



## Hebei Lufeng Piping Equipment Co., Ltd.

*A solution of piping system – ISO 9001:2000 certified*

- Pipes & Tubes
- Pipe fittings
- Flanges
- Valves
- Gaskets
- Fasteners

[www.lfpc.com](http://www.lfpc.com)  
[sales@lfpc.com](mailto:sales@lfpc.com)

Phone: +86 317 6218608 Fax: +86 317 6211182

Wuli Yao Industrial Zone, Yanshan County, Hebei Province, China





# ISO 9001: 2008 Certificate

Certificate CN14/10391

The management system of

## HEBEI LUFENG PIPING EQUIPMENT CO.,LTD.

Floor 6, Liantong Mansion, Wuliyao Industrial Zone, Yanshan County, Cangzhou City, Hebei Province, P. R. China

Organization Code 677353393

has been assessed and certified as meeting the requirements of

### ISO 9001:2008

For the following activities

**Sales of pipeline equipment covering pipes, valves, flanges and fittings**

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2008 requirements may be obtained by consulting the organisation

This certificate is valid from 19 September 2014 until 18 September 2017 and remains valid subject to satisfactory surveillance audits. Re certification audit due before 3 September 2017 Issue 1. Certified since 19 September 2014

Authorised by

SGS United Kingdom Ltd Systems & Services Certification  
Rossmore Business Park Ellesmere Port Cheshire CH65 3EN UK  
t +44 (0)151 350-6666 f +44 (0)151 350-6600 [www.sgs.com](http://www.sgs.com)  
The certification information can be verified on the web site of Certification and Accreditation Administration of the People's Republic of China [www.cnca.gov.cn](http://www.cnca.gov.cn)



SGS 9001-8 01 0614

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# ISO9001:2015 of LFPCO



## CERTIFICATE OF REGISTRATION

The Quality Management Systems of

### HEBEI LUFENG PIPING EQUIPMENT CO.,LTD

Unified Social Credit Code:911309256773533932

Wuliyao Industrial Zone, Yanshan County, Cangzhou city, Hebei Province, China

has been assessed by GIC and complying with

### GB/T19001-2016/ISO9001:2015

For the following activities

**Sales of pipeline equipment covering pipes, valves,  
flanges and fittings**

Date of Issue: 17 January 2019

Date of Expiry: 16 January 2022

Date of Initial Certification: 17 January 2019

Certificate No.: U19Q28012471R0S



Scan for certificate status

The granting of this certificate does not mean that the certificate holder can avoid any legal obligation. If the products or activities covered in the scope of certification require administrative license, the certificate shall be only valid within the scope of administrative licensing. The registered organization shall be subject to regular annual supervision by GIC, and the continual validity of the certificate is base upon conformity of audit. Please scan two-dimension code at lift to find the certificate information. This certificate can be queried at Certification and Accreditation Administration of the People's Republic of China official website ([www.cnca.gov.cn](http://www.cnca.gov.cn)) & GIC website ([www.gicg.com.cn](http://www.gicg.com.cn))



GIC WeChat public number

Signature: *Helen*

Guardian Independent Certification Ltd

Registered in England

Sovereign House 212-224 Shaftesbury Avenue London England WC2H 8HQ

Accredited by Member of IAF MLA



0045

# Certificates of our factory



# Certificate of Compliance



No. 0B181227.CSPCD46

Certificate's Holder:

Cangzhou Sam Pipe Industry Co., Ltd.  
Fan Village, Wuli Yao Industrial Zone, Yanshan County, Cangzhou City, Hebei Province, China

Certification ECM Mark:



Product:  
Model(s):

Flanges and Fittings  
(see the following annex I)

Verification to:

Standard:  
EN 10253-2, EN 10253-3, EN 10253-4,  
ASME B16.9, ASME B16.49, EN 10241,  
MSS SP-75, ASME B16.11, MSS SP-83,  
MSS SP-97, MSS SP-95, MSS SP-79,  
AWWA C208, EN 1092-1, ASME B16.5,  
ASME B16.47, ASME B16.48, ASME B16.36,  
AWWA C207, ISO 7005-1, AS2129, DIN2605,  
DIN2616

related to CE Directive(s):  
2014/68/EU (Pressure Equipment)  
ANNEX I PARAGRAPH 4.3

**Remark:** The product(s) has been verified on a voluntary basis. The product(s) satisfies the requirements of the Certification Mark of ECM, in reference to the above listed Standard(s). The above Compliance Mark can be affixed on the product(s) accordingly to the ECM regulation about its release and its use. The regulation can be found at [www.entecerma.it](http://www.entecerma.it). This Certificate of Compliance can be checked for validity at [www.entecerma.it](http://www.entecerma.it)

This verification doesn't imply assessment of the production of the product(s).

Additional information, clarification about the **CE** Marking:



We attest that a TCF for the **CE** Marking process is in place. Whereas the Manufacturer is Responsible to start the **CE Marking Certification Procedure** through an appointed Notified Body and the perform all the necessary activities, as required by the Directive and accepted by the Notified Body, before placing the **CE** Mark on the product(s).

Date of issue 27 December 2018

Expiry date 26 December 2023

Chief Manager  
Marta Morina

Deputy Manager  
Amanda Payne

**Ente Certificazione Macchine Srl**

Via Ca' Bello, 243 – Loc. Castello di Serravalle – 40053 Valsamoggia (BO) – ITALY  
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## Annex I

No. 0B181227.CSPCD46



### Model(s):

EN 1092-1	P235GH, P245GH, P265GH, P280GH, P295GH, 11CrMo9-10, X2CrNi18-9, X5CrNi18-10, X2CrNiMo17-12-2, X6CrNiTi18-10, X6CrNiNb18-10, X6CrNiMoTi17-12-2
EN 10253-2	P235TR2, P265TR2, P235GH, P265GH, 16Mo3, 13CrMo4-5, 10CrMo5-5, 10CrMo9-10, X11CrMo5, X11CrMo9-1, X10CrMoVNb9-1, L290NB, L360NB, L360QB, L415NB, L415QB, L450QB
EN 10253-3	X2CrNi18-9, X2CrNi19-11, X2CrNi18-10, X5CrNi18-10, X6CrNiTi18-10, X6CrNiNb18-10, X2CrNiMo17-12-2, X5CrNiMo17-12-2, X6CrNiMoTi17-12-2
ASTM A234	WPB, WPC, WP5, WP9, WP11, WP12, WP22, WP91
ASTM A860	WPHY42, WPHY46, WPHY52, WPHY60, WPHY65, WPHY70
ASTM A403	WP304, WP304L, WP316, WP316L, WP321, WP347, WP904L
ASTM A420	WPL6
ASTM A105	A105, A105N
ASTM A350	LF1, LF2, LF3
ASTM A694	F42, F46, F48, F50, F52, F56, F60, F65, F70
ASTM A181	Class 60 & 70
ASTM A182	F5, F9, F11, F22, F51, F53, F55, F91, F304, F304L, F316, F316L, F316H, F321, F347, F347H
EN 10028-2	15NiCuMoNb5-6-4(WB36)

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## About Lufeng

Hebei Lufeng Piping Equipment Co., Ltd was founded in 2008. We are a Chinese exporter of piping materials located in Cangzhou city – it is called the China pipe fittings manufacturing base. We always dedicated to develop our economic advantages to provide superior materials with competitive prices.

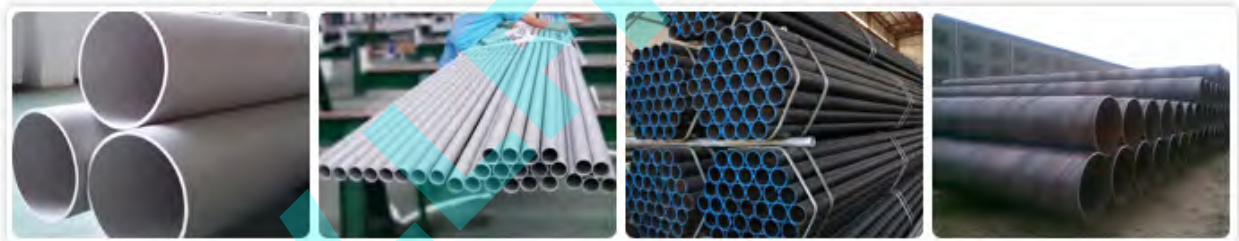
Our pipeline products including steel pipes, tubes, butt welding fittings, steel flanges, forged fittings, branch outlets, valves, gaskets, fasteners and other accessories. They are strictly manufactured according to ISO, ASME, ASTM, ANSI, API, MSS, AWWA, DIN, BS, EN, JIS, GB and other international standards. Production as per customer's drawings or requests is also available.

150 kilometers away from Tianjin Seaport, Lufeng is enjoying the convenient transportation to offer you a timely delivery.

Our experienced and friendly staff are looking forward to working with you!

## Scope of Supply

### 1) Steel Pipes



Our steel pipes are available in a variety of wall thicknesses, shapes, diameters and materials. In addition, they are manufactured in accordance with international standards, such as ASTM, JIS, DIN, BS, GOST, EN etc. to meet the requirements of our global clients. With features of reliability, durability, corrosion resistance and ease of use, our steel pipes are increasingly popular in the petroleum, gas, chemical, electrical power, shipbuilding, pharmaceutical, beverage, and many other fields.

While maintaining quality, we also endeavor to reduce our production costs, so we can offer economically priced steel pipes to our customers. Long term relationships with local suppliers, raw material bulk purchasing, efficient equipment and an experienced, skilled staff assist us in reducing material acquisition costs and improving production efficiency. Thus we can pass our savings on to our customers in the form of lower prices.

*Manufacture Specification:*

ASME/ASTM, EN, API, DIN, JIS,.....

*Type:*

Carbon steel pipes and tubes



Low temperature steel pipes and tubes

Alloy steel pipes and tubes

Stainless steel pipes and tubes

Special alloy steel pipes and tubes

*Forming:*

Seamless (Cold Drawing & Hot Rolling)

Welded (ERW, EFW, LSAW, SSAW)

*Materials:*

ASTM A106 : A, B, C

A53: A, B (Type S, E, F)

API 5L: B, X42, X52, X60, X65, X70 (PSL1 & PSL2)

ASTM A333: 1, 3, 6

ASTM-335: P5, P9, P11, P22, P91

ASTM A312: TP304, TP304/304L, TP304H, TP316L, TP316/316L, TP321, TP321H, TP347H, TP317

ASTM A213: TP304, TP304L, TP316, TP316L,

Monel Alloy, Duplex Steel, Inconel Alloy, ASTM 904L,

ASTM A789/A790: S31803, S32750, S32760, 254SMO

*Wallthickness & OD:*

SCH 5S — SCH160 & XXS

OD 6mm & DN15 — DN2000

## 2) Pipe Fittings

We specialize in manufacturing of a wide variety of industrial pipe fittings including elbows, bends, tees, crosses, reducers, caps and more. All products adopted American standard ASME (ANSI), European standard EN, German standard DIN and so on. Our continuing commitment to the production of quality products has made us internationally recognized in the following industries: power generation, petroleum, natural gas, chemical, shipbuilding, heating, papermaking, metallurgy, among others. Backed by our skilled and qualified employees, we are able to provide an optimal solution to serve you needs.

Quality is our top most priority. Over the years, we have worked to solve problems previously associated with our pipe fittings and have improved product designs for better performance. A strict quality management system is implemented to control each phase of production. The quality of our products is also guaranteed by our advanced production equipment. These help us save raw materials, shorten production time and reduce production costs.

- **Butt welding pipe fittings**





*Manufacture Specification:*

ASME/ANSI B16.9/B16.28/B16.49, JIS B 2311/2220, DIN2605/2616/2615, EN10253, MSS SP-43/SP-75

*Type:*

- Elbow (45° , 90° , 180° , LR, SR, R=3D)
- Tee (Straight & Reducing)
- Cross (Straight & Reducing)
- Reducer (Concentric & Eccentric)
- Stub Ends (Long Pattern & Short Pattern)
- Cap
- Bend
- Special Type acc. to customer's drawings.

*Materials:*

Carbon Steel: ASTM A234-WPB, WPC

Low Temp. Steel: ASTM A420-WPL6, WPL3

Alloy Steel: ASTM A234-WP11, WP22, WP91

Pipeline Steel: WPHY42, WPHY46, WPHY52, WPHY60, WPHY65, WPHY70

Stainless Steel: ASTM A403-WP304, WP304L, WP304/304L, WP304H, WP316, WP316L, WP316/316L, WP321, WP321H, WP347, WP347H

Super Stainless Steel: ASTM 904L, B366-N08904, A403-WP317, 317L, 254SMO(UNS S31254)

Duplex & Super Duplex Steel: ASTM A815-S31803, S32205, S32750, S32760, 2205

Nickel Alloy Inconel825, Incolloy800HT, Monel400, Al-Mi Metal

*Size:*

Seamless products DN15 (1/2" ) — DN600 ( 32" )

Welded products DN450 (18" ) — DN3000 (120" )

*Wall Thickness:*

Stainless Steel: Sch5S, Sch10S, Sch40S, Sch80S

Carbon and Alloy Steel: Sch20, Sch30, STD, Sch40, Sch60, XS, Sch80, Sch100, Sch120, Sch140, Sch160, XXS

● **Forged pipe fittings**



*Manufacture Specification:*

ASME B16.11, MSS-SP-97/SP-79/SP-83/ SP-95

*Type of Socket Welding Fittings:*

45° Elbow, 90° Elbow, Tee, Crosse, Cap, Half-Coupling, Full Coupling, Reducing Coupling (3000#, 6000#, 9000#)

Union (3000#)

Reducing Insert (3000#, 6000#)

Swage Nipple

*Type of Threaded Fittings:*

45° Elbow, 90° Elbow, Street Elbow, Tee, Crosse, Cap, Half-Coupling, Full Coupling, Reducing Coupling (2000#, 3000#, 6000#)

Square Head Plug, Hex Head Plug, Round Head Plug, Hex Head Bushing, Flush Bushing

Union (3000#)

Hexagon Nipple (3000#, 6000#)

Swage Nipple

*Type of Branch Outlet Fittings:*

Socket Welding Ends (3000#, 6000#)

Threaded Ends (3000#, 6000#)

Buttwelding Ends (STD, XS, SCH160)

*Materials:*

ASTM A105

ASTM A350-LF2 , LF3

ASTM A182-F304, F304L, F304H, F316, F316L, F321, F321H, F347H, F317, 904L

Duplex Steel, Inconel Alloy

### **3) Flanges**



We provides ASME and Non code Industrial pipe flanges for the Petrochemical, Process, and Waterworks industries in Stainless Steel Industrial Flanges, Alloy Steel Industrial Flanges and Carbon Steel Industrial Flanges. ANSI, API, AWWA pipe flanges in carbon steel, stainless steel, alloys and chrome steel. Our steel flanges can be Weld Neck, Slip on, Blind, Threaded, Socket Weld, Lap Joint, Orifice Flanges, Ring, and custom steel flanges in sizes 1/2" to 203". Pressure classes – 75, 125, 150, 175, 250, 300, 350, 400, 600, 900, 1500, 2500, 5K, 10K, 15K, 20K. High Yield – Low Temp.

*Manufacture Specification:*

ISO7005-I, ASME/ASNI B16.5/16.36/16.47A/16.47B, MSS SP44, JIS B2220  
DIN2527/2636/2637/2638/2566/2576/2632/2633/2635/2642/2653/2655/2656  
BS 1560-3.1, BS4504-3.1  
API 7S-15, API 7S-43, API 605, NFE 29-203 EN1092

*Type:*

ASME : Weld Neck, Slip on, Blind, Socket Weld, Threaded, Lap Joint  
EN 1092.1: 01 (Plate), 05 (Blank), 11 (Weld Neck), 12 (Hubbed Slip on), 13 (Hubbed Threaded)

*Flange Facing:*

ASME:Raised Face, Flat Face, Ring Type Joint, Male and Famle, Tongue and Groove  
EN1092.1: A-Flat Face, B-Raised Face, C-Tongue, D-Groove, E-Spigot, F-Recess, G-O-Ring Spigot, H-O-Ring Groove

*Rating:*

ASME: Class 150/300/400/600/900/1500/2500  
EN1092.1: PN 2.5/6/10/16/25/40/63/100/160/250/320/400

*Materials:*

Stainless Steel: ASTM A182-F304, F304L, F304H, F316, F316L, F321, F321H, F347H, F317  
Super Stainless Steel: ASTM 904L, B625-N08904, 317, 317L, 254SMO  
Duplex&Super Duplex Steel: ASTM A182-F51(S31803)  
Low Temp Steel: ASTM A350-LF2, LF3  
Carbon Steel: ASTM A105

#### 4) Valves



*Type:*

Gate Valve, Globe Valve, Ball Valve, Check Valve, Butterfly Valve

*Pressure Range:*

Class150-Class2500, Size range: 1/2" -42"

*Temperature:*

-196 to 649 °C (-3200F to 12000F)

*Operation Type:*

Manual, Gearbox, Chain Wheel, Pneumatic, Electronic, Hydraul IC-Pneumatic, etc.

*Connection End:*

RF, BW, SW, NPT, Wafer Type, etc.

*Materials (casting):*

WCB, WCC, LCB, LCC, LC1~3, CF8, CF3, CF8M, CF3M, CF8C, CN7M, CA15, C5, WC5, WC6, WC9, GR4A, etc.

Materials (forging): A105, LF1, LF2, F11, F22, F5, F304, F304L, F316, F316L, F316H, F321, F347, F51, F60, etc.

## 5) Gaskets



*Manufacture Specification:*

ASME B16.20/B16.21

*Metal Gasket:*



Oval Ring, Octagonal Ring, RX, BX

*Semi-Metallic Gasket:*

Spiral Wound, Corrugated, Reinforced Graphite, Reinforced Rubber

*Non-Metallic Gasket:*

Purified PTFE, Modified PTFE, Expanded PTFE, PTFE Envelope, Compressed Non-Asbestos Fiber, Non-toxic Silica Rubber

## 6) Fasteners



*Heavy Hex Bolts:*

ASTM A193 Grade B7/B7M

ASTM A193 Grade B8/B8M

ASTM A320 Grade L7/L7M

ASTM A320 Grade B8/B8M

ASTM A307 Grade B

*Hex Bolts:*

ANSI Grade 2/ Grade 5 / Grade 8

ASTM A307 Grade A

DIN931 Class 4.6/4.8/ 6.8/ 8.8 /10.9/12.9

DIN933 Class 4.6/4.8/ 6.8/ 8.8 /10.9/12.9

DIN960 Class 4.6/4.8/ 6.8/ 8.8 /10.9/12.9

DIN961 Class 4.6/4.8/ 6.8/ 8.8 /10.9/12.9

*Stud Bolts:*

ASTM A193 Grade B7/B7M

ASTM A320 Grade L7/L7M

SAE J429 Grade 2/5/8

DIN 976 Class 4.8/8.8/10.9

ASTM A193 Grade B16

ASTM A193 Grade B8/B8M

ASTM A320 Grade B8/B8M

*Structural Bolts:*

ASTM A325 Type 1



ASTM A490 Type 1  
DIN6914 Class HV-10.9

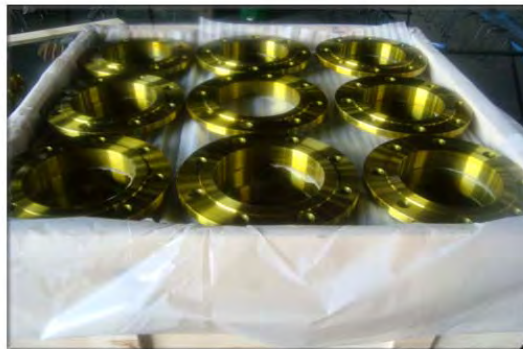
*Heavy Hex Nuts:*

ASTM A194 Grade 2H/2HM  
ASTM A194 Grade 7/ 7M  
DIN934 H=D Grade 2H/2HM  
DIN934 H=D Grade 7/7M

*Hex Nuts:*

ANSI Grade 2/Grade 5/Grade 8  
DIN934 Grade 4/Grade 5/ Grade 6  
DIN934 Grade 8/Grade 10/Grade 12

## Packing





## Our Partners

### 1) Local factories

- Hebei Guanghao pipe fitting Co., Ltd. - Manufacturer of carbon steel pipe fittings
- Hebei Peng Xin Pipe Equipment Group Co., Ltd - Manufacturer of alloy steel pipe fittings
- Hebei Hongrun Heavy Industry Co., Ltd. - Manufacturer of large diameter and heavy wall thickness seamless steel pipes, wind power towers, pressure vessels
- Hebei Canghai Heavy Industry Co., Ltd. - Manufacturer of various of steel pipe fittings
- Hebei Hengtai Pipe Equipment manufacturing Co., Ltd - Manufacturer of various of steel pipe fittings
- Hebei Cangzhou Hengtong Tubing Co. Ltd. - Manufacturer of line pipe fittings
- Hebei Dewei Steel Pipe Co., Ltd. - Manufacturer of SSAW steel pipes
- Cangzhou Spiral Steel Pipe Group Co., Ltd. - - Manufacturer of SSAW steel pipes
- Hebei Haiqianwei Steel Pipe Co., Ltd. - Manufacturer of LSAW steel pipes
- Hebei Haihao High Pressure Flange Co., Ltd - Manufacturer of steel flanges
- Hebei Huike Steel Pipes Co., Ltd. - Manufacturer of SMLS steel pipes
- Hebei Changfeng steel Tube Manufacturing Co., Ltd. - Manufacturer of RRW steel pipes
- Hebei Xingzhonglian Special Steel Tube Co., Ltd. - Manufacturer of squareness steel pipe

### 2) Othere Chinese suppliers

- Angang Stee Group Corporation
- Baosteel Group Corporation
- Baogang Group Corporation
- Pangang Group Corportion
- Valin Steel Group Corportion
- Tianjin Pipe Group Corportion
- Tonghua Group Corportion
- Shagang Group Corportion



- Linggang Iron & Steel Group Co., LTD.
- Hubei Xinyegang Steel Co., Ltd
- Wuhan Iron & Steel Co., Ltd
- Xinyu Iron & Steel Group Co., LTD.
- Liaoning Aotong Steel Pipe Co., Ltd
- MCC Liaoning Dragon Pipe Industries Co., Ltd
- Tianjin Shuangjie Steel Pipe Co., Ltd
- Jiangsu Zhengda Steel Pipe Group Co., Ltd
- Kingland Group Co., Ltd
- China Petroleum Group Bohai Equipment Manufacturing Co., Ltd

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# Pipes & tubes

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Wall Thickness and unit weight of stainless pipe ASME B36.19M

DN	NPS	OD		SCH 5S	SCH10S	SCH40S	SCH80S
6	1/8	10.3	mm	-	1.24	1.73	2.41
			kg/m	-	0.28	0.37	0.47
8	1/4	13.7	mm	-	1.65	2.24	3.02
			kg/m	-	0.50	0.64	0.81
10	3/8	17.1	mm	-	1.65	2.31	3.20
			kg/m	-	0.64	0.86	1.12
15	1/2	21.3	mm	1.65	2.11	2.77	3.73
			kg/m	0.80	1.02	1.29	1.65
20	3/4	26.7	mm	1.65	2.11	2.87	3.91
			kg/m	1.03	1.30	1.71	2.23
25	1	33.4	mm	1.65	2.77	3.38	4.55
			kg/m	1.31	2.13	2.54	3.29
32	1 ¼	42.2	mm	1.65	2.77	3.56	4.85
			kg/m	1.68	2.73	3.44	4.53
40	1 ½	48.3	mm	1.65	2.77	3.68	5.08
			kg/m	1.91	3.16	4.11	5.49
50	2	60.3	mm	1.65	2.77	3.91	5.54
			kg/m	2.40	3.96	5.52	7.60
65	2 ½	73.0	mm	2.11	3.05	5.16	7.01
			kg/m	3.75	5.35	8.77	11.59
80	3	88.9	mm	2.11	3.05	5.49	7.62
			kg/m	4.59	6.56	11.47	15.51
90	3 ½	101.6	mm	2.11	3.05	5.74	8.08
			kg/m	5.26	7.53	13.78	18.92
100	4	114.3	mm	2.11	3.05	6.02	8.56
			kg/m	5.93	8.50	16.32	22.67
125	5	141.3	mm	2.77	3.40	6.55	9.53
			kg/m	9.61	11.74	22.10	31.44
150	6	168.3	mm	2.77	3.40	7.11	10.97
			kg/m	11.48	14.04	28.70	43.22
200	8	219.1	mm	2.77	3.76	8.18	12.70
			kg/m	14.90	20.12	43.20	65.64
250	10	273.1	mm	3.40	4.19	9.27	12.70
			kg/m	22.95	28.20	61.22	82.78
300	12	323.9	mm	3.96	4.57	9.53	12.70
			kg/m	31.71	36.53	74.94	98.96
350	14	355.6	mm	3.96	4.78	-	-
			kg/m	34.87	41.99	-	-
400	16	406.4	mm	4.19	4.78	-	-
			kg/m	42.20	48.07	-	-
450	18	457.2	mm	4.19	4.78	-	-
			kg/m	47.53	54.15	-	-
500	20	508.0	mm	4.78	5.54	-	-
			kg/m	60.23	69.70	-	-
550	22	559.0	mm	4.78	5.54	-	-
			kg/m	66.31	76.75	-	-
600	24	610.0	mm	5.54	6.35	-	-
			kg/m	83.80	95.92	-	-
650	26	660.0	mm	-	-	-	-
			kg/m	-	-	-	-
700	28	711.0	mm	-	-	-	-
			kg/m	-	-	-	-
750	30	762.0	mm	6.35	7.92	-	-
			kg/m	120.15	149.55	-	-





**Dimensions(wallthickness ≤65mm) and masses per unit length - EN10220**

OD D mm,series	Wall thickness T, mm			
	70	80	90	100
	Mass per unit length kg/m			
219.1	257			
244.5	301	325		
273	350	381		
323.9	438	481	519	552
355.6	493	544	590	630
406.4	581	644	702	765
457	668	744	815	880
508	756	844	928	1006
559	844	945	1041	1132
610	932	1046	1154	1258
660	1019	1144	1265	1381
711	1107	1245	1378	1507

**Carbon steel pipes for general purpose - JIS G3452**

DN	NPS	OD	Wall Thickness	kg/m
6	1/8	10.5	2.0	0.419
8	1/4	13.8	2.3	0.652
10	3/8	17.3	2.3	0.851
15	1/2	21.7	2.8	1.31
20	3/4	27.2	2.8	1.68
25	1	34.0	3.2	2.43
32	1 ¼	42.7	3.5	3.38
40	1 ½	48.6	3.5	3.89
50	2	60.5	3.8	5.31
65	2 ½	76.3	4.2	7.47
80	3	89.1	4.2	8.79
90	3 ½	101.6	4.2	10.1
100	4	114.3	4.5	12.2
125	5	139.8	4.5	15.0
150	6	165.2	5.0	19.8
175	7	190.7	5.3	24.2
200	8	216.3	5.8	30.1
225	9	241.8	6.2	36.0
250	10	267.4	6.6	42.4
300	12	318.5	6.9	53.0
350	14	356	7.9	67.7
400	18	406	7.9	77.6
450	20	457.2	7.9	87.5
500	22	508	7.9	97.4

**BS 1387-1985 Steel Tubes and Tubulars Suitable for Screwing to BS 21 Pipe Threads**

Nominal Pipe Size		Wall Thickness			Outside Diameter						Unit Weight of galvanized pipe (kg)						Screw Thread	
					Max.			Min.			Plain End			Screwed and Socketed				
DN	NPS	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy	Light	Medium	Heavy	Threads	Total length
15	1/2	2.0	2.6	3.2	21.4	21.7	21.7	21.0	21.1	21.1	0.99	1.27	1.50	1.00	1.28	1.51	14	11.4-15
20	3/4	2.3	2.6	3.2	26.9	27.2	27.2	26.4	26.6	26.6	1.44	1.63	1.94	1.45	1.64	1.95	14	12.7-16.3
25	1	2.6	3.2	4.0	33.8	34.2	34.2	33.2	33.4	33.4	2.06	2.50	3.03	2.08	2.52	3.05	11	14.5-19.1
32	1-1/4	2.6	3.2	4.0	42.5	42.9	42.9	41.9	42.1	42.1	2.64	3.22	3.92	2.67	3.25	3.95	11	16.8-21.4
40	1-1/2	2.9	3.2	4.0	48.4	48.8	48.8	47.8	48.0	48.0	3.35	3.70	4.51	3.39	3.74	4.55	11	16.8-21.4
50	2	2.9	3.6	4.5	60.2	60.8	60.8	59.6	59.8	59.8	4.23	5.21	6.36	4.30	5.28	6.44	11	21.1-25.7
65	2-1/2	3.2	3.6	4.5	76.0	76.6	76.6	75.2	75.4	75.4	5.90	6.65	8.15	6.03	6.77	8.28	11	23.2-30.2
80	3	3.2	4.0	5.0	88.7	89.5	89.5	87.9	88.1	88.1	6.94	8.64	10.58	7.11	8.81	10.78	11	26.3-33.3
100	4	3.6	4.5	5.4	113.9	114.9	114.9	113.0	113.3	-	10.06	12.59	14.88	10.32	12.90	15.18	11	32.3-39.3
125	5	-	5.0	5.4	-	140.6	140.6	-	138.7	-	-	17.06	18.31	-	17.58	18.82	11	36.6-43.6
150	6	-	5.0	5.4	-	166.1	166.1	-	164.1	-	-	20.25	21.79	-	20.87	22.40	11	36.6-43.6



Polyethylene pipes for water supply GB/T13663 ISO4427

PE63

dn	SDR33		SDR26		SDR17.6		SDR13.6		SDR11	
	0.32Mpa		0.4Mpa		0.6Mpa		0.8Mpa		1.0Mpa	
	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m
20									2.3	0.130
25									2.3	0.167
32					2.3	0.219	2.4	0.228	2.9	0.270
40					2.3	0.278	3.0	0.356	3.7	0.430
50			2.3	0.351	2.9	0.437	3.7	0.549	4.6	0.669
63	2.3	0.447	2.5	0.484	3.6	0.685	4.7	0.878	5.8	1.06
75	2.3	0.536	2.9	0.670	4.3	0.974	5.6	1.24	6.8	1.49
90	2.8	0.782	3.5	0.970	5.1	1.39	6.7	1.79	8.2	2.15
110	3.4	1.161	4.2	1.42	6.3	2.09	8.1	2.64	10.0	3.2
125	3.9	1.51	4.8	1.85	7.1	2.68	9.2	3.41	11.4	4.15
140	4.3	1.87	5.4	2.33	8.0	3.38	10.3	4.28	12.7	5.18
160	4.9	2.43	6.2	3.05	9.1	4.40	11.8	5.6	14.6	6.8
180	5.5	3.07	6.9	3.83	10.2	5.55	13.3	7.1	16.4	8.59
200	6.2	3.85	7.7	4.74	11.4	6.89	14.7	8.72	18.2	10.6
225	6.9	4.82	8.6	5.96	12.8	8.70	16.6	11.08	20.5	13.43
250	7.7	5.98	9.6	7.39	14.2	10.72	18.4	13.65	22.7	16.53
280	8.6	7.48	10.7	9.23	15.9	13.45	20.6	17.11	25.4	20.71
315	9.7	9.48	12.1	11.74	17.9	17.03	23.2	21.68	28.6	26.23
355	10.9	12.01	13.6	14.87	20.1	21.56	26.1	27.49	32.3	33.29
400	12.3	15.27	15.3	18.85	22.7	27.43	29.4	34.9	36.3	42.28
450	13.8	19.28	17.2	23.84	25.5	34.67	33.1	44.2	40.9	53.59
500	15.3	23.85	19.1	29.42	28.3	42.75	36.8	54.59	45.4	66.1
560	17.2	29.9	21.4	36.92	31.7	53.64	41.2	68.46	50.8	82.85
630	19.3	37.75	24.1	46.77	35.7	67.95	46.3	86.56	57.2	104.94

Polyethylene pipes for water supply - GB/T13663 ISO4427

PE80

dn	SDR33		SDR21		SDR17		SDR13.6		SDR11	
	0.4Mpa		0.6Mpa		0.8Mpa		1.0Mpa		1.25Mpa	
	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m
20									2.3	0.171
25									3.0	0.280
32									3.7	0.432
40									4.6	0.669
50									5.8	1.06
63							4.7	0.886	6.8	1.49
75					4.5	1.02	5.6	1.25	8.2	2.16
90			4.3	1.19	5.4	1.48	6.7	1.80	10.0	3.20
110			5.3	1.78	6.6	2.19	8.1	2.66	11.4	4.16
125			6.0	2.29	7.4	2.81	9.2	3.42	12.7	5.19
140			6.7	2.89	8.3	3.52	10.3	4.29	14.6	6.8
160	4.9	2.41	7.7	3.78	9.5	4.60	11.8	5.61	16.4	8.75
180	5.5	3.06	8.6	4.74	10.7	5.84	13.3	7.11	18.2	10.75
200	6.2	3.77	9.6	5.86	11.9	7.15	14.7	8.72	20.5	13.67
225	6.9	4.74	10.8	7.45	13.4	9.12	16.6	11.32	22.7	16.894
250	7.7	5.84	11.9	9.11	14.8	11.20	18.4	13.92	25.4	21.10
280	8.6	7.40	13.4	11.51	16.6	14.33	20.6	17.45	28.6	26.75
315	9.7	9.29	15.0	14.47	18.7	17.98	23.2	22.14	32.2	33.89
355	10.9	11.74	16.9	18.72	21.1	23.08	26.1	28.09	36.3	43.1
400	12.3	14.97	19.1	23.87	23.7	29.21	29.4	35.62	40.9	54.61
450	13.8	18.87	21.5	30.18	26.7	37.03	33.1	45.15	45.4	67.37
500	15.3	23.29	23.9	37.29	29.7	45.76	36.8	55.88	50.8	84.45
560	17.2	29.09	26.7	46.70	33.2	57.30	41.2	69.92	57.2	107.0
630	19.3	36.85	30.0	58.89	37.4	72.59	46.3	88.41		
710	21.8	49.37	33.9	76.28	42.1	93.28	52.2	113.91		
800	24.5	62.53	38.1	96.68	47.4	118.35	58.8	144.58		
900	27.6	79.21	42.9	122.29	53.3	149.72				
1000	30.6	97.53	47.7	151.13	59.3	185.06				
1200	36.4	140.3	57.2	216.28	70.6	263.56				

Polyethylene pipes for water supply GB/T13663 ISO4427

PE100

dn	SDR26		SDR21		SDR17		SDR13.6		SDR11	
	0.6Mpa		0.8Mpa		1.0Mpa		1.25Mpa		1.6Mpa	
	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m
32									3.0	0.283
40									3.7	0.437
50									4.6	0.676
63							4.7	0.895	5.8	1.07
75					4.5	1.03	5.6	1.25	6.8	1.51
90			4.3	1.20	5.4	1.49	6.7	1.82	8.2	2.18
110	4.2	1.45	5.3	1.80	6.6	2.21	8.1	2.69	10.0	3.23
125	4.8	1.99	6.0	2.32	7.4	2.84	9.2	3.45	11.4	4.2
140	5.4	2.38	6.7	2.92	8.3	3.55	10.3	4.34	12.7	5.24
160	6.2	3.11	7.7	3.82	9.5	4.65	11.8	5.67	14.6	6.87
180	6.9	3.9	8.6	4.79	10.7	5.90	13.3	7.18	16.4	8.84
200	7.7	4.8	9.6	5.92	11.9	7.23	14.7	8.81	18.2	10.86
225	8.6	6.05	10.8	7.53	13.4	9.22	16.6	11.44	20.5	13.81
250	9.6	7.52	11.9	9.20	14.8	11.31	18.4	14.07	22.7	17.02
280	10.7	9.40	13.4	11.63	16.6	14.48	20.6	17.63	25.4	21.32
315	12.1	11.94	15.0	14.63	18.7	18.17	23.2	22.38	28.6	27.03
355	13.6	15.11	16.9	18.91	21.1	23.33	26.1	28.38	32.2	34.25
400	15.3	19.12	19.1	24.12	23.7	29.52	29.4	35.99	36.3	43.55
450	17.2	24.69	21.5	30.50	26.7	37.42	33.1	45.63	40.9	55.189
500	19.1	30.48	23.9	37.68	29.7	46.24	36.8	56.46	45.4	68.08
560	21.4	38.2	26.7	47.19	33.2	57.90	41.2	70.46	50.8	85.3
630	24.1	48.46	30.0	59.62	37.4	73.35	46.3	89.64	57.2	108.1
710	27.2	61.63	33.9	76.68	42.1	93.54	52.2	114.22		
800	30.6	78.04	38.1	97.19	47.4	118.67	58.8	144.98		
900	34.4	99.11	42.9	122.93	53.3	150.08				
1000	38.2	121.79	47.7	151.93	59.3	185.57				
1200	45.9	175.73	57.2	216.74	70.6	264.11				

**Polyethylene pipes in coal mining -MT 558.1**

**MPE80**

dn	0.6Mpa		0.8Mpa		1.0Mpa		1.25Mpa		1.6Mpa	
	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m
16									2.0	0.11
20							2.0	0.14	2.3	0.15
25					2.0	0.17	2.3	0.19	2.8	0.23
32			2.0	0.22	2.4	0.26	2.9	0.31	3.6	0.38
40	2.0	0.28	2.4	0.33	3.0	0.41	3.7	0.49	4.5	0.58
50	2.3	0.4	3.0	0.52	3.7	0.63	4.6	0.76	5.6	0.91
63	2.9	0.64	3.8	0.82	4.7	1.00	5.8	1.21	7.1	1.45
75	3.4	0.89	4.5	1.16	5.6	1.42	6.8	1.69	8.4	2.04
90	4.1	1.28	5.4	1.66	6.7	2.03	8.2	2.44	10.1	2.93
110	5.0	1.91	6.6	2.48	8.1	3.00	10.0	3.63	12.3	4.37
125	5.7	2.47	7.4	3.16	9.2	3.87	11.4	4.71	14.0	5.65
140	6.4	3.11	8.3	3.97	10.3	4.85	12.7	5.87	15.7	7.09
160	7.3	4.05	9.5	5.19	11.8	6.35	14.6	7.71	17.9	9.24
180	8.2	5.12	10.7	6.58	13.3	8.05	16.4	9.74	20.1	11.67
200	9.1	6.31	11.9	8.13	14.7	9.89	18.2	12.02	22.4	14.45
225	10.2	7.96	13.4	10.30	16.6	12.56	20.5	15.22	25.2	18.28
250	11.4	9.79	14.8	12.64	18.4	15.47	22.7	18.73	27.9	22.5
280	12.7	122.33	16.6	15.88	20.6	19.40	25.4	23.48	31.3	28.26
315	14.3	15.61	18.7	20.12	23.2	24.58	28.6	29.74	35.2	35.76
355	16.1	19.81	21.1	25.58	26.1	31.17	32.2	37.74	39.7	45.44
400	18.1	25.1	23.7	32.38	29.4	39.56	36.3	47.93	44.7	57.66
450	20.4	31.82	26.7	41.03	33.1	50.10	40.9	60.74	50.3	72.99
500	22.7	39.33	29.7	50.71	36.8	61.88	45.4	74.92	55.8	89.98
560	25.4	49.3	33.2	63.49	41.3	77.60	50.8	93.3		
630	28.6	62.44	37.4	80.46	46.3	98.11	57.2	118.94		
710	32.3	79.46	42.1	102.07	52.2	124.65				
800	36.4	100.9	47.4	129.50	58.8	158.21				
900	40.9	127.55	53.3	163.82						
1000	45.4	157.32	59.3	202.50						

**Polyethylene pipes in coal mining -MT 558.1**

**MPE100**

dn	SDR26		SDR21		SDR17		SDR13.6		SDR11	
	0.6Mpa		0.8Mpa		1.0Mpa		1.25Mpa		1.6Mpa	
	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m	thickness	kg/m
32									3	0.33
40									3.7	0.51
50									4.6	0.78
63							4.7	1.03	5.8	1.23
75					4.5	1.18	5.6	1.44	6.8	1.73
90			4.3	1.38	5.4	1.71	6.7	2.09	8.2	2.5
110	4.2	1.67	5.3	2.07	6.6	2.54	8.1	3.09	10	3.71
125	4.8	2.28	6	2.66	7.4	3.26	9.2	3.96	11.4	4.82
140	5.4	2.73	6.7	3.35	8.3	4.07	10.3	4.98	12.7	6.01
160	6.2	3.57	7.7	4.38	9.5	5.33	11.8	6.5	14.6	7.88
180	6.9	4.47	8.6	5.49	10.7	6.76	13.3	8.23	16.4	10.13
200	7.7	5.5	9.6	6.79	11.9	8.29	14.7	10.1	18.2	12.45
225	8.6	6.94	10.8	8.63	13.4	10.57	16.6	13.11	20.5	15.83
250	9.6	8.62	11.9	10.55	14.8	12.96	18.4	16.13	22.7	19.51
280	10.7	10.78	13.4	13.33	16.6	16.6	20.6	20.21	25.4	24.43
315	12.1	13.69	15	16.77	18.7	20.82	23.2	25.65	28.6	30.98
355	13.6	17.32	16.9	21.67	21.1	26.74	26.1	32.52	32.2	39.25
400	15.3	21.91	19.1	27.64	23.7	33.83	29.4	41.24	36.3	49.91
450	17.2	28.3	21.5	34.95	26.7	42.88	33.1	52.29	40.9	63.24
500	19.1	34.93	23.9	43.18	29.7	52.99	36.8	64.7	45.4	78.01
560	21.4	43.78	26.7	54.08	33.2	66.35	41.2	80.74	50.8	97.79
630	24.1	55.53	30	68.32	37.4	84.05	46.3	102.72	57.2	123.87
710	27.2	70.62	33.9	87.87	42.1	107.19	52.2	130.88		
800	30.6	89.43	38.1	111.37	47.4	135.98	58.8	166.13		
900	34.4	113.57	42.9	140.86	53.3	171.97				
1000	38.2	139.56	47.7	174.09	59.3	212.64				
1200	45.9	201.36	57.2	248.35	70.6	302.63				

**Dimensions and weight of push-on Joint T type ductile iron pipes**

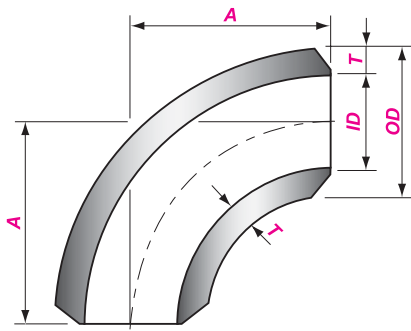
DN(mm)	DE(mm)	WALL THICKNESS(mm)			SOCKET WEIGHT(kg)	STRAIGHT PIPE WEIGHT(kg/m)			TOTAL WEIGHT(mm) 6000mm LONG		
		K8	K9	K10		K8	K9	K10	K8	K9	K10
80	98	6.0	6.0	6.0	3.4	12.2	12.2	12	77	77	77
100	118	6.0	6.1	6.1	4.3	14.9	15.1	15.1	93.7	95	95
125	144	6.0	6.0	6.3	5.7	18.3	18.3	19	119	119	121
150	170	6.0	6.3	6.3	7.1	21.8	22.8	22.8	138	144	144
200	222	6.0	6.4	6.4	10.3	28.7	30.6	30.6	183	194	194
250	274	6.0	6.8	7.5	14.2	35.6	40.2	44.3	228	255	280
300	326	6.4	7.2	8.0	18.9	45.3	50.8	56.3	290	323	357
350	378	6.8	7.7	8.5	23.7	55.9	63.2	69.6	359	403	441
400	429	7.2	8.1	9.0	29.5	67.3	75.7	83.7	433	482	532
450	480	7.6	8.6	9.5	38.3	80	89	99	515	577	632
500	532	8.0	9.0	10.0	42.8	92.8	104.3	115.6	600	69	736
600	635	8.8	9.9	11.0	59.3	122	137.3	152	791	882	971
700	738	9.6	10.8	12.0	79.1	155	173.9	193	1009	1123	1237
800	842	10.4	11.7	13.0	102.3	192	215.2	239	1255	1394	1537
900	945	11.2	12.6	14.0	129	232	260.2	289	1521	1690	1863
1000	1048	12.0	13.5	15.0	161.3	275	309.3	343.2	1811	2017	2221
1200	1265	13.6	15.3	17.0	237.7	374	420.1	466.1	2482	2758	3034

WWW.LFPCO

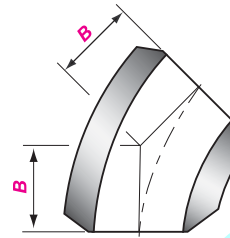
# Pipe fittings

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# BUTT-WELDING ELBOWS



对焊90° 长半径/短半径弯头  
BW 90° LR/SR Elbow



对焊45° 长半径弯头  
BW 45° LR Elbow

GB/T 12459、GB/T 13401、ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End			
DN	NPS		90° Elbows		45° Elbows	
		A		B		
		OD	长半径 LR	短半径 SR	长半径 LR	
15	1/2	21.3	38	-		16
20	3/4	26.7	38	-		19
25	1	33.4	38	25		22
32	1 1/4	42.2	48	32		25
40	1 1/2	48.3	57	38		29
50	2	60.3	76	51		35
65	2 1/2	73.0	95	64		44
80	3	88.9	114	76		51
90	3 1/2	101.6	133	89		57
100	4	114.3	152	102		64
125	5	141.3	190	127		79
150	6	168.3	229	152		95
200	8	219.1	305	203		127
250	10	273.0	381	254		159
300	12	323.8	457	305		190
350	14	355.6	533	356		222
400	16	406.4	610	406		254
450	18	457.0	686	457		286
500	20	508.0	762	508		318
550	22	559.0	838	559		343
600	24	610.0	914	610		381
650	26	660.0	991	660		406
700	28	711.0	1067	711		438
750	30	762.0	1143	762		470
800	32	813.0	1219	813		502
850	34	864.0	1295	864		533
900	36	914.0	1372	914		565
950	38	965.0	1448	965		600
1000	40	1016.0	1524	1016		632
1050	42	1067.0	1600	1067		660
1100	44	1118.0	1676	1118		695
1150	46	1168.0	1753	1168		727
1200	48	1219.0	1829	1219		759
1300	52	1321.0	1981	1321		821
1400	56	1422.0	2134	1422		883
1500	60	1524.0	2286	1524		947
1600	64	1626.0	2438	1626		1010
1700	68	1727.0	2591	1727		1073
1800	72	1829.0	2743	1829		1137
1900	76	1930.0	2896	1930		1199
2000	80	2032.0	3048	2032		1263

注释:

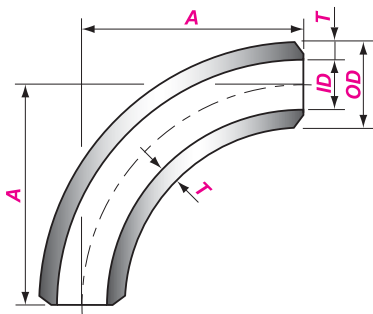
- 1) 除上述标准外, 还可按 GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 等标准制造。
- 2) 更大规格的弯头, 可根据采购方与制造商协商一致的尺寸制造。

Notes:

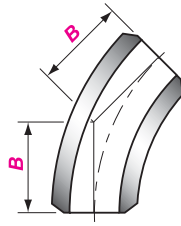
- 1) Besides these, GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 etc. are also applied.
- 2) The elbow with NPS over 80 shall be made subject to the sizes agreed by purchaser and manufacturer.



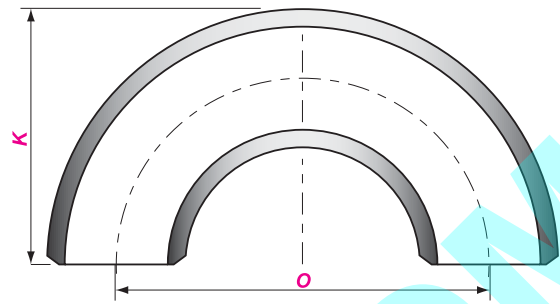
# BUTT-WELDING ELBOWS



对焊 90° 3D 弯头  
BW 90° 3D Elbow



对焊 45° 3D 弯头  
BW 45° 3D Elbow

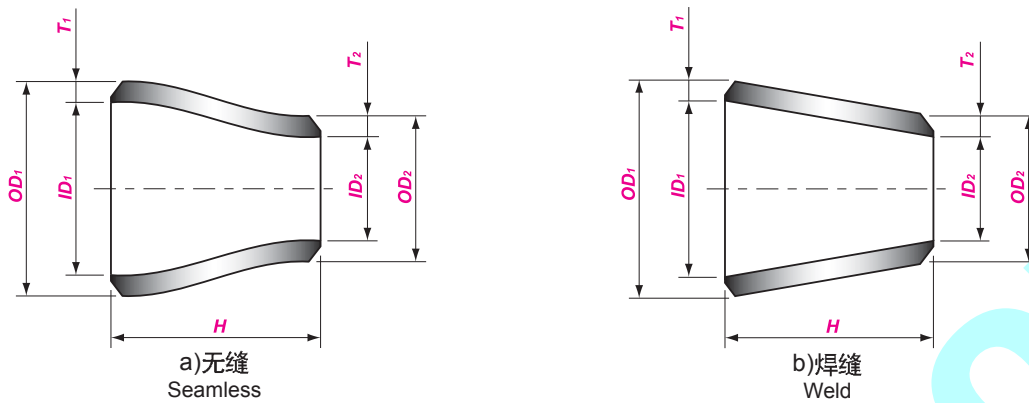


对焊 180° 长半径 / 短半径弯头  
BW 180° LR/SR Return

GB/T 12459、GB/T 13401、ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End		中心至中心 Center to Center	背面至端面 Back to Face		
DN	NPS	OD	90° Elbows	45° Elbows	180° Returns			
			A	B	O		K	
			3D	3D	长半径 LR	短半径 SR	长半径 LR	短半径 SR
15	1/2	21.3	-	-	76	-	48	-
20	3/4	26.7	57	24	76	-	51	-
25	1	33.4	76	31	76	51	56	41
32	1 1/4	42.2	95	39	95	64	70	52
40	1 1/2	48.3	114	47	114	76	83	62
50	2	60.3	152	63	152	102	106	81
65	2 1/2	73.0	190	79	190	127	132	100
80	3	88.9	229	95	229	152	159	121
90	3 1/2	101.6	267	111	267	178	184	140
100	4	114.3	305	127	305	203	210	159
125	5	141.3	381	157	381	254	262	197
150	6	168.3	457	189	457	305	313	237
200	8	219.1	610	252	610	406	414	313
250	10	273.0	762	316	762	508	518	391
300	12	323.8	914	378	914	609	619	467
350	14	355.6	1067	441	1067	711	711	533
400	16	406.4	1219	505	1219	813	813	610
450	18	457.0	1372	568	1372	914	914	686
500	20	508.0	1524	632	1524	1016	1016	762
550	22	559.0	1676	694	1676	1118	1118	838
600	24	610.0	1829	757	1829	1219	1219	914
650	26	660.0	1981	821	-	-	-	-
700	28	711.0	2134	883	-	-	-	-
750	30	762.0	2286	964	-	-	-	-
800	32	813.0	2438	1010	-	-	-	-
850	34	864.0	2591	1073	-	-	-	-
900	36	914.0	2743	1135	-	-	-	-
950	38	965.0	2896	1200	-	-	-	-
1000	40	1016.0	3048	1264	-	-	-	-
1050	42	1067.0	3200	1326	-	-	-	-
1100	44	1118.0	3353	1389	-	-	-	-
1150	46	1168.0	3505	1453	-	-	-	-
1200	48	1219.0	3658	1516	-	-	-	-

# BUTT-WELDING REDUCERS

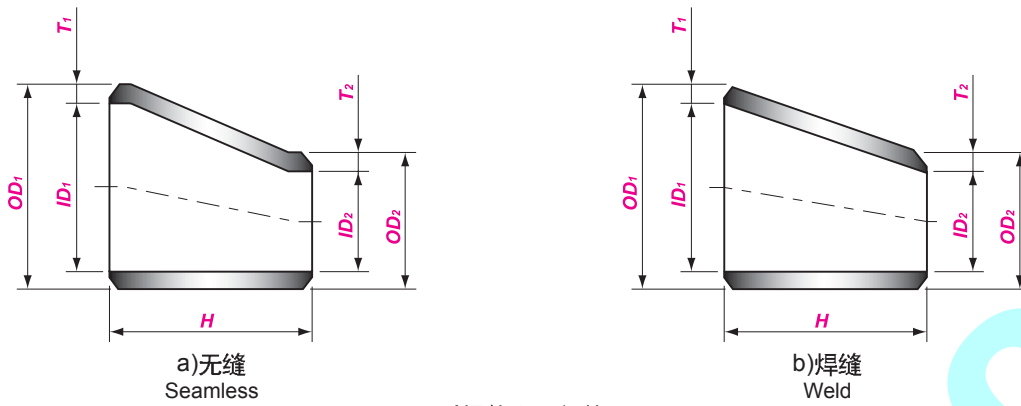


对焊同心异径管  
BW Concentric Reducer

GB/T 12459、GB/T 13401、ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	$OD_1 \times OD_2$	H
20 × 15	3/4 × 1/2	26.7 × 21.3	38
20 × 10	3/4 × 3/8	26.7 × 17.1	
25 × 20	1 × 3/4	33.4 × 26.7	51
25 × 15	1 × 1/2	33.4 × 21.3	
32 × 25	1 1/4 × 1	42.2 × 33.4	51
32 × 20	1 1/4 × 3/4	42.2 × 26.7	
32 × 15	1 1/4 × 1/2	42.2 × 21.3	
40 × 32	1 1/2 × 1 1/4	48.3 × 42.2	64
40 × 25	1 1/2 × 1	48.3 × 33.4	
40 × 20	1 1/2 × 3/4	48.3 × 26.7	
40 × 15	1 1/2 × 1/2	48.3 × 21.3	
50 × 40	2 × 1 1/2	60.3 × 48.3	76
50 × 32	2 × 1 1/4	60.3 × 42.2	
50 × 25	2 × 1	60.3 × 33.4	
50 × 20	2 × 3/4	60.3 × 26.7	
65 × 50	2 1/2 × 2	73.0 × 60.3	89
65 × 40	2 1/2 × 1 1/2	73.0 × 48.3	
65 × 32	2 1/2 × 1 1/4	73.0 × 42.2	
65 × 25	2 1/2 × 1	73.0 × 33.4	
80 × 65	3 × 2 1/2	88.9 × 73.0	89
80 × 50	3 × 2	88.9 × 60.3	
80 × 40	3 × 1 1/2	88.9 × 48.3	
80 × 32	3 × 1 1/4	88.9 × 42.2	
90 × 80	3 1/2 × 3	101.6 × 88.9	102
90 × 65	3 1/2 × 2 1/2	101.6 × 73.0	
90 × 50	3 1/2 × 2	101.6 × 60.3	
90 × 40	3 1/2 × 1 1/2	101.6 × 48.3	
90 × 32	3 1/2 × 1 1/4	101.6 × 42.2	
100 × 90	4 × 3 1/2	114.3 × 101.6	102
100 × 80	4 × 3	114.3 × 88.9	
100 × 65	4 × 2 1/2	114.3 × 73.0	
100 × 50	4 × 2	114.3 × 60.3	
100 × 40	4 × 1 1/2	114.3 × 48.3	
125 × 100	5 × 4	141.3 × 114.3	127
125 × 90	5 × 3 1/2	141.3 × 101.6	
125 × 80	5 × 3	141.3 × 88.9	
125 × 65	5 × 2 1/2	141.3 × 73.0	
125 × 50	5 × 2	141.3 × 60.3	

# BUTT-WELDING REDUCERS



对焊偏心异径管  
BW Eccentric Reducer

GB/T 12459、GB/T 13401、ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	$OD_1 \times OD_2$	H
150 × 125	6 × 5	168.3 × 141.3	140
150 × 100	6 × 4	168.3 × 114.3	
150 × 90	6 × 3½	168.3 × 101.6	
150 × 80	6 × 3	168.3 × 88.9	
150 × 65	6 × 2½	168.3 × 73.0	
200 × 150	8 × 6	219.1 × 168.3	152
200 × 125	8 × 5	219.1 × 141.3	
200 × 100	8 × 4	219.1 × 114.3	
200 × 90	8 × 3½	219.1 × 101.6	
250 × 200	10 × 8	273.0 × 219.1	178
250 × 150	10 × 6	273.0 × 168.3	
250 × 125	10 × 5	273.0 × 141.3	
250 × 100	10 × 4	273.0 × 114.3	
300 × 250	12 × 10	323.8 × 273.0	
300 × 200	12 × 8	323.8 × 219.1	
300 × 150	12 × 6	323.8 × 168.3	
300 × 125	12 × 5	323.8 × 141.3	
350 × 300	14 × 12	355.6 × 323.8	330
350 × 250	14 × 10	355.6 × 273.0	
350 × 200	14 × 8	355.6 × 219.1	
350 × 150	14 × 6	355.6 × 168.3	
400 × 350	16 × 14	406.4 × 355.6	
400 × 300	16 × 12	406.4 × 323.8	
400 × 250	16 × 10	406.4 × 273.0	
400 × 200	16 × 8	406.4 × 219.1	
400 × 150	16 × 6	406.4 × 168.3	
450 × 400	18 × 16	457.0 × 406.4	381
450 × 350	18 × 14	457.0 × 355.6	
450 × 300	18 × 12	457.0 × 323.8	
450 × 250	18 × 10	457.0 × 273.0	
450 × 200	18 × 8	457.0 × 219.1	
500 × 450	20 × 18	508.0 × 457.0	508
500 × 400	20 × 16	508.0 × 406.4	
500 × 350	20 × 14	508.0 × 355.6	
500 × 300	20 × 12	508.0 × 323.8	
500 × 250	20 × 10	508.0 × 273.0	
550 × 500	22 × 20	559.0 × 508.0	508
550 × 450	22 × 18	559.0 × 457.0	
550 × 400	22 × 16	559.0 × 406.4	
550 × 350	22 × 14	559.0 × 355.6	
550 × 300	22 × 12	559.0 × 323.8	

# BUTT-WELDING REDUCERS

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	$OD_1 \times OD_2$	H
600 × 550	24 × 22	610.0 × 559.0	508
600 × 500	24 × 20	610.0 × 508.0	
600 × 450	24 × 18	610.0 × 457.0	
600 × 400	24 × 16	610.0 × 406.4	
600 × 350	24 × 14	610.0 × 355.6	
600 × 300	24 × 12	610.0 × 323.8	
650 × 600	26 × 24	660.0 × 610.0	610
650 × 550	26 × 22	660.0 × 559.0	
650 × 500	26 × 20	660.0 × 508.0	
650 × 450	26 × 18	660.0 × 457.0	
650 × 400	26 × 16	660.0 × 406.4	
650 × 350	26 × 14	660.0 × 355.6	
700 × 650	28 × 26	711.0 × 660.0	610
700 × 600	28 × 24	711.0 × 610.0	
700 × 550	28 × 22	711.0 × 559.0	
700 × 500	28 × 20	711.0 × 508.0	
700 × 450	28 × 18	711.0 × 457.0	
700 × 400	28 × 16	711.0 × 406.4	
700 × 350	28 × 14	711.0 × 355.6	
750 × 700	30 × 28	762.0 × 711.0	610
750 × 650	30 × 26	762.0 × 660.0	
750 × 600	30 × 24	762.0 × 610.0	
750 × 550	30 × 22	762.0 × 559.0	
750 × 500	30 × 20	762.0 × 508.0	
750 × 450	30 × 18	762.0 × 457.0	
750 × 400	30 × 16	762.0 × 406.4	
750 × 350	30 × 14	762.0 × 355.6	
800 × 750	32 × 30	813.0 × 762.0	610
800 × 700	32 × 28	813.0 × 711.0	
800 × 650	32 × 26	813.0 × 660.0	
800 × 600	32 × 24	813.0 × 610.0	
800 × 550	32 × 22	813.0 × 559.0	
800 × 500	32 × 20	813.0 × 508.0	
850 × 800	34 × 32	864.0 × 813.0	610
850 × 750	34 × 30	864.0 × 762.0	
850 × 700	34 × 28	864.0 × 711.0	
850 × 650	34 × 26	864.0 × 660.0	
850 × 600	34 × 24	864.0 × 610.0	
850 × 550	34 × 22	864.0 × 559.0	
900 × 850	36 × 34	914.0 × 864.0	610
900 × 800	36 × 32	914.0 × 813.0	
900 × 750	36 × 30	914.0 × 762.0	
900 × 700	36 × 28	914.0 × 711.0	
900 × 650	36 × 26	914.0 × 660.0	
900 × 600	36 × 24	914.0 × 610.0	
900 × 550	36 × 22	914.0 × 559.0	
950 × 900	38 × 36	965.0 × 914.0	610
950 × 850	38 × 34	965.0 × 864.0	
950 × 800	38 × 32	965.0 × 813.0	
950 × 750	38 × 30	965.0 × 762.0	
950 × 700	38 × 28	965.0 × 711.0	
950 × 650	38 × 26	965.0 × 660.0	
950 × 600	38 × 24	965.0 × 610.0	

对焊同心、偏心异径管 BW CONCENTRIC & ECCENTRIC REDUCERS			
公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	$OD_1 \times OD_2$	H
1000 × 950	40 × 38	1016.0 × 965.0	610
1000 × 900	40 × 36	1016.0 × 914.0	
1000 × 850	40 × 34	1016.0 × 864.0	
1000 × 800	40 × 32	1016.0 × 813.0	
1000 × 750	40 × 30	1016.0 × 762.0	
1000 × 700	40 × 28	1016.0 × 711.0	
1050 × 1000	42 × 40	1067.0 × 1016.0	610
1050 × 950	42 × 38	1067.0 × 965.0	
1050 × 900	42 × 36	1067.0 × 914.0	
1050 × 850	42 × 34	1067.0 × 864.0	
1050 × 800	42 × 32	1067.0 × 813.0	
1050 × 750	42 × 30	1067.0 × 762.0	
1050 × 700	42 × 28	1067.0 × 711.0	
1100 × 1050	44 × 42	1118.0 × 1067.0	610
1100 × 1000	44 × 40	1118.0 × 1016.0	
1100 × 950	44 × 38	1118.0 × 965.0	
1100 × 900	44 × 36	1118.0 × 914.0	
1100 × 850	44 × 34	1118.0 × 864.0	
1100 × 800	44 × 32	1118.0 × 813.0	
1150 × 1100	46 × 44	1168.0 × 1118.0	711
1150 × 1050	46 × 42	1168.0 × 1067.0	
1150 × 1000	46 × 40	1168.0 × 1016.0	
1150 × 950	46 × 38	1168.0 × 965.0	
1150 × 900	46 × 36	1168.0 × 914.0	
1150 × 850	46 × 34	1168.0 × 864.0	
1200 × 1150	48 × 46	1219.0 × 1168.0	711
1200 × 1100	48 × 44	1219.0 × 1118.0	
1200 × 1050	48 × 42	1219.0 × 1067.0	
1200 × 1000	48 × 40	1219.0 × 1016.0	
1200 × 950	48 × 38	1219.0 × 965.0	
1200 × 900	48 × 36	1219.0 × 914.0	
1300 × 1200	52 × 48	1321.0 × 1219.0	711
1300 × 1150	52 × 46	1321.0 × 1168.0	
1300 × 1100	52 × 44	1321.0 × 1118.0	
1300 × 1050	52 × 42	1321.0 × 1067.0	
1300 × 1000	52 × 40	1321.0 × 1016.0	
1400 × 1300	56 × 52	1422.0 × 1321.0	711
1400 × 1200	56 × 48	1422.0 × 1219.0	
1400 × 1100	56 × 44	1422.0 × 1118.0	
1400 × 1000	56 × 40	1422.0 × 1016.0	
1500 × 1400	60 × 56	1524.0 × 1422.0	711
1500 × 1300	60 × 52	1524.0 × 1321.0	
1500 × 1200	60 × 48	1524.0 × 1219.0	
1500 × 1100	60 × 44	1524.0 × 1118.0	

注释:

1) 除上述标准外, 还可按 GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 等标准制造。

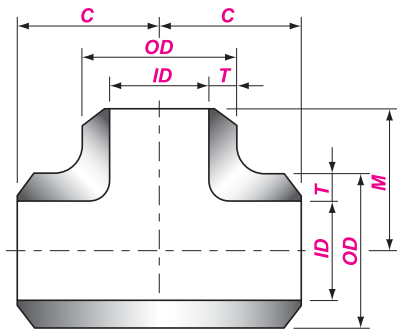
2) 更大规格的同心或偏心异径管, 按采购方与制造商协商的尺寸制造, 或按制造商的尺寸供货。

Notes:

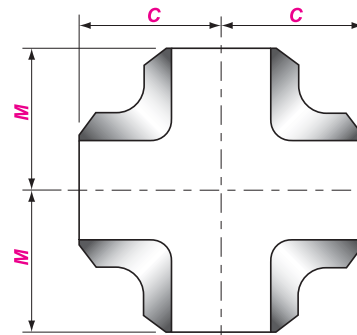
1) Besides the above mentioned standards, the standards of GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 etc. are also applied.

2) For the concentric and eccentric reducers with the sizes larger than that listed in the above table, they will be supplied subject to the sizes agreed by purchaser and manufacturer or according to manufacturer's size.

