



TERRANOVA STEEL

Product Catalogue

Pipes, Fittings and Flanges

Cremona, Italy





Product Catalogue

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International Standards

PIPES, FITTINGS AND FLANGES

ABOUT OUR COMPANY

Terranova Steel

For over 20 years, Terranova Steel has been a trusted manufacturer of premium carbon steel, stainless steel and steel alloy pipes, tubes, fittings and flanges, serving diverse industries across the world.

Terranova Steel boasts a rich legacy of over two decades, solidifying its reputation as a trusted Manufacturer of high-quality carbon steel and stainless steel products. With a history steeped in experience, Terranova Steel has become a dependable leader in the supply of pipes, tubes, fittings and flanges.

Our products find essential applications in diverse industries, including Oil & Gas, Petrochemicals, Dairy, Desalination Plants, Industrial Factories, and Commercial and Infrastructure Construction Projects. This extensive reach underpins Terranova Steel's commitment to delivering top-notch solutions to meet the unique needs of various sectors.

Buttweld Fittings

Stainless Steel: ASTM / ASME A403 / SA403 / WP 304 / 304L / 304H / 316 / 316L / 317 / 317L / 321 / 310 / 347 / 904L

Carbon Steel: ASTM A234 / ASME SA234 WPB / A420 / SA420 / WPL3 / WPL6 / MSS-SP-75 WPHY 42 / 46 / 52 / 56 / 60 / 65 / 70

Alloy Steel: ASTM A234 WP1 / WP5 / WP9 / WP11 / WP22 / WP91

Duplex & Super Duplex Steel: UNS S31803, UNS S32750, UNS S32760, 904L, Alloy20

Others: Monel, Nickel, Inconel, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminum, High Speed Steel, Zinc, Lead

Types: Elbow, Tee, Reducer, Return Bends, Stub-Ends, Cap, Collar, Cross, Insert

Size: ½" NB TO 30" NB (Seamless & Welded)

Wall Thickness: Sch.5S to Sch.XXS

Pipes & Tubes

Stainless Steel: ASTM A312 / ASME SA312 TP304 / 304L / 304H / 316 / 316L / 317 / 317L / 321 / 310 / 347 / 904L

Carbon Steel: ASTM A53 / ASME SA53 GR.B / ASTM A106 / ASME SA106 GR.B / API 5L PSL2 GRADE B / X42 / 46 / 52 / 56 / 60 / 65 / 70

Low Temperature Carbon Steel: ASTM A333 / ASME SA333 Gr.3 / Gr.6

Alloy Steel: ASTM A335 / ASME SA335 GR.P1 / P5 / P9 / P11 / P22 / P91

Nickel Alloys: Monel, Nickel, Inconel, Hastalloy, Titanium, Tantalum, Bismuth, Aluminum, High Speed Steel

Size: ½" to 30" NB. (Seamless & Welded)

Wall Thickness: Sch.5S to Sch.XXS

Length: SRL & DRL

Flanges

Stainless Steel: ASTM A182 / ASME SA182 / F304 / 304L / 304H / 316 / 316L / 317 / 317L / 321 / 310 / 347 / 904L

Carbon Steel: ASTM / ASME A105 / SA105 / A694F42 / 46 / 52 / 56 / 60 / 65 / 70 / A350 LF3 / A350 LF2

Alloy Steel: ASTM A182 / ASME SA182 / F1 / F5 / F9 / F11 / F22 / F91

Duplex & Super Duplex Steel: UNS S31803, UNS S32750, UNS S32760, 904L, Alloy20

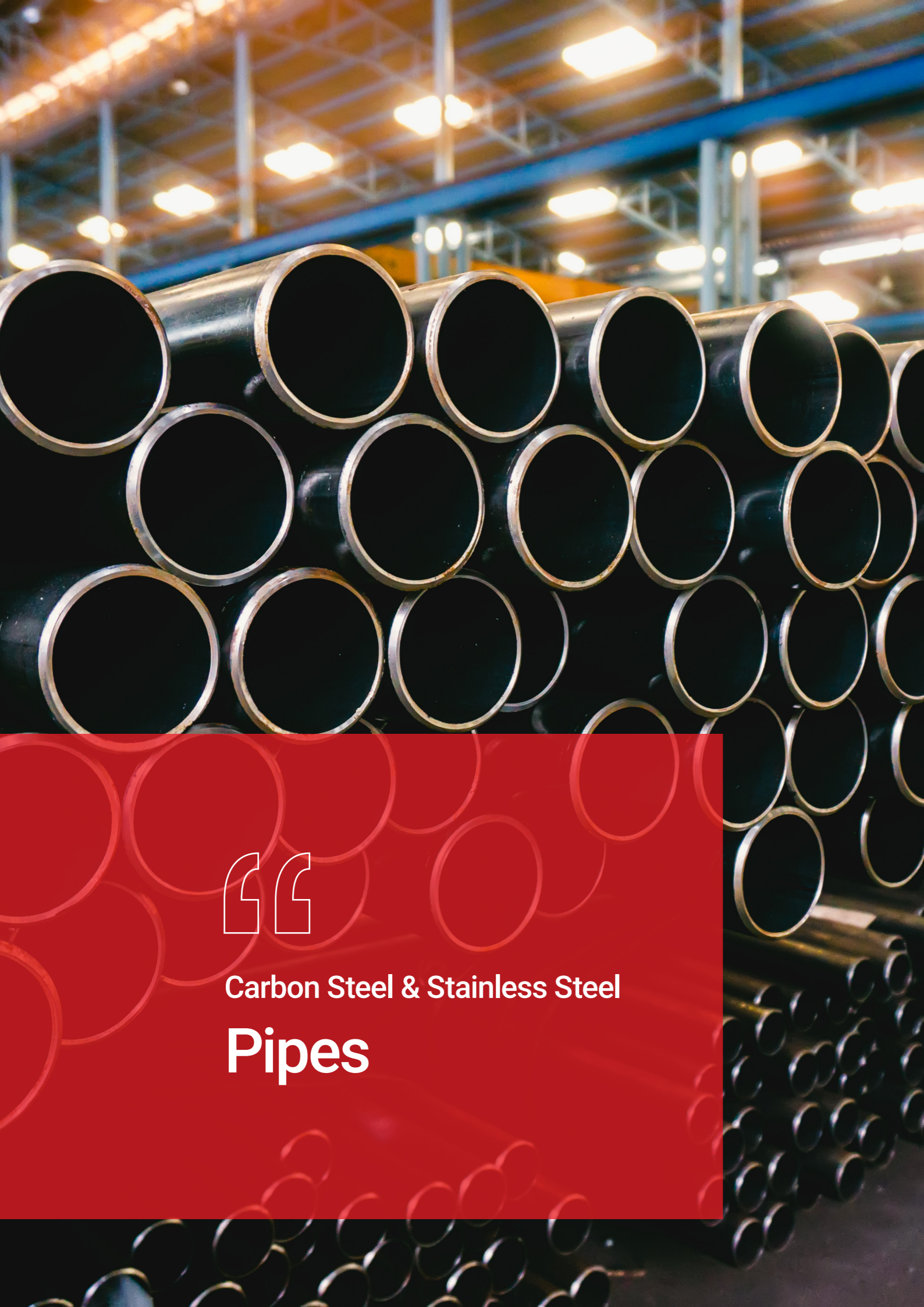
Others: Monel, Nickel, Inconel, Copper, Brass, Bronze, Titanium, Tantalum, Bismuth, Aluminum, High Speed Steel, Zinc, Lead

Types: Weldneck, Slipon, Blind, Socket Weld, Lap Joint, Spectacles, Ring Joint, Orifice, Long Weldneck, Deck Flange, RTJ, Flange, Threaded Flange

