EMSS®

EURO METAL STAINLESS STEEL

EuroMetal Stainless Steel is one of the leading stockholders, importer and exporter of quality finished and semi-finished stainless steel raw material in Turkey.

Our main objective and philosophy are to surpass our competitors by providing outstanding structure, excellent customer service and of course very attractive prices

In accordance with this vision, our main goals are to follow the world stainless steel market and developing technologies, to determine a price policy in line with economic developments and to support our industrialists.

12 year

STAINLESS

ROLL

STEEL

PLATE

PIPE

PROFILE

EMSS®
EURO METAL STAINLESS STEEL

USAGE AREA

CHEMICAL COMPOSITION OF STAINLESS STEEL (HEAT ANALYSIS)

		En	A/S/ASTM	C	Si	Mn	P max	S	N	Cr	Mo	Ni	Other
GENERAL PURPOSE	FERRITIC	1.4512	409	≤0.030	≤1.00	≤1.00	0.040	≤0.015		10.50-12.50			
		1.4003		≤0.030	≤1.00	≤1.50	0.040	≤0.015	≤0.030	10.50-12.50		0.30-1.00	Ti.min:(6x(C+N)):max:0.65
		1.4000	4105	≤0.08	≤1.00	≤1.00	0.040	≤0.015		12-00-14.00			
		1.4016	430	≤0.08	≤1.00	≤1.00	0.040	≤0.015		16.00-18.00			
		1.4509	441	≤0.030	≤1.00	≤1.00	0.040	≤0.015		17.50-18.50			Ni.min:[(3xC)+0.30]: max:1.00:Ti:0.10-0.60
		1.4521	444	≤0.025	≤1.00	≤1.00	0.040	≤0.015	≤0.030	17.00-20.00	1.80-2.50		Ti.min:[(4x(C+N)+0.15): max:0.80 (5)
	MARTENSITIC	1.4006	410	0.08-0.15	≤1.00	≤1.50	0.040	≤0.015		11.50-13.50		≤0.75	
		1.4021	420	0.16-0.25	≤1.00	≤1.50	0.040	≤0.015		12-00-14.00			
		1.4028	420	0.26-0.35	≤1.00	≤1.50	0.040	≤0.015		12-00-14.00			
		1.4313		≤0.05	≤0.70	≤1.50	0.040	≤0.015	≤0.020	12-00-14.00	0.30-0.70	3.50-4.50	
		1.4418		≤0.06	≤0.70	≤1.50	0.040	≤0.015	≤0.020	15.00-17.00	0.80-1.50	4.00-6.00	
	DUPLEX	1.4162	2101	≤0.040	≤1.00	4.00-6.00	0.040	≤0.030	0.20-0.25	21.00-23.00	0.10-0.80	3.50-1.70	Cu:0.10-0.80
		1.4362	2304	≤0.030	≤1.00	≤2.00	0.035	≤0.015	0.05-0.20	22.00-24.00	0.10-0.60	3.50-5.50	Cu:0.10-0.60
		1.4462	2205	≤0.030	≤1.00	≤2.00	0.035	≤0.015	0.10-0.22	21.00-23.00	2.50-3.50	4.50-6.50	Cu:0.50-1.00: W: 0.50-1.00
		1.4501		≤0.030	≤1.00	≤1.00	0.035	≤0.015	0.20-0.30	24.00-26.00	3.00-4.00	6.00-8.00	
		1.4410	2507	≤0.030	≤1.00	≤2.00	0.035	≤0.015	0.24-0.35	24.00-26.00	3.00-4.50	6.00-8.00	
	AUSTENITE	1.4310	301	0.05-0.15	≤2.00	≤2.00	0.045	≤0.015	≤0.11	16.00-19.00	≤0.80	6.00-9.50	
		1.4318	301LN	≤0.030	≤1.00	≤2.00 5.50-	0.045	≤0.015	0.10-0.20	16.50-18.50		6.00-8.00	
		1.4372	201	≤0.015	≤1.00	7.50	0.045	≤0.015	0.05-0.25	16.00-18.00		3.50-5.50	
		1.4568	631	≤0.09	≤0.70	≤1.00	0.040	≤0.015		16.00-18.00		6.50-7.80(4)	Al:0.70-1.50
		1.4301	304	≤0.07	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.50-19.50		8.00-10.50	
		1.4307	304L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.50-19.50		8.00-10.00	
		1.4311	304LN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	17.50-19.50		8.5-11.50	
		1.4541	321	≤0.08	≤1.00	≤2.00	0.045	≤0.015		17.00-19.00		9.00-12.00	
		1.4305	303	≤0.10	≤1.00	≤2.00	0.045	0.15-0.35	≤0.11	17.00-19.00		8.00-10.00	
		1.4303	305	≤0.06	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.00-19.00		11.00-13.00	Ti.min:(5xC) max:0.70
		1.4306	304L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	18.00-20.00		10.00-12.00	Cu:1.00
		1.4401	316	≤0.07	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50		10.00-13.00	
		1.4404	316L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50		10.00-13.00	
		1.4436	316	≤0.05	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50		10.50-13.00	
		1.4432	316L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50	2.00-2.50	10.50-13.00	
		1.4406	316LN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	16.50-18.50	2.00-2.50	10.00-12.50	
		1.4429	316LN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-022	16.50-18.50	2.50-3.00	11.00-14.00	
		1.4571	316Ti	≤0.08	≤1.00	≤2.00	0.045	≤0.015		17.00-19.00	2.50-3.00	10.50-13.50	Ti.min:(5xC) max:0.70
		1.4435	316L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.00-19.00	2.00-2.50	12.50-15.00	
		1.4439	317LMN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	16.50-18.50	2.50-3.00	12.50-14.50	
		1.4466	310MoLN	≤0.020	≤0.70	≤2.00	0.025	≤0.010	0.10-0.16	24.00-26.00	2.00-2.50	21.00-23.00	
		1.4539	904L	≤0.020	≤0.70	≤2.00	0.030	≤0.010	≤0.15 0.15-	19.00-21.00	2.50-3.00	24.00-26.00	
		1.4529		≤0.020	≤0.50	≤1.00	0.030	≤0.010	0.22	19.00-21.00	4.00-5.00	24.00-26.00	Cu1.20-2.00 Cu:0.50-1.50
		1.4547		≤0.020	≤0.70	≤1.00 5.00-	0.030	≤0.010	0.18-0.25	19.50-20.50	2.00-2.50	17.50-18.50	Cu:0.50-1.00
		1.4565		≤0.030	≤1.00	7.00	0.030	≤0.015	0.30-0.60	24.00-26.00	4.00-5.00	16.00-19.00	Ni:≤0.15
HEAT RESISTANT	FERRITIC	1.4713		≤0.12	0.50-1.00	≤1.00	0.040	≤0.015		6.00-8.00	6.00-7.00		Al:0.50-1.00
		1.4724		≤0.12	0.70-1.40	≤1.00	0.040	≤0.015		12.00-14.00	6.00-7.00		Al:0.70-1.20
		1.4762		≤0.12	0.70-1.40	≤1.00	0.040	≤0.015		23.00-26.00	4.00-5.00		Al:1.20-1.70
	AUSTENITE	1.4948	304H	0.04-0.08	≤1.00	≤2.00	0.035	≤0.015	≤0.11	17.00-19.00		8.00-11.00	
		1.4878	321H	≤0.10	≤1.00	≤2.00	0.045	≤0.015		17.00-19.00		9.00-12.00	Ti.min:(5xC) max:0.80
		1.4818		0.04-0.08	1.00-2.00	≤1.00	0.045	≤0.015	0.12-0.20	18.00-20.00		9.00-11.00	
		1.4833	3095	≤0.15	≤1.00	≤2.00	0.045	≤0.015	≤0.11	22.00-24.00		12.00-14.00	Ce:0.03-0.08
		1.4828		≤0.20	1.50-2.50	≤2.00	0.045	≤0.015	≤0.11	19.00-21.00		11.30-13.00	
		1.4835		0.05-0.12	1.40-2.50	≤1.00	0.045	≤0.015	0.12-0.20	20.00-22.00		10.00-12.00	
		1.4845	3105	≤0.10	≤1.50	≤2.00	0.045	≤0.015	≤0.11	24.00-26.00		19.00-22.00	Ce:0.03-0.08
		1.4841	314	≤0.20	1.50-2.50	≤2.00	0.045	≤0.015	≤0.11	24.00-26.00		19.00-22.00	

GRADES AND CHEMICAL COMPOSITIONS

FERRITIC STAINLESS STEEL

		Chemical Composition, max % weight									
ASTM	En	C	Mn	Si	P	S	Cr	Ni	Mo	N	Other
409	1.4512	0.08	1.0	1.00	0.045	0.03	11.5-11.75	-	-	-	(6xC)Ti
430	1.4016	0.12	1.0	1.00	0.04	0.03	16.0-18.0	-	-	-	-
430	(1.450)	0.10	1.0	1.00	0.04	0.03	16.0-19.5	0.75	-	-	(5xC)Ti
439	1.4510	0.07	1.0	1.00	0.04	0.03	17.0-19.0	0.5	-		0.2+4(C+N)Ti

MARTENSITIC STAINLESS STEEL

		Chemical Composition, max % weight									
ASTM	En	C	Mn	Si	P	S	Cr	Ni	Mo	N	Other
410	1.4006	0.15	1.0	1.00	0.04	0.03	11.5-13.0	-	-	-	-
420	1.4021	0.1	1.0	1.00	0.04	0.03	12.0-14.0	-	-	-	-
440	-	0.6-0.75	1.0	1.00	0.04	0.03	16.0-19.5	-	0.75	-	-
440	1.4125	0.95-1.2	1.0	1.00	0.04	0.03	16.0-18.0	-	0.75	-	-

DUPLEX STAINLESS STEEL

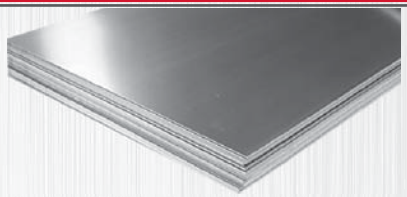
		Chemical Composition, max % weight									
ASTM	En	C	Mn	Si	P	S	Cr	Ni	Mo	N	Other
2205*)	1.4462	0.03	2.0	1.00	0.03	0.02	21.0-23.0	4.5-6.5	2.5-3.5	0.80-0.2	-
329	1.4460	0.20	1.0	0.75	0.04	0.03	23.0-28.0	2.5-5.0	1.0-2.0	-	-

AUSTENITIC STAINLESS STEEL

		Chemical Composition, max % weight									
ASTM	En	C	Mn	Si	P	S	Cr	Ni	Mo	N	Other
201	1.4372	0.15	5.5-7.5	1.00	0.06	0.03	16.0-18.0	3.5-5.5	-	0.25	-
301	1.4310	0.15	2.0	1.00	0.045	0.03	16.0-18.0	6.8-8.0	-	-	-
304	1.4301	0.08	2.0	1.00	0.045	0.03	18.0-20.0	8.0-10.5	-	-	-
304L	1.4306	0.03	2.0	1.00	0.045	0.03	18.0-20.0	8.0-12.0	-	-	-
304LN	1.4311	0.03	2.0	1.00	0.045	0.03	18.0-20.0	8.0-12.0	-	0.1-0.16	
309	1.4828	0.20	2.0	1.00	0.045	0.03	22.0-24.0	12.0-15.0			
309S	1.4833	0.08	2.0	1.00	0.045	0.03	22.0-24.0	12.0-15.0			
310	1.4841	0.25	2.0	1.50	0.045	0.03	24.0-26.0	19.0-22.0			
310S	1.4845	0.08	2.0	1.50	0.045	0.03	24.0-26.0	19.0-22.0			
316	1.4401	0.08	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	-	-
316L	1.4404	0.03	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	-	-
316LN	1.4406	0.03	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	0.1-0.16	
316Ti	1.4571	0.08	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	-	5x(C+N)Ti
321	1.4541	0.08	2.0	1.00	0.045	0.03	17.0-19.0	9.0-12.0	-	-	(5+C)Ti
347	1.4550	0.08	2.0	1.00	0.045	0.03	17.0-19.0	9.0-13.0	-	-	(10+C)Nb

PRECIPITATION HARDENED STAINLESS STEEL

		Chemical Composition, max % weight									
ASTM	En	C	Mn	Si	P	S	Cr	Ni	Mo	N	Other
1.4568	0.09	2.0	1.00	0.04	0.04	16.0-18.0	6.5-7.5	6.5-7.5	-	-	0.75-1.5 Al
1.4532	0.09	2.0	1.00	0.04	0.03	14.0-16.0	6.5-7.5	6.5-7.5	2.0-3.0	-	0.75-1.5 Al



