



## **WENZHOU HOPE MACHINERY CO.,LTD**

Add:NO.220 Haitang Road,(Rd 15th,Ave.3rd)Binhai Industrial Zone,wenzhou China

City office:Room 1703, Fortune Center,Chezhan Avenue,Wenzhou,China

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<http://www.hopemachinery.com>



## ***SANITARY FITTINGS & TUBING***





## COMPANY PROFILE



Wenzhou Hope Machinery Co.,Ltd specialize in fittings and valves for stainless steel sanitary piping systems. With our rich experience and technology in production, we get the CE,PED4.3,3A,and ISO9001 certificate of the products and management system.

Hope Machinery products meet all standard in DIN,SMS,3A,ISO,IDF and RJT. Our raw material are under strict control to ensure contamination free. From fittings to valves, we are constantly ensuring the exceptional quality products with most competitive pricing.

Hope machinery is dedicated to the principles that have made the company a success: exceptional quality, advanced manufacturing technology, good customer service, and intensive research to develop new products directly related to customer needs.

Over the last decade, the company has made a big achievement by our customers' support and our effort. We feel confident that our quality, pricing, and service will help both of us to continue our growth and strengthen our relationship for many years to come!!We always welcome your thoughts, comments, and suggestions for future improvement.

Please contact the Hope Machinery sales team for all your sanitary needs!!!



## INSPECTION



## WORKSHOP





# QUALIFICATION AND CERTIFICATION



# BUSINESS

**APRAGAZ**  
CERTIFICATE OF COMPLIANCE  
Review of Manufacturer's Technical File  
Certificate No. 12CN0386-0-REV 1

Manufacturer: **WENZHOU HOPE MACHINERY CO., LTD**  
Address: Binjiang Zone, Wenzhou, Zhejiang Province, P.R. China

**CE**

ONLY DATE: January 07, 2011  
CERTIFICATE AUTHORIZATION NUMBER: 008

THIS IS TO CERTIFY THAT  
Wenzhou Hope Machinery Co., Ltd.  
is hereby authorized to continue to apply the  
T.A. Number for the model of equipment, conforming to the Factory Standard for  
Number 0323  
(323/2009/01/01) in full scope.  
Both COP and COP Models. Clamp and seal rings in 204 and 218 stainless steel, including options, stainless steel, stainless steel, through accessories to type 03 to 02.

**CE**

**Certificate of Compliance**  
No. 1815017-000001-03

Certificate's Holder: **Wenzhou Hope Machinery Co., Ltd.**  
No. 220, Haiyang Road, Binjiang Industrial Zone, Wenzhou, China, 325000

Certification ECM Mark:

Product: **Bottom, Top, Rotation, Female, End Cap, Clamp, Pipe Holder, Cleaning Bolt, Sight Glass, Hanger**

Material: **STAINLESS STEEL 304, 304L, 316, 316L**

Verification to: **Standard: SA, 3M5, ISO, DIN 11881, DIN 11852, DIN 35576, DIN 25176, ANSI B1.6.3, EN 10223-3, IDP**  
Applied to: **CE (Directive): 97/23/EC (Pressure Equipment) Annex I (Paragraph 4.3)**

**CE**

**Quality Management System  
Certificate of Approval**  
This is to certify that the Quality Management System of  
**WENZHOU HOPE MACHINERY CO., LTD**  
has been assessed and found to meet the requirements of  
**ISO 9001:2008**  
Production and Sales of Ball Valve, Butterfly Valve, Check Valve, Gate Valve, Globe Valve, Needle Valve, Needle Valve, Machine Accessories and Fittings (ISO 9001:2008)

Certificate Number: **Q181304134**  
Date of Issue: **26 April 2013**  
Valid until: **25 April 2016**

**DAS**

**质量管理体系认证证书**  
认证证书  
**温州市好博机械有限公司**  
浙江省温州市开发区海霞路220号

质量管理体系符合  
**ISO 9001:2008**  
球阀、蝶阀、止回阀、闸阀、截止阀、不锈钢球阀机械配件、管道配件的制造和销售（100%出口）

证书编号: **Q181304134**  
首次发证日期: **2013年04月26日**  
证书到期日期: **2016年04月25日**

**DAS**

证书编号: **2010236**

**温州市科技(创新)型企业证书**

兹认定  
**温州市好博机械有限公司**  
为温州市科技(创新)型企业

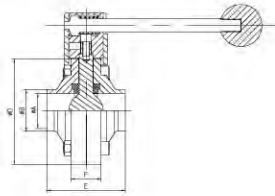
**温州市科技局**





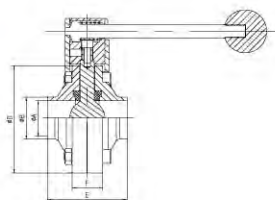


## Sanitary Butterfly Valve



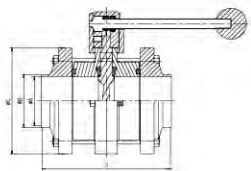
3A butterfly valve weld end with pull handle

	Size	A	B	D	E	F
1301#0100	1"	22.1	25.4	79.0	48.0	22.0
1301#0112	1 1/2"	34.8	38.1	86.0	50.0	22.0
1301#0200	2"	47.5	50.8	100.0	52.0	22.0
1301#0212	2 1/2"	60.2	63.5	115.0	54.0	22.0
1301#0300	3"	72.2	76.2	128.0	54.0	22.0
1301#0400	4"	97.6	101.6	154.0	64.0	22.0
1301#0600	6"	148.4	152.4	220	86	24



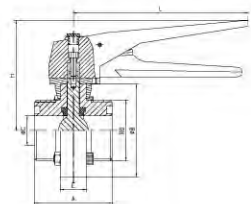
DIN butterfly valve weld end with pull handle

	Size	A	B	D	E	F
1101#025	25	25	28	79	48	22
1101#032	32	31	34	86	50	22
1101#040	40	37	40	90	50	22
1101#050	50	49	52	106	52	22
1101#065	65	66	70	124	56	22
1101#080	80	81	85	139	58	22
1101#0100	100	100	104	159	64	24
1101#0125	125	125	129	190	80	24
1101#0150	150	150	154	220	86	24



DIN 3PC butterfly valve weld end with pull handle

	Size	A	B	C	E
1109#025	25	25	28	78	96
1109#032	32	31	34	83	100
1109#040	40	37	40	84	100
1109#050	50	49	52	88	104
1109#065	65	66	70	97	112
1109#080	80	81	85	107	116
1109#0100	100	100	104	119	128

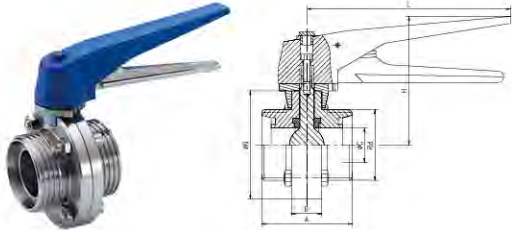


SMS butterfly valve thread end with gripper handle

	Size	A	B	C	PD	E
1202#0100	1"	64	79	22.4	RD40X1/6"	22
1202#0112	1 1/2"	70	86	35	RD60X1/6"	22
1202#0200	2"	78	100	47.5	RD70X1/6"	22
1202#0212	2 1/2"	80	115	59.5	RD85X1/6"	22
1202#0300	3"	84	128	72.2	RD98X1/6"	22
1202#0400	4"	90	154	97.6	RD125X1/6"	22

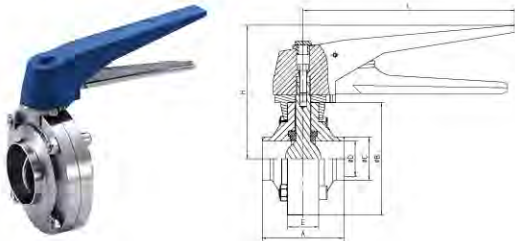


# Sanitary Butterfly Valve



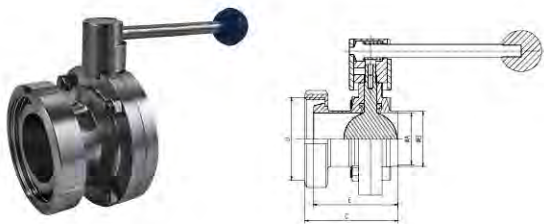
DIN butterfly valve thread end with gripper handle

	Size	A	B	C	RD
1102#025	25	66	79	25	RD52X1/6"
1102#032	32	70	86	31	RD58X1/6"
1102#040	40	74	90	37	RD65X1/6"
1102#050	50	76	106	49	RD78X1/6"
1102#065	65	80	124	66	RD95X1/6"
1102#080	80	86	139	81	RD110X1/4"
1102#0100	100	108	159	100	RD130X1/4"
1102#0125	125	100	190	125	RD160X1/4"
1102#0150	150	110	220	150	RD190X1/4"



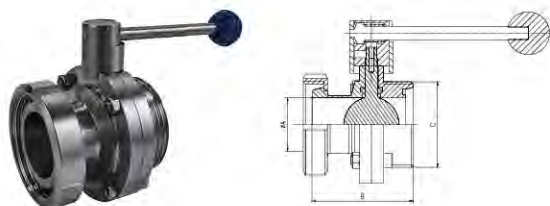
SMS butterfly valve weld end with gripper handle

	Size	A	B	C	D	E	H	L
1201#0100	1"	48	79	25.4	21.4	22	92	146
1201#0112	1 1/2"	50	86	38	35	22	96	146
1201#0200	2"	52	100	51	48	22	103	146
1201#0212	2 1/2"	54	115	63.5	59.5	22	110	146
1201#0300	3"	54	128	76.2	72.2	22	126	175
1201#0400	4"	64	154	101.6	97.6	22	140	175



DIN butterfly valve weld/union with pull handle

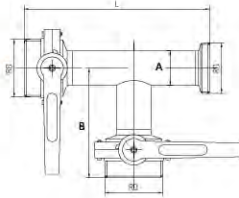
	Size	A	B	C	E	D
1104#025	25	25	28	78	70	RD52X1/6"
1104#032	32	31	34	83	75	RD58X1/6"
1104#040	40	37	40	84	76	RD65X1/6"
1104#050	50	49	52	88	80	RD78X1/6"
1104#065	65	66	70	97	88	RD95X1/6"
1104#080	80	81	85	107	95	RD110X1/4"
1104#0100	100	100	104	119	110	RD130X1/4"



DIN butterfly valve thread/nut with pull handle

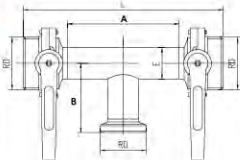
	Size	A	B	C
1105#025	25	25	79	RD52X1/6"
1105#032	32	31	85	RD58X1/6"
1105#040	40	37	88	RD65X1/6"
1105#050	50	49	92	RD78X1/6"
1105#065	65	66	100	RD95X1/6"
1105#080	80	81	110	RD110X1/4"
1105#0100	100	100	130	RD130X1/4"

## Sanitary Butterfly Valve



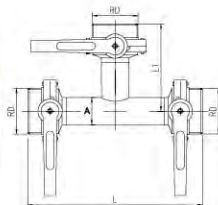
90° Three way butterfly valve thread end

	Size	A	RD	B	F	L
1106#025	25	28	RD52X1/6"	107	50	186
1106#032	32	34	RD58X1/6"	112	52	199
1106#040	40	40	RD65X1/6"	119	57	212
1106#050	50	52	RD78X1/6"	131	67	236
1106#065	65	70	RD95X1/6"	146	78	264
1106#080	80	85	RD110X1/4"	176	103	324
1106#0100	100	104	RD130X1/4"	196	110	360



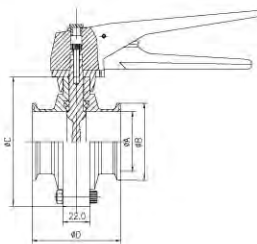
180° Three way butterfly valve thread end

	Size	B	RD	E	A	L
1107#025	25	79	RD52X1/6"	28	100	214
1107#032	32	87	RD58X1/6"	34	104	224
1107#040	40	93	RD65X1/6"	40	114	238
1107#050	50	105	RD78X1/6"	52	134	262
1107#065	65	118	RD95X1/6"	70	156	292
1107#080	80	148	RD110X1/4"	85	206	352
1107#0100	100	150	RD130X1/4"	104	206	378



Three way butterfly valve thread end

	Size	A	RD	L	L1
1108#025	25	28	RD52X1/6"	214	107
1108#032	32	34	RD58X1/6"	224	112
1108#040	40	40	RD65X1/6"	238	119
1108#050	50	52	RD78X1/6"	262	131
1108#065	65	70	RD95X1/6"	292	146
1108#080	80	85	RD110X1/4"	352	176
1108#0100	100	104	RD130X1/4"	378	189

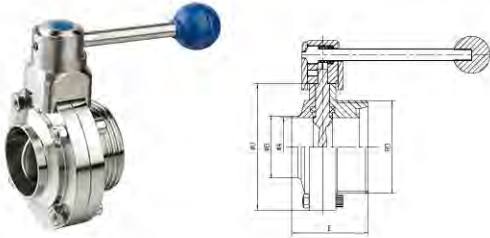


3A butterfly valve clamp end with gripper handle

	Size	A	B	C	D
1302#0100	1"	22.4	50.5	79.0	68
1302#0112	1 1/2"	35.0	50.5	86.0	72
1302#0200	2"	48.0	64.0	100.0	76
1302#0212	2 1/2"	59.5	77.5	115.0	84
1302#0300	3"	72.2	91.0	128.0	84
1302#0400	4"	97.6	119.0	154.0	92

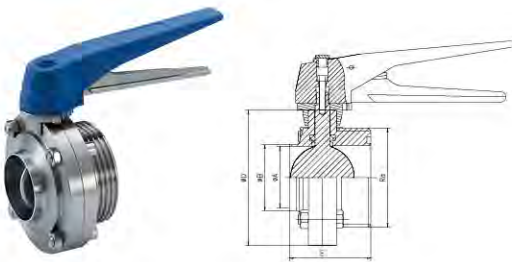


## Sanitary Butterfly Valve



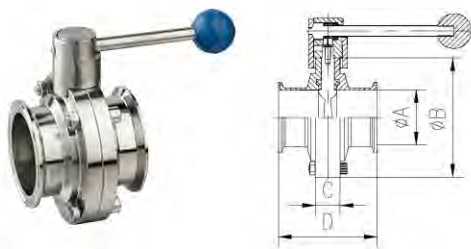
DIN butterfly valve weld/thread end with gripper handle

	Size	A	B	D	E	RD
1103#025	25	25	28	78	57	RD52X1/6"
1302#032	32	31	34	86	60	RD58X1/6"
1302#040	40	37	40	90	62	RD65X1/6"
1302#050	50	49	52	106	64	RD78X1/6"
1302#065	65	66	70	124	68	RD95X1/6"
1302#080	80	81	85	135	72	RD110X1/4"
1302#0100	100	100	104	159	86	RD130X1/4"



SMS butterfly valve weld/thread end with gripper handle

	Size	A	B	D	E	RD
1203#0100	1"	22.4	25.4	79	56	RD40X1/6"
1203#0112	1 1/2"	35.0	38.0	86	60	RD60X1/6"
1203#0200	2"	48.0	51.0	100	65	RD70X1/6"
1203#0212	2 1/2"	59.5	63.5	115	67	RD85X1/6"
1203#0300	3"	72.2	76.2	128	69	RD98X1/6"
1203#0400	4"	97.6	101.6	154	77	



3A butterfly valve clamp end with pull handle

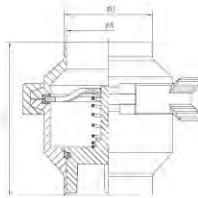
	Size	A	B	C	D
1303#0100	1"	22.1	78.0	22.0	89.0
1303#0112	1 1/2"	34.8	78.0	22.0	89.0
1303#0200	2"	47.5	98.5	22.0	94.0
1303#0212	2 1/2"	60.2	117.5	22.0	95.0
1303#0300	3"	72.2	132.0	24.0	103.0
1303#0400	4"	97.6	170.0	24.0	121.0

# *Sanitary Check Valve*



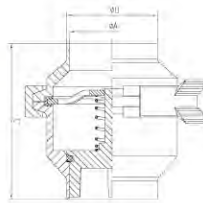


# Sanitary Check Valve



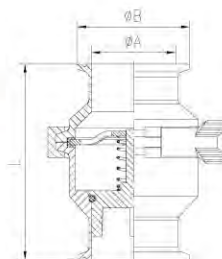
DIN check valve weld end

	Size	A	B	C
2102#025	25	25	28	74.5
2102#032	32	31	34	76
2102#040	40	37	40	76
2102#050	50	49	52	88.5
2102#065	65	66	70	102.5
2102#080	80	81	85	116.5
2102#0100	100	100	104	109
2102#0125	125	129	125	113
2102#0150	150	150	154	123



SMS check valve weld end

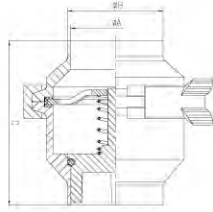
	Size	A	B	C
2201#0100	1"	22.4	25.4	73.5
2201#0112	1 1/2"	35.0	38.0	76.5
2201#0200	2"	48.0	51.0	88.5
2201#0212	2 1/2"	59.5	63.5	102.5
2201#0300	3"	72.2	76.2	101.5
2201#0400	4"	97.6	101.6	109.0



3A check valve clamp end

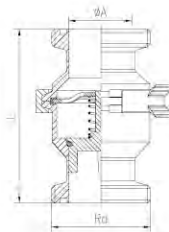
	Size	A	B	D
2302#0100	1"	22.1	50.4	99
2302#0112	1 1/2"	34.8	50.4	102
2302#0200	2"	47.5	63.9	114
2302#0212	2 1/2"	60.2	77.4	128
2302#0300	3"	72.9	90.9	127
2302#0400	4"	97.4	118.9	141

## Sanitary Check Valve



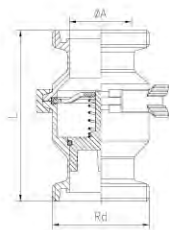
3A check valve weld end

	Size	A	B	C
2301#0100	1"	22.1	25.4	73.5
2301#0112	1 1/2"	34.8	38.1	76.5
2301#0200	2"	47.5	50.8	88.5
2301#0212	2 1/2"	60.2	63.5	102.5
2301#0300	3"	72.9	76.2	101.5
2301#0400	4"	97.4	101.6	109.0



SMS check valve thread end

	Size	A	L	RD
2202#0100	1"	22.4	109.5	RD40X1/6
2202#0112	1 1/2"	35.0	116.5	RD60X1/6
2202#0200	2"	48.0	128.5	RD70X1/6
2202#0212	2 1/2"	59.5	146.5	RD85X1/6
2202#0300	3"	72.2	149.5	RD98X1/6
2202#0400	4"	97.6	159.0	RD125X1/6



DIN check valve thread end

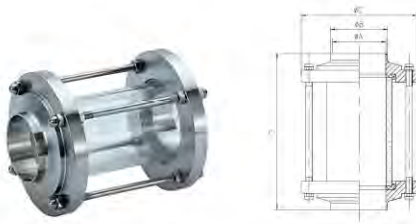
	Size	A	L	RD
2102#025	DN25	25	114.5	RD52X1/6
2102#032	DN32	31	116.0	RD58X1/6
2102#040	DN40	37	118.0	RD65X1/6
2102#050	DN50	49	130.5	RD78X1/6
2102#065	DN65	66	148.5	RD95X1/6
2102#080	DN80	81	158.5	RD110X1/4
2102#0100	DN100	100	168.0	RD130X1/4



# *Sanitary Sight Glass*

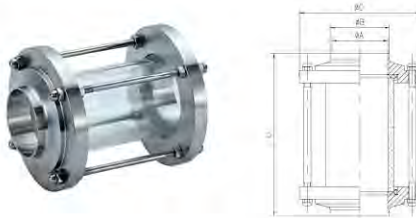


## Sanitary Sight Glass



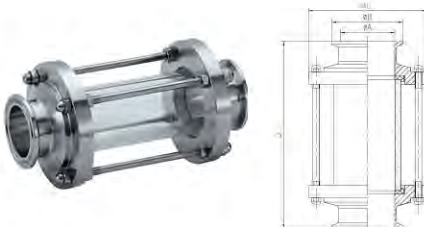
### 3A sight glass weld end

	Size	A	B	C	D
3301#0100	1"	22.1	25.4	79.0	138
3301#0112	1 1/2"	34.8	38.1	86.0	139
3301#0200	2"	47.5	50.8	100.0	143
3301#0212	2 1/2"	60.2	63.5	115.0	143
3301#0300	3"	72.2	76.2	128.0	142
3301#0400	4"	97.6	101.6	154.0	149



### DIN sight glass weld end

	Size	A	B	C	D
3101#025	25	25	28	79.0	136
3101#032	32	31	34	86.0	138
3101#040	40	37	40	90	138
3101#050	50	49	52	106	140
3101#065	65	66	70	124	144
3101#080	80	81	85	139	146
3101#0100	100	100	104	159	152



### SMS/3A sight glass clamp end

	Size	A	B	C	D
3201#0100	1"	22.1	50.4	79	163.4
3201#0112	1 1/2"	34.8	50.4	86	164.4
3201#0200	2"	47.5	63.9	100	168.4
3201#0212	2 1/2"	60.2	77.4	115	168.4
3201#0300	3"	72.2	90.9	128	167.4
3201#0400	4"	97.6	118.9	154	1180.8

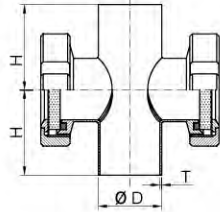


### DIN sight glass thread end

	Size	A	Rd	C	D
3102#025	25	25	Rd52x1/6"	79	154
3102#032	32	31	Rd58x1/6"	86	158
3102#040	40	37	Rd65x1/6"	90	162
3102#050	50	49	Rd78x1/6"	106	164
3102#065	65	66	Rd95x1/6"	124	168
3102#080	80	81	Rd110x1/4"	139	174
3102#0100	100	100	Rd130x1/4"	159	196

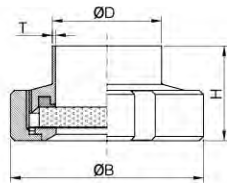


# Sanitary Sight Glass



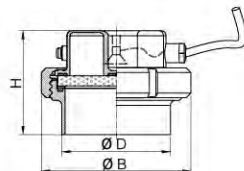
Sight Glass Cross Type

Size	H	D	T
DN25	50.0	28.0	1.5
DN32	55.0	34.0	1.5
DN40	60.0	40.0	1.5
DN50	70.0	52.0	1.5
DN65	80.0	70.0	2.0
DN80	90.0	85.0	2.0
DN100	100.0	104.0	2.0



Sight Glass Union Type

Size	H	B	D	T
DN25	35.0	63.0	28.0	1.5
DN32	38.0	70.0	34.0	1.5
DN40	40.0	78.0	40.0	1.5
DN50	42.0	92.0	52.0	1.5
DN65	47.0	112.0	70.0	2.0
DN80	52.0	127.0	85.0	2.0
DN100	62.0	148.0	104.0	2.0



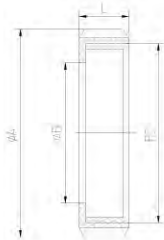
Sight Glass With Lamp

Size	H	B	D
DN80	90.0	127.0	87.0
DN100	100.0	148.0	106.0
DN125	90.0	178.0	132.0
DN150	96.0	210.0	157.0

# Sanitary Union

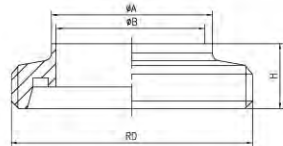






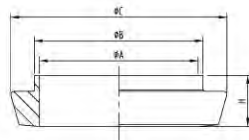
DIN round nut-13

Size	A	RD	B	L	Short
15	44	RD34x1/8"	25	18	4
20	54	RD44x1/6"	32	20	4
25	63	RD52x1/6"	36	21	4
32	70	RD58x1/6"	42	21	4
40	78	RD65x1/6"	49	21	4
50	92	RD78x1/6"	62	22	4
65	112	RD95x1/6"	80	25	6
80	127	RD110x1/4"	94	29	6
100	148	RD130x1/4"	115	31	6
125	178	RD160x1/4"	138	34	6
150	210	RD190x1/4"	164	40	6



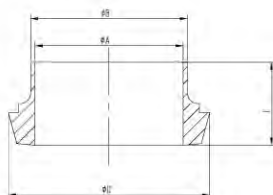
DIN Short welding male

Size	A	B	RD	H
20	22/23	19/20	RD44x1/6"	19
25	28/29	25/26	RD52x1/6"	20
32	34/35	31/32	RD58x1/6"	20
40	40/41	37/38	RD65x1/6"	21
50	52/53	49/50	RD78x1/6"	21
65	70	66	RD95x1/6"	23
80	85	81	RD110x1/4"	26
100	104	100	RD130x1/4"	28
125	129	125	RD160x1/4"	32
150	154	150	RD190x1/4"	36



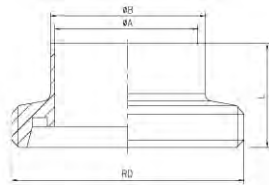
DIN Short welding liner

Size	A	B	C	H	D
20	19/20	22/23	36	13	5
25	25/26	28/29	44	15	5
32	31/32	34/35	50	15	5
40	37/38	40/41	56	15	5
50	49/50	52/53	68	16	5
65	66	70	86	17	5
80	81	85	100	17	5
100	100	104	121	20	5
125	125	129	150	25	8
150	150	154	176	26	8



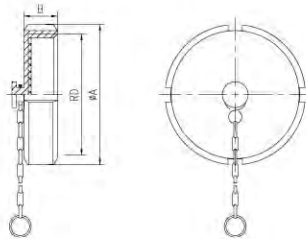
DIN11851 welding liner -14

Size	B	A	C	L
15	18/19	15/16	28	17
20	22/23	19/20	36	18
25	28/29	25/26	44	22
32	34/35	31/32	50	25
40	40/41	37/38	56	26
50	52/53	49/50	68	28
65	70	66	86	32
80	85	81	100	37
100	104	100	121	44
125	129	125	150	34
150	154	150	176	37



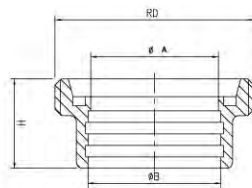
DIN11851 weld male-15

Size	B	A	RD	L
15	18/19	15/16	RD34×1/6"	21
20	22/23	19/20	RD44×1/6"	24
25	28/29	25/26	RD52×1/6"	29
32	34/35	31/32	RD58×1/6"	32
40	40/41	37/38	RD65×1/6"	33
50	52/53	49/50	RD78×1/6"	35
65	70	66	RD95×1/6"	40
80	85	81	RD110×1/4"	45
100	104	100	RD130×1/4"	54
125	129	125	RD160×1/4"	46
150	154	150	RD190×1/4"	50



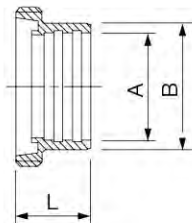
DIN blind nut with chain

size	A	B	RD
DN25	63	21	RD52×1/6"
DN32	70	21	RD58×1/6"
DN40	78	21	RD65×1/6"
DN50	92	22	RD78×1/6"
DN65	112	25	RD95×1/6"
DN80	127	30	RD110×1/4"
DN100	148	31	RD130×1/4"



DIN11851 expanding male-15R

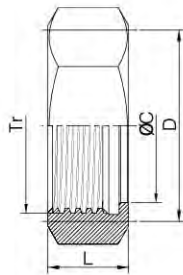
Size	B	A	RD	H
25	28.2	26	RD52×1/6"	29
32	34.2	32	RD58×1/6"	32
40	40.2	38	RD65×1/6"	33
50	52.2	50	RD78×1/6"	35
65	70.3	66	RD95×1/6"	40
80	85.3	81	RD110×1/4"	44
100	102	100	RD130×1/4"	54



DIN11851 expanding male-14R

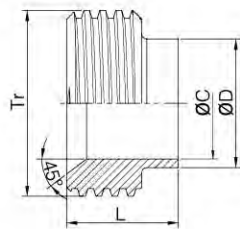
Size	A	B	L
25	26	28.2	22
32	32	34.2	25
40	38	40.2	26
50	50	52.2	28
65	66	70.3	32
80	81	85.3	35
100	100	102.2	42





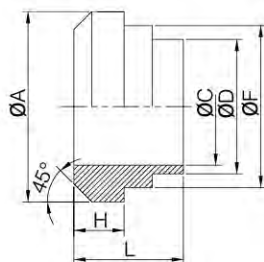
Hex Nut -13H

Size	C	D	Tr	L
1"	30.3	46.0	38.02X1/8 TACME	23.0
1 1/2"	43.4	61.1	51.54X1/8 TACME	24.6
2"	56.5	76.2	65.05X1/8 TACME	27.0
2 1/2"	69.6	91.3	78.56X1/8 TACME	30.15
3"	82.7	106.4	92.08X1/8 TACME	32.5
4"	108.9	137.6	120.14X1/6TACME	38.1



15TRF short/15A long threaded bevel seat ferrule

Size	C	D	Tr	L	
				15TRF	15A
1"	22.1	25.4	37.13X1/8 TACME	18.3	34.9
1.5"	34.8	38.1	50.65X1/8 TACME	18.3	38.1
2"	47.5	50.8	64.17X1/8 TACME	19.1	38.1
2.5"	60.2	63.5	77.67X1/8 TACME	22.2	44.5
3"	72.9	76.2	91.19X1/8 TACME	23.1	44.5
4"	97.4	101.6	119.25X1/6 TACME	26.2	44.5

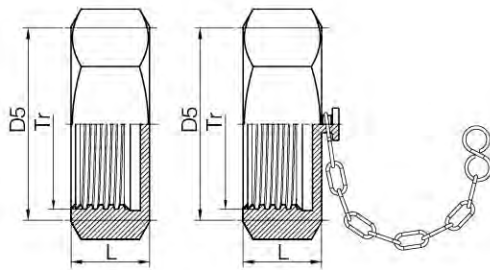


14TRF short/14A long plain bevel seat ferrule

Size	A	C	D	F	H	L	
						14PRF	14A
1"	33.3	22.1	25.4	29.5	7.9	18.3	34.9
1 1/2"	46.8	34.8	38.1	42.6	8.7	18.3	38.1
2"	60.3	47.5	50.8	55.7	10.3	19.1	38.1
2 1/2"	73.8	60.2	63.5	68.8	11.1	22.3	44.5
3"	87.3	72.9	76.2	81.9	11.9	23.1	44.5
4"	114.3	97.4	101.6	108.1	14.3	26.2	44.5

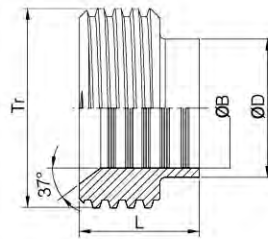
# Sanitary Union

# 3A



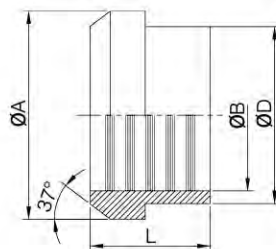
3A-13H Blind Nut(With Chain)

Size	D5	Tr	L
1"	46.0	38.02X1/8 TACME	23.0
1 1/2"	61.1	51.54X1/8 TACME	24.6
2"	76.2	65.05X1/8 TACME	27.0
2 1/2"	91.3	78.56X1/8 TACME	30.15
3"	106.4	92.08X1/8 TACME	32.5
4"	137.6	120.14X1/6 TACME	38.1



15R Expanding Male

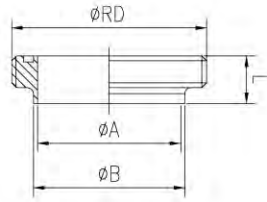
Size	Tr	B	D	L
1"	37.13X1/8 TACME	25.5	29.5	20.6
1.5"	50.65X1/8 TACME	38.2	42.6	28.6
2"	64.17X1/8 TACME	50.9	55.7	34.9
2.5"	77.67X1/8 TACME	63.6	68.8	38.1
3"	91.19X1/8 TACME	76.3	81.9	41.3
4"	119.25X1/6 TACME	101.7	108.1	41.3



14R Expanding Liner

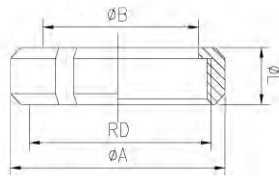
Size	A	B	D	L
1"	33.3	25.5	29.5	19.1
1.5"	46.8	38.2	42.6	28.6
2"	60.3	50.9	55.7	33.3
2.5"	73.8	63.6	68.8	34.9
3"	87.3	76.3	81.9	36.5
4"	114.3	101.7	108.1	38.1





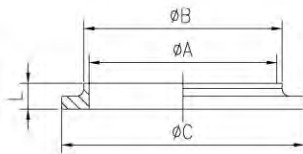
Cloud cluster

size	A	B	RD	L
25	22.4	25.4	RD40x1/6"	18
32	28.8	31.8	RD48x1/6"	20
38	35	38	RD60x1/6"	20
51	48	51	RD70x1/6"	20
63	59.5	63.5	RD85x1/6"	22
76	72.2	76	RD98x1/6"	24
102	97.6	101.6	RD125x1/6"	25



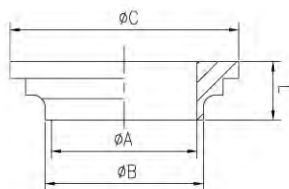
Sms Round Nut

size	A	Rd	B	L	SHORT
25	51	RD40x1/6"	32	19	6
38	73	RD60x1/6"	48	23	6
51	84	RD70x1/6"	60.5	24	6
63	98	RD85x1/6"	74	26	6
76	114	RD98x1/6"	87	27	6
102	140	RD125x1/6"	113	29	6



SMS short welding liner-14

size	A	B	C	L
25	22.4	25.4	35	9
38	35	38	55	10
51	48	51	65	10
63	59.5	63.5	80	10
76	72.2	76.2	93	10
102	97.6	101.6	120.5	10



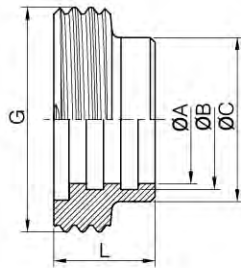
SMS long welding liner-14

size	A	B	C	E
25	22.4	25.4	35	13
38	35	38	55	15
51	48	51	65	15
63	59.5	63.5	80	15
76	72.2	76.2	93	17
102	97.6	101.6	121	17



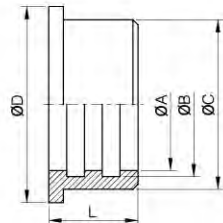
SMS blind nut with chain

size	A	B	RD
1"	51	19	RD40x1/8"
1 1/2"	73	23	RD60x1/8"
2"	84	24	RD70x1/8"
2 1/2"	98	26	RD85x1/8"
3"	114	27	RD98x1/8"
4"	140	29	RD125x1/8"



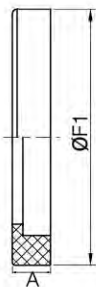
SMS Expanding Male

Size	A	B	C	G	L
25	25.6	26.2	32.0	RD40X1/6	20.0
32	32.0	32.6	40.0	RD48X1/6	20.0
38	38.3	38.9	47.9	RD60X1/6	23.0
51	51.0	51.6	60.4	RD70X1/6	25.0
63	63.7	64.3	73.5	RD85X1/6	30.0
76	76.4	77.2	86.5	RD98X1/6	30.0
102	101.8	102.6	112.5	RD125X1/4	30.0



SMS Expanding Liner

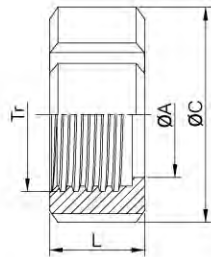
Size	A	B	C	D	L
25	25.6	26.2	32.0	35.0	17.0
32	32.0	32.6	40.0	43.0	17.0
38	38.3	38.9	47.9	55.0	20.0
51	51.0	51.6	60.4	65.0	20.0
63	63.7	64.3	73.5	80.0	22.0
76	76.4	77.2	86.5	93.0	24.0
102	101.8	102.6	112.5	120.5	27.0



Gasket for Union

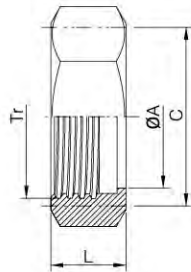
Size	A	F1
25	5.5	32.0
32	5.5	40.0
38	5.5	48.0
51	5.5	61.0
63	5.5	73.5
76	5.5	86.0
89	5.5	99.0
102	5.5	114.0





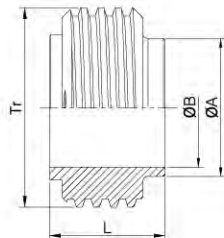
Round Nut

Size	A	Tr	C	L
Ø25	30.5	38.02x1/8 TACME	48.0	30.0
Ø38	43.5	51.54x1/8 TACME	64.0	30.0
Ø51	57.0	65.05x1/8 TACME	77.0	30.0
Ø63	70.7	78.56x1/8 TACME	91.0	30.0
Ø76	83.3	92.08x1/8 TACME	106.0	30.0
Ø102	110.0	119.1x1/8 TACME	135.0	30.0



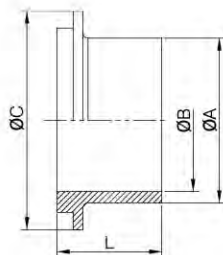
Hexagon Nut

Size	A	Tr	C	L
Ø25	30.3	38.02x1/8 TACME	46.0	30.0
Ø38	43.5	51.54x1/8 TACME	61.0	30.0
Ø51	57.0	65.05x1/8 TACME	76.2	30.0
Ø63	70.7	78.56x1/8 TACME	91.3	30.0
Ø76	83.3	92.08x1/8 TACME	106.5	30.0
Ø102	110.0	119.1x1/8 TACME	137.7	30.0



