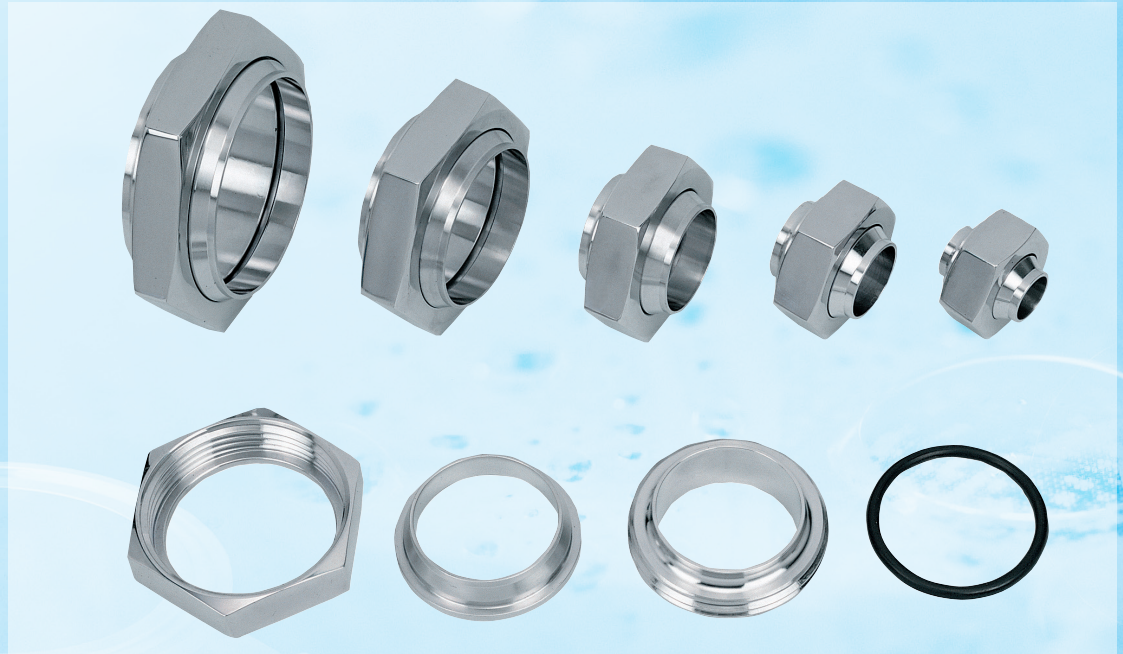


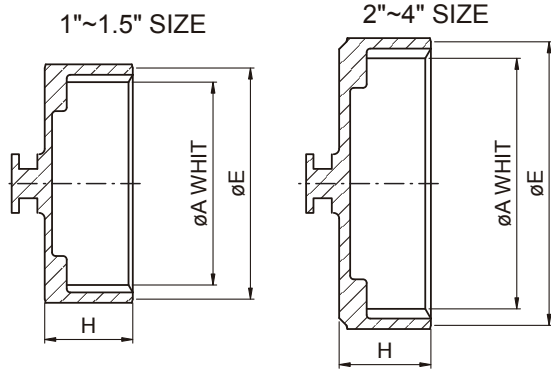
STEEL RESOURCES UNLIMITED, INC.

UNION



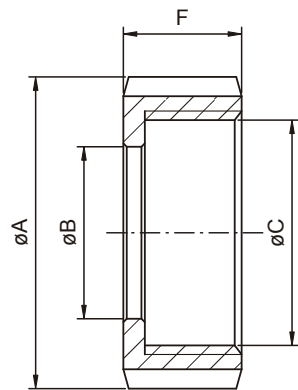
1. Standards: BS 4825
2. Applications: For the Food, Beverage, and other Hygiene Industry
3. Working Pressures: 10 Bar (Max. operating)
4. Materials: Round slotted Nut-----TP-304
Hex. Nut-----TP-304
Expanding Liner-----TP-304, 316, 316L
Expanding Male part-----TP-304, 316, 316L
Welding Liner-----TP-304, 316, 316L
Welding Male part-----TP-304, 316, 316L
Blank Round Nut-----TP-304, 316, 316L
Blank Hex. Nut-----TP-304, 316, 316L
Blank Liner-----TP-304, 316, 316L
Seal----EPDM, Silicone
5. Surface Finished: Ra Max 0.8um.
6. Size range: 1"-----8"

UNION



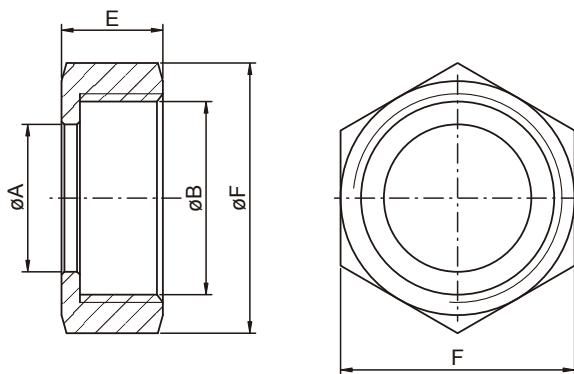
13AH BLANK HEXAGONAL NUT

SIZE	A	E	H
1"	42.6*1/8	49.0	24.0
1 1/2"	55.3*1/8	63.0	24.0
2"	68.3*1/6	77.3	25.0
2 1/2"	80.9*1/6	90.0	26.0
3"	93.6*1/6	102.7	26.0
4"	119.1*1/6	128.0	25.0
6"	169.6*1/6	182.0	29.0



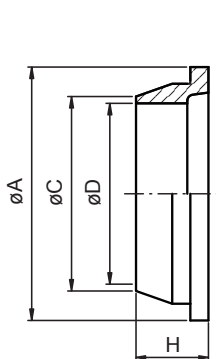
13R ROUND NUT

SIZE	A	B	C	F
1"	58.5	33.3	42.6*1/8	22.2
1 1/2"	74	46	55.3*1/8	22.2
2"	85.5	58.7	68.3*1/6	22.2
2 1/2"	98.5	71.4	80.9*1/6	22.2
3"	111.6	84.1	93.6*1/6	22.2
4"	138	109.5	119.1*1/6	22.2
5"	172.5	136	144.1*1/6	24
6"	197	162.6	169.6*1/6	23.5



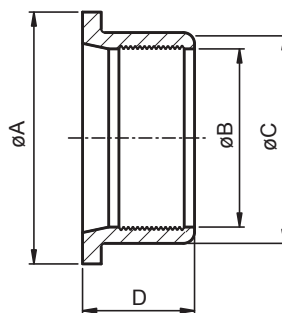
13H HEX. NUT

SIZE	A	B	E	F
1"	33.3	42.6*8T	22.2	50.8
1 1/2"	46	55.3*8T	22.2	65
2"	58.7	68.3*8T	22.2	79.3
2 1/2"	71.4	80.9*8T	22.2	92
3"	84.1	93.6*8T	22.2	104.7
4"	109.5	119.1*8T	22.2	130
6"	162.6	169.6*8T	23.8	184



14 RJT WELD LINER

SIZE	A	C	D	H
1"	41.3	25.65	22.2	19.5
1 1/2"	54.0	38.35	34.9	19.5
2"	66.7	51.05	47.6	19.5
2 1/2"	79.4	63.75	60.3	19.5
3"	92.1	76.45	73.0	19.5
4"	117.5	101.85	97.6	19.5
6"	169.1	152.5	148	19.5

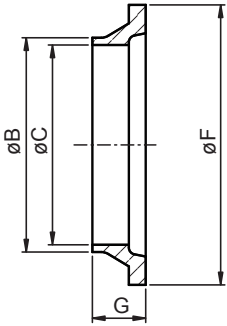


14R EXPANDING LINER

SIZE	A	B	C	D
1"	41.3	25.5	32.5	20
1 1/2"	54	38.2	45.2	24
2"	66.7	50.9	57.9	28
2 1/2"	79.4	63.6	70.6	32
3"	92.1	76.3	83.3	32
4"	117.5	101.7	108.7	32

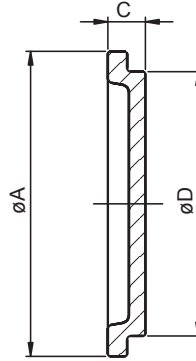
UNION

14W SHORT WELD LINER-W



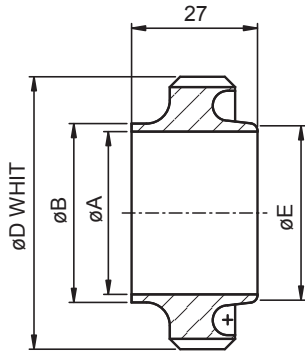
SIZE	B	C	F	G
1"	25.65	22.2	41.3	12.7
1 1/2"	38.35	34.9	54.0	12.7
2"	51.05	47.6	66.7	12.7
2 1/2"	63.75	60.3	79.4	12.7
3"	76.45	73.0	92.1	12.7
4"	101.85	97.6	117.5	12.7

14AH BLANK CAP SIZE



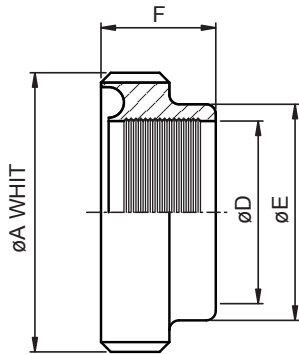
	A	D	C
1"	41.3	32.4	8.2
1 1/2"	54	45.1	8.2
2"	66.7	57.8	8.2
2 1/2"	79.4	70.5	8.2
3"	92.1	83.1	8.2
4"	117.5	108.6	8.2
6"	169	159.6	10.2

15 WELD MALE



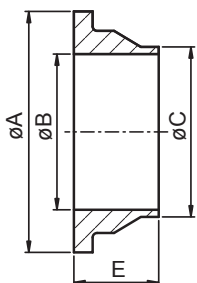
SIZE	A	B	D	E
1"	22.2	25.65	45.72*8T	25.4
1 1/2"	34.9	38.35	58.42*8T	38.1
2"	47.6	51.05	72.72*6T	50.8
2 1/2"	60.3	63.75	85.42*6T	63.5
3"	73.0	76.45	98.12*6T	76.2
4"	97.6	101.85	123.52*6T	101.6
8"	198.8	203.2	224.3*6T	203.3
104	100	104	123.52*6T	101.6

15R EXPANDING MALE



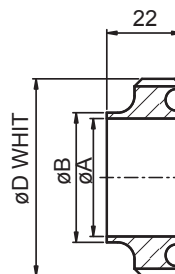
SIZE	A	D	E	F
1"	45.7*8T	25.5	32.5	20
1 1/2"	58.4*8T	38.2	45.2	24
2"	72.7*6T	50.9	57.9	28
2 1/2"	85.4*6T	63.6	70.6	32
3"	98.1*6T	76.3	83.3	32
4"	123.8*6T	101.7	108.7	32

14CP FLAT FACE LINER



SIZE	A	B	C	E
1"	41.3	22.2	25.4	19.0
1 1/2"	54.0	34.9	38.1	19.0
2"	66.7	47.6	50.8	19.0
2 1/2"	79.4	60.3	63.5	19.0
3"	92.1	73.0	76.2	19.0
4"	117.5	97.6	101.6	19.0
6"	168.3	148.2	152.4	23.5

15CP FLAT FACE MALE



SIZE	A	B	D
1"	22.2	25.4	45.72*8T
1 1/2"	34.9	38.1	58.42*8T
2"	47.6	50.8	72.72*6T
2 1/2"	60.3	63.5	85.42*6T
3"	73.0	76.2	98.12*6T
4"	97.6	101.6	123.52*6T
6"	148.2	152.4	174.32*6T

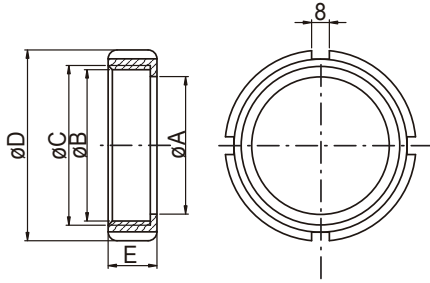
UNION FITTINGS



1. Standards: DS 722.
2. Applications: For the Food, Beverage, and other Hygiene Industry
3. Working Pressures: 10 Bar (Max. operating)
4. Materials:
 - Round slotted Nut-----TP-304
 - Expanding Liner-----TP-304, 316, 316L
 - Expanding Male part-----TP-304, 316, 316L
 - Welding Liner-----TP-304, 316, 316L
 - Welding Male part-----TP-304, 316, 316L
 - Blank Round Nut-----TP-304, 316, 316L
 - Blank Liner-----TP-304, 316, 316L
 - Seal -----EPDM, Silicone.
5. Surface Finished: Ra Max 0.8um.
6. Size range: 1"----- 6"

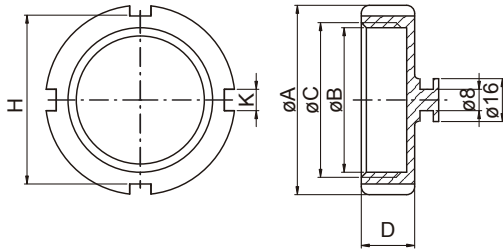
UNION FITTINGS

13R ROUND NUT



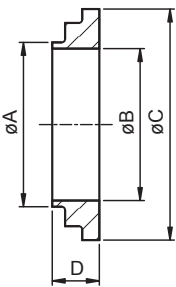
SIZE	A	B	C	D	E
1"	35.0	40.2	RD44*1/6	57.0	20
1 1/4"	42.3	48.2	RD52*1/6	65.0	20
1 1/2"	48.5	54.2	RD58*1/6	71.0	20
2"	62.5	68.2	RD72*1/6	86.0	22
2 1/2"	76.5	84.2	RD88*1/6	103.0	24
3"	88.5	96.2	RD100*1/6	115.0	25
4"	117.0	126.5	RD130*1/6	150.0	28
4"-4RT	116.0	125.0	RD130*1/4	148.0	31
5"	140.0	154.7	RD160*1/4	178.0	32
6"	161.0	169.8	RD175*1/4	193.0	32

13AH BLANK NUT



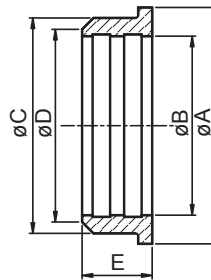
SIZE	A	B	C	D	H	K
1"	57	40.2	RD44*1/6	20	49	8
1 1/2"	71	54.2	RD58*1/6	20	63	8
2"	86	68.2	RD72*1/6	22	78	8
2 1/2"	103	84.2	RD88*1/6	24	98	8
3"	115	96.2	RD100*1/6	25	107	8
4"	150	126.2	RD130*1/6	28	139	10

14 WELD LINER SIZE



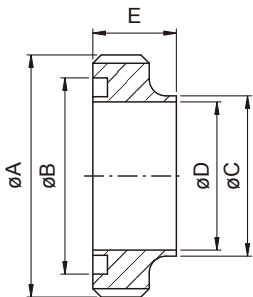
	A	B	C	D
1"	25.4	22.5	40	11
1 1/4"	33.4	27.8	47.4	11
1 1/2"	38.4	35.5	54	11
2"	51.4	48.5	68	11
2 1/2"	63.9	60.5	84	12
3"	76.4	72	96	12
4"	102	97.6	124	12
4"-4RT	102	97.5	123	30
5"	132	123.0	153.5	30
6"	155.4	148.0	168.0	24

14R EXPAND LINER



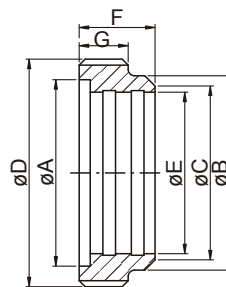
SIZE	A	B	C	D	E
1"	40.0	25.5	33.8	29.0	16.0
1 1/4"	48.0	31.8	41.5	36.0	16.0
1 1/2"	54.0	38.2	47.5	42.0	18.0
2"	68.0	50.9	61.5	55.0	20.0
2 1/2"	84.0	63.7	75.5	67.5	22.0
3"	96.0	76.4	87.5	80.0	24.0
4"	124.0	101.8	115.0	109.0	30.0

15 WELD MALE



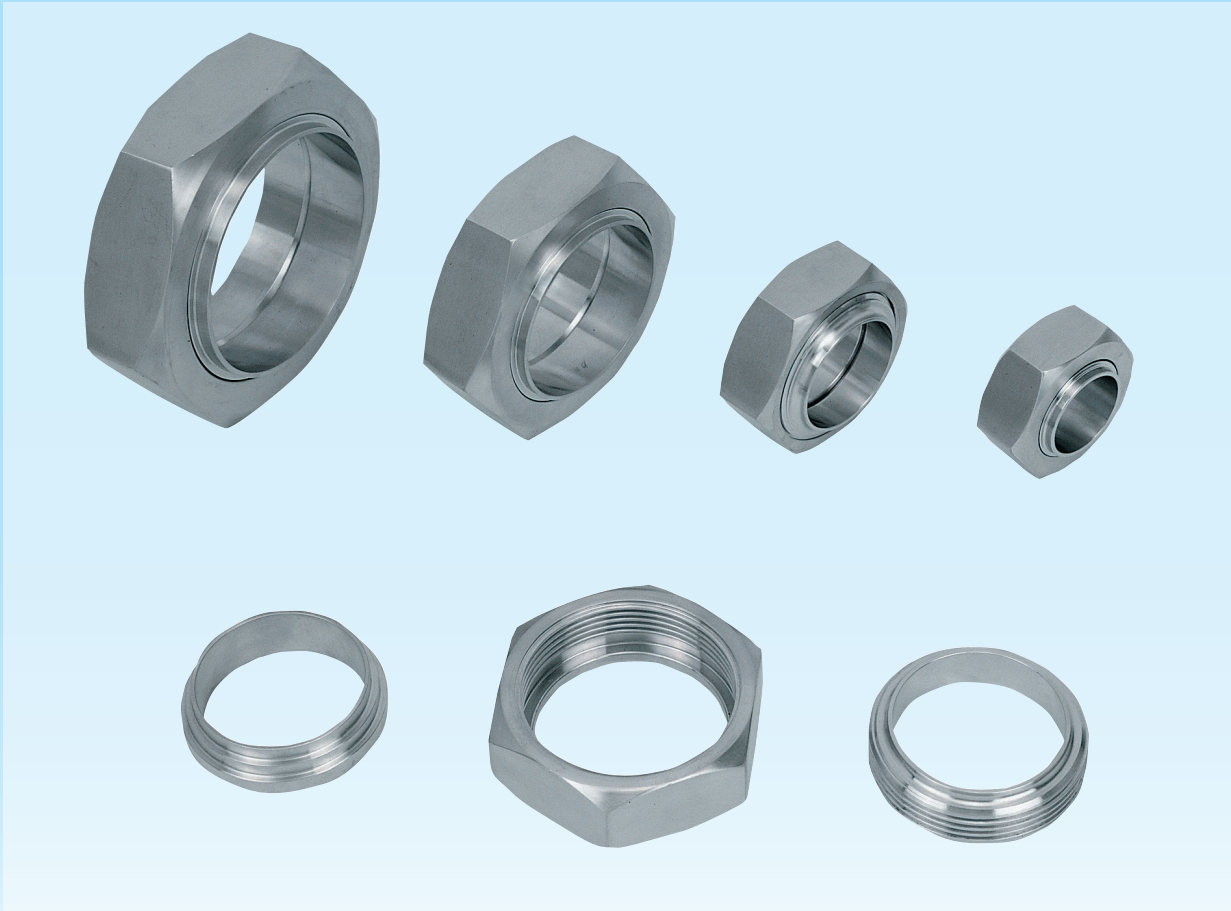
SIZE	A	B	D	C	E
1"	RD44*1/6	32	22.5	25.4	18.5
1 1/4"	RD52*1/6	41	27.8	33.4	20
1 1/2"	RD58*1/6	47	35.5	38.4	20
2"	RD72*1/6	59	48.5	51.4	20
2 1/2"	RD88*1/6	74.5	60.5	63.9	24
3"	RD100*1/6	88	72	76.4	24
4"	RD130*1/6	112.5	97.6	102	24
4"-4RT	RD130*1/4	116.0	97.5	101.6	34
5"	RD160*1/4	139.0	123.0	135.0	36
6"	RD175*1/4	164.0	148.0	160.0	37

15R EXPAND MALE



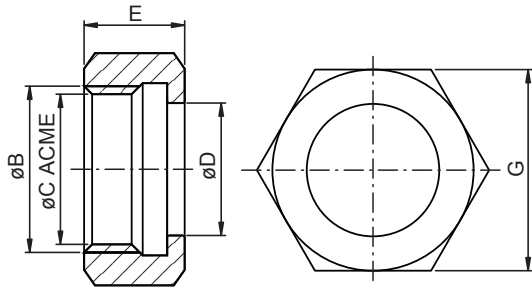
SIZE	A	B	C	D	E	F	G
1"	32.0	34.0	29.0	RD44*1/6	25.5	20.0	13.5
1 1/4"	41.0	41.5	36.0	RD52*1/6	31.8	20.0	13.5
1 1/2"	47.0	47.5	42.0	RD58*1/6	38.2	22.0	13.5
2"	59.0	61.5	55.0	RD72*1/6	50.9	24.0	15.5
2 1/2"	74.5	75.5	67.5	RD88*1/6	63.7	26.0	15.5
3"	88.0	87.5	80.0	RD100*1/6	76.4	28.0	16.5
4"	112.5	115.0	110.0	RD130*1/6	101.8	35.0	18.0

3A BEVEL SEAT UNION FITTINGS



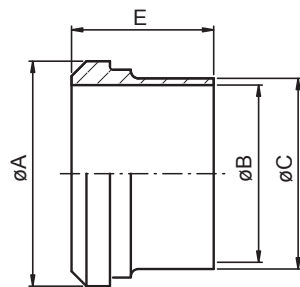
1. Standards: 3A STD.
2. Applications: For the Food, Beverage, and other Hygiene Industry
3. Working Pressures: Up to 400PSI.
4. Materials:
 - Hex. Nut-----TP-304
 - Expanding Liner-----TP-304, 316, 316L
 - Expanding Male part-----TP-304, 316, 316L
 - Welding Liner-----TP-304, 316, 316L
 - Welding Male part-----TP-304, 316, 316L
 - Blank Hex. Nut-----TP-304, 316, 316L
 - Blank Liner-----TP-304, 316, 316L
5. Surface Finished: ID & OD 150 Grit or equivalent 32RA.
6. Size range: 1"-----4"
7. Screw: Acme

3A BEVEL SEAT UNION FITTINGS



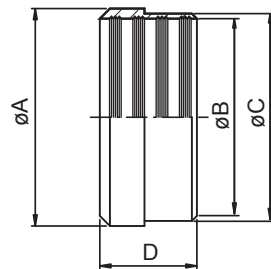
3A-13H 3A HEXAGONAL NUT

SIZE	B	C	D	E	G
1"	38.02	34.34*1/8	30.3	23.0	46.0
1 1/2"	51.54	47.86*1/8	43.4	24.6	61.1
2"	65.05	61.37*1/8	56.5	27.0	76.2
2 1/2"	78.56	74.88*1/8	69.6	30.15	91.3
3"	92.08	88.40*1/8	82.7	32.5	106.4
4"	120.14	115.42*1/6	108.9	38.1	137.6



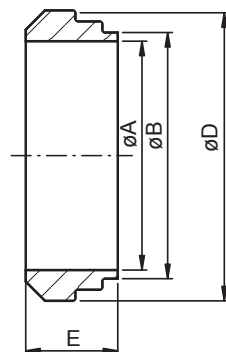
3A-14A LONG WELD LINER

SIZE	A	B	C	E
1"	33.3	22.2	25.7	34.9
1 1/2"	46.8	34.9	38.4	38.1
2"	60.3	47.5	51.1	38.1
2 1/2"	73.8	60.2	63.8	44.5
3"	87.3	72.9	76.5	44.5
4"	114.3	97.4	101.9	44.5



3A-14R RECESSLESS LINER

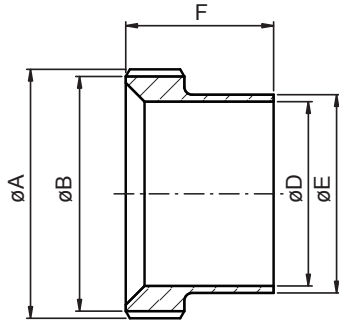
SIZE	A	B	C	D
1"	33.3	25.5	29.5	19.1
1 1/2"	46.8	38.2	42.6	28.6
2"	60.3	50.9	55.7	33.3
2 1/2"	73.8	63.6	68.8	34.9
3"	87.3	76.3	81.9	36.5
4"	114.3	101.7	108.1	38.1



3A-14P 3A SHORT BEVEL SEAT WELD LINER

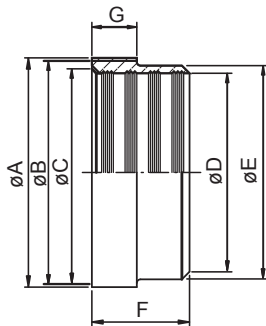
SIZE	A	B	D	E
1"	22.2	25.7	33.3	18.3
1 1/2"	34.9	38.4	46.8	18.3
2"	47.5	51.1	60.3	19.1
2 1/2"	60.2	63.8	73.8	22.3
3"	72.9	76.5	87.3	23.1
4"	97.4	101.9	114.3	26.2