SELECTION AND USE TABLE

GRADES

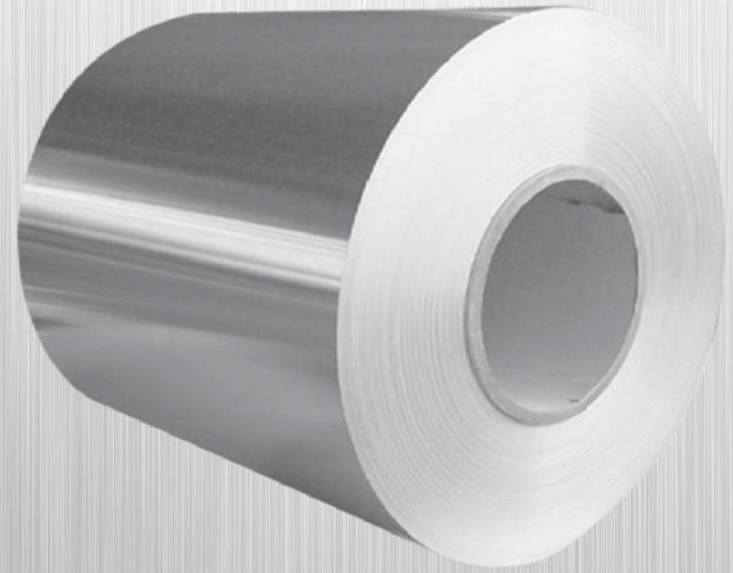
304 - 304L - 304LN - 309/309S

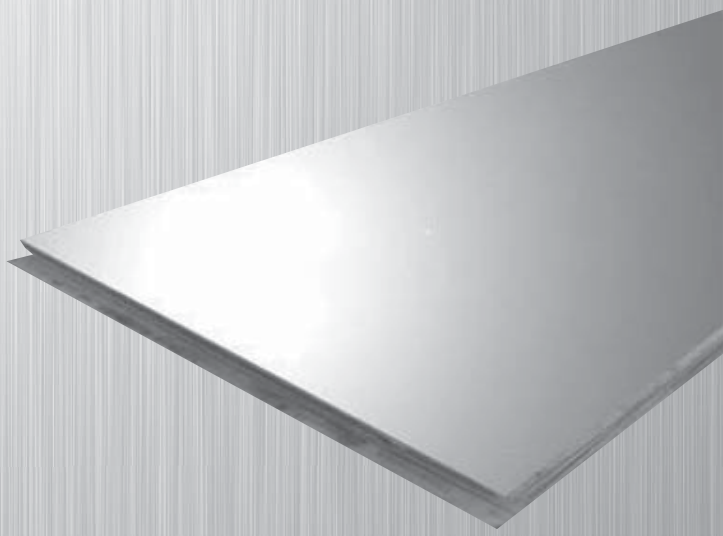
ASTM	304	304L	304 LN	309/309 S
En	1,4301	1,4306	1,4311	1,4828/1,4833
UNS	S30400	S30403	S30453	S30900/S30908
Class	Austenitic	Austenitic	Austenitic	Austenitic
0.2% Yield Strength (Mpa)	min.200 (annealed) max.500 (cold roll)	min.190(annealed) max.500(cold roll)	min.270(annealed)	min.230 (309) min210 (309S)
Tensile Strength (Mpa)	500 (annealed) 700 (cold roll)	470 (annealed) 660 (cold roll)	550-750	500-750 (309) 500-750 (309S)
Hardness (HRB)	130-180	130-170	150-210	223 (309) / 192 (309S)
Annealing Temperature (°C)	1000-1100	1000-1080	1000-1100	1050-1100
Hot Forming (°C)	1150-850	1150-850	1150-850	1050-850
Cold Forming (°C)	Very good	Very good	Very good	Very good
Machining	With compatible set and cooling	With compatible set and cooling	With compatible set and cooling	With compatible set and cooling
Seam	Perfect method except gas melting	Perfect method except gas melting	Perfect method except gas melting	Perfect method except gas melting
Corrosion Resistance	Perfect in dry climate, good in neutral climate	Analog of 304. Additionally resistant to intergranular and stress corrosion crackings	Analog of 304. Additionally mechanical features are improved with nitrogen	Against sulphurous gases: medium (309), low (309S)
High - Temperature	No scaling up to 870 (°C)	Good resistance to nitric acid. No scaling up to 900 (°C).	No scaling up to 900 (°C). Good resistance to intergranular corrosion up to 400 (°C)	High temperature material. No scaling up to 1000 (°C). Has tensile strength and creep properties.
Areas of Usage	Stress corrosion cracking may occur in oxidizing and humid chloride environments	Analog of 304 but usable in parts that cannot be annealed after welding. Especially for different nitric acid environments	Mechanical pressure up to 500 (°C). Usable in the pressure vessels under constantly operating conditions up to 400 (°C).	Usable in heat resistant technics. Oven construction, heaters, cementation boxes, annealing molds etc.

GRADES OF STAINLESS STEEL

310/310S - 316 - 316L - 316Ti

ASTM	310/310S	316	316L	316Ti
En	1.4841/1.4845	1.44041	1.4404	1.4571
UNS	S31000/S31008	S31600	S31603	S31635
Class	Austenitic	Austenitic	Austenitic	Austenitic
0.2% Yield Strength (Mpa)	min.230 (310)	min.210 (annealed)	min.200 (annealed)	min.220 (annealed)
Tensile Strength (Mpa)	min.230 (310S)	up to 500 (cold roll)	up to 450 (cold roll)	up to 700 (cold roll)
	550 – 800 (310)	510 (annealed)	500 (annealed)	540-700 (annealed)
Hardness (HRB)	500 – 750 (310S)	610 (cold roll)	600 (cold roll)	Up to 700 (cold roll)
Annealing Temperature (°C)	223/309/192/309S	160 - 200	155 - 190	160 - 200
Hot Forming (°C)	1050 – 1100	1030 – 1120	1030 – 1100	1030 – 1120
Cold Forming (°C)	1150 – 850	1150 – 850	1150 – 850	1150 – 800
Machining	Very good	Very good	Very good	Very good
Seam	Good method with compatible set and cooling except gas melting	Good method with compatible set and cooling except gas melting	Good method with compatible set and cooling except gas melting	Good method with compatible set and cooling except gas melting
Corrosion Resistance	Against sulphurous gases: low-medium (310S), low (310). Against nitrogen gases: perfect	Corrosion resistance improved with molybdenum additive. Spot and crevice corrosion is better in warm and chloride containing environments. Usable in the air, industrial atmospheres and sea water.	Similar to 316. However, intergranular corrosion sensitivity does not occur. Usable in reducing acids, sea water and other areas where spot corrosion may occur.	Similar to 316. Since the internal structure is stabilized with titanium, intergranular corrosion sensitivity does not occur. Usable up to 400 (°C) as welded
High-Temperature	High temperature material. No scaling up to 1000-1050 (°C). Has tensile strength and creep properties.	High temperature resistance increases with molybdenum additive. No scalling up to 1000 (°C). Suitable for very aggressive environments	Similar to 316, however, low carbon content. Usable in the range of 425-860°C since carbide does not precipitate.	High temperature material. No scaling up to 1000 (°C). Has tensile strength and creep properties.
Areas of Usage	Usable in heat resistant technics. Oven construction, heaters, cementation boxes, annealing molds etc.	Available for use in heat exchangers, steam boilers, kitchens, food facilities, facade cladding as well as in the chemical, petrochemical and food industries up to 300°C.	Similar to 316. Preferable for parts that will not have postwelding heat treatment	Similar to 316, additionally has high-temperature feature. Suitable for constantly, innocuously usage of intergranular corrosion up to 400 (°C). Available in chemical, petrochemical, coal, cellulose, textile, coat, photography, resin and rubber industry.

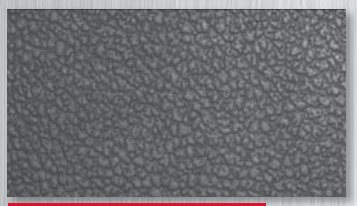




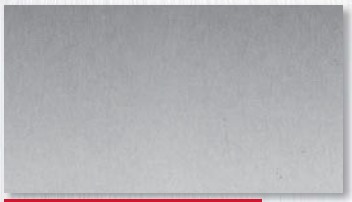
EMSS®
EURO METAL STAINLESS STEEL

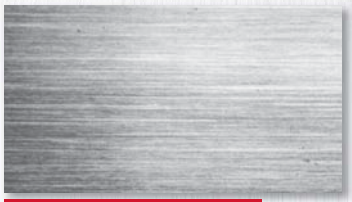
COIL AND PLATES

PATTERNED SURFACES


LEATHER TEXTURED


DOT PATTERN


MATT FINISH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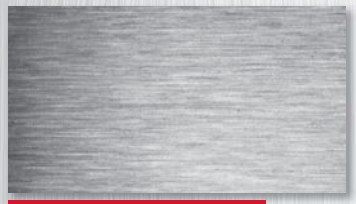
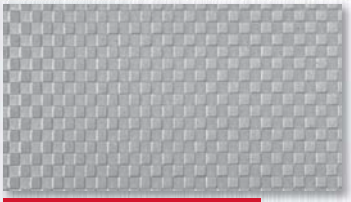
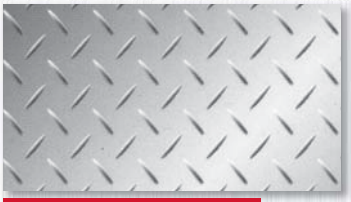

