

STAINLESS STEEL PIPE & PIPE FITTING

湖南安联金属制品有限公司
HUNAN ALLIANZ METAL PRODUCTS CO., LTD





Integrated Supplier of Stainless Steel Products Focus on Engineering Projects Since 1996

从1996年开始专注于工程项目不锈钢产品的综合供应商

企业文化 Enterprise Culture

愿景:Vision:

安精神之本, 联财富之源

Keep the peace of mental, Link the source of wealth.

使命:Mission:

与世界共享中国造, 为客户利益而努力创新

Share made in China with the world and strive to innovate for customers' benefit.

价值观:Values:

激情、敬业、创新、进取、诚信、求实、利他、共赢

Passionate, Dedicated, Innovative, Enterprising, Altruistic, Win-win, Honest, Truth-seeking.

宗旨:Aim:

为客户提供独特价值

Provide unique value for customers.





COMPANY CATALOGUE RONSCO 企业目录

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安聯鋼鐵集團

安聯鋼鐵集團以“与世界共享中国造，为客户利益而努力创新”为使命，通过不断创新业务模式，打造产品品牌，有效地促进了产业发展，深耕钢铁产业、先进材料、先进智造、国际货运、矿业、文化传媒等六大业务板块，是中国知名的综合性钢铁产业集团、世界领先的新材料，开发商和钢材采购综合服务商。截至2020年底，集团资产总额80多亿元，年营业收入40多亿元，员工总数3800余人。

下设十个子公司及海外代表处、五个生产基地、三个研究院，是中国民营企业工业100强、国家技术创新型企业、国家重点高新技术企业、国家绿色示范工厂、全国AAA级质量信用企业、最佳雇主100强企业。

ALLIANZ STEEL GROUP

With the mission of "Share made in China with the world and strive to innovate for interests of customers". Allianz Steel Group has effectively promoted the development of the industry by continuously innovating business models and building product brands. It is a well-known comprehensive steel industry group in China, a world-leading developer of new materials and a comprehensive service provider of steel procurement. Group has cultivated six business sectors, including steel industry, advanced materials, advanced manufacturing, international freight, Mining and cultural media. By the end of 2020, the Group had total assets of over CNY 8 billion, annual income over CNY 4 billion and over 3,800 employees.

Allianz Steel Group has ten subsidiaries and overseas representative offices, five production bases and three research institutes, and it is one of the top 100 private enterprises in China, a national technical innovation enterprise, a national key high-tech enterprise, a national green demonstration manufacturer, a national AAA-grade quality credit enterprise and a top 100 best employer.

安联金属

湖南安联金属制品有限公司成立于1996年，RONSCO是2014年注册的商标。湖南安联是安联钢铁集团旗下专业生产不锈钢管子管件、库存不锈钢卷板、配套不锈钢加工、销售不锈钢产品到国内外客户子公司，致力于为全球客户提供不锈钢高端制造以及配套服务。公司在中国华中地区美丽的湖南长沙设有国际营销部；在不锈钢产地无锡设有分公司，公司严格按照ISO 9001质量管理体系进行现场管理，先后获得ISO 9001、CE、AAAAA信用等级认证等，产品得到SGS、BV、LR、TUV、INTERTEK等国际权威第三方机构的检验和认可。

湖南安联以“为客户提供独特价值”为宗旨，充分发挥本地的不锈钢材料资源优势和强大的加工平台，为各行各业制造业提供“一站式”配套服务解决方案，不断拓展延伸产业链，提升自身价值。作为一个在不锈钢领域有26年以上经验的供应商，我们拥有专业服务团队能够提供高标准的产品技术支持，准时合格的产品交付，专业的产品运输和清关服务，可靠的售后等全方位的服务。未来，湖南安联将继续以全球化视野，进一步深耕不锈钢行业，以技术创新继续推进信息化、自动化、智能化制造、网络化服务好和布局，深入行业细分领域，致力成为细分领域的行业标杆，增强服务能力，为社会创造价值。湖南安联始终坚持“以客户为中心”的经营理念，竭尽全力满足客户的要求，追求与客户合作共赢。湖南安联是您值得信赖的不锈钢产品一站式供应商！

ABOUT ALLIANZ

Hunan Allianz Metal Products Co., Ltd was established in 1996. RONSCO is a registered trademark in 2014. Hunan Allianz is a subsidiary company of Allianz Steel Group specializing in the production of stainless steel pipe fittings, stainless steel coil in stock, stainless steel processing, and sales of stainless steel products to customers domestic and overseas. We are committed to providing high-level stainless steel manufacturing and supporting services to customers worldwide.

We have an international marketing department in Hunan Province, the central southern area of China, and a branch office in Wuxi City. The company is strictly under the ISO 9001 quality management system for on-site management, with ISO 9001, CE, AAAA credit rating certification, etc., Products received inspection and approval of third parties like SGS, BV, LR, TUV, Intertek, and other international authority of the third party inspection and approval.

Hunan Allianz takes "Provide unique value to customers." as our purpose, and gives full play to the local advantages of stainless steel material resources and a powerful processing platform, to provide One-stop service solution for all kinds of manufacturing industries, constantly expanding and extending the industrial chain, enhancing the value.

As a supplier with more than 26 years of experience in the stainless steel field, we have a professional service team to provide high standards of technical support, timely and qualified product delivery, professional product transportation and customs clearance services, reliable after-sales, and other full range of services.

In the future, Hunan Allianz will continue to further cultivate the stainless steel industry with a global vision, and continue to promote information, automation, intelligent manufacturing, network services and layout with technological innovation, in-depth industry segmentation field, committed to becoming a segmentation of the industry benchmark field, enhancing service capacity and creating value for society.

Hunan Allianz always adheres to the "Customer-oriented" business philosophy, making every effort to meet customer requirements and holding the pursuit of win-win cooperation with customers. Hunan Allianz is your reliable one-stop supplier of stainless steel products!



26年不锈钢供应经验
26 YEARS EXPERIENCE IN
STAINLESS STEEL SUPPLYING



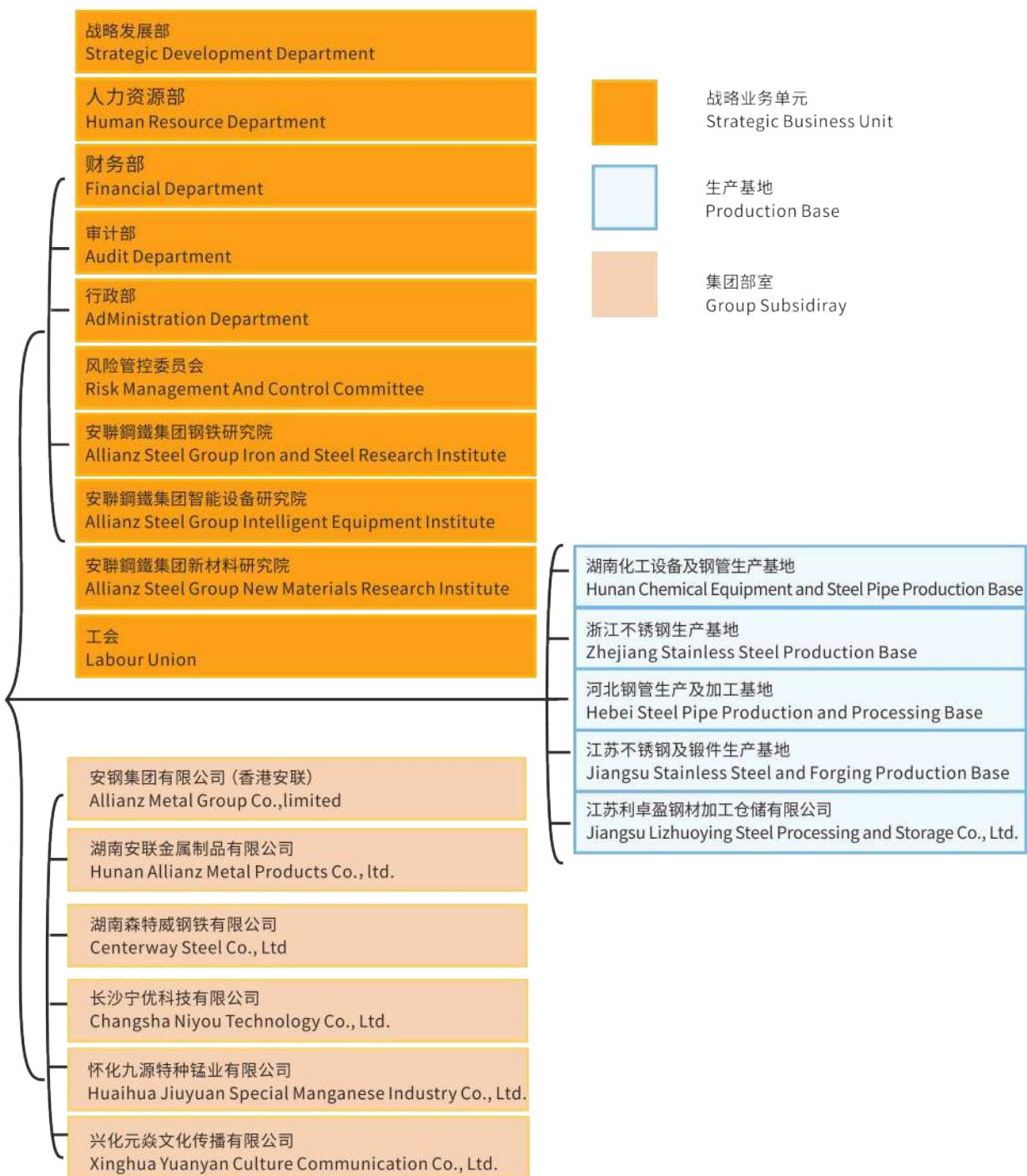
10年阿里巴巴金牌供应商
10 YEARS ALIBABA GOLDEN SUPPLIER



专业的国际贸易团队
PROFESSIONAL INTERNATIONAL
TRADE TEAM



材料和制造的一站式解决方案
ONE-STOP SOLUTION FOR MATERIAL
& FABRICATION



社会责任/Social Responsibility

1 对客户的责任,诚信铸就品牌

Responsible for customers and credit building up brand

安联鋼鐵集团始终把为客户提供最好的产品、最优的服务、全方位满足不同客户的需求视 为企业第一要务，树立了企业的诚信品牌。

Allianz steel group always takes it as the first importance to supply good products and service for customers to meet varied demands of different customers, which helps building up credit and brand of the group.

2 对员工的责任,用诚信增强凝聚力

Responsible for staff and workers and to consolidate cohesive force

安联鋼鐵集团始终坚持“以人为本,立人立企”人才观念,大力营造了企业政通人和、劳动关系和谐、职工安居乐业、忠诚企业、爱岗敬业的良好氛围,保持了企业旺盛的生机和活力,增强了企业的向心力和凝聚力。

Following concept of its “people centered and enterprise development by talents”, Allianz Steel Group is striving to generate a good atmosphere for workers to establish a harmonious work relation, where workers can enjoy working and life and loyal to the enterprise. Those measures maintains vigorous life and vitality of the enterprise and consolidates centripetal force and cohesive force of the enterprise.

3 对合作伙伴的责任,诚信推动合作共赢

Responsible for cooperative partners and credit , promoting mutual benefit of cooperation

公司高举“合作、共赢”的旗帜,树立“诚信为本、成就客户”的经营理念,以诚信联盟,步入了快速发展 的轨道。

Highly holding banner of cooperation and mutual benefit, with concept of “honesty for the achievement of customers”, Allianz Steel Group is moving into track for fast development working together with its partners.

4 对环境的责任,全力创建环境友好型企业

Responsible for environment and becoming an environmental- friendly enterprise

绿色、低碳、环保新常态下企业实现健康持续发展的主题,公司始终坚持经济发展与环境保护并重,紧紧围绕“绿色安钢”环保目标,全力推进资源节约型和环境友好型企业建设,实现环境保护和经济建设的协调发展。

Green, low carbon and environmental protection under the new norm is the theme of the enterprise's healthy development. Allianz Steel Group pays more attention to economic development and environmental protection. The group is pushing forward to build into resources conserving and environmental-friendly enterprise to realize harmonious development in environmental protection and economical construction.

5 对社会的责任,感恩回馈社会,勇担社会责任

Responsible for society , bearing more social responsibility, pay back to the society

致富思源,富而思进,安联鋼鐵集团在超过26年的创新发展中,始终遵循并积极践行“产业报国、奉献社会”的公司精神,树立起了有责任、敢担当、讲奉献的良好企业形象。

During its more than 26 years development, Allianz Steel Group has built up a good reputation in public in term of social responsibility and contribution with Mind of “contributing to the country by developing industry”.



我们的优势Our advantage

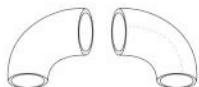
- 我们拥有二十六年不锈钢行业生产销售经验,可提供专业的技术支持&咨询服务。是您在市场,业务战略,事业拓展或营销方面的全球合作伙伴。
• We have more than 26 years of experience in the production and sales of stainless steel industry, able to provide professional technical support & consulting services. we are your global partner in marketing, business strategy, career development or marketing.
- 完善的质量保证体系配备先进的检测设备使得每一道生产工序都能得到严格控制,系统跟进每一笔订单,形成完整的生产、质量管理体系。我们公司以ISO 9001作为质量保证体系,拥有先进的检验设备(光谱仪、拉伸机、冲击试验机、硬度计等设备)。
• The complete quality assurance system is equipped with advanced testing equipment, so that every production process can be strictly controlled, and the system will follow up every order to form a complete production and quality management system. Our company takes ISO 9001 as the quality assurance system and has advanced inspection equipment (spectroscope, tensile machine, impact testing machine, hardness tester, etc.).
- 先进的工艺,专业的团队,不仅可以根据国标,欧标,美标,日标,德标,英标等标准生产精良的标准管件,还可以根据客户要求自主研发制造非标管道配件。
• Advanced technology, professional team, not only can produce excellent standard pipe fittings according to the GB, EN, ASTM/ASME, JIS, DIN, BS and other standards, but also can independently develop and manufacture non-standard pipe fittings according to customer requirements.
- 选料讲究,高品质原材料
• Pay attention to the selection of materials ,
• high-quality raw material equipment
(spectroscopic, tensile machine, impact testing machine, hardness tester, etc.).



- 强大的生产能力，在短时间内满足客户对订单的要求。交期：最快7天
- Strong production capacity to meet customer's order requirements in a short time. The shortest delivery time is 7 days.
- 高品质终端产品，严格按照国标标准把关，高产品合格率，真正确保产品的卓越品质。
- High-quality terminal products, strictly in accordance with national standards, high product qualification rate, truly ensure the excellent quality of products.
- 可提供切割、焊接、钻孔、折弯及车床精密加工等配套服务。
- We can provide cutting, welding, drilling, bending and lathe precision machining and other supporting services.
- 公司库存齐全、常规及部分特殊材料规格产品均有现货，减少生产定做周期。恪守专业、高效、便捷的服务宗旨，管件单个可发货，可零售。
- The company has complete inventory, conventional and some special materials and specifications are available in stock, reducing the production cycle. Adhering to the service tenet of professionalism, efficiency and convenience, the pipe fittings can be shipped individually and can be retailed.

产品介绍/Manufacturing process

管件生产检测流程 Pipe fitting production and testing process



弯头生产流程 Elbow production process



库存原料
Raw Materials Inventory



原料裁断
Raw Material Truncation



推制
Pressing



坡口
Beveling



半成品库
Semi-finished



整形
Shaping



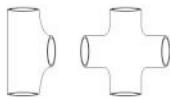
喷砂
Sandblasting



喷码
Marking



检测
Inspection



三通,四通生产流程 Tee & Cross Production Process



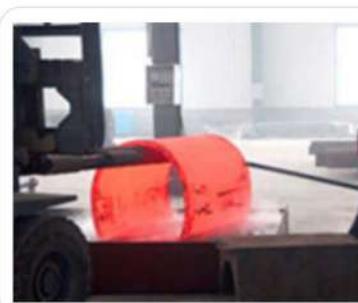
原料裁断
Raw Material Cutting



原料加热
Raw Material Heating



小压力机压制
Small Press Machine Pressing



局部冷却
Local Cooling



压出凸包
Press Out the Protrusion



大压力机压制
Large Press Machine Pressing



再次加热
Reheating



局部冷却
Local Cooling



再次压制
Pressing Again



检测
Detection



坡口
Beveling



待处理半成品
Semi-finished Products
to be Processed



异径管 reducer Production Process



库存原料
Raw Materials Inventory



成型压制
Die Casting



异径管坡口
Reducing Pipe Bevelling



成品入库
Product Storage



打印标识
Marking



成品检验
Finished Product Inspection

管件标准 Pipe Fitting Standards

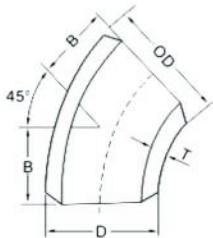
American Standard :	ASME/ANSI B16.9, ASME/ANSI B16.11, ASME/ANSI B16.28, ASME B16.5, MSS SP-43, MSS SP-83, MSS SP-97
GB Standard:	GB/T12459, GB/T13401, GB/T14383, HG/T21635, HG/T21631, HG/T21634, SH3410



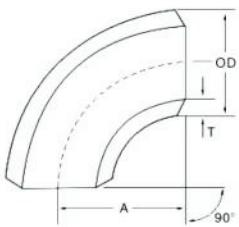
美标钢管尺寸表Nominal Bore Size

外径和壁厚表 Outside Diameter and Wall Thickness ASME B36.19(5S/10S/40S/80S) B36.10(20/20/30/40/80/100/120/140/160)																			
NPS	DN	OD	SCH5S	SCH10S	SCH10	SCH20	SCH30	SCH40S	STD	SCH40	SCH60	SCH80	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS
1/8	6	10.3	-	1.24	1.24	-	1.45	1.73	1.73	1.73	-	2.41	2.41	2.41	-	-	-	3.15	4.83
2/8	8	13.7	-	1.65	1.65	-	1.85	2.24	2.24	2.24	-	3.02	3.02	3.02	-	-	-	-	-
3.8	10	17.1		1.65	1.65	-	1.85	2.31			-	3.2	3.2	3.2	-	-	-	-	-
1/2	15	21.3	1.65	2.11	2.11	-	2.41	2.77	2.77	2.77	-	3.73	3.73	3.73	-	-	-	4.78	7.47
3/4	20	26.7	1.65	2.11	2.11	-	2.41	2.87	2.87	2.87	-	3.91	3.91	3.91	-	-	-	5.56	7.82
1	25	33.4	1.65	2.77	2.77	-	2.9	3.38	3.38	3.38	-	4.55	4.55	4.55	-	-	-	6.35	9.09
1-1/4	32	42.2	1.65	2.77	2.77	-	2.97	3.56	3.56	3.56	-	4.85	4.85	4.85	-	-	-	6.35	9.7
1-1/2	40	48.3	1.65	2.77	2.77	-	3.18	3.68	3.68	3.68	-	5.08	5.08	5.08	-	-	-	7.14	10.15
2	50	60.3	1.65	2.77	2.77	-	3.18	3.19	3.91	3.91	-	5.54	5.54	5.54	-	-	-	8.74	11.07
2-1/2	65	73.0	2.11	3.05	3.05	-	4.78	5.16	5.16	5.16	-	7.01	7.01	7.01	-	-	-		
3	80	88.9	2.11	3.05	3.05	-	4.78	5.49	5.49	5.49	-	7.62	7.62	7.62	-	-	-		
3-1/3	90	101.6	2.11	3.05	3.05	-	4.78	5.74	-	5.74	-	8.08	-	8.08	-	-	-	-	-
4	100	114.3	2.11	3.05	3.05	-	4.78	6.02	6.02	6.02	-	8.56	8.56	8.56	-			13.49	17.12
5	125	141.3	2.77	3.4	3.4	-	-	6.55	6.55	6.55	-	9.53	9.53	9.53	-			15.88	19.05
6	150	168.3	2.77	3.4	3.4	-	-	7.11	7.11	7.11	-	10.97	10.97	10.97	-			18.26	21.95
8	200	219.1	2.77	3.76	3.76	6.35		8.18	8.18	8.18	10.31	12.7	12.7	12.7	15.09	18.26	20.62	23.01	22.23
10	250	273.0	3.4	4.19	4.19	6.35	7.8	9.27	9.27	9.27	12.7	12.7	12.7	15.09	18.26	21.44	25.4	28.58	25.4
12	300	323.8	3.96	4.57	4.57	6.35	8.38	9.53	9.53	10.31	14.27	12.7	12.7	17.48	21.44	25.4	28.58	33.32	25.4
14	350	355.6	3.96	4.78	6.35	7.92	9.53	9.53	9.53	11.13	15.09	12.7	12.7	19.05	23.83	27.79	31.75	35.71	-
16	400	406.4	4.19	4.78	6.35	7.92	9.53	9.53	9.53	12.7	16.66	12.7	12.7	21.44	26.19	30.96	36.53	40.49	-
18	450	457.2	4.19	4.78	6.35	7.92	11.13	9.53	9.53	14.27	19.05	12.7	12.7	23.83	20.36	34.93	39.67	45.24	-
20	500	508	4.78	5.54	6.35	9.53	12.7	9.53	9.53	15.09	20.62	12.7	12.7	26.19	32.54	38.1	44.45	50.01	-
22	550	558.8	4.78	5.54	6.35	9.53	12.7	9.53	9.53	-	22.23	-	12.7	28.58	34.93	41.28	47.63	53.98	-
24	600	609.6	5.54	6.35	6.35	9.53	14.27	9.53	9.53	17.48	24.61	12.7	12.7	30.96	38.89	46.02	52.37	59.54	-
26	650	660.4	-		7.92	12.7	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
28	700	711.2	-		7.92	12.7	15.88	-	9.53	-	-	-	12.7	-	-	-	-	-	
30	750	762	6.35	7.92	7.92	12.7	15.88	-	9.53	-	-	-	12.7	-	-	-	-	-	
32	800	812	-	-	7.92	12.7	15.88	-	9.53	17.48	-	-	12.7	-	-	-	-	-	
34	850	863.6	-	-	7.92	12.7	15.88	-	9.53	17.48	-	-	12.7	-	-	-	-	-	
36	900	914.4	-	-	7.92	12.7	15.88	-	9.53	19.05	-	-	12.7	-	-	-	-	-	
38	950	965.2	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
40	1000	1016	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
42	1050	1066.8	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
44	1100	1117.6	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
46	1150	1168.4	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
48	1200	1219.2	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	
52	-	1320.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
56	-	1422.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
60	-	1524	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
64	-	1600	1624	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
68	-	1727.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
72	-	1800	1828.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

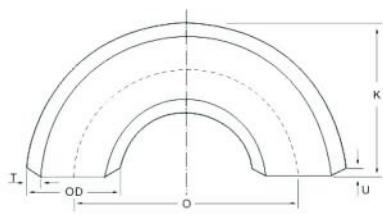
尺寸表 measurement chart



45° 弯头 45° Elbow



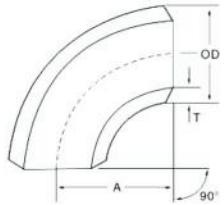
90° 弯头 90° Elbow



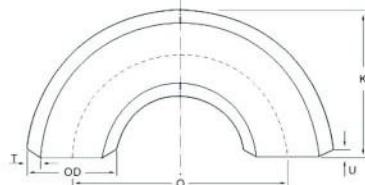
180° 弯头 180° Elbow

公称通径 Nominal diameter		外径 Outside	中心至端面的距离 Center to end		中心至中心的距离 Center to Center	90° LR弯头理论重量kg/pc 90° LR 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 0.32	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
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 50.78	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

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° LR弯头理论重量kg/pc 90° LR Elbow Approx weight					
DN	NPS	OD	B	A	O	sch5S	sch10S	sch20S/ LG	sch40S/ STD	sch80S/ XS	sch80
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	661.1
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	213.9	266.23	268.89	319.66	424.2	-
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	1003.1	-
1200	48	1220	759	1829	3658	-	-	691.63	822.86	1093.7	-



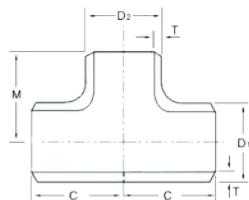
90°弯头 90° Elbow



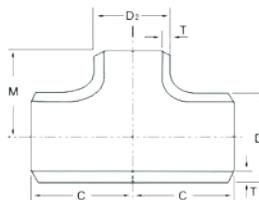
180°弯头 180° Elbow

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° LR弯头理论重量kg/pc 90° LR 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	1 ¹ /4	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	1 ¹ /2	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 0.32	0.38 0.41	0.41 0.44	0.57 0.60	0.57 0.60
65	2 ¹ /2	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	3 ¹ /2	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

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° LR弯头理论重量kg/pc 90° LR Elbow Approx weight					
DN	NPS	OD	A	O	sch5S	sch10S	sch20S/LG	sch40S/STD	sch80S/XS	sch80
300	12	325	305	610	15.12	17.42	23.88	35.76	47.18	63.94
		323.9			15.07	17.36	23.80	35.64	47.01	93.71
		318			14.79	17.04	23.36	34.97	46.12	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	93.1	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	211.6	-
700	28	720 711	711	1422	-	-	157.94 155.95	187.75 175.37	249.08 245.91	-
750	30	762	762	1524	142.6	177.49	179.26	213.11	282.8	-
800	32	813	813	1626	-	-	205.97 204.19	244.90 242.78	325.08 322.26	-
850	34	864	864	1728	-	-	230.75	274.39	364.3	-
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	502.9	668.35	-
1200	48	1200	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	D1xD2	C	M	sch5S	sch10S	sch40S/STD	sch40	sch80S/XS	sch80
20 x 20	3/4 x 3/4	25 x 25 26.7 X 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
		25 x 18 26.7 X 21.3			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 x 25	1 X 1	32 x 32 33.4 X 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
		32 x 25 33.4 X 26.7			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 x 15	1 X 1/2	32 X 18 33.4 X 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
		38 x 38 42.2 X 42.2			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 x 32	1 ¹ /4 X 1 ¹ /4	38 x 32 42.2 X 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
		38 x 32 42.2 X 33.4			0.19	-	-	-	-	-

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	D1xD2	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
32 x 20	1 ¹ /4 X 3/4	38 x 25 42.2 x 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
32x15	1 ¹ /4X1/2	32x18 42.2x21.3	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 x 40	1 ¹ /2 X 1 ¹ /2	45x45 48.3 x 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 x 32	1 ¹ /2 X 1 ¹ /4	45 x 38 48.3 x 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 x 25	1 ¹ /2 X 1	45 x 32 48.3 x 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 x 20	1 ¹ /2 X 3/4	45x25 48.3 x 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 x 15	1 ¹ /2 X 1/2	45x18 48.3 x 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
50x50	2 x 2	57x57 60.3 x 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
50x40	2 X 1 ¹ /2	57x45 60.3 x 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
50x32	2 x 1 ¹ /4	57x38 60.3 x 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 x 25	2 x 1	57 x 32 60.3 x 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
50x20	2 x 3/4	57x25 60.3 x 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
65 x 65	2 ¹ /2 X 2 ¹ /2	76 x 76 73.0 X 73.0	76	76	0.87 0.86	1.21 1.25	2.10 2.12	2.10 2.12	2.80 2.88	2.80 2.88
65 x 50	2 ¹ /2 X 2	76x57 73.0 X 60.3	76	70	0.82 0.81	1.17 1.16	2.00 1.98	2.00 1.98	2.70 2.65	2.70 2.65
65 x 40	2 ¹ /2 X 1 ¹ /2	76x45 73.0 X 48.3	76	67	0.77 0.76	1.11 1.10	1.89 1.88	1.89 1.88	2.56 2.55	2.56 2.55
65 x 32	2 ¹ /2 X 1 ¹ /4	76x38 73.0 X 42.2	76	64	0.75 0.74	1.10 1.08	1.80 1.89	1.80 1.89	2.50 2.25	2.50 2.25
65 x 25	2 ¹ /2 X 1	76x32 73.0 X 33.4	76	57	0.76 0.70	1.10 1.07	1.86 1.81	1.86 1.81	2.53 2.08	2.53 2.08
80 x 80	3x3	89x89	86	86	1.16	1.68	3.02	3.02	4.19	4.19
80 x 65	3 X 2 ¹ /2	89x76 88.9 X 73.0	86	83	1.11 1.10	1.62 1.60	2.89 2.87	2.89 2.87	4.02 3.98	4.02 3.98
80 x 50	3x2	88.9 X 57 88.9 X 60.3	86	76	1.06 1.07	1.53 1.55	2.76 2.79	2.76 2.79	3.81 3.85	3.81 3.85
80 x 40	3 X 1 ¹ /2	88.9 X 45 88.9 X 48.3	86	73	1.01 1.03	1.49 1.50	2.67 2.69	2.67 2.69	3.70 3.73	3.70 3.73
80x32	3 X 1 ¹ /4	89x38 88.9 X 42.2	86	70	1.00 1.00	1.48 1.45	2.65 2.60	2.65 2.60	3.68 3.68	3.68 3.60
90x90	3 ¹ /2 X 3 ¹ /2	101.6 X 101.6	95	95	1.33	1.92	3.61	3.61	5.08	5.08
90x80	3 ¹ /2 X 3	101.6 X 88.9	95	92	1.26	1.82	3.43	3.43	4.83	4.83
90x65	3 ¹ /2 X 2 ¹ /2	101.6 X 73.0	95	89	1.22	1.76	3.32	3.32	4.67	4.67
90x50	3 ¹ /2 X 2	101.6 X 60.3	95	83	1.2	1.73	3.25	3.25	4.57	4.57
90x40	3 ¹ /2 X 1 ¹ /2	101.6 X 48.3	95	79	1.17	1.7	3.21	3.21	4.51	4.51
100 X 100	4x4	108 X 108 114.3 X 114.3	105	105	1.66 1.75	2.41 2.54	4.75 5.01	4.75 5.01	6.75 7.12	6.75 7.12
100 X 90	4 X 3 ¹ /2	114.3 X 101.6	105	102	1.7	2.46	4.85	4.85	6.89	6.89
100 X 80	4x3	108 X 89 114.3 X 88.9	105	98	1.55 1.61	2.24 2.33	4.42 4.60	4.42 4.60	6.27 6.52	6.27 6.52
100 X 65	4 X 2 ¹ /2	108 X 76 114.3 X 73.0	105	95	1.53 1.60	2.21 2.31	4.36 4.56	4.36 4.56	6.50 6.50	6.50 6.50

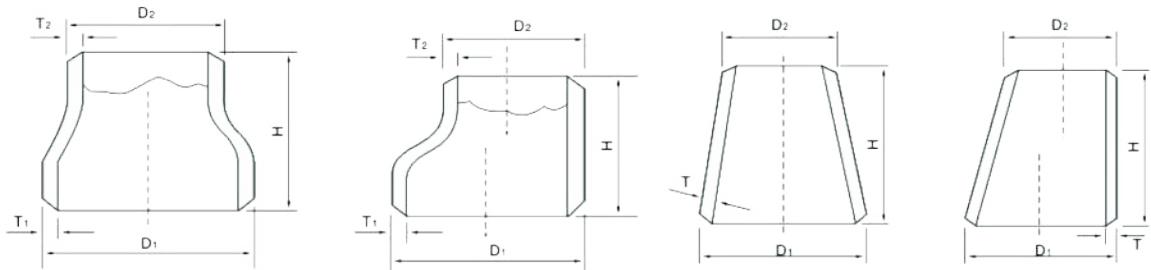
公称通径 Nominal diameter		外径 Outside diameter	中心至端面的距离 Center to end		理论重量kg/pc Approx weight					
DN	NPS	D1xD2	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
100 X 50	4 x 2	108 X 57 114.3 X 60.3	105	89	1.51 1.57	2.19 2.29	4.32 4.41	4.32 4.41	6.13 6.12	6.13 6.12
100 X 40	4 X 1 ¹ /2	108 X 45 114.3 X 48.3	105	86	1.50 1.55	2.09 2.24	4.22 4.00	4.22 4.00	6.03 6.02	6.03 6.02
125 X 125	5 x 5	133 X 133 141.3 X 141.3	124	124	3.18 3.37	3.91 4.14	7.53 7.98	7.53 7.98	10.9 11.6	10.9 11.6
125 X 100	5 x 4	133 X 108 141.3 X 114.3	124	117	3.03 3.15	3.73 3.90	7.20 7.52	7.20 7.52	10.4 10.8	10.4 10.8
125 X 90	5 X 3 ¹ /2	141.3 X 101.6	124	114	3.09	3.83	7.39	7.39	10.6	10.6
125 X 80	5 x 3	133 X 89 141.3 X 88.9	124	111	2.90 3.02	3.59 3.74	6.92 7.21	6.92 7.21	10.0 10.4	10.0 10.4
125 X 65	5 X 2 ¹ /2	133 X 76 141.3 X 73.0	124	108	2.85 3.00	3.59 3.73	6.92 7.20	6.92 7.20	10.0 10.4	10.0 10.4
125 X 50	5 x 2	133 X 57 141.3 X 60.3	124	105	2.80 3.92	3.58 3.73	6.92 7.20	6.92 7.20	10.0 10.4	10.0 10.4
150 X 150	6 x 6	159 X 159 168.3 X 168.3	143	143	4.09 4.32	5.03 5.31	10.5 11.1	10.5 11.1	16.2 17.1	16.2 17.1
150 X 125	6 x 5	159 X 133 168.3 X 141.3	143	137	3.84 4.13	4.73 5.08	9.88 10.6	9.88 10.6	15.2 16.3	15.2 16.3
150 X 100	6 x 4	159 X 108 168.3 X 114.3	143	130	3.76 3.95	4.64 4.87	9.70 10.2	9.70 10.2	14.9 15.6	14.9 15.6
150 X 90	6 X 3 ¹ /2	168.3 X 101.6	143	127	3.91	4.82	10.1	10.1	15.5	15.5
150 X 80	6 x 3	159 X 89 168.3 X 88.9	143	124	3.72 3.93	4.56 4.82	9.56 10.0	9.56 10.0	14.7 15.3	14.7 15.3
150 X 65	6 X 2 ¹ /2	159 X 76 168.3 X 73.0	143	121	3.70 3.81	4.51 4.72	9.51 10.0	9.51 10.0	14.6 15.2	14.6 15.2
200 X 200	8 x 8	219 X 219	178	178	7.72	10.4	22.8	22.8	35.4	35.4
200 X 150	8 x 6	219 X 159 219.1 X 168.3	178	168	6.74 7.17	9.20 9.74	19.9 21.1	19.9 21.1	30.9 32.8	30.9 32.8
200 X 125	8 x 5	219 X 133 219.1 X 141.3	178	162	6.61 7.03	8.98 9.55	19.5 20.7	19.5 20.7	30.2 32.2	30.2 32.2
200 X 100	8 x 4	219 X 108 219.1 X 114.3	178	156	6.43 6.84	8.73 9.39	19.0 19.9	20.5 20.2	29.4 31.3	29.4 31.3
200 X 90	8 X 3 ¹ /2	219.1 X 101.6	178	152	6.84	9.18	19.8	20.1	31.1	31.1
250 X 250	10 x 10	273 X 273	216	216	14.6	18.04	40.04	40.04	52.8	65.12
250 X 200	10 x 8	273 X 219	216	203	13.3	16.4	36.4	36.4	49.8	59.2
250 X 150	10 x 6	273 X 159 273.1 X 168.3	216	194	11.4 12.1	15.0 15.0	31.4 33.4	31.4 33.4	42.7 45.4	50.7 54.0
250 X 125	10 x 5	273 X 133 273.1 X 141.3	216	191	11.2 11.9	14.6 14.6	30.7 32.7	30.7 32.7	41.8 44.5	49.7 52.9
250 X 100	10 x 4	273 X 108 273.1 X 114.3	216	184	11.0 11.7	14.4 14.4	30.3 32.2	30.3 32.2	41.2 42.9	49.0 52.1
300 X 300	12 X 12	325 X 325 323.9 X 323.9	254	254	21.5 21.5	24.8 24.8	51.8 51.8	56.1 56.0	69.0 69.0	95.0 95.0
300 X 250	12 X 10	325 X 273 323.9 X 273.1	254	241	20.4 20.3	23.6 23.4	49.2 49.1	53.3 53.1	65.6 65.2	90.3 90.2
300 X 200	12 x 8	325 X 219 323.9 X 219.1	254	229	20.2 20.0	23.3 23.1	48.4 48.2	52.4 52.2	64.4 64.2	88.6 88.4
300 X 150	12 x 6	325 X 159 323.9 X 168.3	254	219	18.4 19.5	22.5 22.7	44.3 47.1	47.9 51.0	59.0 62.7	81.2 86.4
300 X 125	12 x 5	325 X 133 323.9 X 141.3	254	216	18.0 19.1	20.8 22.1	43.6 46.3	47.1 50.2	57.8 61.5	79.6 84.6
350 X 350	14 X 14	377 X 377 355.6 X 355.6	279	279	27.4 25.7	33.1 31.1	66.1 62.0	77.2 72.5	88.0 82.7	132 124
350 X 300	14 X 12	377 X 325 355.6 X 323.9	279	270	25.8 24.2	31.1 29.2	62.1 58.3	72.5 68.2	82.7 77.7	124 116

