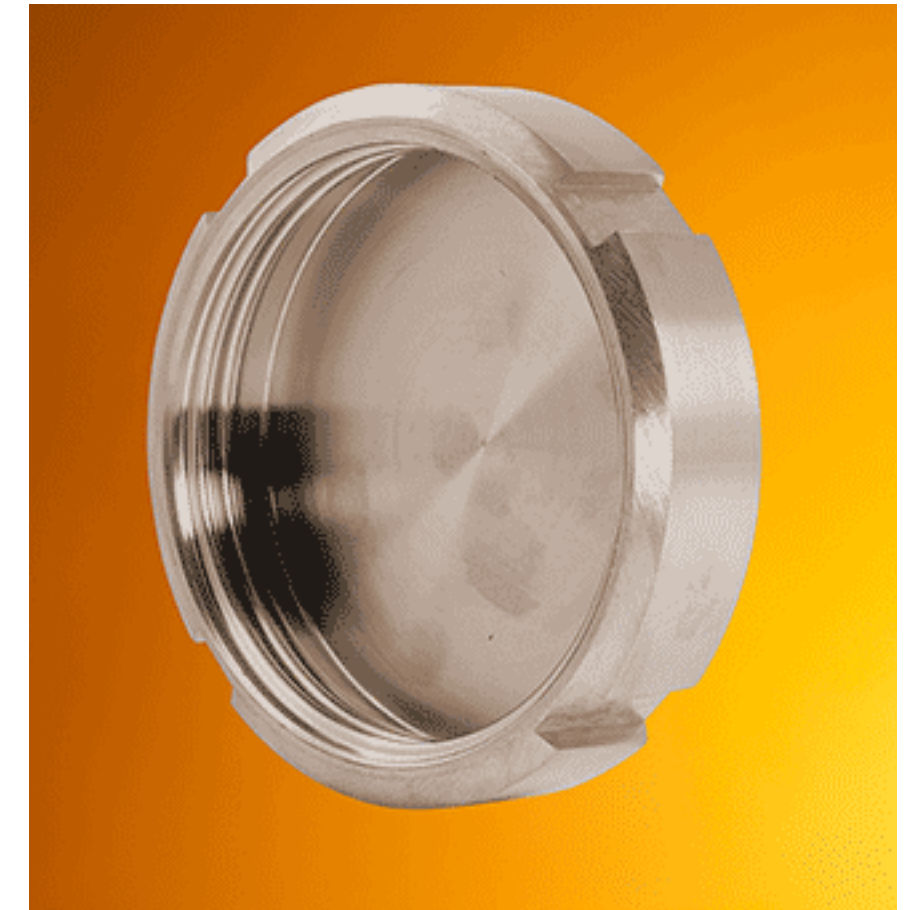
# BLIND NUT

DIN 11852

1.4307 - 1.4404 (1/1)



DN	d5	d8	k	m	Grade AISI/UNS kg/pce.	1.4404 304L/316L *) *)	1.4307 304L *)
15	34x1/8"	44	18	15	0.10	x	x
25	52x1/6"	63	21	18	0.20	x	x
32	58x1/6"	70	21	18	0.23	x	x
40	65x1/6"	78	21	18	0.26	x	x
50	78x1/6"	92	22	19	0.38	x	x
65	95x1/6"	112	25	21	0.66	x	
7 5/3"	104x1/6"	119	25	21	0.69	x	
80	110x1/4"	127	30	26	1.00	x	x
100	130x1/4"	148	31	26	1.40	x	x

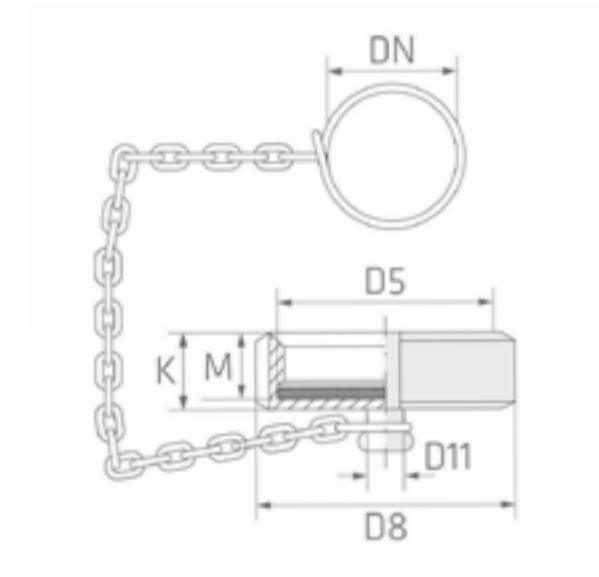


\* 1) = 100% X-RAY

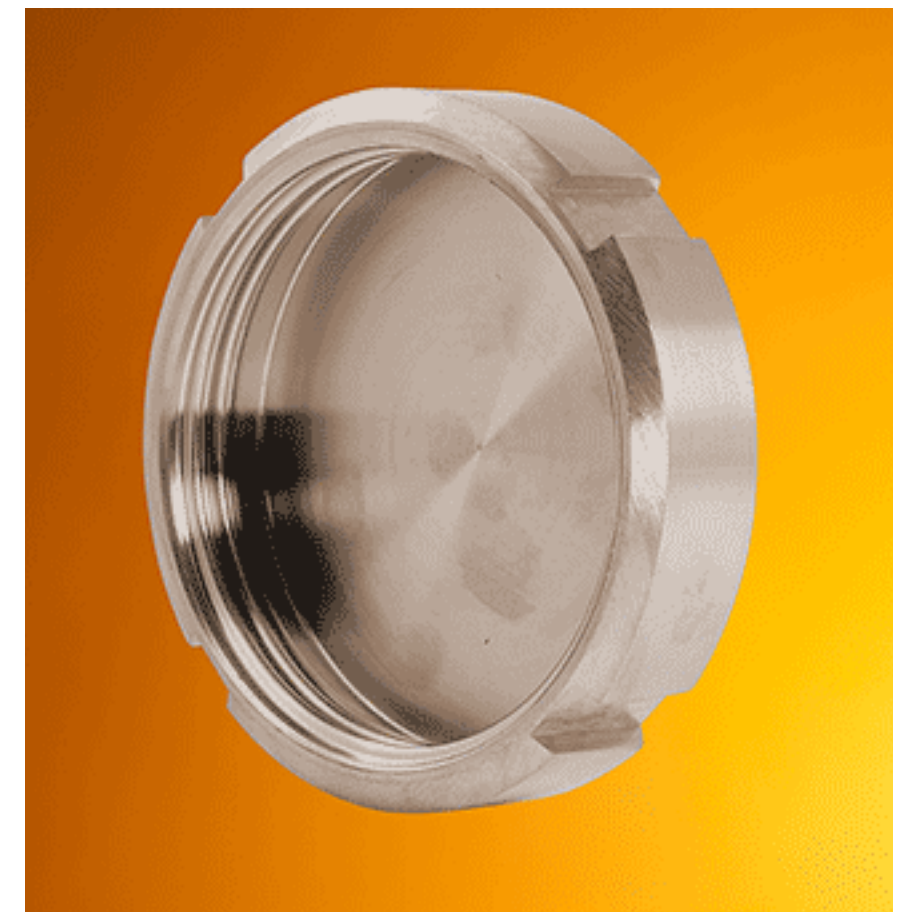
# BLIND NUT COMPLETE WITH SEALING DISC

DIN 11852

1.4307 (1/1)



DN	d5	d8	d11	k	m	Grade AISI/UNS kg/pce.	1.4307 304L *)
20	44x1/6"	54	10	20	17	0.19	x
25	52x1/6"	63	10	21	18	0.25	x
32	58x1/6"	70	10	21	18	0.29	x
50	78x1/6"	92	10	22	19	0.46	x
65	95x1/6"	112	10	25	21	0.85	x
75/ 3"	104x1/6"	119	10	25	21	0.90	x
80	110x1/4"	127	10	30	26	1.11	x
100	130x1/4"	148	10	31	26	1.53	x

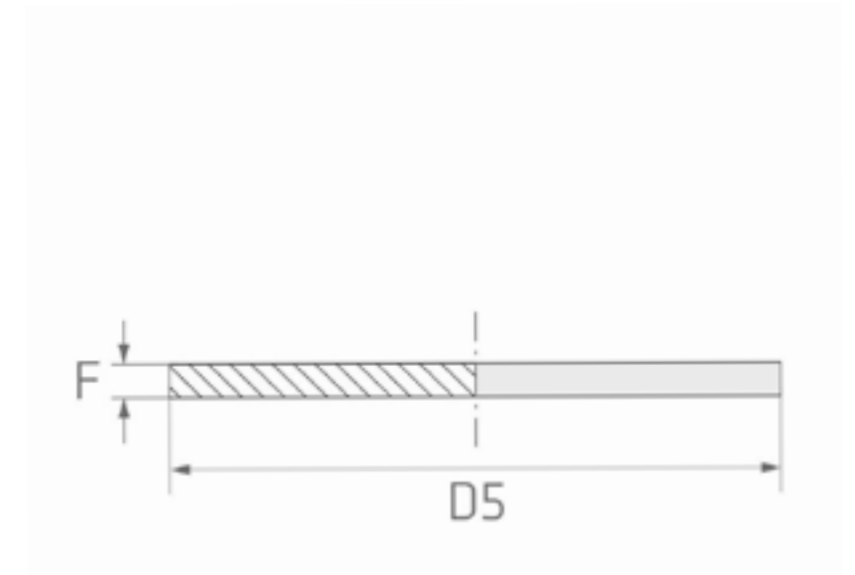


\* 1) = 100% X-RAY

# SEALING DISC

DIN 11852

PERB (1/1)

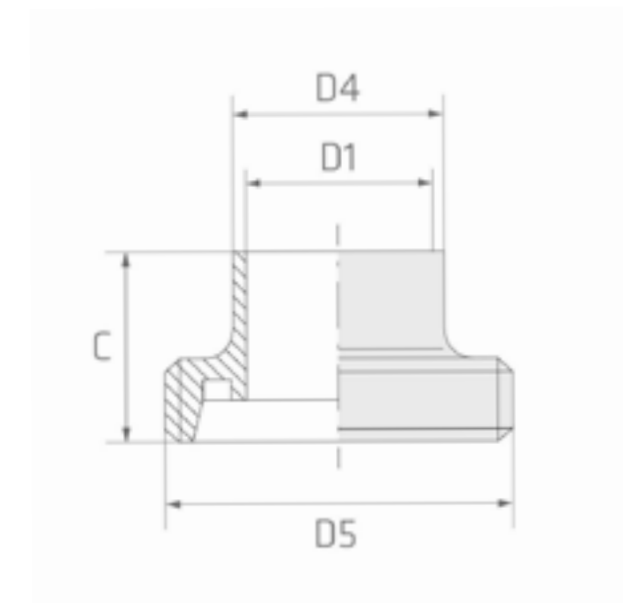


DN	d5	d5-PTFE	f	Grade AISI/UNS kg/pce.	PERB *)
25	52	51	3	0.008	x
32	58	57	3	0.010	x
40	65	64	3	0.013	x
50	78	77	3	0.020	x
65	95	94	3	0.029	x
75/3"	104	103	3	0.035	x
80	110	109	3	0.044	x
100	130	129	3	0.062	x

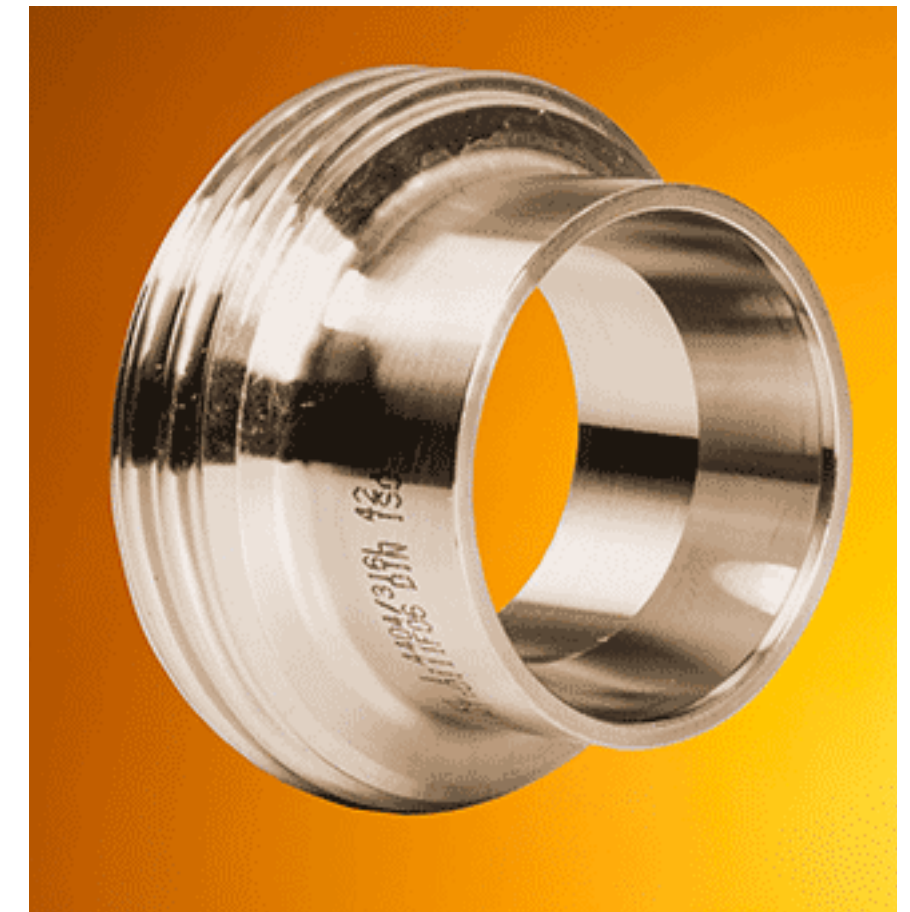
\* 1) = 100% X-RAY

# THREADED UNION ACCORDING TO DIN 11851 - INCH

1.4307 - 1.4404 (1/1)



DN	c	d1	d4	d5	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
1"	29	22.1	25.4	52x1/6"	0.14	x	x
1 1/2"	33	34.8	38.1	65x1/6"	0.21	x	x
2"	35	47.5	50.8	78x1/6"	0.28	x	x
2 1/2"	40	60.2	63.5	95x1/6"	0.47	x	x
3"	40	72.9	76.2	104x1/6"	0.51	x	x
4"	54	97.4	101.6	130x1/4"	1.02	x	x

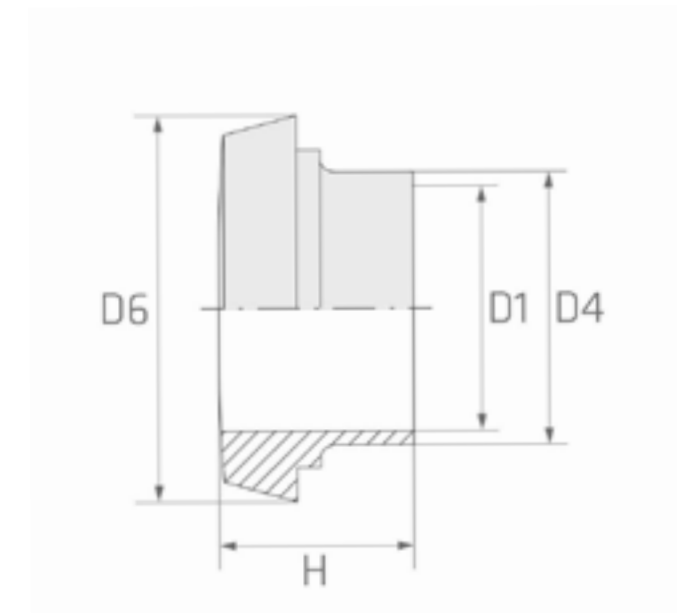


\* 1) = 100% X-RAY



# TAPERED UNION ACCORDING TO DIN 11851 - INCH

1.4307 - 1.4404 (1/1)



DN	d1	d4	d6	h	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
1"	22.1	25.4	44.0	22	0.10	x	
1 1/2"	34.8	38.1	56.0	26	0.15	x	x
2"	47.5	50.8	68.5	28	0.21	x	x
2 1/2"	60.2	63.5	86.0	32	0.37	x	x
3"	72.9	76.2	93.0	32	0.34	x	x
4"	97.4	101.6	121.0	44	0.82	x	x

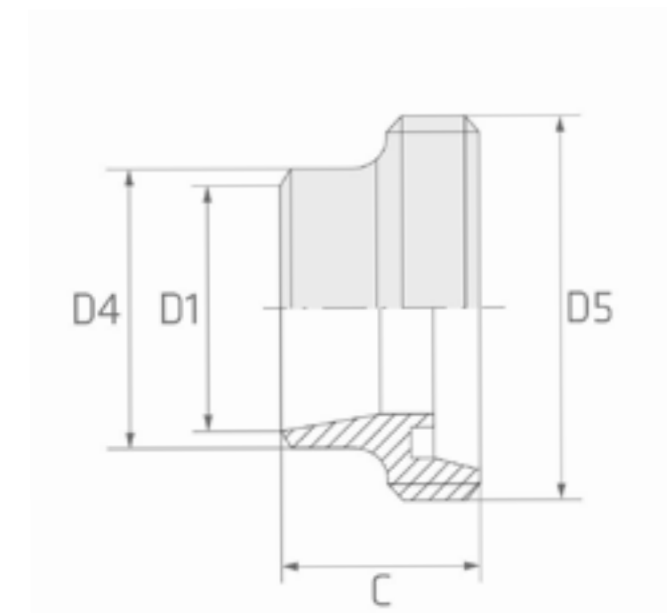


\* 1) = 100% X-RAY

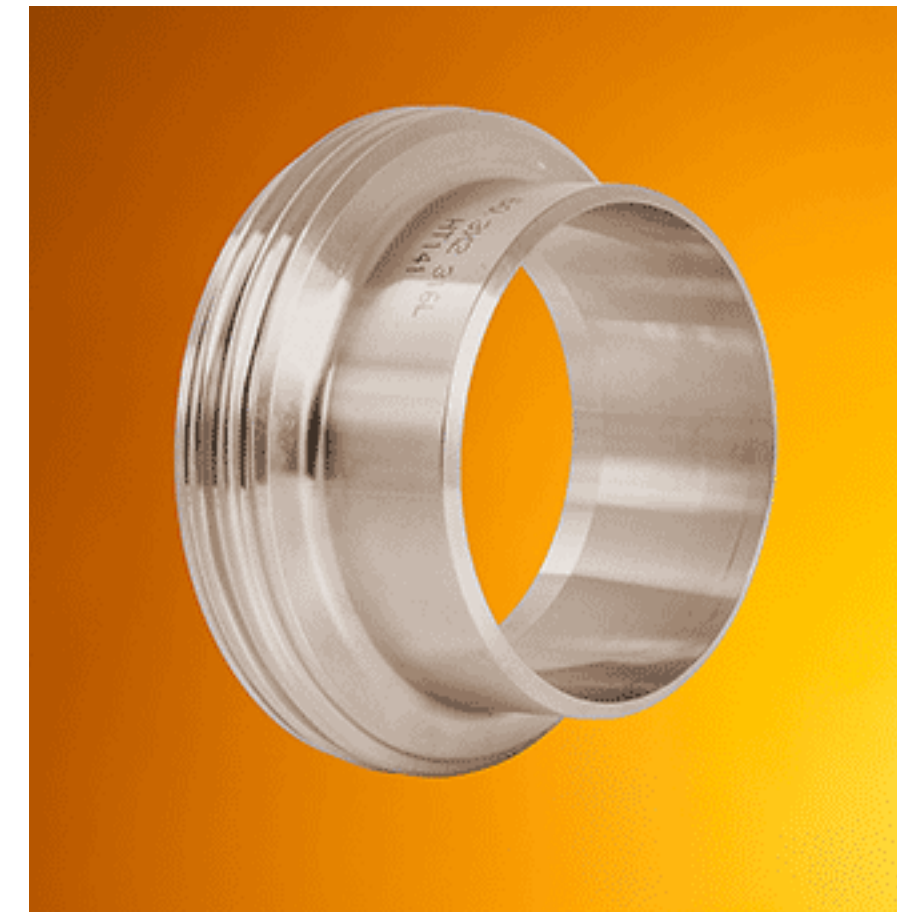


# THREADED UNION ACCORDING TO DIN 11851 - ISO

1.4307 - 1.4404 (1/1)



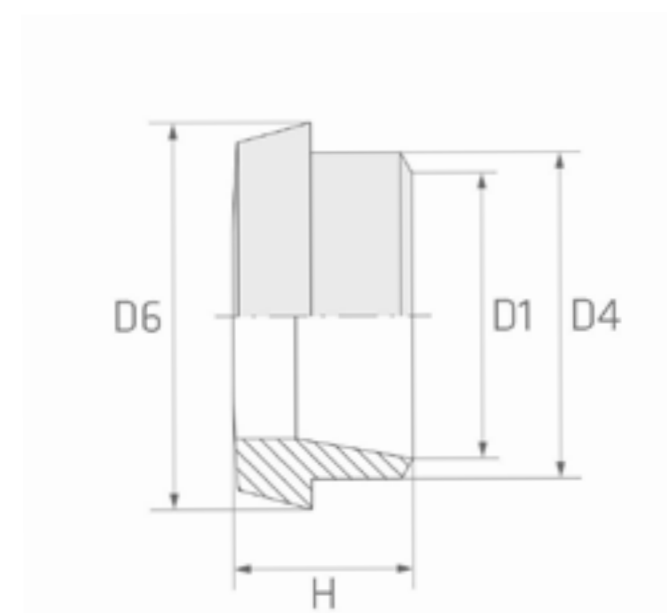
DN	c	d1	d4	d5	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
10	21	14.0	17.2	28x1/8"	0.03	x	
15	21	18.1	21.3	34x1/8"	0.04	x	x
20	24	23.7	26.9	44x1/8"	0.08	x	x
25	29	29.7	33.7	52x1/6"	0.11	x	x
32	32	38.4	42.4	58x1/6"	0.14	x	x
40	33	44.3	48.3	65x1/6"	0.19	x	x
50	35	56.3	60.3	78x1/6"	0.25	x	x
65	40	72.1	76.1	95x1/6"	0.37	x	x
80	45	84.3	88.9	110x1/4"	0.56	x	x
100	54	109.7	114.3	130x1/4"	0.81	x	x



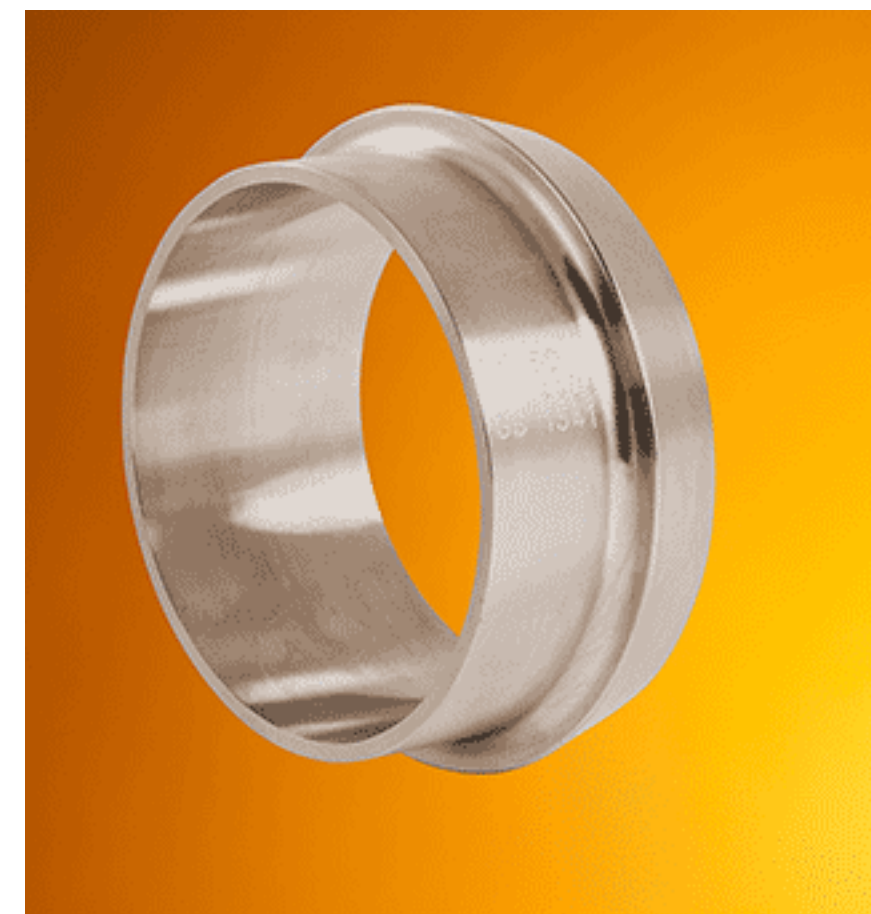
\* 1) = 100% X-RAY

# TAPERED UNION ACCORDING TO DIN 11851 - ISO

1.4307 - 1.4404 (1/1)



DN	d1	d4	d6	h	Grade AISI/UNS kg/pce.	1.4307 304L *)	1.4404 316L *)
15	18.1	21.3	28.5	17	0.02	x	x
20	23.7	26.9	36.5	18	0.04	x	x
25	29.7	33.7	44.0	22	0.07	x	x
32	38.4	42.4	50.0	25	0.11	x	x
40	44.3	48.3	56.0	26	0.13	x	x
50	56.3	60.3	68.5	28	0.19	x	x
65	72.1	76.1	86.0	32	0.29	x	x
80	84.3	88.9	100.0	37	0.36	x	x
100	109.7	114.3	121.0	44	0.67	x	x
125	134.5	139.7	150.0	34	0.76	x	



\* 1) = 100% X-RAY

# HIGH-PRESSURE FITTINGS NPT AND FOR WELDING



## High-pressure fittings NPT and for welding

### Tolerances

NPT Threaded flanges ANSI B2.1;  
similar ANSI B 16.11

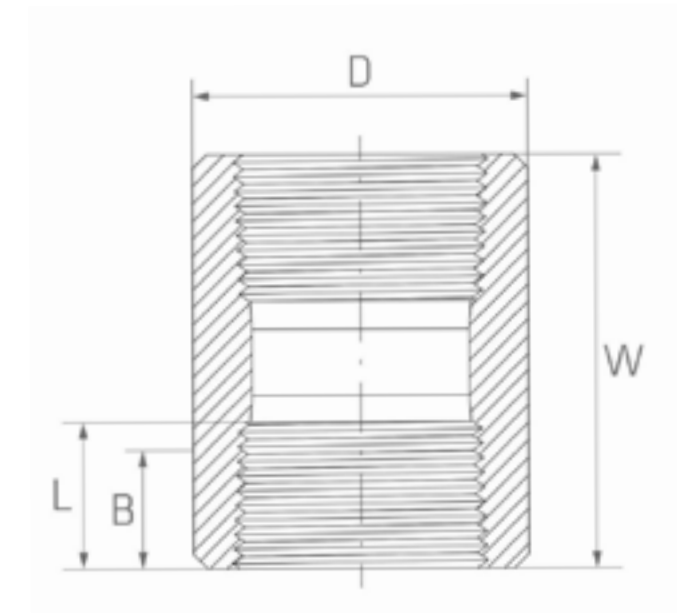
Socket weld similar ANSI B 16.11  
3000 lbs.

### Test certificates

Material similar ASTM-A182  
EN 10204 3.1

# SOCKET (NPT - B2.1 / 3000 LBS.)

304 - 316 (1/1)



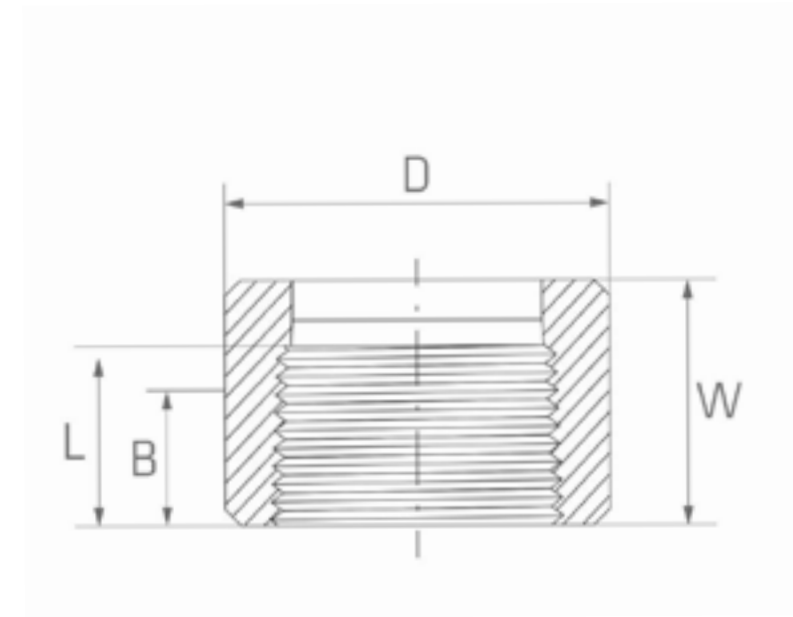
DN	INCH	W	D	B	L	Grade AISI/UNS kg/pce.	304/304L		316/316L	
							*)	*)	*)	*)
6	1/8"	32	16	6.4	6.7	0.03	x	x	x	x
8	1/4"	35	19	8.1	10.2	0.05	x	x	x	x
10	3/8"	38	22	9.1	10.4	0.06	x	x	x	x
15	1/2"	48	28	10.9	13.6	0.14	x	x	x	x
20	3/4"	51	35	12.7	13.9	0.20	x	x	x	x
25	1"	60	44	14.7	17.3	0.40	x	x	x	x
32	1 1/4"	67	57	17.0	18.0	0.70	x	x	x	x
40	1 1/2"	79	64	17.8	18.4	1.00	x	x	x	x
50	2"	86	76	19.0	19.2	1.90	x	x	x	x



\* 1) = 100% X-RAY

# HALF SOCKET (NPT - B2.1 / 3000 LBS.)

304 - 316 (1/1)



DN	INCH	W	D	B	L	Grade		
						AISI/UNS	304/304L	316/316L
						kg/pce.	*)	*)
6	1/8"	16.0	16	6.4	6.7	0.02	x	x
8	1/4"	17.5	20	8.1	10.2	0.03	x	x
10	3/8"	19.0	22	9.1	10.4	0.05	x	x
15	1/2"	24.0	28	10.9	13.6	0.07	x	x
20	3/4"	25.5	35	12.7	13.9	0.10	x	x
25	1"	30.0	44	14.7	17.3	0.20	x	x
32	1 1/4"	33.5	57	17.0	18.0	0.32	x	x
40	1 1/2"	39.5	64	17.8	18.4	0.50	x	x
50	2"	43.0	76	19.0	19.2	0.95	x	x

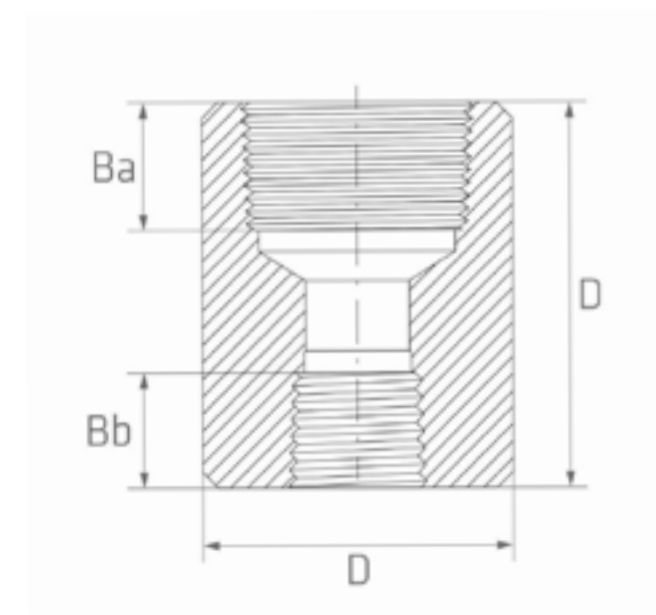


\* 1) = 100% X-RAY



# REDUCING SOCKET (NPT - B2.1 / 3000 LBS.)

304 - 316 (1/2)



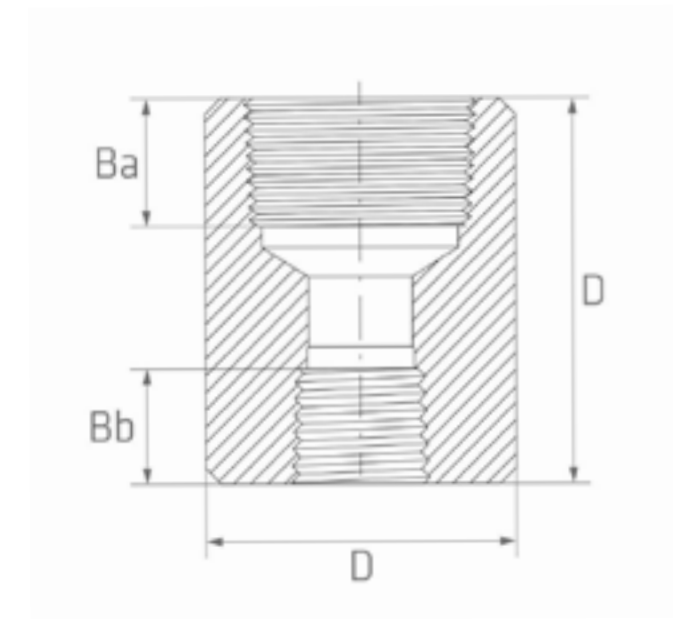
INCH	INCH	D	W	Ba	Bb	Grade		
						AISI/UNS	304/304L	316/316L
						kg/pce.	*)	*)
3/8"	1/4"	22	38	9.1	8.1	0.07		x
1/2"	1/4"	28	48	10.9	8.1	0.19	x	x
1/2"	3/8"	28	48	10.9	9.1	0.15	x	x
3/4"	1/2"	35	51	12.7	10.9	0.24	x	x
1"	1/2"	44	60	14.7	10.9	0.54	x	x
1"	3/4"	44	60	14.7	12.7	0.50	x	x
1 1/4"	1"	57	67	17.0	14.7	0.83		x
1 1/2"	3/4"	64	79	17.8	12.7	1.37		x
1 1/2"	1"	64	79	17.8	14.7	1.28	x	x
1 1/2"	1 1/4"	64	79	17.8	17.0	1.22		x



\* 1) = 100% X-RAY

# REDUCING SOCKET (NPT - B2.1 / 3000 LBS.)

304 - 316 (2/2)



INCH	INCH	D	W	Ba	Bb	Grade		
						AISI/UNS	304/304L	316/316L
						kg/pce.	*)	*)
2"	1"	76	86	19.0	14.7	1.93		x
2"	1 1/2"	76	86	19.0	17.8	1.61	x	x

