HEBEI HAIHAO GROUP

河 北 海 浩 集 团

STEEL PIPE FITTINGS | STEEL FLANGES

"hebei haihao group,
serve flowing world!"

HEBEI HAIHAO GROUP

企业简介 COMPANY PROFILE

Hebei Haihao Flange Factory ,established in 1982,is one of the biggest flanges manufacturer in China.Our flange factory is located in Mengcun County,Cangzhou City,Hebei Province,We are specialized in the production of forged steel flanges,plate steel flanges.We also have engaged in research and design in flanges,rings,customized forgings, and have made excellent achievements in the high quality flange industry. Our flange products are widely used in the following industries: Oil, Gas, Chemical, Shipbuliding, Water treatment, Power plant, steam, construction and other fields all over the world.

Hebei Haihao flange ,as one of the earliest flange manufacturer, has strong experience in flange production and inspection and a complete set of equipments,including advanced cutting,forging,machining,drilling machines and professional testing & inspection instruments.Besides these facilities , we also have a expertised engineers and workers which are expericed in flanges . our company received the certificate of ISO 9001 quality assurance system registration. We also acquired the approved certificates of other world class quality notify body like API, ISO, PED,ABS,BV etc.Furthermore,we also established a good relationship with many professioanl Third Party Inspection company, such as the SGS, BV, LR, ABS etc.

After more than 30 years development, hebei haihao flange obtained the recognition from the clients and end user of domestic markets and all over the world. We have world-famous clients ,such as Exxon Mobil,Shell,CNPC, SINOPEC, Unilever , chevron, Pemex, Petrobras, Hyandai etc.we can produce the flanges in different standard such as ISO, API, ANSI, BS, JIS, UNI, MSS, SP, etc, and also stocks a wide range of Flanges in various materials, sizes and specifications.

Hebei Haihao Group are continuously developing technology and trying to maximize customer satisfaction.we insist on the quality principle of “Create fine products, Keep Promise, Make progress continuously, Strive after perfection” . we are excellent partner for the providing of high quality products, prompt delivery and efficient service.

For any Flanges needs you may have, please browse through our Products list, then feel free to contact us. We always reply within 24 hours. We sincerely welcome customers domestic and abroad to visit us for Cooperation and facilites.

HEBEI HAIHAO GROUP

企业简介 COMPANY PROFILE

Haihao pipe fitting department is the steel pipe fitting division of Hebei Haihao High Pressure Flange Pipe Fitting Group Co.,Ltd, we manufacture ,supply and serve our clients all over the world in the steel pipe fittings field, especially the butt welding pipe fittings.

Hebei Haihao pipe fitting plant is established in 1988.At the beginning , we start production from carbon steel elbows ,then steel pipe tees years later.In the 21 century, we establish the new factory to produce the stainless steel pipe fittings. Now our pipe fittings plants can manufacture most kinds of steel pipe fittings used in industry pipeline.

Our pipe fittings facilities include many kinds of manufacturing equipment, processing line and the quality control devices, which make sure our products in a high quality level. But the most important parts in our pipe fittings plant are our professional engineers and workers, they have years experiences in the pipe fitting production and services.

Our plant acquired world-class approved certificates like the API,ISO9001,ISO14001,CE/PED, ABS, and we keep the cooperation with many professioanl Third Party Inspection agencies , such as the SGS, BV, LR, ABS ,VELOSI etc.

After more than 20 years development, haihao pipe fitting department received a lot of experience in the field, obtained the recognition from the clients and end user all over the world. We have clients ,such as National Chemical Engineering Corporation, CNPC, SINOPEC in the domestic market,and chevron, Shell, Pemex, Petrobras, Hyandai, Unilever etc in the international market.Our pipe fittings are widely used in the piping systems of all kinds of industry projects.

Our company can produce the steel pipe fittings not only in GB Standard ,also the ANSI/ASME standard, DIN, BS EN standard and GOST,JIS,ISO,KS standard.We will keep trying best to supply quality pipe fittings in standard or custom to our clients and partners .

HEBEI HAIHAO GROUP

生产设备
PRODUCTION EQUIPMENT

In Hebei Haihao Group，there are manufacturing euqipments and complete production lines for forged steel flanges, butt welding pipe fittings and forged steel pipe fittings, Specification from DN15mm to DN3600mm.

生产设备
PRODUCTION EQUIPMENT

HEBEI HAIHAO GROUP

生产设备

PRODUCTION EQUIPMENT

生产设备
PRODUCTION EQUIPMENT

HEBEI HAIHAO GROUP

相关客户 FRFERENCE LISTS

Since the founding of Hebei Haihao Group in 1980s, we've produced and supplied around 1,000,0000 Tons steel piping materials and products to our clients worldwide. We also establishing and keep good relationship with them for better service.

bp

SUMMIT

BULGARTRANSGAZ

ExxonMobil

Chevron

CNPC

Keppel Offshore & Marine

FOXCONN 鴻海科技集團

HEBEI HAIHAO GROUP

相关客户

FRFERENCE LISTS

engro

HYUNDAI STEEL

KSS KazStroyService

PAKISTAN STEEL

MATFORCE COMPAGNIE SAHELIENNE D'INDUSTRIES

Mech-Power Building Quality To Power The World

ANGGERIK LAKSANA SDN BHD

PEMEX

PETROPERU

SINOPEC

BR PETROBRAS

HEBEI HAIHAO GROUP

公司资质

COMPANY CERTIFICATES

Hebei haihao put quality and reputation on the first position. We established a laboratory of quality inspection with the Supervision Bureau of Quality and Technology of China, get the first "famous brand" for pipe fittings in Hebei.Haihao group has been type approved by world-class notified bodies.

HEBEI HAIHAO GROUP

公司资质

COMPANY CERTIFICATES


HSL CERTIFICATION SERVICE

质量管理体系认证证书

河北海浩高压法兰管件集团有限公司

GB/T19001-2008 idt ISO9001:2008 标准

A(1)、B 级钢制无缝管件； B1(2)、B2 级钢制有缝管件；
A(1) (3) 锻制法兰的生产


HSL CERTIFICATION SERVICE

QUALITY MANAGEMENT SYSTEM CERTIFICATE

HEBEI HAIHAO HIGH PRESSURE FLANGE & PIPE FITTING GROUP CO., LTD.

GB/T19001-2008 idt ISO9001:2008

The Production of A(1) & B Grade Steel Seamless Pipe Fitting;
B1(2) & B2 Grade Steel Seamed Pipe Fitting;
A(1) (3) Grade Forged Flange


Certificate of Compliance

Certificate's Holder: Hebei Haihao High Pressure Flange & Pipe Fitting Group Co., Ltd.

Certification ECM Mark:

Product: Model(s): Pressure Piping Components
Carbon Steel, Alloy Steel, Stainless Steel

Verification to: Standard: DN 1920/42004

Certificate – Сертификат – 證明書 – Certificat – 증명서 – 证明书


ABS

Certificate of MANUFACTURING ASSESSMENT

HEBEI HAIHAO HIGH PRESSURE FLANGE & PIPE FITTING GROUP CO. LTD Plant of CANGZHOU,HEBEI,CHINA

Steel Pipe Fittings


ABS

CERTIFICATE OF DESIGN ASSESSMENT

HEBEI HAIHAO HIGH PRESSURE FLANGE & PIPE FITTING GROUP CO., LTD. - CANGZHOU


中国石油天然气集团公司
CHINA NATIONAL PETROLEUM CORPORATION

物资供应商准入证

CERTIFICATE OF MATERIAL SUPPLIER


供应商名称：
Supplier Name

准入证编号：
Certificate No.

发证单位：
Issue Unit

准入章：
Certificate stamp


供应商类型：
Supplier Type

供应商编码：
Supplier Code

工商注册号：
License No.

组织机构代码：
Organization Code

法定代表人/负责人：
Legal Representative

单位地址：
Address

发证日期：
Issue Date


年度考评审核记录
Annual Assessment and Review Record

HEBEI HAIHAO GROUP

质检设备

QUALITY INSPECTION EQUIPMENT

HEBEI HAIHAO strictly carrys out rigorous quality control and products inspection to ensure continual quality flanges and pipe fittings. As one of the leading manufacturers in China piping products filed ,Haihao always abide by the principle of "Quality First".

HEBEI HAIHAO GROUP

产品范围

COMPANY CERTIFICATES

	Flanges
Type	Weld neck Flange, Slip on Flange, Plate Flange, Blind Flange, Socket weld Flange, Threaded Flange, Lap Joint Flange, LWN Flange, Orifice Flange, Spectacle Blind,Spades & Ring Spacers.
Size	1/2" to 192"; DN15-DN4800
Face	RF, FF, MF, MFM, RJ, TG, RTJ, SRF.
Pressure	Class150Lbs, 300Lbs, 600Lbs, 900Lbs, 1500Lbs, 2500Lbs; PN6, PN10, PN16, PN20, PN25, PN40, PN63, PN100; 5K,10K,16K,20K,30K,40K,63K.
Standard	ASME/ANSI B16.5, B16.47, ASME B16.36, AWWA C207. DIN 2527, 2573, 2576, 2631, 2632, 2633, 2634, 2635, 2566, 2642. EN 1092, BS 4504, JIS B2220, GOST 10820, GOST 10821, SABS 1123, AS 1219 etc.
Material	Carbon steel:ASTM A105, A350 LF2, SS400, P235GH, P250GH, C22.8, Q235, 20#, 16Mn.
	Stainless steel:ASTM A182 F304, F304L, F316, F316L, F321, F347, F310, F44,F51, etc
	Alloy steel:ASTM A694 F42, F46, F52, F56, F60, F65, F70, A182 F5, F9, F91, F12, F11, F22 etc.

HEBEI HAIHAO GROUP

产品范围

COMPANY CERTIFICATES

	Butt Weld Pipe Fittings
Type	Elbows,Tees,Lateral Tees,Reducers,Caps,Bends, Crosses,Stub Ends,Insulation joints,Saddles.
Size	1/2"- 72"; DN15-DN1800
Wall thickness	SCH5S,SCH10S,SCH10,SCH20S,SCH20,SCH40S,SCH40,SCH80S,SCH80, SCH120,SCH160,STD,XS,XXS
Applicable standard	ASME/ANSI B16.9, ASME/ANSI B16.11, MSS SP-75, MSS SP-43,BS EN 10253, DIN2605, 2609, 2615, 2616, 2617, DIN28011, GOST 17375, 17376, 17378, 17379, 17380, 30753, JIS B2311, JIS B2312, JIS B2313, JIST B2316, ISO 3419, ISO 5251, etc
Material	Carbon steel,Stainless steel,Alloy steel:ASTM A105, A182 F5, F9, F11, F12, F22, A234 WPB, WP5, WP9, WP11, WP12,WP22,WP91, A403 WP304L, WP316L, WP321, ASTM A420 WPL6, ASTM A860 WPHY42, WPHY52, WPHY60, WPHY65, WPHY70, JIS G3454, BS EN10253,S235,S355, DIN ST37,ST52,GOST CT20.

HEBEI HAIHAO GROUP

产品范围

COMPANY CERTIFICATES

	Forged Steel Pipe Fittings
Type	Elbows,Tees,Crosses,Unions,Plugs,Caps,Coupling,Socket,Outlet,Swage Nipple,Bushing,Boss.
Size	1/2" to 24"; DN15-DN600 .
Connection	Socket welding, Butt welding, Threaded.
Pressure	Class 2000, Class 3000, Class 6000, Class 9000, Class 15000.
Standard	ASME/ANSI B16.5, EN 10241.
Material	Carbon steel:ASTM A105, A350 LF2, SS400, P235GH, P250GH, C22.8, Q235, 20#, 16Mn.
	Stainless steel:ASTM A182 F304, F304L, F316, F316L, F321, F347, F310, F44, F51, etc.
	Alloy steel:ASTM A694 F42, F46, F52, F56, F60, F65, F70, A182 F5, F9, F91, F12, F11, F22 etc.

河北海浩




德标
法兰参数系列

河北海浩



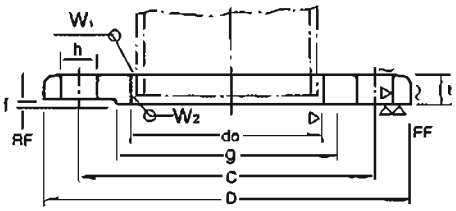

日标
法兰参数系列

5Kg/Cm²

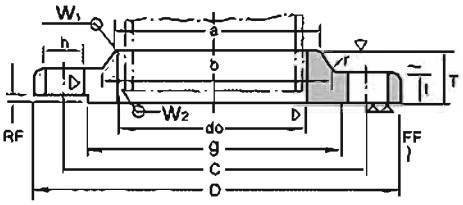
JIS B2220–1984(KSB 1503–1999)

5Kg/Cm² SLIP–ON WELDING STEEL PIPE FLANGES

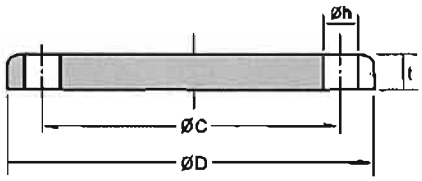
SOP TYPE
NOMINAL SIZE 10-1000A



SOH TYPE
NOMINAL SIZE 450-1000A



BL TYPE
NOMINAL SIZE 10-750A



Unit:mm

Nominal Bore of Flange	Outside Diam.of Applicable Pipe	Inside Diam.of Flange do	Outside Diam.of Flange D	Sectional Dimensions of Flange							Dia.of Bolt			Nominal Bolt Size	Weight(kg)		
				t	T	Diam.of Hub a	Diam.of Hub b	Radius r	Raised face f	Diam.of Raised Face g	Diam.of Bolt Circle C	Number of Bolt Holes	Hole Diam h		SOP	BL	SOH
(10)	17.3	17.8	75	9	–	–	–	–	1	39	55	4	12	M10	0.27	0.3	–
15	21.7	22.2	80	9	–	–	–	–	1	44	60	4	12	M10	0.30	0.4	–
(20)	27.2	27.7	85	10	–	–	–	–	1	49	65	4	12	M10	0.37	0.5	–
25	34.0	34.5	95	10	–	–	–	–	1	59	75	4	12	M10	0.45	0.6	–
(32)	42.7	43.2	115	12	–	–	–	–	2	70	90	4	15	M12	0.78	0.9	–
40	48.6	49.1	120	12	–	–	–	–	2	75	95	4	15	M12	0.83	1.0	–
50	60.5	61.1	130	14	–	–	–	–	2	85	105	4	15	M12	1.07	1.4	–
65	76.3	77.1	155	14	–	–	–	–	2	110	130	4	15	M12	1.49	2.0	–
80	89.1	90.0	180	14	–	–	–	–	2	121	145	4	19	M16	1.99	2.7	–
(90)	101.6	102.6	190	14	–	–	–	–	2	131	155	4	19	M16	2.09	3.0	–
100	114.3	115.4	200	16	–	–	–	–	2	141	165	8	19	M16	2.39	3.7	–
125	139.8	141.2	235	16	–	–	–	–	2	176	200	8	19	M16	3.23	5.2	–
150	165.2	166.6	265	18	–	–	–	–	2	206	230	8	19	M16	4.41	7.5	–
(175)	190.7	192.1	300	18	–	–	–	–	2	232	260	8	23	M20	5.51	9.5	–
200	216.3	218.0	320	20	–	–	–	–	2	252	280	8	23	M20	6.33	12.2	–
(225)	241.8	243.7	345	20	–	–	–	–	2	277	305	12	23	M20	6.64	14.0	–
250	267.4	269.5	385	22	–	–	–	–	2	317	345	12	23	M20	9.45	19.3	–
300	318.5	321.0	430	22	–	–	–	–	3	360	390	12	23	M20	10.3	24.3	–
350	355.6	358.1	480	24	–	–	–	–	3	403	435	12	25	M22	14.0	33.2	–
400	406.4	409.0	540	24	–	–	–	–	3	463	495	16	25	M22	16.9	41.9	–
450	457.2	460.0	605	24	40	495	500	5	3	523	555	16	25	M22	21.6	53.0	24.8
500	508.0	511.0	655	24	40	546	552	5	3	573	605	20	25	M22	23.1	61.9	26.9
550	558.8	562.0	720	26	42	597	603	5	3	630	665	20	27	M24	30.3	81.2	34.1
600	609.6	613.0	770	26	44	648	654	5	3	680	715	20	27	M24	32.7	93.2	37.5
650	660.4	664.0	825	26	48	702	708	5	3	735	770	24	27	M24	35.9	106.9	42.8
700	711.2	715.0	875	26	48	751	758	5	3	785	820	24	27	M24	38.2	120.6	45.4
750	762.0	766.0	945	28	52	802	810	5	3	840	880	24	33	M30	48.7	150.5	57.4
800	812.8	817.0	995	28	52	854	862	5	3	890	930	24	33	M30	51.2	167.4	60.8
(850)	863.6	868.0	1045	28	54	904	912	5	3	940	980	24	33	M30	54.4	185.1	63.5
900	914.4	919.0	1095	30	56	956	964	5	3	990	1030	24	33	M30	61.1	218.1	75.3
1000	1016.0	1021.0	1195	32	60	1058	1066	5	3	1090	1130	28	33	M30	70.5	277.3	88.5
*(1100)	1117.6	1123	1305	32	–	–	–	–	3	1200	1240	28	33	M30	81.7	331.9	–
*1200	1219.2	1225	1420	34	–	–	–	–	3	1305	1350	32	33	M30	102.0	417.8	–
*1350	1371.6	–	1575	34	–	–	–	–	3	1460	1505	32	33	M30	115.9	515.6	–
*1500	1524.0	–	1730	36	–	–	–	–	3	1615	1660	36	33	M30	157.4	659.2	–

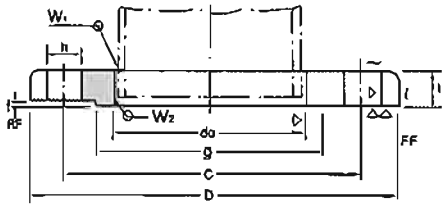
1.Flanges of parenthesized nominal diameter had letter not be used.
2.The facing of flanges shall conform to KS B1509(JIS B2202)1984.
3.Nominal diameter over 1000 is manufacturer' s standard(*).

10Kg/Cm²

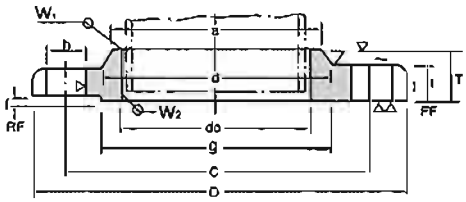
JIS B2220–1984(KSB 1503–1999)

10Kg/Cm² SLIP–ON WELDING STEEL PIPE FLANGES

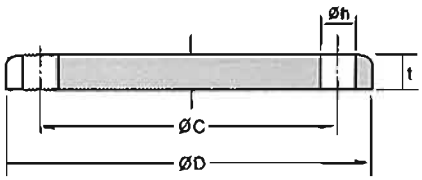
SOP TYPE
NOMINAL SIZE 10-800A



SOH TYPE
NOMINAL SIZE 250-1000A



BL TYPE
NOMINAL SIZE 10-800A



NORMAL THICKNESS FLANGE

Unit:mm

Nominal Diam of Flange	Outside Diam.of Steel Pipe	Inside Diam.of Flange do	Outside Diam.of Flange D	Sectional Dimensions of Flange							Dia.of Bolt			Nominal Bolt Size	Weight(kg)		
				t	T	Diam.of Hub		Rad -ius r	Raised Face f	Diam.of Raised Face g	Bolt Circle Diam. C	Number of Bolt Holes	Hole Diam h		SOP	BL	SOH
						a	b										
10	17.3	17.8	90	12	–	–	–	–	1	46	65	4	15	M12	0.52	0.54	–
15	21.7	22.2	95	12	–	–	–	–	1	51	70	4	15	M12	0.57	0.61	–
20	27.2	27.7	100	14	–	–	–	–	1	56	75	4	15	M12	0.73	0.79	–
25	34.0	34.5	125	14	–	–	–	–	1	67	90	4	19	M16	1.13	1.24	–
32	42.7	43.2	135	16	–	–	–	–	2	76	100	4	19	M16	1.48	1.66	–
40	48.6	49.1	140	16	–	–	–	–	2	81	105	4	19	M16	1.56	1.81	–
50	60.5	61.1	155	16	–	–	–	–	2	96	120	4	19	M16	1.88	2.23	–
65	76.3	77.1	175	18	–	–	–	–	2	116	140	4	19	M16	2.60	3.3	–
80	89.1	90	185	18	–	–	–	–	2	126	150	8	19	M16	2.61	3.5	–
(90)	101.6	102.6	195	18	–	–	–	–	2	136	160	8	19	M16	2.76	4.0	–
100	114.3	115.4	210	18	–	–	–	–	2	151	175	8	19	M16	3.14	4.6	–
125	139.8	141.2	250	20	–	–	–	–	2	182	210	8	23	M20	4.77	7.3	–
150	165.2	166.6	280	22	–	–	–	–	2	212	240	8	23	M20	6.34	10.1	–
(175)	190.7	192.1	305	22	–	–	–	–	2	237	265	12	23	M20	6.82	11.8	–
200	216.3	218	330	22	–	–	–	–	2	262	290	12	23	M20	7.53	14.0	–
(225)	241.8	243.7	350	22	–	–	–	–	2	282	310	12	23	M20	7.74	15.8	–
250	267.4	269.5	400	24	36	288	292	6	2	324	355	12	25	M22	11.8	22.7	12.7
300	318.5	321	445	24	38	340	346	6	3	368	400	16	25	M22	12.7	27.8	13.8
350	355.6	358.1	490	26	42	380	386	6	3	413	445	16	25	M22	16.4	37.1	18.2
400	406.4	409	560	28	44	436	442	6	3	475	510	16	27	M24	23.0	52.5	25.2
450	457.2	460	620	30	48	496	502	6	3	530	565	20	27	M24	29.5	68.8	33.0
500	508	511	675	30	48	548	554	6	3	585	620	20	27	M24	33.5	82.1	37.6
(550)	558.8	562	745	32	52	604	610	6	3	640	680	20	33	M30	43.1	105.8	49.7
600	609.6	613	795	32	52	656	662	6	3	690	730	24	33	M30	45.7	120.2	52.6
(650)	660.4	664	845	34	56	706	712	6	3	740	780	24	33	M30	52.1	145.0	60.6
700	711.2	715	905	34	58	762	770	6	3	800	840	24	33	M30	59.5	167.2	70.6
(750)	762	766	970	36	62	816	824	6	3	855	900	24	33	M30	73.2	204.2	85.8
800	812.8	817	1020	36	64	868	876	6	3	905	950	28	33	M30	76.4	225.4	91.2
(850)	863.6	868	1070	36	66	920	928	6	3	955	1000	28	33	M30	80.7	248.8	98.6
900	914.4	919	1120	38	70	971	979	6	3	1005	1050	28	33	M30	89.4	288.4	109.0
1000	1016	1021	1235	40	74	1073	1081	6	3	1110	1160	28	39	M36	109.2	367.7	133.0
*(1100)	1117.6	1123	1345	42	76	–	–	–	3	1220	1270	28	39	M36	131.6	460.0	–
*1200	1219.2	1225	1465	44	78	–	–	–	3	1325	1380	32	39	M36	163.5	572.2	–
*1350	1371.6	–	1630	48	82	–	–	–	3	1480	1540	36	45	M42	204.7	769.0	–
*1500	1524.0	–	1795	50	90	–	–	–	3	1635	1700	40	45	M42	250.2	974.9	–

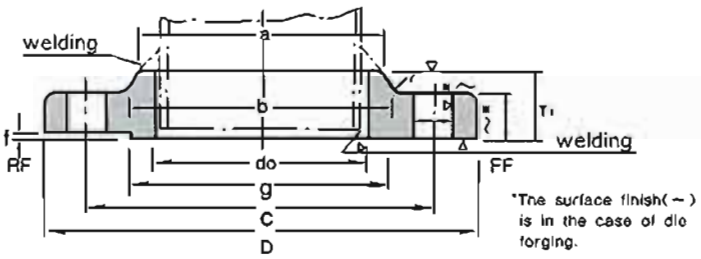
1.Flanges of parenthesized nominal diameter had letter not be used.
2.The facing of flanges shall conform to KS B1509(JIS B2202)1984.
3.Nominal diameter over 1000 is manufacturer´ s standard(*).

16Kg/Cm²

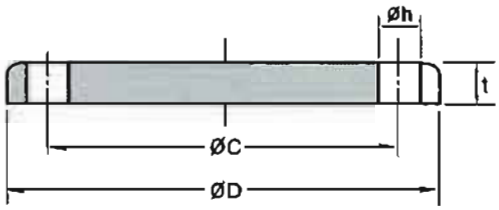
JIS B2220–1984(KSB 1503–1999)

16Kg/Cm² SLIP–ON WELDING STEEL PIPE FLANGES

SOH TYPE
NOMINAL SIZE 10-600A



BL TYPE
NOMINAL SIZE 10-600A



Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Sectional Dimensions of Flange								Bolt Hole			Nominal Bolt Size	Weight(kg)		
			Outside Diameter of Flange D	t	T	Diam.of Hub a	Diam.of Hub b	Radius r	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h		SOP	BL	SOH
10	17.3	17.8	90	12	16	26	28	4	1	46	65	4	15	M12	0.52	0.54	0.52
15	21.7	22.2	95	12	16	30	32	4	1	51	70	4	15	M12	0.57	0.61	0.58
20	27.2	27.7	100	14	20	38	42	4	1	56	75	4	15	M12	0.73	0.79	0.75
25	34.0	34.5	125	14	20	46	50	4	1	67	90	4	19	M16	1.13	1.24	1.16
32	42.7	43.2	135	16	22	56	60	5	2	76	100	4	19	M16	1.48	1.66	1.53
40	48.6	49.1	140	16	24	62	66	5	2	81	105	4	19	M16	1.56	1.81	1.64
50	60.5	61.1	155	16	24	76	80	5	2	98	120	8	19	M16	1.8	2.3	1.83
65	76.3	77.1	175	18	26	94	98	5	2	116	140	8	19	M16	2.5	3.1	2.58
80	89.1	90.0	200	20	28	108	112	6	2	132	160	8	23	M20	3.5	4.5	3.66
(90)	101.6	102.6	210	20	30	120	124	6	2	145	170	8	23	M20	3.7	5.0	3.95
100	114.3	115.4	225	22	34	134	138	6	2	160	185	8	23	M20	4.5	6.3	4.94
125	139.8	141.2	270	22	34	164	170	6	2	195	225	8	25	M22	6.5	9.2	7.0
150	165.2	166.6	305	24	38	196	202	6	2	230	260	12	25	M22	8.7	12.8	9.62
200	216.3	218.0	350	26	40	244	252	6	2	275	305	12	25	M22	10.9	18.6	12.1
250	267.4	269.5	430	28	44	304	312	6	2	345	380	12	27	M24	18.0	30.6	20.0
300	318.5	321.0	480	30	48	354	364	8	3	395	430	16	27	M24	21.5	40.7	24.4
350	355.6	358.1	540	34	52	398	408	8	3	440	480	16	33	M30 x 3	30.8	57.8	35.0
400	406.4	409.0	605	38	60	446	456	10	3	495	540	16	33	M30 x 3	42.8	82.2	46.2
450	457.2	460.0	675	40	64	504	514	10	3	560	605	20	33	M30 x 3	55.1	107.6	61.9
500	508.0	511.0	730	42	68	558	568	10	3	615	660	20	33	M30 x 3	65.1	133.1	73.25
(550)	558.8	562.0	795	44	70	612	622	10	3	670	720	20	39	M36 x 3	77.9	164.1	88.1
600	609.6	613.0	845	46	74	666	676	10	3	720	770	24	39	M36 x 3	86.0	193.2	98.8
(650)	660.4	664	895	48	77	704	726	10	5	770	820	24	39	M36 x 3	96.3	227.5	101.0
700	711.2	715	960	50	80	754	776	10	5	820	875	24	42	M39 x 3	114.1	272.6	120.0
(750)	762.0	766	1020	52	83	806	832	10	5	880	935	24	42	M39 x 3	132.7	321.9	141.0
800	812.8	817	1085	54	86	865	885	10	5	930	990	24	48	M45 x 3	152.1	375.6	161.0
(850)	863.6	868	1135	56	89	916	936	10	5	980	1040	24	48	M45 x 3	166.5	428.1	177.0
900	914.4	919	1185	58	93	968	986	10	5	1030	1090	28	48	M45 x 3	178.1	481.8	191.0
1000	1016.0	1021	1320	62	99	1070	1098	12	5	1140	1210	28	56	M52 x 3	235.3	636.0	230.0
1100	1117.6	1123	1420	66	105	1180	1200	12	5	1240	1310	32	56	M52 x 3	267.9	784.0	289.0
1200	1219.2	1225	1530	70	112	1282	1302	12	5	1350	1420	32	56	M52 x 3	321.1	972.4	348.0
1300	1320.8	1326.0	1645	74	–	–	–	–	5	1450	1530	32	62		378.6	1185.2	–
1350	1371.6	1377.0	1700	76	–	–	–	–	5	1510	1590	32	62		410.0	1303.8	–
1400	1422.4	1428.0	1755	78	–	–	–	–	5	1560	1640	36	62		436.0	1422.5	–
1500	1524.0	1529.0	1865	80	–	–	–	–	5	1670	1750	36	62		496.4	1656.6	–

1.Flanges of parenthesized nominal diameter had better not be used.

2.For dimensional tolerance, refer to JIS B2203.

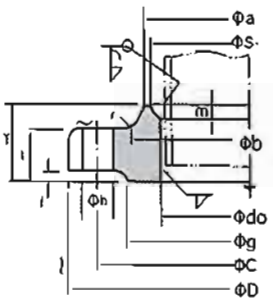
3.In principle material shall be SS400 specified in JIS G3101,SF390A(or SF440A) specified in JIS G3201, or S20C(or S25C) specified in JIS G4051, and shall be fit for welding.

20Kg/Cm²

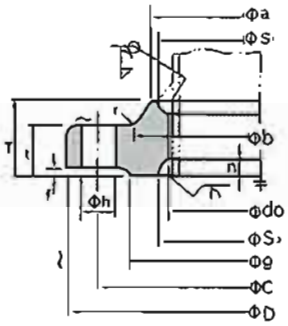
JIS B2220–1984(KSB 1503–1999)

20Kg/Cm² SLIP–ON WELDING STEEL PIPE FLANGES

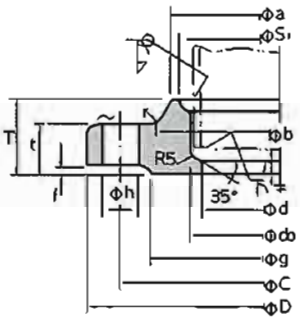
A-TYPE
NOMINAL SIZE 10~50A



B-TYPE
NOMINAL SIZE 10~50A

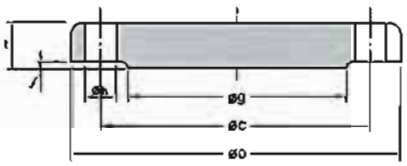


C-TYPE
NOMINAL SIZE 65~600A



*The surface finish(~)
is in the case of die forging.

BL TYPE
NOMINAL SIZE 10-600A



Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter. of Flange do	Outside Diameter. of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Weight(kg)		
				t	T	Diameter of Hub		Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	S_1	m	S_2	n	l	SOP	BL	SOH
						a	b																
10	17.3	17.8	90	14	20	30	32	4	1	46	–	65	4	15	M12	27	4	27	4	–	0.6	0.6	0.59
15	21.7	22.2	95	14	20	34	36	4	1	51	–	70	4	15	M12	31	4	31	4	–	0.7	0.7	0.65
20	27.2	27.7	100	16	22	40	42	4	1	56	–	75	4	15	M12	37	4	37	4	–	0.8	0.8	0.81
25	34.0	34.5	125	16	24	48	50	4	1	67	–	90	4	19	M16	44	4	44	4.5	–	1.3	1.5	1.29
32	42.7	43.2	135	18	26	56	60	5	2	76	–	100	4	19	M16	52	4	53	5	–	1.6	1.8	1.6
40	48.6	49.1	140	18	26	62	66	5	2	81	–	105	4	19	M16	58	4	59	5.5	–	1.7	2.0	1.69
50	60.5	61.1	155	18	26	76	80	5	2	96	–	120	8	19	M16	70	4	72	5.5	–	1.9	2.4	1.89
65	76.3	77.1	175	20	30	100	104	5	2	116	65.9	140	8	19	M16	94	6	85	6	6	2.6	3.4	2.6
80	89.1	90.0	200	22	34	113	117	6	2	132	78.1	160	8	23	M20	107	6	–	–	6	3.8	4.9	3.93
(90)	101.6	102.6	210	24	36	125	130	6	2	145	90.2	170	8	23	M20	120	6	–	–	6	4.4	6.0	4.56
100	114.3	115.4	225	24	36	138	142	6	2	160	102.3	185	8	23	M20	132	6	–	–	6	4.9	6.9	5.13
125	139.8	141.2	270	26	40	166	172	6	2	195	126.6	225	8	25	M22	160	7	–	–	6	7.8	11.0	8.3
150	165.2	166.6	305	28	42	196	202	6	2	230	151.0	260	12	25	M22	186	8	–	–	6	10.1	14.9	10.6
200	216.3	218.0	350	30	46	244	252	6	2	275	199.9	305	12	25	M22	237	9	–	–	6	12.6	21.4	13.3
250	267.4	269.5	430	34	52	304	312	6	2	345	248.8	380	12	27	M24	290	10	–	–	6	21.9	37.2	23.4
300	318.5	321.0	480	36	56	354	364	8	3	395	297.9	430	16	27	M24	345	11	–	–	6	25.8	48.8	27.7
350	355.6	358.1	540	40	62	398	408	8	3	440	333.4	480	16	33	M30 × 3	384	12	–	–	6	36.2	68.0	39.2
400	406.4	409.0	605	46	70	446	456	10	3	495	381.0	540	16	33	M30 × 3	437	13	–	–	7	51.7	99.4	54.2
450	457.2	460.0	675	48	78	504	514	10	3	560	431.8	605	20	33	M30 × 3	490	15	–	–	7	66.1	129.1	71.7
500	508.0	511.0	730	50	84	558	568	10	3	615	482.6	660	20	33	M30 × 3	544	16	–	–	7	77.4	158.4	86.2
(550)	558.8	562.0	795	52	90	612	622	10	3	670	533.4	720	20	39	M36 × 3	595	16	–	–	7	92.2	194.0	105
600	609.6	613.0	845	54	96	666	676	10	3	720	584.2	770	24	39	M36 × 3	646	18	–	–	7	101.1	226.9	119
(650)	660.4	664.0	945	60	–	–	–	–	5	790	–	850	24	48	M45 × 3						147.6	311.6	–
700	711.2	715.0	995	64	–	–	–	–	5	840	–										168.0	370.9	–
(750)	762.0	766.0	1080	68	–	–	–	–	5	900	–	970	24	56	M52 × 3						212.7	460.1	–
800	812.8	817.0	1140	72	–	–	–	–	5	960	–	1030	24	56	M52 × 3						248.5	546.5	–
(850)	863.6	868.0	1200	74	–	–	–		5	1020	–	1090	24	56	M52 × 3						280.5	626.2	–
900	914.6	919.0	1250	76	–	–	–	–	5	1070	–	1140	28	56	M52 × 3						296.9	694.9	–

1.Flanges of parenthesized nominal diameters had better not be used.

2.The Flange gasket surface is based on large raised facing specified in JIS B2202.

3.Size d is an example of pipe thickness for schedule 40 of JIS G3454.and JIS G3456 .But customers can order for other size as occasion demand.

4.For dimensional tolerance,refer to JIS B2203.

5.In principle, material shall be aSS400 specified in JIS G3101, SF390A(or SF440A)specified in JIS G3201, or S20C(or S25C) specified in JIS G4051.Material shall be fit for welding.

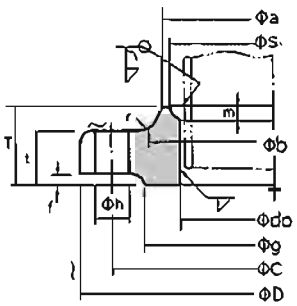
*The surface finish is the case of forging (▽:in other cases).

30Kg/Cm²

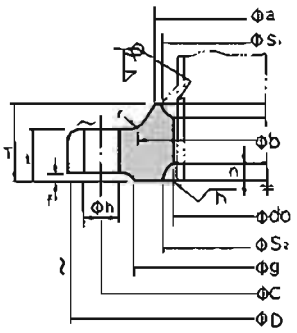
JIS B2220–1984(KSB 1503–1999)

30Kg/Cm² SLIP–ON WELDING STEEL PIPE FLANGES

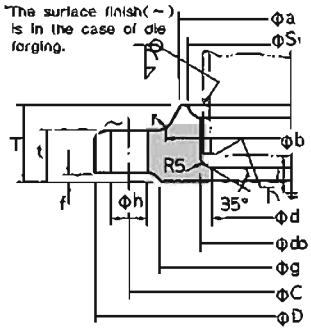
A-TYPE
NOMINAL SIZE 10~50A



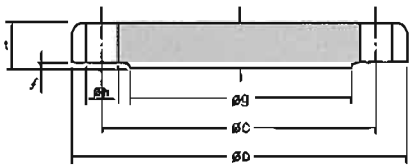
B-TYPE
NOMINAL SIZE 10~50A



C-TYPE
NOMINAL SIZE 65~400A



BL TYPE
NOMINAL SIZE 10-400A



Unit : mm

Nominal Diameter of Flange	Outside Diameter of Steet Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Approx Weight (kg)	
				t	T	Diameter of Hub a	Diameter of Hub b	Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	S_1	m	S_2	n	l	SOH	BL
10	17.3	17.8	110	18	24	30	34	4	1	52	–	75	4	19	M16	–	–	–	–	–	0.99	1.00
15	21.7	22.2	115	18	26	36	40	5	1	55	–	80	4	19	M16	31	4	40	5	–	1.23	1.25
20	27.2	27.7	120	18	28	42	46	5	1	60	–	85	4	19	M16	37	5	44	5	–	1.34	1.38
25	34.0	34.5	130	20	30	50	54	5	1	70	–	95	4	19	M16	44	6	52	5	–	1.76	1.84
32	42.7	43.2	140	22	32	60	64	8	2	80	–	105	4	19	M16	52	6	60	5	–	2.15	2.32
40	48.6	49.1	160	22	34	66	70	8	2	90	–	120	4	23	M20	58	6	66	5	–	2.82	3.00
50	60.5	61.1	165	22	36	82	86	6	2	105	–	130	8	19	M16	70	8.5	78	5	–	2.89	3.14
65	76.3	77.1	200	26	40	102	106	8	2	130	65.9	160	8	23	M20	96	9.5	94	5	6	4.70	5.50
80	89.1	90.0	210	28	44	115	121	8	2	140	78.1	170	8	23	M20	109	9.5	–	–	6	5.36	6.63
(90)	101.8	102.6	230	30	46	128	134	8	2	150	90.2	185	8	25	M22	122	9.5	–	–	6	6.85	8.55
100	114.3	115.4	240	32	48	141	147	8	2	160	102.3	195	8	25	M22	135	9.5	–	–	6	7.89	10.0
125	139.8	141.2	275	36	54	166	172	8	2	195	126.6	230	8	25	M22	160	9.5	–	–	6	11.4	15.3
150	165.2	166.6	325	38	58	196	204	8	2	235	151.0	275	12	27	M24	186	9.5	–	–	6	16.7	22.2
200	216.3	218.0	370	42	64	248	256	8	2	280	199.9	320	12	27	M24	237	9.5	–	–	6	20.6	32.6
250	267.4	269.5	450	48	72	306	314	10	2	345	248.8	390	12	33	M30 × 3	290	10	–	–	6	38.1	55.2
300	318.5	321.0	515	52	78	360	370	10	3	405	297.9	450	16	33	M30 × 3	345	12	–	–	6	49.9	77.9
350	355.6	358.1	560	54	84	402	412	12	3	450	333.4	495	16	33	M30 × 3	383	13	–	–	6	61.2	96.9
400	406.4	409.0	630	60	92	456	468	15	3	510	381.0	560	16	39	M36 × 3	435	14	–	–	7	85.2	136

1. As far as possible, nominal diameter in parenthesis should be avoid from use.
2. The diamensional tolerancer shall confim to JIS B2203.
3. The flange gasket surface is based on large raised facing specified in JIS b2202. But, if necessary, facings other than the Large raised facing specified in JIS B2201 can be designated by customers.
4. Sized is an example of pipe thickness for schedule 40 of JIS G3454 and JIS B3456. When other size is necessary, customers Can order it at will.
5. Material

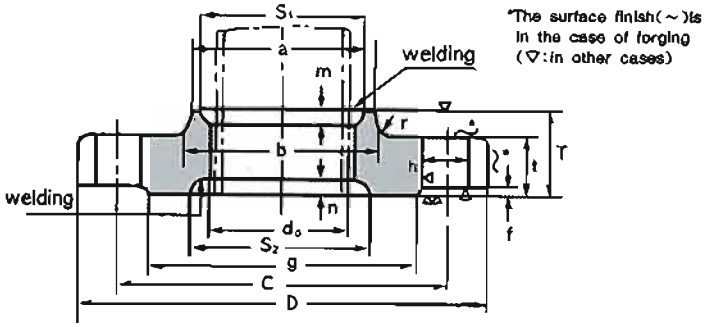
Catbon Steel:S25C spedified in JIS G4051, or Sf440A specified in JIS G3201.
Molybdeum steel: ½ Mo steel spcified in tables 1 and 2 of JIS B2215.
Chromium–Molybdenum steel: ¼ Cr ½ Mo Steel specified in tables 1 and 2 of JIS B2215.
* The surface finish is in the case of forging (△: in other cases)

40Kg/Cm²

JIS B2216

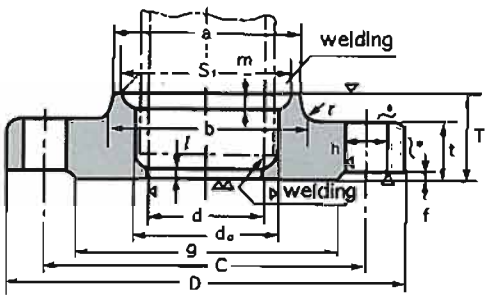
40Kg/Cm² SLIP-ON WELDING STEEL PIPE FLANGES

NOMINAL SIZE 10-65mm



*The surface finish(~)is in the case of forging (▽:in other cases)

NOMINAL SIZE 65-400mm

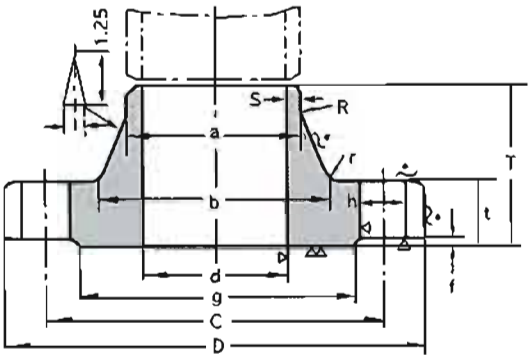


Unit:mm

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Inside Diameter of Flange do	Outside Diameter of Flange D	Sectional Dimensions of Flange								Bolt Hole				Reference					Approx Weight (kg)
				t	T	Diameter of Hub		Radius r	f	g	d	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h	Nominal Bolt Size	S_1	m	S_2	n	l	
						a	b														
10	17.3	17.8	110	18	26	34	38	5	1	52	–	75	4	19	M16	28.0	6	28	5		1.11
15	21.7	22.2	115	20	30	39	43	5	1	55	–	80	4	19	M16	32.5	6	32.5	5		1.39
20	27.2	27.7	120	20	30	45	49	5	1	60	–	85	4	19	M16	38.0	6	38.0	5		1.51
25	34.0	34.5	130	22	32	55	59	5	1	70	–	95	4	19	M16	47.8	6	47.8	5		1.97
32	42.7	43.2	140	24	35	64	68	6	2	80	–	105	4	19	M16	56.5	6	56.5	5		2.50
40	48.6	49.1	160	24	35	70	74	6	2	90	–	120	4	23	M20	62.5	6	62.5	5		3.26
50	60.5	61.1	165	26	38	86	90	6	2	105	–	130	8	19	M16	74.5	6	74.5	5.5		3.47
65	76.3	77.1	200	30	44	106	110	8	2	130	62.3	160	8	23	M20	91.5	7	91.5	7		5.97
80	89.1	90.3	210	32	46	118	124	8	2	140	73.9	170	8	23	M20	105.5	7.5	105.5	7		6.76
100	114.3	115.4	250	36	52	145	151	8	2	165	97.1	205	8	25	M22	133.0	8.5	133.0	7		10.78
125	139.8	141.4	300	40	58	182	188	8	2	200	120.8	250	8	27	M24	160.5	9.5	160.5	7		16.97
150	165.2	167.0	355	44	64	200	208	8	2	240	143.2	295	12	33	M30	188.0	11	188.0	7		22.6
200	216.3	218.2	405	50	72	255	263	8	2	290	190.9	345	12	33	M30	243.0	13	243.0	7		34.9
250	267.4	269.5	475	56	80	310	318	10	2	355	237.2	410	12	33	M30	298.0	15	298.0	7		41.1

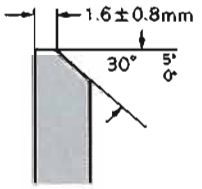
1.As far as possible.nominal diameter in parenthesis should be avoid from use.
2.The dimensional tolerance shall confirm to JIS B2203.
3.The flange gasket surface is based on large raised facing specified in JIS B2202.But ,fi necessary, facings other than the large raised facing specified in JIS B2201 can be designated by customers.
4.Size d is an example of pipe thickness for schedule 40 of JIS G3454 and JIS B3456.when other size is necessary, customers can order it at will.
5.Refer to JIS B2216.

10Kg/Cm²
WELDING NECK FLANGES



*The surface finish shown above is in the case of forging (▽marks: in other cases)

Reference:Beveling



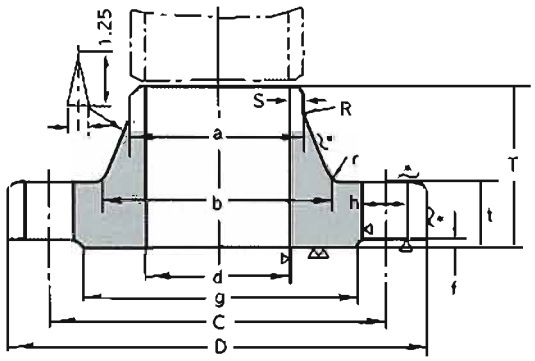
When particularly necessary, customers can order another beveling form the above.

Nominal Diam of Flange	Outside Diam of Steel Pipe	Inside Diam of Flange d	Outside Diam of Flange D	Sectional Dimensions of Flange						Diam of Raised Face g	Bolt Circle Diameter	Number of Bolt Holes	Hole Diam h	Nominal Bolt Size	Length of wecr Depat P *4	Approx Weight (kg)
				t	T *1	Diam of Hub a	Diam of Hub b	Radius r *3	Raised Face f							
10	17.3	To be specified by purchaser	90	12	28.9	17.3	25	4	1	46	65	4	15	M12	3.5	
15	21.7		95	12	30.6	21.7	33	4	1	51	70	4	15	M12	4.5	
20	27.2		100	14	33.9	27.2	38	4	1	56	75	4	15	M12	6.4	
25	34		125	14	36.3	34.0	47	4	1	67	90	4	19	M16	6.0	
32	42.7		135	16	40.3	42.7	57	5	2	76	100	4	19	M16	6.4	
40	48.6		140	16	41.2	48.6	64	5	2	81	105	4	19	M16	5.9	
50	60.5		155	16	42.9	60.5	77	5	2	96	120	4	19	M16	6.3	
65	76.3		175	18	53.0	76.3	97	5	2	116	140	4	19	M16	9.1	
80	89.1		185	18	53.0	89.1	109	6	2	126	150	8	19	M16	9.6	
(90)	101.6		195	18	50.6	101.6	120	6	2	136	160	8	19	M16	9.6	
100	114.3		210	18	54.3	114.3	135	6	2	151	175	8	19	M16	10.4	
125	139.8		250	20	56.2	139.8	160	6	2	182	210	8	23	M20	10.9	
150	165.2		280	22	65.3	165.2	190	6	2	212	240	8	23	M20	12.3	
(175)	190.7		305	22	66.1	190.7	215	6	2	237	265	12	23	M20	13.7	
200	216.3		330	22	66.1	216.3	240	6	2	262	290	12	23	M20	14.4	
(225)	241.8		350	22	62.3	241.8	262	6	2	282	310	12	23	M20	15.0	
250	267.4		400	24	70.7	267.4	292	6	2	324	355	12	25	M22	15.9	
300	318.5		445	24	75.9	318.5	346	6	3	368	400	16	25	M22	17.5	
350	355.6		490	26	83.0	355.6	386	8	3	413	445	16	25	M22	19.0	
400	406.4		560	28	94.4	406.4	442	8	3	475	510	16	27	M24	21.9	
450	457.2		620	30	107.9	457.2	502	10	3	530	565	20	27	M24	21.9	
500	508		675	30	110.2	508.0	554	10	3	585	620	20	27	M24	22.7	
550	558.8		745	32	119.9	558.8	610	10	3	640	680	20	33	M30	23.9	
600	609.6		795	32	123.6	609.6	662	10	3	690	730	24	33	M30	26.1	

1. *1 *2 *4 DIMENSIONS OF "T" "r" "S" "P" ARE MAKER, JUNG ANG' S STANDARD.
2. *2 UNDER NOMINAL SIZE 225m/m & UNDER DIMENSION OF "b" IS MAKER, JUNG ANG' S STANDARD.
3. ALL DIMENSIONS OF FLANGE WAS DESIGNED ON JIS B2220 & B1503 BASE

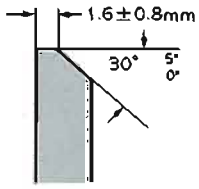
20Kg/Cm²

WELDING NECK STEEL PIPE FLANGES



*The surface finish shown above is in the case of forging (▽marks: in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

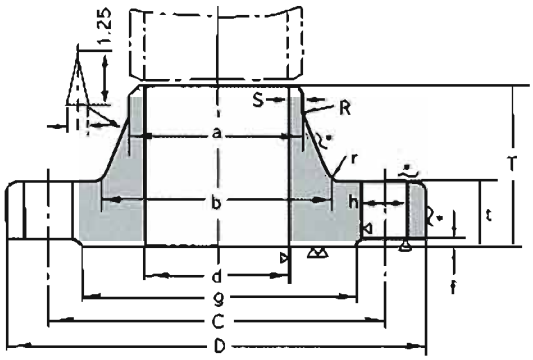
Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight (kg)
			t	d	a	b	S	T	P	Radius	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Diameter of Hole h		
10	17.3	90	14	To be specified by purchaser.	17.3	32	To be specified by purchaser.	35.9	3.5	4	1	46	65	4	15	M12	
15	21.7	95	14		21.7	36		36.4	4.5	4	1	51	70	4	15	M12	
20	27.2	100	16		27.2	42		40.9	6.4	4	1	56	75	4	15	M12	
25	34.0	125	16		34.0	50		42.0	6.0	4	1	67	90	4	19	M16	
32	42.7	135	18		42.7	60		46.0	6.4	5	2	76	100	4	19	M16	
40	48.6	140	18		48.6	66		45.7	5.9	5	2	81	105	4	19	M16	
50	60.5	155	18		60.5	80		48.7	6.3	5	2	96	120	8	19	M16	
65	76.3	175	20		76.3	104		63.7	9.1	5	2	116	140	8	19	M16	
80	89.1	200	22		89.1	117		66.5	9.6	6	2	132	160	8	23	M20	
90	101.6	210	24		101.6	130		68.9	9.4	6	2	145	170	8	23	M20	
100	114.3	225	24		114.3	142		69.0	10.4	6	2	160	185	8	23	M20	
125	139.8	270	26		139.8	172		77.2	10.9	6	2	195	225	8	25	M22	
150	165.2	305	28		165.2	202		86.3	12.3	6	2	230	260	12	25	M22	
200	216.3	350	30		216.3	252		89.0	14.4	6	2	275	305	12	25	M22	
250	267.4	430	34		267.4	312		105.7	15.9	6	2	345	380	12	27	M24	
300	318.5	480	36		318.5	364		110.4	17.5	8	3	395	430	16	27	M24	
350	355.6	540	40		355.6	408		124.5	19.0	8	3	440	480	16	33	M30×3	
400	406.4	605	46		406.4	456		129.9	21.9	10	3	495	540	16	33	M30×3	
450	457.2	675	48		457.2	514		140.9	21.9	10	3	560	605	20	33	M30×3	
500	508.0	730	50		508.0	568		147.7	22.7	10	3	615	660	20	33	M30×3	
550	558.8	795	52		558.8	622		154.9	23.9	10	3	670	720	20	39	M36×3	
600	609.6	845	54		609.6	676		163.1	26.1	10	3	720	770	24	39	M36×3	

NOTE: DIMENSIONS ARE MAKER JUNQ ANQ STANDARD AND DESIGN BASE IS JIS B2220-1984

30Kg/Cm²

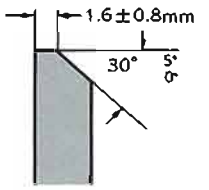
JIS B2220-1984(KSB 1503-1999)

WELDING NECK STEEL PIPE FLANGES



*The surface finish shown above is in the case of forging (▽marks:in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

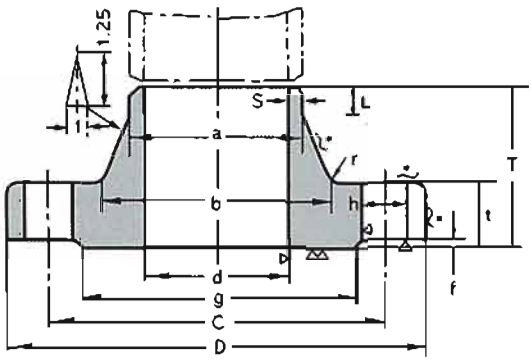
Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight (kg)
			t	d	a	b	S	T	R	Radius r	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Hole Diameter h		
15	21.7	115	18	15.8	22.0	40	3.1	45	20	6	1	55	80	4	19	M16	1.33
20	27.2	120	18	21.1	27.5	44	3.2	45	20	6	1	60	85	4	19	M16	1.47
25	34.0	130	20	26.8	34.4	52	3.8	48	20	6	1	70	95	4	19	M16	1.95
32	42.7	140	22	35.1	43.1	62	4.0	52	30	6	2	80	105	4	19	M16	2.43
40	48.6	160	22	40.7	49.1	70	4.2	54	30	6	2	90	120	4	23	M20	3.16
50	60.5	165	22	52.2	61.0	84	4.4	57	30	8	2	105	130	8	19	M16	3.33
65	76.3	200	26	65.3	76.9	104	5.8	69	30	8	2	130	160	8	23	M20	5.91
80	89.1	210	28	77.5	89.7	118	6.1	73	30	8	2	140	170	8	23	M20	7.05
(90)	101.6	230	30	89.5	102.3	130	6.4	74	30	8	2	150	185	8	25	M22	8.54
100	114.3	240	32	101.5	115.1	142	6.8	76	30	8	2	160	195	8	25	M22	9.72
125	139.8	275	36	125.7	140.7	172	7.5	86	50	10	2	195	230	8	25	M22	14.4
150	165.2	325	38	150.0	166.2	202	8.1	95	50	10	2	235	275	12	27	M24	20.6
200	216.3	370	42	198.7	217.5	254	9.4	102	50	10	2	280	320	12	27	M24	28.7
250	267.4	450	48	247.5	268.7	312	10.6	118	50	12	2	345	390	12	33	M30×3	47.3
300	318.5	515	52	296.4	320.0	366	11.8	127	50	15	3	405	450	16	33	M30×3	62.8
350	355.6	560	54	331.8	357.2	406	12.7	134	80	15	3	450	495	16	33	M30×3	77.0
400	406.4	630	60	379.1	408.3	462	14.6	149	80	20	3	510	560	16	39	M36×3	108.0

REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.
2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.
3. Size d and Size S are example for schedule 40 of JIS G3454 and JIS G3456. Customers can also order for other sizes.
4. For dimensional tolerance, refer to JIS B2203.
5. Material
Carbon Steel: S25C specified in JIS G4051, or SF45 specified in JIS G3201.
Molybdenum Steel: ½Mo Steel specified in tables 1 and 2 of JIS B2215.
Chromium-Molybdenum Steel: 1¼ Cr ½ Mo Steel specified in tables 1 and 2 of JIS B2215.

40Kg/Cm²

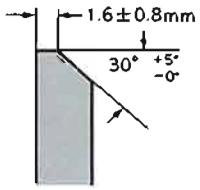
JIS B2219-1984

WELDING NECK STEEL PIPE FLANGES



*The surface finish shown above is in the case of forging (▽marks: in other cases)

Reference:Beveling



When particularly necessary, customers can order another beveling form the above.

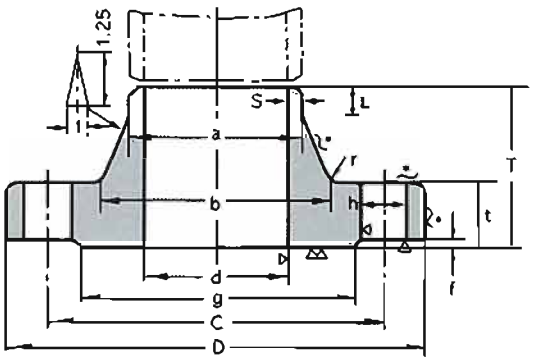
Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight(kg)	
			t	d	a	b	S	T	L	Radius r	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Diameter of Hole h		#40	#80
15	21.7	115	20	15.8	21.7	40	3.1	50	10	6	1	55	80	4	19	M16	1.53	1.55
20	27.2	120	20	21.1	27.2	44	3.2	50	10	6	1	60	85	4	19	M16	1.72	1.74
25	34.0	130	22	26.8	34.0	52	3.8	52	12	6	1	70	95	4	19	M16	2.24	2.28
32	42.7	140	24	35.1	42.7	62	4.0	56	14	6	2	80	105	4	19	M16	2.24	2.86
40	48.6	160	24	40.7	48.6	70	4.2	60	14	6	2	90	120	4	23	M20	2.93	3.01
50	60.5	165	26	52.2	60.5	84	4.4	64	16	8	2	105	130	8	19	M16	4.2	4.41
65	76.3	200	30	65.3	76.3	104	5.8	75	18	8	2	130	160	8	23	M20	7.32	7.52
80	89.1	210	32	77.5	89.1	118	6.1	80	18	8	2	140	170	8	23	M20	8.47	8.80
(90)	104.6	230	34	89.5	104.6	130	6.4	88	18	8	2	150	185	8	25	M22	9.4	-
100	114.3	250	36	101.5	114.3	148	6.8	90	24	8	2	165	205	8	25	M22	13.25	13.82
125	139.8	300	40	125.7	139.8	186	7.5	108	26	10	2	200	250	8	27	M24	21.64	22.5
150	165.2	355	44	150.0	165.2	218	8.1	122	30	10	2	240	295	12	33	M30	32.45	35.1
200	216.3	405	50	198.7	216.3	272	9.4	132	38	10	2	290	345	12	33	M30	45.5	47.2
250	267.4	475	56	247.5	267.4	338	10.6	138	44	12	2	355	410	12	33	M30	69.6	-
300	318.5	540	60	296.4	318.5	400	11.8	159	48	15	3	410	470	16	39	M36	96.0	-
350	355.6	585	64	331.8	355.6	432	12.7	168	50	15	3	455	515	16	39	M36	115.0	-
400	406.4	645	70	379.1	406.4	466	14.6	181	50	20	3	515	570	16	39	M36	143.0	-

REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.
2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.
3. Size d and Size S are example for schedule 40 of JIS G3456. Customers can also order for other sizes.
4. For dimensional tolerance, refer to JIS B2203.
5. T of 125 nominal Diameter is maker's standard.

63Kg/Cm²

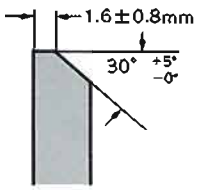
JIS B2220-1984(KSB 1503-1999)

WELDING NECK STEEL PIPE FLANGES



"The surface finish shown above is in the case of forging (▽marks: in other cases)

Reference:Beveling



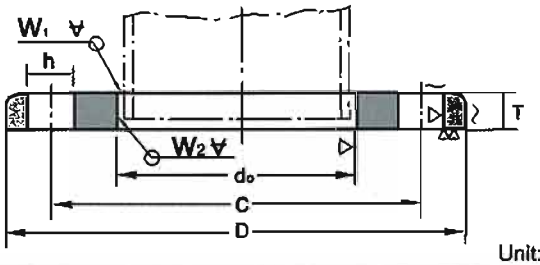
When particularly necessary, customers can order another beveling form the above.

Nominal Diameter of Flange	Outside Diameter of Steel Pipe	Outside Diameter of Flange D	Sectional Dimensions of Flange										Bolt Hole			Nominal Bolt Size	Approx Weight(kg)	
			t	d	a	b	S	T	L	Radius r	f	g	Bolt Circle Diameter C	Number of Bolt Holes	Diameter of Hole h		#80	#160
15	21.7	120	23	To be specified by purchaser.	21.7	45	3.1	60	10	6	1	55	85	4	19	M16	2.07	2.09
20	27.2	135	25		27.2	50	3.2	62	12	6	1	60	95	4	23	M20	2.80	2.85
25	34.0	140	27		34.0	54	3.8	62	13	6	1	70	100	4	23	M20	3.29	3.33
32	42.7	150	31		42.7	64	4.0	66	13	6	2	80	110	4	23	M20	4.12	4.2
40	48.6	175	33		48.6	78	4.2	78	14	6	2	90	130	4	25	M22	6.17	6.31
50	60.5	185	35		60.5	92	4.4	84	16	8	2	105	145	8	23	M20	7.35	7.85
65	76.3	220	39		76.3	114	5.8	96	18	10	2	130	175	8	25	M22	11.85	12.22
80	89.1	230	41		89.1	126	6.1	98	18	10	2	140	185	8	25	M22	13.23	13.82
(90)	101.6	255	42		101.6	140	6.4	126	18	10	2	150	205	8	27	M24	15.2	15.8
100	114.3	270	45		114.3	154	6.8	107	20	10	2	165	220	8	27	M24	19.45	20.65
125	139.8	325	51		(139.8)	(190)	7.5	(128)	24	12	2	200	265	8	33	M30	31.40	34.0
150	165.2	365	55		165.2	224	8.1	142	26	15	2	240	305	12	33	M30	45.0	48.5
200	216.3	425	61		216.3	274	9.4	151	30	15	2	290	360	12	33	M30	63.60	70.7
250	267.4	500	69		267.4	340	10.6	175	38	20	2	355	430	12	39	M36	144.0	-
300	318.5	560	78		318.5	402	11.8	286	44	23	3	410	485	16	39	M36	154.0	-
350	355.6	615	82		355.6	438	12.7	301	48	25	3	455	530	16	46	M43	191	-
400	406.4	680	81		406.4	490	14.6	314	48	25	3	515	590	16	46	M43	247	-

REMARKS: 1. Flange of parenthesized nominal diameter had better not be used.
2. The Flange gasket surface is based on "large raised facing" specified in JIS B2202. If necessary, customers can order for other types of facing.
3. Size d and Size are example for schedule 40 of JIS G3454 and JIS G3456. Customers can also order for oterh sizes.
4. For dimensional tolerance, refer to JIS B2203.
5. The dimensime of ( ) are maker's standard.

1K

KS V 7815 JIS F 7805
SLIP-ON FLANGES



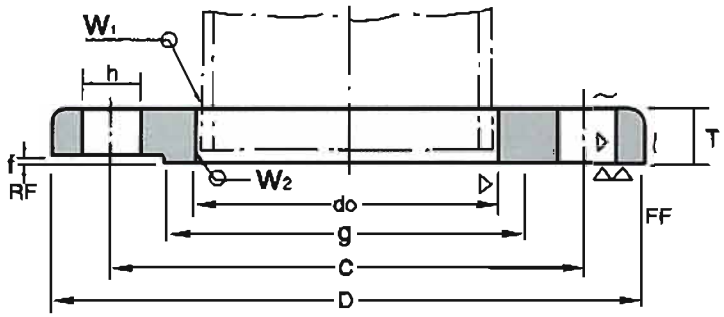
Unit:mm

N/D	PIPE	FLANGE			BOLT HOLE			BOLT	WT
	O/D(d)	D	I/D(do)	T	C	N	h	(M)	(KG)
25	34.0	95	34.5	10	75	4	12	M10	0.45
(32)	42.7	115	43.2	12	90	4	16	M12	0.73
40	48.6	120	49.1	12	95	4	16	M12	0.83
50	60.5	130	61.1	14	105	4	15	M12	1.06
65	76.3	155	77.1	14	130	4	15	M12	1.48
80	89.1	180	90.0	14	145	4	19	M16	1.97
100	114.3	200	115.4	16	165	8	19	M16	2.35
125	139.8	235	141.2	16	200	8	19	M16	3.20
150	165.2	265	166.6	16	230	8	19	M16	3.90
200	216.3	320	218.0	16	280	8	23	M20	5.00
250	267.4	385	269.5	16	345	12	23	M20	6.83
300	318.5	430	321.0	16	390	12	23	M20	7.45
350	355.6	480	358.1	16	435	12	25	M22	9.45
400	406.4	540	409.0	16	495	16	25	M22	11.43
450	457.2	605	460.0	16	555	16	25	M22	14.40
500	508.0	655	511.0	16	605	16	25	M22	15.73
(550)	555.8	660	562.0	16	620	16	23	M20	12.00
600	609.6	710	613.0	16	670	16	23	M20	12.12
(650)	660.4	760	664.0	16	720	16	23	M20	12.15
700	711.2	815	715.0	16	775	16	23	M20	14.28
750	762.0	865	766.0	16	825	20	23	M20	14.88
800	812.8	915	817.0	16	875	20	23	M20	15.70
(850)	863.6	965	868.0	16	925	20	23	M20	16.50
900	914.4	1025	919.0	18	980	20	25	M22	21.48
(950)	962.0	1075	967.0	18	1030	20	25	M22	21.97
1000	1016.0	1125	1021.0	18	1080	20	25	M22	23.38
1050	1062.0	1175	1067.0	18	1130	24	25	M22	25.21
1100	1117.6	1225	1122.0	18	1180	24	25	M22	25.16
1150	1162.0	1275	1167.0	18	1230	24	25	M22	26.64
1200	1219.0	1325	1224.0	18	1280	24	25	M22	27.60
1250	1262.0	1375	1267.0	18	1330	28	25	M22	29.72
1300	1312.0	1425	1317.0	18	1380	28	25	M22	30.92
1350	1371.6	1475	1376.0	18	1430	28	25	M22	32.38
1400	1412.0	1525	1417.0	20	1480	28	25	M22	37.02
1450	1462.0	1595	1467.0	20	1540	28	27	M24	45.81
1500	1524.0	1645	1529.0	20	1590	28	27	M24	46.88
1600	1612.0	1745	1617.0	20	1690	28	27	M24	50.54
1700	1712.0	1845	1717.0	20	1790	28	27	M24	53.70
1800	1812.0	1950	1817.0	20	1895	32	27	M24	58.90
1900	1912.0	2050	1917.0	20	1995	32	27	M24	62.18
2000	2012.0	2150	2017.0	20	2095	36	27	M24	65.10
2100	2116.0	2250	2121.0	24	2195	36	27	M24	79.55
2200	2216.0	2350	2221.0	24	2295	40	27	M24	82.94
2300	2316.0	2450	2321.0	24	2395	40	27	M24	86.75
2400	2416.0	2550	2421.0	24	2495	40	27	M24	89.71
2500	2516.0	2650	2521.0	24	2595	48	27	M24	93.52
2600	2616.0	2750	2621.0	24	2695	48	27	M24	97.34

2Kg/Cm²

KS B 1511–1987. JIS B 2220–1977

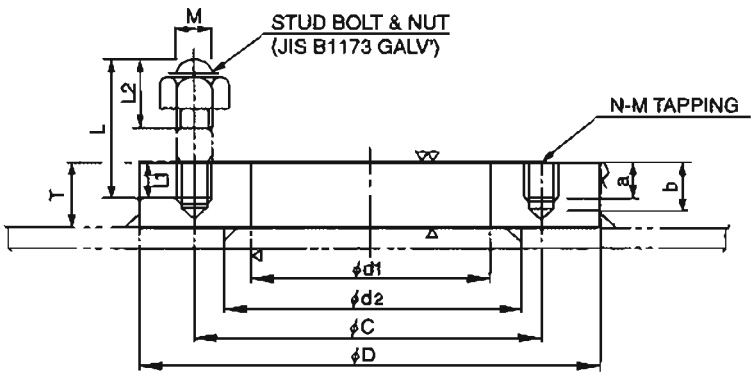
SLIP–ON FLANGE



Unit:mm

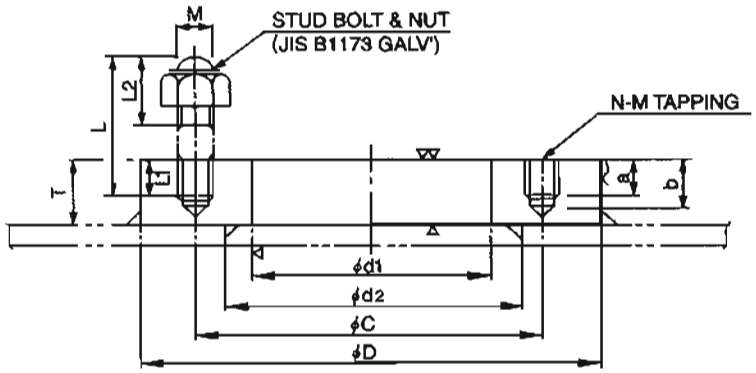
Nominal Bore of Flange	Outside Diam. of Applicable Pipe	Inside Diam. of Flange do	Sectional Dimensions		Bolt Hole			Nominal Bolt Size
			t	D	C	h	N	
450A	457.2	460	22	605	555	23	16	M20
500A	508.0	511	22	655	605	23	20	M20
550A	558.8	562	24	720	665	25	20	M22
600A	609.6	613	24	770	715	25	20	M22
650A	660.4	664	24	825	770	25	24	M22
700A	711.2	715	24	875	820	25	24	M22
750A	762.0	766	24	945	880	27	24	M24
800A	812.8	817	24	995	930	27	24	M24
(850)A	863.6	868	24	1045	980	27	24	M24
900A	914.4	919	24	1095	1030	27	24	M24
1000A	1016.0	1021	26	1195	1130	27	28	M24
(1100)A	1117.6	1123	26	1305	1240	27	28	M24
1200A	1219.2	1224	26	1420	1350	27	32	M24
1350A	1371.6	1377	26	1575	1505	27	32	M24
1500A	1524.0	1529	28	1730	1660	27	36	M24

5K SET-ON FLANGE
JIS B 2220-1999



Nominal Broe of Flange	Sectional Dimensions						STUD BOLT					Weight (kg)
	D	C	d1	T	a	b	N	M	L	L2	L1	
10A	75	55	17.8	16	10	12	4	M10	32	CONTINUOUS THREAD		0.47
15A	80	60	22.2	16	10	12	4	M10	32			0.53
20A	85	65	27.7	16	10	12	4	M10	32			0.60
25A	95	75	34.5	16	10	12	4	M10	32			0.72
32A	115	90	43.2	22	12	16	4	M12	40	22	12	1.45
40A	120	95	49.1	22	12	16	4	M12	40	22	12	1.54
50A	130	105	61.1	22	12	16	4	M12	45	22	12	1.70
65A	155	130	77.1	22	12	16	4	M12	45	22	12	2.36
80A	180	145	90.0	26	16	19	4	M16	50	28	16	3.74
100A	200	165	115.4	26	16	19	8	M16	55	28	16	4.01
125A	235	200	141.2	26	16	19	8	M16	55	28	16	5.38
150A	265	230	166.6	26	16	19	8	M16	55	28	16	6.52
200A	320	280	218.0	30	20	23	8	M20	65	36	20	9.66
250A	385	345	269.5	30	20	23	12	M20	65	36	20	13.25
300A	430	390	321.0	30	20	23	12	M20	65	36	20	14.41
350A	480	435	358.1	34	22	25	12	M22	75	40	22	20.55
400A	540	495	409.0	34	22	25	16	M22	75	40	22	24.85
450A	605	555	460.0	34	22	25	16	M22	75	40	22	31.15

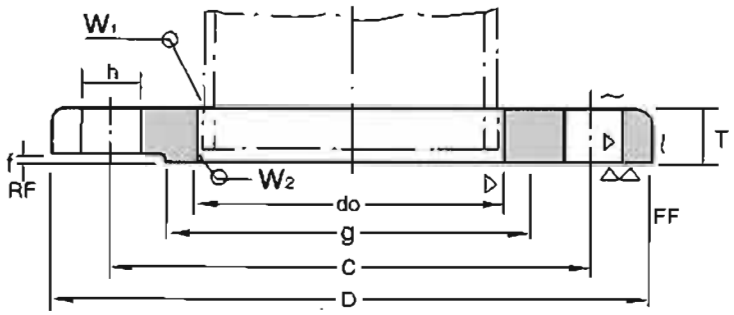
10K SET-ON FLANGE
JIS B 2220-1999



Nominal Broe of Flange	Sectional Dimensions						STUD BOLT					Weight (kg)
	D	C	d1	T	a	b	N	M	L	L2	L1	
10A	90	65	17.8	22	12	16	4	M12	40	22	12	0.97
15A	95	70	22.2	22	12	16	4	M12	40	22	12	1.07
20A	100	75	27.7	22	12	16	4	M12	40	22	12	1.17
25A	125	90	34.5	26	16	19	4	M16	50	28	16	2.27
32A	135	100	43.2	26	16	19	4	M16	50	28	16	2.57
40A	140	105	49.1	26	16	19	4	M16	50	28	16	2.67
50A	155	120	61.1	26	16	19	4	M16	50	28	16	3.07
65A	175	140	77.1	26	16	19	4	M16	55	28	16	3.11
80A	185	150	90.0	26	16	19	8	M16	55	28	16	3.87
100A	210	175	115.4	26	16	19	8	M16	55	28	16	4.67
125A	250	210	141.2	30	20	23	8	M20	65	36	20	7.36
150A	280	240	166.6	30	20	23	8	M20	70	36	20	8.84
200A	330	290	218.0	30	20	23	12	M20	70	36	20	10.64
250A	400	355	269.5	34	22	25	12	M22	75	40	22	17.51
300A	445	400	321.0	34	22	25	16	M22	75	40	22	18.63

KS B2332–1994 & KS D 4308 KS B 2333–1995

Sluice valves for water works flang Butterfly valve for water works flange



Unit : mm

Nominal Bore of Flange	Inside Diam. of Flange do	Sluice valves for water works flange Sectional Dimensions of Flange							Butterfly valves for water works flange Sectional Dimensions of Flange						
		T	D	C	g	f	Diam. of Bolt		T	D	C	g	f	Diam. of Bolt	
							h	N						h	N
50A	61.1	16	155	120	100	2	19	4							
80A	80.0	19	200	160	133	3	19	4							
100A	115.4	19	220	180	153	3	19	8							
125A	141.2	19	250	210	183	3	19	8							
150A	166.6	19	285	240	209	3	23	8							
200A	218.0	20	340	295	264	3	23	8	24	340	295	264	3	23	8
250A	269.5	22	395	350	319	3	23	12	25	395	350	319	3	23	12
300A	321.0	24	445	400	367	4	23	12	27	445	400	367	4	23	12
350A	358.1	24	505	460	427	4	23	16	28	505	460	427	4	23	16
400A	409.0	24	565	515	477	4	28	16	29	565	515	477	4	28	16
450A	460.0	26	615	565	527	4	28	20	30	615	565	527	4	28	20
500A	511.0	26	670	620	582	4	28	20	31	670	620	582	4	28	20
600A	613.0	30	780	725	692	4	31	20	32	780	725	592	4	31	20
700A	715.0	32	895	840	797	4	31	24	34	895	840	797	4	31	24
800A	817.0	35	1015	950	904	5	34	24	36	1015	950	904	5	34	24
900A	919.0	38	1115	1050	1004	5	34	28	38	1115	1050	1004	5	34	28
1000A	1021.0	40	1230	1160	1111	5	37	28	40	1230	1160	1111	5	37	28
1100A	1122.0	40	1366	1270	1200	5	37	32	42	1366	1270	1200	5	37	32
1200A	1224.0	43	1470	1387	1304	5	37	32	44	1470	1387	1304	5	37	32
1350A	1376.0	45	1642	1552	1462	6	38	36	48	1642	1552	1462	6	38	36
1500A	1529.0	48	1800	1710	1620	6	38	36	50	1800	1710	1620	6	38	36
1600A	1617.0								50	1915	1820	1760	6	40	40
1650A	1682.0								50	1950	1880	1770	6	40	40
1800A	1817.0								50	2115	2020	1960	6	48	44
2000A	2017.0								54	2325	2230	2170	6	48	48

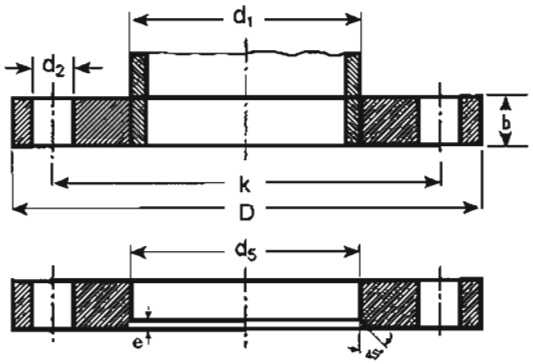
河北海浩




德标
法兰参数系列

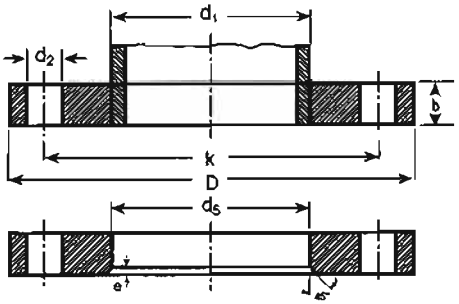
FLANGES WELD ON PIPES
Nominal pressure :6kgf/cm²–ND6
DIN 2573

FLANGES
DUZ,BORUYA KAYNAK EDiLEN
Anma Basinc1:6kgf/cm²–ND6
TS 816/1 (TS ISO 7005–1)



BORU (Pipe)			FLANS (Flange)					CIVATALAR (Bolts)			AGIRLIK (Weight) (7.85 kg/dm³) kg
DN	d_1 1	d_1 2	d_5	D	b	e	k	Sayisi (Each)	Vida (Screw)	d_2	
10		14	14.5	75	12	5	50	4	M10	11.5	0.363
	17.2		17.7								
15		20	21	80	12	5	55	4	M10	11.5	0.410
	21.3		22								
20		25	26	90	14	5	65	4	M10	11.5	0.600
	26.9		27.6								
25		30	31	100	14	5	75	4	M10	11.5	0.740
	33.7		34.4								
32		38	39	120	16	5	90	4	M12	14	1.19
	42.4		43.1								
40		44.5	45.5	130	16	5	100	4	M12	14	1.39
	48.3		49								
50		57	58.1	140	16	6	110	4	M12	14	1.53
	60.3		61.1								
65	76.1		77.1	160	16	6	130	4	M12	14	1.89
80	88.9		90.3	190	18	7	150	4	M16	18	2.98
100		108	109.6	210	18	7	170	4	M16	18	3.46
	114.3		115.9								
125		133	134.8	240	20	7	200	8	M16	18	4.60
	139.7		141.6								
150		159	161.1	265	20	7	225	8	M16	18	5.22
	168.3		170.5								
200	219.1		221.8	320	22	7	280	8	M16	18	7.15
250		267	270.2	375	24	7	335	12	M16	18	9.61
	273		276.2								
300	323.9		327.6	440	24	7	395	12	M20	23	12.6
350	355.6		359.7	490	26	7	445	12	M20	23	15.6
		368	372.2								
400	406.4		411	540	28	7	495	16	M20	23	18.4
		419	423.7								
(450)	457		462.5	595	30	7	550	16	M20	23	21.4
500	508		513.6	645	30	7	600	20	M20	23	24.6

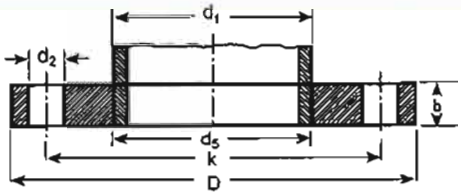
FLANGES WELD ON PIPES
Nominal pressure :10kgf/cm²–ND10
DIN 2576
FLANGES
DUZ,BORUYA KAYNAK EDiLEN
Anma Basinc1:10kgf/cm²–ND6
TS 816/2 (TS ISO 7005–1)



BORU (Pipe)			FLANS (Flange)					CIVATALAR (Bolts)			AGIRLIK (Weight) (7.85 kg/dm³) kg
DN	d_1 1	d_1 2	d_5	D	b	e	k	Sayisi (Each)	Vida (Screw)	d_2	
10		14	14.5	90	14	5	60	4	M12	14	0.613
	17.2		17.7								0.605
15		20	21	95	14	5	65	4	M12	14	0.675
	21.3		22								0.669
20		25	26	105	16	5	75	4	M12	14	0.749
	26.9		27.6								0.936
25		30	31	115	16	5	85	4	M12	14	1.14
	33.7		34.4								1.11
32		38	39	140	16	5	100	4	M16	18	1.66
	42.4		43.1								1.62
40		44.5	45.5	150	16	5	110	4	M16	18	1.89
	48.3		49								1.86
50		57	58.1	165	18	6	125	4	M16	18	2.51
	60.3		61.1								2.47
65	76.1		77.1	185	18	6	145	4	M16	18	3.00
80	88.9		90.3	200	20	7	160	4	M16	18	3.79
100		108	109.6	220	20	7	180	8	M16	18	4.20
	114.3		115.9								4.03
125		133	134.8	250	22	7	210	8	M16	18	5.71
	139.7		141.6								5.46
150		159	161.1	285	22	7	240	8	M20	23	6.72
	168.3		170.5								6.57
(175)	193.7		196.1	315	24	7	270	8	M20	23	8.45
200	219.1		221.8	340	24	7	295	8	M20	23	9.31
250		267	270.2	395	26	7	350	12	M20	23	12.5
	273		276.2								11.9
300	323.9		327.6	445	26	7	400	12	M20	23	13.8
350	355.6		359.7	505	28	7	460	16	M20	23	20.6
		368	372.2								19.0
400	406.4		411	565	32	7	515	16	M24	27	27.9
		419	423.7								25.9
(450)	457		462.5	615	38	7	565	20	M24	27	35.6
500	508		513.6	670	38	7	620	20	M24	27	41.1
600	610	–	616.5	780	40	7	725	20	M27	30	51.87
700	711	–	716	895	40	7	840	24	M27	30	65.79
800	813	–	818	1015	44	7	950	24	M30	33	90.87
900	914	–	920	1115	48	7	1050	28	M30	33	108.41
1000	1016	–	1022	1230	50	7	1160	28	M33	36	133.21
1200	1220	–	1226	1455	54	7	1380	32	M36	39	188.20
1400	1420	–	1426	1675	60	7	1590	36	M39	42	262.14
1600	1620	–	1626	1915	64	7	1820	40	M45	48	367.43
1800	1820	–	1826	2115	70	7	2020	44	M45	48	447.79
2000	2020	–	2026	2325	76	7	2230	48	M45	48	577.71
2200	2220	–	2226	2550	82	7	2440	52	M52	56	699.88
2400	2420	–	2426	2760	88	7	2650	56	M52	56	844.49
2600	2620	–	2626	2960	94	7	2850	60	M52	56	972.23
2800	2820	–	2826	3180	100	7	3070	64	M52	56	1187.1
3000	3020	–	3026	3405	106	7	3290	68	M52	56	

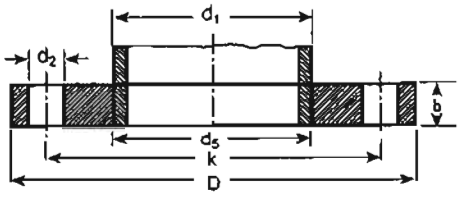
*Duz boruya kaynakli flanslarinND 16–ND 25 –ND 40 olarak imalati yapilmaktadir.