3A BEVEL SEAT UNION FITTINGS



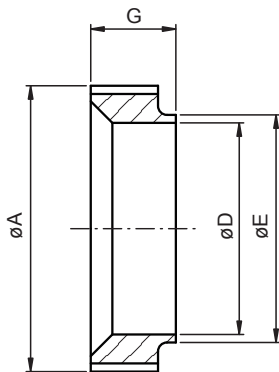
3A-15A LONG WELD MALE

SIZE	A	B	D	E	F
1"	37.13ACME 8TPI	33.4	22.2	25.7	34.9
1 1/2"	50.65ACME 8TPI	47.0	34.9	38.4	38.1
2"	64.16ACME 8TPI	60.5	47.5	51.1	38.1
2 1/2"	77.67ACME 8TPI	74.0	60.2	63.8	44.5
3"	91.19ACME 8TPI	87.5	72.9	76.5	44.5
4"	119.25ACME 6TPI	114.5	97.4	101.9	44.5



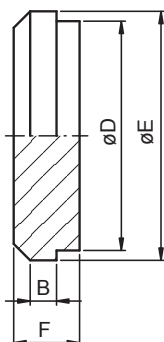
3A-15R RECESSLESS MALE

SIZE	A	B	C	D	E	F	G
1"	37.13	33.45	30.2	25.5	29.5	20.6	16.5
1 1/2"	50.65	46.96	43.7	38.2	42.6	28.6	16.5
2"	64.17	60.48	57.2	50.9	55.7	34.9	17.1
2 1/2"	77.67	73.99	70.7	63.6	68.8	38.1	18.3
3"	91.19	87.5	84.2	76.3	81.9	41.3	19.1
4"	119.25	114.53	109.4	101.7	108.1	41.3	22.2



3A-15 3A SHORT BEVEL SEAT WELD MALE

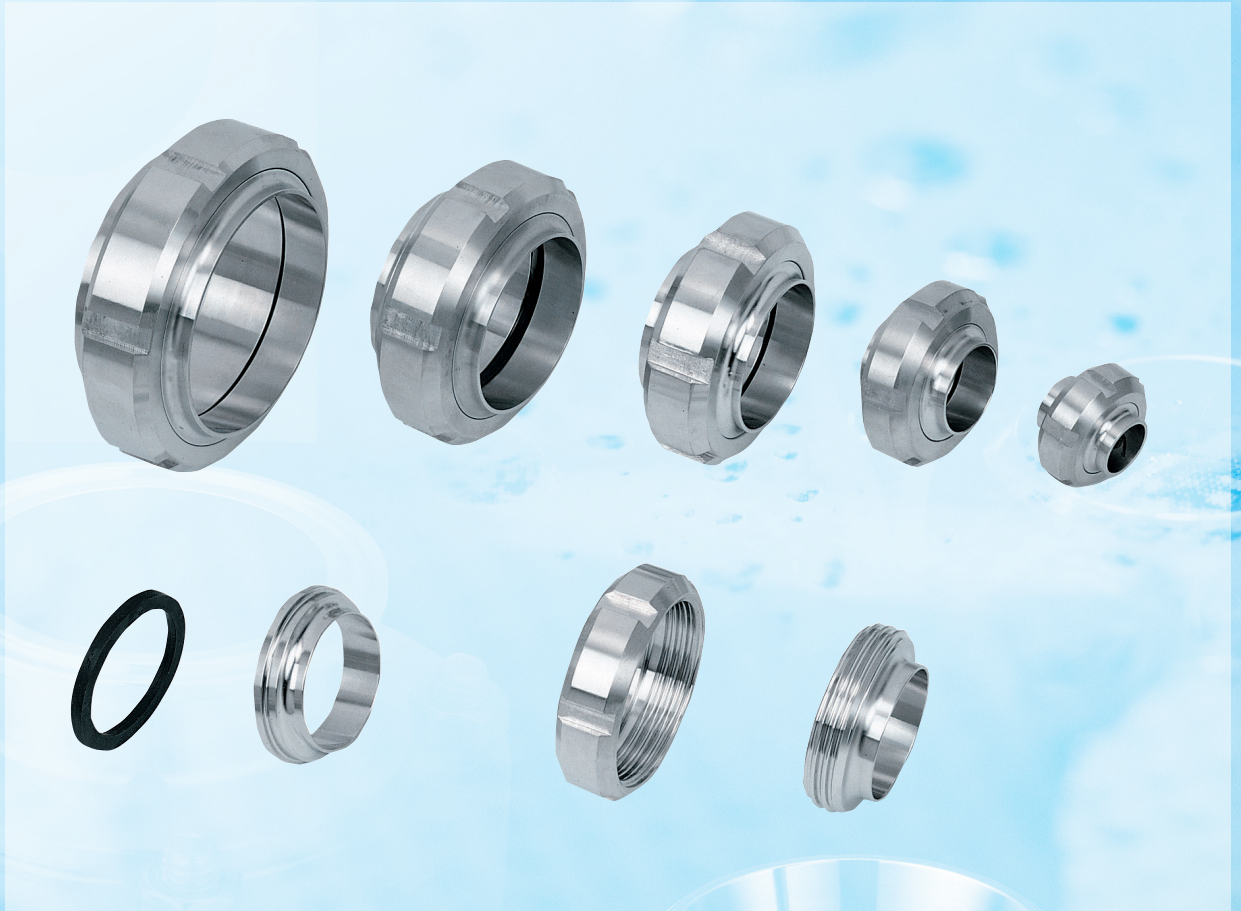
SIZE	A	D	E	G
1"	37.13+0-0.46	22.2	25.7	18.3
1 1/2"	50.65+0-0.48	34.9	38.4	18.3
2"	64.17+0-0.51	47.5	51.1	19.1
2 1/2"	77.67+0-0.53	60.2	63.8	22.2
3"	91.19+0-0.56	72.9	76.5	23.1
4"	119.25+0-0.64	97.4	101.9	26.2



3A-16A BLANK CAP

SIZE	B	D	E	F
1"	4.8	29.5	33.4	12.6
1.5"	4.7	42.6	46.9	14.3
2"	6.4	55.7	60.5	16.0
2.5"	7.1	69.0	73.9	18.2
3"	7.1	81.9	87.5	18.2
4"	7.9	108.0	114.5	20.6

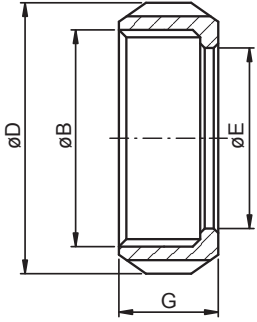
SMS UNION FITTINGS



1. Standards: SMS 1145.
2. Applications: For the Food, Beverage, and other Hygiene Industry
3. Working Pressures: Normal operating at pressures up to 6 Bar.
4. Materials:
 - Round slotted Nut-----TP-304
 - Expanding Liner-----TP-304, 316, 316L
 - Expanding Male part-----TP-304, 316, 316L
 - Welding Liner-----TP-304, 316, 316L
 - Welding Male part-----TP-304, 316, 316L
 - Blank Round Nut-----TP-304, 316, 316L
 - Blank Liner-----TP-304, 316, 316L
 - Seal---EPDM, Silicone, Buna-N, Viton.
5. Surface Finished: Ra Max 0.8um.
6. Size range: Metric 25-104.
Imperial 1"-----4"

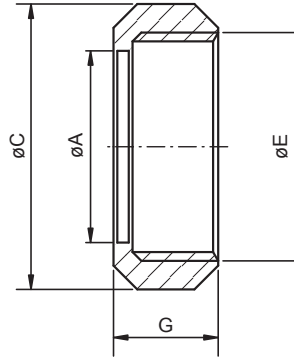
SMS UNION FITTINGS

SMS-13 SMS ROUND SLOTTED NUT-W

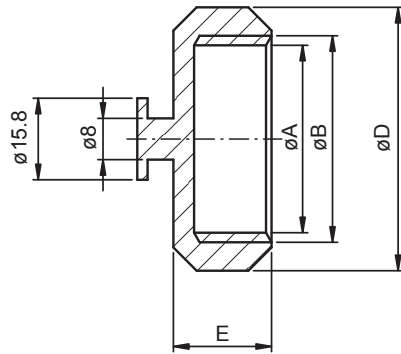


SIZE	B	D	E	G
1"	RD40*1/6	51	32.3	20
1 1/4"	RD48*1/6	60	40.0	22
1 1/2"	RD60*1/6	74	48.5	25
2"	RD70*1/6	84	61.0	26
2 1/2"	RD85*1/6	100	74.0	30
3"	RD98*1/6	114	87.0	32
4"	RD132*1/6	154	117	45

SMS-13R SMS ROUND SLOTTED NUT

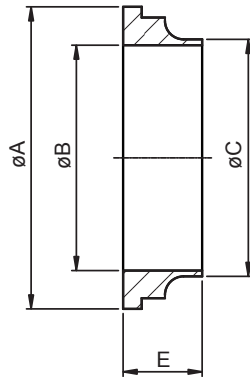


SIZE	A	C	E	G
1"	32.5	51	RD40*1/6	19
1 1/4"	40.3	60	RD48*1/6	22
1 1/2"	48.5	74	RD60*1/6	23
2"	61	84	RD70*1/6	24
2 1/2"	74	100	RD85*1/6	28
3"	87	114	RD98*1/6	30
4"	113	138	RD125*1/4	31



SMS-13 SMS BLANK NUT

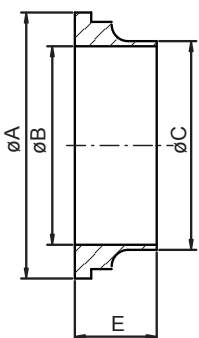
SIZE	A	B	D	E
1"	36.3	RD40*1/6	51	19
1 1/2"	56.3	RD60*1/6	74	23
2"	66.3	RD70*1/6	84	24
2 1/2"	81.3	RD85*1/6	100	28
3"	94.3	RD98*1/6	114	30
4"	120	RD125*1/4	138	31



SMS-14 SMS WELD LINER

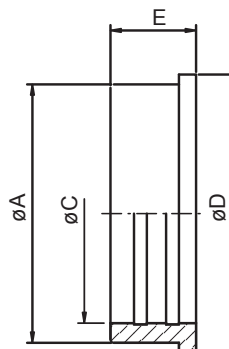
SIZE	A	B	C	E
1"	35.5	22.5	25	15.5
1 1/4"	43.3	29.3	32	16
1 1/2"	55	35.5	38	16
2"	65	48.5	51	17
2 1/2"	80	60.5	63.5	17
3"	93	72.9	76.1	19
4"	118	100.0	104	19
101.6	118	97.6	101.6	19

SMS-14G SMS LONG WELD LINER-G



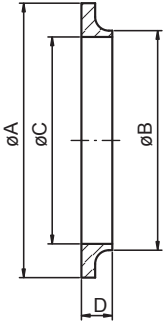
SIZE	A	B	C	E
1"	35.5	22.5	25	15.5
1 1/2"	55	35.5	38	20
2"	65	48.5	51	20
2 1/2"	80	60.5	63.5	24
3"	93	72.8	76.1	24
4"	118	100	104	30
101.6	118	97.6	101.6	30

SMS-14R SMS EXPANDING LINER



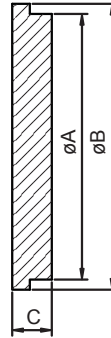
SIZE	A	C	D	E
1"	32	25.2	35.5	17
1 1/4"	39.5	32.1	43.5	17
1 1/2"	48	38.2	55	20
2"	60.4	51.2	65	20
2 1/2"	73.5	63.7	80	25
3"	86.5	76.2	93	30
4"	112.5	101.8	118	27

SMS UNION FITTINGS



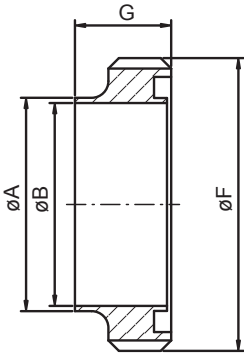
SMS-14W SMS WELD LINER-W

SIZE	A	B	C	D
1"	35.5	25.0	22.6	7.5
1 1/4"	43.5	32.0	29.6	8.0
1 1/2"	55.0	38.0	35.6	9.0
2"	65.0	51.0	48.6	9.0
2 1/2"	80.0	63.5	60.3	9.0
3"	93.0	76.1	72.9	10.0
4"	127.0	101.6	97.6	12.0



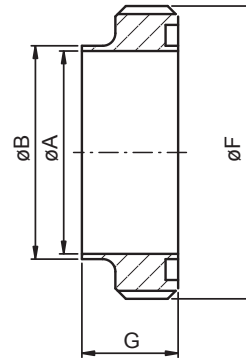
SMS14-AH SMS BLANK LINER

SIZE	A	B	C
1"	32	35.5	7.5
1 1/2"	47.9	55	8
2"	60.4	65	9
2 1/2"	73.5	80	9
3"	86.5	93	11
4"	112.5	118	11



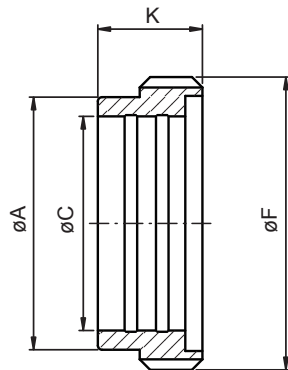
SMS-15
SMS WELD MALE

SIZE	A	B	F	G
1"	25	22.5	RD40*1/6	19
1 1/4"	32	29.3	RD48*1/6	20
1 1/2"	38	35.5	RD60*1/6	23
2"	51	48.5	RD70*1/6	23
2 1/2"	63.5	60.5	RD85*1/6	27
3"	76.1	72.9	RD98*1/6	27
4"	104	100	RD125*1/4	30
101.6	101.6	97.6	RD125*1/4	30



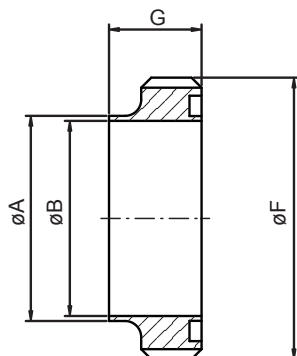
SMS-15S
SMS WELD MALE-S

SIZE	A	B	F	G
1"	22.5	25	RD40*1/6	19
1 1/2"	35.5	38	RD60*1/6	23
2"	48.5	51	RD70*1/6	23
2 1/2"	60.5	63.5	RD85*1/6	24
3"	72.5	76	RD98*1/6	24
4"	100	104	RD125*1/4	28



SMS-15R SMS EXPANDING MALE

SIZE	A	C	F	K
1"	32	25.2	RD40*1/6	20
1 1/2"	47.9	38.2	RD60*1/6	23
2"	60.4	51.2	RD70*1/6	25
2 1/2"	73.5	63.7	RD85*1/6	30
3"	86.5	76.2	RD98*1/6	30
4"	112.5	101.8	RD125*1/4	30



SMS-15W SMS WELD MALE-W

SIZE	A	B	F	G
25	25.0	22.6	RD40*1/6	15
32	32.0	29.6	RD48*1/6	17
38	38.0	35.6	RD60*1/6	20
51	51.0	48.6	RD70*1/6	20
63	63.5	60.3	RD85*1/6	24
76	76.1	72.9	RD98*1/6	24
104	101.6	97.6	RD132*1/6	35

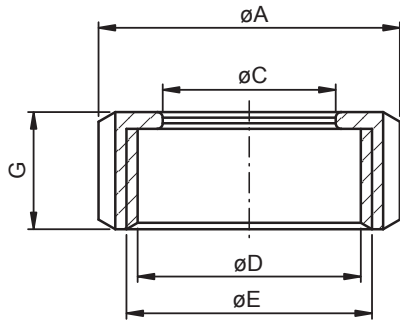
DIN UNION FITTINGS



1. Standards: DIN 11851
2. Applications: For Food Industry
3. Working Pressures: DN10-DN40 40Bar , DN50-DN100 25Bar
4. Materials:
 - Round slotted Nut-----TP-304
 - Expanding Liner-----TP-304, 316, 316L
 - Expanding Male part-----TP-304, 316, 316L
 - Welding Liner-----TP-304, 316, 316L
 - Welding Male part-----TP-304, 316, 316L
 - Blank Nut-----TP-304, 316, 316L
 - Blank Liner-----TP-304, 316, 316L
 - Seal---EPDM, Silicone, Buna-N, Viton.
5. Surface Finished: Ra Max 0.8um.
6. Size range: Imperial 1"-----4"
Metric DN10---DN150

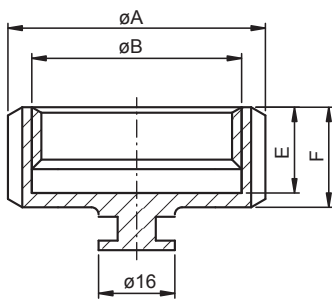
DIN UNION FITTINGS

DIN-13R DIN ROUND SLOTTED NUT



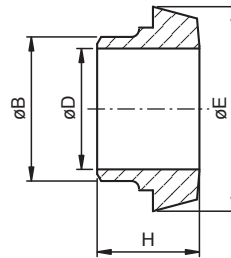
DIN	A	C	D	E	G	SLOT	
10	38	19	25.2	RD 28*1/8	18	4	
15	44	25	31.2	RD 34*1/8	18	4	
20	54	31	40.3	RD 44*1/6	21	4	
25	63	36	48.3	RD 52*1/6	21	4	
32	70	42	54.3	RD 58*1/6	21	4	
40	78	49	61.3	RD 65*1/6	21	4	
50	92	62	74.3	RD 78*1/6	22	4	
65	112	80	91.3	RD 95*1/6	25	4	6
80	127	94	105	RD110*1/4	30	4	6
90	138	104	115	RD120*1/4	30	4	6
100	148	115	125	RD130*1/4	31	4	6
125	178	138	155	RD160*1/4	35	4	6
150	210	164	185	RD190*1/4	40	4	6

DIN-13 DIN BLANK NUT



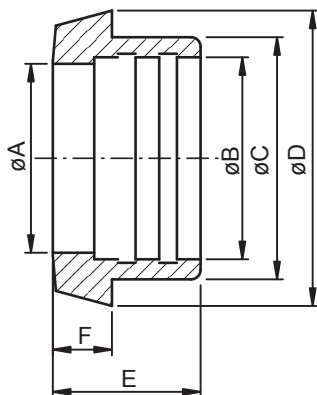
DIN	A	B	E	F	SLOT	
10	38	RD 28*1/8	15	18	4	
15	44	RD 34*1/8	15	18	4	
20	54	RD 44*1/6	18	21	4	
25	63	RD 52*1/6	18	21	4	
32	70	RD 58*1/6	18	21	4	
40	78	RD 65*1/6	18	21	4	
50	92	RD 78*1/6	19	22	4	
65	112	RD 95*1/6	21	25	4	6
80	127	RD110*1/4	26	30	4	6
90	138	RD120*1/4	26	30	4	6
100	148	RD130*1/4	26	31	4	6
125	178	RD160*1/4	30	35	4	6
150	210	RD190*1/4	34	40	4	6

DIN-14 DIN WELD LINER



DN	B	D	E	H
10	15	10	22	17
15	21	16	28	17
20	25	20	36	18
25	31	26	44	22
32	37	32	50	25
40	43	38	56	26
50	55	50	68	28
65	72	66	86	32
80	87	81	100	37
90	95	89	111	35
100	106	100	120	44
125	132	125	149	34
150	157	150	175	37

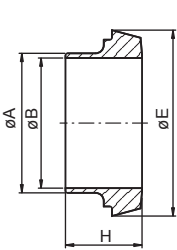
DIN-14R DIN EXPANDING LINER



DIN	A	B	C	D	E	F
10	10	12.2	18	22	17	6
15	16	18.2	24	28	17	6
20	20	22.2	30	36	18	8
25	26	28.2	35	44	22	10
32	32	34.2	41	50	25	10
40	38	40.2	48	56	26	10
50	50	52.2	61	68	28	11
65	66	70.3	79	86	32	12
80	81	85.3	93	100	37	12
100	100	104.3	114	120	44	15
125	125	129.3	137	149	34	17
150	150	154.3	163	175	37	18

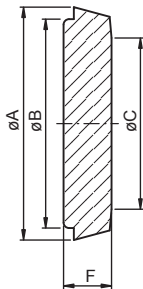
DIN UNION FITTINGS

DIN-14EB DIN IMPERIAL WELD LINER



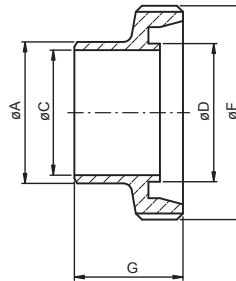
SIZE	A	B	E	H
1/2"	12.7	9.4	22	17
3/4"	19.05	15.8	28	17
1"	25.4	22.2	44	22
1 1/4"	31.8	28.5	50	25
1 1/2"	38.1	34.9	56	26
2"	50.8	47.6	68	28
2 1/2"	63.5	60.3	86	32
3"	76.2	73.0	100	37
4"	101.6	97.6	121	44
5"	127.0	123.0	150	34
6"	152.4	148.4	176	37

DIN-14AH DIN BLANK LINER



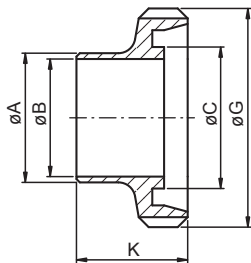
DIN	A	B	C	F
10	22	18	11	9
15	28	24	17	9
20	36	30	21	11
25	44	35	27	13
32	50	41	33	13
40	56	48	39	13
50	68	61	51	14
65	86	79	67	16
80	100	93	82	16
100	120	114	101	20
125	149	137	126	22
150	175	163	151	24

DIN-15 DIN WELD MALE

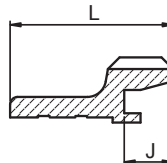
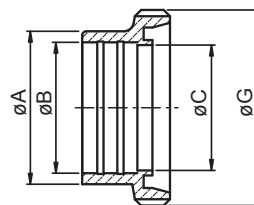


SIZE	A	C	D	F	G
10	15	10	12	RD28*1/8	21
15	21	16	18	RD34*1/8	21
20	25	20	23	RD44*1/6	24
25	31	26	30	RD52*1/6	29
32	37	32	36	RD58*1/6	32
40	43	38	42	RD65*1/6	33
50	55	50	54	RD78*1/6	35
65	72	66	71	RD95*1/6	40
80	87	81	85	RD110*1/4	45
90	95	89	94	RD120*1/4	45
100	106	100	104	RD130*1/4	54
125	132	125	130	RD160*1/4	46
150	157	150	155	RD190*1/4	50

DIN-15EB DIN IMPERIAL WELD MALE



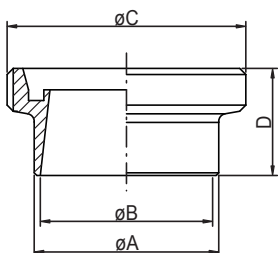
SIZE	A	B	C	G	K
1/2"	12.7	9.4	12.0	RD28*1/8	14
3/4"	19.05	15.8	18.0	RD34*1/8	14
1"	25.4	22.2	30	RD51.9*1/6	29
1 1/4"	31.8	28.5	36	RD57.9*1/6	32
1 1/2"	38.1	34.9	42	RD64.9*1/6	33
2"	50.8	47.6	54	RD77.9*1/6	35
2 1/2"	63.5	60.3	71	RD94.9*1/6	40
3"	76.2	73.0	86	RD109.9*1/4	45
4"	101.6	97.6	105	RD129.9*1/4	54
5"	127.0	123.0	130	RD159.9*1/4	46
6"	152.4	148.4	155	RD189.9*1/4	50



DIN-15R DIN EXPANDING MALE

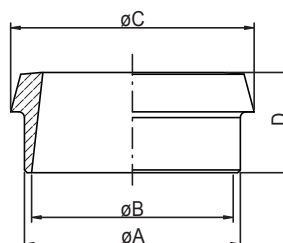
DIN	A	B	C	G	J	L
10	18	12.2	10	27.5 RD28*1/8	7	21
15	24	18.2	16	33.5 RD34*1/8	7	21
20	30	22.2	20	43.3 RD44*1/6	9	24
25	35	28.2	26	51.3 RD52*1/6	10.5	29
32	41	34.2	32	57.3 RD58*1/6	10.5	32
40	48	40.2	38	64.3 RD65*1/6	10.5	33
50	61	52.2	50	77.3 RD78*1/6	10.5	35
65	79	70.3	66	94.3 RD95*1/6	11.5	40
80	93	85.3	81	109 RD110*1/4	11.5	45
100	114	104.3	100	129 RD130*1/4	13.5	54
125	137	129.3	125	159 RD160*1/4	16.5	46
150	163	154.3	150	189 RD190*1/4	17.5	50