Male

Size	A	B	Tr	L
Ø25	25.4	22.4	37.1x1/8 TACME	21.5
Ø38	38.1	35.1	50.6x1/8 TACME	21.5
Ø51	50.8	47.8	64.1x1/8 TACME	21.5
Ø63	63.5	59.5	77.6x1/8 TACME	21.5
Ø76	76.2	72.2	91.1x1/8 TACME	21.5
Ø102	101.6	97.6	118.2x1/8 TACME	21.5

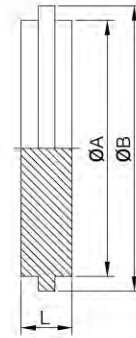
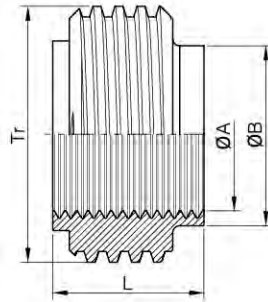
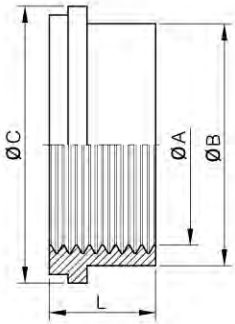


Liner

Size	A	B	C	L
Ø25	25.4	22.4	33.8	21.5
Ø38	38.1	35.1	47.0	21.5
Ø51	50.8	47.8	60.5	21.5
Ø63	63.5	59.5	74.0	21.5
Ø76	76.2	72.2	87.5	21.5
Ø102	101.6	97.6	114.1	21.5

# Sanitary Union

## ISO/IDF



IDF-14R Expanding Liner

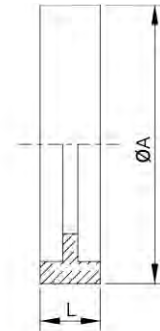
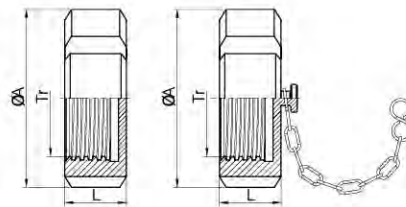
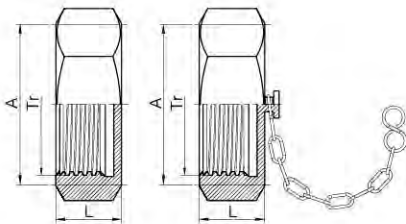
Size	A	B	C	L
Ø25	25.5	29.2	33.8	21.5
Ø38	38.2	42.7	47.0	21.5
Ø51	50.9	56.2	60.5	21.5
Ø63	63.6	69.9	74.0	21.5
Ø76	76.3	82.6	87.5	21.5
Ø102	101.7	111.1	114.1	21.5

IDF-15R Expanding Male

Size	A	B	Tr	L
Ø25	25.5	29.2	37.13x1/8 TACME	21.5
Ø38	38.2	42.7	50.65x1/8 TACME	21.5
Ø50	50.9	56.2	64.16x1/8 TACME	21.5
Ø63	63.6	69.9	77.67x1/8 TACME	21.5
Ø76	76.3	82.6	91.19x1/8 TACME	21.5
Ø102	101.7	111.1	118.2x1/8 TACME	21.5

IDF-16AMP Blank

Size	A	B	L
Ø25	29.2	33.8	10.5
Ø38	42.7	47.0	10.5
Ø51	56.2	60.5	10.5
Ø63	69.9	74.0	10.5
Ø76	82.6	87.5	10.5
Ø102	111.1	114.1	10.5



Hexagon Blind Nut(With Chain)

Size	A	Tr	L
Ø25	46.0	38.02x1/8 TACME	30.0
Ø38	61.0	51.54x1/8 TACME	30.0
Ø51	76.2	65.05x1/8 TACME	30.0
Ø63	91.5	78.56x1/8 TACME	30.0
Ø76	106.5	92.08x1/8 TACME	30.0
Ø102	137.7	119.1x1/8 TACME	30.0

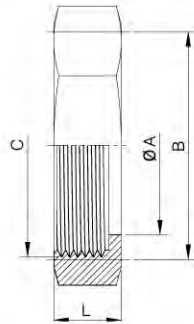
IDF-13 Blind Nut(With Chain)

Size	A	Tr	L
Ø25	48.0	38.02x1/8 TACME	30.0
Ø38	64.0	51.54x1/8 TACME	30.0
Ø51	77.0	65.05x1/8 TACME	30.0
Ø63	91.0	78.56x1/8 TACME	30.0
Ø76	106.0	92.08x1/8 TACME	30.0
Ø102	135.0	119.1x1/8 TACME	30.0

Gasket For Union

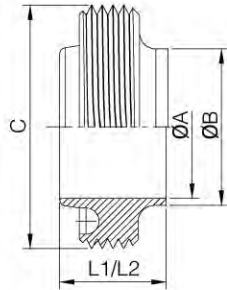
Size	A	L
Ø25	32.5	7.0
Ø38	46.0	7.0
Ø51	59.5	7.0
Ø63	73.0	7.0
Ø76	85.5	7.0
Ø102	114.0	7.0





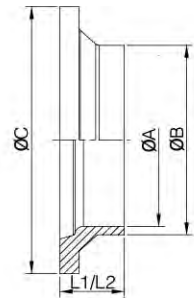
Hexagon Nut

Size	A	B	C	L
1"	33.3	50.8	46.64X1/8 TWHIT	22.2
1 1/2"	46.0	65.0	59.34X1/8 TWHIT	22.2
2"	58.7	79.4	73.64X1/6 TWHIT	22.2
2 1/2"	71.4	92.1	86.34X1/6 TWHIT	22.2
3"	84.1	104.8	99.04X1/6 TWHIT	22.2
4"	109.5	130.2	124.44X1/6 TWHIT	22.2



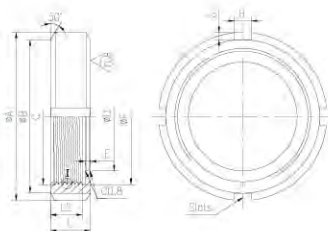
Male

Size	A	B	C	L2
1"	22.2	25.65	45.7x1/8TWHIT	27.0
1 1/2"	34.9	38.35	58.4x1/8TWHIT	27.0
2"	47.6	51.05	72.7x1/6TWHIT	27.0
2 1/2"	60.3	63.75	85.4x1/6TWHIT	27.0
3"	73.0	76.45	98.1x1/6TWHIT	27.0
4"	97.6	101.85	123.5x1/6TWHIT	27.0

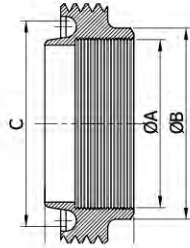


Liner

Size	A	B	C	L2
1"	22.2	25.65	41.3	19.5
1 1/2"	34.9	38.35	54.0	19.5
2"	47.6	51.05	66.7	19.5
2 1/2"	60.3	63.75	79.4	19.5
3"	73.0	76.45	92.1	19.5
4"	97.6	101.85	117.5	19.5

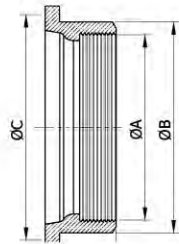


Size	A	B	C	L
1"	59.5	51.5	46.64X1/8 TWHIT	22.2
1 1/2"	74.0	65.0	59.34X1/8 TWHIT	22.2
2"	87.5	78.5	73.64X1/6 TWHIT	22.2
2 1/2"	100.5	91.5	86.34X1/6 TWHIT	22.2
3"	113.0	104.0	99.04X1/6 TWHIT	22.2
4"	138.5	129.5	124.44X1/6 TWHIT	22.2



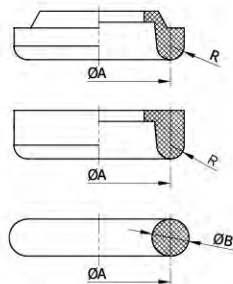
RJT Expanding Male

Size	A	B	C	L
1"	25.5	32.5	45.7x1/8TWHIT	27.0
1 1/2"	38.2	45.2	58.4x1/8TWHIT	27.0
2"	50.9	57.9	72.7x1/8TWHIT	27.0
2 1/2"	63.7	70.6	85.4x1/8TWHIT	27.0
3"	76.3	83.3	98.1x1/8TWHIT	27.0
4"	101.7	108.7	123.5x1/8TWHIT	27.0



RJT Expanding Liner

Size	A	B	C	L
1"	25.5	32.5	41.3	19.5
1 1/2"	38.2	45.2	54.0	19.5
2"	50.9	57.9	66.7	19.5
2 1/2"	63.7	70.6	79.4	19.5
3"	76.3	83.3	92.1	19.5
4"	101.7	108.7	117.5	19.5



Gasket for Union

Size	A	B	R
1"	33.3	6.6	3.2
1 1/2"	46.0	6.6	3.2
2"	58.7	6.6	3.2
2 1/2"	71.4	6.6	3.2
3"	84.1	6.6	3.2
4"	109.5	6.6	3.2
6"	162.6	6.6	3.2

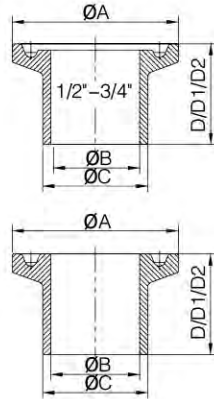


# Clamped Fitting



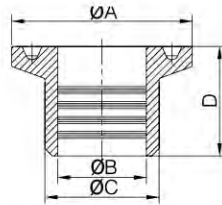
# Clamped Fitting

## 3A



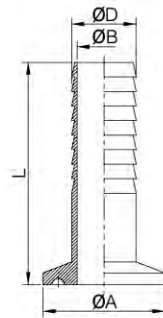
14WMP/14AMP Clamped Ferrule

Size	A	B	C	D	D2
1/2"	25.2	9.4	12.7	12.7	28.6
3/4"	25.2	15.75	19.05	12.7	28.6
1"	50.5	22.1	25.4	12.7	28.6
1 1/4"	50.5	28.5	31.8	12.7	28.6
1 1/2"	50.5	34.8	38.1	12.7	28.6
2"	64.0	47.5	50.8	12.7	28.6
2 1/2"	77.5	60.2	63.5	12.7	28.6
3"	91.0	72.9	76.2	12.7	28.6
4"	119.0	97.4	101.6	15.9	28.6
6"	166.8	146.8	152.4	21.5	38.1
8"	217.7	197.6	203.2	21.5	38.1
10"	268.5	248.4	254	21.5	38.1
12"	319.3	299.2	304.8	21.5	38.1



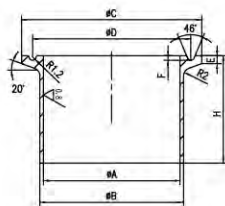
14RMP Expanding Clamped Ferrule

Size	A	B	C	D
1"	50.5	25.5	29.5	19.1
1.5"	50.5	38.2	42.6	28.6
2"	64	50.9	55.7	33.3
2.5"	77.5	63.6	68.8	34.9
3"	91	76.3	81.9	36.5
4"	119	101.7	108.1	38.1
40mm	50.5	40.2	43.8	28.6



14MPHR Rubber Hose Adapter

Size	A	B	D	L
1/2"	25.2	9.0	12.7	50.8
3/4"	25.2	15.0	19.0	50.8
1"	50.5	21.4	25.4	114.3
1 1/4"	50.5	27.8	31.8	114.3
1 1/2"	50.5	34.0	38.1	114.3
2"	64.0	47.0	50.8	114.3
2 1/2"	77.5	59.5	63.5	114.3
3"	91.0	72.2	76.2	114.3
4"	119.0	97.6	101.6	114.3



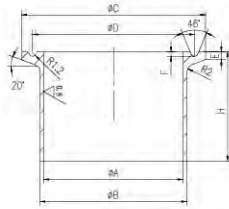
14WLMP Ferrule

Size	A	B	C	H
1"	22.10	25.40	50.40	76.20
1 1/2"	34.80	38.10	50.40	76.20
2"	47.50	50.80	63.90	76.20
2 1/2"	60.20	63.50	77.40	76.20
3"	72.90	76.20	90.90	101.60
4"	97.40	101.60	118.92	101.60
6"	148.86	152.40	166.88	152.40



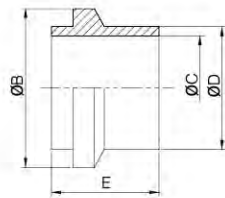
# Clamped Fitting

# 3A



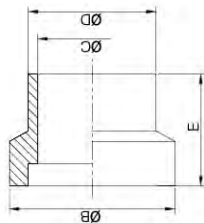
14MPW Ferrule

Size	A	B	C	H
1"	22.10	29.46	50.40	41.28
1 1/2"	34.80	42.57	50.40	41.28
2"	47.50	55.68	63.90	44.45
2 1/2"	60.20	68.78	77.40	44.45
3"	72.90	81.89	90.90	46.05
4"	97.40	108.1	118.92	53.98
6"	146.86	157.28	166.88	63.50



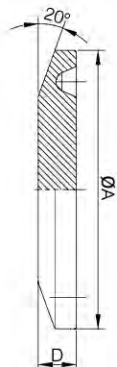
14WI/14WIL Ferrule

Size	B	C	D	E	
				14WI	14WIL
1"	50.67	22.1	25.65	19.84	44.5
1 1/2"	50.67	34.8	38.35	23.8	46.7
2"	67.06	47.5	51.05	26.19	58.9
2 1/2"	84.0	60.2	63.75	29.36	63.4
3"	98.3	72.9	76.45	30.94	68.2
4"	123.7	97.38	101.85	34.11	76.2



15WI/15WIL Ferrule

Size	B	C	D	E	
				15WI	15WIL
1"	50.67	22.1	25.65	19.84	44.5
1 1/2"	50.67	34.8	38.35	23.8	46.7
2"	67.06	47.5	51.05	26.19	58.9
2 1/2"	84.0	60.2	63.75	29.36	63.4
3"	98.3	72.9	76.45	30.94	68.2
4"	123.7	97.38	101.85	34.11	76.2

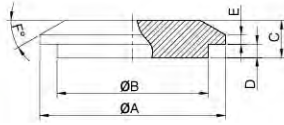


3A-16AMP Blank

Size	A	D
1/2"-3/4"	25.2	5.0
A37	34.0	6.3
1-1.5"	50.5	6.3
2"	64.0	6.3
2.5"	77.5	6.3
3"	91.0	6.3
4"	119.0	7.9
6"	166.8	11.1
8"	217.7	11.1
10"	268.5	11.1
12"	319.3	11.1

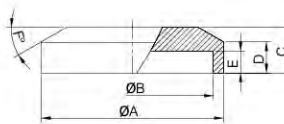
# Clamped Fitting

## 3A



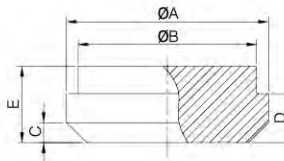
16AI-14WI Male Solid End Cap

Size	A	B	C	D	E	F
1"	50.42	31.75	12.70	4.95	2.67	37°
1 1/2"	50.42	44.20	12.70	4.95	2.67	37°
2"	67.06	56.90	14.27	6.48	2.33	37°
2 1/2"	84.00	69.60	19.05	7.87	3.20	37°
3"	98.30	83.82	17.78	7.87	3.20	37°
4"	123.70	109.14	19.05	7.87	3.20	37°
6"	190.37	173.48	22.35	4.72	3.20	30°
8"	241.17	224.28	22.35	4.72	3.20	30°



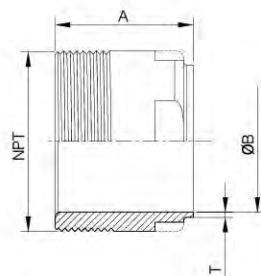
16AI-15WI Female Solid End Cap

Size	A	B	C	D	E	F
1"	50.42	32.13	12.70	8.0	6.32	37°
1 1/2"	50.42	44.58	12.70	8.0	6.32	37°
2"	67.06	57.28	14.27	11.61	7.85	37°
2 1/2"	84.00	69.98	19.05	11.13	9.25	37°
3"	98.30	84.20	17.78	11.13	9.25	37°
4"	123.70	109.60	19.05	11.13	9.25	37°
6"	190.37	175.74	22.35	11.13	6.10	30°
8"	241.17	226.54	22.35	11.13	6.10	30°



3A-16A End Cap

Size	A	B	C	D	E
1"	33.4	29.5	3.3	8.1	12.6
1.5"	46.8	42.6	4.0	8.7	14.3
2"	60.5	55.7	4.0	10.4	16.0
2.5"	73.9	68.8	4.8	11.9	18.2
3"	87.5	81.9	4.8	11.9	18.3
4"	114.5	108.1	6.3	14.2	20.6

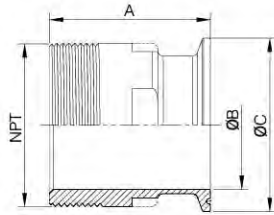


19WB Weld-Male NPT Adapter

Size	A	B	T	NPT
1/2"	41.3	9.4	1.65	NPT1/2×14
3/4"	41.3	15.8	1.65	NPT3/4×14
1"	44.5	22.1	1.65	NPT1×11.5
1 1/4"	44.5	28.5	1.65	NPT1 1/4×11.5
1 1/2"	44.5	34.8	1.65	NPT1 1/2×11.5
2"	46.0	47.5	1.65	NPT2×11.5
2 1/2"	58.7	60.2	1.65	NPT2 1/2×8
3"	63.5	72.9	1.65	NPT3×8
4"	65.1	97.4	2.1	NPT4×8

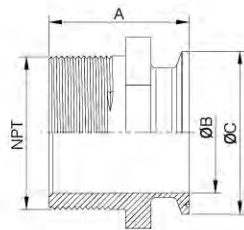
# Clamped Fitting

# 3A



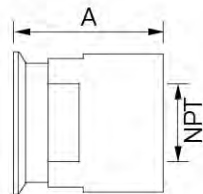
19-14MP NPT Male Clamped Adapter

Size	A	B	C	NPT
1/2"	54.0	9.4	25.1	NPT1/2x14
3/4"	54.0	15.8	25.1	NPT3/4x14
1"	57.2	22.1	50.4	NPT1x11.5
1 1/4"	57.2	28.5	50.4	NPT1 1/4x11.5
1 1/2"	57.2	34.8	50.4	NPT1 1/2x11.5
2"	58.7	47.5	63.9	NPT2x11.5
2 1/2"	71.4	60.2	77.4	NPT2 1/2x8
3"	76.2	72.9	90.9	NPT3x8
4"	81.0	97.4	118.9	NPT4x8



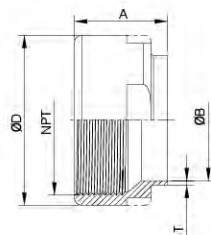
21MP NPT Male Hexagon Clamped Adapter

Size	NPT	A
1"	3/4"	55.5
1"	1"	57.2
1 1/2"	1"	61.9
1 1/2"	1-1/2"	57.2
1 1/2"	2"	66.7
2"	1-1/2"	66.7
2"	2"	67.0
2 1/2"	2-1/2"	73.0
3"	1-1/2"	76.2
3"	2"	76.2
3"	2-1/2"	76.2
4"	3"	96.9
4"	4"	80.1



22MP NPT Female Clamped Adapter

Size	NPT	A
1"	3/4"	41.3
1"	1"	41.3
1 1/2"	1"	57.2
1 1/2"	1-1/2"	57.2
1 1/2"	2"	63.5
2"	1-1/2"	59.5
2"	2"	61.1
2 1/2"	2-1/2"	55.5
3"	1-1/2" w	55.5
3"	2"	55.5
3"	2-1/2"	55.5
3"	3"	55.5
4"	3"	55.5
4"	4"	92.8



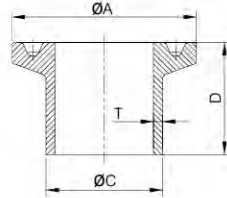
22WB NPT Female Welded Adapter

Size	A	B	T	NPT	D
1/2"	28.6	9.4	1.65	NPT 1/2x14	30.0
3/4"	28.6	15.8	1.65	NPT 3/4x14	33.3
1"	28.6	22.1	1.65	NPT 1x11.5	41.3
1 1/4"	36.5	28.5	1.65	NPT 1 1/4x11.5	47.6
1 1/2"	36.5	34.8	1.65	NPT 1 1/2x11.5	55.0
2"	36.5	47.5	1.65	NPT 2x11.5	73.0
2 1/2"	41.3	60.2	1.65	NPT 2 1/2x8	79.0
3"	46.0	72.9	1.65	NPT 3x8	100.0
4"	50.8	97.4	2.1	NPT 4x8	125.0



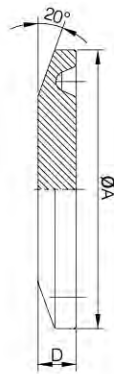
# Clamped Fitting

## DIN



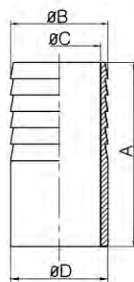
Clamped ferrule

Size	A	C	D1	D2	T
DN15	34.0	18.0	18.0	28.0	1.5
DN20	34.0	22.0	18.0	28.0	1.5
DN25	50.4	28.0	21.5	28.0	1.5
DN32	50.4	34.0	21.5	28.0	1.5
DN40	50.4	40.0	21.5	28.0	1.5
DN50	64.0	52.0	21.5	28.0	1.5
DN65	90.9	70.0	28.0	28.0	2.0
DN80	106.0	85.0	28.0	28.0	2.0
DN100	118.8	104.0	28.0	28.0	2.0
DN155	145.0	129.0	28.0	28.0	2.0
DN183	167.0	154.0	28.0	28.0	2.0



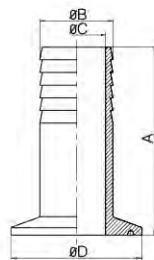
End Cap

Size	A	D
DN15	34.00	6.40
DN20	34.00	6.40
DN25	50.50	6.40
DN32	50.50	6.40
DN40	50.50	6.40
DN50	64.00	6.40
DN65	91.00	6.40
DN80	106.00	6.40
DN100	119.00	7.90
DN125	144.50	11.10
DN125	155.00	11.10
DN150	167.00	11.10
DN150	183.00	11.10
DN200	217.40	11.10
DN200	233.50	11.10



Welded Hose Nipple (DIN 11864)

Size	A	B	C	D
DN15	50	19.5	16	19
DN20	48	23.5	20	23
DN25	58	30.0	26	29
DN32	68	35.5	32	35
DN40	78	43.0	38	41
DN50	88	55.0	50	53
DN65	97	73.0	66	70
DN80	107	89.0	81	85
DN100	116	108.0	100	104

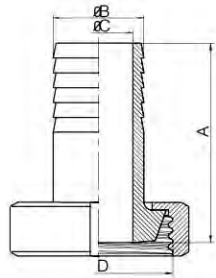


Clamp Hose Nipple (DIN 11864)

Size	A	B	C	D
DN15	68	19.5	16	34
DN20	66	23.5	20	50.5
DN25	79.5	30.0	26	50.5
DN32	89.5	35.5	32	50.5
DN40	99.5	43.0	38	50.5
DN50	109.5	55.0	50	64
DN65	125	73.0	66	91
DN80	135	89.0	81	106
DN100	144	108.0	100	119

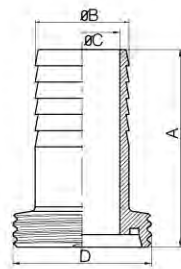
# Clamped Fitting

# DIN



Union-type Hose Coupling (DIN 11864)

Size	A	B	C	D
DN15	63	19.5	16	RD34x1/8
DN20	63	23.5	20	RD44x1/6
DN25	75	30.0	26	RD52x1/6
DN32	85	35.5	32	RD58x1/6
DN40	95	43.0	38	RD65x1/6
DN50	106	55.0	50	RD78x1/6
DN65	117	73.0	66	RD95x1/6
DN80	127	89.0	81	RD110x1/4
DN100	140	108.0	100	RD130x1/4

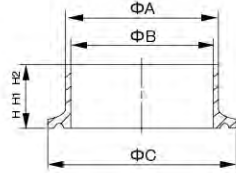


Male Hose Nipple (DIN 11864)

Size	A	B	C	D
DN15	67	19.5	16	RD34x1/8
DN20	69	23.5	20	RD44x1/6
DN25	82	30.0	26	RD52x1/6
DN32	92	35.5	32	RD58x1/6
DN40	102	43.0	38	RD65x1/6
DN50	113	55.0	50	RD78x1/6
DN65	125	73.0	66	RD95x1/6
DN80	135	89.0	81	RD110x1/4
DN100	150	108.0	100	RD130x1/4

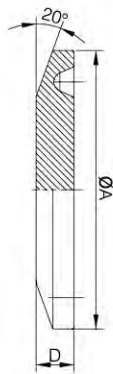
# Clamped Fitting

SMS



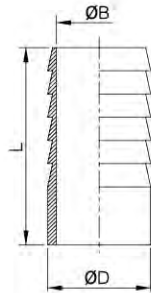
## Ferrule

Size	A	B	C	H	H1	H2
3/4"	19	16	34.00	12.70	21.50	28.60
1"	25.4	22.4	50.50	12.70	21.50	28.60
1 1/4"	31.8	28.8	50.50	12.70	21.50	28.60
1 1/2"	38	35	50.50	12.70	21.50	28.60
2"	51	48	64.00	12.70	21.50	28.60
2 1/2"	63.5	59.5	77.50	12.70	21.50	28.60
3"	76.2	72.2	91.00	12.70	21.50	28.60
4"	101.6	97.6	119.00	15.90	21.50	28.60



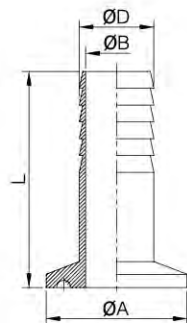
## Blank

Size	A	D
12.7~19	25.2	5.0
37	34.0	6.4
25~38	50.5	6.4
51	64.0	6.4
63	77.5	6.4
76	91.0	6.4
102	119.0	8.0
152.4	166.8	11.0
203	217.7	11.0
254	268.5	11.0
305	319.3	11.0



## Welded hose coupling

Size	B	D	L
12.7	9.0	12.7	45.0
19	15.0	19.0	45.0
25	21.4	25.4	60.0
32	27.8	31.8	60.0
38	34.0	38.1	60.0
51	47.0	50.8	60.0
63	59.5	63.5	70.0
76	72.2	76.2	80.0
102	97.6	101.6	80.0



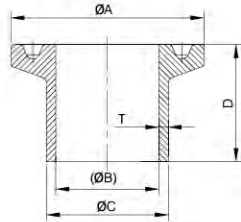
## Clamped hose coupling

Size	A	B	D	L
12.7	25.2	9.0	12.7	66.0
19	25.2	15.0	19.0	66.0
25	50.5	21.4	25.4	81.0
32	50.5	27.8	31.8	81.0
38	50.5	34.0	38.1	81.0
51	64.0	47.0	50.8	81.0
63	77.5	59.5	63.5	91.0
76	91.0	72.2	76.2	101.0
102	119.0	97.6	101.6	101.0



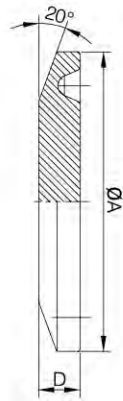
# Clamped Fitting

ISO/IDF



## Clamp Ferrule

Size	B	C	A	T	D1	D2	D3
21.3	18.1	21.3	34	1.6	12.7	21.5	28.6
26.9	23.7	26.9	50.4	1.6	12.7	21.5	28.6
33.7	29.7	33.7	50.4	1.6	12.7	21.5	28.6
42.4	38.4	42.4	50.4	1.6	12.7	21.5	28.6
48.3	44.3	48.3	64	1.6	12.7	21.5	28.6
60.3	56.3	60.3	77.5	1.6	12.7	21.5	28.6
76.1	71.5	76.1	91	1.6	12.7	21.5	28.6
88.9	84.3	88.9	106	1.6	12.7	21.5	28.6
114.3	109.1	114.3	130	1.6	12.7	21.5	28.6



## Blank (16AMP)

Size	A	D
A37	34	6.3
φ12.7- φ19	25.2	5.0
φ25- φ38	50.5	6.3
φ51	64.0	6.3
φ63	77.5	6.3
φ76	91.0	6.3
φ102	119.0	7.9
φ133	166.7	10.6
φ203	217.7	11.1
φ254	268.5	13.0
φ305	319.3	13.0

# Clamp & Pipe Holder



# Clamp & Pipe Holder

## Clamp Nuts



13SP-1



13SP-2



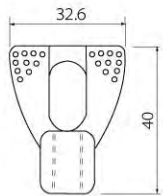
13SP-3



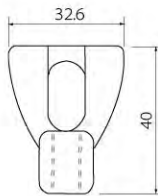
13MHH-13



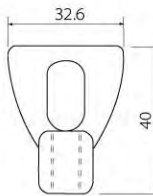
13SP-4



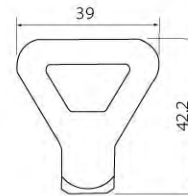
13SP-1



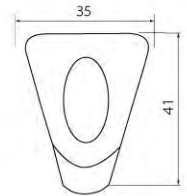
13SP-2



13SP-3



13MHH-13



13SP-4



13MHH-10



13MHH-14



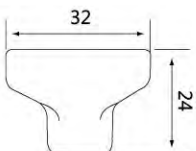
13MHH-11



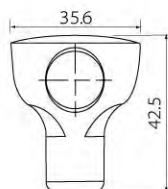
13MHH-12



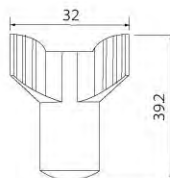
13MHH-15



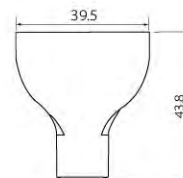
13MHH-10



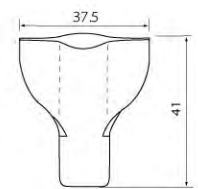
13MHH-14



13MHH-11



13MHH-12



13MHH-15



# Clamp & Pipe Holder

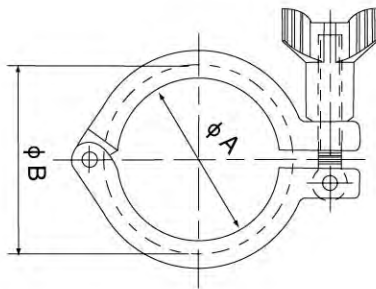


Fold Type

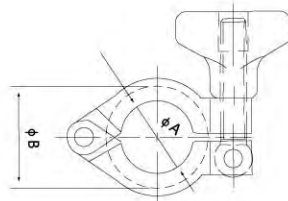


Middle Type

## Single pin clamp 13 MHH

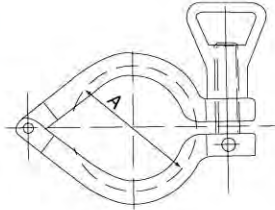


SIZE	ΦA	ΦB
A37	27.8	37
1-1 1/2	44.4	53.6
2.0"	57.8	67
2 1/2"	71.4	80.6
3.0"	84	94.2
3 1/2"	99	109.2
4.0"	110	122.2
4 1/2"	123	133.2
5"	135.5	148X3.5
5"	135.5	148X5.6
5.5"	145	159
6.0"	155.4	170.4
DN150	173	187
8.0"	205	220
DN200	223	237
10"	258	272
12"	307	323



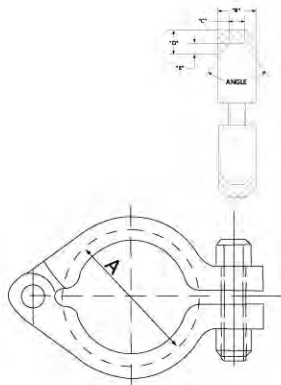
13MHH Mini heavy duty single pin clamp  
**SIZE: 1/2" ~ 3/4"**

## Clamp & Pipe Holder



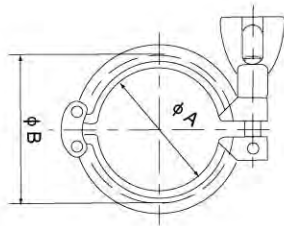
Single pin clamp 13 IS

SIZE	A
1-1 1/2"	54.0
2"	71.4
2 1/2"	88.9
3"	103.2
4"	127.0
6"	195.3
8"	246.0



Single pin clamp 13 IU

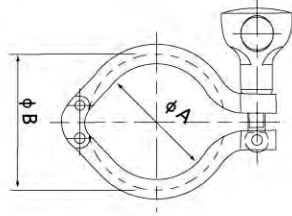
SIZE	A
1-1 1/2"	54.0
2"	71.4
2 1/2"	88.9
3"	103.2
4"	127.0
6"	195.3
8"	246.0



Double pin clamp 13SF

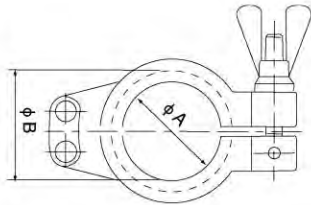
SIZE	φA	φB
1/2"-3/4"	20	28
A37	27.5	42.9
1"-1.5"	45	58.6
2.0"	59	72
2.5"	67	84
3.0"	85	98
4.0"	114	127
4 1/2"	123	133.2
5.0"	135.5	148x5.6
5.5"	145	159
6.0"	155.4	170.4x5.6
DN150	173	187
8.0"	206	220x5.6
DN200	223	237
10"	258	272x5.6
12"	307	323x5.6

## Clamp & Pipe Holder



Double pin clamp 13MHHM

SIZE	Φ A	Φ B
1/2"-3/4"	20	28
1.5"	43.0	53.6
2.0"	57	67
2.5"	70.6	80.6
3.0"	84	94
4.0"	112	122
4 1/2"	123	133.2
5.0"	135.5	148X5.6
5.5"	145	159
6.0"	155	170
DN150	145	159
8.0"	205	220.8
DN200	223	237
10"	258	272
12"	307	323

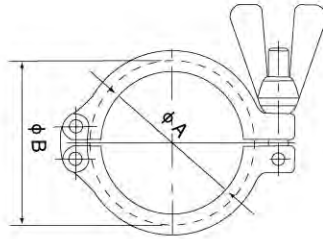


Double pin clamp 13EU

DIN 32676 ISO 2852	DIN 32676 ISO 1127	DIN 32676	
1/4"-3/4"	08-10	06-08	28.0
		10-15-20	37.0
1"-1 1/2"	15-20-25	25-32-40	53.0
2"	32-40	50	67.0
2 1/2"	50		80.0
3"	65	65	94.0
3 1/2"	80	80	109.0
4"		100	122.0
4 1/2"	100		133.0
5"			147.0
5 1/2"	125	125	158.0
6"			170.0

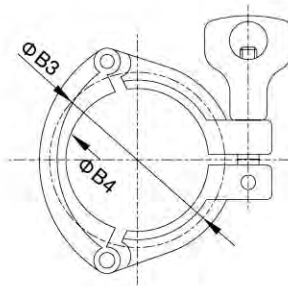


## Clamp & Pipe Holder



13CS Double pin clamp

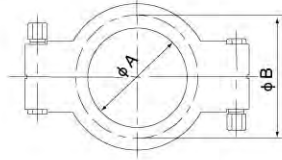
SIZE	$\phi A$	$\phi B$
3/4"	20.58	28.34
DN10-20	27.2	37
1.5"	41.02	53.52
DN25-40	44.5	54.5
2.0"	54.54	67.04
DN50	57	68
2.5"	68.02	80.52
3.0"	81.52	94.02
DN65	84	95
DN80	99	110
4.0"	109.54	122.04
DN100	112	123
DN115	123	134
DN125	144	159
6.0"	157.6	175.1
DN150	172	187
8.0"	207.4	225.9
DN200	222.5	237.5
DN250	257	272
DN300	308	323



Three pieces clamp 13 ISO-3P

SIZE	B3
1"	53.9
1 1/2"	53.9
2"	67.4
2 1/2"	80.9
3"	94.4
4"	122.4
4.5"	133.2
5"	148
5.5"	159
6"	170.4
DN150	187
8"	220
DN200	237
10"	272
12"	323
13"	356
14"	386
15"	406
16"	436
17"	456
18"	486
19"	506
20"	536
24"	638

## Clamp & Pipe Holder



High pressure clamp 13 MHP

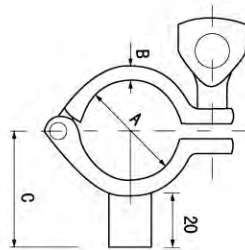
SIZE	ΦA	ΦB
1/2"-3/4"	20	28
1"-1.5"	43.3	52.0
2.0"	56.4	65.5
2.5"	69.5	79.0
3.0"	77.5	92.5
4.0"	108.8	120.5
5.0"	135.5	148
6.0"	158	170
8.0"	206	220
10"	258	272.8
12"	309	327.6



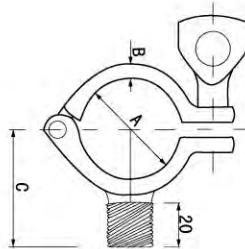
SIZE:1/2"-3/4"

## Pipe holder

ISO



Size	A	B
1/2"	12.7	58.4
3/4"	19.1	62.5
1 1/2"	25.4	65.7
2"	38.1	72
2"	50.8	78.4
2 1/2"	63.5	84.8
3"	76.2	91
4"	101.6	103.8
5"	129	117.4
6"	154	130
8"	204	155
10"	254	180
12"	304	205