# BUTT-WELDING TEES AND CROSSES



对焊 等径三通  
BW Straight Tee

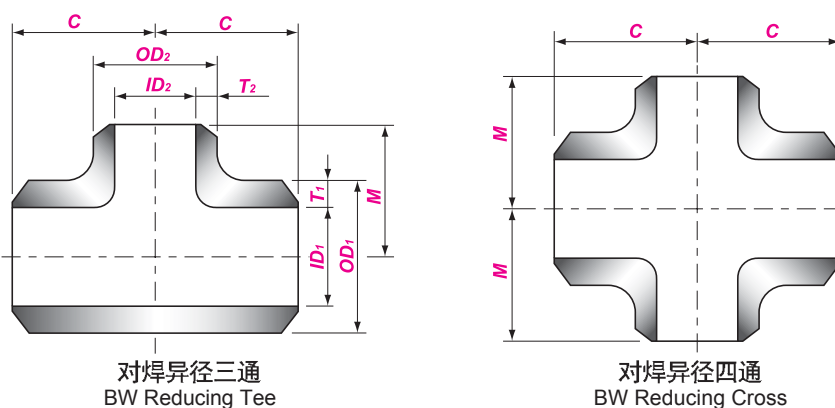


对焊等径四通  
BW Straight Cross

GB/T 12459、GB/T 13401、ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
15	1/2	21.3	25	25
15 × 10	1/2 × 3/8	21.3 × 17.1		25
15 × 8	1/2 × 1/4	21.3 × 13.7		25
20	3/4	26.7	29	29
20 × 15	3/4 × 1/2	26.7 × 21.3		29
20 × 10	3/4 × 3/8	26.7 × 17.1		29
25	1	33.4	38	38
25 × 20	1 × 3/4	33.4 × 26.7		38
25 × 15	1 × 1/2	33.4 × 21.3		38
32	1 1/4	42.2	48	48
32 × 25	1 1/4 × 1	42.2 × 33.4		48
32 × 20	1 1/4 × 3/4	42.2 × 26.7		48
32 × 15	1 1/4 × 1/2	42.2 × 21.3		48
40	1 1/2	48.3	57	57
40 × 32	1 1/2 × 1 1/4	48.3 × 42.2		57
40 × 25	1 1/2 × 1	48.3 × 33.4		57
40 × 20	1 1/2 × 3/4	48.3 × 26.7		57
40 × 15	1 1/2 × 1/2	48.3 × 21.3		57
50	2	60.3	64	64
50 × 40	2 × 1 1/2	60.3 × 48.3		64
50 × 32	2 × 1 1/4	60.3 × 42.2		64
50 × 25	2 × 1	60.3 × 33.4		64
50 × 20	2 × 3/4	60.3 × 26.7		64
65	2 1/2	73.0	76	76
65 × 50	2 1/2 × 2	73.0 × 60.3		76
65 × 40	2 1/2 × 1 1/2	73.0 × 48.3		76
65 × 32	2 1/2 × 1 1/4	73.0 × 42.2		76
65 × 25	2 1/2 × 1	73.0 × 33.4		76
80	3	88.9	86	86
80 × 65	3 × 2 1/2	88.9 × 73.0		86
80 × 50	3 × 2	88.9 × 60.3		86
80 × 40	3 × 1 1/2	88.9 × 48.3		86
80 × 32	3 × 1 1/4	88.9 × 42.2		86
90	3 1/2	101.6	95	95
90 × 80	3 1/2 × 3	101.6 × 88.9		95
90 × 65	3 1/2 × 2 1/2	101.6 × 73.0		95
90 × 50	3 1/2 × 2	101.6 × 60.3		95
90 × 40	3 1/2 × 1 1/2	101.6 × 48.3		95
100	4	114.3	105	105
100 × 90	4 × 3 1/2	114.3 × 101.6		105
100 × 80	4 × 3	114.3 × 88.9		105
100 × 65	4 × 2 1/2	114.3 × 73.0		105
100 × 50	4 × 2	114.3 × 60.3		105
100 × 40	4 × 1 1/2	114.3 × 48.3		105

## BUTT-WELDING TEES AND CROSSES



GB/T 12459、GB/T 13401、ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
125	5	141.3	124	124
125 × 100	5 × 4	141.3 × 114.3		117
125 × 90	5 × 3½	141.3 × 101.6		114
125 × 80	5 × 3	141.3 × 88.9		111
125 × 65	5 × 2½	141.3 × 73.0		108
125 × 50	5 × 2	141.3 × 60.3		105
150	6	168.3	143	143
150 × 125	6 × 5	168.3 × 141.3		137
150 × 100	6 × 4	168.3 × 114.3		130
150 × 90	6 × 3½	168.3 × 101.6		127
150 × 80	6 × 3	168.3 × 88.9		124
150 × 65	6 × 2½	168.3 × 73.0		121
200	8	219.1	178	178
200 × 150	8 × 6	219.1 × 168.3		168
200 × 125	8 × 5	219.1 × 141.3		162
200 × 100	8 × 4	219.1 × 114.3		156
200 × 90	8 × 3½	219.1 × 101.6		152
250	10	273.0		216
250 × 200	10 × 8	273.0 × 219.1	203	
250 × 150	10 × 6	273.0 × 168.3	194	
250 × 125	10 × 5	273.0 × 141.3	191	
250 × 100	10 × 4	273.0 × 114.3	184	
300	12	323.8	254	
300 × 250	12 × 10	323.8 × 273.0		241
300 × 200	12 × 8	323.8 × 219.1		229
300 × 150	12 × 6	323.8 × 168.3		219
300 × 125	12 × 5	323.8 × 141.3		216
350	14	355.6		279
350 × 300	14 × 12	355.6 × 323.8	270	
350 × 250	14 × 10	355.6 × 273.0	257	
350 × 200	14 × 8	355.6 × 219.1	248	
350 × 150	14 × 6	355.6 × 168.3	238	
400	16	406.4	305	
400 × 350	16 × 14	406.4 × 355.6		305
400 × 300	16 × 12	406.4 × 323.8		295
400 × 250	16 × 10	406.4 × 273.0		283
400 × 200	16 × 8	406.4 × 219.1		273
400 × 150	16 × 6	406.4 × 168.3		264

# BUTT-WELDING TEES AND CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
450	18	457.0	343	343
450 × 400	18 × 16	457.0 × 406.4		330
450 × 350	18 × 14	457.0 × 355.6		330
450 × 300	18 × 12	457.0 × 323.8		321
450 × 250	18 × 10	457.0 × 273.0		308
450 × 200	18 × 8	457.0 × 219.1		298
500	20	508.0		381
500 × 450	20 × 18	508.0 × 457.0	368	
500 × 400	20 × 16	508.0 × 406.4	356	
500 × 350	20 × 14	508.0 × 355.6	356	
500 × 300	20 × 12	508.0 × 323.8	346	
500 × 250	20 × 10	508.0 × 273.0	333	
500 × 200	20 × 8	508.0 × 219.1	324	
550	22	559.0	419	419
550 × 500	22 × 20	559.0 × 508.0		406
550 × 450	22 × 18	559.0 × 457.0		394
550 × 400	22 × 16	559.0 × 406.4		381
550 × 350	22 × 14	559.0 × 355.6		381
550 × 300	22 × 12	559.0 × 323.8		371
550 × 250	22 × 10	559.0 × 273.0		359
600	24	610.0	432	432
600 × 550	24 × 22	610.0 × 559.0		432
600 × 500	24 × 20	610.0 × 508.0		432
600 × 450	24 × 18	610.0 × 457.0		419
600 × 400	24 × 16	610.0 × 406.4		406
600 × 350	24 × 14	610.0 × 355.6		406
600 × 300	24 × 12	610.0 × 323.8		397
600 × 250	24 × 10	610.0 × 273.0	384	
650	26	660.0	495	495
650 × 600	26 × 24	660.0 × 610.0		483
650 × 550	26 × 22	660.0 × 559.0		470
650 × 500	26 × 20	660.0 × 508.0		457
650 × 450	26 × 18	660.0 × 457.0		444
650 × 400	26 × 16	660.0 × 406.4		432
650 × 350	26 × 14	660.0 × 355.6		432
650 × 300	26 × 12	660.0 × 323.8	422	
700	28	711.0	521	521
700 × 650	28 × 26	711.0 × 660.0		521
700 × 600	28 × 24	711.0 × 610.0		508
700 × 550	28 × 22	711.0 × 559.0		495
700 × 500	28 × 20	711.0 × 508.0		483
700 × 450	28 × 18	711.0 × 457.0		470
700 × 400	28 × 16	711.0 × 406.4		457
700 × 350	28 × 14	711.0 × 355.6	457	
700 × 300	28 × 12	711.0 × 323.8	448	
750	30	762.0	559	559
750 × 700	30 × 28	762.0 × 711.0		546
750 × 650	30 × 26	762.0 × 660.0		546
750 × 600	30 × 24	762.0 × 610.0		533
750 × 550	30 × 22	762.0 × 559.0		521
750 × 500	30 × 20	762.0 × 508.0		508
750 × 450	30 × 18	762.0 × 457.0		495
750 × 400	30 × 16	762.0 × 406.4		483
750 × 350	30 × 14	762.0 × 355.6		483
750 × 300	30 × 12	762.0 × 323.8		473
750 × 250	30 × 10	762.0 × 273.0	460	



## BUTT-WELDING TEES AND CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
800	32	813.0	597	597
800 × 750	32 × 30	813.0 × 762.0		584
800 × 700	32 × 28	813.0 × 711.0		572
800 × 650	32 × 26	813.0 × 660.0		572
800 × 600	32 × 24	813.0 × 610.0		559
800 × 550	32 × 22	813.0 × 559.0		546
800 × 500	32 × 20	813.0 × 508.0		533
800 × 450	32 × 18	813.0 × 457.0		521
800 × 400	32 × 16	813.0 × 406.4		508
800 × 350	32 × 14	813.0 × 355.6		508
850	34	864.0	635	635
850 × 800	34 × 32	864.0 × 813.0		622
850 × 750	34 × 30	864.0 × 762.0		610
850 × 700	34 × 28	864.0 × 711.0		597
850 × 650	34 × 26	864.0 × 660.0		597
850 × 600	34 × 24	864.0 × 610.0		584
850 × 550	34 × 22	864.0 × 559.0		572
850 × 500	34 × 20	864.0 × 508.0		559
850 × 450	34 × 18	864.0 × 457.0		546
850 × 400	34 × 16	864.0 × 406.4		533
900	36	914.0	673	673
900 × 850	36 × 34	914.0 × 864.0		660
900 × 800	36 × 32	914.0 × 813.0		648
900 × 750	36 × 30	914.0 × 762.0		635
900 × 700	36 × 28	914.0 × 711.0		622
900 × 650	36 × 26	914.0 × 660.0		622
900 × 600	36 × 24	914.0 × 610.0		610
900 × 550	36 × 22	914.0 × 559.0		597
900 × 500	36 × 20	914.0 × 508.0		584
900 × 450	36 × 18	914.0 × 457.0		572
900 × 400	36 × 16	914.0 × 406.4	559	
950	38	965.0	711	711
950 × 900	38 × 36	965.0 × 914.0		711
950 × 850	38 × 34	965.0 × 864.0		698
950 × 800	38 × 32	965.0 × 813.0		686
950 × 750	38 × 30	965.0 × 762.0		673
950 × 700	38 × 28	965.0 × 711.0		648
950 × 650	38 × 26	965.0 × 660.0		648
950 × 600	38 × 24	965.0 × 610.0		635
950 × 550	38 × 22	965.0 × 559.0		622
950 × 500	38 × 20	965.0 × 508.0		610
950 × 450	38 × 18	965.0 × 457.0	597	
1000	40	1016.0	749	749
1000 × 950	40 × 38	1016.0 × 965.0		749
1000 × 900	40 × 36	1016.0 × 914.0		737
1000 × 850	40 × 34	1016.0 × 864.0		724
1000 × 800	40 × 32	1016.0 × 813.0		711
1000 × 750	40 × 30	1016.0 × 762.0		698
1000 × 700	40 × 28	1016.0 × 711.0		673
1000 × 650	40 × 26	1016.0 × 660.0		673
1000 × 600	40 × 24	1016.0 × 610.0		660
1000 × 550	40 × 22	1016.0 × 559.0		648
1000 × 500	40 × 20	1016.0 × 508.0		635
1000 × 450	40 × 18	1016.0 × 457.0		622

# BUTT-WELDING TEES AND CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End		
DN	NPS	$OD_1 \times OD_2$	C	M	
1050	42	1067.0	762	711	
1050 × 1000	42 × 40	1067.0 × 1016.0		711	
1050 × 950	42 × 38	1067.0 × 965.0		711	
1050 × 900	42 × 36	1067.0 × 914.0		711	
1050 × 850	42 × 34	1067.0 × 864.0		711	
1050 × 800	42 × 32	1067.0 × 813.0		711	
1050 × 750	42 × 30	1067.0 × 762.0		711	
1050 × 700	42 × 28	1067.0 × 711.0		698	
1050 × 650	42 × 26	1067.0 × 660.0		698	
1050 × 600	42 × 24	1067.0 × 610.0		660	
1050 × 550	42 × 22	1067.0 × 559.0		660	
1050 × 500	42 × 20	1067.0 × 508.0		660	
1050 × 450	42 × 18	1067.0 × 457.0		648	
1050 × 400	42 × 16	1067.0 × 406.4		635	
1100	44	1118.0		813	762
1100 × 1050	44 × 42	1118.0 × 1067.0	762		
1100 × 1000	44 × 40	1118.0 × 1016.0	749		
1100 × 950	44 × 38	1118.0 × 965.0	737		
1100 × 900	44 × 36	1118.0 × 914.0	724		
1100 × 850	44 × 34	1118.0 × 864.0	724		
1100 × 800	44 × 32	1118.0 × 813.0	711		
1100 × 750	44 × 30	1118.0 × 762.0	711		
1100 × 700	44 × 28	1118.0 × 711.0	698		
1100 × 650	44 × 26	1118.0 × 660.0	698		
1100 × 600	44 × 24	1118.0 × 610.0	698		
1100 × 550	44 × 22	1118.0 × 559.0	686		
1100 × 500	44 × 20	1118.0 × 508.0	686		
1150	46	1168.0	851		800
1150 × 1100	46 × 44	1168.0 × 1118.0			800
1150 × 1050	46 × 42	1168.0 × 1067.0		787	
1150 × 1000	46 × 40	1168.0 × 1016.0		775	
1150 × 950	46 × 38	1168.0 × 965.0		762	
1150 × 900	46 × 36	1168.0 × 914.0		762	
1150 × 850	46 × 34	1168.0 × 864.0		749	
1150 × 800	46 × 32	1168.0 × 813.0		749	
1150 × 750	46 × 30	1168.0 × 762.0		737	
1150 × 700	46 × 28	1168.0 × 711.0		737	
1150 × 650	46 × 26	1168.0 × 660.0		737	
1150 × 600	46 × 24	1168.0 × 610.0		724	
1150 × 550	46 × 22	1168.0 × 559.0		724	
1200	48	1219.0		889	838
1200 × 1150	48 × 46	1219.0 × 1168.0			838
1200 × 1100	48 × 44	1219.0 × 1118.0	838		
1200 × 1050	48 × 42	1219.0 × 1067.0	813		
1200 × 1000	48 × 40	1219.0 × 1016.0	813		
1200 × 950	48 × 38	1219.0 × 965.0	813		
1200 × 900	48 × 36	1219.0 × 914.0	787		
1200 × 850	48 × 34	1219.0 × 864.0	787		
1200 × 800	48 × 32	1219.0 × 813.0	787		
1200 × 750	48 × 30	1219.0 × 762.0	762		
1200 × 700	48 × 28	1219.0 × 711.0	762		
1200 × 650	48 × 26	1219.0 × 660.0	762		
1200 × 600	48 × 24	1219.0 × 610.0	737		
1200 × 550	48 × 22	1219.0 × 559.0	737		

# BUTT-WELDING TEES AND CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
1300	52	1321.0	965	914
1300 × 1200	52 × 48	1321.0 × 1219.0		864
1300 × 1100	52 × 44	1321.0 × 1118.0		813
1300 × 1000	52 × 40	1321.0 × 1016.0		762
1400	56	1422.0	1041	965
1400 × 1300	56 × 52	1422.0 × 1321.0		914
1400 × 1200	56 × 48	1422.0 × 1219.0		864
1400 × 1100	56 × 44	1422.0 × 1118.0		813
1500	60	1524.0	1118	1016
1500 × 1400	60 × 56	1524.0 × 1422.0		965
1500 × 1300	60 × 52	1524.0 × 1321.0		914
1500 × 1200	60 × 48	1524.0 × 1219.0		864
1600	64	1626.0	1194	1092
1600 × 1500	64 × 60	1626.0 × 1524.0		1067
1600 × 1400	64 × 56	1626.0 × 1422.0		1016
1600 × 1300	64 × 52	1626.0 × 1321.0		965
1600 × 1200	64 × 48	1626.0 × 1219.0		914
1700	68	1727.0	1270	1168
1700 × 1600	68 × 64	1727.0 × 1626.0		1143
1700 × 1500	68 × 60	1727.0 × 1524.0		1118
1700 × 1400	68 × 56	1727.0 × 1422.0		1067
1700 × 1300	68 × 52	1727.0 × 1321.0		1016
1700 × 1200	68 × 48	1727.0 × 1219.0		965
1800	72	1829.0	1320	1245
1800 × 1700	72 × 68	1829.0 × 1727.0		1219
1800 × 1600	72 × 64	1829.0 × 1626.0		1194
1800 × 1500	72 × 60	1829.0 × 1524.0		1168
1800 × 1400	72 × 56	1829.0 × 1422.0		1118
1800 × 1300	72 × 52	1829.0 × 1321.0		1067
1800 × 1200	72 × 48	1829.0 × 1219.0		1016
1900	76	1930.0	1422	1320
1900 × 1800	76 × 72	1930.0 × 1829.0		1295
1900 × 1700	76 × 68	1930.0 × 1727.0		1270
1900 × 1600	76 × 64	1930.0 × 1626.0		1245
1900 × 1500	76 × 60	1930.0 × 1524.0		1219
1900 × 1400	76 × 56	1930.0 × 1422.0		1168
1900 × 1300	76 × 52	1930.0 × 1321.0		1118
1900 × 1200	76 × 48	1930.0 × 1219.0		1067
2000	80	2032.0	1499	1397
2000 × 1900	80 × 76	2032.0 × 1930.0		1372
2000 × 1800	80 × 72	2032.0 × 1829.0		1346
2000 × 1700	80 × 68	2032.0 × 1727.0		1321
2000 × 1600	80 × 64	2032.0 × 1626.0		1295
2000 × 1500	80 × 60	2032.0 × 1524.0		1270
2000 × 1400	80 × 56	2032.0 × 1422.0		1219
2000 × 1300	80 × 52	2032.0 × 1321.0		1168
2000 × 1200	80 × 48	2032.0 × 1219.0		1118

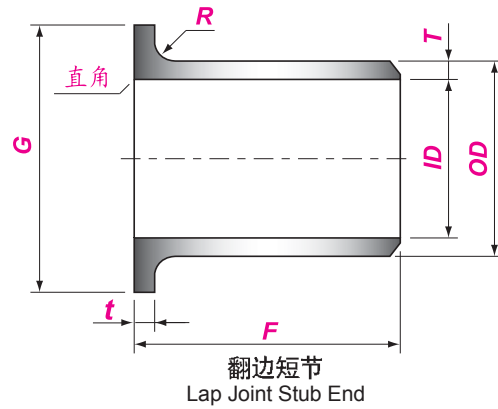
**注释:**

- 除上述标准外, 还可按 GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 等标准制造。
- 对于 ≥ DN 650 (NPS 26) 的等径三通、四通和 ≥ DN 350 (NPS 14) 的异径三通、四通, 推荐但不一定要采用出口尺寸 M。
- 更大规格三通、四通, 按采购方与制造商协商的尺寸制造, 或按制造商的尺寸供货。

**Notes:**

- Besides the above mentioned standards, the standards of GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 etc. are also applied.
- For the straight tees and crosses with DN ≥ 650 (NPS 26) and the reducing tees and crosses with DN ≥ 350 (NPS 14), the outlet sizes are recommended to use (that mean the other sizes may be applied).
- For the tees and crosses with the sizes larger than that listed in the above table, they will be supplied subject to the sized agreed by purchaser and manufacturer or according to manufacturer's size.

# BUTT-WELDING LAP JOINT STUB END



GB/T 12459、ASME B16.9、MSS SP-43

公称尺寸 Nominal Size		筒体外径 OD of Cylinder		长度 Length		圆角半径 Radius of Fillet		搭接直径 Diameter of Lap
DN	NPS	OD		F		R		
		Max.	Min.	长型 Long Type	短型 Short Type	A	B <sub>max</sub>	
15	1/2	22.8	20.5	76	51	3	0.8	35
20	3/4	28.1	25.9	76	51	3	0.8	43
25	1	35.0	32.6	102	51	3	0.8	51
32	1 1/4	43.6	41.4	102	51	5	0.8	64
40	1 1/2	49.9	47.5	102	51	6	0.8	73
50	2	62.4	59.5	152	64	8	0.8	92
65	2 1/2	75.3	72.2	152	64	8	0.8	105
80	3	91.3	88.1	152	64	10	0.8	127
90	3 1/2	104.0	100.8	152	76	10	0.8	140
100	4	116.7	113.5	152	76	11	0.8	157
125	5	144.3	140.5	203	76	11	1.6	186
150	6	171.3	167.5	203	89	13	1.6	216
200	8	222.1	218.3	203	102	13	1.6	270
250	10	277.2	272.3	254	127	13	1.6	324
300	12	328.0	323.1	254	152	13	1.6	381
350	14	359.9	354.8	305	152	13	1.6	413
400	16	411.0	405.6	305	152	13	1.6	470
450	18	462.0	456.0	305	152	13	1.6	533
500	20	514.0	507.0	305	152	13	1.6	584
550	22	565.0	558.0	305	152	13	1.6	641
600	24	616.0	609.0	305	152	13	1.6	692

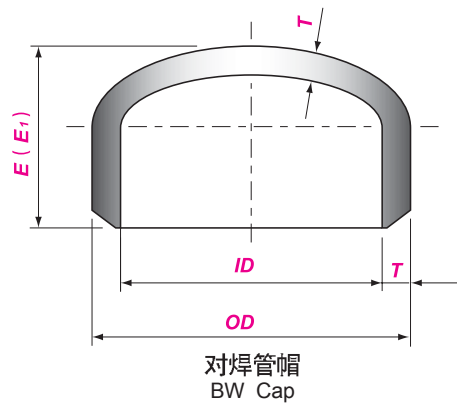
注释:

- 1) 当短型翻边短节用于 PN 50 和 PN 110(300 和 600 级)的较大法兰以及大于等于 PN 150(900 级)的大部分规格的法兰时, 或当长型翻边短节用于 PN 260 和 PN 420(1500 和 2500 级)的较大法兰时, 为了避免法兰可能影响焊接, 或许需要增加筒体的长度。长度增加量由制造商与采购方双方协商。
- 2) 当采用榫槽面和凹凸密封面时, 必须增加搭接边的厚度。增加厚度应附加(不包括)在基本长度 F 上。
- 3) A 型圆角半径 R 与 GB/T 9118.1~9118.2 或 ASME B16.5 中的松套法兰的圆角半径相符合。B 型的圆角半径 R 仅用于 MSS SP-43 标准中, 其长度 F 为短型。
- 4) 搭接直径 G 与 ASME B16.5 中表示的标准机加工面相符合。搭接边的背面应进行机加工, 使其与安装表面一致。当采用环连接密封面时, 使用 ASME B16.5 中给出的尺寸 K。
- 5) 搭接厚度 t 应不小于管子的公称壁厚。

Notes:

- 1) When the short type is used on the larger flanges with PN 50 and PN 110 (300 and 600 LB) and on flanges with PN 150(900 LB) and above, or the long type is used on the larger flange with PN 260 and PN 420(1500 and 2500LB), the length of the cylinder may be added to be feasible the welding, the adding length shall be negotiated by manufacturer and purchaser.
- 2) The thickness of joint shall be added if the TG and MFM contact surface of flange are used, and the adding thickness shall increase (not be included in) the base length F.
- 3) The radius of fillet R(type A) shall conform to the ones of loose flanges according to GB/T 9118.1~9118.2 or ASME B16.5. The radius of fillet R (type B) is only applied for the standards of MSS SP-43 with short length F.
- 4) The lap joint diameter G shall conform to the standard machined face indicated in ASME B16.5, and the back of joint shall be machined to conform to the surface of installation. When RJ used, the size K specified in ASME B 16.5 Shall apply.
- 5) The minimum lap joint thickness t shall not be less than the nominal pipe wall thickness.

# BUTT-WELDING CAPS



GB/T 12459, GB/T 13401, ASME B16.9

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	长度 Length		对尺寸 $E$ 的限制厚度 Limiting Wall Thickness for Length $E$
DN	NPS	OD	$E$	$E_1$	
15	1/2	21.3	25	25	4.57
20	3/4	26.7	25	25	3.81
25	1	33.4	38	38	4.57
32	1 1/4	42.2	38	38	4.83
40	1 1/2	48.3	38	38	5.08
50	2	60.3	38	44	5.59
65	2 1/2	73.0	38	51	7.11
80	3	88.9	51	64	7.62
90	3 1/2	101.6	64	76	8.13
100	4	114.3	64	76	8.64
125	5	141.3	76	89	9.65
150	6	168.3	89	102	10.92
200	8	219.1	102	127	12.70
250	10	273.0	127	152	12.70
300	12	323.8	152	178	12.70
350	14	355.6	165	191	12.70
400	16	406.4	178	203	12.70
450	18	457.0	203	229	12.70
500	20	508.0	229	254	12.70
550	22	559.0	254	254	12.70
600	24	610.0	267	305	12.70
650	26	660.0	267	---	---
700	28	711.0	267	---	---
750	30	762.0	267	---	---
800	32	813.0	267	---	---
850	34	864.0	267	---	---
900	36	914.0	267	---	---
950	38	965.0	305	---	---
1000	40	1016.0	305	---	---
1050	42	1067.0	305	---	---
1100	44	1118.0	343	---	---
1150	46	1168.0	343	---	---
1200	48	1219.0	343	---	---

**注释:**

- 管帽形状为标准椭圆形。
- 管帽的长度不大于限制厚度时为  $E$ ，大于限制厚度时为  $E_1$ ；当管帽的公称尺寸  $\geq$  DN 650 (NPS 26) 时，长度  $E_1$  按采购方与制造商协商的尺寸制造，或按制造商的尺寸供货。

**Notes:**

- The configuration of the cap is normal ellipse.
- Length  $E$  applies for the thickness not exceeding the Limiting Wall Thickness. Length  $E_1$  applies for the thickness exceeding the Limiting Wall Thickness. For the caps with DN  $\geq$  650 (NPS26), they will be made subject to the sizes agreed between purchaser and manufacturer or be supplied according to manufacturer's size.

# TOLERANCES FOR BW FITTINGS

## 对焊管件的公差

### TOLERANCES FOR BW FITTINGS

公称尺寸 Nominal Size		所有管件 <sup>1)2)</sup> All Fittings		45°、90° 弯头、三通、四通 45° & 90° Elbows & Tees, Crosses	3D 弯头 3D Radius Elbows	180° 弯头 Returns			管帽 Caps	异径管、翻边短节 Reducers & Lap Joint Stub Ends	翻边短节 Lap Joint Stub Ends		
DN	NPS	OD <sup>3)4)</sup>	ID <sup>3)</sup>	A, B, C, M	A, B	O	K	U	E, E <sub>r</sub>	H, F	G	R	t
15-65	1/2 - 2 1/2	+1.6 -0.8	± 0.8	± 2	± 3	± 6	± 6	± 1	± 3	± 2	0 -1	0 -1	+1.6 0
80-90	3-3 1/2	± 1.6	± 1.6	± 2	± 3	± 6	± 6	± 1	± 3	± 2	0 -1	0 -1	+1.6 0
100	4	± 1.6	± 1.6	± 2	± 3	± 6	± 6	± 1	± 3	± 2	0 -1	0 -2	+1.6 0
125-200	5-8	+2.4 -1.6	± 1.6	± 2	± 3	± 6	± 6	± 1	± 6	± 2	0 -1	0 -2	+1.6 0
250-450	10-18	+4.0 -3.2	± 3.2	± 2	± 3	± 10	± 6	± 2	± 6	± 2	0 -2	0 -2	+3.2 0
500-600	20-24	+6.4 -4.8	± 4.8	± 2	± 3	± 10	± 6	± 2	± 6	± 2	0 -2	0 -2	+3.2 0
650-750	26-30	+6.4 -4.8	± 4.8	± 3	± 6	---	---	---	± 10	± 5	---	---	---
800-1200	32-48	+6.4 -4.8	± 4.8	± 5	± 6	---	---	---	± 10	± 5	---	---	---
1300-1500	52-60	+6.4 -4.8	± 4.8	± 5	---	---	---	---	---	---	---	---	---
1600-1700	64-68	+6.4 -4.8	± 4.8	± 5	---	---	---	---	---	---	---	---	---
1800-2000	72-80	+6.4 -4.8	± 4.8	± 5	---	---	---	---	---	---	---	---	---

**注释:**

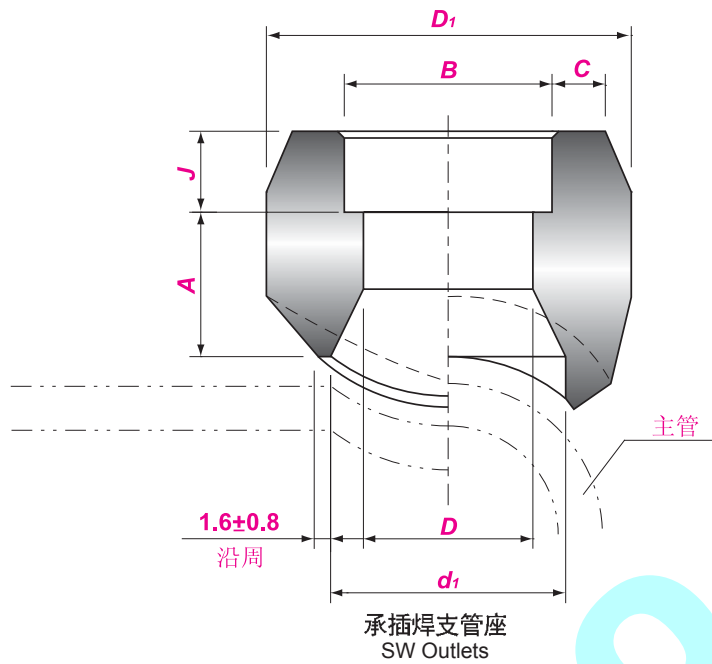
- 1) 端部内径和公称壁厚由采购方指定。
- 2) 如采购方未规定壁厚公差, 则适用 87.5% 的最小壁厚。
- 3) 圆度为正负偏差绝对值之和。
- 4) 当需要增加壁厚以满足设计要求时, 该项公差可超过表列值。

**Note:**

- 1) The inside diameter and the nominal wall thickness shall be specified by purchaser.
- 2) If purchaser doesn't specify the thickness tolerance, 87.5% of the nominal thickness shall be the min. thickness.
- 3) Out-of-roundness is the sum of absolute values of plus and minus tolerance.
- 4) When the wall thickness needs increasing to meet the design requirement, the tolerance may exceed the ones indicated in the above list.

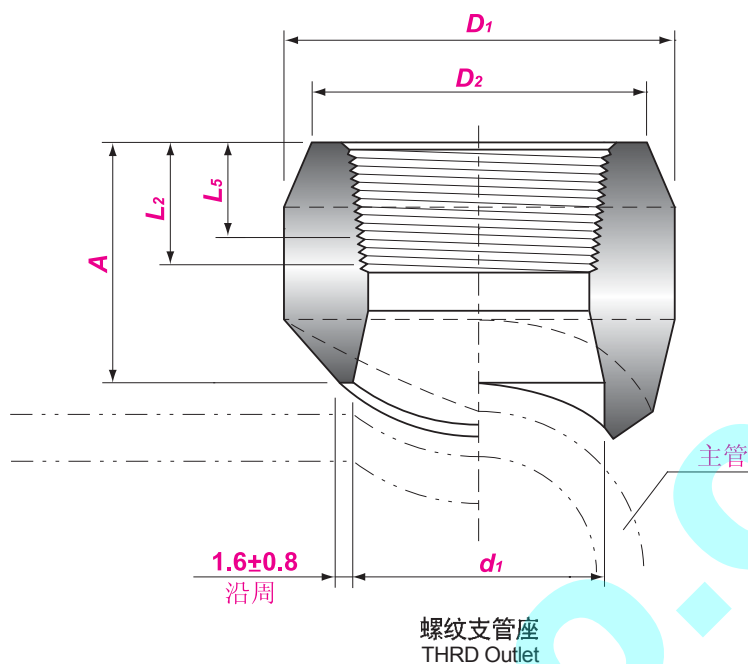
公称尺寸 Nominal Size		Q	P	
DN	NPS			
15-100	1/2 - 4	1	2	
125-200	5-8	2	4	
250-300	10-12	3	5	
350-400	14-16	3	6	
450-600	18-24	4	10	
650-750	26-30	5	10	
800-1050	32-42	5	13	
1100-1200	44-48	5	19	
1300-2000	50-80	5	19	

# OUTLETS



GB/T 19326、MSS SP-97

公称尺寸 Nominal Size		支管公称尺寸 Branch Nominal Size		承插孔 深度 Depth of Socket	结构长度 Face of Fitting to Crotch		本体直径 OD of Fitting		承插孔壁厚 Socket Wall Thickness		开孔直径 Cut Hole Dia.	
DN	NPS	DN	NPS	$J_{min}$	$A_{max}$		$D_{1min}$		$C_{min}$		$d_{1nom}$	
					3000	6000	3000	6000	3000	6000	3000	6000
8~900	1/4~36	6	1/8	9.5	10	-	27	-	3.18	-	16	-
10~900	3/8~36	8	1/4	9.5	10	-	27	-	3.78	-	16	-
15~900	1/2~36	10	3/8	9.5	13	-	30	-	4.01	-	19	-
20~900	3/4~36	15	1/2	9.5	16	24	38	47	4.67	5.97	24	19
25~900	1~36	20	3/4	12.5	16	25	47	53	4.90	6.96	30	25
32~900	1 1/4~36	25	1	12.5	22	29	56	63	5.69	7.92	36	33
40~900	1 1/2~36	32	1 1/4	12.5	22	30	66	74	6.07	7.92	45	38
50~900	2~36	40	1 1/2	12.5	24	32	75	83	6.35	8.92	51	49
65~900	2 1/2~36	50	2	16.0	24	37	90	104	6.93	10.92	65	59
80~900	3~36	65	2 1/2	16.0	25	-	105	-	8.76	-	76	-
100~900	4~36	80	3	16.0	30	-	124	-	9.52	-	94	-
125~900	5~36	100	4	19.0	30	-	154	-	10.69	-	121	-



GB/T 19326、MSS SP-97

主管公称尺寸 Run Pipes Nominal Size		支管公称尺寸 Branch Nominal Size		长度 Length		本体直径 OD of Fitting		支管端部外径 OD at End of Branch		螺纹 长度 Length of Thread	开孔直径 Cut Hole Dia.	
DN	NPS	DN	NPS	A		$D_{1 \min}$		$D_{2 \min}$		$L_{2 \min}$	$d_{1 \text{ nom}}$	
				3000	6000	3000	6000	3000	6000		3000	6000
8~900	1/4~36	6	1/8	19	—	27	—	22	—	6.7	16	—
10~900	3/8~36	8	1/4	19	—	27	—	22	—	10.2	16	—
15~900	1/2~36	10	3/8	21	—	30	—	25	—	10.4	19	—
20~900	3/4~36	15	1/2	25	32	38	45	33	42	13.6	24	19
25~900	1~36	20	3/4	27	37	47	52	39	48	13.9	30	25
32~900	1 1/4~36	25	1	33	40	56	63	48	58	17.3	36	33
40~900	1 1/2~36	32	1 1/4	33	41	66	72	58	67	18.0	45	38
50~900	2~36	40	1 1/2	35	43	75	83	64	77	18.4	51	49
65~900	2 1/2~36	50	2	38	52	90	104	77	93	19.2	65	59
80~900	3~36	65	2 1/2	46	—	105	—	94	—	28.9	76	—
100~900	4~36	80	3	51	—	124	—	114	—	30.5	94	—
125~900	5~36	100	4	57	—	154	—	140	—	33.0	121	—

注释:

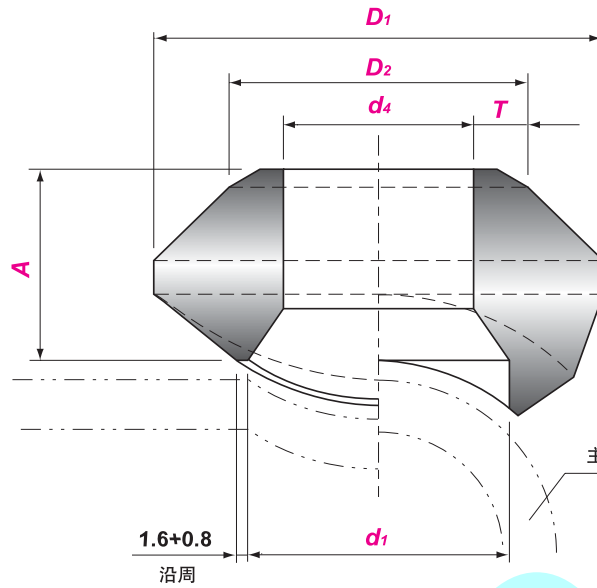
1) 端部螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:

1) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).



# OUTLETS



对焊支管座  
BW Outlet

GB/T 19326, MSS SP-97

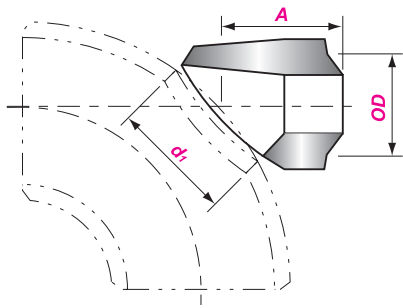
主管公称尺寸 Run Pipes Nominal Size		支管公称尺寸 Branch Nominal Size		长度 Length			本体直径 OD of Fitting			开孔直径 Cut Hole Dia.		
DN	NPS	DN	NPS	A			$D_{2\ min}$			$d_{1\ nom}$		
				STD	XS	Sch160	STD	XS	SCH160	STD	XS	SCH160
8~900	1/4~36	6	1/8	16	16	—	24	24	—	16	16	—
10~900	3/8~36	8	1/4	16	16	—	26	26	—	16	16	—
15~900	1/2~36	10	3/8	19	19	—	30	30	—	19	19	—
20~900	3/4~36	15	1/2	19	19	28	36	36	36	24	24	14
25~900	1~36	20	3/4	22	22	32	43	43	46	30	30	19
32~900	1 1/4~36	25	1	27	27	38	55	55	51	36	36	25
40~900	1 1/2~36	32	1 1/4	32	32	44	66	66	63	45	45	33
50~900	2~36	40	1 1/2	33	33	51	74	74	71	51	51	38
65~900	2 1/2~36	50	2	38	38	55	90	90	82	65	65	43
80~900	3~36	65	2 1/2	41	41	62	104	104	98	76	76	54
90~900	3 1/2~36	80	3	44	44	73	124	124	122	93	93	73
100~900	4~36	90	3 1/2	48	48	—	138	138	—	113	113	—
125~900	5~36	100	4	51	51	84	154	154	154	120	120	98
150~900	6~36	125	5	57	57	94	187	187	188	141	141	122
200~900	8~36	150	6	60	78	105	213	227	222	170	170	146
250~900	10~36	200	8	70	99	—	265	292	—	220	220	—
300~900	12~36	250	10	78	94	—	323	325	—	275	265	—
350~900	14~36	300	12	86	103	—	379	381	—	325	317	—
400~900	16~36	350	14	89	100	—	411	416	—	357	351	—
450~900	18~36	400	16	94	106	—	465	468	—	408	403	—
500~900	20~36	450	18	97	111	—	522	525	—	459	455	—
550~900	22~36	500	20	102	119	—	573	584	—	508	509	—
650~900	26~36	600	24	116	140	—	690	708	—	614	612	—

注释:

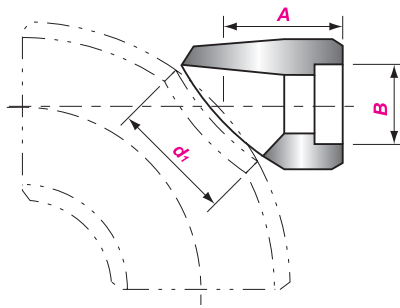
- $D_2$  与支管接管外径相等、 $d_4$  与支管接管内径相等、 $T$  与支管接管壁厚相等。
- 支管端部焊接坡口型式见 21 页图示。

Note:

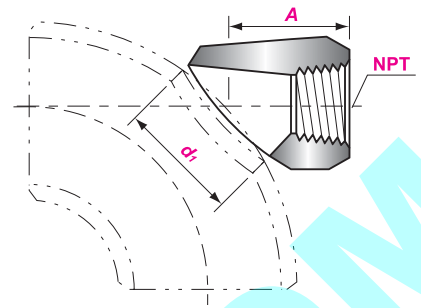
- $D_2$  is same to the outside diameter of branch pipe,  $d_4$  is same to the inside diameter of branch pipe,  $T$  is same to the wall thickness of branch pipe.
- As for the bevel ends of the branch pipe, please refers to the figure in the page of 21.



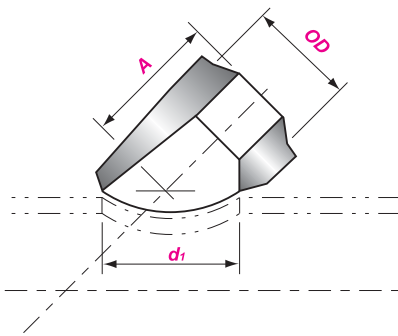
对焊弯头支管座  
BW Elbolet



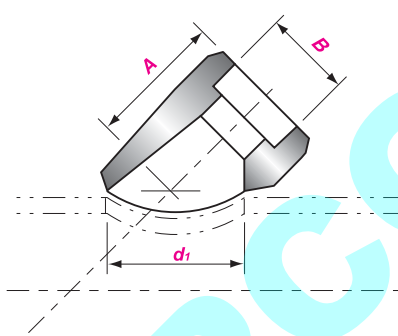
承插焊弯头支管座  
SW Elbolet



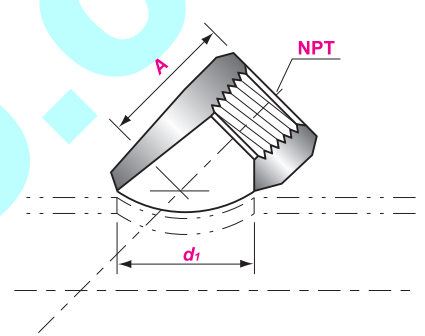
螺纹弯头支管座  
THRD Elbolet



对焊45°支管座  
BW Latrolet



承插焊45°支管座  
SW Latrolet



螺纹45°支管座  
THRD Latrolet

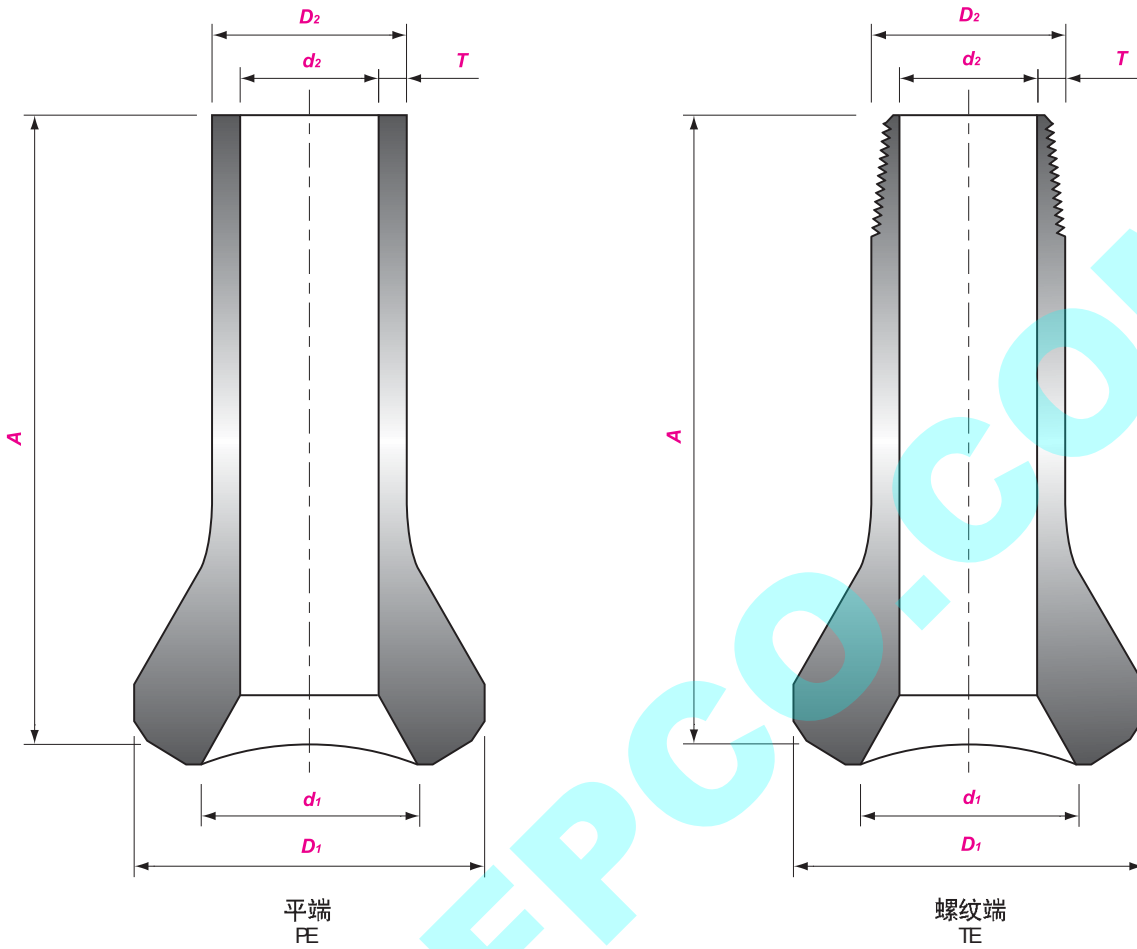
弯头支管座和45°支管座  
ELBOLETS AND LATROLETS

主管公称尺寸 Run Pipes Nominal Size		支管公称尺寸 Branch Nominal Size		长度 Length				开孔直径 Cut Hole Dia.			
DN	NPS	DN	NPS	A				d <sub>1 nom</sub>			
				对焊 BW		承插焊和螺纹 SW and THRD		对焊 BW		承插焊和螺纹 SW and THRD	
				STD、XS	Sch160	3000	6000	STD、XS	Sch160	3000	6000
20~900	3/4~36	15	1/2	45	50	45	50	31	30	31	30
25~900	1~36	20	3/4	50	58	50	58	42	40	42	40
32~900	1 1/4~36	25	1	60	70	60	70	54	50	54	50
40~900	1 1/2~36	32	1 1/4	68	76	68	76	61	58	61	58
50~900	2~36	40	1 1/2	75	83	75	83	76	66	76	66
65~900	2 1/2~36	50	2	90	98	90	98	90	83	90	83
80~900	3~36	65	2 1/2	95	105	-	-	100	95	-	-
90~900	3 1/2~36	80	3	120	130	-	-	132	115	-	-
125~900	5~36	100	4	140	150	-	-	168	150	-	-
200~900	8~36	150	6	195	210	-	-	238	225	-	-
250~900	10~36	200	8	220	-	-	-	338	-	-	-
300~900	12~36	250	10	270	-	-	-	432	-	-	-
350~900	14~36	300	12	290	-	-	-	498	-	-	-

注释:  
1) 其它尺寸参照46~48页。

Note:  
1) As for other sizes, please refer to the ones in the page of 46~48.

# NIPOLETS



## 加长支管座 NIPOLETS

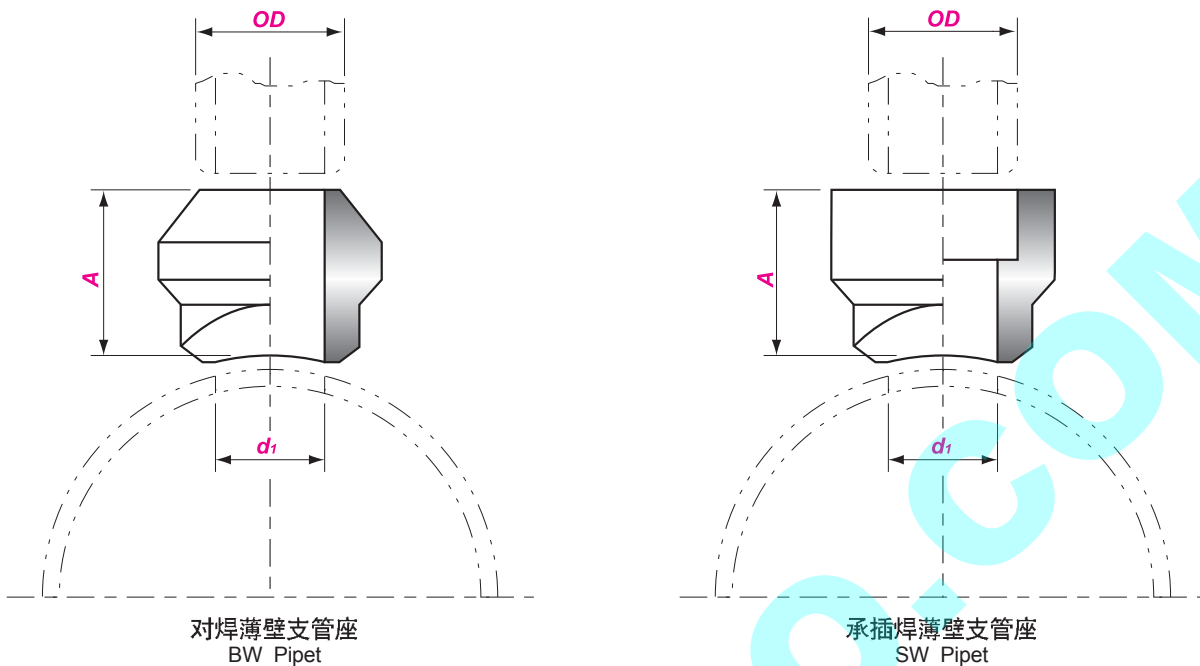
主管公称尺寸 Run Pipes Nominal Size		支管公称尺寸 Branch Nominal Size		长度 Length	端部外径 OD at End	本体直径 OD of Fitting		开孔直径 Cut Hole Dia.	
DN	NPS	DN	NPS	A	D <sub>2</sub>	D <sub>1 min</sub>		d <sub>1 nom</sub>	
						XS	Sch160	XS	Sch160
20~900	3/4~36	15	1/2	89	21.3	38	47	24	19
25~900	1~36	20	3/4		26.7	47	53	30	25
32~900	1 1/4~36	25	1		33.4	56	63	36	33
40~900	1 1/2~36	32	1 1/4	89	42.2	66	72	45	38
50~900	2~36	40	1 1/2		48.3	75	83	51	49
65~900	2 1/2~36	50	2		60.3	90	104	65	59
80~900	3~36	65	2 1/2	89	73.0	105	—	76	—
90~900	3 1/2~36	80	3		88.9	124	—	94	—
125~900	5~36	100	4		114.3	154	—	121	—

**注释:**

- 1) 本产品用于支管端部与阀门连接の場合。
- 2) D<sub>2</sub>的公差: DN15~40 (NPS1/2~1 1/2) 为 ± 0.25mm, DN50~100(NPS2~4)为 ± 0.5mm; T为XS或Sch160等级的壁厚, d<sub>1</sub> = D<sub>2</sub> - 2T。
- 3) 根据采购要求, 端部可加工成平头或螺纹端的型式; 其中螺纹按GB/T 12716 (等同于ASME B1.20.1) 中的NPT螺纹加工。
- 4) A尺寸亦可按采购要求加工成114mm、140mm及165mm的长度。

**Note:**

- 1) This nipolet is used to connect the valve at the the end of the branch pipe.
- 2) The tolerance of D<sub>2</sub> shall be as: DN15~40 (NPS1/2~1 1/2): ± 0.25mm, DN50~100(NPS2~4): ± 0.5mm. T is the thickness of XS or Sch160, d<sub>1</sub> = D<sub>2</sub> - 2T.
- 3) Per the purchase specification, the ends can be machined as plain or threaded type, and the thread shall be machined per GB/T 12716(equivalent to ASME B1.20.1)
- 4) Per the purchase specification, the size of A can be machined as 114mm、140mm and 165mm.



对焊薄壁支管座  
BW Pipet

承插焊薄壁支管座  
SW Pipet

薄壁支管座  
PIPETS

主管公称尺寸 Run Pipes Nominal Size		支管公称尺寸 Branch Nominal Size		长度 Length		开孔直径 Cut Hole Dia.	
DN	NPS	DN	NPS	A		$d_{1\text{ nom}}$	
				对焊 BW	承插焊 SW	Sch5s	Sch10s
8~900	1/4~36	6	1/8	16	-	-	7.8
10~900	3/8~36	8	1/4	16	-	-	10.4
15~900	1/2~36	10	3/8	19	-	-	13.8
20~900	3/4~36	15	1/2	19	26	18.0	17.1
25~900	1~36	20	3/4	22	27	23.4	22.5
32~900	1 1/4~36	25	1	27	33	30.1	27.9
40~900	1 1/2~36	32	1 1/4	32	33	38.9	36.7
50~900	2~36	40	1 1/2	33	35	45.0	42.8
65~900	2 1/2~36	50	2	38	38	57.0	54.8
80~900	3~36	65	2 1/2	42	46	68.8	66.9
90~900	3 1/2~36	80	3	45	51	84.7	82.8
100~900	4~36	90	3 1/2	48	-	97.4	95.5
125~900	5~36	100	4	51	57	110.1	108.2
150~900	6~36	125	5	57	-	135.8	134.5
200~900	8~36	150	6	60	-	162.8	161.5
250~900	10~36	200	8	70	-	213.6	211.6
300~900	12~36	250	10	78	-	266.2	264.6
350~900	14~36	300	12	86	-	315.9	314.7
400~900	16~36	350	14	89	-	347.7	346.0
450~900	18~36	400	16	94	-	398.8	396.8
500~900	20~36	450	18	97	-	448.6	447.4
550~900	22~36	500	20	102	-	498.4	496.9
650~900	26~36	600	24	116	-	598.9	597.3
800~900	32~36	750	30	137	-	749.3	746.2

注释:

- 1) 薄壁支管座通常用于主管壁厚为 Sch5s 或 Sch10s 的情况。
- 2) OD 为支管接管外径; 焊接坡口型式见 21 页图示。

Note:

- 1) The pipets are usually used for connection when the schedule of the run pipe is Sch5s or Sch10s.
- 2) OD is the outside diameter of the connecting branch pipe. As for the bevel ends, please refer the figure in page of 21.

## TOLERANCES OF OUTLETS

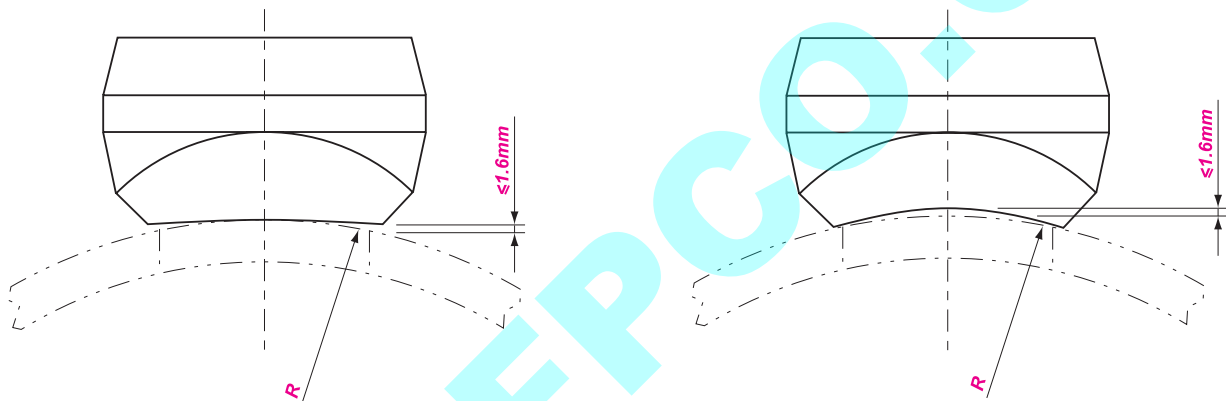
### 支管座的公差

### TOLERANCES OF OUTLETS

支管公称尺寸 Branch Nominal Size		螺纹、对焊 Outlet of THRD & BW	承插焊 SW Outlet		对焊 BW Outlet	
DN	NPS	A	B	D	D <sub>2</sub>	d <sub>4</sub>
6~20	1/8~3/4	± 0.8	+ 0.5 0	+ 1.5 0	+ 0.8 - 0.4	± 0.4
25~100	1~4	± 1.6	+ 0.5 0	+ 1.5 0	+ 0.8 - 0.4	± 0.4
125~300	5~12	± 3.2	-	-	+ 1.6 - 0.8	± 0.8
350~600	14~24	± 4.8	-	-	+ 1.6 - 0.8	± 0.8

支管座与主管之间的间隙允许偏差如下图所示。

The following figures show the allowable spacing tolerances between outlet and the running pipe:



### 支管座的级别与主管壁厚的关系

### CLASS OF OUTLETS VS SCHEDULE OF THE CONNECTING RUN PIPE

支管公称尺寸 Branch Nominal Size		连接形式 Type	支管座的级别 Class of Outlet	适用的主管壁厚 Schedule of the Connecting Run Pipe
DN	NPS			
6~100	1/8~4	承插焊、螺纹 Socket Welding & Threaded	3000	XS
15~50	1/2~2	承插焊、螺纹 Socket Welding & Threaded	6000	SCH160
6~600	1/8~24	对焊 Buttwelding	STD	STD
6~600	1/8~24	对焊 Buttwelding	XS	XS
15~150	1/2~6	对焊 Buttwelding	SCH160	SCH160

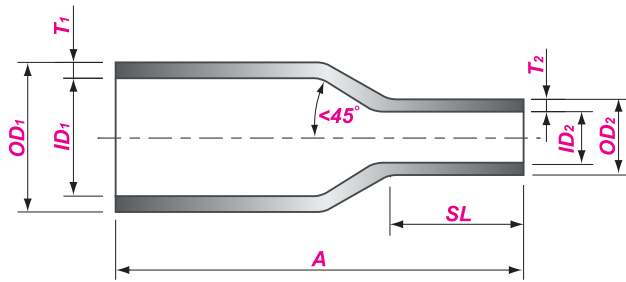
注释:

1) 当支管或主管的厚度超出本表规定时, 经制造商和采购方协商, 支管座可以制成特殊的厚度、尺寸和形状。

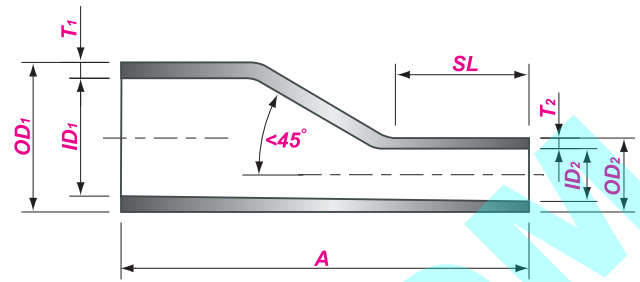
Note:

1) When the schedule of branch or running pipe is out of the scope indicated in the above table, the outlet can be fabricated with special thickness, size and configuration on the basis of the agreement between purchaser and manufacturer.

# SWAGED NIPPLES



同心异径短节  
Concentric Swaged Nipple



偏心异径短节  
Eccentric Swaged Nipple

## MSS SP-95, SH/T 3419

公称尺寸 Nominal Size		端部外径 OD at End	小端长度 Length of Small End	端面至 端面 End to End	公称尺寸 Nominal Size		端部外径 OD at End	小端长度 Length of Small End	端面至 端面 End to End	
DN	NPS	$OD_1 \times OD_2$	$SL_{min}$	A	DN	NPS	$OD_1 \times OD_2$	$SL_{min}$	A	
8 × 6	1/4 × 1/8	13.7 × 10.3	20	57	65 × 6	2 1/2 × 1/8	73.0 × 10.3	22	178	
10 × 6	3/8 × 1/8	17.1 × 10.3	20	64	65 × 8	2 1/2 × 1/4	73.0 × 13.7	22		
10 × 8	3/8 × 1/4	17.1 × 13.7	20		65 × 10	2 1/2 × 3/8	73.0 × 17.1	22		
15 × 6	1/2 × 1/8	21.3 × 10.3	20	70	65 × 15	2 1/2 × 1/2	73.0 × 21.3	25		
15 × 8	1/2 × 1/4	21.3 × 13.7	20		65 × 20	2 1/2 × 3/4	73.0 × 26.7	25		
15 × 10	1/2 × 3/8	21.3 × 17.1	20	76	65 × 25	2 1/2 × 1	73.0 × 33.4	30		
20 × 6	3/4 × 1/8	26.7 × 10.3	20		65 × 32	2 1/2 × 1 1/4	73.0 × 42.2	30		
20 × 8	3/4 × 1/4	26.7 × 13.7	20	89	65 × 40	2 1/2 × 1 1/2	73.0 × 48.3	40		
20 × 10	3/4 × 3/8	26.7 × 17.1	22		65 × 50	2 1/2 × 2	73.0 × 60.3	40		
20 × 15	3/4 × 1/2	26.7 × 21.3	22	102	80 × 6	3 × 1/8	88.9 × 10.3	22		203
25 × 6	1 × 1/8	33.4 × 10.3	20		80 × 8	3 × 1/4	88.9 × 13.7	22		
25 × 8	1 × 1/4	33.4 × 13.7	20		80 × 10	3 × 3/8	88.9 × 17.1	22		
25 × 10	1 × 3/8	33.4 × 17.1	22		80 × 15	3 × 1/2	88.9 × 21.3	25		
25 × 15	1 × 1/2	33.4 × 21.3	22		80 × 20	3 × 3/4	88.9 × 26.7	25		
25 × 20	1 × 3/4	33.4 × 26.7	22		80 × 25	3 × 1	88.9 × 33.4	30		
32 × 6	1 1/4 × 1/8	42.2 × 10.3	20		80 × 32	3 × 1 1/4	88.9 × 42.2	30		
32 × 8	1 1/4 × 1/4	42.2 × 13.7	20		80 × 40	3 × 1 1/2	88.9 × 48.3	40		
32 × 10	1 1/4 × 3/8	42.2 × 17.1	22		80 × 50	3 × 2	88.9 × 60.3	40		
32 × 15	1 1/4 × 1/2	42.2 × 21.3	22		80 × 65	3 × 2 1/2	88.9 × 73.0	40		
32 × 20	1 1/4 × 3/4	42.2 × 26.7	25	203	90 × 6	3 1/2 × 1/8	101.6 × 10.3	22		
32 × 25	1 1/4 × 1	42.2 × 33.4	25		90 × 8	3 1/2 × 1/4	101.6 × 13.7	22		
40 × 6	1 1/2 × 1/8	48.3 × 10.3	20		90 × 10	3 1/2 × 3/8	101.6 × 17.1	22		
40 × 8	1 1/2 × 1/4	48.3 × 13.7	20		90 × 15	3 1/2 × 1/2	101.6 × 21.3	25		
40 × 10	1 1/2 × 3/8	48.3 × 17.1	22		90 × 20	3 1/2 × 3/4	101.6 × 26.7	25		
40 × 15	1 1/2 × 1/2	48.3 × 21.3	25		90 × 25	3 1/2 × 1	101.6 × 33.4	30		
40 × 20	1 1/2 × 3/4	48.3 × 26.7	25		90 × 32	3 1/2 × 1 1/4	101.6 × 42.2	30		
40 × 25	1 1/2 × 1	48.3 × 33.4	25		90 × 40	3 1/2 × 1 1/2	101.6 × 48.3	40		
40 × 32	1 1/2 × 1 1/4	48.3 × 42.2	25		90 × 50	3 1/2 × 2	101.6 × 60.3	40		
50 × 6	2 × 1/8	60.3 × 10.3	20		90 × 65	3 1/2 × 2 1/2	101.6 × 73.0	40		
50 × 8	2 × 1/4	60.3 × 13.7	22	90 × 80	3 1/2 × 3	101.6 × 88.9	40			
50 × 10	2 × 3/8	60.3 × 17.1	22	229	100 × 8	4 × 1/4	114.3 × 13.7	25		
50 × 15	2 × 1/2	60.3 × 21.3	25		100 × 10	4 × 3/8	114.3 × 17.1	25		
50 × 20	2 × 3/4	60.3 × 26.7	30		100 × 15	4 × 1/2	114.3 × 21.3	25		
50 × 25	2 × 1	60.3 × 33.4	30		100 × 20	4 × 3/4	114.3 × 26.7	30		
50 × 32	2 × 1 1/4	60.3 × 42.2	30		100 × 25	4 × 1	114.3 × 33.4	30		
50 × 40	2 × 1 1/2	60.3 × 48.3	30		100 × 32	4 × 1 1/4	114.3 × 42.2	40		
					165					

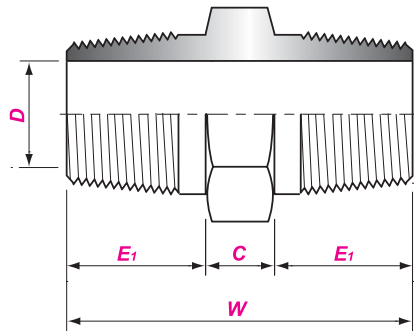
异径短节 SWAGED NIPPLES									
公称尺寸 Nominal Size		端部外径 OD at End	小端长度 Length of Small End	端面至 端面 End to End	公称尺寸 Nominal Size		端部外径 OD at End	小端长度 Length of Small End	端面至 端面 End to End
DN	NPS	$OD_1 \times OD_2$	$SL_{min}$	A	DN	NPS	$OD_1 \times OD_2$	$SL_{min}$	A
100 × 40	4 × 1½	114.3 × 48.3	40	229	200 × 25	8 × 1	219.1 × 33.4	40	330
100 × 50	4 × 2	114.3 × 60.3	45		200 × 32	8 × 1¼	219.1 × 42.2	40	
100 × 65	4 × 2½	114.3 × 73.0	45		200 × 40	8 × 1½	219.1 × 48.3	45	
100 × 80	4 × 3	114.3 × 88.9	45		200 × 50	8 × 2	219.1 × 60.3	45	
100 × 90	4 × 3½	114.3 × 101.6	45		200 × 65	8 × 2½	219.1 × 73.0	45	
125 × 8	5 × 1/4	141.3 × 13.7	25		200 × 80	8 × 3	219.1 × 88.9	50	
125 × 10	5 × 3/8	141.3 × 17.1	25	200 × 90	8 × 3½	219.1 × 101.6	50		
125 × 15	5 × 1/2	141.3 × 21.3	25	200 × 100	8 × 4	219.1 × 114.3	50		
125 × 20	5 × 3/4	141.3 × 26.7	30	200 × 125	8 × 5	219.1 × 141.3	60		
125 × 25	5 × 1	141.3 × 33.4	30	200 × 150	8 × 6	219.1 × 168.3	60		
125 × 32	5 × 1¼	141.3 × 42.2	40	250 × 50	10 × 2	273.0 × 60.3	45	381	
125 × 40	5 × 1½	141.3 × 48.3	40	250 × 65	10 × 2½	273.0 × 73.0	45		
125 × 50	5 × 2	141.3 × 60.3	45	250 × 80	10 × 3	273.0 × 88.9	50		
125 × 65	5 × 2½	141.3 × 73.0	45	250 × 90	10 × 3½	273.0 × 101.6	50		
125 × 80	5 × 3	141.3 × 88.9	45	250 × 100	10 × 4	273.0 × 114.3	60		
125 × 90	5 × 3½	141.3 × 101.6	45	250 × 125	10 × 5	273.0 × 141.3	60		
125 × 100	5 × 4	141.3 × 114.3	50	250 × 150	10 × 6	273.0 × 168.3	65		
150 × 15	6 × 1/2	168.3 × 21.3	30	250 × 200	10 × 8	273.0 × 219.1	65		
150 × 20	6 × 3/4	168.3 × 26.7	30	300 × 50	12 × 2	323.8 × 60.3	50		406
150 × 25	6 × 1	168.3 × 33.4	40	300 × 65	12 × 2½	323.8 × 73.0	50		
150 × 32	6 × 1¼	168.3 × 42.2	40	300 × 80	12 × 3	323.8 × 88.9	60		
150 × 40	6 × 1½	168.3 × 48.3	45	300 × 90	12 × 3½	323.8 × 101.6	60		
150 × 50	6 × 2	168.3 × 60.3	45	300 × 100	12 × 4	323.8 × 114.3	65		
150 × 65	6 × 2½	168.3 × 73.0	45	300 × 125	12 × 5	323.8 × 141.3	65		
150 × 80	6 × 3	168.3 × 88.9	45	300 × 150	12 × 6	323.8 × 168.3	65		
150 × 90	6 × 3½	168.3 × 101.6	50	300 × 200	12 × 8	323.8 × 219.1	70		
150 × 100	6 × 4	168.3 × 114.3	50	300 × 250	12 × 10	323.8 × 273.0	70		
150 × 125	6 × 5	168.3 × 141.3	60						

注释: 1) 当按 SH/T 3419 标准订货时, 其外径应使用 SH/T 3405 《石油化工企业钢管外径系列》中规定的外径。

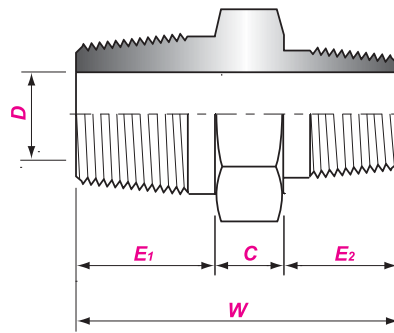
Note: 1) If ordering per SH/T 3419, the outside diameter specified in SH/T 3405 《tube outside diameter in petrochemical industry》 shall be applied.

异径短节的公差 TOLERANCES OF SWAGED NIPPLES						
公称尺寸 Nominal Size		端部外径 OD at End		端部内径 ID at End	端面至端面 End to End	壁厚 Wall
DN	NPS	OD		ID	A	T
		平口端部 Plain End	其它端部 Other Ends			
6~10	1/8~3/8	+ 0.4 - 0.8	± 0.8	± 0.8	± 1.6	不小于公称壁厚的 87.5% Not less than 87.5% Nominal Wall Thickness
15~40	1/2~1½	+ 0.4 - 0.8	+ 1.6 - 0.8	± 0.8	± 1.6	
50~65	2~2½	± 0.8	+ 1.6 - 0.8	± 0.8	± 3.2	
80~100	3~4	± 0.8	± 1.6	± 1.6	± 3.2	
125~150	5~6	+ 2.4 - 1.6	+ 2.4 - 1.6	± 1.6	± 4.8	
200~300	8~12	+ 4.0 - 3.2	+ 4.0 - 3.2	± 3.2	± 6.4	

# HEXAGONAL NIPPLES



同径六角双丝头  
straight Hexagonal Nipple



异径六角双丝头  
Reducing Hexagonal Nipple

公称尺寸 Nominal Size		尺寸 Size					
DN	NPS	$C_{nom}$	$E_{1nom}$	$E_{2nom}$	W	D	
						Sch80	Sch160
6	1/8	6	10	-	26	5	4
8	1/4	6	15	-	36	7	6
8 × 6	1/4 × 1/8	6	15	10	31	5	4
10	3/8	8	16	-	40	10	8
10 × 8	3/8 × 1/4	8	16	15	39	7	6
15	1/2	8	20	-	48	13	10
15 × 10	1/2 × 3/8	8	20	16	44	10	8
15 × 8	1/2 × 1/4	8	20	15	43	7	6
20	3/4	10	21	-	52	18	14
20 × 15	3/4 × 1/2	10	21	20	51	13	10
20 × 10	3/4 × 3/8	10	21	16	47	10	8
25	1	10	25	-	60	23	19
25 × 20	1 × 3/4	10	25	21	56	18	14
25 × 15	1 × 1/2	10	25	20	55	13	10
32	1 1/4	12	25	-	62	31	28
32 × 25	1 1/4 × 1	12	25	25	62	23	19
32 × 20	1 1/4 × 3/4	12	25	21	58	18	14
32 × 15	1 1/4 × 1/2	12	25	20	57	13	10
40	1 1/2	16	26	-	68	36	32
40 × 32	1 1/2 × 1 1/4	16	26	25	67	31	28
40 × 25	1 1/2 × 1	16	26	25	67	23	19
40 × 20	1 1/2 × 3/4	16	26	21	63	18	14
40 × 15	1 1/2 × 1/2	16	26	20	62	13	10
50	2	18	27	-	72	47	40
50 × 40	2 × 1 1/2	18	27	26	71	36	32
50 × 32	2 × 1 1/4	18	27	25	70	31	28
50 × 25	2 × 1	18	27	25	70	23	19
50 × 20	2 × 3/4	18	27	21	66	18	14
50 × 15	2 × 1/2	18	27	20	65	13	10
65	2 1/2	20	38	-	96	57	51
65 × 50	2 1/2 × 2	20	38	27	85	47	40
65 × 40	2 1/2 × 1 1/2	20	38	26	84	36	32
65 × 32	2 1/2 × 1 1/4	20	38	25	83	31	28
65 × 25	2 1/2 × 1	20	38	25	83	23	19
65 × 20	2 1/2 × 3/4	20	38	21	79	18	14
80	3	20	40	-	100	70	63
80 × 65	3 × 2 1/2	20	40	38	98	57	51
80 × 50	3 × 2	20	40	27	87	47	40
80 × 40	3 × 1 1/2	20	40	26	86	36	32
80 × 32	3 × 1 1/4	20	40	25	85	31	28
80 × 25	3 × 1	20	40	25	85	23	19

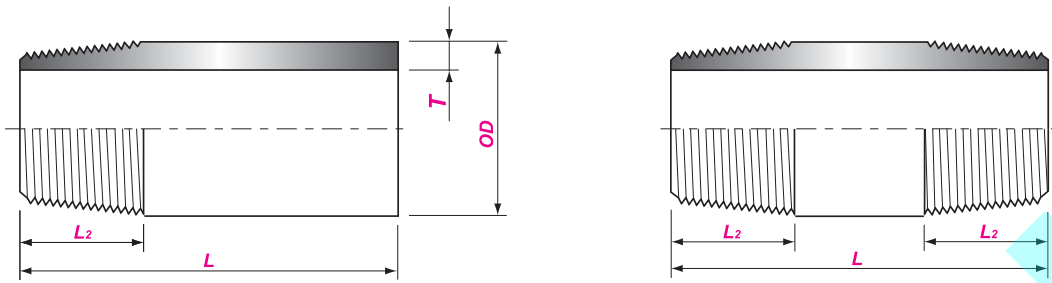
注释:

1) 端部螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:

1) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).





单头螺纹短节  
Pipe Nipple(TOE)

双头螺纹短节  
Pipe Nipple(TBE)

ASTMA733

公称尺寸 Nominal Size		管子外径 OD of Pipes	螺纹长度 Lengths of Thread	管子壁厚 Wall of pipes	长度 Pipe Nipple Lengths.		
DN	NPS	OD	L <sub>2 min</sub>	T	L		
					I	II	III
6	1/8	10.3	6.7	STD, XS Sch40,Sch80	50	75	100
8	1/4	13.7	10.2				
10	3/8	17.1	10.4	STD, XS Sch40,Sch80	50	75	100
15	1/2	21.3	13.6				
20	3/4	26.7	13.9				
25	1	33.4	17.3				
32	1 1/4	42.2	18.0	STD, XS Sch40,Sch80	75	100	150
40	1 1/2	48.3	18.4				
50	2	60.3	19.2				
65	2 1/2	73.0	28.9	STD, XS Sch40,Sch80	100	150	200
80	3	88.9	30.5				
90	3 1/2	101.6	31.8	STD, XS Sch40,Sch80	100	150	200
100	4	114.3	33.0				
125	5	141.3	35.7				
150	6	168.3	38.4	STD, XS Sch40,Sch80	100	150	200
200	8	219.1	43.5				
250	10	273.0	48.9				
300	12	323.8	54.0	STD, XS Sch40,Sch80	150	200	250

注释:

- 表中的长度为常用的参考长度；制造商应按采购文件规定的长度制造。当采购文件未规定长度时，制造商可选择 I、II、III 型中的任一长度型号供货。
- 端部螺纹按 GB/T 12716（等同于 ASME B1.20.1）中的 NPT 螺纹加工。

Note:

- The lengths indicated in the above table are the generally referenced ones. Manufacturer shall conform to the ones specified in the purchase specification. If not specified, manufacturer can select one of the above three series.
- Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).

六角双丝头和螺纹短节的公差

TOLERANCES OF HEXAGONAL NIPPLES & PIPE NIPPLES

公称尺寸 Nominal Size		六角双丝头 Hexagonal Nipple		螺纹短节 Pipe Nipple
DN	NPS	w	D	L
6~20	1/8~3/4	± 1.6	0 - 0.8	± 1.6
25~80	1~3	± 1.6	0 - 1.6	± 1.6
90~300	3 1/2~12	-	-	± 1.6

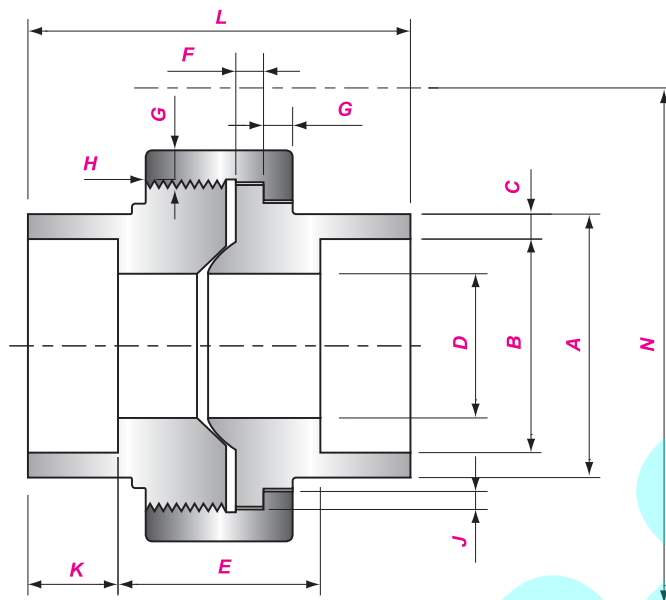
注释 Note:

- 当螺纹短节的长度 L ≥ 305mm (12") 时，公差为 ± 3.2mm。

Note:

- If the length L of the thread nipple is more than and including 305mm (12"), the tolerance shall be ± 3.2mm.