BRUSHED


SQUARE PATTERN

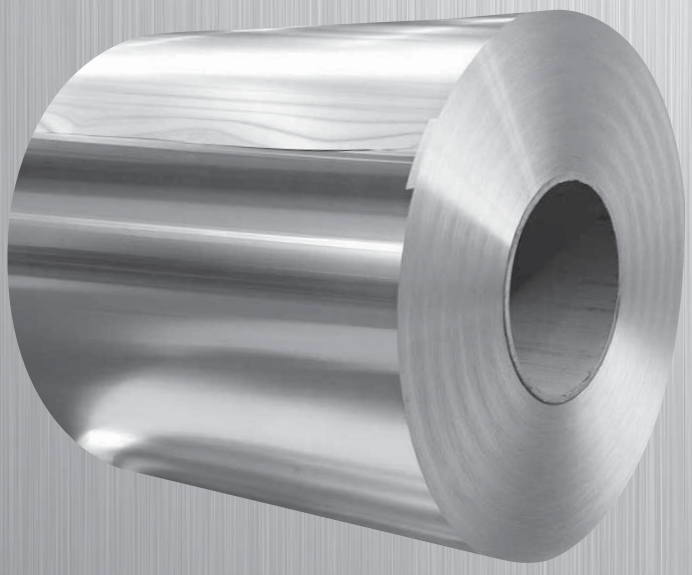

DIAMOND PATTERN

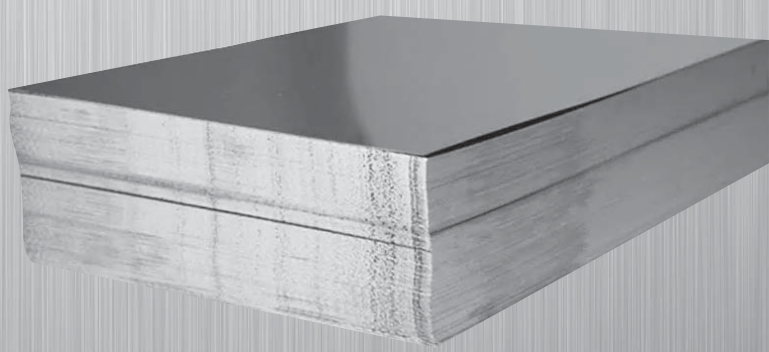
PLATES

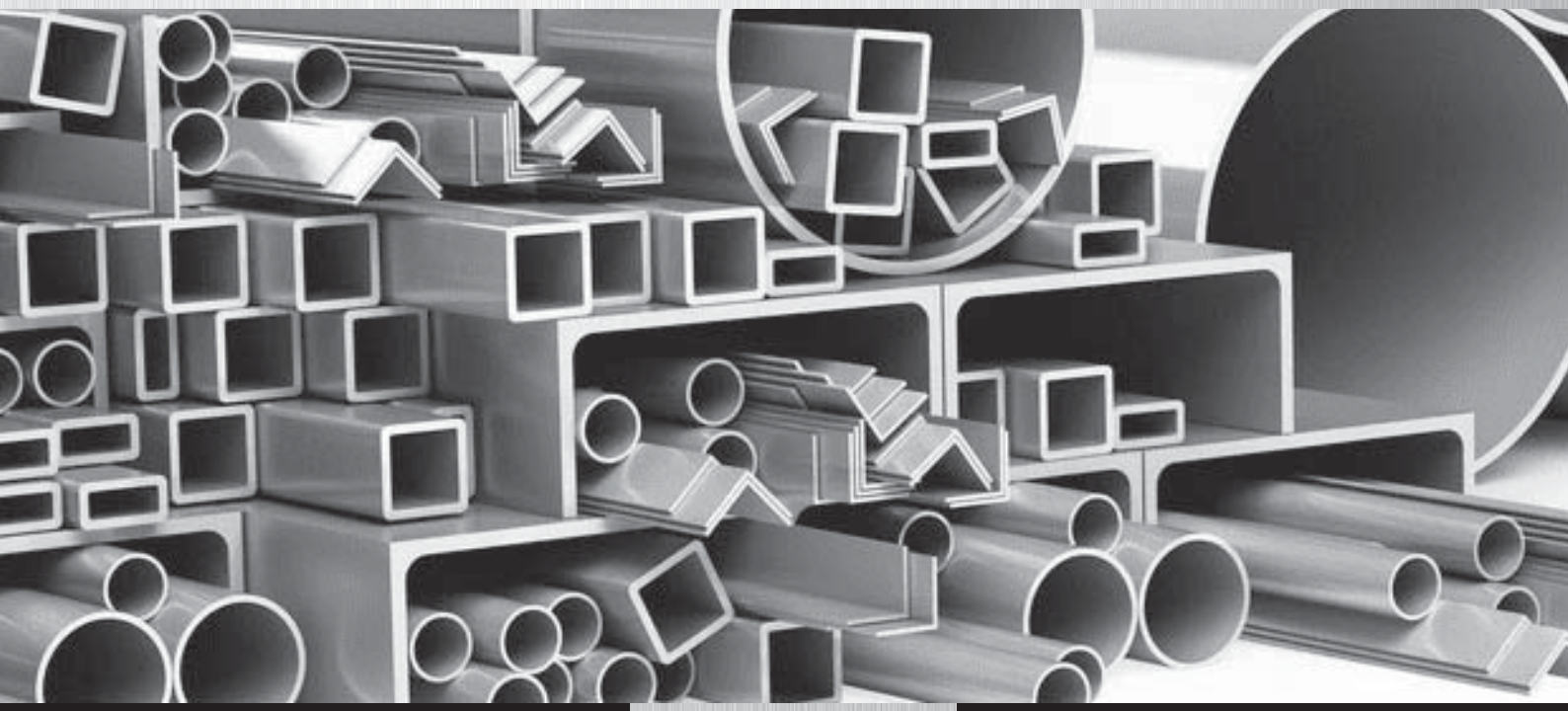
CUT-TO-LENGTH : 0,40-12mm thickness
SLITTING : 0,40-5mm thickness
PLASMA CUTTING : 1-100mm thickness
GRINDING : 1-3mm thickness

PLATE WEIGHT (Kg/Plate)

Thickness	1000x2000	1250x2500	1500x3000	2000x6000
0.30	4.8	7.5		
0.40	6.4	10		
0.50	8.0	12.5	18	
0.60	9.6	15	21.6	
0.70	11.2	17.5	25.2	
0.80	12.8	20.0	28.8	
1	16.0	25.0	36.0	
1.25	20.0	31.3	45.0	
1.5	24.0	37.5	54.0	
2.0	32.0	50.0	72.0	
2.5	40.0	62.5	90.0	
3.0	48.0	75.0	108.0	288
4.0	64.0	100.0	144.0	284
5.0	80.0	125.0	180.0	480
6.0	96.0	150.0	216.0	576
8.0	128.0	200.0	288.0	768
10.0	160.0	250.0	360.0	960
12.0	192.0	300.0	432.0	1152





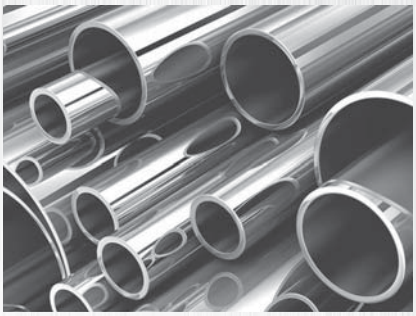


EMSS®
EURO METAL STAINLESS STEEL

PIPE AND PROFILES

STAINLESS STEEL WELDED PIPE DIMENSION AND WEIGHT

DIN 2463

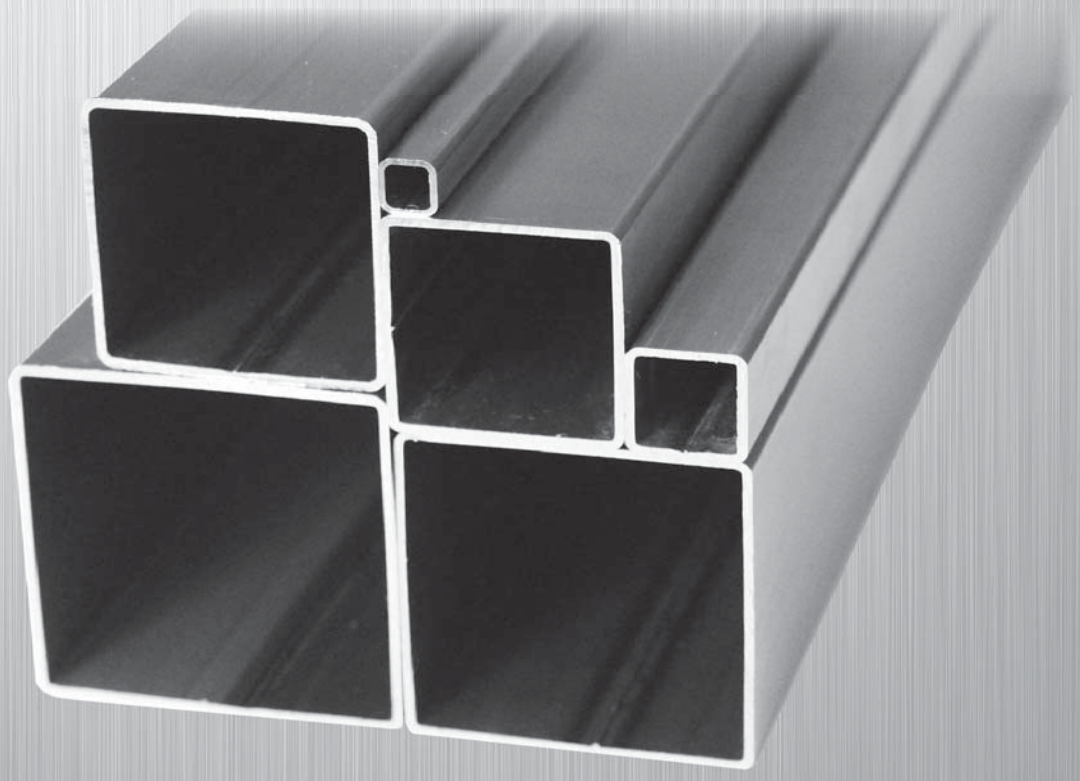


OUTSIDE DIAMETER		1,0	1,2	1,5	2,0	2,5	3,0	4,0	5,0	6,0
10		0,225	0,264	0,319						
12		0,275	0,325	0,394	0,500					
14		0,326	0,385	0,470	0,601					
15		0,351	0,415	0,507	0,651					
16		0,376	0,445	0,545	0,701					
17,2	3/8''	0,406	0,481	0,590	0,761	0,921				
18		0,426	0,505	0,620	0,801					
19		0,452	0,536	0,659	0,854					
20		0,476	0,565	0,695	0,901					
21,3	1/2''	0,508	0,604	0,744	0,967	1,177				
22		0,526	0,625	0,770	1,002					
23		0,551	0,655	0,808	1,051					
25		0,601	0,715	0,883	1,152	1,409				
26,9	3/4''	0,649	0,772	0,954	1,247	1,527	1,795	1,795		
28		0,676	0,805	0,995	1,302	1,596	1,878	1,878		
30		0,726	0,865	1,070	1,402	1,722	2,028	2,028		
32		0,776	0,925	1,146	1,502	1,847	2,178	2,178		
33,0				1,184						
33,7	1''	0,819	0,977	1,209	1,588	1,953	2,306	2,306		
35		0,851	1,016	1,258	1,653	2,035	2,404	2,404		
38		0,929	1,109	1,375	1,808	2,229	2,637	2,637		
40		0,977	1,116	1,446	1,903	2,348	2,779	2,779		
42,4	1 1/4''	1,037	1,238	1,536	2,023	2,498	2,960	2,960		
45		1,102	1,316	1,634	2,153	2,661	3,155	3,155		
48,3	1 1/2''	1,184	1,415	1,758	2,319	2,867	3,403	3,403		
50		1,227	1,466	1,822	2,404	2,974	3,531	3,531		
50,8		1,247	1,490	1,852	2,444		3,591	3,591		
51		1,252	1,496	1,859	2,454	3,036				
52		1,277	1,526	1,897	2,504	3,099	3,681	3,681		
54		1,327	1,587	1,972	2,604	3,224	3,831	3,831		
57				2,085	2,754	3,412	4,057	4,057		
60,3	2''	1,485	1,776	2,209	2,920	3,618	4,304	4,304		
63,5		1,565		2,329	3,080	3,819	4,545	4,545		
70		1,728	2,067	5,573	3,405	4,226	5,033	5,033		
76,1	2 1/2''	1,881	2,251	2,802	3,711	4,607	5,491	5,491		
80		1,978	2,368	2,948	3,906	4,852	5,784	5,784		
84					4,107					
88,9	3''			3,283	4,352	5,409	6,453	6,453		
101,6	3 1/2''			3,760	4,988	6,204	7,407	7,407	12,094	14,363
104				3,850	5,108	6,354	7,587	7,587	12,395	14,724
114,3	4''			4,237	5,624	6,999	8,361	8,361	13,984	16,271
129	4 1/2''			4,789	6,360	7,919	9,465	9,465	15,525	18,480
139,7	5''			5,191	6,896	8,589	10,269	10,269	16,864	20,087
154				5,728	7,612	9,484	11,343	11,343	18,655	22,236
168,3	6''			6,245	8,328	10,397	12,417	12,417	20,445	24,384

STAINLESS STEEL PROFILE WEIGHT TABLE

WELDED SQUARE TUBE

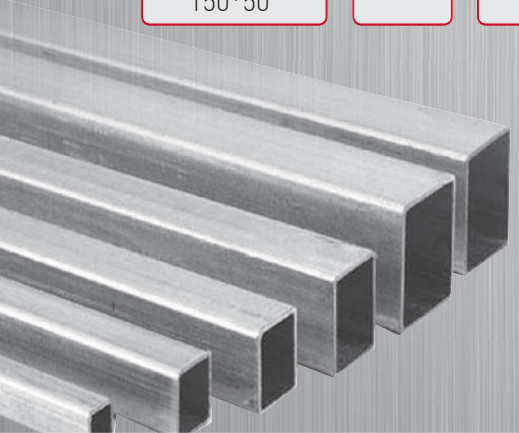
Dimension (mm)	1,0	1,2	1,5	2,0	2,5	3,0	4,0	5,0	6,0
12*12	0,358	0,415	0,508						
15*15	0,453	0,538	0,661						
16*16	0,485	0,576	0,709	0,920					
20*20	0,613	0,729	0,900	1,175					
25*25	0,772	0,921	1,140	1,494	1,846	2,179			
30*30	0,932	1,112	1,379	1,813	2,222	2,245			
35*35	1,091	1,303	1,618	2,132	2,629	3,118			
40*40	1,251	1,495	1,857	2,451	3,036	3,602	4,708		
45*45	1,410	1,686	2,097	2,770	3,433	4,081	5,309		
50*50	1,570	1,878	2,336	3,089	3,818	4,559	5,960		
60*60			2,814	3,727	4,607	5,516	7,222		
70*70			3,293	4,365	5,408	6,473	8,504		
80*80			3,771	5,003	6,203	7,430	9,807	12,095	
100*100		4,728	6,279	7,918	9,343	12,358	15,322	18,236	18,236
120*120			7,555		11,257	14,910	18,512	22,064	22,064