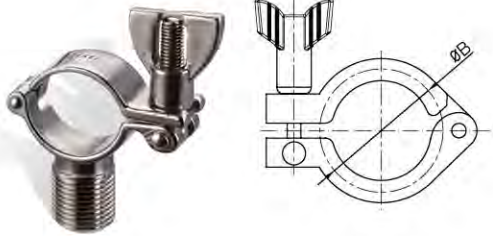


ISO-BSP(Male)

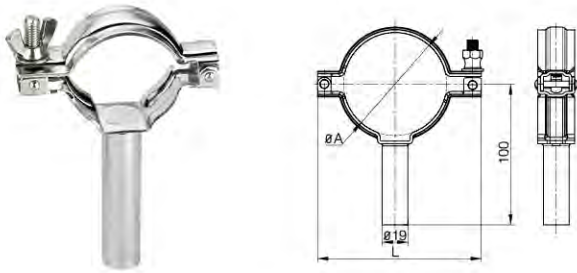
Size	A	B	C
1/2"	12.70	7.50	38.00
3/4"	19.05	7.50	38.00
1"	25.40	7.50	38.00
1 1/2"	38.10	7.50	45.00
2"	50.80	7.50	50.00
2 1/2"	63.50	7.50	60.00
3"	76.20	9.00	68.00
4"	101.60	9.00	78.00
5"	127	9.00	78.00
6"	152.40	9.00	82.00

# Clamp & Pipe Holder

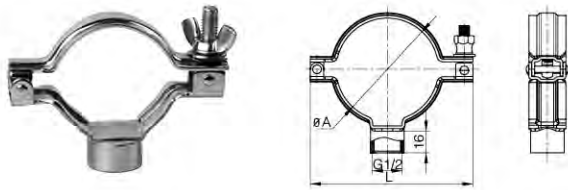
3A-BSP



Size	A	B	c
1"	25.4	3	5mm
1.5"	38.1	3	5mm
2"	50.8	4	6mm
2.5"	63.5	4	6mm
3"	76.2	5	7mm
4"	101.6	5	7mm
5"	127	5	7mm
6"	152.4	5	7mm
8"	203.2	6.5	7mm
10"	254	6.5	7mm
12"	304.8	6.5	7mm



TH1H Pipe Holder(Welded)

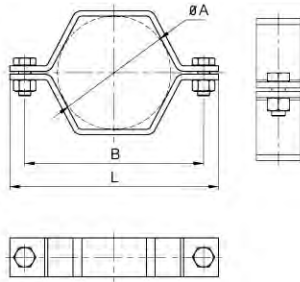


TH1M Pipe Holder(Female)

Size	A	L
1"	25.4	66
1 1/2"	38.1	79
2"	50.8	90
2 1/2"	63.5	105
3"	76.3	120
4"	101.6	146

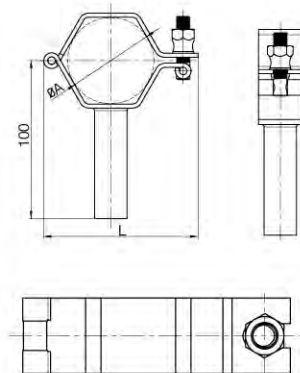


## Clamp & Pipe Holder



### TH2 Pipe Holder

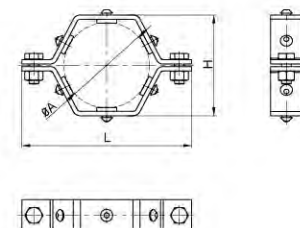
Size	A	B	L
ISO21.3	21.3	48	68
ISO26.9	26.6	55	74
ISO33.7	33.7	63	82
ISO42.4	42.4	74	93
ISO48.3	48.3	82	101
ISO60.3	60.3	95	114
ISO88.9	88.9	130	149
ISO114.3	114.3	158	177



### TH3 Pipe Holder

Size	A	L
DIN28	28	64
DIN34	34	64
DIN40	40	78
DIN52	52	90
DIN70	70	111
DIN85	85	125
DIN101.6	101.6	152

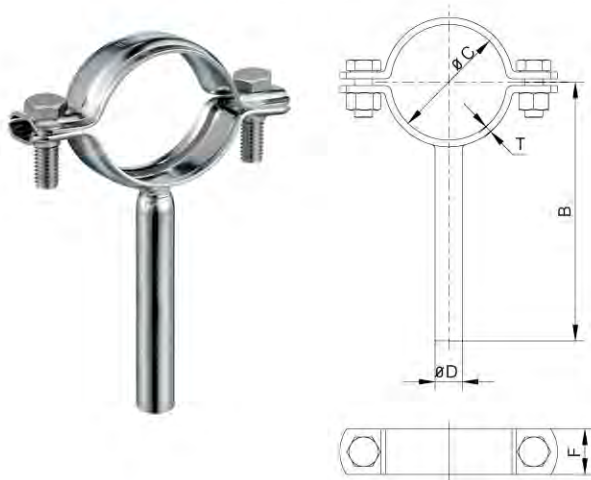
Size	A	L
SMS25	25	61
SMS38	38	76
SMS51	51	90
SMS63.5	63.5	106
SMS76	76	120
SMS104	104	152



### TH4 Pipe Holder

Size	A	H	L
1"	25.4	42.4	86.6
1 1/2"	38.1	55.1	79
2"	50.8	67.8	92
2 1/2"	63.5	80.5	127.6
3"	76.2	93.2	142
4"	104	122	175
6"	152.4	174	255

# Clamp & Pipe Holder

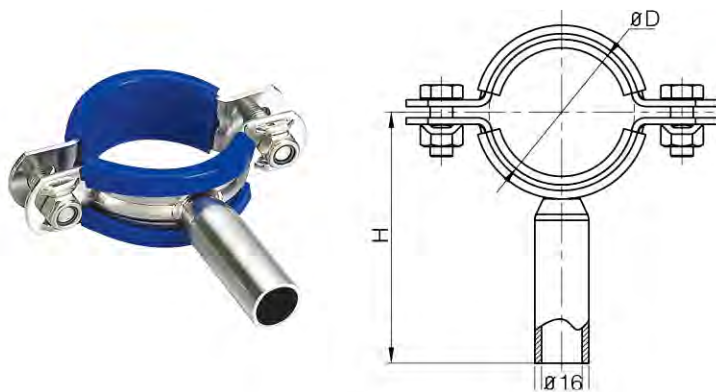


Size	B	D	C	F	T
SMS25.4	69.5	10	25	16	2.0
SMS38.1	76	10	38	20	2.0
SMS50.8	82.5	12	51	20	2.0
SMS63.5	89.5	12	63.5	20	2.5
SMS76.2	95.5	12	76	25	2.5
SMS101.6	109	16	101.6	25	3.0

## TH5 Pipe Holder

Size	B	D	C	F	T
DN10	63	8	12	14	2.0
DN15	66	8	18	14	2.0
DN20	68	8	22	16	2.0
DN25	71	10	28	16	2.0
DN32	74	10	34	16	2.0
DN40	77	10	40	20	2.0
DN50	83	12	52	20	2.0
DN65	92.5	12	70	20	2.5
DN80	100	12	85	25	2.5
DN100	110	12	104	25	3.0
DN125	140	16	129	25	3.0
DN150	152.5	16	154	30	3.0

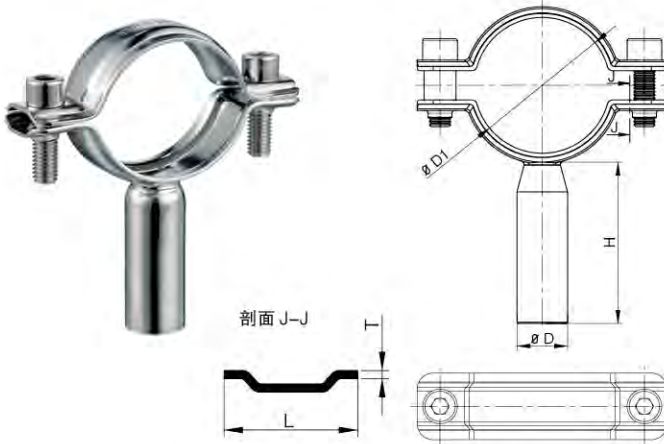
Size	B	D	C	F	T
ISO 32(1 1/4")	78	10	42.4	16	2.0
ISO 40(1 1/2")	81.5	12	48.3	20	2.0
ISO 50(2")	88	12	60.3	20	2.5
ISO 80(3")	102	12	88.9	25	2.5
ISO 100(4")	115	12	114.3	25	3.0
ISO 125(5")	145	16	139.7	25	3.0
ISO 150(6")	160	16	168.3	30	3.0
ISO 200(8")	186	20	219.1	30	4.0



## TH6 Pipe Holder

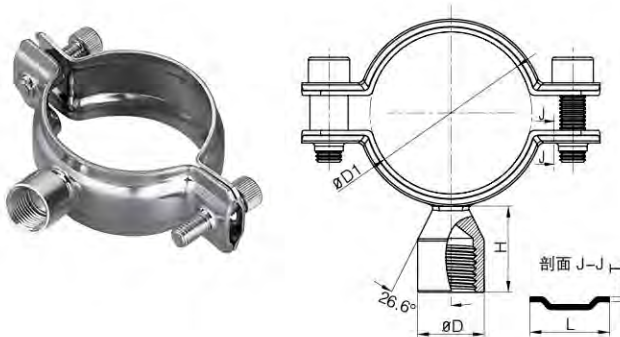
Size	D	H
1/2"	12.7	90
3/4"	19.1	90
1"	25.4	90
1 1/2"	38.1	90
2"	50.8	90
2 1/2"	63.5	90
3"	76.2	90
4"	101.6	90
5"	129	117.5
6"	154	130
8"	204	155
10"	254	180
12"	304	205

## Clamp & Pipe Holder



TH7H Pipe Holder

Size	D	D1	L	H	T
1/4"	8	6.2	12	47	1.5
1/2"	8	12.5	12	47	1.5
3/4"	19	19	25	47	1.5
1"	19	25.4	25	47	1.5
1 1/2"	19	38.1	25	47	1.5
2"	19	50.8	25	47	1.5
2 1/2"	19	63.5	25	47	2
3"	19	76.2	25	47	2
4"	19	101.6	28	47	2
5"	19	129	28	47	2.5
6"	19	154	28	47	2.5
8"	25	204	35	47	3
10"	25	254	35	47	3
12"	25	304	35	47	3



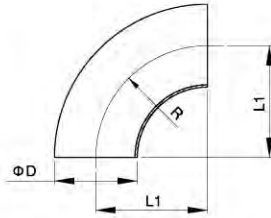
Pipe Holder (TH7M Female)

Size	D	D1	L	H	T
1/4"	8	6.2	12	47	1.5
1/2"	8	12.5	12	47	1.5
3/4"	19	19	25	47	1.5
1"	19	25.4	25	47	1.5
1 1/2"	19	38.1	25	47	1.5
2"	19	50.8	25	47	1.5
2 1/2"	19	63.5	25	47	2
3"	19	76.2	25	47	2
4"	19	101.6	28	47	2
5"	19	129	28	47	2.5
6"	19	154	28	47	2.5
8"	25	204	35	47	3
10"	25	254	35	47	3
12"	25	304	35	47	3



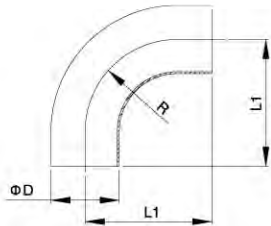
# *Sanitary Pipe-Fittings*





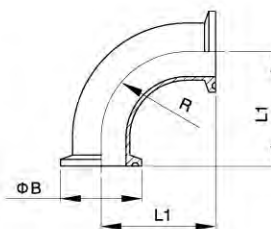
## 90° Welded Elbow

Size	L1	D	R
DN10	26.0	12.0	26.0
DN15	35.0	18.0	35.0
DN20	40.0	22.0	40.0
DN25	50.0	28.0	50.0
DN32	55.0	34.0	55.0
DN40	60.0	40.0	60.0
DN50	70.0	52.0	70.0
DN65	80.0	70.0	80.0
DN80	90.0	85.0	90.0
DN100	100.0	104.0	100.0
DN125	187.0	129.0	187.0
DN150	225.0	154.0	225.0
DN200	300	204	300
DN250	375	254	375
DN300	450	306	450



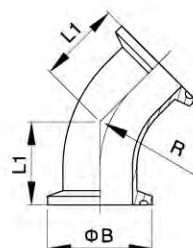
## 90° Welded Elbow With Straight Ends

Size	L1	D	R
DN10	38.0	12.0	26.0
DN15	47.0	18.0	35.0
DN20	52.0	22.0	40.0
DN25	70.0	28.0	50.0
DN32	78.0	34.0	55.0
DN40	85.0	40.0	60.0
DN50	97.0	52.0	70.0
DN65	110.0	70.0	80.0
DN80	118.0	85.0	90.0
DN100	140.0	104.0	100.0



## 90° Clamped Elbow

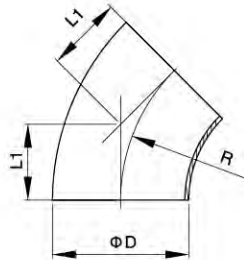
Size	L1	R	B
DN15	53.0	34.0	35.0
DN20	58.0	34.0	40.0
DN25	71.0	50.5	50.0
DN32	76.5	50.5	55.0
DN40	81.5	50.5	60.0
DN50	91.5	64.0	70.0
DN65	108.0	91.0	80.0
DN80	118.0	106.0	90.0
DN100	128.0	119.0	100.0



## 45° Clamped Elbow

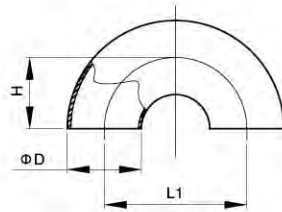
Size	L1	B	R
DN20	34.5	34.0	40.0
DN25	42.2	50.5	50.0
DN32	44.3	50.5	55.0
DN40	46.3	50.5	60.0
DN50	50.5	64.0	70.0
DN65	61.2	91.0	80.0
DN80	65.3	106.0	90.0
DN100	69.5	119.0	100.0





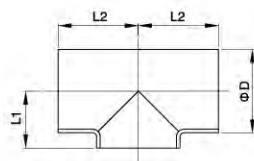
45° Welded Elbow

Size	L1	D	R
DN10	10.7	12.0	26.0
DN15	14.5	18.0	35.0
DN20	16.5	22.0	40.0
DN25	20.7	28.0	50.0
DN32	22.8	34.0	55.0
DN40	24.8	40.0	60.0
DN50	29.0	52.0	70.0
DN65	33.2	70.0	80.0
DN80	37.3	85.0	90.0
DN100	41.5	104.0	100.0
DN125	77.5	129.0	187.0
DN150	93.2	154.0	225.0



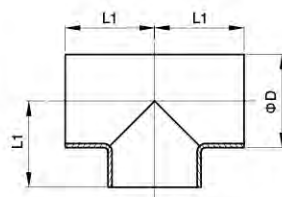
180° Welded Elbow

Size	L1	D	H
DN10	52.0	12.0	26.0
DN15	70.0	18.0	35.0
DN20	80.0	22.0	40.0
DN25	100.0	28.0	50.0
DN32	110.0	34.0	55.0
DN40	120.0	40.0	60.0
DN50	140.0	52.0	70.0
DN65	160.0	70.0	80.0
DN80	180.0	85.0	90.0
DN100	200.0	104.0	100.0
DN125	375.0	129.0	187.5
DN150	450.0	154.0	225.0



Short welded Tee

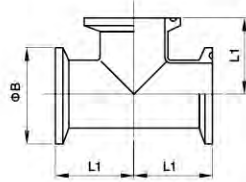
Size	L1	L2	D
DN10	7.5	26.0	12.0
DN15	10.5	35.0	18.0
DN20	12.5	40.0	22.0
DN25	16.0	50.0	28.0
DN32	19.5	55.0	34.0
DN40	22.5	60.0	40.0
DN50	30.0	70.0	52.0
DN65	39.5	80.0	70.0
DN80	47.5	90.0	85.0
DN100	58.0	100.0	104.0
DN125	70.5	187.0	129.0
DN150	83.0	225.0	154.0



Long welded Tee

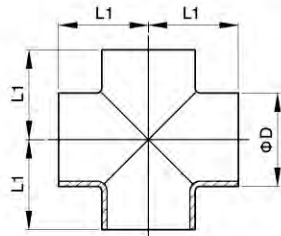
Size	L1	D
DN10	26.0	12.0
DN15	35.0	18.0
DN20	40.0	22.0
DN25	50.0	28.0
DN32	55.0	34.0
DN40	60.0	40.0
DN50	70.0	52.0
DN65	80.0	70.0
DN80	90.0	85.0
DN100	100.0	104.0
DN125	187.0	129.0
DN150	225.0	154.0





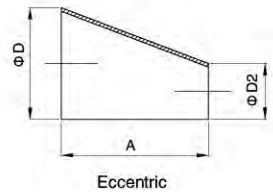
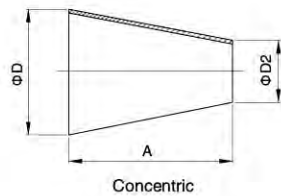
Clamped Tee

Size	L1	B
DN15	53.0	34.0
DN20	58.0	34.0
DN25	71.5	50.5
DN32	76.5	50.5
DN40	81.5	50.5
DN50	91.5	64.0
DN65	108.0	91.0
DN80	118.0	106.0
DN100	128.0	119.0



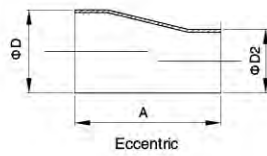
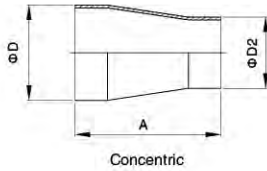
Welded Cross

Size	L1	D
DN25	50.0	28.0
DN32	55.0	34.0
DN40	60.0	40.0
DN50	70.0	52.0
DN65	80.0	70.0
DN80	90.0	85.0
DN100	100.0	104.0



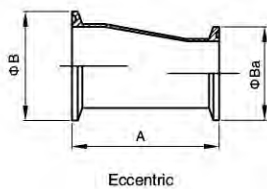
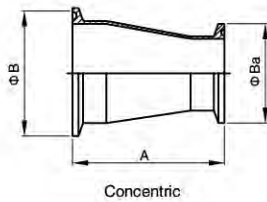
Welded Reducer

Size	A	D	D2
DN20/15	7.0	22.0	18.0
DN25/20	11.0	28.0	22.0
DN32/20	22.0	34.0	22.0
DN32/25	11.0	34.0	28.0
DN40/20	33.0	40.0	22.0
DN40/25	22.0	40.0	28.0
DN40/32	11.0	40.0	34.0
DN50/25	44.0	52.0	28.0
DN50/32	33.0	52.0	34.0
DN50/40	22.0	52.0	40.0
DN65/25	73.0	70.0	28.0
DN65/32	62.0	70.0	34.0
DN65/40	51.0	70.0	40.0
DN65/50	29.0	70.0	52.0
DN80/40	78.0	85.0	40.0
DN80/50	56.0	85.0	52.0
DN80/65	27.0	85.0	70.0
DN100/50	90.0	104.0	52.0
DN100/65	61.0	104.0	70.0
DN100/80	34.0	104.0	85.0



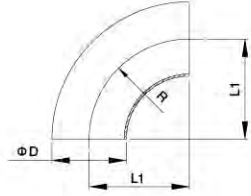
Welded Reducer

Size	A	D3	D2
DN20/15	60.0	22.0	18.0
DN25/20	60.0	28.0	22.0
DN32/20	80.0	34.0	22.0
DN32/25	80.0	34.0	28.0
DN40/20	102.0	40.0	22.0
DN40/25	102.0	40.0	28.0
DN40/32	88.0	40.0	34.0
DN50/25	115.0	52.0	28.0
DN50/32	129.0	52.0	34.0
DN50/40	113.0	52.0	40.0
DN65/25	125.0	70.0	28.0
DN65/32	125.0	70.0	34.0
DN65/40	120.0	70.0	40.0
DN65/50	130.0	70.0	52.0
DN80/40	140.0	85.0	40.0
DN80/50	125.0	85.0	52.0
DN80/65	120.0	85.0	70.0
DN100/50	160.0	104.0	52.0
DN100/65	127.0	104.0	70.0
DN100/80	120.0	104.0	85.0



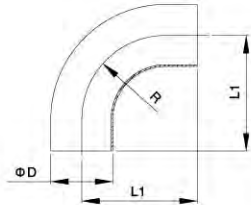
Clamped Reducer

Size	A	B	Ba
DN20/15	86.0	34.0	34.0
DN25/20	86.0	50.5	34.0
DN32/20	106.0	50.5	34.0
DN32/25	106.0	50.5	50.5
DN40/20	128.0	50.5	34.0
DN40/25	128.0	50.5	50.5
DN40/32	128.0	50.5	50.5
DN50/25	141.0	64.0	50.5
DN50/32	141.0	64.0	50.5
DN50/40	141.0	64.0	50.5
DN65/25	151.0	91.0	50.5
DN65/32	151.0	91.0	50.5
DN65/40	146.0	91.0	50.5
DN65/50	146.0	91.0	64.0
DN80/40	166.0	106.0	50.5
DN80/50	151.0	106.0	64.0
DN80/65	146.0	106.0	91.0
DN100/50	192.0	119.0	64.0
DN100/65	159.0	119.0	91.0
DN100/80	152.0	119.0	106.0



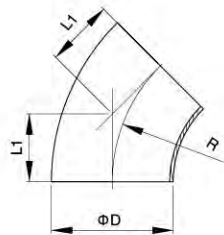
90° Welded Elbow

Size	L1	D	R
12.7	19.05	12.7	19.05
19	28.6	19	28.6
25	38.1	25.4	38.1
32	47.7	31.8	47.7
38	57.1	38.1	57.1
51	76.2	50.8	76.2
63	95.2	63.5	95.2
76	114.3	76.2	114.3
102	152.4	101.6	152.4
127	190.5	127	190.5
152	228.6	152.4	228.6



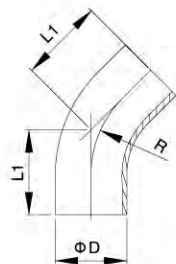
90° Welded Elbow with straight ends

Size	L1	D	R
25	55.0	25.4	32.0
38	70.0	38.1	45.0
51	82.0	50.8	58.0
63	105.0	63.5	70.0
76	110.0	76.2	76.0
102	150.0	101.6	110.0



45° Short welded Elbow

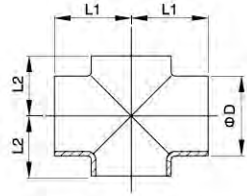
Size	L1	D	R
25	15.5	25.4	38.1
38	23.6	38.1	57.2
51	31.6	50.8	76.2
63	39.5	63.5	95.3
76	47.2	76.2	114.3
102	63.0	101.6	152.4



45° Long welded Elbow

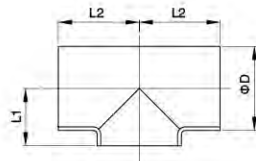
Size	L1	D	R
25	42.5	25.4	38.7
38	56.8	38.1	57.2
51	68.6	50.8	76.2
63	78.4	63.5	95.2
76	85.2	76.2	114.3
102	103.0	101.6	152.4





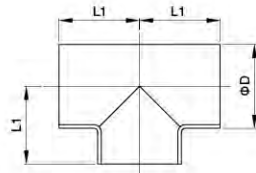
Welded Cross

Size	L1	L2	D
25	55.0	15.0	25.4
38	70.0	21.5	38.1
51	82.0	29.0	50.8
63.5	105.0	36.0	63.5
76.2	110.0	43.0	76.2
102	150.0	57.0	101.6



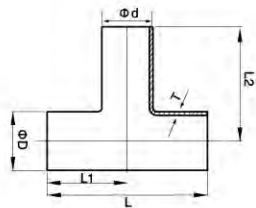
Short welded Tee

Size	L1	L2	D
25	15.0	55.0	25.4
38	21.5	70.0	38.1
51	29.0	82.0	50.8
63	36.0	105.0	63.5
76	43.0	110.0	76.2
102	57.0	150.0	101.6



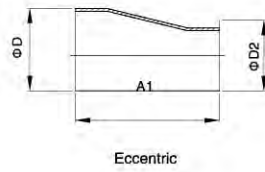
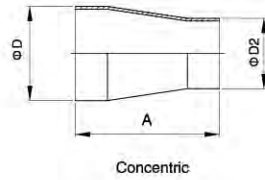
Long welded Tee

Size	L1	D
12.7	55.0	12.7
19	55.0	19
25	55.0	25.4
32	62.5	32
38	70.0	38.1
51	82.0	50.8
63	105.0	63.5
76	110.0	76.2
102	150.0	101.6



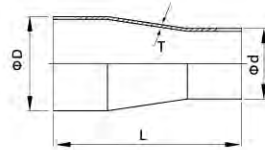
Reducing Welded Tee

Size	L	L1	φ D	φ d	T
25x19	110	55.0	25.0	19.05	1.25
38x19	140	70.0	38.0	19.05	1.25
38x25	140	70.0	38.0	25.0	1.25
51x25	164	82.0	51.0	25.0	1.25
51x38	164	82.0	51.0	38.0	1.25
63.5x25	210	105.0	63.5	25.0	1.5
63.5x38	210	105.0	63.5	38.0	1.5
63.5x51	210	105.0	63.5	51.0	1.5
76.1x25	220	110.0	76.1	25.0	1.6
76.1x38	220	110.0	76.1	38.0	1.6
76.1x51	220	110.0	76.1	51.0	1.6
76.1x63	220	110.0	76.1	63.0	1.6
101.6x51	300	150.0	101.6	51.0	2.0
101.6x63	300	150.0	101.6	63.5	2.0
101.6x76	300	150.0	101.6	76.1	2.0



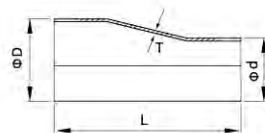
Welded Reducer

Size	A	A1	D	D2
1.5" / 1.0"	39.0	46.0	38.1	25.4
2.0" / 1.0"	57.0	68.0	50.8	25.4
2.0" / 1.5"	39.0	47.0	50.8	38.1
2.5" / 1.0"	74	92	63.5	25.4
2.5" / 1.5"	57.0	70.0	63.5	38.1
2.5" / 2.0"	39.0	44.0	63.5	50.8
3.0" / 1.0"	92	117	76.2	25.4
3.0" / 1.5"	74.0	92.0	76.2	38.1
3.0" / 2.0"	57.0	68.0	76.2	50.8
3.0" / 2.5"	39.0	47.0	76.2	63.5
4.0" / 1.5"	112	47.0	101.6	38.1
4.0" / 2.0"	95.0	117.0	101.6	50.8
4.0" / 2.5"	78.0	94.0	101.6	63.5
4.0" / 3.0"	60.0	74.0	101.6	76.2



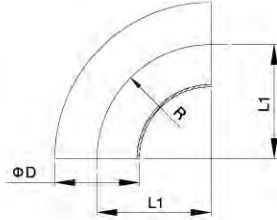
Concentric Reducers With Straight End

Size	φ D	φ d	L	T
25x19	25.0	19.05	85.0	1.25
38x19	38.0	19.05	85.0	1.25
38x25	38.0	25.0	99.0	1.25
51x25	51.0	25.0	117.0	1.25
51x38	51.0	38.0	99.0	1.25
63.5x25	63.5	25.0	134.0	1.5
63.5x38	63.5	38.0	117.5	1.5
63.5x51	63.5	51.0	99.0	1.5
76.1x25	76.1	25.0	152.0	1.6
76.1x38	76.1	38.0	134.0	1.6
76.1x51	76.1	51.0	117.0	1.6
76.1x63	76.1	63.5	99.0	1.6
102x51	102.0	51.0	155.0	2.0
102x63	102.0	63.5	138.0	2.0
102x76	102.0	76.1	120.0	2.0



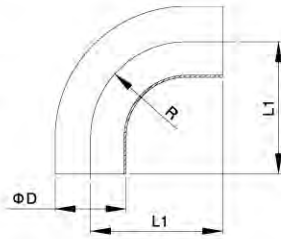
Eccentric Reducers With Straight End

Size	φ D	φ d	L	T
38x25	38.0	25.0	106.0	1.25
51x25	51.0	25.0	128.0	1.25
51x38	51.0	38.0	107.0	1.25
63.5x25	63.5	25.0	150.5	1.5
63.5x38	63.5	38.0	130.0	1.5
63.5x51	63.5	51.0	104.0	1.5
76.1x38	76.1	38.0	149.0	1.6
76.1x51	76.1	51.0	128.0	1.6
76.1x63	76.1	63.5	107.0	1.6
101x51	101.6	51.0	177.0	2.0
101x63	101.6	63.5	154.0	2.0
101x76	101.6	76.1	134.0	2.0
102x51	102.0	51.0	177.0	2.0
102x63	102.0	63.5	154.0	2.0
102x76	102.0	76.1	134.0	2.0



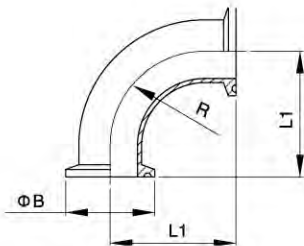
2WCL-90° Welded Elbow

Size	L1	D	R
1/2"	19.1	12.7	19.1
3/4"	28.6	19.1	28.6
1"	38.1	25.4	38.1
1 1/4"	47.6	32	47.6
1 1/2"	57.2	38.1	57.2
2"	76.2	50.8	76.2
2 1/2"	95.3	63.5	95.3
3"	114.3	76.2	114.3
4"	152.4	101.6	152.4
5"	190.5	127.0	190.5
6"	228.6	152.4	228.6
8"	304.8	203.2	304.8
10"	381	254	381
12"	457.2	304.8	457.2



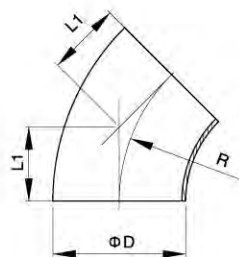
L2S-90° Welded Elbow with straight ends

Size	L1	D	R
1/2"	76.2	12.7	19.1
3/4"	76.2	19.1	28.6
1"	52.4	25.4	38.1
1 1/2"	74.6	38.1	57.2
2"	103.2	50.8	76.2
2 1/2"	131.8	63.5	95.3
3"	160.3	76.2	114.3
4"	211.1	101.6	152.4
6"	292.1	152.4	228.6
6"	279.4	152.4	228.6



2CMP-90° Clamped Elbow

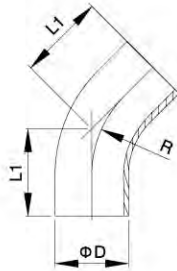
Size	L1	B	R
1"	50.8	50.5	38.1
1 1/2"	69.9	50.5	57.2
2"	88.9	64.0	76.2
2 1/2"	108.0	77.5	95.3
3"	127.0	91.0	114.3
4"	168.2	119.0	152.4
6"	250.8	167	228.6



2WK-45° Welded Elbow

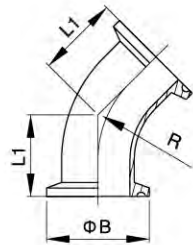
Size	L1	D	R
1/2"	7.9	12.7	19.05
3/4"	11.9	19	28.5
1"	15.8	25.4	38.1
1 1/4"	19.7	32	47.6
1 1/2"	23.8	38.1	57.2
2"	31.8	50.8	76.2
2 1/2"	39.6	63.5	95.3
3"	47.6	76.2	114.3
4"	63.5	101.6	152.4
5"	78.9	127	190.5
6"	94.7	152.4	228.6
8"	127	203.2	304.8
10"	158.75	254	381





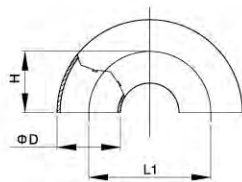
L2KS-45° Welded Elbow with straight ends

Size	L1	D	R
1"	30.2	25.4	38.1
1 1/2"	41.3	38.1	57.2
2"	58.7	50.8	76.2
2 1/2"	76.2	63.5	95.3
3"	93.7	76.2	114.3
4"	122.2	101.6	152.4
6"	158.2	152.4	228.6



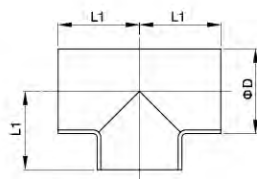
2KMP-45° Clamped Elbow

Size	L1	B	R
1"	28.5	50.5	38.1
1 1/2"	36.5	50.5	57.2
2"	44.5	64.0	76.2
2 1/2"	52.3	77.5	95.3
3"	60.3	91.0	114.3
4"	76.2	119.0	152.4



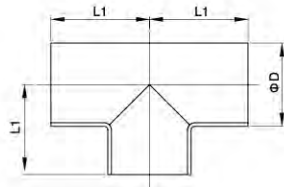
2WU-180° Welded Elbow

Size	L1	D	H
1"	76.2	25.4	38.1
1 1/2"	114.3	38.1	57.2
2"	152.4	50.8	76.2
2 1/2"	190.5	63.5	95.3
3"	228.6	76.2	114.3
4"	304.8	101.6	152.4



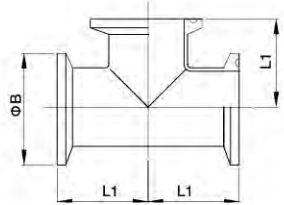
7WWW-Short welded Tee

Size	L1	D
1/2"	28.6	12.7
3/4"	28.6	19
1"	28.6	25.4
1 1/2"	42.0	38.1
2"	52.3	50.8
2 1/2"	59.5	63.5
3"	65.9	76.2
4"	87.3	101.6
5"	127	127
6"	127	152.4



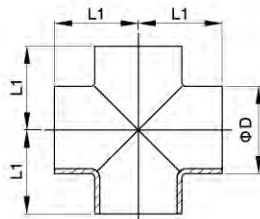
7W-Long welded Tee

Size	L1	D
1/2"	47.6	12.7
3/4"	47.6	19
1"	47.6	25.4
1 1/4"	52.4	32
1 1/2"	57.2	38.1
2"	76.2	50.8
2 1/2"	76.2	63.5
3"	82.6	76.2
4"	98.4	101.6
5"	132.5	127
6"	143	152.4
8"	177.8	203.2
10"	216	254



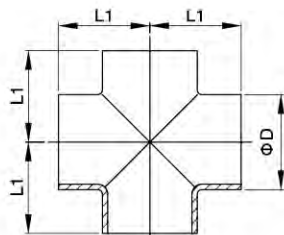
7MP-Clamped Tee

Size	L1	B
1/2"	60.3	25.2
3/4"	60.3	25.2
1"	60.3	50.5
1 1/2"	69.9	50.5
2"	88.9	64.0
2 1/2"	88.9	77.5
3"	95.3	91.0
4"	114.2	119.0
6"	164.5	167
8"	199.3	217.7



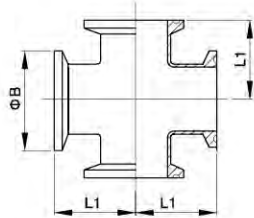
9W-Welded Cross (Long-type)

Size	L1	D
1/2"	47.6	127
3/4"	47.6	19
1"	47.6	25.4
1 1/2"	57.2	38.1
2"	76.2	50.8
2 1/2"	76.2	63.5
3"	82.6	76.2
4"	98.4	101.6
6"	143	152.4
8"	177.8	203.2



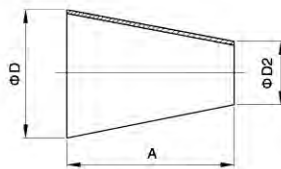
9WWW-Welded Cross (Short-type)

Size	L1	D
1"	28.6	25.4
1 1/2"	42.1	38.1
2"	52.4	50.8
2 1/2"	54.5	63.5
3"	65.9	76.2
4"	87.3	101.6

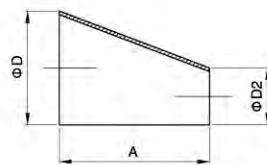


9MP-Clamped Cross

Size	L1	B
1/2"	60.3	25.2
3/4"	60.3	25.2
1"	60.3	50.5
1 1/2"	69.9	50.5
2"	88.9	64.0
2 1/2"	88.9	91.0
3"	95.3	106.0
4"	114.3	119.0
6"	164.5	167



Concentric

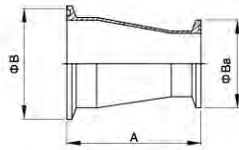


Eccentric

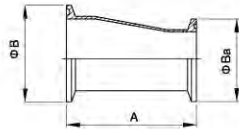
L31/32-Welded Reducer

Size	A	D	D2
1"/0.5"	50.8	25.4	12.7
1.5"/0.75"	76.2	38.1	19
1.5"/1.0"	50.8	38.1	25.4
2.0"/1.0"	101.6	50.8	25.4
2.0"/1.5"	50.8	50.8	38.1
2.5"/1.0"	152.4	63.5	25.4
2.5"/1.5"	101.6	63.5	38.1
2.5"/2.0"	50.8	63.5	50.8
3.0"/1.0"	203.2	76.2	25.4
3.0"/1.5"	152.4	76.2	38.1
3.0"/2.0"	101.6	76.2	50.8
3.0"/2.5"	50.8	76.2	63.5
4.0"/1.0"	304.8	101.6	25.4
4.0"/1.5"	254	101.6	38.1
4.0"/2.0"	203.2	101.6	50.8
4.0"/2.5"	152.4	101.6	63.5
4.0"/3.0"	101.6	101.6	76.2
5.0"/3.0"	127	127	76.2
5.0"/4.0"	127	127	101.6
6.0"/2.0"	140	152.4	50.8
6.0"/2.5"	140	152.4	63.5
6.0"/3.0"	140.0	152.4	76.2
6.0"/4.0"	140.0	152.4	101.6
8.0"/3.0"	152.4	203.2	76.2
8.0"/4.0"	152.4	203.2	101.6
8.0"/6.0"	152.4	203.2	152.4
10.0"/6.0"	177.8	254	152.4
10.0"/8.0"	177.8	254	203.2
12.0"/6.0"	203.2	304.8	152.4
12.0"/8.0"	203.2	304.8	203.2





