



3A

TUBES & FITTINGS
SANITARY VALVES
TANKS

Hygienic Fluid Equipment Professional Manufacturers.

As a professional sanitary stainless steel pipe and fittings factory, we do molding design and manufacture, heat treatment, casting, forging, electrolytic polishing, drilling, milling machine, CNC machining, cleaning, welding, assembling, packing, we offer a wide range of choices.

King Lai's research and development team is constantly searching to improve our craftsmanship. With regular machinery-acquiring plans, King Lai has effectively lowered production cost and helped customers earn the greatest profit margin and market share in their regions.



We Pursue Our Customers Satisfaction with Pride.



Kunshan Kinglai Hygienic Materials Co., Ltd. (KL) founded in 2000, and gone public on 6th September 2011. KL expertise in hygienic materials research and manufacture, including vacuum vessel, pump, valve, flange, pressure vessel, tubing and fittings, etc. 68 series product covers 100,000 types comply with UHP & UHV. KL sanitary division serves customers in various industries, from daily articles of dairy, food, and beverage, to laboratory studies of chemical, pharmaceutical, and bio-tech. KL products are manufactured to meet different regional standards and custom-built products are available upon request. "CUSTOMER SUCCESS IS OUR SUCCESS" is the service tenet that we adhere to all the time.

KL is a professional hygienic material manufacturer with high-tech in several fields, like new material, precision machining, surface treatment, clean room, ultra vacuum etc. KL is one of the few manufacturers which carry a complete technical system, and also is a leading company worldwide.

KL had been certified by ASME BPE in 2013 for both tubing and fitting (*manufacturer), which is the NO.1 in Asia. Also, KL product comply with 3A, DIN, ISO, EHEDG etc.

We feature quick delivery, best quality, competitive pricing and excellent service for KL product.



**ASME BPE
FIRST IN ASIA**
Certified tubing and fitting manufacturer by ASME BPE Org.

THERE IS NO END OF STARTING

KingLai group for many years to fully meet customer demand as own duty, set a good brand image. Excellent management team and a good space to grow up and become a world-class high clean application materials suppliers, in the global food industry, pharmaceutical, biochemical, pharmaceutical industry and electronic clean areas have stable high-end customers, become the new the sustained and rapid growth of the company.

2018 BIHAI filling machines fabricate company

Acquisition BIHAI filling machines

Fabricate company

2017 Lion Hygienic Materials Co., Ltd

Setup Lion Hygienic material Co ltd process for gasline to integrate vacuum industries.

2016 KL Group GNB, KL Group Ireland JV.

Acquisition KL Group GNB Establish, Setup KL Group Ireland JV.

2014 EHEDG Certified

2013 ASME BPE Certified

Certified tubing and fitting manufacturer by ASME BPE Org.

2012/2013 KingLai Group

Joint Venture with abc on pressure vessel

Investment on ITO equipment production

2011 Listed Stock (SZSE : 300260)

Certified by GB, ASME(pressure vessel)

Certified by 3A(diaphragm valve, Filter, Changeover valve, tube)

Expansion the 3rd phase(Hefeng factory)

2009 Polaris Factory

3A Certified

ISO9001-2008, PED Certified

2008 Certified of pressure piping

Certified by ISO, BSI

2007 Established Polaris Stainless Steel Technology Co., Ltd.

2006 Expansion the 3rd phase(KingLai factory)

Certified by 3A(C pumps, Ball valve, Check valve)

2004 Certified by ISO 9001-2000

2000 Built the domestic factory (KingLai factory)

1991 Founded in Taiwan

APPLICATION FIELDS

As high clean applied materials has the global scope began to widespread popularization application, Our product is safe and efficient transmission fluid, control fluid steering, in food, beverage, dairy, and other industrial production in the in a wide range of applications. Fluid handling equipment such as pumps, valves, heat exchangers, storage equipment and pipeline fittings and installation materials, etc. in the company can meet customer multiple design as well as to the health of the strict requirements.

BIO-PHARM EQUIPMENTS

PHARMACEUTICAL,
CHEMICAL,
PERSONAL CARE
LIFE SCIENCE



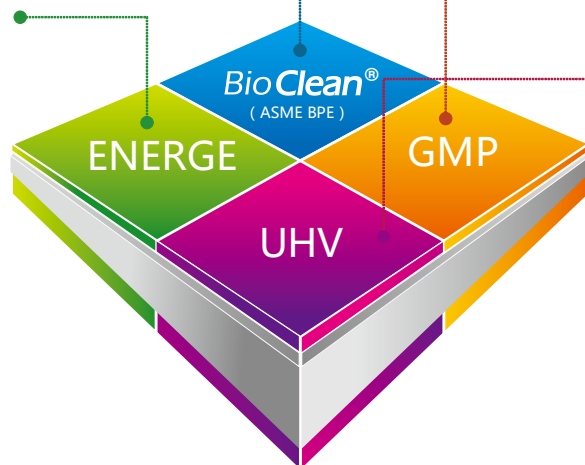
FOODS & BEVERAGE SAFETY PRODUCTION

DRINKS, DAIRY, BREW, WINES,



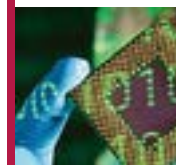
ENERGY SAVING & ENVIRONMENTS

SOLAR CELL, LED



ELECTRONIC & SEMICON

SEMICONDUCTION
OPTICAL COATING,
ITO, UHP DELIVERY



MARKET & WORLDWIDE TRADE NETWORK



With our success and wide acceptance by our OEM/ODM customers worldwide, we further expand our services to domestic customers in China and Taiwan.

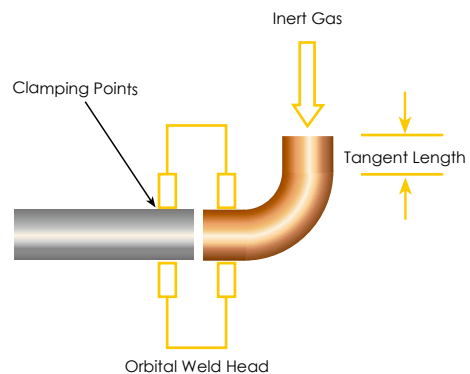
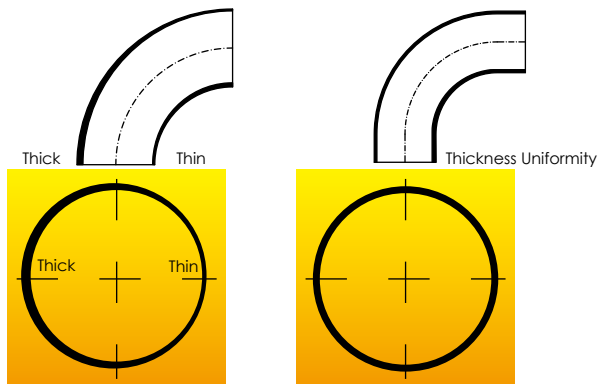
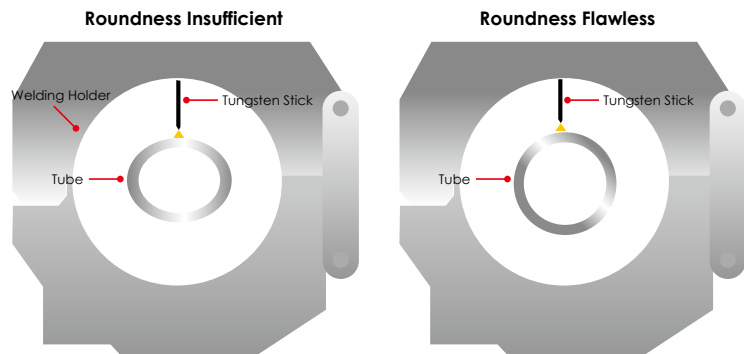
King Lai is constantly improving and upgrading to meet all technological requirements. King Lai's ISO 9001 certification and 3A certification are the results of our dedication to customer service and product quality. With this in mind, we are proud to say "customer success is our success". King Lai supplies to America, Europe, and other major industrial countries worldwide. As a mature manufacturer, we persist in research and development as well as quality management in lowering production cost while generating the highest efficiency. We feature quick delivery, best quality, competitive pricing and excellent service for fitting.

AUTOMATIC WELDING

KL raw material applies to ASTM 304 and 316L with good corrosion resistance and good performance in welding. KL is now using automatic welding, like Orbital welding, TIG welding, MIG welding, to replace hand welding, which can improve working environment & efficiency, meanwhile low down labor cost.

KL tubing automatic welding procedure

1. Long tangent, easy for fixture
2. Fitting roundness, ASME BPE 2012 DT-3-1
3. Fitting wall thickness, ASME BPE 2012 DT-3-1



TIG & Orbital

1. Pulse heating is good for heat sensitive material welding, because high temperature lasts very short period of time and iron condensation is fast.
2. It's good for thin coil welding, because only small heat input and little space been affected.
3. It's good for welding by one side in shape by both sides, because size of heat input and welding pool can be controlled.
4. High frequency arc shock to refine grain, eliminate porosity, improve joint performance.
5. It's suitable for high-speed welding, and can obtain better work efficiency.

Weakness of hand welding

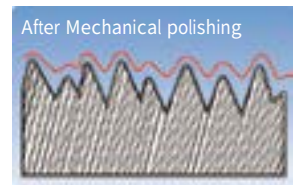
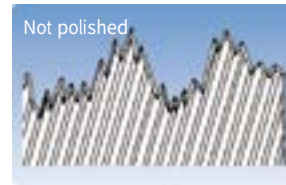
1. Crack
2. Non-fusion
3. Lack of penetration
4. Bubble
5. Undercut
6. Crater
7. Slag inclusion
8. Burn through
9. Overlap
10. Forming uneven
11. Weld repair

POLISHING PROCESS

KL hygienic tubing using 2B cold rolling coil, special welding procedure guarantee full penetration, and good welding performance complies with sanitary requirements for tubing.

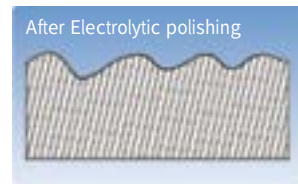
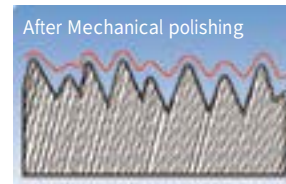
Mechanically Polished (MP)

Metal polishing wheel remove metallic contamination, make surface smooth as satin.



Electro-polished EP

Electro polish process removes spine and sunken, forming a protection layer to increase corrosion resistance. KL process MP before EP, which can guarantee a smooth surface and zero dead room.



Bright Annealing-BA

Tubing temperature need to be cool down below 100℃ with hydrogen protection, after reaching 1050℃. It removes inner stress, and on the other hand, generates a passivation layer to increase the corrosion resistance.

Asid Cleaning & Passivated-AP

Pickle or passivation process can remove contaminations on surface, and generates a protection layer to increase corrosion resistance.

KL MP & EP process can guarantee surface roughness requirement of ASME BPE (0.8-0.375), and 0.12 is doable upon request.



Buffing polishing (BP)

It is commonly used to improve the surface brightness of decorative stainless steel industry, despite the Ra value may be better, but many corner crack was observed under the electron microscope, the surface with many impurities and abrasive particles.

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Hygienic Tubes And Fittings

Kinglai is your complete source for specialized fittings and tubing required in food, dairy, beverage, personal care, biotechnology and pharmaceutical process applications. Smooth, crevice-free interiors and secure, self-aligning joints are characteristic for Kinglai Fittings. Each offers superior corrosion-resistance and unmatched service life. Kinglai fittings are designed and manufactured to ensure dimensional accuracy and structural integrity, making them easy to install. Tubing is manufactured to Kinglai's stringent specifications, making it a perfect match for the weld fittings. Choose from a wide range of tube sizes, surface finishes and connect options.

The Sanitary product range offers a wide range of tubes and fittings with an internal surface finish from $Ra < 0,375\mu m$ to $Ra < 1,6\mu m$. The Sanitary range has tubes and fittings according to DIN, ISO, BS and ASME dimension standards.



Surface finish of tubes and fittings

Code	Ra μm		Surface finish				
	External	Internal	Mill finish	External	Internal		Bright annealing
				MP	MP	EP	
QQ	<1.6	<1.6	√				
EG	<0.8	<1.6		√			√
GG	<0.8	<0.8		√	√		√
HG	<0.8	<0.5		√	√		√
3G	<0.8	<0.5		√	√	√	√
4G	<0.8	<0.375		√	√	√	√

$\mu\text{-in} = \mu m \times 40$

Size range of finished sanitary tubes

ISO			3A			DIN(DIN11850) SERIES2			DIN(DIN11850) SERIES1			DIN			ASME BPE			BS			GB		
NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T	NOM. Size	OD	T
						DN10	13	1.5	DN10	12	1.0	DN10	12	1.5	1/4"	6.35	0.89						
						DN15	19	1.5	DN15	18	1.0	DN15	18	1.5	3/8"	9.53	0.89						
			1/2"	12.7	1.65	DN20	23	1.5	DN20	22	1.0	DN20	22	1.5	1/2"	12.7	1.65	1/2"	12.7	1.6	1/2"	12.7	1.5
			3/4"	19.1	1.65	DN25	29	1.5	DN25	28	1.0	DN25	28	1.5	3/4"	19.1	1.65	3/4"	19.1	1.6	3/4"	19.1	1.5
25	25.0	1.2	1.0"	25.4	1.65	DN32	35	1.5	DN32	34	1.0	DN32	34	1.5	1.0"	25.4	1.65	1.0"	25.4	1.6	1.0"	25.4	1.5
32	31.8	1.2																1.25"	31.8	1.6	1.25"	31.8	1.5
38	38.0	1.2	1.5"	38.1	1.65										1.5"	38.1	1.65	1.5"	38.1	1.6	1.5"	38.1	1.5
						DN40	41	1.5	DN40	40	1.0	DN40	40	1.5									
51	51.0	1.2	2.0"	50.8	1.65	DN50	53	1.5	DN50	52	1.0	DN50	52	1.5	2.0"	50.8	1.65	2.0"	50.8	1.6	2.0"	50.8	1.5
63	63.5	1.6	2.5"	63.5	1.65										2.5"	63.5	1.65	2.5"	63.5	1.6	2.5"	63.5	1.5
						DN65	70	2													2.5"	63.5	2
76	76.1	1.6	3.0"	76.2	1.65										3.0"	76.2	1.65	3.0"	76.2	1.6	3.0"	76.2	1.5
						DN80	85	2													3.0"	76.2	2
																					3.5"	88.9	2
101	101.6	2	4.0"	101.6	2.11	DN100	104	2							4.0"	101.6	2.11	4.0"	101.6	2	4.0"	101.6	2
104	104.0	2				DN125	129	2													4.5"	114.3	2
129	129.0	2	6.0"	152.4	2.77	DN150	154	2							6.0"	152.4	2.77	5.0"	129	2			
204	204.0	2	8.0"	203.2	2.77	DN200	204	2										6.0"	154	2			
																		8.0"	204	2			
																		10.0"	254	2			

Hygienic Clamp: Rated Internal Working Pressure

Nom.Size	@70°F/21°C		@250°F/121°C		@70°F/21°C		@250°F/121°C		@70°F/21°C		@250°F/121°C	
	PSI	bar	PSI	bar	PSI	bar	PSI	bar	PSI	bar	PSI	bar
1/2" & 3/4"	1500	103	1200	83					1500	103	1200	83
1.0" & 1/2"	500	34	250	17	600	41	300	21	1500	103	1200	83
2.0"	450	31	250	17	550	38	275	19	1000	69	800	55
2 1/2"	400	28	200	14	450	31	225	16	1000	69	800	55
3.0"	350	24	150	10	350	24	160	11	1000	69	800	55
4.0"	200	14	125	9	250	17	150	10	1000	69	800	55
5.0"	175	12	100	7								
6.0"	150	10	75	5								
8.0"	100	7	50	3								
10.0"	40	3	30	2								