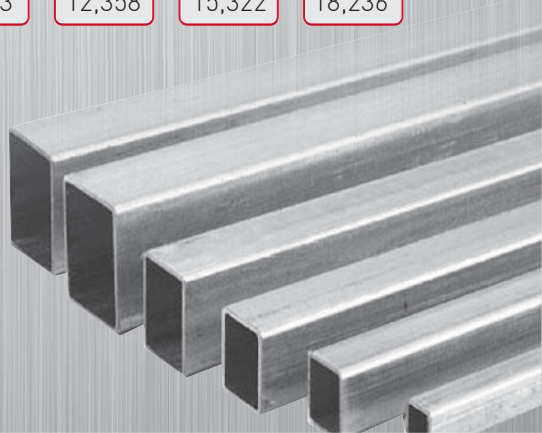


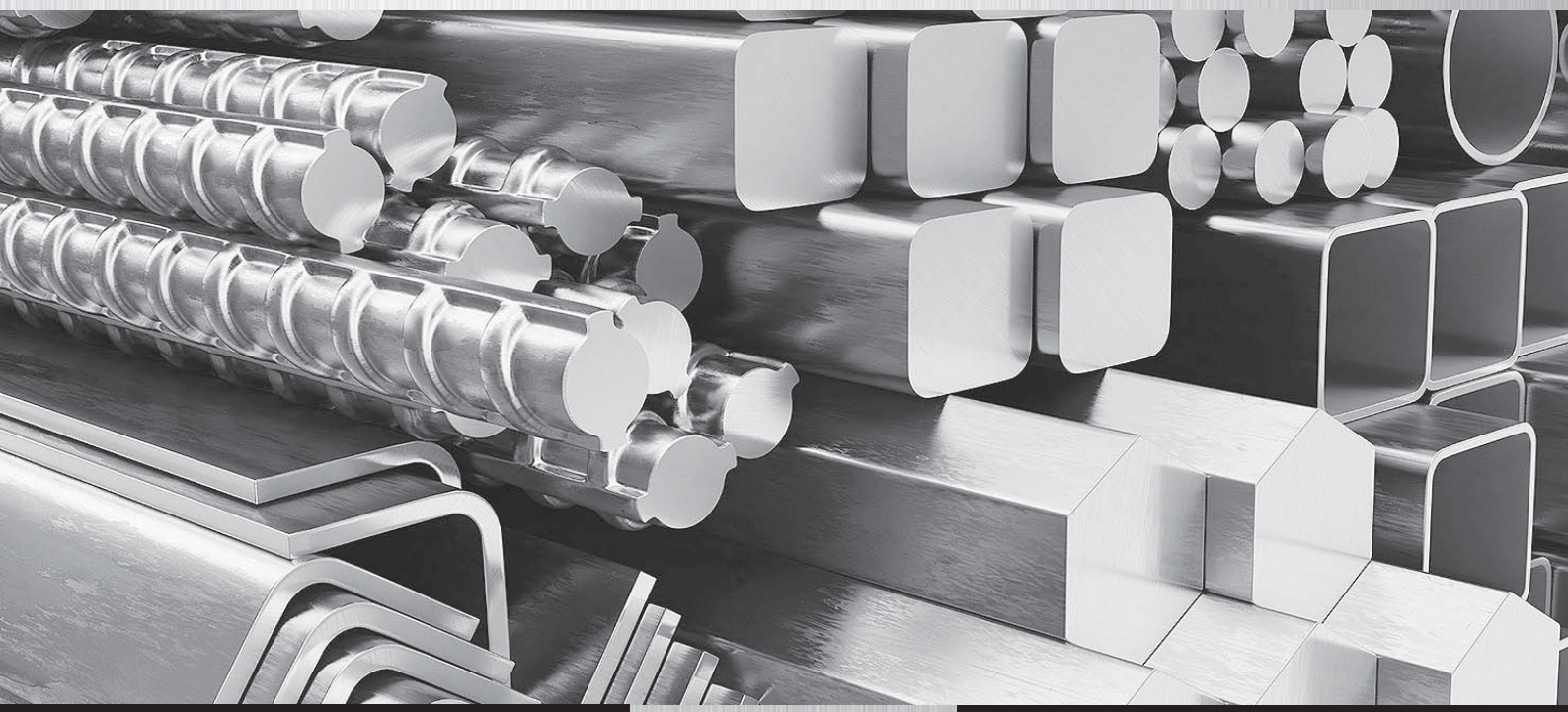
STAINLESS STEEL PROFILE WEIGHT TABLE

RECTANGULAR TUBE

Dimension (mm)	1,0	1,2	1,5	2,0	2,5	3,0	4,0	5,0	6,0
20*10	0,453	0,538	0,661						
20*15	0,533	0,634	0,781						
25*15	0,613	0,729	0,900	1,175					
30*10	0,613	0,729	0,900						
30*15	0,693	0,825	1,020	1,335					
30*20	0,852	0,921	1,140	1,494					
35*20	0,852	1,017	1,259	1,654					
40*15	0,852	1,017	1,259	1,654					
40*20	0,926	1,112	1,379	1,813					
40*30	1,091	1,303	1,618	2,132	2,661	3,156			
50*20	1,091	1,303	1,618	2,132					
50*25		1,399	1,738	2,292					
50*30	1,251	1,495	1,857	2,451					
50*40		1,686	2,097	2,770	3,412	4,081			
60*20		1,495	1,857	2,451					
60*30		1,686	2,097	2,770	3,421	4,081			
60*40		1,878	2,336	3,089	3,819	4,559	5,960		
80*40		2,261	2,814	3,727	4,600	5,516	7,222		
80*60			3,293	4,365	5,408	6,473	8,504		
100*40			3,293	4,365	5,408	6,473	8,504		
100*50				4,684	5,790	6,952	9,115	11,268	
100*60				5,003		7,430	9,807	12,095	
120*40				5,003		7,430	9,807		
120*60				5,642		8,387	11,083	13,728	16,324
120*80				6,279		9,343	12,358	15,322	18,236
150*50				6,279		9,343	12,358	15,322	18,236







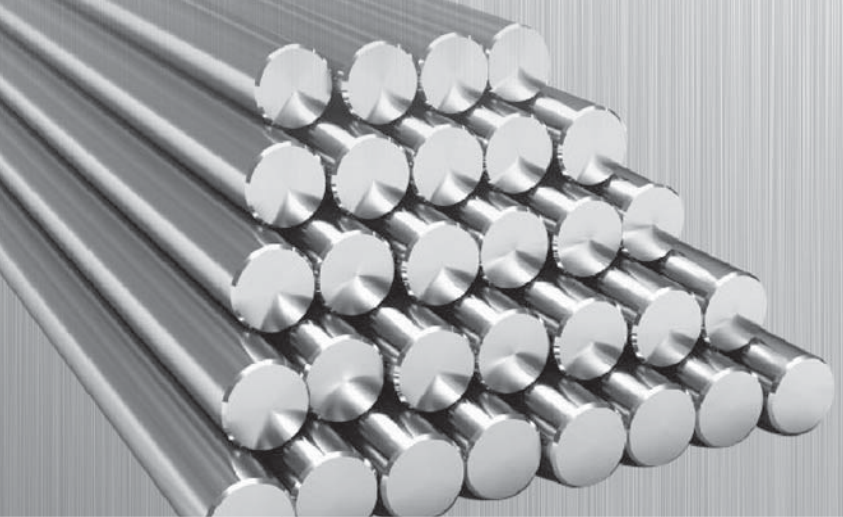
EMSS®
EURO METAL STAINLESS STEEL

ROUND BAR - FLAT BAR
ANGLE - SQUARE

ROUND BAR THEORETICAL WEIGHT (KG/MT)

Ø	mm	kg/mt
Ø	3	0.06
Ø	4	0.10
Ø	5	0.16
Ø	6	0.22
Ø	7	0.30
Ø	8	0.40
Ø	9	0.50
Ø	10	0.62
Ø	11	0.75
Ø	12	0.89
Ø	13	1.05
Ø	14	1.21
Ø	15	1.39
Ø	16	1.59
Ø	17	1.79
Ø	18	2.01
Ø	19	2.24
Ø	20	2.48
Ø	21	2.73
Ø	22	2.99
Ø	24	3.57
Ø	25	3.88
Ø	26	4.19
Ø	28	4.86
Ø	30	5.58
Ø	32	6.31
Ø	35	7.55
Ø	38	8.91
Ø	40	9.92
Ø	45	12.50
Ø	50	15.50
Ø	55	18.76
Ø	60	22.30
Ø	65	26.20

Ø	mm	kg/mt
Ø	70	30.38
Ø	75	34.88
Ø	80	39.60
Ø	85	44.80
Ø	90	50.22
Ø	95	55.90
Ø	100	62.00
Ø	105	68.30
Ø	110	75.00
Ø	115	81.60
Ø	120	89.00
Ø	125	96.50
Ø	130	104.78
Ø	135	113.00
Ø	1 40	121.00
Ø	150	139.50
Ø	160	158.22
Ø	165	168.80
Ø	170	179.18
Ø	180	200.88
Ø	185	212.20
Ø	190	223.82
Ø	200	248.00
Ø	210	273.42
Ø	220	300.08
Ø	230	327.98
Ø	240	357.12
Ø	250	387.50
Ø	260	419.12
Ø	280	486.06
Ø	285	503.60
Ø	300	558.0
Ø	340	716.72
Ø	400	992.00



HEXAGONAL BAR
DIN 176

Size (ws/mm)	Weight (kg/M)
11	0.82
13	1.15
14	1.33
15	1.53
17	1.97
19	2.45
22	3.29
24	3.92
27	4.96
30	6.12
32	6.96
36	8.81
41	11.43
45	13.77
50	17.00

SQUARE BAR
DIN 178

Size (ws/mm)	Weight (kg/M)
6x6	0.28
8x8	0.51
10x10	0.79
12x12	1.14
14x14	1.55
15x15	1.78
16x16	2.02
18x18	2.56
20x20	3.16
22x22	3.82
25x25	4.94
30x30	7.11
35x35	9.68
40x40	12.64
50x50	19.75
60x60	28.46
80x80	50.56
100x100	79.00

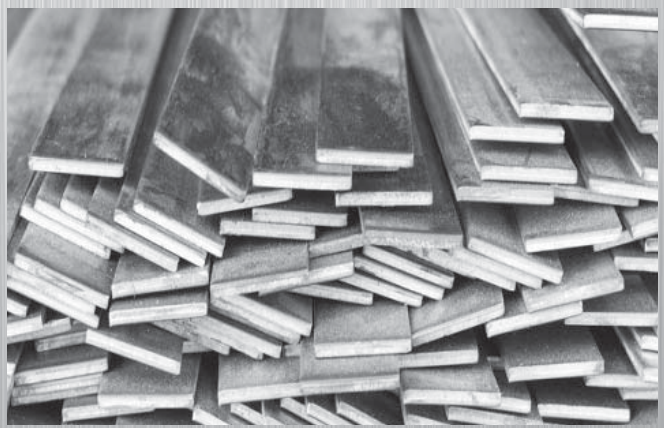
ANGLE BAR
DIN 1028

Size (ws/mm)	Weight (kg/M)
20 x 20 x 3	0.880
25 x 25 x 3	1.120
25 x 25 x 4	1.450
30 x 30 x 3	1.360
30 x 30 x 4	1.780
30 x 30 x 5	2.180
35 x 35 x 4	2.100
40 x 40 x 3	1.813
40 x 40 x 4	2.420
40 x 40 x 5	2.970
50 x 50 x 3	2.284
50 x 50 x 4	3.014
50 x 50 x 5	3.770
50 x 50 x 6	4.470
60 x 60 x 6	5.420
70 x 70 x 7	.380
80 x 80 x 8	9.660
100 x 100 x 10	15.000

FLAT BAR (KG/MT)

DIN 1016, 1017, 1543

THICKNESS SIZE	2	3	4	5	6	8	10	12	15
10	0.16	0.24	0.32	0.40					
15	0.25	0.36	0.48	0.60					
20	0.32	0.48	0.64	0.80	0.95	1.27			
25	0.40	0.60	0.80	0.99	1.19	1.59			
30	0.48	0.72	0.95	1.19	1.43	1.91	2.29		
35	0.56	0.83	1.11	1.39	1.67	2.23	2.78		
40	0.64	0.95	1.27	1.59	1.91	2.54	3.18	3.82	
45	0.72	1.07	1.43	1.79	2.15	2.86	3.58	4.29	
50	0.80	1.19	1.59	1.99	2.39	3.18	3.98	4.77	
60		1.43	1.91	2.39	2.86	3.82	4.77	5.72	
70		1.67	2.23	2.78	3.34	4.45	5.57	6.68	
80		1.91	2.54	3.18	3.82	5.09	6.36	7.63	
90		2.15	2.66	3.58	4.29	5.72	7.16	8.59	
100		2.39	3.18	3.98	4.77	6.36	7.95	9.54	11.93
110			3.50	4.37	5.25	7.00	8.75	10.49	13.12
120			3.82	4.77	5.72	7.63	9.54	11.45	14.31
130				5.17	6.20	8.27	10.34	12.40	15.50
140				5.57	6.68	8.90	11.13	13.36	16.70
150				5.96	7.16	9.54	11.93	14.31	17.89
160				6.36	7.63	10.18	12.72	15.26	19.08
180				7.16	8.59	11.45	14.31	17.17	21.47
200				7.95	9.54	12.72	15.90	19.08	23.85
250				9.94	11.94	15.90	19.88	23.85	29.81

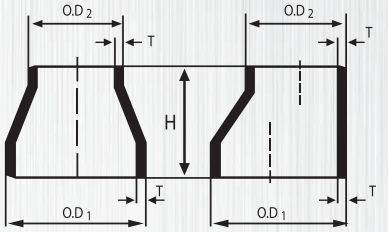


EMSS®
EURO METAL STAINLESS STEEL

FITTINGS

BUTT WELD REDUCER COUPLING ISO AND EUROPEAN STANDARDS

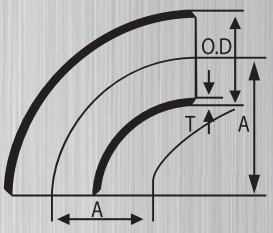
Reducer is in accordance with concentric and eccentric ANSI and MSS standards



