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BIO VALVE & SANITARY COMPONENTS

PHARMACEUTICAL, FOOD, HIGH VACUUM, BPE FITTING



HAITIMA CORPORATION

AN ISO 9001 CERTIFIED MANUFACTURER

<http://www.haitima.com.tw> E-mail: haitima@seed.net.tw

Haitima Ball Valve Manufacturer was founded in 1984 with capital sixteen million U.S. Dollars. Through the years, "Perfection" has been the only goal we pursue. In order to satisfy customers, with continuous efforts, we are working towards perfection through a Quality Assurance System, which has given us the ISO9001, API 607 Fire-Safe Approval, CRN Registered and PED 97/23/EC Module H certificate, 3A, TUV/TRD 100, DNV, BV MARINE Certificate, ATEX, TA-Luft, ISO 15848 , REACH, RoHS. With persistence and effort,we have become one of the leading enterprises of valves and fittings in Taiwan.



President :
Mr. Shen Ming-Show

We offer a wide ranges of valves, including ball valves, gate valves, globe valves, check valves, blind valves, butterfly valves, safety valves, strainer, needle valves, sight glass, s/s ball and rotary screwed end valves, furthermore, such as butt weld, flanged end, clean and trunnion valves, professional manufacturer ball valves, gate valves, globe valves, check valves, actuators and accessory, screwed fittings and pipe.

If you are interested in our valve products, Contact us now and we will be glad to meet your request and offer the best quality and price.



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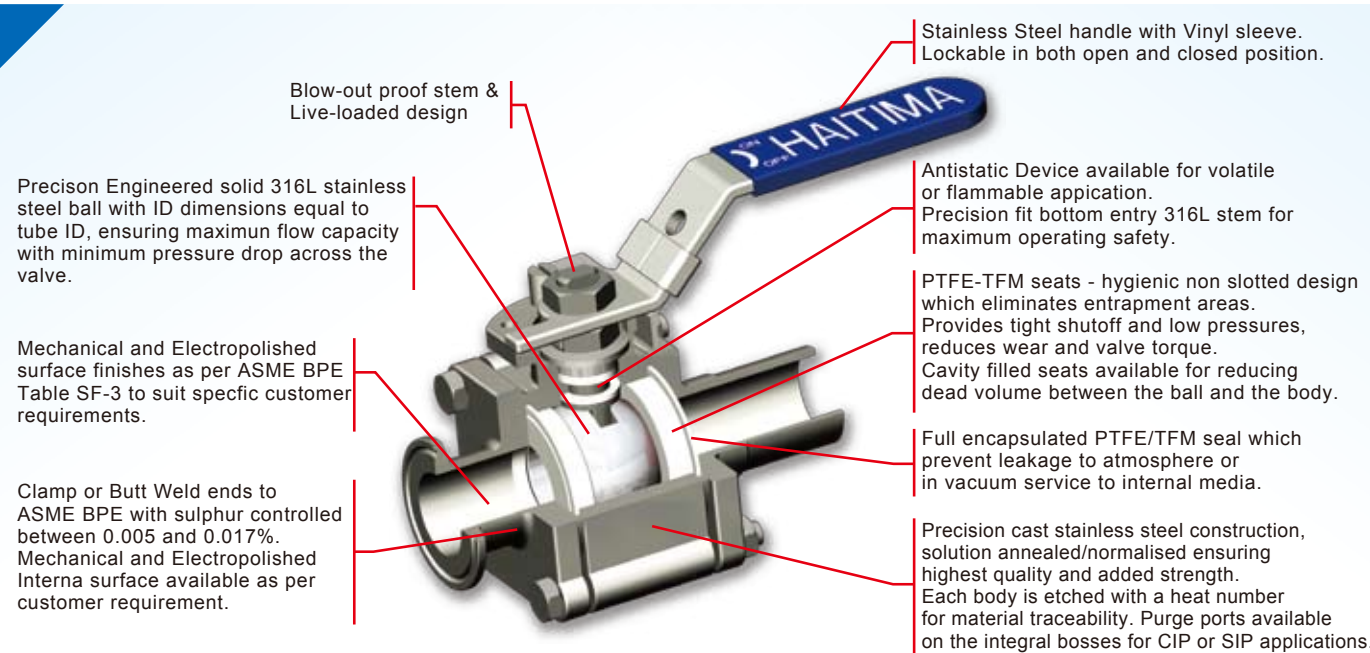


HIGH PURITY BALL VALVE



APPLICATIONS:

Pharmaceutical, Bio-Tech, Semiconductor, Vacuum, Drinking Water.



Body and Trim Materials

The valve body and ends are castings made from Stainless Steel conforming to ASTM A351 CF3M which improves the resistance to intergranular corrosion caused by welding. Welded end castings have low sulphur content of 0.005-0.017% and ferrite < 3%. The ball and stem are from Stainless Steel conforming to AISI 316L. These materials are offered for Biochemical, pharmaceutical, chemical and food machine equipment.

Stem & Ball

All valves have blowout proof stems. And a highly polished solid ball ensures tight shutoff and long service life. The ball orifice matches the tube internal diameter to reduce product deposits being trapped in the line and minimize pressure drop. Its post leading edges are rounded to eliminate excessive wear of the seats.

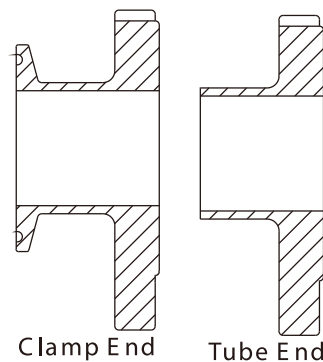


Seats

A flexible seat design provides tight shutoff at high and low pressures, reduces wear and valve torque. The seats are designed for low torque giving bubble tight shutoff and have no equalizing pressure slots or chamfers on the perimeter. Other seat designs available are Cavity Filler seats for reducing dead volume in the valve cavity.

End Connections

All ends are one-piece castings and are machined on all wetted parts to high grade finish. The standard ends are tube end, hygienic clamp or extended tube end.



HIGH PURITY BALL VALVE



Surface Finish

Table SF-1 Acceptance Criteria for Stainless Steel and Higher Alloy Mechanically Polished Product Contact Surface Finishes

Anomaly or Indication	Acceptance Criteria
Pits	If diameter <0.020 in. and bottom is shiny. Pits <0.003 in. diameter are irrelevant and acceptable.
Cluster of pits	No more than 4 pits per each 1/2 in. x 1/2 in. inspection window. The cumulative total of all relevant pits shall not exceed 0.040 in.
Dents	None accepted.
Finishing marks	If Ra max. is met.
Welds	As welded shall meet requirements of MJ-6. If welds are finished, then shall be smooth and blended.
Nicks	None accepted.
Scratches	For tubing, if cumulative length is <12.0 in. per 20 ft tube length or prorated and if depth is <0.003 in. For fittings, valves, and other process components, if length is <0.25 in. cumulatively, depth <0.003 in. and Ramax. is met. For vessels, if length < 0.50 in. at 0.003 depth and if <3 per inspection window.
Surface cracks	None accepted.
Surface inclusions	If Ra max. is met.
Surface residuals	None accepted, visual inspection.
Surface roughness (Ra)	See Table SF-3.
Weld slag	For tubing, up to 3 per 20 ft length or prorated, if <75% of the width of the weld bead. For fittings, valves, vessels, and other process components, none accepted (as welded shall meet the requirements of MJ-6 and Table MJ-3).
Porosity	None open to the surface.

Table SF-3 Ra Readings For Product Contact Surfaces

Surface Designation	Mechanically Polished [Note (1)]	
	Ra Max.	
	µ-in.	µm
SF1	20	0.51
SF2	25	0.64
SF3	30	0.76
Surface Designation	Mechanically Polished [Note (1)] and Electropolished	
	Ra Max.	
	µ-in.	µm
SF4	15	0.38
SF5	20	0.51
SF6	25	0.64

GENERAL NOTES:

- (a) All Ra readings are taken across the lay, wherever possible.
- (b) No single Ra reading shall exceed the Ra max. value in this table.
- (c) Other Ra readings are available if agreed upon between owner/user and manufacturer, not to exceed values in this table.

NOTE:

- (1) Or any other finishing method that meets the Ra max.

Conversion Chart				
Standard	Ra		RMS	
	µ-in.	µm	µ-in.	µm
Grit				
150g	27-32	.68-.80	30-35	.76-.89
180g	18-23	.46-.58	20-25	.51-.64
240g	14-18	.34-.46	15-20	.38-.51
320g	8-10	.21-.25	9-11	.23-.28

Grit : Measures the number of scratches per linear inch of abrasive pad. Higher numbers indicate a smoother finish.

RMS : Defined as Root Mean Square roughness, this method measures a sample for peaks and valleys. Lower numbers indicate a smoother finish.

Ra : Known as the Arithmetic Mean, this measurement represents the average value of all peaks and valleys. Lower numbers indicate a smooth finish.



HIGH PURITY BALL VALVE

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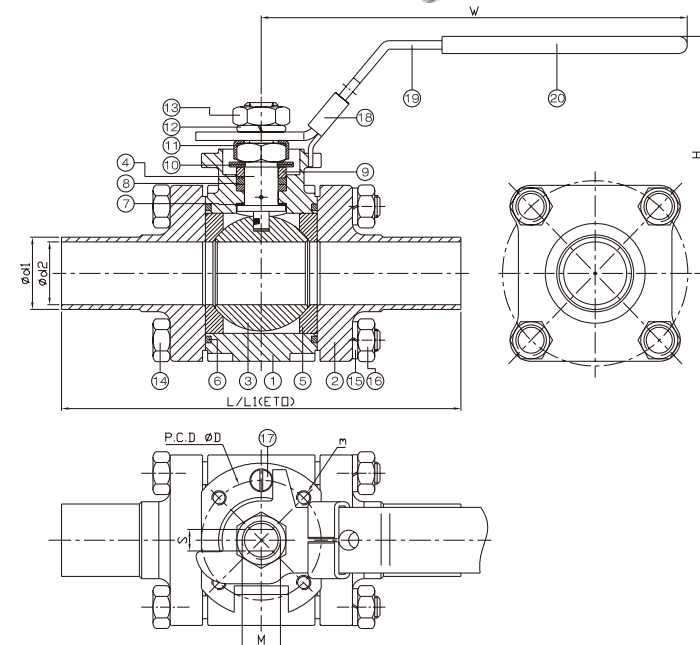
FEATURES

- Tube port, 1/2"~2" (DN15~DN50)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats (option)
- Locking device
- ISO 5211 Mounting pad

2013KB-BPE

- Tube end castings have low sulphur content of 0.005-0.017%
- Extended tube end (ETO)

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF3M
2	CAP	
3	BALL	
4	STEM	ASTM A276-316L
5	SEAT	PTFE / TFM1600
6	SEAL	PTFE
7	THRUST WASHER	
8	PACKING	
9	GLAND RING	AISI 304
10	BELLEVILLE WASHER	AISI 301
11	LOCKING WASHER	AISI 304
12	STEM WASHER	
13	STEM NUT	
14	BOLT	
15	BOLT WASHER	
16	NUT	
17	STOP PIN	
18	LOCKING DEVICE	
19	HANDLE	PVC
20	HANDLE SLEEVE	



DN	L	L1	H	W	d1	d2	D	m	M	S	ISO5211	Torque(N-M)
15	66.2	118	53.5	114	12.7	9.4	36	M5	3/8"-24UNF	5.7	F03	4.5
20	76.9	124	55	114	19.05	15.75	36	M5	3/8"-24UNF	5.7	F03	6
25	103	141	66	146	25.4	22.1	42	M5	7/6"-20UNF	7.5	F04	11
32	110	-	71	146	31.75	28.45	42	M5	7/6"-20UNF	7.5	F04	7.91
40	139.5	157	81	178	38.1	34.8	50	M6	9/16"-18UNF	8.6	F05	15
50	158.7	172	89.5	178	50.8	47.5	50	M6	9/16"-18UNF	8.6	F05	22

unit:mm

NPS	L	L1	H	W	d1	d2	D	m	M	S	ISO5211	Torque(in-lb)
1/2"	2.61	4.65	2.11	4.49	0.5	0.37	1.42	M5	3/8"-24UNF	0.23	F03	39.8
3/4"	3.03	4.89	2.17	4.49	0.75	0.62	1.42	M5	3/8"-24UNF	0.2	F03	53.1
1"	4.06	5.56	2.6	5.75	1	0.87	1.66	M5	7/6"-20UNF	0.3	F04	97.4
1-1/4"	4.33	-	2.80	5.75	1.25	1.12	1.65	M5	7/6"-20UNF	0.3	F04	70
1-1/2"	5.49	6.19	3.19	7.01	1.5	1.37	1.97	M6	9/16"-18UNF	0.34	F05	132.8
2"	6.25	6.78	3.53	7.01	2	1.87	1.97	M6	9/16"-18UNF	0.34	F05	194.7

unit:in



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HIGH PURITY BALL VALVE

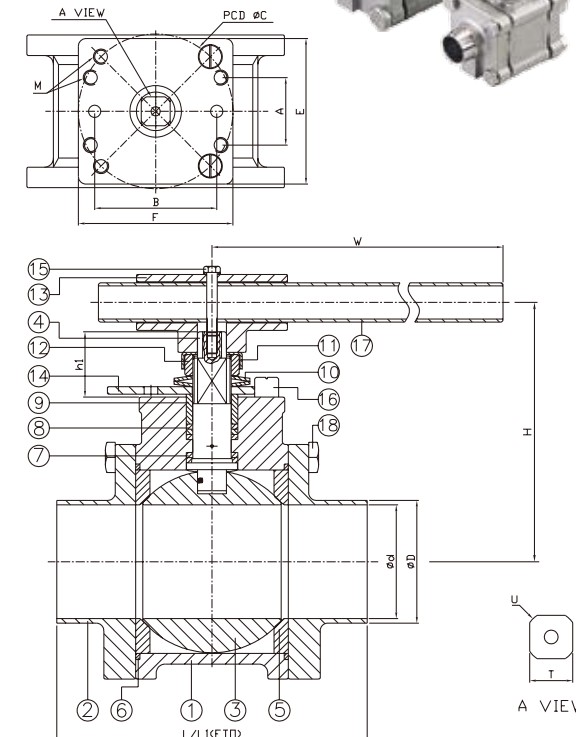
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FEATURES

- Tube port, 2-1/2"~4" (DN65~DN100)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats (option)
- Locking device
- ISO 5211 Mounting pad

2013KB-BPE

- Tube end castings have low sulphur content of 0.005-0.017%
- Extended tube end (ETO)



DN	d	D	L	L1	H	W	h1	M	A	B	C	E	F	T	U	ISO 5211	Torque (N-M)
65	60.2	63.5	159	185	132.1	222	40.6	M10	32	64	102	70.1	85.1	14	M20*2.5	F10	29
80	72.9	76.2	177.8	220	165.6	349	42.7	M10	44.5	80.5	102	96	102.1	19.1	1"-14UNEF	F10	35
100	97.3	101.6	215.9	250	179.1	349	42.9	M10	44.5	80.5	102	96	102.1	19.1	1"-14UNEF	F10	50

unit:mm

NPS	d	D	L	L1	H	W	h1	M	A	B	C	E	F	T	U	ISO 5211	Torque (in-lb)
2-1/2"	2.37	2.5	6.26	7.28	5.2	8.74	1.6	M10	1.26	2.52	4.02	2.76	3.35	0.55	M20*2.5	F10	256.7
3"	2.87	3	7	8.66	6.52	13.74	1.68	M10	1.75	3.17	4.02	3.78	4.02	0.75	1"-14UNEF	F10	309.8
4"	3.83	4	8.5	9.84	7.05	13.74	1.69	M10	1.75	3.17	4.02	3.78	4.02	0.75	1"-14UNEF	F10	442.5

unit:in



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HIGH PURITY BALL VALVE

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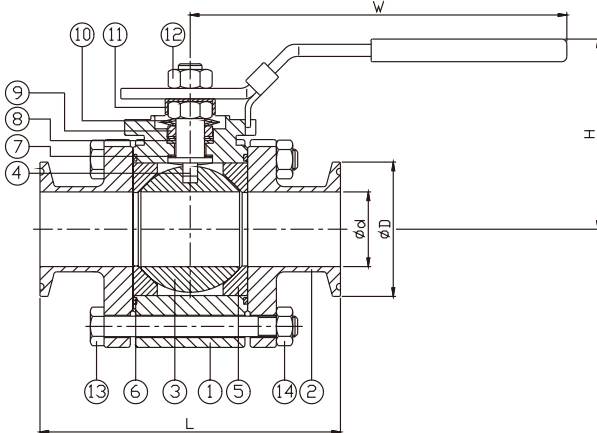
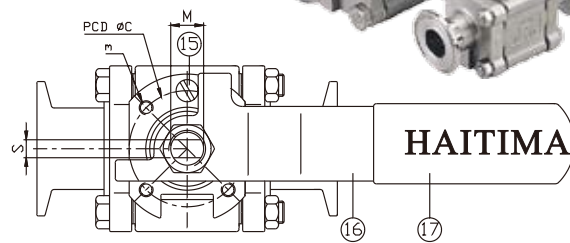
FEATURES

- Clamp end, 1/2"~2" (DN15~DN50)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats (option)
- Locking device
- ISO 5211 Mounting pad

2013KC-BPE

- Clamp end castings have low sulphur content of 0.005-0.017%

ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF3M
2	CAP	
3	BALL	
4	STEM	ASTM A276-316L
5	BALL SEAT	PTFE / TFM1600
6	GASKET	PTFE
7	THRUST WASHER	
8	PACKING	AISI 304
9	GLAND RING	
10	BELLEVILLE WASHER	AISI 301
11	LOCKING WASHER	AISI 304
12	STEM WASHER	
13	STEM NUT	
14	BOLT	
15	BOLT WASHER	
16	NUT	
17	STOP PIN	
18	LOCKING DEVICE	
19	HANDLE	
20	HANDLE SLEEVE	PVC



DN	L	H	W	d	D	C	m	M	S	ISO5211	Torque(N-M)
15	88.9	53.5	114	9.4	25.4	36	M5	3/8"-24UNF	5.7	F03	4.5
20	101.6	55.0	114	15.75	25.4	36	M5	3/8"-24UNF	5.7	F03	6
25	121.9	66.0	146	22.1	50.4	42	M5	7/16"-20UNF	7.5	F04	11
32	130	70.0	146	28.5	50.4	42	M5	7/16"-20UNF	7.5	F04	12
40	139.7	81.0	178	34.8	50.4	50	M6	9/16"-18UNF	8.6	F05	15
50	158.76	89.5	178	47.5	63.9	50	M6	9/16"-18UNF	8.6	F05	22

unit:mm

NPS	L	H	W	d	D	C	m	M	S	ISO5211	Torque(in-lb)
1/2"	3.5	2.11	4.49	0.37	1	1.42	M5	3/8"-24UNF	0.23	F03	39.8
3/4"	4	2.17	4.49	0.62	1	1.42	M5	3/8"-24UNF	0.2	F03	53.1
1"	4.80	2.6	5.75	0.87	1.98	1.65	M5	7/16"-20UNF	0.3	F04	97.4
1-1/4"	5.12	2.76	5.75	1.12	1.98	1.65	M5	7/16"-20UNF	0.3	F04	106.2
1-1/2"	5.5	3.19	7.01	1.37	1.98	1.97	M6	9/16"-18UNF	0.34	F05	132.8
2"	6.25	3.52	7.01	1.87	2.52	1.97	M6	9/16"-18UNF	0.34	F05	194.7

unit:in



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HIGH PURITY BALL VALVE

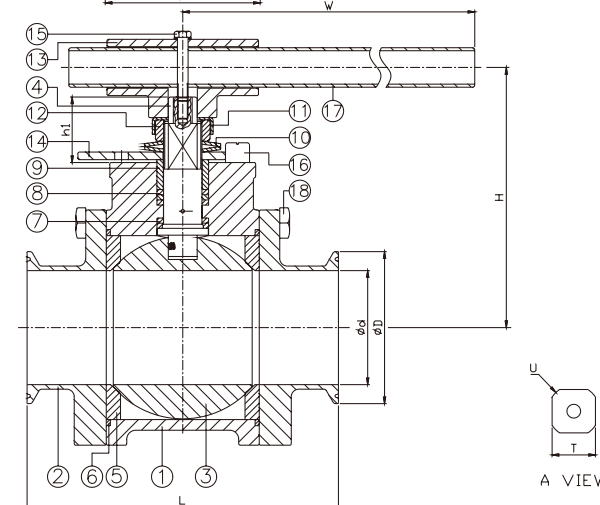
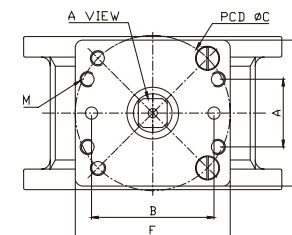
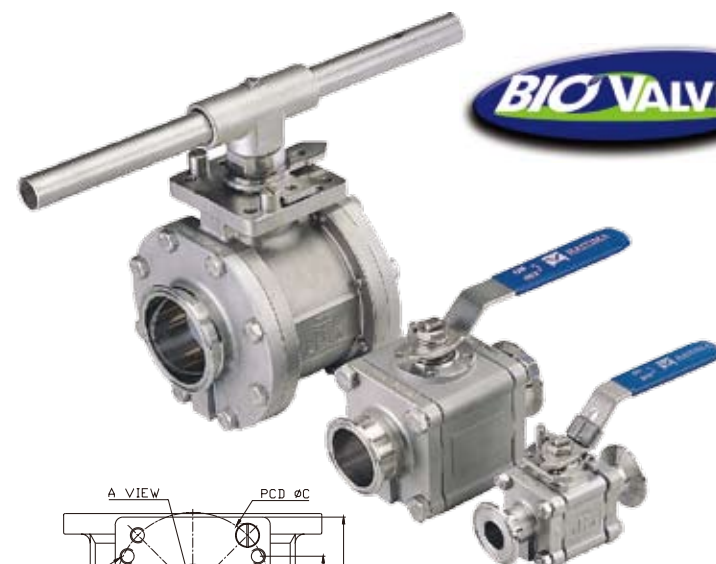
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FEATURES

- Clamp end, 2-1/2"~4" (DN65~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-static device (option)
- Cavity filled seats (option)
- Locking device
- ISO 5211 Mounting pad

2013KC-BPE

- Clamp end castings have low sulphur content of 0.005-0.017%



A VIEW

DN	d	D	L	H	W	h1	M	A	B	C	E	F	T	U	ISO 5211	Torque (N-M)
65	60.2	77.4	159	132.1	222	40.6	M10	32	64	102	70.1	85.1	14	M20*2.5	F10	29
80	72.9	90.9	177.8	165.6	349	42.7	M10	44.5	80.5	102	96	102.1	19.1	1"-14UNEF	F10	35
100	97.3	118.9	215.9	179.1	349	42.9	M10	44.5	80.5	102	96	102.1	19.1	1"-14UNEF	F10	50

unit:mm

NPS	d	D	L	H	W	h1	M	A	B	C	E	F	T	U	ISO 5211	Torque (in-lb)
2-1/2"	2.37	2.5	6.26	5.2	8.74	1.6	M10	1.26	2.52	4.02	2.76	3.35	0.55	M20*2.5	F10	256.7
3"	2.87	3	7	6.52	13.74	1.68	M10	1.75	3.17	4.02	3.78	4.02	0.75	1"-14UNEF	F10	309.8
4"	3.83	4	8.5	7.05	13.74	1.69	M10	1.75	3.17	4.02	3.78	4.02	0.75	1"-14UNEF	F10	442.5

unit:in



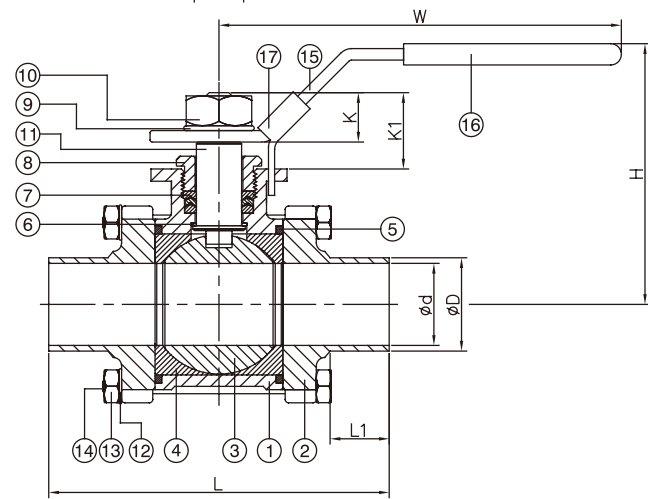
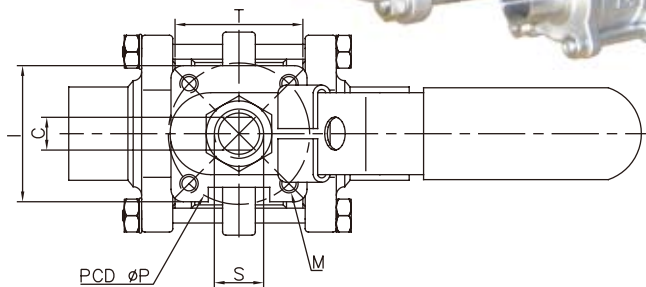
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FEATURES

- Tube port, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Tube End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Cavity filled seats (option)
- Locking device
- ISO 5211 Mounting pad



DN	d	D	W	H	L	L1	T	C	I	K	K1	P	M	S	Torque For Cavity Filler Seat (N-M)	Weight (kg)
15	9.6	12.7	141.2	63.5	90.7	20	26.7	6.5	37	13	18	36	M5	M10	3.6	0.7
20	15.8	19.1	141.2	66.6	103	22.5	33	6.5	37	13	18.7	36	M5	M10	5.1	0.9
25	22.1	25.4	141.2	69.4	115	25	38	6.5	42	13	18	42	M5	M10	8.1	1.2
40	34.8	38.2	188.3	100.6	140	25	54	8.5	50	19.5	30	50	M6	M12	19.5	2.6
50	47.7	50.8	188.3	110.6	158	25	69	8.5	50	19.5	29	50	M6	M12	26	4
65	60.3	63.5	260	139.2	197	25	85	12	72	26	37.7	70	M8	3/4"W	52	8.4
80	72.9	76.4	260	148.2	228	25	101.6	12	72	26	38.2	70	M8	3/4"W	58.5	13.5
100	97.5	101.7	295	175	241.8	25	121.8	16	94	35	52	102	M10	1"W	84.5	19.5

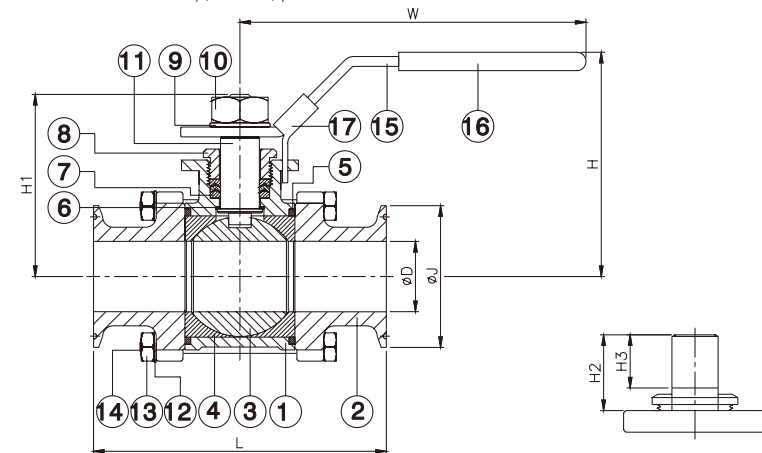
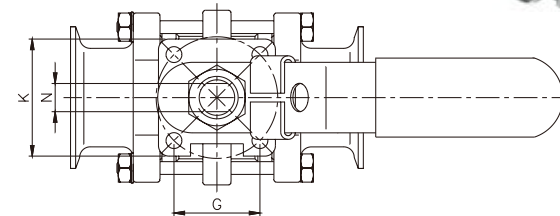
unit:mm

NPS	d	D	W	H	L	L1	T	C	I	K	K1	P	M	S	Torque For Cavity Filler Seat (in-lb)	Weight (lb)
1/2"	0.38	0.5	5.56	2.5	3.57	0.79	1.05	0.26	1.46	0.51	0.71	1.42	M5	M10	32.2	1.6
3/4"	0.62	0.75	5.56	2.62	4.06	0.89	1.3	0.26	1.46	0.51	0.74	1.42	M5	M10	44.9	2.1
1"	0.87	1	5.56	2.73	4.53	0.98	1.5	0.26	1.65	0.51	0.71	1.65	M5	M10	71.3	2.6
1-1/2"	1.37	1.5	7.41	3.96	5.51	0.98	2.13	0.33	1.97	0.77	1.18	1.97	M6	M12	172.6	5.7
2"	1.88	2	7.41	4.35	6.22	0.98	2.72	0.33	1.97	0.77	1.14	1.97	M6	M12	230.1	8.9
2-1/2"	2.37	2.5	10.24	5.48	7.76	0.98	3.35	0.47	2.83	1.02	1.48	2.76	M8	3/4"W	460.2	18.6
3"	2.87	3.01	10.24	5.83	8.98	0.98	4	0.47	2.83	1.02	1.5	2.76	M8	3/4"W	517.8	29.8
4"	3.84	4	11.61	6.89	9.52	0.98	4.8	0.63	3.7	1.38	2.05	4.02	M10	1"W	747.9	43

unit:in

FEATURES

- Clamp end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Cavity filled seats (option)
- Locking device
- ISO 5211 Mounting pad



ITEM	PARTS	MATERIAL
1	BODY	ASTM A351-CF8M
2	CAP	
3	BALL	
4	SEAT	
5	SEAL	PTFE
6	THRUST WASHER	
7	PACKING	
8	GLAND NUT	AISI 304
9	STEM WASHER	
10	STEM NUT	
11	STEM	AISI 316
12	BOLT WASHER	AISI 304
13	NUT	
14	BOLT	
15	HANDLE	PVC
16	HANDLE SLEEVE	
17	LOCKING DEVICE	AISI 304

DN	D	W	H	H1	H2	H3	L	G	K	J	N	ISO 5211	Torque For Cavity Filler Seat (N-M)	Weight (kg)
15	9.6	141.2	63.5	48.5	18	13	90.7	25.5	37	25.4	6.5	F03	3.6	0.8
20	15.8	141.2	66.6	51.8	18.7	13	103	25.5	37	25.4	6.5	F03	5.1	1
25	22.1	141.2	69.4	54.5	18	13	115	29.7	42	50.5	6.5	F04	8.1	1.4
40	34.8	188.3	100.6	82.5	30	19.5	140	35.4	50	50.5	8.5	F05	19.5	2.7
50	47.7	188.3	110.6	91.5	29	19.5	158	35.4	50	64	8.5	F05	26	4.2
65	60.3	260	139.2	117.2	37.7	26	197	49.5	72	77.5	12	F07	52	8.7
80	72.9	260	148.2	126.7	38.2	26	228	49.5	72	91	12	F07	58.5	14.2
100	97.5	295	175	162	52	35	241.8	72.1	94	119	16	F10	84.5	20.5

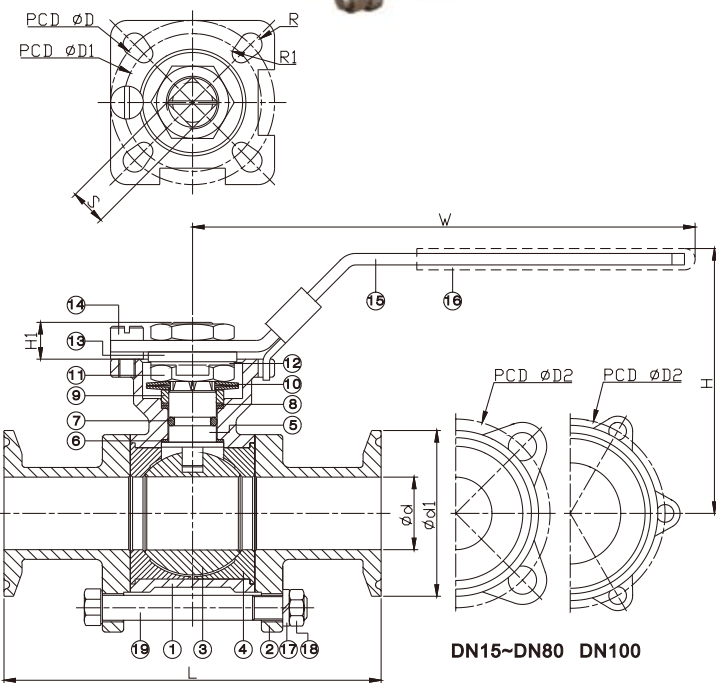
unit:mm

NPS	D	W	H	H1	H2	H3	L	G	K	J	N	ISO 5211	Torque For Cavity Filler Seat (in-lb)	Weight (lb)
1/2"	0.38	5.56	2.5	1.91	0.71	0.51	3.57	1	1.46	1	0.26	F03	32.2	1.7
3/4"	0.62	5.56	2.62	2.04	0.74	0.51	4.06	1	1.46	1	0.26	F03	44.9	2.1
1"	0.87	5.56	2.73	2.15	0.71	0.51	4.53	1.17	1.65	1.99	0.26	F04	71.3	3
1-1/2"	1.37	7.41	3.96	3.25	1.18	0.77	5.51	1.39	1.97	1.99	0.33	F05	172.6	5.9
2"	1.88	7.41	4.35	3.6	1.14	0.77	6.22	1.39	1.97	2.52	0.33	F05	230.1	9.2
2-1/2"	2.37	10.24	5.48	4.61	1.48	1.02	7.76	1.95	2.83	3.05	0.47	F07	460.2	19.2
3"	2.87	10.24	5.83	4.99	1.5	1.02	8.98	1.95	2.83	3.58	0.47	F07	517.8	31.3
4"	3.84	11.61	6.89	6.38	2.05	1.38	9.52	2.84	3.7	4.69	0.63	F10	747.9	45.2

unit:in

FEATURES

- Clamp end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Cavity filled seats (option)
- Locking device
- ISO 5211 Direct mounting pad
- **Automation accessories (option)**



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF3M
2	CAP		
3	BALL		
4	SEAT	ASTM A351-CF8M	
5	STEM	PTFE / TFM1600	
6	THRUST WASHER	ASTM A276-316	
7	O-RING	PTFE	
8	PACKING	VITON	
9	GLAND RING	PTFE	
10	BELLEVILLE WASHER	AISI 304	
11	NUT	AISI 301	
12	LOCKING WASHER	AISI 304	
13	FLAT WASHER		
14	STOP PIN		
15	HANDLE		
16	HANDLE SLEEVE	PVC	
17	SPRING WASHER	AISI 304	
18	NUT		
19	BOLT		

DN	D	D1	D2	d	d1	R	R1	S	L	H	H1	W	Torque (N-m)
8	42	36	45.5	9.6	25.4	2.75	2.75	9	90.7	121.3	9	64.7	5
10	42	36	47	15.8	25.4	2.75	2.75	9	103	121.3	11	64.7	7.5
15	50	42	57.5	22.1	50.5	3.5	2.75	11	115	150	11	79	11
20	70	50	83	34.8	50.5	4.5	3.5	14	139	150	14	96.5	16
25	70	50	100	47.7	64	4.5	3.5	14	158	180	14	104	20
32	102	70	126	60.3	77.5	5.5	4.5	17	197	180	17	142	40
40	102	70	148	72.9	91	5.5	4.5	17	228	243.5	17	150	50
50	125	102	183	97.5	119	6.5	5.5	22	241.8	285	22	185	60

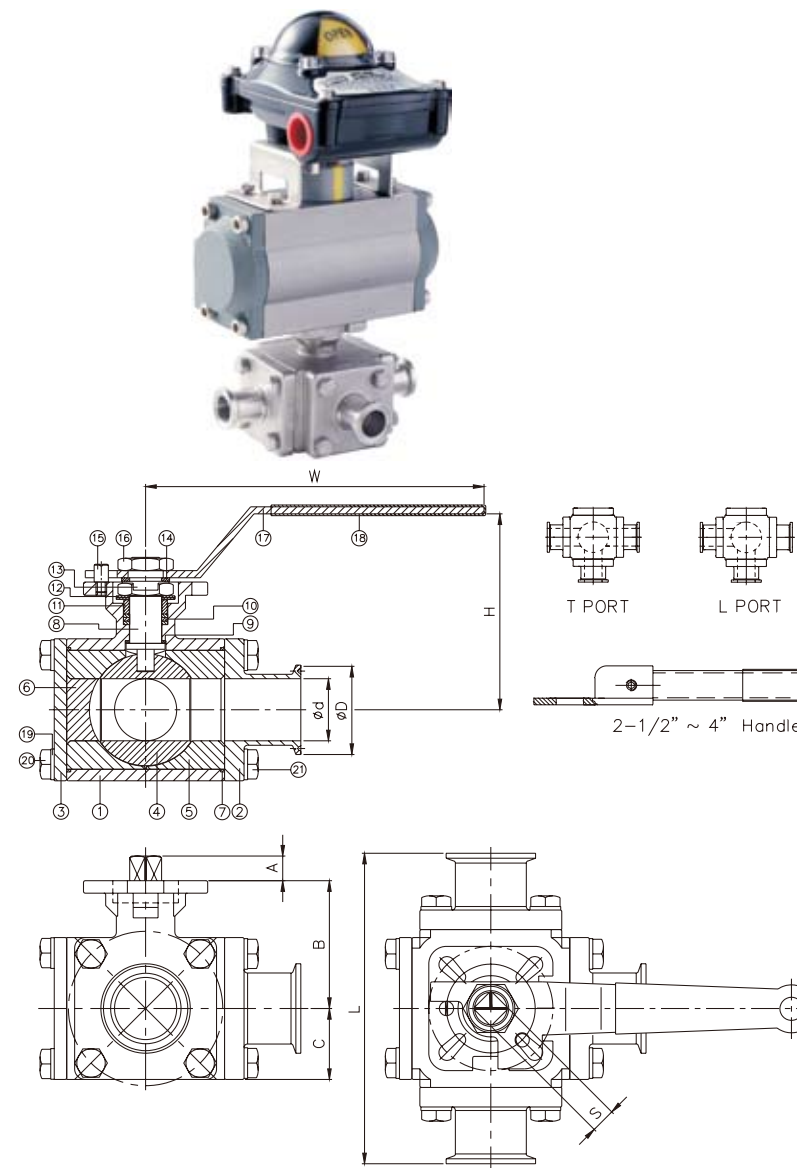
unit:mm

NPS	D	D1	D2	d	d1	R	R1	S	L	H	H1	W	Torque (in-lb)
1/4"	1.65	1.42	1.79	0.38	1	0.11	0.11	0.35	3.57	4.78	0.35	2.55	44.3
3/8"	1.65	1.42	1.85	0.62	1	0.11	0.11	0.35	4.06	4.78	0.43	2.55	66.4
1/2"	1.97	1.65	2.26	0.87	1.99	0.14	0.11	0.43	4.53	5.91	0.43	3.11	97.4
3/4"	2.76	1.97	3.27	1.37	1.99	0.18	0.14	0.55	5.47	5.91	0.55	3.8	141.6
1"	2.76	1.97	3.94	1.88	2.52	0.18	0.14	0.55	6.22	7.09	0.55	4.09	177
1-1/4"	4.02	2.76	4.96	2.37	3.05	0.22	0.18	0.67	7.76	7.09	0.67	5.59	354
1-1/2"	4.02	2.76	5.83	2.87	3.58	0.22	0.18	0.67	8.98	9.59	0.67	5.91	442.5
2"	4.92	4.02	7.2	3.84	4.69	0.26	0.22	0.87	9.52	11.22	0.87	7.28	531

unit:in

FEATURES

- Clamp end, 1/2"~4" (DN15~DN100)
- Body W.P. : 1000 WOG (PN63)
- Clamp End W.P. : 200 WOG
- W.T. : -20°C~200°C (-4°F~392°F)
- Investment casting
- Blow-out proof stem
- Live-loading design
- Anti-Static Device (option)
- Cavity filled seats
- Locking device
- ISO 5211 Direct mounting pad
- **Automation accessories (option)**