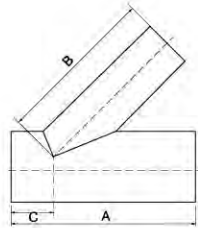
Concentric



Eccentric

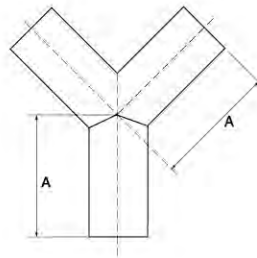
31-14MP/32-14MP Clamped Reducer

Size	A	B	Ba
1.5"/1.0"	76.2	50.5	50.5
2.0"/1.0"	127.0	64.0	50.5
2.0"/1.5"	76.2	64.0	50.5
2.5"/1.5"	127.0	77.5	50.5
2.5"/2.0"	76.2	77.5	64.0
3.0"/1.5"	177.8	91.0	50.5
3.0"/2.0"	127.0	91.0	64.0
3.0"/2.5"	76.2	91.0	77.5
4.0"/2.0"	231.8	119.0	64.0
4.0"/2.5"	181.0	119.0	77.5
4.0"/3.0"	130.2	119.0	91.0



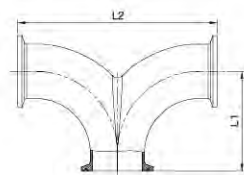
28WA-Butt weld Y-type Tee

Size	A	B	C
1/2"	152.4	127.0	25.4
3/4"	152.4	127.0	25.4
1"	152.4	127.0	25.4
1 1/2"	187.3	173.1	30.2
2"	222.2	180.9	41.3
2 1/2"	254	215.9	38.1
3"	273.1	225.4	47.6
4"	325.5	273.1	52.4
6"	419.1	317.5	101.6



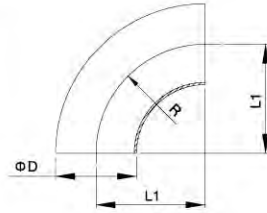
28WB-Butt weld Y-type Tee

Size	A
1/2"	50.8
3/4"	50.8
1"	76.2
1 1/2"	76.2
2"	101.6
2 1/2"	127
3"	152.4
4"	203.2
6"	203.2



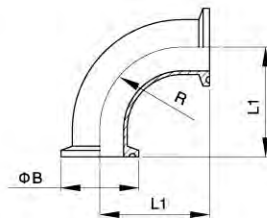
90°Clamp Double Bend

Size	L1	L2
1"	50.8	101.6
1 1/2"	69.85	139.7
1 1/4"	60.4	120.8
2"	88.9	177.8
2 1/2"	107.9	215.9
3"	127.0	228.6
4"	168.4	336.8



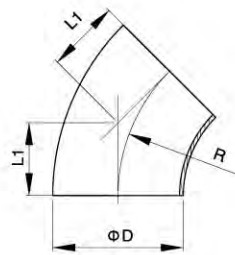
90° Welded Elbow

Size	L1	D	R
48	57		57
60	76		76
1"	33.5	25.4	33.5
1 1/4"	38.0	32.0	38.0
1 1/2"	48.5	38.1	48.5
2"	60.5	50.8	60.5
2 1/2"	83.5	63.5	83.5
3"	88.5	76.2	88.5
3 1/2"	103.5	89.0	103.5
4"	127	101.6	127
4 1/2"	152.4	114.3	152.4
5"	190.5	133.0	190.5
6"	228.6	159.0	228.6



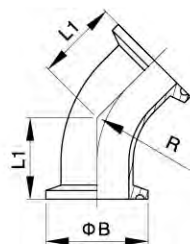
90° Clamped Elbow

Size	L1	B	R
Φ25	55.0	50.5	33.5
Φ32	59.5	50.5	38.0
Φ38	70.0	50.5	48.5
Φ51	82.0	64.0	60.5
Φ63	105.0	77.5	83.5
Φ76	110.0	91.0	88.5
Φ89	125.0	106.0	103.5
Φ102	143.5	119.0	122
Φ102	148.5	119.0	129



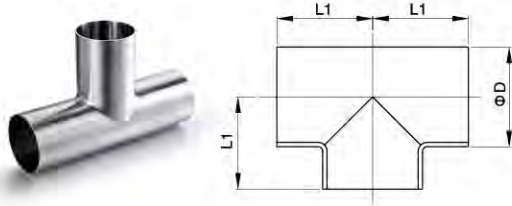
45° Welded Elbow

Size	L1	D	R
1"	13.9	25.4	33.5
1 1/4"	15.7	32.0	38.0
1 1/2"	20.1	38.1	48.5
2"	25.1	50.8	60.5
2 1/2"	34.6	63.5	83.5
3"	36.7	76.2	88.5
3 1/2"	42.9	89.0	103.5
4"	50.8	101.6	122
102	52.6	101.6	127



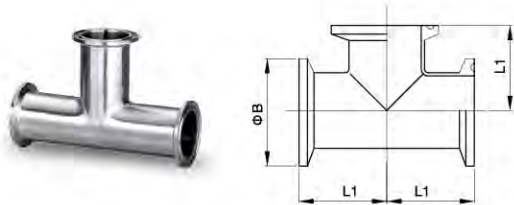
45° Clamped Elbow

Size	L1	D	R
Φ25	35.4	50.5	33.5
Φ32	37.2	50.5	38.0
Φ38	41.6	50.5	48.5
Φ51	46.6	64.0	60.5
Φ63	56.1	77.5	83.5
Φ76	58.2	91.0	88.5
Φ89	64.4	106.0	103.5
Φ102	72.3	119.0	122
Φ102	80.5	119.0	127



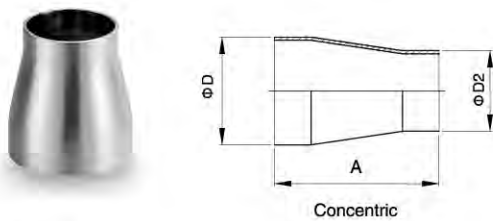
Welded Tee

Size	L1	D
12.7	38.2	25.4
19	60	25.4
1"	33.5	25.4
1 1/4"	38.1	31.8
1 1/2"	48.5	38.1
2"	60.5	50.8
2 1/2"	83.5	63.5
3"	88.5	76.2
3 1/2"	103.5	88.9
4"	127	101.6
4 1/2"	152.4	114.3
5"	190	133.0
6"	228.6	159.0

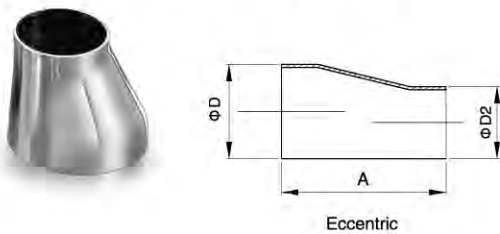


Clamped Tee

Size	L1	D
1"	55.0	50.5
1 1/4"	59.5	50.5
1 1/2"	70.0	50.5
2"	82.0	64.0
2 1/2"	105	77.5
3"	110	91.0
3 1/2"	125	106.0
4"	148.5	119.0



Concentric



Eccentric

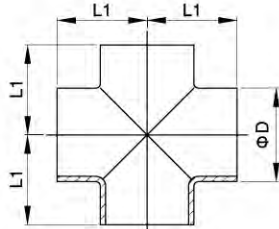
Welded Reducer

Size	A	D	D2
1.0"/0.75"	38.0	25.4	19.05
1.25"/1.0"	50.0	31.8	25.4
1.5"/1.25"	50.0	38.1	31.8
1.5"/1.0"	50.0	38.1	25.4
2.0"/1.5"	67.0	50.8	38.1
2.0"/1.25"	67.0	50.8	31.8
2.0"/1.0"	67.0	50.8	25.4
2.5"/2.0"	67.0	63.5	50.8
2.5"/1.5"	67.0	63.5	38.1
2.5"/1.0"	67.0	63.5	25.4
3.0"/2.5"	67.0	76.2	63.5
3.0"/2.0"	67.0	76.2	50.8
3.0"/1.5"	67.0	76.2	38.1
3.5"/3.0"	76	88.9	76.2
3.5"/2.5"	67.0	88.9	63.5
3.5"/2.0"	67.0	88.9	50.8
4.0"/3.5"	87	101.6	88.9
4.0"/3.0"	87	101.6	76.2
4.0"/2.5"	87	101.6	63.5
4.0"/2.0"	87	101.6	50.8



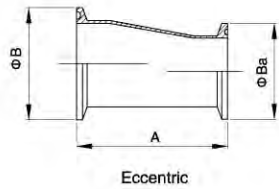
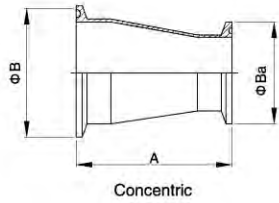
# Pipe Fittings

## ISO/IDF



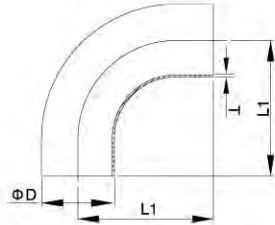
### Welded Cross

Size	L1	D
1"	33.5	25.4
1 1/4"	38.0	32.0
1 1/2"	48.5	38.0
2"	60.5	51.0
2 1/2"	83.5	63.5
3"	88.5	76.0
3 1/2"	103.5	89.0
4"	127	101.6



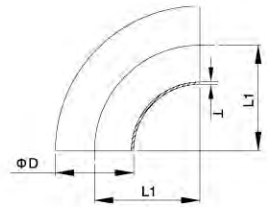
### Clamped Reducer

Size	A	D	Ba
1.0"/0.75"	64	50.5	34.0
1.25"/1.0"	76	50.5	50.5
1.5"/1.25"	76	50.5	50.5
1.5"/1.0"	76	50.5	50.5
2.0"/1.5"	93	64.0	50.5
2.0"/1.25"	93	64.0	50.5
2.0"/1.0"	93	64.0	50.5
2.5"/2.0"	93	77.5	64.0
2.5"/1.5"	93	77.5	50.5
2.5"/1.0"	93	77.5	50.5
3.0"/2.5"	93	91.0	77.5
3.0"/2.0"	93	91.0	64.0
3.0"/1.5"	93	91.0	50.5
3.5"/3.0"	93	106.0	91.0
3.5"/2.5"	93	106.0	77.5
3.5"/2.0"	93	106.0	64.0
4.0"/3.5"	118	119.0	106.0
4.0"/3.0"	118	119.0	91.0
4.0"/2.5"	118	119.0	77.5
4.0"/2.0"	118	119.0	64.0



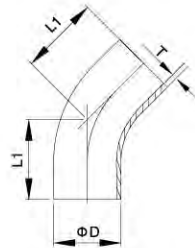
90° Long welded Elbow with straight ends

Size	L1	D	T
1/2"	49.1	12.7	1.6
3/4"	58.6	19.1	1.6
1"	68.1	25.4	1.6
1 1/4"	77.7	31.8	1.6
1 1/2"	87.0	38.1	1.6
2"	106.2	50.8	1.6
2 1/2"	125.0	63.5	1.6
3"	144.2	76.2	1.6
4"	182.4	101.6	2.0



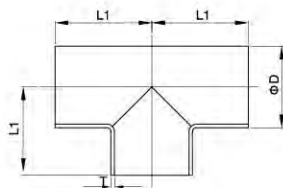
90° Welded Elbow

Size	L1	D	T
1/2"	19.1	12.7	1.6
3/4"	28.6	19.1	1.6
1"	38.1	25.4	1.6
1 1/4"	47.7	31.8	1.6
1 1/2"	57.0	38.1	1.6
2"	76.2	50.8	1.6
2 1/2"	95.0	63.5	1.6
3"	114.2	76.2	1.6
4"	152.4	101.6	2.0



45° Long welded Elbow

Size	L1	D	T
1/2"	37.9	12.7	1.6
3/4"	41.8	19.1	1.6
1"	45.8	25.4	1.6
1 1/4"	49.7	31.8	1.6
1 1/2"	53.7	38.1	1.6
2"	61.6	50.8	1.6
2 1/2"	69.5	63.5	1.6
3"	77.3	76.2	1.6
4"	92.8	101.6	2.0

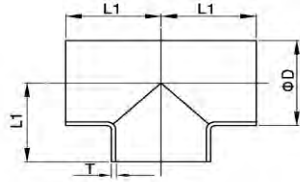


Long welded Tee

Size	L1	D	T
1/2"	49.1	12.7	1.6
3/4"	58.6	19.1	1.6
1"	68.1	25.4	1.6
1 1/4"	77.7	31.8	1.6
1 1/2"	87.0	38.1	1.6
2"	106.2	50.8	1.6
2 1/2"	125.0	63.5	1.6
3"	144.2	76.2	1.6
4"	182.4	101.6	2.0

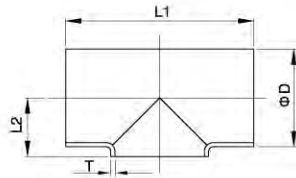
# Pipe Fittings

## AS



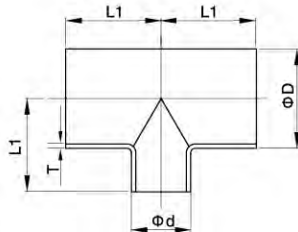
### Equal welded Tee

Size	L1	D	T
1/2"	19.1	12.7	1.6
3/4"	28.6	19.1	1.6
1"	38.1	25.4	1.6
1 1/4"	47.7	31.8	1.6
1 1/2"	57.0	38.1	1.6
2"	76.2	50.8	1.6
2 1/2"	95.0	63.5	1.6
3"	114.2	76.2	1.6
4"	152.4	101.6	2.0



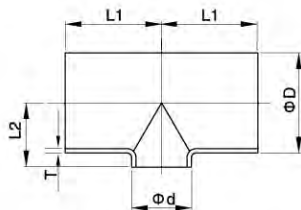
### Short welded Tee

Size	L1	L2	D	T
1/2"	38.2	9.35	12.7	1.6
3/4"	57.2	12.55	19.1	1.6
1"	76.2	15.7	25.4	1.6
1 1/4"	95.4	18.9	31.8	1.6
1 1/2"	114.0	22.05	38.1	1.6
2"	152.4	28.4	50.8	1.6
2 1/2"	190.0	34.75	63.5	1.6
3"	228.4	41.1	76.2	1.6
4"	304.8	53.8	101.6	2.0



### Reducing welded Tee

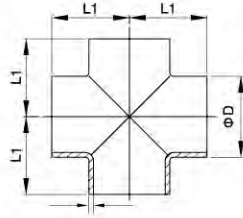
Size	L1	D	d	T
1 1/2"x 1"	80	38.1	25.4	1.6
2"x 1"	80	50.8	25.4	1.6
2"x 1 1/2"	80	50.8	38.1	1.6
2 1/2"x 1 1/2"	80	63.5	38.1	1.6
2 1/2"x 2"	80	63.5	50.8	1.6
3"x 1 1/2"	80	76.2	38.1	1.6
3"x 2"	80	76.2	50.8	1.6
3"x 2 1/2"	80	76.2	63.5	1.6
4"x 2"	80	101.6	50.8	1.6
4"x 2 1/2"	80	101.6	63.5	1.6
4"x 3"	80	101.6	76.2	2.0



### Short reducing welded Tee

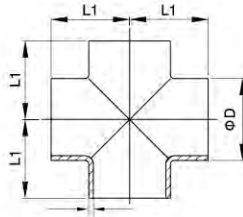
Size	L1	L2	D	d	T
1 1/2"x 1"	80	22.05	38.1	25.4	1.6
2"x 1"	80	28.4	50.8	25.4	1.6
2"x 1 1/2"	80	28.4	50.8	38.1	1.6
2 1/2"x 1 1/2"	80	34.75	63.5	38.1	1.6
2 1/2"x 2"	80	34.75	63.5	50.8	1.6
3"x 1 1/2"	80	41.1	76.2	38.1	1.6
3"x 2"	80	41.1	76.2	50.8	1.6
3"x 2 1/2"	80	41.1	76.2	63.5	1.6
4"x 2"	80	53.8	101.6	50.8	1.6
4"x 2 1/2"	80	53.8	101.6	63.5	1.6
4"x 3"	80	53.8	101.6	76.2	2.0





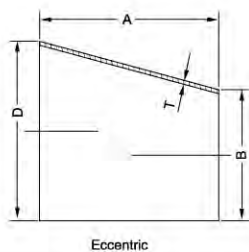
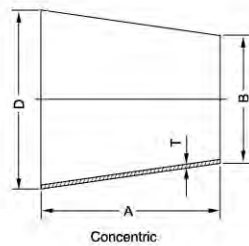
## Long welded Cross

Size	L1	D	T
1/2"	49.1	12.7	1.6
3/4"	58.6	19.1	1.6
1"	68.1	25.4	1.6
1 1/4"	77.7	31.8	1.6
1 1/2"	87.0	38.1	1.6
2"	106.2	50.8	1.6
2 1/2"	125.0	63.5	1.6
3"	144.2	76.2	1.6
4"	182.4	101.6	2.0



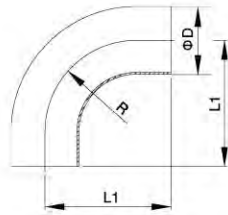
## Short welded Cross

Size	L1	D	T
1/2"	19.1	12.7	1.6
3/4"	28.6	19.1	1.6
1"	38.1	25.4	1.6
1 1/4"	47.7	31.8	1.6
1 1/2"	57.0	38.1	1.6
2"	76.2	50.8	1.6
2 1/2"	95.0	63.5	1.6
3"	114.2	76.2	1.6
4"	152.4	101.6	2.0



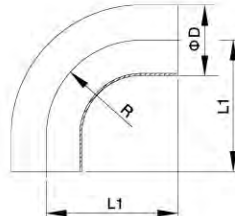
## Welded Reducer

Size	A	B	D	T
3/4"x 1/2"	19.1	12.7	19.1	1.6
1"x 1/2"	25.4	12.7	25.4	1.6
1"x 3/4"	25.4	19.1	25.4	1.6
1 1/4"x 3/4"	31.8	19.1	31.8	1.6
1 1/4"x 1"	31.8	25.4	31.8	1.6
1 1/2"x 3/4"	38.1	19.1	38.1	1.6
1 1/2"x 1"	38.1	25.4	38.1	1.6
2"x 1/2"	50.8	12.7	50.8	1.6
2"x 3/4"	50.8	19.1	50.8	1.6
2"x 1"	50.8	25.4	50.8	1.6
2"x 1 1/4"	50.8	31.8	50.8	1.6
2"x 1 1/2"	50.8	38.1	50.8	1.6
2 1/2"x 1"	63.5	25.4	63.5	1.6
2 1/2"x 1 1/4"	63.5	31.8	63.5	1.6
2 1/2"x 1 1/2"	63.5	38.1	63.5	1.6
2 1/2"x 2"	63.5	50.8	63.5	1.6
3"x 1"	76.2	25.4	76.2	1.6
3"x 1 1/4"	76.2	31.8	76.2	1.6
3"x 1 1/2"	76.2	38.1	76.2	1.6
3"x 2"	76.2	50.8	76.2	1.6
3"x 2 1/2"	76.2	63.5	76.2	1.6
4"x 1"	101.6	25.4	101.6	2.0
4"x 1 1/4"	101.6	31.8	101.6	2.0
4"x 1 1/2"	101.6	38.1	101.6	2.0
4"x 2"	101.6	50.8	101.6	2.0
4"x 2 1/2"	101.6	63.5	101.6	2.0
4"x 3"	101.6	76.2	101.6	2.0



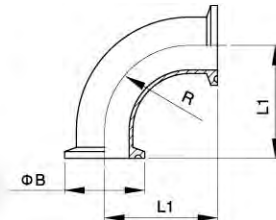
90° Welded Elbow

Size	L1	R	D
1"	43.5	38.1	25.4
1 1/2"	63.5	57.2	38.1
2"	88.5	76.2	50.8
2 1/2"	113.5	95.3	63.5
3"	133.5	114.3	76.2
4"	173.5	152.4	101.6



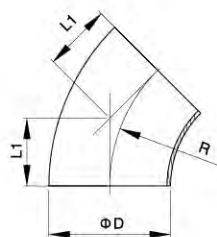
90°Welded Elbow with straight ends

Size	L1	R	D
1"	65.0	38.1	25.4
1 1/2"	85.0	57.2	38.1
2"	110.0	76.2	50.8
2 1/2"	135.0	95.3	63.5
3"	155.0	114.3	76.2
4"	195.0	152.4	101.6



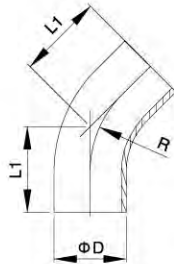
90° Clamped Elbow

Size	L1	B	R
1"	65.0	50.5	38.1
1 1/2"	85.0	50.5	57.2
2"	110.0	64	76.2
2 1/2"	135.0	77.5	95.3
3"	155.0	91	114.3
4"	195.0	119	152.4



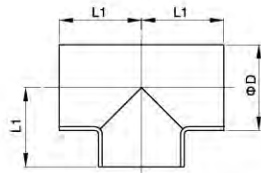
45° Short welded Elbow

Size	L1	D	R
1"	15.8	25.4	38.1
1 1/2"	23.7	38.1	57.2
2"	31.8	50.8	76.2
2 1/2"	39.6	63.5	95.3
3"	47.5	76.2	114.3
4"	63.2	101.6	152.4



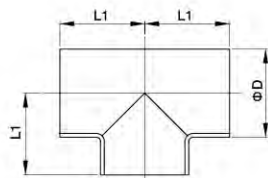
45° Long welded Elbow

Size	L1	D	R
1"	30.2	25.4	38.1
1 1/2"	41.3	38.1	57.2
2"	58.7	50.8	76.2
2 1/2"	76.2	63.5	95.3
3"	93.7	76.2	114.3
4"	122.2	101.6	152.4



Short welded Tee

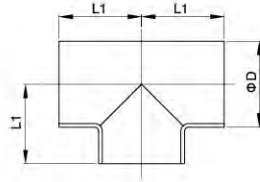
Size	L1	D
1"	43.5	25.4
1 1/2"	63.5	38.1
2"	88.5	50.8
2 1/2"	113.5	63.5
3"	133.5	76.2
4"	173.5	101.6



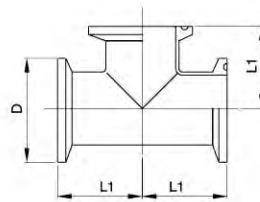
Long welded Tee

Size	L1	D
1"	65.0	25.4
1 1/2"	85.0	38.1
2"	110.0	50.8
2 1/2"	135.0	63.5
3"	155.0	76.2
4"	195.0	101.6

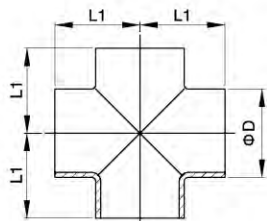



**Long welded Tee**

Size	L1	D
1/2"	47.6	12.7
3/4"	50.8	19.05
1"	54.0	25.4
1 1/2"	60.3	38.1
2"	73.0	50.8
2 1/2"	79.4	63.5
3"	85.7	76.2
4"	104.8	101.6


**Clamped Tee**

Size	L1	D
1/2"	57.2	25.4
3/4"	60.3	25.4
1"	66.7	50.5
1 1/2"	73.0	50.5
2"	85.7	64.0
2 1/2"	92.1	77.5
3"	98.4	91.0
4"	120.7	119.0

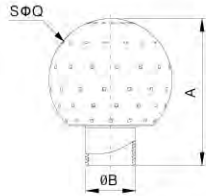

**Welded Cross**

Size	L1	D
1"	65.0	25.4
1 1/2"	85.0	38.1
2"	110.0	50.8
2 1/2"	135.0	63.5
3"	155.0	76.2
4"	195.0	101.6

# *Sanitary Cleaning Ball*

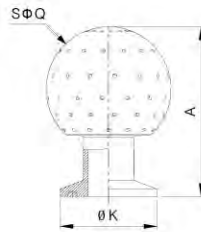


## Sanitary Cleaning Ball



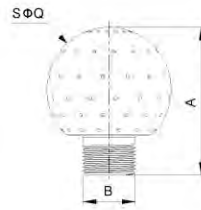
### Welded Fixed Cleaning Ball

DIN	Size								
	φ B	3A	φ B	SMS	φ B	ISO	φ B	A	Q
DN15	18.0	1/2"	12.7	12.7	12.7	φ 12.7	12.7	54.0	40.0
DN20	22.0	3/4"	19.05	19	19.05	φ 19	19.1	64.0	50.0
DN25	28.0	1"	25.4	25	25.4	φ 25	25.4	72.0	63.0
DN32	34.0	1 1/4"	31.8	32	31.8	φ 32	31.8	79.0	65.0
DN40	40.0	1 1/2"	38.1	38	38.1	φ 38	38.1	85.0	76.0
DN50	52.0	2"	50.8	51	50.8	φ 51	50.8	87.0	91.0
DN65	70.0	2 1/2"	63.5	63	63.5	φ 63	63.5	102.0	100.0



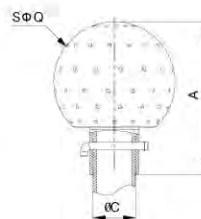
### Clamped Fixed Cleaning Ball

Size	A	Q	K
DN15	1/2"	70.0	53.0
DN20	3/4"	77.0	53.0
DN25	1"	80.0	63.0
DN32	1 1/4"	93.0	76.0
DN40	1 1/2"	93.0	76.0
DN50	2"	108.0	91.0
DN65	2 1/2"	115.0	100.0



### Male Fixed Cleaning Ball

Size	A	Q	B
DN15	1/2"	52.0	G 1/2
DN20	3/4"	62.0	G 3/4
DN25	1"	72.0	G 1
DN32	1 1/4"	85.0	G 1 1/4
DN40	1 1/2"	87.0	G 1 1/2
DN50	2"	102.0	G 2

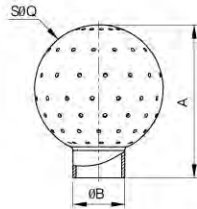


### Welded Fixed Cleaning Ball

DIN	Size								
	φ C	3A	φ C	SMS	φ C	ISO	φ C	A	Q
DN15	18.0	1/2"	12.7	12.7	12.7	φ 12.7	12.7	54.0	40.0
DN20	22.0	3/4"	19.05	19	19.05	φ 19	19.1	64.0	50.0
DN25	28.0	1"	25.4	25	25.4	φ 25	25.4	72.0	63.0
DN32	34.0	1 1/4"	31.8	32	31.8	φ 32	31.8	79.0	65.0
DN40	40.0	1 1/2"	38.1	38	38.1	φ 38	38.1	85.0	76.0
DN50	52.0	2"	50.8	51	50.8	φ 51	50.8	87.0	91.0
DN65	70.0	2 1/2"	63.5	63	63.5	φ 63	63.5	102.0	100.0

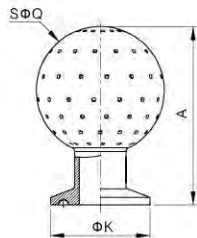


# Sanitary Cleaning Ball



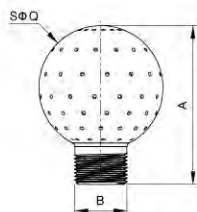
## Welded Fixed Cleaning Ball

DIN	Size								
	φ B	3A	φ B	SMS	φ B	ISO	φ B	A	Q
DN15	18.0	1/2"	12.7	12.7	12.7	φ 12.7	12.7	42.0	30.0
DN20	22.0	3/4"	19.05	19	19.05	φ 19	19.1	55.0	40.0
DN25	28.0	1"	25.4	25	25.4	φ 25	25.4	73.0	53.0
DN32	34.0	1 1/4"	31.8	32	31.8	φ 32	31.8	87.0	63.0
DN40	40.0	1 1/2"	38.1	38	38.1	φ 38	38.1	91.0	65.0
DN50	52.0	2"	50.8	51	50.8	φ 51	50.8	100.0	76.0
DN65	70.0	2 1/2"	63.5	63	63.5	φ 63	63.5	125.0	100.0



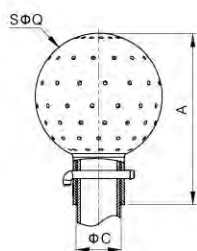
## Clamped Fixed Cleaning Ball

Size	A	Q	K	
DN15	1/2"	84.0	63.0	50.5
DN20	3/4"	84.0	63.0	50.5
DN25	1"	84.0	63.0	50.5
DN32	1 1/4"	84.0	63.0	50.5
DN40	1 1/2"	84.0	63.0	50.5
DN50	2"	97.0	76.0	64.0
DN65	2 1/2"	127.0	100.0	91.0



## Male Fixed Cleaning Ball

Size	A	Q	B	
DN15	1/2"	53.0	38.0	G 1/2
DN20	3/4"	73.0	53.0	G 3/4
DN25	1"	87.0	63.0	G 1
DN32	1 1/4"	90.0	65.0	G 1 1/4
DN40	1 1/2"	100.0	76.0	G 1 1/2
DN50	2"	115.0	91.0	G 2



## Bolted Fixed Cleaning Ball

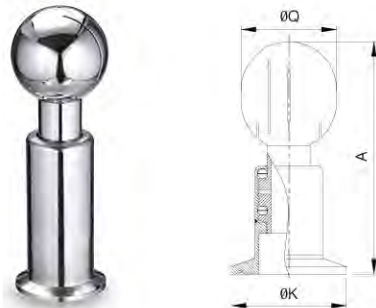
DIN	Size								
	φ C	3A	φ C	SMS	φ C	ISO	φ C	A	Q
DN15	18.0	1/2"	12.7	12.7	12.7	φ 12.7	12.7	55.0	32.0
DN20	22.0	3/4"	19.05	19	19.05	φ 19	19.1	68.0	40.0
DN25	28.0	1"	25.4	25	25.4	φ 25	25.4	86.0	53.0
DN32	34.0	1 1/4"	31.8	32	31.8	φ 32	31.8	100.0	63.0
DN40	40.0	1 1/2"	38.1	38	38.1	φ 38	38.1	105.0	65.0
DN50	52.0	2"	50.8	51	50.8	φ 51	50.8	115.0	76.0
DN65	70.0	2 1/2"	63.5	63	63.5	φ 63	63.5	140.0	100.0

## Sanitary Cleaning Ball



### Welded Rotary Cleaning Ball

DIN	Size								
	φ B	3A	φ B	SMS	φ B	ISO	φ B	A	Q
DN15	18.0	1/2"	12.7	12.7	12.7	φ 12.7	12.7	110.0	40.0
DN20	22.0	3/4"	19.05	19	19.05	φ 19	19.1	137.0	53.0
DN25	28.0	1"	25.4	25	25.4	φ 25	25.4	143.0	53.0
DN32	34.0	1 1/4"	31.8	32	31.8	φ 32	31.8	145.0	53.0
DN40	40.0	1 1/2"	38.1	38	38.1	φ 38	38.1	145.0	53.0
DN50	52.0	2"	50.8	51	50.8	φ 51	50.8	180.0	76.0
DN65	70.0	2 1/2"	63.5	63	63.5	φ 63	63.5	200.0	76.0



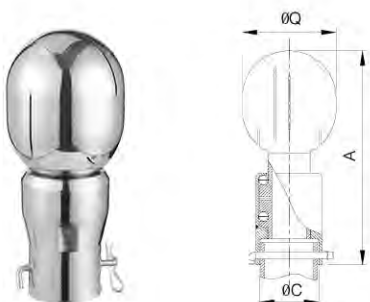
### Clamped Rotary Cleaning Ball

DIN	Size			
	Size	A	Q	K
DN15	1/2"	120.0	40.0	50.5
DN20	3/4"	138.0	53.0	50.5
DN25	1"	138.0	53.0	50.5
DN32	1 1/4"	138.0	53.0	50.5
DN40	1 1/2"	138.0	53.0	50.5
DN50	2"	168.0	76.0	64.0
DN65	2 1/2"	190.0	76.0	91.0



### Male Rotary Cleaning Ball

DIN	Size			
	Size	A	Q	B
DN15	1/2"	110.0	40.0	G 1/2
DN20	3/4"	138.0	53.0	G 3/4
DN25	1"	140.0	53.0	G 1
DN32	1 1/4"	160.0	53.0	G 1 1/4
DN40	1 1/2"	170.0	53.0	G 1 1/2
DN50	2"	192.0	76.0	G 2
DN65	2 1/2"	220.0	76.0	G 2 1/2



### Bolted Rotary Cleaning Ball

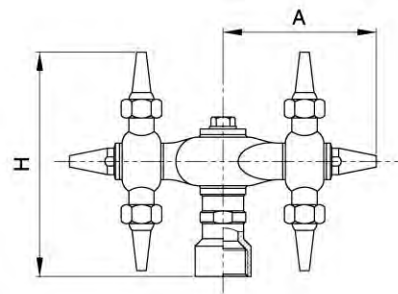
DIN	Size								
	φ C	3A	φ C	SMS	φ C	ISO	φ C	A	Q
DN15	18.0	1/2"	12.7	12.7	12.7	φ 12.7	12.7	110.0	40.0
DN20	22.0	3/4"	19.05	19	19.05	φ 19	19.1	137.0	53.0
DN25	28.0	1"	25.4	25	25.4	φ 25	25.4	135.0	53.0
DN32	34.0	1 1/4"	31.8	32	31.8	φ 32	31.8	137.0	53.0
DN40	40.0	1 1/2"	38.1	38	38.1	φ 38	38.1	150.0	53.0
DN50	52.0	2"	50.8	51	50.8	φ 51	50.8	168.0	76.0
DN65	70.0	2 1/2"	63.5	63	63.5	φ 63	63.5	190.0	76.0

# Sanitary Cleaning Ball



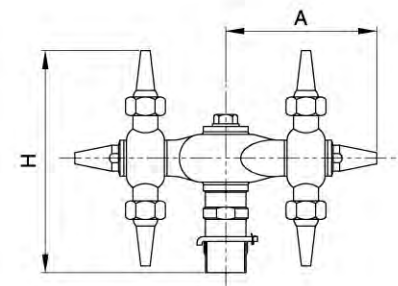
Threaded Rotary Cleaning Ball

Size	A	H	Pressure (bar)	Cleaning radius (m)	Fluxation m <sup>3</sup> /h
1"	118.0	165.0	1.5~2.0	2.0~3.0	23
1 1/4~1 1/2"	142.0	189.0	1.8~2.5	2.5~3.0	38
2"	145.0	191.0	2.5~3.0	3.5~4.0	60



Bolted Rotary Cleaning Ball

Size	A	H	Pressure (bar)	Cleaning radius (m)	Fluxation m <sup>3</sup> /h
1"	118.0	175.0	1.5~2.0	2.0~3.0	23
1 1/4~1 1/2"	142.0	200.0	1.8~2.5	2.5~3.0	38
2"	145.0	205.0	2.5~3.0	3.5~4.0	60





*Sanitary Filter*



# Sanitary Filter



### Material

Steel parts: 304 or 316L

Seal: EPDM (with standard) or NBR (optional)

### Technical parameter

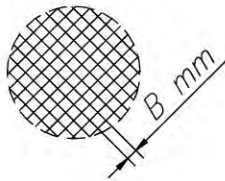
Work pressure: 0-10 bar

Work temperature: -20~ +135 °C (EPDM as seal)

Temperature range: -10°C to 250°C



### Screen: Metal Mesh



Mesh	B (mm)	Useful surface (%)
30	0.55	48
40	0.40	46
60	0.30	52.6
80	0.20	42
100	0.15	36.2
165	0.10	45.4



### Screen: Perforated Plate

A(mm)	Useful surface (%)
0.5	15
1	28
1.5	33
2	30
3	33
5	46

## Sanitary Filter



Welded Straight Strainer

DIN	D×T	3A	Size				ISO/IDF	D×T	H	B
			D×T	SMS	D×T	D×T				
DN25	28×1.5	1"	25.4×1.65	25	25.4×1.5	φ 25	25.4×1.5	325.0	114.0	
DN32	34×1.5	1 1/4"	31.8×1.65	32	31.8×1.5	φ 32	31.8×1.5	330.0	114.0	
DN40	40×1.5	1 1/2"	38.1×1.65	38	38.1×1.5	φ 38	38.1×1.5	330.0	114.0	
DN50	52×1.5	2"	50.8×1.65	51	50.8×1.5	φ 51	50.8×1.5	350.0	125.0	
DN65	70×2	2 1/2"	63.5×1.65	63	63.5×2	φ 63	63.5×2	405.0	138.0	
DN80	85×2	3"	76.2×1.65	76	76.2×2	φ 76	76.2×2	500.0	148.0	
DN100	104×2	4"	101.6×2.1	102	101.6×2	φ 102	101.6×2	600.0	178.0	