Norm	Ext.Diam. L.side O.D.1 mm	Ext.Diam. Sh.side O.D.1 mm	Length H mm	Sched. Thick. T	5 S Weight kg	Sched. Thick. T	10 S Weight kg	Sched. Thick. T	40 S Weight kg	Sched. Thick. T	80S Weight kg
3/4" 1/2"	26.7	21.3	50.8	T 1.65 t 1.65	0.08	T 2.11 t 2.11	0.10	T 2.87 t 2.77	0.10	T 3.91 t 3.73	0.18
1" x 1/2"	33.7	21.3	50.8	T 1.65 t 1.65	0.07	T 2.77 t 2.11	0.12	T 3.38 t 2.77	0.12	T 4.55 t 3.73	0.20
1"x 3/4"	33.7	26.7	50.8	T 1.65 t 1.65	0.08	T 2.77 t 2.11	0.13	T 3.38 t 2.87	0.13	T 4.55 t 3.91	0.22
1" 1/4" x 3/4"	42.4	26.7	50.8	T 1.65 t 1.65	0.10	T 2.77 t 2.11	0.18	T 2.56 t 2.87	0.18	T 4.85 t 3.51	0.25
1" 1/4" x 1"	42.4	33.7	50.8	T 1.65 t 1.65	0.10	T 2.77 t 2.77	0.18	T 3.56 t 3.36	0.18	T 4.85 t 4.55	0.27
1" 1/2" x 1	48.3	33.7	63.5	T 1.65 t 1.65	0.11	T 2.77 t 2.77	0.20	T 3.68 t 3.38	0.20	T 5.08 t 4.55	0.34
1" 1/2" x 1 1/4"	48.3	42.4	63.5	T 1.65 t 1.65	0.12	T 2.77 t 2.77	0.21	T 3.68 t 3.56	0.21	T 5.05 t 4.85	0.36
2" x 1"	60.3	33.7	76.2	T 1.65 t 1.65	0.17	T 2.77 t 2.77	0.28	T 3.91 t 3.38	0.28	T 5.54 t 4.55	0.54
2" x 1" 1/4"	60.3	42.4	76.2	T 1.65 t 1.65	0.18	T 2.77 t 2.77	0.30	T 3.91 t 3.56	0.30	T 5.54 t 4.85	0.58
2" x 1 1/2"	60.3	48.3	76.2	T 1.65 t 1.65	0.19	T 2.77 t 2.77	0.31	T 3.91 t 3.68	0.31	T 5.54 t 5.08	0.59
2" 1/2"x 1 1/4"	76.1	42.4	88.9	T 2.11 t 1.65	0.29	T 3.05 t 2.77	0.43	T 5.16 t 3.56	0.43	T 7.01 t 4.85	0.90
2" 1/2" x 1 1/2"	76.1	48.3	88.9	T 2.11 t 1.65	0.30	T 3.05 t 2.77	0.44	T 5.16 t 3.68	0.44	T 7.01 t 5.08	0.94
2" 1/2" x 2"	76.1	60.3	88.9	T 2.11 t 1.65	0.32	T 3.05 t 2.77	0.47	T 5.16 t 3.81	0.47	T 7.01 t 5.54	1.03
3" x 1 1/2"	88.9	48.3	88.9	T 2.11 t 1.65	0.35	T 3.05 t 2.77	0.51	T 5.49 t 3.68	0.51	T 7.62 t 5.08	1.21
3" x 2"	88.9	60.3	88.9	T 2.11 t 1.65	0.38	T 3.05 t 2.77	0.55	T 5.46 t 3.91	0.55	T 7.62 t 5.54	1.29
3" x 2 1/2"	88.9	76.1	88.9	T 2.11 t 1.65	0.41	T 3.05 t 3.05	0.59	T 5.49 t 5.16	0.59	T 7.62 t 7.01	1.49
4" x 2"	114.3	60.3	101.6	T 2.11 t 1.65	0.55	T 3.05 t 2.77	0.78	T 6.02 t 3.91	0.78	T 8.56 t 5.54	1.95
4" x 2 1/2"	114.3	76.1	101.6	T 2.11 t 2.11	0.58	T 3.05 t 3.05	0.83	T 6.02 t 5.18	0.83	T 8.56 t 7.01	2.19
4" x 3"	114.3	88.9	101.6	T 2.11 t 2.11	0.61	T 3.05 t 3.05	0.87	T 6.02 t 5.49	0.87	T 8.56 t 7.62	2.33
5" x 2 1/2"	139.7	76.1	127.0	T 2.77 t 2.11	1.16	T 3.40 t 3.05	1.40	T 6.65 t 5.16	1.40	T 9.58 t 7.01	3.60
5" x 3"	139.7	88.9	127.0	T 2.77 t 2.11	1.20	T 3.40 t 3.05	1.45	T 6.55 t 5.49	1.45	T 5.53 t 7.62	3.88
5" x 4"	139.7	114.3	127.0	T 2.77 t 2.11	1.25	T 3.40 t 3.05	1.49	T 6.55 t 6.02	1.49	T 8.53 t 8.56	4.13
6" x 3"	168.3	88.9	139.7	T 2.77 t 2.11	1.51	T 3.40 t 3.05	1.82	T 7.11 t 5.49	1.82	T 10.97 t 7.62	5.51
6" x 4"	168.3	114.3	139.7	T 2.77 t 2.11	1.55	T 3.40 t 3.05	1.95	T 7.11 t 6.02	1.95	T 10.97 t 8.56	5.96
8" x 4"	219.1	114.3	152.4	T 2.77 t 2.11	2.16	T 3.76 t 3.05	3.01	T 6.18 t 6.02	3.01	T 12.70 t 8.56	9.24
8" x 5"	219.1	139.7	152.4	T 2.77 t 2.77	2.21	T 3.76 t 3.40	3.08	T 8.18 t 6.55	3.08	T 12.70 t 9.53	9.67
8" x 6"	219.1	168.3	152.4	T 2.77 t 2.77	2.29	T 3.76 t 3.40	3.19	T 8.18 t 7.11	3.19	T 12.70 t 10.97	10.10
10" x 6"	273.1	168.3	177.8	T 3.40 t 2.77	4.00	T 4.19 t 3.40	5.00	T 9.27 t 7.11	5.00	T 12.70 t 10.97	14.70
10" x 8"	273.1	219.1	177.8	T 3.40 t 2.77	4.16	T 4.19 t 3.76	5.20	T 9.27 t 8.18	5.20	T 12.70 t 12.70	15.50
12" x 8"	323.9	219.1	203.2	T 3.96 t 2.77	6.55	T 4.57 t 3.76	7.67	T 9.53 t 8.18	7.67	T 12.70 t 12.70	20.80
12" x 10"	323.9	273.1	203.2	T 3.96 t 3.40	6.82	T 4.57 t 4.19	7.98	T 9.53 t 9.27	7.98	T 12.70 t 12.70	21.60
14" x 6"	355.6	168.3	330.2	T 3.96 t 2.77	10.79	T 4.98 t 3.40	13.15	T 9.53 t 7.11	13.15	T 12.70 t 10.97	35.20
14" x 8"	355.6	219.1	330.2	T 3.96 t 2.77	11.39	T 4.78 t 3.76	13.88	T 9.53 t 8.18	13.88	T 12.70 t 12.70	36.80
14" x 10"	355.6	273.1	330.2	T 3.96 t 3.40	11.82	T 4.78 t 4.19	14.41	T 9.53 t 9.27	14.41	T 12.70 t 12.70	38.70
14" x 12"	355.6	323.9	330.2	T 3.96 t 3.96	12.54	T 4.78 t 4.57	15.29	T 9.53 t 9.53	15.29	T 12.70 t 12.70	40.30
16" x 8"	406.4	219.1	355.6	T 4.19 t 2.77	14.68	T 4.78 t 3.76	16.70	T 9.53 t 8.18	16.70	T 12.70 t 12.70	44.20
16" x 10"	406.4	273.1	355.6	T 4.19 t 3.40	15.59	T 4.78 t 4.19	17.72	T 9.53 t 9.27	17.72	T 12.70 t 12.70	46.27
16" x 12"	406.4	323.9	355.6	T 4.19 t 3.96	16.16	T 4.78 t 4.57	18.35	T 9.53 t 9.53	18.35	T 12.70 t 12.70	47.63
18" x 10"	457.2	273.1	381.0	T 4.19 t 3.40	18.50	T 4.78 t 4.19	21.02	T 9.53 t 9.27	21.02	T 12.70 t 12.70	54.53
18" x 12"	457.2	323.9	381.0	T 4.19 t 3.96	18.90	T 4.78 t 4.57	21.48	T 9.53 t 9.53	21.48	T 12.70 t 12.70	57.15
18" x 14"	457.2	355.6	381.0	T 4.19 t 3.96	19.27	T 4.78 t 4.78	21.9	T 9.53 t 9.53	21.9	T 12.70 t 12.70	57.61

BUTT WELD 90 DEGREE ELBOW
ISO AND EUROPEAN STANDARDS

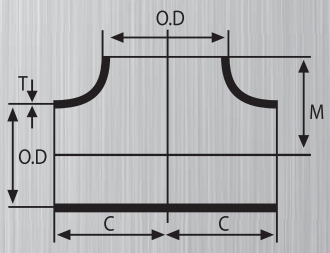
Welding elbow 3d, 90° is in accodance with ISO DIN 2605 standards



Norm Pipe size	Ext.Diam. O.D mm	Centre-to Face A. mm	Sched. Thick. T mm	5 S Wall Weight kg	Sched. Thick. T mm	10 S Wall Weight kg	Sched. Thick. T mm	40 S Wall Weight kg	Sched. Thick. T mm	80 S Wall Weight kg	Sched. Thick. T mm	160S Weight kg
1/2"	21.3	25.4	1.65	0.09	2.11	0.10	2.77	0.18	3.73	0.21	4.75	0.27
3/4"	26.7	28.6	1.65	0.13	2.11	0.13	2.87	0.25	3.91	0.29	5.54	0.39
1"	33.7	38.1	1.65	0.22	2.77	0.29	3.38	0.29	4.55	0.39	6.35	0.54
1 1/4"	42.4	47.6	1.65	0.34	2.77	0.50	3.56	0.59	4.85	0.68	6.35	0.89
1 1/2"	48.3	57.2	1.65	0.50	2.77	0.68	3.68	0.86	5.08	1.02	7.14	1.43
2"	60.3	63.5	1.65	0.68	2.77	0.85	3.91	1.28	5.54	1.59	8.71	2.49
2 1/2"	76.1	76.2	2.11	1.20	3.05	1.41	5.16	2.20	7.01	3.13	9.53	4.25
3"	88.9	85.7	2.11	1.54	3.05	1.77	5.49	3.31	7.62	4.45	11.13	6.49
3 1/2"	101.6	95.3	2.11	2.49	3.05	2.67	5.74	4.08	8.08	5.44	-	-
4"	114.3	104.8	2.11	3.27	3.05	3.46	6.02	5.28	8.56	7.71	13.49	2.18
5"	139.7	123.8	2.77	5.90	3.40	6.10	6.55	9.41	9.53	11.34	15.88	18.94
6"	168.3	142.9	2.77	7.80	3.40	8.07	7.11	11.00	10.97	13.61	18.24	22.59
8"	219.1	177.8	2.77	14.06	3.76	15.65	8.18	20.91	12.70	28.12	23.01	50.80
10"	273.1	215.9	3.40	24.95	4.19	26.76	9.27	35.38	12.70	49.89	28.57	112.04
12"	323.9	254.0	3.96	37.65	4.57	39.46	9.53	62.14	12.70	83.91	33.32	219.54
14"	355.6	279.4	3.96	40.37	4.78	48.53	9.53	79.38	12.70	95.25	-	-
16"	406.4	304.8	4.19	52.16	4.78	58.97	9.53	99.79	12.70	120.20	-	-
18"	457.2	342.9	4.19	67.58	4.78	76.66	9.53	129.73	12.70	156.03	-	-
20"	508.2	381.0	4.78	77.56	5.54	103.42	9.53	162.39	12.70	195.04	-	-
24"	609.6	431.8	5.54	135.9	6.35	155.58	9.53	225.89	12.70	272.15	-	-

