TECHNOLOGY

INNOVATION

SERVICES

詠晟科技股份有限公司 EVERFIT TECHNOLOGY CO., LTD.

EFT

EVERFIT

詠晟科技股份有限公司之前身為茗暘工業股份有限公司，創立於1976年，主要從事不銹鋼管配件之專業製造廠。產品範圍包括：衛生食品級管接頭、管束、閥類，半導體用真空法蘭，BPE級生化製藥用管接頭等。
另也承製各式不銹鋼鍛造、加工之客製品服務。

公司於2005年在彰化近郊成立鍛造廠，佔地1500平方公尺，設有2條生產線從事各類零組件之熱作鍛造，並自行開發模具製作，大量縮短產品之製作時程與降低生產成本，提升產品競爭力。

為提高產品之完整性與擴大滿足客戶之需求，詠晟公司於2009年中與雄駿公司完成合併，加強各類閥門之開發與組裝業務，並將業務項目延伸到建築五金用不銹鋼零組件之製作。

2010年底預定完成和美新廠，廠房總面積約有4000平方公尺；冀望因寬敞的新環境與順暢的流程規劃，能為客戶提供更好與更有競爭的服務，努力達成公司的品質政策：『品質第一、服務至上』。

About the company

Everfit Technology Co.,Ltd., formerly known as Ming Yang industry co., ltd., established in 1976, mainly engaged in professional manufacturer of stainless steel pipe fittings.

Product range include : Sanitary fittings,Clamps, Valves ,Vacuum Flange, BPE ferrules,etc. And we also contract to produce a variety of stainless steel products, forging and processing of customer service.

We form the forging factory in Chang hua in 2005, covers an area of 1,500 square meters. In addition, we set up two production lines in various parts of the hot forging, develop mold marking. Because of that, we can save a lot of time and cost of the manufacture side and enhance the competitiveness of products.

In 2009, we combine with Shiung Jiun enterprise for business combination. In order to improve the integrity and expansion of products to meet customer's demand. To enhance the development of various types of valves and fabricating business, and extend to building hardware components of stainless steel production.

We expect to complete the new factory buildings in Hemei in the end of 2010 and the total area is around 4,000 square meters. Hope we can use more spacious environment and smooth flow planning to provide more competitive and better services to our customers, at the same time, we will reach the company's quality policy: Quality and service is our priority mission.

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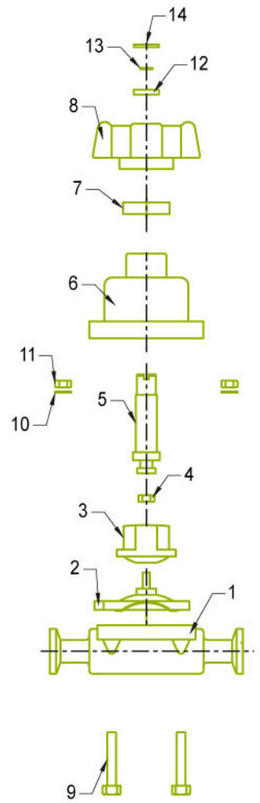
PRODUCTION EQUIPMENT

INSPECT EQUIPMENT

DIAPHRAGM VALVE

Diaphragm Valve



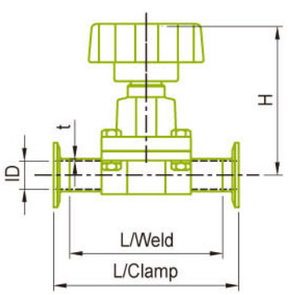
N0	DESIGNATION	QTY	MATERIAL
1	Diaphragm valve Body	1	SS316L
2	EPDM Sea1	1	EPDM
3	Seat	1	SS304
4	Nut	1	ST
5	Screw Shaft Seat	1	SS304
6	Bonnet	1	SS304
7	PP Ring	1	PP
8	Hand Wheel	1	POM
9	Screw	1	SS304
10	Ring	1	SS304
11	Nut	1	SS304
12	Pin	1	SS304
13	Ring	4	SS304
14	Cover	1	PP

Technical data:

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

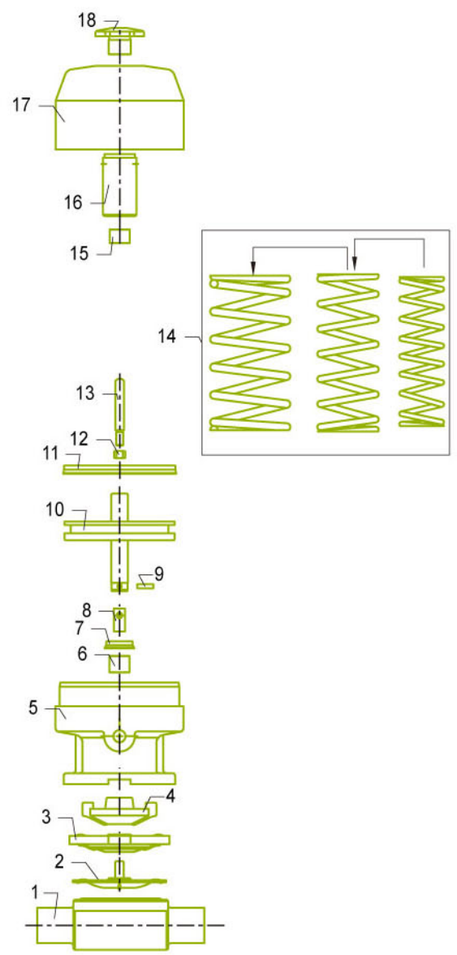
Valve body surface finishes, internal finish (acc.to DIN 4768)

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



Size	ID mm	t mm	H/NC mm	L/Weld mm	L/Clamp mm
1/2"	9.5	1.65	75	83	108
3/4"	15.8	1.65	75	83	108
1"	22.1	1.65	116	120	145
1.5"	34.8	1.65	136	153	178

Actuator Diaphragm Valve



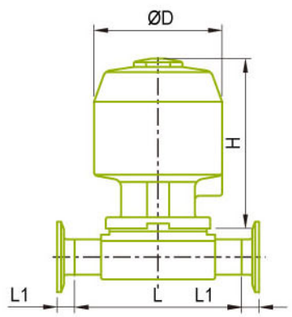
N0	DESIGNATION	QTY	MATERIAL
1	Diaphragm valve Body	1	SS316L
2	PTFE Seal	1	PTFE
3	EPDM Seal	1	EPDM
4	Seat	1	SS304
5	Bonnet	1	SS304
6	Bush	1	Cu
7	U Ring	1	NBR
8	Female	1	SS304
9	Pin	1	SS304
10	Piston	1	SS304
11	U Ring	1	NBR
12	Nut	1	SS304
13	Stem	1	SS304
14	Spring	3	SS304
15	Bush	1	Cu
16	Stem	1	SS304
17	Cover	1	SS304
18	Nut	1	SS304

Technical data:

- EPDM Max product pressure : 10bar.
- PTFE/EPDM Max product pressure : 6bar.
- Max temperature : 150°C(EPDM)
- Min temperature : 10°C

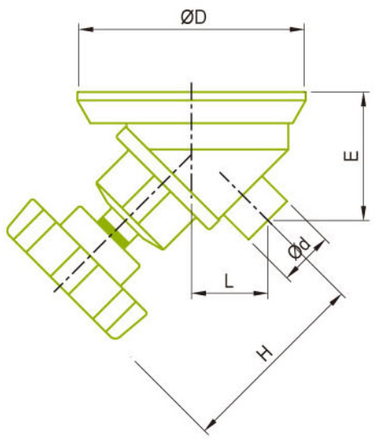
Valve body surface finishes, internal finish (acc.to DIN 4768)

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



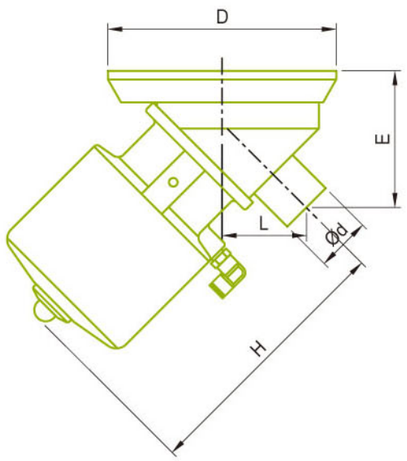
Size	L mm	L1 mm	ØD mm	H mm
1/2"	83	12.5	60	77
3/4"	83	12.5	60	100
1.0"	120	12.5	90	130
1.5"	153	12.5	114	168

Tank Bottom Diaphragm Valve



Manual Tank Bottom Diaphragm Valve

Size	ØD mm	Ød mm	E mm	L mm	H mm
1"	120	25.4	58	52	115
1.5"	160	38.1	65	68	135

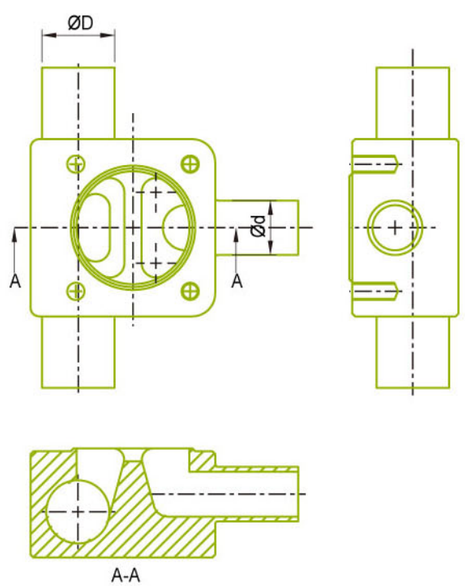


Pneumatic Tank Bottom Diaphragm Valve

Size	ØD mm	Ød mm	E mm	L mm	H mm
1"	120	25.4	58	52	143
1.5"	160	38.1	65	68	170

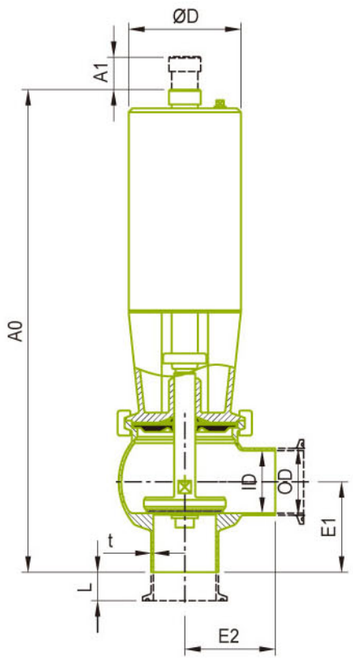
T Type Diaphragm Valve

Size	ØD mm	Ød mm
1" x 1/2"	25.4	12.7
1" x 3/4"	25.4	19.05
1" x 1"	25.4	25.4
1.5" x 1/2"	38.1	12.7
1.5" x 3/4"	38.1	19.05
1.5" x 1"	38.1	25.4
1.5" x 1.5"	38.1	38.1



THE ORIGINAL SEAT VALVE

The Original Seat Valves



Caution, opening/closing time:

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

Air connections

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

Technical data

- Max. product pressure (depending on valve specifications): 1000kpa(10 bar)
- Min. product pressure: full vacuum.
- Temperature range: 10°C to +140°C(EPDM)
- Air pressure: 5 to 7 bar.

Materials:

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

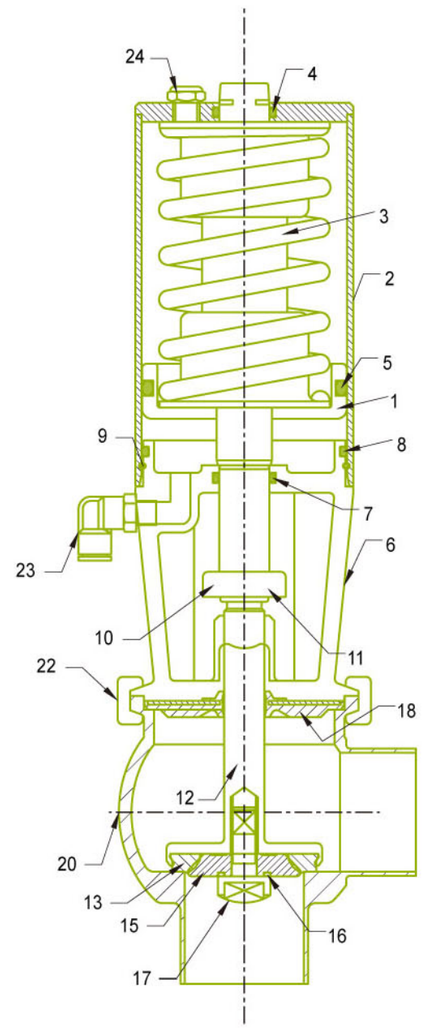
Ordering

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

Valve body combination

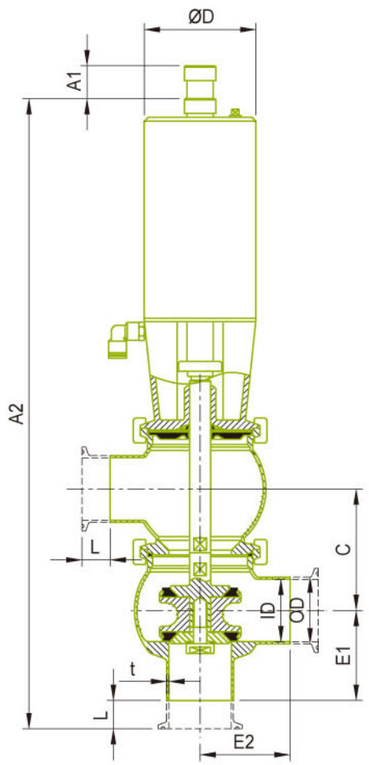
Size	ID mm	OD mm	A0 mm	A1 mm	ØD mm	E1 mm	E2 mm	t mm	L/CLAMP mm	L/SMS male mm	L/IDF male mm	L/RJT male mm
25.4	22.1	25.4	202	14	60	50.5	38	1.65	21.5	19	21.5	21.5
38.1	34.7	38.1	287	25	87	60	68.5	1.65	21.5	23	21.5	21.5
50.8	47.5	50.8	361	25	87	68.5	68.5	1.65	21.5	23	21.5	21.5
63.5	60.2	63.5	385	25	87	79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

The Original Seat Valve



N0	PART NAME	QTY	MATERIAL
1	Piston	1	SS304
2	Cyinder	1	SS304
3	Spring assembly	1	SS304
4	O-ring	1	NBR
5	O-ring	1	NBR
6	Bracket	1	SS304
7	O-ring	1	NBR
8	O-ring	1	NBR
9	Lock wire clip	1	SS304
10	Stop ring	1	PE
11	Clip complete	1	SS420
12	Stem	1	SS316L
13	Seal ring	1	EPDM
14	Washer	1	SS316L
15	O-ring	1	O-ring
16	Screws	1	SS316L
17	Lip seal-EPDM	1	EPDM
18	Valve body-lower	1	SS 316L
19	Clamp	1	SS 304
20	Air connection	1	Cupper
21	Air outlet filter	1	Cupper

THE ORIGINAL SEAT VALVE



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- The air supply(air pressure).
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- Product pressure.

Air connections

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

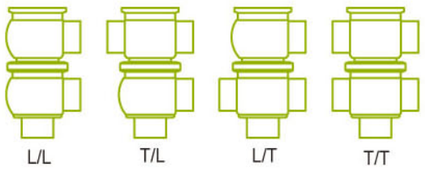
Technical data

- Max. product pressure (depending on valve specifications): 1000kpa(10 bar)
- Min. product pressure: full vacuum.
- Temperature range: 10°C to +140°C(EPDM)
- Air pressure: 5 to 7 bar.

Materials:

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

Valve body combination

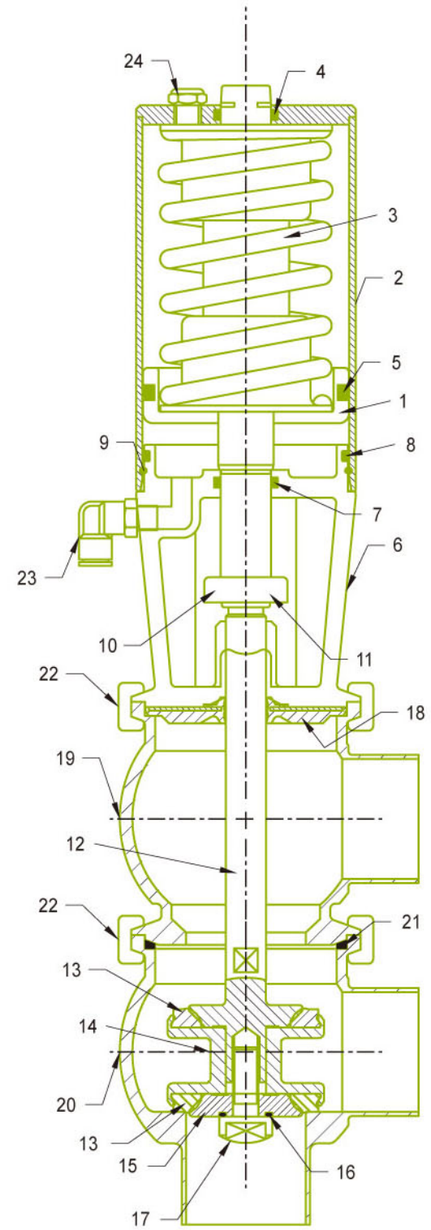


Ordering

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

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

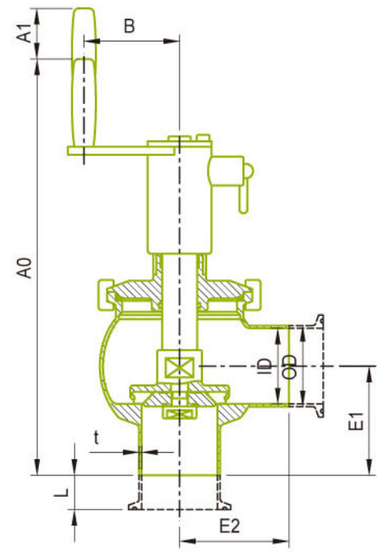
THE ORIGINAL SEAT VALVE



N0	PART NAME	QTY	MATERIAL
1	Piston	1	SUS 304
2	Cyinder	1	SUS 304
3	Spring assembly	1	SUS304
4	O-ring	1	NBR
5	O-ring	1	NBR
6	Bracket	1	SUS304
7	O-ring	1	NBR
8	O-ring	1	NBR
9	Lock wire clip	1	SUS 304
10	Stop ring	1	PE
11	Clip complete	1	SUS 420
12	Stem	1	SUS 316
13	Seal ring	2	EPDM
14	Middle piece	1	SUS 316
15	Washer	1	SUS 316
16	O-ring	1	O-ring
17	Screws	1	SUS316
18	Lip seal-EPDM	1	EPDM
19	Valve body-upper	1	SUS 316
20	Valve body-lower	1	SUS 316
21	Valve body seal ring	1	EPDM
22	Clamp	2	SUS 304
23	Air connection	1	Cupper
24	Air outlet filter	1	Cupper

THE ORIGINAL MANUAL SEAT VALVE

THE ORIGINAL MANUAL SEAT VALVE



Technical data

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

Materials:

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

Options

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

Material grades

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

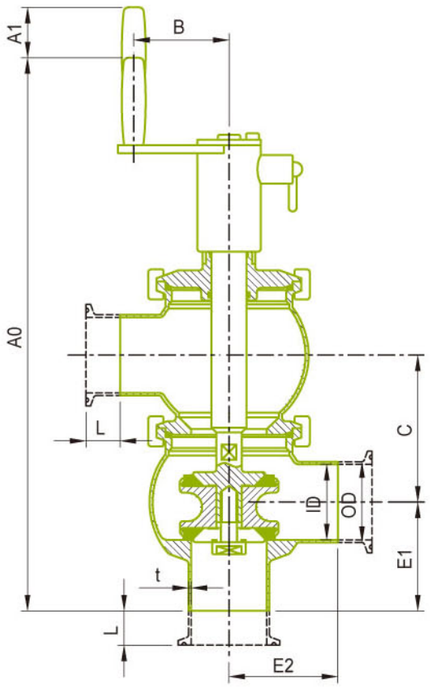
Ordering

- Please state the following when ordering:
  - Connections if not welding ends.
  - Size.
  - Valve body combination.
  - Options.

Valve body combination

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

The Original Manual Seat Valve



Technical data

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

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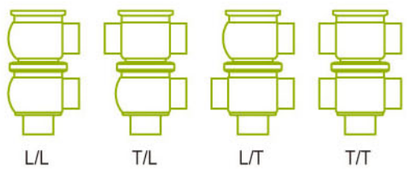
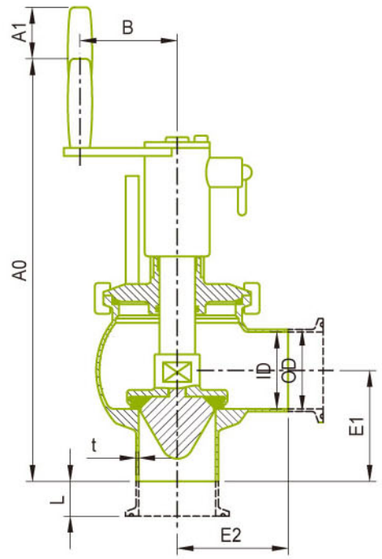
Valve body combination



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

The Original Manual Seat Valve



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Ordering

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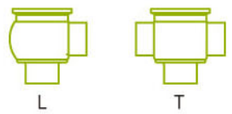
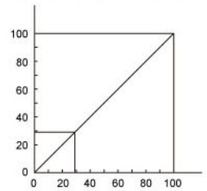
  - Connections if not welding ends.
  - Size.
  - Valve body combination.
  - Options.

Valve body combination



Pressure drop/capacity diagram

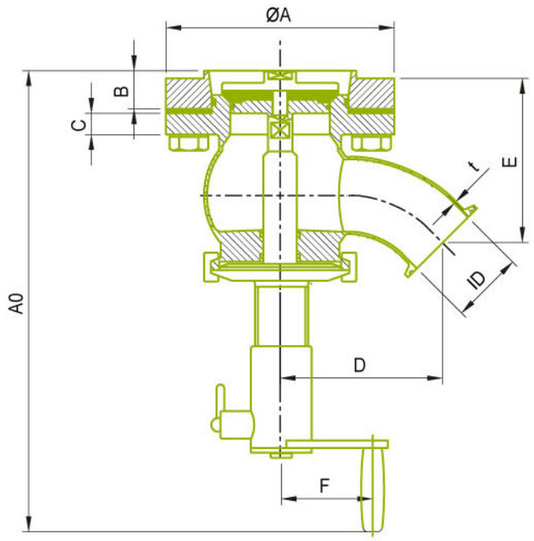
for control function valve



The flow in % of the total flow at a pressure drop of 1bar.

Size	ID mm	OD mm	A0 mm	A1 mm	B mm	E1 mm	E2 mm	t mm	L/CLAMP mm	L/SMS male mm	L/IDF male mm	L/RJT male mm
25.4	22.1	25.4	147	15	35	50.5	38	1.65	21.5	19	21.5	21.5
38.1	34.7	38.1	241	26	80	60	68.5	1.65	21.5	23	21.5	21.5
50.8	47.5	50.8	256	25	80	68.5	68.5	1.65	21.5	23	21.5	21.5
63.5	60.2	63.5	322	32	80	79	82	1.65	21.5	27	21.5	21.5
76.1	72.9	76.1	326	32	80	103.5	103.5	1.65	21.5	27	21.5	21.5
101.6	97.6	101.6	336.5	32	80	103.5	103.5	2	21.5	30	30	30

The Original Manual Tank Valve



Technical data

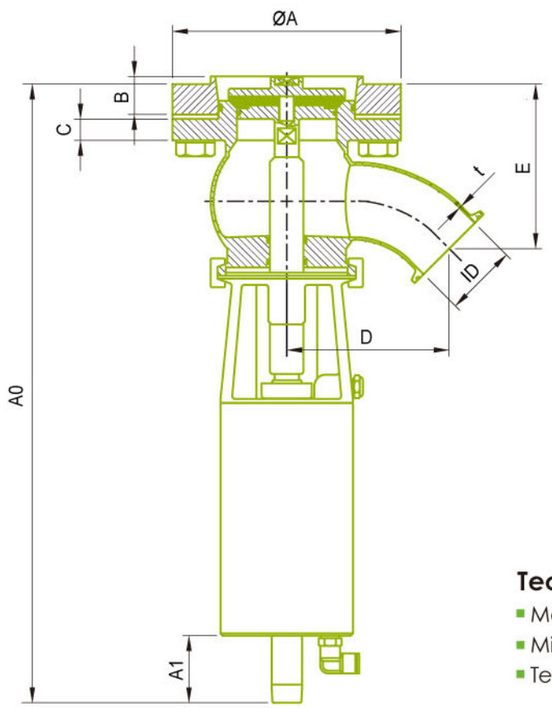
- Max product pressure: 1000kpa(10bar).
- Min product pressure: Full vacuum.
- Temperature range: -10°C to +140°C(EPDM).