Clamped Straight Strainer

DIN	D×K	3A	Size				ISO/IDF	D×K	H	B
			D×K	SMS	D×K	D×K				
DN25	28×50.5	1"	25.4×50.5	25	25.4×50.5	φ 25	25.4×50.5	360.0	114.0	
DN32	34×50.5	1 1/4"	31.8×50.5	32	31.8×50.5	φ 32	31.8×50.5	360.0	114.0	
DN40	40×50.5	1 1/2"	38.1×50.5	38	38.1×50.5	φ 38	38.1×50.5	360.0	114.0	
DN50	52×64.0	2"	50.8×64.0	51	50.8×64.0	φ 51	50.8×64.0	390.0	125.0	
DN65	70×91.0	2 1/2"	63.5×77.5	63	63.5×77.5	φ 63	63.5×77.5	455.0	138.0	
DN80	85×106.0	3"	76.2×91.0	76	76.2×91.0	φ 76	76.2×91.0	550.0	148.0	
DN100	104×119.0	4"	101.6×119.0	102	101.6×119.0	φ 102	101.6×119.0	654.0	178.0	

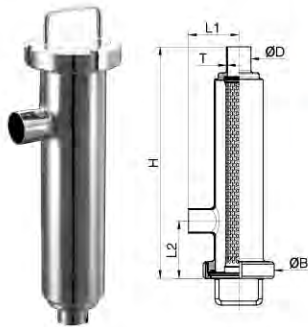


Threaded Straight Strainer

DIN	D	G	Size			H	B
			SMS	D	G		
DN25	28.0	RD52x1/6	25	25.4	RD40x1/6	360.0	114.0
DN32	34.0	RD58x1/6	32	31.8	RD48x1/6	360.0	114.0
DN40	40.0	RD65x1/6	38	38.1	RD60x1/6	360.0	114.0
DN50	52.0	RD78x1/6	51	50.8	RD70x1/6	390.0	125.0
DN65	70.0	RD95x1/6	63	63.5	RD85x1/6	455.0	138.0
DN80	85.0	RD110x1/4	76	76.2	RD98x1/6	550.0	148.0
DN100	104.0	RD130x1/4	102	101.6	RD125x1/4	654.0	178.0



# Sanitary Filter



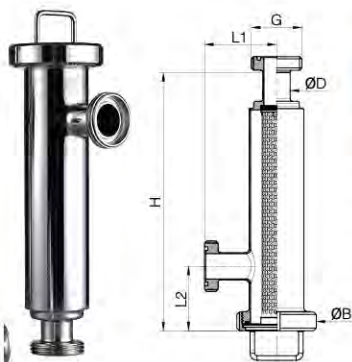
Welded Angle-Type Strainer

DIN	Size							H	B	L1	L2
	D×T	3A	D×T	SMS	D×T	ISO/IDF	D×T				
DN25	28×1.5	1"	25.4×1.65	25	25.4×1.5	φ 25	25.4×1.5	345.0	114.0	76.0	95.0
DN32	34×1.5	1 1/4"	31.8×1.65	32	31.8×1.5	φ 32	31.8×1.5	345.0	114.0	76.0	95.0
DN40	40×1.5	1 1/2"	38.1×1.65	38	38.1×1.5	φ 38	38.1×1.5	345.0	114.0	76.0	95.0
DN50	52×1.5	2"	50.8×1.65	51	50.8×1.5	φ 51	50.8×1.5	375.0	125.0	89.0	110.0
DN65	70×2	2 1/2"	63.5×1.65	63	63.5×2	φ 63	63.5×2	440.0	138.0	102.0	125.0
DN80	85×2	3"	76.2×1.65	76	76.2×2	φ 76	76.2×2	575.0	148.0	114.0	145.0
DN100	104×2	4"	101.6×2.1	102	101.6×2	φ 102	101.6×2	640.0	178.0	140.0	165.0



Welded Angle-Type Strainer

DIN	Size							H	B	L1	L2
	D×K	3A	D×K	SMS	D×K	ISO/IDF	D×K				
DN25	28×50.5	1"	25.4×50.5	25	25.4×50.5	φ 25	25.4×50.5	360.0	114.0	95.0	95.0
DN32	34×50.5	1 1/4"	31.8×50.5	32	31.8×50.5	φ 32	31.8×50.5	360.0	114.0	95.0	95.0
DN40	40×50.5	1 1/2"	38.1×50.5	38	38.1×50.5	φ 38	38.1×50.5	360.0	114.0	95.0	95.0
DN50	52×64.0	2"	50.8×64.0	51	50.8×64.0	φ 51	50.8×64.0	390.0	125.0	109.0	110.0
DN65	70×91.0	2 1/2"	63.5×77.5	63	63.5×77.5	φ 63	63.5×77.5	460.0	138.0	125.0	125.0
DN80	85×106.0	3"	76.2×91.0	76	76.2×91.0	φ 76	76.2×91.0	530.0	148.0	134.0	145.0
DN100	104×119.0	4"	101.6×119.0	102	101.6×119.0	φ 102	101.6×119.0	655.0	178.0	160.0	165.0

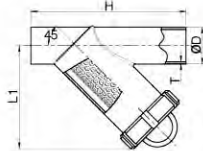


Threaded Angle-Type Strainer

DIN	Size					H	B	L1	L2
	D	G	SMS	D	G				
DN25	28.0	RD52x1/6	25	25.4	RD40x1/6	360.0	114.0	95.0	95.0
DN32	34.0	RD58x1/6	32	31.8	RD48x1/6	360.0	114.0	95.0	95.0
DN40	40.0	RD65x1/6	38	38.1	RD60x1/6	360.0	114.0	95.0	95.0
DN50	52.0	RD78x1/6	51	50.8	RD70x1/6	390.0	125.0	109.0	110.0
DN65	70.0	RD95x1/6	63	63.5	RD85x1/6	460.0	138.0	125.0	125.0
DN80	85.0	RD110x1/4	76	76.2	RD98x1/6	530.0	148.0	134.0	145.0
DN100	104.0	RD130x1/4	102	101.6	RD125x1/4	655.0	178.0	160.0	165.0

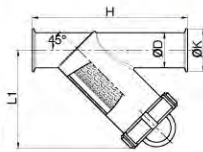
## Sanitary Filter

### Welded Y-type Strainer



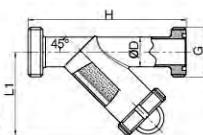
DIN	D×T	3A	Size				ISO/IDF	D×T	H	L1
			D×T	SMS	D×T	D×T				
DN25	28×1.5	1"	25.4×1.65	25	25.4×1.5	φ 25	25.4×1.5	120.0	115.0	
DN32	34×1.5	1 1/4"	31.8×1.65	32	31.8×1.5	φ 32	31.8×1.5	150.0	140.0	
DN40	40×1.5	1 1/2"	38.1×1.65	38	38.1×1.5	φ 38	38.1×1.5	170.0	160.0	
DN50	52×1.5	2"	50.8×1.65	51	50.8×1.5	φ 51	50.8×1.5	190.0	182.0	
DN65	70×2	2 1/2"	63.5×1.65	63	63.5×2	φ 63	63.5×2	235.0	245.0	
DN80	85×2	3"	76.2×1.65	76	76.2×2	φ 76	76.2×2	280.0	285.0	
DN100	104×2	4"	101.6×2.1	102	101.6×2	φ 102	101.6×2	345.0	345.0	

### Clamped Y-type Strainer



DIN	D×K	3A	Size				ISO/IDF	D×K	H	L1
			D×K	SMS	D×K	D×K				
DN25	28×50.5	1"	25.4×50.5	25	25.4×50.5	φ 25	25.4×50.5	145.0	95.0	
DN32	34×50.5	1 1/4"	31.8×50.5	32	31.8×50.5	φ 32	31.8×50.5	165.0	110.0	
DN40	40×50.5	1 1/2"	38.1×50.5	38	38.1×50.5	φ 38	38.1×50.5	180.0	120.0	
DN50	52×64.0	2"	50.8×64.0	51	50.8×64.0	φ 51	50.8×64.0	220.0	140.0	
DN65	70×91.0	2 1/2"	63.5×77.5	63	63.5×77.5	φ 63	63.5×77.5	280.0	175.0	
DN80	85×106.0	3"	76.2×91.0	76	76.2×91.0	φ 76	76.2×91.0	350.0	195.0	
DN100	104×119.0	4"	101.6×119.0	102	101.6×119.0	φ 102	101.6×119.0	500.0	260.0	

### Threaded Y-type Strainer



DIN	D	G	Size			H	L1
			SMS	D	G		
DN25	28.0	RD52x1/6	25	25.4	RD40x1/6	145.0	95.0
DN32	34.0	RD58x1/6	32	31.8	RD48x1/6	165.0	110.0
DN40	40.0	RD65x1/6	38	38.1	RD60x1/6	180.0	120.0
DN50	52.0	RD78x1/6	51	50.8	RD70x1/6	220.0	140.0
DN65	70.0	RD95x1/6	63	63.5	RD85x1/6	280.0	175.0
DN80	85.0	RD110x1/4	76	76.2	RD98x1/6	350.0	195.0
DN100	104.0	RD130x1/4	102	101.6	RD125x1/4	500.0	260.0

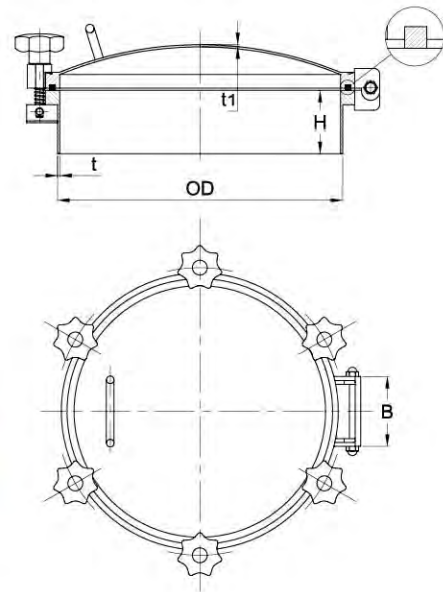


# Sanitary Manhole Cover



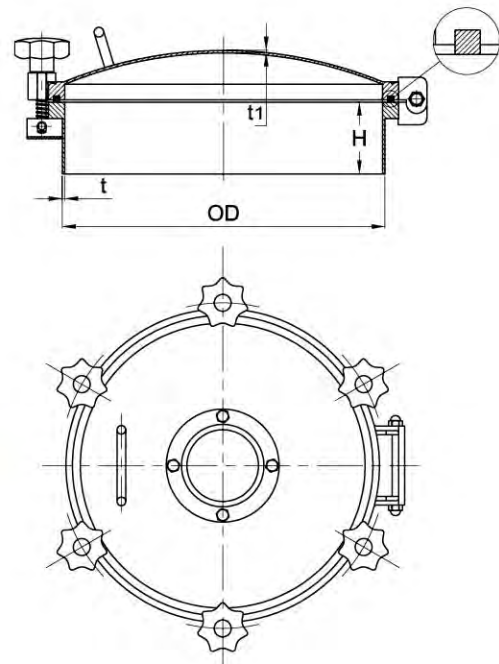


## Sanitary Manhole Cover



### Round Outward Manway With Pressure

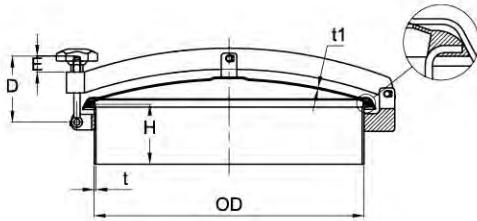
Size	OD mm	t mm	H mm	t1 mm	Handwheel-Num	Pres (Bar)
200	206	3	100	3	4	1 - 3
300	306	3	100	3	4	1 - 3
350	356	3	100	3	5	1 - 3
400	406	3	100	3	6	1 - 3
430	436	3	100	3	6	1 - 3
450	456	3	100	3	6	1 - 3
500	508	4	100	3	6	1 - 3
600	608	4	100	4	6	1 - 3



### Round Outward Manway With Sight Glass

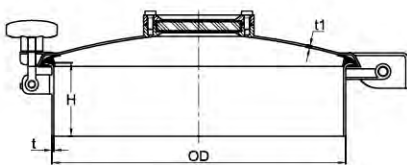
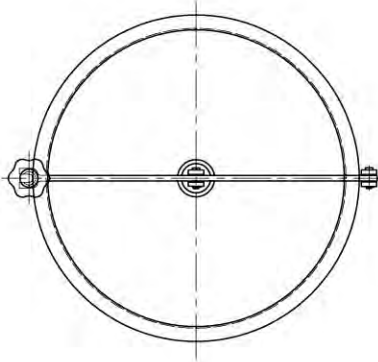
Size	OD mm	t mm	H mm	t1 mm	Sight Glass	Pres (Bar)
200	206	3	100	3	DN80	1 - 3
300	306	3	100	3	DN80	1 - 3
350	356	3	100	3	DN80	1 - 3
400	406	3	100	3	DN80	1 - 3
430	436	3	100	3	DN80	1 - 3
450	456	3	100	3	DN80	1 - 3
500	508	4	100	3	DN100	1 - 3
600	608	4	100	4	DN100	1 - 3

# Sanitary Manhole Cover



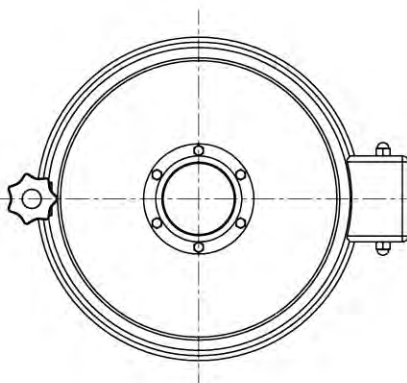
Round Outward Manway

Size	OD mm	t mm	H mm	t1 mm	Pres (Bar)
200	200	2.5	100	2	0 - 0.1
219	219	2.5	100	2	0 - 0.1
300	300	2.5	100	2	0 - 0.1
350	350	2.5	100	2	0 - 0.1
400	400	3	100	2.5	0-0.1
430	430	3	100	2.5	0 - 0.1
450	450	3	100	2.5	0 - 0.1
500	500	3	100	2.5	0 - 0.1
600	600	4	100	3	0 - 0.1
420X300(Oval)	420X300	3	100	2.5	0 - 0.1

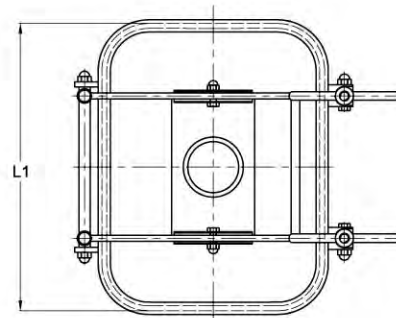
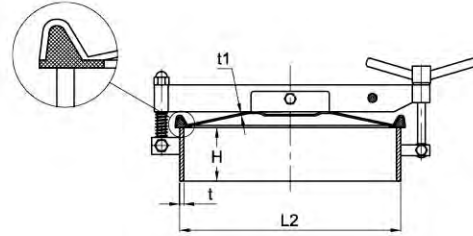


Round Manway With Sight Glass

Size	OD mm	t mm	H mm	t1 mm	Sight Glass	Pres (Bar)
350	355	2.5	100	2.5	DN80	0-0.2
400	406	3	100	3	DN100	0-0.2
450	456	3	100	3	DN150	0-0.2
500	506	3	100	3	DN200	0-0.2
600	608	4	100	3	DN400/500	0-0.2

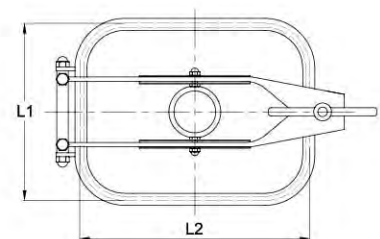
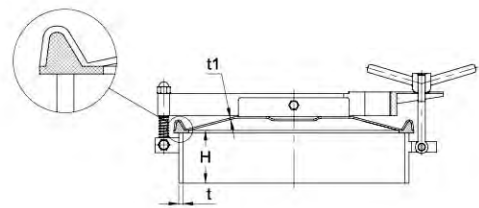


## Sanitary Manhole Cover



Rectangular Manway With Two Intersectant Arms

Size	OD mm	t	H	t1	Pres
235*185	235*185	5	70	1.5	1 - 3
435*335	435*335	8	80	3	1 - 3
535*435	535*435	8	100	3	1 - 3
700*500	700*500	12	100	3	1 - 3

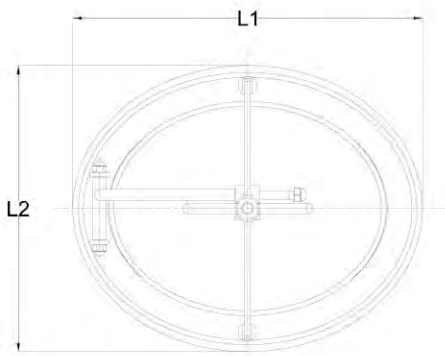
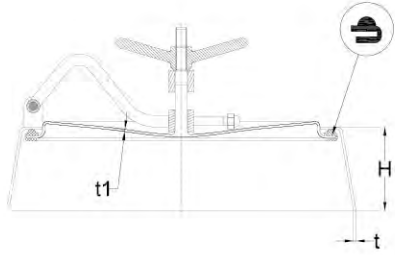


Rectangular Manway With One Intersectant Arms

Size	OD mm L1*L2	t mm	H mm	t1 mm	Pres (Bar)
235*185	235*185	5	70	1.5	1 - 3
435*335	435*335	8	80	3	1 - 3
535*435	535*435	8	100	3	1 - 3
700*500	700*500	12	100	3	1 - 3

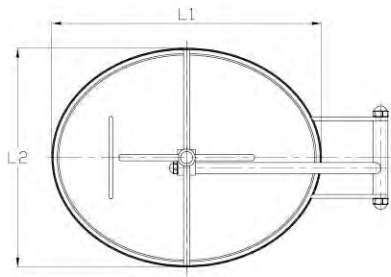
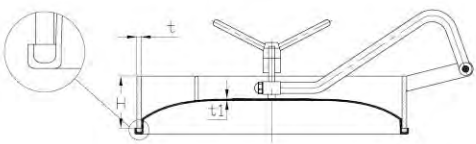


# Sanitary Manhole Cover



Oval Inward Manway with Bevel Edge

Size	OD mm L1*L2	t1 mm	H mm	t2 mm	Pres (Bar)
550*450	550*450	3	80	4	1 - 3
550*450A	550*450	4	80	5	1 - 3
565*465	565*465	4	100	5	1 - 3
580*480	580*480	4	133	5	1 - 3



Oval Inward Manway

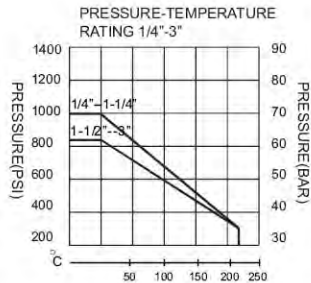
Size	OD mm L1*L2	t mm	H mm	t1 mm	Pres (Bar)
430*330	430*330	8	75	2.5	1 - 3
435*335	435*335	10	75	2.5	1 - 3
450*350	450*350	8	75	3	1 - 3
530*430	530*430	10	75	3	1 - 3
535*435	535*435	12	75	3	1 - 3
635*525	635*525	12	80	3	1 - 3

# Industrial Valve

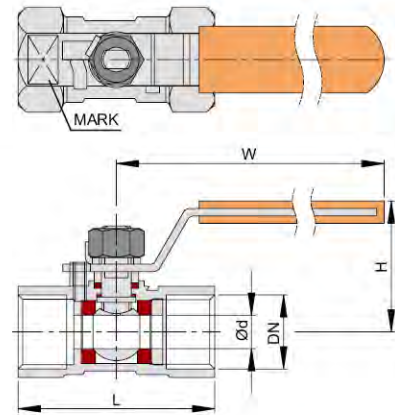


# Industrial Valve

## 1PC BALL VALVE



- Features:
- 1000WOG, PN63
  - Reduce Port
  - Locking Device Handle Upon Request
  - Blow-Out Proof Stem
  - PTFE Packing Sealing
  - Design Standard: ASME B16.34
  - Thread: ASME B1.201/BS21/DIN2999  
DIN259/ISO228/1
  - Testing Standard: API 598/SP-110



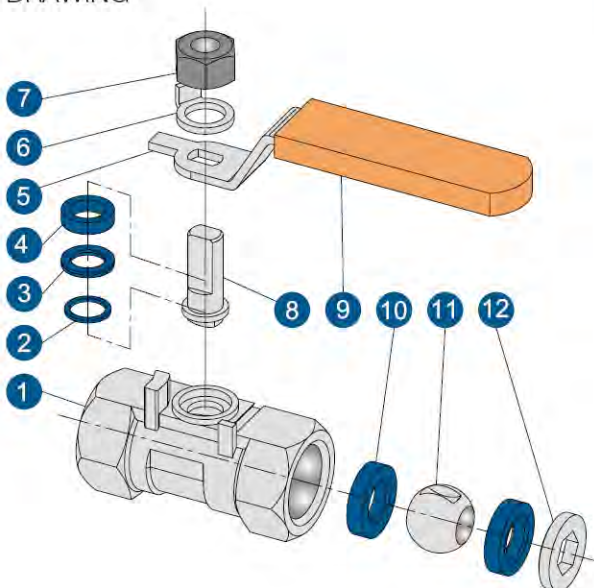
### PRESSURE TESTING

STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4-0.7Mpa

### 1000PSI/PN63 DIMENSION

SIZE	L	Φd	H	W	TORQUE N.M	CV
1/4"	41	5	35	65	3	1
3/8"	45	7	37	70	3	1.2
1/2"	55	9	44	90	3	1.3
3/4"	59	12.5	47	90	4	2
1"	70	15	50	105	5	3.4
1-1/4"	76	20	57	105	7	7.1
1-1/2"	84	25	69	130	8	12.4
2"	97	32	75	130	15	20.3
2-1/2"	124	40	95	180	22	28.5
3"	148	49	105	180	25	47.5

### DRAWING



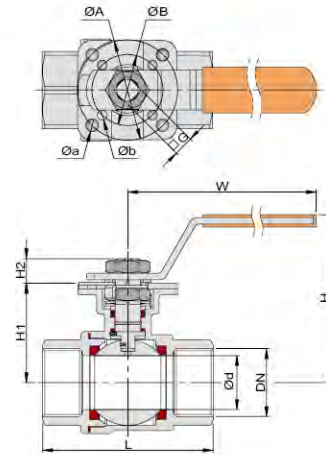
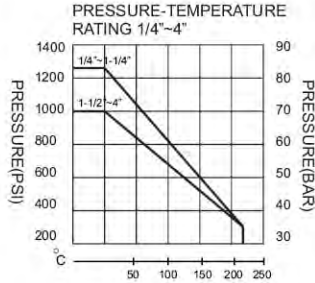
### MATERIAL LIST

ITEM	PART NAME	MATERIAL
1	BODY	CF8M CF8 WCB
2	THRUST WASHER	PTFE
3	STEM PACKING	PTFE
4	GLAND	SUS304
5	HANDLE	SUS304
6	STOP WASHER	SUS304
7	NUT	SUS304
8	STEM	SUS316 SUS304
9	HANDLE COVER	VINYL
10	BALL SEAT	PTFE R-PTFE
11	BALL	SUS316 SUS304
12	END CAP	CF8M CF8



# Industrial Valve

## 2PC BALL VALVE ISO-DIRECT MOUNTING PAD



- Features:
- 1000WOG, PN63
  - Full Port
  - Locking Device Handle Upon Request
  - Blow-Out Proof Stem
  - PTFE Packing Sealing
  - Balance Hole in Ball Slot
  - Design Standard: ASME B16.34
  - Spring Ball Seat for Self-Adjustment
  - ISO5211 Direct Mounting Pad Top Flange
  - Testing Standard: API 598/SP-110

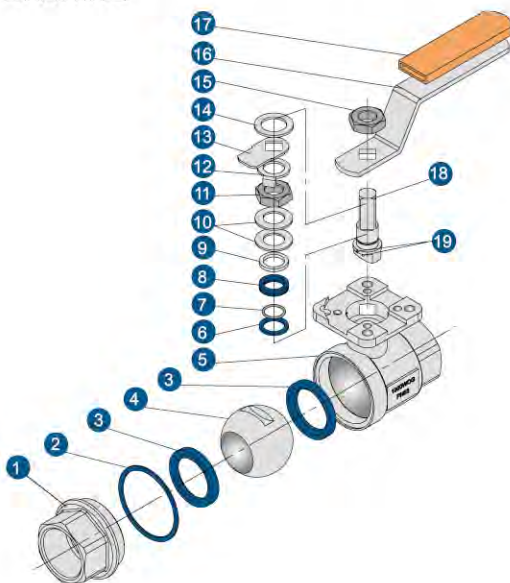
### PRESSURE TESTING

STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4-0.7Mpa

### 1000PSI/PN63 DIMENSION

SIZE	L	Φd	W	H	H1	H2	ΦA	ΦB	Φa	Φb	□G	TORQUE N.M	CV
1/4"	50	11.5	110	60	36	8	42	36	6	5.5	9	4	2
3/8"	60	12	110	60	36	8	42	36	6	5.5	9	4	2
1/2"	75	15	110	64	38	8.5	42	36	6	5.5	9	5	3.4
3/4"	80	20	120	80	42	9	42	36	6	5.5	9	7	7.1
1"	90	25	145	93	51.5	11	50	42	7	6	11	8	12.4
1-1/4"	110	32	145	95	56.5	11	50	42	7	6	11	15	20.3
1-1/2"	120	40	160	126	70	14	70	50	9	7	14	22	28.5
2"	140	50	170	129	77.5	15	70	50	9	7	14	25	47.5
2-1/2"	185	65	230	148	95	18	100	70	11	9	17	50	76
3"	205	80	260	152	107	18	100	70	11	9	17	85	108.4
4"	240	100	300	187	125	19	100	70	11	9	19	115	198

### DRAWING

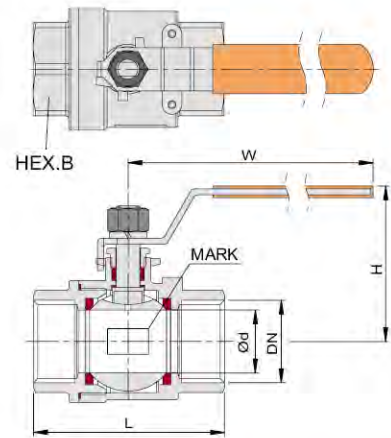
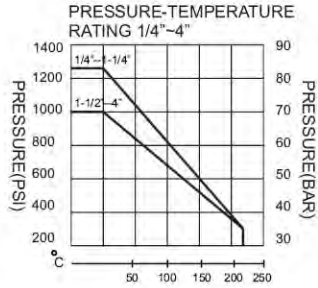


### MATERIAL LIST

ITEM	PART NAME	MATERIAL
1	CAP	CF8M CF8 WCB
2	BODY GASKET	PTFE R-PTFE
3	BALL SEAT	PTFE RPTFE
4	BALL	SUS316 SUS304
5	BODY	CF8M CF8 WCB
6	THRUST WASHER	SUS304
7	O-RING	VITON
8	STEM PACKING	PTFE
9	GALND	SUS304
10	BELLEVILLE WASHER	SUS304
11	STOP NUT	A194-8
12	STOP WASHER	SUS304
13	LOCKING WASHER	SUS304
14	WASHER	SUS304
15	STEM NUT	A194-8
16	HANDLE	SUS304
17	HANDLE COVER	PLASTIC
18	STEM	SUS316 SUS304
19	ANTI-STATIC DEVICE	SUS304

# Industrial Valve

## 2PC BALL VALVE



- Features:
- Full Port
  - Locking Device Handle Upon Request
  - Blow-Out Proof Stem
  - Blance Hole in Ball Slot
  - Spring Ball Seat Design
  - Precision Casting
  - Design Standard:ASME B16.34
  - Testing Standard:API 598/SP-110
  - Light Type & DIN3202-M3 Available

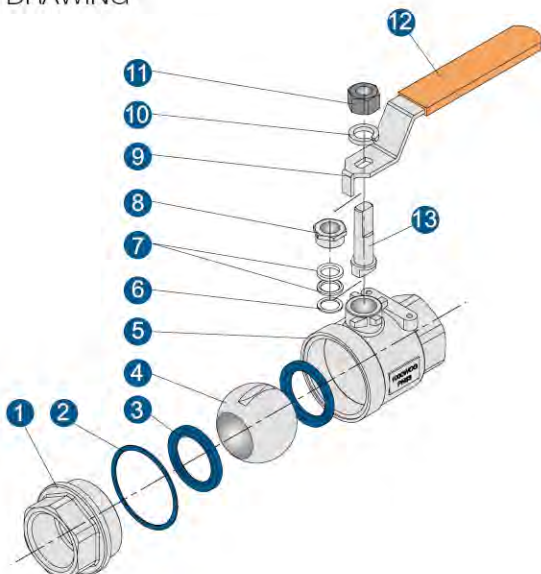
1000PSI/PN63  
DIMENSION  
L\* =DIN3202-M3

### PRESSURE TESTING

STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4-0.7Mpa

SIZE	L*	L	Φd	W	H	TORQUE N.M	CV
1/4"	50	55	10.5	100	50	4	2
3/8"	60	55	12	100	50	4	2
1/2"	75	62	15	130	60	5	3.4
3/4"	80	72	20	130	64	7	7.1
1"	90	84	25	165	71	8	12.4
1-1/4"	110	97	32	165	78	15	20.3
1-1/2"	120	104	38	190	86	22	28.5
2"	140	120	49	190	95	25	47.5
2-1/2"	185	150	62	215	130	50	76
3"	205	164	76	250	148	85	108.4
4"	240	200	96	280	180	115	198

### DRAWING



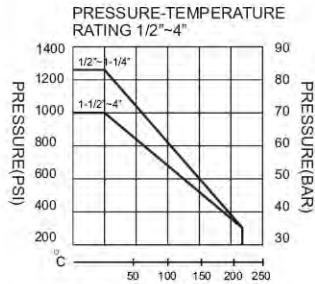
### MATERIAL LIST

ITEM	PART NAME	MATERIAL
1	CAP	CF8M CF8
2	CAP GASKET	PTFE
3	BALL SEAT	PTFE R-PTFE
4	BALL	SUS316 SUS304
5	BODY	CF8M CF8
6	THRUST WASHER	PTFE PEEK
7	STEM PACKING	PTFE
8	STOP NUT	SUS304
9	HANDLE	SUS304
10	SPRING WASHER	SUS304
11	NUT	SUS304
12	HANDLE COVER	PLASTIC
13	STEM	SUS316 SUS304



# Industrial Valve

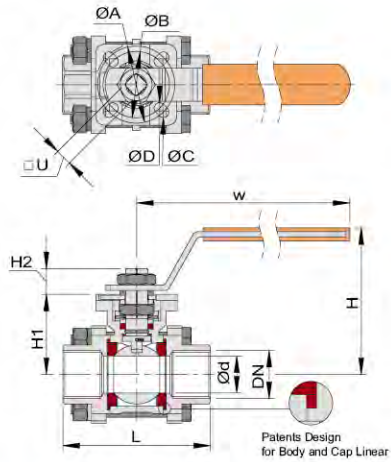
## 3PC BALL VALVE ISO-DIRECT MOUNTING PAD



- Features:
- Spring Ball Seat for Self-Adjust
  - Full Port
  - Locking Device Handle Upon Request
  - Blow-Out Proof Stem
  - V-Ring Packing Sealing
  - Blance Hole in Ball Slot
  - Design Standard:ASME B16.34
  - Anti-Static Device
  - Butt-Welding end/Soket End Available
  - Testing Standard:API 598/SP-110

1000PSI/PN63  
DIMENSION

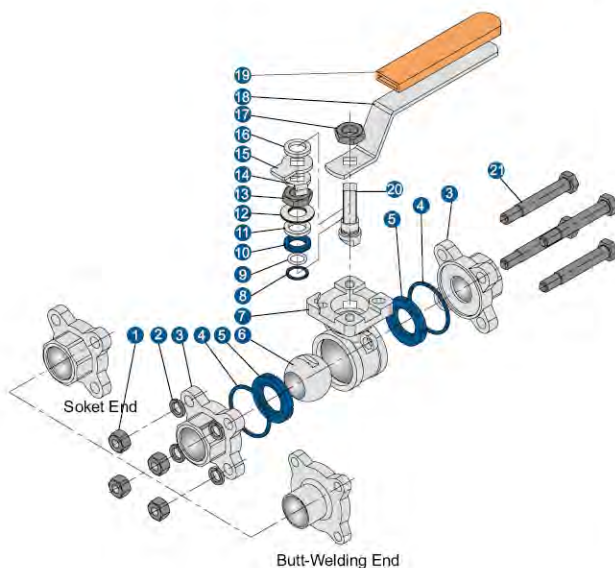
SIZE	L	Φd	W	H	H1	H2	ΦA	ΦB	ΦC	ΦD	□ U	TORQUE N.M	CV
1/2"	70	15	125	60	40	8.5	42	36	6	6	9	5	3.4
3/4"	80	20	125	64	44	8.5	42	36	6	6	9	7	7.2
1"	90	25	155	79.5	52	11	50	42	7	6	11	8	12.5
1-1/4"	110	32	155	87	57	11	50	42	7	6	11	15	20.3
1-1/2"	116	38	195	106	70	14	70	50	8.5	7	14	22	28.5
2"	136	49	195	115	80	15	70	50	8.5	7	14	25	47.5
2-1/2"	185	65	245	136	94.5	18	102	70	11	9	17	50	76
3"	200	76	245	147	103	18	102	70	11	9	17	85	108.5
4"	235	96	300	165	123	19	102	70	11	9	19	113	198



### PRESSURE TESTING

STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4~0.7Mpa

### DRAWING

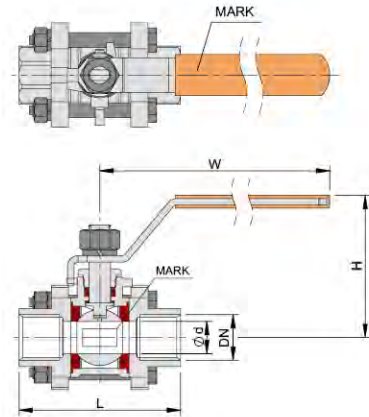
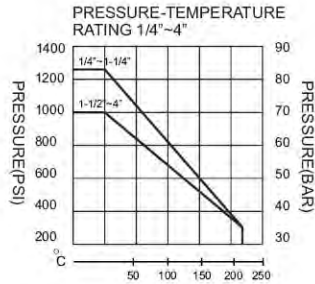


MATERIAL LIST			
ITEM	PART NAME	MATERIAL	
1	NUT	A194-8	
2	SPRING WASHER	SUS304	
3	CAP	CF8M	CF8
4	BODY GASKET	PTFE	
5	BALL SEAT	PTFE	R-PTFE
6	BALL	SUS316	SUS304
7	BODY	CF8M	CF8
8	THRUST WASHER	PTFE	
9	O-RING	VITON	
10	STEM PACKING	PTFE	
11	GLAND	SUS304	
12	ELLEVILLE WASHER	SUS304	
13	STOP NUT	A194-8	
14	STOP WASHER	SUS304	
15	LOCKING WASHER	SUS304	
16	WASHER	SUS304	
17	STEM NUT	A194-8	
18	HANDLE	SUS304	
19	HANDLE COVER	PLASTIC	
20	STEM	SUS316	SUS316
21	BOLT	A193-B8	



# Industrial Valve

## 3PC BALL VALVE



- Features:
- 1000psi/PN63
  - Full Port
  - Locking Device Handle Upon Request
  - Blow-Out Proof Stem
  - PTFE Packing Sealing
  - Blance Hole in Ball Slot
  - Design Standard:ASME B16.34
  - Precision Casting
  - ISO5211 Mounting Pad Top Flange
  - Testing Standard:API 598/SP-110

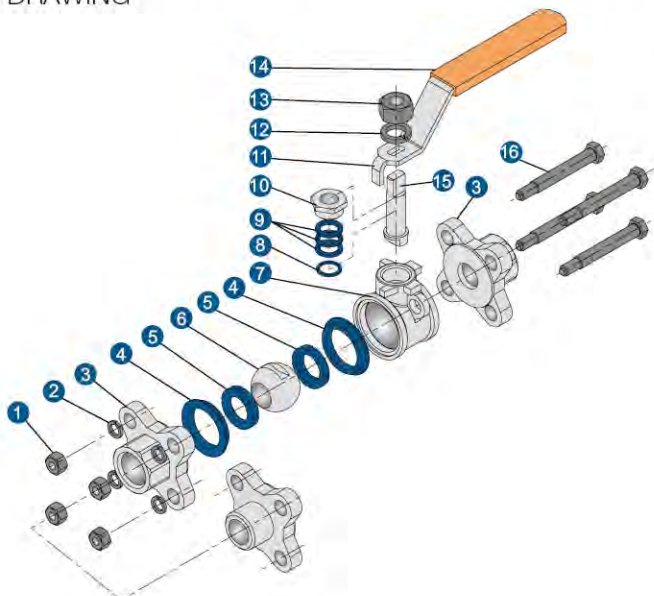
### PRESSURE TESTING

STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4-0.7Mpa

### 1000PSI/PN63 DIMENSION

SIZE	L	d	H	W	TORQUE N.M	CV	
1/4"	DN8	67	12.5	59	100	3.5	2
3/8"	DN10	67	12.5	59	100	4	2
1/2"	DN15	70	15	61	120	5	3.5
3/4"	DN20	80	20	67	125	7	7.1
1"	DN25	90	25	74	150	8	12.4
1-1/4"	DN32	110	32	82	160	15	20.3
1-1/2"	DN40	119	38	99	190	22	28.6
2"	DN50	140	49	105	200	25	47.5
2-1/2"	DN65	160	63	120	265	50	76
3"	DN80	201	76	137	310	85	108.4
4"	DN100	234	96	157	310	115	198

