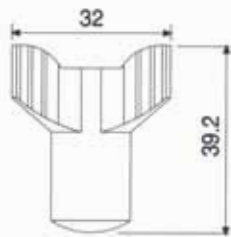
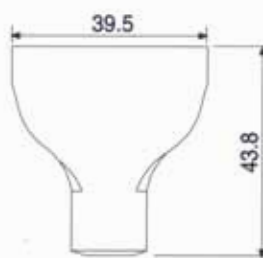


HEAVY DUTY CLAMP-RING (mm)

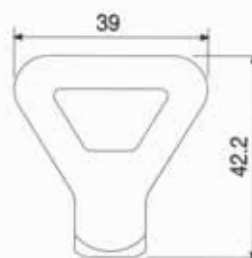
WING-NUT FOR CLAMP-RING



13MHH-11



13MHH-12



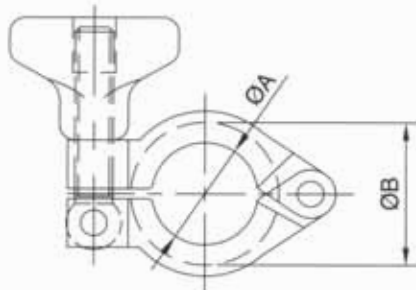
13MHH-13



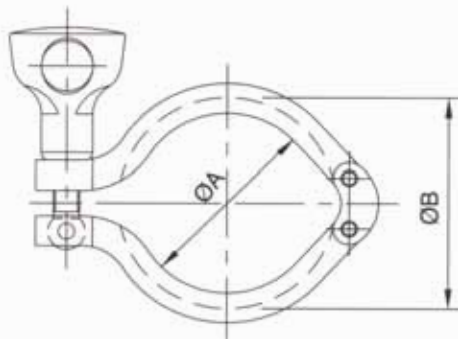
13MHH-14



13SP-2

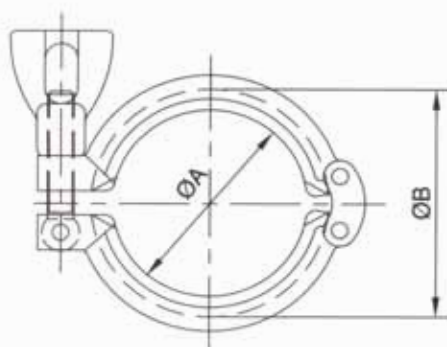


Size: 1/2"~3/4"
(13MHHM & 13MHH & 13SF)



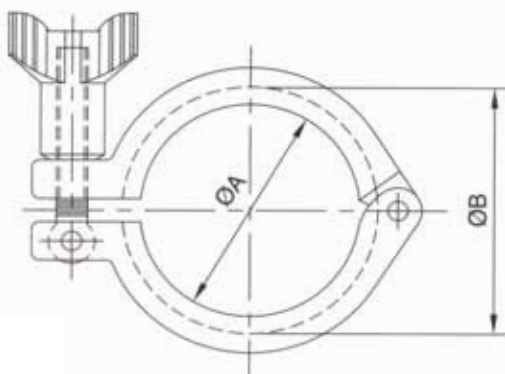
13MHHM HEAVY DUTY DOUBLE PIN CLAMP

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



13SF HEAVY DUTY DOUBLE PIN CLAMP

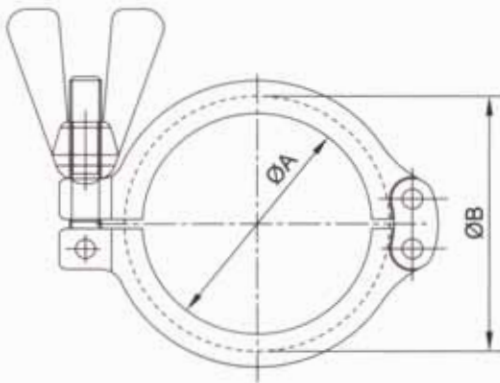
SIZE	A	B
1/2"-3/4"	20	28
A37	27.5	42.9
1.5"	45	58.6
2.0"	59	72
2.5"	67	84
3.0"	85	98
4.0"	114	127



13MHH HEAVY DUTY SINGLE PIN CLAMP

SIZE	A	B
A37	27.8	37
1-1 1/2"	44.4	53.6
2.0"	57.8	67
2 1/2"	71.4	80.6
3.0"	84	94.2
3 1/2"	99	109.2
4.0"	110	122.2
4 1/2"	123	133.2
6.0"	155.4	170.4
8.0"	205	220

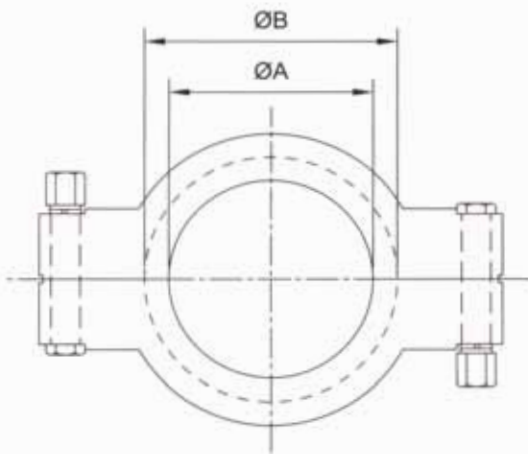
HEAVY DUTY CLAMP-RING (mm)



13CS DOUBLE PIN CLAMP

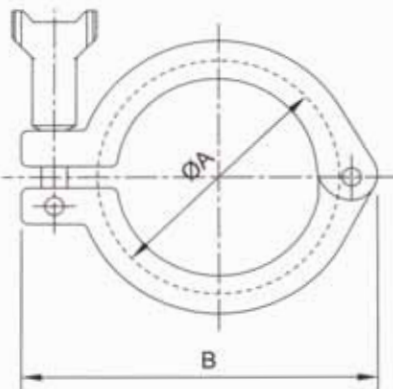
SIZE	A	B
3/4"	20.58	28.34
DN10-20	27.2	37
1.5"	41.02	53.52
DN25-40	44.5	54.5
2.0"	54.54	67.04
DN50	57	68
2.5"	68.02	80.52
3.0"	81.52	94.02
DN65	84	95
DN80	99	110

SIZE	A	B
4.0"	109.54	122.04
DN100	112	123
DN115	123	134
DN125	144	159
6.0"	157.6	175.1
DN150	172	187
8.0"	207.4	225.9
DN200	222.5	237.5
DN250	257	272
DN300	308	323



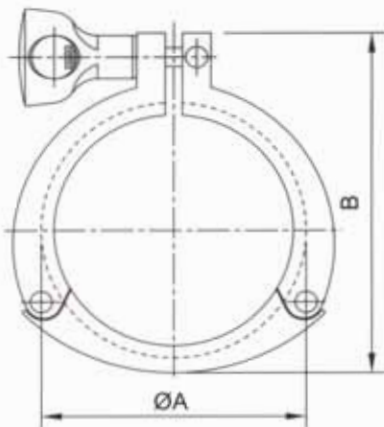
13MHP HIGH PRESSURE CLAMP WITH SCREW BOLT BRASS NUT

SIZE	A	B
1.5"	43.32	52.0
2.0"	56.44	65.5
2.5"	69.54	79.0
3.0"	77.56	92.5
4.0"	108.86	120.5
6.0"	158	170
8.0"	222.5	237.5
10"	258.2	272.8
12"	309	327.6