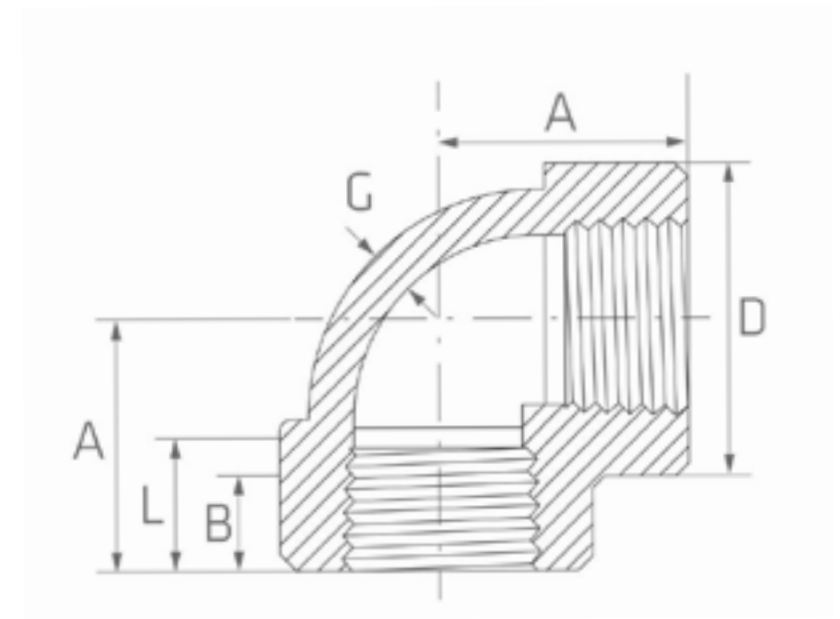


\* 1) = 100% X-RAY



# ELBOW 90° F/F (NPT)

1.4301 - 1.4404 (1/1)



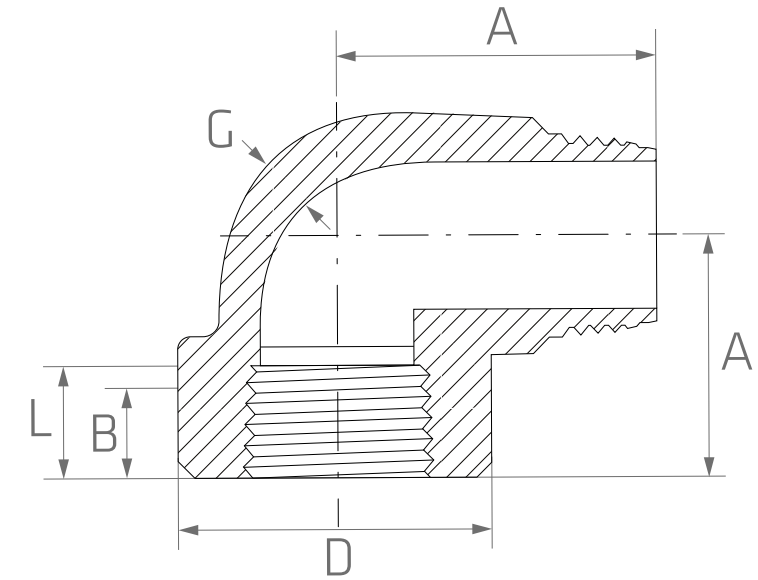
DN	INCH	A	D	G	B	L	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
6	1/8"	24	25	3.18	6.4	6.7	0.07		x
8	1/4"	24	25	3.30	8.1	10.2	0.14	x	x
10	3/8"	28	33	3.51	9.1	10.4	0.27	x	x
15	1/2"	34	38	4.09	10.9	13.6	0.40	x	x
20	3/4"	38	46	4.32	12.7	13.9	0.63	x	x
25	1"	44	56	4.98	14.7	17.3	1.10	x	x
32	1 1/4"	50	62	5.28	17.0	18.0	1.22	x	x
40	1 1/2"	60	76	5.56	17.8	18.4	2.35	x	x
50	2"	64	86	7.14	19.0	19.2	3.30	x	x



\* 1) = 100% X-RAY

# ELBOW 90° F/M (NPT)

1.4301 - 1.4404 (1/1)



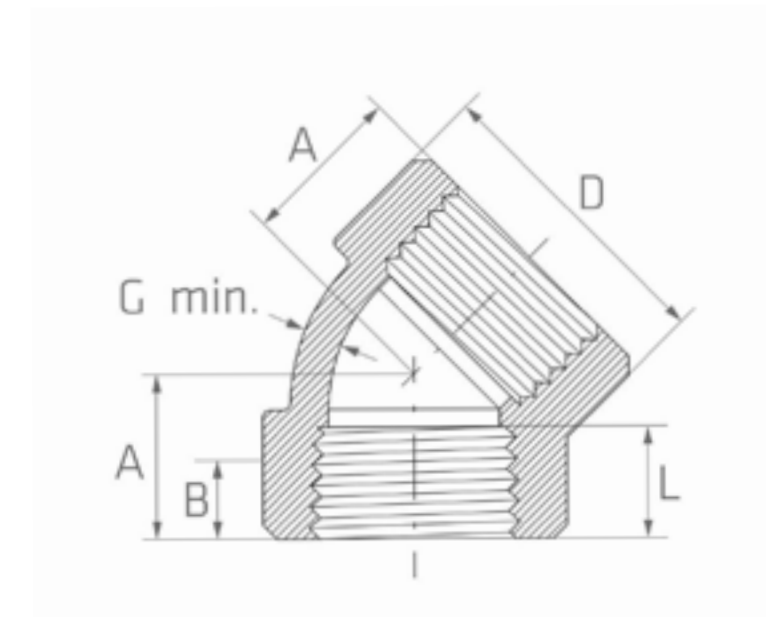
DN	INCH	A	A1	D	G	B	L	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
8	1/4"	25	27	25	3.5	8.1	10.2	0.14	x	x
10	3/8"	29	32	33	3.5	9.1	10.4	0.28	x	x
15	1/2"	33	36	38	4.0	10.9	13.6	0.46		x
20	3/4"	38	41	46	4.5	12.7	13.9	0.67		x
25	1"	44	50	56	5.0	14.7	17.3	1.18		x
32	1 1/4"	51	61	62	5.5	17.0	18.0	2.09		x
40	1 1/2"	60	70	76	5.5	17.8	18.4	2.45		x



\* 1) = 100% X-RAY

# ELBOW 45° F/F (NPT)

1.4401 (1/1)



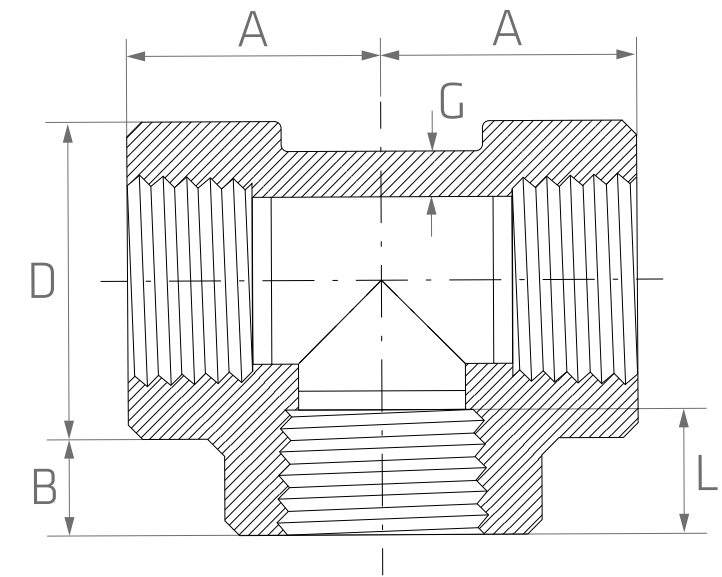
DN	INCH	A	D	G	B	L	Grade AISI/UNS kg/pce.	1.4401/1.4404 316/316L *)
6	1/8"	19	25	3.18	6.4	6.7	0.10	x
8	1/4"	19	25	3.30	8.1	10.2	0.14	x
10	3/8"	22	33	3.51	9.1	10.4	0.25	x
15	1/2"	25	38	4.09	10.9	13.6	0.32	x
20	3/4"	28	46	4.32	12.7	13.9	0.51	x
25	1"	33	56	4.98	14.7	17.3	0.85	x
32	1 1/4"	35	62	5.28	17.0	18.0	1.00	x
40	1 1/2"	43	75	5.56	17.8	18.4	1.85	x
50	2"	44	84	7.14	19.0	19.2	3.00	x



\* 1) = 100% X-RAY

# TEE (NPT)

1.4301 - 1.4401 (1/1)



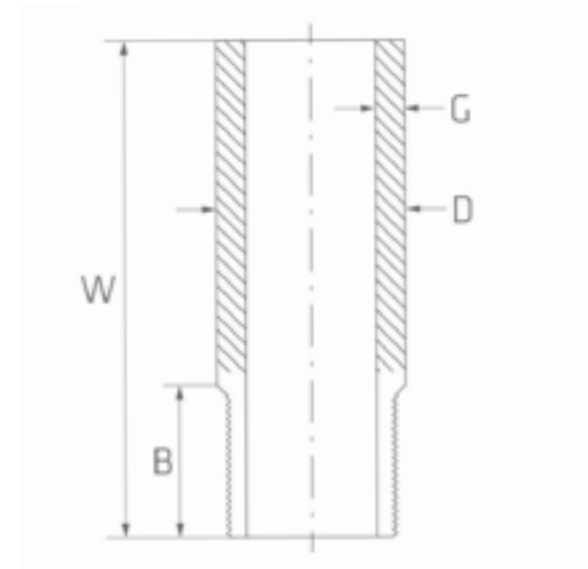
DN	INCH	A	D	G	B	L	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
6	1/8"	25	25	3.18	6.4	6.7	0.01		x
8	1/4"	25	25	3.30	8.1	10.2	0.19	x	x
10	3/8"	28	33	3.51	9.1	10.4	0.39	x	x
15	1/2"	33	38	4.09	10.9	13.6	0.52	x	x
20	3/4"	38	46	4.32	12.7	13.9	0.83	x	x
25	1"	44	56	4.98	14.7	17.3	1.38	x	x
32	1 1/4"	51	62	5.28	17.0	18.0	1.66	x	x
40	1 1/2"	60	75	5.56	17.8	18.4	3.12	x	x
50	2"	64	84	7.14	19.0	19.2	4.00	x	x



\* 1) = 100% X-RAY

# WELDING NIPPLE (NPT)

1.4301 - 1.4401 (1/3)



INCH	W	D	G	B	Grade AISI/UNS kg/pce.	1.4301/1.4307	1.4401/1.4404
						304/304L *)	316/316L *)
1/8"	50.8	10.3	2.8	10.0	0.02	x	
1/8"	76.1	10.3	2.8	10.0	0.02	x	
1/4"	50.8	13.7	3.0	11.0	0.02	x	x
1/4"	76.1	13.7	3.0	11.0	0.04	x	x
1/4"	101.6	13.7	3.0	11.0	0.05		x
3/8"	50.8	17.2	3.2	12.5	0.06	x	x
3/8"	76.1	17.2	3.2	12.5	0.09	x	x
3/8"	101.6	17.2	3.2	12.5	0.11		x
1/2"	50.8	21.3	3.7	14.5	0.08	x	x
1/2"	76.1	21.3	3.7	14.5	0.12	x	x

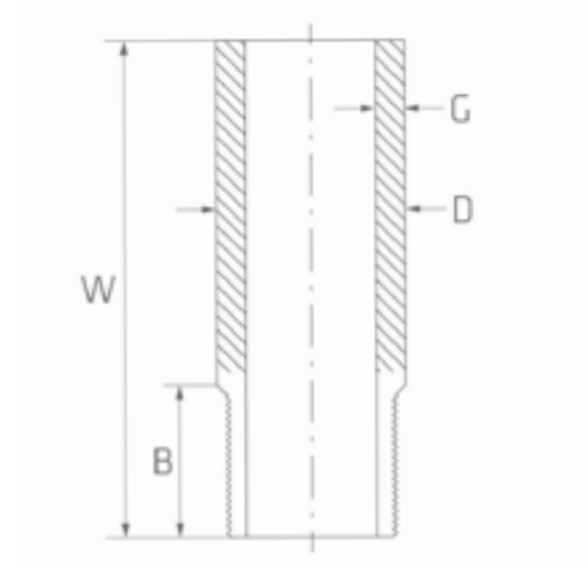


\* 1) = 100% X-RAY



# WELDING NIPPLE (NPT)

1.4301 - 1.4401 (2/3)



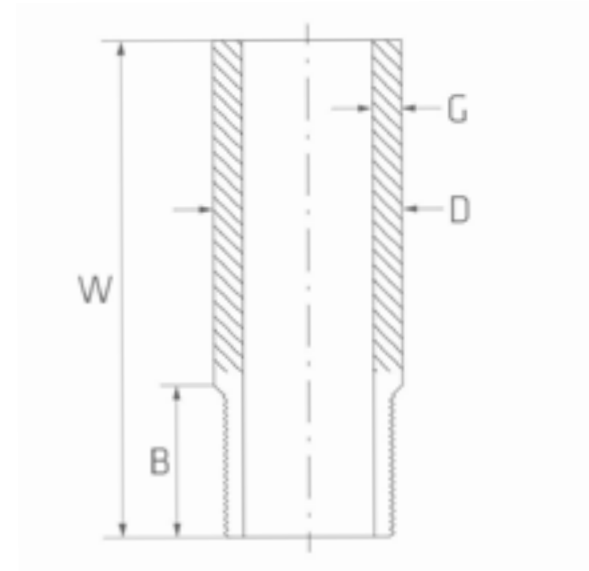
INCH	W	D	G	B	Grade AISI/UNS kg/pce.	1.4301/1.4307	1.4401/1.4404
						304/304L *)	316/316L *)
1/2"	101.6	21.3	3.7	14.5	0.17	x	x
3/4"	50.8	26.7	3.9	16.0	0.11	x	x
3/4"	76.1	26.7	3.9	16.0	0.17	x	x
3/4"	101.6	26.7	3.9	16.0	0.23	x	x
1"	50.8	33.4	4.6	19.0	0.17	x	x
1"	76.1	33.4	4.6	19.0	0.25	x	x
1"	101.6	33.4	4.6	19.0	0.33	x	x
1 1/4"	50.8	42.2	4.9	20.5	0.23		x
1 1/4"	76.1	42.2	4.9	20.5	0.34		x
1 1/4"	101.6	42.2	4.9	20.5	0.46	x	x



\* 1) = 100% X-RAY

# WELDING NIPPLE (NPT)

1.4301 - 1.4401 (3/3)



INCH	W	D	G	B	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
1 1/2"	50.8	48.3	5.1	20.5	0.28		x
1 1/2"	76.1	48.3	5.1	20.5	0.42		x
1 1/2"	101.6	48.3	5.1	20.5	0.56	x	x
2"	50.8	60.3	5.5	22.0	0.39	x	x
2"	76.1	60.3	5.5	22.0	0.58	x	x
2"	101.6	60.3	5.5	22.0	0.77		x

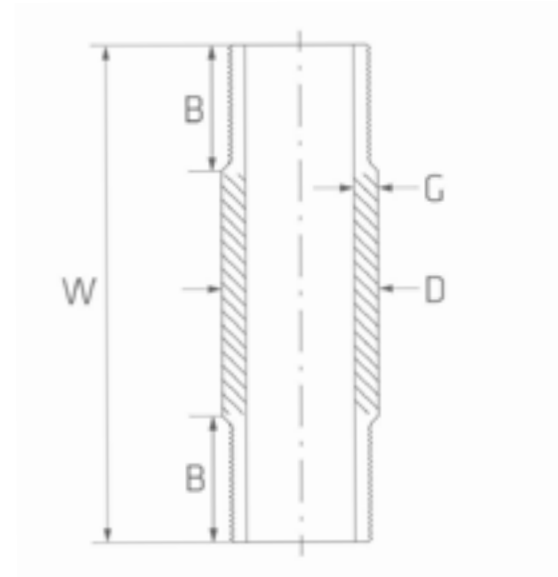


\* 1) = 100% X-RAY



# DOUBLE-PIPE NIPPLE (NPT)

1.4301 - 1.4401 (1/3)



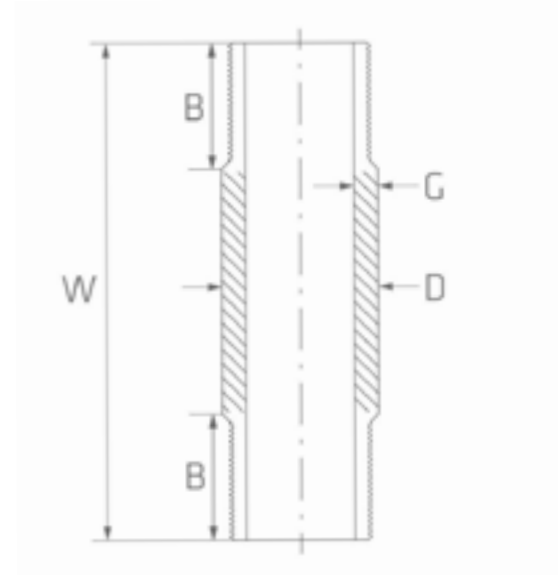
INCH	W	D	G	B	Grade AISI/UNS kg/pce.	1.4301/1.4307	1.4401/1.4404
						304/304L *)	316/316L *)
1/8"	101.6	10.2	2.8	10.0	0.04		x
1/4"	50.8	13.7	3.0	11.0	0.02	x	x
1/4"	76.1	13.7	3.0	11.0	0.04	x	x
1/4"	101.6	13.7	3.0	11.0	0.05	x	x
3/8"	50.8	17.2	3.2	12.5	0.06	x	x
3/8"	76.1	17.2	3.2	12.5	0.09		x
3/8"	101.6	17.2	3.2	12.5	0.11		x
1/2"	50.8	21.3	3.7	14.5	0.08	x	x
1/2"	76.1	21.3	3.7	14.5	0.12	x	x
1/2"	101.6	21.3	3.7	14.5	0.17	x	x



\* 1) = 100% X-RAY

# DOUBLE-PIPE NIPPLE (NPT)

1.4301 - 1.4401 (2/3)



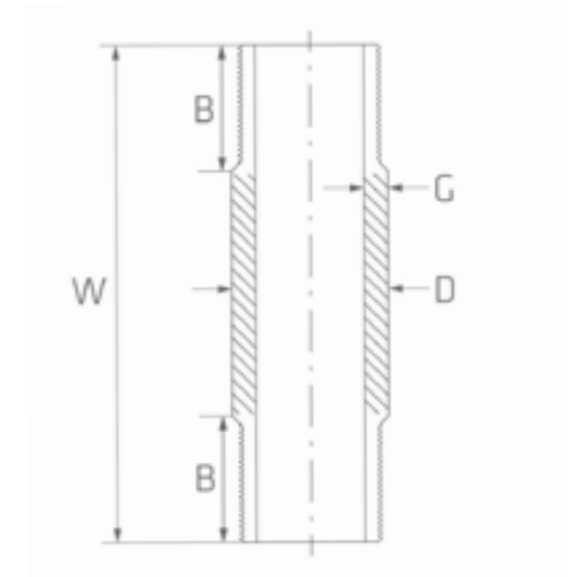
INCH	W	D	G	B	Grade AISI/UNS kg/pce.	1.4301/1.4307	1.4401/1.4404
						304/304L *)	316/316L *)
3/4"	50.8	26.7	3.9	16.0	0.11	x	x
3/4"	76.1	26.7	3.9	16.0	0.17	x	x
3/4"	101.6	26.7	3.9	16.0	0.23	x	x
1"	50.8	33.4	4.6	19.0	0.17	x	x
1"	76.1	33.4	4.6	19.0	0.25	x	x
1"	101.6	33.4	4.6	19.0	0.33	x	x
1 1/4"	50.8	42.2	4.9	20.5	0.23	x	x
1 1/4"	76.1	42.2	4.9	20.5	0.34		x
1 1/4"	101.6	42.2	4.9	20.5	0.46	x	x
1 1/2"	50.8	48.3	5.1	20.5	0.28	x	x



\* 1) = 100% X-RAY

# DOUBLE-PIPE NIPPLE (NPT)

1.4301 - 1.4401 (3/3)



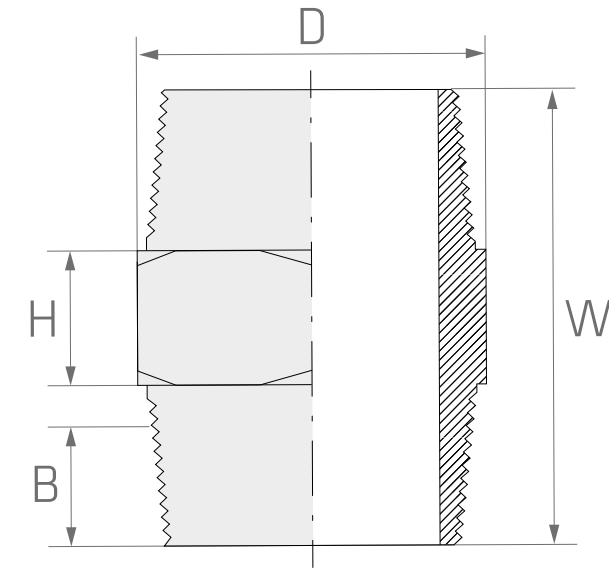
INCH	W	D	G	B	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
1 1/2"	76.1	48.3	5.1	20.5	0.42		x
1 1/2"	101.6	48.3	5.1	20.5	0.56	x	x
2"	50.8	60.3	5.5	22.0	0.39	x	x
2"	76.1	60.3	5.5	22.0	0.58		x
2"	101.6	60.3	5.5	22.0	0.77	x	x



\* 1) = 100% X-RAY

# HEXAGON NIPPLE (NPT)

1.4301 - 1.4401 (1/1)



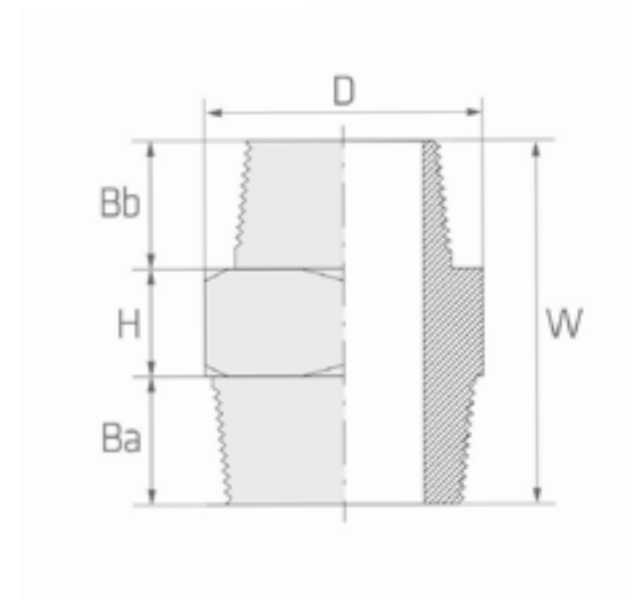
DN	INCH	W	H	D	B	Grade AISI/UNS kg/pce.	1.4301/1.4307	1.4401/1.4404
							304/304L *)	316/316L *)
6	1/8"	26	6	11.0	9.5	0.01		x
8	1/4"	42	6	16.0	11.0	0.03	x	x
10	3/8"	47	8	17.5	12.5	0.06	x	x
15	1/2"	52	8	22.0	14.5	0.09	x	x
20	3/4"	57	10	27.0	16.0	0.12	x	x
25	1"	65	10	35.0	19.0	0.17	x	x
32	1 1/4"	72	14	44.5	20.5	0.29	x	x
40	1 1/2"	74	16	51.0	20.5	0.34	x	x
50	2"	78	17	63.0	22.0	0.55	x	x



\* 1) = 100% X-RAY

# HEXAGON REDUCING NIPPLE (NPT)

1.4301 - 1.4401 (1/2)



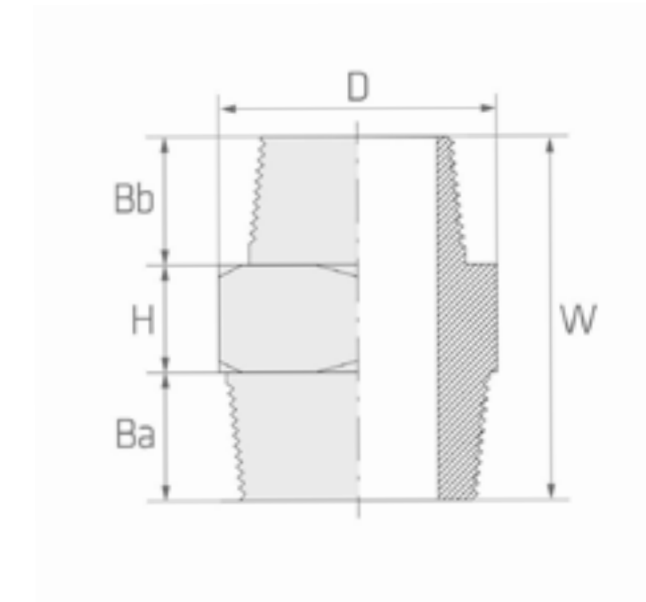
INCH	INCH	H	D	W	Ba	Bb	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
1/4"	1/8"	6	16	27	11	10	0.04		x
3/8"	1/4"	8	19	32	13	11	0.05		x
1/2"	1/4"	10	22	35	14	11	0.08	x	x
1/2"	3/8"	10	22	37	14	13	0.08	x	x
3/4"	1/4"	11	27	38	16	11	0.08		x
3/4"	1/2"	11	27	41	16	14	0.10		x
1"	1/4"	13	35	43	19	11	0.17	x	x
1"	3/8"	13	35	45	19	13	0.17		x
1"	1/2"	13	35	46	19	14	0.21	x	x
1"	3/4"	13	35	48	19	16	0.21	x	x



\* 1) = 100% X-RAY

# HEXAGON REDUCING NIPPLE (NPT)

1.4301 - 1.4401 (2/2)



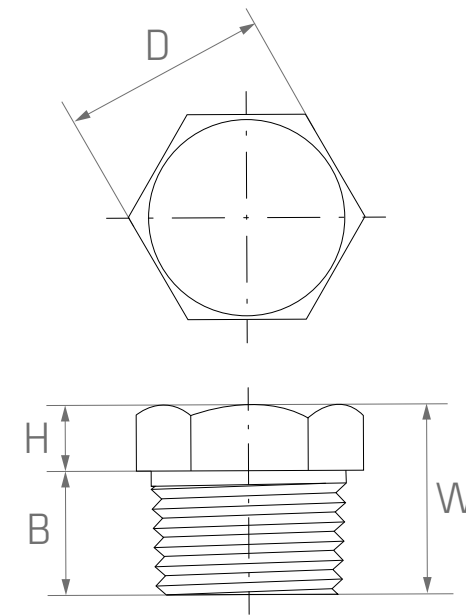
INCH	INCH	H	D	W	Ba	Bb	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
1 1/4"	1"	14	46	54	21	19	0.39		x
1 1/2"	1/2"	16	50	51	21	14	0.34		x
1 1/2"	3/4"	16	50	53	21	16	0.50		x
1 1/2"	1"	16	50	56	21	19	0.52	x	x
2"	1/2"	18	63	54	22	14	1.00		x
2"	3/4"	18	63	56	22	16	0.98		x
2"	1"	18	63	59	22	19	0.96		x
2"	1 1/4"	18	63	61	22	21	0.95	x	x
2"	1 1/2"	18	63	61	22	21	0.94		x
									x



\* 1) = 100% X-RAY

# HEXAGON HEAD PLUG (NPT)

1.4301 - 1.4401 (1/1)



DN	INCH	W	H	D	B	Grade AISI/UNS kg/pce.	1.4301/1.4307	1.4401/1.4404
							304/304L *)	316/316L *)
6	1/8"	16	6	11.0	10	0.01	x	x
8	1/4"	17	6	16.0	11	0.03	x	x
10	3/8"	21	8	18.0	13	0.05	x	x
15	1/2"	22	8	22.0	14	0.08	x	x
20	3/4"	26	10	27.0	16	0.15	x	x
25	1"	29	10	36.0	19	0.25	x	x
32	1 1/4"	35	14	46.0	21	0.50	x	x
40	1 1/2"	37	16	50.0	21	0.65	x	x
50	2"	40	18	65.0	22	1.10	x	x
								x

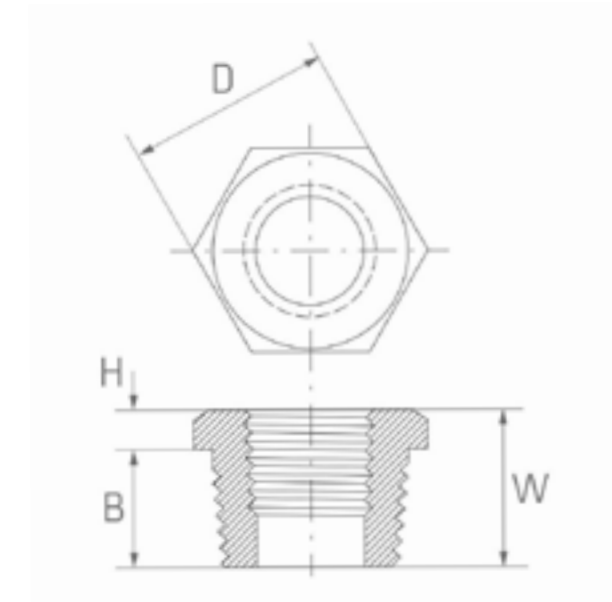


\* 1) = 100% X-RAY



# REDUCER F/M (NPT)

1.4301 - 1.4401 (1/3)



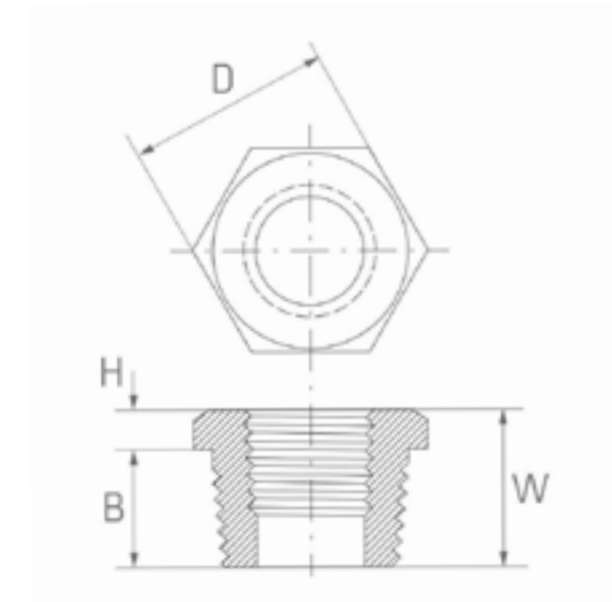
INCH	INCH	W	H	B	D	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
3/8"	1/8"	17	4	13	19	0.02		x
3/8"	1/4"	17	4	13	19	0.03	x	x
1/2"	1/4"	19	5	14	22	0.06	x	x
1/2"	3/8"	19	5	14	27	0.06	x	x
3/4"	1/4"	22	6	16	27	0.12		x
3/4"	3/8"	22	6	16	27	0.10	x	x
3/4"	1/2"	22	6	16	27	0.09	x	x
1"	1/4"	25	6	19	35	0.19	x	x
1"	3/8"	25	6	19	35	0.17		x
1"	1/2"	25	6	19	35	0.15	x	x



\* 1) = 100% X-RAY

# REDUCER F/M (NPT)

1.4301 - 1.4401 (2/3)



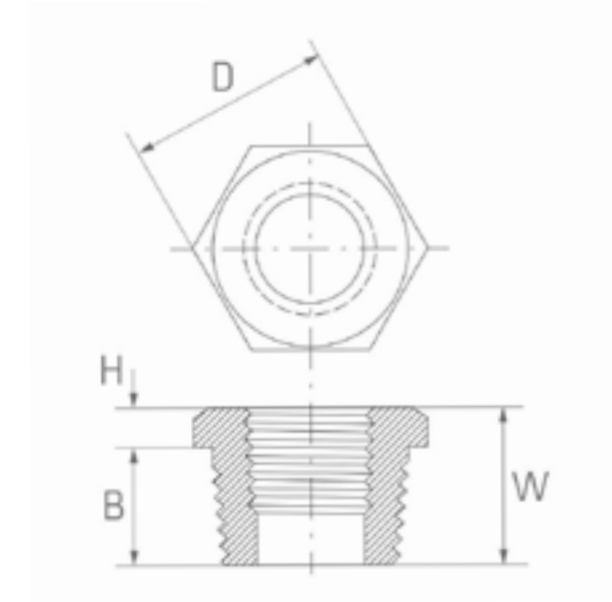
INCH	INCH	W	H	B	D	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
1"	3/4"	25	6	19	35	0.11	x	x
1 1/4"	1/2"	28	7	21	46	0.10	x	x
1 1/4"	3/4"	28	7	21	46	0.09		x
1 1/4"	1"	28	7	21	46	0.12		x
1 1/2"	1/2"	29	8	21	50	0.28	x	x
1 1/2"	3/4"	29	8	21	50	0.24	x	x
1 1/2"	1"	29	8	21	50	0.20	x	x
1 1/2"	1 1/4"	29	8	21	50	0.16	x	x
2"	1/2"	31	9	22	63	0.50	x	x
2"	3/4"	31	9	22	63	0.45		x



\* 1) = 100% X-RAY

# REDUCER F/M (NPT)

1.4301 - 1.4401 (3/3)



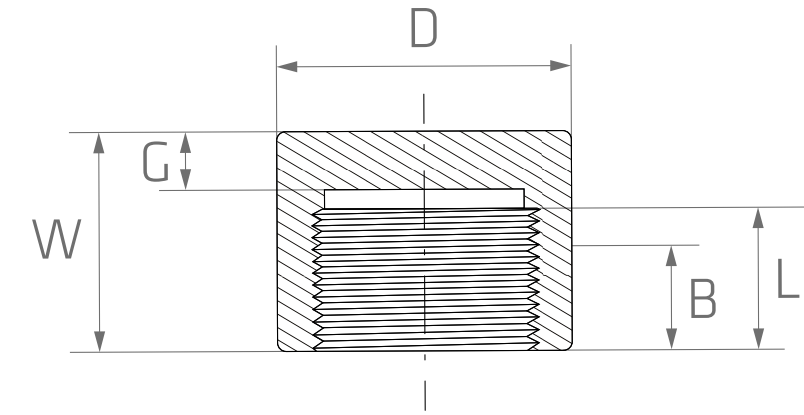
INCH	INCH	W	H	B	D	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
2"	1"	31	9	22	63	0.41		x
2"	1 1/4"	31	9	22	63	0.37		x
2"	1 1/2"	31	9	22	63	0.33	x	x