Hygienic Union



clamp



DIN1212002



RJT1412001



3A



ISO



IDF

Material features of union ring seals

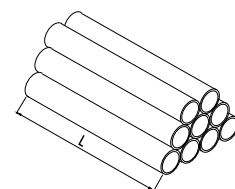
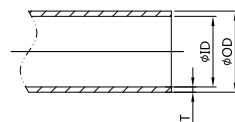
FEATURE	EPDM	NBR	Viton	Silicone	TEFLON
Temperature Range	-48~135°C -55~275°F	-40~120°C -40~248°F	-29~204°C -20~400°F	-62~232°C -80~450°F	-40~232°C -40~450°F
Acid Resistance	Good-Excellent	Good	Good	Good	Good-Excellent
Alkali Resistance	Good-Excellent	Good	Poor-Good	Poor-Fair	Good-Excellent
Gasoline Resistance	Poor-Fair	Good-Excellent	Good-Excellent	Good	Good-Excellent
Diesel Resistance	Good	Good	Good-Excellent	Good	Good-Excellent
Abrasion Resistance	Good-Excellent	Good	Good	Good-Excellent	Good-Excellent
Compression Set	Fair	Good	Good-Excellent	Good-Excellent	Fair

※ Good—Excellent > Good > Poor—Good > Fair > Poor—Fair



Hygienic tubes

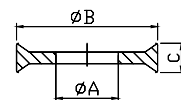
No.	Size	OD/IDxT	L
158000-000025	1/4"	6.35/4.57x0.89	6100.0
158000-000038	3/8"	9.53/7.75x0.89	6100.0
158000-000050	1/2"	12.7/9.40 x 1.65	6100.0
158000-000075	3/4"	19.05/15.75x1.65	6100.0
158000-000100	1"	25.4/22.1x1.65	6100.0
158000-000150	1.5"	38.1/34.8x1.65	6100.0
158000-000200	2"	50.8/47.5x1.65	6100.0
158000-000250	2.5"	63.5/60.2x1.65	6100.0
158000-000300	3"	76.2/72.9x1.65	6100.0
158000-000400	4"	101.6/97.38x2.11	6100.0
158000-000600	6"	152.4/146.86x2.77	6100.0
158000-000800	8"	203.2/197.66x2.77	6100.0



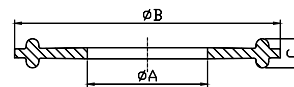
**please specify the surface finish level

Gaskets

No.	Nom.Size	A	B	C
1515001-000050	1/2"	9.6	21.7	4.5
1515001-000075	3/4"	16	21.7	4.5
1515001-000100	1"	22.4	50.5	5.5
1515001-000150	1.5"	35	50.5	5.5
1515001-000200	2"	47.8	64	5.5
1515001-000250	2.5"	60.5	77.5	5.5
1515001-000300	3"	73.1	91	5.5
1515001-000400	4"	97.8	119	5.5
1515001-000600	6"	147.2	116.9	5.2
1515001-000800	8"	200	217.67	5.2
1515001-001000	10"	247.5	268.47	4.6
1515001-001200(PTFE)	12"	298	319.28	5.5



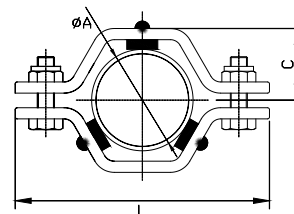
(适用于1/2"-3/4")



(适用于1.0"-12.0")

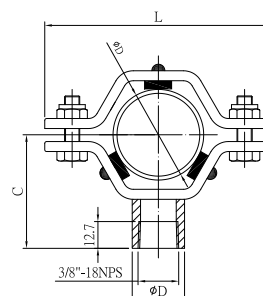
tube holder

No.	Nom.Size	A	C	L
1524001-000050	1/2"	12.7	12	75
1524001-000075	3/4"	19.1	17	75
1524001-000100	1"	25.4	21	78.5
1524001-000150	1.5"	38.1	26.5	94
1524001-000200	2"	50.8	33.5	108
1524001-000250	2.5"	63.5	40	123
1524001-000300	3"	76.2	46	141
1524001-000400	4"	101.6	60	174
1524001-000600	6"	152.4	83.5	235

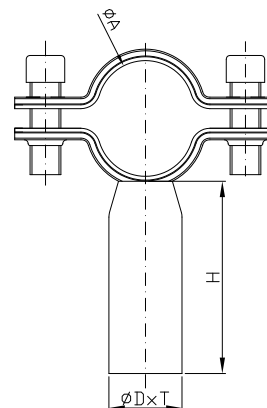


tube holder

No.	Nom.Size	A	C	D	L
1524204-000050	1/2"	12.7	32.6	22	75
1524204-000075	3/4"	19.1	37.6	22	75
1524204-000100	1"	25.4	41.6	22	78.5
1524204-000150	1.5"	38.1	47.1	22	94
1524204-000200	2"	50.8	54.1	22	108
1524204-000250	2.5"	63.5	60.6	22	123
1524204-000300	3"	76.2	66.6	22	141
1524204-000400	4"	101.6	80.6	22	174
1524204-000500	5"	127	87.3	22	287
1524204-000600	6"	152.4	106.8	22	235
1524204-000800	8"	203.2	129.3	22	293
1524204-001000	10"	254	154.8	22	318.4

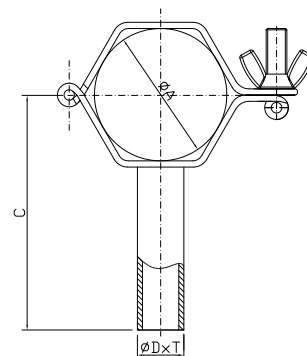
**tube holder**

No.	Nom.Size	A	DxT
1224105-000013	13.5	13.5	25X1.5
1224105-000017	17.2	19.5	25X1.5
1224105-000025	25	25.4	25X1.5
1224105-000028	28	28	25.5X1.37
1224105-000032	32	31.8	25X1.5
1224105-000034	34	34	25.5X1.37
1224105-000038	38	38.1	25X1.5
1224105-000040	40	40	25.5X1.37
1224105-000051	51	50.8	25X1.5
1224105-000052	52	52	25.5X1.37
1224105-000063	63	63.5	25X2.0
1224105-000070	70	70	25.5X1.85
1224105-000076	76	76.2	25X2.0
1224105-000085	85	85	27.3X1.85
1224105-000089	89	89.1	28X2.0
1224105-000101	101	101.6	28X2.5T
1224105-000104	104	104	27.3X1.85
1224105-000129	129	129	28X2.5T
1224105-000154	154	154	28X3.0
1224105-000204	204	204	35X3.0
1224105-000254	254	254	40X2.5
1224105-000306	306	306	45X2.5



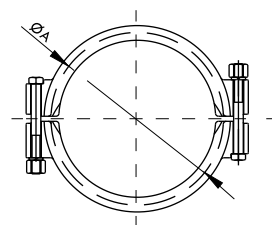
tube holder

No.	Nom.Size	A	C	DxT
1024103-000025	25	25	100	14x1.5
1024103-000028	28	28	100	14x1.5
1024103-000031	31	31.8	100	14x1.5
1024103-000034	34	34	100	14x1.5
1024103-000038	38	38	100	19x1.5
1024103-000040	40	40	100	19x1.5
1024103-000051	51	51	100	19x1.5
1024103-000052	52	52	100	19x1.5
1024103-000063	63	63.5	100	19x1.5
1024103-000070	70	70	100	19x1.5
1024103-000076	76	76	100	19x1.5
1024103-000085	85	85	100	19x1.5
1024103-000089	89	88.9	100	19x1.5
1024103-000101	101	101.6	100	19x1.5
1024103-000104	104	104	100	19x1.5
1024103-000129	129	129	100	19x1.5
1024103-000154	154	154	100	19x1.5
1024103-000204	204	204	151.5	19x1.5



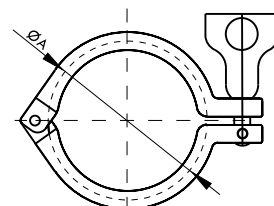
13MHP clamp

No.	Nom.Size	A
1513002-000025	1/2"	28.6
1513002-000025	3/4"	28.6
1513002-000051	1.0"	52.0
1513002-000051	1.5"	52.0
1513002-000064	2.0"	65.5
1513002-000078	2.5"	79.0
1513002-000091	3.0"	92.5
1513002-000119	4.0"	120.0
1513002-000167	6.0"	170.4



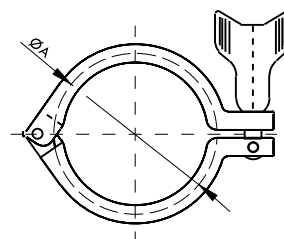
13MHH clamp

No.	Nom.Size	A
1513016-000025	1/2"	28.6
1513016-000025	3/4"	28.6
1513016-000051	1.0"	53.9
1513016-000051	1.5"	53.9
1513016-000064	2.0"	67.4
1513016-000078	2.5"	80.9
1513016-000091	3.0"	94.4
1513016-000119	4.0"	122.4
1513016-000167	6.0"	170.4
1513016-000218	8.0"	221.2
1513016-000268	10.0"	272.0

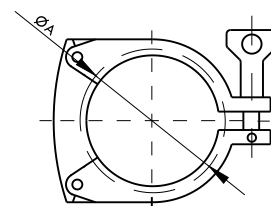


13MHH clamp

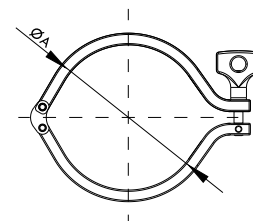
No.	Nom.Size	A
1513001-000025	1/2"	28.6
1513001-000025	3/4"	28.6
1513001-000051	1.0"	53.9
1513001-000051	1.5"	53.9
1513001-000064	2.0"	67.4
1513001-000078	2.5"	80.9
1513001-000091	3.0"	94.4
1513001-000119	4.0"	122.4
1513001-000167	6.0"	170.4
1513001-000218	8.0"	221.2
1513001-000268	10.0"	272.0

**13MHH3 clamp**

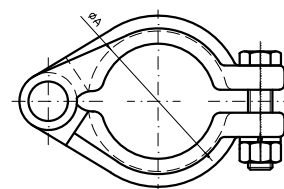
No.	Nom.Size	A
1513003-000051	1.0"	53.9
1513003-000051	1.5"	53.9
1513003-000064	2.0"	67.4
1513003-000078	2.5"	80.9
1513003-000091	3.0"	94.4
1513003-000119	4.0"	122.4

**TC clamp**

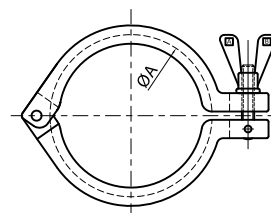
No.	Nom.Size	A
1513017-000051	1.0"	53.4
1513017-000051	1.5"	53.4
1513017-000064	2.0"	66.0
1513017-000078	2.5"	81.3
1513017-000091	3.0"	94.0
1513017-000119	4.0"	122.0
1513017-000167	6.0"	171.2
1513017-000218	8.0"	222.0
1513017-000268	10.0"	274.0

**TC clamp**

No.	Nom.Size	A
1513021-000051	1.5"	55.0
1513021-000064	2.0"	72.0
1513021-000078	2.5"	89.0
1513021-000091	3.0"	103.2
1513021-000119	4.0"	128.0

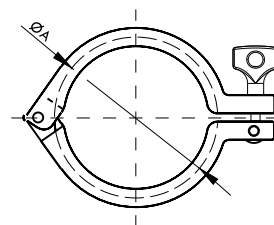
**13MHH Clamp**

No.	Nom.Size	A
1513034-10025	1/2"-3/4"	28
1513034-10034	DN10-DN20	38.28
1513034-10051	1"-1.5"	54
1513034-10064	2"	67
1513034-10078	2.5"	80.9
1513034-10091	3"	94.4
1513034-10106	3.5"	110
1513034-10119	4"	122.4
1513034-10130	4.5"	135
1513034-10167	6"	171.24



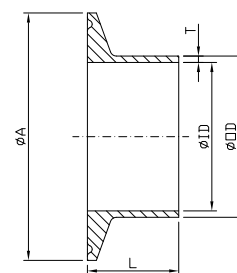
TC clamp

No.	Nom.Size	A
1513022-000051	1.0"	56.0
1513022-000057	1.5"	56.0
1513022-000064	2.0"	72.3
1513022-000078	2.5"	89.5
1513022-000091	3.0"	103.6
1513022-000119	4.0"	129.0



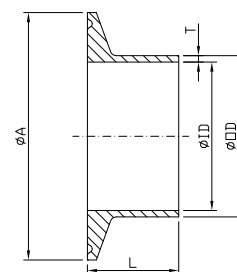
14 WMP clamp ferrule

No.	Nom.Size	OD/IDxT	A	L
1514001-000025	1/4"	6.35/4.57x0.89	25	12.7
1514001-000038	3/8"	9.53/7.75x0.89	25	12.7
1514001-000050	1/2"	12.7/9.4x1.65	25	12.7
1514001-100050	1/2"-1	12.7/9.4x1.65	50.4	12.7
1514001-000075	3/4"	19.05/15.75x1.65	25	12.7
1514001-100075	3/4"-1	19.05/15.75x1.65	50.4	12.7
1514001-000100	1"	25.4/22.1x1.65	50.4	12.7
1514001-000150	1.5"	38.1/34.8x1.65	50.4	12.7
1514001-000200	2"	50.8/47.5x1.65	63.9	12.7
1514001-000250	2.5"	63.5/60.2x1.65	77.5	12.7
1514001-000300	3"	76.2/72.9x1.65	90.9	12.7
1514001-000400	4"	101.6/97.4x2.11	118.9	15.9
1514001-000600	6"	152.4/146.9x2.77	166.9	19.05
1514001-000800	8"	203.2/197.66x2.77	217.67	22.2
1514001-001000	10"	254/247.2x3.4	268.47	22.2
1514001-001200	12"	304.8/298x3.4	319.28	25.4



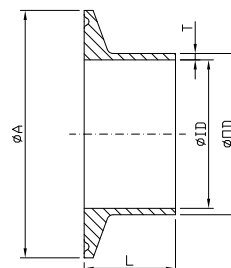
clamp ferrule

No.	Nom.Size	OD/IDxT	A	L
1314001-000050	1/2"	12.7/9.4x1.65	25	21.5
1314001-100050	1/2"-1	12.7/9.4x1.65	50.4	21.5
1314001-000075	3/4"	19.05/15.75x1.65	25	21.5
1314001-100075	3/4"-1	19.05/15.75x1.65	50.4	21.5
1314001-000100	1"	25.4/22.1x1.65	50.4	21.5
1314001-000150	1.5"	38.1/34.8x1.65	50.4	21.5
1314001-000200	2"	50.8/47.5x1.65	63.9	21.5
1314001-000250	2.5"	63.5/60.2x1.65	77.5	21.5
1314001-000300	3"	76.2/72.9x1.65	90.9	21.5
1314001-000400	4"	101.6/97.4x2.11	118.9	21.5