# UNIONS



3000 级别承插焊活接头  
Class 3000 Unions of SW Ends

## MSS SP-83

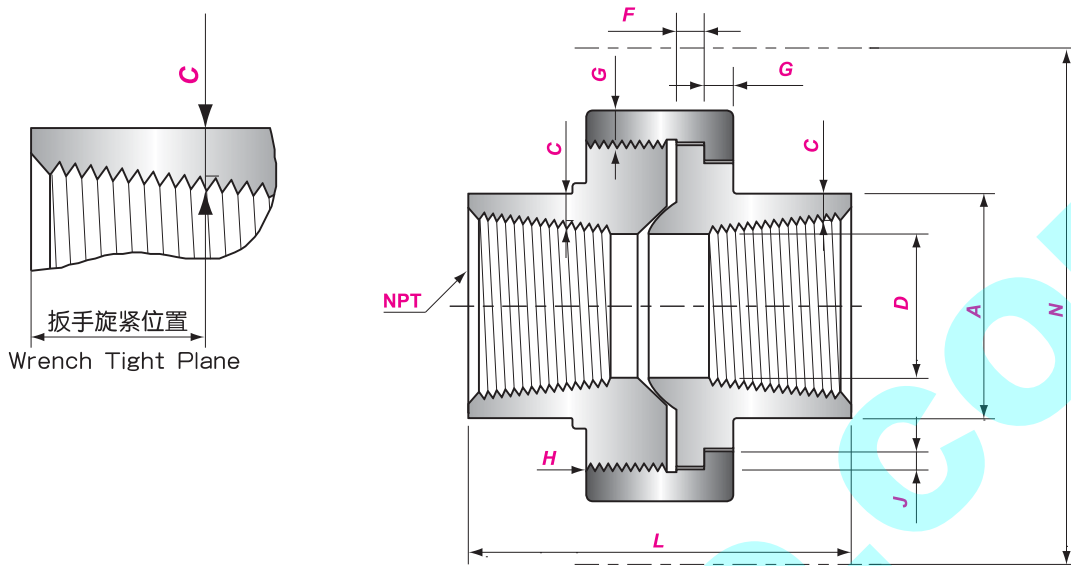
公称尺寸 Nominal Size		端部 外径 Pipe End	承插 孔径 Socket Bore Dia.	承插孔 壁厚 Socket Wall	流通 孔径 Water Way Bore	结构 长度 Laying Length	突缘 厚度 Male Flange	螺母 厚度 Nut	每英寸 螺纹数 THRD Per Inch	螺母承 缘高度 Bearing	插口 深度 Depth of Socket	组 装 长 度 Length Assem	螺母组 装空间 Clear Assem. Nut
DN	NPS	A <sub>min</sub>	B	C <sub>min</sub>	D	E	F <sub>min</sub>	G <sub>min</sub>	H	J <sub>min</sub>	K <sub>min</sub>	L <sub>nom</sub>	N
6	1/8	21.8	10.9	3.2	6.1	20.7	3.2	3.2	16	1.2	9.7	41.4	51
8	1/4	21.8	14.3	3.3	8.5	20.7	3.2	3.2	16	1.2	9.7	41.4	51
10	3/8	25.9	17.7	3.5	11.8	23.8	3.4	3.4	14	1.4	9.7	46.0	56
15	1/2	31.2	21.9	4.1	15.0	23.8	3.7	3.7	14	1.5	9.7	49.0	59
20	3/4	37.1	27.3	4.3	20.2	28.6	4.1	4.1	11	1.7	12.7	56.9	66
25	1	45.5	34.0	5.0	25.9	30.2	4.6	4.4	11	1.9	12.7	62.0	79
32	1 1/4	54.9	42.8	5.3	34.3	36.6	5.3	5.2	10	2.1	12.7	71.1	94
40	1 1/2	61.5	48.9	5.5	40.1	38.1	5.8	5.6	10	2.3	12.7	76.5	112
50	2	75.2	61.2	6.0	51.7	41.4	6.6	6.4	10	2.7	15.7	86.1	132
65	2 1/2	91.7	73.9	7.7	61.2	56.9	7.5	7.1	8	3.1	15.7	102.4	150
80	3	109.2	89.9	8.3	76.4	58.7	8.3	8.0	8	3.5	15.7	109.0	176

注释:

1) H 为每英寸螺纹牙数, 应至少 4 整圈螺纹啮合。此处的内外螺纹按 ASME B1.1 2A/2B 加工。

Note:

1) H is the number of threads per inch with the min. of 4 tightening turns, and the female and male thread herein shall be machined per ASME B1.1 2A/2B.



3000 级别螺纹活接头  
Class 3000 Unions of THRD Ends

MSS SP-83

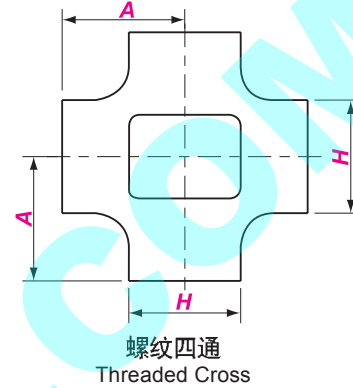
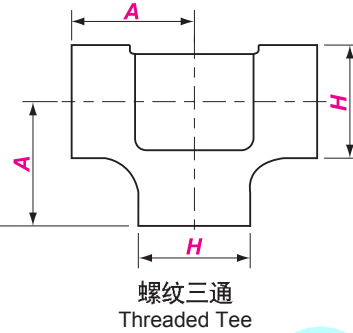
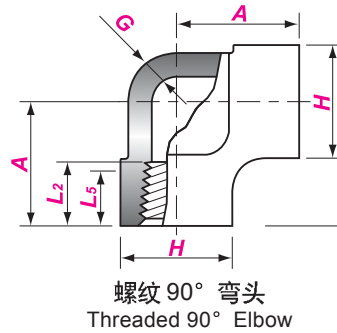
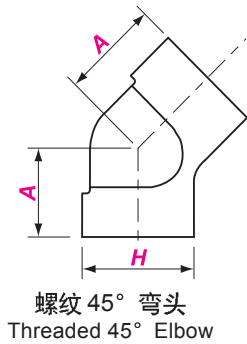
公称尺寸 Nominal Size		端部外径 Pipe End	壁厚 Wall	流通孔径 Bore	突缘厚度 Male Flange	螺母厚度 Nut	每英寸 螺纹数 THRD Per Inch	螺母承 缘高度 Bearing	组装长度 Length Assem	螺母 组装空间 Clear Assem. Nut
DN	NPS	A <sub>min</sub>	C <sub>min</sub>	D	F <sub>min</sub>	G <sub>min</sub>	H	J <sub>min</sub>	L <sub>nom</sub>	N
6	1/8	14.7	2.4	8.4 6.4	3.2	3.2	16	1.2	41.4	51
8	1/4	19.1	3.0	11.1 9.4	3.2	3.2	16	1.2	41.4	51
10	3/8	22.9	3.2	14.3 13.5	3.4	3.4	14	1.4	46.0	56
15	1/2	27.7	3.7	17.9 17.1	3.7	3.7	14	1.5	49.0	59
20	3/4	33.5	3.9	23.0 21.4	4.1	4.1	11	1.7	56.9	66
25	1	41.4	4.5	29.0 27.7	4.6	4.4	11	1.9	62.0	79
32	1 1/4	50.5	4.9	37.7 35.4	5.3	5.2	10	2.1	71.1	94
40	1 1/2	57.2	5.1	43.5 41.2	5.8	5.6	10	2.3	76.5	112
50	2	70.1	5.5	55.6 52.1	6.6	6.4	10	2.7	86.1	132
65	2 1/2	85.3	7.0	66.3 64.3	7.5	7.1	8	3.1	102.4	150
80	3	102.4	7.6	82.6 77.3	8.3	8.0	8	3.5	109.0	176

注释:

- 1) H 为每英寸螺纹牙数, 应至少 4 整圈螺纹啮合。此处的内外螺纹按 ASME B1.1 2A/2B 加工。
- 2) 端部螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:

- 1) H is the number of threads per inch with the min. of 4 tightening turns, and the female and male thread herein shall be machined per ASME B1.1 2A/2B.
- 2) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).

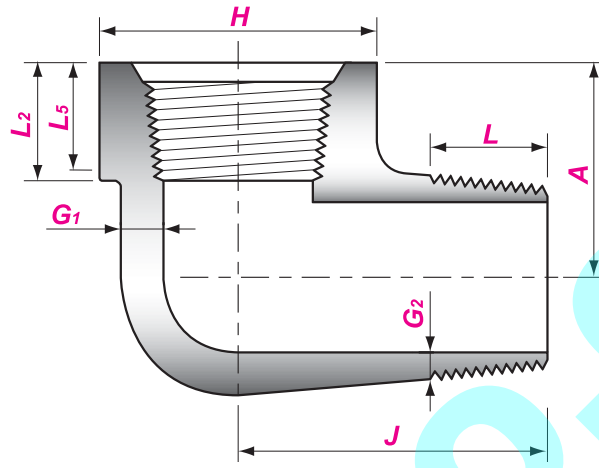


GB/T 14383, ASME B16.11

公称尺寸 Nominal Size		中心至端面 Center-to-End						端部外径 Outside Diameter of Band			本体壁厚 Wall Thickness			螺纹长度 Length of Thread	
DN	NPS	A											L <sub>5 min</sub>	L <sub>2 min</sub>	
		90° Elbows, Tees, Crosses						45° Elbows			G <sub>min</sub>				
		2000	3000	6000	2000	3000	6000	2000	3000	6000	2000	3000			6000
6	1/8	21	21	25	17	17	19	22	22	25	3.18	3.18	6.35	6.4	6.7
8	1/4	21	25	28	17	19	22	22	25	33	3.18	3.30	6.60	8.1	10.2
10	3/8	25	28	33	19	22	25	25	33	38	3.18	3.51	6.98	9.1	10.4
15	1/2	28	33	38	22	25	28	33	38	46	3.18	4.09	8.15	10.9	13.6
20	3/4	33	38	44	25	28	33	38	46	56	3.18	4.32	8.53	12.7	13.9
25	1	38	44	51	28	33	35	46	56	62	3.68	4.98	9.93	14.7	17.3
32	1 1/4	44	51	60	33	35	43	56	62	75	3.89	5.28	10.59	17.0	18.0
40	1 1/2	51	60	64	35	43	44	62	75	84	4.01	5.56	11.07	17.8	18.4
50	2	60	64	83	43	44	52	75	84	102	4.27	7.14	12.09	19.0	19.2
65	2 1/2	76	83	95	52	52	64	92	102	121	5.61	7.65	15.29	23.6	28.9
80	3	86	95	106	64	64	79	109	121	146	5.99	8.84	16.64	25.9	30.5
100	4	106	114	114	79	79	79	146	152	152	6.55	11.18	18.67	27.7	33.0

注释：  
1) 螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:  
1) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).



内外螺纹 90° 弯头  
Female and Male Threaded 90° Elbow

GB/T 14383, ASME B16.11

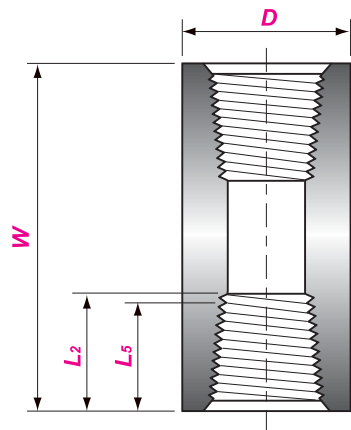
公称尺寸 Nominal Size		中心至内螺纹端面 Center to Female End Street Ells		中心至外螺纹端面 Center to Male End Street Ells		端部外径 Outside Diameter of End		本体壁厚 Wall Thickness		本体壁厚 Wall Thickness		内螺纹长度 Length Internal Thread		外螺纹长度 Length Male Thread
DN	NPS	A		J		H		G <sub>1 min</sub>		G <sub>2 min</sub>		L <sub>5 min</sub>	L <sub>2 min</sub>	L <sub>min</sub>
		3000	6000	3000	6000	3000	6000	3000	6000	3000	6000			
6	1/8	19	22	25	32	19	25	3.18	5.08	2.74	4.22	6.4	6.7	10
8	1/4	22	25	32	38	25	32	3.30	5.66	3.22	5.28	8.1	10.2	11
10	3/8	25	28	38	41	32	38	3.51	6.98	3.50	5.59	9.1	10.4	13
15	1/2	28	35	41	48	38	44	4.09	8.15	4.16	6.53	10.9	13.6	14
20	3/4	35	44	48	57	44	51	4.32	8.53	4.88	6.86	12.7	13.9	16
25	1	44	51	57	66	51	62	4.98	9.93	5.56	7.95	14.7	17.3	19
32	1 1/4	51	54	66	71	62	70	5.28	10.59	5.56	8.48	17.0	18.0	21
40	1 1/2	54	64	71	84	70	84	5.56	11.07	6.25	8.89	17.8	18.4	21
50	2	64	83	84	105	84	102	7.14	12.09	7.64	9.70	19.0	19.2	22

注释:

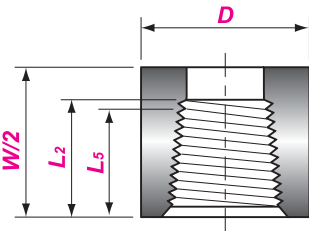
- 1) 制造商也可以选择使用 34 页中螺纹 90° 弯头的 A 和 H 尺寸。
- 2) 螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:

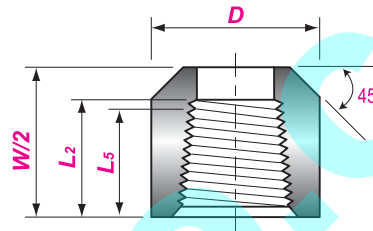
- 1) At the option of manufacturer, the sizes A and H of threaded 90° elbow in the page of 34 can be applied.
- 2) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).



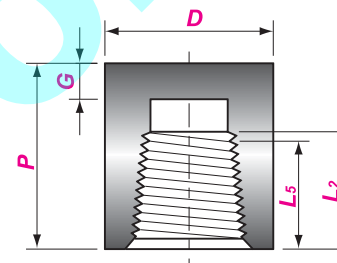
双螺口管箍  
Coupling



单螺口管箍  
Half-Coupling



半管接头  
Boss



管帽  
Cap

GB/T 14383, ASME B16.11

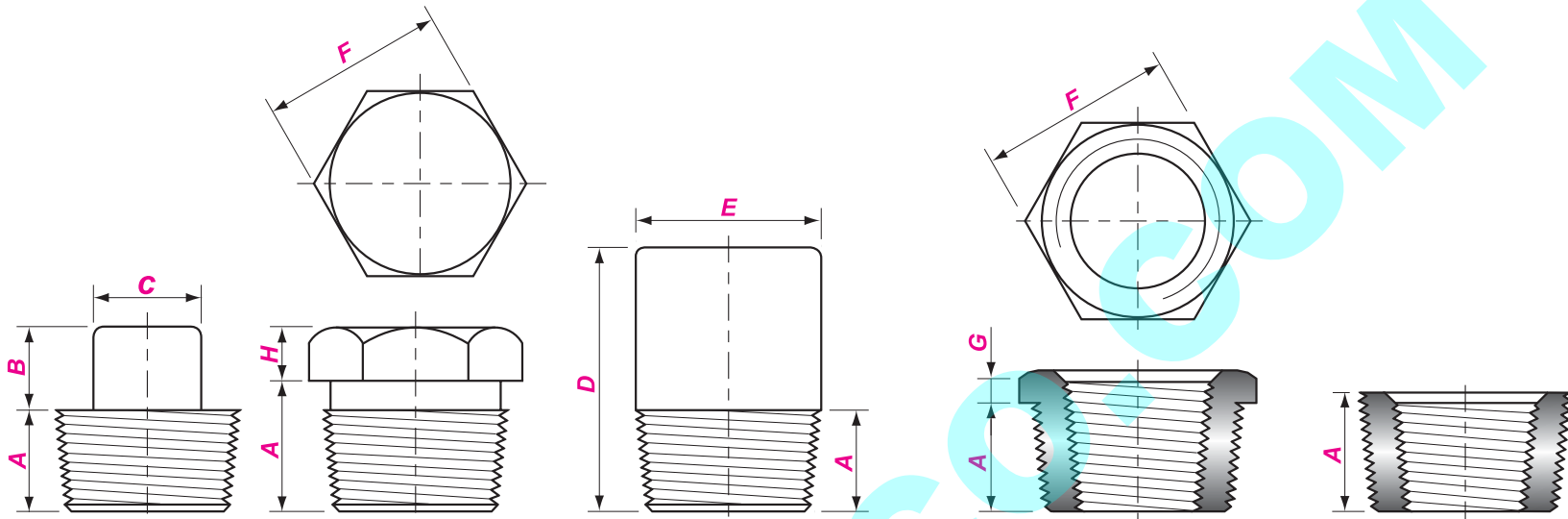
公称尺寸 Nominal Size		端面至端面 End-to-End	端面至端面 End-to-End		外径 Outside Diameter		顶部厚度 End Wall		螺纹长度 Length of Thread	
DN	NPS	W	P		D		G <sub>min</sub>		L <sub>5 min</sub>	L <sub>2 min</sub>
		3000 & 6000	3000	6000	3000	6000	3000	6000		
6	1/8	32	19	-	16	22	4.8	-	6.4	6.7
8	1/4	35	25	27	19	25	4.8	6.4	8.1	10.2
10	3/8	38	25	27	22	32	4.8	6.4	9.1	10.4
15	1/2	48	32	33	28	38	6.4	7.9	10.9	13.6
20	3/4	51	37	38	35	44	6.4	7.9	12.7	13.9
25	1	60	41	43	44	57	9.7	11.2	14.7	17.3
32	1 1/4	67	44	46	57	64	9.7	11.2	17.0	18.0
40	1 1/2	79	44	48	64	76	11.2	12.7	17.8	18.4
50	2	86	48	51	76	92	12.7	15.7	19.0	19.2
65	2 1/2	92	60	64	92	108	15.7	19.0	23.6	28.9
80	3	108	65	68	108	127	19.0	22.4	25.9	30.5
100	4	121	68	75	140	159	22.4	28.4	27.7	33.0

注释:

1) 螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:

1) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).



方头管塞  
Square Head Plug

六角头管塞  
Hex Head Plug

圆头管塞  
Round Head Plug

六角头内外螺纹接头  
Hex Head Bushing

无头内外螺纹接头  
Flush Bushing

GB/T 14383, ASME B16.11

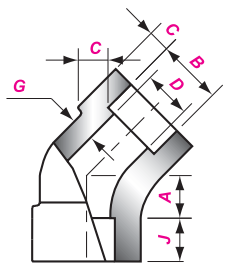
公称尺寸 Nominal Size		长度 Length	方头高度 Square Height	方头对边宽度 Width Flats	圆头直径 Head Diameter	总长 Length	六角头厚度 Hex Height	六角头厚度 Hex Height	六角头对边宽度 Hex Width Flats
DN	NPS	$A_{min}$	$B_{min}$	$C_{min}$	$E_{nom}$	$D_{min}$	$H_{min}$	$G_{min}$	$F_{nom}$
6	1/8	10	6	7	10	35	6	-	11
8	1/4	11	6	10	14	41	6	3	16
10	3/8	13	8	11	18	41	8	4	18
15	1/2	14	10	14	21	44	8	5	22
20	3/4	16	11	16	27	44	10	6	27
25	1	19	13	21	33	51	10	6	36
32	1 1/4	21	14	24	43	51	14	7	46
40	1 1/2	21	16	28	48	51	16	8	50
50	2	22	18	32	60	64	18	9	65
65	2 1/2	27	19	36	73	70	19	10	75
80	3	28	21	41	89	70	21	10	90
100	4	32	25	65	114	76	25	13	115

注释:

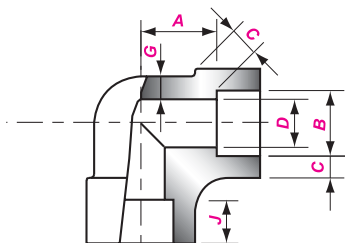
1) 螺纹按 GB/T 12716 (等同于 ASME B1.20.1) 中的 NPT 螺纹加工。

Note:

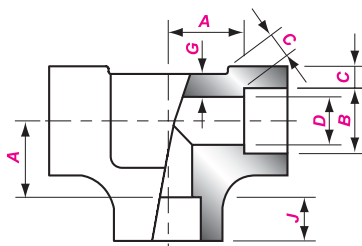
1) Thread shall be machined per GB/T 12716 (equivalent to ASME B1.20.1).



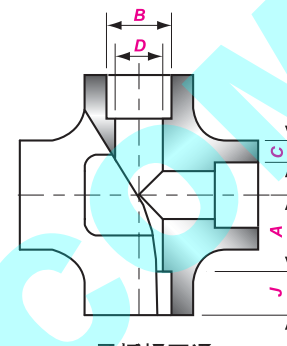
承插焊 45° 弯头  
SW 45° Elbow



承插焊 90° 弯头  
SW 90° Elbow



承插焊三通  
SW Tee



承插焊四通  
SW Cross

GB/T 14383, ASME B16.11

公称尺寸 Nominal Size		承插孔径 Socket Bore Dia.	流通孔径 Bore Dia. of Fittings			承插孔壁厚 Socket Wall Thickness						本体壁厚 Body Wall			承插孔深度 Depth of Socket	中心至承插孔底 Center to Bottom of Socket					
DN	NPS	B	D			C						G <sub>min</sub>			J <sub>min</sub>	A					
			3000	6000	9000	3000		6000		9000		3000	6000	9000		90° Elbow, Tee, Cross			45° Elbow		
						ave	min	ave	min	ave	min					3000	6000	9000	3000	6000	9000
6	1/8	10.9	6.1	3.2	-	3.18	3.18	3.96	3.43	-	-	2.41	3.15	-	9.5	11.0	11.0	-	8.0	8.0	-
8	1/4	14.3	8.5	5.6	-	3.78	3.30	4.60	4.01	-	-	3.02	3.68	-	9.5	11.0	13.5	-	8.0	8.0	-
10	3/8	17.7	11.8	8.4	-	4.01	3.50	5.03	4.37	-	-	3.20	4.01	-	9.5	13.5	15.5	-	8.0	11.0	-
15	1/2	21.9	15.0	11.0	5.6	4.67	4.09	5.97	5.18	9.53	8.18	3.73	4.78	7.47	9.5	15.5	19.0	25.5	11.0	12.5	15.5
20	3/4	27.3	20.2	14.8	10.3	4.90	4.27	6.96	6.04	9.78	8.56	3.91	5.56	7.82	12.5	19.0	22.5	28.5	13.0	14.0	19.0
25	1	34.0	25.9	19.9	14.4	5.69	4.98	7.92	6.93	11.38	9.96	4.55	6.35	9.09	12.5	22.5	27.0	32.0	14.0	17.5	20.5
32	1 1/4	42.8	34.3	28.7	22.0	6.07	5.28	7.92	6.93	12.14	10.62	4.85	6.35	9.70	12.5	27.0	32.0	35.0	17.5	20.5	22.5
40	1 1/2	48.9	40.1	33.2	27.2	6.35	5.54	8.92	7.80	12.70	11.12	5.08	7.14	10.15	12.5	32.0	38.0	38.0	20.5	25.5	25.5
50	2	61.2	51.7	42.1	37.4	6.93	6.04	10.92	9.50	13.84	12.12	5.54	8.74	11.07	16.0	38.0	41.0	54.0	25.5	28.5	28.5
65	2 1/2	73.9	61.2	-	-	8.76	7.62	-	-	-	-	7.01	-	-	16.0	41.0	-	-	28.5	-	-
80	3	89.9	76.4	-	-	9.52	8.30	-	-	-	-	7.62	-	-	16.0	57.0	-	-	32.0	-	-
100	4	115.5	100.7	-	-	10.69	9.35	-	-	-	-	8.56	-	-	19.0	66.5	-	-	41.0	-	-

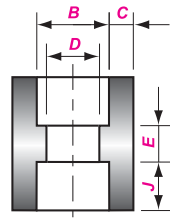
注释:

- 沿承插孔周边的平均壁厚不应小于平均值, 局部允许达到最小值。
- 考虑到管子外径公差的原因, 有的承插孔径比 B16.11 规定略大。
- 当选用的接管尺寸与样本的接管外径与壁厚表规定不一致时, 请在采购文件中说明接管尺寸。

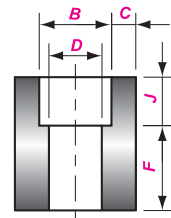
Note:

- The even thickness around the socket bore shall not be less than the average value, the thickness at partial areas can be the min. one.
- Considering the tolerance of outside diameter of pipe, the diameters of some socket bore can be a little larger than the ones specified in B16.11.
- When the sizes of the connecting pipes aren't conformed to the ones specified in this catalog, the sizes of the connecting pipes shall be provided in the purchase specification.

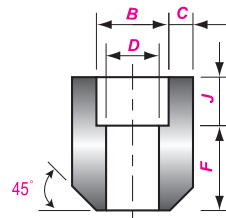




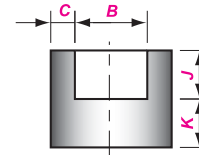
双承口管箍  
SW Coupling



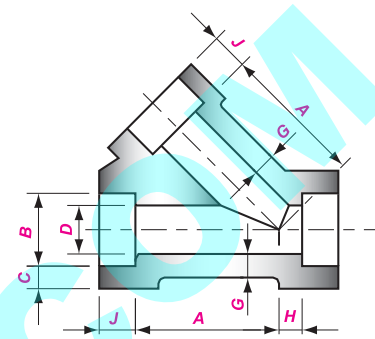
单承口管箍  
SW Half-Coupling



半管接头  
Boss



承插焊管帽  
SW Cap



承插焊 45° 三通  
SW 45° Lateral

GB/T 14383, ASME B16.11

公称尺寸 Nominal Size		承插孔径 Socket Bore Dia.	流通孔径 Bore Dia. of Fittings			承插孔壁厚 Socket Wall Thickness						本体壁厚 Body Wall			承插孔深度 Depth of Socket	长度 Laying Lengths	长度 Laying Lengths	顶部厚度 End Wall Thickness			中心至承插孔底 Center to Bottom of Socket			
DN	NPS	B	D			C						G <sub>min</sub>			J <sub>min</sub>	E	F	K <sub>min</sub>			A		H	
			3000	6000	9000	3000		6000		9000		3000	6000	9000				3000	6000	9000	3000	6000	3000	6000
			ave	min		ave	min	ave	min	ave	min	3000	6000	9000				3000	6000	9000	3000	6000	3000	6000
6	1/8	10.9	6.1	3.2	-	3.18	3.18	3.96	3.43	-	-	2.41	3.15	-	9.5	6.5	16.0	4.8	6.4	-	-	-	-	-
8	1/4	14.3	8.5	5.6	-	3.78	3.30	4.60	4.01	-	-	3.02	3.68	-	9.5	6.5	16.0	4.8	6.4	-	-	-	-	-
10	3/8	17.7	11.8	8.4	-	4.01	3.50	5.03	4.37	-	-	3.20	4.01	-	9.5	6.5	17.5	4.8	6.4	-	37	-	9.5	-
15	1/2	21.9	15.0	11.0	5.6	4.67	4.09	5.97	5.18	9.53	8.18	3.73	4.78	7.47	9.5	9.5	22.5	6.4	7.9	11.2	41	51	9.5	11
20	3/4	27.3	20.2	14.8	10.3	4.90	4.27	6.96	6.04	9.78	8.56	3.91	5.56	7.82	12.5	9.5	24.0	6.4	7.9	12.7	51	60	11	13
25	1	34.0	25.9	19.9	14.4	5.69	4.98	7.92	6.93	11.38	9.96	4.55	6.35	9.09	12.5	12.5	28.5	9.6	11.2	14.2	60	71	13	16
32	1 1/4	42.8	34.3	28.7	22.0	6.07	5.28	7.92	6.93	12.14	10.62	4.85	6.35	9.70	12.5	12.5	30.0	9.6	11.2	14.2	71	81	16	17
40	1 1/2	48.9	40.1	33.2	27.2	6.35	5.54	8.92	7.80	12.70	11.12	5.08	7.14	10.15	12.5	12.5	32.0	11.2	12.7	15.7	81	98	17	21
50	2	61.2	51.7	42.1	37.4	6.93	6.04	10.92	9.50	13.84	12.12	5.54	8.74	11.07	16.0	19.0	41.0	12.7	15.7	19.0	98	151	21	30
65	2 1/2	73.9	61.2	-	-	8.76	7.62	-	-	-	-	7.01	-	-	16.0	19.0	43.0	15.7	19.0	-	151	-	30	-
80	3	89.9	76.4	-	-	9.52	8.30	-	-	-	-	7.62	-	-	16.0	19.0	44.5	19.0	22.4	-	184	-	57	-
100	4	115.5	100.7	-	-	10.69	9.35	-	-	-	-	8.56	-	-	19.0	19.0	48.0	22.4	28.4	-	201	-	66	-

注释(续):

- 当产品为异径时, 其外形尺寸与等径管件相同, 异径端的 B、J、D 按异径端的尺寸加工。
- 双承口管箍也可加工成同心异径或偏心异径型式。
- 管件也可按要求加工成承插焊和螺纹混合的连接型式。

Note(continued):

- When the fittings are reducing, the structure sizes shall be same as the ones of the straight fittings and B、J、D shall be machined per the according reducing ends.
- Couplings can be the concentric or eccentric type.
- Fitting can also be manufactured as the mixed connectings of SW and THRD.

# REFERENCED WEIGHT LISTS

## 参考重量表

### Referenced Weight Lists

#### 对焊 90° 长半径弯头

#### BW 90° LR Elbow

kg

公称尺寸 Nominal Size		Sch10	Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
DN	NPS													
15	1/2	0.06	-	0.07	0.08	0.08	-	0.11	0.11	-	-	-	0.13	0.17
20	3/4	0.08	-	0.09	0.11	0.11	-	0.14	0.14	-	-	-	0.19	0.24
25	1	0.13	-	0.14	0.16	0.16	-	0.12	0.12	-	-	-	0.28	0.36
32	1 1/4	0.21	-	0.24	0.28	0.28	-	0.24	0.24	-	-	-	0.47	0.64
40	1 1/2	0.28	-	0.35	0.40	0.40	-	0.53	0.53	-	-	-	0.71	0.94
50	2	0.47	-	0.59	0.71	0.71	-	0.98	0.98	-	-	-	1.46	1.76
65	2 1/2	0.79	-	1.32	1.42	1.42	-	1.87	1.87	-	-	-	2.45	3.35
80	3	1.16	-	1.95	2.22	2.22	-	3.01	3.01	-	-	-	4.20	5.45
90	3 1/2	1.55	-	2.62	3.12	3.12	-	4.28	4.28	-	-	-	-	-
100	4	2.02	-	3.39	4.22	4.22	-	5.86	5.86	-	7.44	-	8.81	10.8
125	5	3.46	-	-	7.15	7.15	-	10.2	10.2	-	13.2	-	16.1	18.9
150	6	4.98	-	-	11.2	11.2	-	16.8	16.8	-	21.4	-	26.7	31.3
200	8	9.57	17.6	19.4	22.4	22.4	28.0	34.1	34.1	40.0	47.7	53.2	58.6	56.9
250	10	16.7	27.5	33.6	39.7	39.7	53.7	53.7	63.2	75.5	87.6	102	113	102
300	12	25.9	39.3	51.5	58.3	62.9	86.0	76.9	104	126	148	164	188	148
350	14	34.7	62.5	74.9	74.9	87.1	117	98.9	146	180	207	234	259	-
400	16	45.4	82.0	98.3	98.3	130	169	130	215	259	302	351	385	-
450	18	56.2	104	145	125	185	244	165	302	367	431	484	545	-
500	20	82.2	154	204	154	242	326	204	410	502	581	669	744	-
550	22	143	187	248	187	-	426	248	541	654	763	870	974	-
600	24	170	223	331	223	403	561	295	698	865	1011	1137	1277	-
650	26	200	347	-	262	-	-	347	-	-	-	-	-	-
700	28	232	403	478	304	-	-	403	-	-	-	-	-	-
750	30	267	464	577	349	-	-	464	-	-	-	-	-	-
800	32	304	528	658	398	722	-	528	-	-	-	-	-	-
850	34	343	597	743	449	817	-	597	-	-	-	-	-	-
900	36	386	669	834	504	997	-	669	-	-	-	-	-	-
950	38	-	-	-	562	-	-	746	-	-	-	-	-	-
1000	40	-	-	-	623	-	-	828	-	-	-	-	-	-
1050	42	-	-	-	687	-	-	913	-	-	-	-	-	-
1100	44	-	-	-	754	-	-	1003	-	-	-	-	-	-
1150	46	-	-	-	825	-	-	1096	-	-	-	-	-	-
1200	48	-	-	-	898	-	-	1194	-	-	-	-	-	-
1300	52	-	-	-	1107	-	-	-	-	-	-	-	-	-
1400	56	-	-	-	1284	-	-	-	-	-	-	-	-	-
1500	60	-	-	-	1475	-	-	-	-	-	-	-	-	-
1600	64	-	-	-	1679	-	-	-	-	-	-	-	-	-
1700	68	-	-	-	1869	-	-	-	-	-	-	-	-	-
1800	72	-	-	-	2126	-	-	-	-	-	-	-	-	-
1900	76	-	-	-	2372	-	-	-	-	-	-	-	-	-
2000	80	-	-	-	2626	-	-	-	-	-	-	-	-	-

注释: 大于 DN1200 (NPS 48) 的 STD 重量为按公称壁厚 9.53mm 计算的重量。

Note: the weight for the size more than DN1200(NPS48) is calculated on the basis of thickness 9.53mm.

## REFERENCED WEIGHT LISTS

### 参考重量表

#### Referenced Weight Lists

#### 对焊 90° 短半径弯头

#### BW 90° SR Elbow

kg

公称尺寸 Nominal Size		Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
DN	NPS												
25	1	-	0.09	0.11	0.11	-	0.14	0.14	-	-	-	0.18	0.24
32	1¼	-	0.16	0.19	0.19	-	0.25	0.25	-	-	-	0.31	0.43
40	1½	-	0.23	0.27	0.27	-	0.36	0.36	-	-	-	0.48	0.63
50	2	-	0.39	0.48	0.48	-	0.66	0.66	-	-	-	0.98	1.18
65	2½	-	0.89	0.95	0.95	-	1.26	1.26	-	-	-	1.65	2.26
80	3	-	1.30	1.48	1.48	-	2.01	2.01	-	-	-	2.80	3.64
90	3½	-	1.76	2.09	2.09	-	2.87	2.87	-	-	-	-	-
100	4	-	2.28	2.83	2.83	-	3.93	3.93	-	4.99	-	5.91	7.23
125	5	-	-	4.78	4.78	-	6.80	6.80	-	8.84	-	10.8	12.6
150	6	-	-	7.42	7.42	-	11.2	11.2	-	14.2	-	17.7	20.8
200	8	11.7	12.9	14.9	14.9	18.6	22.7	22.7	26.6	31.7	35.4	39.0	37.9
250	10	18.3	22.4	26.5	26.5	35.8	35.8	42.1	50.3	58.4	68.1	75.6	68.1
300	12	26.2	34.4	38.9	42.0	57.4	51.4	69.6	84.3	98.5	110	126	98.5
350	14	41.8	50.0	50.0	58.2	78.0	66.1	97.3	120	138	156	173	-
400	16	54.6	65.4	65.4	86.5	112	86.5	143	172	201	234	256	-
450	18	69.3	96.6	83.0	123	162	110	201	245	287	322	363	-
500	20	103	136	103	161	218	136	273	335	388	466	496	-
550	22	125	165	125	-	284	165	361	436	509	580	649	-
600	24	149	221	149	269	374	197	466	577	675	759	852	-
650	26	231	-	174	-	-	231	-	-	-	-	-	-
700	28	269	334	203	-	-	269	-	-	-	-	-	-
750	30	309	385	233	-	-	309	-	-	-	-	-	-
800	32	352	439	265	482	-	352	-	-	-	-	-	-
850	34	398	496	300	545	-	398	-	-	-	-	-	-
900	36	446	555	336	664	-	446	-	-	-	-	-	-
950	38	-	-	374	-	-	497	-	-	-	-	-	-
1000	40	-	-	415	-	-	552	-	-	-	-	-	-
1050	42	-	-	458	-	-	609	-	-	-	-	-	-
1100	44	-	-	503	-	-	669	-	-	-	-	-	-
1150	46	-	-	550	-	-	730	-	-	-	-	-	-
1200	48	-	-	599	-	-	796	-	-	-	-	-	-
1300	52	-	-	738	-	-	-	-	-	-	-	-	-
1400	56	-	-	854	-	-	-	-	-	-	-	-	-
1500	60	-	-	983	-	-	-	-	-	-	-	-	-
1600	64	-	-	1116	-	-	-	-	-	-	-	-	-
1700	68	-	-	1264	-	-	-	-	-	-	-	-	-
1800	72	-	-	1418	-	-	-	-	-	-	-	-	-
1900	76	-	-	1581	-	-	-	-	-	-	-	-	-
2000	80	-	-	1751	-	-	-	-	-	-	-	-	-

注：大于 DN1200 (NPS 48) 的 STD 重量为按公称壁厚 9.53mm 计算的重量。  
 Note: the weight for the size more than DN1200(NPS48) is calculated on the basis of thickness 9.53mm.

# REFERENCED WEIGHT LISTS

## 参考重量表

### Referenced Weight Lists

对焊 90° 3D 弯头

BW 90° 3D Elbow

kg

公称尺寸 Nominal Size		Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
DN	NPS												
20	3/4	-	0.14	0.17	0.17	-	0.22	0.22	-	-	-	0.29	0.36
25	1	-	0.29	0.33	0.33	-	0.43	0.43	-	-	-	0.56	0.72
32	1 1/4	-	0.47	0.56	0.56	-	0.48	0.73	-	-	-	0.92	1.28
40	1 1/2	-	0.70	0.80	0.80	-	1.07	1.07	-	-	-	1.43	1.88
50	2	-	1.18	1.43	1.43	-	1.97	1.97	-	-	-	2.92	3.53
65	2 1/2	-	2.64	2.83	2.83	-	3.75	3.75	-	-	-	4.90	6.70
80	3	-	3.92	4.47	4.47	-	6.04	6.04	-	-	-	8.45	11.0
90	3 1/2	-	5.27	6.26	6.26	-	8.60	8.60	-	-	-	-	-
100	4	-	6.80	8.47	8.47	-	11.8	11.8	-	14.9	-	17.7	21.6
125	5	-	-	14.3	14.3	-	20.4	20.4	-	26.5	-	32.3	37.8
150	6	-	-	22.3	22.3	-	33.6	33.6	-	42.8	-	53.4	62.6
200	8	35.1	38.8	44.8	44.8	56.0	68.1	68.1	80.0	95.3	106	117	114
250	10	55.0	67.2	79.4	79.4	107	107	126	151	175	204	227	204
300	12	78.5	103	117	126	172	154	209	252	295	329	377	295
350	14	125	150	150	174	234	198	292	359	414	468	519	-
400	16	164	196	196	260	337	260	429	517	604	702	770	-
450	18	208	290	249	369	488	330	604	734	862	968	1089	-
500	20	309	409	309	483	653	409	819	1005	1163	1338	1487	-
550	22	374	496	374	-	852	496	1083	1307	1526	1740	1947	-
600	24	446	663	446	807	1123	591	1397	1731	2023	2276	2554	-
650	26	694	-	523	-	-	694	-	-	-	-	-	-
700	28	806	1004	608	-	-	806	-	-	-	-	-	-
750	30	927	1154	699	-	-	927	-	-	-	-	-	-
800	32	1056	1315	796	1445	-	1056	-	-	-	-	-	-
850	34	1194	1487	899	1634	-	1194	-	-	-	-	-	-
900	36	1338	1667	1008	1993	-	1338	-	-	-	-	-	-
950	38	-	-	1124	-	-	1493	-	-	-	-	-	-
1000	40	-	-	1246	-	-	1655	-	-	-	-	-	-
1050	42	-	-	1374	-	-	1826	-	-	-	-	-	-
1100	44	-	-	1509	-	-	2006	-	-	-	-	-	-
1150	46	-	-	1649	-	-	2191	-	-	-	-	-	-
1200	48	-	-	1797	-	-	2388	-	-	-	-	-	-

## REFERENCED WEIGHT LISTS

### 参考重量表

#### Referenced Weight Lists

#### 对焊等径三通

#### BW Straight Tee

kg

公称尺寸 Nominal Size		Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
DN	NPS												
15	1/2	-	0.15	0.16	0.16	-	0.20	0.20	-	-	-	0.25	0.35
20	3/4	-	0.18	0.20	0.20	-	0.30	0.30	-	-	-	0.35	0.45
25	1	-	0.27	0.28	0.28	-	0.45	0.45	-	-	-	0.54	0.77
32	1 1/4	-	0.46	0.55	0.55	-	0.70	0.70	-	-	-	0.91	1.26
40	1 1/2	-	0.68	0.78	0.78	-	1.25	1.25	-	-	-	1.39	1.83
50	2	-	0.96	1.17	1.17	-	1.61	1.61	-	-	-	2.39	2.89
65	2 1/2	-	2.06	2.21	2.21	-	2.92	2.92	-	-	-	3.81	5.21
80	3	-	2.87	3.23	3.23	-	4.42	4.42	-	-	-	6.17	8.01
90	3 1/2	-	3.65	4.33	4.33	-	5.95	5.95	-	-	-	-	-
100	4	-	4.56	5.68	5.68	-	7.88	7.88	-	10.0	-	11.8	14.5
125	5	-	-	9.08	9.08	-	12.9	12.9	-	16.8	-	20.5	24.0
150	6	-	-	13.6	13.6	-	20.5	20.5	-	26.1	-	32.5	38.1
200	8	17.5	22.0	25.5	25.5	31.8	38.7	38.7	45.4	54.1	60.4	66.6	64.6
250	10	28.0	37.1	44.8	44.8	59.2	59.2	69.7	83.3	96.6	113	125	113
300	12	42.6	55.7	63.1	68.1	93.0	83.2	112	137	160	178	204	160
350	14	64.5	76.3	76.3	88.7	119	101	148	183	211	238	264	-
400	16	78.2	95.7	95.7	126	164	126	191	252	294	342	375	-
450	18	102	141	121	179	237	160	269	357	419	471	529	-
500	20	168	198	150	235	317	190	365	489	566	651	724	-
550	22	185	241	182	-	414	241	482	636	743	846	947	-
600	24	222	305	205	340	516	272	589	796	930	1046	1174	-
650	26	340	-	254	-	-	337	-	-	-	-	-	-
700	28	390	478	289	-	-	383	-	-	-	-	-	-
750	30	420	549	332	-	-	441	-	-	-	-	-	-
800	32	480	627	379	631	-	503	-	-	-	-	-	-
850	34	540	709	429	714	-	569	-	-	-	-	-	-
900	36	610	796	481	872	-	639	-	-	-	-	-	-
950	38	-	-	537	-	-	713	-	-	-	-	-	-
1000	40	-	-	598	-	-	791	-	-	-	-	-	-
1050	42	-	-	636	-	-	846	-	-	-	-	-	-
1100	44	-	-	712	-	-	946	-	-	-	-	-	-
1150	46	-	-	779	-	-	995	-	-	-	-	-	-
1200	48	-	-	850	-	-	1080	-	-	-	-	-	-
1300	52	-	-	917	-	-	-	-	-	-	-	-	-
1400	56	-	-	1065	-	-	-	-	-	-	-	-	-
1500	60	-	-	1226	-	-	-	-	-	-	-	-	-
1600	64	-	-	1398	-	-	-	-	-	-	-	-	-
1700	68	-	-	1580	-	-	-	-	-	-	-	-	-
1800	72	-	-	1740	-	-	-	-	-	-	-	-	-
1900	76	-	-	1980	-	-	-	-	-	-	-	-	-
2000	80	-	-	2290	-	-	-	-	-	-	-	-	-

注释: 大于 DN1200 (NPS 48) 的 STD 重量为按公称壁厚 9.53mm 计算的重量。  
 Note: the weight for the size more than DN1200(NPS48) is calculated on the basis of thickness 9.53mm.

# REFERENCED WEIGHT LISTS

## 参考重量表

### Referenced Weight Lists

#### 对焊等径 45° 斜三通

#### BW Straight 45° Lateral Tee

kg

公称尺寸 Nominal Size		Sch10	Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
DN	NPS													
15	1/2	0.25	-	0.28	0.32	0.32	-	0.41	0.41	-	-	-	0.49	0.64
20	3/4	0.37	-	0.42	0.49	0.49	-	0.64	0.64	-	-	-	0.85	1.07
25	1	0.73	-	0.76	0.87	0.87	-	1.13	1.13	-	-	-	1.47	1.89
32	1 1/4	1.26	-	1.34	1.59	1.59	-	2.09	2.09	-	-	-	2.62	3.63
40	1 1/2	1.7	-	1.93	2.21	2.21	-	2.95	2.95	-	-	-	3.95	5.21
50	2	2.27	-	2.58	3.13	3.13	-	4.31	4.31	-	-	-	6.41	7.75
65	2 1/2	3.46	-	5.29	5.68	5.68	-	7.50	7.50	-	-	-	9.81	13.4
80	3	4.52	-	6.94	7.90	7.90	-	10.7	10.7	-	-	-	14.9	19.4
90	3 1/2	5.38	-	8.29	9.85	9.85	-	13.5	13.5	-	-	-	-	-
100	4	7.01	-	10.8	13.5	13.5	-	18.7	18.7	-	23.7	-	28.1	34.4
125	5	10.8	-	-	20.4	20.4	-	29.0	29.0	-	37.8	-	46.0	53.8
150	6	15.1	-	-	30.8	30.8	-	46.4	46.4	-	59.2	-	73.7	86.5
200	8	25.6	42.8	47.3	54.6	54.6	68.2	83.0	83.0	97.5	116	130	143	139
250	10	41.6	62.5	76.3	90.2	90.2	122	122	144	172	199	232	258	232
300	12	61.4	84.9	111	126	136	186	166	225	273	319	355	408	319
350	14	105	130	156	156	181	242	205	302	373	430	485	539	-
400	16	133	165	198	198	262	340	262	432	521	609	707	776	-
450	18	164	204	284	244	361	477	323	591	718	844	947	1066	-
500	20	197	293	388	293	459	620	388	778	954	1105	1271	1413	-
550	22	234	348	462	348	-	794	462	1009	1218	1422	1621	1814	-
600	24	277	414	615	414	750	1043	549	1298	1608	1879	2114	2372	-
650	26	404	643	-	485	-	-	643	-	-	-	-	-	-
700	28	473	753	937	568	-	-	753	-	-	-	-	-	-
750	30	542	864	1076	651	-	-	864	-	-	-	-	-	-
800	32	616	982	1224	740	1344	-	982	-	-	-	-	-	-
850	34	696	1110	1383	836	1519	-	1110	-	-	-	-	-	-
900	36	780	1245	1551	937	1854	-	1245	-	-	-	-	-	-
950	38	-	-	-	1073	-	-	1425	-	-	-	-	-	-
1000	40	-	-	-	1190	-	-	1580	-	-	-	-	-	-
1050	42	-	-	-	1313	-	-	1744	-	-	-	-	-	-
1100	44	-	-	-	1441	-	-	1915	-	-	-	-	-	-
1150	46	-	-	-	1575	-	-	2093	-	-	-	-	-	-
1200	48	-	-	-	1716	-	-	2280	-	-	-	-	-	-

# REFERENCED WEIGHT LISTS

## 参考重量表

### Referenced Weight Lists

#### 对焊异径管

#### BW Reducers

kg

大端公称尺寸 Large End Nominal Size		Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS
DN	NPS												
20	3/4	-	0.06	0.07	0.07	-	0.09	0.09	-	-	-	0.12	0.15
25	1	-	0.12	0.14	0.14	-	0.18	0.18	-	-	-	0.24	0.31
32	1 1/4	-	0.16	0.19	0.19	-	0.25	0.25	-	-	-	0.32	0.45
40	1 1/2	-	0.25	0.29	0.29	-	0.38	0.38	-	-	-	0.51	0.70
50	2	-	0.37	0.46	0.46	-	0.63	0.63	-	-	-	0.93	1.20
65	2 1/2	-	0.79	0.85	0.85	-	1.12	1.12	-	-	-	1.46	2.00
80	3	-	0.97	1.11	1.11	-	1.50	1.50	-	-	-	2.09	2.71
90	3 1/2	-	1.28	1.52	1.52	-	2.09	2.09	-	-	-	-	-
100	4	-	1.45	1.81	1.81	-	2.51	2.51	-	3.18	-	3.76	4.60
125	5	-	-	3.04	3.04	-	4.33	4.33	-	5.63	-	6.86	8.02
150	6	-	-	4.35	4.35	-	6.55	6.55	-	8.35	-	10.4	12.2
200	8	5.57	6.16	7.12	7.12	8.88	10.8	10.8	12.7	15.1	16.9	18.6	18.0
250	10	8.18	9.99	11.8	11.8	16.0	16.0	18.8	22.5	26.0	30.4	33.7	30.4
300	12	11.1	14.6	16.5	17.8	24.3	21.8	29.5	35.7	41.7	46.5	53.3	41.7
350	14	24.6	29.5	29.6	34.3	46.0	39.0	57.4	70.8	81.5	92.0	102	-
400	16	30.5	36.5	36.6	48.3	62.7	48.3	79.7	96.2	112	130	143	-
450	18	36.8	51.3	44.1	65.3	86.2	58.3	107	130	152	171	193	-
500	20	65.5	86.7	65.5	102	138	86.7	174	213	247	284	316	-
550	22	72.2	95.6	72.2	-	164	95.6	209	252	294	336	376	-
600	24	78.9	117	78.9	143	199	105	247	306	358	402	452	-
650	26	136	-	103	-	-	136	-	-	-	-	-	-
700	28	147	183	111	-	-	147	-	-	-	-	-	-
750	30	157	196	119	-	-	158	-	-	-	-	-	-
800	32	168	209	127	230	-	168	-	-	-	-	-	-
850	34	179	223	135	245	-	179	-	-	-	-	-	-
900	36	189	236	143	282	-	190	-	-	-	-	-	-
950	38	-	-	151	-	-	200	-	-	-	-	-	-
1000	40	-	-	159	-	-	211	-	-	-	-	-	-
1050	42	-	-	167	-	-	222	-	-	-	-	-	-
1100	44	-	-	175	-	-	232	-	-	-	-	-	-
1150	46	-	-	213	-	-	283	-	-	-	-	-	-
1200	48	-	-	222	-	-	296	-	-	-	-	-	-
1300	52	-	-	241	-	-	-	-	-	-	-	-	-
1400	56	-	-	259	-	-	-	-	-	-	-	-	-
1500	60	-	-	278	-	-	-	-	-	-	-	-	-

注释: 大于 DN1200 (NPS 48) 的 STD 重量为按公称壁厚 9.53mm 计算的重量。

Note: the weight for the size more than DN1200(NPS48) is calculated on the basis of thickness 9.53mm.

## REFERENCED WEIGHT LISTS

参考重量表 Referenced Weight Lists														
公称尺寸 Nominal Size														kg
		Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XXS	
DN	NPS													
15	1/2	-	0.04	0.04	0.04	-	0.06	0.06	-	-	-	0.08	0.11	
20	3/4	-	0.05	0.05	0.05	-	0.07	0.07	-	-	-	0.11	0.15	
25	1	-	0.10	0.12	0.12	-	0.16	0.16	-	-	-	0.22	0.32	
32	1 1/4	-	0.13	0.16	0.16	-	0.22	0.22	-	-	-	0.28	0.43	
40	1 1/2	-	0.16	0.19	0.19	-	0.26	0.26	-	-	-	0.36	0.52	
50	2	-	0.21	0.26	0.26	-	0.36	0.36	-	-	-	0.57	0.73	
65	2 1/2	-	0.40	0.44	0.44	-	0.59	0.59	-	-	-	0.80	1.18	
80	3	-	0.65	0.73	0.73	-	1.08	1.08	-	-	-	1.48	2.02	
90	3 1/2	-	0.90	1.07	1.07	-	1.51	1.51	-	-	-	-	-	
100	4	-	1.04	1.30	1.30	-	1.85	1.85	-	2.40	-	2.91	3.69	
125	5	-	-	2.10	2.10	-	3.06	3.06	-	4.07	-	5.09	6.10	
150	6	-	-	3.19	3.19	-	4.93	4.93	-	6.41	-	8.20	9.86	
200	8	4.45	4.92	5.72	5.72	7.21	8.88	8.88	10.6	12.8	14.5	16.1	15.6	
250	10	6.89	8.46	10.1	10.1	13.9	13.8	16.4	19.8	23.3	27.6	31.0	27.6	
300	12	9.75	12.9	14.6	15.9	21.9	19.5	26.9	32.9	39.0	43.9	51.2	39.0	
350	14	14.6	17.6	17.5	20.5	27.7	23.3	35.0	43.8	51.1	58.4	65.7	-	
400	16	18.3	22.1	22.1	29.4	38.6	29.4	49.7	60.7	71.7	84.6	93.8	-	
450	18	23.4	32.9	28.2	42.2	56.3	37.5	70.4	86.8	103	117	134	-	
500	20	35.1	46.8	35.1	55.6	76.0	46.8	96.5	120	141	164	184	-	
550	22	42.7	56.9	42.7	-	99.7	57.0	128	157	185	214	242	-	
600	24	49.7	74.5	49.7	91.2	129	66.3	162	203	240	273	311	-	
650	26	74.0	-	55.6	-	-	74.1	-	-	-	-	-	-	
700	28	82.4	103	61.8	-	-	82.4	-	-	-	-	-	-	
750	30	91.2	114	68.5	-	-	91.2	-	-	-	-	-	-	
800	32	101	126	75.4	138	-	101	-	-	-	-	-	-	
850	34	110	138	82.7	152	-	110	-	-	-	-	-	-	
900	36	120	150	90.2	180	-	120	-	-	-	-	-	-	
950	38	-	-	104	-	-	139	-	-	-	-	-	-	
1000	40	-	-	113	-	-	150	-	-	-	-	-	-	
1050	42	-	-	122	-	-	162	-	-	-	-	-	-	
1100	44	-	-	138	-	-	184	-	-	-	-	-	-	
1150	46	-	-	148	-	-	197	-	-	-	-	-	-	
1200	48	-	-	158	-	-	210	-	-	-	-	-	-	

注释：表中为按管帽高度 E 值计算的重量。

Note: the weight for the above listed caps is calculated on the basis of E height.



## REFERENCED WEIGHT LISTS

### 参考重量表

#### Referenced Weight Lists

#### 翻边短节

Lap Joint Stub End

kg

公称尺寸 Nominal Size		Sch10S		Sch40S		Sch80S	
DN	NPS	短型 Long Pattern	长型 Short Pattern	短型 Short Pattern	长型 Long Pattern	短型 Short Pattern	长型 Long Pattern
15	1/2	0.07	0.09	0.09	0.12	0.12	0.16
20	3/4	0.09	0.12	0.12	0.16	0.15	0.21
25	1	0.15	0.25	0.18	0.32	0.24	0.43
32	1 1/4	0.19	0.34	0.25	0.43	0.33	0.57
40	1 1/2	0.22	0.39	0.31	0.52	0.43	0.75
50	2	0.35	0.71	0.52	1.02	0.73	1.49
65	2 1/2	0.46	0.95	0.81	1.60	1.10	2.22
80	3	0.62	1.22	1.10	2.11	1.50	2.98
90	3 1/2	0.70	1.36	1.52	2.55	2.09	3.65
100	4	0.94	1.59	1.80	3.05	2.58	4.44
125	5	1.30	2.80	2.25	5.42	3.60	7.86
150	6	1.75	3.30	3.59	7.02	5.76	11.3
200	8	2.90	4.95	5.98	10.6	9.18	16.2
250	10	4.79	8.50	10.2	18.4	13.7	24.9
300	12	7.20	10.9	14.9	22.8	19.5	30.2
350	14	7.95	15.0	15.8	28.7	21.6	38.6
400	16	9.50	17.3	18.9	33.1	25.2	44.5
450	18	11.1	19.8	22.0	38.0	29.3	51.1
500	20	14.1	25.9	24.3	42.3	32.6	56.8
550	22	16.5	28.2	-	-	-	-
600	24	19.8	35.0	29.6	51.2	39.7	68.8

#### 异径短节

Swaged Nipple

kg

大端公称尺寸 Large End Nominal Size		Sch10	Sch20	Sch30	STD	Sch40	Sch60	XS	Sch80	Sch100	Sch120	Sch140	Sch160	XX
DN	NPS													
8	1/4	0.03	-	0.03	0.03	0.03	-	0.04	0.04	-	-	-	-	-
10	3/8	0.04	-	0.04	0.05	0.05	-	0.07	0.07	-	-	-	-	-
15	1/2	0.07	-	0.08	0.09	0.09	-	0.11	0.11	-	-	-	0.13	0.17
20	3/4	0.09	-	0.11	0.12	0.12	-	0.16	0.16	-	-	-	0.21	0.27
25	1	0.18	-	0.19	0.21	0.21	-	0.28	0.28	-	-	-	0.36	0.47
32	1 1/4	0.27	-	0.28	0.33	0.33	-	0.44	0.44	-	-	-	0.55	0.76
40	1 1/2	0.35	-	0.39	0.44	0.44	-	0.59	0.59	-	-	-	0.79	1.05
50	2	0.62	-	0.71	0.86	0.86	-	1.19	1.19	-	-	-	1.76	2.13
65	2 1/2	0.90	-	1.37	1.48	1.48	-	1.95	1.95	-	-	-	2.55	3.48
80	3	1.26	-	1.93	2.2	2.2	-	2.98	2.98	-	-	-	4.16	5.39
90	3 1/2	1.45	-	2.22	2.64	2.64	-	3.63	3.63	-	-	-	-	-
100	4	1.84	-	2.84	3.53	3.53	-	4.91	4.91	-	6.23	-	7.37	9.02
125	5	3.10	-	-	5.83	5.83	-	8.29	8.29	-	10.8	-	13.2	15.4
150	6	4.04	-	-	8.25	8.25	-	12.4	12.4	-	15.8	-	19.7	23.1
200	8	6.35	10.6	11.7	13.5	13.5	16.8	20.5	20.5	24.1	28.7	32.0	35.2	34.2
250	10	10.2	15.3	18.7	22.1	22.1	29.8	29.8	35.1	42.0	48.6	56.7	63.0	56.7
300	12	14.0	19.4	25.4	28.8	31.1	42.5	38.0	51.5	62.3	72.8	81.1	93.0	72.8

# REFERENCED WEIGHT LISTS

## 参考重量表

### Referenced Weight Lists

#### 承插焊 90° 弯头和 45° 弯头

SW 90° Elbow & 45° Elbow

kg

公称尺寸 Nominal Size		承插焊 90° 弯头 SW 90° Elbow			承插焊 45° 弯头 SW 45° Elbow		
DN	NPS	3000	6000	9000	3000	6000	9000
6	1/8	0.09	0.15	-	0.08	0.16	-
8	1/4	0.09	0.15	-	0.08	0.16	-
10	3/8	0.12	0.32	-	0.12	0.28	-
15	1/2	0.26	0.40	0.85	0.22	0.30	0.78
20	3/4	0.35	0.65	1.48	0.28	0.72	1.25
25	1	0.52	1.25	2.20	0.55	0.90	1.85
32	1 1/4	0.85	1.40	2.90	0.71	1.15	2.62
40	1 1/2	1.05	2.35	3.50	0.89	1.90	3.45
50	2	1.75	2.96	4.35	1.30	2.95	5.80
65	2 1/2	2.80	-	-	2.68	-	-
80	3	4.60	-	-	4.90	-	-
100	4	9.60	-	-	8.80	-	-

#### 承插焊三通和四通

SW Tee & Cross

kg

公称尺寸 Nominal Size		承插焊三通 SW Tee			承插焊四通 SW Cross		
DN	NPS	3000	6000	9000	3000	6000	9000
6	1/8	0.13	0.22	-	0.15	0.21	-
8	1/4	0.13	0.22	-	0.15	0.25	-
10	3/8	0.16	0.45	-	0.19	0.54	-
15	1/2	0.35	0.55	1.15	0.46	0.64	1.32
20	3/4	0.48	0.90	1.80	0.59	1.09	2.25
25	1	0.66	1.46	2.25	0.81	1.97	2.69
32	1 1/4	1.00	1.90	3.95	1.19	2.34	4.68
40	1 1/2	1.40	2.80	4.87	1.67	3.90	7.84
50	2	2.00	3.70	8.89	2.59	6.15	10.5
65	2 1/2	4.10	-	-	4.95	-	-
80	3	5.55	-	-	7.25	-	-
100	4	15.6	-	-	18.8	-	-

#### 承插焊管箍和管帽

SW Coupling & Cap

kg

公称尺寸 Nominal Size		承插焊管箍 SW Coupling			承插焊管帽 SW Cap		
DN	NPS	3000	6000	9000	3000	6000	9000
6	1/8	0.05	0.06	-	0.03	0.04	-
8	1/4	0.06	0.07	-	0.04	0.05	-
10	3/8	0.08	0.10	-	0.05	0.07	-
15	1/2	0.13	0.16	0.29	0.08	0.13	0.23
20	3/4	0.20	0.28	0.47	0.15	0.22	0.35
25	1	0.28	0.48	0.68	0.22	0.34	0.52
32	1 1/4	0.48	0.65	1.08	0.35	0.47	0.71
40	1 1/2	0.52	0.94	1.12	0.42	0.63	0.95
50	2	0.95	1.65	1.95	0.72	1.14	1.55
65	2 1/2	1.52	-	-	1.25	-	-
80	3	1.75	-	-	2.05	-	-
100	4	2.80	-	-	3.28	-	-

参考重量表

Referenced Weight Lists

螺纹 90° 弯头和 45° 弯头

HTRD 90° Elbow & 45° Elbow

kg

公称尺寸 Nominal Size		螺纹 90° 弯头 THR90° Elbow			螺纹 45° 弯头 THR45° Elbow		
DN	NPS	2000	3000	6000	2000	3000	6000
6	1/8	0.08	0.10	0.18	0.08	0.08	0.14
8	1/4	0.08	0.15	0.33	0.08	0.12	0.27
10	3/8	0.13	0.30	0.48	0.11	0.26	0.49
15	1/2	0.22	0.45	0.72	0.23	0.42	0.69
20	3/4	0.32	0.70	1.29	0.29	0.59	1.12
25	1	0.50	1.21	1.65	0.43	0.96	1.47
32	1 1/4	0.80	1.47	2.70	0.67	1.15	2.65
40	1 1/2	0.93	2.60	3.90	0.82	2.02	3.60
50	2	1.60	3.05	6.05	1.32	2.50	4.60
65	2 1/2	2.95	5.80	9.88	3.30	3.81	7.81
80	3	5.60	8.85	16.4	5.40	6.30	13.1
100	4	10.5	14.9	23.5	9.00	9.80	17.0

螺纹三通和四通

THR Tee & Cross

kg

公称尺寸 Nominal Size		螺纹三通 THR Tee			螺纹四通 THR Cross		
DN	NPS	2000	3000	6000	2000	3000	6000
6	1/8	0.13	0.22	0.35	0.16	0.26	0.42
8	1/4	0.13	0.22	0.57	0.16	0.26	0.68
10	3/8	0.16	0.40	0.66	0.20	0.48	0.79
15	1/2	0.35	0.58	1.15	0.42	0.70	1.38
20	3/4	0.45	0.90	1.80	0.54	1.08	2.16
25	1	0.66	1.46	2.25	0.79	1.75	2.70
32	1 1/4	1.00	1.90	3.95	1.20	2.28	4.74
40	1 1/2	1.40	3.40	4.87	1.68	4.08	5.85
50	2	2.20	3.80	8.89	2.64	4.66	10.7
65	2 1/2	4.20	7.20	12.8	5.05	8.64	15.4
80	3	6.15	10.7	21.6	7.38	12.8	26.5
100	4	14.7	17.9	29.5	17.6	21.5	35.4

螺纹双接口管箍和管帽

THR Coupling & Cap

kg

公称尺寸 Nominal Size		螺纹双接口管箍 THR Coupling		螺纹管帽 THR Cap	
DN	NPS	3000	6000	3000	6000
6	1/8	0.06	0.09	0.03	-
8	1/4	0.08	0.13	0.05	0.11
10	3/8	0.11	0.24	0.07	0.17
15	1/2	0.22	0.40	0.14	0.29
20	3/4	0.30	0.52	0.24	0.42
25	1	0.55	1.06	0.41	0.76
32	1 1/4	0.86	1.32	0.71	0.96
40	1 1/2	1.26	2.20	0.88	1.42
50	2	1.65	3.37	1.25	2.24
65	2 1/2	3.00	4.81	2.29	3.80
80	3	4.25	7.25	3.29	5.43
100	4	7.80	12.0	5.65	9.26

REFERENCED WEIGHT LISTS

参考重量表

Referenced Weight Lists

支管座

Outlet

kg

支管公称尺寸 Branch Nominal Size		对焊支管座 BW Outlet			承插焊支管座 SW Outlet		螺纹支管座 THRD Outlet	
DN	NPS	STD	XS	Sch160	3000	6000	3000	6000
6	1/8	0.04	0.05	-	0.05	-	0.05	-
8	1/4	0.04	0.05	-	0.05	-	0.05	-
10	3/8	0.06	0.07	-	0.09	-	0.09	-
15	1/2	0.11	0.13	0.18	0.16	0.35	0.17	0.32
20	3/4	0.16	0.18	0.20	0.20	0.47	0.22	0.47
25	1	0.32	0.34	0.40	0.42	0.68	0.43	0.65
32	1 1/4	0.38	0.42	0.50	0.59	1.10	0.61	0.96
40	1 1/2	0.57	0.60	0.70	0.70	1.30	0.69	1.28
50	2	0.85	0.90	1.10	1.10	2.45	1.10	2.15
65	2 1/2	1.28	1.35	2.00	1.40	-	1.52	-
80	3	1.88	2.00	3.20	2.30	-	2.50	-
90	3 1/2	2.20	2.40	-	-	-	-	-
100	4	2.80	3.20	6.00	4.20	-	4.10	-
125	5	5.70	6.80	9.80	-	-	-	-
150	6	7.20	11.0	16.0	-	-	-	-
200	8	10.8	19.2	31.0	-	-	-	-
250	10	17.0	19.5	-	-	-	-	-
300	12	25.6	29.6	-	-	-	-	-
350	14	27.0	32.0	-	-	-	-	-
400	16	36.0	41.7	-	-	-	-	-
450	18	48.2	55.8	-	-	-	-	-
500	20	58.5	76.0	-	-	-	-	-
600	24	149	152	-	-	-	-	-

斜支管座 / 弯头支管座

Latrolet & Elbolet

kg

支管公称尺寸 Branch Nominal Size		对焊斜支管座和弯头支管座 BW Latrolet & BW Elbolet			承插焊、螺纹斜支管座和弯头支管座 SW/THRD Latrolet & Elbolet	
DN	NPS	STD	XS	Sch160	3000	6000
15	1/2	0.25	0.28	0.38	0.32	0.48
20	3/4	0.40	0.42	0.61	0.54	0.81
25	1	0.73	0.77	1.10	0.93	1.20
32	1 1/4	1.10	1.15	1.41	1.32	2.23
40	1 1/2	1.47	1.60	2.35	1.59	3.12
50	2	2.50	2.60	3.35	3.06	4.95
65	2 1/2	3.20	3.40	3.70	-	-
80	3	6.05	6.35	7.20	-	-
100	4	10.5	11.8	13.6	-	-
150	6	23.6	33.5	38.0	-	-
200	8	32.9	50.3	-	-	-
250	10	58.5	76.5	-	-	-
300	12	86.0	112	-	-	-

# REFERENCED WEIGHT LISTS

## 参考重量表

### Referenced Weight Lists

#### 活接头和六角头双丝头

#### Union & Hexagonal Nipple

kg

公称尺寸 Nominal Size		活接头 Union	六角头双丝头 Hexagonal Nipple	
DN	NPS	3000	Sch80	Sch160
6	1/8	0.25	0.02	0.02
8	1/4	0.30	0.03	0.04
10	3/8	0.35	0.05	0.06
15	1/2	0.46	0.10	0.12
20	3/4	0.61	0.13	0.17
25	1	0.85	0.22	0.29
32	1 1/4	1.35	0.34	0.41
40	1 1/2	1.92	0.47	0.58
50	2	2.85	0.69	0.91
65	2 1/2	4.90	1.35	1.69
80	3	7.10	2.03	2.55

#### 管塞

#### Head Plug

kg

公称尺寸 Nominal Size		方头管塞 Square Head Plug	六角头管塞 Hex Head Plug	圆头管塞 Round Head Plug
DN	NPS			
6	1/8	0.01	0.02	0.02
8	1/4	0.02	0.03	0.05
10	3/8	0.03	0.05	0.08
15	1/2	0.06	0.08	0.12
20	3/4	0.10	0.14	0.20
25	1	0.18	0.25	0.34
32	1 1/4	0.30	0.49	0.59
40	1 1/2	0.41	0.65	0.73
50	2	0.67	1.16	1.44
65	2 1/2	1.11	1.83	2.36
80	3	1.69	2.92	3.50
100	4	3.48	5.50	6.08

#### 螺纹接头

#### Hex Head Bushing & Flush Bushing

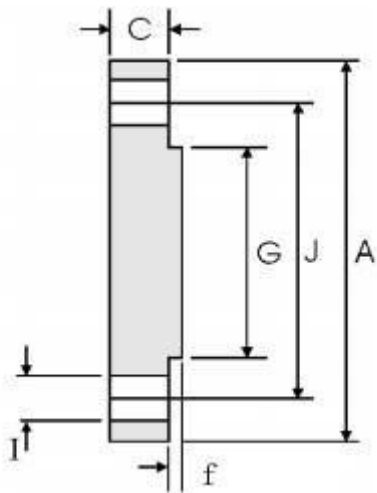
kg

公称尺寸 Nominal Size		六角头内外螺纹接头 Hex Head Bushing	无头内外螺纹接头 Flush Bushing
DN	NPS		
8	1/4	0.01	0.01
10	3/8	0.02	0.01
15	1/2	0.03	0.02
20	3/4	0.04	0.02
25	1	0.07	0.04
32	1 1/4	0.12	0.05
40	1 1/2	0.14	0.06
50	2	0.22	0.09
65	2 1/2	0.36	0.17
80	3	0.46	0.22
100	4	0.78	0.33

# ASME flanges

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## Dimensions of blind flanges - ASME B16.5 Class 150

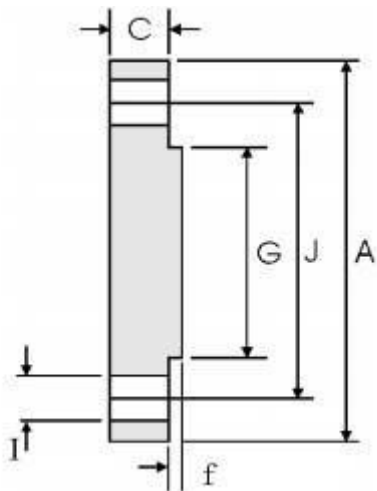


f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>C</b>	<b>G</b>	<b>n</b>	<b>I</b>	<b>J</b>
15	1/2	90	9.6	34.9	4	15.7	60.3
20	3/4	100	11.2	42.9	4	15.7	69.9
25	1	110	12.7	50.8	4	15.7	79.4
32	1 ¼	115	14.3	63.5	4	15.7	88.9
40	1 ½	125	15.9	73	4	15.7	98.4
50	2	150	17.5	92.1	4	19.1	120.7
65	2 ½	180	20.7	104.8	4	19.1	139.7
80	3	190	22.3	127	4	19.1	152.4
90	3 ½	215	22.3	139.7	8	19.1	177.8
100	4	230	22.3	157.2	8	19.1	190.5
125	5	255	22.3	185.7	8	22.4	215.9
150	6	280	23.9	215.9	8	22.4	241.3
200	8	345	27	269.9	8	22.4	298.5
250	10	405	28.6	323.8	12	25.4	362
300	12	485	30.2	381	12	25.4	431.8
350	14	535	33.4	412.8	12	28.4	476.3
400	16	595	35	469.9	16	28.4	539.8
450	18	635	38.1	533.4	16	31.75	577.9
500	20	700	41.3	584.2	20	31.75	635
600	24	815	46.1	692.2	20	35.1	749.3

These flanges may be supplied with a flat face. The flat face may be either the full C dimension of thickness plus 2 mm or the C dimension thickness without the raised face height.