Size: ½" NB TO 36" NB

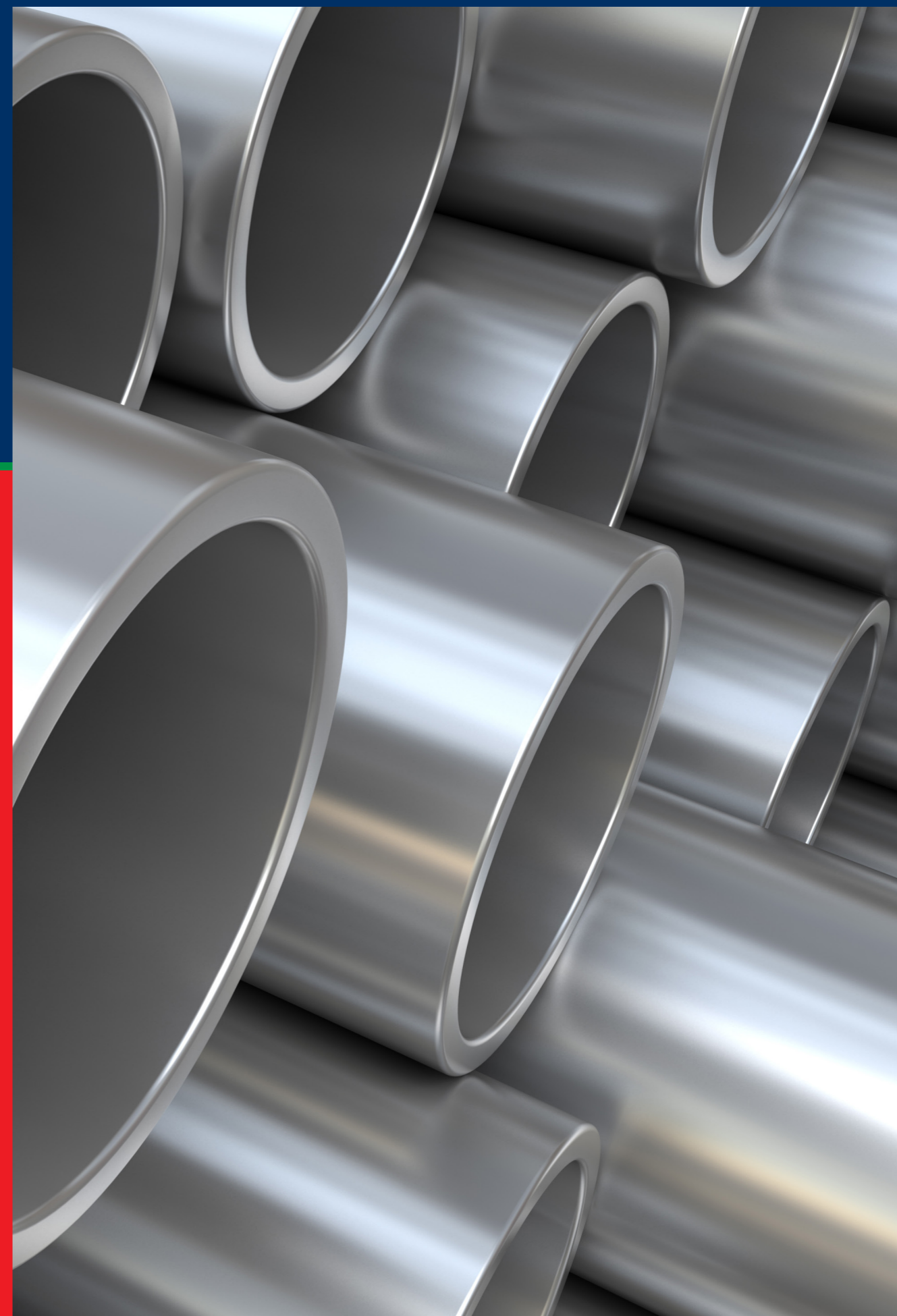
Class: 150#, 300#, 400#, 600#, 900#, 1500# & 2500#

Material		Standard	
Pipes & Tubes	Carbon Steel	API 5L	Specification for Line pipe
		ASTM A106 / ASME SA106	Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service
		ASTM A53 / ASME SA106	Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
	Stainless Steel	ASTM A333 / ASME SA333	Standard Specification for Seamless and Welded Steel Pipe for low-Temperature Service
		ASTM A312 / ASME SA312	Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
		ASTM A269 / ASME SA269	Standard Specification for seamless and welded Austenitic Stainless Steel Tubing for General Service
Alloy Steel	ASTM A335 / ASME SA335	Standard Specification for Seamless Ferritic Alloy-Steel Pipe for High-Temperature Service	
Buttweld Fittings	Carbon Steel	ASTM A234 / ASME SA234	Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
		ASTM A420 / ASME SA420	Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service
	MSS SP 75	Specification of high Strength, wrought, buttweld fittings.	
Stainless Steel	ASTM A403 / ASME SA403	Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings	
Flanges	Carbon Steel	ASTM A105 / ASME SA105	Standard Specification for Carbon Steel Forgings for Piping Applications
		ASTM A350 / ASME SA350	Standard Specification for Carbon and Low-Alloy Steel Forgings, Requiring Notch Toughness Testing for Piping Components
	Stainless Steel	ASTM A182 / ASME SA182	Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service