Materials:

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

Size	ID mm	A0 mm	ØA mm	B mm	C mm	D mm	E mm	F mm	t mm
25.4	22.1	272	100	18	10	65	72	80	1.65
38.1	34.7	290	140	20	12	92	88	80	1.65
50.8	47.5	290	150	23	14	108	106	80	1.65
63.5	60.2	345	180	24	14	125	123	80	1.65
76.1	72.9	355	200	24	14	149	134	80	1.65

The Original Tank Valve



Technical data

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

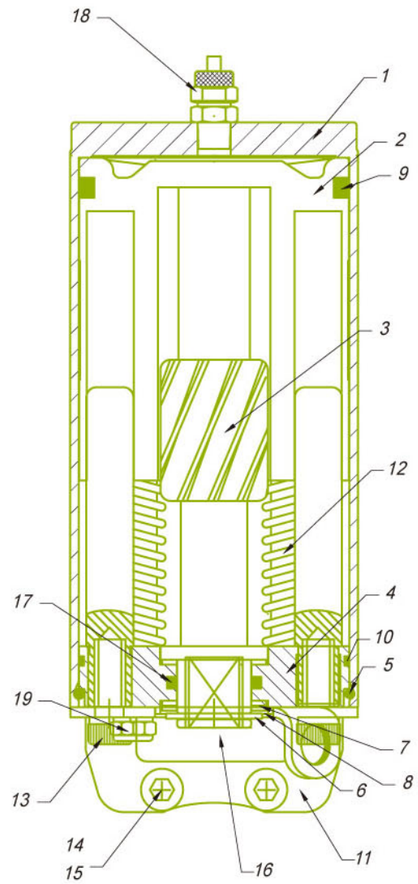
Materials:

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

Size	ID mm	A0 mm	A1 mm	ØA mm	B mm	C mm	D mm	E mm	t mm
25.4	22.1	217	30	100	18	10	65	72	1.65
38.1	34.7	340	20	140	20	12	92	88	1.65
50.8	47.5	364	20	150	23	14	108	106	1.65
63.5	60.2	384	20	180	24	14	125	123	1.65
76.1	72.9	456	40	200	24	14	149	134	1.65

ACTUATOR

S1 ACTUATOR

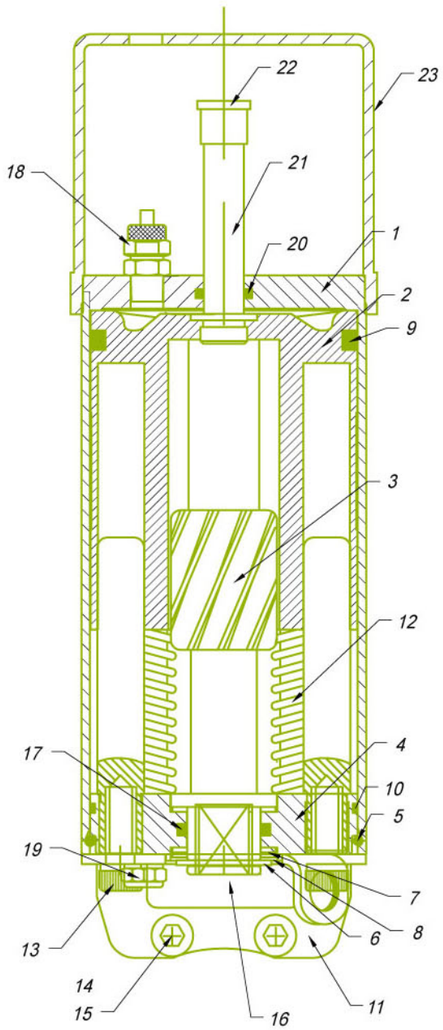


N0	DESIGNATION	QTY	MATERIAL
1	Inox cylinder	1	SS304
2	Pistion	1	POM
3	Coupling axle piece	1	SS304
4	Lower cylinder end	1	SS304
5	Mounting C type spring	1	S/S
6	Circlip	1	SS304
7	Teflon contact seal	3	TELFON
8	SS304 ring	1	SS304
9	Pistion X-ring	1	NBR
10	Lower cylinder O-ring	1	NBR
11	Mounting bracket	1	SS304
12	Compresson spring	6	S/S
13	M8*16 stainless steel screw	2	S/S
14	M6*30 stainless steel screw	2	S/S
15	M6 stainless steel nylon nut	2	S/S
16	Plastic positioning ring	1	Plastic
17	Pistion axle O-ring	1	NBR
18	Air connection	1	Cu
19	Air outlet filter	1	Cu

AIR /SPRING ACTUATOR SIMPLE OR DOUBLE EFFECT
FOR Ø25 (1") TO Ø76 (3") Butterfly Valve

- SHUT-OFF TIME : 1.5 SECOND
- WEIGHT : 3.7KG
- POWER : 4M/KG AT 5 BAR COMPESSED AIR.
- Max. torque 20N/m
- CONSUMPTION : 0.266 LITER AT 5 BAR
- MATERIAL : STAINLESS STEEL AISI 304.

S3 Actuator

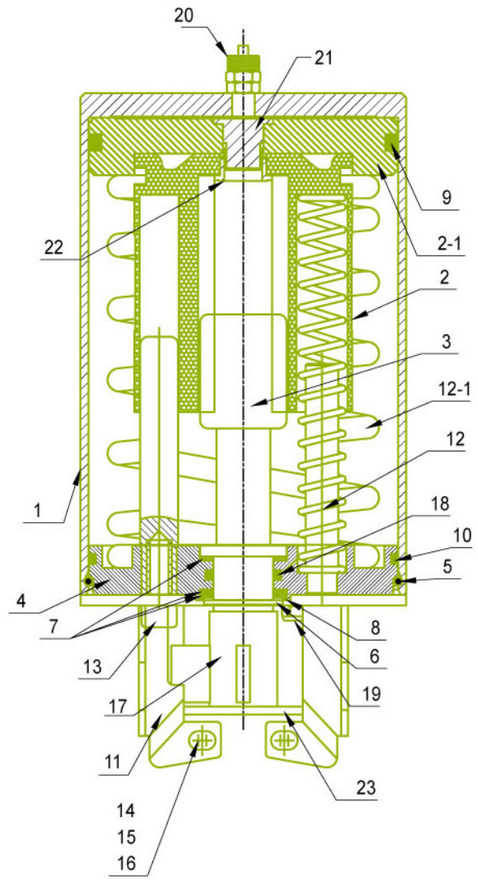


N0	DESIGNATION	QTY	MATERIAL
1	Inox cylinder	1	SS304
2	Pistion	1	POM
3	Coupling axle piece	1	SS304
4	Lower cylinder end	1	SS304
5	Mounting C type spring	1	S/S
6	Circlip	1	SS304
7	Teflon contact seal	3	TELFON
8	SS304 ring	1	SS304
9	Pistion X-ring	1	NBR
10	Lower cylinder O-ring	1	NBR
11	Mounting bracket	1	SS304
12	Compresson spring	6	S/S
13	M8*16 stainless steel screw	2	S/S
14	M6*30 stainless steel screw	2	S/S
15	M6 stainless steel nylon nut	2	S/S
16	Plastic positioning ring	1	Plastic
17	Pistion axle O-ring	1	NBR
18	Air connection	1	Cu
19	Air outlet filter	1	Cu
20	Pistion Stem O-RING	1	NBR
21	Pistion Stem	1	SS304
22	Stem Plastic Cover	1	Plastic
23	Plastic Cover	1	Plastic

AIR /SPRING ACTUATOR SIMPLE OR DOUBLE EFFECT
FOR Ø25 (1") TO Ø76 (3") Butterfly Valve

- SHUT-OFF TIME : 1.5 SECOND
- WEIGHT : 4.2KG
- POWER : 4M/KG AT 5 BAR COMPESSED AIR.
- Max. torque 20N/m
- CONSUMPTION : 0.266 LITER AT 5 BAR
- MATERIAL : STAINLESS STEEL AISI 304.
- COVER : PLASTIC.

S104 Actuator

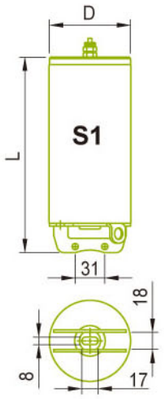


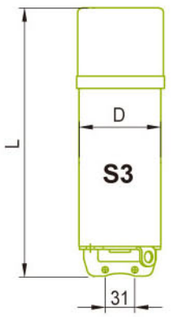
N0	DESIGNATION	QTY
1	Cylinder	1
2	Piston	1
2-1	Aluminium Piston	1
3	Coupling axle piece	1
4	Lower cylinder	1
5	Mounting C type spring	1
6	Circlip	1
7	Teflon contact seal	3
8	SS304 Ring	1
9	Piston X-ring	1
10	Lower cylinder seal	1
11	Mounting bracket	1
12	Compresson spring	6
12-1	Compresson spring	1
13	M8*16 Screw	2
14	M6*45 Screw	2
15	M6 Ring	4
16	M6 nut	2
17	Connecting piece	1
18	Alxe piston seal	1
19	Air outlet filter	1
20	Air Connection 1/8 Gas	1
21	Piston stem screw	1
22	Piston stem nut	1
23	Positionning piece	1

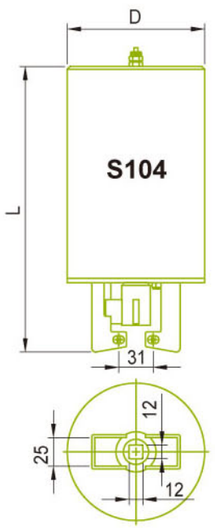
AIR ACTUATOR SIMPLE OR DOUBLE EFFECT
FOR BUTTERFLY VALVE Ø85 TO Ø150 AND FULL

- FLOW BALL VALVE DN50 TO DN80
- SHUT-OFF TIME : 1.7 SECOND
- WEIGHT : 7.1KG
- POWER : AIR ACTUATOR 5 BAR MINI
  SIMPLE EFFECT 11.5M DA N.
  DOUBLE EFFECT 14M DA N.
- CONSUMPTION : 0,550 LITRE AT 5 BAR
- Max. torque 30N/m
- MATERIAL : STAINLESS STEEL AISI 304.

Actuator







Actuator Data

- S1/S3 : Shut-off time : 1.5 second / Weight : S1:3.7KGS / S3:4.2KGS.
- S104 : Shut-off time : 1.7 second / Weight : 7.1KGS.

Technical data

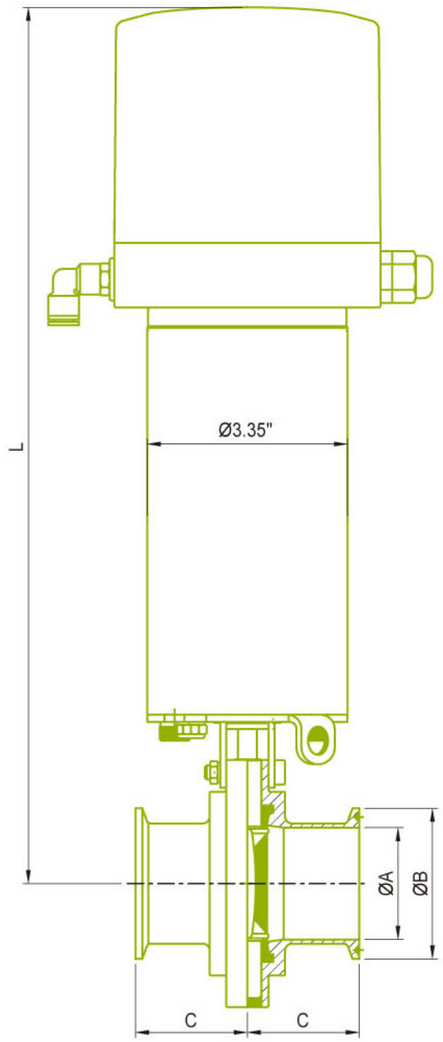
- Max. air pressure : 7bar(700kPa).
- Min. air pressure, NC and NO : 5bar(500kPa)
- Temperature range : -25°C to +90°C.
- Air consumption (litres free air) S1/S3 0.24*P(bar).
- Air consumption (litres free air) S104 0.55*P(bar).
- Signal transfer : S1/S104 can be connect with M12 screw proximity switch (PNP or NPN)
- Signal transfer : S3 can be connect with M12 screw proximity switch(PNP or NPN) or control box.

Material:

- Actuator body : Stainless steel AISI 304.
- Piston : POM.
- Seal : NBR.

Size	For butterfly valve	D	L
S1	1"-3" Dn25-76	85	205
S3	1"-3" Dn25-76	85	274
S104	4" Dn104	120	250

S3 Actuator With Control Box + Butterfly Valve



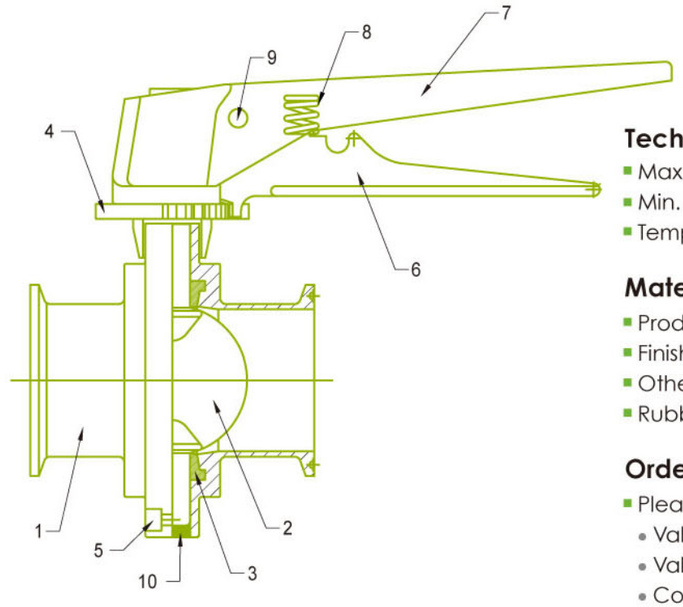
AIR /SPRING ACTUATOR SIMPLE OR DOUBLE EFFECT FOR Ø25 (1") TO Ø76 (3") Butterfly Valve

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

Size	A In	B In	D In	L In
1"	0.87	1.984	1.75	14.04
1-1/2"	1.37	1.984	1.75	14.19
2"	1.87	2.527	1.87	14.57
2-1/2"	2.37	3.047	1.91	14.7
3"	2.84	3.579	2.03	14.97

BUTTERFLY VALVE

Butterfly Valve



Technical data

- Max. product pressure : 10bar
- Min. product pressure : Full vacuum.
- Temperature range : -10° to +95°C

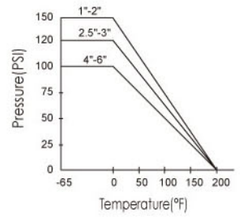
Materials:

- Product wetted steel parts : AISI304 OR AISI316L.
- Finish : Semi-bright.
- Other steel parts : AISI 304.
- Rubber gardes : Silicon rubber, EPDM or VITON.

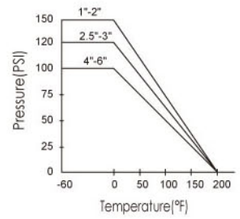
Ordering

- Please state the following when odering:
  - Valve type.
  - Valve size.
  - Connections. if not welding ends.
  - Materials : AISI304 or AISI 316L.
  - Rubber garde : EPDM, Silicone, or Viton
  - Type of handle, if required.

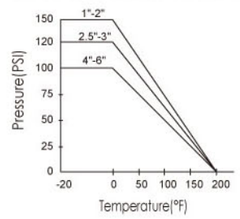
EPDM SEAT TEMPERATURE CHART



SILICONE SEAT TEMPERATURE CHART



VITON SEAT TEMPERATURE CHART



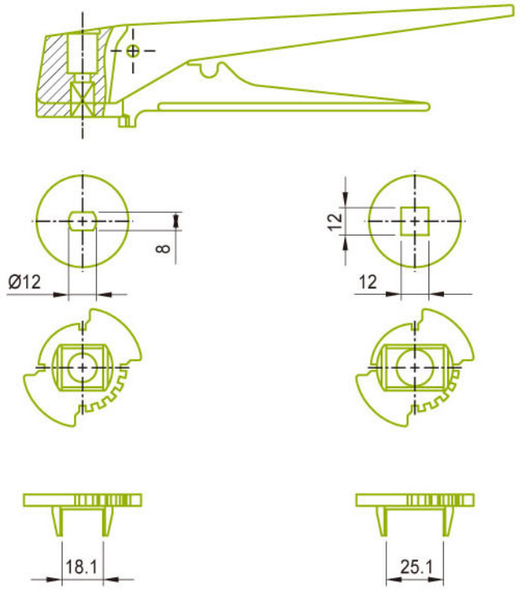
N0	DESIGNATION	Material
1	Body	SS304/316L
2	Disc	SS304/316L
3	Seal	EPDM/SILICON/VITON
4	Notch plate	SS304
5	Screw	SS304
6	Girpper bar	SS304
7	Handle	Nylon
8	Spring	SS304
9	Pin	SS304
10	Seal	EPDM

Torque for Open/Close

(for rotating the valve disc in a dry seal ring)

Size	Max.Nm
1"/ DN25	15
1.5"/ DN38	15
2"/ DN51	20
2.5" DN63.5	25
3"/ DN76	30
4"/ DN104	35
6"	45

Butterfly Valve Handles

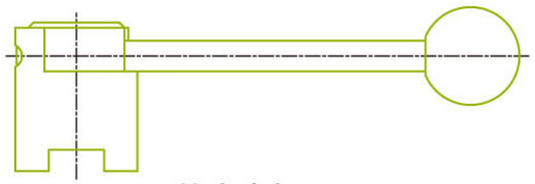


For 1" to 3" Butterfly valve

For 4" Butterfly valve

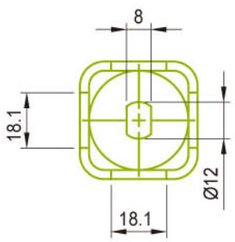
Materials:

- Handle : Nylon 6+30% glass fiber or AISI 304
- Gripper bar : AISI 304
- Notch : AISI 304

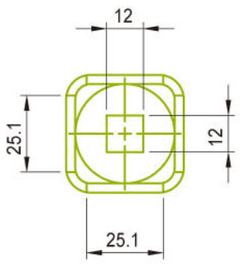


Materials:

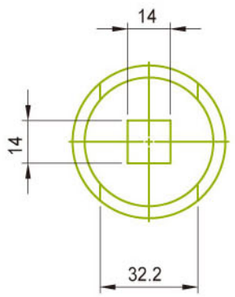
- Handle : Stainless steel 304 with knob.



For 1" to 3" Butterfly valve

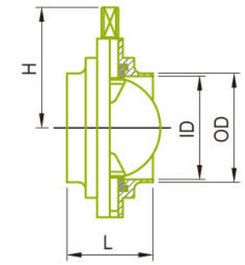


For 4" Butterfly valve



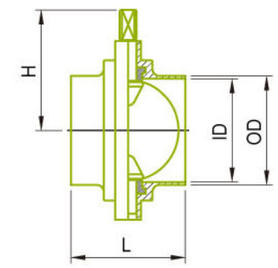
For 6" Butterfly valve

Butterfly Valves



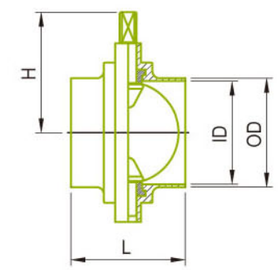
Inch Size Weld Butterfly Valves

Size	ID mm	OD mm	L mm	H mm
1.0"	22.1	25.4	52	61
1.5"	34.8	38.1	52	64.3
2.0"	47.5	50.8	54	74.3
2.5"	60.2	63.5	56	77.6
3.0"	72.9	76.2	60	84.8
4.0"	97.6	101.6	72	101.6
6.0"	146.4	152.4	100	133.5



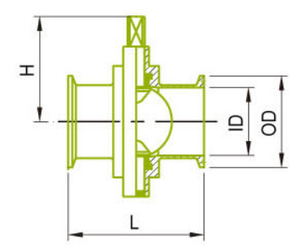
SMS Weld Butterfly Valves

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



DIN Weld Butterfly Valves

Size	ID mm	OD mm	L mm	H mm
DN15	16	19	60	52
DN20	19	23	64	61
DN28	25	28	68	61
DN34	31	34	76	64.3
DN40	37	40	76	74.3
DN52	49	52	80	77.6
DN70	66	70	82	84.8
DN85	81	85	84	91.6
DN104	100	104	88	101.6
DN125	125	132	120	116.2
DN150	150	157	124	131.1



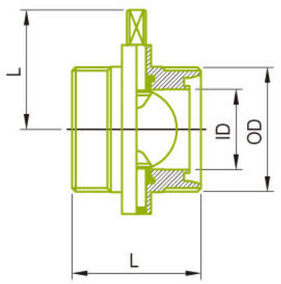
(LONG) Inch Size Clamp Butterfly Valves

Size	ID mm	OD mm	L mm	H mm
1.0"	22.1	50.5	90	61
1.5"	34.8	50.5	90	64.3
2.0"	47.5	64	95	74.3
2.5"	60.2	77.5	97	77.6
3.0"	72.9	91	105	84.8
4.0"	97.6	119	105	101.6
6.0"	146.4	166.8	143	133.5

(SHORT) Inch Size Clamp Butterfly Valves

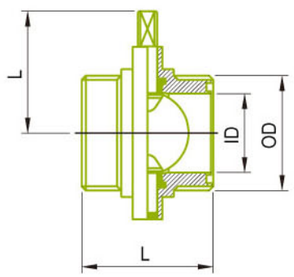
Size	ID mm	OD mm	L mm	H mm
1.0"	22.1	50.5	60	61
1.5"	34.8	50.5	60	64.3
2.0"	47.5	64	60	74.3
2.5"	60.2	77.5	60	77.6
3.0"	72.9	91	60	84.8

Butterfly Valves



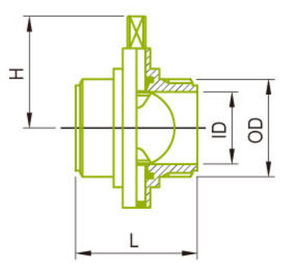
DIN Male Butterfly Valves

Size	ID mm	OD mm	L mm	H mm
DN28	25	RD52x1/6	68	61
DN34	31	RD58x1/6	76	64.3
DN40	37	RD65x1/6	76	74.3
DN52	49	RD78x1/6	80	77.6
DN70	66	RD95x1/6	82	84.8
DN85	81	RD110x1/4	84	91.6
DN104	100	RD130x1/4	100	101.6



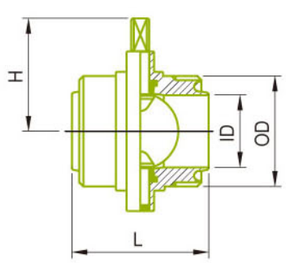
SMS Male Butterfly Valves

Size	ID mm	OD mm	L mm	H mm
DN25	22.5	RD40*1/6	68	61
DN38	35.4	RD60*1/6	76	64.3
DN51	48	RD70*1/6	80	74.3
DN63	60.2	RD85*1/6	80	77.6
DN76	72.1	RD98*1/6	82	84.8
DN104	100	RD125*1/4	100	101.6



IDF Male Butterfly Valves

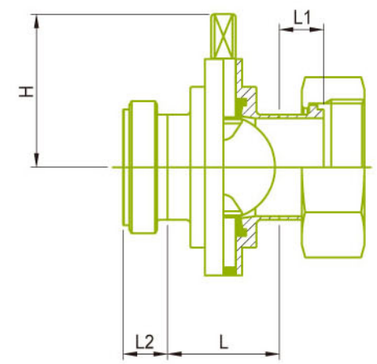
Size	ID mm	OD mm	L mm	H mm
1.0"	22.1	37.13*8TPI ACME	80	61
1-1/2"	34.9	50.65*8TPI ACME	80	64.3
2.0"	47.6	64.16*8TPI ACME	80	74.3
2-1/2"	60.3	77.76*8TPI ACME	80	77.6
3.0"	72.9	91.19*8TPI ACME	80	84.8
4.0"	97.6	125.9*6TPI ACME	100	101.6



RJT Male Butterfly Valves

Size	ID mm	OD mm	L mm	H mm
1.0"	22.1	45.72*8T WHIT	80	61
1-1/2"	34.9	58.42*8T WHIT	90	64.3
2.0"	47.6	72.72*6T WHIT	90	74.3
2-1/2"	60.3	85.42*6T WHIT	90	77.6
3.0"	72.9	98.12*6T WHIT	90	84.8
4.0"	97.6	123.52*6T WHIT	100	101.6

Butterfly Valves



IDF Male part - nut and liner

Size	L mm	L1 mm	L2 mm	H mm
1.0"	52	21.5	16.5	61
1.5"	52	21.5	19.5	64.3
2.0"	54	21.5	19.5	74.3
2.5"	60	21.5	25.0	77.6
3.0"	60	21.5	30.0	84.8
4.0"	72	30.0	35.0	101.6

RJT Male part - nut and liner

Size	L mm	L1 mm	L2 mm	H mm
1.0"	52	19.5	27.0	61
1.5"	52	19.5	27.0	64.3
2.0"	54	19.5	27.0	74.3
2.5"	60	19.5	27.0	77.6
3.0"	60	19.5	27.0	84.8
4.0"	72	23.5	27.0	101.6

3A Male part - nut and liner

Size	L mm	L1 mm	L2 mm	H mm
1.0"	52	18.3	18.3	61
1.5"	52	18.3	18.3	64.3
2.0"	54	19.1	19.1	74.3
2.5"	60	22.3	22.2	77.6
3.0"	60	23.1	23.1	84.8
4.0"	72	26.2	26.2	101.6

SMS Male part - nut and liner

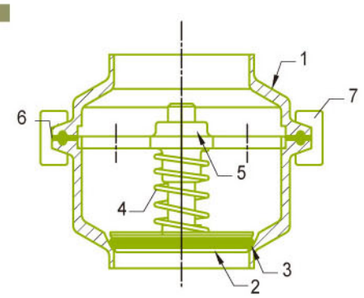
Size	L mm	L1 mm	L2 mm	H mm
DN25	52	15.5	19	61
DN38	52	16.0	23	64.3
DN51	54	17.0	23	74.3
DN63.5	60	17.0	27	77.6
DN76	60	19.0	27	84.8
DN104	72	19.0	30	101.6

DIN Male part - nut and liner

Size	L mm	L1 mm	L2 mm	H mm
DN28	52	22	29	61
DN34	52	25	32	64.3
DN40	54	26	33	74.3
DN52	60	28	35	77.6
DN70	60	32	40	84.8
DN85	72	37	45	101.6
DN104	72	44	54	101.6

NON-RETURN VALVE

NON-RETURN VALVE



NO	NAME
1	Body
2	Disc
3	Seal Ring
4	Spring
5	Plate
6	Ring
7	Clamp

Fig 1. Non-return valve

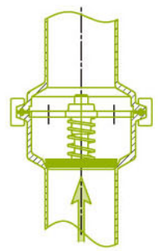


Fig.3. Show the optimal built-in situation. Other positions permitted are e.g. horizonal.