ITEM	PARTS	MATERIAL	
1	BODY	ASTM A351-CF8M	ASTM A351-CF3M
2	CAP		
3	FLAT CAP		
4	BALL	ASTM A351-CF8M	
5	SEAT A	PTFE / TFM1600	
6	SEAT B		
7	SEAL	PTFE	
8	STEM	ASTM A276-316	
9	THRUST WASHER	PTFE	
10	PACKING		
11	GLAND RING	AISI 304	
12	BELLEVILLE WASHER	AISI 301	
13	LOCKING WASHER	AISI 304	
14	FLAT WASHER		
15	STOP PIN		
16	STEM NUT		
17	HANDLE	PVC	
18	HANDLE SLEEVE		
19	SPRING WASHER	AISI 304	
20	BOLT A		
21	BOLT B		

DN	A	B	C	d	D	H	L	S	W	ISO 5211	Torque (N-m)
15	9	44.5	23.5	9.4	25.4	79	118	9	122	F03/F04	4.4
20	9	48	26	15.8	25.4	82.5	127	9	122	F03/F04	5.9
25	11	59	30.5	22.1	50.4	91	152.4	11	137	F04/F05	11.7
40	14	72	40	35	50.4	107	175	14	183	F05/F07	18.2
50	14	82	50	47.6	63.9	117	190	14	183	F05/F07	26
65	17	100	61	60	77.5	108.5	228	17	370	F07/F10	65
80	23	125.5	74	73	90.9	134	260	22	400	F10/F12	106.6
100	23	135.5	84	97.4	119	144	318	22	400	F10/F12	130

unit:mm

NPS	A	B	C	d	D	H	L	S	W	ISO 5211	Torque (in-lb)
1/2"	0.35	1.75	0.93	0.37	1	3.11	4.65	0.35	4.8	F03/F04	39.1
3/4"	0.35	1.89	1.02	0.62	1	3.25	5	0.35	4.8	F03/F04	51.8
1"	0.43	2.32	1.2	0.87	1.98	3.58	6	0.43	5.39	F04/F05	103.6
1-1/2"	0.55	2.83	1.57	1.38	1.98	4.21	6.89	0.55	7.2	F05/F07	161.1
2"	0.55	3.23	1.97	1.87	2.52	4.61	7.48	0.55	7.2	F05/F07	230.1
2-1/2"	0.67	3.94	2.4	2.36	3.05	4.27	8.98	0.67	14.57	F07/F10	575.3
3"	0.91	4.94	2.91	2.87	3.58	5.28	10.24	0.87	15.75	F10/F12	943.5
4"	0.91	5.33	3.31	3.83	4.69	5.67	12.52	0.87	15.75	F10/F12	1150.6

unit:in



Innovation Control Valve Range



Width Range Products:

- Auto Control Divert Valve
- Actuator for Butterfly Valve
- Wide Range Butterfly Valve
- Sight Glass & Non-return Valve
- 3A,BS,AS,NZS,DIN,SMS,RJT,CIP,IDF...etc.
Standard Union & Ferrule & Fitting
- 3A,DIN,SMS...etc. ASTM-A270 Sanitary Tube
- OEM Valve and Sanitary Ball Valve
- OEM/ODM Services

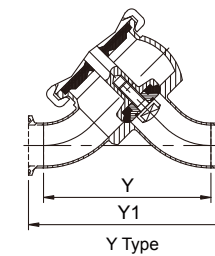
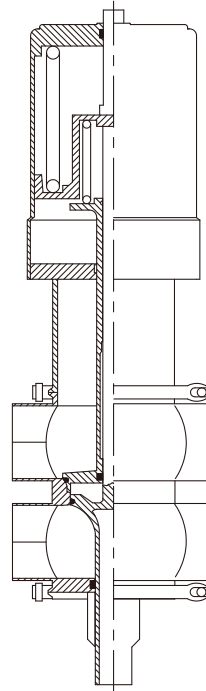
Technical Service for Manual & Control Valve Unit

For Joint any

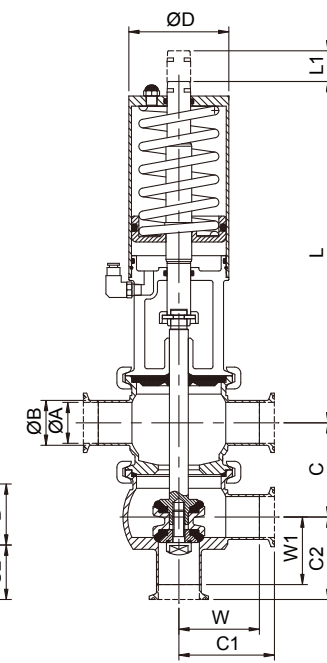
Tube fitting-3A, SMS, DIN, BS,
Elbow, Tee, Reducer
Clamp-Union-Weld/Expanding
Ferrule, Clamp, Valve-Butterfly,
Check, Sight Glass, Ball Valve
with our Orbitol weld Equipment



Auto Control Divert Valve



SIZE:1.0"



SIZE:1.5"-3.0"

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 the 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
Air pressure:-----5to7 bar.

SIZE	1.0"	1.5"	2.0"	2.5"	3.0"
ØA	22.1	34.7	47.5	60.2	72.9
ØB	25.4	38.1	50.8	63.5	76.2
C	56.7	80	92.4	120	128
C1	58.5	81.2	85.7	103.1	116.4
C2	50.6	61	65.4	72.1	79.7
C3	81.4	—	—	—	—
W	59.9	68.5	73	90.4	103.7
W1	52	57.4	66.8	79.5	96.1
ØD	60	85	85	133	133
L	153.6	290	296.3	365.8	368.9
L1	17	25	25	32	36
Y	96.1	142.3	168.6	211.6	244.7
Y1	121.5	167.7	194	237	270.1
(W/W1)+SMS male	19	23	23	27	27
(W/W1)+IDF male	21.5	21.5	21.5	21.5	21.5
(W/W1)+RJT male	27	27	27	27	27

Type: L, T and L/L, T/L, L/T, T/T

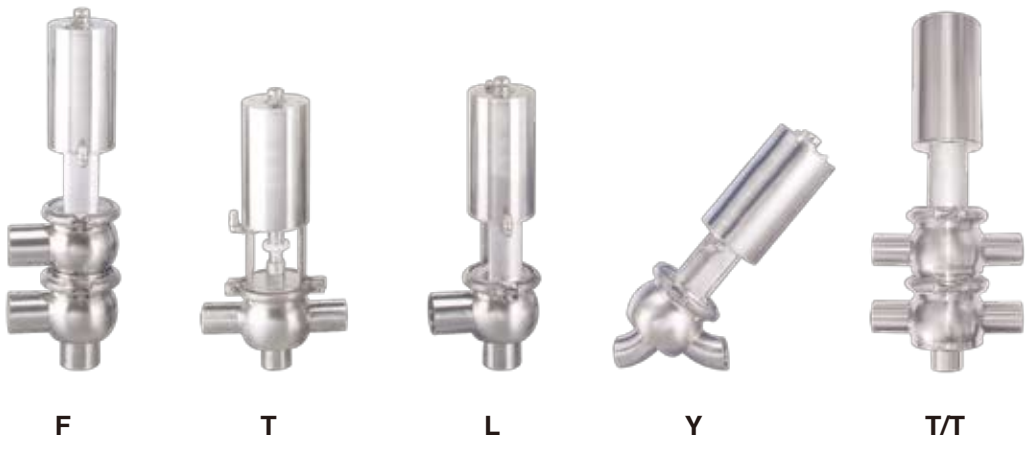
L	T	Y	F
L/L	T/L	L/T	T/T



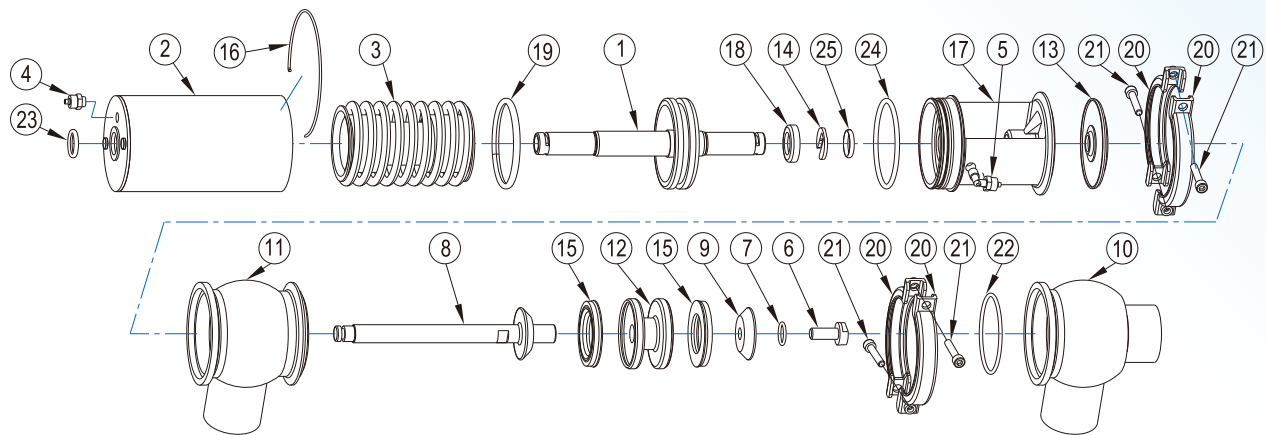
Auto Control Divert Valve

Operation Instruction

- 1. Haitima pneumatic valve can equipped different type of flow design,(as drawing A) to get various flow control.
- 2. Available for SMS, DIN, IDF, RJT, 3A, Ferrule....., Welding; Clamp; Unions.....connect end.
- 3. Material:
 - 3-1. All parts connect with fluid are made of stainless steel AISI 316/316L(1.4401/1.4404).
 - 3-2. The other parts in AISI 304 (1.4301).
 - 3-3. The valve stem is sealed by a special EPDM/Silicon/Viton seal and according to international standard for use on food or pharmaceutical.
- 4. Operating air pressure: 5bar-8bar compressed air.
- 5. Control ways:
 - a. Designed different type for controlling control various flow, as type L; T; F...etc.
 - b. Choose appropriate dimensions and type, as 2".....clamp or welding.
 - c. Choose appropriate control ways (manual or pneumatic):
 - c-1. Manual control valve to be equipped with a rapid pitch screw with protection against unscrewing.
 - c-2. Or choose air/spring(simple effect); or air/air (double effect) for pneumatic control.
 - c-3. Can use Haitima automatic control box to get signal transfer and complete individual valve control.
 - c-3-1. Signal transfer:
 - a. with 10-30VDC proximity switch connection:1 or 2pcs (PNP OR NPN)
 - b. Or 3A 125VAC,30VDC micro switch connection: 2pcs
 - c-3-2. Complete individual valve control:
Choose (a) or (b) +DC24 3.0W electric valve:1pc & air manifold (for complete control box).



Auto Control Divert Valve



F type construction assembly drawing & items list

Parts List											
Item	Part name	Q'TY	Material	Item	Part name	Q'TY	Material	Item	Part name	Q'TY	Material
1	Piston	1	St.St 304	10	Valve body-lower	1	St.St 316	19	X-ring	1	NBR
2	Cylinder	1	St.St 304	11	Valve body-upper	1	St.St 316	20	Clamp	4	St.St 304
3	Spring assembly	1	St.St 304	12	Middle piece	1	St.St 316	21	M6 screws	4	St.St 304
4	Air connect	1	Cupper	13	Lip seal-EPDM	1	304/EPDM	22	Valve body -seal ring	1	EPDM
5	Air connect	1	Cupper	14	Clip complete	1	St.St 304	23	O-ring	1	NBR
6	Screws	1	St.St. 316	15	Seal ring lower	2	EPDM	24	O-ring	1	NBR
7	O-ring	1	Rubber,NBR	16	Lock wire clip	1	St.St 304	25	O-ring	1	NBR
8	Stem	1	St.St 316	17	Bracket	1	St.St 304				
9	Washer	1	St.St 316	18	Stop ring	1	Teflon				

Max. flow tube pressure without leakage of valve seat.

If pressure over table Max. suggest to add proof Max. valve

10. SA. Pneumatic downward movement, spring return (NO-lower seat)
Actuator type / function: 20. AS. Pneumatic upward movement, spring return (NC-lower seat)
30. AA. Pneumatic upward and downward movement (A/A)

Actuator/Valve body combination and direction of pressure		Air		Air		Air		Air		Air	
NO : Normal open NC : Normal close A/A : Air/Air double action		Spring close		Air close		Air close		Spring close		Air close	
Stop and change-over valves- Max. pressure without leakage at the valve seat		5		8		5		20		5	
Air pressure (bar)		10		10		10		10		10	
Actuator Type/Function		10 (NO)		20 (NC)		20 (NC)		30		30	
Valve size (Max. Pressure)	DN25 (1.0")	9.5	10	10	9.5	10	10	10	10	10	10
	DN38 (1.5")	4.5	7.0	10	4.5	7.0	9.0	10	10	10	10
	DN51 (2.0")	4.5	4.0	5.0	4.5	4.0	9.0	10	9.0	10	10
	DN63.5 (2.5")	3.0	3.0	4.0	3.0	2.5	8.0	9.0	6.0	7.0	7.0
	DN76 (3.0")	5.0	4.0	6.0	4.5	5.0	10	10	10	10	10



Manual Divert Valve

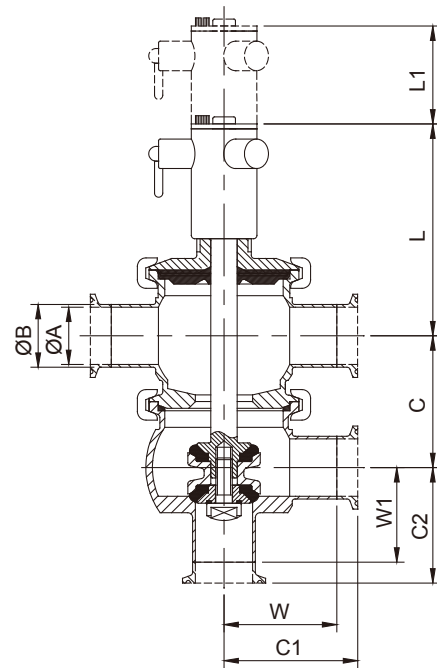


Materials:

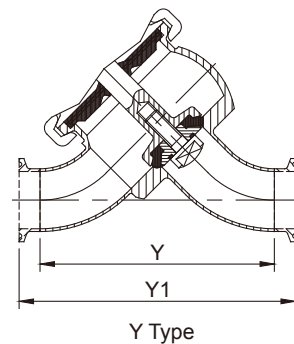
- Flow area: AISI 316L
- Other steel parts: AISI 304
- Plug stem: AISI 316L with Chromium Plated Surface
- Gasket for Flow Area: EPDM/SILICON/VITON
- Other seals: NBR and EPDM
- Surface: Mirror / Satin / Sand Blasted

Technical data:

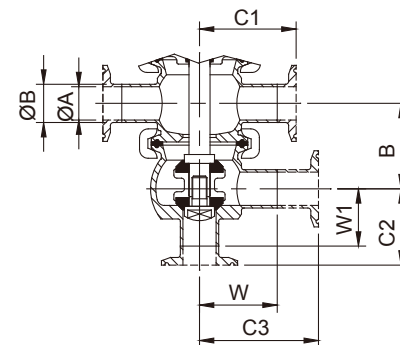
- Max production pressure :1000kpa(10bar).
- Temperature range:
Full vacuum.
-10°C to +140°C (EPDM).



SIZE:1.5"~3.0"



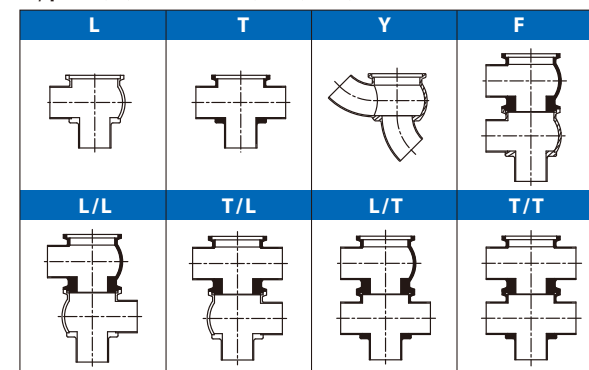
Y Type



SIZE:1.0"

SIZE	1.0"	1.5"	2.0"	2.5"	3.0"
ØA	22.1	34.8	47.5	60.2	72.9
ØB	25.4	38.1	50.8	63.5	76.2
C	56.7	80	92.4	120	128
C1	58.5	81.2	85.7	103.1	116.4
C2	50.6	61	65.4	72.1	79.7
C3	81.4	—	—	—	—
W	59.9	68.5	73	90.4	103.7
W1	52	57.4	66.8	79.5	96.1
ØD	60	85	85	133	133
L	101	126	135	167	170
L1	17	25	25	32	36
Y	96.1	142.3	168.6	211.6	244.7
Y1	121.5	167.7	194	237	270.1
(W/W1)+SMS male	19	23	23	27	27
(W/W1)+IDF male	21.5	21.5	21.5	21.5	21.5
(W/W1)+RJT male	27	27	27	27	27

Type:L,T,Y and L/L,T/L,L/T,T/T



Manual and Auto Control Tank Valve

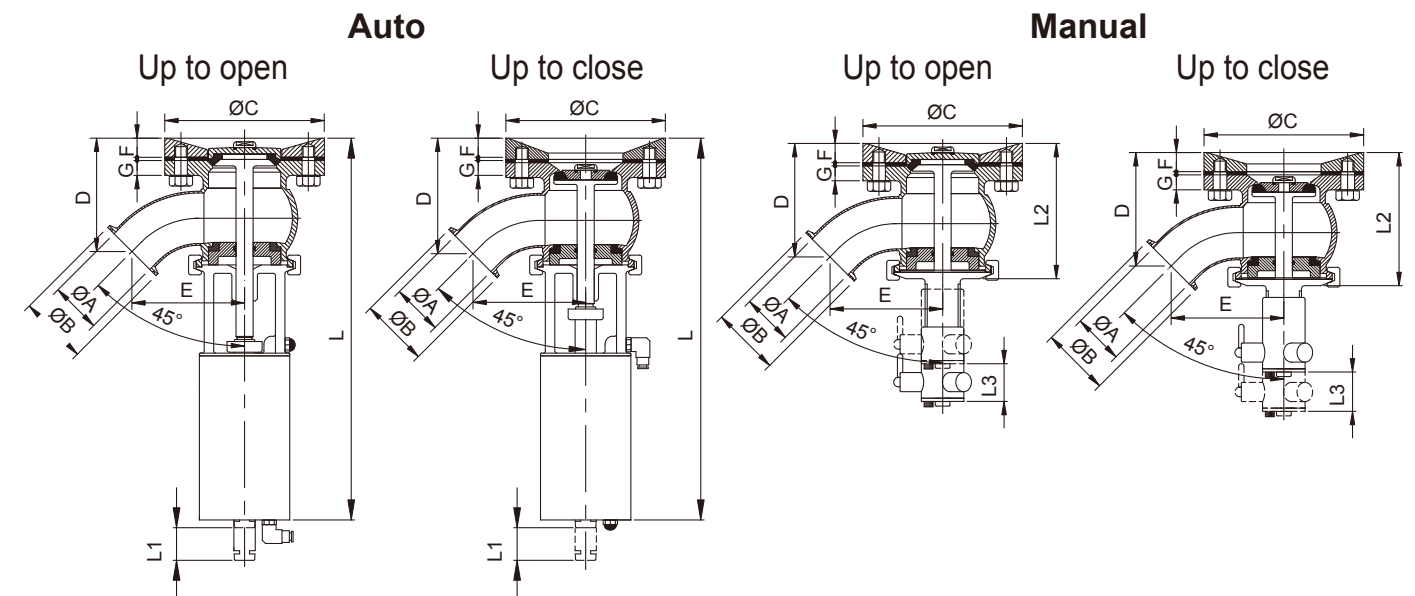


Materials:

- Flow area: AISI 316L
- Other steel parts: AISI 304
- Plug stem: AISI 316L with chromium plated surface
- Gasket for flow area: EPDM/SILICON/VITON
- Other seals: NBR and EPDM
- Surface: Mirror/ satin /sand Blaste

Technical data:

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



SIZE	1.0"	1.5"	2.0"	2.5"	3.0"
ØA	22.1	34.8	47.5	60.2	72.9
ØB	50.5	50.5	64	77.5	91
ØC	110	140	150	180	200
D	56.8	95.1	106.5	124.7	137.5
E	65.8	93	106	125.5	149.5
F	14	20	20	20	20
G	10	14	14	14	14
L	190	354	360	446	450
L1	22	31	31	39	39
L2	94	122	127	158	164
L3	30	35	35	45	45

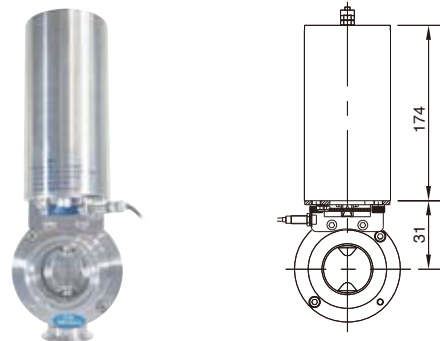


Auto Control Actuator For Butterfly Valve

C2, C3, C101 actuator instruction

1. C2, C3: Shut-Off time: 1.5 second ; Weight: 3.85KGS.
C101: Shut-Off time: 1.7 second ; Weight: 4.7KGS
2. Operating air pressure: 6 kg/cm₂ ; Min. 5bar ; Max. 9bar compress air
3. C2, C3 Air consumption: 0.266 Liter at 5 bar ; C101 Air consumption: 0.550 Liter at 5 bar.
4. Material: stainless steel AISI 304
5. Can be equipped with normal close or open.

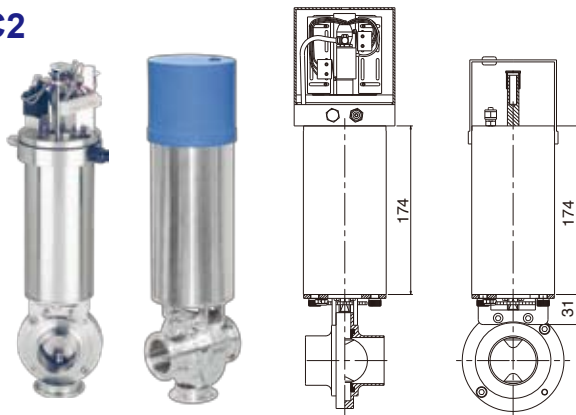
C3



Operation instruction

1. C3 Actuator apply to butterfly valve in size 1"-3" of the disc head DIA. 12mm X 8mm. (other size can be required)
2. Signal transfer: can be connect with M12 screw proximity switch.
3. Air/Air (double effect) actuator or air/spring (simple effect) actuator are available.
4. Accessories: adapter: 1pc ; M6 X 35 screw: 2pcs ; washer: 4pcs ; M6 nut: 2pcs ; 1/8PT quick coupler: 1pc

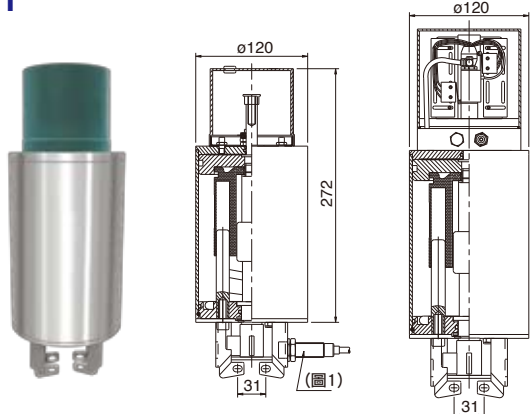
C2



Operation instruction

1. C2 Actuator apply to butterfly valve in size 1"-3" of the disc head DIA. 12mm X 8mm.(other size can be required)
2. Control ways:
 - 2-1. Signal transfer:
 - a. With 10-30VDC proximity switch contact: 1 or 2pcs.
 - b. Or 3A 125VAC. 30VDC microswitch: 2pcs
 - 2-2 Individual control: Choice (a) or (b) + DC24 3.0W electric valve: 1pc & Air manifold (for complete control box).
3. Air/Air (double effect) actuator or air/spring (simple effect) actuator are available.
4. Accessories: adapter: 1pcs ; M6 X 35 screw: 2pcs ; washer: 4pcs ; M6 nut: 2pcs ; 1/8PT quick coupler: 1pcs

C101



Operation instruction

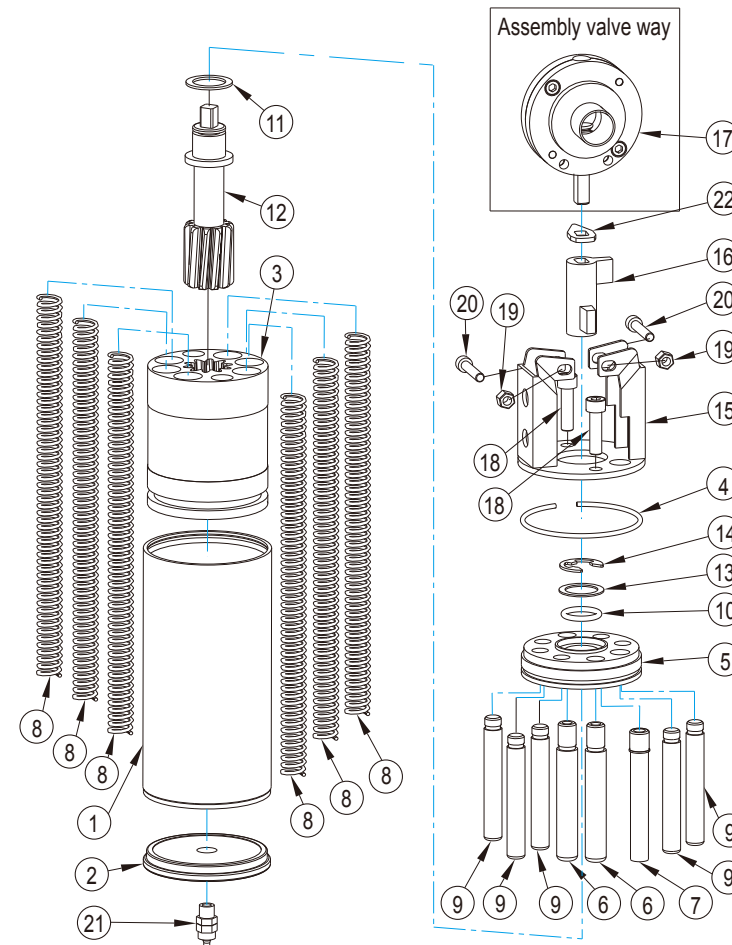
1. C101 Actuator apply to butterfly valve in size 4"-6" of the disc head DIA. 12mm X 12mm.
2. Control ways:
 - 2-1. Signal transfer:
 - a. Can be connect with M18 or M12 screw proximity switch (PNP or NPN) as (1)
 - b. With 10-30 VDC proximity switch contact: 1 or 2pcs (PNP OR NPN)
 - c. Or 3A 125VAC. 30VDC microswitch: 2pcs
 - 2-2. Individual control: Choice (a) or (b) or (c) + DC24 3.0W electric valve: 1pc & air manifold (for complete control box).
3. Air/Air (double effect) actuator or air/spring (simple effect) actuator are available.
4. Accessories: adapter: 1pcs ; M6 X 40 screw: 2pcs ; washer: 4pcs ; M6 nut: 2pcs ; 1/8PT quick coupler: 1pcs



Auto Control Actuator for Butterfly Valve (Warn Gear Design)

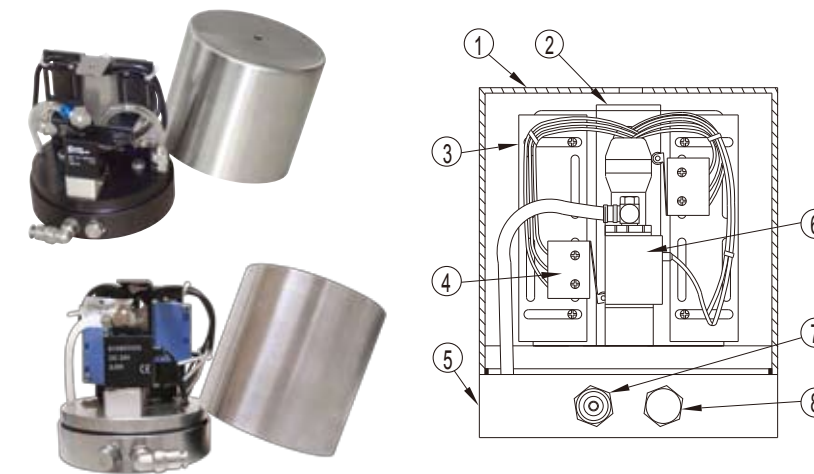
C2 Type construction assembly drawing & items list

C2, C3 & C101 : Max. output torque 20N/M on C2 & C3
Max. output torque 30N/M on C101



Parts List			
Item	Parts name	Q'TY	Material
1	St.St cylinder	1	St.St 304
2	St.St cylinder cap	1	St.St 304
3	Piston	1	Tenac 4010/SH410
4	Lock wire clip	1	St.St 304
5	Lower cylinder end	1	St.St 304
6	Piston guide part	2	St.St 304
7	Piston guide part	1	St.St 304
8	Compress spring	6	St.St 304
9	Piston guide part	5	St.St 304
10	Piston axle O-ring	1	Teflon
11	Teflon gasket	1	Teflon
12	Coupling axle piece	1	St.St 304
13	Conact seal	1	St.St 304
14	Circlip	1	St.St 304
15	Mounting bracket	1	St.St 304
16	Connection piece	1	St.St 304
17	Assembly valve way	1	St.St 304/316(L)
18	M8x12 ST.ST screw	2	St.St 304
19	M6 Nut	2	St.St 304
20	M6x35 ST.ST screw	2	St.St 304
21	Air connection	1	Cupper
22	Positioning index	1	St.St 304

Control Box for Auto Actuator and Divert Valve



Control box construction assembly drawing & items list

Parts List			
Item	Parts name	QTY	Material
1	Cover	1	PC or St.St 304
2	Switch plate	1	St.St 304
3	Plastic hanger	2	St.St 304
4	Micro switch	2	3A 125VAC. 30VDC
5	Air manifold	1	P.O.M (Plastic) or St.St 304
6	Electrovalve	1	DC24 3.0W
7	Air connection	1	Cu
8	E/N connect piece	1	St.St 304



Range of Butterfly Valve



Width Range of Haitima Butterfly Valve-C&G Type
Body: SS304.316.316L material out from precision CNC milling machined.
Body can be changeable and low torque. BS. SMS. DIN 3A Weld End and Male/Male End and Clamp End.

Disk: Out from full machined, high polished. Ra less than 0.6 μm . 9.5mm and 8 x 12mm, 12 x 12mm head for USA and Europe required.

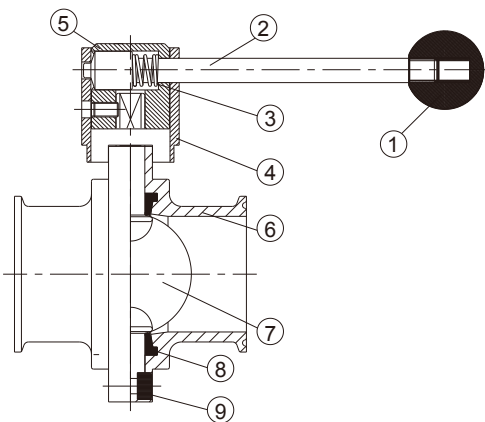
Electropolished and PTFE coating can be Required.

Handle: Different nylon re-force and stainless steel handle gripper, pull, Press type.
From 2 Position-12 Position, design for your wide range and beautiful choice.