DIN/ISO MALE ISO-15



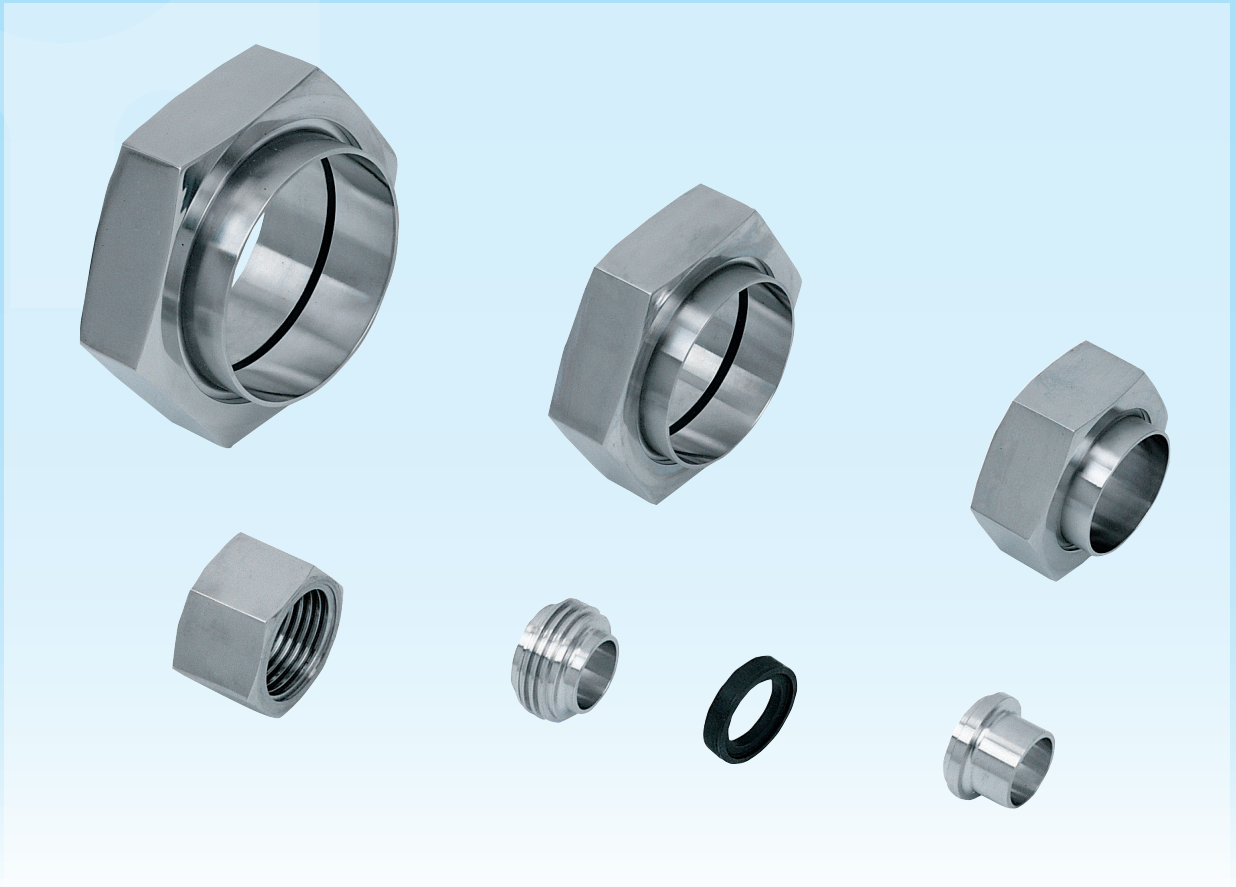
DN	A	B	C	D
10	18	14	RD28*1/8	21
15	21.3	18.1	RD34*1/8	21
20	26.9	23.7	RD44*1/6	24
25	33.7	29.7	RD52*1/6	29
32	42.4	38.4	RD58*1/6	32
40	48.3	44.3	RD65*1/6	33
50	60.3	56.3	RD78*1/6	35
65	76.1	71.6	RD95*1/6	40
80	88.9	84.3	RD110*1/4	45
100	114.3	109.1	RD130*1/4	54

DIN/ISO LINER ISO-14



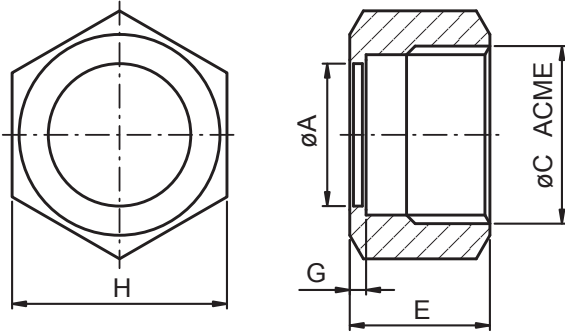
DN	A	B	C	D
10	18	14	22.5	17
15	21.3	18.1	28.5	17
20	26.9	23.7	36.5	18
25	33.7	29.7	44	22
32	42.4	38.4	50	25
40	48.3	44.3	56	26
50	60.3	56.3	68.5	28
65	76.1	71.6	86	32
80	88.9	84.3	100	37
100	114.3	109.1	121	44

IDF UNION FITTINGS



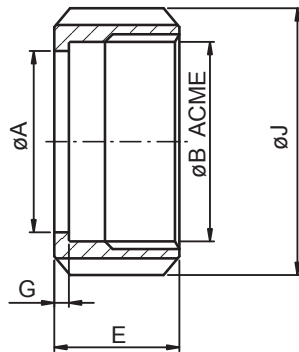
1. Standards: BS 4825 Part 4.
2. Applications: For the Food, Beverage, and other Hygiene Industry
3. Working Pressures: Normal operating at pressures up to 16 Bar.
4. Materials:
 - Round slotted Nut-----TP-304
 - Hex. Nut-----TP-304
 - Expanding Liner-----TP-304, 316, 316L
 - Expanding Male part-----TP-304, 316, 316L
 - Welding Liner-----TP-304, 316, 316L
 - Welding Male part-----TP-304, 316, 316L
 - Blank Round Nut-----TP-304, 316, 316L
 - Blank Hex. Nut-----TP-304, 316, 316L
 - Blank Liner-----TP-304, 316, 316L
 - Seal---EPDM, Silicone.
5. Surface Finished: Ra Max 0.8um.
6. Size range: 1"-----4"

UNION FITTINGS



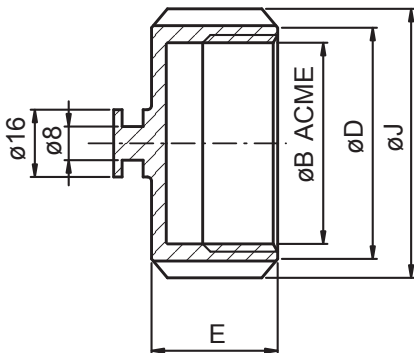
13H SIZE HEXAGONAL NUT

	A	C	E	G	H
1"	30.5	38.02*1/8T	30	3.5	46
1 1/2"	43.5	51.54*1/8T	30	3.5	60
2"	57	65.05*1/8T	30	3.5	75
2 1/2"	70.7	78.56*1/8T	30	3.5	90
3"	83.3	92.08*1/8T	30	3.5	105
4"	112	126.79*1/6T	35	4.7	133



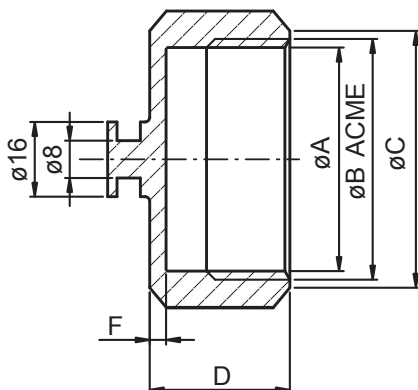
13R ROUND SLOTTED NUT

SIZE	A	B	E	G	J
1"	30.5	34.34*8T	30	3.5	48
1 1/2"	43.5	47.86*8T	30	3.5	64
2"	57	61.37*8T	30	3.5	77
2 1/2"	70.7	74.88*8T	30	3.5	91
3"	83.3	88.40*8T	30	3.5	106
4"	112.0	122.05*6T	35	4.7	142



13RH BLANK ROUND NUT

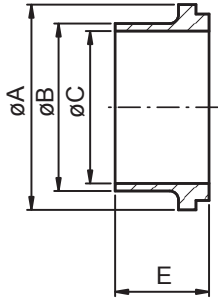
SIZE	B	D	E	J
1"	34.34*8T	41	30	48
1 1/2"	47.86*8T	55	30	64
2"	61.37*8T	68	30	77
2 1/2"	74.88*8T	82	30	91
3"	88.40*8T	97	30	106
4"	122.05*6T	130	35	142



13AH BLANK HEX NUT

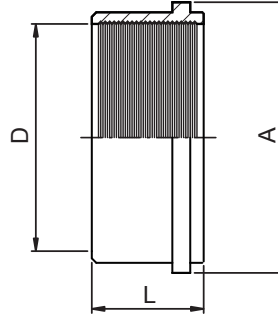
SIZE	A	B	C	D	F
1"	34.34	38.02	43	30	3.5
1 1/2"	47.86	51.54	57.8	30	3.5
2"	61.37	65.05	72.8	30	3.5
2 1/2"	74.88	78.56	87.6	30	3.5
3"	88.40	92.08	103.1	30	3.5
4"	122	126.79	128	35	4.7

UNION FITTINGS



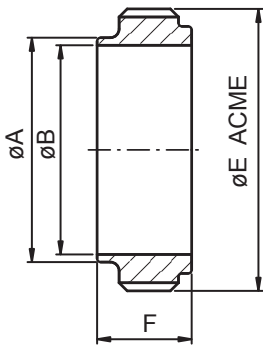
14 IDF WELD LINER

SIZE	A	B	C	E
1"	33.8	25.65	22.2	21.5
1 1/2"	47	38.35	34.9	21.5
2"	60.5	51.05	47.6	21.5
2 1/2"	74	63.75	60.3	21.5
3"	87.5	76.45	73	21.5
4"	120.6	101.85	97.6	30



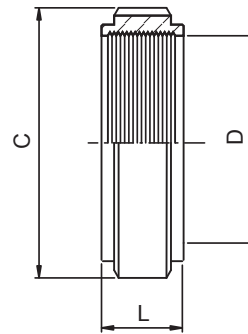
14R EXPANDING LINER

SIZE	A	D	L
1"	33.8	25.5	20
1 1/2"	47.0	38.2	20
2"	60.5	50.9	25
2 1/2"	74.0	63.6	30
3"	87.5	76.3	30
4"	120.7	101.7	30



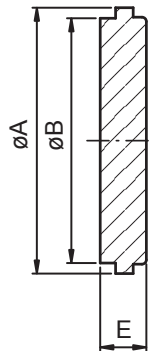
15 WELD MALE

SIZE	A	B	E	F
1"	25.65	22.2	37.13*1/8	21.5
1 1/2"	38.35	34.9	50.65*1/8	21.5
2"	51.05	47.6	64.16*1/8	21.5
2 1/2"	63.75	60.3	77.67*1/8	21.5
3"	76.45	73	91.19*1/8	21.5
4"	101.85	97.6	125.9*1/6	30



15R EXPANDING MALE

SIZE	C	D	L
1"	37.1*8TACME	25.5	16.5
1 1/2"	50.6*8TACME	38.2	19.5
2"	64.1*8TACME	50.9	19.5
2 1/2"	77.6*8TACME	63.6	20.0
3"	91.1*8TACME	76.3	30.0
4"	125.9*6TACME	101.7	35.0

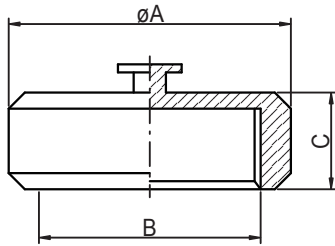


14AH SIZE BLANK LINER

	A	B	E
1"	33.8	29.5	10.5
1 1/2"	47	42.5	10.5
2"	60.5	55.7	10.5
2 1/2"	74	68.8	10.5
3"	87.5	81.9	10.5
4"	120.6	111	12.6

UNION FITTING

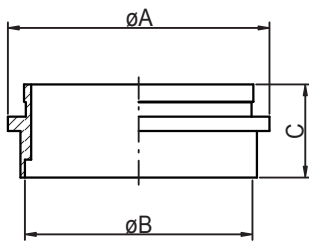
BLANK NUT 3AH



SIZE	A	B	C
40	70	M55×3	24
50	80	M67×3	24
60	92	M79×3.5	24
70	105	M90×3.5	24
80	116	M102×4	25
100	140	M125×4	25

LINER

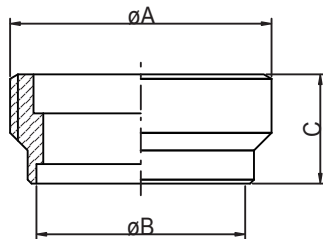
14



SIZE	A	B	C
40	50	40	26
50	63	50	26
60	73	60	26
70	85	70	26
80	96	80	26
100	118	100	26

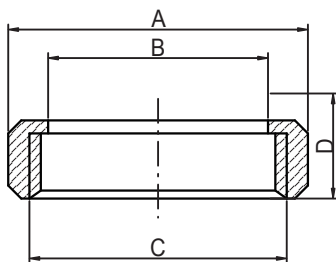
MANCON MALE

15



SIZE	A	B	C
40	M55×3	43.5	28
50	M67×3	53.5	28
60	M79×3.5	63.5	28
70	M90×3.5	73.5	28
80	M102×4	83.5	28
100	M125×4	104	28

ROUND NUT 13



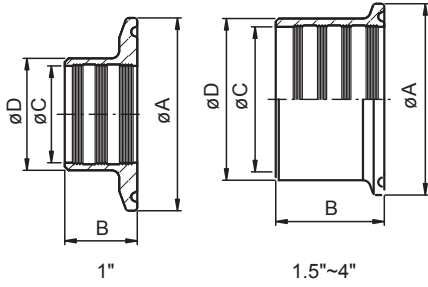
SIZE	A	B	C	D
40	70	47.5	M55×3	24
50	80	57.5	M67×3	24
60	92	67.5	M79×3.5	24
70	105	77.5	M90×3.5	24
80	116	90	M102×4	25
100	140	109	M125×4	25

TRI-CLAMP FITTINGS



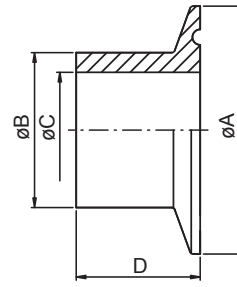
Clamp style fittings are designed to easily assemble or disassemble your lines and systems for maintenance and cleaning in place. Offers a variety of clamp fittings in TP-304, 316 and 316L materials.

TRI-CLAMP FITTINGS



3A-14RMP 3A EXPANDING FERRULE

SIZE	A	B	C	D
1"	50.43	19.1	25.5	29.5
1 1/4"	50.43	28.6	31.9	36.3
1 1/2"	50.43	28.6	38.2	42.6
2"	63.93	33.3	50.9	55.7
2 1/2"	77.43	34.9	63.6	68.8
3"	90.93	36.5	76.3	81.9
4"	118.93	38.1	101.7	108.1

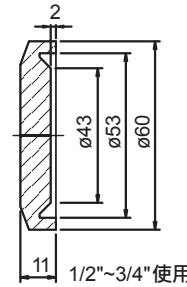
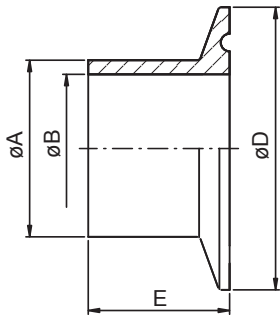


3A-14MPW

SIZE	A	B	C	D
1"	50.50	43.5	31	6.4
1 1/2"	50.50	43.5	31	6.4
2"	63.98	56.5	44.5	6.4
2 1/2"	77.50	70.5	58	6.4
3"	90.98	83.5	71.5	6.4
4"	118.92	110	91.3	7.9

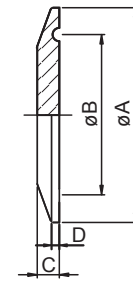
3A-FERRULE 14WMP 14MMP 14AMP

Size	B	A	D	E	E	E
1/2"	9.4	12.7	25.0	12.7	21.5	28.6
3/4"	15.7	19.05	25.0	12.7	21.5	28.6
1.0"	22.2	25.4	50.5	12.7	21.5	28.6
1 1/4"	28.6	31.8	50.5	12.7	21.5	28.6
1 1/2"	34.9	38.1	50.5	12.7	21.5	28.6
2.0"	47.6	50.8	64.0	12.7	21.5	28.6
2 1/2"	60.3	63.5	77.5	12.7	21.5	28.6
3.0"	73.0	76.2	91.0	12.7	21.5	28.6
4.0"	97.6	101.6	119.0	15.9	21.5	28.6
6.0"	146.8	152.5	166.8	22.23	21.5	28.6/38.1
6.0"	150.0	154.0	166.8	19.05	21.5	28.6/38.1
8.0"	197.6	203.3	217.7	22.23	21.5	28.6/38.1
8.0"	200.0	205.0	217.68	19.05	21.5	28.6/38.1
10"	247.2	254.1	268.5	22.23	21.5	28.6/38.1
10"	250.0	255.0	268.48	19.05	21.5	28.6/38.1
12"	298.0	304.9	319.3	22.23	21.5	28.6/38.1
12"	300.0	306.0	319.28	19.05	21.5	28.6/38.1



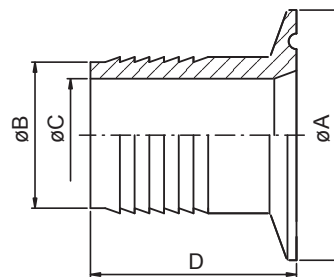
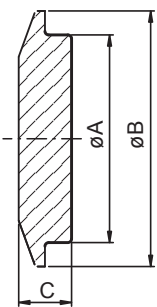
3A-16AMP SOLID END CAP

SIZE	A	B	C	D
A37	34.0	27.5	6.4	2.85
1"	50.5	43.5	6.4	2.85
1 1/2"	50.5	43.5	6.4	2.85
2"	64.0	56.5	6.4	2.85
2 1/2"	77.5	70.5	6.4	2.85
3"	91.0	83.5	6.4	2.85
3 1/2"	106.0	96.8	6.4	2.85
4"	119.0	110.0	7.9	2.85
6"	166.7	156.4	11.1	5.53
8"	217.7	207.2	11.1	5.53
10"	268.5	258.0	11.1	5.53
12"	319.3	308.8	11.1	5.53



14WI-CAP

SIZE	A	B	C
1"	31.50	50.67	9.7
1 1/2"	44.20	50.67	9.7
2"	56.90	67.05	11.77
2 1/2"	69.60	84.00	15.52
3"	83.82	98.30	16.12
4"	109.14	123.70	16.12

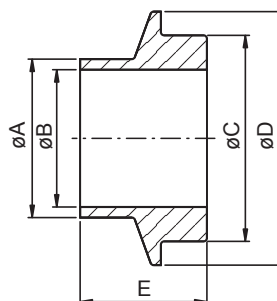
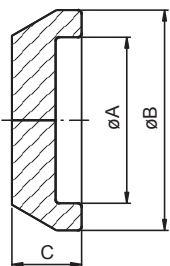


14MPHR HOSE ADAPTER

SIZE	A	B	C	D
1"	50.49	25.4	20.6	42.87
1 1/2"	50.49	25.4	33.3	42.87
2"	63.98	50.8	46	58.75
2 1/2"	77.49	63.5	58.7	59.53
3"	90.98	76.2	71.98	78.58
4"	118.92	101.6	97.38	86.51

15WI-CAP

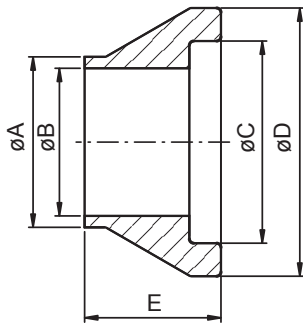
SIZE	A	B	C
1"	31.88	50.67	12.75
1 1/2"	44.58	50.67	12.75
2"	57.28	67.05	17.66
2 1/2"	69.98	84.00	18.77
3"	84.20	98.30	19.37
4"	109.60	123.70	19.37



14WI I-LINE FERRULE

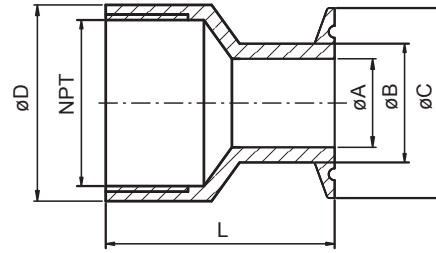
SIZE	A	B	C	D	E
1"	25.65	22.10	31.50	50.67	19.84
1 1/2"	38.35	34.80	44.20	50.67	23.8
2"	51.05	47.50	56.90	67.05	26.19
2 1/2"	63.75	60.20	69.60	84.00	29.36
3"	76.45	72.89	83.82	98.30	30.94
4"	101.85	97.38	109.14	123.70	34.11

TRI-CLAMP FITTINGS



15WI I-LINE FERRULE

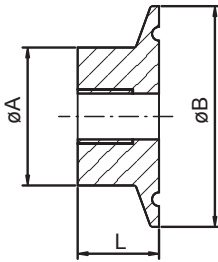
SIZE	A	B	C	D	E
1"	25.65	22.10	31.88	50.67	19.84
1 1/2"	38.35	34.80	44.58	50.67	23.8
2"	51.05	47.50	57.28	67.05	26.19
2 1/2"	63.75	60.20	69.98	84.00	29.36
3"	76.45	72.89	84.20	98.30	30.94
4"	101.85	97.38	109.60	123.70	34.11



22MP FEMALE ADAPTER

SIZE	A		B	D	E	NPT	L
	1.0"	1.5"					
1.0"&1.5"x1.	22.2	34.9	38.1	50.5	52	1.5"NPT	39
1.0"&1.5"x2.	22.2	34.9	38.1	50.5	65	2.0"NPT	39
2.0"x2.0"	47.6		50.8	64	65	2.0"NPT	39
2.5"x2.5"	60.3		63.5	77.5	80	2.5"NPT	50
3.0"x2.5"	73		76.2	91	95	2.5"NPT	50
4.0"x3.0"	73		76.2	91	95	3.0"NPT	52
6.0"x4.0"	97.6		101.6	119	120	4.0"NPT	54

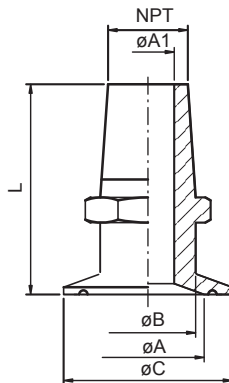
22MP FEMALE ADAPTER



SIZE	A	B	L	NPT
1.0"&1.5"x1/4"	38.1	50.5	19	1/4"NPT
1.0"&1.5"x3/8"	38.1	50.5	19	3/8"NPT
1.0"&1.5"x1/2"	38.1	50.5	19	1/2"NPT
1.0"&1.5"x3/4"	38.1	50.5	19	3/4"NPT
1.0"&1.5"x1.0"	38.1	50.5	19	1"NPT
2.0"x1.0"	50.8	64.0	19	1.0"NPT
2.0"x1.5"	63.5	64.0	19	1.5"NPT
2.5"x1.0"	76.2	77.5	35	1.0"NPT
2.5"x1.5"	76.2	77.5	35	1.5"NPT

SIZE	A	B	L	NPT
2.5"x2.0"	50.8	77.5	35	2.0"NPT
3.0"x1.0"	63.5	91	35	1.0"NPT
3.0"x1.5"	76.2	91	35	1.5"NPT
3.0"x2.0"	76.2	91	35	2.0"NPT
4.0"x1.0"	76.2	119	35	1.0"NPT
4.0"x1.5"	63.5	119	35	1.5"NPT
4.0"x2.0"	76.2	119	35	2.0"NPT
4.0"x2.5"	76.2	119	35	2.5"NPT
4.0"x3.0"	76.2	119	35	3.0"NPT

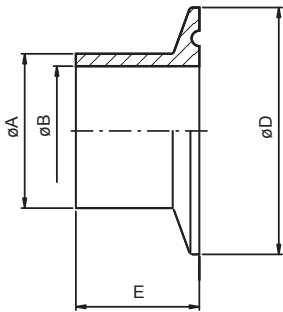
21MP MALE ADAPTER



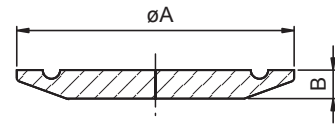
SIZE	A1	A		B	C	NPT	L
		1.0"	1.5"				
1.0"&1.5"x1/4"	3.18	22.2	34.9	14	50.5	$\phi 13.25$ 1/4" 18	40
1.0"&1.5"x3/8"	6.35	22.2	34.9	18	50.5	$\phi 16.67$ 3/8" 18	40
1.0"&1.5"x1/2"	9.5	22.2	34.9	22	50.5	$\phi 20.71$ 1/2" 14	40
1.0"&1.5"x3/4"	15.8	22.2	34.9	27	50.5	$\phi 26.03$ 3/4" 14	45
1.0"&1.5"x1.0"	22.2	22.2	34.9	34	50.5	$\phi 32.59$ 1.0" 11-1/2	50
1.0"&1.5"x1.5"	34.9	22.2	34.9	38.1	50.5	$\phi 47.38$ 1.5" 11-1/2	50
1.0"&1.5"x2.0"	47.6	22.2	34.9	38.1	50.5	$\phi 59.40$ 2.0" 11-1/2	55
2.0"x3/4"	15.8	47.6		50.8	64	$\phi 26.03$ 3/4" 14	50
2.0"x1.0"	22.2	47.6		50.8	64	$\phi 32.59$ 1.0" 11-1/2	50
2.0"x1.5"	34.9	47.6		50.8	64	$\phi 47.38$ 1.5" 11-1/2	50
2.0"x2.0"	47.6	47.6		50.8	64	$\phi 59.40$ 2.0" 11-1/2	55
2.0"x2.5"	60.3	47.6		50.8	64	$\phi 71.61$ 2.5" 8	60
2.0"x3.0"	73	47.6		50.8	64	$\phi 87.39$ 3.0" 8	70
2.0"x4.0"	97.6	47.6		50.8	64	$\phi 112.63$ 4.0" 8	75