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

Flow direction

Technical data

- Required differential pressure for opening the valve when fitted in a vertical pipe, as shown in fig.3, is approx. 6kpa(0.06bar).
- Max. product pressure: 1000kpa(10bar).
- Max. temperature: 140°C(EPDM).
- Min. temperature: -10°C.

Materials:

- Steel parts: Stainless steel AISI 304 or acid-resistant steel AISI 316l.
- Seal ring: EPDM rubber.
- Finish: Semi bright.

Connections

- The valve is available with welding ends for tubes according to 3A,SMS,BS,DIN 11850.

Options

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

Ordering

- Please state the following when ordering:
  - Size.
  - Steel garde, AISI 304 or AISI 316L.
  - Rubber garde if not EPDM.

Pressure drop/capacity diagram

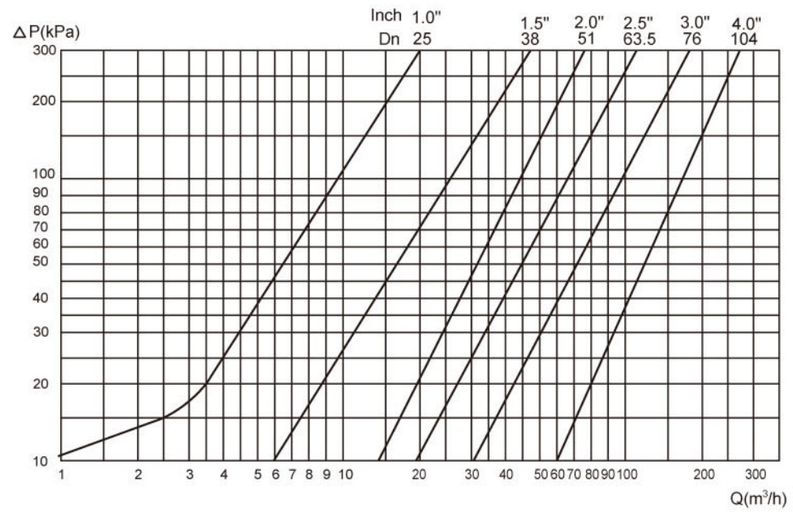
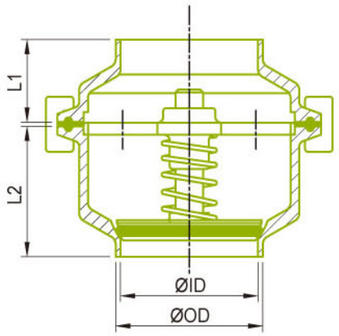


Fig.2 NOTE For the following applies: Medium:Water(20°C)

Measurement:In accordance with VDI 2173

Non-return Valves

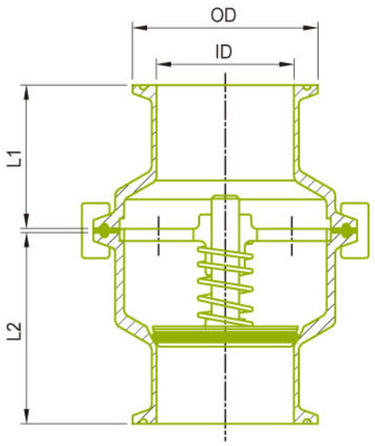


Inch Size Weld Non-return Valve

Size	ID mm	OD mm	L1 mm	L2 mm
1/2"	9.5	12.7	30	45
3/4"	15.8	19.05	30	45
1.0"	22.1	25.4	23.5	35
1.5"	34.8	38.1	28.5	45
2.0"	47.5	50.8	28.5	45
2.5"	60.3	63.5	28.5	45
3.0"	72.9	76.2	28.5	45
4.0"	97.6	101.6	42	75

SMS Weld Non-return Valve

Size	ID mm	OD mm	L1 mm	L2 mm
DN25	22.1	25.4	23.5	35
DN38	35.5	38	28.5	45
DN51	48.5	51	28.5	45
DN63.5	60.3	63.5	28.5	45
DN76	72.9	76.1	28.5	45
DN104	100	104	42	75



DIN Weld Non-return Valve

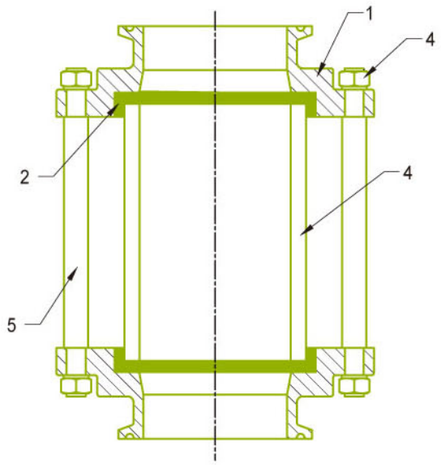
Size	ID mm	OD mm	L1 mm	L2 mm
DN15	16	19	30	45
DN20	20	23	30	45
DN25	25	28	23.5	35
DN32	31	34	28.5	45
DN40	37	40	28.5	45
DN50	49	52	28.5	45
DN65	66	70	28.5	45
DN80	81	85	28.5	45
DN100	100	104	42	75

Inch Size Clamp Non-return Valve

Size	ID mm	OD mm	L1 mm	L2 mm
1/2"	9.5	25.2	35	50
3/4"	15.8	25.2	35	50
1.0"	22.1	50.5	44.5	56
1.5"	34.8	50.5	49.5	66
2.0"	47.5	64	49.5	66
2.5"	60.3	77.5	49.5	66
3.0"	72.9	91	49.5	66
4.0"	97.6	119	63	96

SIGHT GLASS

Sight Glass



N0	Part name
1	Body
2	Seal
3	High press clean glass
4	Nylon lock nut
5	Screw blot

Composition

Content	SiO_2	Al_2O_3	Fe_2O_3	B_2O_3	Na_2O	K_2O
%	80.9	2.3	0.03	12.7	4.0	0.04

Physical Properties

Description	Value
Spectific heat (25°) Average(25-400°C)	0.17 cal/g.°C 0.233 cal°C
Thermal Conductivity (25°C) (100°C)	0.0026 cal/cm.sec°C 0.0030 cal/cm.sec°C
Linear coefficientof expansion(0-300)	$32.5\text{-}10^{-7}$/°C
Density	2.23g/cm³

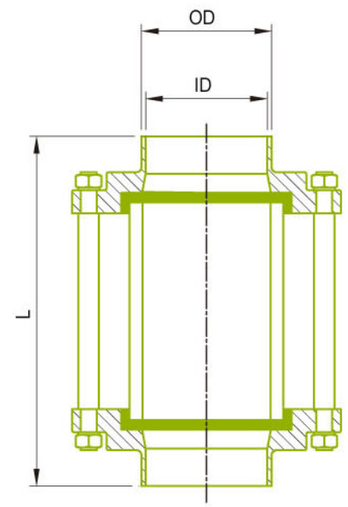
Material

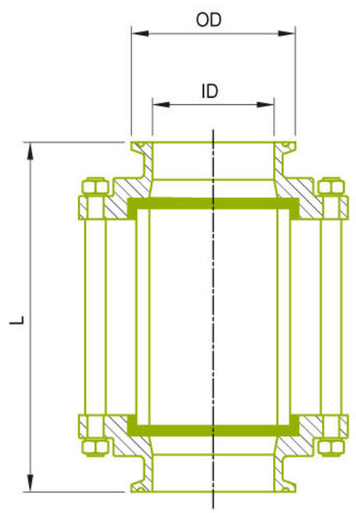
- Steel parts: Stainess steel
  SS304 or SS316L
- Screw blot: Stainess steel SS303.
- Seal rings: EPDM rubber or Silicone,viton
- Finish: Semi bright.

Ordering

- Please state the following items when ordering:
  - SIze.
  - Steel grade, AISI 304 or AISI 316L.
  - Rubber grade if not EPDM.

Sight Glass





3A Weld end Sight glass

Size	ID mm	OD mm	L mm
1.0"	22.1	25.4	128.5
1.5"	34.9	38.1	128.5
2.0"	47.5	50.8	132.5
2.5"	60.2	63.5	136.5
3.0"	72	76.2	136.5
4.0"	97.6	101.6	148.5

SMS Weld end Sight glass

Size	ID mm	OD mm	L mm
DN25	22.5	25	128.5
DN38	35.4	38	128.5
DN51	48	51	132.5
DN63.5	60.2	63.5	136.5
DN76	72	76	136.5
DN104	100	104	148.5

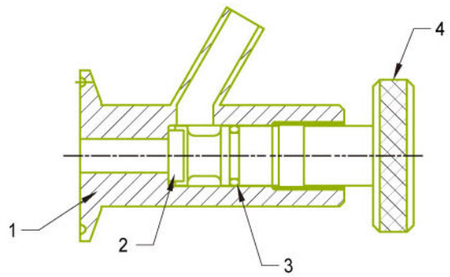
DIN Weld end Sight glass

Size	ID mm	OD mm	L mm
DN10	10	13	144
DN15	16	19	144
DN20	20	23	144
DN25	25	28	144
DN32	31	34	152
DN40	37	40	152
DN50	49	52	156
DN65	66	70	158
DN80	81	85	160
DN104	100	104	164

Clamp end Sight glass

Size	ID mm	OD mm	L mm
1.0"	22.1	50.5	136.5
1.5"	34.8	50.5	136.5
2.0"	47.5	64	136.5
2.5"	60.3	77.5	136.5
3.0"	73	91	136.5
4.0"	97.6	119	176.5

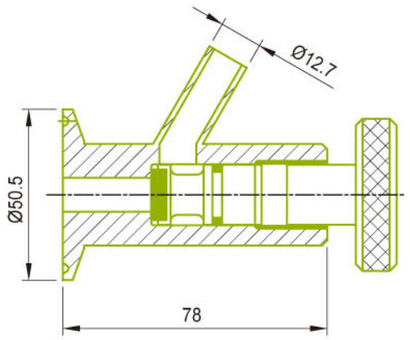
Sample Cock Valve



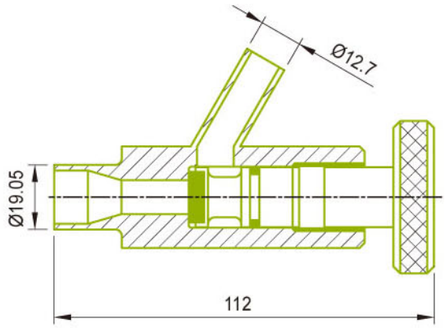
N0	DESIGNATION	QTY
1	Body	1
2	Seal	1
3	O-Ring	1
4	Screw Shaft	1

Materials:

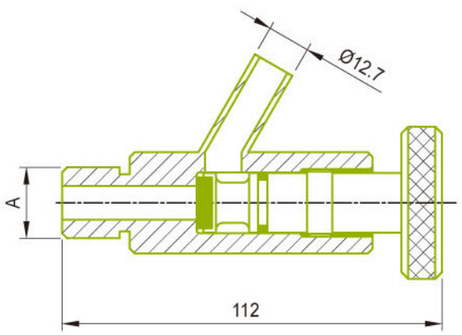
- Steel part: Stainess steel SS304 or SS316L
- Seal: EPDM or Teflon
- O-Ring: EPDM



Clamp End Sample cock valve



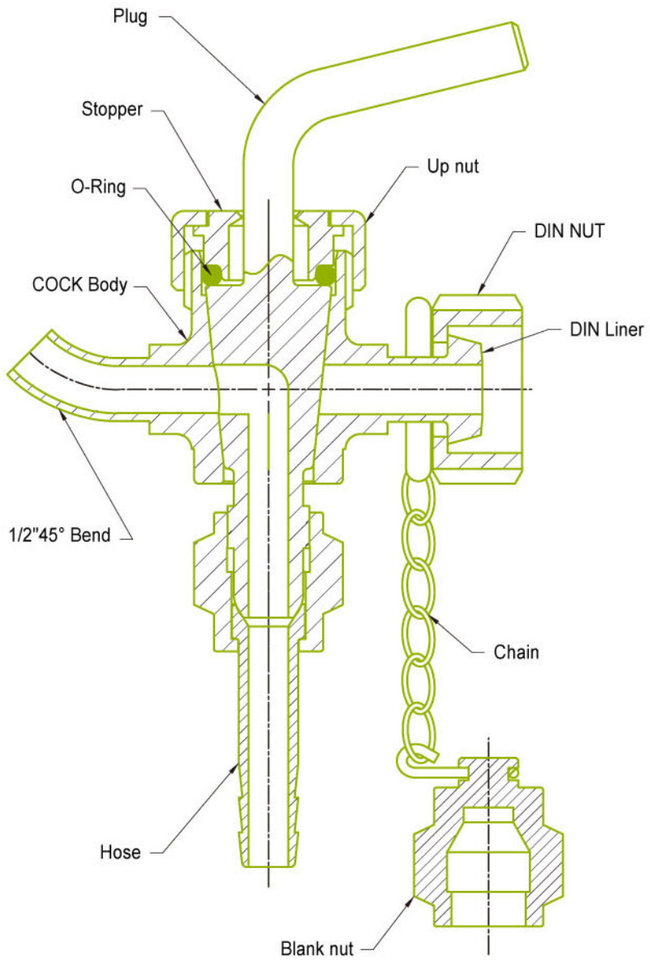
Weld End Sample cock valve



Male end Sample Cock Valve

Size	A
1/2	1/2 PF
3/8	NPT 3/8-14
1/4	NPT 1/4-14
3/8	PT 3/8-14
1/4	PT 1/4-14

Sample Cock Valve

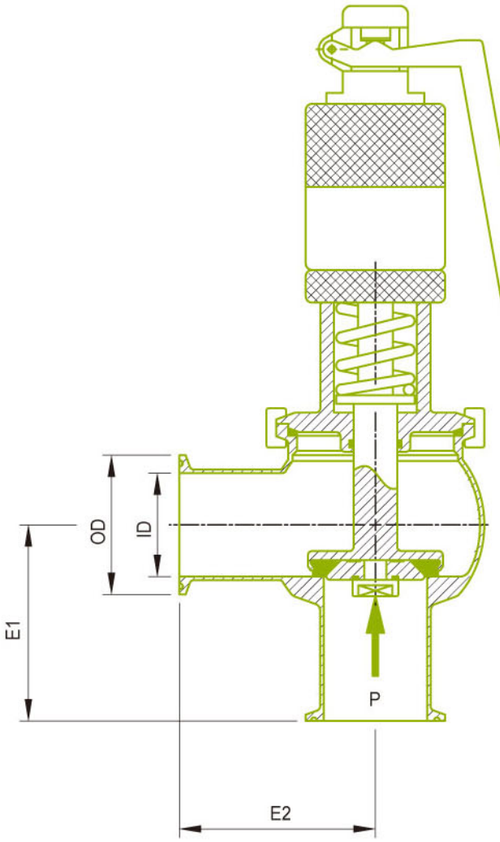


N0	DESIGNATION	QTY
1	COCK Body	1
2	Plug	1
3	O-Ring	1
4	Stopper	1
5	Up nut	1
6	1/2"45° Bend	1
7	DIN Liner	1
8	DIN Nut	1
9	Chain	1
10	Blank Nut	1
11	Male	1
12	Hose	1

Materials:

- Steel part: Stainess steel SS304 or SS316L
- O-Ring: NBR
- Stopper: Teflon
- Chain: SS304

Safety & Relife Valves



Model	SIZE	E1	E2	OD	ID
PA-10	1.0"	49	57.5	50.5	22.1
PA-15	1.5"	81.5	89	50.5	38.1
PA-20	2.0"	89.5	89.5	64	47.5

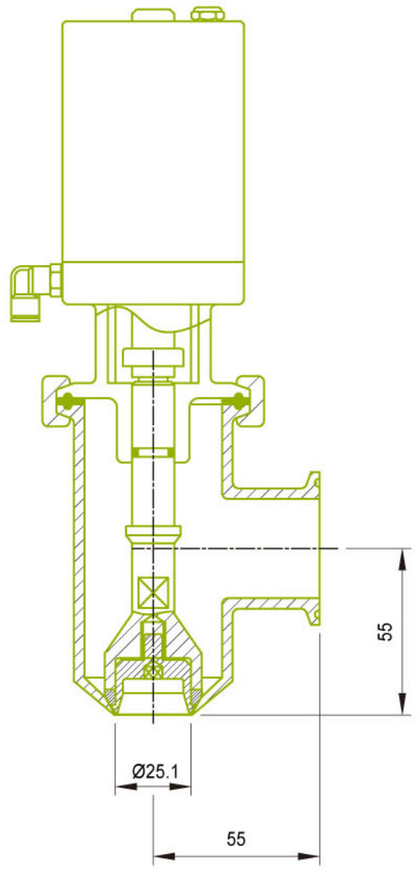
Materials:

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

Technical data:

- Max product pressure: 6bar
- Min product pressure: Full vacuum.
- Temperature range: -10°C to +140°C(EPDM).

Filling Valve



Caution, opening/closing time:

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

Air connections

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

Technical data

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

Materials:

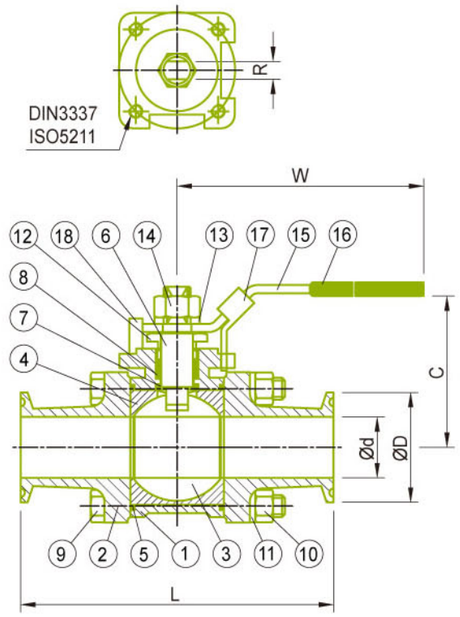
- Product wetted steel parts: Steel AISI 316L.
- Finish: Semi bright.
- Other steel parts: Stainless steel AISI 304.
- Plug stem : AISI 316L with hard chrome planted stem surface.
- Product wetted seals: PTFE rubber.
- Other seals: NBR.

Ordering

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

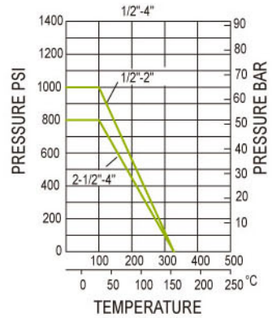
BALL VALVE

SANITARY-BALL VALVE FOR FOOD AND CHEMICAL USE WITH ISO MOUNT PLATE



ITEM	PARTS	MATERIAL
1	BODY	ASTM-A351-CF8M
2	CAP	ASTM-A351-CF8M
3	BALL	A351-CF8M
4	SEAT	PTFE
5	GASKET	PTFE
6	STEM	ANSI-316
7	THRUST WASHER	PTFE
8	STEM PACKING	PTFE
9	BOLT	ANSI-304
10	HEX NUT	ANSI-304
11	BOLT WASHER	ANSI-304
12	GLAND	ANSI-304
13	WASHER	ANSI-304
14	NUT	ANSI-304
15	HANDLE	ANSI-304
16	PLASTIC COVER	PLASTIC
17	LOCK DEVICE	ANSI-304
18	STOP PIN	ANSI-304

PRESSURE TEMPERATURE RATING



- Locking device can be required.
- 100% air tested under water at 100psi, open and closed positions.
- Hydrostatic test pressure 1/4"~2" 1,500psi, 2 1/2"~4" 1,200psi.

- Standard End: Weld & Clamp-End: Other SMS. DIN. RJT. IDF Male/Male can be required.

Size	DN mm	ISO-5211 mm	C mm	L mm	W mm	Ød mm	ØD mm	R mm	L1 mm
1/2"	15	F03	60	89	132	9.5	25.4	5	32.75
3/4"	20	F03	64.5	101	131.5	15.8	25.4	5	36.5
1"	25	F04	69.2	114	165	22.2	50.4	6.5	40
1-1/2"	40	F05	89.26	140	194.3	35	50.4	8.5	43.5
2"	50	F05	97.26	156	194.3	47.6	63.9	8.5	45.75
2-1/2"	65	F07	126.8	197	252	60.3	77.5	12	56
3"	80	F07	135.3	229	252	73	90.9	12	64.5
4"	100	F10	158.8	242.7	332	97.4	118.9	16	60.6

Mount Actuator For Ball Valve

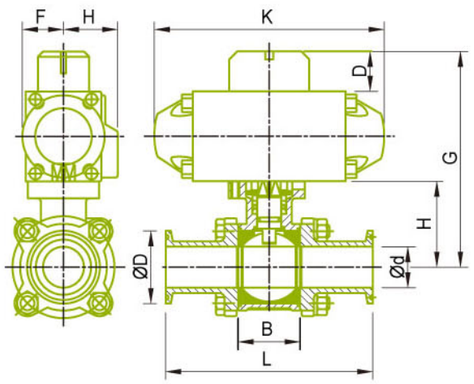
Mount actuator is the direct mount configuration. It can be equipped low & high bracket. The top of ball valves for greater reliability, easy installation and improved cycling life.

Materials:

- ASTM-CF8M A351

Seat:

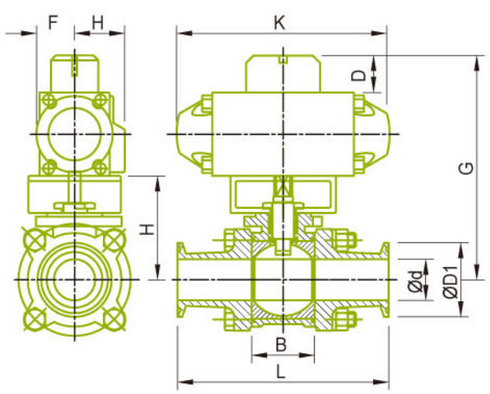
- PTFE/PTFE +15% GF.