Torque for Full Open/Close

1.0"	<1 kgf-m
1.5"	<1 kgf-m
2.0"	1.3 kgf-m
2.5"	1.5 kgf-m
3.0"	2.0 kgf-m
4.0"	3.1 kgf-m

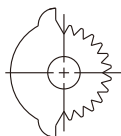
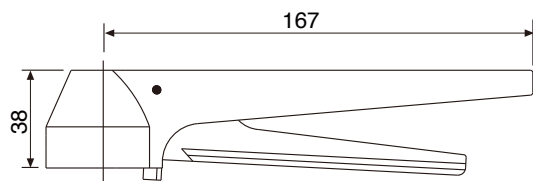
*1kgf-m = 9.8 N.m = 86.8 lbf-in = 7.23 lbf-ft



NO.	NAME
1	KNOB
2	STEEL-BAR
3	SPRING ST.ST
4	ST.ST
5	HOLDER
6	BODY
7	DISC
8	EPDM RUBBER SEAT
9	SCREW BOLT

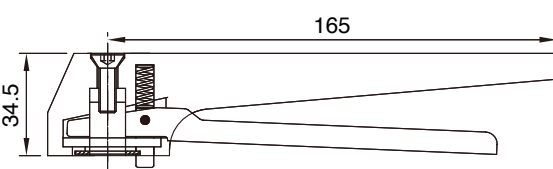
3A Clamp End With St.St Pull Handle, 4 Position

GRIPPER HANDLE 12 POSITION-G12



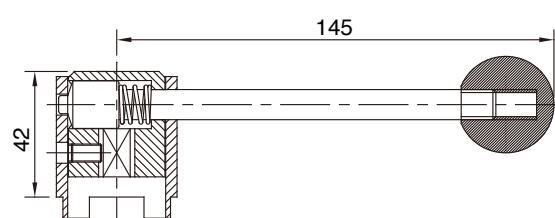
Can fit $\square 9.4 \times 9.4$ and $\circ \phi 12 \times 8$ or $\square 12 \times 12$

GRIPPER HANDLE 2 POSITION-G2



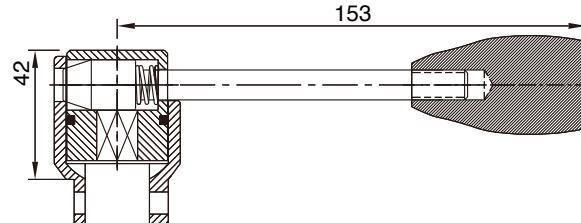
Can fit $\square 9.4 \times 9.4$ and $\circ \phi 12 \times 8$ or $\square 12 \times 12$

PULL HANDLE 4 POSITION-P4



Fit $\square 9.4 \times 9.4$ and $\circ \phi 12 \times 8$ or $\square 12 \times 12$

PULL HANDLE-P4L

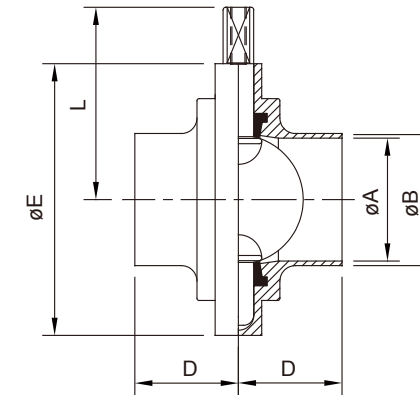


Fit $\square 9.4 \times 9.4$ and $\circ \phi 12 \times 8$ or $\square 12 \times 12$



Full Forged Butterfly Valves

C Type

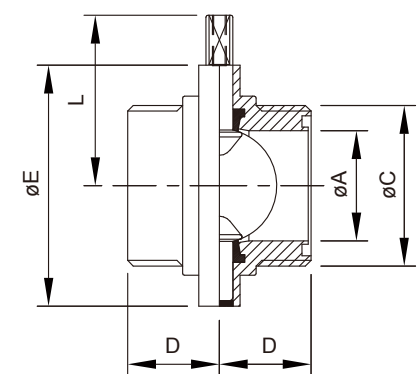
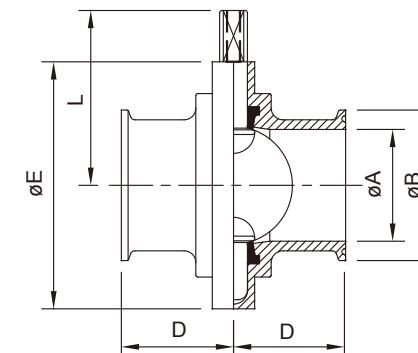


3A/BS/SMS Weld/Weld Butterfly Valves

SIZE	ØA	ØB	SIZE	ØA	ØB	D	ØE	L
1/2"	9.5	12.7	—	—	—	34	79	61
3/4"	15.8	19.05	—	—	—	34	79	61
1.0"	22.1	25.4	DN25	22.5	25	34	79	61
1.5"	34.8	38.1	DN38	35.4	38	38	85	64.3
2.0"	47.5	50.8	DN51	48.0	51	40	105	74.3
2.5"	60.2	63.5	DN63	60.2	63.5	40	112	77.6
3.0"	72.2	76.2	DN76	72.1	76.1	41	125	84.8
4.0"	97.6	101.6	DN104	100	104	44	157	101.7
6.0"	146.8	152.4	—	—	—	57	214	138.9

DIN Weld/Weld Butterfly Valves

SIZE	ØA	ØB	D	ØE	L
DN28	25	28	34	79	61
DN34	31	34	38	85	64.3
DN40	37	40	38	90	74.3
DN50	49	52	40	105	77.6
DN65	66	70	41	125	84.8
DN85	81	85	42	137	91.6
DN104	100	104	44	157	101.7



3A Clamp/Clamp Butterfly Valves

SIZE	ØA	ØB	D	ØE	L
1/2"	9.5	25.2	34	79	61
3/4"	15.8	25.2	34	79	61
1.0"	22.1	50.5	33	79	61
1.5"	34.8	50.5	33	85	64.3
2.0"	47.5	64.0	35	105	74.3
2.5"	60.2	77.5	35	112	77.6
3.0"	72.2	91.0	38	125	84.8
4.0"	97.6	119.0	38	157	101.7
6.0"	146.8	166.8	57	213	138.9

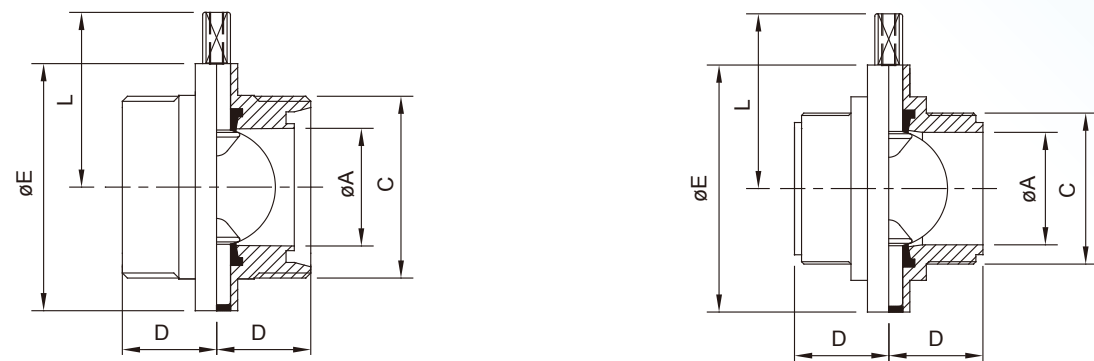
SMS Male/Male Butterfly Valves

SIZE	ØA	C	D	ØE	L
DN25	22.5	RD40x1/6	34	79	61
DN38	35.4	RD60x1/6	38	85	64.3
DN51	48	RD70x1/6	40	105	74.3
DN63	60.2	RD85x1/6	40	112	77.6
DN76	72.1	RD98x1/6	41	125	84.8
DN104	100	RD125x1/4	50	157	101.7



Range of Butterfly Valve

C Type

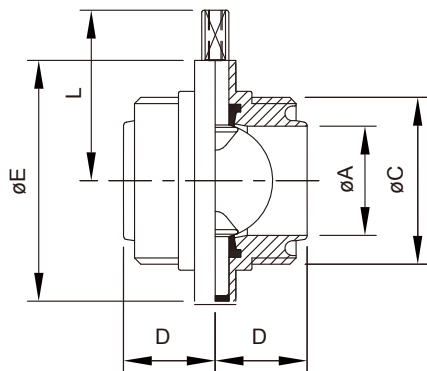


DIN Male/Male Butterfly Valves

SIZE	ØA	C	D	ØE	L
DN28	26	51.3 RD52x1/6	34	79	61
DN34	32	57.3 RD58x1/6	38	85	64.3
DN40	38	64.3 RD65x1/6	38	90	74.3
DN50	50	77.3 RD78x1/6	40	105	77.6
DN65	66	94.3 RD95x1/6	41	125	84.8
DN85	81	109 RD110x1/4	42	137	91.6
DN101.6	97.6	129 RD130x1/4	50	157	101.7
DN104	100	129 RD130x1/4	50	157	101.7

IDF Male/Male Butterfly Valves

SIZE	ØA	C	D	ØE	L
1.0"	22.4	37.13x8T ACME	34	79	61
1.5"	35.1	50.65x8T ACME	38	85	64.3
2.0"	47.8	64.16x8T ACME	40	105	74.3
2.5"	60.5	77.76x8T ACME	40	112	77.6
3.0"	72	91.19x8T ACME	41	125	84.8
4.0"	97.6	125.9x6T ACME	44	157	101.7



RJT Male/Male Butterfly Valves

SIZE	ØA	C	D	ØE	L
1.0"	22.1	45.72x8T WHIT	34	79	61
1.5"	34.9	58.42x8T WHIT	38	85	64.3
2.0"	47.6	72.72x6T WHIT	40	105	74.3
2.5"	60.3	85.42x6T WHIT	40	112	77.6
3.0"	73	98.12x6T WHIT	41	125	84.8
4.0"	97.6	123.52x6T WHIT	50	157	101.7



Full Forged Butterfly Valves

G Type



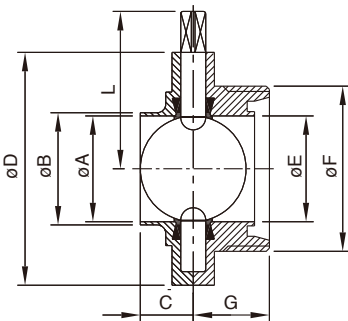
DIN Weld/Weld Butterfly Valves

SIZE	ØA	ØB	C	ØD	L
DN25	26	29	20	87	61
DN32	32	35	21	92	64.25
DN40	38	41	25	97	66.7
DN50	50	53	25	110	74.3
DN65	66	70	25	127	84.75
DN85	81	85	30	142	91.6
DN100	100	104	32	162	101.75

DIN Male / Male Butterfly Valves

SIZE	ØA	ØB	C	ØD	L
DN25	26	51.3-RD52x1/6	32	87	61
DN32	32	57.3-RD58x1/6	32	92	64.25
DN40	38	64.3-RD65x1/6	36	97	66.7
DN50	50	77.3-RD78x1/6	36	110	74.3
DN65	66	94.3-RD95x1/6	38	127	84.75
DN85	81	109-RD110x1/4	50	142	91.6
DN100	100	129-RD130x1/4	52	162	101.75

3 Piece G Type Butterfly Valves



DIN Weld / Male Butterfly Valves

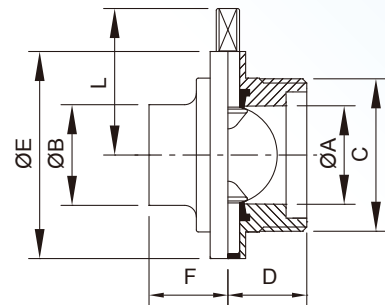
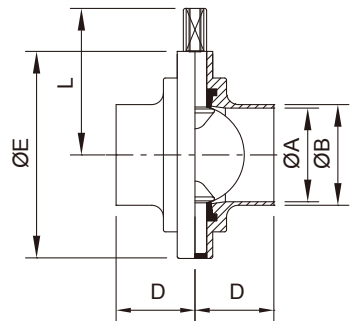
SIZE	ØA	ØB	C	ØD	ØE	ØF	G	L
DN25	26	29	20	87	26	51.3-RD52x1/6	32	61
DN32	32	35	21	92	32	57.3-RD58x1/6	32	64.25
DN40	38	41	25	97	38	64.3-RD65x1/6	36	66.7
DN50	50	53	25	110	50	77.3-RD78x1/6	36	74.3
DN65	66	70	25	127	66	94.3-RD95x1/6	38	84.75
DN85	81	85	30	142	81	109-RD110x1/4	50	91.6
DN100	100	104	32	162	100	129-RD130x1/4	52	101.75

DIN Weld/Weld Butterfly Valves

SIZE	ØA	ØB	ØC	L
DN25	26	29	87	90
DN32	32	35	92	90
DN40	38	41	97	100
DN50	50	53	110	100
DN65	66	70	127	100
DN85	81	85	142	136
DN100	100	104	162	136



Wine Butterfly Valves and Ball Valves

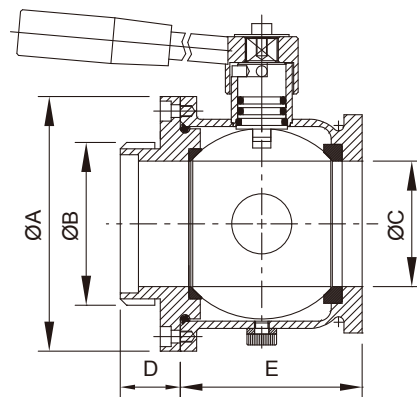
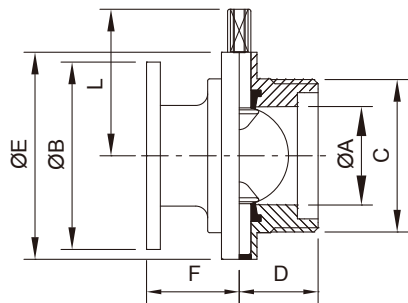


Wine Weld/Weld Butterfly Valves

SIZE	ØA	ØB	D	ØE	L
DN40/43	40	43	37	90	61
DN50/53	50	53	40	105	64.3
DN60/63	60	63	40	112	74.3
DN70/73	70	73	41	125	77.6
DN80/83	80	83	40	137	84.3
DN100/103	100	103	44	157	101.6

Wine Weld/Male Butterfly Valves

SIZE	ØA	ØB	C	ØD	ØE	F	L
DN40/43	40	43	55x3	37	90	37	61
DN50/53	50	53	67x3	40	105	40	64.3
DN60/63	60	63	79x3.5	40	112	40	74.3
DN70/73	70	73	90x3.5	41	125	41	77.6
DN80/83	80	83	102x4	40	137	40	84.3
DN100/103	100	103	125x4	45	157	44	101.6



Wine Male/Flange Butterfly Valves

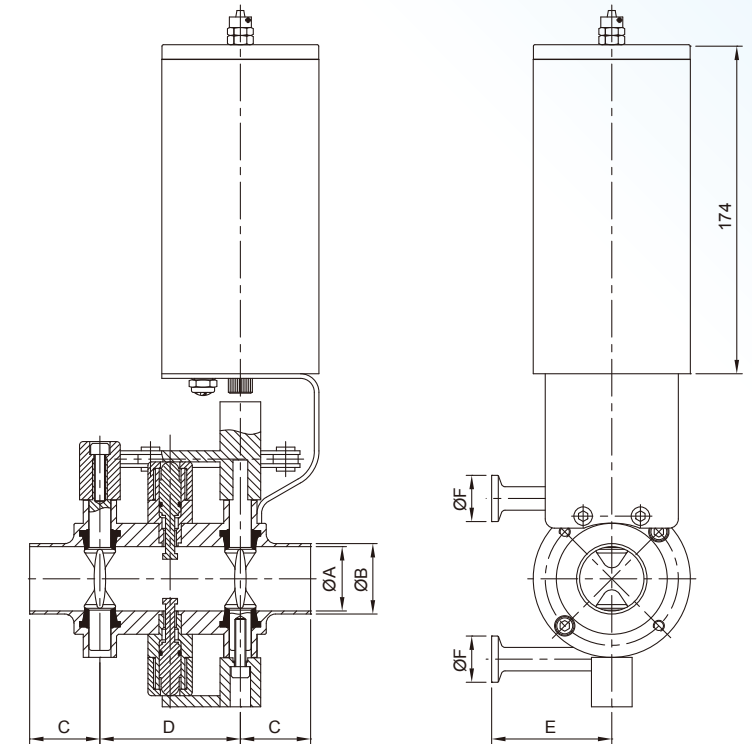
SIZE	ØA	ØB	C	D	ØE	F	L
DN40/43	40	100	55x3	37	90	37	61
DN50/53	50	100	67x3	40	105	40	64.3
DN60/63	60	120	79x3.5	40	112	40	74.3
DN70/73	70	120	90x3.5	41	125	41	77.6
DN80/83	80	140	102x4	40	137	50	84.3
DN100/103	100	140	125x4	44	157	55	101.6

Wine Ball Valves Male/Flange

SIZE	A	B	C	D	E
DN43	94	54.5	40	32.6	72
DN53	105	66.5	50	33	79
DN73	140	89.5	69	33	100



Mix-Proof Butterfly Valve Series

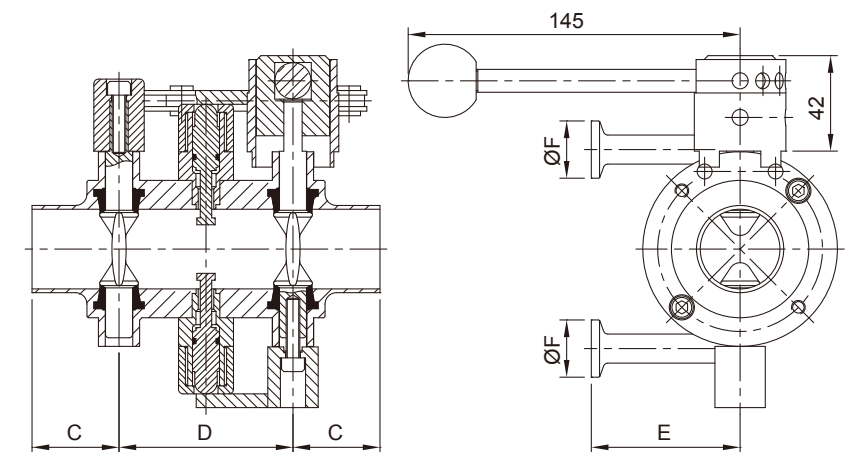
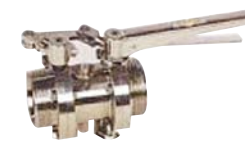


DIN

SIZE	ØA	ØB	C	D	E	ØF
DN40	37	40	24	65	65	25
DN50	49	52	24	70	65	25
DN65	66	70	25	80	75	25
DN80	81	85	28	90	85	25
DN104	100	104	30	110	85	25

Inch

SIZE	ØA	ØB	C	D	E	ØF
1.5"	37	40	24	65	65	25
2.0"	49	52	24	70	65	25
2.5"	66	70	25	80	75	25
3.0"	81	85	28	90	85	25
4.0"	100	104	30	110	85	25



DIN

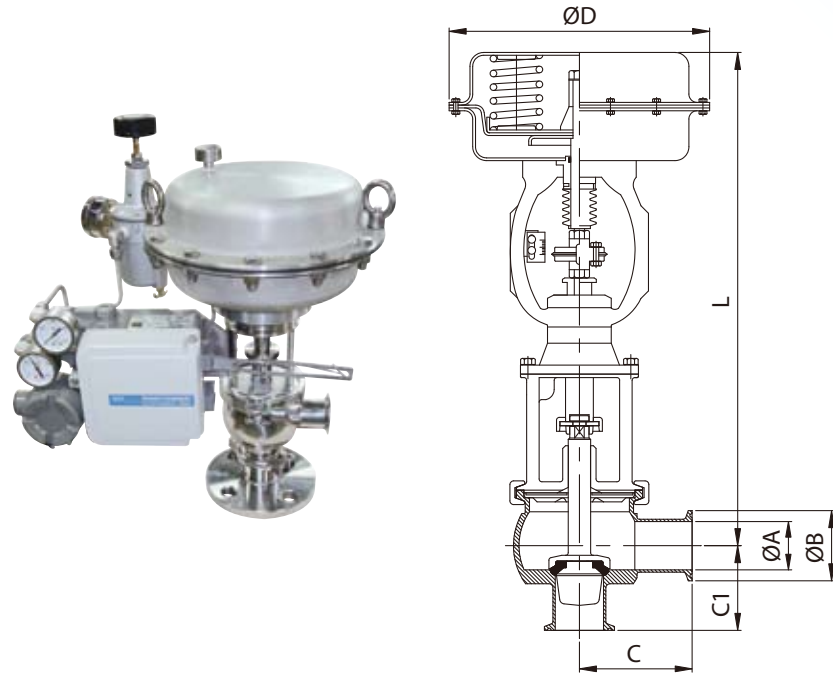
SIZE	ØA	ØB	C	D	E	ØF
DN40	37	40	24	65	65	25
DN50	49	52	24	70	65	25
DN65	66	70	25	80	75	25
DN80	81	85	28	90	85	25
DN104	100	104	30	110	85	25

Inch

SIZE	ØA	ØB	C	D	E	ØF
1.5"	37	40	24	65	65	25
2.0"	49	52	24	70	65	25
2.5"	66	70	25	80	75	25
3.0"	81	85	28	90	85	25
4.0"	100	104	30	110	85	25

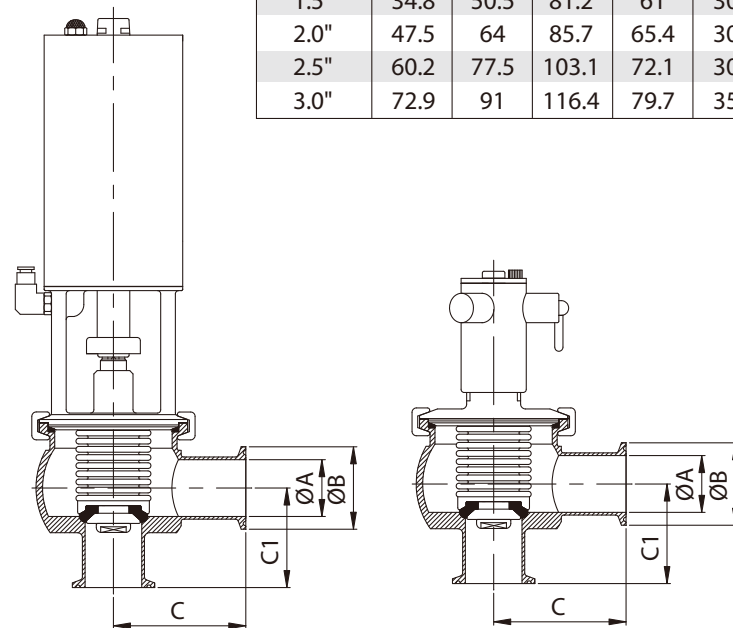


Manual and Auto Control Modulating Valve



Pneumatic Modulating Valve Type L

SIZE	ØA	ØB	C	C1	ØD	L
1.0"	22.1	50.5	58.5	50.6	250	489
1.5"	34.8	50.5	81.2	61	300	557
2.0"	47.5	64	85.7	65.4	300	564
2.5"	60.2	77.5	103.1	72.1	300	580
3.0"	72.9	91	116.4	79.7	350	651



Bellow Sterile Valves

SIZE	ØA	ØB	C	C1
1.0"	22.1	50.5	58.5	50.6
1.5"	34.8	50.5	81.2	61
2.0"	47.5	64	85.7	65.4
2.5"	60.2	77.5	103.1	72.1
3.0"	72.9	91	116.4	79.7



Range Of Non Return Valve (Check Valve)



Range of Check Valve:

Materials

Steel parts: Stainless steel SS316(L)
Seal rings: EPDM Rubber or SILICONE / VITON
Finish: OD≤0.8, ID≤0.8 or 0.4µm

Connections

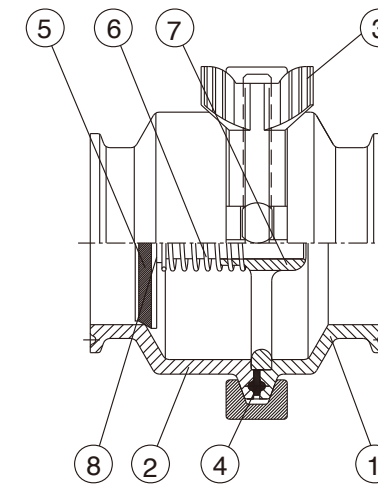
The valve is available with welding ends for tubes according to 3A, SMS, BS, DIN 11851.

Technical data

Required different pressure for opening the valve fitted in a vertical pipe, as shown in fig. 3, the open pressure Max. product pressure: 1000kpa(10bar)

Material grades

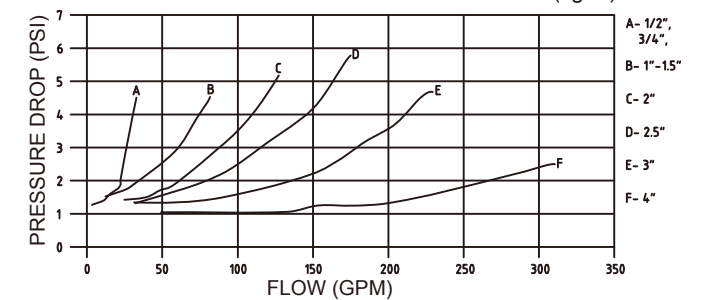
Gasket - Body - EPDM / SILICONE / VITON / NBR / PTFE
Flow Area - EPDM / SILICONE / VITON



NO.	NAME
1	Short Body
2	Long Body
3	Clamp
4	13 PG
5	Seal-Ring
6	ST.ST Spring
7	Flow Support Plate
8	Disc

Spring Check Valve Pressure Drop

(fig. 3)



Note: For the diagram the following applies: Medium: Water(20°C)

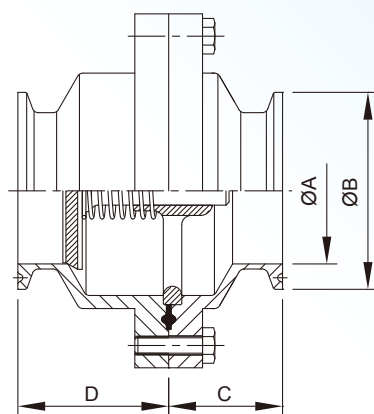
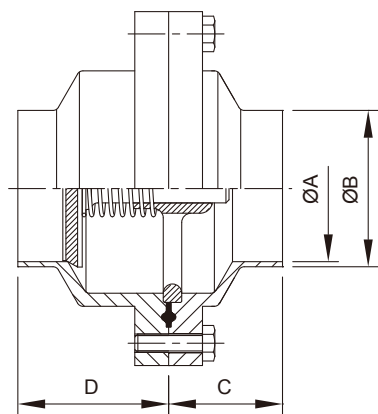
(PSI)

1/2"	3/4"	1.0"	1.5"	2.0"	2.5"	3.0"	4.0"
0.5	0.5	3.0	1.6	0.6	1.3	0.8	0.9

Open Pressure (fig. 1)



Range Of Non-Return Valve

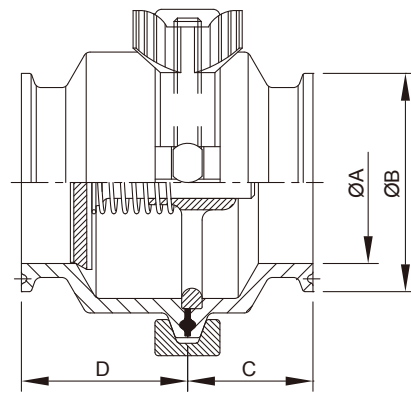
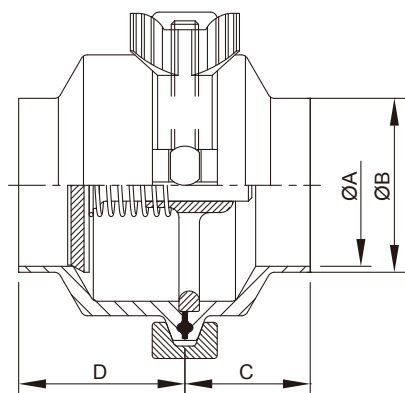


Check Valve Middle Flange/Weld END

3A/BS	ØA	ØB	DIN	ØA	ØB	SMS	ØA	ØB	C	D
1/2"	9.4	12.7							34	23
3/4"	15.8	19.05							34	23
1.0"	22.2	25.4	DN25	25	28	DN25	22.5	25	34	48
1.5"	34.9	38.1	DN32	31	34	DN38	35.5	38	36	48
2.0"	47.6	50.8	DN40	37	40	DN51	48.5	51	36	48
2.5"	60.3	63.5	DN50	49	52	DN63	60.3	63.5	36	48
3.0"	73	76.2	DN65	66	70	DN76	72.1	76.1	36	48
4.0"	97.6	101.6	DN100	100	104	DN104	100	104	47	54

Check Valve Middle Flange/Clamp END

3A/BS	ØA	ØB	SMS	ØA	ØB	C	D
1/2"	9.5	25.2				39.5	28.5
3/4"	15.9	25.2				39.5	28.5
1.0"	22.1	50.5	DN25	22.5	50.5	34	48
1.5"	34.8	50.5	DN38	35.5	50.5	36	48
2.0"	47.5	64	DN51	48.5	64	36	48
2.5"	60.2	77.5	DN63	60.3	77.5	36	48
3.0"	72.9	91	DN76	72.1	91	36	48
4.0"	97.6	119	DN104	100	119	47	54



Check Valve Middle Clamp/Weld END

3A/BS	ØA	ØB	DIN	ØA	ØB	SMS	ØA	ØB	C	D
1/2"	9.5	12.7							24	34
3/4"	15.8	19.05							24	34
1.0"	22.1	25.4	DN25	25	28	DN25	22.5	25	34	48
1.5"	34.8	38.1	DN32	31	34	DN38	35.5	38	36	48
2.0"	47.5	50.8	DN40	37	40	DN51	48.5	51	36	48
2.5"	60.2	63.5	DN50	49	52	DN63	60.3	63.5	36	48
3.0"	72.9	76.2	DN65	66	70	DN76	72.1	76.1	36	48
4.0"	97.6	119	DN100	100	104	DN104	100	104	47	54

Check Valve Middle Clamp/Clamp END

3A/BS	ØA	ØB	DIN	ØA	ØB	SMS	ØA	ØB	C	D
1/2"	9.5	25.2							28.5	39.5
3/4"	15.8	25.2							28.5	39.5
1.0"	22.1	50.5	DN25	25	50.5	DN25	22.5	50.5	34	48
1.5"	34.8	50.5	DN32	31	50.5	DN38	35.5	50.5	36	48
2.0"	47.5	64	DN40	37	64	DN51	48.5	64	36	48
2.5"	60.2	77.5	DN50	49	77.5	DN63	60.3	77.5	36	48
3.0"	72.9	91	DN65	66	91	DN76	72.1	91	36	48
4.0"	97.6	119	DN100	100	119	DN104	100	119	47	54



Range Of Hygienic Sight Glass



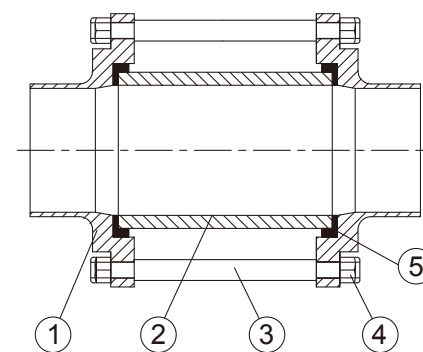
Range Of Hygienic Sight Glass:

Glass:Clean,High Pressure Glass.Max Work 10 bar.Can be changeable.

Body:SUS304,316,316L Precision Machined Body. With Width Connection End.3A,DIN,SMS,RJT,IDF Male/Male.Weld and Female End.

Screw Blot:Full Stainless Steel.

Seal:EPDM,Silicone and Viton.



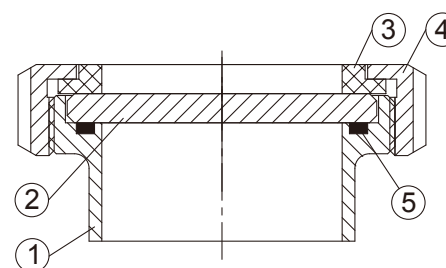
NO.	NAME
1	Body
2	High Pressure Clean Glass
3	Screw Blot
4	Nylon Lock Nut
5	Seal

PYREX Borosilicate Glass Composition

Contect	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	B ₂ O ₃	Na ₂ O	K ₂ O
%	80.9	2.3	0.03	12.7	4.0	0.04

Physical Properties

Young's module	6.4x10 ⁵ kg/cm ³
Poisson's ratio	0.20
Shear modules	2.7x10 ⁵ kg/cm ²
Knoop Hardness (100g)	418KHN
Bending strength	4~7x10 ⁵ kg/cm ²
Design stress (Safety factor)	67 kg/cm ²

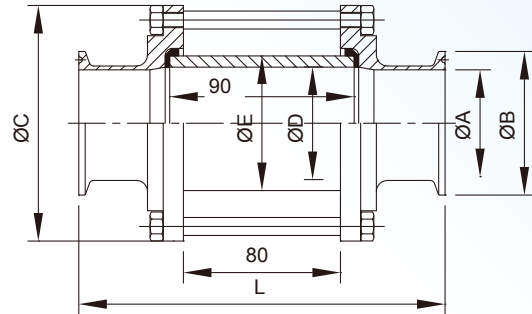
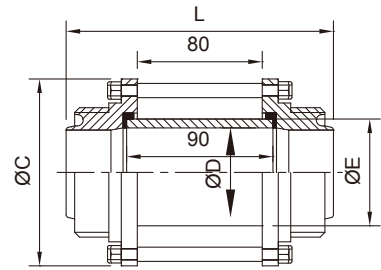


NO.	NAME
1	Body
2	High Pressure Clean Glass
3	Teflon Gasket
4	NUT
5	Seal

With Weld End Only!



Range Of Hygienic Sight Glass

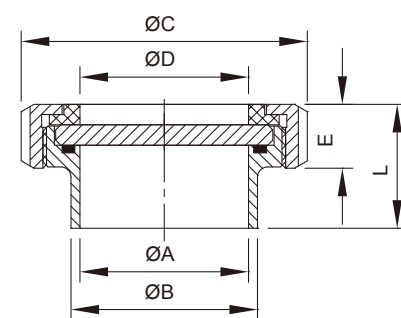
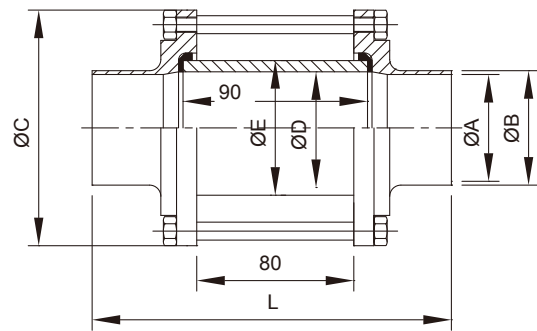


RJT, SMS, DIN, IDF-Male End Sight Class

SIZE	L	ØC	ØD	ØE
25	148	79	26	32
38	156	85	34	40
51	160	105	50	60
63.5	160	112	65	75
76	162	125	75.4	85
104	168	157	100	110

3A/BS Clamp End Sight-glass

SIZE	ØA	ØB	ØC	ØD	ØE	L
1.0"	22.1	50.5	79	26	32	143
1.5"	34.8	50.5	85	34	40	146
2.0"	47.5	64	105	50	60	150
2.5"	60.2	77.5	112	65	75	150
3.0"	72.9	91	125	75.4	85	156
4.0"	97.6	119	157	100	110	156



3A/BS Weld End Sight-glass

SIZE	ØA	ØB	ØC	ØD	ØE	L
1/2"	9.4	12.7	47	10.2	15	106
3/4"	15.75	19.05	47	17	22	106
1.0"	22.1	25.4	79	26	32	148
1.5"	34.8	38.1	85	34	40	156
2.0"	47.5	50.8	105	50	60	160
2.5"	60.2	63.5	112	65	75	160
3.0"	72.9	76.2	125	75.4	85	162
4.0"	97.6	101.6	157	100	110	167

Weld End Sight-glass

SIZE	ØA	ØB	ØC	ØD	ØE	L
DN65	66	73	112	66	25	48.5
DN80	80	93	127	82	29	52.5
DN100	98	113	148	100	31	60.5

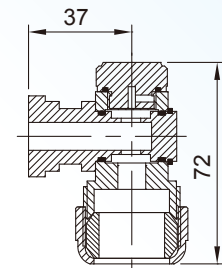
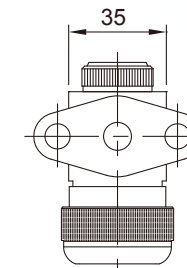
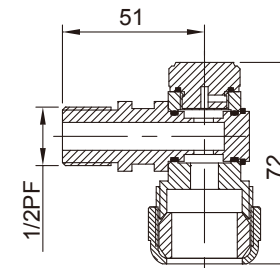
SMS Weld End Sight-glass

SIZE	ØA	ØB	ØC	ØD	ØE	L
DN25	22.5	25	79	26	32	148
DN38	35.4	38	85	34	40	156
DN51	48	51	105	50	60	160
DN63.5	60.2	63.5	112	65	75	160
DN76	72	76	125	75.4	85	162
DN104	100	104	157	100	110	168

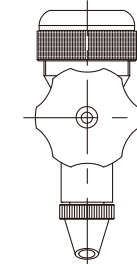
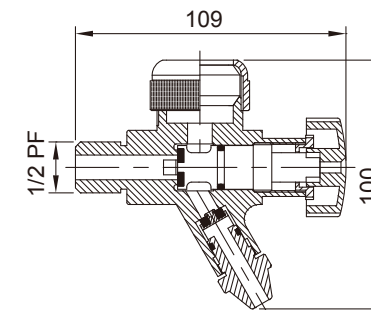


Sample Cock Valve

Upper Valves



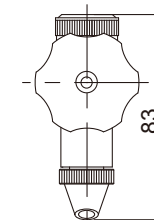
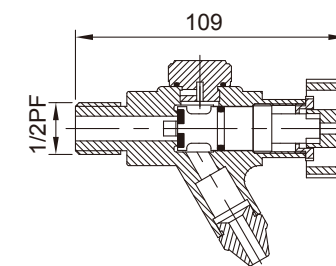
Level Valves



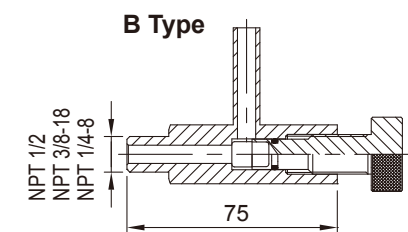
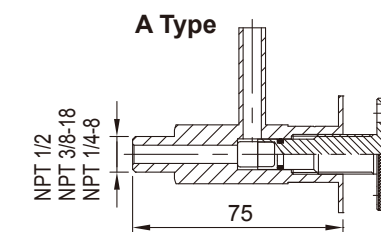
Connecting End

- (1) PF Thread End
- (2) Welding Flange End
- (2) Welding Ferrule End

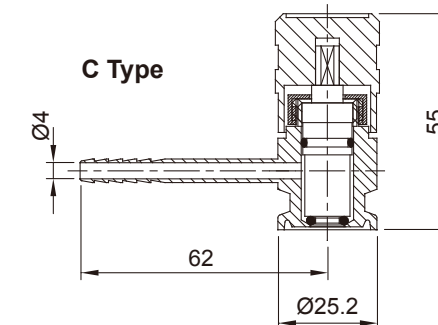
Test Valves



Sample Cock Valves



Sample Cock Valves





Hygienic Sample Valve for BPE

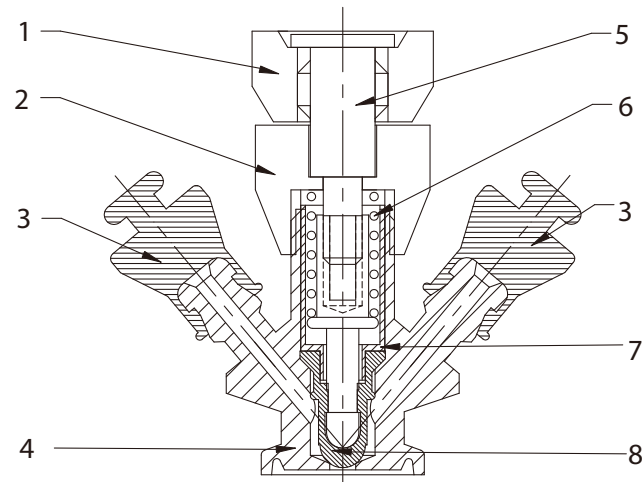


Materials:

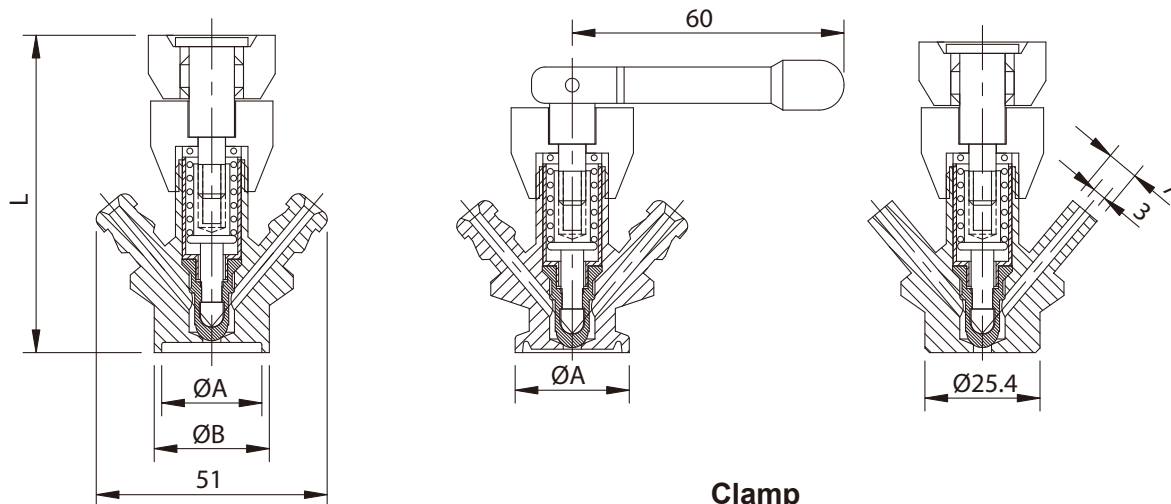
- Flow area: AISI 316L
- Other steel parts: AISI 316
- Plug stem: AISI 316L
- Gasket for flow area: EPDM/SILICON/VITON
- Other seals: NBR and EPDM
- Surface: Mirror/ satin /sand Blaste

Technical data:

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



Parts List			
Item	Parts name	Q'TY	Material
1	Rotating Nut	1	SUS304/316(L)
2	Lucknut	1	SUS304/316(L)
3	Seal	1	EPDM
4	Body	1	SUS304/316(L)
5	Flow Supports	1	SUS304/316(L)
6	Spring	1	SUS304/316(L)
7	Bushing	1	SUS304/316(L)
8	Seal	1	EPDM



Weld

SIZE	ØA	ØB	L
1/2"	9.4	12.7	71.5
3/4"	15.75	19.05	71.5
1.0"	22.1	25.4	71.5

Clamp

SIZE	ØA	L
A37	34	70
1/2"	25.2	70
3/4"	25.2	70
1.0"	50.5	70



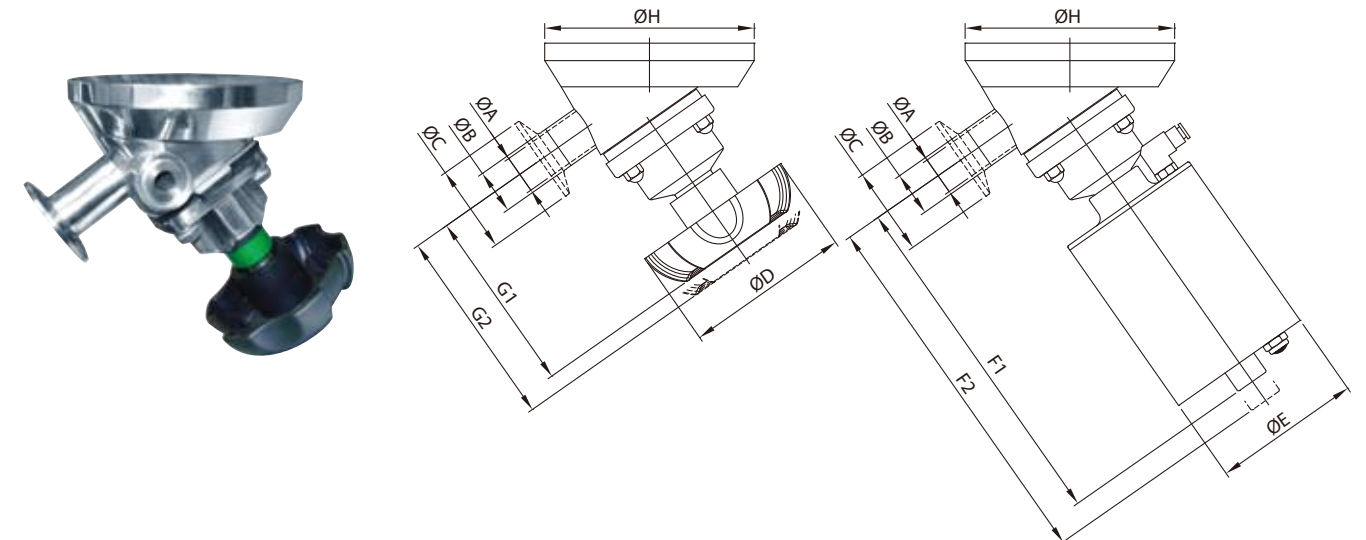
Pneumatic/Manual Diaphragm Valve 2WAY/Tank Bottom Valve



Pneumatic diaphragm valve Aspect design can be widely applied to the fields, such as pharmacy, beer, food, beverage, fluid equipment, cosmetic and so on.
 Control mode: Manual Type & Pneumatic Type
 Connection type: Clamp or Weld or other ...
 Operation: Normal Open & Normal Close design
 Body Material: 316L, Forged Or Casting .
 Connection: INCH: 1/2"~2", DIN / ISO: DN10-DN50 other size can be requirement
 Working temp: Assembling Diaphragm: EPDM(-40°C ~110°C, PTFE / EPDM(-10°C~150°C)
 Working pressure: Max 10 Bar
 Surface: Standard: OD / ID mirror polished. ID Ra<0.5µm. OD- Sand Blasted or E/P or others, ID – Polishing to Ra<0.5µm(SF1) or E/P Finished Ra,0.38µm(SF4) can be required.