13IS I-LINE CLAMP

SIZE	A	B
1-1/2"	53.4	83.8
2.0"	72.2	111
2-1/2"	88.1	121.4
3.0"	102.4	136.1
4.0"	127.8	162
6.0"	195.3	242.1



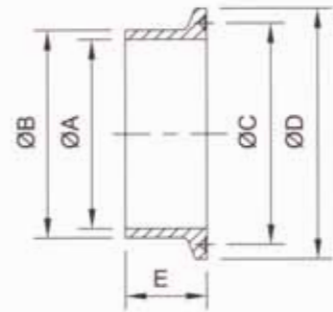
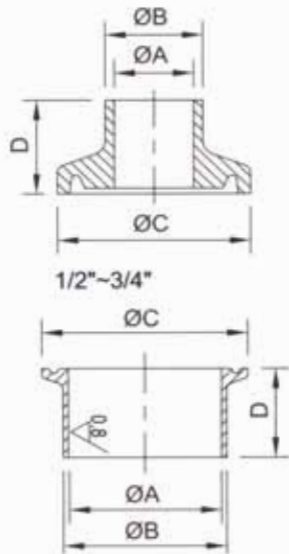
3 PIECES CLAMP

SIZE	A	B
1-1/2"	54	80
2.0"	67.5	94
2-1/2"	80.9	109
3.0"	84.4	126
4.0"	122.4	154

FERRULE ADAPTER (mm)

WELDING FERRULE

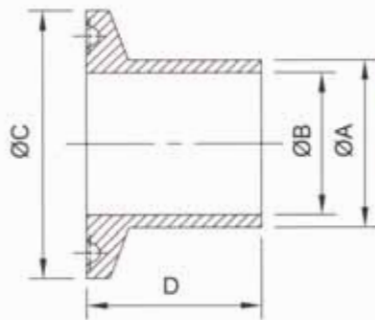
3A/SMS-14WMP 14MMP 14AMP



SIZE	A	B	C	D	D	D
1/2"	9.45	12.75	25.2	12.7	21.5	28.6
3/4"	15.75	19.05	25.2	12.7	21.5	28.6
1.0"	22.2	25.4	50.5	12.7	21.5	28.6
DN25	22.5	25	50.5		21.5	28.6
1.5"	34.9	38.1	50.5	12.7	21.5	28.6
DN38	35.5	38	50.5		21.5	28.6
2.0"	47.6	50.8	64.0	12.7	21.5	28.6
DN51	48.5	21	64.0		21.5	28.6
2.5"	60.3	63.5	77.5	12.7	21.5	28.6
DN63.5	60.5	63.5	77.5		21.5	28.6
DN76	72.9	76.1	91.0		21.5	28.6
3.0"	73.0	76.2	91.0	12.7	21.5	28.6
DN104	97.6	101.6	119.0		21.5	28.6
4.0"	97.6	101.6	119.0	15.8	21.5	28.6
6.0"	146.8	152.5	166.8		21.5	28.6 or 38.1
8.0"	197.6	203.3	217.7		21.5	28.6 or 38.1
10"	247.2	254.1	268.5		21.5	28.6 or 38.1
12"	298	304.9	319.3		21.5	28.6 or 38.1

14MPW

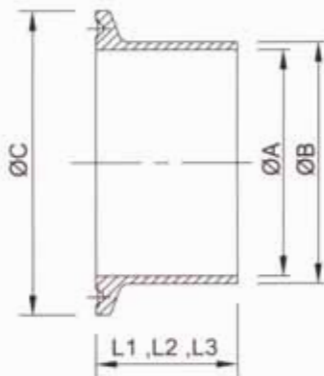
SIZE	A	B	C	D	E
1.0"	22.1	29.5	43.5	50.5	20
1.5"	34.8	42.6	43.5	50.5	20
2.0"	47.5	55.7	56.5	64.0	20
2.5"	60.2	68.8	70.5	77.5	20
3.0"	72.9	81.9	83.5	91.0	20
4.0"	97.4	108.1	110.0	119.0	20



ISO FERRULE

DN	A	B	C	D
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	39.2	50.5	28.6
40	48.3	45.1	64.0	28.6

DN	A	B	C	D
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	109.1	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



DIN FERRULE

SIZE	A	B	C	L1	L2	L3
DN10	9	12	34	12.7	21.5	28.6
DN15	15	18	34	12.7	21.5	28.6
DN20	19	22	34	12.7	21.5	28.6
DN28	25	28	50.5	12.7	21.5	28.6
DN34	31	34	50.5	12.7	21.5	28.6
DN40	37	40	50.5	12.7	21.5	28.6
DN52	49	52	64.0	12.7	21.5	28.6

SIZE	A	B	C	L1	L2	L3
DN70	66	70	91.0	12.7	21.5	28.6
DN85	81	85	106.0	15.8	21.5	28.6
DN101.6	97.6	101.6	119.0	15.8	21.5	28.6
DN104	100	104	119.0	15.8	21.5	28.6
DN125	125	129	155	15.8	21.5	28.6
DN150	150	154	183	15.8	21.5	28.6
DN200	200	204	233.5			28.6

BLANK DIN-16AMP

SIZE	A	B
1/2"	25	6.4
3/4"	25	6.4
1.0"	50.5	6.4
1.5"	50.5	6.4
2.0"	64	6.4
2.5"	77.5	6.4
3.0"	91	6.4
4.0"	119	7.9
10	34	6.4
20	34	6.4
80	106	6.4

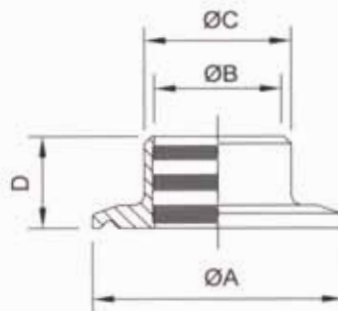
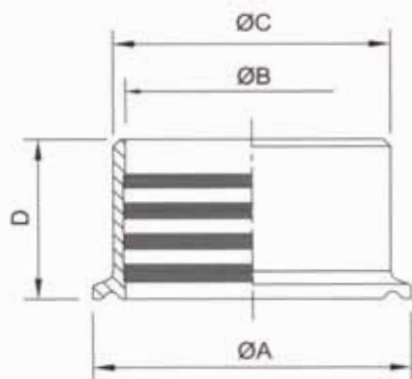
BLANK 3A-16AMP

SIZE	A	B
A37	34	6.3
1/2"-3/4"	25.2	5
1"-1.5"	50.5	6.3
2.0"	61.0	6.3
2.5"	77.5	6.3
3.0"	91.0	6.3
4.0"	119.0	7.9
6.0"	166.8	11.1
8.0"	217.7	11.1
10"	268.5	11.1
12"	319.3	11.1

ISO-16AMP

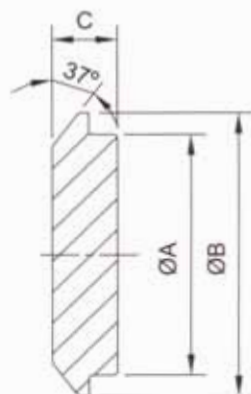
SIZE	A	B
DN20	50.5	6.3
DN25	50.5	6.3
DN32	50.5	6.3
DN40	61.0	6.3
DN50	77.5	6.3
DN65	91	6.3
DN80	106	6.3
DN100	130	7.9
DN125	155	7.9
DN125	183	11.1
DN200	233.5	11.1

FERRULE ADAPTER (mm)