VDA/VSR	DN	D	F	G	H	K
ATBODA	15	20	4	104	4.5	115
ATBODA	20	20	4	111	4.5	115
AT050DA	25	20	29	142	41.5	140.5
AT200DA	40	20	42.5	191	52	210.5
AT200DA	50	20	42.5	200	52	210.5
AT250DA	65	20	49.5	232	49.5	247.5
AT300DA	80	20	56	253.5	206.5	268.5
AT350DA	100	30	64	306	244	315

BALL VALVE/SERIES 26

Size	DN mm	ISO-5211 mm	B mm	L mm	H mm	Ød mm	ØD mm	TOQUE IN/LBS
1/2"	15	F03/F04	26.6	110	39.0	9.5	25.4	56
3/4"	20	F03/F04	33	119	45.0	15.8	25.4	63
1"	25	F04/F05	38.2	124.2	53.0	22.2	50.4	88
1-1/2"	40	F05/F07	54.2	143.2	69.0	35	50.4	192
2"	50	F05/F07	68.5	162	78.0	47.6	63.9	210
2-1/2"	65	F07/F10	85	197	97.6	60.3	77.5	582
3"	80	F07/F10	100	229	106.0	73	90.9	715
4"	100	F10/F12	121.8	243	134.6	97.4	118.9	928

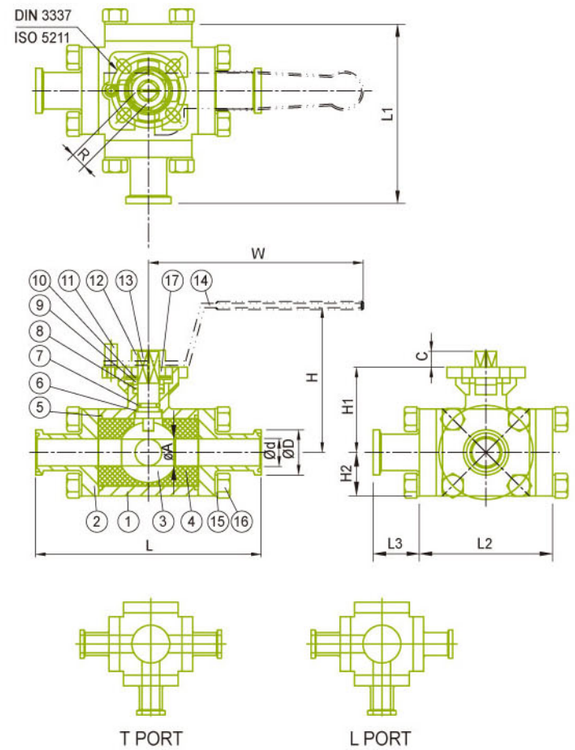


VDA/VSR	DN	D	F	G	H	K
ATBODA	15	20	4	133.1	4.5	115
ATBODA	20	20	4	137.6	4.5	115
AT050DA	25	20	29	164.5	41.5	140.5
AT200DA	40	20	42.5	209	52	210.5
AT200DA	50	20	42.5	217	52	210.5
AT250DA	65	20	49.5	285.1	49.5	247.5
AT300DA	80	20	56	305.8	67	268.5
AT350DA	100	30	64	354.3	77	315

BALL VALVE/SERIES 26

Size	DN mm	ISO-5211 mm	B mm	L mm	H mm	Ød mm	ØD1 mm	TOQUE IN/LBS
1/2"	15	F03	23.5	89	68.1	9.5	25.4	42
3/4"	20	F03	28	101	72.6	15.8	25.4	58
1"	25	F04	34	114	75.5	22.2	50.4	83
1-1/2"	40	F05	53	140	87.0	35	50.4	150
2"	50	F05	64.5	156	95.0	47.6	63.9	298
2-1/2"	65	F07	85	197	150.1	60.3	77.5	512
3"	80	F07	100	229	158.8	73	90.9	685
4"	100	F10	121.5	242.7	179.3	97.4	118.9	996

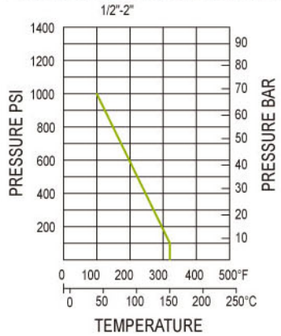
Sanitary 3 Way Ball Valve For Food And Chemical Use With ISO Mount Plate



ITEM	PARTS	MATERIAL		QTY
1	BODY	A351-CF8M	CF3M	1
2	CAP	A351-CF8M	CF3M	4
3	BALL	A351-CF8M	CF3M	1
4	SEAT	PTFE	TEM-1600	4
5	GASKET	PTFE	PTFE	2
6	THRUST WASHER	PTFE	PTFE	1
7	O-RING	VITON	VITON	1
8	STEM PACKING	PTFE	PTFE	1
9	RING	AISI 316	AISI 304	1
10	BEVEL WASHER	AISI 301	AISI 301	2
11	STOP PIN	AISI 316	AISI 316	1
12	NUT	AISI 304	AISI 304	1
13	STEM	AISI 316	AISI 316	1
14	HANDLE	AISI 304	AISI 304	1
15	SPRING WASHER	AISI 304	AISI 304	16
16	BOLT	AISI 304	AISI 304	16
17	PREVALING	PVEICE	AISI 304	1
18	NUT	AISI 304	AISI 304	1

SERIES: Y-4HCS
FOUR PIECE THREE WAY MULTI-PORT 1000 WOG SANITARY
BALL VALVE TRI-CLAMP END T/T/T

PRESSURE TEMPERATURE RATING

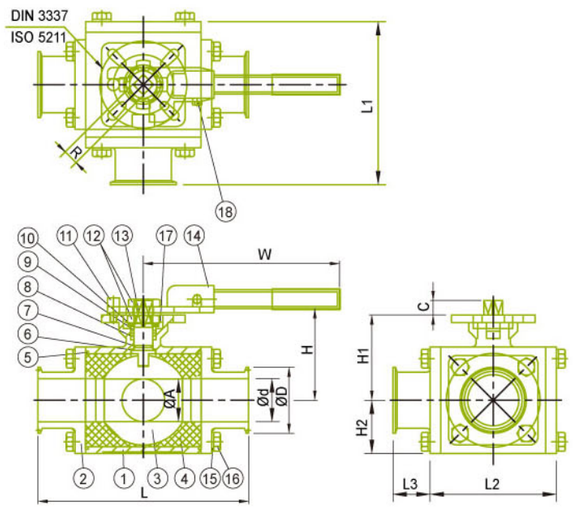


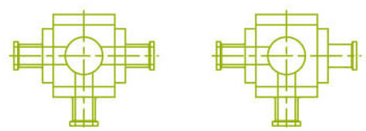
FEATURES

- BLOW-OUT PROOF STEM/SOLID BALL
- LOCKING HANDLE
- INVESTMENT CAST STAINLESS STEEL CF8M OR CF3M
- BALL AND END POLISHED RATE 20RA
- FULL CAVITY FILLED PTFE SEATS
- BALL: T-PORT AND L-PORT
- LONG-NECK ISO 5211 MOUNTING PAD ENABLES TO INSTAL LACTUATOR DIRECTLY
- SIZE: AVAILABLE FROM 1/2" TO 2"

Size	DN mm	ISO-5211 mm	ØA mm	W mm	H mm	H1 mm	C mm	L mm	Ød mm	ØD mm	L1 mm	L2 mm	L3 mm	H2 mm	R mm		TOQUE IN/LBS
1/2"	15	F03 / F04	9.5	121	78.0	44.5	9	118.0	9.5	25.4	91.0	67.6	23.4	23.5	9	M12*1.75	79
3/4"	20	F03 / F04	15.8	121	82.0	48.0	9	127.0	15.8	25.4	98.5	73.0	25.5	26.0	9	M12*1.75	85
1"	25	F04 / F05	22.2	137	90.0	59.0	11	152.6	22.2	50.4	117.4	84.5	32.9	30.5	11	M14*P2	110
1-1/2"	40	F05 / F07	35.0	182	104.0	72.0	14	175.0	35.0	50.4	139.3	107.0	32.3	40.0	14	M18*P2.5	290
2"	50	F05 / F07	47.6	182	114.5	82.0	14	201.4	47.6	63.9	166.3	131.5	34.8	50.0	14	M18*P2.5	680

SANITARY 3-WAY BALL VALVE FOR FOOD AND CHEMICAL USE WITH ISO MOUNT PLATE

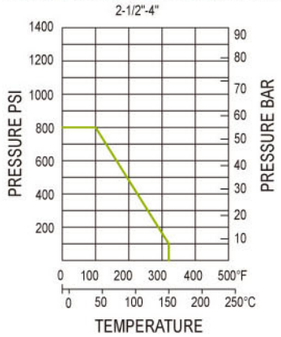




ITEM	PARTS	MATERIAL		QTY
1	BODY	A351-CF8M	A351-CF3M	1
2	CAP	A351-CF8M	A351-CF3M	4
3	BALL	A351-CF8M	CF3M	1
4	SEAT	PTFE	TFM-1600	4
5	GASKET	PTFE	PTFE	2
6	THRUST WASHER	PTFE	PTFE	1
7	O-RING	VITON	VITON	1
8	STEM PACKING	PTFE	PTFE	1
9	RING	AISI 316	AISI 304	1
10	BEVEL WASHER	AISI 301	AISI 301	2
11	STOP PIN	AISI 316	AISI 316	1
12	NUT	AISI 304	AISI 304	1
13	STEM	AISI 316	AISI 316	1
14	HANDLE	AISI 304	AISI 304	1
15	SPRING WASHER	AISI 304	AISI 304	16
16	BOLT	AISI 304	AISI 304	16
17	PREVALING DEVICE	PVEICE	AISI 304	1
18	NUT	AISI 304	AISI 304	1

SERIES: Y-4HCS
FOUR PIECE THREE WAY MULTI-PORT 1000
WOG SANITARY
BALL VALVE TRI-CLAMP END T/T/T

PRESSURE TEMPERATURE RATING

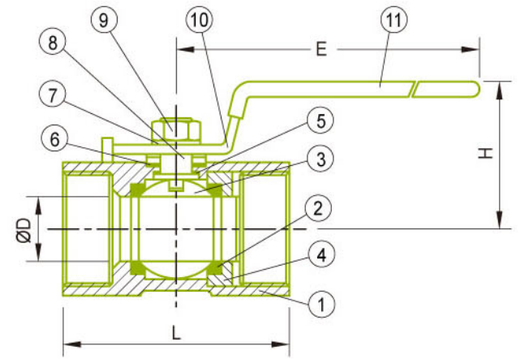


FEATURES

- BLOW-OUT PROOF STEM/SOLID BALL
- LOCKING HANDLE
- INVESTMENT CAST STAINLESS STEEL CF8M OR CF3M
- BALL AND END POLISHED RATE 20RA
- FULL CAVITY FILLED PTFE SEATS
- BALL: T-PORT AND L-PORT
- LONG-NECK ISO 5211 MOUNTING PAD ENABLES TO INSTAL LACTUATOR DIRECTLY
- SIZE: AVAILABLE FROM 2-1/2" TO 4"

Size	DN mm	ISO-5211 mm	ØA mm	W mm	H mm	H1 mm	C mm	L mm	Ød mm	ØD mm	L1 mm	L2 mm	L3 mm	H2 mm	R mm		TOQUE IN/LBS
2-1/2"	65	F07 / F10	60.2	370	108.0	100.0	17	227.7	60.2	77.5	174.0	130.4	43.6	61	17	M22*P2.5	1085
3"	80	F10 / F12	73.0	400	134.0	125.5	23	260.6	73.0	90.9	204.0	157.0	47.0	74	22	1-1/8"*12UNF	1597
4"	100	F10 / F12	97.4	400	143.3	135.5	23	290.5	97.4	118.9	257.5	193.0	64.5	84	22	1-1/8"*12UNF	1780

1-PC & 2-PC BALL VALVE

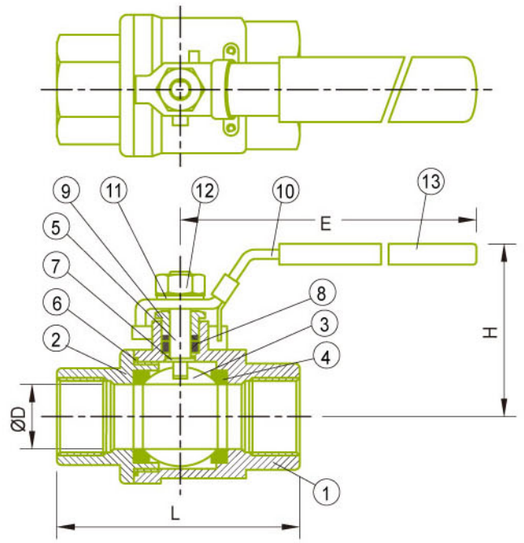


NO	PARTS NAME	MATERIAL	QTY
1	Body	316/304	1
2	Seat	PTFE	2
3	Ball	316/304	1
4	Seat Retainer	316/304	1
5	Thrust Washer	TEFLON	1
6	Stem Packing	TEFLON	1
7	Stem Washer	304	1
8	Stem	316	1
9	Stem Nut	304	1
10	Handle	304	1
11	Plastic Cover	PLASTIC	1

1-PC BALL VALVE

- Pipe thread in accordance with ANSI B2.1, BS 21 1973, DIN 259/2999
- Material : ASTM-CF8M A351
- 800PSI (55 BAR) W.O.G

Size	D mm	E mm	H mm	L mm	M mm
1/4"	5	60	33	40	NPT or PF PT
3/8"	7	67	36	45	NPT or PF PT
1/2"	10	90	42	58	NPT or PF PT
3/4"	13	90	45	60	NPT or PF PT
1"	16	112	52	72	NPT or PF PT
1 1/4"	20	112	57	80	NPT or PF PT
1 1/2"	25	132	60	85	NPT or PF PT
2"	32	132	66	102	NPT or PF PT



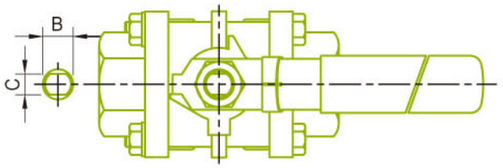
NO	PARTS NAME	MATERIAL	QTY
1	Body	316/WCB	1
2	Cap	316/WCB	1
3	Ball	316	1
4	Seat	PTFE	1
5	Stem	316	1
6	Joint Gasket	PTFE	1
7	Thrust Washer	PTFE	1
8	Stem Packing	PTFE	2
9	Gland Nut	304	1
10	Handle	304	4
11	Washer	304	1
12	Stem Nut	304	1
13	Plastic Cover	PLASTIC	1

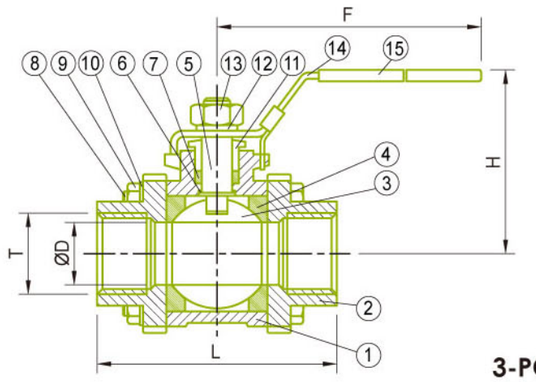
2-PC BALL VALVE

- Pipe thread in accordance with ANSI B2.1, BS 21 1973, DIN 259/2999
- Material : ASTM-CF8M A351
- 1000PSI (69 BAR) W.O.G

Size	D mm	E mm	H mm	L mm	M mm
1/4"	12.5	106	48	52	NPT or PF PT
3/8"	12.5	106	48	52	NPT or PF PT
1/2"	15	106	54	63	NPT or PF PT
3/4"	20	132	61	75	NPT or PF PT
1"	25	152	71	88	NPT or PF PT
1 1/4"	32	152	75	101	NPT or PF PT
1 1/2"	38	193	91	112	NPT or PF PT
2"	50	193	100	124	NPT or PF PT
2 1/2"	65	263	142	164	NPT or PF PT
3"	80	263	142	198	NPT or PF PT

3-PC Ball Valve





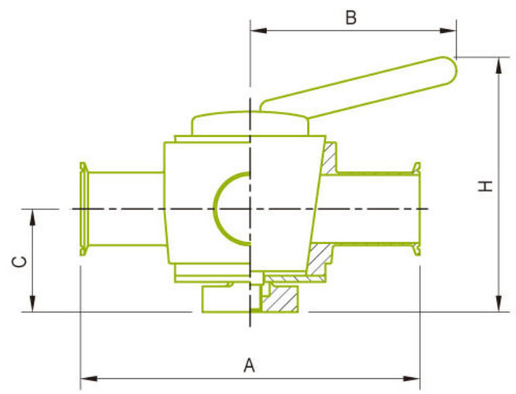
ITEM	PARTS Name	MATERIAL	QTY
1	Body	316/WCB	1
2	Cap	316/WCB	2
3	Ball	316	1
4	Seat	PTFE	1
5	Stem	316	1
6	Thrust Packing	PTFE	1
7	Stem Packing	PTFE	2
8	Bolt	304	4
9	HEX Nut	304	4
10	Bolt Washer	304	4
11	Gland Nut	304	1
12	Stem Washer	304	1
13	Stem Nut	304	1
14	Handle	304	1
15	Plastic Cover	Plastic	1

3-PC 316 BALL VALVE
ISO Mount Plate. lock device

Size	B mm	C mm	D mm	F mm	H mm	L mm	T mm
1/4"	8	5	12.7	33	52	59	NPT, PF, PT
3/8"	8	5	12.7	33	52	59	NPT, PF, PT
1/2"	8	5	15.5	44.5	55	68.5	NPT, PF, PT
3/4"	10	6.5	20	53	62	84	NPT, PF, PT
1"	10	6.5	25.4	57	67	89	NPT, PF, PT
1 1/4"	12	8.5	32	72	82	113	NPT, PF, PT
1 1/2"	12	8.5	38.1	78	92	119	NPT, PF, PT
2"	12	8.5	50.8	95.5	100	137.5	NPT, PF, PT
2 1/2"	19	12	65	110.5	140	162	NPT, PF, PT
3"	19	12	80	125.5	149	184.5	NPT, PF, PT
4"	25	12	100	153.5	184	227	NPT, PF, PT

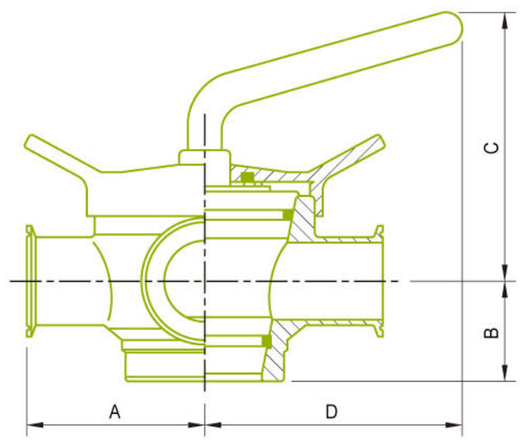
2Way / 3Way Plug Valves

Plug Valve are excellent sanitary devices with minimal pressure drops.
This kind of valve is constructed with a special taper which has been carefully designed to reduce wedging and galling.
Plug valves are made of type 316 stainless steel and come in the clamp and butt-weld end configuration.
Available in rubber or stainless steel plugs.
Note: Plug valves, because of inherent design, is recommended only for low pressure applications.... 25 psi maximum; for use with non-hazardous products, and at temperatures not to exceed 100°F.
They are subject to leakage almost normal operating, maintenance, and cleaning procedures.



2WAY & 3WAY-Butt Weld-plug Valve
2way & 3way-Clamp End-plug Valve

Size (Tube O.D)	Weld A mm	Clamp A mm	B mm	C mm	H mm
1"	184.2	115.9	117.0	58.3	128.4
1.5"	198.4	147.6	142.7	61.0	164.4
2"	223.8	173.0	144.2	72.4	178.0
2.5"	260.4	209.6	150.6	86.2	223.4
3"	290.5	239.7	180.7	90.6	241.4

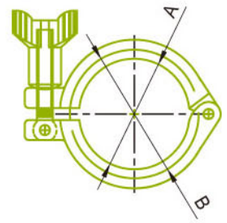


2WAY & 3WAY-Plug Valve For Male Female or Clamp Ends

Size (Tube O.D)	A M/M	A Flanged	B mm	C mm	D mm
1"	60	84	29	125	102
1.5"	79	115	45	129	152
2"	89	135	51	150	165
2.5"	105	158	57	170	191
3"	114	168	64	186	203

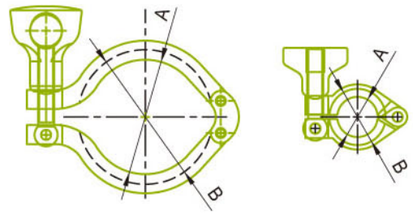
CLAMP / FERRULE

CLAMP



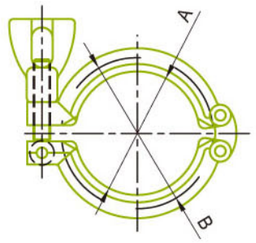
13MHH Heavy Duty Single Pin Clamp

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



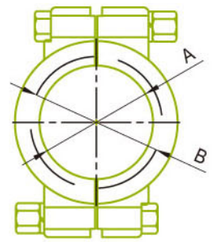
13MHHM Heavy Duty Double Pin Clamp

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



13SF Heavy Duty Double Pin Clamp

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



13MHP High Pressure Clamp

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

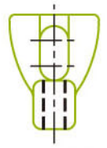
Wing-Nut For Clamp

13MHH-11

13MHH-12

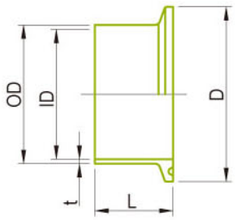
13MHH-13

13MHH-14



13SP-2

Ferrule



SMS Ferrule

SIZE	ID	OD	D	t	L	L
DN25	22.5	25	50.5	1.5	21.5	28.6
DN38	35.5	38	50.5	1.5	21.5	28.6
DN51	48.5	51	64.0	1.5	21.5	28.6
DN63.5	60.5	63.5	77.5	1.5	21.5	28.6
DN76	72.9	76.1	91.0	2	21.5	28.6
DN104	100	104	119.0	1.5	21.5	28.6

Inch Ferrule

SIZE	ID	OD	t	D	L (14WMP)	L (14MMP)	L (14AMP)
1/2"	9.7	12.75	1.5	25.2	12.7	21.5	28.6
3/4"	16	19.05	1.5	25.2	12.7	21.5	28.6
1.0"	22.1	25.4	1.65	50.5	12.7	21.5	28.6
1.5"	34.8	38.1	1.65	50.5	12.7	21.5	28.6
2.0"	47.5	50.8	1.65	64.0	12.7	21.5	28.6
2.5"	60.2	63.5	1.65	77.5	12.7	21.5	28.6
3.0"	72.9	76.2	1.65	91.0	12.7	21.5	28.6
4.0"	97.6	101.6	2	119.0	15.9	21.5	28.6
6.0"	146.8	152.5	2.85	166.8	/	21.5	28.6/38.1
8.0"	197.6	203.3	2.85	217.7	/	21.5	28.6/38.1
10"	247.2	254.1	3.45	268.5	/	21.5	28.6/38.1
12"	298	304.9	3.45	319.3	/	21.5	28.6/38.1

DIN Ferrule

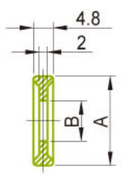
SIZE	ID	OD	D	t	L (14WMP)	L (14MMP)	L (14AMP)
DN10	9	12	34	1.5	12.7	21.5	28.6
DN15	15	18	34	1.5	12.7	21.5	28.6
DN20	19	20	34	1.5	12.7	21.5	28.6
DN28	25	28	50.5	1.5	12.7	21.5	28.6
DN34	31	34	50.5	1.5	12.7	21.5	28.6
DN40	37	40	50.5	1.5	12.7	21.5	28.6
DN52	49	52	64	1.5	12.7	21.5	28.6
DN70	66	70	91	2	12.7	21.5	28.6
DN85	81	85	106	2	15.8	21.5	28.6
DN104	100	104	119	2	15.8	21.5	28.6
DN125	125	129	155	2	15.8	21.5	28.6
DN150	150	154	183	2	15.8	21.5	28.6
DN200	200	204	233.5	2	/	/	28.6

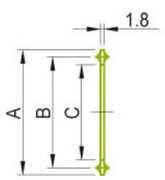
ISO Ferrule

SIZE	ID	OD	D	t	L
8	10.3	13.5	34	1.6	28.6
12	14	17.5	34	1.75	28.6
15	18.1	21.6	34	1.75	28.6
20	23.7	26.9	50.5	1.6	28.6
25	30.5	33.7	50.5	1.6	28.6
32	39.2	42.4	50.5	1.6	28.6
40	45.1	48.3	64	1.6	28.6
50	56.3	60.3	77.5	2	28.6
65	72.1	76.1	91	2	28.6
80	84.9	88.9	106	2	28.6
100	109.1	114.3	130	2.6	28.6
125	133.7	139.7	155	3	28.6
150	162.3	168.3	183	3	28.6
200	211.1	219.1	233.5	4	28.6