3A	ØA	ØB	ØC	BPE	ØA	ØB	ØC	ØD	ØE	F1	F2	G1	G2	L	L1
1/2"	9.4	12.7	25.2	1/2"	9.4	12.7	25	60	60	122	131	74	83	124	88.9
3/4"	15.75	19.05	25.2	3/4"	15.75	19.05	25	60	60	122	131	74	83	135	101.6
1.0"	22.1	25.4	50.5	1.0"	22.1	25.4	25/50.4	95	85	212	225	100	113	141.2	114.3
1.5"	34.8	38.1	50.5	1.5"	34.8	38.1	50.4	95	85	217	232	119	134	168.4	139.7
2.0"	47.5	50.8	64	2.0"	47.5	50.8	63.9	118	133	315	333	135	153	190.5	158.8

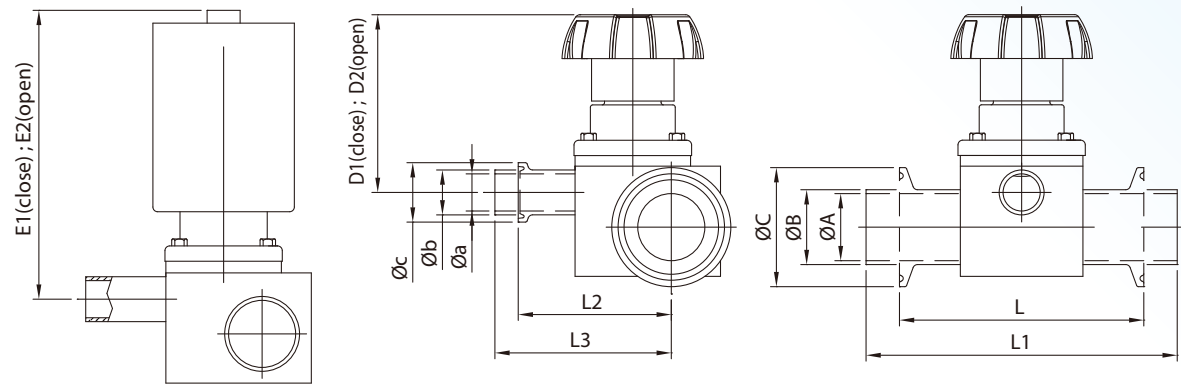
DIN	ØA	ØB	ØC	ØD	ØE	F1	F2	G1	G2	L
DN10	10	13	34		60	122	131	74	83	124
DN20	20	23	34	60	85	212	225	100	113	135
DN25	26	29	50.5	60	85	212	225	100	113	141.2
DN32	32	35	50.5	95	85	217	232	119	134	168.4
DN40	38	41	50.5	95	85	217	232	119	134	168.4
DN50	50	53	64	118	133	315	333	135	153	190.5



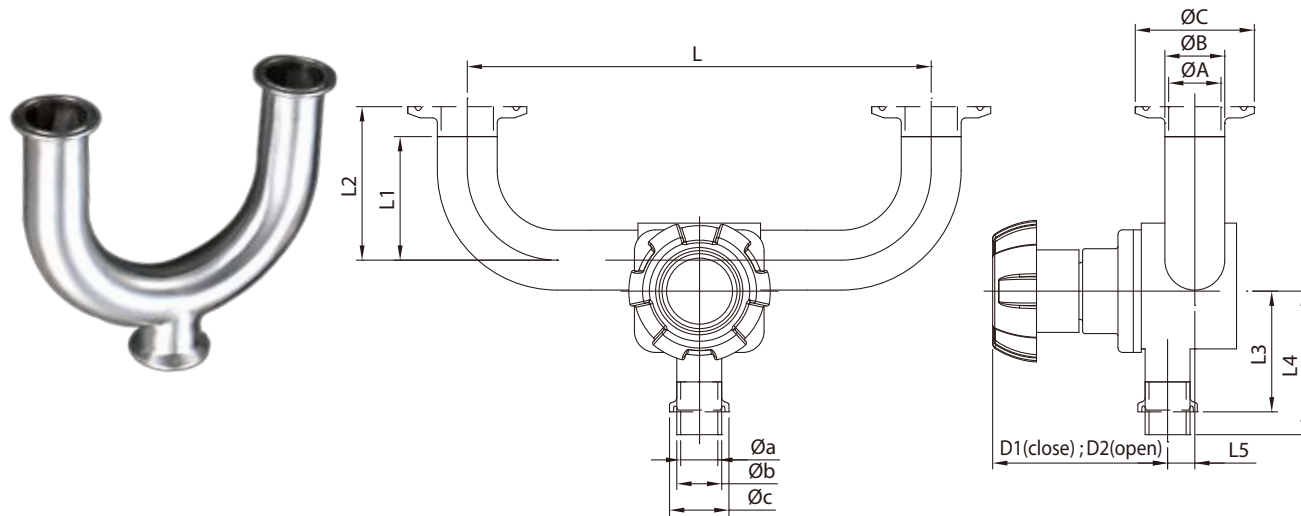
SIZE	ØA	ØB	ØC	ØD	ØE	F1	F2	G1	G2	ØH
1/2"	9.4	12.7	25.2	60	60	122	131	74	83	100
3/4"	15.75	19.05	25.2	60	60	122	131	74	83	100
1.0"	22.1	25.4	50.5	95	85	212	225	100	113	120
1.5"	34.8	38.1	50.5	95	85	217	232	119	134	160
2.0"	47.5	50.8	64	118	133	315	333	135	153	160



Pneumatic/Manual Diaphragm Valve 3WAY/U-Bend valve



SIZE	ØA	ØB	ØC	Øa	Øb	Øc	L	L1	L2	L3	D1	D2	E1	E2
1/2"x1/2"	9.4	12.7	25.2	9.4	12.7	25.2	117.4	132	58	72	74	83	122	131
3/4"x3/4"	15.75	19.05	25.2	15.75	19.05	25.2	117.4	132	61.18	75	74	83	122	131
1.0"x1/2"	22.1	25.4	50.5	9.4	12.7	25.2	117.4	132	64.35	78	74	83	122	131
1.0"x3/4"	22.1	25.4	50.5	15.75	19.05	25.2	117.4	132	64.35	78	74	83	122	131
1.0"x1.0"	22.1	25.4	50.5	22.1	25.4	50.5	136.4	151	81.25	89	100	113	212	225
1.5"x1/2"	34.8	38.1	50.5	9.4	12.7	25.2	117.4	132	70.7	84.7	74	83	122	131
1.5"x3/4"	34.8	38.1	50.5	15.75	19.05	25.2	117.4	132	70.7	84.7	74	83	122	131
1.5"x1.0"	34.8	38.1	50.5	22.1	25.4	50.5	151	151	94.9	94.9	100	113	212	225
1.5"x1.5"	34.8	38.1	50.5	15.75	19.05	50.5	161.4	176	101.9	108	119	134	217	232
2.0"x1/2"	47.5	50.8	64	9.4	12.7	25.2	117.4	132	77.05	91	74	83	122	131
2.0"x3/4"	47.5	50.8	64	15.75	19.05	25.2	117.4	132	77.05	91	74	83	122	131
2.0"x1.0"	47.5	50.8	64	22.1	25.4	50.5	151	151	101.5	100	113	113	212	225
2.0"x1.5"	47.5	50.8	64	34.8	38.1	50.5	176	176	115	115	119	134	217	232
2.0"x2.0"	47.5	50.8	64	47.5	50.8	64	195.4	210	121.7	129	135	153	315	333



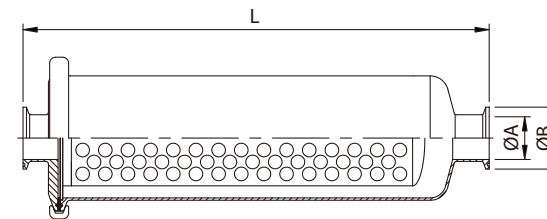
SIZE	ØA	ØB	ØC	Øa	Øb	Øc	L	L1	L2	L3	L4	L5	D1	D2
1/2"x1.0"	22.1	25.4	50.5	9.4	12.7	25.2	196.8	52.4	65.1	64.35	78	11.55	74	83
1/2"x1.5"	34.8	38.1	50.5	9.4	12.7	25.2	214.2	74.6	87.3	70.7	84.7	15.8	74	83
1/2"x2.0"	47.5	50.8	64	9.4	12.7	25.2	298.4	103.2	115.9	77.05	91	18.35	74	83
3/4"x1.0"	22.1	25.4	50.5	15.75	19.05	25.2	196.8	52.4	65.1	64.35	78	11.55	74	83
3/4"x1.5"	34.8	38.1	50.5	15.75	19.05	25.2	214.2	74.6	87.3	70.7	84.7	15.8	100	113
3/4"x2.0"	47.5	50.8	64	15.75	19.05	25.2	298.4	103.2	115.9	77.05	91	18.35	74	83



Filter

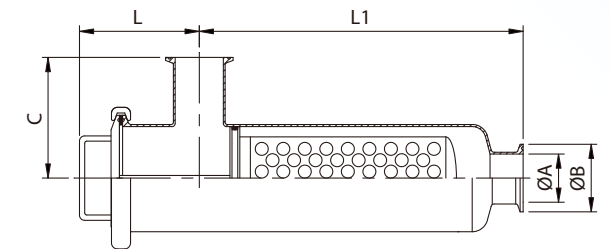


- Material: SUS304/SUS316L
- Mesh: 20~400
- Aperture Size: 1~10(mm)
- P.D.Press(MPa): 0.05~0.2
- Types: Weld end/Clamp end/Male end/Female end



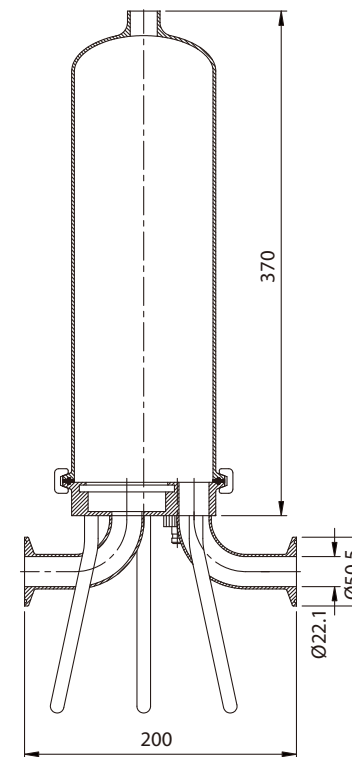
Filter I Type

SIZE	ØA	ØB	ØC	ØD	L
1.0"	22.1	50.5	101.6	119	410
1.5"	34.8	50.5	101.6	119	410
2.0"	47.5	64	101.6	119	410
2.5"	63.5	77.5	101.6	119	450
3.0"	72.9	91	101.6	119	550



Filter L Type

SIZE	ØA	ØB	C	L	L1
1.0"	22.1	50.5	104.8	110	310
1.5"	34.8	50.5	104.8	110	310
2.0"	47.5	64	114.3	110	310
2.5"	60.2	77.5	108	110	410
3.0"	72.9	91	108	110	490

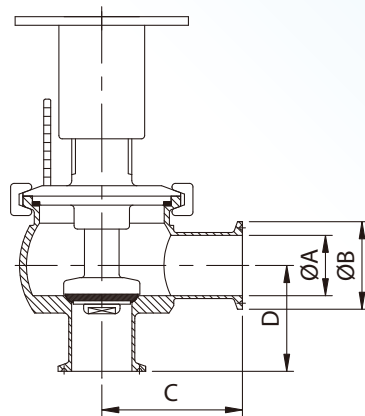


Filter Y Type

SIZE	ØA	ØB	L
1.0"	22.1	50.5	121.5
1.5"	34.8	50.5	188.3
2.0"	47.5	64	214.6
2.5"	60.2	77.5	265.6
3.0"	72.9	91	270



Kinds of Special Valve

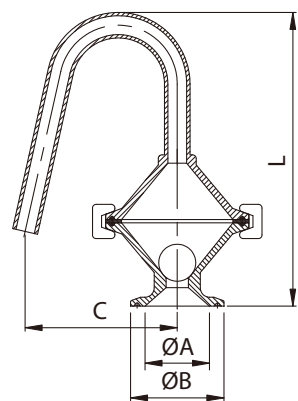


- Material: SUS304 or SUS316L.
Forged or Solid Bar Body.
- Surface: Polished, Electric Polished.
ID Ra < 0.8um. or 0.4um.
- Can be made by your requirement design.

For safety relief pressure.
(Working pressure-0.1~7kgs/cm².)

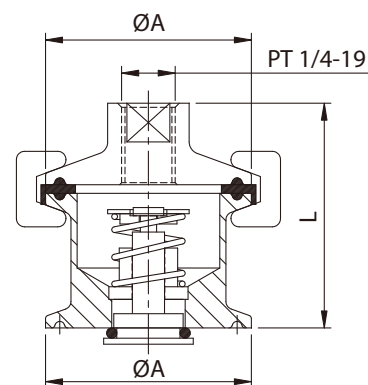
Relief Valve

SIZE	ØA	ØB	C	D
1.0"	22.1	50.5	58.5	50.6
1.5"	34.8	50.5	81.2	61
2.0"	47.5	64	86.1	65.4
2.5"	60.3	77.5	103.1	78.6
3.0"	72.9	91	116.4	79.7



Relief out over-load air pressure
for tank or pipe line.
Air Release Valve

SIZE	ØA	ØB	C	L
1.0"	22.1	50.5	82	158
1.5"	34.8	50.5	82	158
2.0"	47.5	64	82	158



For air get out of the pipe Line.
Air Blow Valve

SIZE	ØA	ØB
1.0"/1.5"	50.5	55
2.0"	34.8	55



Sanitary Standard Pressure Gauge

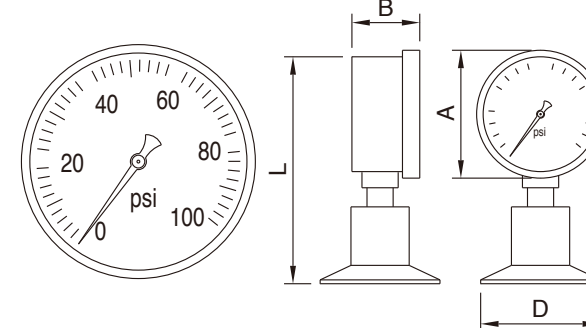


Note:

Sanitary pressure gauges are stainless steel products specifically designed to meet the demanding sanitary requirements for food dairy, beverage, pharmaceutical and biotech applications.

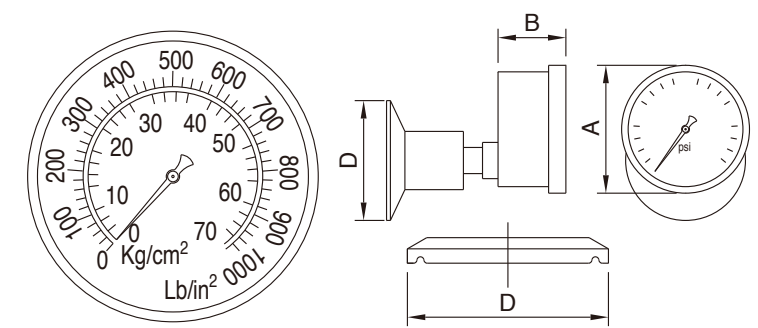
Complies with 3A sanitary standard, water-proof, shock resistant, and closed structures, and are durable and accurate, good for long time running. All series are liquid-filled, and special materials movement and bourdon tube have lasting durability. It is applicable to systems with both strong fluctuation and non-corrosive fluids, such as air, water and oil.

PG1



SIZE	A	B	L
Ø50	56	30	100
Ø63	69	30	122
Ø80	89	30	140
Ø100	112	47	166
Ø160	160	50	224

PG2



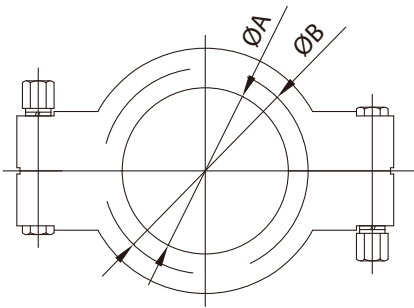
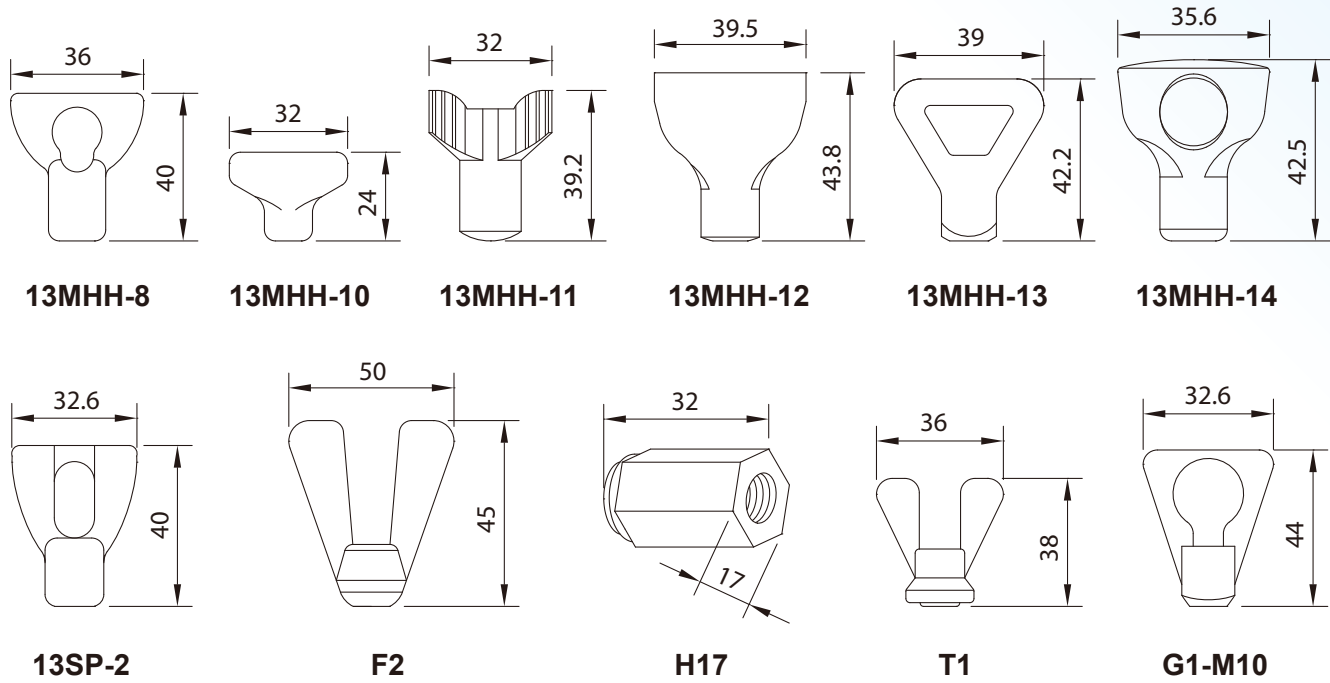
SIZE	D (Tri-clamp)
1" & 1-1/2"	50.4
2.0"	63.9
2-1/2"	77.4
3.0"	90.9
4.0"	118.9

- Process connection : 1-1/2", 2.0", 2-1/2" Quick-release clamp piping system
- Suitable Pressure Ranges : 15psi to 600psi
- Instrument Connection : 1/4"NPT /BSPT or 1/2"NPT /BSPT
- Case & Movement Mat'l: SS304
- Connection Mat'l : SS316
- Diaphragm : SS316
- Fill Fluid : Glycerined (Vegetable oil)
- Max temperature : standard → 120°C , special → 150°C
- Bourdon Tube Mat'l : SS316
- Ferrule : SS304 (option : SS316)
- Lens : Safety Glass



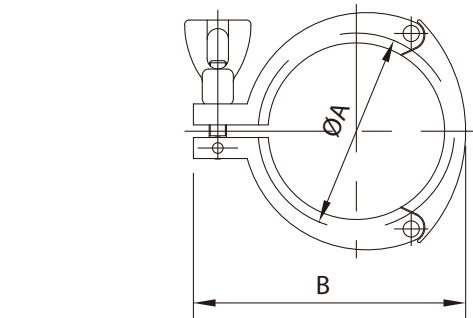
Heavy Duty Clamp-ring(mm)

WING-NUT FOR CLAMP



13MHP HIGH PRESSURE CLAMP WITH SCREW BOLT BRASS NUT

SIZE	ØA	ØB
3/4"	20	28
1.5"	43.32	52
2.0"	56.44	65.5
2.5"	69.54	79
3.0"	77.56	92.5
4.0"	108.86	120.5
6.0"	158	170
6.5"	173	186.2
10"	258	272.8
12"	309	327.6

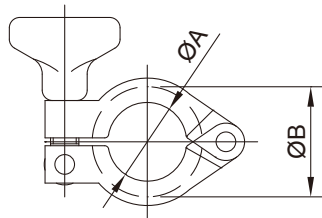


13MHHS 3 PIECES CLAMP

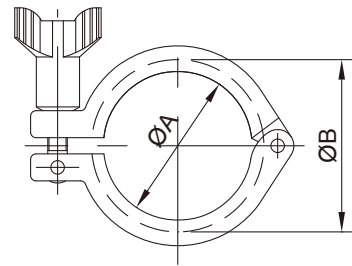
SIZE	ØA	ØB
1.5"	54	80
2.0"	67.5	94
2.5"	80.9	109
3.0"	94	126
4.0"	122.4	154



Heavy Duty Clamp-ring(mm)

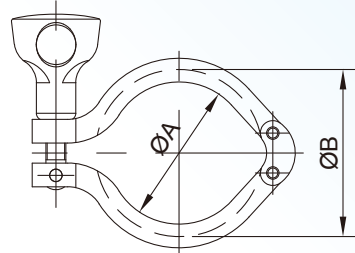


(13MHH & 13MHM & 13SF)
SIZE: 1/2"~3/4"



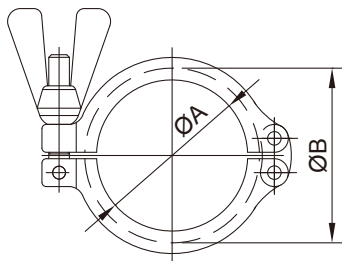
13MHH Heavy Duty Single Pin Clamp

SIZE	ØA	ØB
1/2"-3/4"	20	28
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
3.5"	99	109.2
4.0"	110	122.2
4.5"	123	133.2
6.0"	155.4	170.4
8.0"	205	220



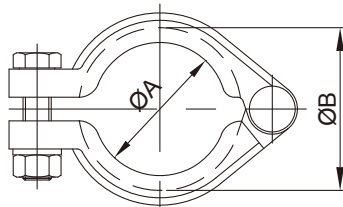
13MHM Heavy Duty Double Pin Clamp

SIZE	ØA	ØB
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



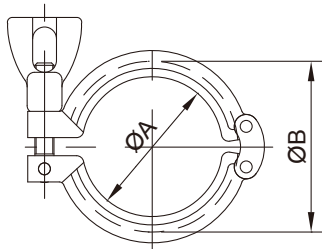
13CS Double Pin Clamp

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



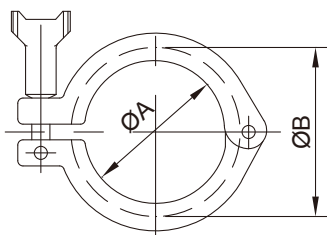
13IU Bolted Clamp

SIZE	ØA	ØB
1.5"	45	55
2.0"	63	73
2.5"	74	89
3.0"	88	102
4.0"	111	128



13SF Heavy Duty Double Pin Clamp

SIZE	ØA	ØB
1/2"-3/4"	20	28
A37	27.5	42.9
1.5"	45	53.6
2.0"	59	72
2.5"	67	84
3.0"	85	98
4.0"	114	127



13IS I-line Clamp

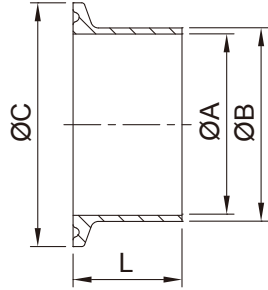
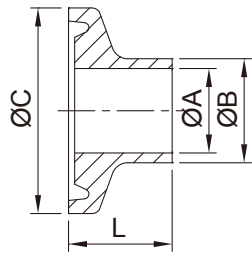
SIZE	ØA	ØB
1.0"~1.5"	44.4	53.4
2.0"	57.8	72.2
2.5"	71.4	88.1
3.0"	84	102.4
4.0"	110	127.8
6.0"	155.4	195.3



Ferrule Adapter (mm)

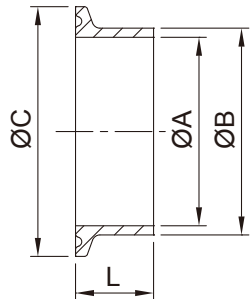
1/2"~3/4"

1.0"~12"



Welding Ferrule

SIZE	ØA	ØB	ØC	L	L	L
1/4"	3.9	6.35	25	12.7	21.5	28.6
1/2"	9.4	12.7	25	12.7	21.5	28.6
DN15	9.7	12.7	25.4	12.7	21.5	28.6
3/4"	15.75	19.05	25	12.7	21.5	28.6
DN20	15.95	19.05	25.4	12.7	21.5	28.6
1"	22.1	25.4	50.5	12.7	21.5	28.6
DN25	22.5	25	50.5	—	21.5	28.6
1.25"	28.45	31.75	50.5	12.7	21.5	28.6
1.5"	34.8	38.1	50.5	12.7	21.5	28.6
DN38	35.5	38.1	50.5	—	21.5	28.6
2.0"	47.5	50.8	64	12.7	21.5	28.6
DN51	48.5	51	64	—	21.5	28.6
2.5"	60.2	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	—	21.5	28.6
3.0"	72.9	76.2	91	12.7	21.5	28.6
DN104	100	104	119	—	21.5	28.6
4.0"	97.4	101.6	119	15.8	21.5	28.6
6.0"	146.86	152.5	166.87	—	21.5	28.6 or 38.1
8.0"	197.66	203.3	217.67	—	21.5	28.6 or 38.1
10"	247.2	254	268.47	—	21.5	28.6 or 38.1
12"	298	304.8	319.27	—	21.5	28.6 or 38.1

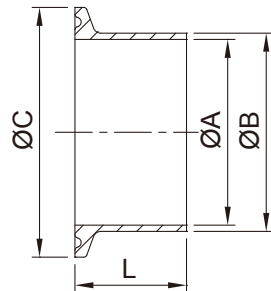


14MPW Ferrule For Tank

SIZE	ØA	ØB	ØC	L
1/2"	8.15	12.75	25.2	54
3/4"	14.6	19.05	25.2	54
1.0"	22.1	29.5	50.5	41.3
1.5"	34.8	42.6	50.5	41.3
2.0"	47.5	55.7	64	44.5
2.5"	60.2	68.8	77.5	44.5
3.0"	72.9	81.9	91	46.1
4.0"	97.4	108.1	119	54
6.0"	146.25	157.3	166.87	63.5
8.0"	197.05	208.1	217.67	63.5

ISO Ferrule

SIZE	ØA	ØB	ØC	L	L
DN8	10.3	13.5	34	21.5	28.6
DN12	14	17.2	34	21.5	28.6
DN15	18.1	21.3	34	21.5	28.6
DN20	23.7	26.9	50.5	21.5	28.6
DN25	30.5	33.7	50.5	21.5	28.6
DN32	39.2	42.4	50.5	21.5	28.6
DN40	45.1	48.3	64	21.5	28.6
DN50	56.3	60.3	77.5	21.5	28.6
DN65	72.1	76.1	91	21.5	28.6
DN80	84.9	88.9	106	21.5	28.6
DN100	109.1	114.3	130	21.5	28.6
DN125	133.7	139.7	155	—	28.6
DN150	162.3	168.3	183	—	28.6
DN200	211.1	219.1	233.5	—	28.6

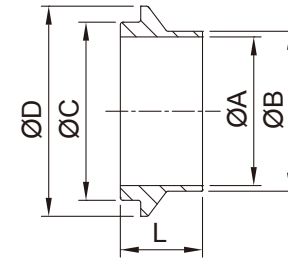


DIN Ferrule

SIZE	DA ØA	DB ØB	DA ØA	DB ØB	ØC	L	L
DN10	10	13	9	12	34	21.5	28.6
DN15	16	19	15	18	34	21.5	28.6
DN20	20	23	19	22	34	21.5	28.6
DN28	26	29	25	28	50.5	21.5	28.6
DN34	32	35	31	34	50.5	21.5	28.6
DN40	38	41	37	40	50.5	21.5	28.6
DN52	50	53	49	52	64	21.5	28.6
DN70	66	70	66	70	91	21.5	28.6
DN85	81	85	81	85	106	21.5	28.6
DN101.6	97.6	101.6	97.6	101.6	119	21.5	28.6
DN104	100	104	100	104	119	21.5	28.6
DN125	125	129	125	129	155	21.5	28.6
DN150	150	154	150	154	183	21.5	28.6
DN200	200	204	200	204	233.5	—	28.6
DN250	250	254	250	254	268.47	—	28.6
DN300	300	304	300	304	319.27	—	28.6

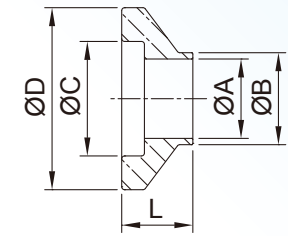


Ferrule Adapter (mm)



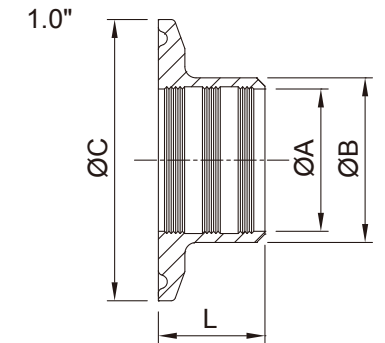
14WI-Ferrule Male

SIZE	ØA	ØB	ØC	ØD	L
1.0"	22.1	25.65	31.5	50.67	19.84
1.5"	34.8	38.35	44.2	50.67	23.8
2.0"	47.5	51.05	56.9	67.05	26.19
2.5"	60.2	63.75	69.6	84	29.36
3.0"	72.89	76.45	83.82	98.3	30.94
4.0"	97.38	101.85	109.14	123.7	34.11

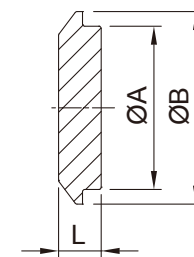
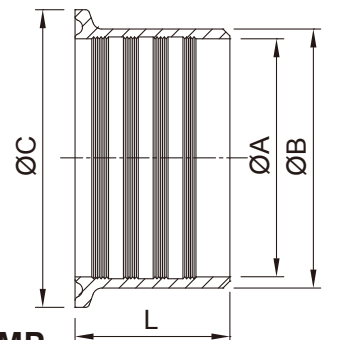


15WI-Ferrule Female

SIZE	ØA	ØB	ØC	ØD	L
1.0"	22.1	25.65	31.88	50.67	19.84
1.5"	34.8	38.35	44.58	50.67	23.8
2.0"	47.5	51.05	57.28	67.05	26.19
2.5"	60.2	63.75	69.98	84	29.36
3.0"	72.89	76.45	84.2	98.3	30.94
4.0"	97.38	101.85	109.6	123.7	34.11

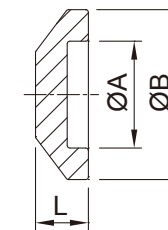


1.25"~4.0"



14WI-CAP Male

SIZE	ØA	ØB	L
1.0"	31.5	50.67	12.37
1.5"	44.2	50.67	12.37
2.0"	56.9	67.05	14.11
2.5"	69.6	84	18.72
3.0"	83.82	98.3	19.32
4.0"	109.14	123.7	19.32



15WI-CAP Female

SIZE	ØA	ØB	L
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	18.77
3.0"	84.2	98.3	19.37
4.0"	109.6	123.7	19.37

14RMP

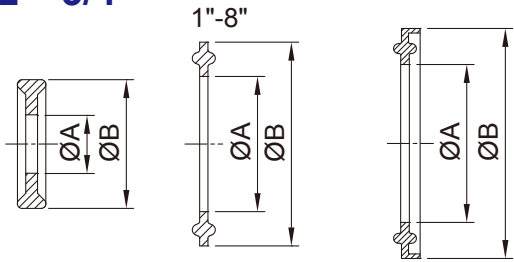
3A-Recessless Ferrule

SIZE	ØA	ØB	ØC	L
1.0"	25.5	29.5	50.5	19.1
1.25"	31.9	36.3	50.5	21.5
1.5"	38.2	42.6	50.5	28.6
2.0"	50.9	55.7	64	33.3
2.5"	63.6	68.8	77.5	34.9
3.0"	76.3	81.9	91	36.5
4.0"	101.7	108.1	119	38.1



Ferrule Adapter (mm)

1/2"~3/4"



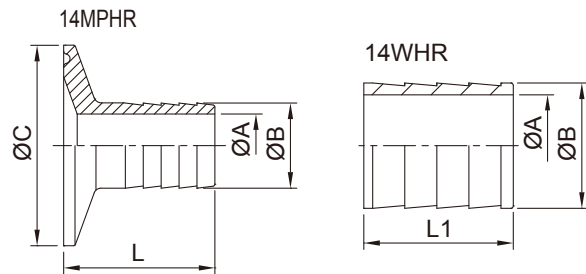
13PG

13FG

Ferrule Gasket (EPDM, SILICON, VITON, PTFE)
PLAIN TYPE 13PG Flang type 13FG

SIZE	ØA	ØB
1/2"	9.9	21.8
3/4"	16.3	21.8
A37	15.5	33
1.0"	22.7	50
1.2"	29.5	50.5
1.5"	35.9	50
2.0"	48.6	63.5
2.5"	61.3	76.2
3.0"	74	88.9
4.0"	98.6	118
6.0"	147.8	165
8.0"	196.6	216

SIZE	ØA	ØB
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"	249	270.7
12"	300	321.5



14MPHR . 14WHR Hose Adapter

SIZE	ØA	ØB	ØC	L	L1
1/2"x1/2"	9.5	13.7	25	38	25.3
3/4"x3/4"	15.8	21.4	25	38	25.3
1.0"x1/2"	9.5	13.7	50.5	38	25.3
1.0"x3/4"	15.8	21.4	50.5	38	25.3
1.0"x1.0"	20.6	25.4	50.5	43	30.3
1.5"x1/2"	9.5	13.7	50.5	38	25.3
1.5"x3/4"	15.8	21.4	50.5	38	25.3
1.5"x1.0"	20.6	25.4	50.5	43	25.3
1.5"x1.5"	33.2	38.1	50.5	43	30.3
2.0"x1.5"	33.2	38.1	64	43	30.3
2.0"x2.0"	46	50.8	64	58.7	46
2.5"x2.5"	58.7	63.5	77.5	59.5	46.8
3.0"x3.0"	72	76.2	91	78.6	65.9
4.0"x4.0"	97.6	101.6	119	85.5	72.8

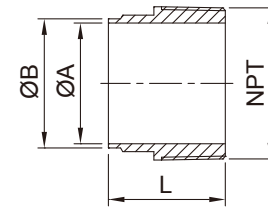
BLANK 16AMP

3A	DIN	ISO	ØA	L
1/2"~3/4"			25	6
A37			34	6.3
	DN10	DN8	34	6.3
	DN15	DN12	34	6.3
	DN20	DN15	34	6.3
1.0"	DN28	DN20	50.5	6.3
1.5"	DN34	DN25	50.5	6.3
	DN40	DN32	50.5	6.3
2.0"	DN52	DN40	64	6.3
2.5"		DN50	77.5	6.3
3.0"	DN70	DN65	91	6.3
	DN85	DN80	106	6.3
4.0"	DN100		119	7.9
		DN100	130	7.9
	DN125	DN125	155	7.9
6.0"			166.8	11.1
	DN150	DN150	183	11.1
8.0"			217.7	11.1
	DN200	DN200	233.5	11.1
10"			268.5	11.1
12"			319.3	11.1