BUTT WELD TEE
ISO AND EUROPEAN STANDARDS

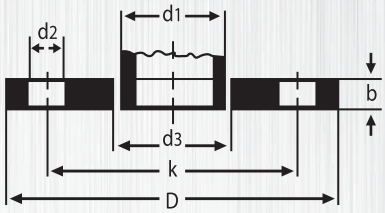
EQUAL TEE



Norm Pipe size	Ext.Diam. O.D mm	Centre-to Face A. mm	Sched. Thick. T mm	5 S Wall Weight kg	Sched. Thick. T mm	10 S Wall Weight kg	Sched. Thick. T mm	40 S Wall Weight kg	Sched. Thick. T mm	80 S Wall Weight kg	Sched. Thick. T mm	160S Weight kg
1/2"	21.3	25.4	1.65	0.09	2.11	0.10	2.77	0.18	3.73	0.21	4.75	0.27
3/4"	26.7	28.6	1.65	0.13	2.11	0.13	2.87	0.25	3.91	0.29	5.54	0.39
1"	33.7	38.1	1.65	0.22	2.77	0.29	3.38	0.29	4.55	0.39	6.35	0.54
1 1/4"	42.4	47.6	1.65	0.34	2.77	0.50	3.56	0.59	4.85	0.68	6.35	0.89
1 1/2"	48.3	57.2	1.65	0.50	2.77	0.68	3.68	0.86	5.08	1.02	7.14	1.43
2"	60.3	63.5	1.65	0.68	2.77	0.85	3.91	1.28	5.54	1.59	8.71	2.49
2 1/2"	76.1	76.2	2.11	1.20	3.05	1.41	5.16	2.20	7.01	3.13	9.53	4.25
3"	88.9	85.7	2.11	1.54	3.05	1.77	5.49	3.31	7.62	4.45	11.13	6.49
3 1/2"	101.6	95.3	2.11	2.49	3.05	2.67	5.74	4.08	8.08	5.44	-	-
4"	114.3	104.8	2.11	3.27	3.05	3.46	6.02	5.28	8.56	7.71	13.49	2.18
5"	139.7	123.8	2.77	5.90	3.40	6.10	6.55	9.41	9.53	11.34	15.88	18.94
6"	168.3	142.9	2.77	7.80	3.40	8.07	7.11	11.00	10.97	13.61	18.24	22.59
8"	219.1	177.8	2.77	14.06	3.76	15.65	8.18	20.91	12.70	28.12	23.01	50.80
10"	273.1	215.9	3.40	24.95	4.19	26.76	9.27	35.38	12.70	49.89	28.57	112.04
12"	323.9	254.0	3.96	37.65	4.57	39.46	9.53	62.14	12.70	83.91	33.32	219.54
14"	355.6	279.4	3.96	40.37	4.78	48.53	9.53	79.38	12.70	95.25	-	-
16"	406.4	304.8	4.19	52.16	4.78	58.97	9.53	99.79	12.70	120.20	-	-
18"	457.2	342.9	4.19	67.58	4.78	76.66	9.53	129.73	12.70	156.03	-	-
20"	508.2	381.0	4.78	77.56	5.54	103.42	9.53	162.39	12.70	195.04	-	-
24"	609.6	431.8	5.54	135.9	6.35	155.58	9.53	225.89	12.70	272.15	-	-

SLIP-ON FLANGE PN6

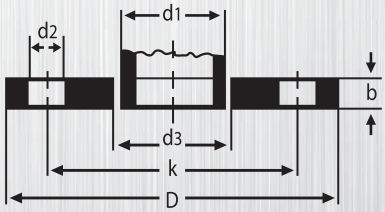
DIN 2573



Tube DN	d1 mm	Flange d5 mm	D mm	b mm	k mm	Hole No.	Bolt		d2 mm	weight kg
10	14 17,2	14,5 17,7	75	12	50	4	M10	-	11,5	0,363
15	20 21,3	20,5 21,8	80	12	55	4	M10	-	11,5	0,410
20	25 26,9	25,5 27,4	90	14	65	4	M10	-	11,5	0,600
25	30 33,7	30,5 34,2	100	14	75	4	M10	-	11,5	0,740
32	38 42,4	38,5 42,9	120	16	90	4	M12	(1/2")	14	1.19
40	44,5 48,3	45 48,8	130	16	100	4	M12	(1/2")	14	1.39
50	57 60,3	57,5 60,8	140	16	110	4	M12	(1/2")	14	1,53
65	76,1	76,6	160	16	130	4	M12	(1/2")	14	1,89
80	88,9	89,4	190	18	150	4	M16	(5/8")	18	2,98
100	108 114,3	108,95 114,8	210	18	170	4	M16	(5/8")	18	3,46
125	133 139,7	133,5 140,2	240	20	200	8	M16	(5/8")	18	4,60
150	159 168,3	159,5 168,8	265	20	225	8	M16	(5/8")	18	5,22
200	216 219,1	217 220,1	320	22	280	8	M16	(5/8")	18	7,15
250	267 273	268 274	375	24	335	12	M16	(5/8")	18	9,61
300	318 323,9	319 324,9	440	24	395	12	M20	(3/4")	23	12,6
350	355,6 368	356,6 369	490	26	445	12	M20	(3/4")	23	15,6
400	406,4 419	407,4 420	540	28	495	16	M20	(3/4")	23	18,4
500	508 521	509 522	645	30	600	20	M20	(3/4")	23	24,6

SLIP-ON FLANGE PN10

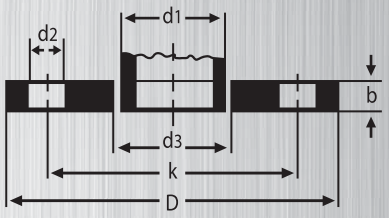
DIN 2576



Tube DN	d1 mm	Flange d5 mm	D mm	b mm	k mm	Hole No.	Bolt		d2 mm	weight kg
10	14 17,2	14,5 17,7	90	14	60	4	M12	(1/2")	14	0,613 0,605
15	20 21,3	20,5 21,8	95	14	65	4	M12	(1/2")	14	0,675 0,669
20	25 26,9	25,5 27,4	105	16	75	4	M12	(1/2")	14	0,947 0,936
25	30 33,7	30,5 34,2	115	16	85	4	M12	(1/2")	14	1,14 1,11
32	38 42,4	38,5 42,9	140	16	100	4	M16	(5/8")	14	1,66 1,62
40	44,5 48,3	45 48,8	150	16	110	4	M16	(5/8")	14	1,89 1,86
50	57 60,3	57,5 60,8	165	18	125	4	M16	(5/8")	14	2,51 2,47
65	76,1	76,6	185	18	145	4	M16	(5/8")	18	3,00
80	88,9	89,4	200	20	160	4	M16	(5/8")	18	3,79
100	108 114,3	108,95 114,8	220	20	180	4	M16	(5/8")	18	4,20 4,03
125	133 193,7	133,5 140,2	250	22	210	8	M16	(5/8")	18	5,71 5,46
150	159 168,3	159,5 168,8	285	22	240	8	M20	(3/4")	23	6,72 6,57
200	216 219.1	217 220,1	340	24	295	8	M20	(3/4")	23	9,50 9,31
250	267 273	268 274	395	26	350	12	M20	(3/4")	23	12,5 11,9
300	318 323,9	319 324,9	445	26	400	12	M20	(3/4")	23	14,4 13,8
350	355,6 368	356,6 369	505	28	460	12	M20	(3/4")	23	20,6 19,0
400	406,4 419	407,4 420	565	32	515	16	M24	(7/24")	27	27,9 25,9
500	508 521	509 522	670	38	620	20	M24	(7/24")	27	41,1 37,9

SLIP-ON FLANGE PN16

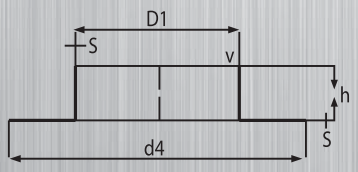
DIN 18697



Tube DN	d1 mm	Flange d5 mm	D mm	b mm	k mm	Hole No.	Bolt		d2 mm	weight kg
10	13,5 17,2	14 17,5	90	12	60	4	M12	1/2"	14	0,526 0,518
15	20 21,3	20,5 22	95	12	65	4	M12	1/2"	14	0,675 0,670
20	25 26,9	25,5 27,5	105	14	75	4	M12	1/2"	14	0,828 0,818
25	30 33,7	30,5 34,5	115	4	85	4	M12	1/2"	14	1,03 1,01
32	38 42,4	38,5 43	140	16	100	4	M16	5/8"	18	1,66 1,63
40	44,5 48,3	45 49	150	16	110	4	M16	5/8"	18	1,89 1,85
50	57 60,3	57,5 61	165	18	125	4	M16	5/8"	18	2,51 2,46
65	76,1	77	185	18	145	4	M16	5/8"	18	3,00
80	88,9	90	200	20	160	8	M16	5/8"	18	3,61
100	108 114,3	109 115	220	22	180	8	M16	5/8"	18	4,60 4,42
125	133 139,7	134 141	250	24	210	8	M16	5/8"	18	6,21 5,92
150	159 168,3	160 169	285	24	240	8	M16	5/8"	18	7,66 7,22
200	219,1	220	340	26	295	12	M20	3/4"	22	9,84
250	267 273	268 274	405	32	355	12	M24	7/8"	26	16,6 16,0
300	323,9	325	460	32	410	12	M24	7/8"	26	19,2
350	355,6 368	356,5 369	520	36	470	16	M24	7/8"	26	29,5 27,4
400	406,4 419	407,5 420	580	38	525	16	M27	1"	30	36,7 34,1
500	508	509	715	44	650	20	M30	1 1/8"	33	62,5
600	09,6	611	840	48	770	20	M33	1 1/4"	36	90,6

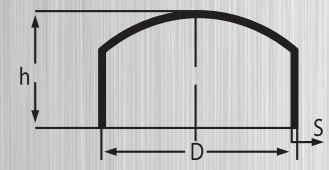
COLLAR

(ANSI B 36.19 - DIN 2642)



NW	D1 mm	S mm	d_4	B min.	+/- Kg st. pc.
15	21.3	2	45	7	0,02
20	25,0	2	58	8	0,04
	26,9	2	58	7	0,04
	26,9	3	58	8	0,06
25	33,7	2	68	10	0,05
	33,7	3	68	10	0,08
32	42,4	2	78	10	0,07
	42,4	3	78	12	0,15
40	48,3	2	88	12	0,09
	48,3	3	88	15	0,18
50	60,3	2	102	15	0,11
	60,3	3	102	18	0,18
65	76,1	2	122	15	0,15
	76,1	3	122	18	0,24
80	88,9	2	138	15	0,19
	88,9	3	138	22	0,30
	88,9	4	138	23	0,44
100	114,3	2	158	20	0,23
	114,3	3	158	22	0,36
	114,3	4	158	25	0,50
125	139,7	2	188	20	0,30
	139,7	3	188	22	0,46
	139,7	4	188	30	0,68
150	168,3	2	212	22	0,33
	168,3	3	212	25	0,55
	168,3	4	212	25	0,72
200	204,0	2	268	23	0,56
	219,1	2	268	23	0,48
	219,1	3	268	25	0,74
	219,1	4	268	25	1,00
250	273,0	3	320	26	0,92
	273,0	4	320	27	1,26
300	323,9	3	370	26	1,07
	323,9	4	370	27	1,47
350	356,0	3	430	26	1,61
400	406,4	3	480	30	1,96
450	456,0	3	530	30	2,16
500	508,0	4	580	40	3.74

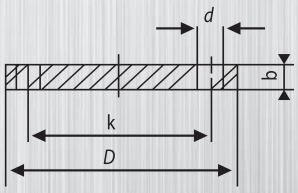
CAP
(ASTMA 403 - ANSI B16.9)



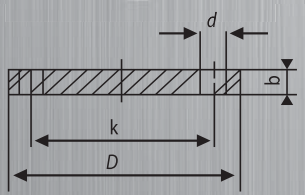
Inch Size				D mm	S mm	B min.	+/- Kg st. pc.
1/2"	Sch	10S		21,34	2,11	25,4	0,03
1/2"	Sch	40S	STD	21,34	2,77	25,4	0,03
3/4"	Sch	10S		26,67	2,11	25,4	0,04
3/4"	Sch	40S	STD	26,67	2,11	25,4	0,05
1"	Sch	10S		33,40	2,77	38,1	0,09
1"	Sch	40S	STD	33,40	3,38	38,1	0,11
1.1/4"	Sch	10S		42,16	2,77	38,1	0,11
1.1/4"	Sch	40S	STD	42,16	3,56	38,1	0,17
1.1/2"	Sch	10S		48,26	2,77	38,1	0,13
1.1/2"	Sch	40S	STD	48,26	3,68	38,1	0,17
2"	Sch	10S		60,33	2,77	38,1	0,17
2"	Sch	40S	STD	60,33	3,91	38,1	0,17
2.1/2"	Sch	10S		76,01	3,05	38,1	0,23
2.1/2"	Sch	40S	STD	76,01	5,16	38,01	0,39
3"	Sch	10S		88,90	3,05	50,8	0,37
3"	Sch	40S	STD	88,90	5,49	50,8	0,66
4"	Sch	10S		114,30	3,05	63,5	0,59
4"	Sch	40S	STD	114,30	6,02	63,5	1,17
5"	Sch	10S		141,30	3,40	76,2	0,99
5"	Sch	40S	STD	141,30	6,55	76,2	1,91
6"	Sch	10S		168,28	3,40	88,9	1,39
6"	Sch	40S	STD	168,28	7,11	88,9	2,90
8"	Sch	10S		219,08	3,76	101,6	2,38
8"	Sch	40S	STD	219,08	8,18	101,6	5,19
10"	Sch	10S		273,05	4,19	127,	4,14
10"	Sch	40S	STD	273,05	9,27	127,0	9,15
12"	Sch	10S		323,85	4,75	152,4	6,39
12"	Sch	40S	STD	323,85	9,53	152,4	13,30
14"	Sch	10S		355,60	4,78	165,1	7,98
16"	Sch	10S		406,40	4,78	177,8	10,00