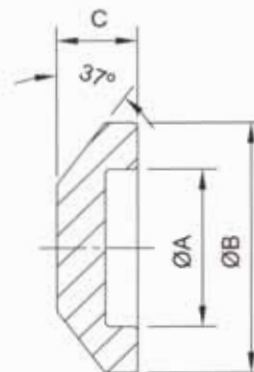
3A-Expanding Ferrule

SIZE	A	B	C	D
1.0"	50.5	25.5	29.5	19.1
1.5"	50.5	38.2	42.6	28.6
2.0"	64	50.9	55.7	33.3
2.5"	77.5	63.6	68.8	34.9
3.0"	91	76.3	91.9	36.5
4.0"	119	101.7	108.1	38.1



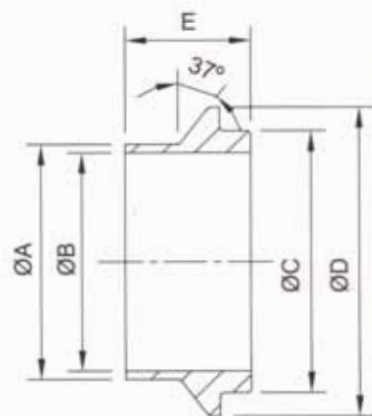
14WI-CAP

SIZE	A	B	C
1.0"	31.50	50.67	9.7
1.5"	44.20	50.67	9.7
2.0"	56.90	67.05	11.77
2.5"	69.60	84.00	15.52
3.0"	83.82	98.30	16.12
4.0"	109.14	123.70	16.12



15WI-CAP

SIZE	A	B	C
1.0"	31.88	50.67	12.75
1.5"	44.58	50.67	12.75
2.0"	57.28	67.05	17.66
2.5"	69.98	84.00	18.77
3.0"	84.20	98.30	19.37
4.0"	109.60	123.70	19.37

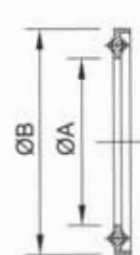


14WI I-LINE FERRULE

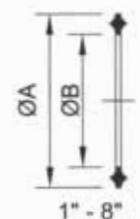
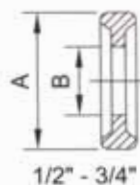
SIZE	A	B	C	D	E
1.0"	25.65	22.10	31.50	50.67	19.84
1.5"	38.35	34.80	44.20	50.67	23.80
2.0"	51.05	47.50	56.90	67.05	26.19
2.5"	63.75	60.20	69.60	84.00	29.36
3.0"	76.45	72.89	83.82	98.30	30.94
4.0"	101.85	97.38	109.14	123.70	34.11

Ferrule Gasket (EPDM, SILICON, VITON, PTFE)

FLANGE TYPE 13FG

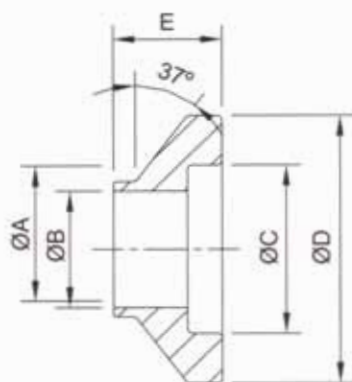


SIZE	A	B
1.0"	22.8	52.7
1.5"	35.8	52.7
2.0"	48.8	66.2
2.5"	60.5	79.7
3.0"	73.1	93.2
4.0"	97.8	121.2
6.0"	148	169.1
10"	270.7	249
12"	300	321.5



PLAIN TYPE 13PG

SIZE	A	B
1/2"	21.8	9.9
3/4"	21.8	16.3
1.0"	50.0	22.7
1.5"	50.063	35.9
2.0"	5	48.6
2.5"	76.2	61.3
3.0"	88.9	74.0
4.0"	118	98.6
6.0"	165	147.8
8.0"	216	196.6



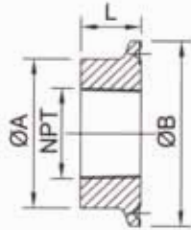
15WI I-LINE FERRULE

SIZE	A	B	C	D	E
1.0"	25.65	22.10	31.88	50.67	19.84
1.5"	38.35	34.80	44.58	50.67	23.80
2.0"	51.05	47.50	57.28	67.05	26.19
2.5"	63.75	60.20	69.98	84.00	29.36
3.0"	76.45	72.89	84.20	98.30	30.94
4.0"	101.85	97.38	109.60	123.70	34.11

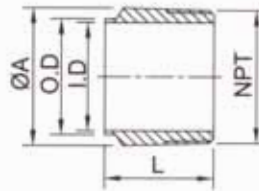
Gasket for Ferrule: EPDM, SILICON, VITON, PTFE

FERRULE ADAPTER (mm)

23BMP THERMOMETER CAP



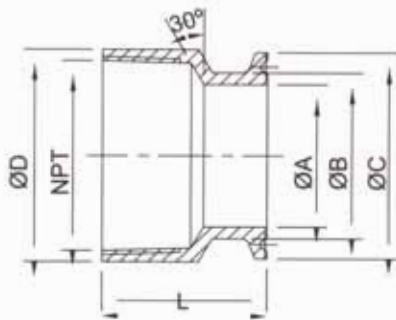
SIZE	A	B	NPT	L
1.0"	25.4	50.5	1/2"-14	15.8
1.5"	38.1	50.5	3/4"-14	15.8
2.0"	50.8	64.0	3/4"-14	15.8
2.5"	63.5	77.5	3/4"-14	15.8
3.0"	76.2	91.0	3/4"-14	15.8
4.0"	101.6	119.0	3/4"-14	15.8



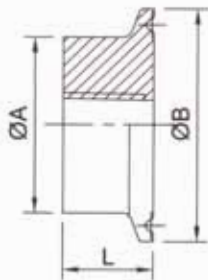
B19W ADAPTER

DN	O.D	I.D	A	B	NPT
1.0"	25.4	22.1	44.5	33.4	1.0"-11.5
1.5"	38.1	34.8	44.5	48.3	1.5"-11.5
2.0"	50.8	47.5	46	60.3	2.0"-11.5
2.5"	63.5	60.2	58.7	73.0	2.5"-8
3.0"	76.2	72.9	63.5	88.9	3.0"-8
4.0"	101.6	97.4	65.1	114.3	4.0"-8
6.0"	152.4	146.9	76.2	168.3	6.0"-8

22MP FEMALE ADAPTER



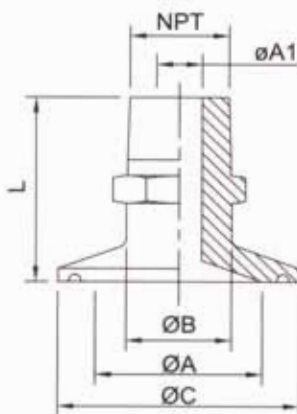
SIZE	A		B	D	E	NPT	L
	1.0"	1.5"					
1.0" & 1.5"x1.5"	22.2	34.9	38.1	50.5	52	1.5"NPT	39
1.0" & 1.5"x2.0"	22.2	34.9	38.1	50.5	65	2.0"NPT	39
2.0"x2.0"	47.6	50.8	64	65	2.0"NPT	39	
2.5"x2.5"	60.3	63.5	77.5	80	2.5"NPT	50	
3.0"x2.5"	73	76.2	91	95	2.5"NPT	50	
4.0"x3.0"	73	76.2	91	95	3.0"NPT	52	
6.0"x4.0"	97.6	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"	50.8	64.0	19	1.5"NPT
2.5"x1.0"	63.5	77.5	35	1.0"NPT
2.5"x1.5"	63.5	77.5	35	1.5"NPT