### DRAWING

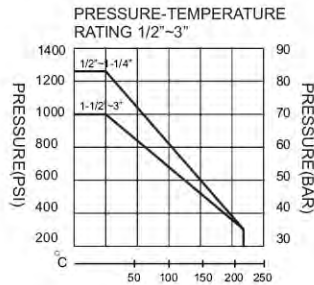


### MATERIAL LIST

ITEM	PART NAME	MATERIAL	
1	NUT	A194-8	
2	SPRING WASHER	SUS304	
3	CAP	CF8M	CF8
4	BODY GASKET	PTFE	R-PTFE
5	BALL SEAT	PTFE	R-PTFE
6	BALL	SUS316	SUS304
7	BODY	CF8M	CF8
8	THRUST WASHER	PTFE	
9	STEM PACKING	PTFE	
10	STOP NUT	SUS304	
11	HANDLE	SUS304	
12	SPRING WASHER	SUS304	
13	STEM NUT	A194-8	
14	HANDLE COVER	PLASTIC	
15	STEM	SUS316	SUS304
16	BOLT	A193-B8	

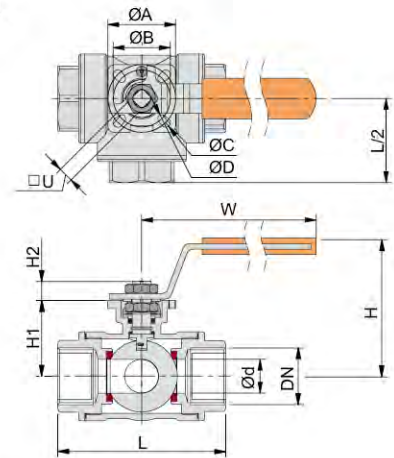
# Industrial Valve

## 3-WAY BALL VALVE ISO-DIRECT MOUNTING PAD



Features:

- Reduce Port
- Locking Device Handle Upon Request
- Blow-Out Proof Stem
- ISO5211 Direct Mounting Pad
- Design Standard:ASME B16.34
- 1000WOG/PN63
- Spring Ball Seat for Self-Adjust
- Testing Standard:API 598



PRESSURE TESTING

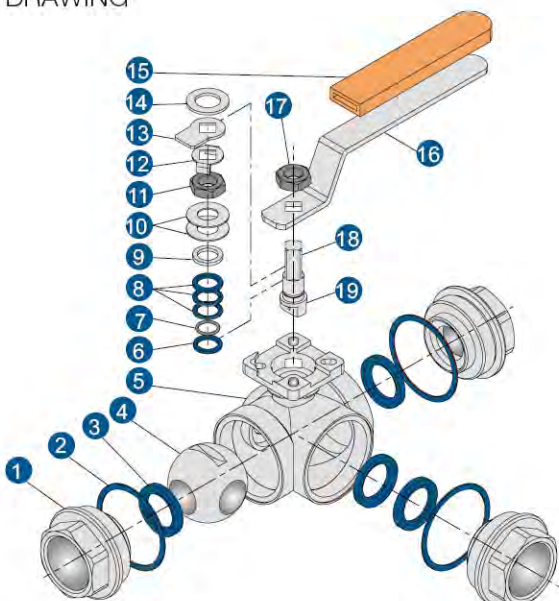
STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4-0.7Mpa

1000PSI/PN63

DIMENSION

SIZE	L	Ød	W	H	H1	H2	ØA	ØB	ØC	ØD	□ U	TORQUE N.M	CV
1/2"	73	12	120	65	36	8.5	42	36	6	6	9	5	1.3
3/4"	80	15	120	69	40	9	42	36	6	6	9	7	2
1"	88	18	150	77	46	11	50	42	7	6	11	8	3.5
1-1/4"	125	25	150	87	56	11	50	42	7	6	11	16	7
1-1/2"	136	32	240	107	69	14	70	50	9	7	14	22	12.4
2"	158	38	240	112	76	15	70	50	9	7	14	26	20.3
2-1/2"	200	50	260	129	93	17	102	70	11	9	17	50	28.5
3"	240	65	300	150	112	19	102	70	11	9	19	85	47

DRAWING



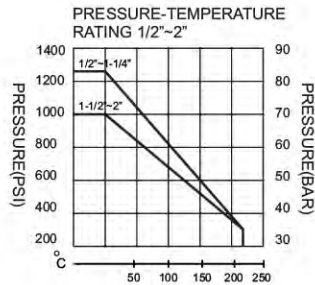
MATERIAL LIST

ITEM	PART NAME	MATERIAL
1	CAP	CF8M CF8
2	BODY GASKET	PTFE
3	BALL SEAT	PTFE R-PTFE
4	BALL	SUS316 SUS304
5	BODY	CF8M CF8
6	THRUST WASHER	PTFE
7	O-RING	VITON
8	STEM PACKING	PTFE
9	GLAND	SUS304
10	BELLEVILLE WASHER	SUS304
11	STOP NUT	A194-8
12	STOP CAP	SUS304
13	LOCKING WASHER	SUS304
14	WASHER	SUS304
15	HANDLE COVER	PLASTIC
16	HANDLE	SUS304
17	STEM NUT	A194-8
18	STEM	SUS316 SUS304
19	ANTI-STACTIC	SUS304

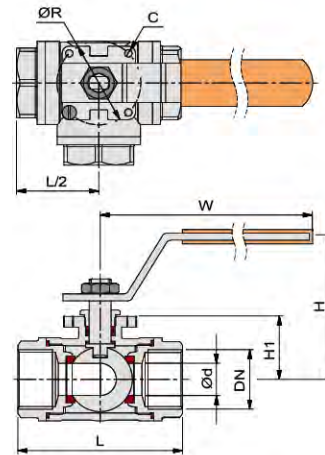


# Industrial Valve

## 3-WAY BALL VALVE



- Features:
- Reduce Port
  - Locking Device Handle Upon Request
  - Blow-Out Proof Stem
  - Spring Ball Seat for Self-Adjust
  - Design Standard:ASME B16.34
  - ISO5211 Top Flange
  - L-Port/T-Port/X-port
  - Testing Standard:API 598



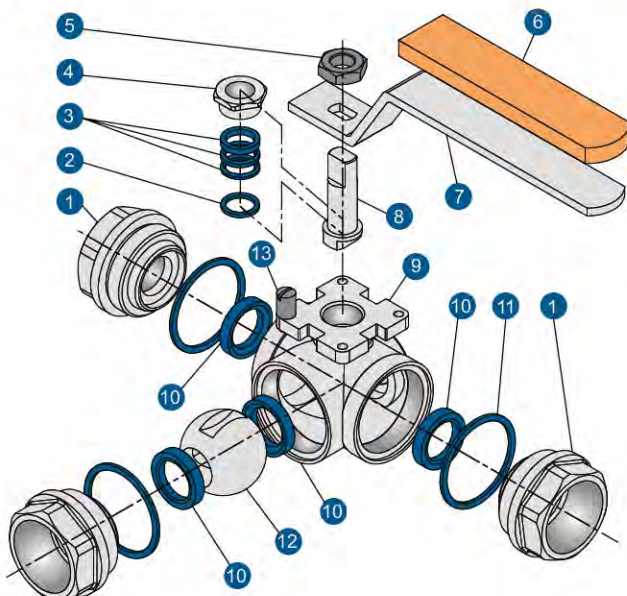
### PRESSURE TESTING

STANDARD PRESSURE	1000PSI
SHELL PRESSURE TESTING	10.4Mpa
WATER SEAL TESTING	7.6Mpa
AIR SEAL TESTING	0.4-0.7Mpa

### 1000PSI/PN63 DIMENSION

SIZE	L	Φd	W	H	H1	ΦR	C	TORQUE N.M	CV
1/2"	73	12	110	57	29	36	M6	5	1.3
3/4"	80	15	120	61	32	42	M6	7	2
1"	88	18	145	67	36.5	42	M6	8	3.4
1-1/4"	125	25	145	81	44	42	M6	15	7.1
1-1/2"	136	32	160	97	52.5	50	M6	22	12.4
2"	152	38	170	108	58.5	50	M6	25	20.3

### DRAWING



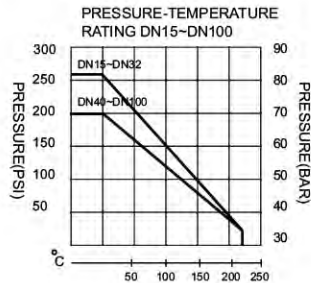
### MATERIAL LIST

ITEM	PART NAME	MATERIAL
1	CAP	CF8M CF8
2	THRUST WASHER	PTFE
3	STEM SEALING	PTFE
4	STOP NUT	SUS304
5	STEM NUT	SUS304
6	HANDLE COVER	PLASTIC
7	HANDLE	SUS304
8	STEM	SUS316 SUS304
9	BODY	CF8M CF8
10	BALL SEAT	PTFE R-PTFE
11	GASKET	PTFE
12	BALL	SUS316 SUS304
13	LOCKING PIN	SUS304



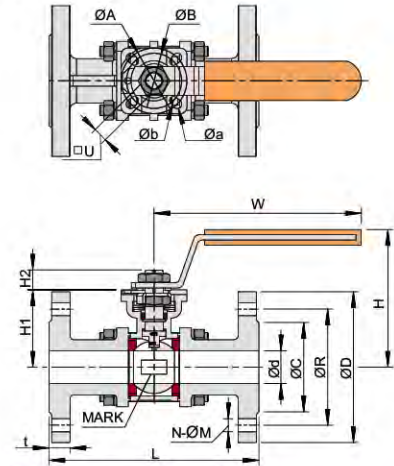
# Industrial Valve

## 3PC FLANGED BALL VALVE ISO-DIRECT MOUNTING PAD



Features:

- Flange Standard: DIN2633/PN16
- Full Port
- Locking Device Handle Upon Request
- Blow-Out Proof Stem
- Fire-Safe Design upon Request
- Blance Hole in Ball Slot
- Anti-Static Device
- Fire-Safe Design Upon Request
- ISO5211 Direct Mounting Pad Top Flange
- Testing Standard: API 598/SP-110



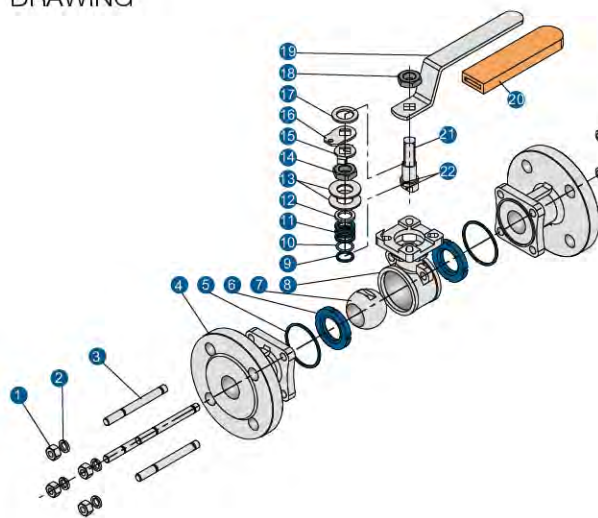
### PRESSURE TESTING

STANDARD PRESSURE	1.6Mpa
SHELL PRESSURE TESTING	2.4Mpa
WATER SEAL TESTING	1.8Mpa
AIR SEAL TESTING	0.4~0.7Mpa

### PN16 DIMENSION

DN	φd	L	H	H1	H2	W	ΦA	ΦB	Φa	Φb	□ U	ΦC	ΦR	ΦD	TORQUE N.M	CV
15	15	115	69	49	8.5	125	42	36	6	5.5	9	45	65	95	5	3.4
20	20	120	75	54	8.5	125	42	36	6	5.5	9	58	75	105	7	7.1
25	25	125	87	60	11	155	50	42	7	6	11	68	85	115	8	12.4
32	32	130	99	72	11	155	50	42	7	6	11	78	100	140	15	20.3
40	38	140	116	80	14	195	70	50	9	7	14	88	110	150	22	28.5
50	50	150	124	88	15	195	70	50	9	7	14	102	125	165	25	47.5
65	65	170	140	102	18	260	102	70	11	9	17	122	145	185	49	76
80	80	180	153	116	18	260	102	70	11	9	17	138	160	200	83	108.4
100	100	190	175	134	19	300	102	70	11	9	19	158	180	220	115	198

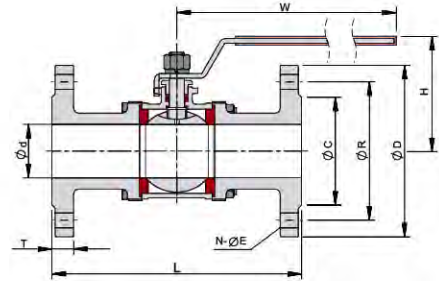
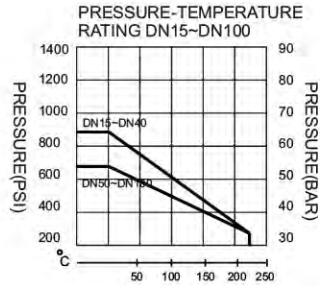
### DRAWING



MATERIAL LIST			
ITEM	PART NAME	MATERIAL	
1	NUT	SUS304	
2	CAP	CF8M	CF8
3	CAP GASKET	PTFE	R-PTFE
4	BALL SEAT	PTFE	R-PTFE
5	BALL	SUS316	SUS304
6	THRUST WASHER	PTFE	R-PTFE
7	O-RING	VITON	
8	STEM PACKING	PTFE	
9	GLAND	SUS304	
10	BELLEVILLE WASHER	SUS304	
11	STOP NUT	SUS304	
12	NUT CAP	SUS304	
13	LOCKING PIN	SUS304	
14	WASHER	SUS304	
15	STEM NUT	SUS304	
16	HANDLE	SUS304	
17	HANDLE COVER	PLASTIC	
18	STEM	SUS316	SUS304
19	ANTI-STATIC	SUS304	
20	BODY	CF8M	CF8
21	BOLT	SUS304	

# Industrial Valve

## 3PC FLANGED BALL VALVE



**Features:**

- ANSI 150#/10K/PN16,300#/20K/PN40
- Full Port
- Locking Device Handle Upon Request
- Blow-Out Proof Stem
- V-Ring Packing Sealing
- Fire Safe Design ACC:API6D
- Blance Hole in Ball Slot
- Design Standard:ASME B16.34
- Flange:ASME 16.5/JIS10K/DIN PN10-40
- Face to Face:ASME B16.10/DIN 3202-F1
- Testing Standard:API 598

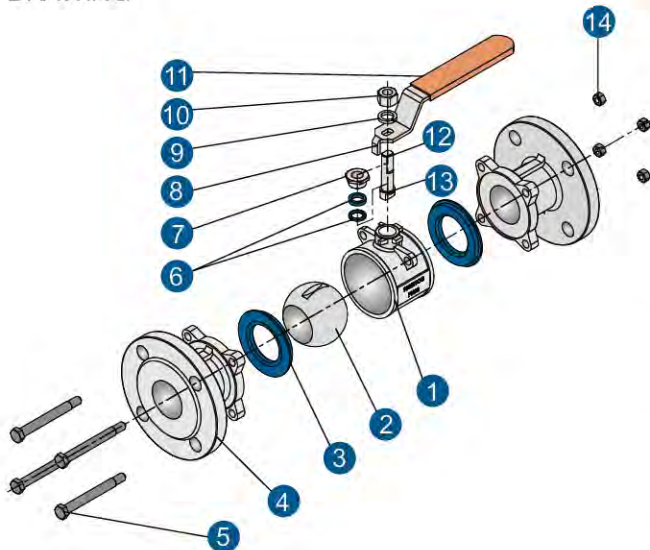
### PRESSURE TESTING

STANDARD PRESSURE	4.0Mpa
SHELL PRESSURE TESTING	6.0Mpa
WATER SEAL TESTING	4.4Mpa
AIR SEAL TESTING	0.4~0.7Mpa

### PN10-40 DIMENSION

SIZE	L	Φd	W	H	ΦC	ΦR	ΦD	N	ΦE	T	TORQUE N.M	CV
DN15	130	15	115	59	45	65	95	4	14	16	5	3.4
DN20	150	20	125	67	58	75	105	4	14	18	7	7.1
DN25	160	25	150	74	68	85	115	4	14	18	8	12.4
DN32	180	32	160	82	78	100	140	4	18	18	16	20.3
DN40	200	38	190	99	88	110	150	4	18	18	22	28.5
DN50	230	50	200	105	102	125	165	4	18	20	25	47.5
DN65	290	65	265	120	122	145	185	8	18	22	50	76
DN80	310	80	300	135	138	160	200	8	18	24	80	108.4
DN100	350	100	300	157	162	190	235	8	22	24	113	198

### DRAWING

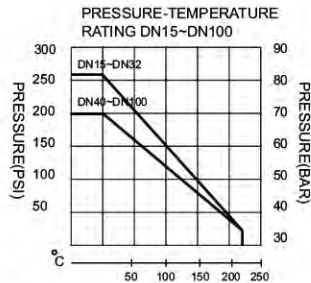


MATERIAL LIST			
ITEM	PART NAME	MATERIAL	
1	BODY	CF8M	CF8
2	BALL	SUS316	SUS304
3	BALL SEAT	PTFE	Refine-PTFE
4	CAP	CF8M	CF8
5	BOLT	SUS304	
6	STEM PACKING	PTFE	
7	STOP NUT	SUS304	
8	HANDLE	SUS304	
9	SPRING WASHER	SUS304	
10	STEM NUT	SUS304	
11	HANDLE COVER	PLASTIC	
12	STEM	SUS316	SUS304
13	THRUST WASHER	SUS304	
14	NUT	SUS304	

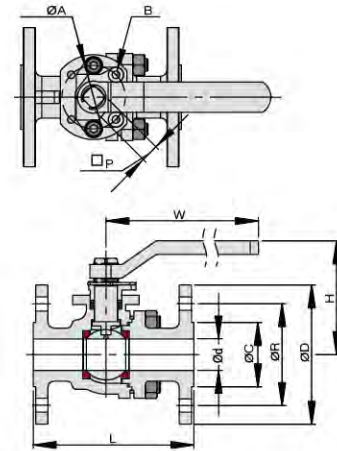


# Industrial Valve

## 2PC FLANGED BALL VALVE



- Features:
- Full Port
  - Class 150/ Class 300
  - Fire-Design Upon Requeмент Acc.API607
  - Blow-Out Proof Stem
  - Blance Hole in Ball Slot
  - V-Ring Packing for Self-Adjustment
  - ◆ & ■ Stem For Costomer Requeмент
  - Design Standard:ASME B16.34
  - Face to Face:ASME B16.10
  - Testing Standard:API 598/SP-110



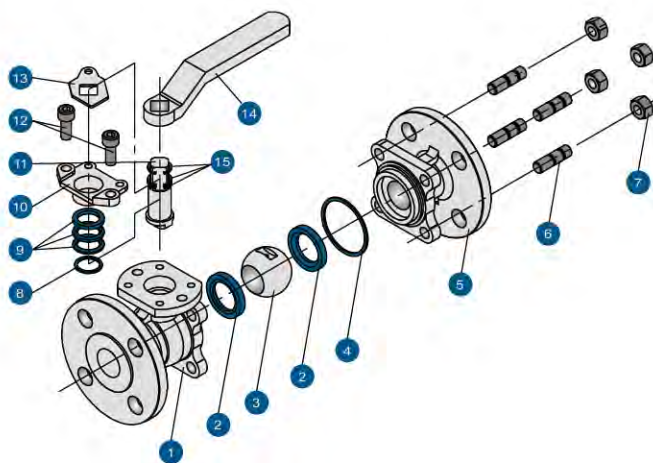
### PRESSURE TESTING

STANDARD PRESSURE	1.6Mpa
SHELL PRESSURE TESTING	2.4Mpa
WATER SEAL TESTING	1.8Mpa
AIR SEAL TESTING	0.4~0.7Mpa

### 150LB DIMENSION

SIZE	Φd	L	H	W	ΦC	ΦR	ΦD	N-M	P	A	B	TORQUE N.M	CV
DN15	15	108	94	125	34.9	60.3	90	4-16	9	42	5	5	3.4
DN20	20	117	97	125	42.9	69.9	100	4-16	9	42	5	7	7
DN25	25	127	106	155	50.8	79.4	110	4-16	11	50	5	8	12.4
DN32	32	140	150	155	63.5	88.9	115	4-16	11	50	5	15	20.3
DN40	38	165	127	190	73	98.4	125	4-16	14	70	6	22	28.5
DN50	50	178	137	230	92.1	120.7	150	4-19	14	70	6	25	47.5
DN65	65	90	158	230	104.8	139.7	180	4-19	17	102	6.5	50	76
DN80	80	203	178	265	127	152.4	190	4-19	19	102	8	85	108.4
DN100	100	229	204	290	157.2	190.5	230	4-19	19	102	8	115	198

### DRAWING



### MATERIAL LIST

ITEM	PART NAME	MATERIAL
1	BODY	CF8M CF8 WCB
2	BALL SEAT	PTFE R-PTFE
3	BALL	SUS316 SUS304
4	BODY GASKET	PTFE
5	CAP	CF8M CF8 WCB
6	BOLT	SUS304
7	NUT	SUS304
8	THRUST WASHER	PTFE
9	V-RING PACKING	PTFE
10	STOP CAP	CF8M CF8
11	STEM	SUS316 SUS304
12	BOLT	SUS304
13	POSITION WASHER	SUS304
14	HANDLE	CF8
15	LOCKING WASHER	SUS301



# Industrial Valve

## GATE VALVE SCREW END



**Features:**

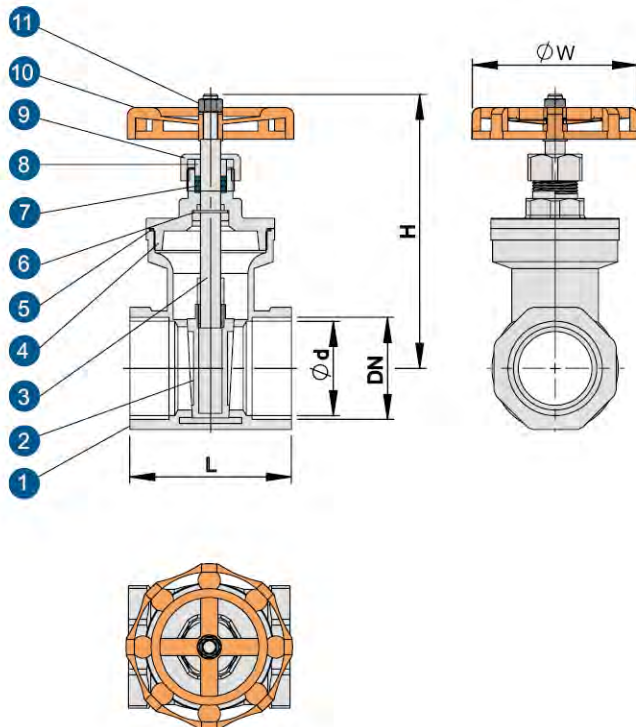
- 200WOG
- Metal to Metal Sealing
- Wheel Handle
- End Standard: DIN2999/DIN259/BSP  
ISO228-1/BS21/2779
- Design Standard: ASME B16.34
- Testing Standard: API 598

**PRESSURE TESTING**

STANDARD PRESSURE	200PSI
SHELL PRESSURE TESTING	2.1Mpa
WATER SEAL TESTING	1.5Mpa
AIR SEAL TESTING	0.4-0.7Mpa

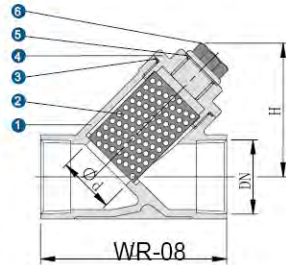
**200 PSI  
DIMENSION**

SIZE		L	d	H	W
NPS	DN				
1/2"	15	55	15	99	70
3/4"	20	60	20	105	70
1"	25	66	25	115	80
1-1/4"	32	76	32	130	90
1-1/2"	40	80	40	147	90
2"	50	96	50	168	100



MATERIAL LIST			
ITEM	PART NAME	MATERIAL	
1	BODY	CF8M	CF8
2	DISC	CF8M	CF8
3	STEM	SUS316	SUS304
4	BONNET	CF8M	CF8
5	GASKET	PTFE	
6	GLAND	SUS316	SUS304
7	STEM PACKING	PTFE	R-PTFE
8	GLAND	SUS304	
9	STOP CAP	SUS304	
10	HANDLE	ALUMINUM	
11	NUT	SUS304	

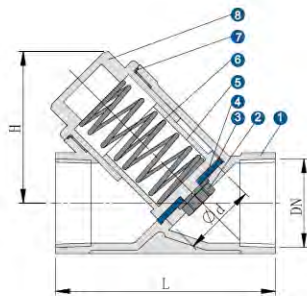
# Industrial Valve



## Y-STRAINER 800PSI

MATERIAL LIST					
ITEM	PART NAME	MATERIAL	ITEM	PART NAME	MATERIAL
1	BODY	CF8M CF8	4	TOP CAP	CF8M CF8
2	FILTER	CF8M CF8	5	GASKET	PTFE
3	GASKET		6	NUT	SUS304

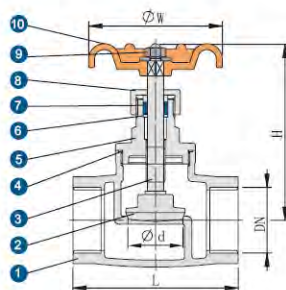
SIZE				
NPS	DN	L	Ød	H
1/2"	15	65	15	51
3/4"	20	80	20	60
1"	25	90	25	72
1-1/4"	32	105	32	77
1-1/2"	40	120	40	87
2"	50	140	50	103



## Y-CHECK VALVE PN40

MATERIAL LIST					
ITEM	PART NAME	MATERIAL	ITEM	PART NAME	MATERIAL
1	BODY	CF8M CF8	5	DISC	SUS316 SUS304
2	NUT	SUS316 SUS304	6	SPRING	SUS316 SUS304
3	WASHER	SUS316 SUS304	7	GASKET	PTFE
4	SEAT	PTFE	8	TOP NUT	CF8M CF8

SIZE				
NPS	DN	L	Ød	H
1/2"	15	65	15	51
3/4"	20	80	20	60
1"	25	90	25	72
1-1/4"	32	105	32	77
1-1/2"	40	120	40	87
2"	50	140	50	103



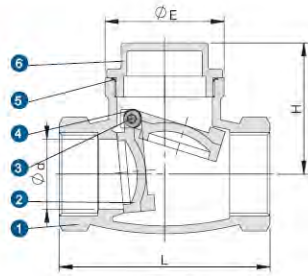
WR-09

## GLOBE VALVE CLASS 200

MATERIAL LIST					
ITEM	NAME	MATERIAL	ITEM	NAME	MATERIAL
1	BODY	CF8M CF8	6	WASHER	SUS304
2	DISC	SUS316 SUS304	7	PACKING	PTFE
3	STEM	SUS316 SUS304	8	STOP NUT	SUS304
4	GASKET	PTFE	9	STEM NUT	SUS304
5	BONNET	CF8M CF8	10	HANDLE	ALUMINUM

SIZE					
NPS	DN	L	Ød	H	W
1/2"	15	60	15	85	70
3/4"	20	74	20	95	70
1"	25	84	25	105	80
1-1/4"	32	93	32	125	90
1-1/2"	40	103	40	135	90
2"	50	133	50	155	100

# Industrial Valve

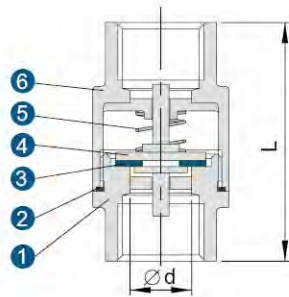


WR-07

## SWING CHECK VALVE CLASS 800

MATERIAL LIST						
ITEM	NAME	MATERIAL	ITEM	NAME	MATERIAL	
1	BODY	CF8M	CF8	4	NUT	SUS304
2	DISC	CF8M	CF8	5	GASKET	PTFE
3	NIP	SUS304	6	TENNOB	CF8M	CF8

SIZE				
NPS	DN	L	$\phi d$	H
1/2"	15	65	15	42
3/4"	20	80	20	51
1"	25	90	25	60
1-1/4"	32	105	32	67
1-1/2"	40	120	40	75
2"	50	140	50	81



WR-22

## 2-PC VERTICAL CHECK VALVE, PN40

MATERIAL LIST							
ITEM	PART NAME	MATERIAL	ITEM	PART NAME	MATERIAL		
1	CAP	CF8M	CF8	4	DISC	SUS316	SUS304
2	GASKET	CF8M	CF8	5	SPRING	SUS316	SUS304
3	SEAT	PTFE	6	BODY	CF8M	CF8	

SIZE			
NPS	DN	L	$\phi d$
1/2"	15	65	15
3/4"	20	70	20
1"	25	80	25
1-1/4"	32	96	32
1-1/2"	40	106	40
2"	50	120	50



# *Industrial Butt-Welding Fitting*



# Long Radius Elbows (45° 90° 180°)



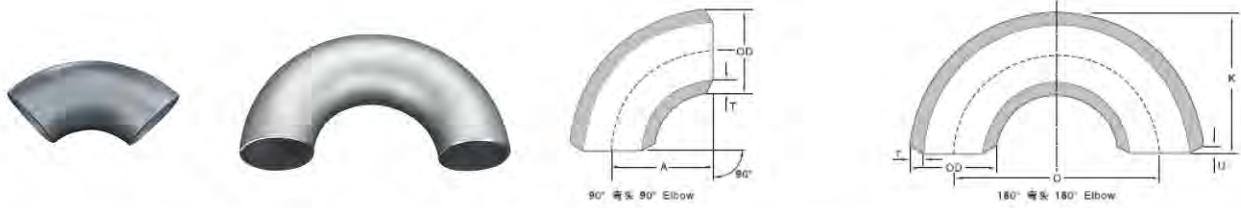
Nominal diameter		Outside diameter	Center to end		Center to Center	90° L/R Elbow Approx weight					
DN	NPS	OD	B	A	O	sch5S	sch10S	sch20S/ LG	sch40S/ STD	sch80S/ XS	sch80
15	1/2	18 21.3	16	38	76	0.04 0.05	0.05 0.06	0.06 0.07	0.06 0.08	0.08 0.10	0.08 0.10
20	3/4	25 26.7	19	38	76	0.06 0.06	0.07 0.08	0.09 0.09	0.09 0.10	0.12 0.13	0.12 0.13
25	1	32 33.4	22	38	76	0.07 0.08	0.12 0.13	0.14 0.14	0.14 0.15	0.19 0.19	0.19 0.19
32	1 1/4	38 42.2	25	96	96	0.11 0.13	0.18 0.20	0.21 0.23	0.23 0.26	0.30 0.34	0.30 0.34
40	1 1/2	45 48.3	29	114	114	0.16 0.17	0.26 0.28	0.30 0.32	0.34 0.37	0.45 0.49	0.45 0.49
50	2	57 60.6	35	152	152	0.27 0.29	0.26 0.28	0.57 0.61	0.62 0.65	0.85 0.90	0.85 0.90
65	2 1/2	76 73	44	190	190	0.58 0.55	0.45 0.47	0.97 0.93	1.35 1.30	1.79 1.71	1.79 1.71
80	3	89	51	228	228	0.82	1.17	1.51	2.04	2.76	2.76
90	3 1/2	101.6	57	266	266	1.09	1.56	2.03	2.85	3.92	3.92
100	4	108 114	64	304	304	1.32 1.40	1.90 2.01	2.74 2.61	3.64 3.85	5.05 5.35	5.05 5.35
125	5	133 141.3 139.7	79	380	380	2.67 2.84 2.81	3.27 3.47 3.43	4.74 5.05 4.99	6.14 6.54 6.46	8.72 9.31 9.19	8.72 9.31 9.19
150	6	168.3 159 165	95	458	458	4.10 3.86 4.01	5.01 4.72 4.91	7.29 6.88 7.14	10.24 9.64 10.03	15.41 14.50 15.09	15.41 14.50 15.09
200	8	219 216	127	610	610	7.12 7.03	9.63 9.49	15.94 15.71	20.51 20.22	31.17 30.71	31.17 30.71
250	10	273 267.4	159	762	762	16.62 13.34	16.74 16.39	24.97 24.44	36.33 35.56	49.12 48.06	57.83 56.57
300	12	325 323.9 318	190	914	914	22.66 22.58 22.16	26.10 26.01 25.53	35.79 35.66 35.00	53.58 53.40 52.39	70.69 70.44 49.11	95.81 95.46 93.63

Above dimensions acc.to GB/T 12459、GB/T 13401、SH 3408、SH3409、HG/T 21635、HG/T 21631、SY/T 05010、ASME B16.9.

Weights are approximate and based on manufacturer's data, according to ASME B36.10M、B36.19M,(sch20s/LG,Weights are approximate and based on manufacture's data, according to GB/T 12459、GB/T 13401.)



## Short Radius Elbows (90° 180°)



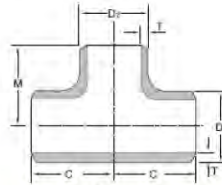
Nominal diameter		Outside diameter	Center to end	Center to center	90°L/R Elbow Approx weight					
DN	NPS	OD	A	O	sch5S	sch10S	sch20S/LG	sch40S/STD	sch80S/XS	sch80
25	1	32	25	50	0.05	0.08	0.09	0.09	0.12	0.12
		33.4			0.05	0.08	0.09	0.10	0.13	0.13
32	1 <sub>1/4</sub>	38	32	64	0.07	0.12	0.14	0.15	0.20	0.20
		42.2			0.08	0.14	0.16	0.17	0.23	0.23
40	1 <sub>1/2</sub>	45	38	76	0.11	0.17	0.20	0.23	0.30	0.30
		48.3			0.11	0.19	0.21	0.24	0.33	0.33
50	2	57	51	102	0.18	0.30	0.38	0.41	0.57	0.57
		60.3			0.19	0.32	0.41	0.44	0.60	0.60
65	2 <sub>1/2</sub>	76	64	128	0.39	0.56	0.65	0.91	1.21	1.21
		73			0.37	0.53	0.62	0.87	1.15	1.15
80	3	89	76	152	0.54	0.78	1.01	1.36	1.84	1.84
90	3 <sub>1/2</sub>	101.6	89	178	0.73	1.04	1.36	1.91	2.62	2.62
100	4	108	102	204	0.89	1.27	1.65	2.44	3.39	3.39
		114			0.94	1.35	1.75	2.59	3.59	3.59
125	5	133	127	254	1.79	2.18	3.17	4.10	5.83	5.83
		141.3			1.90	2.32	3.38	4.37	6.22	6.22
		139.7			1.88	2.30	3.34	4.32	6.14	6.14
150	6	168.3	152	304	2.72	3.32	4.84	6.79	10.23	10.23
		159			2.57	3.14	4.56	6.40	9.63	9.63
		165			2.66	3.26	4.74	6.65	10.02	10.02
200	8	219	203	406	4.74	6.41	10.61	13.65	20.74	20.74
		216			4.68	6.32	10.46	13.46	20.44	20.44
250	10	273	254	508	9.08	11.16	16.64	24.22	32.75	38.55
		267.4			8.89	10.92	16.29	23.70	32.04	37.72

Above dimensions acc.to GB/T 12459、GB/T 13401、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 05010、ASME B16.9.

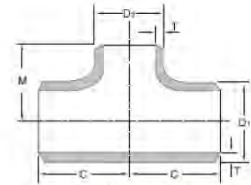
Weights are approximate and based on manufacturer's data, according to ASME B36.10M、B36.19M、(sch20S/LG,Weights are approximate and based on manufacturer's sadata, according to GB/T 12459、GB/T 13401.)



