

Stainless Steel, Superior Standards, Solid Success

富林克管业有限公司

Fulinke Pipe Industry Co., Ltd.



0577-86862022



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No. 589 Third RD Binhai Industrial Valve
Area Longwan Wenzhou Zhenjiang China



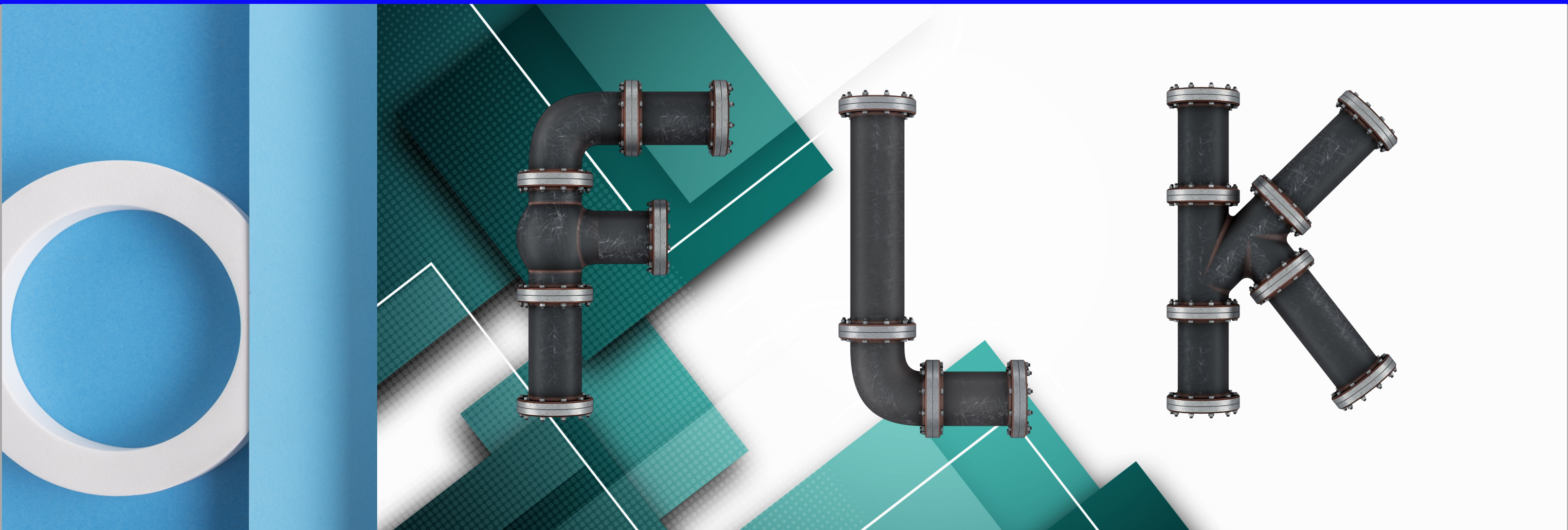
关于我们 ABOUT US

Fulinke Pipeline Co., Ltd. is located in Wenzhou, Zhejiang, the most famous stainless steel base in China. Having the most complete stainless steel one-stop industrial chain also provides us with a highly competitive premise. Our stainless steel products are exported around the world and used in various industries.

Our factories are equipped with state-of-the-art manufacturing machinery, testing equipment and technology to ensure that each product meets the highest standards. We focus on quality control, strictly monitoring and testing from the selection of raw materials to the packaging of finished products. Furthermore, we have a dedicated team of employees who not only possess vast experience and expertise but also work hard to ensure that our products are of consistently excellent quality and delivered on time. Not only do we care about product quality, we are also committed to sustainable development. We have taken a range of measures to reduce our impact on the environment. We use renewable energy, optimize waste recycling and use environmentally friendly production processes.

富林克管道有限公司位于中国最著名的不锈钢基地——浙江温州。拥有最完整的不锈钢一站式产业链，这也为我们提供了极具竞争力的前提。我们的不锈钢无缝管出口到世界各地并应用于各个行业。

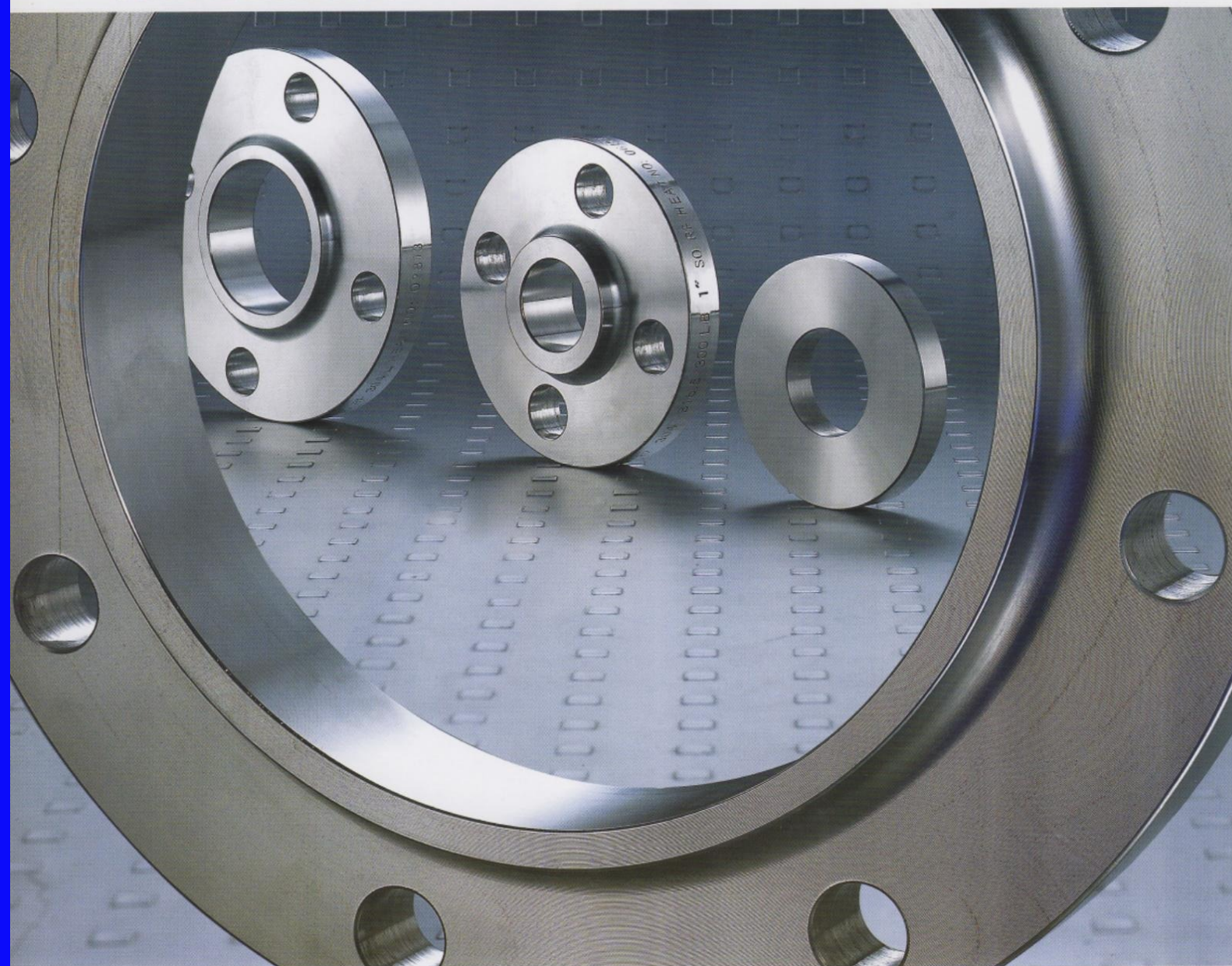
我们的工厂配备了最先进的制造机械设备、检测设备和技術，确保每件产品都符合最高标准。我们注重质量控制，从原材料的选择到成品的包装，严格监控和测试。此外，我们拥有一支敬业的员工团队，他们不仅拥有丰富的经验和专业知识，而且努力工作以确保我们的产品始终如一的卓越品质并及时交付。我们不仅关心产品质量，还致力于可持续发展。我们采取了一系列措施来减少对环境的影响。我们使用可再生能源，优化废物回收并使用环保的生产流程。





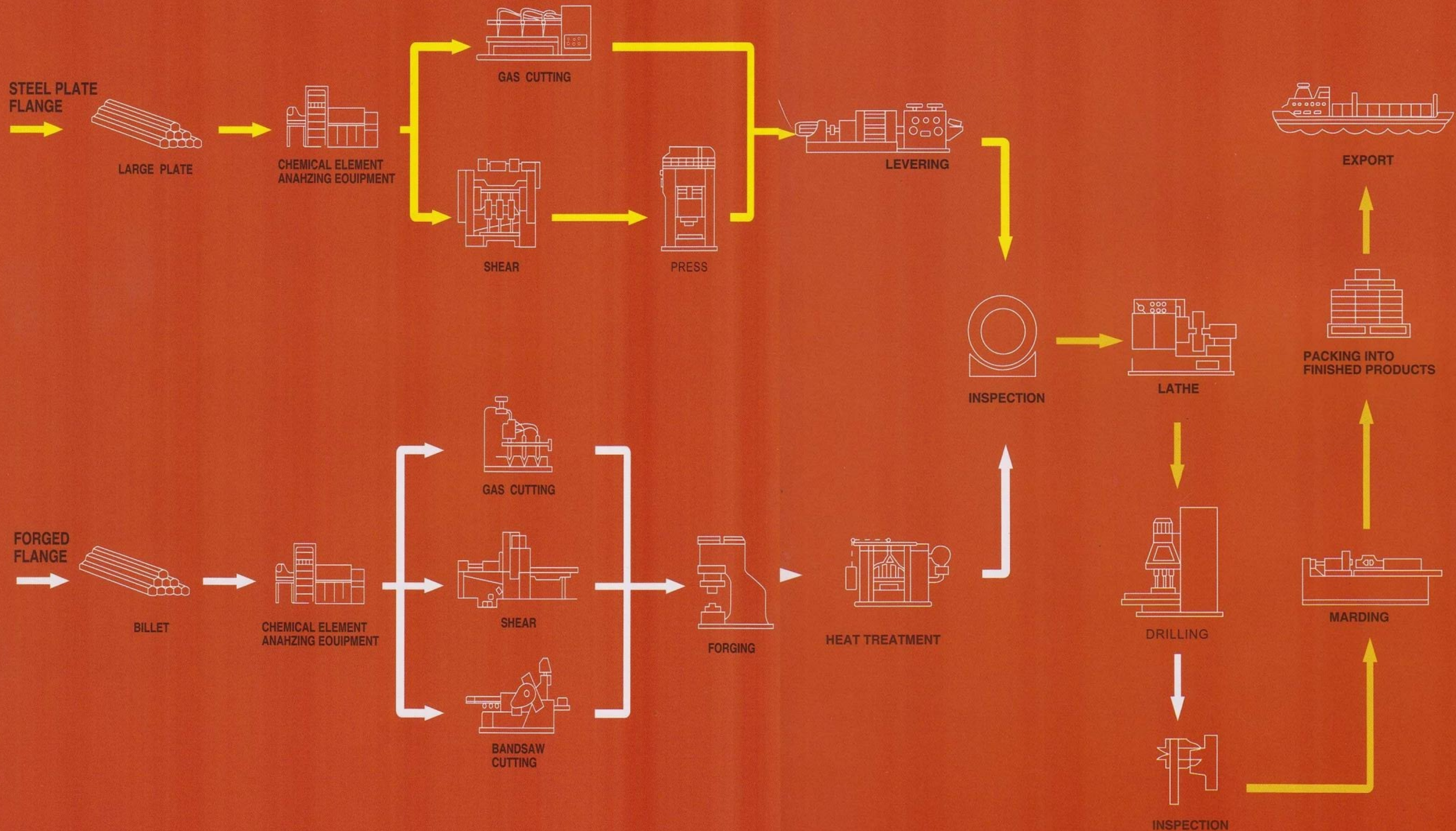
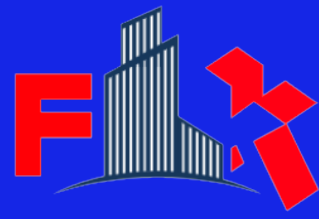
**Efficiently, fast,
professional, thoughtful**

高效 快捷 专业 周到



PRODUCTION FLOW CHART 生产流程图 FOR FLANGES

Efficiently, fast, professional, thoughtful





贸易网络

TRADE NETWORK

生产优质产品，服务全球事业!是富林克经营的始终原则一个售后服务良好的品牌，才是一个负责人的品牌我们时刻承诺，有消费者的地方，就有富林克售后服务队伍的存在

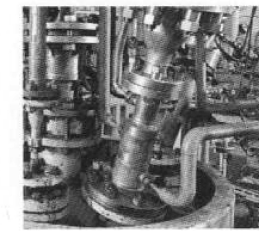
Producing high-quality products and serving global businesses! This is the consistent principle of Fulinke's operation. A brand with good after-sales service is a brand with responsible people. We always promise that where there are consumers, there is the existence of Fulinke's after-sales service team.

- 耐蚀合金
- 高温合金
- 双相不锈钢
- 特殊不锈钢
- 沉淀硬化钢
- 精密合金

超维产品，满足高端需求

耐腐蚀合金

CORROSION RESISTANT ALLOY



金属材料在腐蚀介质中所具有的抵抗介质侵蚀的能力，称耐蚀性。采用合金化方法获得耐蚀合金：提高金属或合金的热力学稳定性；加入易钝化合金元素；加入促使合金表面生成致密腐蚀产物保护膜合金元素。
用于海洋与化学加工设备、泵、阀门零部件、容器等。

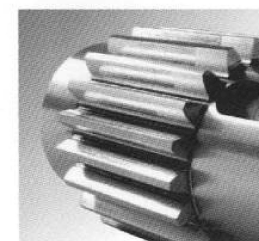
高温合金

HIGH TEMPERATURE ALLOY



高温合金主要用于制造航空、舰艇和工业用燃气轮机的涡轮叶片、导向叶片、涡轮盘、高压压气机盘和燃烧室等高温部件。
还用于制造航天飞行器、火箭发动机、核反应堆、石油化工设备以及煤的转化等能源转化装置。

双相不锈钢 DUPLEX STAINLESS STEEL



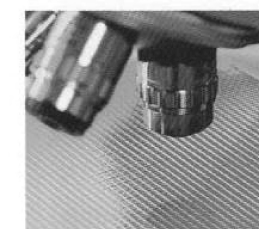
特殊不锈钢

SPECIAL STAINLESS STEEL

耐空气、蒸汽、水等弱腐蚀介质和酸、碱、盐等化学浸蚀性介质腐蚀的钢。有圆钢、管件、锻件、法兰等，在高温下强度高，变形抗力大，增加了锻造成形的难度，适合制造螺栓、排气阀等。可定做各种非标材料。

沉淀硬化钢

PRECIPITATION HARDENING STEEL



精密合金

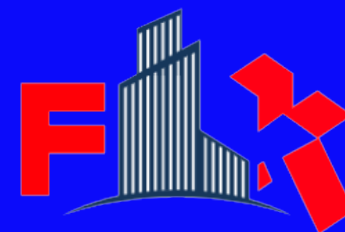
HIGH PRECISION ALLOY

PRECISION ALLOYS

精密合金是含有多种元素的合金，它要求严格的化学成分范围，特殊的熔炼工艺和热处理工艺，具有一定的物理性能和物理机械性能。
精密合金主要应用于制造电子、电工器件、精密仪器和仪表等。

展望未来

COMPANY
VISION



业务范围

BUSINESS
MAP



Assurance  Of Quality affirmation of honom

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"Fulinke Pipe Industry Co, Ltd. our vision is to be a global leader in delivering exceptional stainless steel products. We aspire to transcend geographical boundaries and become the preferred choice for customers worldwide. Through innovation, quality craftsmanship, and a commitment to sustainability, we aim to not only meet but exceed the diverse needs of our global clientele. Together, we envision a future where our stainless steel solutions contribute to the advancement of industries and the well-being of communities across the globe."

富林科管业有限公司的愿景是成为提供卓越不锈钢产品的全球领导者。我们渴望超越地域界限，成为全球客户的首选。通过创新、优质工艺和对可持续发展的承诺，我们的目标是：只满足甚至超越我们全球客户的多样化需求。我们共同展望未来，我们的不锈钢解决方案将为全球行业的进步和社区的福祉做出贡献。



双相不锈钢 Duplex stainless steel

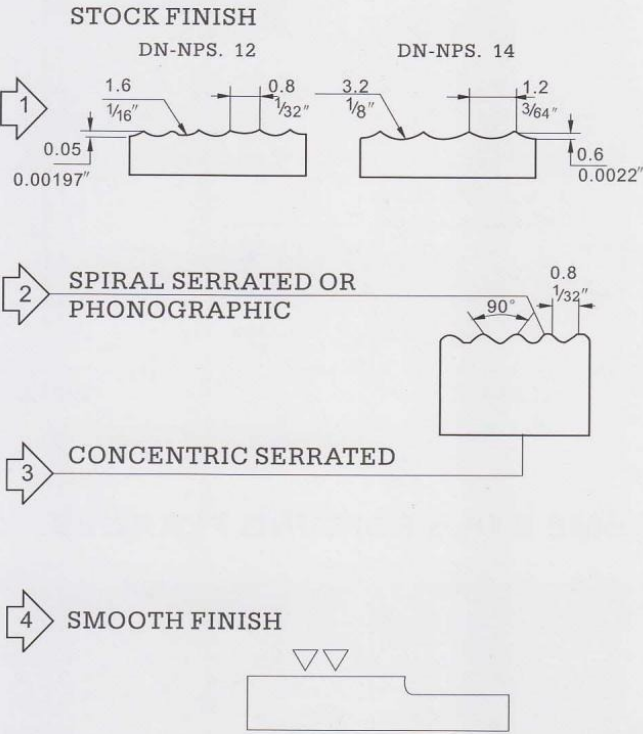
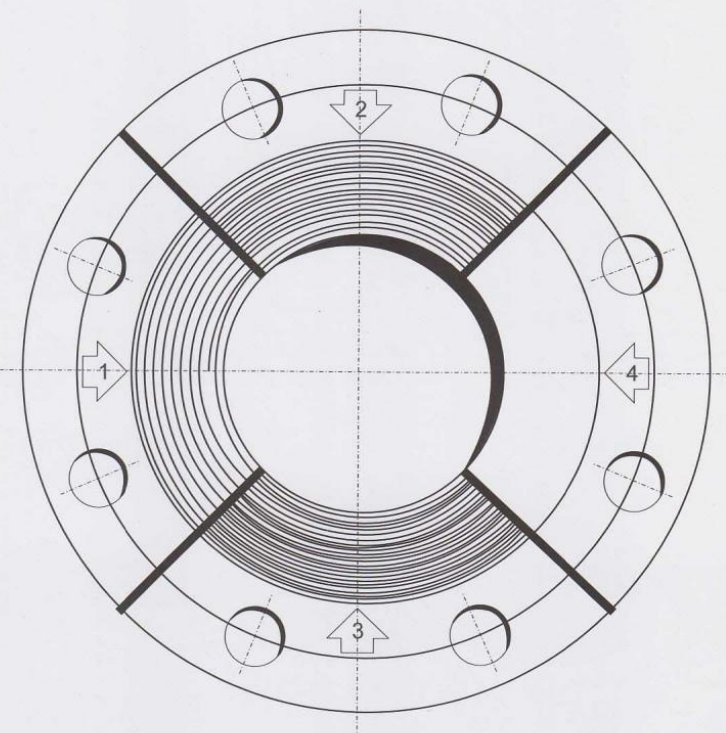
牌号	美标	欧标	国标	比重	化学成分(%)	形态	标准
F52 / 7-MO PLUS	S32950	-	00Cr25Ni5MoN	8.00	C : 0.03 max Cr : 26.0-29.0 Ni : 3.5-5.2 Mo: 1.0-2.5	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A276, A479 ASTM A789, A790 ASTM A815 ASTM A240
F51 / 2205	S31803	1.4462	022Cr22Ni5Mo3N	7.80	C : 0.03 max Cr : 21.0-23.0 Ni : 4.5-6.5 Mo: 2.5-3.5	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A276, EN100 88-3 ASTM A789, A790; NFA 49-217 ASTM A182, A815 ASTM A240, EN 10088-2
F53 / 2507	S32750	1.4410	022Cr25Ni7Mo4N	-	C : 0.03 max Cr : 24.0-26.0 Ni : 6.0-8.0 Cu : 0.5 max Mo: 3.0-5.0	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A479, EN 10088-3 ASTM A789, A790; EN 10216-5 ASTM A182, A195 ASTM A240, EN 10088-2
F55 / ZERON100	S32760	1.4501	022Cr25Ni7Mo4WCuN	-	C : 0.03 max Cr : 24.0-26.0 Ni : 6.0-8.0 Cu : 0.5-1.0 Mo: 3.0-4.0 W : 0.5-1.0	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A182, A276, A479, EN 10088-3, EN 10273 ASTM A790, A789, A928 ASTM A473, A314, ASTM A185 ASTM A240, EN 10028-7, EN10088-2
F44 / 254-SMO	S31254	1.4574	-	8.00	C : 0.01 max Cr : 20.0 Ni : 18.0 Mo: 6.1	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A276, A479, EN10088-3 ASTM A269, A213, A312, NFA 49-217, EN 10216-5 ASTM A249, A269, A312, A358, A409 ASTM A182, A473

特殊不锈钢 Special stainless steel

牌号	美标	欧标	国标	比重	化学成分(%)	形态	标准
F309 / 309H	S30909	-	-	-	C : 0.04-0.10 Mn: 2.0max P : 0.045 max S : 0.03 max	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A479, A484 ASTM A999, A312 ASTM A403 ASTM A240, A480
F310 / 310	S31000	1.4821	20Cr25Ni20	-	Ni : 19.0-22.0 Cr : 24.0-26.0 Fe : Remainder Si : 1.5 max	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A276, A479, A182 ASTM A312, A213, A249, A269 ASTM A182, F310, A403 ASTM A240
F321 / 321	S32100	-	-	-	C : 0.08 max Mn : 2.0 max P : 0.045 max S : 0.03 max Si : 0.75 max Cr : 17.0-19.0	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A276, A479, A182 ASTM A312, A213, A249, A269 ASTM A182, F310, A403 ASTM A240
F347 / 347	S34700	-	06Cr18Ni11Nb	-	C : 0.08 max Mn: 2.0 max Si : 1.0 max P : 0.45 max	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A276, A479, A182 ASTM A312, A213, A249, A269 ASTM A403, A182, F347 ASTM A240
F348	S34800	1.4550	-	-	C : 0.08 max Mn: 2.0 max P : 0.045 max S : 0.03 max Si : 0.75 max Cr : 17.0-19.0	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A312, A249 ASTM A240
904L	N08904	1.4539	-	-	C : 0.02 max Cr : 19.0-23.0 Ni : 23.0-28.0 Mo: 4.0-5.0 Cu : 1.0-2.0	棒, 圆棒, 丝, 锻件 管材 法兰, 管件 板, 带材	ASTM A555, A580 ASTM A999, A312 ASTM A403 ASTM A240, A480



STANDARD FINISH
STANDARD FINISHES for Face of Flange(ANSI B16.5)



STOCK FINISH: The most widely used of any gasket, finish, because, practically, is suitable for all ordinary service conditions. This is a continuous spiral groove. Flanges sizes 12" (304.8mm) and smaller, are produced with a 1/16" round-nosed tool at a feed of 1/32" per revolution. For sizes 14" (335.6mm) and larger, the finish is made 1/8" round-nosed tool at a feed of 3/64" per revolution.