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	D1xD2	C	M	sch5S	sch10S	sch40S/STD	sch40	sch80S/XS	sch80
350 X 250	14 X 10	377 X 273 355.6 X 273.1	279	257	25.1 23.7	30.3 28.6	60.5 57.0	70.8 66.7	80.7 76.0	121 114
350 X 200	14 x 8	377 X 219 355.6 X 219.1	279	248	24.6 23.1	29.7 27.9	59.2 55.7	69.2 65.2	78.0 74.2	118 111
350 X 150	14 x 6	377 X 159 355.6 X 168.3	279	238	24.0 22.3	29.0 27.1	57.9 54.2	67.8 64.8	77.1 77.8	115 110
400 x 400	16 X 16	426 x 426 406.4 X 406.4	305	305	33.1 31.4	38.0 36.1	75.9 72.3	101 96.4	101 96.1	170 162
400 X 350	16 X 14	426 X 377 406.4 X 355.6	305	305	32.0 30.4	36.8 34.9	73.6 70.1	98.1 93.4	97.8 92.9	179 162
400 X 300	16 X 12	426 X 325 406.4 X 323.9	305	295	31.0 28.2	35.6 34.4	71.4 69.1	95.2 90.8	94.7 89.2	173 168
400 X 250	16 X 10	426 X 273 406.4 X 273.1	305	283	30.2 28.7	34.7 33.0	69.9 66.6	93.1 88.7	92.5 87.8	169 161
400 X 200	16 x 8	426 X 219 406.4 X 219.1	305	273	29.5 28.1	33.9 32.3	68.4 65.1	91.1 86.8	90.2 86.0	165 157
400 X 150	16 x 6	426 X 159 406.4 X 168.3	305	264	29.2 27.7	33.5 31.8	67.6 64.4	217 206	89.2 84.8	90.1 85.8
450 x 450	18 X 18	478 X 478 457 X 457	343	343	41.9 39.8	47.8 45.5	95.3 90.7	349 332	127 120	142 136
450 x 400	18 X 16	478 X 426 457 X 406.4	343	330	41.0 39.0	46.8 44.5	93.3 88.9	342 325	144 118	140 133
450 X 350	18 X 14	478 X 377 406.4 X 355.6	343	330	40.4 38.3	46.1 43.8	91.9 87.3	336 320	142 135	137 130
450 X 300	18 X 12	478 X 325 406.4 X 323.9	343	321	39.8 37.3	45.4 42.6	90.6 85.0	331 216	140 131	135 127
450 X 250	18 X 10	478 X 273 457 X 273.1	343	308	39.3 37.3	44.9 42.6	89.6 85.0	228 216	138 131	134 127
450 X 200	18 X 18	478 x 219 457 X 219.1	343	298	38.8 36.9	44.3 42.1	89.1 84.7	225 213	137 130	132 126
500 X 500	20 x 20	529 X 529 508 X 508	381	381	58.9 56.3	68.2 65.3	117 112	469 449	156 149	186 178
500 X 450	20 x 18	529 X 478 508 X 457	381	368	57.9 55.4	67.1 64.2	115 110	462 441	154 147	183 175
500 X 400	20 x 16	529 X 426 508 X 406.4	381	356	57.0 54.7	66.0 63.4	113 109	454 436	151 145	180 173
500 X 350	20 x 14	529 X 377 508 X 355.6	381	356	56.0 53.7	64.9 62.3	111 107	446 428	148 142	177 170
500 X 300	20 x 12	529 X 325 508 X 323.9	381	346	55.0 52.8	63.8 61.2	109 105	438 421	146 140	174 167
500 X 250	20 x 10	529 X 273 508 X 273.1	381	333	54.4 52.2	63.0 60.5	108 104	433 416	144 138	172 165
500 X 200	20 x 8	529 X 219 508 X 219.1	381	324	53.7 51.5	62.3 59.7	107 102	428 410	142 137	170 163
550 X 550	22 x 22	559 X 559	419	419	73.5	85.2	146	635	195	-
550 X 500	22 x 20	559 X 508	419	406	70.7	81.9	141	610	187	-
550 X 450	22 x 18	559 X 457	419	394	67.7	78.5	135	584	180	-
550 X 400	22 x 16	559 X 406.4	419	381	66.2	76.7	132	571	179	-
550 X 350	22 x 14	559 X 355.6	419	381	65.5	75.9	130	565	174	-

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	D1xD2	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
550 X 300	22 x 12	559 X 323.9	419	371	64.0	74.2	127	552	170	-
550 X 250	22 x 10	559 X 273.1	419	359	62.5	72.5	124	540	166	-
600 X 600	24 x 24	630 X 630 610 x 610	432	432	96.0 93.9	110 107	165 161	797 779	220 215	303 396
600 X 550	24 x 22	610 X 559	432	432	90.1	103	155	748	206	-
600 X 500	24 x 20	630 X 529 610 X 508	432	432	92.2 86.4	105 99.4	158 148	765 701	211 198	291 272
600 X 450	24 x 18	630 X 478 610 X 457	432	419	88.4 84.5	101.1 96.9	152 145	734 694	202 193	278 266
600 X 400	24 x 16	630 X 426 610 X 406.4	432	406	86.4 83.2	99.1 95.7	148 143	718 690	198 191	272 263
600 X 350	24 x 14	630 X 377 610 X 355.6	432	406	85.5 81.7	98.0 93.5	147 140	710 768	195 187	269 257
600 X 300	24 x 12	630 X 325 610 X 323.9	432	397	83.5 79.8	95.8 91.5	143 137	678 662	191 182	263 251
600 X 250	24 x 10	630 X 273 610 X 273.1	432	384	81.6 77.9	93.6 89.3	140 134	662 647	187 178	257 245
650 X 650	26 x 26	660 X 660	495	495	-	-	206	-	274	-
650 X 600	26 x 24	660 X 610	495	483	-	-	197	-	263	-
650 X 550	26 x 22	660 X 559	495	470	-	-	189	-	252	-
650 X 500	26 x 20	660 X 508.0	495	457	-	-	185	-	246	-
650 X 450	26 x 18	660 X 457.2	495	444	-	-	183	-	244	-
650 X 400	26 x 16	660 X 406.4	495	432	-	-	179	-	238	-
650 X 350	26 x 14	660 X 355.6	495	432	-	-	175	-	233	-
650 X 300	26 x 12	660 X 323.9	495	422	-	-	171	-	227	-
700 X 700	28 x 28	720 X 720 711 X 711	521	521	-	-	232 229	-	300 305	-
700 X 650	28 x 26	711 X 660	521	521	-	-	222	-	293	-
700 X 600	28 x 24	720 X 630 711 X 610	510	508	-	-	222 211	-	296 275	-
700 X 550	28 x 22	711 X 559	521	495	-	-	204	-	272	-
700 X 500	28 x 20	720 X 529 711 X 508	521	483	-	-	222 199	-	296 265	-

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	D1xD2	C	M	sch5S	sch10S	sch40S/STD	sch40	sch80S/XS	sch80
700x450	28 x 18	720 X 478 711 X 457	521	470	-	-	208 195	-	275 263	-
700 x 400	28 x 16	720 X 426 711 X 406.4	521	457	-	-	206 190	-	268 259	-
700 X 350	28 x 14	720 X 377 711 X 355.6	521	457	-	-	201 183	-	260 253	-
700 X 300	28 x 12	720 X 325 711 X 323.9	521	448	-	-	197 179	-	256 244	-
750 X 750	30 x 30	762 X 762	559	559	176	200	264	-	352	-
750 X 700	30x28	762 X 711	559	546	-	-	254	-	338	-
750 X 650	30 x 26	762 X 660	559	546	-	-	243	-	323	-
750 X 600	30 x 24	762x610	559	533	158	197	238	-	317	-
750 X 550	30 x 22	762 X 559	559	521	157	195	235	-	314	-
750 X 500	30 x 20	762 X 508	559	508	153	174	230	-	306	-
750 x 450	30 x 18	762 X 457	559	495	149	170	224	-	299	-
750 x 400	30 x 16	762 X 406.4	559	483	146	166	219	-	292	-
750 X 350	30 x 14	762 X 355.6	559	483	141	166	211	-	285	-
750 X 300	30 x 12	762 X 323.9	559	473	137	156	206	-	275	-
750 X 250	30 x 10	762 X 273	559	460	132	150	198	-	264	-
800 X 800	32 x 32	820 X 820 813 x 813	597	597	-	-	303 302	-	405 402	-
800 X 750	32 x 30	813 X 762	597	584	-	-	290	-	386	-
800 X 700	32 x 28	820 X 720 713 X 711	597	572	-	-	291 277	-	388 370	-
800 X 650	32 x 26	813 X 660	597	572	-	-	271	-	362	-
800 X 600	32 x 24	820 X 630 813x610	597	559	-	-	279 268	-	356 358	-
800 X 550	32 x 22	813 X 559	597	546	-	-	262	-	350	-
800 X 500	32 x 20	820 X 529 813 X 508	597	533	-	-	273 256	-	364 342	-
800 X 450	32 X 18	820 X 478 813 X 457	597	521	-	-	270 250	-	360 334	-

公称通径 NorMinal 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	D1xD2	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
800 x 400	32 x 16	820 X 426 813 X 406.4	597	508	-	-	264 241	-	352 322	-
800 X 350	32 x 14	820 X 377 813 X 355.6	597	508	-	-	258 235	-	344 314	-
850 X 850	34 x 34	864 X 864	635	635	-	-	341	626	415	-
850 X 800	34 x 32	864 X 813	635	622	-	-	328	610	437	-
850 X 750	34 x 30	864 X 762	635	610	-	-	314	-	419	-
850 X 700	34 x 28	864 X 711	635	597	-	-	307	-	409	-
850 X 650	34 x 26	864 X 660	635	597	-	-	304	-	405	-
850 X 600	34 x 24	864 X 610	635	584	-	-	297	545	396	-
850 X 550	34x22	864 X 559	635	572	-	-	290	532	387	-
850 X 500	34 x 20	864 X 508	635	559	-	-	283	520	378	-
850 X 450	34 x 18	864 X 457	635	546	-	-	273	501	364	-
850 X 400	34 x 16	864 X 406.7	635	533	-	-	266	488	355	-
900 X 900	36x36	920 X 920 914 X 914	673	673	-	-	648 639	786 767	543 511	-
900 X 850	36x34	914 X 864	673	660	-	-	619	736	511	-
900 X 800	36x32	920 X 820 914 X 813	673	648	-	-	370 353	741 690	594 470	-
900 X 750	36x30	914 X 762	673	635	-	-	345	-	460	-
900 X 700	36x28	920 X 720 914 X 711	673	622	-	-	355 341	-	473 455	-
900 X 650	36x26	914 X 660	673	622	-	-	333	667	447	-
900 X 600	36x24	914 X 610	673	610	-	-	651	651	434	-
900 X 550	36x22	914 X 559	673	597	-	-	318	636	424	-
900 X 500	36x20	920 X 529 914 X 508	673	584	-	-	347 306	685 598	462 409	-
900 X 450	36x18	920 X 478 914 X 457	673	572	-	-	343 299	693 913	457 398	-
900x400	36x16	920 X 426 914 X 406.4	673	559	-	-	335 287	669 575	447 383	-



同心异径管 Concentric Reducer

偏心异径管 Eccentric Reducer

同心异径管 Concentric Reducer

偏心异径管 Eccentric Reducer

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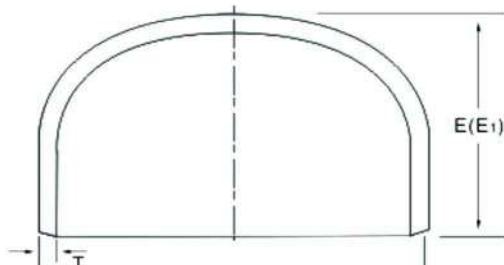
公称通径 Nominal Diameter		外径 Outside diameter	端面至端面的距离 End to end	理论重量kg/pc Approx weight					
DN	NPS	D1xD2	H	sch5S	sch10S	sch40S/STD	sch40	sch80S/XS	sch80
20x15	3/4X1/2	25 X 18 26.7 X 21.3	38	0.03 0.04	0.04 0.04	0.05 0.06	0.05 0.06	0.07 0.07	0.07 0.07
25x20	1x3/4	32.4 X 26.7 33.4 X 25	51	0.06 0.06	0.09 0.10	0.11 0.11	0.11 0.11	0.14 0.15	0.14 0.15
25x15	1x1/2	32 X 18 33.4 X 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
32x25	1 ¹ /4X1	38x32 42.2 X 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
32x20	1 ¹ /4X3/4	38x25 42.2 X 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
32x15	1 ¹ /4X1/2	38x18 42.2 X 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
40x32	1 ¹ /2X1 ¹ /4	45x38 48.3 X 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
40x25	1 ¹ /2X1	45x32 48.3 X 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
40x20	1 ¹ /2X3/4	45x25 48.3 X 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
40x15	1 ¹ /2x1/2	45X18 48.3 X 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
65x50	2 ¹ /2X2	76x57 73.0 X 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
65x40	2 ¹ /2X1 ¹ /2	76x45 73.0 X 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
65x32	2 ¹ /2X1 ¹ /4	76x38 73.0 X 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
65x25	2 ¹ /2X1	76x32 73.0 X 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
80x65	3X2 ¹ /2	89x76 88.9 X 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
80x50	3x2	89x57 88.9 X 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
80x40	3X1 ¹ /2	89x45 88.9 X 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
90x80	3 ¹ /2X3	101.6 X 88.9	102	0.5	0.72	1.29	1.29	1.77	1.77
90x65	3 ¹ /2X2 ¹ /2	101.6 X 73.0	102	0.46	0.66	1.12	1.12	1.63	1.63

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	D1xD2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
90x50	3 ¹ /2X2	101.6X 60.3	102	0.43	0.62	1.10	1.10	1.51	1.51
90x40	4 X 3 ¹ /2	101.6 X 48.3	102	0.41	0.58	1.03	1.03	1.40	1.40
100X90	3 ¹ /2 X 1 ¹ /2	114.3 X 101.6	102	0.57	0.82	1.55	1.55	2.41	2.41
100X80	4x3	108 X 89 114.3 X 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
100X65	4 X 2 ¹ /2	108 X 76 114.3 X 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
100x50	4x2	108 X 57 114.3 X 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 X 100	5x4	133 X 108 141.3 X 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 X 90	5 X 3 ¹ /2	141.3 X 101.6	127	1.06	1.29	2.38	2.38	3.38	3.38
125 X 80	5X3	133 X 89 141.3 X 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 X 65	5 X 2 ¹ /2	133 X 76 141.3 X 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 X 125	6x5	159 X 133 168.3 x 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 X 100	6x4	159 X 108 168.3 X 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 X 90	6 X 3 ¹ /2	168.3 X 101.6	140	1.32	1.61	3.23	3.23	4.83	4.83
150 X 80	6x3	159 X 89 168.3 X 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 X 150	8 x 6	219 x 159 219.1 X 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 X 125	8 x 5	219 X 133 219.1 X 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 X 100	8x4	219 X 108 219.1 x 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 X 200	10 X 8	273 X 219	178	3.72	4.56	9.74	15.5	15.5	15.5
250 X 150	10 X 6	273 X 159 273.1 X 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
250x125	10x5	273x133 273x141.3	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

公称通径 NoNominal 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	D1xD2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
300X250	12X10	325x273 323.9x273.1	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
300X200	12 X 8	325 X 219 323.9 X 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
300X150	12 x 6	325 X 159 323.9 X 168.3	203	5.17 5.22	5.95 6.00	12.0 12.1	12.9 13.0	15.7 15.9	21.2 21.4
350X300	14 X 12	377 X 325 355.6 X 323.9	330	11.4 11.0	13.7 13.2	26.6 25.6	30.9 29.8	35.1 33.8	51.6 49.8
350X250	14 X 10	377 X 273 355.6 X 273.1	330	10.6 10.2	12.8 12.3	24.8 23.8	28.8 27.7	32.7 31.4	48.0 46.1
350X200	14 x 8	377 X 219 355.6 X 219.1	330	9.89 9.46	11.9 11.4	23.0 22.0	26.7 25.5	30.3 29.0	44.5 42.5
350X150	14 x 6	377 X 159 355.6 X 168.3	330	9.63 9.22	11.0 10.5	21.1 20.2	24.5 23.5	27.8 26.6	40.7 38.9
400X350	16 X 14	426 X 377 406.4 X 355.6	356	14.9 14.1	16.9 16.1	32.9 31.2	43.5 41.2	43.5 41.2	71.7 67.9
400X300	16 X 12	426 X 325 406.4 X 323.9	356	14.0 13.6	16.0 15.4	31.0 29.9	40.9 39.5	40.9 39.5	67.4 65.1
400X250	16 X 10	426 X 273 406.4 X 273.1	356	13.2 12.7	15.0 14.5	29.1 28.1	38.4 37.1	38.4 37.1	63.1 60.9
400X200	16 x 8	426 X 219 406.4 X 219.1	356	12.4 11.9	14.1 13.6	27.3 26.2	36.0 34.6	36.0 34.6	59.1 56.7
400X150	16 x 6	426 X 159 406.4 X 168.3	356	11.5 9.96	13.1 12.7	25.3 24.5	33.3 32.3	33.3 32.3	54.5 52.7
450x400	18 X 16	478 X 426 457 X 406.4	381	17.9 17.1	20.4 19.5	39.7 37.9	58.8 56.1	52.6 50.1	96.1 91.6
450X350	18 X 14	478 X 377 457 X 355.6	381	17.1 16.2	19.4 18.5	37.7 35.8	55.8 53.0	49.9 47.4	91.1 86.3
450X300	18 X 12	478 X 325 457 X 323.9	381	16.2 15.7	18.5 17.9	35.8 34.7	53.0 51.2	47.4 45.8	86.3 83.4
450X250	18 X 10	478 X 273 457 X 273.1	381	15.4 14.8	17.6 16.9	34.1 32.8	50.3 48.4	45.0 43.3	81.8 78.6
450X200	18 X 8	478 X 219 457 X 219.1	381	14.5 14.0	16.5 15.9	32.0 30.8	47.3 45.5	42.3 40.7	76.7 73.7
500x450	20 x 18	529 X 478 508 X 457	508	30.4 29.1	35.2 33.7	59.1 56.6	92.5 88.6	78.2 74.9	156 150

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	D1xD2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
500 x400	20x16	529 x426 508 X 406.4	508	28.9 27.7	33.4 32.0	56.2 53.8	87.9 84.1	74.4 71.1	149 142
500 X 350	20 x 14	529 X 377 508 X 355.6	508	27.6 26.3	31.9 30.4	53.6 51.0	83.8 79.7	70.9 67.4	142 135
500 X 300	20 x 12	529 X 325 508 X 323.9	508	26.2 25.4	30.3 29.4	50.8 49.3	79.4 77.0	67.2 65.1	134 130
500 X 250	20 x 10	529 X 273 508 X 273.1	508	24.8 24.0	28.7 27.8	48.2 26.7	75.2 72.8	63.7 61.7	127 123
500 X 200	20x8	529 X 219 508 X 219.1	508	23.5 22.7	27.1 26.2	45.5 43.9	70.9 68.5	60.1 58.0	119 115
550 X 500	22x20	559 X 508	508	32.1	37.3	62.7	-	83	182
550 X 450	22 X 18	559 X 457	508	30.8	35	59.9	-	79.3	174
550 X 400	22 X 16	559 X 406.4	508	29.4	34	57.2	-	75.7	165
550 X 350	22 X 14	559 X 355.6	508	28	32.5	54.5	-	72.1	157
600 X 550	24 x 22	610 X 559	508	28	46.8	68.8	-	91.2	215
600 X 500	24x20	630 X 529 610 X 508	508	40.4 39.2	46.2 44.9	68.0 66.0	123 119	90.1 87.4	212 206
600 X 450	24 x 18	630 X 478 610 X 457	508	39.1 37.6	44.7 43.1	65.8 63.3	119 114	87.1 83.9	205 197
600 X 400	24 x 16	630 X 426 610 X 406.4	508	37.5 36.1	43.0 41.3	63.1 60.7	114 110	83.6 80.4	197 189
650 X 600	26 x 24	660 X 610	610	-	-	89.8	-	119	-
650 X 550	26 x 22	660 X 559	610	-	-	86.3	-	114	-
650 X 500	26 x 20	660 X 508	610	-	-	83	-	110	-
650 X 450	26 x 18	660 X 457	610	-	-	89	-	105	-
700 X 650	28 x 26	711 X 660	610	-	-	97.1	-	129	-
700 X 600	28 x 24	720 X 630 711 X 610	610	-	-	95.7 93.6	-	127 124	-

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	D1xD2	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
700 X 550	28 x 22	711 X 559	610	-	-	90.4	-	120	-
750 X 700	30 x 28	762 X 711	610	-	-	104	-	139	-
750 X 650	30 x 26	762 X 660	610	-	-	101	-	133	-
750 X 600	30 x 24	762 X 610	610	66.4	82.7	97.8	-	130	-
750 X 550	30 x 22	762 X 559	610	63.9	80	94.5	-	125	-
800 X 750	32 x 30	813 X 762	610	-	-	112	-	148	-
800 X 700	32 x 28	820 X 720 812 x 711	610	-	-	109 108	-	145 144	-
800 X 650	32x26	812 X 660	610	-	-	105	-	139	-
800 X 600	32 x 24	820 X 630 813 x 610	610	-	-	104 102	-	138 135	-
850 X 800	34x32	864 X 813	610	-	-	119	-	158	-
850 X 750	34x30	864 X 762	610	-	-	116	-	153	-
850 X 700	34x28	864 X 711	610	-	-	112	-	149	-
850 X 650	34x26	864 X 660	610	-	-	109	-	145	-
900 X 850	36x34	914 X 864	610	-	-	126	-	168	-
900 X 800	36x32	920 X 820 914 X 813	610	-	-	124 123	-	164 163	-
900 X 750	36x30	914 X 762	610	-	-	120	-	159	-
900 X 700	36x28	920 X 720 914 X 711	610	-	-	118 117	-	156 155	-

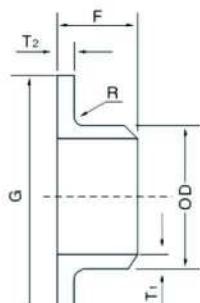


管帽 Cap

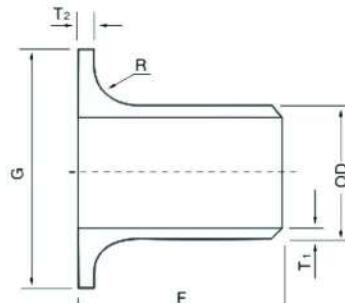
公称通径 Nominal diameter		外径 Outside diameter	背面至端面的距离 Back to end		(E型) 理论重kg/pc (E) Approx weight					
DN	NPS	OD	E	E1	sch5S	sch10S	sch40S/STD	sch40	sch80S/XS	sch80
15	1/2	18 21.3	25	25	0.019 0.022	0.024 0.028	0.031 0.037	0.031 0.037	0.042 0.050	0.042 0.050
20	3/4	25 26.7	25	25	0.027 0.029	0.033 0.035	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	0.071 0.076	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	0.66	0.66	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
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	8.64 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

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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	E1	sch5S	sch10S	sch40S/STD	sch40	sch80S/XS	sch80
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	-



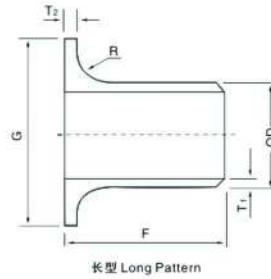
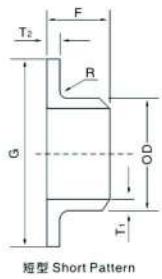
短型 Short Pattern



长型 Long Pattern

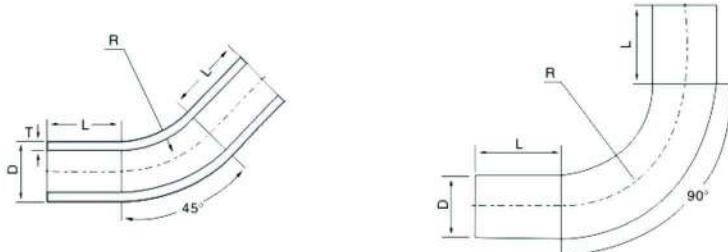
公称通径 Nominal diameter		外径 Outside diameter	长度 Length		搭接外径 Diameter of lap NoNominal & Max.imum	圆角半径 Radius of Fillet R	(E型)理论重kg/pc (E) Theoretical weight						
DN	NPS	OD	短型 SP	长型 LP			A Max	B Max	短型 SP	长型 LP	短型 SP	长型 LP	长型 LP
15	1/2	21.3	50.8	76.2	35.1	3	0.75	0.049	0.067	0.062	0.084	0.079	0.106
20	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	0.219	0.129	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	63.5	152.4	104.6	8	0.75	0.313	0.626	0.448	0.893	0.740	1.465

公称通径 NorNominal diameter		外径 Outside diameter	长度 Length F		搭接外径 Diameter of lap NoNominal & Max.im um	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	长型 LP	长型 LP
80	3	88.9	63.5	152.4	127.0	10	0.75	0.4	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	0.65	1.283	1.38	2.35
100	4	114.3	76.2	152.4	157.2	11	0.75	0.606	1.024	0.87	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 NorNominal pipe size DN	端部外径 Outside Diameter at Bevel D		长度 End to End	圆角半径 Radius of fillet		搭接外径 Diameter of lap G
	A系列 Series A	B系列 Series B		I	A	
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

公称通径 Nominal pipe size DN	端部外径 Outside Diameter at Bevel D		长度 End to End	圆角半径 Redius of fillet	搭线直径 Diameter of tap
	A系列 Series A	B系列 Series B			
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



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 A	R≤6000 mm,且R≥30 (用R 等于3D、4D、5D、6D、7D、80、90、100 来表示弯曲半径,D为管子外径) R≥3D(R=30 ,4D,5D,60 ,7D,8D ,9D,10D) D: outside diameter
弯曲角度 Bend Angle	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300 mm- 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≤1220mm
壁厚 T Wall Thickness T	T ≤120mm
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 = [(0.0433(D-T)TR + 100000] * L(双端直管段重量) Weight/kg = [(0.0433(D-T)TR + 100000] * L(Weight of DoubleSides Straight Length)

管件坡口形式 Welding Bevel of Fittings
GB/T12459、ASME/ANSI B16.9

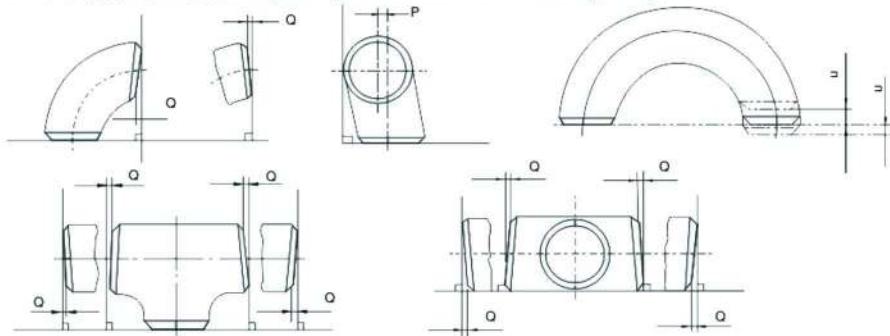


注：极限公差在不同标准中可能会略有差异。
Limiting tolerances can be slightly different between the different standards and codes.

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		
端部外径 D1、D2、0.3	所有管件	极限偏差						
端部内径d1)		+1.6 -0.8	±1.6	+2.4 -1.6	+4.0 -3.2	+6.4 -4.8		
壁厚T、T1、T2		±0.8	±1.6		±3.2	±4.8		
		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	±7			±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						
A	弯头、三通、异径管、四通弯头、三通、异径管、	1	2	3		
p	弯头、三通、四通	2	4	5	7	10
u	180°弯头	1		2		

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%				
中心至顶部尺寸H、F	45°弯头、90°弯头	±2		±3		
中心至中心尺寸P	180°弯头	±7		±10		
背部至顶端尺寸K		±7				
长度	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	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 fitting

项目	管件种类	公称通径范围						
		150~200	250~450	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		±1.6	±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		±5			
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				
端面最大最小外径差	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分割给定的.

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

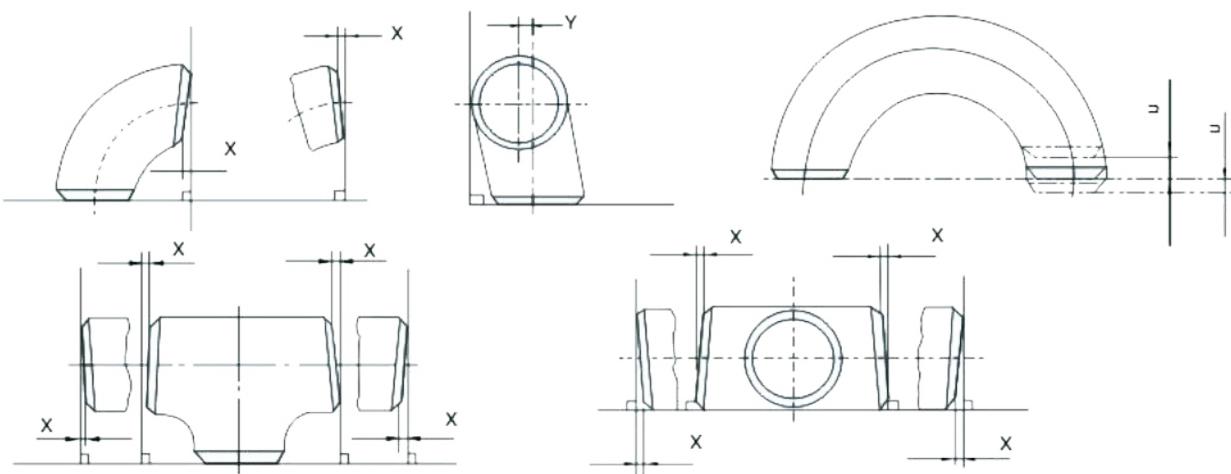
项目	管件种类	公称通径DN (in.)								
		1/2~2 _{1/2}	3~3 _{1/2}	4	5~8	10~18	20~24	26~30		
极限偏差										
端部外径D、D1、D2	所有管件	+1.52 -0.76	±1.52	+2.29 -1.52	+4.06 -3.05		+6.35 -4.83			
端部内径d ^{1,2)}		±0.76	±1.52		±3.05	±4.83				
壁厚T、T1、T2		不小于公称壁厚的87.5%								
中心至端面H、F、C、M	45°90°弯头 三通/四通	±1.52			±2.29	±3.05	+4.83			
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E、E1	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 圆角半径R		+1.52 0								
		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	x	0.76	1.52	2.29	2.29	3.05		4.83	
四通	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)端部内径为端面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



外径和壁厚表 Outside diameter and wall thickness

GB/T 12459- 2017

公称通径 Nominal Pipe Size	外径 Outside Diameter		公称壁厚 T Nominal Wall Thickness																	
	D		SCH 5s	SCH 10s	SCH 10	SCH 20	SCH 30	SCH 40s	STD	SCH 40	SCH 60	SCH 80s	XS	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160	xxs	
DN	A	B	SCH 5s	SCH 10s	SCH 10	SCH 20	SCH 30	SCH 40s	STD	SCH 40	SCH 60	SCH 80s	XS	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160	xxs	
15	21.3	18	1.65	2.11	-	-	-	2.77	2.77	2.77	-	3.73	3.73	3.73	-	-	-	4.78	7.47	
20	26.9	25	1.65	2.11	-	-	-	2.87	2.87	2.87	-	3.91	3.91	3.91	-	-	-	5.56	7.82	
25	33.7	32	1.65	3.38	-	-	-	3.38	3.38	3.38	-	4.55	4.55	4.55	-	-	-	6.35	9.09	
32	42.4	38	1.65	3.77	-	-	-	3.56	3.56	3.56	-	4.85	4.85	4.85	-	-	-	6.35	9.7	
40	48.3	45	1.65	2.77	-	-	-	3.68	3.68	3.68	-	5.08	5.08	5.08	-	-	-	7.14	10.15	
50	60.3	57	1.65	2.77	-	-	-	3.91	3.91	3.91	-	5.54	5.54	5.54	-	-	-	8.74	11.07	
65	73	76	2.11	3.05	-	-	-	5.16	5.16	5.16	-	7.01	7.01	7.01	-	-	-	9.53	14.02	
80	88.9	89	2.11	3.05	-	-	-	5.49	5.49	5.49	-	7.62	7.62	7.62	-	-	-	11.13	15.24	
90	101.6	-	2.11	3.05	-	-	-	5.74	5.74	5.74	-	8.08	8.08	8.08	-	-	-	-	-	
100	114.3	108	2.11	3.05	-	-	-	6.02	6.02	6.02	-	8.56	8.56	8.56	-	11.13	-	13.49	17.12	
125	141.3	133	2.77	3.4	-	-	-	6.55	6.55	6.55	-	9.53	9.53	9.53	-	12.7	-	15.88	19.05	
150	168.3	159	2.77	3.4	-	-	-	7.11	7.11	7.11	-	10.97	10.97	10.97	-	14.27	-	18.26	21.95	
200	219.1	219	2.77	3.76	-	6.35	7.04	8.18	8.18	8.18	10.31	12.7	12.7	12.7	15.09	18.26	20.62	23.01	22.23	
250	273	273	3.4	4.19	-	6.35	7.8	9.27	9.27	9.27	12.7	12.7	12.7	15.09	18.26	21.44	25.4	28.58	25.4	
300	323.9	325	3.96	4.57	-	6.35	8.38	9.53	9.53	10.31	14.27	12.7	12.7	17.48	21.44	25.4	28.58	33.32	25.4	
350	355.6	377	3.96	4.78	6.35	7.92	9.53	-	9.53	11.13	15.09	-	12.7	19.05	23.83	27.79	31.75	35.71	-	
400	406.4	426	4.19	4.78	6.35	7.92	9.53	-	9.53	12.7	16.66	-	12.7	21.44	26.19	30.96	36.53	40.49	-	
450	457	480	4.19	4.78	6.35	7.92	11.13	-	9.53	14.27	19.05	-	12.7	23.83	29.36	34.93	39.67	45.24	-	
500	508	530	4.78	5.54	6.35	9.53	12.7	-	9.53	15.09	20.62	-	12.7	26.19	32.54	38.1	44.45	50.01	-	
550	559	-	4.78	5.54	6.35	9.53	12.7	-	9.53	-	22.23	-	12.7	28.58	34.93	41.28	47.63	53.98	-	
600	610	630	5.54	6.35	6.35	9.53	14.27	-	9.53	17.48	24.61	-	12.7	30.96	38.89	46.02	52.37	59.54	-	
650	660	-	-	-	7.92	12.7	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
700	711	720	-	-	7.92	12.7	15.88	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
750	762	-	6.35	7.92	7.92	12.7	15.88	-	9.35	-	-	-	12.7	-	-	-	-	-	-	
800	813	820	-	-	7.92	12.7	15.88	-	9.53	17.48	-	-	12.7	-	-	-	-	-	-	
850	864	-	-	-	7.92	12.7	15.88	-	9.53	17.48	-	-	12.7	-	-	-	-	-	-	
900	914	-	-	-	7.92	12.7	15.88	-	9.53	19.05	-	-	12.7	-	-	-	-	-	-	
950	965	-	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
1000	1016	-	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
1050	1067	-	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
1100	1118	-	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
1150	1168	-	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
1200	1219	-	-	-	-	-	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	

外径和壁厚表 Outside diameter and wall thickness

SH3408、SH3409

公称通径 Nominal Pipe Size	外径 Outside Diameter	公称壁厚 T Nominal Wall Thickness																	
		DN	D	SCH 5s	SCH 10s	SCH 10	SCH 20	SCH 30	SCH 40s	STD	SCH 40	SCH 60	SCH 80s	XS	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160
6	10.3	-	1.24	1.24	-	1.45	1.73	1.73	1.73	-	2.41	2.41	2.41	-	-	-	-	-	-
8	13.7	-	1.65	1.65	-	1.85	2.24	2.24	2.24	-	3.02	3.02	3.02	-	-	-	-	-	-
10	17.1	-	1.65	1.65	-	1.85	2.31	2.31	2.31	-	3.2	3.2	3.2	-	-	-	-	-	-
15	21.3	1.65	2.11	2.11	-	2.41	2.77	2.77	2.77	-	3.73	3.73	3.73	-	-	-	4.78	7.47	
20	26.7	1.65	2.11	2.11	-	2.41	2.87	2.87	2.87	-	3.91	3.91	3.91	-	-	-	5.56	7.82	
25	33.4	1.65	2.77	2.77	-	2.9	3.38	3.38	3.38	-	4.55	4.55	4.55	-	-	-	6.35	9.09	
(32)	42.2	1.65	2.77	2.77	-	2.97	3.56	3.56	3.56	-	4.85	4.85	4.85	-	-	-	6.35	9.7	
40	48.3	1.65	2.77	2.77	-	3.18	3.68	3.68	3.68	-	5.08	5.08	5.08	-	-	-	7.14	10.15	
50	60.3	1.65	2.77	2.77	-	3.18	3.91	3.91	3.91	-	5.54	5.54	5.54	-	-	-	8.74	11.07	
65	73	2.11	3.05	3.05	-	4.78	5.16	5.16	5.16	-	7.01	7.01	7.01	-	-	-	9.53	14.02	
80	88.9	2.11	3.05	3.05	-	4.78	5.49	5.49	5.49	-	7.62	7.62	7.62	-	-	-	11.13	15.24	
90	101.6	2.11	3.05	3.05	-	4.78	5.74	5.74	5.74	-	8.08	8.08	8.08	-	-	-	-	-	
100	114.3	2.11	3.05	3.05	-	4.78	6.02	6.02	6.02	-	8.56	8.56	8.56	-	11.13	-	13.49	17.12	
(125)	141.3	2.77	3.4	3.4	-	-	6.55	6.55	6.55	-	8.53	8.53	8.53	-	12.7	-	15.88	19.05	
150	168.3	2.77	3.4	3.4	-	-	7.11	7.11	7.11	-	10.97	10.97	10.97	-	14.27	-	18.26	21.95	
200	219.1	2.77	3.76	3.76	6.35	7.04	8.18	8.18	8.18	10.31	12.7	12.7	12.7	15.09	18.26	20.62	23.01	22.23	
250	273	3.4	4.19	4.19	6.35	7.8	9.27	9.27	9.27	12.7	12.7	12.7	15.09	18.26	21.44	25.4	28.58	25.4	
300	323.8	3.96	4.57	4.57	6.35	8.38	9.53	9.53	10.31	14.27	12.7	12.7	17.48	21.44	25.4	28.58	33.32	25.4	
350	355.6	3.96	4.78	4.78	7.92	9.53	9.53	9.53	11.13	15.09	12.7	12.7	19.05	23.83	27.79	31.75	35.71	-	
400	406.4	4.19	4.78	4.78	7.92	9.53	9.53	9.53	12.7	16.66	12.7	12.7	21.44	26.19	30.96	36.53	40.49	-	
450	457	4.19	4.78	4.78	7.92	11.13	9.53	9.53	14.27	19.05	12.7	12.7	23.83	29.36	34.93	39.67	45.24	-	
500	508	4.78	5.54	5.54	9.53	12.7	9.53	9.53	15.09	20.62	12.7	12.7	26.19	29.36	38.1	44.45	50.01	-	
(550)	559	4.78	5.54	5.54	9.53	12.7	-	9.53	-	22.23	-	12.7	28.58	34.93	41.28	47.63	53.98	-	
600	610	5.54	6.35	6.35	9.53	14.27	9.53	9.53	17.48	24.61	12.7	12.7	30.96	38.89	46.02	52.37	59.54	-	
650	660	-	-	7.92	12.7	-	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
700	711	-	-	7.92	12.7	15.88	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
750	762	6.35	7.92	7.92	12.7	15.88	-	9.53	-	-	-	12.7	-	-	-	-	-	-	
800	813	-	-	7.92	12.7	15.88	-	9.53	17.48	-	-	12.7	-	-	-	-	-	-	
(850)	864	-	-	7.92	12.7	15.88	-	9.53	17.48	-	-	12.7	-	-	-	-	-	-	
900	914	-	-	7.92	12.7	15.88	-	9.53	19.05	-	-	12.7	-	-	-	-	-	-	