TRI-CLAMP FITTINGS

ISO-FERRULE



DN	A	B	D	E
8	13.5	10.3	34.0	28.6
12	17.5	14.0	34.0	28.6
15	21.6	18.1	34.0	28.6
20	26.9	23.7	50.5	28.6
25	33.7	30.5	50.5	28.6
32	42.4	38.4	50.5	28.6
40	48.3	45.1	64.0	28.6
50	60.3	56.3	77.5	28.6
65	76.1	72.1	91.0	28.6
80	88.9	84.9	106.0	28.6
100	114.3	110.3	130.0	28.6
125	139.7	133.7	155.0	28.6
150	168.3	162.3	183.0	28.6
200	219.1	211.1	233.5	28.6



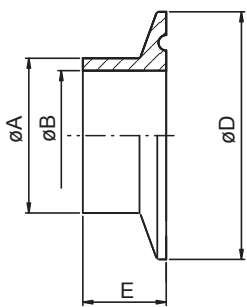
BLANK DIN-16AMP

SIZE	A	B
DN10/15	34	6.4
DN20	34	6.4
DN28/34	50.5	6.4
DN40	50.5	6.4
DN52	64	6.4
DN70	91	6.4
DN80	106	6.4
DN100	119	7.9
DN125	155	11.1
DN150	183	11.1
DN200	233.5	11.1

ISO-16AMP

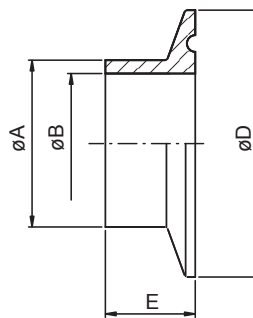
SIZE	A	B
DN20	50.5	6.3
DN25	50.5	6.3
DN32	50.5	6.3
DN40	61.0	6.3
DN50	77.5	6.3
DN65	91	6.3
DN80	106	6.3
DN100	130	7.9
DN125	155	7.9
DN150	183	11.1
DN200	233.5	11.1

SMS-FERRULE



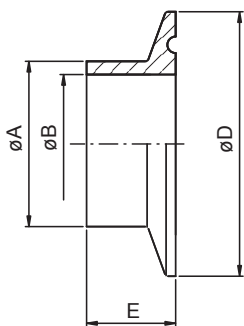
SIZE	A	B	D	E
25	25.6	22.6	50.5	21.5
38	38.6	35.6	50.5	21.5
51	51.6	48.6	64.0	21.5
63.5	64.1	60.3	77.5	21.5
76.1	76.7	72.9	91.0	21.5
101.6	102.5	97.6	119.0	21.5
152.4	152.5	146.8	166.8	21.5

FERRULE



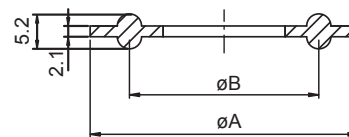
SIZE	A	B	D	E
25.4	25.65	22.20	50.5	21.5
38.1	38.35	34.90	50.5	21.5
50.8	51.05	47.60	64.0	21.5
63.5	63.75	60.30	77.5	21.5
76.2	76.45	73.00	91.0	21.5
101.6	101.85	97.60	119.0	21.5
114.3	114.95	110.30	130.0	28.0
139.7	140.55	135.70	155.0	28.0
168.3	169.35	163.10	183.0	28.0
219.1	220.55	213.90	233.5	28.0

DIN-FERRULE 32676



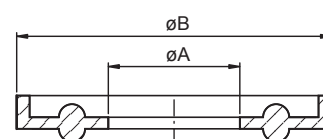
DN	A	B	D	E
10	12.0	9.0	34.0	28.6
15	18.0	15.0	34.0	28.6
20	22.0	19.0	34.0	28.6
25	28.0	25.0	50.5	28.6
32	34.0	31.0	50.5	28.6
40	40.0	37.0	50.5	28.6
50	52.0	49.0	64.0	28.6
65	70.0	66.0	91.0	28.6
80	85.0	81.0	106.0	28.6
100	104.0	100.0	119.0	28.6

13PG



SIZE	A	B
1/2"	21.8	9.9
3/4"	21.8	16.3
1.0"	50.0	22.7
1 1/5"	50.0	29.0
1 1/2"	50.0	35.9
2.0"	63.5	48.6
2 1/2"	76.2	61.3
3"	88.9	74.0
4"	118.0	98.6
6"	165.0	147.8
8"	216.0	196.6

13FGL

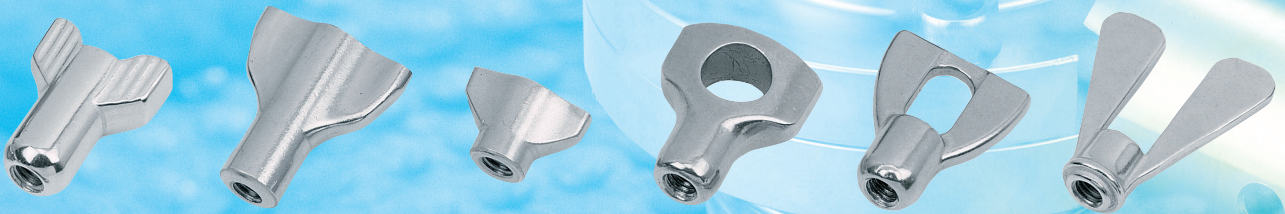


SIZE	A	B
1"	22.8	52.7
1 1/2"	35.8	52.7
2"	48.8	66.2
2 1/2"	60.5	79.7
3"	73.1	93.2
4"	97.8	121.2
6"	148.0	169.1
10"	270.7	249.0
12"	300.0	321.5

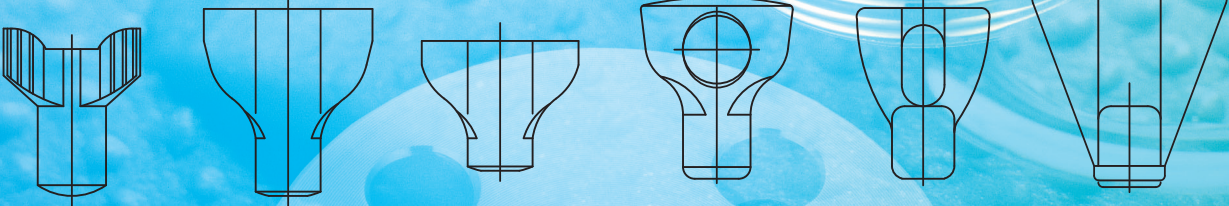
TRI-CLAMP FITTINGS



Clamp style fittings are designed to easily assemble or disassemble your lines and systems for maintenance and cleaning in place. Offers a variety of clamp fittings in TP-304, 316 and 316L materials.



Wing-Nut For Clamp



13MHH-11

13MHH-12

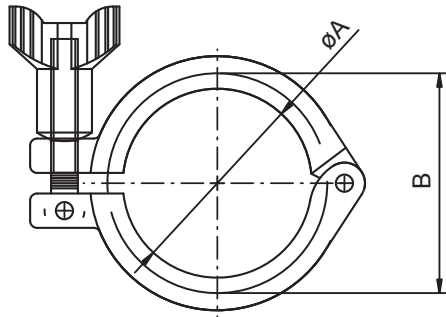
13MHH-10

13MHH-14

13SP-2

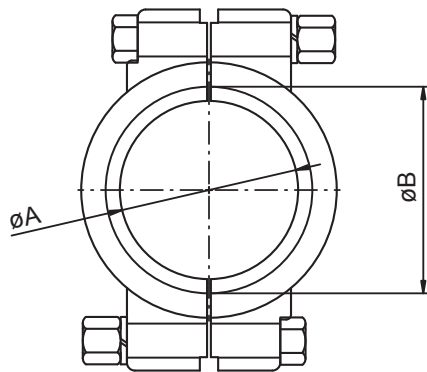
A1325

TRI-CLAMP FITTINGS



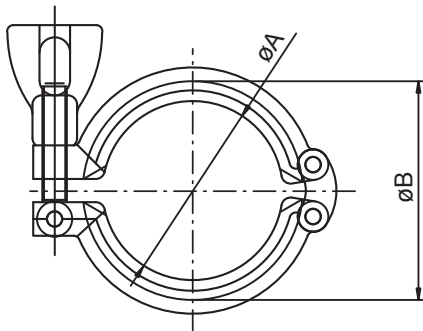
13MHH Heavy Duty Single Pin Clamp

SIZE	A	B
A37	27.8	37
1.5"	44.4	53.6
2.0"	57.8	67
2.5"	71.4	80.6
3.0"	84	94.2
4.0"	110	122.2
6.0"	155.4	170.4
8.0"	205	220



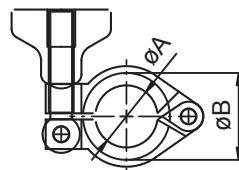
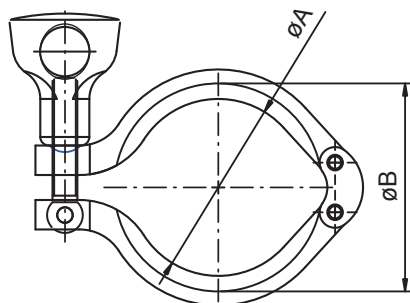
13MHP High Pressure Clamp

SIZE	A	B
1/2"-3/4"	20	28
1.5"	43.3	52
2.0"	56.4	65.5
2.5"	69.5	79
3.0"	77.5	92.5
4.0"	109	120.5
6.0"	158	170
8.0"	222.5	237.5



13SF Heavy Duty Double Pin Clamp

SIZE	A	B
1/2"-3/4"	20	28
1.5"	45	58.6
2.0"	59	72
2.5"	67	84
3.0"	85	98
4.0"	114	127



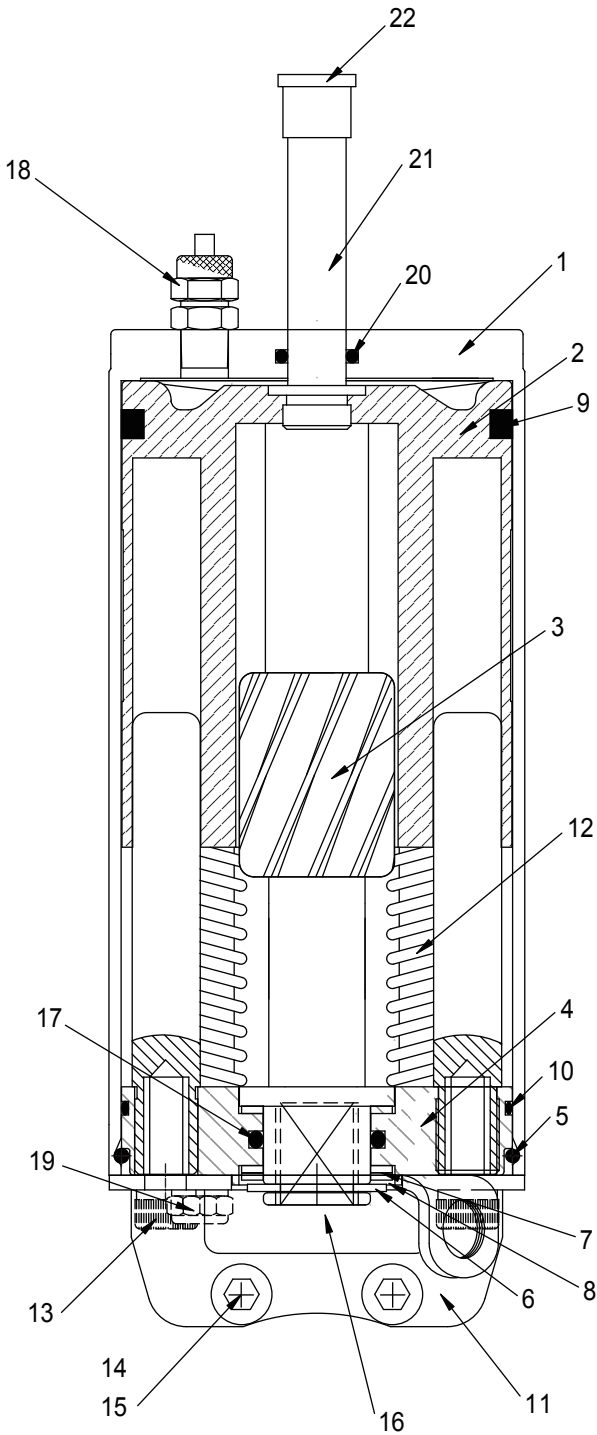
13MHM Heavy Duty Double Pin Clamp

SIZE	A	B
1/2"-3/4"	20	28
1.5"	43.6	53.6
2.0"	57	67
2.5"	70.6	80.6
3.0"	84	94
4.0"	112	122
6.0"	155	170
8.0"	205	220.8

BUTTERFLY VALVES



BUTTERFLY VALVES



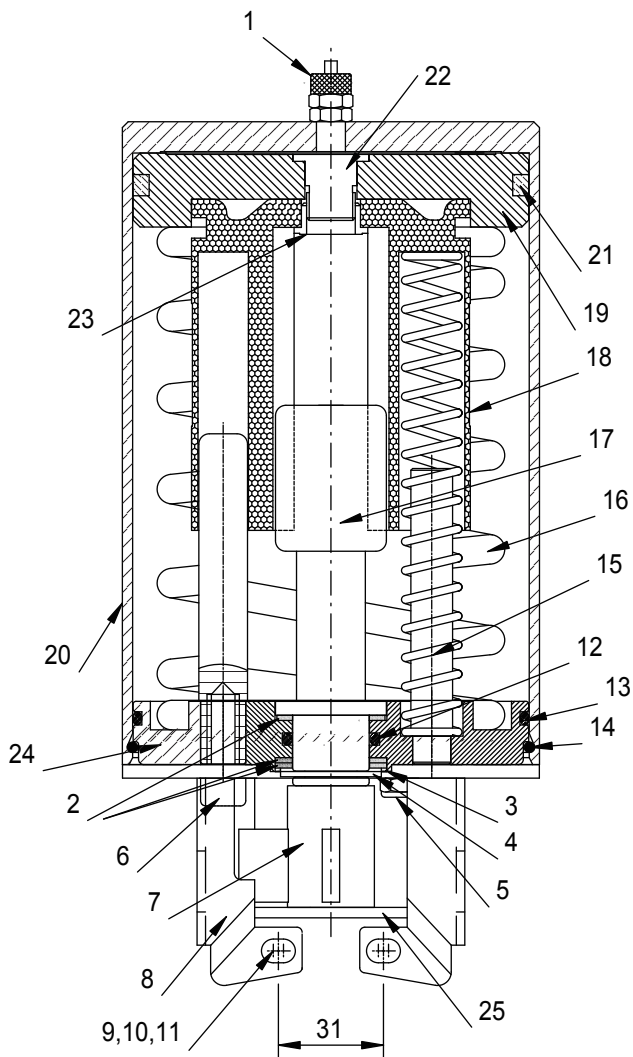
S3 Actuator

NO.	DESIGNATION	MATERIAL	Q'ty
1	Inox cylinder	SS304	1
2	Piston	POM	1
3	Coupling axle piece	SS304	1
4	Lower cylinder end	SS304	1
5	Mounting C type spring	S/S	1
6	Circlip	SS304	1
7	Teflon contact seal	TELFON	3
8	SS304 ring	SS304	1
9	Piston X-ring	NBR	1
10	Lower cylinder O-ring	NBR	1
11	Mounting bracket	SS304	1
12	Compression spring	S/S	6
13	M8*16 stainless steel screw	S/S	2
14	M6*30 stainless steel screw	S/S	2
15	M6 stainless steel nylon nut	S/S	2
16	Plastic positioning ring	Plastic	1
17	Piston axle O-ring	NBR	1
18	Air connection	Cu	1
19	Air outlet filter	Cu	1
20	Piston Stem O-RING	NBR	1
21	Piston Stem	SS304	1
22	Stem Plastic Cover	Plastic	1

AIR /SPRING ACTUATOR SIMPLE OR DOUBLE EFFECT
FOR $\varnothing 25$ (1") TO $\varnothing 76$ (3") Butterfly Valve

- SHUT -OFF TIME : 1.5 SECOND
- WEIGHT : 3.850KG
- POWER : 4M/KG AT 5 BAR COMPESSED AIR.
- Max. torque 20N/m
- CONSUMPTION : 0.266 LITER AT 5 BAR
- MATERIAL : STAINLESS STEEL AISI 304.
- COVER : PLASTIC.

BUTTERFLY VALVES

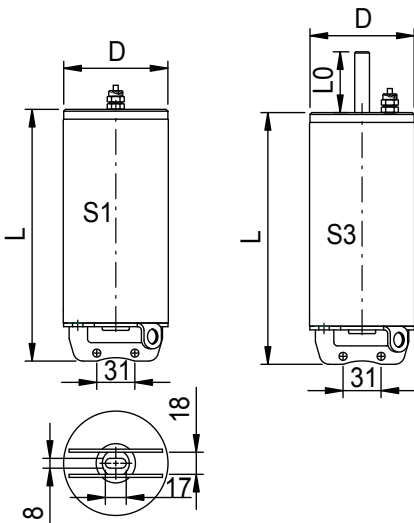


S104 Actuator

NO	DESIGNATION	QTY
1	Air Connection 1/8 Gas	1
2	Teflon gasket for contact	3
3	Inox ring for contact	1
4	Circlip	1
5	Air outlet filter	1
6	M8*16 Screw	2
7	Connecting piece	1
8	Mounting bracket	1
9	M6 Nut	2
10	Ring 6	4
11	M6*35 Screw	2
12	Axle piston seal	1
13	Lower cylinder seal	1
14	Mounting washer	1
15	Compression spring	6
16	Compression spring	1
17	Coupling axle	1
18	Piston	1
19	Aluminium piston	1
20	Cylinder	1
21	Piston seal X-ring	1
22	Piston stem screw	1
23	Piston stem nut	1
24	Lower cylinder	1
25	Positioning piece	1

- AIR ACTUATOR SIMPLE OR DOUBLE EFFECT FOR
- BUTTERFLY VALVE $\varnothing 85$ TO $\varnothing 150$ AND FULL
- FLOW BALL VALVE DN50 TO DN80
- SHUT-OFF TIME :1.7 SECOND
- WEIGHT: 4.700KG
- POWER: AIR ACTUATOR 5 BAR MINI
SIMPLE EFFECT 11.5M DAN.
DOUBLE EFFECT 14M DAN.
- CONSUMPTION:0,550 LITRE AT 5 BAR
- Max.torque 30N/m
- MATERIAL:STAINLESS STEEL AISI 304.

BUTTERFLY VALVES



Actuator

S1&S3 /S104 Actuator

Size	For butterfly valve	D	L	L0
S1	1"-3" Dn25-76	85	205	
S3	1"-3" Dn25-76	85	205	50.5
S104	4" Dn104	120	250	

Actuator Data

S1/S3 : Shut-off time:1.5 second / Weight : 3.85KGS.

S104 : Shut-off time:1.7 second / Weight : 4.7KGS.

Technical data

Max. air pressure:7bar(700kPa).

Min.air pressure, NC and NO:5bar(500kPa)

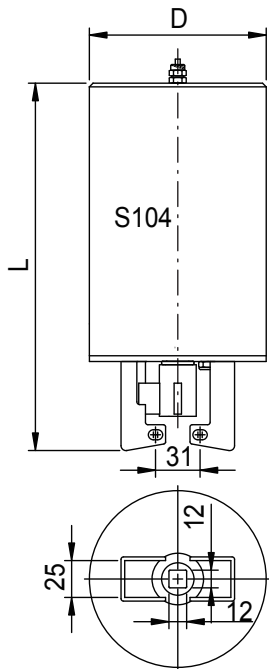
Temperature range:-25°C to +90°C.

Air consumption (litres free air) S1/S3.....0.24*P(bar).

Air consumption (litres free air) S104.....0.55*P(bar).

Signal transfer :S1/S104 can be connect with M12 screw proximity switch
(PNP or NPN)

Signal transfer :S3 can be connect with M12 screw proximity switch(PNP or NPN)
or control box.

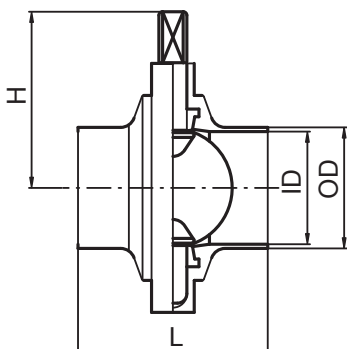


Material:

Actuator body:Stainless steel AISI 304.

Piston :POM.

Seal :NBR.



3A Weld Butterfly valves

SIZE	ID	OD	L	H
1.0"	22.1	25.4	68	61
1.5"	34.8	38.1	76	64.3
2.0"	47.5	50.8	80	74.3
2.5"	60.2	63.5	80	77.6
3.0"	72.2	76.2	82	84.8
4.0"	97.6	101.6	88	101.6

SMS Weld Butterfly valves

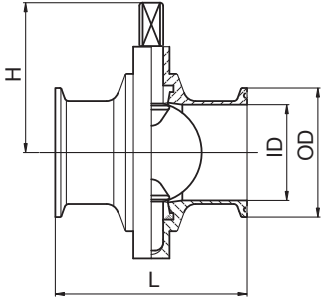
SIZE	ID	OD	L	H
DN25	22.5	25	68	61
DN38	35.4	38	76	64.3
DN51	48	51	80	74.3
DN63	60.2	63.5	80	77.6
DN76	72.1	76.1	82	84.8
DN104	100	104	88	101.6

DIN Weld Butterfly valves

SIZE	ID	OD	L	H
DN28	25	28	68	61
DN34	31	34	76	64.3
DN40	37	40	76	74.3
DN52	49	52	80	77.6
DN70	66	70	82	84.8
DN85	81	85	84	91.6
DN104	100	104	88	101.6

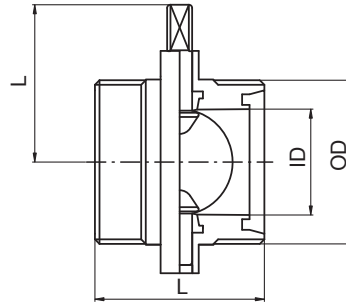
BUTTERFLY VALVES

3A Clamp Butterfly valves



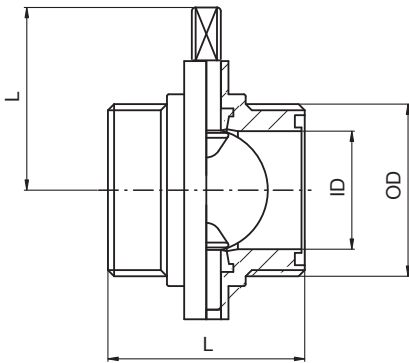
SIZE	ID	OD	L	H
1.0"	22.1	50.5	90	61
1.5"	34.8	50.5	90	64.3
2.0"	47.5	64	95	74.3
2.5"	60.2	77.5	97	77.6
3.0"	72.2	91	105	84.8
4.0"	97.6	119	113	101.6

DIN Male Butterfly valves



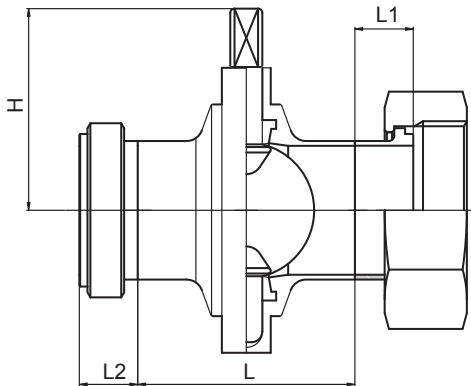
SIZE	ID	OD	L	H
DN28	25	RD52*1/6	68	61
DN34	31	RD58*1/6	76	64.3
DN40	37	RD65*1/6	76	74.3
DN52	49	RD78*1/6	80	77.6
DN70	66	RD95*1/6	82	84.8
DN85	81	RD110*1/4	84	91.6
DN104	100	RD130*1/4	100	101.6

SMS Male Butterfly valves



SIZE	ID	OD	L	H
DN25	22.5	RD10*1/6	68	61
DN38	35.4	RD61*1/6	76	64.3
DN51	48	RD70*1/6	80	74.3
DN63	60.2	RD85*1/6	80	77.6
DN76	72.1	RD98*1/6	82	84.8
DN104	100	RD125*1/4	88	101.6

BUTTERFLY VALVES



3A Male part - nut and liner

SIZE	L	L1	L2	H
1.0"	68	18.3	18.3	61
1.5"	76	18.3	18.3	64.3
2.0"	80	19.1	19.1	74.3
2.5"	80	22.3	22.2	77.6
3.0"	82	23.1	23.1	84.8
4.0"	88	26.2	26.2	101.6

IDF Male part - nut and liner

SIZE	L	L1	L2	H
1.0"	68	21.5	16.5	61
1.5"	76	21.5	19.5	64.3
2.0"	80	21.5	19.5	74.3
2.5"	80	21.5	25.0	77.6
3.0"	82	21.5	30.0	84.8
4.0"	88	30.0	35.0	101.6

SMS Male part - nut and liner

SIZE	L	L1	L2	H
DN25	68	15.5	19	61
DN38	76	16.0	23	64.3
DN51	80	17.0	23	74.3
DN63.5	80	17.0	27	77.6
DN76	82	19.0	27	84.8
DN104	88	19.0	30	101.6

RJT Male part - nut and liner

SIZE	L	L1	L2	H
1.0"	68	19.5	27.0	61
1.5"	76	19.5	27.0	64.3
2.0"	80	19.5	27.0	74.3
2.5"	80	19.5	27.0	77.6
3.0"	82	19.5	27.0	84.8
4.0"	88	23.5	27.0	101.6

DIN Male part - nut and liner

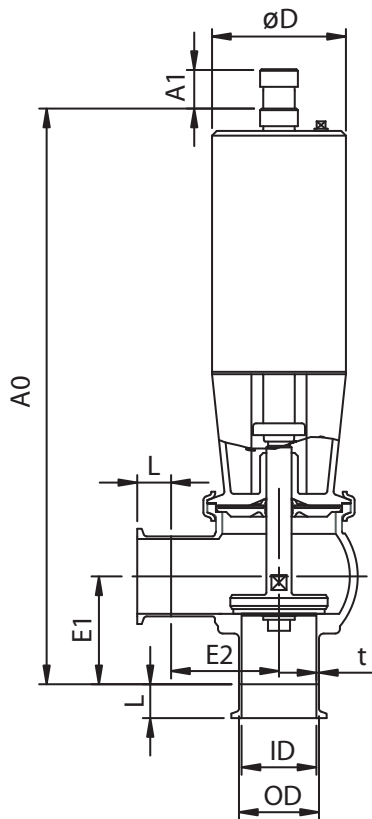
SIZE	L	L1	L2	H
DN28	68	22	29	61
DN34	76	25	32	64.3
DN40	76	26	33	74.3
DN52	80	28	35	77.6
DN70	82	32	40	84.8
DN85	84	37	45	101.6
DN104	88	44	54	101.6

SEAT VALVES



THE ORIGINAL SEAT VALVES

Seat Valve



SIZE	25.4 mm	38.1 mm	50.8 mm	63.5 mm	76.1 mm	101.6 mm
ID	22.1	34.7	47.5	60.2	72.9	97.6
OD	25.4	38.1	50.8	63.5	76.1	101.6
A0	202	287	361	385	453	481
A1	14	25	25	25	32	32
A2	258	426	454	493	581	630
A3	14	25	25	25	32	32
øD	60	87	87	87	133	133
E1	50.5	60	68.5	79	103.5	103.5
E2	38	68.5	68.5	82	103.5	103.5
t	1.65	1.65	1.65	1.65	1.65	2
L/CLAMP	21.5	21.5	21.5	21.5	21.5	21.5
L/SMS male	19	23	23	27	27	30
L/IDF male	21.5	21.5	21.5	21.5	21.5	30
L/RJT male	21.5	21.5	21.5	21.5	21.5	30

Caution, opening/closing time:

Opening/closing time will be effected by the following:

The air supply(air pressure).