## Dimensions of blind flanges - ASME B16.5 Class 300



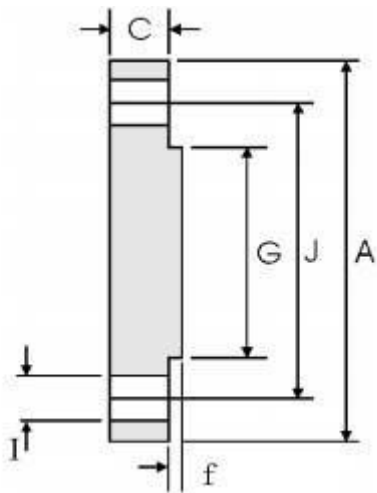
f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
15	1/2	95	12.7	34.9	4	15.7	66.7
20	3/4	115	14.3	42.9	4	19	82.6
25	1	125	15.9	50.8	4	19	88.9
32	1 ¼	135	17.5	63.5	4	19	98.4
40	1 ½	155	19.1	73	4	22.3	114.3
50	2	165	20.7	92.1	8	19	127
65	2 ½	190	23.9	104.8	8	22.3	149.2
80	3	210	27	127	8	22.3	168.3
90	3 ½	230	28.6	139.7	8	22.3	184.2
100	4	255	30.2	157.2	8	22.3	200
125	5	280	33.4	185.7	8	22.3	235
150	6	320	35	215.9	12	22.3	269.9
200	8	380	39.7	269.9	12	25.4	330.2
250	10	445	46.1	323.8	16	28.4	387.4
300	12	520	49.3	381	16	31.7	450.8
350	14	585	52.4	412.8	20	31.7	514.4
400	16	650	55.6	469.9	20	35	571.5
450	18	710	58.8	533.4	24	35	628.6
500	20	775	62	584.2	24	35	685.8
600	24	915	68.3	692.2	24	41.1	812.8

These flanges may be supplied with a flat face. The flat face may be either the full C dimension of thickness plus 2 mm or the C dimension thickness without the raised face height.



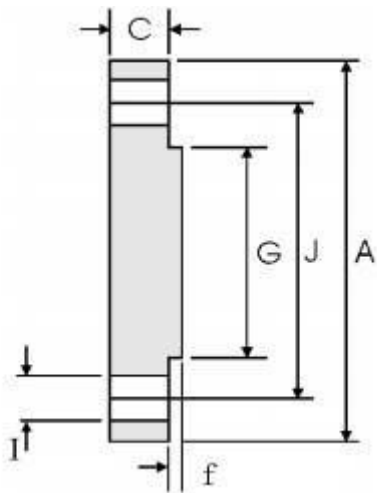
## Dimensions of blind flanges - ASME B16.5 Class 400



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
15	1/2	95	14.3	34.9	4	15.7	66.7
20	3/4	115	15.9	42.9	4	19	82.6
25	1	125	17.5	50.8	4	19	88.9
32	1 ¼	135	20.7	63.5	4	19	98.4
40	1 ½	155	22.3	73	4	22.3	114.3
50	2	165	25.4	92.1	8	19	127
65	2 ½	190	28.6	104.8	8	22.3	149.2
80	3	210	31.8	127	8	22.3	168.3
90	3 ½	230	35	139.7	8	25.4	184.2
100	4	255	35	157.2	8	25.4	200
125	5	280	38.1	185.7	8	25.4	235
150	6	320	41.3	215.9	12	35.4	269.9
200	8	380	47.7	269.9	12	28.4	330.2
250	10	445	54	323.8	16	31.75	387.4
300	12	520	57.2	381	16	35.1	450.8
350	14	585	60.4	412.8	20	35.1	514.4
400	16	650	63.5	469.9	20	38.1	571.5
450	18	710	66.7	533.4	24	38.1	628.6
500	20	775	69.9	584.2	24	41.1	685.8
600	24	915	76.2	692.2	24	47.8	812.8

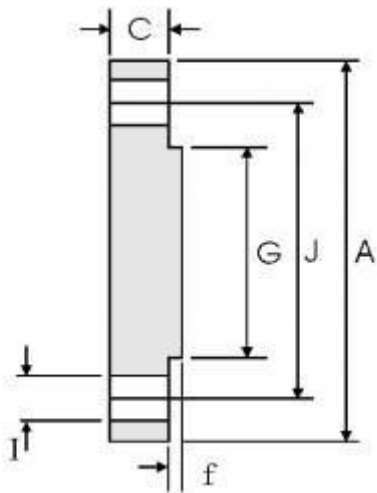
## Dimensions of blind flanges - ASME B16.5 Class 600



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
15	1/2	95	14.3	34.9	4	15.7	66.7
20	3/4	115	15.9	42.9	4	19	82.6
25	1	125	17.5	50.8	4	19	88.9
32	1 ¼	135	20.7	63.5	4	19	98.4
40	1 ½	155	22.3	73	4	22.3	114.3
50	2	165	25.4	92.1	8	19	127
65	2 ½	190	28.6	104.8	8	22.3	149.2
80	3	210	31.8	127	8	22.3	168.3
90	3 ½	230	35	139.7	8	25.4	184.2
100	4	275	38.1	157.2	8	25.4	215.9
125	5	330	44.5	185.7	8	28.4	266.7
150	6	355	47.7	215.9	12	28.4	292.1
200	8	420	55.6	269.9	12	31.75	349.2
250	10	510	63.5	323.8	16	35.1	431.8
300	12	560	66.7	381	20	35.1	489
350	14	605	69.9	412.8	20	38.1	527
400	16	685	76.2	469.9	20	41.1	603.2
450	18	745	82.6	533.4	20	44.5	654
500	20	815	88.9	584.2	24	44.5	723.9
600	24	940	101.6	692.2	24	50.8	838.2

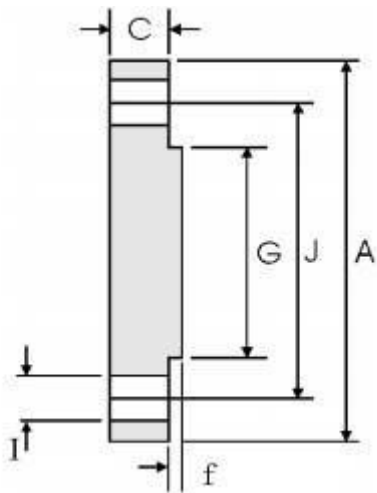
## Dimensions of blind flanges - ASME B16.5 Class 900



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>C</b>	<b>G</b>	<b>n</b>	<b>I</b>	<b>J</b>
15	1/2	120	22.3	34.9	4	22.3	82.6
20	3/4	130	25.4	42.9	4	22.3	88.9
25	1	150	28.6	50.8	4	25.4	101.6
32	1 ¼	160	28.6	63.5	4	25.4	111.1
40	1 ½	180	31.8	73	4	28.4	123.8
50	2	215	38.1	92.1	8	25.4	165.1
65	2 ½	245	41.3	104.8	8	28.4	190.5
80	3	240	38.1	127	8	25.4	190.5
100	4	290	44.5	157.2	8	31.7	235
125	5	350	50.8	185.7	8	35	279.4
150	6	380	55.6	215.9	12	31.7	317.5
200	8	470	63.5	269.9	12	38.1	393.7
250	10	545	69.9	323.8	16	38.1	469.9
300	12	610	79.4	381	20	38.1	533.4
350	14	640	85.8	412.8	20	41.1	558.8
400	16	705	88.9	469.9	20	44.4	616
450	18	785	101.6	533.4	20	50.8	685.8
500	20	855	108	584.2	20	53.8	749.3
600	24	1040	139.7	692.2	20	66.55	901.7

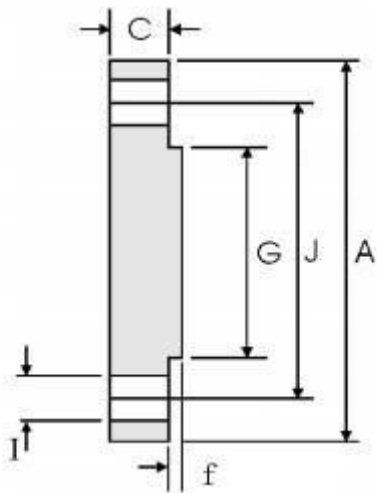
## Dimensions of blind flanges - ASME B16.5 Class 1500



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>C</b>	<b>G</b>	<b>n</b>	<b>I</b>	<b>J</b>
15	1/2	120	22.3	34.9	4	22.3	82.6
20	3/4	130	25.4	42.9	4	22.3	88.9
25	1	150	28.6	50.8	4	25.4	101.6
32	1 ¼	160	28.6	63.5	4	25.4	111.1
40	1 ½	180	31.8	73	4	28.4	123.8
50	2	215	38.1	92.1	8	25.4	165.1
65	2 ½	245	41.3	104.8	8	28.4	190.5
80	3	265	47.7	127	8	31.7	203.2
100	4	310	54	157.2	8	35	241.3
125	5	375	73.1	185.7	8	41.1	292.1
150	6	395	82.6	215.9	12	38.1	317.5
200	8	485	92.1	269.9	12	44.4	393.7
250	10	585	108	323.8	12	50.8	482.6
300	12	675	123.9	381	16	53.8	571.5
350	14	750	133.4	412.8	16	60.45	635
400	16	825	146.1	469.9	16	66.55	704.8
450	18	915	162	533.4	16	73.15	774.7
500	20	985	177.8	584.2	16	79.25	831.8
600	24	1170	203.2	692.2	16	91.9	990.6

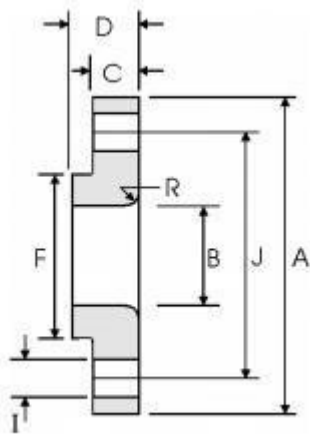
### Dimensions of blind flanges - ASME B16.5 Class 2500



f=7mm

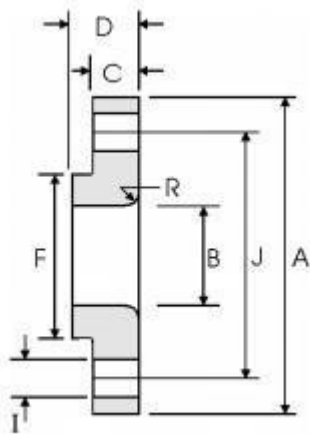
DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>C</b>	<b>G</b>	<b>n</b>	<b>I</b>	<b>J</b>
15	1/2	135	30.2	34.9	4	22.3	88.9
20	3/4	140	31.8	42.9	4	22.3	95.2
25	1	160	35	50.8	4	25.4	108
32	1 ¼	185	38.1	63.5	4	28.4	130.2
40	1 ½	205	44.5	73	4	31.75	146
50	2	235	50.9	92.1	8	28.4	171.4
65	2 ½	265	57.2	104.8	8	31.75	196.8
80	3	305	66.7	127	8	35.1	228.6
100	4	355	76.2	157.2	8	41.1	273
125	5	420	92.1	185.7	8	47.8	323.8
150	6	485	108	215.9	8	53.8	368.3
200	8	550	127	269.9	12	53.8	438.2
250	10	675	165.1	323.8	12	66.55	539.8
300	12	760	184.2	381	12	73.15	619.1

## Dimensions of lap joint flanges - ASME B16.5 Class150



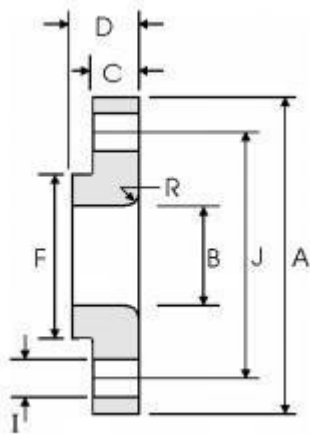
DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	R	F	H	I	J
15	1/2	90	22.9	11.2	16	3	30	4	15.7	60.3
20	3/4	100	28.2	12.7	16	3	38	4	15.7	69.9
25	1	110	34.9	14.3	17	3	49	4	15.7	79.4
32	1 ¼	115	43.7	15.9	21	5	59	4	15.7	88.9
40	1 ½	125	50	17.5	22	6	65	4	15.7	98.4
50	2	150	62.5	19.1	25	8	78	4	19.1	120.7
65	2 ½	180	75.4	22.3	29	8	90	4	19.1	139.7
80	3	190	91.4	23.9	30	10	108	4	19.1	152.4
90	3 ½	215	104.1	23.9	32	10	122	8	19.1	177.8
100	4	230	116.8	23.9	33	11	135	8	19.1	190.5
125	5	255	144.4	23.9	36	11	164	8	22.4	215.9
150	6	280	171.4	25.4	40	13	192	8	22.4	241.3
200	8	345	222.2	28.6	44	13	246	8	22.4	298.5
250	10	405	277.4	30.2	49	13	305	12	25.4	362
300	12	485	328.2	31.8	56	13	365	12	25.4	431.8
350	14	535	360.2	35	79	13	400	12	28.4	476.3
400	16	595	411.2	36.6	87	13	457	16	28.4	539.8
450	18	635	462.3	39.7	97	13	505	16	31.75	577.9
500	20	700	514.4	42.9	103	13	559	20	31.75	635
600	24	815	616	47.7	111	13	663	20	35.1	749.3

## Dimensions of lap joint flanges - ASME B16.5 Class 300



DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	R	F	H	I	J
15	1/2	95	22.9	14.3	22	3	38	4	15.7	66.7
20	3/4	115	28.2	15.9	25	3	48	4	19	82.6
25	1	125	34.9	17.5	27	3	54	4	19	88.9
32	1 ¼	135	43.7	19.1	27	5	64	4	19	98.4
40	1 ½	155	50	20.7	30	6	70	4	22.3	114.3
50	2	165	62.5	22.3	33	8	84	8	19	127
65	2 ½	190	75.4	25.4	38	8	100	8	22.3	149.2
80	3	210	91.4	28.6	43	10	117	8	22.3	168.3
90	3 ½	230	104.1	30.2	44	10	133	8	22.3	184.2
100	4	255	116.8	31.8	48	11	146	8	22.3	200
125	5	280	144.4	35	51	11	178	8	22.3	235
150	6	320	171.4	36.6	52	13	206	12	22.3	269.9
200	8	380	222.2	41.3	62	13	260	12	25.4	330.2
250	10	445	277.4	47.7	95	13	321	16	28.4	387.4
300	12	520	328.2	50.8	102	13	375	16	31.7	450.8
350	14	585	360.2	54	111	13	425	20	31.7	514.4
400	16	650	411.2	57.2	121	13	483	20	35	571.5
450	18	710	462.3	60.4	130	13	533	24	35	628.6
500	20	775	514.4	63.5	140	13	587	24	35	685.8
600	24	915	616	69.9	152	13	702	24	41.1	812.8

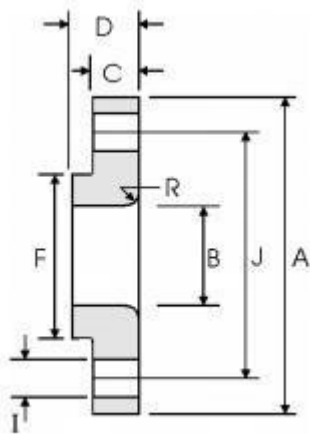
## Dimensions of lap joint flanges - ASME B16.5 Class 400



DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>R</b>	<b>F</b>	<b>H</b>	<b>I</b>	<b>J</b>
15	1/2	95	22.9	14.3	22	3	38	4	15.7	66.7
20	3/4	115	28.2	15.9	25	3	48	4	19	82.6
25	1	125	34.9	17.5	27	3	54	4	19	88.9
32	1 ¼	135	43.7	20.7	29	5	64	4	19	98.4
40	1 ½	155	50	22.3	32	6	70	4	22.3	114.3
50	2	165	62.5	25.4	37	8	84	8	19	127
65	2 ½	190	75.4	28.6	41	8	100	8	22.3	149.2
80	3	210	91.4	31.8	46	10	117	8	22.3	168.3
90	3 ½	230	104.1	35	49	10	133	8	25.4	184.2
100	4	255	116.8	35	51	11	146	8	25.4	200
125	5	280	144.5	38.1	54	11	178	8	25.4	235
150	6	320	171.4	41.3	57	13	206	12	35.4	269.9
200	8	380	222.2	47.7	68	13	260	12	28.4	330.2
250	10	445	277.4	54	102	13	321	16	31.75	387.4
300	12	520	328.2	57.2	108	13	375	16	35.1	450.8
350	14	585	360.2	60.4	117	13	425	20	35.1	514.4
400	16	650	411.2	63.5	127	13	483	20	38.1	571.5
450	18	710	462.3	66.7	137	13	533	24	38.1	628.6
500	20	775	514.4	69.9	146	13	587	24	41.1	685.8
600	24	915	616	76.2	159	13	702	24	47.8	812.8

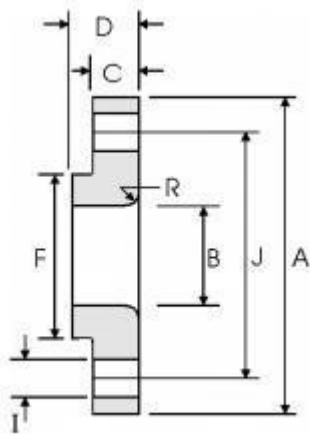


## Dimensions of lap joint flanges - ASME B16.5 Class 600



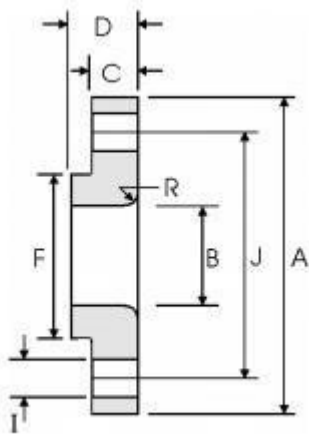
DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>R</b>	<b>F</b>	<b>H</b>	<b>I</b>	<b>J</b>
15	1/2	95	22.9	14.3	22	3	38	4	15.7	66.7
20	3/4	115	28.2	15.9	25	3	48	4	19	82.6
25	1	125	34.9	17.5	27	3	54	4	19	88.9
32	1 ¼	135	43.7	20.7	29	5	64	4	19	98.4
40	1 ½	155	50	22.3	32	6	70	4	22.3	114.3
50	2	165	62.5	25.4	37	8	84	8	19	127
65	2 ½	190	75.4	28.6	41	8	100	8	22.3	149.2
80	3	210	91.4	31.8	46	10	117	8	22.3	168.3
90	3 ½	230	104.1	35	49	10	133	8	25.4	184.2
100	4	275	116.8	38.1	54	11	152	8	25.4	215.9
125	5	330	144.4	44.5	60	11	189	8	28.4	266.7
150	6	355	171.4	47.7	67	13	222	12	28.4	292.1
200	8	420	222.2	55.6	76	13	273	12	31.75	349.2
250	10	510	277.4	63.5	111	13	343	16	35.1	431.8
300	12	560	328.2	66.7	117	13	400	20	35.1	489
350	14	605	360.2	69.9	127	13	432	20	38.1	527
400	16	685	411.2	76.2	140	13	495	20	41.1	603.2
450	18	745	462.3	82.6	152	13	546	20	44.5	654
500	20	815	514.4	88.9	165	13	610	24	44.5	723.9
600	24	940	616	101.6	184	13	718	24	50.8	838.2

## Dimensions of lap joint flanges - ASME B16.5 Class 900



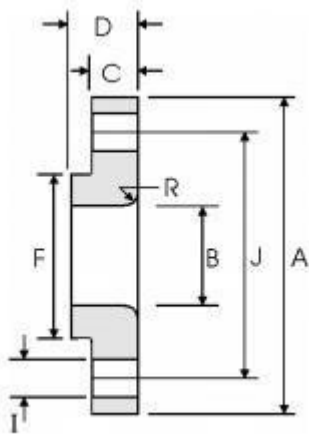
DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	R	F	H	I	J
15	1/2	120	22.9	22.3	32	3	38	4	22.3	82.6
20	3/4	130	28.2	25.4	35	3	44	4	22.3	88.9
25	1	150	34.9	28.6	41	3	52	4	25.4	101.6
32	1 ¼	160	43.7	28.6	41	5	64	4	25.4	111.1
40	1 ½	180	50	31.8	44	6	70	4	28.4	123.8
50	2	215	62.5	38.1	57	8	105	8	25.4	165.1
65	2 ½	245	75.4	41.3	64	8	124	8	28.4	190.5
80	3	240	91.4	38.1	54	10	127	8	25.4	190.5
100	4	290	116.8	44.5	70	11	159	8	31.7	235
125	5	350	144.4	50.8	79	11	190	8	35	279.4
150	6	380	171.4	55.6	86	13	235	12	31.7	317.5
200	8	470	222.2	63.5	114	13	298	12	38.1	393.7
250	10	545	277.4	69.9	127	13	368	16	38.1	469.9
300	12	610	328.2	79.4	143	13	419	20	38.1	533.4
350	14	640	360.2	85.8	156	13	451	20	41.1	558.8
400	16	705	411.2	88.9	165	13	508	20	44.4	616
450	18	785	462.3	101.6	190	13	565	20	50.8	685.8
500	20	855	514.4	108	210	13	622	20	53.8	749.3
600	24	1040	616	139.7	267	13	749	20	66.55	901.7

## Dimensions of lap joint flanges - ASME B16.5 Class 1500



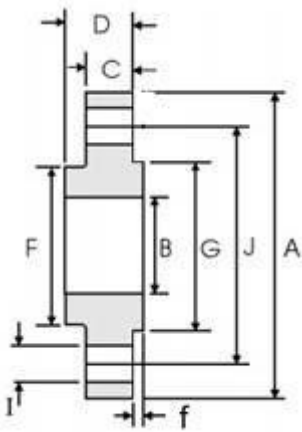
DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	R	F	H	I	J
15	1/2	120	22.9	22.3	32	3	38	4	22.3	82.6
20	3/4	130	28.2	25.4	35	3	44	4	22.3	88.9
25	1	150	34.9	28.6	41	3	52	4	25.4	101.6
32	1 ¼	160	43.7	28.6	41	5	64	4	25.4	111.1
40	1 ½	180	50	31.8	44	6	70	4	28.4	123.8
50	2	215	62.5	38.1	57	8	105	8	25.4	165.1
65	2 ½	245	75.4	41.3	64	8	124	8	28.4	190.5
80	3	265	91.4	47.7	73	10	133	8	25.4	190.5
100	4	310	116.8	54	90	11	162	8	31.7	235
125	5	375	144.4	73.1	105	11	197	8	35	279.4
150	6	395	171.4	82.6	119	13	229	12	31.7	317.5
200	8	485	222.2	92.1	143	13	292	12	38.1	393.7
250	10	585	277.4	108	178	13	368	16	38.1	469.9
300	12	675	328.2	123.9	219	13	451	20	38.1	533.4
350	14	750	360.2	133.4	241	13	495	20	41.1	558.8
400	16	825	411.2	146.1	260	13	552	20	44.4	616
450	18	915	462.3	162	276	13	597	20	50.8	685.8
500	20	985	514.4	177.8	292	13	641	20	53.8	749.3
600	24	1170	616	203.2	330	13	762	20	66.55	901.7

## Dimensions of lap joint flanges - ASME B16.5 Class 2500



DN	NPS	Overall Diameter	Inside Diameter(Min.)	Thickness of Flange(Min.)	Overall Length	Lap Radius	Diameter of Hub	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>R</b>	<b>F</b>	<b>H</b>	<b>I</b>	<b>J</b>
15	1/2	135	22.9	30.2	40	3	43	4	22.3	88.9
20	3/4	140	28.2	31.8	43	3	51	4	22.3	95.2
25	1	160	34.9	35	48	3	57	4	25.4	108
32	1 ¼	185	43.7	38.1	52	5	73	4	28.4	130.2
40	1 ½	205	50	44.5	60	6	79	4	31.75	146
50	2	235	62.5	50.9	70	8	95	8	28.4	171.4
65	2 ½	265	75.4	57.2	79	8	114	8	31.75	196.8
80	3	305	91.4	66.7	92	10	133	8	35.1	228.6
100	4	355	116.8	76.2	108	11	165	8	41.1	273
125	5	420	144.4	92.1	130	11	203	8	47.8	323.8
150	6	485	171.4	108	152	13	235	8	53.8	368.3
200	8	550	222.2	127	178	13	305	12	53.8	438.2
250	10	675	277.4	165.1	229	13	375	12	66.55	539.8
300	12	760	328.2	184.2	254	13	441	12	73.15	619.1

## Dimensions of slip on flanges - ASME B16.5 Class 150

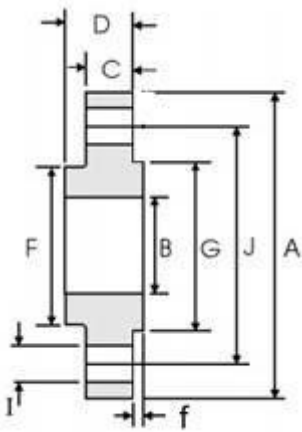


f=2mm

DN	NPS	Overall Diameter	Inside Diameter (Min.)	Thickness of Flange (Min.)	Overall Length	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	F	G		I	J
15	1/2	90	22.2	9.6	14	30	34.9	4	15.7	60.3
20	3/4	100	27.7	11.2	14	38	42.9	4	15.7	69.9
25	1	110	34.5	12.7	16	49	50.8	4	15.7	79.4
32	1 ¼	115	43.2	14.3	19	59	63.5	4	15.7	88.9
40	1 ½	125	49.5	15.9	21	65	73	4	15.7	98.4
50	2	150	61.9	17.5	24	78	92.1	4	19.1	120.7
65	2 ½	180	74.6	20.7	27	90	104.8	4	19.1	139.7
80	3	190	90.7	22.3	29	108	127	4	19.1	152.4
90	3 ½	215	103.4	22.3	30	122	139.7	8	19.1	177.8
100	4	230	116.1	22.3	32	135	157.2	8	19.1	190.5
125	5	255	143.8	22.3	35	164	185.7	8	22.4	215.9
150	6	280	170.7	23.9	38	192	215.9	8	22.4	241.3
200	8	345	221.5	27	43	246	269.9	8	22.4	298.5
250	10	405	276.2	28.6	48	305	323.8	12	25.4	362
300	12	485	327	30.2	54	365	381	12	25.4	431.8
350	14	535	359.2	33.4	56	400	412.8	12	28.4	476.3
400	16	595	410.5	35	62	457	469.9	16	28.4	539.8
450	18	635	461.8	38.1	67	505	533.4	16	31.75	577.9
500	20	700	513.1	41.3	71	559	584.2	20	31.75	635
600	24	815	616	46.1	81	663	692.2	20	35.1	749.3

These flanges may be supplied with a flat face. The flat face may be either the full C dimension of thickness plus 2 mm or the C dimension thickness without the raised face height.

## Dimensions of slip on flanges - ASME B16.5 Class 300

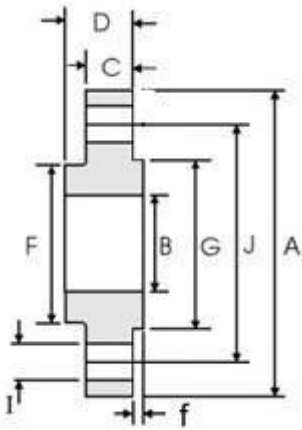


f=2mm

DN	NPS	Overall Diameter	Inside Diameter (Min.)	Thickness of Flange (Min.)	Overall Length	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	F	G	H	I	J
15	1/2	95	22.2	12.7	21	38	34.9	4	15.7	66.7
20	3/4	115	27.7	14.3	24	48	42.9	4	19	82.6
25	1	125	34.5	15.9	25	54	50.8	4	19	88.9
32	1 ¼	135	43.2	17.5	25	64	63.5	4	19	98.4
40	1 ½	155	49.5	19.1	29	70	73	4	22.3	114.3
50	2	165	61.9	20.7	32	84	92.1	8	19	127
65	2 ½	190	74.6	23.9	37	100	104.8	8	22.3	149.2
80	3	210	90.7	27	41	117	127	8	22.3	168.3
90	3 ½	230	103.4	28.6	43	133	139.7	8	22.3	184.2
100	4	255	116.1	30.2	46	146	157.2	8	22.3	200
125	5	280	143.8	33.4	49	178	185.7	8	22.3	235
150	6	320	170.7	35	51	206	215.9	12	22.3	269.9
200	8	380	221.5	39.7	60	260	269.9	12	25.4	330.2
250	10	445	276.2	46.1	65	321	323.8	16	28.4	387.4
300	12	520	327	49.3	71	375	381	16	31.7	450.8
350	14	585	359.2	52.4	75	425	412.8	20	31.7	514.4
400	16	650	410.5	55.6	81	483	469.9	20	35	571.5
450	18	710	461.8	58.8	87	533	533.4	24	35	628.6
500	20	775	513.1	62	94	587	584.2	24	35	685.8
600	24	915	616	68.3	105	702	692.2	24	41.1	812.8

These flanges may be supplied with a flat face. The flat face may be either the full C dimension of thickness plus 2 mm or the C dimension thickness without the raised face height.

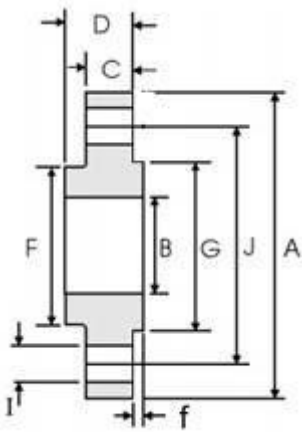
## Dimensions of slip on flanges - ASME B16.5 Class 400



f=7mm

DN	NPS	Overall Diameter	Inside Diameter (Min.)	Thickness of Flange (Min.)	Overall Length	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	F	G	H	I	J
15	1/2	95	22.2	14.3	22	38	34.9	4	15.7	66.7
20	3/4	115	27.7	15.9	25	48	42.9	4	19	82.6
25	1	125	34.5	17.5	27	54	50.8	4	19	88.9
32	1 ¼	135	43.2	20.7	29	64	63.5	4	19	98.4
40	1 ½	155	49.5	22.3	32	70	73	4	22.3	114.3
50	2	165	61.9	25.4	37	84	92.1	8	19	127
65	2 ½	190	74.6	28.6	41	100	104.8	8	22.3	149.2
80	3	210	90.7	31.8	46	117	127	8	22.3	168.3
90	3 ½	230	103.4	35	49	133	139.7	8	25.4	184.2
100	4	255	116.1	35	51	146	157.2	8	25.4	200
125	5	280	143.8	38.1	54	178	185.7	8	25.4	235
150	6	320	170.7	41.3	57	206	215.9	12	35.4	269.9
200	8	380	221.5	47.7	68	260	269.9	12	28.4	330.2
250	10	445	276.2	54	73	321	323.8	16	31.75	387.4
300	12	520	327	57.2	79	375	381	16	35.1	450.8
350	14	585	359.2	60.4	84	425	412.8	20	35.1	514.4
400	16	650	410.5	63.5	94	483	469.9	20	38.1	571.5
450	18	710	461.8	66.7	98	533	533.4	24	38.1	628.6
500	20	775	513.1	69.9	102	587	584.2	24	41.1	685.8
600	24	915	616	76.2	114	702	692.2	24	47.8	812.8

## Dimensions of slip on flanges - ASME B16.5 Class 600

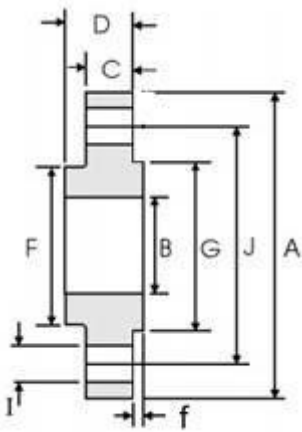


f=7mm

DN	NPS	Overall Diameter	Inside Diameter (Min.)	Thickness of Flange (Min.)	Overall Length	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	F	G		I	J
15	1/2	95	22.2	14.3	22	38	34.9	4	15.7	66.7
20	3/4	115	27.7	15.9	25	48	42.9	4	19	82.6
25	1	125	34.5	17.5	27	54	50.8	4	19	88.9
32	1 ¼	135	43.2	20.7	29	64	63.5	4	19	98.4
40	1 ½	155	49.5	22.3	32	70	73	4	22.3	114.3
50	2	165	61.9	25.4	37	84	92.1	8	19	127
65	2 ½	190	74.6	28.6	41	100	104.8	8	22.3	149.2
80	3	210	90.7	31.8	46	117	127	8	22.3	168.3
90	3 ½	230	103.4	35	49	133	139.7	8	25.4	184.2
100	4	275	116.1	38.1	54	152	157.2	8	25.4	215.9
125	5	330	143.8	44.5	60	189	185.7	8	28.4	266.7
150	6	355	170.7	47.7	67	222	215.9	12	28.4	292.1
200	8	420	221.5	55.6	76	273	269.9	12	31.75	349.2
250	10	510	276.2	63.5	86	343	323.8	16	35.1	431.8
300	12	560	327	66.7	92	400	381	20	35.1	489
350	14	605	359.2	69.9	94	432	412.8	20	38.1	527
400	16	685	410.5	76.2	106	495	469.9	20	41.1	603.2
450	18	745	461.8	82.6	117	546	533.4	20	44.5	654
500	20	815	513.1	88.9	127	610	584.2	24	44.5	723.9
600	24	940	616	101.6	140	718	692.2	24	50.8	838.2



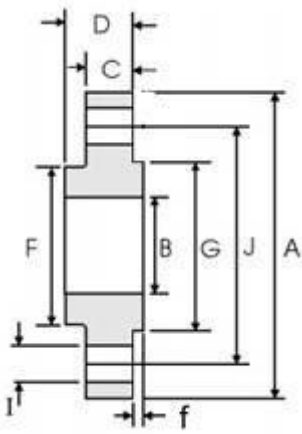
## Dimensions of slip on flanges - ASME B16.5 Class 900



f=7mm

DN	NPS	Overall Diameter	Inside Diameter (Min.)	Thickness of Flange (Min.)	Overall Length	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	F	G	H	I	J
15	1/2	120	22.2	22.3	32	38	34.9	4	22.3	82.6
20	3/4	130	27.7	25.4	35	44	42.9	4	22.3	88.9
25	1	150	34.5	28.6	41	52	50.8	4	25.4	101.6
32	1 ¼	160	43.2	28.6	41	64	63.5	4	25.4	111.1
40	1 ½	180	49.5	31.8	44	70	73	4	28.4	123.8
50	2	215	61.9	38.1	57	105	92.1	8	25.4	165.1
65	2 ½	245	74.6	41.3	64	124	104.8	8	28.4	190.5
80	3	240	103.4	38.1	54	127	127	8	25.4	190.5
100	4	290	116.1	44.5	70	159	157.2	8	31.7	235
125	5	350	143.8	50.8	79	190	185.7	8	35	279.4
150	6	380	170.7	55.6	86	235	215.9	12	31.7	317.5
200	8	470	221.5	63.5	102	298	269.9	12	38.1	393.7
250	10	545	276.2	69.9	108	368	323.8	16	38.1	469.9
300	12	610	327	79.4	117	419	381	20	38.1	533.4
350	14	640	359.2	85.8	130	451	412.8	20	41.1	558.8
400	16	705	410.5	88.9	133	508	469.9	20	44.4	616
450	18	785	461.8	101.6	152	565	533.4	20	50.8	685.8
500	20	855	513.1	108	159	622	584.2	20	53.8	749.3
600	24	1040	616	139.7	203	749	692.2	20	66.55	901.7

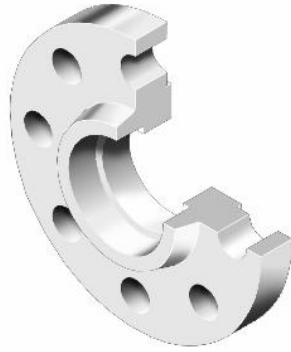
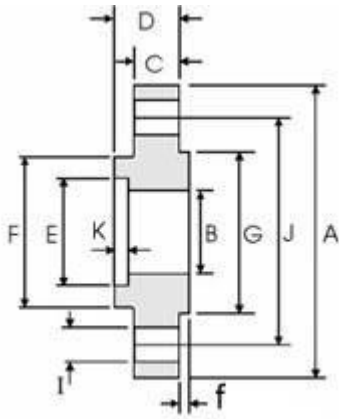
## Dimensions of slip on flanges - ASME B16.5 Class 1500



f=7mm

DN	NPS	Overall Diameter	Inside Diameter (Min.)	Thickness of Flange (Min.)	Overall Length	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>	<b>G</b>		<b>I</b>	<b>J</b>
15	1/2	120	22.2	22.3	32	38	34.9	4	22.3	82.6
20	3/4	130	27.7	25.4	35	44	42.9	4	22.3	88.9
25	1	150	34.5	28.6	41	52	50.8	4	25.4	101.6
32	1 ¼	160	43.2	28.6	41	64	63.5	4	25.4	111.1
40	1 ½	180	49.5	31.8	44	70	73	4	28.4	123.8
50	2	215	61.9	38.1	57	105	92.1	8	25.4	165.1
65	2 1/2	245	74.6	41.3	64	124	104.8	8	28.4	190.5

## Dimensions of socket welding flanges - ASME B16.5 - Class150

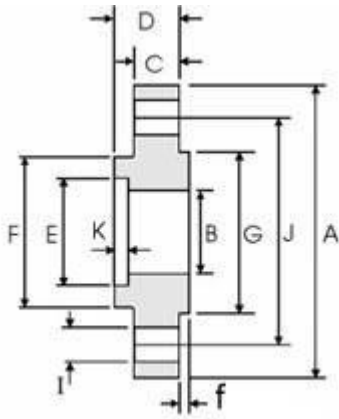


f=2mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter of Socket	Depth of Socket	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	K	F	G	H	I	J
15	1/2	90	15.8	9.6	14	22.2	10	30	34.9	4	15.7	60.3
20	3/4	100	20.9	11.2	14	27.7	11	38	42.9	4	15.7	69.9
25	1	110	26.6	12.7	16	34.5	13	49	50.8	4	15.7	79.4
32	1 ¼	115	35.1	14.3	19	43.2	14	59	63.5	4	15.7	88.9
40	1 ½	125	40.9	15.9	21	49.5	16	65	73	4	15.7	98.4
50	2	150	52.5	17.5	24	61.9	17	78	92.1	4	19.1	120.7
65	2 ½	180	62.7	20.7	27	74.6	19	90	104.8	4	19.1	139.7
80	3	190	77.9	22.3	29	90.7	21	108	127	4	19.1	152.4

Dimensions of B correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. These bore sizes are furnished unless otherwise specified by the Purchaser.

## Dimensions of socket welding flanges - ASME B16.5 – Class300

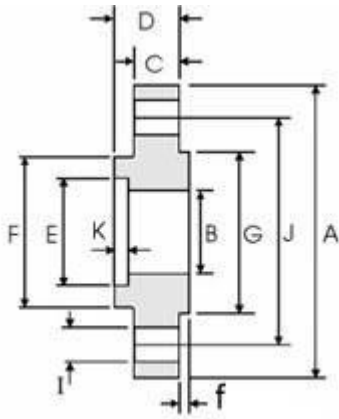


f=2mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter of Socket	Depth of Socket	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	K	F	G	H	I	J
15	1/2	95	15.8	12.7	21	22.2	10	38	34.9	4	15.7	66.7
20	3/4	115	20.9	14.3	24	27.7	11	48	42.9	4	19	82.6
25	1	125	26.6	15.9	25	34.5	13	54	50.8	4	19	88.9
32	1 ¼	135	35.1	17.5	25	43.2	14	64	63.5	4	19	98.4
40	1 ½	155	40.9	19.1	29	49.5	16	70	73	4	22.3	114.3
50	2	165	52.5	20.7	32	61.9	17	84	92.1	8	19	127
65	2 ½	190	62.7	23.9	37	74.6	19	100	104.8	8	22.3	149.2
80	3	210	77.9	27	41	90.7	21	117	127	8	22.3	168.3

Dimensions of B correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. These bore sizes are furnished unless otherwise specified by the Purchaser.

**Dimensions of socket welding flanges - ASME B16.5 –Class 400 & 600**

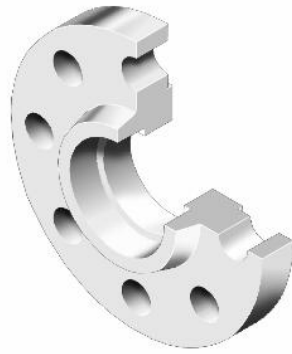
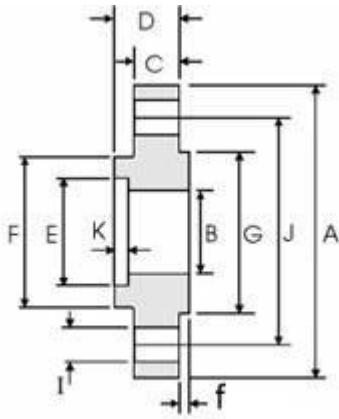


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter of Socket	Depth of Socket	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	K	F	G	H	I	J
15	1/2	95		14.3	22	22.2	10	38	34.9	4	15.7	66.7
20	3/4	115		15.9	25	27.7	11	48	42.9	4	19	82.6
25	1	125		17.5	27	34.5	13	54	50.8	4	19	88.9
32	1 ¼	135		20.7	29	43.2	14	64	63.5	4	19	98.4
40	1 ½	155		22.3	32	49.5	16	70	73	4	22.3	114.3
50	2	165		25.4	37	61.9	17	84	92.1	8	19	127
65	2 ½	190		28.6	41	74.6	19	100	104.8	8	22.3	149.2
80	3	210		31.8	46	90.7	21	117	127	8	22.3	168.3

Inside diameter to be specified by the purchaser.

**Dimensions of socket welding flanges - ASME B16.5 –Class 1500**

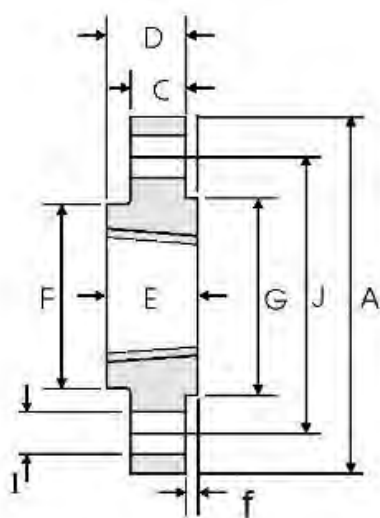


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter of Socket	Depth of Socket	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	K	F	G	H	I	J
15	1/2	120		22.3	32	22.2	10	38	34.9	4	22.3	82.6
20	3/4	130		25.4	35	27.7	11	44	42.9	4	22.3	88.9
25	1	150		28.6	41	34.5	13	52	50.8	4	25.4	101.6
32	1 ¼	160		28.6	41	43.2	14	64	63.5	4	25.4	111.1
40	1 ½	180		31.8	44	49.5	16	70	73	4	28.4	123.8
50	2	215		38.1	57	61.9	17	105	92.1	8	25.4	165.1
65	2 ½	245		41.3	64	74.6	19	124	104.8	8	28.4	190.5

Inside diameter to be specified by the purchaser.

## Dimensions of threaded flanges ASME B16.5 - Class150



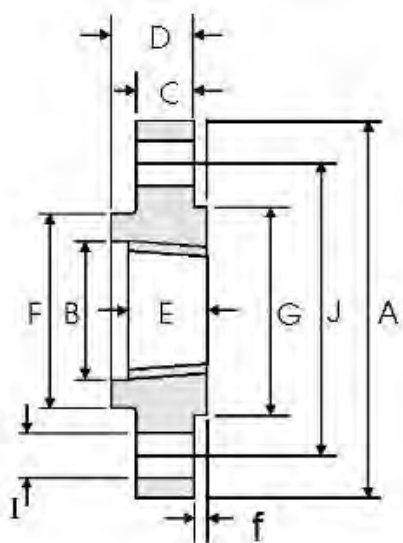
f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	D	E	F	G			
15	1/2	90	9.6	14	16	30	34.9	4	15.7	60.3
20	3/4	100	11.2	14	16	38	42.9	4	15.7	69.9
25	1	110	12.7	16	17	49	50.8	4	15.7	79.4
32	1 ¼	115	14.3	19	21	59	63.5	4	15.7	88.9
40	1 ½	125	15.9	21	22	65	73	4	15.7	98.4
50	2	150	17.5	24	25	78	92.1	4	19.1	120.7
65	2 ½	180	20.7	27	29	90	104.8	4	19.1	139.7
80	3	190	22.3	29	30	108	127	4	19.1	152.4
90	3 ½	215	22.3	30	32	122	139.7	8	19.1	177.8
100	4	230	22.3	32	33	135	157.2	8	19.1	190.5
125	5	255	22.3	35	36	164	185.7	8	22.4	215.9
150	6	280	23.9	38	40	192	215.9	8	22.4	241.3
200	8	345	27	43	44	246	269.9	8	22.4	298.5
250	10	405	28.6	48	49	305	323.8	12	25.4	362
300	12	485	30.2	54	56	365	381	12	25.4	431.8
350	14	535	33.4	56	57	400	412.8	12	28.4	476.3
400	16	595	35	62	64	457	469.9	16	28.4	539.8
450	18	635	38.1	67	68	505	533.4	16	31.75	577.9
500	20	700	41.3	71	73	559	584.2	20	31.75	635
600	24	815	46.1	81	83	663	692.2	20	35.1	749.3

Class 150 flanges are made without a counterbore.

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.

## Dimensions of threaded flanges ASME B16.5 – Class300



f=2mm



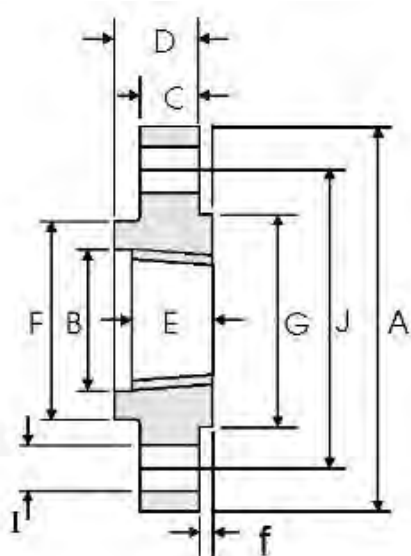
DN	NPS	Overall Diameter	Counter-bore(Min.)	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	H	I	J
15	1/2	95	23.6	12.7	21	16	38	34.9	4	15.7	66.7
20	3/4	115	29	14.3	24	16	48	42.9	4	19	82.6
25	1	125	35.8	15.9	25	18	54	50.8	4	19	88.9
32	1 ¼	135	44.4	17.5	25	21	64	63.5	4	19	98.4
40	1 ½	155	50.3	19.1	29	23	70	73	4	22.3	114.3
50	2	165	63.5	20.7	32	29	84	92.1	8	19	127
65	2 ½	190	76.2	23.9	37	32	100	104.8	8	22.3	149.2
80	3	210	92.2	27	41	32	117	127	8	22.3	168.3
90	3 ½	230	104.9	28.6	43	37	133	139.7	8	22.3	184.2
100	4	255	117.6	30.2	46	37	146	157.2	8	22.3	200
125	5	280	144.4	33.4	49	43	178	185.7	8	22.3	235
150	6	320	171.4	35	51	47	206	215.9	12	22.3	269.9
200	8	380	222.2	39.7	60	51	260	269.9	12	25.4	330.2
250	10	445	276.2	46.1	65	56	321	323.8	16	28.4	387.4
300	12	520	328.6	49.3	71	61	375	381	16	31.7	450.8
350	14	585	360.4	52.4	75	64	425	412.8	20	31.7	514.4
400	16	650	411.2	55.6	81	69	483	469.9	20	35	571.5
450	18	710	462	58.8	87	70	533	533.4	24	35	628.6
500	20	775	512.8	62	94	74	587	584.2	24	35	685.8
600	24	915	614.4	68.3	105	83	702	692.2	24	41.1	812.8

Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45°

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.



## Dimensions of threaded flanges ASME B16.5 – Class400



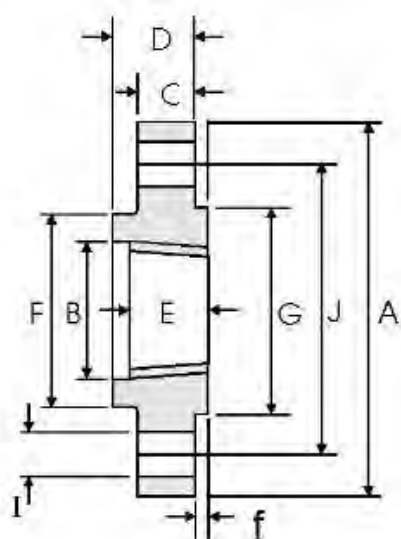
f=7mm

DN	NPS	Overall Diameter	Counter-bore(Min.)	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G		H	I
15	1/2	95	23.6	14.3	22	16	38	34.9	4	15.7	66.7
20	3/4	115	29	15.9	25	16	48	42.9	4	19	82.6
25	1	125	35.8	17.5	27	18	54	50.8	4	19	88.9
32	1 ¼	135	44.4	20.7	29	21	64	63.5	4	19	98.4
40	1 ½	155	50.6	22.3	32	23	70	73	4	22.3	114.3
50	2	165	63.5	25.4	37	29	84	92.1	8	19	127
65	2 ½	190	76.2	28.6	41	32	100	104.8	8	22.3	149.2
80	3	210	92.2	31.8	46	35	117	127	8	22.3	168.3
90	3 ½	230	104.9	35	49	40	133	139.7	8	25.4	184.2
100	4	255	117.6	35	51	37	146	157.2	8	25.4	200
125	5	280	144.4	38.1	54	43	178	185.7	8	25.4	235
150	6	320	171.4	41.3	57	46	206	215.9	12	35.4	269.9
200	8	380	222.2	47.7	68	51	260	269.9	12	28.4	330.2
250	10	445	276.2	54	73	56	321	323.8	16	31.75	387.4
300	12	520	328.6	57.2	79	61	375	381	16	35.1	450.8
350	14	585	360.4	60.4	84	64	425	412.8	20	35.1	514.4
400	16	650	411.2	63.5	94	69	483	469.9	20	38.1	571.5
450	18	710	462	66.7	98	70	533	533.4	24	38.1	628.6
500	20	775	512.8	69.9	102	74	587	584.2	24	41.1	685.8
600	24	915	614.4	76.2	114	83	702	692.2	24	47.8	812.8

Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45°

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.

## Dimensions of threaded flanges ASME B16.5 – Class600



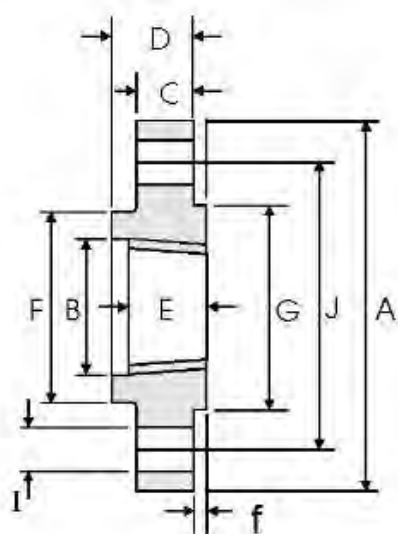
f=7mm

DN	NPS	Overall Diameter	Counter-bore(Min.)	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	H	I	J
15	1/2	95	23.6	14.3	22	16	38	34.9	4	15.7	66.7
20	3/4	115	29	15.9	25	16	48	42.9	4	19	82.6
25	1	125	35.8	17.5	27	18	54	50.8	4	19	88.9
32	1 1/4	135	44.4	20.7	29	21	64	63.5	4	19	98.4
40	1 1/2	155	50.6	22.3	32	23	70	73	4	22.3	114.3
50	2	165	63.5	25.4	37	29	84	92.1	8	19	127
65	2 1/2	190	76.2	28.6	41	32	100	104.8	8	22.3	149.2
80	3	210	92.2	31.8	46	35	117	127	8	22.3	168.3
90	3 1/2	230	104.9	35	49	40	133	139.7	8	25.4	184.2
100	4	275	117.6	38.1	54	42	152	157.2	8	25.4	215.9
125	5	330	144.4	44.5	60	48	189	185.7	8	28.4	266.7
150	6	355	171.4	47.7	67	51	222	215.9	12	28.4	292.1
200	8	420	222.2	55.6	76	58	273	269.9	12	31.75	349.2
250	10	510	276.2	63.5	86	66	343	323.8	16	35.1	431.8
300	12	560	328.6	66.7	92	70	400	381	20	35.1	489
350	14	605	360.4	69.9	94	74	432	412.8	20	38.1	527
400	16	685	411.2	76.2	106	78	495	469.9	20	41.1	603.2
450	18	745	462	82.6	117	80	546	533.4	20	44.5	654
500	20	815	512.8	88.9	127	83	610	584.2	24	44.5	723.9
600	24	940	614.4	101.6	140	93	718	692.2	24	50.8	838.2

Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45°

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.

## Dimensions of threaded flanges ASME B16.5 – Class900



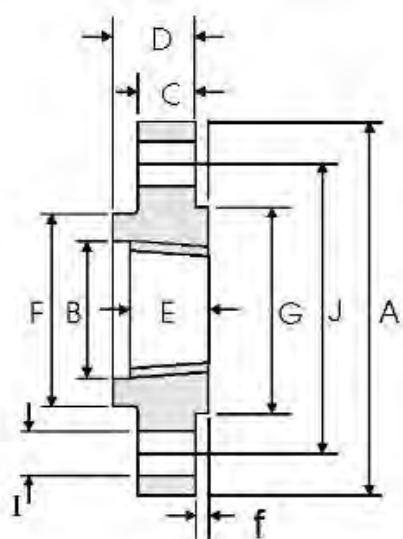
f=7mm

DN	NPS	Overall Diameter	Counter-bore(Min.)	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	H	I	J
15	1/2	120	23.6	22.3	32	23	38	34.9	4	22.3	82.6
20	3/4	130	29	25.4	35	26	44	42.9	4	22.3	88.9
25	1	150	35.8	28.6	41	29	52	50.8	4	25.4	101.6
32	1 1/4	160	44.4	28.6	41	31	64	63.5	4	25.4	111.1
40	1 1/2	180	50.6	31.8	44	32	70	73	4	28.4	123.8
50	2	215	63.5	38.1	57	39	105	92.1	8	25.4	165.1
65	2 1/2	245	76.2	41.3	64	48	124	104.8	8	28.4	190.5
80	3	240	92.2	38.1	54	42	127	127	8	25.4	190.5
100	4	290	117.6	44.5	70	48	159	157.2	8	31.7	235
125	5	350	144.4	50.8	79	54	190	185.7	8	35	279.4
150	6	380	171.4	55.6	86	58	235	215.9	12	31.7	317.5
200	8	470	222.2	63.5	102	64	298	269.9	12	38.1	393.7
250	10	545	276.2	69.9	108	72	368	323.8	16	38.1	469.9
300	12	610	328.6	79.4	117	77	419	381	20	38.1	533.4
350	14	640	360.4	85.8	130	83	451	412.8	20	41.1	558.8
400	16	705	411.2	88.9	133	86	508	469.9	20	44.4	616
450	18	785	462	101.6	152	89	565	533.4	20	50.8	685.8
500	20	855	512.8	108	159	93	622	584.2	20	53.8	749.3
600	24	1040	614.4	139.7	203	102	749	692.2	20	66.55	901.7

Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45°

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.

## Dimensions of threaded flanges ASME B16.5 - Class1500



f=7mm

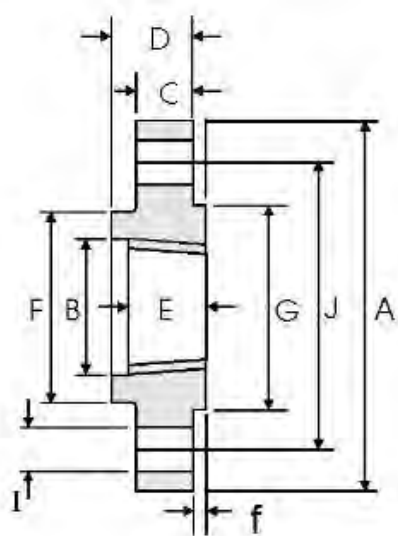


DN	NPS	Overall Diameter	Counter-bore(Min.)	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	H	I	J
15	1/2	120	23.6	22.3	32	23	38	34.9	4	22.3	82.6
20	3/4	130	29	25.4	35	26	44	42.9	4	22.3	88.9
25	1	150	35.8	28.6	41	29	52	50.8	4	25.4	101.6
32	1 1/4	160	44.4	28.6	41	31	64	63.5	4	25.4	111.1
40	1 1/2	180	50.6	31.8	44	32	70	73	4	28.4	123.8
50	2	215	63.5	38.1	57	39	105	92.1	8	25.4	165.1
65	2 1/2	245	76.2	41.3	64	48	124	104.8	8	28.4	190.5

Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45°

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.

## Dimensions of threaded flanges ASME B16.5 – Class2500



f=7mm

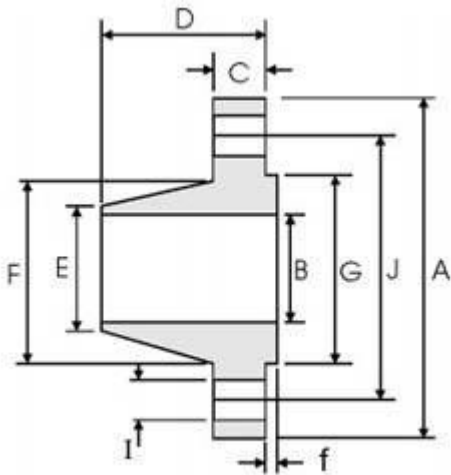


DN	NPS	Overall Diameter	Counter-bore(Min.)	Thickness of Flange(Min)	Overall Length	Threaded Length(Min)	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	H	I	J
15	1/2	135	23.6	30.2	40	29	43	34.9	4	22.3	88.9
20	3/4	140	29	31.8	43	32	51	42.9	4	22.3	95.2
25	1	160	35.8	35	48	35	57	50.8	4	25.4	108
32	1 ¼	185	44.4	38.1	52	39	73	63.5	4	28.4	130.2
40	1 ½	205	50.6	44.5	60	45	79	73	4	31.75	146
50	2	235	63.5	50.9	70	51	95	92.1	8	28.4	171.4
65	2 ½	265	76.2	57.2	79	58	114	104.8	8	31.75	196.8

Class 300 and higher threaded flanges are counter-bored. Threads are chamfered to the counterbore at an angle of 45°

Threaded flanges shall have a taper pipe thread conforming to ASME B1.20.1.

## Dimensions of weld neck flanges - ASME B16.5 Class150



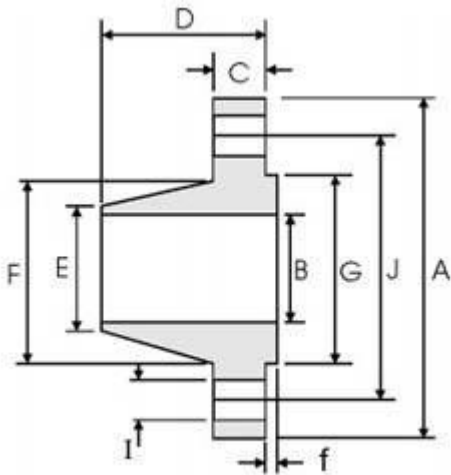
f=2mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>n</b>	<b>I</b>	<b>J</b>
15	1/2	90	15.8	9.6	46	21.3	30	34.9	4	15.7	60.3
20	3/4	100	20.9	11.2	51	26.7	38	42.9	4	15.7	69.9
25	1	110	26.6	12.7	54	33.4	49	50.8	4	15.7	79.4
32	1 ¼	115	35.1	14.3	56	42.2	59	63.5	4	15.7	88.9
40	1 ½	125	40.9	15.9	60	48.3	65	73	4	15.7	98.4
50	2	150	52.5	17.5	62	60.3	78	92.1	4	19.1	120.7
65	2 ½	180	62.7	20.7	68	73.0	90	104.8	4	19.1	139.7
80	3	190	77.9	22.3	68	88.9	108	127	4	19.1	152.4
90	3 ½	215	90.1	22.3	70	101.6	122	139.7	8	19.1	177.8
100	4	230	102.3	22.3	75	114.3	135	157.2	8	19.1	190.5
125	5	255	128.2	22.3	87	141.3	164	185.7	8	22.4	215.9
150	6	280	154.1	23.9	87	168.3	192	215.9	8	22.4	241.3
200	8	345	202.7	27.0	100	219.1	246	269.9	8	22.4	298.5
250	10	405	254.6	28.6	100	273.0	305	323.8	12	25.4	362.0
300	12	485	304.8	30.2	113	323.8	365	381	12	25.4	431.8
350	14	535	to be specified by the purchaser	33.4	125	355.6	400	412.8	12	28.4	476.3
400	16	595		35.0	125	406.4	457	469.9	16	28.4	539.8
450	18	635		38.1	138	457.0	505	533.4	16	31.8	577.9
500	20	700		41.3	143	508.0	559	584.2	20	31.8	635.0
600	24	815		46.1	151	610.0	663	692.2	20	35.1	749.3

1. These flanges may be supplied with a flat face. The flat face may be either the full C dimension of thickness plus 2 mm or the C dimension thickness without the raised face height.

2. Dimensions of B correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. These bore sizes are furnished unless otherwise specified by the Purchaser.

## Dimensions of weld neck flanges - ASME B16.5 Class300



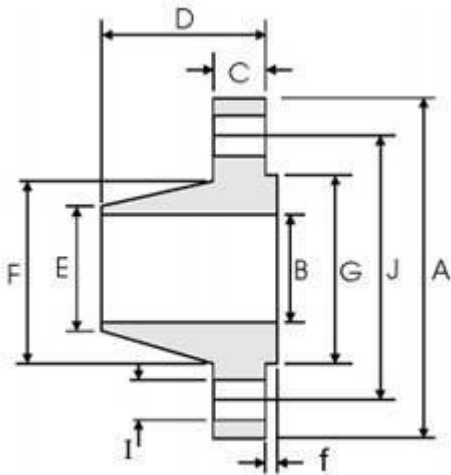
f=2mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	n	I	J
15	1/2	95	15.8	12.7	51	21.3	38	34.9	4	15.7	66.7
20	3/4	115	20.9	14.3	56	26.7	48	42.9	4	19.0	82.6
25	1	125	26.6	15.9	60	33.4	54	50.8	4	19.0	88.9
32	1 ¼	135	35.1	17.5	64	42.2	64	63.5	4	19.0	98.4
40	1 ½	155	40.9	19.1	67	48.3	70	73	4	22.3	114.3
50	2	165	52.5	20.7	68	60.3	84	92.1	8	19.0	127.0
65	2 ½	190	62.7	23.9	75	73.0	100	104.8	8	22.3	149.2
80	3	210	77.9	27.0	78	88.9	117	127	8	22.3	168.3
90	3 ½	230	90.1	28.6	79	101.6	133	139.7	8	22.3	184.2
100	4	255	102.3	30.2	84	114.3	146	157.2	8	22.3	200.0
125	5	280	128.2	33.4	97	141.3	178	185.7	8	22.3	235.0
150	6	320	154.1	35.0	97	168.3	206	215.9	12	22.3	269.9
200	8	380	202.7	39.7	110	219.1	260	269.9	12	25.4	330.2
250	10	445	254.6	46.1	116	273.0	321	323.8	16	28.4	387.4
300	12	520	304.8	49.3	129	323.8	375	381	16	31.7	450.8
350	14	585	to be specified by the purchaser	52.4	141	355.6	425	412.8	20	31.7	514.4
400	16	650		55.6	144	406.4	483	469.9	20	35.0	571.5
450	18	710		58.8	157	457.0	533	533.4	24	35.0	628.6
500	20	775		62.0	160	508.0	587	584.2	24	35.0	685.8
600	24	915		68.3	167	610.0	702	692.2	24	41.1	812.8

1. These flanges may be supplied with a flat face. The flat face may be either the full C dimension of thickness plus 2 mm or the C dimension thickness without the raised face height.

2. Dimensions of B correspond to the inside diameters of pipe as given in ASME B36.10M for standard wall pipe. These bore sizes are furnished unless otherwise specified by the Purchaser.

## Dimensions of weld neck flanges - ASME B16.5 Class400



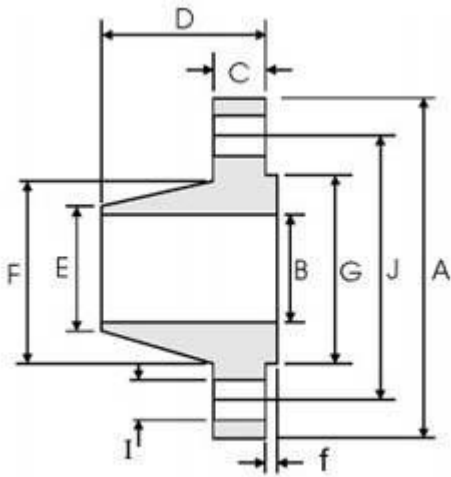
f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	n	I	J
15	1/2	95	-	14.3	52	21.3	38	34.9	4	15.7	66.7
20	3/4	115	-	15.9	57	26.7	48	42.9	4	19.0	82.6
25	1	125	-	17.5	62	33.4	54	50.8	4	19.0	88.9
32	1 ¼	135	-	20.7	67	42.2	64	63.5	4	19.0	98.4
40	1 ½	155	-	22.3	70	48.3	70	73	4	22.3	114.3
50	2	165	-	25.4	73	60.3	84	92.1	8	19.0	127.0
65	2 ½	190	-	28.6	79	73.0	100	104.8	8	22.3	149.2
80	3	210	-	31.8	83	88.9	117	127	8	22.3	168.3
90	3 ½	230	-	35.0	86	101.6	133	139.7	8	25.4	184.2
100	4	255	-	35.0	89	114.3	146	157.2	8	25.4	200.0
125	5	280	-	38.1	102	141.3	178	185.7	8	25.4	235.0
150	6	320	-	41.3	103	168.3	206	215.9	12	35.4	269.9
200	8	380	-	47.7	117	219.1	260	269.9	12	28.4	330.2
250	10	445	-	54.0	124	273.0	321	323.8	16	31.8	387.4
300	12	520	-	57.2	137	323.8	375	381	16	35.1	450.8
350	14	585	-	60.4	149	355.6	425	412.8	20	35.1	514.4
400	16	650	-	63.5	152	406.4	483	469.9	20	38.1	571.5
450	18	710	-	66.7	165	457.0	533	533.4	24	38.1	628.6
500	20	775	-	69.9	168	508.0	587	584.2	24	41.1	685.8
600	24	915	-	76.2	175	610.0	702	692.2	24	47.8	812.8

Inside diameter to be specified by the purchaser.



## Dimensions of weld neck flanges - ASME B16.5 Class600

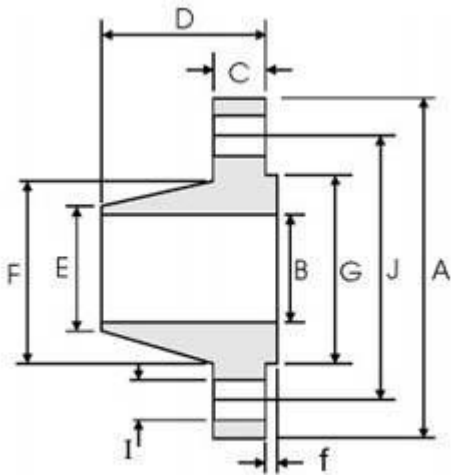


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	n	I	J
15	1/2	95	-	14.3	52	21.3	38	34.9	4	15.7	66.7
20	3/4	115	-	15.9	57	26.7	48	42.9	4	19.0	82.6
25	1	125	-	17.5	62	33.4	54	50.8	4	19.0	88.9
32	1 ¼	135	-	20.7	67	42.2	64	63.5	4	19.0	98.4
40	1 ½	155	-	22.3	70	48.3	70	73	4	22.3	114.3
50	2	165	-	25.4	73	60.3	84	92.1	8	19.0	127.0
65	2 ½	190	-	28.6	79	73.0	100	104.8	8	22.3	149.2
80	3	210	-	31.8	83	88.9	117	127	8	22.3	168.3
90	3 ½	230	-	35.0	86	101.6	133	139.7	8	25.4	184.2
100	4	275	-	38.1	102	114.3	152	157.2	8	25.4	215.9
125	5	330	-	44.5	114	141.3	189	185.7	8	28.4	266.7
150	6	355	-	47.7	117	168.3	222	215.9	12	28.4	292.1
200	8	420	-	55.6	133	219.1	273	269.9	12	31.8	349.2
250	10	510	-	63.5	152	273.0	343	323.8	16	35.1	431.8
300	12	560	-	66.7	156	323.8	400	381	20	35.1	489.0
350	14	605	-	69.9	165	355.6	432	412.8	20	38.1	527.0
400	16	685	-	76.2	178	406.4	495	469.9	20	41.1	603.2
450	18	745	-	82.6	184	457.0	546	533.4	20	44.5	654.0
500	20	815	-	88.9	190	508.0	610	584.2	24	44.5	723.9
600	24	940	-	101.6	203	610.0	718	692.2	24	50.8	838.2

Inside diameter to be specified by the purchaser.

## Dimensions of weld neck flanges - ASME B16.5 Class900

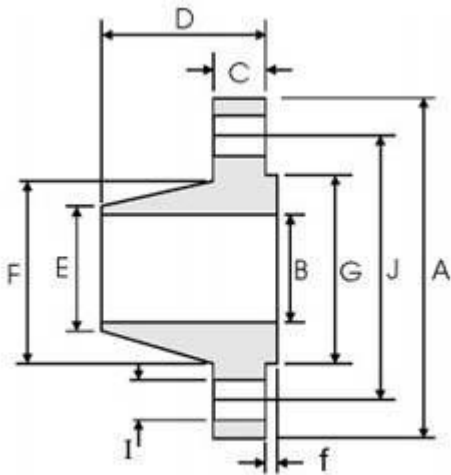


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>n</b>	<b>I</b>	<b>J</b>
15	1/2	120	-	22.3	60	21.3	38	34.9	4	22.3	82.6
20	3/4	130	-	25.4	70	26.7	44	42.9	4	22.3	88.9
25	1	150	-	28.6	73	33.4	52	50.8	4	25.4	101.6
32	1 ¼	160	-	28.6	73	42.2	64	63.5	4	25.4	111.1
40	1 ½	180	-	31.8	83	48.3	70	73	4	28.4	123.8
50	2	215	-	38.1	102	60.3	105	92.1	8	25.4	165.1
65	2 ½	245	-	41.3	105	73.0	124	104.8	8	28.4	190.5
80	3	240	-	38.1	102	88.9	127	127	8	25.4	190.5
100	4	290	-	44.5	114	114.3	159	157.2	8	31.7	235.0
125	5	350	-	50.8	127	141.3	190	185.7	8	35.0	279.4
150	6	380	-	55.6	140	168.3	235	215.9	12	31.7	317.5
200	8	470	-	63.5	162	219.1	298	269.9	12	38.1	393.7
250	10	545	-	69.9	184	273.0	368	323.8	16	38.1	469.9
300	12	610	-	79.4	200	323.8	419	381	20	38.1	533.4
350	14	640	-	85.8	213	355.6	451	412.8	20	41.1	558.8
400	16	705	-	88.9	216	406.4	508	469.9	20	44.4	616.0
450	18	785	-	101.6	229	457.0	565	533.4	20	50.8	685.8
500	20	855	-	108.0	248	508.0	622	584.2	20	53.8	749.3
600	24	1040	-	139.7	292	610.0	749	692.2	20	66.6	901.7

Inside diameter to be specified by the purchaser.