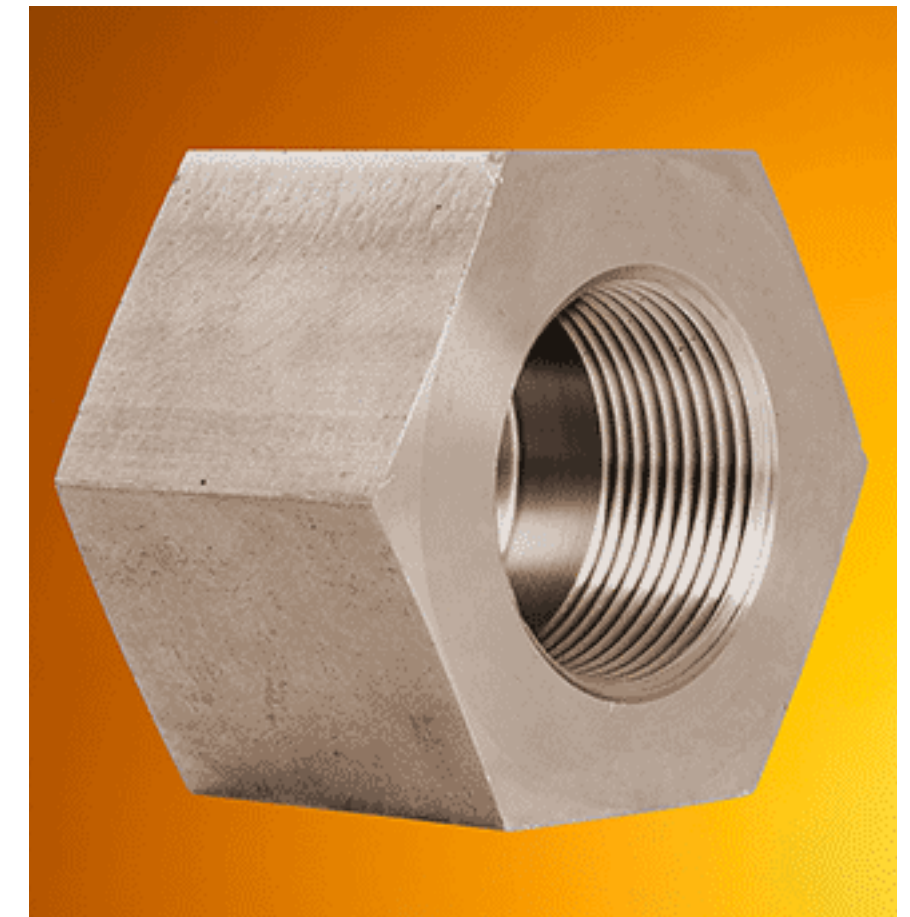
\* 1) = 100% X-RAY

# HEXAGON CAP (NPT)

1.4301 - 1.4401 (1/1)



DN	INCH	W	D	G	B	L	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
8	1/4"	25	16.0	5.0	8.0	10.0	0.05	x	x
10	3/8"	25	17.5	5.0	9.0	10.5	0.08	x	x
15	1/2"	32	22.0	6.5	11.0	13.5	0.12	x	x
20	3/4"	37	27.0	6.5	12.5	14.0	0.20	x	x
25	1"	41	35.0	9.5	14.5	17.5	0.31	x	x
32	1 1/4"	44	44.5	9.5	17.0	18.0	0.60	x	x
40	1 1/2"	44	51.0	11.0	18.0	18.5	0.73	x	x
50	2"	48	63.5	12.5	19.0	19.0	1.05	x	x

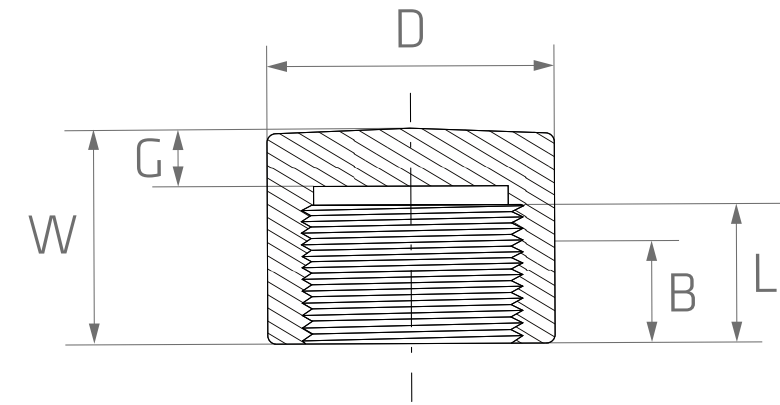


\* 1) = 100% X-RAY



# ROUND CAP (NPT)

1.4301 - 1.4401 (1/1)



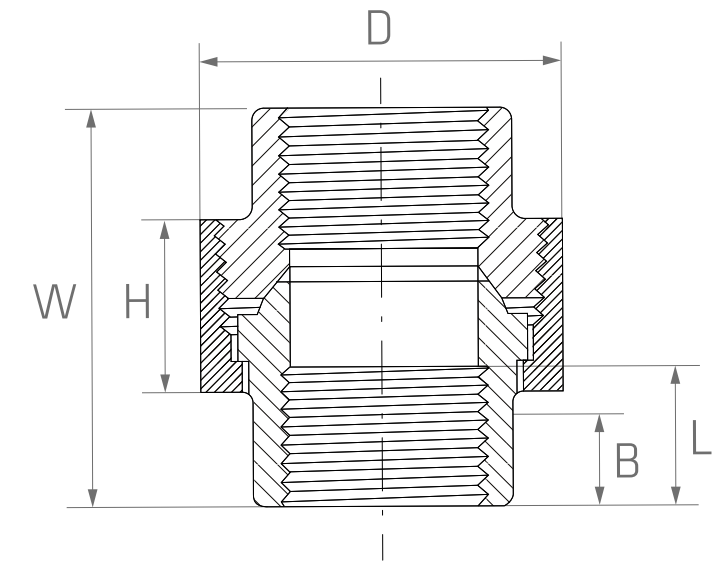
DN	INCH	W	D	G	B	L	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
6	1/8"	19	16	4.8	6.4	6.7	0.03		x
8	1/4"	25	19	4.8	8.1	10.2	0.05	x	x
10	3/8"	25	22	4.8	9.1	10.4	0.06	x	x
15	1/2"	32	28	6.4	10.9	13.6	0.12	x	x
20	3/4"	37	35	6.4	12.7	13.9	0.19	x	x
25	1"	41	44	9.7	14.7	17.3	0.35	x	x
32	1 1/4"	44	57	9.7	17.0	18.0	0.56	x	x
40	1 1/2"	44	64	11.2	17.8	18.4	0.75	x	x
50	2"	48	76	12.7	19.0	19.2	1.45	x	x



\* 1) = 100% X-RAY

# UNION CONIC F/F (NPT)

1.4301 - 1.4401 (1/1)



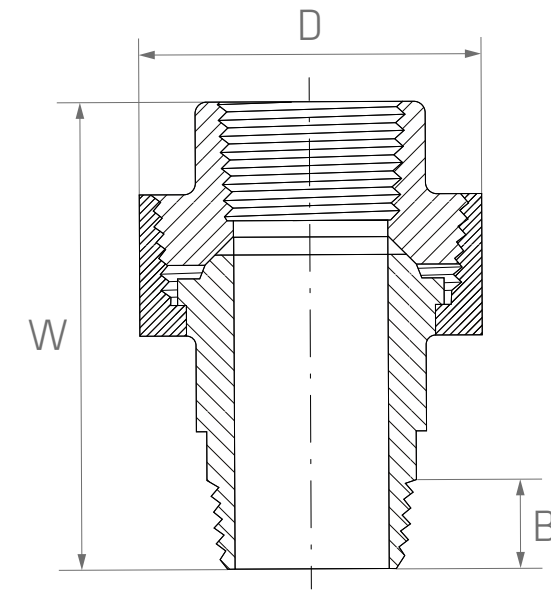
INCH	W	H	D	B	L	Grade AISI/UNS kg/pce.	1.4301/1.4307 304/304L *)	1.4401/1.4404 316/316L *)
1/8"	45	18	34	8.1	10.2	0.13		x
1/4"	45	18	34	6.4	6.7	0.13	x	x
3/8"	51	19	38	9.1	10.4	0.20	x	x
1/2"	54	21	48	10.9	13.6	0.40	x	x
3/4"	57	24	54	12.7	13.9	0.50	x	x
1"	64	25	63	14.7	17.3	1.00	x	x
1 1/4"	72	29	72	17.0	18.0	1.45	x	x
1 1/2"	80	30	77	17.8	18.4	1.60	x	x
2"	89	37	94	19.0	19.2	2.50	x	x



\* 1) = 100% X-RAY

# UNION CONIC F/M (NPT)

1.4301 - 1.4401 (1/1)



INCH	W	H	L	Grade AISI/UNS kg/pce.	1.4401/1.4404 316/316L *)
1/4"	18	34	11	0.20	x
3/8"	19	38	13	0.25	x
1/2"	21	48	14	0.44	x
3/4"	24	54	16	0.60	x
1"	25	63	19	0.80	x
1 1/4"	29	72	21	1.25	x
1 1/2"	30	77	21	1.67	x
2"	37	94	22	2.65	x

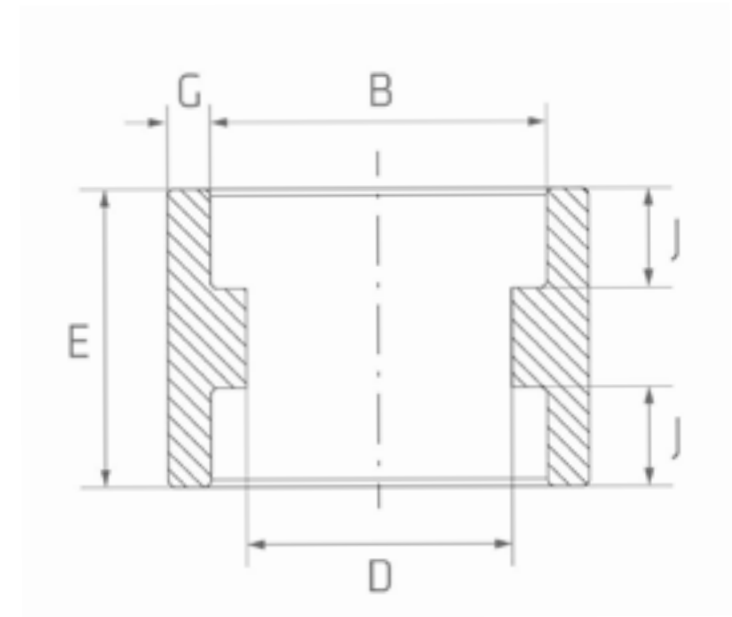


\* 1) = 100% X-RAY



# SOCKET (SW)

1.4301 (1/1)



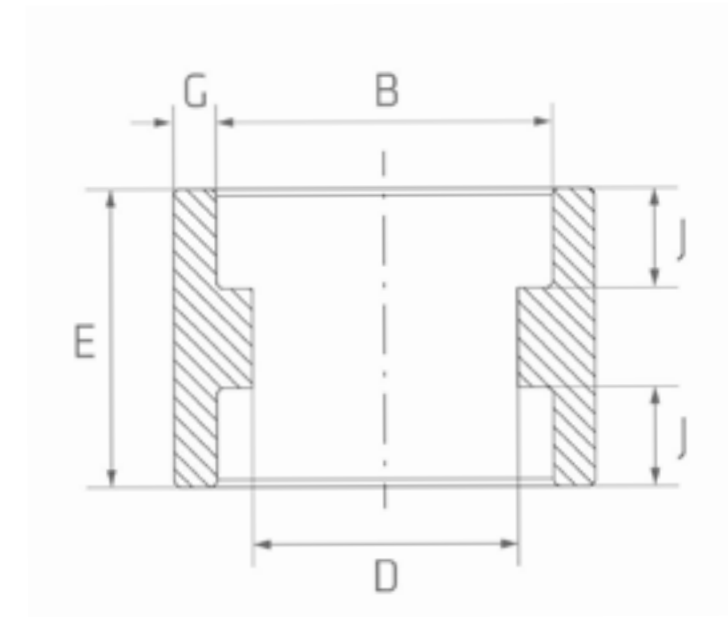
DN	INCH	B		D		E		G	G	J	Grade	1.4301/1.4307
		min.	max.	min.	max.	min.	max.	gem./ave.	min.	min.	AISI/UNS	304/304L
8	1/4"	14.2	14.6	8.5	10.0	5.0	8.0	3.78	3.30	9.5	0.05	
10	3/8"	17.6	18.0	11.8	13.3	3.5	9.5	4.01	3.50	9.5	0.10	x
15	1/2"	21.8	22.2	15.0	16.6	6.5	12.5	4.67	4.09	9.5	0.14	x
20	3/4"	27.2	27.6	20.2	21.7	6.5	12.5	4.90	4.27	12.5	0.20	x
25	1"	33.9	34.3	25.9	27.4	8.5	16.5	5.69	4.98	12.5	0.30	x
32	1 1/4"	42.7	43.1	34.3	35.8	8.5	16.5	6.07	5.28	12.5	0.45	x
40	1 1/2"	48.8	49.2	40.1	41.6	8.5	16.5	6.35	5.54	16.0	0.60	x
50	2"	61.2	61.7	51.7	53.3	15.0	23.0	6.93	6.04	16.0	0.95	x



\* 1) = 100% X-RAY

# SOCKET (SW)

1.4401 (1/1)



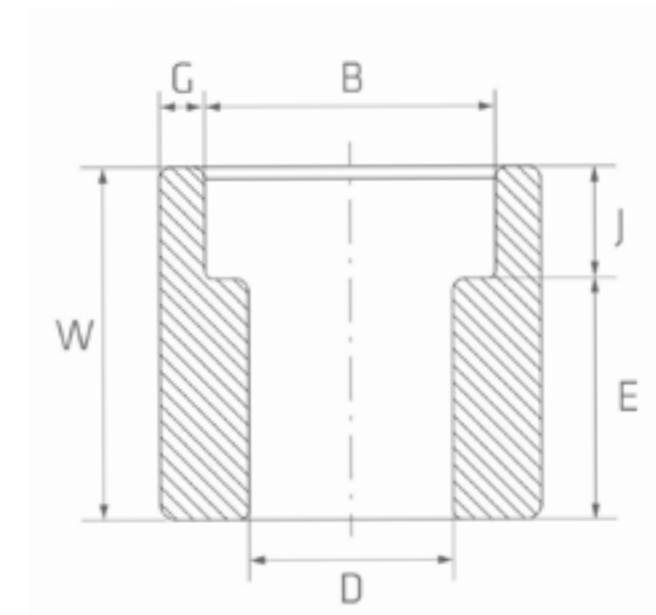
DN	INCH	B		D		E		G	G	J	Grade	1.4401/1.4404
		min.	max.	min.	max.	min.	max.	gem./ave.	min.	min.	AISI/UNS	316/316L
8	1/4"	14.2	14.6	8.5	10.0	5.0	8.0	3.78	3.30	9.5	0.05	x
10	3/8"	17.6	18.0	11.8	13.3	3.5	9.5	4.01	3.50	9.5	0.10	x
15	1/2"	21.8	22.2	15.0	16.6	6.5	12.5	4.67	4.09	9.5	0.14	x
20	3/4"	27.2	27.6	20.2	21.7	6.5	12.5	4.90	4.27	12.5	0.20	x
25	1"	33.9	34.3	25.9	27.4	8.5	16.5	5.69	4.98	12.5	0.30	x
32	1 1/4"	42.7	43.1	34.3	35.8	8.5	16.5	6.07	5.28	12.5	0.45	x
40	1 1/2"	48.8	49.2	40.1	41.6	8.5	16.5	6.35	5.54	16.0	0.60	x
50	2"	61.2	61.7	51.7	53.3	15.0	23.0	6.93	6.04	16.0	0.95	x



\* 1) = 100% X-RAY

# HALF SOCKET (SW)

1.4301 (1/1)



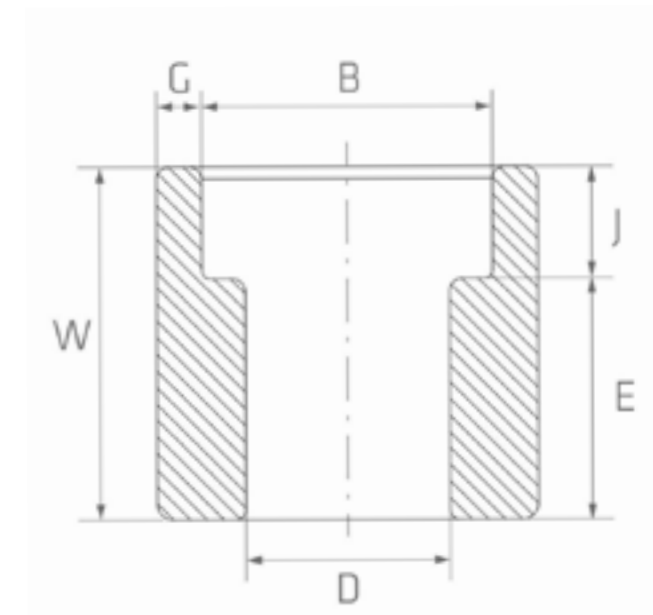
DN	INCH	B		D		E		G	G	J	Grade	1.4301/1.4307
		min.	max.	min.	max.	min.	max.	gem./ave.	min.	min.	AISI/UNS	304/304L
8	1/4"	14.2	14.6	8.5	10.0	15.0	17.5	3.78	3.30	9.5	0.06	
10	3/8"	17.6	18.0	11.8	13.3	15.0	24.0	4.01	3.50	9.5	0.11	x
15	1/2"	21.8	22.2	15.0	16.6	21.0	25.5	4.67	4.09	9.5	0.15	x
20	3/4"	27.2	27.6	20.2	21.7	22.5	25.5	4.90	4.27	12.5	0.21	x
25	1"	33.9	34.3	25.9	27.4	26.5	30.5	5.69	4.98	12.5	0.35	x
32	1 1/4"	42.7	43.1	34.3	35.8	28.0	32.0	6.07	5.28	12.5	0.50	x
40	1 1/2"	48.8	49.2	40.1	41.6	30.0	34.0	6.35	5.54	16.0	0.65	x
50	2"	61.2	61.7	51.7	53.3	39.0	43.0	6.93	6.04	16.0	1.10	x



\* 1) = 100% X-RAY

# HALF SOCKET (SW)

1.4401 (1/1)



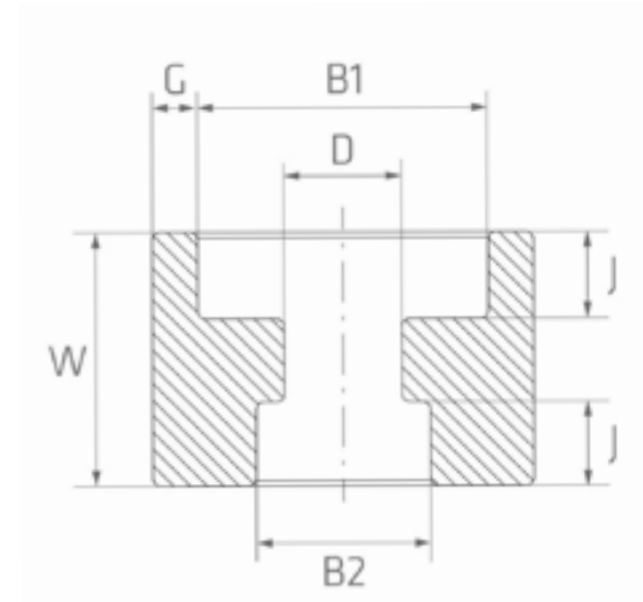
DN	INCH	B		D		E		G	G	J	Grade	1.4401/1.4404
		min.	max.	min.	max.	min.	max.	gem./ave.	min.	min.	AISI/UNS	316/316L
8	1/4"	14.2	14.6	8.5	10.0	15.0	17.5	3.78	3.30	9.5	0.06	
10	3/8"	17.6	18.0	11.8	13.3	15.0	24.0	4.01	3.50	9.5	0.11	
15	1/2"	21.8	22.2	15.0	16.6	21.0	25.5	4.67	4.09	9.5	0.15	x
20	3/4"	27.2	27.6	20.2	21.7	22.5	25.5	4.90	4.27	12.5	0.21	x
25	1"	33.9	34.3	25.9	27.4	26.5	30.5	5.69	4.98	12.5	0.35	x
32	1 1/4"	42.7	43.1	34.3	35.8	28.0	32.0	6.07	5.28	12.5	0.50	
40	1 1/2"	48.8	49.2	40.1	41.6	30.0	34.0	6.35	5.54	16.0	0.65	x
50	2"	61.2	61.7	51.7	53.3	39.0	43.0	6.93	6.04	16.0	1.10	



\* 1) = 100% X-RAY

# REDUCING SOCKET (SW)

1.4301 (1/2)



INCH	INCH	B1	B1	B2	B2	D	D	G	J	W	Grade	1.4301/1.4307
		min.	max.	min.	max.	min.	max.	gem./ave.	min.		AISI/UNS	304/304L
											kg/pce.	*)
3/8"	1/4"	17.6	18.0	14.2	14.6	8.5	10.0	3.50	9.5	25.5	0.06	
1/2"	1/4"	21.8	22.2	14.2	14.6	8.5	10.0	4.09	9.5	28.5	0.19	
1/2"	3/8"	21.8	22.2	17.6	18.0	11.8	13.3	4.09	9.5	25.5	0.14	x
3/4"	1/2"	27.2	27.6	21.8	22.2	15.0	16.6	4.27	12.5	34.5	0.23	x
1"	1/2"	33.4	34.3	21.8	22.2	15.0	16.6	4.98	12.5	34.5	0.54	x
1"	3/4"	33.7	34.3	27.8	27.6	20.2	21.7	4.98	12.5	37.5	0.50	
1 1/4"	1"	42.7	43.1	33.4	34.3	25.9	27.4	5.28	12.5	37.5	0.82	x
1 1/2"	1/2"	48.8	49.2	21.8	22.2	15.0	16.6	5.54	12.5	34.5	1.49	
1 1/2"	3/4"	48.8	49.2	27.8	27.6	20.2	21.7	5.54	12.5	34.5	1.37	
1 1/2"	1"	48.8	49.2	33.4	34.3	35.9	27.4	5.54	12.5	37.5	1.28	

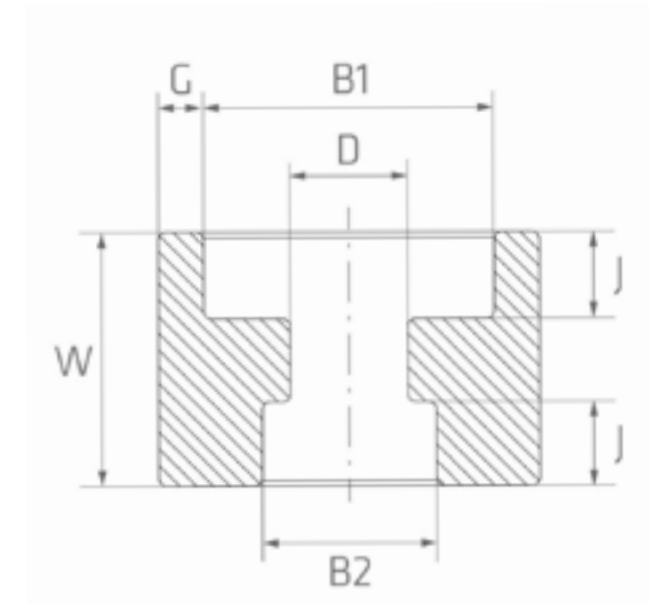


\* 1) = 100% X-RAY



# REDUCING SOCKET (SW)

1.4301 (2/2)



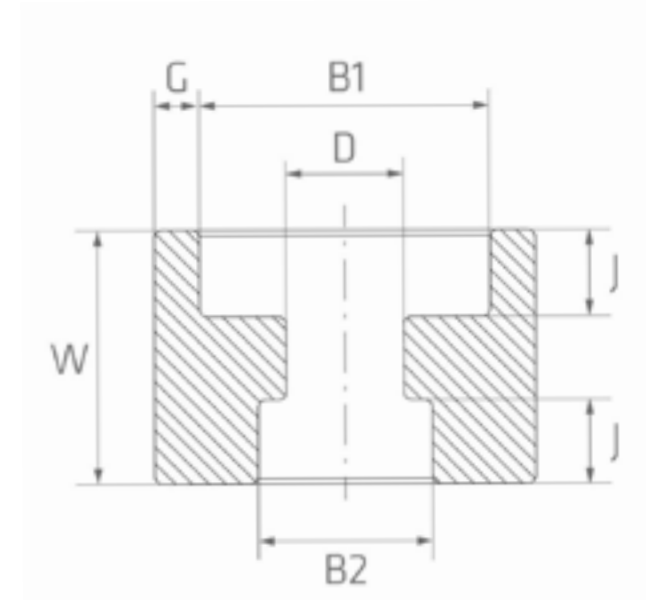
INCH	INCH	B1	B1	B2	B2	D	D	G	J	W	Grade	1.4301/1.4307
		min.	max.	min.	max.	min.	max.	gem./ave.	min.		AISI/UNS	304/304L
											kg/pce.	*)
2"	1"	61.2	61.7	33.4	34.3	25.9	27.4	6.04	12.5	44.5	1.93	x
2"	1 1/4"	61.2	61.7	42.7	43.1	34.3	35.8	6.40	12.5	44.5	1.45	x
2"	1 1/2"	61.2	61.7	48.8	49.2	40.1	41.6	6.04	12.5	44.5	1.61	x



\* 1) = 100% X-RAY

# REDUCING SOCKET (SW)

1.4401 (1/2)



INCH	INCH	B1	B1	B2	B2	D	D	G	J	W	Grade	1.4401/1.4404
		min.	max.	min.	max.	min.	max.	gem./ave.	min.		AISI/UNS	316/316L
											kg/pce.	*)
3/8"	1/4"	17.6	18.0	14.2	14.6	8.5	10.0	3.50	9.5	25.5	0.06	x
1/2"	1/4"	21.8	22.2	14.2	14.6	8.5	10.0	4.09	9.5	28.5	0.19	x
1/2"	3/8"	21.8	22.2	17.6	18.0	11.8	13.3	4.09	9.5	25.5	0.14	x
3/4"	1/2"	27.2	27.6	21.8	22.2	15.0	16.6	4.27	12.5	34.5	0.23	x
1"	1/2"	33.4	34.3	21.8	22.2	15.0	16.6	4.98	12.5	34.5	0.54	x
1"	3/4"	33.7	34.3	27.8	27.6	20.2	21.7	4.98	12.5	37.5	0.50	x
1 1/4"	1"	42.7	43.1	33.4	34.3	25.9	27.4	5.28	12.5	37.5	0.82	x
1 1/2"	1/2"	48.8	49.2	21.8	22.2	15.0	16.6	5.54	12.5	34.5	1.49	x
1 1/2"	3/4"	48.8	49.2	27.8	27.6	20.2	21.7	5.54	12.5	34.5	1.37	x
1 1/2"	1"	48.8	49.2	33.4	34.3	35.9	27.4	5.54	12.5	37.5	1.28	x

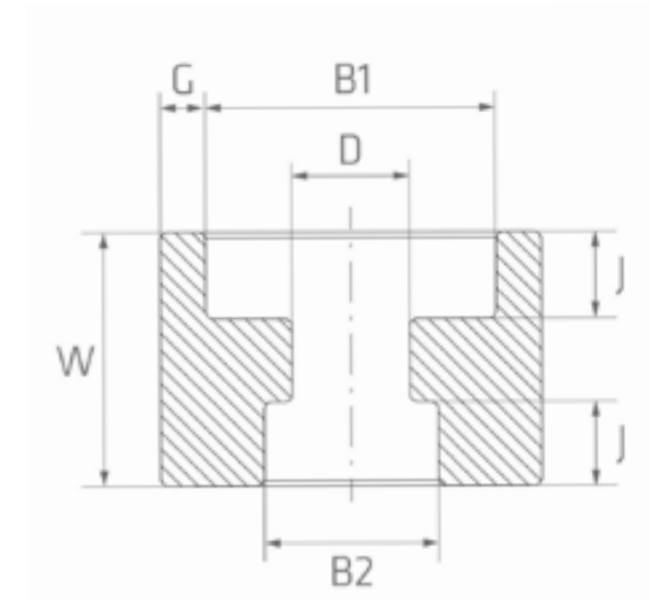


\* 1) = 100% X-RAY



# REDUCING SOCKET (SW)

1.4301 (2/2)



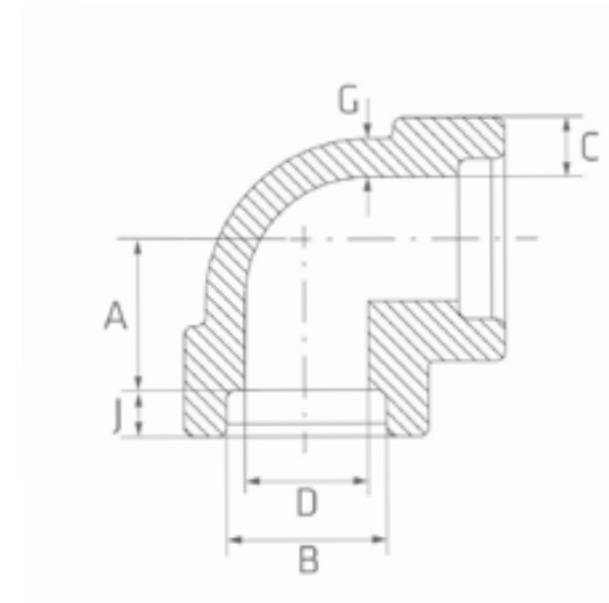
INCH	INCH	B1	B1	B2	B2	D	D	G	J	W	Grade	1.4401/1.4404
		min.	max.	min.	max.	min.	max.	gem./ave.	min.		AISI/UNS	316/316L
											kg/pce.	*)
2"	1"	61.2	61.7	33.4	34.3	25.9	27.4	6.04	12.5	44.5	1.93	x
2"	1 1/4"	61.2	61.7	42.7	43.1	34.3	35.8	6.40	12.5	44.5	1.45	x
2"	1 1/2"	61.2	61.7	48.8	49.2	40.1	41.6	6.04	12.5	44.5	1.61	x



\* 1) = 100% X-RAY

# ELBOW 90° (SW)

1.4301 (1/1)



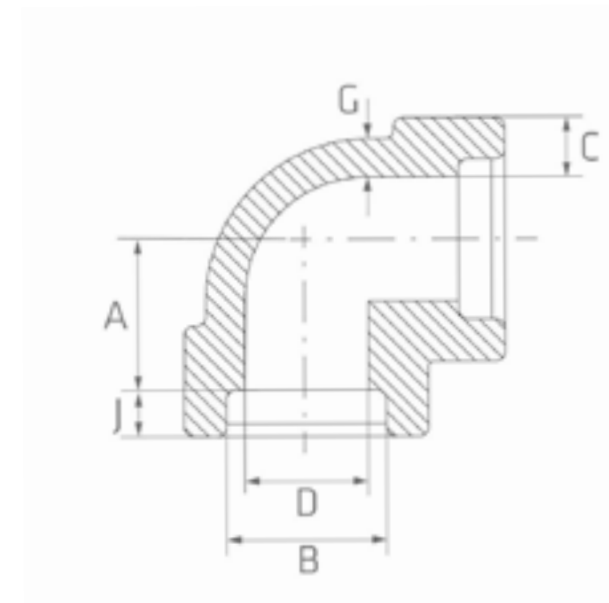
DN	INCH	B		D		C		A		G	J	Grade	
		min.	max.	min.	max.	gem./ave.	min.	min.	max.			1.4301/1.4307	AISI/UNS 304/304L
8	1/4"	14.2	14.6	8.5	10.0	3.78	3.30	10.0	12.0	3.02	9.5	0.09	x
10	3/8"	17.6	18.0	11.8	13.3	4.01	3.50	12.0	15.0	3.20	9.5	0.13	x
15	1/2"	21.8	22.2	15.0	16.6	4.67	4.09	14.0	17.0	3.73	9.5	0.25	x
20	3/4"	27.2	27.6	20.2	21.7	4.89	4.27	17.5	20.5	3.91	12.5	0.32	x
25	1"	33.9	34.3	25.9	27.4	5.69	4.98	20.5	24.5	4.55	12.5	0.52	x
32	1 1/4"	42.7	43.1	34.3	35.8	6.07	5.28	25.0	29.0	4.85	12.5	0.86	x
40	1 1/2"	48.8	49.2	40.1	41.6	6.35	5.54	30.0	34.0	5.08	12.5	1.12	x
50	2"	61.2	61.7	51.7	53.3	6.93	6.04	36.0	40.0	5.54	16.0	1.80	x



\* 1) = 100% X-RAY

# ELBOW 90° (SW)

1.4401 (1/1)



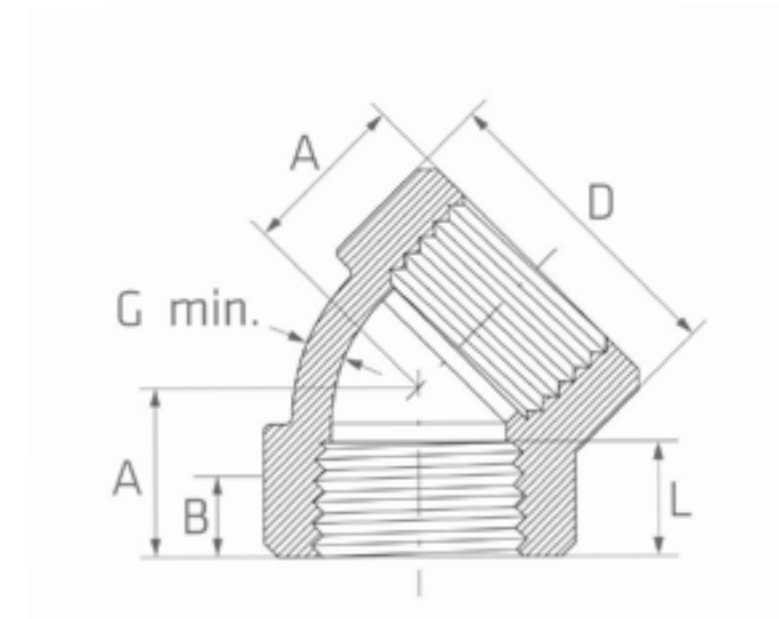
DN	INCH	B		D		C		A		G	J	Grade 1.4401/1.4404 AISI/UNS 316/316L	
		min.	max.	min.	max.	gem./ ave.	min.	min.	max.			min.	min.
8	1/4"	14.2	14.6	8.5	10.0	3.78	3.30	10.0	12.0	3.02	9.5	0.09	x
10	3/8"	17.6	18.0	11.8	13.3	4.01	3.50	12.0	15.0	3.20	9.5	0.13	x
15	1/2"	21.8	22.2	15.0	16.6	4.67	4.09	14.0	17.0	3.73	9.5	0.25	x
20	3/4"	27.2	27.6	20.2	21.7	4.89	4.27	17.5	20.5	3.91	12.5	0.32	x
25	1"	33.9	34.3	25.9	27.4	5.69	4.98	20.5	24.5	4.55	12.5	0.52	x
32	1 1/4"	42.7	43.1	34.3	35.8	6.07	5.28	25.0	29.0	4.85	12.5	0.86	x
40	1 1/2"	48.8	49.2	40.1	41.6	6.35	5.54	30.0	34.0	5.08	12.5	1.12	x
50	2"	61.2	61.7	51.7	53.3	6.93	6.04	36.0	40.0	5.54	16.0	1.80	x