The length and dimensions of the air hose

Number of valves connected to same air hose

Use of single solenoid valve for serial connected air actuator functions.

Product pressure.

Air connections

Compressed air

R1/8"(BSP), internal thread.

Technical data

Max.product pressure (depending on valve specifications):-----1000kpa(10 bar)

Min.product pressure:-----full vacuum.

Temperature range:-----10°C to +140°C(EPDM)

Air pressure:-----5to7 bar

Materials:

Product wetted steel parts:-----steel AISI 316L.

Finish:-----Semi bright.

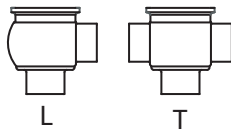
Other steel parts:-----Stainless steel AISI 304.

Plug stem :-----AISI 316L with hard chrome planted stemm surface.

Product wetted seals:-----EPDM rubber .

Other seals:-----NBR.

Valve body combination



Ordering

Please state the following when ordering:

-Size.

-Connections if not welding ends .

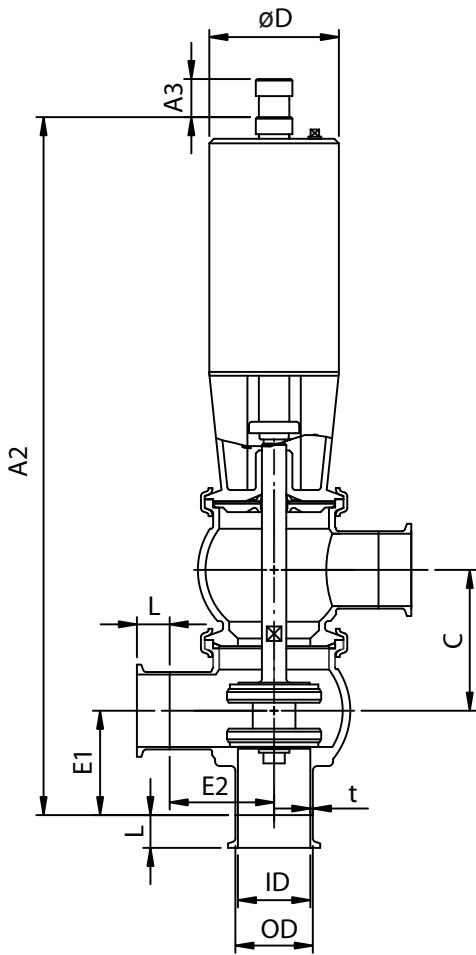
-Valve body combination.

-Actuator function, NC, NO, or A/A.

-Options.

SEAT VALVES

Seat Valve



SIZE	25.4 mm	38.1 mm	50.8 mm	63.5 mm	76.1 mm	101.6 mm
ID	22.1	34.7	47.5	60.2	72.9	97.6
OD	25.4	38.1	50.8	63.5	76.1	101.6
A0	202	287	361	385	453	481
A1	14	25	25	25	32	32
A2	258	426	454	493	581	630
A3	14	25	25	25	32	32
øD	60	87	87	87	133	133
C	55.6	80	92	108	128	148
E1	50.5	60	68.5	79	103.5	103.5
E2	38	68.5	68.5	82	103.5	103.5
t	1.65	1.65	1.65	1.65	1.65	2
L/CLAMP	21.5	21.5	21.5	21.5	21.5	21.5
L/SMS male	19	23	23	27	27	30
L/IDF male	21.5	21.5	21.5	21.5	21.5	30
L/RJT male	21.5	21.5	21.5	21.5	21.5	30

Caution, opening/closing time:

Opening/closing time will be effected by the following:
 The air supply(air pressure).
 The length and dimensions of the air hose
 Number of valves connected to same air hose
 Use of single solenoid valve for serial connected air actuat or functions
 Product pressure .

Air connections

Compressed air
 R1/8"(BSP), internal thread .

Technical data

Max.product pressure (depending on valve specifications):------1000k pa(10 bar)
 Min. product pressure:------full vacuum.
 Temperature range:------10°C to +140°C (EPDM)
 Air pressure:------5to7 bar.

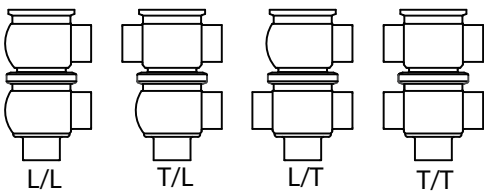
Materials:

Product wetted steel parts:------steel AISI 316L.
 Finish:------Semi bright.
 Other steel parts:------Stainless steel AISI 304.
 Plug stem :------AISI 316L with hard chrome planted stemm surface .
 Product wetted seals:------EPDM rubber.
 Other seals:------NBR.

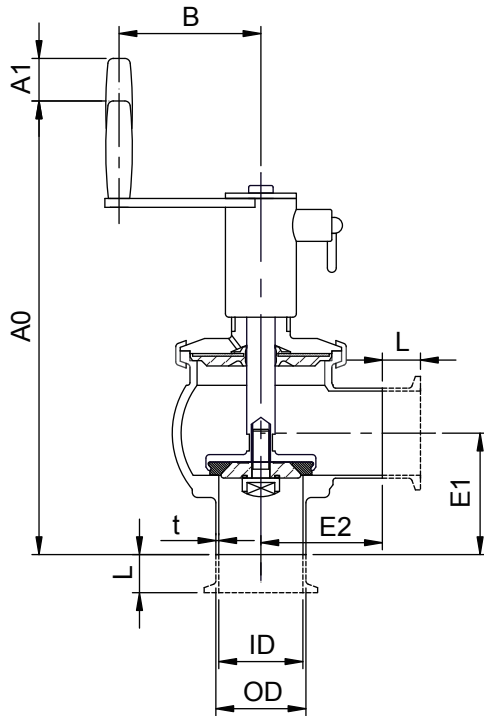
Ordering

Please state the following when ordering:
 -Size.
 -Connections if not welding ends .
 -Valve body combination.
 -Actuator function, NC, NO, or A/A.
 -Options.

Valve body combination



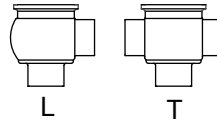
MANUAL SEAT VALVES



Manual Seat Valve

SIZE	25.4 mm	38.1 mm	50.8 mm	63.5 mm	76.1 mm	101.6 mm
ID	22.1	34.7	47.5	60.2	72.9	97.6
OD	25.4	38.1	50.8	63.5	76.1	101.6
A0	147	241	256	297	326	336.5
A1	15	25	25	25	32	32
A2	202	321	348	404	453	453
A3	15	26	25	25	32	32
B	35	80	80	80	80	80
E1	50.5	60	68.5	79	103.5	103.5
E2	38	68.5	68.5	82	103.5	103.5
t	1.65	1.65	1.65	1.65	1.65	2.0
L/CLAMP	21.5	21.5	21.5	21.5	21.5	21.5
L/SMS male	19	23	23	27	27	30
L/IDF male	21.5	21.5	21.5	21.5	21.5	30
L/RJTmale	21.5	21.5	21.5	21.5	21.5	30

Valve body combination



Materials:

Product wetted steel parts: AISI 316L
 Other steel parts: AISI 304
 Plug stem: AISI 316L with chromium plated surface

Product wetted saels: EPDM
 Other seals: NBR and FPM
 Finish: Semi bright

Technical data:

Max product pressure : 1000kpa(10bar).
 Min product pressure : Full vacuum.
 Temperature range: -10 °C to + 140°C(EPDM).

Options

Equipment

- 1.)Male parts or clamp liners in accordance with required standard.
- 2.)Stainless steel disc replacing standard lip seal.

Material grades

- 3.)Product wetted seals and lip seal of NBR, Fluorinated rubber(FPM) or PTFE.

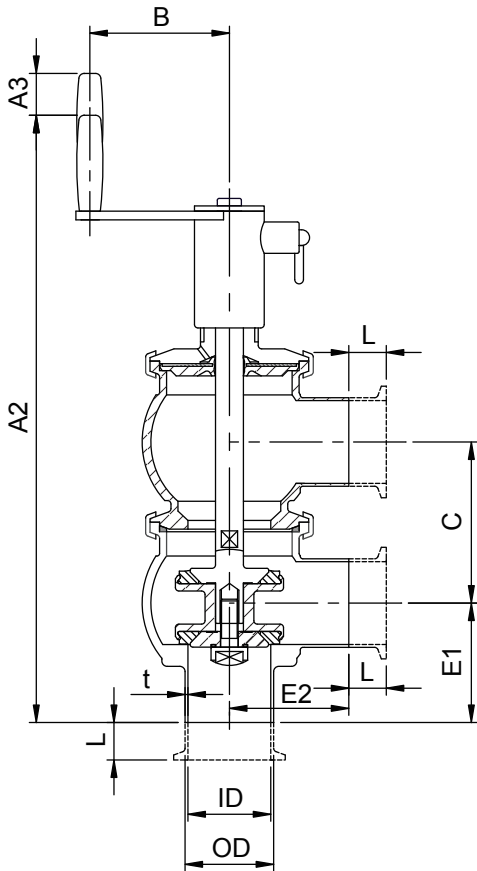
Ordering

Please state the following when ordering:

- Connections if not welding ends.
- Size.
- Valve body combination.
- Options.

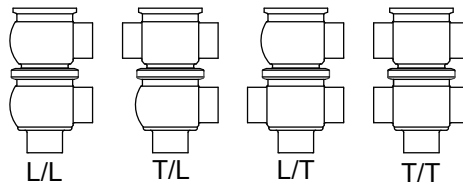
SEAT VALVES

Manual Seat Valve



SIZE	25.4 mm	38.1 mm	50.8 mm	63.5 mm	76.1 mm	101.6 mm
ID	22.1	34.7	47.5	60.2	72.9	97.6
OD	25.4	38.1	50.8	63.5	76.1	101.6
A0	147	241	256	297	326	336.5
A1	15	25	25	25	32	32
A2	202	321	348	404	453	453
A3	15	26	25	25	32	32
B	35	80	80	80	80	80
C	55.6	80	92	108	128	148
E1	50.5	60	68.5	79	103.5	103.5
E2	38	68.5	68.5	82	103.5	103.5
t	1.65	1.65	1.65	1.65	1.65	2.0
L/CLAMP	21.5	21.5	21.5	21.5	21.5	21.5
L/SMS male	19	23	23	27	27	30
L/IDF male	21.5	21.5	21.5	21.5	21.5	30
L/RJmale	21.5	21.5	21.5	21.5	21.5	30

Valve body combination



Materials:

Product wetted steel parts: AISI 316L
 Other steel parts: AISI 304
 Plug stem: AISI 316L with chromium plated surface

Product wetted saels: EPDM
 Other seals: NBR and FPM
 Finish: Semi bright

Technical data:

Max product pressure : 1000kpa(10bar).
 Min product pressure : Full vacuum.
 Temperature range: -10°Cto+140°C(EPDM).

Options

Equipment

- 1.)Male parts or clamp liners in accordance with required standard.
- 2.)Stainless steel disc replacing standard lip seal.

Material grades

- 3.)Product wetted seals and lip seal of NBR, Fluorinated rubber(FPM) or PTFE.

Ordering

Please state the following when ordering:

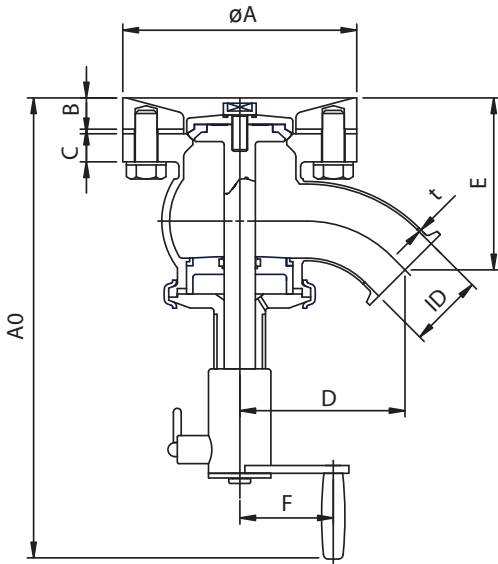
- Connections if not welding ends.
- Size.

-Valve body combination.

-Options.

SEAT VALVES

The Original Manual Tank Valve



SIZE	25.4 mm	38.1 mm	50.8 mm	63.5 mm	76.1 mm
ID	22.1	34.7	47.5	60.2	72.9
A0	272	290	295	350	360
øA	110	140	150	180	200
B	18	20	20	24	24
C	15	16	18	14	14
D	93	93	105	136	148
E	99	106	110	143	144
F	80	80	80	80	80
t	1.65	1.65	1.65	1.65	1.65

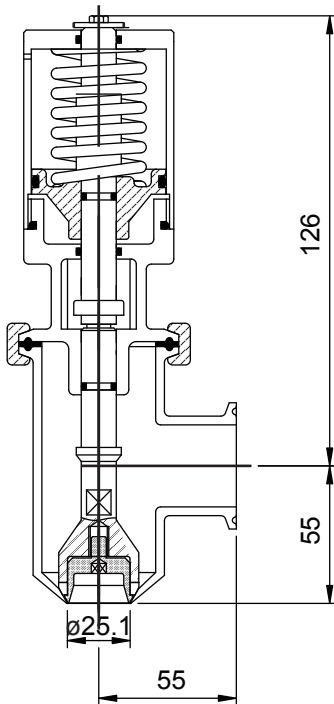
Materials:

Product wetted steel parts:	AISI 316
Other steel parts:	AISI 304
Plug stem:	AISI 316 with chromium plated surface
Product wetted saels:	EPDM
Other seals:	NBR and FPM
Finish:	Semi bright

Technical data:

Max product pressure :	1000k pa(10bar).
Min product pressure :	Full vacuum.
Temperature range:	-10°C to +140°C(EPDM).

Filling Valve



Caution, opening/closing time:

Opening/closing time will be effected by the following:

The air supply(air pressure).

The length and dimensions of the air hose.

Number of valves connected to same air hose.

Use of single solenoid valve for serial connected air actuator functions.

Product pressure.

Air connections

Compressed air:

R1/8"(BSP), internal thread.

Technical data

Max. product pressure (depending on valve specifications):—1000kpa(10 bar)

Min. product pressure:-----full vacuum.

Temperature range:-----10°C to + 140°C(EPDM)

Air pressure:-----5 to 7 bar

Materials:

Product wetted steel parts:-----steel AISI 316L.

Finish:-----Semi bright.

Other steel parts:-----Stainless steel AISI 304.

Plug stem :-----AISI 316L with hard chrome planted stemm surface.

Product wetted seals:-----PTFE rubber

Other seals:-----NBR.

Ordering

Please state the following when ordering:

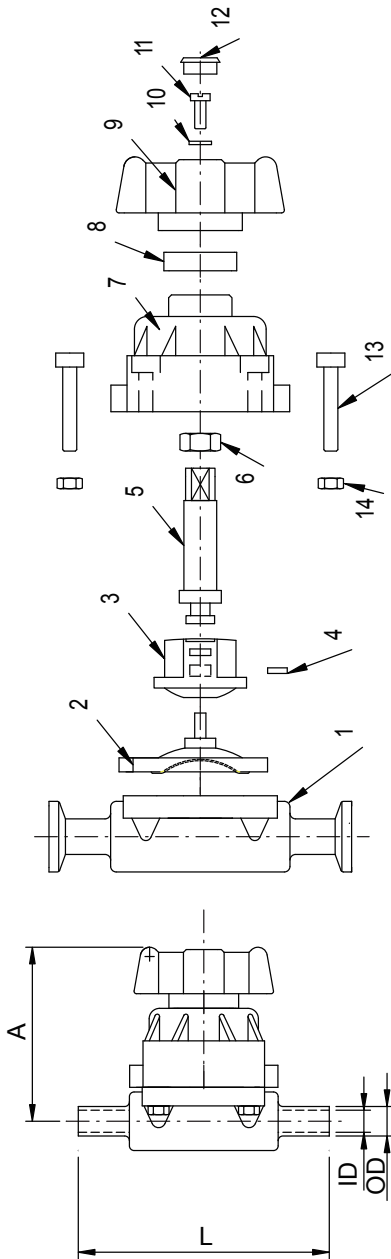
-Connections if not welding ends .

-Actuator function, NC, NO, or A/A.

-Options.

THE ORIGINAL SEAT VALVES

Diaphragm Valve



NO	DESIGNATION	QTY	MATERIAL
1	Diaphragm valve Body	1	SS316L
2	EPDM Sea1	1	EPDM
3	Seat	1	PP
4	Seat	1	ST
5	Screw Shaft Seat	1	SS304
6	Screw	1	SS
7	Bonnet	1	NYLON
8	PP Ring	1	PP
9	Hand Wheel	1	NYLON
10	Ring	1	PP
11	Screw M4*10	1	SS
12	Cover	1	PP
13	Screw M5*30	4	SS
14	M5 Screw	4	SS

Technical data:

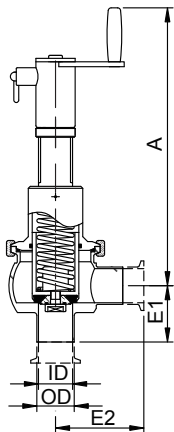
Max product pressure :10bar
 Max temperature:140°C(EPDM)
 Min temperature:10°C

Valve body surface finishes, internal finish
 (acc.to DIN 4768)

Ra<6.3 m blasted internal /external
 Ra<6.3 m electropolished internal /external
 Ra<0.8 m mechanically polished internal , blasted external
 Ra<0.8 m electropolished internal /external
 Ra<0.6 m mechanically polished internal , blasted external
 Ra<0.6 m electropolished internal /external
 Ra<0.4 m mechanically polished internal ,blasted external
 Ra<0.4 m electropolished internal /external
 Ra<0.25 m mechanically polished internal /external
 Ra<0.25 m electropolished internal /external

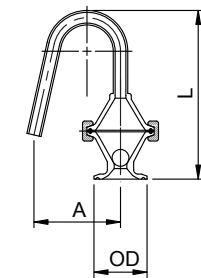
Size	ID	OD	A	L / Weld	L / Clamp
1/2"	9.5	12.7	75	108	108
3/4"	15.8	19.05	75	108	108
1"	22.1	25.4	75	108	151

Relief Valve

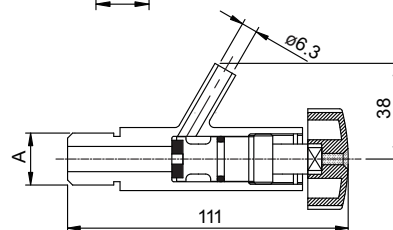


SIZE	38.1 mm	50.8 mm	63.5 mm
ID	34.7	47.5	60.2
OD	38.1	50.8	63.5
A	285	300	310
E1	57.4	68.5	79
E2	68.5	68.5	82
t	1.65	1.65	1.65
L/CLAMP	21.5	21.5	21.5
L/SMS male	23	23	27
L/IDF male	21.5	21.5	21.5
L/RJT male	21.5	21.5	21.5

Air release valve



SIZE	OD	A	L
1.0"	50.5	82	130



Sample cock valve

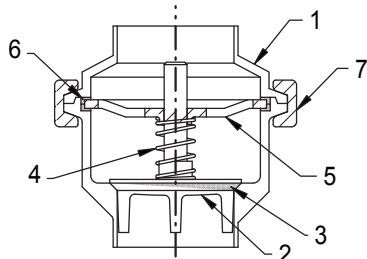
SIZE	A
1/2	1/2 PF
3/8	NPT 3/8-14
1/4	NPT 1/4-14

NON-RETURN VALVES



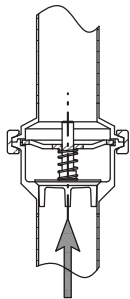
NON-RETURN VALVES

Non-return Valve



NO.	Name
1	Body
2	Disc
3	Seal Ring
4	Spring
5	plate
6	Ring
7	Clamp

Fig 1. Non-return valve



Flow direction

Fig.3. Show the optimal built-in situation.

Other positions permitted are e.g. horizontal.

The four guide legs of the valve cone ensures good alignment.

Material

Steel parts: Stainless steel AISI 304
or acid-resistant steel
AISI 316L.

Seal ring: EPDM rubber

Finish: Semi bright.

Connections

The valve is available with welding ends for tubes according to 3A,SMS,BS,DIN 1 1850.

Technical data

Required differential pressure for opening the valve when fitted in a vertical pipe, as shown in fig.3, is approx. 6kpa(0.06bar).

Max. product pressure: 1000kpa(10bar).

Max. temperature: 140°C(EPDM).

Min. temperature: -10°C.

Options

Material grades

A) Product wetted seal rings of nitrile(NBR) or Fluorinated rubber (FPM).

Ordering

Please state the following when ordering:

-Size.

-Steel grade, AISI 304 or AISI 316L.

-Rubber grade if not EPDM.