Materials

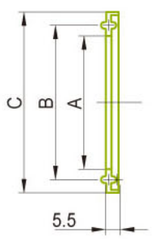
Seal rings: EPDM, Silicon, Vition, PTFE





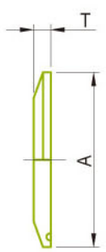
Plain Type 13PG

SIZE	A	B	C
1/2"	21.8	/	9.9
3/4"	21.8	/	16.3
1.0"	50.0	43.5	22.7
1.5"	50.0	43.5	35.9
2.0"	63.5	56.5	48.6
2.5"	76.2	70.5	61.3
3.0"	88.9	83.5	74.0
4.0"	118.0	110.0	98.6
6.0"	165.0	156.4	147.8
8.0"	216.0	207.2	198.6



Flange Type 13FG

SIZE	A	B	C
1.0"	22.8	43.5	52.7
1.5"	35.8	43.5	52.7
2.0"	48.8	56.5	66.2
2.5"	60.5	70.5	79.7
3.0"	73.1	83.5	93.2
4.0"	97.8	110.0	121.2
6.0"	148	156.4	169.1
10"	249	258	270.7
12"	300	308.8	321.5



Blank 3A-16AMP

SIZE	A	T
1/2"-3/4"	25.2	6.4
1-1.5"	50.5	6.4
2.0"	64.0	6.4
2.5"	77.5	6.4
3.0"	91.0	6.4
4.0"	119.0	7.9
6.0"	166.7	11.1
8.0"	217.7	11.1
10"	268.5	11.1
12"	319.3	11.1

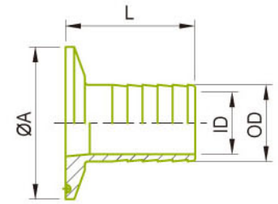
Blank DIN-16AMP

SIZE	A	T
DN10-20	34	6.4
DN28-40	50.5	6.4
DN52	64	6.4
DN70	91	6.4
DN85	106	6.4
DN104	119	7.9
DN125	155	11.1
DN150	183	11.1
DN200	233.5	11.1

Blank ISO-16AMP

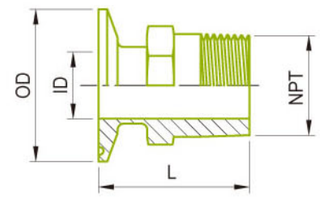
SIZE	A	T
DN20	50.5	6.4
DN25	50.5	6.4
DN32	50.5	6.4
DN40	64	6.4
DN50	77.5	6.4
DN65	91	6.4
DN80	106	6.4
DN100	130	7.9
DN125	155	7.9
DN150	183	11.1
DN200	233.5	11.1

Ferrule Adapter



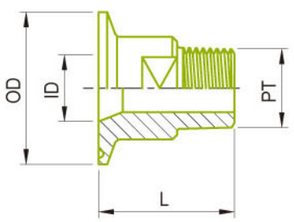
14MPHR Hose Adapter

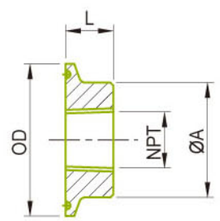
Size	ID	OD	øA	L
1/2"	9.5	12.7	25.2	38.1
3/4"	15.8	19.05	25.2	38.1
1.0"	22.1	25.4	50.5	43
1.5"	34.8	38.1	50.5	43
2.0"	47.5	50.8	64	59
2.5"	60.2	63.5	77.5	60
3.0"	72	76.2	91	79
4.0"	97.6	101.6	119	87



21MP Clamp*Male NPT

Size	ID	OD	NPT	PT	L
1/2"*1/2"	9.5	25.2	1/2"	1/2"	38.1
1/2"*3/4"	15.8	25.2	3/4"	3/4"	41.3
3/4"*1/2"	15.8	25.2	1/2"	1/2"	38.1
3/4"*3/4"	15.8	25.2	3/4"	3/4"	41.3
1"*1/2"	9.5	50.8	1/2"	1/2"	41.3
1"*3/4"	15.8	63.5	3/4"	3/4"	41.3
1"*1"	22.1	50.5	1"	1"	41.3
1"*1-1/2"	22.1	50.5	1-1/2"	1-1/2"	41.3
1"*2"	22.1	50.5	2"	2"	41.3
1-1/2"*3/4"	15.8	50.5	3/4"	3/4"	41.3
1-1/2"*1"	22.1	50.5	1"	1"	41.3
1-1/2"*1-1/2"	34.8	50.5	1-1/2"	1-1/2"	57.2
1-1/2"*2"	34.8	50.5	2"	2"	41.3
2"*1/2"	9.5	64	1/2"	1/2"	42.8
2"*3/4"	15.8	64	3/4"	3/4"	42.8
2"*1"	22.1	64	1"	1"	42.8
2"*1-1/2"	34.8	64	1-1/2"	1-1/2"	42.8
2"*2"	47.5	64	2"	2"	59.5
2-1/2"*1-1/2"	34.8	77.5	1-1/2"	1-1/2"	42
2-1/2*2"	47.5	77.5	2"	2"	43.6
2-1/2"*2-1/2"	60.2	77.5	2-1/2"	2-1/2"	53.2
3"*3"	73	91	3"	3"	55.5
4"*4"	97.6	119	4"	4"	67.5

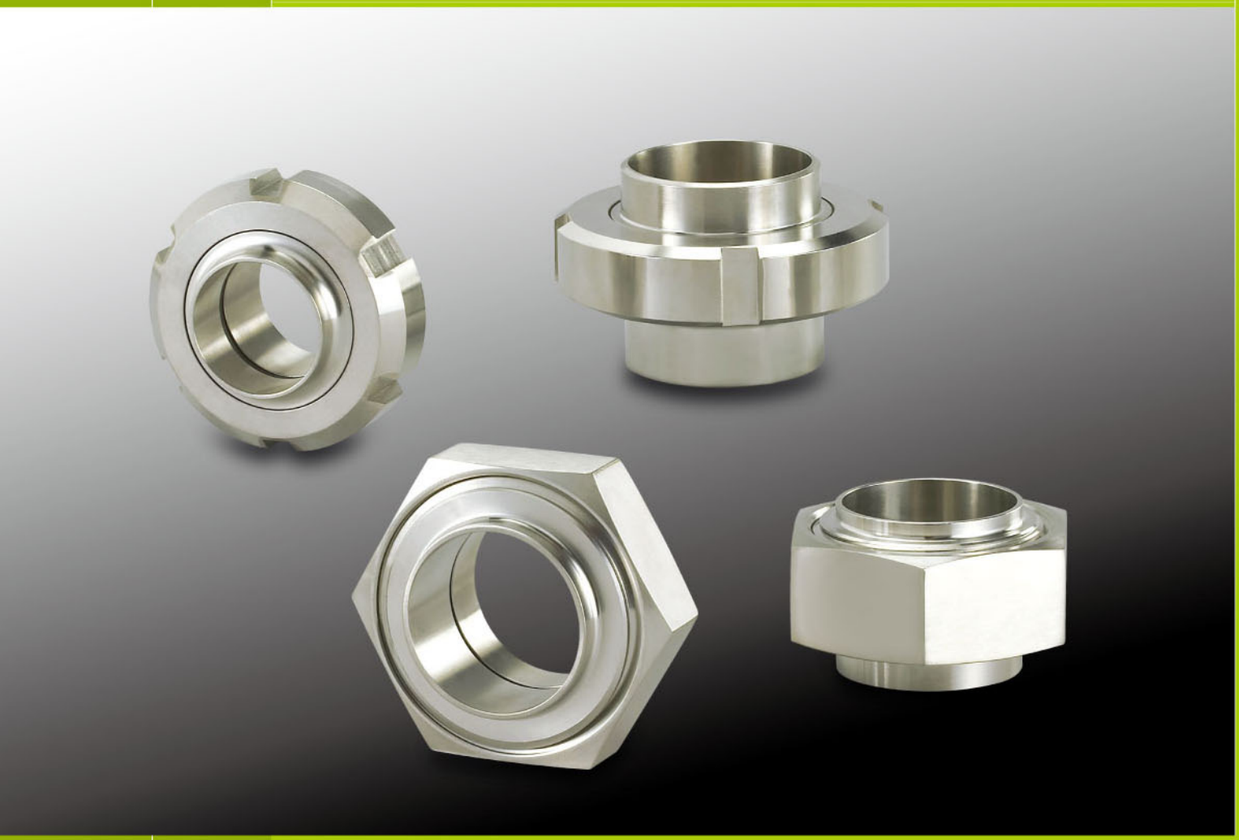




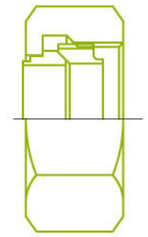
23BMP Thermometer Cap

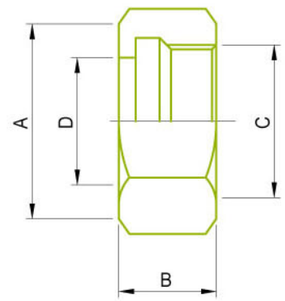
Size	OD	øA	NPT	PT	L
1.0"	50.5	38.1	1/2"	1/2"	15.8
1.5"	50.5	38.1	3/4"	3/4"	15.8
2.0"	64	50.8	3/4"	3/4"	15.8
2.5"	77.5	63.5	3/4"	3/4"	15.8
3.0"	91	76.2	3/4"	3/4"	15.8
4.0"	119	101.6	3/4"	3/4"	15.8

UNION



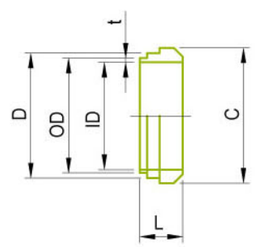
3A Union Parts





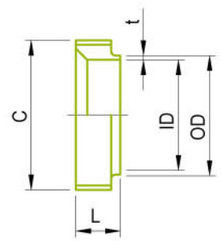
3A Hexagonal Nut 3A-13H

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



3A Short Liner 3A-14PRF

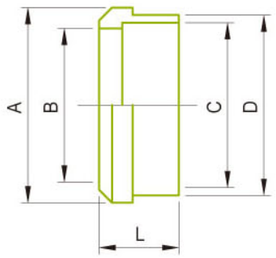
SIZE	OD/ID x t	C	D	L
1.0"	25.4/22.1x1.65	33.3	29.5	18.3
1.5"	38.1/34.8x1.65	46.8	42.6	18.3
2.0"	50.8/47.5x1.65	60.3	55.7	19.1
2.5"	63.5/60.2x1.65	73.8	68.8	22.3
3.0"	76.2/72.9x1.65	87.3	81.9	23.1
4.0"	101.6/97.6x2.0	114.3	108.1	26.2



3A Short Male 3A-15TRF

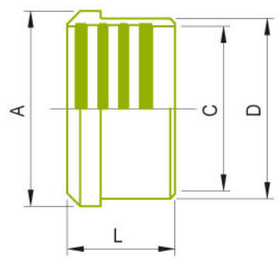
SIZE	C	OD/ID x t	L
1.0"	37.13 ACME 8TPI	25.4/22.1x1.65	18.3
1.5"	50.65 ACME 8TPI	38.1/34.8x1.65	18.3
2.0"	64.17 ACME 8TPI	50.8/47.5x1.65	19.1
2.5"	77.67 ACME 8TPI	63.5/60.2x1.65	22.2
3.0"	91.19 ACME 8TPI	76.2/72.9x1.65	23.1
4.0"	119.25ACME 6TPI	101.6/97.6x2.0	26.2

3A Recessless Union Parts



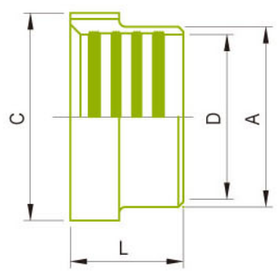
3A Recessless Liner

SIZE	A	B	C	D	L
1.0"	33.3	22.2	25.5	29.5	19.1
1.5"	46.8	34.9	38.2	42.6	22.2
2.0"	60.3	47.6	50.9	55.7	24.6
2.5"	73.8	60.3	63.6	68.8	27
3.0"	87.3	73	76.3	81.9	28.6
4.0"	114.3	97.6	101.7	108.1	31.8



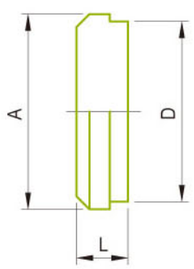
3A Recessless Liner

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



3A Recessless Male

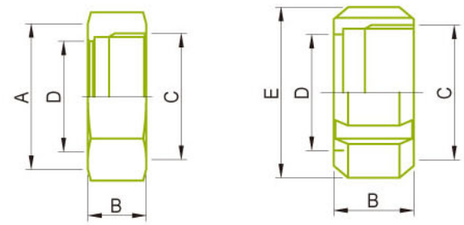
SIZE	A	C		D	L
1.0"	29.5	37.13	ACME 8TPI	25.5	20.6
1.5"	42.6	50.65	ACME 8TPI	38.2	28.6
2.0"	55.7	64.17	ACME 8TPI	50.9	34.9
2.5"	68.8	77.67	ACME 8TPI	63.6	38.1
3.0"	81.9	91.19	ACME 8TPI	76.3	41.3
4.0"	108.1	119.25	ACME 6TPI	101.7	41.3



3A Cap (3A-16A)

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

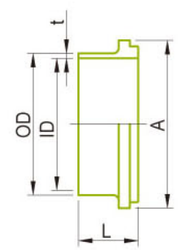
IDF Union Parts



IDF Round Nut

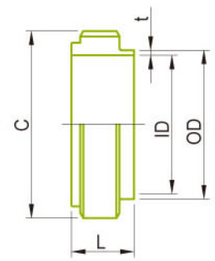
IDF Hexagonal Nut IDF-13H
IDF Round Nut IDF-13R

SIZE	A	B	C	D	E
1.0"	46	30	34.34 *8T ACME	30.5	48
1.5"	60	30	47.86 *8T ACME	43.5	64
2.0"	75	30	61.37 *8T ACME	57.0	77
2.5"	90	30	74.88 *8T ACME	70.7	91
3.0"	105	30	88.40 *8T ACME	83.3	104
4.0"	133	34.9	122.05 *6T ACME	112	135



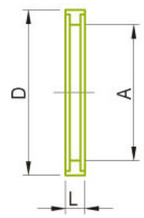
IDF Welding Liner IDF-14

SIZE	A	ID	OD	t	L
1.0"	33.8	22.1	25.4	1.65	21.5
1.5"	47.0	34.8	38.1	1.65	21.5
2.0"	60.5	47.5	50.8	1.65	21.5
2.5"	74.0	60.2	63.5	1.65	21.5
3.0"	87.5	72.9	76.2	1.65	21.5
4.0"	120.7	97.6	101.6	2.0	30.0



IDF Welding Male IDF-15R

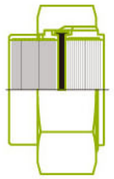
SIZE	C	ID	OD	t	L
1.0"	37.1*8T ACME	22.1	25.4	1.65	21.5
1.5"	50.6*8T ACME	34.8	38.1	1.65	21.5
2.0"	64.1*8T ACME	47.5	50.8	1.65	21.5
2.5"	77.6*8T ACME	60.2	63.5	1.65	21.5
3.0"	91.1*8T ACME	72.9	76.2	1.65	21.5
4.0"	125.9*6T ACME	97.6	101.6	1.65	30.0

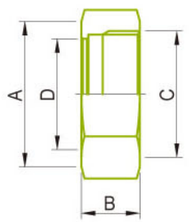


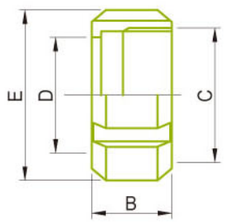
IDF Seal Ring

SIZE	A	D	L
1.0"	23	32.5	7
1.5"	36	46	7
2.0"	49	59.5	7
2.5"	60.7	73.2	7
3.0"	73.2	86.5	7
4.0"	98	112.5	7

IDF Expanding Union Parts



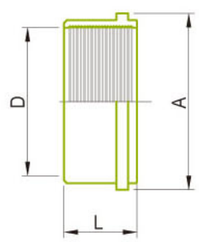




IDF Round Nut

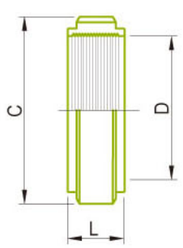
IDF Hexagonal Nut IDF-13H
IDF Round Nut IDF-13R

SIZE	A	B	C	D	E
1.0"	46	30	34.34 *8T ACME	30.5	48
1.5"	60	30	47.86 *8T ACME	43.5	64
2.0"	75	30	61.37 *8T ACME	57.0	77
2.5"	90	30	74.88 *8T ACME	70.7	91
3.0"	105	30	88.40 *8T ACME	83.3	104
4.0"	133	34.9	122.05 *6T ACME	112	135



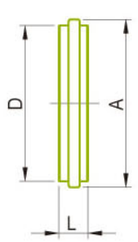
IDF Expanding Liner IDF-14R

SIZE	A	D	L
1.0"	33.8	25.5	20
1.5"	47.0	38.2	20
2.0"	60.5	50.9	25
2.5"	74.0	63.6	30
3.0"	87.5	76.3	30
4.0"	120.7	101.7	30



IDF Expanding Male IDF-15R

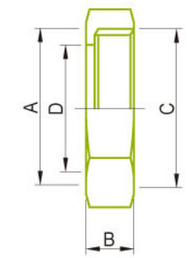
SIZE	C	D	L
1.0"	37.1*8T ACME	25.5	16.5
1.5"	50.6*8T ACME	38.2	19.5
2.0"	64.1*8T ACME	50.9	19.5
2.5"	77.6*8T ACME	63.6	20.0
3.0"	91.1*8T ACME	76.3	30.0
4.0"	125.9*6T ACME	101.7	35.0



IDF Blank IDF-16AMP

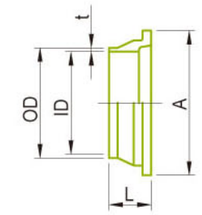
SIZE	A	D	L
1.0"	33.8	29.2	10.5
1.5"	47.0	42.7	10.5
2.0"	60.5	56.2	10.5
2.5"	74.0	69.9	10.5
3.0"	87.5	82.6	10.5
4.0"	114.1	111.1	12.6

RJT Union Parts



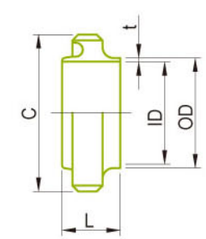
RJT Hexagonal Nut RJT-13H

SIZE	A	B	C	D
1.0"	50.8	22.2	42.266*8 TPI WHIT	33.3
1.5"	65.0	22.2	54.966*8 TPI WHIT	46
2.0"	79.4	22.2	67.920*6 TPI WHIT	58.7
2.5"	92.0	22.2	80.620*6 TPI WHIT	71.4
3.0"	104.8	22.2	93.320*6 TPI WHIT	84.1
4.0"	130	22.2	118.720*6 TPI WHIT	109.7
6.0"	184	24	169.520*6 TPI WHIT	163



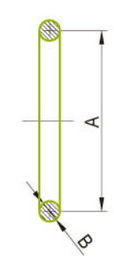
RJT Welding Liner RJT-14

SIZE	A	L	ID	OD	t
1.0"	41.3	19.5	22.2	25.7	1.7
1.5"	54.0	19.5	34.9	38.4	1.7
2.0"	66.7	19.5	47.6	51.1	1.7
2.5"	79.4	19.5	60.3	63.8	1.7
3.0"	92.1	19.5	73.0	76.5	1.7
4.0"	117.5	19.5	97.6	101.9	2.1
6.0"	169.1	23.5	148.0	152.5	2.2



RJT Welding Male RJT-15

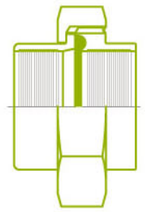
SIZE	ID	OD	C	L	t
1.0"	22.2	25.6	45.72*8T WHIT	27	1.7
1.5"	34.9	38.4	58.42*8T WHIT	27	1.7
2.0"	47.6	51.1	72.72*6T WHIT	27	1.7
2.5"	60.3	63.8	85.42*6T WHIT	27	1.7
3.0"	73.0	76.5	98.12*6T WHIT	27	1.7
4.0"	97.6	101.9	123.52*6T WHIT	27	2.1
6.0"	148	152.5	174.32*6T WHIT	24	2.2

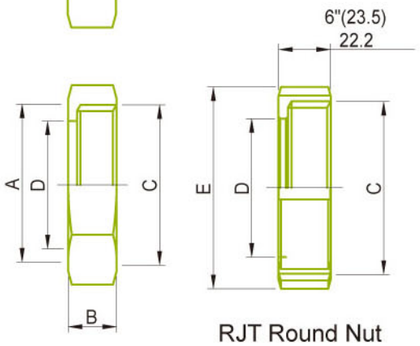


RJT Seal O-Ring

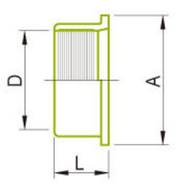
SIZE	A	B
1.0"	33.3	6.6
1.5"	46.0	6.6
2.0"	58.7	6.6
2.5"	71.4	6.6
3.0"	84.1	6.6
4.0"	109.5	6.6

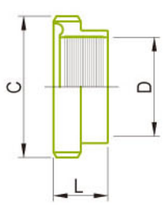
RJT Expanding Union Parts

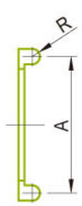




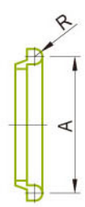
RJT Round Nut







(1) U Type-1



(2) U Type-2

RJT Hexagonal Nut RJT-13H

SIZE	A	B	C	D	E
1.0"	50.8	22.2	42.266*8 TPI WHIT	33.3	58.5
1.5"	65.0	22.2	54.966*8 TPI WHIT	46	74
2.0"	79.4	22.2	67.920*6 TPI WHIT	58.7	85.5
2.5"	92.0	22.2	80.620*6 TPI WHIT	71.4	98.5
3.0"	104.8	22.2	93.320*6 TPI WHIT	84.1	111.6
4.0"	130	22.2	118.720*6 TPI WHIT	109.7	138
6.0"	184	24	169.520*6 TPI WHIT	163	197

RJT Expanding Liner RJT-14R

SIZE	A	D	L
1.0"	41.3	25.5	20
1.5"	54.0	38.2	24
2.0"	66.7	50.9	28
2.5"	79.4	63.6	32
3.0"	92.1	76.3	32
4.0"	117.5	101.7	32

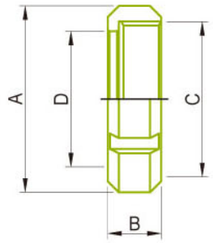
RJT Expanding Male RJT-15R

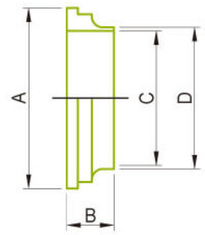
SIZE	C	D	L
1.0"	45.72*8T WHIT	25.5	20
1.5"	58.42*8T WHIT	38.2	24
2.0"	72.72*6T WHIT	50.9	28
2.5"	85.42*6T WHIT	63.6	32
3.0"	98.12*6T WHIT	76.3	32
4.0"	123.52*6T WHIT	101.7	32

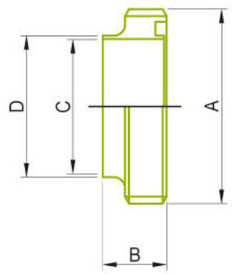
RJT Seal U-Ring

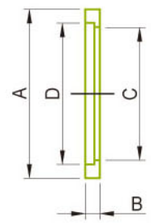
SIZE	A	R
1.0"	33.3	3.2
1.5"	46.0	3.2
2.0"	58.7	3.2
2.5"	71.4	3.2
3.0"	84.1	3.2
4.0"	109.5	3.2

SMS Union Parts









SMS Nut SMS-13R

SIZE	A	B	C	D
25	51	19	RD40*1/6	32.3
32	60	22	RD48*1/6	40.3
38	74	23	RD60*1/6	48.5
51	84	24	RD70*1/6	61.0
63.5	100	28	RD85*1/6	74.0
76	114	30	RD98*1/6	87.0
101.6/104	138	31	RD125*1/4	113.0
104-B	150	31	RD132*1/6	113.0

SMS Liner SMS-14

SIZE	A	B	C	D
25	35.5	15.5	22.5	25
32	43.5	16	31.3	33.7
38	55	16	35.5	38
51	65	17	48.5	51
63.5	80	17	60.5	63.5
76	93	19	72.9	76.1
104	118	19	100	104
101.6	118	19	97.6	101.6