\* 1) = 100% X-RAY

# ELBOW 45° (SW)

1.4301 (1/1)



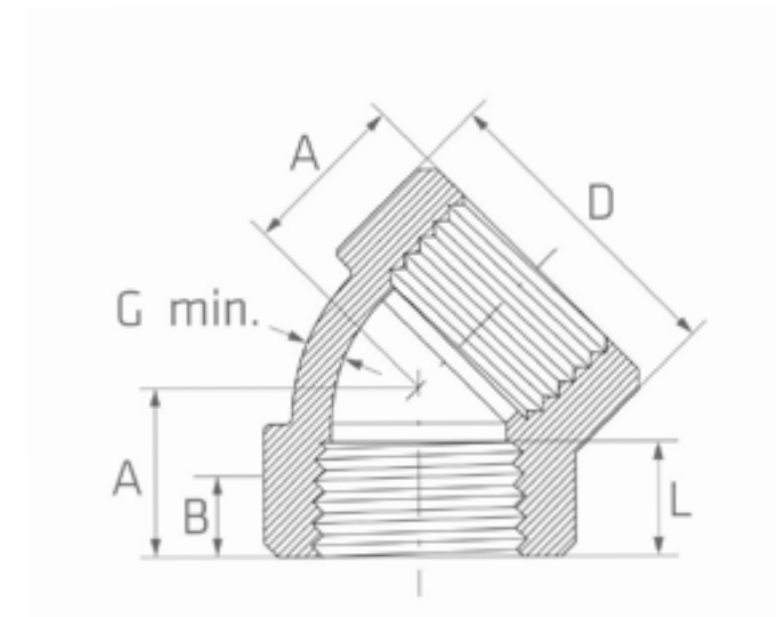
DN	INCH	B	B	D	D	C	C	A	A	G	J	Grade	1.4301/1.4307
		min.	max.	min.	max.	gem./ave.	min.	min.	max.	min.	min.	AISI/UNS	304/304L
												kg/pce.	*)
8	1/4"	14.2	14.6	8.5	10.0	3.78	3.30	7.0	9.0	3.02	9.5	0.08	x
10	3/8"	17.6	18.0	11.8	13.3	4.01	3.50	6.5	9.5	3.20	9.5	0.13	x
15	1/2"	21.8	22.2	15.0	16.6	4.67	4.09	9.5	12.5	3.73	9.5	0.18	x
20	3/4"	27.2	27.6	20.2	21.7	4.90	4.27	11.5	14.5	3.91	12.5	0.30	x
25	1"	33.9	34.3	25.9	27.4	5.69	4.98	12.0	16.0	4.55	12.5	0.45	x
32	1 1/4"	42.7	43.1	34.3	35.8	6.07	5.28	15.5	19.5	4.85	12.5	0.75	x
40	1 1/2"	48.8	49.2	40.1	41.6	6.35	5.54	18.5	22.5	5.08	12.5	0.90	x
50	2"	61.2	61.7	51.7	53.3	6.93	6.04	23.5	27.5	5.54	16.0	1.30	x



\* 1) = 100% X-RAY

# ELBOW 45° (SW)

1.4401 (1/1)



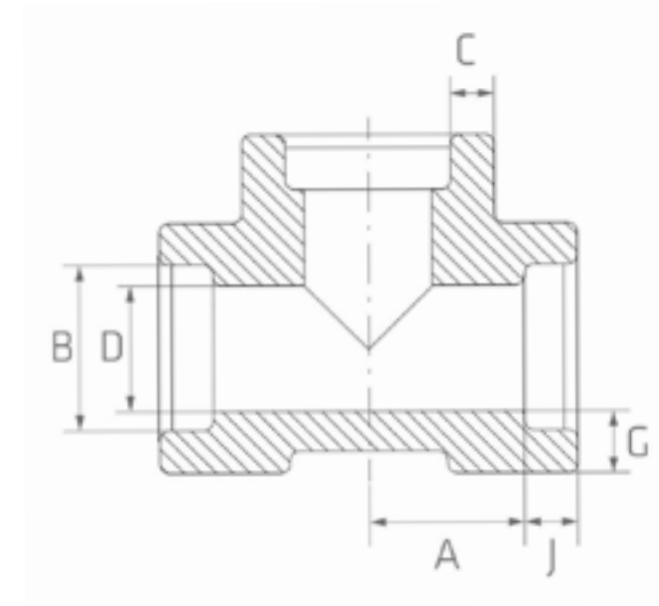
DN	INCH	B		D		C		A		G	J	Grade 1.4401/1.4404 AISI/UNS 316/316L	
		min.	max.	min.	max.	gem./ ave.	min.	min.	max.			min.	min.
8	1/4"	14.2	14.6	8.5	10.0	3.78	3.30	7.0	9.0	3.02	9.5	0.08	x
10	3/8"	17.6	18.0	11.8	13.3	4.01	3.50	6.5	9.5	3.20	9.5	0.13	x
15	1/2"	21.8	22.2	15.0	16.6	4.67	4.09	9.5	12.5	3.73	9.5	0.18	x
20	3/4"	27.2	27.6	20.2	21.7	4.90	4.27	11.5	14.5	3.91	12.5	0.30	x
25	1"	33.9	34.3	25.9	27.4	5.69	4.98	12.0	16.0	4.55	12.5	0.45	x
32	1 1/4"	42.7	43.1	34.3	35.8	6.07	5.28	15.5	19.5	4.85	12.5	0.75	x
40	1 1/2"	48.8	49.2	40.1	41.6	6.35	5.54	18.5	22.5	5.08	12.5	0.90	x
50	2"	61.2	61.7	51.7	53.3	6.93	6.04	23.5	27.5	5.54	16.0	1.30	x



\* 1) = 100% X-RAY

# TEE (SW)

1.4301 (1/1)



DN	INCH	B		D		C		A		G	J	Grade	1.4301/1.4307
		min.	max.	min.	max.	gem./ave.	min.	min.	max.	min.	min.	AISI/UNS	304/304L
8	1/4"	14.2	14.6	8.5	10.0	3.78	3.30	10.0	12.0	3.02	9.5	0.08	x
10	3/8"	17.6	18.0	11.8	13.3	4.01	3.50	12.0	15.0	3.20	9.5	0.13	x
15	1/2"	21.8	22.2	15.0	16.6	4.67	4.09	14.0	17.0	3.73	9.5	0.18	x
20	3/4"	27.2	27.6	20.2	21.7	4.90	4.27	17.5	20.5	3.91	12.5	0.30	x
25	1"	33.9	34.3	25.9	27.4	5.69	4.98	20.5	24.5	4.55	12.5	0.45	x
32	1 1/4"	42.7	43.1	34.3	35.8	6.07	5.28	25.0	29.0	4.85	12.5	0.75	x
40	1 1/2"	48.8	49.2	40.1	41.6	6.35	5.54	30.0	34.0	5.08	12.5	0.90	x
50	2"	61.2	61.7	51.7	53.3	6.93	6.04	36.0	40.0	5.54	16.0	1.30	x

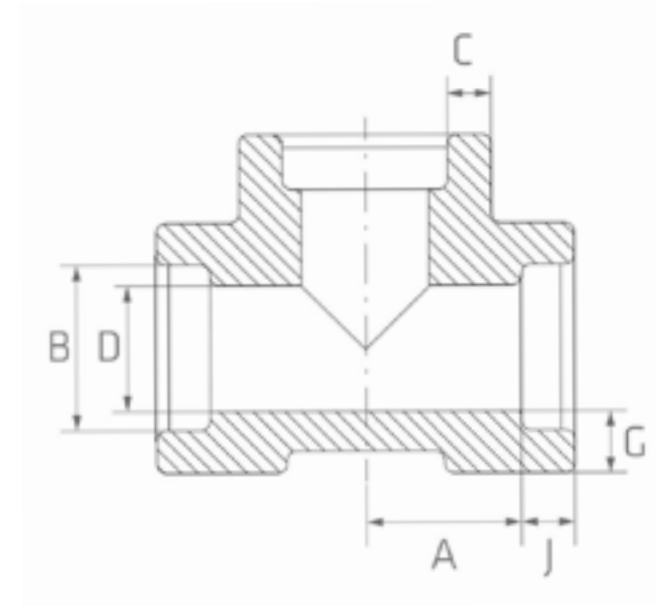


\* 1) = 100% X-RAY



# TEE (SW)

1.4401 (1/1)



DN	INCH	B		D		C		A		G	J	Grade 1.4401/1.4404 AISI/UNS 316/316L	
		min.	max.	min.	max.	gem./ ave.	min.	min.	max.			min.	min.
8	1/4"	14.2	14.6	8.5	10.0	3.78	3.30	10.0	12.0	3.02	9.5	0.08	x
10	3/8"	17.6	18.0	11.8	13.3	4.01	3.50	12.0	15.0	3.20	9.5	0.13	x
15	1/2"	21.8	22.2	15.0	16.6	4.67	4.09	14.0	17.0	3.73	9.5	0.18	x
20	3/4"	27.2	27.6	20.2	21.7	4.90	4.27	17.5	20.5	3.91	12.5	0.30	x
25	1"	33.9	34.3	25.9	27.4	5.69	4.98	20.5	24.5	4.55	12.5	0.45	x
32	1 1/4"	42.7	43.1	34.3	35.8	6.07	5.28	25.0	29.0	4.85	12.5	0.75	x
40	1 1/2"	48.8	49.2	40.1	41.6	6.35	5.54	30.0	34.0	5.08	12.5	0.90	x
50	2"	61.2	61.7	51.7	53.3	6.93	6.04	36.0	40.0	5.54	16.0	1.30	x

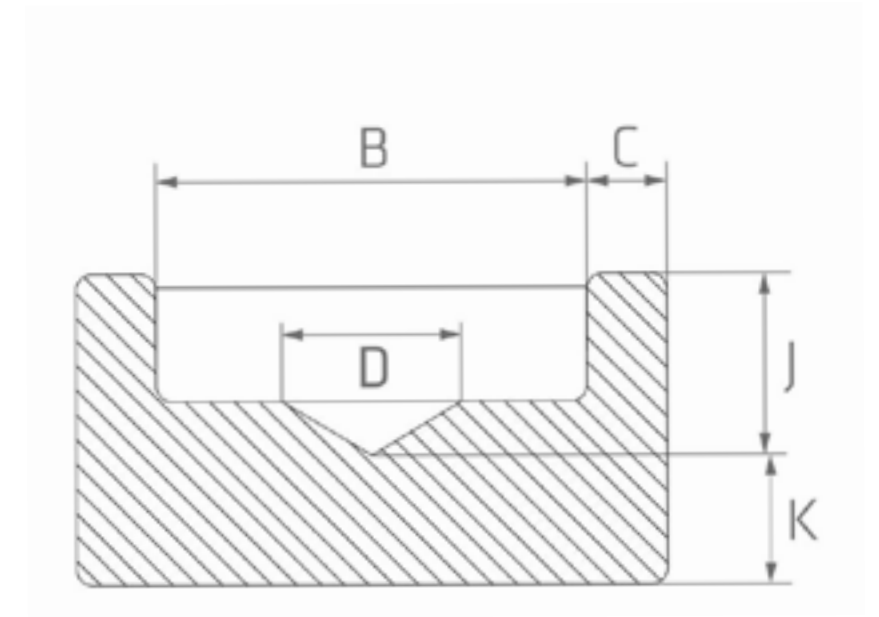


\* 1) = 100% X-RAY



# ROUND CAP (SW)

1.4301 (1/1)



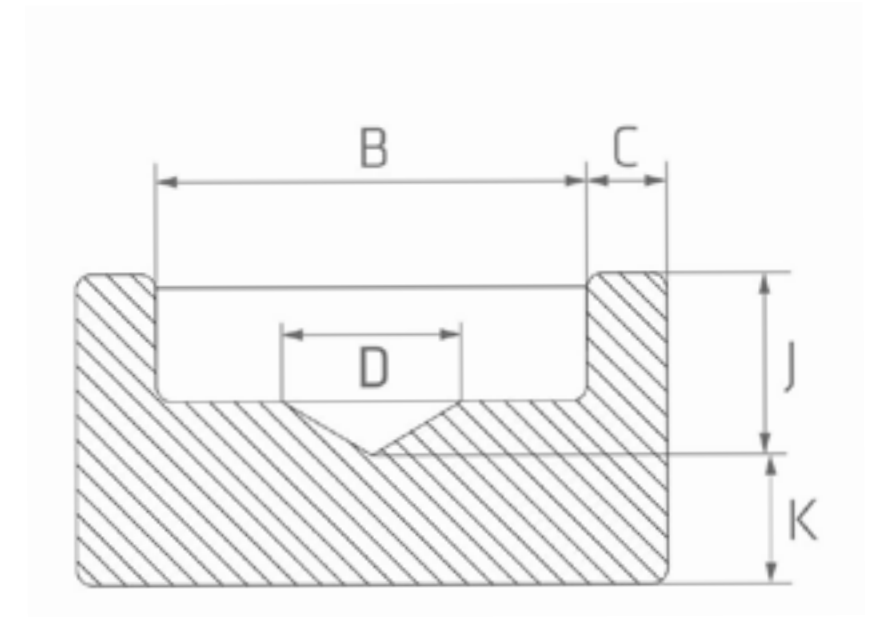
DN	INCH	B		D		C	C	K	J	Grade	1.4301/1.4307 AISI/UNS 304/304L
		min.	max.	min.	max.						
8	1/4"	14.2	14.6	10.0	8.5	3.78	3.30	4.8	9.5	0.05	x
10	3/8"	17.6	18.0	13.3	11.8	4.01	3.50	4.8	9.5	0.06	
15	1/2"	21.8	22.2	16.6	15.0	4.67	4.09	6.4	9.5	0.14	
20	3/4"	27.2	27.6	21.7	20.2	4.90	4.27	6.4	12.5	0.20	
25	1"	33.9	34.3	27.4	25.9	5.69	4.98	9.6	12.5	0.40	x
40	1 1/2"	48.8	49.2	41.7	40.1	6.35	5.54	11.2	12.5	1.00	x



\* 1) = 100% X-RAY

# ROUND CAP (SW)

1.4401 (1/1)



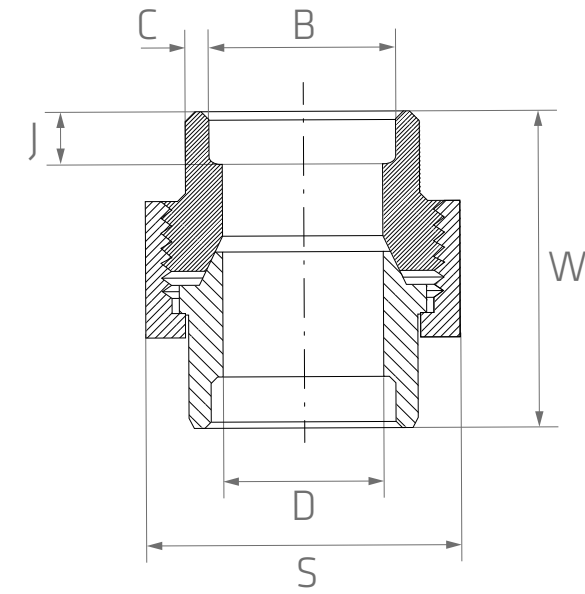
DN	INCH	B		D		C	C	K	J	Grade AISI/UNS	1.4401/1.4404 316/316L *)
		min.	max.	min.	max.						
8	1/4"	14.2	14.6	10.0	8.5	3.78	3.30	4.8	9.5	0.05	x
10	3/8"	17.6	18.0	13.3	11.8	4.01	3.50	4.8	9.5	0.06	x
15	1/2"	21.8	22.2	16.6	15.0	4.67	4.09	6.4	9.5	0.14	x
20	3/4"	27.2	27.6	21.7	20.2	4.90	4.27	6.4	12.5	0.20	x
25	1"	33.9	34.3	27.4	25.9	5.69	4.98	9.6	12.5	0.40	x
40	1 1/2"	48.8	49.2	41.7	40.1	6.35	5.54	11.2	12.5	1.00	x



\* 1) = 100% X-RAY

# UNION (SW)

1.4301 - 1.4401 (1/1)



DN	INCH	B	D	C	W	J	S	Grade AISI/UNS	1.4301/1.4307	1.4401/1.4404
									304/304L	316/316L
		min.	min.	min.	max.	gem./ave.	min.	kg/pce.	*)	*)
8	1/4"	14.2	8.5	3.30	77.5	9.5	34	0.20	x	x
10	3/8"	17.6	11.8	3.50	85.5	9.5	38	0.35		x
15	1/2"	21.8	15.0	4.09	105.5	9.5	48	0.40	x	x
20	3/4"	27.2	20.2	4.27	120.5	12.5	54	0.45	x	x
25	1"	33.9	25.9	4.98	53.0	12.5	63	1.00	x	x
32	1 1/4"	42.7	34.3	5.28	156.5	12.5	72	1.30	x	x
40	1 1/2"	48.8	40.1	5.54	166.5	12.5	77	1.70	x	x
50	2"	61.2	51.7	6.04	70.0	16.0	94	3.00	x	x



\* 1) = 100% X-RAY

# CUTTING RING FITTINGS



## Cutting ring fittings

## Tolerances

Similar DIN 2353 and DIN 3861

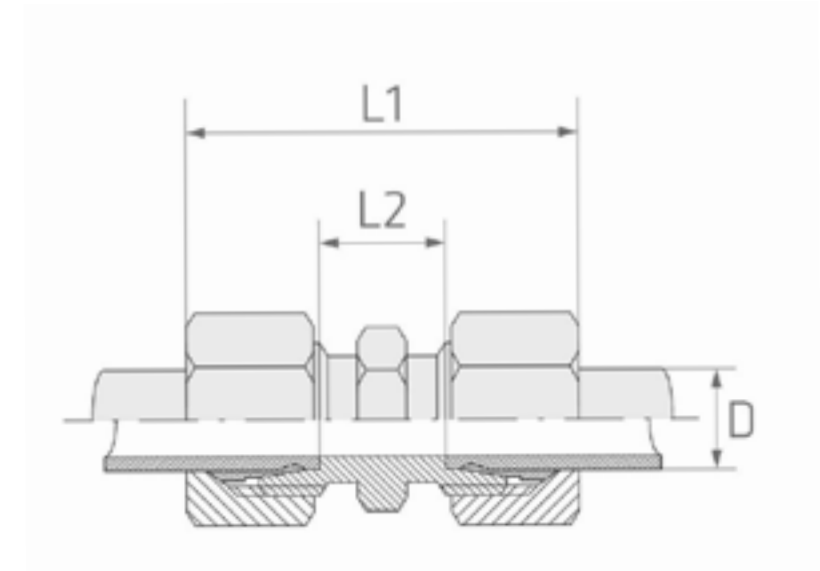
## Test certificates

not available

# STRAIGHT UNION

DIN 2353

1.4571 (1/2)



D	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	500	40	10	14	12	0.035	x
8	L	500	41	11	17	14	0.050	x
10	L	500	44	13	19	17	0.065	x
12	L	400	45	14	22	19	0.085	x
14	S	630	59	22	27	24	0.187	x
15	L	400	48	16	27	24	0.154	x
16	S	630	60	21	30	27	0.229	x
18	L	400	50	16	32	27	0.201	x
20	S	420	69	23	36	32	0.350	x
22	L	250	54	20	36	32	0.274	x



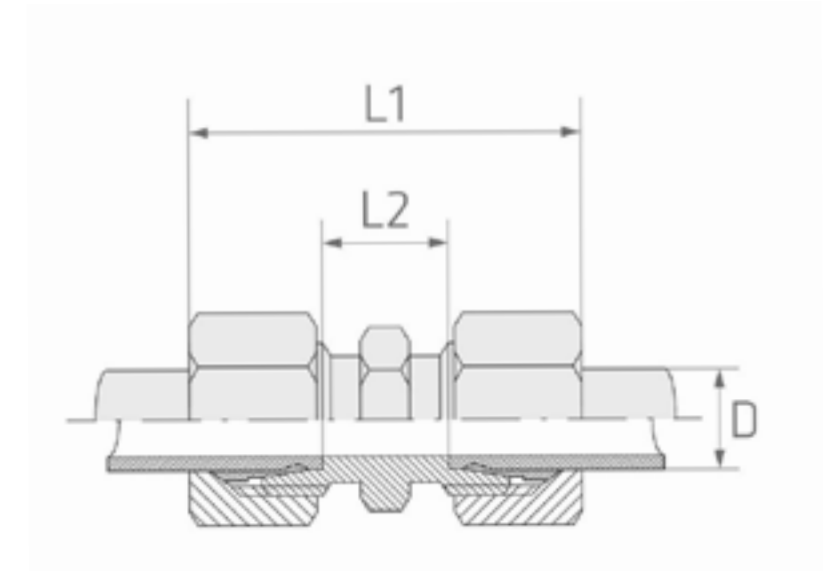
\* 1) = 100% X-RAY



# STRAIGHT UNION

DIN 2353

1.4571 (2/2)



D	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
25	S	420	77	26	46	41	0.672	x
28	L	250	55	21	41	41	0.347	x
30	S	420	83	27	50	46	0.821	x
35	L	250	65.5	20	50	46	0.543	x
38	S	420	95	29	60	55	1.215	x
42	L	250	68	21	60	55	0.790	x

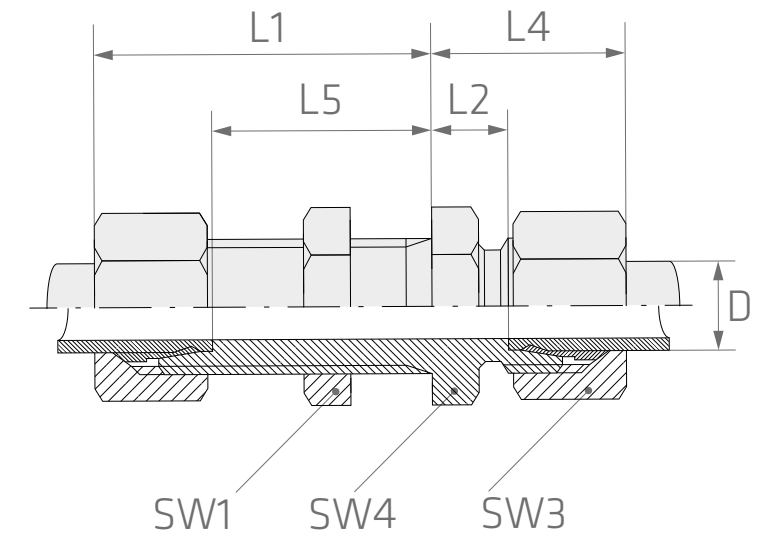


\* 1) = 100% X-RAY

# BULKHEAD UNION

DIN 2353

1.4571 (1/1)



D	TypeE	PN	L1	L2	L3	SW1	SW2	SW3	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	500	64	7.0	27	14	17	17	0.072	x
8	L	500	65	8.0	27	17	19	19	0.083	x
10	L	500	68	10.0	28	19	22	22	0.125	x
12	L	400	69	10.0	29	22	24	24	0.135	x
15	L	400	73	12.0	31	27	27	30	0.230	x
16	S	630	85	16.5	31.5	30	32	32	0.345	x
22	L	250	84	16.5	34.5	36	36	41	0.435	x
30	S	420	115	21.5	37.5	50	50	50	1.120	x



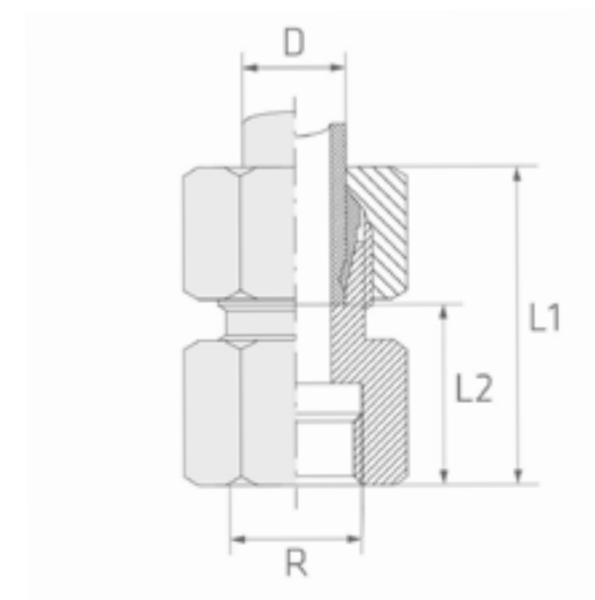
\* 1) = 100% X-RAY



# STRAIGHT PRESS CONNECTION ON ONE SIDE F

DIN 2353

1.4571 (1/2)



D	R	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	1/8"	L	500	34	19.0	14	14	0.027	x
6	1/4"	L	500	39	24.0	14	19	0.048	x
8	1/4"	L	500	39	24.0	17	19	0.050	x
10	1/4"	L	500	40	25.0	19	19	0.060	x
12	1/4"	L	400	40	25.0	22	19	0.068	x
12	3/8"	L	400	41	26.0	22	24	0.088	x
12	1/2"	L	400	46	29.0	22	27	0.106	x
14	1/2"	S	630	50	32.0	27	27	0.148	x
15	3/8"	L	400	42	27.0	27	24	0.114	x
15	1/2"	L	400	46	31.0	27	27	0.113	x

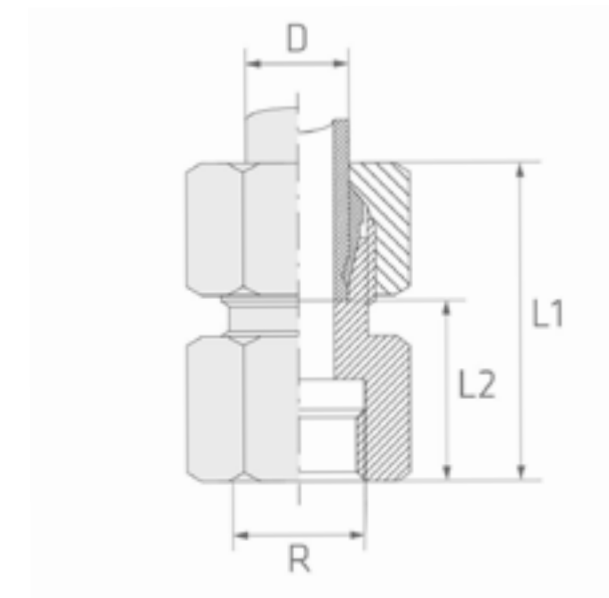


\* 1) = 100% X-RAY

# STRAIGHT PRESS CONNECTION ON ONE SIDE F

DIN 2353

1.4571 (2/2)



D	R	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
16	1/2"	S	630	50	31.5	30	27	0.175	x
18	3/8"	L	400	44	27.5	32	27	0.168	x
18	1/2"	L	400	47	30.5	32	27	0.151	x
20	3/8"	S	420	51	27.5	36	32	0.245	x
20	1/2"	S	420	56	34.5	36	32	0.248	x
20	3/4"	S	420	56	34.5	36	36	0.300	x
22	3/4"	L	250	52	35.5	36	36	0.270	x
25	1"	S	420	62	37.5	46	41	0.466	x
28	1"	L	250	55	38.0	41	41	0.311	x
42	1 1/2"	L	250	66	42.5	60	60	0.760	x

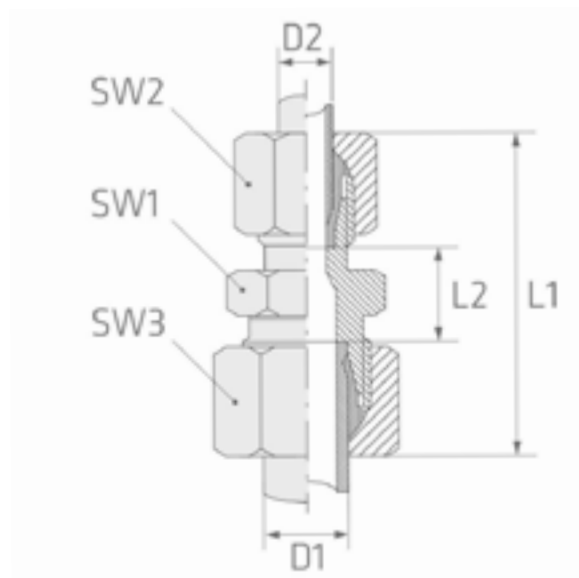


\* 1) = 100% X-RAY

# STRAIGHT REDUCING UNION

DIN 2353

1.4571 (1/2)



D1	D2	TypeE	PN	L1	L2	SW1	SW2	SW3	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
8	6	L	500	41.0	11.0	17	14	14	0.051	x
10	6	L	500	42.0	12.0	19	17	14	0.058	x
10	8	L	500	42.0	12.0	19	17	17	0.058	x
12	6	L	400	43.0	13.0	22	19	14	0.063	x
12	8	L	400	43.0	13.0	22	19	17	0.070	x
12	10	L	400	44.0	14.0	22	19	19	0.080	x
15	6	L	400	44.0	14.0	27	24	14	0.100	x
15	10	L	400	45.0	15.0	27	24	19	0.110	x
15	12	L	400	45.0	15.0	27	24	22	0.132	x
16	12	S	630	55.0	20.0	30	27	24	0.190	x

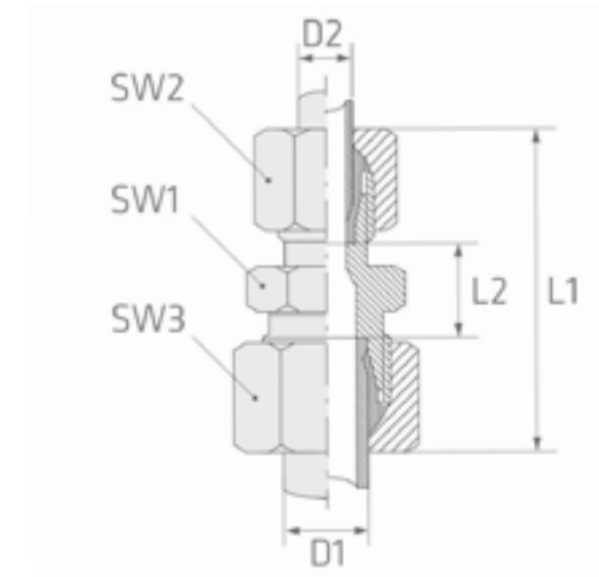


\* 1) = 100% X-RAY

# STRAIGHT REDUCING UNION

DIN 2353

1.4571 (2/2)



D1	D2	TypeE	PN	L1	L2	SW1	SW2	SW3	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
20	12	S	420	60.0	22.0	36	32	24	0.312	x
22	12	L	250	49.0	17.0	36	32	22	0.200	x
22	15	L	250	50.0	18.0	36	32	27	0.220	x
22	18	L	250	51.0	18.0	36	32	32	0.274	x
28	22	L	250	54.0	21.0	41	41	36	0.309	x
35	28	L	250	59.0	21.0	50	46	41	0.455	x

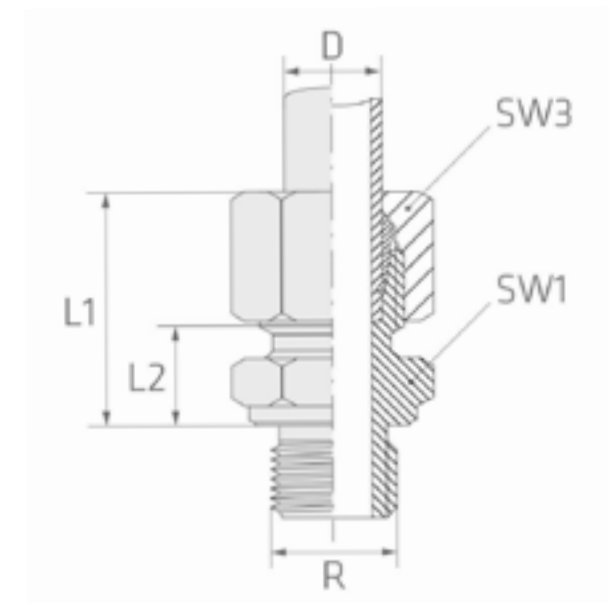


\* 1) = 100% X-RAY

# STRAIGHT PRESS CONNECTION ON ONE SIDE M

DIN 2353

1.4571 (1/5)



D	R	TypeE	PN	L1	L2	L3	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	1/8"	L	500	23.5	8.5	8.0	14	14	0.025	x
6	1/4"	L	500	25.0	10.0	12.0	14	19	0.040	x
6	3/8"	L	500	26.5	11.5	12.0	14	22	0.058	x
6	1/2"	L	500	28.0	13.0	14.0	14	27	0.100	x
8	1/8"	L	500	23.5	8.5	8.0	17	14	0.032	x
8	1/4"	L	500	25.0	10.0	12.0	17	19	0.043	x
8	3/8"	L	500	27.5	12.5	12.0	17	22	0.059	x
8	1/2"	L	500	28.0	13.0	14.0	17	27	0.099	x
10	1/8"	L	500	25.5	10.5	8.0	19	17	0.043	x
10	1/4"	L	500	26.0	11.0	12.0	19	19	0.050	x

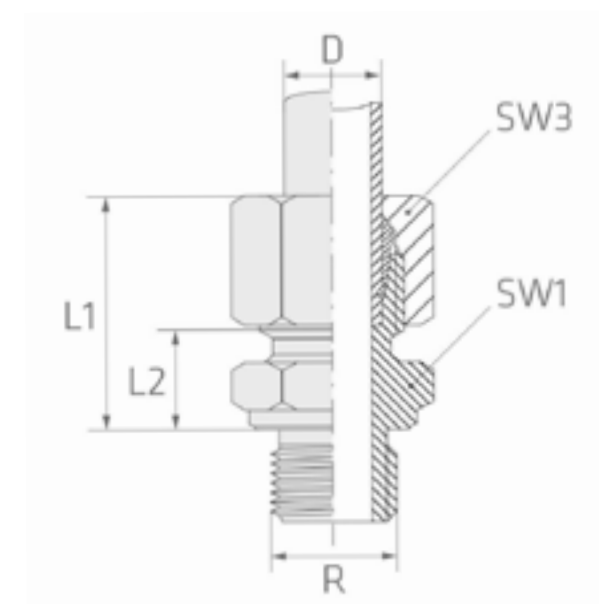


\* 1) = 100% X-RAY

# STRAIGHT PRESS CONNECTION ON ONE SIDE M

DIN 2353

1.4571 (2/5)