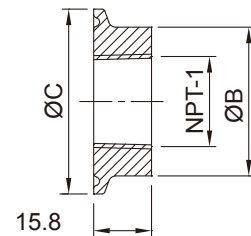


Ferrule Adapter (mm)

B19W



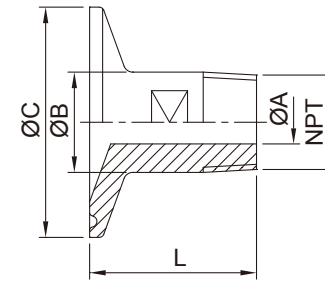
23BMP



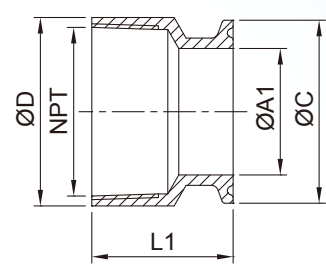
B19W . 23BMP

SIZE	ØA	ØB	ØC	L	NPT	NPT-1
1.0"	22.1	25.4	50.5	44.5	1.0"-11.5T	1/2"-14T
1.5"	34.8	38.1	50.5	44.5	1.5"-11.5T	3/4"-14T
2.0"	47.5	50.8	64	46	2.0"-11.5T	3/4"-14T
2.5"	60.2	63.5	77.5	58.7	2.5"-8T	3/4"-14T
3.0"	72.9	76.2	91	63.5	3.0"-8T	3/4"-14T
4.0"	97.4	101.6	119	65.1	4.0"-8T	3/4"-14T
6.0"	146.9	152.4	166.8	76.2	6.0"-8T	3/4"-14T

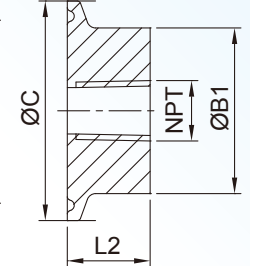
21MP



22MP



22MP



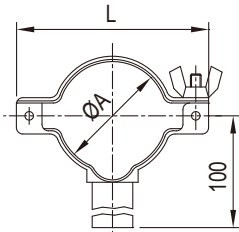
21MP . 22MP

SIZE	ØA	ØA1 1.0" 1.5"	ØB	ØB1	ØC	ØD	L	L1	L2	NPT
1/2"x1/2"	9.4	9.4	12.7		25	30	45	33		1/2"-18T
3/4"x1/2"	15.75		19.05		25		45			1/2"-18T
3/4"x3/4"	15.75	15.75	19.05		25	30	45	33		3/4"-18T
1.0"&1.5"x1/4"	3.18		14	38.1	50.5		40		19	1/4"-18T
1.0"&1.5"x3/8"	6.35		18	38.1	50.5		40		19	3/8"-18T
1.0"&1.5"x1/2"	9.7		22	38.1	50.5		40		19	1/2"-14T
1.0"&1.5"x3/4"	15.75		27	38.1	50.5		45		19	3/4"-14T
1.0"&1.5"x1.0"	22.1		34	38.1	50.5		50		19	1.0"-11.5T
1.0"&1.5"x1.2"	28.6	22.1	34.8	38.1		50.5	46	50	39	1.2"-11.5T
1.0"&1.5"x1.5"	34.8	22.1	34.8	38.1		50.5	52	50	39	1.5"-11.5T
1.0"&1.5"x2.0"	47.5	22.1	34.8	38.1		50.5	65	55	39	2.0"-11.5T
2.0"x1/4"	3.18		50.8	50.8	64		40		19	1/4"-18T
2.0"x3/8"	6.35		50.8	50.8	64		40		19	3/8"-18T
2.0"x1/2"	9.4		50.8		64		40			1/2"-14T
2.0"x3/4"	15.75		50.8		64		50		19	3/4"-14T
2.0"x1.0"	22.1		50.8	50.8	64		50		19	1.0"-11.5T
2.0"x1.5"	34.8		50.8	50.8	64	65	50	39		1.5"-11.5T
2.0"x2.0"	47.5	47.5	50.8		64		55			2.0"-11.5T
2.0"x2.5"	60.2		50.8		64		60			2.5"-8T
2.0"x3.0"	72.9		50.8		64		70			3.0"-8T
2.0"x4.0"	97.6		50.8		64		75			4.0"-8T
2.5"x1.0"	22.1		63.5	63.5	77.5		50		35	1.0"-11.5T
2.5"x1.5"	34.8		63.5	63.5	77.5		50		35	1.5"-11.5T
2.5"x2.0"	47.5		63.5	63.5	77.5		55		35	2.0"-11.5T
2.5"x2.5"	60.2	60.2	63.5		77.5	80	60	50		2.5"-8T
2.5"x3.0"	72.9		63.5		77.5		70			3.0"-8T
2.5"x4.0"	97.6		63.5		77.5		75			4.0"-8T
3.0"x1.0"	22.1		76.2	76.2	91		55		35	1.0"-11.5T
3.0"x1.5"	34.8		76.2	76.2	91		55		35	1.5"-11.5T
3.0"x2.0"	47.5		76.2	76.2	91		55		35	2.0"-11.5T
3.0"x2.5"	60.2	72.9	76.2		91	95	60	50		2.5"-8T
3.0"x3.0"	72.9		76.2		91		70			3.0"-8T
3.0"x4.0"	97.6		76.2		91		75			4.0"-8T
4.0"x1.0"	22.1		101.6	101.6	119		55		35	1.0"-11.5T
4.0"x1.5"	34.8		101.6	101.6	119		55		35	1.5"-11.5T
4.0"x2.0"	47.5		101.6	101.6	119		55		35	2.0"-11.5T
4.0"x2.5"	60.2		101.6	101.6	119		60		35	2.5"-8T
4.0"x3.0"	72.9	72.9	101.6	101.6	119	95	70	52	35	3.0"-8T
4.0"x4.0"	97.6		101.6		119		75			4.0"-8T
6.0"x4.0"		97.6	101.6		119	120	75	54		4.0"-8T

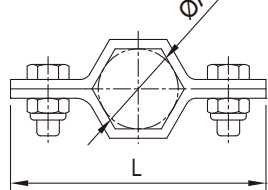


Tubing Hanger (mm)

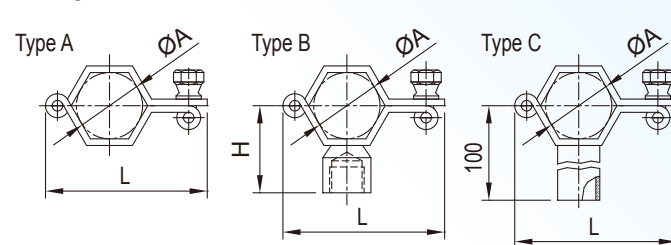
TH-1



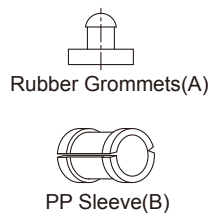
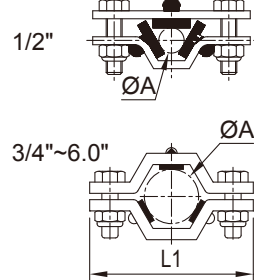
TH-2



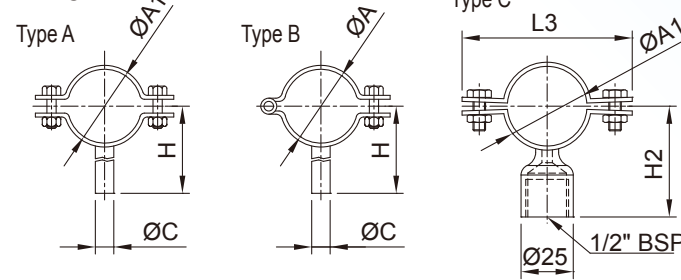
TH-3



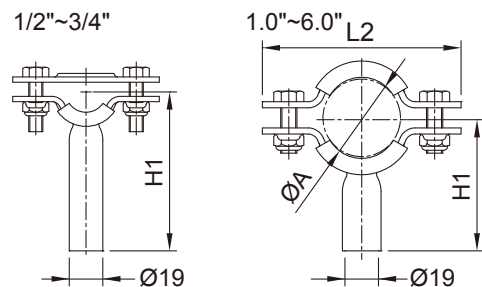
TH-4



TH-5



TH-6



TH-2

SIZE	ØA	L	SIZE	ØA	L
ISO-21.3	21.3	68	SMS25	25	74
ISO-26.9	26.9	74	SMS38	38	87
ISO-33.7	33.7	82	SMS51	51	105
ISO-42.4	42.4	93	SMS63	63	117
ISO-48.3	48.3	101	SMS76	76	133
ISO-60.3	60.3	114	SMS104	104	165
ISO-88.9	88.9	149			
ISO-114.3	114.3	177			

TH-5(Type B)

SIZE	ØA	ØC	H
NW20	22	10	61
NW25	28	10	64
NW32	34	10	67
NW40	40	10	70
NW50	52	10	76
NW65	70	10	85
NW80	85	10	92.5
NW100	104	10	102
NW125	129	12	114.5
NW150	154	12	127
NW200	204	12	152

TH-1.TH-4.TH-5(Type A .Type B).TH6

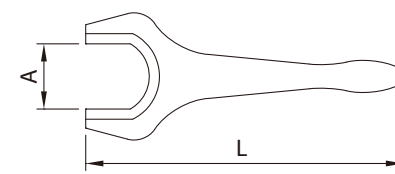
SIZE	ØA	ØA1	ØC	H	H1	H2	L	L1	L2	L3
1/2"	12.7							79	83	
3/4"	19.05							79	83	
1.0"	25.4	25.5	10	84	90	46.8	66	79	83	55
1.25"		31.75	10	87	90	49.9				60
1.5"	38.1	38.1	10	90	90	53	76	95	97.7	80
2.0"	50.8	50.8	10	76	90	59.4	90	117.9	111.7	90
2.5"	63.5	63.5	10	85	90	66.3	105	120	124	120
3.0"	76.2	76.1	10	92.5	90	72.6	120	135.1	104.5	138
4.0"	101.6/104	101.6	10	102	90	85.3	146	168.4	162	180
5.0"		129	12	114.5		99				207
6.0"	152.4	154	12	127	145	112		225	217	232
8.0"		204	12	152		137				285

TH-3(Type A .Type B .Type C). TH-5(Type A)

SIZE	ØA	H	L	SIZE	ØA	ØA1	ØC	H	H1	L
				DIN10			12/13	6	67.5	
				DIN15			18/19	8	70.5	
				DIN20			22/23	8	72.5	
SMS25	25	45	61	DIN25	28	28/29	8	46.5	75.5	64
				DIN32	34	34/35	10	49.5	78.5/79.5	64
SMS38	38	51.5	76	DIN40	40	40/41	10	52.5	81.5/82.5	78
SMS51	51	58	90	DIN50	52	52/53	12	58.5	88/89	90
SMS63.5	63.5	64	106	DIN65	70	70	12	67.5	98	111
SMS76	76.1	70.5	120	DIN80	85	85	15	75	105.5	125
SMS104	104	84.5	152	DIN100	101.6	104	15	83	116	146
				DIN125			129	18	127	
				DIN150			154	18	140	
				DIN200			204			
				DIN250			254			

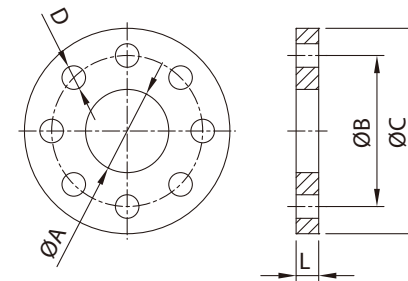


Kinds of Parts



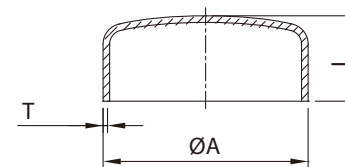
RJT SPANNER

SIZE	ØA	L
1.0"	51.8	240
1.5"	66	288
2.0"	80.4	300
2.5"	93.2	326
3.0"	106.3	440
4.0"	121.5	448



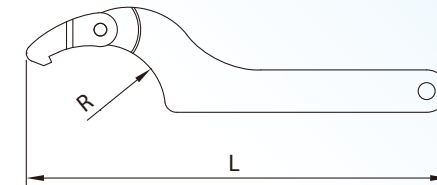
BACK-UP FLANGE

SIZE	ØA	ØB	ØC	ØD	L
1.0"	27	79.4	108	4-15.9	9.5
1.5"	39.7	98.4	127	4-15.9	9.5
2.0"	52.4	120.7	152.4	4-19.05	11.1
2.5"	65.1	139.7	177.8	4-19.05	11.1
3.0"	77.8	152.4	190.5	4-19.05	12.7
4.0"	103.2	190.5	228.6	8-19.05	12.7
6.0"	154	241.3	279.4	8-22.2	14.3



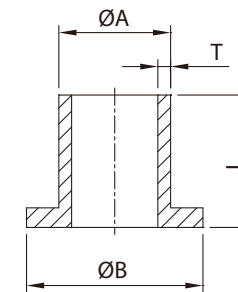
16W CAP

SIZE	ØA	T	L
1.0"	25.4	1.65	19.1
1.5"	38.1	1.65	14.2
2.0"	50.8	1.65	19.1
2.5"	63.5	1.65	25.4
3.0"	76.2	1.65	31.8
4.0"	101.6	2.1	38.1



DIN SPANNER

SIZE	R	L
DN10~DN20	22	175
DN25~DN40	31	247
DN50~DN100	49	290
DN125~DN150	82.5	515



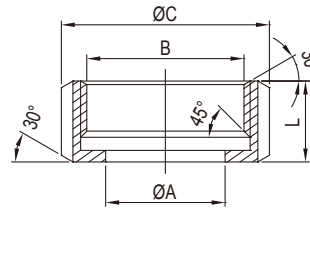
14VB STUB END

SIZE	ØA	ØB	T	L
1.0"	25.4	50.8	1.65	41.3
1.5"	38.1	73	1.65	44.5
2.0"	50.8	92.1	1.65	38.1
2.5"	63.5	104.8	1.65	50.8
3.0"	76.2	127	1.65	57.2
4.0"	101.6	157.2	2.1	66.7
6.0"	152.4	215.9	2.77	76.2

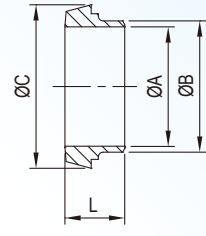
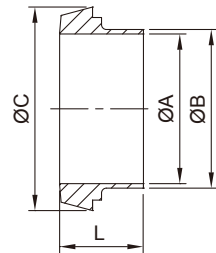
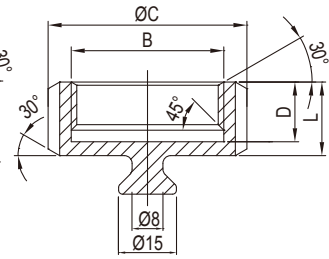


DIN 11851 Unions (mm)

DIN-13R



DIN-13RBN



DIN-13 Round Nut

DIN	ØA	B	ØC	D	L	Slots
10	19	RD 28x1/8	38	15	18	4
15	25	RD 34x1/8	44	15	18	4
20	31	RD 44x1/6	54	17	21	4
25	36	RD 52x1/6	63	18	21	4
32	42	RD 58x1/6	70	18	21	4
40	49	RD 65x1/6	78	18	21	4
50	62	RD 78x1/6	92	19	22	4
65	80	RD 95x1/6	112	21	25	6
80	94	RD 110x1/4	127	25	30	6
90	104	RD 120x1/4	138	26	30	6
100	115	RD 130x1/4	148	26	31	6
125	138	RD 160x1/4	178	30	35	6
150	164	RD 190x1/4	210	34	40	6

DIN-14DA Welding Liner

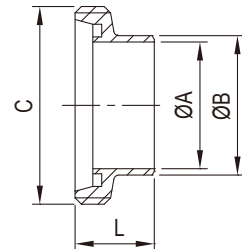
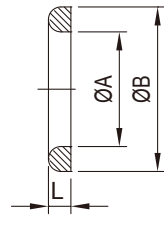
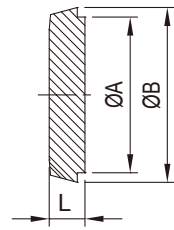
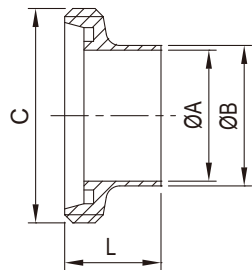
DIN	ØA	ØB	ØC	L
10	10	13	22.5	17
15	16	19	28.5	17
20	20	23	36.5	18
25	26	29	44	22
32	32	35	50	25
40	38	41	56	26
50	50	53	68.5	28
60	57	61	76	30
65	66	70	86	32
80	81	85	100	37
100	100	104	121	44
125	125	129	150	34
150	150	154	176	37

DIN-14DB Welding Liner

DIN	ØA	ØB	ØC	L
10	9	12	22.5	17
15	15	18	28.5	17
20	19	22	36.5	18
25	25	28	44	22
32	31	34	50	25
40	37	40	56	26
50	49	52	68.5	28
60	57	61	76	30
65	66	70	86	32
80	81	85	100	37
100	100	104	121	44
125	125	129	150	34
150	150	154	176	37

DIN-14 Welding Liner

SIZE	ØA	ØB	ØC	L
10	10	15	22	17
15	16	21	28	17
20	20	25	36	18
25	26	31	44	22
32	32	37	50	25
40	38	43	56	26
50	50	55	68	28
60	57	63	76	30
65	66	72	86	32
80	81	87	100	37
101.6	99	104	121	44
104	100	106	121	44
125	125	132	150	34
150	150	157	176	37



DIN-15DA Welding Male

SIZE	ØA	ØB	C	L
10	10	13	RD 28X1/8	21
15	16	19	RD 34X1/8	21
20	20	23	RD 44X1/6	24
25	26	29	RD 52X1/6	29
32	32	35	RD 58X1/6	32
40	38	41	RD 65X1/6	33
50	50	53	RD 78X1/6	35
60	57	61	RD 85X1/6	36
65	66	70	RD 95X1/6	40
80	81	85	RD 110X1/4	45
90	89	93	RD 120X1/4	54
100	100	104	RD 130X1/4	54
125	125	129	RD 160X1/4	46
150	150	154	RD 190X1/4	50

DIN-15DB Welding Male

SIZE	ØA	ØB	C	L
10	9	12	RD 28X1/8	21
15	15	18	RD 34X1/8	21
20	19	22	RD 44X1/6	24
25	25	28	RD 52X1/6	29
32	31	34	RD 58X1/6	32
40	37	40	RD 65X1/6	33
50	49	52	RD 78X1/6	35
60	57	61	RD 85X1/6	36
65	66	70	RD 95X1/6	40
80	81	85	RD 110X1/4	45
90	89	93	RD 120X1/4	54
100	100	104	RD 130X1/4	54
125	125	129	RD 160X1/4	46
150	150	154	RD 190X1/4	50

DIN-14B Blanks

SIZE	ØA	ØB	L
10	18	22	9
15	24	28	9
20	30	36	11
25	35	44	13
32	41	50	13
40	48	56	13
50	61	68	14
65	79	86	16
80	93	100	16
100	114	121	20
125	137	150	22
150	163	176	24

DIN Seal Ring (EPDM,Silicon,Viton)

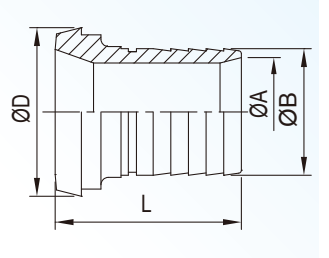
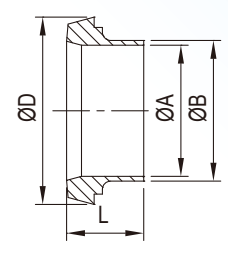
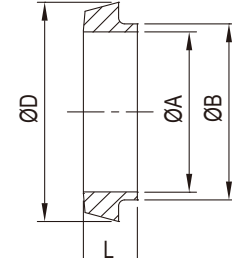
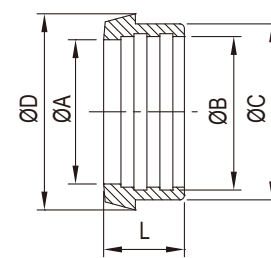
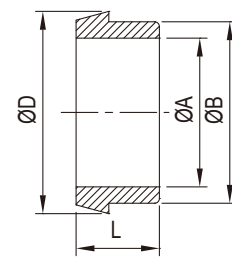
SIZE	ØA	ØB	L
10	12	20	4.5
15	18	26	4.5
20	23	33	4.5
25	30	40	5
32	36	46	5
40	42	52	5
50	54	64	5
65	71	81	5
80	85	95	5
100	104	114	5
125	130	142	7
150	155	167	7

DIN-15 Welding Male

SIZE	ØA	ØB	C	L
10	10	15	RD 28X1/8	21
15	16	21	RD 34X1/8	21
20	20	25	RD 44X1/6	24
25	26	31	RD 52X1/6	29
32	32	37	RD 58X1/6	32
40	38	43	RD 65X1/6	33
50	50	55	RD 78X1/6	35
60	57	63	RD 85X1/6	36
65	66	72	RD 95X1/6	40
80	81	87	RD 110X1/4	45
101.6	99	104	RD 130X1/4	54
104	100	106	RD 130X1/4	54
125	125	132	RD 160X1/4	46
150	150	157	RD 190X1/4	50



DIN 11851 Expanding / Imperial Unions (mm)



DIN Welding Liner DIN-14-T

SIZE	ØA	ØB	ØD	L
DN10	10	18	22	17
DN15	16	24	28	17
DN20	20	30	36	18
DN25	26	35	44	22
DN32	32	41	50	25
DN40	38	48	56	26
DN50	50	61	68	28
DN65	66	79	86	32
DN80	81	93	100	37
101.6	99	112	121	44
DN104	100	114	121	44

DIN Expanding Liner DIN-14R

SIZE	ØA	ØB	ØC	ØD	L
DN10	10	12.2	18	22	17
DN15	16	18.2	24	28	17
DN20	20	22.2	30	36	18
DN25	26	28.2	35	44	22
DN32	32	34.2	41	50	25
DN40	38	40.2	48	56	26
DN50	50	52.2	61	68	28
DN65	66	70.3	79	86	32
DN80	81	85.3	93	100	37
DN100	100	104.3	114	121	44
DN125	125	129.3	137	150	34
DN150	150	154.3	163	176	37

DIN Short Welding Liner DIN-14E

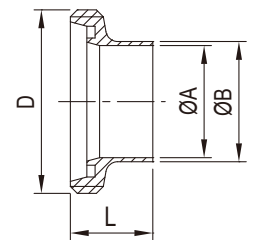
SIZE	ØA	ØB	ØD	L
DN10	9	12	22.5	13
DN15	15	18	28.5	13
DN20	19	22	36.5	13
DN25	25	28	44	15
DN32	31	34	50	15
DN40	37	40	56	15
DN50	49	52	68.5	16
DN65	66	70	86	17
DN80	81	85	100	17
DN100	100	104	121	20
DN125	125	129	150	23.5
DN150	150	154	176	27

DIN Imperial Welding Liner DIN-14I

SIZE	ØA	ØB	ØD	L
1.0"	22.1	25.4	44	22
1.5"	34.8	38.1	56	26
2.0"	47.5	50.8	68	28
2.5"	60.2	63.5	86	32
3.0"	72.9	76.2	100	37
4.0"	97.6	101.6	121	44

DIN-14AHR Hose Adapter

SIZE	ØA	ØB	ØD	L
DN25	22.2	25	44	67
DN32	28.7	32.2	50	71
DN40	34	38	56	78
DN50	47	50.5	68	89
DN65	59	63.2	86	100
DN80	71.5	75.5	100	108
DN100	95	100.8	121	120



DIN Imperial Welding Male DIN-15I

SIZE	ØA	ØB	D	L
1.0"	22.1	25.4	RD52 x 1/6	29
1.5"	34.8	38.1	RD65 x 1/6	33
2.0"	47.5	50.8	RD78 x 1/6	35
2.5"	60.2	63.5	RD95 x 1/6	40
3.0"	72.9	76.2	RD110 x 1/4	45
4.0"	97.6	101.6	RD130 x 1/4	54

DIN Welding Liner DIN-15-T

SIZE	ØA	ØB	D	L
DN10	10	18	RD 28X1/8	21
DN15	16	24	RD 34X1/8	21
DN20	20	30	RD 44X1/6	24
DN25	26	35	RD 52X1/6	29
DN32	32	41	RD 58X1/6	32
DN40	38	48	RD 65X1/6	33
DN50	50	61	RD 78X1/6	35
DN65	66	79	RD 95X1/6	40
DN80	81	93	RD 110X1/4	45
101.6	99	112	RD 130X1/4	54
DN104	100	114	RD 130X1/4	54

DIN Expanding Male DIN-15R

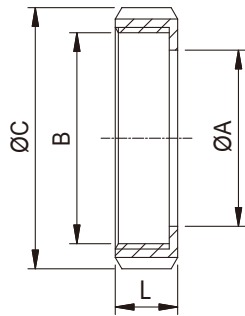
SIZE	ØA	ØB	ØC	D	L
DN10	12.2	18	10	RD28x1/8	21
DN15	18.2	24	16	RD34x1/8	21
DN20	22.2	30	20	RD44x1/6	24
DN25	28.2	35	26	RD52x1/6	29
DN32	34.2	41	32	RD58x1/6	32
DN40	40.2	48	38	RD65x1/6	33
DN50	52.2	61	50	RD78x1/6	35
DN65	70.3	79	66	RD95x1/6	40
DN80	85.3	93	81	RD110x1/4	45
DN100	104.3	114	100	RD130x1/4	54
DN125	129.3	137	125	RD160x1/4	46
DN150	154.3	163	150	RD190x1/4	50

DIN Short Welding Male DIN-15E

SIZE	ØA	ØB	D	L
DN10	9	12	RD 28X1/8	17
DN15	15	18	RD 34X1/8	17
DN20	19	22	RD 44X1/6	19
DN25	25	28	RD 52X1/6	22
DN32	31	34	RD 58X1/6	22
DN40	37	40	RD 65X1/6	22
DN50	49	52	RD 78X1/6	23
DN65	66	70	RD 95X1/6	25
DN80	81	85	RD 110X1/4	25
DN100	100	104	RD 130X1/4	30
DN125	125	129	RD 160X1/4	35.5
DN150	150	154	RD 190X1/4	40

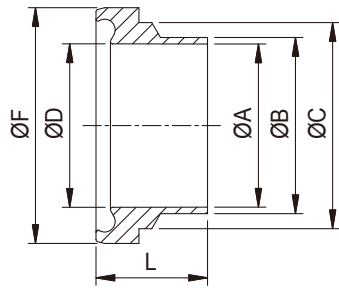


DIN 11853-1 Unions Form A



Din Round Nut Din-13R

DIN	ØA	B	ØC	L	Slots
10	19	RD 28x1/8	38	18	4
15	25	RD 34x1/8	44	18	4
20	31	RD 44x1/6	54	20	4
25	36	RD 52x1/6	63	21	4
32	42	RD 58x1/6	70	21	4
40	49	RD 65x1/6	78	21	4
50	62	RD 78x1/6	92	22	4
65	80	RD 95x1/6	112	25	6
80	94	RD 110x1/4	127	29	6
90	104	RD 120x1/4	138	30	6
100	114	RD 130x1/4	148	31	6
125	137	RD 160x1/4	178	35	6
150	163	RD 190x1/4	210	40	6



DIN-14 Liner

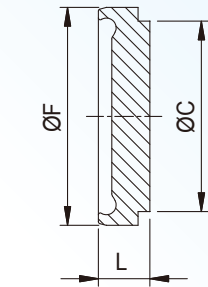
SIZE	ØA	ØB	ØC	ØD	ØF	L
DN10	10	13	18	10.1	21.9	17
DN15	16	19	24	16.1	27.9	17
DN20	20	23	30	20.1	35.9	18
DN25	26	29	35	26.1	42.9	22
DN32	32	35	41	32.1	48.9	25
DN40	38	41	48	38.1	54.9	26
DN50	50	53	61	50.1	66.9	30
DN65	66	70	79	66.1	84.9	34
DN80	81	85	93	81.1	98.9	38
DN100	100	104	114	100.1	118.9	46

ISO-14 Liner

SIZE	ØA	ØB	ØC	ØD	ØF	L
DN8	10.3	13.5	18	10.4	21.9	17
DN10	14	17.2	24	14.1	27.9	17
DN15	18.1	21.3	30	18.2	35.9	18
DN20	23.7	26.9	35	23.8	42.9	22
DN25	29.7	33.7	41	29.8	48.9	25
DN32	38.4	42.4	48	38.5	54.9	26
DN40	44.3	48.3	61	44.4	66.9	30
DN50	56.3	60.3	79	56.4	84.9	34
DN65	72.1	76.1	93	72.2	98.9	38
DN80	84.3	88.9	114	84.4	118.9	46

Imperial-14Liner

SIZE	ØA	ØB	ØC	ØD	ØF	L
1/2"	9.4	12.7	18	9.45	21.9	17
3/4"	15.75	19.05	24	15.8	27.9	17
1.0"	22.1	25.4	35	22.15	42.9	22
1.5"	34.8	38.1	48	34.85	54.9	26
2.0"	47.5	50.8	61	47.55	66.9	30
2.5"	60.2	63.5	79	60.25	84.9	34
3.0"	72.9	76.2	93	72.95	98.9	38
4.0"	97.38	101.6	114	97.43	118.9	46

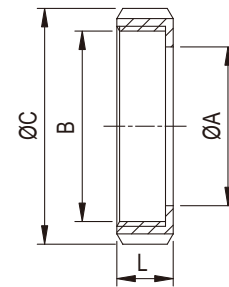


DIN/ISO/Imperial-14 LINER Blank Cap

SIZE	ØC	ØF	L	
DN10	1/2"	18	21.9	9
DN15	3/4"	24	27.9	9
DN20	-	30	35.9	10
DN25	1.0"	35	42.9	12
DN32	-	41	48.9	13
DN40	1.5"	48	54.9	13
DN50	2.0"	61	66.9	14
DN65	2.5"	79	84.9	16
DN80	3.0"	93	98.9	16
DN100	4.0"	114	118.9	20



DIN 11864-1 Unions Form A

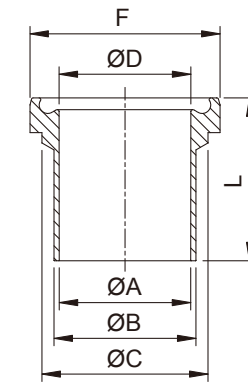


Din Round Nut Din-13R

DIN	ØA	B	ØC	L	Slots
10	19	RD 28x1/8	38	18	4
15	25	RD 34x1/8	44	18	4
20	31	RD 44x1/6	54	20	4
25	36	RD 52x1/6	63	21	4
32	42	RD 58x1/6	70	21	4
40	49	RD 65x1/6	78	21	4
50	62	RD 78x1/6	92	22	4
65	80	RD 95x1/6	112	25	6
80	94	RD 110x1/4	127	29	6
90	104	RD 120x1/4	138	30	6
100	114	RD 130x1/4	148	31	6
125	137	RD 160x1/4	178	35	6
150	163	RD 190x1/4	210	40	6

DIN-14 LINER Form A

SIZE	ØA	ØB	ØC	ØD	ØF	L
DN10	10	13	18	10.1	21.9	39
DN15	16	19	24	16.1	27.9	39
DN20	20	23	30	20.1	35.9	38
DN25	26	29	35	26.1	42.9	40
DN32	32	35	41	32.1	48.9	47
DN40	38	41	48	38.1	54.9	47
DN50	50	53	61	50.1	66.9	48
DN65	66	70	79	66.1	84.9	61
DN80	81	85	93	81.1	98.9	61
DN100	100	104	114	100.1	118.9	66



ISO-14 LINER Form A

SIZE	ØA	ØB	ØC	ØD	ØF	L
DN8	10.35	13.5	18	10.4	21.9	39
DN10	14	17.2	24	14.1	27.9	39
DN15	18.1	21.3	30	18.2	35.9	40
DN20	23.7	26.9	35	23.8	42.9	41
DN25	29.7	33.7	41	29.8	48.9	47
DN32	38.4	42.4	48	38.5	54.9	47
DN40	44.35	48.3	61	44.4	66.9	48
DN50	56.35	60.3	79	56.4	84.9	62
DN65	72.15	76.1	93	72.2	98.9	61
DN80	84.35	88.9	114	84.4	118.9	68

Imperial-14 LINER Form A

SIZE	ØA	ØB	ØC	ØD	ØF	L
1/2"	9.4	12.7	18	9.45	21.9	39
3/4"	15.75	19.05	24	15.8	27.9	39
1.0"	22.1	25.4	35	22.15	42.9	40
1.5"	34.8	38.1	48	34.85	54.9	46.5
2.0"	47.5	50.8	61	47.55	66.9	47.5
2.5"	60.2	63.5	79	60.25	84.9	63
3.0"	72.9	76.2	93	72.95	98.9	61
4.0"	97.38	101.6	114	97.43	118.9	65

DIN Seal

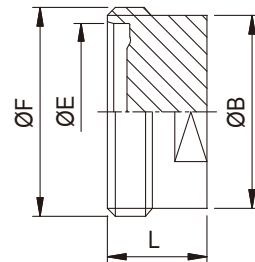
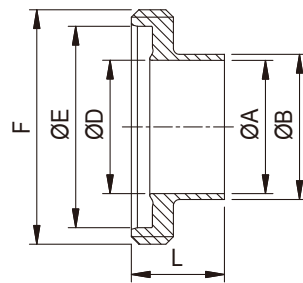
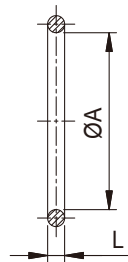
DIN	ØA	L
DN10	12	3.5
DN15	18	3.5
DN20	22	3.5
DN25	28	3.5
DN32	34	5
DN40	40	5
DN50	52	5
DN65	68	5
DN80	83	5
DN100	102	5

ISO Seal

DIN	ØA	L
DN8	12	3.5
DN10	16	3.5
DN15	20	3.5
DN20	26	3.5
DN25	32	5
DN32	40.5	5
DN40	46.5	5
DN50	58.5	5
DN65	73.5	5
DN80	86.5	5

Imperial Seal

DIN	ØA	L
1/2"	12	3.5
3/4"	18	3.5
1.0"	24	3.5
1.5"	37	5
2.0"	50	5
2.5"	62	5
3.0"	75	5
4.0"	100	5



DIN Seal

DIN	ØA	L
DN10	12	3.5
DN15	18	3.5
DN20	22	3.5
DN25	28	3.5
DN32	34	5
DN40	40	5
DN50	52	5
DN65	68	5
DN80	83	5
DN100	102	5

ISO Seal

DIN	ØA	L
DN8	12	3.5
DN10	16	3.5
DN15	20	3.5
DN20	26	3.5
DN25	32	5
DN32	40.5	5
DN40	46.5	5
DN50	58.5	5
DN65	73.5	5
DN80	86.5	5

Imperial Seal

DIN	ØA	L
1/2"	12	3.5
3/4"	18	3.5
1.0"	24	3.5
1.5"	37	5
2.0"	50	5
2.5"	62	5
3.0"	75	5
4.0"	100	5

DIN-15 Male

SIZE	ØA	ØB	ØD	ØE	F	L
DN10	10	13	10.1	22	RD28x1/8	19
DN15	16	19	16.1	28	RD34x1/8	19
DN20	20	23	20.1	36	RD44x1/6	21
DN25	26	29	26.1	43	RD52x1/6	26
DN32	32	35	32.1	49	RD58x1/6	30
DN40	38	41	38.1	55	RD65x1/6	31
DN50	50	53	50.1	67	RD78x1/6	31
DN65	66	70	66.1	85	RD95x1/6	36
DN80	81	85	81.1	99	RD110x1/4	42
DN100	100	104	100.1	119	RD130x1/4	50

ISO-15 Male

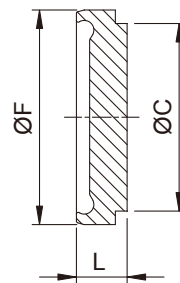
SIZE	ØA	ØB	ØD	ØE	F	L
DN8	10.3	13.5	10.4	22	RD28x1/8	19
DN10	14	17.2	14.1	28	RD34x1/8	19
DN15	18.1	21.3	18.2	36	RD44x1/6	21
DN20	23.7	26.9	23.8	43	RD52x1/6	26
DN25	29.7	33.7	29.8	49	RD58x1/6	30
DN32	38.4	42.4	38.5	55	RD65x1/6	31
DN40	44.3	48.3	44.4	67	RD78x1/6	31
DN50	56.3	60.3	56.4	85	RD95x1/6	36
DN65	72.1	76.1	72.2	99	RD110x1/4	42
DN80	84.3	88.9	84.4	119	RD130x1/4	50

Imperial-15 Male

SIZE	ØA	ØB	ØD	ØE	F	L
1/2"	9.4	12.7	9.45	22	RD28x1/8	19
3/4"	15.75	19.05	15.8	28	RD34x1/8	19
1.0"	22.1	25.4	22.2	43	RD52x1/6	26
1.5"	34.8	38.1	34.9	55	RD65x1/6	31
2.0"	47.5	50.8	47.6	67	RD78x1/6	31
2.5"	60.2	63.5	60.3	85	RD95x1/6	36
3.0"	72.9	76.2	73	99	RD110x1/4	42
4.0"	97.38	101.6	97.4	119	RD130x1/4	50

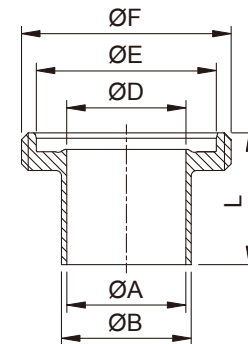
DIN/ISO/Imperial-15 MALE Blank Cap

SIZE	ØB	ØE	F	L	
DN10	1/2"	23	22	RD28x1/8	24
DN15	3/4"	28	28	RD34x1/8	24
DN20	-	34	36	RD44x1/6	24
DN25	1.0"	44	43	RD52x1/6	24
DN32	-	53	49	RD58x1/6	24
DN40	1.5"	60	55	RD65x1/6	24
DN50	2.0"	72	67	RD78x1/6	24
DN65	2.5"	87	85	RD95x1/6	28
DN80	3.0"	100	99	RD110x1/4	28
DN100	4.0"	120	119	RD130x1/4	30