Carbon Steel & Stainless Steel

Pipes

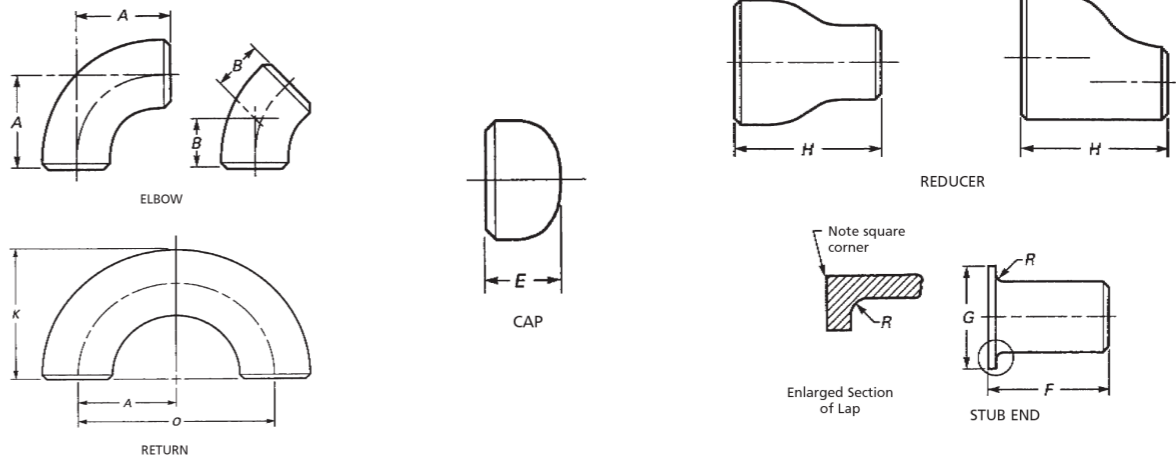


Fittings

DIMENSIONS

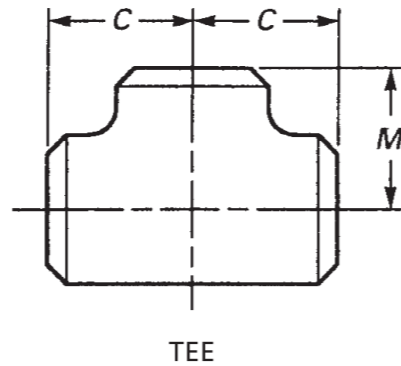
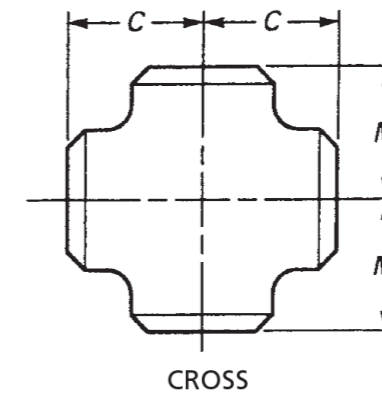
Buttwelding Fittings to ASME B16.9															
Nominal size	OD	Elbow			Returns				Caps	Reducers Note 1	Stub Ends				
		Long		Short	Long		Short	Long			Short	Radius of Fillet	Diam of Lap		
		90 deg	45 deg	90 deg	O	K	O							K	
DN	NPS	D	A	B	A	O	K	O	K	E	H	F	F	R	G
15	1/2	21.3	38	16		76	48			25	1	76	51	3	35
20	3/4	26.7	38	19		76	51			25	38	76	51	3	43
25	1	33.4	38	22	25	76	56	51	41	38	51	102	51	3	51
32	1 1/4	42.2	48	25	32	95	70	64	52	38	51	102	51	5	64
40	1 1/2	48.3	57	29	38	114	83	76	62	38	64	102	51	6	73
50	2	60.3	76	35	51	152	106	102	81	38	76	152	64	8	92
65	2 1/2	73.0	95	44	64	190	132	127	100	38	89	152	64	8	106
80	3	88.9	114	51	76	229	159	152	121	51	89	152	64	10	127
90	3 1/2	101.6	133	57	89	267	184	178	140	64	102	152	76	10	140
100	4	114.3	152	64	102	305	210	203	159	64	102	152	76	11	157
125	5	141.3	190	79	127	381	262	254	197	76	127	203	76	11	185
150	6	168.3	229	95	152	457	313	305	237	89	140	203	89	13	218
200	8	219.1	305	127	203	610	414	406	313	102	152	203	102	13	270
250	10	273.0	381	159	254	762	518	508	391	127	178	254	127	13	324
300	12	323.8	457	190	305	914	619	610	467	152	203	254	152	13	381
350	14	355.6	533	222	356	1067	711	711	533	165	330	305	152	13	413
400	16	406.4	610	254	406	1219	813	813	610	178	356	305	152	13	470
450	18	457	686	286	457	1372	914	914	686	203	381	305	152	13	533
500	20	508	762	318	508	1524	1016	1016	762	229	508	305	152	13	584
550	22	559	838	343	559	1676	1118	1118	838	254	508	305	152	13	641
600	24	610	914	381	610	1829	1219	1219	914	267	508	305	152	13	692
650	26	660	991	405						267	610				
700	28	711	1067	438						267	610				
750	30	762	1143	470						267	610				
800	32	813	1219	502						267	610				
850	34	864	1295	533						267	610				
900	36	914	1372	565						267	610				
950	38	965	1448	600						305	610				
1000	40	1016	1524	632						305	610				
1050	42	1067	1600	660						305	610				
1100	44	1118	1676	695						343	610				
1150	46	1168	1753	727						343	711				
1200	48	1219	1829	759						343	711				

Note 1: Reducer dimension "H" is based on large end nominal size



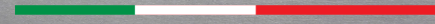
Carbon Steel & Stainless Steel
Fittings

Buttwelding Tees and Crosses to ASME B16.9																	Buttwelding Tees and Crosses to ASME B16.9																														
Nominal Size		Outside Diam.	Centre to-end Run	Centre-to-End Outlet (M)													Centre-to-End Outlet (M)																														
DN	NPS	D	C	8	10	15	20	25	32	40	50	65	80	90	100	125	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200									
8	3/8	13.7																																													
10	1/4	17.3																																													
15	1/2	21.3	25	25	25	25																																									
20	3/4	26.7	29		29	29	29																																								
25	1	33.4	38			38	38	38																																							
32	1 1/4	42.2	48			49	48	48	48																																						
40	1 1/2	48.3	57			57	57	57	57	57																																					
50	2	60.3	64				44	51	57	60	64																																				
65	2 1/2	73.0	76					57	64	67	70	76																																			
80	3	88.9	86						70	73	76	83	86																																		
90	3 1/2	101.6	95							79	83	89	92	95																																	
100	4	114.3	105							86	89	95	98	102	105																																
125	5	141.3	124								105	108	111	114	117	124																															
150	6	168.3	143									121	124	127	130	137	143																														
200	8	219.1	178											152	156	162	168	178																													
250	10	273.0	216												184	191	194	203	216																												
300	12	323.8	254													216	219	229	241	254																											
350	14	355.6	279														238	248	257	270	279																										
400	16	406.4	305															264	273	283	295	305	305																								
450	18	457	343																298	308	321	330	330	343																							
500	20	508	381																	324	333	346	356	356	368	381																					
550	22	559	419																		359	371	381	381	394	406	419																				
600	24	610	432																			384	397	406	406	419	432	432	432																		
650	26	660	495																				422	432	432	444	457	470	483	495																	
700	28	711	521																					448	457	457	470	483	495	508	521	521															
750	30	762	559																						460	473	483	483	495	508	521	533	546	546	559												
800	32	813	597																							508	508	521	533	546	559	572	572	584	597												
850	34	864	635																								533	546	559	572	584	597	597	610	622	635											
900	36	914	673																									559	572	584	597	610	622	622	635	648	660	673									
950	38	965	711																										597	610	622	635	648	648	673	686	698	711	711								
1000	40	1016	749																											622	635	648	660	673	673	698	711	724	737	749	749						
1050	42	1067	762																												635	648	660	660	660	698	698	711	711	711	711	711	711				
1100	44	1118	813																													686	686	698	698	698	698	711	711	724	724	737	749	762	762		
1150	46	1168	851																														724	724	737	737	737	749	749	762	762	775	787	800	800		
1200	48	1219	889																															737	737	762	762	762	787	787	787	813	813	813	838	838	838