DIN2502
PN16



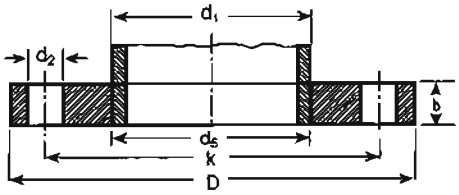
TUBO				BRIDA		TORNILLOS				PESO UNIDAD (7,85kg/dm³) kg. ≈
DN	d_1 ISO	d_1 DIN	d_5	D	b	k	CANT.	ROSCA	d_2	
10 a 175	Los diametros nominales de 10 a 175, son iguales que la tabla DIN 2576									
10		14	14.5	90	14	60	4	M12	14	0.613
	17.2		17.7							0.605
15		20	21	95	14	65	4	M12	14	0.675
	21.3		22							0.669
20		25	26	105	16	75	4	M12	14	0.749
	26.9		27.6							0.936
25		30	31	115	16	85	4	M12	14	1.14
	33.7		34.4							1.11
32		38	39	140	16	100	4	M16	18	1.66
	42.4		43.1							1.62
40		44.5	45.5	150	16	110	4	M16	18	1.89
	48.3		49							1.86
50		57	58.1	165	18	125	4	M16	18	2.51
	60.3		61.1							2.47
65	76.1		77.1	185	18	145	4	M16	18	3.00
80	88.9	–	90.3	200	20	160	8	M16	18	3.79
100		108	109.6	220	20	180	8	M16	18	4.20
	114.3		115.9							4.03
125		133	134.8	250	22	210	8	M16	18	5.71
	139.7		141.6							5.46
150		159	161.1	285	22	240	8	M20	23	6.72
	168.3		170.5							6.57
175	193.7		196.1	315	24	270	8	M20	23	8.45
200	219.1	216	221.8	340	24	295	12	M20	23	9.2
250	–	267	270.2	405	26	355	12	M24	27	13.4
	273	–	276.2							
300	323.9	318	327.6	460	28	410	12	M24	27	17.4
350	355.6	–	359.7	520	30	470	16	M24	27	26.6
	–	368	372.2							
400	406.4	–	411	580	32	525	16	M27	30	30.9
	–	419	423.7							
500	508	521	513.6	715	38	650	20	M30	33	54.0
600	610	622	616.5	840	42	770	20	M33	36	77.58
700	711	720	716	910	44	840	24	M33	36	77.13
800	813	820	818	1.025	50	950	24	M36	39	106.35
900	914	920	920	1.125	54	1.050	28	M36	39	125.39
1.000	1.016	1020	1.022	1.255	60	1.170	28	M39	42	177.99
1.200	1.220	–	1.226	1.485	68	1.390	32	M45	48	263.46
1.400	1.420	–	1.426	1.685	74	1.590	36	M45	48	329.77
1.600	1.620	–	1.626	1.930	82	1.820	40	M52	56	483.11
1.800	1.820	–	1.826	2.130	88	2.020	44	M52	56	577.63
2.000	3.020	–	2.026	2.345	94	2.230	48	M56	62	720.85

DIN2503
PN25



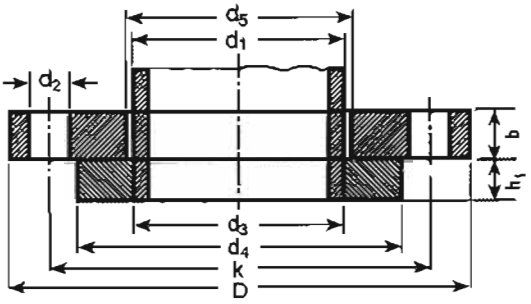
TUBO			BRIDA				TORNILLOS			PESO UNIDAD (7,85kg/dm³) kg. ≈
DN	d_1 ISO	d_1 DIN	d_6	D	b	k	CANT. ROSCA		d_2	
10 a 150	Los diametros nominales de 10 a 150, son iguales que la tabla de Presion Nominal 40									
15		20	21	95	16	65	4	M12	14	0.77
	21.3		22							
20		25	26	105	18	75	4	M12	14	1
	26.9		27.6							
25		30	31	115	18	85	4	M12	14	1.28
	33.7		34.4							
32		38	39	140	18	100	4	M16	18	1.87
	42.4		43.1							
40		44.5	45.5	150	18	110	4	M16	18	2.13
	48.3		49							
50		57	58.1	165	20	125	4	M16	18	2.79
	60.3		61.1							
65	76.1		77.1	185	22	145	8	M16	18	3.48
80	88.9		90.3	200	24	160	8	M16	18	4.35
100		108	109.6	235	24	190	8	M20	22	5.78
	114.3		115.9							
125		133	134.8	270	26	220	8	M24	26	7.87
	139.7		141.6							
150		159	161.1	300	28	250	8	M24	26	10.1
	168.3		170.5							
(175)	193.7	–	196.1	330	28	280	12	M24	26	11.0
200	219.1	–	221.8	360	30	310	12	M24	26	13.6
250	–	267	270.2	425	32	370	12	M27	30	19.4
	273	–	276.2							
300	323.9	–	327.6	485	34	430	16	M27	30	25.0
350	355.6	–	359.7	555	38	490	16	M30	33	38.2
	–	368	372.2							
400	406.4	–	411	620	40	550	16	M33	36	48.8
	–	419	423.7							
500	508	–	513.6	730	44	660	20	M33	36	67.2
600	610	–	616.5	845	50	770	20	M36	39	93.57
700	711	–	716	960	52	875	24	M39	42	117.53
800	813	–	818	1085	56	990	24	M45	48	156.31
900	914	–	920	1185	62	1090	28	M45	48	188.57
1000	1016	–	1022	1320	68	1210	28	M52	56	255.79
1200	1220	–	1226	1530	76	1420	32	M52	56	345.56
1400	1420	–	1426	1755	86	1640	36	M56	62	481.53
1600	1620	–	1626	1975	96	1860	40	M56	62	652.83
1800	1820	–	1826	2185	104	2070	44	M64	70	800.15

DIN2503
PN40



TUBO			BRIDA				TORNILLOS			PESO UNIDAD (7,85kg/dm³) kg. ≈
DN	d_1 ISO	d_1 DIN	d_5	D	b	k	CANT.	ROSCA	d_2	
15		20	21	95	16	65	4	M12	14	0.77
	21.3		22							
20		25	26	105	18	75	4	M12	14	1
	26.9		27.6							
25		30	31	115	18	85	4	M12	14	1.28
	33.7		34.4							
32		38	39	140	18	100	4	M16	18	1.87
	42.4		43.1							
40		44.5	45.5	150	18	110	4	M16	18	2.13
	48.3		49							
50		57	58.1	165	20	125	4	M16	18	2.79
	60.3		61.1							
65	76.1		77.1	185	22	145	8	M16	18	3.48
80	88.9		90.3	200	24	160	8	M16	18	4.35
100		108	109.6	235	24	190	8	M20	22	5.78
	114.3		115.9							
125		133	134.8	270	26	220	8	M24	26	7.87
	139.7		141.6							
150		159	161.1	300	28	250	8	M24	26	10.1
	168.3		170.5							
200	219.1		221.8	375	34	320	12	M27	30	17.4
250		267	270.2	450	38	385	12	M30	33	27.6
	273		276.2							
300	323.9		327.6	515	42	450	16	M30	33	37.8
350	355.6		359.7	580	46	510	16	M33	36	53.4
		368	372.2							
400	406.4		411	660	50	585	16	M36	39	75.4
		419	423.7							
500	508		513.6	755	52	670	20	M39	42	88.3

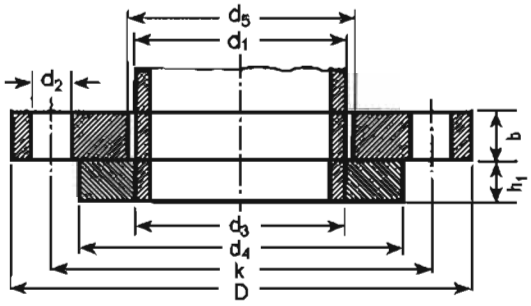
LAPPED FALNGES WITH COLLAR
Nominal Pressure :10kgf/cm²–ND10
DIN 2642
FLANGES
BORULARICIN,DESTEKLIGEVSEK
Anma Basinci:10kgf/cm²–ND10
TS 814/2 (TS ISO 7005–1)



BORU (Pipe)			FLANS (Flange)			CIVATALAR (Bolts)			DESTEK (Beam)			AGIRLIK(Weight) 7.85 kg/dm³	
DN	d_1	D	d_5	b	k	Sayisi (Each)	Vida (Screw)	d_2	d_3	d_4	h_1	Flans (flange)kg	Destek (Beam)kg
10	14 17.2	90	16 19	14	60	4	M12	14	17.7	40	10	0.599	0.087
15	20 21.3	95	22 24	14	65	4	M12	14	22	45	10	0.689	0.105
20	25 26.9	105	28 30	14	75	4	M12	14	27.6	58	12	0.806	0.203
25	30 33.7	115	33 36	16	85	4	M12	14	34.4	68	12	1.11	0.276
32	38 42.4	140	42 46	16	100	4	M16	18	43.1	78	12	1.64	0.343
40	44.5 48.3	150	50 54	16	110	4	M16	18	49	88	12	1.86	0.426
50	57 60.3	165	62 65	16	125	4	M16	18	61.1	102	14	2.20	0.618
65	76.1	185	81	16	145	4	M16	18	77.1	122	14	2.62	0.786
80	88.9	200	94	18	160	4/8	M16	18	90.3	138	16	3.32	1.10
100	108 114.3	220	113 119	18	180	8	M16	18	115.9	158	16	3.67	1.31
125	133 139.7	250	138 145	18	210	8	M16	18	141.6	188	18	4.54	1.96
150	168.3	285	173	18	240	8	M20	22	170.5	212	18	5.60	2.18
200	219.1	340	225	20	295	8	M20	22	221.8	268	20	7.46	3.10
250	273	395	279	22	350	12	M20	22	276.2	320	22	10.3	4.22
300	323.9	445	329	26	400	12	M20	22	327.6	370	22	14.0	4.85
350	355.6	505	362	28	460	16	M20	22	372.2	430	22	18.5	6.71
400	406.4	565	413	32	515	16	M24	26	423.7	482	24	25.0	8.28
(450)	457	615	467	38	565	20	M24	26	462.5	532	24	30.6	9.3
500	508	670	517	38	620	20	M24	26	513.6	585	26	37.0	11.5
600	610	780	618	44	725	20	M27	30	616.6	685	26	56.3	15.6
700	711	895	721	50	840	24	M27	30	718.6	800	28	80.4	23.2
800	813	1015	824	56	950	24	M30	33	821.5	905	30	113.2	29.2

LAPPED FALNGES WITH COLLAR
Nominal Pressure :25kgf/cm²–ND25
DIN 2655

FLANGES
BORULARICIN,DESTEKLIGEVSEK
Anma Basinc1:25kgf/cm²–ND25
TS 814/4 (TS ISO 7005–1)



BORU (Pipe)		FLANS (Flange)				CIVATALAR (Bolts)			DESTEK (Beam)			AGIRLIK(Weight) 7.85 kg/dm³	
DN	d_1	D	d_5	b	k	Sayisi (Each)	Vida (Screw)	d_2	d_3	d_4	h_1	Flans (flange) kg	Destek (Beam) kg
10 150	17.2 168.3	Degerler DIN 2656 (40 kgf/cm²) den alinmalidir											
200	219.1	360	225	26	310	12	M24	26	221.8	278	24	11.7	4.53
250	273	425	279	30	370	12	M27	30	276.2	335	26	17.9	6.56
300	323.9	485	329	34	430	16	M27	30	327.6	395	28	24.7	8.80
350	355.6	555	362	38	490	16	M30	33	359.2	450	32	37.38	13.2
400	406.4	620	414	42	550	16	M33	36	411	505	34	50	16.5
500	508	730	517	50	660	20	M33	36	513.6	615	38	73.89	25.3

LAPPED FALNGES WITH COLLAR
Nominal Pressure :40kgf/cm²–ND40
DIN 2656

FLANGES
BORULARICIN,DESTEKLI GEVSEK
Anma Basinc1:40kgf/cm²–ND40
TS 814/5 (TS ISO 7005–1)

BORU (Pipe)		FLANS (Flange)				CIVATALAR (Bolts)			DESTEK (Bean)			AGIRLIK(Weight) 7.85 kg/dm³	
DN	d_1	D	d_5	b	k	Sayisi (Each)	Vida (Screw)	d_2	d_3	d_4	h_1	Flans (flange)kg	Destek (Beam)kg
10	17.2	90	19	16	60	4	M12	14	17.7	40	12	0.696	0.104
15	21.3	95	24	16	65	4	M12	14	22	45	12	0.773	0.126
20	26.9	105	30	16	75	4	M12	14	27.6	58	14	0.934	0.236
25	33.7	115	36	18	85	4	M12	14	34.4	68	14	1.26	0.321
32	42.4	140	46	18	100	4	M16	18	43.1	78	14	1.85	0.401
40	48.3	150	54	18	110	4	M16	18	49	83	14	2.10	0.498
50	60.3	165	65	20	125	4	M16	18	61.1	102	16	2.75	0.706
65	76.1	185	81	20	145	8	M16	18	77.1	122	16	3.11	0.898
80	88.9	200	94	22	160	8	M16	18	90.3	138	18	3.88	1.23
100	114.3	235	119	22	190	8	M20	22	115.9	162	20	5.23	1.80
125	139.7	270	145	24	220	8	M24	26	141.6	188	22	7.23	2.40
150	168.3	300	173	24	250	8	M24	26	170.5	218	22	8.60	3.02
200	219.1	375	225	30	320	12	M27	30	221.8	285	26	15.2	5.54
250	273	450	279	36	385	12	M30	33	276.2	345	30	25.7	8.83
300	323.9	515	329	40	450	16	M30	33	327.6	410	34	34.42	14.0
350	355.6	580	362	46	510	16	M33	36	359.2	465	38	52.36	18.9
400	406.4	660	414	50	585	16	M36	39	411	535	42	74.2	28.4

SCREWED PIPE FLANGES

Nominal Pressure :10 and 16kgf/cm²–ND10–ND16

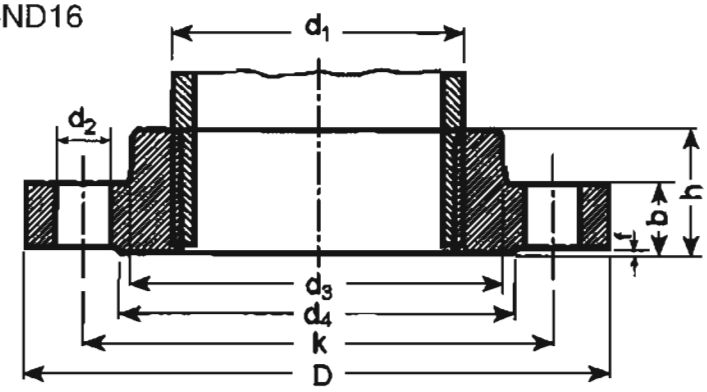
DIN 2566

FLANGES

BORULARICIN,VIDALI

Anma Basinc1:10ve 16kgf/cm²–ND10–ND16

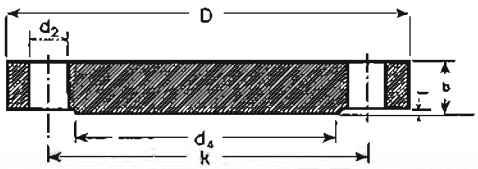
TS 813 (TS ISO 7005–1)



BORU (Pipe)		FLANS (Flange)					BOYUN (Neck)	ALINCIKINTISI (Raised face)		CIVATALAR (Bolts)			FLANSAGIRLIGI (Flange weight) (7.85 kg/dm³) kg
DN	d_1	Boru Vidasi (Whitwort)	D	b	k	h	d_3	d_4	f	Sayisi Each	Vida Screw	d_2	
6	10.2	R1/8"	75	12	50	18	20	32	2	4	M10	11	0.326
8	13.5	R1/14"	80	12	55	18	25	38	2	4	M10	11	0.380
10	17.2	R3/8"	90	14	60	20	30	40	2	4	M12	14	0.544
15	21.3	R1/2"	95	14	65	20	35	45	2	4	M12	14	0.613
20	26.9	R3/4"	105	16	75	24	45	58	2	4	M12	14	0.910
25	33.7	R1"	115	16	85	24	52	68	2	4	M12	14	1.20
32	42.4	R11/4"	140	16	100	26	60	78	2	4	M16	18	1.60
40	48.3	R11/2"	150	16	110	26	70	88	3	4	M16	18	1.78
50	60.3	R2"	165	18	125	28	85	102	3	4	M16	18	2.43
65	76.1	R21/2"	185	18	145	32	105	122	3	4	M16	18	3.18
80	88.9	R3"	200	20	160	34	118	138	3	4/8	M16	18	4.12
100	114.3	R4"	220	20	180	38	140	158	3	8	M16	18	4.47
125	139.7	R5"	250	22	210	40	168	188	3	8	M16	18	6.13
150	165.1	R6"	285	22	240	44	195	212	3	8	M20	23	7.92

*Siparse gore galvanizli olarak imal edilebilir.

BLIND FLANGES
Nominal Pressure :6kgf/cm²–ND6
DIN 2527
KOR FLANS
Anma Basinc1:6kgf/cm²–ND6
(TS ISO 7005–1)

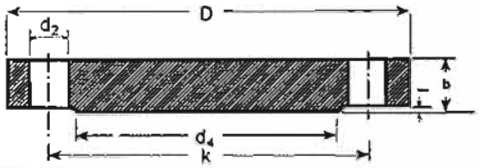


BORU (Pipe) DN	D	b	k	ALINCIKINTISI (Raised face)		DELIKLER (Drilling)			AGIRLIK (Weight) kg
				d_4	f	Sayisi (Each)	Vida (Screw)	d_2	
10	75	12	50	35	2	4	M10	11.5	0.38
15	80	12	55	40	2	4	M10	11.5	0.44
20	90	14	65	50	2	4	M10	11.5	0.654
25	100	14	75	60	2	4	M10	11.5	0.82
32	120	14	90	70	2	4	M12	14	1.176
40	130	14	100	80	3	4	M12	14	1.392
50	140	14	110	90	3	4	M12	14	1.63
65	160	14	130	110	3	4	M12	14	2.48
80	190	16	150	128	3	4	M16	18	3.49
100	210	16	170	148	3	4	M16	18	4.86
125	240	18	200	178	3	8	M16	18	6.28
150	265	18	225	202	3	8	M16	18	7.75
175	295	20	255	230	3	8	M16	18	10.7
200	320	20	280	258	3	8	M16	18	12.7
250	375	22	335	312	3	12	M16	18	19.0
300	440	22	395	365	4	12	M20	23	26.3
350	490	22	445	415	4	12	M20	23	32.9
400	540	22	495	455	4	16	M20	23	40.2
500	645	24	600	570	4	20	M20	23	63.2
600	755	28	705	670	5	20	M24	27	96.07
700	860	30	810	775	5	24	M24	27	133.8
800	975	32	920	880	5	24	M27	30	183.29
900	1075	36	1020	980	5	24	M27	30	251.7
1000	1175	42	1120	1080	5	28	M27	30	350.98

BLIND FLANGES
Nominal Pressure :10kgf/cm²–ND10
KOR FLANS
Anma Basinc1:10kgf/cm²–ND10
(TS ISO 7005–1)

BORU (Pipe) DN	D	b	k	ALINCIKINTISI (Raised face)		DELIKLER (Drilling)			AGIRLIK (Weight) kg
				d_4	f	Sayisi (Each)	Vida (Screw)	d_2	
10 175	10 ile 175 arasindaki degerler ND 16 'dan alinmalidir.								
200	340	24	295	268	3	8	M20	23	16.9
250	395	26	350	320	3	12	M20	23	24.7
300	445	26	400	370	4	12	M20	23	31.9
350	505	26	460	430	4	16	M20	23	41.9
400	565	26	515	482	4	16	M24	27	51.2
500	670	28	620	585	4	20	M24	27	77.8
600	780	30	725	685	5	20	M27	30	109.2
700	895	32	840	800	5	24	M27	30	153.77
800	1015	36	950	905	5	24	M30	33	222.86
900	1115	40	1050	1005	5	24	M30	33	299.08
1000	1230	46	1160	1110	5	28	M33	36	418.78

BLIND FLANGES
Nominal Pressure :16kgf/cm²–ND16
DIN 2527
KOR FLANS
Anma Basıncı:16kgf/cm²–ND16
(TS ISO 7005–1)

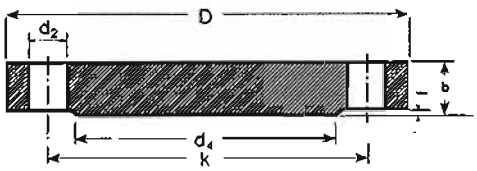


BORU (Pipe) DN	D	b	k	ALINCIKINTISI (Raised face)		DELIKLER (Drilling)			AGIRLIK (Weight) kg
				d_4	f	Sayisi (Each)	Vida (Screw)	d_2	
10	90	14	60	40	2	4	M12	14	0.63
15	95	14	65	45	2	4	M12	14	0.72
20	105	16	75	58	2	4	M12	14	1.01
25	115	16	85	68	2	4	M12	14	1.23
32	140	16	100	78	2	4	M16	18	1.80
40	150	16	110	88	3	4	M16	18	2.09
50	165	18	125	102	3	4	M16	18	2.88
65	185	18	145	122	3	4	M16	18	3.66
80	200	20	160	138	3	8	M16	18	4.77
100	220	20	180	158	3	8	M16	18	5.65
125	250	22	210	188	3	8	M16	18	8.42
150	285	22	240	212	3	8	M20	23	10.4
(175)	315	24	270	242	3	8	M20	23	14.0
200	340	24	295	268	3	12	M20	23	16.1
250	405	26	355	320	3	12	M24	27	24.9
300	460	28	410	378	4	12	M24	27	35.1
350	520	30	470	438	4	16	M24	27	47.8
400	580	32	525	490	4	16	M27	30	63.5
500	715	34	650	610	4	20	M30	33	102
600	840	36	770	725	5	20	M33	36	149.7
700	910	36	840	795	5	24	M33	36	173.7
800	1025	38	950	900	5	24	M36	39	235.5
900	1126	40	1050	1000	5	28	M36	39	298.8
1000	1255	42	1170	1115	5	28	M39	42	390.7
1200	1485	48	1390	1330	5	32	M45	48	624.8
1400	1685	52	1590	1530	5	36	M45	48	872.6
1600	1930	58	1820	1750	5	40	M52	56	1275.1
1800	2130	62	2020	1950	5	44	M52	56	1661.9
2000	2345	66	2230	2150	5	48	M56	62	2142.1

BLIND FLANGES
Nominal Pressure :25kgf/cm²–ND25
DIN 2527
KOR FLANS
Anma Basıncı:25kgf/cm²–ND25
(TS ISO 7005–1)

BORU (Pipe) DN	D	b	k	ALINCIKINTISI (Raised face)		DELIKLER (Drilling)			AGIRLIK (Weight) kg
				d_4	f	Sayisi (Each)	Vida (Screw)	d_2	
10 150	Anma basinci 40 kgf/cm² olan olculerden alinmalidir.								
(175)	330	28	280	248	3	12	M24	27	17.6
200	360	30	310	278	3	12	M24	27	22.7
250	425	32	370	335	3	12	M27	30	34.5
300	485	34	430	395	4	16	M27	30	47.3
350	555	38	490	450	4	16	M30	33	69.3
400	620	40	550	505	4	16	M33	36	91.5
500	730	44	660	615	4	20	M33	36	141
600	845	48	770	720	5	20	M36	39	202.3
700	960	50	875	820	5	24	M39	42	271.05
800	1085	54	990	930	5	24	M45	48	373.52
900	1185	58	1090	1030	5	28	M45	48	479.07
1000	1320	62	1210	1140	5	28	M52	56	632.47

BLIND FLANGE
Nominal Pressure :40kgf/cm²–ND40
DIN 2527
KOR FLANS
Anma Basinci:40kgf/cm²–ND40
(TS ISO 7005–1)

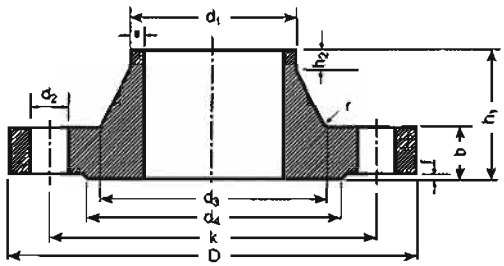


BORU (Pipe) DN	D	b	k	ALINCIKINTISI (Raised face)		DELIKLER (Drilling)			AGIRLIK (Weight) kg
				d_4	f	Sayisi (Each)	Vida (Screw)	d_2	
10	90	16	60	40	2	4	M12	14	0.722
15	95	16	65	45	2	4	M12	14	0.813
20	105	18	75	58	2	4	M12	14	1.137
25	115	18	85	68	2	4	M12	14	1.382
32	140	18	100	78	2	4	M16	18	2.033
40	150	18	110	88	3	4	M16	18	2.355
50	165	20	125	102	3	4	M16	18	3.2
65	185	22	145	122	3	8	M16	18	4.33
80	200	24	160	138	3	8	M16	18	5.94
100	235	24	190	162	3	8	M20	23	7.64
125	270	26	220	188	3	8	M24	27	11.0
150	300	28	250	218	3	8	M24	27	14.7
(175)	350	32	295	260	3	12	M27	30	22.4
200	375	34	320	285	3	12	M27	30	27.6
250	450	38	385	345	3	12	M30	33	44.5
300	515	42	450	410	4	16	M30	33	64.3
350	580	46	510	460	4	16	M33	36	90.8
400	660	50	585	535	4	16	M36	39	129
500	755	56	670	615	4	20	M39	42	175
600	890	62	795	733	5	20	M45	48	285.17
700	995	64	900	838	5	24	M45	48	368.83
800	1140	70	1030	960	5	24	M52	56	528.39
900	1250	76	1140	1070	5	28	M52	56	690.99
1000	1360	84	1250	1180	5	28	M52	56	912.42

*Kor Flanslarn ND 64 ve DN100 normlarininda imalatl yapilmaktadir

WELDING NECK FLANGES
Nominal Pressure :6kgf/cm²–ND6
DIN 2631

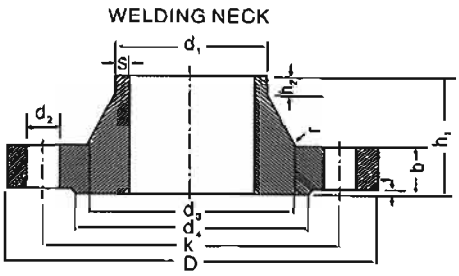
FLANSLAR
BORULAR ICIN, BOYUNLARI KAYNAKLI
Anma Basinc1:6kgf/cm²–ND6
TS 811/2 (TS ISO 7005–1)



BORU (Pipe)		FLANS (Flange)				BOYUN (Neck)				ALINCIKINTEIE (Raised face)		CIVATALAR (Bolts)			FLANS AGIRLEK (Weight) (7.85 kg/dm³) kg
DN	d_1 ISO/DIN	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Sayisi (Each)	Vida (Screw)	d_2	
15	20 21.3	80	12	55	30	28 30	2	4	6	40	2	4		11	0.392
20	25 26.9	90	14	65	32	35 38	2.3	4	6	50	2	4		11	0.592
25	30 33.7	100	14	75	35	40 42	2.6	4	6	60	2	4		11	0.747
32	38 42.4	120	14	90	35	50 55	2.6	6	8	70	2	4		14	1.05
40	44.5 48.3	130	14	100	38	58 62	2.6	6	7	80	3	4		14	1.18
50	57 60.3	140	14	110	38	70 74	2.9	6	8	90	3	4		14	1.34
65	76.1	160	14	130	38	88	2.9	6	9	110	3	4		14	1.67
80	88.9	190	16	150	42	102	3.2	8	10	128	3	4		18	2.71
100	108 114.3	210	16	170	45	122 130	3.6	8	10	148	3	4		18	3.24
125	133 139.7	240	18	200	48	148 155	4	8	10	178	3	8		18	4.49
150	159 168.3	265	18	225	48	172 184	4.5	10	12	202	3	8		18	5.15
200	219.1	320	20	280	55	236	5.9	10	15	258	3	8		18	7.78
250	267 273	375	22	335	60	282 290	6.3	12	15	312	3	12		18	10.8
300	323.9	440	22	395	62	342	7.1	12	15	365	4	12		22	14
350	355.6 368	490	22	445	62	385	7.1	12	15	415	4	12		22	16.7
400	406.4 419	540	22	495	65	438	7.1	12	15	455	4	16		22	19
500	508	645	24	600	68	538	7.1	12	15	570	4	20		22	28.6
600	610	755	24	705	70	640	7.1	12	16	670	5	20	M24	26	31.5
700	711	860	24	810	70	740	7.1	12	16	775	5	24	M24	26	37.4
800	813	975	24	920	70	842	7.1	12	16	880	5	24	M27	30	46.1
900	914	1075	26	1020	70	942	7.1	12	16	980	5	24	M27	30	55.6
1000	1016	1175	26	1120	70	1045	7.1	16	16	1080	5	28	M27	30	61.9
1200	1220	1405	28	1340	90	1248	8	16	20	1295	5	32	M30	33	100
1400	1420	1630	32	1560	90	1452	8	16	20	1510	5	36	M33	36	149
1600	1620	1830	34	1760	90	1655	9	16	20	1710	5	40	M33	36	180
1800	1820	2045	36	1970	100	1855	10	16	20	1920	5	44	M36	39	225
2000	2020	2265	38	2180	110	2058	11	16	25	2125	5	48	M39	42	295
2200	2220	2475	42	2390	115	2260	12	18	25	2335	6	52	M39	42	361
2400	2420	2685	44	2600	125	2462	13	18	25	2545	6	56	M39	42	415
2600	2620	2905	46	2810	130	2665	14	18	25	2750	6	60	M45	48	530
2800	2820	3115	48	3020	135	2865	15	18	30	2960	6	64	M45	48	643
3000	3020	3315	50	3220	140	3068	16	18	30	3160	6	68	M45	48	777
3200	3220	3525	54	3430	150	3272	16	20	30	3370	6	72	M45	48	851
3400	3420	3735	56	3640	160	3475	18	20	35	3580	6	76	M45	48	993
3600	3620	3970	60	3860	165	3678	18	20	35	3790	6	80	M52	56	1001

DIN 10Bar

DIN 2632 Welding Neck Flange

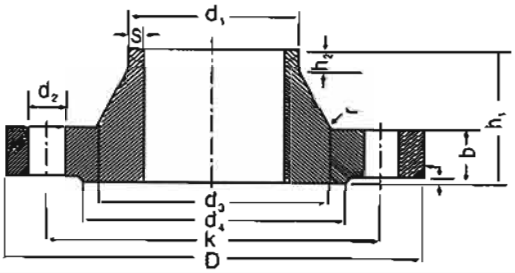


BORE		COMMON DIMENSION			HUB					RAISED FACE		DRILLING		Approx. Weight(kg)
DN	d_1	D	b	k	h_1	d_3	s	r	h_2	d4	f	Number of Bolt	d_2	DIN 2632
10	14 17.2	90	14	60	35	25 28	1.8	4	6	40	2	4	14	0.58
15	20 21.3	95	14	65	35	30 32	2	4	6	45	2	4	14	0.648
20	25 26.9	105	16	75	38	38 40	2.3	4	6	58	2	4	14	0.952
25	30 33.7	115	16	85	38	42 45	2.6	4	6	68	2	4	14	1.14
32	38 42.4	140	18	100	40	52 56	2.6	6	6	78	2	4	18	1.69
40	44.5 48.3	150	16	110	42	60 64	2.6	6	7	88	3	4	18	1.86
50	57 60.3	165	18	125	45	72 75	2.9	6	8	102	3	4	18	2.53
65	76.1	185	18	145	45	90	2.9	6	10	122	3	4	18	3.06
80	88.9	200	20	160	50	105	3.2	8	10	138	3	8	18	3.7
100	108 114.3	220	20	180	52	125 131	3.6	8	12	158	3	8	18	4.62
125	133 139.7	250	22	210	55	150 156	4	8	12	188	3	8	18	6.3
150	159 168.3	285	22	240	55	175 184	4.5	10	12	212	3	8	22	7.75
175	193.7	315	24	270	60	210	5.4	10	12	242	3	8	22	9.85
200	219.1	340	24	295	62	235	5.9	10	16	268	3	8	22	11.3
250	267 273	395	26	350	68	285 292	6.3	12	16	320	3	12	22	14.7
300	323.9	445	26	400	68	344	7.1	12	16	370	4	12	22	17.4
350	355.6 368	505	26	460	68	385	7.1	12	16	430	4	16	22	21.6
400	406.4 419	565	26	515	72	440	7.1	12	16	482	4	16	26	26.2
500	508	670	28	620	75	542	7.1	12	16	585	4	20	26	36.1
600	610	780	28	725	80	642	7.1	12	18	685	5	20	30	44.6
700	711	895	30	840	80	745	8	12	18	800	5	24	30	62.4
800	813	1015	32	950	90	850	8	12	18	905	5	24	33	84.1
900	914	1115	34	1050	95	950	10	12	20	1005	5	28	33	98.5
1000	1016	1230	34	1160	95	1052	10	16	20	1110	5	28	36	115
1200	1220	1455	38	1380	115	1255	11	16	25	1330	5	32	39	182
1400	1420	1675	42	1590	120	1460	12	16	25	1535	5	36	42	248
1600	1620	1915	46	1820	130	1665	14	16	25	1760	5	40	48	347
1800	1820	2115	50	2020	140	1868	15	16	30	1960	5	44	48	430
2000	2020	2325	54	2230	150	2072	16	16	30	2170	5	48	48	539
2200	2220	2550	58	2440	160	2275	18	18	35	2370	6	52	56	658
2400	2420	2760	62	2650	170	2478	20	18	35	2570	6	56	56	825
2600	2620	2960	66	2850	180	2680	22	18	40	2780	6	60	56	979
2800	2820	3180	70	3070	190	2882	22	18	40	3000	6	64	56	1156
3000	3020	3405	75	3290	200	3085	24	18	45	3210	6	68	62	1420

DIN 16Bar

DIN 2633 Welding Neck Flange

WELDING NECK

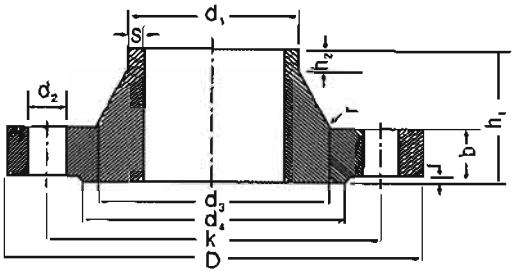


BORE		COMMON DIMENSION			HUB					RAISED FACE		DRILLING		Approx. Weight(kg)
DN	d_1	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Number of Bolt	d_2	DIN 2633
10	14 17.2	90	14	60	35	25 28	1.8	4	6	40	2	4	14	0.58
15	20 21.3	95	14	65	35	30 32	2	4	6	45	2	4	14	0.648
20	25 26.9	105	16	75	38	38 40	2.3	4	6	58	2	4	14	0.952
25	30 33.7	115	16	85	38	42 45	2.6	4	6	68	2	4	14	1.14
32	38 42.4	140	18	100	40	52 56	2.6	6	6	78	2	4	18	1.69
40	44.5 48.3	150	18	110	42	60 64	2.6	6	7	88	3	4	18	1.86
50	57 60.3	165	18	125	45	72 75	2.9	6	8	102	3	4	18	2.53
65	76.1	185	18	145	45	90	2.9	6	10	122	3	4	18	3.06
80	88.9	200	20	160	50	105	3.2	8	10	138	3	8	18	3.7
100	108 114.3	220	20	180	52	125 131	3.6	8	12	158	3	8	18	4.62
125	133 139.7	250	22	210	55	150 156	4	8	12	188	3	8	18	6.3
150	159 168.3	285	22	240	55	175 184	4.5	10	12	212	3	8	22	7.75
175	193.7	315	24	270	60	210	5.4	10	12	242	3	8	22	9.85
200	219.1	340	24	295	62	235	5.9	10	16	268	3	12	22	11
250	267 273	405	26	355	70	285 292	6.3	12	16	320	3	12	26	15.6
300	323.9	460	28	410	78	344	7.1	12	16	378	4	12	26	22
350	355.6 368	520	30	470	82	390	8	12	16	438	4	16	26	28.8
400	406.4 419	580	32	525	85	445	8	12	16	490	4	16	30	36.3
500	508	715	34	650	90	548	8	12	16	610	4	20	33	61
600	610	840	36	770	95	652	8.8	12	18	725	5	20	36	75.4
700	711	910	36	840	100	755	8.8	12	18	795	5	24	36	77
800	813	1025	38	950	105	855	10	12	20	900	5	24	39	101
900	914	1125	40	1050	110	955	10	12	20	1000	5	28	39	122
1000	1016	1255	42	1170	120	1058	10	16	22	1115	5	28	42	162
1200	1220	1485	48	1390	130	1262	12.5	16	30	1330	5	32	48	243
1400	1420	1685	52	1590	145	1465	14.2	16	30	1530	5	36	48	323
1600	1620	1930	58	1820	160	1668	16	16	35	1750	5	40	56	479
1800	1820	2130	62	2020	170	1870	17.5	16	35	1950	5	44	56	599
2000	2020	2345	66	2230	180	2072	20	16	40	2150	5	48	62	719

DIN 25Bar

DIN 2634 Welding Neck Flange

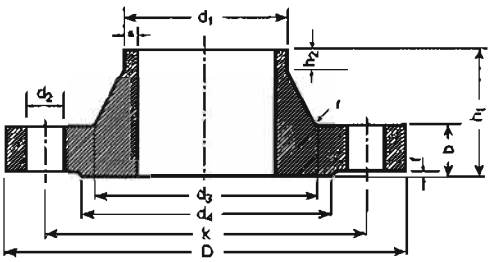
WELDING NECK



BORE		COMMON DIMENSION			HUB					RAISED FACE		DRILLING		Approx. Weight(kg)
DN	d_1	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Number of Bolt	d_2	DIN 2634
10	14 17.2	90	16	60	35	25 28	1.8	4	6	40	2	4	14	0.661
15	20 21.3	95	16	65	38	30 32	2	4	6	45	2	4	14	0.746
20	25 26.9	105	18	75	40	38 40	2.3	4	6	58	2	4	14	1.06
25	30 33.7	115	18	85	40	42 46	2.6	4	6	68	2	4	14	1.29
32	38 42.4	140	18	100	42	52 56	2.6	6	6	78	2	4	18	1.88
40	44.5 48.3	150	18	110	45	60 64	2.6	6	7	88	3	4	18	2.33
50	57 60.3	165	20	125	48	72 75	2.9	6	8	102	3	4	18	2.82
65	76.1	185	22	145	52	90	2.9	6	10	122	3	8	18	3.74
80	88.9	200	24	160	58	105	3.2	8	12	138	3	8	18	4.75
100	108 114.3	235	24	190	65	128 134	3.6	8	12	162	3	8	22	6.52
125	133 139.7	270	26	220	68	155 162	4	8	12	188	3	8	26	9.07
150	159 168.3	300	28	250	75	182 192	4.5	10	12	218	3	8	26	11.8
175	191 193.7	330	28	280	75	215 218	5.6	10	15	248	3	12	26	13.4
200	216 219.1	360	30	310	80	240 244	6.3	10	16	278	3	12	26	17
250	267 273	425	32	370	88	292 298	7.1	12	18	335	3	12	30	24.4
300	318 323.9	485	34	430	92	345 352	8	12	18	395	4	16	30	31.2
350	355.6 368	555	38	490	100	398	8	12	20	450	4	16	33	47.2 44.2
400	406.4 419	620	40	550	110	452	8.8	12	20	505	4	16	36	61.7 57.9
500	508	730	44	660	125	558	10	12	20	615	4	20	36	89.6
600	610	845	46	770	125	660	11	12	20	720	5	20	39	104
700	711	960	46	875	125	760	12.5	12	20	820	5	24	42	136
800	813	1085	50	990	135	865	14.2	12	22	930	5	24	48	186
900	914	1185	54	1090	145	968	16	12	24	1030	5	28	48	236
1000	1016	1320	58	1210	155	1070	17.5	16	24	1140	5	28	56	307

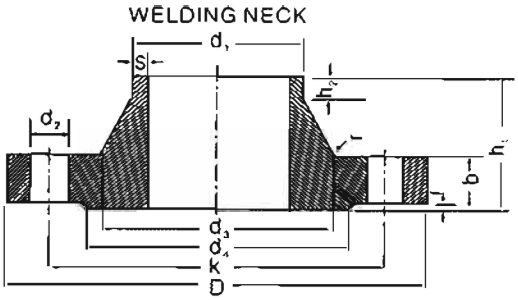
WELDENG NICK FLANGES
Nominal Pressure :40kgf/cm²–ND40
DIN 2635

FLANSLAR
BORULAR ICIN, BOYUNLARI KAYNAKLI
Anma Basinci:40kgf/cm²–ND40
TS 811/6 (TS ISO 7005–1)



BORU (Pipe)		FLANS (Flange)				BOYUN (Neck)				ALIN CIKINTISI (Raised face)		CIVATALAR (Bolts)			FLANS AGIRLIGI (FlangeWeight) (7.85 kg/dm³) kg
DN	d_1 ISO/DIN	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Sayisi Each	Vida Screw	d_2	
10	14 17.2	90	16	60	35	25 28	1.8	4	6	40	2	4	M12	14	0.661
15	20 21.3	95	16	65	38	30 32	2	4	6	45	2	4	M12	14	0.746
20	25 26.9	105	18	75	40	38 40	2.3	4	6	58	2	4	M12	14	1.06
25	30 33.7	115	18	85	40	42 46	2.6	4	6	68	2	4	M12	14	1.29
32	38 42.4	140	18	100	42	52 56	2.6	6	6	78	2	4	M16	18	1.88
40	44.5 48.3	150	18	110	45	60 64	2..6	6	7	88	3	4	M16	18	2.33
50	57 60.3	165	20	125	48	72 75	2.9	6	8	102	3	4	M16	18	2.82
65	76.1	185	22	145	52	90	2.9	6	10	122	3	8	M16	18	3.74
80	88.9	200	24	160	58	105	3.2	8	12	138	3	8	M16	18	4.75
100	108 114.3	235	24	190	65	128 134	3.6	8	12	162	3	8	M20	23	6.52
125	133 139.7	270	26	220	68	155 162	4	8	12	188	3	8	M24	27	9.07
150	159 168.3	300	28	250	75	182 192	4.5	10	12	218	3	8	M24	27	11.8
175	191 193.7	350	32	295	82	215 218	5.6	10	15	260	3	12	M27	30	18.2
200	216 219.1	375	34	320	88	240 244	6.3	10	16	285	3	12	M27	30	21.5
250	267 273	450	38	385	105	298 306	7.1	12	18	345	3	12	M30	33	34.9
300	318 323.9	515	42	450	115	352 362	8	12	18	410	4	16	M30	33	49.7
350	355.6 368	580	46	510	125	408	8.8	12	20	465	4	16	M33	36	68.1
400	406.4 419	660	50	585	135	462	11	12	20	535	4	16	M36	39	96.5
500	508 521	755	52	670	140	562	14.2	12	20	615	4	20	M39	42	117

WELDING NECK FLANGES
Nominal Pressure:64kgf/cm²–ND64
DIN2636
FLANSLAR
BORULARICIN,BOYUNLARI KAYNAKLI
Anma Basinc1:64kgf/cm²–ND64
TS 811/7 (TS ISO 7005–1)

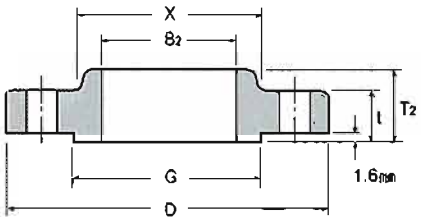


BORE (Pipe)		FLANS (Flange)				BOYUN (Neck)				ALIN CIKINTISI (Raised face)		CIVATALAR (Bolts)			FLANS AGIRLIGI (Flange Weight) (7.85kg/dm³) kg
DN	d_1 ISO/DIN	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Sayisi (Each)	Vida Screw	d_2	
10 40	17.2 48.3	Degerler DIN 2637 (100kgf/cm²) 'den alin malidir.													
50	60.3	180	26	135	62	82	2.9	6	10	102	3	4	M20	22	4.55
65	76.1	205	26	160	68	98	3.2	6	12	122	3	8	M20	22	5.73
80	88.9	215	28	170	72	112	3.6	8	12	138	3	8	M20	22	6.69
100	114.3	250	30	200	78	138	4.0	8	12	162	3	8	M24	26	9.66
125	139.7	295	34	240	88	168	4.5	8	12	188	3	8	M27	30	15.1
150	168.3	345	36	280	95	202	5.6	10	12	218	3	8	M30	33	21.9
175	193.7	375	40	310	105	228	6.3	10	16	260	3	12	M30	33	23.7
200	219.1	415	42	345	110	256	7.1	10	16	285	3	12	M33	36	34.9
250	273	470	46	400	125	316	8.8	12	18	345	3	12	M33	36	49.6
300	323.9	530	52	460	140	372	11	12	18	410	4	16	M33	36	68.7
350	355.6	600	56	525	150	420	12.5	12	20	465	4	16	M36	39	94.6
400	406.4	670	60	585	160	475	14.2	12	20	535	4	16	M39	42	124

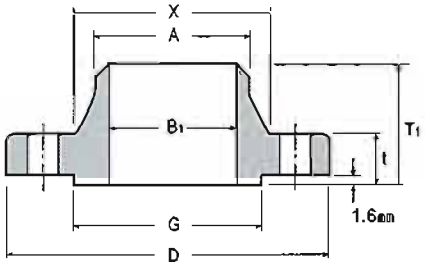
WELDING NECK FLANGES
Nominal Pressure:100kgf/cm²–ND100
DIN2637

FLANSLAR
BORULAR ICIN, BOYUNLARI KAYNAKLI
Anm Basinc1:100kgf/cm²–DN100
TS 811/8 (TS ISO 7005–1)

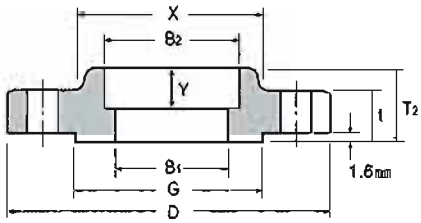
BORE (Pipe)		FLANS (Flange)				BOYUN (Neck)				ALIN CIKINTISI (Raised face)		CIVATALAR (Bolts)			FLANS AGIRLIGI (Flange Weight) (7.85kg/dm³) kg
DN	d_1 ISO/DIN	D	b	k	h_1	d_3	s	r	h_2	d_4	f	Sayisi (Each)	Vida Screw	d_2	
10	17.2	100	20	70	45	32	1.8	4	6	40	2	4	M12	14	1.09
15	21.3	105	20	75	45	34	2.0	4	6	45	2	4	M12	14	1.19
25	33.7	140	24	100	58	52	2.6	4	8	68	2	4	M16	18	2.66
40	48.3	170	26	125	62	70	2.9	6	10	88	3	4	M20	22	4.09
50	60.3	195	28	145	68	90	3.2	6	10	102	3	4	M24	26	5.98
65	76.1	220	30	170	76	108	3.6	6	12	122	3	8	M24	26	7.91
80	88.9	230	32	180	78	120	4.0	8	12	138	3	8	M24	26	8.95
100	114.3	265	36	210	90	150	5.0	8	12	162	3	8	M27	30	13.7
125	139.7	315	40	250	105	180	6.3	8	12	188	3	8	M30	33	22.7
150	168.3	355	44	290	115	210	7.1	10	12	218	3	12	M30	33	30.2
175	193.7	385	48	320	127	245	8.8	10	16	260	3	12	M30	33	38.9
200	219.1	430	52	360	130	278	10.0	10	16	285	3	12	M33	36	52.8
250	273	505	60	430	157	340	12.5	12	18	345	3	12	M36	39	81.4
300	323.9	585	68	500	170	400	14.2	12	18	410	4	16	M39	42	122
350	355.6	655	74	560	189	460	16.0	12	20	465	4	16	M45	48	165



SLIP-ON



WELDING NECK



SOCKET WELDING

CLASS 150 FLANGES

ANSI B16.5 FORGED FLANGES

Unit:mm

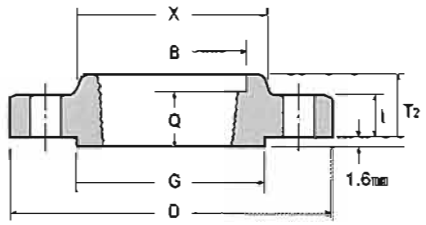
Nominal Pipe Size	Outside Diam.	Diam. at Base of Hub	O.D of Raised Face	Thick-ness	BORE			LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	D	X	G	t	B1	B2	B3	T1	T2	T3	A	R	Q
1/2	88.9	30.2	35.1	11.2	15.7	22.4	22.9	47.8	15.7	15.7	21.3	3.0	15.7
3/4	98.6	38.1	42.9	12.7	20.8	27.7	28.2	52.3	15.7	15.7	26.7	3.0	15.7
1	108	49.3	50.8	14.2	26.7	34.5	35.1	55.6	17.5	17.5	33.5	3.0	17.5
1 1/4	117.3	58.7	63.5	15.7	35.1	43.2	43.7	57.2	20.6	20.6	42.2	4.8	20.6
1 1/2	127	65.0	73.2	17.5	40.9	49.5	50.0	62.0	22.4	22.4	48.3	6.4	22.4
2	152.4	77.7	91.9	19.1	52.6	62.0	62.5	63.5	25.4	25.4	60.5	7.9	25.4
2 1/2	177.8	90.4	104.6	22.4	62.7	74.7	75.4	69.9	28.4	28.4	73.2	7.9	28.4
3	190.5	108.0	127.0	23.9	78.0	90.7	91.4	69.9	30.2	30.2	88.9	9.7	30.2
3 1/2	215.9	122.2	139.7	23.9	90.2	103.4	104.1	71.4	31.8	31.8	101.6	9.7	31.8
4	228.6	134.9	157.2	23.9	102.4	116.1	116.8	76.2	33.3	33.3	114.3	11.2	33.3
5	254	163.6	185.7	23.9	128.3	143.8	144.5	88.9	36.6	36.6	141.2	11.2	36.6
6	279.4	192.0	215.9	25.4	154.2	170.7	171.5	88.9	39.6	39.6	168.4	12.7	39.6
8	342.9	246.1	269.7	28.4	202.7	221.5	222.3	101.6	44.5	44.5	219.2	12.7	44.5
10	406.4	304.8	323.9	30.2	254.5	276.4	277.4	101.6	49.3	49.3	273.1	12.7	49.3
12	482.6	365.3	381.0	31.8	304.8	327.2	328.2	114.3	55.6	55.6	323.9	12.7	55.6
14	533.4	400.1	412.8	35.1	336.6	359.2	360.2	127.0	57.2	79.2	355.6	12.7	57.2
16	596.9	457.2	469.9	36.6	387.4	410.5	411.2	127.0	63.5	87.4	406.4	12.7	63.5
18	635	505.0	533.4	39.6	438.2	461.8	462.3	139.7	68.3	96.8	457.2	12.7	68.3
20	698.5	558.8	584.2	42.9	489.0	513.1	514.4	144.5	73.2	103.1	508.0	12.7	73.2
24	812.8	663.4	692.2	47.8	590.6	616.0	616.0	152.4	82.6	111.3	609.6	12.7	82.6

Notes:

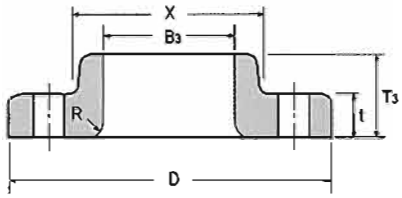
(1) For the 'Bore'(B1) other than Standard Wall Thickness, refer to page 83.

(2) Class 150 flanges except Lap Joint will be furnished with 0.06" (1.6mm) raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T1), (T2).

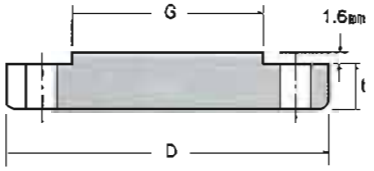
(3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.



THREADED



LAP JOINT



BLIND

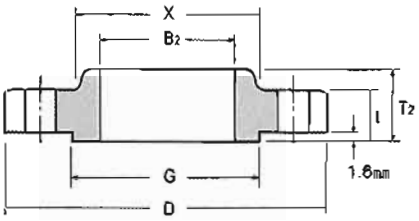
CLASS 150 FLANGES

ANSI B16.5 FORGED FLANGES

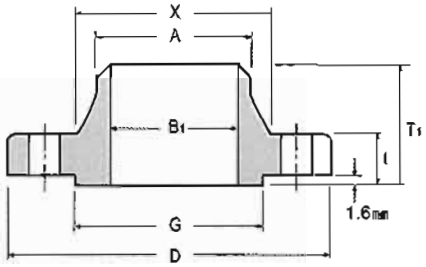
Unit:mm

Nominal Pipe Size	Depth of Socket	DRILLING			BOLTING				APPROXIMATE WEIGHT						
						Machine Bolt Length	Stud Bolt Length		Welding Neck			Slip-on and Threaded	Lap Joint	Blind	Socket Welding
	Y	Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Raised Face	Raised Face	Ring Joint	SCH40	SCH80	SCH160				
1/2	9.7	60.5	4	15.7	1/2	50.8	57.2	–	0.60	0.60	0.60	0.47	0.51	0.47	0.47
3/4	11.2	69.9	4	15.7	1/2	50.8	63.5	–	0.90	0.90	0.90	0.58	0.64	0.63	0.59
1	12.7	79.2	4	15.7	1/2	57.2	63.5	76.2	1.14	1.18	1.24	0.86	0.93	0.94	0.87
1 1/4	14.2	88.9	4	15.7	1/2	57.2	69.9	82.6	1.41	1.48	1.54	1.08	1.16	1.23	1.11
1 1/2	15.7	98.6	4	15.7	1/2	63.5	69.9	82.6	1.81	1.90	2.01	1.41	1.51	1.62	1.45
2	17.5	120.7	4	19.1	5/8	69.9	82.6	95.3	2.72	2.84	3.07	2.26	2.38	2.64	2.33
2 1/2	19.1	139.7	4	19.1	5/8	76.2	88.9	101.6	4.45	4.70	4.98	3.43	3.6	4.07	3.55
3	20.6	152.4	4	19.1	5/8	76.2	88.9	101.6	5.22	5.54	5.90	3.87	4.04	4.92	4.02
3 1/2	22.4	177.8	8	19.1	5/8	76.2	88.9	101.6	6.40	6.76	7.46	5.20	5.24	5.90	5.24
4	23.9	190.5	8	19.1	5/8	76.2	88.9	101.6	7.49	7.96	8.90	5.75	5.96	7.41	5.99
5	23.9	215.9	8	22.4	3/4	82.6	95.3	108.0	9.53	10.54	12.04	6.26	6.44	8.76	6.68
6	26.9	241.3	8	22.4	3/4	82.6	101.6	114.3	11.80	13.12	15.11	7.38	7.65	11.40	8.60
8	31.8	298.5	8	22.4	3/4	88.9	108.0	120.7	19.10	21.34	25.84	12.36	12.66	20.10	13.60
10	33.3	362.0	12	25.4	7/8	101.6	114.3	127.0	24.50	28.85	35.74	17.10	17.4	29.39	19.50
12	39.6	431.8	12	25.4	7/8	101.6	120.7	133.4	39.90	46.80	58.01	27.68	28.3	43.80	29.10
14	41.4	476.3	12	28.4	1	114.3	133.4	146.1	51.80	62.58	77.60	35.2	41.5	59.42	40.90
16	44.5	539.8	16	28.4	1	114.3	133.4	146.1	64.50	79.42	98.82	45.5	52.98	77.40	47.17
18	49.3	577.9	16	31.8	1 1/8	127.0	146.1	158.8	74.90	97.63	124.32	49.71	59	94.8	54.43
20	54.1	635.0	20	31.8	1 1/8	139.7	158.8	171.5	89.40	120.44	154.18	66.5	72.12	123.4	70.31
24	63.5	749.3	20	35.1	1 1/4	152.4	171.5	184.2	121.70	169.37	223.92	90.5	99.42	188.24	95.25

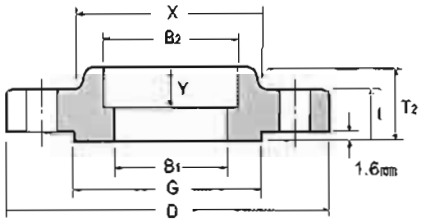
(4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
(5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(t).
(6) Depth of Socket (Y) is covered by ANSI B16.5 only in sizes through 3 inch, over 3 inch is at the manufacture's option.



SLIP-ON



WELDING NECK



SOCKET WELDING

CLASS 300 FLANGES

ANSI B16.5 FORGED FLANGES

Unit:mm

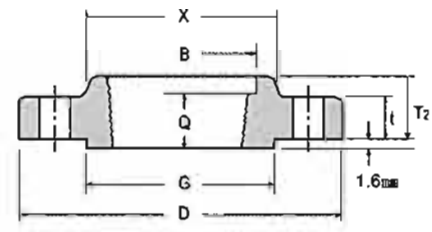
Nominal Pipe Size	Outside Diam.	Diam. at Base of Hub	O.D of Raised Face	Thick-ness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Counter Bore Min. Threaded Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	D	X	G	t	B1	B2	B3	B	T1	T2	T3	A	R	Q
1/2	95.3	38.1	35.1	14.2	15.7	22.4	22.9	23.6	52.3	22.4	22.4	21.3	3.0	15.7
3/4	117.3	47.8	42.9	15.7	20.8	27.7	28.2	29.0	57.2	25.4	25.4	26.7	3.0	15.7
1	124	53.8	50.8	17.5	26.7	34.5	35.1	35.8	62.0	26.9	26.9	33.5	3.0	17.5
1 1/4	133.4	63.5	63.5	19.1	35.1	43.2	43.7	44.5	65.0	26.9	26.9	42.2	4.8	20.6
1 1/2	155.4	69.9	73.2	20.6	40.9	49.5	50.0	50.5	68.3	30.2	30.2	48.3	6.4	22.4
2	165.1	84.1	91.9	22.4	52.6	62.0	62.5	63.5	69.9	33.3	33.3	60.5	7.9	28.4
2 1/2	190.5	100.1	104.6	25.4	62.7	74.7	75.4	76.2	76.2	38.1	38.1	73.2	7.9	31.8
3	209.6	117.3	127.0	28.4	78.0	90.7	91.4	92.2	79.2	42.9	42.9	88.9	9.7	31.8
3 1/2	228.6	133.4	139.7	30.2	90.2	103.4	104.1	104.9	81.0	44.5	44.5	101.6	9.7	36.6
4	254	146.1	157.2	31.8	102.4	116.1	116.8	117.6	85.9	47.8	47.8	114.3	11.2	36.6
5	279.4	177.8	185.7	35.1	128.3	143.8	144.5	144.5	98.6	50.8	50.8	141.2	11.2	42.9
6	317.5	206.2	215.9	36.6	154.2	170.7	171.5	171.5	98.6	52.3	52.3	168.4	12.7	46.0
8	381	260.4	269.7	41.1	202.7	221.5	222.3	222.3	111.3	62.0	62.0	219.2	12.7	50.8
10	444.5	320.5	323.9	47.8	254.5	276.4	277.4	276.4	117.3	66.5	95.3	273.1	12.7	55.6
12	520.7	374.7	381.0	50.8	304.8	327.2	328.2	328.7	130.0	73.2	101.6	323.9	12.7	60.5
14	584.2	425.5	412.8	53.8	336.6	359.2	360.2	360.4	142.7	76.2	111.3	355.6	12.7	63.5
16	647.7	482.6	469.9	57.2	387.4	410.5	411.2	411.2	146.1	82.6	120.7	406.4	12.7	68.3
18	711.2	533.4	533.4	60.5	438.2	461.8	462.3	462.0	158.8	88.9	130.0	457.2	12.7	69.9
20	774.7	587.2	584.2	63.5	489.0	513.1	514.4	512.8	162.1	95.3	139.7	508.0	12.7	73.2
24	914.4	701.5	692.2	69.9	590.6	616.0	616.0	614.4	168.1	106.4	152.4	609.6	12.7	82.6

Notes:

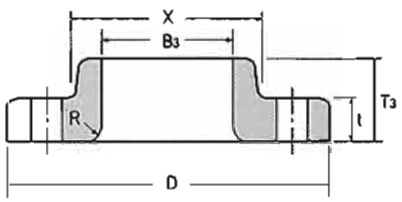
(1) For the 'Bore'(B1) other than Standard Wall Thickness, refer to page 83.

(2) Class 300 flanges except Lap Joint will be furnished with 0.06" (1.6mm) raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T1), (T2).

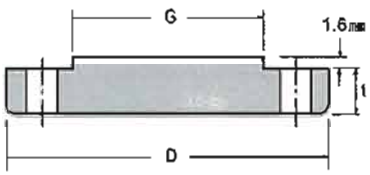
(3) For Slip-on, Threaded, Socket Welding and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.



THREADED



LAP JOINT



BLIND

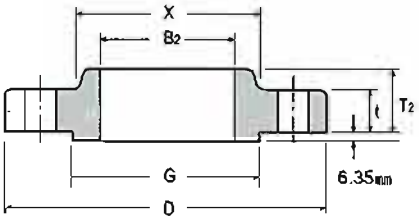
CLASS 300 FLANGES

ANSI B16.5 FORGED FLANGES

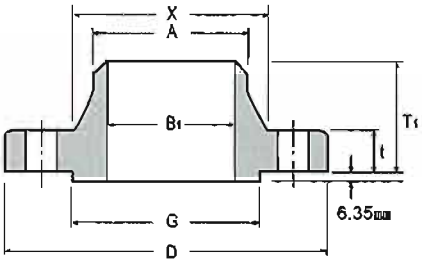
Unit:mm

Nominal Pipe Size	Depth of Socket	DRILLING			BOLTING				APPROXIMATE WEIGHT						
		Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Machine Bolt Length	Stud Bolt Length		Welding Neck			Slip-on and Threaded	Lap Joint	Blind	Socket Welding
	Y					Raised Face	Raised Face	Ring Joint	SCH40	SCH80	SCH160				
1/2	9.7	66.5	4	15.7	1/2	57.2	63.5	76.2	0.91	0.91	0.91	0.63	0.63	0.63	0.63
3/4	11.2	82.6	4	19.1	5/8	63.5	76.2	88.9	1.36	1.36	1.36	1.16	1.16	1.16	1.19
1	12.7	88.9	4	19.1	5/8	63.5	76.2	88.9	1.82	1.87	1.93	1.39	1.39	1.42	1.44
1 1/4	14.2	98.6	4	19.1	5/8	69.9	82.6	95.3	2.27	2.35	2.41	1.75	1.75	1.88	1.75
1 1/2	15.7	114.3	4	22.4	3/4	76.2	88.9	101.6	3.18	3.28	3.40	2.53	2.53	2.68	2.62
2	17.5	127.0	8	19.1	5/8	76.2	88.9	101.6	3.36	3.49	3.75	2.90	2.91	3.22	2.94
2 1/2	19.1	149.4	8	22.4	3/4	82.6	101.6	114.3	5.45	5.72	6.02	4.25	4.25	4.80	4.49
3	20.6	168.1	8	22.4	3/4	88.9	108.0	120.7	7.32	7.52	8.94	5.92	5.94	6.89	6.2
3 1/2	22.4	184.2	8	22.4	3/4	95.3	108.0	127.0	8.93	9.31	10.10	7.72	7.74	9.53	
4	23.9	200.2	8	22.4	3/4	95.3	114.3	127.0	12.10	12.62	13.69	10.13	10.15	11.2	
5	23.9	235.0	8	22.4	3/4	108.0	120.7	133.4	16.30	17.42	19.08	12.58	12.6	15.96	
6	26.9	269.7	12	22.4	3/4	108.0	120.7	139.7	20.40	21.86	24.07	16.04	16.05	21.40	
8	31.8	330.2	12	25.4	7/8	120.7	139.7	152.4	31.30	33.75	38.69	24.5	24.53	34.6	
10	33.3	387.4	16	28.4	1	139.7	158.8	171.5	45.40	50.43	58.38	34.16	39.92	53.50	
12	39.6	450.9	16	31.8	1 1/8	146.1	171.5	184.2	64.50	72.35	85.10	51.26	58.7	78.9	
14	41.4	514.4	20	31.8	1 1/8	158.8	177.8	190.5	93.50	105.61	122.49	72.12	83.46	107.5	
16	44.5	571.5	20	35.1	1 1/4	165.1	190.5	203.2	113.10	130.25	152.56	90.4	106.14	139.25	
18	49.3	628.7	24	35.1	1 1/4	171.5	196.9	209.6	138.90	164.74	195.07	109	133.95	176.9	
20	54.1	685.8	24	35.1	1 1/4	184.2	203.2	222.3	167.70	202.32	240.17	136	157.65	223.17	
24	63.5	812.8	24	41.1	1 1/2	203.2	228.6	254.0	238.68	288.15	348.28	204	240.4	342	

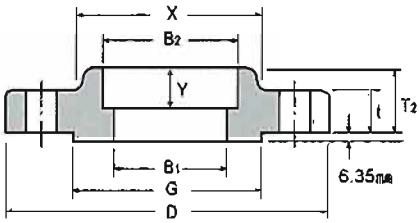
(4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
(5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness(t).
(6) Depth of Socket (Y) is covered by ANSI B16.5 only in sizes through 3 inch, over 3 inch is at the manufacture's option.



SLIP-ON



WELDING NECK



SOCKET WELDING

CLASS 600 FLANGES

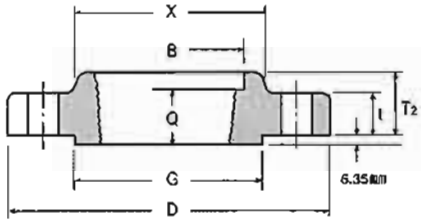
ANSI B16.5 FORGED FLANGES

Unit:mm

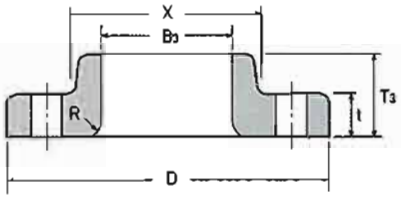
Nominal Pipe Size	Outside Diam.	Diam. at Base of Hub	O.D of Raised Face	Thick-ness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Counter Bore Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	D	X	G	t	B1	B2	B3	B	T1	T2	T3	A	R	Q
1/2	95.3	38.1	35.1	14.2	See Note(1) To be specified by purchaser	22.4	22.9	23.6	52.3	22.4	22.4	21.3	3.0	15.7
3/4	117.3	47.8	42.9	15.7		27.7	28.2	29.0	57.2	25.4	25.4	26.7	3.0	15.7
1	124	53.8	50.8	17.5		34.5	35.1	35.8	62.0	26.9	26.9	33.5	3.0	17.5
1 1/4	133.4	63.5	63.5	20.6		43.2	43.7	44.5	66.5	28.4	28.4	42.2	4.8	20.6
1 1/2	155.4	69.9	73.2	22.4		49.5	50.0	50.5	69.9	31.8	31.8	48.3	6.4	22.4
2	165.1	84.1	91.9	25.4		62.0	62.5	63.5	73.2	36.6	36.6	60.5	7.9	28.4
2 1/2	190.5	100.1	104.6	28.4		74.7	75.4	76.2	79.2	41.1	41.1	73.2	7.9	31.8
3	209.6	117.3	127.0	31.8		90.7	91.4	92.2	82.6	46.0	46.0	88.9	9.7	35.1
3 1/2	228.6	133.4	139.7	35.1		103.4	104.1	104.9	85.9	49.3	49.3	101.6	9.7	39.6
4	273.1	152.4	157.2	38.1		116.1	116.8	117.6	101.6	53.8	53.8	114.3	11.2	41.1
5	330.2	189.0	185.7	44.5		143.8	144.5	144.5	114.3	60.5	60.5	141.2	11.2	47.8
6	355.6	222.3	215.9	47.8		170.7	171.5	171.5	117.3	66.5	66.5	168.4	12.7	50.8
8	419.1	273.1	269.7	55.6		221.5	222.3	222.3	133.4	76.2	76.2	219.2	12.7	57.2
10	508	342.9	323.9	63.5		276.4	277.4	276.4	152.4	85.9	111.3	273.1	12.7	65.0
12	558.8	400.1	381.0	66.5		327.2	328.2	328.7	155.4	91.9	117.3	323.9	12.7	69.9
14	603.3	431.8	412.8	69.9		359.2	360.2	360.4	165.1	93.7	127.0	355.6	12.7	73.2
16	685.8	495.3	469.9	76.2		410.5	411.2	411.2	177.8	106.4	139.7	406.4	12.7	77.7
18	743	546.1	533.4	82.6		461.8	462.3	462.0	184.2	117.3	152.4	457.2	12.7	79.2
20	812.8	609.6	584.2	88.9		513.1	514.4	512.8	190.5	127.0	165.1	508.0	12.7	82.6
24	939.8	717.6	692.2	101.6		616.0	616.0	614.4	203.2	139.7	184.2	609.6	12.7	91.9

Notes:

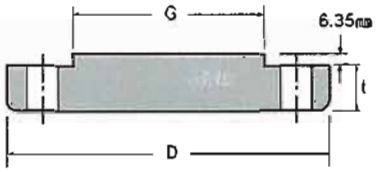
(1) For the inside diameter of pipes (corresponding to 'Bore' (B1) of Welding Neck Flanges), refer to page 83.
(2) Class 600 flanges except Lap Joint will be furnished with 0.25" (6.35mm) raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T1), (T2).
(3) For Slip-on, Threaded and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.



THREADED



LAP JOINT



BLIND

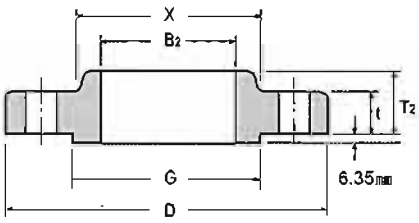
CLASS 600 FLANGES

ANSI B16.5 FORGED FLANGES

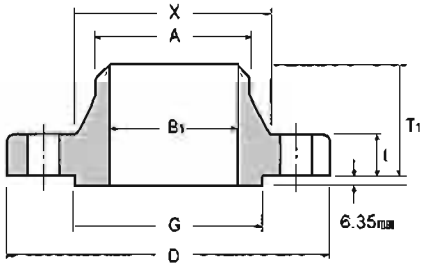
Unit:mm

Nominal Pipe Size	Depth of Socket	DRILLING			BOLTING				APPROXIMATE WEIGHT						
						Stud Bolt Length			Welding Neck			Slip-on and Threaded	Lap Joint	Blind	Socket Welding
	Y	Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	0.25" Raised Face	Male-Female Tongue-Groove	Ring Joint	SCH40	SCH80	SCH160				
1/2	9.7	66.5	4	15.7	1/2	76.2	69.9	76.2	1.36	1.36	1.36	0.91	0.91	0.91	0.91
3/4	11.2	82.6	4	19.1	5/8	88.9	82.6	88.9	1.59	1.63	1.67	1.4	1.4	1.4	1.36
1	12.7	88.9	4	19.1	5/8	88.9	82.6	88.9	1.82	1.87	1.94	1.7	1.7	1.81	1.81
1 1/4	14.2	98.6	4	19.1	5/8	95.3	88.9	95.3	2.50	2.59	2.66	2.27	2.27	2.4	2.6
1 1/2	15.7	114.3	4	22.4	3/4	108.0	101.6	108.0	3.63	3.74	3.88	3.1	3.1	3.4	3.18
2	17.5	127.0	8	19.1	5/8	108.0	101.6	108.0	4.54	4.69	4.98	3.71	3.85	4.4	3.9
2 1/2	19.1	149.4	8	22.4	3/4	120.7	114.3	120.7	6.36	6.66	7.00	5.44	5.44	6.8	5.9
3	20.6	168.1	8	22.4	3/4	127.0	120.7	127.0	8.17	8.58	9.04	7.26	7.26	8.9	7.4
3 1/2	22.4	184.2	8	25.4	7/8	139.7	133.4	139.7	12.00	12.44	13.28	9.53	9.53	13.17	
4	23.9	215.9	8	25.4	7/8	146.1	139.7	146.1	16.80	17.46	18.79	14.97	15.40	18.6	
5	23.9	266.7	8	28.4	1	165.1	158.8	165.1	30.90	32.27	34.30	28.5	29	30.84	
6	26.9	292.1	12	28.4	1	171.5	165.1	171.5	36.77	34.93	37.69	36.32	36.5	33.80	
8	31.8	349.3	12	31.8	1 1/8	190.5	184.2	196.9	50.90	53.98	60.16	44	50.8	62.2	
10	33.3	431.8	16	35.1	1 1/4	215.9	209.6	215.9	86.26	92.59	103.34	76.2	82	102	
12	39.6	489.0	20	35.1	1 1/4	222.3	215.9	222.3	102.60	112.36	128.19	97.52	108.86	132	
14	41.4	527.1	20	38.1	1 3/8	235.0	228.6	235.0	121.60	136.13	156.38	102	111.20	158	
16	44.5	603.3	20	41.1	1 1/2	254.0	247.7	254.0	177.10	198.70	226.80	149.82	165.71	224.13	
18	49.3	654.1	20	44.5	1 5/8	273.1	266.7	273.1	215.70	246.66	283.01	180.1	219.4	285	
20	54.1	723.9	24	44.5	1 5/8	285.8	279.4	292.1	268.00	310.23	356.13	231.54	258.8	365	
24	63.5	838.2	24	50.8	1 7/8	330.2	323.9	336.6	372.00	495.71	512.38	330	362	536.80	

(4) Blind Flanges may with the same hub as that used for Slip-on Flanges or without hub.
(5) The gasket surface and backside (bearing surface lor bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (t).
(6) Dimensions of sizes 1/2" through 31/2" are the same as for Class 400 Flanges.
(7) Depth of Socket (Y) is covered by ANSI B16.5 only in sizes through 3 inch, over 3 inch is at the manufacture's option.



SLIP-ON



WELDING NECK

CLASS 900 FLANGES

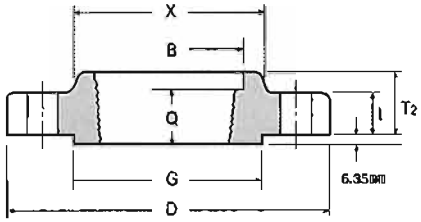
ANSI B16.5 FORGED FLANGES

Unit:mm

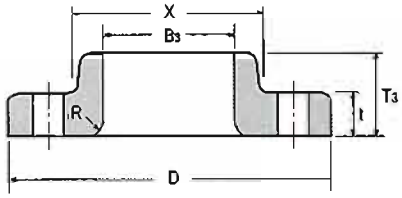
Nominal Pipe Size	Outside Diam.	Diam. at Base of Hub	O.D of Raised Face	Thick-ness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel
					Welding Neck	Slip-on	Lap Joint	Counter Bore Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint	
	D	X	G	t	B1	B2	B3	B	T1	T2	T3	A
1/2	120.7	38.1	35.1	22.4	See Note(1) To be specified by purchaser	22.4	22.9	23.6	60.5	31.8	31.8	21.3
3/4	130	44.5	42.9	25.4		27.7	28.2	29.0	69.9	35.1	35.1	26.7
1	149.4	52.3	50.8	28.4		34.5	35.1	35.8	73.2	41.1	41.1	33.5
1 1/4	158.8	63.5	63.5	28.4		43.2	43.7	44.5	73.2	41.1	41.1	42.2
1 1/2	177.8	69.9	73.2	31.8		49.5	50.0	50.5	82.6	44.5	44.5	48.3
2	215.9	104.6	91.9	38.1		62.0	62.5	63.5	101.6	57.2	57.2	60.5
2 1/2	244.3	124.0	104.6	41.1		74.7	75.4	76.2	104.6	63.5	63.5	73.2
3	241.3	127.0	127.0	38.1		90.7	91.4	92.2	101.6	53.8	53.8	88.9
4	292.1	158.8	157.2	44.5		116.1	116.8	117.6	114.3	69.9	69.9	114.3
5	349.3	190.5	185.7	50.8		143.8	144.5	144.5	127.0	79.2	79.2	141.2
6	381	235.0	215.9	55.6		170.7	171.5	171.5	139.7	85.9	85.9	168.4
8	469.9	298.5	269.7	63.5		221.5	222.3	222.3	162.1	101.6	114.3	219.2
10	546.1	368.3	323.9	69.9		276.4	277.4	276.4	184.2	108.0	127.0	273.1
12	609.6	419.1	381.0	79.2		327.2	328.2	328.7	200.2	117.3	142.7	323.9
14	641.4	450.9	412.8	85.9		359.2	360.4	360.4	212.9	130	155.4	355.6
16	704.9	508.0	469.9	88.9		410.5	411.2	411.2	215.9	133.4	165.1	406.4
18	787.4	565.2	533.4	101.6		461.8	462.3	462.0	228.6	152.4	190.5	457.2
20	857.3	622.3	584.2	108.0		513.1	514.4	512.8	247.7	158.8	209.6	508.0
24	1041.4	749.3	692.2	139.7		616.0	616.0	614.4	292.1	203.2	266.7	609.6

Notes:

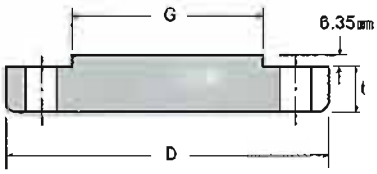
(1) For the inside diameter of pipes (corresponding to 'Bore' (B1) of Welding Neck Flanges), refer to page 83.
(2) Class 900 flanges except Lap Joint will be furnished with 0.25" (6.35mm) raised face, which is included in 'Thickness' (t) and 'Length through Hub' (T1), (T2).
(3) For Slip-on, Threaded, and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.



THREADED



LAP JOINT



BLIND

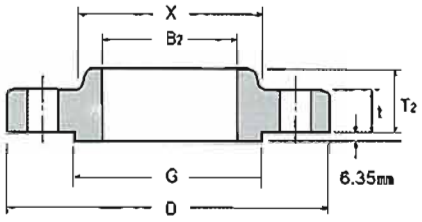
CLASS 900 FLANGES

ANSI B16.5 FORGED FLANGES

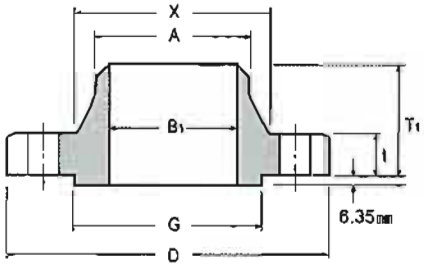
Unit:mm

Nominal Pipe Size	Radius of fillet	Thread Length	DRILLING			BOLTING				APPROXIMATE WEIGHT					
			Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Stud Bolt Length			Welding Neck			Slip-on and Threaded	Lap Joint	Blind
							0.25" Raised Face	Male-Female Tongue-Groove	Ring Joint	SCH40	SCH80	SCH160			
	R	Q													
1/2	3.0	22.4	82.6	4	22.4	3/4	108.0	101.6	108.0	3.10	3.10	3.10	1.81	1.8	1.9
3/4	3.0	25.4	88.9	4	22.4	3/4	114.3	108.0	114.3	3.18	3.18	3.18	2.4	2.4	2.7
1	3.0	28.4	101.6	4	25.4	7/8	127.0	120.7	127.0	3.86	3.92	4.00	3.50	3.60	4.09
1 1/4	4.8	30.2	111.3	4	25.4	7/8	127.0	120.7	127.0	4.54	4.64	4.71	4.1	4.1	4.54
1 1/2	6.4	31.8	124.0	4	28.4	1	139.7	133.4	139.7	6.36	6.49	6.65	5.52	5.55	5.93
2	7.9	38.1	165.1	8	25.4	7/8	146.1	139.7	146.1	10.90	11.10	11.50	9.98	9.98	11.34
2 1/2	7.9	47.8	190.5	8	28.4	1	158.8	152.4	158.8	16.30	16.69	17.14	15.8	15.8	16.00
3	9.7	41.1	190.5	8	25.4	7/8	146.1	139.7	146.1	15.00	15.50	16.10	11.8	11.8	13.17
4	11.2	47.8	235.0	8	31.8	1 1/8	171.5	165.1	171.5	23.20	23.94	25.43	23.2	23.2	24.5
5	11.2	53.8	279.4	8	35.1	1 1/4	190.5	184.2	190.5	39.10	40.62	42.86	37.65	36.74	39.46
6	12.7	57.2	317.5	12	31.8	1 1/8	190.5	184.2	196.9	49.90	52.06	55.33	48.3	49	51.5
8	12.7	63.5	393.7	12	38.1	1 3/8	222.3	215.9	222.3	84.90	88.61	96.09	75	86	89
10	12.7	71.4	469.9	16	38.1	1 3/8	235.0	228.6	235.0	121.70	129.87	142.79	111.3	125.64	131.54
12	12.7	76.2	533.4	20	38.1	1 3/8	254.0	247.7	254.0	157.00	169.48	189.74	146	167.00	187
14	12.7	82.6	558.8	20	41.1	1 1/2	273.1	266.7	292.1	181.00	199.62	225.55	172.36	180.07	224.07
16	12.7	85.9	616.0	20	44.5	1 5/8	285.8	279.4	298.5	225.00	251.11	285.08	192.95	211.10	272.4
18	12.7	88.9	685.8	20	50.8	1 7/8	323.9	317.5	333.6	309.00	347.24	392.13	272.4	295.10	385.9
20	12.7	91.9	749.3	20	53.8	2	349.3	342.9	362.0	377.00	431.59	490.91	331.42	367.70	488
24	12.7	101.6	901.7	20	66.5	2 1/2	438.2	431.8	457.2	685.00	778.36	885.21	632	703.70	905

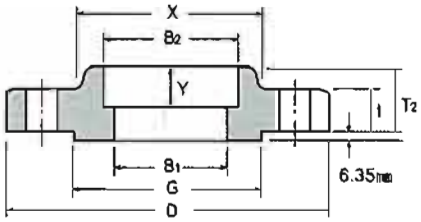
(4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
(5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (t).
(6) Dimensions of sizes 1/2" through 21/2" are the same as for Class 1500 Flanges.



SLIP-ON



WELDING NECK



SOCKET WELDING

CLASS 1500 FLANGES

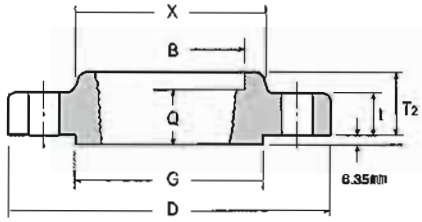
ANSI B16.5 FORGED FLANGES

Unit:mm

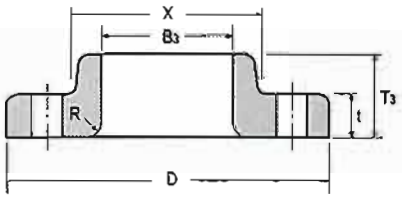
Nominal Pipe Size	Outside Diam.	Diam. at Base of Hub	O.D of Raised Face	Thick-ness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Counter Bore Min. Threaded Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	D	X	G	t	B1	B2	B3	B	T1	T2	T3	A	R	Q
1/2	120.7	38.1	35.1	22.4	See Note(1) To be specified by purchaser	22.4	22.9	23.6	60.5	31.8	31.8	21.3	3.0	22.4
3/4	130	44.5	42.9	25.4		27.7	28.2	29.0	69.9	35.1	35.1	26.7	3.0	25.4
1	149.4	52.3	50.8	28.4		34.5	35.1	35.8	73.2	41.1	41.4	33.5	3.0	28.4
1 1/4	158.8	63.5	63.5	28.4		43.2	43.7	44.5	73.2	41.1	41.1	42.2	4.8	30.2
1 1/2	177.8	69.9	73.2	31.8		49.5	50.0	50.5	82.6	44.5	44.5	48.3	6.4	31.8
2	215.9	104.6	91.9	38.1		62.0	62.5	63.5	101.6	57.2	57.2	60.5	7.9	38.1
2 1/2	244.3	124.0	104.6	41.1		74.7	75.4	76.2	104.6	63.5	63.5	73.2	7.9	47.8
3	266.7	133.4	127.0	47.8		90.7	91.4	92.2	117.3	73.2	73.2	88.9	9.7	50.8
4	311.2	162.1	157.2	53.8		116.1	116.8	117.6	124.0	90.4	90.4	114.3	11.2	57.2
5	374.7	196.9	185.7	73.2		143.8	144.5	144.5	155.4	104.6	104.6	141.2	11.2	63.5
6	393.7	228.6	215.9	82.6		170.7	171.5	171.5	171.5	119.1	119.1	168.4	12.7	69.9
8	482.6	292.1	269.7	91.9		221.5	222.3	222.3	212.9	142.7	142.7	219.2	12.7	76.2
10	584.2	368.3	323.9	108.0		276.4	277.4	276.4	254.0	158.8	177.8	273.1	12.7	84.1
12	673.1	450.9	381.0	124.0		327.2	328.2	328.7	282.4	180.8	218.9	323.9	12.7	91.9
14	749.3	495.3	412.8	133.4		359.2	360.2	360.4	298.5	–	241.3	355.6	12.7	–
16	825.5	552.5	469.9	146.1		410.5	411.2	411.2	311.2	–	260.4	406.4	12.7	–
18	914.4	596.9	533.4	162.1		461.8	462.3	462.0	327.2	–	276.4	457.2	12.7	–
20	984.3	641.4	584.2	177.8		513.1	514.4	512.8	355.6	–	292.1	508.0	12.7	–
24	1168.4	762.0	692.2	203.2		616.0	616.0	614.4	406.4	–	330.2	609.6	12.7	–

Notes:

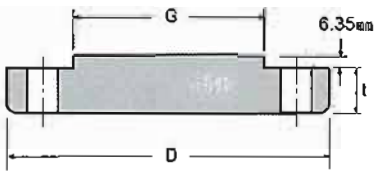
(1) For the inside diameter of pipes (corresponding to 'Bore' (B1) of Welding Neck Flanges), refer to page 83.
(2) Class 1500 flanges except Lap Joint will be furnished with 0.25" (6.35mm) raised face, which is not included in 'Thickness' (t) and 'Length through Hub' (T1), (T2).
(3) For Slip-on, Threaded Lap Joint and Socket Welding Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits 7 degrees.