SPIRAL SERRATED OR PHONOGRAPHIC: This finish is produced by using a 90° round-nosed tool.

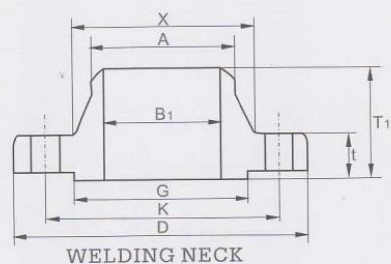
CONCENTRIC SERRATED: This finish a produced by using a 90° round-noise tool.

SMOOTH FINISH: The cutting tool employed shall have an approximate 0.06" radius. The resultant surface finish shall have a 125 μ inch to 250 μ inch (ANSI B16.5 para 6.4; 4.1).

- 1. RAISED FACE, AND LARGE MALE AND FEMALE**
Either a serrated-concentric or serrated-spiral finish having from 34 to 64 grooves per inch is used. The cutting tool employed has an approximate 0.06 in. Radius. The resultant surface finish shall have a 125 μ inch (3.2 μ m).to 500 μ inch (12.5 μ m) approximate roughness.
- 2. TONGUE AND GROOVE. AND SMALL MAKE AND FEMALE**
The gasket contact surface does not exceed 125 μ in. (3.2 μ m) roughness.
- 3. RING JOINT**
The inside wall surface of gasket groove does not exceed 63 μ in (1.6 μ m) roughness.
- 4. BLIND**
Blind flanges need not be faced in the center if, when this center part is raised. Its diameter is at least 1 in. Smaller than the inside diameter of fittings of the corresponding pressure class. When the centen part is depressed. Its diameter is not greater than the inside diameter of the corresponding pressure class fittings. Machining of the depressed center is not required.

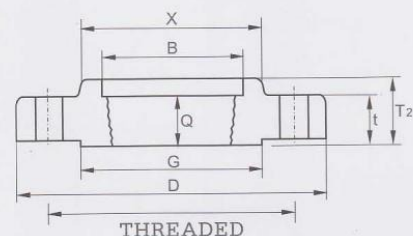


FLANGES TYPE



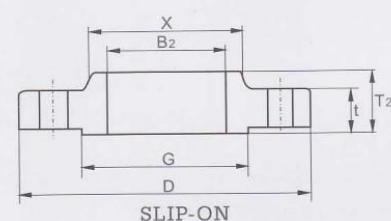
Welding Neck Flanges

The welding neck flange is normally referred to as the “high hup” flange. It is designed to transfer stresses to the pipe, thereby reducing high stress concentrations at the base of the flange. The welding neck flange is the best designed butt-welded flange of those currently available because of its inherent structural value. It is expensive because of the design.



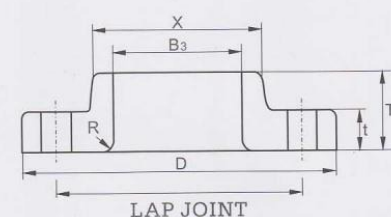
Threaded (Screwed) Flanges

The threaded flange is similar to the slip-on flange, but the bore is threaded. Its chief merit is that it can be assembled without welding, explaining its use in low pressure services at ordinary atmospheric temperatures, and in highly explosive areas where welding creates a hazard.



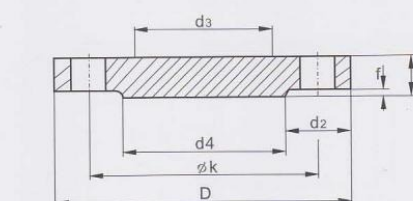
Slip-On Flanges

The slip-on flange has a low hub because the pipe slips into the flange prior to welding. It is welded both inside and out to provide sufficient strength and prevent leakage. Slip-on flanges are all bored slightly larger than the O. D. of the matching pipe. They are preferred over welding neck flanges by many users due to their lower initial cost, but final installation cost is probably not much less than that of the welding neck flange because of the additional welding involved.



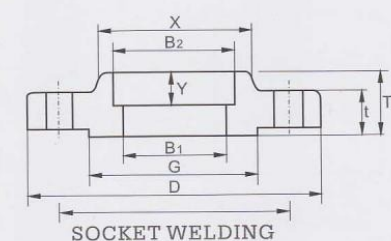
Lap joint Flanges

The lap joint flange is practically identical to a slip-on flange except it has a radius at the intersection of the bore and flange face. This radius is necessary to have the flange accommodate a lap joint stub end. Normally, a lap joint flange and a lap joint stub end are mated together in an assembly system.



Blind Flanges

The blind flange is a flange without a bore. It is used to close off the ends of a piping system and / or a pressure vessel opening. It also permits easy access to the interior of a line or vessel once it has been sealed and must be reopened.



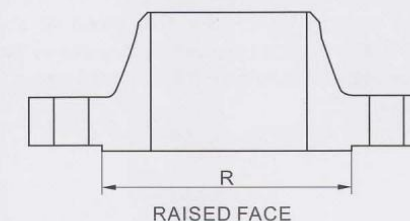
Socket Welding Flanges

The socket welding flange is similar to a slip-on flange except it has a bore and a counterbore dimension. The counterbore is slightly larger than the O. D. of the matching pipe, allowing the pipe to be inserted into the flange similar to a slip-on flange. The diameter of the smaller bore is the same as the I. D. of the matching pipe. A restriction is built into the bottom of the bore which sets as a shoulder for the pipe to rest on. This eliminates any restriction in flow when using a socket welding flange.

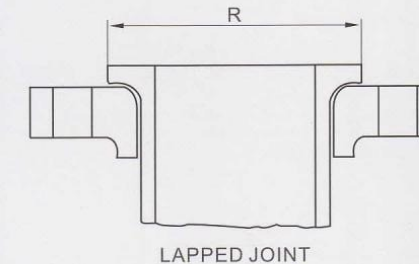


FLANGES FACINGS

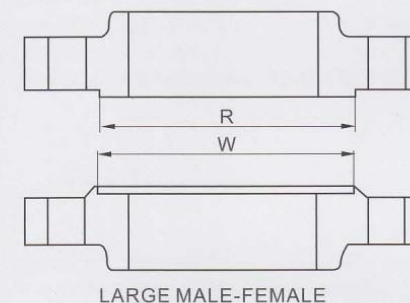
DIMENSIONS OF FLANGE FACINGS



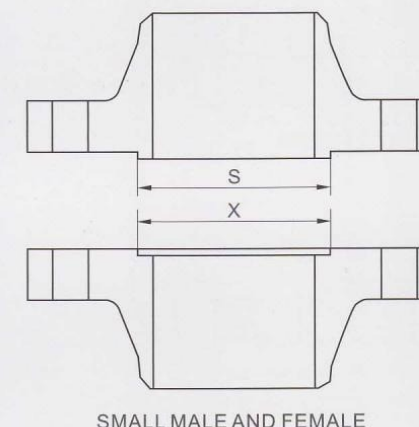
RAISED FACE



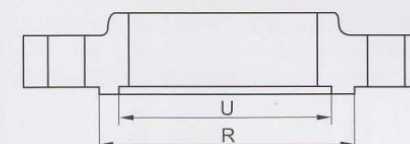
LAPPED JOINT



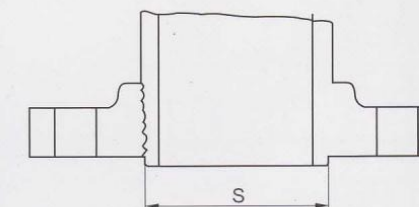
LARGE MALE-FEMALE



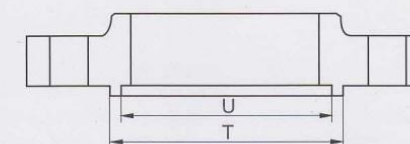
SMALL MALE AND FEMALE



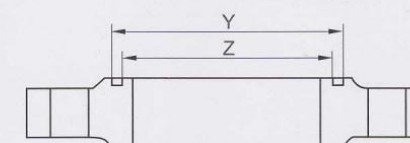
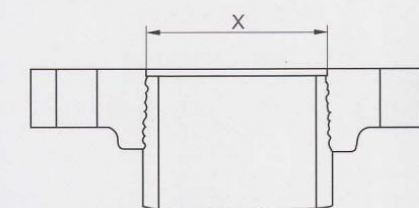
LARGE TONGUE AND GROOVE



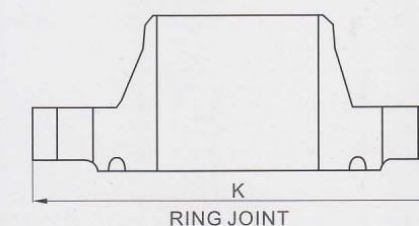
SMALL MALE AND FEMALE



SMALL TONGUE AND GROOVE



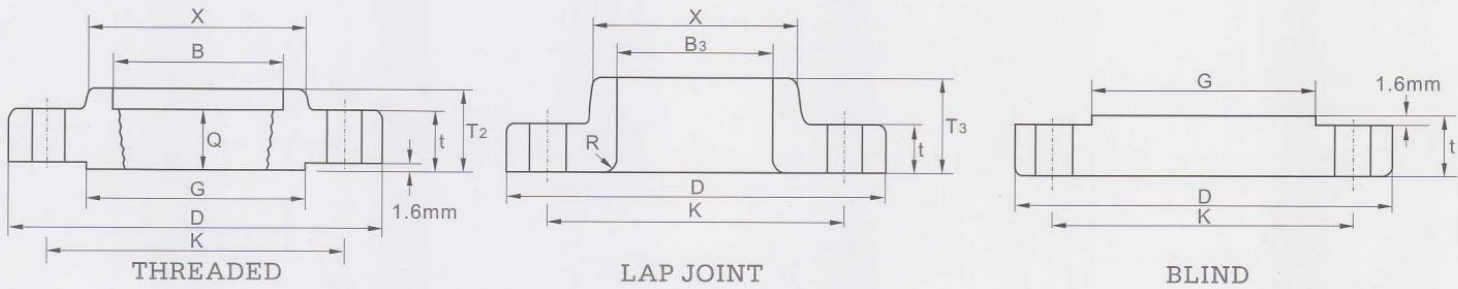
FLAT FACE



RING JOINT



ANSI
CLASS 150 FLANGES

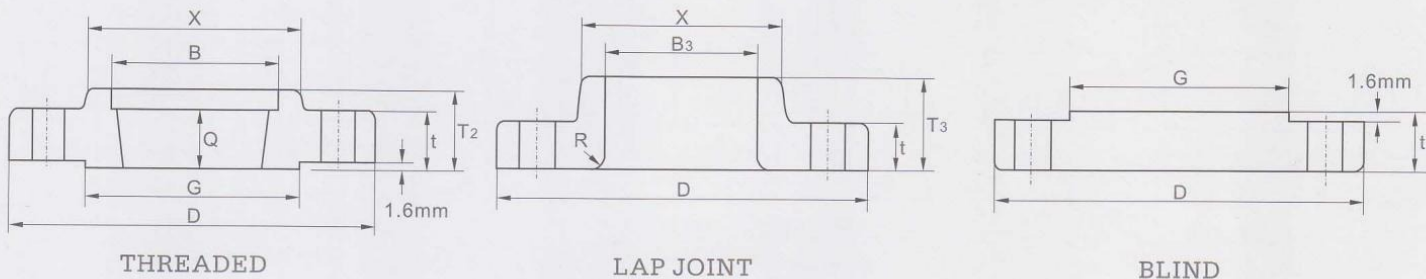


Unit:mm

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 Raised Face	Stud Bolt Length		Welding Neck	Slip-on and Threaded	Lap Joint	Blind	Socket Welding
							Raised Face	Ring Joint					
	Y	K							Kg	Kg	Kg	Kg	Kg
1/2	9.7	60.5	4	15.7	1/2	50.8	57.2	-	0.51	0.47	0.51	0.47	0.47
3/4	11.2	69.9	4	15.7	1/2	50.8	63.5	-	0.73	0.58	0.64	0.63	0.59
1	12.7	79.2	4	15.7	1/2	57.2	63.5	76.2	1.07	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	1.40	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	1.41	1.51	1.62	1.45
2	17.5	120.7	4	19.1	5/8	69.9	82.6	95.3	2.59	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	4.28	3.43	3.60	4.06	3.55
3	20.6	152.4	4	19.1	5/8	76.2	88.9	101.6	5.18	3.87	4.04	4.90	4.02
3 1/2	22.4	177.8	8	19.1	5/8	76.2	88.9	101.6	5.45	4.99	4.99	5.90	4.99
4	23.9	190.5	8	19.1	5/8	76.2	88.9	101.6	7.32	5.75	5.96	7.41	5.99
5	23.9	215.9	8	22.4	3/4	82.6	95.3	108.0	8.91	6.22	6.44	8.76	6.68
6	26.9	241.3	8	22.4	3/4	82.6	101.6	114.3	11.26	7.38	7.59	11.31	7.99
8	31.8	298.5	8	22.4	3/4	88.9	108.0	120.7	17.68	12.36	12.66	19.92	13.29
10	33.3	362.0	12	25.4	7/8	101.6	114.3	127.0	24.79	17.10	16.78	29.39	19.50
12	39.6	431.8	12	25.4	7/8	101.6	120.7	133.4	38.98	27.68	28.30	43.70	29.03
14	41.4	476.3	12	28.4	1	114.3	133.4	146.1	51.71	35.20	41.50	59.42	38.56
16	44.5	539.8	16	28.4	1	114.3	133.4	146.1	64.41	42.08	52.98	77.11	44.49
18	49.3	577.9	16	31.8	1 1/8	127.0	146.1	158.8	74.84	49.71	59.00	94.80	54.43
20	54.1	635.0	20	31.8	1 1/8	139.7	158.8	171.5	89.36	65.50	72.12	123.38	70.31
24	63.5	749.3	20	35.1	1 1/4	152.4	171.5	184.2	119.66	90.50	99.02	188.24	95.25



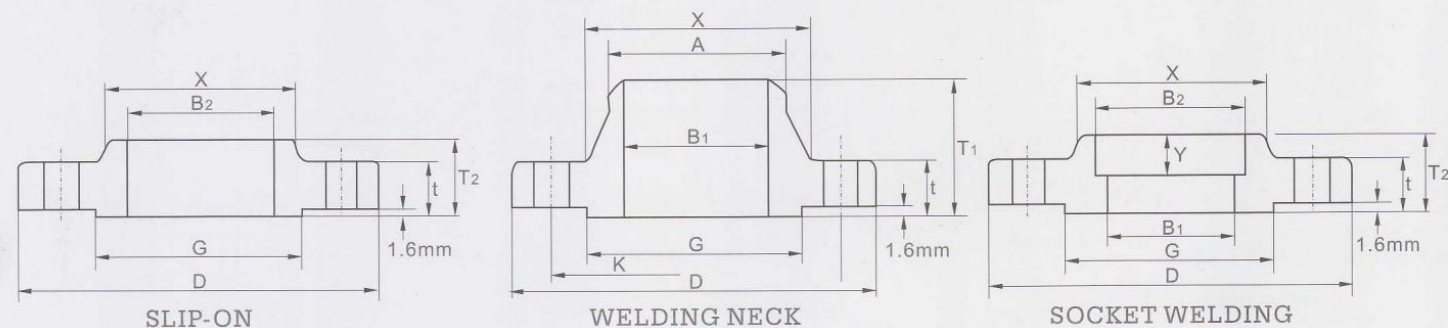
ANSI
CLASS 300 FLANGES



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
							Raised Face	Raised Face					
						Y	K						
1/2	9.7	66.5	4	15.7	1/2	57.2	63.5	76.2	0.78	0.62	0.61	0.62	0.62
3/4	11.2	82.6	4	19.1	5/8	63.5	76.2	88.9	1.34	1.15	1.15	1.16	1.19
1	12.7	88.9	4	19.1	5/8	63.5	76.2	88.9	1.64	1.39	1.38	1.42	1.44
1 1/4	14.2	98.6	4	19.1	5/8	69.9	82.6	95.3	2.06	1.67	1.66	1.79	1.73
1 1/2	15.7	114.3	4	22.4	3/4	76.2	88.9	101.6	3.06	2.53	2.52	2.68	2.62
2	17.5	127.0	8	19.1	5/8	76.2	88.9	101.6	3.40	2.80	2.79	3.09	2.94
2 1/2	19.1	149.4	8	22.4	3/4	82.6	101.6	114.3	5.31	4.25	4.22	4.75	4.49
3	20.6	168.1	8	22.4	3/4	88.9	108.0	120.7	7.32	5.81	5.78	6.79	6.20
3 1/2	22.4	184.2	8	22.4	3/4	95.3	108.0	127.0	8.17	7.72	7.72	9.53	-
4	23.9	200.2	8	22.4	3/4	95.3	114.3	127.0	11.30	10.13	10.07	12.00	-
5	23.9	235.0	8	22.4	3/4	108.0	120.7	133.4	15.12	12.58	12.52	15.96	-
6	26.9	269.7	12	22.4	3/4	108.0	120.7	139.7	19.68	16.04	15.95	21.20	-
8	31.8	330.2	12	25.4	7/8	120.7	139.7	152.4	30.48	24.50	24.37	34.60	-
10	33.3	387.4	16	28.4	1	139.7	158.8	171.5	43.74	34.16	39.92	55.34	-
12	39.6	450.9	16	31.8	1 1/8	146.1	171.5	184.2	64.41	51.26	58.70	78.90	-
14	41.4	514.4	20	31.8	1 1/8	158.8	177.8	190.5	88.30	72.12	83.46	107.05	-
16	44.5	571.5	20	35.1	1 1/4	165.1	190.5	203.2	112.94	90.40	106.14	139.25	-
18	49.3	628.7	24	35.1	1 1/4	171.5	196.9	209.6	138.34	109.00	133.95	176.90	-
20	54.1	685.8	24	35.1	1 1/4	184.2	203.2	222.3	167.37	136.00	157.65	223.17	-
24	63.5	812.8	24	41.1	1 1/2	203.2	228.6	254.0	235.41	204.00	240.40	342.00	-