外径和壁厚表 Outside diameter and wall thickness
B36.10M、B36.19M

外径 Outside Diameter		公称通径 Nominal Pipe Size	公称壁厚 T Nominal Wall Thickness																
DN	NPS	D	SCH 5S	SCH 10S	SCH 10	SCH 20	SCH 30	SCH 40S	STD	SCH40	SCH60	SCH80	XS	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160	XXS
6	1/8	10.3	-	1.24	-	-	-	1.73	1.73	1.73	-	2.41	2.41	2.41	-	-	-	-	-
8	1/4	13.7	-	1.65	-	-	-	2.24	2.24	2.24	-	3.02	3.02	3.02	-	-	-	-	-
10	3.8	17.1	-	1.65	-	-	-	2.31	2.31	2.31	-	3.20	3.20	3.20	-	-	-	-	-
15	1/2	21.3	1.65	2.11	-	-	-	2.77	2.77	2.77	-	3.73	3.73	3.73	-	-	-	4.78	7.47
20	3/4	26.7	1.65	2.11	-	-	-	2.87	2.87	2.87	-	3.91	3.91	3.91	-	-	-	5.56	7.82
25	1	33.4	1.65	2.77	-	-	-	3.38	3.38	3.38	-	4.55	4.55	4.55	-	-	-	6.35	9.09
32	1 ¹ /4	42.2	1.65	2.77	-	-	-	3.56	3.56	3.56	-	4.85	4.85	4.85	-	-	-	6.35	9.7
40	1 ¹ /2	48.3	1.65	2.77	-	-	-	3.68	3.68	3.68	-	5.08	5.08	5.08	-	-	-	7.14	10.15
50	2	60.3	1.65	2.77	-	-	-	3.19	3.91	3.91	-	5.54	5.54	5.54	-	-	-	8.74	11.07
65	2 ¹ /2	73.0	2.11	3.05	-	-	-	5.16	5.16	5.16	-	7.01	7.01	7.01	-	-	-	9.53	14.02
80	3	88.9	2.11	3.05	-	-	-	5.49	5.49	5.49	-	7.62	7.62	7.62	-	-	-	11.13	15.24
90	3 ¹ /3	101.6	2.11	3.05	-	-	-	5.74	5.74	5.74	-	8.08	8.08	8.08	-	-	-	-	-
100	4	114.3	2.11	3.05	-	-	-	6.02	6.02	6.02	-	8.56	8.56	8.56	-	11.13	-	13.49	17.12
125	5	141.3	2.77	3.40	-	-	-	6.55	6.55	6.55	-	9.53	9.53	9.53	-	12.70	-	15.88	19.05
150	6	168.3	2.77	3.40	-	-	-	7.11	7.11	7.11	-	10.97	10.97	10.97	-	14.27	-	18.26	21.95
200	8	219.1	2.77	3.76	-	6.35	7.04	8.18	8.18	8.18	10.31	12.70	12.70	12.70	15.09	18.26	20.62	23.01	22.23
250	10	273.1	3.40	4.19	-	6.35	7.80	9.27	9.27	9.27	12.70	12.70	12.70	15.09	18.26	21.44	25.4	28.58	25.40
300	12	323.9	3.96	4.57	-	6.35	8.38	9.53	9.53	10.31	14.27	12.70	12.70	17.48	21.44	25.40	28.58	33.32	25.40
350	14	355.6	3.96	4.78	6.35	7.92	9.53	-	9.53	11.13	15.09	-	12.70	19.05	23.83	27.79	31.75	35.71	-
400	16	406.4	4.19	4.78	6.35	7.92	9.53	-	9.53	12.70	16.66	-	12.70	21.44	26.19	30.96	36.53	40.49	-
450	18	457.2	4.19	4.78	6.35	7.92	11.13	-	9.53	14.27	19.05	-	12.70	23.83	29.36	34.93	39.67	45.24	-
500	20	508	4.78	5.54	6.35	9.53	12.7	-	9.53	15.09	20.62	-	12.70	26.19	32.54	38.10	44.45	50.01	-
550	22	559	4.78	5.54	6.35	9.53	12.7	-	9.53	-	22.23	-	12.70	28.58	34.93	41.28	47.63	53.98	-
600	24	610	5.54	6.35	6.35	9.53	14.27	-	9.53	17.48	24.61	-	12.70	30.96	38.89	46.02	52.37	59.54	-
650	26	660	-	-	7.92	12.70	-	9.53	-	-	-	12.70	-	-	-	-	-	-	-
700	28	711	-	-	7.92	12.70	15.88	-	9.53	-	-	-	12.70	-	-	-	-	-	-
750	30	762	6.35	7.92	7.92	12.70	15.88	-	9.53	-	-	-	12.70	-	-	-	-	-	-
800	32	813	-	-	7.92	12.70	15.88	-	9.53	17.48	-	-	12.70	-	-	-	-	-	-
850	34	864	-	-	7.92	12.70	15.88	-	9.53	17.48	-	-	12.70	-	-	-	-	-	-
900	36	914	-	-	7.92	12.70	15.88	-	9.53	19.05	-	-	12.70	-	-	-	-	-	-
950	38	965	-	-	-	-	-	-	9.53	-	-	-	12.70	-	-	-	-	-	-
1000	40	1016	-	-	-	-	-	-	9.53	-	-	-	12.70	-	-	-	-	-	-
1050	42	1067	-	-	-	-	-	-	9.53	-	-	-	12.70	-	-	-	-	-	-
1100	44	1118	-	-	-	-	-	-	9.53	-	-	-	12.70	-	-	-	-	-	-
1150	46	1168	-	-	-	-	-	-	9.53	-	-	-	12.70	-	-	-	-	-	-
1200	48	1219	-	-	-	-	-	-	9.53	-	-	-	12.70	-	-	-	-	-	-

外径和壁厚表 Outside diameter and wall thickness

JIS B2311、B2312、B2313

公称通径 Nominal Pipe Size		外径 Outside Diameter	公称壁厚 T Nominal Wall Thickness																	
DN	NPS	D	SGP	SCH 5S	SCH 10S	SCH 10	SCH 20	SCH 30	SCH 40S	STD	SCH 40	SCH 60	SCH 80S	XS	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160	XXS
15	1/2	21.7	2.8	1.65	2.1	-	2.5	-	2.8	2.8	2.8	-	3.7	3.7	3.7	-	-	4.8	7.5	
20	3/4	27.2	2.8	1.65	2.1	-	2.5	-	2.9	2.9	2.9	-	3.9	3.9	3.9	-	-	5.6	7.8	
25	1	34.0	3.2	1.65	2.8	-	3.0	-	3.4	3.4	3.4	-	4.5	4.5	4.5	-	-	6.4	9.1	
32	1 ¹ /4	42.7	3.5	1.65	2.8	-	3.0	-	3.6	3.6	3.6	-	4.9	4.9	4.9	-	-	6.4	9.7	
40	1 ¹ /2	48.6	3.5	1.65	2.8	-	3.0	-	3.7	3.7	3.7	-	5.1	5.1	5.1	-	-	7.1	10.2	
50	2	60.5	3.8	1.65	2.8	-	3.5	-	3.9	3.9	3.9	-	5.5	5.5	5.5	-	-	8.7	11.1	
65	2 ¹ /2	76.3	4.2	2.1	3.0	-	3.5	-	5.2	5.2	5.2	-	7.0	7.0	7.0	-	-	9.5	14.0	
80	3	89.1	4.2	2.1	3.0	-	4.0	-	5.5	5.5	5.5	-	7.6	7.6	7.6	-	-	11.1	15.2	
90	3 ¹ /3	101.6	4.2	2.1	3.0	-	4.0	-	5.7	5.7	5.7	-	8.1	8.1	8.1	-	-	-	-	
100	4	114.3	4.5	2.1	3.0	-	4.0	-	6.0	6.0	6.0	-	8.6	8.6	8.6	-	11.1	13.5	17.1	
125	5	139.8	4.5	2.8	3.4	-	5.0	-	6.6	6.6	6.6	-	9.5	9.5	9.5	-	12.7	15.9	19.0	
150	6	165.2	5.0	2.8	3.4	-	5.0	-	7.1	7.1	7.1	-	11.0	11.0	11.0	-	14.3	18.2	21.9	
200	8	216.3	5.8	2.8	4.0	-	6.5	7.0	8.2	8.2	9.3	10.3	12.7	12.7	12.7	15.1	18.2	20.6	23.0	21.9
250	10	267.4	6.6	3.4	4.0	-	6.5	7.8	9.3	9.3	10.3	12.7	12.7	12.7	15.1	18.3	21.8	25.4	28.6	25.4
300	12	318.5	6.9	4.0	4.5	-	8.0	8.4	9.5	9.5	11.1	14.3	12.7	12.7	19.0	21.4	25.4	28.6	33.3	25.4
350	14	355.6	7.9	4.0	5.0	6.4	8.0	9.5	9.5	9.5	12.7	15.1	-	12.7	21.4	23.8	27.8	31.8	35.7	-
400	16	406.4	7.9	4.5	5.0	6.4	8.0	9.5	9.5	9.5	14.3	16.7	-	12.7	23.8	26.2	30.9	36.5	40.5	-
450	18	457.2	7.9	4.5	5.0	6.4	9.5	11.1	9.5	9.5	15.1	19.0	-	12.7	26.2	29.4	34.9	39.7	45.2	-
500	20	508.0	7.9	5.0	5.5	6.4	9.5	12.7	9.5	9.5	15.9	20.6	-	12.7	28.6	32.5	38.1	44.4	50.0	-
550	22	558.8	-	5.0	5.5	6.4	9.5	12.7	9.5	9.5	17.5	22.2	-	12.7	31.0	34.9	41.3	47.6	54.0	-
600	24	609.6	-	5.5	6.5	6.4	12.7	14.3	9.5	9.5	-	24.6	-	12.7	34.0	38.9	46.0	52.4	59.5	-
650	26	660.4	-	5.5	8.0	7.9	12.7	-	-	9.5	17.5	-	-	12.7	-	-	-	-	-	-
700	28	711.2	-	5.5	8.0	7.9	12.7	15.9	-	9.5	17.5	-	-	12.7	-	-	-	-	-	-
750	30	762.0	-	6.5	8.0	7.9	12.7	15.9	9.5	9.5	17.5	-	-	12.7	-	-	-	-	-	-
800	32	812.8	-	-	8.0	7.9	12.7	15.9	-	9.5	17.5	-	-	12.7	-	-	-	-	-	-
850	34	863.6	-	-	8.0	7.9	12.7	15.9	-	9.5	19.1	-	-	12.7	-	-	-	-	-	-
900	36	914.4	-	-	8.0	7.9	12.7	15.9	-	9.5	-	-	-	12.7	-	-	-	-	-	-
950	38	965.2	-	-	-	-	-	-	-	9.5	26.2	-	-	12.7	-	-	-	-	-	-
1000	40	1016.0	-	-	9.5	-	14.3	-	-	9.5	-	-	-	12.7	-	-	-	-	-	-
1050	42	1066.8	-	-	-	-	-	-	-	9.5	-	-	-	12.7	-	-	-	-	-	-
1100	44	1117.6	-	-	-	-	-	-	-	-9.5	-	-	-	12.7	-	-	-	-	-	-
1150	46	1168.4	-	-	-	-	-	-	-	9.5	-	-	-	12.7	-	-	-	-	-	-
1200	48	1219.2	-	-	-	-	-	-	-	9.5	-	-	-	12.7	-	-	-	-	-	-

奥氏体不锈钢化学成分对照表 Chemical composition table of stainless steel

国别	标准	GB钢号	化学成份(%) Chemical composition (%)									机械性能 Mechanical properties			
			C≤	Mn≤	Si≤	S≤	P≤	Cr	Ni	Mo	其它	δb (Mpa)	δ0.5 (Mpa)	ε(%)	HBW≤
中国China	GB/T13401	SF304	0.08	2.00	1.00	0.03	0.045	17.50-20.00	8.00-11.00	-	-	515	205	30	201
		SF304L	0.03	2.00	1.00	0.03	0.045	17.50-20.00	8.00-13.00	-	-	480	170	30	201
		SF321	0.08	2.00	1.00	0.03	0.045	17.00-19.00	9.00-12.00	-	Ti:SC-0.70	515	205	30	201
		SF316	0.08	2.00	1.00	0.03	0.045	16.00-18.00	10.00-14.00	2.00-3.00	-	515	205	30	201
		SF316L	0.03	2.00	1.00	0.03	0.045	16.00-18.00	10.00-15.00	2.00-3.00	-	480	170	30	201
		SF310	0.10	2.00	1.50	0.03	0.045	24.00-26.00	19.00-22.00	-	-	515	205	30	201
美国America	ASTM A430	SF347	0.08	2.00	1.00	0.03	0.045	17.00-20.00	9.00-13.00	-	Nb:10C-1.10	515	205	30	201
		S30400	0.08	2.00	1.00	0.03	0.045	18.00-20.00	8.00-11.00	-	-	515	205	28	-
		S30403	0.08	2.00	1.00	0.03	0.045	18.00-20.00	8.00-12.00	-	-	485	170	28	-
		S32100	0.08	2.00	1.00	0.03	0.045	17.00-19.00	9.00-12.00	-	Ti:5X(C+N2)-0.70	515	205	28	-
		S31600	0.08	2.00	1.00	0.03	0.045	16.00-18.00	10.00-14.00	2.0-3.0	-	515	205	28	-
		S31603	0.08	2.00	1.00	0.03	0.045	16.00-18.00	10.00-14.00	2.0-3.0	-	485	170	28	-
		S31700	0.08	2.00	1.00	0.03	0.045	18.00-20.00	11.00-15.00	3.0-4.0	-	515	205	28	-
		S31703	0.08	2.00	1.00	0.03	0.045	18.00-20.00	11.00-15.00	3.0-4.0	-	515	205	28	-
		S310S	0.08	2.00	1.00	0.03	0.045	24.00-26.00	19.00-22.00	-	-	515	205	28	-
欧洲Euro	EN10253-4	S34700	0.08	2.00	1.00	0.03	0.045	17.00-19.00	9.00-12.00	-	Nb:10C-1.10	515	205	28	-
		1.4301	0.07	2.00	1.00	0.015	0.045	17.00-19.00	8.00-10.50	-	-	500-700	195	40	-
		1.4307	0.03	2.00	1.00	0.015	0.045	17.50-19.50	8.00-10.00	-	-	470-670	180	40	-
		1.4541	0.08	2.00	1.00	0.015	0.045	17.00-19.50	9.00-12.00	-	Ti:SXC-0.70	500-730	200	35	-
		1.4401	0.07	2.00	1.00	0.015	0.045	16.50-18.50	10.00-13.00	2.00-2.5	-	510-710	205	40	-
		1.4404	0.03	2.00	1.00	0.015	0.045	16.50-18.50	10.00-13.00	2.00-2.5	-	490-690	190	40	-
		1.4571	0.08	2.00	1.00	0.015	0.045	16.50-18.50	10.50-13.50	2.00-2.5	Ti:SXC-0.70	500-730	210	35	-
日本Japan	JIS 3459/3468	1.4550	0.08	2.00	1.00	0.015	0.045	17.00-19.00	9.00-12.00	-	Nb:10C-1.00	510-740	205	35	-
		SUS304	0.08	2.00	1.00	0.03	0.045	18.00-20.00	8.00-10.5	-	-	520	205	35	-
		SUS304L	0.03	2.00	1.00	0.03	0.045	18.00-20.00	9.00-13.00	-	-	480	175	35	-
		SUS321	0.08	2.00	1.00	0.03	0.045	17.00-19.00	9.00-13.00	-	Ti:5XC以上	520	175	35	-
		SUS316	0.08	2.00	1.00	0.03	0.045	16.00-18.00	10.00-14.00	-	-	520	205	35	-
		STU316L	0.03	2.00	1.00	0.03	0.045	16.00-18.00	12.00-15.00	2.00-3.00	-	480	205	35	-
		SUS317	0.08	2.00	1.00	0.03	0.045	18.00-20.00	11.00-15.00	3.00-4.00	-	520	205	35	-
		SUS317L	0.03	2.00	1.00	0.03	0.045	18.00-20.00	11.00-15.00	3.00-4.00	-	480	175	35	-
		SUS310S	0.08	2.00	1.00	0.03	0.045	24.00-26.00	19.00-22.00	-	-	520	205	35	-
		SUS347	0.08	2.00	1.00	0.03	0.045	17.00-19.00	9.00-13.00	-	Nb:10C以上	520	205	35	-

中外不锈钢牌号对照表

Comparison table between domestic and foreign stainless steel grades

序号	类别	中国GB	美国 AISI,ASTM	日本JIS	欧洲EN	
1	奥氏体 不锈钢 Austenitic	06Cr19Ni10	304、S30400	SUS304	X5CrNi18-10	1.4301
2		022Cr19Ni10、S30403	304L、S30403	SUS304L	X2CrNi19-11	1.4307
3		07Cr19Ni11Ti、S32169	321H、S32109	SUS321H	X7CrNi18-10	1.4541
4		06Cr18Ni11Ti、S32168	321、S32100	SUS321	X6CrNi18-10	1.4541
5		06Cr17Ni12Mo2、S31608	316、S31600	SUS316	X5CrNiMo17-12-2	1.4401
6		022Cr17Ni12Mo2、S31603	316L、S31603	SUS316L	X2CrNiMo17-12-2	1.4404
7		06Cr17Ni12Mo3Ti、S31668	316Ti、S31635	SUS316Ti	X6CrNiMoTi17-12-2	1.4571
8		06Cr19Ni13Mo3、S31708	317、S31700	SUS317	-	-
9		022Cr19Ni13Mo3、S31703	317L、S31703	SUS317L	X2CrNiMo19-14-4	1.4438
10		06Cr25Ni20、S31008	310S、S31008	SUS310s	X12CrNi23-12	1.4845
11		06Cr18Ni11N6、S34778	347、S34700	SUS347	X6CrNiNb18-10	1.455
12	双相不锈钢 Duplex	022Cr22Ni5Mo3N、S22253	S31803	SUS329J3L	X2CrMoN22-5-3	1.4462
13		022Cr19Ni5Mo3Si2N、S21953	S31500	-	-	-
14		03Cr25Ni6Mo3Cu2N、S25554	S32550、255	SUS329J4L	X2CrMoCuN25-6-3	1.4507
15		022Cr25Ni6Mo2N、S22553	S31200	-	X3CrMoN27-5-2	1.4460
16		022Cr25Ni7Mo4N、S25073	S32750、2507	-	X2CrNiMoN25-7-4	1.4410
17		022Cr23Ni5Mo3N	S32205、2205	-	-	-

美标化学成份对照表

A403 and A815 Chemical Requirements Compositon,% Grade

GRADE WP	Grade CR	UNS Designation	C	Mn	P	S	Si	Ni	Cr	Mo	Others
WP304	Cr304	S30400	0.08	2.00	0.045	0.03	1.00	8.0-11.0	18.0-20.0	-	-
WP304L	CR304L	S30403	0.03	2.00	0.045	0.03	1.00	8.0-12.0	18.0-20.0	-	-
WP304H	CR304H	S30409	0.04-0.10	2.00	0.045	0.03	1.00	8.0-11.0	18.0-20.0	-	-
WP309	Cr309	S30900	0.2	2.00	0.045	0.03	1.00	12.0-15.0	22.0-24.0	-	-
WP310S	CR310S	S31008	0.08	2.00	0.045	0.03	1.00	19.0-22.0	24.0-26.0	-	-
WP31254	Cr31254	S31254	0.02	1.00	0.03	0.01	0.08	17.5-18.5	19.5-20.5	6.0-6.5	Cu 0.50-1.00 N 0.18-0.22
WP316	Cr316	S31600	0.08	2.00	0.045	0.03	1.00	10.0-14.0	16.0-18.0	2.00-3.00	-
WP316L	CR316L	S31603	0.03	2.00	0.045	0.03	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	0.03	1.00	10.0-14.0	16.0-18.0	2.00-3.00	-
WP317	Cr317	S31700	0.08	2.00	0.045	0.03	1.00	11.0-15.0	18.0-20.0	3.00-4.00	-
WP317L	CR317L	S31703	0.03	2.00	0.045	0.03	1.00	11.0-15.0	18.0-20.0	3.00-4.00	-
WPS31726	CRS31726	S31726	0.03	2.00	0.045	0.03	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	0.03	1.00	9.0-12.0	17.0-19.0	-	Ti S (C+N)-0.7
WP321H	Cr321H	S32109	0.04-0.10	2.00	0.045	0.03	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	0.03	1.00	9.0-12.0	17.0-19.0	-	-
WP347H	CR347H	S34709	0.04-0.10	2.00	0.045	0.03	1.00	9.0-12.0	17.0-19.0	-	-
WP316TI	CR316TI	316Ti	0.08	2.00	0.045	0.03	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	0.02	1.00	4.5-6.5	21.0-23.0	2.5-3.5	-
WPS32205	CRS32205	S32205	0.03	2.00	0.030	0.02	1.00	4.5-6.5	22.0-23.0	3.0-3.5	-
WPS32750	CRS32750	S32750	0.03	1.20	0.035	0.02	0.08	6.0-8.0	24.0-26.0	3.0-5.0	-
WPS32760	CRS32760	S32760	0.03	1.00	0.030	0.01	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	双承口管锥 Couplings	单承口管锥、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	21/2-4	+ 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	双接口管箱、管帽 Coupling Cap 端面至端面 End to end	单接口管播、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	21/2-4	± 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.

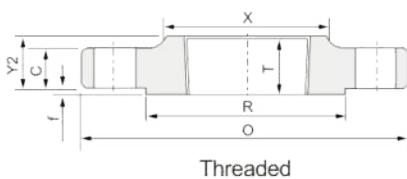
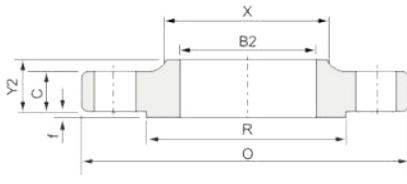
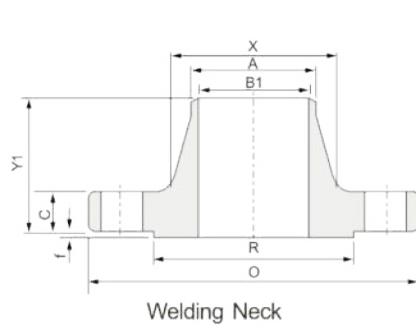
螺纹、承插焊管件压力等级与管子壁厚等级的关系

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	-



FLANGE



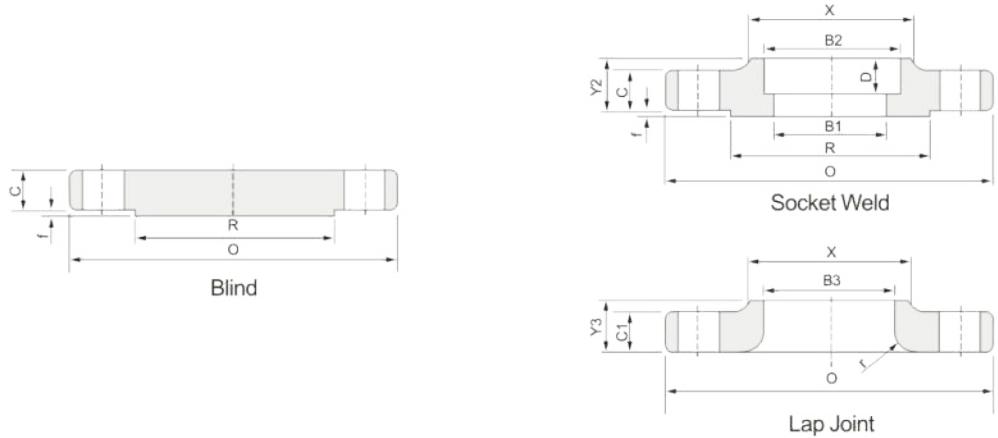
ASME B16.5 CLASS 150 PIPE FLANGES

Dimensions in mm

Nominal Pipe Size	Outside Diameter	Thickness	Thickness of Lap Joint	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore			Length thru hub			Thread Length Threaded Flange (Min)	Depth of Socket	Diameter Hub at Bevel
						Welding Neck Socket Welding	Slip-On Socket Welding	Lap Joint	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
O	C	C1	R	r	B1	B2	B3	Y1	Y2	Y3	T	D	A	
1/2	90	9.6	11.2	34.9	3	15.8	22.2	22.9	46.0	14.0	16.0	16.0	10.0	21.3
3/4	100	11.2	12.7	42.9	3	20.9	27.7	28.2	51.0	14.0	16.0	16.0	11.0	26.7
1	110	12.7	14.3	50.8	3	26.6	34.9	34.9	54.0	16.0	17.0	17.0	13.0	33.4
1 ¹ /4	115	14.3	15.9	63.5	5	35.1	43.2	43.7	56.0	19.0	21.0	21.0	14.0	42.2
1 ¹ /2	125	15.9	17.5	73.0	6	40.9	49.5	50.0	60.0	21.0	22.0	22.0	16.0	48.3
2	150	17.5	19.1	92.1	8	52.5	61.9	62.5	62.0	24.0	25.0	25.0	17.0	60.3
2 ¹ /1	180	20.7	22.3	104.8	8	62.7	74.6	75.4	68.0	27.0	29.0	29.0	19.0	73.0
3	190	22.3	23.9	127.0	10	77.9	90.7	91.4	68.0	29.0	30.0	30.0	21.0	88.9
3 ¹ /2	215	22.3	23.9	139.7	10.0	90.1	103.4	104.1	70.0	30.0	32.0	32.0	22.4	101.6
4	230	22.3	23.9	157.2	11.0	102.3	116.1	116.8	75.0	32.0	33.0	33.0	24.0	114.3
5	255	22.3	23.9	185.7	11.0	128.2	143.8	144.4	87.0	35.0	36.0	36.0	24.0	141.3
6	280	23.9	25.4	215.9	13.0	154.1	170.7	171.4	87.0	38.0	40.0	40.0	27.0	168.3
8	345	27.0	28.6	266.9	13.0	202.7	221.5	222.2	100.0	43.0	44.0	44.0	32.0	219.1
10	405	28.6	30.2	323.8	13.0	254.6	276.2	277.4	100.0	48.0	49.0	49.0	33.0	273.0
12	485	30.2	31.8	381.0	13.0	To be specified by purchaser	327.0	328.2	113.0	54.0	56.0	56.0	40.0	323.8
14	535	33.4	35.0	412.8	13.0		359.2	360.2	125.0	56.0	79.0	57.0	41.4	355.6
16	595	35.0	36.6	469.9	13.0		410.5	411.2	125.0	62.0	87.0	64.0	44.5	406.4
18	635	38.1	39.7	533.4	13.0		461.8	462.3	138.0	67.0	97.0	68.0	49.0	457.0
20	700	41.3	42.9	584.2	13.0		513.1	514.4	143.0	71.0	103.0	73.0	73.0	508.0
24	815	46.1	47.7	692.2	13.0		616.0	616.0	151.0	81.0	111.0	83.0	60.5	610.0

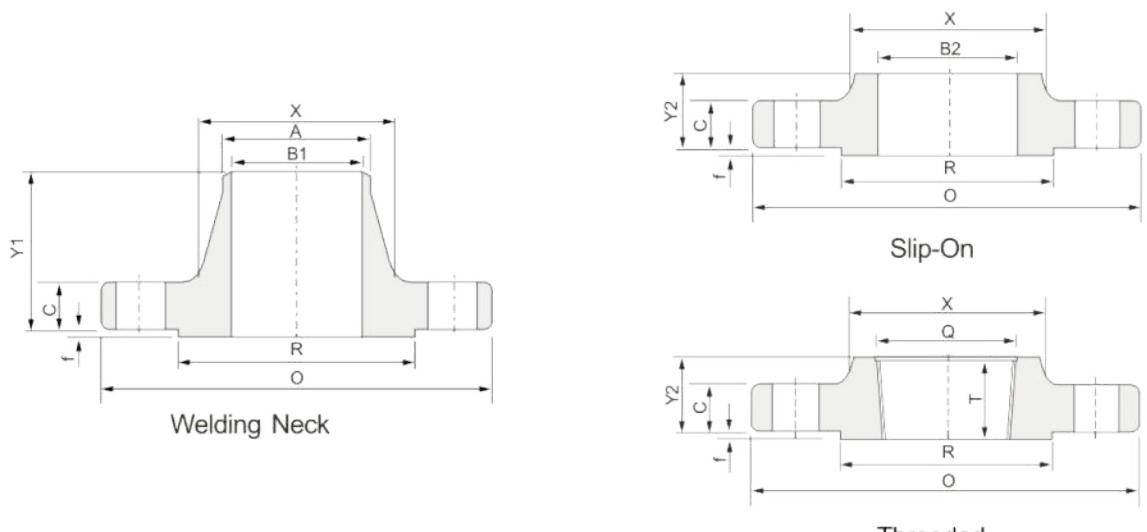
NOTES

- 1) Raised face height (f=2.0mm) not included in thickness (C) and length through hub (Y1, Y2)
- 2) For Slip-on, Threaded, Socket-Welding, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.



Dimensions in mm

Hub Diameter	Drilling			Approximate Weight								Nominal Pipe Size		
	Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt	Welding Neck		Slip on Threaded		Lap Joint		Blind				
				Kg	lb	Kg	lb	Kg	lb	Kg	lb			
30	60.3	15.9	4	0.51	1.10	0.47	1.00	0.51	1.00	0.47	1.00	0.47	1.00	1/2
38	69.9	15.9	4	0.73	1.60	0.58	1.30	0.64	1.40	0.63	1.40	0.59	1.30	3/4
49	79.4	15.9	4	1.70	2.40	0.86	1.90	0.93	1.80	0.94	2.10	0.87	1.90	1
59	88.9	15.9	4	1.40	3.10	1.08	2.40	1.16	2.00	1.23	2.70	1.11	2.40	1 ¹ /4
65	98.4	15.9	4	1.81	4.00	1.41	3.10	1.51	3.30	1.62	3.60	1.45	3.20	1 ¹ /2
78	120.7	19.1	4	2.59	5.70	2.26	5.00	2.38	5.20	2.64	5.80	2.33	5.00	2
90	139.7	19.1	4	4.28	9.40	3.43	7.60	3.60	7.90	4.06	9.00	3.55	7.80	2 ¹ /2
108	152.4	19.1	4	5.18	11.40	3.87	8.50	4.04	8.90	4.09	10.80	4.02	8.90	3
122	177.8	19.1	8	5.45	12.00	4.99	11.00	4.99	11.00	5.90	13	4.99	11.00	3 ¹ /2
135	190.5	19.1	8	73.2	16.10	5.75	12.70	5.96	13.00	7.41	16.30	5.99	13.20	4
164	215.9	22.2	8	8.91	19.60	6.22	13.70	6.44	14.00	8.76	19.30	6.68	14.70	5
192	241.3	22.2	8	11.26	24.80	7.38	16.30	7.59	16.70	11.31	24.90	7.99	17.60	6
246	298.5	22.2	8	17.68	39.00	12.36	27.30	12.66	27.90	19.92	43.90	13.29	29.30	8
305	362.0	25.4	12	24.29	54.70	17.10	37.70	16.78	37.00	29.39	64.80	19.50	43.00	10
365	431.8	25.4	12	38.98	85.90	27.68	61.00	28.30	36.40	43.70	96.30	29.30	64.00	12
400	476.3	28.6	12	51.71	114.00	35.20	77.60	41.50	91.50	59.42	140.00	38.56	85.00	14
457	539.8	28.6	16	64.41	142.00	42.18	93.00	52.98	116.80	77.11	170.00	44.49	98.00	16
505	577.9	31.8	16	74.84	165.00	49.71	109.60	59.00	130.00	94.80	209.00	54.43	120.00	18
559	635.0	31.8	20	89.36	197.00	65.50	140.00	72.12	150.00	123.38	272.00	70.31	155.00	20
663	749.3	34.9	20	119.66	263.80	90.50	199.50	99.02	218.30	188.24	415.00	95.25	210.00	24



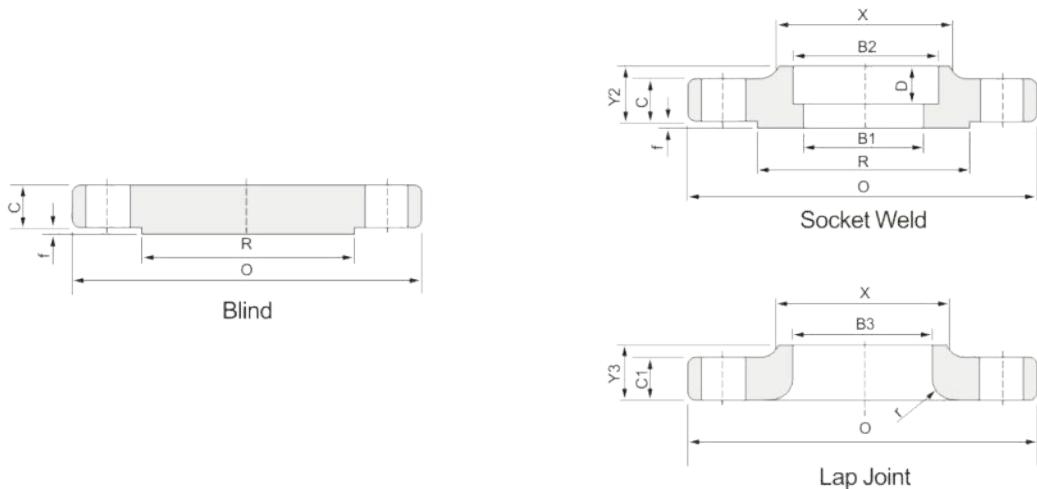
ASME B16.5 CLASS 300 PIPE FLANGES

Dimensions in mm

Nominal Pipe Size	Outside Diameter	Thicknesses	Thickness of Lap Joint	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore			Diameter Counter Bore Threaded	Length thru hub			Thread Length Threaded	Depth of Socket	Diameter Hub at Bevel	
						Welding Neck Socket Welding	Slip-On Socket Welding	Lap Joint		Welding Neck	Slip-on Threaded Socket Welding	Lap Joint				
O	C	C1	R	r	B1	B2	B3	Q	Y1	Y2	Y3	T	D	A		
1/2	95.0	12.7	14.3	34.9	3.0	15.8	22.2	22.9	23.6	51.0	21.0	22.0	16.0	10.0	21.3	
3/4	115.0	14.3	15.9	42.9	3.0	20.9	27.7	28.2	29.0	56.0	24.0	25.0	16.0	11.0	26.7	
1	125.0	15.9	17.5	50.8	3.0	26.6	34.5	34.9	35.8	60.0	25.0	27.0	18.0	13.0	33.4	
1 ¹ /4	135.0	17.5	19.1	63.5	5.0	35.1	43.2	43.7	44.4	64.0	25.0	27.0	21.0	14.0	42.2	
1 ¹ /2	155.0	19.1	20.7	73.0	6.0	40.9	49.5	50.0	50.3	67.0	29.0	30.0	23.0	16.0	48.3	
2	165.0	20.7	22.3	92.1	8.0	52.5	61.9	62.5	63.5	68.0	32.0	33.0	29.0	17.0	60.3	
2 ¹ /2	190.0	23.9	25.4	104.8	8.0	62.7	74.6	75.4	76.2	75.0	37.0	38.0	32.0	19.0	70.3	
3	210.0	27.0	28.6	127.0	10.0	77.9	90.7	91.4	92.2	78.0	41.0	43.0	32.0	21.0	88.9	
3 ¹ /2	230.0	28.6	30.2	139.7	10.0	90.1	103.4	104.1	104.9	79.0	43.0	44.0	37.0	-	101.6	
4	255.0	30.2	31.8	157.2	11.0	102.3	116.1	116.8	117.6	84.0	46.0	48.0	37.0	-	114.3	
5	280.0	33.4	35.0	185.7	11.0	128.2	143.8	144.4	144.4	97.0	49.0	51.0	43.0	-	141.3	
6	320.0	35.0	36.6	215.9	13.0	154.1	170.7	171.4	171.4	97.0	51.0	52.0	47.0	-	168.3	
8	380.0	39.7	41.3	266.9	13.0	202.7	221.5	222.2	222.2	110.0	60.0	62.0	51.0	-	219.1	
10	445.0	46.1	47.7	323.8	13.0	254.6	276.2	277.4	276.2	116.0	65.0	95.0	56.0	-	273.0	
12	520.0	49.3	50.8	381.0	13.0	Tolerances specified by purchaser	304.8	327.0	328.2	328.6	129.0	71.0	102.0	61.0	-	323.8
14	585.0	52.4	54.0	412.8	13.0		359.2	360.2	360.4	141.0	75.0	111.0	64.0	-	355.6	
16	650.0	55.6	57.2	469.9	13.0		410.5	411.2	411.2	144.0	81.0	121.0	69.0	-	406.4	
18	710.0	58.8	60.4	533.4	13.0		461.8	462.3	462.0	157.0	87.0	130.0	70.0	-	457	
20	775.0	62.0	63.5	584.2	13.0		513.1	514.4	512.8	160.0	94.0	140.0	74.0	-	508	
24	915.0	68.3	63.9	692.2	13.0		616.0	616.0	616.4	167.0	105.0	152.0	83.0	-	610	

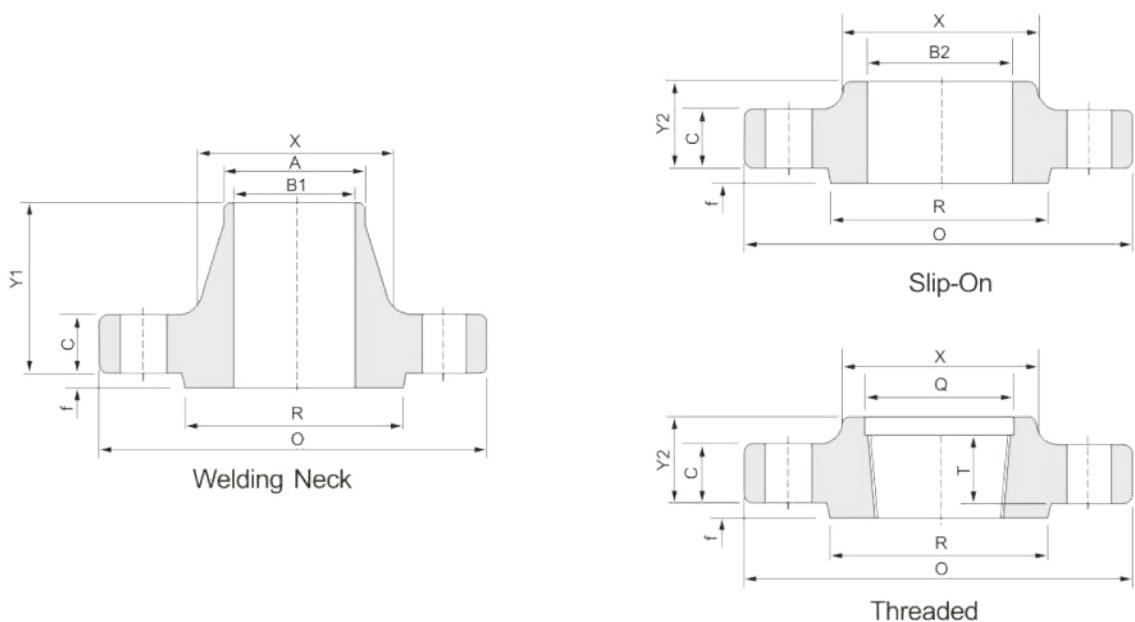
NOTES

- 1) Raised face height ($f=2.0\text{mm}$) not included in thickness (C) and length through hub (Y1, Y2)
- 2) For Slip-on, Threaded, Socket-Welding, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.