BLIND FLANGE PN6
DIN 2527

NW	D	b	k	Holes No.	d
10	75	12	50	4	11
15	80	12	55	4	11
20	90	14	65	4	11
25	100	14	75	4	11
32	120	14	90	4	14
40	130	14	100	4	14
50	140	14	110	4	14
65	180	14	130	4	14
80	190	16	150	4	18
100	210	16	170	4	18
125	240	18	200	8	18
150	265	18	225	8	18
200	320	20	280	8	18
250	375	22	335	12	18
300	440	22	395	12	22
350	490	22	445	12	22
400	540	22	495	16	22
500	645	24	600	20	22

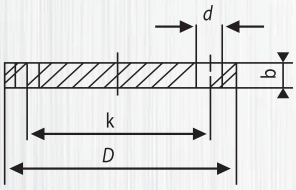


BLIND FLANGE PN10
DIN 2527



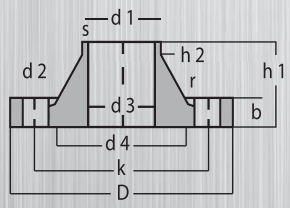
NW	D	b	k	Holes No.	d
200	340	24	295	8	22
250	395	26	350	12	22
300	445	26	400	12	22
350	505	26	460	16	22
400	565	26	460	16	22
500	670	28	620	20	26

BLIND FLANGE PN16
DIN 2527



NW	D	b	k	Holes No.	d
10	90	14	60	4	14
15	95	14	65	4	14
20	105	16	75	4	14
25	115	16	85	4	14
32	140	16	100	4	18
40	150	16	110	4	18
50	165	18	125	4	18
65	185	18	145	4	18
80	200	20	160	4	18
100	220	20	180	4	18
125	250	22	210	8	18
150	285	22	240	8	22
200	340	24	295	8	22
250	405	26	355	12	26
300	460	28	410	12	26
350	520	30	470	12	26
400	580	32	525	16	30
500	715	36	650	20	33

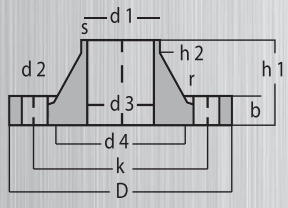
WELD NECK FLANGE PN16
DIN 2633



NW	d_1	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Holes No.	x	d_1	kg
10	14	90	14	60	35	25	1,8	4	6	40	2	4	x	14	0,580
10	17,2	90	14	60	35	28	1,8	4	6	40	2	4	x	14	0,580
15	20	95	14	65	35	30	2	4	6	45	2	4	x	14	0,648
15	21,3	95	14	65	35	32	2	4	6	45	2	4	x	14	0,648
20	25	105	16	75	38	38	2,3	4	6	58	2	4	x	14	0,952
20	26,9	105	16	75	38	40	2,3	4	6	58	2	4	x	14	0,952
25	30	115	16	85	38	42	2,6	4	6	68	2	4	x	14	1,14
25	33,7	115	16	85	38	45	2,6	6	6	68	2	4	x	14	1,14
32	38	140	16	100	40	52	2,6	6	6	78	2	4	x	18	1,69
32	42,4	140	16	100	40	56	2,6	6	6	78	2	4	x	18	1,69
40	44,5	150	16	110	42	60	2,6	6	7	88	3	4	x	18	1,86
40	48,3	150	16	110	42	64	2,6	6	7	88	3	4	x	18	1,86
50	57	165	18	125	45	72	2,9	6	8	102	3	4	x	18	2,53
50	60,3	165	18	125	45	75	2,9	6	8	102	3	4	x	18	2,53
65	76,1	185	18	145	45	90	2,9	6	10	122	3	4	x	18	3,00
80	88,9	200	20	160	50	105	3,2	8	10	138	3	4	x	18	3,70
100	108	220	20	180	52	125	3,6	8	12	158	3	8	x	18	4,62
100	114,3	220	20	180	52	131	3,6	8	12	158	3	8	x	18	4,62
125	133	250	22	210	55	150	4	8	12	188	3	8	x	18	6,30
125	139,7	250	22	210	55	156	4	8	12	188	3	8	x	18	6,30
150	159	285	22	240	55	175	4,5	10	12	212	3	8	x	22	,75
150	168,3	285	22	240	55	184	4,5	10	12	212	3	8	x	22	,75
175	193,7	315	24	270	60	210	5,4	10	12	242	3	8	x	22	9,85
200	219,1	340	24	295	62	235	5,9	10	16	268	3	12	x	22	11,0
250	267	405	26	355	70	285	6,3	12	16	320	3	12	x	26	15,8
250	273	405	26	355	70	292	6,3	12	16	320	4	12	x	26	15,8
300	323,9	460	28	410	78	344	7,1	12	16	378	4	12	x	26	22,0
350	355,6	520	30	470	82	390	8	12	16	438	4	16	x	26	31,2
350	368	520	30	470	82	390	8	12	16	438	4	16	x	26	28,8
400	406,4	580	32	525	85	445	8	12	16	490	4	16	x	30	39,3
400	419	580	32	525	85	445	8	12	16	490	4	16	x	30	36,3
500	508	715	34	650	90	548	8	12	16	610	4	20	x	33	61,0
600	610	840	36	770	95	652	8,0	12	18	725	5	20	x	36	75,4
700	711	910	36	840	100	755	8,8	12	18	795	5	24	x	36	77,0
800	813	1028	38	950	405	855	10	12	20	900	5	24	x	38	101
900	914	1125	40	1050	110	955	10	12	20	1000	5	28	x	42	122
1000	1016	1255	42	1170	120	1058	10	16	22	1115	5	28	x	48	162
1200	1220	1485	48	1390	130	1262	12,5	16	30	1330	5	32	x	48	243
1400	1420	1685	52	1590	145	1465	14,2	16	30	1530	5	36	x	56	323
1600	1620	1930	58	1820	160	1668	16	16	35	1750	5	40	x	56	479
1800	1820	2130	62	2020	170	1870	17,5	16	35	1950	5	44	x	62	599
2000	2020	2345	66	2230	180	2072	20	16	40	2150	5	48	x	62	719

WELD NECK FLANGE PN40

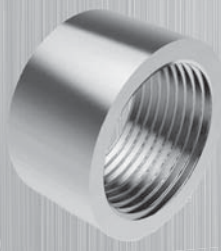
DIN 2635

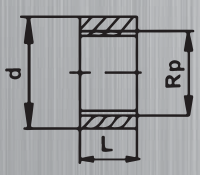


NW	d_1	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Holes No	x	d_1	kg
10	14	90	16	60	35	25	1,8	4	6	40	2	4	x	14	0,661
10	17,2	90	16	60	35	28	1,8	4	6	40	2	4	x	14	0,661
15	20	95	16	65	38	30	2	4	6	45	2	4	x	14	0,745
15	21,3	95	16	65	38	32	2	4	6	45	2	4	x	14	0,745
20	25	105	18	75	40	38	2,3	4	6	58	2	4	x	14	1,06
20	26,9	105	18	75	40	40	2,3	4	6	58	2	4	x	14	1,06
25	30	115	18	85	40	42	2,6	4	6	68	2	4	x	14	1,29
25	33,7	115	18	85	40	46	2,6	4	6	68	2	4	x	14	1,29
32	38	140	18	100	42	52	2,6	6	6	78	2	4	x	16	1,88
32	42,4	140	18	100	42	58	2,6	6	6	78	2	4	x	16	1,88
40	44,5	150	18	110	45	60	2,6	6	7	88	3	4	x	18	2,33
40	48,3	150	18	110	45	64	2,6	6	7	88	3	4	x	18	2,33
50	57	165	20	125	48	72	2,9	6	8	102	3	4	x	18	2,82
50	60,3	165	20	125	48	75	2,9	6	8	102	3	4	x	18	2,82
65	76,1	185	18	145	45	90	2,9	6	10	122	3	4	x	18	3,00
80	88,9	200	20	160	50	105	3,2	8	10	138	3	8	x	18	4,75
100	114,3	235	24	190	65	128	3,6	8	12	162	3	8	x	22	6,52
100	114,3	235	24	190	65	134	3,6	8	12	162	3	8	x	22	6,52
125	133	270	26	220	68	155	4	8	12	188	3	8	x	26	9,07
125	139,7	270	26	220	68	162	4	8	12	188	3	8	x	26	9,07
150	159	300	28	250	75	182	4,5	10	12	218	33	8	x	26	11,8
150	168,3	300	28	250	75	192	4,5	10	12	218	3	8	x	26	11,8
175	193,7	350	32	295	82	218	5,6	10	15	260	3	12	x	30	18,2
200	219,1	375	34	320	88	244	6,3	10	16	285	3	12	x	30	21,5
250	267	450	38	385	105	298	7,1	12	18	345	3	12	x	33	34,9
250	273	450	38	385	115	306	7,1	12	18	345	3	12	x	33	34,9
300	323,9	515	42	450	115	362	8	12	18	410	4	16	x	33	49,7
350	355,8	580	46	510	125	408	8,8	12	20	465	4	16	x	36	68,1
350	368	580	46	510	125	408	8,8	12	20	465	4	16	x	36	68,1
400	406,4	660	50	585	135	462	11	12	20	535	4	16	x	39	96,5
400	419	660	50	585	135	462	11	12	20	535	4	16	x	39	96,5
500	506	755	52	670	140	562	14,2	12	20	615	4	20	x	42	117

HALF COUPLING

DIN 2999

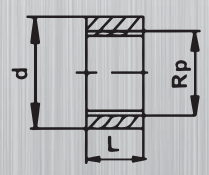




OUTSIDE DIAMETER RP-DIN 2999	d	L mm
1/8'	14	7,5
1/4'	17,5	11
3/8'	21,3	11,5
1/2'	26,4	15
3/4'	31,8	16,5
1'	39,5	19
11/4'	48,3	21,5
11/2'	54,5	21,5
2'	66,3	26
21/2'	82	30
3'	95	33
4'	122	39
5'	150	44
6'	180	44

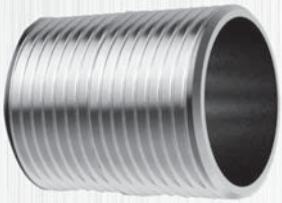
COUPLING

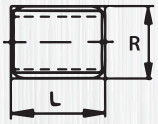
DIN 2986



OUTSIDE DIAMETER RP-DIN 2999	d	L mm
1/8'	14	17
1/4'	17,5	25
3/8'	21,3	26
1/2'	26,4	34
3/4'	31,8	36
1'	39,5	43
11/4'	48,3	48
11/2'	54,5	48
2'	66,3	56
21/2'	82	65
3'	95	71
4'	122	83
5'	150	92
6'	180	92

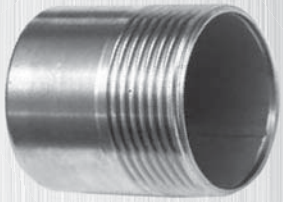
PARALLEL NIPPLE
DIN 2982

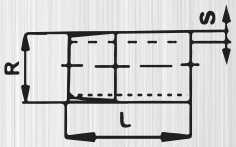




OUTSIDE DIAMETER RP-DIN 2999	L mm
1/8'	16
1/4'	18
3/8'	22
1/2'	25
3/4'	30
1'	5
11/4'	38
11/2'	38
2'	45
21/2'	55
3'	60
4'	70
5'	85
6'	100

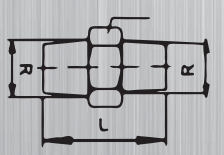
WELDING NIPPLE
DIN 2982





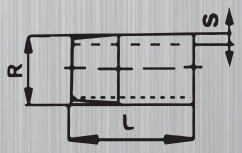
OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8'	2	30
1/4'	2.3	30
3/8'	2.3	30
1/2'	2.6	35
3/4'	2.6	40
1'	3.2	40
11/4'	3.2	50
11/2	3.2	50
2'	3,6	50
21/2'	3,6	50
3'	4	70
4'	4.5	80
5'	5.0	90
6'	7.1	120

REDUCING NIPPLE
DIN 2999



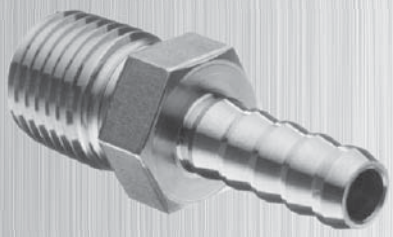
OUTSIDE DIAMETER RP-DIN 2999	d	L mm
1/4' x 1/8'	35	20
3/8' x 1/8'	35	21
3/8' x 1/4'	35	21
1/2' x 1/8'	39	26
1/2' x 1/4'	39	26
1/2' x 3/8'	39	26
3/4' x 1/8'	44	32
3/4' x 1/4'	44	32
3/4' x 3/8'	44	32
3/4' x 1/2'	44	32
1' x 3/8'	50	38
1' x 1/2'	50	38
1' x 3/4'	50	38
1.1/4 x 1/2'	56	46
1.1/4 x 3/4'	56	46
1.1/4 x 1'	56	46
1.1/2' x 3/4'	58	50
1.1/2' x 1'	58	50
1.1/2' x 1.1/4'	58	50
2' x 3/4'	65	65
2' x 1'	65	65
2' x 1.1/4'	65	65
2' x 1.1/2'	65	65
2.1/2' x 2'	74	80
2.1/2' x 1.1/4'	74	80
2.1/2' x 1.1/4'	74	80