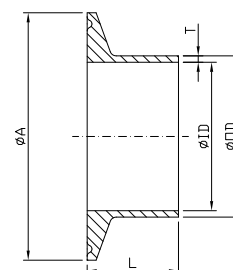


14WMP clamp ferrule

No.	Nom.Size	OD/IDxT	A	L
1514003-000025	1/4"	6.35/4.57x0.89	25	28.6
1514003-000038	3/8"	9.53/7.75x0.89	25	28.6
1514003-000050	1/2"	12.7/9.4x1.65	25	28.6
1514003-100050	1/2"-1	12.7/9.4x1.65	50.4	28.6
1514003-000075	3/4"	19.05/15.75x1.65	25	28.6
1514003-100075	3/4"-1	19.05/15.75x1.65	50.4	28.6
1514003-000100	1"	25.4/22.1x1.65	50.4	28.6
1514003-000150	1.5"	38.1/34.8x1.65	50.4	28.6
1514003-000200	2"	50.8/47.5x1.65	63.9	28.6
1514003-000250	2.5"	63.5/60.2x1.65	77.5	28.6
1514003-000300	3"	76.2/72.9x1.65	90.9	28.6
1514003-000400	4"	101.6/97.4x2.11	118.9	28.6
1514003-000600	6"	152.4/146.9x2.77	166.9	38.1
1514003-000800	8"	203.2/197.66x2.77	217.67	38.1
1514003-001000	10"	254/247.2x3.4	268.47	38.1
1514003-001200	12"	304.8/298x3.4	319.28	38.1

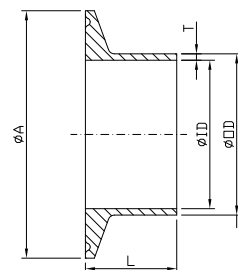
**14AMP-AWF clamp ferrule**

No.	Nom.Size	OD/IDxT	A	L
1514004-000025	1/4"	6.35/4.57x0.89	25	44.45
1514004-000038	3/8"	9.53/7.75x0.89	25	44.45
1514004-000050	1/2"	12.7/9.4x1.65	25	44.45
1514004-100050	1/2"-1	12.7/9.4x1.65	50.4	44.45
1514004-000075	3/4"	19.05/15.75x1.65	25	44.45
1514004-100075	3/4"-1	19.05/15.75x1.65	50.4	44.45
1514004-000100	1"	25.4/22.1x1.65	50.4	44.45
1514004-000150	1.5"	38.1/34.8x1.65	50.4	44.45
1514004-000200	2"	50.8/47.5x1.65	63.9	57.2
1514004-000250	2.5"	63.5/60.2x1.65	77.5	57.2
1514004-000300	3"	76.2/72.9x1.65	90.9	57.2
1514004-000400	4"	101.6/97.4x2.11	118.9	57.2
1514004-000600	6"	152.4/146.9x2.77	166.9	76.2
1514004-000800	8"	203.2/197.66x2.77	217.67	76.2
1514004-001000	10"	254/247.2x3.4	268.47	76.2
1514004-001200	12"	304.8/298x3.4	319.28	76.2



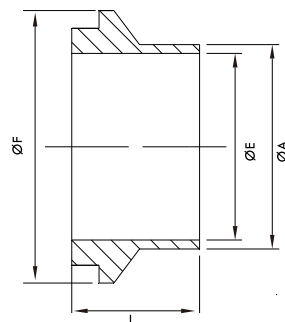
14 AWP-AWF clamp ferrule

No.	Nom.Size	OD/IDxT	A	L
5514004-000025	1/4"	6.35/4.57x0.89	25	44.45
5514004-000038	3/8"	9.53/7.75x0.89	25	44.45
5514004-000050	1/2"	12.7/9.4x1.65	25	44.45
5514004-100050	1/2"-1	12.7/9.4x1.65	50.4	44.45
5514004-000075	3/4"	19.05/15.75x1.65	25	44.45
5514004-100075	3/4"-1	19.05/15.75x1.65	50.4	44.45
5514004-000100	1"	25.4/22.1x1.65	50.4	44.45
5514004-000150	1.5"	38.1/34.8x1.65	50.4	44.45
5514004-000200	2"	50.8/47.5x1.65	63.9	57.2
5514004-000250	2.5"	63.5/60.2x1.65	77.5	57.2
5514004-000300	3"	76.2/72.9x1.65	90.9	57.2
5514004-000400	4"	101.6/97.4x2.11	118.9	57.2
5514004-000600	6"	152.4/146.9x2.77	166.9	76.2
5514004-000800	8"	203.2/197.66x2.77	217.67	76.2
5514004-001000	10"	254/247.2x3.4	268.47	76.2
5514004-001200	12"	304.8/298x3.4	319.28	76.2



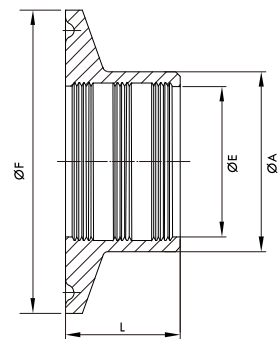
14 AMP clamp ferrule

No.	Nom.Size	A	E	F	L
1514007-000100	1.0"	25.7	22.1	50.7	20.0
1514007-000150	1.5"	38.4	34.8	50.7	23.9
1514007-000200	2.0"	51.1	47.5	67.1	26.3
1514007-000250	2.5"	63.8	60.2	84.1	29.5
1514007-000300	3.0"	76.5	72.9	98.4	31.1
1514007-000400	4.0"	101.9	97.4	123.8	34.2
1514007-000600	6.0"	152.7	146.9	190.4	28.7
1514007-000800	8.0"	203.5	197.7	241.2	28.7



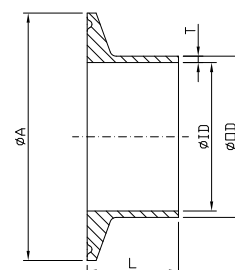
14 RMP clamp ferrule

No.	Nom.Size	A	E	F	L
1514009-000100	1.0"	29.5	25.5	50.4	19.1
1514009-000150	1.5"	42.6	38.2	50.4	28.6
1514009-000200	2.0"	55.7	50.9	63.9	33.4
1514009-000250	2.5"	68.8	63.6	77.5	34.9
1514009-000300	3.0"	81.9	76.3	90.9	36.5
1514009-000400	4.0"	108.1	101.7	118.9	38.1

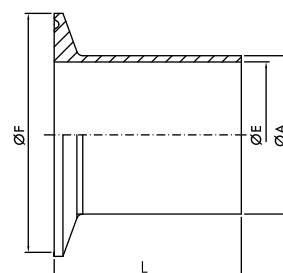


14MPW clamp ferrule

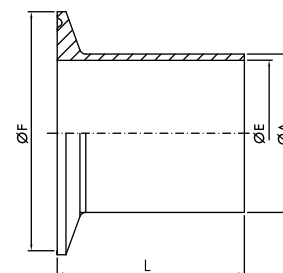
No.	Nom.Size	OD/IDxT	A	L
1514025-000100	1"	29.46/22.1x3.68	50.4	41.3
1514025-000101	1"-1	29.46/22.1x3.68	50.4	76.2
1514025-000150	1.5"	42.57/34.8x3.885	50.4	41.3
1514025-000151	1.5"-1	42.57/34.8x3.885	50.4	76.2
1514025-000200	2"	55.67/47.5x4.085	63.9	44.5
1514025-000201	2"-1	55.67/47.5x4.085	63.9	76.2
1514025-000250	2.5"	68.78/60.2x4.29	77.5	44.5
1514025-000251	2.5"-1	68.78/60.2x4.29	77.5	76.2
1514025-000300	3"	81.88/72.9x4.49	90.9	46
1514025-000301	3"-1	81.88/72.9x4.49	90.9	76.2
1514025-000400	4"	108.1/97.4x5.35	118.9	54
1514025-000401	4"-1	108.1/97.4x5.35	118.9	76.2

**14 WLMP clamp ferrule**

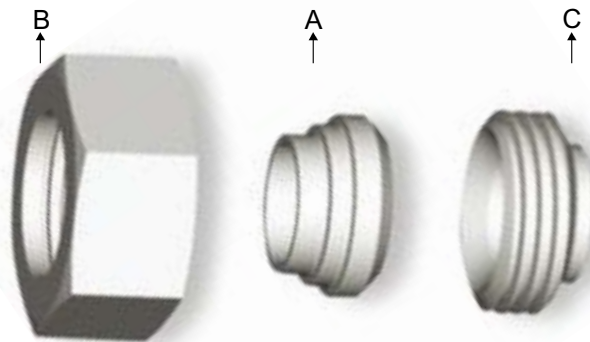
No.	Nom.Size	A	E	F	L
1514013-000050	0.5"	12.7	9.4	25.0	76.2
1514013-000075	0.75"	19.1	15.8	25.0	76.2
1514013-000100	1.0"	25.4	22.1	50.4	76.2
1514013-000101	1.0"-1	25.4	22.1	50.4	101.6
1514013-000120	1.0"-2	25.4	22.1	50.4	75.0
1514013-000130	1.0"-3	25.4	22.1	50.4	130.0
1514013-000150	1.5"	38.1	34.8	50.4	76.2
1514013-000160	1.5"-1	38.1	34.8	50.4	100.0
1514013-000200	2.0"	50.8	47.5	63.9	76.2
1514013-000210	2.0"-1	50.8	47.5	63.9	130.0
1514013-000250	2.5"	63.5	60.2	77.5	76.2
1514013-000300	3.0"	76.2	72.9	90.9	101.6
1514013-000400	4.0"	101.6	97.4	118.9	101.6
1514013-000410	4.0"-1	101.6	97.4	118.9	75.0
1514013-000600	6.0"	152.4	146.8	166.9	152.4
1514013-000610	6.0"-1	152.4	146.8	166.9	75.0
1514013-000800	8.0"	203.2	197.6	217.7	152.4

**TS/14 AHT clamp ferrule**

No.	Nom.Size	A	E	F	L
1514035-000100	1.0"	25.4	22.1	50.4	114.3
1514035-000150	1.5"	38.1	34.9	50.4	114.3
1514035-000200	2.0"	50.8	47.5	63.9	114.3
1514035-000250	2.5"	63.5	60.2	77.5	114.3
1514035-000300	3.0"	76.2	72.9	90.9	114.3
1514035-000400	4.0"	101.6	97.4	118.9	117.4

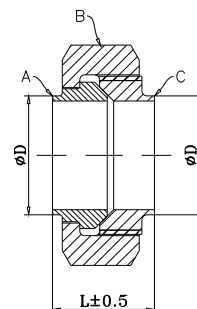


1508001-XXXXXX 1514011-XXXXXX 1514010-XXXXXX



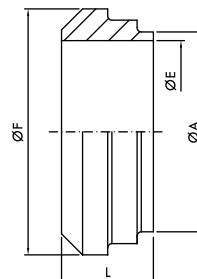
3A union

No.	Nom.Size	D	L
1512004-000100	1.0"	25.4	33.4
1512004-000150	1.5"	38.1	32.6
1512004-000200	2.0"	50.8	34.3
1512004-000250	2.5"	63.5	40.0
1512004-000300	3.0"	76.2	44.4
1512004-000400	4.0"	101.6	55.9



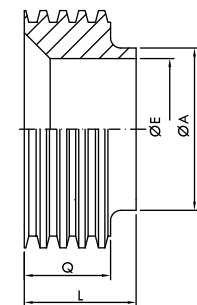
14 PR joint

No.	Nom.Size	A	E	F	L
1514011-000100	1.0"	25.4	22.1	33.4	17.5
1514011-000150	1.5"	38.1	34.8	46.9	17.5
1514011-000200	2.0"	50.8	47.5	60.5	18.3
1514011-000250	2.5"	63.5	60.2	74.0	21.4
1514011-000300	3.0"	76.2	72.9	87.5	23.8
1514011-000400	4.0"	101.6	97.4	114.5	31.0



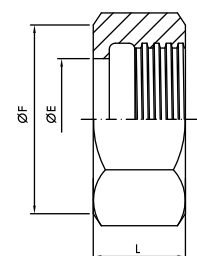
15 TR thread-weld joint

No.	Nom.Size	A	E	F	L
1514010-000100	1.0"	25.4	22.1	17.5	13.5
1514010-000150	1.5"	38.1	34.8	17.5	13.5
1514010-000200	2.0"	50.8	47.5	18.3	14.3
1514010-000250	2.5"	63.5	60.2	21.4	17.5
1514010-000300	3.0"	76.2	72.9	23.8	18.3
1514010-000400	4.0"	101.6	97.4	31.0	21.4



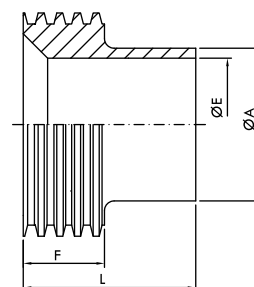
13H hex nut

No.	Nom.Size	E	F	L
1508001-000100	1.0"	30.3	46.0	23.0
1508001-000150	1.5"	43.4	61.1	24.6
1508001-000200	2.0"	56.5	76.2	27.0
1508001-000250	2.5"	69.6	91.3	30.2
1508001-000300	3.0"	82.7	106.5	32.5

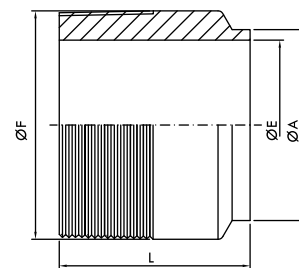


15A joint

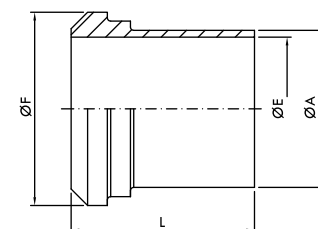
No.	Nom.Size	A	E	F	L
1514042-000100	1.0"	25.4	22.1	14.3	34.9
1514042-000150	1.5"	38.1	34.8	14.3	38.1
1514042-000200	2.0"	50.8	47.5	15.1	38.1
1514042-000250	2.5"	63.5	60.2	18.3	44.5
1514042-000300	3.0"	76.2	72.9	19.1	44.5
1514042-000400	4.0"	101.6	97.4	22.2	44.5

**joint**

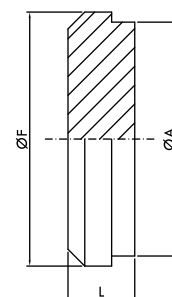
No.	Nom.Size	A	E	F	L
1514049-000100	1.0"	25.4	22.1	1.0"-11.5NPT	44.5
1514049-000150	1.5"	38.1	34.8	1.5"-11.5NPT	44.5
1514049-000200	2.0"	50.8	47.5	2.0"-11.5NPT	46.0
1514049-000250	2.5"	63.5	60.2	2.5"-8NPT	58.7
1514049-000300	3.0"	76.2	72.9	3.0"-8NPT	63.5
1514049-000400	4.0"	101.6	97.4	4.0"-8NPT	65.1
1514049-000600	6.0"	152.4	146.9	6.0"-8NPT	76.2

**14A joint**

No.	Nom.Size	A	E	F	L
1514020-000100	1.0"	25.4	22.1	33.4	34.9
1514020-000150	1.5"	38.1	34.8	46.9	38.1
1514020-000200	2.0"	50.8	47.5	60.5	38.1
1514020-000250	2.5"	63.5	60.2	74.0	44.5
1514020-000300	3.0"	76.2	72.9	87.5	44.5
1514020-000400	4.0"	101.6	97.4	114.5	44.5

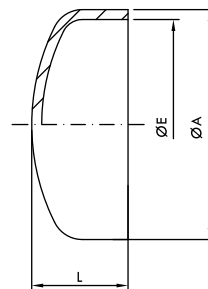
**16A cap**

No.	Nom.Size	A	F	L
1516003-000100	1.0"	33.4	29.5	12.0
1516003-000150	1.5"	46.9	42.6	14.4
1516003-000200	2.0"	60.5	55.7	15.9
1516003-000250	2.5"	74.0	68.8	16.7
1516003-000300	3.0"	87.5	81.9	18.3
1516003-000400	4.0"	114.5	108.1	20.6