THREADED



LAP JOINT



BLIND

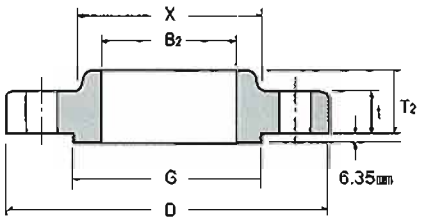
CLASS 1500 FLANGES

ANSI B16.5 FORGED FLANGES

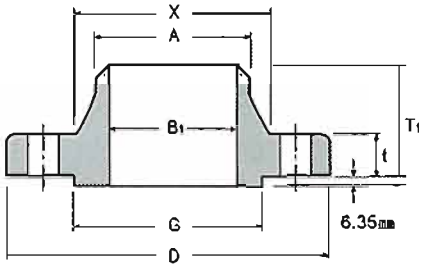
Unit:mm

Nominal Pipe Size	Depth of Socket	DRILLING			BOLTING				APPROXIMATE WEIGHT						
						Stud Bolt Length			Welding Neck			Slip-on and Threaded	Lap Joint	Blind	Socket Welding
	Y	Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	0.25" Raised Face	Male-Female Tongue-Groove	Ring Joint	SCH40	SCH80	SCH160				
1/2	9.7	82.6	4	22.4	3/4	108.0	101.6	108.0	3.10	3.10	3.10	1.8	1.9	1.9	1.81
3/4	11.2	88.9	4	22.4	3/4	114.3	108.0	114.3	3.18	3.18	3.18	2.35	2.35	2.72	2.81
1	12.7	101.6	4	25.4	7/8	127.0	120.7	127.0	3.86	3.92	4.00	3.50	3.60	4.08	3.61
1 1/4	14.21	11.3	4	25.4	7/8	127.0	120.7	127.0	4.54	4.64	4.71	4.1	4.10	4.3	4.99
1 1/2	15.71	24.0	4	28.4	1	139.7	133.4	139.7	6.36	6.49	6.65	5.45	5.45	5.9	6.76
2	17.5	165.1	8	25.4	7/8	146.1	139.7	146.1	10.90	11.10	11.50	10.5	10.45	11.3	10.89
2 1/2	19.1	190.5	8	28.4	1	158.8	152.4	158.8	16.34	16.69	17.14	15.8	15.8	16	16.34
3	20.6	203.2	8	31.8	1 1/8	177.8	171.5	177.8	21.80	22.37	23.01	21.80	21.80	21.79	
4	23.9	241.3	8	35.1	1 1/4	196.9	190.5	196.9	31.30	32.10	33.71	33.10	34.10	33.11	
5	23.9	292.1	8	41.1	1 1/2	247.7	241.3	247.7	59.90	61.75	64.47	59.00	63.60	60	
6	26.9	317.5	12	38.1	1 3/8	260.4	254.0	266.7	74.19	77.13	81.12	74	77	75	
8	31.8	393.7	12	44.5	1 5/8	292.1	285.8	323.9	124.00	128.83	138.56	117.73	129.73	136.98	
10	33.3	482.6	12	50.8	1 7/8	336.6	330.2	342.9	206.00	217.16	234.82	197.50	220.19	229.97	
12	39.6	571.5	16	53.8	2	374.7	368.3	387.4	306	330.75	359.07	264	286.00	316.40	
14	41.4	635.0	16	60.5	2 1/4	406.4	400.1	425.5	416	431.88	467.94		404.10	421	
16	44.5	704.9	16	66.5	2 1/2	444.5	438.2	469.9	567	562.30	610.84		522.10	559	
18	49.3	774.7	16	73.2	2 3/4	495.3	489.0	527.1	736	741.28	790.00		670.00	761.60	
20	54.1	831.9	16	79.2	3	539.8	533.4	565.2	929	892.00	980.00		806.00	967	
24	63.5	990.6	16	91.9	3 1/2	616.0	609.6	647.7	1504	1430.00	1580.00		1285.5	1568	

(4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
(5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, and facing is carried out according to MSS SP-9, without reducing thickness (t).
(6) Dimensions of sizes 1/2" through 21/2" are the same as for Class 900 Flanges.
(7) Depth of Socket (Y) is covered by ANSI B16.5 only in sizes through 21/2 inch, over 21/2 inch is at the manufacturer's option.



SLIP-ON



WELDING NECK

CLASS 2500 FLANGES

ANSI B16.5 FORGED FLANGES

Unit:mm

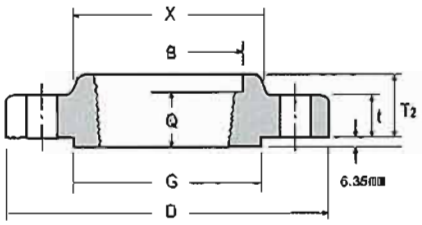
Nominal Pipe Size	Outside Diam.	Diam. at Base of Hub	O.D of Raised Face	Thick-ness	BORE				LENGTH THRU HUB			Diam. of Hub at Bevel	Radius of Fillet	Thread Length
					Welding Neck Socket Welding	Slip-on Socket Welding	Lap Joint	Counter Bore Min. Threaded Min.	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	D	X	G	t	B1	B2	B3	B	T1	T2	T3	A	R	Q
1/2	133.4	42.9	35.1	30.2	To be specified by purchaser	22.4	22.9	23.6	73.2	39.6	39.6	21.3	3.0	28.4
3/4	139.7	50.8	42.9	31.8		27.7	28.2	29.0	79.2	42.9	42.9	26.7	3.0	31.8
1	158.8	57.2	50.8	35.1		34.5	35.1	35.8	88.9	47.8	47.8	33.5	3.0	35.1
1 1/4	184.2	73.2	63.5	38.1		43.2	43.7	44.5	95.3	52.3	52.3	42.2	4.8	38.1
1 1/2	203.2	79.2	73.2	44.5		49.5	50.0	50.5	111.3	60.5	60.5	48.3	6.4	44.5
2	235	95.3	91.9	50.8		62.0	62.5	63.5	127.0	69.9	69.9	60.5	7.9	50.8
2 1/2	266.7	114.3	104.6	57.2		74.7	75.4	76.2	142.7	79.2	79.2	73.2	7.9	57.2
3	304.8	133.4	127.0	66.5		90.7	91.4	92.2	168.1	91.9	91.9	88.9	9.7	63.5
4	355.6	165.1	157.2	76.2		116.1	116.8	117.6	190.5	108.0	108.0	114.3	11.2	69.9
5	419.1	203.2	185.7	91.9		143.8	144.5	144.5	228.6	130.0	130.0	141.2	11.2	76.2
6	482.6	235.0	215.9	108.0		170.7	171.5	171.5	273.1	152.4	152.4	168.4	12.7	82.6
8	552.5	304.8	269.7	127.0		221.5	222.3	222.3	317.5	177.8	177.8	219.2	12.7	95.3
10	673.1	374.7	323.9	165.1		276.4	277.4	276.4	419.1	228.6	228.6	273.1	12.7	108.0
12	762	441.5	381.0	184.2		327.2	328.2	328.7	463.6	254.0	254.0	232.9	12.7	120.7

Notes:

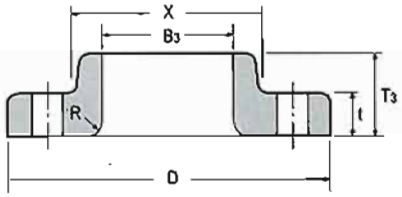
(1) For the inside diameter of pipes (corresponding to 'Bore' (B1) of Welding Neck Flanges.), refer to page 83.

(2) Class 2500 flanges except Lap Joint will be furnished with 0.25" (6.35mm) raised face, which is included in Thickness (t) and 'Length through Hub' (T1), (T2).

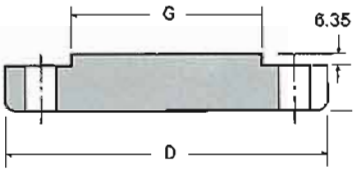
(3) For Slip-on, Threaded and Lap Joint Flanges, the hubs can be shaped either vertical from base to top or tapered within the limits of 7 degrees.



THREADED



LAP JOINT



BLIND

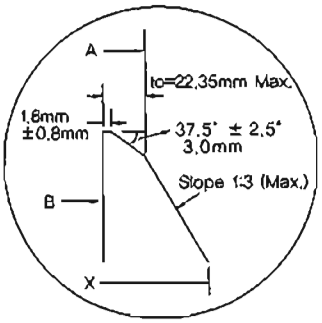
CLASS 2500 FLANGES

ANSI B16.5 FORGED FLANGES

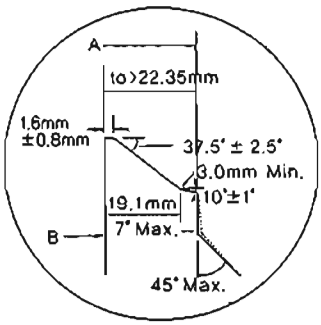
Unit:mm

Nominal Pipe Size	DRILLING			BOLTING				APPROXIMATE WEIGHT			
	Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Stud Bolt Length			Welding Neck	Slip-on and Threaded	Lap Joint	Blind
					0.25" Raised Face	Male-Female Tongue--Groove	Ring Joint				
1/2	88.9	4	22.4	3/4	120.7	114.3	120.7	3.63	3.20	3.20	3.11
3/4	95.3	4	22.4	3/4	127.0	120.7	127.0	4.09	4.08	4.08	4.54
1	108.0	4	25.4	7/8	139.7	133.4	139.7	5.90	5.44	5.44	5.44
1 1/4	130.0	4	28.4	1	152.4	146.1	152.4	9.08	8.16	8.16	8.16
1 1/2	146.1	4	31.8	1 1/8	171.5	165.1	171.5	12.70	11.00	11.00	10.44
2	171.5	8	28.4	1	177.8	171.5	177.8	19.10	17.25	17.25	17.71
2 1/2	196.9	8	31.8	1 1/8	196.9	190.5	203.2	23.60	25.00	25.00	25.42
3	228.6	8	35.1	1 1/4	222.3	215.9	228.6	42.70	37.70	37.70	39.04
4	273.1	8	41.1	1 1/2	254.0	247.7	260.4	66.30	58.00	58.00	60.38
5	323.9	8	47.8	1 3/4	298.5	292.1	311.2	110.80	95.30	95.30	101.15
6	368.3	8	53.8	2	342.9	336.6	355.6	176.46	146.51	147.00	156.63
8	438.2	12	53.8	2	381.0	374.7	393.7	261.50	220.00	220.00	240.62
10	539.8	12	66.5	2 1/2	489.0	482.6	508.0	484.50	421.00	421.00	465.36
12	619.3	12	73.2	2 3/4	539.8	533.4	558.8	730.00	590.00	590.00	664.1

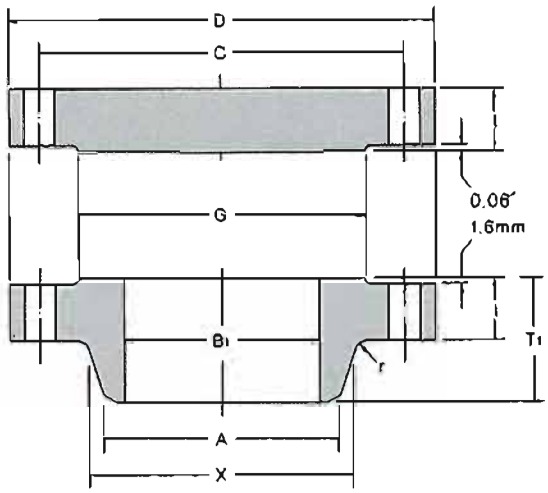
(4) Blind Flanges may be made with the same hub as that used for Slip-on Flanges or without hub.
(5) The gasket surface and backside (bearing surface for bolting) are made parallel within 1 degree. To accomplish parallelism, spot facing is carried out according to MSS SP-9, without reducing thickness (t).
(6) Class 2500 Slip-on Flanges are not covered by ANSI B16.5, slip-on flanges are at the manufacturer's option.



BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm) OR LESS.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)



CLASS 75 FLANGES

ASME B16.47 SER.B (API 605)

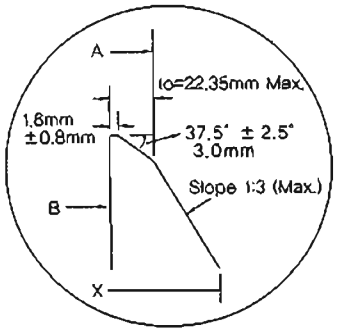
Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. of Hub at Base	Diam. of Hub at Bevel	BORE Wall Thickness 6.35mm	BORE Wall Thickness 9.5mm	BORE Wall Thickness 12.7mm	Length Thru Hub	THICKNESS Blind	THICKNESS Welding Neck	Radius at Base of Hub	DRILLING Bolt Circle Diam	DRILLING Number of Holes	DRILLING Diam. of Holes	Approximate Weight(kg) Welding neck	Approximate Weight(kg) Blind
	D	G	X	A	B1			T1	t	t	r	c				
26	762	704.9	676.1	661.9	647.7	641.4	635.0	58.7	33.3	33.3	7.9	723.9	36	19.1	36.3	115.7
28	813	755.7	726.9	712.7	698.5	692.2	685.8	62.0	33.3	33.3	7.9	774.7	40	19.1	38.6	131.5
30	864	806.5	777.7	763.5	749.3	743.0	736.6	65.0	33.3	33.3	7.9	825.5	44	19.1	40.8	149.7
32	914	857.3	828.5	814.3	800.1	793.8	787.4	69.9	36.6	35.1	7.9	876.3	48	19.1	47.6	176.9
34	965	908.1	879.3	865.1	850.9	844.6	838.2	73.2	38.1	35.1	7.9	927.1	52	19.1	49.9	195.0
36	1034	965.2	935.0	915.9	850.9	895.4	889.0	85.9	42.4	36.6	9.7	992.1	40	22.4	65.8	235.0
38	1084	1016.0	985.8	966.7	952.5	946.2	939.8	88.9	44.5	38.1	9.7	1042.9	40	22.4	72.6	269.9
40	1135	1066.8	1036.6	1017.5	1003.3	997.0	990.6	91.9	44.5	38.1	9.7	1093.7	44	22.4	77.1	344.7
42	1186	1117.6	1087.4	1068.3	1054.1	1047.8	1041.4	95.3	47.8	39.6	9.7	1144.5	48	22.4	83.9	406.0
44	1251	1174.8	1140.0	1119.1	1104.9	1098.6	1092.2	104.6	49.3	42.9	9.7	1203.5	36	25.4	104.3	483.1
46	1302	1225.6	1190.8	1169.9	1155.7	1149.4	1143.0	108.0	50.8	44.5	9.7	1254.3	40	25.4	111.1	537.5
48	1353	1276.4	1241.6	1220.7	1206.5	1200.2	1193.8	111.3	53.8	46.0	9.7	1305.1	44	25.4	122.5	596.5
50	1403	1327.2	1293.9	1271.5	1257.3	1251.0	1244.6	115.8	55.4	47.8	9.7	1355.9	44	25.4	131.5	682.7
52	1457	1378.0	1344.7	1322.3	1308.1	1301.8	1295.4	120.7	57.2	47.8	9.7	1409.7	48	25.4	140.6	755.2
54	1508	1428.8	1397.0	1373.1	1358.9	1352.6	1346.2	125.5	60.5	49.3	9.7	1460.5	48	25.4	154.2	834.6
56	1575	1485.9	1450.8	1423.9	1409.7	1403.4	1397.0	134.9	62.0	50.8	11.2	1521.0	40	28.4	181.4	957.1
58	1626	1536.7	1501.6	1474.7	1460.5	1454.2	1447.8	138.2	63.5	52.3	11.2	1571.8	44	28.4	195.0	1043.3
60	1676	1587.5	1552.4	1525.5	1511.3	1505.0	1498.6	144.5	66.5	55.6	11.2	1622.6	44	28.4	215.5	1134.0

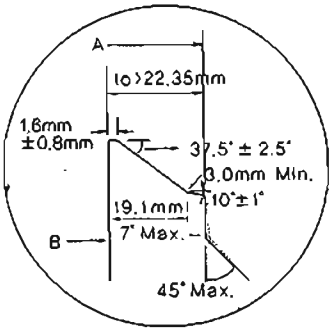
Notes

(1) 'Bore' (B1) of flanges shall be specified by the purchaser.

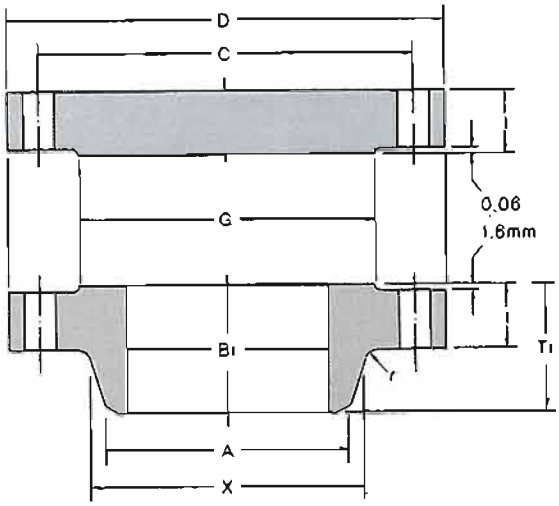
(2) Class 300 flanges will be furnished with 0.06" (1.6mm) raised face which is included in 'Thickness' (t) and 'Length thru Hub' (T1).



BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm) OR LESS.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)



CLASS 150 FLANGES

ASME B16.47 SER.B (API 605)

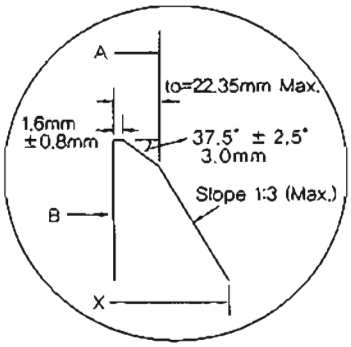
Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. of Hub at Base	Diam. of Hub at Bevel	BORE Wall Thickness 6.35mm	BORE Wall Thickness 9.5mm	BORE Wall Thickness 12.7mm	Length Thru Hub	THICKNESS Blind	THICKNESS Welding	Radius at Base of Hub	DRILLING Bolt Circle Diam	DRILLING Number of Holes	DRILLING Diam. of Holes	Approximate Weight(kg) Welding neck	Approximate Weight(kg) Blind
	D	G	X	A	B1			T1	t	t	r	c				
26	786	711.2	684.3	661.9	647.7	641.4	635.0	88.9	44.5	41.1	9.7	744.5	36	22.4	54.4	169.2
28	837	762.0	735.1	712.7	698.5	692.2	685.8	95.3	47.8	44.5	9.7	795.3	40	22.4	63.5	205.9
30	887	812.8	787.4	763.5	749.3	743.0	736.6	100.1	50.8	44.5	9.7	846.1	44	22.4	68.0	246.3
32	941	863.6	839.7	814.3	800.1	793.8	787.4	108.0	53.8	46.0	9.7	900.2	48	22.4	77.1	293.9
34	1005	920.8	892.0	865.1	850.9	844.6	838.2	110.2	57.2	49.3	9.7	957.3	40	25.4	95.3	355.2
36	1057	971.6	944.6	915.9	901.7	895.4	889.0	117.3	58.7	52.3	9.7	1009.7	44	25.4	108.9	403.7
38	1124	1022.4	997.0	968.2	952.5	946.2	939.8	124.0	63.5	53.8	9.7	1069.8	40	28.4	131.5	494.0
40	1175	1079.5	1049.3	1019.0	1003.3	997.0	990.6	128.5	66.5	55.6	9.7	1120.6	44	28.4	140.6	565.6
42	1226	1130.3	1101.9	1069.8	1054.1	1047.8	1041.4	133.4	68.3	58.7	11.2	1171.4	48	28.4	156.5	631.9
44	1276	1181.1	1152.7	1120.6	1104.9	1098.6	1092.2	136.7	71.4	60.5	11.2	1222.2	52	28.4	167.8	716.2
46	1341	1234.9	1205.0	1171.4	1155.7	1149.4	1143.0	144.5	74.7	62.0	11.2	1284.2	40	31.8	197.3	827.4
48	1392	1289.1	1257.3	1222.2	1206.5	1200.2	1193.8	149.4	77.7	65.0	11.2	1335.0	44	31.8	217.7	927.6
50	1443	1339.9	1308.1	1273.0	1257.3	1251.0	1244.6	153.9	80.8	68.3	11.2	1385.8	48	31.8	235.9	1036.0
52	1494	1390.7	1360.4	1323.8	1308.1	1301.8	1295.4	157.2	84.1	69.9	11.2	1436.6	52	31.8	249.5	1155.3
54	1549	1441.5	1412.7	1374.6	1358.9	1352.6	1346.2	162.1	87.4	71.4	11.2	1492.3	56	31.8	281.2	1291.9
56	1600	1492.3	1465.3	1425.4	1409.7	1403.4	1397.0	166.6	90.4	73.2	14.2	1543.1	60	31.8	294.8	1426.1
58	1675	1543.1	1516.1	1476.2	1460.5	1454.2	1447.8	174.8	93.5	74.7	14.2	1611.4	48	35.1	353.8	1614.8
60	1726	1600.2	1570.0	1527.0	1511.3	1505.0	1498.6	179.3	96.8	76.2	14.2	1662.2	52	35.1	385.6	1774.9

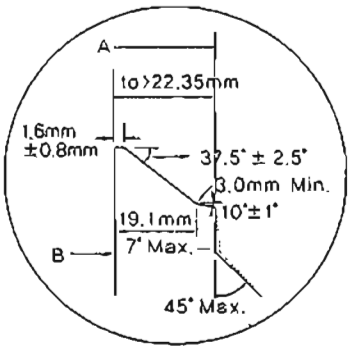
Notes

(1) 'Bore' (B1) of flanges shall be specified by the purchaser.

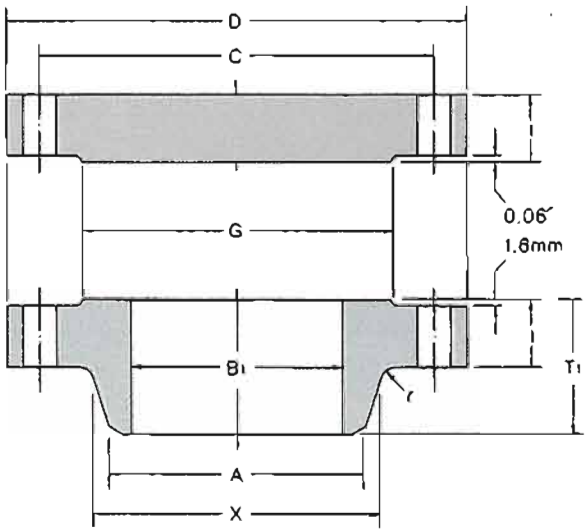
(2) Class 300 flanges will be furnished with 0.06" (1.6mm) raised face which is included in 'Thickness' (t) and 'Length thru Hub' (T1).



BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm) OR LESS.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)



CLASS 300 FLANGES

ASME B16.47 SER.B(API 605)

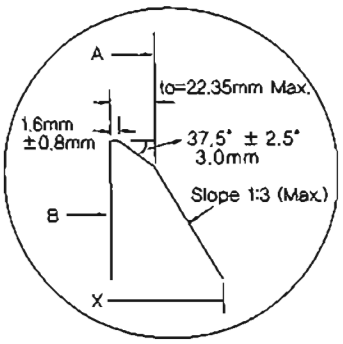
Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. of Hub at Base	Diam. of Hub at Bevel	BORE Wall Thickness			Length Thru Hub	THICKNESS		Radius at Base of Hub	DRILLING			Approximate Weight(kg)	
					6.35mm	9.5mm	12.7mm		Blind	Welding Neck		Bolt Circle Diam	Number of Holes	Diam. of Holes		
	D	G	X	A	B1			T1	t	t	r	c			Welding neck	Blind
26	867	736.6	701.5	665.2	647.7	641.4	635.0	144.5	88.9	88.9	14.2	803.1	32	35.1	181.4	411.4
28	921	787.4	755.7	716.0	698.5	692.2	685.8	149.4	88.9	88.9	14.2	857.3	36	35.1	204.1	464.0
30	991	844.6	812.8	768.4	749.3	743.0	736.6	158.0	93.7	93.7	14.2	920.8	36	38.1	249.5	566.5
32	1054	901.7	863.6	819.2	800.1	793.8	787.4	168.1	103.1	103.1	15.7	977.9	32	41.1	310.7	705.8
34	1108	952.5	917.4	870.0	850.9	844.6	838.2	173.0	103.1	103.1	15.7	1031.7	36	41.1	340.2	779.7
36	1171	1009.7	965.2	920.8	901.7	895.4	889.0	180.8	103.1	103.1	15.7	1089.2	32	44.5	381.0	871.4
38	1222	1060.5	1016.0	971.6	952.5	946.2	939.8	192.0	111.3	111.3	15.7	1140.0	36	44.5	415.0	1023.8
40	1273	1114.6	1066.8	1022.4	1003.3	997.0	990.6	198.4	115.8	115.8	15.7	1190.8	40	44.5	449.1	1156.2
42	1334	1168.4	1117.6	1074.7	1054.1	1047.8	1041.4	204.7	119.1	119.1	15.7	1244.6	36	47.8	514.8	1304.6
44	1384	1219.2	1173.2	1125.5	1104.9	1098.6	1092.2	214.4	127.0	127.0	15.7	1295.4	40	47.8	560.2	1498.7
46	1461	1270.0	1228.9	1176.3	1155.7	1149.4	1143.0	222.3	130.0	128.5	15.7	1365.3	36	50.8	666.8	1708.3
48	1511	1327.2	1277.9	1227.1	1206.5	1200.2	1193.8	223.8	134.9	128.5	15.7	1416.1	40	50.8	714.4	1897.4
50	1562	1378.0	1330.5	1277.9	1257.3	1251.0	1244.6	235.0	139.7	138.2	15.7	1466.9	44	50.8	775.7	2099.7
52	1613	1428.8	1382.8	1328.7	1308.1	1301.8	1295.4	242.8	144.3	142.7	15.7	1517.7	48	50.8	834.6	2311.5
54	1673	1479.6	1435.1	1379.5	1358.9	1352.6	1346.2	239.8	149.4	136.7	15.7	1577.8	48	50.8	898.1	2575.5
56	1765	1536.7	1493.8	1430.3	1409.7	1403.4	1397.0	268.2	157.0	153.9	17.5	1651.0	36	60.5	1177.1	3012.8
58	1827	1593.9	1547.9	1481.1	1460.5	1454.2	1447.8	274.6	162.1	153.9	17.5	1712.0	40	60.5	1256.6	3332.6
60	1878	1651.0	1598.7	1531.9	1511.3	1505.0	1498.6	271.5	166.6	150.9	17.5	1763.8	40	60.5	1301.8	3619.7

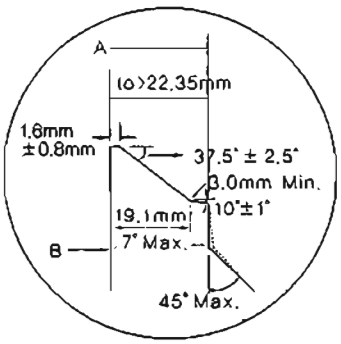
Notes

(1) 'Bore' (B1) of flanges shall be specified by the purchaser.

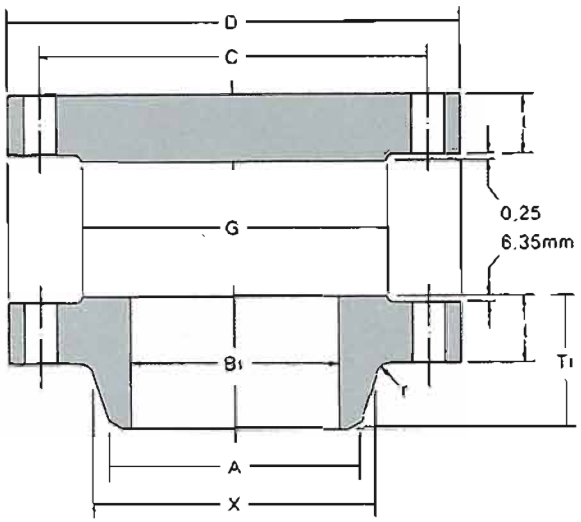
(2) Class 300 flanges will be furnished with 0.06" (1.6mm) raised face which is included in 'Thickness' (t) and 'Length thru Hub' (T1).



BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm) OR LESS.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)



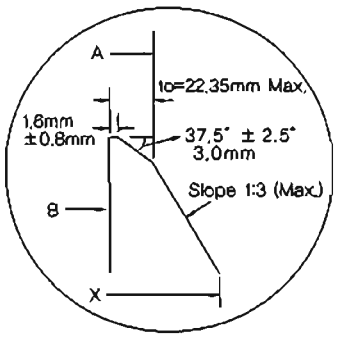
CLASS 400 FLANGES

ASME B16.47 SER.B(API 605)

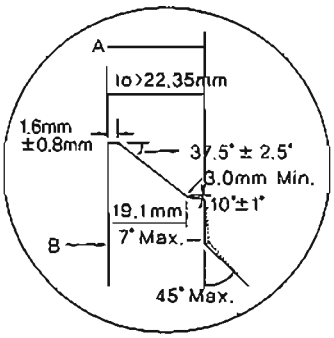
Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. of Hub at Base	Diam. of Hub at Bevel	BORE			Length Thru Hub	THICKNESS		Radius at Base of Hub	DRILLING			Approximate Weight(kg)	
					Wall Thickness				Blind	Welding		Bolt Circle Diam	Number of Holes	Diam. of Holes		
					6.35mm	9.5mm	12.7mm								Welding neck	Blind
	D	G	X	A	B1			T1	t	t	r	c				
26	850.9	711.2	688.8	660.4	647.7	641.4	635.0	149.4	88.9	88.9	11.2	781.1	28	38.1	163.3	396.4
28	914.4	762.0	739.6	711.2	698.5	692.2	685.8	158.8	95.3	95.3	12.7	838.2	24	41.1	204.1	490.3
30	971.6	819.2	793.8	762.0	749.3	743.0	736.6	169.9	101.6	101.6	12.7	895.4	28	41.1	240.4	590.6
32	1035.1	873.3	844.6	812.8	800.1	793.8	787.4	179.3	108.0	108.0	12.7	952.5	28	44.5	288.0	712.2
34	1085.9	927.1	898.7	863.6	850.9	844.6	838.2	187.5	111.3	111.3	14.2	1003.3	32	44.5	313.0	807.9
36	1155.7	980.9	952.5	914.4	901.7	895.4	889.0	200.2	119.1	119.1	14.2	1066.8	28	47.8	387.8	979.8
38	1206.5	1035.1	1003.3	965.2	952.5	946.2	939.8	206.2	124.0	124.0	14.2	1117.6	32	47.8	424.1	1111.3
40	1270.0	1092.2	1054.1	1016.0	1003.3	997.0	990.6	215.9	130.0	130.0	14.2	1174.8	32	50.8	494.4	1291.9
42	1320.8	1143.0	1107.9	1066.8	1054.1	1047.8	1041.4	223.8	133.4	133.4	14.2	1225.6	32	50.8	539.8	1432.9
44	1384.3	1200.2	1158.7	1117.6	1104.9	1098.6	1092.2	233.2	139.7	139.7	14.2	1282.7	32	53.8	623.7	1648.8
46	1441.5	1257.3	1212.9	1168.4	1155.7	1149.4	1143.0	244.3	146.1	146.1	14.2	1339.9	36	53.8	691.7	1868.8
48	1511.3	1308.1	1267.0	1219.2	1206.5	1200.2	1193.8	257.0	152.4	152.4	14.2	1403.4	28	60.5	811.9	2143.7
50	1568.5	1361.9	1320.8	1270.0	1257.3	1251.0	1244.6	268.2	158.8	157.2	14.2	1460.5	32	60.5	884.5	2405.4
52	1619.3	1412.7	1371.6	1320.8	1308.1	1301.8	1295.4	276.4	163.6	162.1	14.2	1511.3	32	60.5	963.9	2641.3
54	1701.8	1470.2	1425.4	1371.6	1358.9	1352.6	1346.2	289.1	171.5	169.9	14.2	1581.2	28	66.5	1163.5	3058.2
56	1752.6	1527.0	1479.6	1422.4	1409.7	1403.4	1397.0	298.5	176.3	174.8	14.2	1632.0	32	66.5	1229.3	3334.9
58	1803.4	1577.8	1530.4	1473.2	1460.5	1454.2	1447.8	306.3	180.8	177.8	14.2	1682.8	32	66.5	1465.1	3622.4
60	1886.0	1635.3	1584.5	1524.0	1511.3	1505.0	1498.6	319.0	189.0	185.7	14.2	1752.6	32	73.2	1732.8	4139.6

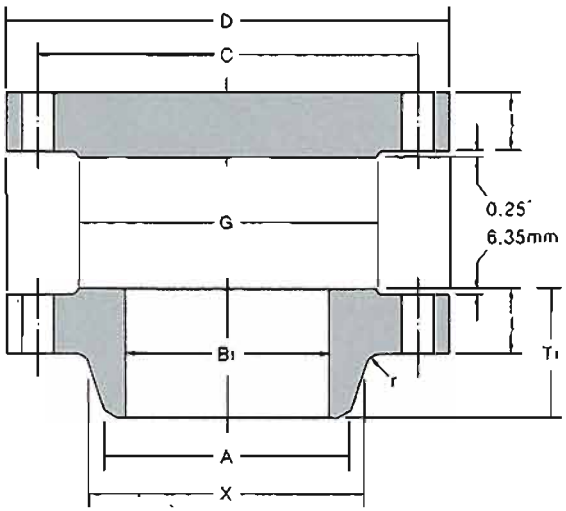
Notes
Dimensions for class 600,900 NPS 36" and larger as the same as for series A flanges.



BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm) OR LESS.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)



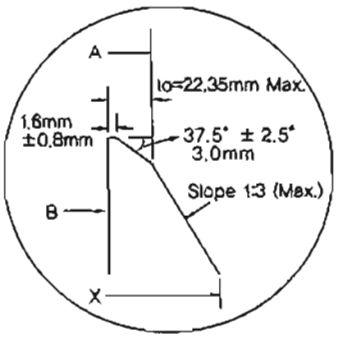
CLASS 600 FLANGES

ASME B16.47 SER.B(API 605)

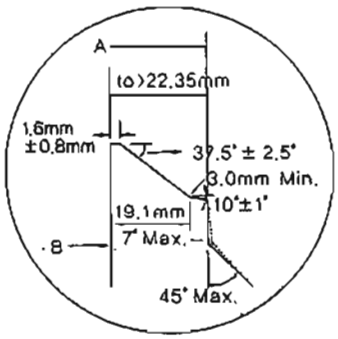
Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. of Hub at Base	Diam. of Hub at Bevel	BORE			Length Thru Hub	THICKNESS		Radius at Base of Hub	DRILLING			Approximate Weight(kg)	
					Wall Thickness				Blind	Welding Neck		Bolt Circle Diam	Number of Holes	Diam. of Holes		
					6.35mm	9.5mm	12.7mm								Welding neck	Blind
	D	G	X	A	B1			T1	t	t	r	c				
26	889.0	726.9	698.5	660.4	647.7	641.4	635.0	180.8	111.3	111.3	12.70	806.5	28	44.5	249.5	541.6
28	952.5	784.4	752.3	711.2	698.5	692.2	685.8	190.5	115.8	115.8	12.70	863.6	28	47.8	294.8	647.3
30	1022.4	841.2	806.5	762.0	749.3	743.0	736.6	204.7	127.0	125.5	12.70	927.1	28	50.8	367.4	817.4
32	1085.9	895.4	860.6	812.8	800.1	793.8	787.4	215.9	134.9	130.0	12.70	984.3	28	53.8	430.9	979.3
34	1162.1	952.5	914.4	863.6	850.9	844.6	838.2	233.4	144.3	141.2	14.22	1054.1	24	60.5	546.6	1199.8
36	1212.9	1009.7	968.2	914.4	901.7	895.4	889.0	242.8	150.9	146.1	14.22	1104.9	28	60.5	607.8	1366.7
38	1270.0	1054.1	1022.4	965.2	952.5	946.2	939.8	254.0	155.4	152.4	14.22	1162.3	28	60.5	666.8	1544.1
40	1320.8	1111.3	1073.2	1016.0	1003.3	997.0	990.6	263.7	162.1	158.8	14.22	1212.9	32	60.5	739.4	1740.9
42	1403.4	1168.4	1127.3	1066.8	1054.1	1047.8	1041.4	279.4	171.5	168.1	14.22	1282.7	28	66.5	920.8	2079.8
44	1454.2	1225.6	1181.1	1117.6	1104.9	1098.6	1092.2	289.1	177.8	173.0	14.22	1333.5	32	66.5	979.8	2315.6
46	1511.3	1276.4	1234.9	1168.4	1155.7	1149.4	1143.0	300.0	185.7	179.3	14.22	1390.7	32	66.5	1093.2	2611.8
48	1593.9	1333.5	1289.1	1219.2	1206.5	1200.2	1193.8	316.0	195.3	189.0	14.22	1460.5	32	73.2	1295.0	3055.9
50	1670.1	1384.3	1343.2	1270.0	1257.3	1251.0	1244.6	328.7	203.2	196.9	14.22	1524.0	28	79.2	1510.5	3490.5
52	1720.9	1435.1	1394.0	1320.8	1308.1	1301.8	1295.4	336.6	209.6	203.2	14.22	1574.8	32	79.2	1614.8	3822.0
54	1778.0	1492.3	1447.8	1371.6	1358.9	1352.6	1346.2	349.3	217.4	209.6	14.22	1632.0	32	79.2	1778.1	4233.4
56	1854.2	1543.1	1501.6	1422.4	1409.7	1403.4	1397.0	362.0	225.6	217.4	15.75	1695.5	32	85.9	1941.4	4776.0
58	1905.0	1600.2	1552.4	1473.2	1460.5	1454.2	1447.8	369.8	231.6	222.3	15.75	1746.3	32	85.9	2104.7	5177.4
60	1993.9	1657.4	1609.9	1524.0	1511.3	1505.0	1498.6	388.9	242.8	233.4	17.53	1822.5	28	91.9	2268.0	5945.8

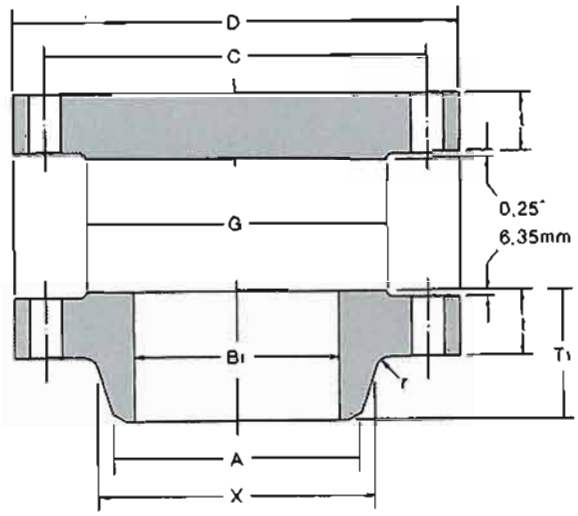
Notes
Dimensions for class 600,900 NPS 36" and larger as the same as for series A flanges.



BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm) OR LESS.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)



CLASS 900 FLANGES

ASME B16.47 SER.B(API 605)

Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. of Hub at Base	Diam. of Hub at Bevel	BORE			Length Thru Hub	THICKNESS		Radius at Base of Hub	DRILLING			Approximate Weight(kg)	
					Wall Thickness				Blind	Welding		Bolt Circle Diam	Number of Holes	Diam. of Holes		
					6.35mm	9.5mm	12.7mm								Welding neck	Blind
	D	G	X	A	B1			T1	t	t	r	c				
26	1022.4	762.0	743.0	660.4	647.7	641.4	635.0	258.8	153.9	134.9	11.2	901.7	20	66.5	476.3	990.7
28	1104.9	819.2	797.1	711.2	698.5	692.2	685.8	276.4	166.6	147.6	12.7	971.6	20	73.2	689.5	1252.8
30	1181.1	876.3	850.9	762.0	749.3	743.0	736.6	289.1	176.0	155.4	12.7	1035.1	20	79.2	825.6	1512.3
32	1238.3	927.1	908.1	812.8	800.1	793.8	787.4	303.3	185.7	160.3	12.7	1092.2	20	79.2	936.7	1753.2
34	1314.5	990.6	962.2	863.6	850.9	844.6	838.2	319.0	195.1	171.5	14.2	1155.7	20	85.9	1111.3	2075.7
36	1346.2	1028.7	1016.0	914.4	901.7	895.4	889.0	325.4	201.7	173.0	14.2	1200.2	24	79.2	1143.1	2251.2
38	1460.5	1098.6	1073.2	965.2	952.5	946.2	939.8	352.6	215.9	190.5	19.1	1289.1	20	91.9	1535.4	2836.4
40	1511.3	1162.1	1127.3	1016.0	1003.3	997.0	990.6	363.5	223.8	196.9	20.6	1339.9	24	91.9	1642.0	3148.0
42	1562.1	1212.9	1176.3	1066.8	1054.1	1047.8	1041.4	371.3	231.6	206.2	20.6	1390.7	24	91.9	1796.3	3481.4
44	1648.0	1270.0	1234.9	1117.6	1104.9	1098.6	1092.2	390.7	242.8	214.4	22.4	1463.5	24	98.6	1950.5	4061.5
46	1733.6	1333.5	1292.4	1168.4	1155.7	1149.4	1143.0	411.0	255.5	225.6	22.4	1536.7	24	104.6	2104.7	4729.2
48	1784.4	1384.3	1343.2	1219.2	1206.5	1200.2	1193.8	419.1	263.7	233.4	23.9	1587.5	24	104.6	2258.9	5170.1

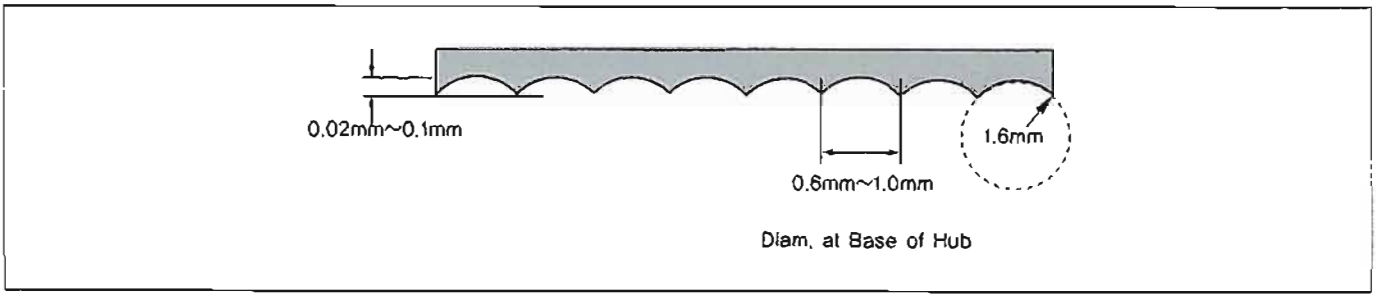
Notes
Dimensions for class 600,900 NPS 36" –and larger as the same as for series A flanges.

FINISH & TOLERANCE

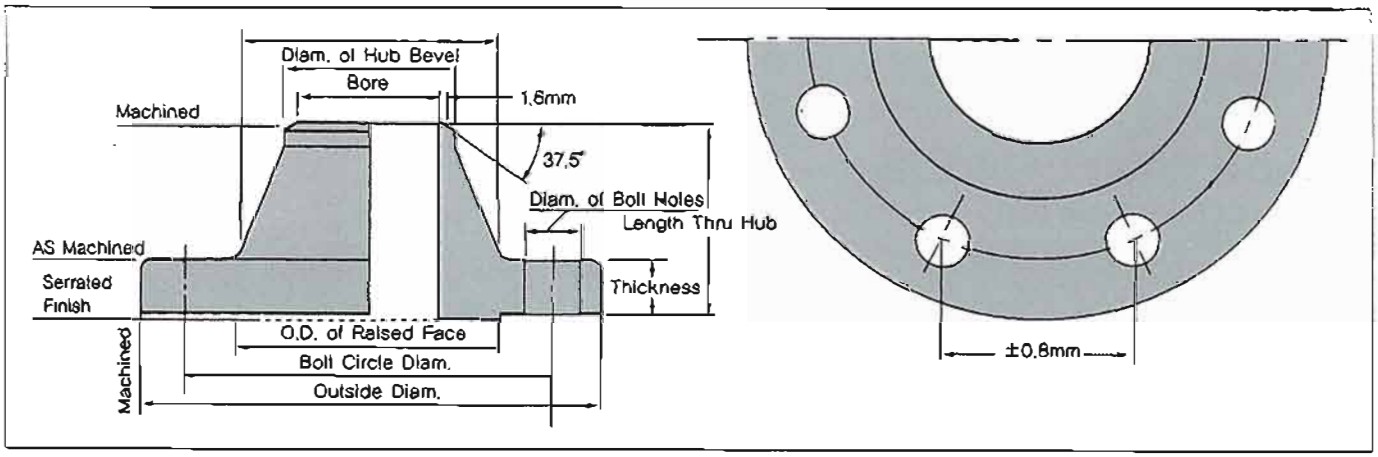
ANSI B16.47 SER.B Forged Flanges

1. Standard Finishes for Contact Face of Flanges

The flange face shall have a serrated finish consisting of 20 to 40 grooves per inch, 0.002 in. to 0.005 in. deep, cut spirally or concentrically with a round-nose tool.



2. Dimensional Tolerances for ASME B16.47 SER. B Flanges.



Dimension	Folerance
outside diameter of raised face	± 0.8mm
Flange thickness	+ 4.8mm, - 0mm
Length thru hub	± 3.0mm
Diam. of hub at bevel	+ 4.1mm, - 0.8mm
Bolt circle diameter	± 1.6mm
Center-to-center of adjacent bolt holes	± 0.8mm
Bore	+ 3.0mm, - 1.6mm
Outside diameter	± 3.0mm
Diameter at base of hub	± 3.0mm

Notes

(1) Flanges shall have bearing surfaces for bolting that are parallel to the flange face within 1 degree. Any back facing or spot facing required to accomplish parallelism between the flange face and nut bearing surface on the back of the flange shall not reduce the flange thickness.

(2) Tolerance for the welding end of a welding neck flange shall be in conformance with ANSI B16.25.

(3) Other tolerances than specified the table shall be in accordance with ANSI B16.5.

(4) The flange shall be either back-faced or spot-faced at the bolt-holes on the flange back if the nut bearing surface at the back of the flange is not parallel with the flange face within the tolerances listed in Note, if the fillet at the hub interferes with the nut bearing surface or if the flange thickness exceed the minimum required thickness by more than 0.19 inch (4.8 millimeters). The nut bearing surface is the spot-facing diameter at the bolt-holes as given in MSS SP-9. Spot-facing shall be in accordance with MSS SP-9.

(5) Tolerances marked' are not covered in API 605.

MATERIAL SPECIFICATIONS

A. MATERIALS

a. The Steel used in the manufacture of these flanges shall be selected to meet the following requirements.

b. The F48 and higher grades of Class 400, 600 and 900 flanges shall be killed steel.

c. The steel used shall be suitable for field welding to other flanges fittings, or pipe manufactured under ASTM specifications A105, A53, A106, A381 or API Standards 5L and 5LX.

d. The steel used shall have a maximum carbon content of 0.35 and a carbon equivalent computed by the following equation.

$$CE = C + \frac{Mn}{6} + \frac{Si+Cr+Mo}{5} + \frac{Ni+Cu}{15}$$

that should not exceed 50%, based on check analysis, if the carbon equivalent factor exceeds 0.50%, the acceptance of the flanges shall be based on agreement of customer.

e. The choice and used of alloying elements, combined with the elements within the limits prescribed in paragraph A. d. to give the required tensile properties prescribed in paragraph A. f. shall be made by AJF. and reported in the chemical analysis to identify the type of steel.

f. The steel used shall have tensile properties conforming to the requirements prescribed in following table.

B. HEAT TREATMENT

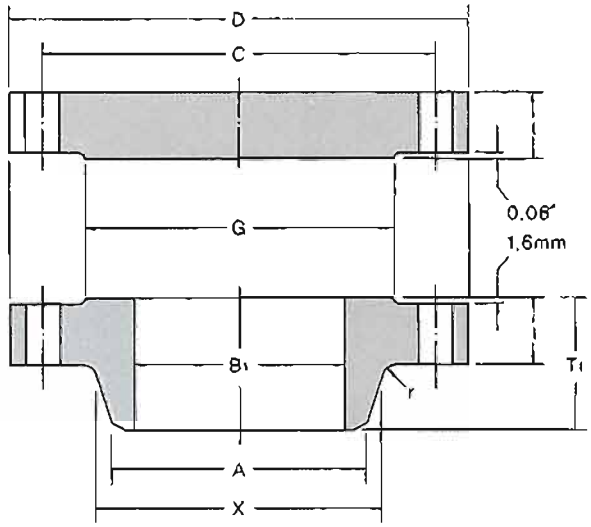
The F42 and higher grades of flanges of all pressure classes and the class 400 and higher classes of Grade F36 flanges shall be normalized or quenched and tempered.

C. TEST SPECIMEN

The test specimens may be taken from the forgings or, at the manufactures option, from the billets or forging bar entering into the finished product, provided such test blank has undergone relatively the same forming and the equivalent heat treatment as the finished flange. The dimensions of the test blank must be such as to adequately reflect the heat treatment properties of the hub of the flange.

MSS SP44 FORGED FLANGES

Grade	Yield Point Min.		Tensile Strength Min.		Elongation in 2 in. Min Recent
	KSI	Mpa	KSI	Mpa	
F36	36	248	60	414	20
F42	42	290	60	414	20
F46	46	317	60	414	20
F48	48	331	62	427	20
F50	50	345	64	441	20
F52	52	359	66	455	20
F56	56	386	68	469	20
F60	60	414	75	517	20
F65	65	448	77	531	18



CLASS 150 FLANGES

ASME B16.47 SER.A(MSS SP 44)

Unit:mm

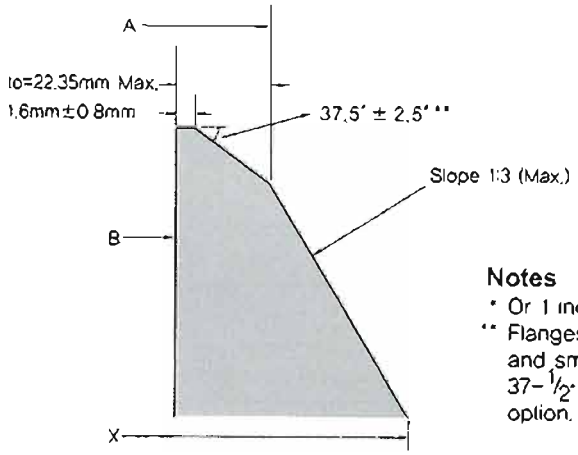
Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. at Base of Hub	Thickness	BORE Wall Thickness		Length Thru Hub
					9.5mm	12.7mm	
	D	G	X	t	B1		T1
12	483	381.0	365.3	31.8	304.8	298.5	114.3
14	533	412.8	400.1	35.1	336.6	330.2	127.0
16	597	469.9	457.2	36.6	387.4	381.0	127.0
18	635	533.4	505.0	39.6	438.2	431.8	139.7
20	699	584.2	558.8	42.9	489.0	482.6	144.5
22	749	641.4	609.6	46.0	539.8	533.4	149.4
24	813	692.2	663.4	47.8	590.6	584.2	152.4
26	870	749.3	676.1	68.3	641.4	635.0	120.7
28	927	800.1	726.9	71.4	692.2	685.8	125.5
30	984	857.3	781.1	74.7	743.0	736.6	136.7
32	1060	914.4	831.9	80.8	793.8	787.4	144.5
34	1111	965.2	882.7	82.6	844.6	838.2	149.4
36	1168	1022.4	933.5	90.4	895.4	889.0	157.0
38	1238	1073.2	990.6	87.4	946.2	939.8	157.2
40	1289	1124.0	1041.4	90.4	997.0	990.6	163.6
42	1346	1193.8	1092.2	96.8	1047.8	1041.4	171.5
44	1403	1244.6	1143.0	101.6	1098.6	1092.2	177.8
46	1454	1295.4	1196.8	103.1	1149.4	1143.0	185.7
48	1511	1358.9	1247.6	108.0	1200.2	1193.8	192.0
50	1568	1409.7	1301.8	111.3	1251.0	1244.6	203.2
52	1626	1460.5	1352.6	115.8	1301.8	1295.4	209.6
54	1683	1511.3	1403.4	120.7	1352.6	1346.2	215.9
56	1746	1574.8	1457.5	124.0	1403.4	1397.0	228.6
58	1803	1625.6	1508.3	128.5	1454.2	1447.8	235.0
60	1854	1676.4	1559.1	131.8	1505.0	1498.6	239.8

Notes

(1) For the 'Bore' (B1) other than wall thickness 0.375" (9.5mm) and 0.500" (12.7mm), refer to page 83

(2) Class 150 flanges will be furnished with 0.06" (1.6mm) raised face, which is included in 'Thickness' (t) and 'Length thru Hub' (T1).

(3)Dimensional tolerance are in accordance with ANSI B16.5.

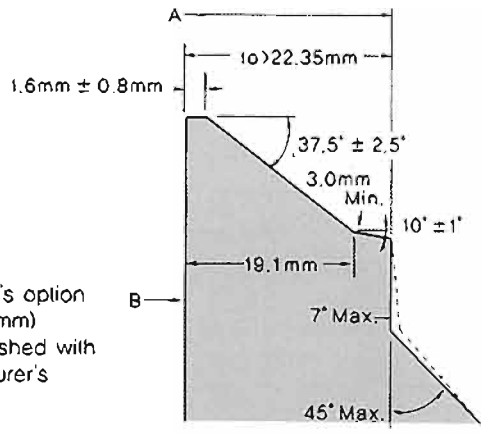


BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm)* OR LESS.

Notes

* Or 1 inch at manufacturer's option

** Flanges sizes 24" (609.6mm) and smaller may be furnished with 37-½° bevel at manufacturer's option.



BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)

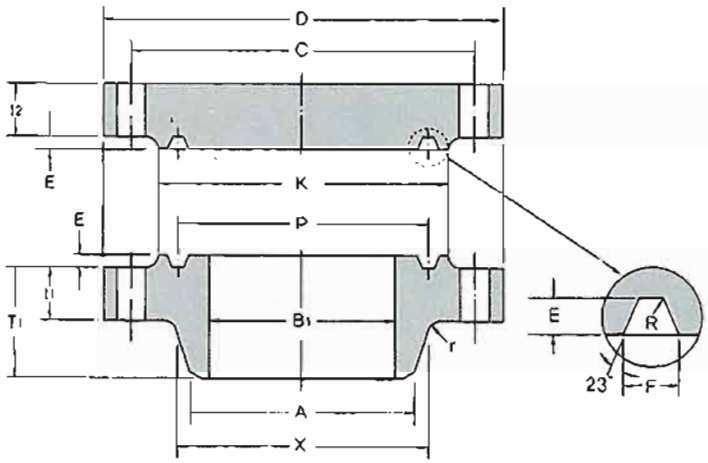
WELDING-ENDS FOR WELDING-NECK FLANGES

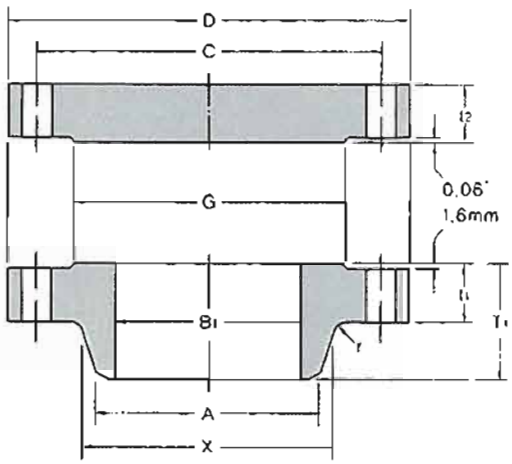
Unit:mm

Nominal Pipe Size	Diam. of Hub Bevel	Radius of Fillet	DRILLING			Approximate Weight(kg)	
			Bolt Circle Diam	Number of Holes	Diam of Holes	Weld-neck	Blind
	A	r	C				
12	304.8	9.7	431.8	12	25.4	38.98	43.70
14	355.6	9.7	476.3	12	28.4	51.71	59.42
16	406.4	9.7	539.8	16	28.4	64.41	77.11
18	457.2	9.7	577.9	16	31.8	74.84	94.80
20	508.0	9.7	635.0	20	31.8	89.36	123.38
22	558.8	9.7	692.2	20	35.1	112.00	-
24	609.6	9.7	749.3	20	35.1	119.66	188.24
26	660.4	9.7	806.5	24	35.1	136.10	318.40
28	711.2	11.2	863.6	28	35.1	156.50	377.80
30	762.0	11.2	914.4	28	35.1	181.40	445.40
32	812.8	11.2	977.9	28	41.1	229.10	561.10
34	863.6	12.7	1028.7	32	41.1	244.90	627.80
36	914.4	12.7	1085.9	32	41.1	290.30	760.20
38	965.2	12.7	1149.4	32	41.1	326.60	825.10
40	1016.0	12.7	1200.2	36	41.1	351.50	925.30
42	1066.8	12.7	1257.3	36	41.1	403.70	1080.00
44	1117.6	12.7	1314.5	40	41.1	449.10	1232.40
46	1168.4	12.7	1365.3	40	41.1	480.80	1343.10
48	1219.2	12.7	1422.4	44	41.1	537.50	1518.70
50	1270.0	12.7	1479.6	44	47.8	576.10	1685.60
52	1320.8	12.7	1536.7	44	47.8	639.60	1885.20
54	1371.6	12.7	1593.9	44	47.8	719.00	2104.30
56	1422.4	12.7	1651.0	48	47.8	798.30	2327.90
58	1473.2	12.7	1708.2	48	47.8	868.60	2574.20
60	1524.0	12.7	1759.0	52	47.8	927.60	2791.50

(4) Maximum Pressure Rating for raised face flanges is 285 psi (19.5BARS) at atmospheric temperature.

(5) Flange dimendions of size 12" (304.8mm) thrugh 24" (609.6mm) flanges except 22" (558.8mm) are in accordance with ANSI B 16.5.





CLASS 300 FLANGES

ASME B16.47 SER.A(MSS SP 44)

Unit:mm

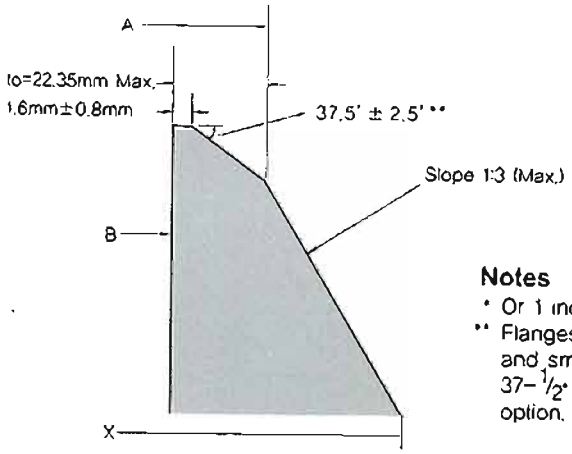
Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. at Base of Hub	Thickness		BORE Wall Thickness 9.5mm	BORE Wall Thickness 12.7mm	Length Thru Hub	Diam. of Hub at Bevel	Radius of Fillet
	D	G	X	t1	t2	B1		T1	A	r
12	521	381.0	374.7	50.8	50.8	304.8	298.5	130.0	304.8	9.7
14	584	412.8	425.5	53.8	53.8	336.6	330.2	142.7	355.6	9.7
16	648	469.9	482.6	57.2	57.2	387.4	381.0	146.1	406.4	9.7
18	711	533.4	533.4	60.5	60.5	468.2	431.8	158.8	457.2	9.7
20	775	584.2	587.2	63.5	63.5	489.0	482.6	162.1	508.0	9.7
22	838	641.4	641.4	66.5	66.5	539.8	533.4	165.1	558.8	9.7
24	914	692.2	701.5	69.9	69.9	590.6	584.2	168.1	609.6	9.7
26	972	749.3	720.9	79.2	84.1	641.4	635.0	184.2	660.4	9.7
28	1035	800.1	774.7	85.9	90.4	692.2	685.8	196.9	711.2	11.2
30	1092	857.3	827.0	91.9	95.3	743.0	736.6	209.6	762.0	11.2
32	1149	914.4	881.1	98.6	100.1	793.8	787.4	222.3	812.8	11.2
34	1207	965.2	936.8	101.6	104.6	844.6	838.2	231.6	863.6	12.7
36	1270	1022.4	990.6	104.6	111.3	895.4	889.0	241.3	914.4	12.7
38	1168	1028.7	993.6	108.0	108.0	946.2	939.8	180.8	965.2	12.7
40	1238	1085.9	1047.8	114.3	114.3	997.0	990.6	193.5	1016.0	12.7
42	1289	1136.7	1098.6	119.1	119.1	1047.8	1041.4	200.2	1066.8	12.7
44	1353	1193.8	1149.4	124.0	124.0	1098.6	1092.2	206.2	1117.6	12.7
46	1416	1244.6	1203.5	128.5	128.5	1149.4	1143.0	215.9	1168.4	12.7
48	1467	1301.8	1254.3	133.4	133.4	1200.2	1193.8	223.8	1219.2	12.7
50	1530	1358.9	1305.1	139.7	139.7	1251.0	1244.6	231.6	1270.0	12.7
52	1581	1409.7	1355.9	144.5	144.5	1301.8	1295.4	238.3	1320.8	12.7
54	1657	1466.9	1409.7	152.4	152.4	1352.6	1346.2	252.5	1371.6	12.7
56	1708	1517.7	1463.5	153.9	153.9	1403.4	1397.0	260.4	1422.4	12.7
58	1759	1574.8	1514.3	158.8	158.8	1454.2	1447.8	266.7	1473.2	12.7
60	1810	1625.6	1565.1	163.6	163.6	1505.0	1498.6	273.1	1524.0	12.7

Notes

(1) For the 'Bore' (B1) other than wall thickness 0.375" (9.5mm) and 0.500" (12.7mm), refer to page 83.

(2) Class 300 flanges will be furnished with 0.06" (1.6mm) raised face, which is included in 'Thickness' (t) and 'Length thru Hub' (T1).

(3)Dimensional tolerance are in accordance with ASME B 16.5.

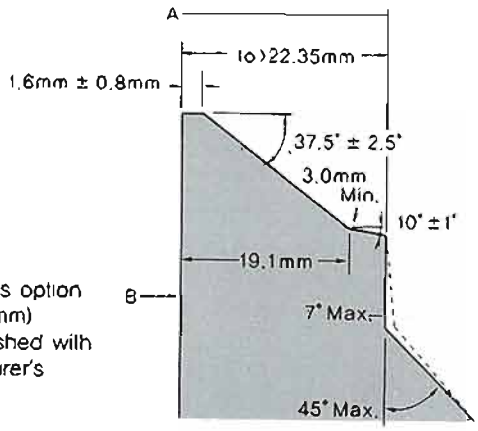


BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm)* OR LESS.

Notes

* Or 1 inch at manufacturer's option

** Flanges sizes 24" (609.6mm) and smaller may be furnished with 37-1/2° bevel at manufacturer's option.



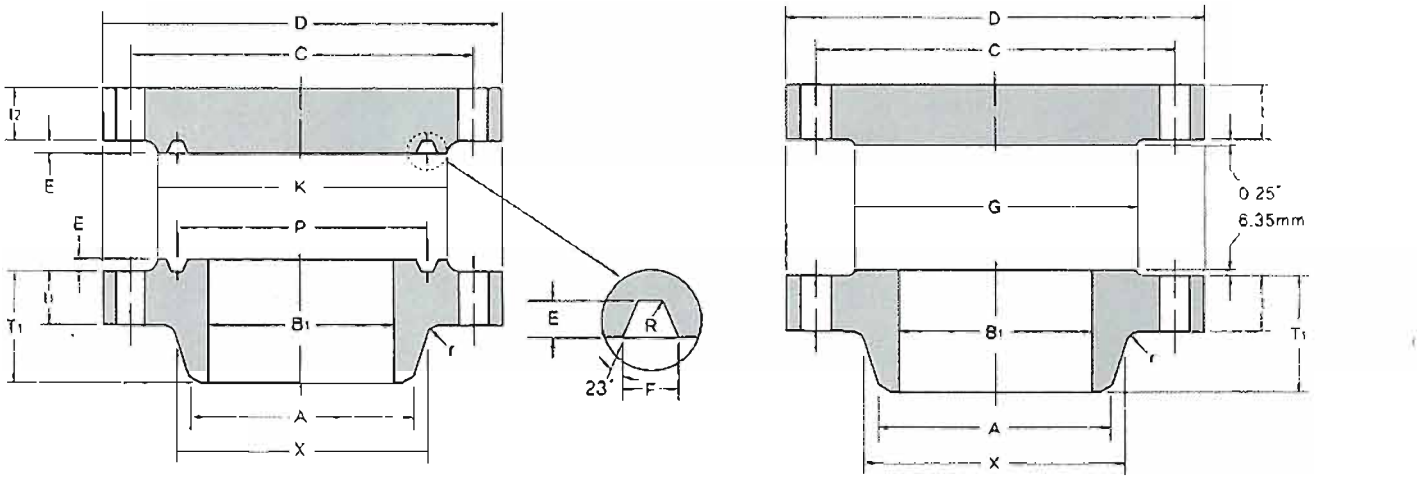
BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)

WELDING-ENDS FOR WELDING-NECK FLANGES

Unit:mm

Nominal Pipe Size	DRILLING			Pitch Dima	GROOVE DIMENSIONS			Diam. of Raised Face	Ring and Groove Number	Approximate Weight(kg)	
	Bolt Circle Diam	Number of Holes	Diam of Holes		Width	Depth	Radius			Weld-neck	Blind
	C			P	F	E	R	K			
12	450.9	16	31.8	381.0	11.9	7.9	0.8	412.8	R57	64.41	78.90
14	514.4	20	31.8	419.1	11.9	7.9	0.8	457.2	R61	88.30	107.05
16	571.5	20	35.1	469.9	11.9	7.9	0.8	508.0	R65	112.94	139.25
18	628.7	24	35.1	533.4	11.9	7.9	0.8	574.5	R69	138.34	176.90
20	685.8	24	35.1	584.2	13.5	9.5	1.5	635.0	R73	167.37	223.17
22	743.0	24	41.1	635.0	15.1	11.1	1.5	685.8	R81	213.00	-
24	812.8	24	41.1	692.2	16.7	11.1	1.5	749.3	R77	235.41	342.00
26	876.3	28	44.5	749.3	19.8	12.7	1.5	809.8	R93	274.40	489.00
28	939.8	28	44.5	800.1	19.8	12.7	1.5	860.6	R94	337.90	596.50
30	997.0	28	47.8	857.3	19.8	12.7	1.5	917.4	R95	394.60	699.90
32	1054.1	28	50.8	914.4	23.0	14.3	1.5	984.3	R96	455.90	814.20
34	1104.9	28	50.8	965.2	23.0	14.3	1.5	1035.1	R97	519.40	938.00
36	1168.4	32	53.8	1022.4	23.0	14.3	1.5	1092.2	R98	578.30	1105.00
38	1092.2	32	41.1							315.30	907.70
40	1155.7	32	44.5							381.00	1079.60
42	1206.5	32	44.5							430.90	1219.30
44	1263.7	32	47.8							478.50	1396.60
46	1320.8	28	50.8							560.20	1587.10
48	1371.6	32	50.8							626.00	1767.20
50	1428.8	32	53.8							694.00	2014.90
52	1479.6	32	53.8							753.00	2225.40
54	1549.4	28	60.5							929.90	2578.30
56	1600.2	28	60.5							977.50	2766.10
58	1651.0	32	60.5							1029.70	3025.10
60	1701.8	32	60.5							1120.40	3299.50

(4) Maximum Pressure Rating for raised face flanges is 740 psi (51BARS) at atmospheric temperature.
(5) Flange dimendions of size 12" (304.8mm) through 24" (609.6mm) flanges except 22" (558.8mm) are in accordance with ASME B 16.5.
(6) For sizes 26" (660.4mm) and larger. Diameter of Hub at Bevel (A) are in accordance with ASME Boiler and pressure vessel code.



CLASS 400 FLANGES

ASME B16.47 SER.A (MSS SP 44)

Unit:mm

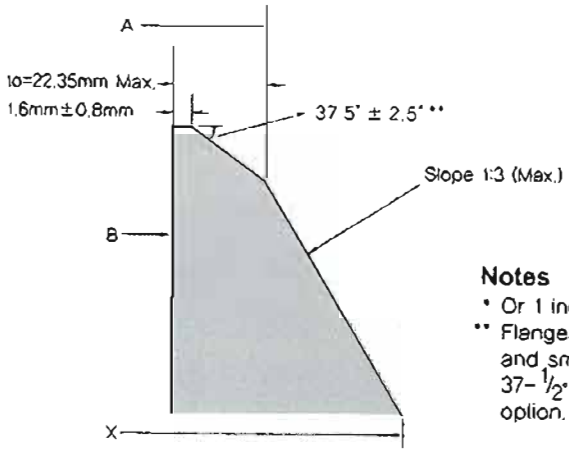
Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. at Base of Hub	Thickness		BORE Wall Thickness 9.5mm	BORE Wall Thickness 12.7mm	Length Thru Hub	Diam. of Hub at Bevel	Radius of Fillet
	D	G	X	t1	t2	B1		T1	A	r
12	521	381.0	374.7	57.2	57.2	304.8	298.5	136.7	323.9	11.2
14	584	412.8	425.5	60.5	60.5	336.6	330.2	149.4	355.6	11.2
16	648	469.9	482.6	63.5	63.5	387.4	381.0	152.4	406.4	11.2
18	711	533.4	533.4	66.5	66.5	438.2	431.8	165.1	457.2	11.2
20	775	584.2	587.2	69.9	69.9	489.0	482.6	168.1	508.0	11.2
22	838	641.4	641.4	73.2	73.2	539.8	533.4	171.5	558.8	11.2
24	914	692.2	701.5	76.2	76.2	590.6	584.2	174.8	609.6	11.2
26	972	749.3	726.9	88.9	98.6	641.4	635.0	193.5	660.4	11.2
28	1035	800.1	782.6	95.3	104.6	692.2	685.8	206.2	711.2	12.7
30	1092	857.3	836.7	101.6	111.3	743.0	736.6	218.9	762.0	12.7
32	1149	914.4	889.0	108.0	115.8	793.8	787.4	231.6	812.8	12.7
34	1207	965.2	944.6	111.3	122.2	844.6	838.2	241.3	863.6	14.2
36	1270	1022.4	1000.3	114.3	128.5	895.4	889.0	251.0	914.4	14.2
38	1207	1035.1	1003.3	124.0	124.0	946.2	939.8	206.2	965.2	14.2
40	1270	1092.2	1054.1	130.0	130.0	997.0	990.6	215.9	1016.0	14.2
42	1321	1143.0	1107.9	133.4	133.4	1047.8	1041.4	223.8	1066.8	14.2
44	1384	1200.2	1158.7	139.7	139.7	1098.6	1092.2	233.4	1117.6	14.2
46	1441	1257.3	1212.9	146.1	146.1	1149.4	1143.0	244.3	1168.4	14.2
48	1511	1308.1	1267.0	152.4	152.4	1200.2	1193.8	257.0	1219.2	14.2
50	1568	1361.9	1320.8	157.2	158.8	1251.0	1244.6	268.2	1270.0	14.2
52	1619	1412.7	1371.6	162.1	163.6	1301.8	1295.4	276.4	1320.8	14.2
54	1702	1470.2	1425.4	169.9	171.5	1352.6	1346.2	289.1	1371.6	14.2
56	1753	1527.0	1479.6	174.8	176.3	1403.4	1397.0	298.5	1422.4	14.2
58	1803	1577.8	1530.4	177.8	180.8	1454.2	1447.8	306.3	1473.2	14.2
60	1886	1635.3	1584.5	185.7	189.0	1505.0	1498.6	319.0	1524.0	14.2

Notes

(1) For the 'Bore' (B1) other than wall thickness 0.375" (9.5mm) and 0.500" (12.7mm), refer to page 83.

(2) Class 400 flanges will be furnished with 0.25" (6.4mm) raised face, which is included in 'Thickness' (t) and 'Length thru Hub' (T1).

(3)Dimensional tolerance are in accordance with ASME B 16.5.

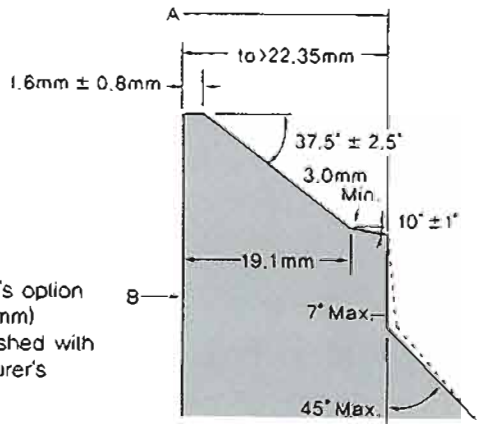


BEVEL FOR WALL THICKNESS(to)
0.88" IN.(22.35mm)* OR LESS.

Notes

* Or 1 inch at manufacturer's option

** Flanges sizes 24" (609.6mm) and smaller may be furnished with 37-½° bevel at manufacturer's option.



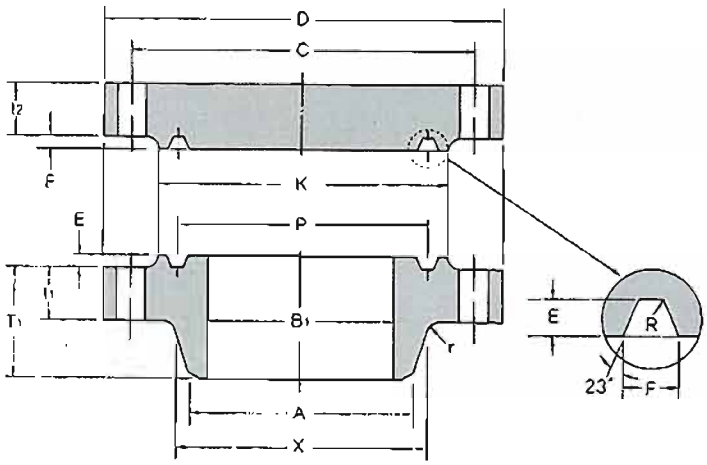
BEVEL FOR WALL THICKNESS(to)
GREATER THAN 0.88 IN.(22.35mm)

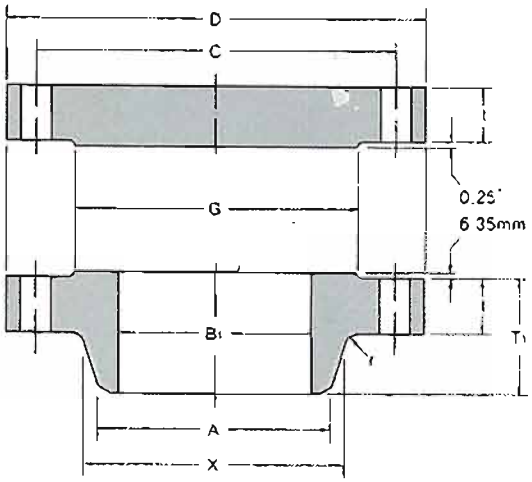
WELDING-ENDS FOR WELDING-NECK FLANGES

Unit:mm

Nominal Pipe Size	DRILLING			Pitch Dima	GROOVE DIMENSIONS			Diam. of Raised Face	Ring and Groove Number	Approximate Weight(kg)	
	Bolt Circle Diam	Number of Holes	Diam of Holes		Width	Depth	Radius			Weld-neck	Blind
	C			P	F	E	R	K			
12	450.9	16	35.1	381.0	11.9	7.9	0.8	412.8	R57	72.57	98.00
14	514.4	20	35.1	419.1	11.9	7.9	0.8	457.2	R61	105.69	131.66
16	571.5	20	38.1	469.9	11.9	7.9	0.8	508.0	R65	133.30	167.00
18	628.7	24	38.1	533.4	11.9	7.9	0.8	574.5	R69	158.90	206.57
20	685.8	24	41.1	584.2	13.5	9.5	1.5	635.0	R73	193.00	261.00
22	743.0	24	44.5	635.0	15.1	11.1	1.5	685.8	R81	235.00	–
24	812.8	24	47.8	692.2	16.7	11.1	1.5	749.3	R77	281.48	395.00
26	876.3	28	47.8	749.3	19.8	12.7	1.5	809.8	R93	294.80	572.90
28	939.8	28	50.8	800.1	19.8	12.7	1.5	860.6	R94	356.10	690.40
30	997.0	28	53.8	857.3	19.8	12.7	1.5	917.4	R95	410.50	817.40
32	1054.1	28	53.8	914.4	23.0	14.3	1.5	984.3	R96	483.10	942.10
34	1104.9	28	53.8	965.2	23.0	14.3	1.5	1035.1	R97	544.30	1095.40
36	1168.4	32	53.8	1022.4	23.0	14.3	1.5	1092.2	R98	607.80	1276.90
38	1117.6	32	47.8							424.10	1111.30
40	1174.8	32	50.8							494.40	1291.90
42	1225.6	32	50.8							539.80	1432.90
44	1282.7	32	53.8							623.70	1648.80
46	1339.9	36	53.8							691.70	1868.80
48	1403.4	28	60.5							811.90	2143.70
50	1460.5	32	60.5							884.50	2405.40
52	1511.3	32	60.5							963.90	2641.30
54	1581.2	28	66.5							1163.50	3058.20
56	1632.0	32	66.5							1229.30	3334.90
58	1682.8	32	66.5							1465.10	3622.40
60	1752.6	32	73.2							1732.80	4139.60

(4) Maximum Pressure Rating for raised face flanges is 985 psi (68BARS) at atmospheric temperature.
(5) Flange dimendions of size 12" (304.8mm) through 24" (609.6mm) flanges except 22" (558.8mm) are in accordance with ASME B 16.5.
(6) For sizes 26" (660.4mm) and larger. Diameter of Hub at Bevel (A) are in accordance with ASME Boiler and pressure vessel code.





CLASS 600 FLANGES

ASME B16.47 SER.A(MSS SP 44)

Unit:mm

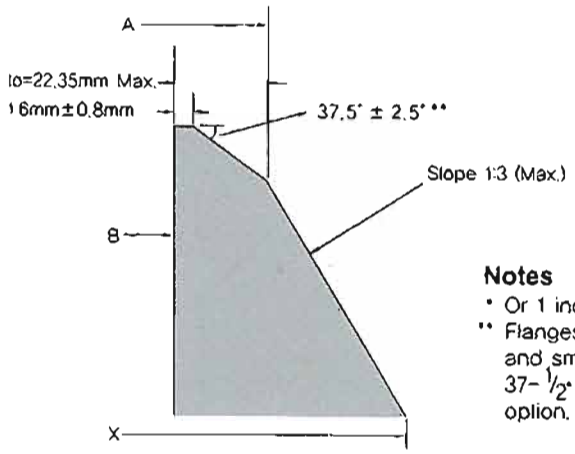
Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. at Base of Hub	Thickness		BORE Wall Thickness 9.5mm	BORE Wall Thickness 12.7mm	Length Thru Hub	Diam. of Hub at Bevel	Radius of Fillet
	D	G	X	t1	t2	B1		T1	A	r
12	559	381.0	400.1	66.5	66.5	304.8	298.5	155.4	323.9	11.2
14	603	412.8	431.8	69.9	69.9	336.6	330.2	165.1	355.6	11.2
16	686	469.9	495.3	76.2	76.2	387.4	381.0	177.8	406.4	11.2
18	743	533.4	546.1	82.6	82.6	438.2	431.8	184.2	457.2	11.2
20	813	584.2	609.6	88.9	88.9	489.0	482.6	190.5	508.0	11.2
22	870	641.2	666.8	95.3	95.3	539.8	533.4	196.9	558.8	11.2
24	940	692.2	717.6	101.6	101.6	590.6	584.2	203.2	609.6	11.2
26	1016	749.3	747.8	108.0	125.5	641.4	635.0	222.3	660.4	12.7
28	1073	800.1	803.1	111.3	131.8	692.2	685.8	235.0	711.2	12.7
30	1130	857.3	862.1	114.3	139.7	743.0	736.6	247.7	762.0	12.7
32	1194	914.4	917.4	117.3	147.6	793.8	787.4	260.4	812.8	12.7
34	1245	965.2	973.1	120.7	153.9	844.6	838.2	269.7	863.6	14.2
36	1314	1022.4	1031.7	124.0	162.1	895.4	889.0	282.4	914.4	14.2
38	1270	1054.1	1022.4	152.4	155.4	946.2	939.8	254.0	965.2	14.2
40	1321	1111.3	1073.2	158.8	162.1	997.0	990.6	263.7	1016.0	14.2
42	1403	1168.4	1127.3	168.1	171.5	1047.8	1041.4	279.4	1066.8	14.2
44	1454	1225.6	1181.1	173.0	177.8	1098.6	1092.2	289.1	1117.6	14.2
46	1511	1276.4	1234.9	179.3	185.7	1149.4	1143.0	300.0	1168.4	14.2
48	1594	1333.5	1289.1	189.0	195.3	1200.2	1193.8	316.0	1219.2	14.2
50	1670	1384.3	1343.2	196.9	203.2	1251.0	1244.6	328.7	1270.0	14.2
52	1721	1435.1	1394.0	203.2	209.6	1301.8	1295.4	336.6	1320.8	14.2
54	1778	1492.3	1447.8	209.6	217.4	1352.6	1346.2	349.3	1371.6	14.2
56	1854	1543.1	1501.6	217.4	225.6	1403.4	1397.0	362.0	1422.4	15.7
58	1905	1600.2	1552.4	222.3	231.6	1454.2	1447.8	369.8	1473.2	15.7
60	1994	1657.4	1609.9	233.4	242.8	1505.0	1498.6	388.9	1524.0	17.5

Notes

(1) For the 'Bore' (B1) other than wall thickness 0.375" (9.5mm) and 0.500" (12.7mm), refer to page 50, 51.

(2) Class 600 flanges will be furnished with 0.25" (6.35mm) raised face, which is included in 'Thickness' (t) and 'Length thru Hub' (T1).

(3)Dimensional tolerance are in accordance with ASME B 16.5.

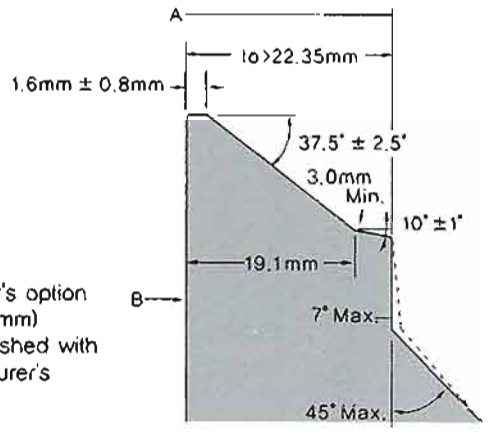


BEVEL FOR WALL THICKNESS(to) 0.88" IN.(22.35mm) OR LESS.