## Dimensions of weld neck flanges - ASME B16.5 Class1500

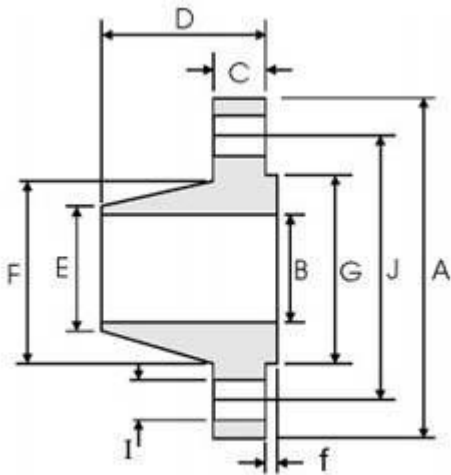


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G	n	I	J
15	1/2	120	-	22.3	60	21.3	38	34.9	4	22.3	82.6
20	3/4	130	-	25.4	70	26.7	44	42.9	4	22.3	88.9
25	1	150	-	28.6	73	33.4	52	50.8	4	25.4	101.6
32	1 ¼	160	-	28.6	73	42.2	64	63.5	4	25.4	111.1
40	1 ½	180	-	31.8	83	48.3	70	73	4	28.4	123.8
50	2	215	-	38.1	102	60.3	105	92.1	8	25.4	165.1
65	2 ½	245	-	41.3	105	73.0	124	104.8	8	28.4	190.5
80	3	265	-	47.7	117	88.9	133	127	8	31.7	203.2
100	4	310	-	54.0	124	114.3	162	157.2	8	35.0	241.3
125	5	375	-	73.1	156	141.3	197	185.7	8	41.1	292.1
150	6	395	-	82.6	171	168.3	229	215.9	12	38.1	317.5
200	8	485	-	92.1	213	219.1	292	269.9	12	44.4	393.7
250	10	585	-	108.0	254	273.0	368	323.8	12	50.8	482.6
300	12	675	-	123.9	283	323.8	451	381	16	53.8	571.5
350	14	750	-	133.4	298	355.6	495	412.8	16	60.5	635.0
400	16	825	-	146.1	311	406.4	552	469.9	16	66.6	704.8
450	18	915	-	162.0	327	457.0	597	533.4	16	73.2	774.7
500	20	985	-	177.8	356	508.0	641	584.2	16	79.3	831.8
600	24	1170	-	203.2	406	610.0	762	692.2	16	91.9	990.6

Inside diameter to be specified by the purchaser.

**Dimensions of weld neck flanges - ASME B16.5 Class2500**



f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	B	C	D	E	F	G		I	J
15	1/2	135	-	30.2	73	21.3	43	34.9	4	22.3	88.9
20	3/4	140	-	31.8	79	26.7	51	42.9	4	22.3	95.2
25	1	160	-	35.0	89	33.4	57	50.8	4	25.4	108.0
32	1 ¼	185	-	38.1	95	42.2	73	63.5	4	28.4	130.2
40	1 ½	205	-	44.5	111	48.3	79	73	4	31.8	146.0
50	2	235	-	50.9	127	60.3	95	92.1	8	28.4	171.4
65	2 ½	265	-	57.2	143	73.0	114	104.8	8	31.8	196.8
80	3	305	-	66.7	168	88.9	133	127	8	35.1	228.6
100	4	355	-	76.2	190	114.3	165	157.2	8	41.1	273.0
125	5	420	-	92.1	229	141.3	203	185.7	8	47.8	323.8
150	6	485	-	108.0	273	168.3	235	215.9	8	53.8	368.3
200	8	550	-	127.0	318	219.1	305	269.9	12	53.8	438.2
250	10	675	-	165.1	419	273.0	375	323.8	12	66.6	539.8
300	12	760	-	184.2	464	323.8	441	381	12	73.2	619.1

Inside diameter to be specified by the purchaser.

Inside Diameter of WN Flange Bore

DN	NPS	OD	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
8	1/4	13.7	-	10.4	-	-	-	9.2	9.2	9.2	-	7.7	7.7	7.7	-	-	-	-	-
10	3/8	17.1	-	13.8	-	-	-	12.5	12.5	12.5	-	10.7	10.7	10.7	-	-	-	-	-
15	1/2	21.3	18.0	17.1	-	-	-	15.8	15.8	15.8	-	13.8	13.8	13.8	-	-	-	11.7	6.4
20	3/4	26.7	23.4	22.5	-	-	-	21.0	21.0	21.0	-	18.9	18.9	18.9	-	-	-	15.6	11.1
25	1	33.4	30.1	27.9	-	-	-	26.6	26.6	26.6	-	24.3	24.3	24.3	-	-	-	20.7	15.2
32	1 ¼	42.2	38.9	36.7	-	-	-	35.1	35.1	35.1	-	32.5	32.5	32.5	-	-	-	29.5	22.8
40	1 ½	48.3	45.0	42.8	-	-	-	40.9	40.9	40.9	-	38.1	38.1	38.1	-	-	-	34.0	28.0
50	2	60.3	57.0	54.8	-	-	-	52.5	52.5	52.5	-	49.2	49.2	49.2	-	-	-	42.8	38.2
65	2 ½	76.1	71.9	70.0	-	-	-	65.8	65.8	65.8	-	62.1	62.1	62.1	-	-	-	57.0	48.1
80	3	88.9	84.7	82.8	-	-	-	77.9	77.9	77.9	-	73.7	73.7	73.7	-	-	-	66.6	58.4
90	3 ½	101.6	97.4	95.5	-	-	-	90.1	90.1	90.1	-	85.4	85.4	85.4	-	-	-	-	-
100	4	114.3	110.1	108.2	-	-	-	102.3	102.3	102.3	-	97.2	97.2	97.2	-	92.0	-	87.3	80.1
125	5	141.3	135.8	134.5	-	-	-	128.2	128.2	128.2	-	122.2	122.2	122.2	-	115.9	-	109.5	103.2
150	6	168.3	162.8	161.5	-	-	-	154.1	154.1	154.1	-	146.4	146.4	146.4	-	139.8	-	131.8	124.4
200	8	219.1	213.6	211.6	-	206.4	205.0	202.7	202.7	202.7	198.5	193.7	193.7	193.7	188.9	182.6	177.9	173.1	174.6
250	10	273.1	266.3	264.7	-	260.4	257.5	254.6	254.6	254.6	247.7	247.7	247.7	242.9	236.6	230.2	222.3	215.9	222.3
300	12	323.9	316.0	314.8	-	311.2	307.1	304.8	304.8	303.3	295.4	298.5	298.5	288.9	281.0	273.1	266.7	257.3	273.1
350	14	355.6	347.7	346.0	342.9	339.8	336.5	-	336.5	333.3	325.4	-	330.2	317.5	307.9	300.0	292.1	284.2	-
400	16	406.4	398.0	396.8	393.7	390.6	387.3	-	387.3	381.0	373.1	-	381.0	363.5	354.0	344.5	333.3	325.4	-
450	18	457.2	448.8	447.6	444.5	441.4	434.9	-	438.1	428.7	419.1	-	431.8	409.5	398.5	387.3	377.9	366.7	-
500	20	508.0	498.4	496.9	495.3	488.9	482.6	-	488.9	477.8	466.8	-	482.6	455.6	442.9	431.8	419.1	408.0	-
550	22	559.0	549.4	547.9	546.3	539.9	533.6	-	539.9	-	514.5	-	533.6	501.8	489.1	476.4	463.7	451.0	-
600	24	610.0	598.9	597.3	597.3	590.9	581.5	-	590.9	575.0	560.8	-	584.6	548.1	532.2	518.0	505.3	490.9	-
650	26	660.0	-	-	644.2	634.6	-	-	640.9	-	-	-	634.6	-	-	-	-	-	-
700	28	711.0	-	-	695.2	685.6	679.2	-	691.9	-	-	-	685.6	-	-	-	-	-	-
750	30	762.0	749.3	746.2	746.2	736.6	730.2	-	742.9	-	-	-	736.6	-	-	-	-	-	-
800	32	813.0	-	-	797.2	787.6	781.2	-	793.9	778.0	-	-	787.6	-	-	-	-	-	-
850	34	864.0	-	-	848.2	838.6	832.2	-	844.9	825.9	-	-	838.6	-	-	-	-	-	-
900	36	914.0	-	-	898.2	888.6	882.2	-	894.9	-	-	-	888.6	-	-	-	-	-	-

WELDING NECK FLANGES

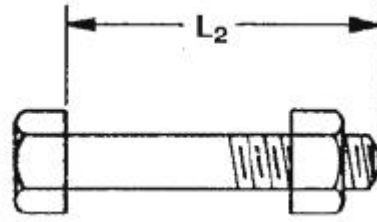
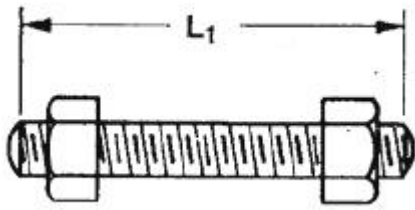
Outside Diameter (1)	When OD is 24" or less	±1.5 mm
	When OD is over 24"	±3.0 mm
Diameter of Contact Face	2 mm raised face	±1.0 mm
	7 mm raised face	±0.5 mm
	Tongue & Groove	
	Male, Female	
Diameter of Hub at Point of Welding	NPS ≤ 5	+2.0 mm, -1.0 mm
	NPS ≥ 6	+4.0 mm, -1.0 mm
Inside Diameter	NPS ≤ 10	±1.0 mm
	12 ≤ NPS ≤ 18	±1.5 mm
	NPS ≥ 20	+3.0 mm, -1.5 mm
Diameter of Hub at Base (1)	When Hub Base is 24" or less	±1.5 mm
	When Hub Base is over 24"	±3.0 mm
Thickness	NPS ≤ 18	+3.0 mm, -0.0 mm
	NPS ≥ 20	+5.0 mm, -0.0 mm
Drilling	Bolt Circle Diameter	±1.5 mm
	Bolt Hole Spacing	±0.8 mm
Eccentricity of Bolt Circle and Facing with Respect to Bore	NPS ≤ 2 1/2	±0.8 mm
	NPS ≥ 3	±1.5 mm
Length Through Hub	NPS ≤ 2 1/2	±1.5 mm
	5 ≤ NPS ≤ 10	+1.5 mm, -3.0 mm
	NPS ≥ 12	+3.0 mm, -5.0 mm

SLIP-ON, LAP JOINT, SOCKET WELDING, THREADED and BLIND FLANGES

Outside Diameter (1)	When OD is 24" or less	±1.5 mm
	When OD is over 24"	±3.0 mm
Diameter of Contact Face	2 mm raised face	±1.0 mm
	7 mm raised face	±0.5 mm
	Tongue & Groove	
	Male, Female	
Inside Diameter of Slip-On and Lap Joint Flanges	NPS ≤ 10	+1.0 mm, -0.0 mm
	NPS ≥ 12	+1.5 mm, -0.0 mm
Counter bores, Threaded Flanges	NPS ≤ 10	+1.0 mm, -0.0 mm
	NPS ≥ 12	+1.5 mm, -0.0 mm
Counter bores, Socket Welding Flanges	1/2 ≤ NPS ≤ 3	±0.25 mm
Diameter of Hub at Base (1)	NPS ≤ 12	+2.0 mm, -1.5 mm
	NPS ≥ 14	±3.0 mm
Thickness	NPS ≤ 18	+3.0 mm, -0.0 mm
	NPS ≥ 20	+5.0 mm, -0.0 mm
Drilling	Bolt Circle Diameter	±1.5 mm
	Bolt Hole Spacing	±0.8 mm
Eccentricity of Bolt Circle and Facing with Respect to Bore	NPS ≤ 2 1/2	±0.8 mm
	NPS ≥ 3	±1.5 mm
Overall Length Through Hub (1)	NPS ≤ 18	+3.0 mm, -1.0 mm
	NPS ≥ 20	+5.0 mm, -1.5 mm

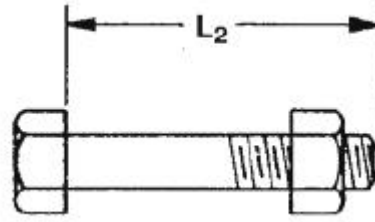
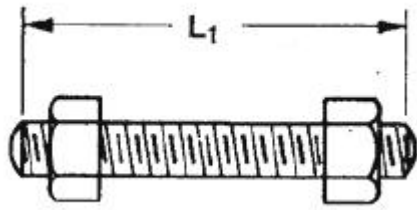
(1) Tolerances not listed in B16.5

**Stud bolts and machine bolts for ASME B16.5 flanges - Class 150**



NPS	DN	Diameter of bolts (inches)	Diameter of bolts (mm)	L1		L2	Number of bolts
				RF	RJ	RF	
1/2	15	1/2	14	55	-	50	4
3/4	20	1/2	14	65	-	50	4
1	25	1/2	14	65	75	55	4
1 1/4	32	1/2	14	70	85	55	4
1 1/2	40	1/2	14	70	85	65	4
2	50	5/8	18	85	95	70	4
2 1/2	65	5/8	18	90	100	75	4
3	80	5/8	18	90	100	75	4
3 1/2	90	5/8	18	90	100	75	8
4	100	5/8	18	90	100	75	8
5	125	3/4	20	95	110	85	8
6	150	3/4	20	100	115	85	8
8	200	3/4	20	110	120	90	8
10	250	7/8	24	115	125	100	12
12	300	7/8	24	120	135	100	12
14	350	1	27	135	145	115	12
16	400	1	27	135	145	115	16
18	450	1-1/8	30	145	160	125	16
20	500	1-1/8	30	160	170	140	20
24	600	1-1/4	33	170	185	150	20

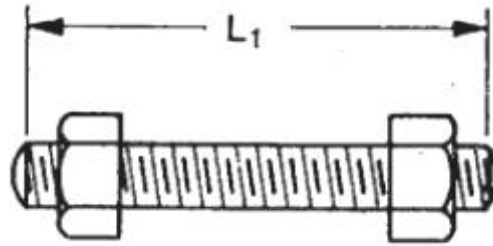
**Stud bolts and machine bolts for ASME B16.5 flanges - Class 300**



NPS	DN	Diameter of bolts (inches)	Diameter of bolts (mm)	L1		L2	Number of bolts
				RF	RJ	RF	
1/2	15	1/2	14	65	75	55	4
3/4	20	5/8	18	75	90	65	4
1	25	5/8	18	75	90	65	4
1 1/4	32	5/8	18	85	95	70	4
1 1/2	40	3/4	20	90	100	75	4
2	50	5/8	18	90	100	75	8
2 1/2	65	3/4	20	100	115	85	8
3	80	3/4	20	110	120	90	8
3 1/2	90	3/4	20	110	125	95	8
4	100	3/4	20	115	125	95	8
5	125	3/4	20	120	135	110	8
6	150	3/4	20	120	140	110	12
8	200	7/8	24	140	150	120	12
10	250	1	27	160	170	140	16
12	300	1-1/8	30	170	185	145	16
14	350	1-1/8	30	180	190	160	20
16	400	1-1/4	33	190	205	165	20
18	450	1-1/4	33	195	210	170	24
20	500	1-1/4	33	205	220	185	24
24	600	1-1/2	39	230	255	205	24

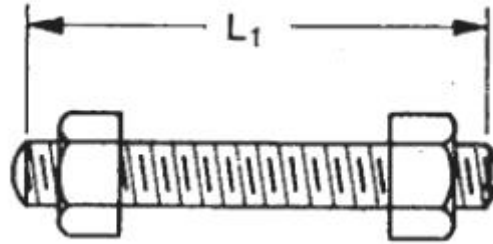


**Stud bolts for ASME B16.5 flanges - Class 600**



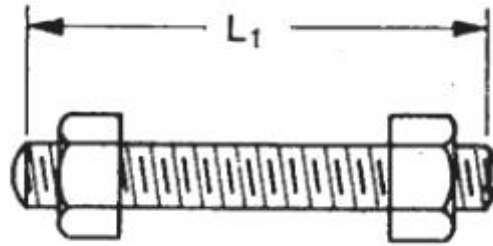
NPS	DN	Diameter of bolts (inches)	Diameter of bolts (mm)	Length RF	Length RJ	Length MF, TG	Number of bolts
1/2	15	1/2	14	75	75	70	4
3/4	20	5/8	18	90	90	85	4
1	25	5/8	18	90	90	85	4
1 1/4	32	5/8	18	95	95	90	4
1 1/2	40	3/4	20	110	110	100	4
2	50	5/8	18	110	110	100	8
2 1/2	65	3/4	20	120	120	115	8
3	80	3/4	20	125	125	120	8
3 1/2	90	7/8	24	140	140	135	8
4	100	7/8	24	145	145	140	8
5	125	1	27	165	165	160	8
6	150	1	27	170	170	165	12
8	200	1-1/8	30	190	195	185	12
10	250	1-1/4	33	215	215	210	16
12	300	1-1/4	33	220	220	215	20
14	350	1-3/8	36	235	235	230	20
16	400	1-1/2	39	255	255	250	20
18	450	1-5/8	42	275	275	265	20
20	500	1-5/8	42	285	290	280	24
24	600	1-7/8	48	330	335	325	24

**Stud bolts for ASME B16.5 flanges - Class 900**



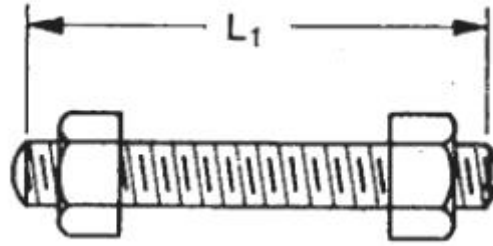
NPS	DN	Diameter of bolts (inches)	Diameter of bolts (mm)	Length RF	Length RJ	Length MF, TG	Number of bolts
1/2	15	3/4	20	110	110	100	4
3/4	20	3/4	20	115	115	110	4
1	25	7/8	24	125	125	120	4
1 1/4	32	7/8	24	125	125	120	4
1 1/2	40	1	27	140	140	135	4
2	50	7/8	24	145	145	140	8
2 1/2	65	1	27	160	160	150	8
3	90	7/8	34	145	145	140	8
4	100	1-1/8	30	170	170	165	8
5	125	1-1/4	33	190	190	185	8
6	150	1-1/8	30	190	195	185	12
8	200	1-3/8	36	220	220	215	12
10	250	1-3/8	36	235	235	230	16
12	300	1-3/8	36	255	255	250	20
14	350	1-1/2	39	275	280	265	20
16	400	1-5/8	42	285	290	280	20
18	450	1-7/8	48	325	335	320	20
20	500	2	52	350	360	345	20
24	600	2-1/2	64	440	455	430	20

**Stud bolts for ASME B16.5 flanges - Class 1500**



NPS	DN	Diameter of bolts (inches)	Diameter of bolts (mm)	Length RF	Length RJ	Length MF, TG	Number of bolts
1/2	15	3/4	20	110	110	100	4
3/4	20	3/4	20	115	115	110	4
1	25	7/8	24	125	125	120	4
1 1/4	32	7/8	24	125	125	120	4
1 1/2	40	1	27	140	140	135	4
2	50	7/8	24	145	145	140	8
2 1/2	65	1	27	160	160	150	8
3	90	1-1/8	30	180	170	180	8
4	100	1-1/4	33	195	190	195	8
5	125	1-1/2	39	250	240	250	8
6	150	1-3/8	36	260	255	265	12
8	200	1-5/8	42	290	285	300	12
10	250	1-7/8	48	335	330	345	12
12	300	2	52	375	370	385	16
14	350	2-1/4	56	405	400	425	16
16	400	2-1/2	64	445	440	470	16
18	450	2-3/4	72	495	490	525	16
20	500	3	76	540	535	565	16
24	600	3-1/2	90	615	610	650	16

**Stud bolts for ASME B16.5 flanges - Class 2500**



NPS	DN	Diameter of bolts (inches)	Diameter of bolts (mm)	Length RF	Length RJ	Length MF, TG	Number of bolts
1/2	15	3/4	20	120	120	115	4
3/4	20	3/4	20	125	125	120	4
1	25	7/8	24	140	140	135	4
1 1/4	32	1	27	150	150	145	4
1 1/2	40	1-1/8	30	170	170	165	4
2	50	1	27	180	180	170	8
2 1/2	65	1-1/8	30	195	205	190	8
3	90	1-1/4	33	220	230	215	8
4	100	1-1/2	39	255	260	250	8
5	125	1-3/4	45	300	310	290	8
6	150	2	52	345	355	335	8
8	200	2	52	380	395	375	12
10	250	2-1/2	64	490	510	485	12
12	300	2-3/4	72	540	560	535	12

**Approx weight of forged flanges - ASME B16.5**

**Class 150** unit: kg

DN	NPS	Slip On	Welding Neck	Socket Welding	Threaded	Lapped	Blind
15	1/2	0.41	0.5	0.42	0.42	0.47	0.43
20	3/4	0.59	0.74	0.6	0.61	0.66	0.64
25	1	0.82	1.06	0.83	0.84	0.89	0.9
32	1 ¼	0.99	1.31	1.02	1.02	1.06	1.13
40	1 ½	1.29	1.69	1.32	1.33	1.35	1.5
50	2	2.02	2.55	2.07	2.08	2.08	2.38
65	2 ½	3.42	4.26	3.52	3.54	3.56	4.09
80	3	3.89	4.98	4.02	4.05	3.96	4.96
100	4	5.46	7.13	--	5.7	5.55	7.18
125	5	6.24	8.93	--	6.61	6.38	8.83
150	6	7.6	10.8	--	8.14	7.69	11.6
200	8	12.5	18.1	--	13.2	12.6	20.1
250	10	16.4	24.1	--	17.7	16.5	28.8
300	12	26.8	37.7	--	28.4	27.1	44.1
350	14	35.2	49.7	--	37.5	39.7	59
400	16	44.6	60.6	--	47.6	50.9	76.2
450	18	49.2	69.5	--	53	56.8	94.4
500	20	62.6	86.6	--	67.3	71.8	123.8
600	24	88.2	118.4	--	95.4	99.8	187.7

**Class 300** unit: kg

DN	NPS	Slip On	Welding Neck	Socket Welding	Threaded	Lapped	Blind
15	1/2	0.65	0.75	0.67	0.65	0.71	0.64
20	3/4	1.08	1.24	1.11	1.09	1.12	1.06
25	1	1.39	1.64	1.43	1.41	1.47	1.42
32	1 ¼	1.74	2.13	1.8	1.77	1.83	1.86
40	1 ½	2.5	2.94	2.58	2.54	2.6	2.67
50	2	2.91	3.47	3.02	2.97	2.94	3.21
65	2 ½	4.37	5.28	4.57	4.48	4.33	4.88
80	3	5.91	7.11	6.2	6.06	5.88	6.9
100	4	9.8	11.6	--	10	9.71	11.7
125	5	12.3	15.5	--	12.8	12.2	15.8
150	6	16.1	19.9	--	16.7	15.8	21.4
200	8	24	30.1	--	24.8	23.5	34.3
250	10	34.3	43.6	--	35.7	36.3	53.8
300	12	49.7	62.7	--	51.5	53.8	79
350	14	70	87.7	--	72.5	74.5	106.1
400	16	89.5	109.8	--	92.7	96.3	139.2
450	18	108	133.4	--	111.9	114.8	175.6
500	20	134.8	162.2	--	139.6	142.5	222.6
600	24	201.9	235.4	--	209.4	209.3	340.6

**Approx weight of forged flanges - ASME B16.5**

**Class 600** unit: kg

DN	NPS	Slip On	Welding Neck	Socket Welding	Threaded	Lapped	Blind
15	1/2	0.74	0.86	0.74	0.74	0.71	0.76
20	3/4	1.21	1.39	1.21	1.22	1.17	1.23
25	1	1.57	1.83	1.57	1.58	1.5	1.64
32	1 ¼	2.11	2.52	2.12	2.14	1.95	2.32
40	1 ½	2.97	3.46	2.98	3.01	2.83	3.27
50	2	3.65	4.28	3.65	3.71	3.41	4.18
65	2 ½	5.29	6.3	5.36	5.39	4.99	6.16
80	3	7.11	8.44	7.22	5.39	6.68	8.58
100	4	14.8	17.3	--	15	14.2	17.6
125	5	24.4	28.7	--	24.9	23.7	29.5
150	6	28.7	33.6	--	29.3	27.8	36.1
200	8	43.7	52	--	44.6	42.4	59.4
250	10	71.3	85.6	--	72.9	75.9	98.7
300	12	84.9	102.3	--	86.7	90.7	125.2
350	14	99.4	121	--	102.1	108.7	152
400	16	141.1	167.5	--	144.5	154.2	213.4
450	18	174.6	202.8	--	178.8	189.2	274.3
500	20	222.1	253.3	--	227.4	242.7	352.2
600	24	313.3	354.9	--	321.8	345.7	535.1

**Class900** unit: kg

DN	NPS	Slip On	Welding Neck	Socket Welding	Threaded	Lapped	Blind
15	1/2	1.74	1.88	--	1.74	1.7	1.7
20	3/4	2.34	2.58	--	2.35	2.29	2.29
25	1	3.46	3.78	--	3.48	3.39	3.39
32	1 ¼	3.98	4.42	--	4.01	3.87	3.87
40	1 ½	5.52	6.17	--	5.57	5.38	5.38
50	2	9.74	10.9	--	9.8	9.49	9.49
65	2 ½	13.8	15.3	--	13.9	13.5	14
80	3	11.5	13.7	--	11.6	11	13.1
100	4	19.5	22.6	--	19.7	18.9	26.9
125	5	32.1	37	--	32.6	31.4	36.5
150	6	41	48.3	--	41.7	40	47.4
200	8	70.6	80.4	--	71.6	72.2	82.5
250	10	99.8	120.5	--	101.5	104.9	122
300	12	132.5	160.9	--	134.4	141.1	173
350	14	151.9	186.9	--	154.7	161.2	206
400	16	184.5	235.1	--	188.2	199.2	259
450	18	255.9	319.3	--	260.5	276.9	367
500	20	313.5	389.3	--	319.3	347.1	463
600	24	602.7	721.3	--	612.4	676.9	876

**Approx weight of forged flanges - ASME B16.5**

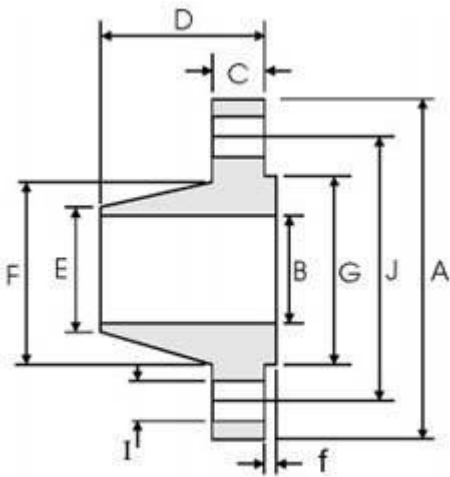
**Class 1500** unit: kg

DN	NPS	Slip On	Welding Neck	Socket Welding	Threaded	Lapped	Blind
15	1/2	1.74	1.87	1.76	1.74	1.7	1.77
20	3/4	2.34	2.58	2.37	2.35	2.29	2.42
25	1	3.46	3.78	3.53	3.48	3.39	3.6
32	1 ¼	3.98	4.42	4.06	4.01	3.87	4.21
40	1 ½	5.52	6.17	5.62	5.57	5.38	5.92
50	2	9.74	11	9.96	9.8	9.49	9.95
65	2 ½	13.8	15.3	14.2	13.9	13.5	14.1
80	3	--	19.9	--	--	19.5	18.9
100	4	--	30.2	--	--	30	29.8
125	5	--	57.8	--	--	57.3	58.5
150	6	--	69.5	--	--	68.8	72.2
200	8	--	119.6	--	--	115.8	122.9
250	10	--	207.5	--	--	200.3	211.6
300	12	--	312.9	--	--	317.9	317.3
350	14	--	413.6	--	--	428.1	422.6
400	16	--	528.3	--	--	551.3	577.9
450	18	--	675.1	--	--	717.8	763.3
500	20	--	860.8	--	--	870.8	968.8
600	24	--	1376.7	--	--	1390.3	1562.3

**Class 2500** unit: kg

DN	NPS	Slip On	Welding Neck	Socket Welding	Threaded	Lapped	Blind
15	1/2	--	3.27	--	3.07	3.02	3.09
20	3/4	--	3.82	--	3.5	3.44	3.54
25	1	--	5.44	--	4.94	4.85	5.05
32	1 ¼	--	7.98	--	7.25	7.1	7.42
40	1 ½	--	11.4	--	10.3	10.1	10.6
50	2	--	16.8	--	14.9	14.6	15.6
65	2 ½	--	24.2	--	21.3	20.8	22.4
80	3	--	37.6	--	--	32.2	34.9
100	4	--	56.8	--	--	48.8	53.6
125	5	--	96.3	--	--	82.6	91.2
150	6	--	149.5	--	--	127.9	142.5
200	8	--	224.4	--	--	183.5	211.6
250	10	--	436.8	--	--	355.7	413.5
300	12	--	622.9	--	--	498.3	589.6

**Dimensions of weld neck flanges - ASME B16.47 series A Class150**



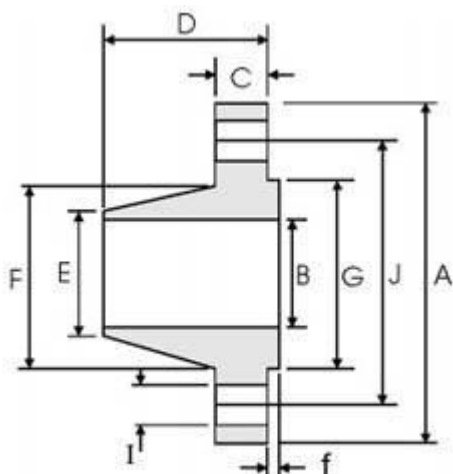
**f=2mm**

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	B	C	D	E	F	G		I	J	R
650	26	870	-	66.7	119	660.4	676	749	24	34.9	806.4	10
700	28	925	-	69.9	124	711.2	727	800	28	34.9	863.6	11
750	30	985	-	73.1	135	762.0	781	857	28	34.9	914.4	11
800	32	1060	-	79.4	143	812.8	832	914	28	41.3	977.9	11
850	34	1110	-	81.0	148	863.6	883	965	32	41.3	1028.7	13
900	36	1170	-	88.9	156	914.4	933	1022	32	41.3	1085.8	13
950	38	1240	-	85.8	156	965.2	991	1073	32	41.3	1149.4	13
1000	40	1290	-	88.9	162	1016.0	1041	1124	36	41.3	1200.2	13
1050	42	1345	-	95.3	170	1066.8	1092	1194	36	41.3	1257.3	13
1100	44	1405	-	100.1	176	1117.6	1143	1245	40	41.3	1314.4	13
1150	46	1455	-	101.6	184	1168.4	1197	1295	40	41.3	1365.2	13
1200	48	1510	-	106.4	191	1219.2	1248	1359	44	41.3	1422.4	13
1250	50	1570	-	109.6	202	1270.0	1302	1410	44	47.6	1479.6	13
1300	52	1625	-	114.3	208	1320.8	1353	1461	44	47.6	1536.7	13
1350	54	1685	-	119.1	214	1371.6	1403	1511	44	47.6	1593.8	13
1400	56	1745	-	122.3	227	1422.4	1457	1575	48	47.6	1651.0	13
1450	58	1805	-	127.0	233	1473.2	1508	1626	48	47.6	1708.2	13
1500	60	1855	-	130.2	238	1524.0	1559	1676	52	47.6	1759.0	13

Inside diameter B to be specified by the purchaser



## Dimensions of weld neck flanges - ASME B16.47 series A Class300

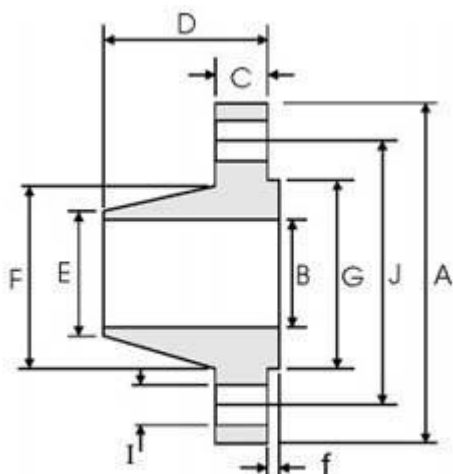


f=2mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	B	C	D	E	F	G	n	I	J	R
650	26	970	-	77.8	183	660.4	721	749	28	44.5	876.3	10
700	28	1035	-	84.2	195	711.2	775	800	28	44.5	939.8	11
750	30	1090	-	90.5	208	762.0	827	857	28	47.6	997.0	11
800	32	1150	-	96.9	221	812.8	881	914	28	50.8	1054.1	11
850	34	1205	-	100.1	230	863.6	937	965	28	50.8	1104.9	13
900	36	1270	-	103.2	240	914.4	991	1022	32	54.0	1168.4	13
950	38	1170	-	106.4	179	965.2	994	1029	32	41.3	1092.2	13
1000	40	1240	-	112.8	192	1016.0	1048	1086	32	44.5	1155.7	13
1050	42	1290	-	117.5	198	1066.8	1099	1137	32	44.5	1206.5	13
1100	44	1355	-	122.3	205	1117.6	1149	1194	32	47.6	1263.6	13
1150	46	1415	-	127.0	214	1168.4	1203	1245	28	50.8	1320.8	13
1200	48	1465	-	131.8	222	1219.2	1254	1302	32	50.8	1371.6	13
1250	50	1530	-	138.2	230	1270.0	1305	1359	32	54.0	1428.8	13
1300	52	1580	-	142.9	237	1320.8	1356	1410	32	54.0	1479.6	13
1350	54	1660	-	150.9	251	1371.6	1410	1467	28	60.3	1549.4	13
1400	56	1710	-	152.4	259	1422.4	1464	1518	28	60.3	1600.2	13
1450	58	1760	-	157.2	265	1473.2	1514	1575	32	60.3	1651.0	13
1500	60	1810	-	162.0	271	1524.0	1565	1626	32	60.3	1701.8	13

Inside diameter B to be specified by the purchaser

## Dimensions of weld neck flanges - ASME B16.47 series A Class400

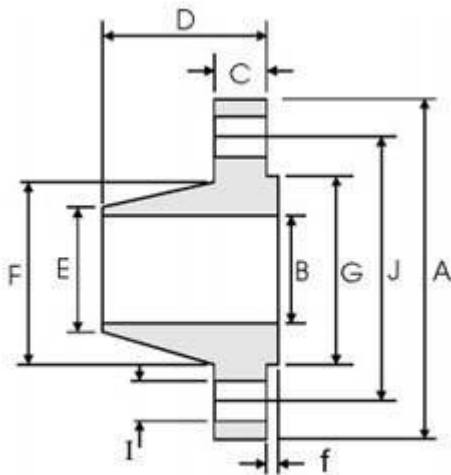


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	B	C	D	E	F	G	n	I	J	R
650	26	970	-	88.9	194	660.4	727	749	28	47.6	876.3	11
700	28	1035	-	95.3	206	711.2	783	800	28	50.8	939.8	13
750	30	1090	-	101.6	219	762.0	837	857	28	54.0	997.0	13
800	32	1150	-	108.0	232	812.8	889	914	28	54.0	1054.1	13
850	34	1205	-	111.2	241	863.6	945	965	28	54.0	1104.9	14
900	36	1270	-	114.3	251	914.4	1000	1022	32	54.0	1168.4	14
950	38	1205	-	123.9	206	965.2	1003	1035	32	47.6	1117.6	14
1000	40	1270	-	130.2	216	1016.0	1054	1092	32	50.8	1174.8	14
1050	42	1320	-	133.4	224	1066.8	1108	1143	32	50.8	1225.6	14
1100	44	1385	-	139.7	233	1117.6	1159	1200	32	54.0	1282.7	14
1150	46	1440	-	146.1	244	1168.4	1213	1257	36	54.0	1339.8	14
1200	48	1510	-	152.4	257	1219.2	1267	1308	28	60.3	1403.4	14
1250	50	1570	-	157.2	268	1270.0	1321	1362	32	60.3	1460.5	14
1300	52	1620	-	162.0	276	1320.8	1372	1413	32	60.3	1511.3	14
1350	54	1700	-	169.9	289	1371.6	1426	1470	28	66.7	1581.2	14
1400	56	1755	-	174.7	298	1422.4	1480	1527	32	66.7	1632.0	14
1450	58	1805	-	177.8	306	1473.2	1530	1578	32	66.7	1682.8	14
1500	60	1885	-	185.8	319	1524.0	1584	1635	32	73.0	1752.6	14

Inside diameter B to be specified by the purchaser

**Dimensions of weld neck flanges - ASME B16.47 series A Class600**

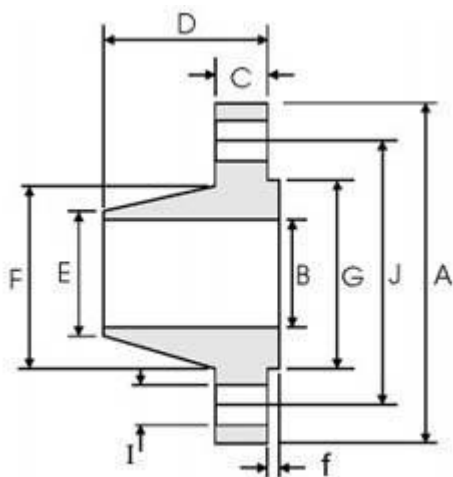


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius ( Min.)
		A	B	C	D	E	F	G		I	J	R
650	26	1015	-	108.0	222	660.4	748	749	28	50.8	914.4	13
700	28	1075	-	111.2	235	711.2	803	800	28	54.0	965.2	13
750	30	1130	-	114.3	248	762.0	862	857	28	54.0	1022.4	13
800	32	1195	-	117.5	260	812.8	918	914	28	60.3	1079.5	13
850	34	1245	-	120.7	270	863.6	973	965	28	60.3	1130.3	14
900	36	1315	-	123.9	283	914.4	1032	1022	28	54.0	1193.8	14
950	38	1270	-	152.4	254	965.2	1022	1054	28	60.3	1162.0	14
1000	40	1320	-	158.8	264	1016.0	1073	1111	32	60.3	1212.8	14
1050	42	1405	-	168.3	279	1066.8	1127	1168	28	54.0	1282.7	14
1100	44	1455	-	173.1	289	1117.6	1181	1226	32	54.0	1333.5	14
1150	46	1510	-	179.4	300	1168.4	1235	1276	32	54.0	1390.6	14
1200	48	1595	-	189.0	316	1219.2	1289	1334	32	73.0	1460.5	14
1250	50	1670	-	196.9	329	1270.0	1343	1384	28	79.4	1524.0	14
1300	52	1720	-	203.2	337	1320.8	1394	1435	32	79.4	1574.8	14
1350	54	1780	-	209.6	349	1371.6	1448	1492	32	79.4	1632.0	14
1400	56	1855	-	217.5	362	1422.4	1502	1543	32	85.7	1695.4	16
1450	58	1905	-	222.3	370	1473.2	1553	1600	32	85.7	1746.2	16
1500	60	1995	-	233.4	389	1524.0	1610	1657	28	92.1	1822.4	17

Inside diameter B to be specified by the purchaser

**Dimensions of weld neck flanges - ASME B16.47 series A Class900**

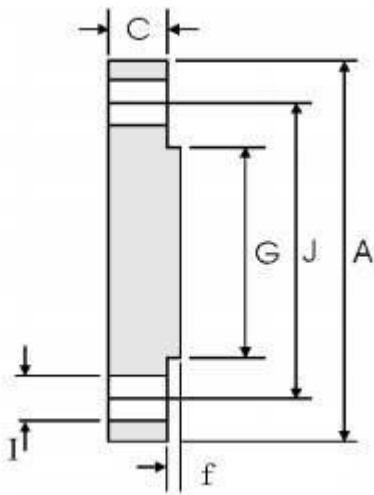


f=7mm

DN	NPS	Overall Diameter	Inside Diameter	Thickness of Flange(Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	B	C	D	E	F	G	n	I	J	R
650	26	1085	-	139.7	286	660.4	775	749	20	73.0	952.5	11
700	28	1170	-	142.9	298	711.2	832	800	20	79.4	1022.4	13
750	30	1230	-	149.3	311	762.0	889	857	20	79.4	1085.8	13
800	32	1315	-	158.8	330	812.8	946	914	20	85.7	1155.7	13
850	34	1395	-	165.1	349	863.6	1006	965	20	92.0	1225.6	14
900	36	1460	-	171.5	362	914.4	1064	1022	20	92.0	1289.0	14
950	38	1460	-	190.5	352	965.2	1073	1099	20	92.0	1289.0	19
1000	40	1510	-	196.9	364	1016.0	1127	1162	24	92.0	1339.8	21
1050	42	1560	-	206.4	371	1066.8	1176	1213	24	92.0	1390.6	21
1100	44	1650	-	214.4	391	1117.6	1235	1270	24	98.4	1463.7	22
1150	46	1735	-	225.5	411	1168.4	1292	1334	24	104.8	1536.7	22
1200	48	1785	-	233.4	419	1219.2	1343	1384	24	104.8	1587.5	24

Inside diameter B to be specified by the purchaser

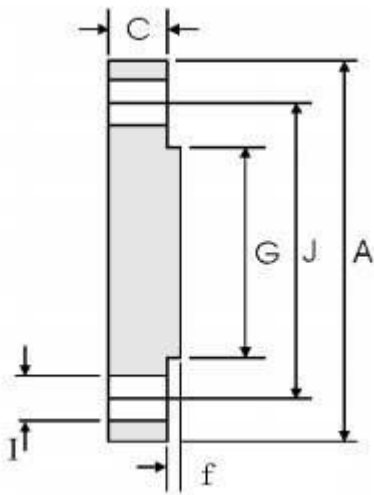
**Dimensions of blind flanges - ASME B16.47 series A Class 150**



f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	870	66.7	749	24	34.9	806.4
700	28	925	69.9	800	28	34.9	863.6
750	30	985	73.1	857	28	34.9	914.4
800	32	1060	79.4	914	28	41.3	977.9
850	34	1110	81.0	965	32	41.3	1028.7
900	36	1170	88.9	1022	32	41.3	1085.8
950	38	1240	85.8	1073	32	41.3	1149.4
1000	40	1290	88.9	1124	36	41.3	1200.2
1050	42	1345	95.3	1194	36	41.3	1257.3
1100	44	1405	100.1	1245	40	41.3	1314.4
1150	46	1455	101.6	1295	40	41.3	1365.2
1200	48	1510	106.4	1359	44	41.3	1422.4
1250	50	1570	109.6	1410	44	47.6	1479.6
1300	52	1625	114.3	1461	44	47.6	1536.7
1350	54	1685	119.1	1511	44	47.6	1593.8
1400	56	1745	122.3	1575	48	47.6	1651.0
1450	58	1805	127.0	1626	48	47.6	1708.2
1500	60	1855	130.2	1676	52	47.6	1759.0

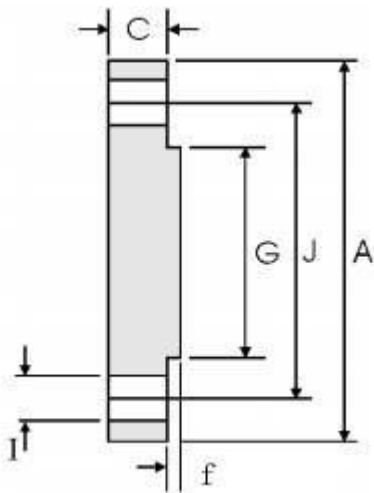
**Dimensions of blind flanges - ASME B16.47 series A Class 300**



f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	970	82.6	749	28	44.5	876.3
700	28	1035	88.9	800	28	44.5	939.8
750	30	1090	93.7	857	28	47.6	997.0
800	32	1150	98.5	914	28	50.8	1054.1
850	34	1205	103.2	965	28	50.8	1104.9
900	36	1270	109.6	1022	32	54.0	1168.4
950	38	1170	106.4	1029	32	41.3	1092.2
1000	40	1240	112.8	1086	32	44.5	1155.7
1050	42	1290	117.5	1137	32	44.5	1206.5
1100	44	1355	122.3	1194	32	47.6	1263.6
1150	46	1415	127.0	1245	28	50.8	1320.8
1200	48	1465	131.8	1302	32	50.8	1371.6
1250	50	1530	138.2	1359	32	54.0	1428.8
1300	52	1580	142.9	1410	32	54.0	1479.6
1350	54	1660	150.9	1467	28	60.3	1549.4
1400	56	1710	152.4	1518	28	60.3	1600.2
1450	58	1760	157.2	1575	32	60.3	1651.0
1500	60	1810	162.0	1626	32	60.3	1701.8

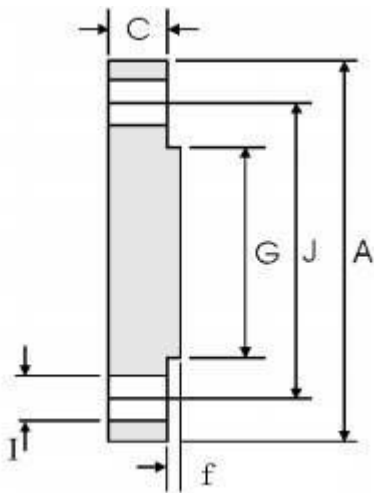
**Dimensions of blind flanges - ASME B16.47 series A Class 400**



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	970	98.5	749	28	47.6	876.3
700	28	1035	104.8	800	28	50.8	939.8
750	30	1090	111.2	857	28	54.0	997.0
800	32	1150	115.9	914	28	54.0	1054.1
850	34	1205	122.3	965	28	54.0	1104.9
900	36	1270	128.6	1022	32	54.0	1168.4
950	38	1205	123.9	1035	32	47.6	1117.6
1000	40	1270	130.2	1092	32	50.8	1174.8
1050	42	1320	133.4	1143	32	50.8	1225.6
1100	44	1385	139.7	1200	32	54.0	1282.7
1150	46	1440	146.1	1257	36	54.0	1339.8
1200	48	1510	152.4	1308	28	60.3	1403.4
1250	50	1570	157.2	1362	32	60.3	1460.5
1300	52	1620	162.0	1413	32	60.3	1511.3
1350	54	1700	169.9	1470	28	66.7	1581.2
1400	56	1755	174.7	1527	32	66.7	1632.0
1450	58	1805	177.8	1578	32	66.7	1682.8
1500	60	1885	185.8	1635	32	73.0	1752.6

**Dimensions of blind flanges - ASME B16.47 series A Class 600**

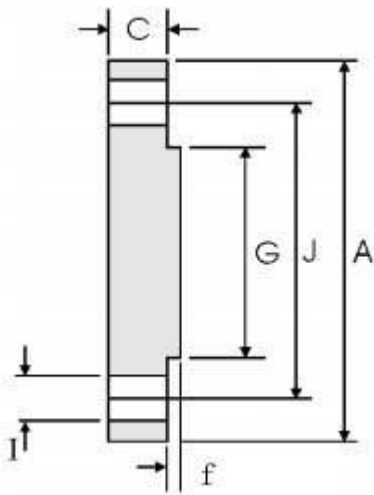


f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	1015	125.5	749	28	50.8	914.4
700	28	1075	131.8	800	28	54.0	965.2
750	30	1130	139.7	857	28	54.0	1022.4
800	32	1195	147.7	914	28	60.3	1079.5
850	34	1245	154.0	965	28	60.3	1130.3
900	36	1315	162.0	1022	28	54.0	1193.8
950	38	1270	155.0	1054	28	60.3	1162.0
1000	40	1320	162.0	1111	32	60.3	1212.8
1050	42	1405	171.5	1168	28	54.0	1282.7
1100	44	1455	177.8	1226	32	54.0	1333.5
1150	46	1510	185.8	1276	32	54.0	1390.6
1200	48	1595	195.3	1334	32	73.0	1460.5
1250	50	1670	203.2	1384	28	79.4	1524.0
1300	52	1720	209.6	1435	32	79.4	1574.8
1350	54	1780	217.5	1492	32	79.4	1632.0
1400	56	1855	225.5	1543	32	85.7	1695.4
1450	58	1905	231.8	1600	32	85.7	1746.2
1500	60	1995	242.9	1657	28	92.1	1822.4



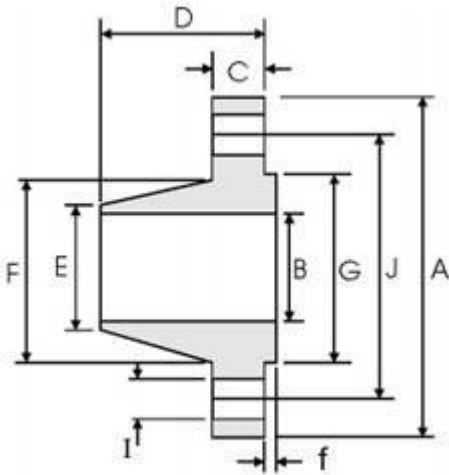
**Dimensions of blind flanges - ASME B16.47 series A Class 900**



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	1085	160.4	749	20	73.0	952.5
700	28	1170	171.5	800	20	79.4	1022.4
750	30	1230	182.6	857	20	79.4	1085.8
800	32	1315	193.7	914	20	85.7	1155.7
850	34	1395	204.8	965	20	92.0	1225.6
900	36	1460	214.4	1022	20	92.0	1289.0
950	38	1460	215.9	1099	20	92.0	1289.0
1000	40	1510	223.9	1162	24	92.0	1339.8
1050	42	1560	231.8	1213	24	92.0	1390.6
1100	44	1650	242.9	1270	24	98.4	1463.7
1150	46	1735	255.6	1334	24	104.8	1536.7
1200	48	1785	263.6	1384	24	104.8	1587.5

**Dimensions of weld neck flanges - ASME B16.47 series B Class 75**

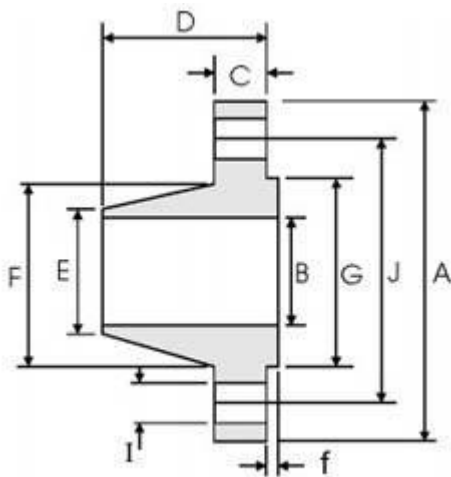


f=2mm

DN	NPS	Overall Diameter	Thickness (Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	C	D	E	F	G	n	I	J	R
650	26	760	31.9	57	661.9	676	705	36	19.05	723.9	8
700	28	815	31.9	60	712.7	727	756	40	19.05	774.7	8
750	30	865	31.9	64	763.5	778	806	44	19.05	825.5	8
800	32	915	33.5	68	814.3	829	857	48	19.05	876.3	8
850	34	965	33.5	72	865.1	879	908	52	19.05	927.1	8
900	36	1035	35.0	84	915.9	935	965	40	22.23	992.2	10
950	38	1085	36.6	87	966.7	986	1016	40	22.23	1043.0	10
1000	40	1135	36.6	91	1017.5	1037	1067	44	22.23	1093.8	10
1050	42	1185	38.2	94	1068.3	1087	1118	48	22.23	1144.6	10
1100	44	1250	41.4	103	1119.1	1140	1175	36	25.4	1203.3	10
1150	46	1300	43.0	106	1169.9	1191	1226	40	25.4	1254.1	10
1200	48	1355	44.6	110	1220.7	1241	1276	44	25.4	1304.9	10
1250	50	1405	46.2	114	1271.5	1294	1327	44	25.4	1355.7	10
1300	52	1455	46.2	119	1322.3	1345	1378	48	25.4	1409.7	10
1350	54	1510	47.8	124	1373.1	1397	1429	48	25.4	1460.5	10
1400	56	1575	49.3	133	1423.9	1451	1486	40	28.58	1520.8	11
1450	58	1625	50.9	137	1474.7	1502	1537	44	28.58	1571.6	11
1500	60	1675	54.1	143	1525.5	1553	1588	44	28.58	1622.4	11

Inside diameter B to be specified by the purchaser

**Dimensions of weld neck flanges - ASME B16.47 series B Class 150**

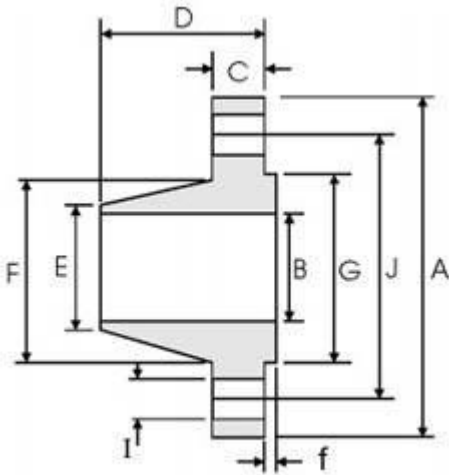


f=2mm

DN	NPS	Overall Diameter	Thickness (Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	C	D	E	F	G	n	I	J	R
650	26	785	39.8	87	661.9	684	711	36	22.23	744.5	10
700	28	835	43.0	94	712.7	735	762	40	22.23	795.3	10
750	30	885	43.0	98	763.5	787	813	44	22.23	846.1	10
800	32	940	44.6	106	814.3	840	864	48	22.23	900.1	10
850	34	1005	47.7	109	865.1	892	921	40	25.4	957.3	10
900	36	1055	50.9	116	915.9	945	972	44	25.4	1009.6	10
950	38	1125	52.5	122	968.2	997	1022	40	28.58	1070.0	10
1000	40	1175	54.1	127	1019.0	1049	1080	44	28.58	1120.8	10
1050	42	1225	57.3	132	1069.8	1102	1130	48	28.58	1171.6	11
1100	44	1275	58.9	135	1120.6	1153	1181	52	28.58	1222.4	11
1150	46	1340	60.4	143	1171.4	1205	1235	40	31.75	1284.3	11
1200	48	1390	63.6	148	1222.2	1257	1289	44	31.75	1335.1	11
1250	50	1445	66.8	152	1273.0	1308	1340	48	31.75	1385.9	11
1300	52	1495	68.4	156	1323.8	1360	1391	52	31.75	1436.7	11
1350	54	1550	70.0	160	1374.6	1413	1441	56	31.75	1492.2	11
1400	56	1600	71.6	165	1425.4	1465	1492	60	31.75	1543.0	14
1450	58	1675	73.1	173	1476.2	1516	1543	48	34.92	1611.3	14
1500	60	1725	74.7	178	1527.0	1570	1600	52	34.92	1662.1	14

Inside diameter B to be specified by the purchaser

**Dimensions of weld neck flanges - ASME B16.47 series B Class 300**

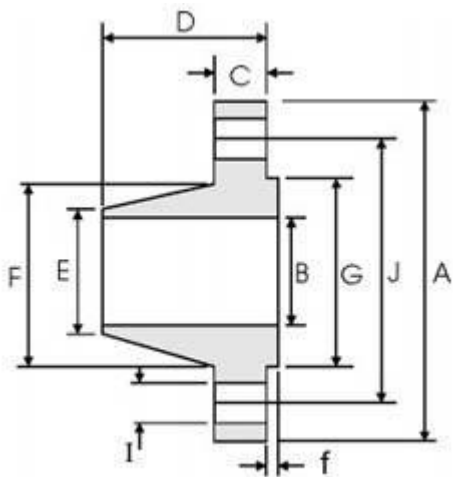


f=2mm

DN	NPS	Overall Diameter	Thickness (Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	C	D	E	F	G	n	I	J	R
650	26	865	87.4	168	665.2	702	737	32	34.9	803.3	14
700	28	920	87.4	148	716.0	756	787	36	34.9	857.2	14
750	30	990	92.1	156	768.4	813	845	36	38.1	920.8	14
800	32	1055	101.6	167	819.2	864	902	32	41.28	977.9	16
850	34	1110	101.6	171	870.0	918	953	36	41.28	1031.9	16
900	36	1170	101.6	179	920.8	965	1010	32	44.45	1089.0	16
950	38	1220	109.6	165	971.6	1016	1060	36	44.45	1139.8	16
1000	40	1275	114.3	197	1022.4	1067	1114	40	44.45	1190.6	16
1050	42	1335	117.5	203	1074.7	1118	1168	36	47.63	1244.6	16
1100	44	1385	125.5	213	1125.5	1173	1219	40	47.63	1295.4	16
1150	46	1460	127.0	221	1176.3	1229	1270	36	50.8	1365.2	16
1200	48	1510	127.0	222	1227.1	1278	1327	40	50.8	1416.0	16
1250	50	1560	136.6	233	1277.9	1330	1378	44	50.8	1466.8	16
1300	52	1615	141.3	241	1328.7	1383	1429	48	50.8	1517.6	16
1350	54	1675	135.0	238	1379.5	1435	1480	48	50.8	1578.0	16
1400	56	1765	152.4	267	1430.3	1494	1537	36	60.33	1651.0	17
1450	58	1825	152.4	273	1481.1	1548	1594	40	60.33	1712.9	17
1500	60	1880	149.3	270	1557.3	1599	1651	40	60.33	1763.7	17

Inside diameter B to be specified by the purchaser

**Dimensions of weld neck flanges - ASME B16.47 series B Class 400**



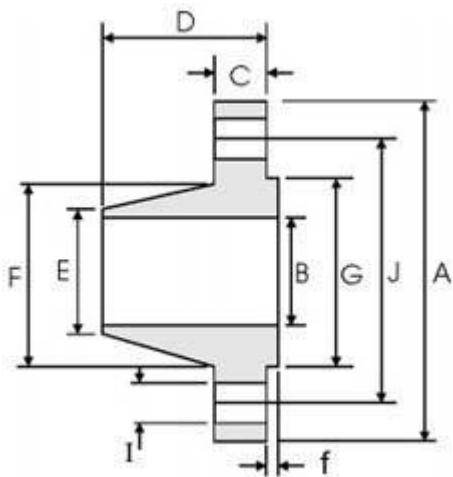
f=7mm

DN	NPS	Overall Diameter	Thickness (Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	C	D	E	F	G	n	I	J	R
650	26	850	88.9	149	660.4	689	711	28	38.1	781.0	11
700	28	915	95.3	159	711.2	740	762	24	41.28	838.2	13
750	30	970	101.6	170	762.0	794	819	28	41.28	895.4	13
800	32	1035	108.0	179	812.8	845	873	28	44.45	952.5	13
850	34	1085	111.2	187	863.6	899	927	32	44.45	1003.3	14
900	36	1155	119.1	200	914.4	952	981	28	47.63	1066.8	14

1. Inside diameter B to be specified by the purchaser

2. Dimensions for Classes 400, 600, and 900 NPS 38 and larger for Series B flanges are the same as for the Series A flanges.

**Dimensions of weld neck flanges - ASME B16.47 series B Class 600**



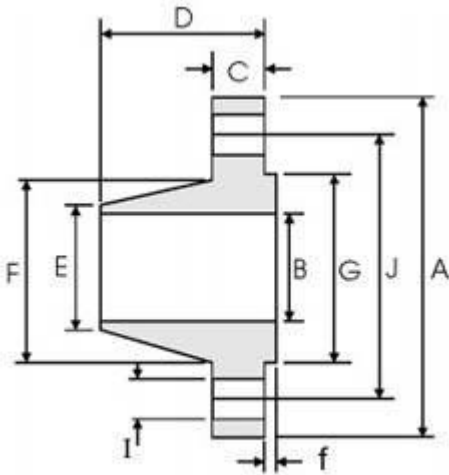
f=7mm

DN	NPS	Overall Diameter	Thickness (Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	C	D	E	F	G	n	I	J	R
650	26	850	111.2	181	660.4	698	727	28	44.45	806.4	11
700	28	950	115.9	190	711.2	752	784	28	47.63	863.6	13
750	30	1020	125.5	205	762.0	806	841	28	50.8	927.1	13
800	32	1085	130.2	216	812.8	860	895	28	53.97	984.2	13
850	34	1160	141.3	233	863.6	914	953	24	60.33	1054.1	14
900	36	1215	146.1	243	914.4	968	1010	28	60.33	1104.9	14

1. Inside diameter B to be specified by the purchaser

2. Dimensions for Classes 400, 600, and 900 NPS 38 and larger for Series B flanges are the same as for the Series A flanges.

**Dimensions of weld neck flanges - ASME B16.47 series B Class 900**



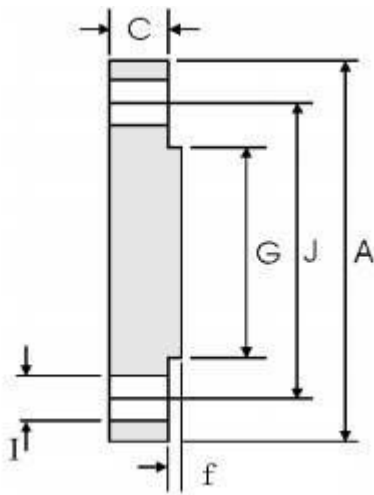
f=7mm

DN	NPS	Overall Diameter	Thickness (Min.)	Overall Length	Diameter at Bevel	Diameter of Hub	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle	Fillet Radius (Min.)
		A	C	D	E	F	G		I	J	R
650	26	1020	135.0	259	660.4	743	762	20	66.68	901.7	11
700	28	1105	147.7	276	711.2	797	819	20	73.02	971.6	13
750	30	1180	155.6	289	762.0	851	876	20	79.37	1035.0	13
800	32	1240	160.4	303	812.8	908	927	20	79.37	1092.2	13
850	34	1315	171.5	319	863.6	962	991	20	85.73	1155.7	14
900	36	1345	173.1	325	914.4	1016	1029	24	79.37	1200.2	14

1. Inside diameter B to be specified by the purchaser

2. Dimensions for Classes 400, 600, and 900 NPS 38 and larger for Series B flanges are the same as for the Series A flanges.

Dimensions of blind flanges - ASME B16.47 series B Class 75

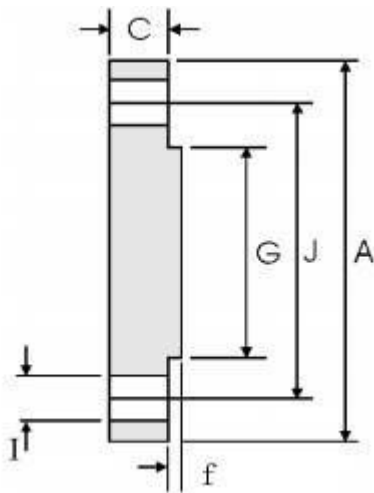


f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	760	31.9	705	36	19.05	723.9
700	28	815	31.9	756	40	19.05	774.7
750	30	865	31.9	806	44	19.05	825.5
800	32	915	35.0	857	48	19.05	876.3
850	34	965	36.6	908	52	19.05	927.1
900	36	1035	40.9	965	40	22.23	992.2
950	38	1085	43.0	1016	40	22.23	1043.0
1000	40	1135	43.0	1067	44	22.23	1093.8
1050	42	1185	46.3	1118	48	22.23	1144.6
1100	44	1250	47.7	1175	36	25.4	1203.3
1150	46	1300	49.3	1226	40	25.4	1254.1
1200	48	1355	52.5	1276	44	25.4	1304.9
1250	50	1405	54.1	1327	44	25.4	1355.7
1300	52	1455	55.7	1378	48	25.4	1409.7
1350	54	1510	58.9	1429	48	25.4	1460.5
1400	56	1575	60.4	1486	40	28.58	1520.8
1450	58	1625	62.0	1537	44	28.58	1571.6
1500	60	1675	65.2	1588	44	28.58	1622.4



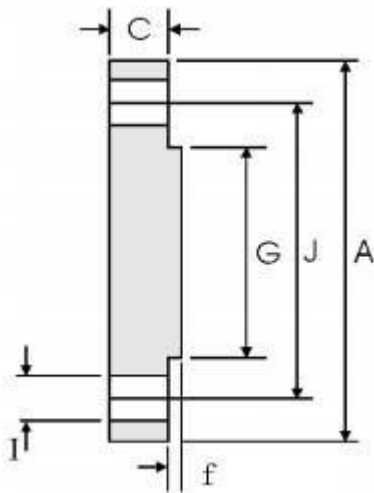
**Dimensions of blind flanges - ASME B16.47 series B Class 150**



f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	785	43.0	711	36	22.23	744.5
700	28	835	46.2	762	40	22.23	795.3
750	30	885	49.3	813	44	22.23	846.1
800	32	940	52.5	864	48	22.23	900.1
850	34	1005	55.7	921	40	25.4	957.3
900	36	1055	57.3	972	44	25.4	1009.6
950	38	1125	62.0	1022	40	28.58	1070.0
1000	40	1175	65.2	1080	44	28.58	1120.8
1050	42	1225	66.8	1130	48	28.58	1171.6
1100	44	1275	70.0	1181	52	28.58	1222.4
1150	46	1340	73.1	1235	40	31.75	1284.3
1200	48	1390	76.3	1289	44	31.75	1335.1
1250	50	1445	79.5	1340	48	31.75	1385.9
1300	52	1495	82.7	1391	52	31.75	1436.7
1350	54	1550	85.8	1441	56	31.75	1492.2
1400	56	1600	89.0	1492	60	31.75	1543.0
1450	58	1675	91.9	1543	48	34.92	1611.3
1500	60	1725	95.4	1600	52	34.92	1662.1

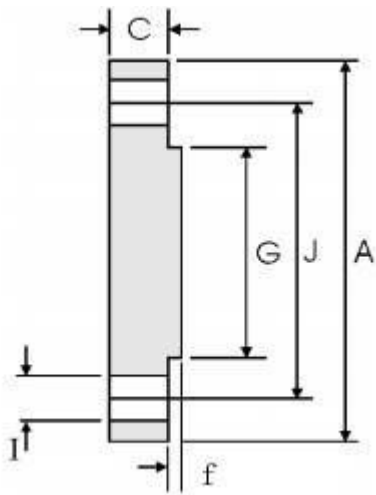
**Dimensions of blind flanges - ASME B16.47 series B Class 300**



f=2mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	865	87.4	737	32	34.9	803.3
700	28	920	87.4	787	36	34.9	857.2
750	30	990	92.1	845	36	38.1	920.8
800	32	1055	101.6	902	32	41.28	977.9
850	34	1110	101.6	953	36	41.28	1031.9
900	36	1170	101.6	1010	32	44.45	1089.0
950	38	1220	109.6	1060	36	44.45	1139.8
1000	40	1275	114.3	1114	40	44.45	1190.6
1050	42	1335	117.5	1168	36	47.63	1244.6
1100	44	1385	125.5	1219	40	47.63	1295.4
1150	46	1460	128.6	1270	36	50.8	1365.2
1200	48	1510	133.4	1327	40	50.8	1416.0
1250	50	1560	138.2	1378	44	50.8	1466.8
1300	52	1615	142.6	1429	48	50.8	1517.6
1350	54	1675	147.7	1480	48	50.8	1578.0
1400	56	1765	155.4	1537	36	60.33	1651.0
1450	58	1825	160.4	1594	40	60.33	1712.9
1500	60	1880	165.1	1651	40	60.33	1763.7

**Dimensions of blind flanges - ASME B16.47 series B Class 400**

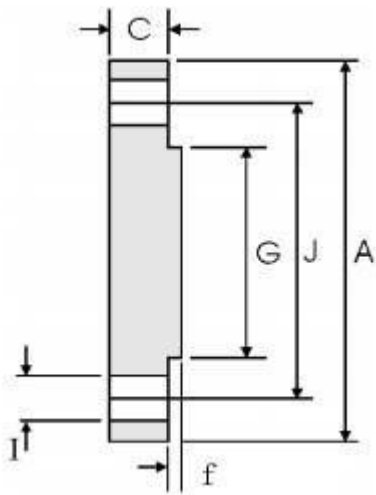


f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	850	88.9	711	28	38.1	781.0
700	28	915	95.3	762	24	41.28	838.2
750	30	970	101.6	819	28	41.28	895.4
800	32	1035	108.0	873	28	44.45	952.5
850	34	1085	111.2	927	32	44.45	1003.3
900	36	1155	119.1	981	28	47.63	1066.8

Dimensions for Classes 400, 600, and 900 NPS 38 and larger for Series B flanges are the same as for the Series A flanges.

**Dimensions of blind flanges - ASME B16.47 series B Class 600**

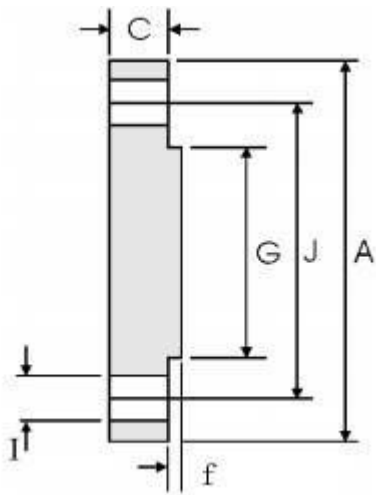


f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	850	111.3	727	28	44.45	806.4
700	28	915	115.9	784	28	47.63	863.6
750	30	970	127.0	841	28	50.8	927.1
800	32	1035	134.9	895	28	53.97	984.2
850	34	1085	144.2	953	24	60.33	1054.1
900	36	1155	150.9	1010	28	60.33	1104.9

Dimensions for Classes 400, 600, and 900 NPS 38 and larger for Series B flanges are the same as for the Series A flanges.

**Dimensions of blind flanges - ASME B16.47 series B Class 900**



f=7mm

DN	NPS	Overall Diameter	Thickness of Flange(Min.)	Diameter of Face	Number of Bolts	Diameter of Bolt Holes	Diameter of Bolt Circle
		A	C	G	n	I	J
650	26	1020	154.0	762	20	66.68	901.7
700	28	1105	166.7	819	20	73.02	971.6
750	30	1180	176.1	876	20	79.37	1035.0
800	32	1240	186.0	927	20	79.37	1092.2
850	34	1315	195.0	991	20	85.73	1155.7
900	36	1345	201.7	1029	24	79.37	1200.2

Dimensions for Classes 400, 600, and 900 NPS 38 and larger for Series B flanges are the same as for the Series A flanges.