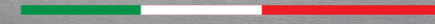
Fittings

WEIGHTS



Fittings

WEIGHTS



Nominal Size													Nominal Size																	
Standard Weight													XS						Sch 160											
Nominal Size		OD	Elbows			Returns		Caps	Reducers	Stub Ends			Tees	Elbows			Returns		Caps	Reducers	Stub Ends			Tees	Elbows			Caps	Reducers	Tees
DN	NPS		90 deg	45 deg	90 deg	Long	Short			MSS	ASME	90 deg		45 deg	90 deg	Long	Short	90 deg			45 deg	90 deg	MSS		ASME	90 deg	45 deg			
15	1/2	21.3	0.08	0.04		0.16	15	0.04		0.12	0.14	0.09	0.10	0.05		0.20		0.05		0.13	0.12	0.11	0.12			0.06		0.12		
20	3/4	26.7	0.11	0.06		0.21	20	0.05	0.06	0.15	0.18	0.13	0.14	0.70		0.21		0.07	0.08	0.17	0.2	0.17	0.13			0.09		0.21		
25	1	33.4	0.16	0.08	0.11	0.31	0.21	0.11	0.12	0.19	0.3	0.25	0.20	0.10	0.14	0.41	0.26	0.15	0.15	0.24	0.38	0.32	0.25	0.13	0.17	0.2	0.19	0.41		
32	1 1/4	42.2	0.26	0.13	0.18	0.52	0.35	0.14	0.16	0.26	0.41	0.43	0.35	0.18	0.23	0.70	0.46	0.20	0.21	0.35	0.55	0.56	0.42	0.21	0.28	0.25	0.25	0.69		
40	1 1/2	48.3	0.37	0.19	0.25	0.74	0.49	0.17	0.25	0.38	0.55	0.61	0.50	0.25	0.33	1.02	0.66	0.24	0.33	0.46	0.68	0.81	0.65	0.33	0.43	0.35	0.43	1.07		
50	2	60.3	0.66	0.33	0.44	1.3	0.87	0.24	0.38	0.54	0.99	0.88	0.90	0.45	0.6	1.88	1.19	0.33	0.51	0.74	1.36	1.2	1.33	0.67	0.89	0.54	0.75	1.78		
65	2 1/2	73.0	1.29	0.69	0.91	2.73	1.82	0.42	0.73	0.8	1.56	1.74	1.79	0.90	1.19	3.56	2.38	0.57	0.95	1.06	2.08	2.28	2.33	1.17	1.49	0.77	1.2	2.86		
80	3	88.9	2.04	1.02	1.36	4.07	2.71	0.67	0.94	1.13	2.13	2.41	2.74	1.37	1.83	5.74	3.65	0.92	1.25	1.51	2.84	3.25	3.83	1.92	2.55	1.4	1.71	4.55		
90	3 1/2	101.6	2.94	1.47	1.97	5.65	3.77	0.92	1.19	1.47	2.58	3.26	4.05	2.02	2.07	12.72	5.21	1.3	1.64	2.01	3.51	4.51	5.92	2.96	3.95	2.1	2.35	6.52		
100	4	114.3	3.84	1.92	2.56	7.67	5.11	1.17	1.45	1.81	3.04	4.12	5.36	2.68	3.58	15.76	7.15	1.68	2.02	2.52	4.23	5.77	8.02	4.01	5.35	2.76	3	8.5		
125	5	141.3	6.48	3.24	4.32	13	8.64	1.9	2.5	2.53	5.3	6.54	9.13	4.57	6.09	19.39	12.2	2.73	3.52	3.6	7.52	9.2	14.7	7.35	9.79	4.85	5.59	14.8		
150	6	168.3	9.94	4.97	6.63	19.9	13.3	2.83	3.6	3.73	6.89	9.58	15	7.50	10	31.98	20	4.38	5.38	5.57	10.42	14.5	24.2	12.1	16.2	7.81	8.63	23.3		
200	8	219.1	20.1	10.1	13.4	40.3	26.8	5.11	5.7	5.89	10.42	17.9	30.5	15.3	20.3	64.33	40.7	7.91	8.63	10.12	15.86	27.1	53.2	26.6	35.5	15.2	15	47.2		
250	10	273.0	35.4	17.7	23.6	70.8	47.2	8.92	9.6	10.42	18.12	30.4	47.7	23.9	31.8	99.66	74.9	12.2	12.9	13.95	24.28	41	103	51.5	68.6	28.9	27.5	88		
300	12	323.8	52	26	34.6	112	71.9	13.1	13.6	14.9	22.2	43.6	68.7	34.4	45.8	144.96	94.9	17.4	18	19.93	29.81	57.7	171	85.5	114	47.7	44.6	143		
350	14	355.6	67.9	34	45.3			15.9	25.4	15.5	28.3	53.5	89.9	15	60			21.2	33.6	21	38	70.9	236	118	158	61.2	88.5	186		
400	16	406.4	89	44.5	59.1			20	31	18	32.7	66.1	118	59	78.3			26.7	41.1	24	44	87.7	350	175	234	92.8	121	260		
450	18	457	113	56.5	75.3			25.5	37.8	21	37.5	83.9	150	75.5	100			34.1	50.1	28	50	111	495	247	330	131	165	356		
500	20	508	140	70	93.1			31.8	55.4	23.3	41.7	104	186	93	124			42.5	74.9	31	56	138	676	338	451	179	233	502		
550	22	559	169	84.5	113			38.8	62.4	25.8	46.3	126	225	113	150			51.7	82.9	33	61	167	886	443	591	219		657		
600	24	610	202	101	135			45.1	68.4	28.4	50.5	139	268	134	179			60.1	91	37	67	186	1160	580	773	307		800		
650	26	660	237	119	158			50.5	89.4			176	315	158	210			67.3	119			234								
700	28	711	276	138	184			56.2	96.6			198	367	184	245			74.9	129			264								
750	30	762	316	158	211			62.1	104			228	421	211	281			82.8	138			304								
800	32	813	361	180	241			68.4	111			259	480	240	320			91.2	148			347								
850	34	864	406	204	272			75.4	116			295	543	272	362			100	158			393								
900	36	914	457	228	304			81.9	125			331	608	304	405			109	167			441								
950	38	965	510	255	340			94.7	133			370	679	339	453			126	177			493								
1000	40	1016	565	282	377			102	140			411	753	376	502			137	187			547								
1050	42	1067	622	311	416			110	147			422	828	414	554			147	196			562								
1100	44	1118	684	342	456			126	155			475	912	456	608			167	206			633								
1150	46	1168	748	374	499			134	189			521	997	498	665			179	252			695								
1200	48	1219	814	407	543			143	197			569	1085	542	724			191	263			759								

Note 1: All weights are approximate

Note 2: Weights shown are based on carbon steel.

Note 3: As a guide to stainless steel fittings weight use carbon steel Standard Weight for Sch 40S and carbon steel XS for Sch 80S

Note 1: All weights are approximate

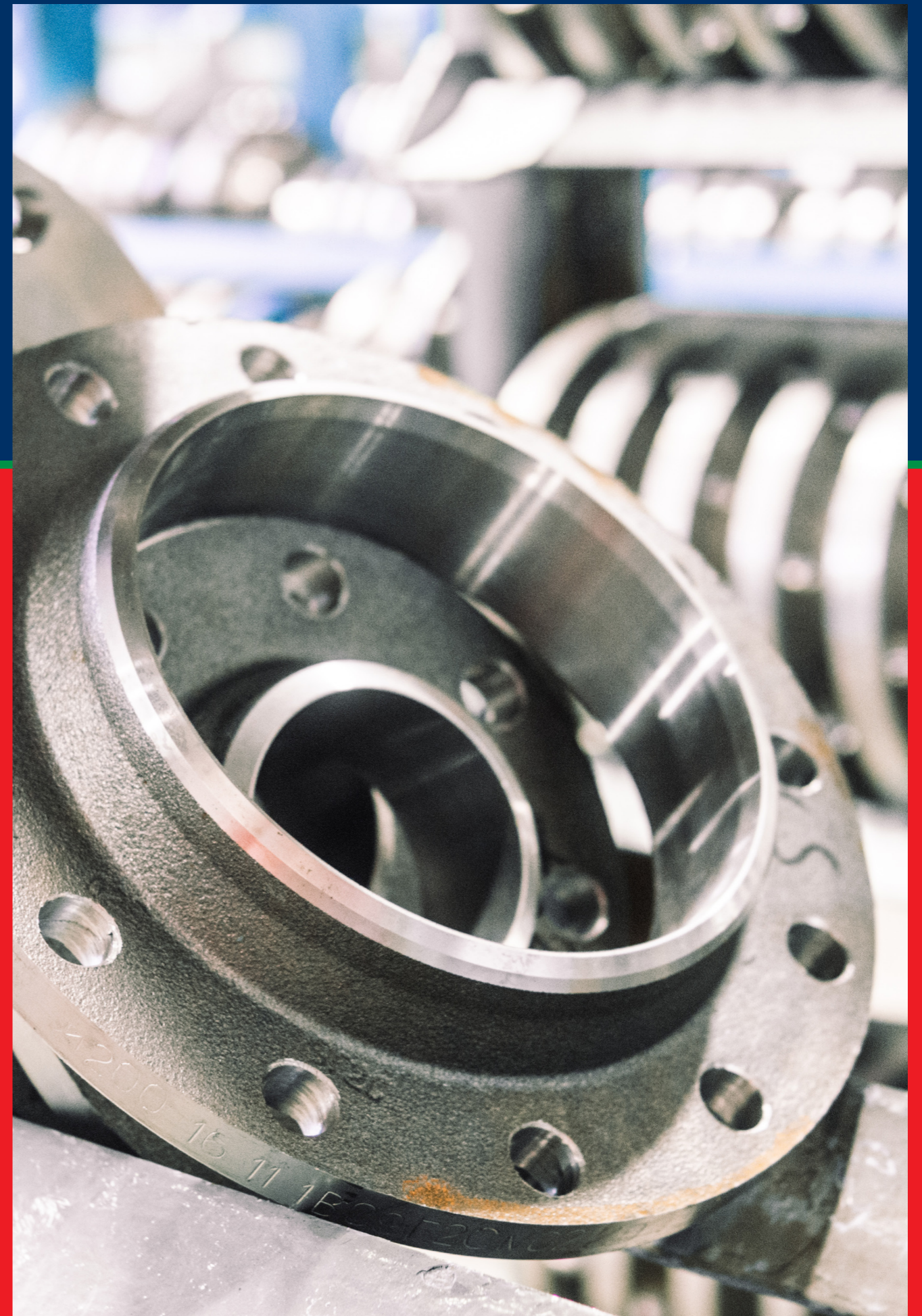
Note 2: Weights shown are based on carbon steel.