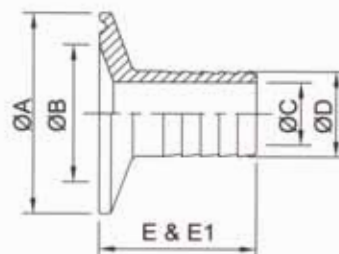
SIZE	A	B	L	NPT
2.5"x2.0"	63.5	77.5	35	2.0"NPT
3.0"x1.0"	76.2	91	35	1.0"NPT
3.0"x1.5"	76.2	91	35	1.5"NPT
3.0"x2.0"	76.2	91	35	2.0"NPT
4.0"x1.0"	101.6	119	35	1.0"NPT
4.0"x1.5"	101.6	119	35	1.5"NPT
4.0"x2.0"	101.6	119	35	2.0"NPT
4.0"x2.5"	101.6	119	35	2.5"NPT
4.0"x3.0"	101.6	119	35	3.0"NPT



21MP MALE ADAPTER

SIZE	ØA1	ØA		ØB	ØC	NPT	L
		1.0"	1.5"				
1.0" & 1.5"x1/4"	3.18	22.2	34.9	14	50.5	Ø13.25 1/4" 18	40
1.0" & 1.5"x3/8"	6.35	22.2	34.9	18	50.5	Ø16.67 3/8" 18	40
1.0" & 1.5"x1/2"	9.5	22.2	34.9	22	50.5	Ø20.71 1/2" 14	40
1.0" & 1.5"x3/4"	15.8	22.2	34.9	27	50.5	Ø26.03 3/4" 14	45
1.0" & 1.5"x1.0"	22.2	22.2	34.9	34	50.5	Ø32.59 1.0" 11-12	50
1.0" & 1.5"x1.5"	34.9	22.2	34.9	38.1	50.5	Ø47.38 1.5" 11-12	50
1.0" & 1.5"x2.0"	47.6	22.2	34.9	38.1	50.5	Ø59.40 2.0" 11-12	55

SIZE	ØA1	ØA	ØB	ØC	NPT	L
2.0"x3/4"	15.8	47.6	50.8	64.0	Ø26.03 3/4" 14	50
2.0"x1.0"	22.2	47.6	50.8	64.0	Ø32.59 1.0" 11-12	50
2.0"x1.5"	34.9	47.6	50.8	64.0	Ø47.38 1.5" 11-12	50
2.0"x2.0"	47.6	47.6	50.8	64.0	Ø59.40 2.0" 11-12	55
2.0"x2.5"	60.3	47.6	50.8	64.0	Ø71.61 2.5" 8	60
2.0"x3.0"	73	47.6	50.8	64.0	Ø87.39 3.0" 8	70
2.0"x4.0"	97.6	47.6	50.8	64.0	Ø112.63 4.0" 8	75

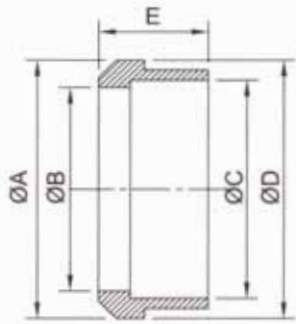


HOSE 14MPHR

SIZE	A	B	C	D	E	E1
1/2"	50.5	34.5	9.50	13.7	38	140
3/4"	50.5	34.5	15.8	21.4	38	140
1.0"	50.5	34.5	20.6	25.4	43	140
1.5"	50.5	34.5	33.2	38.1	43	140

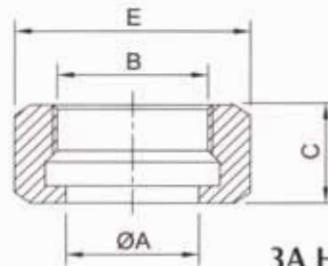
SIZE	A	B	C	D	E	E1
2.0"	64.0	46.0	46.0	50.8	58.7	140
2.5"	77.5	60.3	58.7	63.5	59.5	140
3.0"	91.0	73	72	76.2	78.6	140
4.0"	119	97.6	97.6	101.6	85.5	140

3A UNIONS (mm)



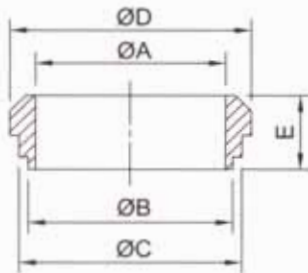
3A Recessless Liner

SIZE	ØA	ØD	ØC	ØB	E
1.0"	33.3	29.5	25.5	22.2	19.1
1.5"	46.8	42.6	38.2	34.9	22.2
2.0"	60.3	55.7	50.9	47.6	24.6
2.5"	73.8	68.8	63.6	60.3	27
3.0"	87.3	81.9	76.3	73	28.6
4.0"	114.3	108.1	101.7	97.6	31.8



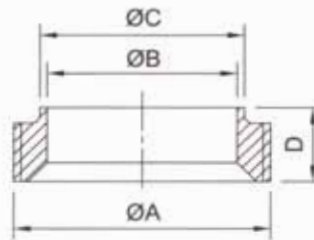
3A Hexagonal Nut 3A-13H

SIZE	ØA	B	C	E
1.0"	30.3	38.02 ACME 8TPI	23	46
1.5"	43.4	51.54 ACME 8TPI	24.6	61.1
2.0"	56.5	65.05 ACME 8TPI	27	76.2
2.5"	69.6	78.56 ACME 8TPI	29.6	91.3
3.0"	82.7	92.08 ACME 8TPI	32.5	106.4
4.0"	108.9	120.14 ACME 6TPI	38.1	137.6



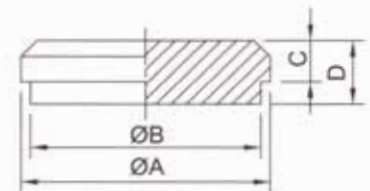
3A Short Bevel Seat Weld Liner 3A-14PRF

SIZE	A	B	C	D	E
1.0"	22.1	25.4	29.5	33.3	18.3
1.5"	34.8	38.1	42.6	46.8	18.3
2.0"	47.5	50.8	55.7	60.3	19.1
2.5"	60.2	63.5	68.8	73.8	22.3
3.0"	72.9	76.2	81.9	87.3	23.1
4.0"	97.6	101.6	108.1	114.3	26.2



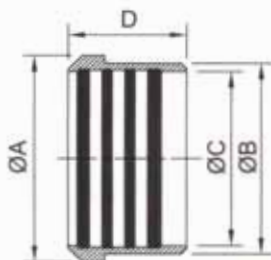
3A Short Bevel Seat Weld Male 3A-15TRF

SIZE	A	B	C	D
1.0"	37.13 ACME 8TPI	22.1	25.4	18.3
1.5"	50.65 ACME 8TPI	34.8	38.1	18.3
2.0"	64.17 ACME 8TPI	47.5	50.8	19.1
2.5"	77.67 ACME 8TPI	60.2	63.5	22.2
3.0"	91.19 ACME 8TPI	72.9	76.2	23.1
4.0"	119.25 ACME 6TPI	97.6	101.6	26.2