DIN/ISO/Imperial-14 LINER Blank Cap

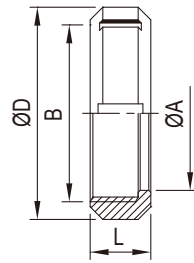
SIZE	ØC	ØF	L	
DN10	1/2"	18	21.9	9
DN15	3/4"	24	27.9	9
DN20	-	30	35.9	10
DN25	1.0"	35	42.9	12
DN32	-	41	48.9	13
DN40	1.5"	48	54.9	13
DN50	2.0"	61	66.9	14
DN65	2.5"	79	84.9	16
DN80	3.0"	93	98.9	16
DN100	4.0"	114	118.9	20



DIN-15 Male Form A

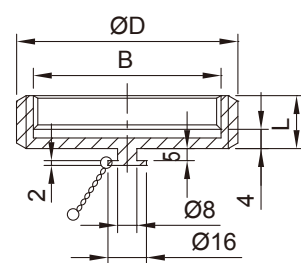


SMS Long Weld/short Unions (mm)



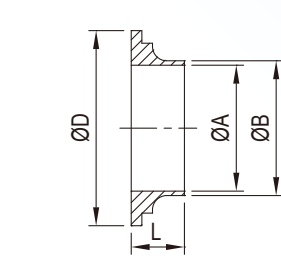
SMS Nut 6 Slots SMS-13R

SIZE	ØA	B	ØD	L
DN25	32	RD40x1/6	51	19
DN32	40	RD48x1/6	60	22
DN38	48	RD60x1/6	74	23
DN51	60.5	RD70x1/6	84	24
DN63.5	74	RD85x1/6	100	28
DN76	87	RD98x1/6	114	30
DN101.6	113	RD125x1/4	138	31
DN104	113	RD125x1/4	138	31
DN104-B	117	RD132x1/6	150	31



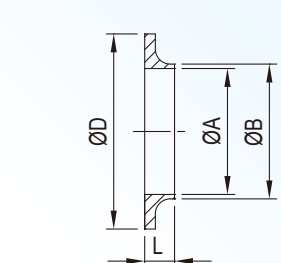
SMS Blank Nut 13RBN

SIZE	B	ØD	L
DN25	RD40x1/6	51	19
DN32	RD48x1/6	60	22
DN38	RD60x1/6	74	23
DN51	RD70x1/6	84	24
DN63.5	RD85x1/6	100	28
DN76	RD98x1/6	114	30
DN104	RD125x1/4	138	31



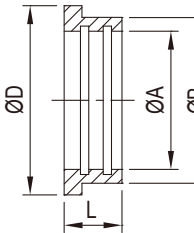
Long Welding Liner SMS-14GL

SIZE	ØA	ØB	ØD	L
DN25	22.5	25	35.5	15.5
DN38	35.5	38	55	16
DN51	48.5	51	65	17
DN63.5	60.5	63.5	80	17
DN76	72.9	76.1	93	19
DN101.6	97.6	101.6	118	19
DN104	100	104	118	19
DN104-B	98.5	102.5	127	19



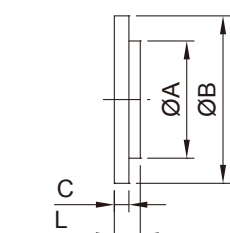
Short Welding Liner SMS-14S

SIZE	ØA	ØB	ØD	L
DN25	22.5	25	35.5	8
DN38	35.5	38	55	8
DN51	48.5	51	65	9
DN63.5	60.5	63.5	80	9
DN76	72	76	93	10
DN101.6	97.6	101.6	118	12
DN104	100	104	118	12
DN104-B	98.5	102.5	127	12



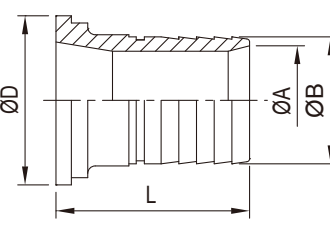
SMS Expanding Line 14R

SIZE	ØA	ØB	ØD	L
DN25	25.2	32	35.5	17
DN32	32.2	40	43.5	17
DN38	38.2	48	55	20
DN40	40.2	48	55	20
DN51	51.2	60	65	20
DN63.5	63.7	73.5	80	25
DN76	76.2	86	93	30
DN101.6	101.8	112.5	118	27
DN104	104.2	112.5	118	27



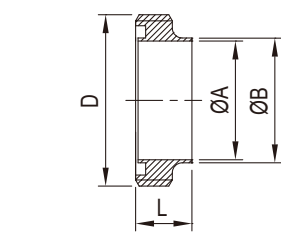
SMS-14B Blanks

SIZE	ØA	ØB	C	L
DN25	32	35.5	3.5	7.5
DN38	48	55	5	9
DN51	60	65	5	10
DN63.5	73.5	80	5	10
DN76	86	93	5	11
DN104	112	118	6	11
DN104B	116	128	6	11



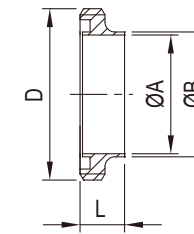
SMS-14AHR Hose Adapter

SIZE	ØA	ØB	ØD	L
DN25	22.2	25	35.5	60.5
DN38	34	38	55	72
DN51	47	50.5	65	82
DN63.5	59	63.2	80	95
DN76	71.5	75.5	93	97
DN104	95	100.8	118	109



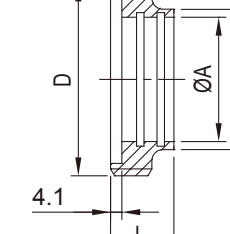
Long Welding Male SMS-15GL

SIZE	ØA	ØB	D	L
DN25	22.5	25	RD40x1/6	19
DN38	35.5	38	RD60x1/6	23
DN51	48.5	51	RD70x1/6	23
DN63.5	60.5	63.5	RD85x1/6	27
DN76	72.9	76.1	RD98x1/6	27
DN101.6	97.6	101.6	RD125x1/4	30
DN104	100	104	RD125x1/4	30
DN104-B	98.5	102.5	RD132x1/6	35



Short Welding Male SMS-15S

SIZE	ØA	ØB	D	L
DN25	22.5	25	RD40x1/6	18
DN38	35.5	38	RD60x1/6	21
DN51	48.5	51	RD70x1/6	21
DN63.5	60.5	63.5	RD85x1/6	23
DN76	72	76	RD98x1/6	23
DN101.6	97.6	101.6	RD125x1/4	26
DN104	100	104	RD125x1/4	26
DN104-B	98.5	102.5	RD132x1/6	26



SMS Expanding Male 15R

SIZE	ØA	ØB	D	L
DN25	25.2	32	RD40x1/6	20
DN32	32.2	40	RD48x1/6	20
DN38	38.2	47.9	RD60x1/6	23
DN40	40.2	48	RD60x1/6	23
DN51	51.2	60.4	RD70x1/6	25
DN63.5	63.7	73.5	RD85x1/6	30
DN76	76.2	86.5	RD98x1/6	35
DN101.6	101.8	112.5	RD125x1/4	30
DN104	104.2	112.5	RD125x1/4	30

Seal Ring L Type
(EPDM, SILICON, VITON)

SIZE	ØA	ØB	ØC
DN25	22.8	25.1	38.1
DN38	35.8	38.1	47.8
DN51	48.8	51.1	60.8
DN63.5	61	63.6	73.3
DN76	73.4	76.1	85.8
DN104	100.5	104	115.7

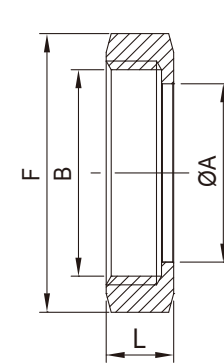
SMS-15AHR Hose Adapter

SIZE	ØA	ØB	D	L
DN25	22.2	25	RD40 x1/6	64
DN38	34	38	RD60 x1/6	79
DN51	47	50.5	RD70 x1/6	89
DN63.5	59	63.2	RD85 x1/6	102
DN76	71.5	75.5	RD98 x1/6	105
DN104	95	100.8	RD125x1/4	120

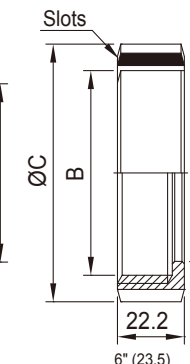


RJT (BS) Unions (mm)

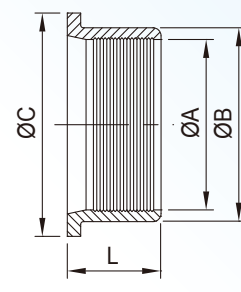
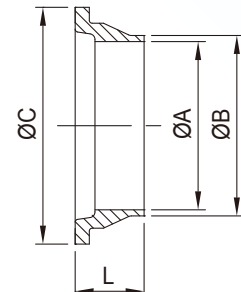
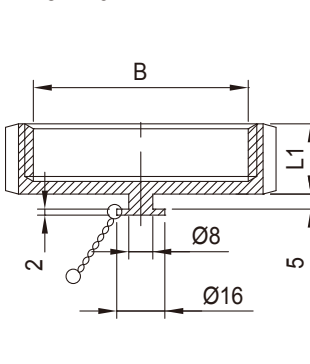
RJT-13H



RJT-13R



RJT-13HBN



RJT-13 NUT

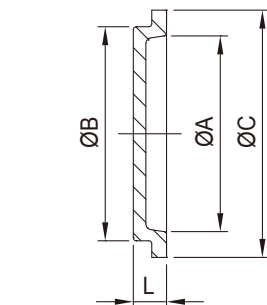
SIZE	ØA	B	ØC	L	L1	Slots	F
1/2"	14.5	19.6 x10 TPI WHIT		16			28.5
3/4"	21	26.2 x10 TPI WHIT		16			33
1.0"	33.45	42.266x8 TPI WHIT	58.5	22.2	23.5	4	50.8
1.5"	46	54.966x8 TPI WHIT	74	22.2	23.5	4	65
2.0"	58.67	67.92 x6 TPI WHIT	85.5	22.2	23.5	6	79.4
2.5"	71.4	80.62 x6 TPI WHIT	98.5	22.2	23.5	6	92
3.0"	84.1	93.32 x6 TPI WHIT	111.6	22.2	23.5	8	104.8
4.0"	109.7	118.72 x6 TPI WHIT	138	22.2	23.5	8	130
6.0"	163	169.52 x6 TPI WHIT	197	24		10	184

RJT Welding Liner RJT-14

SIZE	ØA	ØB	ØC	L
1/2"	9.6	14	18	11.4
3/4"	16	20	23.1	11.4
1.0"	22.2	25.4	41.3	19.5
1.5"	34.8	38.1	54	19.5
2.0"	47.5	50.8	66.7	19.5
2.5"	60.2	63.5	79.4	19.5
3.0"	72.9	76.2	92.1	19.5
4.0"	97.6	101.6	117.5	19.5
6.0"	148	152.4	169.1	23.5

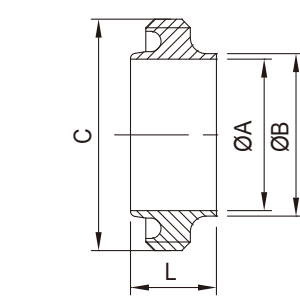
RJT Expanding Liner RJT-14R

SIZE	ØA	ØB	ØC	L
1.0"	25.5	32.5	41.3	20
1.5"	38.2	45.2	54	24
2.0"	50.9	57.9	66.7	28
2.5"	63.6	70.6	79.4	32
3.0"	76.3	83.3	92.1	32
4.0"	101.7	108.7	117.5	32



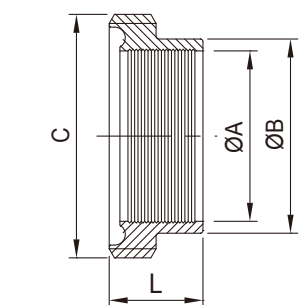
RJT -14B Blanks

SIZE	ØA	ØB	ØC	L
1.0"	37.8	32.5	41.3	9
1.5"	40.5	45.2	54	9
2.0"	53.2	57.9	66.7	9
2.5"	65.9	70.6	79.4	9
3.0"	78.2	83.3	92.1	9
4.0"	104	108.7	117.5	9
104	104	108.7	117.5	9



RJT Welding Male RJT-15

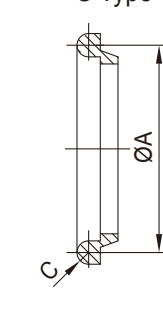
SIZE	ØA	ØB	C	L
1/2"	9.6	13.7	21.2x10T WHIT	16.5
3/4"	16	20	27.6x10T WHIT	16.5
1.0"	22.1	25.4	45.72 x8T WHIT	27
1.5"	34.8	38.1	58.42 x8T WHIT	27
2.0"	47.5	50.8	72.72 x6T WHIT	27
2.5"	60.2	63.5	85.42 x6T WHIT	27
3.0"	72.9	76.2	98.12 x6T WHIT	27
4.0"	97.6	101.6	123.52x6T WHIT	27
104	100	104	123.52x6T WHIT	27
6.0"	148	152.4	174.32x6T WHIT	24



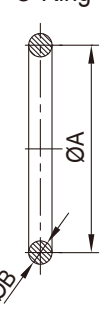
RJT Expanding Male RJT-15R

SIZE	ØA	ØB	C	L
1.0"	25.5	32.5	45.72x8T WHIT	20
1.5"	38.2	45.2	58.42x8T WHIT	24
2.0"	50.9	57.9	72.72x6T WHIT	28
2.5"	63.6	70.6	85.42x6T WHIT	32
3.0"	76.3	83.3	98.12x6T WHIT	32
4.0"	101.7	108.7	123.52x6T WHIT	32

U Type



O-Ring



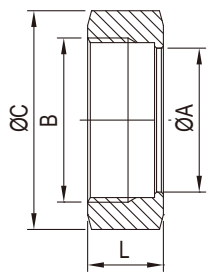
RJT Seal Ring
(EPDM, Silicon, Viton)

SIZE	ØA	ØB	C
1.0"	33.3	6.6	3.2
1.5"	46	6.6	3.2
2.0"	58.7	6.6	3.2
2.5"	71.4	6.6	3.2
3.0"	84.1	6.6	3.2
4.0"	109.5	6.6	3.2
6.0"	162.6	6.6	3.2

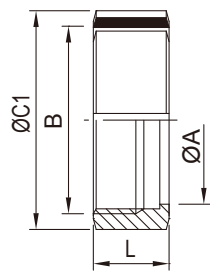


IDF/JIS G3447 Unions (mm)

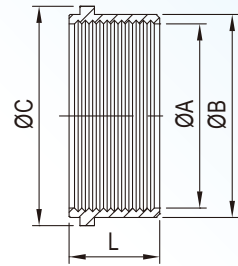
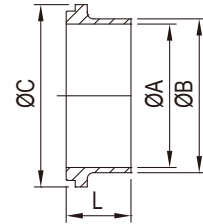
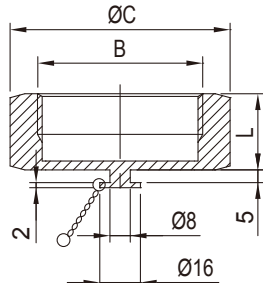
IDF-13H



IDF-13R



IDF-13HBN



IDF-13 NUT

SIZE	ØA	B	ØC	ØC1	L
1.0"	30.5	34.34x8T ACME	46	48	30
1.5"	43.5	47.86x8T ACME	60	64	30
2.0"	57	61.37x8T ACME	75	77	30
2.5"	70.7	74.88x8T ACME	90	91	30
3.0"	83.3	88.4 x8T ACME	106	106	30
3.0"	83.3	88.4 x8T ACME	105	105	30
4.0"	112	115.41x8T ACME	135	135	34.9
4.0"	112	122.05x6T ACME	133	133	34.9

IDF Welding Liner IDF-14

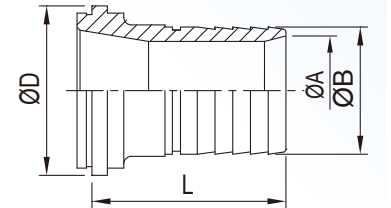
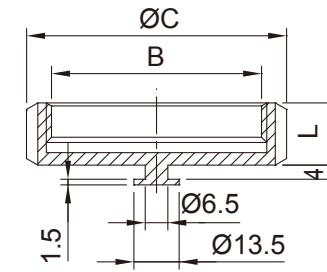
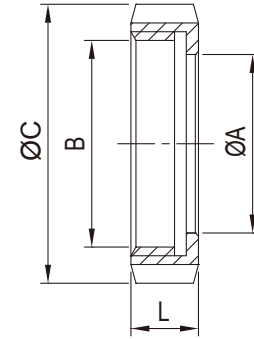
SIZE	IDF ØA	IDF ØB	JIS ØA	JIS ØB	ØC	L
1.0"	22.6	25.6	23	25.4	33.8	21.5
1.5"	35.6	38.6	35.7	38.1	47	21.5
2.0"	48.6	51.6	47.8	50.8	60.5	21.5
2.5"	60.3	64.1	59.5	63.5	74	21.5
3.0"	72.9	76.7	72.3	76.3	87.5	21.5
4.0"	97.6	101.6			114.1	30
4.0"	97.6	102.5	97.6	101.6	120.6	30

IDF Expanding Liner IDF-14R

SIZE	ØA	ØB	ØC	L
1.0"	25.5	29.2	33.8	20
1.5"	38.2	42.7	47	20
2.0"	50.9	56.2	60.5	25
2.5"	63.6	69.9	74	30
3.0"	76.3	82.6	87.5	30
4.0"	101.7	108.4	114.1	30
4.0"	101.7	111.1	120.6	30



Wine Unions



Macon Nut 4 Slots M-13R

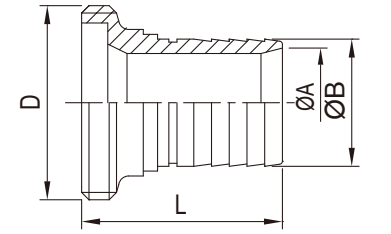
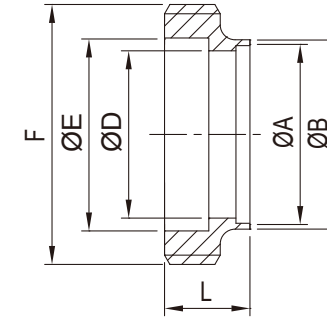
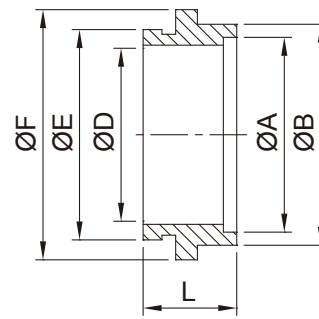
SIZE	ØA	B	ØC	L
DN33	37	39x11TPI WHIT	50	25
DN43	47	M55xP3.0	70	25
DN53	57	M67xP3.0	80	25
DN63	67	M79xP3.5	95	25
DN73	77	M90xP3.5	106	25
DN83	90	M102xP4.0	118	25
DN103	112	M125xP4.0	139	25

Macon Blank Nut 4 Slots M-13RBN

SIZE	B	ØC	L
DN33	39x11TPI WHIT	50	25
DN43	M55xP3.0	70	25
DN53	M67xP3.0	80	25
DN63	M79xP3.5	95	25
DN73	M90xP3.5	106	25
DN83	M102xP4.0	118	25
DN103	M125xP4.0	139	26

Macon Liner 14 Hose Adapter

SIZE	ØA	ØB	ØD	L
DN40	34/36.5	40	50.8	82
DN50	47	50.5	63	92
DN60	59	63.2	75	102
DN70	66.3	70	85	104
DN80	71.5	75.5	97	110



IDF-14B Blanks

SIZE	ØA	ØB	L
1.0"	29.2	33.8	10.5
1.5"	42.7	47	10.5
2.0"	56.2	60.5	10.5
2.5"	69.9	74	10.5
3.0"	82.6	87.5	10.5
4.0"	111.1	114.1	12.6
4.0"	111.1	120.6	12.6

IDF Welding Male IDF-15

SIZE	IDF ØA	IDF ØB	JIS ØA	JIS ØB	C	L
1.0"	22.1	25.4	23	25.4	37.13x8T ACME	21.5
1.5"	34.8	38	35.7	38.1	50.65x8T ACME	21.5
2.0"	47.5	51	47.8	50.8	64.16x8T ACME	21.5
2.5"	60.2	63.5	59.5	63.5	77.76x8T ACME	21.5
3.0"	72.9	76.2	72.3	76.3	91.19x8T ACME	21.5
4.0"	97.6	101.6			118.2x8T ACME	30
4.0"	97.6	102.5	97.6	101.6	125.9x6T ACME	21.5

IDF Expanding Male IDF-15R

SIZE	ØA	ØB	C	L
1.0"	25.5	29.2	37.13x8T ACME	19.5
1.5"	38	42.5	50.65x8T ACME	19.5
2.0"	50.9	56.2	64.16x8T ACME	19.5
2.5"	63.6	69.9	77.76x8T ACME	25
3.0"	76.3	82.6	91.19x8T ACME	30
4.0"	101.7	108.8	118.2 x8T ACME	35
4.0"	101.7	111.1	125.9 x6T ACME	35

IDF Seal Ring

SIZE	ØA	ØB
1.0"	23	32.5
1.5"	36	46
2.0"	49	59.5
2.5"	60.7	73.2
3.0"	73.2	86.5
4.0"	98	113
4.0"	98	119.6

Macon Liner M-14

SIZE	ØA	ØB	ØD	ØE	ØF	L
DN33	33.3	36	28	31.5	38	22
DN38	38.2	46	35.9	44.5	50	29
DN40/43	43.3	46.3	40	44.5	50	22
DN50/53	53.3	56.3	50	54.5	62.5	22
DN51	51.2	56	48.5	54.5	62.5	29
DN60/63	63.3	66.3	60	64.5	73.5	22
DN70/73	73.3	76.3	70	74.5	85	22
DN76	72	76	70	74.5	85	22
DN80/83	83.3	86.3	80	84.5	96	22
DN103	104.2	108	100	104.5	119	22

Macon Male M-15

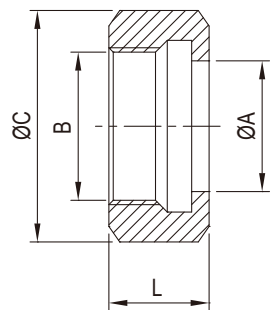
SIZE	ØA	ØB	ØD	ØE	F	L
DN33	33.3	36.3	30	32	40.5x11TPI WHIT	22
DN38	38.2	46	35.9	45	M55xP3.0	30
DN43	43.3	46.3	40	45	M55xP3.0	22
DN51	51.2	56	48.5	55	M67xP3.0	30
DN53	53.3	56.3	50	55	M67xP3.0	22
DN63	63.3	66.3	60	66	M79xP3.5	22
DN73	73.3	76.3	70	76	M90xP3.5	22
DN76	72	76	70	76	M90xP3.5	22
DN83	83.3	86.3	80	86	M102xP4.0	22
DN103	104.2	108	100	106	M125xP4.0	22

Macon Male 15AHR Hose Adapter

SIZE	ØA	ØB	D	L
DN40	34/36.5	38	M55xP3.0	84
DN50	47	50.5	M67xP3.0	94
DN65	59	63.2	M79xP3.5	104
DN70	66.3	70	M90xP3.5	106
DN80	71.5	75.5	M102xP4.0	112

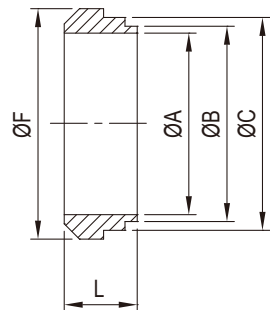


3A Unions (mm)



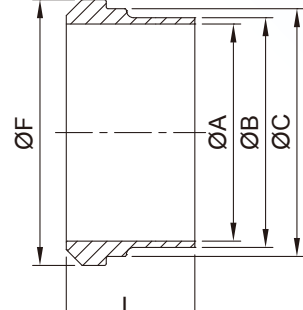
3A Hexagonal Nut 3A-13H

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



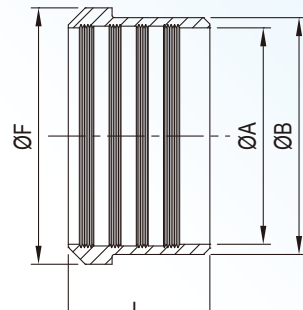
3A short Bevel Seat Weld Liner 3A-14PRF

SIZE	ØA	ØB	ØC	ØF	L
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



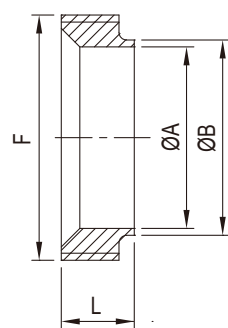
3A-14A Long Weld Liner

SIZE	ØA	ØB	ØC	ØF	L
1.0"	22.2	25.4	29.5	33.3	34.9
1.5"	34.9	38.1	42.6	46.8	38.1
2.0"	47.6	50.8	55.7	60.3	38.1
2.5"	60.3	63.5	68.8	73.8	44.5
3.0"	73	76.2	81.9	87.3	44.5
4.0"	97.6	101.6	108.1	114.3	44.5



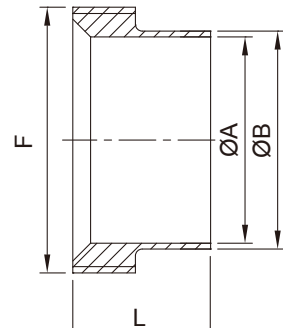
3A-14R Recessless Liner

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



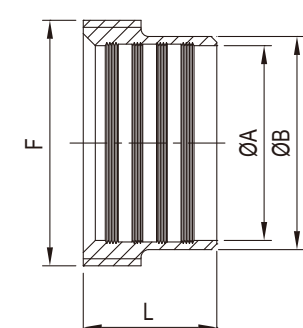
3A short Bevel Seat Weld Male 3A-15TRF

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



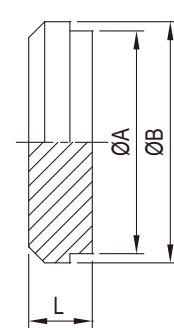
3A-15A Long Weld Male

SIZE	ØA	ØB	F	L
1.0"	22.1	25.4	37.13 ACME 8TPI	34.9
1.5"	34.9	38.1	50.65 ACME 8TPI	38.1
2.0"	47.6	50.8	64.16 ACME 8TPI	38.1
2.5"	60.2	63.5	77.67 ACME 8TPI	44.5
3.0"	73	76.2	91.19 ACME 8TPI	44.5
4.0"	97.6	101.6	119.25 ACME 6TPI	44.5



3A-15R Recessless Male

SIZE	ØA	ØB	F	L
1.0"	25.5	29.5	37.13 ACME 8TPI	20.6
1.5"	38.2	42.6	50.65 ACME 8TPI	28.6
2.0"	50.9	55.7	64.17 ACME 8TPI	34.9
2.5"	63.6	68.8	77.67 ACME 8TPI	38.1
3.0"	76.3	81.9	91.19 ACME 8TPI	41.3
4.0"	101.7	108.1	119.25 ACME 6TPI	41.3



3A-16A

SIZE	ØA	ØB	L
1.0"	29.5	33.3	11.9
1.5"	42.6	46.8	14.3
2.0"	55.7	60.3	15.9
2.5"	68.8	73.8	16.7
3.0"	81.9	87.3	18.3
4.0"	108.1	114.3	20.6



Wide Range Tube Line



Haitima tube fittings can be used for sanitary, pharmaceutical, vacuum...etc purposes.

It can be equipped with different types or connection ends, as 45°/90° elbow ,tee ,concentric/ eccentric reducer....weld , clamp, unions....

Standard type:3A, SMS, DIN, BS, BPE...etc.

Material: ASTM 304, 316, 316L

Surface: 1) ID/OD polishing .

2) Only ID polishing .

3) Only OD polishing .

4) unpolished.

Roughness: #400, #320, #240, #180....

Ra≤0.8µm, 0.6µm, 0.5µm, 0.4µm....

(Other surface finish can be ordered).



Haitima Sanitary Tubes For Biochemistry, Pharmaceutical, Food...etc.

Haitima Sanitary for food, and pharmaceutical industry

Material: ASTM 304,304L,316L

Spec: ASTM A269, A270.

Surface & Roughness:

1. OD/ID Pickle (Ra≤1.0µm)

2. Polished:

(1) ID Polished to 180Grit (Ra≤0.8µm).

(2) ID Polished to 240Grit (Ra≤0.6µm).

(3) ID Polished to 320Grit (Ra≤0.5µm).

(4) ID Polished to 420Grit (Ra≤0.4µm).

(5) Electro polished:

(5-1). ID Electro polished Ra≤0.5µm).

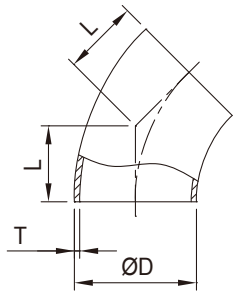
(5-2). ID Electro polished Ra≤0.38µm).

BPE standard			SMS standard			IDF standard			3A sanitary standard			DIN 11850		
SIZE	O.D	T	SIZE	O.D	T	SIZE	O.D	T	SIZE	O.D	T	SIZE	O.D	T
1/2"	12.7	1.65				1.0"	25.4	1.2	25.4	1.65		25	28	1
1.0"	25.4	1.65	25	25	1.25	1.0"	25.4	1.2						1.5
			32	32	1.25	1.25"	31.8	1.2				32	34	1
														1.5
1.5"	38.1	1.65	38	38	1.25	1.5"	38.1	1.2	38.1	1.65		40	40	1
														1.5
2.0"	50.8	1.65	51	51	1.25	2.0"	50.8	1.5	50.8	1.65		50	52	1
														1.5
2.5"	63.5	1.65	63.5	63.5	1.5	2.5"	63.5	2	63.5	1.65		65	70	2
3.0"	76.2	1.65	76	76.1	1.6	3.0"	76.3	2	76.2	1.65		80	85	2
4.0"	101.6	2.11	104	104	2	4.0"	101.6	2	101.6	1.65		100	104	2
										2.11				



3A Pipe Line(mm)

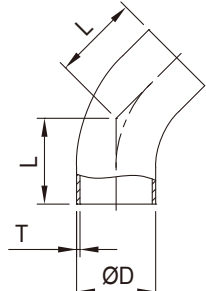
45° Short Elbow



C.2WK-45° Elbow

SIZE	ØD	L	T
1/2"	12.7	13.16	1.65
3/4"	19.05	23.8	1.65
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
6.0"	152.4	95.25	2.77

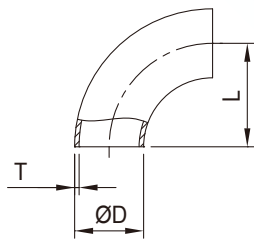
45° Long Elbow



C.L2KS-45° Elbow

SIZE	ØD	L	T
1/2"	12.7	30.2	1.65
3/4"	19.05	30.2	1.65
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
6.0"	152.4	158.2	2.80

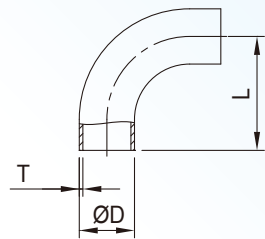
90° Short Bend



C.2WCL-90° Bend

SIZE	ØD	L	T
1/2"	12.7	19.05	1.65
3/4"	19.05	28.58	1.65
1.0"	25.4	38.1	1.65
1.5"	38.1	57.2	1.65
2.0"	50.8	76.2	1.65
2.5"	63.5	95.25	1.65
3.0"	76.2	114.3	1.65
4.0"	101.6	152.4	2.10
6.0"	152.4	228.6	2.77

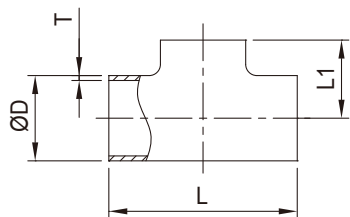
90° Long Bend



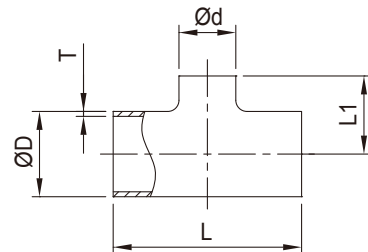
C.L2S-90° Bend

SIZE	ØD	L	T
1/2"	12.7	45	1.65
3/4"	19.05	60	1.65
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
6.0"	152.4	292.1	2.80

Welding Tee



Long Reducing Tee



C.7WWW-Short Tee

SIZE	ØD	L	L1	T
1/2"	12.7	38.1	19.05	1.65
3/4"	19.05	57.2	28.6	1.65
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.7W-Long Tee

SIZE	ØD	L	L1	T
1/2"	12.7	95.2	47.6	1.65
3/4"	19.05	95.2	47.6	1.65
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
6.0"	152.4	285.8	142.9	2.77

C.7RW-Long Reducing Tee

SIZE	ØD	Ød	L	L1	T
1.5"x1.0"	38.1	25.4	114.3	54	1.65
2.0"x1.0"	50.8	25.4	152.4	60.30	1.65
2.0"x1.5"	50.8	38.1	152.4	63.50	1.65
2.5"x1.5"	63.5	38.1	152.4	69.85	1.65
2.5"x2.0"	63.5	50.8	152.4	82.55	1.65
3.0"x1.5"	76.2	38.1	165.1	76.20	1.65
3.0"x2.0"	76.2	50.8	165.1	88.9	1.65
3.0"x2.5"	76.2	63.5	165.1	82.55	1.65
4.0"x2.0"	101.6	50.8	196.8	101.6	2.10
4.0"x2.5"	101.6	63.5	196.8	95.25	2.10
4.0"x3.0"	101.6	76.2	196.8	95.25	2.10

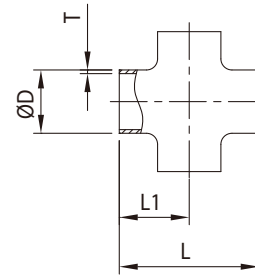
C.7RWS-Short Reducing Tee

SIZE	ØD	Ød	L	L1	T
1.5"x1.0"	38.1	25.4	84.2	34.9	1.65
2.0"x1.0"	50.8	25.4	104.8	41.3	1.65
2.0"x1.5"	50.8	38.1	104.8	48.4	1.65
2.5"x1.0"	63.5	25.4	119	47.63	1.65
2.5"x1.5"	63.5	38.1	119	54.75	1.65
2.5"x2.0"	63.5	50.8	119	58.7	1.65
3.0"x1.0"	76.2	25.4	131.8	54.0	1.65
3.0"x1.5"	76.2	38.1	131.8	65.1	1.65
3.0"x2.0"	76.2	50.8	131.8	65.1	1.65
3.0"x2.5"	76.2	63.5	131.8	65.9	1.65
4.0"x1.0"	101.6	25.4	174.6	66.7	2.1
4.0"x1.5"	101.6	38.1	174.6	108.0	2.1
4.0"x2.0"	101.6	50.8	174.6	108.0	2.1
4.0"x2.5"	101.6	63.5	174.6	108.0	2.1
4.0"x3.0"	101.6	76.2	174.6	108.0	2.1



3A Pipe Line(mm)

Cross



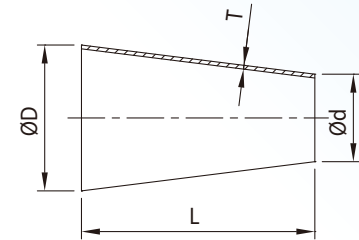
C.9WWW-Short Cross

SIZE	ØD	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	ØD	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

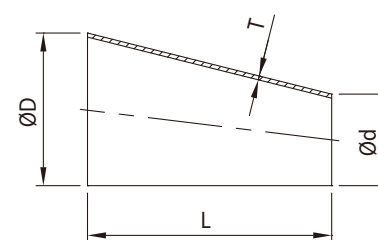


C.31-Concentric Reducer

SIZE	ØD	Ød	L	T
3/4"x1/2"	19.05	12.7	50.8	1.65
1.0"x1/2"	25.4	12.7	50.8	1.65
1.5"x1/2"	38.1	12.7	101.6	1.65
2.0"x1/2"	50.8	12.7	152.4	1.65
1.0"x3/4"	25.4	19.05	25.4	1.65
1.5"x3/4"	38.1	19.05	76.2	1.65
1.5"x1.0"	38.1	25.4	50.8	1.65
2.0"x1.0"	50.8	25.4	101.6	1.65
2.0"x1.5"	50.8	38.1	50.8	1.65
2.5"x1.0"	63.5	25.4	152.4	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

SIZE	ØD	Ød	L	T
3.0"x1.0"	76.2	25.4	203.2	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
3.0"x2.5"	76.2	63.5	50.8	1.65
4.0"x1.5"	101.6	38.1	254	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
6.0"x2.0"	152.4	50.8	406.4	2.77
6.0"x3.0"	152.4	76.2	304.8	2.77
6.0"x4.0"	152.4	101.6	203.2	2.77

Eccentric Reducer

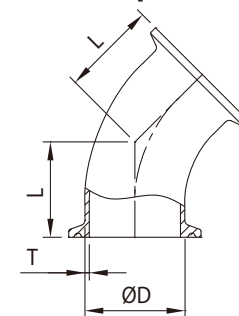


C.32-Eccentric Reducer

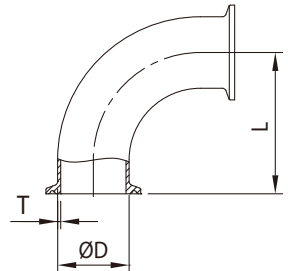
SIZE	ØD	Ød	L	T
3/4"x1/2"	19.05	12.7	25.4	1.65
1.0"x1/2"	25.4	12.7	50.8	1.65
1.5"x1/2"	38.1	12.7	101.6	1.65
2.0"x1/2"	50.8	12.7	152.4	1.65
1.0"x3/4"	25.4	19.05	25.4	1.65
1.5"x3/4"	38.1	19.05	76.2	1.65
2.0"x3/4"	50.8	19.05	127	1.65
1.5"x1.0"	38.1	25.4	50.8	1.65
2.0"x1.0"	50.8	25.4	101.6	1.65
2.0"x1.5"	50.8	38.1	50.8	1.65
2.5"x1.0"	63.5	25.4	152.4	1.65
2.5"x1.5"	63.5	38.1	101.6	1.65

SIZE	ØD	Ød	L	T
2.5"x2.0"	63.5	50.8	50.8	1.65
3.0"x1.0"	76.2	25.4	203.2	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
3.0"x2.5"	76.2	63.5	50.8	1.65
4.0"x1.5"	101.6	38.1	254	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
6.0"x2.0"	152.4	50.8	406.4	2.77
6.0"x3.0"	152.4	76.2	304.8	2.77
6.0"x4.0"	152.4	101.6	203.2	2.77