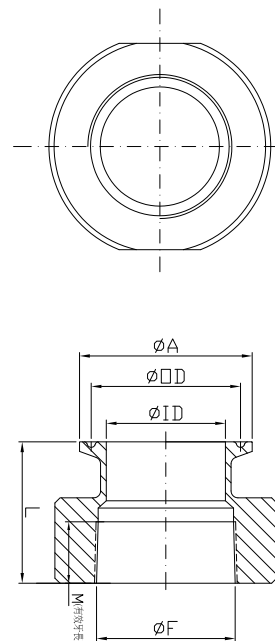
16W end cap

No.	Nom.Size	A	F	L
1516004-000050	1/2"	12.7	9.4	6.4
1516004-000075	3/4"	19.1	15.8	7.9
1516004-000100	1.0"	25.4	22.1	19.1
1516004-000150	1.5"	38.1	34.8	14.3
1516004-000200	2.0"	50.8	47.5	19.1
1516004-000250	2.5"	63.5	60.2	25.4
1516004-000300	3.0"	76.2	72.9	31.8
1516004-000400	4.0"	101.6	97.4	38.1
1516004-000600	6.0"	152.4	146.8	57.2



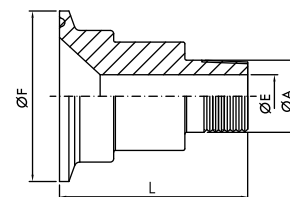
22MP blank cap

No.	Nom.Size	OD / ID	A	L	F
1514062-050012	1/2"X1/8"	17.78x10.16	25	33.02	1/8-27NPT
1514062-050025	1/2"X1/4"	17.46x9.4	25	31.8	1/4-18NPT
1514062-050038	1/2"X3/8"	17.46x9.4	25	31.8	3/8-18NPT
1514062-050050	1/2"X1/2"	17.46x9.4	25	34.9	1/2-14NPT
1514062-050075	1/2"X3/4"	19.05x9.4	25	42	3/4-14NPT
1514062-075012	3/4"X1/8"	20.32x10.16	25	33.02	1/8-27NPT
1514062-075025	3/4"X1/4"	19.05x9.4	25	31.8	1/4-18NPT
1514062-050038	3/4"X3/8"	19.05x9.4	25	31.8	3/8-18NPT
1514062-075050	3/4"X1/2"	17.46x15.8	25	34.9	1/2-14NPT
1514062-075075	3/4"X3/4"	17.46x15.8	25	34.9	3/4-14NPT
1514062-100050	1"X1/2"	42.6x17.3	50.4	41.4	1/2-14NPT
1514062-100075	1"X3/4"	38.1x22.1	50.4	41.3	3/4-14NPT
1514062-100100	1"X1"	42.5x22.1	50.4	41.3	1-11.5NPT
1514062-100150	1"X1.5"	38.1x22.1	50.4	57.2	1.5-11.5NPT
1514062-100200	1"X2"	25.4x22.1	50.4	60.3	2-11.5NPT
1514062-150050	1.5"X1/2"	38.1x34.8	50.4	41.3	1/2-14NPT
1514062-150075	1.5"X3/4"	42.5x22.1	50.4	41.3	3/4-14NPT
1514062-150100	1.5"X1"	42.5x31.8	50.4	41.3	1-11.5NPT
1514062-150125	1.5"X1.25"	38.1x34.8	50.4	57.2	1.25-11.5NPT
1514062-150150	1.5"X1.5"	42x34.8	50.4	57.2	1.5-11.5NPT
1514062-150200	1.5"X2"	38.1x34.8	50.4	57.2	2-11.5NPT
1514062-200050	2"X1/2"	50.8x47.5	63.9	42.9	1/2-14NPT
1514062-200100	2"X1"	50.8x47.5	63.9	42.9	1-11.5NPT
1514062-200150	2"X1.5"	50.8x47.5	63.9	42.9	1.5-11.5NPT
1514062-200200	2"X2"	50.8x47.5	63.9	59.7	2-11.5NPT
1514062-200250	2"X2.5"	50.8x47.5	63.9	60.3	2.5-8NPT
1514062-250150	2.5"X1.5"	63.5x60.2	77.5	42.2	1.5-11.5NPT
1514062-250200	2.5"X2"	63.5x60.2	77.5	43.6	1.5-11.5NPT
1514062-250250	2.5"X2.5"	63.5x60.2	77.5	53.3	2-11.5NPT
1514062-300200	3"X2"	76.2x72.9	90.9	59.5	2-11.5NPT
1514062-300300	3"X3"	76.2x72.9	90.9	55.9	3-8NPT
1514062-400400	4"X4"	101.6x97.4	118.9	66.7	4-8NPT

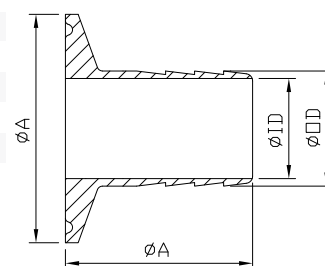


21MPOUTSET joint

No.	Nom.Size	A	F	L
1514063-100050	1.0"x1/2"	1/2"-14NPT	50.4	55.6
1514063-100075	1.0"x3/4"	3/4"-14NPT	50.4	55.6
1514063-100100	1.0"x1.0"	1.0"-11.5NPT	50.4	57.2
1514063-100150	1.0"x1.5"	1.5"-11.5NPT	50.4	62.0
1514063-150050	1.5"x1/2"	1/2"-14NPT	50.4	55.6
1514063-150075	1.5"x3/4"	3/4"-14NPT	50.4	55.6
1514063-150100	1.5"x1.0"	1.0"-11.5NPT	50.4	58.7
1514063-150125	1.5"x1.25"	1.25"-11.5NPT	50.4	62.0
1514063-150150	1.5"x1.5"	1.5"-11.5NPT	50.4	62.0
1514063-150200	1.5"x2.0"	2.0"-11.5NPT	50.4	66.8
1514063-200050	2.0"x1/2"	1/2"-14NPT	63.9	63.9
1514063-200100	2.0"x1.0"	1.0"-11.5NPT	63.9	60.3
1514063-200125	2.0"x1.25"	1.25"-11.5NPT	63.9	62.7
1514063-200150	2.0"x1.5"	1.5"-11.5NPT	63.9	62.7
1514063-200200	2.0"x2.0"	2.0"-11.5NPT	63.9	67.6
1514063-250150	2.5"x1.5"	1.5"-11.5NPT	77.5	70.6
1514063-250200	2.5"x2.0"	2.0"-11.5NPT	77.5	70.6
1514063-250250	2.5"x2.5"	2.5"-8NPT	77.5	83.3
1514063-300300	3.0"x3.0"	3.0"-8NPT	90.9	88.9
1514063-400400	4.0"x4.0"	4.0"-8NPT	118.9	96.8

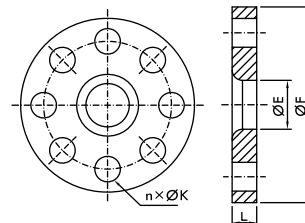
**14 MPHR hose coupler**

No.	Nom.Size	OD/IDxT	A	L
1514044-050012	1/2"X1/8"	4.78/1.6	25	38.1
1514044-050025	1/2"X1/4"	7.92/4.75	25	38.1
1514044-050038	1/2"X3/8"	10.3/6.35	25	38.1
1514044-000050	1/2"	12.7/9.3	25	42.9
1514044-000075	3/4"	19.05/15.75	25	42.9
1514044-000100	1"	25.4/20.6	50.4	42.9
1514044-000150	1.5"	38.1/33.3	50.4	42.9
1514044-000200	2"	50.8/46	63.9	58.7
1514044-000250	2.5"	63.5/58.7	77.5	59.5
1514044-000300	3"	76.2/72	90.9	78.6
1514044-000400	4"	101.6/97.4	118.9	86.5



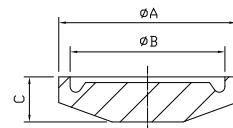
38SL BACK-UP FLANGE

No.	Nom.Size	A	F	L	nxK
1514043-000050	1/2"	14.3	88.9	9.5	4x15.9
1514043-000075	3/4"	20.7	98.4	9.5	4x15.9
1514043-000100	1.0"	27.0	108.0	9.5	4x15.9
1514043-000150	1.5"	39.7	127.0	9.5	4x15.9
1514043-000200	2.0"	52.4	152.4	11.1	4x19.1
1514043-000250	2.5"	65.1	177.8	11.1	4x19.1
1514043-000300	3.0"	77.8	190.5	12.7	4x19.1
1514043-000400	4.0"	103.2	228.6	12.7	8x19.1
1514043-000600	6.0"	154.0	279.4	14.3	8x22.2

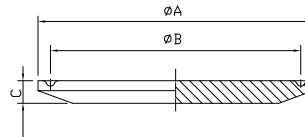


16AMP clamp cap

No.	Nom.Size	A	B	C
1516001-000075	1/2"-3/4"	25	21.8	4.75
1516001-000150	1"-1.5"	50.4	43.6	6.4
1516001-000200	2"	63.9	56.3	6.4
1516001-000250	2.5"	77.4	70.6	6.4
1516001-000300	3"	90.9	83.3	6.4
1516001-000350	3.5"	105.9	93.9	6.4
1516001-000400	4"	118.9	110.3	8
1516001-000450	4.5"	130	122	7.9
1516001-000500	5"	155	146	8
1516001-000600	6"	166.9	156.87	11.1
1516001-000601	6"-1	183	174	14
1516001-000800	8"	217.7	207.2	12.7
1516001-000801	8"-1	233.5	225	14
1516001-001000	10"	168.47	257.96	12.7

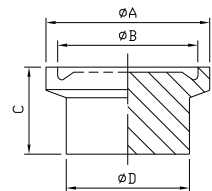


(适用于1/2"-3/4")

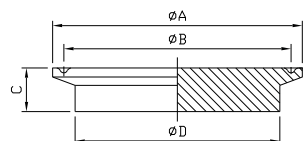


23 BMP temperature sensor plate

No.	Nom.Size	A	B	C	D
1516002-000075	1/2"	25.4	21.8	13.5	19.1
1516002-000075	3/4"	25.4	21.8	13.5	19.1
1516002-000100	1"	50.4	43.6	13.5	38.1
1516002-000150	1.5"	50.4	43.6	13.5	38.1
1516002-000200	2"	63.9	56.3	13.5	50.8
1516002-000250	2.5"	77.5	70.6	13.5	63.5
1516002-000300	3"	90.9	83.3	13.5	76.2
1516002-000400	4"	118.9	110.3	16.7	101.6

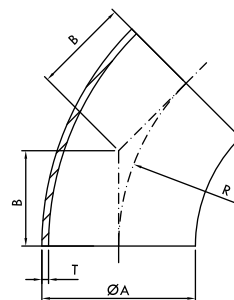


(适用于1/2"-3/4")

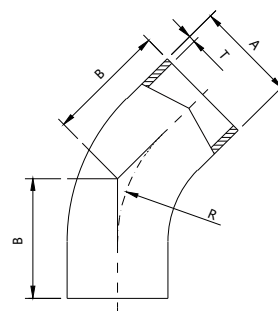


45° elbow, short

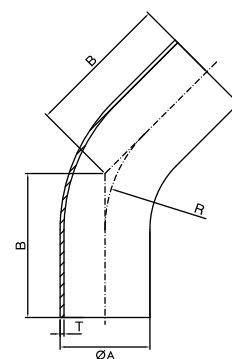
No.	Nom.Size	AxT	B	R
1506001-000050	1/2"	12.7x1.65	8.0	19.1
1506001-000075	3/4"	19.1x1.65	11.9	28.6
1506001-000100	1.0"	25.4x1.65	15.8	38.1
1506001-000150	1.5"	38.1x1.65	23.7	57.2
1506001-000200	2.0"	50.8x1.65	31.6	76.2
1506001-000250	2.5"	63.5x1.65	39.7	95.3
1506001-000300	3.0"	76.2x1.65	47.4	114.3
1506001-000400	4.0"	101.6x2.11	63.1	152.4
1506001-000600	6.0"	152.4x2.77	94.7	228.6

**45° elbow, long**

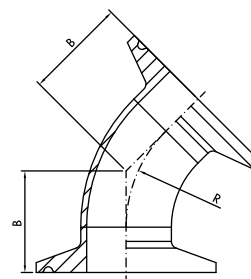
No.	Nom.Size	AxT	B	R
1506101-000075	3/4"	19.1x1.65	19.4	28.6
1506101-000100	1.0"	25.4x1.65	30.18	38.1
1506101-000150	1.5"	38.1x1.65	41.28	57.2
1506101-000200	2.0"	50.8x1.65	58.72	76.2
1506101-000250	2.5"	63.5x1.65	76.2	95.3
1506101-000300	3.0"	76.2x1.65	93.7	114.3
1506101-000400	4.0"	101.6x2.11	122.2	152.4
1506101-000600	6.0"	152.4x2.77	158.8	228.6

**45° elbow, lengthen**

No.	Nom.Size	AxT	B	R
1506103-000050	1/2"	12.7x1.65	57.2	28.6
1506103-000075	3/4"	19.1x1.65	57.2	28.6
1506103-000100	1.0"	25.4x1.65	57.2	38.1
1506103-000150	1.5"	38.1x1.65	63.5	57.2
1506103-000200	2.0"	50.8x1.65	76.2	76.2
1506103-000250	2.5"	63.5x1.65	85.7	95.3
1506103-000300	3.0"	76.2x1.65	92.1	114.3
1506103-000400	4.0"	101.6x2.11	114.3	152.4
1506103-000600	6.0"	152.4x2.77	158.8	228.6

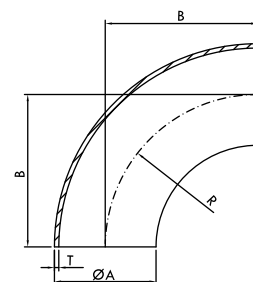
**45° clamp elbow**

No.	Nom.Size	AxT	B	R
1506201-000050	1/2"	12.7x1.65	25.4	28.6
1506201-000075	3/4"	19.1x1.65	25.4	28.6
1506201-000100	1.0"	25.4x1.65	28.6	38.1
1506201-000150	1.5"	38.1x1.65	36.5	57.2
1506201-000200	2.0"	50.8x1.65	44.5	76.2
1506201-000250	2.5"	63.5x1.65	52.4	95.3
1506201-000300	3.0"	76.2x1.65	60.3	114.3
1506201-000400	4.0"	101.6x2.11	79.4	152.4
1506201-000600	6.0"	152.4x2.77	132.8	228.6



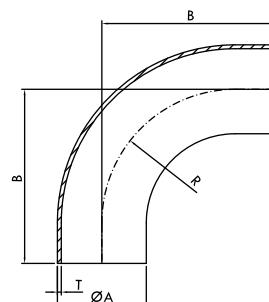
90° elbow, short

No.	Nom.Size	AxT	B	R
1506000-000050	1/2"	12.7x1.65	19.1	19.1
1506000-000075	3/4"	19.1x1.65	28.6	28.6
1506000-000100	1.0"	25.4x1.65	38.1	38.1
1506000-000150	1.5"	38.1x1.65	57.2	57.2
1506000-000200	2.0"	50.8x1.65	76.2	76.2
1506000-000250	2.5"	63.5x1.65	95.3	95.3
1506000-000300	3.0"	76.2x1.65	114.3	114.3
1506000-000400	4.0"	101.6x2.11	152.4	152.4
1506000-000600	6.0"	152.4x2.77	228.6	228.6
1506000-000800	8.0"	203.2x2.77	305	305



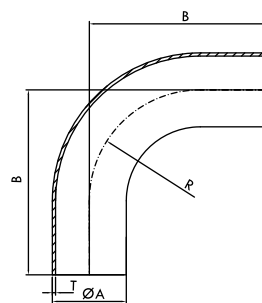
90° elbow, long

No.	Nom.Size	AxT	B	R
1506100-000100	1.0"	25.4x1.65	52.4	38.1
1506100-000150	1.5"	38.1x1.65	74.6	57.2
1506100-000200	2.0"	50.8x1.65	103.2	76.2
1506100-000250	2.5"	63.5x1.65	131.8	95.3
1506100-000300	3.0"	76.2x1.65	160.3	114.3
1506100-000400	4.0"	101.6x2.11	211.1	152.4