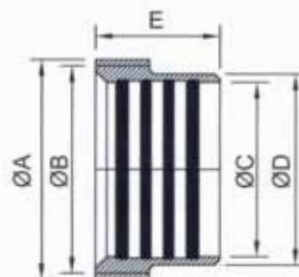
3A -16A

SIZE	A	B	C	D
1.0"	33.3	29.5	7.9	11.9
1.5"	46.8	42.6	8.7	14.3
2.0"	60.3	55.7	10.3	15.9
2.5"	73.8	68.8	11.1	16.7
3.0"	87.3	81.9	11.9	18.3
4.0"	114.3	108.1	14.3	20.6



3A Recessless Liner

SIZE	ØA	ØD	ØC	D
1.0"	33.3	29.5	25.5	19.1
1.5"	46.8	42.6	38.2	28.6
2.0"	60.3	55.7	50.9	33.3
2.5"	73.8	68.8	63.6	34.9
3.0"	87.3	81.9	76.3	36.5
4.0"	114.3	108.1	101.7	38.1

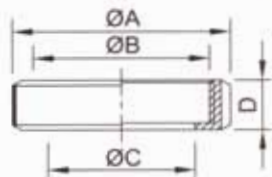


3A Recessless Male

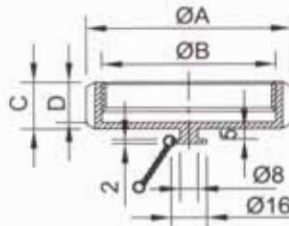
SIZE	ØA	ØB	ØD	ØC	E
1.0"	37.13 ACME 8TPI	33.45	29.5	25.5	20.6
1.5"	50.65 ACME 8TPI	46.96	42.6	38.2	28.6
2.0"	64.17 ACME 8TPI	60.48	55.7	50.9	34.9
2.5"	77.67 ACME 8TPI	73.99	68.8	63.6	38.1
3.0"	91.19 ACME 8TPI	87.5	81.9	76.3	41.3
4.0"	119.25 ACME 6TPI	114.53	108.1	101.7	41.3

DIN 11851 WELD / EXPANDING / IMPERIAL (mm)

DIN Round Nut DIN-13R



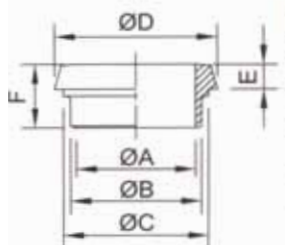
DIN	A	B	C	D	Slots
10	38	RD 28x1/8	19	18	4
15	44	RD 34x1/8	25	18	4
20	54	RD 44x1/6	31	21	4
25	63	RD 52x1/6	36	21	4
32	70	RD 58x1/6	42	21	4
40	78	RD 65x1/6	49	21	4
50	92	RD 78x1/6	62	22	4
65	112	RD 95x1/6	80	25	6
80	127	RD 110x1/4	94	30	6
90	138	RD 120x1/4	104	30	6
100	148	RD 130x1/4	115	31	6
125	178	RD 160x1/4	138	35	6
150	210	RD 190x1/4	164	40	6



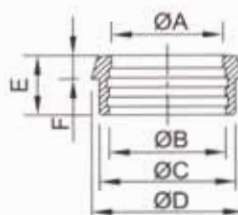
DIN Blank Nut DIN-13RBN

DIN	A	B	C	D
10	38	RD 28x1/8	18	15
15	44	RD 34x1/8	18	15
20	54	RD 44x1/6	21	18
25	63	RD 52x1/6	21	18
32	70	RD 58x1/6	21	18
40	78	RD 65x1/6	21	18
50	92	RD 78x1/6	22	19
65	112	RD 95x1/6	25	21
80	127	RD 110x1/4	30	26
90	138	RD 120x1/4	30	2
100	148	RD 130x1/4	31	26
125	178	RD 160x1/4	35	30
150	210	RD 190x1/4	40	34

DIN Welding Liner DIN-14



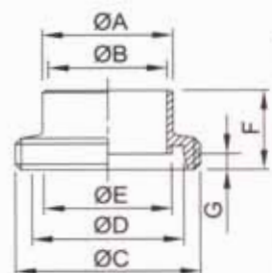
DIN	A	B	C	D	E	F
10	10	13	18	22	6	17
15	16	19	24	28	6	17
20	20	23	30	36	8	18
25	26	29	35	44	10	22
32	32	35	41	50	10	25
40	38	41	48	56	10	26
50	50	53	61	68	11	28
65	66	70	79	86	12	32
80	81	85	93	100	12	37
90	89	93	103	111	15	35
100	100	104	114	121	15	44
125	125	129	137	150	17	34
150	150	154	163	176	18	37



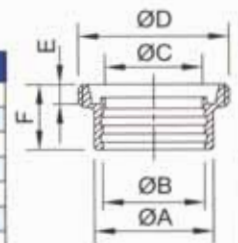
DIN Expanding Liner DIN-14R

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 Welding Male DIN-15



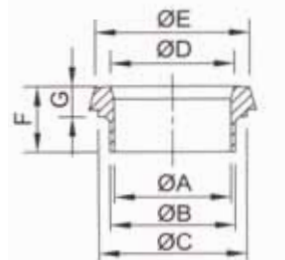
DIN	A	B	C	D	E	F	G
10	13	10	RD 28x1/8	20	12	21	4
15	19	16	RD 34x1/8	26	18	21	4
20	23	20	RD 44x1/6	33	23	24	6
25	29	26	RD 52x1/6	40	30	29	7
32	35	32	RD 58x1/6	46	36	32	7
40	41	38	RD 65x1/6	52	42	33	7
50	53	50	RD 78x1/6	64	54	35	7
65	70	66	RD 95x1/6	81	71	40	8
80	85	81	RD 110x1/4	95	85	45	8
90	93	89	RD 120x1/4	114	104	45	10
100	104	100	RD 130x1/4	114	104	54	10
125	129	125	RD 160x1/4	142	130	46	12
150	154	150	RD 190x1/4	167	155	50	13



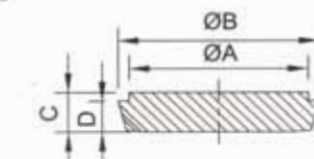
DIN Expanding Male DIN-15R

DIN	A	B	C	D	E	F
10	18	12.2	10	RD 28x1/8	4	21
15	24	18.2	16	RD 34x1/8	4	21
20	30	22.2	20	RD 44x1/6	6	24
25	35	28.2	26	RD 52x1/6	7	29
32	41	34.2	32	RD 58x1/6	7	32
40	48	40.2	38	RD 65x1/6	7	33
50	61	52.2	50	RD 78x1/6	7	35
65	79	70.3	66	RD 95x1/6	8	40
80	93	85.3	81	RD 110x1/4	8	45
100	114	104.3	100	RD 130x1/4	10	54
125	137	129.3	125	RD 160x1/4	12	46
150	163	154.3	150	RD 190x1/4	13	50

DIN Imperial Welding Liner

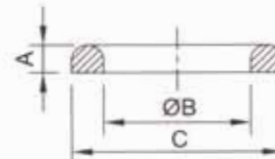


SIZE	A	B	C	D	E	F	G
1.0"	22.1	25.4	35.0	26.0	44	22	13
1.5"	34.8	38.1	48.0	38.0	56	26	13
2.0"	47.5	50.8	61.0	50.0	68	28	14
2.5"	60.2	63.5	79.0	66.0	86	32	16
3.0"	72.9	76.2	93.0	81.0	100	37	19
4.0"	97.6	101.6	114.0	100.0	121	44	19