**Approx weight of forged flanges - ASME B16.47**

unit: kg

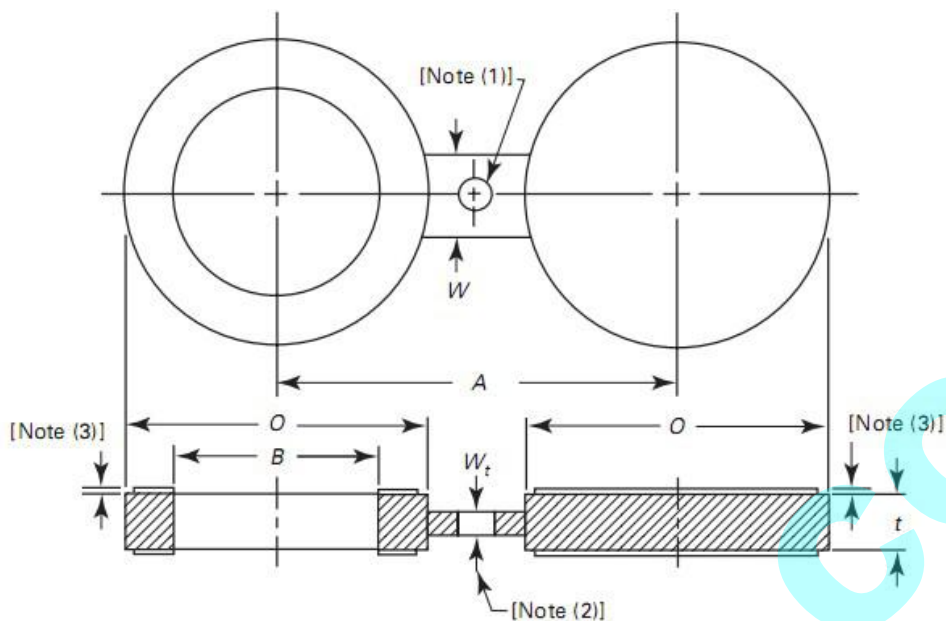
**Series A (MSS SP-44)**

DN	NPS	Class150		Class300		Class600		Class900	
		WN	BL	WN	BL	WN	BL	WN(XS)	BL
650	26	142.4	306.1	270.5	458.3	423.0	65.0	673.8	1083.0
700	28	161.4	361.9	329.0	565.3	479.7	90.3	798.5	1343.1
750	30	190.8	430.9	376.2	658.2	541.8	1061.2	913.3	1594.4
800	32	238.2	537.3	436.8	769.2	609.6	1244.7	1098.9	1924.5
850	34	254.4	599.9	488.7	889.0	667.3	1416.2	1281.9	2283.6
900	36	304.8	733.7	546.0	1039.7	755.1	1646.7	1457.0	2639.0
950	38	336.8	799.1	304.8	875.8	640.0	1493.0	1423.9	2664.2
1000	40	364.9	894.5	370.3	1040.8	686.4	1678.5	1504.2	2925.4
1050	42	415.9	1044.9	403.1	1176.6	854.6	2013.2	1635.5	3251.2
1100	44	437.8	1195.9	459.2	1346.2	904.1	2228.1	1919.3	3794.5
1150	46	498.6	1304.7	522.6	1529.8	997.7	2517.6	2243.2	4403.5
1200	48	548.0	1470.0	556.3	1697.3	1196.0	2934.7	2405.5	4380.9
1250	50	593.4	1621.6	635.4	1937.8	1511.9	3357.7	-	-
1300	52	652.1	1815.7	681.6	2141.7	1616.3	3653.8	-	-
1350	54	726.2	2038.5	834.0	2496.4	1779.7	4077.0	-	-
1400	56	798.2	2243.2	878.0	2681.2	1943.2	4557.7	-	-
1450	58	882.8	2497.1	919.9	2921.1	2106.6	4958.6	-	-
1500	60	926.0	2700.7	977.5	3189.7	2270.0	5724.0	-	-

**Series B (API 605)**

DN	NPS	Class150		Class300		Class600		Class900	
		WN	BL	WN	BL	WN	BL	WN(XS)	BL
650	26	58.1	165.0	188.0	388.8	246.9	529.2	525.9	927.6
700	28	66.8	200.4	197.1	440.0	284.0	625.3	665.0	1174.3
750	30	72.3	239.7	241.6	535.8	354.5	788.1	784.7	1409.4
800	32	83.7	287.7	299.7	673.5	412.9	945.8	889.3	1657.2
850	34	102.0	378.7	323.0	745.1	521.9	1158.7	1047.7	1943.5
900	36	114.7	395.1	357.7	831.3	570.5	1323.7	1060.5	2109.0
950	38	139.5	484.7	384.5	972.5	-	-	-	-
1000	40	151.0	555.5	439.8	1106.3	-	-	-	-
1050	42	166.1	618.3	490.0	1247.8	-	-	-	-
1100	44	177.0	701.2	539.6	1431.3	-	-	-	-
1150	46	207.4	809.6	632.6	1635.7	-	-	-	-
1200	48	224.9	908.2	650.2	1811.4	-	-	-	-
1250	50	247.6	1021.5	714.4	1999.5	-	-	-	-
1300	52	262.3	1136.3	774.0	2208.5	-	-	-	-
1350	54	284.8	1266.2	802.8	2468.2	-	-	-	-
1400	56	301.5	1398.6	1071.8	2889.7	-	-	-	-
1450	58	360.7	1587.7	1138.4	3182.7	-	-	-	-
1500	60	382.2	1744.3	1210.1	3484.7	-	-	-	-

**Dimensions of Class Raised Face Figure-8 Blanks - ASME B16.48 Class 150**



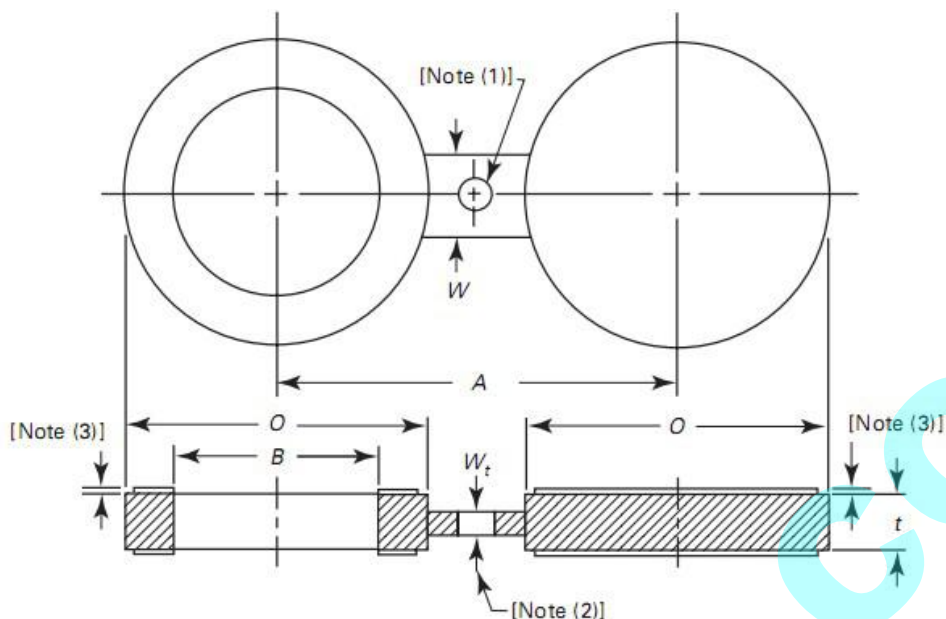
NPS	OD, O	ID, B	Center line, A	Thickness, t	Web Width, W
1/2	45	16	60	3	38
3/4	54	21	70	3	38
1	64	27	80	3	38
1 1/4	73	42	90	6.4	38
1 1/2	83	48	100	6.4	38
2	102	61	120	6.4	51
2 1/2	107	73	140	6.4	51
3	133	89	150	6.4	64
3 1/2	159	102	175	9.7	64
4	172	114	190	9.7	64
5	194	141	215	9.7	76
6	219	168	240	12.7	76
8	276	219	300	12.7	76
10	337	273	360	15.7	102
12	406	324	430	19.1	102
14	448	356	475	19.1	108
16	511	406	460	22.4	108
18	546	457	580	25.4	114
20	603	508	635	28.4	121
24	714	610	750	31.8	140

(1) Hole size (where required due to bolt spacing) shall be the same as the flange bolt hole and located such that it will not interfere with bolting between two flanges.

(2) The handle or web (tie bar) may be integral or attached to the line blank or spacer. The web and its attachment shall be capable of supporting the weight of the blank or spacer in all orientations without permanent deformation to the web.

(3) The gasket seating surface finish and dimensions for raised face line blanks shall be in accordance with ASME B16.5. A raised face may be specified at the option of the purchaser. The height of the raised faces shall be in addition to the thicknesses, t

**Dimensions of Class Raised Face Figure-8 Blanks - ASME B16.48 Class 300**



NPS	OD, O	ID, B	Center line, A	Thickness, t	Web Width, W
1/2	51	16	65	6.4	38
3/4	64	21	80	6.4	38
1	70	27	90	6.4	38
1 1/4	79	42	100	6.4	38
1 1/2	92	48	115	6.4	38
2	108	61	125	9.7	51
2 1/2	127	73	150	9.7	51
3	146	89	170	9.7	64
3 1/2	162	102	185	12.7	64
4	178	114	200	12.7	64
5	213	141	235	15.7	76
6	248	168	270	15.7	76
8	305	219	330	22.4	76
10	359	273	385	25.4	102
12	419	324	450	28.4	102
14	483	356	515	31.8	108
16	536	406	570	38.1	108
18	594	457	630	41.1	114
20	651	508	685	44.5	121
24	772	610	810	50.8	140

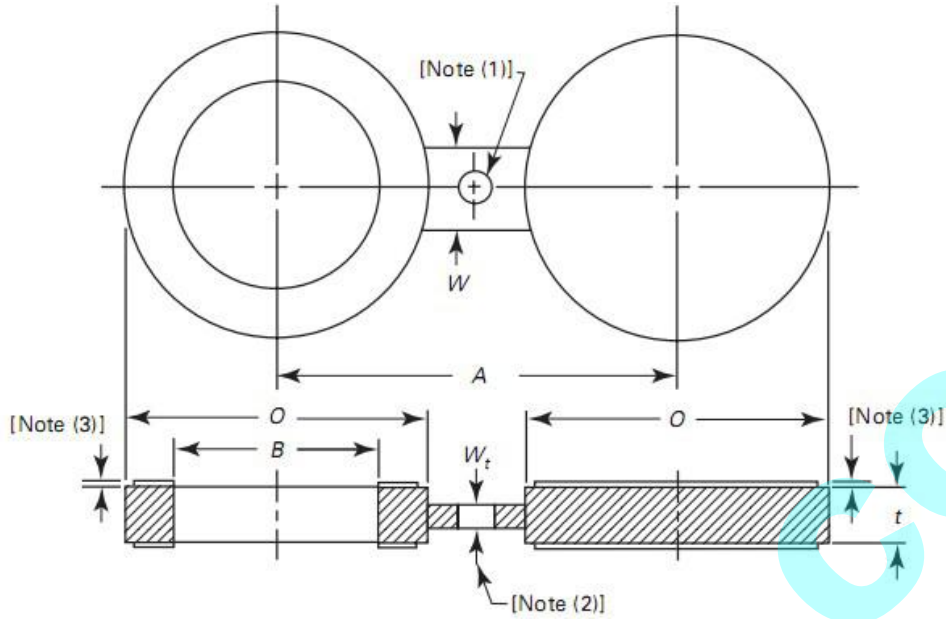
(1) Hole size (where required due to bolt spacing) shall be the same as the flange bolt hole and located such that it will not interfere with bolting between two flanges.

(2) The handle or web (tie bar) may be integral or attached to the line blank or spacer. The web and its attachment shall be capable of supporting the weight of the blank or spacer in all orientations without permanent deformation to the web.

(3) The gasket seating surface finish and dimensions for raised face line blanks shall be in accordance with ASME B16.5. A raised face may be specified at the option of the purchaser. The height of the raised faces shall be in addition to the thicknesses, t



**Dimensions of Class Raised Face Figure-8 Blanks - ASME B16.48 Class 600**



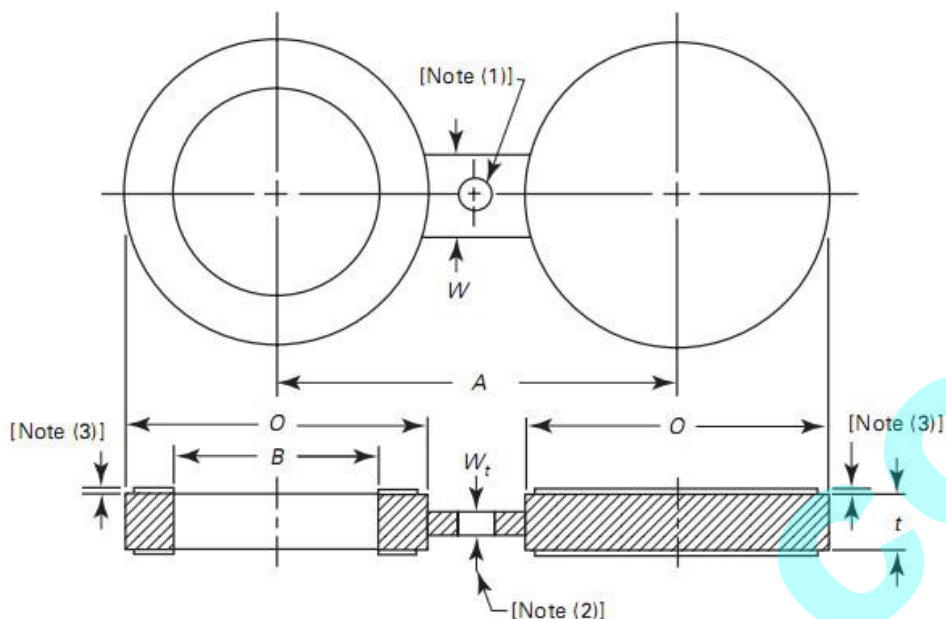
NPS	OD, O	ID, B	Center line, A	Thickness, t	Web Width, W
1/2	51	16	65	6.4	38
3/4	64	21	80	6.4	38
1	70	27	90	6.4	57
1 1/4	79	37	100	9.7	57
1 1/2	92	43	115	9.7	67
2	108	55	125	9.7	57
2 1/2	127	67	150	12.7	67
3	146	83	170	12.7	67
3 1/2	159	96	185	15.7	76
4	191	108	215	15.7	76
5	238	135	265	19.1	86
6	264	162	290	22.4	86
8	318	212	350	28.4	95
10	397	265	430	35.1	105
12	454	315	490	41.1	105
14	489	346	525	44.5	114
16	562	397	605	50.8	124
18	610	448	655	53.8	133
20	679	497	725	63.5	133
24	787	597	840	73.2	152

(1) Hole size (where required due to bolt spacing) shall be the same as the flange bolt hole and located such that it will not interfere with bolting between two flanges.

(2) The handle or web (tie bar) may be integral or attached to the line blank or spacer. The web and its attachment shall be capable of supporting the weight of the blank or spacer in all orientations without permanent deformation to the web.

(3) The gasket seating surface finish and dimensions for raised face line blanks shall be in accordance with ASME B16.5. A raised face may be specified at the option of the purchaser. The height of the raised faces shall be in addition to the thicknesses, t

**Dimensions of Class Raised Face Figure-8 Blanks - ASME B16.48 Class 900**



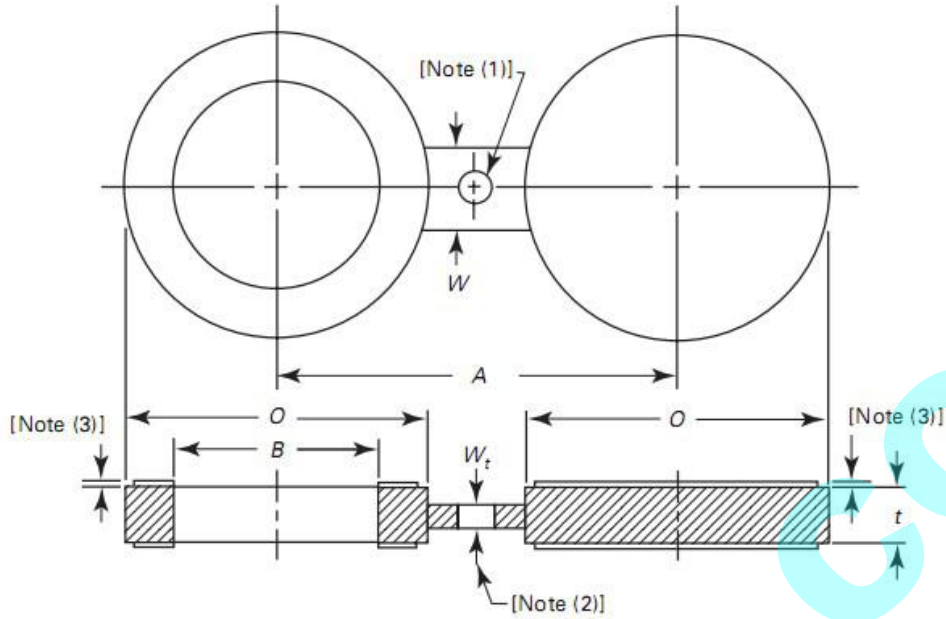
NPS	OD, O	ID, B	Center line, A	Thickness, t	Web Width, W
1/2	60	16	80	6.4	38
3/4	67	21	90	6.4	41
1	76	27	100	6.4	57
1 1/4	86	37	110	9.7	57
1 1/2	95	43	125	9.7	67
2	140	55	165	12.7	57
2 1/2	162	67	190	12.7	67
3	165	83	190	15.7	67
4	203	108	235	19.1	76
5	244	135	280	22.4	86
6	286	162	320	25.4	86
8	356	212	395	35.1	95
10	432	265	470	41.1	105
12	495	315	535	47.8	105
14	518	346	560	53.8	114
16	572	397	615	60.5	124
18	635	448	685	66.5	133
20	696	497	750	73.2	133
24	835	597	900	88.9	152

(1) Hole size (where required due to bolt spacing) shall be the same as the flange bolt hole and located such that it will not interfere with bolting between two flanges.

(2) The handle or web (tie bar) may be integral or attached to the line blank or spacer. The web and its attachment shall be capable of supporting the weight of the blank or spacer in all orientations without permanent deformation to the web.

(3) The gasket seating surface finish and dimensions for raised face line blanks shall be in accordance with ASME B16.5. A raised face may be specified at the option of the purchaser. The height of the raised faces shall be in addition to the thicknesses, t

**Dimensions of Class Raised Face Figure-8 Blanks - ASME B16.48 Class 1500**



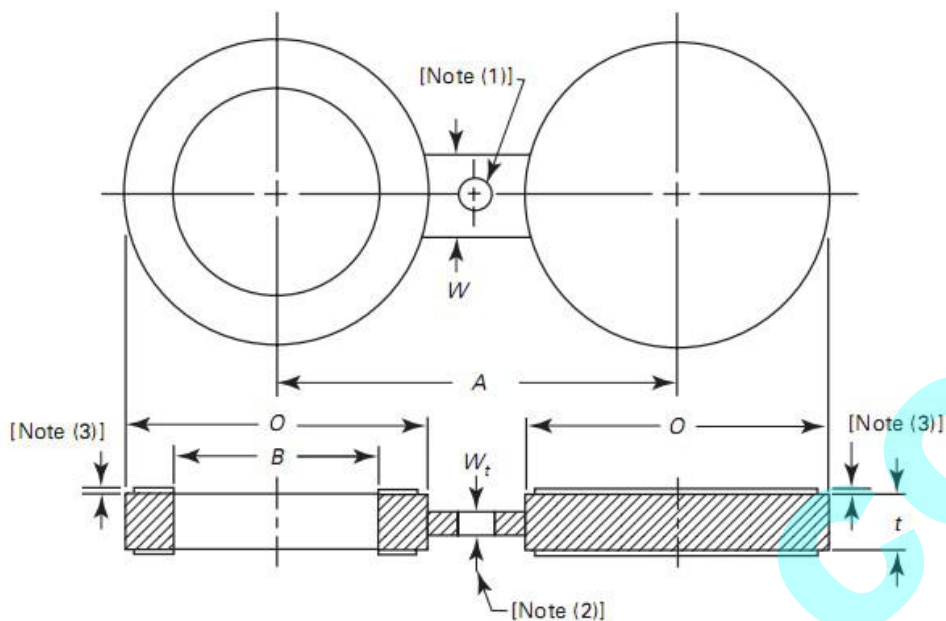
NPS	OD, O	ID, B	Center line, A	Thickness, t	Web Width, W
1/2	61	16	80	6.4	38
3/4	67	21	90	9.7	41
1	76	27	100	9.7	64
1 1/4	86	35	110	9.7	64
1 1/2	95	41	125	12.7	70
2	140	53	165	12.7	70
2 1/2	162	63	190	15.7	76
3	172	78	205	19.1	76
4	206	102	240	22.4	89
5	251	128	290	28.4	89
6	279	154	320	35.1	89
8	349	203	395	41.1	102
10	432	255	480	50.8	114
12	518	303	570	60.5	114
14	575	333	635	66.5	127
16	638	381	705	76.2	133
18	702	429	775	85.9	146
20	752	478	830	95.3	152
24	899	575	990	111.3	178

(1) Hole size (where required due to bolt spacing) shall be the same as the flange bolt hole and located such that it will not interfere with bolting between two flanges.

(2) The handle or web (tie bar) may be integral or attached to the line blank or spacer. The web and its attachment shall be capable of supporting the weight of the blank or spacer in all orientations without permanent deformation to the web.

(3) The gasket seating surface finish and dimensions for raised face line blanks shall be in accordance with ASME B16.5. A raised face may be specified at the option of the purchaser. The height of the raised faces shall be in addition to the thicknesses, t

**Dimensions of Class Raised Face Figure-8 Blanks - ASME B16.48 Class 2500**



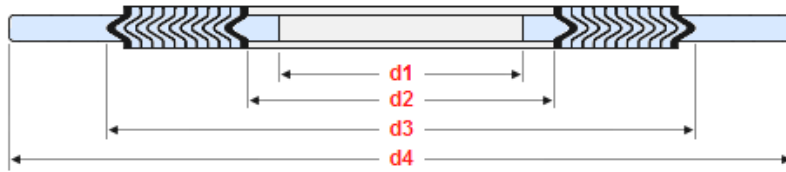
NPS	OD, O	ID, B	Center line, A	Thickness, t	Web Width, W
1/2	67	16	90	9.7	38
3/4	73	21	95	9.7	41
1	83	27	110	9.7	64
1 1/4	102	35	130	12.7	64
1 1/2	114	41	145	15.7	70
2	143	53	170	15.7	70
2 1/2	165	63	195	19.1	76
3	194	78	230	22.4	76
4	232	102	275	28.4	89
5	276	128	325	35.1	89
6	314	154	370	41.1	89
8	384	198	440	53.8	102
10	473	248	540	66.5	114
12	546	289	620	79.2	114

(1) Hole size (where required due to bolt spacing) shall be the same as the flange bolt hole and located such that it will not interfere with bolting between two flanges.

(2) The handle or web (tie bar) may be integral or attached to the line blank or spacer. The web and its attachment shall be capable of supporting the weight of the blank or spacer in all orientations without permanent deformation to the web.

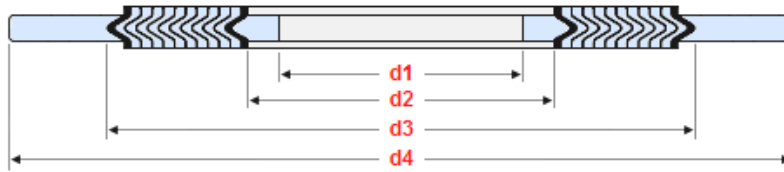
(3) The gasket seating surface finish and dimensions for raised face line blanks shall be in accordance with ASME B16.5. A raised face may be specified at the option of the purchaser. The height of the raised faces shall be in addition to the thicknesses, t

**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class150**



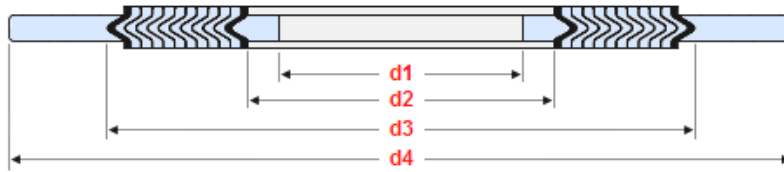
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
1/2	14.2	19.1	31.8	47.8	±0.8	±0.4	±0.8	±0.8
3/4	20.6	25.4	39.6	57.2				
1	26.9	31.8	47.8	66.8				
1 ¼	38.1	47.8	60.5	76.2				
1 ½	44.5	54.1	69.9	85.9				
2	55.6	69.9	85.9	104.9				
2 ½	66.5	82.6	98.6	124				
3	81	101.6	120.7	136.7				
4	106.4	127	149.4	174.8				
5	131.8	155.7	177.8	196.9				
6	157.2	182.6	209.6	222.3	±1.5	±0.8	+1.5/-0.8	±0.8
8	215.9	233.4	263.7	279.4				
10	268.2	287.3	317.5	339.9				
12	317.5	339.9	374.7	409.7				
14	349.3	371.6	406.4	450.9				
16	400.1	422.4	463.6	514.4				
18	449.3	474.7	527.1	549.4				
20	500.1	525.5	577.9	606.6				
24	603.3	628.7	685.8	717.6				

**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class 300**



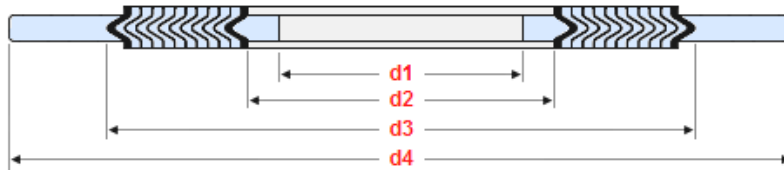
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
1/2	14.2	19.1	31.8	54.1	±0.8	±0.4	±0.8	±0.8
3/4	20.6	25.4	39.6	66.8				
1	26.9	31.8	47.8	73.2				
1 ¼	38.1	47.8	60.5	82.6				
1 ½	44.5	54.1	69.9	95.3				
2	55.6	69.9	85.9	111.3				
2 ½	66.5	82.6	98.6	130.3				
3	81	101.6	120.7	149.4	±1.5	±0.8	±0.8	
4	106.4	127	149.4	181.1				
5	131.8	155.7	177.8	215.9				
6	157.2	182.6	209.6	251				
8	215.9	233.4	263.7	308.1				
10	268.2	287.3	317.5	362				
12	317.5	339.9	374.7	422.4				
14	349.3	371.6	406.4	485.9				
16	400.1	422.4	463.6	539.8				
18	449.3	474.7	527.1	596.9				
20	500.1	525.6	577.9	654.1	±0.8	+1.5/-0.8		
24	603.3	628.7	685.8	774.7				

**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class 400**



NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
1/2	14.2	19.1	31.8	54.1	±0.8	±0.4	±0.8	±0.8
3/4	20.6	25.4	39.6	66.8				
1	26.9	31.8	47.8	73.2				
1 ¼	38.1	47.8	60.5	82.6				
1 ½	44.5	54.1	69.9	95.3				
2	55.6	69.9	85.9	111.3				
2 ½	66.5	82.6	98.6	130.3				
3	81	101.6	120.7	149.4				
4	102.6	120.7	149.4	177.8				
5	128.3	147.6	177.8	212.9				
6	154.9	174.8	209.6	247.7	±1.5	±0.8	+1.5/-0.8	±0.8
8	205.7	225.6	263.7	304.8				
10	255.3	274.6	317.5	358.9				
12	307.3	327.2	374.7	419.1				
14	342.9	362	406.4	482.6				
16	389.9	412.8	463.6	536.7				
18	438.2	469.9	527.1	593.9				
20	489	520.7	577.9	647.7				
24	590.6	628.7	685.8	768.4				

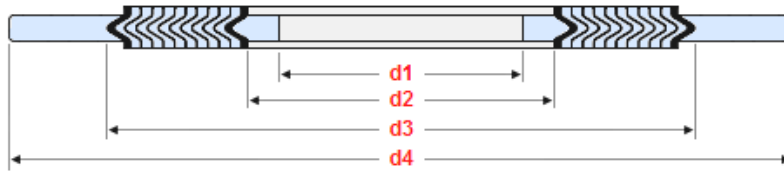
**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class 600**



NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
1/2	14.2	19.1	31.8	54.1	±0.8	±0.4	±0.8	±0.8
3/4	20.6	25.4	39.6	66.8				
1	26.9	31.8	47.8	73.2				
1 ¼	38.1	47.8	60.5	82.6				
1 ½	44.5	54.1	69.9	95.3				
2	55.6	69.9	85.9	111.3				
2 ½	66.5	82.6	98.6	130.3				
3	78.7	101.6	120.7	149.4				
4	102.6	120.7	149.4	193.8				
5	128.3	147.6	177.8	241.3				
6	154.9	174.8	209.6	266.7	±1.5	±0.8	+1.5/-0.8	±0.8
8	205.7	225.6	263.7	320.8				
10	255.3	274.6	317.5	400.1				
12	307.3	327.2	374.7	457.2				
14	342.9	362	406.4	492.3				
16	389.9	412.8	463.6	565.2				
18	438.2	469.9	527.1	612.9				
20	489	520.7	577.9	682.8				
24	590.6	628.7	685.8	790.7				

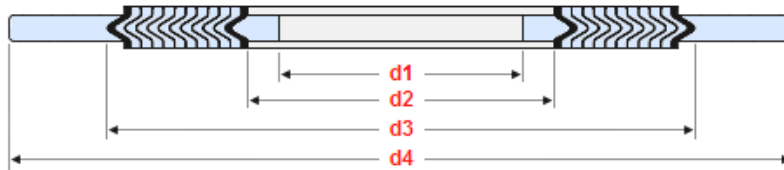


**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class 900**



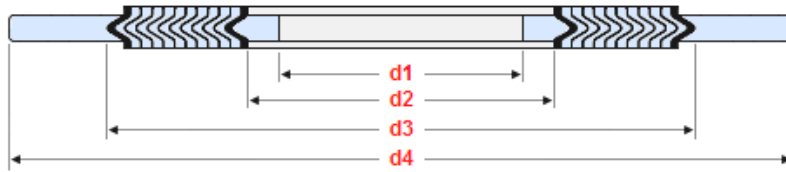
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance				
					d1	d2	d3	d4	
1/2	14.2	19.1	31.8	63.5	±0.8	±0.4	±0.8	±0.8	
3/4	20.6	25.4	39.6	69.9					
1	26.9	31.8	47.8	79.5					
1 ¼	33.3	39.6	60.5	88.9					
1 ½	41.4	47.8	69.9	98.6					
2	52.3	58.7	85.9	143					
2 ½	63.5	69.9	98.6	165.1					
3	78.7	95.3	120.7	168.4					
4	102.6	120.7	149.4	206.5		±1.5	±0.8		±0.8
5	128.3	147.6	177.8	247.7					
6	154.9	174.8	209.6	289.1					
8	196.9	222.3	257.3	358.9					
10	246.1	276.4	311.2	435.1	±0.8		+1.5/-0.8		
12	292.1	323.9	368.3	498.6					
14	320.8	355.6	400.1	520.7					
16	374.7	412.8	457.2	574.8					
18	425.5	463.6	520.7	638.3					
20	482.6	520.7	571.5	698.5					
24	590.6	628.7	679.5	838.2					

**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class 1500**



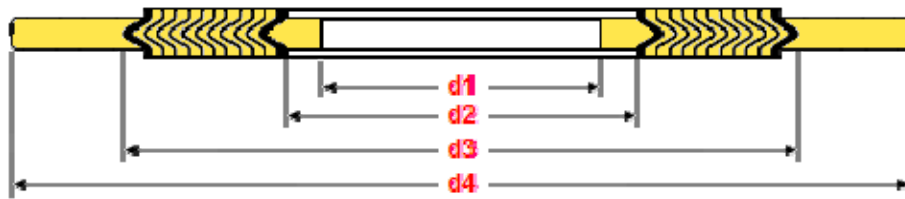
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
1/2	14.2	19.1	31.8	63.5	±0.8	±0.4	±0.8	±0.8
3/4	20.6	25.4	39.6	69.9				
1	26.9	31.8	47.8	79.5				
1 ¼	33.3	39.6	60.5	88.9				
1 ½	41.4	47.8	69.9	98.6				
2	52.3	58.7	85.9	143				
2 ½	63.5	69.9	98.6	165.1				
3	78.7	92.2	120.7	174.8				
4	97.8	117.6	149.4	209.6				
5	124.5	143	177.8	254				
6	147.3	171.5	209.6	282.7	±1.5	±0.8	+1.5/-0.8	
8	196.9	215.9	257.3	352.6				
10	246.1	266.7	311.2	435.1				
12	292.1	323.9	368.3	520.7				
14	320.8	362	400.1	577.9				
16	374.7	406.4	457.2	641.4				
18	425.5	463.6	520.7	704.9				
20	476.3	514.4	571.5	755.7				
24	577.9	616	679.5	901.7				

**Dimensions for spiral wound gaskets used with ASME B16.5 flanges - ASME B16.20  
Class 2500**



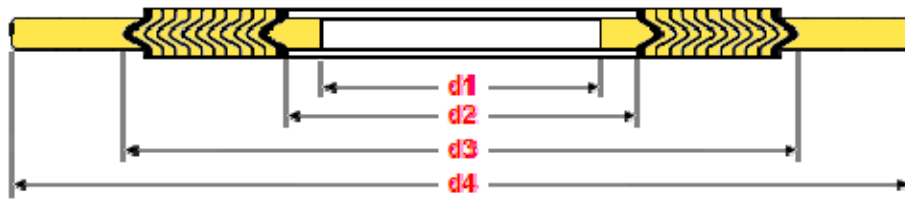
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
1/2	14.2	19.1	31.8	69.9	±0.8	±0.4	±0.8	±0.8
3/4	20.6	25.4	39.6	76.2				
1	26.9	31.8	47.8	85.9				
1 ¼	33.3	39.6	60.5	104.9				
1 ½	41.4	47.8	69.9	117.6				
2	52.3	58.7	85.9	146				
2 ½	63.5	69.9	98.6	168.4				
3	78.7	92.2	120.7	196.9	±1.5	±0.8	±0.8	
4	97.8	117.6	149.4	235				
5	124.5	143	177.8	279.4				
6	147.3	171.5	209.6	317.5				
8	196.9	215.9	257.3	387.4				
10	246.1	270	311.2	476.3				
12	292.1	317.5	368.3	549.4	±0.8	+1.5/-0.8		

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series A Flanges  
Class 150**



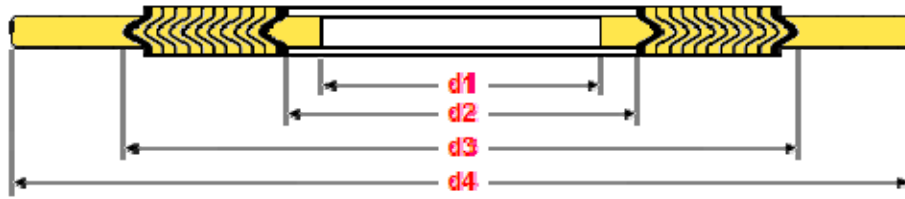
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	654.1	673.1	704.9	774.7	±3.0	±0.8	±1.5	±0.8
28	704.9	723.9	755.7	831.9				
30	755.7	774.7	806.5	882.7				
32	806.5	825.5	860.6	939.8				
34	857.3	876.3	911.4	990.6				
36	908.1	927.1	968.5	1047.8				
38	958.9	977.9	1019.3	1111.3				
40	1009.7	1028.7	1070.1	1162.1				
42	1060.5	1079.5	1124	1219.2				
44	1111.3	1130.3	1178.1	1276.4				
46	1162.1	1181.1	1228.9	1327.2	±1.3			
48	1212.9	1231.9	1279.7	1384.3				
50	1263.7	1282.7	1333.5	1435.1				
52	1314.5	1333.5	1384.3	1492.3				
54	1358.9	1384.3	1435.1	1549.4				
56	1409.7	1435.1	1485.9	1606.6				
58	1460.5	1485.9	1536.7	1663.7				
60	1511.3	1536.7	1587.5	1714.5				

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series A Flanges  
Class 300**



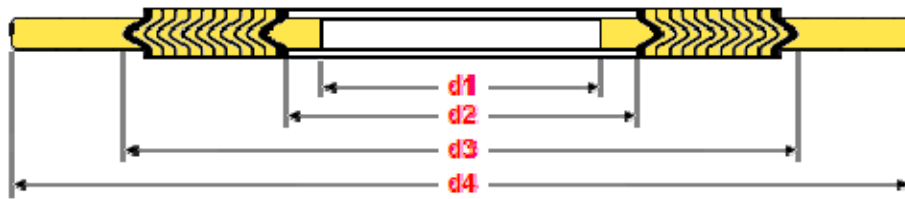
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	654.1	685.8	736.6	835.2	±3.0	±0.8	±1.5	±0.8
28	704.9	736.6	787.4	898.7				
30	755.7	793.8	844.6	952.5				
32	806.5	850.9	901.7	1006.6				
34	857.3	901.7	952.5	1057.4				
36	908.1	955.8	1006.6	1117.6				
38	952.5	977.9	1016	1054.1				
40	1003.3	1022.4	1070.1	1114.6				
42	1054.1	1073.2	1120.9	1165.4				
44	1104.9	1130.3	1181.1	1219.2				
46	1152.7	1178.1	1228.9	1273.3	±1.3			
48	1209.8	1235.2	1286	1324.1				
50	1244.6	1295.4	1346.2	1378				
52	1320.8	1346.2	1397	1428.8				
54	1352.6	1403.4	1454.2	1492.3				
56	1403.4	1454.2	1505	1543.1				
58	1447.8	1511.3	1562.1	1593.9				
60	1524	1562.1	1612.9	1644.7				

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series A Flanges  
Class 400**



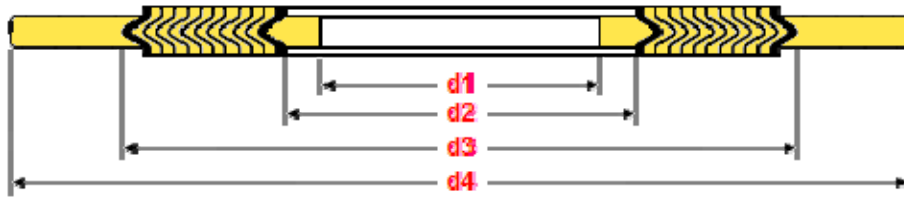
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	660.4	685.8	736.6	891.9	±3.0	±0.8	±1.5	±0.8
28	711.2	736.6	787.4	892.3				
30	755.7	793.8	844.6	946.2				
32	812.8	850.9	901.7	1003.3				
34	863.6	901.7	952.5	1054.1				
36	917.7	955.8	1006.6	1117.6				
38	952.5	971.6	1022.4	1073.2				
40	1000.3	1025.7	1076.5	1127.3				
42	1051.1	1076.5	1127.3	1178.1				
44	1104.9	1130.3	1181.1	1231.9				
46	1168.4	1193.8	1244.6	1289.1	±1.3			
48	1206.5	1244.6	1295.4	1346.2				
50	1257.3	1295.4	1346.2	1403.4				
52	1308.1	1346.2	1397	1454.2				
54	1352.6	1403.4	1454.2	1517.7				
56	1403.4	1454.2	1505	1568.5				
58	1454.2	1505	1555.8	1619.3				
60	1517.7	1568.5	1619.3	1682.8				

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series A Flanges  
Class 600**



NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	647.7	685.8	736.6	866.9	±3.0	±0.8	±1.5	±0.8
28	698.5	736.6	787.4	914.4				
30	755.7	793.8	844.6	971.6				
32	812.8	850.9	901.7	1022.4				
34	863.6	901.7	952.5	1073.2				
36	917.7	955.8	1006.6	1130.3				
38	952.5	990.6	1041.4	1104.9				
40	1009.7	1047.8	1098.6	1155.7				
42	1066.8	1104.9	1155.7	1219.2				
44	1111.3	1162.1	1212.9	1270				
46	1162.1	1212.9	1263.7	1327.2	±1.3			
48	1219.2	1270	1320.8	1390.7				
50	1270	1320.8	1371.6	1447.8				
52	1320.8	1371.6	1422.4	1498.6				
54	1378	1428.8	1479.6	1555.8				
56	1428.8	1479.6	1530.4	1612.9				
58	1473.2	1536.7	1587.5	1663.7				
60	1530.4	1593.9	1644.7	1733.6				

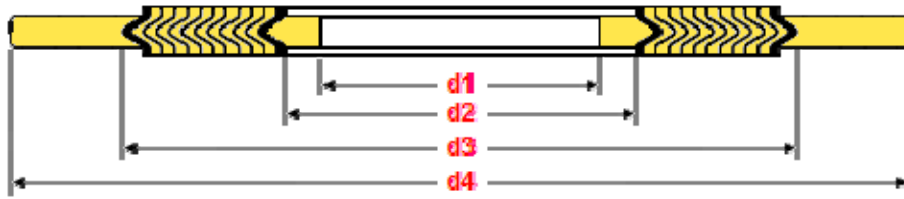
**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series A Flanges  
Class 900**



NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	660.4	685.8	736.6	882.7	±3.0	±0.8	±1.5	±0.8
28	711.2	736.6	787.4	946.2				
30	768.4	793.8	844.6	1009.7				
32	812.8	850.9	901.7	1073.2				
34	863.6	901.7	952.5	1136.7		±1.3		
36	920.8	958.9	1009.7	1200.2				
38	1009.7	1035.1	1085.9	1200.2		±1.3		
40	1060.5	1098.6	1149.4	1251				
42	1111.3	1149.4	1200.2	1301.8				
44	1155.7	1206.5	1257.3	1368.6				
46	1219.2	1270	1320.8	1435.1				
48	1270	1320.8	1371.6	1485.9				

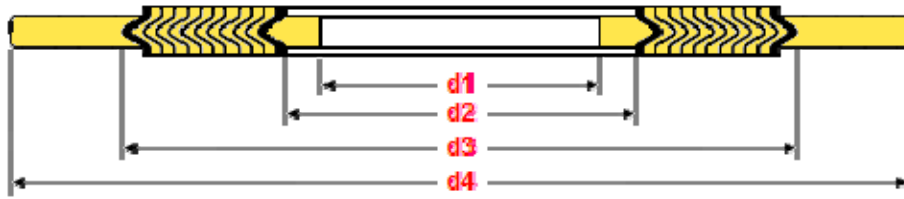


**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series B Flanges  
Class 150**



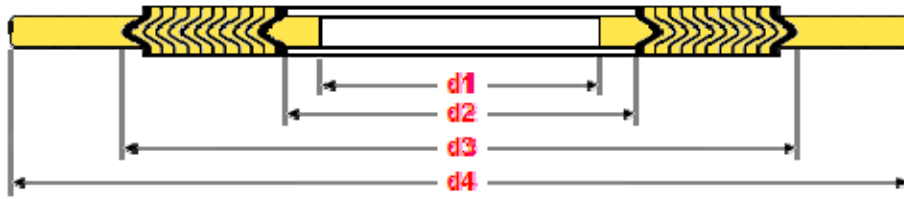
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	654.1	673.1	698.5	725.4	±3.0	±0.8	±1.5	±0.8
28	704.9	723.9	749.3	776.2				
30	755.7	774.7	800.1	827				
32	806.5	825.5	850.9	881.1				
34	857.3	876.3	908.1	935				
36	908.1	927.1	958.9	987.6		±1.3		
38	958.9	974.9	1009.7	1044.7				
40	1009.7	1022.4	1063.8	1095.5				
42	1060.5	1079.5	1114.6	1146.3				
44	1111.3	1124	1165.4	1197.1				
46	1162.1	1181.1	1224	1255.8	±1.3			
48	1212.9	1231.9	1270	1306.6				
50	1263.7	1282.7	1325.6	1357.4				
52	1314.5	1333.5	1376.4	1408.2				
54	1365.3	1384.3	1422.4	1463.8				
56	1422.4	1444.8	1478	1514.6				
58	1478	1500.1	1528.8	1579.6				
60	1535.2	1557.3	1586	1630.4				

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series B Flanges  
Class 300**



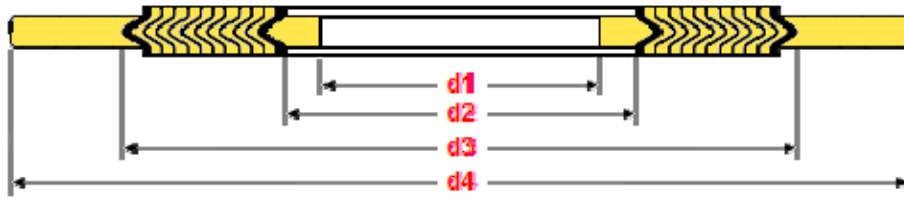
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	654.1	673.1	711.2	771.7	±0.8	±0.8	±1.5	±0.8
28	704.9	723.9	762	825.5				
30	755.7	774.7	812.8	886				
32	806.5	825.5	863.6	939.8				
34	857.3	876.3	914.4	993.9				
36	908.1	927.1	965.2	1047.8				
38	971.6	1009.7	1047.8	1098.6	±3.0	±1.3	±1.5	±0.8
40	1022.4	1060.5	1098.6	1149.4				
42	1085.9	1111.3	1149.4	1200.2				
44	1124	1162.1	1200.2	1251				
46	1178.1	1216.2	1254.3	1317.8				
48	1231.9	1263.7	1311.4	1368.6				
50	1267	1317.8	1355.9	1419.4				
52	1317.8	1368.6	1406.9	1470.2				
54	1365.3	1403.4	1454.2	1530.4				
56	1428.8	1479.6	1524	1593.9				
58	1484.4	1535.2	1573.3	1655.8				
60	1557.3	1589	1630.4	1706.6				

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series B Flanges  
Class 400**



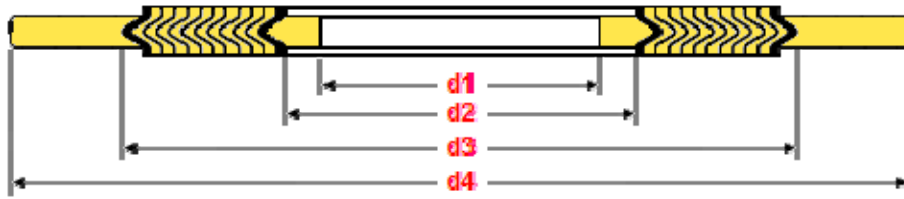
NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	654.1	666.8	698.5	746.3	±3.0	±0.8	±1.5	±0.8
28	701.8	714.5	749.3	800.1				
30	752.6	765.3	806.5	857.3				
32	800.1	812.8	860.6	911.4				
34	850.9	866.9	911.4	962.2				
36	898.7	917.7	965.2	1022.4				
38	952.5	971.6	1022.4	1073.2		±1.3	±1.5	±0.8
40	1000.3	1025.7	1076.5	1127.3				
42	1051.1	1076.5	1127.3	1178.1				
44	1104.9	1130.3	1181.1	1231.9				
46	1168.4	1193.8	1244.6	1289.1				
48	1206.5	1244.6	1295.4	1346.2				
50	1257.3	1295.4	1346.2	1403.4				
52	1308.1	1346.2	1397	1454.2				
54	1352.6	1403.4	1454.2	1517.7				
56	1403.4	1454.2	1505	1568.5				
58	1454.2	1505	1555.8	1619.3				
60	1517.7	1568.5	1619.3	1682.8				

**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series B Flanges  
Class 600**



NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	644.7	663.7	714.5	765.3	±3.0	±0.8	±1.5	±0.8
28	685.8	704.9	755.7	819.2				
30	752.6	778	828.8	879.6				
32	793.8	831.9	882.7	933.5				
34	850.9	889	939.8	997				
36	901.7	939.8	990.6	1047.8		±1.3		
38	952.5	990.6	1041.4	1104.9				
40	1009.7	1047.8	1098.6	1155.7				
42	1066.8	1104.9	1155.7	1219.2				
44	1111.3	1162.1	1212.9	1270				
46	1162.1	1212.9	1263.7	1327.2				
48	1219.2	1270	1320.8	1390.7				
50	1270	1320.8	1371.6	1447.8				
52	1320.8	1371.6	1422.4	1498.6				
54	1378	1428.8	1479.6	1555.8				
56	1428.8	1479.6	1530.4	1612.9				
58	1473.2	1536.7	1587.5	1663.7				
60	1530.4	1593.9	1644.7	1733.6				

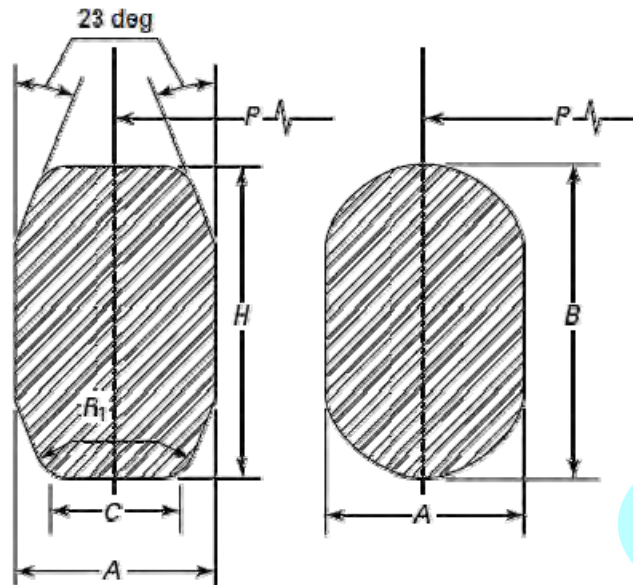
**Dimensions for Spiral-Wound Gaskets Used With ASME B16.47 Series B Flanges  
Class 900**



NPS	Inner Ring	Sealing Element		Outer Ring	Tolerance			
	d1	d2	d3	d4	d1	d2	d3	d4
26	666.8	692.2	749.3	838.2	±3.0	±0.8	±1.5	±0.8
28	717.6	743	800.1	901.7				
30	781.1	806.5	857.3	958.9				
32	838.2	863.6	914.4	1016				
34	895.4	920.8	971.6	1073.2		±1.3		
36	920.8	946.2	997	1124				
38	1009.7	1035.1	1085.9	1200.2				
40	1060.5	1098.6	1149.4	1251				
42	1111.3	1149.4	1200.2	1301.8				
44	1155.7	1206.5	1257.3	1368.6				
46	1219.2	1270	1320.8	1435.1				
48	1270	1320.8	1371.6	1485.9				

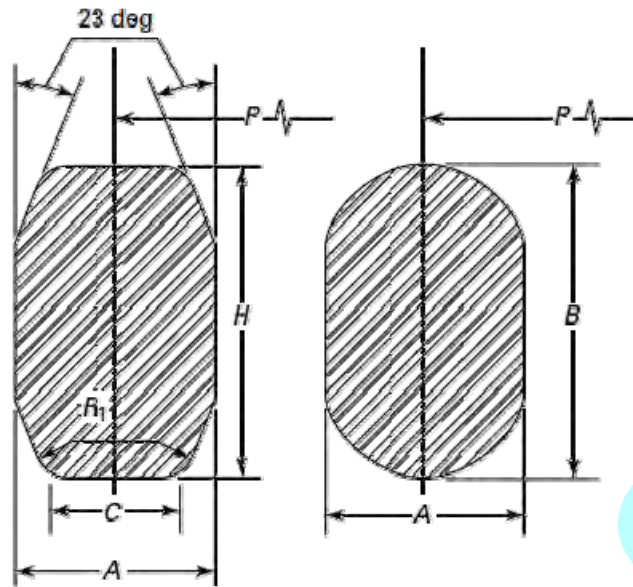
DN	NPS	Class150	Class300	Class600	Class900	Class1500	Class2500
15	1/2	-	R11	R11	R12	R12	R13
20	3/4	-	R13	R13	R14	R14	R16
25	1	R15	R16	R16	R16	R16	R18
32	1 ¼	R17	R18	R18	R18	R18	R21
40	1 ½	R19	R20	R20	R20	R20	R23
50	2	R22	R23	R23	R24	R24	R26
65	2 ½	R25	R26	R26	R27	R27	R28
80	3	R29	R31	R31	R31	R35	R32
100	4	R36	R37	R37	R37	R39	R38
125	5	R40	R41	R41	R41	R44	R42
150	6	R43	R45	R45	R45	R46	R47
200	8	R48	R49	R49	R49	R50	R51
250	10	R52	R53	R53	R53	R54	R55
300	12	R56	R57	R57	R57	R58	R60
350	14	R59	R61	R61	R62	R63	-
400	16	R64	R65	R65	R66	R67	-
450	18	R68	R69	R69	R70	R71	-
500	20	R72	R73	R73	R74	R75	-
600	24	R76	R77	R77	R78	R79	-
650	26	-	R93	R93	R100	-	-
700	28	-	R94	R94	R101	-	-
750	30	-	R95	R95	R102	-	-
800	32	-	R96	R96	R103	-	-
850	34	-	R97	R97	R104	-	-
900	36	-	R98	R98	R105	-	-

## Type R Ring Gasket Dimensions and Tolerances



Ring Number	Average Pitch Diameter of Ring, P	Width of Ring, A	Height of Ring		Width of Flat on Octagonal Ring, C	Radius in Octagonal Ring, R1	Weight, kgs	
			Oval, B	Octagonal, H			Oval	Octagonal
R-11	34.14	6.35	11.2	9.7	4.32	1.5	0.05	0.05
R-12	39.7	7.95	14.2	12.7	5.23	1.5	0.10	0.09
R-13	42.88	7.95	14.2	12.7	5.23	1.5	0.11	0.10
R-14	44.45	7.95	14.2	12.7	5.23	1.5	0.11	0.10
R-15	47.63	7.95	14.2	12.7	5.23	1.5	0.12	0.11
R-16	50.8	7.95	14.2	12.7	5.23	1.5	0.13	0.12
R-17	57.15	7.95	14.2	12.7	5.23	1.5	0.14	0.13
R-18	60.33	7.95	14.2	12.7	5.23	1.5	0.15	0.14
R-19	65.1	7.95	14.2	12.7	5.23	1.5	0.16	0.15
R-20	68.28	7.95	14.2	12.7	5.23	1.5	0.17	0.16
R-21	72.24	11.13	17.5	16	7.75	1.5	0.30	0.29
R-22	82.55	7.95	14.2	12.7	5.23	1.5	0.20	0.19
R-23	82.55	11.13	17.5	16	7.75	1.5	0.34	0.33
R-24	95.25	11.13	17.5	16	7.75	1.5	0.39	0.38
R-25	101.6	7.95	14.2	12.7	5.23	1.5	0.25	0.23
R-26	101.6	11.13	17.5	16	7.75	1.5	0.42	0.41
R-27	107.95	11.13	17.5	16	7.75	1.5	0.48	0.44
R-28	111.13	12.7	19.1	17.5	8.66	1.5	0.57	0.56
R-29	114.3	7.95	14.2	12.7	5.23	1.5	0.28	0.26
R-30	117.48	11.13	17.5	16	7.75	1.5	0.49	0.47
R-31	123.83	11.13	17.5	16	7.75	1.5	0.51	0.50
R-32	127	12.7	19.1	17.5	8.66	1.5	0.65	0.64
R-33	131.78	7.95	14.2	12.7	5.23	1.5	0.33	0.30
R-34	131.78	11.13	17.5	16	7.75	1.5	0.54	0.53
R-35	136.53	11.13	17.5	16	7.75	1.5	0.57	0.55
R-36	149.23	7.95	14.2	12.7	5.23	1.5	0.37	0.33
R-37	149.23	11.13	17.5	16	7.75	1.5	0.62	0.60
R-38	157.18	15.88	22.4	20.6	10.49	1.5	1.16	1.14
R-39	161.93	11.13	17.5	16	7.75	1.5	0.67	0.65
R-40	171.45	7.95	14.2	12.7	5.23	1.5	0.42	0.39
R-41	180.98	11.13	17.5	16	7.75	1.5	0.75	0.73
R-42	190.5	19.05	25.4	23.9	12.32	1.5	1.91	1.89
R-43	193.68	7.95	14.2	12.7	5.23	1.5	0.48	0.44
R-44	193.68	11.13	17.5	16	7.75	1.5	0.80	0.78
R-45	211.15	11.13	17.5	16	7.75	1.5	0.88	0.85
R-46	211.15	12.7	19.1	17.5	8.66	1.5	1.08	1.06
R-47	228.6	19.05	25.4	23.9	12.32	1.5	2.30	2.26

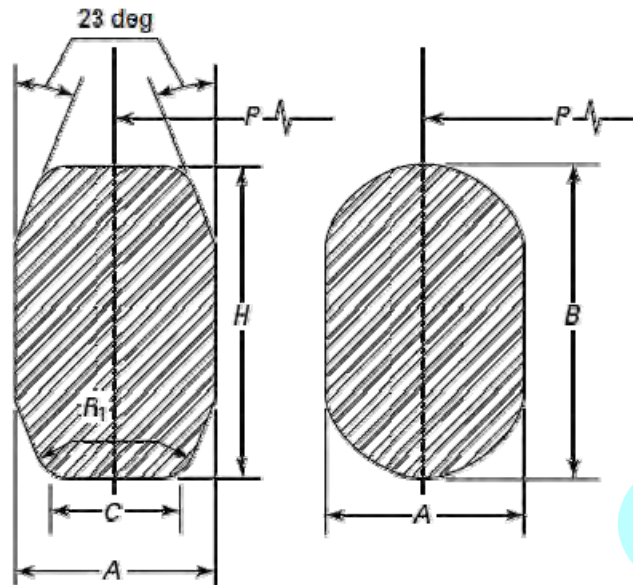
## Type R Ring Gasket Dimensions and Tolerances



Ring Number	Average Pitch Diameter of Ring, P	Width of Ring, A	Height of Ring		Width of Flat on Octagonal Ring, C	Radius in Octagonal Ring, R1	Weight, kgs	
			Oval, B	Octagonal, H			Oval	Octagonal
R-48	247.65	7.95	14.2	12.7	5.23	1.5	0.61	0.56
R-49	269.88	11.13	17.5	16	7.75	1.5	1.12	1.09
R-50	269.88	15.88	22.4	20.6	10.49	1.5	2.00	1.96
R-51	279.4	22.23	28.7	26.9	14.81	1.5	3.65	3.71
R-52	304.8	7.95	14.2	12.7	5.23	1.5	0.75	0.69
R-53	323.85	11.13	17.5	16	7.75	1.5	1.36	1.31
R-54	323.85	15.88	22.4	20.6	10.49	1.5	2.40	2.35
R-55	342.9	28.58	36.6	35.1	19.81	2.3	7.36	7.73
R-56	381	7.95	14.2	12.7	5.23	1.5	0.94	0.87
R-57	381	11.13	17.5	16	7.75	1.5	1.58	1.53
R-58	381	22.23	28.7	26.9	14.81	1.5	4.99	5.05
R-59	396.88	7.95	14.2	12.7	5.23	1.5	0.98	0.91
R-60	406.4	31.75	39.6	38.1	22.33	2.3	10.48	10.66
R-61	419.1	11.13	17.5	16	7.75	1.5	1.74	1.69
R-62	419.1	15.88	22.4	20.6	10.49	1.5	3.10	3.04
R-63	419.1	25.4	33.3	31.8	17.3	2.3	7.35	7.56
R-64	454.03	7.95	14.2	12.7	5.23	1.5	1.12	1.04
R-65	469.9	11.13	17.5	16	7.75	1.5	1.95	1.90
R-66	469.9	15.88	22.4	20.6	10.49	1.5	3.48	3.42
R-67	469.9	28.58	36.6	35.1	19.81	2.3	10.12	10.61
R-68	517.53	7.95	14.2	12.7	5.23	1.5	1.28	1.18
R-69	533.4	11.13	17.5	16	7.75	1.5	2.21	2.15
R-70	533.4	19.05	25.4	23.9	12.32	1.5	5.35	5.28
R-71	533.4	28.58	36.6	35.1	19.81	2.3	11.43	12.02
R-72	558.8	7.95	14.2	12.7	5.23	1.5	1.38	1.27
R-73	584.2	12.7	19.1	17.5	8.66	1.5	2.99	2.93
R-74	584.2	19.05	25.4	23.9	12.32	1.5	5.87	5.78
R-75	584.2	31.75	39.6	38.1	22.33	2.3	15.10	16.01
R-76	673.1	7.95	14.2	12.7	5.23	1.5	1.66	1.53
R-77	692.15	15.88	22.4	20.6	10.49	1.5	5.13	5.03
R-78	692.15	25.4	33.3	31.8	17.3	2.3	12.29	12.51
R-79	692.15	34.93	44.5	41.4	24.82	2.3	22.09	22.57
R-80	615.95	7.95	-	12.7	5.23	1.5	-	1.41
R-81	635	14.3	-	19.1	9.58	1.5	-	3.88
R-82	57.15	11.13	-	16	7.75	1.5	-	0.23
R-84	63.5	11.13	-	16	7.75	1.5	-	0.26
R-85	79.38	12.7	-	17.5	8.66	1.5	-	0.44



## Type R Ring Gasket Dimensions and Tolerances



Ring Number	Average Pitch Diameter of Ring, P	Width of Ring, A	Height of Ring		Width of Flat on Octagonal Ring, C	Radius in Octagonal Ring, R1	Weight, kgs	
			Oval, B	Octagonal, H			Oval	Octagonal
R-86	90.5	15.88	-	20.6	10.49	1.5	-	0.66
R-87	100.03	15.88	-	20.6	10.49	1.5	-	0.72
R-88	123.83	19.05	-	23.9	12.32	1.5	-	1.24
R-89	114.3	19.05	-	23.9	12.32	1.5	-	1.15
R-90	155.58	22.23	-	26.9	14.81	1.5	-	2.06
R-91	260.35	31.75	-	38.1	22.33	2.3	-	6.83
R-92	228.6	11.13	17.5	16	7.75	1.5	0.94	0.92
R-93	749.3	19.05	-	23.9	12.32	1.5	-	7.41
R-94	800.1	19.05	-	23.9	12.32	1.5	-	7.91
R-95	857.25	19.05	-	23.9	12.32	1.5	-	8.48
R-96	914.4	22.23	-	26.9	14.81	1.5	-	12.09
R-97	965.2	22.23	-	26.9	14.81	1.5	-	12.31
R-98	1022.35	22.23	-	26.9	14.81	1.5	-	13.51
R-99	234.95	11.13	-	16	7.75	1.5	-	0.94
R-100	749.3	28.58	-	35.1	19.81	2.3	-	-
R-101	800.1	31.75	-	38.1	22.33	2.3	-	-
R-102	857.25	31.75	-	38.1	22.33	2.3	-	-
R-103	914.4	31.75	-	38.1	22.33	2.3	-	-
R-104	965.2	34.93	-	41.4	24.82	2.3	-	-
R-105	1022.35	34.93	-	41.4	24.82	2.3	-	-

### GENERAL NOTES:

(a) All dimensions are in millimeters.

(b) Tolerances:

**P** = average pitch diameter of ring,  $\pm 0.18$

**A** = width of ring,  $\pm 0.20$

**B, H** = height of ring,  $+1.3, -0.5$

Variation in height throughout the entire circumference of any given ring shall not exceed 0.5 within these tolerances.

**C** = width of flat on octagonal ring,  $\pm 0.20$

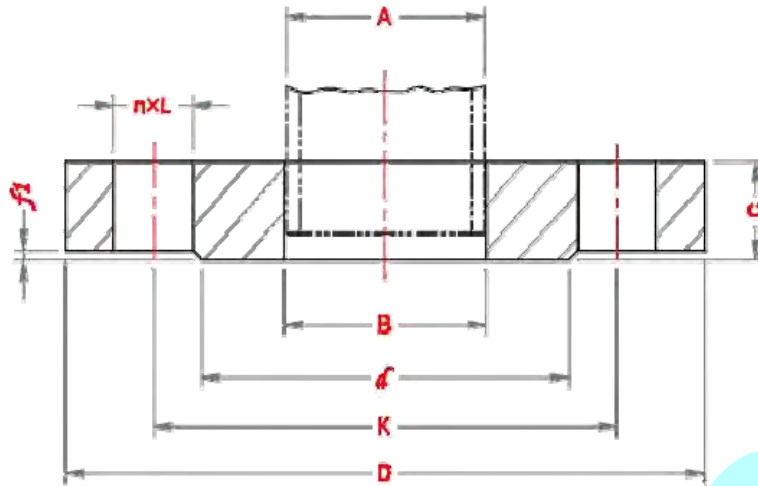
**R1** = radius in ring,  $\pm 0.5$

**23 deg** = angle,  $\pm 0 \text{ deg } 30 \text{ min}$

# EN 1092-1

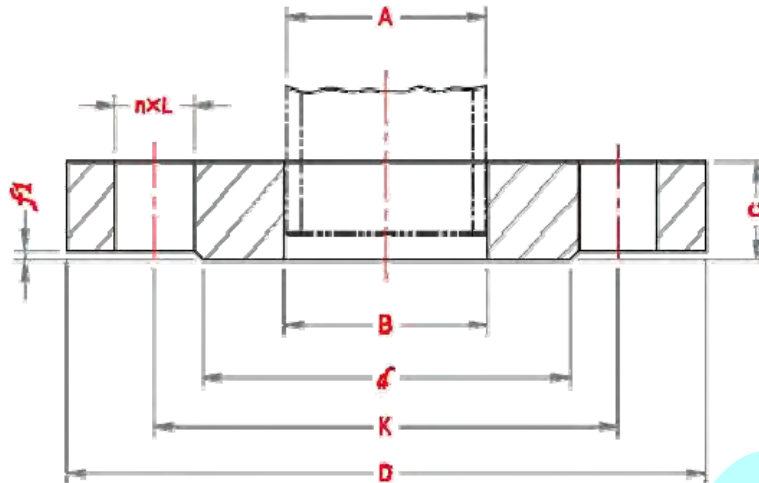
## flanges

**Dimensions of plate flanges EN 1092-1 Type 01 / PN2.5**



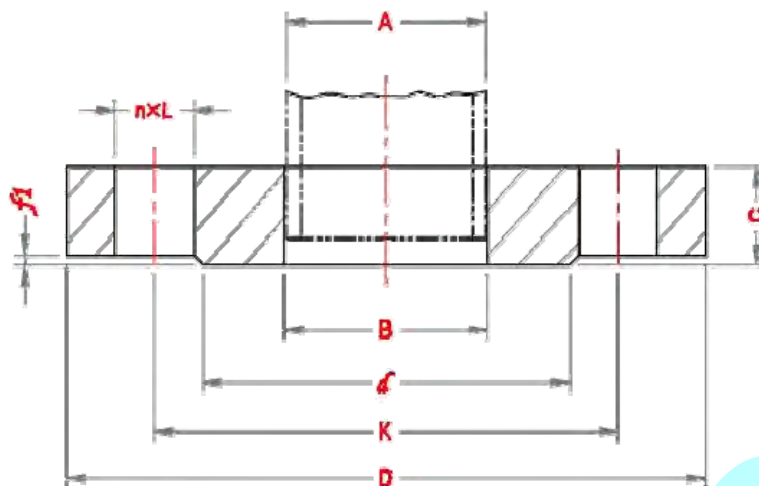
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	75	50	11	4	M10	12	35	2	18
15	21.3	80	55	11	4	M10	12	40	2	22
20	26.9	90	65	11	4	M10	14	50	2	27.5
25	33.7	100	75	11	4	M10	14	60	2	34.5
32	42.4	120	90	14	4	M12	16	70	2	43.5
40	48.3	130	100	14	4	M12	16	80	3	49.5
50	60.3	140	110	14	4	M12	16	90	3	61.5
65	76.1	160	130	14	4	M12	16	110	3	77.5
80	88.9	190	150	18	4	M16	18	128	3	90.5
100	114.3	210	170	18	4	M16	18	148	3	116
125	139.7	240	200	18	8	M16	20	178	3	141.5
150	168.3	265	225	18	8	M16	20	202	3	170.5
200	219.1	320	280	18	8	M16	22	258	3	221.5
250	273	375	335	18	12	M16	24	312	3	276.5
300	323.9	440	395	22	12	M20	24	365	4	327.5
350	355.6	490	445	22	12	M20	26	415	4	359.5
400	406.4	540	495	22	16	M20	28	455	4	411
450	457	595	550	22	16	M20	30	520	4	462
500	508	645	600	22	20	M20	30	570	4	513.5
600	610	755	705	26	20	M24	32	670	5	616.5
700	711	860	810	26	24	M24	40	775	5	715
800	813	975	920	30	24	M27	44	880	5	817
900	914	1075	1020	30	24	M27	48	980	5	918
1000	1016	1175	1120	30	28	M27	52	1080	5	1020
1200	1219	1375	1320	30	32	M27	60	1280	5	1223

**Dimensions of plate flanges EN 1092-1 Type 01 / PN6**



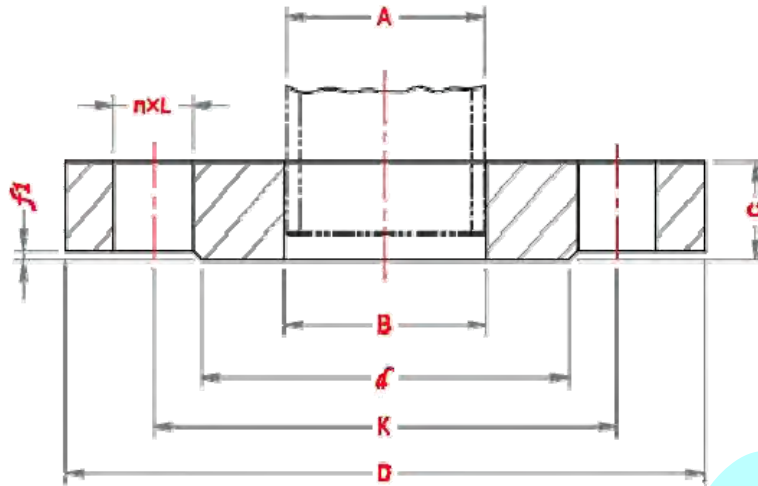
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	75	50	11	4	M10	12	35	2	18
15	21.3	80	55	11	4	M10	12	40	2	22
20	26.9	90	65	11	4	M10	14	50	2	27.5
25	33.7	100	75	11	4	M10	14	60	2	34.5
32	42.4	120	90	14	4	M12	16	70	2	43.5
40	48.3	130	100	14	4	M12	16	80	3	49.5
50	60.3	140	110	14	4	M12	16	90	3	61.5
65	76.1	160	130	14	4	M12	16	110	3	77.5
80	88.9	190	150	18	4	M16	18	128	3	90.5
100	114.3	210	170	18	4	M16	18	148	3	116
125	139.7	240	200	18	8	M16	20	178	3	141.5
150	168.3	265	225	18	8	M16	20	202	3	170.5
200	219.1	320	280	18	8	M16	22	258	3	221.5
250	273	375	335	18	12	M16	24	312	3	276.5
300	323.9	440	395	22	12	M20	24	365	4	327.5
350	355.6	490	445	22	12	M20	26	415	4	359.5
400	406.4	540	495	22	16	M20	28	455	4	411
450	457	595	550	22	16	M20	30	520	4	462
500	508	645	600	22	20	M20	30	570	4	513.5
600	610	755	705	26	20	M24	32	670	5	616.5
700	711	860	810	26	24	M24	40	775	5	715
800	813	975	920	30	24	M27	44	880	5	817
900	914	1075	1020	30	24	M27	48	980	5	918
1000	1016	1175	1120	30	28	M27	52	1080	5	1020
1200	1219	1405	1340	33	32	M30	60	1295	5	1223
1400	1422	1630	1560	36	36	M33	72	1510	5	1426
1600	1626	1830	1760	36	40	M33	80	1710	5	1630
1800	1829	2045	1970	39	44	M36	88	1920	5	1833
2000	2032	2265	2180	42	48	M39	96	2125	5	2036

## Dimensions of plate flanges EN 1092-1 Type 01 / PN10



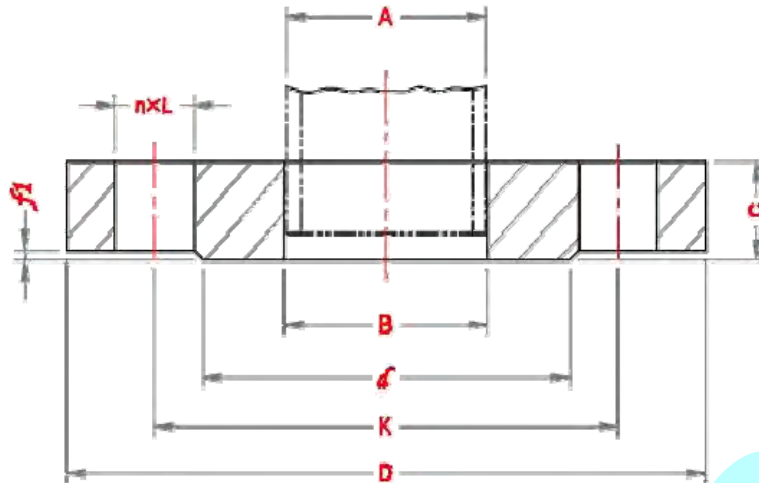
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	90	60	14	4	M12	14	40	2	18
15	21.3	95	65	14	4	M12	14	45	2	22
20	26.9	105	75	14	4	M12	16	58	2	27.5
25	33.7	115	85	14	4	M12	16	68	2	34.5
32	42.4	140	100	18	4	M16	18	78	2	43.5
40	48.3	150	110	18	4	M16	18	88	3	49.5
50	60.3	165	125	18	4	M16	20	102	3	61.5
65	76.1	185	145	18	8	M16	20	122	3	77.5
80	88.9	200	160	18	8	M16	20	138	3	90.5
100	114.3	220	180	18	8	M16	22	158	3	116
125	139.7	250	210	18	8	M16	22	188	3	141.5
150	168.3	285	240	22	8	M20	24	212	3	170.5
200	219.1	340	295	22	8	M20	24	268	3	221.5
250	273	395	350	22	12	M20	26	320	3	276.5
300	323.9	445	400	22	12	M20	26	370	4	327.5
350	355.6	505	460	22	16	M20	30	430	4	359.5
400	406.4	565	515	26	16	M24	32	482	4	411
450	457	615	565	26	20	M24	36	532	4	462
500	508	670	620	26	20	M24	38	585	4	513.5
600	610	780	725	30	20	M27	42	685	5	616.5
700	711	895	840	30	24	M27	50	800	5	715
800	813	1015	950	33	24	M30	56	905	5	817
900	914	1115	1050	33	28	M30	62	1005	5	918
1000	1016	1230	1160	36	28	M33	70	1110	5	1020
1200	1219	1455	1380	39	32	M36	83	1330	5	1223
1400	1422	1675	1590	42	36	M39	90	1535	5	1426
1600	1626	1915	1820	48	40	M45	100	1760	5	1630
1800	1829	2115	2020	48	44	M45	110	1960	5	1833
2000	2032	2325	2230	48	48	M45	120	2170	5	2036