Notes

* Or 1 inch at manufacturer's option

** Flanges sizes 24" (609.6mm) and smaller may be furnished with 37-1/2° bevel at manufacturer's option.



BEVEL FOR WALL THICKNESS(to) GREATER THAN 0.88 IN.(22.35mm)

WELDING-ENDS FOR WELDING-NECK FLANGES

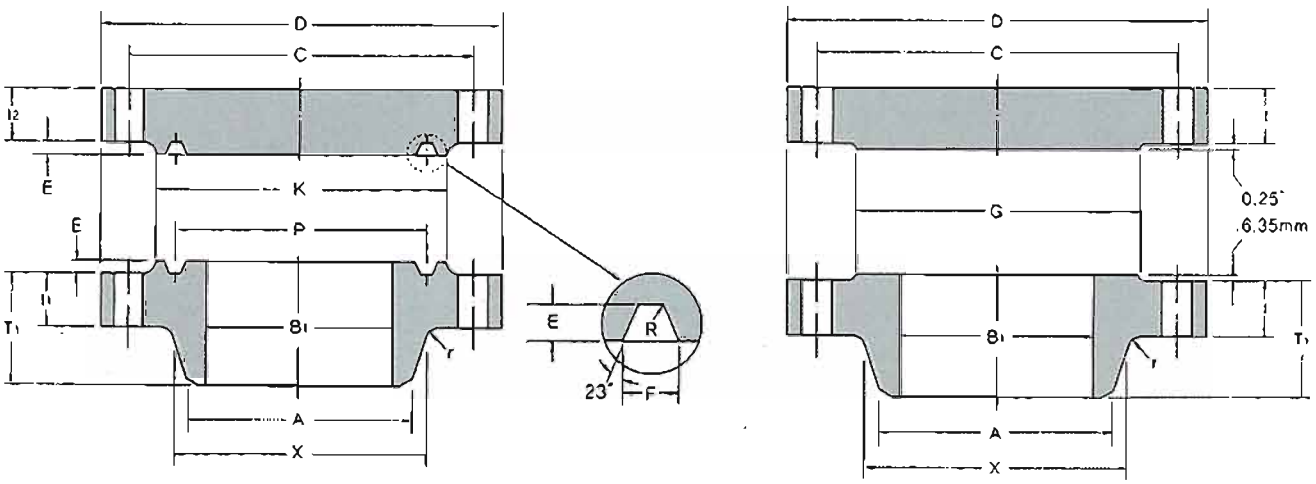
Unit:mm

Nominal Pipe Size	DRILLING			Pitch Dima	GROOVE DIMENSIONS			Diam. of Raised Face	Ring and Groove Number	Approximate Weight(kg)	
	Bolt Circle Diam	Number of Holes	Diam of Holes		Width	Depth	Radius			Weld-neck	Blind
	C			P	F	E	R	K			
12	489.0	20	35.1	381.0	11.9	7.9	0.8	412.8	R57	102.51	132.00
14	527.1	20	38.1	419.1	11.9	7.9	0.8	457.2	R61	121.56	158.00
16	603.3	20	41.1	469.9	11.9	7.9	0.8	508.0	R65	177.06	224.73
18	654.1	20	44.5	533.4	11.9	7.9	0.8	574.5	R69	215.65	285.00
20	723.9	24	44.5	584.2	13.5	9.5	1.5	635.0	R73	267.86	365.00
22	777.7	24	47.8	635.0	15.1	11.1	1.5	685.8	R81	330.00	-
24	838.2	24	50.8	692.2	16.7	11.1	1.5	749.3	R77	372.00	533.45
26	914.4	28	50.8	749.3	19.8	12.7	1.5	809.8	R93	426.40	797.90
28	965.2	28	53.8	800.1	19.8	12.7	1.5	860.6	R94	480.80	934.90
30	1022.4	28	53.8	857.3	19.8	12.7	1.5	917.4	R95	548.90	1099.10
32	1079.5	28	60.5	914.4	23.0	14.3	1.5	984.3	R96	623.70	1295.50
34	1130.3	28	60.5	965.2	23.0	14.3	1.5	1035.1	R97	698.50	1468.30
36	1193.8	28	66.5	1022.4	23.0	14.3	1.5	1092.2	R98	773.40	1724.60
38	1162.1	28	60.5							666.80	1544.10
40	1212.9	32	60.5							739.40	1740.90
42	1282.7	28	66.5							920.80	2079.80
44	1333.5	32	66.5							979.80	2315.60
46	1390.7	32	66.5							1093.20	2611.80
48	1460.5	32	73.2							1295.00	3055.90
50	1524.0	28	79.2							1510.50	3490.50
52	1574.8	32	79.2							1614.80	3822.00
54	1632.0	32	79.2							1778.10	4233.40
56	1695.5	32	85.9							1941.40	4776.00
58	1746.3	32	85.9							2104.70	5177.40
60	1822.5	28	91.9							2268.00	5945.80

(4) Maximum Pressure Rating for raised face flanges is 1480 psi (102.1 BARS) at atmospheric temperature.

(5) Flange dimendions of size 12" (304.8mm) through 24" (609.6mm) flanges except 22" (558.8mm) are in accordance with ASME B 16.5.

(6) For sizes 26" (660.4mm) and larger. Diameter of Hub at Bevel (A) are in accordance with ASME Boiler and pressure vessel code.



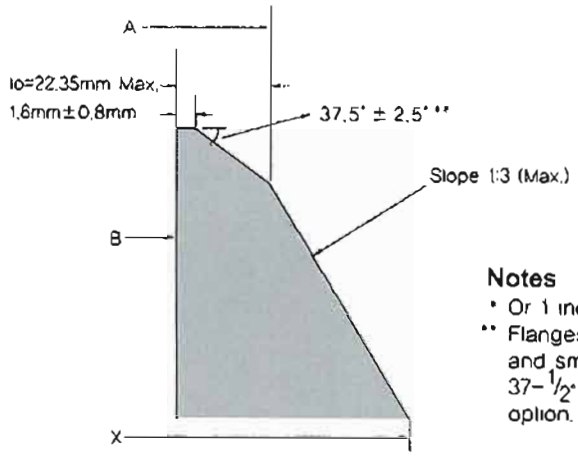
CLASS 900 FLANGES

ASME B16.47 SER.A(MSS SP 44)

Unit:mm

Nominal Pipe Size	Outside Diam.	O.D of Raised Face	Diam. at Base of Hub	Thickness		BORE Wall Thickness		Length Thru Hub	Diam. of Hub at Bevel	Radius of Fillet
				Welding Neck	Blind	9.5mm	12.7mm			
	D	G	X	t1	t2	B1		T1	A	r
12	610	381.0	419.1	79.2	79.2	304.8	298.5	200.2	323.9	11.2
14	641	412.8	450.9	85.9	85.9	336.6	330.2	212.9	355.6	11.2
16	705	469.9	508.0	88.9	88.9	387.4	381.0	215.9	406.4	11.2
18	787	533.4	565.2	101.6	101.6	438.2	431.8	228.6	457.2	11.2
20	857	584.2	622.3	108.0	108.0	489.0	482.6	247.7	508.0	11.2
24	1041	692.2	749.3	139.7	139.7	590.6	584.2	292.1	609.6	11.2
26	1086	749.3	774.7	139.7	160.3	641.4	635.0	285.8	660.4	11.2
28	1168	800.1	831.9	142.7	171.5	692.2	685.8	298.5	711.2	12.7
30	1232	857.3	889.0	149.4	182.4	743.0	736.6	311.2	762.0	12.7
32	1314	914.4	946.2	158.8	193.5	793.8	787.4	330.2	812.8	12.7
34	1397	965.2	1006.3	165.1	204.7	844.6	838.2	349.3	863.6	14.2
36	1461	1022.4	1063.8	171.5	214.4	895.4	889.0	362.0	914.4	14.2
38	1461	1098.6	1073.2	190.5	215.9	946.2	939.8	352.6	965.2	19.1
40	1511	1162.1	1127.3	196.9	223.8	997.0	990.6	363.5	1016.0	20.6
42	1562	1212.9	1176.3	206.2	231.6	1047.8	1041.4	371.3	1066.8	20.6
44	1648	1270.0	1234.9	214.4	242.8	1098.6	1092.2	390.7	1117.6	22.4
46	1734	1333.5	1292.4	225.6	255.5	1149.4	1143.0	411.0	1168.4	22.4
48	1784	1384.3	1343.2	233.4	263.7	1200.2	1193.8	419.1	1219.2	23.9

Notes
(1) For the 'Bore' (B1) other than wall thickness 0.375" (9.5mm) and 0.500" (12.7mm), refer to page 83.
(2) Class 900 flanges will be furnished with 0.25" (6.35mm) raised face, which is included in 'Thickness' (t) and 'Length thru Hub' (T1).
(3)Dimensional tolerance are in accordance with ASME B 16.5.

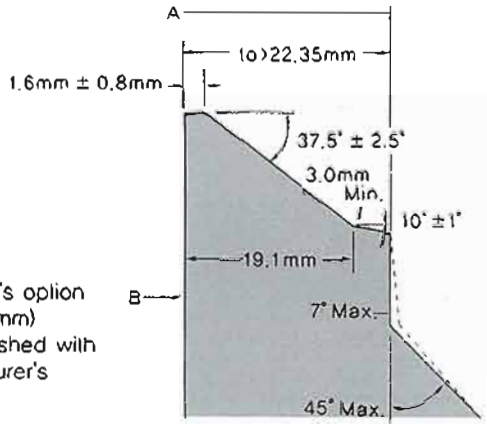


BEVEL FOR WALL THICKNESS(to) 0.88" IN.(22.35mm) OR LESS.

Notes

* Or 1 inch at manufacturer's option

** Flanges sizes 24" (609.6mm) and smaller may be furnished with 37-½° bevel at manufacturer's option.



BEVEL FOR WALL THICKNESS(to) GREATER THAN 0.88 IN.(22.35mm)

WELDING-ENDS FOR WELDING-NECK FLANGES

Unit:mm

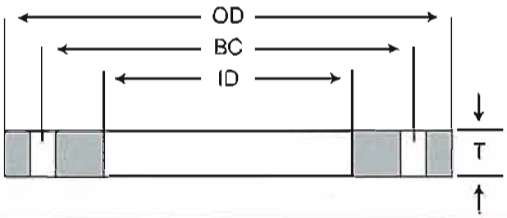
Nominal Pipe Size	DRILLING			Pitch Dima	GROOVE DIMENSIONS			Diam. of Raised Face	Ring and Groove Number	Approximate Weight(kg)	
	Bolt Circle Diam	Number of Holes	Diam of Holes		Width	Depth	Radius			Weld-neck	Blind
	C			P	F	E	R	K			
12	533.4	20	38.1	381.0	11.9	7.9	0.8	419.1	R57	157.00	187.00
14	558.8	20	41.1	419.1	16.7	11.1	1.5	466.9	R62	181.00	224.07
16	616.0	20	44.5	469.9	16.7	11.1	1.5	523.7	R66	224.73	272.40
18	685.8	20	50.8	533.4	19.8	12.7	1.5	593.9	R70	308.72	385.90
20	749.3	20	53.8	584.2	19.8	12.7	1.5	647.7	R74	376.82	488.00
24	901.7	20	66.5	692.2	27.0	15.9	2.3	771.7	R78	685.00	905.00
26	952.5	20	73.2	749.3	30.2	17.5	2.3	831.9	R100	691.70	1163.90
28	1022.4	20	79.2	800.1	33.3	17.5	2.3	889.0	R101	821.00	1441.50
30	1085.9	20	79.2	857.3	33.3	17.5	2.3	946.2	R102	961.60	1704.60
32	1155.7	20	85.9	914.4	33.3	17.5	2.3	1003.3	R103	1154.40	2059.80
34	1225.6	20	91.9	965.2	36.5	20.6	2.3	1066.8	R104	1347.20	2460.80
36	1289.1	20	91.9	1022.4	36.5	20.6	2.3	1124.0	R105	1540.00	2816.40
38	1289.1	20	91.9							1535.40	2836.40
40	1339.9	24	91.9							1642.00	3148.00
42	1390.7	24	91.9							1796.30	3481.40
44	1463.5	24	98.6							1950.50	4061.50
46	1536.7	24	104.6							2104.70	4729.20
48	1587.5	24	104.6							2258.90	5170.10

(4) Maximum Pressure Rating for raised face flanges is 2220 psi (153.1 BARS) at atmospheric temperature.

(5) Flange dimendions of size 12" (304.8mm) through 24" (609.6mm) flanges are in accordance with ASME B 16.5.

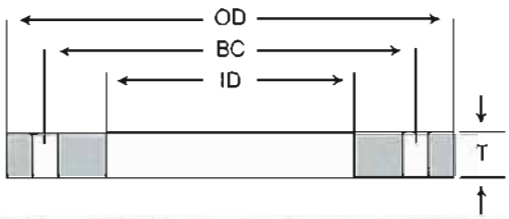
(6) For sizes 26" (660.4mm) and larger. Diameter of Hub at Bevel (A) are in accordance with ASME Boiler and pressure vessel code.

AWWA C207–07 –Rings & Blinds.
CLASS B



Nominal Size	Outside Diameter (OD)	Slip–on Bore (ID)	NO. of Bolt Holes	Diameter Bolt Holes	Bolt Circle (BC)	Thickness (T)		Weight Each	
						CLASS B			
						Slip–on	Blind	Slip–on	Blind
4	228.6	116.1	8	19.1	190.5	15.9	15.9	3.52	4.84
5	254	143.8	8	22.2	215.9	15.9	15.9	3.91	5.94
6	279.4	170.7	8	22.2	241.3	17.5	17.5	4.86	8
8	342.9	221.5	8	22.2	298.5	17.5	17.5	6.97	12.27
10	406.4	276.4	12	25.4	362	17.5	17.5	8.75	17
12	482.6	327.2	12	25.4	431.8	17.5	18.3	12.75	25.42
14	533.4	360.4	12	28.6	476.3	17.5	20.1	15.64	34.07
16	596.9	411.2	16	28.6	539.8	17.5	22.7	18.8	48.07
18	635	462	16	31.8	577.9	17.5	24.1	18.74	57.55
20	698.5	512.8	20	31.8	635	17.5	26.4	22.1	76.18
22	749.3	563.6	20	34.9	692.2	19.1	28.8	25.86	95.44
24	812.8	614.4	20	34.9	749.3	19.1	30.9	30.5	121.31
26	869.95	666.8	24	34.9	806.5	20.6	33.2	35.96	149.04
28	927.1	717.6	28	34.9	863.3	22.2	35.5	42.52	180.79
30	984.25	768.4	28	34.9	914.4	22.2	37.5	47.15	216.25
32	1060.5	819.2	28	41.3	977.9	23.8	40.2	59.59	267.11
34	1111.3	870	32	41.3	1028.7	23.8	42.2	62.19	307.35
36	1168.4	920.8	32	41.3	1085.9	25.4	44.5	72.51	359.84
38	1238.3	971.6	32	41.3	1149.4	25.4	47.1	83.81	429.75
40	1289.1	1022.4	36	41.3	1200.2	25.4	49.1	86.99	484.83
42	1346.2	1073.2	36	41.3	1257.3	28.6	51.4	105.72	555.26
44	1403.4	1124	40	41.3	1314.5	28.6	53.7	112.57	629.96
48	1511.3	1225.6	44	41.3	1422.4	31.8	58	138.69	790.5
54	1682.8	1378	44	47.6	1593.9	34.9	65	179.42	1095.72
60	1854.2	1530.4	52	47.6	1759	38.1	71.6	229.93	1466.79
66	2032	1682.8	52	47.6	1930.4	41.3	78.5	300.53	1942.81
72	2197.1	1835.2	60	47.6	2095.5	44.5	85.2	363.34	2466.14
78	2362.2	1987.6	64	54	2260.6	50.8		452.23	
84	2533.7	2140	64	54	2425.7	50.8		518.24	
90	2705.1	2292.4	68	61.9	2590.8	57.2		635.94	
96	2876.6	2444.8	68	61.9	2755.9	57.2		718.99	
102	3048	2597.2	72	68.3	2908.3	63.5		865.47	
108	3219.5	2749.6	72	68.3	3067.1	63.5		967.34	
120	3562.4	3054.4	76	74.6	3371.9	69.9		1267.3	
132	3905.3	3359.2	80	81	3702.1	76.2		1618.4	
144	4248.2	3664	84	87.3	4019.6	82.6		2029.5	

AWWA C207–07 –Rings & Blinds.
CLASS D



Norminal Size	Outside Diameter (OD)	Slip–on Bore (ID)	NO. of Bolt Holes	Diameter Bolt Holes	Bolt Circle (BC)	Thickness (T)		Weight Each	
						CLASS D			
						Slip–on	Blind	Slip–on	Blind
4	228.6	116.1	8	19.1	190.5	15.9	15.9	3.52	4.84
5	254	143.8	8	22.2	215.9	15.9	16.5	3.91	6.17
6	279.4	170.7	8	22.2	241.3	17.5	17.6	4.86	8.05
8	342.9	221.5	8	22.2	298.5	17.5	20.6	6.97	14.44
10	406.4	276.4	12	25.4	362	17.5	24.2	8.75	23.5
12	482.6	327.2	12	25.4	431.8	20.6	28.4	15.01	39.45
14	533.4	360.4	12	28.6	476.3	23.8	28.8	21.27	48.81
16	596.9	411.2	16	28.6	539.8	25.4	32.1	27.29	67.97
18	635	462	16	31.8	577.9	27	33.8	28.92	80.72
20	698.5	512.8	20	31.8	635	28.6	36.8	36.12	106.19
22	749.3	563.6	20	34.9	692.2	30.2	39.8	40.89	131.89
24	812.8	614.4	20	34.9	749.3	31.8	42.2	50.78	165.67
26	869.95	666.8	24	34.9	806.5	33.3	45.4	58.14	203.81
28	927.1	717.6	28	34.9	863.3	33.3	48.4	63.79	246.49
30	984.25	768.4	28	34.9	914.4	34.9	51	74.12	294.1
32	1060.5	819.2	28	41.3	977.9	38.1	54.6	95.4	362.79
34	1111.3	870	32	41.3	1028.7	38.1	57.2	99.56	416.59
36	1168.4	920.8	32	41.3	1085.9	41.3	60.2	117.91	486.79
38	1238.3	971.6	32	41.3	1149.4	41.3	63.7	136.28	581.21
40	1289.1	1022.4	36	41.3	1200.2	41.3	66.3	141.44	654.67
42	1346.2	1073.2	36	41.3	1257.3	44.5	69.3	164.49	748.63
44	1403.4	1124	40	41.3	1314.5	44.5	72.4	175.15	849.33
48	1511.3	1225.6	44	41.3	1422.4	47.6	78	207.61	1063.09
54	1682.8	1378	44	47.6	1593.9	54	87.2	277.62	1469.95
60	1854.2	1530.4	52	47.6	1759	57.2	96	345.2	1966.64
66	2032	1682.8	52	47.6	1930.4	63.5	105	462.08	2598.66
72	2197.1	1835.2	60	47.6	2095.5	66.7	114	544.61	3299.77
78	2362.2	1987.6	64	54	2260.6	69.9		622.26	
84	2533.7	2140	64	54	2425.7	73		744.71	
90	2705.1	2292.4	68	61.9	2590.8	76.2		847.18	
96	2876.6	2444.8	68	61.9	2755.9	82.6		1038.26	
102	3048	2597.2	72	68.3	2908.3	82.6		1125.79	
108	3219.5	2749.6	72	68.3	3067.1	85.7		1305.53	
120	3562.4	3054.4	76	74.6	3371.9	88.9		1611.74	
132	3905.3	3359.2	80	81	3702.1	98.4		2089.89	
144	4248.2	3664	84	87.3	4019.6	105		2579.82	

河北海浩

欧标
法兰参数系列

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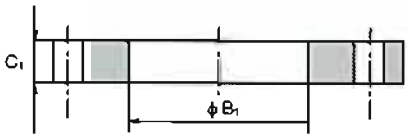
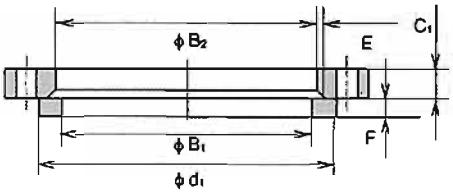
DIMENSIONS OF PN6 FLANGES

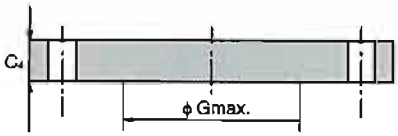
TYPE 01



TYPE 02



TYPE 05



DN	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolt number	Outside diameter of neck A	Bore diameters		Flange thickness			Chamfer	Wall thickness	Collar Thickness	Diameter of shoulder Gmax
						B_1	B_2	C_1	C_2	C_4	E	S	F	
	Flange type													
	01,02,05,11,12,13				11	01 12	02	01 02	11 12,13	05	02	11	32	05
10	75	50	11	4	17.2	18.0	21	12	12	12	3	2	10	–
15	80	55	11	4	21.3	22.0	25	12	12	12	3	2	10	–
20	90	65	11	4	26.9	27.5	31	14	14	14	4	2.3	10	–
25	100	75	11	4	33.7	34.5	38	14	14	14	4	2.6	10	–
32	120	90	14	4	42.4	43.5	46	16	14	14	5	2.6	10	–
40	130	100	14	4	48.3	49.5	53	16	14	14	5	2.6	10	–
50	140	110	14	4	60.3	61.5	65	16	14	14	5	2.9	12	–
65	160	130	14	4	76.1	77.5	81	16	14	14	6	2.9	12	55
80	190	150	18	4	88.9	90.5	94	18	16	16	6	3.2	12	70
100	210	170	18	4	114.3	116.0	120	18	16	16	6	3.6	14	90
125	240	200	18	8	139.7	141.5	145	20	18	18	6	4.0	14	115
150	265	225	18	8	168.3	170.5	174	20	18	18	6	4.5	14	140
200	320	280	18	8	219.1	221.5	226	22	20	20	6	6.3	16	190
250	375	335	18	12	273.0	276.5	281	24	22	22	8	6.3	18	235
300	440	395	22	12	323.9	327.5	333	24	22	22	8	7.1	18	285
350	490	445	22	12	355.6	359.5	365	26	22	22	8	7.1	18	330
400	540	495	22	16	406.4	411.0	416	28	22	22	8	7.1	20	380
450	595	550	22	16	457.0	462.0	467	30	22	24	8	7.1	20	425
500	645	600	22	20	508.0	513.5	519	30	24	24	8	7.1	22	475
600	755	705	26	20	610.0	616.5	622	32	30	30	8	7.1	22	575
700	860	810	26	24	711.0	To be specified by the purch aser	721	40	30	40	4	8	–	670
800	975	920	30	24	813.0		824	44	30	44	4	8	–	770
900	1075	1020	30	24	914.0		926	48	34	48	4	8	–	860
1000	1175	1120	30	28	1016.0		1028	52	38	52	4	8	–	960
1200	1405	1340	33	32	1219.0		1234	60	42	60	5	8.8	–	1160
1400	1630	1560	36	36	1422		–	72	56	68	–	8.8	–	1346
1600	1830	1760	36	40	1626		–	80	63	76	–	10	–	1546
1800	2045	1970	39	44	1829		–	88	69	84	–	11	–	1746
2000	2265	2180	42	48	2032		–	96	74	92	–	12.5	–	1950

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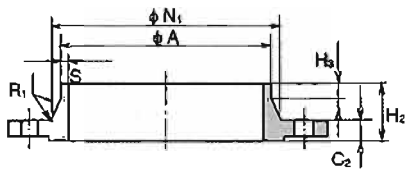
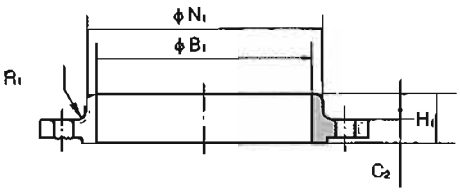
DIMENSIONS OF PN6 FLANGES

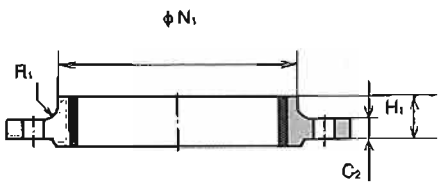
TYPE 11



TYPE 12



TYPE 13



DN	Raised face		Length			Neck diameters		Corner radii	APPROXIMATE WEIGHT				
	d_1	f_1	H_1	H_2	H_3	N_1	N_2	R_1					
	Flange type												
	01,05,11,12,13		12 13	11	11	11	12 13	11 12,13	Type01	Type02	Type05	Type11	Type12
10	35	2	20	28	6	26	25	4	0.356	0.345	0.38	0.353	0.326
15	40	2	20	30	6	30	30	4	0.402	0.388	0.438	0.408	0.373
20	50	2	24	32	6	38	40	4	0.592	0.568	0.657	0.621	0.584
25	60	2	24	35	6	42	50	4	0.719	0.688	0.821	0.762	0.729
32	70	2	26	35	6	55	60	6	1.16	1.12	1.18	1.11	1.04
40	80	3	26	38	7	62	70	6	1.35	1.29	1.39	1.26	1.20
50	90	3	28	38	8	74	80	6	1.48	1.42	1.62	1.43	1.34
65	110	3	32	38	9	88	100	6	1.86	1.76	2.14	1.77	1.83
80	128	3	34	42	10	102	110	8	2.95	2.84	3.43	2.88	2.75
100	148	3	40	45	10	130	130	8	3.26	3.10	4.22	3.41	3.01
125	178	3	44	48	10	155	160	8	4.31	4.12	6.10	4.65	4.30
150	202	3	44	48	12	184	185	10	4.76	4.53	7.51	5.50	4.63
200	258	3	44	55	15	236	240	10	6.88	6.51	12.3	8.60	6.97
250	312	3	44	60	15	290	295	12	8.92	8.32	18.5	11.7	9.13
300	365	4	44	62	15	342	355	12	11.9	11.1	25.5	15.3	12.4
350	415	4	–	62	15	385	–	12	16.8	15.9	31.8	20.3	–
400	465	4	–	65	15	438	–	12	19.8	18.8	38.5	23.1	–
450	520	4	–	65	15	492	–	12	24.6	23.3	51.2	27.0	–
500	570	4	–	68	15	538	–	12	26.4	24.9	60.1	30.8	–
600	670	5	–	70	16	640	–	12	34.8	33.0	103	44.0	–
700	775	5	–	76	16	740	–	12	–	–	178	53.7	–
800	880	5	–	76	16	842	–	12	–	–	252	64.4	–
900	980	5	–	78	16	942	–	12	–	–	336	79.2	–
1000	1080	5	–	82	16	1045	–	16	–	–	435	98.6	–
1200	1295	5	–	104	20	1248	–	16	–	–	717	152	–
1400	1510	5	–	114	20	1452	–	16	–	–	1094	246	–
1600	1710	5	–	119	20	1655	–	16	–	–	1545	309	–
1800	1920	5	–	133	20	1855	–	16	–	–	2131	400	–
2000	2125	5	–	146	25	2058	–	16	–	–	2862	516	–

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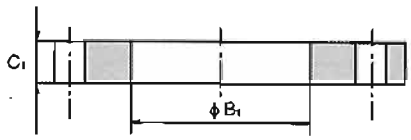
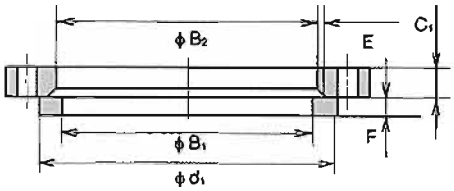
DIMENSIONS OF PN10 FLANGES

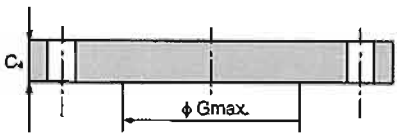
TYPE 01



TYPE 02



TYPE 05



DN	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolt number	Outside diameter of neck A	Bore diameters		Flange thickness			Chamfer	Wall thickness	Collar Thickness	Diameter of shoulder Gmax
						B_1	B_2	C_1	C_2	C_4	E	S	F	
	Flange type													
	01,02,05,11,12,13				11	01 12	02	01 02	11 12,13	05	02	11	32	05
10	90	60	14	4	17.2	18.0	21	14	16	16	3	2	12	–
15	95	65	14	4	21.3	22.0	25	14	16	16	3	2	12	–
20	105	75	14	4	26.9	27.5	31	16	18	18	4	2.3	14	–
25	115	85	14	4	33.7	34.5	38	16	18	18	4	2.6	14	–
32	140	100	18	4	42.4	43.5	47	18	18	18	5	2.6	14	–
40	150	110	18	4	48.3	49.5	53	18	18	18	5	2.6	14	–
50	165	125	18	4	60.3	61.5	65	20	18	18	5	2.9	16	–
65	185	145	18	8	76.1	77.5	81	20	18	18	6	2.9	16	55
80	200	160	18	8	88.9	90.5	94	20	20	20	6	3.2	16	70
100	220	180	18	8	114.3	116.0	120	22	20	20	6	3.6	18	90
125	250	210	18	8	139.7	141.5	145	22	22	22	6	4.0	18	115
150	285	240	22	8	168.3	170.5	174	24	22	22	6	4.5	20	140
200	340	295	22	8	219.1	221.5	226	24	24	24	6	6.3	20	190
250	395	350	22	12	273.0	276.5	281	26	26	26	8	6.3	22	235
300	445	400	22	12	323.9	327.5	333	26	26	26	8	7.1	22	285
350	505	460	22	16	355.6	359.5	365	30	26	26	8	7.1	22	330
400	565	515	26	16	406.4	411.0	416	32	26	26	8	7.1	24	380
450	615	565	26	20	457.0	462.0	467	36	28	28	8	7.1	24	425
500	670	620	26	20	508.0	513.5	519	38	28	28	8	7.1	26	475
600	780	725	30	20	610.0	616.5	622	42	30	34	8	8.0	26	575
700	895	840	30	24	711.0	To be specified by the purch aser	721	50	35	38	8	8.8	–	670
800	1015	950	33	24	813.0		824	56	38	48	8	8.8	–	770
900	1115	1050	33	28	914.0		926	62	38	50	8	12.5	–	860
1000	1230	1160	36	28	1016.0		1028	70	44	54	8	12.5	–	960
1200	1455	1380	39	32	1219.0		1234	83	55	66	8	12.5	–	1160
1400	1675	1590	42	36	1422		–	–	65	–	–	14.2	–	–
1600	1915	1820	48	40	1626		–	–	75	–	–	16	–	–
1800	2115	2020	48	44	1829		–	–	85	–	–	17.5	–	–
2000	2325	2230	48	48	2032		–	–	90	–	–	17.5	–	–

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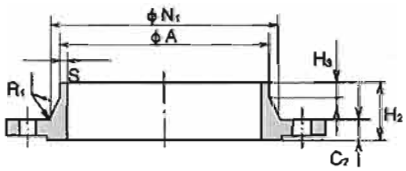
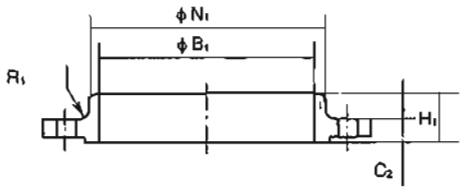
DIMENSIONS OF PN10 FLANGES

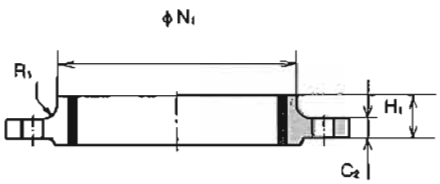
TYPE 11



TYPE 12



TYPE 13



DN	Raised face		Length			Neck diameters		Corner radii	APPROXIMATE WEIGHT				
	d_1	f_1	H_1	H_2	H_3	N_1	N_2	R_1					
	Flange type												
	01,05,11,12,13		12 13	11	11	11	12 13	11 12,13	Type01	Type02	Type05	Type11	Type12
10	40	2	22	35	6	28	30	4	0.604	0.591	0.722	0.678	0.646
15	45	2	22	38	6	32	35	4	0.670	0.654	0.813	0.768	0.722
20	58	2	26	40	6	40	45	4	0.936	0.909	1.14	1.09	1.04
25	68	2	28	40	6	46	52	4	1.11	1.08	1.38	1.30	1.25
32	78	2	30	42	6	56	60	6	1.82	1.77	2.03	1.91	1.81
40	88	3	32	45	7	64	70	6	2.08	2.02	2.35	2.15	2.06
50	102	3	28	45	8	74	84	6	2.73	2.52	2.88	2.53	2.39
65	122	3	32	45	10	92	104	6	3.16	3.05	3.51	3.03	2.97
80	138	3	34	50	10	105	118	6	3.79	3.48	4.61	3.92	3.78
100	158	3	40	52	12	131	140	8	4.39	4.20	5.65	4.62	4.38
125	188	3	44	55	12	156	168	8	5.41	5.21	8.13	6.30	6.07
150	212	3	44	55	12	184	195	10	7.14	6.89	10.5	7.81	7.24
200	268	3	44	62	16	234	246	10	9.27	8.87	16.5	11.6	10.1
250	320	3	46	68	16	292	298	12	11.8	11.2	24.1	15.8	12.8
300	370	4	46	68	16	342	350	12	13.6	12.8	30.8	18.3	14.5
350	430	4	53	68	16	385	400	12	20.4	19.4	39.6	25.3	22.7
400	482	4	57	72	16	440	456	12	27.5	26.4	49.4	30.6	28.0
450	532	4	63	72	16	488	502	12	33.6	32.2	63	35.1	32.3
500	585	4	67	75	16	542	559	12	40.2	38.5	75.2	40.5	38.7
600	685	5	75	82	18	642	658	12	54.5	52.2	124	52.9	48.9
700	800	5	–	85	18	746	–	12	–	79.4	183	75.8	–
800	905	5	–	96	18	850	–	12	–	112	297	102	–
900	1005	5	–	99	20	950	–	12	–	135	374	121	–
1000	1110	5	–	105	20	1052	–	16	–	180	492	161	–
1200	1330	5	–	132	25	1256	–	16	–	278	842	258	–
1400	1535	5	–	143	25	1460	–	16	–	–	–	371	–
1600	1760	5	–	159	25	1666	–	16	–	–	–	547	–
1800	1960	5	–	175	30	1868	–	16	–	–	–	691	–
2000	2170	5	–	186	30	2072	–	16	–	–	–	830	–

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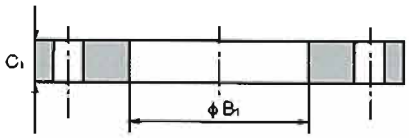
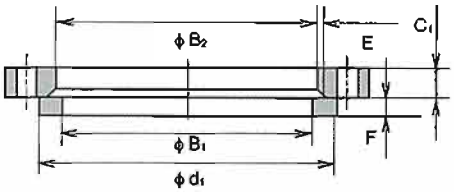
DIMENSIONS OF PN16 FLANGES

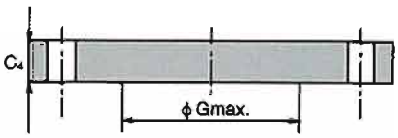
TYPE 01



TYPE 02



TYPE 05



DN	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolt number	Outside diameter of neck A	Bore diameters		Flange thickness			Chamfer	Wall thickness	Collar Thickness	Diameter of shoulder Gmax
						B_1	B_2	C_1	C_2	C_4	E	S	F	
	Flange type													
	01,02,05,11,12,13				11	01 12	02	01 02	11 12,13	05	02	11	32	05
10	90	60	14	4	17.2	18.0	21	14	16	16	3	2	12	–
15	95	65	14	4	21.3	22.0	25	14	16	16	3	2	12	–
20	105	75	14	4	26.9	27.5	31	16	18	18	4	2.3	14	–
25	115	85	14	4	33.7	34.5	38	16	18	18	4	2.6	14	–
32	140	100	18	4	42.4	43.5	47	18	18	18	5	2.6	14	–
40	150	110	18	4	48.3	49.5	53	18	18	18	5	2.6	14	–
50	165	125	18	4	60.3	61.5	65	20	18	18	5	2.9	16	–
65	185	145	18	8	76.1	77.5	81	20	18	18	6	2.9	16	55
80	200	160	18	8	88.9	90.5	94	20	20	20	6	3.2	16	70
100	220	180	18	8	114.3	116.0	120	22	20	20	6	3.6	18	90
125	250	210	18	8	139.7	141.5	145	22	22	22	6	4.0	18	115
150	285	240	22	8	168.3	170.5	174	24	22	22	6	4.5	20	140
200	340	295	22	12	219.1	221.5	226	26	24	24	6	6.3	20	190
250	405	355	26	12	273.0	276.5	281	29	26	26	8	6.3	22	235
300	460	410	26	12	323.9	327.5	333	32	28	28	8	7.1	24	285
350	520	470	26	16	355.6	359.5	365	35	30	30	8	8.0	26	330
400	580	525	30	16	406.4	411.0	416	38	32	32	8	8.0	28	380
450	640	585	30	20	457.0	462.0	467	42	34	40	8	8.8	30	425
500	715	650	33	20	508.0	513.5	519	46	36	44	8	8.8	32	475
600	840	770	36	20	610.0	616.5	622	55	40	54	8	10.0	32	575
700	910	840	36	24	711.0	To be specified by the purch aser	721	63	40	58	8	10.0	–	670
800	1025	950	39	24	813.0		824	74	41	62	8	12.5	–	770
900	1125	1050	39	28	914.0		926	82	48	64	8	12.5	–	860
1000	1255	1170	42	28	1016.0		1030	90	59	68	8	12.5	–	960
1200	1485	1390	48	32	1219		–	–	78	–	–	14.2	–	1160
1400	1685	1590	48	36	1422		–	–	84	–	–	16	–	1346
1600	1930	1820	56	40	1626		–	–	102	–	–	17.5	–	1546
1800	2130	2020	56	44	1829		–	–	110	–	–	20	–	1746
2000	2345	2230	62	48	2032		–	–	124	–	–	22	–	1950

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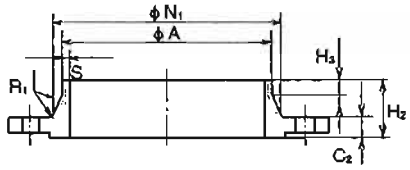
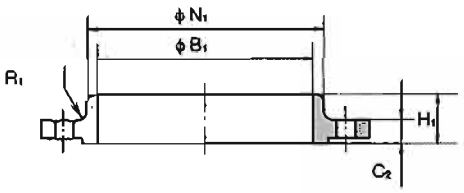
DIMENSIONS OF PN16 FLANGES

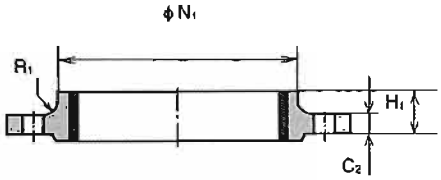
TYPE 11



TYPE 12



TYPE 13



DN	Raised face		Length			Neck diameters		Corner radii	APPROXIMATE WEIGHT				
	d_1	f_1	H_1	H_2	H_3	N_1	N_2	R_1					
	Flange type												
	01,05,11,12,13		12 13	11	11	11	12 13	11 12,13	Type01	Type02	Type05	Type11	Type12
10	40	2	22	35	6	28	30	4	0.604	0.591	0.722	0.678	0.646
15	45	2	22	38	6	32	35	4	0.670	0.654	0.813	0.768	0.722
20	58	2	26	40	6	40	45	4	0.936	0.909	1.14	1.09	1.04
25	68	2	28	40	6	46	52	4	1.11	1.08	1.38	1.3	1.25
32	78	2	30	42	6	56	60	6	1.82	1.77	2.03	1.91	1.81
40	88	3	32	45	7	64	70	6	2.08	2.02	2.35	2.15	2.06
50	102	3	28	45	8	74	84	6	2.73	2.52	2.88	2.53	2.39
65	122	3	32	45	10	92	104	6	3.16	3.05	3.51	3.03	2.97
80	138	3	34	50	10	105	118	6	3.79	3.48	4.61	3.92	3.78
100	158	3	40	52	12	131	140	8	4.39	4.20	5.65	4.62	4.38
125	188	3	44	55	12	156	168	8	5.41	5.21	8.13	6.30	6.07
150	212	3	44	55	12	184	195	10	7.14	6.89	10.5	7.81	7.24
200	268	3	44	62	16	235	246	10	9.73	9.31	16.2	11.5	9.8
250	320	3	46	70	16	292	298	12	14.2	13.5	25.0	16.70	13.6
300	378	4	46	78	16	344	350	12	19	18.0	35.1	22.1	17.2
350	438	4	57	82	16	390	400	12	28.2	27.0	48.0	32.8	27.9
400	490	4	63	85	16	445	456	12	35.9	34.6	63.5	41.1	35.7
450	550	4	68	83	16	490	502	12	46.1	44.6	96.6	50.6	45.0
500	610	4	73	84	16	548	559	12	64.0	62.0	133	66.2	60.4
600	725	5	83	88	18	670	658	12	102	98.8	226	104	94
700	795	5	83	104	18	755	760	12	–	107	285	96.5	–
800	900	5	90	108	20	855	864	12	–	152	388	122	–
900	1000	5	94	118	20	955	968	12	–	184	483	155	–
1000	1115	5	100	137	22	1058	1072	16	–	257	640	233	–
1200	1330	5	–	160	30	1262	–	16	–	–	–	390	–
1400	1530	5	–	177	30	1465	–	16	–	–	–	495	–
1600	1750	5	–	204	35	1668	–	16	–	–	–	760	–
1800	1950	5	–	218	35	1870	–	16	–	–	–	929	–
2000	2150	5	–	238	40	2072	–	16	–	–	–	1185	–

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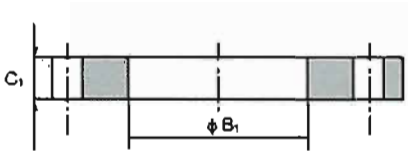
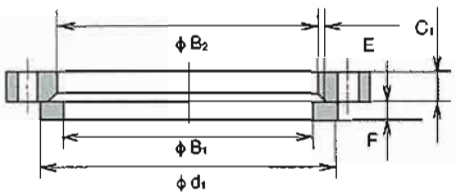
DIMENSIONS OF PN25 FLANGES

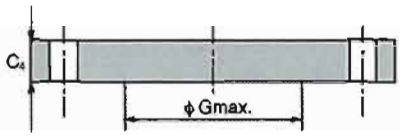
TYPE 01



TYPE 02



TYPE 05



DN	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolt number	Outside diameter of neck A	Bore diameters		Flange thickness			Chamfer	Wall thickness	Collar Thickness	Diameter of shoulder Gmax
						B_1	B_2	C_1	C_2	C_4	E	S	F	
	Flange type													
	01,02,05,11,12,13				11	01 12	02	01 02	11 12,13	05	02	11	32	05
10	90	60	14	4	17.2	18.0	21	14	16	16	3	2.0	12	–
15	95	65	14	4	21.3	22.0	25	14	16	16	3	2.0	12	–
20	105	75	14	4	26.9	27.5	31	16	18	18	4	2.3	14	–
25	115	85	14	4	33.7	34.5	38	16	18	18	4	2.6	14	–
32	140	100	18	4	42.4	43.5	47	18	18	18	5	2.6	14	–
40	150	110	18	4	48.3	49.5	53	18	18	18	5	2.6	14	–
50	165	125	18	4	60.3	61.5	65	20	20	20	5	2.9	16	–
65	185	145	18	8	76.1	77.5	81	22	22	22	6	2.9	16	55
80	200	160	18	8	88.9	90.5	94	24	24	24	6	3.2	18	70
100	235	190	22	8	114.3	116.0	120	26	24	24	6	3.6	20	90
125	270	220	26	8	139.7	141.5	145	28	26	26	6	4.0	22	115
150	300	250	26	8	168.3	170.5	174	30	28	28	6	4.5	24	140
200	360	310	26	12	219.1	221.5	226	32	30	30	6	6.3	26	190
250	425	370	30	12	273.0	276.5	281	35	32	32	8	7.1	26	235
300	485	430	30	16	323.9	327.5	333	38	34	34	8	8.0	28	285
350	555	490	33	16	355.6	359.5	365	42	38	38	8	8.0	32	332
400	620	550	36	16	406.4	411.0	416	48	40	40	8	8.8	34	380
450	670	600	36	20	457.0	462.0	467	54	46	50	8	8.8	36	425
500	730	660	36	20	508.0	513.5	519	58	48	51	8	10.0	38	475
600	845	770	39	20	610.0	616.5	622	68	48	66	8	12.5	40	575
700	960	875	42	24	711	–	721	85	50	–	8	14.2	–	–
800	1085	990	48	24	813	–	824	95	53	–	8	16	–	–
900	1185	1090	48	28	914	–	–	–	57	–	–	17.5	–	–
1000	1320	1210	56	28	1016	–	–	–	63	–	–	20	–	–

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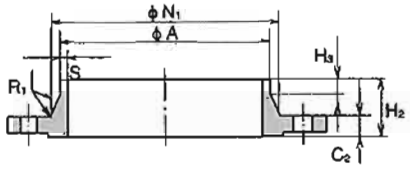
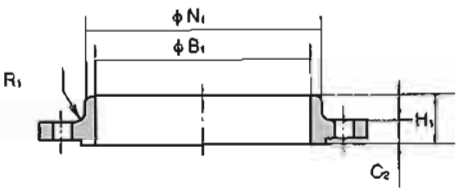
DIMENSIONS OF PN25 FLANGES

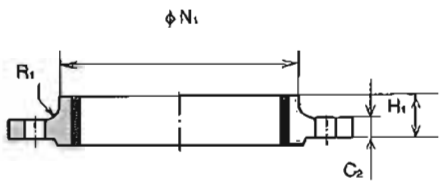
TYPE 11



TYPE 12



TYPE 13

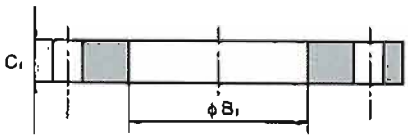


DN	Raised face		Length			Neck diameters		Corner radii	APPROXIMATE WEIGHT				
	d_1	f_1	H_1	H_2	H_3	N_1	N_2	R_1					
	Flange type												
	01,05,11,12,13		12 13	11	11	11	12 13	11 12,13	Type01	Type02	Type05	Type11	Type12
10	40	2	22	35	6	28	30	4	0.604	0.591	0.722	0.678	0.646
15	45	2	22	38	6	32	35	4	0.670	0.654	0.813	0.768	0.722
20	58	2	26	40	6	40	45	4	0.936	0.909	1.14	1.09	1.04
25	68	2	28	40	6	46	52	4	1.11	1.08	1.38	1.3	1.25
32	78	2	30	42	6	56	60	6	1.82	1.77	2.03	1.91	1.81
40	88	3	32	45	7	64	70	6	2.08	2.02	2.35	2.15	2.06
50	102	3	34	48	8	75	84	6	2.73	2.65	3.20	2.85	2.74
65	122	3	38	52	10	90	104	6	3.48	3.36	4.29	3.68	3.65
80	138	3	40	58	12	105	118	8	4.32	4.18	5.54	4.78	4.59
100	162	3	44	65	12	134	145	8	6.07	5.87	7.60	6.46	6.1
125	188	3	48	68	12	162	170	8	8.19	7.95	10.8	8.86	8.22
150	218	3	52	75	12	192	200	10	10.3	9.97	14.6	11.7	10.6
200	278	3	52	80	16	244	256	10	14.3	13.8	22.5	17.1	14.9
250	335	3	60	88	18	298	310	12	20.1	19.4	33.5	24.3	20.9
300	395	4	67	92	18	352	364	12	26.6	25.5	46.3	31.8	27.3
350	450	4	72	100	20	398	418	12	41.8	40.5	68.1	48.8	45.1
400	505	4	78	110	20	452	472	12	57.6	56.1	89.7	63.3	57.7
450	555	4	84	110	20	500	520	12	69.8	67.8	130	76	69.6
500	615	4	90	125	20	558	580	12	87.0	84.6	159	97	87
600	720	5	100	125	20	660	684	12	127	124	278	121	111
700	820	5	–	129	20	760	–	12	–	–	–	155	–
800	930	5	–	138	22	864	–	12	–	–	–	205	–
900	1030	5	–	148	24	968	–	12	–	–	–	249	–
1000	1140	5	–	160	24	1070	–	16	–	–	–	338	–

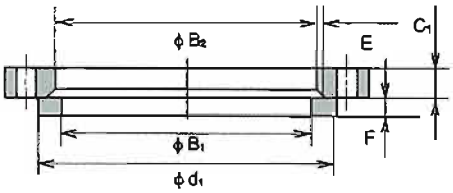
EN 1092-1:2007

DIMENSIONS OF PN40 FLANGES

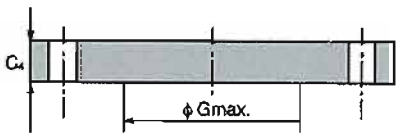
TYPE 01



TYPE 02



TYPE 05

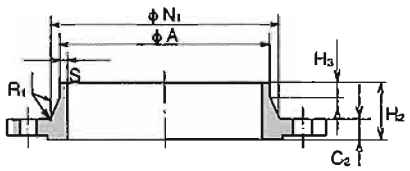


DN	Outside diameter	Diameter of bolt circle	Diameter of bolt hole	Bolt number	Outside diameter of neck A	Bore diameters		Flange thickness			Chamfer	Wall thickness	Collar Thickness	Diameter of shoulder Gmax
						B_1	B_2	C_1	C_2	C_4	E	S	F	
	Flange type													
	01,02,05,11,12,13				11	01 12	02	01 02	11 12,13	05	02	11	32	05
10	90	60	14	4	17.2	18.0	21	14	16	16	3	2.0	12	–
15	95	65	14	4	21.3	22.0	25	14	16	16	3	2.0	12	–
20	105	75	14	4	26.9	27.5	31	16	18	18	4	2.3	14	–
25	115	85	14	4	33.7	34.5	38	16	18	18	4	2.6	14	–
32	140	100	18	4	42.4	43.5	47	18	18	18	5	2.6	14	–
40	150	110	18	4	48.3	49.5	53	18	18	18	5	2.6	14	–
50	165	125	18	4	60.3	61.5	65	20	20	20	5	2.9	16	–
65	185	145	18	8	76.1	77.5	81	22	22	22	6	2.9	16	55
80	200	160	18	8	88.9	90.5	94	24	24	24	6	3.2	18	70
100	235	190	22	8	114.3	116.0	120	26	24	24	6	3.6	20	90
125	270	220	26	8	139.7	141.5	145	28	26	26	6	4.0	22	115
150	300	250	26	8	168.3	170.5	174	30	28	28	6	4.5	24	140
200	375	320	30	12	219.1	221.5	226	36	34	36	6	6.3	28	190
250	450	385	33	12	273.0	276.5	281	42	38	38	8	7.1	30	235
300	515	450	33	16	323.9	327.5	333	52	42	42	8	8.0	34	285
350	580	510	36	16	355.6	359.5	365	58	46	46	8	8.8	36	330
400	660	585	39	16	406.4	411.0	416	65	50	50	8	11.0	42	380
450	685	610	39	20	457.0	462.0	467	To be specified by the purchaser	57	57	8	12.5	46	425
500	755	670	42	20	508.0	513.5	519		57	57	8	14.2	50	475
600	890	795	48	20	610.0	616.5	622		72	72	8	16.0	54	575

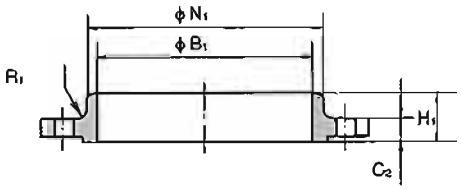
EN 1092–1:2007

DIMENSIONS OF PN40 FLANGES

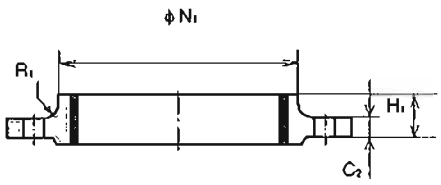
TYPE 11



TYPE 12



TYPE 13



DN	Raised face		Length			Neck diameters		Corner radii	APPROXIMATE WEIGHT				
	d_1	f_1	H_1	H_2	H_3	N_1	N_2	R_1					
	Flange type												
	01,05,11,12,13		12 13	11	11	11	12 13	11 12,13	Type01	Type02	Type05	Type11	Type12
10	40	2	22	35	6	28	30	4	0.604	0.591	0.722	0.678	0.646
15	45	2	22	38	6	32	35	4	0.67	0.654	0.813	0.768	0.722
20	58	2	26	40	6	40	45	4	0.936	0.909	1.14	1.09	1.04
25	68	2	28	40	6	46	52	4	1.11	1.08	1.38	1.30	1.25
32	78	2	30	42	6	56	60	6	1.82	1.77	2.03	1.91	1.81
40	88	3	32	45	7	64	70	6	2.08	2.02	2.35	2.15	2.06
50	102	3	34	48	8	75	84	6	2.73	2.65	3.20	2.85	2.74
65	122	3	38	52	10	90	104	6	3.48	3.36	4.29	3.68	3.65
80	138	3	40	58	12	105	118	8	4.32	4.18	5.54	4.78	4.59
100	162	3	44	65	12	134	145	8	6.07	5.87	7.60	6.46	6.10
125	188	3	48	68	12	162	170	8	8.19	7.95	10.8	8.86	8.22
150	218	3	52	75	12	192	200	10	10.3	9.97	14.6	11.7	10.6
200	285	3	52	88	16	244	260	10	17.9	17.4	28.8	21.0	18.3
250	345	3	60	105	18	306	312	12	29.3	28.4	44.4	34.2	28.3
300	410	4	67	115	18	362	380	12	45.1	43.6	64.2	47.6	40.4
350	465	4	72	125	20	408	424	12	66.7	64.9	89.5	69.3	58.8
400	535	4	78	135	20	462	478	12	97.1	95.1	127	98	82.1
450	560	4	84	135	20	500	522	12	–	–	154	105	86.2
500	615	4	90	140	20	562	576	12	–	–	188	130	105
600	735	5	100	150	20	666	686	12	–	–	331	209	172

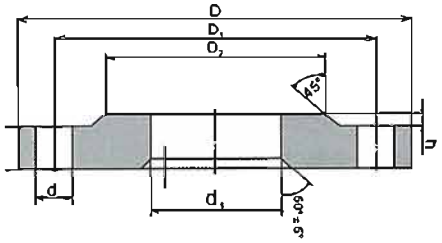
河北海浩




俄标
法兰参数系列

GOST 12820-80 PN6

STEEL PLAIN WELDED FLANGES

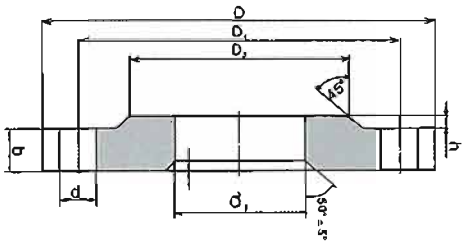


UNIT:mm

Nomencatlure	Dimensions,mm								Weight,kg
	D	D_1	D_2	d_1	b	h	n	d	
P_{nom}=0.6Mpa(6kgf/cm²)									
1-10-6	75	50	35	15	10	2	4	11	0.31
1-15-6	80	55	40	19	10	2	4	11	0.33
1-20-6	90	65	50	26	12	2	4	11	0.53
1-25-6	100	75	60	33	12	2	4	11	0.64
1-32-6	120	90	70	39	13	2	4	14	1.01
1-40-6	130	100	80	46	13	3	4	14	1.21
1-50-6	140	110	90	59	13	3	4	14	1.33
1-65-6	160	130	110	78	13	3	4	14	1.63
1-80-6	185	150	128	91	15	3	4	18	2.44
1-100-6	205	170	148	110	15	3	4	18	2.85
1-125-6	235	200	178	135	17	3	8	18	3.88
1-150-6	260	225	202	161	17	3	8	18	4.39
1-175-6	290	255	232	196	19	3	8	18	5.36
1-200-6	315	280	258	222	19	3	8	18	5.89
1-225-6	340	305	282	245	19	3	8	18	6.60
1-250-6	370	335	312	273	20	3	12	18	7.67
1-300-6	435	395	365	325	20	4	12	22	10.28
1-350-6	485	445	415	377	22	4	12	22	12.58
1-400-6	535	495	465	426	24	4	16	22	15.20
1-450-6	590	550	520	480	24	4	16	22	17.25
1-500-6	640	600	570	530	25	4	16	22	19.72
1-600-6	755	705	670	630	25	5	20	26	26.24
1-700-6	860	810	775	720	27	5	24	26	36.68
1-800-6	975	920	880	820	27	5	24	30	46.14
1-900-6	1075	1020	980	920	29	5	24	30	55.10
1-1000-6	1175	1120	1080	1020	31	5	28	30	64.36
1-1200-6	1400	1340	1295	1220	34	5	32	33	99.03

GOST 12820-80 PN10

STEEL PLAIN WELDED FLANGES

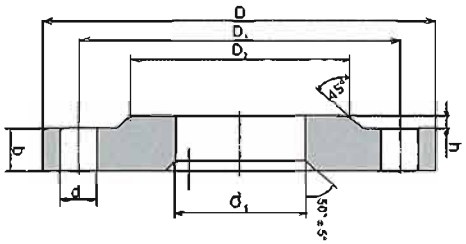


UNIT:mm

Nomencature	Dimensions,mm								Weight,kg
	D	D_1	D_2	d_1	b	h	n	d	
P_{nom}=1.0Mpa(10kgf/cm²)									
1-10-10	90	60	42	15	10	2	4	14	0.46
1-15-10	95	65	47	19	10	2	4	14	0.51
1-20-10	105	75	58	26	12	2	4	14	0.74
1-25-10	115	85	68	33	12	2	4	14	0.89
1-32-10	135	100	78	39	14	2	4	18	1.40
1-40-10	145	110	88	46	15	3	4	18	1.71
1-50-10	160	125	102	59	15	3	4	18	2.06
1-65-10	180	145	122	78	17	3	4	18	2.80
1-80-10	195	160	133	91	17	3	4	18	3.19
1-100-10	215	180	158	110	19	3	8	18	3.96
1-125-10	245	210	184	135	21	3	8	18	5.40
1-150-10	280	240	212	161	21	3	8	22	6.62
1-175-10	310	270	242	196	21	3	8	22	7.32
1-200-10	335	295	268	222	21	3	8	22	8.05
1-225-10	365	325	295	245	21	3	8	22	9.30
1-250-10	390	350	320	273	23	3	12	22	10.65
1-300-10	440	400	370	325	24	4	12	22	12.90
1-350-10	500	460	430	377	24	4	16	22	15.85
1-400-10	565	515	482	426	26	4	16	26	21.56
1-450-10	615	565	532	480	26	4	20	26	22.76
1-500-10	670	620	585	530	28	4	20	26	27.70
1-600-10	780	725	685	630	31	5	20	30	39.40
1-700-10	895	840	800	720	34	5	24	30	59.46
1-800-10	1010	950	905	820	37	5	24	33	79.16
1-900-10	1110	1050	1005	920	40	5	28	33	94.13
1-1000-10	1220	1160	1110	1020	43	5	28	33	118.43
1-1200-10	1455	1380	1330	1222	51	5	32	39	197.44

GOST 12820-80 PN16

STEEL PLAIN WELDED FLANGES

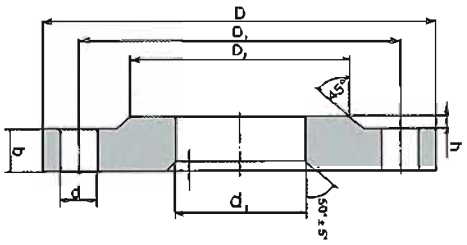


UNIT:mm

Nomencatlure	Dimensions,mm								Weight,kg
	D	D_1	D_2	d_1	b	h	n	d	
P_{nom}=1.6Mpa(16kgf/cm²)									
1-10-16	90	60	42	15	12	2	4	14	0.54
1-15-16	95	65	47	19	12	2	4	14	0.61
1-20-16	105	75	58	26	14	2	4	14	0.86
1-25-16	115	85	68	33	16	2	4	14	1.17
1-32-16	135	100	78	39	16	2	4	18	1.58
1-40-16	145	110	88	46	17	3	4	18	1.96
1-50-16	160	125	102	59	19	3	4	18	2.58
1-65-16	180	145	122	78	21	3	4	18	3.42
1-80-16	195	160	133	91	21	3	4	18	3.71
1-100-16	215	180	158	110	23	3	8	18	4.73
1-125-16	245	210	184	135	25	3	8	18	6.38
1-150-16	280	240	212	161	25	3	8	22	7.81
1-175-16	310	270	242	196	25	3	8	22	8.64
1-200-16	335	295	268	222	27	3	12	22	10.10
1-225-16	365	325	295	245	27	3	12	22	11.70
1-250-16	405	355	320	273	28	3	12	26	14.49
1-300-16	460	410	370	325	28	4	12	26	17.78
1-350-16	520	470	430	377	30	4	16	26	22.88
1-400-16	580	525	482	426	34	4	16	30	31.00
1-450-16	640	585	532	480	38	4	20	30	39.64
1-500-16	710	650	585	530	44	4	20	33	57.01
1-600-16	840	770	685	630	45	5	20	39	80.03
1-700-16	910	840	800	720	47	5	24	39	84.21
1-800-16	1020	950	905	820	49	5	24	39	104.41
1-900-16	1120	1050	1005	920	54	5	28	39	128.60
1-1000-16	1255	1170	1110	1020	58	5	28	45	179.37
1-1200-16	1485	1390	1330	1220	71	5	32	52	297.78

GOST 12820-80 PN25

STEEL PLAIN WELDED FLANGES

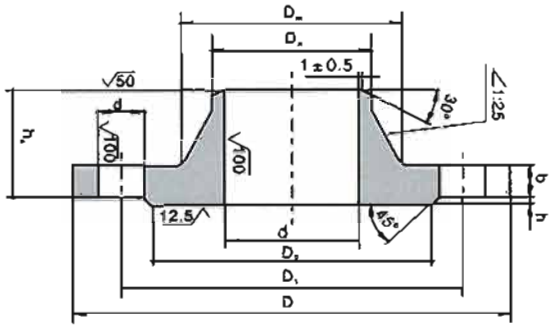


UNIT:mm

Nomencatlure	Dimensions,mm								Weight,kg
	D	D_1	D_2	d_1	b	h	n	d	
P_{nom}=2.5Mpa(25kgf/cm²)									
1-10-25	90	60	42	15	14	2	4	14	0.63
1-15-25	95	65	47	19	14	2	4	14	0.70
1-20-25	105	75	58	26	16	2	4	14	0.98
1-25-25	115	85	68	33	16	2	4	14	1.17
1-32-25	135	100	78	39	18	2	4	18	1.77
1-40-25	145	110	88	46	19	3	4	18	2.18
1-50-25	160	125	102	59	21	3	4	18	2.71
1-65-25	180	145	122	78	21	3	8	18	3.22
1-80-25	195	160	133	91	23	3	8	18	4.06
1-100-25	230	190	158	110	25	3	8	22	5.92
1-125-25	270	220	184	135	27	3	8	26	8.26
1-150-25	300	250	212	161	27	3	8	26	10.12
1-200-25	360	310	278	222	29	3	12	26	13.34
1-250-25	425	370	335	273	31	3	12	30	18.90
1-300-25	485	430	390	325	32	4	16	30	23.95
1-350-25	550	490	450	377	38	4	16	33	34.35
1-400-25	610	550	505	426	40	4	16	33	44.62
1-500-25	730	660	615	530	48	4	20	39	67.30
1-600-25	840	770	720	630	49	5	20	39	90.87
1-800-25	1075	990	930	820	63	5	24	45	181.43

GOST 12821–80 PN6

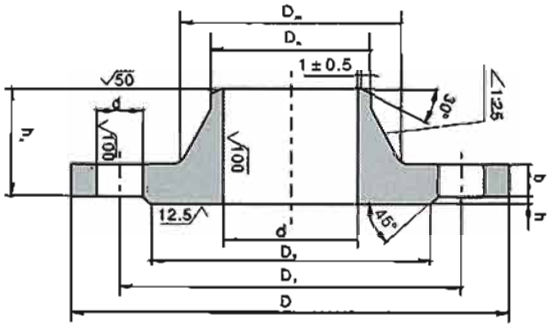
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight, Kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom} = 0,6 MPa (6 kgf/cm²)												
1–10–6	75	50	35	2	8	10	27	22	15	4	11	0.34
1–15–6	80	55	40	2	12	10	28	28	19	4	11	0.40
1–20–6	90	65	50	2	18	10	30	36	26	4	11	0.53
1–25–6	100	75	60	2	25	12	30	42	33	4	11	0.76
1–32–6	120	90	70	2	31	12	33	50	39	4	14	1.10
1–40–6	130	100	80	3	38	12	35	60	46	4	14	1.36
1–50–6	140	110	90	3	49	12	35	70	58	4	14	1.53
1–65–6	160	130	110	3	66	12	35	88	77	4	14	1.97
1–80–6	185	150	128	3	78	13	37	102	90	4	18	2.76
1–100–6	205	170	148	3	96	13	38	122	110	4	18	3.35
1–125–6	235	200	178	3	121	15	40	148	135	8	18	4.66
1–150–6	260	225	202	3	146	15	43	172	161	8	18	5.37
1–175–6	290	255	232	3	177	17	47	210	196	8	18	7.32
1–200–6	315	280	258	3	202	17	50	235	222	8	18	8.37
1–225–6	340	305	282	3	226	17	50	260	248	8	18	9.45
1–250–6	370	335	312	3	254	18	50	288	278	12	18	10.99
1–300–6	435	395	365	4	303	18	50	340	330	12	22	14.82
1–350–6	485	445	415	4	351	18	50	390	382	12	22	17.69
1–400–6	535	495	465	4	398	18	50	440	432	16	22	20.55
1–450–6	590	550	520	4	450	18	50	494	484	16	22	23.63
1–500–6	640	600	570	4	501	19	50	545	535	16	22	26.63
1–600–6	755	705	670	5	602	19	55	650	636	20	26	35.79
1–700–6	860	810	775	5	692	19	55	740	726	24	26	44.31
1–800–6	975	920	880	5	792	19	60	844	826	24	30	56.17
1–900–6	1075	1020	980	5	892	21	60	944	926	24	30	66.79
1–1000–6	1175	1120	1080	5	992	21	60	1044	1028	28	30	73.51
1–1200–6	1400	1340	1295	5	1192	23	70	1248	1228	32	33	111.43

GOST 12821-80 PN10

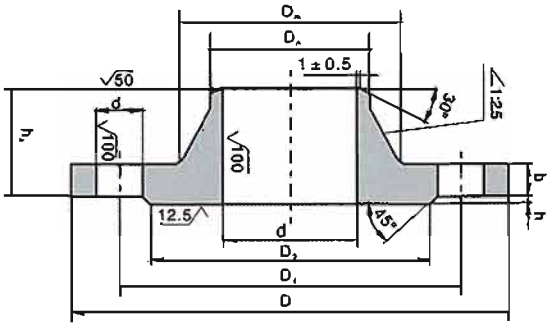
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight, Kg
	D	D_1	D_2	h	d_1	b	h_1	D_m	D_n	n, Number of holes	d	
P_{nom} = 1,0 MPa (10 kgf/cm²)												
1-10-10	90	60	42	2	8	10	33	25	15	4	14	0.50
1-15-10	95	65	47	2	12	10	33	30	19	4	14	0.58
1-20-10	105	75	58	2	18	12	36	38	26	4	14	0.87
1-25-10	115	85	68	2	25	12	38	45	33	4	14	1.05
1-32-10	135	100	78	2	31	13	40	55	39	4	18	1.54
1-40-10	145	110	88	3	38	13	42	62	46	4	18	1.83
1-50-10	160	125	102	3	49	13	42	76	58	4	18	2.26
1-65-10	180	145	122	3	66	15	45	94	77	4	18	3.17
1-80-10	195	160	133	3	78	15	47	105	90	4	18	3.67
1-100-10	215	180	158	3	96	17	48	128	110	8	18	4.70
1-125-10	245	210	184	3	121	19	57	156	135	8	18	6.71
1-150-10	280	240	212	3	146	19	57	180	161	8	22	8.17
1-175-10	310	270	242	3	177	19	57	210	196	8	22	9.71
1-200-10	335	295	268	3	202	19	58	240	222	8	22	11.35
1-225-10	365	325	295	3	226	19	60	268	248	8	22	13.24
1-250-10	390	350	320	3	254	21	60	290	278	12	22	14.64
1-300-10	440	400	370	4	303	22	60	345	330	12	22	18.66
1-350-10	500	460	430	4	351	22	60	400	382	16	22	24.00
1-400-10	565	515	482	4	398	22	60	445	432	16	26	30.00
1-450-10	615	565	532	4	450	22	65	500	484	20	26	33.33
1-500-10	670	620	585	4	501	24	65	550	535	20	26	39.20
1-600-10	780	725	685	5	602	24	65	650	636	20	30	48.80
1-700-10	895	840	800	5	692	25	65	744	726	24	30	65.26
1-800-10	1010	950	905	5	792	27	75	850	826	24	33	87.24
1-900-10	1110	1050	1005	5	892	29	80	950	926	28	33	103.02
1-1000-10	1220	1160	1110	5	992	29	80	1050	1028	28	33	119.19
1-1200-10	1455	1380	1330	5	1192	33	90	1256	1228	32	39	179.91

GOST 12821–80 PN16

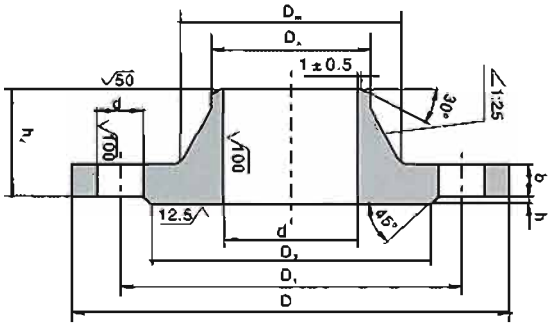
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight, Kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom} = 1,6 MPa (16 kgf/cm²)												
1–10–16	90	60	42	2	8	12	33	26	15	4	14	0.59
1–15–16	95	65	47	2	12	12	33	30	19	4	14	0.68
1–20–16	105	75	58	2	18	12	36	28	26	4	14	0.87
1–25–16	115	85	68	2	25	12	38	45	33	4	14	1.05
1–32–16	135	100	78	2	31	13	40	55	39	4	18	1.54
1–40–16	145	110	88	3	38	13	42	64	46	4	18	1.85
1–50–16	160	125	102	3	49	13	45	76	58	4	18	2.28
1–65–16	180	145	122	3	66	15	47	94	77	4	18	3.19
1–80–16	195	160	133	3	78	17	50	110	90	4	18	4.21
1–100–16	215	180	158	3	96	17	50	130	110	8	18	4.90
1–125–16	245	210	184	3	121	19	57	156	135	8	18	6.75
1–150–16	280	240	212	3	146	19	57	180	161	8	22	8.3
1–175–16	310	270	242	3	177	21	57	210	196	8	22	10.37
1–200–16	335	295	268	3	202	21	58	240	222	12	22	11.79
1–225–16	365	325	295	3	226	21	65	268	248	12	22	14.12
1–250–16	405	355	320	3	254	23	65	292	278	12	26	17.36
1–300–16	460	410	370	4	303	24	66	346	330	12	26	22.76
1–350–16	520	470	430	4	351	28	70	400	382	16	26	32.04
1–400–16	580	525	482	4	398	32	75	450	432	16	30	43.00
1–450–16	640	585	532	4	450	34	85	506	484	20	30	54.00
1–500–16	710	650	585	4	501	38	90	559	535	20	33	70.97
1–600–16	840	770	685	5	602	41	90	660	636	20	39	99.30
1–700–16	910	840	800	5	692	43	95	750	726	24	39	105.90
1–800–16	1020	950	905	5	792	45	95	850	826	24	39	130.57
1–900–16	1120	1050	1005	5	892	47	110	958	926	28	39	157.83
1–1000–16	1255	1170	1110	5	992	49	110	1060	1028	28	45	203.39
1–1200–16	1485	1390	1330	5	1192	51	125	1268	1228	32	52	284.94

GOST 12821–80 PN25

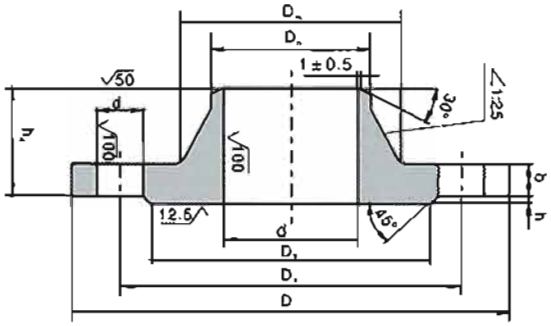
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight, Kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom} = 2,5 MPa (25 kgf/cm²)												
1–10–25	90	60	42	2	8	14	33	26	15	4	14	0.68
1–15–25	95	65	47	2	12	14	33	30	19	4	14	0.79
1–20–25	105	75	58	2	18	14	34	38	26	4	14	0.97
1–25–25	145	85	68	2	25	14	36	45	33	4	14	1.18
1–32–25	135	100	78	2	31	16	43	56	39	4	18	1.83
1–40–25	115	110	88	3	38	16	45	64	46	4	18	2.19
1–50–25	160	125	102	3	49	17	45	76	58	4	18	2.78
1–65–25	180	145	122	3	66	19	50	96	77	8	18	3.71
1–80–25	195	160	133	3	78	19	52	110	90	8	18	4.44
1–100–25	230	190	158	3	96	21	58	132	110	8	22	6.51
1–125–25	270	220	184	3	121	23	65	160	135	8	26	9.41
1–150–25	300	250	212	3	146	25	68	186	161	8	26	12.52
1–175–25	330	280	242	3	177	25	70	216	196	12	26	13.88
1–200–25	360	310	278	3	202	27	75	245	222	12	26	17.44
1–225–25	395	340	305	3	226	29	75	270	248	12	30	21.56
1–250–25	425	370	335	3	254	29	75	300	278	12	30	24.40
1–300–25	485	430	390	4	303	32	80	352	330	16	30	33.29
1–350–25	550	490	450	4	351	36	85	406	382	16	33	46.57
1–400–25	610	550	505	4	398	40	100	464	432	16	33	64.81
1–450–25	660	600	555	4	450	42	100	515	484	20	33	72.26
1–500–25	730	660	615	4	500	44	100	570	535	20	39	88.91
1–600–25	840	770	720	5	600	49	115	670	636	20	39	123.70
1–700–25	960	875	820	5	690	53	125	766	726	24	45	166.81
1–800–25	1075	990	930	5	790	55	135	874	826	24	45	213.9
1–900–25	1185	1090	1030	5	892	57	145	980	926	28	52	213.90
1–1000–25	1315	1210	1140	5	992	59	150	1084	1028	28	56	312.12
1–1200–25	1525	1420	1350	5	1192	62	160	1288	1228	32	56	387.50

GOST 12821-80 PN40

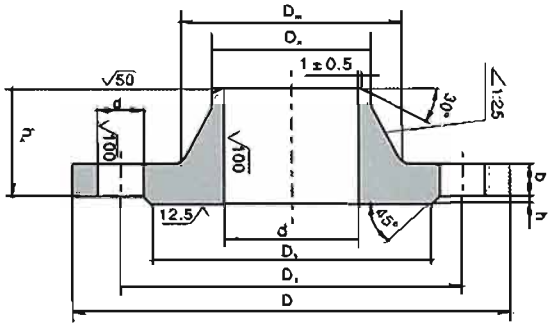
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom}=4.0MPa (40kgf/cm²)												
1-10-40	90	60	42	2	8	14	33	26	15	4	14	0.68
1-15-40	95	65	47	2	12	14	33	30	19	4	14	0.79
1-20-40	105	75	58	2	18	14	34	38	26	4	14	0.97
1-25-40	115	85	68	2	25	14	36	45	33	4	14	1.18
1-32-40	135	100	78	2	31	16	43	56	39	4	18	1.83
1-40-40	145	110	88	3	38	16	45	64	46	4	18	2.19
1-50-40	160	125	102	3	48	17	45	76	58	4	18	2.81
1-65-40	180	145	122	3	66	19	50	96	77	8	18	3.71
1-80-40	195	160	133	3	78	21	55	112	90	8	18	4.8
1-100-40	230	190	158	3	96	23	65	138	110	8	22	7.4
1-125-40	270	220	184	3	120	25	65	160	135	8	26	10.00
1-150-40	300	250	212	3	145	27	68	186	161	8	26	13.03
1-175-40	350	295	242	3	177	33	85	226	196	12	30	20.75
1-200-40	375	320	285	3	200	35	85	250	222	12	30	24.44
1-225-40	415	355	315	3	226	37	95	280	248	12	33	31.33
1-250-40	445	385	345	3	252	39	98	310	278	12	33	37.59
1-300-40	510	450	410	4	301	42	112	368	330	16	33	57.10
1-350-40	570	510	465	4	351	48	116	418	382	16	33	70.34
1-400-40	655	585	535	4	398	54	135	480	432	16	39	106.76
1-450-40	680	610	560	4	448	56	135	530	484	20	39	107.00
1-500-40	755	670	615	4	495	58	140	580	535	20	45	132.33
1-600-40	890	795	735	5	595	58	140	686	636	20	52	180.95
1-700-40	995	900	810	5	695	63	160	790	726	24	52	228.25
1-800-40	1135	1030	960	5	795	71	190	908	826	24	56	343.69
1-900-40	1250	1140	1070	5	895	74	215	1024	926	28	56	436.54
1-1000-40	1360	1250	1180	5	995	77	235	1140	1028	28	56	540.75
1-1200-40	1575	1460	1380	5	1195	80	250	1350	1228	32	62	690.59

GOST 12821–80 PN63

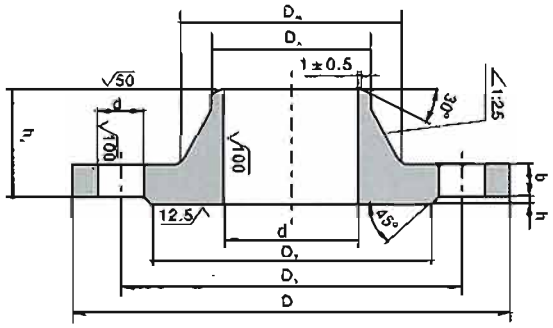
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom}=6.3MPa (63kgf/cm²)												
1–10–63	100	70	42	2	8	16	46	34	15	4	14	1.03
1–15–63	105	75	47	2	12	16	46	38	19	4	14	1.15
1–20–63	125	90	58	2	18	18	54	48	26	4	18	1.80
1–25–63	135	100	68	2	25	20	56	52	33	4	18	2.30
1–32–63	150	110	78	2	31	21	60	64	39	4	22	2.94
1–40–63	165	125	88	3	37	21	65	74	46	4	22	3.75
1–50–63	175	135	102	3	47	23	67	86	58	4	22	4.63
1–65–63	200	160	122	3	64	25	72	106	77	8	22	6.29
1–80–63	210	170	133	3	77	27	72	120	90	8	22	7.22
1–100–63	250	200	158	3	94	29	77	140	110	8	26	10.71
1–125–63	295	240	184	3	118	33	95	172	135	8	30	17.13
1–150–63	340	280	212	3	142	35	105	206	161	8	33	24.60
1–175–63	370	310	212	3	174	39	105	232	196	12	33	28.61
1–200–63	405	345	285	3	198	41	110	264	222	12	33	36.60
1–225–63	430	370	315	3	222	43	115	290	248	12	33	42.54
1–250–63	470	400	345	3	246	45	115	316	278	12	39	50.89
1–300–63	530	460	410	4	294	50	120	370	330	16	39	68.15
1–350–63	595	525	465	4	342	56	140	430	382	16	39	98.68
1–400–63	670	585	535	4	386	62	155	484	432	16	45	135.80
1–500–63	800	705	615	4	485	66	165	594	535	20	52	192.74
1–600–63	925	820	735	5	585	71	180	704	636	20	56	269.27
1–700–63	1045	935	840	5	685	76	225	820	726	24	56	300.86
1–800–63	1165	1050	960	5	785	85	225	920	826	24	62	463.87
1–900–63	1285	1170	1070	5	885	88	265	1050	926	28	62	954.41
1–1000–63	1415	1290	1180	5	985	92	280	1160	1028	28	70	980.60
1–1200–63	1665	1530	1380	5	1185	95	315	1386	1228	32	78	1263.72

GOST 12821-80 PN100

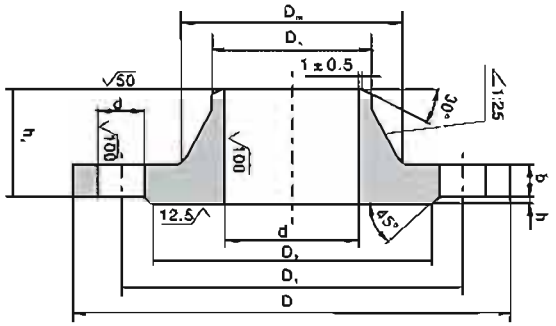
STEEL PLAIN WELDED FLANGES



Nomencatlure	Dimensions, mm											Weight kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom}=10MPa (100kgf/cm²)												
1-10-100	100	70	42	2	8	16	43	34	15	4	14	1.02
1-15-100	105	75	47	2	12	18	46	38	19	4	14	1.26
1-20-100	125	90	58	2	18	20	51	48	26	4	18	1.98
1-25-100	135	100	68	2	25	22	56	52	33	4	18	2.48
1-32-100	150	110	78	2	31	22	60	64	39	4	22	3.05
1-40-100	165	125	88	3	37	23	67	76	46	4	22	4.06
1-50-100	195	145	102	3	45	25	68	86	58	4	26	6.03
1-65-100	220	170	122	3	62	29	80	110	77	8	26	8.52
1-80-100	230	180	133	3	75	31	87	124	90	8	26	9.91
1-100-100	265	210	158	3	92	35	97	146	110	8	30	14.65
1-125-100	310	250	184	3	112	39	112	180	135	8	33	23.32
1-150-100	350	290	212	3	136	43	125	214	161	12	33	32.87
1-175-100	380	320	242	3	166	45	125	246	196	12	33	39.00
1-200-100	430	360	285	3	190	51	140	276	222	12	39	54.24
1-225-100	470	400	315	3	212	53	155	312	248	12	39	71.19
1-250-100	500	430	345	3	236	57	160	340	278	12	39	85.24
1-300-100	585	500	410	4	284	66	180	400	330	16	45	127.78
1-350-100	655	560	465	4	332	72	195	460	382	16	52	170.94
1-400-100	715	620	535	4	376	78	200	510	432	16	52	216.44

GOST 12821-80 PN160

STEEL PLAIN WELDED FLANGES

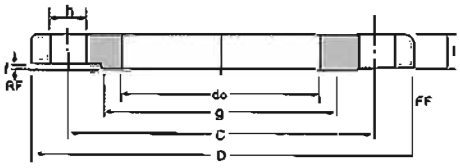


Nomencatlure	Dimensions, mm											Weight kg
	D	D_1	D_2	h	d_1	b	h_4	D_m	D_n	n, Number of holes	d	
P_{nom}=16MPa (160kgf/cm²)												
1-15-160	105	75	47	2	12	18	50	38	19	4	14	1.27
1-20-160	125	90	58	2	18	20	56	48	26	4	18	1.98
1-25-160	135	100	68	2	25	22	56	52	33	4	18	2.48
1-32-160	150	110	78	2	31	22	65	64	39	4	22	3.07
1-40-160	165	125	88	3	37	25	72	76	46	4	22	4.01
1-50-160	195	145	102	3	45	27	75	86	58	4	26	6.43
1-65-160	220	170	122	3	62	31	85	110	77	8	26	9.38
1-80-160	230	180	133	3	75	33	90	124	90	8	26	10.40
1-100-160	265	210	158	3	92	37	100	146	110	8	30	15.40
1-125-160	310	250	184	3	112	41	115	180	135	8	33	24.87
1-150-160	350	290	212	3	136	47	130	214	161	12	33	35.04
1-175-160	380	320	242	3	166	51	135	246	196	12	33	43.10
1-200-160	430	360	285	3	190	57	145	276	222	12	39	60.10
1-225-160	470	400	315	3	212	60	160	312	248	12	39	78.80
1-250-160	500	430	345	3	236	65	165	340	278	12	39	94.40
1-300-160	585	500	410	4	284	74	185	400	330	16	45	141.00