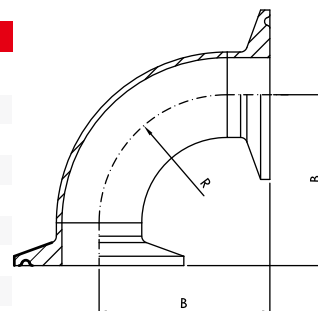
90° elbow, lengthen

No.	Nom.Size	AxT	B	R
1506102-000038	3/8"	9.53x0.89	66.7	28.6
1506102-000050	1/2"	12.7x1.65	76.2	28.6
1506102-000075	3/4"	19.1x1.65	76.2	28.6
1506102-000100	1.0"	25.4x1.65	76.2	38.1
1506102-000150	1.5"	38.1x1.65	95.3	57.2
1506102-000200	2.0"	50.8x1.65	120.7	76.2
1506102-000250	2.5"	63.5x1.65	139.7	95.3
1506102-000300	3.0"	76.2x1.65	158.8	114.3
1506102-000400	4.0"	101.6x2.11	203.2	152.4
1506102-000600	6.0"	152.4x2.77	292.1	228.6



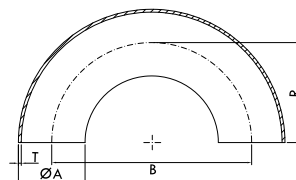
90° clamp elbow

No.	Nom.Size	AxT	B	R
1506200-000050	1/2"	12.7x1.65	41.3	28.6
1506200-000075	3/4"	19.1x1.65	41.3	28.6
1506200-000100	1.0"	25.4x1.65	50.8	38.1
1506200-000150	1.5"	38.1x1.65	69.9	57.2
1506200-000200	2.0"	50.8x1.65	88.9	76.2
1506200-000250	2.5"	63.5x1.65	108.0	95.3
1506200-000300	3.0"	76.2x1.65	127.0	114.3
1506200-000400	4.0"	101.6x2.11	168.3	152.4
1506200-000600	6.0"	152.4x2.77	247.7	228.6

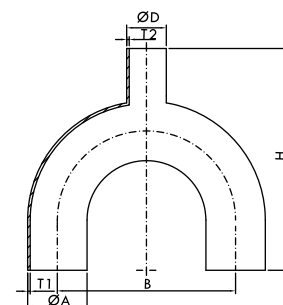


180° elbow

No.	Nom.Size	AxT	B	R
1506002-000050	1/2"	12.7x1.65	38.2	19.1
1506002-000075	3/4"	19.1x1.65	57.2	28.6
1506002-000100	1.0"	25.4x1.65	76.2	38.1
1506002-000150	1.5"	38.1x1.65	114.3	57.2
1506002-000200	2.0"	50.8x1.65	152.4	76.2
1506002-000250	2.5"	63.5x1.65	190.5	95.3
1506002-000300	3.0"	76.2x1.65	228.6	114.3
1506002-000400	4.0"	101.6x2.11	304.8	152.4

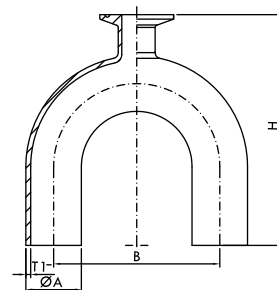
**180° return bend**

No.	Nom.Size	AxT1	DxT2	B	H
1506109-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	114.3	108.5
1506109-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	114.3	108.5
1506109-000100	1.0"x1.0"	25.4x1.65	25.4x1.65	114.3	108.5
1506109-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	152.4	173.7
1506109-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	152.4	173.7
1506109-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	152.4	174.1
1506109-000150	1.5"x1.5"	38.1x1.65	38.1x1.65	152.4	174.1
1506109-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	152.4	206.2
1506109-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	152.4	206.2
1506109-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	152.4	206.2
1506109-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	152.4	206.5
1506109-000200	2.0"x2.0"	50.8x1.65	50.8x1.65	152.4	206.5
1506109-250075	2.5"x3/4"	63.5x1.65	19.1x1.65	190.5	232.2
1506109-250100	2.5"x1.0"	63.5x1.65	25.4x1.65	190.5	232.2
1506109-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	190.5	232.2
1506109-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	190.5	232.2
1506109-000250	2.5"x2.5"	63.5x1.65	63.5x1.65	190.5	232.2
1506109-300050	3.0"x1/2"	76.2x1.65	12.7x1.65	228.6	255.5
1506109-300075	3.0"x3/4"	76.2x1.65	19.1x1.65	228.6	255.5
1506109-300100	3.0"x1.0"	76.2x1.65	25.4x1.65	228.6	257.4
1506109-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	228.6	257.4
1506109-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	228.6	257.4
1506109-300250	3.0"x2.5"	76.2x1.65	63.5x1.65	228.6	257.4
1506109-000300	3.0"x3.0"	76.2x1.65	76.2x1.65	228.6	257.4
1506109-400050	4.0"x1/2"	101.6x2.11	12.7x1.65	304.8	331.7
1506109-400075	4.0"x3/4"	101.6x2.11	19.1x1.65	304.8	331.7
1506109-400100	4.0"x1.0"	101.6x2.11	25.4x1.65	304.8	333.6
1506109-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	304.8	333.6
1506109-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	304.8	333.6
1506109-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	304.8	333.6
1506109-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	304.8	333.6
1506109-000400	4.0"x4.0"	101.6x2.11	101.6x2.11	304.8	333.6



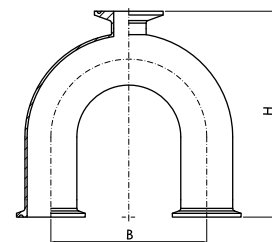
180° return bend

No.	Nom.Size	AxT	B	H
1506309-000075	3/4"x3/4"	19.1x1.65	114.3	98.9
1506309-100050	1.0"x1/2"	25.4x1.65	114.3	102.1
1506309-100075	1.0"x3/4"	25.4x1.65	114.3	102.1
1506309-000100	1.0"x1.0"	25.4x1.65	114.3	102.1
1506309-150050	1.5"x1/2"	38.1x1.65	152.4	148.3
1506309-150075	1.5"x3/4"	38.1x1.65	152.4	148.3
1506309-150100	1.5"x1.0"	38.1x1.65	152.4	148.5
1506309-000150	1.5"x1.5"	38.1x1.65	152.4	148.5
1506309-200050	2.0"x1/2"	50.8x1.65	152.4	168.1
1506309-200075	2.0"x3/4"	50.8x1.65	152.4	168.1
1506309-200100	2.0"x1.0"	50.8x1.65	152.4	168.1
1506309-200150	2.0"x1.5"	50.8x1.65	152.4	168.4
1506309-000200	2.0"x2.0"	50.8x1.65	152.4	168.4
1506309-250075	2.5"x3/4"	63.5x1.65	190.5	194.0
1506309-250100	2.5"x1.0"	63.5x1.65	190.5	194.0
1506309-250150	2.5"x1.5"	63.5x1.65	190.5	194.0
1506309-250200	2.5"x2.0"	76.2x1.65	228.6	219.3
1506309-000250	2.5"x2.5"	63.5x1.65	190.5	194.0
1506309-300250	2.5"x2.5"	76.2x1.65	190.5	194.0



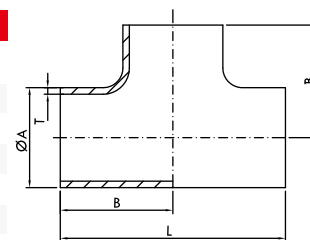
180° return bend

No.	Nom.Size	B	H
1506209-100050	1.0"x1/2"	114.3	114.8
1506209-100075	1.0"x3/4"	114.3	114.8
1506209-000100	1.0"x1.0"	114.3	114.8
1506209-150050	1.5"x1/2"	114.3	161.0
1506209-150075	1.5"x3/4"	114.3	161.0
1506209-150100	1.5"x1.0"	114.3	161.4
1506209-000150	1.5"x1.5"	114.3	161.4
1506209-200050	2.0"x1/2"	152.4	180.8
1506209-200075	2.0"x3/4"	152.4	180.8
1506209-200100	2.0"x1.0"	152.4	180.8
1506209-200150	2.0"x1.5"	152.4	181.1
1506209-000200	2.0"x2.0"	152.4	181.1
1506209-250050	2.5"x1/2"	190.5	206.7
1506209-250075	2.5"x3/4"	190.5	206.7
1506209-250100	2.5"x1.0"	190.5	206.7
1506209-250150	2.5"x1.5"	190.5	206.7
1506209-250200	2.5"x2.0"	190.5	206.7
1506209-000250	2.5"x2.5"	190.5	206.7

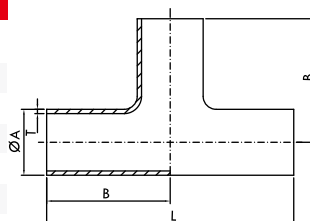


Equal tee, short

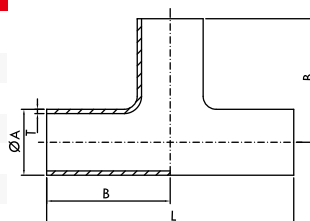
No.	Nom.Size	AxT1	B	L
1503100-000075	3/4"	19.1x1.65	25.4	50.8
1503100-000100	1.0"	25.4x1.65	28.6	57.2
1503100-000150	1.5"	38.1x1.65	42.1	84.1
1503100-000200	2.0"	50.8x1.65	52.4	104.7
1503100-000250	2.5"	63.5x1.65	59.6	119.1
1503100-000300	3.0"	76.2x1.65	65.9	131.8
1503100-000400	4.0"	101.6x2.11	87.35	174.7

**Equal tee, long**

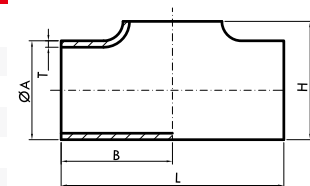
No.	Nom.Size	AxT1	B	L
1503101-000050	1/2"	12.7x1.65	19.1	38.1
1503101-000075	3/4"	19.1x1.65	47.6	95.2
1503101-000100	1.0"	25.4x1.65	47.6	95.2
1503101-000150	1.5"	38.1x1.65	57.2	114.4
1503101-000200	2.0"	50.8x1.65	76.2	152.4
1503101-000250	2.5"	63.5x1.65	76.2	152.4
1503101-000300	3.0"	76.2x1.65	82.6	165.2
1503101-000400	4.0"	101.6x2.11	98.4	196.8
1503101-000600	6.0"	152.4x2.11	127.0	254.0

**Equal tee, lengthen**

No.	Nom.Size	AxT1	B	L
1503102-000025	1/4"	6.35x0.89	44.5	89.0
1503102-000035	3/8"	9.53x0.89	44.5	89.0
1503102-000050	1/2"	12.7x1.65	47.6	95.2
1503102-000075	3/4"	19.1x1.65	50.8	101.6
1503102-000100	1.0"	25.4x1.65	54.0	108.0
1503102-000150	1.5"	38.1x1.65	60.3	120.6
1503102-000200	2.0"	50.8x1.65	73.0	146.0
1503102-000250	2.5"	63.5x1.65	79.4	158.8
1503102-000300	3.0"	76.2x1.65	85.7	171.4
1503102-000400	4.0"	101.6x2.11	104.8	209.6
1503102-000600	6.0"	152.4x2.77	142.9	285.8

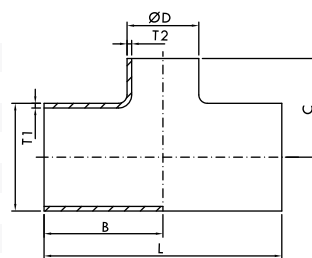
**Equal tee, short outlet**

No.	Nom.Size	AxT1	B	H	L
1503000-000075	3/4"	19.1x1.65	25.4	19.8	50.8
1503000-000100	1.0"	25.4x1.65	28.6	27.0	57.2
1503000-000150	1.5"	38.1x1.65	42.1	40.5	84.1
1503000-000200	2.0"	50.8x1.65	52.4	54.0	104.7
1503000-000250	2.5"	63.5x1.65	59.6	67.0	119.1
1503000-000300	3.0"	76.2x1.65	65.9	79.5	131.8
1503000-000400	4.0"	101.6x2.11	87.4	105.5	174.7



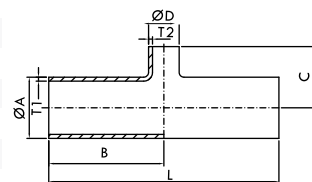
Reducing tee, short

No.	Nom.Size	AxT1	DxT2	B	C	L
1503100-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	28.6	29.2	57.2
1503100-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	28.6	29.2	57.2
1503100-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	42.1	36.6	84.1
1503100-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	42.1	36.6	84.1
1503100-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	42.1	34.9	84.1
1503100-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	52.4	44.1	104.8
1503100-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	52.4	41.3	104.8
1503100-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	52.4	48.4	104.8
1503100-250100	2.0"x1.0"	63.5x1.65	25.4x1.65	59.6	47.6	119.1
1503100-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	59.6	54.8	119.1
1503100-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	59.6	58.7	119.1
1503100-300025	3.0"x1/4"	76.2x1.65	63.5x0.89	65.9	61.1	131.8
1503100-300050	3.0"x1/2"	76.2x1.65	25.4x1.65	65.9	61.1	131.8
1503100-300075	3.0"x3/4"	76.2x1.65	38.1x1.65	65.9	61.1	131.8
1503100-300100	3.0"x1.0"	76.2x1.65	50.8x1.65	65.9	61.1	131.8
1503100-300150	3.0"x1.5"	76.2x1.65	63.5x1.65	65.9	61.1	131.8
1503100-300200	3.0"x2.0"	76.2x1.65	12.7x1.65	65.9	65.1	131.8
1503100-300250	3.0"x2.5"	76.2x1.65	19.1x1.65	87.3	65.9	131.8
1503100-400100	4.0"x1.0"	101.6x2.11	25.4x1.65	87.3	66.8	174.6
1503100-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	87.3	73.8	174.6
1503100-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	87.3	77.8	174.6
1503100-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	87.3	78.6	174.6
1503100-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	87.3	76.6	174.6



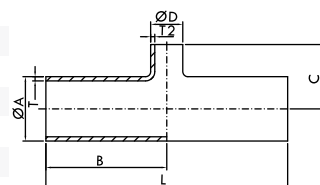
Reducing tee, long

No.	Nom.Size	AxT1	DxT2	B	C	L
1503101-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	47.8	25.4	95.5
1503101-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	47.8	28.5	95.5
1503101-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	57.2	31.8	114.3
1503101-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	57.2	35.1	114.3
1503101-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	57.2	54.1	114.3
1503101-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	76.2	38.1	152.4
1503101-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	76.2	41.4	152.4
1503101-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	76.2	60.3	152.4
1503101-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	76.2	63.5	152.4
1503101-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	76.2	69.9	152.4
1503101-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	76.2	82.6	152.4
1503101-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	82.6	76.2	165.5
1503101-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	82.6	88.9	165.1
1503101-300250	3.0"x2.5"	76.2x1.65	63.5x1.65	82.6	82.6	165.1
1503101-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	98.6	88.9	197.1
1503101-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	98.6	101.6	197.1
1503101-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	98.6	95.3	197.1
1503101-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	98.6	95.3	197.1
1503101-600150	6.0"x1.5"	152.4x2.11	38.1x1.65	127.0	114.3	254.0
1503101-600200	6.0"x2.0"	152.4x2.11	50.8x1.65	127.0	127.0	254.0
1503101-600250	6.0"x2.5"	152.4x2.11	63.5x1.65	127.0	120.7	254.0
1503101-600300	6.0"x3.0"	152.4x2.11	76.2x1.65	127.0	120.7	254.0
1503101-600400	6.0"x4.0"	152.4x2.11	101.6x2.11	127.0	123.7	254.0