ANSI CLASS 300 FLANGES

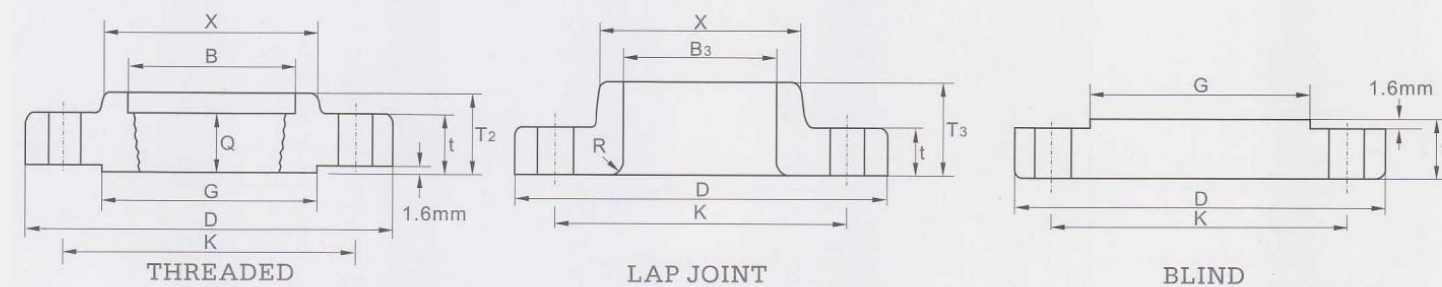


ASME B16.5 FORGING FLANGES

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			
					B1	B2	B3	B	T1	T2	T3			
	D	X	G	t	B1	B2	B3	B	T1	T2	T3	A	R	Q
1/2	95	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	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	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	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	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	191	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	210	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	229	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	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	318	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	445	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	521	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	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	648	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	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	775	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	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



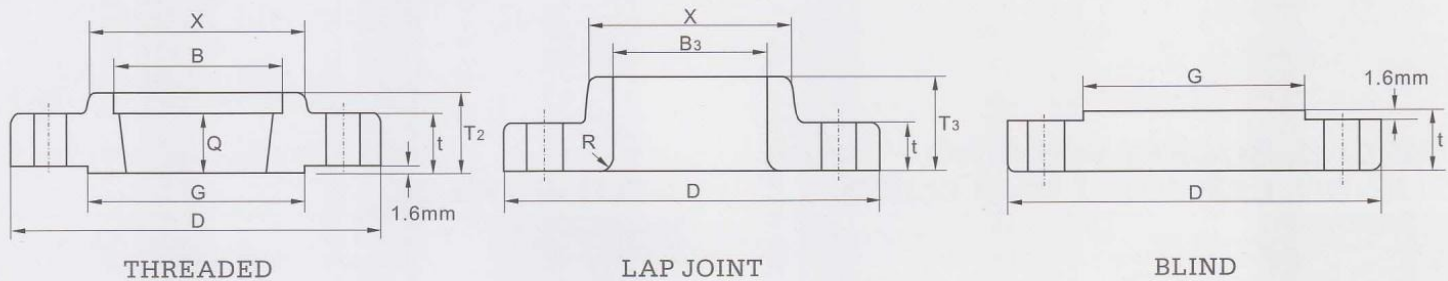
ANSI CLASS 150 FLANGES



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 Raised Face	Stud Bolt Length Raised Face Ring Joint	Welding Neck	Slip-on and Threaded	Lap Joint	Blind	Socket Welding
		Y	K					Kg	Kg	Kg	Kg	Kg
1/2	9.7	60.5	4	15.7	1/2	50.8	57.2	-	0.51	0.47	0.51	0.47
3/4	11.2	69.9	4	15.7	1/2	50.8	63.5	-	0.73	0.58	0.64	0.59
1	12.7	79.2	4	15.7	1/2	57.2	63.5	76.2	1.07	0.86	0.93	0.87
1 1/4	14.2	88.9	4	15.7	1/2	57.2	69.9	82.6	1.40	1.08	1.16	1.11
1 1/2	15.7	98.6	4	15.7	1/2	63.5	69.9	82.6	1.81	1.41	1.51	1.45
2	17.5	120.7	4	19.1	5/8	69.9	82.6	95.3	2.59	2.26	2.38	2.33
2 1/2	19.1	139.7	4	19.1	5/8	76.2	88.9	101.6	4.28	3.43	3.60	3.55
3	20.6	152.4	4	19.1	5/8	76.2	88.9	101.6	5.18	3.87	4.04	4.02
3 1/2	22.4	177.8	8	19.1	5/8	76.2	88.9	101.6	5.45	4.99	4.99	4.99
4	23.9	190.5	8	19.1	5/8	76.2	88.9	101.6	7.32	5.75	5.96	5.99
5	23.9	215.9	8	22.4	3/4	82.6	95.3	108.0	8.91	6.22	6.44	6.68
6	26.9	241.3	8	22.4	3/4	82.6	101.6	114.3	11.26	7.38	7.59	7.99
8	31.8	298.5	8	22.4	3/4	88.9	108.0	120.7	17.68	12.36	12.66	13.29
10	33.3	362.0	12	25.4	7/8	101.6	114.3	127.0	24.79	17.10	16.78	19.50
12	39.6	431.8	12	25.4	7/8	101.6	120.7	133.4	38.98	27.68	28.30	29.03
14	41.4	476.3	12	28.4	1	114.3	133.4	146.1	51.71	35.20	41.50	38.56
16	44.5	539.8	16	28.4	1	114.3	133.4	146.1	64.41	42.08	52.98	44.49
18	49.3	577.9	16	31.8	1 1/8	127.0	146.1	158.8	74.84	49.71	59.00	54.43
20	54.1	635.0	20	31.8	1 1/8	139.7	158.8	171.5	89.36	65.50	72.12	70.31
24	63.5	749.3	20	35.1	1 1/4	152.4	171.5	184.2	119.66	90.50	99.02	95.25



ANSI
CLASS 600 FLANGES

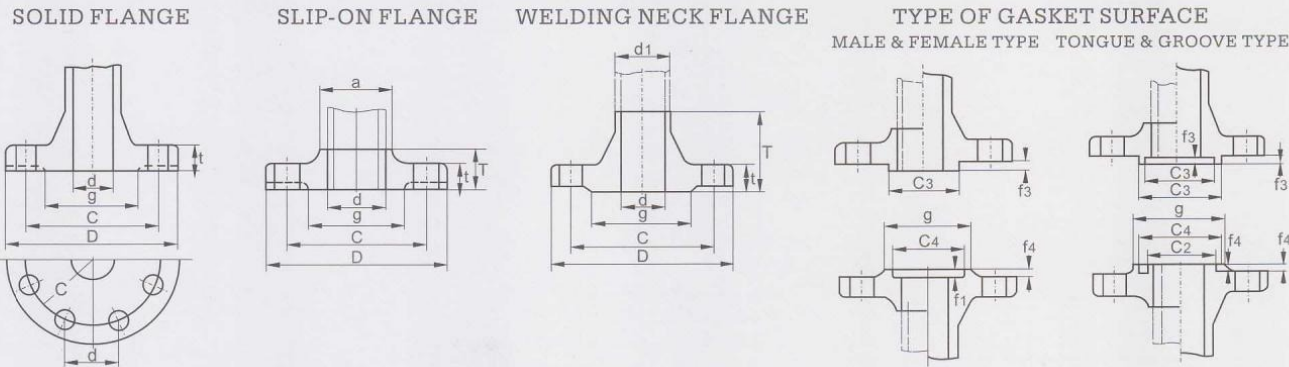


Nominal Pipe Size	Depth of Socket	DRILLING			BOLTING			APPROXIMATE WEIGHT					
		Bolt Circle Diam	Number of Holes	Diam of Holes	Diam of Bolts (inch)	Stud Bolt Length			Welding Neck	Slip-on and Threaded	Lap Joint	Blind	Socket Welding
						0.25" Raised Face	Mate Female Tongue- Groove	Ring Joint					
	Y	K							Kg	Kg	Kg	Kg	Kg
1/2	9.7	66.5	4	15.7	1/2	76.2	69.9	76.2	0.90	0.91	0.80	0.91	0.91
3/4	11.2	82.6	4	19.1	5/8	88.9	82.6	88.9	1.59	1.40	1.36	1.40	1.36
1	12.7	88.9	4	19.1	5/8	88.9	82.6	88.9	1.90	1.70	1.59	1.81	1.81
1 1/4	14.2	98.6	4	19.1	5/8	95.3	88.9	95.3	2.49	2.27	2.04	2.40	2.60
1 1/2	15.7	114.3	4	22.4	3/4	108.0	101.6	108.0	3.63	3.10	2.95	3.40	3.18
2	17.5	127.0	8	19.1	5/8	108.0	101.6	108.0	4.54	3.63	3.63	4.40	3.90
2 1/2	19.1	149.4	8	22.4	3/4	120.7	114.3	120.7	6.35	5.44	4.99	6.80	5.90
3	20.6	168.1	8	22.4	3/4	127.0	120.7	127.0	8.16	7.26	6.35	8.90	7.40
3 1/2	22.4	184.2	8	25.4	7/8	139.7	133.4	139.7	11.80	9.53	9.08	13.17	
4	23.9	215.9	8	25.4	7/8	146.1	139.7	146.1	16.78	14.97	14.06	18.60	
5	23.9	266.7	8	28.4	1	165.1	158.8	165.1	30.87	28.50	27.50	30.84	
6	26.9	292.1	12	28.4	1	171.5	165.1	171.5	36.77	36.32	35.38	38.00	
8	31.8	349.3	12	31.8	1 1/8	190.5	184.2	196.9	50.80	44.00	50.80	62.20	
10	33.3	431.8	16	35.1	1 1/4	215.9	209.6	215.9	86.26	76.20	74.00	102.00	
12	39.6	489.0	20	35.1	1 1/4	222.3	215.9	222.3	102.51	97.52	108.86	132.00	
14	41.4	527.1	20	38.1	1 3/8	235.0	228.6	235.0	121.56	102.00	111.00	158.00	
16	44.5	603.3	20	41.1	1 1/2	254.0	247.7	254.0	177.06	149.82	165.71	224.73	
18	49.3	654.1	20	44.5	1 5/8	273.1	266.7	273.1	215.65	180.10	194.00	285.00	
20	54.1	723.9	24	44.5	5/8	285.8	279.4	292.1	267.86	231.54	258.78	365.00	
24	63.5	838.2	24	50.8	1 7/8	330.2	323.9	336.6	372.00	330.00	362.00	533.45	

Unit:mm



TOLERANCE
ASME B16.5 FORGING FLANGES



THREAD, SOCKET-WELDING,
SLIP-ON, LAP JOINT AND BLIND.

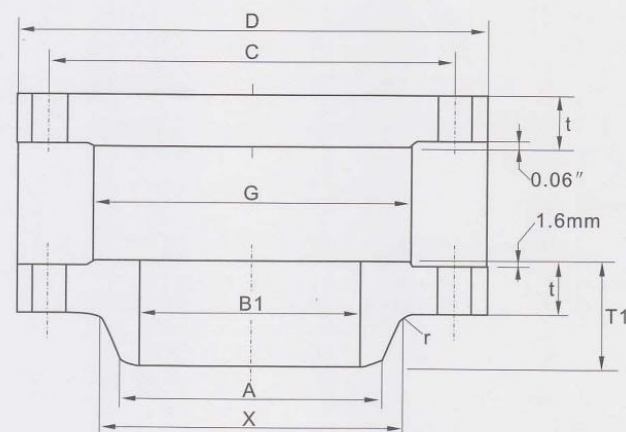
Outside Diameter	When O.D.is 24" or less	±1/16" (1.6mm)*
	When O.D.is Over 24"	±1/8" (3.2mm)*
Inside Diameter	Threaded	Within limits on boring gauge
	Socket-Welding. Slip-on and Lap joint	10" & Smaller +1/32" (0.8mm). - 0" 12" & Larger +1/16" (1.6mm). - 0"
Outside Diameter of Hub	5" and Smaller	+3/32" (2.4mm)* -1/32" (0.08mm)
	6" and Larger	+5/32" (4.0mm) -1/32" (0.8mm)
Diameter of Contact Face	1/16" Raised Face	±1/32" (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	±1/64" (0.4mm)
Diameter of Counterbore	Same as for Inside Diameter	
Drilling	Bolt Circle	±1/16" (1.6mm)
	Bolt Hole Spacing	±1/32" (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	21/2" Smaller 1/32" (0.8mm) Max. 3" & Larger 1/16" (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	1/32" (0.8mm) Max.*
	Eccentricity of Facing with Respect to Bore	1/32" (0.8mm) Max.*
Thickness	18" and Smaller	+1/8" (3.2mm). - 0"
	20" and Larger	+3/16" (4.8mm). - 0"
Length Thru Hub	10" and Smaller	±1/16" (1.6mm)
	12" and Larger	±1/8" (3.2mm)

WELDING NECK

Outside Diameter	When O.D.is 24" or Less	±1/16" (1.6mm)*
	When O.D.is Over 24"	±1/8" (3.2mm)*
Inside Diameter	10" and Smaller	±1/32" (0.8mm)
	12" thru 18"	±1/16" (1.6mm)
	20" and Larger	+1/8" (3.2mm) -1/16" (1.6mm)
Diameter of Contact Face	1/16" Raised Face	±1/32" (0.8mm)
	1/4" Raised Face Tongue & Groove Male, Female	±1/64" (0.4mm)
Diameter of Hub at Base	When Hub Base is 24" or Smaller	±1/16" (1.6mm)*
	When Hub Base is Over 24"	±1/8" (3.2mm)*
Diameter of Hub at Point of Welding	5" and Smaller	+3/32" (2.4mm). -1/32" (0.8mm).
	6" and Larger	+5/32" (4.0mm). -1/32" (0.8mm)
Drilling	Bolt Circle	±1/16" (1.6mm)
	Bolt Hole Spacing	±1/32" (0.8mm)
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" & Smaller 1/32" (0.8mm) Max. 3" & Latger 1/16" (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	1/32" (0.8mm) Max.
	Eccentricity of Facing with Respect to Bore	1/32" (0.8mm) Max.
Thickness	18" and Smaller	+1/8" (3.2mm). - 0"
	20" and Larger	+3/16 (4.8mm). - 0"
Length Thru Hub	10" and Smaller	±1/16" (1.6mm)
	12" and Larger	±1/8" (3.2mm)



CLASS 150 FLANGES



MSS SP44 FORGING FLANGES

Nominal Pipe Size	Outside Diam.	O.D. of Raised Face	Diam. At Base of Hub	Thickness	BORE	
					Wall Thickness	
					9.5mm	12.7mm
	D	G	X	t	B1	
12	483	381.0	365.3	31.8	304.8	298.5
14	533	412.8	400.1	35.1	336.6	330.2
16	597	469.9	457.2	36.6	387.4	381.0
18	635	533.4	505.0	39.6	438.2	431.8
20	699	584.2	558.8	42.9	489.0	482.6
22	749	641.4	609.6	46.0	539.8	533.4
24	813	692.2	663.4	47.8	590.6	584.2
26	870	749.3	676.1	68.3	641.4	635.0
28	927	800.1	726.9	71.4	692.2	685.8
30	984	857.3	781.1	74.7	743.0	736.6
32	1060	914.4	831.9	80.8	793.8	787.4
34	1111	965.2	882.7	82.6	844.6	838.2
36	1168	1022.4	933.5	90.4	895.4	889.0
38	1238	1073.2	990.6	87.4	946.2	939.8
40	1289	1124.0	1041.4	90.4	997.0	990.6
42	1346	1193.8	1092.2	96.8	1047.8	1041.4
44	1403	1044.6	1143.0	101.6	1098.6	1092.2
46	1454	1295.4	1196.8	103.1	1149.4	1143.0
48	1511	1358.9	1247.6	108.0	1200.2	1193.8
50	1568	1409.7	1301.8	111.3	1251.0	1244.6
52	1626	1460.5	1352.6	115.8	1301.8	1295.4
54	1683	1511.3	1403.4	120.7	1352.6	1346.2
56	1746	1574.8	1457.5	124.0	1403.4	1397.0
58	1803	1625.6	1508.3	128.5	1454.2	1447.8
60	1854	1676.4	1559.1	131.8	1505.0	1498.6



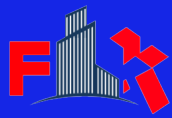
WELDING-ENDS FOR WELDING-NECK FLANGES



BEVEL FOR WALL THICKNESS (to)
*0.75" IN. (20 mm) OR LESS.

BEVEL FOR WALL THICKNESS (to)
GREATER THAN 0.75 IN. (20mm)

Nominal Pipe Size	Length thru Hub	Diam. Of Hub Bevel	Radius of Fillet	DRILLING		
				Bolt Circle Diam.	Number of Holes	Diam. Of Holes
	T1	A	r	C		
12	114.3	323.9	9.7	431.8	12	25.4
14	127.0	355.6	9.7	476.3	12	28.4
16	127.0	406.4	9.7	539.8	16	28.4
18	139.7	457.2	9.7	577.9	16	31.8
20	144.5	508.0	9.7	635.0	20	31.8
22	149.4	558.8	9.7	692.2	20	35.1
24	152.4	609.6	9.7	749.3	20	35.1
26	120.7	To specified by Purchaser.	9.7	806.5	24	35.1
28	125.5		11.2	863.6	28	35.1
30	136.7		11.2	914.4	28	35.1
32	144.5		11.2	977.9	28	41.1
34	149.4		12.7	1028.7	32	41.1
36	157.0		12.7	1085.9	32	41.1
38	157.2		12.7	1149.4	32	41.1
40	163.6		12.7	1200.2	36	41.1
42	171.5		12.7	1257.3	36	41.1
44	177.8		12.7	1314.5	40	41.1
46	185.7		12.7	1365.3	40	41.1
48	192.0		12.7	1422.4	44	41.1
50	203.2		12.7	1479.6	44	47.8
52	209.6		12.7	1536.7	44	47.8
54	215.9		12.7	1593.9	44	47.8
56	228.6		12.7	1651.0	48	47.8
58	235.0		12.7	1708.2	48	47.8
60	239.8		12.7	1759.0	52	47.8



WELDING-ENDS FOR WELDING-NECK FLANGES



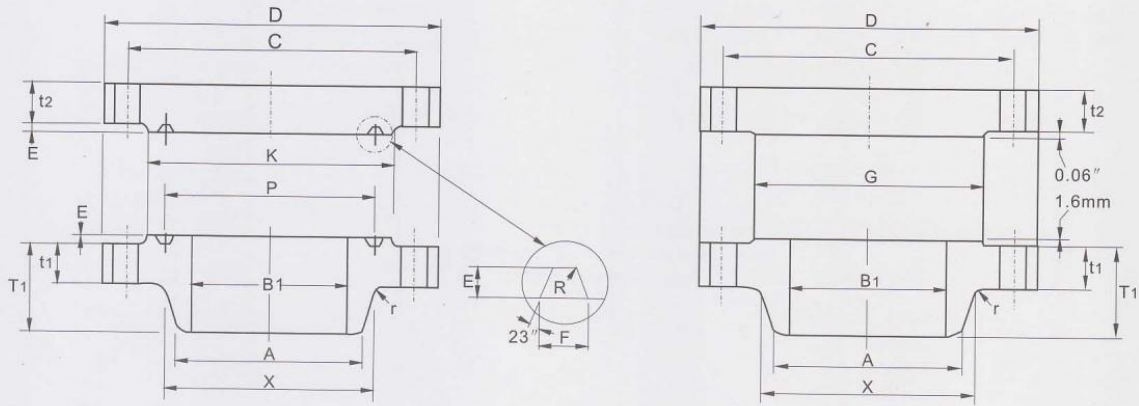
BEVEL FOR WALL THICKNESS (to) *0.75" IN. (20 mm) OR LESS. BEVEL FOR WALL THICKNESS (to) GREATER THAN 0.75 IN. (20mm)

Unit:mm

Nominal Pipe Size	DRILLING			Pitch Diam.	GROOVE DIMENSIONS			Diam. Of Raised Face	Ring and Groove Number
	Bolt Circle Diam.	Number of Holes	Diam. of Holes		Width	Depth	Radius		
	C			P	F	E	R	K	
12	489.0	20	35.1	381.0	11.9	7.9	0.8	412.8	R57
14	527.1	20	38.1	419.1	11.9	7.9	0.8	457.2	R61
16	603.3	20	41.1	469.9	11.9	7.9	0.8	508.0	R65
18	654.1	20	44.5	533.4	11.9	7.9	0.8	574.5	R69
20	723.9	24	44.5	584.2	13.5	9.5	1.5	635.0	R73
22	777.7	24	47.8	635.0	15.1	11.1	1.5	685.8	R81
24	838.2	24	50.8	692.2	16.7	11.1	1.5	749.3	R77
26	914.4	28	50.8	749.3	19.8	12.7	1.5	809.8	R93
28	965.2	28	53.8	800.1	19.8	12.7	1.5	860.6	R94
30	1022.4	28	53.8	857.3	19.8	12.7	1.5	917.4	R95
32	1079.5	28	60.5	914.4	23.0	14.3	1.5	984.3	R96
34	1130.3	28	60.5	965.2	23.0	14.3	1.5	1035.1	R97
36	1193.8	28	66.5	1022.4	23.0	14.3	1.5	1092.2	R98
38	1162.1	28	60.5						
40	1212.9	32	60.5						
42	1282.7	28	66.5						
44	1333.5	32	66.5						
46	1390.7	32	66.5						
48	1460.5	32	73.2						
50	1524.0	28	79.2						
52	1574.8	32	79.2						
54	1632.0	32	79.2						
56	1695.5	32	85.9						
58	1746.3	32	85.9						
60	1822.5	28	91.9						



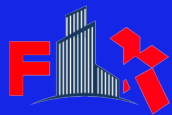
CLASS 300 FLANGES



MSS SP44 FORGING FLANGES

Unit:mm

Nominal Pipe Size	Outside Diam.	O.D.of Raised Face	Diam. At Base of Hub	Thickness		BORE		Length Thru Hub	Diam. Of Hub at Bevel	Radius of Fillet
				Welding Neck	Blind	Wall Thickness				
						9.5mm	12.7mm			
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	323.9	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	666.8	9.7
28	1035	800.1	774.7	85.9	90.4	692.2	685.8	196.9	717.6	11.2
30	1092	857.3	827.0	91.9	95.3	743.0	736.6	209.6	768.4	11.2
32	1149	914.4	881.1	98.6	100.1	793.8	787.4	222.3	819.2	11.2
34	1207	965.2	936.8	101.6	104.6	844.6	838.2	231.6	871.7	12.7
36	1270	1022.4	990.6	104.6	111.3	895.4	889.0	241.3	922.5	12.7
38	1105	1028.7	993.6	108.0	106.0	946.2	939.8	180.8	To be specified by purchaser.	12.7
40	1238	1085.9	1047.8	114.3	114.3	997.0	990.6	193.5		12.7
42	1289	1136.7	1098.6	119.1	119.1	1047.8	1041.4	200.2		12.7
44	1353	1193.8	1149.4	124.0	124.0	1198.6	1092.2	206.2		12.7
46	1416	1244.6	1203.5	128.5	128.5	1149.4	1143.0	215.9		12.7
48	1467	1301.8	1254.3	133.4	133.4	1200.2	1193.8	223.8		12.7
50	1530	1358.9	1305.1	139.7	139.7	1251.0	1244.6	231.6		12.7
52	1581	1409.7	1355.9	144.5	144.5	1301.8	1295.4	238.3		12.7
54	1657	1466.9	1409.7	152.4	152.4	1352.6	1346.2	252.5		12.7
56	1708	1517.7	1463.5	153.9	153.9	1403.4	1397.0	260.4		12.7
58	1759	1574.8	1514.3	158.8	158.8	1454.2	1447.8	266.7		12.7
60	1810	1625.6	1565.1	163.6	163.6	1505.0	1498.6	273.1		12.7



WELDING-ENDS FOR WELDING-NECK FLANGES



BEVEL FOR WALL THICKNESS (to)
*0.75" IN. (20 mm) OR LESS.