Pressure drop/capacity diagram

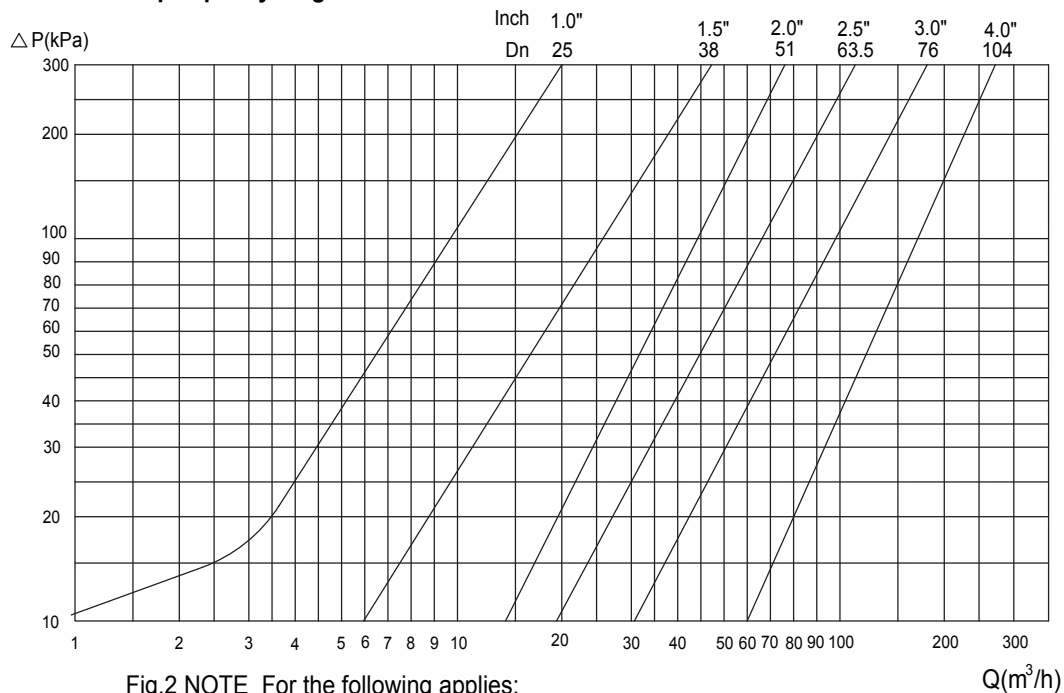


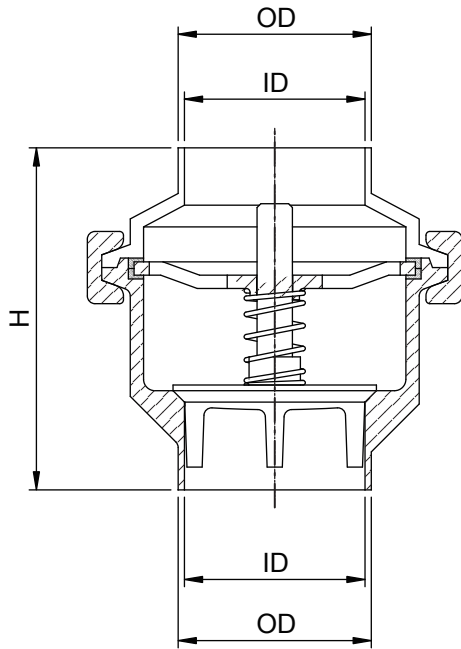
Fig.2 NOTE For the following applies:

Medium:Water(20°C)

Measurement:In accordance with VDI 2173

NON-RETURN VALVES

Non-return Valves



3A Weld Non-return valve

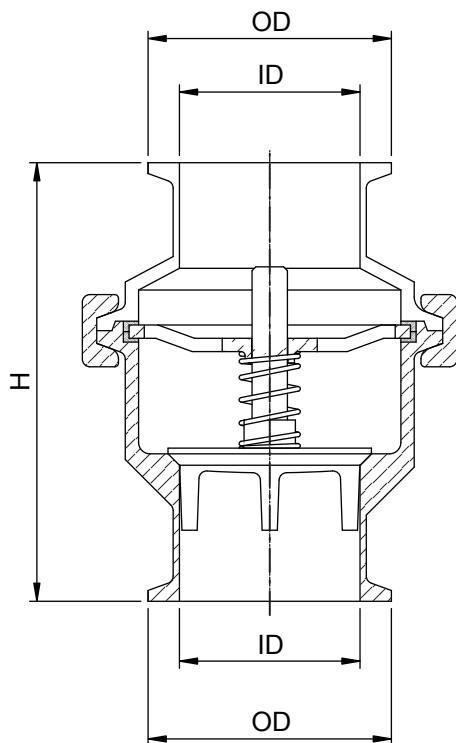
SIZE	ID	OD	H
1.0"	22.1	25.4	68.5
1.5"	34.8	38.1	80.5
2.0"	47.5	50.8	90
2.5"	60.2	63.5	95
3.0"	72.2	76.2	115
4.0"	97.6	101.6	155

SMS Weld Non-return valve

DN	ID	OD	H
25	22.5	25	68.5
38	35.4	38	80.5
51	45	51	90
63	60.5	63.5	95
76	72	76	115
104	100	104	155

DIN Weld Non-return valve

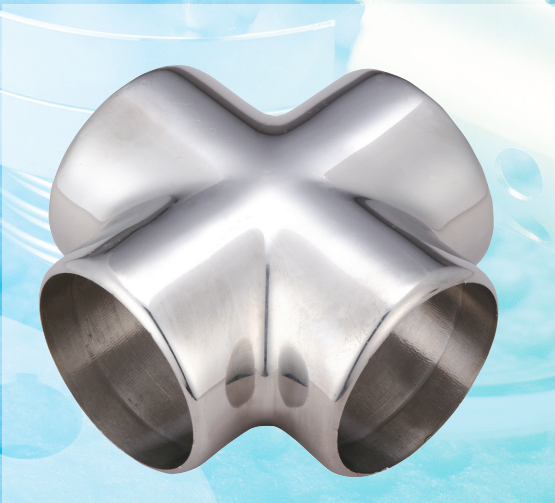
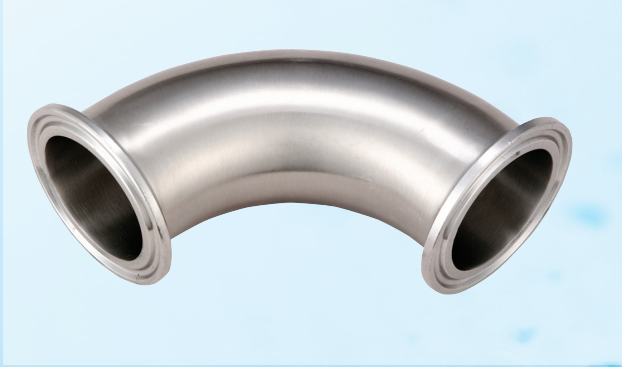
DN	ID	OD	H
28	25	28	68.5
34	31	34	80.5
40	37	40	80.5
52	49	52	90
70	66	70	115
85	81	85	120
104	100.	104	155



3A Clamp Non-return valve

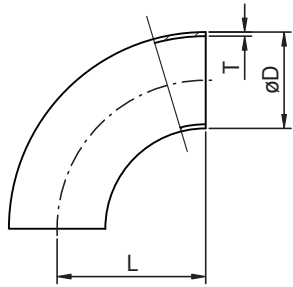
SIZE	ID	OD	H
1.0"	22.1	50.5	111.5
1.5"	34.8	50.5	123.5
2.0"	47.5	64	133
2.5"	60.2	77.5	138
3.0"	72.2	91	158
4.0"	97.6	119	198

3A PIPE FITTING



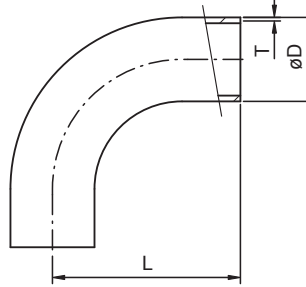
3A PIPE FITTING

90° Short Elbow 2WCL



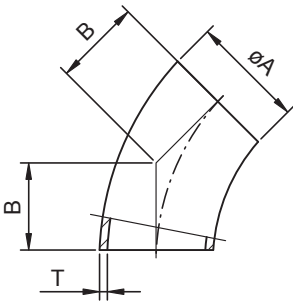
SIZE	D	L	T
1.0"	25.4	38.1	1.65
1.5"	38.1	57.20	1.65
2.0"	50.8	76.20	1.65
2.5"	63.5	95.25	1.65
3.0"	76.2	114.30	1.65
4.0"	101.6	152.40	2.10

90° Long Elbow L2S



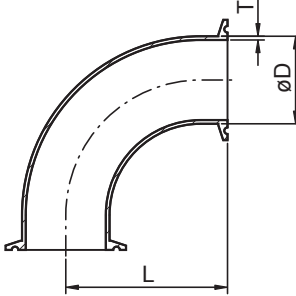
SIZE	D	L	T
1.0"	25.4	52.4	1.65
1.5"	38.1	74.6	1.65
2.0"	50.8	103.2	1.65
2.5"	63.5	131.8	1.65
3.0"	76.2	160.3	1.65
4.0"	101.6	211.1	2.10

45° Short Elbow 2WK

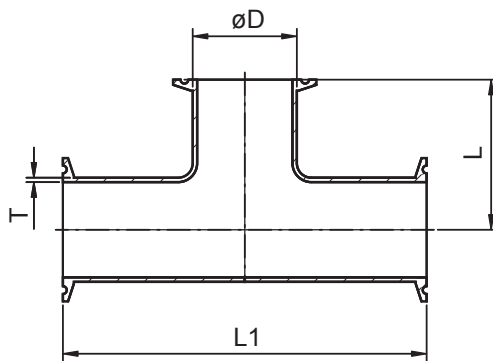


SIZE	A	B	T
1.0"	25.4	15.8	1.65
1.5"	38.1	23.8	1.65
2.0"	50.8	31.75	1.65
2.5"	63.5	39.6	1.65
3.0"	76.2	47.6	1.65
4.0"	101.6	63.5	2.10

90° Clamp Elbow 2CMP



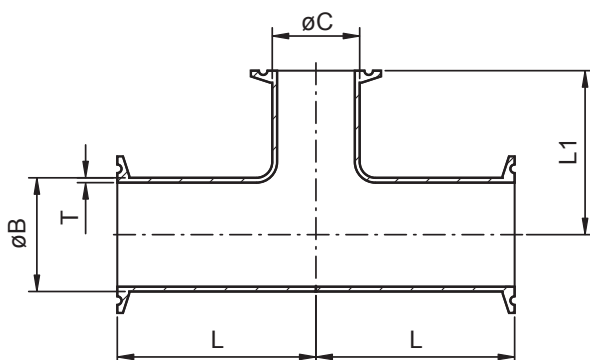
SIZE	D	L	T
1.0"	25.4	50.8	1.65
1.5"	38.1	69.9	1.65
2.0"	50.8	88.9	1.65
2.5"	63.5	107.95	1.65
3.0"	76.2	127.0	1.65
4.0"	101.6	168.2	2.10



Clamp Long Tee 7MP

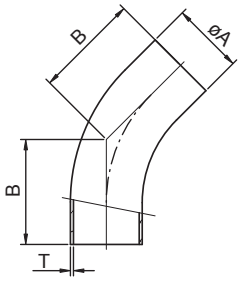
SIZE	D	L	L1	T
1.0"	25.4	60.3	120.6	1.65
1.5"	38.1	69.9	139.8	1.65
2.0"	50.8	88.9	177.8	1.65
2.5"	63.5	88.9	177.8	1.65
3.0"	76.2	95.3	190.6	1.65
4.0"	101.6	114.2	228.4	2.10

Reducing Tee Clamp End L7RMP



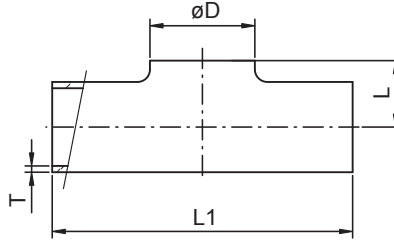
SIZE	B	C	L	L1	T
1.5" × 1.0"	38.1	25.4	69.85	66.68	1.65
2.0" × 1.0"	50.8	25.4	88.90	73.00	1.65
2.0" × 1.5"	50.8	38.1	88.90	76.20	1.65
2.5" × 1.5"	63.5	38.1	88.90	82.55	1.65
2.5" × 2.0"	63.5	50.8	88.90	95.25	1.65
3.0" × 1.5"	76.2	38.1	95.25	88.90	1.65
3.0" × 2.0"	76.2	50.8	95.25	101.60	1.65
3.0" × 2.5"	76.2	63.5	95.25	95.25	1.65
4.0" × 2.0"	101.6	50.8	114.2	114.30	2.10
4.0" × 2.5"	101.6	63.5	114.2	107.95	2.10
4.0" × 3.0"	101.6	76.2	114.2	107.95	2.10

3A PIPE FITTING



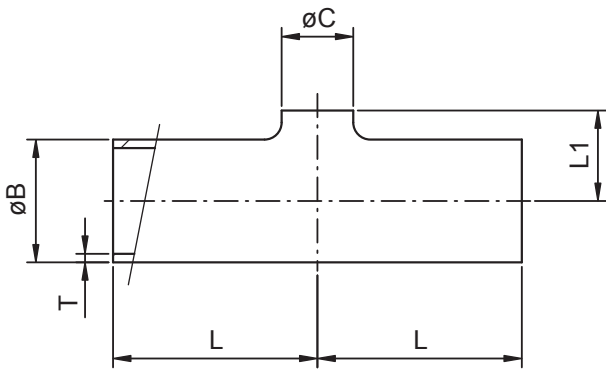
45° Long Elbow L2KS

SIZE	A	B	T
1.0"	25.4	30.2	1.65
1.5"	38.1	41.3	1.65
2.0"	50.8	58.7	1.65
2.5"	63.5	76.2	1.65
3.0"	76.2	93.7	1.65
4.0"	101.6	122.2	2.10



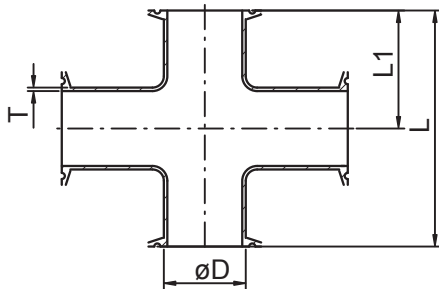
Equal Tee W/O Straight end

SIZE	D	L	L1	T
1.0"	25.4	16	57.2	1.65
1.5"	38.1	22	84.2	1.65
2.0"	50.8	29	104.8	1.65
2.5"	63.5	35	119.0	1.65
3.0"	76.2	41	131.8	1.65
4.0"	101.6	54	174.6	2.10



Reducing Tee W/O Straight end

SIZE	B	C	L	L1	T
1.5" × 1.0"	38.1	25.4	42.1	22	1.65
2.0" × 1.5"	50.8	38.1	52.4	29	1.65
2.5" × 2.0"	63.5	50.8	59.5	35	1.65
3.0" × 2.0"	76.2	50.8	65.9	41	1.65
3.0" × 2.5"	76.2	63.5	65.9	41	1.65
4.0" × 2.0"	101.6	50.8	117.5	54	2.10
4.0" × 2.5"	101.6	63.5	117.5	54	2.10
4.0" × 3.0"	101.6	76.2	117.5	54	2.10



Clamp Long Cross 9MP

SIZE	D	L	L1	T
1.0"	25.4	120.6	60.3	1.65
1.5"	38.1	139.8	69.9	1.65
2.0"	50.8	177.8	88.9	1.65
2.5"	63.5	177.8	88.9	1.65
3.0"	76.2	190.6	95.3	1.65
4.0"	101.6	228.4	114.2	2.10

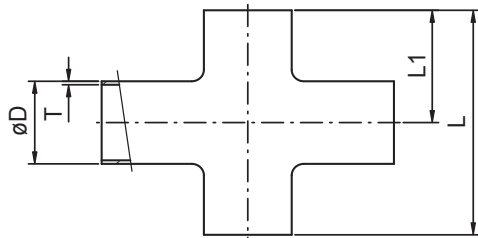
Cross

Short Cross L9WWW

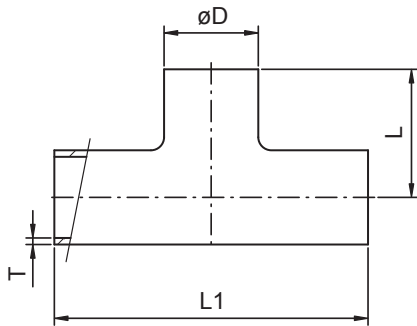
SIZE	D	L	L1	T
1.0"	25.4	57.2	28.6	1.65
1.5"	38.1	84.2	42.1	1.65
2.0"	50.8	104.8	52.4	1.65
2.5"	63.5	119.0	59.5	1.65
3.0"	76.2	131.8	65.9	1.65
4.0"	101.6	174.6	87.3	2.10

Long Cross L9W

SIZE	D	L	L1	T
1.0"	25.4	95.2	47.6	1.65
1.5"	38.1	114.4	57.2	1.65
2.0"	50.8	152.4	76.2	1.65
2.5"	63.5	152.4	76.2	1.65
3.0"	76.2	165.2	82.6	1.65
4.0"	101.6	196.8	98.4	2.10



3A PIPE FITTING



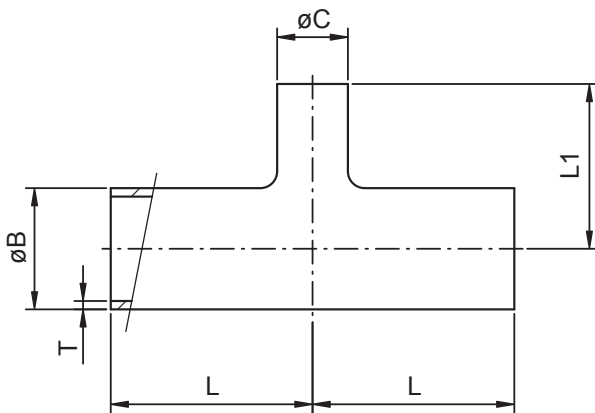
Welding Tee

Short Tee L7WWW

SIZE	D	L	L1	T
1.0"	25.4	28.6	57.2	1.65
1.5"	38.1	42.1	84.2	1.65
2.0"	50.8	52.4	104.8	1.65
2.5"	63.5	59.5	119.0	1.65
3.0"	76.2	65.9	131.8	1.65
4.0"	101.6	87.3	174.6	2.10

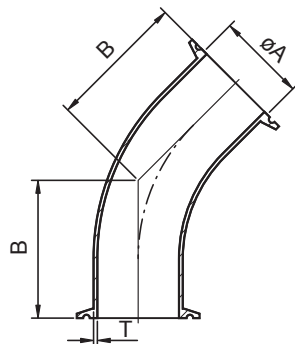
Long Tee 7W

SIZE	D	L	L1	T
1.0"	25.4	47.6	95.2	1.65
1.5"	38.1	57.2	114.4	1.65
2.0"	50.8	76.2	152.4	1.65
2.5"	63.5	76.2	152.4	1.65
3.0"	76.2	82.6	165.2	1.65
4.0"	101.6	98.4	196.8	2.10



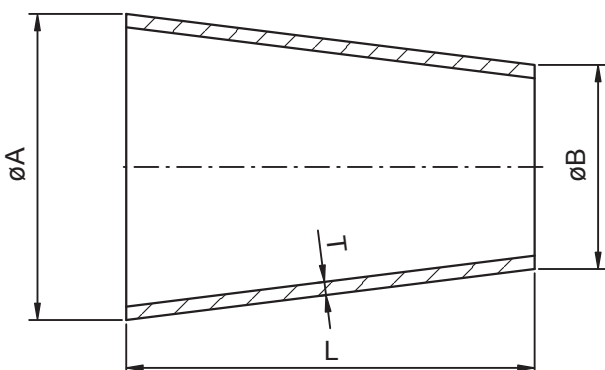
Reducing Tee L7RW

SIZE	B	C	L	L1	T
1.5" × 1.0"	38.1	25.4	57.15	53.98	1.65
2.0" × 1.0"	50.8	25.4	76.20	60.30	1.65
2.0" × 1.5"	50.8	38.1	76.20	63.50	1.65
2.5" × 1.5"	63.5	38.1	76.20	69.85	1.65
2.5" × 2.0"	63.5	50.8	76.20	82.55	1.65
3.0" × 1.5"	76.2	38.1	82.55	76.20	1.65
3.0" × 2.0"	76.2	50.8	82.55	88.90	1.65
3.0" × 2.5"	76.2	63.5	82.55	82.55	1.65
4.0" × 2.0"	101.6	50.8	98.40	101.60	2.10
4.0" × 2.5"	101.6	63.5	98.40	95.25	2.10
4.0" × 3.0"	101.6	76.2	98.40	95.25	2.10



45° Clamp Elbow 2KMP

SIZE	A	B	T
1.0"	25.4	28.5	1.65
1.5"	38.1	36.5	1.65
2.0"	50.8	44.45	1.65
2.5"	63.5	52.3	1.65
3.0"	76.2	60.3	1.65
4.0"	101.6	76.2	2.10

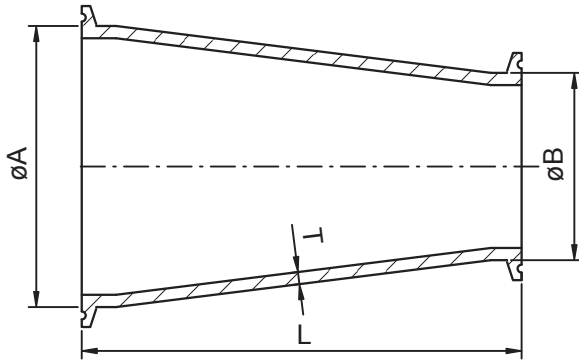


Concentric Reducer L31

SIZE	A	B	L	T
1.5" × 1.0"	38.1	25.4	50.8	1.65
2.0" × 1.5"	50.8	38.1	50.8	1.65
2.5" × 1.5"	63.5	38.1	101.6	1.65
2.5" × 2.0"	63.5	50.8	50.8	1.65
3.0" × 1.5"	76.2	38.1	152.4	1.65
3.0" × 2.0"	76.2	50.8	101.6	1.65
3.0" × 2.5"	76.2	63.5	50.8	1.65
4.0" × 1.5"	101.6	38.1	254.0	2.10
4.0" × 2.0"	101.6	50.8	203.2	2.10
4.0" × 2.5"	101.6	63.5	152.4	2.10
4.0" × 3.0"	101.6	76.2	101.6	2.10

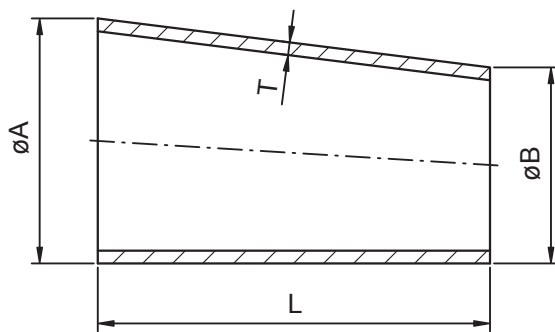
3A PIPE FITTING

Concentric Reducer 31-14MP



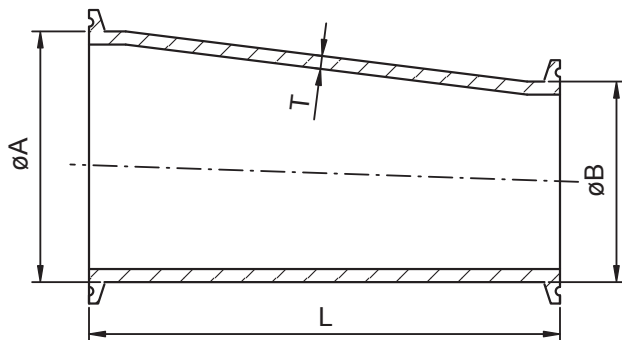
SIZE	A	B	L	T
1.5"×1.0"	38.1	25.4	76.2	1.65
2.0"×1.5"	50.8	38.1	76.2	1.65
2.5"×1.5"	63.5	38.1	127.0	1.65
2.5"×2.0"	63.5	50.8	76.2	1.65
3.0"×1.5"	76.2	38.1	177.8	1.65
3.0"×2.0"	76.2	50.8	127.0	1.65
3.0"×2.5"	76.2	63.5	76.2	1.65
4.0"×1.5"	101.6	38.1	282.5	2.10
4.0"×2.0"	101.6	50.8	231.7	2.10
4.0"×2.5"	101.6	63.5	180.9	2.10
4.0"×3.0"	101.6	76.2	130.1	2.10

Eccentric Reducer L32



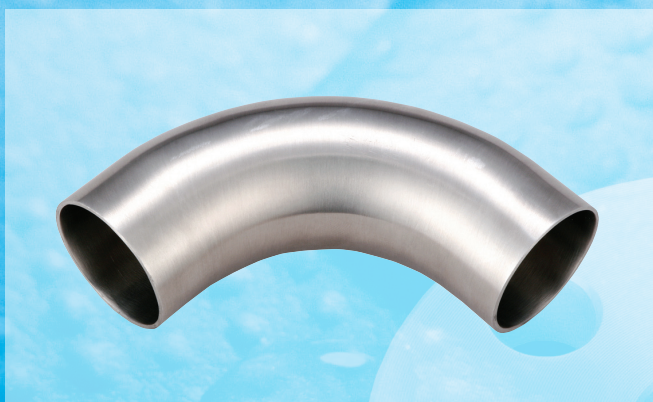
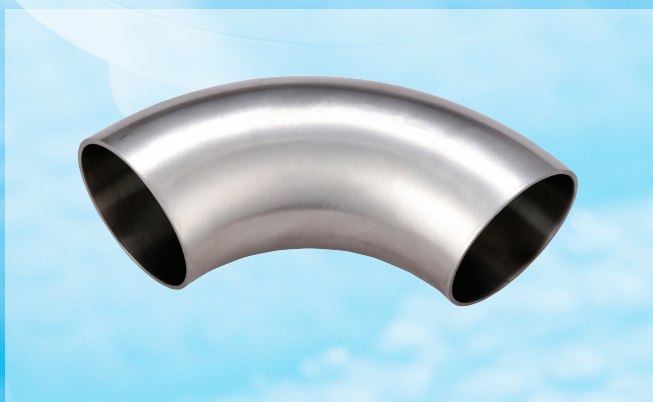
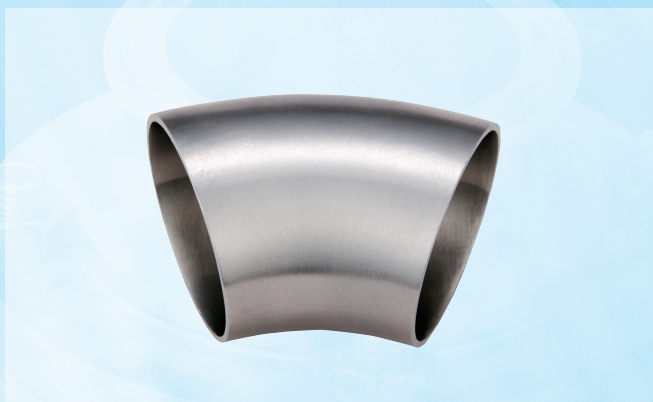
SIZE	A	B	L	T
1.5"×1.0"	38.1	25.4	50.8	1.65
2.0"×1.5"	50.8	38.1	50.8	1.65
2.5"×1.5"	63.5	38.1	101.6	1.65
2.5"×2.0"	63.5	50.8	50.8	1.65
3.0"×1.5"	76.2	38.1	152.4	1.65
3.0"×2.0"	76.2	50.8	101.6	1.65
3.0"×2.5"	76.2	63.5	50.8	1.65
4.0"×1.5"	101.6	38.1	254.0	2.10
4.0"×2.0"	101.6	50.8	203.2	2.10
4.0"×2.5"	101.6	63.5	152.4	2.10
4.0"×3.0"	101.6	76.2	101.6	2.10