Note 3: As a guide to stainless steel fittings weight use carbon steel Standard Weight for Sch 40S and carbon steel XS for Sch 80S



Carbon Steel & Stainless Steel

Flanges



Flanges

DIMENSIONS AND WEIGHTS

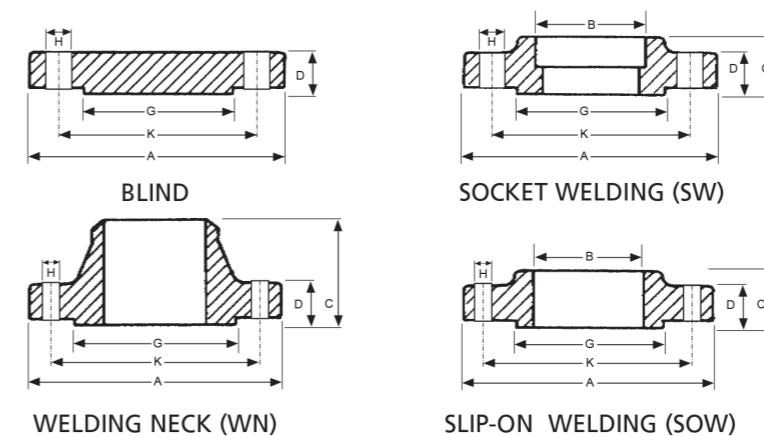
Class 150 Flanges to ASME B16.5																
Nominal Size		Dimensions											Weight (kg)			
		Flange OD A mm	Flange Thickness D mm	Bore SOW SW B mm	Raised Face Diam. G mm	Length Thru Hub		Bolt Drilling				RF Stud Bolt Length mm				
						SOW, SW Threaded C mm	W Neck C mm	Circle Diam. K mm	Hole Diam. H mm	No.	Bolt Diam. in					
DN	NPS												SOW SW	WN	Blind	
15	1/2	88.9	11.2	22.4	35.1	15.8	47.8	60.4	15.7	4	1/2"	60.0	45.0	0.4	0.5	0.4
20	3/4	98.6	12.7	27.7	42.9	15.8	52.3	69.9	15.7	4	1/2"	65.0	50.0	0.6	0.7	0.6
25	1	108.0	14.2	34.5	50.8	17.5	55.6	79.2	15.7	4	1/2"	65.0	55.0	0.8	1.0	0.9
32	1 1/4	117.3	15.7	43.2	63.5	20.6	57.2	88.9	15.7	4	1/2"	70.0	55.0	1.0	1.3	1.2
40	1 1/2	127.0	17.5	49.5	73.2	22.4	62.0	98.6	15.7	4	1/2"	70.0	60.0	1.3	1.7	1.5
50	2	152.4	19.1	62.0	91.9	25.5	63.5	120.7	19.1	4	5/8"	80.0	65.0	2.1	2.6	2.4
65	2 1/2	177.8	22.4	74.7	104.6	28.5	69.9	139.7	19.1	4	5/8"	90.0	75.0	3.3	4.1	3.9
80	3	190.5	23.9	90.7	127.0	30.2	69.9	152.4	19.1	4	5/8"	90.0	75.0	3.9	4.9	4.9
90	3 1/2	215.9	23.9	103.4	139.7	31.8	71.4	177.8	19.1	8	5/8"	90.0	75.0	4.8	6.1	6.2
100	4	228.6	23.9	116.1	157.2	33.3	76.2	190.5	19.1	8	5/8"	90.0	75.0	5.3	6.8	7.0
125	5	254.0	23.9	143.8	185.7	36.6	88.9	215.9	22.4	8	3/4"	90.0	80.0	6.1	8.6	8.6
150	6	279.4	25.4	170.7	215.9	39.6	88.9	241.3	22.4	8	3/4"	100.0	85.0	7.5	10.6	11.3
200	8	342.9	28.4	221.5	269.7	44.5	101.6	298.5	22.4	8	3/4"	110.0	90.0	12.1	17.6	19.6
250	10	406.4	30.2	276.4	323.9	49.3	101.6	362.0	25.4	12	7/8"	115.0	95.0	16.5	24.0	28.8
300	12	482.6	31.8	327.2	381.0	55.6	114.3	431.8	25.4	12	7/8"	120.0	100.0	26.2	36.5	43.2
350	14	533.4	35.1	359.2	412.8	57.2	127.0	476.3	28.4	12	1"	130.0	110.0	34.6	48.4	58.1
400	16	596.9	36.6	410.5	469.9	63.5	127.0	539.8	28.4	16	1"	135.0	115.0	44.8	60.6	76.1
450	18	635.0	39.6	461.8	533.4	68.3	139.7	577.9	31.8	16	1 1/8"	150.0	125.0	48.9	68.3	93.7
500	20	698.5	42.9	513.1	584.2	73.2	144.5	635.0	31.8	20	1 1/8"	160.0	135.0	61.9	84.5	122.0
600	24	812.8	47.8	616.0	692.2	82.6	152.4	749.3	35.1	20	1 1/4"	175.0	145.0	86.9	115.0	185.0

Class 300 Flanges to ASME B16.5																
Nominal Size		Dimensions											Weight (kg)			
		Flange OD A mm	Flange Thickness D mm	Bore SOW SW B mm	Raised Face Diam. G mm	Length Thru Hub		Bolt Drilling				RF Stud Bolt Length mm				
						SOW, SW Threaded C mm	W Neck C mm	Circle Diam. K mm	Hole Diam. H mm	No.	Bolt Diam. in					
DN	NPS													SOW SW	WN	Blind
15	1/2	95.3	14.2	22.4	35.1	22.4	52.3	66.5	15.7	4	1/2"	65	55	0.6	0.8	0.6
20	3/4	117.3	15.7	27.7	42.9	25.4	57.2	82.6	19.1	4	5/8"	75	60	1.1	1.3	1.1
25	1	124	17.5	34.5	50.8	26.9	62	88.9	19.1	4	5/8"	80	65	1.4	1.5	1.4
32	1 1/4	133.4	19.1	43.2	63.5	26.9	65	98.6	19.1	4	5/8"	80	65	1.7	2	1.8
40	1 1/2	155.5	20.6	49.5	73.2	30.2	68.3	114.3	22.4	4	3/4"	90	75	2.5	2.9	2.7
50	2	165.1	22.4	62	91.9	33.3	69.9	127	19.1	8	5/8"	90	75	2.9	3.4	3.2
65	2 1/2	190.5	25.4	74.7	104.6	38.1	76.2	149.4	22.4	8	3/4"	100	85	4.3	5.2	4.9
80	3	215.9	28.4	90.7	127	42.9	79.2	168.1	22.4	8	3/4"	110	90	5.9	6.9	6.8
90	3 1/2	228.6	30.2	103.4	139.7	44.5	81	184.2	22.4	8	3/4"	110	95	7.3	8.7	8.7
100	4	254	31.8	116.1	157.2	47.8	85.9	200.2	22.4	8	3/4"	110	95	9.6	11.2	11.5
125	5	279.4	35.1	143.8	185.7	50.8	98.6	235	22.4	8	3/4"	120	100	12.3	15.1	15.6
150	6	317.5	36.6	170.7	215.9	52.3	98.6	269.7	22.4	12	3/4"	125	105	15.6	19.1	20.9
200	8	381	41.1	221.5	269.7	62	112.3	330.2	25.4	12	7/8"	140	110	24.2	29.9	34.3
250	10	444.5	47.6	276.4	323.9	66.5	117.3	387.4	28.4	16	1"	155	130	34.1	42.7	53.3
300	12	520.7	50.8	327.2	381	73.2	130	450.9	31.8	16	1 1/8"	170	145	49.8	61.8	78.8
350	14	584.2	53.8	359.2	412.8	76.2	142.7	514.4	31.8	20	1 1/8"	175	150	69.9	85.8	105
400	16	647.7	57.2	410.5	469.9	82.6	146.1	571.5	35.1	20	1 1/4"	190	160	88.1	106	137
450	18	711.2	60.5	461.8	533.4	88.9	158.8	626.7	35.1	24	1 1/4"	195	170	109	131	175
500	20	774.7	63.5	513.1	584.2	95.3	162.1	685.8	35.1	24	1 1/4"	205	180	134	158	221
600	24	914.4	70	616	692.2	106.4	168.1	812.8	41.1	24	1 1/2"	230	195	201	230	339