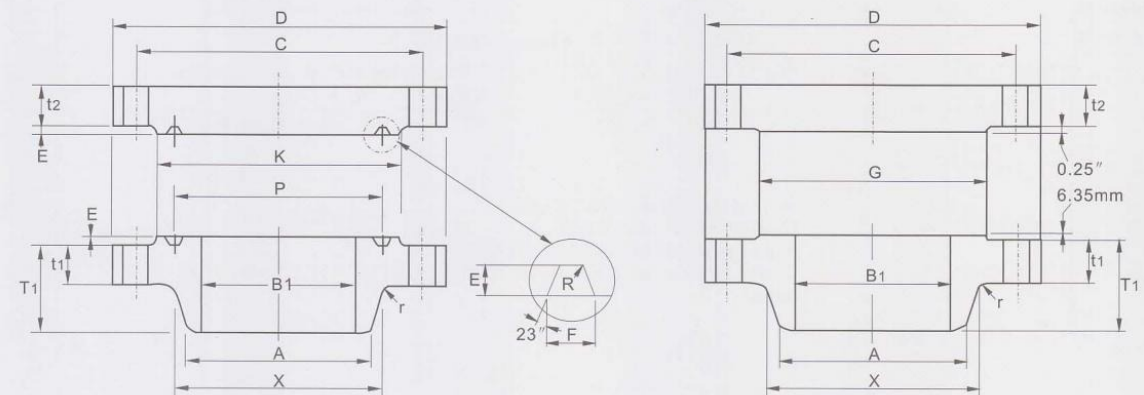
BEVEL FOR WALL THICKNESS (to)
GREATER THAN 0.75 IN. (20mm)

Nominal Pipe Size	DRILLING			Pitch Diam.	GROOVE DIMENSIONS			Diam. Of Raised Face	Ring and Groove Number
	Bolt Circle Diam.	Number of Holes	Diam. of Holes		Width	Depth	Radius		
	C				F	E	R		
12	450.9	16	31.8	381.0	11.9	7.9	0.8	412.8	R57
14	514.4	20	31.8	419.1	11.9	7.9	0.8	457.2	R61
16	571.5	20	35.1	469.9	11.9	7.9	0.8	508.0	R65
18	628.7	24	35.1	533.4	11.9	7.9	0.8	574.5	R69
20	685.8	24	35.1	584.2	13.5	9.5	1.5	635.0	R73
22	743.0	24	41.1	635.0	15.1	11.1	1.5	685.8	R81
24	812.8	24	41.1	692.2	16.7	11.1	1.5	749.3	R77
26	876.3	28	44.5	749.3	19.8	12.7	1.5	809.8	R93
28	939.8	28	44.5	800.1	19.8	12.7	1.5	860.6	R94
30	997.0	28	47.8	857.3	19.8	12.7	1.5	917.4	R95
32	1054.1	28	50.8	914.4	23.0	14.3	1.5	984.3	R96
34	1104.9	28	50.8	965.2	23.0	14.3	1.5	1035.1	R97
36	1168.4	32	53.8	1022.4	23.0	14.3	1.5	1092.2	R98
38	1092.2	32	41.1						
40	1155.7	32	44.5						
42	1206.5	32	44.5						
44	1263.7	32	47.8						
46	1320.8	28	50.8						
48	1371.6	32	50.8						
50	1428.8	32	53.8						
52	1479.6	32	53.8						
54	1549.4	28	60.5						
56	1600.2	28	60.5						
58	1651.0	32	60.5						
60	1701.8	32	60.5						

Unit:mm

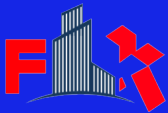


CLASS 600 FLANGES



MSS SP44 FORGING FLANGES

Nominal Pipe Size	Outside Diam.	Diam. At Base of Hub	O.D.of Raised Face	Thickness		BORE		Length Thru Hub	Diam. Of Hub at Bevel	Radius of Fillet	Unit:mm
				Welding Neck	Blind	Wall Thickness					
						9.5mm	12.7mm				
D	X	G	t1	t2	B1		T1	A	r		
12	559	400.1	381.0	66.5	66.5	304.8	298.5	155.4	323.9	11.2	
14	603	431.8	412.8	69.9	69.9	336.6	330.2	165.1	355.6	11.2	
16	686	495.3	469.9	76.2	76.2	387.4	381.0	177.8	406.4	11.2	
18	743	546.1	533.4	82.6	82.6	438.2	431.8	184.2	457.2	11.2	
20	813	609.6	584.2	88.9	88.9	489.0	482.6	190.5	508.0	11.2	
22	870	666.8	641.4	95.3	95.3	539.8	533.4	196.9	558.8	11.2	
24	940	717.6	692.2	101.6	101.6	590.6	584.2	203.2	609.6	11.2	
26	1016	747.8	749.3	108.0	125.5	641.4	635.0	222.3	671.6	12.7	
28	1073	803.1	800.1	111.3	131.8	692.2	685.8	235.0	723.9	12.7	
30	1130	862.1	857.3	114.3	139.7	743.0	736.6	247.7	774.7	12.7	
32	1194	917.4	914.4	117.3	147.6	793.8	787.4	260.4	825.5	12.7	
34	1245	973.1	965.2	120.7	153.9	844.6	838.2	269.7	877.8	14.2	
36	1314	1031.7	1022.4	124.0	162.1	895.4	889.0	282.4	928.6	14.2	
38	1270	1022.4	1054.1	152.4	155.4	946.2	939.8	254.0	To be specified by purchaser.	14.2	
40	1321	1073.2	1111.3	158.8	162.1	997.0	990.6	263.7		14.2	
42	1403	1127.3	1168.4	168.1	171.5	1047.8	1041.4	279.4		14.2	
44	1454	1181.1	1225.6	173.0	177.8	1098.6	1092.2	289.1		14.2	
46	1511	1234.9	1276.4	179.3	185.7	1149.4	1143.0	300.0		14.2	
48	1594	1289.1	1333.5	189.0	195.3	1200.2	1193.8	316.0		14.2	
50	1670	1343.2	1384.3	196.9	203.2	1251.0	1244.6	328.7		14.2	
52	1721	1394.0	1435.1	203.2	209.6	1301.8	1295.4	336.6		14.2	
54	1778	1447.8	1492.3	209.6	217.4	1352.6	1346.2	349.3		14.2	
56	1854	1501.6	1543.1	217.4	225.6	1403.4	1397.0	362.0		15.7	
58	1905	1552.4	1600.2	222.3	231.6	1454.2	1447.8	369.8		15.7	
60	1994	1609.9	1657.4	233.4	242.8	1505.0	1498.6	388.9		17.5	



DIN 2527

Presion nominal 16 blind flanges

Unit:mm

Diameter Nennweite	Brida Flange Flansch			d9 max.	Tornillos / Screws / Schrauben			Weight of a flange				
	D	b	k		Numero Number Anzahl	Rosca Thread Gewinde	d2	FormaB/ShapeB Form B	Forma T/Shape T Form T			
								Kg	Kg			
10	90	14	60		4	M12	14	0,63				
15	95	14	65					0,72				
20	105	16	75					1,01				
25	115	16	85					1,23				
32	140	16	100					1,8				
40	150	16	110	55	8	M16	18	2,09	3,7			
50	165	18	125					2,88				
65	185	18	145					3,66				
80	200	20	160					4,77				
100	220	20	180					5,65				
125	250	22	210	115		M20	22	8,42	8,59			
150	285	22	240	140				10,4	10,6			
-175	315	24	270	165				14	14,3			
200	340	24	295	190				16,1	16,5			
250	405	26	355	235				24,9	25,6			
300	460	28	410	285	12	M24	26	35,1	36,1			
350	520	30	470	330				47,8	49,1			
400	580	32	525	380				16	M27	30	63,5	65,3
500	715	36	650	475							20	M30

Presion nominal 10 blind flanges

Unit:mm

Diameter Nennweite	Brida Flange Flansch			d9 max.	Tornillos / Screws / Schrauben			Weight of a flange		
	D	b	k		Numero Number Anzahl	Rosca Thread Gewinde	d2	FormaB/ShapeB Form B	Forma T/Shape T Form T	
								Kg	Kg	
10 a150	Vease presion nominal 40.									
10 to 150	See rated pressure 40.									
10 bis 150	Fur Nennweten 10 bis 150 sind Blindflansche des Nenndruckes 40 zu verwenden.									
-175	330	28	280	165	12	M24	26	17,3	17,6	
200	360	30	310	190		16	M27	30	22,3	22,7
250	425	32	370	237					33,5	34,5
300	485	34	430	285	46,3				47,3	
350	555	38	490	332	M30		33	68	69,3	
400	620	40	550	380	M33		36	89,7	91,5	
500	730	45	660	475		20		138	141	



DIN 2527

Presion nominal 40 blind flanges

Unit:mm

Diameter Nennweite	Brida Flange Flansch			d9 max.	Tornillos / Screws / Schrauben			Weight of a flange		
	D	b	k		Numero Number Anzahl	Rosca Thread Gewinde	d2	FormaB/ShapeB Form B	Forma T/Shape T Form T	
								Kg	Kg	
10	90	16	60		4	M12	14	0,72		
15	95	16	65					0,81		
20	105	18	75					1,24		
25	115	18	85					1,38		
32	140	18	100					2,03		
40	150	18	110	55	8	M16	18	2,35		
50	165	20	125					3,2		
65	185	22	145					4,29		4,33
80	200	24	160					5,88		5,94
100	235	24	190					7,54		7,64
125	270	26	220	115	12	M24	26	10,8	11	
150	300	28	250	140				14,5	14,7	
-175	350	32	295	165				22,1	22,4	
200	375	34	320	190				27,2	27,6	
250	450	38	385	235				43,8	44,5	
300	515	42	450	285	16	M30	33	63,3	64,3	
350	580	46	510	330				89,5	90,8	
400	660	50	585	380				127	129	
500	755	56	670	475				172	175	
								20	M39	42

Presion nominal 64 blind flanges

Unit:mm

Diameter Nennweite	Brida /Flange / Flansch							Tornillos / Screws / Schrauben			Weight of a flange
	D	b	k	d3	d4	d9	f	Numero Number Anzahl	Rosca Thread Gewinde	d2	Kg
10 a 40	Vease presion nominal 100.										
10 to 40	See rated pressure 100.										
10 bis 40	Fur Nennweten 10 bis 40 sind Blindflansche des Nenndruckes 100 zu verwenden.										
50	180	26	135	82	102	-	3	4	M20	22	4,51
65	205	26	160	98	122	45	3	8	M20	22	5,71
80	215	28	170	112	138	60	3	8	M20	22	6,92
100	250	30	200	138	162	80	3	8	M24	26	10,1
125	295	34	240	168	188	105	3	8	M27	30	16
150	345	36	280	202	218	130	3	8	M30	33	23,5
-175	375	40	310	228	260	155	3	12	M30	33	30,8
200	415	42	345	256	285	180	3	12	M33	36	39,7
250	470	46	400	316	345	220	3	12	M33	36	57,4
300	530	52	460	372	410	270	4	16	M33	36	81,0
350	600	56	525	420	465	310	4	16	M36	39	114
400	670	60	585	475	535	360	4	16	M39	42	153



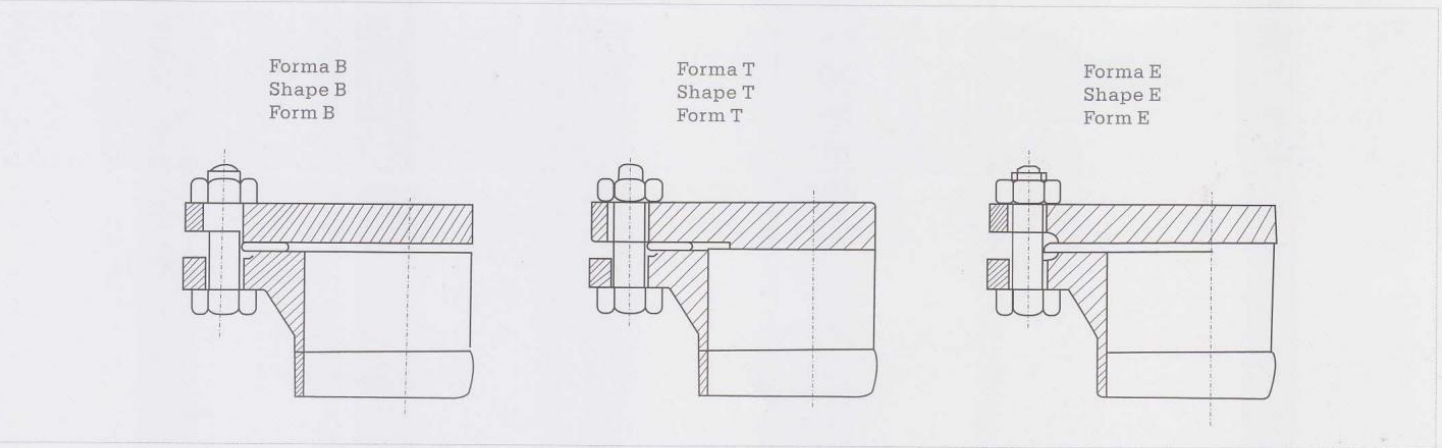
DIN 2527

Presion nominal 100 blind flanges

Unit:mm

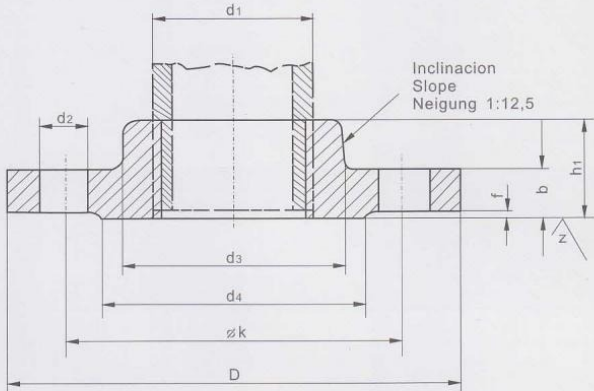
Diameter Nennweite	Brida /Flange / Flansch							Tornillos / Screws / Schrauben			Weight of a flange Kg
	D	b	k	d3	d4	d9	f	Numero Number Anzahl	Rosca Thread Gewinde	d2	
10	100	20	70	32	40	-	2	4	M12	14	1
15	105	20	75	34	45	-	2	4	M12	14	1,22
25	140	24	100	52	68	-	2	4	M16	18	2,65
32	155	24	110	62	78	-	2	4	M20	22	3,24
40	170	26	125	70	88	-	3	4	M20	22	4,09
50	195	28	145	90	102	-	3	4	M24	26	5,84
65	220	30	170	108	122	45	3	8	M24	26	8,03
80	230	32	180	120	138	60	3	8	M24	26	9,43
100	265	36	210	150	162	80	3	8	M27	30	14,3
125	315	40	250	180	188	105	3	8	M30	33	22,6
150	355	44	290	210	218	130	3	12	M30	33	31,8
-175	385	48	320	245	260	155	3	12	M30	33	41,3
200	430	52	360	278	285	180	3	12	M33	36	56,1
250	505	60	430	340	345	210	3	12	M36	39	89,6
300	585	68	500	400	410	260	4	16	M39	42	119
350	655	74	560	460	465	300	4	16	M45	48	175

Aplication examples



DIN 2565

Threaded flanges with neck
Rated pressure 6, 10, 16, 25 and 40



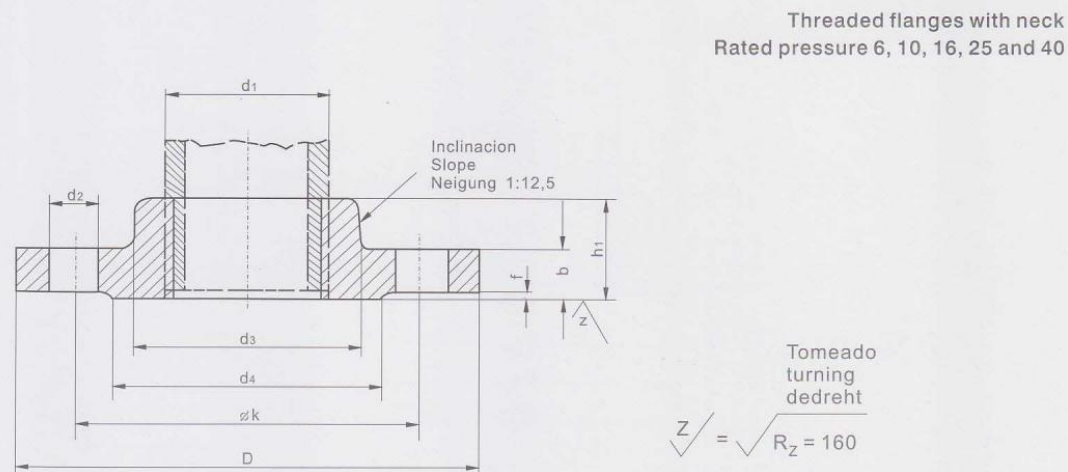
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turning
dedreht
$$\frac{z}{\sqrt{R_z}} = \sqrt{R_z = 160}$$

Threaded flanges with neck
Rated pressure 6

Diameter Nennweite	d1	Brida / Flange / Flansch				Cuello Neck Ansatz	Resalto / Raised face / Dichtleiste			Tornillos / Screws Schrauben			Weight of a flange Kg
		Rosca Thread Whitworth- Rohrgewinde DIN 2999	D	b	k	h1	d3	d4	f	Number	Thread	d2	
6	10,2	R 1/8	65	10	40	18	18	25	2	4	M10	11	0,19
8	13,5	R 1/4	70	10	45	18	22	30	2	4	M10	11	0,227
10	17,2	R 3/8	75	12	50	20	25	35	2	4	M10	11	0,323
15	21,3	R 1/2	80	12	55	20	30	40	2	4	M10	11	0,373
20	26,9	R 3/4	90	14	65	24	40	50	2	4	M10	11	0,59
25	33,7	R 1	100	14	75	24	50	60	2	4	M10	11	0,743
32	42,4	R 1 1/4	120	14	90	26	60	70	2	4	M12	14	1,05
40	48,3	R 1 1/2	130	14	100	26	70	80	3	4	M12	14	1,2
50	60,3	R 2	140	14	110	28	80	90	3	4	M12	14	1,37
65	76,1	R 2 1/2	160	14	130	32	100	110	3	4	M12	14	1,92
80	88,9	R 3	190	16	150	34	110	128	3	4	M16	18	2,82
100	114,3	R 4	210	16	170	38	130	148	3	4	M16	18	3,19
125	139,7	R 5	240	18	200	40	160	178	3	8	M16	18	4,47
150	165,1	R 6	265	18	225	44	185	202	3	8	M16	18	5,3