D	R	TypeE	PN	L1	L2	L3	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
10	3/8"	L	500	27.5	12.5	12.0	19	22	0.064	x
10	1/2"	L	500	29.0	14.0	14.0	19	27	0.102	x
12	1/8"	L	400	26.5	11.5	8.0	22	19	0.058	x
12	1/4"	L	400	27.0	12.0	12.0	22	19	0.062	x
12	3/8"	L	400	27.5	12.5	12.0	22	22	0.070	x
12	1/2"	L	400	28.0	13.0	14.0	22	27	0.101	x
14	3/8"	S	630	36.5	18.5	12.0	27	24	0.130	x
14	1/2"	S	630	37.0	19.0	14.0	27	27	0.154	x
15	1/4"	L	400	28.0	13.0	12.0	27	24	0.098	x
15	3/8"	L	400	28.5	13.5	12.0	27	24	0.102	x

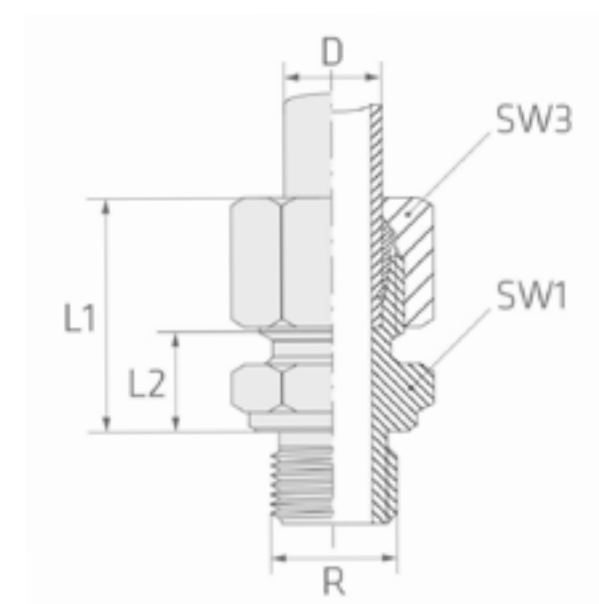


\* 1) = 100% X-RAY

# STRAIGHT PRESS CONNECTION ON ONE SIDE M

DIN 2353

1.4571 (3/5)



D	R	TypeE	PN	L1	L2	L3	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
15	1/2"	L	400	29.0	14.0	14.0	27	27	0.114	x
15	3/4"	L	400	30.0	15.0	16.0	27	32	0.172	x
16	3/8"	S	630	36.5	18.0	12.0	30	27	0.156	x
16	1/2"	S	630	37.0	18.5	14.0	30	27	0.161	x
16	3/4"	S	630	39.0	20.5	16.0	30	32	0.240	x
18	3/8"	L	400	31.0	14.5	12.0	32	27	0.136	x
18	1/2"	L	400	31.0	14.5	14.0	32	27	0.142	x
18	3/4"	L	400	31.0	14.5	16.0	32	32	0.185	x
20	1/2"	S	420	42.0	20.5	14.0	36	32	0.245	x
20	3/4"	S	420	42.0	20.5	16.0	36	32	0.277	x



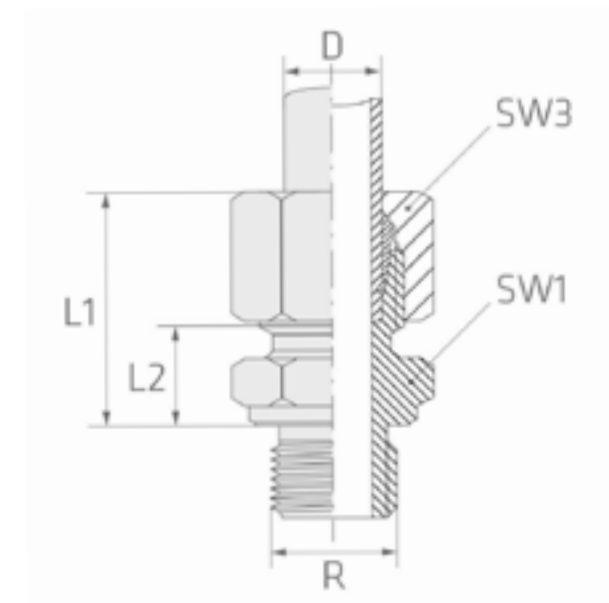
\* 1) = 100% X-RAY



# STRAIGHT PRESS CONNECTION ON ONE SIDE M

DIN 2353

1.4571 (4/5)



D	R	TypeE	PN	L1	L2	L3	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
20	1"	S	420	44.0	22.5	18.0	36	41	0.387	x
22	1/2"	L	250	33.0	16.5	14.0	36	32	0.200	x
22	3/4"	L	250	33.0	16.5	16.0	36	32	0.196	x
22	1"	L	250	34.0	17.5	18.0	36	41	0.289	x
25	1/2"	S	420	44.0	20.0	14.0	46	41	0.444	x
25	3/4"	S	420	47.0	23.0	16.0	46	41	0.455	x
25	1"	S	420	47.0	23.0	18.0	46	41	0.494	x
28	1/2"	L	250	34.0	17.5	14.0	41	41	0.210	x
28	3/4"	L	250	34.0	17.5	16.0	41	41	0.230	x
28	1"	L	250	34.0	17.5	18.0	41	41	0.270	x

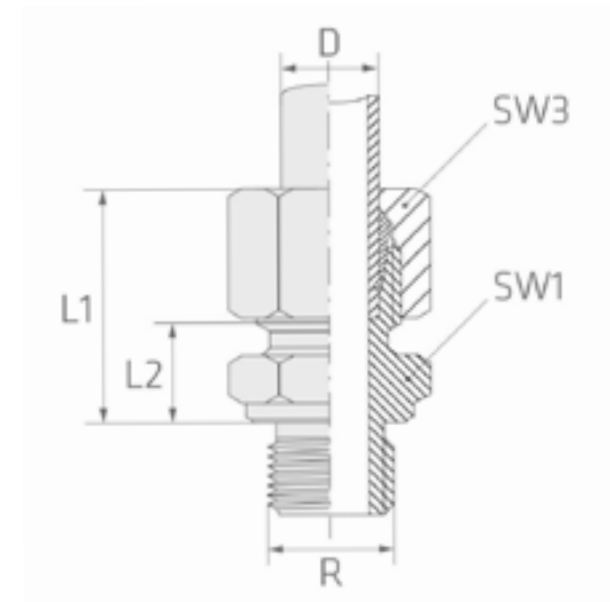


\* 1) = 100% X-RAY

# STRAIGHT PRESS CONNECTION ON ONE SIDE M

DIN 2353

1.4571 (5/5)



D	R	TypeE	PN	L1	L2	L3	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
28	1 1/4"	L	250	35.0	18.5	20.0	41	50	0.247	x
30	1 1/4"	S	420	50.0	23.5	20.0	50	50	0.670	x
30	1 1/2"	S	420	53.0	26.5	22.0	50	55	0.667	x
35	1 1/4"	L	250	39.0	17.5	20.0	50	55	0.465	x
38	1 1/4"	S	420	55.0	26.0	20.0	60	55	0.920	x
42	1 1/2"	L	250	42.0	19.0	22.0	60	55	0.610	x

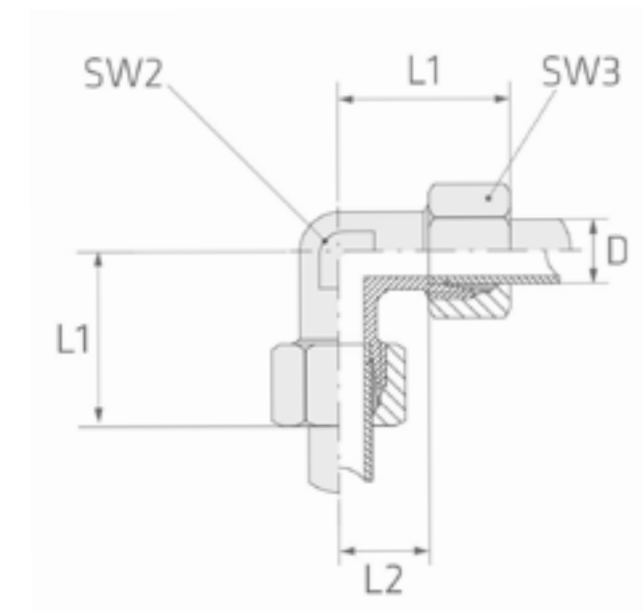


\* 1) = 100% X-RAY

# UNION ELBOW

DIN 2353

1.4571 (1/2)



D	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	500	27	12.0	14	12	0.042	x
8	L	500	29	14.0	17	12	0.059	x
10	L	500	30.5	15.0	19	14	0.074	x
12	L	400	32.5	17.0	22	17	0.103	x
14	S	630	40.5	22.0	27	19	0.210	x
15	L	400	37	21.0	27	19	0.169	x
16	S	630	44	24.5	30	24	0.260	x
18	L	400	40.5	23.5	32	24	0.248	x
20	S	420	49.5	26.5	36	27	0.410	x
22	L	250	44.5	27.5	36	27	0.320	x

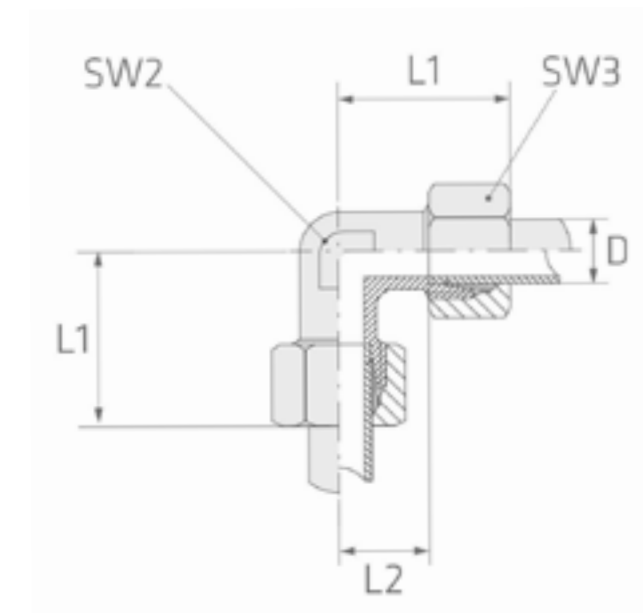


\* 1) = 100% X-RAY

# UNION ELBOW

DIN 2353

1.4571 (2/2)



D	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
25	S	420	55.5	30.0	46	36	0.776	x
28	L	250	47.5	30.5	41	36	0.454	x
30	S	420	63.5	35.5	50	41	1.003	x
35	L	250	57	34.5	50	41	0.675	x
42	L	250	63.5	40.0	60	50	1.070	x

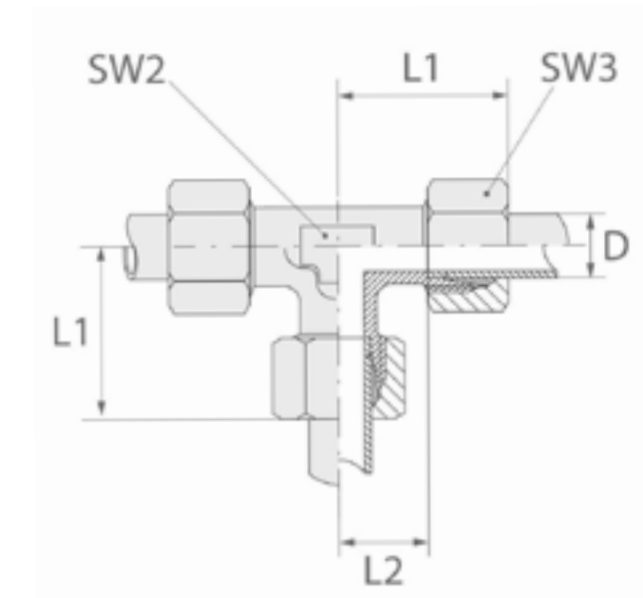


\* 1) = 100% X-RAY

# UNION TEE

DIN 2353

1.4571 (1/2)



D	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	500	27	12.0	14	12	0.051	x
8	L	500	29	14.0	17	12	0.085	x
10	L	500	30.5	15.0	19	14	0.106	x
12	L	400	32.5	17.0	22	17	0.140	x
14	S	630	40.5	22.0	27	19	0.300	x
15	L	400	37	21.0	27	19	0.240	x
16	S	630	44	24.5	30	24	0.390	x
18	L	400	40.5	23.5	32	24	0.348	x
20	S	420	49.5	26.5	36	27	0.590	x
22	L	250	44.5	27.5	36	27	0.468	x

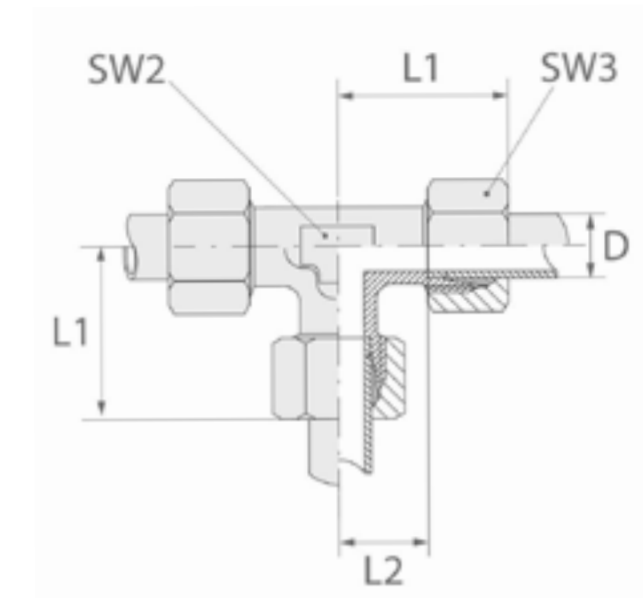


\* 1) = 100% X-RAY

# UNION TEE

DIN 2353

1.4571 (2/2)



D	TypeE	PN	L1	L2	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
25	S	420	55.5	30.0	46	36	1.180	x
28	L	250	47.5	30.5	41	36	0.665	x
30	S	420	63.5	35.5	50	41	1.430	x
35	L	250	57	34.5	50	41	1.025	x
38	S	420	74	41.0	60	50	2.010	x
42	L	250	63.5	40.0	60	50	1.500	x

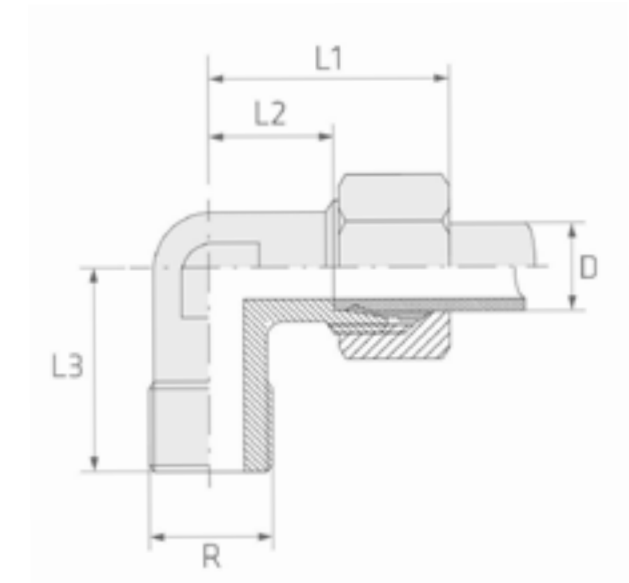


\* 1) = 100% X-RAY

# MALE ELBOW

DIN 2353

1.4571 (1/2)



D	R	TypeE	PN	L1	L2	L3	L4	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	1/8"	L	500	27.0	12.0	20	8	14	12	0.034	x
6	1/4"	L	500	27.0	12.0	26	12	14	12	0.057	x
8	1/8"	L	500	29.0	14.0	26	8	17	12	0.053	x
8	1/4"	L	500	29.0	14.0	26	12	17	12	0.060	x
8	3/8"	L	500	30.0	15.0	27	12	17	14	0.082	x
8	1/2"	L	500	34.0	19.0	30	14	17	17	0.095	x
10	1/4"	L	500	30.5	15.0	27	12	19	14	0.066	x
10	3/8"	L	500	30.5	15.0	27	12	19	14	0.070	x
10	1/2"	L	500	36.5	21.0	32	14	19	19	0.090	x
12	1/4"	L	400	32.5	17.0	28	12	22	17	0.074	x



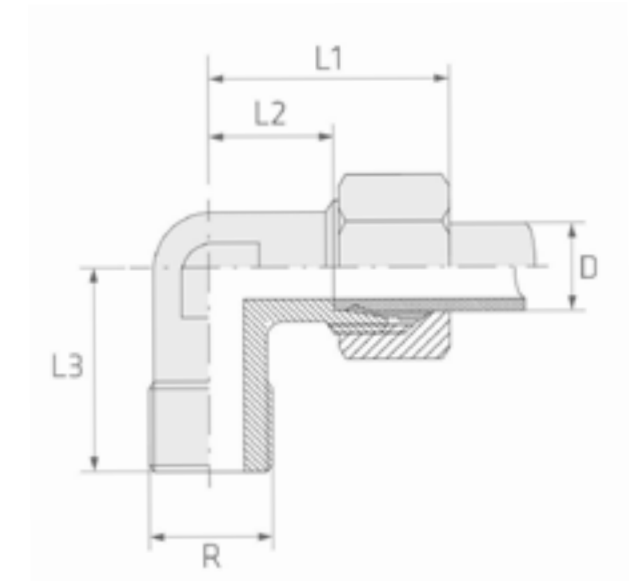
\* 1) = 100% X-RAY



# MALE ELBOW

DIN 2353

1.4571 (2/2)



D	R	TypeE	PN	L1	L2	L3	L4	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
12	3/8"	L	400	32.5	17.0	28	12	22	17	0.075	x
12	1/2"	L	400	36.5	21.0	32	14	22	17	0.110	x
14	1/2"	S	630	40.5	22.0	32	14	27	19	0.158	x
15	3/8"	L	400	37.0	21.0	28	12	27	19	0.134	x
15	1/2"	L	400	37.5	21.0	34	14	27	19	0.216	x
16	1/2"	S	630	44.0	24.5	32	14	30	24	0.200	x
18	1/2"	L	400	40.5	23.5	36	14	32	24	0.273	x
22	3/4"	L	250	44.0	27.5	26	16	36	27	0.267	x
25	1"	S	420	54.0	30.0	30	18	46	36	0.631	x

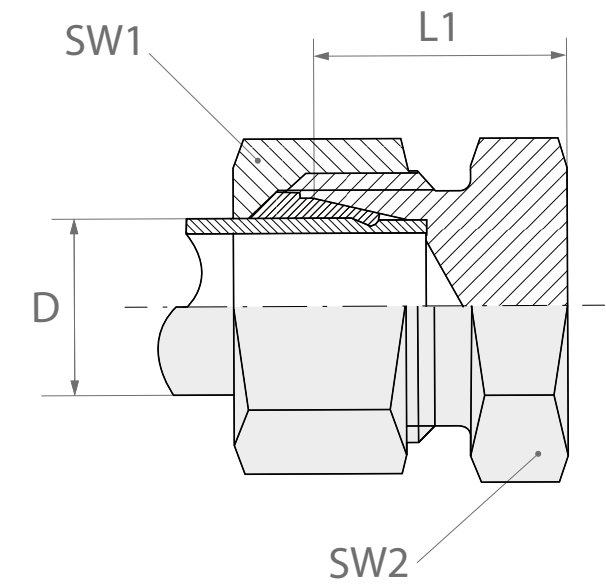


\* 1) = 100% X-RAY

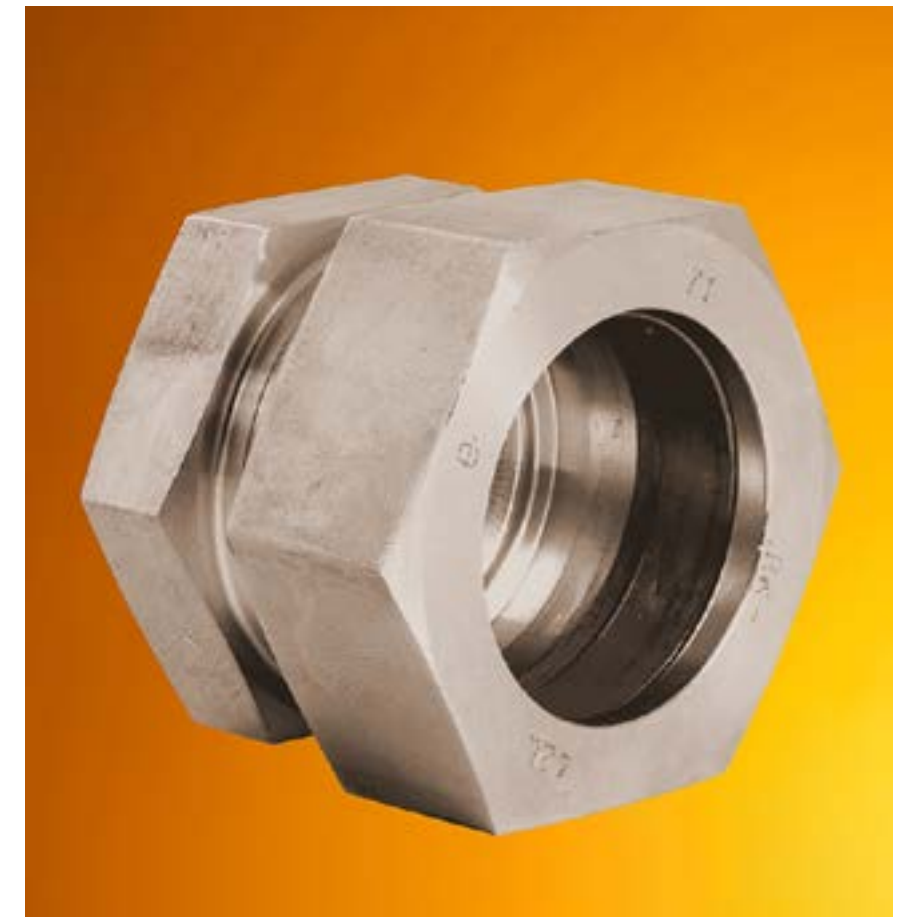
# CLOSING PLUG

DIN 2353

1.4571 (1/1)



D	TypeE	PN	L1	L2	L3	SW1	SW2	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	500	24	15	16	14	12	0.022	x
8	L	500	26	15	18	17	14	0.030	x
10	L	500	27.5	15.5	19	19	17	0.038	x
12	L	400	27.5	15.5	19	22	19	0.084	x
18	L	400	31.5	17	22	32	27	0.124	x
22	L	250	35.5	17	26	36	32	0.166	x
25	S	420	43.5	25.5	30	46	41	0.448	x
28	L	250	35.5	17	26	41	41	0.238	x
42	L	250	42.5	23.5	30	60	55	0.556	x

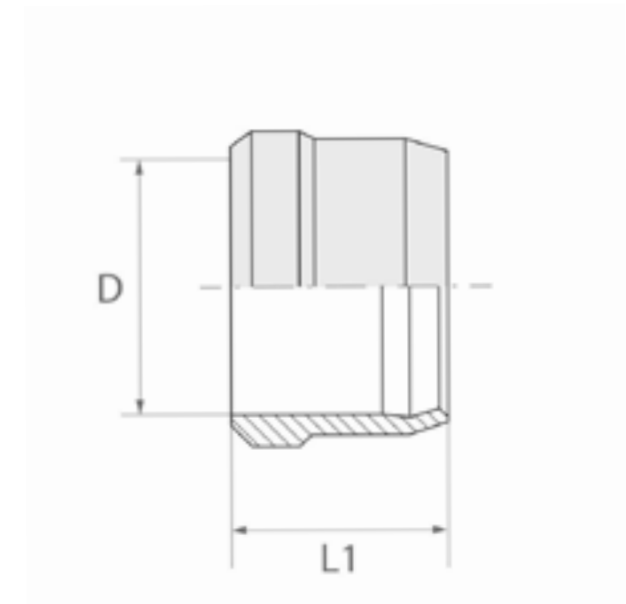


\* 1) = 100% X-RAY

# CUTTING RING

DIN 2353

1.4571 (1/2)



D	TypeE	PN	TypeE	L1	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	800		9.0	0.002	x
8	L	800		9.0	0.002	x
10	L	800		10.0	0.003	x
12	L	630		10.0	0.003	x
14	S	630		10.0	0.004	x
15	L	400		10.0	0.004	x
16	S	630		10.5	0.005	x
18	L	400		10.0	0.005	x
20	S	420		12.5	0.009	x
22	L	250		10.5	0.007	

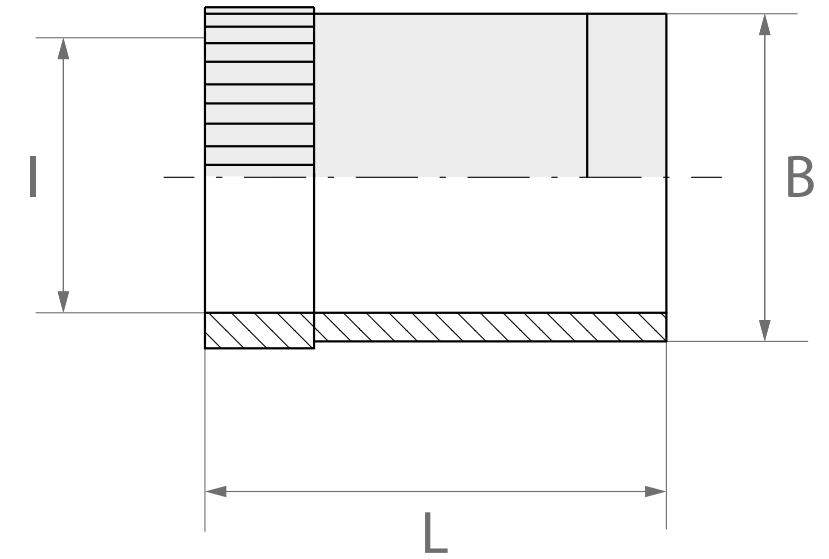


\* 1) = 100% X-RAY



# REINFORCING RING DIN 2353

1.4571 (1/1)



D	D1	L1	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
4	2.5	15.5	0.001	x
6	4.5	15.7	0.002	x
8	6.5	17.0	0.002	x
10	8.5	17.0	0.002	x
12	10.0	18.0	0.004	x
13	11.5	18.0	0.004	x
15	13.0	18.0	0.005	x
22	20.0	24.0	0.010	x
24	22.0	18.0	0.011	x
25	23.0	18.0	0.011	x

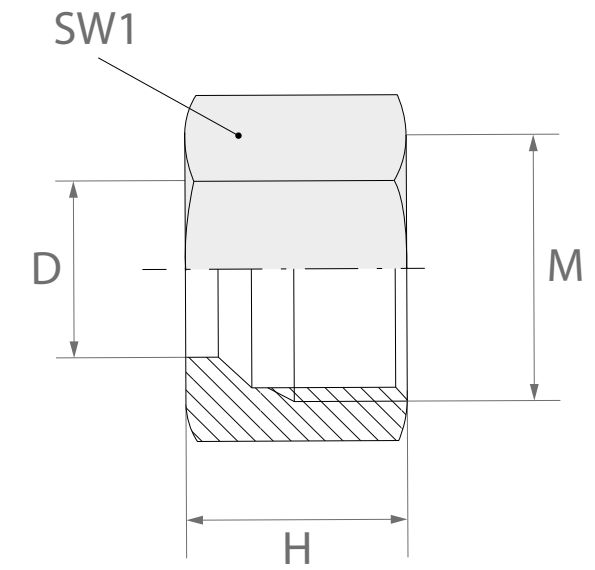


\* 1) = 100% X-RAY

# NUT

DIN 2353

1.4571 (1/1)



D	TypeE	PN	M	H	SW1	Grade AISI/UNS kg/pce.	1.4571 316 Ti *)
6	L	500	12x1.5	14.5	14	0.010	x
12	L	400	18x1.5	15.5	22	0.024	x
15	L	400	22x1.5	17.0	27	0.041	x
22	L	250	30x2.0	20.0	36	0.081	x



\* 1) = 100% X-RAY

# CLIPS



Clips

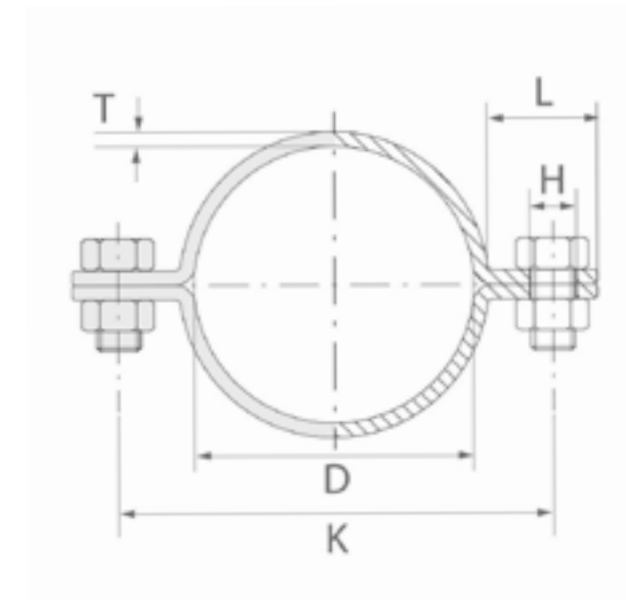
Test certificates

not available



# PIPE CLIP

1.4301 - 1.4401 (1/5)



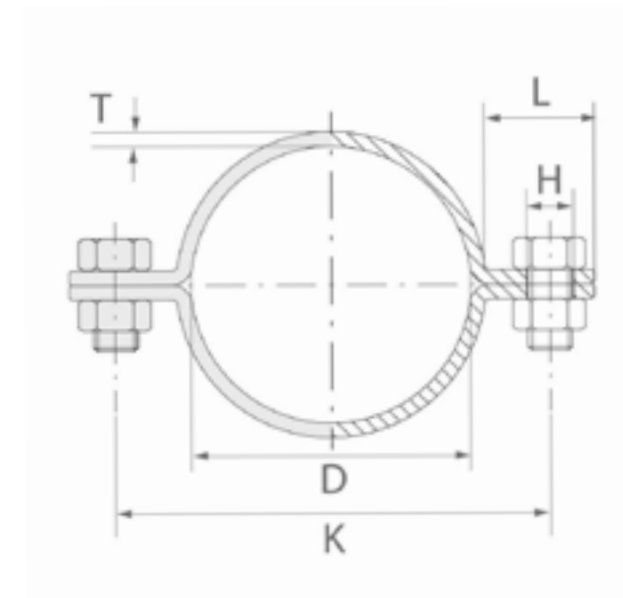
D INCH	D NW	D MM	T	W	L	K	H	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4401 316 *)
	10	12.0	2.0	20	18	34.0	7	0.05		x
		15.0	2.0	20	18	37.0	7	0.05		x
	10	17.2	2.0	20	18	39.2	7	0.05		x
	15	20.0	2.0	20	18	42.0	7	0.06	x	x
	15	21.3	2.0	20	18	43.3	7	0.06	x	x
		22.0	2.0	20	18	44.0	7	0.06	x	x
	20	25.0	2.0	20	18	47.0	7	0.06	x	x
1"	20	25.4	2.0	20	18	47.4	7	0.06		x
	20	26.9	2.0	20	18	48.9	7	0.06	x	x
		28.0	2.0	20	18	50.0	7	0.06	x	x



\* 1) = 100% X-RAY

# PIPE CLIP

1.4301 - 1.4401 (2/5)



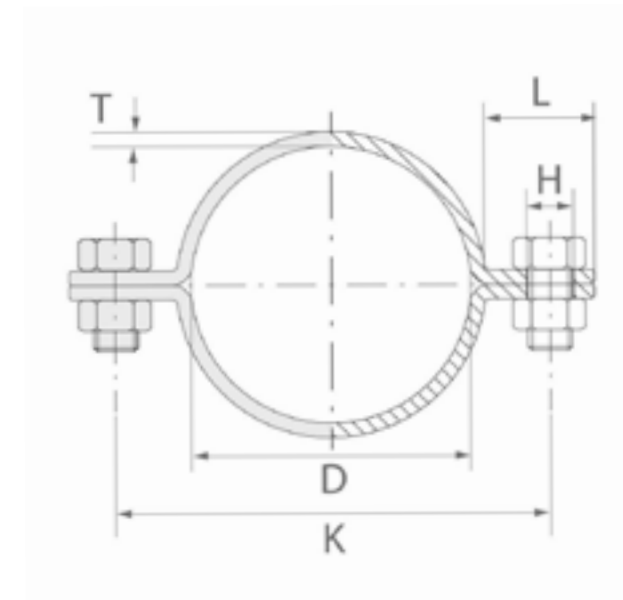
D INCH	D NW	D MM	T	W	L	K	H	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4401 316 *)
		30.0	2.0	20	18	52.0	7	0.07	x	x
1 1/4"		31.8	2.0	20	18	53.8	7	0.07		x
	25	33.7	2.0	20	18	55.7	7	0.07	x	x
1 1/2"		38.1	2.5	20	20	63.1	9	0.11		x
		40.0	2.5	20	20	65.0	9	0.11	x	x
	32	42.4	2.5	20	20	67.4	9	0.12	x	x
	40	44.5	2.5	20	20	69.5	9	0.12		x
	40	48.3	2.5	20	20	73.3	9	0.12	x	x
2"		50.8	2.5	20	20	75.8	9	0.13		x
		52.0	2.5	20	20	77.0	9	0.13	x	x



\* 1) = 100% X-RAY

# PIPE CLIP

1.4301 - 1.4401 (3/5)