Dimensions in mm

Hub Diametre	Drilling			Approximate Weight								Nominal Pipe Size		
	Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt	Weld neck		Slip on Threaded		Lap Joint		Blind				
				Kg	lb	Kg	lb	Kg	lb	Kg	lb			
38.0	66.7	15.9	4	0.78	1.70	0.62	1.40	0.61	1.30	0.62	1.40	0.62	1.40	1/2
48.0	82.6	19.1	4	1.34	3.00	1.15	2.50	1.15	2.50	1.16	2.50	1.19	2.60	3/4
54.0	88.9	19.1	4	1.64	3.60	1.39	3.10	1.39	3.00	1.42	3.00	1.44	3.20	1
64.0	98.4	19.1	4	2.06	4.50	1.67	3.70	1.66	3.70	1.79	3.90	1.73	3.80	1 ¹ /4
70.0	114.3	22.2	4	3.06	6.70	2.53	5.60	2.52	5.60	2.68	5.90	2.62	5.80	1 ¹ /2
84.0	127.0	19.1	8	3.40	7.50	2.80	6.20	2.79	6.20	3.09	6.80	2.94	6.50	2
100.0	149.2	22.2	8	5.31	11.70	4.25	9.40	4.22	9.30	4.75	10.50	4.49	9.90	2 ¹ /2
117.0	168.3	22.2	8	7.32	16.10	5.81	12.80	5.78	12.70	6.79	14.90	6.20	13.70	3
133.0	184.2	22.2	8	8.17	18.00	7.72	17.00	7.72	17.00	9.53	21.00	-	-	3 ¹ /2
146.0	200.0	22.2	8	11.30	24.90	10.13	22.30	10.07	22.20	12.00	26.50	-	-	4
178.0	235.0	22.2	8	15.12	33.30	12.58	27.70	12.52	27.60	15.96	35.20	-	-	5
206.0	269.9	22.2	12	19.68	43.40	16.04	35.40	15.95	35.20	21.20	46.70	-	-	6
260.0	330.2	25.4	12	30.48	67.20	24.50	54	24.37	53.70	34.60	76.30	-	-	8
321.0	387.4	28.6	16	43.74	96.40	34.16	75.3	39.92	88.00	55.34	122.00	-	-	10
375.0	450.8	31.8	16	64.41	142.00	51.26	113	58.70	129.40	78.19	174.00	-	-	12
425.0	514.4	31.8	20	88.30	94.70	72.12	159	83.46	184.00	107.05	236.00	-	-	14
483.0	571.5	34.9	20	112.94	249.00	90.40	199.3	106.14	234.00	139.25	307.00	-	-	16
533.0	628.6	34.9	24	138.34	305.00	109.00	240.3	133.95	295.30	176.90	396.00	-	-	18
587.0	658.8	34.9	24	167.37	369.00	136.00	300	157.65	347.60	223.17	492.00	-	-	20
702.0	812.8	41.3	24	235.41	519.00	204.00	449.7	240.40	530.00	342.00	754.00	-	-	24



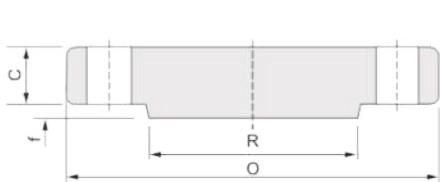
ASME B16.5 CLASS 400 PIPE FLANGES

Dimensions in mm

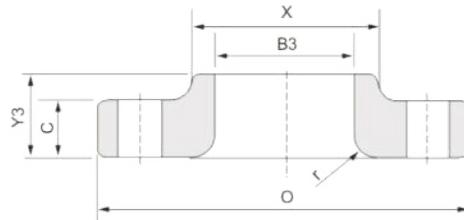
Nominal Pipe Size	Outside Diameter	Thickness	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore				Length thru hub			Thread Length Threaded Flange (Min)	Diameter Hub at Bevel
					Welding Neck Socket Welding	Slip-On	Lap Joint	Diameter Counter Bore Threaded	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint		
	O	C	R	r	B1	B2	B3	Q	Y1	Y2	Y3	T	A
1/2	95.0	14.3	34.9	3.0	To be specified by purchaser	22.2	22.9	23.6	52.0	22.0	22.0	16.0	21.3
3/4	115.0	15.9	42.9	3.0		27.7	28.2	29.0	57.0	25.0	25.0	16.0	26.7
1	125.0	17.5	50.8	3.0		34.5	34.9	35.8	62.0	27.0	27.0	18.0	33.4
1 ^{1/4}	135.0	20.7	63.5	5.0		43.2	43.7	44.4	67.0	29.0	29.0	21.0	42.2
1 ^{1/2}	155.0	22.3	73.0	6.0		49.5	50.0	50.3	70.0	32.0	32.0	23.0	48.3
2	165.0	25.4	92.1	8.0		61.9	62.5	63.5	73.0	37.0	37.0	29.0	60.3
2 ^{1/2}	190.0	28.6	104.8	8.0		74.6	75.4	76.2	79.0	41.0	41.0	32.0	73.0
3	210.0	31.8	127.0	10.0		90.7	91.4	92.2	83.0	46.0	46.0	32.0	88.9
3 ^{1/2}	230.0	35.0	139.7	10.0		103.4	104.1	104.9	86.0	49.0	49.0	37.0	101.6
4	255.0	35.0	157.2	11.0		116.1	116.8	117.6	89.0	51.0	51.0	37.0	114.3
5	280.0	38.1	185.7	11.0		143.8	144.4	144.4	102.0	54.0	54.0	43.0	141.3
6	320.0	41.3	215.9	13.0		170.7	171.4	171.4	103.0	57.0	57.0	47.0	168.3
8	380.0	47.7	266.9	13.0		221.5	222.2	222.2	117.0	68.0	68.0	51.0	219.1
10	445.0	54.0	323.8	13.0		276.2	277.4	276.2	124.0	73.0	102.0	56.0	273.0
12	520.0	57.2	381.0	13.0		327.0	328.2	328.6	137.0	79.0	108.0	61.0	323.8
14	585.0	60.4	412.8	13.0		359.2	360.2	360.4	149.0	84.0	117.0	64.0	355.6
16	650.0	63.5	469.9	13.0		410.5	411.2	411.2	152.0	94.0	127.0	69.0	406.4
18	710.0	66.7	533.4	13.0		461.8	462.3	462.0	165.0	98.0	137.0	70.0	457.0
20	775.0	69.9	584.2	13.0		513.1	514.4	512.8	168.0	102.0	146.0	74.0	508.0
24	915.0	76.2	692.2	13.0		616.0	616.0	614.4	175.0	114.0	159.0	83.0	610.0

NOTES

- 1) Raised face height ($f=7.0\text{mm}$) not included in thickness (C) and length through hub (Y1, Y2)
- 2) For Slip-on, Threaded, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.



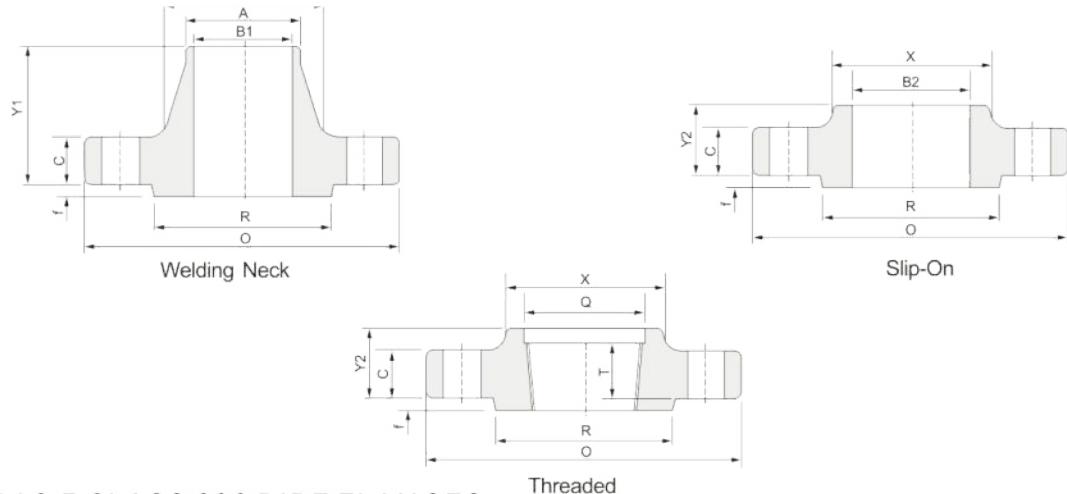
Blind



Lap Joint

Dimensions in mm

Hub Diametre	Drilling			Approximate Weight								Nominal Pipe Size
	Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt Holes	Welding Neck		Slip on Threaded		Lap Joint		Blind		
X	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb
38.0	66.7	15.9	4	0.90	2.00	0.91	2.00	0.80	1.80	0.91	2.00	1/2
48.0	82.6	19.1	4	1.59	3.50	1.40	3.00	1.36	3.00	1.40	3.00	3/4
54.0	88.9	19.1	4	1.90	4.00	1.70	3.70	1.59	3.50	1.81	4.00	1
64.0	98.4	19.1	4	2.49	5.50	2.27	5.00	2.04	4.50	2.40	5.30	1 ¹ /4
70.0	114.3	22.2	4	3.63	8.00	3.10	6.80	2.96	6.50	3.40	7.50	1 ¹ /2
84.0	127.0	19.1	8	4.54	10.00	3.63	8.00	3.63	8.00	4.40	9.70	2
100	149.2	22.2	8	6.35	14.00	5.44	12.00	4.99	11.00	6.80	15.00	21/2
117.0	168.3	22.2	8	8.10	18.00	7.26	16.00	6.35	14.00	8.90	19.60	3
133.0	184.2	25.4	8	11.80	26.00	9.53	21.00	9.08	20.00	13.17	29.00	3 ¹ /2
146.0	200.0	25.4	8	13.61	30.00	10.89	24.00	9.98	22.00	14.40	31.70	4
178.0	235.0	25.4	8	17.69	39.00	14.07	31.00	13.15	29.00	19.50	43.00	5
206.0	269.9	25.4	12	22.23	49.00	19.98	44.00	16.78	37.00	27.67	61.00	6
260.0	330.2	28.6	12	35.38	78.00	30.40	67.00	26.16	59.00	45.36	100.00	8
321.0	387.4	31.8	16	49.89	110.00	41.28	91.00	43.09	95.00	68.00	150.00	10
375.0	450.8	34.9	16	72.57	160.00	59.02	130.00	68.95	152.00	98.00	216.00	12
425.0	514.4	34.9	20	105.69	233.00	81.72	180.00	95.25	210.00	131.66	290.00	14
483.0	571.5	38.1	20	133.36	294.00	106.69	235.00	127.00	280.00	167.00	268.00	16
533.0	628.6	38.1	24	158.90	350.30	129.39	285.30	156.47	345.00	206.57	455.40	18
587.0	685.8	41.3	24	193.00	425.50	152.00	335.00	190.51	420.00	261.00	575.40	20
702.0	812.8	41.3	24	281.48	620.50	231.54	510.50	278.96	615.00	395.00	870.80	24



ASME B16.5 CLASS 600 PIPE FLANGES

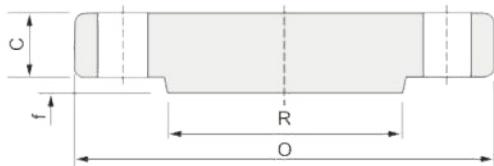
Dimensions in mm

Nominal Pipe Size	Outside Diameter	Thickness	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore				Length thru hub				Thread Length Thru Flange (Min)	Depth of Socket	Diameter Hub of Bevel
	O	C	R	r	B1	B2	B3	Q	Y1	Y2	Y3	T			
1/2	95.0	14.3	34.9	3		22.2	22.9	23.6	52	22.0	22.0	16.0	10.0	21.3	
3/4	115.0	15.9	42.9	3		27.7	28.2	29.0	57.0	25.0	25.0	16.0	11.0	26.7	
1	125.0	17.5	50.8	3		34.5	34.9	35.8	62.0	27.0	27.0	18.0	13.0	33.4	
1 ¹ /4	135.0	20.7	63.5	5		43.2	43.7	44.4	67.0	29.0	29.0	21.0	14.0	42.2	
1 ¹ /2	155.0	22.3	73	6		49.5	50.0	50.3	70.0	32.0	32.0	23.0	16.0	48.3	
2	165.0	25.4	92.1	8.0		61.9	62.5	63.5	73.0	37.0	37.0	29.0	17.0	60.3	
2 ¹ /2	190.0	28.6	104.8	8.0		74.6	75.4	76.2	79.0	41.0	41.0	32.0	19.0	73	
3	210.0	31.8	127.0	10.0		90.7	91.4	92.2	83.0	46.0	46.0	35.0	21.0	88.9	
3 ¹ /2	230.0	35.0	139.7	10.0		103.4	104.1	104.9	86.0	49.0	49.0	40.0	-	101.6	
4	275.0	38.1	157.2	11.0		116.1	116.8	117.6	102.0	54.0	54.9	42.0	-	114.3	
5	330.0	44.5	185.7	11.0		143.8	144.4	144.4	114.0	60.0	60.0	48.0	-	141.3	
6	355.0	47.7	215.9	13.0		170.7	171.4	171.4	117.0	67.0	67.0	51.0	-	168.3	
8	420.0	55.6	266.9	13.0		221.5	222.2	222.2	133.0	76.0	76.0	58.0	-	219.1	
10	510.0	63.5	323.8	13.0		276.2	277.4	276.2	152.0	86.0	111.0	66.0	-	273	
12	560.0	66.7	381.0	13.0		327.0	328.2	328.6	156.0	92.0	117.0	70.0	-	323.8	
14	605.0	69.9	412.8	13.0		359.2	360.2	360.4	165.0	94.0	127.0	74.0	-	355.6	
16	685.0	76.2	469.9	13.0		410.5	411.2	411.2	178.0	106.0	140.0	78.0	-	406.4	
18	745.0	82.6	533.4	13.0		461.8	462.3	462.0	184.0	117.0	152.0	80.0	-	457.0	
20	815.0	88.9	584.2	13.0		513.1	514.4	512.8	190.0	127.0	165.0	83.0	-	508.0	
24	940.0	101.6	692.2	13.0		616.0	616.0	614.4	203.0	140.0	184.0	93.0	-	610.0	

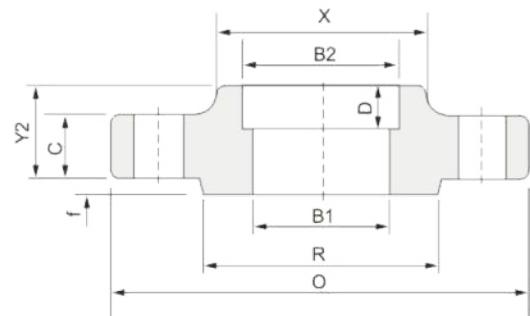
NOTES

- 1) Raised face height ($f=7.0\text{mm}$) not included in thickness (C) and length through hub (Y1, Y2)
- 2) For Slip-on, Threaded, Socket Welding, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.

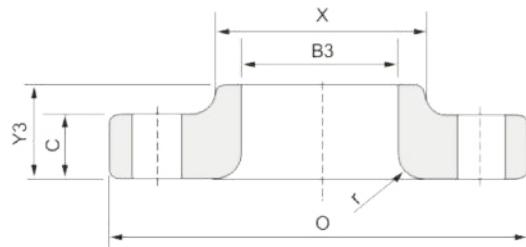
To be specified by purchaser



Blind



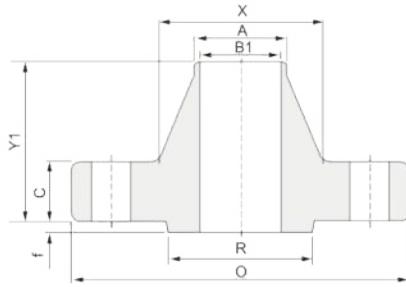
Socket Weld



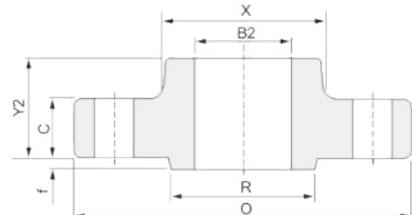
Lap Joint

Dimensions in mm

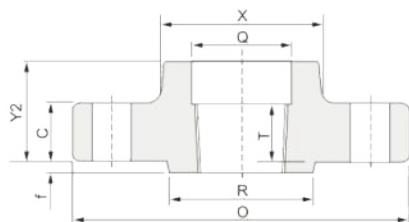
Hub Diameter	Drilling			Approximate Weight								Nominal Pipe Size	
	Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt	Weld neck		Slip on Threaded		Lap Joint		Blind			
X	Holes			Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb
38.0	66.7	15.9	4	0.90	2.00	0.91	2.00	0.80	1.80	0.91	2.00	0.91	2.00
48.0	82.6	19.1	4	1.59	3.50	1.40	3.00	1.36	3.00	1.40	3.00	1.36	3.00
54.0	88.9	19.1	4	1.90	4.00	1.70	3.70	1.59	3.50	1.81	4.00	1.81	4.00
64.0	98.4	19.1	4	2.94	5.50	2.27	5.00	2.04	4.50	2.40	5.30	2.60	5.70
70.0	114.3	22.2	4	3.63	8.00	3.10	6.80	2.96	6.50	3.40	7.50	3.18	7.00
84.0	127.0	19.1	8	4.54	10.00	3.63	8.00	3.63	8.00	4.40	9.70	3.90	8.60
100.0	149.2	22.2	8	6.35	14.00	5.44	12.00	4.99	11.00	6.80	15.00	5.90	13.0
117.0	168.3	22.2	8	8.10	18.00	7.26	16.00	6.35	14.00	8.90	19.60	7.40	16.30
133.0	184.2	25.4	8	11.8	26.00	9.53	21.00	9.08	20.00	13.17	29.00	-	-
152.0	215.9	25.4	8	16.78	37.00	14.97	33.00	14.60	31.00	18.60	41.00	-	-
189.0	266.7	28.6	8	30.87	68.00	28.50	62.80	27.50	60.60	30.84	68.00	-	-
222.0	292.1	28.6	12	36.77	80.00	36.32	80.00	35.38	78.00	38.00	83.80	-	-
273.0	349.2	31.8	12	50.8	112.00	44.00	97.00	50.80	112.00	62.20	137.00	-	-
343.0	431.8	34.9	16	86.26	190.00	76.20	168.00	74.00	163.00	102.00	224.90	-	-
400.0	489.0	34.9	20	102.51	226.00	97.52	215.00	108.56	240.00	132.00	291.00	-	-
432.0	527.0	31.8	20	121.56	268.00	102.00	224.80	111.00	244.70	158.00	348.30	-	-
495.0	603.2	41.3	20	177.06	290.00	149.82	330.20	165.71	365.30	224.73	495.40	-	-
546.0	654.0	44.5	20	215.65	475.40	180.10	412.30	294.00	427.70	285.00	628.30	-	-
610.0	723.9	44.5	24	267.86	590.50	231.54	510.50	258.78	570.50	365.00	804.70	-	-
718.0	838.2	50.8	24	372.00	820.00	330.00	725.50	362.00	798.00	533.45	1176.00	-	-
													24



Welding Neck



Slip-On



Threaded

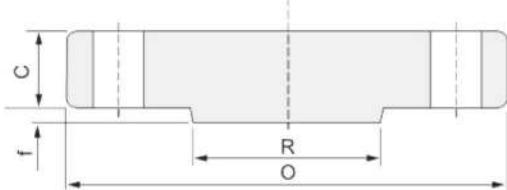
ASME B16.5 CLASS 900 PIPE FLANGES

Dimensions in mm

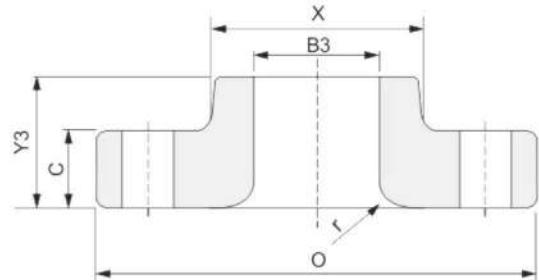
Nominal Pipe Size	Outside Diameter	Thickness	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore				Length thru hub			Thread Length Thread Flange (Min)	Diameter Hub at Bevel
					Welding Neck	Slip-On	Lap Joint	Diameter Counter Bore Threaded	Welding Neck	Slip-on Threaded	Lap Joint		
O	C	R	r	B1	B2	B3	Q	Y1	Y2	Y3	T	A	
1/2	120.0	22.3	34.9	3.0	To be specified by purchaser	22.2	22.9	23.6	60.0	32.0	32.0	23.0	21.3
3/4	130.0	25.4	42.9	3.0		27.7	28.2	29	70.0	35.0	35.0	26.0	26.7
1	150.0	28.6	50.8	3.0		34.5	34.9	35.8	73.0	41.0	41.0	29.0	33.4
1 1/4	160.0	28.6	63.5	5.0		43.2	43.7	44.4	73.0	41.0	41.0	31.0	42.2
1 1/2	180.0	31.8	73.0	6.0		49.5	50.0	50.3	83.0	44.0	44.0	32.0	48.3
2	215.0	38.1	92.1	8.0		61.9	62.5	63.5	102.0	57.0	57.0	39.0	60.3
2 1/2	245.0	41.3	104.8	8.0		74.6	75.4	76.2	105.0	64.0	64.0	48.0	73.0
3	240.0	38.1	127.0	10.0		90.7	91.4	92.2	102.0	54.0	54.0	42.0	88.9
4	290.0	44.5	157.2	11.0		116.1	116.8	117.6	114.0	70.0	70.0	48.0	114.3
5	350.0	50.8	185.7	11.0		143.8	144.4	144.4	127.0	79.0	79.0	54.0	141.3
6	380.0	55.6	215.9	13.0		170.7	171.4	171.4	140.0	86.0	86.0	58.0	168.3
8	470.0	63.5	266.9	13.0		221.5	222.2	222.2	162.0	102.0	114.0	64.0	219.1
10	545.0	69.9	323.8	13.0		276.2	277.4	276.2	184.0	108.0	127.0	72.0	273.0
12	610.0	79.4	381.0	13.0		327.0	328.2	328.6	200.0	117.0	143.0	77.0	323.8
14	640.0	85.8	412.8	13.0		359.2	360.2	360.4	213.0	130.0	156.0	83.0	355.6
16	705.0	88.9	469.9	13.0		410.5	411.2	411.2	216.0	133.0	165.0	86.0	406.4
18	785.0	101.6	533.4	13.0		461.8	462.3	462.0	229.0	152.0	190.0	89.0	457.0
20	855.0	108.0	584.2	13.0		513.1	514.4	512.8	248.0	159.0	210.0	93.0	508.0
24	1040.0	139.7	692.2	13.0		616.0	616.0	614.4	292.0	203.0	267.0	102.0	610.0

NOTES

- 1) Raised face height ($f=7.0\text{mm}$) not included in thickness (C) and length through hub (Y1, Y2)
- 2) For Slip-on, Threaded, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.



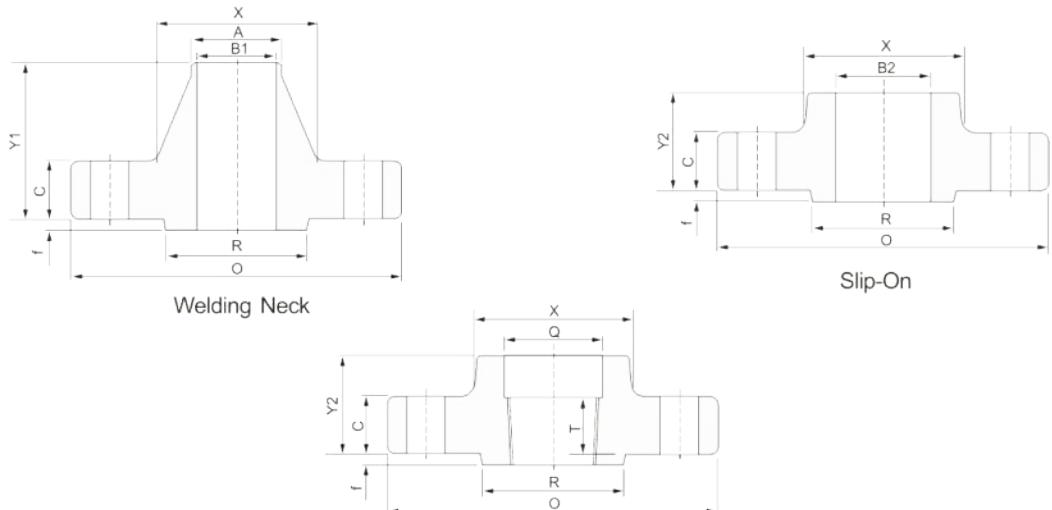
Blind



Lap Joint

Dimensions in mm

Hub Diametre	Drilling			Approximate Weight								Nominal Pipe Size
	Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt	Welding Neck		Slip on Threaded		Lap Joint		Blind		
X				Kg	lb	Kg	lb	Kg	lb	Kg	lb	
38.0	82.6	22.2	4	2.10	4.60	1.80	4.00	1.80	4.00	1.90	4.00	1/2
44.0	88.9	22.2	4	2.72	6.00	2.27	5.00	2.27	5.00	2.72	6.00	3/4
52.0	101.6	25.4	4	3.86	8.50	3.40	7.50	3.40	7.50	4.08	9.00	1
64.0	111.1	25.4	4	4.54	10.00	4.10	9.00	4.09	10.80	4.30	9.50	1 ¹ /4
70.0	123.8	28.6	4	5.90	13.00	5.45	12.00	5.40	11.90	5.90	13.00	1 ¹ /2
105.0	165.1	25.4	8	10.89	24.00	10.50	23.00	9.53	21.00	11.30	25.00	2
124.0	190.5	28.6	8	16.34	36.00	15.80	34.80	13.15	29.00	16.00	36.30	2 ¹ /2
127.0	190.5	25.4	8	15.00	33.00	11.80	26.00	11.34	25.00	13.17	29.00	3
159.0	235.0	31.8	8	23.13	51.00	23.20	48.50	22.60	48.50	24.50	54.00	4
190.0	279.4	34.9	8	38.50	84.90	37.65	83.00	36.74	81.00	39.46	87.00	5
235.0	317.5	31.8	12	49.89	110.00	48.30	106.30	47.50	104.70	51.50	113.50	6
298.0	393.7	38.1	12	79.45	175.00	75.00	166.30	86.00	189.60	59.00	106.20	8
368.0	469.9	38.1	16	118.04	260.00	111.13	245.00	125.64	277.00	131.51	290.00	10
419.0	533.4	38.1	20	157.00	346.00	146.00	321.00	167.00	368.00	187.00	412.30	12
451.0	558.8	41.3	20	181.60	400.60	172.36	380.00	180.07	397.00	224.07	494.00	14
508.0	616.0	44.5	20	224.73	495.50	192.95	425.40	211.10	465.40	272.40	600.50	16
565.0	685.8	50.8	20	308.72	680.60	272.4	600.50	295.10	650.60	385.90	850.80	18
622.0	749.3	54	20	376.82	830.70	331.42	730.60	367.74	810.70	488.00	1076.00	20
749.0	901.7	66.7	20	685.00	1510.00	632.00	1393.00	700.00	1543.00	905.00	1995.00	24



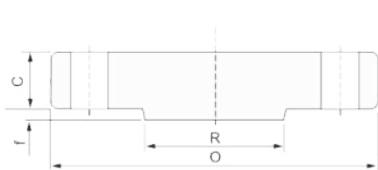
ASME B16.5 CLASS 1500 PIPE FLANGES Threaded

Dimensions in mm

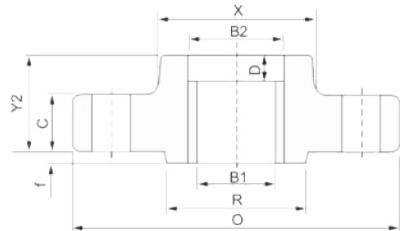
Nominal Pipe Size	Outside Diameter	Thicknesses	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore				Length thru hub			Thread Length Threaded Flange (Min)	Depth of Socket	Diameter Hub of Bevel
					Welding Neck Socket Welding	Slip-On Socket Welding	Lap Joint	Diameter Counter Bore Threaded	Welding Neck	Slip-on Threaded Socket Welding	Lap Joint			
	O	C	R	r	B1	B2	B3	Q	Y1	Y2	Y3	T	D	A
1/2	120.0	22.3	34.9	3.0		22.2	22.9	23.6	60.0	32.0	32.0	23.0	10.0	21.3
3/4	130.0	25.4	42.9	3.0		27.7	28.2	29.0	70.0	35.0	35.0	26.0	11.0	26.7
1	150.0	28.6	50.8	3.0		34.5	34.9	35.8	73.0	41.0	41.0	29.0	13.0	33.4
1 ¹ /4	160.0	28.6	63.5	5.0		43.2	43.7	44.4	73.0	41.0	41.0	31.0	14.0	42.2
1 ¹ /2	180.0	31.8	73.0	6.0		49.5	50.0	50.3	83.0	44.0	44.0	32.0	16.0	48.3
2	215.0	38.1	92.1	8.0		61.9	62.5	63.5	102.0	57.0	57.0	39.0	17.0	60.3
2 ¹ /2	245.0	41.3	104.8	8.0		74.6	75.4	76.2	105.0	64.0	64.0	48.0	19.0	73.0
3	265.0	47.7	127.0	10.0		-	91.4	-	117.0	-	73.0	-	-	88.9
4	310.0	54.0	157.2	11.0		-	116.8	-	124.0	-	90.0	-	-	114.3
5	375.0	73.0	185.7	11.0		-	144.4	-	156.0	-	105.0	-	-	141.3
6	395.0	82.6	215.9	13.0		-	171.4	-	171.0	-	119.0	-	-	168.3
8	485.0	92.1	266.9	13.0		-	222.2	-	213.0	-	143.0	-	-	219.1
10	585.0	108.0	323.8	13.0		-	277.4	-	254.0	-	178.0	-	-	273.0
12	675.0	123.9	381.0	13.0		-	328.2	-	283.0	-	219.0	-	-	323.8
14	750.0	133.4	412.8	13.0		-	360.2	-	298.0	-	241.0	-	-	355.6
16	825.0	146.1	469.9	13.0		-	411.2	-	311.0	-	160.0	-	-	406.4
18	915.0	162.0	533.4	13.0		-	462.3	-	327.0	-	276.0	-	-	457.0
20	985.0	177.8	584.2	13.0		-	514.4	-	256.0	-	292.0	-	-	508.0
24	1170.0	203.2	692.2	13.0		-	616.0	-	406.0	-	330.0	-	-	610.0

NOTES

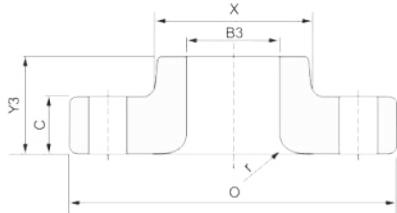
- 1) Raised face height ($f=7.0\text{mm}$) not included in thickness (C) and length through hub (Y_1, Y_2)
- 2) For Slip-on, Threaded, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.



Blind



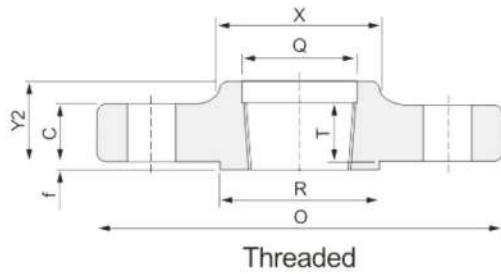
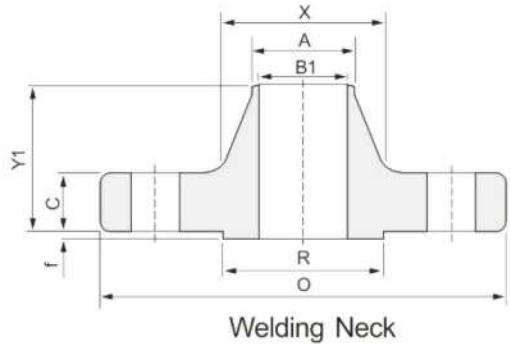
Socket Weld



Lap Joint

Dimensions in mm

Hub Diameter X	Drilling			Approximate Weight									Nominal Pipe Size	
	Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt	Weld neck		Slip on Threaded		Lap Joint		Blind		Socket Welding		
				Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	
38.0	82.6	22.2	4	2.21	4.60	1.80	4.00	1.80	4.0	1.90	4.00	1.81	4.00	1/2
44.0	88.9	22.2	4	2.72	6.00	2.27	5.00	2.27	5.0	2.72	600	2.81	6.20	3/4
52.0	101.6	25.4	4	3.86	8.50	3.40	7.50	3.40	7.5	4.08	9.00	3.61	8.00	1
64.0	111.1	25.4	4	4.54	10.00	4.10	9.00	4.09	10.8	4.30	9.50	4.99	11	1 ¹ /4
70.0	123.8	28.6	4	5.90	13.00	5.45	12.00	5.40	11.9	5.90	13.00	6.76	14.9	1 ¹ /2
105.0	165.1	25.4	8	10.89	24.00	10.5	23.00	9.53	21.0	11.30	25.00	10.89	24	2
124.0	190.5	28.6	8	16.34	36.00	15.8	34.80	13.15	29.0	16.00	35.30	16.34	36	2 ¹ /2
133.0	203.2	31.8	8	21.79	48.00	-	48.00	17.24	38.0	21.79	48.00	-	-	3
162.0	241.3	34.9	8	31.30	69.00	-	68.40	29.00	63.9	33.11	73.00	-	-	4
197.0	292.1	41.3	8	59.02	130.00	-	129.60	54.00	119.0	60.00	132.30	-	-	5
229.0	317.5	38.1	12	74.91	165.00	-	163.00	62.00	136.7	75.00	165.30	-	-	6
292.0	393.7	44.5	12	123.83	273.00	-	258.00	129.73	236.0	136.98	302.00	-	-	8
368.0	482.6	50.8	12	205.93	454.00	-	435.00	220.19	485.4	229.97	507.00	-	-	10
451.0	571.5	54.0	16	306.00	674.60	-	582.00	286.02	630.6	316.00	696.70	-	-	12
495.0	635.0	60.3	16	416.00	917.00	-	-	404.06	890.8	421.00	928.00	-	-	14
552.0	704.8	66.7	16	567.50	1250.00	-	-	522.10	1151.0	559.00	1232.70	-	-	16
597.0	774.7	73.0	16	736.00	1622.00	-	-	669.65	1476.3	761.00	1677.70	-	-	18
641.0	831.8	79.4	16	929.00	2048.00	-	-	805.85	1776.6	967.00	2131.80	-	-	20
762.0	990.6	92.1	16	1504.00	3315.00	-	-	1285.55	2834.0	1568.00	3456.80	-	-	24



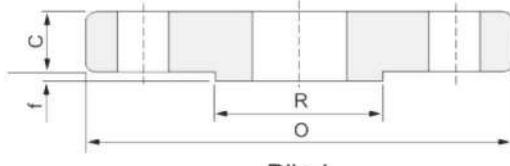
ASME B16.5 CLASS 2500 PIPE FLANGES

Dimensions in mm

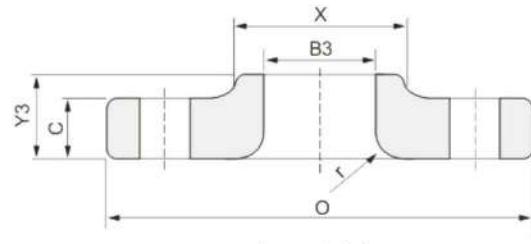
Nominal Pipe Size	Outside Diameter	Thickness	Raised Face Diameter	Corner Radius of Bore of Lap Joint	Bore			Length thru hub			Thread Length Threaded (Min)	Diameter Hub at Bevel
					Welding Neck	Lap Joint	Diameter Counter Bore Threaded	Welding Neck	Theaded	Lap Joint		
	O	C	R	r	B1	B3	Q	Y1	Y2	Y3	T	A
1/2	135.0	30.2	34.9	3.0	To be specified by purchaser	22.9	23.6	73.0	40.0	40.0	29.0	21.3
3/4	140.0	31.8	42.9	3.0		28.2	29.0	79.0	43.0	43.0	32.0	26.7
1	160.0	35.0	50.8	3.0		34.9	35.8	89.0	48.0	48.0	35.0	33.4
1 ¹ /4	185.0	38.1	63.5	5.0		43.7	44.4	95.0	52.0	52.0	39.0	42.2
1 ¹ /2	205.0	44.5	73.0	6.0		50.0	50.3	110.0	60.0	60.0	45.0	48.3
2	235.0	50.9	92.1	8.0		62.5	63.5	127.0	70.0	70.0	51.0	60.3
2 ¹ /2	265.0	57.2	104.8	8.0		75.4	76.2	143.0	79.0	79.0	58.0	73.0
3	305.0	66.7	127.0	10.0		91.4	-	168.0	-	92.0	-	88.9
4	355.0	76.2	157.2	11.0		116.8	-	190.0	-	108.0	-	114.3
5	420.0	92.1	185.7	11.0		144.4	-	229.0	-	130.0	-	141.3
6	485.0	108.0	215.9	13.0		171.4	-	273.0	-	152.0	-	168.3
8	550.0	127.0	266.9	13.0		222.2	-	318.0	-	178.0	-	219.1
10	675.0	165.1	323.8	13.0		277.4	-	419.0	-	229.0	-	273.0
12	760.0	184.2	381.0	13.0		328.2	-	464.0	-	254.0	-	323.8

NOTES

- 1) Raised face height ($f=7.0\text{mm}$) not included in thickness (C) and length through hub (Y1, Y2)
- 2) For Slip-on, Threaded, lap Joint flanges, the hub shall be tapered 7° max. or vertical from base to top.
- 3) Blind Flanges may be made with the same hub as that used for Slip-On flanges or without hub.