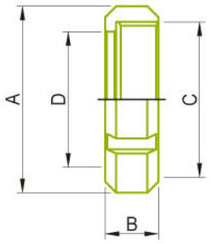
SMS Male SMS-15

SIZE	A	B	C	D
25	RD40*1/6	19	22.5	25
32	RD48*1/6	23	31.3	33.7
38	RD60*1/6	23	35.5	38
51	RD70*1/6	23	48.5	51
63.5	RD85*1/6	27	60.5	63.5
76	RD98*1/6	27	72.9	76.1
104	RD125*1/4	30	100	104
101.6	RD125*1/4	30	97.6	101.6

SMS Seal Ring

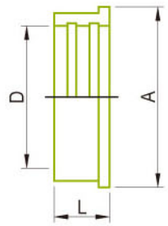
SIZE	A	B	C	D
25	31.8	5.3	22.8	25.1
38	47.8	5.3	35.8	38.1
51	60.8	5.3	48.8	51.1
63.5	73.3	5.3	61.0	63.6
76	85.8	5.3	73.4	76.1
104	115.7	5.3	100.5	104.0

SMS Expanding Union Parts



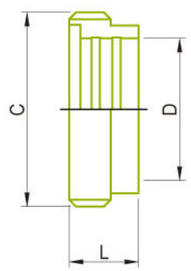
SMS Nut SMS-13R

SIZE	A	B	C	D
25	51	19	RD40*1/6	32.3
32	60	22	RD48*1/6	40.3
38	74	23	RD60*1/6	48.5
51	84	24	RD70*1/6	61.0
63.5	100	28	RD85*1/6	74.0
76	114	30	RD98*1/6	87.0
101.6/104	138	31	RD125*1/4	113.0
104-B	150	31	RD132*1/6	113.0



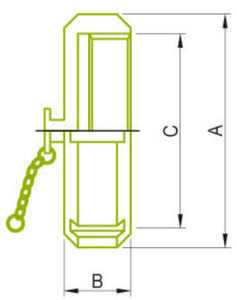
SMS Expanding Liner SMS-14R

SIZE	A	D	L
25	35.5	25.2	17
32	43.5	32.2	17
38	55	38.2	20
51	65	51.2	20
63.5	80	63.7	25
76	93	76.2	30
104	118	104.2	27



SMS Expanding Male SMS-15R

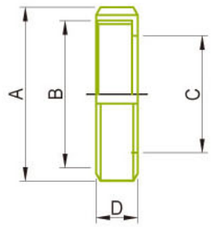
SIZE	C	D	L
25	RD40*1/6	25.2	20
32	RD48*1/6	32.2	20
38	RD60*1/6	38.2	23
51	RD70*1/6	51.2	25
63.5	RD85*1/6	63.7	30
76	RD98*1/6	76.2	35
104	RD125*1/4	104.2	30



SMS Blank Nut SMS-13RBN

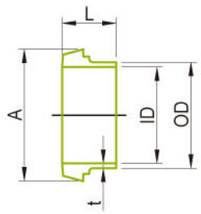
SIZE	A	B	C
25	51	19	RD40*1/6
32	60	22	RD48*1/6
38	74	23	RD60*1/6
51	84	24	RD70*1/6
63.5	100	28	RD85*1/6
76	114	30	RD98*1/6
101.6/104	138	31	RD125*1/4
104-B	150	31	RD132*1/6

DIN Union Parts



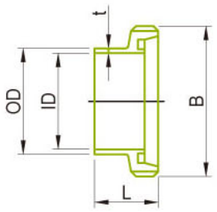
Din Nut part, DIN-13R

DIN	A	B	C	L
10	38	RD 28*1/8	19	18
15	44	RD 34*1/8	25	18
20	54	RD 44*1/6	31	21
25	63	RD 52*1/6	36	21
32	70	RD 58*1/6	42	21
40	78	RD 65*1/6	49	21
50	92	RD 78*1/6	62	22
65	112	RD 95*1/6	80	25
80	127	RD110*1/4	94	30
90	138	RD120*1/4	104	30
100	148	RD130*1/4	115	31
125	178	RD160*1/4	138	35
150	210	RD190*1/4	164	40



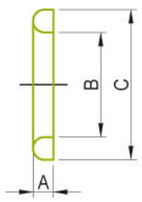
Din Liner part, DIN-14

DIN	ID	OD	t	A	L
10	10	13	1.5	22	17
15	16	19	1.5	28	17
20	20	23	1.5	36	18
25	26	29	1.5	44	22
32	32	35	1.5	50	25
40	38	41	1.5	56	26
50	50	53	1.5	68	28
65	66	70	2	86	32
80	81	85	2	100	37
100	100	104	2	121	44
125	125	129	2	150	34
150	150	154	2	176	37



Din Male part, DIN-15

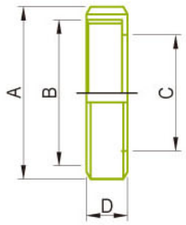
DIN	OD	ID	t	A	L
10	13	10	12	RD 28*1/8	21
15	19	16	18	RD 34*1/8	21
20	23	20	23	RD 44*1/6	24
25	29	26	30	RD 52*1/6	29
32	35	32	36	RD 58*1/6	32
40	41	38	42	RD 65*1/6	33
50	53	50	54	RD 78*1/6	35
65	70	66	71	RD 95*1/6	40
80	85	81	85	RD110*1/4	45
90	93	89	94	RD120*1/4	54
100	104	100	104	RD130*1/4	54
125	129	125	130	RD160*1/4	46
150	154	150	155	RD190*1/4	50

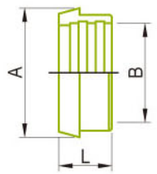


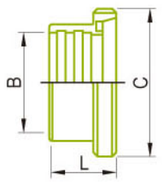
Din Seal Ring

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

DIN Expanding Union Parts







Din Nut part, DIN-13R

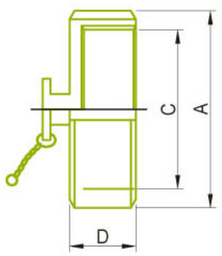
DIN	A	B	C	L
10	38	RD 28*1/8	19	18
15	44	RD 34*1/8	25	18
20	54	RD 44*1/6	31	21
25	63	RD 52*1/6	36	21
32	70	RD 58*1/6	42	21
40	78	RD 65*1/6	49	21
50	92	RD 78*1/6	62	22
65	112	RD 95*1/6	80	25
80	127	RD110*1/4	94	30
90	138	RD120*1/4	104	30
100	148	RD130*1/4	115	31
125	178	RD160*1/4	138	35
150	210	RD190*1/4	164	40

Din Expanding Liner part, DIN-14R

DIN	A	B	L
25	44	28.2	22
32	50	34.2	25
40	56	40.2	26
50	68	52.2	28
65	86	70.3	32
80	100	85.3	37
104	121	104.3	44

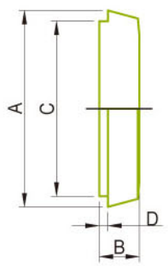
Din Expanding Male part, DIN-15R

DIN	B	C	L
25	28.2	RD 52*1/6	29
32	34.2	RD 58*1/6	32
40	40.2	RD 65*1/6	33
50	52.2	RD 78*1/6	35
65	70.3	RD 95*1/6	40
80	85.3	RD110*1/4	45
101.6	101.9	RD130*1/4	54
104	104.3	RD130*1/4	54



Din Blank Nut part, DIN-13RBN

DIN	A	C	D
10	38	RD 28*1/8	18
15	44	RD 34*1/8	18
20	54	RD 44*1/6	20
25	63	RD 52*1/6	21
32	70	RD 58*1/6	21
40	78	RD 65*1/6	21
50	92	RD 78*1/6	22
65	112	RD 95*1/6	25
80	127	RD110*1/4	30
100	148	RD130*1/4	31
125	178	RD160*1/4	35
150	210	RD190*1/4	41



Din Blank Liner part, DIN-14B

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

BPE

ASME BPE PRODUCT SPECIFICATION

Material
316L, chemical composition in accordance with Table DT-3
304L, 1.4404 and 1.4435 also available

Tolerances
According to ASME BPE-2009 Table DT-5 and Table DT-6

Weld Ends
Weld ends of tubes and fittings are prepared for orbital automatic tube weld

Surface Finish
We provide quality mechanical polish from 32 μ-in through to 15 μ-in.
Electropolishing and other requirements are available upon request.

Test Procedures
Control of dimensions
End preparation
Internal surface roughness measurements
Visual inspection

Product Marking
Besides EVERFIT, we will imprint the part number, heat number, ASME BPE and surface finish designation

Packaging
All finish products will be packed to suit the special conditions for international deliveries.

Documentation
Certified material test report 3.1 as per DIN EN 10204/ASTM A1016.
Prematerial certification available upon request

ORDERING INFORMATION : Surface Finish
WHEN ORDERING PLEASE SPECIFY

_____ - ##
Part Number

F1=SF1	F4=SF4
F2=SF2	F5=SF5
F3=SF3	F6=SF6

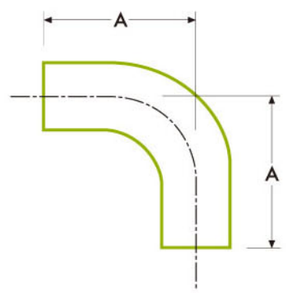
DT 1

Tubes

Nominal Size		Tube Wall Thickness		Part Number
inch	mm.	inch	mm.	
1/4	6.35	0.035	0.89	2201B001
3/8	9.53	0.035	0.89	2201B002
1/2	12.70	0.065	1.65	2201B003
3/4	19.05	0.065	1.65	2201B004
1	25.40	0.065	1.65	2201B005
1 1/2	38.10	0.065	1.65	2201B006
2	50.80	0.065	1.65	2201B007
2 1/2	63.50	0.065	1.65	2201B008
3	76.20	0.065	1.65	2201B009
4	101.60	0.083	2.11	2201B010
6	152.40	0.109	2.77	2201B011

DT 7

Automatic Tube Weld:
90° Elbow

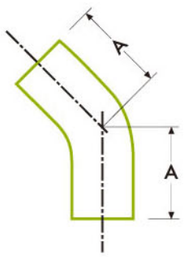


Nominal Size		A		Part Number
inch	mm.	inch	mm	
1/4	6.35	2.625	66.70	2207B001
3/8	9.53	2.625	66.70	2207B002
1/2	12.70	3.000	76.20	2207B003
3/4	19.05	3.000	76.20	2207B004
1	25.40	3.000	76.20	2207B005
1 1/2	38.10	3.750	95.30	2207B006
2	50.80	4.750	120.70	2207B007
2 1/2	63.50	5.500	139.70	2207B008
3	76.20	6.250	158.80	2207B009
4	101.60	8.000	203.20	2207B010
6	152.40	11.500	292.10	2207B011

DT 8

Automatic Tube Weld:

45° Elbow

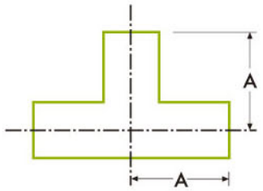


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/4	6.35	2.000	50.80	2208B001
3/8	9.53	2.000	50.80	2208B002
1/2	12.7	2.250	57.20	2208B003
3/4	19.05	2.250	57.20	2208B004
1	25.40	2.250	57.20	2208B005
1 1/2	38.10	2.500	63.50	2208B006
2	50.80	3.000	76.20	2208B007
2 1/2	63.50	3.375	85.70	2208B008
3	76.20	3.625	92.10	2208B009
4	101.60	4.500	114.30	2208B010
6	152.40	6.250	158.80	2208B011

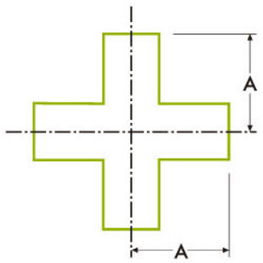
DT 9

Automatic Tube Weld:

Straight Tee/ Straight Cross



Tee



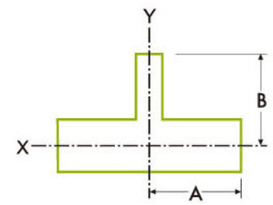
Cross

Nominal Size		A		Part Number Straight Tee	Part Number Straight Cross
inch	mm.	inch	mm.		
1/4	6.35	1.750	44.50	2209B001	2209B201
3/8	9.53	1.750	44.50	2209B002	2209B202
1/2	12.70	1.875	47.60	2209B003	2209B203
3/4	19.05	2.000	50.80	2209B004	2209B204
1	25.40	2.125	54.00	2209B005	2209B205
1 1/2	38.10	2.375	60.30	2209B006	2209B206
2	50.80	2.875	73.00	2209B007	2209B207
2 1/2	63.50	3.125	79.40	2209B008	2209B208
3	76.20	3.375	85.70	2209B009	2209B209
4	101.60	4.125	104.80	2209B010	2209B210
6	152.40	5.625	142.90	2209B011	2209B211

DT 10

Automatic Tube Weld:

Reducing Tee

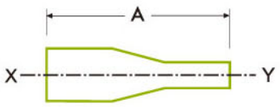


Nominal Size						A		B		Part Number
inch			mm.			inch	mm.	inch	mm.	
3/8	x	1/4	9.53	x	6.35	1.750	44.45	1.750	44.50	2210B001
1/2	x	1/4	12.70	x	6.35	1.875	47.60	1.875	47.60	2210B002
	x	3/8		x	9.53	1.875	47.60	1.875	47.60	2210B003
3/4	x	1/4	19.05	x	6.35	2.000	50.80	2.000	50.80	2210B004
	x	3/8		x	9.53	2.000	50.80	2.000	50.80	2210B005
	x	1/2		x	12.70	2.000	50.80	2.000	50.80	2210B006
1	x	1/4	25.40	x	6.35	2.125	54.00	2.125	54.00	2210B007
	x	3/8		x	9.53	2.125	54.00	2.125	54.00	2210B008
	x	1/2		x	12.70	2.125	54.00	2.125	54.00	2210B009
	x	3/4		x	19.05	2.125	54.00	2.125	54.00	2210B010
1 1/2	x	1/2	38.10	x	12.70	2.375	60.30	2.375	60.30	2210B011
	x	3/4		x	19.05	2.375	60.30	2.375	60.30	2210B012
	x	1		x	25.40	2.375	60.30	2.375	60.30	2210B013
2	x	1/2	50.80	x	12.70	2.875	73.00	2.625	66.70	2210B014
	x	3/4		x	19.05	2.875	73.00	2.625	66.70	2210B015
	x	1		x	25.40	2.875	73.00	2.625	66.70	2210B016
	x	1 1/2		x	38.10	2.875	73.00	2.625	66.70	2210B017
2 1/2	x	1/2	63.50	x	12.70	3.125	79.40	2.875	73.00	2210B018
	x	3/4		x	19.05	3.125	79.40	2.875	73.00	2210B019
	x	1		x	25.40	3.125	79.40	2.875	73.00	2210B020
	x	1 1/2		x	38.10	3.125	79.40	2.875	73.00	2210B021
	x	2		x	50.80	3.125	79.40	2.875	73.00	2210B022
3	x	1/2	76.20	x	12.70	3.375	85.70	3.125	79.40	2210B023
	x	3/4		x	19.05	3.375	85.70	3.125	79.40	2210B024
	x	1		x	25.40	3.375	85.70	3.125	79.40	2210B025
	x	1 1/2		x	38.10	3.375	85.70	3.125	79.40	2210B026
	x	2		x	50.40	3.375	85.70	3.125	79.40	2210B027
	x	2 1/2		x	63.50	3.375	85.70	3.125	79.40	2210B028
4	x	1/2	101.60	x	12.70	4.125	104.80	3.625	92.10	2210B029
	x	3/4		x	19.05	4.125	104.80	3.625	92.10	2210B030
	x	1		x	25.40	4.125	104.80	3.625	92.10	2210B031
	x	1 1/2		x	38.10	4.125	104.80	3.625	92.10	2210B032
	x	2		x	50.40	4.125	104.80	3.875	98.40	2210B033
	x	2 1/2		x	63.50	4.125	104.80	3.875	98.40	2210B034
	x	3		x	76.20	4.125	104.80	3.875	98.40	2210B035
6	x	3	152.40	x	76.20	5.625	142.90	4.875	123.80	2210B042
	x	4		x	101.60	5.625	142.90	5.125	130.20	2210B043

DT 11

Automatic Tube Weld:

Concentric Reducer/ Eccentric Reducer

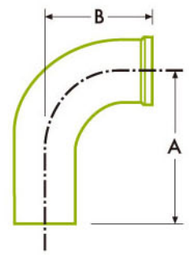


Nominal Size		A		Part Number	B		Part Number
inch	mm.	inch	mm.	CR	inch	mm.	ER
3/8 x 1/4	9.53 x 6.35	3.250	82.60	2211B001	4.000	101.60	2211B051
1/2 x 1/4	12.70 x 6.35	3.250	82.60	2211B002	4.000	101.60	2211B052
x 3/8	x 9.53	3.250	82.60	2211B003	4.000	101.60	2211B053
3/4 x 1/4	19.05 x 6.35	3.250	82.60	2211B004	4.000	101.60	2211B054
x 3/8	x 9.53	3.250	82.60	2211B005	4.000	101.60	2211B055
x 1/2	x 12.70	4.000	101.60	2211B006	4.000	101.60	2211B056
1 x 1/4	25.40 x 6.35	4.500	114.30	2211B007	4.500	114.30	2211B057
x 3/8	x 9.53	4.500	114.30	2211B008	4.500	114.30	2211B058
x 1/2	x 12.70	4.500	114.30	2211B009	4.500	114.30	2211B059
x 3/4	x 19.05	4.000	101.60	2211B010	4.000	101.60	2211B060
1 1/2 x 1/2	38.10 x 12.70	5.500	139.70	2211B011	5.500	139.70	2211B061
x 3/4	x 19.05	5.000	127.00	2211B012	5.000	127.00	2211B062
x 1	x 25.40	5.000	127.00	2211B013	5.000	127.00	2211B063
2 x 1/2	50.80 x 12.70	7.750	196.90	2211B014	7.750	196.90	2211B064
x 3/4	x 19.05	7.250	184.20	2211B015	7.250	184.20	2211B065
x 1	x 25.40	7.250	184.20	2211B016	7.250	184.20	2211B066
x 1 1/2	x 38.10	5.250	133.40	2211B017	5.250	133.40	2211B067
2 1/2 x 1/2	63.50 x 12.70	9.750	247.70	2211B018	9.750	247.70	2211B068
x 3/4	x 19.05	9.250	235.00	2211B019	9.250	235.00	2211B069
x 1	x 25.40	9.250	235.00	2211B020	9.250	235.00	2211B070
x 1 1/2	x 38.10	7.250	184.20	2211B021	7.250	184.20	2211B071
x 2	x 50.80	5.500	139.70	2211B022	5.500	139.70	2211B072
3 x 1	76.20 x 25.40	11.250	285.80	2211B023	11.250	285.80	2211B073
x 1 1/2	x 38.10	9.250	235.00	2211B024	9.250	235.00	2211B074
x 2	x 50.80	7.500	190.50	2211B025	7.500	190.50	2211B075
x 2 1/2	x 63.50	5.500	139.70	2211B026	5.500	139.70	2211B076
4 x 1	101.60 x 25.40	15.500	393.70	2211B027	15.500	393.70	2211B077
x 1 1/2	x 38.10	13.500	342.90	2211B028	13.500	342.90	2211B078
x 2	x 50.80	11.750	298.50	2211B029	11.750	298.50	2211B079
x 2 1/2	x 63.50	9.750	247.70	2211B030	9.750	247.70	2211B080
x 3	x 76.20	7.750	196.90	2211B031	7.750	196.90	2211B081
6 x 3	152.40 x 76.20	10.000	254.00	2211B033	9.750	247.70	2211B083
x 4	x 101.60	10.000	254.00	2211B034	10.000	254.00	2211B084

DT 12

Automatic Tube Weld:

Hygienic Clamp Joint, 90˚ Elbow

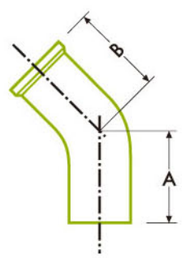


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/4	6.35	2.625	66.70	1.625	41.30	2212B001
3/8	9.53	2.625	66.70	1.625	41.30	2212B002
1/2	12.70	3.000	76.20	1.625	41.30	2212B003
3/4	19.05	3.000	76.20	1.625	41.30	2212B004
1	25.40	3.000	76.20	2.000	50.80	2212B005
1 1/2	38.10	3.750	95.30	2.750	69.90	2212B006
2	50.80	4.750	120.70	3.500	88.90	2212B007
2 1/2	63.50	5.500	139.70	4.250	108.00	2212B008
3	76.20	6.250	158.80	5.000	127.00	2212B009
4	101.60	8.000	203.20	6.625	168.20	2212B010
6	152.40	11.500	292.10	10.500	266.70	2212B011

DT 13

Automatic Tube Weld:

Hygienic Clamp Joint, 45˚ Elbow

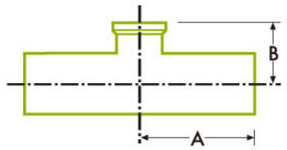


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/4	6.35	2.000	50.80	1.000	25.40	2213B001
3/8	9.53	2.000	50.80	1.000	25.40	2213B002
1/2	12.70	2.250	57.20	1.000	25.40	2213B003
3/4	19.05	2.250	57.20	1.000	25.40	2213B004
1	25.40	2.250	57.20	1.125	28.60	2213B005
1 1/2	38.10	2.500	63.50	1.438	36.50	2213B006
2	50.80	3.000	76.20	1.750	44.50	2213B007
2 1/2	63.50	3.375	85.70	2.063	52.40	2213B008
3	76.20	3.625	92.10	2.375	60.30	2213B009
4	101.60	4.500	114.30	3.125	79.40	2213B010
6	152.40	6.250	158.80	5.250	133.40	2213B011

DT 14

Automatic Tube Weld:

Short Outlet Hygienic Clamp Joint Reducing Tee

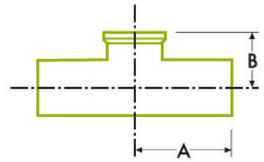


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
3/8 x 1/4	9.53 x 6.35	1.750	44.50	1.000	25.40	2214B001
1/2 x 1/4	12.70 x 6.53	1.875	47.60	1.000	25.40	2214B002
x 3/8	x 9.53	1.875	47.60	1.000	25.40	2214B003
3/4 x 1/4	19.05 x 6.35	2.000	50.80	1.000	25.40	2214B004
x 3/8	x 9.53	2.000	50.80	1.000	25.40	2214B005
x 1/2	x 12.70	2.000	50.80	1.000	25.40	2214B006
1 x 1/4	25.40 x 6.35	2.125	54.00	1.125	28.60	2214B007
x 3/8	x 9.53	2.125	54.00	1.125	28.60	2214B008
x 1/2	x 12.70	2.125	54.00	1.125	28.60	2214B009
x 3/4	x 19.05	2.125	54.00	1.125	28.60	2214B010
1 1/2 x 1/2	38.10 x 12.70	2.375	60.30	1.375	34.90	2214B011
x 3/4	x 19.05	2.375	60.30	1.375	34.90	2214B012
x 1	x 25.40	2.375	60.30	1.375	34.90	2214B013
2 x 1/2	50.80 x 12.70	2.875	73.00	1.625	41.30	2214B014
x 3/4	x 19.05	2.875	73.00	1.625	41.30	2214B015
x 1	x 25.40	2.875	73.00	1.625	41.30	2214B016
x 1 1/2	x 38.10	2.875	73.00	1.625	41.30	2214B017
2 1/2 x 1/2	63.50 x 12.70	3.125	79.40	1.875	47.60	2214B018
x 3/4	x 19.05	3.125	79.40	1.875	47.60	2214B019
x 1	x 25.40	3.125	79.40	1.875	47.60	2214B020
x 1 1/2	x 38.10	3.125	79.40	1.875	47.60	2214B021
x 2	x 50.80	3.125	79.40	1.875	47.60	2214B022
3 x 1/2	76.20 x 12.70	3.375	85.70	2.125	54.00	2214B023
x 3/4	x 19.05	3.375	85.70	2.125	54.00	2214B024
x 1	x 25.40	3.375	85.70	2.125	54.00	2214B025
x 1 1/2	x 38.10	3.375	85.70	2.125	54.00	2214B026
x 2	x 50.80	3.375	85.70	2.125	54.00	2214B027
x 2 1/2	x 63.50	3.375	85.70	2.125	54.00	2214B028
4 x 1/2	101.60 x 12.70	4.125	104.80	2.625	66.70	2214B029
x 3/4	x 19.05	4.125	104.80	2.625	66.70	2214B030
x 1	x 25.40	4.125	104.80	2.625	66.70	2214B031
x 1 1/2	x 38.10	4.125	104.80	2.625	66.70	2214B032
x 2	x 50.80	4.125	104.80	2.625	66.70	2214B033
x 2 1/2	x 63.50	4.125	104.80	2.625	66.70	2214B034
x 3	x 76.20	4.125	104.80	2.625	66.70	2214B035
6 x 1/2	152.40 x 12.70	5.625	142.90	3.625	92.10	2214B036
x 3/4	x 19.05	5.625	142.90	3.625	92.10	2214B037
x 1	x 25.40	5.625	142.90	3.625	92.10	2214B038
x 1 1/2	x 38.10	5.625	142.90	3.625	92.10	2214B039
x 2	x 50.80	5.625	142.90	3.625	92.10	2214B040
x 2 1/2	x 63.50	5.625	142.90	3.625	92.10	2214B041
x 3	x 76.20	5.625	142.90	3.625	92.10	2214B042
x 4	x101.60	5.625	142.90	3.750	95.30	2214B043