河北海浩

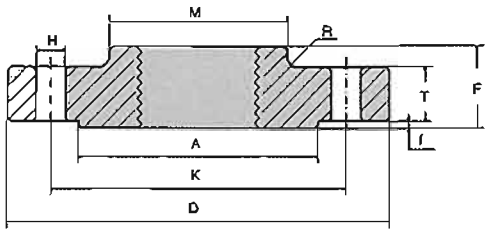
南非标
法兰参数系列

SABS 1123-1600/3



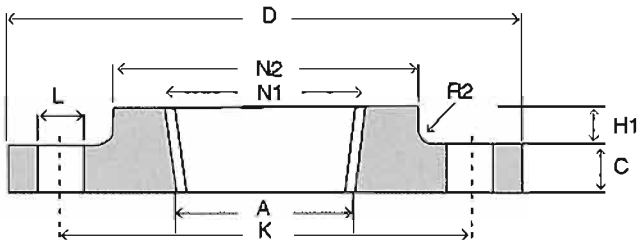
Nominal Pipe Size	Outside Diam	Pipe	BORE	Thickness	Bolt circle diam	Raise Face		Diam of Bolt	Number of holes	Weight / kg	
1600/3	D	OD	do	t	C	g	f	H	N	Slip on	Blind
15MM	95	21.3	22	10	65	45	2	14	4	0.48	0.51
20MM	105	26.9	27.6	10	75	58	2	14	4	0.58	0.63
25MM	115	33.7	34.4	10	85	68	2	14	4	0.69	0.77
32MM	140	42.4	43.1	10	100	78	2	18	4	1.01	1.13
40MM	150	48.3	49	10	110	88	3	18	4	1.16	1.31
50MM	165	60.3	61.1	12	125	102	3	18	4	1.64	1.92
65MM	185	76.1	77.1	12	145	122	3	18	4	1.99	2.44
80MM	200	88.9	90.3	14	160	138	3	18	8	2.52	3.23
100MM	220	114.3	115.9	14	180	158	3	18	8	2.8	3.96
125MM	250	139.7	141.6	16	210	188	3	18	8	3.96	5.91
150MM	285	168.3	170.5	18	240	212	3	22	8	5.47	8.59
200MM	340	219.1	221.8	22	295	268	3	22	12	8.29	14.9
250MM	405	273	276.2	25	355	320	3	26	12	12.4	24.05
300MM	460	323.9	327.6	28	410	378	4	26	12	16.82	35.15
350MM	520	355.6	359.7	30	470	438	4	26	16	24.37	48.05
400MM	580	406.4	411	35	525	490	4	26	16	34.42	70.31
450MM	640	457	462.5	40	585	550	4	26	20	45.83	97.75
500MM	715	508	513.6	40	650	610	4	33	20	56.69	120.8
600MM	840	610	616.5	50	770	725	5	33	20	95.19	210.96

SABS 1123-1600/4



压力	通径	外径	中心距	孔径	孔数	内径	盘厚	总高	突台径	R	台径	台高	RF 单重	FF 单重
PN	DN	D	K	H	---	BSP	T	F	M	R	A	f	KG	KG
Nominal pressure 1600/4kPa	10	90	60	14	4	15.00	8	14	30	4	40	2	0.38	0.45
	15	95	65	14	4	17.00	8	14	35	4	45	2	0.44	0.51
	20	105	75	14	4	22.50	8	16	45	4	58	2	0.57	0.66
	25	115	85	14	4	29.00	8	16	52	4	68	2	0.69	0.78
	32	140	100	18	4	37.50	10	20	60	6	78	2	1.21	1.36
	40	150	110	18	4	43.50	10	20	70	6	88	3	1.43	1.68
	50	165	125	18	4	55.00	12	22	85	6	102	3	2.01	2.30
	65	185	145	18	4	71.00	12	26	105	6	122	3	2.65	2.99
	80	200	160	18	8	83.50	14	28	118	8	138	3	3.32	3.66
	100	220	180	18	8	108.50	14	34	140	8	158	3	4.01	4.39
	*125	250	210	18	8	134.00	16	38	168	8	188	3	5.67	6.12
	150	285	240	22	8	159.50	18	40	195	10	212	3	7.60	8.20

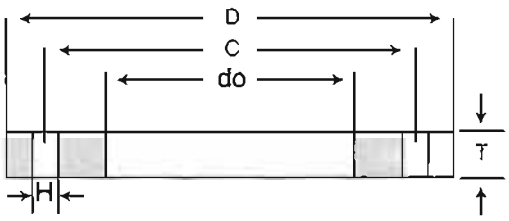
BS 10 TABLE D SCREWED



N.B Size		外径	中心距	孔径	内径	板厚	大内径	颈外径	颈高		孔数	单重
		D	K	L	A	C	N1	N2	H1	R2	No. Holes	Unit Weight
Ins	mm	mm	mm	mm	mm	mm	mm	mm	mm			KG
1/2 "	15	95.3	66.8	14.5	18.7	4.8	19.7	33.3	9.5	1.6	4	0.28
3/4 "	20	101.6	73.2	14.5	24.3	4.8	25.3	38.1	11.1	1.6	4	0.32
1 "	25	114.3	82.6	14.5	30.5	4.8	31.7	47.6	11.1	1.6	4	0.43
1¼ "	32	120.7	87.4	14.5	39	6.4	40.4	55.6	11.1	1.6	4	0.59
1½ "	40	133.4	98.6	14.5	44.9	6.4	46.3	61.9	12.7	1.6	4	0.73
2 "	50	152.4	114.3	17.5	56.7	7.9	58	74.6	12.7	1.6	4	1.1
2½ "	65	165.1	127	17.5	72.2	7.9	73.7	90.5	15.9	1.6	4	1.31
3 "	80	184.2	146.1	17.5	85	9.7	86.5	106.4	15.9	1.6	4	1.93
4 "	100	215.9	177.8	17.5	110.1	9.7	111.6	133.4	19.1	3.2	4	2.66
5 "	125	254	209.6	17.5	137	12.7	138.5	160.3	19.1	3.2	8	4.21
6 "	150	279.4	235	17.5	164.5	12.7	166	185.7	19.1	3.2	8	4.68
8 "	200	336.6	292.1	17.5	215.5	12.7	217	241.3	22.2	3.2	8	6.66
10 "	250	406.4	355.6	22.2	269.5	16	271	298.5	27	3.2	8	11.49
12 "	300	457.2	406.4	22.2	321	19.1	322.5	349.3	28.6	4.8	12	15.14

BS10 TABLE D

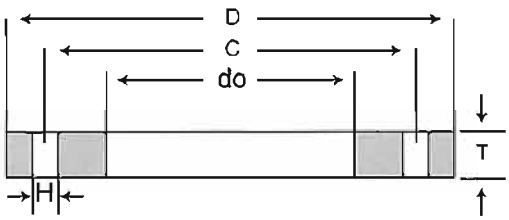
BS10:1962



Nominal Pipe Size	Outside Diam	BORE	Thickness	Bolt circle diam	Diam of Bolt	Number of holes	Weight / kg	
T/D	D	do	T	C	H	N	Slip on	Blind
15MM	95.3	22	4.8	66.7	14.3	4	0.23	0.25
20MM	101.6	27.6	4.8	73	14.3	4	0.26	0.29
25MM	114.3	34.4	4.8	82.6	14.3	4	0.33	0.37
32MM	120.7	43.1	6.4	87.3	14.3	4	0.46	0.55
40MM	133.4	49	6.4	98.4	14.3	4	0.56	0.68
50MM	152.4	61.1	7.9	114.3	17.5	4	0.89	1.08
65MM	165.1	77.1	7.9	127	17.5	4	0.97	1.28
80MM	184.2	90.3	9.5	146.1	17.5	4	1.43	1.93
100MM	215.9	115.9	9.5	177.8	17.5	4	1.87	2.67
125MM	254	141.6	12.7	209.6	17.5	8	3.31	4.90
150MM	279.4	170.5	12.7	235	17.5	8	3.72	5.96
200MM	336.6	221.8	12.7	292.1	17.5	8	4.87	8.72
250MM	406.4	276.2	15.9	355.6	22.2	8	8.41	15.92
300MM	457.2	327.6	19.1	406.4	22.2	12	11.37	24.12
350MM	527.1	359.7	22.2	469.9	25.4	12	19.47	37.24
400MM	577.9	411.0	22.2	520.7	25.4	12	21.92	44.93
450MM	641.4	462.5	25.4	584.2	25.4	12	30.29	63.54
500MM	704.9	513.6	28.6	641.4	25.4	16	40.03	86.29
600MM	825.5	616.5	31.8	755.7	28.6	16	57.5	131.68

BS10 TABLE E

BS10:1962



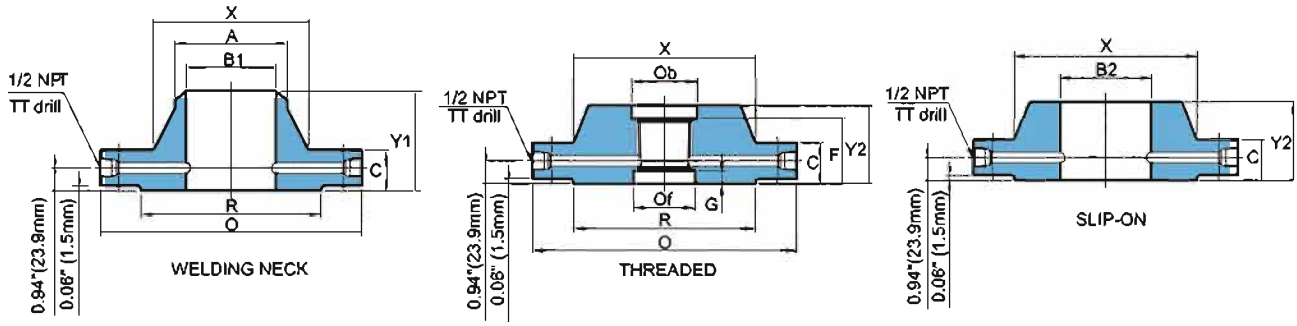
Nominal Pipe Size	Outside Diam	BORE	Thickness	Bolt circle diam	Diam of Bolt	Number of holes	Weight / kg	
T/E	D	do	T	C	H	N	Slip on	Blind
15MM	95.3	22	6.4	66.7	14.3	4	0.3	0.33
20MM	101.6	27.6	6.4	73.0	14.3	4	0.34	0.38
25MM	114.3	34.4	7.1	82.6	14.3	4	0.48	0.54
32MM	120.7	43.1	7.9	87.3	14.3	4	0.58	0.68
40MM	133.4	49	8.7	98.4	14.3	4	0.78	0.92
50MM	152.4	61.1	9.5	114.3	17.5	4	1.07	1.30
65MM	165.1	77.1	10.3	127.0	17.5	4	1.27	1.67
80MM	184.2	90.3	11.1	146.1	17.5	4	1.67	2.25
100MM	215.9	115.9	12.7	177.8	17.5	8	2.47	3.49
125MM	254	141.6	14.3	209.6	17.5	8	3.73	5.51
150MM	279.4	170.5	17.5	235	22.2	8	4.96	8.12
200MM	336.6	221.8	19.1	292.1	22.2	8	7.11	13.01
250MM	406.4	276.2	22.2	355.6	22.2	12	11.47	22.03
300MM	457.2	327.6	25.4	406.4	25.4	12	14.91	31.83
350MM	527.1	359.7	28.6	469.9	25.4	12	25.09	47.98
400MM	577.9	411.0	31.8	520.7	25.4	12	31.4	64.36
450MM	641.4	462.5	34.9	584.2	25.4	16	41.06	86.88
500MM	704.9	513.6	38.1	641.4	25.4	16	53.32	114.95
600MM	825.5	616.5	47.6	755.7	31.8	16	85.16	196.3

河北海浩

孔板
法兰参数系列

CLASS300 ORIFICE FLANGES

ANSI B16.36

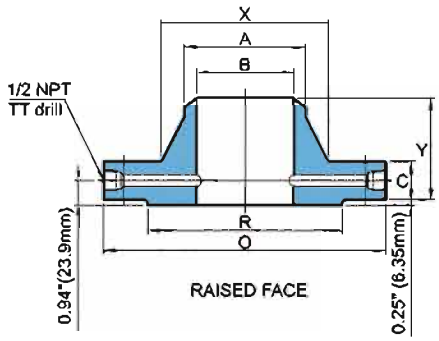


Unit : mm

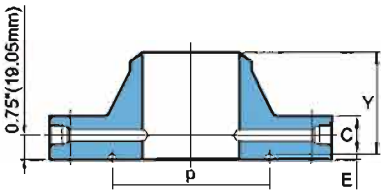
Nominal Pipe Size	O. D. of Rasied Face	O.D. of Flange	Thick-ness of Flange, Min.	Length Through Hub		Diam. of Hub	Hub Diam. Beginn-ing of Chamfer (W.N)	Diam. of Counterbore		Counterbore Depth(From Face)		Bore		Diam. of Press-ure Connec-tion (inch)	Drilling Template				Bolt Lenght	
				Slip-On and Thre-aded	Weld Neck			Back	Face			Slip-On	Weld Neck		Bolt Circle	Number of Holes	Diam. of Holes	Diam. of Bolts (inch)	Mach-ine Bolts	Stud Bolts
	R	O	C	Y2	Y1	X	A	Ob	Of	F	G	B2	B1	TT						
1	50.8	124.0	38.1	47.8	82.6	53.8	33.5	35.8	33.0	36.6	19.1	34.5	To be specified by purchaser.	1/4	88.9	4	17.5	5/8	114.3	127.0
1 1/2	73.2	155.4	38.1	47.8	85.9	69.9	48.3	50.5	48.0	37.3	18.3	49.5		1/4	114.3	4	20.6	3/4	120.7	133.4
2	91.9	165.1	38.1	49.3	85.9	84.1	60.5	63.5	59.9	38.1	17.5	62.0		1/4	127.0	8	17.5	5/8	114.3	127.0
2 1/2	104.6	190.5	38.1	50.8	88.9	100.1	73.2	76.2	72.1	44.5	14.2	74.7		1/4	149.4	8	20.6	3/4	120.7	133.4
3	127.0	209.6	38.1	52.3	88.9	117.3	88.9	92.2	87.9	46.0	14.2	90.7		3/8	168.1	8	20.6	3/4	120.7	133.4
4	157.2	254.0	38.1	53.8	91.9	146.1	114.3	117.6	113.0	47.8	14.2	116.1		1/2	200.2	8	20.6	3/4	120.7	133.4
6	215.9	317.5	38.1	53.8	100.1	206.2	168.4	171.5	166.9	47.8	7.9	170.7		1/2	269.7	12	22.4	3/4	120.7	133.4
8	269.7	381.0	41.1	62.0	111.3	260.4	219.2	222.3	217.2	55.6	11.2	221.5		1/2	330.2	12	25.4	7/8	127.0	146.1
10	323.9	444.5	47.8	66.5	117.3	320.5	273.1	Threaded flanges are furnished in NPS 1-8 only.				276.4		1/2	387.4	16	28.4	1	146.1	165.1
12	381.0	520.7	50.8	73.2	130.0	374.7	323.9					327.2		1/2	450.9	16	31.8	1 1/8	158.8	177.8
14	412.8	584.2	53.8	76.2	142.7	425.5	355.6					359.2		1/2	514.4	20	31.8	1 1/8	165.1	184.2
16	469.9	647.7	57.2	82.6	146.1	482.6	406.4					410.5		1/2	571.5	20	35.1	1 1/4	177.8	196.9
18	533.4	711.2	60.5	88.9	158.8	533.4	457.2					461.8		1/2	628.7	24	35.1	1 1/4	184.2	203.2
20	584.2	774.7	63.5	95.3	162.1	587.2	508.0					513.1		1/2	685.8	24	35.1	1 1/4	190.5	215.9
24	692.2	914.4	69.9	106.4	168.1	701.5	609.6					616.0		1/2	812.8	24	41.1	1 1/2	209.6	241 3

CLASS400 ORIFICE FLANGES

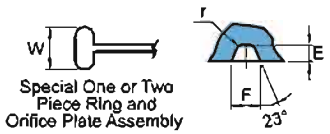
ANSI B16.36



RAISED FACE



RING TYPE JOINT



Special One or Two Piece Ring and Orifice Plate Assembly

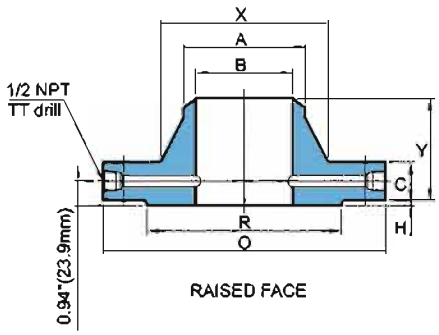
Groove Detail

Unit : mm

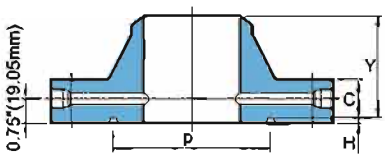
Nominal Pipe Size	O. D. of Rasied Face	O.D. of Flange	Thick-ness of Flange, Min.	Length Thro-ugh Hub	Ring Type Joint						Diam. of Hub	Hub Diam. Beginn-ing of Cham-fer	Bore	Diam. of Press-ure Connec-tion (inch)	Drilling Template				Lenght of Stud Bolts	
					Groove Number	Pitch Diam.	Groove Depth	Groove Width	Radius at Bottom	Special Oval Ring Height					Bolt Circle	Number of Holes	Diam. of Holes	Diam. of Bolts (inch)	Raised Face	Ring Joint
	R	O	C	Y		P	E	F	r max.	W	X	A	B	TT						
1	50.8	124.0	36.6	81.0	R16	50.8	6.4	8.7	0.8	25.4	53.8	33.5	To be specified by purchaser	1/4	88.9	4	17.5	5/8	127.0	139.7
1 1/2	73.2	155.4	36.6	84.3	R20	68.3	6.4	8.7	0.8	25.4	69.9	48.3		1/4	114.3	4	20.6	3/4	133.4	139.7
2	91.9	165.1	36.6	84.3	R23	82.6	7.9	11.9	0.8	26.9	84.1	60.5		1/4	127.0	8	17.5	5/8	127.0	139.7
2 1/2	104.6	190.5	36.6	87.4	R26	101.6	7.9	11.9	0.8	26.9	100.1	73.2		1/4	149.4	8	20.6	3/4	133.4	146.1
3	127 0	209.6	36.6	87 4	R31	123.8	7.9	11.9	0 8	26 9	117.3	88.9		3/8	168.1	8	20.6	3/4	133.4	146.1
4	157.2	254.0	38.1	88.9	R37	149.2	7.9	11.9	0.8	26.9	146.1	114.3		1/2	200.2	8	25.4	7/8	139.7	152.4
6	215.9	317.5	41.1	103.1	R45	211.1	7.9	11.9	0.8	26.9	206.2	168.4		1/2	269.7	12	25.4	7/8	158.8	165.1
8	269.7	381.0	47.8	117.3	R49	269.9	7.9	11.9	0.8	26.9	260.4	219.2		1/2	330.2	12	28.4	1	171.5	184.2
10	323.9	444.5	53.8	124.0	R53	323.9	7.9	11.9	0.8	26.9	320.5	273.1		1/2	387.4	16	31.8	1 1/8	190.5	203.2
12	381.0	520.7	57.2	136.7	R57	381.0	7.9	11.9	0.8	26.9	374.7	323.9		1/2	450.9	16	35.1	1 1/4	203.2	215.9
14	412.8	584.2	60.7	149.4	R61	419.1	7.9	11.9	0.8	26.9	425.5	355.6		1/2	514.4	20	35.1	1 1/4	209.6	228.6
16	469.9	647.7	63.5	152.4	R65	469.9	7.9	11.9	0.8	30.2	482.6	406.4		1/2	571.5	20	38.1	1 3/8	222.3	235.0
18	533.4	711.2	66.5	165.1	R69	533.4	7.9	11.9	0.8	30.2	533 4	457.2		1/2	628.7	24	38.1	1 3/8	235.0	241.3
20	584.2	774.7	69.9	168.1	R73	584.2	9.5	13.5	1.5	31.8	587.2	508.0		1/2	685.8	24	41.1	1 1/2	247.7	260.4
24	692.2	914.4	76.2	174.8	R77	692.2	23.8	16.7	1 5	36.6	701.5	609.6		1/2	812.8	24	47.8	1 3/4	279.4	292.1

CLASS600 ORIFICE FLANGES

ANSI B16.36

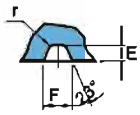


RAISED FACE



RING TYPE JOINT

Special One or Two Piece Ring and Orifice Plate Assembly



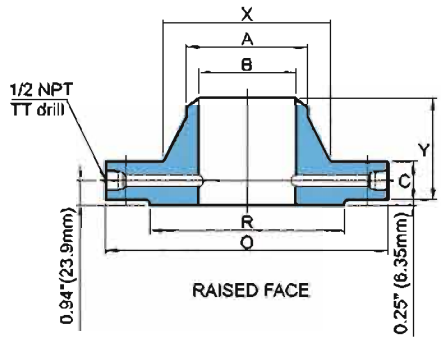
Groove Detail

Unit : mm

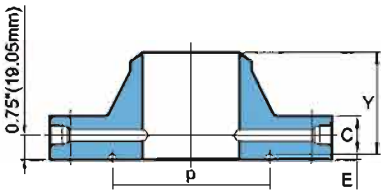
Nominal Pipe Size	O.D. of Rasied Face	O.D. of Flange	Thick-ness of Flange, Min.	Length Thro-ugh Hub	Height of Raised Face	Ring Type Joint						Diam. of Hub	Hub Diam. Beginn-ing of Cham-fer	Bore	Diam. of Press-ure Connec-tion (inch)	Drilling Template					Lenght of Stud Bolts	
						Groove Number	Pitch Diam.	Groove Depth	Groove Width	Radius at Bottom	Special Oval Ring Height					Bolt Circle	Number of Holes	Diam. of Holes		Diam. of Bolts (inch)	Raised Face	Ring Joint
																		Raised Face	Ring Joint			
	R	O	C	Y	H		P	E	F	r max.	W	X	A	B	TT							
1	50.8	124.0	36.6	81.0	1.5	R16	50.8	6.4	8.7	0.8	25.4	53.8	33.5	To be specified by purchaser	1/4	88.9	4	17.5	19.1	5/8	127.0	139.7
1 1/2	73.2	155.4	36.6	84.3	1.5	R20	68.3	6.4	8.7	0.8	25.4	69.9	48.3		1/4	114.3	4	20.6	22.4	3/4	133.4	139.7
2	91.9	165.1	36.6	84.3	1.5	R23	82.6	7.9	11.9	0.8	26.9	84.1	60.5		1/4	127.0	8	17.5	19.1	5/8	127.0	139.7
2 1/2	104.6	190.5	36.6	87.4	1.5	R26	101.6	7.9	11.9	0.8	26.9	100.1	73.2		1/4	149.4	8	20.6	22.4	3/4	133.4	146.1
3	127.0	209.6	36.6	87.4	1.5	R31	123.8	7.9	11.9	0.8	26.9	117.3	88.9		3/8	168.1	8	20.6	22.4	3/4	133.4	146.1
4	157.2	273.1	38.1	101.6	6.4	R37	149.2	7.9	11.9	0.8	26.9	152.4	114.3		1/2	215.9	8	25.4	25.4	7/8	152.4	165.1
6	215.9	355.6	47.8	117.3	6.4	R45	211.1	7.9	11.9	0.8	26.9	222.3	168.4		1/2	292.1	12	28.4	28.4	1	177.8	190.5
8	269.7	419.1	55.6	133.4	6.4	R49	269.9	7.9	11.9	0.8	26.9	273.1	219.2		1/2	349.3	12	31.8	31.8	1 1/8	196.9	209.6
10	323.9	508.0	63.5	152.4	6.4	R53	323.9	7.9	11.9	0.8	26.9	342.9	273.1		1/2	431.8	16	35.1	35.1	1 1/4	222.3	235.0
12	381.0	558.8	66.5	155.4	6.4	R57	381.0	7.9	11.9	0.8	26.9	400.1	323.9		1/2	489.0	20	35.1	35.1	1 1/4	228.6	241.3
14	412.8	603.3	69.9	165.1	6.4	R61	419.1	7.9	11.9	0.8	26.9	431.8	355.6		1/2	527.1	20	38.1	38.1	1 3/8	241.3	254.0
16	469.9	685.8	76.2	177.8	6.4	R65	469.9	7.9	11.9	0.8	30.2	495.3	406.4		1/2	603.3	20	41.1	41.1	1 1/2	260.4	273.1
18	533.4	743.0	82.6	184.2	6.4	R69	533.4	7.9	11.9	0.8	30.2	546.1	457.2		1/2	654.1	20	44.5	44.5	1 5/8	279.4	292.1
20	584.2	812.8	88.9	190.5	6.4	R73	584.2	9.5	13.5	1.5	31.8	609.6	508.0		1/2	723.9	24	44.5	44.5	1 5/8	298.5	317.5
24	692.2	939.8	101.6	203.2	6.4	R77	692.2	11.1	16.7	1.5	36.6	717.6	609.6		1/2	838.2	24	50.8	50.8	1 7/8	336.6	349.3

CLASS900 ORIFICE FLANGES

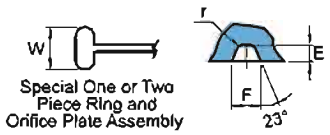
ANSI B16.36



RAISED FACE



RING TYPE JOINT



Special One or Two Piece Ring and Orifice Plate Assembly

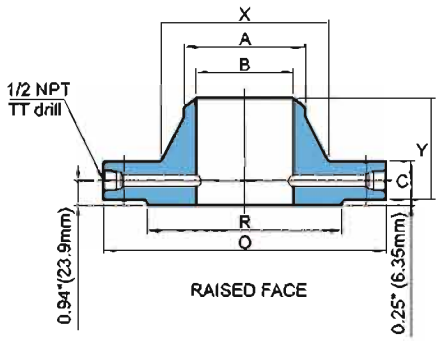
Groove Detail

Unit : mm

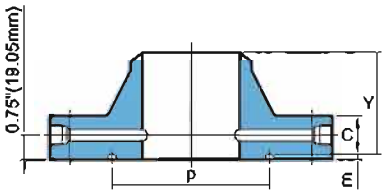
Nominal Pipe Size	O. D. of Rasied Face	O.D. of Flange	Thick-ness of Flange, Min.	Length Thro-ugh Hub	Ring Type Joint						Diam. of Hub	Hub Diam. Beginn-ing of Cham-fer	Bore	Diam. of Press-ure Connec-tion (inch)	Drilling Template				Lenght of Stud Bolts	
					Groove Number	Pitch Diam.	Groove Depth	Groove Width	Radius at Bottom	Special Oval Ring Height					Bolt Circle	Number of Holes	Diam. of Holes	Diam. of Bolts (inch)	Raised Face	Ring Joint
	R	O	C	Y		P	E	F	r max.	W	X	A	B	TT						
1	50.8	149.4	38.1	82.6	R16	50.8	6.4	8.7	0.8	25.4	52.3	33.5	To be specified by purchaser	1/4	101.6	4	25.4	7/8	152.4	158.8
1 1/2	73.2	177.8	38.1	88.9	R20	68.3	6.4	8.7	0.8	25.4	69.9	48.3		1/4	124.0	4	28.4	1	158.8	165.1
2	91.9	215.9	38.1	101 6	R24	95.3	7.9	11.9	0.8	26.9	104 6	60.5		1/4	165.1	8	25.4	7/8	152.4	165.1
2 1/2	104.6	244.3	41.1	104.6	R27	108.0	7.9	11.9	0.8	26.9	124.0	73.2		1/4	190.5	8	28.4	1	165.1	177.8
3	127 0	241.3	38.1	101.6	R31	123.8	7.9	11.9	0 8	26 9	127 0	88.9		3/8	190.5	8	25.4	7/8	152.4	165.1
4	157.2	292.1	44.5	114.3	R37	149.2	7.9	11.9	0.8	26.9	158.8	114.3		1/2	235.0	8	31.8	1 1/8	177.8	190.5
6	215.9	381.0	55.6	139.7	R45	211.1	7.9	11.9	0.8	26.9	235.0	168.4		1/2	317.5	12	31.8	1 1/8	196.9	209.6
8	269.7	469.9	63.5	162.1	R49	269.9	7.9	11.9	0.8	26.9	298.5	219.2		1/2	393.7	12	38.1	1 3/8	228.6	241.3
10	323.9	546.1	69.9	184.2	R53	323.9	7.9	11.9	0.8	26.9	368.3	273.1		1/2	469.9	16	38.1	1 3/8	241.3	254.0
12	381.0	609.6	79.2	200.2	R57	381.0	7.9	11.9	0.8	26.9	419.1	323.9		1/2	533.4	20	38.1	1 3/8	260.4	273.1
14	412.8	641.4	85.9	212.9	R62	419.1	11.1	16.7	1.5	33.3	450.9	355.6		1/2	558.8	20	41.1	1 1/2	279.4	292.1
16	469.9	704.9	88.9	215.9	R66	469.9	11.1	16.7	1.5	36.6	508.0	406.4		1/2	616.0	20	44.5	1 5/8	292.1	304.8
18	533.4	787.4	101.6	228.6	R70	533.4	12.7	19.8	1 5	39 6	565.2	457.2		1/2	685.8	20	50 8	1 7/8	330.2	349.3
20	584.2	857.3	108.0	247.7	R74	584.2	12.7	19.8	1.5	39.6	622.3	508.0		1/2	749.3	20	53.8	2	355.6	374.7
24	692.2	1041 4	139.7	292.1	R78	692.2	15.9	27.0	2.3	47 8	749.3	609.6		1/2	901.7	20	66.5	2 1/2	444.5	469.9

CLASS1500 ORIFICE FLANGES

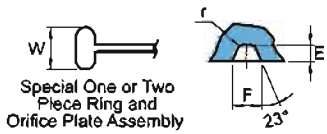
ANSI B16.36



RAISED FACE



RING TYPE JOINT



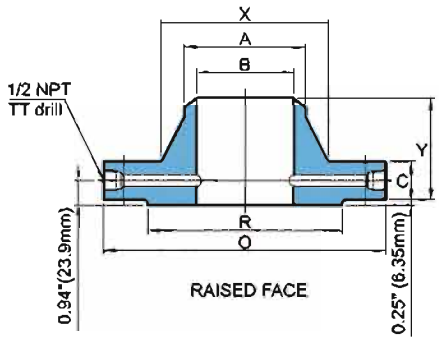
Groove Detail

Unit : mm

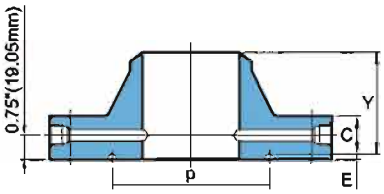
Nominal Pipe Size	O. D. of Rasied Face	O.D. of Flange	Thick-ness of Flange, Min.	Length Thro-ugh Hub	Ring Type Joint						Diam. of Hub	Hub Diam. Beginn-ing of Cham-fer	Bore	Diam. of Press-ure Connec-tion (inch)	Drilling Template				Lenght of Stud Bolts	
					Groove Number	Pitch Diam.	Groove Depth	Groove Width	Radius at Bottom	Special Oval Ring Height					Bolt Circle	Number of Holes	Diam. of Holes	Diam. of Bolts (inch)	Raised Face	Ring Joint
	R	O	C	Y		P	E	F	r max.	W	X	A	B	TT						
1	50.8	149.4	38.1	82.6	R16	50.8	6.4	8.7	0.8	25.4	52.3	33.5	To be specified by purchaser.	1/4	101.6	4	25.4	7/8	152.4	158.8
1 1/2	73.2	177.8	38.1	88.9	R20	68.3	6.4	8.7	0.8	25.4	69.9	48.3		1/4	124.0	4	28.4	1	158.8	165.1
2	91.9	215.9	38.1	101.6	R24	95.3	7.9	11.9	0.8	26.9	104.6	60.5		1/4	165.1	8	25.4	7/8	152.4	165.1
2 1/2	104.6	244.3	41.1	104.6	R27	108.0	7.9	11.9	0.8	26.9	124.0	73.2		1/4	190.5	8	28.4	1	165.1	177.8
3	127.0	266.7	47.8	117.3	R35	136.5	7.9	11.9	0.8	26.9	133.4	88.9		3/8	203.2	8	31.8	1 1/8	184.2	184.2
4	157.2	311.2	53.8	124.0	R39	161.9	7.9	11.9	0.8	26.9	162.1	114.3		1/2	241.3	8	35.1	1 1/4	203.2	215.9
6	215.9	393.7	82.6	171.5	R46	211.1	9.5	13.5	1.5	28.4	228.6	168.4		1/2	317.5	12	38.1	1 3/8	266.7	279.4
8	269.7	482.6	91.9	212.9	R50	269.9	11.1	16.7	1.5	33.3	292.1	219.2		1/2	393.7	12	44.5	1 5/8	298.5	311.2
10	323.9	584.2	108.0	254.0	R54	323.9	11.1	16.7	1.5	33.3	368.3	273.1		1/2	482.6	12	50.8	1 7/8	342.9	355.6
12	381.0	673.1	124.0	282.4	R58	381.0	14.3	20.5	1.5	39.6	450.9	323.9		1/2	571.5	16	53.8	2	381.0	400.1
14	412.8	749.3	133.4	298.5	R63	419.1	15.9	27.0	2.3	44.5	495.3	355.6		1/2	635.0	16	60.5	2 1/4	412.8	445.0
16	469.9	825.5	146.1	311.2	R67	469.9	17.5	30.1	2.3	50.8	552.5	406.4		1/2	704.9	16	66.5	2 1/2	450.9	482.6
18	533.4	914.4	162.1	327.2	R71	533.4	17.5	30.2	2.3	50.8	596.9	457.2		1/2	774.7	16	73.2	2 3/4	501.7	533.4
20	584.2	984.3	177.8	355.6	R75	584.2	17.5	33.3	2.3	53.8	641.4	508.0		1/2	831.9	16	79.2	3	546.1	571.5
24	692.2	1168.4	203.2	406.4	R79	692.2	20.6	36.5	2.3	58.7	762.0	609.6		1/2	990.6	16	91.9	3 1/2	622.3	660.4

CLASS2500 ORIFICE FLANGES

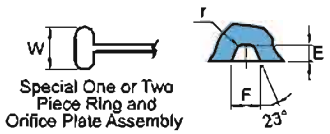
ANSI B16.36



RAISED FACE



RING TYPE JOINT



Special One or Two Piece Ring and Orifice Plate Assembly

Groove Detail

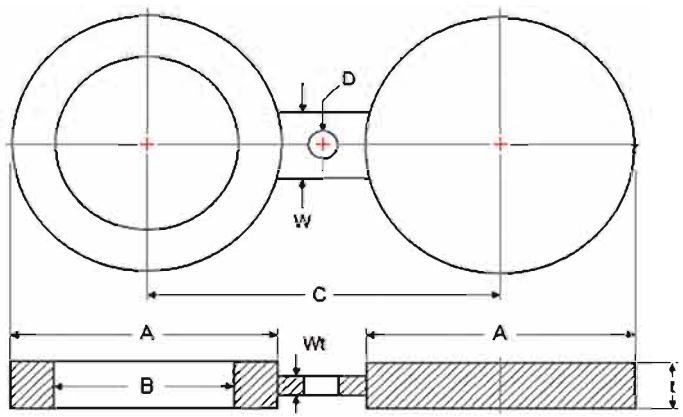
Unit : mm

Nominal Pipe Size	O. D. of Rasied Face	O.D. of Flange	Thick-ness of Flange, Min.	Length Thro-ugh Hub	Ring Type Joint						Diam. of Hub	Hub Diam. Beginn-ing of Cham-fer	Bore	Diam. of Press-ure Connec-tion (inch)	Drilling Template				Lenght of Stud Bolts	
					Groove Number	Pitch Diam.	Groove Depth	Groove Width	Radius at Bottom	Special Oval Ring Height					Bolt Circle	Number of Holes	Diam. of Holes	Diam. of Bolts (inch)	Raised Face	Ring Joint
	R	O	C	Y		P	E	F	r max.	W	X	A	B	TT						
1	50.8	158.8	38.1	91 9	R18	60.3	6.4	8.7	0.8	25 4	57.2	33.5	To be specified by purchaser.	1/4	108.0	4	25.4	7/8	152.4	158.8
1 1/2	73.2	203.2	44.5	111.3	R23	82.6	7.9	11.9	0.8	26.9	79.2	48.3		1/4	146.1	4	31.8	1 1/8	177.8	190.5
2	91.9	235.0	50.8	127.0	R26	101.6	7.9	11.9	0.8	26.9	95.3	60.5		1/4	171.5	8	28.4	1	184.2	196.9
2 1/2	104.6	266.7	57.2	142.7	R28	111.1	9.5	13.5	1.5	30.2	114.3	73.2		1/4	196.9	8	31.8	1 1/8	203.2	215.9
3	127 0	304.8	66.5	168.1	R32	127.0	9.5	13.5	1 5	30.2	133 4	88.9		3/8	228.6	8	35.1	1 1/4	228.6	241.3
4	157.2	355.6	76.2	190.5	R38	157.2	11.1	16.7	1.5	33.3	165.1	114.3		1/2	273.1	8	41.1	1 1/2	260.4	273.1
6	215.9	482.6	108.0	273.1	R47	228.6	12.7	19.8	1.5	36.6	235.0	168.4		1/2	368.3	8	53.8	2	349.3	368.3
8	269.7	552.5	127.0	317.5	R51	279.4	14.3	23.0	1.5	39.6	304.8	219.2		1/2	438.2	12	53.8	2	387.4	406.4
10	323.9	673.1	165.1	419.1	R55	342.9	17.5	30.2	2.3	47.8	374.7	273.1		1/2	539.8	12	66.5	2 1/2	489.0	514.4
12	381.0	762.0	184.2	463.6	R60	406.4	17.5	33.3	2.3	50.8	441.5	323.9		1/2	619.3	12	73.2	2 3/4	539.8	571.5

河北海浩

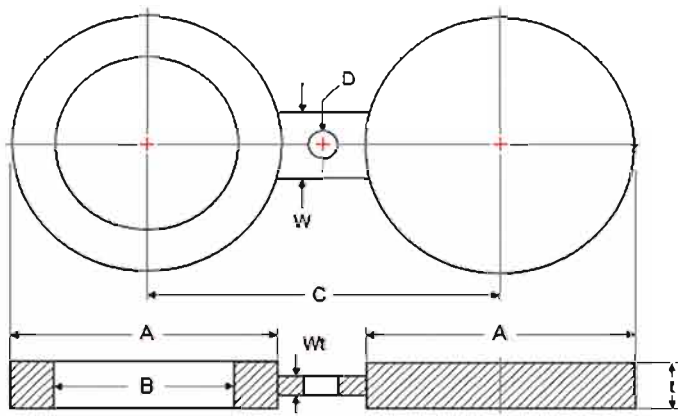
八字盲板
法兰参数系列

Dimensions Spectacle Blinds - ASME B16.48



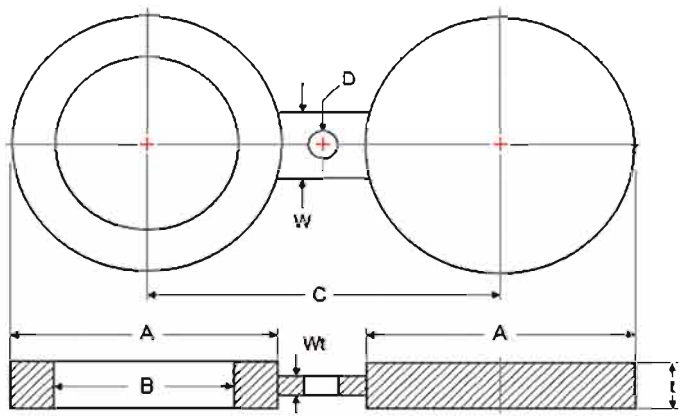
NPS	Class150					Class300				
	Outside Ø	Inside Ø	Center Line	THK	Web Width	Outside Ø	Inside Ø	Center Line	THK	Web Width
	A	B	C	t	W	A	B	C	t	W
1/2	45	16	60	3	38	51	16	65	6.4	38
3/4	54	21	70	3	38	64	21	80	6.4	38
1	64	27	80	3	38	70	27	90	6.4	38
1¼	73	42	90	6.4	38	79	42	100	6.4	38
1½	83	48	100	6.4	38	92	48	115	6.4	38
2	102	61	120	6.4	51	108	61	125	9.7	51
2½	107	73	140	6.4	51	127	73	150	9.7	51
3	133	89	150	6.4	64	146	89	170	9.7	64
3½	159	102	175	9.7	64	162	102	185	12.7	64
4	172	114	190	9.7	64	178	114	200	12.7	64
5	194	141	215	9.7	76	213	141	235	15.7	76
6	219	168	240	12.7	76	248	168	270	15.7	76
8	276	219	300	12.7	76	305	219	330	22.4	76
10	337	273	360	15.7	102	359	273	385	25.4	102
12	406	324	430	19.1	102	419	324	450	28.4	102
14	448	356	475	19.1	108	483	356	515	31.8	108
16	511	406	460	22.4	108	536	406	570	38.1	108
18	546	457	580	25.4	114	594	457	630	41.1	114
20	603	508	635	28.4	121	651	508	685	44.5	121
24	714	610	750	31.8	140	772	610	810	50.8	140
NPS	Outside Ø	Inside Ø	Center Line	THK	Web Width	Outside Ø	Inside Ø	Center Line	THK	Web Width
	A	B	C	t	W	A	B	C	t	W

Dimensions Spectacle Blinds - ASME B16.48



NPS	Class600					Class900				
	Outside Ø	Inside Ø	Center Line	THK	Web Width	Outside Ø	Inside Ø	Center Line	THK	Web Width
	A	B	C	t	W	A	B	C	t	W
1/2	51	16	65	6.4	38	60	16	80	6.4	38
3/4	64	21	80	6.4	38	67	21	90	6.4	41
1	70	27	90	6.4	57	76	27	100	6.4	57
1¼	79	37	100	9.7	57	86	37	110	9.7	57
1½	92	43	115	9.7	67	95	43	125	9.7	67
2	108	55	125	9.7	57	140	55	165	12.7	57
2½	127	67	150	12.7	67	162	67	190	12.7	67
3	146	83	170	12.7	67	165	83	190	15.7	67
4	191	108	215	15.7	76	203	108	235	19.1	76
5	238	135	265	19.1	86	244	135	280	22.4	86
6	264	162	290	22.4	86	286	162	320	25.4	86
8	318	212	350	28.4	95	356	212	395	35.1	95
10	397	265	430	35.1	105	432	265	470	41.1	105
12	454	315	490	41.1	105	495	315	535	47.8	105
14	489	346	525	44.5	114	518	346	560	53.8	114
16	562	397	605	50.8	124	572	397	615	60.5	124
18	610	448	655	53.8	133	635	448	685	66.5	133
20	679	497	725	63.5	133	696	497	750	73.2	133
24	787	597	840	73.2	152	835	597	900	88.9	152
NPS	Outside Ø	Inside Ø	Center Line	THK	Web Width	Outside Ø	Inside Ø	Center Line	THK	Web Width
	A	B	C	t	W	A	B	C	t	W

Dimensions Spectacle Blinds - ASME B16.48

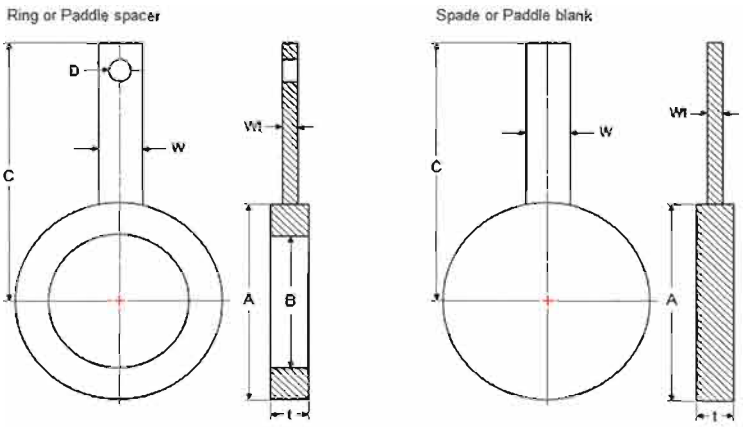


NPS	Class1500					Class2500				
	Outside Ø	Inside Ø	Center Line	THK	Web Width	Outside Ø	Inside Ø	Center Line	THK	Web Width
	A	B	C	t	W	A	B	C	t	W
1/2	61	16	80	6.4	38	67	16	90	9.7	38
3/4	67	21	90	9.7	41	73	21	95	9.7	41
1	76	27	100	9.7	64	83	27	110	9.7	64
1¼	86	35	110	9.7	64	102	35	130	12.7	64
1½	95	41	125	12.7	70	114	41	145	15.7	70
2	140	53	165	12.7	70	143	53	170	15.7	70
2½	162	63	190	15.7	76	165	63	195	19.1	76
3	172	78	205	19.1	76	194	78	230	22.4	76
4	206	102	240	22.4	89	232	102	275	28.4	89
5	251	128	290	28.4	89	276	128	325	35.1	89
6	279	154	320	35.1	89	314	154	370	41.1	89
8	349	203	395	41.1	102	384	198	440	53.8	102
10	432	255	480	50.8	114	473	248	540	66.5	114
12	518	303	570	60.5	114	546	289	620	79.2	114
14	575	333	635	66.5	127	-	-	-	-	-
16	638	381	705	76.2	133	-	-	-	-	-
18	702	429	775	85.9	146	-	-	-	-	-
20	752	478	830	95.3	152	-	-	-	-	-
24	899	575	990	111	178	-	-	-	-	-
NPS	Outside	Inside Ø	Center	THK	Web	Outside	Inside Ø	Center	THK	Web
	A	B	C	t	W	A	B	C	t	W

河北海浩

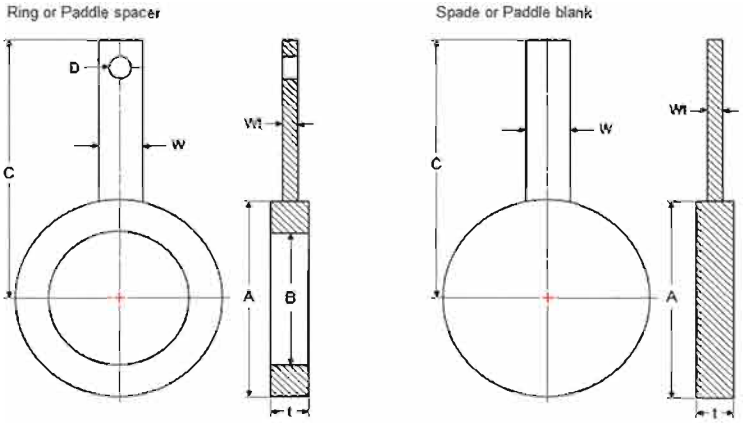
插板
法兰参数系列

Dimensions of Spades & Ring Spacers - ASME B16.48



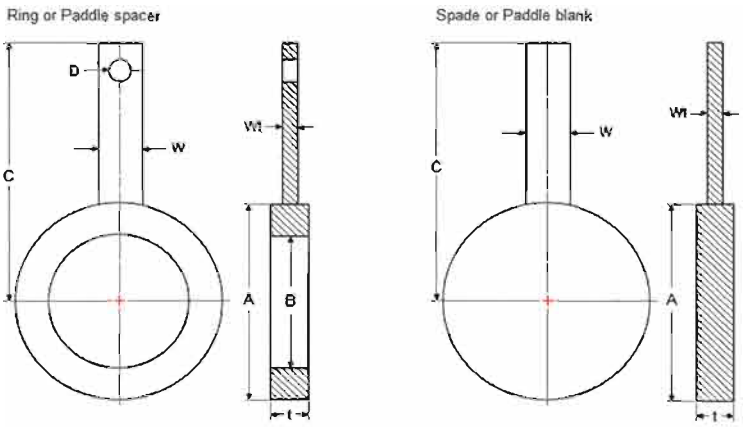
NPS	CLASS150					CLASS300				
	Outside Dia	Inside Dia	Center to End	THK	Handle Width	Outside Dia	Inside Dia	Center to End	THK	Handle Width
	A	B	C	t	W	A	B	C	t	W
1/2	45	16	126	3	32	51	16	129	6.4	32
3/4	54	21	131	3	32	64	21	136	6.4	32
1	64	27	136	3	32	70	27	139	6.4	32
1¼	73	42	145	6.4	32	79	42	150	6.4	32
1½	83	48	145	6.4	32	92	48	150	6.4	32
2	102	61	155	6.4	32	108	61	158	9.7	32
2½	107	73	170	6.4	32	127	73	177	9.7	32
3	133	89	170	6.4	32	146	89	177	9.7	32
3½	159	102	202	9.7	38	162	102	205	12.7	38
4	172	114	202	9.7	38	178	114	205	12.7	38
5	194	141	225	9.7	38	213	141	240	15.7	38
6	219	168	225	12.7	38	248	168	240	15.7	38
8	276	219	267	12.7	38	305	219	281	22.4	38
10	337	273	322	15.7	44	359	273	333	25.4	44
12	406	324	357	19.1	44	419	324	363	28.4	44
14	448	356	378	19.1	44	483	356	395	31.8	44
16	511	406	410	22.4	44	536	406	422	38.1	44
18	546	457	427	25.4	51	594	457	450	41.1	51
20	603	508	455	28.4	51	651	508	480	44.5	51
24	714	610	512	31.8	51	772	610	540	50.8	51
NPS	Outside Dia	Inside Dia	Center to End	THK	Handle Width	Outside Dia	Inside Dia	Center to End	THK	Handle Width
	A	B	C	t	W	A	B	C	t	W

Dimensions of Spades & Ring Spacers - ASME B16.48



NPS	CLASS600					CLASS900				
	Outside Dia	Inside Dia	Center to End	THK	Handle Width	Outside Dia	Inside Dia	Center to End	THK	Handle Width
	A	B	C	t	W	A	B	C	t	W
1/2	51	16	129	6.4	32	60	16	134	6.4	32
3/4	64	21	136	6.4	32	67	21	137	6.4	32
1	70	27	139	6.4	32	76	27	142	6.4	32
1¼	79	37	150	9.7	32	86	37	151	9.7	32
1½	92	43	150	9.7	32	95	43	151	9.7	32
2	108	55	158	9.7	32	140	55	174	12.7	32
2½	127	67	177	12.7	32	162	67	186	12.7	32
3	146	83	177	12.7	32	165	83	186	15.7	32
4	191	108	211	15.7	38	203	108	217	19.1	38
5	238	135	248	19.1	38	244	135	259	22.4	38
6	264	162	248	22.4	38	286	162	259	25.4	38
8	318	212	288	28.4	38	356	212	307	35.1	38
10	397	265	352	35.1	44	432	265	370	41.1	44
12	454	315	381	41.1	44	495	315	401	47.8	44
14	489	346	398	44.5	44	518	346	412	53.8	44
16	562	397	435	50.8	44	572	397	440	60.5	44
18	610	448	459	53.8	51	635	448	471	66.5	51
20	679	497	493	63.5	51	696	497	501	73.2	51
24	787	597	547	73.2	51	835	597	571	88.9	51
NPS	Outside	Inside	Center	THK	Handle	Outside	Inside	Center	THK	Handle
	A	B	C	t	W	A	B	C	t	W

Dimensions of Spades & Ring Spacers - ASME B16.48



NPS	CLASS1500					CLASS2500				
	Outside	Inside	Center	THK	Handle	Outside	Inside	Center	THK	Handle
	A	B	C	t	W	A	B	C	t	W
1/2	61	16	135	6.4	32	67	16	137	9.7	32
3/4	67	21	137	9.7	32	73	21	140	9.7	32
1	76	27	142	9.7	32	83	27	145	9.7	32
1¼	86	35	151	9.7	32	102	35	161	12.7	32
1½	95	41	151	12.7	32	114	41	161	15.7	32
2	140	53	174	12.7	32	143	53	175	15.7	32
2½	162	63	190	15.7	32	165	63	201	19.1	32
3	172	78	190	19.1	32	194	78	201	22.4	32
4	206	102	219	22.4	38	232	102	232	28.4	38
5	251	128	256	28.4	38	276	128	273	35.1	38
6	279	154	256	35.1	38	314	154	273	41.1	38
8	349	203	303	41.1	38	384	198	321	53.8	38
10	432	255	370	50.8	44	473	248	390	66.5	44
12	518	303	412	60.5	44	546	289	427	79.2	44
14	575	333	442	66.5	44	-	-	-	-	-
16	638	381	472	76.2	44	-	-	-	-	-
18	702	429	504	85.9	51	-	-	-	-	-
20	752	478	530	95.3	51	-	-	-	-	-
24	899	575	603	111.3	51	-	-	-	-	-
NPS	Outside	Inside	Center	THK	Handle	Outside	Inside	Center	THK	Handle
	A	B	C	t	W	A	B	C	t	W

COMPARSION FLANGE BORES OF WELDING NECK FLANGE FOR ANSI WITH JIS

Unit:mm

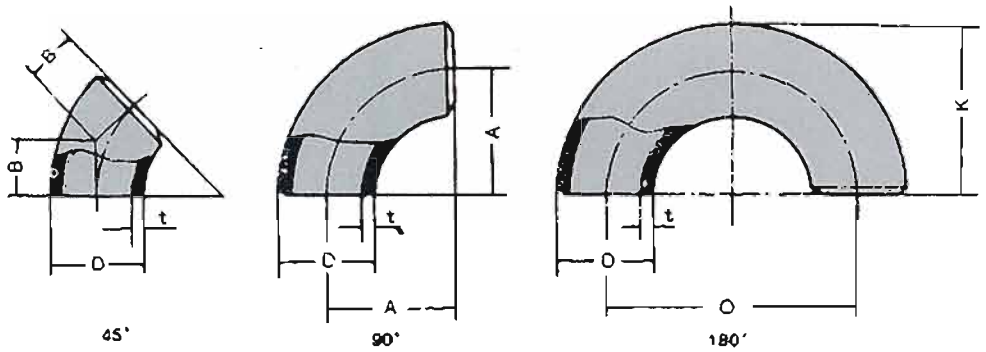
NOMINAL	O.D		SCH10		SCH20		SCH30		STD	SCH40		SCH60		XH	SCH80		SCH100		SCH120		SCH140		SCH160		XXH
PIPE SIZE	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	ANSI	JIS	ANSI	JIS	ANSI	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	JIS	ANSI	ANSI
1/2"	21.7	21.34	-	-	-	-	-	-	15.798	16.1	15.798	15.3	-	13.87	14.3	13.87	-	-	-	-	-	-	12.3	11.84	6.4
3/4"	27.2	26.67	-	-	-	-	-	-	20.929	21.4	20.929	20.4	-	18.85	19.4	18.85	-	-	-	-	-	-	16.2	15.60	11.02
1"	34.0	33.40	-	-	-	-	-	-	26.65	27.2	26.65	26.2	-	24.31	25.0	24.31	-	-	-	-	-	-	21.2	20.70	15.22
11/4"	42.7	42.16	-	-	-	-	-	-	35.05	35.5	35.05	33.7	-	32.46	32.9	32.46	-	-	-	-	-	-	29.9	29.47	22.76
11/2"	48.6	48.26	-	-	-	-	-	-	40.89	41.2	40.89	39.6	-	38.10	38.4	38.1	-	-	-	-	-	-	34.4	33.99	27.94
2"	60.5	60.33	-	-	54.1	-	-	-	52.5	52.7	52.50	50.7	-	49.25	49.5	49.25	-	-	-	-	-	-	43.1	42.90	38.18
21/2"	76.3	73.03	-	-	67.3	-	-	-	62.713	65.9	62.71	64.3	-	59.00	62.3	59.00	-	-	-	-	-	-	57.3	53.98	44.98
3"	89.1	88.90	-	-	80.1	-	-	-	77.93	78.1	77.93	75.9	-	73.66	73.9	73.66	-	-	-	-	-	-	66.9	66.65	58.42
31/2"	101.6	101.60	-	-	92.6	-	-	-	90.12	90.2	90.12	87.6	-	85.45	85.4	85.45	-	-	-	-	-	-	76.2	-	-
4"	114.3	114.30	-	-	104.5	-	-	-	102.26	102.3	102.26	100.1	-	97.18	97.1	96.18	-	-	92.1	92.05	-	-	87.3	87.33	80.06
5"	139.8	141.30	-	-	129.6	-	-	-	128.19	126.6	128.19	123.6	-	122.25	120.8	122.25	-	-	114.4	115.90	-	-	108.0	109.55	103.20
6"	165.2	168.28	-	-	154.2	-	-	-	154	151	154.0	146.6	-	146.33	143.2	146.33	-	-	136.6	139.73	-	-	128.8	131.8	124.38
8"	216.3	219.08	-	-	203.5	206.38	202.3	205.0	202.72	199.9	202.72	195.7	198.45	193.68	190.9	193.68	186.1	188.95	179.9	182.60	175.1	177.83	170.3	173.05	174.63
10"	267.4	273.05	-	-	254.5	260.35	251.7	257.45	254.51	248.7	254.51	242.0	247.65	247.65	237.2	242.93	230.9	236.58	224.5	230.23	216.5	222.25	210.2	215.90	-
12"	318.5	323.85	-	-	305.7	311.15	301.7	307.09	304.8	297.9	303.23	289.9	295.30	298.45	283.7	288.95	275.7	281.03	267.7	273.05	261.3	266.7	251.9	257.20	-
14"	355.6	355.60	342.8	342.9	339.8	339.70	336.6	336.55	336.55	333	333.35	325.4	325.48	330.2	317.6	317.50	308.0	308.0	300.0	300.08	292.0	292.1	284.2	284.18	-
16"	406.4	406.40	393.6	393.7	390.8	390.53	387.4	387.35	387.35	381.0	381.0	373.4	373.07	381.0	363.6	363.58	353.0	354.03	344.6	344.53	333.4	333.35	325.4	325.48	-
18"	457.2	457.20	444.4	444.5	441.4	441.33	435.0	434.95	438.15	428.6	428.65	419.2	419.1	431.8	409.6	409.6	398.4	398.4	387.4	387.35	377.8	377.85	366.8	366.73	-
20"	508.0	508.0	495.2	495.3	489.0	489.95	482.6	482.60	488.95	477.8	477.88	466.8	466.75	462.6	455.6	455.63	443.0	442.93	431.8	431.80	419.2	419.10	408.0	408.03	-
24"	-	609.6	-	-	-	590.55	-	581.05	590.55	-	574.8	-	560.43	584.2	-	547.73	-	531.83	-	517.55	-	504.85	-	490.58	-
30"	-	762.0	-	-	-	736.6	-	730.25	742.95	-	-	-	-	736.6	-	-	-	-	-	-	-	-	-	-	-

河北海浩

美标
管件参数系列

弯头 长半径

Elbows Long Radius ASME/ANSI B16.9



Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
1/2	0.840	21.3	A=38.1 B=15.7 O=76.2 K=47.8
3/4	1.050	26.7	A=38.1 B=19.1 O=76.2 K=50.8
1	1.315	33.4	A=38.1 B=22.4 O=76.2 K=55.6
1 1/4	1.660	42.2	A=47.8 B=25.4 O=95.3 K=69.9
1 1/2	1.900	48.3	A=57.2 B=28.4 O=114.3 K=82.6
2	2.375	60.3	A=76.2 B=35.1 O=152.4 K=106.4
2 1/2	2.875	73.0	A=95.3 B=44.5 O=190.5 K=131.8
3	3.500	88.9	A=114.3 B=50.8 O=228.6 K=158.8

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量		
Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			
Std/40	0.109	2.77	0.04	0.08	0.16
XS/80	0.147	3.73	0.05	0.10	0.20
Std/40	0.113	2.87	0.04	0.08	0.16
XS/80	0.154	3.91	0.07	0.14	0.28
Std/40	0.133	3.38	0.08	0.15	0.30
XS/80	0.179	4.55	0.10	0.19	0.38
160	0.250	6.35	0.13	0.25	0.50
Std/40	0.140	3.56	0.13	0.25	0.50
XS/80	0.191	4.85	0.17	0.33	0.66
160	0.250	6.35	0.21	0.42	0.84
Std/40	0.145	3.68	0.18	0.36	0.72
XS/80	0.200	5.08	0.25	0.49	0.98
160	0.281	7.14	0.33	0.65	1.30
XXS	0.400	10.15	0.43	0.86	1.72
Std/40	0.154	3.91	0.33	0.65	1.30
XS/80	0.218	5.54	0.45	0.90	1.80
160	0.344	8.74	0.67	1.33	2.66
XXS	0.436	11.07	0.81	1.61	3.22
Std/40	0.203	5.16	0.65	1.29	2.58
XS/80	0.276	7.01	0.86	1.71	3.42
160	0.375	9.53	1.12	2.23	4.46
XXS	0.552	14.02	1.53	3.05	6.10
Std/40	0.216	5.49	1.02	2.03	4.06
XS/80	0.300	7.62	1.37	2.74	5.48
160	0.438	11.13	1.92	3.83	7.66
XXS	0.600	15.24	2.49	4.97	9.94

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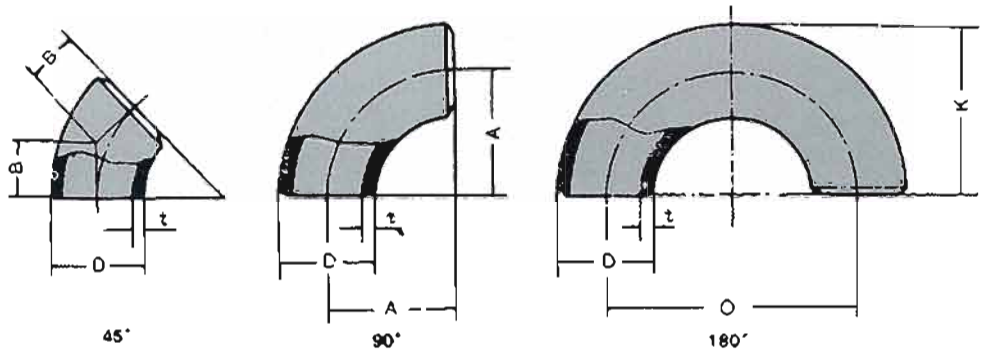
Elbows Long Radius ASME/ANSI B16.9

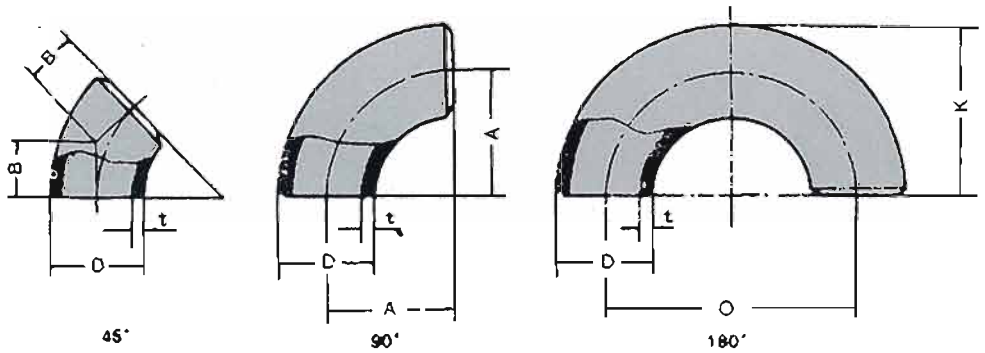


Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
4	4.500	114.3	A=152.4 B=63.5 O=304.8 K=209.6
5	5.563	141.3	A=190.5 B=79.2 O=381.0 K=261.9
6	6.625	168.3	A=228.6 B=95.3 O=457.2 K=312.7
8	8.625	219.1	A=304.8 B=127.0 O=609.6 K=414.3
10	10.750	273.0	A=381.0 B=158.8 O=762.0 K=517.7

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量		
Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			
Std/40	0.237	6.02	1.93	3.85	7.70
XS/80	0.337	8.56	2.67	5.34	10.7
120	0.438	11.13	3.39	6.78	13.6
160	0.531	13.49	4.02	8.03	16.1
XXS	0.674	17.12	4.91	9.82	19.6
Std/40	0.258	6.55	3.26	6.51	13.0
XS/80	0.375	9.53	4.64	9.27	18.5
120	0.500	12.70	6.05	12.1	24.2
160	0.625	15.88	7.35	14.7	29.4
XXS	0.750	19.05	8.60	17.2	34.4
Std/40	0.280	7.11	5.05	10.1	20.2
XS/80	0.432	10.97	7.65	15.3	30.6
120	0.562	14.27	9.75	19.5	39.0
160	0.719	18.26	12.1	24.2	48.4
XXS	0.864	21.95	14.2	28.4	56.4
20	0.250	6.35	7.95	15.9	31.8
30	0.277	7.04	8.80	17.6	35.2
Std/40	0.322	8.18	10.2	20.4	40.8
60	0.406	10.31	12.7	25.4	50.8
XS/80	0.500	12.70	15.5	30.9	61.8
100	0.594	15.09	18.2	36.3	72.6
120	0.719	18.26	21.7	43.3	86.6
140	0.812	20.62	24.2	48.3	96.6
160	0.906	23.01	26.7	53.3	107
XXS	0.875	22.23	25.9	51.7	103
20	0.250	6.35	12.5	25.0	50.0
30	0.307	7.80	15.3	30.5	61.0
Std/40	0.365	9.27	18.1	36.1	72.2
XS/60	0.500	12.70	24.4	48.8	97.6
80	0.594	15.09	28.7	57.3	115
100	0.719	18.26	34.3	68.6	137
120	0.844	21.44	39.8	79.5	169
140/XXS	1.000	25.40	46.4	92.8	186
160	1.125	28.58	51.5	103	206

弯头 长半径

Elbows Long Radius ASME/ANSI B16.9



Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
12	12.750	323.9	A=457.2 B=190.5 O=914.4 K=619.3
14	14.000	355.6	A=533.4 B=222.3 O=1066.8 K=711.2
16	16.000	406.4	A=609.6 B=254.0 O=1219.2 K=812.8
18	18.000	457.0	A=685.8 B=285.8 O=1371.6 K=914.4

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量		
Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			
20	0.250	6.35	17.9	35.7	71.4
30	0.330	8.38	23.4	45.8	93.6
Std	0.375	9.53	26.6	53.1	106
40	0.406	10.31	28.7	57.8	115
XS	0.500	12.70	35.0	70.0	140
60	0.562	14.27	39.1	78.2	156
80	0.688	17.48	47.4	94.7	189
100	0.844	21.44	57.5	115	230
120/XXS	1.000	25.40	67.0	134	268
140	1.125	28.58	74.5	149	298
160	1.312	33.32	85.5	171	342
10	0.250	6.35	22.9	45.5	91.6
20	0.312	7.92	28.5	56.9	114
Std/30	0.375	9.53	34.1	68.1	136
40	0.438	11.13	39.6	79.2	158
XS	0.500	12.70	45.0	90.0	180
60	0.594	15.09	53.0	106	212
80	0.750	19.05	66.0	132	264
100	0.938	23.83	81.5	163	326
120	1.094	27.79	94.0	188	376
140	1.250	31.75	106	212	424
160	1.406	35.71	118	236	472
10	0.250	6.35	30.0	60.0	120
20	0.312	7.92	37.3	74.5	149
Std/30	0.375	9.53	44.7	89.3	179
XS/40	0.500	12.70	59.0	118	236
60	0.656	16.66	76.5	153	306
80	0.844	21.44	97.5	195	390
100	1.031	26.19	118	235	470
120	1.219	30.96	137	274	548
140	1.438	36.53	160	319	638
160	1.594	40.49	175	350	700
10	0.250	6.35	38.1	76.1	152
20	0.312	7.92	47.3	94.5	189
30	0.438	11.13	66.0	132	264
Std	0.375	9.53	56.5	113	226
XS	0.500	12.70	75.0	150	300
40	0.562	14.27	84.0	168	336
60	0.750	19.05	111	222	444
80	0.938	23.83	137	274	548
100	1.156	29.36	167	334	668
120	1.375	34.93	196	392	784
140	1.562	39.67	220	440	880
160	1.781	45.24	246	492	984

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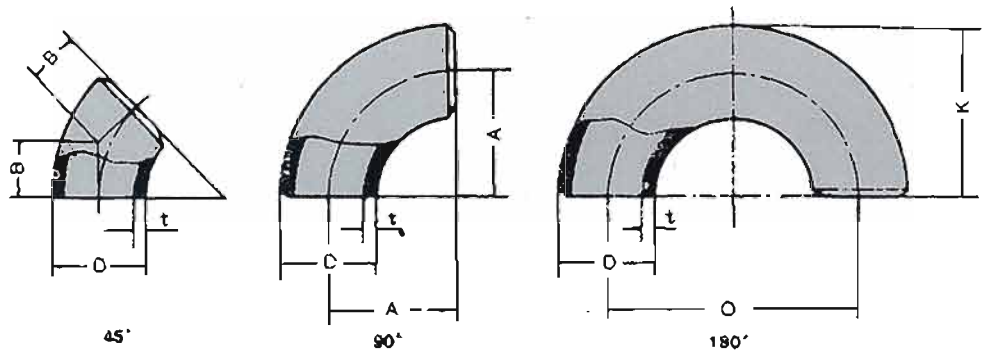
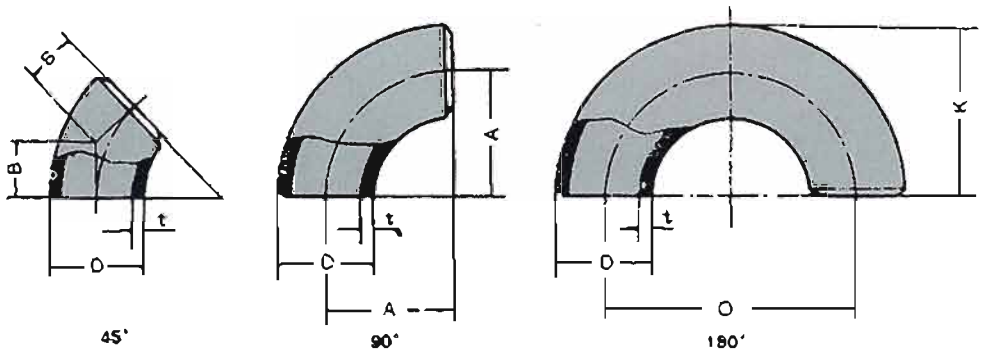


Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
20	20.000	508.0	A=762.0 B=317.5 O=1524.0 K=1016.0
22	22.000	559.0	A=838.2 B=342.9 O=1676.4 K=1117.6
24	24.000	610.0	A=914.4 B=381.0 O=1828.8 K=1219.2
26	26.000	660.0	A=990.6 B=406.4

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量		
Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			
10	0.250	6.35	47.0	94.0	188
Std/20	0.375	9.63	70.0	140	280
XS/30	0.500	12.70	93.0	186	372
40	0.594	15.09	110	219	438
60	0.812	20.62	149	297	594
80	1.031	26.19	186	372	744
100	1.281	21.54	229	457	914
120	1.500	38.10	264	528	1056
140	1.750	44.45	305	609	1218
160	1.969	50.01	338	676	1352
10	0.250	6.35	57.0	114	228
Std/20	0.375	9.53	85.0	170	340
XS/30	0.500	12.70	113	225	450
60	0.875	22.23	194	387	774
80	1.125	28.58	248	492	984
100	1.375	34.93	297	594	1188
120	1.625	41.28	347	694	1388
140	1.875	47.63	395	790	1580
160	2.125	53.98	443	885	1770
10	0.250	6.35	68	136	272
Std/20	0.375	9.53	101	202	404
XS	0.500	12.70	135	269	538
30	0.562	14.27	151	301	602
40	0.688	17.48	183	366	732
60	0.969	24.61	255	510	1020
80	1.219	30.96	317	634	1268
100	1.531	38.89	393	786	1572
120	1.812	46.02	460	919	1838
140	2.062	52.37	515	1033	2060
160	2.344	59.34	580	1160	2320
10	0.312	7.92	99	198	
Std	0.375	9.53	119	238	
XS/20	0.500	12.70	158	316	

弯头 长半径

Elbows Long Radius ASME/ANSI B16.9

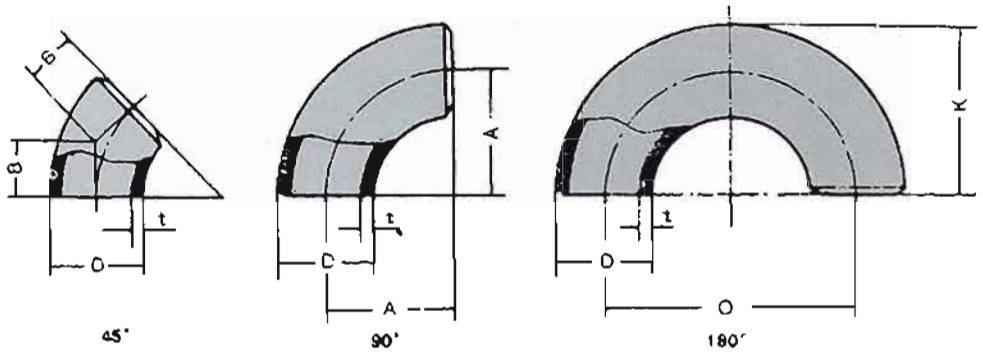


Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
28	28.000	711.0	A=1066.8 B=469.9
30	30.000	762.0	A=1143.0 B=469.9
32	32.000	813.0	A=1219.2 B=501.7
34	34.000	864.0	A=1295.4 B=533.4
36	36.000	914.0	A=1371.6 B=565.2
38	38.000	965.0	A=1448.0 B=600.0
40	40.000	1016.0	A=1524.0 B=632.0

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量		
Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			
10 Std XS/20 30	0.312 0.375 0.500 0.625	7.92 9.53 12.70 15.88	115 138 184 228	230 276 367 456	
10 Std XS/20 30	0.312 0.375 0.500 0.625	7.92 9.53 12.70 15.88	132 159 211 262	264 318 421 524	
10 Std XS/20 30 40	0.312 0.375 0.500 0.625 0.688	7.92 9.53 12.70 15.88 17.48	151 181 240 299 328	301 362 480 597 656	
10 Std XS/20 30 40	0.312 0.375 0.500 0.625 0.688	7.92 9.53 12.70 15.88 17.48	170 204 271 338 371	340 408 542 675 742	
10 Std XS/20 30 40	0.312 0.375 0.500 0.625 0.750	7.92 9.53 12.70 15.88 19.05	191 229 304 379 453	381 458 608 758 906	
Std XS	0.375 0.500	9.53 12.7	257 341.5	514 683	1028 1366
Std XS	0.375 0.500	9.53 12.7	285 378.5	570 757	1140 1514

弯头 长半径

Elbows Long Radius ASME/ANSI B16.9

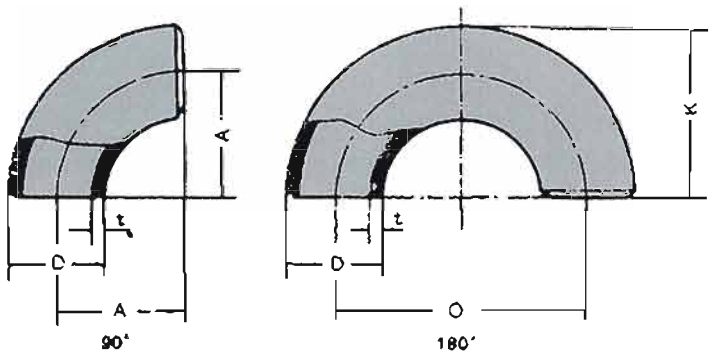


Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
42	42.000	1067.0	A=1600.0 B=660.0
44	44.000	1118.0	A=1676.0 B=695.0
46	46.000	1168.0	A=1753.0 B=727.0
48	48.000	1219.0	A=1829.0 B=759.0

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量		
Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			
Std	0.375	9.53	314.5	625	1258
XS	0.500	12.7	418	836	1672
Std	0.375	9.53	345.5	691	1382
XS	0.500	12.7	459	918	1836
Std	0.375	9.53	375.5	753	1506
XS	0.500	12.7	501.5	1003	2006
Std	0.375	9.53	411	822	1644
XS	0.500	12.7	546	1092	2184

弯头 短半径

Elbows Short Radius ASME/ANSI B16.28

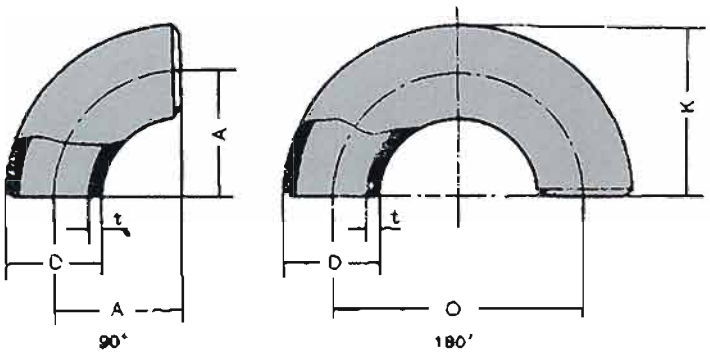


Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
1	1.315	33.4	A=25.4 O=50.8 K=41.1
1 1/4	1.660	42.2	A=31.8 O=63.5 K=52.3
1 1/2	1.900	48.3	A=38.1 O=76.2 K=62.0
2	2.375	60.3	A=50.8 O=101.6 K=81.0
2 1/2	2.875	73.0	A=63.5 O=127.0 K=100.1
3	3.500	88.9	A=76.2 O=152.4 K=120.7
4	4.500	114.3	A=101.6 O=203.2 K=158.8
5	5.563	141.3	A=127.0 O=254.0 K=196.9

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量	
Sch. No.	t		90° kg	180° kg
	inch	mm		
Std/40	0.133	3.38	0.10	0.20
XS/80	0.179	4.55	0.13	0.26
160	0.250	6.35	0.17	0.34
XXS	0.358	9.09	0.22	0.44
Std/40	0.140	3.56	0.17	0.34
XS/80	0.191	4.85	0.22	0.44
160	0.250	6.35	0.28	0.56
XXS	0.382	9.70	0.39	0.78
Std/40	0.145	3.68	0.24	0.48
XS/80	0.200	5.08	0.32	0.64
160	0.281	7.14	0.43	0.86
XXS	0.400	10.15	0.57	1.14
Std/40	0.154	3.91	0.45	0.86
XS/80	0.218	5.54	0.60	1.20
160	0.344	8.74	0.89	1.78
XXS	0.436	11.07	1.07	2.14
Std/40	0.203	5.16	0.86	1.72
XS/80	0.276	7.01	1.14	2.28
160	0.375	9.53	1.49	2.98
XXS	0.552	14.02	2.03	4.06
Std/40	0.216	5.49	1.35	2.70
XS/80	0.300	7.62	1.83	3.66
160	0.438	11.13	2.56	5.12
XXS	0.600	15.24	3.31	6.62
Std/40	0.237	6.02	2.57	5.14
XS/80	0.337	8.56	3.56	7.12
120	0.438	11.13	4.52	9.04
160	0.531	13.49	5.35	10.70
XXS	0.674	17.12	6.54	13.08
Std/40	0.258	6.55	4.34	8.68
XS/80	0.375	9.53	6.18	12.40
120	0.500	12.70	8.04	16.10
160	0.625	15.88	9.80	19.60
XXS	0.750	19.05	11.45	22.90

弯头 短半径

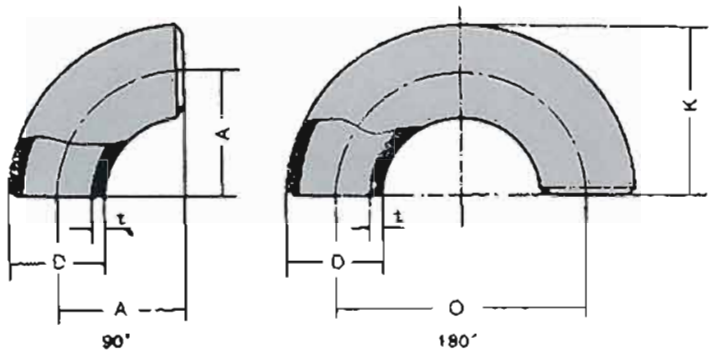
Elbows Short Radius ASME/ANSI B16.28



Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸			Wall Thickness:t 壁厚:t			Approx. Weight 理论重量	
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm	Sch. No.	t		90° kg	180° kg
	inch	mm			inch	mm		
6	6.625	168.3	A=152.4 O=304.8 K=236.5	Std/40	0.280	7.11	6.77	13.5
				XS/80	0.432	10.97	10.2	20.4
				120	0.562	14.27	13.0	26.0
				160	0.719	18.26	16.2	32.4
				XXS	0.864	21.95	19.0	38.0
8	8.625	219.1	A=203.2 O=406.4 K=312.7	20	0.250	6.35	10.6	21.2
				30	0.277	7.04	11.8	23.6
				Std/40	0.322	8.18	13.6	27.2
				60	0.406	10.31	16.9	33.8
				XS/80	0.500	12.70	20.9	41.8
				100	0.594	15.09	24.2	48.4
				120	0.719	18.26	28.8	57.6
				140	0.812	20.62	32.2	64.4
				160	0.906	23.01	35.5	71.0
				XXS	0.875	22.23	34.4	68.8
10	10.750	273.0	A=254.0 O=508.0 K=390.7	20	0.250	6.35	16.7	33.4
				30	0.307	7.80	20.4	40.8
				Std/40	0.365	9.27	24.1	48.2
				XS/60	0.500	12.70	32.5	65.0
				80	0.594	15.09	38.2	76.4
				100	0.719	18.26	45.7	91.4
				120	0.844	21.44	53.0	106.0
				140/XXS	1.000	25.40	61.9	124.0
				160	1.125	28.58	68.7	137.0
12	12.750	323.9	A=304.8 O=609.6 K=466.9	20	0.250	6.35	23.8	47.6
				30	0.330	8.38	31.2	62.4
				Std	0.375	9.53	35.4	70.8
				40	0.406	10.31	38.2	76.4
				60	0.562	14.27	52.2	104.0
				XS	0.500	12.70	46.7	93.4
				80	0.688	17.48	63.1	126.0
				100	0.844	21.44	76.5	153.0
				120/XXS	1.000	25.40	89.5	179.0
				140	1.125	28.58	99.6	199.0
				160	1.312	33.32	114.0	228.0

弯头 短半径

Elbows Short Radius ASME/ANSI B16.28

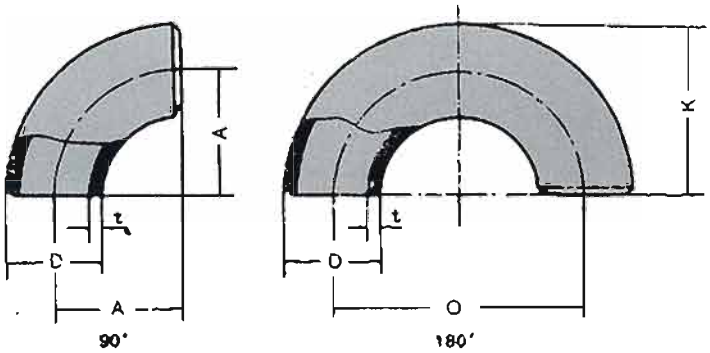


Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
14	14.000	355.6	A=355.6 O=711.2 K=533.4
16	16.000	406.4	A=406.4 O=812.8 K=609.6
18	18.000	457.0	A=457.0 O=914.4 K=685.8
20	20.000	508.0	A=508.0 O=1016.0 K=762.0

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量	
Sch. No.	t		90° kg	180° kg
	inch	mm		
10	0.250	6.35	30.6	61.2
20	0.312	7.92	37.9	75.8
Std/30	0.375	9.53	45.4	90.8
40	0.438	11.13	52.8	106
XS	0.500	12.70	60.0	120
60	0.594	15.09	70.6	141
80	0.750	19.05	88.3	177
100	0.938	23.83	109	218
120	1.094	27.79	125	250
140	1.250	31.75	142	284
160	1.406	35.71	157	314
10	0.250	6.35	40.0	80.0
30	0.312	7.92	49.7	99.0
Std/30	0.375	9.53	59.5	119
XS/40	0.500	12.70	78.7	157
60	0.656	16.66	102	204
80	0.844	21.44	130	260
100	1.031	26.19	157	314
120	1.219	30.96	183	366
140	1.438	36.53	213	426
160	1.594	40.49	233	466
10	0.250	6.35	50.7	101
20	0.312	7.92	63.0	126
Std	0.375	9.53	75.6	151
30	0.438	11.13	87.9	176
40	0.562	14.27	112	224
XS	0.750	19.05	148	296
60	0.500	12.70	100	200
80	0.938	23.83	183	366
100	1.156	29.36	222	444
120	1.375	34.93	261	522
140	1.562	39.67	293	586
160	1.781	45.24	330	660
10	0.250	6.35	62.7	123
Std/20	0.375	9.53	93.4	187
XS/30	0.500	12.70	124	248
40	0.594	15.09	146	292
60	0.812	20.62	198	396
80	1.031	26.19	248	496
100	1.281	32.54	304	608
120	1.500	38.10	352	704
140	1.750	44.45	405	810
160	1.969	50.01	451	902