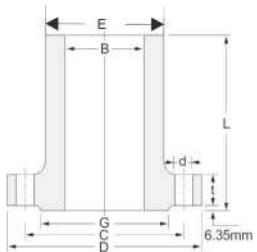
Blind



Lap Joint

Dimensions in mm

Hub Diameter	Drilling			Approximate Weight								Nominal Pipe Size	
	Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt	Welding Neck		Threaded		Lap Joint		Blind			
				Kg	lb	Kg	lb	Kg	lb	Kg	lb		
43.0	88.9	22.2	4	3.18	7.00	3.18	7.00	3.00	6.00	3.18	7.00	1/2	
51.0	95.2	22.2	4	4.08	9.00	4.08	9.00	3.63	8.00	4.54	10.00	3/4	
57.0	108.0	25.4	4	5.45	12.00	5.44	12.00	4.99	11.00	5.44	12.00	1	
73.0	130.2	28.6	4	9.07	20.00	8.16	18.00	7.26	16.00	8.16	18.00	1 ¹ /4	
79.0	146.0	31.8	4	11.35	25.00	11.00	24.30	9.99	22.00	10.44	23.00	1 ¹ /2	
95.0	171.4	28.6	8	19.07	42.00	17.25	38.00	16.80	37.00	17.71	39.00	2	
114.0	196.8	31.8	8	23.61	52.00	24.97	55.00	24.06	53.00	25.42	56.00	2 ¹ /2	
133.0	228.6	34.9	8	42.68	94.00	-	-	36.32	80.00	39.04	86.00	3	
165.0	273.0	41.3	8	64.00	141.00	-	-	54.48	120.00	60.38	133.00	4	
203.0	323.8	47.6	8	110.68	244.00	-	-	92.53	204.00	101.15	223.00	5	
235.0	368.3	54.0	8	176.46	378.00	-	-	143.01	315.30	156.63	345.00	6	
305.0	438.2	54.0	12	261.27	576.00	-	-	213.38	470.40	240.62	530.60	8	
375.0	539.8	66.7	12	484.43	1068.00	-	-	408.60	900.80	465.36	1026.00	10	
441.0	619.1	73.0	12	692.35	1526.30	-	-	572.95	1263.30	664.06	1464.00	12	



LONG WELDING NECK FLANGES CLASS 400

Unit:mm

Nominal Pipe Size	Outside Diameter	O.D.of Raised Face	Hub Diameter at Bevel	Diameter of Bore	Thickness of Flange Min	Length Through Hub	DRILLING		
							Diameter of Bolt Circle	Number of Holes	Diameter of Holes
	D	G	E	B	t	L	C	d	
1									
1 ¹ /4									
1 ¹ /2									
2									
2 ¹ /2									
3									
3 ¹ /2									
4	254	157.2	146.1	101.6	35.1	304.8	200.2	8	25.4
5	279	185.7	177.8	127.0	38.1	304.8	235.0	12	25.4
6	318	215.9	206.2	152.4	41.1	304.8	269.7	12	25.4
8	381	269.7	260.4	203.2	47.8	304.8	330.2	12	28.4
10	445	323.9	320.5	254.0	53.8	304.8	387.4	16	31.8
12	521	381.0	347.7	304.8	57.2	304.8	450.9	16	35.1
14	584	412.8	425.5	355.6	60.5	304.8	514.4	20	35.1
16	648	469.9	482.6	406.4	63.5	304.8	571.5	24	38.1
18	711	533.4	533.4	457.2	66.5	304.8	628.7	24	38.1
20	775	584.2	587.2	508.0	69.9	304.8	685.8	24	41.1
24	914	692.2	701.5	609.6	76.2	304.8	812.8	24	47.8

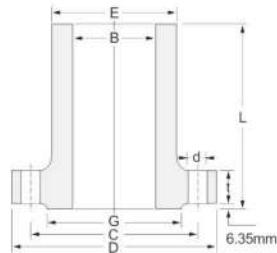
LONG WELDING NECK FLANGES CLASS 600

Unit:mm

Nominal Pipe Size	Outside Diameter	O.D.of Raised Face	Hub Diameter at Bevel	Diameter of Bore	Thickness of Flange Min	Length Through Hub	DRILLING		
							Diameter of Bolt Circle	Number of Holes	Diameter of Holes
	D	G	E	B	t	L	C	d	
1	124	50.8	53.8	25.4	17.5	228.6	88.9	4	19.1
1 ¹ /4	133	63.5	63.5	31.8	20.6	228.6	98.6	4	19.1
1 ¹ /2	155	73.2	69.9	38.1	22.4	228.6	114.3	4	22.4
2	165	91.9	84.1	50.8	25.4	228.6	127.0	8	19.1
2 ¹ /2	191	104.6	100.1	63.5	28.4	228.6	149.4	8	22.4
3	210	127.0	117.3	76.2	31.8	228.6	168.1	8	22.4
3 ¹ /2	229	139.7	133.4	88.9	35.1	228.6	184.2	8	25.4
4	273	157.2	152.4	101.6	38.1	304.8	215.9	8	25.4
5	330	185.7	190.5	127.0	44.5	304.8	266.7	8	28.4
6	356	215.9	222.3	152.4	47.8	304.8	292.1	12	28.4
8	419	269.7	273.1	203.2	55.6	304.8	349.3	12	31.8
10	508	323.9	342.9	254.0	63.5	304.8	431.8	16	35.1
12	559	381.0	400.1	304.8	66.5	304.8	489.0	20	35.1
14	603	412.8	431.8	355.6	69.9	304.8	527.1	20	38.1
16	686	469.9	495.3	406.4	76.2	304.8	603.3	20	41.1
18	743	533.4	546.1	457.2	82.6	304.8	654.1	20	44.5
20	813	584.2	609.6	508.0	88.9	304.8	723.9	24	44.5
24	940	692.2	717.6	609.6	101.6	304.8	838.2	24	50.8

NOTES

- 1) Bore (B) is the same as noMinal pipe size.
- 2) Welding necks longer than listed are available in all size on special order.
- 3) This dimensional specification is in accordance with ANSI B16.5 Edd. 1997 which is still commonly used at the market. The latest version is ANSI B16.5 Edd. 2003



LONG WELDING NECK FLANGES CLASS 900

Unit:mm

No Nominal Pipe Size	Outside Diameter D	O.D. of Raised Face G	Hub Diameter at Bevel E	Diameter of Bore B	Thickness of Flange Min t	Length Through Hub L	DRILLING		
							Diameter of Bolt Circle C	Number of Holes	Diameter of Holes d
1	Use Class 1500 dimensions these sizes.								
1 ¹ /4									
1 ¹ /2									
2									
2 ¹ /2									
3	241	127.0	127.0	76.2	38.1	304.8	190.5	8	25.4
4 ¹ /2	292	157.2	155.8	101.6	44.5	304.8	235.0	8	31.8
5	349	185.7	190.5	127.0	50.8	304.8	279.4	8	35.1
6	381	215.9	235.0	152.4	55.6	304.8	317.5	12	31.8
8	470	269.7	298.5	203.2	63.5	304.8	393.7	12	38.1
10	546	323.9	368.3	254.0	69.9	304.8	469.9	16	38.1
12	610	381.0	419.1	304.8	79.2	406.4	533.4	20	38.1
14	641	412.8	450.9	355.6	85.9	406.4	558.8	20	41.1
16	705	469.9	508.0	406.4	88.9	To be specified by purchaser	616.0	20	44.5
18	787	533.4	565.2	557.2	101.6		685.8	20	50.8
20	857	584.2	622.3	508.0	108.0		749.3	20	53.8
24	1040	692.2	749.3	609.6	139.7		901.7	20	66.5

NOTES

- 1) Bore (B) is the same as noNominal pipe size.
- 2) Welding necks longer than listed are available in all size on special order.
- 3) This dimensional specification is in accordance with ANSI B16.5 Edd. 1997 which is still commonly used at the market. The latest version is ANSI B16.5 Edd. 2003

LONG WELDING NECK FLANGES CLASS 1500

Unit:mm

Nominal Pipe Size	Outside Diameter	O.D.of Raised Face	Hub Diameter at Bevel	Diameter of Bore	Thickness of Flange Min	Length Through Hub	DRILLING		
	D	G	E	B	t	L	Diameter of Bolt Circle	Number of Holes	Diameter of Holes
1	149	50.8	52.3	25.4	28.4	228.6	101.6	4	25.4
1 ¹ / ₄	159	63.5	63.5	31.8	28.4	228.6	111.3	4	25.4
1 ¹ / ₂	178	73.2	69.9	38.1	31.8	228.6	124.0	4	28.4
2	216	91.9	104.6	50.8	38.1	228.6	165.1	8	25.4
2 ¹ / ₂	244	104.6	124.0	63.5	41.1	304.8	190.5	8	28.4
3	267	127.0	133.4	76.2	47.8	304.8	203.2	8	31.8
4	311	157.2	162.1	101.6	53.8	304.8	241.3	8	35.1
5	375	185.7	196.9	127.0	73.2	304.8	292.1	8	41.1
6	394	215.9	228.6	152.4	82.6	304.8	317.5	12	38.1
8	483	269.7	292.1	203.2	91.9	304.8	393.7	12	44.5
10	584	323.9	368.3	254.0	108.0	406.4	482.6	12	50.8
12	673	381.0	450.9	304.8	124.0	406.4	571.5	16	53.8
14	749	412.8	495.3	355.6	133.4	To be specified by purchaser	635.0	16	60.5
16	826	469.9	552.5	406.4	146.1		704.9	16	66.5
18	914	533.4	596.9	457.2	162.1		774.7	16	73.2
20	984	584.2	641.4	508.0	177.8		831.9	16	79.2
24	1168	692.2	762.0	609.6	203.2		990.6	16	91.9

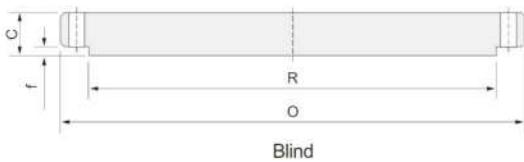
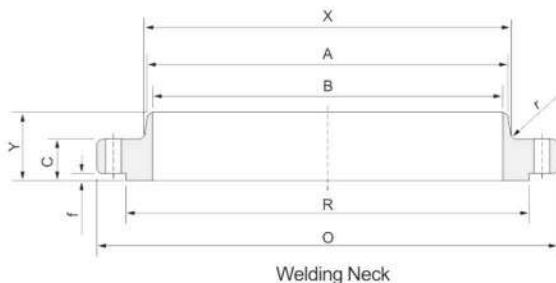
LONG WELDING NECK FLANGES CLASS 2500

Unit:mm

Nominal Pipe Size	Outside Diameter	O.D.of Raised Face	Hub Diameter at Bevel	Diameter of Bore	Thickness of Flange Min	Length Through Hub	DRILLING		
	D	G	E	B	t	L	C	Diameter of Bolt Circle	Number of Holes
1	159	50.8	57.2	25.4	35.1	228.6	108.0	4	25.4
1 ₁ / ₄	184	63.5	73.2	31.8	38.1	228.6	130.0	4	28.4
1 ₁ / ₂	203	73.2	79.2	38.1	44.5	228.6	146.1	4	31.8
2	235	91.9	95.3	50.8	50.8	228.6	171.5	4	28.4
2 ₁ / ₂	267	104.6	114.3	63.5	57.2	228.6	196.9	8	31.8
3	305	127.0	133.4	76.2	66.5	304.8	228.6	8	35.1
4	356	157.2	165.1	101.6	76.2	304.8	273.1	8	41.1
5	419	185.7	203.2	127.0	91.9	304.8	323.9	8	47.8
6	483	215.9	235.0	152.4	108.0	304.8	368.3	8	53.8
8	552	269.7	304.8	203.2	127.0	304.8	438.2	12	53.8
10	673	323.9	374.7	254.0	165.1	406.4	539.8	12	66.5
12	762	381.0	441.5	304.8	184.2	406.4	619.3	16	73.2

NOTES

- 1) Bore (B) is the same as noMinal pipe size.
 - 2) Welding necks longer than listed are available in all size on special order.
 - 3) This dimensional specification is in accordance with ANSI B16.5 Edd. 1997 which is still commonly used at the market.
- The latest version is ANSI B16.5 Edd. 2003



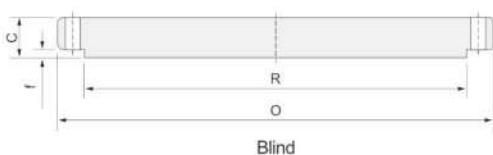
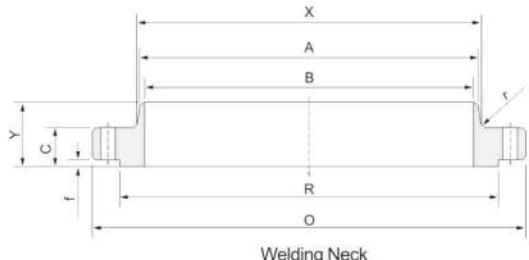
ASME B 16.47 SERIES B CLASS 75

Unit:mm

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Fillet Radius Minimum	Bore	Length Thru Hub	Diameter Hub at Bevel	Hub Diameter	Drilling			Approx. Weight						
		Welding Neck	blind							Y	A	X	Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt	Welding Neck		Blind	
		O	C										B	Kg	Ib	Kg	Ib		
26	762.0	33.3	33.3	704.9	7.9		58.7	661.9	676.1	723.9	19.1	36	40.5	89.40	116.7	257.41			
28	812.8	33.3	33.3	755.7	7.9		62.0	712.7	726.9	774.9	19.1	40	44.4	97.98	133.0	293.16			
30	863.6	33.3	33.3	806.5	7.9		65.0	763.5	777.7	825.5	19.1	44	48.4	106.71	150.2	331.25			
32	914.4	35.1	36.6	857.3	7.9		69.9	814.3	828.5	876.3	19.1	48	54.7	120.56	185.3	408.66			
34	965.2	35.1	38.1	908.1	7.9		73.2	865.1	879.3	927.1	19.1	52	59.1	130.35	215.3	474.73			
36	1033.5	36.6	42.4	965.2	9.7		85.9	915.9	935.0	992.1	22.4	40	78.2	172.38	275.2	606.73			
38	1084.3	38.1	44.5	1016.0	9.7		88.9	966.7	985.8	1042.9	22.4	40	85.9	189.34	318.0	710.22			
40	1135.1	38.1	44.5	1066.8	9.7		91.9	1017.5	1036.6	1093.7	22.4	44	91.4	201.63	348.6	768.56			
42	1185.9	39.6	47.8	1117.6	9.7		95.3	1068.3	1087.4	1144.5	22.4	48	99.4	219.10	408.8	901.45			
44	1251	42.9	49.3	1174.8	9.7		104.6	1119.1	1140.0	1203.5	25.4	36	123.9	273.23	470.3	1037.11			
46	1301.8	44.5	50.8	1225.6	9.7		108.0	1169.9	1190.8	1254.3	25.4	40	133.4	294.10	525.0	1157.56			
48	1352.6	46.0	53.8	1276.4	9.7		111.3	1220.7	1241.6	1305.1	25.4	44	143.2	315.73	600.7	1324.52			
50	1403.4	47.8	55.4	1327.2	9.7		115.8	1271.5	1293.9	1355.9	25.4	44	152.8	323.70	665.8	1454.71			
52	1457.5	47.8	57.2	1378.0	9.7		120.7	1322.3	1344.7	1409.7	25.4	48	167.5	369.44	741.1	1634.04			
54	1508.3	49.3	60.5	1428.8	9.7		125.5	1373.1	1397	1460.5	25.4	48	181.4	399.96	840.4	1853.05			
56	1574.8	50.8	62	1485.9	11.2		134.9	1423.9	1450.8	1521.0	28.4	40	215.0	474.15	939.6	2071.91			
58	1625.6	52.3	63.5	1536.7	11.2		138.2	1474.7	1501.6	1571.8	28.4	44	228.0	502.78	1025.0	2261.32			
60	1676.4	55.6	66.5	1587.5	11.2		144.5	1525.5	1552.4	1622.6	28.4	44	249.2	549.53	1144.0	2522.59			

NOTES

Raised Face height (f) will be furnished with 1.6 mm and, which is included in Thickness (C) and Length Through Hub (Y)



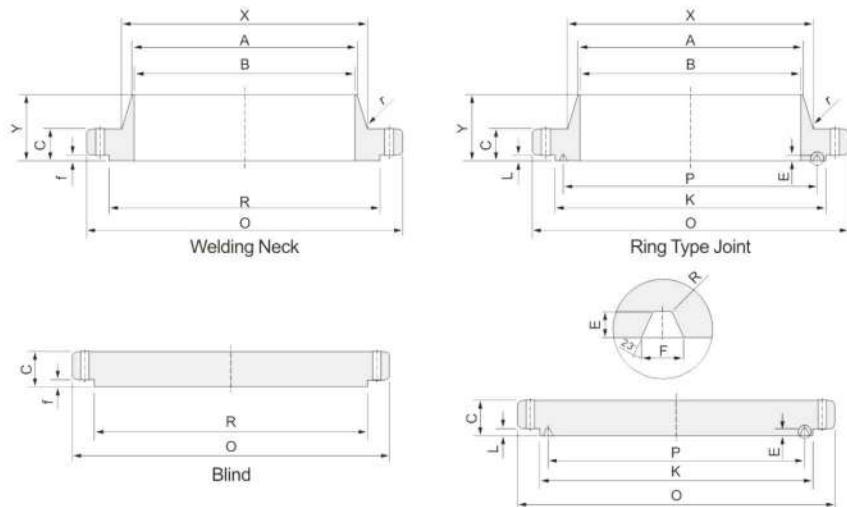
ASME B 16.47 SERIES B CLASS 150

Unit:mm

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length Thru Hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx Weight			
		Welding Neck	Blind							Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck	Blind		
		O	C	R	X	B	Y	A	r	Kg	lb	Kg	lb			
26	785.9	41.1	44.5	711.2	684.3	To be specified by purchaser	88.9	661.9	9.7	744.5	22.4	36	63.2	139.42	164.7	363.14
28	836.7	44.5	47.8	762.0	735.1		96.3	712.7	9.7	795.3	22.4	40	72.9	160.77	200.8	442.70
30	887.5	44.5	50.8	812.8	787.4		100.1	763.5	9.7	864.1	22.4	44	79.8	175.9	240.6	530.47
32	941.3	46.0	53.8	863.6	839.7		108.0	814.3	9.7	900.2	22.4	48	91.4	201.46	287.2	633.28
34	1004.8	49.3	57.2	920.8	892.0		110.2	865.1	9.7	957.3	25.4	40	109.7	241.79	347.9	767.06
36	1057.1	52.3	58.7	971.6	944.6		117.3	915.9	9.7	1009.7	25.4	44	124.5	274.49	395.5	871.97
38	1124.0	53.8	63.5	1022.4	997.0		124.0	968.2	9.7	1069.8	28.4	40	146.3	322.69	483.5	1066.17
40	1174.8	55.6	66.5	1079.5	1049.3		128.5	1019	9.7	1120.6	28.4	44	159.3	351.35	553.8	1221.05
42	1225.6	58.7	68.3	1130.3	1101.9		133.4	1069.8	11.2	1171.4	28.4	48	175.3	386.58	618.9	1364.63
44	1276.4	60.5	71.4	1181.1	1152.7		136.7	1120.6	11.2	1222.2	28.4	52	187.9	414.41	701.4	1546.48
46	1341.4	62.0	74.7	1234.9	1205.0		144.5	1171.4	11.2	1284.2	31.8	40	220.3	485.85	813.2	1793.01
48	1392.2	65.0	77.7	1289.1	1257.3		149.4	1222.2	11.2	1335	31.8	44	239.5	825.21	911.5	2009.79
50	1443.0	68.3	80.8	1339.9	1308.1		153.9	1273.0	11.2	1385.8	31.8	48	258.9	570.77	1017.4	2243.34
52	1493.8	69.9	84.1	1390.7	1360.4		157.2	1323.8	11.2	1436.6	31.8	52	274.9	606.17	1134.7	2502.04
54	1549.4	71.4	87.4	1441.5	1412.7		162.1	1374.6	11.2	1492.3	31.8	56	299.1	659.54	1268.7	2797.55
56	1600.2	73.2	90.4	1492.3	1465.3		166.6	1425.4	14.2	1543.1	31.8	60	318.5	702.35	1400.5	3088.10
58	1674.9	74.7	93.5	1543.1	1516.1		174.8	1476.2	14.2	1611.4	35.1	48	377.9	833.24	1589.6	3505.06
60	1725.7	76.2	96.8	1600.2	1570.0		179.3	1527.0	14.2	1662.2	35.1	52	401.1	884.40	1746.7	3851.56

NOTES

Raised Face height (f) will be furnished with 1.6 mm and, which is included in Thickness (C) and Length Through Hub (Y)



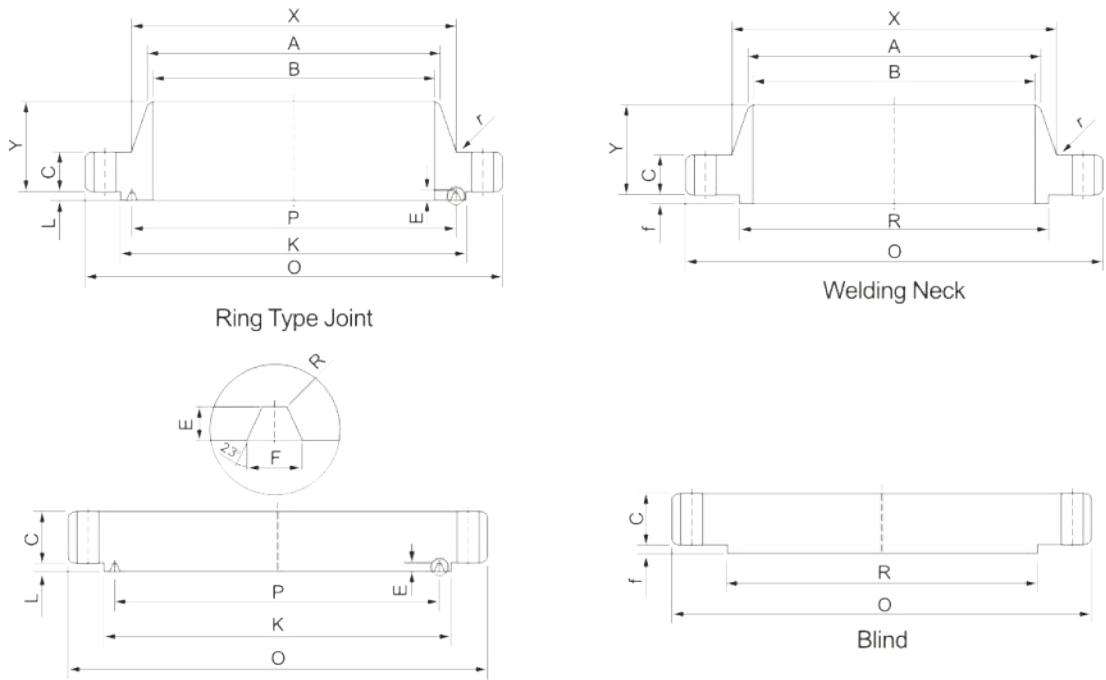
ASME B 16.47 SERIES B CLASS 300

Unit:mm

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length thru hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck	blind							Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck	Blind		
		O	C							R	x	B	Y	A	r	Kg
26	866.6	88.9	88.9	736.6	701.5		144.5	665.2	14.2	803.1	35.1	32	185.0	407.87	390.7	861.57
28	920.8	88.9	88.9	787.4	755.7		149.4	716.0	14.2	857.3	35.1	36	202.5	446.45	441.2	972.83
30	990.6	93.7	93.7	844.6	812.8		158.0	768.4	14.2	920.8	38.1	36	246.2	542.87	537.9	1185.97
32	1054.1	103.1	103.1	901.7	863.6		168.1	819.2	15.7	977.9	41.1	32	302.1	666.08	673.5	1485.09
34	1107.9	103.1	103.1	952.5	917.4		173.0	870.0	15.7	1031.7	41.1	36	324.4	715.37	743.5	1639.36
36	1171.4	103.1	103.1	1009.7	965.2		180.8	920.8	15.7	1089.2	44.5	32	363.9	802.44	834.3	1839.59
38	1222.2	111.3	111.3	1060.5	1016.0		192.0	971.6	15.7	1140	44.5	36	407.4	898.29	978.6	2157.8
40	1273.0	115.8	115.8	1114.6	1066.8		198.4	1022.4	15.7	1190.8	44.5	40	440.3	970.85	1104.3	2434.91
42	1333.5	119.1	119.1	1168.4	1117.6		204.7	1074.7	15.7	1244.6	47.8	36	489.9	1080.12	1249.7	2755.49
44	1384.3	127.0	127.0	1219.2	1173.2		214.4	1125.5	15.7	1295.4	47.8	40	541.1	1193.08	1433.9	3161.78
46	1460.5	128.5	130.0	1270.0	1228.9		222.3	1176.3	15.7	1365.3	50.8	36	637.0	1404.54	1641	3618.41
48	1511.3	128.5	134.9	1327.2	1277.9		223.8	1227.1	15.7	1416.1	50.8	40	656.8	1448.3	1819.7	4012.5
50	1526.1	138.2	139.7	1378.0	1330.5		235.0	1277.9	15.7	1466.9	50.8	44	724.6	1597.77	2011.2	4434.67
52	1612.9	142.7	144.3	1428.8	1382.8		242.8	1328.7	15.7	1517.7	50.8	48	772.0	1702.19	2212.1	4877.68
54	1673.4	136.7	149.4	1479.6	1435.1		239.8	1379.5	15.7	1577.8	50.8	48	803.4	1771.51	2473.6	5454.33
56	1765.3	153.9	157.0	1536.7	1493.8		268.2	1430.3	17.5	1651.0	60.5	36	1075.2	2370.79	2899.0	6392.33
58	1827.3	153.9	162.1	1593.7	1574.9		274.6	1481.1	17.5	1713.0	60.5	40	1132.1	2496.32	3184.6	7022.00
60	1878.1	150.9	166.6	1651.0	1598.7		271.5	1531.9	17.5	1763.8	60.5	40	1168.8	2577.15	3486.7	7688.18

NOTES

Raised Face height (f) will be furnished with 1.6 mm and, which is included in Thickness (C) and Length Through Hub (Y)

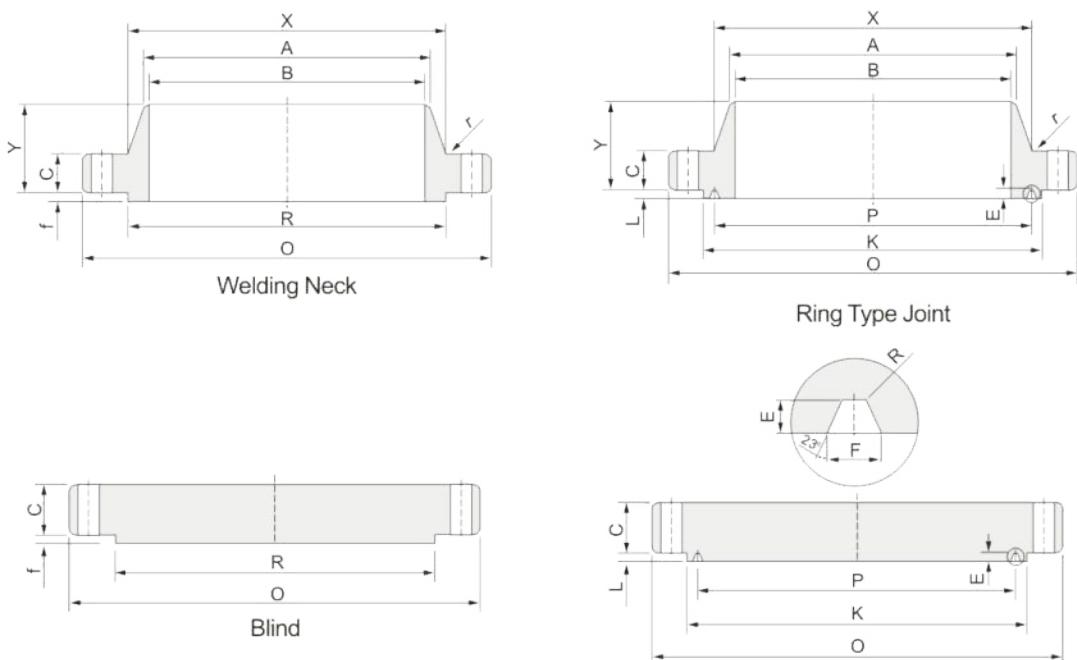


ASME B 16.47 SERIES B CLASS 400

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diametre	Bore	Length thru hub	Diameter Hub at Bevel	Fillet Rodius Minimum	Drilling			Approx. Weight			
		Welding Neck	blind							Bolt Circle Diameter Holes	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck		Blind	
		O	C							R	X	B	Y	A	r	Kg
26	850.9	88.9	88.9	711.2	688.8		149.4	660.4	11.2	781.1	38.1	28	177.9	392.29	396.6	874.00
28	914.4	95.3	95.3	762.0	739.6		158.8	711.2	12.7	838.2	41.1	24	218.4	481.54	492.6	1086.00
30	971.6	101.6	101.6	819.2	793.8		169.9	762.0	12.7	895.4	41.1	28	254.5	561.13	591.1	1303.00
32	1035.1	108.0	108.0	873.3	844.6		179.3	812.8	12.7	952.5	44.5	28	300.2	661.88	710.0	1566.00
34	1085.9	111.3	111.3	927.1	898.7		187.5	863.6	14.2	1003.3	44.5	32	326.1	719.05	798.2	1760.00
36	1155.7	119.1	119.1	980.9	952.5		200.2	914.4	14.2	1066.8	47.8	28	403.1	888.77	977.2	2155.00
38	1206.5	124.0	124.0	1035.1	1003.3		206.2	965.2	14.2	1117.6	47.8	32	434.9	958.89	1104.8	2436.01
40	1270.0	130.0	130.0	1092.2	1054.1		215.9	1016.0	14.2	1174.8	50.8	32	498.9	1100.16	1280.9	2824.29
42	1320.8	133.4	133.4	1143.0	1107.9		223.8	1066.8	14.2	1225.6	50.8	32	541.0	1192.90	1640.3	1411.88
44	1384.3	139.7	139.7	1200.2	1158.7		233.2	1117.6	14.2	1282.7	53.8	32	615.4	1356.89	1636.1	3607.63
46	1441.5	146.1	146.1	1257.3	1212.9		244.3	1168.4	14.2	1339.9	53.8	36	682.5	1504.82	1849.2	4077.40
48	1511.3	152.4	158.8	1308.1	1267.0		257.0	1219.2	14.2	1403.4	60.5	28	804.0	1772.85	2128.8	4694.04
50	1568.5	157.2	157.2	1361.9	1320.8		268.2	1270.0	14.2	1460.5	60.5	32	874.9	1929.14	2379.2	5246.17
52	1619.3	162.1	163.6	1412.7	1371.6		276.4	1320.8	14.2	1511.3	60.5	32	938.5	2069.35	2619.1	5775.13
54	1701.8	169.9	171.5	1470.2	1425.4		289.1	1371.6	14.2	1581.2	66.5	28	1131.1	2494.02	3031.8	6685.18
56	1752.6	174.8	176.3	1527.0	1479.6		298.5	1422.4	14.2	1632.0	66.5	32	1192.8	2630.11	3293.9	7263.08
58	1803.4	177.8	180.8	1577.8	1530.4		306.3	1473.2	14.2	1682.8	66.5	32	1260.6	2779.62	3585.7	7906.53
60	1886.0	185.7	189.0	1635.3	1584.5		319.0	1524.0	14.2	1752.6	73.2	32	1469.3	3239.88	4072.0	8978.72

NOTES

- 1) Raised Face height (f) will be furnished with 6.4 mm and, which is included in Thickness (C) and Length Through Hub (Y)
- 2) 38" to 60" Dimensions same as series A

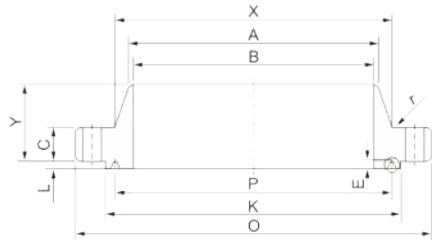


ASME B 16.47 SERIES B CLASS 600

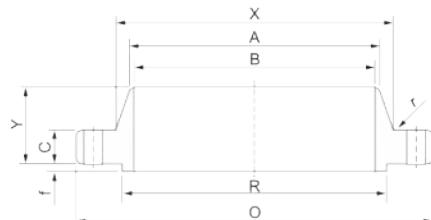
Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length Thru hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck	Blind							Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt Holes	Welding Neck		Blind	
		O	C	R	x	B	Y	A	r	Kg	lb	Kg	lb			
26	889.0	111.3	111.3	726.9	698.5	-	180.8	660.4	12.7	806.5	44.5	28	259.0	571.06	527.8	1163.75
28	952.5	115.8	115.8	784.4	752.3	-	190.5	711.2	12.7	863.6	47.8	28	303.8	669.87	629.9	1388.89
30	1022.4	125.5	127.0	841.2	806.5	-	204.7	762	12.7	927.1	50.8	28	376.9	931.04	794.0	1750.67
32	1085.9	130.0	134.9	895.4	860.6	-	215.9	812.8	12.7	984.3	53.8	28	435.1	959.32	949.6	2093.93
34	1162.1	141.2	144.3	952.5	914.4	-	233.4	863.6	14.2	1054.1	60.5	24	548.6	120.69	1165.1	2569.14
36	1212.9	146.1	150.9	1009.7	968.2	-	242.8	914.4	14.2	1104.9	60.5	28	590.2	1301.37	1320.4	2911.57
38	1270.0	152.4	155.4	1054.1	1022.4	-	254.0	965.2	14.2	1162.1	60.5	28	667.5	1474.81	1499.6	3306.63
40	1320.8	158.8	162.1	1111.3	1073.2	-	263.7	1016.0	14.2	1212.9	60.5	32	717.5	1582.16	1683.9	3712.94
42	1403.4	168.1	171.5	1168.4	1127.3	-	279.4	1066.8	14.2	1282.7	66.5	28	886.3	1954.34	2015.4	4443.91
44	1454.2	173.0	177.8	1225.6	1181.1	-	289.1	1117.6	14.2	1333.5	66.5	32	940.8	2074.45	2233.9	4925.77
46	1511.3	179.3	185.7	1276.4	1234.9	-	300.0	1168.4	14.2	1390.7	66.5	32	1044.9	2304.07	2530.3	5579.36
48	1593.9	189.0	195.3	1333.5	1289.1	-	316.0	1219.2	14.2	1460.5	73.2	32	1236.2	2725.75	3939.1	6480.63
50	1670.1	196.9	203.2	1384.3	1343.2	-	328.7	1270	14.2	1524.0	79.2	28	1442.5	3180.71	3667.7	7425.74
52	1720.9	203.2	209.6	1435.1	1394.0	-	336.6	1320.8	14.2	1574.8	79.2	32	1514.5	3339.40	3667.4	8086.54
54	1778.0	209.6	217.4	1492.3	1447.8	-	349.3	1371.6	14.2	1632.0	79.2	32	1659.5	3659.13	4078.3	8992.57
56	1854.2	217.4	225.6	1543.1	1501.6	-	362	1422.4	15.7	1695.5	85.9	32	1869.3	4121.85	4571.8	10080.75
58	1905.0	222.3	231.6	1600.2	1552.4	-	369.8	1473.2	15.7	1746.3	85.9	32	1981.7	4369.62	4974.1	10967.98
60	1993.9	233.4	242.8	1657.4	1609.9		288.9	1524.0	15.7	1822.5	85.9	28	2382.5	5253.38	5737.1	12650.32

NOTES

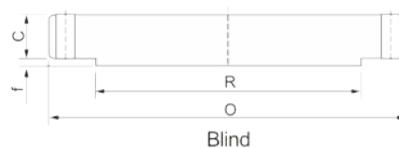
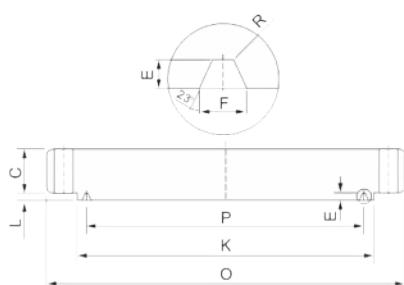
- 1) Raised Face height (f) will be furnished with 1.6 mm and, which is included in Thickness (C) and Length Through Hub (Y)
- 2) 38" to "Dimemusion same as series A.