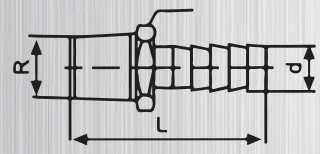
DOUBLE PIPE NIPPLE
DIN 2982



OUTSIDE DIAMETER RP-DIN 2999	L mm
1/8'	40
1/4'	40
3/8'	40
1/2'	60
3/4'	60
1'	60
1. 1/4'	80
1. 1/2'	80
2'	100
2,1/2'	100
3'	120
4'	120
5'	150

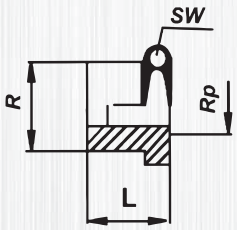
HEX HOSE NOZZLE





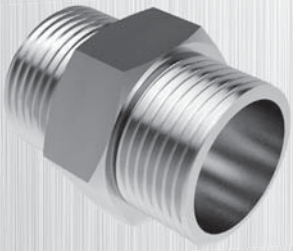
OUTSIDE DIAMETER RP-DIN 2999	L mm	d mm	sw
1/8"	50	7	14
1/4"	50	9	14
3/8"	53	11	19
1/2"	65	14	22
3/4"	70	20	30
1"	75	26	36
11/4"	80	33	46
11/2"	95	39	50
2"	100	51	60
21/2"	110	63	80
3"	120	76	95

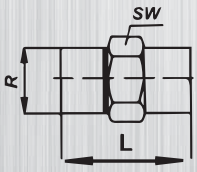
HEX BUSHING
DIN 2990



OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/4' x 1/8'	18	12
3/4' x 1/4'	26	30
3/4' x 3/8'	26	30
3/4' x 1/2'	26	30
1' x 1/2'	28	38
1' x 3/4'	28	38
11/4' x 1/2'	30	48
11/4' x 3/4'	30	48
11/4' x 1'	30	48
11/2' x 1/2'	32	55
11/2' x 3/4'	32	55
11/2' x 1'	32	55
11/2' x 11/4'	32	55
2' x 3/4'	37	65
2' x 1'	37	65
2' x 11/4	37	65
2' x 11/2'	32	65
21/2' x 2'	40	80
3' x 11/2'	46	95
3' x 2'	46	95
3' x 21/2'	46	95
4' x 2'	51	120
4' x 21/2'	51	120
4' x 3'	51	120

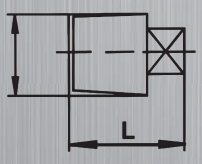
HEX NIPPLE
DIN 2990





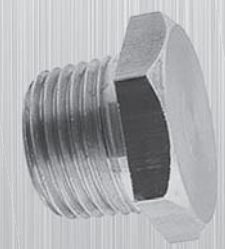
OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8'	22	12
1/4'	28	14
3/8'	35	19
1/2'	42	24
3/4'	47	32
1'	52	38
11/4'	56	46
11/2'	59	55
2'	66	65
21/2'	72	80
3'	80	95
4'	83	120

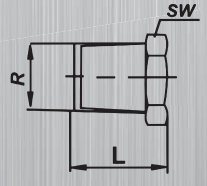
SQUARE PLUG MALE
CONICAL GEAR



OUTSIDE DIAMETER RP-DIN 2999	sw
1/8'	15
1/4'	19
3/8'	21
1/2'	25
3/4'	28
1'	31
11/4'	35
11/2'	36
2'	41
21/2'	48
3'	53
4'	60

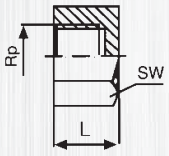
HEX PLUG MALE





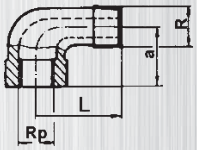
OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8'	16	11
1/4'	19	14
3/8'	22	19
1/2'	24	22
3/4'	27	27
1'	30	36
11/4'	37	46
1 1 /2	38	52
2'	41	66
21/2'	51	80
3'	54	95
4'	57	120

HEX PLUG FEMALE



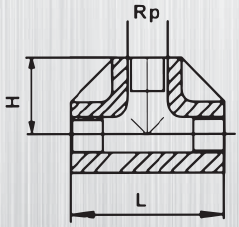
OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8'	15	7.5
1/4'	17	11
3/8'	18	11.5
1/2'	21	15
3/4'	21	16.5
1'	26	19
11/4'	29	21.5
11/2'	29	21.5
2'	33	26
21/2'	35	30
3'	46	33
4'	46	39

90 DEGREES STREET ELBOW



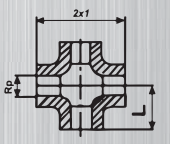
OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8'	20	26
1/4'	21	28
3/8'	25.5	32
1/2'	27.5	37
3/4'	31	43
1'	37.5	52
11/4'	44	60
11/2'	50	65
2'	56	74
21/3'	67	90
3'	81	116

EQUAL TEE
DIN 2987



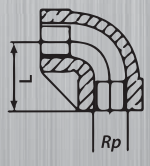
OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8'	38	20
1/4'	42	21
3/8'	50	25.5
1/2'	56	27.5
3/4'	67.5	31
1'	76	37.5
11/4'	90	44
1 1 /2	100	50
2'	116	56
21/2'	150	67
3'	160	81

EQUAL CROSS TEE
DIN 2987



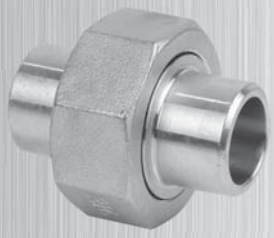
OUTSIDE DIAMETER RP-DIN 2999	L mm
3/8'	24
1/2'	28
3/4'	33
1'	38
11/4'	45
11/2'	49
2'	57
21/2'	66
3'	78

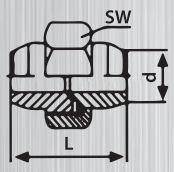
90° THREADED ELBOW
DIN 2987



OUTSIDE DIAMETER RP-DIN 2999	sw
1/8"	20
1/4"	21
3/8"	25
1/2"	28
3/4"	33
1"	38
11/4"	45
11/2"	50
2"	58
21/2"	75
3"	85
4"	96

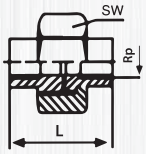
WELD UNION





OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
102,	37	30
13.2	37	30
17.2	40	36
21.3	46	41
26.9	48	46
33,7	52	50
42.4	60	65
48.3	71	75
60.3	76	90
76,1	90	110
88.9	90	120
114.3	115	155

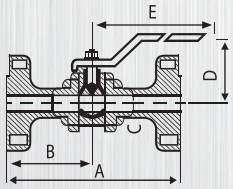
THREAD UNION



OUTSIDE DIAMETER RP-DIN 2999	L mm	sw
1/8"	37	30
1/4"	37	30
3/8"	40	36
1/2"	46	41
3/4"	48	46
1"	52	50
1.1/4	60	65
1.1/2	71	75
2"	76	90
2.2/2	90	110
3"	90	120
4"	115	155

BALL VALVE PN 16

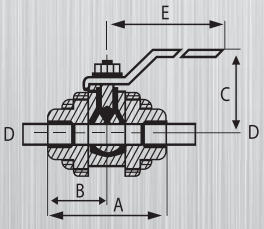
3 piece, flanged, full bore valve. According to DIN 2633



SIZE F	C	A	B	D	E
3/8	12,6	135,0	67,5	55	97,5
1/2	16,0	141,0	70,5	64	125,5
3/4	20,0	161,0	80,5	67	125,5
1"	25,0	171,0	85,5	83	143,5
11/4"	32,0	192,0	96,0	89	143,5
11/2"	38,1	207,0	103,5	100	203,5
2"	50,8	230,6	115,3	108	203,5
21/2"	65,0	263,0	131,5	150	251,5
3"	80,0	292,0	146,0	161	251,5
4"	100,0	330,0	165,0	180	291,5

3 PIECE BALL VALVE

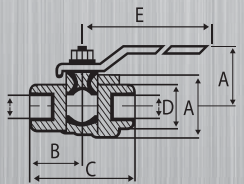
Threaded, full bore valve. According to PIN 25/55 DIN 2999



SIZE Rp	A	B	C	D	E
1/42'	65,0	32,5	11,2	55	97,5
3/8'	65,0	32,5	12,6	5	97,5
1/2'	71,0	35,5	16,0	64	125,5
3/4'	85,0	42,5	20,0	67	125,5
1'	95,0	7,5	25,0	83	143,5
11/4'	112,0	58,0	32,0	89	143,5
11/2'	123,0	61,5	38,1	100	203,5
2'	140,6	70,3	50,8	108	203,5
21/2'	173,0	86,5	65,0	150	251,5
3'	192,0	96,0	80,0	161	251,5
4'	226,0	113,0	100,0	180	291,5

2 PIECE BALL VALVE

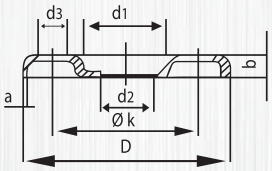
Threaded, full bore valve. According to PIN 25/55 DIN 2999



SIZE Rp	A	B	C	D	E
1/4'	11,2	27	54	55	97.5
3/8'	12.6	27	54	55	97,5
1/2'	16,0	34	64	64	125,5
3/4'	20,0	38	76	67	125,5
1'	25,0	44	88	83	143,5
11/4'	32,0	49	98	89	143,5
11/2'	38,1	60	120	100	203,5
2'	50,8	67	134	108	203,5

PRESSED FLANGE

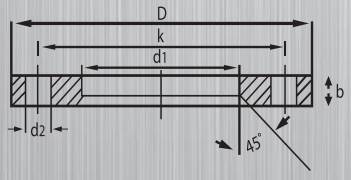
DIN 2642



DIN	ISO	DIN		k	a	b	d_1	d_2	d_2	d_3	Holes No.
15	21,3	20	95	65	3	11,6	38	24	23	13,5	4
20	26,9	26	105	75	3	14,0	48	30	28	13,5	4
25	33,7	30	115	85	3	16,5	53	37	33	13,5	4
32	42,4	38	140	100	3	17,0	68	46	42	17,5	4
40	48,3	44,5	150	110	4	17,5	77	54	50	17,5	4
50	60,3	54/57	165	125	4	18,5	91	65	62	17,5	4
65	76,1	69	185	145	4	21,0	108	81	74	17,5	4
80	88,9	84	200	160	5	22,0	123	94	89	17,5	8
100	114,3	104/108	220	180	6	23,0	141	119	113	17,5	8
125	139,7	128/133	250	210	7	25,0	168	148	138	17,5	8
150	168,3	154/159	285	240	8	27,0	192	178	164	21,5	8
200	219,1	-	340	295	8	31,0	245	225	-	21,5	8
250	273,0	-	395	380	8	34,0	295	279	-	21,5	12
300	323,8	-	445	400	8	38,0	345	329	-	21,5	12

LOOSE FLANGE

DIN 2642



NW	ISO	d_1	b	D	k	Holes No.	x	d_2
10	14	16	14	90	60	4	*	14
	17,2	19	14			4	*	14
15	20	22	14	95	65	4	*	14
	21,3	24	14			4	*	14
20	25	28	14	105	75	4	*	14
	26,9	30	14			4	*	14
25	30	33	16	115	85	4	*	14
	26,9	30	14			4	*	14
32	38	42	16	140	100	4	*	18
	42,4	46	46			4	*	18
40	44,5	50	16	150	110	4	*	18
	48,3	54	16			4	*	18
50	57	62	16	165	125	4	*	18
	60,3	65	16			4	*	18
65	76,1	81	16	185	145	4	*	18
80	88,9	94	18	200	160	8	*	18
100	108	113	18	220	180	8	*	18
	114,3	119	18			8	*	18
125	133	138	18	250	210	8	*	18
	139,7	145	18			8	*	18
200	219,1	225	20	340	295	8	*	18
250	267	273	22	395	350	12	*	22
	273	279	22			12	*	22
300	323,9	329	26	445	400	12	*	22
350	355,6	362	28	505	4601	16	*	22
400	406,4	413	32	565	515	16	*	26
	419,0	426	32			16	*	26
500	508	517	38	670	620	20	*	26
600	610	618	44	780	725	20	*	30
700	711	721	50	895	840	24	*	30
800	813	824	56	1015	950	24	*	33

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