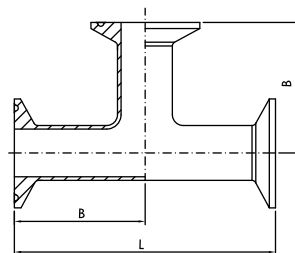
Reducing tee, lengthen

No.	Nom.Size	AxT1	DxT2	B	C	L
1503102-050038	1/2"x 3/8"	12.7x1.65	9.53x0.89	47.6	47.6	95.2
1503102-075025	3/4"x1/4"	19.1x1.65	6.35x0.89	50.8	50.8	101.6
1503102-075038	3/4"x3/8"	19.1x1.65	9.53x0.89	50.8	50.8	101.6
1503102-075050	3/4"x1/2"	19.1x1.65	12.7x1.65	50.8	50.8	101.6
1503102-100025	1.0"x1/4"	25.4x1.65	6.35x0.89	54.0	54.0	108.0
1503102-100038	1.0"x3/8"	25.4x1.65	9.53x0.89	54.0	54.0	108.0
1503102-100038	1.0"x1/2"	25.4x1.65	12.7x1.65	54.0	54.0	108.0
1503102-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	54.0	54.0	108.0
1503102-150025	1.5"x1/4"	38.1x1.65	6.35x0.89	60.3	60.3	120.6
1503102-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	60.3	60.3	120.6
1503102-150038	1.5"x3/8"	38.1x1.65	9.53x0.98	60.3	60.3	120.6
1503102-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	60.3	60.3	120.6
1503102-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	60.3	60.3	120.6
1503102-200025	2.0"x1/4"	50.8x1.65	6.35x0.89	73.0	66.7	146.0
1503102-200038	2.0"x3/8"	50.8x1.65	9.53x0.89	73.0	66.7	146.0
1503102-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	73.0	66.7	146.0
1503102-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	73.0	66.7	146.0
1503102-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	73.0	66.7	146.0
1503102-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	73.0	66.7	146.0
1503102-250038	2.5"x3/8"	63.5x1.65	9.53x0.89	79.4	73.0	158.8
1503102-250050	2.5"x1/2"	63.5x1.65	12.7x1.65	79.4	73.0	158.8
1503102-250075	2.5"x3/4"	63.5x1.65	19.1x1.65	79.4	73.0	158.8
1503102-250100	2.5"x1.0"	63.5x1.65	25.4x1.65	79.4	73.0	158.8
1503102-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	79.4	73.0	158.8
1503102-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	79.4	73.0	158.8
1503102-300500	3.0"x1/2"	76.2x1.65	12.7x1.65	85.7	79.4	171.4
1503102-300075	3.0"x3/4"	76.2x1.65	19.1x1.65	85.7	79.4	171.4
1503102-300100	3.0"x1.0"	76.2x1.65	25.4x1.65	85.7	79.4	171.4
1503102-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	85.7	79.4	171.4
1503102-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	85.7	79.4	171.4
1503102-300250	3.0"x2.5"	76.2x1.65	63.5x1.65	85.7	79.4	171.4
1503102-400050	4.0"x1/2"	101.6x2.11	12.7x1.65	104.8	92.1	209.6
1503102-400075	4.0"x3/4"	101.6x2.11	19.1x1.65	104.8	92.1	209.6
1503102-400100	4.0"x1.0"	101.6x2.11	25.4x1.65	104.8	92.1	209.6
1503102-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	104.8	92.1	209.6
1503102-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	104.8	98.4	209.6
1503102-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	104.8	98.4	209.6
1503102-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	104.8	98.4	209.6
1503102-600075	6.0"x3/4"	152.4x2.77	19.1x1.65	142.9	123.8	285.8
1503102-600100	6.0"x1.0"	152.4x2.77	25.4x1.65	142.9	123.8	285.8
1503102-600150	6.0"x1.5"	152.4x2.77	38.1x1.65	142.9	123.8	285.8
1503102-600200	6.0"x2.0"	152.4x2.77	50.8x1.65	142.9	123.8	285.8
1503102-600250	6.0"x2.5"	152.4x2.77	63.5x1.65	142.9	123.8	285.8
1503102-600300	6.0"x3.0"	152.4x2.77	76.2x1.65	142.9	123.8	285.8
1503102-600400	6.0"x4.0"	152.4x2.77	101.6x2.11	142.9	130.2	285.8



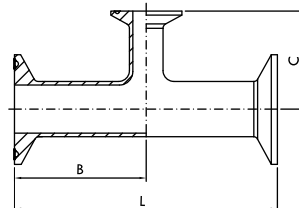
Equal tee, clamp

No.	Nom.Size	B	L
1503301-00050	1/2"	31.6	63.2
1503301-00075	3/4"	60.3	120.7
1503301-00100	1.0"	60.3	120.7
1503301-00150	1.5"	69.9	139.7
1503301-00200	2.0"	88.9	177.8
1503301-00250	2.5"	88.9	177.8
1503301-00300	3.0"	95.3	190.5
1503301-00400	4.0"	114.3	228.6



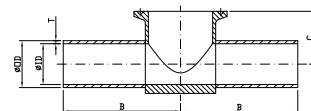
Reducing tee, clamp

No.	Nom.Size	B	C	L
1503309-150100	1.5"x1.0"	54.75	46.0	109.5
1503309-200100	2.0"x1.0"	65.10	54.0	130.2
1503309-200150	2.0"x1.5"	65.10	61.0	130.2
1503309-250150	2.5"x1.5"	72.25	71.4	144.5
1503309-250200	2.5"x2.0"	72.25	71.4	144.5
1503309-300100	3.0"x1.0"	78.60	77.8	157.2
1503309-300150	3.0"x1.5"	78.60	77.8	157.2
1503309-300200	3.0"x2.0"	78.60	77.8	157.2
1503309-300250	3.0"x2.5"	78.60	78.6	157.2
1503309-400050	4.0"x1/2"	103.20	123.8	206.4
1503309-400075	4.0"x3/4"	103.20	123.8	206.4
1503309-400100	4.0"x1.0"	103.20	123.8	206.4
1503309-400150	4.0"x1.5"	103.20	123.8	206.4
1503309-400200	4.0"x2.0"	103.20	123.8	206.4
1503309-400250	4.0"x2.5"	103.20	123.8	206.4
1503309-400300	4.0"x3.0"	103.20	123.8	206.4



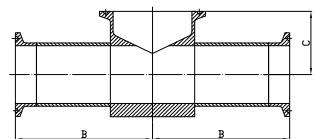
Instrument tee

No.	Nom.Size	OD/IDxT	B	C
1503203-050150	1/2"x1.5"	12.7/9.4x1.65	63.5	22.2
1503203-075150	3/4"x1.5"	19.05/15.8x1.65	63.5	25.4
1503203-100150	1"x1.5"	25.4/22.1x1.65	63.5	28.6
1503203-050200	1/2"x2"	12.7/9.4x1.65	69.9	25.4
1503203-075200	3/4"x2"	19.05/15.8x1.65	69.9	28.6
1503203-100200	1"x2"	25.4/22.1x1.65	69.9	31.75
1503203-150200	1.5"x2"	38.1/34.8x1.65	69.9	38.1



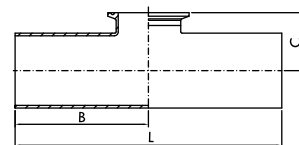
Instrument tee, clamp

No.	Nom.Size	OD/IDxT	B	C
1503303-050150	1/2"x1.5"	12.7/9.4x1.65	76.2	22.2
1503303-075150	3/4"x1.5"	19.05/15.8x1.65	76.2	25.4
1503303-100150	1"x1.5"	25.4/22.1x1.65	76.2	28.6
1503303-050200	1/2"x2"	12.7/9.4x1.65	82.6	25.4
1503303-075200	3/4"x2"	19.05/15.8x1.65	82.6	28.6
1503303-100200	1"x2"	25.4/22.1x1.65	82.6	31.75
1503303-150200	1.5"x2"	38.1/34.8x1.65	82.6	38.1



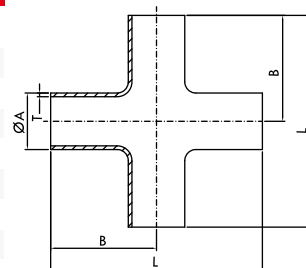
Reducing tee, short outlet

No.	Nom.Size	B	C	L
1503201-075050	3/4"x1/2"	50.8	25.4	101.6
1503201-100050	1.0"x1/2"	54.0	28.6	108.0
1503201-100075	1.0"x3/4"	54.0	28.6	108.0
1503201-150050	1.5"x1/2"	60.3	34.9	120.7
1503201-150075	1.5"x3/4"	60.3	34.9	120.7
1503201-150100	1.5"x1.0"	60.3	34.9	120.7
1503201-200050	2.0"x1/2"	70.3	41.3	146.1
1503201-200075	2.0"x3/4"	70.3	41.3	146.1
1503201-200100	2.0"x1.0"	70.3	41.3	146.1
1503201-200150	2.0"x1.5"	70.3	41.3	146.1
1503201-02550	2.5"x1/2"	79.4	47.6	158.8
1503201-250075	2.5"x3/4"	79.4	47.6	158.8
1503201-250100	2.5"x1.0"	79.4	47.6	158.8
1503201-250150	2.5"x1.5"	79.4	47.6	158.8
1503201-250200	2.5"x2.0"	79.4	47.6	158.8
1503201-300050	3.0"x1/2"	85.7	54.0	171.5
1503201-300075	3.0"x3/4"	85.7	54.0	171.5
1503201-300100	3.0"x1.0"	85.7	54.0	171.5
1503201-300150	3.0"x1.5"	85.7	54.0	171.5
1503201-300200	3.0"x2.0"	85.7	54.0	171.5
1503201-300250	3.0"x1/4"	85.7	54.0	171.5
1503201-400050	4.0"x1/2"	104.8	66.7	209.6
1503201-400075	4.0"x3/4"	104.8	66.7	209.6
1503201-400100	4.0"x1.0"	104.8	66.7	209.6
1503201-400150	4.0"x1.5"	104.8	66.7	209.6
1503201-400200	4.0"x2.0"	104.8	66.7	209.6
1503201-400250	4.0"x2.5"	104.8	66.7	209.6
1503201-400300	4.0"x3.0"	104.8	66.7	209.6
1503201-600500	6.0"x1/2"	142.9	92.1	285.8
1503201-600100	6.0"x1.0"	142.9	92.1	285.8
1503201-600150	6.0"x1.5"	142.9	92.1	285.8
1503201-600300	6.0"x3.0"	142.9	92.1	285.8
1503201-600400	6.0"x4.0"	142.9	95.3	285.8


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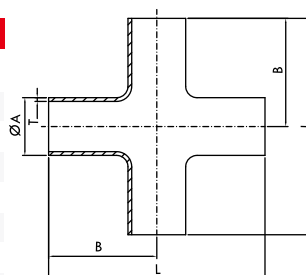
Straight cross, long

No.	Nom.Size	AxT	B	L
1504101-000050	1/2"	12.7x1.65	19.1	38.1
1504101-000075	3/4"	19.1x1.65	47.6	95.2
1504101-000100	1.0"	25.4x1.65	47.6	95.2
1504101-000150	1.5"	38.1x1.65	57.2	114.4
1504101-000200	2.0"	50.8x1.65	76.2	152.4
1504101-000250	2.5"	63.5x1.65	76.2	152.4
1504101-000300	3.0"	76.2x1.65	82.6	165.2
1504101-000400	4.0"	101.6x2.11	98.4	196.8
1504101-000600	6.0"	152.4x2.77	127.0	254.0



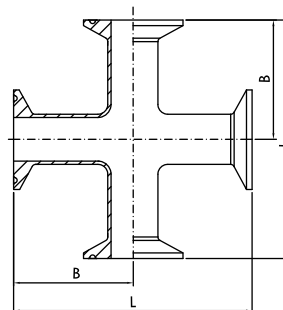
Straight cross, lengthen

No.	Nom.Size	AxT	B	L
1504102-000050	1/2"	12.7x1.65	47.6	95.2
1504102-000075	3/4"	19.1x1.65	50.8	101.6
1504102-000100	1.0"	25.4x1.65	54.0	108.0
1504102-000150	1.5"	38.1x1.65	60.3	120.6
1504102-000200	2.0"	50.8x1.65	76.0	146.0
1504102-000250	2.5"	63.5x1.65	79.4	158.8
1504102-000300	3.0"	76.2x1.65	85.7	171.4
1504102-000400	4.0"	101.6x2.11	104.8	209.6



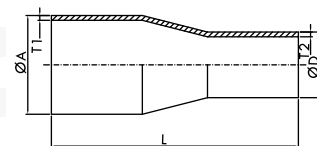
Straight cross, clamp

No.	Nom.Size	B	L
1504301-000050	1/2"	31.6	63.5
1504301-000075	3/4"	60.3	120.6
1504301-000100	1.0"	60.3	120.6
1504301-000150	1.5"	69.9	139.8
1504301-000200	2.0"	88.9	177.8
1504301-000250	2.5"	88.9	177.8
1504301-000300	3.0"	95.3	190.6
1504301-000400	4.0"	114.2	228.4



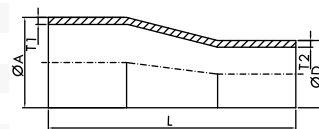
Concentric reducer, long

No.	Nom.Size	AxT1	DxT2	L
1505004-050025	1/2"x1/4"	12.7x1.65	6.35x0.89	101.6
1505004-050038	1/2"x3/8"	12.7x1.65	9.53x0.89	101.6
1505004-075038	3/4"x3/8"	19.1x1.65	9.53x0.89	101.6
1505004-075050	3/4"x1/2"	19.1x1.65	12.7x1.65	101.6
1505004-100038	1.0"x3/8"	25.4x1.65	9.53x0.89	114.3
1505004-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	114.3
1505004-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	101.6
1505004-150038	1.5"x3/8"	38.1x1.65	9.53x0.89	152.4
1505004-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	139.7
1505004-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	127.0
1505004-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	127.0
1505004-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	196.9
1505004-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	184.2
1505004-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	184.2
1505004-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	133.4
1505004-250050	2.5"x1/2"	63.5x1.65	12.7x1.65	247.7
1505004-250075	2.5"x3/4"	63.5x1.65	19.1x1.65	235.0
1505004-250025	2.5"x1.0"	63.5x1.65	25.4x1.65	235.0
1505004-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	184.2
1505004-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	139.7
1505004-300500	3.0"x1/2"	76.2x1.65	12.7x1.65	298.5
1505004-300075	3.0"x3/4"	76.2x1.65	19.1x1.65	285.8
1505004-300100	3.0"x1.0"	76.2x1.65	25.4x1.65	285.8
1505004-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	235.0
1505004-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	190.5
1505004-300250	3.0"x2.5"	76.2x1.65	63.2x1.65	139.7
1505004-400050	4.0"x1/2"	101.6x2.11	12.7x1.65	406.4
1505004-400075	4.0"x3/4"	101.6x2.11	19.1x1.65	393.7
1505004-400100	4.0"x1.0"	101.6x2.11	25.4x1.65	393.7
1505004-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	342.9
1505004-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	298.5
1505004-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	247.7
1505004-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	196.9
1505004-600300	6.0"x3.0"	152.4x2.77	76.2x1.65	254.0
1505004-600400	6.0"x4.0"	152.4x2.77	101.6x2.77	254.0