DIN14B Blanks

DIN	A	B	C	D
10	18	22.5	9	6
15	24	28.5	9	6
20	30	36.5	11	8
25	35	44	13	10
32	41	50	13	10
40	48	56	13	10
50	61	68.5	14	11
65	79	86	16	12
80	93	100	16	12
100	114	121	20	15
125	137	150	22	17
150	163	176	24	18

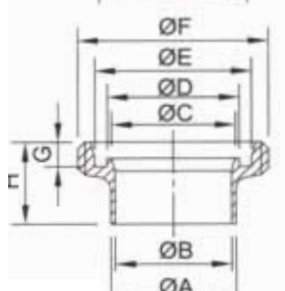


DIN Seal Ring

(EPDM, Silicon, Viton)

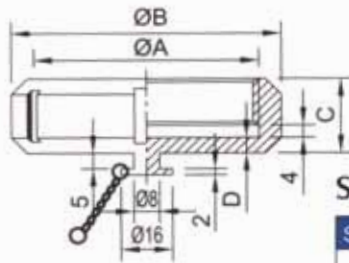
DIN	A	B	C
20	4.5	23	33
25	5	30	40
32	5	36	46
40	5	42	52
50	5	54	64
65	5	71	81
80	5	85	95
100	5	104	114

DIN Imperial Welding Male



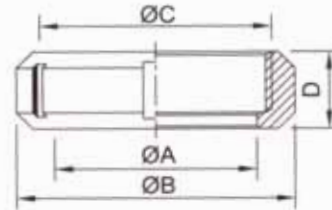
SIZE	A	B	C	D	E	F	G	H
1.0"	25.4	22.1	26.0	30	40	RD 52x1/6	7	29
1.5"	38.1	34.8	38.0	42	52	RD 65x1/6	7	33
2.0"	50.8	47.5	50.0	54	61	RD 78x1/6	7	35
2.5"	63.5	60.2	66.0	71	81	RD 95x1/6	8	40
3.0"	76.2	72.9	81.0	86	96	RD 110x1/4	8	45
4.0"	101.6	97.6	100.0	105	115	RD 130x1/4	10	54

SMS LONG TYPE WELDING / EXPANDING UNIONS (mm)



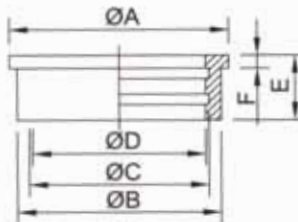
SMS Blank Nut 13RBN

SIZE	A	B	C	D
25	RD40x1/6	51	19	4
32	RD48x1/6	60	22	4
38	RD60x1/6	74	23	4
51	RD70x1/6	84	24	5
63	RD85x1/6	100	28	5
76	RD98x1/6	114	30	6
104	RD125x1/4	138	31	5



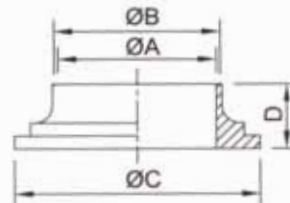
SMS Nut 6 Slots SMS-13R

SIZE	A	B	C	D
25	32.3	51	RD40x1/6	19
32	40.3	60	RD48x1/6	22
38	48.5	74	RD60x1/6	23
51	61.0	84	RD70x1/6	24
63.5	74.0	100	RD85x1/6	28
76	87.0	114	RD98x1/6	30
101.6	113.0	138	RD125x1/4	31
104	113.0	138	RD125x1/4	31
104-B	117.0	150	RD132x1/6	31



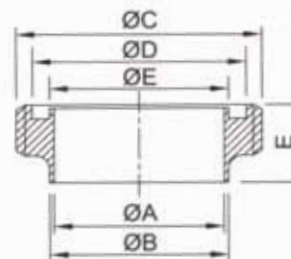
SMS Expanding Liner 14R

SIZE	A	B	C	D	E	F
25	35.5	32.0	25.8	25.2	17	3.5
32	43.5	40.0	33.0	32.2	17	3.5
38	55.0	47.9	38.8	38.2	20	4.0
40	55.0	48.0	41.2	40.2	20	4.0
51	65.0	60.4	51.8	51.2	20	4.0
63	80.0	73.5	64.3	63.7	25	4.0
76	93.0	86.5	77.0	76.2	30	5.0
101.6	118.0	112.5	102.6	101.8	27	6.0
104	118.0	112.5	105.0	104.2	27	6.0



Long Welding Liner SMS-14

SIZE	A	B	C	D
25	22.5	25	35.5	15.5
38	35.5	38	55	16.0
51	48.5	51	65	17.0
63	60.5	63.5	80	17.0
76	72.9	76.1	93	19.0
101.6	97.6	101.6	118	19.0
104	100	104	118	19.0
104-B	98.5	102.5	127	19.0

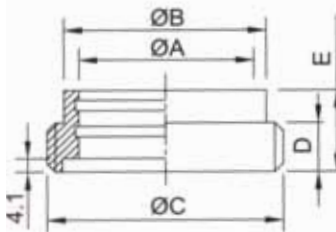


SMS Expanding Male 15R

SIZE	A	B	C	D	E
25	25.2	32.0	RD40x1/6	11	20
32	32.2	40.0	RD48x1/6	13	20
38	38.2	47.9	RD60x1/6	15	23
40	40.2	48.0	RD60x1/6	15	23
51	51.2	60.4	RD70x1/6	15	25
63	63.7	73.5	RD85x1/6	19	30
76	76.2	86.5	RD98x1/6	19	35
101.6	101.8	112.5	RD125x1/4	20	30
104	104.2	112.5	RD125x1/4	20	30

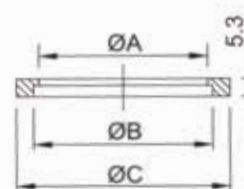
Lone Welding Male SMS-15

SIZE	A	B	C	D	E	F
DN25	22.5	25.0	RD40x1/6	32	24.9	19
DN38	35.5	38.0	RD60x1/6	84	37.9	23
DN51	48.5	51.0	RD70x1/6	61	50.9	23
DN63.5	60.5	63.5	RD85x1/6	73.5	63.4	27
DN76	72.9	76.1	RD98x1/6	86	75.9	27
DN101.6	97.6	101.6	RD125x1/4	116	103.9	30
DN104	100.0	104.0	RD125x1/4	116	103.9	30



SMS Blanks

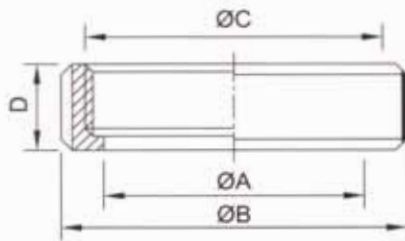
SIZE	A	B	C	D
25	32.0	35.5	3.5	7.5
38	48.0	55.0	5.0	9.0
51	60.0	65.0	5.0	10.0
63	73.5	80.0	5.0	10.0
76	86.0	93.0	5.0	11.0
101.6	112.0	118.0	6.0	11.0
104	112.0	118.0	6.0	11.0



**Seal Ring L Type
(EPDM, SILICON, VITON)**

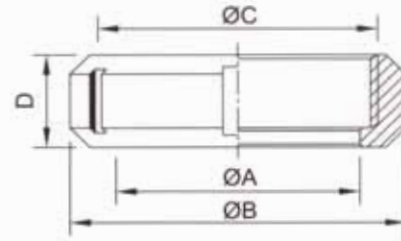
SIZE	A	B	C
25	22.8	25.1	31.8
38	35.8	38.1	47.8
51	48.8	51.1	60.8
63.5	61.0	63.6	73.3
76	73.4	76.1	85.8
104	100.5	104.0	115.7