Flanges

DIMENSIONS AND WEIGHTS

Class 600 Flanges to ASME B16.5																
Nominal Size		Dimensions											Weight (kg)			
		Flange OD A mm	Flange Thickness D mm	Bore SOW SW B mm	Raised Face Diam. G mm	Length Thru Hub		Bolt Drilling				RF Stud Bolt Length mm				
						SOW, SW Threaded C mm	W Neck C mm	Circle Diam. K mm	Hole Diam. H mm	No.	Bolt Diam. in					
DN	NPS													SOW SW	WN	Blind
15	1/2	95.3	14.2	22.4	35.1	22.4	52.3	66.5	15.7	4	1/2"	80.0	65.0	0.7	0.9	0.8
20	3/4	117.3	15.7	27.7	42.9	25.4	57.2	82.6	19.1	4	1/2"	90.0	70.0	1.3	1.5	1.3
25	1	124.0	17.5	34.5	50.8	26.9	62.0	88.9	19.1	4	1/2"	90.0	70.0	1.5	1.8	1.6
32	1 1/4	133.4	20.6	43.2	63.5	28.4	66.5	98.6	19.1	4	1/2"	100.0	75.0	2.0	2.5	2.2
40	1 1/2	155.4	22.4	49.5	73.2	31.8	69.9	114.3	22.4	4	1/2"	105.0	80.0	3.0	3.5	3.3
50	2	165.1	25.4	62.0	91.9	36.6	73.2	127.0	19.1	8	5/8"	105.0	80.0	3.6	4.4	4.2
65	2 1/2	190.5	28.4	74.7	104.6	41.1	79.2	149.4	22.4	8	5/8"	120.0	85.0	5.3	6.4	6.1
80	3	209.6	31.8	90.7	127.0	46.0	82.6	168.1	22.4	8	5/8"	125.0	90.0	7.0	8.5	8.4
90	3 1/2	228.6	35.1	103.4	139.7	49.3	85.9	184.2	25.4	8	5/8"	140.0	95.0	8.8	10.7	11.0
100	4	273.1	38.1	116.1	157.2	53.8	101.6	215.9	25.4	8	5/8"	145.0	100.0	14.5	17.4	17.3
125	5	330.2	44.5	143.8	185.7	60.5	114.3	266.7	28.4	8	3/4"	165.0	110.0	24.4	29.2	29.4
150	6	355.6	47.8	170.7	215.9	66.5	117.3	292.1	28.4	12	3/4"	170.0	115.0	28.7	34.9	36.1
200	8	419.1	55.6	221.5	269.7	76.2	133.4	349.3	31.8	12	3/4"	195.0	125.0	43.4	53.9	58.9
250	10	508.0	63.5	276.4	323.9	85.9	152.4	431.8	35.1	16	7/8"	215.0	135.0	70.3	86.5	97.5
300	12	558.8	66.5	327.2	381.0	91.9	155.4	489.0	35.1	20	7/8"	220.0	140.0	84.2	103.0	124.0
350	14	603.3	69.9	359.2	412.8	93.7	165.1	527.1	38.1	20	1"	235.0	145.0	98.7	122.0	151.0
400	16	685.8	76.2	410.5	469.9	106.4	177.8	603.3	41.1	20	1"	255.0	150.0	142.0	170.0	214.0
450	18	743.0	82.6	461.8	533.4	117.3	184.2	654.1	44.5	20	1 1/8"	275.0	155.0	173.0	204.0	272.0
500	20	812.8	88.9	513.1	584.2	127.0	190.5	723.9	44.5	24	1 1/8"	290.0	160.0	220.0	254.0	349.0
600	24	939.8	101.6	616.0	692.2	139.7	203.2	838.2	50.8	24	1 1/4"	330.0	165.0	312.0	358.0	533.0



Note 1: All weights are approximate

Note 2: For Class 150, 300 the flange thickness "D" dimension includes approx. 1.5mm for the raised face height. For Class 600, 900, 1500, 2500 the flange thickness does not include the raised face height and approx. 6.4mm must be added to D dimension