Eccentric Reducer 32-14MP

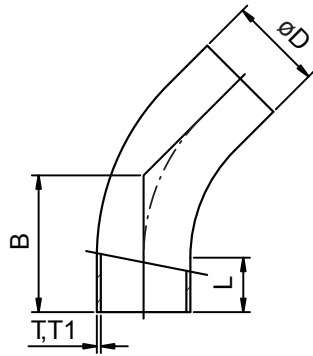


SIZE	A	B	L	T
1.5"×1.0"	38.1	25.4	76.2	1.65
2.0"×1.5"	50.8	38.1	76.2	1.65
2.5"×1.5"	63.5	38.1	127.0	1.65
2.5"×2.0"	63.5	50.8	76.2	1.65
3.0"×1.5"	76.2	38.1	177.8	1.65
3.0"×2.0"	76.2	50.8	127.0	1.65
3.0"×2.5"	76.2	63.5	76.2	1.65
4.0"×1.5"	101.6	38.1	282.5	2.10
4.0"×2.0"	101.6	50.8	231.7	2.10
4.0"×2.5"	101.6	63.5	180.9	2.10
4.0"×3.0"	101.6	76.2	130.1	2.10

SMS PIPE FITTING

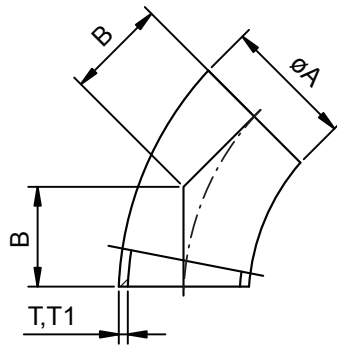


SMS PIPE FITTING



45° Long Elbow

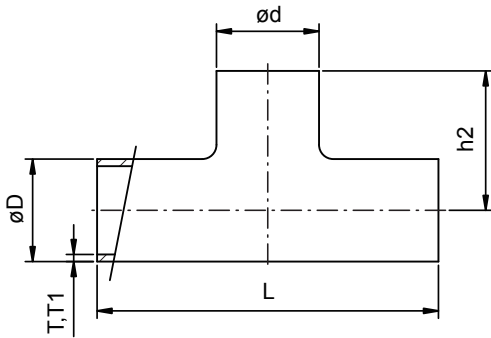
SIZE	D	L	B	T	T1
25	25	27	42.53	1.25	1.5
38	38	33	56.61	1.25	1.5
51	51	37	68.69	1.25	1.5
63.5	63.5	38	78.45	1.50	1.5
76	76.1	38	85.28	1.60	2.0
104	104	40	103.0	2.00	2.0



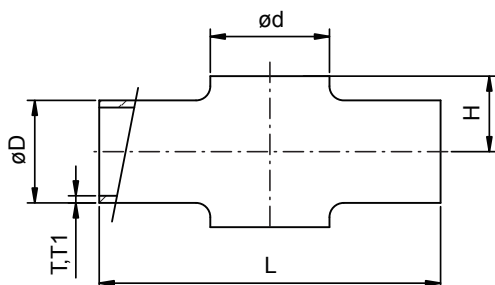
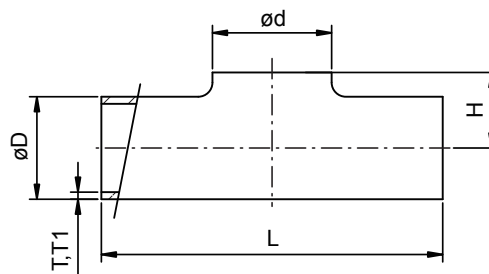
45° Short Elbow

SIZE	D	B	T	T1
25	25	15.53	1.25	1.5
38	38	23.61	1.25	1.5
51	51	31.69	1.25	1.5
63.5	63.5	39.45	1.50	1.5
76	76.1	47.28	1.60	2.0
104	104	63.0	2.00	2.0

Tee With Straight-End



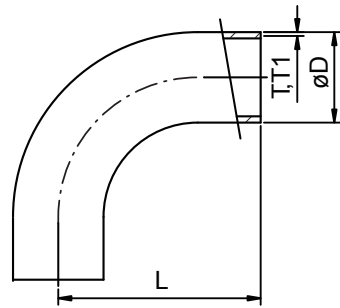
Tee Without Straight-End



Welding Cross Without Straight-End

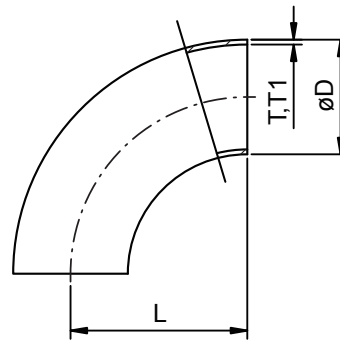
SIZE	øD	T	T1	L	h2	H	ød
25	25	1.25	1.5	110	55	15	25
38	38	1.25	1.5	140	70	21	38
51	51	1.25	1.5	164	82	29	51
63.5	63.5	1.5	1.5	210	105	36	63.5
76.1	76.1	1.6	2.0	220	110	44	76.1
104	104	2.0	2.0	300	150	58	104

SMS PIPE FITTING



90° Long Tube Bend

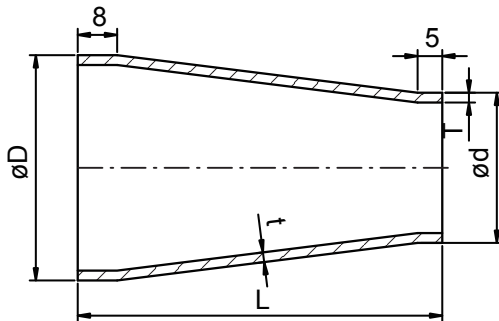
SIZE	D	L	T	T1
25	25	52.5	1.25	1.5
38	38	72.0	1.25	1.5
51	51	91.5	1.25	1.5
63.5	63.5	113.25	1.50	1.5
76	76.1	132.15	1.60	2.0
104	104	172.1	2.00	2.0



90° Short Tube Bend

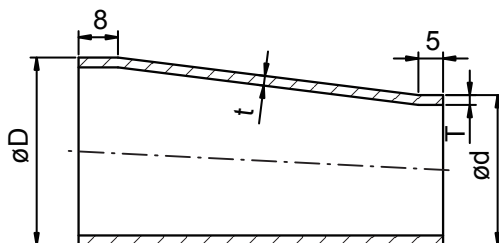
SIZE	D	L	T	T1
25	25	37.5	1.25	1.5
38	38	57.0	1.25	1.5
51	51	76.5	1.25	1.5
63.5	63.5	95.25	1.50	1.5
76	76.1	114.15	1.60	2.0
104	104	152.1	2.00	2.0

Concentric Reducer



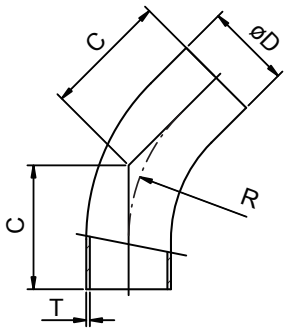
SIZE	øD	T	ød	t	L	L1
38×25	38	1.50	25	1.50	39	46
51×25	51	1.50	25	1.50	57	68
51×38	51	1.50	38	1.50	39	47
63.5×25	63.5	1.50	25	1.50	74	92
63.5×38	63.5	1.50	38	1.50	57	70
63.5×51	63.5	1.50	51	1.50	39	44
76×25	76.1	1.65	25	1.50	92	
76×38	76.1	1.65	38	1.50	74	92
76×51	76.1	1.65	51	1.50	57	68
76×63.5	76.1	1.65	63.5	1.65	39	47
104×51	104	2.00	51	1.50	95	117
104×63.5	104	2.00	63.5	1.50	78	94
104×76	104	2.00	76.1	1.60	60	74

Eccentric Reducer



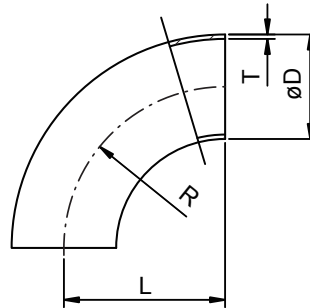
DIN PIPE FITTING

45° Long Elbow



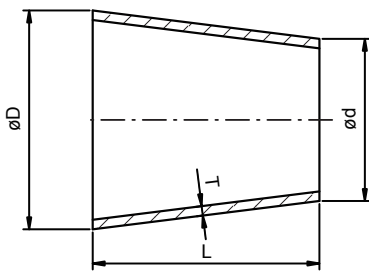
SIZE	D	C	R	T
DN25	28	20	20	1.5
DN32	34	23	23	1.5
DN40	40	20	20	1.5
DN50	52	27	27	1.5
DN65	70	30	30	2.0
DN80	85	33	33	2.0
DN100	104	40	40	2.0

90° Short Elbow

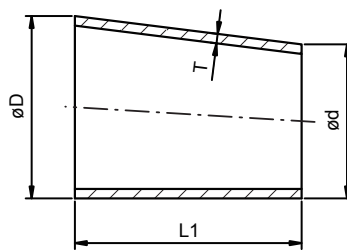


SIZE	D	L1	R	T
DN25	28	50	50	1.5
DN32	34	55	55	1.5
DN40	40	60	60	1.5
DN50	52	70	70	1.5
DN65	70	80	80	2.0
DN80	85	90	90	2.0
DN100	101.6	133	133	2.0
DN100	104	100	100	2.0

Concentric Reducer

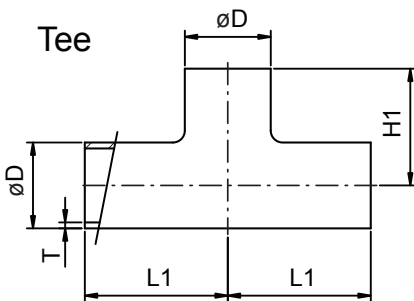


Eccentric Reducer

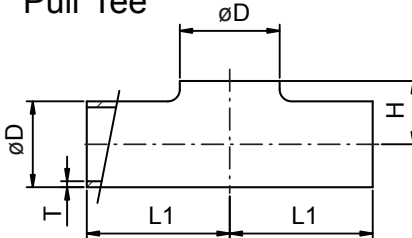


SIZE	øD	ød	T	L	L1
32×25	32	26	1.5	11	16.5
40×25	38	26	1.5	22	33
40×32	38	32	1.5	11	16.5
50×25	50	26	1.5	44	66
50×32	50	32	1.5	33	49.5
50×40	50	38	1.5	22	33
65×40	66	38	2.0	51	77
65×50	66	50	2.0	29	44
80×50	81	50	2.0	56	85
80×65	81	66	2.0	27	41.2
100×50	100	50	2.0	90	137.5
100×65	100	66	2.0	61	93.5
100×80	100	81	2.0	34	52.5

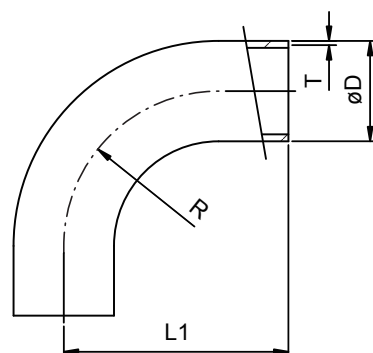
Tee



Pull Tee



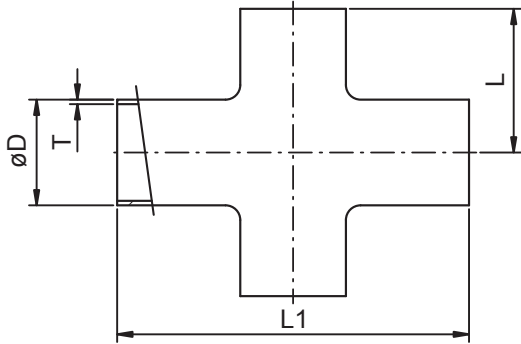
SIZE	øD	H	H1	L1	T
DN20	22	13	47	47	1.5
DN25	28	15.5	50	50	1.5
DN32	34	19	55	55	1.5
DN40	40	22	60	60	1.5
DN50	52	28.5	70	70	1.5
DN65	70	39.5	80	80	2.0
DN80	85	46.5	90	90	2.0
DN100	101.6	56	150	150	2.0
DN100	104	58	100	100	2.0



90° Long Bend

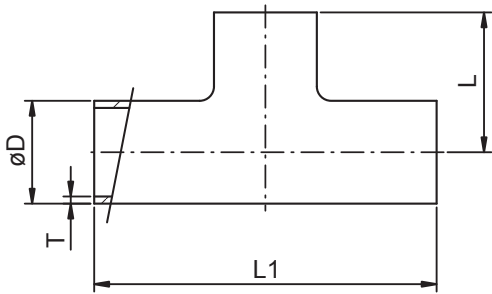
SIZE	D	L1	R	T
DN25	28	65	50	1.5
DN32	34	73	55	1.5
DN40	40	80	60	1.5
DN50	52	92	70	1.5
DN65	70	105	80	2.0
DN80	85	119	90	2.0
DN100	101.6	175	133	2.0
DN100	104	140	100	2.0

PIPE FITTING



Cross Short Cross

SIZE	D	L	L1	T
1.0"	25.4	65	130	1.65
1.5"	38.1	85	170	1.65
2.0"	50.8	110	220	1.65
2.5"	63.5	135	270	1.65
3.0"	76.2	155	310	1.65
4.0"	101.6	195	390	2.10



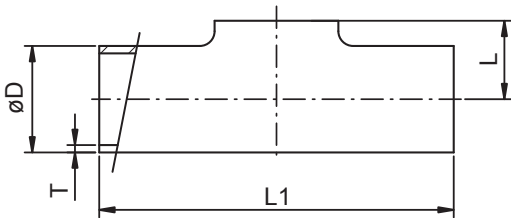
Welding Tee

Welding Tee

SIZE	D	L	L1	T
1.0"	25.4	43.5	87	1.65
1.5"	38.1	63.5	127	1.65
2.0"	50.8	88.5	177	1.65
2.5"	63.5	113.5	227	1.65
3.0"	76.2	133.5	267	1.65
4.0"	101.6	173.5	347	2.10

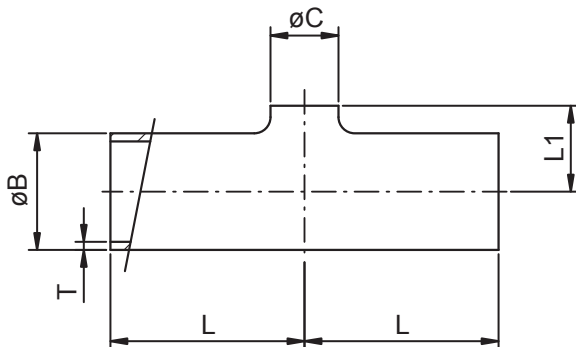
Long Tee

SIZE	D	L	L1	T
1.0"	25.4	65	130	1.65
1.5"	38.1	85	170	1.65
2.0"	50.8	110	220	1.65
2.5"	63.5	135	270	1.65
3.0"	76.2	155	310	1.65
4.0"	101.6	195	390	2.10



Pull Tee

SIZE	D	L	L1	T
1.0"	25.4	14.2	87	1.65
1.5"	38.1	21.6	127	1.65
2.0"	50.8	29.1	177	1.65
2.5"	63.5	35.3	227	1.65
3.0"	76.2	41.4	267	1.65
4.0"	101.6	54.7	347	2.10



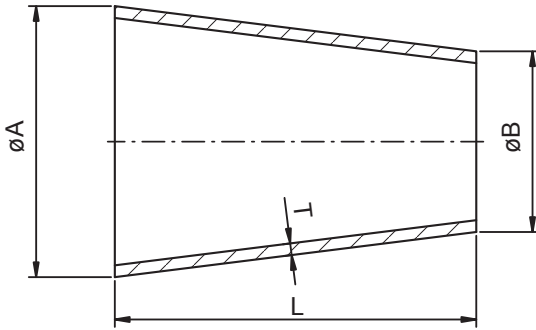
Reducing Tee

Reducing Tee W/O Straight end

SIZE	B	C	L	L1	T
1.5" × 1.0"	38.1	25.4	63.5	22	1.65
2.0" × 1.0"	50.8	25.4	88.5	29	1.65
2.0" × 1.5"	50.8	38.1	88.5	29	1.65
2.5" × 1.0"	63.5	25.4	113.5	35	1.65
2.5" × 1.5"	63.5	38.1	113.5	35	1.65
2.5" × 2.0"	63.5	50.8	113.5	35	1.65
3.0" × 1.0"	76.2	25.4	132	41	1.65
3.0" × 1.5"	76.2	38.1	129	41	1.65
3.0" × 2.0"	76.2	50.8	112	41	1.65
3.0" × 2.5"	76.2	63.5	112	41	1.65
4.0" × 2.0"	101.6	50.8	173.5	55	2.10
4.0" × 2.5"	101.6	63.5	173.5	55	2.10
4.0" × 3.0"	101.6	76.2	173.5	55	2.10

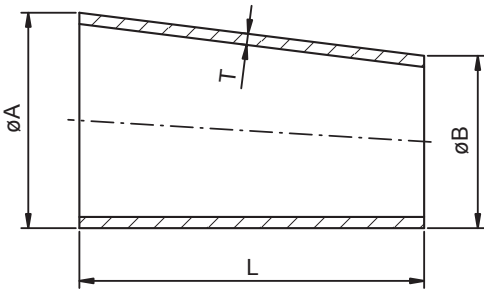
PIPE FITTING

Concentric Reducer

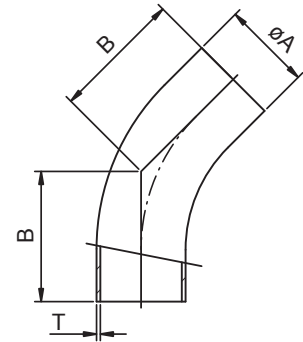


SIZE	A	B	L	T
1.5" × 1.0"	38.1	25.4	29	1.65
2.0" × 1.0"	50.8	25.4	53	1.65
2.0" × 1.5"	50.8	38.1	41	1.65
2.5" × 1.0"	63.5	25.4	82	1.65
2.5" × 1.5"	63.5	38.1	64	1.65
2.5" × 2.0"	63.5	50.8	40	1.65
3.0" × 1.0"	76.2	25.4	110	1.65
3.0" × 1.5"	76.2	38.1	81	1.65
3.0" × 2.0"	76.2	50.8	55	1.65
3.0" × 2.5"	76.2	63.5	41	1.65
4.0" × 1.5"	101.6	38.1	135	2.10
4.0" × 2.0"	101.6	50.8	106	2.10
4.0" × 2.5"	101.6	63.5	76	2.10
4.0" × 3.0"	101.6	76.2	53	2.10

Eccentric Reducer



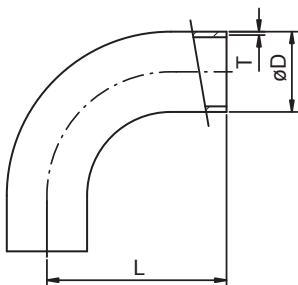
SIZE	A	B	L	T
1.5" × 1.0"	38.1	25.4	35	1.65
2.0" × 1.0"	50.8	25.4	54	1.65
2.0" × 1.5"	50.8	38.1	36	1.65
2.5" × 1.0"	63.5	25.4	76	1.65
2.5" × 1.5"	63.5	38.1	66	1.65
2.5" × 2.0"	63.5	50.8	35	1.65
3.0" × 1.0"	76.2	25.4	112	1.65
3.0" × 1.5"	76.2	38.1	78	1.65
3.0" × 2.0"	76.2	50.8	66	1.65
3.0" × 2.5"	76.2	63.5	44	1.65
4.0" × 1.5"	101.6	38.1	122	2.10
4.0" × 2.0"	101.6	50.8	97	2.10
4.0" × 2.5"	101.6	63.5	73	2.10
4.0" × 3.0"	101.6	76.2	77	2.10



45° Long Elbow

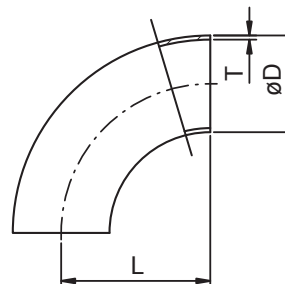
SIZE	A	B	T
1.0"	25.4	30.2	1.65
1.5"	38.1	41.3	1.65
2.0"	50.8	58.7	1.65
2.5"	63.5	76.2	1.65
3.0"	76.2	93.7	1.65
4.0"	101.6	122.2	2.10

90° Long Tube Bend



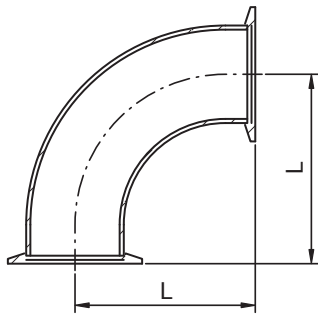
SIZE	D	L	T
1.0"	25.4	65	1.65
1.5"	38.1	85	1.65
2.0"	50.8	110	1.65
2.5"	63.5	135	1.65
3.0"	76.2	155	1.65
4.0"	101.6	195	2.10

90° Short Tube Bend



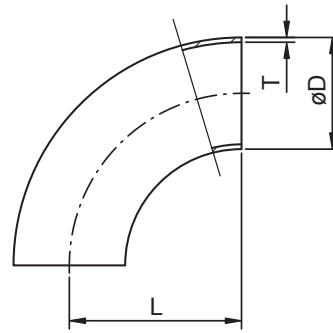
SIZE	D	L	T
1.0"	25.4	43.5	1.65
1.5"	38.1	63.5	1.65
2.0"	50.8	88.5	1.65
2.5"	63.5	113.5	1.65
3.0"	76.2	133.5	1.65
4.0"	101.6	173.5	2.10

VACUUM COMPONENTS



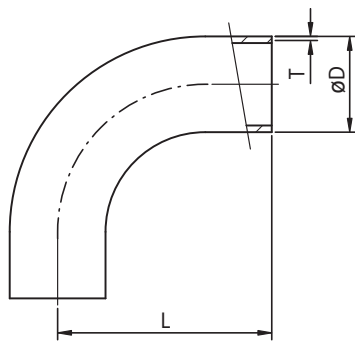
90° Elbow Flange

SIZE	Tube O.D	L
KF-25	1.0"	51.6
KF-40	1.5"	61.0
KF-50	2.0"	80.0



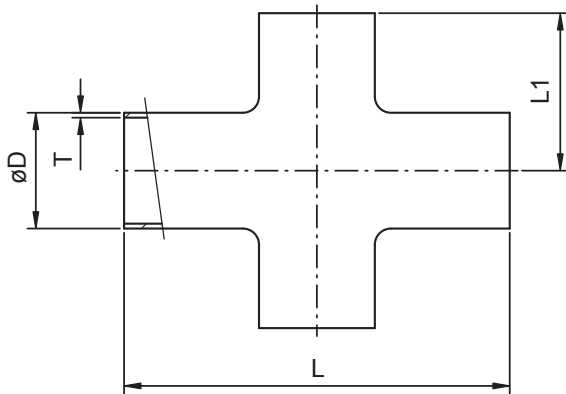
90° Short Bend

SIZE	D	L	T
1.0"	25.4	38.1	1.65
1.5"	38.1	57.20	1.65
2.0"	50.8	76.20	1.65
2.5"	63.5	95.25	1.65
3.0"	76.2	114.30	1.65
4.0"	101.6	152.40	2.10



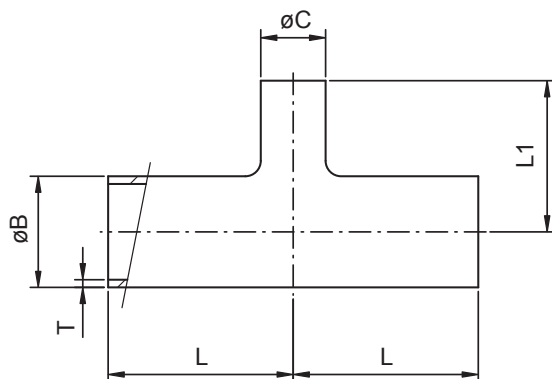
90° Long Bend

SIZE	D	L	T
1.0"	25.4	52.4	1.65
1.5"	38.1	74.6	1.65
2.0"	50.8	103.2	1.65
2.5"	63.5	131.8	1.65
3.0"	76.2	160.3	1.65
4.0"	101.6	211.1	2.10