SMS CL LONG WELD/BE SHORT UNIONS (mm)



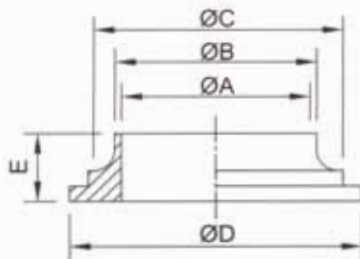
SMS-13BE Nut 4 Slots SMS-13R

SIZE	A	B	C	D
25	32.3	49	RD40x1/6	17.2
38	48.5	70	RD60x1/6	22
51	61.0	80	RD70x1/6	23
63	74.0	96	RD85x1/6	27
76	87.0	110	RD98x1/6	28.5
104	113.0	136	RD125x1/4	31



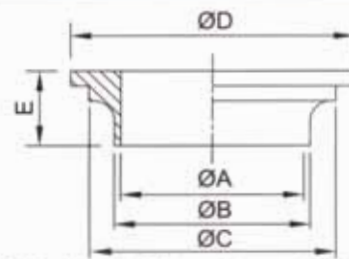
SMS Nut 6 Slots SMS-13R

SIZE	A	B	C	D
25	32.3	51	RD40x1/6	19
32	40.3	60	RD48x1/6	22
38	48.5	74	RD60x1/6	23
51	60.5	84	RD70x1/6	24
63.5	74.0	100	RD85x1/6	28
76	87.0	114	RD98x1/6	30
101.6	113.0	138	RD125x1/4	31
104	113.0	138	RD125x1/4	31



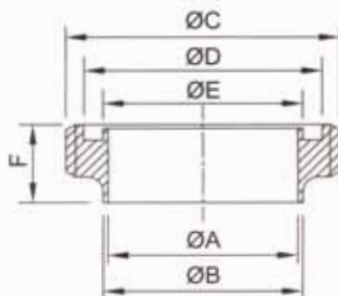
SMS-14BE Welding Liner SMS-14S

SIZE	A	B	C	D	E
25	22.5	25	32	35.5	10
38	35.5	38	47.9	55	11
51	48.5	51	60.4	65	13
63	60.5	63.5	73.5	80	13
76	72.9	76.1	86.5	93	14
104	100	104	112.5	118	16



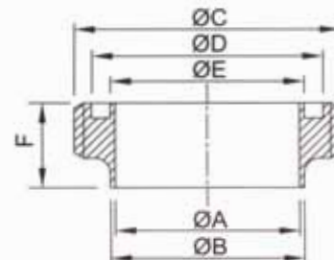
CL-Style Welding Liner SMS-14G

SIZE	A	B	C	D	E
25	22.5	25	31.7	35.5	15
38	35.5	38	47.7	55	20
51	48.5	51	59.65	65	20
63.5	60.5	63.5	73.1	80	24
76	72.9	76.1	85.6	93	24
101.6	97.6	101.6	111.6	118	30
104	100	104	111.6	118	30



SMS-15BE Welding Male SMS-15S

SIZE	A	B	C	D	E	F
25	22.5	25.0	RD40x1/6	32	25	15
38	35.5	38.0	RD60x1/6	48	38	20
51	48.5	51.0	RD70x1/6	61	51	20
63	60.5	63.5	RD85x1/6	73.5	63.5	24
76	72.9	76.1	RD98x1/6	86	76.1	24
104	100	104.0	RD125x1/4	116	104	27

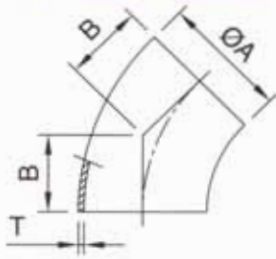


CL-Style Welding Male SMS-15G

SIZE	A	B	C	D	E	F
25	22.5	25.0	RD40x1/6	32	24.9	19
38	35.5	38.0	RD60x1/6	48	37.9	23
51	48.5	51.0	RD70x1/6	61	50.9	32
63.5	60.5	63.5	RD85x1/6	73.5	63.4	27
76	72.9	76.1	RD98x1/6	86	75.9	27
101.6	97.6	101.6	RD125x1/4	116	103.9	30
104	100.0	104.0	RD125x1/4	116	103.9	30

3A PIPE LINE (mm)

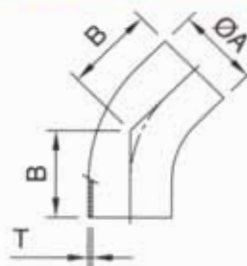
45° Short Elbow



C.2WK-45° 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

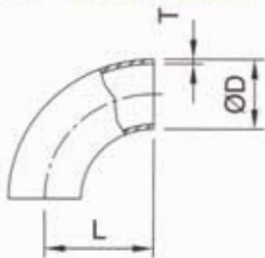
45° Long Elbow



C.L2KS-45° 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

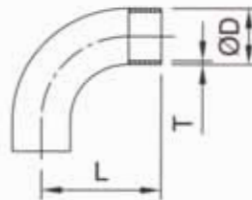
90° Short Bend



C.2WCL-90° Bend

SIZE	D	L	T
1.0"	25.4	38.10	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

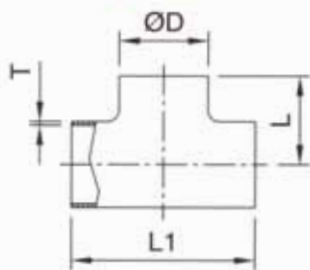
90° Long Bend



C.L2S-90° 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

Welding Tee



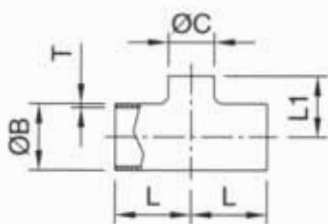
C.L7WWW-Short Tee

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

C.7W-Long 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

Long Reducing Tee



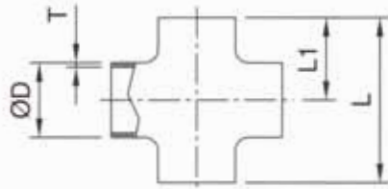
C.L7RW-Long Reducing Tee

SIZE	B	C	L	L1	T
1.5"x1.0"	38.1	25.4	57.15	53.98	1.65
2.0"x1.0"	50.8	25.4	76.20	60.30	1.65
2.0"x1.5"	50.8	38.1	76.20	63.50	1.65
2.5"x1.5"	63.5	38.1	76.20	69.85	1.65
2.5"x2.0"	63.5	50.8	76.20	82.55	1.65
3.0"x1.5"	76.2	38.1	82.55	76.20	1.65

SIZE	B	C	L	L1	T
3.0"x2.0"	76.2	50.8	82.55	88.90	1.65
3.0"x2.5"	76.2	63.5	82.55	82.55	1.65
4.0"x2.0"	101.6	50.8	98.40	101.60	2.10
4.0"x2.5"	101.6	63.5	98.40	95.25	2.10
4.0"x3.0"	101.6	76.2	98.40	95.25	2.10

3A PIPE LINE (mm)