# Tees (Straight and reducing)



等径三通 Straight Tee



异径三通 Reducing Tee

Nominal diameter		Outside diameter	Center to end		Approx weight					
DN	NPS	D <sub>1</sub> ×D <sub>2</sub>	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ xs	sch80
20x20	3/4x3/4	25x25	29	29	0.07	0.10	0.13	0.13	0.16	0.16
		26.7x26.7			0.08	0.11	0.15	0.15	0.18	0.18
20x15	3/4x1/2	25x18	29	29	0.06	0.09	0.12	0.12	0.15	0.15
		26.7x21.3			0.07	0.10	0.13	0.13	0.16	0.16
25x25	1x1	32x32	38	38	0.11	0.19	0.23	0.25	0.30	0.30
		33.4x33.4			0.12	0.20	0.25	0.25	0.32	0.32
25x20	1x3/4	32x25	38	38	0.10	0.18	0.22	0.22	0.28	0.28
		33.4x26.7			0.11	0.19	0.25	0.24	0.31	0.31
25x15	1x1/2	32x18	38	38	0.09	0.17	0.21	0.21	0.27	0.27
		33.4x21.3			0.10	0.18	0.23	0.23	0.30	0.30
32x32	1.1/4x1.1/4	38x38	48	48	0.19	0.36	0.42	0.42	0.63	0.63
		42.2x42.2			0.20	0.39	0.52	0.52	0.73	0.73
32x25	1.1/4x1	38x32	48	48	0.18	0.33	0.40	0.40	0.58	0.58
		42.2x33.4			0.19	0.35	0.42	0.42	0.68	0.68
32x20	1.1/4x3/4	38x25	48	48	0.17	0.31	0.38	0.38	0.55	0.55
		42.2x26.7			0.18	0.32	0.40	0.40	0.65	0.65
32x15	1.1/4x1/2	38x18	57	48	0.16	0.30	0.36	0.36	0.52	0.52
		42.2x21.3			0.17	0.31	0.38	0.38	0.62	0.62
40x40	1.1/2x1.1/2	45x45	57	57	0.35	0.59	0.78	0.78	1.08	1.08
		48.3x48.3			0.45	0.69	0.88	0.88	1.18	1.18
40x32	1.1/2x1.1/4	45x38	57	57	0.32	0.54	0.72	0.72	0.99	0.99
		48.3x42.2			0.42	0.65	0.82	0.82	1.09	1.09
40x25	1.1/2x1	45x32	57	57	0.27	0.45	0.60	0.60	0.83	0.83
		48.3x33.4			0.37	0.65	0.80	0.80	1.08	1.08
40x20	1.1/2x3/4	45x25	57	57	0.26	0.44	0.58	0.58	0.80	0.80
		48.3x26.7			0.36	0.64	0.68	0.68	1.00	1.00
40x15	1.1/2x3/4	45x18	57	57	0.25	0.42	0.56	0.56	0.78	0.78
		48.3x21.3			0.35	0.62	0.66	0.66	0.78	0.78
50x50	2x2	57x57	64	64	0.49	1.03	1.15	1.15	1.65	1.65
		60.3x60.3			0.25	1.05	1.18	1.18	1.67	1.67
50x40	2x1.1/2	57x45	64	60	0.44	0.93	1.04	1.04	1.48	1.48
		60.3x48.3			0.45	0.95	1.06	1.06	1.50	1.50
50x32	2x1.1/4	57x38	64	57	0.40	0.81	0.98	0.98	1.37	1.37
		60.3x42.2			0.43	0.89	1.00	1.00	1.42	1.42
50x25	2x1	57x32	64	51	0.39	0.72	0.92	0.98	1.31	1.31
		60.3x33.4			0.40	0.84	0.94	0.94	1.34	1.34
50x20	2x3/4	57x25	64	44	0.37	0.70	0.87	0.87	1.24	1.24
		60.3x26.7			0.38	0.80	0.90	0.90	1.27	1.27

Above Dimensions

## Tees (Straight and reducing)

Nominal diameter		Outside diameter	Center to end		Approx weight					
DN	NPS	D <sub>1</sub> ×D <sub>2</sub>	C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ xs	sch80
65x65	2.1/2x2.1/2	76x76 73.0x73.0	76	70	0.87 0.86	1.21 1.25	2.10 2.12	2.10 2.12	2.80 2.88	2.80 2.88
65x50	2.1/2x2	76x57 73.0x60.3	76	70	0.82 0.81	1.17 1.16	2.00 1.98	2.00 1.98	2.80 2.65	2.70 2.65
65x40	2.1/2x1.1/2	76x45 73.0x48.3	76	67	0.77 0.76	1.11 1.10	1.89 1.88	1.89 1.88	2.56 2.55	2.56 2.55
65x32	2.1/2x1.1/4	76x38 73.0x42.2	76	64	0.75 0.74	1.10 1.08	1.80 1.89	1.80 1.89	2.50 2.25	2.50 2.25
65x25	2.1/2x1	76x32 73.0x33.4	76	57	0.76 0.70	1.10 1.07	1.86 1.81	1.86 1.81	2.53 2.08	2.53 2.08
80x80	3x3	89x89	86	86	1.16	1.68	3.02	3.02	4.19	4.19
80x65	3x2.1/2	89x76 88.9x73.0	86	83	1.11 1.10	1.62 1.60	2.89 2.87	2.89 2.87	4.05 3.98	4.02 3.98
80x50	3x2	88.9x57 88.9x60.3	86	76	1.06 1.07	1.53 1.55	2.76 2.79	2.76 2.79	3.81 3.85	3.81 3.85
80x40	3x1.1/2	88.9x45 88.9x48.3	86	73	1.01 1.03	1.49 1.50	2.67 2.69	2.67 2.69	3.70 3.73	3.70 3.73
80x32	3x1.1/4	89x38 88.9x42.2	86	70	1.00 1.00	1.48 1.45	2.65 2.60	2.65 2.60	3.68 3.60	3.68 3.60
90x90	3.1/2x3.1/2	101.6x101.6	95	95	1.33	1.92	3.61	3.61	5.08	5.08
90x80	3.1/2x3	101.6x88.9	95	92	1.26	1.82	3.43	3.43	4.083	4.83
90x65	3.1/2x2.1/2	101.6x73.0	95	89	1.22	1.76	3.32	3.32	4.67	4.67
90x50	3.1/2x2	101.6x60.3	95	83	1.20	1.73	3.25	3.25	4.57	4.57
90x40	3.1/2x1.1/2	101.6x48.3	95	79	1.17	1.70	3.21	3.21	4.51	4.51
100x100	4x4	108x108 114.3x114.3	105	105	1.66 1.75	2.41 2.54	4.75 5.01	4.75 5.01	6.75 7.12	6.75 7.12
100x90	4x3.1/2	114.3x101.6	105	102	1.70	2.46	4.85	4.85	6.89	6.89
100x80	4x3	108x89 114.3x88.9	105	98	1.55 1.61	2.24 2.33	4.42 4.60	4.42 4.60	6.27 6.52	6.27 6.52
100x65	4x2.1/2	108x76 114.3x73.0	105	95	1.53 1.60	2.21 2.31	4.36 4.56	4.36 4.56	6.50 6.50	6.50 6.50
100x50	4x2	108x57 114.3x60.3	105	89	1.51 1.57	2.19 2.29	4.32 4.41	4.32 4.41	6.13 6.12	6.13 6.12
100x40	4x1.1/2	108x45 114.3x48.3	105	86	1.50 1.55	2.09 2.24	4.22 4.00	4.22 4.00	6.03 6.02	6.03 6.02
125x125	5x5	133x133 141.3x141.3	124	124	3.18 3.37	3.91 4.14	7.53 7.98	7.53 7.98	10.9 11.6	10.9 11.6
125x100	5x4	133x108 141.3x114.3	124	117	3.03 3.15	3.73 3.90	7.20 7.52	7.20 7.52	10.4 10.8	10.4 10.8

Above dimensions acc.to GB/T 12459、GB/T 13401、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 05010、ASME B16.9.

Weights are approximate and based on manufacturer's data, according to ANSI B16.19



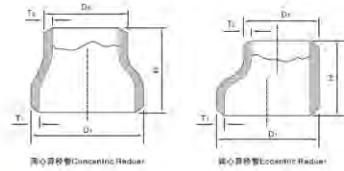
## Tees (Straight and reducing)

Nominal diameter		Outside diameter D <sub>1</sub> ×D <sub>2</sub>	Center to end		Approx weight					
DN	NPS		C	M	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
125x90	5x3.1/2	141.3x101.6	124	114	3.09	3.83	7.39	7.39	10.6	10.6
125x80	5x3	133x89 141.3x88.9	124	111	2.90 3.02	3.59 3.74	6.92 7.21	6.92 7.21	10.0 10.4	10.0 10.4
125x65	5x2.1/2	133x76 141.3x73.0	124	108	2.85 3.00	3.59 3.73	6.92 7.20	6.92 7.20	10.0 10.4	10.0 10.4
125x50	5x2	133x57 141.3x60.3	124	105	2.80 3.92	3.58 3.73	6.92 7.20	6.92 7.20	10.0 10.4	10.0 10.4
150x150	6x6	159x159 168.3x168.3	143	143	4.09 4.32	5.03 5.31	10.5 11.1	10.5 11.1	16.2 17.1	16.2 17.1
150x125	6x5	159x133 168.3x141.3	143	137	3.84 4.13	4.73 5.08	9.88 10.6	9.88 10.6	15.2 16.3	15.2 16.3
150x100	6x4	159x108 168.3x114.3	143	130	3.76 3.95	4.64 4.87	9.70 10.2	9.70 10.2	14.9 15.6	14.9 15.6
150x90	6x3.1/2	68.3x101.6	143	127	3.91	4.82	10.1	10.1	15.5	15.5
150x80	6x3	159x89 168.3x88.9	143	124	3.72 3.93	4.56 4.82	9.56 10.0	9.56 10.0	14.7 15.3	14.7 15.3
150x65	6x2.1/2	159x76 168.3x73.0	143	121	3.70 3.81	4.51 4.72	9.51 10.0	9.51 10.0	14.6 15.2	14.6 15.2
200x200	8x8	219x219	178	178	7.72	10.4	22.8	22.8	35.4	35.4
200x150	8x6	219x159 219.1x168.3	178	168	6.74 7.17	9.20 9.74	19.9 21.1	19.9 21.1	3.09 32.8	3.09 32.8
200x125	8x5	219x133 219.1x141.3	178	162	6.61 7.03	8.98 9.55	19.5 20.7	19.5 20.7	30.2 32.2	30.2 32.2
200x100	8x4	219x108 219.1x114.3	178	156	6.43 6.84	8.73 9.39	20.5 20.2	20.5 20.2	29.4 31.3	29.4 31.3
200x90	8x.31/2	219.1x101.6	178	152	6.84	9.18	20.1	20.1	31.1	31.1
250x250	10x10	273x273	216	216	14.6	18.04	40.04	40.04	65.12	65.12
250x200	10x8	273x219	216	203	13.3	16.4	36.4	36.4	59.2	59.2
250x150	10x6	273x159 273.1x168.3	216	194	11.4 12.1	15.0 15.0	31.4 33.4	31.4 33.4	50.7 54.0	50.7 54.0
250x125	10x5	273x133 273.1x141.3	216	191	11.2 11.9	14.6 14.6	30.7 32.7	30.7 32.7	49.7 52.9	49.7 52.9
250x100	10x4	273x108 273.1x114.3	216	184	11.0 11.7	14.4 14.4	30.3 32.2	30.3 32.2	49.0 52.1	49.0 52.1

Above dimensions acc.to GB/T 12459、GB/T 13401、SH 3408、SH3409、HG/T 21635、HG/T 21631、SY/T 05010、ASME B16.9  
Weights are approximate and based on manufacturer's data according to ANSI B16.19



## Reducers(concentric and eccentric)



Nominal diameter		Outside diameter	End to end	Approx weight					
DN	NPS	D <sub>1</sub> xD <sub>2</sub>		H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ xs
20x15	3/4x1/2	25x18 26.7x21.3	38	0.03 0.04	0.04 0.04	0.05 0.06	0.05 0.06	0.07 0.07	0.07 0.07
25x20	1x3/4	32x25 33.4x26.7	51	0.06 0.06	0.09 0.10	0.11 0.11	0.11 0.11	0.14 0.15	0.14 0.15
25x15	1x1/2	32x18 33.4x21.3	51	0.05 0.06	0.08 0.09	0.09 0.10	0.09 0.10	0.12 0.13	0.12 0.13
32x25	1.1/4x1	38x32 42.2x33.4	51	0.07 0.08	0.11 0.12	0.14 0.15	0.14 0.15	0.18 0.20	0.18 0.20
32x20	1.1/4x3/4	38x25 42.2x26.7	51	0.06 0.07	0.10 0.11	0.13 0.14	0.13 0.14	0.16 0.18	0.16 0.18
32x15	1.1/4x1/2	38x18 42.2x21.3	64	0.06 0.07	0.09 0.11	0.11 0.13	0.11 0.13	0.14 0.17	0.14 0.17
40x32	1.1/2x1.1/4	45x38 48.3x33.4	64	0.11 0.11	0.17 0.19	0.22 0.24	0.22 0.24	0.29 0.32	0.29 0.32
40x25	1.1/2x1	45x32 48.3x33.4	64	0.10 0.10	0.16 0.17	0.20 0.22	0.20 0.22	0.27 0.29	0.27 0.29
40x20	1.1/2x3/4	45x25 48.3x26.7	64	0.09 0.10	0.15 0.16	0.18 0.20	0.18 0.20	0.24 0.26	0.24 0.26
40x15	1.1/2x1/2	45x18 48.3x21.3	76	0.08 0.09	0.13 0.15	0.16 0.19	0.16 0.19	0.21 0.24	0.21 0.24
50x40	2x1.1/2	57x45 60.3x48.3	76	0.16 0.17	0.26 0.27	0.35 0.37	0.35 0.37	0.47 0.51	0.47 0.51
50x32	2x1.1/4	57x38 60.3x42.2	76	0.15 0.16	0.24 0.26	0.32 0.35	0.32 0.35	0.44 0.48	0.44 0.48
50x25	2x1	57x32 60.3x33.4	89	0.14 0.14	0.22 0.24	0.30 0.32	0.30 0.32	0.41 0.44	0.41 0.44
65x50	2.1/2x2	76x57 73.0x60.3	89	0.30 0.30	0.43 0.43	0.70 0.70	0.70 0.70	0.92 0.92	0.92 0.92
65x40	2.1/2x1.1/2	76x45 73.0x48.3	89	0.28 0.28	0.40 0.40	0.64 0.63	0.64 0.63	0.84 0.83	0.84 0.83
65x32	2.1/2x1.1/4	76x38 73.0x42.2	89	0.26 0.27	0.38 0.38	0.60 0.60	0.60 0.60	0.79 0.79	0.79 0.79
65x25	2.1/2x1	76x32 73.0x33.4	89	0.25 0.25	0.36 0.35	0.57 0.56	0.57 0.56	0.75 0.73	0.75 0.73
80x65	3x2.1/2	89x76 88.9x73.0	89	0.38 0.37	0.54 0.53	0.93 0.91	0.93 0.91	1.26 1.23	1.26 1.23
80x50	3x2	89x57 88.9x60.3	89	0.34 0.35	0.48 0.49	0.83 0.84	0.83 0.84	1.11 1.13	1.11 1.13

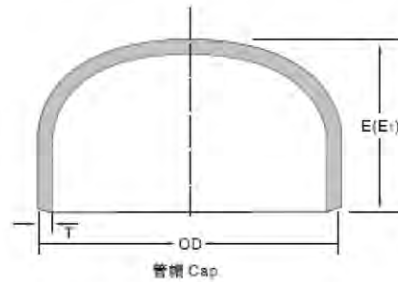
Weights are approximate and based on manufacturer's data, according to ANSI B16.19

## Reducers(concentric and eccentric)

Nominal diameter		Outside diameter	End to end	Approx. weight					
DN	NPS	D <sub>1</sub> xD <sub>2</sub>	H	sch5S	sch10S	sch40S/ STD	sch40	sch80S/ XS	sch80
80x40	3x1.1/2	89x45	89	0.31	0.45	0.76	0.76	1.02	1.02
		88.9x48.3		0.32	0.45	0.78	0.78	1.05	1.05
90x80	3.1/2x3	101.6x88.9	102	0.50	0.72	1.29	1.29	1.77	1.77
90x65	3.1/2x2.1/2	101.6x73.0	120	0.46	0.66	1.12	1.12	1.63	1.63
90x50	3.1/2x2	101.6x60.3	102	0.43	0.62	1.10	1.10	1.51	1.51
90x40	4x3.1/2	101.6x48.3	120	0.41	0.58	1.03	1.03	1.40	1.40
100x90	3.1/2x1.1/2	114.3x101.6	120	0.57	0.82	1.55	1.55	2.41	2.41
100x80	4x3	108x76	120	0.52	0.75	1.41	1.41	1.94	1.94
		114.3x88.9		0.54	0.77	1.46	1.46	2.02	2.02
100x65	4x2.1/2	108x89	120	0.49	0.70	1.32	1.32	1.82	1.82
		114.3x73.0		0.50	0.72	1.35	1.35	1.87	1.87
100x50	4x2	108x57	120	0.44	0.64	1.19	1.19	1.64	1.64
		114.3x60.3		0.48	0.68	1.27	1.27	1.75	1.75
125x100	5x4	133x108	127	1.04	1.27	2.35	2.35	3.33	3.33
		141.3x114.3		1.11	1.35	2.50	2.50	3.55	3.55
125x90	5x3.1/2	141.3x101.6	127	1.06	1.29	2.38	2.38	3.38	3.38
125x80	5x3	133x89	127	0.97	1.18	2.17	2.17	3.07	3.07
		141.3x88.9		1.01	1.23	2.27	2.27	3.22	3.22
125x65	5x2.1/2	133x76	127	0.92	1.12	2.06	2.06	2.91	2.91
		141.3x73.0		0.95	1.16	2.14	2.14	3.02	3.02
150x125	6x5	159x133	140	1.40	1.71	3.42	3.42	5.14	5.14
		168.3x141.3		1.48	1.81	3.64	3.64	5.47	5.47
150x100	6x4	159x108	140	1.29	1.58	3.15	3.15	4.72	4.72
		168.3x114.3		1.37	1.67	3.36	3.36	5.03	5.03
159x90	6x3.1/2	168.3x101.6	140	1.32	1.61	3.23	3.23	4.83	4.83
150x80	6x3	159x89	140	1.21	1.48	2.96	2.96	4.41	4.41
		168.3x88.9		1.26	1.53	3.87	3.87	4.58	4.58
200x150	8x6	219x159	152	2.00	2.70	5.65	5.65	8.55	8.55
		219.1x168.3		2.04	2.75	5.77	5.77	8.73	8.73
250x125	8x5	219x133	152	1.90	2.56	5.35	5.35	8.09	8.09
		219.1x141.3		1.93	2.60	5.44	5.44	8.23	8.23
250x150	10x6	273x159	178	3.38	4.15	8.83	14.0	14.0	14.0
		273.1x168.3		3.43	4.21	8.96	14.2	14.2	14.2
250x125	10x5	273x133	178	3.25	3.99	8.47	13.4	13.4	13.4
		273.1x141.3		3.29	4.04	8.59	13.6	13.6	13.6
200x100	8x4	219x108	152	1.80	2.43	5.07	5.07	7.64	7.64
		219.1x114.3		1.83	2.46	5.14	5.44	7.75	7.75
250x200	10x8	273x219	178	3.72	4.56	9.74	15.5	15.5	15.5

Weights are approximate and based on manufacturer's data, according to ANSI B16.19

# CAPS

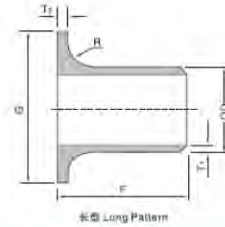
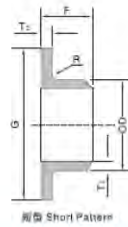


Nominal diameter		Outside diameter	Back to end		Approx weight					
DN	NPS		E	E <sub>1</sub>	sch5S	sch10S	sch40S/STD	sch40	sch80S/xs	sch80
15	1/2	18	25	25	0.019	0.024	0.031	0.031	0.042	0.042
		21.3			0.022					
20	3/4	25	25	25	0.027	0.033	0.045	0.045	0.060	0.060
		26.7			0.029					
25	1	32	38	38	0.049	0.083	0.101	0.101	0.136	0.136
		33.7			0.052					
32	1.1/4	38	38	38	0.058	0.099	0.126	0.126	0.173	0.173
		42.4			0.065					
40	1.1/2	45	38	38	0.071	0.118	0.158	0.158	0.218	0.218
		48.3			0.076					
50	2	57	38	44	0.094	0.156	0.221	0.221	0.313	0.313
		60.3			0.099					
65	2.1/2	76	38	51	0.167	0.241	0.409	0.409	0.555	0.555
		73.0			0.161					
80	3	89	51	64	0.254	0.367	0.660	0.660	0.917	0.917
90	3.1/2	101.6	64	76	0.355	0.512	0.965	0.965	1.36	1.36
100	4	108	64	76	0.387	0.561	1.11	1.11	1.58	1.58
		114.3			0.410					
125	5	133	76	89	0.769	0.945	1.82	1.82	2.65	2.65
		139.7			0.808					
150	6	159	89	102	1.07	1.31	2.74	2.74	4.22	4.22
		168.3			1.13					
200	8	219	102	127	1.76	2.38	5.119	5.119	8.05	8.05
		216.1			1.74					
250	10	273	127	152	3.36	4.14	9.15	9.15	12.5	16.3
		267.4			3.29					

Above dimensions acc.to GB/T 12459 GB/T 13401 SH 3408 SH3409 HG/T 21635 HG/T 21631 SY/T 05010 ASME B16.9.  
 Weights are approximate and based on manufacturer's data, according to ANSI B16.19



# STUB END



Nominal diameter		Outside diameter OD	Length F		Diameter of lap Nominal Maximum	Radius of Fillet R		(E) Approx weight					
DN	NPS		SP	LP		A Max	B Max	sch5S		sch10S		sch40S	
					G			SP	LP	SP	LP	SP	LP
15	1/2	21.3	50.8	76.2	35.1	3	0.75	0.049	0.067	0.062	0.084	0.079	0.106
20	3/1	26.7	50.8	76.2	42.9	3	0.75	0.064	0.087	0.081	0.109	0.101	0.144
25	1	33.4	50.8	101.6	50.8	3	0.75	0.082	0.144	0.134	0.233	0.160	0.279
32	1.1/4	42.4	50.8	101.6	63.5	5	0.75	0.109	0.188	0.178	0.307	0.225	0.386
40	1.1/2	48.3	50.8	101.6	73.2	6	0.75	0.129	0.219	0.213	0.358	0.279	0.467
50	2	60.3	63.5	152.4	91.9	8	0.75	0.204	0.406	0.338	0.667	0.471	0.924
65	2.1/2	73.0	63.5	152.4	104.6	8	0.75	0.313	0.626	0.448	0.893	0.740	1.465
80	3	88.9	63.5	152.4	127.0	10	0.75	0.400	0.781	0.574	1.117	1.01	1.954
90	3.1/2	101.6	76.2	152.4	139.7	10	0.75	0.522	0.896	0.650	1.283	1.38	2.35
100	4	114.3	76.2	152.4	157.2	11	0.75	0.606	1.024	0.870	1.474	1.68	2.822
125	5	141.3	76.2	203.2	185.7	11	1.5	0.985	2.153	1.21	2.635	2.08	4.957
150	6	168.3	88.9	203.0	215.9	13	1.5	1.34	2.591	1.64	3.174	3.37	6.482
200	8	219.1	101.6	203.2	269.7	13	1.5	1.96	3.409	2.65	4.607	5.67	9.819
250	10	273.1	127	254.0	323.9	13	1.5	3.57	6.389	4.38	7.843	9.55	17.023

Above dimensions acc.to GB/T 12459、GB/T 13401、SH 3408、SH3409、HG/T 21635、HG/T 21631、SY/T 05010、ASME B16.9.  
Weights are approximate and based on manufacturer's data, according to ANSI B16.19

Outside diameter and wall thickness  
 GB/T 12459、GB/T 13401

Nominal Pipe Size	Outside Diameter		Nominal Wall Thickness														
	D																
DN	A	B	SCH5s	SCH10s	SCH20s	LG	SCH20	SCH30	STD	SCH40	SCH60	XS	SCH80	SCH100	SCH120	SCH140	SCH160
15	21.3	18	1.6	2.1	2.6	--	--	--	--	2.9	--	--	3.6	--	--	--	4.5
20	26.9	25	1.6	2.1	2.6	--	--	--	--	2.9	--	--	4.0	--	--	--	5.6
25	33.7	32	1.6	2.8	3.2	--	--	--	--	3.2	--	--	4.5	--	--	--	6.3
32	42.4	38	1.6	2.8	3.2	--	--	--	--	3.6	--	--	5.0	--	--	--	6.3
40	48.3	45	1.6	2.8	3.2	--	--	--	--	3.6	--	--	5.0	--	--	--	7.1
50	60.3	87	1.6	3.0	3.2	--	3.6	--	--	4.0	--	--	5.6	--	--	--	8.8
65	76.1 (73)	76	2.0	3.0	3.6	--	4.5	--	--	5.0	--	--	7.1	--	--	--	10.0
80	88.9	89	2.0	3.0	4.0	--	4.5	--	--	5.6	--	--	8.0	--	--	--	11.0
90	101.6	--	2.0	3.0	4.0	--	4.5	--	--	5.6	--	--	8.0	--	--	--	12.5
100	114.3	108	2.0	3.0	4.0	--	5.0	--	--	5.9	--	--	8.8	--	11.0	--	14.2
125	139.7	133	2.9	3.4	5.0	--	5.0	--	--	6.3	--	--	10.0	--	12.5	--	16.0
150	168.3	159	2.9	3.4	5.0	--	5.6	--	--	7.1	--	--	11.0	--	14.2	--	17.5
200	219.1	219	2.9	4.0	6.3	--	6.6	7.1	--	8.0	10.0	--	12.5	16.0	17.5	20.0	22.2
250	273.0	273	3.6	4.0	6.3	--	6.3	8.0	--	8.8	12.5	--	16.0	17.5	22.2	25.0	28.0

Outside diameter and wall thickness  
 SH3408、SH 3409

Nominal Pipe Size	Outside Diameter		Nominal Wall Thickness													
	D															
DN	A		SCH5s	SCH10s	SCH20s	SCH40S		SCH20		SCH40	SCH60	SCH80		SCH120	SCH140	SCH160
10	17		1.2	1.6	2.0	2.5	3.2	--	--	2.5	--	3.5	--	--	--	--
15	22		1.6	2.0	2.5	3.0	4.0	--	--	3.0	--	4.0	--	--	--	5.0
20	27		1.6	2.0	2.5	3.0	4.0	--	--	3.0	--	4.0	--	--	--	5.5
25	34		1.6	2.8	3.0	3.5	4.5	--	--	3.5	--	4.5	--	--	--	6.5
(32)	42		1.6	2.8	3.0	3.5	5.0	--	--	3.5	--	5.0	--	--	--	6.5
40	48		1.6	2.8	3.0	4.0	5.0	--	--	4.0	--	5.0	--	--	--	7.0
50	60		1.6	2.8	3.5	4.0	5.5	3.5	--	4.0	5.0	5.5	--	7.0	--	8.5
(65)	76		2.0	3.0	3.5	5.0	7.0	4.5	--	5.0	6.0	7.0	--	8.0	--	9.5
80	89		2.0	3.0	4.0	5.5	7.5	4.5	--	5.5	6.5	7.5	--	9.0	--	11.0
100	114		2.0	3.0	4.0	6.0	8.5	5.0	--	6.0	7.0	8.5	--	11.0	--	14.0
(125)	140		2.8	3.5	5.0	6.5	9.5	5.0	--	6.5	8.0	9.5	--	13.0	--	16.0
150	168		2.8	3.5	5.0	7.0	11.0	5.5	6.5	7.0	9.5	11.0	--	14.0	--	18.0



Outside diameter and wall thickness ASME  
B36.10 M、B36.19M

Nominal Pipe Size		Outside Diameter	Nominal Wall Thickness														
DN	NPS		D	SCH 5S	SCH 10S	SCH 10	SCH 20	SCH 30	SCH 40	STD	SCH 40	SCH 60	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160
6	1/8	10.3	--	1.24	--	--	--	1.73	1.73	1.73	--	2.41	--	--	--	--	--
8	1/4	13.7	--	1.65	--	--	--	2.24	2.24	2.24	--	3.02	--	--	--	--	--
10	3/8	17.1	--	1.65	--	--	--	2.31	2.31	2.31	--	3.20	--	--	--	--	--
15	1/2	21.3	1.65	2.11	--	--	--	2.77	2.77	2.77	--	3.73	--	--	--	4.78	7.47
20	3/4	26.7	1.65	2.11	--	--	--	2.87	2.87	2.87	--	3.91	--	--	--	5.56	7.82
25	1	33.4	1.65	2.77	--	--	--	3.38	3.38	3.38	--	4.55	--	--	--	6.35	9.09
32	1 1/4	42.2	1.65	2.77	--	--	--	3.56	3.56	3.56	--	4.85	--	--	--	6.35	9.70
40	1 1/2	48.3	1.65	2.77	--	--	--	3.68	3.68	3.68	--	5.08	--	--	--	7.14	10.15
50	2	60.3	1.65	2.77	--	--	--	3.91	3.91	3.91	--	5.54	--	--	--	8.74	11.07
65	2 1/2	73.0	2.11	3.05	--	--	--	5.16	5.16	5.16	--	7.01	--	--	--	9.5	14.02
80	3	88.9	2.11	3.05	--	--	--	5.49	5.49	5.49	--	7.62	--	--	--	11.13	15.24
90	3 1/2	101.6	2.11	3.05	--	--	--	5.74	5.74	5.74	--	8.08	--	--	--	--	--
100	4	114.3	2.11	3.05	--	--	--	6.02	6.02	6.02	--	8.56	--	11.13	--	13.49	17.12
125	5	141.3	2.77	3.40	--	--	--	6.55	6.55	6.55	--	9.53	--	12.70	--	15.88	19.05
150	6	168.3	2.77	3.40	--	--	--	7.11	7.11	7.11	--	10.97	--	14.27	--	18.26	21.95
200	8	219.1	2.77	3.76	--	6.35	7.04	8.18	8.18	8.18	10.31	12.70	15.09	18.26	20.62	23.01	22.23
250	10	273.1	3.40	4.19	--	6.35	7.80	9.27	9.27	9.27	12.70	12.70	18.26	21.44	25.40	28.58	25.40
300	12	323.9	3.96	4.57	--	6.35	8.38	9.53	9.53	10.31	14.27	12.70	21.44	25.40	28.58	33.32	25.40

Outside diameter and wall thickness  
JIS B2311、B2312、B2313

Nominal Pipe Size		Outside Diameter	Nominal Wall Thickness																	
DN	NPS		D	SGP	SCH 5S	SCH 10S	SCH 10	SCH 20s	SCH 30	SCH 40s	STD	SCH 40	SCH 60	SCH 80s	XS	SCH 80	SCH 100	SCH 120	SCH 140	SCH 160
15	1/2	21.7	2.8	1.65	2.1	--	2.5	--	2.8	2.8	2.8	--	3.7	3.7	3.7	--	--	--	4.8	7.5
20	3/4	27.2	2.8	1.65	2.1	--	2.5	--	2.9	2.9	2.9	--	3.9	3.9	3.9	--	--	--	5.6	7.8
25	1	34.0	3.2	1.65	2.8	--	3.0	--	3.4	3.4	3.4	--	4.5	4.5	4.5	--	--	--	6.4	9.1
32	1 1/4	42.7	3.5	1.65	2.8	--	3.0	--	3.6	3.6	3.6	--	4.9	4.9	4.9	--	--	--	6.4	9.7
40	1 1/2	48.6	3.5	1.65	2.8	--	3.0	--	3.7	3.8	3.7	--	5.1	5.1	5.1	--	--	--	7.1	10.2
50	2	60.5	3.8	1.65	2.8	--	3.5	--	3.9	3.9	3.9	--	5.5	5.5	5.5	--	--	--	8.7	11.1
65	2 1/2	76.3	4.2	2.1	3.0	--	3.5	--	5.2	5.2	5.2	--	7.0	7.0	7.0	--	--	--	9.5	14.0
80	3	89.1	4.2	2.1	3.0	--	4.0	--	5.5	5.5	5.5	--	7.6	7.6	7.6	--	--	--	11.4	15.2
90	3 1/2	101.6	4.2	2.1	3.0	--	4.0	--	5.7	5.7	5.7	--	8.1	8.1	8.1	--	--	--	--	--
100	6	114.3	4.5	2.1	3.0	--	4.0	--	6.0	6.0	6.0	--	8.6	8.6	8.6	--	11.1	--	13.5	17.1
125	5	139.8	4.5	2.8	3.4	--	5.0	--	6.6	6.6	6.6	--	9.5	9.5	9.5	--	12.7	--	15.9	19.0
150	6	165.2	5.0	2.8	3.4	--	5.0	--	7.1	7.1	7.1	--	11.0	11.0	11.0	--	14.3	--	18.2	21.9
200	8	216.3	5.8	2.8	4.0	--	6.5	7.0	8.2	8.2	8.2	10.3	12.7	12.7	12.7	15.1	18.2	20.6	23.0	22.2
250	10	267.4	6.6	3.4	4.0	--	6.5	7.8	9.3	9.3	9.3	12.7	12.7	12.7	15.1	18.3	21.4	25.4	28.6	25.4
300	12	318.5	6.9	4.0	4.5	--	6.5	8.4	9.5	9.5	10.3	14.3	12.7	12.7	17.4	21.4	25.4	28.6	33.3	25.4

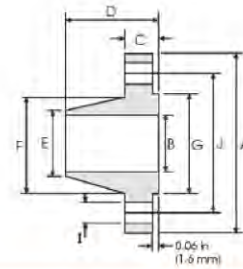






# FLANGE

## Weld Neck Flanges-ANSI B16.5



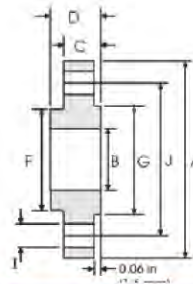
Pipe		Flange Data					Raised Face		Drilling Data		Weight	
Nominal Pipe Size	Outside Diameter	A	B	C	D	E	F	G	H	I	J	Kg/Piece
		Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Diameter at weld Bevel	Hub Diameter	Face Diameter	Number of holes	Bolt Hole Diameter	Diameter of Circle of Holes	
	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm		In mm	In mm	
1/2	0.840 21.30	3.500 88.90	0.620 15.70	0.440 11.20	1.880 47.80	0.840 21.30	1.190 30.20	1.380 35.00	4	0.620 15.70	2.380 60.45	0.48
3/4	1.050 26.70	3.880 98.60	0.820 20.80	0.500 12.70	2.060 52.30	1.050 26.70	1.500 38.10	1.690 42.90	4	0.620 15.70	2.750 69.85	0.71
1	1.315 33.40	4.250 108.0	1.050 26.70	0.560 14.20	2.190 55.60	1.320 33.50	1.940 49.30	2.000 50.80	4	0.620 15.70	3.120 79.25	1.01
1 1/4	1.660 42.20	4.620 117.3	1.380 35.10	0.620 15.70	2.250 57.15	1.660 42.20	2.310 58.70	2.500 63.50	4	0.620 15.70	3.500 88.90	1.33
1 1/2	1.900 48.30	5.000 127.0	1.610 40.90	0.690 17.50	2.440 62.00	1.900 48.30	2.560 65.00	2.880 73.15	4	0.620 15.70	3.880 98.60	1.72
2	2.375 60.30	6.000 152.4	2.070 52.60	0.750 19.10	2.500 63.50	2.380 60.45	3.060 77.70	3.620 91.90	4	0.750 19.10	4.750 120.7	2.58
2 1/2	2.875 73.00	7.000 177.8	2.470 62.70	0.880 22.4	2.750 69.85	2.880 73.15	3.560 90.40	4.120 104.8	4	0.750 19.10	5.500 139.7	4.11
3	3.500 88.90	7.500 190.5	3.070 78.00	0.940 23.90	2.750 69.85	3.500 88.90	4.250 108.0	5.000 127.0	4	0.750 19.10	6.000 152.4	4.92
3 1/2	4.000 101.6	8.500 215.9	3.550 90.20	0.940 23.90	2.810 71.40	4.000 101.6	4.810 122.2	5.500 139.7	8	0.750 19.10	7.000 177.8	6.08
4	4.500 114.30	9.000 228.6	4.303 102.4	0.940 23.90	3.000 76.20	4.500 114.3	5.310 134.9	6.190 157.2	8	0.750 19.10	7.500 190.5	6.84
5	5.563 141.3	10.00 254.0	5.050 128.3	0.940 23.90	3.500 88.90	5.560 141.2	6.440 163.6	7.310 185.7	8	0.880 22.40	8.500 215.9	8.56
6	6.625 168.3	11.00 279.4	6.070 154.2	1.000 25.40	3.500 88.90	6.630 168.4	7.560 192.0	8.500 215.9	8	0.880 22.40	9.500 241.3	10.6
8	8.625 219.1	13.50 342.9	7.980 202.7	1.120 28.40	4.000 101.6	8.630 219.2	9.690 246.1	10.62 269.7	8	0.880 22.40	11.75 298.5	17.6
10	10.75 273.0	16.00 406.4	10.02 254.5	1.190 30.20	4.000 101.6	10.76 273.0	12.00 304.8	12.75 323.8	12	1.000 25.40	14.25 362.0	24.0
12	12.75 323.8	19.00 482.6	12.00 304.8	1.250 31.75	4.500 114.3	12.75 323.8	14.38 365.3	15.00 381.0	12	1.000 25.40	17.00 431.8	36.5
14	14.00 355.6	21.00 533.4	To be specified by Purchaser	1.380 35.10	5.000 127.0	14.00 355.6	15.75 400.1	16.25 412.7	12	1.12 28.40	18.75 476.3	48.4
16	16.00 406.4	23.50 596.9		1.440 36.60	5.000 127.0	16.00 406.4	18.00 475.2	18.50 469.9	16	1.120 28.40	21.25 539.8	60.6
18	18.00 457.2	25.00 635.0		1.560 39.60	5.500 139.7	18.00 457.2	19.88 505.0	21.00 533.4	16	1.250 31.75	22.75 577.9	68.3
20	20.00 508.0	27.50 698.5		1.690 42.90	5.690 144.5	20.00 508.0	22.00 558.8	23.00 584.2	20	1.250 31.75	25.00 635.0	84.5
24	24.00 509.6	32.00 812.8		1.880 47.80	6.000 152.4	24.00 609.6	26.12 663.4	27.25 692.1	20	1.380 35.10	29.50 749.3	115

### Notes

- Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.
- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard.)