Ring Type Joint



Welding Neck

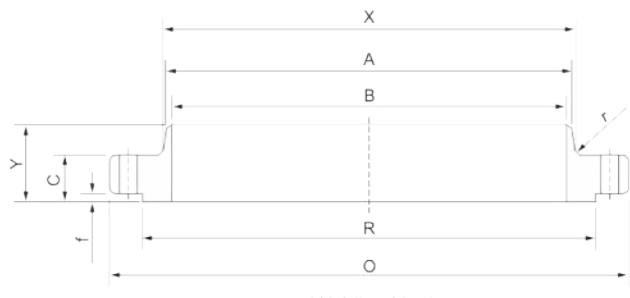


ASME B 16.47 SERIES B CLASS 900

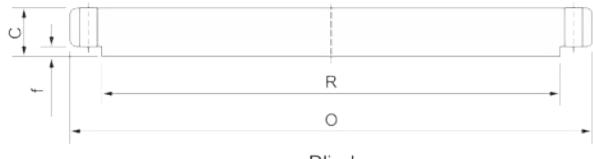
Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length Thru Hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck	Blind							Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck		Blind	
		O	C	R	x	B	Y	A	r			Kg	lb	Kg	lb	
26	1022.4	134.9	153.9	762.0	743	To be specified by purchaser	258.8	660.4	11.2	901.7	66.5	20	538.2	1186.82	935.8	2063.43
28	1104.9	147.6	166.6	819.2	797.1		276.4	711.2	12.7	971.6	73.2	20	675.2	1488.80	1177.0	2595.35
30	1181.1	155.4	176.0	876.3	850.9		289.1	762.0	12.7	1035.1	79.2	20	798.6	1761.00	1415.6	3221.32
32	1238.3	160.3	185.7	927.1	908.1		303.3	812.8	12.7	1092.2	79.2	20	898.8	1981.89	1654.3	3647.74
34	1314.5	171.5	195.1	990.6	962.2		319.0	863.6	14.2	1155.7	85.9	20	1063. 7	2345.45	1950.0	4299.76
36	1346.2	173	201.7	1028.7	1016.0		325.4	914.4	14.2	1200.2	79.2	24	1078. 4	2377.80	2001.5	4413.26
38	1460.5	190.5	215.9	1098.6	1073.2		352.6	965.2	19.1	1289.1	91.9	20	1445. 4	3187.19	2676.4	5901.56
40	1511.3	196.9	223.8	1162.1	1127.3		363.5	1016	20.6	1339.9	91.9	24	1529. 5	3372.47	2940.5	6483.82
42	1562.1	206.2	231.6	1212.9	1176.3		371.3	1066.8	20.6	1390.7	91.9	24	1666. 7	3675.05	3271.1	7212.76
44	1648	214.4	242.8	1270.0	1234.9		390.7	1117.6	22.4	1463.5	98.6	24	1939. 2	4275.97	3801.1	8381.52
46	1733.6	225.6	255.5	1333.5	1292.4		411	1168.4	22.4	1536.7	104.6	24	2265	4994.31	4414.6	9734.19
48	1784.4	233.4	263.7	1384.3	1343.2		419.1	1219.2	23.9	1587.5	104.6	24	2433. 2	5365.28	4850.4	10695.04

NOTES

- 1) Raised Face height (f) will be furnished with 6.4 mm and, which is included in Thickness (C) and Length Through Hub (Y)
 2) 38" to 60" Dimensions same as series A



Welding Neck



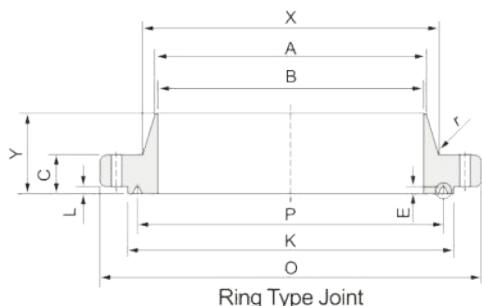
Blind

ASME B 16.47 SERIES A CLASS 150

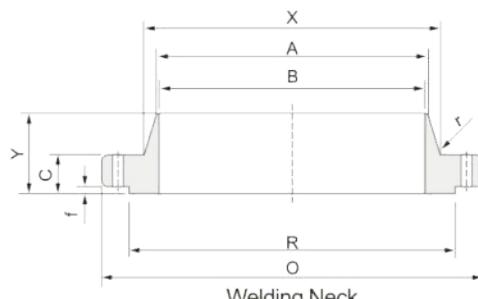
Nominal Size	Outside Diameter	Thickness (Min)	Raised Face Diameter	Hub Diameter	Bore	Length thru hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck blind							B	Y	A	r			
O	C	R	X												
26	870.0	68.3	749.3	676.1		120.7	660.4	9.7	806.5	35.1	24	150.17	331.12	306.92	676.75
28	927.0	71.4	800.1	726.9		125.5	711.2	11.2	863.6	35.1	28	171.36	377.85	363.8	802.19
30	984.3	74.7	857.3	781.1		136.7	762.0	11.2	914.4	35.1	28	200.22	441.49	431.19	950.78
32	1060.5	81.0	914.4	831.9		144.5	812.8	11.2	977.9	41.1	28	250.06	551.39	539.39	1189.36
34	1111.3	82.6	965.2	882.7		149.4	863.6	12.7	1028.7	41.1	32	267.72	590.32	602.55	1328.63
36	1168.4	90.4	1022.4	933.5		157.2	914.4	12.7	1085.9	41.1	32	316.30	697.43	733.15	1616.59
38	1238.3	87.4	1073.2	990.6		157.2	965.2	12.7	1149.4	41.1	32	352.11	776.39	198.93	1761.65
40	1289.1	90.4	1124.0	1041.4		163.6	1016	12.7	1200.2	41.1	36	379.80	837.45	895.04	1973.57
42	1346.2	96.8	1193.8	1092.2		171.5	1066.8	12.7	1257.3	41.1	36	453.33	959.91	1048.63	2312.23
44	1403.4	101.6	1244.6	1143		177.8	1117.6	12.7	1314.5	41.1	40	484.15	1067.55	1195.58	2636.25
46	1454.2	103.1	1295.4	1196.8		185.7	1168.4	12.7	1365.3	41.1	40	518.15	1142.52	1306.29	2880.36
48	1511.3	108.0	1358.9	1247.6		192	1219.2	12.7	1422.4	41.1	44	527.87	1263.19	1476.59	3255.84
50	1568.5	111.3	1409.7	1301.8		203.2	1270	12.7	1479.6	47.8	44	616.48	1359.35	1625.40	3584.01
52	1625.6	115.8	1460.5	1352.6		209.6	1320.8	12.7	1526.7	47.8	44	681.22	1502.10	1823.13	4019.99
54	1682.8	120.7	1511.3	1403.4		215.9	1371.6	12.7	1593.7	47.8	44	751.38	1656.78	2040.36	4499.00
56	1746.3	124.0	1574.8	1457.5		228.6	1422.4	12.7	1651	47.8	48	835.80	1842.95	2256.61	4975.82
58	1803.4	128.5	1625.6	1508.3		235	1473.2	12.7	1708.2	47.8	48	914.26	2015.94	2501.32	5515.42
60	1854.2	131.8	1676.4	1599.1		239.8	1524	12.7	1759	47.8	52	961.89	2120.97	2710.09	5975.75

NOTES

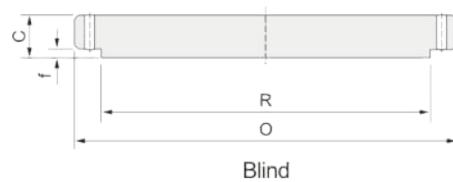
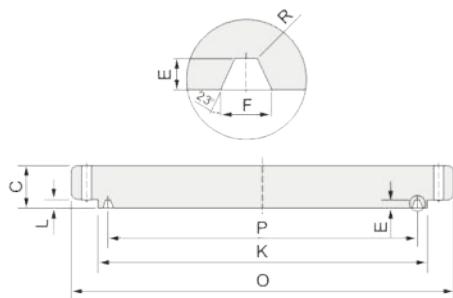
Raised Face height (f) will be furnished with 1.6 mm and, which is included in Thickness (C) and Length Through Hub (Y)



Ring Type Joint



Welding Neck



Blind

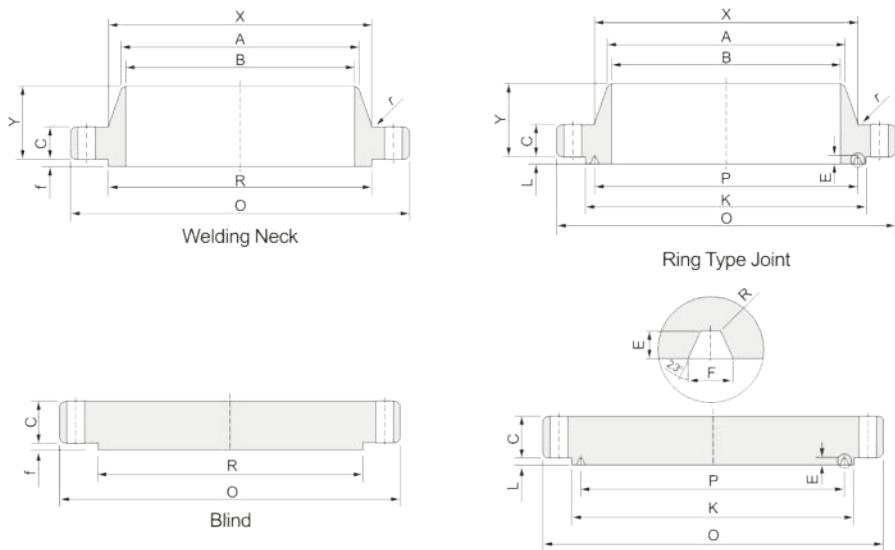
ASME B 16.47 SERIES A CLASS 300

Dimensions in mm

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length Thru Hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck	Blind							Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck		Blind	
		O	C							R	E	P	K	O	Y	
26	971.6	79.2	84.1	749.3	720.9	To be specified by purchaser	184.2	660.4	9.7	876.3	44.5	28	283.4	624.88	460.1	1014.61
28	1035.1	85.9	90.4	800.1	774.7		196.9	711.2	11.2	938.8	44.5	28	343.2	756.66	566.1	1248.27
30	1092.2	91.9	95.3	857.3	827.0		209.6	762.0	11.2	997.0	47.8	28	395.3	871.68.	663.1	1462.13
32	1149.4	98.6	100.1	914.4	881.1		222.3	812.8	11.2	1054.1	50.8	28	455	1003.28	771	1700.00
34	1206.5	101.6	104.6	965.2	936.8		231.6	863.6	12.7	1104.9	50.8	28	511.5	1127.9	893.4	1969.86
36	1270.0	104.6	111.3	1022.4	990.6		241.3	914.4	12.7	1168.4	53.8	32	568.2	1252.79	1044.1	2302.24
38	1168.4	108.0	108.0	1028.7	993.6		180.8	965.2	12.7	1092.2	41.1	32	318.3	701.88	875.1	1929.54
40	1238.3	114.3	114.3	1085.9	1047.8		193.5	1016.0	12.7	1155.7	44.5	32	384.7	848.19	1039.1	2291.11
42	1289.1	119.1	119.1	1136.7	1098.6		200.2	1066.8	12.7	1206.5	44.5	32	420.8	927.77	1177.7	2596.86
44	1352.6	124.0	124.0	1193.8	1149.4		206.2	1117.6	12.7	1263.7	47.8	32	476.9	1051.48	1346.7	2969.55
46	1416.1	128.5	128.5	1244.6	1203.5		215.9	1168.4	12.7	1320.8	50.8	28	549.8	1212.32	1536.7	3388.40
48	1466.9	133.4	133.4	1301.8	1254.3		223.8	1219.2	12.7	1371.6	50.8	32	587.4	1295.16	1707.2	3764.29
50	1530.4	139.7	139.7	1358.9	1305.1		231.6	1270.0	12.7	1428.8	53.8	32	664.7	1465.56	1944.4	4287.32
52	1581.2	144.5	144.5	1409.7	1355.9		238.3	1320.8	12.7	1479.6	53.8	32	715.2	1576.99	2153.1	4747.66
54	1657.4	152.4	152.4	1466.9	1409.7		252.5	1371.6	12.7	1549.4	60.5	28	857.3	1890.25	2494.1	5499.57
56	1708.2	153.9	153.9	1517.7	1463.5		260.4	1422.4	12.7	1600.2	60.5	28	905.8	1997.24	2682.1	5914.04
58	1759.0	158.8	158.8	1574.8	1514.3		266.7	1473.2	12.7	1651.0	60.5	32	952.9	2101.05	2925.5	6450.63
60	1809.8	163.6	163.6	1625.6	1565.1		273.1	1524.0	12.7	1701.8	60.5	32	1015.5	2239.28	3198.2	7052.06

NOTES

Raised Face height (f) will be furnished with 1.6 mm and, which is included in Thickness (C) and Length Through Hub (Y)



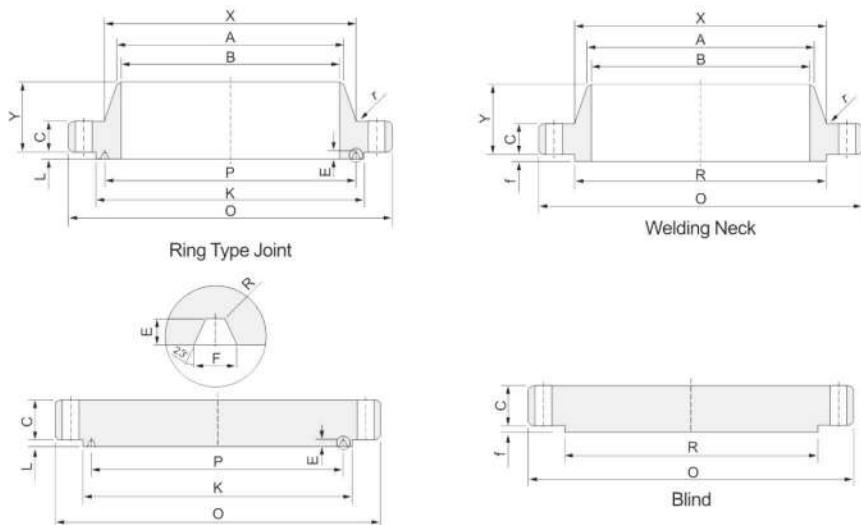
ASME B 16.47 SERIES A CLASS 400

Dimensions in mm

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length Thru Hub	Diameter Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck	Blind							Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck		Blind	
		O	C	R	X	B	Y	A	r			Kg	lb	Kg	lb	
26	971.6	88.9	98.6	749.3	726.9	To be specified by purchaser	193.5	660.4	11.2	876.3	47.8	28	319.6	704.79	559.8	1234.45
28	1035.1	85.3	104.6	800.1	782.6		206.2	711.2	12.7	938.8	50.8	28	379.2	836.07	673.4	1484.89
30	1092.2	101.6	111.3	857.3	836.7		218.9	762.0	12.7	997.0	53.8	28	436.2	961.79	795.7	1754.63
32	1149.4	108.0	115.8	914.4	889.0		231.6	812.8	12.7	1054.1	53.8	28	503.1	1109.41	923.2	2035.75
34	1206.5	111.3	122.2	965.2	944.6		241.3	863.6	14.2	1104.9	53.8	28	565.0	1245.93	1077.8	2376.54
36	1270.0	114.3	128.5	1022.4	1000.3		251.0	914.4	14.2	1168.4	53.8	32	634.1	1398.17	1252.4	2761.65
38	1206.5	124.0	124.0	1035.1	1003.3		206.2	965.2	14.2	1117.6	47.8	32	434.9	958.89	1104.8	2436.01
40	1270.0	130.0	130.0	1092.2	1054.1		215.9	1016.0	14.2	1174.8	50.8	32	498.9	1100.16	1280.9	2824.29
42	1320.8	133.4	133.3	1143.0	1107.9		223.8	1066.8	14.2	1225.6	50.8	32	541.0	1192.90	640.3	1411.88
44	1384.5	139.7	139.7	1200.0	1158.7		233.2	1117.6	14.2	1282.7	53.8	32	615.4	1356.85	1636.1	3607.63
46	1441.5	146.1	146.1	1257.3	1212.9		244.3	1168.4	14.2	1339.9	53.8	36	682.5	1504.82	1849.2	4077.40
48	1511.3	152.4	152.4	1301.8	1267.0		257.0	1219.2	14.2	1403.4	60.5	28	804.0	1772.85	2128.8	4694.04
50	1568.5	157.2	158.8	1361.9	1320.8		268.2	1270.0	14.2	1460.5	60.5	32	874.9	1329.14	2379.2	5246.17
52	1619.3	162.1	163.6	1412.7	1371.6		276.4	1320.8	14.2	1511.3	60.5	32	938.5	2069.35	2619.1	5775.13
54	1701.8	169.9	171.5	1470.2	1425.4		289.1	1371.6	14.2	1581.2	66.5	28	1131.1	2494.02	3031.8	6685.18
56	1752.6	174.8	176.3	1527.0	1479.6		298.5	1422.4	14.2	1632.0	66.5	32	1192.8	1630.11	3293.9	7263.08
58	1803.4	177.8	180.8	1577.8	1530.4		306.3	1473.2	14.2	1382.8	66.5	32	1260.6	2779.62	3585.7	7906.53
60	1886.0	185.7	189.0	1635.3	1584.5		319.0	1524.0	14.2	1752.6	73.2	32	1469.3	3239.88	4072.0	8978.72

NOTES

Raised Face height (f) will be furnished with 6.4 mm and, which is included in Thickness (C) and Length Through Hub (Y)



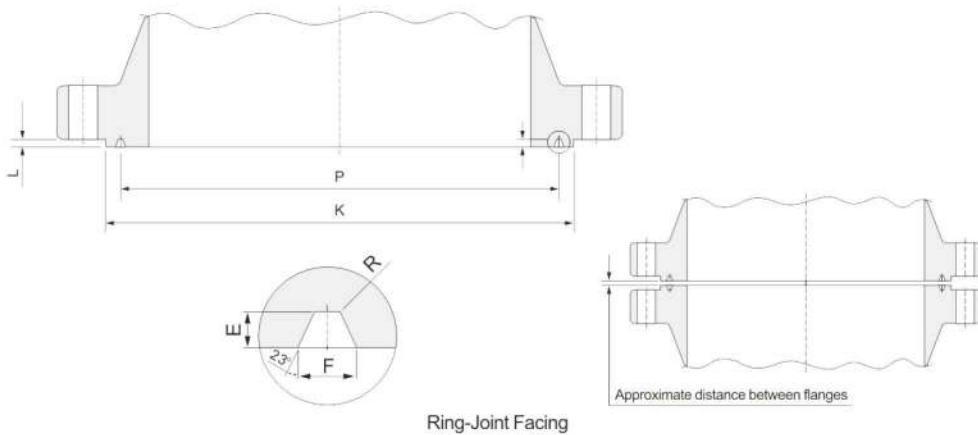
ASME B 16.47 SERIES A CLASS 600

Dimensions in mm

Nominal Size	Outside Diameter	Thickness		Raised Face Diameter	Hub Diameter	Bore	Length Thru Hub	Diameter of Hub at Bevel	Fillet Radius Minimum	Drilling			Approx. Weight			
		Welding Neck	Blind							Bolt Circle Diameter	Diameter of Bolt Holes	Number of Bolt Holes	Weld Neck		Blind	
		O	C	R	X	B	Y	A	r	Kg	lb	Kg	lb			
26	1016.0	108.0	125.5	749.3	747.8	To be specified by purchaser	222.3	660.4	12.7	914.4	50.8	28	444.4	979.98	768.9	1695.50
28	1073.2	111.3	131.8	800.1	803.1		235.0	711.2	12.7	965.2	53.8	28	499.6	1101.68	900.1	1984.75
30	1130.3	114.3	139.7	857.3	862.1		247.7	162.0	12.7	1022.4	53.8	28	567.5	1251.31	1065.2	2348.71
32	1193.8	117.3	147.6	914.4	917.4		260.4	812.8	12.7	1079.5	60.5	28	633.7	1397.4	1243.3	2741.38
34	1244.6	120.7	153.9	965.2	973.1		269.7	863.6	14.2	1130.7	60.5	28	695.8	1534.17	1417.3	3125.17
36	1314.5	124.0	162.1	1022.4	1031.7		282.4	914.4	14.2	1193.8	66.5	28	789.0	1739.78	1652.8	3643.76
38	1270.8	152.4	155.4	1054.1	1022.4		254.0	965.2	14.2	1162.1	60.5	28	667.5	1471.81	1499.6	3306.63
40	1320.8	158.8	162.1	1111.3	1073.2		263.7	1016.0	14.2	1212.9	60.5	32	717.5	1582.16	1683.9	3712.94
42	1403.4	168.1	171.5	1168.4	1127.3		279.4	1066.8	14.2	1282.7	66.5	28	886.3	1954.34	2015.4	4443.91
44	1454.2	173.0	177.8	1225.6	1181.1		289.1	1117.6	14.2	1333.5	66.5	32	940.8	2074.45	2233.9	4925.77
46	1511.3	179.3	185.7	1276.4	1234.9		300.0	1168.4	14.2	1390.7	66.5	32	1044.9	2304.07	2530.3	5579.36
48	1593.9	189.0	195.3	1333.5	1289.1		316.0	1219.2	14.2	1460.5	73.2	32	1236.2	2725.75	2939.1	6480.63
50	1670.1	196.9	203.2	1384.3	1343.2		328.7	1270.0	14.2	1524.0	79.2	28	1442.5	3180.71	3367.7	7425.75
52	1720.9	203.2	209.6	1435.1	1394.0		336.6	1320.8	14.2	1574.8	79.2	32	1514.5	3339.40	3667.4	8086.54
54	1778.0	209.6	217.4	1492.3	1447.8		349.3	1371.6	14.2	1632.0	79.2	32	1659.5	3659.13	4078.3	8992.57
56	1854.2	217.4	225.6	1543.1	1501.6		362.0	1422.4	15.7	1695.5	85.9	32	1869.3	4121.85	4571.8	10080.75
58	1905.0	222.3	231.6	1600.2	1552.4		369.8	1473.2	15.7	1746.3	85.9	32	1981.7	4369.62	4974.1	10967.98
60	1993.9	233.4	242.8	1657.4	1609.9		388.9	1524.0	17.5	1822.5	91.9	28	2382.5	5253.38	5737.1	12650.32

NOTES

Raised Face height (f) will be furnished with 6.4 mm and, which is included in Thickness (C) and Length Through Hub (Y)



ASME B 16.47 SERIES A&B RING JOINT FACING

Dimensions in mm

Nominal Pipe Size	Groove Dimensions				Diameter of Raised Portion	Groove Number
	Pitch Diameter	Depth	Width	Radius at Bottom		
	p	F/(L*)	F	R	K-Min	
Dimensions of ring joint facing for class 300,400 & 600						
26	749.3	12.7	19.84	1.52	809.75	R93
28	800.1	12.7	19.84	1.52	806.55	R94
30	857.25	12.7	19.84	1.52	917.45	R95
32	914.40	14.27	23.01	1.52	984.25	R96
34	965.20	14.27	23.01	1.52	1035.05	R97
36	1022.35	14.27	23.01	1.52	1092.2	R98
Dimensions of ring joint facing for class 900						
26	749.3	17.48	30.18	2.29	831.85	R100
28	800.1	17.48	33.32	2.29	889	R101
30	857.25	17.48	33.32	2.29	946.15	R102
32	914.4	17.48	33.32	2.29	1003.3	R103
34	965.2	20.62	36.53	2.29	1066.8	R104
36	1022.35	20.62	36.53	2.29	1123.92	R105

Tolerances	
E(Depth)	+0.406 -0.000
F(Width)	±0.203
P(Pitch Diameter)	±0.127
R(Radius at Bottom)	Max.
23 deg.(Angle)	±1/2deg.

NOTES

Raised Face height (f) will be furnished with 6.4 mm and, which is included in Thickness (C) and Length Through Hub (Y)

THREADED, SOCKET-WELDING, SLIP-ON, LAP-JOINT AND BLIND FLANGES.

Dimensions in inch / mm

OUTSIDE DIAMETER O	When Outside Diameter is 24" or less	$\pm 0.06"$	$\pm 1.5\text{mm}$
	When Outside Diameter is Over 24"	$\pm 0.12"$	$\pm 3.0\text{mm}$
INSIDE DIAMETER. B	Threaded	To standard gauge limit.	
	Socket-Welding, Slip-On, LapJoint & Counterbore threaded 10" & Smaller 12" & Larger	+0.03"- 0 +0.06"- 0	+1.0mm- 0 +1.5mm- 0
	Counterbore socket welding 1/2" to 3	$\pm 0.010"$	$\pm 0.25\text{mm}$
OUTSIDE DIAMETER OF HUB.X	12" & Smaller	+0.09" -0.03"	+2.0mm -1.0mm
	14" & Larger	$\pm 0.12"$	$\pm 3.0\text{mm}$
DIAMETER OF CONTACT FACER	0.06" Raised Face	$\pm 0.03"$	$\pm 1.0\text{mm}$
	0.25" Raised Face Tongue & Groove Male, Female	$\pm 0.016"$	$\pm 0.4\text{mm}$
DRILLING	Bolt Circle	$\pm 0.06"$	$\pm 1.5\text{mm}$
	Bolt Hole Spacing	$\pm 0.03"$	$\pm 0.8\text{mm}$
	Eccentricity Bolt Circle With Respect to Facing 21/2" Smaller 3" & Larger	0.03" max 0.06" max	0.8mm max 1.5mm max
	Eccentricity of Bolt Circle With Respect to bore	0.03" max	0.8mm max
	Eccentricity of Facing with Respect to bore	0.03" max	0.8mm max
FLANGE THICKNESS C	18" & Smaller 20" & Larger	+0.12"-0 +0.19"- 0	+3.0mm-0 +5.0mm- 0
LENGTH THRU HUB y	4" & Smaller 5" to 10" inclusive 12" & Larger	$\pm 0.06"$ + 0.06"- 0.12" $\pm 0.12"- 0.18"$	$\pm 1.5\text{mm}$ + 1.5mm- 3.0mm $\pm 3.0\text{mm}- 5.0\text{mm}$

This tolerance is not covered in ASTM / ANSI B 16.5, but maker's option.

WELDING NECK FLANGES.

Dimensions in inch / mm

OUTSIDE DIAMETER O	When Outside Diameter is 24" or less	$\pm 0.06"$	$\pm 1.5\text{mm}$
	When Outside Diameter is Over 24"	$\pm 0.12"$	$\pm 3.0\text{mm}$
INSIDE DIAMETER. B	10" and Smaller	$\pm 0.03"$	$\pm 1.0\text{mm}$
	12" Thru Larger.	$\pm 0.06"$	$\pm 1.5\text{mm}$
	20" and Larger	+0.12" -0.06"	+3.0mm -1.5mm
DIAMETER OF CONTACT FACE.R	0.06" Raised Face	$\pm 0.03"$	$\pm 1.0\text{mm}$
	0.25" Raised Face Tongue & Groove Male, Female	$\pm 0.016"$	$\pm 0.4\text{mm}$
DIAMETER. OF HUB BASE DIAMETER OF HUB.X	When Hub Base is 24" or smaller	$\pm 0.06"$	$\pm 1.5\text{mm}$
	When Hub Base is Over 24"	$\pm 0.12"$	$\pm 3.0\text{mm}"$
HUB AT POINT OF WELDING A	5" and Smaller	+0.09" -0.03"	+2.0mm -1.0mm
	6" and Larger	+ 0.16" -0.03"	+ 4.0mm -1.0mm
DRILLING	Bolt Circle	$\pm 0.06"$	$\pm 1.5\text{mm}$
	Bolt Hole Spacing	$\pm 0.03"$	$\pm 0.8\text{mm}$
	Eccentricity Bolt Circle With Respect to Facing 21/2" Smaller 3" & Larger	0.03" max 0.06" max	0.8mm max 1.5mm max
	Eccentricity of Bolt Circle With Respect to bore	0.03" max	0.8mm max
	Eccentricity of Facing with Respect to bore	0.03" max	0.8mm max
FLANGE THICKNESS C	18" & Smaller 20" & Larger	+0.12"-0 +0.19"- 0	+3.2mm-0 +5.0mm- 0
LENGTH THRU HUB y	4" & Smaller 5" to 10" inclusive 12" & Larger	$\pm 0.06"$ + 0.06"- 0.12" $\pm 0.12"- 0.18"$	$\pm 1.5\text{mm}$ + 1.5mm- 3.0mm $\pm 3.0\text{mm}- 5.0\text{mm}$

TOLERANCES B16.47 & B16.36 FLANGES

B16.47 LARGE DIAMETER FLANGES WELDING NECK & BLIND FLANGES.			Dimensions in inch / mm	
OUTSIDE DIAMETER O	All Sizes		±0.12"	±3.0mm
INSIDE DIAMETER B	Normal Inside Diameter Welding End		+0.12" -0.06"	+3.0mm -1.5mm
	Inside Counter Type		+0.00" -0.06"	+0.00mm -1.5mm
	Backing Ring Contact Surface		+0.10"-0	+2.5mm-0
DIAMETER OF CONTACT FACE R	0.06" Raised Face		±0.08"	±2.0mm
	0.25" Raised Face		±0.04"	±1.0mm
DIAMETER OF HUB AT BASE X	Hub Diameter		±0.12"	±3.0mm
DIAMETER OF HUB AT POINT OF WELDING A	Outide Diameter of Welding End		+1.21" -0.06"	+5.3mm -1.5mm
DRILLING	Bolt Circle		±0.06"	±1.5mm
	Bolt Hole Spacing		±0.03"	±0.08mm
	Eccentricity Bolt Circle With Respect to Facing		0.06"max	1.5mm max
	Eccentricity of Bolt Circle With Respect to bore		0.03"max	0.8mm max
	Eccentricity of Facing With Respect to bore		0.03"max	0.8mm max
FLANGE THICKNESS C	Upto 1.0"(25.4mm)		+0.12"-0	+3.2mm-0
	1.0" to 2.0"(25.4mm to50.8mm)		+0.19"-0	+5.0mm-0
>2.0" to 3.0(>50.8mm to 76.2mm)		+0.31"-0	+7.9mm-0	
Over 3.0"(76.2mm)		+0.38"-0	+9.7mm-0	
LENGTH THRU HUB Y	All Sizes		±0.19	±5.0mm

This tolerance is not covered in ASTM / ANSI B 16.47, but maker's option.

TOLERANCE FOR RING JOINT FACING			Dimensions in inch / mm	
RING TYPE JOINT	Depth-E		+0.16"	+0.4mm
	Width-F		±0.008"	±2.00mm
	Pitch Diameter-P		±0.005"	±0.13mm
	Radius at Bottom-R		max	max
	23 Angle		±12%	±12%

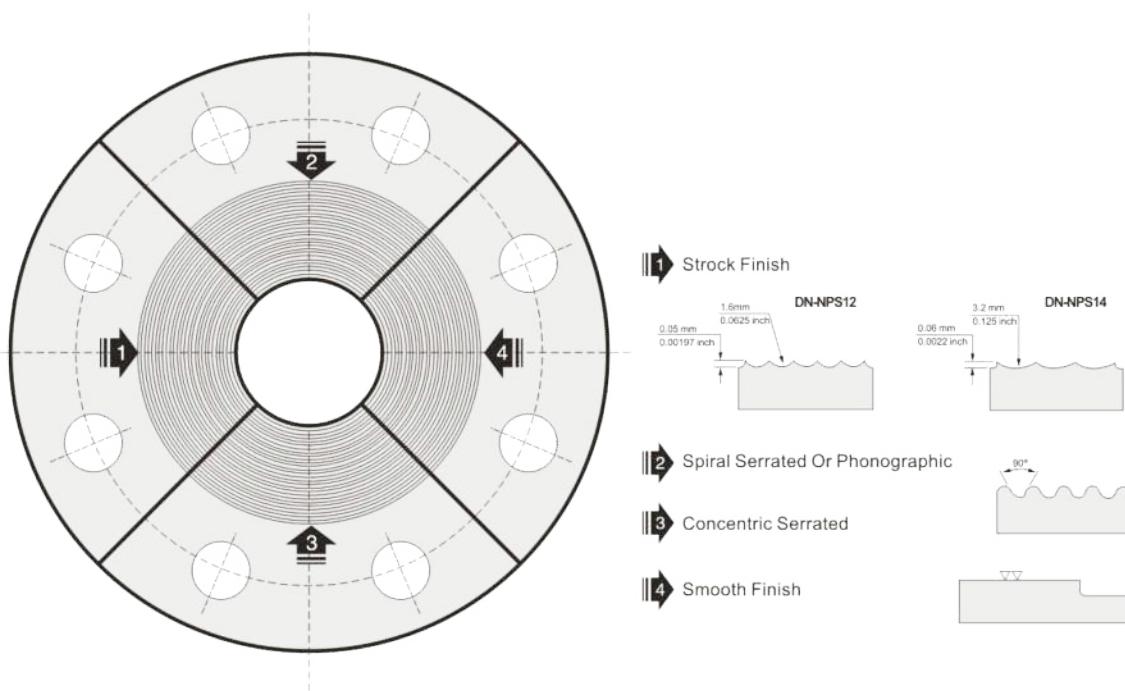
B 16.36 ORIFICE FLANGES			Dimensions in inch / mm			
Tolerance on all dimensions shall be as shown in ANSI/ASME B 16.5 except for those shown below						
ROLERANCE FOR ORIFICE FLANGE	Tolerance on location of center of pressure tap holes from flange face shall be					
	Flange smaller than noMinal size 4"		±0.02"	±0.50mm		
	Flange NoMinal Size 4" Larger		±0.03"	±0.80mm		
	Bore Diameter Tolerance (Welding Neck Flanges only)		+ 12% NoMinal Value			

BORE CHART ASME B 36.10 & B36.19

Size/Outside Pipe Diameter	Schedule	Wall Thickness	Inside Diameter	Size/Outside Pipe Diameter	Schedule	Wall Thickness	Inside Diameter	Size/Outside Pipe Diameter	Schedule	Wall Thickness	Inside Diameter
		mm	mm			mm	mm			mm	mm
1/2" 21.34	5S	1.65	18.03	5" 141.3	5S	2.77	135.76	16" 406.4	5S	4.19	398.02
	10S	2.11	17.12		10S	3.40	134.49		10S	4.78	396.85
	40/40S/STD	2.77	15.80		40/40S/STD	6.55	128.19		10	6.35	393.7
	80/80S/XS	3.73	13.87		80/80S/XS	9.53	122.25		20	7.92	390.55
	160	4.78	11.79		120	12.70	115.90		30/STD	9.53	387.35
	XXS	7.47	6.40		160	15.88	109.55		40/XS	12.7	381
3/4" 26.67	5S	1.65	23.37	6" 168.3	5S	2.77	162.74	16" 406.4	60	16.66	373.08
	10S	2.11	22.45		10S	3.40	161.47		80	21.44	363.52
	40/40S/STD	2.87	20.93		40/40S/STD	7.11	154.05		100	26.12	354.03
	80/80S/XS	3.91	18.85		80/80S/XS	10.97	146.33		120	30.96	344.47
	160	5.56	15.54		120	14.27	139.73		140	36.53	333.35
	XXS	7.87	11.02		160	18.26	131.73		160	40.49	325.42
1" 33.4	5S	1.65	30.10	8" 219.1	5S	2.77	213.54	18" 457.2	5S	419	448.82
	10S	2.77	27.86		10S	3.76	211.56		10S	4.78	447.65
	40/40S/STD	3.38	26.64		20	6.35	206.38		10	6.35	444.50
	80/80S/XS	4.55	24.31		30	7.04	205.00		20	7.92	441.35
	160	6.35	20.7		40/40S/STD	8.18	202.72		STD	9.53	438.15
	XXS	9.09	15.21		60	10.31	198.45		30	11.13	434.95
1 1/4" 42.16	5S	1.65	38.86	80/80S/XS	12.70	193.68	18" 457.2	XS	12.7	431.80	
	10S	2.77	36.63		100	15.09	188.90	40	14.27	428.65	
	40/40S/STD	3.56	35.05		120	18.26	182.55	60	19.05	419.10	
	80/80S/XS	4.85	32.46		140	20.62	177.83	80	23.83	409.55	
	160	6.35	29.46		XXS	22.23	174.63	100	29.36	398.48	
	XXS	9.70	22.76		160	23.01	173.05	120	34.93	387.35	
1 1/2" 48.26	5S	1.65	44.96	10" 273	5S	3.4	266.24	18" 457.2	140	39.67	377.85
	10S	2.77	42.72		10S	4.19	264.67		160	45.24	366.73
	40/40S/STD	3.68	40.89		20	6.35	260.35		5S	4.78	498.45
	80/80S/STD	5.08	38.10		30	7.8	257.45		10S	5.54	496.87
	160	7.14	33.99		40/40S/STD	9.27	254.51		10	6.35	495.30
	XXS	10.15	27.94		80/80S/XS	12.7	247.65		20/STD	9.53	488.95
2" 60.32	5S	1.65	57.02	10" 273	80	15.09	242.87	18" 457.2	30/XS	12.70	482.60
	10S	2.77	54.79		100	18.26	236.52		40	15.09	477.82
	40/40S/STD	3.91	52.50		120	21.44	230.17		60	20.62	466.75
	80/80S/XS	5.54	49.25		140/XXS	25.40	222.25		80	26.19	455.63
	160	8.74	42.85		160	28.58	215.90		100	32.54	442.93
	XXS	11.07	38.18		5S	3.96	315.93		120	38.10	431.80
2 1/2" 73.02	5S	2.11	68.81	12" 323.8	10S	4.57	314.71	18" 457.2	140	44.45	419.10
	10S	3.05	66.93		20	6.35	311.15		160	50.01	407.97
	40/40S/STD	5.16	62.71		30	8.38	307.09		20"		
	80/80S/XS	7.01	59		40S/SSTD	9.53	304.80		508		
	160	9.53	53.98		40	10.31	303.23				
	XXS	14.02	44.98		80S/XS	12.70	298.45				
3" 88.9	5S	2.11	84.68	12" 323.8	60	14.27	295.30	18" 457.2	5S	5.54	598.53
	10S	3.05	82.80		80	17.48	288.90		10S/10	6.35	596.90
	40/40S/STD	5.49	77.93		100	21.44	280.97		20/STD	9.53	590.55
	80/80S/XS	7.62	73.66		120/XXS	25.40	273.05		XS	12.7	584.20
	160	11.13	66.65		140	28.58	266.70		30	14.27	581.05
	XXS	15.24	58.42		160	33.32	257.20		40	17.48	574.65
3 1/2" 101.6	5S	2.11	97.38	14" 355.6	5S	3.96	347.68	18" 609.6	60	24.61	560.37
	10S	3.05	95.50		10S	4.78	346.05		80	30.96	547.67
	40/40S/STD	5.74	90.12		10	6.35	342.90		100	38.89	531.83
	80/80S/XS	8.08	85.45		20	7.92	339.75		120	46.02	517.55
	160				30/STD	9.53	336.55		140	52.37	504.85
	XXS				40	11.13	333.35		160	59.54	490.52
4" 114.3	5S	2.11	110.08	14" 355.6	60	12.70	330.20	18" 609.6	120	46.02	517.55
	10S	3.05	108.20		80	15.09	325.42		140	52.37	504.85
	40/40S/STD	6.02	102.26		100	19.05	317.50		160	59.54	490.52
	80/80S/XS	8.56	97.18		120	23.83	307.95				
	160	11.13	92.05		140	27.79	300.02				
	XXS	13.49	87.33		160	31.75	292.10				
		17.12	80.06			35.71	284.18				

Wall Thickness of big diameter flanges (B 16.47) Size NPS26" through 60"

S5S=0.250 inch(6.350mm) • S10S=0.312 inch(7.920mm) • S40S=0.375 inch(9.525mm) • SXH/80S=0.500 inch(12.700mm)



FLANGE FACING FINISHES

FACE PREPARATION

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 size 12" (304.8mm) and smaller, are produced with a 1/16" round-nosed tool. For size 14" (355.6mm) and larger, the finish is made with 1/8" round-nosed tool.

SPIRAL SERRATED OR PHONOGRAPHIC:

This finish is produced by using a 90° round-nosed tool.

CONCENTRIC SERRATED:

This finish is produced by using a 90° round-nosed 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 B 16.5 para 6.4.5)

1. RAISED FACE, AND LARGE MALE AND FEMALE

Either a serrated-concentric or serrated-spiral finish having from 45 to 55 grooves per inch is used. (1.8 to 2.2 grooves per mm) the cutting tool employed has an approximate 0.06 inch radius. The resultant surface finish shall have a 12.5 μ inch (3.2 μ m) to 250 μ inch (6.4 μ m) approximate roughness.

2. TONGUE AND GROOVE, AND SMALL MALE AND FEMALE

The gasket contact surface does not exceed 125 μ inch (3.2 μ m) roughness.

3. RING JOINT

The inside wall surface of gasket groove does not exceed 63 μ inch (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 inch smaller than the inside diameter of fittings of corresponding pressure class. When the center part is depressed, it's diameter is not greater than the inside diameter of the corresponding pressure class fitting. Machining of the depressed center is not required.