## Dimensions of plate flanges EN 1092-1 Type 01 / PN16



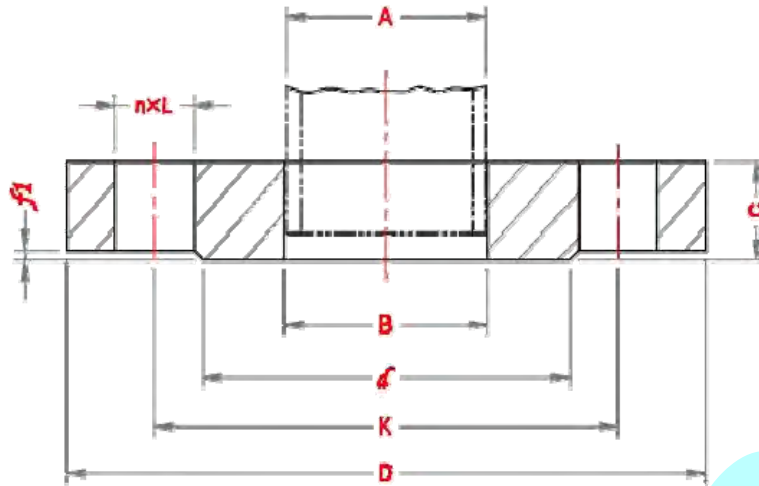
DN	Pipe OD, A	Outside Diamete, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	90	60	14	4	M12	14	40	2	18
15	21.3	95	65	14	4	M12	14	45	2	22
20	26.9	105	75	14	4	M12	16	58	2	27.5
25	33.7	115	85	14	4	M12	16	68	2	34.5
32	42.4	140	100	18	4	M16	18	78	2	43.5
40	48.3	150	110	18	4	M16	18	88	3	49.5
50	60.3	165	125	18	4	M16	20	102	3	61.5
65	76.1	185	145	18	8	M16	20	122	3	77.5
80	88.9	200	160	18	8	M16	20	138	3	90.5
100	114.3	220	180	18	8	M16	22	158	3	116
125	139.7	250	210	18	8	M16	22	188	3	141.5
150	168.3	285	240	22	8	M20	24	212	3	170.5
200	219.1	340	295	22	12	M20	26	268	3	221.5
250	273	405	355	26	12	M24	29	320	3	276.5
300	323.9	460	410	26	12	M24	32	378	4	327.5
350	355.6	520	470	26	16	M24	35	438	4	359.5
400	406.4	580	525	30	16	M27	38	490	4	411
450	457	640	585	30	20	M27	42	550	4	462
500	508	715	650	33	20	M30	46	610	4	513.5
600	610	840	770	36	20	M33	55	725	5	616.5
700	711	910	840	36	24	M33	63	795	5	715
800	813	1025	950	39	24	M36	74	900	5	817
900	914	1125	1050	39	28	M36	82	1000	5	918
1000	1016	1255	1170	42	28	M39	90	1115	5	1020
1200	1219	1485	1390	48	32	M45	95	1330	5	1223
1400	1422	1685	1590	48	36	M45	103	1530	5	1426
1600	1626	1930	1820	56	40	M52	115	1750	5	1630
1800	1829	2130	2020	56	44	M52	126	1950	5	1833
2000	2032	2345	2230	62	48	M56	138	2150	5	2036

## Dimensions of plate flanges EN 1092-1 Type 01 / PN25



DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	90	60	14	4	M12	14	40	2	18
15	21.3	95	65	14	4	M12	14	45	2	22
20	26.9	105	75	14	4	M12	16	58	2	27.5
25	33.7	115	85	14	4	M12	16	68	2	34.5
32	42.4	140	100	18	4	M16	18	78	2	43.5
40	48.3	150	110	18	4	M16	18	88	3	49.5
50	60.3	165	125	18	4	M16	20	102	3	61.5
65	76.1	185	145	18	8	M16	22	122	3	77.5
80	88.9	200	160	18	8	M16	24	138	3	90.5
100	114.3	235	190	22	8	M20	26	162	3	116
125	139.7	270	220	26	8	M24	28	188	3	141.5
150	168.3	300	250	26	8	M24	30	218	3	170.5
200	219.1	360	310	26	12	M24	32	278	3	221.5
250	273	435	370	30	12	M27	35	335	3	276.5
300	323.9	485	430	30	16	M27	38	395	4	327.5
350	355.6	555	490	33	16	M30	42	450	4	359.5
400	406.4	620	550	36	16	M33	48	505	4	411
450	457	670	600	36	20	M33	54	555	4	462
500	508	730	660	36	20	M33	58	615	4	513.5
600	610	845	770	39	20	M36	68	720	5	616.5
700	711	960	875	42	24	M39	85	820	5	715
800	813	1085	990	48	24	M45	95	930	5	817

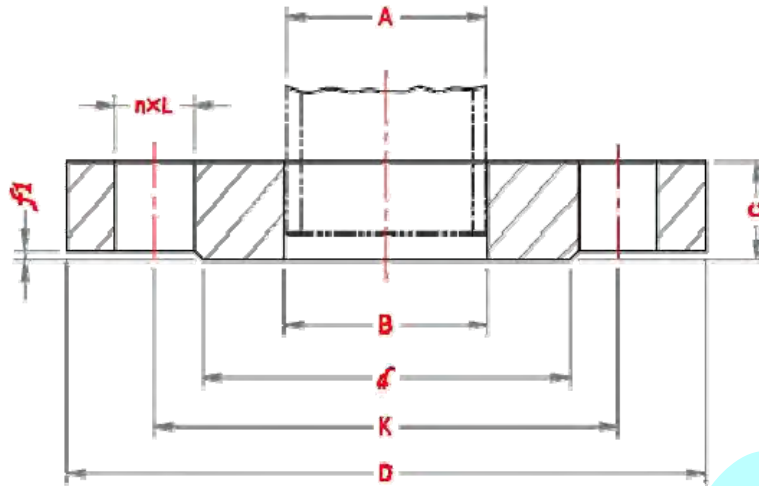
**Dimensions of plate flanges EN 1092-1 Type 01 / PN40**



DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	90	60	14	4	M12	14	40	2	18
15	21.3	95	65	14	4	M12	14	45	2	22
20	26.9	105	75	14	4	M12	16	58	2	27.5
25	33.7	115	85	14	4	M12	16	68	2	34.5
32	42.4	140	100	18	4	M16	18	78	2	43.5
40	48.3	150	110	18	4	M16	18	88	3	49.5
50	60.3	165	125	18	4	M16	20	102	3	61.5
65	76.1	185	145	18	8	M16	22	122	3	77.5
80	88.9	200	160	18	8	M16	24	138	3	90.5
100	114.3	235	190	22	8	M20	26	162	3	116
125	139.7	270	220	26	8	M24	28	188	3	141.5
150	168.3	300	250	26	8	M24	30	218	3	170.5
200	219.1	375	320	30	12	M27	36	285	3	221.5
250	273	450	385	33	12	M30	42	345	3	276.5
300	323.9	515	450	33	16	M30	52	410	4	327.5
350	355.6	580	510	36	16	M33	58	465	4	359.5
400	406.4	660	585	39	16	M36	65	535	4	411
450	457	685	610	39	20	M36	66	560	4	462
500	508	755	670	42	20	M39	72	615	4	513.5
600	610	890	795	48	20	M45	84	735	5	616.5

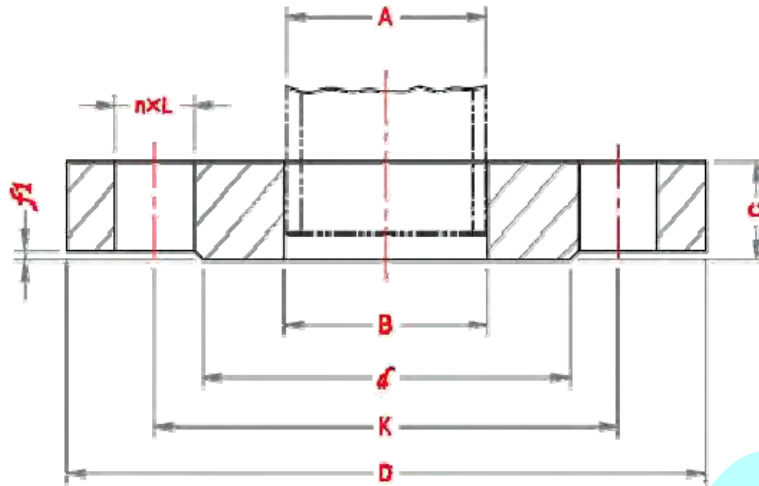


**Dimensions of plate flanges EN 1092-1 Type 01 / PN63**



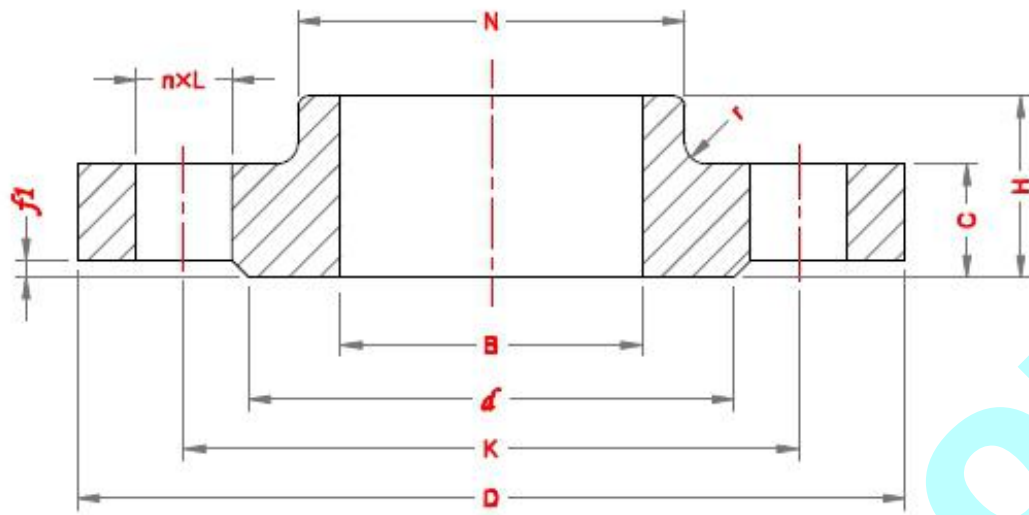
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	100	70	14	4	M12	20	40	2	18
15	21.3	105	75	14	4	M12	20	45	2	22
20	26.9	130	90	18	4	M16	22	58	2	27.5
25	33.7	140	100	18	4	M16	24	68	2	34.5
32	42.4	155	110	22	4	M20	24	78	2	43.5
40	48.3	170	125	22	4	M20	26	88	3	49.5
50	60.3	180	135	22	4	M20	26	102	3	61.5
65	76.1	205	160	22	8	M20	26	122	3	77.5
80	88.9	215	170	22	8	M20	30	138	3	90.5
100	114.3	250	200	26	8	M24	32	162	3	116
125	139.7	295	240	30	8	M27	34	188	3	141.5
150	168.3	345	280	33	8	M30	36	218	3	170.5
200	219.1	415	345	36	12	M33	48	285	3	221.5
250	273	470	400	36	12	M33	55	345	3	276.5
300	323.9	530	460	36	16	M33	65	410	4	327.5
350	355.6	600	525	39	16	M36	72	465	4	359.5
400	406.4	670	585	42	16	M39	80	535	4	411

## Dimensions of plate flanges EN 1092-1 Type 01 / PN100



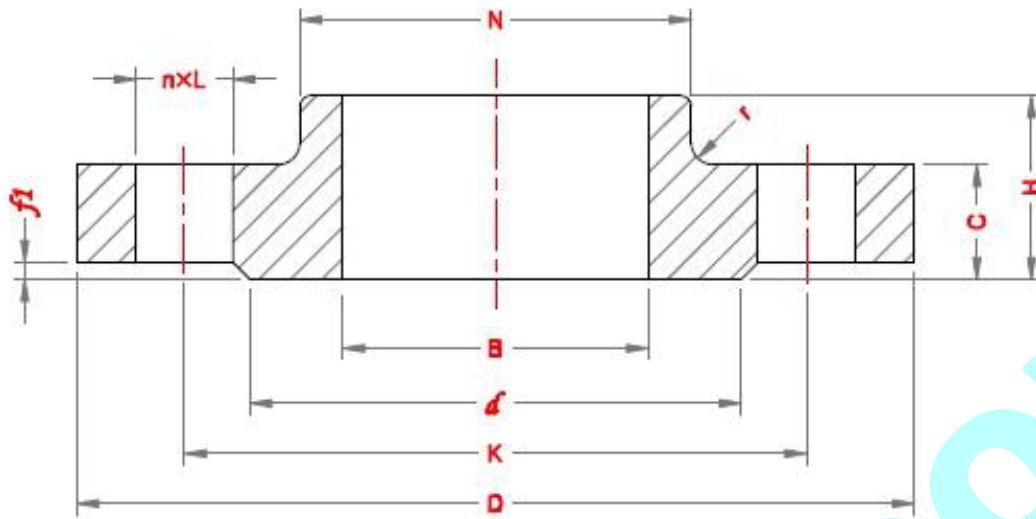
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1	Bore diameter, B
10	17.2	100	70	14	4	M12	20	40	2	18
15	21.3	105	75	14	4	M12	20	45	2	22
20	26.9	130	90	18	4	M16	22	58	2	27.5
25	33.7	140	100	18	4	M16	24	68	2	34.5
32	42.4	155	110	22	4	M20	24	78	2	43.5
40	48.3	170	125	22	4	M20	26	88	3	49.5
50	60.3	195	145	26	4	M24	28	102	3	61.5
65	76.1	220	170	26	8	M24	30	122	3	77.5
80	88.9	230	180	26	8	M24	34	138	3	90.5
100	114.3	265	210	30	8	M27	36	162	3	116
125	139.7	315	250	33	8	M30	42	188	3	141.5
150	168.3	355	290	33	12	M30	48	218	3	170.5
200	219.1	430	360	36	12	M33	60	285	3	221.5
250	273	505	430	39	12	M36	72	345	3	276.5
300	323.9	585	500	42	16	M39	84	410	4	327.5
350	355.6	655	560	48	16	M45	95	465	4	359.5

## Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN6



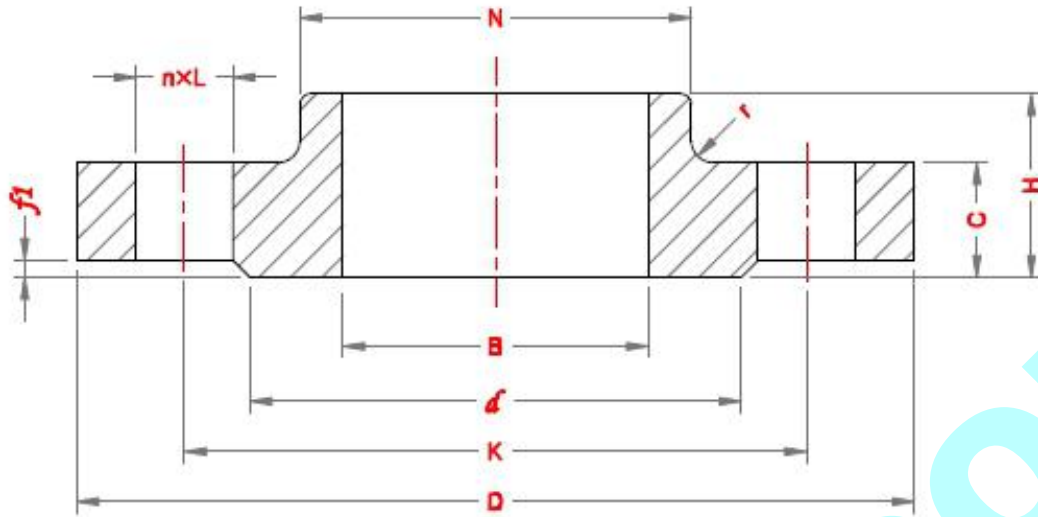
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>r</b>	<b>B</b>
10	17.2	75	50	11	4	35	2	12	20	25	4	18
15	21.3	80	55	11	4	40	2	12	20	30	4	22
20	26.9	90	65	11	4	50	2	14	24	40	4	27.5
25	33.7	100	75	11	4	60	2	14	24	50	4	34.5
32	42.4	120	90	14	4	70	2	14	26	60	6	43.5
40	48.3	130	100	14	4	80	3	14	26	70	6	49.5
50	60.3	140	110	14	4	90	3	14	28	80	6	61.5
65	76.1	160	130	14	4	110	3	14	32	100	6	77.5
80	88.9	190	150	18	4	128	3	16	34	110	8	90.5
100	114.3	210	170	18	4	148	3	16	40	130	8	116
125	139.7	240	200	18	8	178	3	18	44	160	8	141.5
150	168.3	265	225	18	8	202	3	18	44	185	10	170.5
200	219.1	320	280	18	8	258	3	20	44	240	10	221.5
250	273	375	335	18	12	312	3	22	44	295	12	276.5
300	323.9	440	395	22	12	365	4	22	44	355	12	327.5

## Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN10



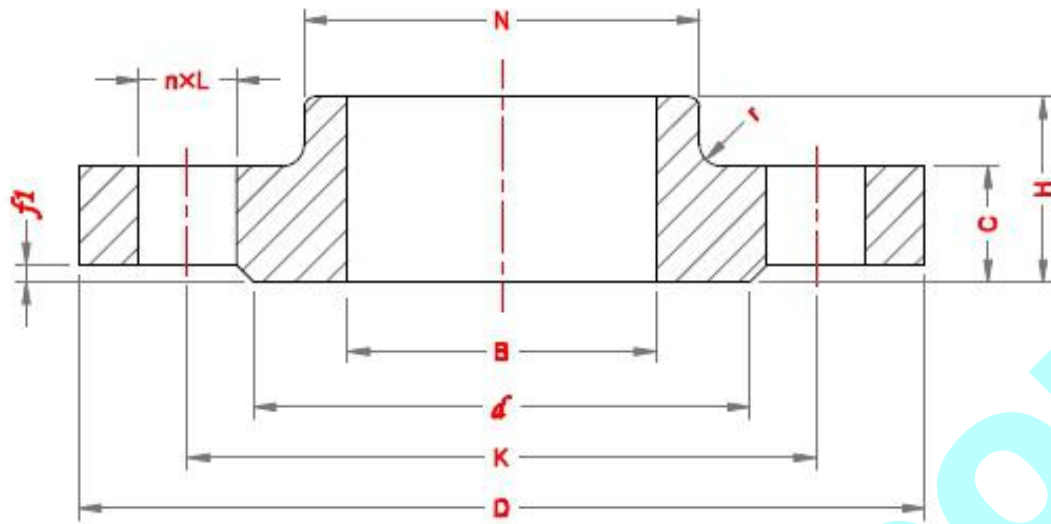
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>r</b>	<b>B</b>
15	21.3	95	65	14	4	45	2	16	22	35	4	22
20	26.9	105	75	14	4	58	2	18	26	45	4	27.5
25	33.7	115	85	14	4	68	2	18	28	52	4	34.5
32	42.4	140	100	18	4	78	2	18	30	60	6	43.5
40	48.3	150	110	18	4	88	3	18	32	70	6	49.5
50	60.3	165	125	18	4	102	3	18	28	84	6	61.5
65	76.1	185	145	18	8	122	3	18	32	104	6	77.5
80	88.9	200	160	18	8	138	3	20	34	118	6	90.5
100	114.3	220	180	18	8	158	3	20	40	140	8	116
125	139.7	250	210	18	8	188	3	22	44	168	8	141.5
150	168.3	285	240	22	8	212	3	22	44	195	10	170.5
200	219.1	340	295	22	8	268	3	24	44	246	10	221.5
250	273	395	350	22	12	320	3	26	46	298	12	276.5
300	323.9	445	400	22	12	370	4	26	46	350	12	327.5
350	355.6	505	460	22	16	430	4	26	53	400	12	359.5
400	406.4	565	515	26	16	482	4	26	57	456	12	411
450	457	615	565	26	20	532	4	28	63	502	12	462
500	508	670	620	26	20	585	4	28	67	559	12	513.5
600	610	780	725	30	20	685	5	28	75	658	12	616.5

Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN16



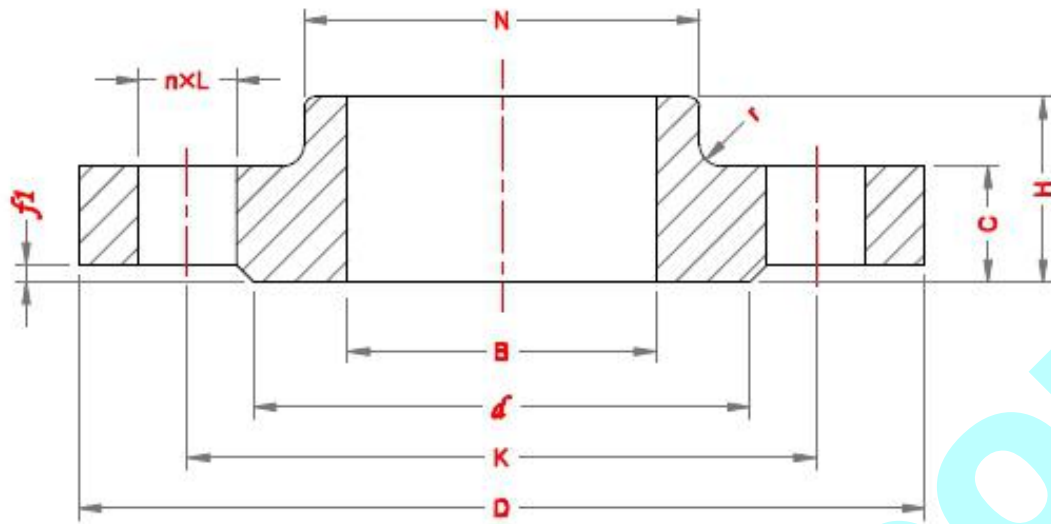
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>r</b>	<b>B</b>
15	21.3	95	65	14	4	45	2	16	22	35	4	22
20	26.9	105	75	14	4	58	2	18	26	45	4	27.5
25	33.7	115	85	14	4	68	2	18	28	52	4	34.5
32	42.4	140	100	18	4	78	2	18	30	60	6	43.5
40	48.3	150	110	18	4	88	3	18	32	70	6	49.5
50	60.3	165	125	18	4	102	3	18	28	84	6	61.5
65	76.1	185	145	18	8	122	3	18	32	104	6	77.5
80	88.9	200	160	18	8	138	3	20	34	118	6	90.5
100	114.3	220	180	18	8	158	3	20	40	140	8	116
125	139.7	250	210	18	8	188	3	22	44	168	8	141.5
150	168.3	285	240	22	8	212	3	22	44	195	10	170.5
200	219.1	340	295	22	12	268	3	24	44	246	10	221.5
250	273	405	355	26	12	320	3	26	46	298	12	276.5
300	323.9	460	410	26	12	378	4	28	46	350	12	327.5
350	355.6	520	470	26	16	438	4	30	57	400	12	359.5
400	406.4	580	525	30	16	490	4	32	63	456	12	411
450	457	640	585	30	20	550	4	34	38	502	12	462
500	508	715	650	33	20	610	4	36	73	559	12	513.5
600	610	840	770	36	20	725	5	40	83	658	12	616.5
700	711	910	840	36	24	795	5	40	83	750	12	718
800	813	1025	950	39	24	900	5	41	90	864	12	820
900	914	1125	1050	39	28	1000	5	48	94	968	12	921
1000	1016	1255	1170	42	28	1115	5	59	100	1072	16	1023

## Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN25



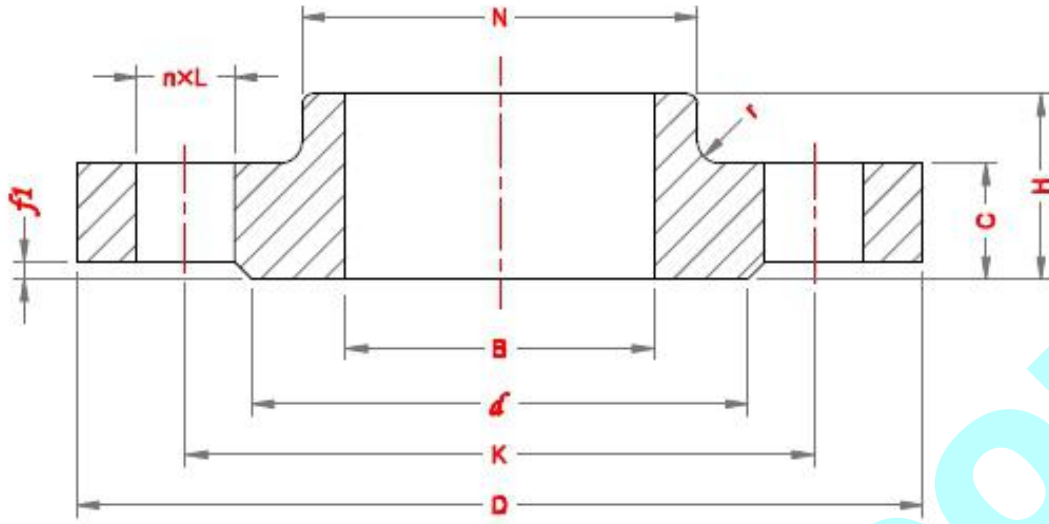
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>r</b>	<b>B</b>
15	21.3	95	65	14	4	45	2	16	22	35	4	22
20	26.9	105	75	14	4	58	2	18	26	45	4	27.5
25	33.7	115	85	14	4	68	2	18	28	52	4	34.5
32	42.4	140	100	18	4	78	2	18	30	60	6	43.5
40	48.3	150	110	18	4	88	3	18	32	70	6	49.5
50	60.3	165	125	18	4	102	3	20	34	84	6	61.5
65	76.1	185	145	18	8	122	3	22	38	104	6	77.5
80	88.9	200	160	18	8	138	3	24	40	118	8	90.5
100	114.3	235	190	22	8	162	3	24	44	145	8	116
125	139.7	270	220	26	8	188	3	26	48	170	8	141.5
150	168.3	300	250	26	8	218	3	28	52	200	10	170.5
200	219.1	360	310	26	12	278	3	30	52	256	10	221.5
250	273	435	370	30	12	335	3	32	60	310	10	276.5
300	323.9	485	430	30	16	395	4	34	67	364	10	327.5
350	355.6	555	490	33	16	450	4	38	72	418	12	359.5
400	406.4	620	550	36	16	505	4	40	78	472	12	411
450	457	670	600	36	20	555	4	46	84	520	12	462
500	508	730	660	36	20	615	4	48	90	580	12	513.5
600	610	845	770	39	20	720	5	58	100	684	12	616.5

## Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN40



DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>r</b>	<b>B</b>
15	21.3	95	65	14	4	45	2	16	22	35	4	22
20	26.9	105	75	14	4	58	2	18	26	45	4	27.5
25	33.7	115	85	14	4	68	2	18	28	52	4	34.5
32	42.4	140	100	18	4	78	2	18	30	60	6	43.5
40	48.3	150	110	18	4	88	3	18	32	70	6	49.5
50	60.3	165	125	18	4	102	3	20	34	84	6	61.5
65	76.1	185	145	18	8	122	3	22	38	104	6	77.5
80	88.9	200	160	18	8	138	3	24	40	118	8	90.5
100	114.3	235	190	22	8	162	3	24	44	145	8	116
125	139.7	270	220	26	8	188	3	26	48	170	8	141.5
150	168.3	300	250	26	8	218	3	28	52	200	10	170.5
200	219.1	375	320	30	12	285	3	34	52	260	10	221.5
250	273	450	385	33	12	345	3	38	60	312	12	276.5
300	323.9	515	450	33	16	410	4	42	67	380	12	327.5
350	355.6	580	510	36	16	465	4	46	72	424	12	359.5
400	406.4	660	585	39	16	535	4	50	78	478	12	411
450	457	685	610	39	20	560	4	57	84	522	12	462
500	508	755	670	42	20	615	4	57	90	576	12	513.5
600	610	890	795	48	20	735	5	72	100	686	12	616.5

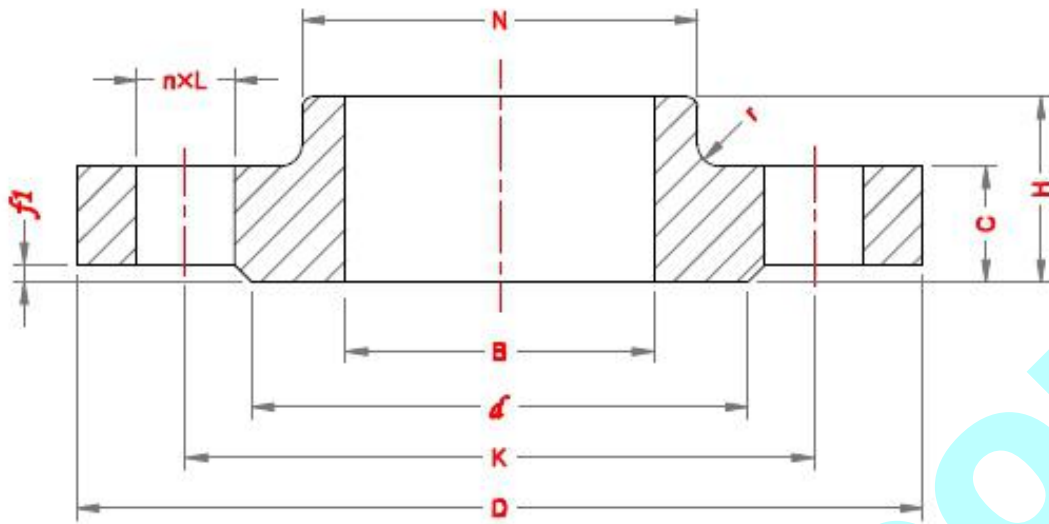
Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN63



DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	A	D	K	L		d	f1	C	H	N	r	B
15	21.3	105	75	14	4	45	2	20	28	43	4	22
20	26.9	130	90	18	4	58	2	20	30	52	4	27.5
25	33.7	140	100	18	4	68	2	24	32	60	4	34.5
32	42.4	155	110	22	4	78	2	24	32	68	6	43.5
40	48.3	170	125	22	4	88	3	26	34	80	6	49.5
50	60.3	180	135	22	4	102	3	26	36	90	6	61.5
65	76.1	205	160	22	8	122	3	26	40	112	6	77.5
80	88.9	215	170	22	8	138	3	28	44	125	8	90.5
100	114.3	250	200	26	8	162	3	30	52	152	8	116
125	139.7	295	240	30	8	188	3	34	56	185	8	141.5
150	168.3	345	280	33	8	218	3	36	60	215	10	170.5

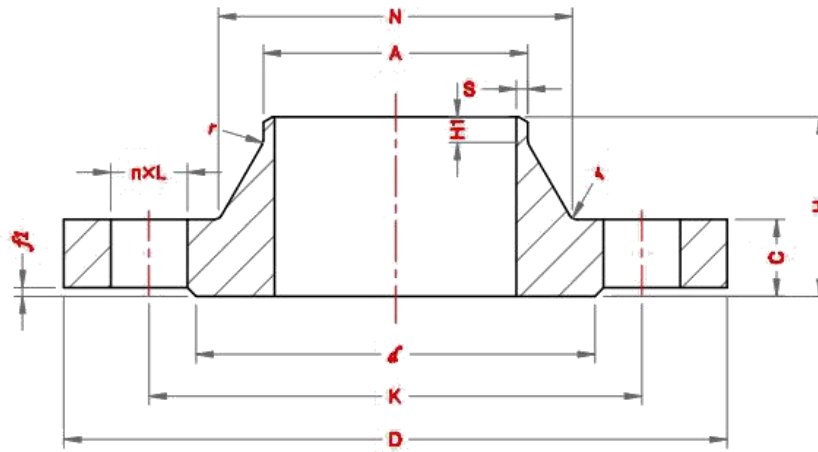


## Dimensions of hubbed slip-on flanges EN 1092-1 Type 12 / PN100



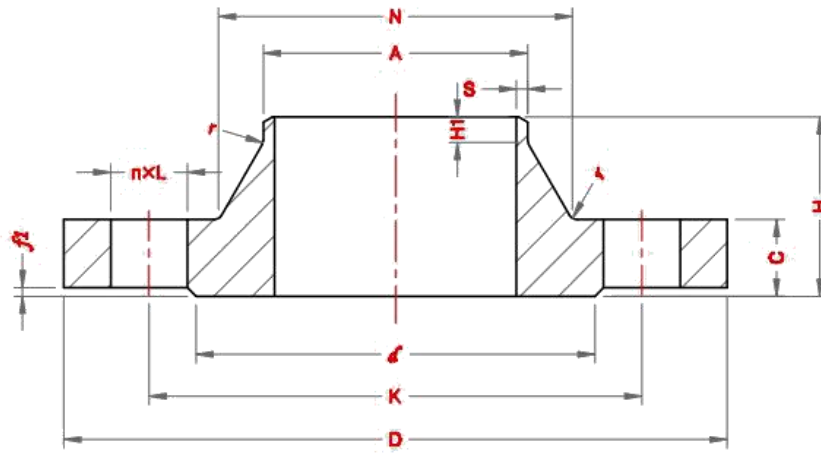
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Hole	No. of bolt	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Radius of Corners,	Bore diameter
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>r</b>	<b>B</b>
15	21.3	105	75	14	4	45	2	20	28	43	4	22
20	26.9	130	90	18	4	58	2	22	30	52	4	27.5
25	33.7	140	100	18	4	68	2	24	32	60	4	34.5
32	42.4	155	110	22	4	78	2	24	32	68	6	43.5
40	48.3	170	125	22	4	88	3	26	34	80	6	49.5
50	60.3	195	145	26	4	102	3	28	36	95	6	61.5
65	76.1	220	170	26	8	122	3	30	40	118	6	77.5
80	88.9	230	180	26	8	138	3	32	44	130	8	90.5
100	114.3	265	210	30	8	162	3	36	52	158	8	116
125	139.7	315	250	33	8	188	3	40	56	188	8	141.5
150	168.3	355	290	33	12	218	3	44	60	225	10	170.5

Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN2.5



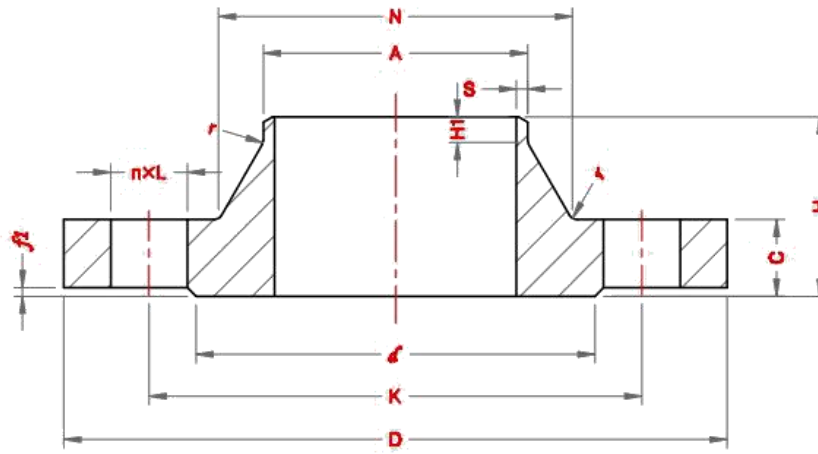
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
10	17.2	75	50	11	4	35	2	12	28	26	2.0	6	4
15	21.3	80	55	11	4	40	2	12	30	30	2.0	6	4
20	26.9	90	65	11	4	50	2	14	32	38	2.3	6	4
25	33.7	100	75	11	4	60	2	14	35	42	2.6	6	4
32	42.4	120	90	14	4	70	2	14	35	55	2.6	6	6
40	48.3	130	100	14	4	80	3	14	38	62	2.6	7	6
50	60.3	140	110	14	4	90	3	14	38	74	2.9	8	6
65	76.1	160	130	14	4	110	3	14	38	88	2.9	9	6
80	88.9	190	150	18	4	128	3	16	42	102	3.2	10	8
100	114.3	210	170	18	4	148	3	16	45	130	3.6	10	8
125	139.7	240	200	18	8	178	3	18	48	155	4.0	10	8
150	168.3	265	225	18	8	202	3	18	48	184	4.5	12	10
200	219.1	320	280	18	8	258	3	20	55	236	6.3	15	10
250	273	375	335	18	12	312	3	22	60	290	6.3	15	12
300	323.9	440	395	22	12	365	4	22	62	342	7.1	15	12
350	355.6	490	445	22	12	415	4	22	62	385	7.1	15	12
400	406.4	540	495	22	16	465	4	22	65	438	7.1	15	12
450	457	595	550	22	16	520	4	22	65	492	7.1	15	12
500	508	645	600	22	20	570	4	24	68	538	7.1	15	12
600	610	755	705	26	20	670	5	30	70	640	7.1	16	12
700	711	860	810	26	24	775	5	30	76	740	7.1	16	12
800	813	975	920	30	24	880	5	30	76	842	7.1	16	12
900	914	1075	1020	30	24	980	5	30	78	942	7.1	16	12
1000	1016	1175	1120	30	28	1080	5	30	82	1045	8.0	16	16
1200	1219	1375	1320	30	32	1280	5	32	94	1245	8.0	16	16
1400	1422	1575	1520	30	36	1480	5	38	96	1445	8.8	16	16
1600	1626	1790	1730	30	40	1690	5	46	102	1645	10.0	20	16
1800	1829	1990	1930	30	44	1890	5	46	110	1845	11.0	20	16
2000	2032	2190	2130	30	48	2090	5	50	122	2045	11.0	22	16
2200	2235	2405	2340	33	52	2295	5	56	129	2248	11.0	25	18
2400	2438	2605	2540	33	56	2495	5	62	143	2448	11.0	25	18

**Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN2.5**



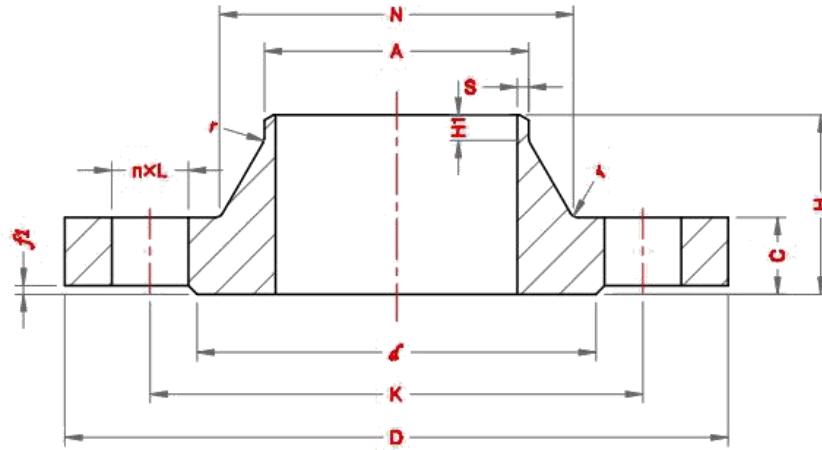
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
2600	2620	2805	2740	33	60	2695	5	64	148	2648	11.0	25	18
2800	2820	3030	2960	36	64	2910	5	74	161	2848	11.0	25	18
3000	3020	3230	3160	36	68	3110	5	80	170	3050	11.0	25	18
3200	3220	3430	3360	36	72	3310	5	84	180	3250	11.0	25	20
3400	3420	3630	3560	36	76	3510	5	90	194	3450	11.0	28	20
3600	3620	3840	3770	36	80	3720	5	96	201	3652	11.0	28	20
3800	3820	4045	3970	39	80	3920	5	102	212	3852	11.0	28	20
4000	4020	4245	4170	39	84	4120	5	106	226	4052	11.0	28	20

**Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN6**



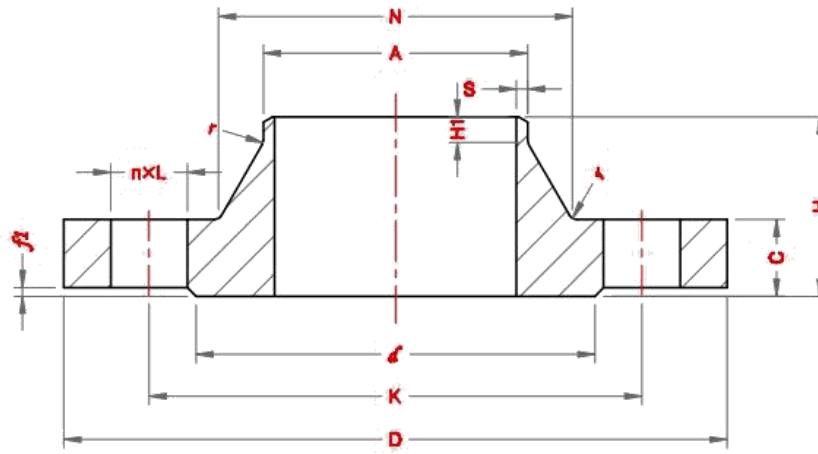
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
15	21.3	80	55	11	4	40	2	12	30	30	2.0	6	4
20	26.9	90	65	11	4	50	2	14	32	38	2.3	6	4
25	33.7	100	75	11	4	60	2	14	35	42	2.6	6	4
32	42.4	120	90	14	4	70	2	14	35	55	2.6	6	6
40	48.3	130	100	14	4	80	3	14	38	62	2.6	7	6
50	60.3	140	110	14	4	90	3	14	38	74	2.9	8	6
65	76.1	160	130	14	4	110	3	14	38	88	2.9	9	6
80	88.9	190	150	18	4	128	3	16	42	102	3.2	10	8
100	114.3	210	170	18	4	148	3	16	45	130	3.6	10	8
125	139.7	240	200	18	8	178	3	18	48	155	4.0	10	8
150	168.3	265	225	18	8	202	3	18	48	184	4.5	12	10
200	219.1	320	280	18	8	258	3	20	55	236	6.3	15	10
250	273	375	335	18	12	312	3	22	60	290	6.3	15	12
300	323.9	440	395	22	12	365	4	22	62	342	7.1	15	12
350	355.6	490	445	22	12	415	4	22	62	385	7.1	15	12
400	406.4	540	495	22	16	465	4	22	65	438	7.1	15	12
450	457	595	550	22	16	520	4	22	65	492	7.1	15	12
500	508	645	600	22	20	570	4	24	68	538	7.1	15	12
600	610	755	705	26	20	670	5	30	70	640	7.1	16	12
700	711	860	810	26	24	775	5	30	76	740	8.0	16	12
800	813	975	920	30	24	880	5	30	76	842	8.0	16	12
900	914	1075	1020	30	24	980	5	34	78	942	8.0	16	12
1000	1016	1175	1120	30	28	1080	5	38	82	1045	8.0	16	16
1200	1219	1405	1340	33	32	1295	5	42	104	1248	8.8	20	16
1400	1422	1630	1560	36	36	1510	5	56	114	1452	8.8	20	16
1600	1626	1830	1760	39	40	1710	5	63	119	1655	10.0	20	16
1800	1829	2045	1970	42	44	1920	5	69	133	1855	11.0	20	16
2000	2032	2265	2180	42	48	2125	5	74	146	2058	12.5	25	16
2200	2235	2475	2390	42	52	2335	5	81	154	2260	14.0	25	18
2400	2438	2685	2600	48	56	2545	5	87	168	2462	15.0	25	18
2600	2620	2905	2810	48	60	2750	5	91	175	2665	16.0	25	18

**Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN6**



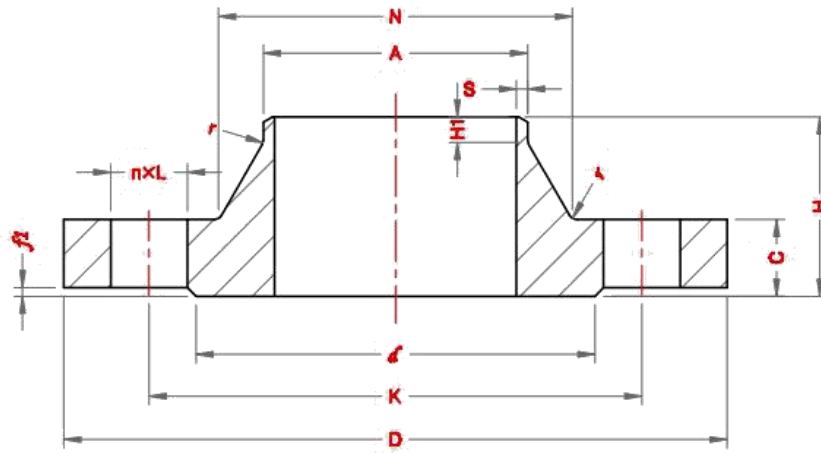
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
2800	2820	3115	3020	48	64	2960	5	101	188	2865	17.0	30	18
3000	3020	3315	3220	48	68	3160	5	102	192	3068	20.0	30	18
3200	3220	3525	3430	48	72	3370	5	106	202	3272	20.0	30	20
3400	3420	3735	3640	48	76	3580	5	110	214	3475	22.0	35	20
3600	3620	3970	3860	56	80	3790	5	124	229	3678	22.0	35	20

Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN10



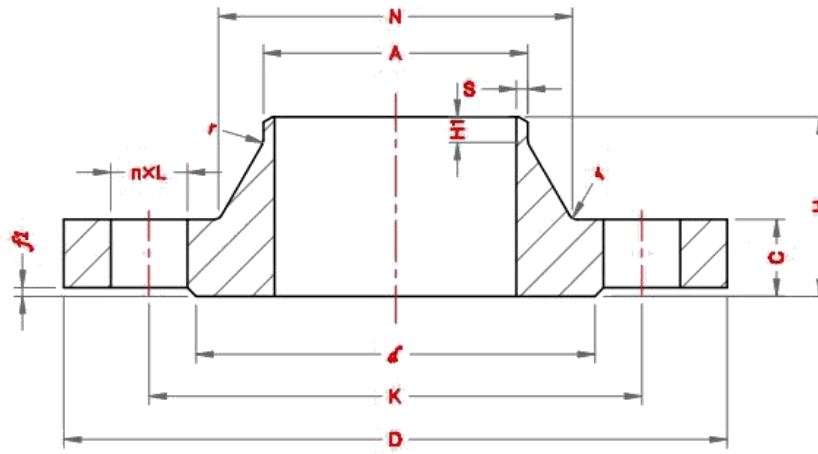
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	95	65	14	4	45	2	16	38	32	2.0	6	4
20	26.9	105	75	14	4	58	2	18	40	40	2.3	6	4
25	33.7	115	85	14	4	68	2	18	40	46	2.6	6	4
32	42.4	140	100	18	4	78	2	18	42	56	2.6	6	6
40	48.3	150	110	18	4	88	3	18	45	64	2.6	7	6
50	60.3	165	125	18	4	102	3	18	45	74	2.9	8	6
65	76.1	185	145	18	8	122	3	18	45	92	2.9	10	6
80	88.9	200	160	18	8	138	3	20	50	105	3.2	10	6
100	114.3	220	180	18	8	158	3	20	52	131	3.6	12	8
125	139.7	250	210	18	8	188	3	22	55	156	4.0	12	8
150	168.3	285	240	22	8	212	3	22	55	184	4.5	12	10
200	219.1	340	295	22	8	268	3	24	62	234	6.3	16	10
250	273	395	350	22	12	320	3	26	68	292	6.3	16	12
300	323.9	445	400	22	12	370	4	26	68	342	7.1	16	12
350	355.6	505	460	22	16	430	4	26	68	385	7.1	16	12
400	406.4	565	515	26	16	482	4	26	72	440	7.1	16	12
450	457	615	565	26	20	532	4	28	72	488	7.1	16	12
500	508	670	620	26	20	585	4	28	75	542	7.1	16	12
600	610	780	725	30	20	685	5	30	82	642	8.0	18	12
700	711	895	840	30	24	800	5	35	85	746	8.8	18	12
800	813	1015	950	33	24	905	5	38	96	850	8.8	18	12
900	914	1115	1050	33	28	1005	5	38	99	950	12.5	20	12
1000	1016	1230	1160	36	28	1110	5	44	105	1052	12.5	20	16
1200	1219	1455	1380	39	32	1330	5	55	132	1256	12.5	25	16
1400	1422	1675	1590	42	36	1535	5	65	143	1460	14.2	25	16
1600	1626	1915	1820	48	40	1760	5	75	159	1666	16.0	25	16
1800	1829	2115	2020	48	44	1960	5	85	175	1868	17.5	30	16
2000	2032	2325	2230	48	48	2170	5	90	186	2072	17.5	30	16
2200	2235	2550	2440	56	52	2370	5	100	202	2275	20.0	35	18
2400	2438	2760	2650	56	56	2570	5	110	218	2478	22.2	35	18
2600	2620	2960	2850	56	60	2780	5	110	224	2680	25.0	40	18

**Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN10**



DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
2800	2820	3180	3070	56	64	3000	5	124	244	2882	25.0	40	18
3000	3020	3405	3290	62	68	3210	5	132	257	3085	32.0	45	18

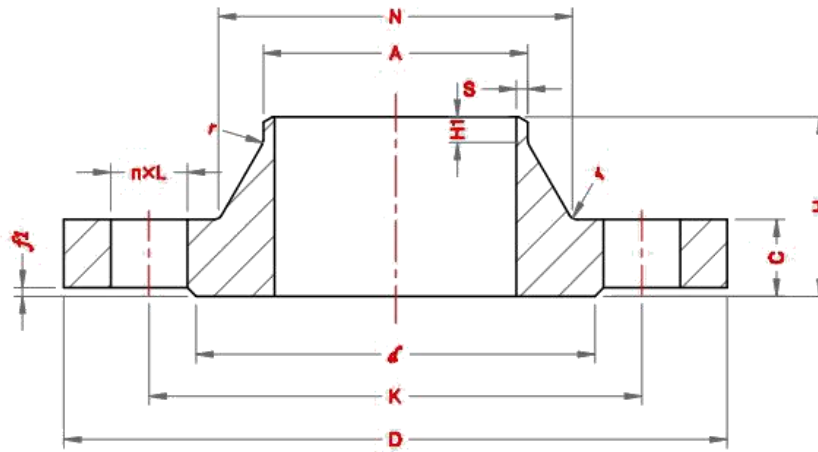
Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN16



DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
15	21.3	95	65	14	4	45	2	16	38	32	2.0	6	4
20	26.9	105	75	14	4	58	2	18	40	40	2.3	6	4
25	33.7	115	85	14	4	68	2	18	40	46	2.6	6	4
32	42.4	140	100	18	4	78	2	18	42	56	2.6	6	6
40	48.3	150	110	18	4	88	3	18	45	64	2.6	7	6
50	60.3	165	125	18	4	102	3	18	45	74	2.9	8	6
65	76.1	185	145	18	8	122	3	18	45	92	2.9	10	6
80	88.9	200	160	18	8	138	3	20	50	105	3.2	10	6
100	114.3	220	180	18	8	158	3	20	52	131	3.6	12	8
125	139.7	250	210	18	8	188	3	22	55	156	4.0	12	8
150	168.3	285	240	22	8	212	3	22	55	184	4.5	12	10
200	219.1	340	295	22	12	268	3	24	62	235	6.3	16	10
250	273	405	355	26	12	320	3	26	70	292	6.3	16	12
300	323.9	460	410	26	12	378	4	28	78	344	7.1	16	12
350	355.6	520	470	26	16	438	4	30	82	390	8.0	16	12
400	406.4	580	525	30	16	490	4	32	85	445	8.0	16	12
450	457	640	585	30	20	550	4	34	83	490	8.0	16	12
500	508	715	650	33	20	610	4	36	84	548	8.0	16	12
600	610	840	770	36	20	725	5	40	88	670	10.0	18	12
700	711	910	840	36	24	795	5	40	104	755	10.0	18	12
800	813	1025	950	39	24	900	5	62	108	855	12.5	20	12
900	914	1125	1050	39	28	1000	5	64	118	955	12.5	20	12
1000	1016	1255	1170	42	28	1115	5	68	137	1058	12.5	22	16
1200	1219	1485	1390	48	32	1330	5	78	160	1262	14.2	30	16
1400	1422	1685	1590	48	36	1530	5	84	177	1465	16.0	30	16
1600	1626	1930	1820	56	40	1750	5	102	204	1668	17.5	35	16
1800	1829	2130	2020	56	44	1950	5	110	218	1870	20.0	35	16
2000	2032	2345	2230	62	48	2150	5	124	238	2072	22.0	40	16

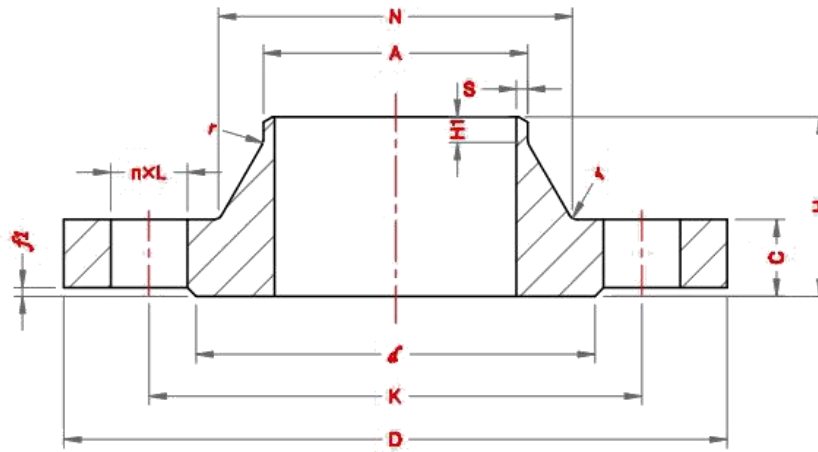


Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN25



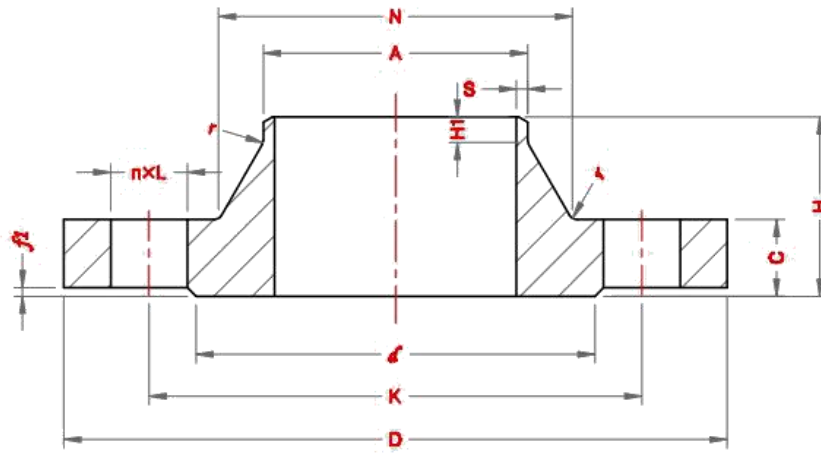
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	A	D	K	L		d	f1	C	H	N	S	H1	r
15	21.3	95	65	14	4	45	2	16	38	32	2.0	6	4
20	26.9	105	75	14	4	58	2	18	40	40	2.3	6	4
25	33.7	115	85	14	4	68	2	18	40	46	2.6	6	4
32	42.4	140	100	18	4	78	2	18	42	56	2.6	6	6
40	48.3	150	110	18	4	88	3	18	45	64	2.6	7	6
50	60.3	165	125	18	4	102	3	20	48	75	2.9	8	6
65	76.1	185	145	18	8	122	3	22	52	90	2.9	10	6
80	88.9	200	160	18	8	138	3	24	58	105	3.2	12	8
100	114.3	235	190	22	8	162	3	24	65	134	3.6	12	8
125	139.7	270	220	26	8	188	3	26	68	162	4.0	12	8
150	168.3	300	250	26	8	218	3	28	75	192	4.5	12	10
200	219.1	360	310	26	12	278	3	30	80	244	6.3	16	10
250	273	425	370	30	12	335	3	32	88	298	7.1	18	12
300	323.9	485	430	30	16	395	4	34	92	352	8.0	18	12
350	355.6	555	490	33	16	450	4	38	100	398	8.0	20	12
400	406.4	620	550	36	16	505	4	40	110	452	8.8	20	12
450	457	670	600	36	20	555	4	46	110	500	8.8	20	12
500	508	730	660	36	20	615	4	48	125	558	10.0	20	12
600	610	845	770	39	20	720	5	48	125	660	11.0	20	12
700	711	960	875	42	24	820	5	50	129	760	14.2	20	12
800	813	1085	990	48	24	930	5	53	138	864	16.0	22	12
900	914	1185	1090	48	28	1030	5	57	148	968	17.5	24	12
1000	1016	1320	1210	56	28	1140	5	63	160	1070	20.0	24	16

## Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN40



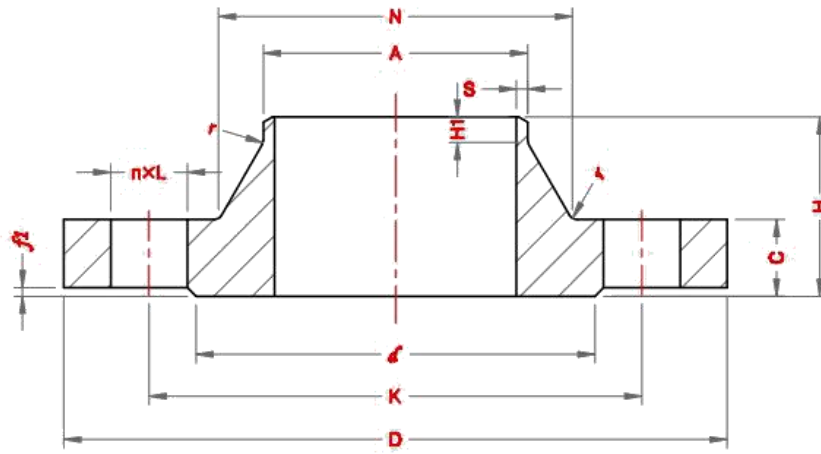
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	95	65	14	4	45	2	16	38	32	2.0	6	4
20	26.9	105	75	14	4	58	2	18	40	40	2.3	6	4
25	33.7	115	85	14	4	68	2	18	40	46	2.6	6	4
32	42.4	140	100	18	4	78	2	18	42	56	2.6	6	6
40	48.3	150	110	18	4	88	3	18	45	64	2.6	7	6
50	60.3	165	125	18	4	102	3	20	48	75	2.9	8	6
65	76.1	185	145	18	8	122	3	22	52	90	2.9	10	6
80	88.9	200	160	18	8	138	3	24	58	105	3.2	12	8
100	114.3	235	190	22	8	162	3	24	65	134	3.6	12	8
125	139.7	270	220	26	8	188	3	26	68	162	4.0	12	8
150	168.3	300	250	26	8	218	3	28	75	192	4.5	12	10
200	219.1	375	320	30	12	285	3	34	88	244	6.3	16	10
250	273	450	385	33	12	345	3	38	105	306	7.1	18	12
300	323.9	515	450	33	16	410	4	42	115	362	8.0	18	12
350	355.6	580	510	36	16	465	4	46	125	408	8.8	20	12
400	406.4	660	585	39	16	535	4	50	135	462	11.0	20	12
450	457	685	610	39	20	560	4	57	135	500	12.5	20	12
500	508	755	670	42	20	615	4	57	140	562	14.2	20	12
600	610	890	795	48	20	735	5	72	150	666	16.0	20	12

## Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN63



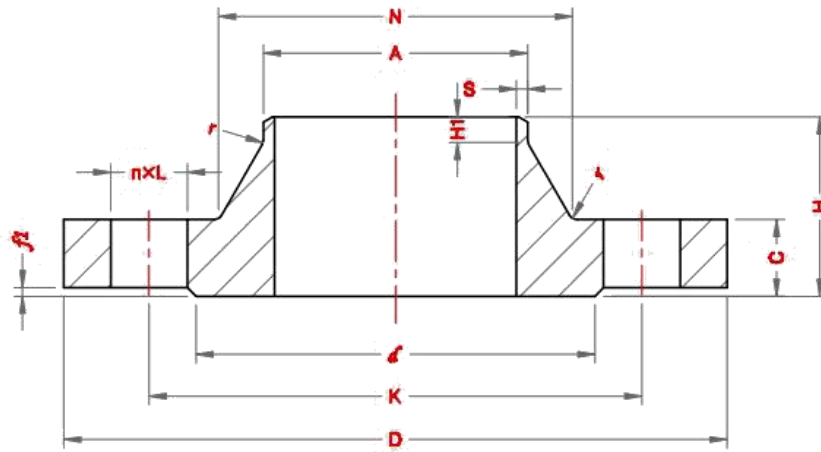
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	105	75	14	4	45	2	20	45	34	2.0	6	4
20	26.9	130	90	18	4	58	2	22	48	42	2.6	8	4
25	33.7	140	100	18	4	68	2	24	58	52	2.6	8	4
32	42.4	155	110	22	4	78	2	24	60	62	2.9	8	6
40	48.3	170	125	22	4	88	3	26	62	70	2.9	10	6
50	60.3	180	135	22	4	102	3	26	62	82	4.0	10	6
65	76.1	205	160	22	8	122	3	26	68	98	4.0	12	6
80	88.9	215	170	22	8	138	3	28	72	112	4.5	12	8
100	114.3	250	200	26	8	162	3	30	78	138	4.5	12	8
125	139.7	295	240	30	8	188	3	34	88	168	5.6	12	8
150	168.3	345	280	33	8	218	3	36	95	202	6.3	12	10
200	219.1	415	345	36	12	285	3	42	110	256	7.1	16	10
250	273	470	400	36	12	345	3	46	125	316	8.8	18	12
300	323.9	530	460	36	16	410	4	52	140	372	11.0	18	12
350	355.6	600	525	39	16	465	4	56	150	420	12.5	20	12
400	406.4	670	585	42	16	535	4	60	160	475	14.2	20	12

## Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN100



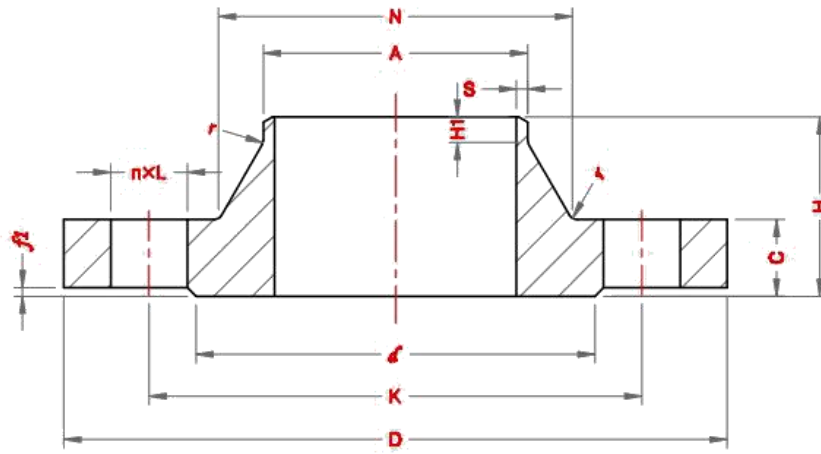
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	105	75	14	4	45	2	20	45	34	3.2	6	4
20	26.9	130	90	18	4	58	2	22	48	42	3.2	8	4
25	33.7	140	100	18	4	68	2	24	58	52	3.6	8	4
32	42.4	155	110	22	4	78	2	24	60	62	3.6	8	6
40	48.3	170	125	22	4	88	3	26	62	70	3.6	10	6
50	60.3	195	145	26	4	102	3	28	68	90	4.0	10	6
65	76.1	220	170	26	8	122	3	30	76	108	4.0	12	6
80	88.9	230	180	26	8	138	3	32	78	120	5.0	12	8
100	114.3	265	210	30	8	162	3	36	90	150	5.6	12	8
125	139.7	315	250	33	8	188	3	40	105	180	6.3	12	8
150	168.3	355	290	33	12	218	3	44	115	210	8.0	12	10
200	219.1	430	360	36	12	285	3	52	130	278	8.8	16	10
250	273	505	430	39	12	345	3	60	157	340	10.0	18	12
300	323.9	585	500	42	16	410	4	68	170	400	12.5	18	12
350	355.6	655	560	48	16	465	4	74	189	460	14.2	20	12

## Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN160



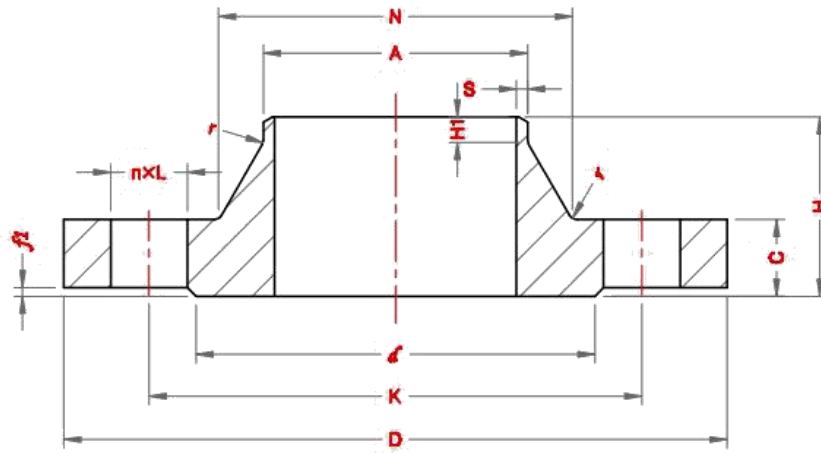
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	105	75	14	4	45	2	20	45	34	2.0	6	4
20	26.9	130	90	18	4	58	2	24	52	42	2.9	6	4
25	33.7	140	100	18	4	68	2	24	58	52	2.9	8	4
32	42.4	155	110	22	4	78	2	28	60	60	3.6	8	5
40	48.3	170	125	22	4	88	3	28	64	70	3.6	10	6
50	60.3	195	145	26	4	102	3	30	75	90	4.0	10	6
65	76.1	220	170	26	8	122	3	34	82	108	5.0	12	6
80	88.9	230	180	26	8	138	3	36	86	120	6.3	12	8
100	114.3	265	210	30	8	162	3	40	100	150	8.0	12	8
125	139.7	315	250	33	8	188	3	44	115	180	10.0	14	8
150	168.3	355	290	33	12	218	3	50	128	210	12.5	14	10
200	219.1	430	360	36	12	285	3	60	140	278	16.0	16	10
250	273	515	430	42	12	345	3	68	155	340	20.0	18	12
300	323.9	585	500	42	16	410	4	78	175	400	22.2	18	12

## Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN250



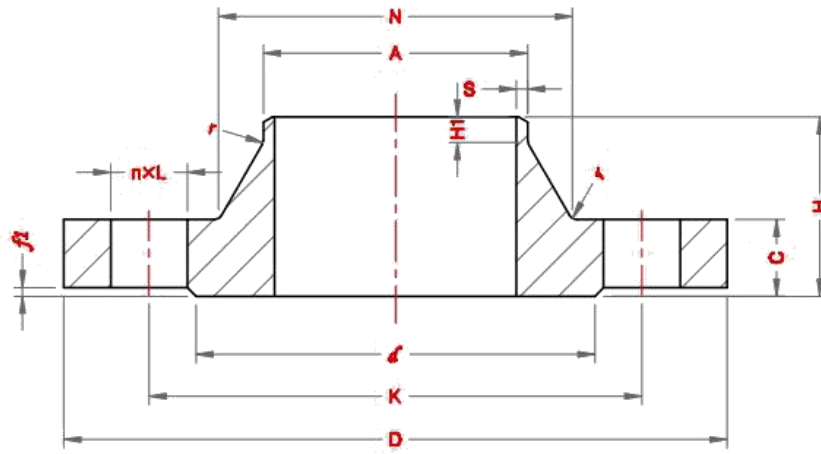
DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	130	90	18	4	45	2	26	60	48	2.6	6	4
20	26.9	135	95	18	4	58	2	28	62	54	3.2	8	4
25	33.7	150	105	22	4	68	2	28	65	60	3.6	8	4
32	42.4	165	120	22	4	78	2	32	70	72	4.0	8	4
40	48.3	185	135	26	4	88	3	34	80	84	5.0	10	6
50	60.3	200	150	26	8	102	3	38	85	95	6.3	10	6
65	76.1	230	180	26	8	122	3	42	95	124	8.0	12	6
80	101.6	255	200	30	8	138	3	46	102	136	11.0	12	8
100	127	300	235	33	8	162	3	54	120	164	14.2	14	8
125	152.4	340	275	33	12	188	3	60	140	200	16.0	16	8
150	177.8	390	320	36	12	218	3	68	160	240	17.5	18	10
200	244.5	485	400	42	12	285	3	82	190	305	25.0	25	10
250	298.5	585	490	48	16	345	3	100	215	385	32.0	30	12

Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN320



DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. Of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	21.3	130	90	18	4	45	2	26	60	48	3.2	6	4
20	26.9	145	100	22	4	58	2	30	70	58	4.0	8	4
25	33.7	160	115	22	4	68	2	34	78	68	5.0	8	4
32	42.4	175	130	26	4	78	2	36	83	80	5.6	8	4
40	48.3	195	145	26	4	88	3	38	88	92	6.3	10	6
50	60.3	210	160	26	8	102	3	42	100	106	8.0	10	6
65	88.9	255	200	30	8	122	3	51	120	138	11.0	12	6
80	101.6	275	220	30	8	138	3	55	130	156	12.5	14	8
100	133	335	265	36	8	162	3	65	145	186	16.0	16	8
125	168.3	380	310	36	12	188	3	75	175	230	20.0	20	8
150	193.7	425	350	39	12	218	3	84	195	265	25.0	25	10
200	244.5	525	440	42	16	285	3	103	235	345	30.0	30	10
250	323.9	640	540	52	16	345	3	125	300	428	40.0	40	12

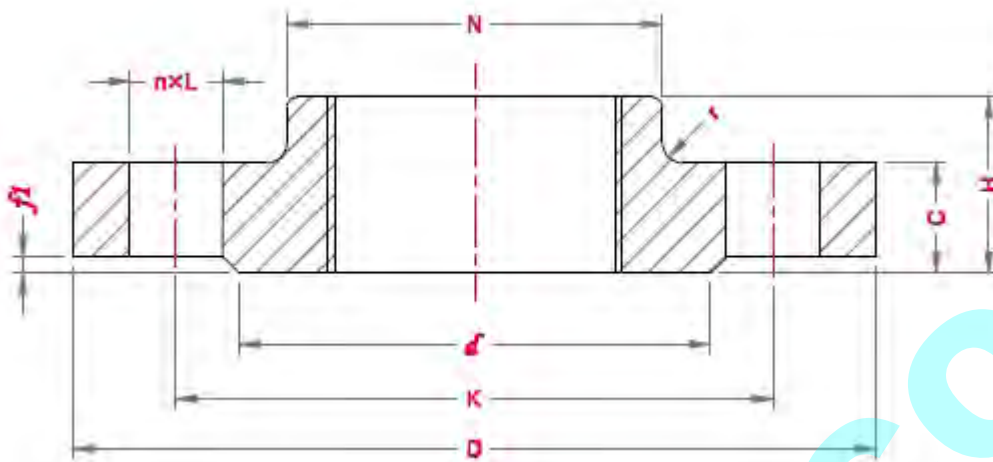
## Dimensions of weld neck flanges – EN 1092-1 Type 11 / PN400