Note 3: Bolt length dimensions incorporate the height of the raised face

Note 4: Welding Neck bore is derived from the pipe schedule

Flanges

DIMENSIONS AND WEIGHTS

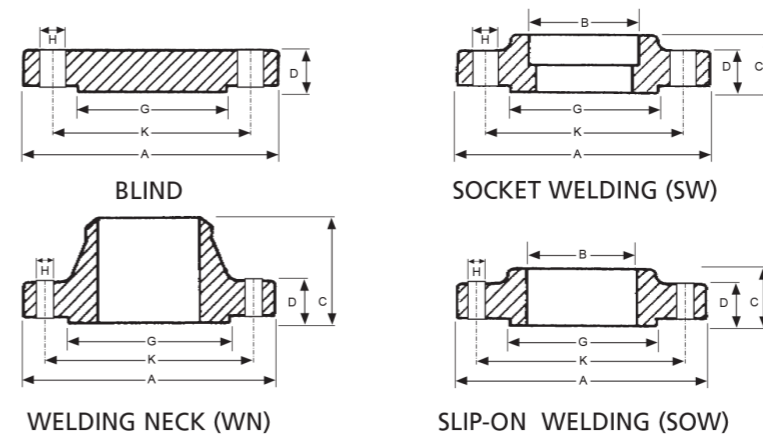
Flanges

DIMENSIONS AND WEIGHTS

Class 900 Flanges to ASME B16.5															
Nominal Size		Dimensions											Weight (kg)		
DN	NPS	Flange OD A mm	Flange Thickness D mm	Bore SOW SW B mm	Raised Face Diam. G mm	Length Thru Hub		Bolt Drilling			RF Stud Bolt Length mm	SOW SW	WN	Blind	
						SOW, SW Threaded C mm	W Neck C mm	Circle Diam. K mm	Hole Diam. H mm	Bolts No.					Bolt Diam. in
15	1/2	120.7	22.4	22.4	35.1	31.8	60.5	82.6	22.4	4	3/4"	105.0	1.8	1.9	1.8
20	3/4	130.0	25.4	27.7	42.9	35.1	70.0	88.9	22.4	4	3/4"	115.0	2.4	2.6	2.4
25	1	149.4	28.4	34.5	50.8	41.1	73.2	101.6	25.4	4	7/8"	125.0	3.6	3.7	3.6
32	1 1/4	158.8	28.4	43.2	63.5	41.1	73.2	111.3	25.4	4	7/8"	125.0	4.0	4.3	4.1
40	1 1/2	177.8	31.8	49.5	73.2	44.5	82.6	124.0	28.4	4	1"	140.0	5.5	5.9	5.8
50	2	215.9	38.1	62.0	91.9	57.2	101.6	165.1	25.4	8	7/8"	145.0	10.2	10.8	10.1
65	2 1/2	244.3	41.1	74.7	104.6	63.5	104.6	190.5	28.4	8	1"	160.0	13.9	15.0	14.0
80	3	241.3	38.1	90.7	127.0	53.8	101.6	190.5	25.4	8	7/8"	145.0	11.6	13.7	13.1
100	4	292.1	44.5	116.1	157.2	69.9	114.3	235.0	31.8	8	1 1/8"	170.0	19.7	22.5	26.9
125	5	349.3	50.8	143.8	185.7	79.2	127.0	279.4	35.1	8	1 1/4"	190.0	31.9	37.4	36.5
150	6	381.0	55.6	170.7	215.9	85.9	139.7	317.5	31.8	12	1 1/8"	195.0	41.1	47.7	47.4
200	8	469.9	63.5	221.5	269.7	101.6	162.1	393.7	38.1	12	1 3/8"	220.0	70.7	81.3	82.5
250	10	546.1	69.9	276.4	323.9	108.0	184.2	469.9	38.1	16	1 3/8"	235.0	101.0	119.0	122.0
300	12	609.6	79.2	327.2	381.0	117.3	200.2	533.4	38.1	20	1 3/8"	255.0	133.0	157.0	173.0
350	14	641.4	85.6	359.2	412.8	130.0	212.9	558.8	41.1	20	1 1/2"	275.0	153.0	180.0	206.0
400	16	704.9	88.9	410.5	469.9	133.4	215.9	616.0	44.5	20	1 5/8"	285.0	185.0	217.0	259.0
450	18	787.4	101.6	461.8	533.4	152.4	228.6	685.8	50.8	20	1 7/8"	325.0	258.0	292.0	367.0
500	20	857.3	108.0	513.1	584.2	158.8	247.7	749.3	53.8	20	2"	345.0	317.0	362.0	463.0
600	24	1041.4	139.7	616.0	692.2	203.2	292.1	901.7	66.5	20	2 1/2"	435.0	606.0	665.0	876.0

Class 2500 Flanges to ASME B16.5														
Nominal Size		Dimensions											Weight (kg)	
DN	NPS	Flange OD A mm	Flange Thickness D mm	Raised Face Diam. G mm	Length Thru Hub		Bolt Drilling			RF Stud Bolt Length mm	SOW SW	WN	Blind	
					SOW, SW Threaded C mm	W Neck C mm	Circle Diam. K mm	Hole Diam. H mm	Bolts No.					Bolt Diam. in
15	1/2	133.4	30.2	35.1	39.6	73.2	88.9	22.4	4	3/4"	125.0	3.1	3.0	
20	3/4	139.7	31.8	42.9	42.9	79.2	95.3	22.4	4	3/4"	125.0	3.7	3.5	
25	1	158.8	35.1	50.8	47.8	88.9	108.0	25.4	4	7/8"	140.0	5.2	5.0	
32	1 1/4	184.2	38.1	63.5	52.3	95.3	130.0	28.4	4	1"	150.0	7.7	7.4	
40	1 1/2	203.2	44.5	73.2	60.5	111.3	146.1	31.8	4	1 1/8"	170.0	10.9	10.4	
50	2	235.0	50.8	91.9	69.9	127.0	171.5	28.4	8	1"	175.0	16.2	15.6	
65	2 1/2	266.7	57.2	104.6	79.2	142.7	196.9	31.8	8	1 1/8"	195.0	23.7	22.6	
80	3	304.8	66.5	127.0	168.1	228.6	35.1	8	1 1/4"	220.0	36.2	34.8		
100	4	355.6	76.2	157.2	190.5	273.1	41.1	8	1 1/2"	255.0	55.3	53.9		
125	5	419.1	91.9	185.7	228.6	323.9	47.8	8	1 3/4"	300.0	92.5	90.8		
150	6	482.6	108.0	215.9	273.1	368.3	53.8	8	2"	345.0	143.0	141.0		
200	8	552.5	127.0	269.7	317.5	438.2	53.8	12	2"	380.0	215.0	214.0		
250	10	673.1	165.1	323.9	419.1	539.8	66.5	12	2 1/2"	485.0	406.0	411.0		
300	12	762.0	184.2	381.0	463.6	619.3	73.2	16	2 3/4"	540.0	572.0	592.0		

Class 1500 Flanges to ASME B16.5															
Nominal Size		Dimensions											Weight (kg)		
DN	NPS	Flange OD A mm	Flange Thickness D mm	Bore SOW SW B mm	Raised Face Diam. G mm	Length Thru Hub		Bolt Drilling			RF Stud Bolt Length mm	SOW SW	WN	Blind	
						SOW, SW Threaded C mm	W Neck C mm	Circle Diam. K mm	Hole Diam. H mm	Bolts No.					Bolt Diam. in
15	1/2	120.7	22.4	22.4	35.1	31.8	60.5	82.6	22.4	4	1/2"	105.0	1.8	1.9	1.8
20	3/4	130.0	25.4	27.7	42.9	35.1	69.9	88.9	22.4	4	1/2"	115.0	2.4	2.6	2.4
25	1	149.4	28.4	34.5	50.8	41.1	73.2	101.6	25.4	4	1/2"	125.0	3.6	3.7	3.6
32	1 1/4	158.8	28.4	43.2	63.5	41.1	73.2	111.3	25.4	4	1/2"	125.0	4.0	4.3	4.1
40	1 1/2	177.8	31.8	49.5	73.2	44.5	82.6	124.0	28.4	4	1/2"	140.0	5.5	5.9	5.8
50	2	215.9	38.1	62.0	91.9	57.2	101.6	165.1	25.4	8	5/8"	145.0	10.2	10.8	10.1
65	2 1/2	244.3	41.1	74.7	104.6	63.5	104.6	190.5	28.4	8	5/8"	160.0	13.9	15.0	14.0
80	3	266.7	47.8	90.7	127.0	117.3	203.2	31.8	8	5/8"	180.0	19.9	19.1		
100	4	311.2	53.8	116.1	157.2	124.0	241.3	35.1	8	5/8"	195.0	29.9	29.9		
125	5	374.7	73.2	143.8	185.7	155.4	292.1	41.1	8	5/8"	250.0	55.4	58.4		
150	6	393.7	82.6	170.7	215.9	171.5	317.5	38.1	12	3/4"	260.0	68.4	71.8		
200	8	482.6	91.9	221.5	269.7	212.9	393.7	44.5	12	3/4"	290.0	117.0	122.0		
250	10	584.2	108.0	276.4	323.9	254.0	482.6	50.8	12	3/4"	335.0	194.0	210.0		
300	12	673.1	124.0	327.2	381.0	282.4	571.5	53.8	16	7/8"	375.0	288.0	316.0		
350	14	749.3	133.4	359.2	412.8	298.5	635.0	60.4	16	7/8"	405.0	380.0	420.0		
400	16	825.5	146.1	410.5	469.9	311.2	704.9	66.5	16	1"	445.0	485.0	558.0		
450	18	914.4	162.1	461.8	533.4	327.2	774.7	73.2	16	1"	495.0	644.0	760.0		
500	20	984.3	177.8	513.1	584.2	355.6	831.9	79.2	16	1 1/8"	540.0	775.0	965.0		
600	24	1168.4	203.2	616.0	692.2	406.4	990.6	91.9	16	1 1/2"	615.0	1232.0	1558.0		



Note 1: All weights are approximate

Note 2: For Class 150, 300 the flange thickness "D" dimension includes approx. 1.5mm for the raised face height
For Class 600, 900, 1500, 2500 the flange thickness does not include the raised face height and approx. 6.4mm must be added to D dimension