DIN 2566

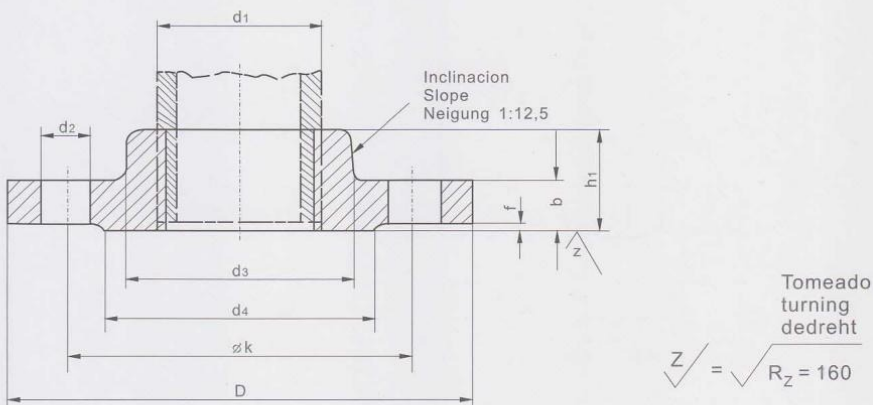


Threaded flanges with neck
Rated pressure 10 and 16

Diameter Nennweite	d1	Brida / Flange / Flansch				Cuello Neck Ansatz		Resalto / Raised face / Dichtleiste		Tornillos / Screws Schrauben			Weight of a flange Kg
		Rosca Thread Whitworth- Rohrgewinde DIN 2999	D	b	k	h1	d3	d4	f	Numero Number Anzahl	Rosca Thread Gewinde	d2	
6	10,2	R 1/8	75	12	50	18	20	32	2	4	M10	11	0,326
8	13,5	R 1/4	80	12	55	18	25	38	2	4	M10	11	0,38
10	17,2	R 3/8	90	14	60	20	30	40	2	4	M12	14	0,544
15	21,3	R 1/2	95	14	65	20	35	45	2	4	M12	14	0,613
20	26,9	R 3/4	105	16	75	24	45	58	2	4	M12	14	0,91
25	33,7	R 1	115	16	85	24	52	68	2	4	M12	14	1,1
32	42,4	R 1 1/4	140	16	100	26	60	78	2	4	M16	18	1,6
40	48,3	R 1 1/2	150	16	110	26	70	88	3	4	M16	18	1,78
50	60,3	R 2	165	18	125	28	85	102	3	4	M16	18	2,43
65	76,1	R 2 1/2	185	18	145	32	105	122	3	4	M16	18	3,18
80	88,9	R 3	200	20	160	34	118	138	3	8	M16	18	4,12
100	114,3	R 4	220	20	180	38	140	158	3	8	M16	18	4,47
125	139,7	R 5	250	22	210	40	168	188	3	8	M16	18	6,13
150	165,1	R 6	285	22	240	44	195	212	3	8	M20	22	7,92

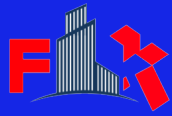


DIN 2567

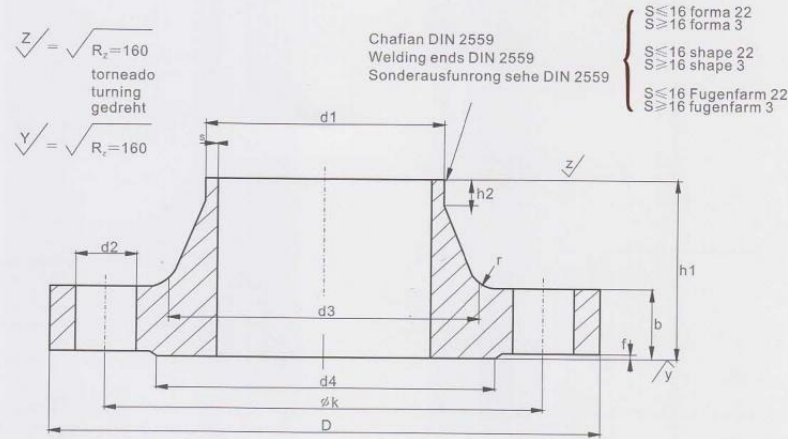


Threaded flanges with neck
Rated pressure 25 and 40

Diameter Nennweite	d1	Brida / Flange / Flansch				Cuello Neck Ansatz		Resalto / Raised face / Dichtleiste		Tornillos / Screws Schrauben			Weight of a flange Kg
		Rosca Thread Whitworth- Rohrgewinde DIN 2999	D	b	k	h1	d3	d4	f	Number	Thread	d2	
6	10,2	R 1/8	75	14	50	20	20	32	2	4	M10	11	0,388
8	13,5	R 1/4	80	14	55	20	25	38	2	4	M10	11	0,45
10	17,2	R 3/8	90	16	60	22	30	40	2	4	M12	14	0,63
15	21,3	R 1/2	95	16	65	22	35	45	2	4	M12	14	0,71
20	26,9	R 3/4	105	18	75	26	45	58	2	4	M12	14	1,03
25	33,7	R 1	115	18	85	28	52	68	2	4	M12	14	1,28
32	42,4	R 1 1/4	140	18	100	30	60	78	2	4	M16	18	1,87
40	48,3	R 1 1/2	150	18	110	32	70	88	3	4	M16	18	2,14
50	60,3	R 2	165	20	125	34	85	102	3	4	M16	18	2,85
65	76,1	R 2 1/2	185	22	145	38	105	122	3	8	M16	18	3,85
80	88,9	R 3	200	24	160	40	118	138	3	8	M16	18	4,8
100	114,3	R 4	235	24	190	44	145	162	3	8	M20	22	6,43
125	139,7	R 5	270	26	220	48	170	188	3	8	M24	26	8,77
150	165,1	R 6	300	28	250	52	200	218	3	8	M24	26	10,5



DIN 2635



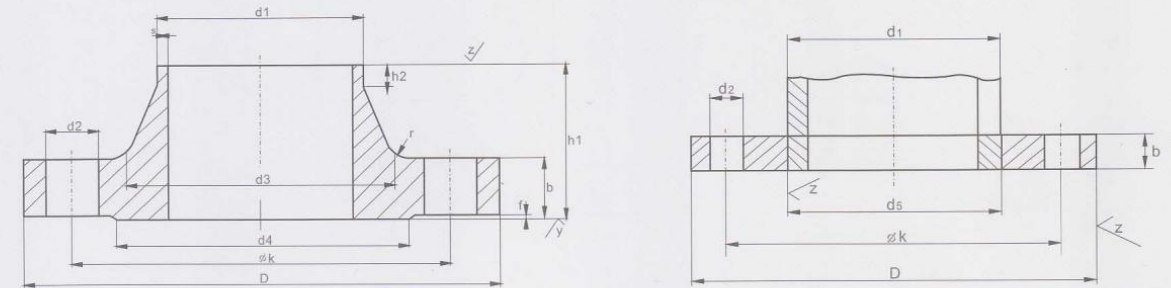
Welding neck flanges Rated pressure 40

Tubo / Pipe / Rohr-Anschlußmabe			Brida / Flange Flansch				Cuello / Neck Ansatz				Resalto Raised face Dichtleiste		Tornillos Screws Schrauben			Weight of a Flange
Diameter Nennweite	d1		D	b	k	h1	d3	s	r	h2	d4	f	Number Numero Anzahl	Rosca Thread Gewinde	d2	Kg
	ISO Serie 1 Reihe 1	DIN Serie 2 Reihe 2														
10	-	14	90	16	60	35	25	1,8	4	6	40	2	4	M12	14	0,661
15	17,2	-	95	16	65	38	28	2	4	6	45	2	4	M12	14	0,746
	21,3	20					30									
20	-	25	105	18	75	40	32	2,3	4	6	58	2	4	M12	14	1,06
	26,9	-					38									
25	-	30	115	18	85	40	40	2,6	4	6	68	2	4	M12	14	1,29
	33,7	-					42									
32	-	38	140	18	100	42	46	2,6	6	6	78	2	4	M16	18	1,88
	42,4	-					52									
40	-	44,5	150	18	110	45	56	2,6	6	7	88	3	4	M16	18	2,33
	48,3	-					60									
50	-	57	165	20	125	48	64	2,9	6	8	102	3	4	M16	18	2,82
	60,3	-					72									
65	76,1	-	185	22	145	52	75	2,9	6	10	122	3	8	M16	18	3,74
80	88,9	-	200	24	160	58	90	3,2	8	12	138	3	8	M16	18	4,75
100	-	108	235	24	190	65	105	3,6	8	12	162	3	8	M20	22	6,52
	114,3	-					128									
125	-	133	270	26	220	68	134	4	8	12	188	3	8	M24	26	9,07
	139,7	-					155									
150	-	159	300	28	250	75	162	4,5	10	12	218	3	8	M24	26	11,8
	168,3	-					182									
(175)	193,7	-	350	32	295	82	192	5,6	10	15	260	3	12	M27	30	18,2
200	219,1	-	375	34	320	88	218	6,3	10	16	285	3	12	M27	30	21,5
250	-	267	450	38	385	105	244	7,1	12	18	345	3	12	M30	33	34,9
	273	-					298									
300	323,9	-	515	42	450	115	306	8	12	18	410	4	16	M30	33	49,7
350	355,6	-	580	46	510	125	362	8,8	12	20	465	4	16	M33	36	68,1
	-	368					408									
400	406,4	-	660	50	585	135	462	11	12	20	535	4	16	M36	39	96,5
	-	419					462									
(450)	457	-	685	50	610	135	500	12,5	12	20	560	4	20	M36	39	99,7
500	508	-	755	52	670	140	562	14,2	12	20	615	4	20	M39	42	117



DIN 2519

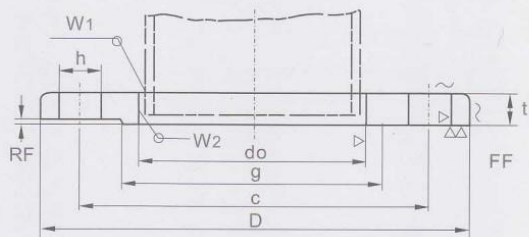
TOLERANCE



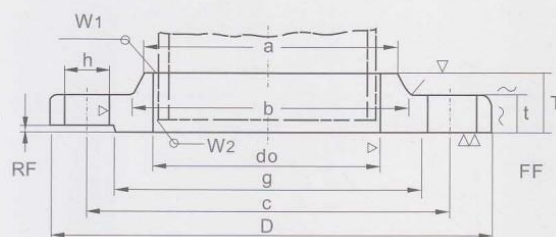
Medidas Measurements Maß	Steel flanaes: Tecnnical terms of delivery Dimensional tolerances in mm. Dimensiones Dimensions Abmessungsbereich	Ejecucion/Finishing/Ausführung		
		Mecanizada Machined Bearbeitet		Sin mecanizar Unmachined Unbearbeitet
Diametro exterior D Outside Diameter D Außendurchmesser D	Hasta 200 mm./Up to 200 mm./Bis 200 mm.	±1		±2
	Mas de 200 a 300 mm./Above 200 to 300 mm. Über 200 bis 300 mm.	±1.5		±2
	Mas de 400 mm./Above 400 mm. /Über 400 mm.	±2		±3
	Mas de 300 a 400 mm./Above 300 to 400 mm. / Über 300 bis 400 mm.	±2		±5
Agujero central Central hole Mittelloch		Las demas/the rest Außer Vorschein	Bridas con cuello para soldar /weldneck flanges/ Vorschweißflansche	
	Hasta 100 mm. /Up to 100 mm./Bis 100 mm.	0.5	-1.0	
	Mas de 100 a 400 mm./Above 100 to 400 mm Über 100 bis 400 mm.	1	-1.5	
	Mas de 400 mm./Above 400 mm./über 400 mm	+1.5	-2	
Espesor de la brida b Flange thickness b Flanschdicke b	Hasta 10 mm./Up to 10mm./Bis 10 mm	Ambas superficies/both surfaces/beide Flächen ±0.5	una superficie/one surface/eine Fläche ±1	+1.5
	Mas de 10 hasta 20 mm./Above 10 to 20 mm. Über 10 bis 20 mm.	±0.8	±1.3	-1
	Mas de 20 hasta 30 mm./Above 20 to 30 mm. Über 20 bis 30 mm.	±1	±1.5	-2
	Mas de 30 hasta 50 mm./Above 30 to 50 mm. Über 30 bis 50 mm.	±1	±1.5	-3
	Mas de 50 mm./Above 50 mm. /über 50 mm	±1.5	±2	-4
Altura h1 Height h1 Flanschhöhe h1	Hasta NW80/Up to NW80/bis NW80	±1.5		
	Mas de NW80 hasta NW 250./Above NW 80 to NW 250 über Nw80 bis bis NW 250.	±2		
	Mas de NW 250./Above NW 250 /über NW 250.	±3		
Espesor del cuello s Neck thickness s Ansatzdicke s	Hasta NW100/ Up to Nw100 /bis NW100. Mas de NW	+1.0		+1.5
	100 hasta NW 400. /Above NW100 to Nw400. Über NW100 bis bis NW400.	+1.5		+2.0
	Mas de NW 400./Above NW 400/über NW 400.	+2.0		+2.5
Diametro del resalto d4 Tongue diameter d4 Dichtleisten- durchmesser d4	Hasta NW 80/Up to NW80/bis NW80.	-1		
	Mas de NW 80 hasta NW 300./Above Nw80 to NW 300./über NW80 bis NW 300.	-2		
	Mas de NW 300./Above NW 300/über NW 300	-3		
Diametro entre centros de orificios k Diameter between hole centers k Lockreis-durchmesser k	para juntas de forma se ha garantizar la concentricidad del circulo de orificios y del agujero central. Las tolerancias para el diametro del circulo de			
	For shaped joints, the concentricity of the es and the center hole must be guaranteed.the tolerances for the diamter.of the hole circle , distance			
	Bei formschlüssigen Dichtungen muß die konzentritat bon lochkreis und Mittelloch gewährleistet sein. Die zulässigen Maßabweichungen für			



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5K KS B1503 JIS B2220



NOMINAL SIZE 10-400mm

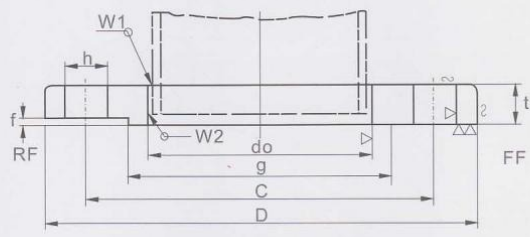


NOMINAL SIZE 450-1000mm

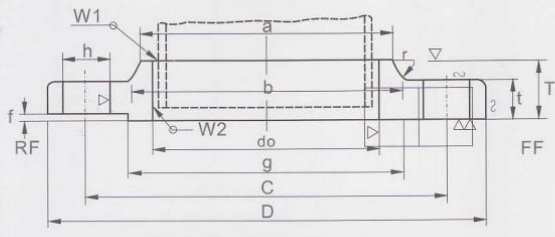
Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange												Nomi- Nal Bolt Size	Welding		Approx- Weight (Kg/w)
		Dia. Bolt Circle C	Dia. of Raised Face g	Inside Dia. of Flange do	Outside Dia. of Appli Cable Pipe	t	T	Dia. of Hub		Radi- us r	Raised Face f	Hole Dia. h	Number of Bolt Holes		W1	W2	
								a	b								
(10)	75	55	39	17.8	17.3	9	-	-	-	-	1	12	4	M10	5.0	2.5	0.27
15	80	60	44	22.2	21.7	9	16	30	-	-	1	12	4	M10	5.0	3.0	0.30
(20)	85	65	49	27.7	27.2	10	18	36	-	-	1	12	4	M10	5.0	3.0	0.37
25	95	75	59	34.5	34.0	10	18	45	-	-	1	12	4	M10	5.0	3.0	0.45
(32)	115	90	70	43.2	42.7	12	21	54	-	-	2	15	4	M12	6.0	3.0	0.78
40	120	95	75	49.1	48.6	12	21	60	-	-	2	15	4	M12	6.0	3.0	0.83
50	130	105	85	61.1	60.5	14	22	76	-	-	2	15	4	M12	6.0	3.0	1.07
65	155	130	110	77.1	76.3	14	26	92	-	-	2	15	4	M12	6.0	4.0	1.49
80	180	145	121	90.0	89.1	14	30	105	-	-	2	19	4	M16	6.0	4.0	1.99
(90)	190	155	131	102.6	101.6	14	-	-	-	-	2	19	4	M16	6.0	4.0	2.09
100	200	165	141	115.4	114.3	16	36	135	-	-	2	19	8	M16	7.0	4.0	2.39
125	235	200	176	141.2	139.8	16	-	-	-	-	2	19	8	M16	7.0	4.0	3.23
150	265	230	206	166.6	165.2	18	-	-	-	-	2	19	8	M16	7.0	5.0	4.41
(175)	300	260	232	192.1	190.7	18	-	-	-	-	2	23	8	M20	7.5	5.0	5.51
200	320	280	252	218.0	216.3	20	-	-	-	-	2	23	8	M20	8.5	6.0	6.33
(225)	345	305	277	243.7	241.8	20	-	-	-	-	2	23	12	M20	9.0	6.0	6.64
250	385	345	317	269.5	267.4	22	-	-	-	-	2	23	12	M20	10.0	6.0	9.45
300	430	390	360	321.0	318.5	22	-	-	-	-	3	23	12	M20	10.0	6.0	10.30
350	480	435	403	358.1	355.6	24	-	-	-	-	3	25	12	M22	12.0	7.0	14.00
400	540	495	463	409.0	406.4	24	-	-	-	-	3	25	16	M22	12.0	7.0	16.90
450	605	555	523	460.0	457.2	24	40	495	500	5	3	25	16	M22	12.0	7.0	24.80
500	655	605	573	511.0	508.0	24	40	546	552	5	3	25	20	M22	12.0	7.0	26.90
550	720	665	630	562.0	558.8	26	42	597	603	5	3	27	20	M24	12.0	7.0	34.10
600	770	715	680	613.0	609.6	26	44	648	654	5	3	27	20	M24	12.0	7.0	37.50
650	825	770	735	664.0	660.4	26	48	702	708	5	3	27	24	M24	12.0	7.0	42.80
700	875	820	785	715.0	711.2	26	48	751	758	5	3	27	24	M24	12.0	7.0	45.40
750	945	880	840	766.0	762.0	28	52	802	810	5	3	33	24	M30	12.0	7.0	57.40
800	995	930	890	817.0	812.8	28	52	854	862	5	3	33	24	M30	13.0	8.0	60.80
(850)	1045	980	940	868.0	863.6	28	54	904	912	5	3	33	24	M30	13.0	8.0	63.50
900	1095	1030	990	919.0	914.4	30	56	956	964	5	3	33	24	M30	13.0	8.0	75.30
1000	1195	1130	1090	1021.0	1016.0	32	60	1058	1066	5	3	33	28	M30	14.0	9.0	88.50
*(1100)	1305	1240	1200	1123.0	1117.6	32	-	-	-	-	3	33	28	M30			
*1200	1420	1350	1305	1225.0	1219.2	34	-	-	-	-	3	33	32	M30			
*1350	1575	1505	1460	-	1371.6	34	-	-	-	-	3	33	32	M30			
*1500	1730	1660	1615	-	1524.0	36	-	-	-	-	3	33	36	M30			



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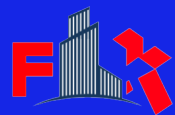