FLANGE FACING FINISHES ROUGHNESS VALUES

Conversion Table of N-Numbers, Ra and Rz in μm and $\mu\text{"}$

	N0	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12	N13
Ra μm	0.0125	0.025	0.05	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50	100
CLA $\mu\text{"}$	0.5	1	2	4	8	16	32	63	125	250	500	1000	2000	4000
Approx Rz μm "	0.11	0.22	0.45	0.8	1.0	1.6	3.0	5.9	12	23	46	90	180	360
Approx Rz μm "	to	to	to	to	to	to	to	to	to	to	to	to	to	to
0.16	0.30	0.60	1.1	1.8	2.8	4.8	8.0	16	32	57	110	220	430	
4.5	9	18	32	40	64	122	233	463	926	1852	3600	7200	14400	
Range of ratio to Rz:Ra	to	to	to	to	to	to	to	to	to	to	to	to	to	to
7	12	24	44	72	112	192	315	625	1250	2300	4400	8800	17200	
0.1	9:1	9:1	8:1	5:1	4:1	3.8:1	3.7:1	3.7:1	3.7:1	3.7:1	3.6:1	3.6:1	3.6:1	3.6:1
13:1	12:1	12:1	11:1	9:1	7:1	6:1	5:1	5:1	5:1	4.6:1	4.4:1	4.4:1	4.3:1	

Nose Radius Selection

Surface finish Ra Value (μm)	Nose radii, $r\epsilon \text{ mm}$					
	0.2	0.4	0.8	1.2	1.6	2.4
Deed rate, $f(\text{mm/rev})$						
0.6	0.05	0.07	0.10	0.12	0.14	0.17
1.6	0.08	0.12	0.16	0.20	0.23	0.29
3.2	0.12	0.16	0.23	0.29	0.33	0.40
6.3	-	0.23	0.33	0.40	0.47	0.57
8.0	-	-	0.40	0.49	0.57	0.69

NOTES

- 1) Ra is the international symbol for average roughness
- 2) Ra = AA (arithmetic average) = CLA (center line average)
- 3) RMS (root mean square) is obsolete
- 4) Ra is approximately 10% finer than RMS

Theoretical Surface Finish Value

Formulas					
RPM	$N=V_c \cdot 1000 / \pi \cdot D \text{ (rev/mm)}$				
Cutting speed	$V_c = N \cdot \pi \cdot D / 1000 \text{ (m/mm)}$				
	$R_a = f^2 / 50 / r\epsilon \text{ (\mu m)}$				
Surface finish	$R_a = R_t / 3.5 \text{ (\mu m)}$				
	$R_a = f^2 / 8 r\epsilon \text{ (\mu m)}$				
Profile Depth	$R_a = f^2 \cdot 1000 / 8 r\epsilon \text{ (\mu m)}$		Metal Removal Rate		$Q = V_c \cdot f \cdot ap \text{ (\mu M)}$

Definitions					
ap=Depth of cut (mm)			$P_c = \text{Power demand (kw)}$		
D=Workpiece diameter (mm)			$Q = \text{Metal removal rate (cm}^3/\text{Min})$		
f=Feed rate (mm/rev)			$R_a = \text{Surface finish (\mu m)}$		
h=Chip thickness (mm)			$r\epsilon = \text{Nose radius (mm)}$		
k=Constant 1.4 for steels and stainless steels & 1.0 for cast iron			$R_t = \text{Profile depth (\mu m)}$		
$k_c = \text{Specific cutting force (N/mm}^2)$			$R_y = \text{max height of profile (\mu m)}$		
$k_{c1.1} = \text{cutting force (1mm}^2) \text{ (N/mm}^2)$			$V_c = \text{Cutting speed (m/min)}$		
$m_c = \text{Exponent}$			$x = \text{Setting angle (}^\circ\text{)}$		
$n = \text{RPM}$			$n = \text{Efficiency}$		
			$\gamma_o = \text{Cutting rate angle (}^\circ\text{)}$		

CLASS 150-300 PRESSURE TEMP. RATING

CLASS 150

Material Group Specification A182/A240	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
	Grade 304 304H	Grade 316 316H/317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309s 310s
Temparature°F	-20to100	275	275	230	275	275	275	295	275
	200	230	235	195	250	255	240	245	260
	300	205	215	175	230	230	225	230	225
	400	190	195	160	200	200	200	200	200
	500	170	170	150	170	170	170	170	170
	600	140	140	140	140	140	140	140	140
	650	125	125	125	125	125	125	1250	125
	700	110	110	110	110	110	110	110	110
	750	95	95	95	95	95	95	95	95
	800	80	80	80	80	80	80	-	80
	850	65	65	65	65	65	65	-	65
	900	50	50	-	50	50	50	-	50
	950	35	35	-	35	35	35	-	35
	1000	20	20	-	20	20	20	-	20

CLASS 300

Material Group Specification A182/a240	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
	Grade 304 304H	Grade 316 316H/317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309s 310s
Temparature°F	-20to100	720	720	600	720	720	720	750	720
	200	600	620	510	650	660	630	635	745
	300	540	560	455	595	615	580	580	580
	400	495	515	420	550	575	545	540	540
	500	465	480	395	515	540	520	515	515
	600	440	450	370	485	515	500	495	495
	650	430	440	365	475	505	490	485	485
	700	420	435	360	465	495	485	480	480
	750	415	425	355	460	490	480	470	470
	800	405	420	345	450	485	475	465	-
	850	395	420	34	445	485	465	460	460
	900	390	415	-	440	450	450	450	450
	950	380	385	-	385	385	385	-	385
	1000	355	365	-	365	365	365	-	340
	1050	325	360	-	360	360	355	355	-
	1100	255	305	-	310	325	260	260	-
	1150	205	235	-	235	275	190	190	-
	1200	165	185	-	185	205	135	135	-
	1250	135	145	-	140	180	105	105	-
	1300	115	115	-	110	140	75	75	-
	1350	95	95	-	85	105	60	60	-
	1400	75	75	-	65	75	45	45	-
	1450	60	60	-	50	60	30	35	-
	1500	40	40	-	40	40	25	25	-

CLASS 400-600 PRESSURE TEMP. RATING

CLASS 400

Material Group	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
Specification A182/A240	Grade 304 304H	Grade 316 316H/317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309s 310s
-20to100	960	960	800	960	960	960	960	1000	960
200	800	825	680	865	885	840	850	990	840
300	715	745	610	795	820	775	775	890	775
400	660	685	560	735	770	725	725	820	725
500	620	635	525	690	725	690	685	775	685
600	590	600	495	650	690	665	660	740	660
650	575	590	485	635	675	655	645	730	645
700	565	580	480	620	660	645	635	725	635
750	550	570	470	610	655	640	625	710	625
800	540	565	460	600	650	630	620	-	620
850	530	555	450	595	645	620	610	-	610
900	520	555	-	590	600	600	600	-	600
950	510	515	-	515	515	515	515	-	515
1000	470	485	-	485	485	485	485	-	455
1050	435	480	-	480	480	470	470	-	325
1100	345	405	-	415	430	345	345	-	230
1150	275	315	-	345	365	250	250	-	165
1200	220	245	-	245	275	185	185	-	115
1250	180	195	-	185	245	135	135	-	70
1300	150	155	-	145	185	100	100	-	35
1350	125	160	-	115	140	80	80	-	25
1400	100	100	-	85	100	60	60	-	20
1450	80	80	-	70	80	45	45	-	15
1500	55	55	-	50	55	35	35	-	10

CLASS 600

Material Group	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
Specification A182/A240	Grade 304 304H	Grade 316 316H/317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309s 310s
-20to100	1440	1440	1200	1440	1440	1440	1440	1500	1440
200	1200	1240	1020	1295	1325	1260	1270	1490	1260
300	1075	1120	910	1190	1235	1160	1160	1335	1160
400	995	1025	840	1105	1150	1090	1085	1230	1085
500	930	955	785	1030	1085	1035	1025	1160	1025
600	885	900	745	975	1030	1000	990	1115	990
650	865	885	730	950	1015	985	970	1095	970
700	845	870	720	930	995	970	985	1085	955
750	825	855	705	915	985	960	940	1065	940
800	810	845	690	900	975	945	930	-	930
850	790	835	675	895	970	930	915	-	915
900	780	830	-	885	900	900	900	-	900
950	765	775	-	775	775	775	775	-	775
1000	710	725	-	725	725	725	725	-	680
1050	650	720	-	720	720	705	705	-	485
1100	515	610	-	625	645	520	520	-	345
1150	410	475	-	475	550	375	375	-	245
1200	330	370	-	370	410	275	275	-	170
1250	265	295	-	280	365	205	205	-	105
1300	225	235	-	220	275	150	150	-	55
1350	185	190	-	170	205	115	115	-	35
1400	150	150	-	130	180	90	90	-	25
1450	115	115	-	105	115	70	65	-	20
1500	85	85	-	75	85	50	50	-	15

CLASS 900-1500 PRESSURE TEMP. RATING
CLASS 900

Material Group Specification A182/S240	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
	Grade 304 304H	Grade 316 316H/317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309s 310s
-20to100	2160	2160	1800	2160	2160	2160	2160	2250	2160
200	1800	1860	1535	1945	1985	1895	1910	2230	1895
300	1615	1680	1370	1785	1850	1740	1740	2000	1740
400	1490	1540	1260	1655	1730	1635	1625	1845	1625
500	1395	1435	1180	1550	1625	1555	1540	1740	1540
600	1325	1355	1150	1460	1550	1500	1485	1670	1485
650	1295	1325	1095	1425	1520	1475	1455	1640	1455
700	1265	1305	1080	1395	1490	1455	1435	1625	1435
750	1240	1280	1060	1375	1475	1440	1410	1595	1410
800	1215	1265	1035	1355	1460	1420	1395	-	1395
850	1190	1255	1015	1340	1455	1395	1375	-	1375
900	1165	1245	-	1325	1350	1350	1350	-	1350
950	1145	1160	-	1160	1160	1160	1160	-	1160
1000	1065	1090	-	1090	1090	1090	1090	-	1020
1050	975	1080	-	1080	1080	1060	1060	-	730
1100	770	915	-	935	965	780	780	-	515
1150	615	710	-	710	825	565	565	-	370
1200	495	555	-	555	620	410	410	-	255
1250	400	440	-	420	545	310	310	-	155
1300	340	350	-	330	410	225	225	-	80
1350	280	290	-	255	310	175	175	-	50
1400	225	225	-	195	225	135	135	-	40
1450	175	175	-	155	175	105	100	-	30
1500	125	125	-	115	125	75	75	-	20

CLASS 1500

Material Group Specification A182/A240	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
	Grade 304 304H	Grade 316 316H/317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309s 310s
-20to100	3600	3600	3000	3600	3600	3600	3600	3750	3600
200	3000	3095	2555	3240	3310	3155	3180	3720	3155
300	2690	2795	2280	2975	3085	2905	2905	3335	2905
400	2485	2570	2100	1760	2280	2725	2710	3070	2710
500	2330	2390	1970	2580	2710	2590	2570	2905	2570
600	2210	2255	1860	2435	2580	2495	2470	2785	2470
650	2160	2210	1825	2375	2530	2460	2425	2735	2425
700	2110	2170	1800	2330	2485	2425	2390	2710	2390
750	2065	2135	1765	2290	2460	2400	2350	2660	2350
800	2030	2110	1730	2255	2435	2365	2330	-	2330
850	1980	2090	1690	2230	2425	2330	2290	-	2290
900	1945	2075	-	2210	2245	2245	2245	-	2245
950	1910	1930	-	1930	1930	1930	1930	-	1930
1000	1770	1820	-	1820	1820	1820	1820	-	1695
1050	1630	1800	-	1800	1800	1765	1765	-	1215
1100	1285	1525	-	1560	1610	1305	1305	-	855
1150	1030	1185	-	1185	1370	945	945	-	615
1200	825	925	-	925	1030	685	685	-	430
1250	670	735	-	705	910	515	515	-	255
1300	565	585	-	550	685	375	375	-	135
1350	465	480	-	430	515	290	290	-	85
1400	380	380	-	325	380	225	225	-	70
1450	290	290	-	255	290	170	165	-	50
1500	205	205	-	190	205	130	130	-	30

CLASS 2500 PRESSURE TEMP. RATING

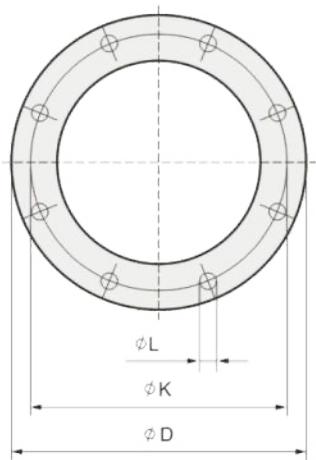
CLASS 2500

Material Group Specification A182/A240	2.1	2.2	2.3	2.4	2.5	2.6	2.7		
	Grade 304 304H	Grade 316 316H / 317	Grade 304L 316L	Grade 321 321H	Grade 347/347H 348/348H	Grade 309H	Grade 310 310H	Grade F44/F51 F53/F55	Grade 309S 310S
Temperature°F									
-20 to 100	6000	6000	5000	6000	6000	6000	6000	6250	6000
200	5000	5160	4260	5400	5520	5260	5300	6200	5260
300	4480	4660	3800	4960	5140	4840	4840	5560	4840
400	4140	4280	3500	4600	4800	4540	4520	5120	4520
500	3880	3980	3280	4300	4520	4320	4280	4840	4280
600	3680	3760	3100	4060	4300	4160	4120	4640	4120
650	3600	3680	3040	3960	4220	4100	4040	4560	4040
700	3520	3620	3000	3880	4140	4040	3980	4520	3980
750	3440	3560	2940	3820	4100	4000	3920	4430	3920
800	3380	3520	2880	3760	4060	3940	3880	-	3880
850	3300	3480	2820	3720	4040	3880	3820	-	3820
900	3240	3460	-	3680	3745	3745	3745	-	3745
950	3180	3220	-	3220	3220	3220	3220	-	3220
1000	2950	3030	-	3030	3030	3030	3030	-	2830
1050	2715	3000	-	3000	3000	2945	2945	-	2030
1100	2145	2545	-	2600	2685	2170	2170	-	1430
1150	1715	1970	-	1970	2285	1570	1570	-	1030
1200	1370	1545	-	1545	1715	1145	1145	-	715
1250	1115	1230	-	1170	1515	855	855	-	430
1300	945	970	-	915	1145	630	630	-	230
1350	770	800	-	715	860	485	485	-	145
1400	630	630	-	454	630	370	370	-	115
1450	485	485	-	430	485	285	275	-	85
1550	345	345	-	315	345	215	215	-	55

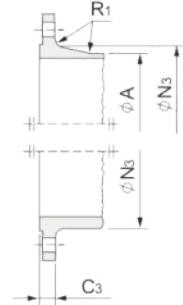
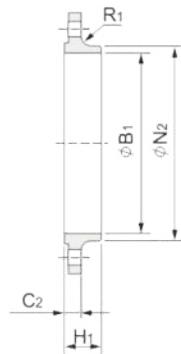
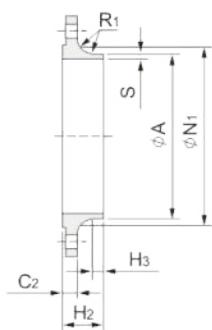
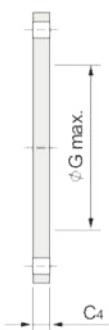
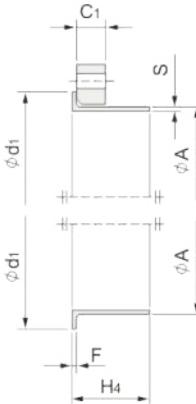
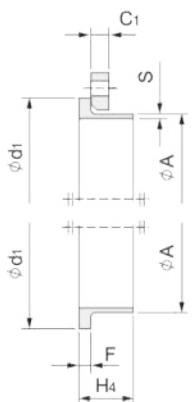
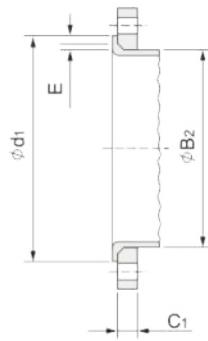
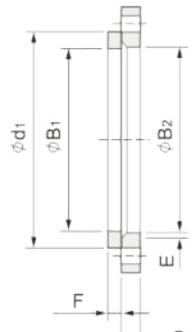
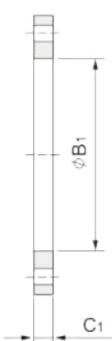
GENERAL COMMENTS:

- All pressure are in pounds as per square inch, gaga (psig)
- See temperature notes for service limitations.
- Plate materials are listed only for use as blind flange. Additional plate materials listed in ANSI B16.34 may also be used with corresponding B 16.34 standard class rating.
- ASME boiler and pressure vessel code, section II materials which also meet the requirements of the listed ASTM specification may be used.

EN 1092-1 PN6



Refer to the column "Bolting Number" in Table 11 for the actual number.



NOTE 1 Dimensions N1,N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange.

NOTE 2 For dimension d1, see Table 8.

NOTE 3 For dimensions Gmax refer to NOTE 1 of 5.6.1.

NOTE 4 Type 33; lapped pipe end without determination of thickness and height.

EN 1092-1 PN 6

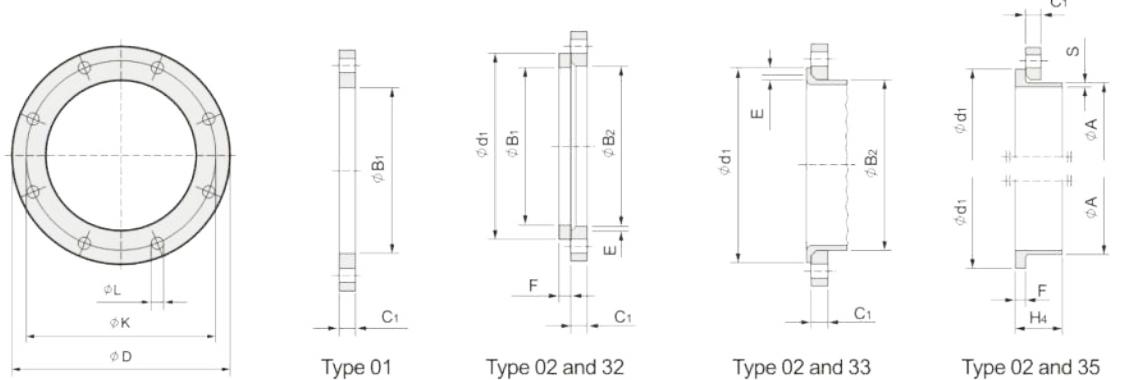
Dimensions in inch / mm

DN	Mating dimensions						Outside Diameter of neck A	Bore Diameter B ₁ B ₂	Flange thickness C ₁ C ₂ C ₃ C ₄	Chamfer E	Collar thickness F	Diameter of shoulder Gmax	Length				Neck diameter N ₁ N ₂ N ₃			Outer Radius R ₁	Wall thickness (see 5.6.1) S						
	Outside Diameter D	Diameter of bolt circle K	Diameter of bolt hole L	Bolting		Number	Size						H ₁	H ₂	H ₃	H ₄	H ₅										
								B ₁	B ₂	C ₁	C ₂	C ₃	C ₄														
Flange Type																											
	01,02,05,11,12,13,21						11 21° 35-37	01 12 32	02 01 12 21	11 02 12 21	05	02	32	35	36	37	05	12 13	11	11	35	36	37	11 12 13 21	11 12 13 21	11,35 to 37	
10	75	50	11	4	M10	17.2	18.0	21	12	12	12	3	10	5	2	2.5	-	20	28	6	28	35	7	26	25	20	4
15	80	55	11	4	M10	21.3	22.0	25	12	12	12	3	10	5	2	2.5	-	20	30	6	30	38	7	30	30	26	4
20	90	65	11	4	M10	26.9	27.5	31	14	14	14	4	10	6	2.5	3	-	24	32	6	32	40	8	38	40	34	4
25	100	75	11	4	M10	33.7	34.5	38	14	14	14	4	10	7	2.5	3	-	24	35	6	35	40	10	42	50	44	4
32	120	90	14	4	M12	42.4	43.5	46	16	14	14	5	10	8	3	3	-	26	35	6	35	42	12	55	60	54	6
40	130	100	14	4	M12	48.3	49.5	53	16	14	14	5	10	8	3	3	-	26	38	7	38	45	15	62	70	64	6
50	140	110	14	4	M12	60.3	61.5	65	16	14	14	5	12	8	3	3	-	28	38	8	38	45	20	74	80	74	6
65	160	130	14	4	M12	76.1	77.5	81	16	14	14	6	12	8	3	3	55	32	38	9	38	45	20	88	100	94	6
80	190	150	18	4	M16	88.9	90.5	94	18	16	16	6	12	10	3	4	70	34	45	10	42	50	25	102	110	110	8
100	210	170	18	4	M16	114.3	116.0	120	18	16	16	6	14	10	4	4	90	40	45	10	45	52	25	130	130	130	8
125	240	200	18	8	M16	139.7	141.5	145	20	18	18	6	14	10	4	4	115	44	48	10	48	55	25	155	160	160	8
150	265	225	18	8	M16	168.3	170.5	174	20	18	18	6	14	10	5	4	140	44	48	12	48	55	25	184	185	182	10
200	320	280	18	8	M16	219.1	221.5	226	22	20	20	6	16	11	5	5	190	44	55	15	55	62	30	236	240	238	10
250	375	335	18	12	M16	273.0	276.5	281	24	22	22	8	16	12	8	-	235	44	60	15	60	68	-	290	295	284	12
300	440	395	22	12	M20	323.9	327.5	333	24	22	22	8	18	12	8	-	285	44	62	15	62	68	-	342	355	342	12
350	490	445	22	12	M20	355.6	359.5	365	26	22	22	8	18	13	8	-	330	-	62	15	62	68	-	385	-	392	12
400	540	495	22	16	M20	406.4	411.0	416	28	22	22	8	20	14	8	-	380	-	65	15	65	72	-	438	-	442	12
450	595	550	22	16	M20	457.0	462.0	467	30	22	24	8	20	15	8	-	425	-	65	15	72	72	-	492	-	494	12
500	645	600.	22	20	M20	508.0	513.5	519	30	24	24	8	22	16	8	-	475	-	68	15	75	75	-	538	-	544	12
600	755	705	26	20	M24	610.0	616.5	622	32	30	30	8	22	16	-	-	575	-	70	16	70	-	-	640	-	642	12
700	860	810	26	24	M24	711.0	b	721	40	30	40	4	-	16	-	-	670	-	76	16	70	-	-	740	-	746	12
800	975	920	30	24	M27	813.0		824	44	30	44	4	-	16	-	-	770	-	76	16	70	-	-	842	-	850	12
900	1075	1020	30	24	M27	914.0		928	48	34	48	4	-	16	-	-	860	-	78	16	70	-	-	942	-	950	12
1000	1175	1120	30	28	M27	1016.0		1028	52	38	52	4	-	18	-	-	960	-	82	16	70	-	-	1045	-	1050	16
1200	1405	1340	33	32	M30	1219.0		1234	60	42	60	5	-	20	-	-	1160	-	104	20	90	-	-	1248	-	1264	16
1400	1630	1560	36	36	M33	1422.0		-	72	56	68	-	-	-	-	-	1345	-	114	20	-	-	-	1452	-	1480	16
1600	1830	1760	36	40	M33	1626.0		-	80	63	76	-	-	-	-	-	1546	-	119	20	-	-	-	1655	-	1680	16
1800	2045	1970	39	44	M36	1829.0		-	88	69	84	-	-	-	-	-	1746	-	133	20	-	-	-	1855	-	1878	16
2000	2265	2180	42	48	M39	2032.0		-	96	74	92	-	-	-	-	-	1950	-	146	25	-	-	-	2058	-	2082	16
2200	2475	2390	42	52	M39	2235.0		-	-	-	81	-	-	-	-	-	-	154	25	-	-	-	-	2260	-	-	18
2400	2685	2600	42	56	M39	2428.0		-	-	-	87	-	-	-	-	-	-	168	25	-	-	-	-	2462	-	-	18
2600	2905	2810	48	60	M45	2620.0		-	-	-	91	-	-	-	-	-	-	175	25	-	-	-	-	2665	-	-	18
2800	3115	3020	48	64	M45	2820.0		-	-	-	101	-	-	-	-	-	-	188	30	-	-	-	-	2865	-	-	18
3000	3315	3220	48	68	M45	3020.0		-	-	-	102	-	-	-	-	-	-	192	30	-	-	-	-	3068	-	-	18
3200	3525	3430	48	72	M45	3220.0		--	-	-	106	-	-	-	-	-	-	202	30	-	-	-	-	3272	-	-	20
3400	3735	3640	48	76	M45	3420.0		-	-	-	110	-	-	-	-	-	-	214	35	-	-	-	-	3475	-	-	20
3600	3970	3860	56	80	M52	3620.0		-	-	-	124	-	-	-	-	-	-	229	35	-	-	-	-	3678	-	-	20

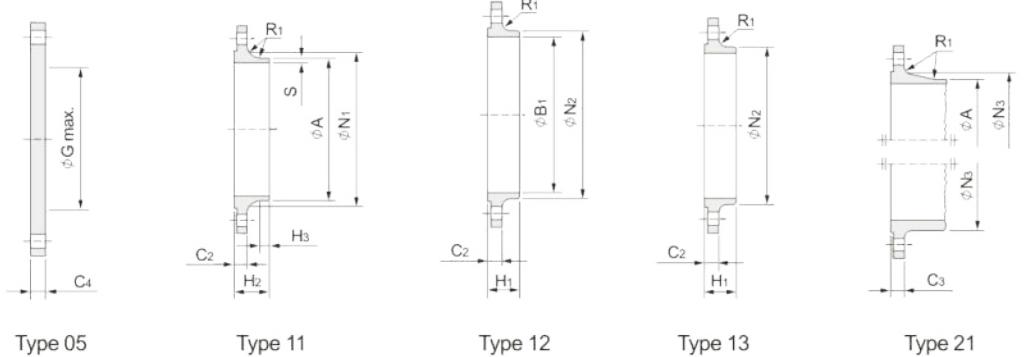
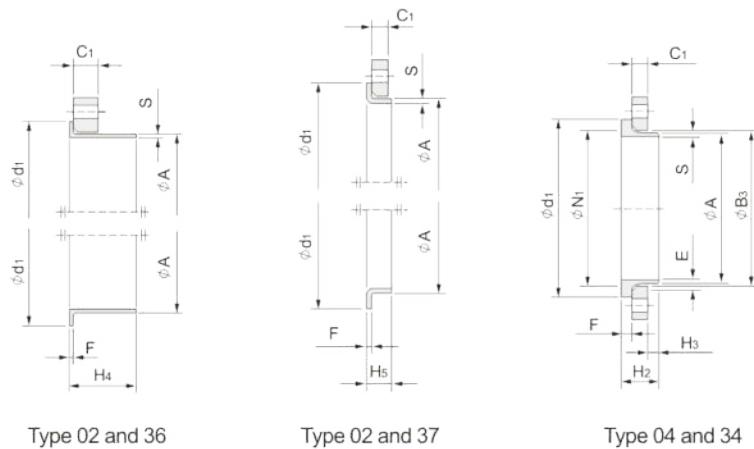
a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

b To be specified by the purchaser.

EN 1092-1 PN 10



This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.
Refer to the column "Bolting Number" in Table 12 for the actual number.



NOTE 1 Dimensions N_1, N_2 and N_3 are measured at the intersection of the hub draft angle and the back face of the flange.
NOTE 2 For dimension d_1 , see Table 8.

NOTE 3 For dimensions $G\text{max}$ refer to NOTE 1 of 5.6.1.

NOTE 4 Type 33; lapped pipe end without determination of thickness and height.

EN 1092-1 PN 10

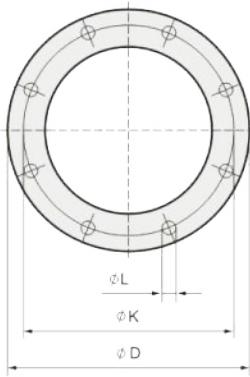
Dimensions in inch / mm

DN	Mating dimensions						Outside diameter of neck A	Bore diameter			Flange thickness			Chamfer E	Collar thickness F	Diameter of shoulder Gmax	Length				Neck diameters			Outer thickness radii R1	Wall thickness (see 5.6.1) S												
	Outside diameter D	Diameter of bolt circle K	Diameter of bolt circle L	Bolting		B ₁	B ₂	B ₃	C ₁	C ₂	C ₃	C ₄	H ₁				H ₂	H ₃	H ₄	H ₅	N ₁	N ₂	N ₃														
							Flange type												11 21° 34° 35-37		01 02 05 11 12 13 21		01 02 04 04 04 13		01 11 12 21 05		02 04 32 34 35 36 37		05		12 13 11 34° 11 34° 35 36 37		11 12 13 21 21 11 34° 12 13 21		11 12 13 21 34		11 15 to 37
10	90	60	14	4	M12	17.2	18	21	31	14	16	16	16	3	12	5	2	2.5		22	35	6	35	35	7	28	30	28	4	1.8							
15	95	65	14	4	M12	21.3	22.0	25	35	14	16	16	16	3	12	5	2	2.5		22	38	6	38	38	7	32	35	32	4	2.0							
20	105	75	14	4	M12	26.9	27.5	31	42	16	18	18	18	4	14	6	2.5	3		26	40	6	40	40	8	40	45	40	4	2.3							
25	115	85	14	4	M12	33.7	34.5	38	49	16	18	18	18	4	14	7	2.5	3		28	40	6	40	40	10	46	52	50	4	2.6							
32	140	100	18	4	M16	42.4	43.5	47	59	18	18	18	18	5	14	8	3	3		30	42	6	42	42	12	56	60	60	6	2.6							
40	150	110	18	4	M16	48.3	49.5	53	67	18	18	18	18	5	14	8	3	3		32	45	7	45	45	15	64	70	70	6	2.6							
50	165	125	18	4	M16	60.3	61.5	65	77	20	18	18	18	5	16	8	3	4		32	45	8	45	45	20	74	84	84	6	2.9							
65	185	145	18	8	M16	76.1	77.5	81	96	20	18	18	18	6	16	8	3	4	55	32	45	10	45	45	20	92	104	104	6	2.9							
80	200	160	18	8	M16	88.9	90.5	94	108	20	20	20	20	6	16	10	3	4	70	34	50	10	50	50	25	105	118	120	6	3.2							
100	220	180	18	8	M16	114.3	116.0	120	134	22	20	20	20	6	18	10	4	4	90	40	52	12	52	52	25	131	140	140	8	3.6							
125	250	210	18	8	M16	139.7	141.5	145	162	22	22	22	22	6	18	10	4	4	115	44	55	12	55	55	25	156	168	170	8	4.0							
150	285	240	22	8	M20	168.3	170.5	174	188	24	22	22	22	6	20	10	4	4	140	44	55	12	55	55	25	184	195	190	10	4.5							
200	340	295	22	8	M20	219.1	221.5	226	240	24	24	24	24	6	20	11	5	4	190	44	62	16	62	62	30	234	246	246	10	6.3							
250	395	350	22	12	M20	273.0	276.5	281	294	26	24	24	24	8	22	12	8	-	235	46	68	16	68	68	-	292	298	298	12	6.3							
300	445	400	22	12	M20	323.9	327.5	333	348	26	26	26	26	8	22	12	8	-	285	46	68	16	68	68	-	342	350	348	12	7.1							
350	505	460	22	16	M20	355.6	359.5	365	400	30	26	26	26	8	22	13	8	-	330	53	68	16	68	68	-	385	400	408	12	7.1							
400	565	515	26	16	M24	406.4	411.0	416	450	32	26	26	26	8	24	14	8	-	380	57	72	16	72	72	-	440	456	456	12	7.1							
450	615	565	26	20	M24	457.0	462.0	467	498	36	28	28	28	8	24	15	-	-	425	63	72	16	72	72	-	488	502	502	12	7.1							
500	670	620	26	20	M24	508.0	513.5	519	550	38	28	28	28	8	26	16	-	-	475	67	75	16	75	75	-	542	559	559	12	7.1							
600	750	725	30	20	M27	610.0	616.5	622	650	42	30	34	34	8	26	18	-	-	575	75	82	18	80	-	-	642	658	658	12	-							
700	895	840	30	24	M27	711.0	b	721	-	50	35	b	b	38	8	-	20	-	670	-	85	18	80	-	-	746	-	772	12	-							
800	1015	950	33	24	M30	813.0		824	-	56	38			48	8	-	20	-	770	-	96	18	90	-	-	850	-	876	12	-							
900	1115	1050	33	28	M30	914.0		926	-	62	38			50	8	-	22	-	860	-	99	20	95	-	-	950	-	976	12	-							
1000	1230	1160	36	28	M33	1016.0		1028	-	70	44			54	8	-	24	-	960	-	105	20	95	-	-	1052	-	108	16	-							
1200	1455	1380	39	32	M36	1219.0		1234	-	83	55			66	8	-	26	-	1160	-	132	25	95	-	-	1256	-	129	16	-							
1400	1675	1590	42	36	M39	1422.0		-	-	-	-			65	-	-	-	-	-	-	143	25	-	-	-	1460	-	149	16	-							
1600	1915	1820	48	40	M45	1626.0		-	-	-	-			75	-	-	-	-	-	-	159	25	-	-	-	1666	-	171	16	-							
1800	2115	2020	48	44	M45	1829.0	-	-	-	-	-			85	-	-	-	-	-	-	175	30	-	-	-	1868	-	191	16	-							
2000	2325	2230	48	48	M45	2032.0	-	-	-	-	-			90	-	-	-	-	-	-	786	30	-	-	-	2072	-	212	16	-							
2200	2550	2440	56	52	M52	2235.0	-	-	-	-	-			100	-	-	-	-	-	-	202	35	-	-	-	2275	-	-	18	-							
2400	2760	2650	56	56	M52	2438.0	-	-	-	-	-			110	-	-	-	-	-	-	218	35	-	-	-	2478	-	-	18	-							
2600	2960	2850	56	60	M52	2620.0	-	-	-	-	-			110	-	-	-	-	-	-	224	40	-	-	-	2680	-	-	18	-							
2800	3180	3070	56	64	M52	2820.0	-	-	-	-	-			124	-	-	-	-	-	-	244	40	-	-	-	2882	-	-	18	-							
3000	3405	3290	62	68	M56	3020.0	-	-	-	-	-			132	-	-	-	-	-	-	257	45	-	-	-	3085	-	-	18	-							

a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

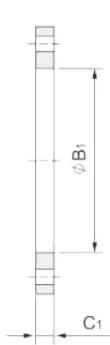
b To be specified by the purchaser.

c Use is limited up to DN 600.

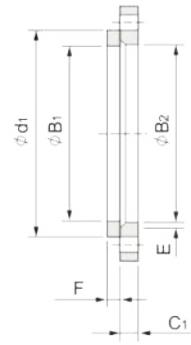


This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.

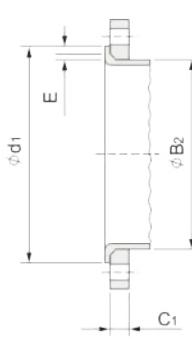
Refer to the column "Bolting Number" in Table 13 for the actual number.



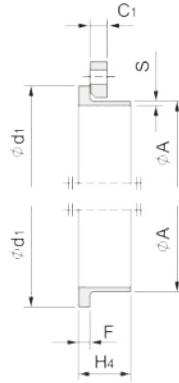
Type 01



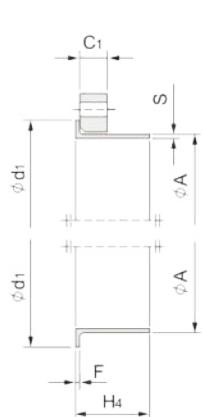
Type 02 and 32



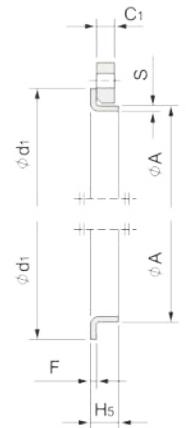
Type 02 and 33



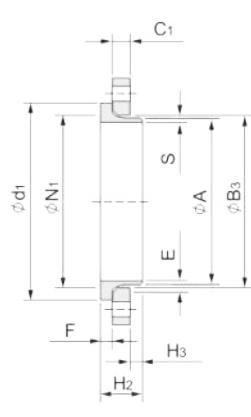
Type 02 and 35



Type 02 and 36



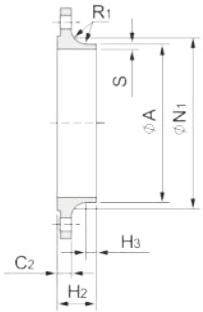
Type 02 and 37



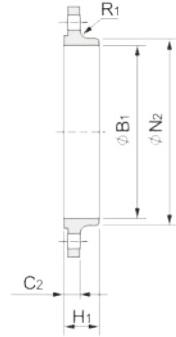
Type 04 and 34



Type 05



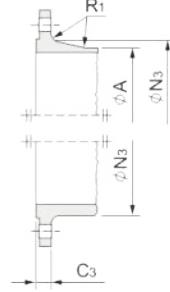
Type 11



Type 12



Type 13



Type 21

NOTE 1 Dimensions N₁, N₂ and N₃ are measured at the intersection of the hub draft angle and the back face of the flange
NOTE 2 For dimension d₁, see Table 8.

NOTE 3 For dimensions Gmax refer to NOTE 1 of 5.6.1.

NOTE 4 Type 33; lapped pipe end without determination of thickness and height.

EN 1092-1 PN 16

Dimensions in / mm

DN	Mating dimensions						Outside Diameter of Neck A	Bore Diameter		Flange Thickness				Chamfer E	Collar Thickness F	Diameter of Shoulder Gmax	Length						Neck Diameter			Corner Radii		Wall Thickness (see 5.6.1)		
	Outside Diameter	Diameter Of Circle K	Diameter Of Bolt Hole L	Bolting		Numeber		B ₁	B ₂	B ₃	C ₁	C ₂	C ₃	C ₄			H ₁	H ₂	H ₃	H ₄	H ₅	N ₁	N ₂	N ₃	R ₁	S				
								Flange type																						
01,02,05,11,12,13,21						11 21° 34° 35-37	01 12 32 32	02	04	01 02 04 13	11 12 13 13	21	05	02 04	32 34	35 36	36 37	05	12 13 13 34°	11 11 11 34°	35 35	36 35	37	11 34° 12 13	21	11 12 13 21 34	11 35 to 37			
10	90	60	14	4	M12	17.2	18	21	31	14	16	16	16	3	12	5	2	2.5	-	22	35	6	35	35	7	28	30	28	4	1.8
15	95	65	14	4	M12	21.3	22	25	35	14	16	16	16	3	12	5	2	2.5	-	22	38	6	38	38	7	32	35	32	4	2.0
20	105	75	14	4	M12	26.9	27.5	31	42	16	18	18	18	4	14	6	2.5	3	-	26	40	6	40	40	8	40	45	40	4	2.3
25	115	85	14	4	M12	33.7	34.5	38	49	16	18	18	18	4	14	7	2.5	3	-	28	40	6	40	40	10	46	52	50	4	2.6
32	140	100	18	4	M16	42.4	43.5	47	59	18	18	18	18	5	14	8	3	3	-	30	42	6	42	42	12	56	60	60	6	2.6
40	150	110	18	4	M16	48.3	49.5	53	67	18	18	18	18	5	14	8	3	3	-	3.2	45	7	45	45	15	64	70	70	6	2.6
50	165	125	18	4	M16	60.3	61.5	65	77	20	18	18	18	5	16	8	3	4	-	28	45	80	45	45	20	74	84	84	6	2.9
65	185	145	18	8b	M16	76.1	77.5	81	96	20	18	18	18	6	16	8	3	4	55	32	45	10	45	45	20	92	104	104	6	2.9
80	200	160	18	8	M16	88.9	90.5	94	108	20	20	20	20	6	16	10	3	4	70	34	50	10	50	50	25	105	118	120	6	3.2
100	220	180	18	8	M16	114.3	116	120	134	22	20	20	20	6	18	10	4	4	90	40	52	12	52	52	25	131	140	140	8	3.6
125	250	210	18	8	M16	139.7	141.5	145	162	22	22	22	22	6	18	10	4	4	115	44	55	12	55	55	25	156	168	170	8	4.0
150	285	240	22	8	M20	168.3	170.5	174	188	24	22	22	22	6	20	10	5	5	140	44	55	12	55	55	25	184	195	190	10	4.5
200	340	295	22	12	M20	219.1	221.5	226	240	26	24	24	24	6	20	11	6	6	190	44	62	16	62	62	30	235	246	246	10	6.3
250	405	355	26	12	M24	273	276.5	281	294	29	26	26	26	8	22	12	10	10	235	46	70	16	70	68	-	292	298	296	12	6.3
300	460	410	26	12	M24	323.9	327.5	333	348	32	28	28	26	8	24	14	10	10	285	46	78	16	78	68	-	344	350	350	12	7.1
350	520	470	26	16	M24	355.6	359.5	365	400	35	30	30	30	8	26	18	10	10	330	57	82	16	82	68	-	390	400	410	12	8
400	580	525	30	16	M27	406.4	411	416	454	38	32	32	32	8	28	20	10	10	380	63	85	16	52	72	-	445	456	458	12	8
450	640	585	30	20	M27	457	462	467	500	42	34	40	40	8	30	22			425	68	83	16	72	-	-	490	502	516	12	8
500	715	650	33	20	M30	508	513.5	519	556	46	36	44	44	8	32	22	-	-	475	73	84	16	90	-	-	548	559	576	12	8
600	840	770	36	20	M33	610	616.5	622	660	55	40	54	54	8	32	24	-	-	575	83	88	18	95	-	-	670	658	690	12	8.8
700	910	840	36	24	M33	711				721	63	40		58	8	-	26	-	670	83	104	18	100	-	-	755	760	760	12	-
800	1025	950	39	24	M36	813				824	74	41		62	8	-	28	-	770	90	108	20	105	-	-	855	864	862	12	-
900	1125	1050	39	28	M36	914				926	82	48		64	8	-	30	-	860	94	118	20	110	-	-	955	968	962	12	-
1000	1255	1170	42	28	M39	1016				1030	90	59		68	8	-	35	-	960	100	137	22	120	-	-	1058	1072	1076	16	-
1200	1485	1390	48	32	M45	1219					78	c		-	-	-	-	1160		160	30	-	-	-	1262	-	1282	16	-	
1400	1685	1590	48	36	M45	1422					84			-	-	-	-	1346		177	30	-	-	-	1465	-	1482	16	-	
1600	1930	1820	56	40	M52	1626					c	102		-	-	-	-	1546		204	35	-	-	-	1688	-	1696	16	-	
1800	2130	2020	56	44	M52	1829					-	-	-	-	-	-	1746		218	35	-	-	-	1870	-	1896	16	-		
2000	2345	2230	62	48	M56	2030.0					-	-	-	-	-	-	-	1950		238	40	-	-	-	2072	-	2100	16	-	

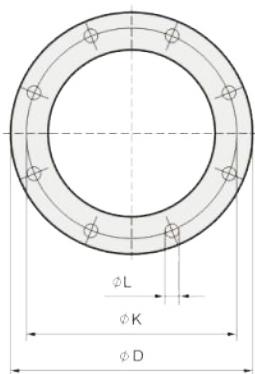
a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

b According to EN 1092-2 (Cast iron flanges) and EN 1092-3 (Copper alloy flanges), the flanges in this DN and PN may be supplied with 4 holes. Where steel flanges are required with 4 holes, these may be supplied by agreement between flange manufacturer and purchaser.

c To be specified by the purchaser.