弯头 短半径

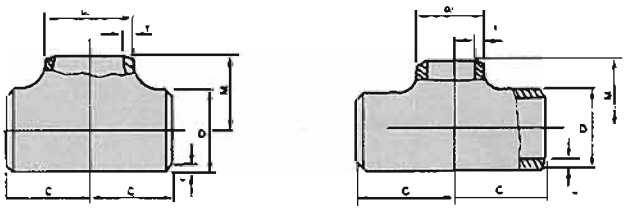
Elbows Short Radius ASME/ANSI B16.28



Nominal Pipe Size 公称尺寸 inch	Dimensions 尺寸		
	Outside Diameter at Bevel:D 坡口处外径:D		Center End:A/B 中心至端面:A/B Center to Center:O 中心至中心:O Back to Face:K 顶端至端面:K mm
	inch	mm	
22	22.000	559	A=558.8 O=1117.6 K=838.3
24	24.000	610	A=609.6 O=1219.2 K=914.4

Wall Thickness:t 壁厚:t			Approx. Weight 理论重量	
Sch. No.	t		90° kg	180° kg
	inch	mm		
10	0.250	6.35	75.9	152
Std/20	0.375	9.53	113	226
XS/30	0.500	12.70	150	300
60	0.875	22.23	258	516
80	1.125	28.58	328	656
100	1.375	34.93	396	792
120	1.625	41.28	462	924
140	1.875	47.63	527	1054
160	2.125	53.98	590	1180
10	0.250	6.35	90.5	181
Std/20	0.375	9.53	135	270
30	0.562	14.27	201	402
40	0.688	17.48	244	488
60	0.969	24.61	340	680
XS	0.500	12.70	179	358
80	1.219	30.96	423	846
100	1.531	38.89	524	1048
120	1.812	46.02	612	1224
140	2.062	52.37	689	1378
160	2.344	59.54	773	1546

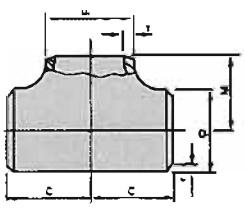
三通（等径、异径）
TEES (STRAIGHT AND REDUCING)

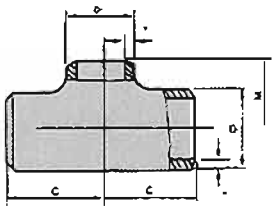


公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	C	M	sch5s	sch10s	sch20s	STD	sch40	XS	sch80	sch120
20 × 20	3/4 × 3/4	25 × 25 26.7 × 26.7	29	29	0.07 0.08	0.10 0.11	0.12 0.13	0.13 0.15	0.13 0.15	0.16 0.18	0.16 0.18	– –
20 × 15	3/4 × 1/2	25 × 18 26.7 × 21.3	29	29	0.06 0.07	0.09 0.10	0.11 0.12	0.12 0.13	0.12 0.13	0.15 0.16	0.15 0.16	– –
25 × 25	1 × 1	32 × 32 33.4 × 33.4	38	38	0.11 0.12	0.19 0.20	0.21 0.22	0.23 0.25	0.23 0.25	0.30 0.32	0.30 0.32	– –
25 × 20	1 × 3/4	32 × 35 33.4 × 26.7	38	38	0.10 0.11	0.18 0.19	0.20 0.21	0.22 0.24	0.22 0.24	0.28 0.31	0.28 0.31	– –
25 × 15	1 × 1/2	32 × 18 33.4 × 21.3	38	38	0.09 0.10	0.17 0.18	0.19 0.20	0.21 0.23	0.21 0.23	0.27 0.30	0.27 0.30	– –
32 × 32	1.1/4 × 1.1/4	38 × 38 42.2 × 42.2	48	48	0.19 0.20	0.36 0.39	0.39 0.45	0.42 0.52	0.42 0.52	0.63 0.73	0.63 0.73	– –
32 × 25	1.1/4 × 1	38 × 32 42.2 × 33.4	48	48	0.18 0.19	0.33 0.35	0.37 0.39	0.40 0.42	0.40 0.42	0.58 0.68	0.58 0.68	– –
32 × 20	1.1/4 × 3/4	38 × 35 42.2 × 26.7	48	48	0.17 0.18	0.31 0.32	0.34 0.36	0.38 0.40	0.38 0.40	0.55 0.65	0.55 0.65	– –
32 × 15	1.1/4 × 1/2	38 × 18 42.2 × 21.3	48	48	0.16 0.17	0.30 0.31	0.33 0.35	0.36 0.38	0.36 0.38	0.52 0.62	0.52 0.62	– –
40 × 40	1.1/2 × 1.1/2	45 × 45 48.3 × 48.3	57	57	0.35 0.45	0.59 0.69	0.65 0.76	0.78 0.88	0.78 0.88	1.08 1.18	1.08 1.18	– –
40 × 32	1.1/2 × 1.1/4	45 × 38 48.3 × 42.2	57	57	0.32 0.42	0.54 0.65	0.63 0.75	0.72 0.82	0.72 0.82	0.99 1.09	0.99 1.09	– –
40 × 25	1.1/2 × 1	45 × 32 48.3 × 33.4	57	57	0.27 0.37	0.45 0.65	0.52 0.73	0.60 0.80	0.60 0.80	0.83 1.08	0.83 1.08	– –
40 × 20	1.1/2 × 3/4	45 × 25 48.3 × 26.7	57	57	0.26 0.36	0.44 0.64	0.51 0.66	0.58 0.68	0.58 0.68	0.80 1.00	0.80 1.00	– –
40 × 15	1.1/2 × 1/2	45 × 18 48.3 × 21.3	57	57	0.25 0.35	0.42 0.62	0.48 0.64	0.56 0.66	0.56 0.66	0.78 0.78	0.78 0.78	– –
50 × 50	2 × 2	57 × 57 60.3 × 60.3	64	64	0.49 0.50	1.03 1.05	1.11 1.13	1.15 1.18	1.15 1.18	1.65 1.67	1.65 1.67	– –
50 × 40	2 × 1.1/2	57 × 45 60.3 × 48.3	64	60	0.44 0.45	0.93 0.95	1.01 1.03	1.04 1.06	1.04 1.06	1.48 1.50	1.48 1.50	– –
50 × 32	2 × 1.1/4	57 × 38 60.3 × 42.2	64	57	0.40 0.43	0.81 0.89	0.88 0.94	0.98 1.00	0.98 1.00	1.37 1.42	1.37 1.42	– –
50 × 25	2 × 1	57 × 32 60.3 × 33.4	64	51	0.39 0.40	0.72 0.84	0.83 0.88	0.92 0.94	0.92 0.94	1.31 1.34	1.31 1.34	– –
50 × 20	2 × 3/4	57 × 25 60.3 × 33.4	64	44	0.37 0.38	0.70 0.80	0.77 0.85	0.87 0.90	0.87 0.90	1.24 1.27	1.24 1.27	– –
65 × 65	2.1/2 × 2.1/2	76 × 76 73.0 × 73.0	76	76	0.87 0.86	1.25 1.21	1.73 1.65	2.12 2.10	2.12 2.10	2.88 2.80	2.88 2.80	– –
65 × 50	2.1/2 × 2	76 × 57 73.0 × 60.3	76	70	0.82 0.81	1.17 1.16	1.54 1.49	2.00 1.98	2.00 1.98	2.70 2.65	2.74 2.09	– –
65 × 40	2.1/2 × 1.1/2	75 × 45 73.0 × 48.3	76	67	0.77 0.76	1.11 1.10	1.41 1.38	1.89 1.88	1.89 1.88	2.56 2.55	2.56 2.55	– –
65 × 32	2.1/2 × 1.1/4	76 × 38 73.0 × 42.0	76	64	0.75 0.74	1.10 1.08	1.35 1.30	1.80 1.89	1.80 1.89	2.50 2.25	2.50 2.25	– –
65 × 25	2.1/2 × 1	76 × 32 73.0 × 33.4	76	57	0.76 0.70	1.10 1.07	1.34 1.28	1.86 1.81	1.86 1.81	2.53 2.08	2.53 2.08	– –

三通（等径、异径）

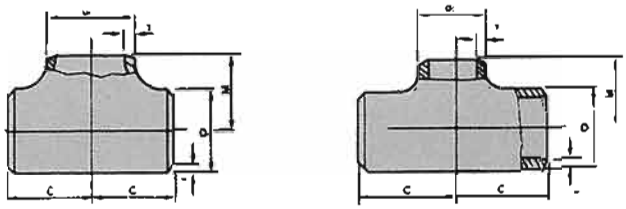
TEES (STRAIGHT AND REDUCING)





公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	C	M	sch5s	sch10s	sch20s	STD	sch40	XS	sch80	sch120
80×80	3×3	89×89	86	86	1.16	1.68	2.21	3.02	3.02	4.19	4.19	–
80×65	3×2.1/2	89×57 88.9×73.0	86	83	1.11 1.10	1.62 1.60	2.13 2.08	2.89 2.87	2.89 2.87	4.02 3.98	4.02 3.98	– –
80×50	3×2	89×57 88.9×60.3	86	76	1.06 1.07	1.53 1.55	2.05 2.10	2.76 2.79	2.76 2.79	3.81 3.85	3.81 3.85	– –
80×40	3×1.1/2	89×45 88.9×48.3	86	73	1.01 1.03	1.49 1.50	1.98 2.01	2.67 2.69	2.67 2.69	3.70 3.73	3.70 3.73	– –
80×32	3×1.1/4	89×38 88.9×42.2	86	70	1.00 1.00	1.48 1.45	1.97 1.95	2.65 2.60	2.65 2.60	3.68 3.60	3.68 3.60	– –
90×90	3.1/2×3.1/2	101.6×101.6	95	95	1.33	1.92	2.53	3.61	3.61	5.08	5.08	–
90×80	3.1/2×3	101.6×88.9	95	92	1.26	1.82	2.41	3.43	3.43	4.83	4.83	–
90×65	3.1/2×2.1/2	101.6×73.0	95	89	1.22	1.76	2.35	3.32	3.32	4.67	4.67	–
90×50	3.1/2×2	101.6×60.3	95	83	1.20	1.73	2.31	3.25	3.25	4.57	4.57	–
90×40	3.1/2×1.1/2	101.6×48.3	95	79	1.17	1.70	2.26	3.21	3.21	4.51	4.51	–
100×100	4×4	108×108 114.3×114.3	105	105	1.66 1.75	2.41 2.54	3.02 3.26	4.75 5.01	4.75 5.01	6.75 7.12	6.75 7.12	8.78 9.26
100×90	4×3.1/2	114.3×101.6	105	102	1.70	2.46	3.19	4.85	4.85	6.89	6.89	8.96
100×80	4×3	108×89 114.3×88.9	105	98	1.55 1.61	2.24 2.33	3.16 3.21	4.42 4.60	4.42 4.60	6.27 6.52	6.27 6.52	8.15 8.48
100×65	4×2.1/2	108×76 114.3×73.0	105	95	1.53 1.60	2.21 2.31	3.09 3.11	4.36 4.56	4.36 4.56	6.50 6.50	6.50 6.50	8.45 8.45
100×50	4×2	108×57 114.3×60.3	105	89	1.51 1.57	2.19 2.29	3.08 3.19	4.32 4.41	4.32 4.41	6.13 6.12	6.13 6.12	7.97 9.26
100×40	4×1.1/2	108×45 114.3×48.3	105	86	1.50 1.55	2.09 2.24	2.92 3.19	4.22 4.00	4.22 4.00	6.03 6.02	6.06 6.04	7.88 9.11
125×125	5×5	133×133 141.3×141.3	124	124	3.18 3.37	3.91 4.14	6.17 6.31	7.53 7.98	7.53 7.98	10.9 11.6	10.9 11.6	16.4 15.4
125×100	5×4	133×108 141.3×114.3	124	117	3.03 3.15	3.73 3.90	5.76 5.91	7.20 7.52	7.20 7.52	10.4 10.8	10.4 10.8	13.9 14.5
125×90	5×3.1/2	141.3×101.6	124	114	3.09	3.83	5.83	7.39	7.39	10.6	10.6	14.2
125×80	5×3	133×89 141.3×88.9	124	111	2.90 3.02	3.59 3.74	5.42 5.71	6.92 7.21	6.92 7.21	10.0 10.4	10.0 10.4	13.3 13.8
125×65	5×2.1/2	133×76 141.3×73.0	124	108	2.85 3.00	3.59 3.73	5.40 5.71	6.92 7.20	6.92 7.20	10.0 10.4	10.0 10.4	13.3 13.8
125×50	5×2	133×57 141.3×60.3	124	105	2.80 3.92	3.58 3.73	5.38 5.70	6.92 7.20	6.92 7.20	10.0 10.4	10.0 10.4	13.3 13.8
150×150	6×6	159×159 168.3×168.3	143	143	4.09 4.32	5.03 5.31	8.91 9.10	10.5 11.1	10.5 11.1	16.2 17.1	16.2 17.1	21.0 22.2
150×125	6×5	159×133 168.3×141.3	143	137	3.84 4.13	4.73 5.08	8.33 9.01	9.88 10.6	9.88 10.6	15.2 16.3	15.2 16.3	19.8 21.3
150×100	6×4	159×108 168.3×114.3	143	130	3.76 3.95	4.64 4.87	8.21 8.55	9.70 10.2	9.70 10.2	14.9 15.6	14.9 15.6	19.3 20.3
150×90	6×3.1/2	168.3×101.6	143	127	3.91	4.82	8.46	10.1	10.1	15.5	15.5	20.1
150×80	6×3	159×89 168.3×88.9	143	124	3.72 3.93	4.56 4.82	8.09 8.43	9.56 10.1	9.56 10.1	14.7 15.3	14.7 15.3	19.0 20.2
150×65	6×2.1/2	159×76 168.3×73.0	143	121	3.70 3.81	4.51 4.72	7.93 8.33	9.51 10.0	9.51 10.0	14.6 15.2	14.6 15.2	19.2 20.0

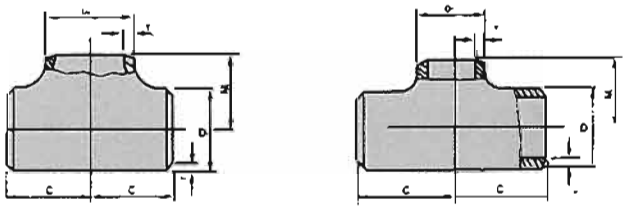
三通（等径、异径）
TEES (STRAIGHT AND REDUCING)



公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	C	M	sch5s	sch10s	sch20s	STD	sch40	XS	sch80	sch120
200×200	8×8	219×219	178	178	7.72	10.4	17.7	22.8	22.8	35.4	35.4	50.8
200×150	8×6	219×159 219.1×141.3	178	168	6.74 7.17	9.20 9.74	16.4 16.4	19.9 21.1	19.9 21.1	30.9 32.8	30.9 32.8	44.4 47.2
200×125	8×5	219×133 219.1×141.3	178	162	6.61 7.03	8.89 9.55	15.1 16.1	19.5 20.7	19.5 20.7	30.2 32.2	30.2 32.2	43.5 46.3
200×100	8×4	219×108 219.1×114.3	178	156	6.43 6.84	8.73 9.39	14.7 15.6	19.0 19.9	20.5 20.2	29.4 31.3	29.4 31.3	42.3 45.0
200×90	8×3.1/2	219.1×101.6	178	152	6.84	9.18	15.5	19.8	20.1	31.1	31.1	44.2
250×250	10×10	273×273	216	216	14.6	18.04	27.39	40.4	40.4	51.1	65.12	95.21
250×200	10×8	273×219	216	208	13.3	16.4	24.9	36.4	36.4	49.8	59.2	84.1
250×150	10×6	273×159 273.1×168.3	216	194	11.4 12.1	15.0 15.0	21.3 22.7	31.4 33.4	31.4 33.4	42.7 45.4	50.7 54.0	72.1 76.7
250×125	10×5	273×133 273.1×141.3	216	191	11.2 11.9	14.6 14.6	20.9 22.2	30.7 32.7	30.7 32.7	41.8 44.5	49.7 52.9	70.6 75.1
250×100	10×4	273×108 273.1×114.3	216	184	11.0 11.7	14.4 14.4	20.6 21.9	30.3 32.2	30.3 32.2	41.2 42.9	49.0 52.1	69.6 74.1
300×300	12×12	325×325 323.9×323.9	254	254	21.5 21.5	24.8 24.8	34.5 34.5	51.8 51.8	56.1 56.0	69.0 69.0	95.0 95.0	138 138
300×250	12×10	325×273 323.9×273.1	254	241	20.4 20.3	23.6 23.4	32.8 32.1	49.2 49.1	53.3 53.1	65.6 65.2	90.3 90.2	131 130
300×200	12×8	325×219 323.9×219.1	254	229	20.2 20.0	23.3 23.1	32.3 32.1	48.4 48.2	52.4 52.2	64.4 64.2	88.6 88.4	128 118
300×150	12×6	325×159 323.9×168.3	254	219	18.4 19.5	22.5 22.7	29.5 31.3	44.3 47.1	47.9 51.0	59.0 62.7	81.2 86.4	118 136
300×125	12×5	325×133 323.9×141.3	254	216	18.0 19.1	20.8 22.1	28.0 30.7	43.6 46.3	47.1 50.2	57.8 61.5	79.6 84.6	115 126
350×350	14×14	377×377 355.6×355.6	279	279	27.4 25.7	33.1 31.1	54.9 51.5	66.1 62.0	77.2 72.5	88.0 82.7	132 124	192 181
350×300	14×12	377×325 355.6×323.9	279	270	25.8 24.2	31.1 29.2	51.6 48.5	62.1 58.3	72.5 68.2	82.7 77.7	124 116	181 170
350×250	14×10	377×273 355.6×273.1	279	257	25.1 23.7	30.3 28.6	50.3 47.4	60.5 57.0	70.8 66.7	80.7 76.0	121 114	171 161
350×200	14×8	377×219 355.6×219.1	279	248	24.6 23.1	29.7 27.9	49.2 46.2	59.2 55.7	69.2 65.2	78.0 74.2	118 111	167 157
350×150	14×6	377×159 355.6×168.3	279	238	24.0 22.3	29.0 27.1	48.1 45.6	57.9 54.2	67.8 64.8	77.1 77.8	115 110	163 156
400×400	16×16	426×426 406.4×406.4	305	305	33.1 31.4	38.0 36.1	63.0 59.8	75.9 72.3	101 96.4	101 96.1	170 162	246 234
400×350	16×14	426×377 406.4×355.6	305	305	32.0 30.4	36.8 34.9	60.9 57.9	73.6 70.1	98.1 93.4	97.8 92.9	179 170	238 226
400×300	16×12	426×325 406.4×323.9	305	295	31.0 28.2	35.6 34.4	59.0 57.7	71.4 69.1	95.2 90.8	94.7 89.2	173 168	230 209
400×250	16×10	426×273 406.4×273.1	305	283	30.2 28.7	34.7 33.0	57.6 54.7	69.9 66.6	93.1 88.7	92.5 87.8	169 161	225 209
400×200	16×8	426×219 406.4×219.1	305	273	29.5 28.1	33.9 32.3	56.2 53.5	68.4 65.1	91.1 86.8	90.2 86	165 157	219

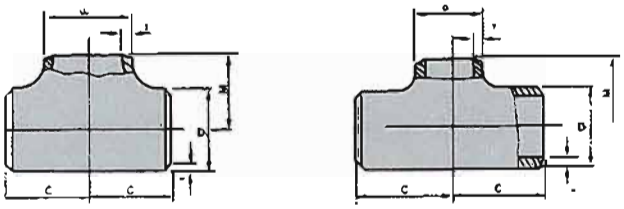
三通（等径、异径）

TEES (STRAIGHT AND REDUCING)



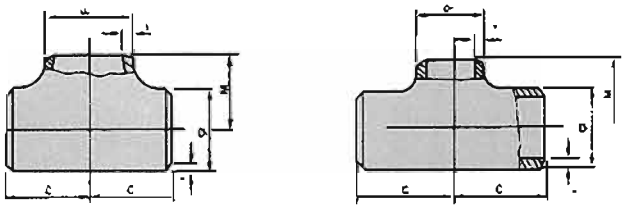
公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	C	M	sch5s	sch10s	sch20s	STD	sch40	XS	sch80	sch120
400×150	16×6	426×159 406.4×168.3	305	264	29.2 27.7	33.5 31.8	55.6 52.8	67.6 64.4	90.1 85.8	89.2 84.8	163 155	217 206
450×450	18×18	478×478 457×457	343	343	41.9 39.8	47.8 45.5	79.2 75.4	95.3 88.9	142 136	127 120	233 218	349 332
450×400	18×16	478×426 457×406.4	343	330	41.0 39.0	46.8 44.5	77.5 73.8	93.3 88.9	140 133	144 118	233 222	342 325
450×350	18×14	478×377 406.4×355.6	343	330	40.4 38.3	46.1 43.8	76.3 72.5	91.9 87.3	137 130	142 135	229 228	336 320
450×300	18×12	478×325 457×323.9	343	321	39.8 37.3	45.4 42.6	75.2 70.6	90.6 85.0	135 127	140 131	226 212	331 216
450×250	18×10	478×273 457×273.1	343	308	39.3 37.3	44.9 42.6	74.4 70.6	89.6 85.0	134 127	138 131	223 212	228 216
450×200	18×8	478×219 457×291.1	343	298	38.8 36.9	44.3 42.1	73.4 69.7	89.1 84.7	132 126	137 130	220 209	225 213
500×500	20×20	529×529 508×508	381	381	58.9 56.3	68.2 65.3	117 112	117 112	186 178	156 149	322 308	469 449
500×450	20×18	529×478 508×457	381	368	57.9 55.4	67.1 64.2	115 110	115 110	183 175	154 147	317 303	462 441
500×400	20×16	529×426 508×406.4	381	356	57.0 54.7	66.0 63.4	113 109	113 109	180 173	151 145	312 299	454 436
500×350	20×14	529×377 508×355.6	381	356	56.0 53.7	64.9 62.3	111 107	111 107	177 170	148 142	306 294	446 428
500×300	20×12	529×325 508×323.9	381	346	55.0 52.8	63.8 61.2	109 105	109 105	174 167	146 140	301 289	438 421
500×250	20×10	529×273 508×273.1	381	333	54.4 52.2	63.0 60.5	108 104	108 104	172 165	144 138	298 286	433 416
500×200	20×8	529×219 508×219.1	381	324	53.7 51.5	62.3 59.7	107 102	107 102	170 163	142 137	294 282	428 410
550×550	22×22	559×559	419	419	73.5	85.2	146	146	265	195	–	635
550×500	22×20	559×508	419	406	70.7	81.9	141	141	257	187	–	610
550×450	22×18	559×457	419	394	67.7	78.5	135	135	240	180	–	584
550×400	22×16	559×406.4	419	381	66.2	76.7	132	132	235	179	–	571
550×350	22×14	559×355.6	419	381	65.5	75.9	130	130	230	174	–	565
550×300	22×12	559×323.9	419	371	64.0	74.2	127	127	225	170	–	552
550×250	22×10	559×273.1	419	359	62.5	72.5	124	124	220	166	–	540
600×600	24×24	630×630 610×610	432	432	96.0 93.9	110 107	165 161	165 161	300 295	220 215	503 496	797 779
600×550	24×22	610×559	432	432	90.1	103	155	155	285	206	–	748
600×500	24×20	630×529 610×508	432	432	92.2 86.4	105 99.4	158 148	158 148	290 270	211 198	491 472	765 701
600×450	24×18	630×478 610×457	432	419	88.4 84.5	101 96.9	152 145	152 145	280 265	202 193	478 466	734 694
600×400	24×16	630×426 610×406.4	432	406	86.4 83.2	99.1 95.7	148 143	148 143	270 260	198 191	472 463	718 690
600×350	24×14	630×377 610×355.6	432	406	85.5 81.7	98.0 93.5	147 140	147 140	265 255	195 187	469 457	710 678
600×300	24×12	630×325 610×323.9	432	397	83.5 79.8	95.8 91.5	143 137	143 137	255 250	191 182	463 451	678 662
600×250	24×10	630×273 610×273.1	495	384	81.6 77.9	93.6 89.3	140 134	140 134	257 245	187 178	457 445	662 647

三通（等径、异径）
TEES (STRAIGHT AND REDUCING)



公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	C	M	sch5s	sch10s	sch20s	STD	sch40	XS	sch80	sch120
650×650	26×26	660×660	495	495	–	–	274	206	–	274	–	–
650×600	26×24	660×610	495	483	–	–	263	197	–	263	–	–
650×550	26×22	660×559	495	470	–	–	252	189	–	252	–	–
650×500	26×20	660×508.0	495	457	–	–	246	185	–	246	–	–
650×450	26×18	660×547.2	495	444	–	–	244	183	–	244	–	–
650×400	26×16	660×406.4	495	432	–	–	238	179	–	238	–	–
650×350	26×14	660×355.6	495	432	–	–	233	175	–	233	–	–
650×300	26×12	660×323.9	495	422	–	–	227	171	–	227	–	–
700×700	28×28	720×720 711×711	521	521	–	–	309 305	232 229	–	300 305	–	–
700×650	28×26	711×660	521	521	–	–	293	222	–	293	–	–
700×600	28×24	720×630 711×610	510	508	–	–	296 284	222 211	–	296 275	–	–
700×550	28×22	711×559	521	495	–	–	273	204	–	272	–	–
700×500	28×20	720×529 711×508	521	483	–	–	296 275	222 199	–	296 265	–	–
700×450	28×18	720×478 711×457	521	470	–	–	278 265	208 195	–	275 263	–	–
700×400	28×16	720×426 711×406.4	521	457	–	–	275 259	206 190	–	268 259	–	–
700×350	28×14	720×377 711×355.6	521	457	–	–	268 253	201 183	–	260 253	–	–
700×300	28×12	720×325 711×323.9	521	448	–	–	262 244	197 179	–	256 244	–	–
750×750	30×30	762×762	559	559	176	200	352	264	–	352	–	–
750×700	30×28	762×711	559	546	–	–	338	254	–	338	–	–
750×650	30×26	762×660	559	546	–	–	323	243	–	323	–	–
750×600	30×24	762×610	559	533	158	197	317	238	–	317	–	–
750×550	30×22	762×559	559	521	157	195	314	235	–	314	–	–
750×500	30×20	762×508	559	508	153	174	306	230	–	306	–	–
750×450	30×18	762×457	559	495	149	170	299	224	–	299	–	–
750×400	30×16	762×406.4	559	483	146	166	292	219	–	292	–	–
750×350	30×14	762×355.6	559	483	141	166	282	211	–	285	–	–
750×300	30×12	762×323.9	559	473	137	156	275	206	–	275	–	–
750×250	30×10	762×273	559	460	132	150	264	198	–	264	–	–
800×800	32×32	820×820 813×813	597	597	–	–	405 402	303 302	–	405 402	–	–
800×750	32×30	813×762	597	584	–	–	386	290	–	386	–	–

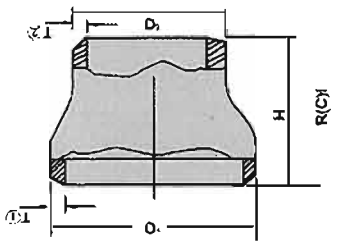
三通（等径、异径）
TEES (STRAIGHT AND REDUCING)

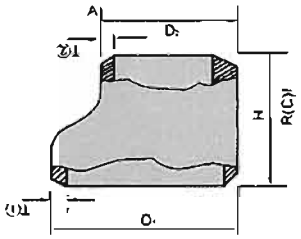


公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	C	M	sch5s	sch10s	sch20s	STD	sch40	XS	sch80	sch120
800 × 700	32 × 28	820 × 720 813 × 711	597	572	–	–	388 370	291 277	–	388 370	–	–
800 × 650	32 × 26	813 × 660	597	572	–	–	362	271	–	362	–	–
800 × 600	32 × 24	820 × 630 813 × 610	597	559	–	–	372 358	279 268	–	365 359	–	–
800 × 550	32 × 22	813 × 559	597	546	–	–	350	262	–	350	–	–
800 × 500	32 × 20	820 × 529 813 × 508	597	533	–	–	364 342	273 256	–	364 342	–	–
800 × 450	32 × 18	820 × 478 813 × 457	597	521	–	–	360 334	270 250	–	360 334	–	–
800 × 400	32 × 16	820 × 426 813 × 406.4	597	508	–	–	352 322	264 241	–	352 322	–	–
800 × 350	32 × 14	820 × 377 813 × 355.6	597	508	–	–	344 313	258 235	–	344 314	–	–
850 × 850	34 × 34	864 × 864	635	635	–	–	455	341	626	415	–	–
850 × 800	34 × 32	864 × 813	635	622	–	–	437	328	610	437	–	–
850 × 750	34 × 30	864 × 762	635	610	–	–	419	314	–	419	–	–
850 × 700	34 × 28	864 × 711	635	597	–	–	409	307	–	409	–	–
850 × 650	34 × 26	864 × 660	635	597	–	–	405	304	–	405	–	–
850 × 600	34 × 24	864 × 610	635	584	–	–	396	297	545	396	–	–
850 × 550	34 × 22	864 × 559	635	572	–	–	387	290	532	387	–	–
850 × 500	34 × 20	864 × 508	635	559	–	–	378	283	520	378	–	–
850 × 450	34 × 18	864 × 457	635	546	–	–	364	273	501	364	–	–
850 × 400	34 × 16	864 × 406.4	635	533	–	–	355	266	488	355	–	–
900 × 900	36 × 36	920 × 920 914 × 914	673	673	–	–	514 511	648 639	786 767	543 511	–	–
900 × 850	36 × 34	914 × 864	673	660	–	–	490	619	736	511	–	–
900 × 800	36 × 32	920 × 820 914 × 813	673	648	–	–	494 470	370 353	741 690	494 470	–	–
900 × 750	36 × 30	914 × 762	673	635	–	–	460	345	–	460	–	–
900 × 700	36 × 28	920 × 720 914 × 711	673	622	–	–	473 455	355 341	–	473 455	–	–
900 × 650	36 × 26	914 × 660	673	622	–	–	444	333	667	447	–	–
900 × 600	36 × 24	914 × 610	673	610	–	–	434	326	651	434	–	–
900 × 550	36 × 22	914 × 559	673	597	–	–	424	318	636	424	–	–
900 × 500	36 × 20	920 × 529 914 × 508	673	584	–	–	463 409	347 306	685 598	462 409	–	–
900 × 450	36 × 18	920 × 478 914 × 452	673	572	–	–	458 398	343 299	693 613	457 398	–	–
900 × 400	36 × 16	920 × 426 914 × 406.4	673	559	–	–	447 383	335 287	669 575	447 383	–	–

异径接头（同心、偏心）

REDUCERS (CONCENTRIC AND ECCENTRIC)

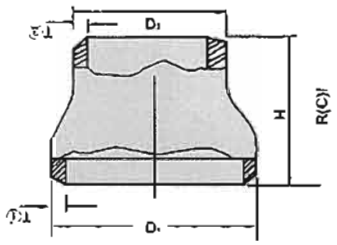


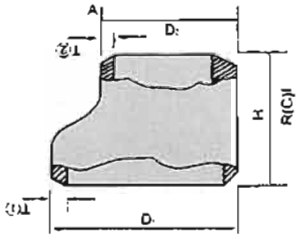


公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end	理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	H	sch5s	sch10s	sch20s	STD	sch40s	XS	sch80s	sch120s
20×15	3/4×1/2	25×18	38	0.03	0.04	0.049	0.05	0.05	0.07	0.07	–
		26.7×21.3		0.04	0.04	0.05	0.06	0.06	0.07	0.07	–
25×20	1×3/4	32×25	51	0.06	0.09	0.11	0.11	0.11	0.14	0.14	–
		33.4×26.7		0.06	0.10	0.11	0.11	0.11	0.15	0.15	–
25×15	1×1/2	32×18	51	0.05	0.08	0.09	0.09	0.09	0.12	0.12	–
		33.4×21.3		0.06	0.90	0.10	0.10	0.10	0.13	0.13	–
32×25	1.1/4×1	38×32	51	0.07	0.11	0.125	0.14	0.14	0.18	0.18	–
		42.2×33.4		0.08	0.12	0.137	0.15	0.15	0.20	0.20	–
32×20	1.1/4×3/4	38×25	51	0.06	0.10	0.125	0.13	0.13	0.16	0.16	–
		42.2×26.7		0.07	0.11	0.13	0.14	0.14	0.18	0.18	–
32×15	1.1/4×1/2	38×18	51	0.06	0.09	0.1	0.11	0.11	0.14	0.14	–
		42.2×21.3		0.07	0.11	0.125	0.12	0.13	0.17	0.17	–
40×32	1.1/2×1.1/4	45×38	64	0.11	0.17	0.19	0.22	0.22	0.29	0.29	–
		48.3×42.2		0.11	0.19	0.22	0.24	0.24	0.32	0.32	–
40×25	1.1/2×1	45×32	64	0.10	0.16	0.18	0.20	0.20	0.27	0.27	–
		48.3×33.4		0.10	0.17	0.20	0.22	0.22	0.29	0.29	–
40×20	1.1/2×3/4	45×25	64	0.09	0.15	0.1	0.18	0.18	0.24	0.24	–
		48.3×26.7		0.10	0.16	–	0.20	0.20	0.26	0.26	–
40×15	1.1/2×1/2	45×18	64	0.08	0.13	0.15	0.16	0.16	0.21	0.21	–
		48.3×21.3		0.09	0.15	0.17	0.19	0.19	0.24	0.24	–
50×40	2×1.1/2	57×45	76	0.16	0.26	0.33	0.35	0.35	0.47	0.47	–
		60.3×48.3		0.17	0.27	0.35	0.37	0.37	0.51	0.51	–
50×32	2×1.1/4	57×38	76	0.15	0.24	0.30	0.32	0.32	0.44	0.44	–
		60.3×42.2		0.16	0.26	0.33	0.35	0.35	0.48	0.48	–
50×25	2×1	57×32	76	0.14	0.22	0.27	0.30	0.30	0.41	0.41	–
		60.3×33.4		0.14	0.24	0.30	0.32	0.32	0.44	0.44	–
65×50	2.1/2×2	76×57	89	0.30	0.43	0.52	0.70	0.70	0.92	0.92	–
		73.0×60.3		0.30	0.43	0.53	0.70	0.70	0.92	0.92	–
65×40	2.1/2×1.1/2	76×45	89	0.28	0.40	0.5	0.64	0.64	0.84	0.84	–
		73.0×48.3		0.28	0.40	0.5	0.63	0.63	0.83	0.83	–
65×30	2.1/2×1.1/4	76×38	89	0.26	0.38	0.45	0.60	0.60	0.79	0.79	–
		73.0×42.2		0.27	0.38	0.45	0.60	0.60	0.79	0.79	–
65×25	2.1/2×1	76×32	89	0.25	0.36	0.4	0.57	0.57	0.75	0.75	–
		73.0×33.4		0.25	0.35	0.4	0.56	0.56	0.73	0.73	–
80×65	3×2.1/2	89×76	89	0.38	0.54	0.72	0.93	0.93	1.26	1.26	–
		88.9×73.0		0.37	0.53	0.7	0.91	0.91	1.23	1.23	–
80×50	3×2	89×57	89	0.34	0.48	0.64	0.83	0.83	1.11	1.11	–
		88.9×60.3		0.35	0.49	0.65	0.84	0.84	1.13	1.13	–
80×40	3×1.1/2	89×45	89	0.31	0.45	0.6	0.76	0.76	1.02	1.02	–
		88.9×48.3		0.32	0.45	0.6	0.78	0.78	1.05	1.05	–

异径接头（同心、偏心）

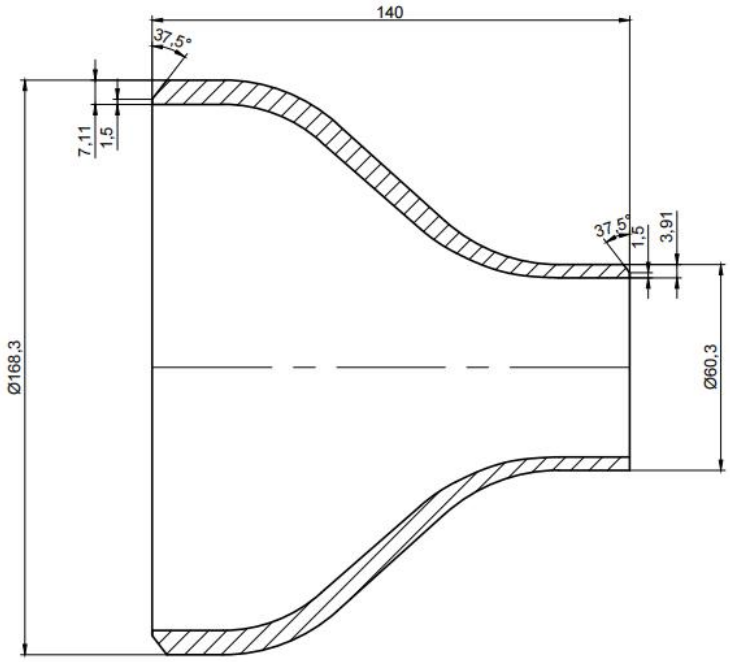
REDUCERS (CONCENTRIC AND ECCENTRIC)





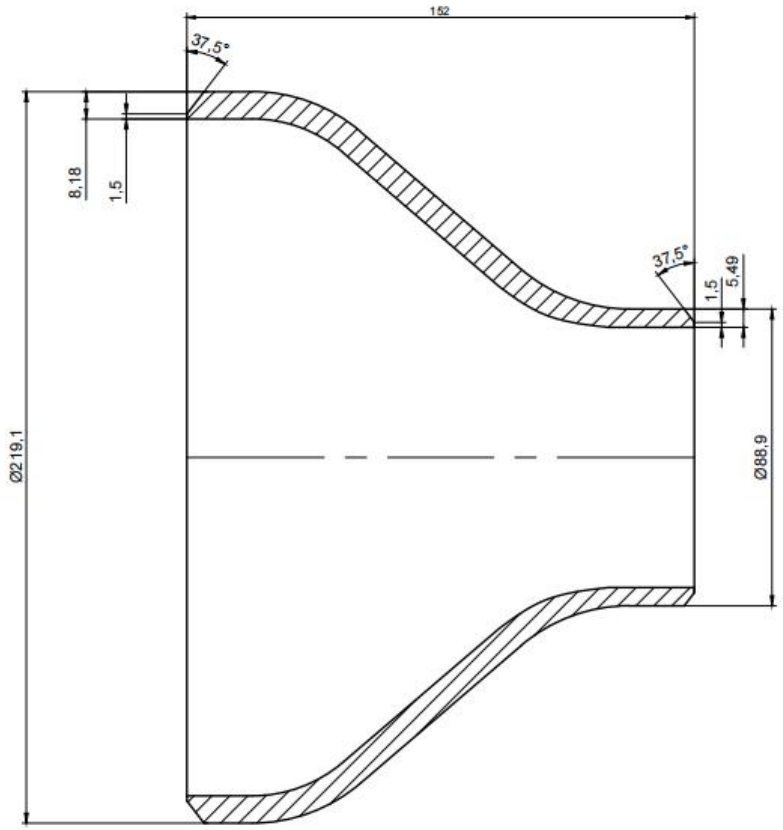
公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end	理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	H	sch5s	sch10s	sch20s	STD	sch40s	XS	sch80s	sch120s
90×80	3.1/2×3	101.6×88.9	102	0.50	0.72	1.09	1.29	1.77	1.77	–	–
90×65	3.1/2×2.1/2	101.6×73.0	102	0.46	0.66	1.0	1.12	1.12	1.63	1.63	–
90×50	3.1/2×2	101.6×60.3	102	0.43	0.62	0.95	1.10	1.10	1.51	1.51	–
90×40	3.1/2×1.1/2	101.6×48.3	102	0.41	0.58	–	1.03	1.03	1.40	1.40	–
100×90	4×3.1/2	114.3×101.6	102	0.57	0.82	–	1.55	1.55	2.41	2.41	2.38
100×80	4×3	108×89 114.3×88.9	102	0.52 0.54	0.75 0.77	– –	1.41 1.46	1.41 1.46	1.94 2.02	1.94 2.02	2.18 2.24
100×65	4×2.1/2	108×76 114.3×73.0	102	0.49 0.50	0.70 0.72	0.93 0.96	1.32 1.35	1.32 1.35	1.82 1.87	1.82 1.87	2.05 2.1
100×50	4×2	108×57 114.3×60.3	102	0.44 0.48	0.64 0.68	0.85 0.90	1.19 1.27	1.19 1.27	1.64 1.75	1.64 1.75	1.87 1.98
125×100	5×4	133×108 141.3×114.3	127	1.04 1.11	1.27 1.35	1.89 2.01	2.35 2.50	2.35 2.50	3.33 3.55	3.33 3.55	4.31 4.60
125×90	5×3.1/2	141.3×101.6	127	1.06	1.29	1.92	2.38	2.38	3.38	3.38	4.4
125×80	5×3	133×89 141.3×88.9	127	0.97 1.01	1.18 1.23	1.76 1.83	2.17 2.27	2.17 2.27	3.07 3.22	3.07 3.22	4.0 4.19
125×65	5×2.1/2	133×76 141.3×73.0	127	0.92 0.95	1.12 1.16	1.67 1.72	2.06 2.14	2.06 2.14	2.91 3.02	2.91 3.02	3.8 3.98
150×125	6×5	159×133 168.3×141.3	140	1.40 1.48	1.71 1.81	2.54 2.67	3.42 3.64	3.42 3.64	5.14 5.47	5.14 5.47	6.52 6.95
150×100	6×4	159×108 168.3×114.3	140	1.29 1.37	1.58 1.67	2.35 2.48	3.15 3.36	3.15 3.36	4.72 5.03	4.72 5.03	5.97 6.38
150×90	6×3.1/2	168.3×101.6	140	1.32	1.61	2.39	3.23	3.23	4.83	4.83	6.08
150×80	6×3	159×89 168.3×88.9	140	1.21 1.26	1.48 1.53	2.20 2.27	2.96 3.07	2.96 3.07	4.41 4.58	4.41 4.58	5.64 5.85
200×150	8×6	219×159 219.1×168.3	152	2.00 2.04	2.70 2.75	4.30 4.38	5.65 5.77	5.65 5.77	8.55 8.73	8.55 8.73	11.9 12.2
200×125	8×5	219×133 219.1×141.3	152	1.90 1.93	2.56 2.60	4.07 4.14	5.35 5.44	5.35 5.44	8.09 8.23	8.09 8.23	11.2 11.4
200×100	8×4	219×108 219.1×114.3	152	1.80 1.83	2.43 2.46	3.86 3.92	5.07 5.14	5.07 5.44	7.64 7.75	7.64 7.75	10.6 10.7
250×200	10×8	273×219	178	3.43	4.56	6.75	9.74	15.5	15.5	15.5	21.4
250×150	10×6	273×159 273.1×168.3	178	3.27 3.38	4.15 4.21	6.59 6.69	8.83 8.96	14.0 14.2	14.0 14.2	14.0 14.2	19.2 19.5
250×125	10×5	273×133 273.1×141.3	178	3.25 3.29	3.99 4.04	6.34 6.42	8.47 9.59	13.4 13.6	13.4 13.6	13.4 13.6	18.4 18.6

Item No.	ITEM	SIZE	SCH	MATERIAL	STANDARD	BEVEL END	QTY
A.2	Concentric Reducer	6"x2"	Sch-40	ASTM A234 WPB	ANSI B16.9	ANSI B16.25	200



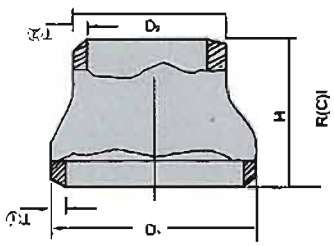
Description	Size	Material	Thicknsee	Standard	Qty				
Concentric Reduce	6"x2"	ASTM A234 WPB	SCH 40	ANSI B16.9	200				
HH18-231025		/							
	Singnature	Date	HH18-231025-01		Rev	Dimensional Unit (mm)	Hebei Haihao Group		
Design	Zhaokai Mi	2023.10.26			01				
Verify									
Approve			Scale: 1:1.2		A3				

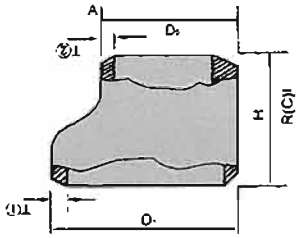
Item No.	ITEM	SIZE	SCH	MATERIAL	STANDARD	BEVEL END	QTY
A.4	Concentric Reducer	8"x3"	Sch-40	ASTM A234 WPB	ANSI B16.9	ANSI B16.25	10



Description	Size	Material	Thicknsee	Standard	Qty				
Concentric Reduce	8"x3"	ASTM A234 WPB	SCH 40	ANSI B16.9	10				
HH18-231025		/							
	Singnature	Date	HH18-231025-02		Rev	Dimensional Unit (mm)	Hebei Haihao Group		
Design	Zhaokai Mi	2023.10.26			01				
Verify									
Approve			Scale: 1:1.2		A3				

异径接头（同心、偏心）
REDUCERS (CONCENTRIC AND ECCENTRIC)

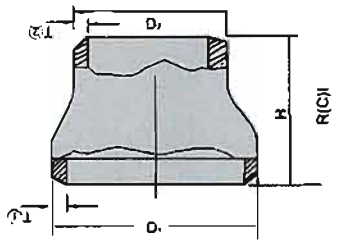


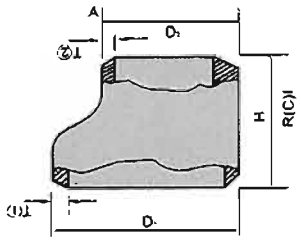


公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end	理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	H	sch5s	sch10s	sch20s	STD	sch40s	XS	sch80s	sch120s
300 × 250	12 × 10	325 × 273	203	5.98	6.89	9.38	13.9	15.0	18.3	24.8	35.1
		323.9 × 273.1		5.97	6.88	9.36	13.9	15.0	18.3	24.8	35.0
300 × 200	12 × 8	325 × 219	203	5.57	6.42	8.73	12.9	14.0	17.0	23.0	32.4
		323.9 × 219.1		5.56	6.41	8.70	12.9	13.9	17.0	23.0	32.3
300 × 150	12 × 6	325 × 159	203	5.17	5.95	8.10	12.0	12.9	15.7	21.2	29.6
		323.9 × 168.3		5.22	6.00	8.14	12.1	13.0	15.9	21.4	30.0
350 × 300	14 × 12	377 × 325	330	11.4	13.7	22.2	26.6	30.9	35.1	51.6	73.3
		355.6 × 323.9		11.0	13.2	21.4	25.6	29.8	33.8	49.8	70.6
350 × 250	14 × 10	377 × 273	330	10.6	12.8	20.7	24.8	28.8	32.7	48.0	68.0
		355.6 × 273.1		10.2	12.3	19.9	23.8	27.7	31.4	46.1	65.3
350 × 200	14 × 8	377 × 219	330	9.89	11.9	19.2	23.0	26.7	30.3	44.5	62.8
		355.6 × 219.1		9.46	11.4	18.4	22.0	25.5	29.0	42.5	59.9
350 × 150	14 × 6	377 × 159	330	9.63	11.0	17.75	21.1	24.5	27.8	40.7	57.3
		355.6 × 168.3		9.22	10.5	16.95	20.2	23.5	26.6	38.9	54.7
400 × 350	16 × 14	426 × 377	356	14.9	16.9	27.4	32.9	43.5	43.5	71.7	101
		406.4 × 355.6		14.1	16.1	26.0	31.2	41.2	41.2	67.9	95.4
400 × 300	16 × 12	426 × 325	356	14.0	16.0	25.9	31.0	40.9	40.9	67.4	94.7
		406.4 × 323.9		13.6	15.4	25.0	29.9	39.5	39.5	65.1	91.3
400 × 250	16 × 10	426 × 273	356	13.2	15.0	24.3	29.1	38.4	38.4	63.1	88.5
		406.4 × 273.1		12.7	14.5	23.5	28.1	37.1	37.1	60.9	85.3
400 × 200	16 × 8	426 × 219	356	12.4	14.1	22.8	27.3	36.0	36.0	59.1	82.6
		406.4 × 219.1		11.9	13.6	21.9	26.2	34.6	34.6	56.7	79.2
400 × 150	16 × 6	426 × 159	356	11.5	13.1	21.18	25.3	33.3	33.3	54.5	75.9
		406.4 × 168.3		9.96	12.7	20.45	24.5	32.3	32.3	52.7	73.4
450 × 400	18 × 16	478 × 426	381	17.9	20.4	33.1	39.7	58.8	52.6	96.1	137
		457 × 406.4		17.1	19.5	31.6	37.9	56.1	50.1	91.6	131
450 × 350	18 × 14	478 × 377	381	17.1	19.4	31.5	37.7	55.8	49.9	91.1	130
		457 × 355.6		16.2	18.5	29.9	35.8	53.0	47.4	86.3	123
450 × 300	18 × 12	478 × 325	381	16.2	18.5	29.9	35.8	53.0	47.4	86.3	123
		457 × 323.9		15.7	17.9	28.9	34.7	51.2	45.8	83.4	119
450 × 250	18 × 10	478 × 273	381	15.4	17.6	28.4	34.1	50.3	45.0	81.8	116
		457 × 273.1		14.8	16.9	27.3	32.8	48.4	43.3	78.6	112
450 × 200	18 × 8	478 × 219	381	14.5	16.5	36.7	32.0	47.3	42.3	76.7	109
		457 × 219.1		14.0	15.9	35.7	30.8	45.5	40.7	73.7	104
500 × 450	20 × 18	529 × 478	508	30.4	35.2	59.1	59.1	92.5	78.2	156	213
		508 × 457		29.1	33.7	56.6	56.6	88.6	74.9	150	213
500 × 400	20 × 16	529 × 426	508	28.9	33.4	56.2	56.2	87.9	74.4	149	211
		508 × 406.4		27.7	32.0	53.8	53.8	84.1	71.1	142	201
500 × 350	20 × 14	529 × 377	508	27.6	31.9	53.6	53.6	83.8	70.9	142	200
		508 × 355.6		26.3	30.4	51.0	51.0	79.7	67.4	135	190
500 × 300	20 × 12	529 × 325	508	26.2	30.3	50.8	50.8	79.4	67.2	134	189
		508 × 323.9		25.4	29.4	49.3	49.3	77.0	65.1	130	183

异径接头（同心、偏心）

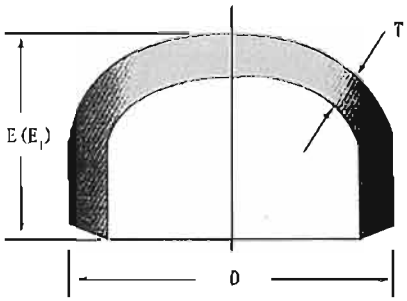
REDUCERS (CONCENTRIC AND ECCENTRIC)





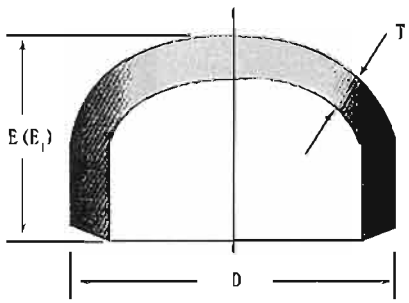
公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end	理论重量 kg/pcs approx weight							
DN	INCH	$D_1 \times D_2$	H	sch5s	sch10s	sch20s	STD	sch40s	XS	sch80s	sch120s
500×250	20×10	529×273 508×273.1	508	24.8 24.0	28.7 27.8	48.2 46.7	48.2 46.7	75.2 72.8	63.7 61.7	127 123	179 173
500×200	20×8	529×219 508×219.1	508	23.5 22.7	27.1 26.2	45.5 43.9	45.5 43.9	70.9 68.5	60.1 58.0	119 115	168 162
550×500	22×20	559×508	508	32.1	37.3	62.7	62.7	–	83.0	182	255
550×450	22×18	559×457	508	30.8	35	59.9	59.9	–	79.3	174	243
550×400	22×16	559×406.4	508	29.4	34.0	57.2	57.2	–	75.7	165	219
550×350	22×14	559×355.6	508	28.0	32.5	54.5	54.5	–	72.1	157	286
600×550	24×22	610×559	508	28.0	46.8	68.8	68.8	–	91.2	215	311
600×500	24×20	630×529 610×508	508	40.4 39.2	46.2 44.9	68.0 66.0	– –	123 119	90.1 87.4	212 206	307 298
600×450	24×18	630×478 610×457	508	39.1 37.6	44.7 43.1	65.8 63.6	65.8 63.3	119 114	87.1 83.9	205 197	296 284
600×400	24×16	630×426 610×406.4	508	37.5 36.1	43.0 41.3	63.1 60.7	63.1 60.7	114 110	83.6 80.4	197 189	283 272
650×600	26×24	660×610	610	–	–	119	89.8	–	119	–	–
650×550	26×22	660×559	610	–	–	114	86.3	–	114	–	–
650×500	26×20	660×508	610	–	–	110	83.0	–	110	–	–
650×450	26×18	660×457	610	–	–	105	79.0	–	105	–	–
700×650	28×26	711×660	610	–	–	129	97.1	–	129	–	–
700×600	28×24	720×630 711×610	610	– –	– –	127 124	95.7 93.6	–	127 124	–	–
700×550	28×22	711×559	610	–	–	120	90.4	–	120	–	–
750×700	30×28	762×711	610	–	–	139	104	–	139	–	–
750×650	30×26	762×660	610	– –	– –	133	101	–	133	–	–
750×600	30×24	762×610	610	66.4	82.7	130	97.8	–	130	–	–
750×550	30×22	762×559	610	63.9	80.0	125	94.5	–	125	–	–
800×750	32×30	813×762	610	–	–	148	112	–	148	–	–
800×700	32×28	820×720 813×711	610	– –	– –	145 144	109 108	–	145 144	–	–
800×650	32×26	813×660	610			139	105	–	139	–	–
800×600	32×24	820×720 813×610	610	– –	– –	138 135	104 102	–	138 135	–	–
850×800	34×32	864×813	610	–	–	158	119	–	158	–	–
850×750	34×30	864×762	610	–	–	153	116	–	153	–	–
850×700	34×28	864×711	610	–	–	149	112	–	149	–	–
850×650	34×26	864×660	610	–	–	145	109	–	145	–	–
900×850	36×34	914×864	610	–	–	168	126	–	168	–	–
900×800	36×32	920×820 914×813	610	– –	– –	164 163	124 123	–	164 163	–	–
900×750	36×30	914×762	610	–	–	159	120	–	159	–	–
900×700	36×28	920×720 914×711	610	– –	– –	156 155	118 117	–	156 155	–	–

管帽
CAPS



公称直径 Norminal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	CD	E (E_1)	E (E_2)	sch5s	sch10s	sch20s	STD	sch40s	XS	sch80s	sch120s
15	1/2	18 21.3	25	–	0.019 0.022	0.024 0.028	0.027 0.033	0.031 0.037	0.031 0.037	0.042 0.050	0.042 0.050	0.057 0.063
20	3/4	25 26.7	25	–	0.027 0.029	0.033 0.035	0.038 0.041	0.045 0.048	0.045 0.048	0.060 0.065	0.060 0.065	0.079 0.086
25	1	32 33.7	38	–	0.049 0.052	0.083 0.087	0.091 0.093	0.101 0.106	0.101 0.106	0.136 0.143	0.136 0.143	0.176 0.182
32	1.1/4	38 42.4	38	–	0.058 0.065	0.099 0.110	0.111 0.125	0.126 0.141	0.126 0.141	0.173 0.193	0.173 0.193	0.213 0.237
40	1.1/2	45 48.3	38	–	0.071 0.076	0.118 0.127	0.138 0.148	0.158 0.169	0.158 0.169	0.218 0.234	0.218 0.234	0.294 0.323
50	2	57 60.3	38	44	0.094 0.099	0.156 0.165	0.189 0.200	0.221 0.234	0.221 0.234	0.313 0.331	0.313 0.331	0.387 0.426
65	2.1/2	76 73.0	38	51	0.167 0.161	0.241 0.232	0.391 0.312	0.409 0.393	0.409 0.393	0.555 0.543	0.555 0.543	0.676 0.634
80	3	89	51	64	0.254	0.367	0.490	0.660	0.660	0.917	0.917	1.469
90	3.1/2	101.6	64	76	0.355	0.512	0.739	0.965	0.965	1.36	1.36	1.891
100	4	108 114.3	64	76	0.387 0.410	0.561 0.594	0.810 0.882	1.11 1.17	1.11 1.17	1.58 1.67	1.58 1.67	2.01 2.16
125	5	133 139.7 141.3	76	89	0.769 0.808 0.817	0.945 0.933 1.00	1.339 1.421 1.473	1.82 1.91 1.93	1.82 1.91 1.93	2.65 2.78 2.81	2.65 2.78 2.81	3.52 3.70 3.74
150	6	159 168.3 165.2	89	102	1.07 1.13 1.11	1.31 1.39 1.36	1.843 2.00 1.97	2.74 2.90 2.85	2.74 2.90 2.85	4.22 4.47 4.39	4.22 4.47 4.39	5.50 5.82 5.72
200	8	219 216.1	102	127	1.76 1.74	2.38 2.35	4.03 3.98	5.19 5.13	5.19 5.13	8.05 7.95	8.05 7.95	11.6 11.5
250	10	273 267.4	127	152	3.36 3.29	4.14 4.05	6.27 6.14	9.15 8.96	9.15 8.96	12.5 12.2	16.8 16.4	23.9 23.4

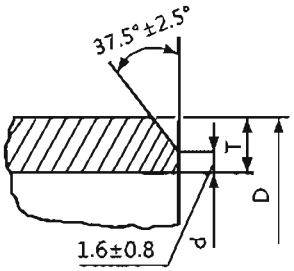
管帽
CAPS



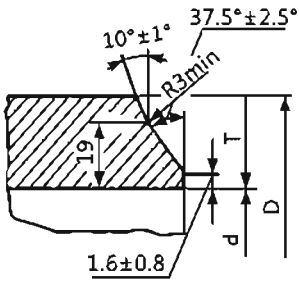
公称直径 Nominal diameter		外径mm Outside	中心距至端面的距离 center to end		理论重量 kg/pcs approx weight							
DN	INCH	CD	F	B	sch5s	sch10s	sch20s	STD	sch40s	XS	sch80s	sch120s
300	12	325 323.9 318.5	152	178	5.12 5.11 5.02	6.40 6.39 6.27	9.90 9.43 9.40	13.5 13.3 13.2	14.6 14.4 14.2	17.9 17.7 17.3	28.3 27.1 26.8	94.0 91.0 90.5
350	14	377 355.6	165	191	6.00 5.66	8.46 7.98	14.0 13.2	16.9 15.9	19.9 18.8	22.5 21.2	38.5 35.2	105 99.0
400	16	426 406.4	178	203	6.93 6.60	7.91 7.53	17.4 12.5	21.0 20.0	28.2 26.7	28.0 26.7	52.0 49.1	116 111
450	18	478 457.2	203	229	7.90 7.52	9.01 8.58	22.3 21.2	26.9 25.6	43.8 41.4	35.8 34.1	76.1 69.1	131 125
500	20	529 508.0	254	254	10.5 10.1	12.02 11.7	33.2 31.9	33.2 31.9	57.6 54.0	44.2 42.5	103 93.7	141 136
550	22	559	267	–	12.1	22.6	38.8	38.8	78.3	51.7	116	168
600	24	630 610	267	305	14.8 14.3	26.4 26.1	47.4 45.1	46.5 45.1	92.3 90.1	61.9 60.1	177 160	172 164
650	26	660	267	–	23.3	26.9	67.3	50.5	103.5	67.3	–	–
700	28	720 711	267	–	27.1 38.7	32.4 49.7	75.9 94.9	56.9 56.2	151.1 121.3	75.6 74.9	–	–
750	30	762	267	–	41.4	51.7	82.8	62.1	117.3	82.8	–	–
800	32	820 813	267	–	43.4 43.1	58.3 57.7	92.0 91.2	70.6 70.0	127 116	92.0 91.2	–	–
850	34	864	267	–	57.2	68.5	105	78.7	144	105	–	–
900	36	920 914	267	–	60.3 59.1	74.6 72.1	115 114	86.3 85.7	172 171	115 114	–	–

ASME/ANSI B16.9、B16.28规定的对焊管件焊端坡口的结构

End Preperation of Butt-Welding Fittings to ASME/ANSI B16.9、B16.28



(a)壁厚≤22
Wall Thickness≤22



(b)壁厚 > 22
Wall Thickness > 22

ASME/ANSI B16.9、B16.28及MSS-43中对焊管件尺寸的极限偏差

Tolerances for Butt-Welding Fittings

项目 Items	管件种类 Type Of Pipe	公称通径DN(In.)Norminal Pipe Size							
		1/2~2 1/2	3~3 1/2	4	5~8	10~18	20~24	26~30	32~48
		极限偏差Max.Deviation							
端部外径D、D_1、D_2 Outside Diameter At Bevel	所有管件 ALL Tubing	+1.52 −0.76	±1.52		+2.29 −1.52	+4.06 −3.05	+6.35 −4.83		
端部内径d Inside Diameter At Bevel		±0.76	±1.52			±3.05	±4.83		
壁厚T、T_1、T_2 Wall Thickness		不小于公称壁厚的87.5% Not Less Than 87.5% Of Nominal Wall Thickness							
中心至端面A、B、C、M Center To End	45°、90°弯头、三通、四通 45°、90° elbows、tees、crosses	±1.52				±2.29		±3.05	±4.83.
中心至中心P Center To Center	180°弯头 180° elbows	±6.35				±9.65		-	
背面到端面K Back To End		±6.35						-	
U		±0.76				±1.52		-	
长度L Length	异径管、翻边短节 Reducers、lap joint stub ends	±1.52				±2.29		±4.83.	
全长E、E Length	管帽 Tube cap	±3.05			±6.35			±9.65	
搭接直径G1 Diameter of Lap	翻边短节 Lap Joint Stub Ends	0 −0.76				0 −1.52		-	
搭接厚度 Thickness of Lap		+1.52 0						-	
圆角半径R Radius of An arc		0 −0.76		0 −1.52				-	

注：

1)端部内经除非用户有特殊要求，应优先保证端部外径和公称壁厚的极限偏差。

2)端部内经为端部外径与两倍的公称壁厚的差。

Note:

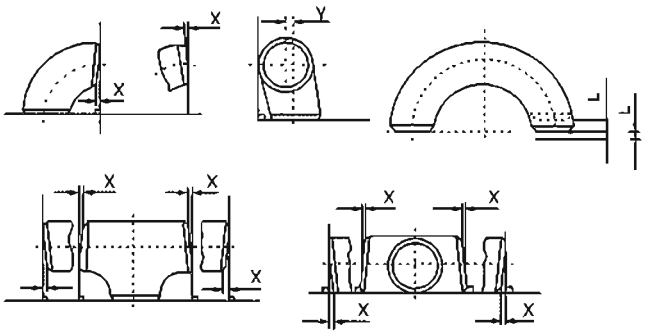
1)About the inside diameter at bevel.we should guarantee the tolerances of out side diameter at bevel and nominal wall thickness in priority except the special requirement.

2)The inside diameter at bevel is the mathematics difference botween outside diameter at bevel and double norminal wall thickness.

ASME/ANSI B16.9、B16.28中对焊管件的形位公差

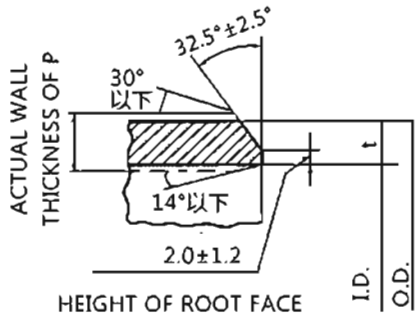
Angularity Tolerance of Butt-Welding Fittings

公称通径 Norminal Pipe Size DN(in.)	弯头、三通、四通 Elbows、Tees、Crosses	
	X	Y
1/2~4	0.76	1.52
5~8	1.52	3.05
10~12	2.29	4.83
14~16	2.29	6.35
18~24	3.05	9.65
26~30	48.3	9.65
32~42		12.70
44~48		19.05



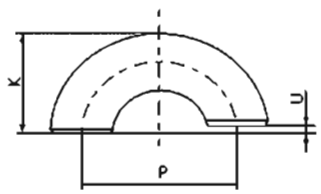
外形尺寸公差和弯曲形状

Tolerance of bimensions and Shapes of bevelling

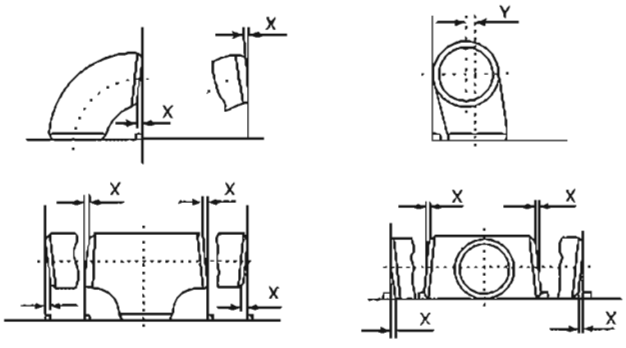


ITEMS	SORTS OF FITTINGS	JIS B 2311						
		NOMINAL DIA.						
		A	15–65	80–100	125–200	250–450	500–600	650–750	800–1200
		B	1/2–2 1/2	3–4	5–8	10–18	20–24	26–30	32–48
		TOLERANCE							
O、D、OF WELDING END	ALL FITTINGS	±2.0		±2.5	±3.5	+5.0 −2.8	+6.4 −2.8		
I、D、OF WELDING END		±2.0		±2.5	±3.5	±4.5	±4.8		
WALL THICKNESS		+NOTSPECIFIED、−15%							
ANGLE OF BEVELLING		PLEASE REFER TO PART DRAWING BELOW							
HEIGHT OF ROOT FACE		PLEASE REFER TO PART DRAWING BELOW							
DIMENSION FROM CENTER TO END(H、F)	45° 90° ELBOW	±2.0			±3.2				±4.8
DIMENSION FROM CENTER TO CENTER(P)	180° ELBOW	±6.4			±9.5		−		
DIMENSION FROM CENTER TO FACE(K)		±6.4					−		
ALIGNMENT OF ENDS(U)		1.6			3.2		−		
DIMENSION FROM FACE TO FACE(H)	REDUCER	±2.0			±3.2			±4.8	
DIMENSION FROM CENTER TO END(C、M)	TEE	±2.0			±3.2				±4.8
DIMENSION FROM BACK TO FACE(E、E1)	CAP	±3.2			±6.4			−	
PERIPHERAL LENGHT OF END	ALL FITTINGS	−						±0.5%	

GIGN OF 180° ELBOW

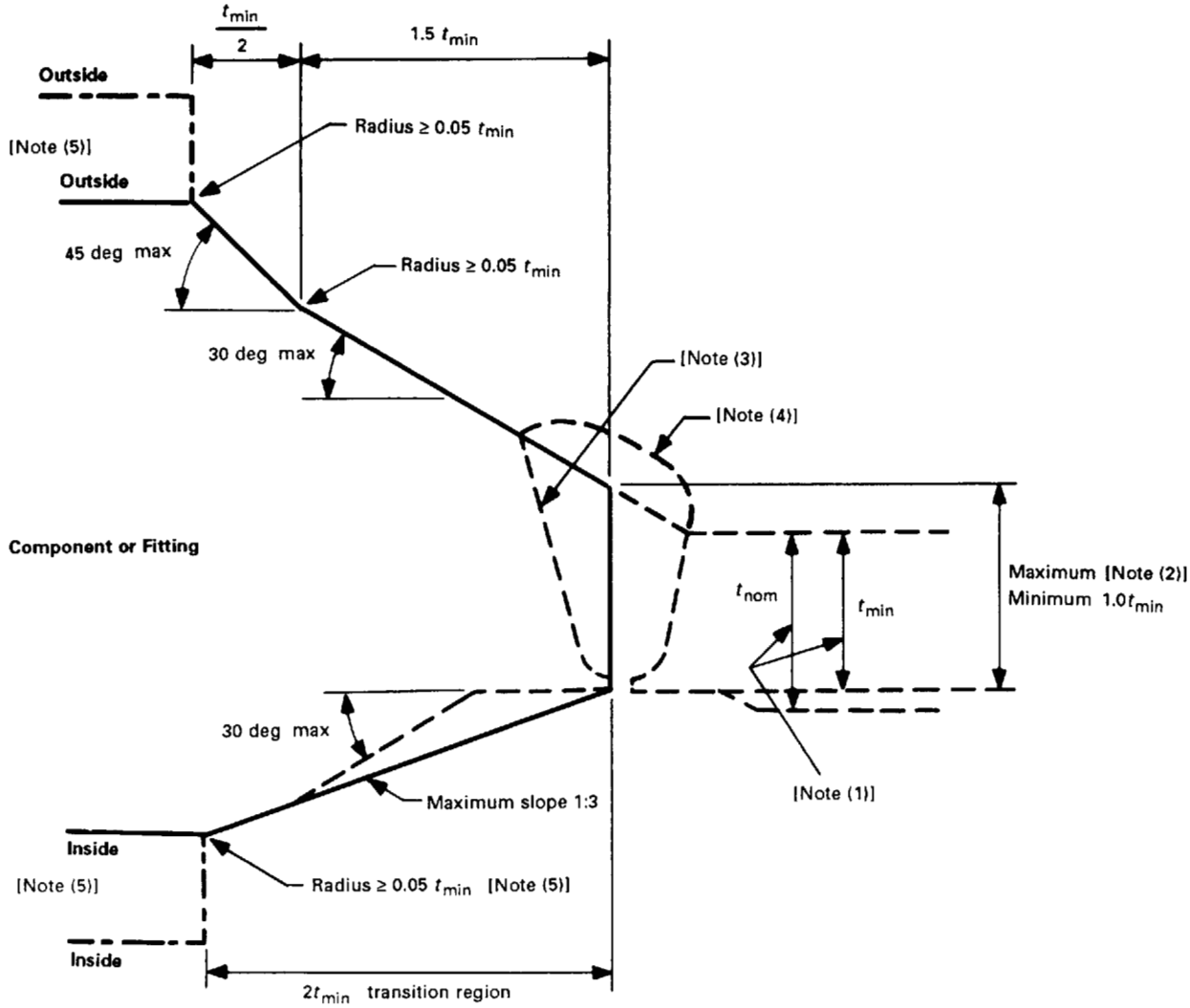


TOLERANCE OF SQVARENESS AGAINST AXIS OF FITTING



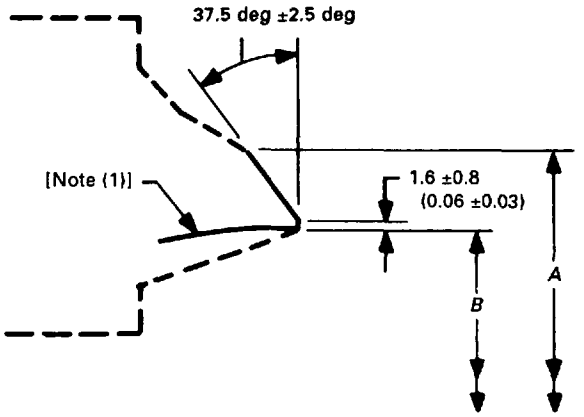
SHAPE AND DIMENSIONS OF BEVELLING

ITEMS	SORTS OF FITTINGS	NOMINAL DIA.							
		A	15–100	125–200	250–300	350–400	450–600	650–750	800–1050	1100–1200
		B	1/2–4	5–8	10–12	14–16	18–24	26–30	32–42	44–48
OFE ANGLE (X) ……	ELBOW,REDVER,TEE	0.8		1.6	2.4		3.2	4.8		
OFF PLAIN (Y)	ELBOW,TEE	1.6		3.2	4.8	6.4	9.5		12.7	19.1

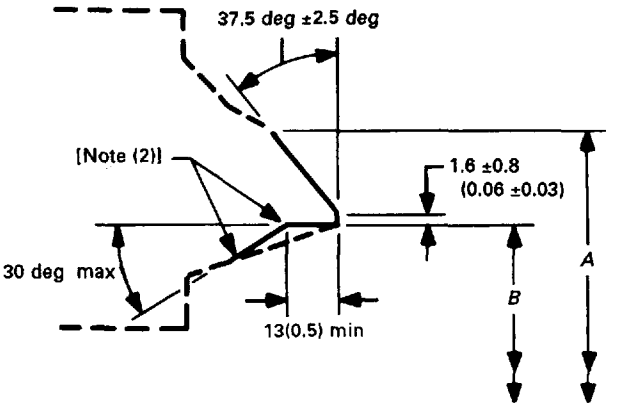


NOTES:
(1) The value of t_{min} is whichever of the following is applicable:
  (a) the minimum ordered wall thickness of the pipe;
  (b) 0.875 times the nominal wall thickness of pipe ordered to a pipe schedule wall thickness that has an under-tolerance of 12.5%;
  (c) the minimum ordered wall thickness of the cylindrical welding end of a component or fitting (or the thinner of the two) when the joint is between two components.
(2) The maximum thickness at the end of the component is:
  (a) the greater of t_{min} + 4 mm (0.16 in.) or 1.15t_{min} when ordered on a minimum wall basis;
  (b) the greater of t_{min} + 4 mm (0.16 in.) or 1.10t_{nom} when ordered on a nominal wall basis.
(3) Weld bevel shown is for illustration only.
(4) The weld reinforcement permitted by applicable code may lie outside the maximum envelope.
(5) Where transitions using maximum slope do not intersect inside or outside surface, as shown by phantom outlines, maximum slopes shown or alternate radii shall be used.

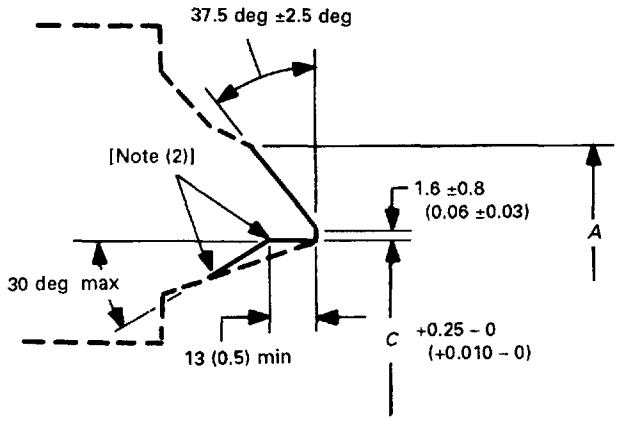
FIG. 1 MAXIMUM ENVELOPE FOR WELDING END TRANSITIONS



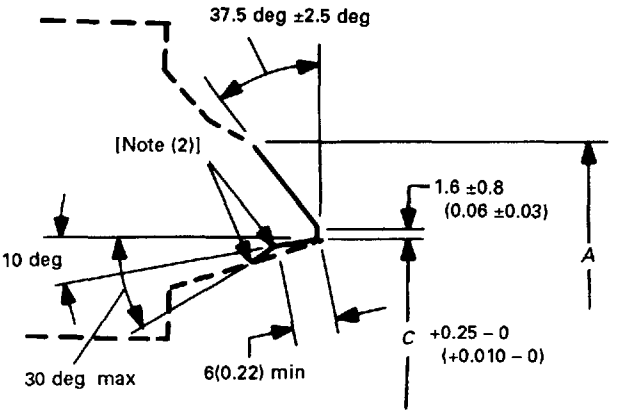
(a) Welding End Detail for Joint Without Backing Ring



(b) Welding End Detail for Joint Using Split Rectangular Backing Ring



(c) Welding End Detail for Joint Using Continuous Rectangular Backing Ring

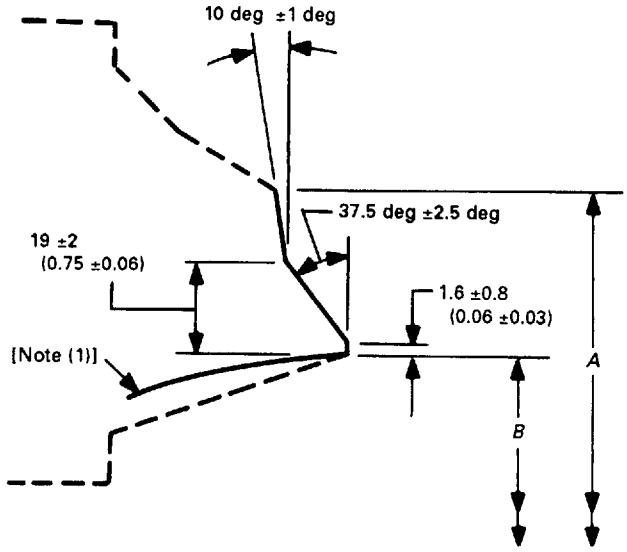


(d) Welding End Detail for Joint Using Continuous Tapered Backing Ring

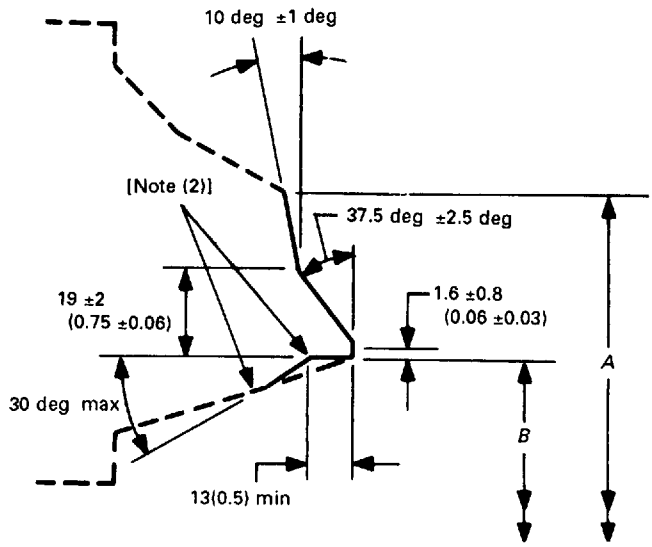
GENERAL NOTES:
(a) Broken lines denote maximum envelope for transitions from welding bevel and root face into body of component. See Fig. 1 for details.
(b) See Section 5 for tolerances other than those given in these sketches.
(c) Purchase order must specify contour of any backing ring to be used.
(d) Linear dimensions are in millimeters with inch values in parentheses.

NOTES:
(1) Internal surface may be as-formed or machined for dimension *B* at root face. Contour within the envelope shall be in accordance with Section 2.
(2) Intersections should be slightly rounded.

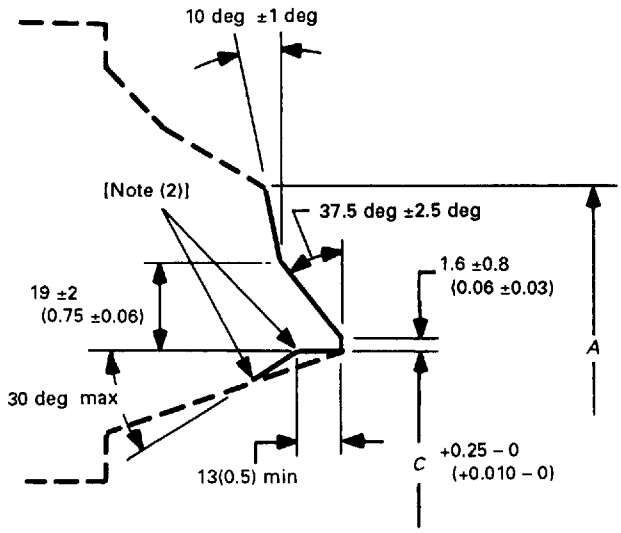
FIG. 2 WELD BEVELS FOR WALL THICKNESS NOT OVER 22 mm (0.88 in.)



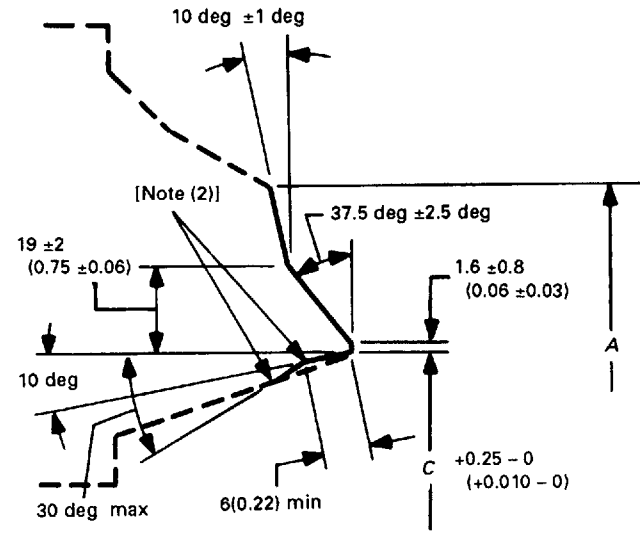
(a) Welding End Detail for Joint Without Backing Ring



(b) Welding End Detail for Joint Using Split Rectangular Backing Ring



(c) Welding End Detail for Joint Using Continuous Rectangular Backing Ring



(d) Welding End Detail for Joint Using Continuous Tapered Backing Ring

GENERAL NOTES:
(a) Broken lines denote maximum envelope for transitions from welding groove and root face into body of components. See Fig. 1 for details.
(b) See Section 5 for tolerances other than those given in these sketches.
(c) Purchase order must specify contour of any backing ring to be used.
(d) Linear dimensions are in millimeters with inch values in parentheses.

NOTES:
(1) Internal surface may be as-formed or machined for dimension *B* at root face. Contour within the envelope shall be in accordance with Section 2.
(2) Intersections should be slightly rounded.

FIG. 3 WELD BEVEL DETAILS FOR WALL THICKNESS OVER 22 mm (0.88 in.)

(c) Components having nominal wall thicknesses greater than 22 mm (0.88 in.) shall have compound angle bevels as illustrated in Fig. 3.

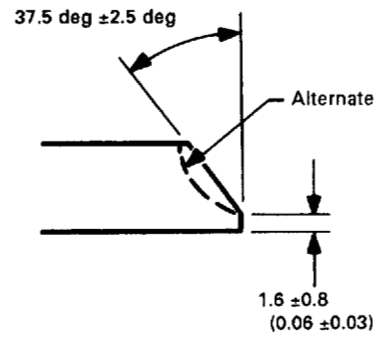
3.2 Bevels for GTAW Root Pass

(a) Components having nominal wall thicknesses of 3 mm (0.12 in.) and less shall have ends cut square or slightly chamfered.

(b) Components having nominal wall thicknesses over 3 mm (0.12 in.) to 10 mm (0.38 in.) inclusive shall have $37\frac{1}{2}$ deg $\pm$ $2\frac{1}{2}$ deg bevels or slightly concave bevels. See Fig. 4.

(c) Components having nominal wall thicknesses over 10 mm (0.38 in.) to 25 mm (1.0 in.) inclusive shall have bevels as shown in Fig. 5.

(d) Components having nominal wall thicknesses greater than 25 mm (1.0 in.) shall have bevels as shown in Fig. 6.



GENERAL NOTES:
(a) This detail applies for gas tungsten arc welding (GTAW) of the root pass where nominal wall thickness is over 3 mm (0.12 in.) to 10 mm (0.38 in.) inclusive.
(b) Linear dimensions are in millimeters with inch values in parentheses.

FIG. 4 WELD BEVEL DETAILS FOR GTAW ROOT PASS [Wall Thickness Over 3 mm (0.12 in.) to 10 mm (0.38 in.), Inclusive]

4 PREPARATION OF INSIDE DIAMETER OF WELDING END

4.1 General

Preparation of the inside diameter at the end of a component shall be in accordance with one of the following, as specified by the purchaser.

(a) Components to be welded without backing rings shall meet the requirements of the standard or specification for the component.

(b) Components to be welded using split or noncontinuous backing rings shall be contoured with a cylindrical surface at the end as shown in Fig. 2, sketch (b) and Fig. 3, sketch (b). If the backing ring contour is other than rectangular, details must be furnished by the purchaser.