NOMINAL SIZE 10-225mm

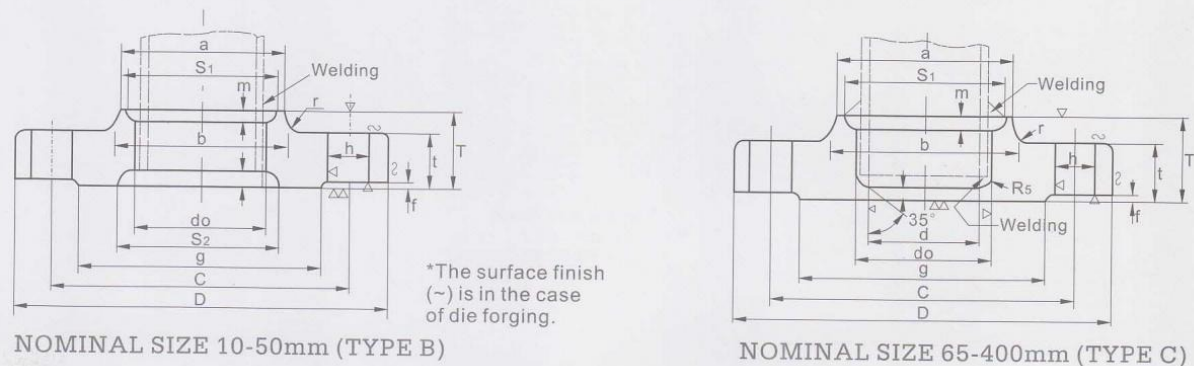


NOMINAL SIZE 250-1000mm

Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange												Nomi- Nal Bolt Size	Weld Length (Reference):		Unit:mm Approx- Weight (Kg/w)
		Bolt Circle Dia. C	Dia. of Raised Face g	Inside Dia. of Flange do	Outside Dia. of Steel Pipe	t	T	Dia. of Hub		Radi- us r	Raised Face f	Hole Dia. h	Number of Bolt Holes		W1	W2	
								a	b								
10	90	65	46	17.8	17.3	12	-	-	-	-	1	15	4	M12	5	2.5	0.52
15	95	70	51	22.2	21.7	12	16	30	-	-	1	15	4	M12	5	3	0.57
20	100	75	56	27.7	27.2	14	18	36	-	-	1	15	4	M12	5	3	0.73
25	125	90	67	34.5	34	14	18	45	-	-	1	19	4	M16	5	3	1.13
32	135	100	76	43.2	42.7	16	21	54	-	-	2	19	4	M16	6	3	1.48
40	140	105	81	49.1	48.6	-	21	60	-	-	2	19	4	M16	6	3	1.56
50	155	120	96	61.1	60.5	16	22	76	-	-	2	19	4	M16	6	3	1.88
65	175	140	116	77.1	76.3	18	25	94	-	-	2	19	4	M16	6.5	4	2.6
80	185	150	126	90	89.1	18	30	108	-	-	2	19	8	M16	6.5	4	2.61
(90)	195	160	136	102.6	101.6	18	-	-	-	-	2	19	8	M16	6.5	4	2.76
100	210	175	151	115.4	114.3	18	35	136	-	-	2	19	8	M16	7	4	3.14
125	250	210	182	141.2	139.8	20	-	-	-	-	2	23	8	M20	7.5	4	4.77
150	280	240	212	166.6	165.2	22	-	-	-	-	2	23	8	M20	8	5	6.34
(175)	305	265	237	192.1	190.7	22	-	-	-	-	2	23	12	M20	9	5	6.82
200	330	290	262	218	216.3	22	-	-	-	-	2	23	12	M20	9	6	7.53
(225)	350	310	282	243.7	241.8	22	-	-	-	-	2	23	12	M20	9	6	7.74
250	400	355	324	269.5	267.4	24	36	288	292	6	2	25	12	M22	10	6	12.7
300	445	400	368	321	318.5	24	38	340	346	6	3	25	16	M22	10	6	13.8
350	490	445	413	358.1	355.6	26	42	380	386	6	3	25	16	M22	12	7	18.2
400	560	510	475	409	406.4	28	44	436	442	6	3	27	16	M24	12	7	25.2
450	620	565	530	460	457.2	30	48	496	502	6	3	27	20	M24	14	8	33
500	675	620	585	511	508	30	48	548	554	6	3	27	20	M24	14	8	37.6
550	745	680	640	562	558.8	32	52	604	610	6	3	33	20	M30	15	9	49.7
600	795	730	690	613	609.6	32	52	656	662	6	3	33	24	M30	16	10	52.6
650	845	780	740	664	660.4	34	56	706	712	6	3	33	24	M30	16	10	60.6
700	905	840	800	715	711.2	34	58	762	770	6	3	33	24	M30	17	10	70.6
750	970	900	855	766	762	36	62	816	824	6	3	33	24	M30	18	11	85.8
800	1020	950	905	817	812.8	36	64	868	876	6	3	33	28	M30	19	12	91.2
(850)	1070	1000	955	868	863.6	36	66	920	928	6	3	33	28	M30	19	12	98.6
900	1120	1050	1005	919	914.4	38	70	971	979	6	3	33	28	M30	22	14	109
1000	1235	1160	1110	1021	1016	40	74	1073	1081	6	3	39	28	M36	22	14	133
*(1100)	1345	1270	1220	1123	1117.6	42	-	-	-	-	3	39	28	M36			
*1200	1465	1380	1325	1225	1219.2	44	-	-	-	-	3	39	32	M36			
*1350	1630	1540	1480	-	1371.6	48	-	-	-	-	3	45	36	M42			
*1500	1795	1700	1635	-	1524.0	50	-	-	-	-	3	45	40	M42			



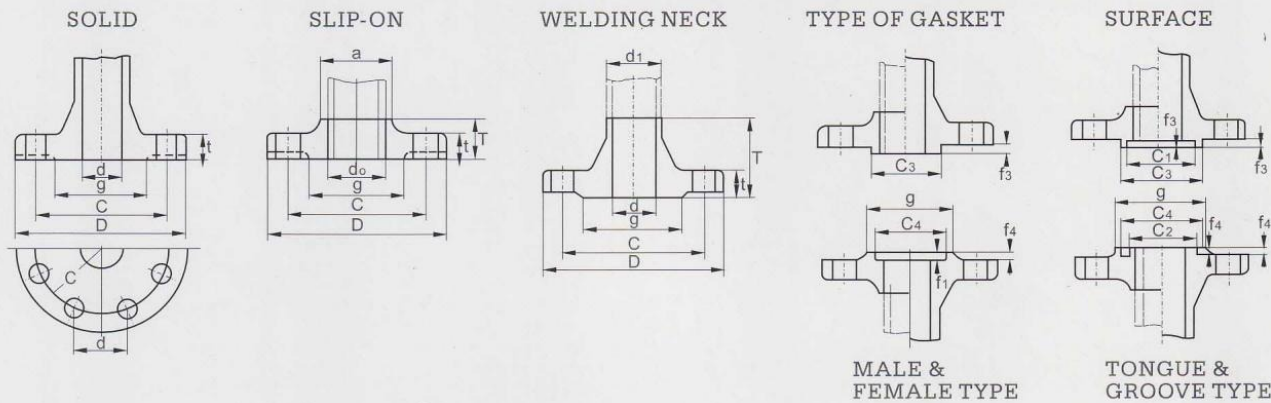
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30K KS B1503 JIS B2220
Slip-On



Nominal Dia. of Flange	Outside Dia. of Flange D	Sectional Dimensions of flange														Reference					Approx. Weight (Kg)
		Bolt Circle Dia. C	Dia. of Raised Face g	Dia. of Flange do	Outside Dia. of Steel Pipe	t	T	Dia. of Hub		Radi us r	f	d	Num- ber of Bolt Holes	Hole Dia. h	NomiNal Bolt Size	S1	m	S2	n	l	
								a	b												
10	110	75	52	17.8	17.3	16	24	30	34	4	1	-	4	19	M16	-	-	-	-	-	0.99
15	115	80	55	22.2	21.7	18	26	36	40	5	1	-	4	19	M16	31	4	40	5	-	1.23
20	120	85	60	27.7	27.2	18	28	42	46	5	1	-	4	19	M16	37	5	44	5	-	1.34
25	130	95	70	34.5	34.0	20	30	50	54	5	1	-	4	19	M16	55	6	52	5	-	1.76
32	140	105	80	43.2	42.7	22	32	60	64	6	2	-	4	19	M16	52	6	60	5	-	2.15
40	160	120	90	49.1	48.6	22	34	66	70	6	2	-	4	23	M20	58	6	66	5	-	2.82
50	165	130	105	61.1	60.5	22	36	82	86	6	2	-	8	19	M16	70	6.5	78	5	-	2.89
65	200	160	130	77.1	76.3	26	40	102	106	8	2	65.9	8	23	M20	96	9.5	94	5	6	4.70
80	210	170	140	90.0	89.1	28	44	115	121	8	2	78.1	8	23	M20	109	9.5	-	-	6	5.36
(90)	230	185	150	102.6	101.6	30	46	128	134	8	2	90.2	8	25	M22	122	9.5	-	-	6	6.85
100	240	195	160	115.4	114.3	32	48	141	147	8	2	102.3	8	25	M22	135	9.5	-	-	6	7.89
125	275	230	195	141.2	139.8	36	54	166	172	8	2	126.6	8	25	M22	160	9.5	-	-	6	11.4
150	325	275	235	166.6	165.2	38	58	196	204	8	2	151.0	12	27	M24	186	9.5	-	-	6	16.7
200	370	320	280	218.0	216.3	42	64	248	256	8	2	199.9	12	27	M24	237	9.5	-	-	6	20.6
250	450	390	345	269.5	267.4	48	72	306	314	10	2	248.8	12	22	M30	290	10	-	-	6	36.1
300	515	450	405	321.0	318.5	52	78	360	370	10	3	297.9	16	33	M30	345	12	-	-	6	49.9
350	560	495	450	358.1	355.6	54	84	402	412	12	3	333.4	16	33	M30	383	13	-	-	6	61.2
400	630	560	510	409.0	406.4	60	92	456	468	15	3	381.0	16	39	M36	435	14	-	-	7	85.2

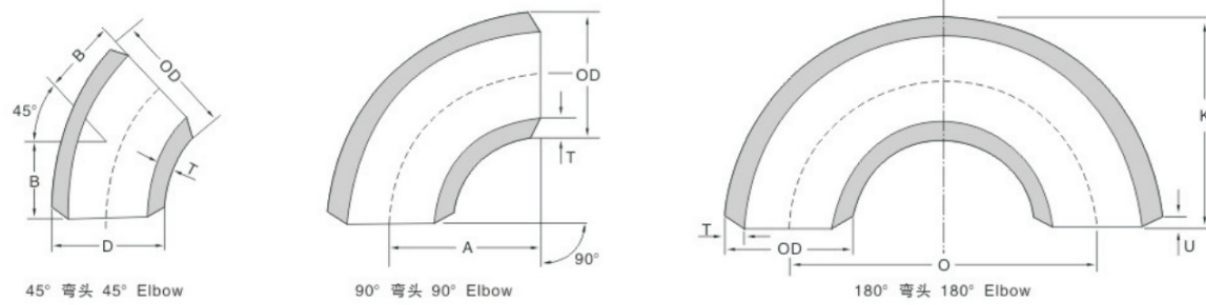
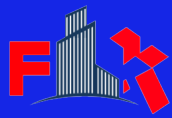


KS B1502 JIS B2203
TOLERANCE FOR PIPE FLANGES



Unit:mm			
Flange Section	Surface Condition	Basic Size	Dimensional Tolerance
Outside Dia. D	As Forged (1)	300 & below	+ Not Specified
		over 300 thru 600	-2.0
		over 600 thru 1000	
		over 1000 thru 1500	+ Not Specified
	Finish	300 & below	-3.0
		over 300 thru 600	±1
		over 600 thru 1000	±1.5
		over 1000 thru 1500	±2
Inside Dia.	Solid Flange d(2)	16 & below	±1
		over 16 thru 63	±1.5
		over 63 thru 125	±2
		over 125 thru 150	±2.5
	Slip-on Flange do	over 250 thru 500	±3
		over 500 thru 1000	±4
		over 1000	±5
	Welding Neck Flange d	100 & below	±0.5
		over 100 thru 400	+0
		over 400 thru 600	+1.5
		over 600 thru 800	+2
Bolt Hole	Bolt Circle Dia. C	over 800 thru 1000	+2.5
		over 1000	+3
		250 & below	±0.5
		over 250 thru 550	±0.6
		over 550 thru 950	±0.8
		over 950 thru 1350	±1
		over 1350	±1.5

Unit:mm				
Flange Section	Surface Condition	Basic Size	Dimensional Tolerance	
Bolt Hole	Pitch of Hose P	Drilling Hole	-	±0.5
Dia. of Hub	Slip-on Flange (a) and Welding Neck Flange (d1)	As Forged	220 & below	+2
			over 220 thru 450	+3
			over 450 thru 650	+4
			over 650 thru 850	+6
		Finish	over 850 thru 1000	+7
			over 1000	+8
			220 & below	+1
			over 220 thru 450	+1.5
Gasket Seat	C1, C2 C3, C4	Finish	over 450 thru 650	+2
			over 650 thru 850	+2.5
	f4f3	Finish	over 850 thru 1000	+3
			over 1000	+3.5
	g	Finish	500 & below	±0.3
			over 500 thru 1000	±0.35
			over 1000 thru 1500	±0.4
			over 1500	±0.5
Thickness t	One-side Finish	Both-side Finish	8 & below	±0.2
			over 8	±0.25
			200 & below	±0.8
			over 200 thru 650	±0.9
Hub Height T	Flange with Pipe Inserted	Finish	over 650 thru 1000	±1
			over 1000	±1.2
			20 & below	+1.5
			over 20 thru 50	+2
	Flange with Buttwelded Pipe	Finish	over 50 thru 100	+3
			20 & below	+1
			over 20 thru 50	+1.5
			over 50 thru 100	+2



公称通径 Nominal diameter		外径 Outside diameter	中心至端面的距离 Center to end		中心至中心的距离 Center to Center	90° L/R弯头理论重量kg/pc 90° L/R Elbow Approx weight					
DN	NPS	OD	B	A	O	sch5S	sch10S	sch20S/ LG	sch40S/ STD	sch80S/ XS	sch80
15	1/2	18 21.3	16	38	76	0.04 0.05	0.05 0.06	0.06 0.07	0.06 0.08	0.08 0.10	0.08 0.10
20	3/4	25 26.7	19	38	76	0.06 0.06	0.07 0.08	0.09 0.09	0.09 0.10	0.12 0.13	0.12 0.13
25	1	32 33.4	22	38	76	0.07 0.08	0.12 0.13	0.14 0.14	0.14 0.15	0.19 0.19	0.19 0.19
32	1 1/4	38 42.2	25	48	96	0.11 0.13	0.18 0.20	0.21 0.23	0.23 0.26	0.30 0.34	0.30 0.34
40	1 1/2	45 48.3	29	57	114	0.16 0.17	0.26 0.28	0.30 .032	0.34 0.37	0.45 0.49	0.45 0.49
50	2	57 60.3	35	76	152	0.27 0.29	0.45 0.47	0.57 0.61	0.62 0.65	0.85 0.90	0.85 0.90
65	2 1/2	76 73	44	95	190	0.58 0.55	0.82 0.79	0.97 0.93	1.35 1.30	1.79 1.71	1.79 1.71
80	3	89	51	114	228	0.82	1.17	1.51	2.04	2.76	2.76
90	3 1/2	101.6	57	133	266	1.09	1.56	2.03	2.85	3.92	3.92
100	4	108 114	64	152	304	1.32 1.40	1.90 2.01	2.47 2.61	3.64 3.85	5.05 5.35	5.05 5.35
125	5	133 141.3 139.7	79	190	380	2.67 2.84 2.81	3.27 3.47 3.43	4.74 5.05 4.99	6.14 6.54 6.46	8.72 9.31 9.19	8.72 9.31 9.19
150	6	168.3 159 165	95	229	458	4.10 3.86 4.01	5.01 4.72 4.91	7.29 6.88 7.14	10.24 9.64 10.03	15.41 14.50 15.09	15.41 14.50 15.09
200	8	219 216	127	305	610	7.12 7.03	9.63 9.49	15.94 15.71	20.51 20.22	31.17 30.71	31.17 30.71
250	10	273 267.4	159	381	762	13.62 13.34	16.74 16.39	24.97 24.44	36.33 35.56	49.12 48.06	57.83 56.57
300	12	325 323.9 318	190	457	914	22.66 22.58 22.16	26.10 26.01 25.53	35.79 35.66 35.00	53.58 53.40 52.39	70.69 70.44 49.11	95.81 95.46 93.63

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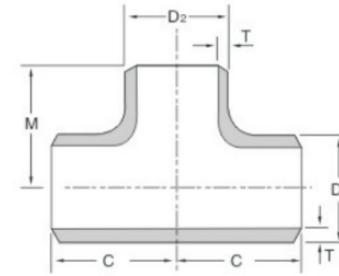
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公称通径 Nominal diameter		外径 Outside diameter	端面至端面的距离 End to end	理论重量kg/pc Approx weight					
DN	NPS	D1 × D2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
550 × 500	22 × 20	559 × 508	508	32.1	37.3	62.7	—	83.0	182
550 × 450	22 × 18	559 × 457	508	30.8	35.0	59.9	—	79.3	174
550 × 400	22 × 16	559 × 406.4	508	29.4	34.0	57.2	—	75.7	165
550 × 350	22 × 14	559 × 355.6	508	28.0	32.5	54.5	—	72.1	157
600 × 550	24 × 22	610 × 559	508	28.0	46.8	68.8	—	91.2	215
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
600 × 450	24 × 18	630 × 478 610 × 457	508	39.1 37.6	44.7 43.1	65.8 63.3	119 114	87.1 83.9	205 197
600 × 400	24 × 16	630 × 426 610 × 406.4	508	37.5 36.1	43.0 41.3	63.1 60.7	114 110	83.6 80.4	197 189
650 × 600	26 × 24	660 × 610	610	—	—	89.8	—	119	—
650 × 550	26 × 22	660 × 559	610	—	—	86.3	—	114	—
650 × 500	26 × 20	660 × 508	610	—	—	83.0	—	110	—
650 × 450	26 × 18	660 × 457	610	—	—	89.0	—	105	—
700 × 650	28 × 26	711 × 660	610	—	—	97.1	—	129	—
700 × 600	28 × 24	720 × 630 711 × 610	610	— —	— —	95.7 93.6	— —	127 124	— —
700 × 550	28 × 22	711 × 559	610	—	—	90.4	—	120	—
750 × 700	30 × 28	762 × 711	610	—	—	104	—	139	—
750 × 650	30 × 26	762 × 660	610	—	—	101	—	133	—
750 × 600	30 × 24	762 × 610	610	66.4	82.7	97.8	—	130	—
750 × 550	30 × 22	762 × 559	610	63.9	80.0	94.5	—	125	—
800 × 750	32 × 30	813 × 762	610	—	—	112	—	148	—
800 × 700	32 × 28	820 × 720 812 × 711	610	— —	— —	109 108	— —	145 144	— —
800 × 650	32 × 26	812 × 660	610	—	—	105	—	139	—
800 × 600	32 × 24	820 × 630 813 × 610	610	— —	— —	104 102	— —	138 135	— —
850 × 800	34 × 32	864 × 813	610	—	—	119	—	158	—
850 × 750	34 × 30	864 × 762	610	—	—	116	—	153	—
850 × 700	34 × 28	864 × 711	610	—	—	112	—	149	—
850 × 650	34 × 26	864 × 660	610	—	—	109	—	145	—
900 × 850	36 × 34	914 × 864	610	—	—	126	—	168	—
900 × 800	36 × 32	920 × 820 914 × 813	610	— —	— —	124 123	— —	164 163	— —
900 × 750	36 × 30	914 × 762	610	—	—	120	—	159	—
900 × 700	36 × 28	920 × 720 914 × 711	610	— —	— —	118 117	— —	156 155	— —

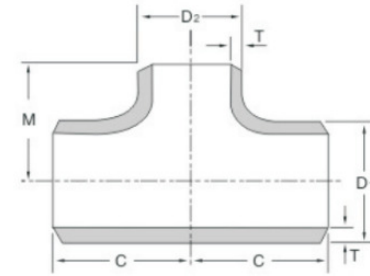


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公称通径 Nominal diameter		外径 Outside diameter	中心至 端面的距离 Center to end	中心至 中心的距离 Center to Center	90° L/R弯头理论重量kg/pc 90° L/R Elbow Approx weight					
DN	NPS	OD	A	O	sch5S	sch10S	sch20S/ LG	sch40S/ STD	sch80S/ XS	sch80
300	12	325 323.9 318	305	610	15.12 15.07 14.79	17.42 17.36 17.04	23.88 23.80 23.36	35.76 35.64 34.97	47.18 47.01 46.12	63.94 93.71 62.49
350	14	377 355.6	356	712	20.51 19.33	24.70 23.28	40.99 38.61	48.62 45.79	64.24 60.46	94.67 89.01
400	16	426 406.4	406	812	27.98 26.68	31.88 30.40	52.95 50.47	62.84 59.89	83.11 79.17	137.34 130.69
450	18	478 457.2	457	914	35.38 33.38	40.32 38.54	67.01 64.05	79.57 76.04	105.32 100.61	192.90 184.06
500	20	529 508	508	1016	49.64 47.66	57.45 55.15	82.58 79.25	98.08 94.12	129.91 124.62	260.90 250.00
550	22	559	559	1118	57.75	66.85	93.10	114.16	151.26	330.49
600	24	630 610	610	1220	82.30 79.67	94.21 91.19	118.38 114.57	140.67 136.14	186.51 180.46	441.22 -
650	26	660	660	1320	-	-	134.26	159.56	211.60	-
700	28	720 711	711	1422	- -	- -	157.94 155.95	187.75 175.37	249.08 245.91	- -
750	30	762	762	1524	142.60	177.49	179.26	213.11	282.80	-
800	32	820 813	813	1626	- -	- -	205.97 204.19	244.90 242.78	325.08 322.26	- -
850	34	864	864	1728	-	-	230.75	274.39	364.30	-
900	36	920 914	914	1828	- -	- -	260.07 258.36	309.29 307.25	410.74 408.02	- -
950	38	956	965	1930	-	-	288.13	342.69	455.17	-
1000	40	1016 1020	1016	2032	- -	- -	319.53 320.80	380.06 381.57	504.89 506.90	- -
1050	42	1067	1067	2134	-	-	352.55	419.36	557.18	-
1100	44	1118 1120	1118	2236	- -	- -	387.19 387.88	460.60 461.43	612.05 613.16	- -
1150	46	1168	1168	2336	-	-	422.72	502.90	668.35	-
1200	48	1220	1220	2440	-	-	461.34	548.87	729.53	-