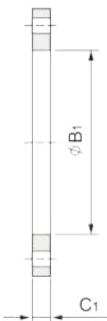
d Use is limited up to DN 600.

EN 1092-1 PN 25

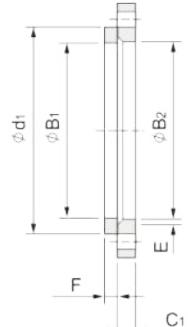


This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.

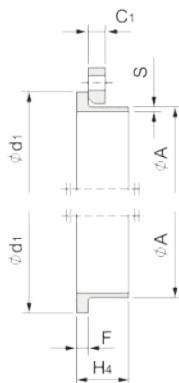
Refer to the column "Bolting Number" in Table 14 for the actual number.



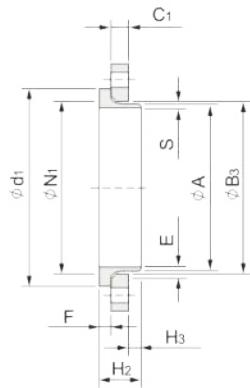
Type 01



Type 02 and 32



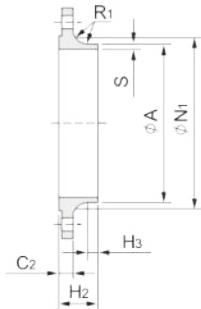
Type 02 and 35



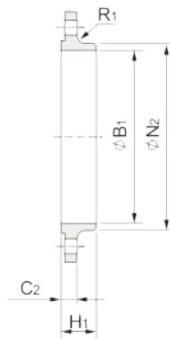
Type 04 and 34



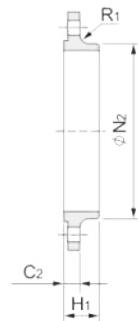
Type 05



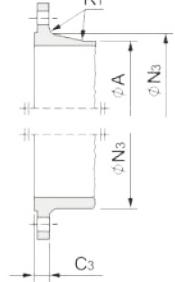
Type 11



Type 12



Type 13



Type 21

NOTE 1 Dimensions N_1, N_2 and N_3 are measured at the intersection of the hub draft angle and the back face of the flange

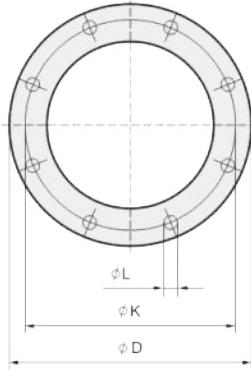
NOTE 2 For dimension d_1 , see Table 8.

NOTE 3 For dimensions G_{max} refer to NOTE 1 of 5.6.1.

DN	Mating dimensions						Outside diameter of neck A	Bore diameter		Flange thickness		Chamfer E	Collar thickness F	Diameter of shoulder Gmax	length				Neck diameter		Corner radii R ₁	Wall thickness (see 5.6.1) S				
	Outside diameter D	Diameter of bolt circle K	Diameter of bolt hole L	Bolting		Number		B ₁	B ₂	B ₃	C ₁	C ₂	C ₃	C ₄	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃					
	Flange type										Flange type										Flange type					
	01,02,05,11,12,13,21						11 21° 34° 35	01 12 32	02 04 04 13	01 11 02 12 21	05	02 04	32 34	35	05	12 13 34° 34°	11 35 35	11 13 34 13	12 13 21	11 12 13 21 34	11 34 35					
10	90	60	14	4	M12	17.2	18	21	31	14	16	16	16	3	12	5	-	22	35	6	35	28	30	28	4	1.8
15	95	65	14	4	M12	21.3	22	25	35	14	16	16	16	3	12	5	-	22	38	6	38	32	35	32	4	2.0
20	105	75	14	4	M12	26.9	27.5	31	42	16	18	18	18	4	14	6	-	26	40	6	40	40	45	40	4	2.3
25	115	85	14	4	M12	33.7	34.5	38	49	16	18	18	18	4	14	7	-	28	40	6	40	46	52	50	4	2.6
32	140	100	18	4	M16	42.4	43.5	47	59	18	18	18	18	5	14	8	-	30	42	6	42	56	60	60	6	2.6
40	150	110	18	4	M16	48.3	49.5	53	67	18	18	18	18	5	14	8	-	32	45	7	45	64	70	70	6	2.6
50	165	125	18	4	M16	60.3	61.5	65	77	20	20	20	20	5	16	10	-	34	48	8	48	75	84	84	6	2.9
65	185	145	18	8	M16	76.1	77.5	81	96	22	22	22	22	6	16	11	55	38	52	10	52	90	104	104	6	2.9
80	200	160	18	8	M16	88.9	90.5	94	114	24	24	24	22	6	18	12	70	40	58	12	58	105	118	120	8	3.2
100	235	190	22	8	M20	114.3	116.0	120	138	26	24	24	24	6	20	14	90	44	65	12	65	134	145	142	8	3.6
125	270	220	26	8	M24	139.7	141.5	145	166	28	26	26	26	6	22	16	115	48	68	12	68	162	170	162	8	4.0
150	300	250	26	8	M24	168.3	170.5	174	194	30	28	28	28	6	24	18	140	52	75	12	75	192	200	192	10	4.5
200	360	310	26	12	M24	219.1	221.5	226	250	32	30	30	30	6	26	18	190	52	80	16	80	244	256	252	10	6.3
250	425	370	30	12	M27	273.0	276.5	281	302	35	32	32	32	8	26	18	235	60	88	18	88	298	310	304	12	7.1
300	485	430	30	16	M27	323.9	327.5	333	356	38	34	34	34	8	28	20	285	67	92	18	92	352	364	364	12	8.0
350	555	490	33	16	M30	355.6	359.5	365	408	42	38	38	38	8	32	22	330	72	100	20	100	398	418	418	12	8.0
400	620	550	36	16	M33	406.4	411.0	416	462	48	40	40	40	8	34	24	380	78	110	20	110	452	472	472	12	8.8
450	670	600	36	20	M33	457.0	462.0	467	510	54	46	46	50	8	36	26	425	84	110	20	110	500	520	520	12	8.8
500	730	660	36	20	M36	508.0	513.5	519	568	58	48	48	51	8	38	28	475	90	125	20	125	558	580	580	12	10
600	845	770	39	20	M36	610.0	615.5	622	670	68	48	58	56	8	40	30	575	100	125	20	115	660	684	684	12	11
700	960	875	42	24	M39	711.0	b	721	824	85	50	b	57	8	30	-	-	129	20	125	760	-	-	12	-	
800	1085	990	48	24	M45	813.0		95		53	8			35	-	-	138	22	135	864	-	-	12	-		
900	1185	1090	48	28	M45	914.0	-	-	-	b	57	-	-	-	-	148	24	968	-	-	12	-	-			
1000	1320	1210	56	28	M52	1016.0	-	-	-	b	63	-	-	-	-	160	24	107	0	-	-	16	-			
1200																										
1400																										
1600																										
1800																										
2000																										

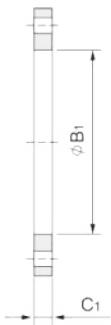
a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.
b To be specified by the purchaser.
c Use is limited up to DN 500.
d Only mating dimensions fixed, see Annex J.

EN 1092-1 PN 40

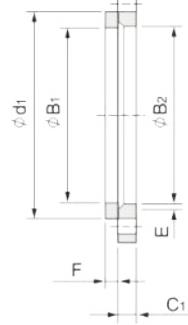


This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.

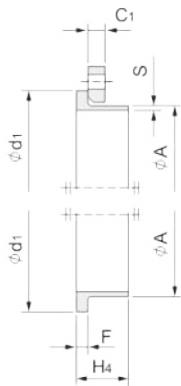
Refer to the column "Bolting Number" in Table 15 for the actual number.



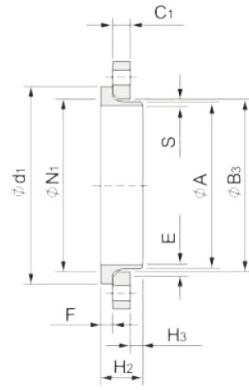
Type 01



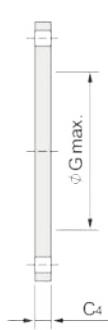
Type 02 and 32



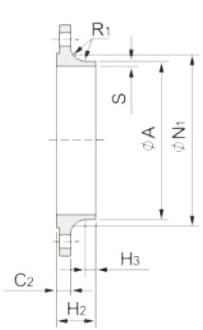
Type 02 and 35



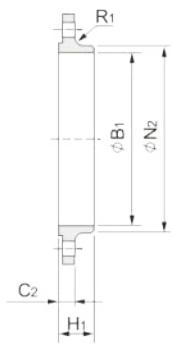
Type 04 and 34



Type 05



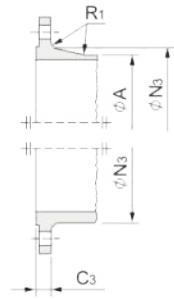
Type 11



Type 12



Type 13



Type 21

NOTE 1 Dimensions N1,N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange.

NOTE 2 For dimension d1, see Table 8.

NOTE 3 For dimensions Gmax refer to NOTE 1 of 5.6.1.

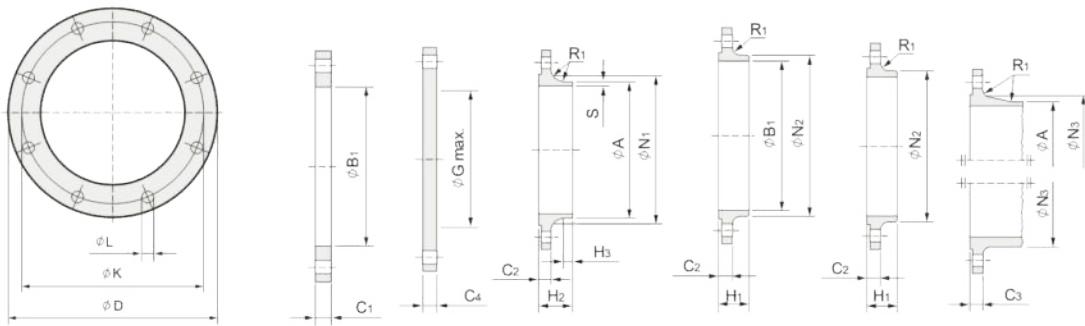
DN	Mating dimensions						Outside diameter of neck A	Bore Diameter		Flange Thickness				Diameter of Shoulder Gmax	Length				Neck Diameters			Corner Radii	Wall Thickness (see 5.6.1 S)		
	Outside diameter K	Diameter of bolt circle L	Diameter of bolt Hole Number	Bolting Size	B ₁	B ₂	B ₃	C ₁	C ₂	C ₃	C ₄	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃							
	Flange type																								
01,05,11,12,13,21						11 21°	01 12 32	02	04	01 02 04	11 12 13	21	05	02 04	32 34°	35	05	12 13	11 34°	35	11 34	12 13	21	11 12 13 21	34° 11
10	90	60	14	4	M12	17.2	18	21	31	14	16	16	3	12	5	-	22	35	6	35	28	30	28	4	1.8
15	95	65	14	4	M12	21.3	22	25	35	14	16	16	3	12	5	-	22	38	6	38	32	35	32	4	2.0
20	105	75	14	4	M12	26.9	27.5	31	42	16	18	18	4	14	6	-	26	40	6	40	40	45	40	4	2.3
25	115	85	14	4	M12	33.7	34.5	38	49	16	18	18	4	14	7	-	28	40	6	40	46	52	50	4	2.6
32	140	100	18	4	M16	42.4	43.5	47	59	18	18	18	5	14	8	-	30	42	6	42	56	60	60	6	2.6
40	150	110	18	4	M16	48.3	49.5	53	67	18	18	18	5	14	8	-	32	45	7	45	64	70	70	6	2.6
50	165	125	18	4	M16	60.3	61.5	65	77	20	20	20	5	16	10	-	34	48	8	48	75	84	84	6	2.9
65	185	145	18	8	M16	76.1	77.5	81	96	22	22	22	6	16	11	55	38	52	10	52	90	104	104	6	2.9
80	200	160	18	8	M16	88.9	90.5	94	114	24	24	22	6	18	12	70	40	58	12	58	105	118	120	8	3.2
100	235	190	22	8	M20	114.3	116	120	138	26	24	24	6	20	14	90	44	65	12	65	134	145	142	8	3.6
125	270	220	26	8	M24	139.7	141.5	145	166	28	26	26	6	22	16	115	48	68	12	68	162	170	162	8	4.0
150	300	250	26	8	M24	168.3	170.5	174	194	30	28	28	6	24	18	140	52	75	12	75	192	200	192	10	4.5
200	375	320	30	12	M27	219.1	221.5	226	250	36	34	36	6	28	18	190	52	88	16	88	244	260	254	10	6.3
250	450	385	33	12	M30	273	276.5	281	312	42	38	38	8	30	18	235	60	105	18	105	306	312	312	12	7.1
300	515	450	33	16	M30	323.9	327.5	333	368	52	42	42	8	34	20	285	67	115	18	115	362	380	378	12	8.0
350	580	510	36	16	M33	355.6	359.5	365	418	58	46	46	8	36	22	330	72	125	20	125	408	424	432	12	8.8
400	660	585	39	16	M36	406.4	411	416	472	65	50	50	8	42	24	380	78	135	20	135	462	478	498	12	11.0
450	685	610	39	20	M36	457	462	467	510	d	57	57	8	46	26	425	84	135	20		500	522	522	12	12.5
500	755	670	42	20	M39	508	513.5	519	572		57	57	8	50	28	475	90	140	20		562	576	476	12	14.2
600	890	795	48	20	M45	610	616.5	622	676		72	72	8	54	30	575	100	150	20		666	686	686	12	16.0
700																									
800																									
900																									
1000																									
1200																									
1400																									
1600																									

a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

b Only mating dimensions fixed, see Annex J.

c Use is limited up to DN 500.

d To be specified by the purchaser.



This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.

Refer to the column "Bolting Number" in Table 16 for the actual number.

NOTE 1 Dimensions N1,N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange.

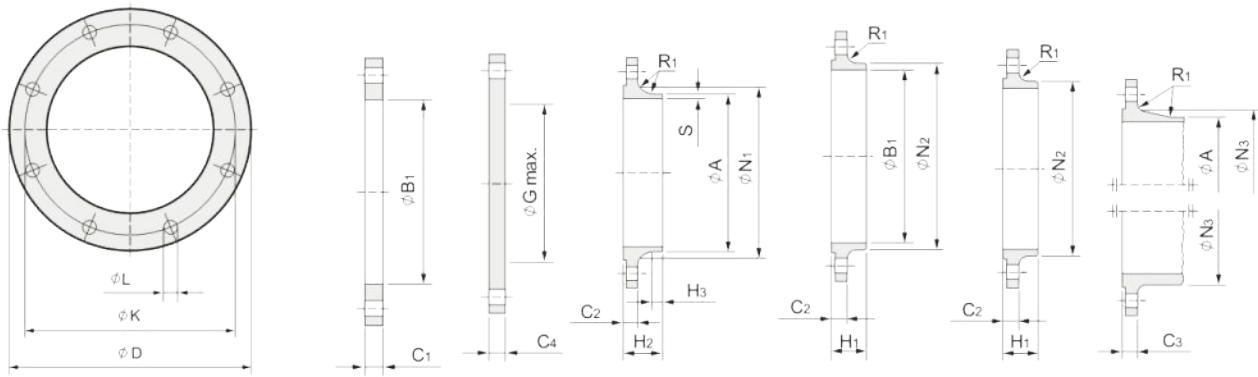
NOTE 3 For dimensions Gmax refer to NOTE 1 of 5.6.1.

EN 1092-1PN 63

DN	Mating Dimensions						Outside Diameter of Neck A	Bore Diameter	Flange Thickness				Diameter of Shoulder Gmax	Length			Neck Diameters			Corner Radii R1	Wall Thickness (see 5.6.1) S
	Outside Diameter	Diameter of Bolt Circle K	Diameter of Bolt Hole L	Bolting Number	Size	B ₁			C ₁	C ₂	C ₄	H ₁		H ₂	H ₃	N ₁	N ₂	N ₃			
									Flange type												
	01,05,11,12,13,21						11 21*	01 02	01	11 12 13	21	05	05	12 13	11	11	11 12 13	21	11 12 13 21	11	
10	100	70	14	4	M12	17.2	18	20	20	20	20	20	-	28	45	6	32	40	40	4	
15	105	75	14	4	M12	21.3	22	20	20	20	20	20	-	28	45	6	34	43	45	4	
20	130	90	18	4	M16	26.9	27.5	22	22	22	22	22	-	30	48	8	42	52	50	4	
25	140	100	18	4	M16	33.7	34.5	24	24	24	24	24	-	32	58	8	52	60	61	4	
32	155	110	22	4	M20	42.4	43.5	24	24	24	24	24	-	32	60	8	62	68	68	6	
40	170	125	22	4	M20	48.3	49.5	26	26	26	26	26	-	34	62	10	70	80	82	6	
50	180	135	22	4	M20	60.3	61.5	26	26	26	26	26	-	36	62	10	82	90	90	6	
65	205	160	22	8	M20	76.1	77.5	26	26	26	26	26	45	40	68	12	98	112	105	6	
80	215	170	22	8	M20	88.9	90.5	30	28	28	28	28	60	44	72	12	112	125	122	8	
100	250	200	26	8	M24	114.3	116	32	30	30	30	30	80	52	78	12	138	152	146	8	
125	295	240	30	8	M27	139.7	141.5	34	34	34	34	34	105	56	88	12	168	185	177	8	
150	345	280	33	8	M30	168.3	170.5	36	36	36	36	36	130	60	95	12	202	215	204	10	
200	415	345	36	12	M23	219.1	221.5	48	42	42	42	42	180	-	110	16	256	-	264	10	
250	470	400	36	12	M33	273.0	276.5	55	46	46	46	46	220	-	125	18	316	-	320	12	
300	530	460	36	16	M33	323.9	327.5	65	52	52	52	52	270	-	140	18	372	-	378	12	
350	600	525	39	16	M36	355.6	359.6	72	56	56	56	56	310	-	150	20	420	-	434	12	
400	670	585	42	16	M39	406.4	411.0	80	60	60	60	60	360	-	160	20	475	-	490	12	
500																					
600																					
700																					
800																					
900																					
1000																					
1200																					

a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

b Only mating dimensions fixed, see Annex J.



This diagram illustrates the arrangement but not necessarily the correct number of bolt holes.

Refer to the column "Bolting Number" in Table 17 for the actual number.

NOTE 1 Dimensions N1,N2 and N3 are measured at the intersection of the hub draft angle and the back face of the flange
NOTE 3 For dimensions Gmax refer to NOTE 1 of 5.6.1.

EN 1092-1 PN 100

Dimensions in inch / mm

DN	Mating dimensions						Outside Diameter of Neck A	Bore Diameter	Flange Thickness				Diameter of Shoulder Gmax	H ₁	H ₂	H ₃	Length				Neck Diameter				Comer Radii R ₁	Wall Thickness S	
	Diameter of Circle k	Diameter of Bolt Circle K	Diameter of Bolt Hole l	Bolting		B ₁			B ₂	B ₃ C ₁	C ₂	C ₃	C ₄														
				Number	Size																						
Flange type																											
10	100	70	14	4	M12	17.2	18	20	20	20	20	20	-	28	45	6	32	40	40	4							
15	105	75	14	4	M12	21.3	22	20	20	20	20	20	-	28	45	6	34	43	45	4							
20	130	90	18	4	M16	26.9	27.5	22	22	22	22	22		30	48	8	42	52	50	4							
25	140	100	18	4	M16	33.7	34.5	24	24	24	24	24	-	32	58	8	52	60	61	4							
32	155	110	22	4	M20	42.4	43.5	24	24	26	24	24	-	32	60	8	62	68	68	6							
40	170	125	22	4	M20	48.3	49.5	26	26	28	26	26	-	34	62	10	70	80	82	6							
50	195	145	26	4	M24	60.3	61.5	28	28	30	28	28	-	36	68	10	90	95	96	6							
65	220	170	26	8	M24	76.1	77.5	30	30	34	30	45	40	76	12	108	118	118	118	6							
80	230	180	26	8	M24	88.9	90.5	34	32	36	32	60	44	78	12	120	130	128	8								
100	265	210	30	8	M27	114.3	116	36	36	40	36	80	52	90	12	150	158	150	8								
125	315	250	33	8	M30	139.7	141.5	42	40	40	40	105	56	105	12	180	188	185	8								
150	355	290	33	12	M30	168.3	170.5	48	44	44	44	130	60	115	12	210	225	216	10								
200	430	360	36	12	M33	219.1	221.5	60	52	52	52	180	-	130	16	278	-	278	10								
250	505	430	39	12	M36	273	276.5	72	60	60	60	210	-	157	18	340	-	340	12								
300	585	500	42	16	M39	323.9	327.5	84	68	68	68	260	-	170	18	400	-	407	12								
350	655	560	48	16	M45	355.6	359.6	95	74	74	74	300	-	189	20	460	-	460	12								
400													b														
500																											
a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.																											
b Only mating dimensions fixed, see Annex J.																											

EN 1092-1 Flange facing dimensions

DN	d1												Dimensions in inch / mm										
	PN6 ^a		PN6 ^a		PN16	PN25	PN40	PN63	PN100	PN160	PN250	PN320	PN400	f1	f2	f3	f4	w ^b	x	y	z ^b	a≈	R
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm		
10	35	40	40	40	40	40	40	40	40	40	40	40	2	4.5	4.0	2.0	24	34	35	23	41'	2.5	
15	40	45	45	45	45	45	45	45	45	45	45	45					29	39	40	28			
20	50	58	58	58	58	58	58	58	58	58	58	58					36	50	51	35			
25	60	68	68	68	68	68	68	68	68	68	68	68					43	57	58	42			
32	70	78	78	78	78	78	78	78	78	78	78	78					51	65	66	50			
40	80	88	88	88	88	88	88	88	88	88	88	88					61	75	76	60			
50	90	102	102	102	102	102	102	102	102	102	102	102					73	87	88	72			
65	110	122	122	122	122	122	122	122	122	122	122	122					95	109	110	94			
80	128	138	138	138	138	138	138	138	138	138	138	138					106	120	121	105			
100	148	158	158	162	162	162	162	162	162	162	162	162					129	149	150	128	31'	3	
125	178	188	188	188	188	188	188	188	188	188	188	188					155	175	176	154			
150	202	212	212	218	218	218	218	218	218	218	218	218					183	203	204	182			
200	258	268	268	278	285	285	285	285	285	285	285	285					239	259	260	238			
250	312	320	320	335	345	345	345	345	345	345	345	345					292	312	313	291			
300	365	370	378	395	410	410	410	410	410	-	-	-					343	363	364	342			
350	415	430	438	450	465	465	465	465	-	-	-	-	4	5.0	4.5	2.5	395	421	422	394	37'	3.5	
400	465	482	490	505	535	535	535	535	-	-	-	-					447	473	474	446			
450	520	532	550	555	560	560	560	560	-	-	-	-					497	523	524	496			
500	570	585	610	615	615	615	615	615	-	-	-	-					549	575	576	548			
600	670	685	725	720	735	735	735	735	-	-	-	-					649	675	676	648			
700	775	880	795	820	840	840	840	840	-	-	-	-					751	777	778	750			
800	880	905	900	930	960	960	960	960	-	-	-	-	5	5.5	5.0	3.0	856	882	883	855	28'	4	
900	980	1005	1000	1030	1070	1070	1070	1070	-	-	-	-					961	987	988	960			
1000	1080	1110	1115	1140	1180	1180	1180	1180	-	-	-	-					1062	1092	1094	1060			
1200	1290	1330	1330	1350	1380	1380	1380	1380	-	-	-	-					1262	1292	1294	1260			
1400	1510	1535	1530	1560	1600	-	-	-	-	-	-	-					1462	1492	1494	1460			
1600	1710	1760	1750	1780	1815	-	-	-	-	-	-	-					1662	1692	1694	1660			
1800	1920	1960	1950	1985	-	-	-	-	-	-	-	-	5	6.0	4.0	-	1862	1892	1894	1860	2060	-	
2000	2125	2170	2150	2210	-	-	-	-	-	-	-	-					2062	2092	2094	2060			
2200	2335	2370	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
2400	2545	2570	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
2600	2750	2780	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
2800	2960	3000	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
3000	3160	3210	-	-	-	-	-	-	-	-	-	-	5	6.5	4.0	-	-	-	-	-	2060	-	
3200	3370	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
3400	3580	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
3600	3790	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
3800	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-			
4000	-	-	-	-	-	-	-	-	-	-	-	-					-	-	-	-			

a For flanges type 21 the outside hub diameter approximately corresponds to the outside pipe diameter.

b Only mating dimensions fixed, see Annex J.

EN 1092-1 Wall thickness for type 11

Dimensions in inch / mm

øA	PN2.5		PN6		PN10		PN16		PN25		PN40		PN63		PN100	
	S	Sp	S	Sp	S	Sp	S	Sp	S	Sp	S	Sp	S	Sp	S	Sp
17.2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
21.3	2	2	2	2	2	2	2	2	2	2	2	7	2	2	3.2	2
26.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.2	2.3
33.7	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.6	2.6
42.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.9	2.9	3.6	2.9
48.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.9	2.9	3.6	3.2
60.3	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4	3.2	4	36
76.1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4	3.6	4	4
88.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.5	4	5	5
114.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.5	4.5	5.6	5.6
139.7	4	4	4	4	4	4	4	4	4	4	4	4	5.6	5.6	6.3	6.3
168.3	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	6.3	6.3	8	8
219.1	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	7.1	7.1	8.8	8.8
273	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	7.1	7.1	7.1	7.1	8.8	8.8	10	10
323.9	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	8	8	8	8	11	10	12.5	12.5
355.6	7.1	7.1	7.1	7.1	7.1	7.1	8	8	8	8	8.8	8.8	12.5	10	14.2	14.2
406.4	7.1	7.1	7.1	7.1	7.1	7.1	8	8	8.8	8.8	11	11	14.2	11	16	16
457	7.1	7.1	7.1	7.1	7.1	7.1	8	8	8.8	8.8	12.5	12.5	-	-	-	-
508	7.1	7.1	7.1	7.1	7.1	7.1	8	8	10	10	14.2	14.2	-	-	-	-
610	7.1	7.1	7.1	7.1	8	7.1	10	8.8	11	11	16	16	-	-	-	-
711	7.1	7.1	8	7.1	8.8	8	10	8.8	14.2	12.5	-	-	-	-	-	-
813	7.1	7.1	8	7.1	8.8	8	12.5	10	16	14.2	-	-	-	-	-	-
914	7.1	7.1	8	7.1	12.5	10	12.5	10	17.5	16	-	-	-	-	-	-
1016	7.1	7.1	8	7.1	12.5	10	12.5	10	20	17.5	-	-	-	-	-	-
1219	8	7.1	8.8	8	12.5	11	14.2	12.5	-	-	-	-	-	-	-	-
1422	8	7.1	8.8	8	14.2	12.5	16	14.2	-	-	-	-	-	-	-	-
1626	8.8	8	10	9	16	14.2	17.5	16	-	-	-	-	-	-	-	-
1829	10	10	11	10	17.5	16	20	17.5	-	-	-	-	-	-	-	-
2032	11	10	12.5	11	17.5	16	22	20	-	-	-	-	-	-	-	-
2235	11	10	14	12.5	20	18	-	-	-	-	-	-	-	-	-	-
2438	11	10	15	14.2	22.2	20	-	-	-	-	-	-	-	-	-	-
2620	11	10	16	14.2	25	22.2	-	-	-	-	-	-	-	-	-	-
2820	11	10	17	16	25	22.2	-	-	-	-	-	-	-	-	-	-
3020	11	10	20	16	32	24	-	-	-	-	-	-	-	-	-	-
3220	11	10	20	16	-	-	-	-	-	-	-	-	-	-	-	-
3420	11	10	22	17.5	-	-	-	-	-	-	-	-	-	-	-	-
3620	11	10	22	17.5	-	-	-	-	-	-	-	-	-	-	-	-
3820	11	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4020	11	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE Sp valves shall match those given in En10220 respectively EN ISO 1127.

不锈钢化学成份对照表 Stainless steel chemical component form

材质	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	N%
EN10222-5:1.4301	≤0.07	≤1.00	≤2.00	≤0.045	≤0.015	17-19.5		8.0-10.5	≤0.11
EN17440:1.4306	≤0.030	≤1.00	≤2.00	≤0.045	≤0.015	18-20.0		10-12	≤0.11
EN10222-5:1.4401	≤0.07	≤1.00	≤2.00	≤0.045	≤0.015	16.5-18.5	2.0-2.5	10-13.0	≤0.11
EN10222-5:1.4404	≤0.030	≤1.00	≤2.00	≤0.045	≤0.015	15.5-18.5	2.0-2.5	10-13.0	≤0.11
EN10222-5:1.4541	≤0.08	≤1.00	≤2.00	≤0.045	≤0.015	17-19.0		9.0-12.0	Ti:5x%C-0.70
EN10222-5:1.4571	≤0.08	≤1.00	≤2.00	≤0.045	≤0.015	16.5-18.5	2.0-2.5	10.5-13.5	Ti:5x%C-0.70

材质	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	N%
ASTM A182:F304	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	18-20.0		8.0-11.0	-
ASTM A182:F304L	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	18-20.0		10-13.0	-
ASTM A182:F316	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	16-18.0	2.0-3.0	10-14.0	-
ASTM A182:F316L	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	16-18.0	2.0-3.0	10-15.0	-
ASTM A182:F321	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	17-19.0		9.0-12.0	Ti:5x%-0.70
ASTM A276:F316Ti	≤0.08	≤1.00	≤2.00	≤0.045	≤0.030	16-18.0	2.0-3.0	10-14.0	≤0.10

不锈钢机械性能对照表 Stainless steel Mechanical properties form

材质	屈服强度Yield strength(Mpa)		抗拉强度 tensile strength Rm Mpa	延伸度A% Elongation Rm Mpa	断面收缩率 Reduction A%
	Rp ^{0.2}	Rp ^{0.1}			
EN10222-5:1.4301	≥200	≥230	500-700	≥35%	-
DIN17440:1.4306	≥180	≥215	460-680	≥40%	-
EN10222-5:1.4401	≥205	≥240	510-710	≥35%	-
EN10222-5:1.4404	≥190	≥225	490-690	≥35%	-
EN10222-5:1.4541	≥200	≥235	510-710	≥30%	-
EN10222-5:1.4571	≥210	≥245	510-710	≥35%	-

材质	屈服强度Yield strength(Mpa)		抗拉强度 Tensile strength Rm Mpa	延伸度A% Elongation Rm Mpa	断面收缩率 Reduction A%
	Rp ^{0.2}	Rp ^{0.1}			
ASTM A182:F304	≥205	-	≥515	≥30%	≥50%
ASTM A182:F304L	≥170	-	≥485	≥30%	≥50%
ASTM A182:F316	≥205	-	≥515	≥30%	≥50%
ASTM A182:F316L	≥170	-	≥485	≥30%	≥50%
ASTM A182:F321	≥205	-	≥515	≥30%	≥50%
ASTM A276:F316Ti	≥205	-	≥515	≥30%	≥40%



包装 Packing

>> 口径≤89mm的管件,表面为普通酸洗或者喷砂,一般国内执行标准且数量少或者样品,可入出口三层瓦楞纸箱装,纸箱厚度大于1.7mm,或纸箱型号有1#到12#根据管件重量来设计,纸箱总重≤25KG

>> 口径≤219mm的管件,用气泡袋装袋/缠绕,两头盖上绿色PVC管帽防止坡口划伤。或用0.1mm厚度的珍珠棉每层铺垫后装如出口木箱;装好箱后用钉子把箱盖钉紧,不能露出明钉,以防刮伤人或产品。

>> 口径≥219mm的管件,用缠绕膜单独包裹,可直接适用出口木托包装,也可根据要求设计木箱。装上产品后用双2cm宽的编制带捆紧。再用0.1mm缠绕膜整体缠绕包裹起到固定和防水作用。或两头盖上绿色的PVC管帽防止坡口碰伤,用纸板包裹供觉的地方比如三通、四通,再进行整体的缠绕,这种包装仅限于整柜出货。

>> Stainless Steel Fittings OD≤89mm, the surface is ordinary pickling or sandblasting, generally implemented in domestic standards and in small quantities or samples, can be packed in three-layer corrugated boxes for import and export, the thickness of the carton is greater than 1.7mm, or the carton model is 1# to 12 #designed according to the weight of the pipe fittings, the total weight of the carton is less than or equal to 25KG.

>> OD≤219mm, bagged/wrapped with bubble bags, and covered with green PVC pipe caps on both ends to prevent scratches on the groove. Or use 0.1mm thick pearl cotton for each layer and then pack it into an export wooden box; after packing the box, use nails to fasten the box cover, and do not expose the nails, so as to prevent people or products from being scratched.

>> OD≥219mm, wrapped individually with wrap, which can be directly applied to export wooden pallet packaging, and wooden boxes can also be designed according to requirements. After installing the product tie it tightly with double 2cm wide braided straps. Then wrap it with 0.1mm wrapping film as a whole to fix and waterproof. Or cover both ends with green PVC pipe caps to prevent the bevel from bruising, wrap the places for sleep such as tee and cross, and then wrap them as a whole. This kind of packaging is only limited to the whole cabinet.

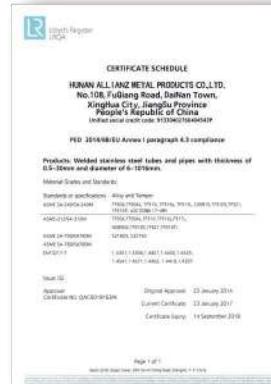


订货指南 Ordering Guide

- 订货指南:请提供以下信息
- Ordering guide: please provide the following information when ordering.

1	产品类型: Product type:
2	数量/重量/标准/牌号/交货日期 Quantity/weight/standard/grade/date of delivery
3	产品尺寸: Product size:
4	加工工艺 : 焊接/锻造 Processing technology: Weld/Forge
5	表面处理: Surface finish:
6	应用或零部件名称: Name of application of part:
7	包装要求: Packing requirement:
8	备注 : 如有特别需要请联系我们 Note: Please contact us if you have any special requirement

证书 Certificate



出口国家 Export Countries



Africa

A01 Egypt
A02 Ghana
A03 Kenya
A04 Morocco
A05 Nigeria
A06 South Africa

North & South America

B01 Argentina
B02 Brazil
B03 Canada
B04 Chile
B05 Colombia
B06 Costa Rica
B07 Ecuador
B08 Honduras

B09 Mexico
B10 Panama
B11 Peru
B12 United States

Asia

C01 Bahrain
C02 Brunei
C03 United Arab Emirates
C04 Thailand
C05 Turkey
C06 Vietnam

C07 India
C08 Indonesia
C09 Iran
C10 Israel
C11 Korea
C12 Kuwait
C13 Lebanon
C14 Pakistan
C15 Philippines
C16 Saudi Arabia
C17 Singapore

Europe

D01 Austria
D02 Belarus
D03 Belgium
D04 Bulgaria
D05 Czech
D06 France

D07 Germany
D08 Greece
D09 Italy
D10 Lithuania
D11 Netherlands

D12 Romania
D13 Russia
D14 Spain
D15 Ukraine
D16 United Kingdom

Oceania

E01 Australia
E02 Fiji
E03 New Zealand

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联系我们



Ronsco-Your Reliable Stainless Steel Supplier



TEL:86-731-82250427
Web: www.ronscopipe.com
Email: marketing@ronsteel.com
Head Office: 2505-2508, C3 Building, Wanda Plaza,
Kaifu District, Changsha, Hunan Province, China.

湖南安联金属制品有限公司

HUNAN ALLIANZ METAL PRODUCTS

电话:+86-731-82250427
网址: www.ronscopipe.com
邮箱: marketing@ronsteel.com
办公地址:湖南省长沙市开福区万达广场C3栋, 25楼2505-2508 ,邮编410005



湖南安联金属制品有限公司

HUNAN ALLIANZ METAL PRODUCTS CO., LTD

电话:+86-731-82250427

网址: www.ronscopipe.com

邮箱: marketing@ronsteel.com

办公地址:湖南省长沙市开福区万达广场C3栋,

邮编410005

Office Address: C3 BUILDING, WANDA PLAZA, KAIFU DISTRICT, CHANGSHA CITY, HUNAN PROVINCE, CHINA.