# FLANGE

Slip On Flanges - ANSI B16.5  
 Class 150 lb



Pipe	Flange Data					Hub	Raised Face	Drilling Data		Weight	
Nominal Pipe Size	A	B	C	D	F	G	H	I	J	Kg/Piece	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of holes	Bolt Hole Diameter		Diameter of Circle of Holes
	In mm	In mm	In mm	In mm	In mm	In mm	In mm		In mm		In mm
1/2	0.840 21.30	3.500 88.90	0.880 22.40	0.440 11.20	0.620 15.70	1.190 30.20	1.380 35.10	4	0.620 15.70	3.380 60.45	0.39
3/4	1.050 26.70	3.880 98.60	1.090 27.70	0.500 12.70	0.620 15.70	1.500 38.10	1.690 42.90	4	0.620 15.70	2.750 69.85	0.56
1	1.315 33.40	4.250 108.0	1.360 34.50	0.560 14.20	0.690 17.50	1.940 49.30	2.000 50.80	4	0.620 15.70	3.12 79.25	0.78
1 1/4	1.660 42.20	4.620 117.3	1.700 43.20	0.620 15.70	0.810 20.60	2.310 58.70	2.500 63.50	4	0.620 15.70	3.500 88.90	1.03
1 1/2	1.900 48.30	5.000 127.0	1.950 49.50	0.690 17.50	0.880 22.40	2.560 65.00	2.880 73.15	4	0.620 15.70	.880 98.60	1.32
2	2.375 60.30	6.000 152.4	2.440 62.00	0.750 19.10	1.000 25.40	3.060 77.70	3.620 91.90	4	0.750 19.10	4.750 120.7	2.09
2 1/2	2.875 73.00	7.000 177.8	2.940 74.70	0.880 22.40	1.120 28.40	3.560 90.40	4.120 104.6	4	0.750 19.10	5.500 139.7	3.28
3	3.500 88.90	7.500 190.5	3.570 90.70	0.940 23.90	1.190 30.20	4.250 108.0	5.000 127.0	4	0.750 19.10	6.000 152.4	3.85
3 1/2	4.000 101.6	8.500 215.9	4.070 103.4	0.940 23.90	1.250 31.75	4.810 122.2	5.500 139.7	8	0.750 19.10	7.000 177.8	4.81
4	4.500 114.3	9.000 228.6	4.570 116.1	0.940 23.90	1.310 33.30	5.310 134.9	6.190 157.2	8	0.750 19.10	7.500 190.5	5.30
5	5.563 141.3	10.00 254.0	5.660 143.8	0.940 23.90	1.440 36.60	6.440 163.6	7.310 185.7	8	0.880 22.40	8.500 215.9	6.07
6	6.625 168	11.00 279.4	8.720 221.5	1.000 25.40	1.560 39.60	7.560 192.0	8.500 215.9	8	0.880 22.40	9.500 241.3	7.45
8	8.625 219.1	13.50 342.9	1088 276.3	1.120 28.40	1.750 44.50	9.960 246.1	10.62 269.7	8	0.880 22.40	11.75 298.5	12.1
10	10.75 273.0	16.00 406.4	12.88 327.1	1.190 30.20	1.940 49.30	12.00 304.8	12.75 323.9	12	1.000 25.40	14.25 362.0	16.5
12	12.75 323.8	19.00 482.6	1.250 327.1	1.250 31.75	2.190 55.60	14.38 365.3	15.00 381.0	12	1.000 25.40	17.00 431.8	26.2
14	14.00 355.6	21.00 533.4	14.14 359.1	1.380 35.10	2.250 57.15	15.75 400.1	16.25 412.8	12	1.120 28.40	18.75 476.3	34.6
16	16.00 406.4	23.50 596.9	16.16 410.5	1.440 36.60	2.500 63.50	18.00 457.2	18.50 469.9	16	1.120 28.40	21.25 539.8	44.8
18	18.00 457.2	25.00 635.0	18.18 461.8	1.560 39.60	2.690 68.30	19.88 505.0	21.00 533.4	16	1.250 31.75	22.75 577.9	48.9
20	20.00 508.0	27.50 698.5	20.20 513.1	1.690 42.90	2.880 73.15	22.00 558.8	23.00 548.2	20	1.250 31.75	25.00 635.0	61.9
24	24.00 609.6	32.00 812.8	24.25 616.0	1.880 47.80	3.250 82.60	26.12 663.4	27.25 692.2	20	1.250 31.75	29.50 749.3	86.9

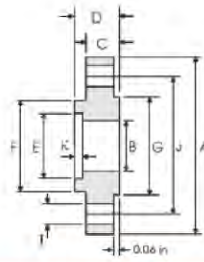
**Notes**

- Weights are based on manufacturer's data and are approximate.
- Flat face flanges may be provided at full thickness,C,or with raised face removed(the latter is nonstandard).



# FLANGE

## Socket Welding Flanges - ANSI B16.5



Pipe		Flange Data						Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size	A	B	C	D	E	K	F	G	H	I	J	Kg/Piece	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Socket Diameter	Depth of Socket	Hub Diameter	Face Diameter	NO. of Holes	Bolt Hole Diameter		Diameter of Circle of Holes
	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm		In mm
1/2	0.840 21.30	3.500 88.90	0.620 15.70	0.440 11.20	0.620 15.70	0.880 22.40	0.380 9.600	1.190 30.20	1.380 35.10	4	0.620 15.70	2.380 60.45	0.42
3/4	1.050 26.70	3.880 98.60	0.820 20.80	0.500 12.70	0.620 15.70	1.090 27.70	0.440 11.10	1.500 38.10	1.690 42.90	4	0.620 15.70	2.750 69.85	0.59
1	1.315 33.40	4.250 108.0	1.050 26.70	0.560 14.20	0.690 17.50	1.360 34.50	0.500 12.70	1.940 49.30	2.000 63.50	4	0.620 15.70	3.120 79.25	0.81
1 1/4	1.660 42.20	4.620 117.3	1.380 35.10	0.620 15.70	0.810 20.60	1.700 43.20	0.560 14.20	2.310 58.70	2.500 63.50	4	0.620 15.70	3.500 88.90	1.07
1 1/2	1.900 48.30	5.000 127.0	1.610 40.90	0.690 17.50	0.880 22.30	1.950 49.50	0.620 15.70	2.560 65.00	2.880 73.15	4	0.620 15.70	3.880 98.60	1.36
2	2.375 60.30	6.000 152.4	2.070 52.60	0.750 19.10	1.000 25.40	2.440 62.00	0.690 47.50	3.060 77.70	3.620 91.90	4	0.750 19.10	4.750 120.7	2.10
2 1/2	2.875 73.00	7.000 177.8	2.470 62.70	0.880 22.40	1.120 28.40	2.940 74.70	0.750 19.00	3.560 90.40	4.120 104.6	4	0.750 19.10	5.500 139.7	3.33
3	3.500 88.90	7.500 190.5	3.070 78.00	0.940 23.90	1.190 30.20	3.570 90.70	0.810 20.60	4.250 108.0	5.000 127.0	4	0.750 19.10	6.000 152.4	3.90

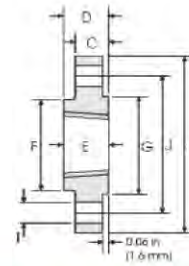
Pipe		Flange Data						Hub	Raised Face	Drilling Data			Weight
Nominal Pipe Size	A	B	C	D	E	K	F	G	H	I	J	Kg/Piece	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Socket Diameter	Depth of Socket	Hub Diameter	Face Diameter	NO. of Holes	Bolt Hole Diameter		Diameter of Circle of Holes
	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm		In mm
1/2	0.840 21.30	3.750 95.20	0.620 15.70	0.560 14.20	0.880 22.30	0.880 22.40	0.380 9.600	1.500 38.10	1.380 35.10	4	0.620 15.70	2.620 66.55	0.66
3/4	1.050 26.70	4.620 117.3	0.820 20.80	0.620 15.70	1.000 25.40	1.090 27.70	0.440 11.10	1.880 47.70	1.690 42.90	4	0.750 19.10	3.250 82.50	1.15
1	1.315 33.40	4.880 123.9	1.050 26.70	0.690 17.50	1.060 26.90	1.360 34.50	0.500 12.70	2.120 53.80	2.000 63.50	4	1.750 19.10	3.500 88.90	1.40
1 1/4	1.660 42.20	5.250 133.3	1.380 35.10	0.750 19.00	1.060 26.90	1.700 43.20	0.560 14.20	2.500 63.50	2.500 63.50	4	0.750 19.10	3.880 98.60	1.75
1 1/2	1.900 48.30	6.120 155.4	1.610 40.90	0.810 20.60	1.190 30.20	1.950 49.50	0.620 15.70	2.750 69.85	2.880 73.15	4	0.880 22.30	4.500 114.3	2.55
2	2.375 60.30	6.500 165.1	2.070 52.60	0.880 22.30	1.310 33.20	2.440 62.00	0.690 47.50	3.310 84.00	3.620 91.90	4	0.750 19.10	5.000 127.0	2.93
2 1/2	2.875 73.00	7.500 190.5	2.470 62.70	1.000 25.40	1.500 38.10	2.940 74.70	0.750 19.00	3.940 100.0	4.120 104.6	4	0.880 22.30	5.880 149.3	4.40

**Note**

-Dimension B corresponds to the pipe inside diameter. Values quoted assume 40S/Standard wall thickness.  
 -Weights are based on manufacturer's data and are approximate.

# FLANGE

## Threaded Flanges -ANSI B16.5



### Class 150 lb

Nominal Pipe Size	Pipe		Flange Data				Hub	Raised Face	Drilling Data		Weight
	A	C	D	E	F	G	H	I	J	Kg/Piece	
	Outside Diameter	Overall Diameter	Inside Diameter	Flange Thickness min	Overall Length	Hub Diameter	Face Diameter	Number of holes	Bolt Hole Diameter		Diameter of Circle of Holes
In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm	In mm		
1/2	0.840	3.500	0.440	0.620	0.620	1.190	1.380	4	0.620	2.380	0.39
	21.30	88.90	11.20	15.70	15.70	30.20	35.10		15.70	60.45	
3/4	1.050	3.880	0.500	0.620	0.620	1.500	1.690	4	0.620	2.750	0.56
	26.70	98.60	12.70	15.70	15.70	38.10	42.90		15.70	69.85	
1	1.315	4.250	0.560	0.690	0.690	1.940	2.000	4	0.620	3.12	0.78
	33.40	108.0	14.20	17.50	17.50	49.30	50.80		15.70	79.25	
1 1/4	1.660	4.620	0.620	0.810	0.810	2.310	2.500	4	0.620	3.500	1.03
	42.20	117.3	15.70	20.60	20.60	58.70	63.50		15.70	88.90	
1 1/2	1.900	5.000	0.690	0.880	0.880	2.560	2.880	4	0.620	.880	1.32
	48.30	127.0	17.50	22.40	22.40	65.00	73.15		15.70	98.60	
2	2.375	6.000	0.750	1.000	1.000	3.060	3.620	4	0.750	4.750	2.06
	60.30	152.4	19.10	25.40	25.40	77.70	91.90		19.10	120.7	
2 1/2	2.875	7.000	0.880	1.120	1.120	3.560	4.120	4	0.750	5.500	3.28
	73.00	177.8	22.40	28.40	28.40	90.40	104.6		19.10	139.7	
3	3.500	7.500	0.940	1.190	1.190	4.250	5.000	4	0.750	6.000	3.85
	88.90	190.5	23.90	30.20	30.20	108.0	127.0		19.10	152.4	
3 1/2	4.000	8.500	0.940	1.250	1.250	4.810	5.500	8	0.750	7.000	4.81
	101.6	215.9	23.90	31.75	31.75	122.2	139.7		19.10	177.8	
4	4.500	9.000	0.940	1.310	1.310	5.310	6.190	8	0.750	7.500	5.30
	114.3	228.6	23.90	33.30	33.30	134.9	157.2		19.10	190.5	
5	5.563	10.00	0.940	1.440	1.440	6.440	7.310	8	0.880	8.500	6.07
	141.3	254.0	23.90	36.60	36.60	163.6	185.7		22.40	215.9	
6	6.625	11.00	1.000	1.560	1.560	7.560	8.500	8	0.880	9.500	7.45
	16.8	279.4	25.40	39.60	39.60	192.0	215.9		22.40	241.3	
8	8.625	13.50	1.120	1.750	1.750	9.960	10.62	8	0.880	11.75	12.1
	219.1	342.9	28.40	44.50	44.50	246.1	269.7		22.40	298.5	
10	10.75	16.00	1.190	1.940	1.940	12.00	12.75	12	1.000	14.25	16.5
	273.0	406.4	30.20	49.30	49.30	304.8	323.9		25.40	362.0	
12	12.75	19.00	1.250	2.190	2.190	14.38	15.00	12	1.000	17.00	26.2
	323.8	482.6	31.75	55.60	55.60	365.3	381.0		25.40	431.8	
14	14.00	21.00	1.380	2.250	2.250	15.75	16.25	12	1.120	18.75	34.6
	355.6	533.4	35.10	57.15	57.15	400.1	412.8		28.40	476.3	
16	16.00	23.50	1.440	2.500	2.500	18.00	18.50	16	1.120	21.25	44.8
	406.4	596.9	36.60	63.50	63.50	457.2	469.9		28.40	539.8	
18	18.00	25.00	1.560	2.690	2.690	19.88	21.00	16	1.250	22.75	48.9
	457.2	635.0	39.60	68.30	68.30	505.0	533.4		31.75	577.9	
20	20.00	27.50	1.690	2.880	2.880	22.00	23.00	20	1.250	25.00	61.9
	508.0	698.5	42.90	73.15	73.15	558.8	548.2		31.75	635.0	
24	24.00	32.00	1.880	3.250	3.250	26.12	27.25	20	1.250	29.50	86.9
	609.6	812.8	47.80	82.60	82.60	663.4	692.2		31.75	749.3	

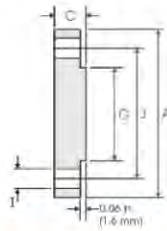
#### Notes

- The third conforms to ASME B1.20.1 NTP threads as described in section 10.(The only exceptions are small male and female plain face threaded flanges which use NPSL recout threads.)
- Class 150 threaded flanges are made without a counterbore.Threads are chamfered to the major diameter(approx.)at an angle of 45° ( approx. ) at the back of the flange.
- Weights are based on manufacturer's data and are approximate.



# FLANGE

## Blind Flanges -ANSI B1



## Class 150 lb

Nominal Pipe Size	Pipe		Flange Data		Raised Face		Drilling Data		Weight
	Outside Diameter	Overall Diameter	C	G	H	I	J	Kg/Piece	
									A
In mm	In mm	In mm	In mm	In mm	Number of holes	In mm	In mm		
1/2	0.840 21.30	3.500 88.90	0.440 11.20	1.380 35.10	4	0.620 15.70	2.380 60.45	0.39	
3/4	1.050 26.70	3.880 98.60	0.500 12.70	1.690 42.90	4	0.620 15.70	2.750 69.85	0.56	
1	1.315 33.40	4.250 108.0	0.560 14.20	2.000 50.80	4	0.620 15.70	3.12 79.25	0.78	
1 1/4	1.660 42.20	4.620 117.3	0.620 15.70	2.500 63.50	4	0.620 15.70	3.500 88.90	1.03	
1 1/2	1.900 48.30	5.000 127.0	0.690 17.50	2.880 73.15	4	0.620 15.70	.880 98.60	1.32	
2	2.375 60.30	6.000 152.4	0.750 19.10	3.620 91.90	4	0.750 19.10	4.750 120.7	2.06	
2 1/2	2.875 73.00	7.000 177.8	0.880 22.40	4.120 104.6	4	0.750 19.10	5.500 139.7	3.28	
3	3.500 88.90	7.500 190.5	0.940 23.90	5.000 127.0	4	0.750 19.10	6.000 152.4	3.85	
3 1/2	4.000 101.6	8.500 215.9	0.940 23.90	5.500 139.7	8	0.750 19.10	7.000 177.8	4.81	
4	4.500 114.3	9.000 228.6	0.940 23.90	6.190 157.2	8	0.750 19.10	7.500 190.5	5.30	
5	5.563 141.3	10.00 254.0	0.940 23.90	7.310 185.7	8	0.880 22.40	8.500 215.9	6.07	
6	6.625 168	11.00 279.4	1.000 25.40	8.500 215.9	8	0.880 22.40	9.500 241.3	7.45	
8	8.625 219.1	13.50 342.9	1.120 28.40	10.62 269.7	8	0.880 22.40	11.75 298.5	12.1	
10	10.75 273.0	16.00 406.4	1.190 30.20	12.75 323.9	12	1.000 25.40	14.25 362.0	16.5	
12	12.75 323.8	19.00 482.6	1.250 31.75	15.00 381.0	12	1.000 25.40	17.00 431.8	26.2	
14	14.00 355.6	21.00 533.4	1.380 35.10	16.25 412.8	12	1.120 28.40	18.75 476.3	34.6	
16	16.00 406.4	23.50 596.9	1.440 36.60	18.50 469.9	16	1.120 28.40	21.25 539.8	44.8	
18	18.00 457.2	25.00 635.0	1.560 39.60	21.00 533.4	16	1.250 31.75	22.75 577.9	48.9	
20	20.00 508.0	27.50 698.5	1.690 42.90	23.00 584.2	20	1.250 31.75	25.00 635.0	61.9	
24	24.00 609.6	32.00 812.8	1.880 47.80	27.25 692.2	20	1.380 35.10	29.50 749.3	86.9	

### Notes

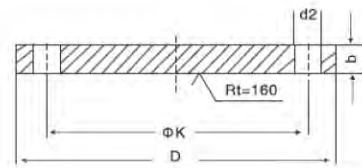
-Weights are based on manufacturer's data and are approximate.

-Flat face flanges may be provided at full thickness, C, or with raised face removed (the latter is nonstandard).



# FLANGE

DIN2527



Bridas ciegas/Blind Flanges/Blind flansche  
 Presion nominal 6./Rated pressure 6./Nenndruck 6 edidas en  
 milímetros/Dimensions in mm./Maße in mm.

Diámetro Nominal Rated Diameter Nennweite	Brida/ Flange/ Flansch			d <sub>1</sub> max.	Tornillos/Screws/Schrauben			peso da una brida/Weoght of a flange/Gowicht eines Flansches(7.85 kg/dm <sup>3</sup> )	
	D	b	K		Número/ Number/ Anzahl	Rosca/ Thread/ Gewinde	d <sub>2</sub>	Forma B/ Shape B/ Fom B	Forma T/ Shape T/ Fom T
								Kg	Kg
10	75	12	50					0.38	
15	80	12	55					0.44	
20	90	14	65					0.65	
25	100	14	75					0.82	
32	120	14	90					1.17	
40	130	14	100		4			1.39	
50	140	14	110					1.62	
65	160	14	130	55				2.44	2.48
80	190	16	150	70				3.43	3.49
100	210	16	170	90				4.76	4.86
125	240	18	200	115				6.11	6.28
150	265	18	225	140				7.51	7.75
(175)	295	20	255	165	8			10.4	10.7
200	320	20	280	190				12.3	12.7
250	375	22	335	235				18.3	19
300	440	22	395	285	12			25.3	26.3
350	490	22	445	330				31.6	32.9
400	540	22	495	380	16			38.4	40.2
500	645	24	600	475	20			60.4	63.2

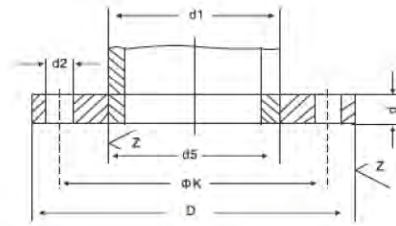
Bridas ciegas/Blind Flanges/blind flansche  
 presion nominal 10./Rated pressure 10./Nenndruck 10 Medidas en  
 milímetros/Dimensions in mm/Mae in mm.

Diámetro Nominal Rated Diameter Nennweite	Brida/ Flange/ Flansch			d <sub>1</sub> max.	Tornillos/Screws/Schrauben			peso da una brida/Weoght of a flange/Gowicht eines Flansches(7.85 kg/dm <sup>3</sup> )	
	D	b	K		Número/ Number/ Anzahl	Rosca/ Thread/ Gewinde	d <sub>2</sub>	Forma B/ Shape B/ Fom B	Forma T/ Shape T/ Fom T
								Kg	Kg
10a175	Vease presion nominal 16								
10to175	See rated pressure 16								
10bis175	Für Ne nne ten 10 bis 175 sind Blindflan sche des Nenndruckes 16zu verwenden								
200	340	24	295	190	8			16.5	16.9
250	395	26	350	235				24	24.7
300	445	26	400	285	12		M20	30.9	31.9
350	505	26	460	330				40.6	41.9
400	565	26	515	380	16			49.4	51.2
500	670	28	620	475	20		M24	75	77.8

# FLANGE

DIN2573

Bridas planas para soldar  
 presión nominal 6  
 Flat flange for welding  
 Rated pressure 6  
 Flansche, glatt zum Loten oder Schweißen  
 Nennndruck 6



Diametro Nominal Rated Diameter Nennweite	d1		d5	D	b	c	K	Tornillos/Screws/Schrauben		Peso de una brida/weight of a flange/ Gewicht eines Flansches (7.85 Kg/dm <sup>3</sup> )	
	ISO Serie1	DIN Serie 2						Numero/ Numebar/ Anzahl	Rosca/ Thread/ Gewinde		
	Reihe 1	Reihe 2									
10	-	14	14.5	75	12	5	50	4	M10	11	0.363
	17.2	-	17.7								
15	-	20	21	80	12	5	55	4	M10	11	0.41
	21.3	-	22								
20	-	25	26	90	14	5	65	4	M10	11	0.6
	26.9	-	27.6								
25	-	30	31	100	14	5	75	4	M10	11	0.74
	33.7	-	34.4								
32	-	38	39	120	16	5	90	4	M12	14	1.19
	42.4	-	43.1								
40	-	44.5	45.5	130	16	5	100	4	M12	14	1.39
	48.3	-	49								
50	-	57	58.1	140	16	6	110	4	M12	14	1.53
	60.3	-	61.1								
65	76.1	-	77.1	160	16	6	130	4	M12	14	1.89
80	88.9	-	90.3	190	18	7	150	4	M16	14	2.98
100	-	108	109.6	210	18	7	170	4	M16	18	3.46
	114.3	-	115.9								
125	-	133	134.8	240	20	7	200	8	M16	18	4.6
	139.7	-	141.6								
150	-	159	161.1	265	20	7	225	8	M16	18	5.22
	168.3	-	170.5								
200	219.1	-	221.8	320	22	7	280	8	M16	18	7..15
250	-	267	270.2	375	24	7	335	12	M16	18	9.61
	273	-	276.2								
300	323.9	-	327.6	440	24	7	295	12	M20	22	12.6
350	355.6	-	359.7	490	26	7	445	12	M20	22	15.6
	-	368	372.2								
450	406.4	-	411	540	28	7	495	16	M20	22	18.4
	-	419	423.7								
(450)*	457	-	462.5	595	30	7	550	16	M20	22	21.4
500	508	-	513.6	645	30	7	600	20	M20	22	24.6



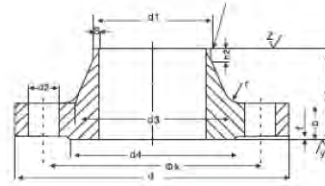
# FLANGE

## DIN2631

Bridas con cuello para soldar  
 presión nominal 6

Welding neck flanges  
 Rated pressure 6

Voreschweißflansche  
 Nenndruck 6

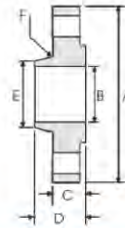


Tubo/Pipe/Rohr-Anschlu Bmabe		Brida/Flange/Flansch						Cuello/Neck/Ansatz				Resalto/ Raised face/ Dichtelste	Tomillos/Screws/Schrauben	Poso de una brida/ Weight of a flange/ Gewicht eines Flansches(7.85Kg/ dm <sup>3</sup> )		
Diámetro Nominal Rated Diameter Nennweite	d1		D	b	K	h1	d3	s	r	h2	d4	1	Numero/ Number Anzahl	Rosea/ Thread/ Gewinde	d2	Kg
	ISO Serie 1 Reihe 1	DIN Serie 2 Reihe 2														
10	-	14	75	12	50	28	22	1.8	4	8	35	2	4	M10	11	0.335
	17.2	--					26									
15	-	20	80	12	55	30	28	2	4	6	40	2	4	M10	11	0.392
	21.3	-					30									
20	-	25	90	14	65	32	35	2.3	4	6	50	2	4	M10	11	0.592
	26.9	-					38									
25	-	30	100	14	75	35	40	2.6	4	6	60	2	4	M10	11	0.747
	33.7	-					42									
32	-	38	120	14	90	35	50	2.6	6	6	70	2	4	M12	14	1.05
	42.4	-					55									
40	-	44.5	130	14	100	38	58	2.6	6	7	80	3	4	M12	14	1.18
	48.3	-					62									
50	-	57	140	14	110	38	70	2.9	6	8	90	3	4	M12	14	1.34
	60.3	-					74									
65	76.1	-	160	14	130	38	88	2.9	6	9	110	3	4	M12	14	1.67
80	88.9	-	190	16	150	42	102	3.2	8	10	128	3	4	M16	18	2.71
100	-	108	210	16	170	45	122	3.6	8	10	148	3	4	M16	18	3.24
	-	-					-									
125	-	133	240	18	200	48	148	4	8	10	178	3	8	M16	18	4.49
	139.5	-					155									
150	-	159	265	18	225	48	172	4.5	10	12	202	3	8	M16	18	5.15
	168.3	-					184									
200	219.1	-	320	20	280	55	236	5.9	10	15	258	3	8	M16	18	7.78
250	-	267	375	22	335	60	282	6.3	12	15	312	3	12	M16	18	10.8
	273	-					290									
300	323.9	-	440	22	395	62	342	7.1	12	15	365	4	12	M20	22	14
350	355.6	-	490	22	445	62	385	7.1	12	15	415	4	16	M20	22	18.5
	-	368					-									16.7
400	406.4	-	540	22	495	65	438	7.1	12	15	465	4	16	M20	22	21.2
	-	419					-									19
500	508	-	645	24	600	68	538	7.1	12	15	570	4	20	M20	22	28.6
600	610	-	755	24	705	70	640	7.1	12	16	670	5	20	M24	26	31.5
700	711	-	860	24	810	70	740	7.1	12	16	775	5	24	M24	26	374.4
800	813	-	875	24	820	70	842	7.1	12	16	880	5	24	M27	30	46.1
900	914	-	1075	26	1020	70	942	7.1	12	16	980	5	24	M27	30	55.6
1000	1018	-	1175	26	1120	70	1045	7.1	12	16	1080	5	28	M27	30	61.9
1200	1220	-	1405	28	1340	90	1248	8	16	16	1295	5	32	M30	33	100
1400	1420	-	1630	32	1560	90	1452	8	16	16	1510	5	36	M33	36	149
1600	1620	-	1830	34	1760	90	1655	9	16	16	1710	5	40	M33	36	180
1800	1820	-	2045	36	1970	100	1855	10	16	16	1920	5	44	M36	39	225
2000	2020	-	2265	38	2180	110	2058	11	16	16	2125	5	48	M39	42	295
2200	2220	-	2475	42	2390	T115	2260	12	18	25	2335	6	52	M39	42	361
2400	2420	-	2685	44	2800	125	2482	13	18	25	2545	6	56	M39	42	415
2600	2620	-	2905	46	2810	130	2665	14	18	25	2750	6	60	M45	48	530
2800	2820	-	3115	48	3020	135	2885	15	18	30	2960	6	64	M45	48	643
3000	3020	-	3315	50	3220	140	3068	16	18	30	3160	6	68	M45	48	777
3200	3220	-	3525	54	3430	150	3272	16	20	30	3370	6	72	M45	48	851
3400	3420	-	3733	56	3640	160	3475	18	20	35	3580	6	76	M45	48	993
3600	3620	-	3970	60	3860	165	3678	18	20	35	3790	6	80	M52	56	1001



# FLANGE

Slip On Flanges(Code 112)-BS 4504

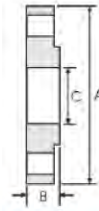


DN	PN	A mm	B mm	C mm	D mm	E mm	F mm
10	6	75	18.0	12	20	25	3
	10&6	90		14	20	30	
	25&40	90		16	22	30	
15	6	80	22	12	20	30	3
	10&16	95		14	20	35	
	25&40	95		16	22	35	
20	6	90	27.5	14	24	40	4
	10&16	105		16	24	45	
	25&40	105		18	26	45	
25	6	100	34.5	14	24	50	4
	10&16	115		16	24	52	
	25&40	115		18	28	52	
32	6	120	43.5	14	26	60	5
	10&16	140		16	26	60	
	25&40	140		18	30	60	
40	6	130	49.5	14	26	70	5
	10&16	150		16	26	70	
	25&40	150		18	32	70	
50	6	140	61.5	14	28	80	5
	10&16	165		18	28	84	
	25&40	165		20	34	84	
65	6	160	77.5	14	32	100	6
	10&16	185		18	32	104	
	25&40	185		22	38	104	
80	6	190	90.5	16	34	110	6
	10&16	200		20	34	118	
	25&40	200		24	40	118	
100	6	210	116.0	16	40	130	6
	10&16	220		20	40	140	
	25&40	235		24	44	145	
125	6	240	141.5	18	44	160	6
	10&16	250		22	44	168	
	25&40	270		26	48	170	
150	6	265	170.5	18	44	185	8
	10&16	285		22	44	195	
	25&40	300		28	75	190	

DN	PN	A mm	B mm	C mm	D mm	E mm	F mm
200	6	320	221.5	20	44	240	8
	10&16	340		24	44	246	
	25	360		30	52	258	
	40	375		34	52	260	
250	6	375	276.5	22	44	295	10
	10	395		26	46	298	
	16	405		26	46	298	
	25	425		32	60	310	
300	40	450	327.5	38	60	312	10
	6	440		22	44	355	
	10	445		26	46	350	
	16	460		28	46	350	
350	25	485	359.5	34	67	364	10
	40	515		42	67	380	
	10	505		26	53	400	
	16	520		30	57	400	
400	25	555	411.0	38	72	418	10
	40	580		46	72	424	
	10	565		26	57	456	
	16	580		32	63	456	
450	25	620	462.0	40	78	472	12
	40	660		50	78	478	
	10	615		28	63	502	
	18	640		34	88	502	
500	25	670	513.5	42	84	520	12
	40	685		50	84	522	
	10	670		28	87	559	
	16	715		34	73	559	
600	25	730	616.5	44	90	580	12
	40	755		52	90	576	
	10	780		28	75	658	
	18	840		36	83	658	
-	25	845	-	48	100	684	-
	40	890		60	100	686	
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

# FLANGE

Plate Flanges(Code 101)-BS 4504



DN	PN	A mm	B mm	C mm
10	2.5&6	75	12	16.0
	10&16	90	14	
	25&40	90	14	
15	2.5&6	80	12	22
	10&16	95	14	
	25&40	95	14	
20	2.5&6	90	14	27.5
	10&16	105	16	
	25&40	105	16	
25	2.5&6	100	14	34.5
	10&16	115	16	
	25&40	115	16	
32	2.5&6	120	16	43.5
	10&16	140	18	
	25&40	140	18	
40	2.5&6	130	18	49.5
	10&16	150	18	
	25&40	150	18	
50	2.5&6	140	16	61.5
	10&16	165	20	
	25&40	165	20	
65	2.5&6	160	16	77.5
	10&16	185	20	
	25&40	185	22	
80	2.5&6	190	18	90.5
	10&16	200	20	
	25&40	200	24	
100	2.5&6	210	18	116.0
	10&16	220	22	
	25&40	235	26	
125	2.5&6	240	20	141.5
	10&16	250	22	
	25&40	270	28	
150	2.5&6	265	20	170.5
	10&16	285	24	
	25&40	300	30	
200	2.5&6	320	22	221.5
	10&16	340	24	
	25	360	32	
250	40	375	36	276.5
	2.5&6	375	24	
	10	395	26	
250	16	405	29	276.5
	25	425	35	
	40	450	42	

DN	PN	A mm	B mm	C mm
300	2.5&6	440	24	327.5
	10	445	26	
	16	460	32	
300	25	485	38	327.5
	40	515	48	
	2.5&6	490	26	
10	505	28		
16	520	35	359.0	
25	555	42		
40	580	54		359.5
2.5&6	540	28	411.0	
10	565	32		
16	580	38		
400	25	620	46	411.0
	40	660	60	
	2.5&6	595	30	
10	615	36		
16	640	42		
450	25	670	50	462.0
	40	685	68	
	2.5&6	645	39	
10	670	38		
16	715	46		
500	25	730	56	513.5
	40	755	72	
	2.5&6	755	32	
10	780	42		
16	840	52		
600	25	845	68	616.5
	40	890	84	
	2.5	860	38	
2.5	975	38		
2.5	1075	40		
1000	2.5	1175	42	
1200	2.5	1375	44	
1400	2.5	1575	48	
1600	2.5	1790	51	
1800	2.5	1990	54	
2000	2.5	2190	58	

Notes  
 -Dimension B is the flange thickness with or without a raised face.

# Sanitary Pipe

## Summarize:

Produce sanitary welded pipe and seamless pipe with DIN11850, 3A, SMS3008, ISO1127, BS4825-1, ASME GB/T 17395 standards . and polished as client's requirements .

HOPE MACHINERY provide 3.1B certification of EN10204 for all the steel material.



## Technical data

Standard	DIN11850, 3A, SMS3008, ISO1127, BS4825-1, ASME BPE, GB/T 17395
Size	1"-8" DN10-DN200 17.2-168.3
Steel material	304, 304L, 316, 316L
Surface qualities	1) 180 Grit
	2) 240 Grit
	3) 320 Grit
	4) 420 Grit
	5) Unpolished



## International general standard and measurement of sanitary pipe and fittings

		DIN 11850 Series 0		DIN 11850 Series 1		DIN 11850 Series 2		DIN 11850 Series 3		SMS		DS		3A/BPE		ISO 1127 Series 1		BS 4825	
DN	SIZE	OD	T	OD	T	OD	T	OD	T	OD	T	OD	T	OD	T	OD	T	OD	T
DN10	3/8"	12	1.5	12	1	13	1.5	14	2							17.2	1.6		
DN15	1/2"	18	1.5	18	1	19	1.5	20	2					12.7	1.65	21.3	1.6		
DN20	3/4"	22	1.5	22	1	23	1.5	24	2					19.05	1.65	26.9	1.6		
DN25	1"	28	1.5	28	1	29	1.5	30	2	25	1.25	25.4	1.5	25.4	1.65	33.7	2	25.4	1.6
DN32	1 1/4"	34	1.5	34	1	35	1.5	36	2	32	1.25	31.75	1.5			42.4	2		
DN40	1 1/2"	40	1.5	40	1	41	1.5	42	2	38	1.25	38.1	1.5	38.1	1.65	48.3	2	38.1	1.6
DN50	2"	52	1.5	52	1	53	1.5	54	2	51	1.25	50.8	1.5	50.8	1.65	60.3	2	50.8	1.6
DN65	2 1/2"					70	2			63.5	1.5	63.5	1.5	63.5	1.65			63.5	1.6
DN80	3"					85	2			76.1	1.6	76.2	2.0	76.2	1.65	76.1	2.3	76.2	1.6
	3 1/2"															88.9	2.3		
DN100	4"					104	2			101.6	2	101.6	2.0	101.6	2.11	114.3	2.6	101.6	2
DN125	5"					129	2							127	2.11	139.7	2.6		
DN150	6"					154	2							152.4	2.77	168.3	2.6		
DN200	8"					204	2							203.2	2.77	219.1	2.6		

## Chemical composition and mechanics property

	钢种	CHEMICAL COMPOSITION								MECHANICS PROPERTY			
		C ≤	Si ≤	Mn ≤	P ≤	S ≤	Cr	Mo	Ni	$\sigma_s$ 0.2(Mpa)≥	$\sigma_b$ (Mpa)≥	$\delta 5\%$	HB≤
(GB)	0Cr18Ni9	0.07	1.0	2.0	0.035	0.030	17.0-19.0	/	8.0-11	205	520	40	187
	00Cr19Ni10	0.03	1.0	2.0	0.035	0.030	18.0-20.0	/	8.0-12	177	480	40	187
	0Cr17Ni12Mo2	0.08	1.0	2.0	0.035	0.030	16.0-18.5	2.0-3.0	10-14	205	520	40	187
	00Cr17Ni14Mo2	0.03	1.0	2.0	0.035	0.030	16.0-18.0	2.0-3.0	12-15	177	480	40	187
(ASTM)	304	0.08	1.0	2.0	0.045	0.030	18.0-20.0	/	8.0-11.5	205	515	35	187
	304L	0.035	1.0	2.0	0.045	0.030	18.0-20.0	/	8.0-12	170	485	35	187
	316	0.08	1.0	2.0	0.045	0.030	16.0-18.0	2.0-3.0	10-14	205	515	35	187
	316L	0.035	1.0	2.0	0.045	0.030	16.0-18.0	2.0-3.0	10-14	170	485	35	187
(JIS)	SUS304	0.08	1.0	2.0	0.045	0.030	18.0-20.0	/	8.0-11	206	520	35	187
	SUS304L	0.03	1.0	2.0	0.045	0.030	18.0-20.0	/	9.0-13	177	481	35	187
	SUS316	0.08	1.0	2.0	0.045	0.030	16.0-18.0	2.0-3.0	10-14	206	520	35	187
	SUS316L	0.03	1.0	2.0	0.045	0.030	16.0-18.0	2.0-3.0	12-15	177	481	35	187
(DIN)	1.4301	0.07	1.0	2.0	0.045	0.015	17.5-19.5	/	8.0-10.5	205	520	40	187
	1.4307	0.03	1.0	2.0	0.045	0.015	17.5-19.5	/	8.0-10.5	180	480	40	187
	1.4401	0.07	1.0	2.0	0.045	0.015	16.5-18.5	2.0-2.5	10-13	205	520	40	187
	1.4404	0.03	1.0	2.0	0.045	0.015	16.5-18.5	2.0-2.5	10-13	180	480	40	187