(c) Components to be welded using solid or continuous backing rings shall be contoured with a cylindrical or tapered surface at the end as specified by the purchaser. End preparation is illustrated in Fig. 2, sketch (c) and Fig. 3, sketch (c) for rectangular ends and in Fig. 2, sketch (d) and Fig. 3, sketch (d) for tapered ends.

(d) Components to be welded using consumable insert rings or GTAW root pass shall be contoured with a cylindrical surface at the end as shown in Figs. 4, 5, and 6.

4.2 Dimension *C*

Values for dimension C shown in Fig. 2, sketches (c) and (d); Fig. 3, sketches (c) and (d); and Figs. 5 and 6 are tabulated in Table 1 for DN 65 through 900 (NPS $2\frac{1}{2}$ through 36).

Dimensions for other sizes and/or wall thicknesses can be determined by the following formulas:

$$C = A - 0.79 - 1.75t - 0.25 \text{ mm}$$

$$(C = A - 0.031 - 1.75t - 0.010 \text{ in.})$$

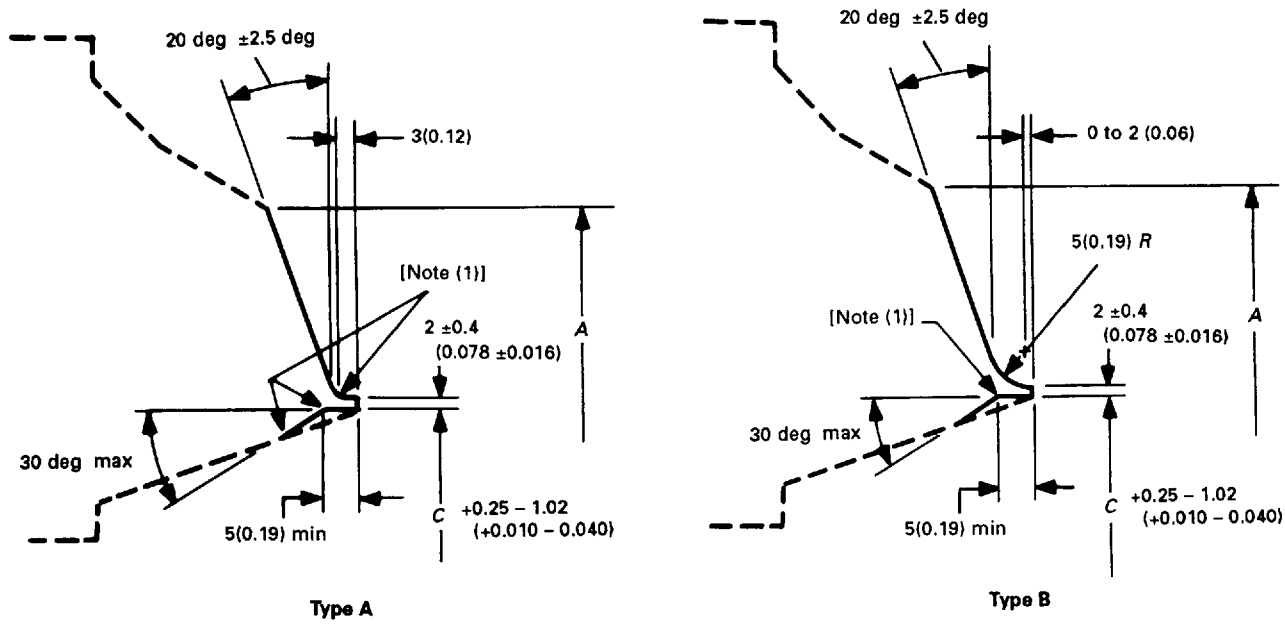
where

A = nominal O.D. of pipe (see column 3 in Tables 1 and A1, taken from ASME B36.10M)

0.79 (0.031) = minus tolerance on O.D. of pipe, mm (in.), as covered by ASTM specifications having the more restrictive requirements such as A 106, A 335, etc.

1.75 = minimal wall of $87\frac{1}{2}$% of nominal wall (permitted by ASTM specification having the more restrictive requirements such as A 106, A 335, etc.) multiplied by 2 to convert into terms of diameter

t = nominal wall thickness of pipe, mm (in.)



GENERAL NOTES:
(a) This detail applies for gas tungsten arc welding (GTAW) of the root pass where nominal wall thickness is over 10 mm (0.38 in.) to 25 mm (1.0 in.) inclusive.
(b) Broken lines denote maximum envelope for transitions from welding groove and land into body of component. See Fig. 1 for details.
(c) See Section 5 for tolerances other than those given in these sketches.
(d) Linear dimensions are in millimeters with inch values in parentheses.

NOTE:
(1) Inside corners should be slightly rounded.

FIG. 5 WELD BEVEL DETAILS FOR GTAW ROOT PASS [Wall Thickness Over 10 mm (0.38 in.) to 25 mm (1.0 in.), Inclusive]

0.25
(0.010) = plus machining tolerance on Bore *C*, mm (in.)

4.3 Exceptions

(a) For pipe or tubing varying from the ASTM A 106 and A 335 types, having different wall thickness and/or outside diameter tolerances (such as forged and bored pipe), the foregoing formulas may be inapplicable.

(b) For components in smaller sizes and lower schedule numbers, it may be necessary to deposit weld metal on the inside diameter or use thicker wall materials in order to machine the backing ring while maintaining required wall thickness. This condition may also arise when using material whose nominal dimensions indicate sufficient metal but whose actual inside diameter (I.D.), considering tolerances, is large enough to require additional metal.

5 TOLERANCES (See Figs. 2, 3, 5, and 6)

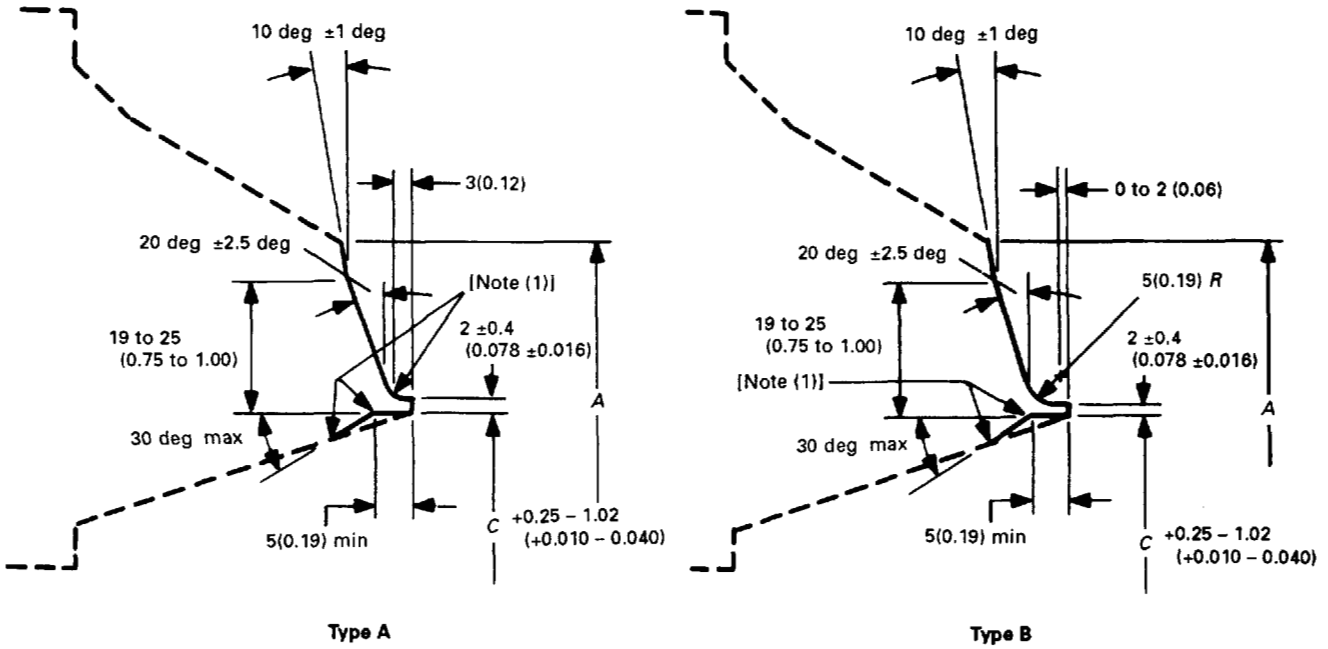
5.1 Dimension *B*

Values for the I.D. at the welding end [see dimension *B*, Fig. 2, sketches (a) and (b); and Fig. 3, sketches (a) and (b)] shall be as specified in the applicable standard or specification for the component.

5.2 Welding Bevels, Root Face, and Dimension *C*

Values of welding bevels, root face, and dimension *C* shall be as indicated in Figs. 2, 3, 4, 5, and 6.

Large diameter pipe and fittings with a relatively thin wall have a tendency to spring out-of-round after removal from the machining fixture. For this reason, the measured diameters may vary with orientation. A tolerance of +0.25 mm (+0.010 in.) shall apply to the average diameter.



GENERAL NOTES:
(a) This detail applies for gas tungsten arc welding (GTAW) of root pass where nominal wall thickness is greater than 25 mm (1.0 in.).
(b) Broken lines denote maximum envelope for transitions from welding groove and land into body of component. See Fig. 1 for details.
(c) See Section 5 for tolerances other than those given in these sketches.
(d) Linear dimensions are in millimeters with inch values in parentheses.

NOTE:
(1) Inside corners should be slightly rounded.

FIG. 6 WELD BEVEL DETAILS FOR GTAW ROOT PASS [Wall Thickness Over 25 mm (1.0 in.)]

5.3 Dimension *A*

Dimension *A* is the nominal outside diameter of the component at the welding end.

5.3.1 Valves (Column 4 of Tables 1 and A1)

Nominal Size	Tolerance
≤ DN 125 (NPS 5)	+2.4 mm (0.09 in.) –0.8 mm (0.03 in.)
≥ DN 150 (NPS 6)	+4.0 mm (0.16 in.) –0.8 mm (0.03 in.)

5.3.2 Other Components. Dimension *A* values for other components shall be as specified in the applicable standard or specification for the component.

5.4 Wall Thickness

The maximum thickness, t_{max}, at the end of the component is:

(a) greater of t_{min} + 4 mm (0.16 in.) or $1.15t_{min}$ when ordered on a minimum wall basis;

(b) greater of t_{min} + 4 mm (0.16 in.) or $1.10t_{nom}$ when ordered on a nominal wall basis (see Fig. 1).

The minimum thickness, t_{min}, shall be as specified in the applicable standard or specification for the component (see Figs. 2, 3, 5, and 6).

TABLE 1 DIMENSIONS OF WELDING ENDS
(See Figs. 1 to 6, Inclusive)

Nominal Pipe Size (DN)	Schedule No. [Note (1)]	O.D. at Welding Ends		B	C [Note (3)]	t
		Wrought or Fabricated Components, A [Note (1)]	Cast Steel Valves, A [Note (2)]			
65	40	73.0	75	62.5	62.93	5.16
	80	73.0	75	59	59.69	7.01
	160	73.0	75	54	55.28	9.53
	XXS	73.0	75	45	47.43	14.02
80	40	88.9	91	78	78.25	5.49
	80	88.9	91	73.5	74.53	7.62
	160	88.9	91	66.5	68.38	11.13
	XXS	88.9	91	58.5	61.19	15.24
90	40	101.6	105	90	90.52	5.74
	80	101.6	105	85.5	86.42	8.08
100	40	114.3	117	102	102.73	6.02
	80	114.3	117	97	98.28	8.56
	120	114.3	117	92	93.78	11.13
	160	114.3	117	87.5	89.65	13.49
	XXS	114.3	117	80	83.30	17.12
125	40	141.3	144	128	128.80	6.55
	80	141.3	144	122	123.58	9.53
	120	141.3	144	116	118.04	12.70
	160	141.3	144	109.5	112.47	15.88
	XXS	141.3	144	103	106.92	19.05
150	40	168.3	172	154	154.82	7.11
	80	168.3	172	146.5	148.06	10.97
	120	168.3	172	140	142.29	14.27
	160	168.3	172	132	135.31	18.26
	XXS	168.3	172	124.5	128.85	21.95
200	40	219.1	223	203	203.75	8.18
	60	219.1	223	198.5	200.02	10.31
	80	219.1	223	193.5	195.84	12.70
	100	219.1	223	189	191.65	15.09
	120	219.1	223	182.5	186.11	18.26
	140	219.1	223	178	181.98	20.62
	XXS	219.1	223	174.5	179.16	22.23
	160	219.1	223	173	177.79	23.01
250	40	273.0	278	254.5	255.74	9.27
	60	273.0	278	247.5	249.74	12.70
	80	273.0	278	243	245.55	15.09
	100	273.0	278	236.5	240.01	18.26
	120	273.0	278	230	234.44	21.44
	140	273.0	278	222	227.51	25.40
	160	273.0	278	216	221.95	28.58
300	STD	323.8	329	305	306.08	9.53
	40	323.8	329	303	304.72	10.31
	XS	323.8	329	298.5	300.54	12.70
	60	323.8	329	295	297.79	14.27

(Notes follow at end of table)

(Table 1 continues on next page)

TABLE 1 DIMENSIONS OF WELDING ENDS (CONT'D)
(See Figs. 1 to 6, Inclusive)

Nominal Pipe Size (DN)	Schedule No. [Note (1)]	O.D. at Welding Ends: Wrought or Fabricated Components, *A* [Note (1)]	O.D. at Welding Ends: Cast Steel Valves, *A* [Note (2)]	*B*	*C* [Note (3)]	*t*
300	80	323.8	329	289	292.17	17.48
	100	323.8	329	281	285.24	21.44
	120	323.8	329	273	278.31	25.40
	140	323.8	329	266.5	272.75	28.58
	160	323.8	329	257	264.45	33.32
350	STD	355.6	362	336.5	337.88	9.53
	40	355.6	362	333.5	335.08	11.13
	XS	355.6	362	330	332.34	12.70
	60	355.6	362	325.5	328.15	15.09
	80	355.6	362	317.5	321.22	19.05
	100	355.6	362	308	312.86	23.83
	120	355.6	362	300	305.93	27.79
	140	355.6	362	292	299.00	31.75
	160	355.6	362	284	292.07	35.71
400	STD	406.4	413	387.5	388.68	9.53
	40	406.4	413	381	383.14	12.70
	60	406.4	413	373	376.21	16.66
	80	406.4	413	363.5	367.84	21.44
	100	406.4	413	354	359.53	26.19
	120	406.4	413	344.5	351.18	30.96
	140	406.4	413	333.5	341.43	36.53
	160	406.4	413	325.5	334.50	40.49
450	STD	457.2	464	438	439.48	9.53
	XS	457.2	464	432	433.94	12.70
	40	457.2	464	428.5	431.19	14.27
	60	457.2	464	419	422.82	19.05
	80	457.2	464	409.5	414.46	23.83
	100	457.2	464	398.5	404.78	29.36
	120	457.2	464	387.5	395.03	34.93
	140	457.2	464	378	386.77	39.67
	160	457.2	464	366.5	376.99	45.24
500	STD	508.0	516	489	490.28	9.53
	XS	508.0	516	482.5	484.74	12.70
	40	508.0	516	478	480.55	15.09
	60	508.0	516	467	470.88	20.62
	80	508.0	516	455.5	461.13	26.19
	100	508.0	516	443	450.02	32.54
	120	508.0	516	432	440.29	38.10
	140	508.0	516	419	429.17	44.45
	160	508.0	516	408	419.44	50.01
550	STD	558.8	567	539	541.08	9.53
	XS	558.8	567	533	535.54	12.70
	60	558.8	567	514	518.86	22.23
	80	558.8	567	501	507.75	28.58

(Notes follow at end of table)

(Table 1 continues on next page)

TABLE 1 DIMENSIONS OF WELDING ENDS (CONT'D)
(See Figs. 1 to 6, Inclusive)

Nominal Pipe Size (DN)	Schedule No. [Note (1)]	O.D. at Welding Ends: Wrought or Fabricated Components, *A* [Note (1)]	O.D. at Welding Ends: Cast Steel Valves, *A* [Note (2)]	*B*	*C* [Note (3)]	*t*
550	100	558.8	567	488.5	496.63	34.93
	120	558.8	567	476	485.52	41.28
	140	558.8	567	463	474.41	47.63
	160	558.8	567	450.5	463.30	53.98
600	STD	609.6	619	590.5	591.88	9.53
	XS	609.6	619	584	586.34	12.70
	30	609.6	619	581	583.59	14.27
	40	609.6	619	574.5	577.97	17.48
	60	609.6	619	560.5	565.49	24.61
	80	609.6	619	547.5	554.38	30.96
	100	609.6	619	532	540.49	38.89
	120	609.6	619	517.5	528.03	46.02
	140	609.6	619	505	516.91	52.37
	160	609.6	619	490.5	504.37	59.54
650	10	660.4	670	645.5	645.50	7.92
	20	660.4	670	635	637.14	12.70
700	10	711.2	721	695.5	696.30	7.92
	20	711.2	721	686	687.94	12.70
	30	711.2	721	679.5	682.37	15.88
750	10	762.0	772	746	747.10	7.92
	20	762.0	772	736.5	738.74	12.70
	30	762.0	772	730	733.17	15.88
800	10	812.8	825	797	797.90	7.92
	20	812.8	825	787.5	789.54	12.70
	30	812.8	825	781	783.97	15.88
	40	812.8	825	778	781.17	17.48
850	10	863.6	876	848	848.70	7.92
	20	863.6	876	838	840.34	12.70
	30	863.6	876	832	834.77	15.88
	40	863.6	876	828.5	831.97	17.48
900	10	914.4	927	898.5	899.50	7.92
	20	914.4	927	889	891.14	12.70
	30	914.4	927	882.5	885.57	15.88
	40	914.4	927	876.5	880.02	19.05

GENERAL NOTES:
(a) Dimensions are in millimeters.
(b) See Section 5 for tolerances.

NOTES:
(1) Letter designations signify:
  (a) STD = standard wall thickness
  (b) XS = extra-strong wall thickness
  (c) XXS = double extra-strong wall thickness
(2) The diameters listed are not requirements. They are provided for the convenience of the user.
(3) Internal machining for continuous backing rings for sizes DN 50 and smaller is not contemplated. See para. 4.2 for *C* dimension for sizes not listed.

ANNEX A
INCH TABLE

(This Annex is an integral part of ASME B16.25 and is placed after the main text for convenience.)

This Annex provides a table of the standard inch dimensions for fittings.

TABLE A1 DIMENSIONS OF WELDING ENDS
(See Figs. 1 to 6, Inclusive)

Nominal Pipe Size (NPS)	Schedule No. [Note (1)]	O.D. at Welding Ends: Wrought or Fabricated Components, *A* [Note (1)]	O.D. at Welding Ends: Cast Steel Valves, *A* [Note (2)]	*B*	*C* [Note (3)]	*t*
2½	40	2.88	2.96	2.469	2.479	0.203
	80	2.88	2.96	2.323	2.351	0.276
	160	2.88	2.96	2.125	2.178	0.375
	XXS	2.88	2.96	1.771	1.868	0.552
3	40	3.50	3.59	3.068	3.081	0.216
	80	3.50	3.59	2.900	2.934	0.300
	160	3.50	3.59	2.624	2.692	0.438
	XXS	3.50	3.59	2.300	2.409	0.600
3½	40	4.00	4.12	3.548	3.564	0.226
	80	4.00	4.12	3.364	3.402	0.318
4	40	4.50	4.62	4.026	4.044	0.237
	80	4.50	4.62	3.826	3.869	0.337
	120	4.50	4.62	3.624	3.692	0.438
	160	4.50	4.62	3.438	3.530	0.531
	XXS	4.50	4.62	3.152	3.279	0.674
5	40	5.56	5.69	5.047	5.070	0.258
	80	5.56	5.69	4.813	4.866	0.375
	120	5.56	5.69	4.563	4.647	0.500
	160	5.56	5.69	4.313	4.428	0.625
	XXS	5.56	5.69	4.063	4.209	0.750
6	40	6.62	6.78	6.065	6.094	0.280
	80	6.62	6.78	5.761	5.828	0.432
	120	6.62	6.78	5.501	5.600	0.562
	160	6.62	6.78	5.187	5.326	0.719
	XXS	6.62	6.78	4.897	5.072	0.864
8	40	8.62	8.78	7.981	8.020	0.322
	60	8.62	8.78	7.813	7.873	0.406
	80	8.62	8.78	7.625	7.709	0.500
	100	8.62	8.78	7.437	7.544	0.594
	120	8.62	8.78	7.187	7.326	0.719
	140	8.62	8.78	7.001	7.163	0.812
	XXS	8.62	8.78	6.875	7.053	0.875
	160	8.62	8.78	6.813	6.998	0.906
10	40	10.75	10.94	10.020	10.070	0.365
	60	10.75	10.94	9.750	9.834	0.500
	80	10.75	10.94	9.562	9.670	0.594
	100	10.75	10.94	9.312	9.451	0.719
	120	10.75	10.94	9.062	9.232	0.844
	140	10.75	10.94	8.750	8.959	1.000
	160	10.75	10.94	8.500	8.740	1.125
12	STD	12.75	12.97	12.000	12.053	0.375
	40	12.75	12.97	11.938	11.999	0.406
	XS	12.75	12.97	11.750	11.834	0.500
	60	12.75	12.97	11.626	11.725	0.562

(Notes follow at end of table)

(Table A1 continues on next page)

TABLE A1 DIMENSIONS OF WELDING ENDS (CONT'D)
(See Figs. 1 to 6, Inclusive)

Nominal Pipe Size (NPS)	Schedule No. [Note (1)]	O.D. at Welding Ends: Wrought or Fabricated Components, *A* [Note (1)]	O.D. at Welding Ends: Cast Steel Valves, *A* [Note (2)]	*B*	*C* [Note (3)]	*t*
12	80	12.75	12.97	11.374	11.505	0.688
	100	12.75	12.97	11.062	11.232	0.844
	120	12.75	12.97	10.750	10.959	1.000
	140	12.75	12.97	10.500	10.740	1.125
	160	12.75	12.97	10.126	10.413	1.312
14	STD	14.00	14.25	13.250	13.303	0.375
	40	14.00	14.25	13.124	13.192	0.438
	XS	14.00	14.25	13.000	13.084	0.500
	60	14.00	14.25	12.812	12.920	0.594
	80	14.00	14.25	12.500	12.646	0.750
	100	14.00	14.25	12.124	12.318	0.938
	120	14.00	14.25	11.812	12.044	1.094
	140	14.00	14.25	11.500	11.771	1.250
	160	14.00	14.25	11.188	11.498	1.406
16	STD	16.00	16.25	15.250	15.303	0.375
	40	16.00	16.25	15.000	15.084	0.500
	60	16.00	16.25	14.688	14.811	0.656
	80	16.00	16.25	14.312	14.482	0.844
	100	16.00	16.25	13.938	14.155	1.031
	120	16.00	16.25	13.562	13.826	1.219
	140	16.00	16.25	13.124	13.442	1.438
	160	16.00	16.25	12.812	13.170	1.594
18	STD	18.00	18.28	17.250	17.303	0.375
	XS	18.00	18.28	17.000	17.084	0.500
	40	18.00	18.28	16.876	16.975	0.562
	60	18.00	18.28	16.500	16.646	0.750
	80	18.00	18.28	16.124	16.318	0.938
	100	18.00	18.28	15.688	15.936	1.156
	120	18.00	18.28	15.250	15.553	1.375
	140	18.00	18.28	14.876	15.225	1.562
	160	18.00	18.28	14.438	14.842	1.781
20	STD	20.00	20.31	19.250	19.303	0.375
	XS	20.00	20.31	19.000	19.084	0.500
	40	20.00	20.31	18.812	18.920	0.594
	60	20.00	20.31	18.376	18.538	0.812
	80	20.00	20.31	17.938	18.155	1.031
	100	20.00	20.31	17.438	17.717	1.281
	120	20.00	20.31	17.000	17.334	1.500
	140	20.00	20.31	16.500	16.896	1.750
	160	20.00	20.31	16.062	16.513	1.969
22	STD	22.00	22.34	21.250	21.303	0.375
	XS	22.00	22.34	21.000	21.084	0.500
	60	22.00	22.34	20.250	20.428	0.875
	80	22.00	22.34	19.750	19.990	1.125

(Notes follow at end of table)

(Table A1 continues on next page)

TABLE A1 DIMENSIONS OF WELDING ENDS (CONT'D)
(See Figs. 1 to 6, Inclusive)

Nominal Pipe Size (NPS)	Schedule No. [Note (1)]	O.D. at Welding Ends: Wrought or Fabricated Components, *A* [Note (1)]	O.D. at Welding Ends: Cast Steel Valves, *A* [Note (2)]	*B*	*C* [Note (3)]	*t*
22	100	22.00	22.34	19.250	19.553	1.375
	120	22.00	22.34	18.750	19.115	1.625
	140	22.00	22.34	18.250	18.678	1.875
	160	22.00	22.34	17.750	18.240	2.125
24	STD	24.00	24.38	23.250	23.303	0.375
	XS	24.00	24.38	23.000	23.084	0.500
	30	24.00	24.38	22.876	22.975	0.562
	40	24.00	24.38	22.624	22.755	0.688
	60	24.00	24.38	22.062	22.263	0.969
	80	24.00	24.38	21.562	21.826	1.219
	100	24.00	24.38	20.938	21.280	1.531
	120	24.00	24.38	20.376	20.788	1.812
	140	24.00	24.38	19.876	20.350	2.062
	160	24.00	24.38	19.312	19.857	2.344
26	10	26.00	26.38	25.376	25.413	0.312
	20	26.00	26.38	25.000	25.084	0.500
28	10	28.00	28.38	27.376	27.413	0.312
	20	28.00	28.38	27.000	27.084	0.500
	30	28.00	28.38	26.750	26.865	0.625
30	10	30.00	30.38	29.376	29.413	0.312
	20	30.00	30.38	29.000	29.084	0.500
	30	30.00	30.38	28.750	28.865	0.625
32	10	32.00	32.50	31.376	31.413	0.312
	20	32.00	32.50	31.000	31.084	0.500
	30	32.00	32.50	30.750	30.865	0.625
	40	32.00	32.50	30.624	30.755	0.688
34	10	34.00	34.50	33.376	33.413	0.312
	20	34.00	34.50	33.000	33.084	0.500
	30	34.00	34.50	32.750	32.865	0.625
	40	34.00	34.50	32.624	32.755	0.688
36	10	36.00	36.50	35.376	35.413	0.312
	20	36.00	36.50	35.000	35.084	0.500
	30	36.00	36.50	34.750	34.865	0.625
	40	36.00	36.50	34.500	34.646	0.750

GENERAL NOTES:
(a) Dimensions are in inches.
(b) See Section 5 for tolerances.

NOTES:
(1) Letter designations signify:
  (a) STD = standard wall thickness
  (b) XS = extra-strong wall thickness
  (c) XXS = double extra-strong wall thickness
(2) The diameters listed are not requirements. They are provided for the convenience of the user.
(3) Internal machining for continuous backing rings for sizes NPS 2 and smaller is not contemplated. See para. 4.2 for *C* dimension for sizes not listed.

WROUGHT CARBON STEEL WALL THICKNESS STANDARDS

Nominal Pipe Size		Outside Diameter			Nominal Wall Thickness														Nominal Pipe Size	
A	B	ASME	JIS	DIN	JIS(1)	DIN(2)	SCH10	SCH20	SCH30	STD	SCH40	SCH60	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS	A	B
15	1/2"	21.3	21.7	21.3	2.8	2.0	2.11	–	2.41	2.77	2.77	–	3.73	3.73	–	–	–	4.78	7.47	15	1/2"
20	3/4"	26.7	27.2	26.9	2.8	2.3	2.11	–	2.41	2.87	2.87	–	3.91	3.91	–	–	–	5.56	7.82	20	3/4"
25	1"	33.4	34.0	33.7	3.2	2.6	2.77	–	2.90	3.38	3.38	–	4.55	4.55	–	–	–	6.35	9.09	25	1"
32	1 1/4"	42.2	42.7	42.4	3.5	2.6	2.77	–	2.97	3.56	3.56	–	4.85	4.85	–	–	–	6.35	9.70	32	1 1/4"
40	1 1/2"	48.3	48.6	48.3	3.5	2.9	2.77	–	3.18	3.68	3.68	–	5.08	5.08	–	–	–	7.14	10.15	40	1 1/2"
50	2"	60.3	60.5	60.3	3.8	2.9	2.77	–	3.18	3.91	3.91	–	5.54	5.54	–	–	–	8.74	11.07	50	2"
65	2 1/2"	73.0	76.3	76.1	4.2	2.9	3.05	–	4.78	5.16	5.16	–	7.01	7.01	–	–	–	9.53	14.02	65	2 1/2"
80	3"	88.9	89.1	88.9	4.2	3.2	3.05	–	4.78	5.49	5.49	–	7.62	7.62	–	–	–	11.13	15.24	80	3"
90	3 1/2"	101.6	101.6	–	4.2	–	3.05	–	4.78	5.74	5.74	–	8.08	8.08	–	–	–	–	–	90	3 1/2"
100	4"	114.3	114.3	114.3	4.5	3.6	3.05	–	4.78	6.02	6.02	–	8.56	8.56	–	11.13	–	13.49	17.12	100	4"
125	5"	141.3	139.8	139.7	4.5	4.0	3.40	–	–	6.55	6.55	–	9.53	9.53	–	12.70	–	15.99	19.05	125	5"
150	6"	168.3	165.2	168.3	5.0	4.5	3.40	4.5	–	7.11	7.11	–	10.97	10.97	–	14.27	–	18.26	21.95	150	6"
200	8"	219.1	216.3	219.1	5.8	6.3	3.76	6.35	7.04	8.18	8.18	10.31	12.70	12.70	15.09	18.26	20.62	23.01	22.23	200	8"
250	10"	273.1	267.4	273.0	6.6	6.3	4.19	6.35	7.80	9.27	9.27	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40	250	10"
300	12"	323.9	318.5	323.9	6.9	7.1	4.57	6.35	8.38	9.53	10.31	14.27	12.70	17.48	21.44	25.40	28.58	33.32	25.40	300	12"
350	14"	355.6	355.6	355.6	7.9	8.0	6.35	7.92	9.53	9.53	11.13	15.09	12.70	19.05	23.83	27.79	31.75	35.71	–	350	14"
400	16"	406.4	406.4	406.4	7.9	8.8	6.35	7.92	9.53	9.53	12.70	16.66	12.70	21.44	26.19	30.96	36.53	40.49	–	400	16"
450	18"	457.2	457.2	457.0	7.9	10.0	6.35	7.92	11.13	9.53	14.27	19.05	12.70	23.83	29.36	34.93	39.67	45.24	–	450	18"
500	20"	508.0	508.0	508.0	7.9	11.0	6.35	9.53	12.70	9.53	15.09	20.62	12.70	26.19	32.54	38.10	44.45	50.01	–	500	20"
550	22"	558.8	558.8	–	–	–	6.35	9.53	12.70	9.53	–	22.23	12.70	28.58	34.93	41.28	47.63	53.98	–	550	22"
600	24"	609.6	609.6	610.0	–	12.5	6.35	9.53	14.27	9.53	17.48	24.61	12.70	30.96	38.89	46.02	52.37	59.54	–	600	24"
650	26"	660.4	660.4	–	–	–	7.92	12.70	–	9.53	–	–	12.70	–	–	–	–	–	–	650	26"
700	28"	711.1	711.2	711.0	–	12.5	7.92	12.70	15.88	9.53	–	–	12.70	–	–	–	–	–	–	700	28"
750	30"	762.0	762.0	–	–	–	7.92	12.70	15.88	9.53	–	–	12.70	–	–	–	–	–	–	750	30"
800	32"	812.8	812.8	813.0	–	12.5	7.92	12.70	15.88	9.53	17.48	–	12.70	–					–	800	32"
850	34"	863.6	863.6	–	–	–	7.92	12.70	15.88	9.53	17.48	–	12.70	–					–	850	34"
900	36"	914.4	914.4	914.0	–	12.5	7.92	12.70	15.88	9.53	19.05	–	12.70	–					–	900	36"
950	38"	965.2	965.2	–	–	–	–	–	–	9.53	–	–	12.70	–					–	950	38"
1000	40"	1016.0	1016.0	1016.0	–	12.5	–	–	–	9.53	–	–	12.70	–					–	1000	40"
1050	42"	1066.8	1066.8	–	–	–	–	–	–	9.53	–	–	12.70	–					–	1050	42"
1100	44"	1117.6	1117.6	–	–	–	–	–	–	9.53	–	–	12.70	–	–	–	–	–	–	1100	44"
1150	46"	1168.4	1168.4	–	–	–	–	–	–	9.53	–	–	12.70	–	–	–	–	–	–	1150	46"
1200	48"	1219.2	1219.2	1220.0	–	–	–	–	–	9.53	–	–	12.70	–	–	–	–	–	–	1200	48"

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JIS G3454 DIN2448
JIS G3455 DIN2458
JIS G3457

河北海浩

俄标
管件参数系列

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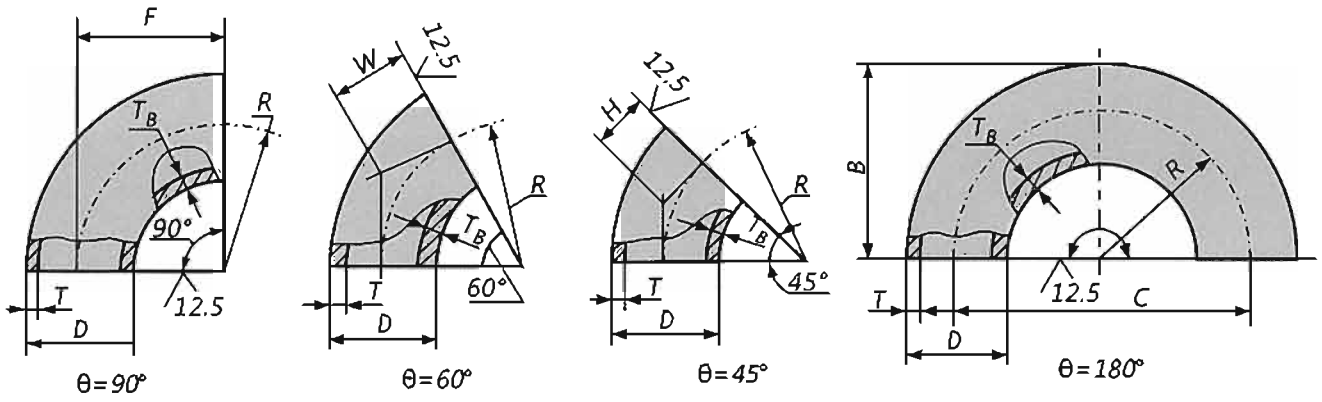

Таблица 2— Отводы исполнения 2

Размеры в миллиметрах

DN	D	T	F=R	W	H	C	B	Масса отвода с θ =90°, кг
25	32	2.0 2.5 3.0 3.5	38	22	18	76	56	0.1 0.2 0.2 0.2
32	38	2.0 2.5 3.0 3.5 4.0	48	28	23	96	69	0.2 0.2 0.2 0.3 0.3
40	45	2.5 3.0 3.5 4.0 5.0	60	35	25	120	83	0.3 0.3 0.4 0.4 0.5
50	57	2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0	75	43	80	150	104	0.4 0.5 0.6 0.7 0.7 0.8 0.9 1.0
65	76	3.0 3.5 4.0 4.5 5.0 5.5 6.0 7.0 8.0	100	57	41	200	138	0.8 1.0 1.1 1.3 1.4 1.6 1.7 2.0 2.2
80	89	3.0 3.5 4.0 4.5 5.0 5.5 6.0 7.0 8.0	120	69	50	240	165	1.2 1.4 1.5 1.7 1.9 2.1 2.3 2.7 3.0

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Таблица 2— Отводы исполнения 2

Размеры в миллиметрах

DN	D	T	F=R	W	H	C	B	Масса отвода с θ=90°, кг
100	102	3.5 4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0	150	87	62	300	201	2.1 2.4 2.6 2.9 3.4 3.9 4.5 5.0 5.5
	108	3.5 4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0					204	2.2 2.5 2.8 3.1 3.6 4.1 4.7 5.3 5.8
	114	3.5 4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0					207	2.2 2.6 2.9 3.3 3.8 4.4 5.0 5.7 6.1
125	133	3.5 4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0	190	110	79	380	257	3.3 3.8 4.3 4.8 5.7 6.5 7.4 8.2 9.1 10.0 11.0
150	159	4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0	225	130	93	450	305	5.4 6.1 6.7 8.1 9.4 11.0 12.0 13.0 14.0 16.0 17.0 18.0
	168	4.0 4.5 5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0						5.6 6.4 7.1 8.5 9.8 11.2 12.5 14.0 15.0 16.0 17.5 19.0

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Таблица 2— Отводы исполнения 2

Размеры в миллиметрах

DN	D	T	F=R	W	H	C	B	Масса отвода с θ=90°, кг
200	219	5.0 6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0	300	173	124	600	410	13.0 15.0 17.0 20.0 22.0 25.0 27.0 29.0 32.0 34.0 37.0 39.0 42.0 44.0
250	273	6.0 7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0	375	217	155	750	512	23.0 27.0 31.0 35.0 39.0 43.0 46.0 50.0 54.0 58.0 61.0 66.0 70.0 78.0 85.0
300	325	7.0 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0 24.0 26.0 28.0	450	260	186	900	613	39.0 45.0 50.0 56.0 61.0 66.0 72.0 77.0 82.0 87.0 92.0 96.0 107.0 118.0 130.0 141.0 150.0
350	377	9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	525	303	217	1050	714	68.0 75.0 83.0 90.0 97.0 104.0 112.0 119.0 133.0 147.0 161.0 175.0 188.0 201.0 214.0 228.0

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Таблица 2— Отводы исполнения 2

Размеры в миллиметрах

DN	D	T	F=R	W	H	C	B	Масса отвода с θ =90°, кг
400	426	8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0	600	346	248	1200	813	78.0 87.0 97.0 107.0 117.0 126.0 135.0 145.0 154.0 164.0 173.0 192.0 210.0 230.0 249.0 268.0 286.0 306.0 324.0
500	530	9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0 34.0 36.0	750	433	310	1500	1015	138.0 153.0 168.0 183.0 198.0 212.0 227.0 242.0 256.0 270.0 298.0 327.0 356.0 385.0 413.0 440.0 467.0 494.0 520.0
600	630	9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	900	519	373	1800	1215	198.0 219.0 245.0 261.0 282.0 302.0 324.0 345.0 366.0 387.0 429.0 471.0 513.0 554.0 595.0 636.0 678.0

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Таблица 2— Отводы исполнения 2

Раэмеры в миллиметрах

DN	D	T	F=R	W	H	C	B	Масса отвода с θ=90°, кг
700	720	9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	1000	577	404	2000	1360	248.0 275.0 302.0 329.0 356.0 383.0 410.0 436.0 462.0 489.0 542.0 595.0 647.0 698.0 750.0 801.0 852.0
800	820	9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 20.0 22.0 24.0 26.0 28.0 30.0 32.0	1200	693	485	2400	1610	339.0 376.0 413.0 450.0 487.0 524.0 561.0 598.0 636.0 670.0 743.0 815.0 887.0 959.0 1030.0 1101.0 1171.0

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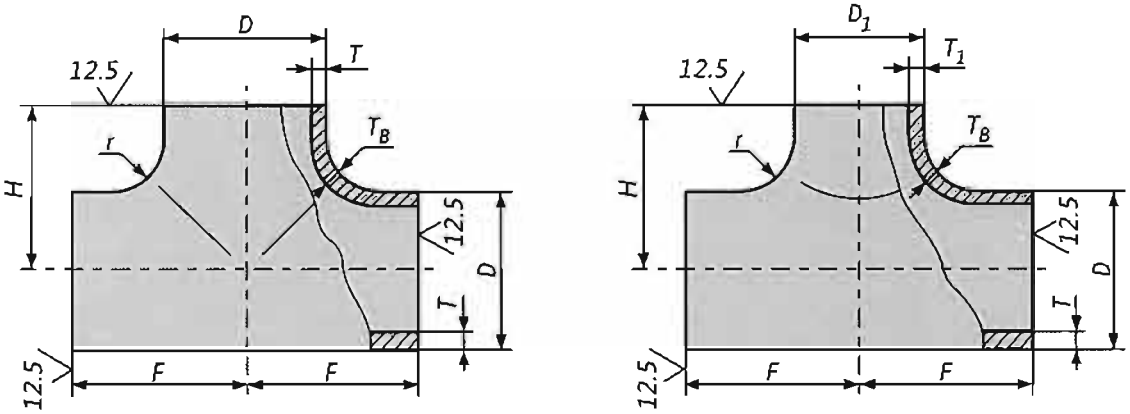

Таблица 2— Тройники исполнения 2

Размеры в миллиметрах

DN	D	T	D_1	T_1	F	H	r,не менее	Масса,кг
40	45	2.5 4.0 5.0	–	–	40	40	5	0.3 0.4 0.4
50	57	3.0 4.0 5.0	45	2.5 3.0 4.0	50	45		0.4 0.6 0.7
		3.0 4.0 5.0	–	–				0.4 0.6 0.7
65	76	3.5 6.0 7.0	45	2.5 4.0 5.0	65	60		0.8 1.4 1.6
		3.5 6.0 7.0	57	3.0 5.0 5.5				0.8 1.4 1.6
		3.5 6.0 7.0	–	–				0.8 1.4 1.6
80	89	3.5 6.0 8.0	57	3.0 4.0 5.5	80	70		1.5 2.0 2.7
		3.5 6.0 8.0	76	3.5 6.0 7.0				1.5 2.0 2.7
		3.5 6.0 8.0	–	–				1.5 2.0 2.7
100	108	4.0 6.0 8.0 9.0	76	3.5 5.0 6.0 7.0	100	80		2.2 3.3 4.5 4.9

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Таблица 2— Тройники исполнения 2

Размеры в миллиметрах

DN	D	T	D_1	T_1	F	H	r,не менее	Масса,кг
100	108	4.0 6.0 8.0 9.0	89	4.0 6.0 8.0 8.0	100	80	5	2.2 3.3 4.5 4.9
		4.0 6.0 8.0 9.0	–	–				2.2 3.3 4.5 4.9
125	133	4.0 6.0 8.0 10.0 12.0	89	3.5 5.0 6.0 8.0 9.0	110	95	6	2.9 4.1 5.9 6.8 8.0
		4.0 6.0 8.0 10.0 12.0	108	4.0 5.0 6.0 9.0 10.0				2.9 4.1 5.9 6.8 8.0
		4.0 6.0 8.0 10.0 12.0	–	–				2.9 4.1 5.9 6.8 8.0
150	159	4.5 6.0 8.0 10.0 12.0	108	4.0 5.0 6.0 9.0 10.0	130	110	8	4.8 6.6 9.0 10.1 12.2
		4.5 6.0 8.0 10.0 12.0	133	4.0 5.0 6.0 10.0 12.0				4.8 6.6 9.0 10.1 12.2
		4.5 6.0 8.0 10.0 12.0	–	–				4.8 6.6 9.0 10.1 12.2
200	219	6.0 8.0 10.0 12.0 16.0	133	5.0 6.0 8.0 10.0 16.0	160	140	10	10.2 13.8 16.8 19.9 26.6
		6.0 8.0 10.0 12.0 16.0	159	6.0 6.0 8.0 11.0 12.0				10.2 13.8 16.8 19.9 26.6
		6.0 8.0 10.0 12.0 16.0	–	–				10.2 13.8 16.8 19.9 26.6

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Таблица 2— Тройники исполнения 2

Размеры в миллиметрах

DN	D	T	D_1	T_1	F	H	r, не менее	Масса, кг
250	273	7.0 10.0 12.0 16.0 18.0	159	4.5 6.0 8.0 11.0 12.0	190	175	12	18.4 26.0 31.2 41.6 46.8
		7.0 10.0 12.0 16.0 18.0	219	6.0 8.0 10.0 12.0 16.0				18.4 26.0 31.2 41.6 46.8
		7.0 10.0 12.0 16.0 18.0	–	–				18.4 26.0 31.2 41.6 46.8
300	325	8.0 10.0 12.0 16.0 22.0	219	6.0 8.0 10.0 12.0 16.0	220	200	15	27.4 34.2 41.1 54.8 75.3
		8.0 10.0 12.0 16.0 22.0	273	7.0 10.0 12.0 16.0 18.0				27.4 34.2 41.1 54.8 75.3
		8.0 10.0 12.0 16.0 22.0	–	–				27.4 34.2 41.1 54.8 75.3
350	377	10.0 12.0 16.0 20.0	273	7.0 10.0 12.0 16.0	240	225	15	46.0 55.0 73.6 92.0
		10.0 12.0 16.0 20.0	325	8.0 10.0 16.0 18.0				46.0 55.0 73.6 92.0
		10.0 12.0 16.0 20.0	–	–				46.0 55.0 73.6 92.0
400	426	10.0 12.0 16.0 18.0	325	8.0 10.0 12.0 16.0	270	250	18	55.5 66.6 88.8 100.0
		10.0 12.0 16.0 18.0	377	10.0 12.0 16.0 18.0				55.5 66.6 88.8 100.0
		10.0 12.0 16.0 18.0	–	–				55.5 66.6 88.8 100.0

大小头

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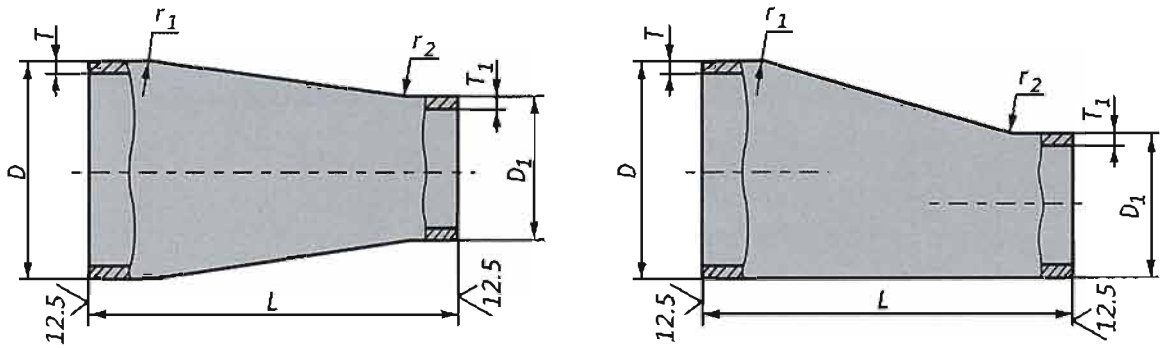

Таблийа 2— Переходы исполнения2

Размеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
32	38	2.0 3.0 4.0	32	2.0 3.0 4.0	30	0.1 0.2 0.2
		2.0 3.0 4.0	25	1.6 3.0 3.0		0.1 0.2 0.2
40	45	2.5 4.0 5.0		1.6 3.0 3.0		0.1 0.2 0.3
		2.5 4.0 5.0	32	2.0 4.0 5.0		0.1 0.2 0.3
		2.5 4.0 5.0	38	2.0 4.0 5.0		0.1 0.2 0.3
50	57	3.0 4.0 5.0 6.0	25	1.6 1.6 3.0 3.0	45	0.2 0.3 0.3 0.4
		3.0 4.0 5.0 6.0	32	2.0 2.0 3.0 4.0		0.2 0.3 0.3 0.4
		3.0 4.0 5.0 6.0	38	2.0 4.0 4.0 4.0		0.2 0.3 0.3 0.4

大小头

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Таблийа 2— Переходы исполнения2

Размеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
50	57	3.0 4.0 5.0 6.0	45	2.5 2.5 4.0 5.0	60	0.2 0.3 0.3 0.4
65	76	3.0 3.5 5.0 6.0 7.0	38	2.0 2.5 3.0 3.0 4.0	55	0.3 0.4 0.6 0.6 0.7
		3.0 3.5 5.0 6.0 7.0	45	2.5 2.5 4.0 4.0 5.0	70	0.4 0.5 0.6 0.7 0.8
		3.0 3.5 5.0 6.0 7.0	57	3.0 3.0 4.0 5.0 6.0		0.3 0.4 0.6 0.7 0.8
80	89	3.5 6.0 8.0	45	2.5 4.0 5.0	75	0.6 0.9 1.2
		3.5 6.0 8.0	57	3.0 4.0 5.0		0.6 0.9 1.2
		3.5 6.0 8.0	76	3.5 5.0 6.0		0.6 0.9 1.2
100	108	4.0 6.0 8.0 9.0	57	3.0 4.0 5.0 6.0	80	0.9 1.2 1.6 1.8
		4.0 6.0 8.0 9.0	76	3.5 5.0 6.0 7.0		0.9 1.2 1.6 1.8
		4.0 6.0 8.0 9.0	89	3.5 6.0 8.0 8.0		0.9 1.2 1.6 1.8

大小头

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Таблийа 2— Переходы исполнения 2

Раэмеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
100	114	4.0 6.0 8.0 9.0	57	3.0 4.0 5.0 6.0	80	1.0 1.3 1.7 1.9
		4.0 6.0 8.0 9.0	76	3.5 5.0 6.0 7.0		1.0 1.3 1.7 1.9
		4.0 6.0 8.0 9.0	89	3.5 6.0 8.0 8.0		1.0 1.3 1.7 1.9
125	133	4.0 8.0 10.0	57	3.0 4.0 5.0	100	1.3 2.5 3.1
		5.0 8.0 10.0	76	3.5 5.0 6.0		1.6 2.5 3.1
		4.0 6.0 8.0	89	3.5 5.0 6.0		1.3 1.9 2.5
		5.0 8.0 8.0 10.0	108	4.0 6.0 8.0 9.0		1.6 2.5 2.5 3.1
		5.0 8.0 8.0 10.0	114	4.0 6.0 8.0 9.0		1.6 2.5 2.5 3.1
150	159	4.5 8.0 10.0 12.0	57	3.0 4.0 5.0 6.0	75	1.5 2.6 3.2 3.9
		4.5 8.0 10.0 12.0	76	3.5 5.0 6.0 7.0		1.5 2.6 3.2 3.9
		4.5 8.0 10.0 12.0	89	3.5 6.0 8.0 8.0	130	2.3 3.9 4.8 5.9

大小头

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Таблийа 2— Переходы исполнения 2

Раэмеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
150	159	4.5 8.0 10.0 12.0	108	4.0 6.0 8.0 9.0	130	2.3 3.9 4.8 5.9
		4.5 8.0 10.0 12.0	114	4.0 6.0 8.0 9.0		2.3 3.9 4.8 5.9
		4.5 8.0 10.0 12.0	133	4.0 8.0 10.0 10.0		2.3 3.9 4.8 5.9
	168	4.5 8.0 10.0 12.0	57	3.0 4.0 5.0 6.0	75	1.6 2.7 3.3 4.0
		4.5 8.0 10.0 12.0	76	3.5 5.0 6.0 7.0		1.6 2.7 3.3 4.0
		4.5 8.0 10.0 12.0	89	3.5 6.0 8.0 8.0	130	2.6 4.1 5.1 6.2
		4.5 8.0 10.0 12.0	108	4.0 6.0 8.0 9.0		2.6 4.1 5.1 6.2
		4.5 8.0 10.0 12.0	114	4.0 6.0 8.0 9.0		2.6 4.1 5.1 6.2
		4.5 8.0 10.0 12.0	133	4.0 8.0 10.0 10.0		2.6 4.1 5.1 6.2
200	219	6.0 10.0 12.0 14.0 16.0	57	3.0 4.0 4.0 5.0 6.0	95	2.9 4.6 5.5 6.4 7.3
		6.0 10.0 12.0 14.0 16.0	76	3.5 5.0 5.0 6.0 7.0		2.9 4.6 5.5 6.4 7.3

大小头

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Таблийа 2— Переходы исполнения 2

Размеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
200	219	6,0 10,0 12,0 14,0 16,0	89	3,5 5,0 5,0 6,0 8,0	95	2.9 4.6 5.5 6.4 7.3
		6,0 10,0 12,0 14,0 16,0	108	4,0 6,0 8,0 8,0 9,0		2.9 4.6 5.5 6.4 7.3
		6,0 10,0 12,0 14,0 16,0	114	4,0 6,0 8,0 8,0 9,0		2.9 4.6 5.5 6.4 7.3
		6,0 10,0 12,0 14,0 16,0	133	4,0 8,0 8,0 10,0 10,0	140	4.4 7.2 8.8 10.0 12.0
		6,0 10,0 12,0 14,0 16,0	159	4,5 8,0 10,0 12,0 12,0		4.4 7.2 8.8 10.0 12.0
		6,0 10,0 12,0 14,0 16,0	168	4,5 8,0 10,0 12,0 12,0		4.4 7.2 8.8 10.0 12.0
250	273	7,0 10,0 12,0 14,0 16,0 18,0	108	4,0 6,0 8,0 8,0 9,0 9,0		6.0 8.5 10.0 12.0 13.0 15.0
		7,0 10,0 12,0 14,0 16,0 18,0	114	4,0 6,0 8,0 8,0 9,0 9,0		6.0 8.5 10.0 12.0 13.0 15.0
		7,0 10,0 12,0 14,0 16,0 18,0	133	4,0 6,0 8,0 8,0 10,0 10,0		6.0 8.5 10.0 12.0 13.0 15.0

大小头

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Таблийа 2— Переходы исполнения 2

Размеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
250	273	7,0 10,0 12,0 14,0 16,0 18,0	159	4,5 8,0 10,0 10,0 12,0 12,0	180	8,3 12,0 14,0 16,0 18,0 20,0
		7,0 10,0 12,0 14,0 16,0 18,0	168	4,5 8,0 10,0 10,0 12,0 12,0		8,3 12,0 14,0 16,0 18,0 20,0
		7,0 10,0 12,0 14,0 16,0 18,0	219	6,0 8,0 10,0 12,0 14,0 16,0		8,3 12,0 14,0 16,0 18,0 20,0
300	325	8,0 10,0 12,0 14,0 16,0 18,0 22,0	108	4,0 4,0 6,0 6,0 8,0 8,0 9,0	140	9,0 11,0 16,0 18,0 20,0 23,0 28,0
		8,0 10,0 12,0 14,0 16,0 18,0 22,0	114	4,0 4,0 6,0 6,0 8,0 8,0 9,0		9,0 11,0 16,0 18,0 20,0 23,0 28,0
		8,0 10,0 12,0 14,0 16,0 18,0 22,0	133	5,0 6,0 8,0 8,0 8,0 10,0 10,0		11,0 13,0 16,0 18,0 20,0 23,0 28,0
		8,0 10,0 12,0 14,0 16,0 18,0 22,0	159	4,5 6,0 8,0 8,0 10,0 10,0 12,0		11,0 14,0 16,0 18,0 20,0 23,0 28,0
		8,0 10,0 12,0 14,0	168	4,0 6,0 8,0 8,0		11,0 14,0 16,0 18,0

大小头

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Таблийа 2— Переходы исполнения 2

Размеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
300	325	16.0 18.0 22.0	168	10.0 10.0 12.0	140	20.0 23.0 28.0
		8.0 10.0 12.0 14.0 16.0 18.0 22.0	219	7.0 8.0 10.0 10.0 12.0 14.0 16.0	180	11.0 14.0 17.0 20.0 22.0 25.0 31.0
		8.0 10.0 12.0 14.0 16.0 18.0 22.0	273	7.0 10.0 12.0 12.0 14.0 16.0 18.0		11.0 14.0 17.0 20.0 22.0 25.0 31.0
350	377	12.0 16.0 20.0 24.0 26.0	159	6.0 8.0 10.0 12.0 12.0	220	22.0 29.0 35.0 42.0 45.0
		12.0 16.0 20.0 24.0 26.0	168	6.0 8.0 10.0 12.0 12.0		22.0 29.0 35.0 42.0 45.0
		12.0 16.0 20.0 24.0 26.0	219	8.0 10.0 12.0 14.0 16.0		22.0 29.0 35.0 42.0 45.0
		10.0 12.0 14.0 16.0 20.0 24.0 26.0	273	7.0 10.0 12.0 12.0 16.0 18.0 18.0		20.0 24.0 28.0 31.0 38.0 45.0 49.0
		10.0 12.0 14.0 16.0 20.0 24.0 26.0	325	8.0 10.0 12.0 16.0 18.0 22.0 22.0		20.0 24.0 28.0 31.0 38.0 45.0 49.0
400	426	12.0 16.0 20.0	159	8.0 10.0 10.0		37.0 53.0 65.0

大小头

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Таблийа 2— Переходы исполнения 2

Раэмеры в миллиметрах

DN	D	T	D_1	T_1	L	Масса,кг
400	426	22.0	159	10.0	220	71.0
		26.0		12.0		83.0
		28.0		12.0		89.0
		12.0	168	8.0		37.0
		16.0		10.0		53.0
		20.0		10.0		65.0
		22.0		10.0		71.0
		26.0		12.0		83.0
		28.0		12.0		89.0
		12.0	219	8.0		32.0
		16.0		10.0		45.0
		20.0		12.0		56.0
		22.0		12.0		61.0
		26.0		14.0		72.0
		28.0		16.0		76.0
		12.0	273	10.0		27.0
		16.0		12.0		36.0
		20.0		14.0		44.0
		22.0		14.0		48.0
		26.0		18.0		56.0
		28.0		18.0		59.0
		10.0	325	8.0		23.0
		12.0		10.0		27.0
		14.0		12.0		31.0
		16.0		12.0		36.0
		20.0		16.0		44.0
		22.0		18.0		48.0
		26.0		20.0		56.0
		28.0		22.0		59.0
		10.0	377	10.0		23.0
		12.0		12.0		27.0
		14.0		14.0		31.0
		16.0		16.0		36.0
		20.0		20.0		44.0
		22.0		20.0		48.0
		26.0		24.0		56.0
		28.0		26.0		59.0
500	530	12.0	377	10.0	300	46.0
		14.0		12.0		54.0
		16.0		12.0		61.0
		20.0		16.0		75.0
		22.0		20.0		81.0
		26.0		22.0		94.0
		12.0	426	10.0		46.0
		14.0		12.0		54.0
		16.0		16.0		61.0
		20.0		16.0		75.0
		22.0		20.0		81.0
		26.0		22.0		94.0

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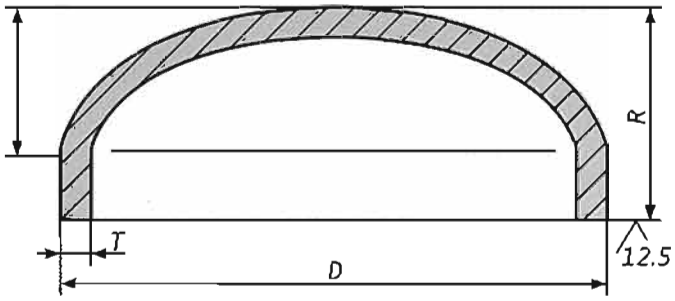

Таблица 2— Заглушки исполнения 2

Размеры в миллиметрах

DN	D	T	K		DN	D	T	K	Масса,кг
25	32	2.0 3.0	15	0.1 0.1	50	57	3.0 5.0	30	0.2 0.3
32	38	2.0 3.0	20	0.1 0.1	65	76	3.5 6.0	40	0.4 0.5
40	45	2.5 4.0		0.1 0.2	80	89	3.5 8.0	45	0.6 0.9
100	108	4.0 8.0	50	0.7 1.3	300	325	10.0 12.0 18.0 20.0	100	11.0 13.0 19.0 21.0
	114	4.0 8.0		0.7 1.3					
125	133	4.0 8.0 10.0	55	0.9 2.0 2.5	350	377	10.0 12.0 16.0 20.0 24.0	115	16.0 19.0 26.0 32.0 38.0
150	159	4.5 8.0 11.0	65	1.5 2.3 3.2	400	426	10.0 12.0 16.0 18.0 22.0 26.0	125	19.0 23.0 30.0 34.0 42.0 50.0
	168	4.5 8.0 11.0		1.5 2.3 3.2					
200	219	8.0 10.0 12.0	75	4.6 5.1 6.1	500	530	10.0 16.0 20.0 22.0 26.0 30.0	150	25.0 40.0 50.0 55.0 65.0 75.0
250	273	7.0 12.0 14.0 18.0	85	4.9 9.2 11.0 14.0					

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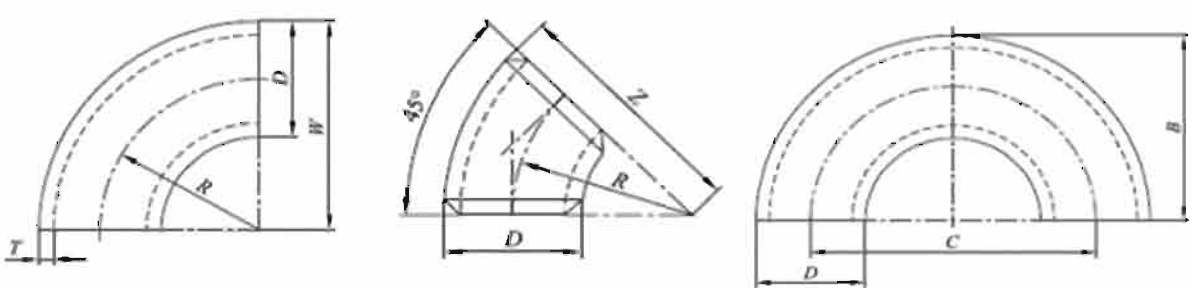
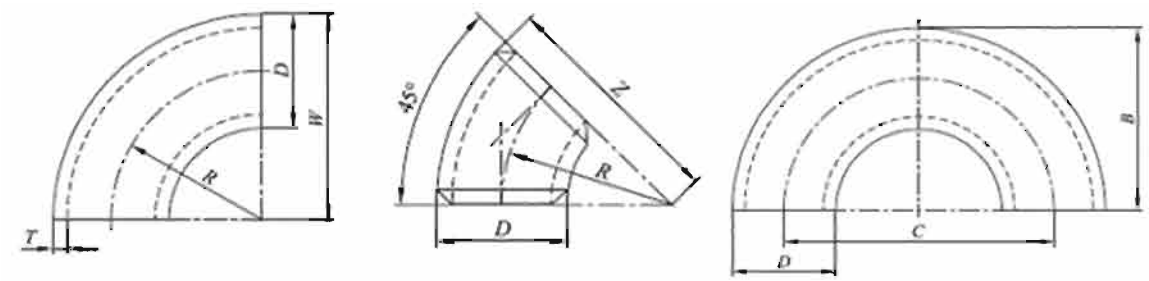
欧标
管件参数系列

Dimensions of R=2D Elbows - EN 10253.2



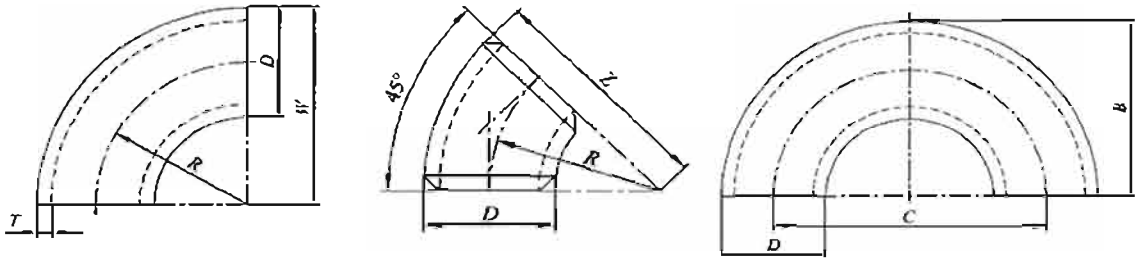
DN	D	R	C	B - W
15	21.3	25	50	36
20	2.9	25	50	39
25	33.7	25	50	42
32	42.4	32	64	53
40	48.3	38	76	62
50	60.3	51	102	81
65	76.1	63	127	102
80	88.9	76	152	121
100	114.3	102	203	159
125	139.7	127	254	197
150	168.3	152	305	237
200	219.1	203	406	313
250	273	254	508	391
300	323.9	305	610	467
350	355.6	356	711	533
400	406.4	406	813	610
450	457	457	914	686
500	508	508	1 016	762
550	559	559	1 118	838
600	610	610	1 220	914
650	660	660	1 320	990
700	711	711	1 422	1 066
750	762	762	1 524	1 143
800	813	813	1 626	1 220
850	864	864	1 728	1 296
900	914	914	1 828	1 371
1 000	1 016	1 016	2 032	1 524
1 050	1 067	1 067	2 134	1 600
1 100	1 118	1 118	2 236	1 677
1 150	1 166	1 166	2 332	1 749
1 200	1 219	1 219	2 438	1 830

Dimensions of R=3D Elbows - EN 10253.2



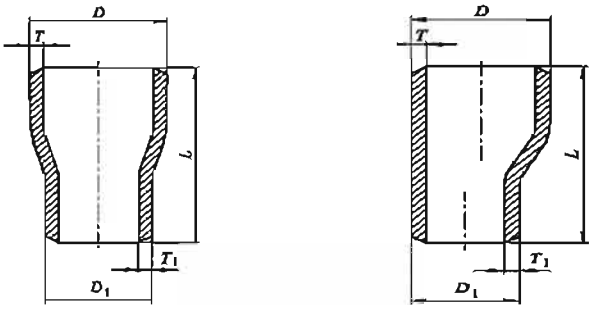
DN	D	R	C	B – W - Z
15	21.3	38	76	49
20	26.9	38	76	51
25	33.7	38	76	56
32	38	45	90	64
32	42.4	48	96	69
40	48.3	57	114	82
40	51	63	126	88
50	57	72	144	100
50	60.3	76	152	106
65	70	92	184	127
65	76.1	95	190	133
80	88.9	114	228	159
90	101.6	133	267	184
100	108	142.5	285	196
100	114.3	152	304	210
125	133	181	362	247
125	139.7	190	380	260
150	159	216	432	295
150	168.3	229	457	313
175	193.7	270	540	367
200	219.1	305	610	414
225	244.5	340	680	462
250	273	381	762	518
300	323.9	457	914	619
350	355.6	533	1 066	711
400	406.4	610	1 220	813
450	457	686	1 372	914
500	508	762	1 524	1 016
550	559	838	1 676	1 118
600	610	914	1 828	1 219
650	660	990	1 980	1 320
700	711	1 067	2 134	1 422
750	762	1 143	2 286	1 524
800	813	1 219	2 438	1 626
850	864	1 296	2 592	1 728
900	914	1 372	2 744	1 829
1 000	1 016	1 524	3 048	2 032
1 050	1 067	1 600	3 201	2 134
1 100	1 118	1 677	3 354	2 236
1 150	1 168	1 752	3 504	2 336
1 200	1 219	1 829	3 658	2 438

Dimensions of R=5D Elbows - EN 10253.2



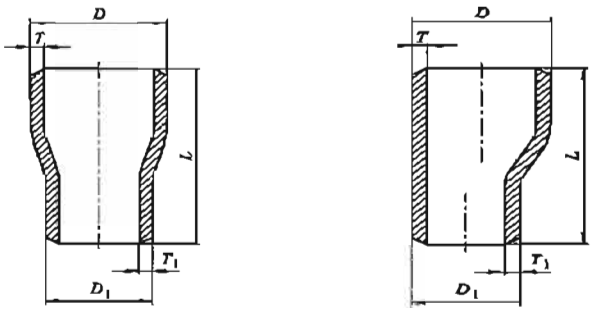
DN	D	R	C	B – W - Z
15	21.3	42.5	85	53
20	26.9	57.5	115	71
25	33.7	72.5	145	89
32	38	82.5	165	101
32	42.4	92.5	185	114
40	48.3	109.5	219	134
40	51	122.5	245	149
50	57	130	260	158
50	60.3	137.5	275	168
65	70	160	320	195
65	76.1	175	350	213
80	88.9	207.5	415	252
90	101.6	235	470	286
100	108	253	506	306
100	114.3	270	540	327
125	133	311.5	623	378
125	139.7	330	660	400
150	159	375	750	454
150	168.3	390	780	474
200	219.1	515	1030	624
225	244.5	580	1160	702
250	273	650	1300	786
300	323.9	770	1540	932
350	355.6	850	1700	1 028
400	406.4	970	1940	1 173
450	457	1 122	2 244	1 350
500	508	1 245	2 490	1 500
550	559	1 398	2 796	1 677
600	610	1 525	3 050	1 830
650	660	1 650	3 300	1 980
700	711	1 778	3 556	2 133
750	762	1 905	3 810	2 286
800	813	2 033	4 066	2 439
850	864	2 155	4 310	2 587
900	914	2 285	4 570	2 742
1 000	1 016	2 540	5 080	3 048
1 050	1 067	2 665	5 335	3 201
1 100	1 118	2 790	5 580	3 354
1 150	1 168	2 915	5 830	3 504
1 200	1 219	3 050	6 100	3 657

EN10253-2 REDUCER



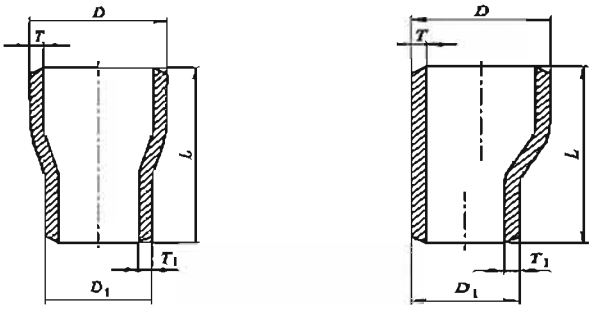
Side D		Side D1		
DN	D	DN1	D1	Length L
20	26,9	15	21,3	38
25	33,7	20	26,9	51
		15	21,3	51
32	42,4	25	33,7	51
		20	26,9	51
		15	21,3	51
40	48,3	32	42,4	64
		25	33,7	64
		20	26,9	64
50	60,3	40	48,3	76
		32	42,4	76
		25	33,7	76
		20	26,9	76
65	76,1	50	60,3	89
		40	48,3	89
		32	42,4	89
		25	33,7	89
80	88,9	65	76,1	89
		50	60,3	89
		40	48,3	89
		32	42,4	89
100	114,3	80	88,9	102
		65	76,1	102
		50	60,3	102
		40	48,3	102
125	139,7	100	114,3	127
		80	88,9	127
		65	76,1	127
		50	60,3	127

EN10253-2 REDUCER



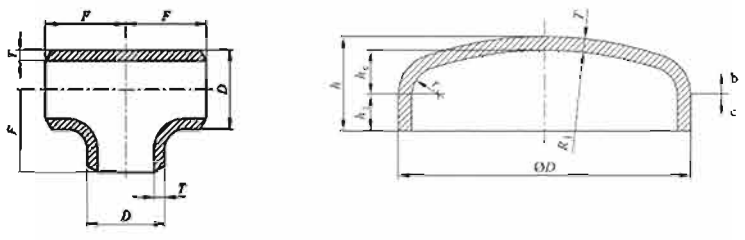
Side D		Side D1		
DN	D	DN1	D1	Length L
150	168,3	125	139,7	140
		100	114,3	140
		80	88,9	140
		65	76,1	140
200	219,1	150	168,3	152
		125	139,7	152
		100	114,3	152
		80	88,9	152
250	273	200	219,1	178
		150	168,3	178
		125	139,7	178
		100	114,3	178
300	323,9	250	273	203
		200	219,1	203
		150	168,3	203
		125	139,7	203
350	355,6	300	323,9	330
		250	273	330
		200	219,1	330
		150	168,3	330
400	406,4	350	355,6	356
		300	323,9	356
		250	273	356
		200	219,1	356
450	457	400	406,4	381
		350	355,6	381
		300	323,9	381
		250	273	381

EN10253-2 REDUCER



Side D		Side D1		
DN	D	DN1	D1	Length L
500	508	450	457	508
		400	406,4	508
		350	355,6	508
		300	323,9	508
550	559	500	508	508
		450	457	508
		400	406,4	508
		350	355,6	508
600	610	550	559	508
		500	508	508
		450	457	508
		400	406,4	508
700	711	600	610	610
		500	508	610
		450	457	610
800	813	700	711	610
		600	610	610
		550	559	610
		500	508	610
900	914	800	813	610
		700	711	610
		600	610	610
1 000	1 016	900	914	610
		800	813	610
		700	711	610
1 200	1 219	1 000	1 016	711
		900	914	711
		800	813	711

EQUAL TEE, CAP



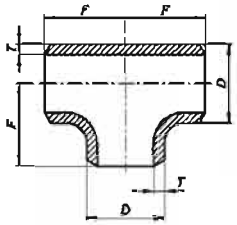
DN	D	F	h
15	21,3	25	25
20	26,9	29	25
25	33,7	38	38
32	42,4	48	38
40	48,3	57	38
50	60,3	64	38
65	76,1	76	38
80	88,9	86	51
90	101,6	95	64
100	114,3	105	64
125	139,7	124	76
150	168,3	143	89
200	219,1	178	102
250	273	216	127
300	323,9	254	152
350	355,6	279	165
400	406,4	305	178
450	457	343	203
500	508	381	229
550	559	419	254
600	610	432	267
650	660	495	267

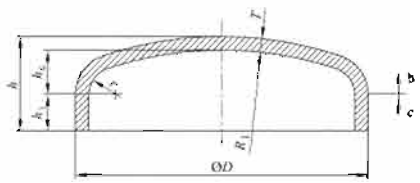
a For these dimensions, the length of the outlet branch is not equal to the length of the run F. The applicable values for the length of the outlet branch are respectively : 711 for DN 1050, 762 for DN 1100, 800 for DN 1150 and 838 for DN 1200.

R1 approximately equal to 0.8 D

r approximately equal to 0.15 D

EQUAL TEE, CAP





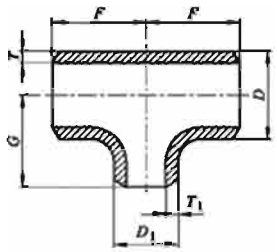
DN	D	F	h
700	711	521	267 for T ≤ 25
			290
750	762	559	267 for T ≤ 20
			310
800	813	597	267 for T ≤ 17.5
			330
850	864	635	267 for T ≤ 14
			350
900	914	673	267 for T ≤ 10
			370
1000	1 016	749	305 for T ≤ 14.2
			420
1050	1 067	762 a	305 for T ≤ 13
			405
1100	1 118	813 a	343 for T ≤ 12
			390
1150	1 168	851 a	343 for T ≤ 11
			375
1200	1 219	889 a	343 for T ≤ 10
			360

a For these dimensions, the length of the outlet branch is not equal to the length of the run F. The applicable values for the length of the outlet branch are respectively : 711 for DN 1050, 762 for DN 1100, 800 for DN 1150 and 838 for DN 1200.