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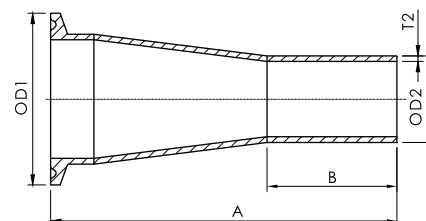
Eccentric reducer

No.	Nom.Size	AxT1	DxT2	L
1505104-050038	1/2"x3/8"	12.7x1.65	9.53x0.89	101.6
1505104-075050	3/4"x1/2"	19.1x1.65	12.7x1.65	101.6
1505104-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	114.3
1505104-150038	1.0"x3/8"	25.4x1.65	9.53x0.89	114.3
1505104-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	101.6
1505104-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	139.7
1505104-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	127.0
1505104-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	127.0
1505104-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	196.9
1505104-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	184.2
1505104-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	184.2
1505104-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	133.4
1505104-250050	2.5"x1/2"	63.5x1.65	12.7x1.65	247.7
1505104-250075	2.5"x3/4"	63.5x1.65	19.1x1.65	235.0
1505104-250100	2.5"x1.0"	63.5x1.65	25.4x1.65	235.0
1505104-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	184.2
1505104-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	139.7
1505104-300050	3.0"x1/2"	76.2x1.65	12.7x1.65	298.5
1505104-300075	3.0"x3/4"	76.2x1.65	19.1x1.65	285.8
1505104-300100	3.0"x1.0"	76.2x1.65	25.4x1.65	285.8
1505104-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	235.0
1505104-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	190.5
1505104-300250	3.0"x2.5"	76.2x1.65	63.5x1.65	139.7
1505104-400050	3.0"x1/2"	101.6x2.11	12.7x1.65	406.4
1505104-400075	3.0"x3/4"	101.6x2.11	19.1x1.65	393.7
1505104-400100	4.0"x1.0"	101.6x2.11	25.4x1.65	393.7
1505104-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	342.9
1505104-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	298.5
1505104-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	247.7
1505104-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	196.9
1505104-600300	6.0"x3.0"	152.4x2.77	76.2x1.65	247.7
1505104-600400	6.0"x4.0"	152.4x2.77	101.6x2.77	254.0

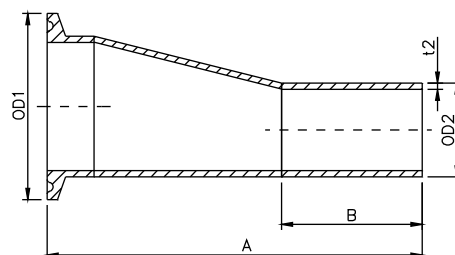


Concentric reducer, clamp

No.	Nom.Size	OD1	OD2	T2	A	B
1505201-075050	3/4"x1/2"	25.4	12.7	1.65	76.2	38.1
1505201-100050	1.0"x1/2"	50.4	12.7	1.65	88.9	38.1
1505201-100075	1.0"x3/4"	50.4	19.05	1.65	76.2	38.1
1505201-150050	1.5"x1/2"	50.4	12.7	1.65	114.3	38.1
1505201-150075	1.5"x3/4"	50.4	19.05	1.65	101.6	38.1
1505201-150100	1.5"x1.0"	50.4	25.4	1.65	101.6	38.1
1505201-200050	2.0"x1/2"	63.9	12.7	1.65	165.1	38.1
1505201-200075	2.0"x3/4"	63.9	19.05	1.65	152.4	38.1
1505201-200100	2.0"x1.0"	63.9	25.4	1.65	152.4	38.1
1505201-200150	2.0"x1.5"	63.9	38.1	1.65	101.6	38.1
1505201-250100	2.5"x1.0"	77.5	25.4	1.65	203.2	38.1
1505201-250150	2.5"x1.5"	77.5	38.1	1.65	152.4	38.1
1505201-250200	2.5"x2.0"	77.5	50.8	1.65	108.0	44.5
1505201-300100	3.0"x1.0"	90.9	25.4	1.65	254.0	38.1
1505201-300150	3.0"x1.5"	90.9	38.1	1.65	203.2	38.1
1505201-300200	3.0"x2.0"	90.9	50.8	1.65	158.8	44.5
1505201-300250	3.0"x2.5"	90.9	63.5	1.65	108.0	44.5
1505201-400100	4.0"x1.0"	118.9	25.4	1.65	358.8	38.2
1505201-400150	4.0"x1.5"	118.9	38.1	1.65	308.0	38.2
1505201-400200	4.0"x2.0"	118.9	50.8	1.65	263.5	44.5
1505201-400250	4.0"x2.5"	118.9	63.5	1.65	212.7	44.5

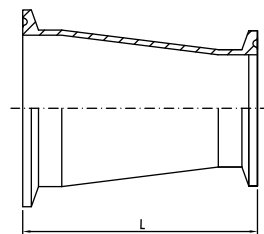
**Eccentric reducer, clamp**

No.	Nom.Size	OD1	OD2	T2	A	B
1505301-075050	3/4"x1/2"	25.4	12.7	1.65	76.2	38.1
1505301-100050	1.0"x1/2"	50.4	12.7	1.65	88.9	38.1
1505301-100075	1.0"x3/4"	50.4	19.05	1.65	76.2	38.1
1505301-150050	1.5"x1/2"	50.4	12.7	1.65	114.6	38.1
1505301-150075	1.5"x3/4"	50.4	19.05	1.65	101.6	38.1
1505301-150100	1.5"x1.0"	50.4	25.4	1.65	101.6	38.1
1505301-200050	2.0"x1/2"	63.9	12.07	1.65	165.1	38.1
1505301-200075	2.0"x3/4"	63.9	19.05	1.65	152.4	38.1
1505301-200100	2.0"x1.0"	63.9	25.4	1.65	152.4	38.1
1505301-200150	2.0"x1.5"	63.9	38.1	1.65	101.6	38.1
1505301-250075	2.5"x3/4"	77.5	19.05	1.65	203.2	38.1
1505301-250100	2.5"x1.0"	77.5	25.4	1.65	203.2	38.1
1505301-250150	2.5"x1.5"	77.5	38.1	1.65	152.4	38.1
1505301-250200	2.5"x2.0"	77.5	50.8	1.65	108.0	44.5
1505301-300100	3.0"x1.0"	90.9	25.4	1.65	254.0	38.1
1505301-300150	3.0"x1.5"	90.9	38.1	1.65	203.2	38.1
1505301-300200	3.0"x2.0"	90.9	50.8	1.65	158.8	44.5
1505301-300250	3.0"x2.5"	90.9	63.5	1.65	108.0	44.5
1505301-400100	4.0"x1.0"	118.9	25.4	1.65	358.8	38.2
1505301-400150	4.0"x1.5"	118.9	38.1	1.65	308.0	38.2
1505301-400200	4.0"x2.0"	118.9	50.8	1.65	263.5	44.5
1505301-400250	4.0"x2.5"	118.9	63.5	1.65	212.7	44.5
1505301-400350	4.0"x3.5"	118.9	76.2	1.65	161.9	44.5
1505301-600400	6.0"x4.0"	166.9	101.6	2.11	228.6	69.85



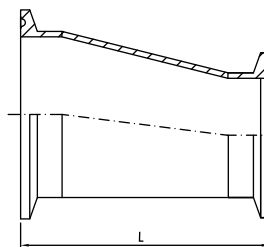
Concentric reducer, clamp

No.	Nom.Size	L
1505200-075050	3/4"x1/2"	50.8
1505200-100050	1.0"x1/2"	63.5
1505200-100075	1.0"x3/4"	50.8
1505200-150050	1.5"x1/2"	88.9
1505200-150075	1.5"x3/4"	76.2
1505200-150100	1.5"x1.0"	76.2
1505200-200050	2.0"x1/2"	139.7
1505200-200075	2.0"x3/4"	127.0
1505200-200100	2.0"x1.0"	127.0
1505200-200150	2.0"x1.5"	76.2
1505200-250050	2.5"x1/2"	190.5
1505200-250075	2.5"x3/4"	177.8
1505200-250100	2.5"x1.0"	177.8
1505200-250150	2.5"x1.5"	127.0
1505200-250200	2.5"x2.0"	76.2
1505200-300075	3.0"x3/4"	228.6
1505200-300150	3.0"x1.5"	117.8
1505200-300200	3.0"x2.0"	127.0
1505200-300250	3.0"x2.5"	76.2
1505200-400100	4.0"x1.0"	333.4
1505200-400150	4.0"x1.5"	282.6
1505200-400200	4.0"x2.0"	231.8
1505200-400250	4.0"x2.5"	181.0
1505200-400300	4.0"x3.0"	130.2
1505200-600400	6.0"x4.0"	193.7



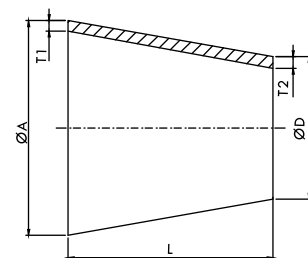
Eccentric reducer, clamp

No.	Nom.Size	L
1505300-075050	3/4"x1/2"	50.8
1505300-100050	1.0"x1/2"	63.5
1505300-100075	1.0"x3/4"	50.8
1505300-150050	1.5"x1/2"	88.9
1505300-150075	1.5"x3/4"	76.2
1505300-150100	1.5"x1.0"	76.2
1505300-200050	2.0"x1/2"	139.7
1505300-200075	2.0"x3/4"	127.0
1505300-200100	2.0"x1.0"	127.0
1505300-200150	2.0"x1.5"	76.2
1505300-250050	2.5"x1/2"	190.5
1505300-250075	2.5"x3/4"	177.8
1505300-250100	2.5"x1.0"	177.8
1505300-250150	2.5"x1.5"	127.0
1505300-250200	2.5"x2.0"	76.2
1505300-300075	3.0"x3/4"	228.6
1505300-300150	3.0"x1.5"	117.8
1505300-300200	3.0"x2.0"	127.0
1505300-300250	3.0"x2.5"	76.2
1505300-400100	4.0"x1.0"	333.4
1505300-400150	4.0"x1.5"	282.6
1505300-400200	4.0"x2.0"	231.8
1505300-400250	4.0"x2.5"	181.0
1505300-400300	4.0"x3.0"	130.2
1505300-600400	6.0"x4.0"	193.7



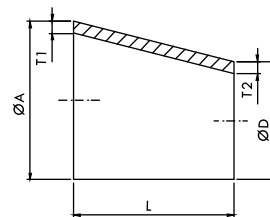
Concentric reducer, short

No.	Nom.Size	AxT1	DxT2	L
1505000-050025	1/2"x1/4"	12.7x1.65	6.35x0.89	25.4
1505000-050038	1/2"x3/8"	12.7x1.65	9.53x0.89	25.4
1505000-075038	3/4"x3/8"	19.1x1.65	9.53x0.89	25.4
1505000-075050	3/4"x1/2"	19.1x1.65	12.7x1.65	25.4
1505000-100038	1.0"x3/8"	25.4x1.65	9.53x0.89	38.1
1505000-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	38.1
1505000-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	25.4
1505000-150038	1.5"x3/8"	38.1x1.65	9.53x0.89	76.2
1505000-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	63.5
1505000-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	50.8
1505000-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	50.8
1505000-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	114.3
1505000-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	114.3
1505000-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	101.6
1505000-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	50.8
1505000-250050	2.5"x1/2"	63.5x1.65	12.7x1.65	165.1
1505000-250075	2.5"x3/4"	63.5x1.65	19.1x1.65	152.4
1505000-250100	2.5"x1.0"	63.5x1.65	25.4x1.65	152.4
1505000-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	101.6
1505000-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	50.8
1505000-300050	3.0"x1/2"	76.2x1.65	12.7x1.65	215.9
1505000-300075	3.0"x3/4"	76.2x1.65	19.1x1.65	203.2
1505000-300100	3.0"x1.0"	76.2x1.65	25.4x1.65	203.2
1505000-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	152.4
1505000-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	101.6
1505000-300250	3.0"x2.5"	76.2x1.65	63.2x1.65	50.8
1505000-400025	4.0"x1/2"	101.6x2.11	12.7x1.65	355.6
1505000-400075	4.0"x3/4"	101.6x2.11	19.1x1.65	330.2
1505000-400100	4.0"x1.0"	101.6x2.11	25.4x1.65	304.8
1505000-400150	4.0"x1.5"	101.6x2.11	38.1x1.65	254.0
1505000-400200	4.0"x2.0"	101.6x2.11	50.8x1.65	203.2
1505000-400250	4.0"x2.5"	101.6x2.11	63.5x1.65	152.4
1505000-400300	4.0"x3.0"	101.6x2.11	76.2x1.65	101.6
1505000-600300	6.0"x3.0"	152.4x2.77	76.2x1.65	139.7
1505000-600400	6.0"x4.0"	152.4x2.77	101.6x2.11	139.7



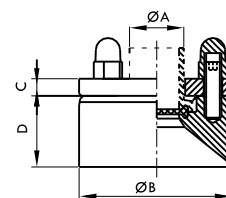
Eccentric reducer, short

No.	Nom.Size	AxT1	DxT2	L
1505100-050038	1/2"x3/8"	12.7x1.65	9.53x0.89	25.4
1505100-075050	3/4"x1/2"	19.1x1.65	12.7x1.65	25.4
1505100-100050	1.0"x1/2"	25.4x1.65	12.7x1.65	38.1
1505100-150038	1.0"x3/8"	25.4x1.65	9.53x0.89	38.1
1505100-100075	1.0"x3/4"	25.4x1.65	19.1x1.65	25.4
1505100-150050	1.5"x1/2"	38.1x1.65	12.7x1.65	63.5
1505100-150075	1.5"x3/4"	38.1x1.65	19.1x1.65	50.8
1505100-150100	1.5"x1.0"	38.1x1.65	25.4x1.65	50.8
1505100-200050	2.0"x1/2"	50.8x1.65	12.7x1.65	114.3
1505100-200075	2.0"x3/4"	50.8x1.65	19.1x1.65	114.3
1505100-200100	2.0"x1.0"	50.8x1.65	25.4x1.65	101.6
1505100-200150	2.0"x1.5"	50.8x1.65	38.1x1.65	50.8
1505100-250075	2.5"x3/4"	63.5x1.65	19.1x1.65	152.4
1505100-250100	2.5"x1.0"	63.5x1.65	25.4x1.65	152.4
1505100-250150	2.5"x1.5"	63.5x1.65	38.1x1.65	101.6
1505100-250200	2.5"x2.0"	63.5x1.65	50.8x1.65	50.8
1505100-300050	3.0"x1/2"	76.2x1.65	12.7x1.65	215.9
1505100-300075	3.0"x3/4"	76.2x1.65	19.1x1.65	203.2
1505100-300100	3.0"x1.0"	76.2x1.65	25.4x1.65	203.2
1505100-300150	3.0"x1.5"	76.2x1.65	38.1x1.65	152.4
1505100-300200	3.0"x2.0"	76.2x1.65	50.8x1.65	101.6
1505100-300250	3.0"x2.5"	76.2x1.65	63.5x1.65	50.8
1505100-400100	4.0"x1.0"	101.6x2.11	25.4x2.11	304.8
1505100-400150	4.0"x1.5"	101.6x2.11	38.1x2.11	254.0
1505100-400200	4.0"x2.0"	101.6x2.11	50.8x2.11	203.2
1505100-400250	4.0"x2.5"	101.6x2.11	63.5x2.11	152.4
1505100-400300	4.0"x3.0"	101.6x2.11	76.2x2.11	101.6
1505100-600300	6.0"x3.0"	152.4x2.77	76.2x2.11	139.7
1505100-600400	6.0"x4.0"	152.4x2.77	101.6x2.77	139.7

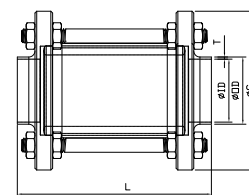


Sterile flange

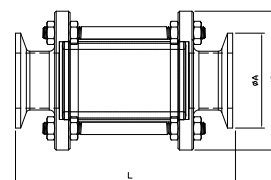
No.	A	B	C	D
5501K01-007500	3/4"	54.5	6.0	25.0
5501K01-010000	1.0"	84.5	6.0	25.0
5501K01-015000	1.5"	84.5	6.0	25.0
5501K01-020000	2.0"	99.5	6.0	25.0
5501K01-025000	2.5"	112.0	10.0	38.0
5501K01-030000	3.0"	131.0	10.0	38.0

**Sight glass**

No.	Nom.Size	OD/IDxT	L	C
1538000-000100	1"	25.4/22.1x1.65	115	72
1538000-000150	1.5"	38.1/34.8x1.65	115	88
1538000-000200	2"	50.8/47.5/1.65	115	98
1538000-000250	2.5"	63.5/60.2x1.65	130	110
1538000-000300	3"	76.2/72.9x1.65	130	128

**Sight glass**

No.	Nom.Size	L	C	A
1538100-000100	1"	140.4	72	50.4
1538100-000150	1.5"	140.4	88	50.4
1538100-000200	2"	140.4	98	63.9
1538100-000250	2.5"	155.4	110	77.5
1538100-000300	3"	155.4	128	90.9



Sanitary Filtration System

Application

King Lai duplex filter is suitable for the filtration of different type of very small impurities present in fresh milk, sugar, beverages, glue, CIP cleaning fluid and other liquids. The two filters can run alternatively or continually so that they can be replaced or cleaned online.