Note 3: Bolt length dimensions incorporate the height of the raised face

Note 4: Welding Neck bore is derived from the pipe schedule

Flanges

DIMENSIONS AND WEIGHTS

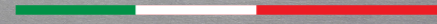


Table D Flanges to AS 2129

Nominal Size	Dimensions (mm)							Weight (kg)	
	OD	Thickness	Raised Face Diam.	Drilling			Bolt Size and Thread	SOW	Blind
				Bolt Circle Diam. K	Bolt Hole Diam. H	Number of Bolts			
DN	A	D	G						
15	95	*5	47	67	14	4	M12	0.6	0.6
20	100	*5	53	73	14	4	M12	0.7	0.7
25	115	*5	65	83	14	4	M12	0.9	1
32	120	*6	67	87	14	4	M12	0.9	1.1
40	135	*6	78	98	14	4	M12	1.2	1.4
50	150	*8	90	114	18	4	M16	1.4	1.7
65	165	*8	103	127	18	4	M16	1.6	2.1
80	185	*10	122	146	18	4	M16	2	2.7
90	205	*10	141	165	18	4	M16	2.2	3.2
100	215	*10	154	178	18	4	M16	2.5	3.6
125	255	13	186	210	18	8	M16	3.3	4.9
150	280	13	211	235	18	8	M16	4	6.1
200	335	13	268	292	18	8	M16	5	8.8
250	405	16	328	356	22	8	M20	8.7	15.8
300	455	19	378	406	22	12	M20	11.3	23.6
350	525	22	438	470	26	12	M24	19.6	38.6
400	580	22	489	521	26	12	M24	22.3	44.9
450	640	25	532	584	26	12	M24	29	63
500	705	29	609	641	26	16	M24	39.9	86
550	760	29	637	699	30	16	M27	50	107
600	825	32	720	756	30	16	M27	58	125
700	910	35	809	845	30	20	M27		
750	995	41	888	927	33	20	M30		
800	1060	41	942	984	36	20	M33		
850	1090	44	974	1016	36	20	M33		
900	1175	48	1050	1092	36	24	M33		
1000	1255	51	1133	1175	36	24	M33		
1200	1490	60	1368	1410	36	32	M33		

Table E Flanges to AS 2129

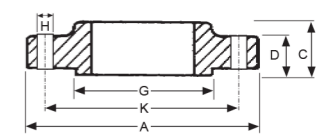
Nominal Size	Dimensions (mm)							Weight (kg)	
	OD	Thickness	Raised Face Diam.	Drilling			Bolt Size and Thread	SOW	Blind
				Bolt Circle Diam. K	Bolt Hole Diam. H	Number of Bolts			
DN	A	D	G						
15	95	*6	47	67	14	4	M12	0.6	0.7
20	100	*6	53	73	14	4	M12	0.7	0.8
25	115	*7	63	83	14	4	M12	0.9	1
32	120	*8	67	87	14	4	M12	1	1.1
40	135	*9	78	98	14	4	M12	1.2	1.4
50	150	*10	90	114	18	4	M16	1.4	1.7
65	165	*10	103	127	18	4	M16	1.6	2.1
80	185	*11	122	146	18	4	M16	2	2.7
90	205	12	141	165	18	8	M16		
100	215	13	154	178	18	8	M16	2.5	3.6
125	255	14	186	210	18	8	M16	3.7	5.5
150	280	17	207	235	22	8	M20	5	8.3
200	335	19	264	292	22	8	M20	7.1	12.9
250	405	22	328	356	22	12	M20	11.4	21.9
300	455	25	374	406	26	12	M24	15.1	31.8
350	525	29	438	470	26	12	M24	25.3	47.6
400	580	32	489	521	26	12	M24	31.3	66
450	640	35	552	584	26	16	M24	40.8	87
500	705	38	609	641	26	16	M24	53	114
550	760	44	663	699	30	16	M27		
600	825	48	717	756	33	16	M30	85	195
700	910	51	806	845	33	20	M30		
750	995	54	885	927	36	20	M33		
800	1060	54	942	984	36	20	M33		
850	1090	57	974	1016	36	20	M33		
900	1175	64	1050	1092	36	24	M33		
1000	1255	67	1130	1175	39	24	M36		
1200	1490	79	1365	1410	39	32	M36		

Table F Flanges to AS 2129

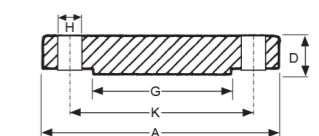
Nominal Size	Dimensions (mm)							Weight (kg)	
	OD	Thickness	Raised Face Diam.	Drilling			Bolt Size and Thread	SOW	Blind
				Bolt Circle Diam. K	Bolt Hole Diam. H	Number of Bolts			
DN	A	D	G						
15	95	10	47	67	14	4	M12	0.6	0.7
20	100	10	53	73	14	4	M12	0.7	0.8
25	120	10	63	87	18	4	M16	0.9	1
32	135	13	74	98	18	4	M16	1.1	1.3
40	140	13	81	105	18	4	M16	1.2	1.4
50	165	16	103	127	18	4	M16	2.2	2.6
65	185	16	122	146	18	4	M16	2.5	3
80	205	16	141	165	18	8	M16	3	3.8
90	215	19	154	178	18	8	M16		
100	230	19	167	191	18	8	M16	4.3	5.9
125	280	22	207	235	22	8	M20	7.4	10.1
150	305	22	232	260	22	12	M20	8.1	11.9
200	370	35	296	324	22	12	M20	12.7	20.3
250	430	29	349	381	26	12	M24	18.1	31.4
300	490	32	406	438	26	16	M24	23.9	44.7
350	550	35	459	495	30	16	M27	35.3	63
400	610	41	516	552	30	20	M27	47.6	90
450	675	44	571	610	33	20	M30	62	120
500	735	51	634	673	33	24	M30	80	162
550	785	54	685	724	33	24	M30		
600	850	57	739	781	36	24	M33	112	
700	935	60	815	857	36	24	M33		
750	1015	67	898	940	36	28	M33		
800	1060	68	942	984	36	28	M33		
850	1090	70	974	1016	36	32	M33		
900	1185	76	1060	1105	39	32	M36		
1000	1275	83	1149	1194	39	36	M36		
1200	1530	95	1385	1441	42	40	M39		

Table H Flanges to AS 2129

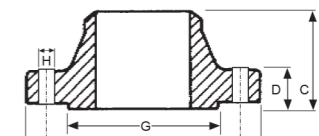
Nominal Size	Dimensions (mm)							Weight (kg)	
	OD	Thickness	Raised Face Diam.	Drilling			Bolt Size and Thread	SOW	Blind
				Bolt Circle Diam. K	Bolt Hole Diam. H	Number of Bolts			
DN	A	D	G						
15	115	13	57	83	18	4	M16	0.8	1
20	115	13	57	83	18	4	M16	0.9	1
25	120	14	64	87	18	4	M16	1.1	1.2
32	135	17	76	98	18	4	M16	1.5	1.8
40	140	17	83	105	18	4	M16	1.7	2
50	165	19	102	127	18	4	M16	2.6	3.1
65	185	19	114	146	18	8	M16	3.1	3.8
80	205	22	127	165	18	8	M16	4.3	5.4
90	215	22	140	178	18	8	M16		
100	230	25	152	191	18	8	M16	5.8	7.9
125	280	29	178	235	22	8	M20	9.9	12.6
150	305	29	210	260	22	12	M20	10.8	15.4
200	370	32	260	324	22	12	M20	18.3	28.2
250	430	35	311	381	26	12	M24	22.1	38
300	490	41	362	438	26	16	M24	31	58
350	550	48	419	495	30	16	M27	47.7	85
400	610	54	483	552	30	20	M27	62	118
450	675	60	533	610	33	20	M30	105	196
500	735	67	597	673	33	24	M30		
550	785	70	648	724	33	24	M30		
600	850	76	699	781	36	24	M33		



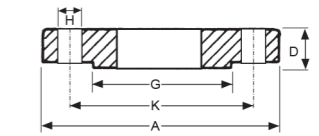
SLIP-ON WELDING (SOW)



BLIND



WELDING NECK (WN)



PLATE

Note 1: All weights are approximate

Note 2: A diametrical clearance of 4mm maximum applies to pipe or tube OD for plate flanges

Note 3: The flange thickness "D" dimension included the raised face height

Note 4: Welding Neck bore is derived from the pipe schedule

Notes

TERRANOVA STEEL







Cremona, Italy



T **TERRANOVA STEEL**