DN	Pipe OD	Outside Diameter	Diameter of Bolt Circle	Diameter of Bolt Holes	No. of bolts	Diameter of Raised Face	Height of Raised Face	Flange thickness	Length of Flange	Neck Diameter	Wall thickness	Length of right end	Radius of Corners
	<b>A</b>	<b>D</b>	<b>K</b>	<b>L</b>		<b>d</b>	<b>f1</b>	<b>C</b>	<b>H</b>	<b>N</b>	<b>S</b>	<b>H1</b>	<b>r</b>
15	26.9	145	100	22	4	45	2	30	68	56	5.0	8	4
20	33.7	160	115	22	4	58	2	34	80	70	6.3	10	4
25	42.4	180	130	26	4	68	2	38	90	82	7.1	10	4
32	48.3	200	145	26	4	78	2	43	100	94	8.8	12	6
40	60.3	220	165	30	4	88	3	48	110	106	10.0	12	6
50	76.1	235	180	30	8	102	3	52	120	120	12.5	15	6
65	101.6	290	225	33	8	122	3	64	135	158	16.0	18	6
80	114.3	305	240	33	8	138	3	68	150	174	17.5	20	8
100	139.7	370	295	39	8	162	3	80	175	216	22.2	25	8
125	193.7	415	340	39	12	188	3	92	200	258	30.0	30	8
150	219.1	475	390	42	12	218	3	105	225	302	35.0	35	10
200	273	585	490	48	16	285	3	130	280	388	40.0	40	10

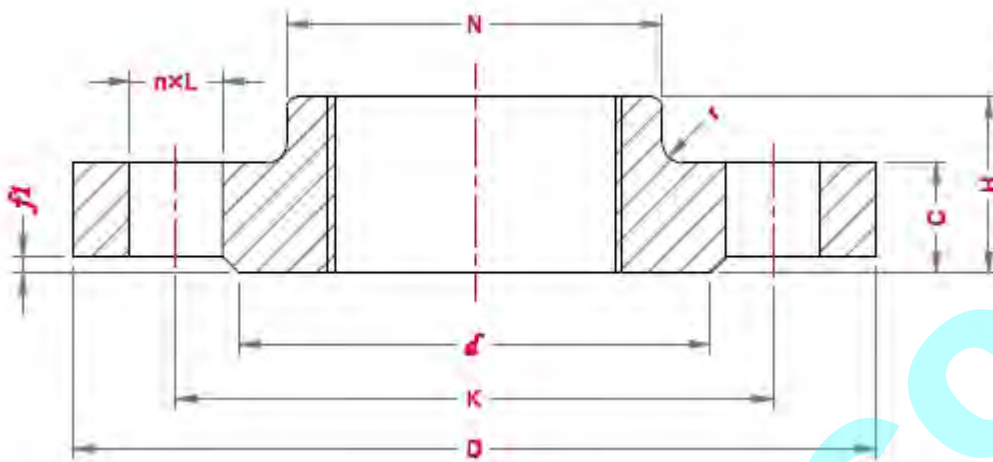


## Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN6



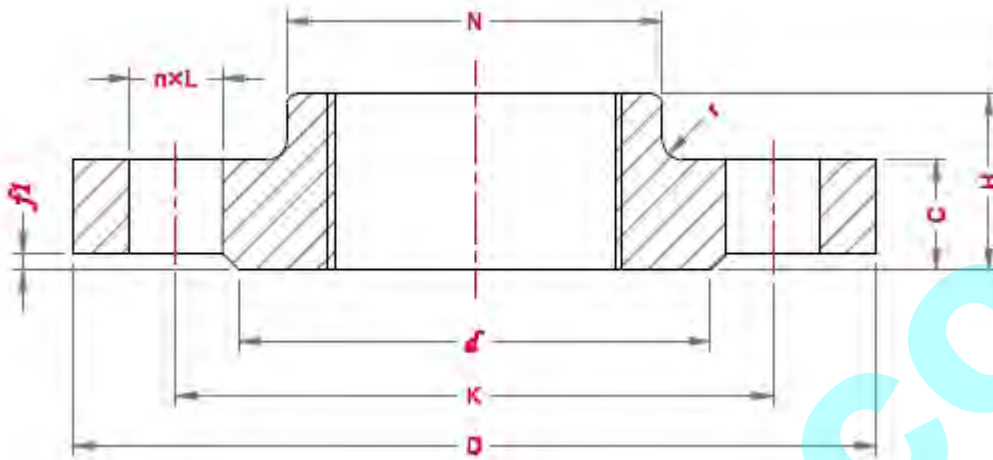
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	75	50	11	4	35	2	12	20	25	4
15	21.3	80	55	11	4	40	2	12	20	30	4
20	26.9	90	55	11	4	50	2	14	21	40	4
25	33.7	100	75	11	4	60	2	14	24	50	4
32	42.4	120	95	14	4	70	2	14	26	60	6
40	48.3	130	100	14	4	80	3	14	26	70	6
50	60.3	140	110	14	4	90	3	14	28	80	6
65	76.1	160	130	14	4	110	3	14	32	100	6
80	88.9	190	150	18	4	128	3	16	34	110	8
100	114.3	210	170	18	4	148	3	16	40	130	8
125	139.7	240	200	18	8	178	3	18	44	160	8
150	168.3	265	225	18	8	202	3	18	44	185	10
200	219.1	320	280	18	8	258	3	20	44	240	10
250	273	375	335	18	12	312	3	22	44	295	12
300	323.9	440	395	22	12	365	4	22	44	355	12

## Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN10



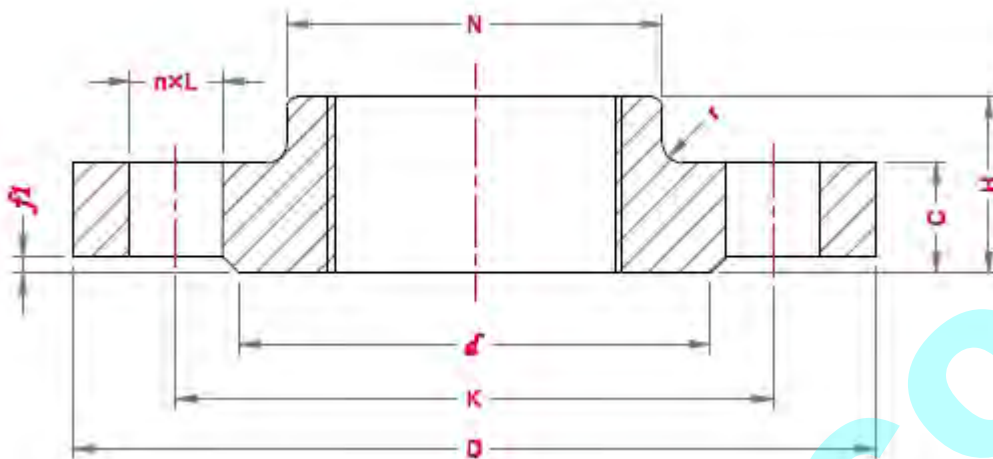
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	90	60	14	4	40	2	16	22	30	4
15	21.3	95	65	14	4	45	2	16	22	35	4
20	26.9	105	75	14	4	58	2	18	26	45	4
25	33.7	115	85	14	4	68	2	18	28	52	4
32	42.4	140	100	18	4	78	2	18	30	60	6
40	48.3	150	110	18	4	88	3	18	32	70	6
50	60.3	165	125	18	4	102	3	18	28	84	6
65	76.1	185	145	18	8	122	3	18	32	104	6
80	88.9	200	160	18	8	138	3	20	34	118	6
100	114.3	220	180	18	8	158	3	20	40	140	8
125	139.7	250	210	18	8	188	3	22	44	168	8
150	168.3	285	240	22	8	212	3	22	44	195	10
200	219.1	340	295	22	8	268	3	24	44	246	10
250	273	395	350	22	12	320	3	26	46	298	12
300	323.9	445	400	22	12	370	4	26	46	350	12
350	355.6	505	460	22	16	430	4	26	53	400	12
400	406.4	565	515	26	16	482	4	26	57	456	12
450	457	615	565	26	20	532	4	28	63	502	12
500	508	670	620	26	20	585	4	28	67	559	12
600	610	780	725	30	20	685	5	30	75	658	12

**Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN16**



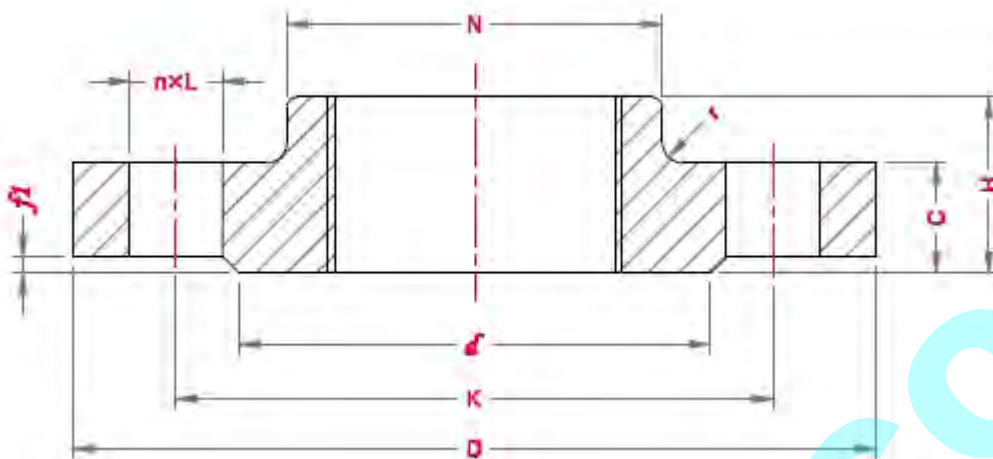
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	90	60	14	4	40	2	16	22	30	4
15	21.3	95	65	14	4	45	2	16	22	35	4
20	26.9	105	75	14	4	58	2	18	26	45	4
25	33.7	115	85	14	4	68	2	18	28	52	4
32	42.4	140	100	18	4	78	2	18	30	60	6
40	48.3	150	110	18	4	88	3	18	32	70	6
50	60.3	165	125	18	4	102	3	18	28	84	6
65	76.1	185	145	18	8	122	3	18	32	104	6
80	88.9	200	160	18	8	138	3	20	34	118	6
100	114.3	220	180	18	8	158	3	20	40	140	8
125	139.7	250	210	18	8	188	3	22	44	168	8
150	168.3	285	240	22	8	212	3	22	44	195	10
200	219.1	340	293	22	12	268	3	24	44	246	10
250	273	405	355	26	12	320	3	26	46	398	12
300	323.9	460	410	26	12	378	4	28	46	350	12
350	355.6	520	470	26	16	438	4	30	67	400	12
400	406.4	580	525	30	16	490	4	32	63	456	12
450	457	640	585	30	20	550	4	34	68	502	12
500	508	715	650	33	20	610	4	36	73	557	12
600	610	840	770	36	20	723	5	40	83	658	12

## Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN25



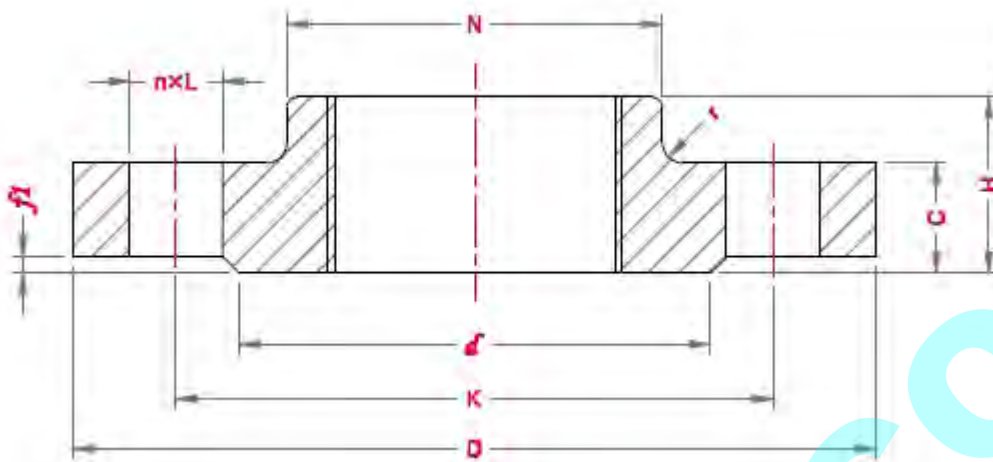
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	90	60	14	4	40	2	16	22	30	4
15	21.3	95	65	14	4	45	2	16	22	35	4
20	26.9	105	75	14	4	58	2	18	26	45	4
25	33.7	115	85	14	4	68	2	18	28	52	4
32	42.4	140	100	18	4	78	2	18	30	60	6
40	48.3	150	110	18	4	88	3	18	32	70	6
50	60.3	165	125	18	4	102	3	20	34	84	6
65	76.1	185	145	18	8	122	3	22	38	104	6
80	88.9	200	160	18	8	138	3	24	40	118	8
100	114.3	235	190	22	8	162	3	24	44	145	8
125	139.7	270	220	26	8	188	3	26	48	170	8
150	168.3	300	250	26	8	218	3	28	52	200	10
200	219.1	360	310	26	12	278	3	30	52	256	10
250	273	425	370	30	12	335	3	32	60	310	12
300	323.9	485	430	30	16	395	4	34	67	364	12
350	355.6	555	490	33	16	450	4	38	72	418	12
400	406.4	620	550	36	16	505	4	40	78	472	12
450	457	670	600	36	20	555	4	46	84	520	12
500	508	730	660	36	20	615	4	48	90	580	12
600	610	845	770	39	20	720	5	48	100	684	12

## Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN40



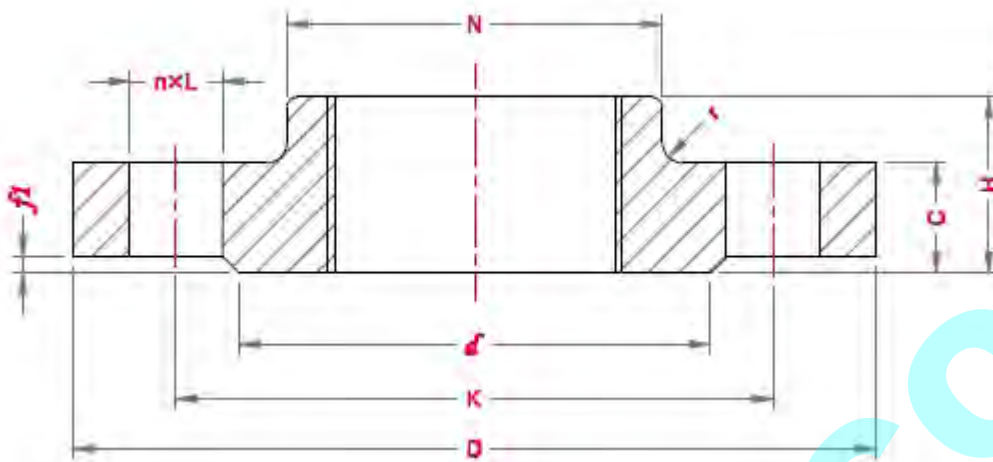
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	90	60	14	4	40	2	16	22	30	4
15	21.3	95	65	14	4	45	2	16	22	35	4
20	26.9	105	75	14	4	58	2	18	26	45	4
25	33.7	115	85	14	4	68	2	18	28	52	4
32	42.4	140	100	18	4	78	2	18	30	60	6
40	48.3	150	110	18	4	88	3	18	32	70	6
50	60.3	165	125	18	4	102	3	20	34	84	6
65	76.1	185	145	18	8	122	3	22	38	104	6
80	88.9	200	160	18	8	138	3	24	40	118	8
100	114.3	235	190	22	8	162	3	24	44	145	8
125	139.7	270	220	26	8	188	3	26	48	170	8
150	168.3	300	250	26	8	218	3	28	52	200	10
200	219.1	375	320	30	12	285	3	34	52	260	10
250	273	450	385	33	12	345	3	38	60	312	12
300	323.9	515	450	33	16	410	4	42	67	380	12
350	355.6	580	510	36	16	465	4	46	72	424	12
400	406.4	660	585	39	16	535	4	50	78	478	12
450	457	685	610	39	20	560	4	57	84	522	12
500	608	755	670	42	20	615	4	57	90	576	12
600	610	890	795	48	20	735	5	72	100	686	12

**Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN63**



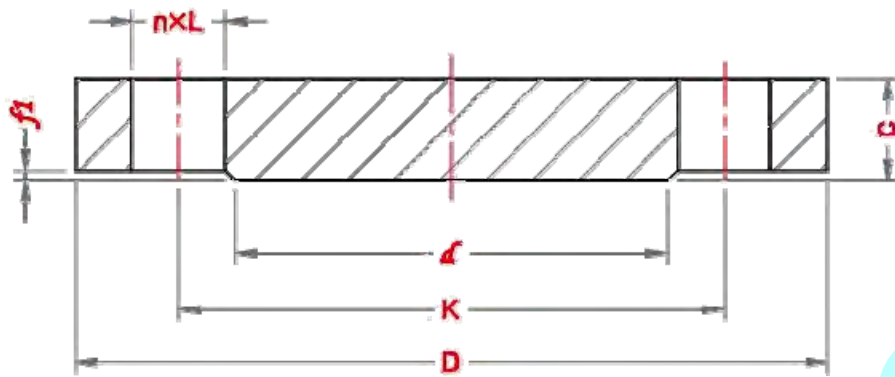
DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	100	70	14	4	40	2	20	28	40	4
15	21.3	105	75	14	4	45	2	20	28	43	4
20	26.9	130	90	18	4	58	2	20	30	52	4
25	33.7	140	100	18	4	68	2	24	32	60	4
32	42.4	155	110	22	4	78	2	24	32	68	6
40	48.3	170	125	22	4	88	3	26	34	80	6
50	60.3	180	135	22	4	102	3	26	36	90	6
65	76.1	205	160	22	8	122	3	26	40	112	6
80	88.9	215	170	22	8	138	3	28	44	125	8
100	114.3	250	200	26	8	162	3	30	52	152	8
125	139.7	295	240	30	8	188	3	34	56	185	8
160	168.3	345	280	33	8	218	3	36	60	215	10

**Dimensions of hubbed threaded flanges EN 1092-1 Type 13 / PN100**



DN	Pipe OD, A	Outside Diameter, D	Diameter of Bolt Circle, K	Diameter of Bolt Hole, L	No. of bolt	Diameter of Raised Face, d	Height of Raised Face, f1	Flange thickness, C	Length of Flange, H	Neck Diameter, N	Radius of Corners, r
10	17.2	100	70	14	4	40	2	20	28	40	4
15	21.3	105	75	14	4	45	2	20	28	43	4
20	26.9	130	90	18	4	58	2	20	30	52	4
25	33.7	140	100	18	4	68	2	24	32	60	4
32	42.4	155	110	22	4	78	2	24	32	68	6
40	48.3	170	125	22	4	88	3	26	34	80	6
50	60.3	195	145	26	4	102	3	28	36	95	6
65	76.1	220	170	26	8	122	3	30	40	118	6
80	88.9	230	180	26	8	138	3	32	44	130	8
100	114.3	265	210	30	8	162	3	36	52	158	8
125	139.7	315	250	33	8	188	3	40	56	188	8
150	168.3	355	290	33	12	218	3	44	60	225	10

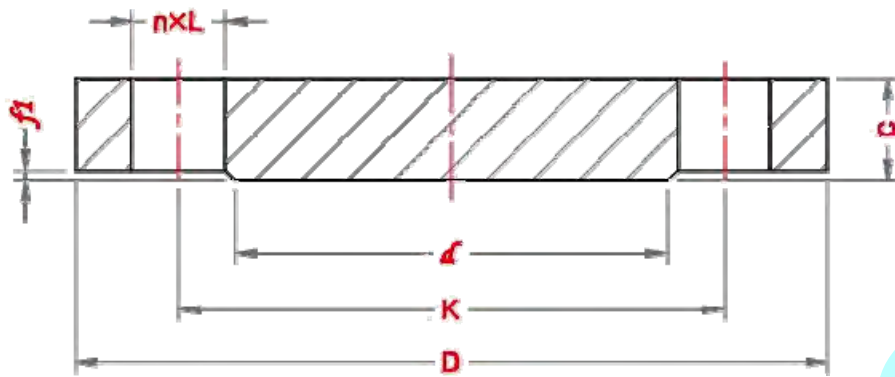
Dimensions of blind flanges – EN1092-1 Type 05 / PN2.5



DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	75	50	11	4	M10	12	35	2
15	80	55	11	4	M10	12	40	2
20	90	65	11	4	M10	14	50	2
25	100	75	11	4	M10	14	60	2
32	120	90	14	4	M12	14	70	2
40	130	100	14	4	M12	14	80	3
50	140	110	14	4	M12	14	90	3
65	160	130	14	4	M12	14	110	3
80	190	150	18	4	M16	16	128	3
100	210	170	18	4	M16	16	148	3
125	240	200	18	8	M16	18	178	3
150	265	225	18	8	M16	18	202	3
200	320	280	18	8	M16	20	258	3
250	375	335	18	12	M16	22	312	3
300	440	395	22	12	M20	22	365	4
350	490	445	22	12	M20	22	415	4
400	540	495	22	16	M20	22	455	4
450	595	550	22	16	M20	24	520	4
500	645	600	22	20	M20	24	570	4
600	755	705	26	20	M24	30	670	5
700	860	810	26	24	M24	40	775	5
800	975	920	30	24	M27	44	880	5
900	1075	1020	30	24	M27	48	980	5
1000	1175	1120	30	28	M27	52	1080	5
1200	1375	1320	30	32	M27	50	1280	5
1400	1575	1520	30	36	M27	57	1480	5
1600	1790	1730	30	40	M27	64	1690	5
1800	1990	1930	30	44	M27	70	1890	5
2000	2190	2130	30	48	M27	78	2090	5

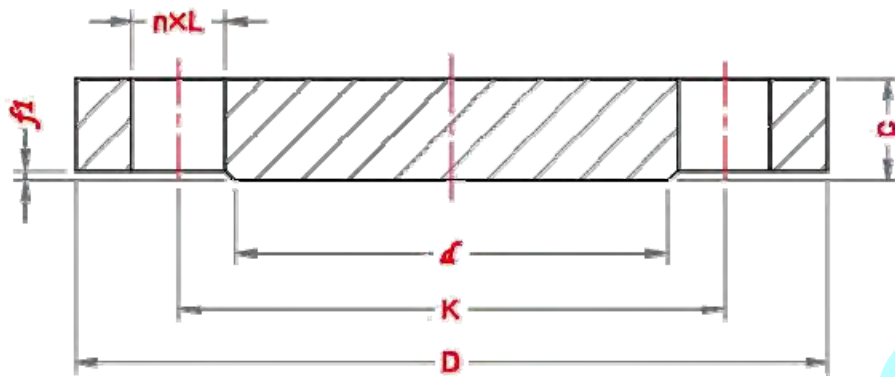


**Dimensions of blind flanges – EN1092-1 Type 05 / PN6**



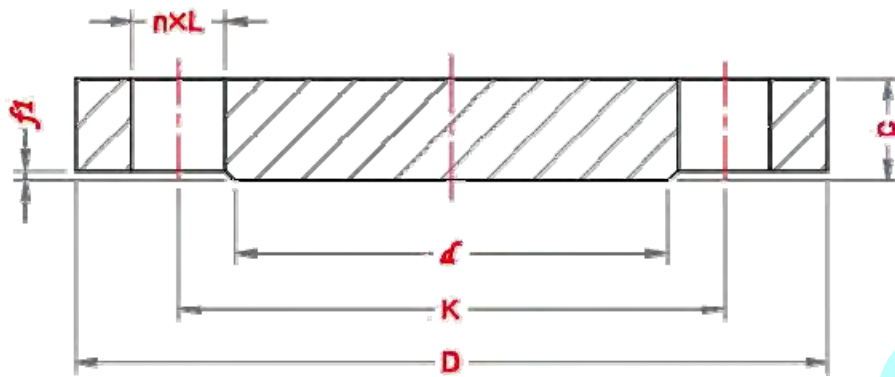
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	75	50	11	4	M10	12	35	2
15	80	55	11	4	M10	12	40	2
20	90	65	11	4	M10	14	50	2
25	100	75	11	4	M10	14	60	2
32	120	90	14	4	M12	14	70	2
40	130	100	14	4	M12	14	80	3
50	140	110	14	4	M12	14	90	3
65	160	130	14	4	M12	14	110	3
80	190	150	18	4	M16	16	128	3
100	210	170	18	4	M16	16	148	3
125	240	200	18	8	M16	18	178	3
150	265	225	18	8	M16	18	202	3
200	320	280	18	8	M16	20	258	3
250	375	335	18	12	M16	22	312	3
300	440	395	22	12	M20	22	365	4
350	490	445	22	12	M20	22	415	4
400	540	495	22	16	M20	22	455	4
450	595	550	22	16	M20	24	520	4
500	645	600	22	20	M20	24	570	4
600	755	705	26	20	M24	30	670	5
700	860	810	26	24	M24	40	775	5
800	975	920	30	24	M27	44	880	5
900	1075	1020	30	24	M27	48	980	5
1000	1175	1120	30	28	M27	52	1080	5
1200	1405	1340	33	32	M30	60	1295	5
1400	1630	1560	36	36	M33	68	1510	5
1600	1830	1760	36	40	M33	76	1710	5
1800	2045	1970	39	44	M36	84	1920	5
2000	2265	2180	42	48	M39	92	2125	5

**Dimensions of blind flanges – EN1092-1 Type 05 / PN10**



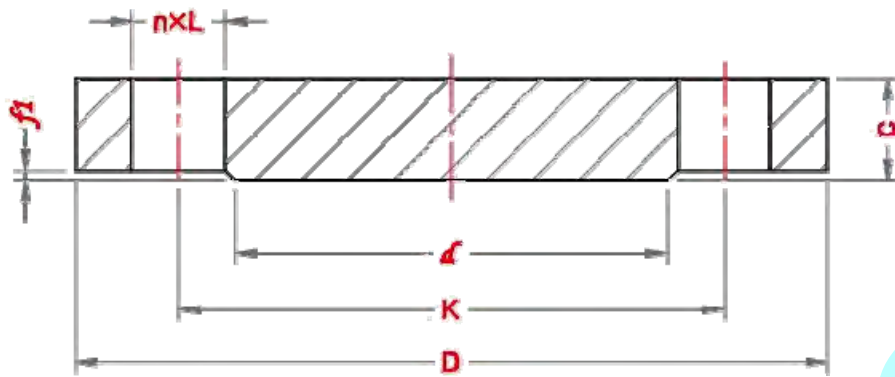
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	90	60	14	4	M12	16	40	2
15	95	65	14	4	M12	16	45	2
20	105	75	14	4	M12	18	58	2
25	115	85	14	4	M12	18	68	2
32	140	100	18	4	M16	18	78	2
40	150	110	18	4	M16	18	88	3
50	165	125	18	4	M16	18	102	3
65	185	145	18	8	M16	18	122	3
80	200	160	18	8	M16	20	138	3
100	220	180	18	8	M16	20	158	3
125	250	210	18	8	M16	22	188	3
150	285	240	22	8	M20	22	212	3
200	340	295	22	8	M20	24	268	3
250	395	350	22	12	M20	26	320	3
300	445	400	22	12	M20	26	370	4
350	505	460	22	16	M20	26	430	4
400	565	515	26	16	M24	26	482	4
450	615	565	26	20	M24	28	532	4
500	670	620	26	20	M24	28	585	4
600	780	725	30	20	M27	34	685	5
700	895	840	30	24	M27	38	800	5
800	1015	950	33	24	M30	48	905	5
900	1115	1050	33	28	M30	50	1005	5
1000	1230	1160	36	28	M33	54	1110	5
1200	1455	1380	39	32	M36	66	1330	5
1400	1675	1590	42	36	M39	72	1535	5
1600	1915	1820	48	40	M45	82	1760	5
1800	2115	2020	48	44	M45	92	1960	5
2000	2325	2230	48	48	M45	100	2170	5

**Dimensions of blind flanges – EN1092-1 Type 05 / PN16**



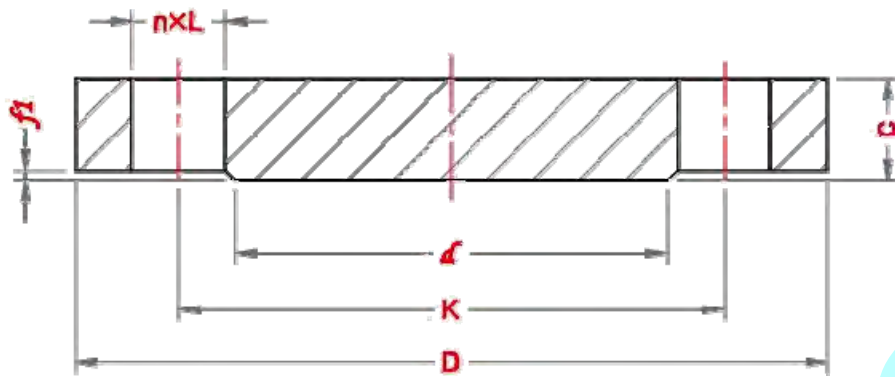
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	90	60	14	4	M12	16	40	2
15	95	65	14	4	M12	16	45	2
20	105	75	14	4	M12	18	58	2
25	115	85	14	4	M12	18	68	2
32	140	100	18	4	M16	18	78	2
40	150	110	18	4	M16	18	88	3
50	165	125	18	4	M16	18	102	3
65	185	145	18	8	M16	18	122	3
80	200	160	18	8	M16	20	138	3
100	220	180	18	8	M16	20	158	3
125	250	210	18	8	M16	22	188	3
150	285	240	22	8	M20	22	212	3
200	340	295	22	12	M20	24	268	3
250	405	355	26	12	M24	26	320	3
300	460	410	26	12	M24	28	378	4
350	520	470	26	16	M24	30	438	4
400	580	525	30	16	M27	32	490	4
450	640	585	30	20	M27	40	550	4
500	715	650	33	20	M30	44	610	4
600	840	770	36	20	M33	54	725	5
700	910	840	36	24	M33	58	795	5
800	1025	950	39	24	M36	62	900	5
900	1125	1050	39	28	M36	64	1000	5
1000	1255	1170	42	28	M39	68	1115	5
1200	1485	1390	48	32	M45	86	1330	5
1400	1685	1590	48	36	M45	94	1530	5
1600	1930	1820	56	40	M52	112	1750	5
1800	2130	2020	56	44	M52	121	1950	5
2000	2345	2230	62	48	M56	136	2150	5

Dimensions of blind flanges – EN1092-1 Type 05 / PN25



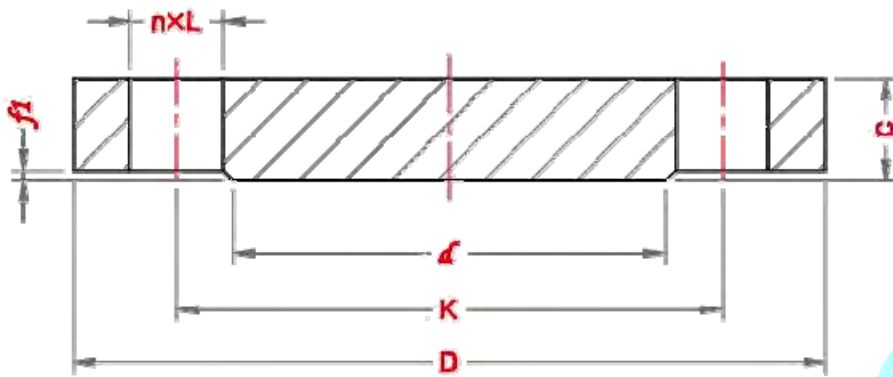
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	90	60	14	4	M12	16	40	2
15	95	65	14	4	M12	16	45	2
20	105	75	14	4	M12	18	58	2
25	115	85	14	4	M12	18	68	2
32	140	100	18	4	M16	18	78	2
40	150	110	18	4	M16	18	88	3
50	165	125	18	4	M16	20	102	3
65	185	145	18	8	M16	22	122	3
80	200	160	18	8	M16	24	138	3
100	235	190	22	8	M20	24	162	3
125	270	220	26	8	M24	26	188	3
150	300	250	26	8	M24	28	218	3
200	360	310	26	12	M24	30	278	3
250	435	370	30	12	M27	32	335	3
300	485	430	30	16	M27	34	395	4
350	555	490	33	16	M30	38	450	4
400	620	550	36	16	M33	40	505	4
450	670	600	36	20	M33	50	555	4
500	730	660	36	20	M33	51	615	4
600	845	770	39	20	M36	66	720	5

Dimensions of blind flanges – EN1092-1 Type 05 / PN40



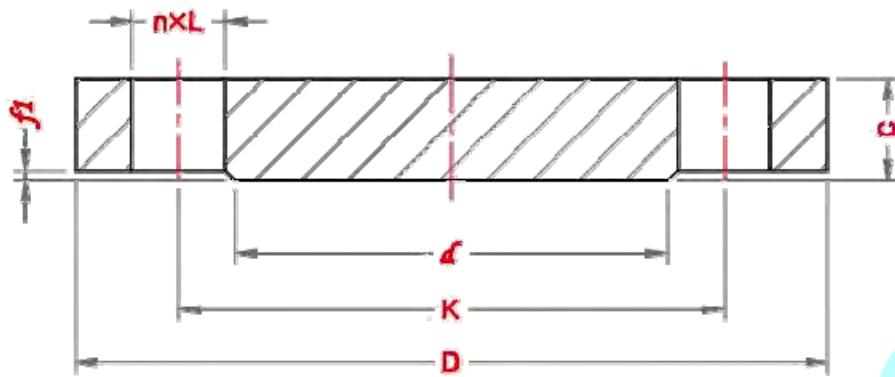
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	90	60	14	4	M12	16	40	2
15	95	65	14	4	M12	16	45	2
20	105	75	14	4	M12	18	58	2
25	115	85	14	4	M12	18	68	2
32	140	100	18	4	M16	18	78	2
40	150	110	18	4	M16	18	88	3
50	165	125	18	4	M16	20	102	3
65	185	145	18	8	M16	22	122	3
80	200	160	18	8	M16	24	138	3
100	235	190	22	8	M20	24	162	3
125	270	220	26	8	M24	26	188	3
150	300	250	26	8	M24	28	218	3
200	375	320	30	12	M27	36	285	3
250	450	385	33	12	M30	38	345	3
300	515	450	33	16	M30	42	410	4
350	580	510	36	16	M33	46	465	4
400	660	585	39	16	M36	50	535	4
450	685	610	39	20	M36	57	560	4
500	755	670	42	20	M39	57	615	4
600	890	795	48	20	M45	72	735	5

Dimensions of blind flanges – EN1092-1 Type 05 / PN63



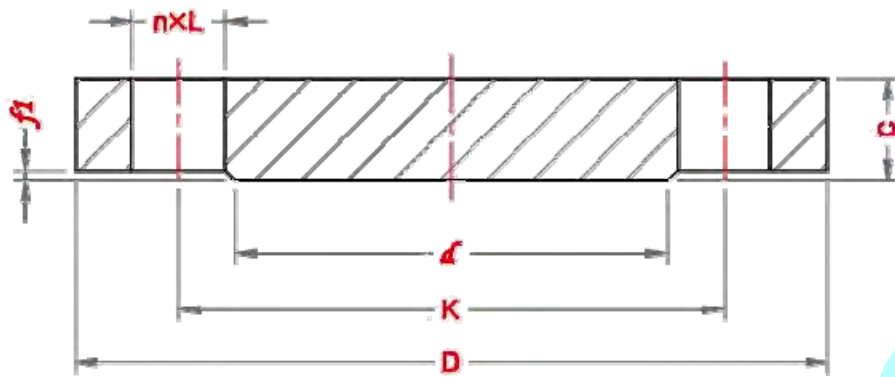
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	100	70	14	4	M12	20	40	2
15	105	75	14	4	M12	20	45	2
20	130	90	18	4	M16	22	58	2
25	140	100	18	4	M16	24	68	2
32	155	110	22	4	M20	24	78	2
40	170	125	22	4	M20	26	88	3
50	180	135	22	4	M20	26	102	3
65	205	160	22	8	M20	26	122	3
80	215	170	22	8	M20	28	138	3
100	250	200	26	8	M24	30	162	3
125	295	240	30	8	M27	34	188	3
150	345	280	33	8	M30	36	218	3
200	415	345	36	12	M33	42	285	3
250	470	400	36	12	M33	46	345	3
300	530	460	36	16	M33	52	410	4
350	600	525	39	16	M36	56	465	4
400	670	585	42	16	M39	60	535	4

**Dimensions of blind flanges – EN1092-1 Type 05 / PN100**



DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	100	70	14	4	M12	20	40	2
15	105	75	14	4	M12	20	45	2
20	130	90	18	4	M16	22	58	2
25	140	100	18	4	M16	24	68	2
32	155	110	22	4	M20	24	78	2
40	170	125	22	4	M20	26	88	3
50	195	145	26	4	M24	28	102	3
65	220	170	26	8	M24	30	122	3
80	230	180	26	8	M24	32	138	3
100	265	210	30	8	M27	36	162	3
125	315	250	33	8	M30	40	188	3
150	355	290	33	12	M30	44	218	3
200	430	360	36	12	M33	52	285	3
250	505	430	39	12	M36	60	345	3
300	585	500	42	16	M39	68	410	4
350	655	560	48	16	M45	74	465	4

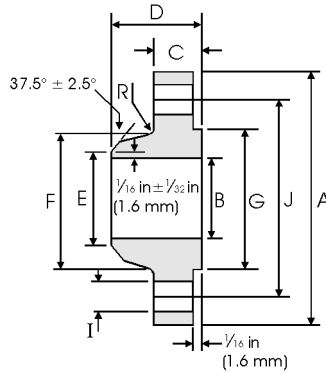
**Dimensions of blind flanges – EN1092-1 Type 05 / PN160**



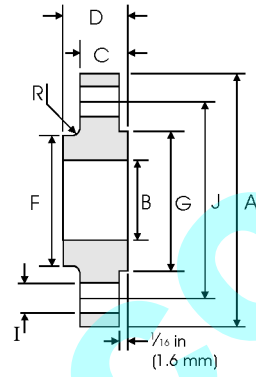
DN	Outside Diameter, D	Diameter of Bolt Circle, K	Dia of Bolt Hole, L	No. of bolt	Size of Bolt	Flange thickness, C	Diameter of Raised Face, d	Height of Raised Face, f1
10	100	70	14	4	M12	24	40	2
15	105	75	14	4	M12	26	45	2
20	130	90	18	4	M16	30	58	2
25	140	100	18	4	M16	32	68	2
32	155	110	22	4	M20	34	78	2
40	170	125	22	4	M20	36	88	3
50	195	145	26	4	M24	38	102	3
65	220	170	26	8	M24	42	122	3
80	230	180	26	8	M24	46	138	3
100	265	210	30	8	M27	52	162	3
125	315	250	33	8	M30	56	188	3
150	355	290	33	12	M30	62	218	3
200	430	360	36	12	M33	66	285	3
250	515	430	42	12	M39	76	345	3
300	585	500	42	16	M39	88	410	4



# Weld Neck and Slip On Flanges - BS 3293



Weld Neck



Slip On

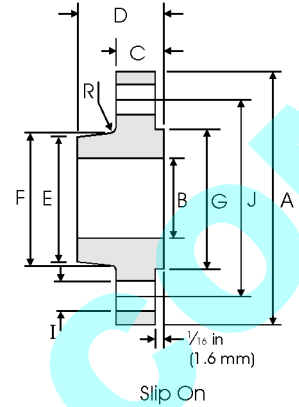
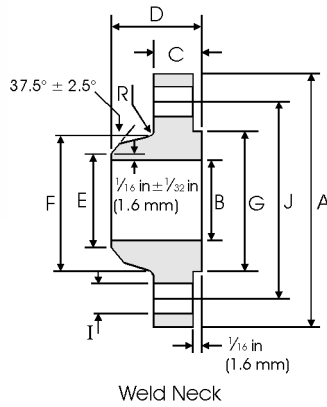
## Class 150 lb

Pipe Nominal Pipe Size	Flange Data				Hub Data		Raised Face	Drilling Data			Radius	Weight	
	A	B	C	D		E	F	G	H	I	J	R	
	Overall Diameter	Slip on Inside Diameter	Flange Thickness	WNF Overall Length	Slip on Overall Length	WNF Diameter at Weld Bevel	WNF / Slip on Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diam.	Diameter of Circle of Holes	Fillet	kg/ piece
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	WNF Slip On	
26	34 <sup>1</sup> / <sub>4</sub> 869.9	26 <sup>1</sup> / <sub>4</sub> 666.7	2 50.8	5 127.0	3 <sup>3</sup> / <sub>8</sub> 85.7	26 660.4	28 <sup>1</sup> / <sub>2</sub> 723.9	29 <sup>1</sup> / <sub>4</sub> 742.9	24	1 <sup>3</sup> / <sub>8</sub> 34.9	31 <sup>3</sup> / <sub>4</sub> 806.4	1 <sup>1</sup> / <sub>4</sub> 6.35	118 107
28	36 <sup>1</sup> / <sub>2</sub> 927.1	28 <sup>1</sup> / <sub>4</sub> 717.6	2 <sup>1</sup> / <sub>16</sub> 52.4	5 <sup>1</sup> / <sub>16</sub> 128.6	3 <sup>7</sup> / <sub>16</sub> 87.3	28 711.2	30 <sup>3</sup> / <sub>4</sub> 781.0	31 <sup>1</sup> / <sub>4</sub> 793.7	28	1 <sup>3</sup> / <sub>8</sub> 34.9	34 863.6	1 <sup>1</sup> / <sub>4</sub> 6.35	134 122
30	38 <sup>3</sup> / <sub>4</sub> 984.2	30 <sup>1</sup> / <sub>4</sub> 768.3	2 <sup>1</sup> / <sub>8</sub> 54.0	5 <sup>1</sup> / <sub>8</sub> 130.2	3 <sup>1</sup> / <sub>2</sub> 88.9	30 762.0	32 <sup>3</sup> / <sub>4</sub> 831.8	33 <sup>3</sup> / <sub>4</sub> 857.2	28	1 <sup>3</sup> / <sub>8</sub> 34.9	36 914.4	1 <sup>1</sup> / <sub>4</sub> 6.35	153 138
32	41 <sup>3</sup> / <sub>4</sub> 1060.4	32 <sup>1</sup> / <sub>4</sub> 819.1	2 <sup>1</sup> / <sub>4</sub> 57.1	5 <sup>1</sup> / <sub>4</sub> 133.3	3 <sup>5</sup> / <sub>8</sub> 92.1	32 812.8	35 889.0	35 <sup>3</sup> / <sub>4</sub> 908.0	28	1 <sup>5</sup> / <sub>8</sub> 41.3	38 <sup>1</sup> / <sub>2</sub> 977.9	5 <sup>1</sup> / <sub>16</sub> 7.94	190 170
34	43 <sup>3</sup> / <sub>4</sub> 1111.2	34 <sup>1</sup> / <sub>4</sub> 869.9	2 <sup>5</sup> / <sub>16</sub> 58.7	5 <sup>5</sup> / <sub>16</sub> 134.9	3 <sup>11</sup> / <sub>16</sub> 93.7	34 863.6	37 939.8	37 <sup>3</sup> / <sub>4</sub> 958.8	32	1 <sup>5</sup> / <sub>8</sub> 41.3	40 <sup>1</sup> / <sub>2</sub> 1028.7	5 <sup>1</sup> / <sub>16</sub> 7.94	212 184
36	46 1168.4	36 <sup>1</sup> / <sub>4</sub> 920.7	2 <sup>3</sup> / <sub>8</sub> 60.3	5 <sup>3</sup> / <sub>8</sub> 136.5	3 <sup>3</sup> / <sub>4</sub> 95.2	36 914.4	39 <sup>1</sup> / <sub>4</sub> 996.9	40 <sup>1</sup> / <sub>4</sub> 1022.3	32	1 <sup>5</sup> / <sub>8</sub> 41.3	42 <sup>3</sup> / <sub>4</sub> 1085.8	5 <sup>1</sup> / <sub>16</sub> 7.94	242 211
38	48 <sup>3</sup> / <sub>4</sub> 1238.2	38 <sup>1</sup> / <sub>4</sub> 971.5	2 <sup>3</sup> / <sub>8</sub> 60.3	5 <sup>3</sup> / <sub>8</sub> 136.5	3 <sup>3</sup> / <sub>4</sub> 95.2	38 965.2	41 <sup>3</sup> / <sub>4</sub> 1060.4	42 <sup>1</sup> / <sub>4</sub> 1073.1	32	1 <sup>5</sup> / <sub>8</sub> 41.3	45 <sup>1</sup> / <sub>4</sub> 1149.3	3 <sup>8</sup> / <sub>16</sub> 9.53	284 249
40	50 <sup>3</sup> / <sub>4</sub> 1289.0	40 <sup>1</sup> / <sub>4</sub> 1022.3	2 <sup>1</sup> / <sub>2</sub> 63.5	5 <sup>1</sup> / <sub>2</sub> 139.7	3 <sup>7</sup> / <sub>8</sub> 98.4	40 1016.0	43 <sup>3</sup> / <sub>4</sub> 1111.2	44 <sup>1</sup> / <sub>4</sub> 1123.9	36	1 <sup>5</sup> / <sub>8</sub> 41.3	47 <sup>1</sup> / <sub>4</sub> 1200.1	3 <sup>8</sup> / <sub>16</sub> 9.53	311 272
42	53 1346.2	42 <sup>1</sup> / <sub>4</sub> 1073.2	2 <sup>5</sup> / <sub>8</sub> 66.7	5 <sup>5</sup> / <sub>8</sub> 142.9	4 101.6	42 1066.8	46 1168.4	47 1193.8	36	1 <sup>5</sup> / <sub>8</sub> 41.3	49 <sup>1</sup> / <sub>2</sub> 1257.3	3 <sup>8</sup> / <sub>16</sub> 9.53	358 313
44	55 <sup>1</sup> / <sub>4</sub> 1403.3	44 <sup>1</sup> / <sub>4</sub> 1123.9	2 <sup>5</sup> / <sub>8</sub> 66.7	5 <sup>5</sup> / <sub>8</sub> 142.9	4 101.6	44 1117.6	48 1219.2	49 1244.6	40	1 <sup>5</sup> / <sub>8</sub> 41.3	51 <sup>3</sup> / <sub>4</sub> 1314.4	7 <sup>1</sup> / <sub>16</sub> 11.11	376 331
46	57 <sup>1</sup> / <sub>4</sub> 1454.2	46 <sup>1</sup> / <sub>4</sub> 1174.7	2 <sup>11</sup> / <sub>16</sub> 68.3	5 <sup>11</sup> / <sub>16</sub> 144.5	4 <sup>1</sup> / <sub>16</sub> 103.2	46 1168.4	50 1270.0	51 1295.4	40	1 <sup>5</sup> / <sub>8</sub> 41.3	53 <sup>3</sup> / <sub>4</sub> 1365.2	7 <sup>1</sup> / <sub>16</sub> 11.11	399 349
48	59 <sup>1</sup> / <sub>2</sub> 1511.1	48 <sup>1</sup> / <sub>4</sub> 1225.5	2 <sup>3</sup> / <sub>4</sub> 69.9	5 <sup>3</sup> / <sub>4</sub> 146.1	4 <sup>1</sup> / <sub>8</sub> 104.8	48 1219.2	52 <sup>1</sup> / <sub>4</sub> 1327.2	53 <sup>1</sup> / <sub>2</sub> 1358.9	44	1 <sup>5</sup> / <sub>8</sub> 41.3	56 1422.4	7 <sup>1</sup> / <sub>16</sub> 11.11	440 381

### Notes

- For weld neck flanges, dimension B is to be specified by the purchaser. It corresponds to the pipe inside diameter.
- For slip on flanges, the hub may be cylindrical or have a draft of  $\leq 7^\circ$  on the outside surface.
- WNF = Weld Neck Flange.
- Weights are based on manufacturer's data and are approximate.

# Weld Neck and Slip On Flanges - BS 3293



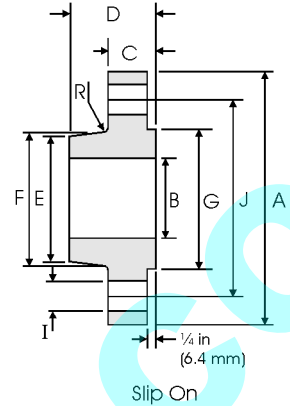
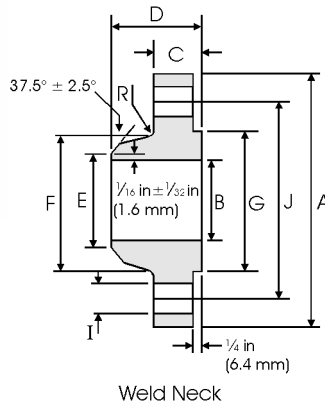
## Class 300 lb

Pipe Nominal Pipe Size	Flange Data				Hub Data			Raised Face	Drilling Data			Radius	Weight
	A	B	C	D	E		F	G	H	I	J	R	
	Overall Diameter	Slip on Inside Diameter	Flange Thickness	WNF / Slip on Overall Length	WNF Diam. at Weld Bevel	Slip on Hub Diam. at Small End	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diam.	Diameter of Circle of Holes	Fillet	kg/ piece
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	in mm	in mm
26	38 <sup>1</sup> / <sub>4</sub> 971.5	26 <sup>1</sup> / <sub>4</sub> 666.7	3 <sup>1</sup> / <sub>8</sub> 79.4	7 <sup>1</sup> / <sub>4</sub> 184.1	26 <sup>1</sup> / <sub>4</sub> 666.7	27 <sup>1</sup> / <sub>16</sub> 687.4	28 <sup>3</sup> / <sub>8</sub> 720.7	29 <sup>1</sup> / <sub>2</sub> 749.3	28	1 <sup>3</sup> / <sub>4</sub> 44.4	34 <sup>1</sup> / <sub>2</sub> 876.3	<sup>3</sup> / <sub>8</sub> 9.53	279 251
28	40 <sup>3</sup> / <sub>4</sub> 1035.0	28 <sup>1</sup> / <sub>4</sub> 717.6	3 <sup>3</sup> / <sub>8</sub> 85.7	7 <sup>3</sup> / <sub>4</sub> 196.8	28 <sup>1</sup> / <sub>4</sub> 717.5	29 <sup>1</sup> / <sub>8</sub> 739.7	30 <sup>1</sup> / <sub>2</sub> 774.7	31 <sup>1</sup> / <sub>2</sub> 800.1	28	1 <sup>3</sup> / <sub>4</sub> 44.4	37 939.8	<sup>7</sup> / <sub>16</sub> 11.11	340 313
30	43 1092.2	30 <sup>1</sup> / <sub>4</sub> 768.3	3 <sup>5</sup> / <sub>8</sub> 92.1	8 <sup>1</sup> / <sub>4</sub> 209.5	30 <sup>1</sup> / <sub>4</sub> 768.3	31 <sup>3</sup> / <sub>16</sub> 792.2	32 <sup>9</sup> / <sub>16</sub> 827.2	33 <sup>3</sup> / <sub>4</sub> 857.2	28	1 <sup>7</sup> / <sub>8</sub> 47.6	39 <sup>1</sup> / <sub>4</sub> 996.9	<sup>7</sup> / <sub>16</sub> 11.11	390 354
32	45 <sup>1</sup> / <sub>4</sub> 1149.3	32 <sup>1</sup> / <sub>4</sub> 819.1	3 <sup>7</sup> / <sub>8</sub> 98.4	8 <sup>3</sup> / <sub>4</sub> 222.2	32 <sup>1</sup> / <sub>4</sub> 819.1	33 <sup>1</sup> / <sub>4</sub> 844.6	34 <sup>11</sup> / <sub>16</sub> 881.1	36 914.4	28	2 50.8	41 <sup>1</sup> / <sub>2</sub> 1054.1	<sup>7</sup> / <sub>16</sub> 11.11	435 395
34	47 <sup>1</sup> / <sub>2</sub> 1206.5	34 <sup>1</sup> / <sub>4</sub> 869.9	4 101.6	9 <sup>1</sup> / <sub>8</sub> 231.8	34 <sup>5</sup> / <sub>16</sub> 871.5	35 <sup>5</sup> / <sub>16</sub> 896.9	36 <sup>7</sup> / <sub>8</sub> 936.6	38 965.2	28	2 50.8	43 <sup>1</sup> / <sub>2</sub> 1104.9	<sup>1</sup> / <sub>2</sub> 12.7	504 460
36	50 1270.0	36 <sup>1</sup> / <sub>4</sub> 920.7	4 <sup>1</sup> / <sub>8</sub> 104.8	9 <sup>1</sup> / <sub>2</sub> 241.3	36 <sup>5</sup> / <sub>16</sub> 922.3	37 <sup>3</sup> / <sub>8</sub> 949.3	39 990.6	40 <sup>1</sup> / <sub>4</sub> 1022.3	32	2 <sup>1</sup> / <sub>8</sub> 54.0	46 1168.4	<sup>1</sup> / <sub>2</sub> 12.7	560 513

### Notes

- For weld neck flanges, dimension B is to be specified by the purchaser. It corresponds to the pipe inside diameter.
- For slip on flanges, the hub may be cylindrical or have a draft of  $\leq 7^\circ$  on the outside surface.
- WNF = Weld Neck Flange.
- Weights are based on manufacturer's data and are approximate.

# Weld Neck and Slip On Flanges - BS 3293



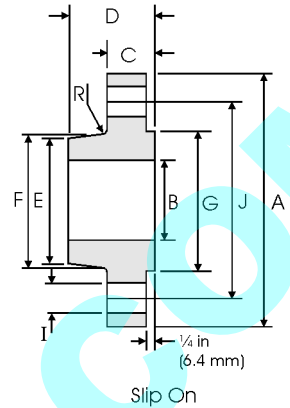
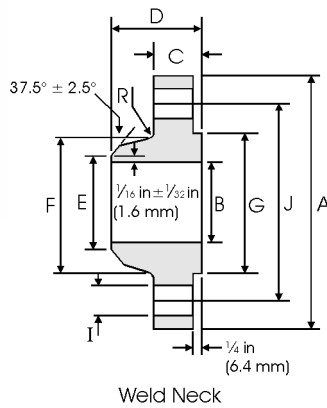
## Class 400 lb

Pipe Nominal Pipe Size	Flange Data				Hub Data			Raised Face	Drilling Data			Radius	Weight
	A	B	C	D	E	F	G	H	I	J	R		
	Overall Diameter	Slip on Inside Diameter	Flange Thickness	WNF / Slip on Overall Length	WNF Diam. at Weld Bevel	Slip on Hub Diam. at Small End	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diam.	Diameter of Circle of Holes	Fillet	kg/ piece
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	in mm	WNF Slip On
26	38 <sup>1</sup> / <sub>4</sub> 971.5	26 <sup>1</sup> / <sub>4</sub> 666.7	3 <sup>1</sup> / <sub>2</sub> 88.9	7 <sup>5</sup> / <sub>8</sub> 193.7	26 <sup>5</sup> / <sub>16</sub> 668.3	27 <sup>5</sup> / <sub>16</sub> 693.7	28 <sup>5</sup> / <sub>8</sub> 727.1	29 <sup>1</sup> / <sub>2</sub> 749.3	28	1 <sup>7</sup> / <sub>8</sub> 47.6	34 <sup>1</sup> / <sub>2</sub> 876.3	7 <sup>1</sup> / <sub>16</sub> 11.11	340 295
28	40 <sup>3</sup> / <sub>4</sub> 1035.0	28 <sup>1</sup> / <sub>4</sub> 717.6	3 <sup>3</sup> / <sub>4</sub> 95.2	8 <sup>1</sup> / <sub>8</sub> 206.4	28 <sup>5</sup> / <sub>16</sub> 719.1	29 <sup>3</sup> / <sub>8</sub> 746.1	30 <sup>13</sup> / <sub>16</sub> 782.6	31 <sup>1</sup> / <sub>2</sub> 800.1	28	2 50.8	37 939.8	1 <sup>1</sup> / <sub>2</sub> 12.7	399 354
30	43 1092.2	30 <sup>1</sup> / <sub>4</sub> 768.3	4 101.6	8 <sup>5</sup> / <sub>8</sub> 219.1	30 <sup>5</sup> / <sub>16</sub> 769.6	31 <sup>1</sup> / <sub>2</sub> 800.1	32 <sup>15</sup> / <sub>16</sub> 836.6	33 <sup>3</sup> / <sub>4</sub> 857.2	28	2 <sup>1</sup> / <sub>8</sub> 54.0	39 <sup>1</sup> / <sub>4</sub> 996.9	1 <sup>1</sup> / <sub>2</sub> 12.7	454 408
32	45 <sup>1</sup> / <sub>4</sub> 1149.3	32 <sup>1</sup> / <sub>4</sub> 819.1	4 <sup>1</sup> / <sub>4</sub> 107.9	9 <sup>1</sup> / <sub>8</sub> 231.8	32 <sup>3</sup> / <sub>8</sub> 822.3	33 <sup>9</sup> / <sub>16</sub> 852.5	35 889.0	36 914.4	28	2 <sup>1</sup> / <sub>8</sub> 54.0	41 <sup>1</sup> / <sub>2</sub> 1054.1	1 <sup>1</sup> / <sub>2</sub> 12.7	522 465
34	47 <sup>1</sup> / <sub>2</sub> 1206.5	34 <sup>1</sup> / <sub>4</sub> 869.9	4 <sup>3</sup> / <sub>8</sub> 111.1	9 <sup>1</sup> / <sub>2</sub> 241.3	34 <sup>3</sup> / <sub>8</sub> 873.1	35 <sup>5</sup> / <sub>8</sub> 904.9	37 <sup>3</sup> / <sub>16</sub> 944.6	38 965.2	28	2 <sup>1</sup> / <sub>8</sub> 54.0	43 <sup>1</sup> / <sub>2</sub> 1104.9	9 <sup>1</sup> / <sub>16</sub> 14.29	590 522
36	50 1270.0	36 <sup>1</sup> / <sub>4</sub> 920.8	4 <sup>1</sup> / <sub>2</sub> 114.3	9 <sup>7</sup> / <sub>8</sub> 250.8	36 <sup>7</sup> / <sub>16</sub> 925.5	37 <sup>3</sup> / <sub>4</sub> 958.8	39 <sup>7</sup> / <sub>8</sub> 1012.9	40 <sup>1</sup> / <sub>4</sub> 1022.3	32	2 <sup>1</sup> / <sub>8</sub> 54.0	46 1168.4	9 <sup>1</sup> / <sub>16</sub> 14.29	669 601

### Notes

- For weld neck flanges, dimension B is to be specified by the purchaser. It corresponds to the pipe inside diameter.
- For slip on flanges, the hub may be cylindrical or have a draft of ≤ 7° on the outside surface.
- WNF = Weld Neck Flange.
- Weights are based on manufacturer's data and are approximate.

# Weld Neck and Slip On Flanges - BS 3293



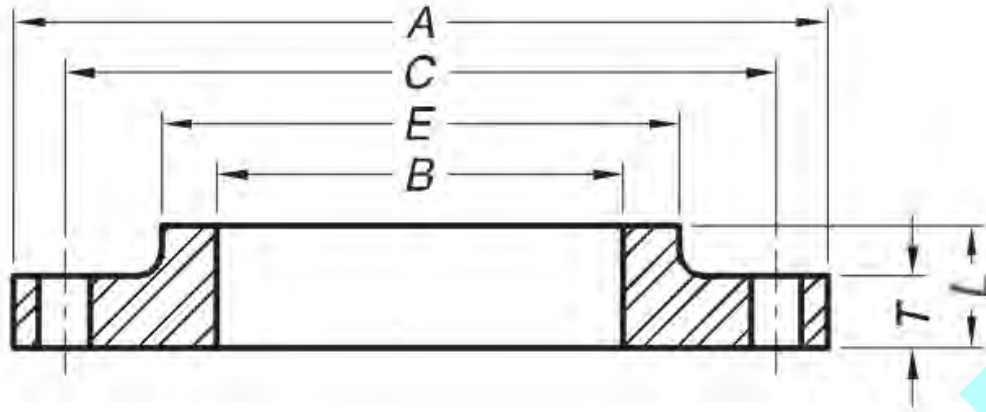
## Class 600 lb

Nominal Pipe Size	Flange Data				Hub Data			Raised Face	Drilling Data			Radius	Weight
	A	B	C	D	E		F	G	H	I	J	R	
	Overall Diameter	Slip on Inside Diameter	Flange Thickness	WNF / Slip on Overall Length	WNF Diam. at Weld Bevel	Slip on Hub Diam. at Small Lend	Hub Diameter	Face Diameter	Number of Holes	Bolt Hole Diam.	Diameter of Circle of Holes	Fillet	kg/ piece
in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm		in mm	in mm	in mm	WNF Slip On
26	40 1016.0	26 <sup>1</sup> / <sub>4</sub> 666.7	4 <sup>1</sup> / <sub>4</sub> 107.9	8 <sup>3</sup> / <sub>4</sub> 222.2	26 <sup>7</sup> / <sub>16</sub> 671.52	27 <sup>13</sup> / <sub>16</sub> 706.4	29 <sup>7</sup> / <sub>16</sub> 747.7	29 <sup>1</sup> / <sub>2</sub> 749.3	28	2 50.8	36 914.4	9 <sup>9</sup> / <sub>16</sub> 14.29	437 408
28	42 <sup>1</sup> / <sub>4</sub> 1073.1	28 <sup>1</sup> / <sub>4</sub> 717.6	4 <sup>3</sup> / <sub>8</sub> 111.1	9 <sup>1</sup> / <sub>4</sub> 234.9	28 <sup>1</sup> / <sub>2</sub> 723.9	29 <sup>15</sup> / <sub>16</sub> 760.4	31 <sup>5</sup> / <sub>8</sub> 803.3	31 <sup>1</sup> / <sub>2</sub> 800.1	28	2 <sup>1</sup> / <sub>8</sub> 54.0	38 965.2	5 <sup>5</sup> / <sub>8</sub> 15.88	508 472
30	44 <sup>1</sup> / <sub>2</sub> 1130.3	30 <sup>1</sup> / <sub>4</sub> 768.3	4 <sup>1</sup> / <sub>2</sub> 114.3	9 <sup>3</sup> / <sub>4</sub> 247.6	30 <sup>1</sup> / <sub>2</sub> 774.7	32 <sup>1</sup> / <sub>16</sub> 814.4	33 <sup>15</sup> / <sub>16</sub> 862.0	33 <sup>3</sup> / <sub>4</sub> 857.2	28	2 <sup>1</sup> / <sub>8</sub> 54.0	40 <sup>1</sup> / <sub>4</sub> 1022.3	1 <sup>11</sup> / <sub>16</sub> 17.46	559 526
32	47 1193.8	32 <sup>1</sup> / <sub>4</sub> 819.1	4 <sup>5</sup> / <sub>8</sub> 117.5	10 <sup>1</sup> / <sub>4</sub> 260.3	32 <sup>1</sup> / <sub>2</sub> 825.5	34 <sup>3</sup> / <sub>16</sub> 868.4	36 <sup>1</sup> / <sub>8</sub> 917.6	36 914.4	28	2 <sup>3</sup> / <sub>8</sub> 60.3	42 <sup>1</sup> / <sub>2</sub> 1079.5	1 <sup>11</sup> / <sub>16</sub> 17.46	680 605
34	49 1244.6	34 <sup>1</sup> / <sub>4</sub> 869.9	4 <sup>3</sup> / <sub>4</sub> 120.6	10 <sup>5</sup> / <sub>8</sub> 269.9	34 <sup>9</sup> / <sub>16</sub> 877.9	36 <sup>5</sup> / <sub>16</sub> 922.3	38 <sup>5</sup> / <sub>16</sub> 973.1	38 965.2	28	2 <sup>3</sup> / <sub>8</sub> 60.3	44 <sup>1</sup> / <sub>2</sub> 1130.3	3 <sup>3</sup> / <sub>4</sub> 19.05	717 652
36	51 <sup>3</sup> / <sub>4</sub> 1314.4	36 <sup>1</sup> / <sub>4</sub> 920.7	4 <sup>7</sup> / <sub>8</sub> 123.8	11 <sup>1</sup> / <sub>8</sub> 282.6	36 <sup>9</sup> / <sub>16</sub> 928.7	38 <sup>7</sup> / <sub>16</sub> 976.3	40 <sup>5</sup> / <sub>8</sub> 1031.9	40 <sup>1</sup> / <sub>4</sub> 1022.3	28	2 <sup>5</sup> / <sub>8</sub> 66.7	47 1193.8	3 <sup>3</sup> / <sub>4</sub> 19.05	780 744

### Notes

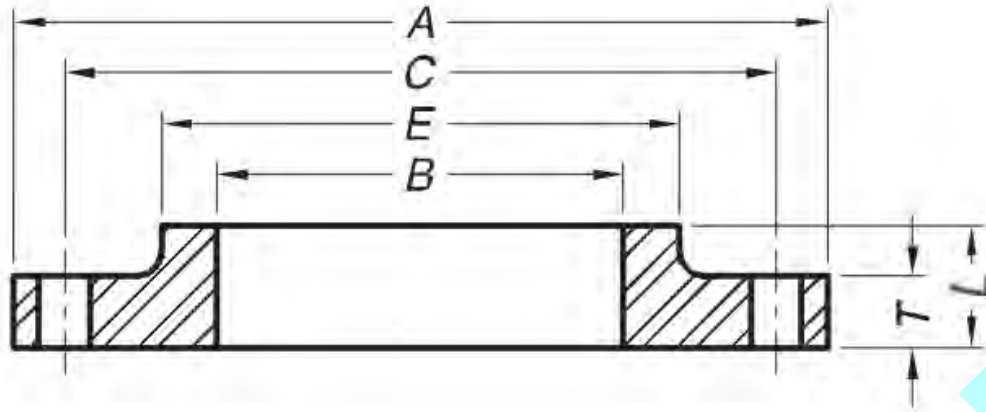
- For weld neck flanges, dimension B is to be specified by the purchaser. It corresponds to the pipe inside diameter.
- For slip on flanges, the hub may be cylindrical or have a draft of  $\leq 7^\circ$  on the outside surface.
- WNF = Weld Neck Flange.
- Weights are based on manufacturer's data and are approximate.

**Steel-hub flanges Class D (175-150 psi) - AWWA C207**



NPS	DN	OD, A	ID, B	Number of Bolts	Diam.of Bolt Circle, C	Diam.of Bolt Holes	T	L	E
4	100	228.6	116.1	8	190.5	19.1	12.7	22.2	134.9
5	125	254.0	143.8	8	215.9	22.2	14.3	31.8	160.3
6	150	279.4	170.7	8	241.3	22.2	14.3	31.8	192.1
8	200	342.9	221.5	8	298.5	22.2	14.3	31.8	246.1
10	250	406.4	276.4	12	362.0	25.4	17.5	31.8	304.8
12	300	482.6	327.2	12	431.8	25.4	17.5	31.8	365.1
14	350	533.4	360.4	12	476.3	28.6	19.1	31.8	400.1
16	400	596.9	411.2	16	539.8	28.6	19.1	31.8	457.2
18	450	635.0	462.0	16	577.9	31.8	19.1	31.8	504.8
20	500	698.5	512.8	20	635.0	31.8	19.1	31.8	558.8
22	550	749.3	563.6	20	692.2	34.9	25.4	44.5	616.0
24	600	812.8	614.4	20	749.3	34.9	25.4	44.5	663.6
26	650	870.0	665.2	24	806.5	34.9	25.4	44.5	723.9
28	700	927.1	716.0	28	863.6	34.9	25.4	44.5	774.7
30	750	984.3	766.8	28	914.4	34.9	25.4	44.5	825.5
32	800	1060.5	817.6	28	977.9	41.3	28.6	44.5	882.7
34	850	1111.3	868.4	32	1028.7	41.3	28.6	44.5	933.5
36	900	1168.4	919.2	32	1085.9	41.3	28.6	44.5	984.3
38	950	1238.3	970.0	32	1149.4	41.3	28.6	44.5	1035.1
40	1000	1289.1	1020.8	36	1200.2	41.3	28.6	44.5	1092.2
42	1050	1346.2	1071.6	36	1257.3	41.3	31.8	44.5	1143.0
44	1100	1403.4	1122.4	40	1314.5	41.3	31.8	57.2	1193.8
46	1150	1454.2	1173.2	40	1365.3	41.3	31.8	57.2	1244.6
48	1200	1511.3	1224.0	44	1422.4	41.3	34.9	63.5	1295.4
50	1250	1568.5	1274.8	44	1479.6	47.6	34.9	63.5	1346.2
52	1300	1625.6	1325.6	44	1536.7	47.6	34.9	63.5	1397.0
54	1350	1682.8	1376.4	44	1593.9	47.6	34.9	63.5	1447.8
60	1500	1854.2	1528.8	52	1759.0	47.6	38.1	69.9	1600.2
66	1650	2032.0	1681.2	52	1930.4	47.6	38.1	69.9	1752.6
72	1800	2197.1	1833.6	60	2095.5	47.6	38.1	69.9	1905.0
78	1950	2362.2	1986.0	64	2260.6	54.0	44.5	76.2	2063.8
84	2100	2533.7	2138.4	64	2425.7	54.0	44.5	76.2	2222.5
90	2250	2705.1	2290.8	68	2590.8	60.3	50.8	82.6	2381.3
96	2400	2876.6	2443.2	68	2755.9	60.3	50.8	82.6	2540.0

**Steel-hub flanges Class E (275 psi) - AWWA C207**



NPS	DN	OD, A	ID, B	Number of Bolts	Diam.of Bolt Circle, C	Diam.of Bolt Holes	T	L	E
4	100	228.6	116.1	8	190.5	19.1	23.8	33.3	134.9
5	125	254.0	143.8	8	215.9	22.2	23.8	36.5	163.5
6	150	279.4	170.7	8	241.3	22.2	25.4	39.7	192.1
8	200	342.9	221.5	8	298.5	22.2	28.6	44.5	246.1
10	250	406.4	276.4	12	362.0	25.4	30.2	49.2	304.8
12	300	482.6	327.2	12	431.8	25.4	31.8	55.6	365.1
14	350	533.4	360.4	12	476.3	28.6	34.9	57.2	400.1
16	400	596.9	411.2	16	539.8	28.6	36.5	63.5	457.2
18	450	635.0	462.0	16	577.9	31.8	39.7	68.3	504.8
20	500	698.5	512.8	20	635.0	31.8	42.9	73.0	558.8
22	550	749.3	563.6	20	692.2	34.9	46.0	79.4	609.6
24	600	812.8	614.4	20	749.3	34.9	48.2	82.6	663.6
26	650	870.0	665.2	24	806.5	34.9	50.8	85.7	723.9
28	700	927.1	716.0	28	863.6	34.9	52.4	87.3	781.1
30	750	984.3	766.8	28	914.4	34.9	54.0	88.9	831.9
32	800	1060.5	817.6	28	977.9	41.3	57.2	92.1	889.0
34	850	1111.3	868.4	32	1028.7	41.3	58.7	93.7	939.8
36	900	1168.4	919.2	32	1085.9	41.3	60.3	95.3	997.0
38	950	1238.3	970.0	32	1149.4	41.3	60.3	95.3	1060.5
40	1000	1289.1	1020.8	36	1200.2	41.3	63.5	98.4	1111.3
42	1050	1346.2	1071.6	36	1257.3	41.3	66.7	101.6	1168.4
44	1100	1403.4	1122.4	40	1314.5	41.3	66.7	101.6	1219.2
46	1150	1454.2	1173.2	40	1365.3	41.3	68.3	103.2	1270.0
48	1200	1511.3	1224.0	44	1422.4	41.3	69.9	104.8	1327.2
50	1250	1568.5	1274.8	44	1479.6	47.6	69.9	104.8	1378.0
52	1300	1625.6	1325.6	44	1536.7	47.6	73.0	108.0	1435.1
54	1350	1682.8	1376.4	44	1593.9	47.6	76.2	111.1	1492.3
60	1500	1854.2	1528.8	52	1759.0	47.6	79.4	114.3	1657.4
66	1650	2032.0	1681.2	52	1930.4	47.6	85.7	123.8	1816.1
72	1800	2197.1	1833.6	60	2095.5	47.6	88.9	127.0	1993.9
78	1950	2362.2	1986.0	64	2260.6	54.0	98.4	136.5	2146.3
84	2100	2533.7	2138.4	64	2425.7	54.0	98.4	136.5	2298.7
90	2250	2705.1	2290.8	68	2590.8	60.3	108.0	146.1	2457.5
96	2400	2876.6	2443.2	68	2755.9	60.3	108.0	146.1	2609.9