DT 15

Automatic Tube Weld:

Short Outlet Hygienic Clamp Joint Tee

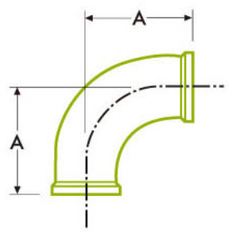


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/4	6.35	1.750	44.50	1.000	25.40	2215B001
3/8	9.53	1.750	44.50	1.000	25.40	2215B002
1/2	12.70	1.875	47.60	1.000	25.40	2215B003
3/4	19.05	2.000	50.80	1.125	28.60	2215B004
1	25.40	2.125	54.00	1.125	28.60	2215B005
1 1/2	38.10	2.375	60.30	1.375	34.90	2215B006
2	50.80	2.875	73.00	1.625	41.30	2215B007
2 1/2	63.50	3.125	79.40	1.875	47.60	2215B008
3	76.20	3.375	85.70	2.125	54.00	2215B009
4	101.60	4.125	104.80	2.750	69.90	2215B010
6	152.40	5.625	142.90	4.625	117.50	2215B011

DT 16

Hygienic Clamp Joint:

90° Elbow

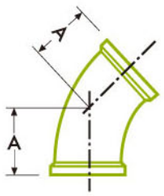


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/4	6.35	1.625	41.30	2216B001
3/8	9.53	1.625	41.30	2216B002
1/2	12.70	1.625	41.30	2216B003
3/4	19.05	1.625	41.30	2216B004
1	25.40	2.000	50.80	2216B005
1 1/2	38.10	2.750	69.90	2216B006
2	50.80	3.500	88.90	2216B007
2 1/2	63.50	4.250	108.00	2216B008
3	76.20	5.000	127.00	2216B009
4	101.60	6.625	168.30	2216B010
6	152.40	11.500	266.70	2216B011

DT 17

Hygienic Clamp Joint:

45° Elbow

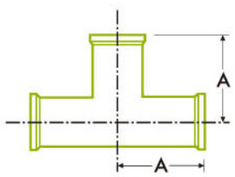


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/4	6.35	1.000	25.40	2217B001
3/8	9.53	1.000	25.40	2217B002
1/2	12.70	1.000	25.40	2217B003
3/4	19.05	1.000	25.40	2217B004
1	25.40	1.125	28.60	2217B005
1 1/2	38.10	1.437	36.50	2217B006
2	50.80	1.750	44.50	2217B007
2 1/2	63.50	2.063	52.40	2217B008
3	76.20	2.375	60.30	2217B009
4	101.60	3.125	79.40	2217B010
6	152.40	5.250	133.40	2217B011

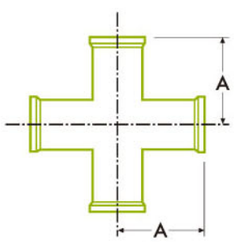
DT 18

Hygienic Clamp Joint:

Straight Tee/ Straight Cross



Tee



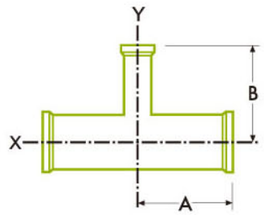
Cross

Nominal Size		A		Part Number Straight Tee	Part Number Straight Cross
inch	mm.	inch	mm.		
1/4	6.35	2.250	57.20	2218B001	2218B201
3/8	9.53	2.250	57.20	2218B002	2218B202
1/2	12.70	2.250	57.20	2218B003	2218B203
3/4	19.05	2.375	60.30	2218B004	2218B204
1	25.40	2.625	66.70	2218B005	2218B205
1 1/2	38.10	2.875	73.00	2218B006	2218B206
2	50.80	3.375	85.70	2218B007	2218B207
2 1/2	63.50	3.625	92.10	2218B008	2218B208
3	76.20	3.875	98.40	2218B009	2218B209
4	101.60	4.750	120.70	2218B010	2218B210
6	152.40	7.125	181.00	2218B011	2218B211

DT 19

Hygienic Clamp Joint:

Reducing Tee

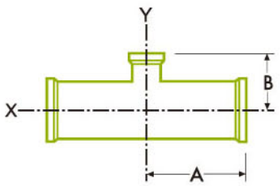


Nominal Size						A		B		Part Number
inch			mm.			inch	mm.	inch	mm.	
3/8	x	1/4	9.53	x	6.35	2.250	57.20	2.250	57.20	2219B001
1/2	x	1/4	12.70	x	6.35	2.375	60.30	2.375	60.30	2219B002
	x	3/8		x	9.53	2.375	60.30	2.375	60.30	2219B003
3/4	x	1/4	19.05	x	6.35	2.500	63.50	2.500	63.50	2219B004
	x	3/8		x	9.53	2.500	63.50	2.500	63.50	2219B005
	x	1/2		x	12.70	2.500	63.50	2.500	63.50	2219B006
1	x	1/4	25.40	x	6.35	2.625	66.70	2.625	66.70	2219B007
	x	3/8		x	9.53	2.625	66.70	2.625	66.70	2219B008
	x	1/2		x	12.70	2.625	66.70	2.625	66.70	2219B009
	x	3/4		x	19.05	2.625	66.70	2.625	66.70	2219B010
1 1/2	x	1/2	38.10	x	12.70	2.875	73.00	2.875	73.00	2219B011
	x	3/4		x	19.05	2.875	73.00	2.875	73.00	2219B012
	x	1		x	25.40	2.875	73.00	2.875	73.00	2219B013
2	x	1/2	50.80	x	12.70	3.375	85.70	3.125	79.40	2219B014
	x	3/4		x	19.05	3.375	85.70	3.125	79.40	2219B015
	x	1		x	25.40	3.375	85.70	3.125	79.40	2219B016
	x	1 1/2		x	38.10	3.375	85.70	3.125	79.40	2219B017
2 1/2	x	1/2	63.50	x	12.70	3.625	92.10	3.375	85.70	2219B018
	x	3/4		x	19.05	3.625	92.10	3.375	85.70	2219B019
	x	1		x	25.40	3.625	92.10	3.375	85.70	2219B020
	x	1 1/2		x	38.10	3.625	92.10	3.375	85.70	2219B021
	x	2		x	50.80	3.625	92.10	3.375	85.70	2219B022
3	x	1/2	76.20	x	12.70	3.875	98.40	3.625	92.10	2219B023
	x	3/4		x	19.05	3.875	98.40	3.625	92.10	2219B024
	x	1		x	25.40	3.875	98.40	3.625	92.10	2219B025
	x	1 1/2		x	38.10	3.875	98.40	3.625	92.10	2219B026
	x	2		x	50.80	3.875	98.40	3.625	92.10	2219B027
	x	2 1/2		x	63.50	3.875	98.40	3.625	92.10	2219B028
4	x	1/2	101.60	x	12.70	4.750	120.70	4.125	104.80	2219B029
	x	3/4		x	19.05	4.750	120.70	4.125	104.80	2219B030
	x	1		x	25.40	4.750	120.70	4.125	104.80	2219B031
	x	1 1/2		x	38.10	4.750	120.70	4.125	104.80	2219B032
	x	2		x	50.80	4.750	120.70	4.375	111.10	2219B033
	x	2 1/2		x	63.50	4.750	120.70	4.375	111.10	2219B034
	x	3		x	76.20	4.750	120.70	4.375	111.10	2219B035
6	x	3	152.40	x	76.20	7.125	181.00	5.375	136.50	2219B042
	x	4	152.40	x	101.60	7.125	181.00	5.750	146.10	2219B043

DT 20

Hygienic Clamp Joint:

Short Outlet Reducing Tee

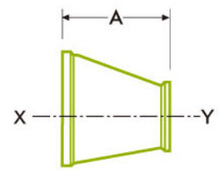


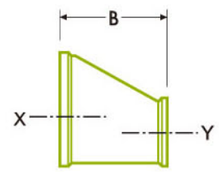
Nominal Size						A		B		Part Number
inch			mm.			inch	mm.	inch	mm.	
3/8	x	1/4	9.53	x	6.35	2.250	57.20	1.000	25.40	2220B001
1/2	x	1/4	12.70	x	6.35	2.375	60.30	1.000	25.40	2220B002
	x	3/8		x	9.53	2.375	60.30	1.000	25.40	2220B003
3/4	x	1/4	19.05	x	6.35	2.500	63.50	1.000	25.40	2220B004
	x	3/8		x	9.53	2.500	63.50	1.000	25.40	2220B005
	x	1/2		x	12.70	2.500	63.50	1.000	25.40	2220B006
1	x	1/4	25.40	x	6.35	2.625	66.70	1.125	28.60	2220B007
	x	3/8		x	9.53	2.625	66.70	1.125	28.60	2220B008
	x	1/2		x	12.70	2.625	66.70	1.125	28.60	2220B009
	x	3/4		x	19.05	2.625	66.70	1.125	28.60	2220B010
1 1/2	x	1/2	38.10	x	12.70	2.875	73.00	1.375	34.90	2220B011
	x	3/4		x	19.05	2.875	73.00	1.375	34.90	2220B012
	x	1		x	25.40	2.875	73.00	1.375	34.90	2220B013
2	x	1/2	50.80	x	12.70	3.375	85.70	1.625	41.30	2220B014
	x	3/4		x	19.05	3.375	85.70	1.625	41.30	2220B015
	x	1		x	25.40	3.375	85.70	1.625	41.30	2220B016
	x	1 1/2		x	38.10	3.375	85.70	1.625	41.30	2220B017
2 1/2	x	1/2	63.50	x	12.70	3.625	92.10	1.875	47.60	2220B018
	x	3/4		x	19.05	3.625	92.10	1.875	47.60	2220B019
	x	1		x	25.40	3.625	92.10	1.875	47.60	2220B020
	x	1 1/2		x	38.10	3.625	92.10	1.875	47.60	2220B021
	x	2		x	50.80	3.625	92.10	1.875	47.60	2220B022
3	x	1/2	76.20	x	12.70	3.875	98.40	2.125	54.00	2220B023
	x	3/4		x	19.05	3.875	98.40	2.125	54.00	2220B024
	x	1		x	25.40	3.875	98.40	2.125	54.00	2220B025
	x	1 1/2		x	38.10	3.875	98.40	2.125	54.00	2220B026
	x	2		x	50.80	3.875	98.40	2.125	54.00	2220B027
	x	2 1/2		x	63.50	3.875	98.40	2.125	54.00	2220B028
4	x	1/2	101.60	x	12.70	4.750	120.70	2.625	66.70	2220B029
	x	3/4		x	19.05	4.750	120.70	2.625	66.70	2220B030
	x	1		x	25.40	4.750	120.70	2.625	66.70	2220B031
	x	1 1/2		x	38.10	4.750	120.70	2.625	66.70	2220B032
	x	2		x	50.80	4.750	120.70	2.625	66.70	2220B033
	x	2 1/2		x	63.50	4.750	120.70	2.625	66.70	2220B034
	x	3		x	76.20	4.750	120.70	2.625	66.70	2220B035
6	x	1/2	152.40	x	12.70	7.125	181.00	3.625	92.10	2220B036
	x	3/4		x	19.05	7.125	181.00	3.625	92.10	2220B037
	x	1		x	25.40	7.125	181.00	3.625	92.10	2220B038
	x	1 1/2		x	38.10	7.125	181.00	3.625	92.10	2220B039
	x	2		x	50.80	7.125	181.00	3.625	92.10	2220B040
	x	2 1/2		x	63.50	7.125	181.00	3.625	92.10	2220B041
	x	3		x	76.20	7.125	181.00	3.625	92.10	2220B042
	x	4		x	101.60	7.125	181.00	3.750	95.30	2220B043

DT 21

Hygienic Clamp Joint:

Concentric Reducer/ Eccentric Reducer



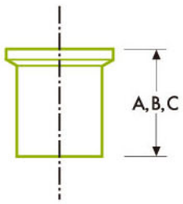


Nominal Size						A		Part Number CR	B		Part Number ER
inch			mm.			inch	mm.		inch	mm.	
3/4	x	1/2	19.05	x	12.70	2.000	50.80	2221B006	2.000	50.80	2221B056
1	x	1/2	25.40	x	12.70	2.500	63.50	2221B009	2.500	63.50	2221B059
	x	3/4		x	19.05	2.000	50.80	2221B010	2.000	50.80	2221B060
1 1/2	x	1/2	38.10	x	12.70	3.500	88.90	2221B011	3.500	88.90	2221B061
	x	3/4		x	19.05	3.000	76.20	2221B012	3.000	76.20	2221B062
	x	1		x	25.40	3.000	76.20	2221B013	3.000	76.20	2221B063
2	x	1/2	50.80	x	12.70	5.500	139.70	2221B014	5.500	139.70	2221B064
	x	3/4		x	19.05	5.000	127.00	2221B015	5.000	127.00	2221B065
	x	1		x	25.40	5.000	127.00	2221B016	5.000	127.00	2221B066
	x	1 1/2		x	38.10	3.000	76.20	2221B017	3.000	76.20	2221B067
2 1/2	x	1/2	63.50	x	12.70	7.500	190.50	2221B018	7.500	190.50	2221B068
	x	3/4		x	19.05	7.000	177.80	2221B019	7.000	177.80	2221B069
	x	1		x	25.40	7.000	177.80	2221B020	7.000	177.80	2221B070
	x	1 1/2		x	38.10	5.000	127.00	2221B021	5.000	127.00	2221B071
	x	2		x	50.80	3.000	76.20	2221B022	3.000	76.20	2221B072
3	x	1	76.20	x	25.40	9.000	228.60	2221B023	9.000	228.60	2221B073
	x	1 1/2		x	38.10	7.000	177.80	2221B024	7.000	177.80	2221B074
	x	2		x	50.80	5.000	127.00	2221B025	5.000	127.00	2221B075
	x	2 1/2		x	63.50	3.000	76.20	2221B026	3.000	76.20	2221B076
4	x	1	101.60	x	25.40	13.125	333.40	2221B027	13.125	333.40	2221B077
	x	1 1/2		x	38.10	11.125	282.60	2221B028	11.125	282.60	2221B078
	x	2		x	50.80	9.125	231.80	2221B029	9.125	231.80	2221B079
	x	2 1/2		x	63.50	7.125	181.00	2221B030	7.125	181.00	2221B080
	x	3		x	76.20	5.125	130.20	2221B031	5.125	130.20	2221B081
6	x	3	152.40	x	76.20	7.500	190.50	2221B033	7.625	193.70	2221B083
	x	4		x	101.60	7.625	193.70	2221B034	7.625	193.70	2221B084

DT 22

Automatic Tube Weld:

Ferrule



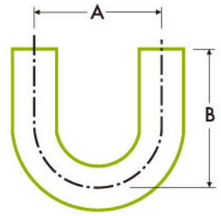
Nominal Size	A		Part Number	B		Part Number
inch	inch	mm.	A	inch	mm.	B
1/4	1.750	44.50	2222B001	1.130	28.7	2222B101
3/8	1.750	44.50	2222B002	1.130	28.7	2222B102
1/2	1.750	44.50	2222B003	1.130	28.7	2222B103
3/4	1.750	44.50	2222B004	1.130	28.7	2222B104
1	1.750	44.50	2222B005	1.130	28.7	2222B105
1 1/2	1.750	44.50	2222B006	1.130	28.7	2222B106
2	2.250	57.20	2222B007	1.130	28.7	2222B107
2 1/2	2.250	57.20	2222B008	1.130	28.7	2222B108
3	2.250	57.20	2222B009	1.130	28.7	2222B109
4	2.250	57.20	2222B010	1.130	28.7	2222B110
6	3.000	76.20	2222B011	1.500	38.1	2222B111

Nominal Size	C		Part Number
inch	inch	mm.	C
1/4	0.500	12.7	2222B201
3/8	0.500	12.7	2222B202
1/2	0.500	12.7	2222B203
3/4	0.500	12.7	2222B204
1	0.500	12.7	2222B205
1 1/2	0.500	12.7	2222B206
2	0.500	12.7	2222B207
2 1/2	0.500	12.7	2222B208
3	0.500	12.7	2222B209
4	0.625	15.9	2222B210
6	0.750	19.1	2222B211

DT 23

Automatic Tube Weld:

180° Return Bend

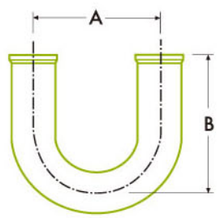


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/4	6.35	4.500	114.30	2.625	66.70	2223B001
3/8	9.53	4.500	114.30	2.625	66.70	2223B002
1/2	12.70	4.500	114.30	3.000	76.20	2223B003
3/4	19.05	4.500	114.30	3.000	76.20	2223B004
1	25.40	3.000	76.20	3.000	76.20	2223B005
1 1/2	38.10	4.500	114.30	4.500	114.30	2223B006
2	50.80	6.000	152.40	5.000	127.00	2223B007
2 1/2	63.50	7.500	190.50	5.750	146.10	2223B008
3	76.20	9.000	228.60	6.500	165.10	2223B009
4	101.60	12.000	304.80	8.500	215.90	2223B010
6	152.40	18.000	457.20	11.500	292.10	2223B011

DT 24

Hygienic Clamp Joint:

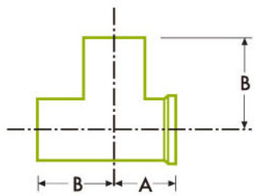
180° Return Bend



Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/4	6.35	4.500	114.30	3.125	79.40	2224B001
3/8	9.53	4.500	114.30	3.125	79.40	2224B002
1/2	12.70	4.500	114.30	3.500	88.90	2224B003
3/4	19.05	4.500	114.30	3.500	88.90	2224B004
1	25.40	3.000	76.20	3.500	88.90	2224B005
1 1/2	38.10	4.500	114.30	5.000	127.00	2224B006
2	50.80	6.000	152.40	5.500	139.70	2224B007
2 1/2	63.50	7.500	190.50	6.250	158.80	2224B008
3	76.20	9.000	228.60	7.000	177.80	2224B009
4	101.60	12.000	304.80	9.125	231.80	2224B010
6	152.40	18.000	457.20	13.000	330.20	2224B011

DT 25

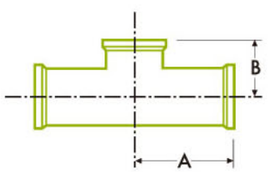
Hygienic
Mechanical Joint:
Short Outlet Run Tee



Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/4	6.35	0.875	22.20	1.750	44.50	2225B001
3/8	9.53	0.875	22.20	1.750	44.50	2225B002
1/2	12.70	0.875	22.20	1.875	47.60	2225B003
3/4	19.05	1.000	25.40	2.000	50.80	2225B004
1	25.40	1.125	28.60	2.125	54.00	2225B005
1 1/2	38.10	1.375	34.90	2.375	60.30	2225B006
2	50.80	1.625	41.30	2.875	73.00	2225B007
2 1/2	63.50	1.875	47.60	3.125	79.40	2225B008
3	76.20	2.125	54.00	3.375	85.70	2225B009
4	101.60	2.750	69.90	4.125	104.80	2225B010
6	152.40	4.625	117.50	5.625	142.90	2225B011

DT 27

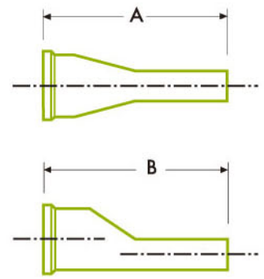
Hygienic Clamp Joint:
Short Outlet Tee



Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/2	12.70	2.250	57.20	1.000	25.40	2227B003
3/4	19.05	2.350	60.30	1.125	28.60	2227B004
1	25.40	2.625	66.70	1.125	28.60	2227B005
1 1/2	38.10	2.875	73.00	1.375	34.90	2227B006
2	50.80	3.375	85.70	1.625	41.30	2227B007
2 1/2	63.50	3.625	92.10	1.875	47.60	2227B008
3	76.20	3.875	98.40	2.125	54.00	2227B009
4	101.60	4.750	120.70	2.750	69.90	2227B010
6	152.40	7.125	181.00	4.625	117.50	2227B011

DT 26

Hygienic Clamp Joint:
Tube Weld Concentric Reducer/ Eccentric Reducer

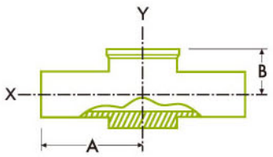


Nominal Size						A		Part Number CR	B		Part Number ER
inch			mm.			inch	mm.		inch	mm.	
3/4	x	1/2	19.05	x	12.70	3.000	76.20	2226B006	3.000	76.20	2226B056
1	x	1/2	25.40	x	12.70	3.500	88.90	2226B009	3.500	88.90	2226B059
	x	3/4		x	19.05	3.000	76.20	2226B010	3.000	76.20	2226B060
1 1/2	x	1/2	38.10	x	12.70	4.500	114.30	2226B011	4.500	114.30	2226B061
	x	3/4		x	19.05	4.000	101.60	2226B012	4.000	101.60	2226B062
	x	1		x	25.40	4.000	101.60	2226B013	4.000	101.60	2226B063
2	x	1/2	50.80	x	12.70	6.500	165.10	2226B014	6.500	165.10	2226B064
	x	3/4		x	19.05	6.000	152.40	2226B015	6.000	152.40	2226B065
	x	1		x	25.40	6.000	152.40	2226B016	6.000	152.40	2226B066
	x	1 1/2		x	38.10	4.000	101.60	2226B017	4.000	101.60	2226B067
2 1/2	x	1/2	63.50	x	12.70	8.500	215.90	2226B018	8.500	215.90	2226B068
	x	3/4		x	19.05	8.000	203.20	2226B019	8.000	203.20	2226B069
	x	1		x	25.40	8.000	203.20	2226B020	8.000	203.20	2226B070
	x	1 1/2		x	38.10	6.000	152.40	2226B021	6.000	152.40	2226B071
	x	2		x	50.80	4.250	108.00	2226B022	4.250	108.00	2226B072
3	x	1	76.20	x	25.40	10.000	254.00	2226B023	10.000	254.00	2226B073
	x	1 1/2		x	38.10	8.000	203.20	2226B024	8.000	203.20	2226B074
	x	2		x	50.80	6.250	158.80	2226B025	6.250	158.80	2226B075
	x	2 1/2		x	63.50	4.250	108.00	2226B026	4.250	108.00	2226B076
4	x	1	101.60	x	25.40	14.125	358.80	2226B027	14.125	358.80	2226B077
	x	1 1/2		x	38.10	12.125	308.00	2226B028	12.125	308.00	2226B078
	x	2		x	50.80	10.375	263.50	2226B029	10.375	263.50	2226B079
	x	2 1/2		x	63.50	8.375	212.70	2226B030	8.375	212.70	2226B080
	x	3		x	76.20	6.375	161.90	2226B031	6.375	161.90	2226B081
6	x	3	152.40	x	76.20	9.000	228.60	2226B033	8.750	222.30	2226B083
	x	4		x	101.60	9.000	228.60	2226B034	9.000	228.60	2226B084

DT 28

Automatic Tube Weld:

Instrument Tee

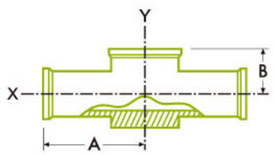


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/2 x 1 1/2	12.70 x 38.10	2.500	63.50	0.875	22.20	2228B001
3/4 x 1 1/2	19.05 x 38.10	2.500	63.50	1.000	25.40	2228B002
1 x 1 1/2	25.40 x 38.10	2.500	63.50	1.125	28.60	2228B003
1/2 x 2	12.70 x 50.80	2.750	69.90	1.000	25.40	2228B004
3/4 x 2	19.05 x 50.80	2.750	69.90	1.125	28.60	2228B005
1 x 2	25.40 x 50.80	2.750	69.90	1.250	31.80	2228B006
1 1/2 x 2	38.10 x 50,80	2.750	69.90	1.500	38.10	2228B007

DT 29

Hygienic Clamp Joint:

Instrument Tee

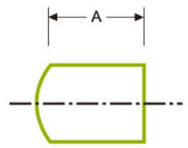


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/2 x 1 1/2	12.70 x 38.10	3.000	76.20	0.875	22.20	2229B001
3/4 x 1 1/2	19.05 x 38.10	3.000	76.20	1.000	25.40	2229B002
1 x 1 1/2	25.40 x 38.10	3.000	76.20	1.125	28.60	2229B003
1/2 x 2	12.70 x 50.80	3.250	82.60	1.000	25.40	2229B004
3/4 x 2	19.05 x 50.80	3.250	82.60	1.125	28.60	2229B005
1 x 2	25.40 x 50.80	3.250	82.60	1.250	31.80	2229B006
1 1/2 x 2	38.10 x 50,80	3.250	82.60	1.500	38.10	2229B007

DT 30

Automatic Tube Weld:

Cap

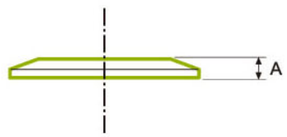


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/2	12.70	1.500	38.10	2230B003
3/4	19.05	1.500	38.10	2230B004
1	25.40	1.500	38.10	2230B005
1 1/2	38.10	1.500	38.10	2230B006
2	50.80	1.500	38.10	2230B007
2 1/2	63.50	1.500	38.10	2230B008
3	76.20	1.750	44.50	2230B009
4	101.60	2.000	50.80	2230B010
6	152.40	2.500	63.50	2230B011

DT 31

Hygienic Clamp Joint:

Solid End Cap



Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/4	6.35	0.187	4.70	2231B001
3/8	9.35	0.187	4.70	2231B002
1/2	12.70	0.187	4.70	2231B003
3/4	19.05	0.187	4.70	2231B004
1	25.40	0.250	6.40	2231B005
1 1/2	38.10	0.250	6.40	2231B006
2	50.80	0.250	6.40	2231B007
2 1/2	63.50	0.250	6.40	2231B008
3	76.20	0.250	6.40	2231B009
4	101.60	0.312	7.90	2231B010
6	152.40	0.437	11.10	2231B011

TEE / REDUCER / CROSS / BEND

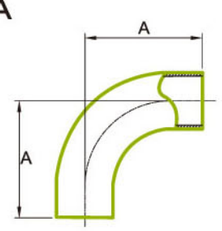
SANITARY TUBE

Tube ASTM A-270
3A

Nominal Size		Tube Wall Thickness		Part Number
inch	mm.	inch	mm.	
1/2	12.70	0.065	1.65	2401B003
3/4	19.05	0.065	1.65	2401B004
1	25.40	0.065	1.65	2401B005
1 1/2	38.10	0.065	1.65	2401B006
2	50.80	0.065	1.65	2401B007
2 1/2	63.50	0.065	1.65	2401B008
3	76.20	0.065	1.65	2401B009
4	101.60	0.083	2.11	2401B010
6	152.40	0.109	2.77	2401B011
8	203.20	0.120	3.05	2401B012
10	254.00	0.109	2.77	2401B013

2S

90° Long Tube Bend
1.5D
3A

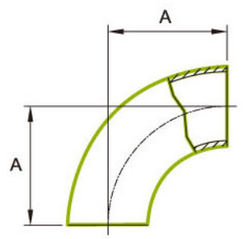


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/2	12.70	3.000	76.2	2407B003
3/4	19.05	3.000	76.2	2407B004
1	25.40	2.063	52.4	2407B005
1 1/2	38.10	2.938	74.6	2407B006
2	50.80	4.063	103.2	2407B007
2 1/2	63.50	5.188	131.8	2407B008
3	76.20	6.312	160.3	2407B009
4	101.60	8.313	211.2	2407B010
6	152.40	12.460	316.5	2407B011

All sizes of clamp end also available

2WCL

90° Short Tube Bend
1.5D
3A

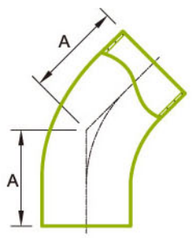


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/2	12.70	1.125	28.6	2407B103
3/4	19.05	1.125	28.6	2407B104
1	25.40	1.500	38.1	2407B105
1 1/2	38.10	2.250	57.2	2407B106
2	50.80	3.000	76.2	2407B107
2 1/2	63.50	3.750	95.3	2407B108
3	76.20	4.500	114.3	2407B109
4	101.60	6.000	152.4	2407B110
6	152.40	9.000	228.6	2407B111
8	203.20	12.000	304.8	2407B112
10	254.00	15.000	381.0	2407B113
12	304.80	18.000	457.2	2407B114

All sizes of clamp end also available

2KS

45° long tube bend
3A

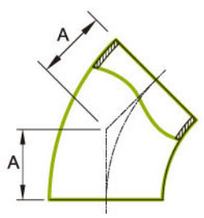


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/2	12.70	2.250	57.2	2408B003
3/4	19.05	2.250	57.2	2408B004
1	25.40	1.188	30.2	2408B005
1 1/2	38.10	1.625	41.3	2408B006
2	50.80	2.313	58.7	2408B007
2 1/2	63.50	3.000	76.2	2408B008
3	76.20	3.688	93.7	2408B009
4	101.60	4.813	122.3	2408B010
6	152.40	6.250	158.8	2408B011

All sizes of clamp end also available

2WK

45° Short Tube Bend
3A

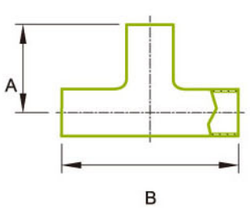


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/2	12.70	0.466	11.8	2408B103
3/4	19.05	0.466	11.8	2408B104
1	25.40	0.625	15.9	2408B105
1 1/2	38.10	0.938	23.8	2408B106
2	50.80	1.250	31.8	2408B107
2 1/2	63.50	1.563	39.7	2408B108
3	76.20	1.875	47.6	2408B109
4	101.60	2.500	63.5	2408B110
6	152.40	3.750	95.3	2408B111
8	203.20	5.000	127.0	2408B112
10	254.00	6.250	158.8	2408B113
12	304 80	7.500	190.5	2408B114

All sizes of clamp end also available

7W

Long Equal Tee
3A

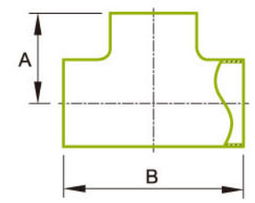


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1/2	12.70	1.875	47.6	3.750	95.3	2409B003
3/4	19.05	2.000	50.8	4.000	101.6	2409B004
1	25.40	1.875	47.6	3.750	95.3	2409B005
1 1/2	38.10	2.250	57.2	4.500	114.3	2409B006
2	50.80	3.000	76.2	6.000	152.4	2409B007
2 1/2	63.50	3.000	76.2	6.000	152.4	2409B008
3	76.20	3.250	82.6	6.500	165.1	2409B009
4	101.60	3.875	98.4	7.750	196.9	2409B010
6	152.40	5.625	142.9	11.250	285.8	2409B011
8	203.20	7.000	177.8	14.000	355.6	2409B012

All sizes of clamp end also available

7WWW

Short Equal Tee
3A

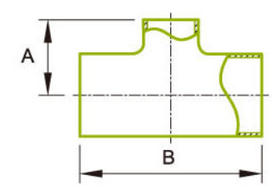


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1	25.40	1.125	28.6	2.250	57.2	2409B105
1 1/2	38.10	1.656	42.1	3.312	84.2	2409B106
2	50.80	2.062	52.4	4.124	104.8	2409B107
2 1/2	63.50	2.344	59.5	4.688	119.0	2409B108
3	76.20	2.594	65.9	5.188	131.8	2409B109
4	101.60	3.438	87.3	6.876	174.6	2409B110

All sizes of clamp end also available

7RW

Long Reducing Tee
3A

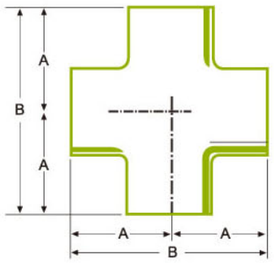


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
3/4 x 1/2	19.05 x 12.70	2.126	54.0	4.252	108.0	2410B006
1 x 1/2	25.40 x 12.70	1.874	47.6	3.748	95.2	2410B009
x 3/4	25.40 x 19.05	1.874	47.6	3.748	95.2	2410B010
1 1/2 x 1/2	38.10 x 12.70	2.250	57.2	4.500	114.4	2410B011
x 3/4	38.10 x 19.05	2.250	57.2	4.500	114.4	2410B012
x 1	38.10 x 25.40	2.126	54.0	4.500	114.4	2410B013
2 x 1/2	50.80 x 12.70	2.374	60.3	6.000	152.4	2410B014
x 3/4	50.80 x 19.05	2.374	60.3	6.000	152.4	2410B015
x 1	50.80 x 25.40	2.374	60.3	6.000	152.4	2410B016
x 1 1/2	50.80 x 38.10	2.382	60.5	6.000	152.4	2410B017
2 1/2 x 1 1/2	63.50 x 38.10	2.752	69.9	6.000	152.4	2410B021
x 2	63.50 x 50.80	3.252	82.6	6.000	152.4	2410B022
3 x 1	76.20 x 25.40	2.874	73.0	6.500	165.2	2410B025
x 1 1/2	76.20 x 38.10	3.000	76.2	6.500	165.2	2410B026
x 2	76.20 x 50.80	3.500	88.9	6.500	165.2	2410B027
x 2 1/2	76.20 x 63.50	3.224	81.9	6.500	165.2	2410B028
4 x 1	101.60 x 25.40	3.374	85.7	7.748	196.8	2410B031
x 1 1/2	101.60 x 38.10	3.500	88.9	7.748	196.8	2410B032
x 2	101.60 x 50.40	3.870	98.3	7.748	196.8	2410B033
x 2 1/2	101.60 x 63.50	3.622	92.0	7.748	196.8	2410B034
x 3	101.60 x 76.20	3.622	92.0	7.748	196.8	2410B035
6 x 2	152.40 x 50.80	4.500	114.3	11.250	285.8	2410B040
x 3	152.40 x 76.20	4.875	123.8	11.250	285.8	2410B042
x 4	152.40 x 101.60	5.125	130.1	11.250	285.8	2410B043

All sizes of clamp end also available

9WWW

Short Cross
3A

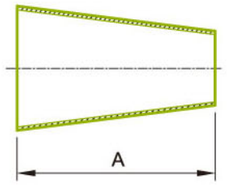


Nominal Size		A		B		Part Number
inch	mm.	inch	mm.	inch	mm.	
1	25.40	1.125	28.6	2.250	57.2	2409B305
1 1/2	38.10	1.656	42.1	3.313	84.2	2409B306
2	50.80	2.063	52.4	4.125	104.8	2409B307
2 1/2	63.50	2.344	59.5	4.688	119.1	2409B308
3	76.20	2.594	65.9	5.188	131.8	2409B309
4	101.60	3.438	87.3	6.875	174.6	2409B310

All sizes of clamp end also available

31W

Concentric Reducer
3A

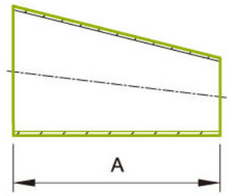


Nominal Size		A		Part Number
inch	mm.	inch	mm.	
3/4 x 1/2	19.05 x 12.70	1.000	25.4	2411B006
1 x 1/2	25.40 x 12.70	1.000	25.4	2411B009
x 3/4	25.40 x 19.05	1.000	25.4	2411B010
1 1/2 x 1/2	38.10 x 12.70	2.500	63.5	2411B011
x 3/4	38.10 x 19.05	2.000	50.8	2411B012
x 1	38.10 x 25.40	2.000	50.8	2411B013
2 x 1/2	50.80 x 12.70	6.000	152.4	2411B014
x 3/4	50.80 x 19.05	5.000	127.0	2411B015
x 1	50.80 x 25.40	4.000	101.6	2411B016
x 1 1/2	50.80 x 38.10	2.000	50.8	2411B017
2 1/2 x 1 1/2	63.50 x 38.10	4.000	101.6	2411B021
x 2	63.50 x 50.80	2.000	50.8	2411B022
3 x 1	76.20 x 25.40	8.000	203.2	2411B023
x 1 1/2	76.20 x 38.10	6.000	152.4	2411B024
x 2	76.20 x 50.80	4.000	101.6	2411B025
x 2 1/2	76.20 x 63.50	2.000	50.8	2411B026
4 x 1 1/2	101.60 x 38.10	10.000	254.0	2411B028
x 2	101.60 x 50.40	8.000	203.2	2411B029
x 2 1/2	101.60 x 63.50	6.000	152.4	2411B030
x 3	101.60 x 76.20	4.000	101.6	2411B031
6 x 2	152.40 x 50.80	5.500	139.7	2411B032
x 3	152.40 x 76.20	5.500	139.7	2411B033
x 4	152.40 x 101.60	5.500	139.7	2411B034
8 x 4	203.20 x 101.60	6.000	152.4	2411B035
x 6	203.20 x 152.40	6.000	152.4	2411B036

All sizes of clamp end also available

32W

Eccentric Reducer
3A



Nominal Size		A		Part Number
inch	mm.	inch	mm.	
3/4 x 1/2	19.05 x 12.70	1.000	25.4	2411B056
1 x 1/2	25.40 x 12.70	1.000	25.4	2411B059
1 x 3/4	25.40 x 19.05	1.000	25.4	2411B060
1 1/2 x 1/2	38.10 x 12.70	2.500	63.5	2411B061
1 1/2 x 3/4	38.10 x 19.05	2.000	50.8	2411B062
1 1/2 x 1	38.10 x 25.40	2.000	50.8	2411B063
2 x 1/2	50.80 x 12.70	6.000	152.4	2411B064
2 x 3/4	50.80 x 19.05	5.000	127.0	2411B065
2 x 1	50.80 x 25.40	4.000	101.6	2411B066
2 x 1 1/2	50.80 x 38.10	2.000	50.8	2411B067
2 1/2 x 1 1/2	63.50 x 38.10	4.000	101.6	2411B071
2 1/2 x 2	63.50 x 50.80	2.000	50.8	2411B072
3 x 1	76.20 x 25.40	8.000	203.2	2411B073
3 x 1 1/2	76.20 x 38.10	6.000	152.4	2411B074
3 x 2	76.20 x 50.80	4.000	101.6	2411B075
3 x 2 1/2	76.20 x 63.50	2.000	50.8	2411B076
4 x 1 1/2	101.60 x 38.10	10.000	254.0	2411B078
4 x 2	101.60 x 50.40	8.000	203.2	2411B079
4 x 2 1/2	101.60 x 63.50	6.000	152.4	2411B080
4 x 3	101.60 x 76.20	4.000	101.6	2411B081
6 x 3	152.40 x 76.20	5.500	139.7	2411B083
6 x 4	152.40 x 101.60	5.500	139.7	2411B084
8 x 4	203.20 x 101.60	6.000	152.4	2411B085
8 x 6	203.20 x 152.40	6.000	152.4	2411B086

All sizes of clamp end also available

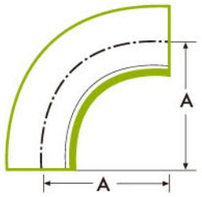
16W

Tube End Cap

Nominal Size		A		Part Number
inch	mm.	inch	mm.	
1/2	12.70	0.250	6.4	2430B103
3/4	19.05	0.312	7.9	2430B104
1	25.40	0.375	9.5	2430B105
1 1/2	38.10	0.562	14.3	2430B106
2	50.80	0.750	19.1	2430B107
2 1/2	63.50	1.000	25.4	2430B108
3	76.20	1.250	31.8	2430B109
4	101.60	1.500	38.1	2430B110
6	152.40	2.000	50.8	2430B111
8	203.20	2.500	63.5	2430B112

SMS

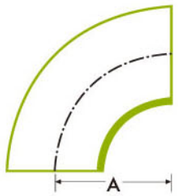
90° Long Tube Bend
1D



Nominal Size		A	Part Number
DN	Thickness	mm.	
25	1.25	55	2307B005
38	1.25	70	2307B006
51	1.25	82	2307B007
63.5	1.50	105	2307B008
76.1	1.60	110	2307B009
104	2.00	150	2307B010

SMS

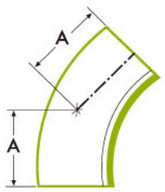
90° Short Tube Bend
1.5D



Nominal Size		A	Part Number
DN	Thickness	mm.	
25	1.25	38	2307B105
38	1.25	57	2307B106
51	1.25	77	2307B107
63.5	1.50	95	2307B108
76.1	1.60	114	2307B109
104	2.00	152	2307B110

SMS

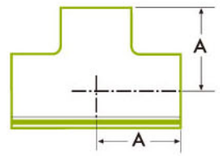
45° Long Tube Bend



Nominal Size		A	Part Number
DN	Thickness	mm.	
25	1.25	43	2308B005
38	1.25	57	2308B006
51	1.25	69	2308B007
63.5	1.50	77	2308B008
76.1	1.60	85	2308B009
104	2.00	103	2308B010

SMS

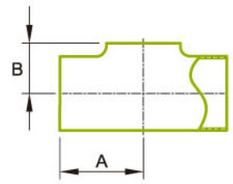
Equal Tee



Nominal Size		A	Part Number
DN	Thickness	mm.	
25	1.25	55	2309B005
38	1.25	70	2309B006
51	1.25	82	2309B007
63.5	1.50	105	2309B008
76.1	1.60	110	2309B009
104	2.00	150	2309B010

SMS

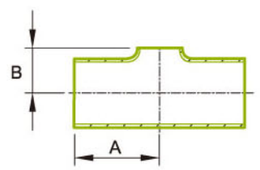
Equal Tee
Without Straight End



Nominal Size	A	B	Part Number
DN	mm.	mm.	
25	55	15	2315B005
38	70	22	2315B006
51	82	28	2315B007
63.5	105	36	2315B008
76.1	110	43	2315B009
104	150	58	2315B010

SMS

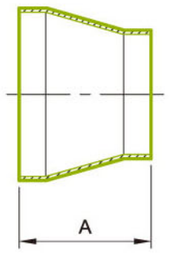
Reducing Tee
Without Straight End



Nominal Size	A	B	Part Number
DN	mm.	mm.	
38 x 25	70	22	2314B013
51 x 25	82	29	2314B016
x 38	82	29	2314B017
63.5 x 25	105	35	2314B020
x 38	105	35	2314B021
x 51	105	36	2314B022
76.1 x 25	110	42	2314B025
x 38	110	43	2314B026
x 51	110	43	2314B027
x 63.5	110	43	2314B028
104 x 25	150	55	2314B031
x 38	150	55	2314B032
x 51	150	57	2314B033
x 63.5	150	58	2314B034
x 76.1	150	58	2314B035

SMS

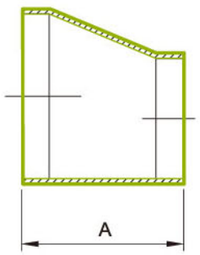
Concentric Reducer
With Straight End



Nominal Size DN	A mm.	Part Number
38 x 25	39	2311B013
51 x 25	57	2311B016
x 38	39	2311B017
63.5 x 25	74	2311B020
x 38	57	2311B021
x 51	39	2311B022
76.1 x 25	92	2311B023
x 38	74	2311B024
x 51	57	2311B025
x 63.5	39	2311B026
104 x 51	95	2311B029
x 63.5	78	2311B030
xv 76.1	60	2311B031

SMS

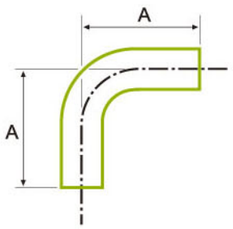
Eccentric Reducer
With Straight End



Nominal Size DN	A mm.	Part Number
38 x 25	46	2311B063
51 x 25	68	2311B066
x 38	47	2311B067
63.5 x 25	92	2311B070
x 38	70	2311B071
x 51	44	2311B072
76.1 x 38	92	2311B074
x 51	68	2311B075
x 63.5	47	2311B076
104 x 51	117	2311B079
x 63.5	94	2311B080
xv 76.1	74	2311B081

BS

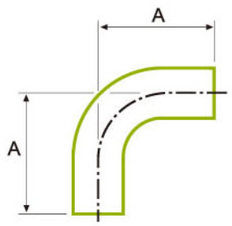
90° Long Tube Bend
1.5D **ISO**



Nominal Size Size	mm.	A mm.	Part Number
0.5	12.7	58	2507B003
0.75	19.05	60	2507B004
1	25.4	65	2507B005
1.5	38.1	85	2507B006
2	50.8	110	2507B007
2.5	63.5	135	2507B008
3	76.2	155	2507B009
4	101.6	195	2507B010

BS

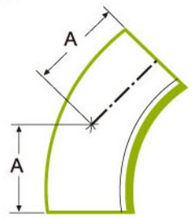
90° Short Tube Bend
1.5D



Nominal Size Size	mm.	A mm.	Part Number
1	25.4	44	2507B105
1.5	38.1	64	2507B106
2	50.8	89	2507B107
2.5	63.5	114	2507B108
3	76.2	134	2507B109
4	101.6	174	2507B110

BS

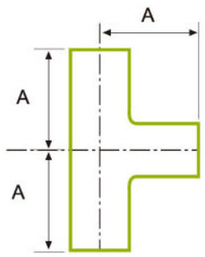
45° Long Tube Bend
1.5D



Nominal Size Size	mm.	A mm.	Part Number
1	25.4	30	2508B005
1.5	38.1	41	2508B006
2	50.8	59	2508B007
2.5	63.5	76	2508B008
3	76.2	94	2508B009
4	101.6	122	2508B010

BS

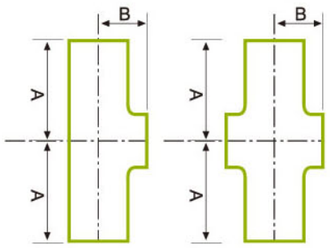
Short Equal Tee
BS4825



Nominal Size Size	mm.	A mm.	Part Number
1	25.4	44	2509B105
1.5	38.1	64	2509B106
2	50.8	89	2509B107
2.5	63.5	114	2509B108
3	76.2	134	2509B109
4	101.6	174	2509B110

BS

Pulled Tee / Pulled Cross

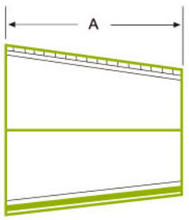


Pulled Tee Pulled Cross

Nominal Size		A	B	Part Number	Part Number
Size	mm.	mm.	mm.	Pulled Tee	Pulled Cross
1	25.4	44	14	2515B105	2515B305
1.5	38.1	64	22	2515B106	2515B306
2	50.8	89	29	2515B107	2515B307
2.5	63.5	114	35	2515B108	2515B308
3	76.2	134	41	2515B109	2515B309
4	101.6	174	54	2515B110	2515B310

BS

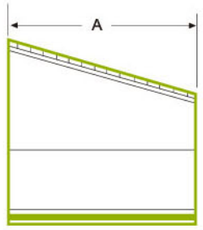
Concentric Reducer



Nominal Size			A	Part Number
Size		mm.	mm.	
1	x	0.5	25.4 x 12.7	43	2511B009
	x	0.75	25.4 x 19.05	30	2511B010
1.5	x	1	38.1 x 25.4	48	2511B013
2	x	1	50.8 x 25.4	50	2511B016
	x	1.5	50.8 x 38.1	66	2511B017
2.5	x	1	63.5 x 25.4	68	2511B020
	x	1.5	63.5 x 38.1	48	2511B021
	x	2	63.5 x 50.8	66	2511B022
3	x	1	76.2 x 25.4	98	2511B023
	x	1.5	76.2 x 38.1	75	2511B024
	x	2	76.2 x 50.8	70	2511B025
	x	2.5	76.2 x 63.5	72	2511B026
4	x	1.5	101.6 x 38.1	60	2511B028
	x	2	101.6 x 50.8	101	2511B029
	x	2.5	101.6 x 63.5	76	2511B030
	x	3	101.6 x 76.2	50	2511B031
6	x	3	154 x 76.2	152.4	2511B033
	x	4	154 x 101.6	152.4	2511B034

BS

Eccentric Reducer



Nominal Size			A	Part Number
Size		mm.	mm.	
0.75	x	0.5	19.05 x 12.7	25.4	2511B056
1	x	0.5	25.4 x 12.7	38.1	2511B059
	x	0.75	25.4 x 19.05	25.4	2511B060
1.5	x	1	38.1 x 25.4	33	2511B063
2	x	1	50.8 x 25.4	66	2511B066
	x	1.5	50.8 x 38.1	33	2511B067
2.5	x	1	63.5 x 25.4	73	2511B070
	x	1.5	63.5 x 38.1	68	2511B071
	x	2	63.5 x 50.8	39	2511B072
3	x	1	76.2 x 25.4	95	2511B073
	x	1.5	76.2 x 38.1	70	2511B074
	x	2	76.2 x 50.8	48	2511B075
	x	2.5	76.2 x 63.5	40	2511B076
4	x	2	101.6 x 50.8	98	2511B079
	x	2.5	101.6 x 63.5	70	2511B080
	x	3	101.6 x 76.2	77	2511B081
6	x	3	154 x 76.2	152.4	2511B083
	x	4	154 x 101.6	152.4	2511B084

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