等径三通 Straight Tee



异径三通 Reducing Tee

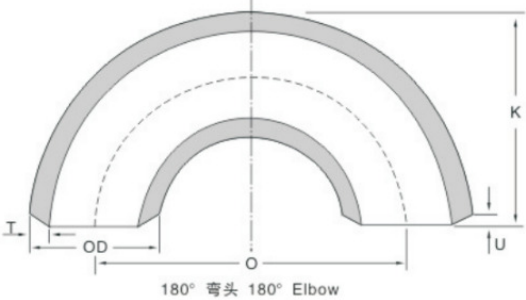
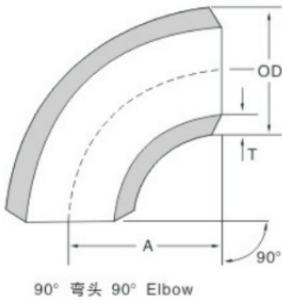
公称通径 Nominal diameter		外径 Outside diameter	中心至端面的距离 Center to end		理论重量kg/pc Approx weight					
DN	NPS	D ₁ × D ₂	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
20 × 20	3/4 × 3/4	25 × 25 26.7 × 26.7	29	29	0.07 0.08	0.10 0.11	0.13 0.15	0.13 0.15	0.16 0.18	0.16 0.18
20 × 15	3/4 × 1/2	25 × 18 26.7 × 21.3	29	29	0.06 0.07	0.09 0.10	0.12 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	0.23 0.25	0.23 0.25	0.30 0.32	0.30 0.32
25 × 20	1 × 3/4	32 × 25 33.4 × 26.7	38	38	0.10 0.11	0.18 0.19	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	0.21 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	0.42 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	0.40 0.42	0.40 0.42	0.58 0.68	0.58 0.68
32 × 20	1.1/4 × 3/4	38 × 25 42.2 × 26.7	48	48	0.17 0.18	0.31 0.32	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	0.36 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	0.78 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	0.72 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	0.60 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	0.58 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	0.56 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	1.15 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	1.04 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	0.98 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	0.92 0.94	0.92 0.94	1.31 1.34	1.31 1.34
50 × 20	2 × 3/4	57 × 25 60.3 × 26.7	64	44	0.37 0.38	0.70 0.80	0.87 0.90	0.87 0.90	1.24 1.27	1.24 1.27

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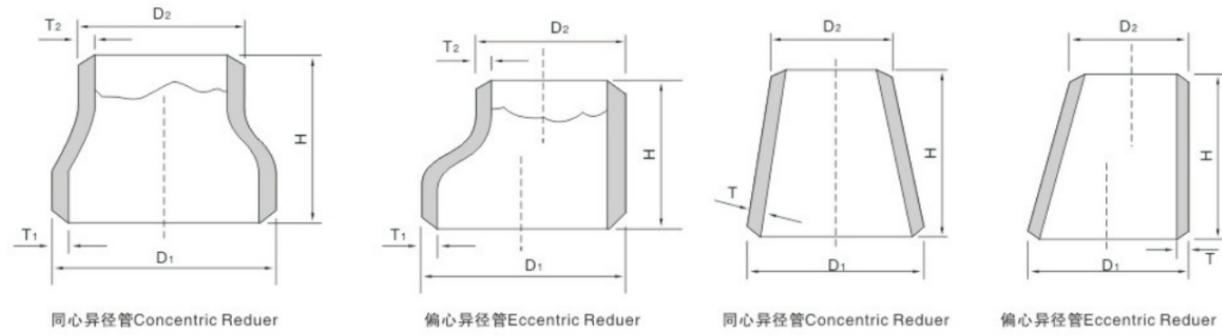
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公称通径 Nominal diameter		外径 Outside diameter	中心至端面的距离 Center to end		中心至中心的距离 Center to Center	90° L/R弯头理论重量kg/pc 90° L/R Elbow Approx weight					
DN	NPS	OD	B	A	O	sch5S	sch10S	sch20S/ LG	sch40S/ STD	sch80S/ XS	sch80
350	14	377 355.6	222	533	1066	30.71 28.95	36.98 34.86	61.36 57.80	72.80 68.56	96.17 90.52	141.75 133.27
400	16	426 406.4	254	610	1220	42.05 40.09	47.90 45.67	79.55 75.82	94.42 89.98	124.87 118.95	206.35 196.35
450	18	478 457.2	286	686	1372	53.11 5078	60.52 57.86	100.60 96.14	199.44 114.14	158.10 151.03	298.56 276.29
500	20	529 508	318	762	1524	74.47 71.48	86.18 82.72	123.86 118.87	147.12 141.17	194.86 186.94	391.34 375.00
550	22	559	343	838	1676	86.58	100.21	144.06	171.14	226.75	495.44
600	24	630 610	381	914	1828	123.32 119.37	141.21 136.64	177.37 171.67	210.78 203.98	279.45 270.40	661.10 -
650	26	660	406	991	1982	-	-	201.59	239.58	317.72	-
700	28	720 711	438	1067	2134	-	-	237.03 234.03	281.75 278.18	373.80 369.04	-
750	30	762	470	1143	2286	213.90	266.23	268.89	319.66	424.20	-
800	32	820 813	502	1219	2438	-	-	308.83 306.16	367.20 364.02	487.42 483.20	-
850	34	864	533	1295	2590	-	-	345.86	411.27	546.04	-
900	36	920 914	565	1372	2744	-	-	390.39 387.83	464.28 461.22	616.56 612.48	-
950	38	965	600	1448	2896	-	-	432.25	514.21	682.98	-
1000	40	1016 1020	632	1524	3048	-	-	479.29 481.19	570.09 572.36	757.33 760.35	-
1050	42	1067	660	1600	3200	-	-	528.65	628.85	835.51	-
1100	44	1118 1120	695	1676	3352	-	-	580.43 581.48	690.49 491.73	917.53 919.19	-
1150	46	1168	727	1753	3506	-	-	634.45	754.79	1003.10	-
1200	48	1220	759	1829	3658	-	-	691.63	822.86	1093.70	-



公称通径 Nominal diameter		外径 Outside diameter	中心至端面的距离 Center to end	中心至中心的距离 Center to Center	90° L/R弯头理论重量kg/pc 90° L/R Elbow Approx weight					
DN	NPS	OD	A	O	sch5S	sch10S	sch20S/ LG	sch40S/ STD	sch80S/ XS	sch80
25	1	32 33.4	25	50	0.05 0.05	0.08 0.08	0.09 0.09	0.09 0.10	0.12 0.13	0.12 0.13
32	1¼	38 42.2	32	64	0.07 0.08	0.12 0.14	0.14 0.16	0.15 0.17	0.20 0.23	0.20 0.23
40	1½	45 48.3	38	76	0.11 0.11	0.17 0.19	0.20 0.21	0.23 0.24	0.30 0.33	0.30 0.33
50	2	57 60.3	51	102	0.18 0.19	0.30 .032	0.38 0.41	0.41 0.44	0.57 0.60	0.57 0.60
65	2½	76 73	64	128	0.39 0.37	0.56 0.53	0.65 0.62	0.91 0.87	1.21 1.15	1.21 1.15
80	3	89	76	152	0.54	0.78	1.01	1.36	1.84	1.84
90	3½	101.6	89	178	0.73	1.04	1.36	1.91	2.62	2.62
100	4	108 114	102	204	0.89 0.94	1.27 1.35	1.65 1.75	2.44 2.59	3.39 3.59	3.39 3.59
125	5	133 141.3 139.7	127	254	1.79 1.90 1.88	2.18 2.32 2.30	3.17 3.38 3.34	4.10 4.37 4.32	5.83 6.22 6.14	5.83 6.22 6.14
150	6	168.3 159 165	152	304	2.72 2.57 2.66	3.32 3.14 3.26	4.84 4.56 4.74	6.79 6.40 6.65	10.23 9.63 10.02	10.23 9.63 10.02
200	8	219 216	203	406	4.74 4.68	6.41 6.32	10.61 10.46	13.65 13.46	20.74 20.44	20.74 20.44
250	10	273 267.4	254	508	9.08 8.89	11.16 10.92	16.64 16.29	24.22 23.70	32.75 32.04	38.55 37.72

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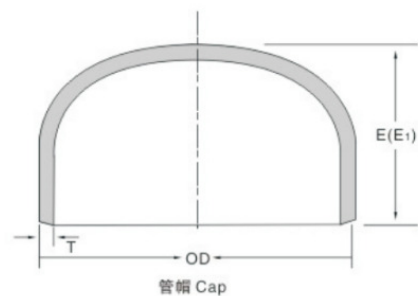
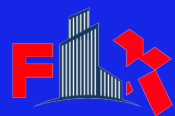
公称通径 Nominal diameter		外径 Outside diameter	端面至端面的距离 End to end	理论重量kg/pc Approx weight					
DN	NPS	D1 × D2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
20 × 15	3/4 × 1/2	25 × 18 26.7 × 21.3	38	0.03 0.04	0.04 0.04	0.05 0.06	0.05 0.06	0.07 0.07	0.07 0.07
25 × 20	1 × 3/4	32 × 25 33.4 × 26.7	51	0.06 0.06	0.09 0.10	0.11 0.11	0.11 0.11	0.14 0.15	0.14 0.15
25 × 15	1 × 1/2	32 × 18 33.4 × 21.3	51	0.05 0.06	0.08 0.09	0.09 0.10	0.09 0.10	0.12 0.13	0.12 0.13
32 × 25	1.1/4 × 1	38 × 32 42.2 × 33.4	51	0.07 0.08	0.11 0.12	0.14 0.15	0.14 0.15	0.18 0.20	0.18 0.20
32 × 20	1.1/4 × 3/4	38 × 25 42.2 × 26.7	51	0.06 0.07	0.10 0.11	0.13 0.14	0.13 0.14	0.16 0.18	0.16 0.18
32 × 15	1.1/4 × 1/2	38 × 18 42.2 × 21.3	51	0.06 0.07	0.09 0.11	0.11 0.13	0.11 0.13	0.14 0.17	0.14 0.17
40 × 32	1.1/2 × 1.1/4	45 × 38 48.3 × 33.4	64	0.11 0.11	0.17 0.19	0.22 0.24	0.22 0.24	0.29 0.32	0.29 0.32
40 × 25	1.1/2 × 1	45 × 32 48.3 × 33.4	64	0.10 0.10	0.16 0.17	0.20 0.22	0.20 0.22	0.27 0.29	0.27 0.29
40 × 20	1.1/2 × 3/4	45 × 25 48.3 × 26.7	64	0.09 0.10	0.15 0.16	0.18 0.20	0.18 0.20	0.24 0.26	0.24 0.26
40 × 15	1.1/2 × 1/2	45 × 18 48.3 × 21.3	64	0.08 0.09	0.13 0.15	0.16 0.19	0.16 0.19	0.21 0.24	0.21 0.24
50 × 40	2 × 1.1/2	57 × 45 60.3 × 48.3	76	0.16 0.17	0.26 0.27	0.35 0.37	0.35 0.37	0.47 0.51	0.47 0.51
50 × 32	2 × 1.1/4	57 × 38 60.3 × 42.2	76	0.15 0.16	0.24 0.26	0.32 0.35	0.32 0.35	0.44 0.48	0.44 0.48
50 × 25	2 × 1	57 × 32 60.3 × 33.4	76	0.14 0.14	0.22 0.24	0.30 0.32	0.30 0.32	0.41 0.44	0.41 0.44
65 × 50	2.1/2 × 2	76 × 57 73.0 × 60.3	89	0.30 0.30	0.43 0.43	0.70 0.70	0.70 0.70	0.92 0.92	0.92 0.92
65 × 40	2.1/2 × 1.1/2	76 × 45 73.0 × 48.3	89	0.28 0.28	0.40 0.40	0.64 0.63	0.64 0.63	0.84 0.83	0.84 0.83
65 × 32	2.1/2 × 1.1/4	76 × 38 73.0 × 42.2	89	0.26 0.27	0.38 0.38	0.60 0.60	0.60 0.60	0.79 0.79	0.79 0.79
65 × 25	2.1/2 × 1	76 × 32 73.0 × 33.4	89	0.25 0.25	0.36 0.35	0.57 0.56	0.57 0.56	0.75 0.73	0.75 0.73
80 × 65	3 × 2.1/2	89 × 76 88.9 × 73.0	89	0.38 0.37	0.54 0.53	0.93 0.91	0.93 0.91	1.26 1.23	1.26 1.23
80 × 50	3 × 2	89 × 57 88.9 × 60.3	89	0.34 0.35	0.48 0.49	0.83 0.84	0.83 0.84	1.11 1.13	1.11 1.13

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公称通径 Nominal diameter		外径 Outside diameter	端面至端面的距离 End to end	理论重量kg/pc Approx weight					
DN	NPS	D1 × D2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
80 × 40	3 × 1.1/2	89 × 45 88.9 × 48.3	89	0.31 0.32	0.45 0.45	0.76 0.78	0.76 0.78	1.02 1.05	1.02 1.05
90 × 80	3.1/2 × 3	101.6 × 88.9	102	0.50	0.72	1.29	1.29	1.77	1.77
90 × 65	3.1/2 × 2.1/2	101.6 × 73.0	102	0.46	0.66	1.12	1.12	1.63	1.63
90 × 50	3.1/2 × 2	101.6 × 60.3	102	0.43	0.62	1.10	1.10	1.51	1.51
90 × 40	4 × 3.1/2	101.6 × 48.3	102	0.41	0.58	1.03	1.03	1.40	1.40
100 × 90	3.1/2 × 1.1/2	114.3 × 101.6	102	0.57	0.82	1.55	1.55	2.41	2.41
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
100 × 65	4 × 2.1/2	108 × 76 114.3 × 73.0	102	0.49 0.50	0.70 0.72	1.32 1.35	1.32 1.35	1.82 1.87	1.82 1.87
100 × 50	4 × 2	108 × 57 114.3 × 60.3	102	0.44 0.48	0.64 0.68	1.19 1.27	1.19 1.27	1.64 1.75	1.64 1.75
125 × 100	5 × 4	133 × 108 141.3 × 114.3	127	1.04 1.11	1.27 1.35	2.35 2.50	2.35 2.50	3.33 3.55	3.33 3.55
125 × 90	5 × 3.1/2	141.3 × 101.6	127	1.06	1.29	2.38	2.38	3.38	3.38
125 × 80	5 × 3	133 × 89 141.3 × 88.9	127	0.97 1.01	1.18 1.23	2.17 2.27	2.17 2.27	3.07 3.22	3.07 3.22
125 × 65	5 × 2.1/2	133 × 76 141.3 × 73.0	127	0.92 0.95	1.12 1.16	2.06 2.14	2.06 2.14	2.91 3.02	2.91 3.02
150 × 125	6 × 5	159 × 133 168.3 × 141.3	140	1.40 1.48	1.71 1.81	3.42 3.64	3.42 3.64	5.14 5.47	5.14 5.47
150 × 100	6 × 4	159 × 108 168.3 × 114.3	140	1.29 1.37	1.58 1.67	3.15 3.36	3.15 3.36	4.72 5.03	4.72 5.03
150 × 90	6 × 3.1/2	168.3 × 101.6	140	1.32	1.61	3.23	3.23	4.83	4.83
150 × 80	6 × 3	159 × 89 168.3 × 88.9	140	1.21 1.26	1.48 1.53	2.96 3.07	2.96 3.87	4.41 4.58	4.41 4.58
200 × 150	8 × 6	219 × 159 219.1 × 168.3	152	2.00 2.04	2.70 2.75	5.65 5.77	5.65 5.77	8.55 8.73	8.55 8.73
200 × 125	8 × 5	219 × 133 219.1 × 141.3	152	1.90 1.93	2.56 2.60	5.35 5.44	5.35 5.44	8.09 8.23	8.09 8.23
200 × 100	8 × 4	219 × 108 219.1 × 114.3	152	1.80 1.83	2.43 2.46	5.07 5.14	5.07 5.44	7.64 7.75	7.64 7.75
250 × 200	10 × 8	273 × 219	178	3.72	4.56	9.74	15.5	15.5	15.5
250 × 150	10 × 6	273 × 159 273.1 × 168.3	178	3.38 3.43	4.15 4.21	8.83 8.96	14.0 14.2	14.0 14.2	14.0 14.2
250 × 125	10 × 5	273 × 133 273.1 × 141.3	178	3.25 3.29	3.99 4.04	8.47 8.59	13.4 13.6	13.4 13.6	13.4 13.6
300 × 250	12 × 10	325 × 273 323.9 × 273.1	203	5.98 5.97	6.89 6.88	13.9 13.9	15.0 15.0	18.3 18.3	24.8 24.8
300 × 200	12 × 8	325 × 219 323.9 × 219.1	203	5.57 5.56	6.42 6.41	12.9 12.9	14.0 13.9	17.0 17.0	23.0 23.0

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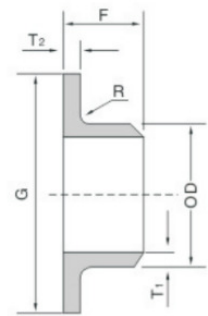


公称通径 Nominal diameter		外径 Outside diameter	背面至端面的距离 Back to end		(E型) 理论重kg/pc (E) Approx weight					
DN	NPS	OD	E	E ₁	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
15	1/2	18 21.3	25	25	0.019 0.022	0.024 0.028	0.031 0.037	0.031 0.037	0.042 0.050	0.042 0.050
20	3/4	25 26.7	25	25	0.027 0.029	0.033 0.035	0.045 0.048	0.045 0.048	0.060 0.065	0.060 0.065
25	1	32 33.7	38	38	0.049 0.052	0.083 0.087	0.101 0.106	0.101 0.106	0.136 0.143	0.136 0.143
32	1.1/4	38 42.4	38	38	0.058 0.065	0.099 0.110	0.126 0.141	0.126 0.141	0.173 0.193	0.173 0.193
40	1.1/2	45 48.3	38	38	0.071 0.076	0.118 0.127	0.158 0.169	0.158 0.169	0.218 0.234	0.218 0.234
50	2	57 60.3	38	44	0.094 0.099	0.156 0.165	0.221 0.234	0.221 0.234	0.313 0.331	0.313 0.331
65	2.1/2	76 73.0	38	51	0.167 0.161	0.241 0.232	0.409 0.393	0.409 0.393	0.555 0.534	0.555 0.534
80	3	89	51	64	0.254	0.367	0.660	0.660	0.917	0.917
90	3.1/2	101.6	64	76	0.355	0.512	0.965	0.965	1.36	1.36
100	4	108 114.3	64	76	0.387 0.410	0.561 0.594	1.11 1.17	1.11 1.17	1.58 1.67	1.58 1.67
125	5	133 139.7 141.3	76	89	0.769 0.808 0.817	0.945 0.993 1.00	1.82 1.91 1.93	1.82 1.91 1.93	2.65 2.78 2.81	2.65 2.78 2.81
150	6	159 168.3 165.2	89	102	1.07 1.13 1.11	1.31 1.39 1.36	2.74 2.90 2.85	2.74 2.90 2.85	4.22 4.47 4.39	4.22 4.47 4.39
200	8	219 216.1	102	127	1.76 1.74	2.38 2.35	5.19 5.13	5.19 5.13	8.05 7.95	8.05 7.95
250	10	273 267.4	127	152	3.36 3.29	4.14 4.05	9.15 8.96	9.15 8.96	12.5 12.2	16.3 16.4

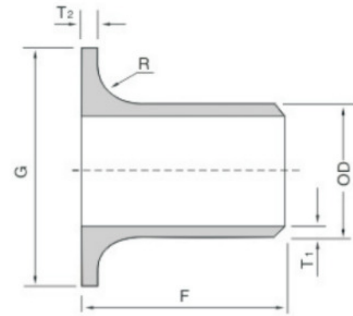
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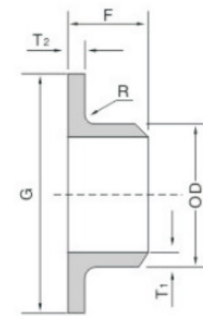
公称通径 Nominal diameter		外径 Outside diameter	背面至端面的距离 Back to end		(E型) 理论重kg/pc (E) Approx weight					
DN	NPS	OD	E	E ₁	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
300	12	325 323.9 318.5	152	187	5.12 5.11 5.02	6.40 6.39 6.27	13.5 13.3 13.2	14.6 14.4 14.2	17.9 17.7 17.3	28.3 27.1 26.8
350	14	377 355.6	165	191	6.00 5.66	8.46 7.87	16.9 15.9	19.9 18.8	22.5 21.2	38.5 35.2
400	16	426 406.4	178	203	6.93 6.60	7.91 7.53	21.0 20.0	28.2 20.0	28.0 26.7	52.0 49.1
450	18	478 457.2	203	229	7.90 7.52	9.01 8.58	26.9 25.6	43.8 41.4	35.8 34.1	76.1 69.1
500	20	529 508.0	229	254	10.5 10.1	12.02 11.7	33.2 31.9	57.6 54.0	44.2 42.5	103 93.7
550	22	559	254	254	12.1	22.6	38.8	78.3	51.7	116
600	24	630 610	267	305	14.8 14.3	16.9 16.4	46.5 45.1	92.3 90.1	61.9 60.1	177 160
650	26	660	267	—	23.3	26.1	50.5	103.5	67.3	
700	28	720 711	267	—	27.1 38.7	32.4 49.7	56.9 56.2	151.1 121.3	75.6 74.9	
750	30	762	267	—	41.4	51.7	62.1	117.3	82.8	
800	32	820 813	267	—	43.4 43.1	58.3 57.7	70.6 70.0	127 126	92.0 91.2	
850	34	864	267	—	57.2	68.5	78.7	144	105	
900	36	920 914	267	—	60.3 59.1	74.6 72.1	86.6 85.7	172 171	115 114	