Cross

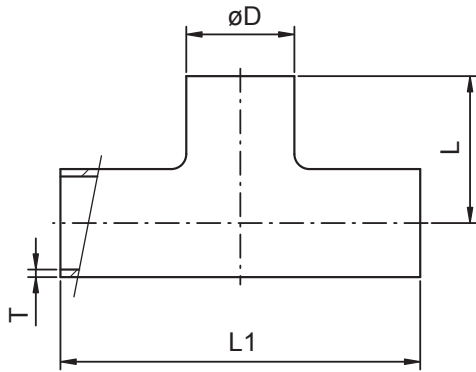
SIZE	D	L	L1	T
1.0"	25.4	95.2	47.6	1.65
1.5"	38.1	114.4	57.2	1.65
2.0"	50.8	152.4	76.2	1.65
2.5"	63.5	152.4	76.2	1.65
3.0"	76.2	165.2	82.6	1.65
4.0"	101.6	196.8	98.4	2.10



Reducing Tee

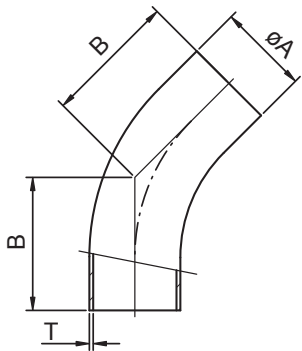
SIZE	B	C	L	L1	T
1.5" × 1.0"	38.1	25.4	57.15	53.98	1.65
2.0" × 1.0"	50.8	25.4	76.20	60.30	1.65
2.0" × 1.5"	50.8	38.1	76.20	63.50	1.65
2.5" × 1.5"	63.5	38.1	76.20	69.85	1.65
2.5" × 2.0"	63.5	50.8	76.20	82.55	1.65
3.0" × 1.5"	76.2	38.1	82.55	76.20	1.65
3.0" × 2.0"	76.2	50.8	82.55	88.90	1.65
3.0" × 2.5"	76.2	63.5	82.55	82.55	1.65
4.0" × 2.0"	101.6	50.8	98.40	101.60	2.10
4.0" × 2.5"	101.6	63.5	98.40	95.25	2.10
4.0" × 3.0"	101.6	76.2	98.40	95.25	2.10

VACUUM COMPONENTS



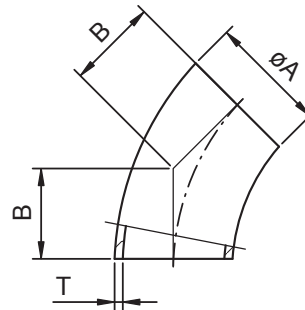
Tee

SIZE	D	L	L1	T
1.0"	25.4	47.6	95.2	1.65
1.5"	38.1	57.2	114.4	1.65
2.0"	50.8	76.2	152.4	1.65
2.5"	63.5	76.2	152.4	1.65
3.0"	76.2	82.6	165.2	1.65
4.0"	101.6	98.4	196.8	2.10



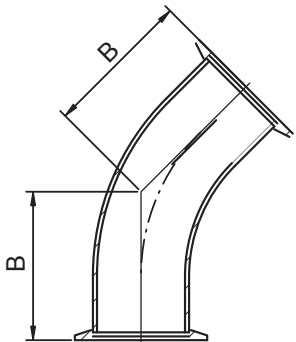
45° Long Elbow

SIZE	A	B	T
1.0"	25.4	30.2	1.65
1.5"	38.1	41.3	1.65
2.0"	50.8	58.7	1.65
2.5"	63.5	76.2	1.65
3.0"	76.2	93.7	1.65
4.0"	101.6	122.2	2.10



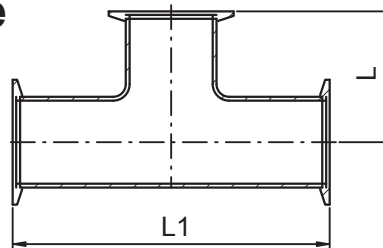
45° Short Elbow

SIZE	A	B	T
1.0"	25.4	15.8	1.65
1.5"	38.1	23.8	1.65
2.0"	50.8	31.75	1.65
2.5"	63.5	39.6	1.65
3.0"	76.2	47.6	1.65
4.0"	101.6	63.5	2.10



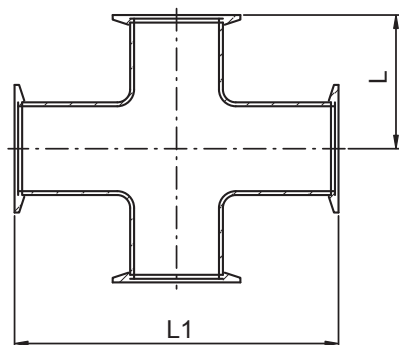
45° Elbow Flange

SIZE	Tube O.D	B
KF-25	1.0"	28.5
KF-40	1.5"	42.7
KF-50	2.0"	50.8



Tee Flange

SIZE	Tube O.D	L	L1
KF-25	1.0"	51.6	103.2
KF-40	1.5"	61.0	122
KF-50	2.0"	80.0	160

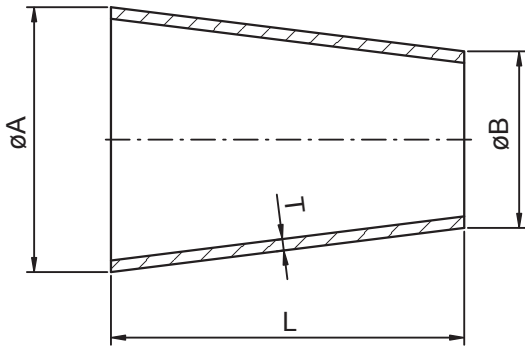


4-Way Cross Flange

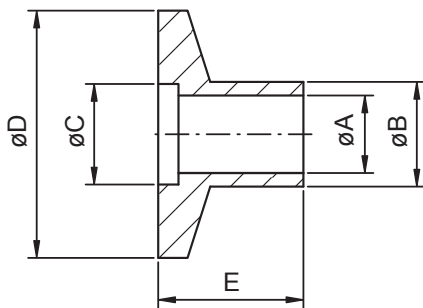
SIZE	Tube O.D	L	L1
KF-25	1.0"	51.6	103.2
KF-40	1.5"	61.0	122
KF-50	2.0"	80.0	160

VACUUM COMPONENTS

Concentric Reducer

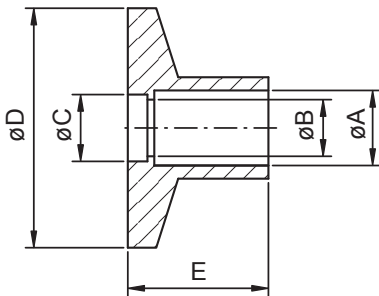


SIZE	A	B	L	T
1.5"×1.0"	38.1	25.4	50.8	1.65
2.0"×1.5"	50.8	38.1	50.8	1.65
2.5"×1.5"	63.5	38.1	101.6	1.65
2.5"×2.0"	63.5	50.8	50.8	1.65
3.0"×1.5"	76.2	38.1	152.4	1.65
3.0"×2.0"	76.2	50.8	101.6	1.65
3.0"×2.5"	76.2	63.5	50.8	1.65
4.0"×1.5"	101.6	38.1	254.0	2.10
4.0"×2.0"	101.6	50.8	203.2	2.10
4.0"×2.5"	101.6	63.5	152.4	2.10
4.0"×3.0"	101.6	76.2	101.6	2.10



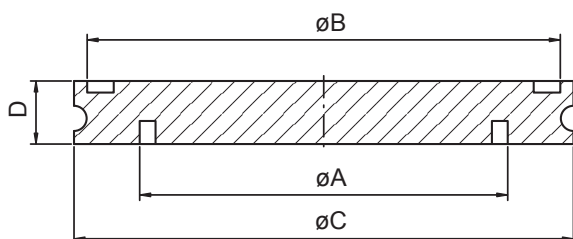
Weld Flange

SIZE	A	B	C	D	E	E
KF-10	9.4	12.7	12.2	30	12.7	40
KF-16	15.7	19.05	17.3	30	12.7	40
KF-25	22.1	25.4	26.2	40	12.7	40
KF-40	34.8	38.1	41.1	55	19.1	40
KF-50	47.5	50.8	52.3	75	19.1	40



Socket Weld Flange

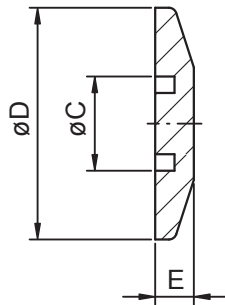
SIZE	A	B	C	D	E
KF-10	13	9.4	12.2	30	12.7
KF-16	19.3	15.7	17.3	30	12.7
KF-25	25.7	22.1	26.2	40	12.7
KF-40	38.4	34.8	41.1	55	12.7
KF-50	51.1	47.5	52.3	75	12.7



ISO-Blank Flange

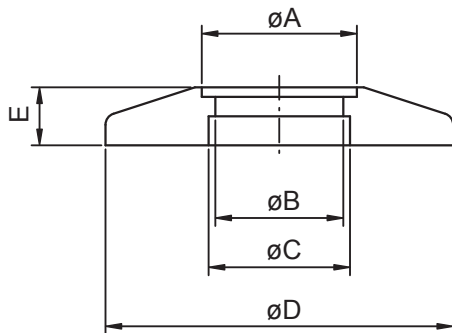
SIZE	A	B	C	D
ISO-63	70	90	95	12
ISO-80	83	105	110	12
ISO-100	102	125	130	12
ISO-160	153	175	180	12

VACUUM COMPONENTS



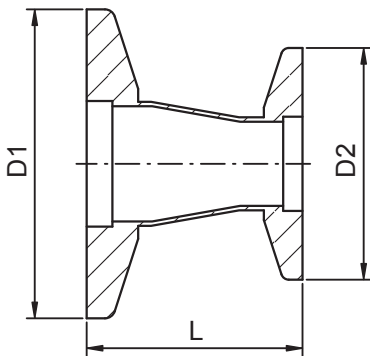
Blank Flange

SIZE	C	D	E
KF-10	12.2	30	5
KF-16	17.3	30	5
KF-25	26.2	40	5
KF-40	41.1	55	5
KF-50	52.3	75	5



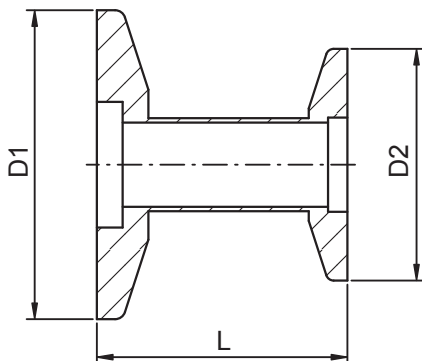
Bored Blank Flange

SIZE	A	B	C	D	E
KF-10	13	9.4	12.2	30	5
KF-16	19.3	15.7	17.3	30	5
KF-25	25.7	22.1	26.2	40	5
KF-40	38.4	34.8	41.1	55	5
KF-50	51.1	47.5	52.3	75	5



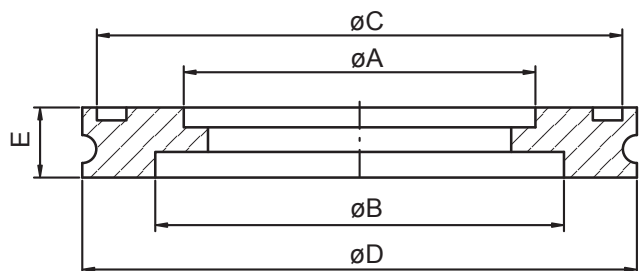
Conical Reducer

D1	D2	L
KF-25	KF-16	39.9
KF-40	KF-16	39.9
KF-40	KF-25	39.9
KF-50	KF-16	39.9
KF-50	KF-25	39.9
KF-50	KF-40	39.9



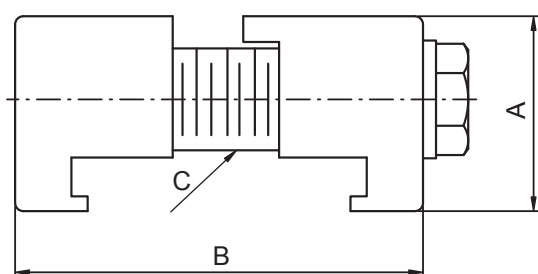
Straight Reducer

D1	D2	L
KF-25	KF-16	39.9
KF-40	KF-16	39.9
KF-40	KF-25	39.9
KF-50	KF-16	39.9
KF-50	KF-25	39.9
KF-50	KF-40	39.9



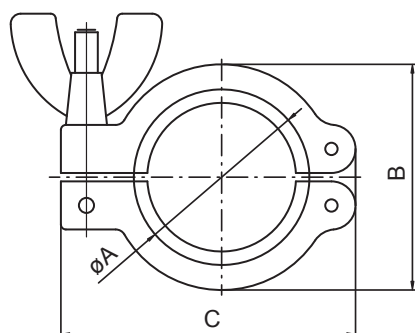
ISO-Bored Flange

SIZE	A	B	C	D	E
ISO-63	63.7	70	90	95	12
ISO-80	76.4	83	105	110	12
ISO-100	101.8	102	125	130	12
ISO-160	152.9	153	175	180	12



ISO-Double Claw Clamp

SIZE	A	B	C
ISO-63	23.9	50	M8
ISO-80	23.9	50	M8
ISO-100	26.2	50	M8
ISO-160	27.9	50	M10

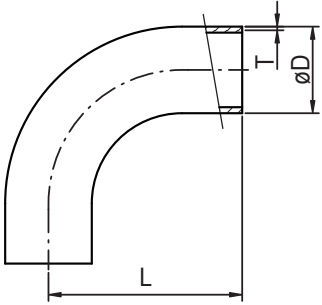


KF-Clamp-Aluminum/Stainless Steel

SIZE	A	B	C
10/16	35	45	62
20/25	45	55	73
32/40	60	70	90
50	80	96	123

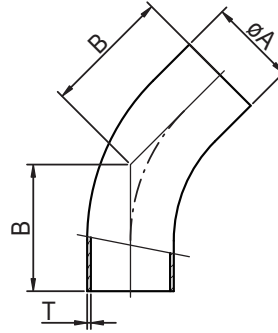
BPE PIPE FITTING

2S 90° Bend DT-7



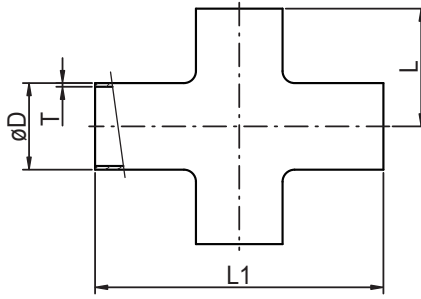
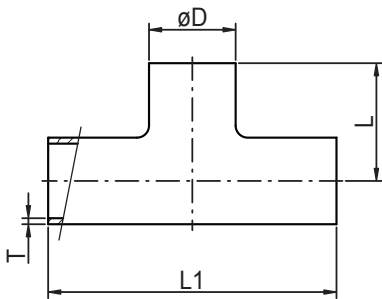
SIZE	D	L	T
1/2"	12.7	76.2	1.65
3/4"	19.05	76.2	1.65
1.0"	25.4	76.2	1.65
1.5"	38.1	95.3	1.65
2.0"	50.8	120.7	1.65
2.5"	63.5	139.7	1.65
3.0"	76.2	158.8	1.65
4.0"	101.6	203.2	2.10

2KS 45° Elbow DT-8



SIZE	A	B	T
1/2"	12.7	57.2	1.65
3/4"	19.05	57.2	1.65
1.0"	25.4	57.2	1.65
1.5"	38.1	63.5	1.65
2.0"	50.8	76.2	1.65
2.5"	63.5	85.7	1.65
3.0"	76.2	92.1	1.65
4.0"	101.6	114.3	2.10

BPE-7W Tee & BPE-9W Cross

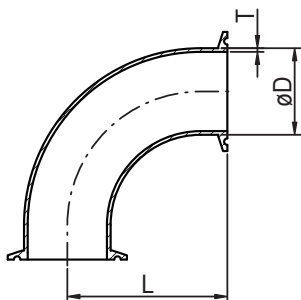


DT-9

SIZE	D	L	L1	T
1/2"	12.7	47.6	95.2	1.65
3/4"	19.05	50.8	101.6	1.65
1.0"	25.4	54	108	1.65
1.5"	38.1	60.3	120.6	1.65
2.0"	50.8	73	146	1.65
2.5"	63.5	79.4	158.8	1.65
3.0"	76.2	85.7	171.4	1.65
4.0"	101.6	104.8	209.6	2.10

BPE-2CMP 90° Clamp Bend

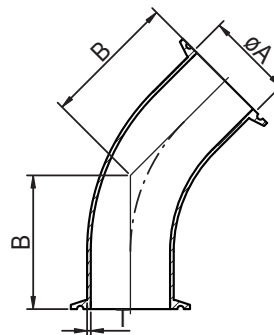
DT-16



SIZE	D	L	T
1/2"	12.7	41.3	1.65
3/4"	19.05	41.3	1.65
1.0"	25.4	50.8	1.65
1.5"	38.1	69.9	1.65
2.0"	50.8	88.9	1.65
2.5"	63.5	108	1.65
3.0"	76.2	127	1.65
4.0"	101.6	168.3	2.10

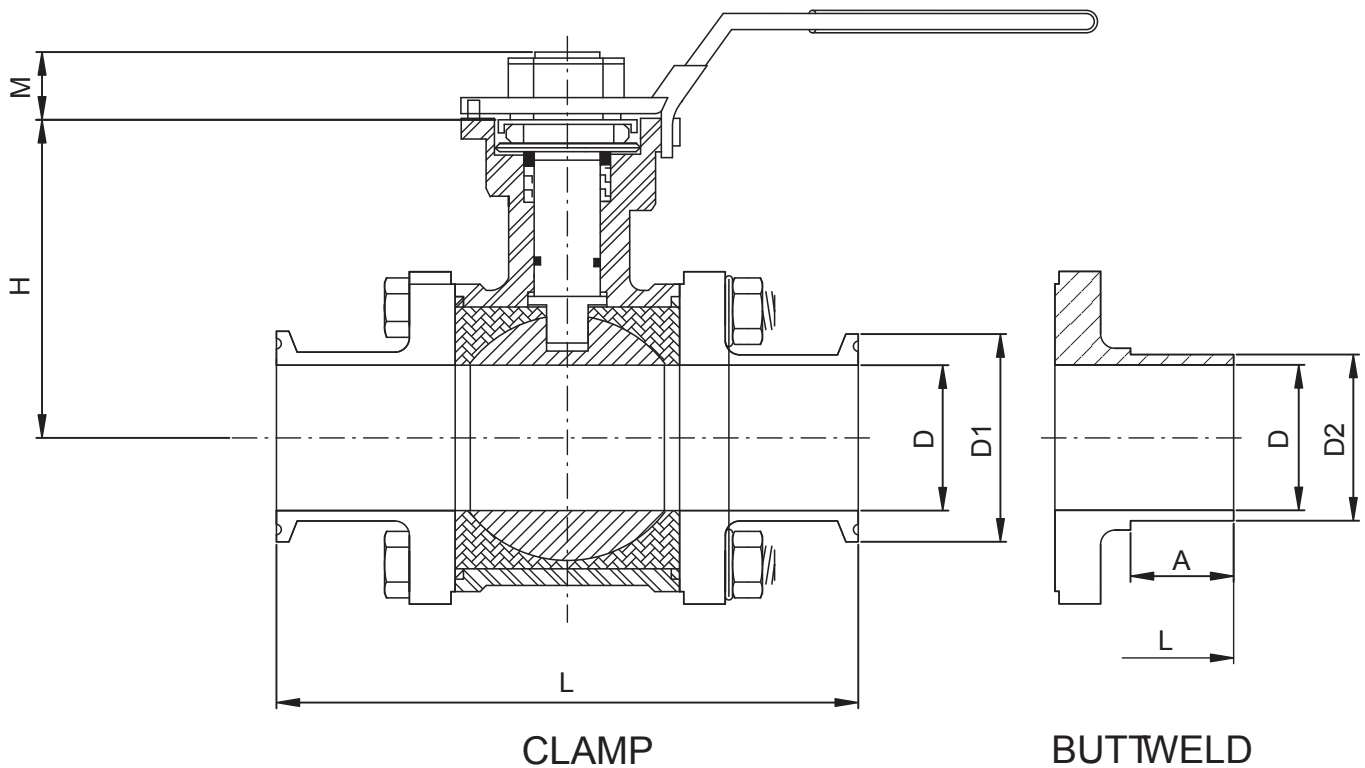
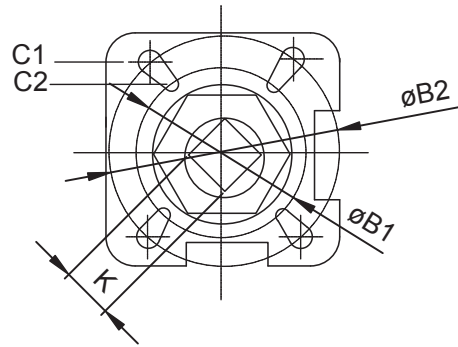
BPE-2KMP 45° Clamp Elbow

DT-17



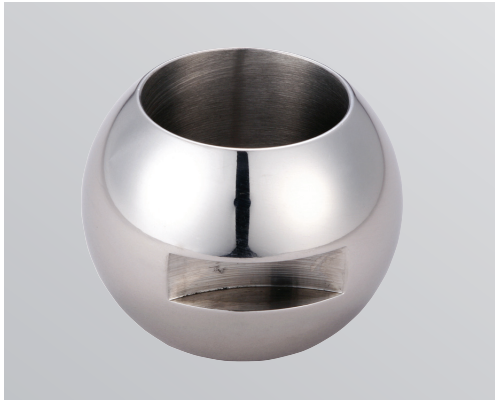
SIZE	A	B	T
1/2"	12.7	25.4	1.65
3/4"	19.05	25.4	1.65
1.0"	25.4	28.6	1.65
1.5"	38.1	36.5	1.65
2.0"	50.8	44.45	1.65
2.5"	63.5	52.4	1.65
3.0"	76.2	60.3	1.65
4.0"	101.6	79.4	2.10

BALL VALVES

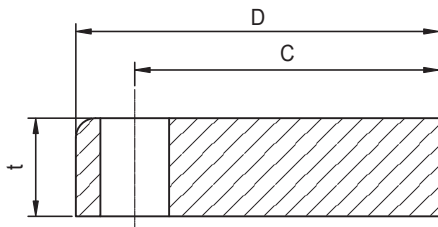


SIZE	ISO 521	D±0.1	L±2.0	H	M±1.0	øB1	øB2	K	D1	D2	A	C1	C2	INCH/LBS
1/2"	F03-F04	9.5	89	37	9	36	42	9	25.4	12.7	18	M5*0.8	M5*0.8	90
3/4"	F03-F04	15.9	101	47	9	36	42	9	25.4	19.1	21	M5*0.8	M5*0.8	100
1"	F04-F05	22.2	114	57.2	11	42	50	11	50.4	25.4	25	M5*0.8	M6*1.0	120
1-1/2"	F05-F07	35	140	78.2	14	50	70	14	50.4	38.2	28	M6.1.0	M8*1.25	240
2"	F05-F07	47.6	156	86.2	14	50	70	14	63.8	50.8	25	M6*1.0	M8*1.25	480
2-1/2"	F07-F10	60.3	197	109.2	17	70	102	17	77.6	63.5	35	M8*1.25	M10*1.5	650
3"	F07-F10	73	229	117.7	17	70	102	17	91	76.2	43	M8*1.25	M10*1.5	1150
4"	F10-F12	97.4	241	141.2	22	102	125	22	119	100.6	37	M10*1.5	M12*1.75	1400

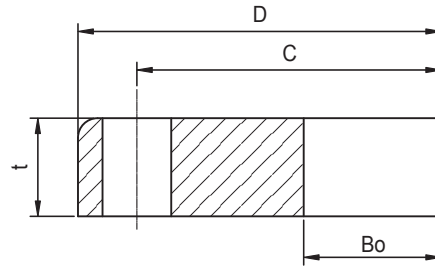
BALL AND FLANG



10A



10B



SIZE	D	C	t
1/2	95	70	12
3/4	100	75	14
1	125	90	14
1 1/4	135	100	16
1 1/2	140	105	16
2	155	120	16
2 1/2	175	140	18
3	185	150	18
4	210	175	18
5	250	210	20
6	280	240	22
8	330	310	22
10	400	355	24
12	445	400	24
14	490	445	26
16	560	510	28
18	620	565	30
20	675	620	30

SIZE	D	C	t	Bo
1/2	95	70	9	22.2
3/4	100	75	11	27.7
1	125	90	11	34.5
1 1/4	135	100	13	43.2
1 1/2	140	105	13	49.1
2	155	120	13	61.1
2 1/2	175	140	15	77.1
3	185	150	15	90.0
4	210	175	15	115.4
5	250	210	17	141.2
6	280	240	19	166.6
8	330	310	19	218.0
10	400	355	21	269.5
12	445	400	21	321.0
14	490	445	23	358.1
16	560	510	25	409.0
18	620	565	27	460.0
20	675	620	27	511.0

3350 SW 148TH Avenue Suite 110 Miramar, Florida 33027 Tel: 1 305 490-2831
305 829-0273 / info@steelresources.us