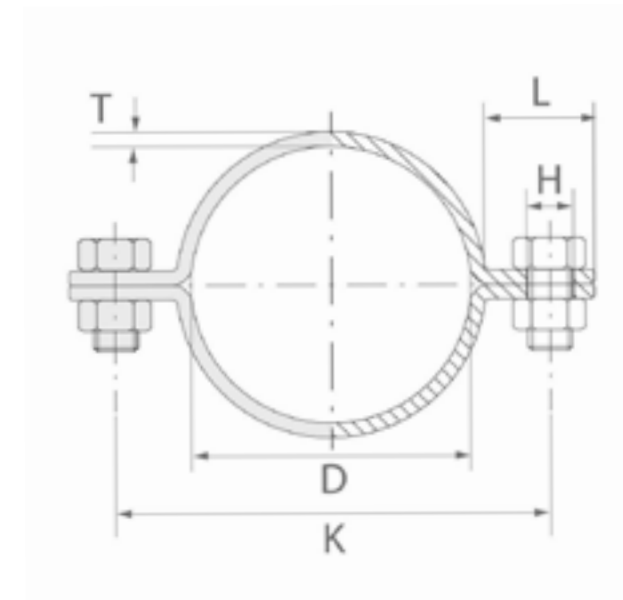
D INCH	D NW	D MM	T	W	L	K	H	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4401 316 *)
	50	54.0	2.5	20	20	79.0	9	0.13	x	x
	50	60.3	2.5	20	20	85.3	9	0.14	x	x
2 1/2"		63.5	3.0	20	20	89.5	9	0.17		x
	65	70.0	3.0	20	20	96.0	9	0.18	x	x
	65	76.1	3.0	20	20	102.1	9	0.19	x	x
	80	84.0	3.0	20	20	110.0	9	0.20	x	x
	80	85.0	3.0	20	20	111.0	9	0.20	x	x
	80	88.9	3.0	20	20	114.9	9	0.20	x	x
	100	104.0	4.0	20	20	132.0	9	0.29	x	x
	100	108.0	4.0	20	20	136.0	9	0.30	x	x



\* 1) = 100% X-RAY

# PIPE CLIP

1.4301 - 1.4401 (4/5)



D INCH	D NW	D MM	T	W	L	K	H	Grade AISI/UNS kg/pce.	1.4301 304 *)	1.4401 316 *)
4 1/2"	100	114.3	4.0	20	20	142.3	9	0.31	x	x
5"	125	129.0	4.0	25	25	162.0	9	0.44	x	x
	125	139.7	4.0	25	25	172.7	9	0.46	x	x
150	154.0	4.0	25	25	187.0	11	0.53	x	x	
	150	168.3	5.0	25	25	203.3	11	0.69	x	x
200	204.0	5.0	25	25	239.0	11	0.81		x	
	219.1	5.0	25	25	254.1	11	0.85	x	x	
	256.0	5.0	25	25	291.0	11	0.97		x	
273.0	5.0	25	25	308.0	11	1.02	x	x		
	306.0	5.0	25	25	341.0	11	1.13	x	x	

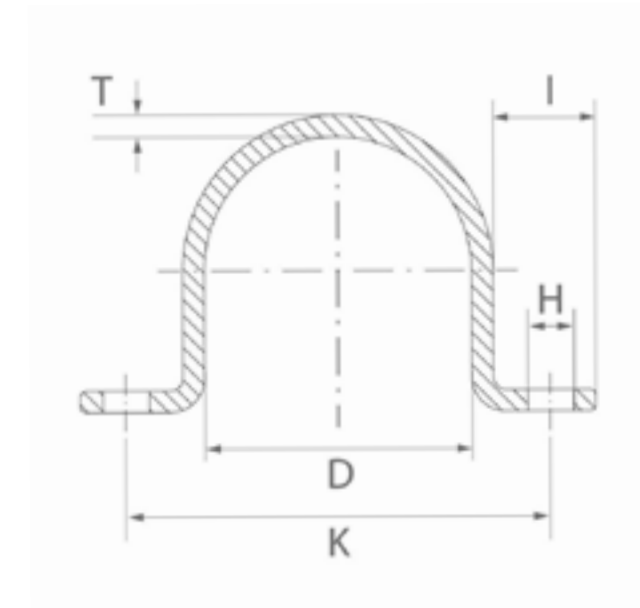


\* 1) = 100% X-RAY



# U-CLIP

1.4401 (1/4)



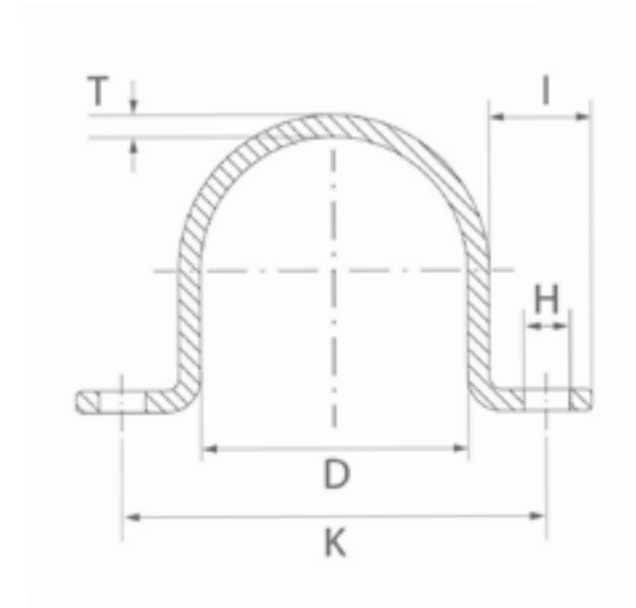
D NW	D MM	T	W	I	K	H	Grade AISI/UNS kg/pce.	1.4401 316 *)
10	12.0	2.0	20	20	36.0	9	0.02	x
10	17.2	2.0	20	20	41.2	9	0.02	x
15	20.0	2.0	20	20	44.0	9	0.03	x
15	21.3	2.0	20	20	45.3	9	0.03	x
20	25.0	2.0	20	20	49.0	9	0.03	x
20	25.4	2.0	20	20	49.4	9	0.03	x
20	26.9	2.0	20	20	50.9	9	0.03	x
	28.0	2.0	20	20	52.0	9	0.03	x
	30.0	2.0	20	20	54.0	9	0.04	x
	31.8	2.0	20	20	55.8	9	0.04	x



\* 1) = 100% X-RAY

# U-CLIP

1.4401 (2/4)



D NW	D MM	T	W	I	K	H	Grade AISI/UNS kg/pce.	1.4401 316 *)
25	33.7	2.0	20	20	57.7	9	0.04	x
	38.1	2.5	20	20	63.1	9	0.04	x
	40.0	2.5	20	20	65.0	9	0.05	x
32	42.4	2.5	20	20	67.4	9	0.06	x
40	44.5	2.5	20	20	69.5	9	0.06	x
40	48.3	2.5	20	20	73.3	9	0.06	x
	50.8	2.5	20	20	75.8	9	0.06	x
	52.0	2.5	20	20	77.0	9	0.07	x
50	54.0	2.5	20	20	79.0	9	0.07	x
50	57.0	3.0	20	20	86.3	9	0.08	x

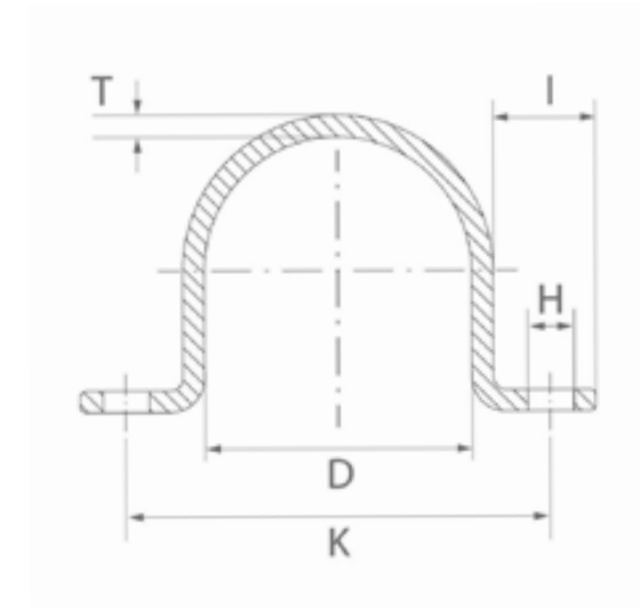


\* 1) = 100% X-RAY



# U-CLIP

1.4401 (3/4)



D NW	D MM	T	W	I	K	H	Grade AISI/UNS kg/pce.	1.4401 316 *)
50	60.3	3.0	20	20	76.3	9	0.09	x
	63.5	3.0	20	20	89.5	9	0.10	x
65	70.0	3.0	20	20	96.0	9	0.10	x
65	76.1	3.0	20	20	102.1	9	0.11	x
80	84.0	3.0	20	20	110.0	9	0.12	x
80	88.9	3.0	20	20	114.9	9	0.13	x
	101.6	4.0	20	20	129.6	9	0.19	x
100	104.0	4.0	20	20	132.0	9	0.19	x
100	108.0	4.0	20	20	136.0	9	0.20	x
100	114.3	4.0	20	20	142.3	9	0.21	x

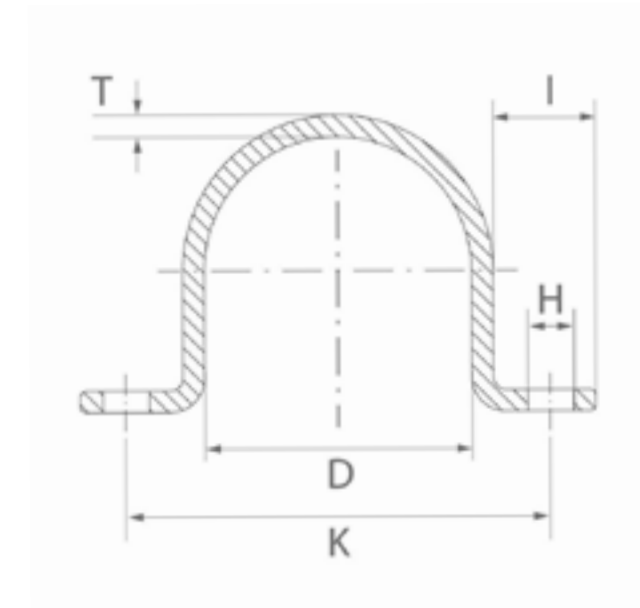


\* 1) = 100% X-RAY

# U-CLIP



1.4401 (4/4)



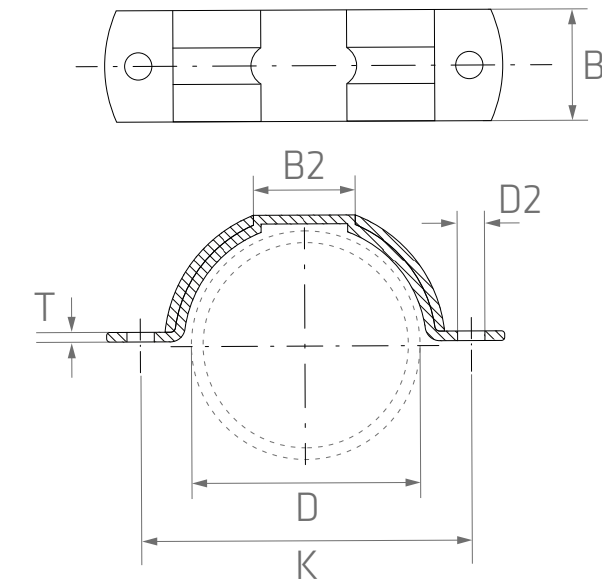
D NW	D MM	T	W	I	K	H	Grade AISI/UNS kg/pce.	1.4401 316 *)
125	129.0	4.0	25	25	162.0	11	0.30	x
125	139.7	4.0	25	25	172.7	11	0.32	x
150	154.0	5.0	25	25	187.0	11	0.35	x
150	168.3	5.0	25	25	203.3	11	0.38	x
200	204.0	5.0	25	25	239.0	11	0.57	x
200	219.1	5.0	25	25	254.1	11	0.61	x
	256.0	5.0	25	25	291.0	11	0.70	x
	273.0	5.0	25	25	308.0	11	0.74	x
	306.0	5.0	25	25	341.0	11	0.83	x
	323.9	5.0	25	25	358.9	11	0.88	x



\* 1) = 100% X-RAY

# PIPE CLIP TYPE R-171 REINFORCED

1.4401 (1/1)



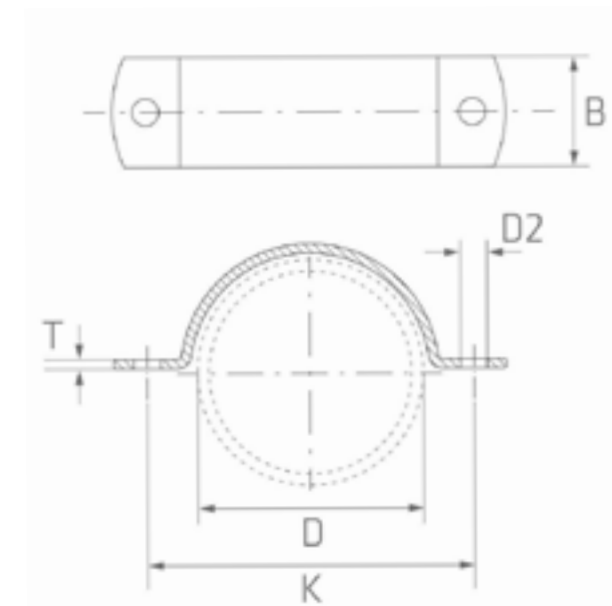
D NW	D MM	B	L	d	T	B1	Bolt size	Grade AISI/UNS	1.4401 316 kg/pce. *)
50	60.3	40	87	9.5	3	20	M8 x 25	0.261	x
65	76.1	40	100	9.5	3	22	M8 x 25	0.279	x
80	88.9	40	120	9.5	3	30	M8 x 25	0.355	x
100	114.3	40	156	12	3	30	M10 x 35	0.436	x
125	139.7	40	186	12	3	30	M10 x 35	0.520	x
150	168.3	40	206	12	4	30	M10 x 35	0.744	x
200	219.1	40	262	15	4	30	M12 x 35	0.940	x
250	273	40	316	15	4	30	M12 x 50	1.080	x
300	323.9	50	390	18	4	38	M16 x 50	1.749	x



\* 1) = 100% X-RAY

# PIPE CLIP TYPE R-171 REINFORCED SMOOTH FINISH

1.4401 (1/1)



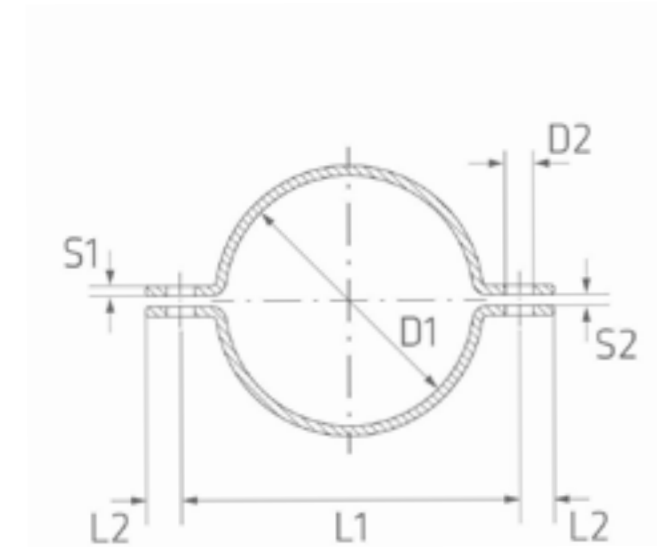
D NW	D MM	B	L	d	T	Bolt size	Grade AISI/UNS	1.4401 316 kg/pce. *)
15	21.3	25	44	7.5	2	M6 x 20	0.049	x
25	33.7	25	57	7.5	3	M6 x 20	0.094	x
32	42.4	30	69	7.5	3	M6 x 20	0.141	x
40	48.3	30	73	7.5	3	M6 x 20	0.147	x
350	355.6	50	413	18	4	M16 x 50	2.000	x



\* 1) = 100% X-RAY

# PIPE CLIP DIN 3567 - HEAVY DUTY

1.4301 (1/2)



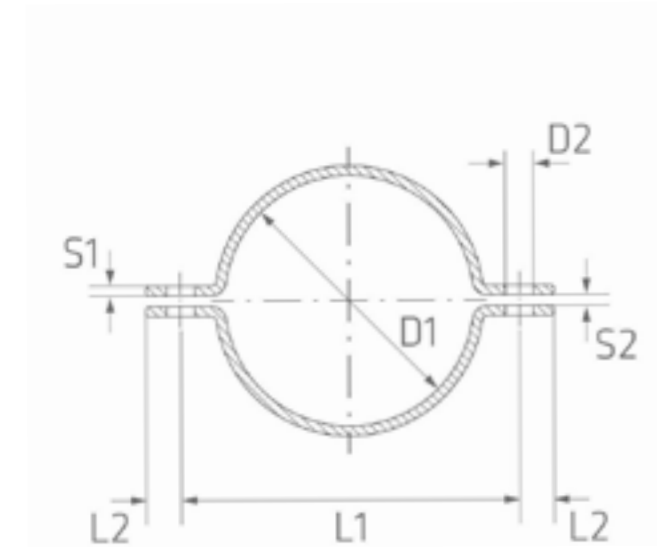
D NW	D MM	A	C	D2	F	B x S	Grade AISI/UNS kg/pce.	1.4301 304 *)
15	21.3	59	15	11.5	7	30 x 5	0.19	x
20	26.9	66	15	11.5	7	30 x 5	0.21	x
25	33.7	72	15	11.5	7	30 x 5	0.25	x
32	42.4	82	15	11.5	7	30 x 5	0.28	x
40	48.3	88	15	11.5	7	30 x 5	0.30	x
50	60.3	108	18	14	9	40 x 6	0.59	x
65	76.1	122	18	14	9	40 x 6	0.65	x
80	88.9	136	18	14	9	40 x 6	0.74	x
100	114.3	178	24	18	11	50 x 8	1.58	x
125	139.7	204	24	18	11	50 x 8	1.85	x



\* 1) = 100% X-RAY

# PIPE CLIP DIN 3567 - HEAVY DUTY

1.4301 (2/2)



D NW	D MM	A	C	D2	F	B x S	Grade AISI/UNS kg/pce.	1.4301 304 *)
150	168.3	232	24	18	11	50 x 8	2.15	x
200	204	268	24	18	11	50 x 8	2.50	x
200	219.1	284	24	18	11	50 x 8	2.69	x



\* 1) = 100% X-RAY

# VALVES



## Valves

## Tolerances

Threaded fittings ISO 228-1G

Fittings for welding similar  
ANSI B16.25

Flanges similar EN1092-1 or  
ASME B16.5

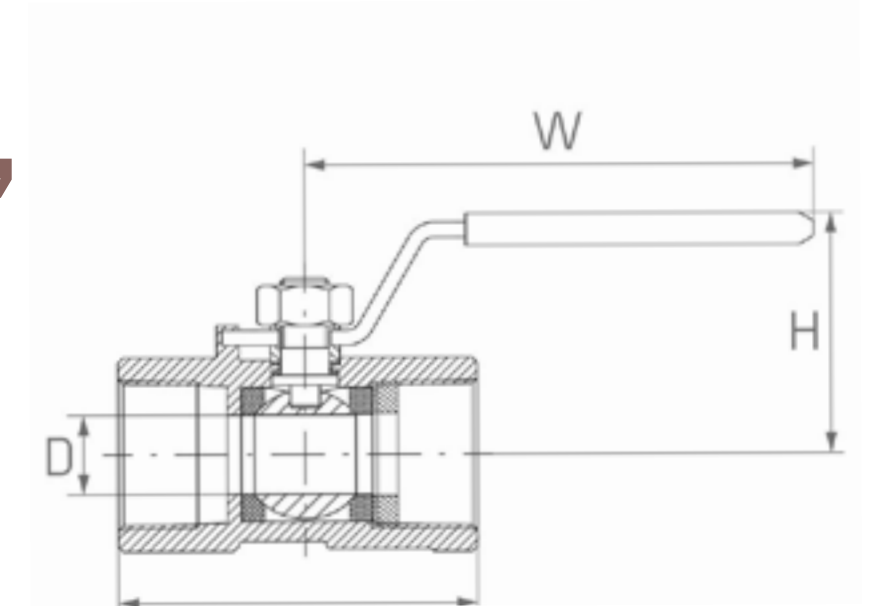
## Test certificates

EN 10204 3.1



# HEXAGON REDUCED PORT BALL VALVE, 1 PIECE – REDUCED PORT BALL VALVE SCREWED END

CF8M (1/1)

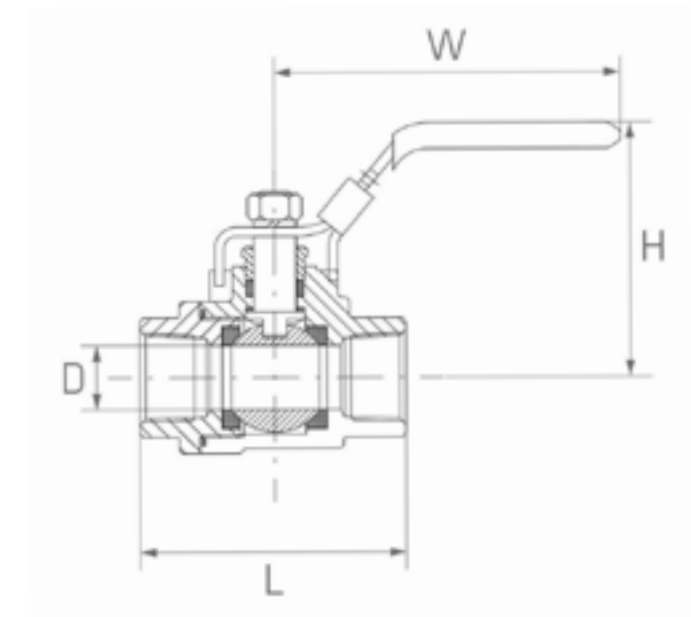


INCH	D	L	L1	H	W	SW	CF8M 304/316 *)
1/4 "	5.0	39.0	19.0	30.0	70.0	17	x
3/8 "	6.8	44.0	21.0	34.0	90.0	21	x
1/2 "	9.2	56.5	27.5	41.0	100.0	25	x
3/4 "	12.5	59.0	29.0	44.0	100.0	30	x
1 "	15.0	71.0	34.5	50.0	110.0	37	x
1 1/4 "	20.0	78.0	37.0	55.0	110.0	46	x
1 1/2 "	25.0	83.0	40.0	64.0	135.0	53	x
2 "	32.0	100.0	49.0	70.0	145.0	65	x



\* 1) = 100% X-RAY

# 2-PIECE BALL VALVE I/I, FULL BORE, SCREWED END



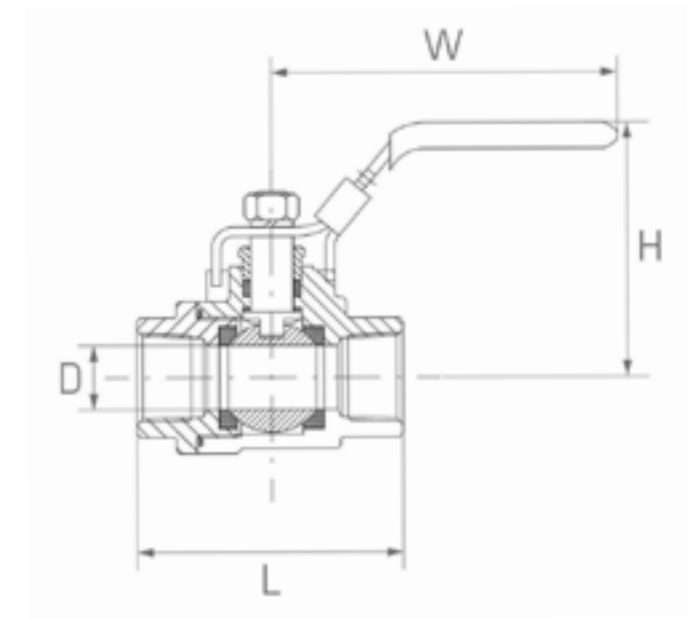
CF8M (1/2)

INCH	D	L	H	W	SW	CF8M 304/316 *)
1/4 "	11.5	49.0	45.5	95.0	20.0	x
3/8 "	12.5	49.0	45.5	95.0	20.0	x
1/2 "	15.0	57.0	46.5	95.0	24.5	x
3/4 "	20.0	65.0	51.0	108.0	30.0	x
1 "	25.0	77.5	54.0	108.0	37.0	x
1 1/4 "	32.0	90.5	67.5	140.0	46.0	x
1 1/2 "	38.0	98.0	74.0	140.0	54.0	x
2 "	50.0	121.0	86.0	160.0	66.0	x
2 1/2 "	65.0	157.0	103.5	200.0	81.0	x
3 "	80.0	177.0	134.5	245.0	95.0	x



\* 1) = 100% X-RAY

# 2-PIECE BALL VALVE I/I, FULL BORE, SCREWED END



CF8M (2/2)

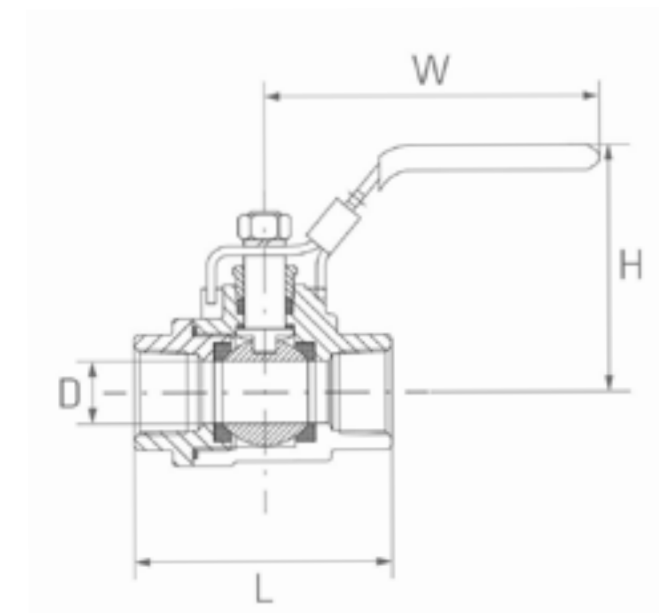
INCH	D	L	H	W	SW	CF8M 304/316 *)
4"	100.0	217.0	171.0	318.0	125.0	x



\* 1) = 100% X-RAY

# 2-PIECE BALL VALVE I/I, FULL BORE, SCREWED END, 2000 PSI

CF8M (1/1)



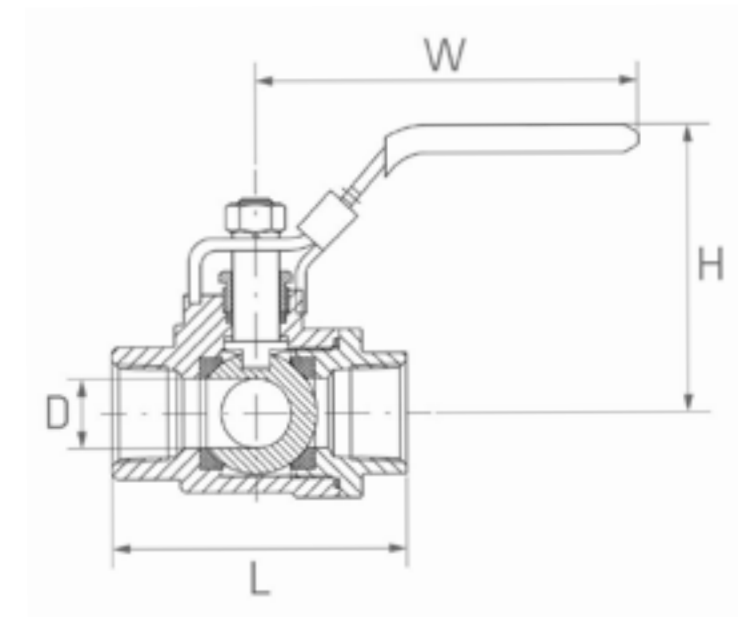
INCH	D	L	H	W	CF8M 304/316 *)
1/4 "	12.5	56.0	48.0	105.0	x
3/8 "	12.5	56.0	48.0	105.0	x
1/2 "	15.0	66.0	53.0	110.0	x
3/4 "	20.0	78.0	62.0	135.0	x
1 "	25.0	89.0	75.0	150.0	x
1 1/4 "	32.0	104.0	83.0	150.0	x
1 1/2 "	38.0	112.0	91.0	177.0	x
2 "	50.0	123.0	102.0	183.0	x



\* 1) = 100% X-RAY

# 3-WAY BALL VALVE I/I/I, L-PORT, REDUCED BORE

CF8M (1/1)



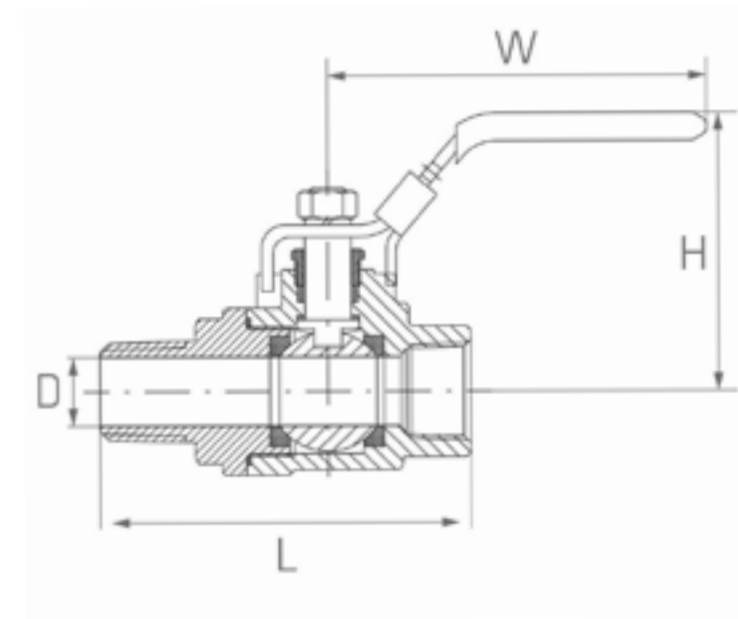
INCH	D	L	F	W	H	CF8M 304/316 *)
1/4 "	12.7	64.0	32.0	132.0	60.0	x
3/8 "	12.7	64.0	32.0	132.0	60.0	x
1/2 "	12.7	75.0	37.5	132.0	60.0	x
3/4 "	16.0	84.0	42.0	155.0	73.0	x
1 "	20.0	101.0	50.5	155.0	80.0	x
1 1/4 "	25.0	119.0	54.5	155.0	85.0	x
1 1/2 "	32.0	130.0	65.0	210.0	103.0	x
2 "	38.0	151.0	75.5	210.0	110.0	x



\* 1) = 100% X-RAY

# 2-PIECE BALL VALVE I/I, FULL BORE

CF8M (1/1)



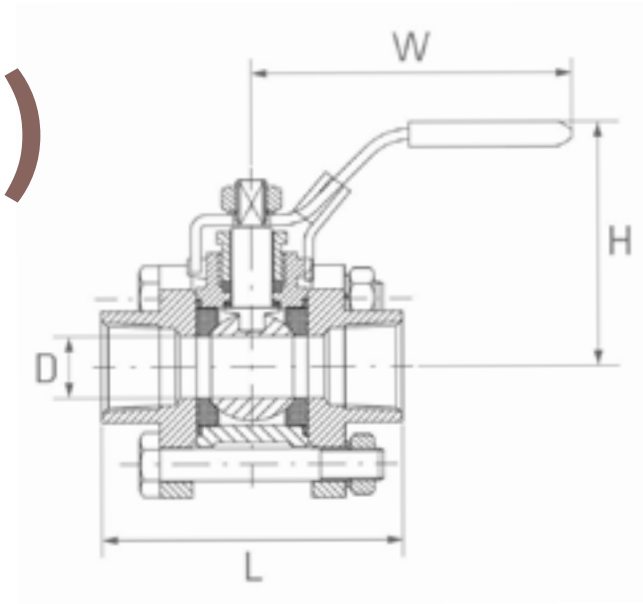
INCH	D	L	H	W	SW	CF8M 304/316 *)
1/4 "	11.5	56.0	45.5	95.0	20.0	x
3/8 "	12.5	56.0	45.5	95.0	20.0	x
1/2 "	15.0	71.5	46.5	95.0	24.5	x
3/4 "	20.0	81.0	51.0	108.0	30.0	x
1 "	25.0	96.5	54.0	108.0	37.0	x
1 1/4 "	32.0	111.5	67.5	140.0	46.0	x
1 1/2 "	38.0	119.0	74.0	140.0	54.0	x
2 "	50.0	146.0	86.0	160.0	66.0	x



\* 1) = 100% X-RAY

# BALL VALVE 3-PIECE, FULL BORE (SW) WITH WELDING END

CF8M (1/2)



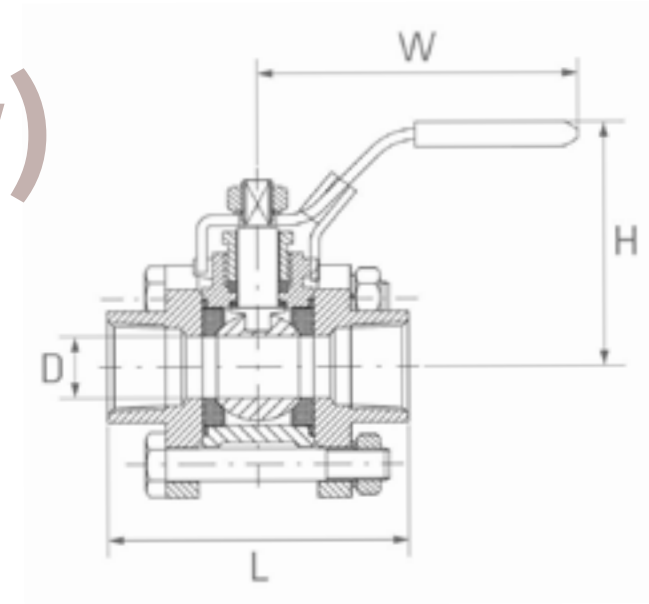
INCH	L	D	H	W	SW	CF8M 304/316 *)
1/4 "	55.5	12.8	45.0	95.0	12.0	x
3/8 "	55.5	12.8	45.0	95.0	14.0	x
1/2 "	57.0	15.0	46.0	95.0	15.5	x
3/4 "	69.0	20.0	51.0	108.0	21.1	x
1 "	79.0	25.0	54.0	108.0	27.3	x
1 1/4 "	91.0	32.0	67.0	140.0	35.2	x
1 1/2 "	102.5	38.0	74.0	140.0	41.1	x
2 "	124.0	50.0	86.0	160.0	52.3	x
2 1/2 "	157.0	65.0	103.0	200.0	65.0	x
3 "	178.5	80.0	134.5	245.0	80.0	x



\* 1) = 100% X-RAY



# BALL VALVE 3-PIECE, FULL BORE (SW) WITH WELDING END



CF8M (2/2)