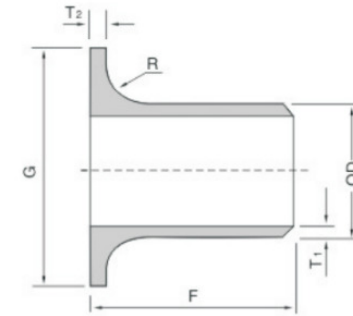
短型 Short Pattern



长型 Long Pattern



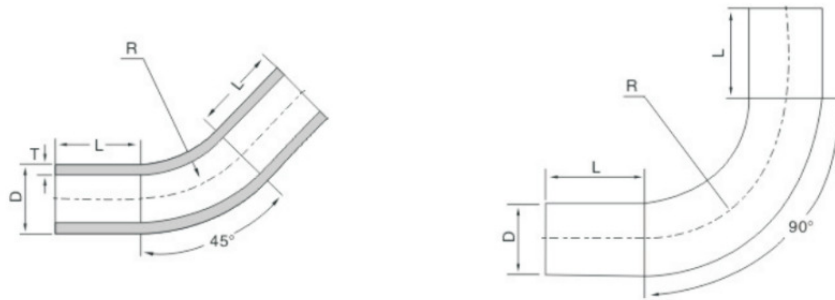
短型 Short Pattern



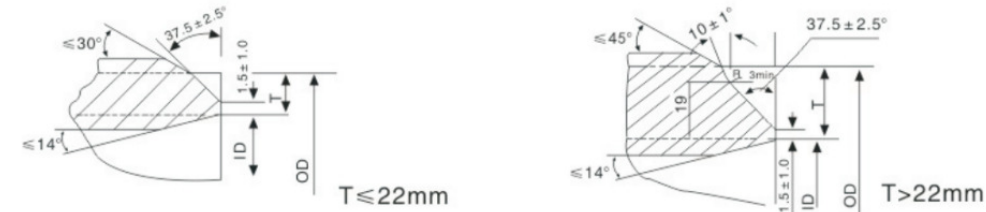
长型 Long Pattern

公称通径 Normalinal diameter		外径 Outside diameter	长度 Length F		搭接外径 Diameter of lap Nominal & Maximum	圆角半径 Radius of Fillet R		(E型) 理论重kg/pc (E) Approx weight					
								sch5S		sch10S		sch40S	
DN	NPS	OD	短型 SP	长型 LP	G	A Max	B Max	短型 SP	长型 LP	短型 SP	长型 LP	短型 SP	长型 LP
15	1 / 2	21.3	50.8	76.2	35.1	3	0.75	0.049	0.067	0.062	0.084	0.079	0.106
20	3 / 4	26.7	50.8	76.2	42.9	3	0.75	0.064	0.087	0.081	0.109	0.101	0.144
25	1	33.4	50.8	101.6	50.8	3	0.75	0.082	0.144	0.134	0.233	0.160	0.279
32	1.1/4	42.4	50.8	101.6	63.5	5	0.75	0.109	0.188	0.178	0.307	0.225	0.386
40	1.1/2	48.3	50.8	101.6	73.2	6	0.75	0.129	0.219	0.213	0.358	0.279	0.467
50	2	60.3	63.5	152.4	91.9	8	0.75	0.204	0.406	0.338	0.667	0.471	0.924
65	2.1/2	73.0	63.5	152.4	104.6	8	0.75	0.313	0.626	0.448	0.893	0.740	1.465
80	3	88.9	63.5	152.4	127.0	10	0.75	0.400	0.781	0.574	1.117	1.01	1.954
90	3.1/2	101.6	76.2	152.4	139.7	10	0.75	0.522	0.896	0.650	1.283	1.38	2.35
100	4	114.3	76.2	152.4	157.2	11	0.75	0.606	1.024	0.870	1.474	1.68	2.822
125	5	141.3	76.2	203.2	185.7	11	1.5	0.985	2.153	1.21	2.635	2.08	4.957
150	6	168.3	88.9	203.0	215.9	13	1.5	1.34	2.591	1.64	3.174	3.37	6.482
200	8	219.1	101.6	203.2	269.7	13	1.5	1.96	3.409	2.65	4.607	5.67	9.819
250	10	273.1	127	254.0	323.9	13	1.5	3.57	6.389	4.38	7.843	9.55	17.023
300	12	323.9	152.4	254.0	381.0	13	1.5	5.85	8.922	6.74	10.275	13.8	21.075
350	14	355.6	152.4	304.8	412.8	13	1.5	6.55	11.571	7.49	13.912	16.88	—
400	16	406.4	152.4	304.8	469.9	13	1.5	7.778	14.216	8.797	16.078	—	—
450	18	457.2	152.4	304.8	533.4	13	1.5	9.009	16.216	10.252	18.453	—	—
500	20	508	152.4	304.8	584.2	13	1.5	11.102	19.984	13.202	23.764	—	—
550	22	559	152.4	304.8	641.4	13	1.5	12.763	22.81	14.779	26.413	—	—
600	24	610	152.4	304.8	692.2	13	1.5	16.132	28.839	18.476	33.028	—	—

公称通径 Nominal pipe size DN	端部外径 Outside Diameter at Bevel D		长度 End to End L	圆角半径 Radius of fillet R	搭线直径 Diameter of lap G
	A系列 Series A	B系列 Series B			
15	21.3	18	38	2	46
20	26.9	25	40	2	56
25	33.7	32	40	3	65
32	42.4	38	42	3	76
40	48.3	45	45	3	84
50	60.3	57	48	3	99
65	76.1	76	48	3	118
80	88.9	89	50	4	132
100	114.3	108	52	4	156
125	139.7	133	55	4	184
150	168.3	159	55	4	211
200	219.1	219	62	5	266
250	273	273	70	5	319
300	323.9	325	78	5	370
350	355.6	377	82	5	429
400	406.4	426	85	5	480
450	457	478	87	5	548
500	508	529	90	6	609
600	610	630	95	6	720



管件坡口形式 Welding Bevel of Fittings
GB/T12459、ASME/ANSI B169

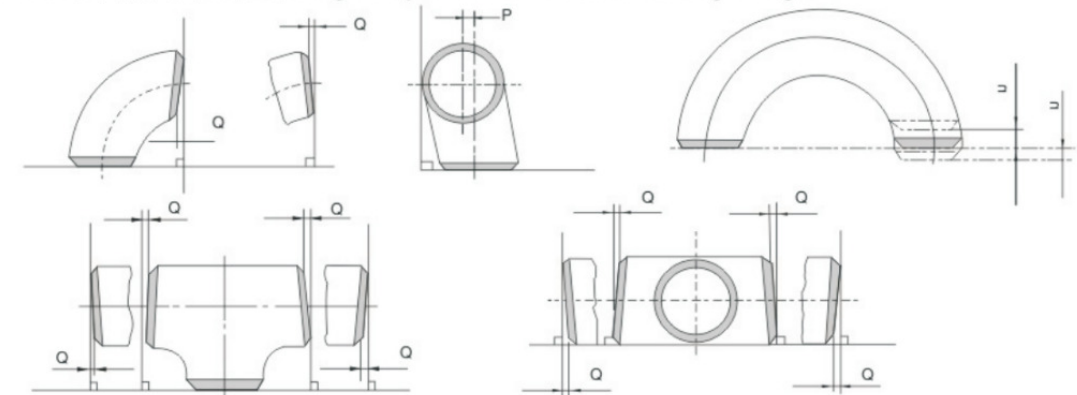


注：极限公差在不同标准中可能会略有差异。
Limiting tolerances can be slightly difference between the different standards and codes.

对焊管件尺寸公差 Tolerances for butt-welding fittings

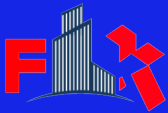
项目	管件种类	公称通径DN				
		15~65	80~100	125~200	250~450	500
		极限偏差				
端部外径 D1、D2、D3	所有管件	+1.6 -0.8	± 1.6	+2.4 -1.6	+4.0 -3.2	+6.4 -4.8
端部内径d1)		± 0.8	± 1.6		± 3.2	± 4.8
壁厚T、T1、T2		不小于公称壁厚的87.5%				
中心至端面B、A	45° 弯头、90° 弯头	± 2			± 3	
中心至中心P	180° 弯头	± 7			± 10	
背面至端面K		± 7				
长度L	异径管	± 2			± 3	
中心至端面C、M	三通、四通	± 2			± 3	
全长E、E1	管帽	± 4			± 7	

GB/T12459 对焊管件形位公差表 Angularity tolerance of butt-welding fittings



项目	管件种类	公称通径DN				
		15-100	125-200	250-300	350-400	450-500
		公 差				
Q	弯头、三通、异径管、四通	1	2	3		4
P	弯头、三通、四通	2	4	5	7	10
U	180° 弯头	1		2		

项目 Item	内容 DESCRIPTION
标准 Standard	按DL/T 515《电站弯管》、SY 5257《钢制弯管》执行， 或按顾客提出的标准或技术要求执行according to DL/T 515《power station Bend》， SY 5257《steel Bend》，or customer's techincal drawings
材料 Material	碳钢、合金钢、不锈钢 carbon steel, alloy steel, stainless steel
弯曲半径 R Bend Radius R	$R \leq 6000\text{mm}$, 且 $R \geq 3D$ (用 R 等于 3D、4D、5D、6D、7D、8D、9D、10D 来表示弯曲半径，D 为管子外径) $R \geq 3D$ ($R=3D, 4D, 5D, 6D, 7D, 8D, 9D, 10D$) D: outside diameter
弯曲角度 θ Bend Angle θ	常用为 15°、30°、45°、60°、90°、135° 和 180°，也可按顾客提出的角度弯制 normally 15°、30°、45°、60°、90°、135°、180° or at customer's option
直段长度 L Length of Straight L	弯管两端段长度一般在 300mm-1500mm，由顾客确定长度的大小 normally between 300mm and 1500mm in length of straight, It is at customer's option
外径 D Outside Diameter D	$D \leq 1220\text{mm}$
壁厚 T Wall Thickness T	$T \leq 120\text{mm}$
端部坡口 End Bevel	按对焊管件焊端坡口结构型式执行 according to welding bevel of butt welding fitting
重量 Weight	重量/kg = $\frac{0.0433(D-T)TR\theta}{100000} + L(\text{双端直管段重量})$ Weight/kg = $\frac{0.0433(D-T)TR\theta}{100000} + L(\text{Weight of DoubleSides Straight Length})$



美标化学成份对照表 A403 and A815 Chemical Requirements

Composition, %											
Grade											
Grade WP	Grade CR	UNS De-signation	C	Mn	P	S	Si	Ni	Cr	Mo	Others
WP304	CR304	S30400	0.08	2.00	0.045	0.030	1.00	8.0–11.0	18.0–20.0	–	–
WP304L	CR304L	S30403	0.03	2.00	0.045	0.030	1.00	8.0–12.0	18.0–20.0	–	–
WP304H	CR304H	S30409	0.04–0.10	2.00	0.045	0.030	1.00	8.0–11.0	18.0–20.0	–	–
WP309	CR309	S30900	0.20	2.00	0.045	0.030	1.00	12.0–15.0	22.0–24.0	–	–
WP310S	CR310S	S31008	0.08	2.00	0.045	0.030	1.00	19.0–22.0	24.0–26.0	–	–
WP31254	CR31254	S31254	0.02	1.00	0.030	0.010	0.08	17.5–18.5	19.5–20.5	6.0–6.5	Cu0.50–1.00 N 0.18–0.22
WP316	CR316	S31600	0.08	2.00	0.045	0.030	1.00	10.0–14.0	16.0–18.0	2.00–3.00	–
WP316L	CR316L	S31603	0.03	2.00	0.045	0.030	1.00	10.0–14.0	16.0–18.0	2.00–3.00	–
WP316H	CR316H	S31609	0.04–0.10	2.00	0.045	0.030	1.00	10.0–14.0	16.0–18.0	2.00–3.00	–
WP317	CR317	S31700	0.08	2.00	0.045	0.030	1.00	11.0–15.0	18.0–20.0	3.00–4.00	–
WP317L	CR317L	S31703	0.03	2.00	0.045	0.030	1.00	11.0–15.0	18.0–20.0	3.00–4.00	–
WPS31726	CRS31726	S31726	0.03	2.00	0.045	0.030	1.00	13.5–17.5	17.0–20.0	4.0–5.0	N 0.10–0.20
WP321	CR321	S32100	0.08	2.00	0.045	0.030	1.00	9.0–12.0	17.0–19.0	–	Ti 5(C+N)–0.7
WP321H	CR321H	S32109	0.04–0.10	2.00	0.045	0.030	1.00	9.0–12.0	17.0–19.0	–	Ti 4(C+N)–0.7
WP347	CR347	S34700	0.08	2.00	0.045	0.030	1.00	9.0–12.0	17.0–19.0	–	–
WP347H	CR347H	S34709	0.04–0.10	2.00	0.045	0.030	1.00	9.0–12.0	17.0–19.0	–	–
WP316Ti	CR316Ti	316Ti	0.08	2.00	0.045	0.030	0.75	10.0–14.0	16.0–18.0	2.0–3.0	Ti 5(C+N)–0.7
WP904L	CR904L	904L	0.02	2.00	0.045	0.035	1.00	23.0–28.0	19.0–23.0	–	Cu 1.0–2.0
WPS31803	CRS31803	S31803	0.03	2.00	0.030	0.020	1.00	4.5–6.5	21.0–23.0	2.5–3.5	–
WPS32205	CRS32205	S32205	0.03	2.00	0.030	0.020	1.00	4.5–6.5	22.0–23.0	3.0–3.5	–
WPS32750	CRS32750	S32750	0.03	1.20	0.035	0.020	0.08	6.0–8.0	24.0–26.0	3.0–5.0	–
WPS32760	CRS32760	S32760	0.03	1.00	0.030	0.010	1.00	6.0–8.0	24.0–26.0	3.0–4.0	W0.50–1.00

承插式管件尺寸的极限公差 Tolerances for socket–welding fittings

公称通径 Nominal diameter		所有管件 All Fittings		45° 、90° 弯头、三通、四通、45° 斜三通 45° 、90° Elbows, Tees, Crosses, 45° Laterals	双承口管箍 Couplings	单承口管箍、异径插入件 Half Couplings Reducer Inserts	活接头 (含螺纹) Unions (Including Thread)
		承接孔径 Socket Bore	流通孔径 Water Way Bore	中心至承插孔底 Center To Bottom of Socket	结构长度 Laying Lengths	结构长度 Laying Lengths	公称装配长度 Length Assem Nominal
DN	NPS	d1	d2	A、H	E	F	L
6–8	1/8–1/4			± 0.8	± 1.5	± 0.8	± 1.5
10–20	3/8–3/4	+0.3 0	± 0.4	± 1.5	± 3.0	± 1.5	± 1.5
25–50	1–2			± 2.0	± 4.0	± 2.0	± 1.5
35–100	2 1/2–4	+0.4 0	± 0.8	± 2.5	± 5.0	± 2.5	± 1.5

螺纹管件尺寸的极限公差 Tolerances for Threaded Fittings

公称通径 Nominal diameter		45° 、90° 弯头、三通、四通 45° 、90° Elbows, Tees, Crosses 中心至端面 Center To end	双接口管箍、管帽 Coupling Cap 端面至端面 End to end	单接口管箍、半管接头 Half Couplings, Boss 端面至端面 End to end
DN	NPS	A	E、F	E/2
6–8	1/8–1/4	± 0.7	± 0.7	± 0.4
10–20	3/8–3/4	± 1.5	± 1.5	± 0.8
25–50	1–2	± 2.0	± 2.0	± 1.0
65–100	2 1/2–4	± 2.5	± 2.5	± 1.3

注：极限公差在不同标准中可能会略有差异。
Limiting tolerances can be slightly difference between the different standards and codes.

螺纹、承插焊管件压力等级与管子壁厚等级的关系
The Correlation of Thread and Socket–Welding Fittings
with Pressure Class Designation or Schedule No . of Pipe

压力等级代号 Code of Pressure Grade	管子壁厚等级 Wall Thickness Class			
	承插 Socket	螺纹 Thread	承插 Socket	螺纹 Thread
2000	–	sch80	–	XS
3000	sch80	sch160	XS	–
6000	sch160	–	–	XS
9000	–	–	XS	–



GB/T 12459 对焊管件形位公差表 Angularity tolerance of butt-welding fittings

项目	管件种类	公称通径范围				
		15~65	80~100	125~200	250~450	500
		极 限 偏 差				
端部外径	所有管件	+1.6 -0.8	± 1.6	+2.4 -1.6	+4.0 -3.2	+6.4 -4.8
端部内径		± 0.8	± 1.6		± 3.2	± 4.8
壁厚		不小于公称壁厚的87.5%				
中心至端部尺寸H、F		45° 弯头、90° 弯头	± 2			± 3
中心至中心尺寸P	180° 弯头	± 7			± 10	
背面至端部尺寸K		± 7				
长度L	异径接头	± 2			± 3	
中心至端面尺寸C、M	三通	± 2			± 3	
背面至端面尺寸E、E1	管帽	± 4		± 7		

项目	管件种类	公称通径范围				
		15~65	80~100	125~200	250~450	500
		极 限 偏 差				
X	弯头、三通、异径管、四通	1	2	3		4
Y	弯头、三通、四通	2	4	5	7	10
U	180° 弯头	1		2		

注：1)除非用户有特殊要求，应优先保证端外径和公称壁厚的极限偏差

GB/T 13401 对焊管件形位公差表Angularity tolerance of butt-welding fittings

项目	管件种类	公称通径范围				
		150~200	250~450	500~600	650~750	800~1200
		极 限 偏 差				
端部外径	所有管件	± 2.4 -1.6	+4.0 -3.2	+6.4 -4.8		
端部内径 ^①		± 1.6	± 3.2	± 4.8		
壁厚		不小于公称壁厚的87.5%				
中心至端部尺寸H、F		45° 弯头、90° 弯头	—	± 3		
长度L	异径接头	—	± 3			± 5
中心至端面尺寸C、M	三通四通	—	± 3			± 5
背面至端面尺寸E	管帽		± 7		± 10	
端部最大最小外径差	所有管件	不大于0.01DN，且不大于S				

项目	管件种类	公称通径范围				
		350~400	400~600	650~750	800~1050	1100~1200
		公 差				
端面偏摆X	弯头、三通异径接头、三通	3	4	5		
中心偏摆Y	弯头、三通、四通	7	10		13	19

注：1)除非用户有特殊要求，应优先保证端外径和公称壁厚的极限偏差
2)对于异径管件，其尺寸偏差是按大径端的公称通割分给定的

对焊管件形位公差表ASME/ANSI B 16.9、B 16.28
Angularity tolerance of butt-welding fittings ASME/ANSI B 16.9、B 16.28

项目	管件种类	公称通径DN(in.)							
		1/2~2 1/2	3~3 1/2	4	5~8	10~18	20~24	26~30	32~48
		极 限 偏 差							
端部外径D、D1、D2	所有管件	+1.52 -0.76	± 1.52		+2.29 -1.52	+4.06 -3.05	+6.35 -4.83		
端部内径d ^{1)、2)}		± 0.76	± 1.52			± 3.05	± 4.83		
壁厚T、T1、T2		不小于公称壁厚的87.5%							
中心至端面H、F、C、M	45° 90° 弯头 三通/四通	± 1.52				± 2.29		± 3.05	+4.83
中心至中心P	180° 弯头	± 6.35				± 9.65		—	
背面至端面K		± 6.35					—		
U		± 0.76				± 1.52		—	
长度L	异径管、翻边短接	± 1.52				± 2.29		± 4.83	
全长E、E1	管帽	± 3.05			± 6.35			± 9.65	
搭接直径G	翻边短接	0 -0.76				0 -1.52			
搭接厚t		+1.52 0							
圆角半径R		0 -0.76		0 -1.52					

公称通径		1 /2~4	5~8	10~12	14~16	18~24	26~30	32~42	44~48
弯头、三通、四通	X	0.76	1.52	2.29	2.29	3.05		4.83	
	Y	1.52	3.05	4.83	6.35	9.65	9.65	12.70	19.05

注：1)除非用户有特殊要求，应优先保证端外径和公称壁厚的极限偏差
2)端部内径为端部外径两倍的公称壁厚的差
3)圆度为外径正、负偏差绝对值之和