45° Clamp Elbow



90° Clamp Bend



C.2KMP-45° Elbow

SIZE	ØD	L	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

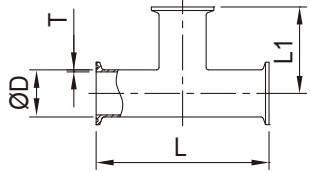
C.2CMP-90° Bend

SIZE	ØD	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	107.95	1.65
3.0"	76.2	127	1.65
4.0"	101.6	168.2	2.10



3A Pipe Line(mm)

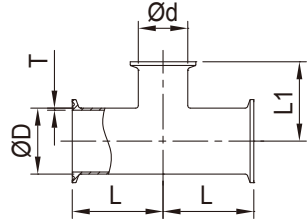
Clamp Tee



C.7MP-Clamp Long Tee

SIZE	ØD	L	L1	T
1/2"	12.7	63.5	31.75	1.65
3/4"	19.05	120.6	60.3	1.65
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

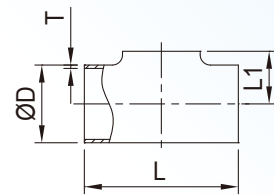
Reducing Tee



C.7RMP-Reducing Long Tee Clamp End

SIZE	ØD	Ød	L	L1
1.5"x1.0"	38.1	25.4	69.85	66.68
2.0"x1.0"	50.8	25.4	88.9	73.0
2.0"x1.5"	50.8	38.1	88.9	76.2
2.5"x1.5"	63.5	38.1	88.9	82.55
2.5"x2.0"	63.5	50.8	88.9	95.25
3.0"x1.5"	76.2	38.1	95.25	88.9
3.0"x2.0"	76.2	50.8	95.25	101.6
3.0"x2.5"	76.2	63.5	95.25	95.25
4.0"x2.0"	101.6	50.8	114.2	114.3
4.0"x2.5"	101.6	63.5	114.2	107.95
4.0"x3.0"	101.6	76.2	114.2	107.95

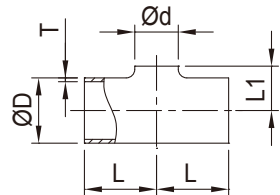
Equal Tee



C.7WO Equal Tee W/O Straight end

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

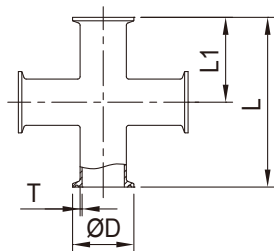
Reducing Tee



C.7RWW W/O Straight end Reducing Tee

SIZE	ØD	d	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

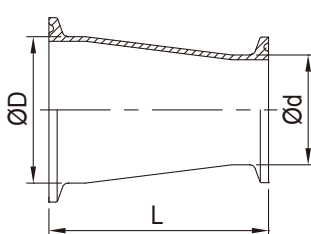
Clamp Cross



C.9MP-Clamp Long Cross

SIZE	ØD	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

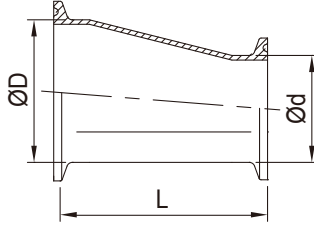
Concentric Reducer



C.32-14MP Eccentric Reducer Clamp End
C.31-14MP Concentric Reducer Clamp End

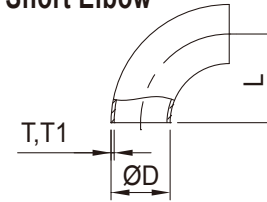
SIZE	ØD	Ød	L
1.5"x1.0"	38.1	25.4	76.2
2.0"x1.5"	50.8	38.1	76.2
2.5"x1.5"	63.5	38.1	127
2.5"x2.0"	63.5	50.8	76.2
3.0"x1.5"	76.2	38.1	177.8
3.0"x2.0"	76.2	50.8	127
3.0"x2.5"	76.2	63.5	76.2
4.0"x1.5"	101.6	38.1	282.5
4.0"x2.0"	101.6	50.8	231.7
4.0"x2.5"	101.6	63.5	180.9
4.0"x3.0"	101.6	76.2	130.1

Eccentric Reducer



SMS Pipe Line (mm)

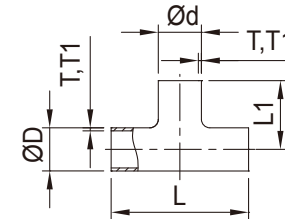
90° Short Elbow



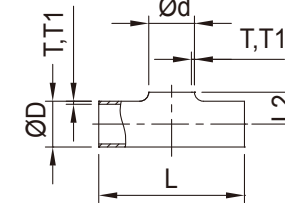
SMS 90 B 90° Short Elbow

DN	ØD	L	T	T1
25	25.0	37.5	1.25	1.5
38	38.0	57.0	1.25	1.5
51	51.0	76.5	1.25	1.5
63.5	63.5	95.25	1.5	1.5
76	76.1	114.15	1.6	2.0
104	104	152.1	2.0	2.0

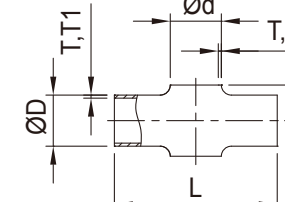
SMS ET Tee With Straight-End



SMS PT Tee Without Straight-End

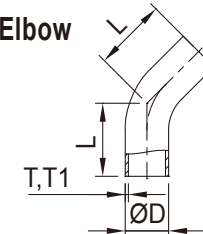


SMS PC Welding Cross Without Straight-End



DN	ØD	Ød	T	T1	L	L1	L2
25	25.0	25.0	1.25	1.5	110	55	14.0
38	38.0	38.0	1.25	1.5	140	70	21.0
51	51.0	51.0	1.25	1.5	164	82	28.5
63.5	63.5	63.5	1.5	1.5	210	105	36.0
76.1	76.1	76.1	1.6	2.0	220	110	43.0
104	104	104	2.0	2.0	300	150	58.0

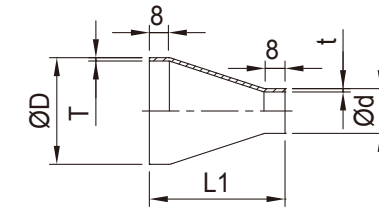
45° Long Elbow



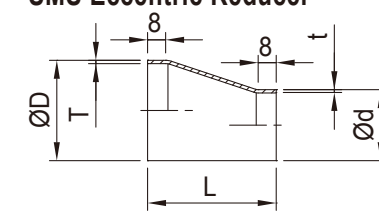
SMS 45 LB 45° Long Elbow

DN	ØD	L	T	T1
25	25.0	42.33	1.25	1.5
38	38.0	48.72	1.25	1.5
51	51.0	58.15	1.25	1.5
63.5	63.5	75.3	1.5	1.5
76	76.1	79.37	1.6	2.0
104	104	85.54	2.0	2.0

SMS CR SMS Concentric Reducer

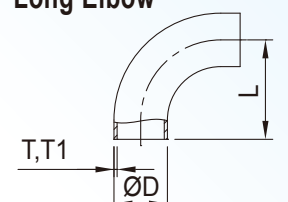


SMS ER SMS Eccentric Reducer



SIZE	ØD	Ød	T	t	L1	L
38x25	38.0	25.0	1.25	1.25	46	39
51x25	51.0	25.0	1.25	1.25	68	57
51x38	51.0	38.0	1.25	1.25	47	39
63.5x25	63.5	25.0	1.5	1.25	92	74
63.5x38	63.5	38.0	1.5	1.25	70	57
63.5x51	63.5	51.0	1.5	1.25	44	39
76x25	76.1	25.0	1.6	1.25	-	92
76x38	76.1	38.0	1.6	1.25	92	74
76x51	76.1	51.0	1.6	1.25	68	57
76x63.5	76.1	63.5	1.6	1.50	47	39
104x51	104	51.0	2.0	1.25	117	95
104x63.5	104	63.5	2.0	1.50	94	78
104x76	104	76.1	2.0	1.60	74	60

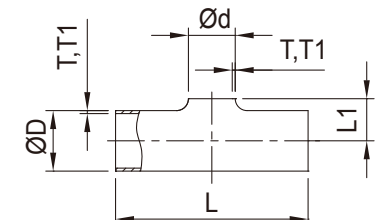
90° Long Elbow



SMS 90 LB 90° Long Elbow

DN	ØD	L	T	T1
25	25.0	55	1.25	1.5
38	38.0	70	1.25	1.5
51	51.0	82	1.25	1.5
63.5	63.5	105	1.5	1.5
76	76.0	110	1.6	2.0
101.6	101.6	150	2.0	2.0
104	104	150	2.0	2.0

SMS PRT Welding Reducing Tee Without Straight-End

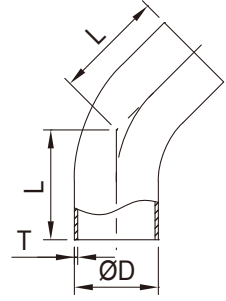


DN	ØD	Ød	T	T1	L	L1
38x25	38.0	25.0	1.25	1.5	140	21.0
51x25	51.0	25.0	1.25	1.5	164	29.0
51x38	51.0	38.0	1.25	1.5	164	29.0
63.5x25	63.5	25.0	1.5	1.5	210	34.5
63.5x38	63.5	38.0	1.5	1.5	210	35.0
63.5x51	63.5	51.0	1.5	1.5	210	36.0
76.1x25	76.1	25.0	1.6	2.0	220	41.0
76.1x38	76.1	38.0	1.6	2.0	220	42.0
76.1x51	76.1	51.0	1.6	2.0	220	43.0
76.1x63.5	76.1	63.5	1.6	2.0	220	43.0
104x25	104	25.0	2.0	2.0	300	56.0
104x38	104	38.0	2.0	2.0	300	56.0
104x51	104	51.0	2.0	2.0	300	57.0
104x63.5	104	63.5	2.0	2.0	300	58.0
104x76.1	104	76.1	2.0	2.0	300	58.0



DIN Pipe Line (mm)

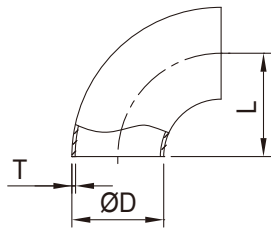
DIN 45° Long Elbow



DIN 45 LB

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

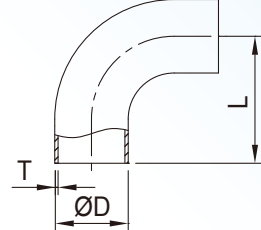
DIN 90° Short Bend



DIN 90 B

SIZE	ØD	L	T
DN20	22	40	1.5
DN25	28	50	1.5
DN32	34	55	1.5
DN40	40	60	1.5
DN50	52	70	1.5
DN65	70	80	2.0
DN80	85	90	2.0
DN100	101.6	152.4	2.0
DN100	104	100	2.0

DIN 90° Long Bend

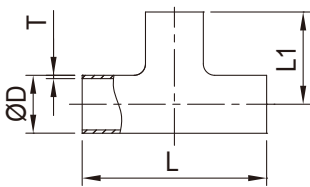


DIN 90 LB

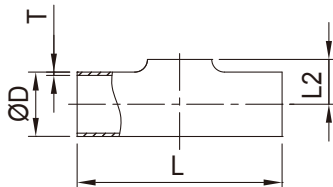
SIZE	ØD	L	T
DN25	28	70	1.5
DN32	34	78	1.5
DN40	40	85	1.5
DN50	52	97	1.5
DN65	70	110	2.0
DN80	85	118	2.0
DN100	101.6	150	2.0
DN100	104	140	2.0

DIN Tee & Pull Tee

DIN ET



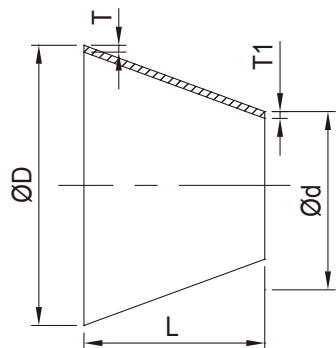
DIN PT



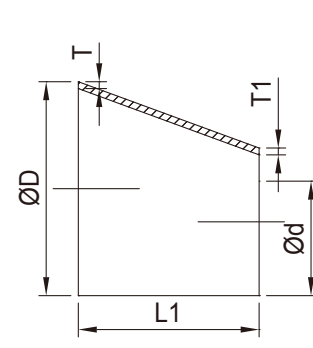
SIZE	ØD	L	L1	L2	T
DN20	22	94	47	13	1.5
DN25	28	100	50	15.5	1.5
DN32	34	110	55	19	1.5
DN40	40	120	60	22	1.5
DN50	52	140	70	28.5	1.5
DN65	70	160	80	39.5	2.0
DN80	85	180	90	46.5	2.0
DN100	101.6	300	150	56	2.0
DN100	104	200	100	58	2.0

DIN Concentric Reducer

DIN CR



DIN ER

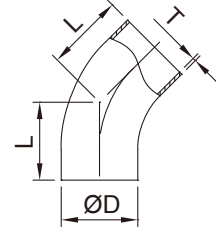


SIZE	ØD	Ød	T	L	L1	T1
32x25	34	28	1.5	25	16.5	1.5
40x25	40	28	1.5	23	33	1.5
40x32	40	34	1.5	23	16.5	1.5
50x25	52	28	1.5	27	66	1.5
50x32	52	34	1.5	28	49.5	1.5
50x40	52	40	1.5	27	33	1.5
65x25	70	28	1.5	35	75	1.5
65x40	70	40	2.0	39	77	1.5
65x50	70	52	2.0	29	44	1.5
80x50	85	52	2.0	45	85	1.5
80x65	85	70	2.0	33	41.2	2.0
100x50	104	52	2.0	50	137.5	1.5
100x65	104	70	2.0	44	93.5	2.0
100x80	104	85	2.0	60	52.5	2.0



BS Pipe Line (mm)

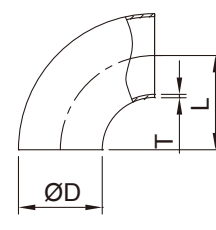
45° Long Elbow



BS 45 LB

SIZE	ØD	L	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

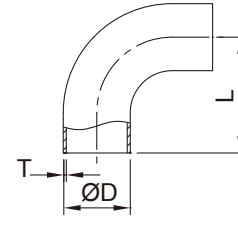
90° Short Tube Bend



BS 90 B

SIZE	ØD	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

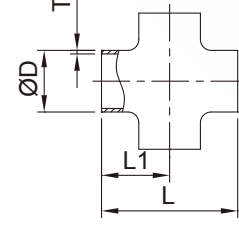
90° Long Tube Bend



BS 90 LB

SIZE	ØD	L	T
1/2"	12.7	45	1.65
3/4"	19.05	60	1.65
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

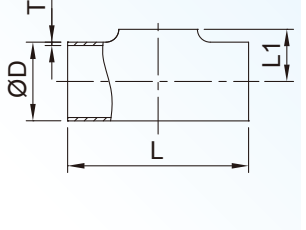
Cross



BS EC

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

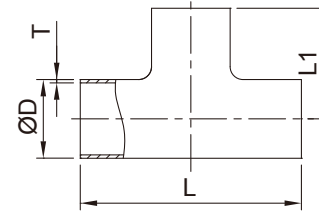
Pull Tee



BS PT

SIZE	ØD	L	L1	T
1.0"	25.4	87	13.8	1.65
1.5"	38.1	127	19.9	1.65
2.0"	50.8	177	27.6	1.65
2.5"	63.5	227	34.9	1.65
3.0"	76.2	267	40.9	1.65
4.0"	101.6	347	54.7	2.10

Welding Tee



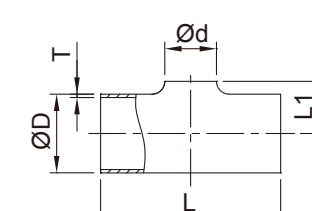
BS ETS
Welding Tee

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

BS ETL
Long Tee

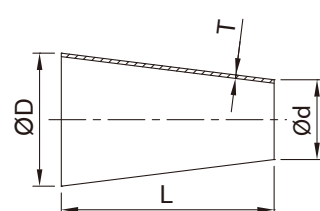
SIZE	ØD	L	L1	T
1.0"	25.4	130	65	1.65
1.5"	38.1	170	85	1.65
2.0"	50.8	220	110	1.65
2.5"	63.5	270	135	1.65
3.0"	76.2	310	155	1.65
4.0"	101.6	390	195	2.10

BS PRT
Reducing Tee W/O Straight End



SIZE	ØD	Ød	L	L1	T
1.5"x1.0"	38.1	25.4	127	22	1.65
2.0"x1.0"	50.8	25.4	177	29	1.65
2.0"x1.5"	50.8	38.1	177	29	1.65
2.5"x1.0"	63.5	25.4	227	35	1.65
2.5"x1.5"	63.5	38.1	227	35	1.65
2.5"x2.0"	63.5	50.8	227	35	1.65
3.0"x1.0"	76.2	25.4	267	41	1.65
3.0"x1.5"	76.2	38.1	267	41	1.65
3.0"x2.0"	76.2	50.8	267	41	1.65
3.0"x2.5"	76.2	63.5	267	41	1.65
4.0"x2.0"	101.6	50.8	347	55	2.10
4.0"x2.5"	101.6	63.5	347	55	2.10
4.0"x3.0"	101.6	76.2	347	55	2.10

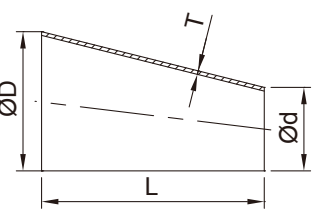
Concentric Reducer



BS CR

SIZE	ØD	d	L	T
1.5"x1.0"	38.1	25.4	29	1.65
2.0"x1.0"	50.8	25.4	53	1.65
2.0"x1.5"	50.8	38.1	41	1.65
2.5"x1.0"	63.5	25.4	82	1.65
2.5"x1.5"	63.5	38.1	64	1.65
2.5"x2.0"	63.5	50.8	40	1.65
3.0"x1.0"	76.2	25.4	110	1.65
3.0"x1.5"	76.2	38.1	81	1.65
3.0"x2.0"	76.2	50.8	55	1.65
3.0"x2.5"	76.2	63.5	41	1.65
4.0"x1.5"	101.6	38.1	135	2.10
4.0"x2.0"	101.6	50.8	106	2.10
4.0"x2.5"	101.6	63.5	76	2.10
4.0"x3.0"	101.6	76.2	53	2.10

Eccentric Reducer



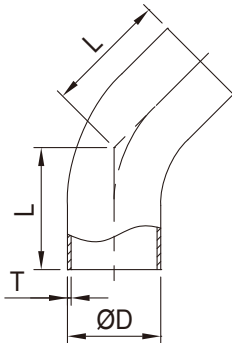
BS ER

SIZE	ØD	d	L	T
1.5"x1.0"	38.1	25.4	35	1.65
2.0"x1.0"	50.8	25.4	54	1.65
2.0"x1.5"	50.8	38.1	36	1.65
2.5"x1.0"	63.5	25.4	76	1.65
2.5"x1.5"	63.5	38.1	66	1.65
2.5"x2.0"	63.5	50.8	35	1.65
3.0"x1.0"	76.2	25.4	112	1.65
3.0"x1.5"	76.2	38.1	78	1.65
3.0"x2.0"	76.2	50.8	66	1.65
3.0"x2.5"	76.2	63.5	44	1.65
4.0"x1.5"	101.6	38.1	122	2.10
4.0"x2.0"	101.6	50.8	97	2.10
4.0"x2.5"	101.6	63.5	73	2.10
4.0"x3.0"	101.6	76.2	77	2.10



AS Pipe Line (mm)

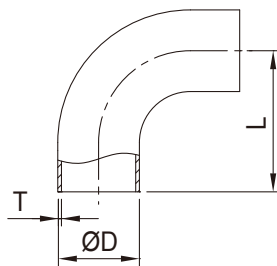
45° Long Elbow



AS 45 LB

SIZE	ØD	L	T
1/2"	12.7	30	1.6
3/4"	19.1	30	1.6
1.0"	25.4	30	1.6
1 1/4"	31.8	30	1.6
1.5"	38.1	30	1.6
2.0"	50.8	30	1.6
2.5"	63.5	30	1.6
3.0"	76.2	30	1.6
4.0"	101.6	30	2.0

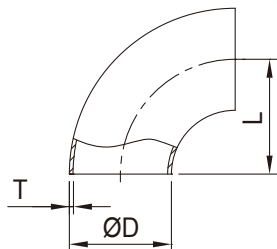
90° Long Bend



AS 90 LB

SIZE	ØD	L	T
1/2"	12.7	49.1	1.6
3/4"	19.1	58.6	1.6
1.0"	25.4	68.1	1.6
1 1/4"	31.8	77.7	1.6
1.5"	38.1	87.0	1.6
2.0"	50.8	106.2	1.6
2.5"	63.5	125.0	1.6
3.0"	76.2	144.2	1.6
4.0"	101.6	182.4	2.0

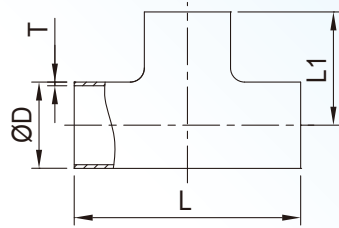
90° Short Bend



AS 90 B

SIZE	ØD	L	T
1/2"	12.7	19.1	1.6
3/4"	19.1	28.6	1.6
1.0"	25.4	38.1	1.6
1 1/4"	31.8	47.7	1.6
1.5"	38.1	57.0	1.6
2.0"	50.8	76.2	1.6
2.5"	63.5	95.0	1.6
3.0"	76.2	114.2	1.6
4.0"	101.6	152.4	2.0

Long Tee

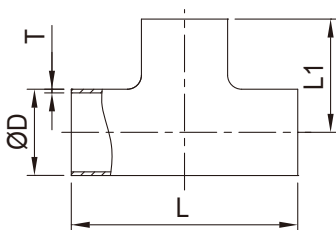


AS ET

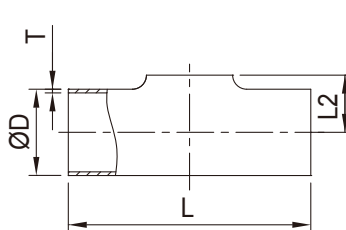
SIZE	ØD	L	L1	T
1/2"	12.7	98.2	49.1	1.6
3/4"	19.1	117.2	58.6	1.6
1.0"	25.4	136.2	68.1	1.6
1 1/4"	31.8	155.4	77.7	1.6
1.5"	38.1	174.0	87.0	1.6
2.0"	50.8	212.4	106.2	1.6
2.5"	63.5	250.0	125.0	1.6
3.0"	76.2	288.4	144.2	1.6
4.0"	101.6	364.8	182.4	2.0

Short Tee/Equal Tee

AS ET



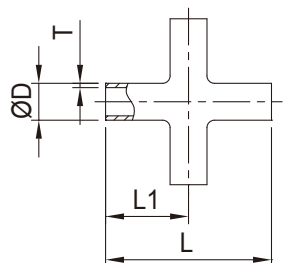
AS PT



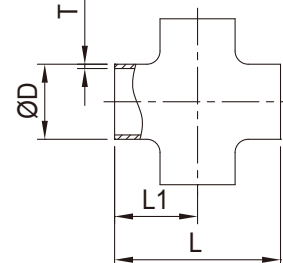
AS ET

SIZE	ØD	L	L1	L2	T
1/2"	12.7	38.2	19.1	9.35	1.6
3/4"	19.1	57.2	28.6	12.55	1.6
1.0"	25.4	76.2	38.1	15.7	1.6
1 1/4"	31.8	95.4	47.7	18.9	1.6
1.5"	38.1	114.0	57.0	22.05	1.6
2.0"	50.8	152.4	76.2	28.4	1.6
2.5"	63.5	190.0	95.0	34.75	1.6
3.0"	76.2	228.4	114.2	41.1	1.6
4.0"	101.6	304.8	152.4	53.8	2.0

AS EC Long Cross



Short Cross



AS ECS

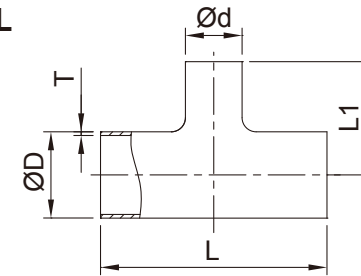
SIZE	ØD	L	L1	T
1/2"	12.7	38.2	19.1	1.6
3/4"	19.1	57.2	28.6	1.6
1.0"	25.4	76.2	38.1	1.6
1 1/4"	31.8	95.4	47.7	1.6
1.5"	38.1	114.0	57.0	1.6
2.0"	50.8	152.4	76.2	1.6
2.5"	63.5	190.0	95.0	1.6
3.0"	76.2	228.4	114.2	1.6
4.0"	101.6	304.8	152.4	2.0



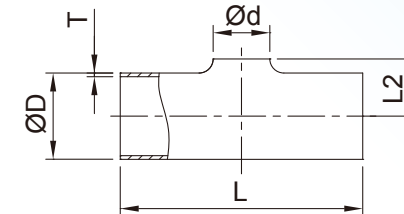
AS Pipe Line (mm)

Reducing Tee & Equal Reducing Tee

AS RTL



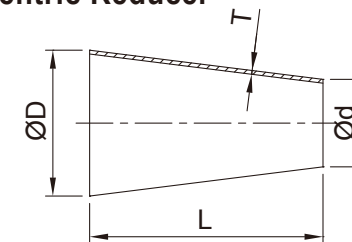
AS RTP



SIZE	ØD	Ød	L	L1	L2	T
1.5"x1.0"	38.1	25.4	160	80	22.05	1.6
2.0"x1.0"	50.8	25.4	160	80	28.4	1.6
2.0"x1.5"	50.8	38.1	160	80	28.4	1.6
2.5"x1.5"	63.5	38.1	160	80	34.75	1.6
2.5"x2.0"	63.5	50.8	160	80	34.75	1.6
3.0"x1.5"	76.2	38.1	160	80	41.1	1.6
3.0"x2.0"	76.2	50.8	160	80	41.1	1.6
3.0"x2.5"	76.2	63.5	190.5	95.3	41.1	1.6
4.0"x2.0"	101.6	50.8	160	80	53.8	2.0
4.0"x2.5"	101.6	63.5	190.5	95.3	53.8	2.0
4.0"x3.0"	101.6	76.2	228.6	114.3	53.8	2.0

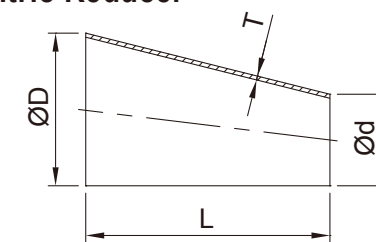
AS CR

Concentric Reducer



AS ER

Eccentric Reducer



SIZE	ØD	Ød	L	T
3/4"x1/2"	19.1	12.7	19.1	1.6
1.0"x1/2"	25.4	12.7	25.4	1.6
1.0"x3/4"	25.4	19.1	25.4	1.6
1 1/4" x3/4"	31.8	19.1	31.8	1.6
1 1/4"x1.0"	31.8	25.4	31.8	1.6
1.5"x3/4"	38.1	19.1	38.1	1.6
1.5"x1.0"	38.1	25.4	38.1	1.6
1.5"x1 1/4"	38.1	31.8	38.1	1.6
2.0"x1/2"	50.8	12.7	50.8	1.6
2.0"x3/4"	50.8	19.1	50.8	1.6
2.0"x1.0"	50.8	25.4	50.8	1.6
2.0"x1 1/4"	50.8	31.8	50.8	1.6
2.0"x1.5"	50.8	38.1	50.8	1.6
2.5"x1.0"	63.5	25.4	63.5	1.6
2.5"x1 1/4"	63.5	31.8	63.5	1.6
2.5"x1.5"	63.5	38.1	63.5	1.6
2.5"x2.0"	63.5	50.8	63.5	1.6
3.0"x1.0"	76.2	25.4	76.2	1.6

SIZE	ØD	Ød	L	T
3.0"x1 1/4"	76.2	31.8	76.2	1.6
3.0"x1.5"	76.2	38.1	76.2	1.6
3.0"x2.0"	76.2	50.8	76.2	1.6
3.0"x2.5"	76.2	63.5	76.2	1.6
4.0"x1.0"	101.6	25.4	101.6	1.6
4.0"x1 1/4"	101.6	31.8	101.6	1.6
4.0"x1.5"	101.6	38.1	101.6	1.6
4.0"x2.0"	101.6	50.8	101.6	1.6
4.0"x2.5"	101.6	63.5	101.6	1.6
4.0"x3.0"	101.6	76.2	101.6	1.6
5.0"x2.0"	127.0	50.8	127.0	1.6
5.0"x3.0"	127.0	76.2	127.0	1.6
5.0"x4.0"	127.0	101.6	127.0	1.6
6.0"x2.0"	152.4	50.8	152.4	1.6
6.0"x2.5"	152.4	63.5	152.4	1.6
6.0"x3.0"	152.4	76.2	152.4	1.6
6.0"x4.0"	152.4	101.6	152.4	1.6
6.0"x5.0"	152.4	127.0	152.4	1.6



High Purity Tube & Fitting Valve (ASTM BPE Standard)



Pharmaceutical/Biotechnology fitting. Haitima have over 15 years hygienic fitting experiences for developing out the ASME bioprocessing equipment (BPE) standard tube, fitting, valve components for high purity application such as water for injection, pharmaceutical, Cosmetics use. Material: low sulphur ASTM SS316L, S: $\leq 0.005\% \sim 0.017\%$,

MTR certificate will be offered.
Surface options:

Ra Reading for Tubing					
As drawing and / or mechanically polished			Mechanically Polished and Electropolished or Electropolished		
Surface Designation	Ra Average		Surface Designation	Ra Average	
	μ -in	μ -m		μ -in	μ -m
SF1	20	0.5	SF4	15	0.38
SF2	25	0.63	SF5	20	0.5
SF3	30	0.76	SF6	25	0.63

Ra Reading for Fitting					
Mechanically polished			Mechanically Polished and Electropolished		
Surface Designation	Ra Average		Surface Designation	Ra Average	
	μ -in	μ -m		μ -in	μ -m
SF1	20	0.5	SF4	15	0.38
SF2	25	0.63	SF5	20	0.5
SF3	30	0.76	SF6	25	0.63

Outer surface: Tubes and fittings $Ra \leq 32\mu$ in (0.8 μ m)

SEMI-CONDUCTOR/MICRO-ELECTRONICS



Haitima developed our semiconductor, vacuum pipe fitting and components step by step by means of good produce techniques experience of sanitary pipe fitting and valve.

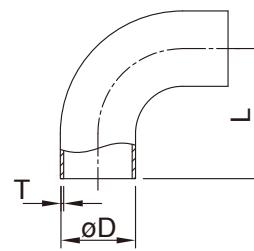
Our Vacuum and semiconductor fitting include: Clamp-Aluminum and Stainless steel and claw clamp are available. Flange-KF, ISO specification. Reducer-Blank flange and all of Elbow, Tee, Reducer. $Ra \leq 0.4\mu$ m by machine and polished can be provided on request.

We also can offer Electro-polished and blasted surfaces. So far our products have been successfully promoted to Germany, U.K, Japan and local building projects based on our flexible production ability and strict quality control.



BPE Pipe Line (mm)

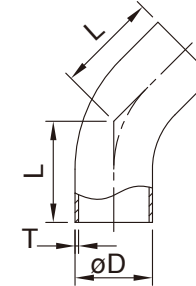
BPE-2S 90° Elbow



DT-7

SIZE	ØD	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	95.25	1.65
2.0"	50.8	120.65	1.65
2.5"	63.5	139.7	1.65
3.0"	76.2	158.75	1.65
4.0"	101.6	203.2	2.1

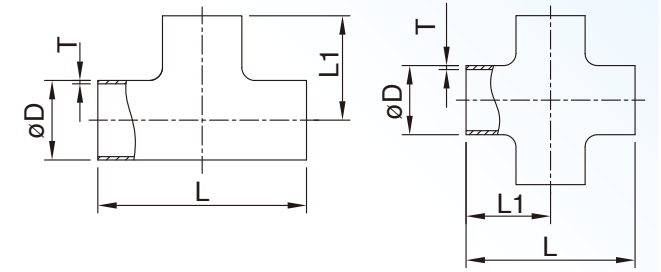
BPE-2KS 45° Elbow



DT-8

SIZE	ØD	L	T
1/2"	12.7	57.15	1.65
3/4"	19.05	57.15	1.65
1.0"	25.4	57.15	1.65
1.5"	38.1	63.5	1.65
2.0"	50.8	76.2	1.65
2.5"	63.5	85.6	1.65
3.0"	76.2	91.95	1.65
4.0"	101.6	114.3	2.1

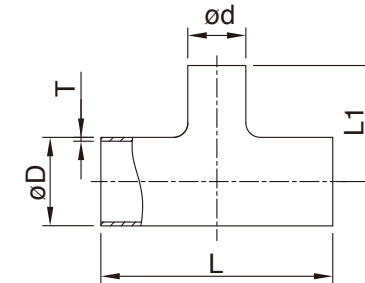
BPE-7W Tee & 9W Cross



DT-9

SIZE	ØD	L	L1	T
1/2"	12.7	95.2	47.5	1.65
3/4"	19.05	101.6	50.8	1.65
1.0"	25.4	108	53.85	1.65
1.5"	38.1	120.6	60.2	1.65
2.0"	50.8	146	73	1.65
2.5"	63.5	158.8	79.25	1.65
3.0"	76.2	171.4	85.6	1.65
4.0"	101.6	209.6	104.65	2.1

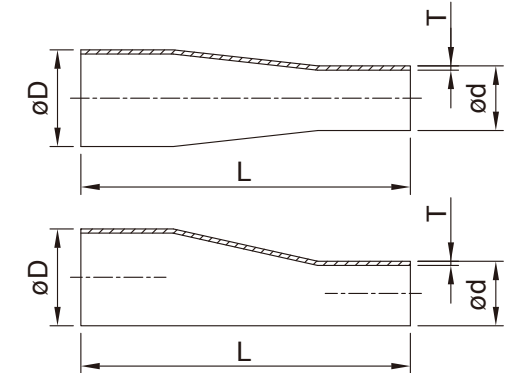
BPE-7RW Reducing Tee



DT-10

SIZE	ØD	Ød	L	L1	T
3/4"x1/2"	19.05	12.7	101.6	50.8	1.65
1.0"x1/2"	25.4	12.7	108	53.85	1.65
1.0"x3/4"	25.4	19.05	108	53.85	1.65
1.5"x1/2"	38.1	12.7	120.6	60.2	1.65
1.5"x3/4"	38.1	19.05	120.6	60.2	1.65
1.5"x1.0"	38.1	25.4	120.6	60.2	1.65
2.0"x1/2"	50.8	12.7	145.8	66.55	1.65
2.0"x3/4"	50.8	19.05	145.8	66.55	1.65
2.0"x1.0"	50.8	25.4	145.8	66.55	1.65
2.0"x1.5"	50.8	38.1	145.8	66.55	1.65
2.5"x1/2"	63.5	12.7	158.5	72.9	1.65
2.5"x3/4"	63.5	19.05	158.5	72.9	1.65
2.5"x1.0"	63.5	25.4	158.5	72.9	1.65
2.5"x1.5"	63.5	38.1	158.5	72.9	1.65
2.5"x2.0"	63.5	50.8	158.5	72.9	1.65
3.0"x1/2"	76.2	12.7	171.2	79.25	1.65
3.0"x3/4"	76.2	19.05	171.2	79.25	1.65
3.0"x1.0"	76.2	25.4	171.2	79.25	1.65
3.0"x1.5"	76.2	38.1	171.2	79.25	1.65
3.0"x2.0"	76.2	50.8	171.2	79.25	1.65
3.0"x2.5"	76.2	63.5	171.2	79.25	1.65
4.0"x1.0"	101.6	25.4	209.3	91.95	2.1
4.0"x1.5"	101.6	38.1	209.3	91.95	2.1
4.0"x2.0"	101.6	50.8	209.3	98.3	2.1
4.0"x2.5"	101.6	63.5	209.3	98.3	2.1
4.0"x3.0"	101.6	76.2	209.3	98.3	2.1

BPE-31 Concentric & BPE-32 Eccentric Reducer



DT-11

SIZE	ØD	Ød	L	T
3/4"x1/2"	19.05	12.7	101.6	1.65
1.0"x1/2"	25.4	12.7	114.3	1.65
1.0"x3/4"	25.4	19.05	101.6	1.65
1.5"x1/2"	38.1	12.7	139.7	1.65
1.5"x3/4"	38.1	19.05	127	1.65
1.5"x1.0"	38.1	25.4	127	1.65
2.0"x1/2"	50.8	12.7	196.85	1.65
2.0"x3/4"	50.8	19.05	184.25	1.65
2.0"x1.0"	50.8	25.4	184.25	1.65
2.0"x1.5"	50.8	38.1	133.35	1.65

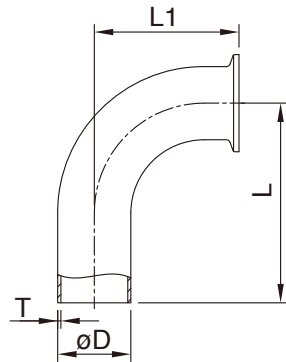
DT-11

SIZE	ØD	Ød	L	T
2.5"x1.5"	63.5	38.1	184.25	1.65
2.5"x2.0"	63.5	50.8	139.7	1.65
3.0"x1.5"	76.2	38.1	235	1.65
3.0"x2.0"	76.2	50.8	190.5	1.65
3.0"x2.5"	76.2	63.5	139.7	1.65
4.0"x1.5"	101.6	38.1	342.9	2.1
4.0"x2.0"	101.6	50.8	299.7	2.1
4.0"x2.5"	101.6	63.5	247.7	2.1
4.0"x3.0"	101.6	76.2	196.85	2.1



BPE Pipe Line (mm)

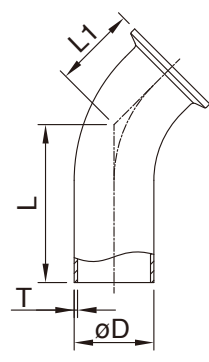
**BPE-90° Weld /
Clamp Elbow**



DT-12

SIZE	ØD	L	L1	T
1/2"	12.7	76.2	41.15	1.65
3/4"	19.05	76.2	41.15	1.65
1.0"	25.4	76.2	50.8	1.65
1.5"	38.1	95.25	69.85	1.65
2.0"	50.8	120.65	88.9	1.65
2.5"	63.5	139.7	107.95	1.65
3.0"	76.2	158.75	127	1.65
4.0"	101.6	203.2	168.15	2.1