INCH	L	D	H	W	SW	CF8M 304/316 *)
4 "	219.0	100.0	171.0	318.0	100.0	x

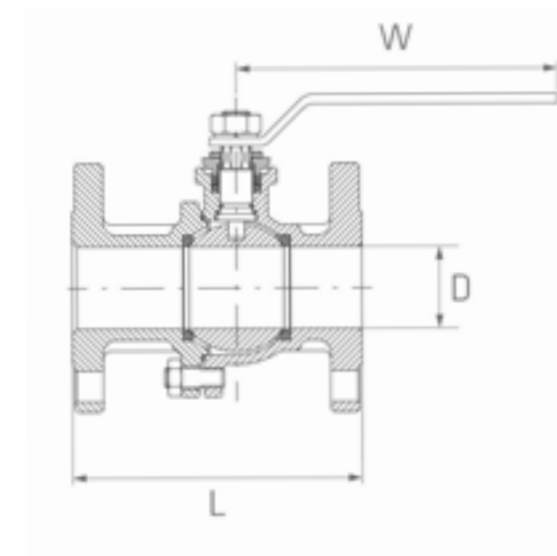


\* 1) = 100% X-RAY

# 2-PIECE FLANGED BALL VALVE, FULL BORE

EN-1092-1

CF8M (1/1)



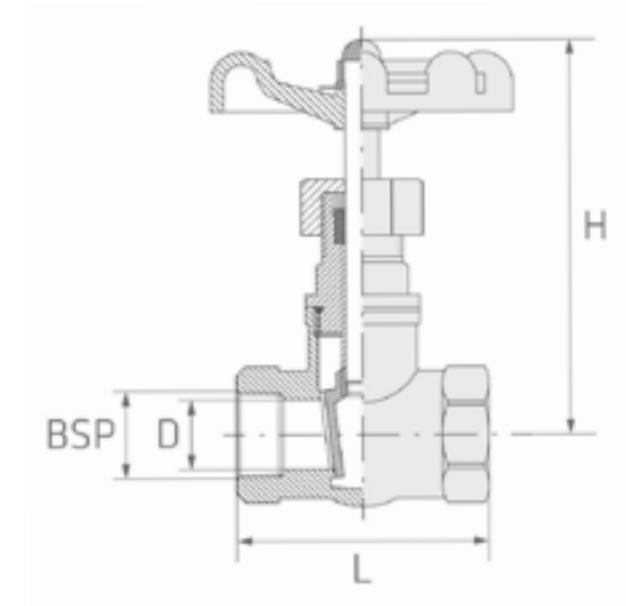
INCH	L	D	H	W	CF8M 304 *)
1/2"	115.0	45.0	80.0	140.0	x
3/4 "	120.0	58.0	85.0	140.0	x
1 "	125.0	68.0	95.0	160.0	x
1 1/4"	130.0	78.0	108.0	160.0	x
1 1/2"	140.0	88.0	114.0	185.0	x
2 "	150.0	102.0	124.0	185.0	x
2 1/2"	170.0	122.0	148.0	230.0	x
3 "	180.0	138.0	158.0	230.0	x
4 "	190.0	158.0	191.0	320.0	x



\* 1) = 100% X-RAY

# SHUT-OFF SLIDE I/I ISO 228-1G

CF8M (1/1)



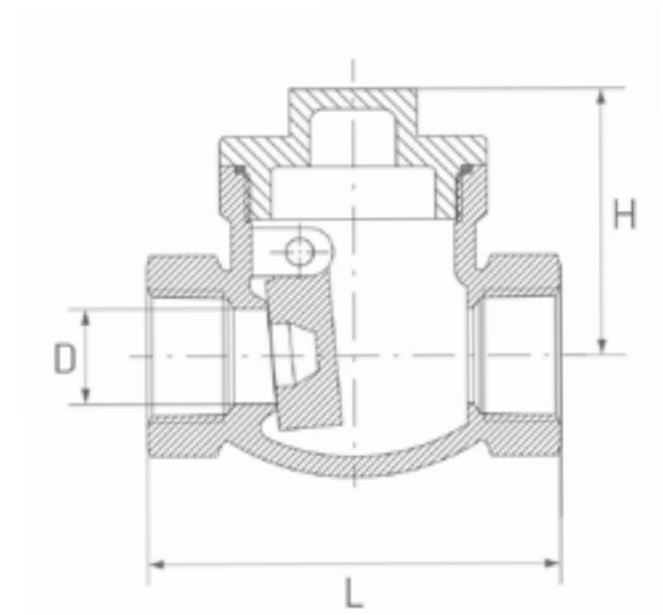
DN	D	L	A	H	CF8M 304/316 *)
15	14.0	53.0	66.0	95.0	x
20	19.0	57.0	72.0	95.0	x
25	24.0	64.0	78.0	105.0	x
32	30.0	72.0	97.0	125.0	x
40	38.0	76.0	97.0	135.0	x
50	47.0	88.0	107.0	135.0	x



\* 1) = 100% X-RAY

# SWING CHECK VALVE F/F STRAIGHT SEAT

CF8M (1/1)



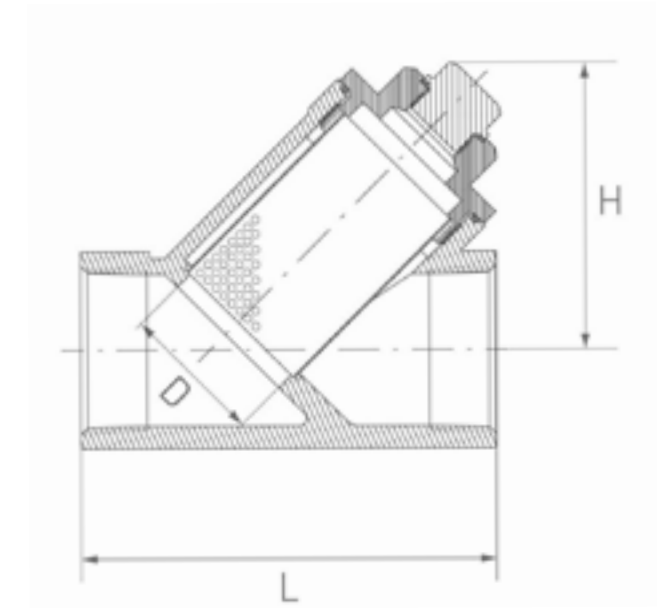
DN	D	L	H	CF8M
				316
				*)
1/4 "	6.0	36.0	58.0	x
3/8 "	10.0	36.0	58.0	x
1/2 "	15.0	40.0	66.0	x
3/4 "	20.0	54.0	80.0	x
1 "	25.0	59.0	90.0	x
1 1/4 "	32.0	62.5	105.0	x
1 1/2 "	38.0	73.0	120.0	x
2 "	50.0	85.0	140.0	x
2 1/2 "	65.0	95.0	165.0	x
3 "	80.0	115.0	190.0	x



\* 1) = 100% X-RAY

# STRAINER I/I, ISO 228-1G

CF8M (1/1)



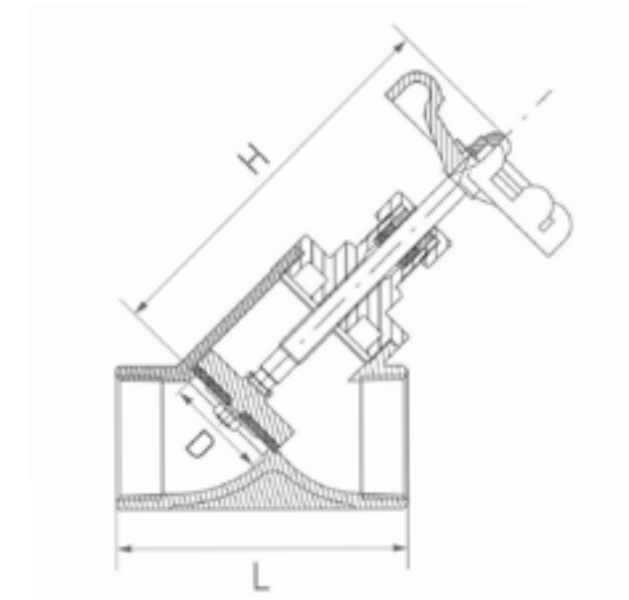
DN	D	L	H	CF8M
				316
				*)
1/4 "	10.0	65.0	39.0	x
3/8 "	12.0	65.0	39.0	x
1/2 "	15.0	65.0	39.0	x
3/4 "	20.0	80.0	45.0	x
1 "	25.0	90.0	52.0	x
1 1/4 "	32.0	105.0	58.0	x
1 1/2 "	40.0	120.0	72.0	x
2 "	50.0	140.0	80.0	x



\* 1) = 100% X-RAY

# GATE VALVE, BEVEL SEAT I/I, ISO 228-1G

CF8M (1/1)



INCH	D	L	S	H	D	CF8M
						316
						*)
1/2"	12.5	65.0	27.0	97.0	70.0	x
3/4 "	18.0	75.0	32.0	110.0	70.0	x
1 "	23.5	90.0	41.0	130.0	80.0	x
1 1/4"	32.0	110.0	50.0	150.0	80.0	x
1 1/2"	36.0	120.0	56.0	160.0	90.0	x
2"	46.0	150.0	70.0	180.0	100.0	x

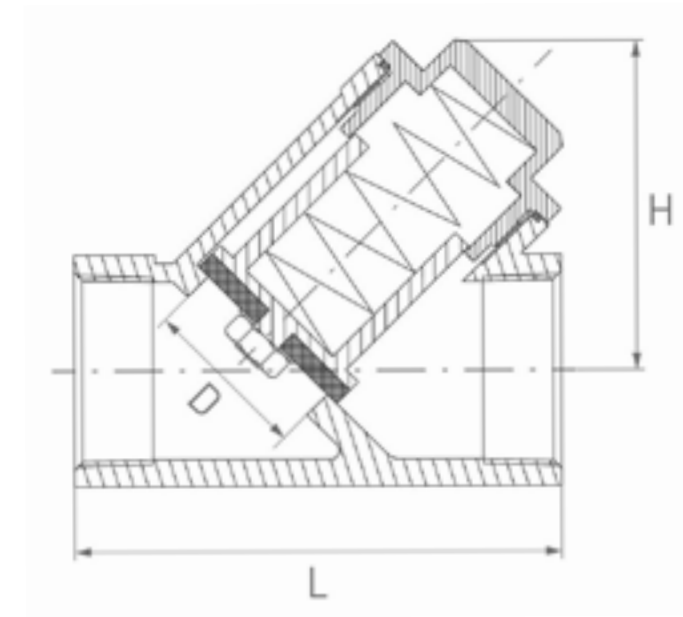


\* 1) = 100% X-RAY



# SWING CHECK VALVE F/IF, BEVEL SEAT

CF8M (1/2)



DN	D	L	H	CF8M
				316
				*)
1/4 "	9.5	64.0	43.0	x
3/8 "	11.5	64.0	43.0	x
1/2 "	15.0	64.0	45.0	x
3/4 "	20.0	79.0	52.0	x
1 "	25.0	90.0	68.0	x
1 1/4 "	30.0	106.0	70.0	x
1 1/2 "	38.0	119.0	80.0	x
2 "	47.0	140.0	98.0	x
2 1/2 "	61.0	167.0	117.0	x
3 "	75.0	198.0	137.0	x



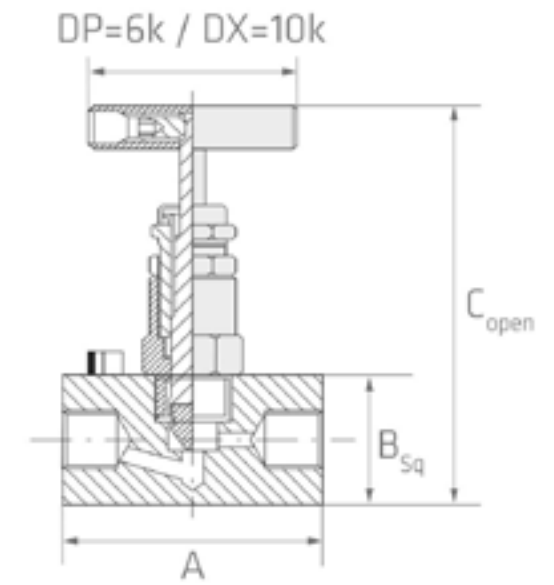
\* 1) = 100% X-RAY





# NEEDLE VALVE

CF8M (1/1)



INCH	L	H	D	CF8M
				316
				*)
1/4 "	54.0	77.0	5.0	x
3/8 "	56.0	78.0	6.0	x
1/2 "	64.0	80.0	6.0	x
3/4 "	70.0	83.0	8.0	x
1 "	80.0	95.0	12.0	x



\* 1) = 100% X-RAY

# NOXPRESS



## Noxpress

## Tolerances

Pipes similar EN 10312/10217-7-  
DVGW/GW541

Noxpress 14401 - DVGW + KIWA

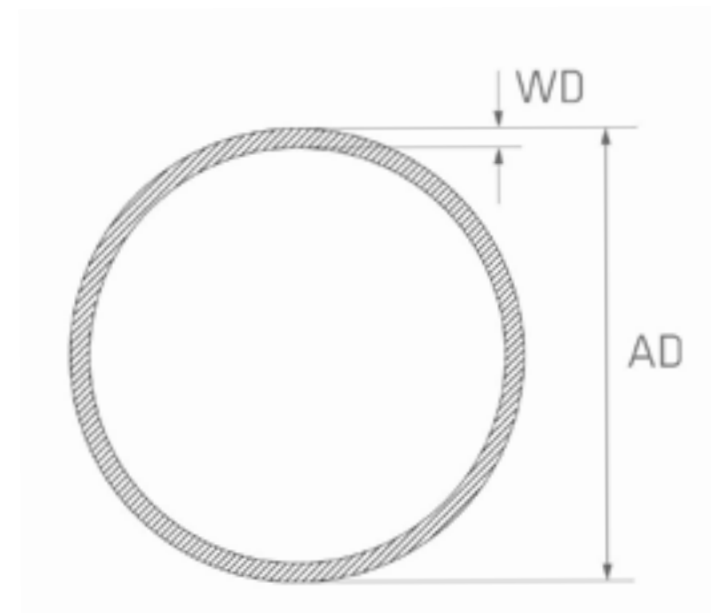
## Prüfbescheinigung

Europe:

KIWA, DVGW, CSTB, ETA  
Danmark, SITAC

# PIPES

1.4401 (1/1)



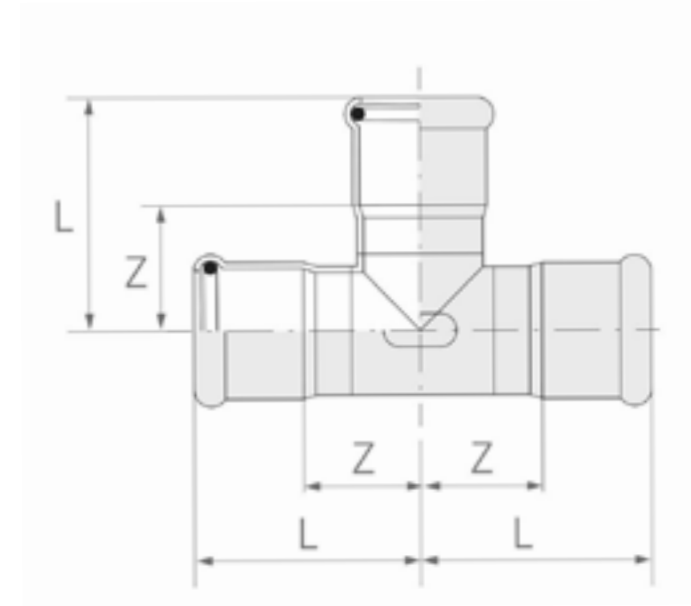
AFM	DIM	INT	l/m	Grade AISI/UNS	1.4401 316 *)
15	1.0	13.0	0.133	0.35	x
18	1.0	16.0	0.201	0.43	x
22	1.2	19.6	0.302	0.63	x
28	1.2	25.6	0.515	0.81	x
35	1.5	32.0	0.804	1.26	x
42	1.5	39.0	1.195	1.52	x
54	1.5	51.0	2.043	1.97	x
76.1	2.0	72.1	4.083	3.71	x
88.9	2.0	84.9	5.661	4.35	x
108	2.0	104.0	8.495	5.31	x



\* 1) = 100% X-RAY

# EQUAL TEE

1.4404 (1/1)



D	A	B	L	Z	Z1	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	38.2	66	13	18.2	0.064	x
18	21	40.7	68	13	19.7	0.080	x
22	21	44	80	19	23	0.108	x
28	24	50	88	20	26	0.148	x
35	27	56.5	105	25.5	29.5	0.200	x
42	32	66	116	25	34	0.282	x
54	38	79	142	33	41	0.422	x
76.1	55	116.5	242	66	61.5	1.270	x
88.9	64	128	250	63.5	64	1.430	x
108	78	154.5	310	77	76.5	2.865	x

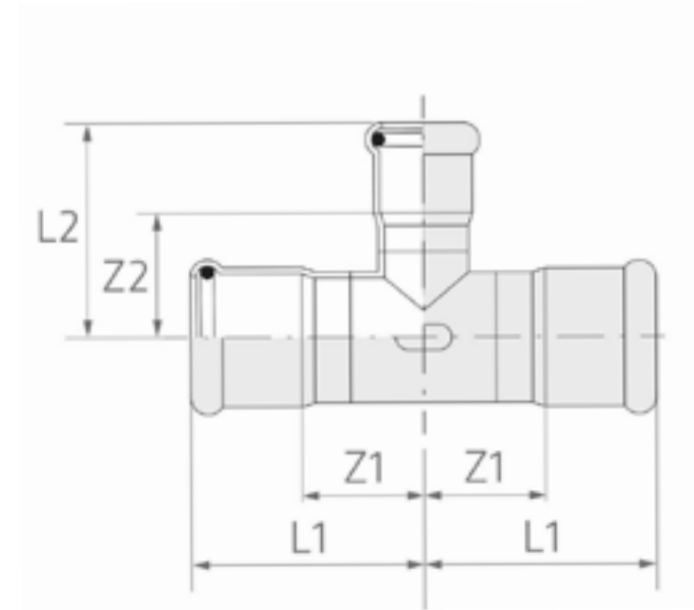


\* 1) = 100% X-RAY

# REDUCING TEE



1.4404 (1/2)



		D		A	A1	B	L	Z	Z1	Grade AISI/UNS kg/pce.	1.4404 316L *)	
22	x	15	x	22	21	20	42	80	19	22	0.098	x
28	x	18	x	28	24	21	46	88	20	25	0.132	x
28	x	22	x	28	24	21	47	88	20	26	0.136	x
35	x	15	x	35	27	20	47.5	105	25.5	27.5	0.137	x
35	x	18	x	35	27	21	48.5	105	25.5	27.5	0.174	x
35	x	22	x	35	27	21	49.5	105	25.5	28.5	0.178	x
35	x	28	x	35	27	24	52.5	105	25.5	28.5	0.194	x
42	x	22	x	42	32	24	53	116	25	32	0.234	x
42	x	28	x	42	32	24	56	116	25	32	0.242	x
42	x	35	x	42	32	27	60	116	25	33	0.258	x

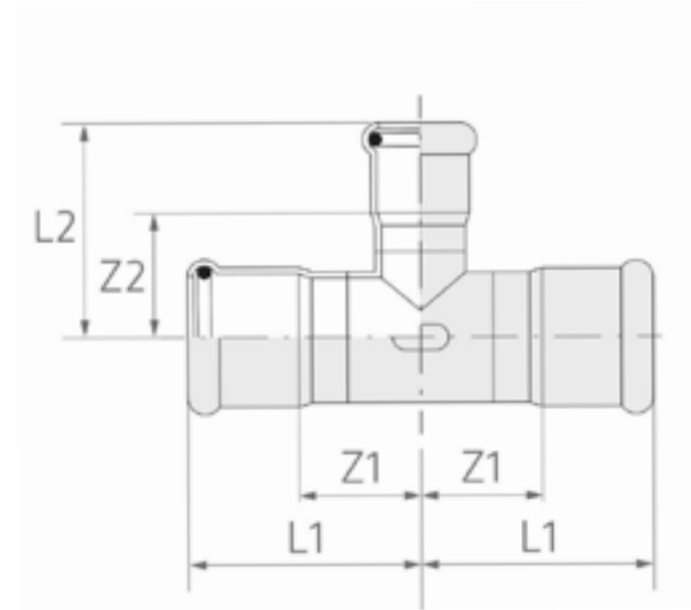


\* 1) = 100% X-RAY

# REDUCING TEE



1.4404 (2/2)



		D		A	A1	B	L	Z	Z1	Grade AISI/UNS kg/pce.	1.4404 316L *)	
54	x	22	x	54	38	21	60	142	33	39	0.380	x
54	x	28	x	54	38	24	63	142	33	39	0.365	x
54	x	35	x	54	38	27	67	142	33	40	0.365	x
54	x	42	x	54	38	32	73	142	33	41	0.394	x
76.1	x	28	x	76.1	55	24	74	242	66	50	1.005	x
76.1	x	42	x	76.1	55	32	84	242	66	52	1.028	x
88.9	x	54	x	88.9	64	38	97	250	61	59	1.297	x
108	x	54	x	108	78	38	106	310	77	68	1.900	x
108	x	76.1	x	108	78	55	132.5	310	77	77.5	2.040	x

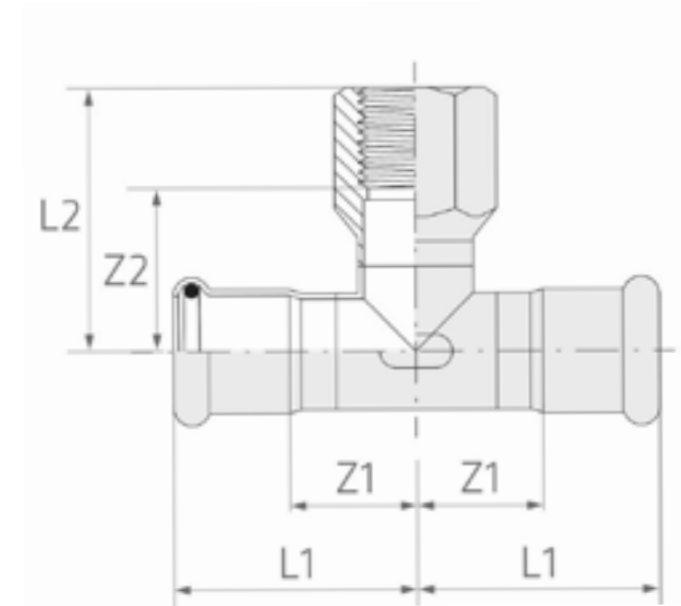


\* 1) = 100% X-RAY



# BRANCH TEE FEMALE BSP OUTLET

1.4404 (1/2)

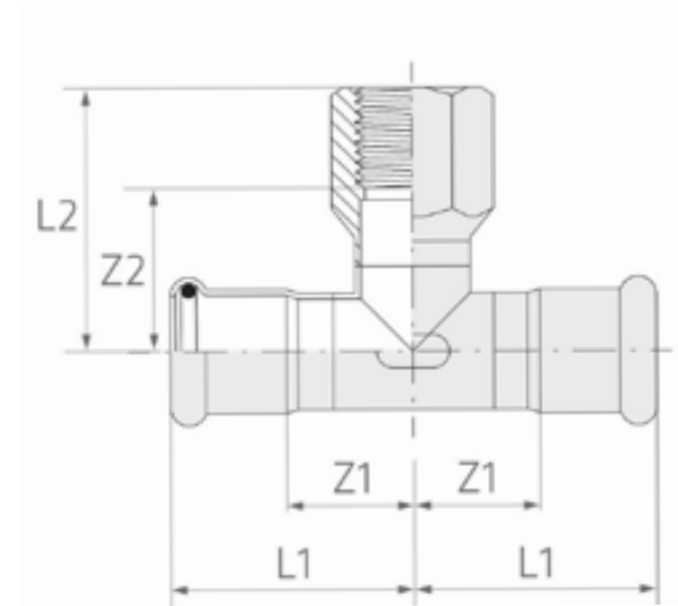


		D		A	B	L	Z	Grade	1.4404	
								AISI/UNS	316L	
								kg/pce.	*)	
15	x	1/2"	x	15	20	35.2	66	13	0.074	x
22	x	1/2"	x	22	21	39	80	19	0.110	x
22	x	3/4"	x	22	21	42	80	19	0.126	x
28	x	1/2"	x	28	24	42	88	20	0.174	x
28	x	3/4"	x	28	24	45	88	20	0.154	x
35	x	1/2"	x	35	27	44.5	105	25.5	0.182	x
35	x	3/4"	x	35	27	47.5	105	25.5	0.198	x
42	x	1/2"	x	42	32	48	116	25	0.234	x
42	x	3/4"	x	42	32	51	116	25	0.245	x
54	x	1/2"	x	54	38	55	142	33	0.348	x



\* 1) = 100% X-RAY

# BRANCH TEE FEMALE BSP OUTLET



1.4404 (2/2)

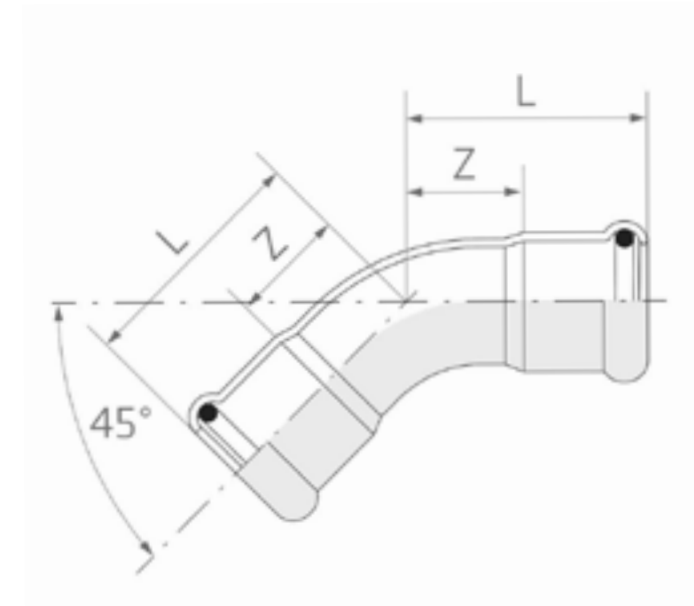
		D		A	B	L	Z	Grade	1.4404	
								AISI/UNS	316L	
								kg/pce.	*)	
54	x	3/4"	x	54	38	58	142	33	0.363	x
54	x	2"	x	54	38	79	142	33	0.775	x
88.9	x	2"	x	88.9	64	97	250	61	1.490	x
108	x	3/4"	x	108	78	85	310	77	1.720	x



\* 1) = 100% X-RAY

# ELBOW 45° F/F

1.4404 (1/1)



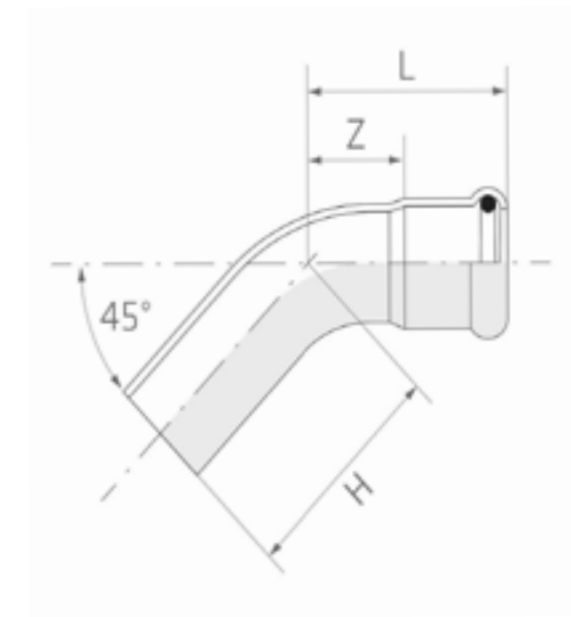
D	A	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	45	25	0.048	x
18	21	51	30	0.068	x
22	21	57	36	0.093	x
28	24	63	39	0.134	x
35	27	68	41	0.176	x
42	32	78	46	0.246	x
54	38	87	49	0.357	x
76.1	55	126	71	0.913	x
88.9	64	128	64	1.165	x
108	78	155	77	1.704	x



\* 1) = 100% X-RAY

# ELBOW 45° M/F

1.4404 (1/1)



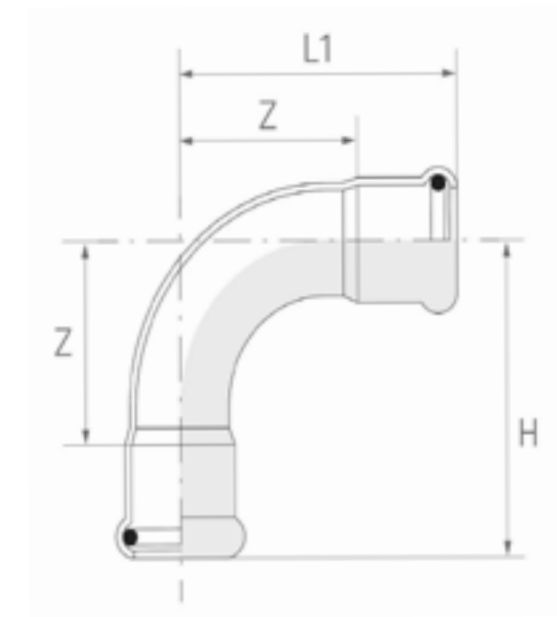
D	A	H	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	48	45	25	0.048	x
18	21	55	51	30	0.068	x
22	21	61	57	36	0.093	x
28	24	68	63	39	0.134	x
35	27	71	68	41	0.176	x
42	32	82	78	46	0.246	x
54	38	92	87	49	0.357	x
76.1	55	133	126	71	0.913	x
88.9	64	136	128	64	1.165	x



\* 1) = 100% X-RAY

# ELBOW 90° F/F

1.4404 (1/1)



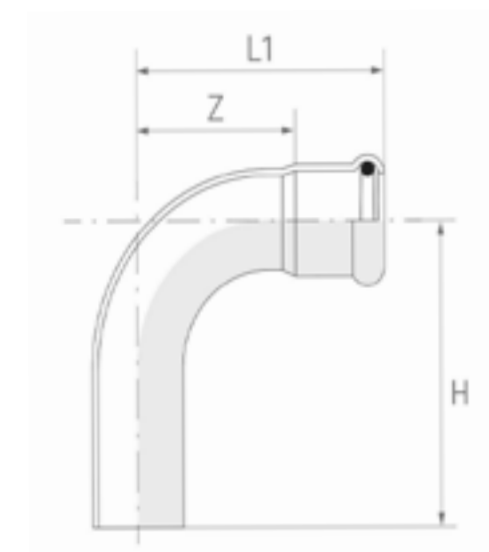
D	A	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	56	36	0.058	x
18	21	61	40	0.077	x
22	21	72	51	0.115	x
28	24	83	59	0.160	x
35	27	93	66	0.219	x
42	32	108	76	0.308	x
54	38	125	87	0.458	x
76.1	55	180	125	1.243	x
88.9	64	191	127	1.527	x
108	78	250	172	2.382	x



\* 1) = 100% X-RAY

# ELBOW 90° M/F

1.4404 (1/1)



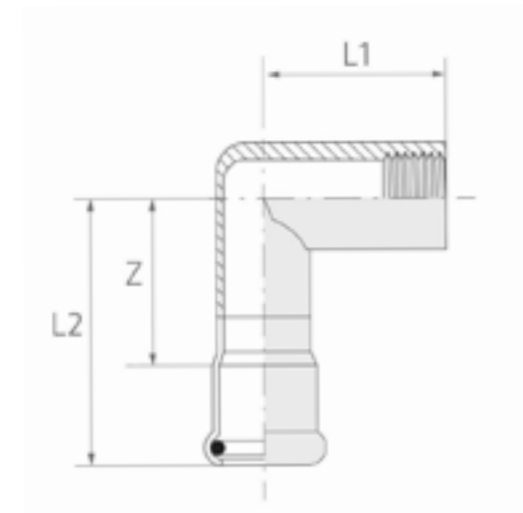
D	A	H	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	62	56	36	0.058	x
18	21	67	61	40	0.077	x
22	21	83	72	51	0.115	x
28	24	91	83	59	0.160	x
35	27	96	93	66	0.219	x
42	32	112	108	76	0.308	x
54	38	130	125	87	0.458	x
76.1	55	187	180	125	1.243	x
88.9	64	199	191	127	1.527	x



\* 1) = 100% X-RAY

# ELBOW ADAPTOR 90° WITH FEMALE THREAD

1.4404 (1/1)



	D	A	H	L	Z	Grade AISI/UNS	1.4404 316L
						kg/pce.	*)
15	x	1/2"	20	47	29	0.09	x
18	x	1/2"	21	48	30	0.102	x
22	x	3/4"	21	53	35	0.186	x
28	x	1"	24	61	41	0.312	x

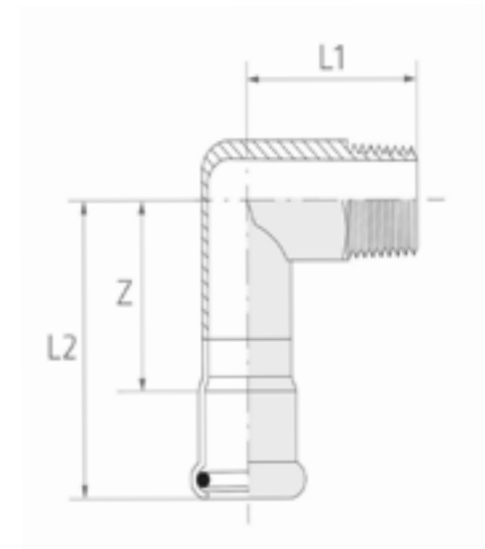


\* 1) = 100% X-RAY



# ELBOW ADAPTOR 90° WITH MALE THREAD

1.4404 (1/1)



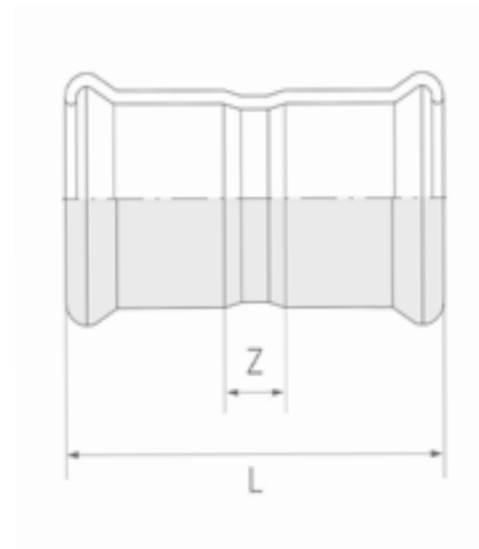
	D		A	H	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	x	1/2"	20	47	33	27	0.088	x
18	x	1/2"	21	48	34	27	0.105	x
22	x	3/4"	21	54	41	33	0.148	x
28	x	1"	24	60	45	36	0.258	x
54	x	2"	38	92	74	54	0.825	x



\* 1) = 100% X-RAY

# SOCKET

1.4404 (1/1)