R1 approximately equal to 0.8 D

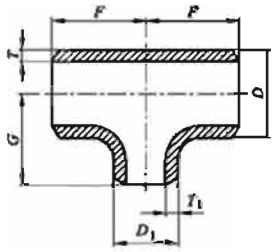
r approximately equal to 0.15 D

REDUCING TEE



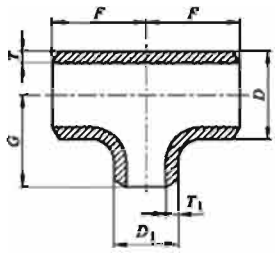
Side D		Side D1			
DN	D	DN1	D1	F	G
20	26,9	15	21,3	29	29
25	33,7	15	21,3	38	38
		20	26,9		38
32	42,4	15	21,3	48	48
		20	26,9		48
		25	33,7		48
40	48,3	15	21,3	57	57
		20	26,9		57
		25	33,7		57
		32	42,4		57
50	60,3	20	26,9	64	44
		25	33,7		51
		32	42,4		57
		40	48,3		60
65	76,1	25	33,7	76	57
		32	42,4		64
		40	48,3		67
		50	60,3		70
80	88,9	32	42,4	86	70
		40	48,4		73
		50	60,3		76
		65	76,1		83
100	114,3	40	48,3	105	86
		50	60,3		89
		65	76,1		95
		80	88,9		98
125	139,7	50	60,3	124	105
		65	76,1		108
		80	88,9		111
		100	114,3		117
150	168,3	65	76,1	143	121
		80	88,9		124
		100	114,3		130
		125	139,7		137
200	219,1	100	114,3	178	156
		125	139,7		162
		150	168,3		168

REDUCING TEE



Side D		Side D1			
DN	D	DN1	D1	F	G
250	273,1	100	114,3	216	184
		125	139,7		191
		150	168,3		194
		200	219,1		203
300	323,9	150	168,3	254	219
		200	219,1		229
		250	273		241
350	355,6	150	168,3	279	238
		200	219,1		248
		250	273		257
		300	323,9		270
400	406,4	150	168,3	305	264
		200	219,1		273
		250	273		283
		300	323,9		295
		350	355,6		305
450	457	200	219,1	343	298
		250	273		308
		300	323,9		321
		350	355,6		330
		400	406,4		330
500	508	250	273	381	333
		300	323,9		346
		400	406,4		356
		450	457,0		368
550	559	250	273	419	359
		300	323,9		371
		400	406,4		381
		500	508,0		406
600	610	250	273	432	384
		300	323,9		397
		400	406,4		406
		500	508,0		432
650	660	300	323,9	496	422
		350	355,6		432
		400	406,4		432
		500	508		457

REDUCING TEE



Side D		Side D1			
DN	D	DN1	D1	F	G
700	711	300	323,9	521	448
		400	406,4		457
		500	508,0		483
		600	610,0		508
750	762	400	406,4	559	483
		500	508,0		508
		600	610,0		533
800	813	400	406,4	602	508
		500	508,0		533
		600	610,0		559
		700	711,0		572
850	864	400	406,4	635	533
		500	508,0		559
		600	610,0		584
		700	711,0		597
900	914	400	406,4	673	559
		500	508,0		584
		600	610,0		610
		700	711,0		622
		800	813,0		648
1 000	1 016	600	610,0	749	660
		700	711,0		673
		800	813,0		711
		900	914,0		737
1 050	1 067	600	610,0	762	660
		700	711,0		698
		800	813,0		711
		900	914,0		711
1 100	1 118	600	610,0	813	698
		700	711,0		698
		800	813,0		711
		900	914		724
1 200	1 219	700	711,0	889	762
		800	813,0		787
		900	914,0		787
		1 000	1 016,0		813

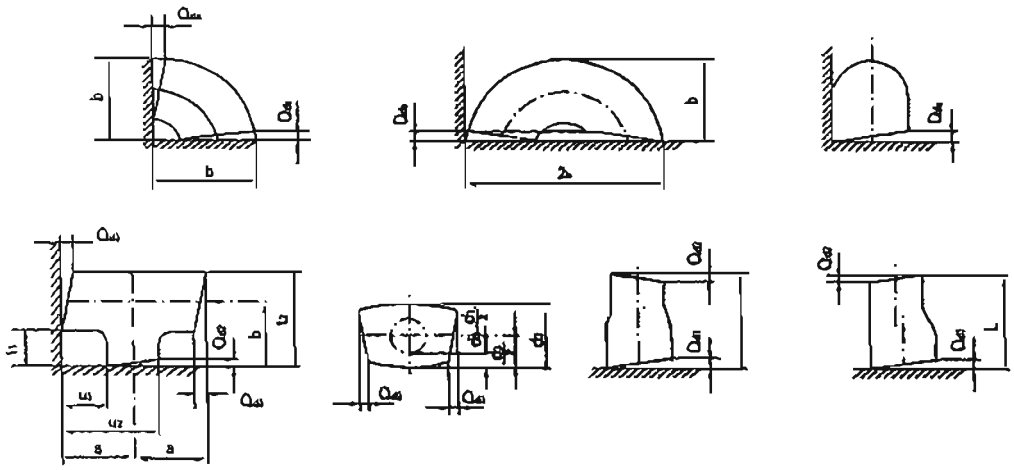
DIN WEIGHT TABLE



公称直径 Nominal diameter		弯头 Elbow			三通 Tee	大小头 Reducer	管帽 Cap
DN	INCH	45°	90°	180°			
15	1/2"	0.02	0.04	0.08	0.08		0.02
20	3/4"	0.03	0.06	0.12	0.12	0.05	0.02
25	1"	0.06	0.12	0.24	0.26	0.1	0.03
32	1 1/4"	0.1	0.19	0.4	0.45	0.12	0.04
40	1 1/2"	0.16	0.3	0.6	0.58	0.18	0.06
50	2"	0.25	0.49	0.98	0.85	0.3	0.12
65	2 1/2"	0.4	0.79	1.6	1.2	0.47	0.21
80	3"	0.61	1.22	2.44	1.8	0.56	0.28
90	3 1/2"	0.82	1.63	3.25	2.9	0.88	0.36
100	4"	1.19	2.37	4.74	3.1	0.9	0.42
125	5"	2.02	4.04	8.08	5.1	1.7	0.62
150	6"	3.25	6.5	13	9	2.5	1.23
200	8"	7.9	15.8	31.6	18	5	2.21
250	10"	12.45	24.9	49.8	26.5	7.5	5.4
300	12"	20	40	80	42	11	7.3
350	14"	28.6	57.2	114.4	71	22	9.8
400	16"	41.1	82.2	164.4	85	30	16
450	18"	59.5	119	238			
500	20"	81	162	324		68	
550	22"						
600	24"	117.04	234.08	468.16		93	
650	26"						
700	28"	178.7	357.39	714.79			
750	30"						
800	32"	233.6	467.19	934.38			
850	34"						
900	36"						
950	38"						
1000	40"						

钢制对焊无缝管件形位公差

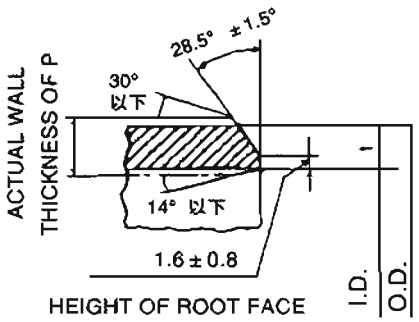
Tolerance of form and position of Steel butt-welding seamless fittings



DIN 2605/2615/2616/2609 EN10253-1对焊管件形位公差表

d a in mm	外径 D Limit Deviations for Outer Diameter公差		Toterance 极限偏差	
		Subject to agrement	on Circularity 椭圆度	O
≤100	±1%da 最大 (With a maximum of ±0.5mm 范围	±0.4mm	Within the 极限偏差 specified 范围 tolerance on diameter	1% of dimention (with a maximum of 1mm)
100<da≤200	±1% d a	±0.5% d a		
>200	±1%d a	±0.6% d a	2%	

Nominal Size DN	45° 弯头、90° 弯头、180° 弯头 Limit Deviations for Dimension 尺寸公差范围					
	45 Elbow b	90 Elbow b	180 Elbow 2b	Cap h 管帽	Tee a and b 三通	Reducer l1 异径
15-65a	±6.0	±2.5	±8.0	±4	±2.0	±2.5
80-100	±7.0	±3.0	±9.0			±3.0
125-200	±8.5	±3.5	±10.0	±7	±3.0	±3.5
250	±9.5	±4.0	±14.0			±4.0
300-450	±12.0	±5.0				±5.0
500-600	±14.5	±6.0	±16.0			±6.0
700			To Be Agreed	±10	±5.0	
800	±19.0	±8.0				
900-1200			Agreed			±8.0



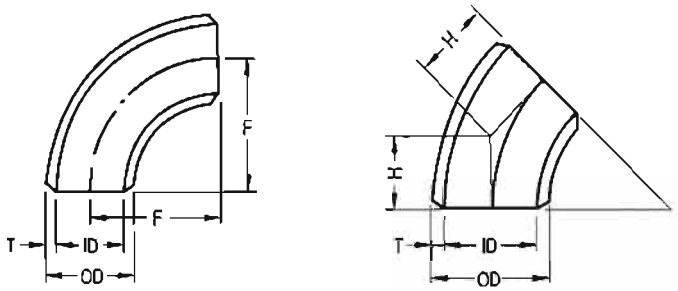
德标坡口角度
Germany standard groove angle

Nominal Size DN	Thickness 壁厚 s	Limit Deviations for Wall Thickness s 壁厚的极限偏差			
		DIN			EN10253-1
15-400		-12.5% +15%			-0%+20%
	s≤4mm				-12.5%+15%
450-600	s>4mm				Not Specified
700-1200	s≤10mm	-0.35mm	+15%		
	s>10mm	-0.5mm			

河北海浩

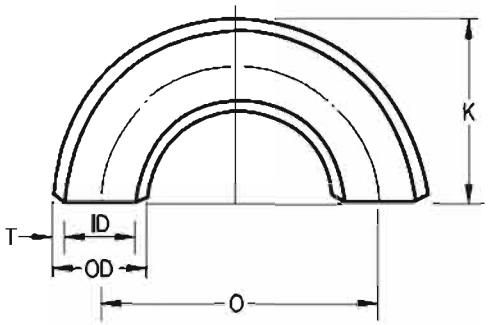
日标
管件参数系列

JIS ELBOW 90° & 45°



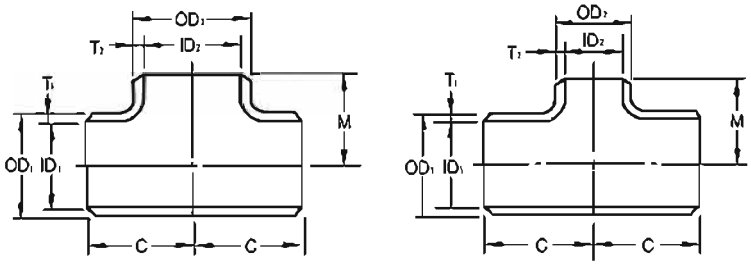
Nominal		OD	Center to End			90 ° Weight		45°Weight
(NPS)			90°(F)		45°(H)	KG/PC		KG/PC
A	B	D	Long	Shot	Long	Long	Short	LONG
15	½	21.7	38.1	-	15.8	0.08	0.05	0.04
20	¾	27.2	38.1	-	15.8	0.1	0.07	0.05
25	1	34	38.1	25.4	15.8	0.15	0.1	0.08
32	1¼	42.7	47.6	31.8	19.7	0.26	0.17	0.13
40	1½	48.6	57.2	38.1	23.7	0.35	0.24	0.18
50	2	60.5	76.2	50.8	31.6	0.64	0.43	0.32
65	2½	76.3	95.3	63.5	39.5	1.12	0.75	0.56
80	3	89.1	114.3	76.2	47.3	1.58	1.05	0.79
90	3½	101.6	133.4	88.9	55.3	2.17	1.45	1.09
100	4	114.3	152.4	101.6	63.1	2.91	1.94	1.46
125	5	139.8	190.5	127	78.9	4.49	2.99	2.25
150	6	165.2	228.6	152.4	94.7	7.09	4.73	3.55
200	8	216.3	304.8	203.2	126.3	14.4	9.61	7.2
250	10	267.4	381	254	157.8	25.4	16.9	12.7
300	12	318.5	457.2	304.8	189.4	38.1	25.4	19.05
350	14	355.6	533.4	355.6	220.9	56.7	37.8	28.35
400	16	406.4	609.6	406.4	252.5	74.3	49.5	37.15
450	18	457.2	685.8	457.2	284.1	94.2	62.8	47.1
500	20	508	762	508	315.6	116	77.7	58
550	22	558.8	838.2	558.8	347.2	141	94.1	70.5
600	24	609.6	914.4	609.6	378.7	168	112	84
650	26	660.4	990.6	660.4	410.3	198	132	99
700	28	711.2	1066.8	711.2	441.9	230	154	115
750	30	762	1143	762	473.4	264	176	132
800	32	812.8	1219.2	812.8	505	301	201	150.5
850	34	863.6	1295.4	863.6	536.6	340	227	170
900	36	914.4	1371.6	914.4	568.1	380	253	190
950	38	965.2	1447.8	965.2	599.7	425	283	212.5
1000	40	1016	1524	1016	631.2	471	314	235.5
1050	42	1066.8	1600.2	1066.8	662.8	518	346	259
1100	44	1117.6	1676.4	1117.6	694.4	570	380	285
1150	46	1168.4	1752.6	1168.4	725.9	623	415	311.5
1200	48	1219.2	1828.8	1219.2	757.5	677	452	338.5

JIS ELBOW 180°



Nominal (NPS)		OD	Center to Center 180° (O)		End to End 180° (K)		180° Weight KG/PC	
A	B	D	Long	Shot	Long	Shot	Long	Short
15	½	21.7	76.2	-	49	-	0.16	0.1
20	¾	27.2	76.2	-	51.7	-	0.2	0.14
25	1	34	76.2	50.8	55.1	42.4	0.3	0.2
32	1¼	42.7	95.2	63.6	69	53.2	0.52	0.34
40	1½	48.6	114.4	76.2	81.5	62.4	0.7	0.48
50	2	60.5	152.4	101.6	106.5	81.1	1.28	0.86
65	2½	76.3	190.6	127	133.5	101.7	2.24	1.5
80	3	89.1	228.6	152.4	158.9	120.8	3.16	2.1
90	3½	101.6	266.8	177.8	184.2	139.7	4.34	2.9
100	4	114.3	304.8	203.2	209.6	158.8	5.82	3.88
125	5	139.8	381	254	260.4	196.9	8.98	5.98
150	6	165.2	457.2	304.8	311.2	235	14.18	9.46
200	8	216.3	609.6	406.4	413	311.4	28.8	19.22
250	10	267.4	762	508	514.7	387.7	50.8	33.8
300	12	318.5	914.4	609.6	616.5	464.1	76.2	50.8
350	14	355.6	1066.8	711.2	711.2	533.4	113.4	75.6
400	16	406.4	1219.2	812.8	812.8	609.6	148.6	99
450	18	457.2	-	-	-	-	188.4	125.6
500	20	508	-	-	-	-	232	155.4
550	22	558.8	-	-	-	-	282	188.2
600	24	609.6	-	-	-	-	336	224
650	26	660.4	-	-	-	-	396	264
700	28	711.2	-	-	-	-	460	308
750	30	762	-	-	-	-	528	352
800	32	812.8	-	-	-	-	602	402
850	34	863.6	-	-	-	-	680	454
900	36	914.4	-	-	-	-	760	506
950	38	965.2	-	-	-	-	850	566
1000	40	1016	-	-	-	-	942	628
1050	42	1066.8	-	-	-	-	1036	692
1100	44	1117.6	-	-	-	-	1140	760
1150	46	1168.4	-	-	-	-	1246	830
1200	48	1219.2	-	-	-	-	1354	904

JIS TEE



Straight Reducing

Nominal Pipe Size (Unit : A)	Outside Dia. O.D1	Outside Dia. O.D2	Center to End		WEIGHT
			C	M	KG/PC
15	21.7	21.7	25.4	25.4	0.09
20	27.2	27.2	28.6	28.6	0.13
20 x 20 x 15	27.2	21.7	28.6	28.6	0.12
25	34	34	38.1	38.1	0.24
25 x 25 x 20	34	27.2	38.1	38.1	0.23
25 x 25 x 15	34	21.7	38.1	38.1	0.22
32	42.7	42.7	47.6	47.6	0.42
32 x 32 x 25	42.7	34	47.6	47.6	0.39
32 x 32 x 20	42.7	27.2	47.6	47.6	0.37
40	48.6	48.6	57.2	57.2	0.58
40 x 40 x 32	48.6	42.7	57.2	57.2	0.56
40 x 40 x 25	48.6	34	57.2	57.2	0.53
40 x 40 x 20	48.6	27.2	57.2	57.2	0.51
50	60.5	60.5	63.5	63.5	0.86
50 x 50 x 40	60.5	48.6	63.5	60.3	0.8
50 x 50 x 32	60.5	42.7	63.5	57.2	0.77
50 x 50 x 25	60.5	34	63.5	50.8	0.73
65	76.3	76.3	76.2	76.2	1.42
65 x 65 x 50	76.3	60.5	76.2	69.9	1.31
65 x 65 x 40	76.3	48.6	76.2	66.7	1.25
65 x 65 x 32	76.3	42.7	76.2	63.5	1.22
80	89.1	89.1	85.7	85.7	1.87
80 x 80 x 65	89.1	76.3	85.7	82.6	1.79
80 x 80 x 50	89.1	60.5	85.7	76.2	1.68
80 x 80 x 40	89.1	48.6	85.7	73	1.62
90	101.6	101.6	95.3	95.3	2.39
90 x 90 x 80	101.6	89.1	95.3	92.1	2.31
90 x 90 x 65	101.6	76.3	95.3	88.9	2.25
90 x 90 x 50	101.6	60.5	95.3	82.6	2.21
90 x 90 x 40	101.6	48.6	95.3	79.4	2.15
100	114.3	114.3	104.8	104.8	3.13
100 x 100 x 90	114.3	101.6	104.8	101.6	2.92
100 x 100 x 80	114.3	89.1	104.8	98.4	2.84
100 x 100 x 65	114.3	76.3	104.8	95.3	2.72
100 x 100 x 50	114.3	60.5	104.8	88.9	2.66
125	139.8	139.8	123.8	123.8	4.53
125 x 125 x 100	139.8	114.3	123.8	117.5	4.3
125 x 125 x 90	139.8	101.6	123.8	114.3	4.18
125 x 125 x 80	139.8	89.1	123.8	111.1	4.08
125 x 125 x 65	139.8	76.3	123.8	108	4
125 x 125 x 50	139.8	60.5	123.8	104.8	3.9
150	165.2	165.2	142.9	142.9	6.84
150 x 150 x 125	165.2	139.8	142.9	136.5	6.45
150 x 150 x 100	165.2	114.3	142.9	130.2	6.23
150 x 150 x 90	165.2	101.6	142.9	127	6.12

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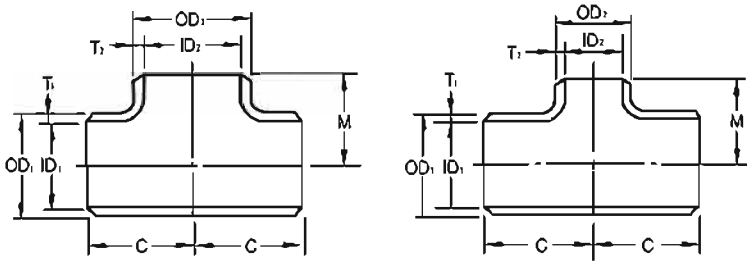
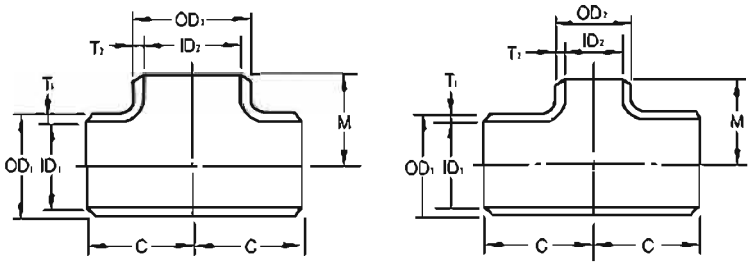


Straight Reducing

Nominal Pipe Size (Unit : A)	Outside Dia. O.D1	Outside Dia. O.D2	Center to End C	Center to End M	WEIGHT KG/PC
150 x 150 x 80	165.2	89.1	142.9	123.8	6.01
150 x 150 x 65	165.2	76.3	142.9	120.7	5.92
200	216.3	216.3	177.8	177.8	12.8
200 x 200 x 150	216.3	165.2	177.8	168.3	11.9
200 x 200 x 125	216.3	139.8	177.8	161.9	11.5
200 x 200 x 100	216.3	114.3	177.8	155.6	11.3
250	267.4	267.2	215.9	215.9	21.8
250 x 250 x 200	267.4	216.3	215.9	203.2	20.4
250 x 250 x 150	267.4	165.2	215.9	193.7	19.5
250 x 250 x 125	267.4	139.8	215.9	190.5	19.2
300	318.5	318.5	254	254	32
300 x 300 x 250	318.5	267.4	254	241.3	30.4
300 x 300 x 200	318.5	216.3	254	228.6	29
300 x 300 x 150	318.5	165.2	254	219.1	28.1
350	355.6	355.6	279.4	279.4	44.7
350 x 350 x 300	355.6	318.5	279.4	269.9	42.7
350 x 350 x 250	355.6	267.4	279.4	257.2	41.2
350 x 350 x 200	355.6	216.3	279.4	247.7	40
400	406.4	406.4	304.8	304.8	55.2
400 x 400 x 350	406.4	355.6	304.8	304.8	54.2
400 x 400 x 300	406.4	318.5	304.8	295.3	52.7
400 x 400 x 250	406.4	267.4	304.8	282.6	51.2
450	457.2	457.2	342.9	342.9	70
450 x 450 x 400	457.2	406.4	342.9	330.2	67.9
450 x 450 x 350	457.2	355.6	342.9	330.2	88.9
450 x 450 x 300	457.2	318.5	342.9	320.7	65.4
500	508	508	381	381	86.6
500 x 500 x 450	508	457.2	381	368.3	84.2
500 x 500 x 400	508	406.4	381	355.6	82.1
500 x 500 x 350	508	355.6	381	355.6	81.1
550	558.8	558.8	419.1	419.1	106
550 x 550 x 500	558.8	508	419.1	406.4	103
550 x 550 x 450	558.8	457.2	419.1	393.7	101
550 x 550 x 400	558.8	406.4	419.1	381	98.9
600	609.6	609.6	431.8	431.8	116
600 x 600 x 550	609.6	558.8	431.8	431.8	115
600 x 600 x 500	609.6	508	431.8	431.8	114
600 x 600 x 450	609.6	457.2	431.8	419.1	111
650	660.4	660.4	495.3	495.3	147
650 x 650 x 600	660.4	609.6	495.3	482.6	144
650 x 650 x 550	660.4	558.8	495.3	469.9	141
650 x 650 x 500	660.4	508	495.3	457.2	138
700	711.2	711.2	520.7	520.7	165
700 x 700 x 650	711.2	660.4	520.7	520.7	163

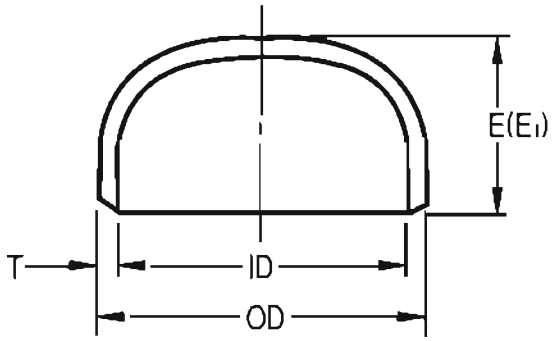
JIS TEE



Straight Reducing

Nominal Pipe Size (Unit : A)	Outside Dia. O.D1	Outside Dia. O.D2	Center to End		WEIGHT
			C	M	KG/PC
700 x 700 x 600	711.2	609.6	520.7	508	160
700 x 700 x 550	711.2	558.8	520.7	495.3	157
750	762	762	558.8	558.8	190
750 x 750 x 700	762	711.2	558.8	546.1	188
750 x 750 x 650	762	660.4	558.8	546.1	185
750 x 750 x 600	762	609.6	558.8	533.4	182
800	812.8	812.8	569.9	596.9	217
800 x 800 x 750	812.8	762	569.9	584.2	213
800 x 800 x 700	812.8	711.2	569.9	571.5	209
800 x 800 x 650	812.8	660.4	569.9	571.5	208
850	863.6	863.6	635	635	246
850 x 850 x 800	863.6	812.8	635	622.3	243
850 x 850 x 750	863.6	762	635	609.6	238
850 x 850 x 700	863.6	711.2	635	596.9	236
900	914.4	914.4	673.1	673.1	276
900 x 900 x 850	914.4	863.6	673.1	660.4	271
900 x 900 x 800	914.4	812.8	673.1	647.7	269
900 x 900 x 750	914.4	762	673.1	635	264
950	965.2	965.2	711.2	711.2	308
950 x 950 x 900	965.2	914.4	711.2	711.2	306
950 x 950 x 850	965.2	863.6	711.2	698.5	302
950 x 950 x 800	965.2	812.8	711.2	685.8	298
1000	1016	1016	749.3	749.3	342
1000 x 1000 x 950	1016	965.2	749.3	749.3	340
1000 x 1000 x 900	1016	914.4	749.3	736.6	335
1000 x 1000 x 850	1016	863.6	749.3	723.9	331
1050	1066.8	1066.8	762	711.2	352
1050 x 1050 x 1000	1066.8	1016	762	711.2	350
1050 x 1050 x 950	1066.8	965.2	762	711.2	348
1050 x 1050 x 900	1066.8	914.4	762	711.2	346
1100	1117.6	1117.6	812.8	762	396
1100 x 1100 x 1050	1117.6	1066.8	812.8	762	394
1100 x 1100 x 1000	1117.6	1016	812.8	749.3	389
1100 x 1100 x 950	1117.6	965.2	812.8	736.6	385
1150	1168.4	1168.4	850.9	800.1	434
1150 x 1150 x 1100	1168.4	1117.6	850.9	800.1	432
1150 x 1150 x 1050	1168.4	1066.8	850.9	787.4	427
1150 x 1150 x 1000	1168.4	1016	850.9	774.7	423
1200	1219.2	1219.2	889	838.2	474
1200 x 1200 x 1150	1219.2	1168.4	889	838.2	472
1200 x 1200 x 1100	1219.2	1117.6	889	838.2	470
1200 x 1200 x 1050	1219.2	1066.8	889	812.8	462

JIS CAP



(NPS)		OD	End to End Cap			Weight
A	B	D	E	E1	T	KG/PC
15	½	21.7	25.4	-	-	0.03
20	¾	27.2	25.4	-	-	0.04
25	1	34	38.1	-	-	0.08
32	1¼	42.7	38.1	-	-	0.11
40	1½	48.6	38.1	-	-	0.15
50	2	60.5	38.1	44.5	5.5	0.23
65	2½	76.3	38.1	50.8	7	0.34
80	3	89.1	50.8	63.5	7.6	0.51
90	3½	101.6	63.5	76.2	8.1	0.67
100	4	114.3	63.5	76.2	8.6	0.88
125	5	139.8	76.2	88.9	9.5	1.29
150	6	165.2	88.9	101.6	11	1.99
200	8	216.3	101.6	127	12.7	3.61
250	10	267.4	127	152.4	12.7	6.33
300	12	318.5	152.4	177.8	12.7	9.43
350	14	355.6	165.1	190.5	12.7	13.2
400	16	406.4	177.8	203.2	12.7	16.6
450	18	457.2	203.2	228.6	12.7	21.2
500	20	508	228.6	254	12.7	26.4
550	22	558.8	254	254	12.7	31.5
600	24	609.6	266.7	304.8	12.7	36.6
650	26	660.4	266.7	-	-	41

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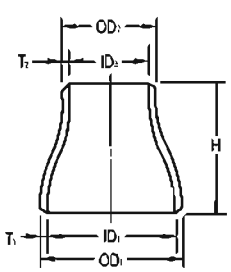
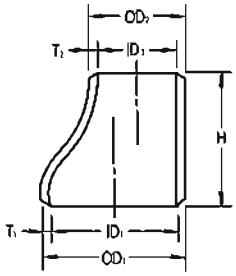


Concentric



Eccentric

NPS		OD		End-End	SGP
A	B	D1	D2	H	Kg/PC
20×15	¾×½	27.2	21.7	38.1	0.06
25×20	1×¾	34	27.2	50.8	0.11
25×15	1×½	34	21.7	50.8	0.1
32×25	1¼×1	42.7	34	50.8	0.16
32×20	1¼×¾	42.7	27.2	50.8	0.15
32×15	1¼×½	42.7	21.7	50.8	0.13
40×32	1 ½×1¼	48.6	42.7	63.5	0.24
40×25	1 ½×1	48.6	34	63.5	0.21
40×20	1 ½×¾	48.6	27.2	63.5	0.2
40×15	1 ½×½	48.6	21.7	63.5	0.18
50×40	2×1½	60.5	48.6	76.2	0.37
50×32	2×1¼	60.5	42.7	76.2	0.35
50×25	2×1	60.5	34	76.2	0.31
50×20	2×¾	60.5	27.2	76.2	0.29
65×50	2 ½×2	76.3	60.5	88.9	0.6
65×40	2 ½×1½	76.3	48.6	88.9	0.55
65×32	2 ½×1¼	76.3	42.7	88.9	0.52
65×25	2 ½×1	76.3	34	88.9	0.48
80×65	3×2½	89.1	76.3	88.9	0.73
80×50	3×2	89.1	60.5	88.9	0.66
80×40	3×1½	89.1	48.6	88.9	0.62
80×32	3×1¼	89.1	42.7	88.9	0.59
90×80	3 ½×3	101.6	89.1	101.6	0.91
90×65	3 ½×2½	101.6	76.3	101.6	0.85
90×50	3 ½×2	101.6	60.5	101.6	0.81
90×40	3 ½×1½	101.6	48.6	101.6	0.76
90×32	3 ½×1¼	101.6	42.7	101.6	0.73
100×90	4×3½	114.3	101.6	101.6	1.18
100×80	4×3	114.3	89.1	101.6	1.1
100×65	4×2½	114.3	76.3	101.6	1.04
100×50	4×2	114.3	60.5	101.6	0.97
100×40	4×1½	114.3	48.6	101.6	0.91
125×100	5×4	139.8	114.3	127	1.74
125×90	5×3½	139.8	101.6	127	1.66
125×80	5×3	139.8	89.1	127	1.58
125×65	5×2½	139.8	76.3	127	1.5
125×50	5×2	139.8	60.5	127	1.41
150×125	6×5	165.2	139.8	139.7	2.55
150×100	6×4	165.2	114.3	139.7	2.36
150×90	6×3½	165.2	101.6	139.7	2.27
150×80	6×3	165.2	89.1	139.7	2.18
150×65	6×2½	165.2	76.3	139.7	2.09

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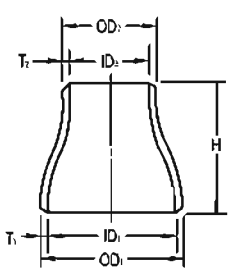
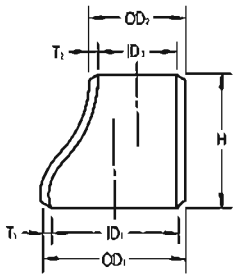


Concentric



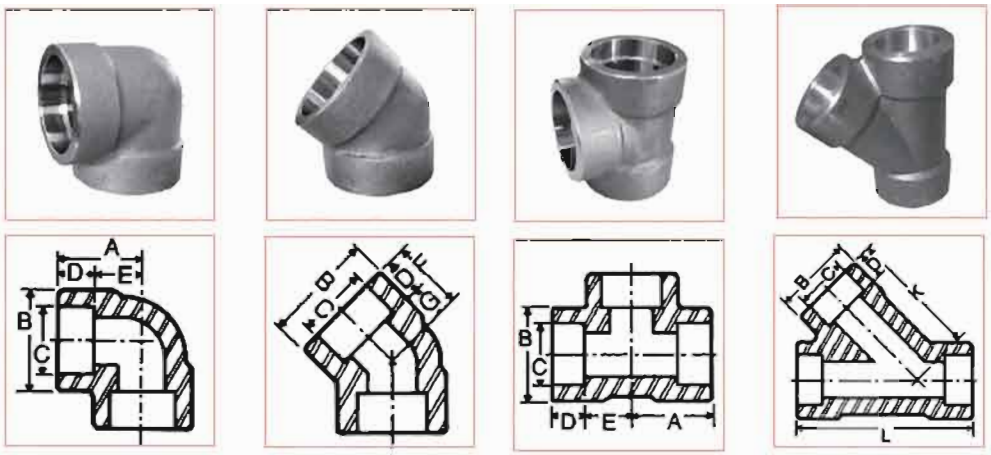
Eccentric

NPS		OD		End-End	SGP
A	B	D1	D2	H	Kg/PC
200×150	8×6	216.3	165.2	152.4	4.17
200×125	8×5	216.3	139.8	152.4	3.87
200×100	8×4	216.3	114.3	152.4	3.67
200×90	8×3½	216.3	101.6	152.4	3.51
250×200	10×8	267.4	216.3	177.8	6.87
250×150	10×6	267.4	165.2	177.8	6.32
250×125	10×5	267.4	139.8	177.8	6.06
250×100	10×4	267.4	114.3	177.8	5.8
300×250	12×10	318.5	267.4	203.2	9.97
300×200	12×8	318.5	216.3	203.2	9.29
300×150	12×6	318.5	165.2	203.2	8.69
300×125	12×5	318.5	139.8	203.3	8.39
350×300	14×12	355.6	318.5	330.2	21.2
350×250	14×10	355.6	267.4	330.2	19.7
350×200	14×8	355.6	216.3	330.2	18.3
350×150	14×6	355.6	165.2	330.2	16.9
400×350	16×14	406.4	355.6	355.6	25.9
400×300	16×12	406.4	318.5	355.6	24.1
400×250	16×10	406.4	267.4	355.6	22.4
400×200	16×8	406.4	216.3	355.6	21.7
450×400	18×16	457.2	406.4	381	31.5
450×350	18×14	457.2	355.6	381	29.8
450×300	18×12	457.2	318.5	381	27.7
450×250	18×10	457.2	267.4	381	27.1
500×450	20×18	508	457.2	508	47
500×400	20×16	508	406.4	508	44.7
500×350	20×14	508	355.6	508	42.4
500×300	20×12	508	318.5	508	40.8
550×500	22×20	558.8	508	508	52.1
550×450	22×18	558.8	457.2	508	49.5
550×400	22×16	558.8	406.4	508	47
550×350	22×14	558.8	355.6	508	45.3
600×550	24×22	609.6	558.8	508	57.1
600×500	24×20	609.6	508	508	54.8
600×450	24×18	609.6	457.2	508	52.6
600×400	24×16	609.6	406.4	508	50.4
650×600	26×24	660.4	609.6	609.6	74.5
650×550	26×22	660.4	558.8	609.6	71.5
650×500	26×20	660.4	508	609.6	68.5
650×450	26×18	660.4	457.2	609.6	66.3
700×650	28×26	711.2	660.4	609.6	80.6
700×600	28×24	711.2	609.6	609.6	77.5
700×550	28×22	711.2	558.8	609.6	74.5
700×500	28×20	711.2	508	609.6	72.4

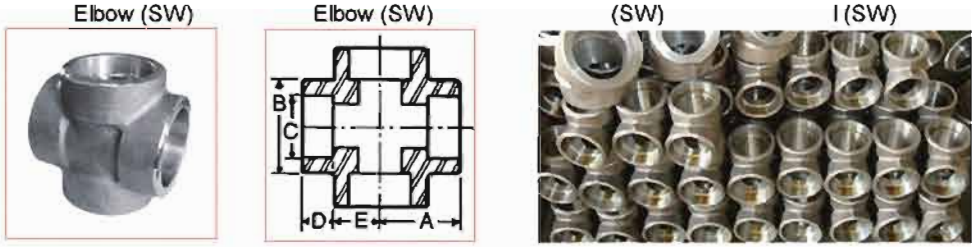
河北海浩

锻造
管件参数系列

Products: Forged Socket Weld Fittings



90 Degree Elbow (SW) | 45 Degree Elbow (SW) | Tee (SW) | Latera l (SW)



Cross (SW) | Socket Weld Fittings

Socket Weld Dimensional Data

1/8" to 4" class 3000 socket weld, 1/8" to 4" class 6000 socket weld, 1/2" to 2 " class 9000 socket weld

	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 3000	A	7/8	7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
	B	29/32	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/16	4 5/16	5 3/4
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	7/16	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 5/8

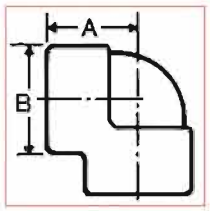
	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 6000	A	-	-	-	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	-	-	-	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6
	C	-	-	-	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D	-	-	-	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	-	-	-	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 1/2	2 3/4

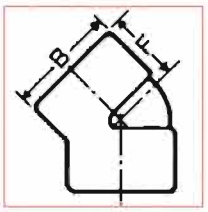
	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 9000	A	-	-	-	1 1/2	1 3/4	2	2 3/8	2 1/2	3	-	-	-
	B	-	-	-	1 5/8	2 2/9	2 1/2	3	3 1/3	3 2/3	-	-	-
	C	-	-	-	0.855	1.065	1.330	1.675	1.915	2.406	-	-	-
	D	-	-	-	3/8	1/2	1/2	1/2	1/2	5/8	-	-	-
	E	-	-	-	1	1 1/8	1 1/4	1 3/8	1 1/2	2 1/8	-	-	-

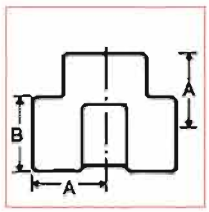
Products: Forged Threaded Fittings

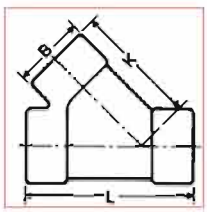




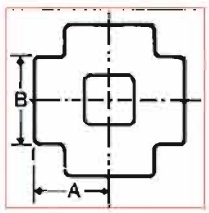


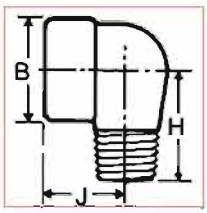






90 Degree Elbow (TH) | 45 Degree Elbow (TH) | Tee (TH) | Lateral (TH)

Cross (TH) | Threaded Street Elbow (TH)

Threaded Fittings Dimensional Data

1/4" to 4" class 2000 threaded, 1/8" to 4" class 3000 threaded, 1/8" to 4 " class 6000 threaded

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 2000	A	-	7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
	B	-	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/16	4 5/16	5 3/4

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 3000	A	7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 6000	A	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 3/16	4 1/2
	B	1 1/8	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	5 3/4	6

Threaded Street Elbow Dimensional Data

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	-	-	-
Class3000	B	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	-	-	-
	H	1 1/4	1 1/4	1 1/2	1 5/8	1 7/8	2 1/4	2 5/8	2 15/16	3 5/16	-	-	-
	J	7/8	7/8	1	1 1/8	1 3/8	1 3/4	2	2 1/8	2 1/2	-	-	-
	Wt	0.264	0.242	0.375	0.595	1.048	1.438	2.340	3.000	5.461	-	-	-

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	-	-	-	-
Class6000	B	1 1/8	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	-	-	-	-
	H	1 1/4	1 1/2	1 5/8	1 7/8	2 1/4	2 5/8	2 15/16	3 5/16	-	-	-	-
	J	7/8	1	1 1/8	1 3/8	1 3/4	2	2 1/8	2 1/2	-	-	-	-
	Wt		0.375	0.438	1.000	1.625	3.030	3.688	7.120	-	-	-	-

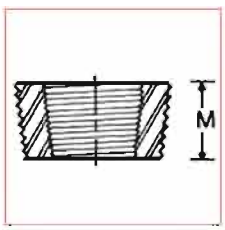
Products: Threaded Plugs and Bushings

Square Head Plug

Hexagon Plug

Round Head Plug

Hexagon Bushing



Flush Bushing

Dimensional Data

Nominal Pipe Size	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
A	1 3/8	1 5/8	1 5/8	1 3/4	1 3/4	2	2	2	2 1/2	2 3/4	2 3/4	3
B	13/32	17/32	11/16	27/32	1 1/16	15/16	1 11/16	1 29/32	2 3/8	2 7/8	3 1/2	4 1/2
C*	7/16	5/8	11/16	7/8	1 1/16	1 7/16	1 13/16	2	2 1/2	3	3 3/4	4 5/8
D	1/4	1/4	5/16	5/16	3/8	3/8	9/16	5/8	11/16	3/4	13/16	1 1/4
E	7/16	1/2	9/16	11/16	3/4	27/32	7/8	15/16	1	1 1/4	1 9/16	1 21/32
F	9/32	3/8	7/16	9/16	5/8	13/16	15/16	1 1/8	1 5/16	1 1/2	1 11/16	2 1/2
G	1/4	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	1 1/4
H	3/8	7/16	1/2	9/16	5/8	3/4	13/16	13/16	7/8	1 1/16	1 1/8	1 3/8
J*		5/8	11/16	7/8	1 1/16	1 7/16	1 13/16	2	2 1/2	3	3 3/4	4 5/8
K		3/16	3/16	3/16	1/4	1/4	3/8	3/8	3/8	1/2	13/16	1 1/4
L		1/2	9/16	11/16	3/4	27/32	7/8	15/16	1	1 1/4	1 9/16	1 21/32
M		7/16	1/2	9/16	5/8	3/4	13/16	13/16	7/8	1 1/16	1 1/8	1 1/4
N	3/8	7/16	1/2	9/16	5/8	3/4	13/16	13/16	7/8	1 1/16	1 1/8	1 1/4

*Dimension J for Hex Head Bushing and dimension C for Hex Head Plug are the same.

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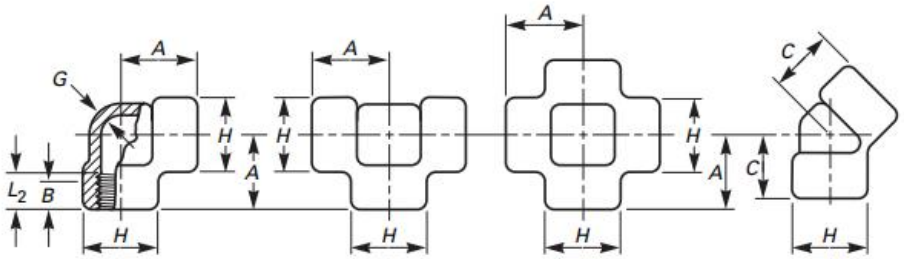
Table I-2 Forged Threaded Fittings



Nominal Pipe Size	Center-to-End Elbows, Tees, and Crosses, A			Center-to-End 45-deg Elbow, C			Outside Diameter of Band, H			Minimum Wall Thickness, G			Min. Length of Thread [Note (1)]	
	2000	3000	6000	2000	3000	6000	2000	3000	6000	2000	3000	6000	B	L_2
1/8	0.81	0.81	0.97	0.69	0.69	0.75	0.88	0.88	1.00	0.125	0.125	0.250	0.25	0.2639
1/4	0.81	0.97	1.12	0.69	0.75	0.88	0.88	1.00	1.31	0.125	0.130	0.260	0.32	0.4018
3/8	0.97	1.12	1.31	0.75	0.88	1.00	1.00	1.31	1.50	0.125	0.138	0.275	0.36	0.4078
1/2	1.12	1.31	1.50	0.88	1.00	1.12	1.31	1.50	1.81	0.125	0.161	0.321	0.43	0.5337
3/4	1.31	1.50	1.75	1.00	1.12	1.31	1.50	1.81	2.19	0.125	0.170	0.336	0.50	0.5457
1	1.50	1.75	2.00	1.12	1.31	1.38	1.81	2.19	2.44	0.145	0.196	0.391	0.58	0.6828
1 1/4	1.75	2.00	2.38	1.31	1.38	1.69	2.19	2.44	2.97	0.153	0.208	0.417	0.67	0.7068
1 1/2	2.00	2.38	2.50	1.38	1.69	1.72	2.44	2.97	3.31	0.158	0.219	0.436	0.70	0.7235
2	2.38	2.50	3.25	1.69	1.72	2.06	2.97	3.31	4.00	0.168	0.281	0.476	0.75	0.7565
2 1/2	3.00	3.25	3.75	2.06	2.06	2.50	3.62	4.00	4.75	0.221	0.301	0.602	0.93	1.1380
3	3.38	3.75	4.19	2.50	2.50	3.12	4.31	4.75	5.75	0.236	0.348	0.655	1.02	1.2000
4	4.19	4.50	4.50	3.12	3.12	3.12	5.75	6.00	6.00	0.258	0.440	0.735	1.09	1.3000

GENERAL NOTE: Dimensions are in inches.

NOTE:

(1) Dimension *B* is minimum length of perfect thread. The length of useful thread (*B* plus threads with fully formed roots and flat crests) shall not be less than L_2 (effective length of external thread) required by American National Standard for Pipe Threads (ASME B1.20.1; see para. 6.3).

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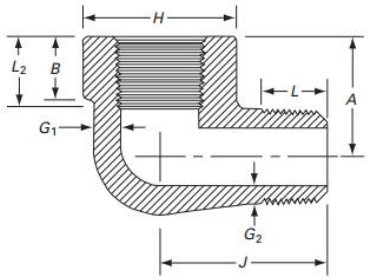
Table I-3 Forged Threaded Fittings — Street Elbows



Nominal Pipe Size, NPS	Center-to-Female End Street Ells, A [Note (1)]		Center-to-Male End Street Ells, J		Outside Diameter of Band, H [Note (2)]		Minimum Wall Thickness, G_1		Minimum Wall Thickness, G_2 [Note (3)]		Minimum Length Internal Thread [Note (4)]		Minimum Length Male Thread, L
	Class Designation		Class Designation		Class Designation		Class Designation		Class Designation				
	3000	6000	3000	6000	3000	6000	3000	6000	3000	6000	B	L_2	
1/8	0.75	0.88	1.00	1.25	0.75	1.00	0.125	0.200	0.108	0.166	0.25	0.2639	0.38
1/4	0.88	1.00	1.25	1.50	1.00	1.25	0.130	0.223	0.127	0.208	0.32	0.4018	0.44
3/8	1.00	1.12	1.50	1.62	1.25	1.50	0.138	0.275	0.138	0.220	0.36	0.4078	0.50
1/2	1.12	1.38	1.62	1.88	1.50	1.75	0.161	0.321	0.164	0.257	0.43	0.5337	0.56
3/4	1.38	1.75	1.88	2.25	1.75	2.00	0.170	0.336	0.192	0.270	0.50	0.5457	0.62
1	1.75	2.00	2.25	2.62	2.00	2.44	0.196	0.391	0.219	0.313	0.58	0.6828	0.75
1 1/4	2.00	2.12	2.62	2.81	2.44	2.75	0.208	0.417	0.219	0.334	0.67	0.7068	0.81
1 1/2	2.12	2.50	2.81	3.31	2.75	3.31	0.219	0.436	0.246	0.350	0.70	0.7235	0.81
2	2.50	3.25	3.31	4.13	3.31	4.00	0.281	0.476	0.301	0.382	0.75	0.7565	0.88

GENERAL NOTE: Dimensions are in inches.

NOTES:

(1) Dimension *A* of Table I-2 for the appropriate fitting size may also be used at the option of the manufacturer.

(2) Dimension *H* of Table I-2 for the appropriate fitting size may also be used at the option of the manufacturer.

(3) Wall thickness before threading.

(4) Dimension *B* is minimum length of perfect thread. The length of useful thread (*B* plus threads with fully formed roots and flat crests) shall not be less than L_2 (effective length of external thread) required by American National Standard for Pipe Threads (ASME B1.20.1; see para. 6.3).

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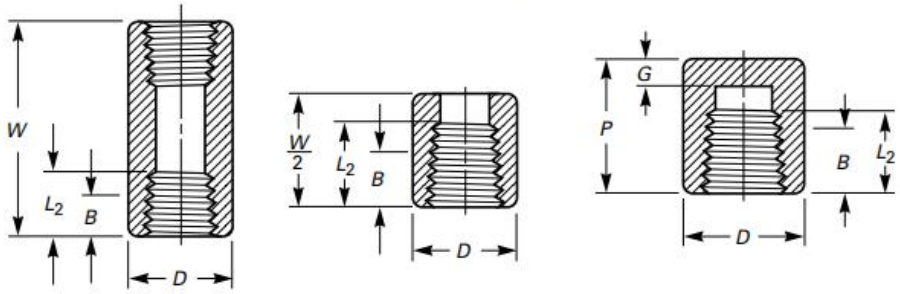
Table I-4 Threaded Fittings



Coupling Half-Coupling Cap

Nominal Pipe Size	End-to-End Couplings, *W*	End-to-End Caps, *P*		Outside Diameter, *D*		Minimum End Wall Thickness, *G*		Minimum Length of Thread [Note (1)]	
	3000 and 6000	3000	6000	3000	6000	3000	6000	*B*	L_2
1/8	1.25	0.75	...	0.62	0.88	0.19	...	0.25	0.2639
1/4	1.38	1.00	1.06	0.75	1.00	0.19	0.25	0.32	0.4018
3/8	1.50	1.00	1.06	0.88	1.25	0.19	0.25	0.36	0.4078
1/2	1.88	1.25	1.31	1.12	1.50	0.25	0.31	0.43	0.5337
3/4	2.00	1.44	1.50	1.38	1.75	0.25	0.31	0.50	0.5457
1	2.38	1.62	1.69	1.75	2.25	0.38	0.44	0.58	0.6828
1 1/4	2.62	1.75	1.81	2.25	2.50	0.38	0.44	0.67	0.7068
1 1/2	3.12	1.75	1.88	2.50	3.00	0.44	0.50	0.70	0.7235
2	3.38	1.88	2.00	3.00	3.62	0.50	0.62	0.75	0.7565
2 1/2	3.62	2.38	2.50	3.62	4.25	0.62	0.75	0.93	1.1380
3	4.25	2.56	2.69	4.25	5.00	0.75	0.88	1.02	1.2000
4	4.75	2.69	2.94	5.50	6.25	0.88	1.12	1.09	1.3000

GENERAL NOTES:

(a) Dimensions are in inches.

(b) Class 2000 and NPS 1/8 Class 6000 couplings, half couplings, and caps are not included in this Standard.

(c) The wall thickness away from the threaded ends shall meet the minimum wall thickness requirements of Table I-2 for the appropriate NPS and Class Designation fitting.

NOTE:

(1) Dimension *B* is minimum length of perfect thread. The length of useful thread (*B* plus threads with fully formed roots and flat crests) shall be no less than L_2 (effective length of external thread) required by American National Standard for Pipe Threads (ASME B1.20.1; see para. 6.3).

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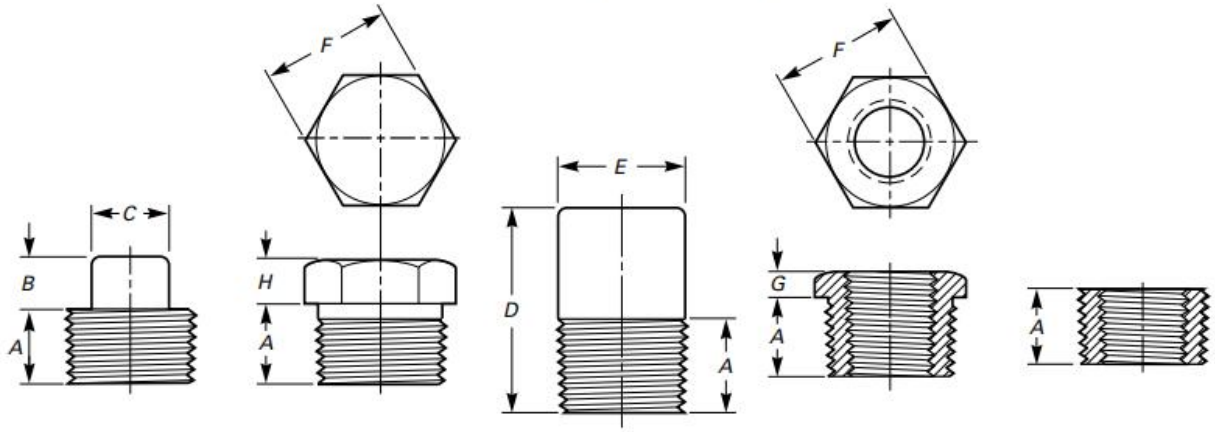
Table I-5 Plugs and Bushings



Square Head Plug | Hex Head Plug | Round Head Plug | Hex Head Bushing [Note (1)] | Flush Bushing

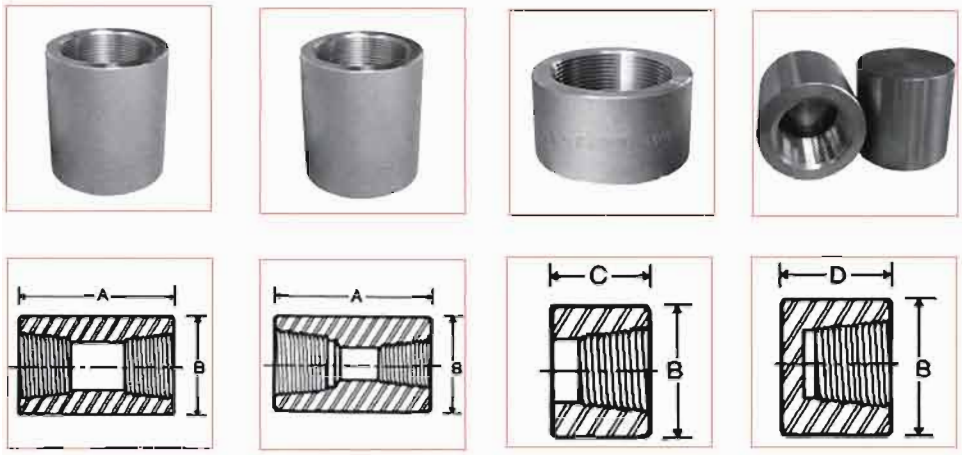
Nominal Pipe Size	Minimum Length, *A*	Square Head Plugs		Round Head Plugs		Hex Plugs and Bushings		
		Minimum Square Height, *B*	Minimum Width Flats, *C*	Nominal Head Diameter, *E*	Minimum Length, *D*	Nominal Width Flats, *F*	Hex Height	
							Minimum Bushing, *G*	Plug, *H*
1/8	0.38	0.25	0.28	0.41	1.38	0.44	. . .	0.25
1/4	0.44	0.25	0.38	0.53	1.62	0.62	0.12	0.25
3/8	0.50	0.31	0.44	0.69	1.62	0.69	0.16	0.31
1/2	0.56	0.38	0.56	0.84	1.75	0.88	0.19	0.31
3/4	0.62	0.44	0.62	1.06	1.75	1.06	0.22	0.38
1	0.75	0.50	0.81	1.31	2.00	1.38	0.25	0.38
1 1/4	0.81	0.56	0.94	1.69	2.00	1.75	0.28	0.56
1 1/2	0.81	0.62	1.12	1.91	2.00	2.00	0.31	0.62
2	0.88	0.69	1.31	2.38	2.50	2.50	0.34	0.69
2 1/2	1.06	0.75	1.50	2.88	2.75	3.00	0.38	0.75
3	1.12	0.81	1.69	3.50	2.75	3.50	0.41	0.81
4	1.25	1.00	2.50	4.50	3.00	4.62	0.50	1.00

GENERAL NOTE: Dimensions are in inches.

NOTE:

(1) *Cautionary Note Regarding Hex Bushings:* Hex head bushings of one-size reduction should not be used in services where they might be subject to harmful loads and forces other than internal pressures.

Products: ThreadedCouplings Reducers and Caps



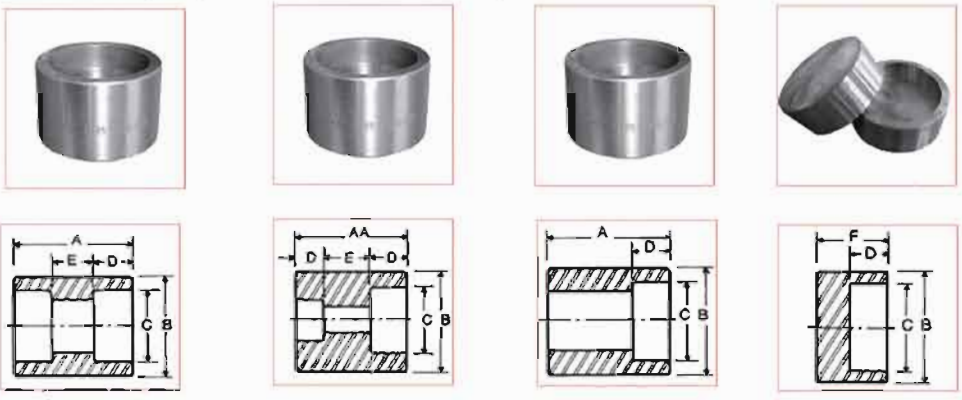
Coupling (TH) | Reducer (TH) | Half Coupling (TH) | Pipe Cap (TH)

Dimensional Data (1/8" to 4" class 3000 & 6000 threaded)

	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 3000	B	3/4	3/4	7/8	1 1/8	1 3/8	1 3/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5 1/2
	D	15/16	1	1	1 1/4	1 7/16	1 5/8	1 3/4	1 3/4	1 7/8	2 3/8	2 9/16	2 11/16

	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 6000	B	7/8	1	1 1/4	1 1/2	1 3/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5	6 1/4
	D	1	1 1/16	1	1 5/16	1 1/2	1 11/16	1 13/16	1 7/8	2	2 1/2	2 11/16	2 15/16

Socket Weld Couplings, Reducerss and Caps



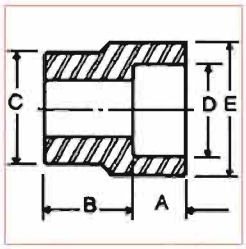
Coupling (SW) | Reducer (SW) | Half Coupling (SW) | Pipe Cap (SW)

Dimensional Data

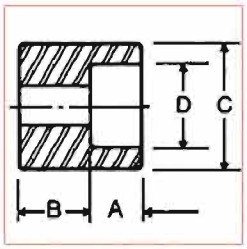
	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 3000	B	3/4	7/8	1 1/16	1 1/4	1 1/2	1 13/16	2 1/4	2 1/2	3	3 5/8	4 5/16	6 1/2
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D	7/16	7/16	7/16	1/2	9/16	5/8	11/16	3/4	7/8	7/8	1	1 1/8
	F	11/16	3/4	3/4	7/8	1	1 1/16	1 3/16	1 1/4	1 1/2	1 9/16	1 13/16	2 1/16

	SIZE	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Class 6000	B	-	-	-	1 1/2	1 3/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5	6 1/4
	C	-	-	-	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D	-	-	-	1/2	9/16	5/8	11/16	3/4	7/8	7/8	1	1 1/8
	F	-	-	-	1	1 1/16	1 1/4	1 5/16	1 3/8	1 5/8	1 11/16	1 15/16	2 5/16

Products: Socket Reducer Inserts



Type1



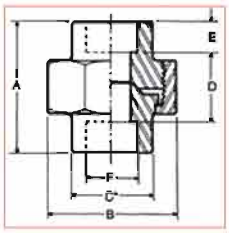
Type2

Dimensional Data

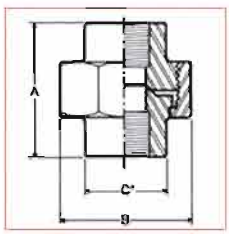
Socket weld reducer Inserts availbale in class 3000, 6000 and 9000

			Class 3000				Class 6000				Class 9000			
Nominal Pipe Size	C	D	Fitting Type	A	B	E	Fitting Type	A	B	E	Fitting Type	A	B	E
3/8 x 1/4	0.675	0.555	1	7/16	3/4	15/16	1	7/16	7/8	1				
1/2 x 3/8	0.85	0.69	1	7/16	13/16	1 1/16	1	7/16	15/16	1 3/16				
1/2 x 1/4	0.85	0.555	1	7/16	13/16	15/16	1	7/16	7/8	1				
3/4 x 1/2	1.06	0.855	1	7/16	7/8	1 5/16	1	7/16	1 1/16	1 3/8	1	7/16	1 3/16	1 3/4
3/4 x 3/8	1.06	0.69	2	7/16	5/8	-	1	7/16	7/8	1 3/16				
3/4 x 1/4	1.06	0.555	2	3/8	11/16	-	2	3/8	7/8	-				
1 x 3/4	1.325	1.065	1	9/16	15/16	1 1/2	1	9/16	1 1/8	1 11/16	1	9/16	1 1/4	2
1 x 1/2	1.325	0.855	2	1/2	5/8	-	1	7/16	1 1/8	1 3/8	1	7/16	1 1/8	1 3/4
1 x 3/8	1.325	0.69	2	7/16	11/16	-	2	1/2	7/8	-				
1 x 1/4	1.325	0.555	2	3/8	3/4	-	2	3/8	15/16	-				
1 1/4 x 1	1.67	1.33	1	9/16	1	1 7/8	1	9/16	1 3/16	2	1	9/16	1 3/8	2 3/8
1 1/4 x 3/4	1.67	1.065	2	9/16	11/16	-	2		13/16	-	1	9/16	1 3/16	2
1 1/4 x 1/2	1.67	0.855	2	1/2	3/4	-	2		7/8	-	2	1/2	7/8	-
1 1/4 x 3/8	1.67	0.69	2	7/16	13/16	-	2		15/16	-				
1 1/4 x 1/4	1.67	0.555	2	3/8	7/8	-	2		1	-				
1 1/2 x 1 1/4	1.91	1.675	1	9/16	1 1/8	2 1/4	1		1 3/8	2 3/8	1	9/16	1 5/8	2 3/4
1 1/2 x 1	1.91	1.33	2	5/8	11/16	-	1		1 3/16	2	1	9/16	1 3/8	2 3/8
1 1/2 x 3/4	1.91	1.065	2	9/16	3/4	-	2		1	-	2	9/16	1	-
1 1/2 x 1/2	1.91	0.855	2	1/2	13/16	-	2		1 1/16	-	2	9/16	1	-
1 1/2 x 3/8	1.91	0.69	2	7/16	7/8	-	2		1 1/8	-				
2 x 1 1/2	2.385	1.915	1	9/16	1 1/4	2 1/2	1		1 7/8	2 11/16	1	9/16	2 1/16	3
2 x 1 1/4	2.385	1.675	2	11/16	13/16	-	2		15/16	-	1	9/16	2	2 3/4
2 x 1	2.385	1.33	2	5/8	7/8	-	2		1	-	2	13/16	1	-
2 x 3/4	2.385	1.065	2	9/16	15/16	-	2		1 1/16	-	2	3/4	1 1/16	-
2 x 1/2	2.385	0.855	2	1/2	1	-	2		1 1/8	-	2	11/16	1 1/8	-

Products: Union



Union (SW)



Union (TH)

Dimensional Data

1/8" to 3 " class 3000 and 1/2" to 2" class 6000

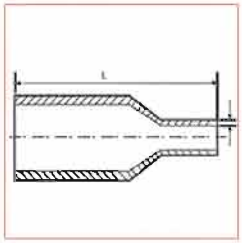
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Class 3000	A	1 11/16	1 11/16	1 27/32	2	2 5/16	2 7/16	2 7/8	3	3 1/2	4 1/2	4 7/16
	B	1 31/64	1 31/64	1 11/16	1 15/16	2 3/8	2 25/32	3 23/64	3 23/32	4 27/64	5 15/64	6 5/32
	C	53/64	53/64	1	1 3/16	1 15/32	1 25/32	2 7/32	2 35/64	3 1/16	3 9/16	4 9/32
	D	25/32	25/32	31/32	1 3/32	1 5/32	1 3/8	1 45/64	1 7/8	2 1/16	2 3/8	2 7/16
	E	7/16	7/16	7/16	7/16	9/16	9/16	9/16	9/16	11/16	7/8	1
	F	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535
		0.430	0.565	0.700	0.865	1.075	1.340	1.685	1.925	2.416	2.921	3.550

		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	-	-
Class 6000	A	1 11/15	1 27/32	2	2 5/16	2 7/16	2 7/8	3	3 1/2	4 1/8	-	-
	B	1 31/64	1 11/16	1 15/16	2 3/8	2 25/32	3 23/64	3 23/32	4 27/64	5 15/64	-	-
	C	53/64	1	1 3/16	1 15/32	1 25/32	2 7/32	2 35/64	3 1/16	3 9/16	-	-
	D	25/32	31/32	1 3/32	1 5/32	1 3/8	1 45/64	1 7/8	2 1/16	2 3/8	-	-
	E	7/16	7/16	7/16	9/16	9/16	9/16	9/16	11/16	7/8	-	-
	F	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	-	-
		0.430	0.565	0.700	0.865	1.075	1.340	1.685	1.925	2.416	-	-

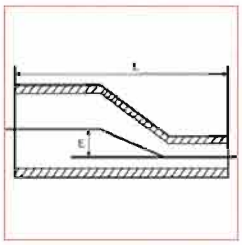
Note:

"C" dimension is across octagon corners or a diameter as applicable.The 2.1/2" and 3" 3000LB and 2" 6000LB sizes have octagonal male and female ends; the other sizes are round.

Products: Swaged Nipple



Concentric Swaged Nipple



Eccentric Swaged Nipple

Dimensional Data

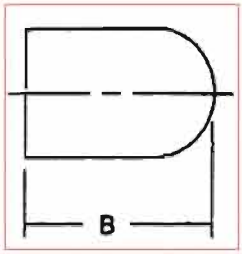
Nominal Pipe Size (NPS)	Outside Diameter Large End (mm)	Outside Diameter Small End (mm)	End To End "L" (mm)
1/4x1/8	13.7	10.3	57
3/8x1/8	17.1	10.3	64
3/8x1/8	17.1	13.7	64
1/2x1/8	21.3	10.3	70
1/2x1/4	21.3	13.7	70
1/2x3/8	21.3	17	70
3/4x1/8	26.7	10.3	76
3/4x1/4	26.7	13.7	76
3/4x3x8	26.7	17.1	76
3/4x1/2	26.7	21.3	76
1x1/8	33.4	10.3	89
1x1/4	33.4	13.7	89
1x3/8	33.4	17.1	89
1x1/2	33.4	21.3	89
1x3/4	33.4	26.7	89
1.1/4x1/8	42.2	10.3	102
1.1/4x1/4	42.2	13.7	102
1.1/4x3/8	42.2	17.1	102
1.1/4x1/2	42.2	21.3	102
1.1/4x3/4	42.2	26.7	102
1.1/4x1	42.2	33.4	102
1.1/2x1/8	48.3	10.3	114
1.1/4x1/4	48.3	13.7	114
1.1/2x3/8	48.3	17.1	114
1.1/2x1/2	48.3	21.3	114
1.1/2x3/4	48.3	26.7	114
1.1/2x1	48.3	33.4	114
1.1/2x1.1/4	48.3	42.2	114
2x1/8	60.3	10.3	165
2x1/4	60.3	13.7	165
2x3/8	60.3	17.1	165
2x1/2	60.3	21.3	165
2x3/4	60.3	26.7	165
2x1	60.3	33.4	165
2x1.1/4	60.3	42.2	165
2x1.1/2	60.3	48.3	165
2.1/2x1/8	73	10.3	178
2x1/4	73	13.7	178
2.1/2x3/8	73	17.1	178
2.1/2x1/2	73	21.3	178
2.1/2x3/4	73	26.7	178
2.1/2x1	73	33.4	178
2.1/2x1.1/4	73	42.2	178
2.1/4x1.1/2	73	48.3	178
2.1/2x2	73	60.3	178
3x1/8	88.9	10.3	203
3x1/4	88.9	13.7	203
3x3/8	88.9	17.1	203
3x1/2	88.9	21.3	203
3x3/4	88.9	26.7	203
3x1	88.9	33.4	203
3x1.1/4	88.9	42.2	203
3x1.1/2	88.9	48.3	203
3x2	88.9	60.3	203
3x2.1/2	88.9	73	203
3.1/2x1/8	101.6	10.3	203
3.1/2x1/4	101.6	13.7	203
3.1/2x3/8	101.6	17.1	203
3.1/2x1/2	101.6	21.3	203
3.1/2x3/4	101.6	26.7	203
3.1/2x1	101.6	33.4	203
3.1/2x1.1/4	101.6	42.2	203
3.1/2x1.1/2	101.6	48.3	203
3.1/2x2	101.6	60.3	203
3.1/2x2.1/2	101.6	73	203

Nominal Pipe Size (NPS)	Outside Diameter Large End (mm)	Outside Diameter Small End (mm)	End To End "L" (mm)
3.1/2x3	101.6	88.9	203
4x1/4	114.3	13.7	229
4x3/8	114.3	17.1	229
4x1/2	114.3	21.3	229
4x3/4	114.3	26.7	229
4x1	114.3	33.4	229
4x1.1/4	114.3	42.2	229
4x1.1/2	114.3	48.3	229
4x2	114.3	60.3	229
4x2.1/2	114.3	73	229
4x3	114.3	88.9	229
4x3.1/2	114.3	101.6	229
5x1/4	114.3	13.7	279
5x3/8	114.3	17.1	279
5x1/2	114.3	21.3	279
5x3/4	114.3	26.7	279
5x1	114.3	33.4	279
5x1.1/4	114.3	42.2	279
5x1.1/2	114.3	48.3	279
5x2	114.3	60.3	279
5x2.1/2	114.3	73	279
5x3	114.3	88.9	279
5x3.1/2	114.3	101.6	279
5x4	114.3	114.3	279
6x1/2	168.3	21.3	304
6x3/4	168.3	26.7	904
6x1	168.3	33.4	304
6x1.1/4	168.3	42.2	304
6x1.1/2	168.3	48.3	304
6x2	168.3	60.3	304
6x2.1/2	168.3	73	304
6x3	168.3	88.9	304
6x3.1/2	168.3	101.6	304
6x4	168.3	114.3	304
6x5	168.3	141.3	304
8x1	219.1	33.4	330
8x1.1/4	219.1	42.2	330
8x1.1/2	219.1	48.3	330
8x2	219.1	60.3	330
8x2.1/2	219.1	73	330
8x3	219.1	88.9	330
8x3.1/2	219.1	101.6	330
8x4	219.1	114.3	330
8x5	219.1	141.3	330
8x6	219.1	168.3	330
10x2	273	60.3	381
10x2.1/2	273	73	381
10x3	273	88.9	381
10x3.1/2	273	101.6	381
10x4	273	114.3	381
10x5	273	141.3	381
10x6	273	168.3	381
10x8	273	219.1	381
12x2	323.8	60.3	406
12x2.1/2	323.8	73	406
12x3	323.8	88.9	406
12x3.1/2	323.8	101.6	406
12x4	323.8	114.3	406
12x5	323.8	141.3	406
12x6	323.8	168.3	406
12x8	323.8	219.1	406
12x10	323.8	273	406

Note:

"C" dimension is across octagon corners or a diameter as applicable.The 2.1/2" and 3" 3000LB and 2" 6000LB sizes have octagonal male and female ends; the other sizes are round.

Product:Bull Plugs



Dimensional Data

Nominal Pipe Size (NPS)	Outside Diameter (mm)	End To End "B" (mm)
1/8	10.3	34
1/4	13.7	34
3/8	17.1	57
1/2	21.3	64
3/4	26.7	70
1	33.4	76
1.1/4	42.2	83
1.1/2	48.3	89
2	60.3	102
2.1/2	73	127
3	88.9	152
3.1/2	101.6	165
4	114.3	178
5	141.3	216
6	168.3	254
8	219.1	279
10	273	330
12	328.8	356

TABLEA3-TOLERANCES

Nominal Pipe Size (NPS)	Outside Diameter at End			Fitting Wall Thickness (see b)
	Overall Length (mm)	Square Cut Ends (mm)	Other End Connections (mm)	
1/8-3/8	+/-2	+0.40 -0.80	+/-0.80	Not less than 0.875 nominal wall thickness
1/2-1.1/2	+/-2	+0.40 -0.80	+1.50 -0.80	
2-2.1/2	+/-3	+/-0.80	+1.50 -0.80	
3-4	+/-3	+/-0.80	+/-1.50	
5-6	+/-5	+2.30 -1.50	+2.30 -1.50	
8-12	+/-7	+4.00 -3.00	+4.00 -3.00	

Products: Nipple


Both end Threaded


One Threaded and One Plain


Both and Plain

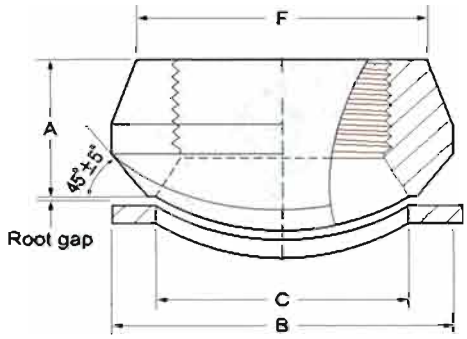

Hexagon Nipple

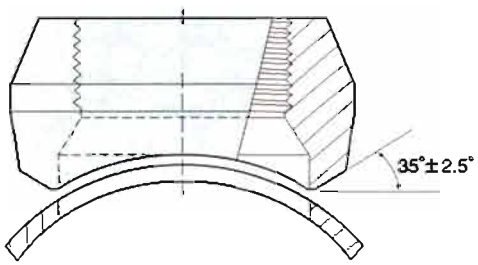
Dimensional Data

Nominal Diameter		Outside Diameter D	Sch40 STD Sch80 XS	Sch160 XXS	L(mm)
DN	NPS				
8	1/4	13.5	○		60 90 120 150 180
10	3/8	17.2	○		
15	1/2	21.3	○	○	
20	3/4	26.7	○	○	
25	1	33.4	○	○	
32	1.1/4	42.2	○	○	
40	1.1/2	48.3	○	○	
50	2	60.3	○	○	

THREAD-OLETS

3000lb 6000lb

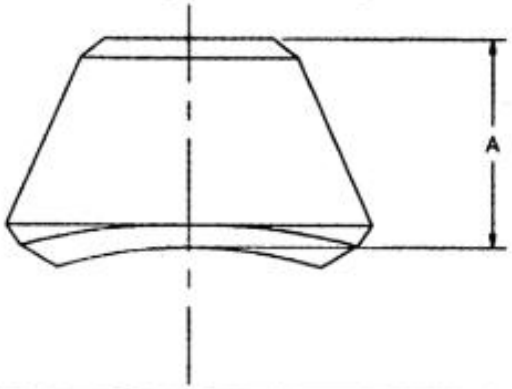




Outlet Size	A		B	
	3000#	6000#	3000#	6000#
1/2	25.4	31.8	34.9	44.5
3/4	27.0	36.5	44.5	50.8
1	33.3	39.7	54.0	61.9
1 1/4	33.3	41.3	65.1	69.9
1 1/2	34.9	42.9	73.0	82.6
2	38.1	52.4	88.9	103.2
2 1/2	46.0	-	103.2	-
3	50.8	-	122.2	-
4	57.2	-	152.4	-

- Dimensions are in millimeters.
- Applicable Run Pipe Sizes are from Out-Let size to 36 inch
- For the 3000# and 6000# Socket-outlets and Thread-outlets, Inside Bore, Thread, Socket Bore and Socket Depth Dimentions are According to ASME B16.11

TABLE 2 Branch Outlet Height - Buttwelding, Customary Units

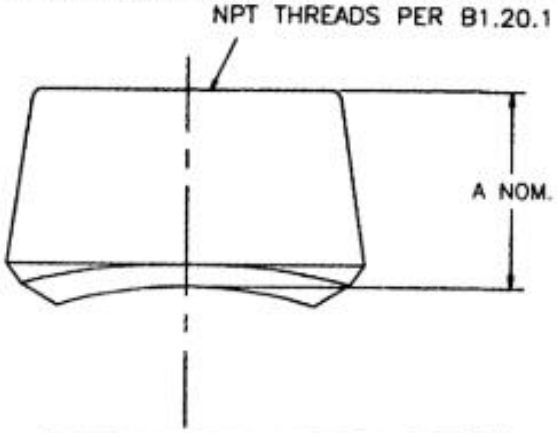


OUTLET NPS	"A" (FACE OF FITTING TO CROTCH)					
	STANDARD		EXTRA STRONG		SCHEDULE 160	
	REDUCING	FULL	REDUCING	FULL	REDUCING	FULL
1/8	.62		.62			
1/4	.62		.62			
3/8	.75		.75			
1/2	.75	.75	.75	.75	1.12	1.12
3/4	.88	.88	.88	.88	1.25	1.25
1	1.06	1.06	1.06	1.06	1.50	1.50
1-1/4	1.25	1.25	1.25	1.25	1.75	1.75
1-1/2	1.31	1.31	1.31	1.31	2.00	2.00
2	1.50	1.50	1.50	1.50	2.18	2.18
2-1/2	1.62	1.62	1.62	1.62	2.44	2.44
3	1.75	1.75	1.75	1.75	2.88	2.88
3-1/2	1.88	2.00	1.88	2.00	-	-
4	2.00	2.00	2.00	2.00	3.31	3.31
5	2.25	2.25	2.25	2.25	3.69	3.69
6	2.38	2.38	3.06	3.06	4.12	4.12
8	2.75	2.75	3.88	3.88		
10	3.06	3.06	3.69	3.50		
12	3.38	3.38	4.06	3.94		
14	3.50	3.50	3.94	4.12		
16	3.69	3.69	4.18	4.44		
18	3.81	4.06	4.38	4.69		
20	4.00	4.62	4.69	5.00		
24	4.56	5.38	5.50	5.50		

Dimensions are in Inches

Tolerances: 1/8 - 3/4 ± .03in.
1 - 4 ± .06in.
5 - 12 ± .12in.
14 - 24 ± .19in.

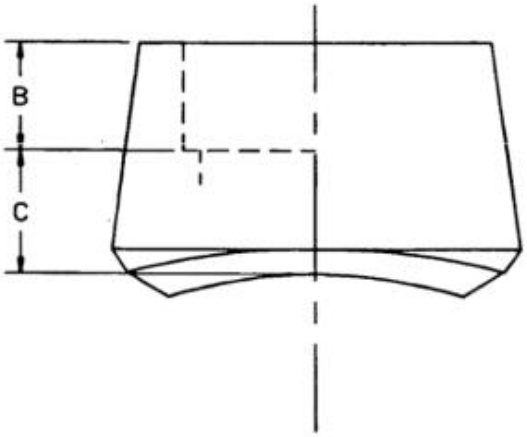
TABLE 3 Branch Outlet Height - Threaded, Customary Units



OUTLET NPS	"A" (FACE OF FITTING TO CROTCH) THREADED	
	3000	6000
1/8	.75	
1/4	.75	
3/8	.81	
1/2	1.00	1.25
3/4	1.06	1.44
1	1.31	1.56
1-1/4	1.31	1.62
1-1/2	1.38	1.69
2	1.50	2.06
2-1/2	1.81	
3	2.00	
4	2.25	

Dimensions are in Inches
Tolerances: 1/8 - 3/4 ± .03in.
1 - 4 ± .06in.

TABLE 4 Branch Outlet - Socket Welding, Customary Units

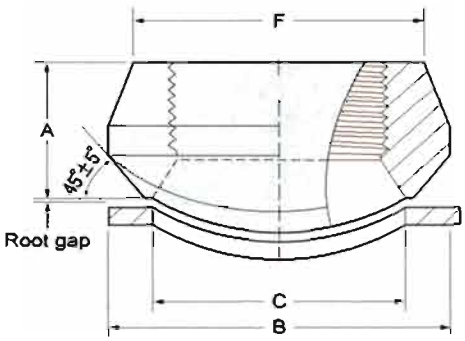


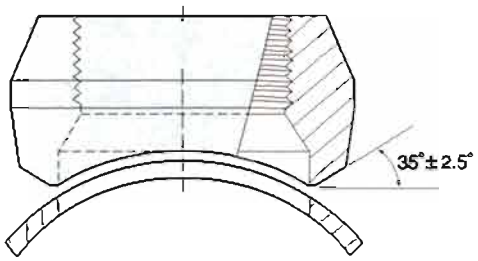
OUTLET NPS	"B" MIN.[a]	"C" MAX.	
		3000	6000
1/8	0.38	0.41	
1/4	0.38	0.41	
3/8	0.38	0.50	
1/2	0.38	0.63	0.94
3/4	0.50	0.63	1.00
1	0.50	0.88	1.13
1-1/4	0.50	0.88	1.19
1-1/2	0.50	0.94	1.25
2	0.62	0.94	1.44
2-1/2	0.62	1.00	
3	0.62	1.19	
4	0.75	1.19	

(a) Note: "B" Minimum Socket Depths per ASME B16.11
Dimensions are in inches

THREAD-OLETS

3000lb 6000lb



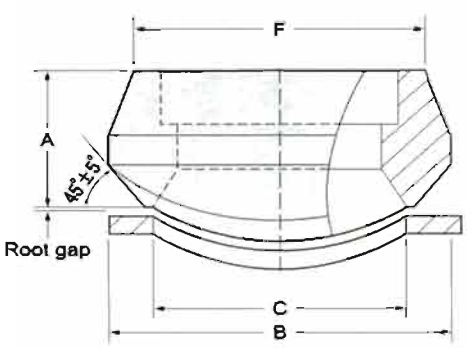


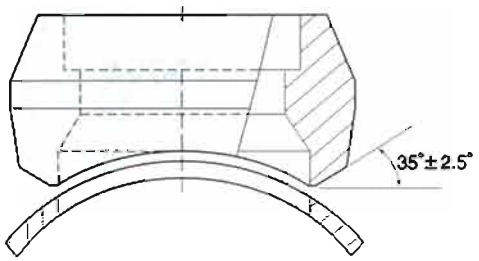
(Unit : mm)

C		F	
3000#	6000#	3000#	6000#
23.8	19.1	31.8	39.7
30.2	25.4	36.5	45.2
36.5	33.3	46.0	57.2
44.5	38.1	55.6	65.1
50.8	49.2	61.9	76.2
65.1	69.9	74.6	92.1
76.2	-	87.3	-
93.7	-	104.8	-
120.7	-	130.2	-

SOCKET-OLETS

3000# 6000#



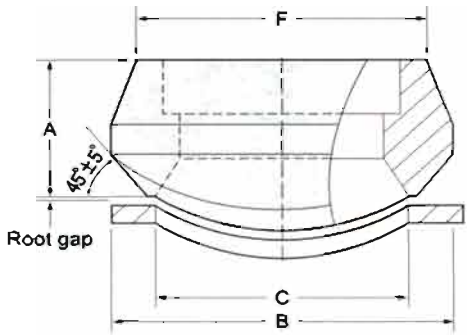


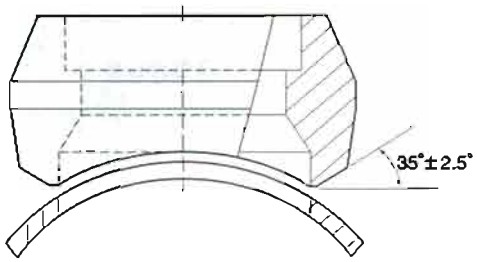
Outlet Size	A		B	
	3000#	6000#	3000#	6000#
1/2	25.4	31.8	34.9	44.5
3/4	27.0	36.5	44.5	50.8
1	33.3	39.7	54.0	61.9
1 1/4	33.3	41.3	65.1	69.9
1 1/2	34.9	42.9	73.0	82.6
2	38.1	58.7	88.9	103.2
2 1/2	46.0	-	103.2	-
3	50.8	-	122.2	-
4	57.2	-	152.4	-

- Dimensions are in millimeters.
- Applicable Run Pipe Sizes are from Out-Let size to 36 inch
- For the 3000# and 6000# Socket-outlets and Thread-outlets, Inside Bore, Thread, Socket Bore and Socket Depth Dimentions are According to ASME B16.11

SOCKET-OLETS

3000# 6000#



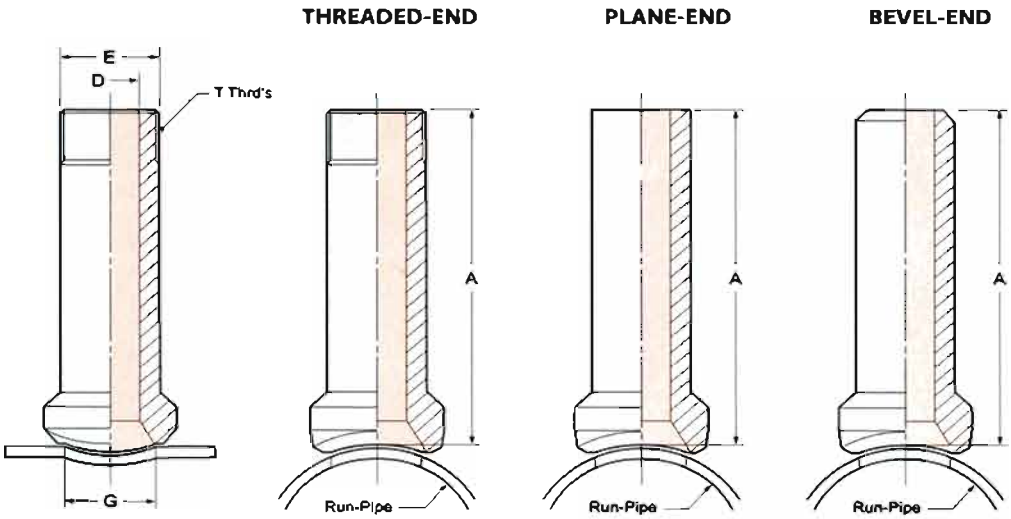


(Unit : mm)

C		F	
3000#	6000#	3000#	6000#
23.8	19.1	31.8	39.7
30.2	25.4	36.5	45.2
36.5	33.3	46.0	57.2
44.5	38.1	55.6	65.1
50.8	49.2	61.9	76.2
65.1	69.9	74.6	92.1
76.2	-	87.3	-
93.7	-	104.8	-
120.7	-	130.2	-

NIPPLE-OLETS

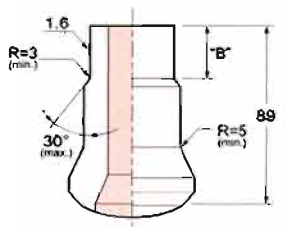
3000#



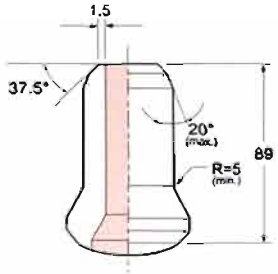
STD, X-S

Run Pipe Size	Outlet Size T	A	G	D	E	Unit Weight (kg)
36- 3/4	1/2	88.9	23.9	14.0	21.3	0.36
36-1	3/4	88.9	30.2	18.8	26.7	0.56
36-1 1/4	1	88.9	36.6	24.4	33.3	0.84
36-1 1/2	1 1/4	88.9	44.5	32.5	42.2	1.22
36-2	1 1/2	88.9	50.8	38.1	48.3	2.00
36-2 1/2	2	88.9	65.0	49.3	60.5	3.12

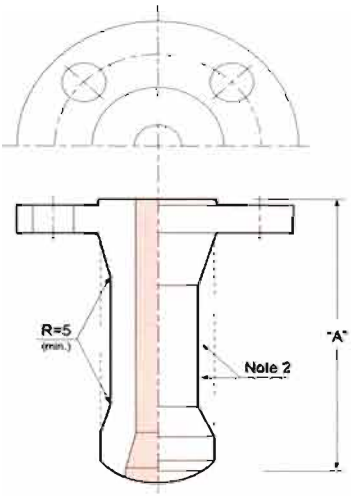
FLANGED-OLETS



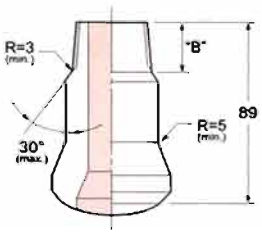
PLANE-END OUTLET



BUTT WELD-END OUTLET



FLANGED-END OUTLET



THREADED-END OUTLET

Nominal Size DN	"A" (Face flanges to crotch) Cross					"B" Min (mm)
	150#	300#	600#	1500#	2500#	
15	150	150	150	150	150	25
20						
25						30
40						
50					165	

- Dimensions are in millimeters.
- Shape only indicative, other shape are also acceptable.

THE GENEAL MATERIAL

Varjety	Standard andCode	Grade	Chemical Compositon%.max										Mechanical requirements				
			c	Mn	P	S	Si	Cr	Mo	NI	Cu	Other	Ωb Mpa min	Ω0.2 Mpa min	Ω % min	HB max	Other
FITTING	ASTM A234/A234M	WPB	0.30	0.29-1.06	0.050	0.058	0.10min	0.40	0.15	0.40	0.40	V:0.06;Nb0.02	415-585	240	22	197	-
		WPC	0.35	0.29-1.06	0.050	0.058	0.10min	0.40	0.15	0.40	0.40	V:0.06;Nb0.02	485-655	275	22	197	-
		WP1	0.28	0.30-.0.90	0.045	0.045	0.10-0.50	-	0.44-0.65	-	-	-	380-550	205	22	197	-
		WP12CL1	0.05-0.02	0.30-0.80	0.045	0.045	0.60	0.80-1.25	0.44-0.65	-	-	-	415-585	220	22	197	-
		WP12CL2	0.05-0.02	0.30-0.80	0.045	0.045	0.60	0.80-1.25	0.44-0.65	-	-	-	485-655	275	22	197	-
		WP11CL1	0.05-0.02	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	0.44-0.65	-	-	-	415-585	205	22	197	-
		WP11CL2	0.05-0.02	0.30-.080	0.040	0.040	0.50-1.00	1.00-1.50	0.44-0.65	-	-	-	485-655	275	22	197	-
		WP11CL3	0.05-0.02	0.30-0.80	0.040	0.040	0.50-1.00	1.00-1.50	0.44-0.65	-	-	-	820-650	310	22	197	-
		WP22CL1	0.05-0.15	0.30-0.60	0.040	0.040	0.50	1.90-2.60	0.87-1.13	-	-	-	415-585	205	22	197	-
		WP22CL3	0.05-0.15	0.30-0.60	0.040	0.040	0.50	1.90-2.60	0.87-1.13	-	-	-	520-690	310	22	197	-
		WP5CL1	0.15	0.30-0.60	0.040	0.030	0.50	4.0-6.0	0.44-0.65	-	-	-	415-585	205	22	217	-
		WP5C13	0.15	0.30-0.60	0.040	0.030	0.50	4.0-6.0	0.44-0.65	-	-	-	520-690	310	22	217	-
		WP9CL1	0.15	0.30-0.60	0.030	0.030	1.00	8.0-10.0	0.90-1.10	-	-	-	415-585	205	22	217	-
		WP9CL3	0.156	0.30-.0.60	0.030	0.030	1.00	8.0-10.0	0.90-1.10	-	-	-	520-690	310	22	217	-
		WPR	0.20	0.40-1.06	0.045	0.050	-	-	-	1.60-2.24	0.75-1.25	-	435-650	315	20/28	217	-
		WP91	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	8.0-9.5	0.85-1.05	0.40	-	See stangard	585-760	415	20	248	-
		WP911	0.09-0.13	0.30-0.60	0.020	0.010	0.10-0.50	8.0-10.5	0.90-1.10	0.40	-	See stangard	620-840	440	20	248	-
	ASTM A403/A403M	WP304	0.08	2.00	0.045	0.030	1.00	18.0-20.0	-	8.0-11.0	-	-	515	205	28		-
		WP304H	0.04-0.10	2.00	0.045	0.030	1.00	18.0-20.0	-	8.0-11.0	-	-	515	205	28	-	-
		WP304L	0.035	2.00	0.045	0.030	1.00	18.0-20.0	-	8.0-13.0	-	-	485	170	28	-	-
		WP304LN	0.030	2.00	0.045	0.030	0.75	18.0-20.0	-	8.0-10.5	-	N2:0.10-0.16	515	205	28	-	-
		WP304N	0.08	2.00	0.045	0.030	0.75	18.0-20.0	-	8.0-11.0	-	N2:0.10-0.16	550	240	28	-	-
		WP309	0.15	2.00	0.045	0.030	1.00	22.0-24.0	-	12.0-15.0	-	-	515	205	28	-	-
		WP310	0.15	2.00	0.045	0.030	1.50	24.0-26.0	-	19.0-22.0	-	-	515	205	28	-	-
		WP316	0.08	2.00	0.045	0.030	1.00	16.0-18.0	2.00-3.00	10.0-14.0	-	-	515	205	28	-	-
		WP316H	0.04-0.10	2.00	0.045	0.030	1.00	16.0-18.0	2.00-3.00	10.0-14.0	-	-	515	205	28	-	-
		WP316LN	0.30	2.00	0.045	0.030	0.75	16.0-18.0	2.00-3.00	11.0-14.0	-	N2:0.10-0.16	515	205	28	-	-
		WP316L	0.035	2.00	0.045	0.030	1.00	16.0-18.0	2.00-3.00	10.0-16.0	-	-	485	170	28	-	-
		WP316N	0.08	2.00	0.045	0.030	0.75	16.0-18.0	2.00-3.00	11.0-14.0	-	N2:0.10-0.16	550	240	28	-	-
		WP317	0.08	2.00	0.045	0.030	1.00	18.0-20.0	3.0-4.0	11.0-15.0	-	-	515	205	28	-	-
		WP317L	0.030	2.00	0.045	0.030	1.00	18.0-20.0	3.0-4.0	11.0-15.0	-	-	515	205	28	-	-
		WP321	0.08	2.00	0.045	0.030	1.00	17.0-20.0	-	9.0-13.0	-	Ti:5C-0.7	515	205	28	-	-
		WP321H	0.04-0.10	2.00	0.045	0.030	1.00	17.0-20.0	-	9.0-13.0	-	Ti:4C-0.7	515	205	28	-	-
		WP347	0.08	2.00	0.045	0.030	1.00	17.0-20.0	-	9.0-13.0	-	Nb+Ta:10C-1.10	515	205	28	-	-
		WP347H	0.04-0.10	2.00	0.045	0.030	1.00	17.0-20.0	-	9.0-13.0	-	Nb+Ta:8C-1.10	515	205	28	-	-
		WP348	0.08	2.00	0.045	0.030	1.00	17.0-20.0	-	9.0-13.0	-	Ta:0.10	515	205	28	-	-
		WP348H	0.04-.010	2.00	0.045	0.030	1.00	17.0-20.0	-	9.0-13.0	-	Ta:0.10	515	205	28	-	-

Note.The bevel can be made according to the special requtrements of the customers.