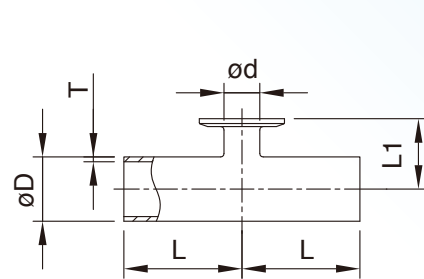
**BPE-45° Weld /
Clamp Elbow**



DT-13

SIZE	ØD	L	L1	T
1/2"	12.7	57.15	25.4	1.65
3/4"	19.05	57.15	25.4	1.65
1.0"	25.4	57.15	28.45	1.65
1.5"	38.1	63.5	36.8	1.65
2.0"	50.8	76.2	44.45	1.65
2.5"	63.5	85.6	52.32	1.65
3.0"	76.2	91.95	60.45	1.65
4.0"	101.6	114.3	79.25	2.1

**BPE-Short Outlet Weld /
Clamp Reducing Tee**

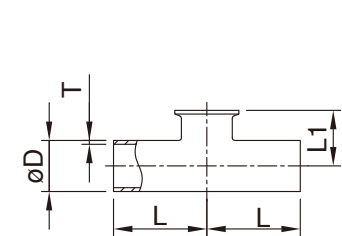


DT-14

SIZE	ØD	Ød	L	L1	T
3/4"x1/2"	19.05	12.7	50.8	25.4	1.65
1.0"x1/2"	25.4	12.7	53.84	28.6	1.65
1.0"x3/4"	25.4	19.05	53.84	28.6	1.65
1.5"x1/2"	38.1	12.7	60.2	34.9	1.65
1.5"x3/4"	38.1	19.05	60.2	34.9	1.65
1.5"x1.0"	38.1	25.4	60.2	34.9	1.65
2.0"x1/2"	50.8	12.7	72.9	41.3	1.65
2.0"x3/4"	50.8	19.05	72.9	41.3	1.65
2.0"x1.0"	50.8	25.4	72.9	41.3	1.65
2.0"x1.5"	50.8	38.1	72.9	41.3	1.65
2.5"x1/2"	63.5	12.7	79.25	47.6	1.65
2.5"x3/4"	63.5	19.05	79.25	47.6	1.65
2.5"x1.0"	63.5	25.4	79.25	47.6	1.65

SIZE	ØD	Ød	L	L1	T
2.5"x1.5"	63.5	38.1	79.25	47.6	1.65
2.5"x2.0"	63.5	50.8	79.25	47.6	1.65
3.0"x1/2"	76.2	12.7	85.6	53.65	1.65
3.0"x3/4"	76.2	19.05	85.6	53.65	1.65
3.0"x1.0"	76.2	25.4	85.6	53.65	1.65
3.0"x1.5"	76.2	38.1	85.6	53.65	1.65
3.0"x2.0"	76.2	50.8	85.6	53.65	1.65
3.0"x2.5"	76.2	63.5	85.6	53.65	1.65
4.0"x1.0"	101.6	25.4	104.65	66.55	2.1
4.0"x1.5"	101.6	38.1	104.65	66.55	2.1
4.0"x2.0"	101.6	50.8	104.65	66.55	2.1
4.0"x2.5"	101.6	63.5	104.65	66.55	2.1
4.0"x3.0"	101.6	76.2	104.65	66.55	2.1

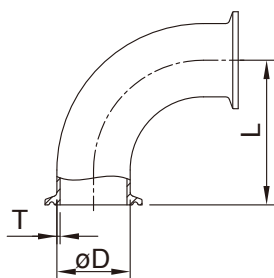
**BPE-Equal Outlet
Weld / Clamp Tee**



DT-15

SIZE	ØD	L	L1	T
1/2"	12.7	47.6	25.4	1.65
3/4"	19.05	50.8	28.44	1.65
1.0"	25.4	54	28.44	1.65
1.5"	38.1	60.2	34.8	1.65
2.0"	50.8	72.9	41.15	1.65
2.5"	63.5	79.25	47.5	1.65
3.0"	76.2	85.7	53.85	1.65
4.0"	101.6	104.8	69.85	2.1

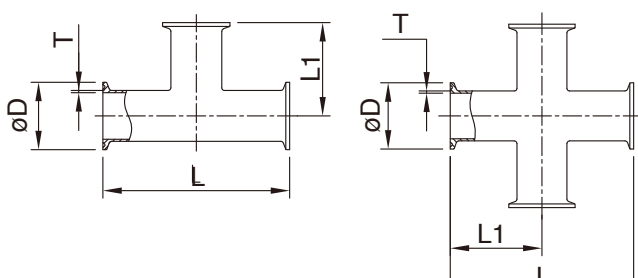
**BPE-2CMP 90°
Clamp Elbow**



DT-16

SIZE	ØD	L	T
1/2"	12.7	41.15	1.65
3/4"	19.05	41.15	1.65
1.0"	25.4	50.8	1.65
1.5"	38.1	69.85	1.65
2.0"	50.8	88.9	1.65
2.5"	63.5	107.95	1.65
3.0"	76.2	127	1.65
4.0"	101.6	168.15	2.1

BPE-7MP Clamp Tee & BPE-9MP Cross



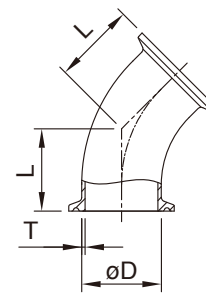
DT-18

SIZE	ØD	L	L1	T
1/2"	12.7	114.4	57.2	1.65
3/4"	19.05	120.6	60.2	1.65
1.0"	25.4	133.4	66.55	1.65
1.5"	38.1	146	72.9	1.65
2.0"	50.8	171.4	85.6	1.65
2.5"	63.5	182.2	91.95	1.65
3.0"	76.2	196.8	98.3	1.65
4.0"	101.6	241.4	120.65	2.1



BPE Pipe Line (mm)

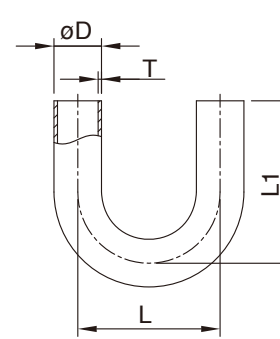
**BPE-2KMP 45°
Clamp Elbow**



DT-17

SIZE	ØD	L	T
1/2"	12.7	25.4	1.65
3/4"	19.05	25.4	1.65
1.0"	25.4	28.4	1.65
1.5"	38.1	36.58	1.65
2.0"	50.8	44.45	1.65
2.5"	63.5	52.32	1.65
3.0"	76.2	60.45	1.65
4.0"	101.6	79.25	2.1

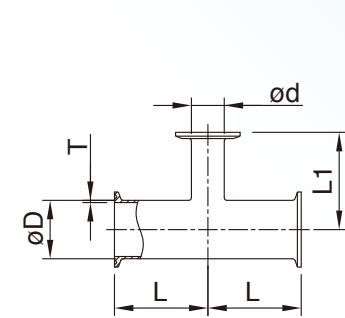
BPE-180° U-Joint Weld



DT-23

SIZE	ØD	L	L1	T
1/2"	12.7	114.3	76.2	1.65
3/4"	19.05	114.3	76.2	1.65
1.0"	25.4	114.3	76.2	1.65
1.5"	38.1	152.4	114.3	1.65
2.0"	50.8	152.4	127	1.65
2.5"	63.5	190.5	146.1	1.65
3.0"	76.2	228.6	165.1	1.65
4.0"	101.6	304.8	215.9	2.1

BPE-Reducing Tee Clamp End

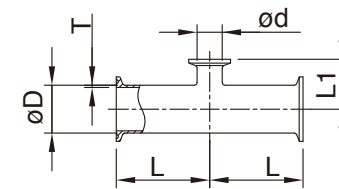


DT-19

SIZE	ØD	Ød	L	L1	T
3/4"x1/2"	19.05	12.7	63.5	63.5	1.65
1.0"x1/2"	25.4	12.7	66.7	66.7	1.65
1.0"x3/4"	25.4	19.05	66.7	66.7	1.65
1.5"x1/2"	38.1	12.7	73	73	1.65
1.5"x3/4"	38.1	19.05	73	73	1.65
1.5"x1.0"	38.1	25.4	73	73	1.65
2.0"x1.0"	50.8	25.4	85.7	79.4	1.65
2.0"x1.5"	50.8	38.1	85.7	79.4	1.65
2.5"x1.0"	63.5	25.4	92.1	85.7	1.65
2.5"x1.5"	63.5	38.1	92.1	85.7	1.65

SIZE	ØD	Ød	L	L1	T
2.5"x2.0"	63.5	50.8	92.1	85.7	1.65
3.0"x1.0"	76.2	25.4	98.4	92.1	1.65
3.0"x1.5"	76.2	38.1	98.4	92.1	1.65
3.0"x2.0"	76.2	50.8	98.4	98.4	1.65
3.0"x2.5"	76.2	63.5	98.4	98.4	1.65
4.0"x1.0"	101.6	25.4	120.7	104.8	2.1
4.0"x1.5"	101.6	38.1	120.7	104.8	2.1
4.0"x2.0"	101.6	50.8	120.7	111.1	2.1
4.0"x2.5"	101.6	63.5	120.7	111.1	2.1
4.0"x3.0"	101.6	76.2	120.7	111.1	2.1

BPE-7RMP Clamp Reducing Tee



DT-20

SIZE	ØD	Ød	L	L1	T
3/4"x1/2"	19.05	12.7	63.5	25.4	1.65
1.0"x1/2"	25.4	12.7	66.7	28.6	1.65
1.0"x3/4"	25.4	19.05	66.7	28.6	1.65
1.5"x1/2"	38.1	12.7	73	34.9	1.65
1.5"x3/4"	38.1	19.05	73	34.9	1.65
1.5"x1.0"	38.1	25.4	73	34.9	1.65
2.0"x1.0"	50.8	25.4	85.7	47.6	1.65
2.0"x1.5"	50.8	38.1	92.1	47.6	1.65
2.5"x1.0"	63.5	25.4	92.1	47.6	1.65
2.5"x1.5"	63.5	38.1	92.1	47.6	1.65

SIZE	ØD	Ød	L	L1	T
2.5"x2.0"	63.5	50.8	92.1	47.6	1.65
3.0"x1.0"	76.2	25.4	98.4	54	1.65
3.0"x1.5"	76.2	38.1	98.4	54	1.65
3.0"x2.0"	76.2	50.8	98.4	54	1.65
3.0"x2.5"	76.2	63.5	98.4	54	1.65
4.0"x1.0"	101.6	25.4	120.7	66.7	2.1
4.0"x1.5"	101.6	38.1	120.7	66.7	2.1
4.0"x2.0"	101.6	50.8	120.7	66.7	2.1
4.0"x2.5"	101.6	63.5	120.7	66.7	2.1
4.0"x3.0"	101.6	76.2	120.7	66.7	2.1

DT-21

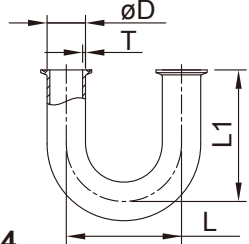
SIZE	ØD	Ød	L	T
3/4"x1/2"	19.05	12.7	50.8	1.65
1.0"x1/2"	25.4	12.7	63.5	1.65
1.0"x3/4"	25.4	19.05	50.8	1.65
1.5"x1/2"	38.1	12.7	88.9	1.65
1.5"x3/4"	38.1	19.05	76.2	1.65
1.5"x1.0"	38.1	25.4	76.2	1.65
2.0"x1/2"	50.8	12.7	139.7	1.65
2.0"x3/4"	50.8	19.05	127.0	1.65
2.0"x1.0"	50.8	25.4	127.0	1.65
2.0"x1.5"	50.8	38.1	76.2	1.65

SIZE	ØD	Ød	L	T
2.5"x1.5"	63.5	38.1	127	1.65
2.5"x2.0"	63.5	50.8	76.2	1.65
3.0"x1.5"	76.2	38.1	177.8	1.65
3.0"x2.0"	76.2	50.8	127.0	1.65
3.0"x2.5"	76.2	63.5	76.2	1.65
4.0"x1.5"	101.6	38.1	282.6	2.1
4.0"x2.0"	101.6	50.8	231.8	2.1
4.0"x2.5"	101.6	63.5	181.0	2.1
4.0"x3.0"	101.6	76.2	130.2	2.1



BPE Pipe Line (mm)

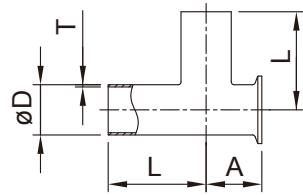
BPE-180° Clamp Joint



DT-24

SIZE	ØD	L	L1	T
1/2"	12.7	114.3	88.9	1.65
3/4"	19.05	114.3	88.9	1.65
1.0"	25.4	114.3	88.9	1.65
1.5"	38.1	114.3	127.0	1.65
2.0"	50.8	152.4	139.7	1.65
2.5"	63.5	190.5	158.8	1.65
3.0"	76.2	228.6	177.8	1.65
4.0"	101.6	304.8	231.8	2.1

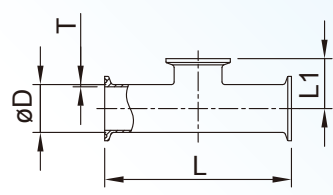
BPE-Short Outlet Run Tee



DT-25

SIZE	ØD	A	L	T
1/2"	12.7	22.2	47.6	1.65
3/4"	19.05	25.4	50.8	1.65
1.0"	25.4	28.6	54.0	1.65
1.5"	38.1	34.9	60.3	1.65
2.0"	50.8	41.3	73.0	1.65
2.5"	63.5	47.6	79.4	1.65
3.0"	76.2	54.0	85.7	1.65
4.0"	101.6	69.9	104.8	2.1

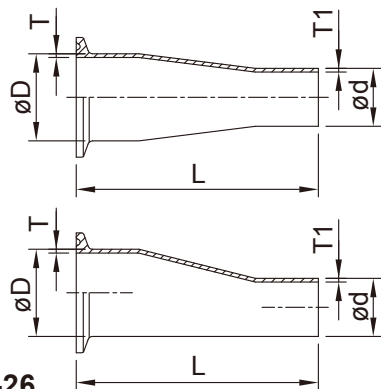
BPE-Short Outlet Tee Clamp End



DT-27

SIZE	ØD	L	L1	T
1/2"	12.7	114.4	25.4	1.65
3/4"	19.05	120.6	28.6	1.65
1.0"	25.4	133.4	28.6	1.65
1.5"	38.1	146.0	34.9	1.65
2.0"	50.8	171.4	41.3	1.65
2.5"	63.5	184.2	47.6	1.65
3.0"	76.2	196.8	54.0	1.65
4.0"	101.6	241.4	69.9	2.1

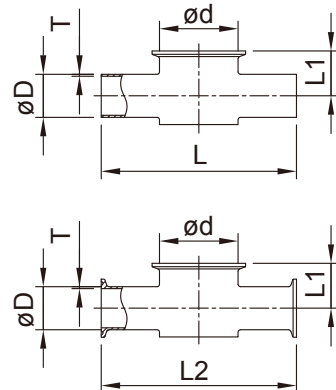
BPE-Concentric & Eccentric Reducer Clamp / Weld End



DT-26

SIZE	ØD	Ød	L	T	T1
3/4"x1/2"	19.05	12.7	76.2	1.65	1.65
1.0"x1/2"	25.4	12.7	88.9	1.65	1.65
1.0"x3/4"	25.4	19.05	76.2	1.65	1.65
1.5"x1/2"	38.1	12.7	114.3	1.65	1.65
1.5"x3/4"	38.1	19.05	101.6	1.65	1.65
1.5"x1.0"	38.1	25.4	101.6	1.65	1.65
2.0"x1/2"	50.8	12.7	165.1	1.65	1.65
2.0"x3/4"	50.8	19.05	152.4	1.65	1.65
2.0"x1.0"	50.8	25.4	152.4	1.65	1.65
2.0"x1.5"	50.8	38.1	101.6	1.65	1.65
2.5"x1.5"	63.5	38.1	152.4	1.65	1.65
2.5"x2.0"	63.5	50.8	107.9	1.65	1.65
3.0"x1.5"	76.2	38.1	203.2	1.65	1.65
3.0"x2.0"	76.2	50.8	158.8	1.65	1.65
3.0"x2.5"	76.2	63.5	108.0	1.65	1.65
4.0"x1.5"	101.6	38.1	308.0	2.1	1.65
4.0"x2.0"	101.6	50.8	263.5	2.1	1.65
4.0"x2.5"	101.6	63.5	212.7	2.1	1.65
4.0"x3.0"	101.6	76.2	161.9	2.1	1.65

BPE-Instrument Tee Weld / Clamp End



DT-28/DT-29

SIZE	ØD	Ød	L	L1	L2	T
1.0"x1/2"	12.7	25.4	127	22.2	154	1.65
1.0"x3/4"	19.05	25.4	127	25.4	154	1.65
1.5"x1/2"	12.7	38.1	127	22.2	152.4	1.65
1.5"x3/4"	19.05	38.1	127	25.4	152.4	1.65
1.5"x1.0"	25.4	38.1	127.0	28.6	152.4	1.65
2.0"x1/2"	12.7	50.8	139.8	25.4	165.2	1.65
2.0"x3/4"	19.05	50.8	139.8	28.6	165.2	1.65
2.0"x1.0"	25.4	50.8	139.8	31.8	165.2	1.65
2.0"x1.5"	38.1	50.8	139.8	38.1	165.2	1.65
2.5"x1/2"	12.7	63.5	170	35	194	1.65
2.5"x3/4"	19.05	63.5	170	38.1	194	1.65
2.5"x1.0"	25.4	63.5	170	41.3	194	1.65
2.5"x1.5"	38.1	63.5	170	44.5	194	1.65
2.5"x2.0"	50.8	63.5	170	48.0	194	1.65

DT-28/DT-29

SIZE	ØD	Ød	L	L1	L2	T
3.0"x1/2"	12.7	76.2	180	38.1	204	1.65
3.0"x3/4"	19.05	76.2	180	41.3	204	1.65
3.0"x1.0"	25.4	76.2	180	44.5	204	1.65
3.0"x1.5"	38.1	76.2	180	48	204	1.65
3.0"x2.0"	50.8	76.2	180	50.8	204	1.65
3.0"x2.5"	63.5	76.2	180	54	204	1.65
4.0"x1/2"	12.7	101.6	220	79.4	244	1.65
4.0"x3/4"	19.05	101.6	220	82.6	244	1.65
4.0"x1.0"	25.4	101.6	220	85.7	244	1.65
4.0"x1.5"	38.1	101.6	220	88.9	244	1.65
4.0"x2.0"	50.8	101.6	220	95.2	244	1.65
4.0"x2.5"	63.5	101.6	220	98.4	244	1.65
4.0"x3.0"	76.2	101.6	220	101.6	244	1.65



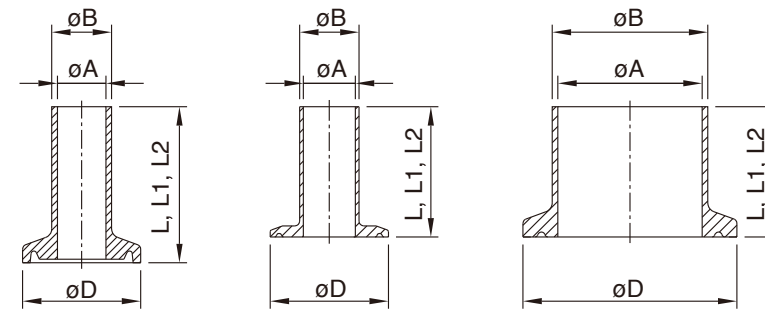
BPE Pipe Line (mm)

BPE-14AMP-AWF Weld Ferrule

1/2" & 3/4"

1.0"

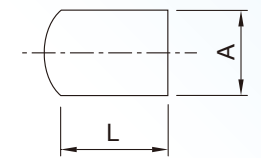
1.5"- 4.0"



DT-22

SIZE	ØA	ØB	ØD	L	L1	L2
1/2"	9.4	12.7	25	12.7	28.7	44.5
3/4"	15.7	19.1	25	12.7	28.7	44.5
1.0"	22.1	25.4	50.5	12.7	28.7	44.5
1.5"	34.8	38.1	50.5	12.7	28.7	44.5
2.0"	47.5	50.8	64	12.7	28.7	57.2
2.5"	60.2	63.5	77.5	12.7	28.7	57.2
3.0"	72.9	76.2	91	12.7	28.7	57.2
4.0"	97.4	101.6	119	15.9	28.7	57.2

BPE-16W Weld Cap



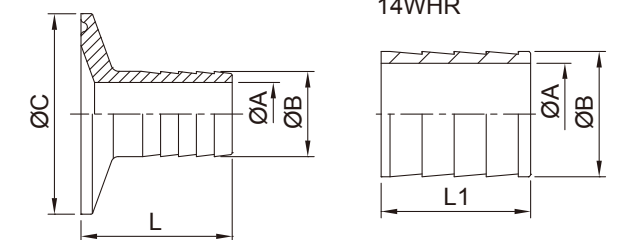
DT-30

SIZE	A	L
1/2"	12.70	38.10
3/4"	19.05	38.10
1.0"	25.40	38.10
1 1/2"	38.10	38.10
2.0"	50.80	38.10
2 1/2"	63.50	38.10
3.0"	76.20	44.50
4.0"	101.60	50.80
6.0"	152.40	63.50

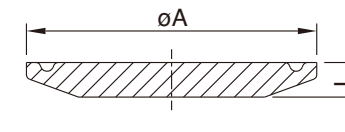
BPE-14MPHR . 14WHR Hose Adapter

14MPHR

14WHR



BPE-16AMP Solid End Cap

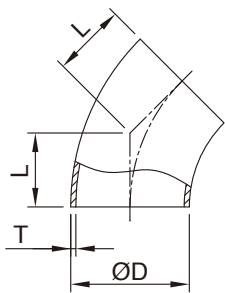


DT-31

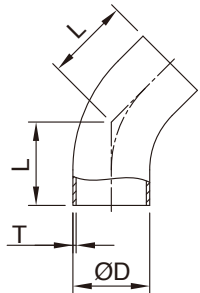
SIZE	ØA	L
1/2"	25.4	4.75
3/4"	25.4	4.75
1.0"	50.5	6.35
1.5"	50.5	6.35
2.0"	64	6.35
2.5"	77.5	6.35
3.0"	91	6.35
4.0"	119.0	7.92

SIZE	ØA	ØB	ØC	L	L1
1/2"x1/2"	9.5	13.7	25	38	25.3
3/4"x3/4"	15.8	21.4	25	38	25.3
1.0"x1/2"	9.5	13.7	50.5	38	25.3
1.0"x3/4"	15.8	21.4	50.5	38	25.3
1.0"x1.0"	20.6	25.4	50.5	43	30.3
1.5"x1/2"	9.5	13.7	50.5	38	25.3
1.5"x3/4"	15.8	21.4	50.5	38	25.3
1.5"x1.0"	20.6	25.4	50.5	43	25.3
1.5"x1.5"	33.2	38.1	50.5	43	30.3
2.0"x1.5"	33.2	38.1	64	43	30.3
2.0"x2.0"	46	50.8	64	58.7	46
2.5"x2.5"	58.7	63.5	77.5	59.5	46.8
3.0"x3.0"	72	76.2	91	78.6	65.9
4.0"x4.0"	97.6	101.6	119	85.5	72.8

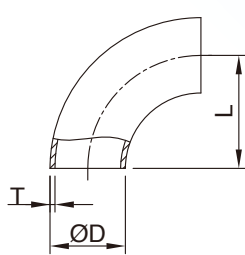
45° Short Elbow



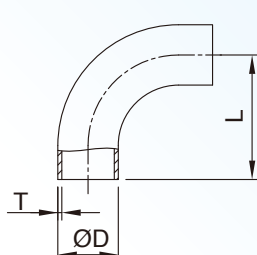
45° Long Elbow



90° Short Elbow



90° Long Elbow



45° Elbow

SIZE	ØD	L	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	2.1

45° Elbow

SIZE	ØD	L	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	2.1

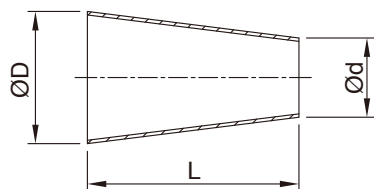
90° Bend

SIZE	ØD	L	T
1.0"	25.4	38.1	1.65
1.5"	38.1	57.2	1.65
2.0"	50.8	76.2	1.65
2.5"	63.5	95.25	1.65
3.0"	76.2	114.3	1.65
4.0"	101.6	152.4	2.1

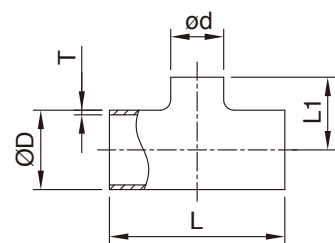
90° Bend

SIZE	ØD	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	2.1

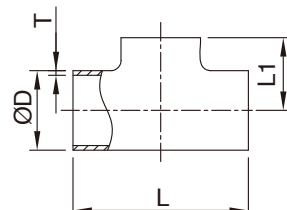
Concentric Reducer



Reducing Tee



Welding Tee



Concentric Reducer

SIZE	ØD	Ød	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
3.0"x2.5"	76.2	63.5	50.8	1.65
4.0"x1.5"	101.6	38.1	254	2.1
4.0"x2.0"	101.6	50.8	203.2	2.1
4.0"x2.5"	101.6	63.5	152.4	2.1
4.0"x3.0"	101.6	76.2	101.6	2.1

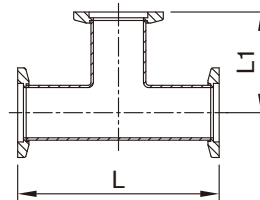
Reducing Tee

SIZE	ØD	Ød	L	L1	T
1.5"x1.0"	38.1	25.4	114.3	53.98	1.65
2.0"x1.0"	50.8	25.4	152.4	60.3	1.65
2.0"x1.5"	50.8	38.1	152.4	63.5	1.65
2.5"x1.5"	63.5	38.1	152.4	69.85	1.65
2.5"x2.0"	63.5	50.8	152.4	82.55	1.65
3.0"x1.5"	76.2	38.1	165.1	76.2	1.65
3.0"x2.0"	76.2	50.8	165.1	88.90	1.65
3.0"x2.5"	76.2	63.5	165.1	82.55	1.65
4.0"x2.0"	101.6	50.8	196.8	101.6	2.1
4.0"x2.5"	101.6	63.5	196.8	95.25	2.1
4.0"x3.0"	101.6	76.2	196.8	95.25	2.1

Tee

SIZE	ØD	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	2.1

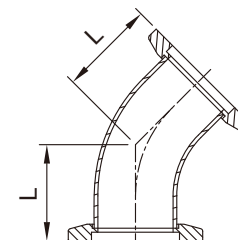
Tee Flange



Tube

SIZE	O.D	L	L1
KF25	1.0"	100.07	50.03
KF40	1.5"	130.04	65.02
KF50	2.0"	139.95	70.01

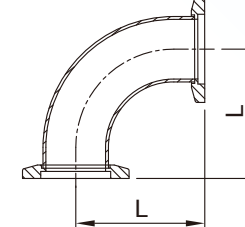
45° Elbow Flange



Tube

SIZE	O.D	L
KF25	1.0"	28.44
KF40	1.5"	42.67
KF50	2.0"	50.54

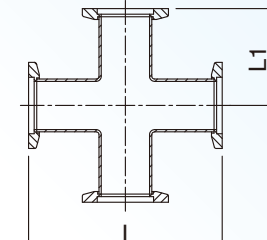
90° Elbow Flange



Tube

SIZE	O.D	L
KF25	1.0"	50.03
KF40	1.5"	65.02
KF50	2.0"	70.1

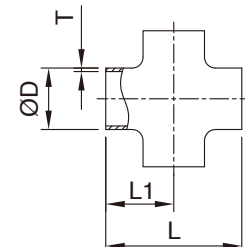
4-Way Cross Flange



Tube

SIZE	O.D	L	L1
KF25	1.0"	100.09	50.03
KF40	1.5"	130.04	65.02
KF50	2.0"	139.95	70.1

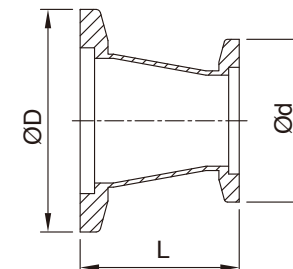
Cross



Cross

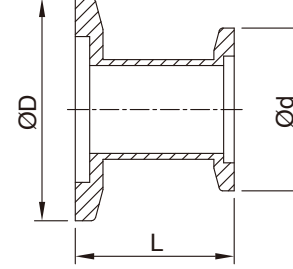
SIZE	ØD	L	L1	T
1.0"	25.4	95.2	47.6	1.65
1.5"	38.1	114.4	57.2	1.65
2.0"	50.8	152.4	76.2	1.65
2.5"	63.5	152.4	76.2	1.65
3.0"	76.2	165.2	82.6	1.65
4.0"	101.6	196.8	98.4	2.1

Conical Reducer



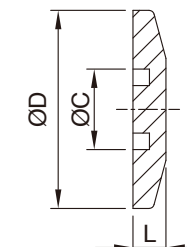
ØD	Ød	L
KF25	KF16	39.9
KF40	KF16	39.9
KF40	KF25	39.9
KF50	KF16	39.9
KF50	KF25	39.9
KF50	KF40	39.9

Straight Reducer



ØD	Ød	L
KF25	KF16	39.9
KF40	KF16	39.9
KF40	KF25	39.9
KF50	KF16	39.9
KF50	KF25	39.9
KF50	KF40	39.9

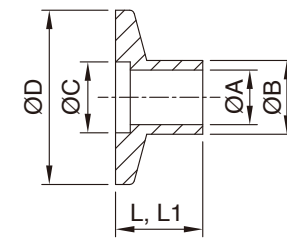
Blank Flange



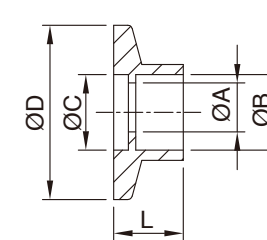
Blank Flange

SIZE	ØC	ØD	L
KF-10	12.2	30	5.1
KF-16	17.3	30	5.1
KF-25	26.2	40	5.1
KF-40	41.1	55	5.1
KF-50	52.3	75	5.1

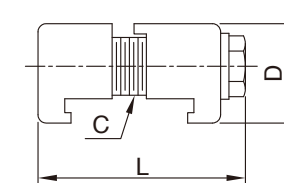
Weld Flange



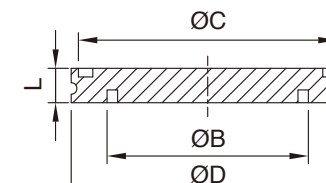
Socket Weld Flange



ISO-Double Claw Clamp



ISO-Blank Flange



Weld Flanges

SIZE	ØA	ØB	ØC	ØD	L	L1
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	33.8	38.1	41.1	55	19.1	40
KF-50	46.5	50.8	52.3	75	19.1	40

Socket Weld Flange

SIZE	ØA	ØB	ØC	ØD	L
KF-10	9.4	13.0	12.2	30.0	12.7
KF-16	15.7	19.3	17.3	30.0	12.7
KF-25	22.1	25.7	26.2	40.0	12.7
KF-40	34.8	38.4	41.1	55.0	12.7
KF-50	47.5	51.1	52.3	75.0	12.7

Double Claw Clamp

SIZE	C	D	L
ISO-63	M8	24.1	50.3
ISO-80	M8	24.1	50.3
ISO-100	M8	24.1	50.3
ISO-160	M10	27.9	52.1

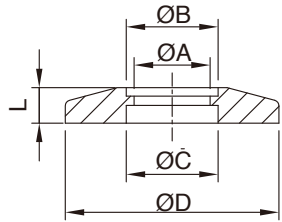
Blank Flange

SIZE	ØB	ØC	ØD	L
ISO-63	70	90	95	12
ISO-80	83	105	110	12
ISO-100	102	125	130	12
ISO-160	153	175	180	12



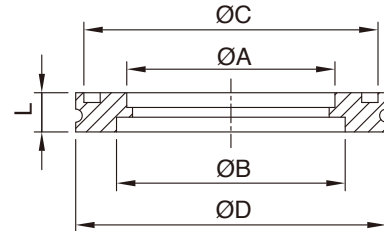
Vacuum Components

Bored Flange



SIZE	ØA	ØB	ØC	ØD	L
KF-10	11.17	12.95	12.2	30	5
KF-16	17.27	19.3	17.3	30	5
KF-25	22.6	25.9	26.2	40	5
KF-40	35.3	38.6	41.1	55	5
KF-50	48	51.3	52.3	75	5

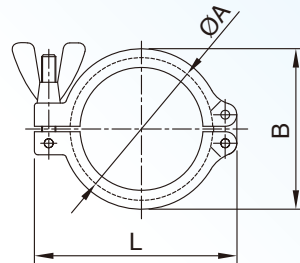
ISO-Bored Flange



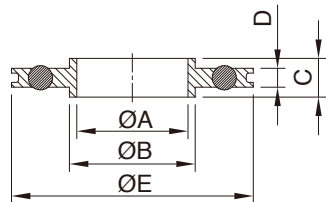
Weld Flange

SIZE	ØA	ØB	ØC	ØD	L
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

KF-Clamp-Aluminum

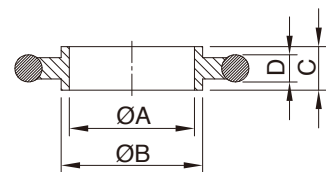


SIZE	ØA	ØB	L
10/16	35	45	62
20/25	45	55	73
32/40	60	70	86.1
50	80	96	123



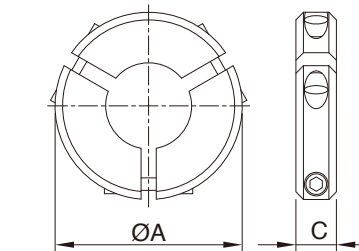
ISO-Type

SIZE	ØA	ØB	C	D	ØE
ISO-63-V-U	66.8	69.6	8	3.81	91
ISO-80-V-U	79.75	82.6	8	3.81	104
ISO-100-V-U	98.8	101.6	8	3.81	123
ISO-160-V-U	149.86	152.6	8	3.81	170
ISO-200-V-U	207.8	212.6	8	3.81	234
ISO-250-V-U	257.5	260.4	8	3.81	285
ISO-320-V-U	312	317.3	12	5.58	340
ISO-400-V-U	394	399.2	12	5.58	416
ISO-500-V-U	494	500.2	12	5.58	555



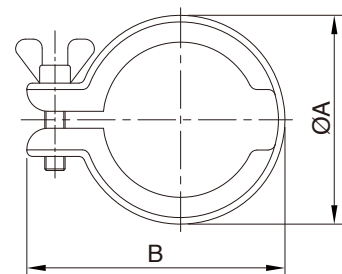
KF-Type

SIZE	ØA	ØB	C	D
KF-10	10	12	8	3.9
KF-16	16	17	8	3.9
KF-25	25	26	8	3.9
KF-40	40	41	8	3.9
KF-50	50	52	8	3.9



Clamping Element 3Pcs KF-TYPE (Alu or SS304)

SIZE	ØA	C
ISO-KF NW10/16	52.1	18
ISO-KF NW20/25	55.1	16
ISO-KF NW32/40	70.1	18
ISO-KF NW50	95.3	24.9



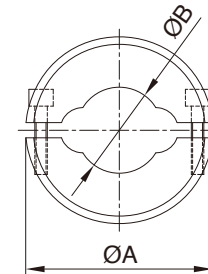
Press Type Clamp Ring KF-TYPE (Alu or SS304)

SIZE	ØA	B
ISO-KF NW10/16	36.1	47
ISO-KF NW20/25	46	57.2
ISO-KF NW32/40	61	71.1
ISO-KF NW50	82	90.9



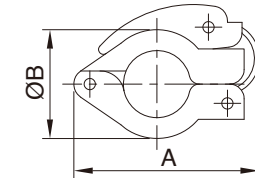
Vacuum Components

Centreing Ring (SS304 & Alu Material) with O-Ring (EPDM, Silicon)



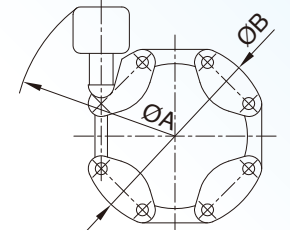
Clamp For Metal Seal (SS304 Stainless Steel) KF

SIZE	ØA	ØB
ISO-KF NW10/16	47	35.1
ISO-KF NW20/25	57.2	45.2
ISO-KF NW32/40	72.4	59.9
ISO-KF NW50	96	80



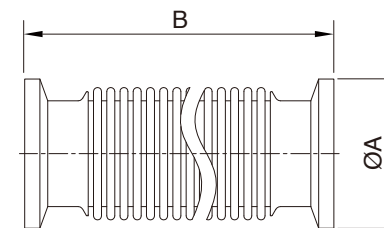
Quick Release Clamp KF-Type (Alu&SS304)

SIZE	A	ØB
ISO-KF NW10/16	76.2	50.8
ISO-KF NW20/25	76.2	50.8
ISO-KF NW32/40	101.6	76.2



Chain Clamp (Alu, Plastic & SS304 material Link Steel)

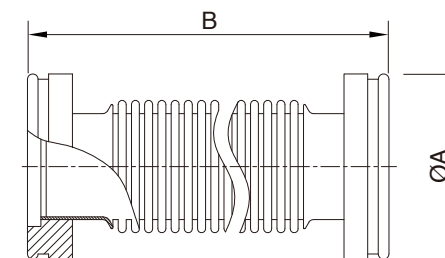
SIZE	ØA	ØB
ISO-KF NW10/16	115.1	59.9
ISO-KF NW20/25	1.9	52.1
ISO-KF NW32/40	34.1	5.1
ISO-KF NW50	151.9	104.9



NW FLEXIBLE HOSES

SIZE	ØA	B
KF-16-250	30	250
KF-16-500	30	500
KF-16-750	30	750
KF-16-1000	30	1000
KF-25-250	40	250
KF-25-500	40	500
KF-25-750	40	750
KF-25-1000	40	1000

SIZE	ØA	B
KF-40-250	55	250
KF-40-500	55	500
KF-40-750	55	750
KF-40-1000	55	1000
KF-50-250	75	250
KF-50-500	75	500
KF-50-750	75	750
KF-50-1000	75	1000



ISO FLEXIBLE HOSES

SIZE	ØA	B
ISO-63-250	95	250
ISO-63-500	95	500
ISO-63-750	95	750
ISO-63-1000	95	1000
ISO-80-250	110	250
ISO-80-500	110	500

SIZE	ØA	B
ISO-80-750	110	750
ISO-80-1000	110	1000
ISO-100-250	130	250
ISO-100-500	130	500
ISO-100-750	130	750
ISO-100-1000	130	1000