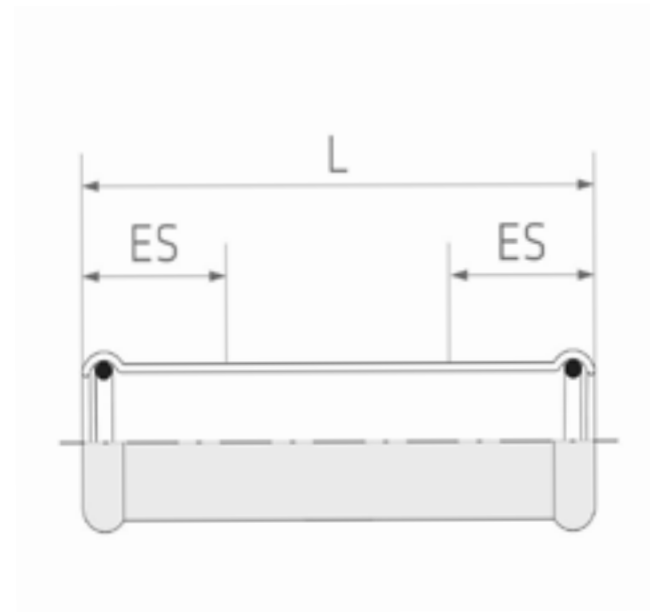
D	A	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	48	8	0.034	x
18	21	50	8	0.042	x
22	21	51	9	0.054	x
28	24	56	8	0.073	x
35	27	68	14	0.105	x
42	32	74	10	0.145	x
54	38	94	18	0.215	x
76.1	55	125	15	0.51	x
88.9	64	144	16	0.695	x
108	78	172	16	1.035	x



\* 1) = 100% X-RAY

# SLIP COUPLING

1.4404 (1/1)



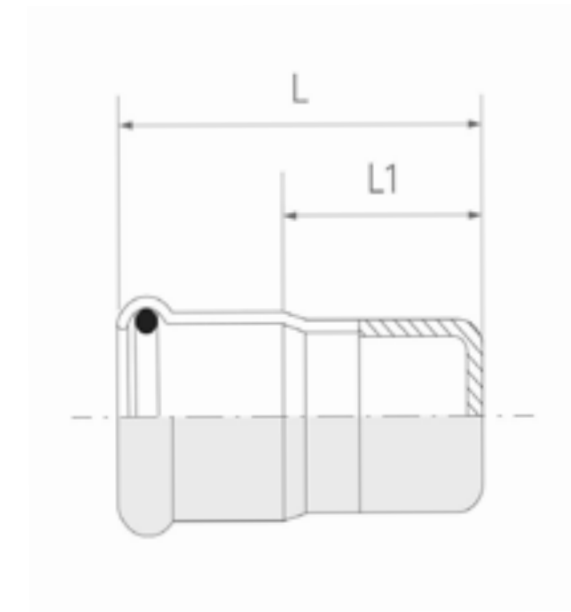
D	A	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	20	80	40	0.054	x
18	21	80	38	0.068	x
22	21	84	42	0.085	x
28	24	90	42	0.113	x
35	27	102	48	0.157	x
42	32	120	56	0.215	x
54	38	139	63	0.313	x
76.1	55	226	116	0.930	x



\* 1) = 100% X-RAY

# VALVE CONNECTOR

1.4404 (1/1)



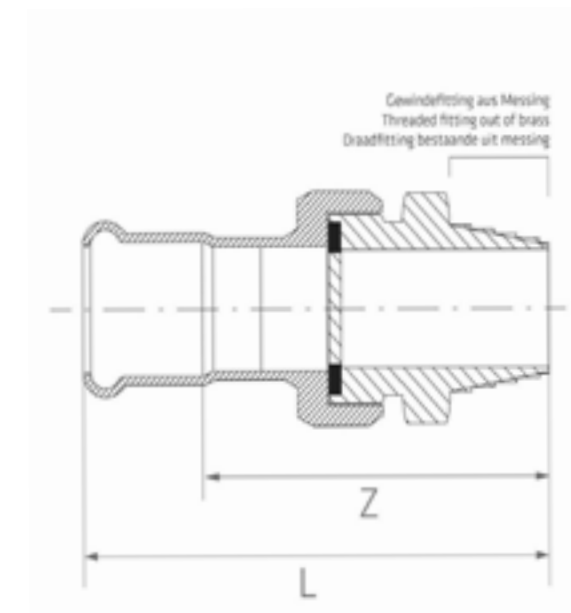
	D	A	L	Grade AISI/UNS kg/pce.	1.4404 316L *)	
15	x	3/4"	20	57	0.116	x
18	x	3/4"	21	57	0.120	x
22	x	1"	21	60	0.142	x
28	x	1 1/4"	24	65	0.254	x
35	x	1 1/2"	27	70	0.286	x
42	x	2"	32	77	0.502	x



\* 1) = 100% X-RAY

# STRAIGHT MALE UNION CONNECTOR

1.4404 (1/1)



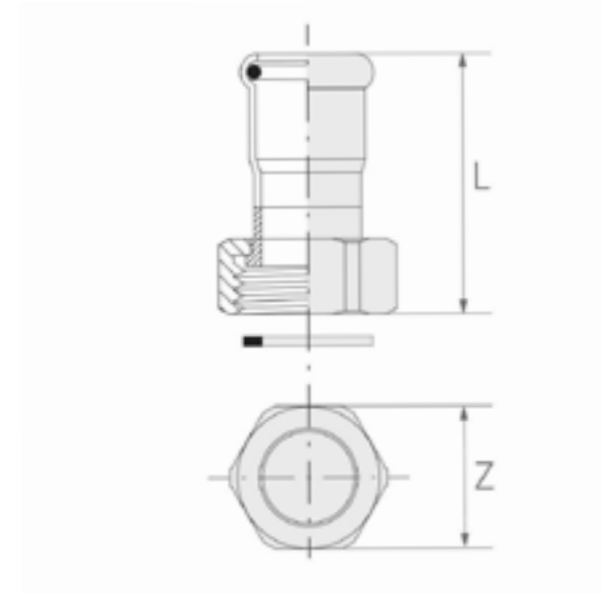
	D		A	L	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	x	1/2"	20	83	0.187	x
15	x	3/4"	20	85	0.186	x
18	x	3/4"	21	85	0.182	x
22	x	1/2"	21	86	0.262	x
22	x	3/4"	21	88	0.278	x
22	x	1"	21	93	0.362	x
28	x	1"	24	98	0.466	x
35	x	1 1/4"	27	106	0.450	x
42	x	1 1/2"	32	117	0.925	x
54	x	2"	38	139	1.065	x



\* 1) = 100% X-RAY

# STRAIGHT FEMALE UNION CONNECTOR

1.4404 (1/1)



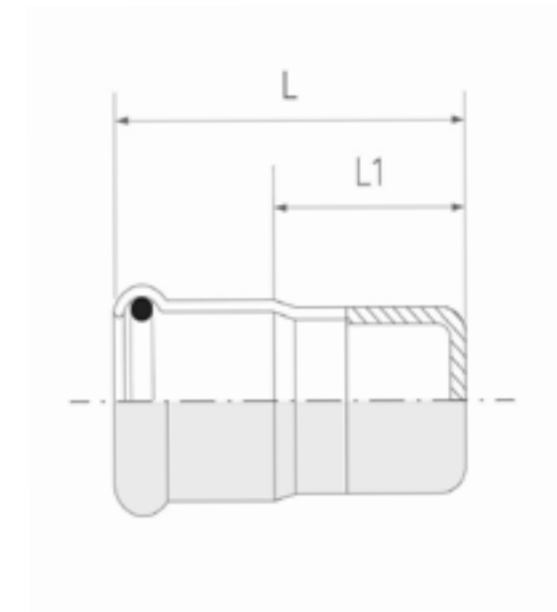
	D		A	L	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	x	1/2"	20	78	0.174	x
15	x	3/4"	20	79.5	0.178	x
18	x	1/2"	21	78	0.180	x
18	x	3/4"	21	78	0.220	x
22	x	3/4"	21	83	0.266	x
22	x	1"	21	86	0.352	x
28	x	1"	24	91	0.496	x
35	x	1 1/4"	27	98	0.540	x
42	x	1 1/2"	32	108	0.580	x
54	x	2"	38	130	0.845	x



\* 1) = 100% X-RAY

# STOP END

1.4404 (1/1)



D	L	A	Grade AISI/UNS kg/pce.	1.4404 316L *)
15	28	20	0.024	x
18	29.5	21	0.030	x
22	31	21	0.041	x
28	47	24	0.051	x
35	48	27	0.071	x
42	58	32	0.100	x
54	65	38	0.154	x

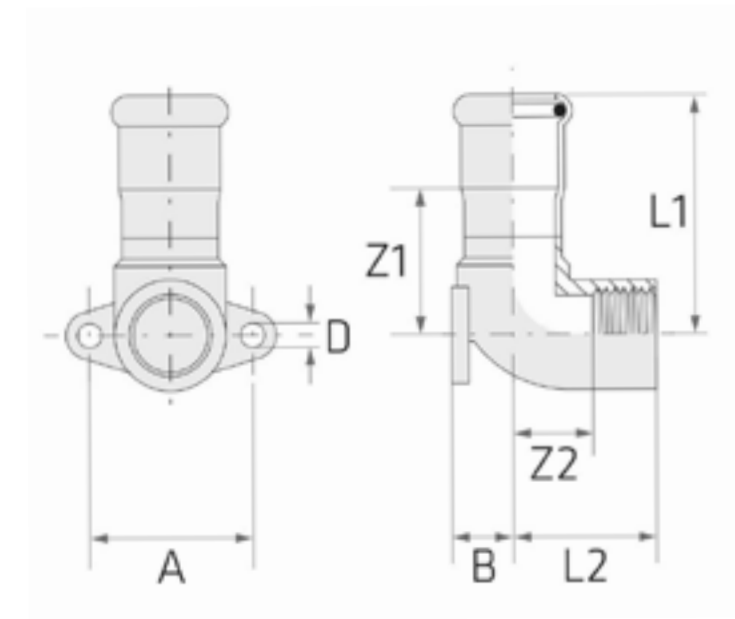


\* 1) = 100% X-RAY



# WALL PLATE ELBOW 90° WITH FEMALE THREAD

1.4404 (1/1)



	D		B	D	L	L1	L2	X	Z	Grade AISI/UNS	1.4404 316L
										kg/pce.	*)
15	x	1/2"	13	5	43	48	30	34	28	0.104	x
18	x	1/2"	13	5	43	49	30	34	28	0.110	x
22	x	3/4"	17	6	51	53	34	40	32	0.148	x

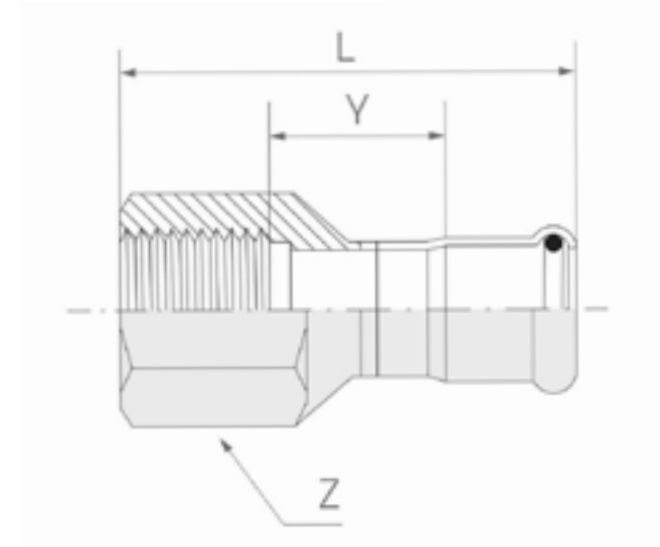


\* 1) = 100% X-RAY

# FEMALE ADAPTOR



1.4404 (1/2)



	D	A	L	Grade AISI/UNS	1.4404 316L	
				kg/pce.	*)	
15	x	1/2"	20	39	0.046	x
18	x	1/2"	21	39	0.066	x
22	x	1/2"	21	39	0.100	x
22	x	3/4"	21	42	0.090	x
22	x	1"	21	45	0.148	x
28	x	3/4"	24	44	0.155	x
28	x	1"	24	47	0.169	x
28	x	1 1/4"	24	49	0.172	x
35	x	1"	27	63	0.170	x
35	x	1 1/4"	27	67	0.198	x



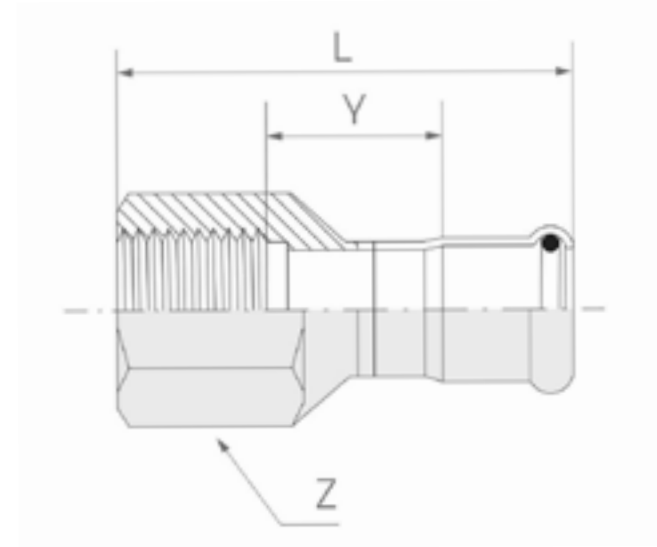
\* 1) = 100% X-RAY

>

# FEMALE ADAPTOR



1.4404 (2/2)



	D	A	L	Grade AISI/UNS	1.4404 316L	
				kg/pce.	*)	
42	x	1 1/4"	32	73	0.248	x
42	x	1 1/2"	32	73	0.270	x
54	x	2"	38	98	0.618	x

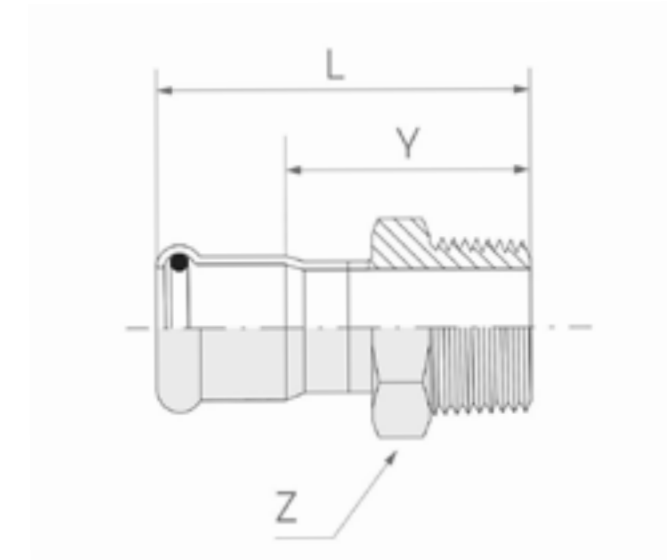


\* 1) = 100% X-RAY

# MALE ADAPTOR



1.4404 (1/2)

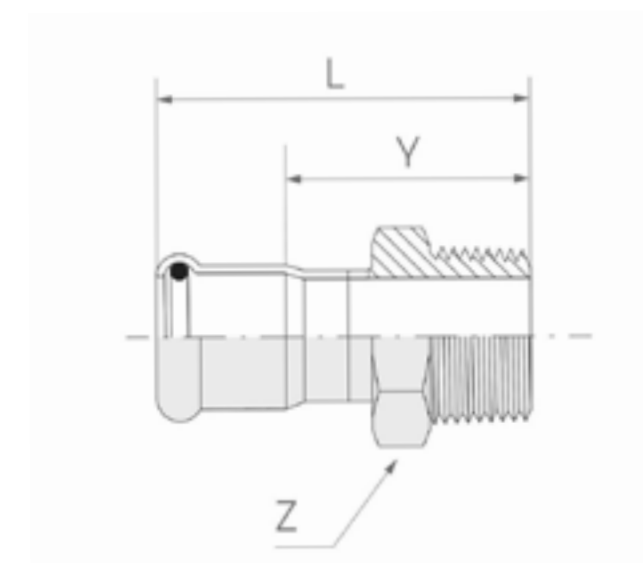


	D	A	L	Grade AISI/UNS kg/pce.	1.4404 316L *)	
15	x	1/2"	20	43.5	0.065	x
15	x	3/4"	20	46	0.119	x
18	x	1/2"	21	43.5	0.064	x
18	x	3/4"	21	46	0.089	x
22	x	1/2"	21	43.5	0.087	x
22	x	3/4"	21	46	0.089	x
22	x	1"	21	48	0.157	x
28	x	3/4"	24	46	0.106	x
28	x	1"	24	48	0.119	x
28	x	1 1/4"	24	51	0.196	x



\* 1) = 100% X-RAY

# MALE ADAPTOR



1.4404 (2/2)

	D	A	L	Grade AISI/UNS kg/pce.	1.4404 316L *)	
35	x	1"	27	69	0.115	x
35	x	1 1/4"	27	72	0.179	x
35	x	1 1/2"	27	72	0.240	x
42	x	1 1/4"	32	78	0.204	x
42	x	1 1/2"	32	78	0.228	x
54	x	1 1/2"	38	86	0.246	x
54	x	2"	38	90	0.423	x
76.1	x	2 1/2"	55	132	0.961	x

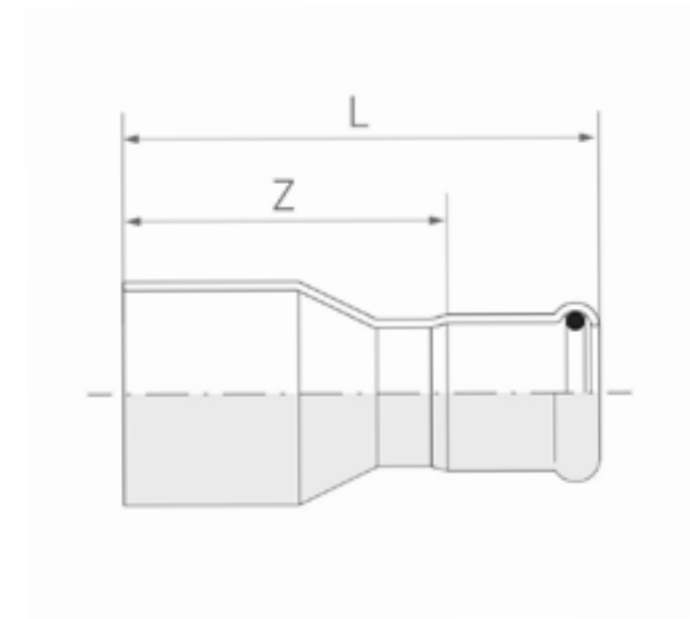


\* 1) = 100% X-RAY

# REDUCER



1.4404 (1/2)



	D	A	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)	
18	x	15	20	62.5	42.5	0.045	x
22	x	15	20	72.5	52.5	0.053	x
22	x	18	21	70.5	49.5	0.056	x
28	x	15	20	80	60	0.065	x
28	x	18	21	74	53	0.069	x
28	x	22	21	77	56	0.077	x
35	x	15	20	81	61	0.090	x
35	x	22	21	85	64	0.095	x
35	x	28	24	83.5	59.5	0.113	x
42	x	22	21	91	70	0.141	x

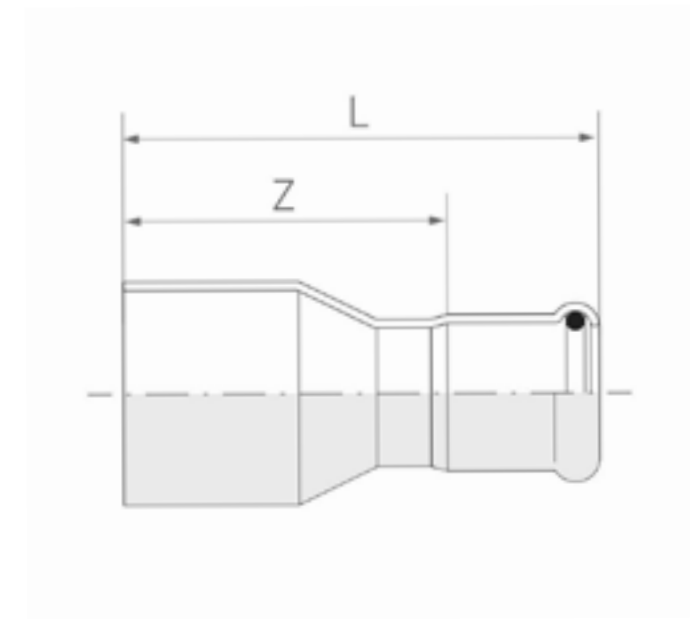


\* 1) = 100% X-RAY

# REDUCER



1.4404 (2/2)



	D	A	L	Z	Grade AISI/UNS kg/pce.	1.4404 316L *)	
42	x	28	24	96.5	72.5	0.155	x
42	x	35	27	103	76	0.169	x
54	x	28	24	117.5	93.5	0.207	x
54	x	35	27	116.5	89.5	0.226	x
54	x	42	32	117.5	85.5	0.246	x
76.1	x	54	38	157	119	0.465	x
108	x	54	38	182	144	0.800	x
108	x	76.1	55	208	153	0.975	x

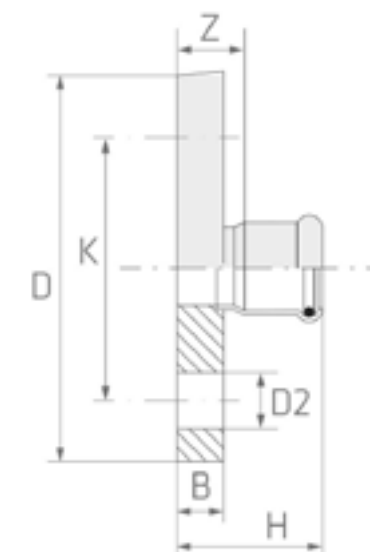


\* 1) = 100% X-RAY



# ADAPTOR FLANGE PN16

1.4404 (1/1)



D	DN FLG	A	B	D	G	K	L	N°	Grade AISI/UNS	1.4404 316L
									kg/pce.	*)
15	15	20	14	95	14	65	54	4	0.558	x
18	15	21	14	95	14	65	55	4	0.576	x
22	20	21	16	105	14	75	58	4	0.760	x
28	25	24	16	115	14	85	61	4	0.925	x
35	32	27	16	140	18	100	65	4	1.340	x
42	40	32	16	150	18	110	71	4	1.505	x
54	50	38	18	165	18	125	79	4	1.890	x
76.1	65	55	18	185	18	145	106	4	2.250	x
88.9	80	64	20	200	18	160	113	8	3.200	x
108	100	78	20	220	18	180	130	8	3.620	x

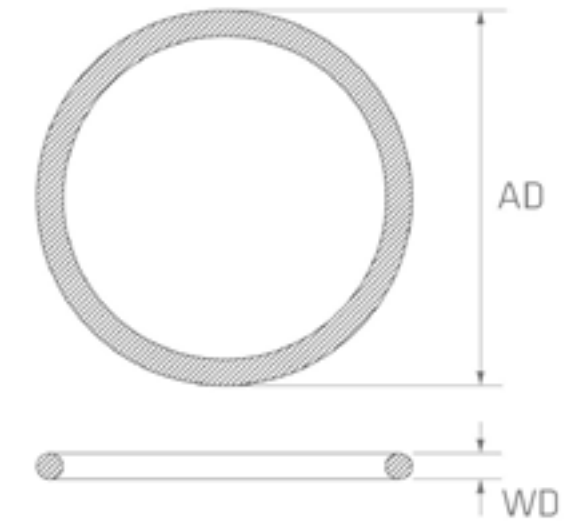


\* 1) = 100% X-RAY

>

# FKM RING GREEN

FKM (1/1)



D

FKM

\*1)

15	x
18	x
22	x
28	x
35	x
42	x
54	x
76.1	x
88.9	x

\* 1) = 100% X-RAY

# UNI GRIP



Uni

# UNI GRIP TYPE L W5

1.4571 (1/2)

OD Min ø	OD Max ø	OD ø Nominal	B	D	H	1.4571 316 Ti *)
21	24	21.3/21.6	45	46	76	x
26	29	26.9/28	45	46	76	x
29	32	30	45	54	84	x
33	36	33.7/35	45	54	84	x
36	39	38	60	66	104	x
39	43	42.4	60	66	104	x
43	47.5	44.5	60	74	112	x
47.5	52.5	48.3	60	74	112	x
52.5	58	54/57	75	85	125	x
58	64	60.3/63	75	85	125	x



\* 1) = 100% X-RAY

# UNI GRIP TYPE L W5

1.4571 (2/2)

OD Min $\varnothing$	OD Max $\varnothing$	OD $\varnothing$ Nominal	B	D	H	1.4571 316 Ti *)
64	72	66.6/68/69/70	95	108	164	x
72	80	73/76.1/79.5	95	108	164	x
80	88	84	95	124	170	x
88	96	88.9	95	124	170	x
97	105	98/100.6/101.6/104	95	141	187	x
104	112	104.8/108/110	95	141	187	x
112	120	114.3/118	95	158	202	x



\* 1) = 100% X-RAY

# UNI FLEX TYPE L W5

1.4571 (1/3)

OD Min $\varnothing$	OD Max $\varnothing$	OD $\varnothing$ Nominal	B	D	H	1.4571 316 Ti *)
21	24	21.3/21.6	45	46	76	available on request
26	29	26.9/28	45	46	76	available on request
29	32	30	45	54	84	available on request
33	36	33.7/35	45	54	84	available on request
36	39	38	60	66	104	available on request
39	43	42.4	60	66	104	available on request
43	47.5	44.5	60	74	112	available on request
47.5	52.5	48.3	60	74	112	available on request
52.5	58	54/57	75	85	125	available on request
58	64	60.3/63	75	85	125	available on request



\* 1) = 100% X-RAY



# UNI FLEX TYPE L W5

1.4571 (2/3)

OD Min $\varnothing$	OD Max $\varnothing$	OD $\varnothing$ Nominal	B	D	H	1.4571 316 Ti *)
64	72	66.6/68/69/70	95	108	164	available on request
72	80	73/76.1/79.5	95	108	164	available on request
80	88	84	95	124	170	available on request
88	96	88.9	95	124	170	available on request
97	105	98/100.6/101.6/104	95	141	187	available on request
104	112	104.8/108/110	95	141	187	available on request
112	120	114.3/118	95	158	202	available on request
122	130	125/127/129	95	158	202	available on request
129	137	130.2/131/133	110	178	230	available on request
137	145	139.7/141.3/141.6	110	186	238	available on request



\* 1) = 100% X-RAY



# UNI FLEX TYPE L W5

1.4571 (3/3)

OD Min $\varnothing$	OD Max $\varnothing$	OD $\varnothing$ Nominal	B	D	H	1.4571 316 Ti (*)
149	157	154/155	110	197	249	available on request
157	165	159	110	205	255	available on request
164	172	165/168.3	110	212	262	available on request



\* 1) = 100% X-RAY



## SERVICE

# MORE THAN STEEL.

STAPPERT – there is more in for you. We don't stock only more than 20,000 products, but we also offer the corresponding allround service, so that the material meets exactly your expectations in size, length and surface. Our services include the areas:

### CUTTING

- › Cut ready for assembly
- › Mitre cuts and double-mitre cuts from 30° to 150°
- › Bundle cuts
- › Fix lengths
- › Coplanar cuts
- › Precision cuttings with tight tolerances

### PROCESSING

- › DIN 2559 and DIN EN ISO 9692-1 or ANSI B
- › 16.25 welded joint preparation on seamless and welded round pipes and tubes
- › Conic whitworth thread for 1/2" up to 2" male thread
- › Adapted wall thicknesses to seamless and welded round tubes, flanges, concentric reducers, caps and welding collars

### REFINEMENT

- › Grinding, polishing, mirror polishing, brushing. From matt- to mirror-finished. On flat and circular grinding machines.
- › Glass bead blasting

### TESTING

- › Incoming goods inspection
- › US testing of the wall thickness
- › Spectrometer tests
- › Ferrite testing
- › Certifications
- › Special inspections
- › TÜV authorisation for re-stamping

Our quality claim is above the normal standard. It starts with the grade of our products and it includes our whole company. For this reason we implemented a comprehensive quality management system many years ago for which we have received the DIN EN ISO 9001 certificate.



### PACKING

- › In wooden boxes and crates
- › Seamless and welded round pipes and tubes with plastic caps
- › In foil or bubble wrap
- › Customer-specific markings and labelling
- › Refined surfaces covered with laser film



## › STAPPERT GROUP OVERVIEW

# THE STAPPERT BRAND IS INTERNATIONAL.

YOU WILL MEET US IN 11 EUROPEAN COUNTRIES.

### **STAPPERT Česká republika spol. s r.o.**

Měnín | Praha

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### **STAPPERT Deutschland GmbH**

Ahrensburg | Berlin | Bönen |  
Düsseldorf | Freiburg | Hannover |  
Leipzig | Mannheim | München |  
Niederaula | Nürnberg | Ulm |  
Weil der Stadt

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### **STAPPERT Fleischmann GmbH**

Haid | Teesdorf

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### **STAPPERT France S.A.S.**

Meyzieu | Orvault | Soissons

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### **STAPPERT Intramet SA**

Engis | Temse

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### **STAPPERT Magyarország Kft.**

Budapest | Debrecen | Hódmezővásárhely | Nagykanizsa

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### **STAPPERT Noxon BV**

Helmond | Zwijndrecht

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### **STAPPERT Polska Sp. z o.o.**

Bydgoszcz | Gliwice | Warszawa

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### **STAPPERT Slovensko a.s.**

Nováky

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### **STAPPERT Sverige AB**

Älmhult | Kungsbacka |  
Norrköping | Malmö

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### **STAPPERT UK Ltd.**

Birmingham

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## › GERMANY

## STAPPERT GERMANY

GERMANY.STAPPERT.BIZ

**Head Office**

Willstätterstraße 13  
40549 Düsseldorf  
T 0211 5279-0  
F 0211 5279-177  
deutschland@stappert.biz

**Export Division**

An der Strusbek 54  
22926 Ahrensburg  
T 04102 4741-0  
F 04102 4741-67  
export@stappert.biz

**Ahrensburg**

An der Strusbek 54  
22926 Ahrensburg  
T 04102 4741-0  
F 04102 4741-22  
ahrensburg@stappert.biz

**Berlin**

Landsberger Allee 366  
12681 Berlin  
T 030 428403-0  
F 030 428403-15  
berlin@stappert.biz

**Bönen**

Edisonstraße 19  
59199 Bönen  
T 02383 957-0  
F 02383 957-010  
boenen@stappert.biz

**Düsseldorf**

Willstätterstraße 13  
40549 Düsseldorf  
T 0211 5279-0  
F 0211 5279-190  
duesseldorf@stappert.biz

**Freiburg**

Mitscherlichstraße 8  
79108 Freiburg  
T 0761 55965-0  
F 0761 55965-20  
freiburg@stappert.biz

**Hannover**

Karl-Wiechert-Allee 76  
30625 Hannover  
T 0511 54097-0  
F 0511 54097-61  
hannover@stappert.biz

**Leipzig**

Hugo-Aurig-Straße 7d  
04319 Leipzig  
T 0341 65972-0  
F 0341 65972-50  
leipzig@stappert.biz

**Mannheim**

Donaustraße 64-66  
68199 Mannheim  
T 0621 84216-0  
F 0621 84216-70  
mannheim@stappert.biz

**München**

Carl-Zeiss-Ring 19a  
85737 Ismaning  
T 089 82917-0  
F 089 82917-200  
muenchen@stappert.biz

**Niederaula**

Industriestraße 9  
36272 Niederaula  
T 06625 100-0  
F 06625 100-1000  
niederaula@stappert.biz

**Nürnberg**

Am Plärrer 27  
90443 Nürnberg  
T 0911 393626-0  
F 0911 393626-24  
nuernberg@stappert.biz

**Ulm**

Wilhelmstraße 22  
89073 Ulm  
T 0731 140129-0  
F 0731 140129-1000  
ulm@stappert.biz

**Weil der Stadt**

Josef-Beyerle-Straße 13  
71263 Weil der Stadt  
T 07033 5282-0  
F 07033 5282-4713  
weilderstadt@stappert.biz



› GROUP

# STAPPERT GROUP

GROUP.STAPPERT.BIZ

**STAPPERT Česká republika spol. s r.o.**

Otmarov 57  
66457 Měnín  
TSCHECHISCHE REPUBLIK  
T +420 544423911  
F +420 547230363  
ceskarepublika@stappert.biz  
ceskarepublika.stappert.biz

**STAPPERT Deutschland GmbH**

Willstätterstraße 13  
40549 Düsseldorf  
DEUTSCHLAND  
T 0211 5279-0  
F 0211 5279-177  
deutschland@stappert.biz  
deutschland.stappert.biz

**STAPPERT Fleischmann GmbH**

Gewerbepark B17/1/Objekt 1  
2524 Teesdorf  
ÖSTERREICH  
T +43 2253 90313-0  
F +43 2253 90313-600  
fleischmann@stappert.biz  
fleischmann.stappert.biz

**STAPPERT France S.A.S.**

13, Rue Charlemagne-BP 21  
02201 Soissons Cedex  
FRANKREICH  
T +33 3 23 73 50 00  
F +33 3 23 73 50 10  
france@stappert.biz  
france.stappert.biz

**STAPPERT Intramet SA**

Rue du Parc Industriel, 5  
4480 Engis  
BELGIEN  
T +32 4 275 82 11  
F +32 4 275 82 90  
intramet@stappert.biz  
intramet.stappert.biz

**STAPPERT Magyarország**

Rétifarkas utca 1  
1172 Budapest  
MAGYARORSZÁG  
T +36 1 434 2424  
F +36 1 434 2442  
magyarorszag@stappert.biz  
magyarorszag.stappert.biz

**STAPPERT Noxon BV**

Gerstdijk 4  
5704 RG Helmond  
NIEDERLANDE  
T +31 492 582111  
F +31 492 538970  
noxon@stappert.biz  
noxon.stappert.biz

**STAPPERT Polska Sp. z o.o.**

ul. A. Gaudiego 18  
44-109 Gliwice  
POLEN  
T +48 32 3447300  
F +48 32 3447375  
polska@stappert.biz  
polska.stappert.biz

**STAPPERT Slovensko a.s.**

Šimonovská 37  
97271 Nováky  
SLOWAKEI  
T +421 46 51834-20  
F +421 46 51834-30  
slovensko@stappert.biz  
slovensko.stappert.biz

**STAPPERT Sverige AB**

Gamla Slätthultsvägen 3  
34334 Älmhult  
SCHWEDEN  
T +46 476 48550  
F +46 476 48560  
sverige@stappert.biz  
sverige.stappert.biz

**STAPPERT UK Ltd.**

Wentworth Way | Tankersley  
Barnsley S75 3DH  
GROSSBRITANNIEN  
T +44 121 740 0175  
F +44 121 326 3109  
uk@stappert.biz  
uk.stappert.biz