Cross



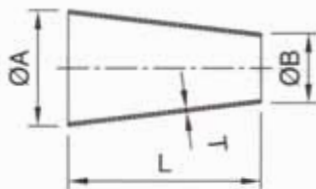
C.L9WWW-Cross

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

C.L9W-Long 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

Concentric Reducer

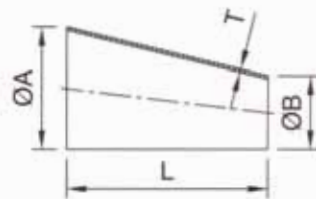


C.L31-Concentric Reducer

SIZE	A	B	L	T
1.5"x1.0"	38.1	25.4	50.8	1.65
2.0"x1.5"	50.8	38.1	50.8	1.65
2.5"x1.5"	63.5	38.1	101.6	1.65
2.5"x2.0"	63.5	50.8	50.8	1.65
3.0"x1.5"	76.2	38.1	152.4	1.65
3.0"x2.0"	76.2	50.8	101.6	1.65

SIZE	A	B	L	T
3.0"x2.5"	76.2	63.5	50.8	1.65
4.0"x1.5"	101.6	38.1	254.0	2.10
4.0"x2.0"	101.6	50.8	203.2	2.10
4.0"x2.5"	101.6	63.5	152.4	2.10
4.0"x3.0"	101.6	76.2	101.6	2.10

Eccentric Reducer

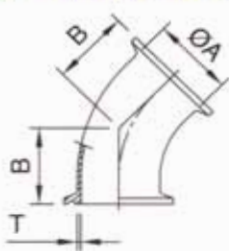


C.L32-Eccentric Reducer

SIZE	A	B	L	T
1.5"x1.0"	38.1	25.4	50.8	1.65
2.0"x1.5"	50.8	38.1	50.8	1.65
2.5"x1.5"	63.5	38.1	101.6	1.65
2.5"x2.0"	63.5	50.8	50.8	1.65
3.0"x1.5"	76.2	38.1	152.4	1.65
3.0"x2.0"	76.2	50.8	101.6	1.65

SIZE	A	B	L	T
3.0"x2.5"	76.2	63.5	50.8	1.65
4.0"x1.5"	101.6	38.1	254.0	2.10
4.0"x2.0"	101.6	50.8	203.2	2.10
4.0"x2.5"	101.6	63.5	152.4	2.10
4.0"x3.0"	101.6	76.2	101.6	2.10

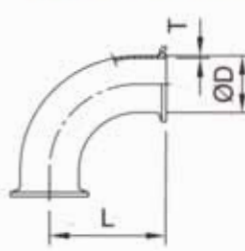
45° Clamp Elbow



C.2KMP-45° Elbow

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

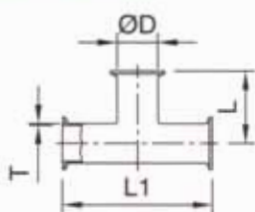
90° Clamp Bend



C.2CMP-90° Bend

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

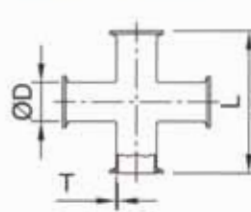
Clamp Tee



C.7MP-Clamp Long Tee

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

Clamp Cross

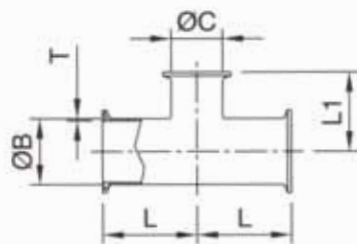


C.9MP-Clamp Long Cross

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

3A PIPE LINE (mm)

Reducing Tee

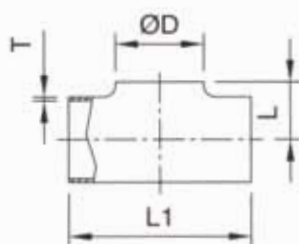


C.L7RMP-Reducing Tee Clamp End

SIZE	B	C	L	L1
1.5"X1.0"	38.1	25.4	69.85	66.68
2.0"X1.0"	50.8	25.4	88.90	73.00
2.0"X1.5"	50.8	38.1	88.90	76.20
2.5"X1.5"	63.5	38.1	88.90	82.55
2.5"X2.0"	63.5	50.8	88.90	95.25
3.0"X1.5"	76.2	38.1	95.25	88.90

SIZE	B	C	L	L1
3.0"X2.0"	76.2	50.8	95.25	101.60
3.0"X2.5"	76.2	63.5	95.25	95.25
4.0"X2.0"	101.6	50.8	114.20	114.30
4.0"X2.5"	101.6	63.5	114.20	107.95
4.0"X3.0"	101.6	76.2	114.20	107.95

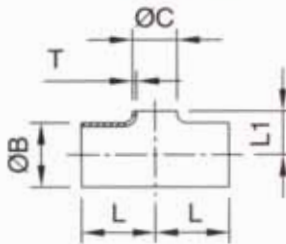
Equal Tee



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

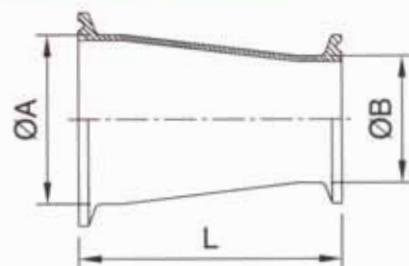
Reducing Tee



Reducing Tee W/O Straight end

SIZE	B	C	L	L1
1.5"X1.0"	38.1	25.4	42.1	22
2.0"X1.5"	50.8	38.1	52.4	29
2.5"X2.0"	63.5	50.8	59.5	35
3.0"X2.0"	76.2	50.8	65.9	41
3.0"X2.5"	76.2	63.5	65.9	41
4.0"X2.0"	101.6	50.8	117.5	54
4.0"X2.5"	101.6	63.5	117.5	54
4.0"X3.0"	101.6	76.2	117.5	54

Concentric Reducer

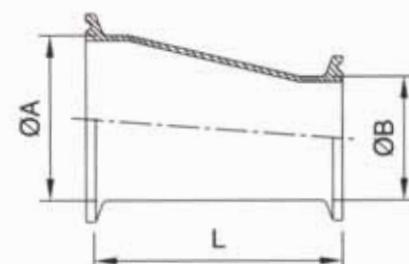


C.31-14MP Concentric Reducer Clamp End

SIZE	A	B	L
1.5"X1.0"	38.1	25.4	76.2
2.0"X1.5"	50.8	38.1	76.2
2.5"X1.5"	63.5	38.1	127.0
2.5"X2.0"	63.5	50.8	76.2
3.0"X1.5"	76.2	38.1	177.8
3.0"X2.0"	76.2	50.8	127.0

SIZE	A	B	L
3.0"X2.5"	76.2	63.5	76.2
4.0"X1.5"	101.6	38.1	282.5
4.0"X2.0"	101.6	50.8	231.7
4.0"X2.5"	101.6	63.5	180.9
4.0"X3.0"	101.6	76.2	130.1

Eccentric Reducer



C.32-14MP Eccentric Reducer Clamp End

SIZE	A	B	L
1.5"X1.0"	38.1	25.4	76.2
2.0"X1.5"	50.8	38.1	76.2
2.5"X1.5"	63.5	38.1	127.0
2.5"X2.0"	63.5	50.8	76.2
3.0"X1.5"	76.2	38.1	177.8
3.0"X2.0"	76.2	50.8	127.0

SIZE	A	B	L
3.0"X2.5"	76.2	63.5	76.2
4.0"X1.5"	101.6	38.1	282.5
4.0"X2.0"	101.6	50.8	231.7
4.0"X2.5"	101.6	63.5	180.9
4.0"X3.0"	101.6	76.2	130.1