Working Principle

Install a sanitary duplex filter in the liquid transport pipeline and transmit the fluid medium into the filter through the cartridges, and then fully contact strainer in the big pipe of the filter so as to completely particle in fluid medium. It is recommended to use the bottom connection as inlet and the top connection or side connection as outlet. This means that the particles strained off will gather inside the filter element which facilitates cleaning, especially the duplex filter is horizontally installed.

Features

- All parts are made of stainless steel (AISI 304/316L).
- 30 to 300 mesh filter cartridges are available upon request. The filter cartridges can be mounted and dismounted without use of tools.
- The two filters can run alternatively or continually so that they can be replaced or cleaned online.

Technical Data

Items	Details
Working pressure	0-10Bar, 0-145psi
Gasket	EPDM
Operating temperature	-10° C-120° C, 14° F to 248° F (EPDM) +140° C, 248° F (SIP, ≤ 30 minute)
Cartridge material	1.4301(304) / 1.4404(316L) EN10088
Filter screen	30 ~ 300 mesh size (optional)
Body Connection	Clamp
Connections	Welded, Clamp, thread, flange
Surface finish	3A, DIN, ISO, GB
Certifications	Inner surface: Electrolytic polishing Ra=0.4μm Outer surface: Mirror polishing Ra=0.8μm3A



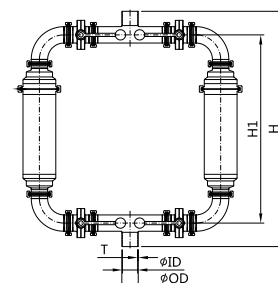
Options

- Inlet and outlet pressure gauge are available;
- Butterfly valve available with standard handle, pull rod or pneumatic actuator.

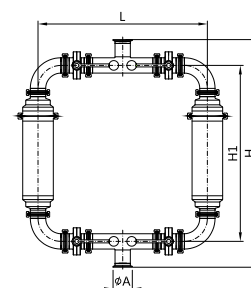


Duplex Filtration Systems (Straight thought, weld)

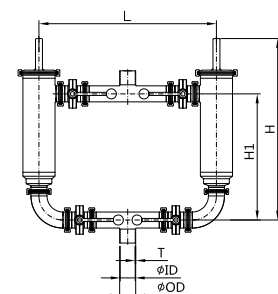
No.	Size	OD/IDxT	L	H	H1
1539AXX-100XXX	1"	25.4/22.1x1.65	486	615.6	507.6
1539AXX-150XXX	1.5"	38.1/34.8x1.65	524	672.5	545.8
1539AXX-200XXX	2"	50.8/47.5x1.65	562	729.8	583.8
1539AXX-250XXX	2.5"	63.5/60.2x1.65	620	780.8	622
1539AXX-300XXX	3"	76.2/72.9x1.65	658	831.4	660

**Duplex Filtration Systems (Straight thought, clamp)**

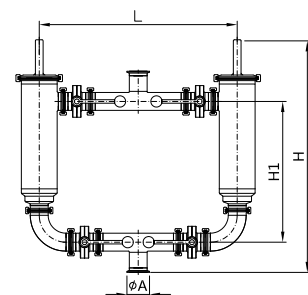
No.	Size	A	L	H	H1
1539BXX-100XXX	1"(25)	50.4	486	641	507.6
1539BXX-150XXX	1.5"(38)	50.4	524	691.9	545.8
1539BXX-200XXX	2"(51)	63.9	562	755.2	583.8
1539BXX-250XXX	2.5"(63)	77.5	620	806.2	622
1539BXX-300XXX	3"(76)	90.9	658	856.8	660

**Duplex Filtration Systems (Angular type, weld)**

No.	Size	OD/IDxT	L	H	H1
1539CXX-100XXX	1"	25.4/22.1x1.65	486	590.55	361.45
1539CXX-150XXX	1.5"	38.1/34.8x1.65	524	616	380.55
1539CXX-200XXX	2"	50.8/47.5x1.65	562	647.65	399.55
1539CXX-250XXX	2.5"	63.5/60.2x1.65	620	672.95	408.65
1539CXX-300XXX	3"	76.2/72.9x1.65	658	698.25	427.65

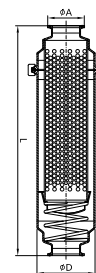
**Duplex Filtration Systems (Angular type, clamp)**

No.	Size	A	L	H	H1
1539DXX-100XXX	1"(25)	50.4	486	603.25	361.45
1539DXX-150XXX	1.5"(38)	50.4	524	628.7	380.55
1539DXX-200XXX	2"(51)	63.9	562	660.35	399.55
1539DXX-250XXX	2.5"(63)	77.5	620	685.65	408.65
1539DXX-300XXX	3"(76)	90.9	658	710.95	427.65



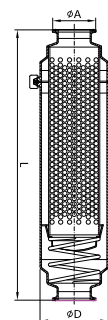
straight through filter

No.	Size	A	D	L
153912X-100XXX	1"(25)	50.4	101.6	402
153912X-150XXX	1.5"(38)	50.4	101.6	402
153912X-200XXX	2"(51)	63.9	101.6	402
153912X-250XXX	2.5"(63)	77.5	114.3	402
153912X-300XXX	3"(76)	90.9	114.3	402



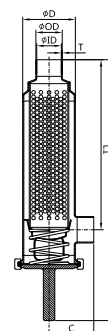
straight through filter (lengthen)

No.	Size	A	D	L
153913X-100XXX	1"(25)	50.4	101.6	898.2
153913X-150XXX	1.5"(38)	50.4	101.6	898.2
153913X-200XXX	2"(51)	63.9	101.6	898.2
153913X-250XXX	2.5"(63)	77.5	114.3	898.2
153913X-300XXX	3"(76)	90.9	114.3	898.2



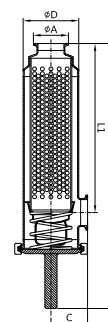
Angular filter (weld)

No.	Size	OD/IDxT	D	L	L1	C
153922X-100XXX	1"	25.4/22.1x1.65	101.6	503	327.95	86.2
153922X-150XXX	1.5"	38.1/34.8x1.65	101.6	503	327.95	86.2
153922X-200XXX	2"	50.8/47.5x1.65	101.6	503	327.95	86.2
153922X-250XXX	2.5"	63.5/60.2x1.65	114.3	503	317.95	92.6
153922X-300XXX	3"	76.2/72.9x1.65	114.3	503	317.95	92.6



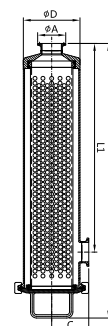
Angular filter (clamp)

No.	Size	A	D	L	L1	C
153932X-100XXX	1"(25)	50.4	101.6	483.75	308.65	66.9
153932X-150XXX	1.5"(38)	50.4	101.6	483.75	308.65	66.9
153932X-200XXX	2"(51)	63.9	101.6	483.75	308.65	66.9
153932X-250XXX	2.5"(63)	77.5	114.3	483.75	298.65	73.3
153932X-300XXX	3"(76)	90.9	114.3	483.75	298.65	73.3



Angular filter (clamp)

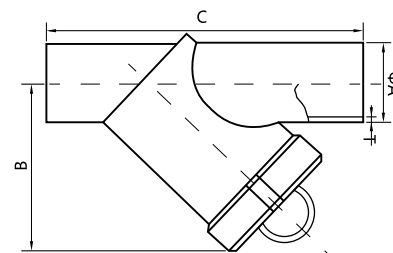
No.	Size	A	D	L	L1	C
153934X-050XXX	1/2"(12)	25	101.6	494.25	376.12	66.5
153934X-100XXX	1"(25)	50.4	101.6	492.47	374.34	66.5
153934X-150XXX	1.5"(38)	50.4	101.6	492.47	374.34	66.5
153934X-200XXX	2"(51)	63.9	101.6	492.25	363.55	66.5
153934X-250XXX	2.5"(63)	77.5	114.3	494.25	363.55	73.85
153934X-300XXX	3"(76)	90.9	114.3	494.25	353.55	73.85
153934X-400XXX	4"(101)	118.9	114.3	497.35	345.65	76.95



Y-Type filter (Weld)

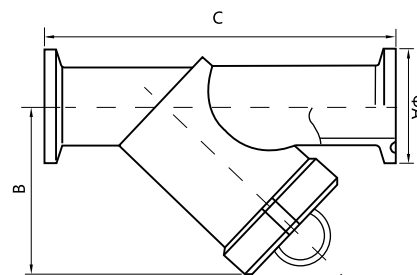
Material: 304/Seal: Silicone/lining: 80mesh

NO.	Size	A	B	C	T
1539710-000100	1.0"	25.4	95.0	125.0	1.65
1539710-000150	1.5"	38.1	110.0	165.0	1.65
1539710-000200	2.0"	50.8	140.0	195.0	1.65
1539710-000250	2.5"	63.5	185.0	230.0	1.65
1539710-000300	3.0"	76.1	220.0	280.0	1.65
1539710-000400	4.0"	101.6	248.0	340.0	2.11

**Y-Type filter (Clamp)**

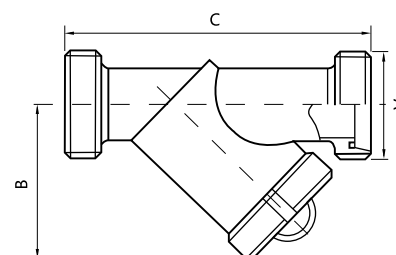
Material: 304/Seal: Silicone/Lining: 80 mesh

NO.	Size	A	B	C
1539700-000100	1.0"	50.4	95.0	125.0
1539700-000150	1.5"	50.4	110.0	165.0
1539700-000200	2.0"	63.9	140.0	195.0
1539700-000250	2.5"	77.5	185.0	230.0
1539700-000300	3.0"	91.0	220.0	280.0
1539700-000400	4.0"	119.0	248.0	340.0

**Y-Type filter (Thread)**

Material: 304/Seal: Silicone/Lining: 80N

NO.	Size	A	B	C
1539720-000025	1.0"	RD52X1/6	95.0	125.0
1539720-000038	1.5"	RD65X1/6	110.0	165.0
1539720-000051	2.0"	RD78X1/6	140.0	195.0
1539720-000064	2.5"	RD95X1/6	185.0	230.0
1539720-000077	3.0"	RD110X1/6	220.0	280.0
1539700-000101	4.0"	RD130X1/6	248.0	340.0



Hygienic Magnetic filter

Application

Pipeline magnetic filter is mainly used to remove magnetic impurities in fluid, with wide applications in pharmaceutical (online filtration), dyes, food (syrup, fruit juice, jam and edible oil), beverages, dairy products, chemical (industrial syrup, Pulp, brine) and other industry. This product has the advantages such as strong magnetic properties, being perfect for removing impurities and easy to clean, flexible installation methods, simple demolition, etc. It can be used to remove tiny magnetic impurity particles of $0.5\mu\text{m}$. The magnetic rod is made of high magnetic NdFeB permanent magnet material. The magnetic force is 5-20 times higher than that of the conventional magnetic material (ferrite or Al-Ni-Co magnet). This magnetic filter can be used continuously for more than ten years with high surface finish quality, the products can meet sanitary requirements.

Working Principle

Install a magnetic filter in the liquid transport pipeline and transmit the fluid medium into the filter through the magnetic filter via a number of flow ports, and then fully contact magnetic rod in the big pipe of the filter with magnetic force of the magnetic field so as to completely absorb the magnetic metal impurities in fluid medium. Multi-flow port can change the direction of the original fluid and the large tube body can make the media longer contacting the rod. This design is more effective than the contact of a general filter in the process of removing impurities.

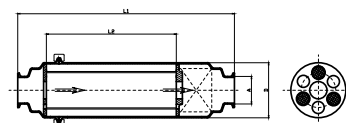
Features

- All parts are made of stainless steel (AISI 316L).
- The magnetic force can reach 12000Gs.
- The filter cartridges can be mounted and dismounted without use of tools.
- The magnetic rods can be magnetized and reuse.



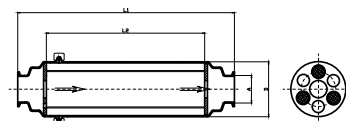
Standard magnetic filter

Size	A(mm)	D(mm)	L1(mm)	L2(mm)	Magnets	Working temperature	Magnetic force	Working pressure
DN25	25.4	101.6	402	240	3	0~120°C 0~150°C 0~180°C	12,000 ~ 14,000 Gs	2.5Mpa
DN40	38.1	101.6	402	240	3			
DN50	50.8	101.6	402	240	3			
DN65	63.5	114.3	402	240	3			
DN80	76.1	114.3	402	240	3			
DN100	101.6	127.0	402	240	4			



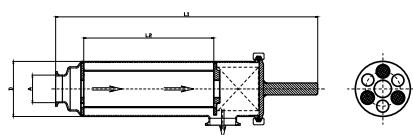
Lengthened magnetic filter

Size	A(mm)	D(mm)	L1(mm)	L2(mm)	Magnets	Working temperature	Magnetic force	Working pressure
DN25	25.4	101.6	897	790	3	0~120°C 0~150°C 0~180°C	12,000 ~ 14,000 Gs	2.5Mpa
DN40	38.1	101.6	897	790	3			
DN50	50.8	101.6	897	790	3			
DN65	63.5	114.3	897	790	3			
DN80	76.1	114.3	897	790	3			
DN100	101.6	127.0	897	790	4			



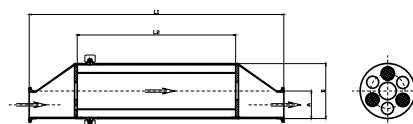
Angel magnetic filter

Size	A(mm)	D(mm)	L1(mm)	L2(mm)	Magnets	Working temperature	Magnetic force	Working pressure
DN25	25.4	101.6	483	240	3	0~120°C 0~150°C 0~180°C	12,000 ~ 14,000 Gs	2.5Mpa
DN40	38.1	101.6	483	240	3			
DN50	50.8	101.6	483	240	3			
DN65	63.5	114.3	483	240	3			
DN80	76.1	114.3	483	240	3			
DN100	101.6	127.0	483	240	4			



High-purity magnetic filter

Size	A(mm)	D(mm)	L1(mm)	L2(mm)	Magnets	Working temperature	Magnetic force	Working pressure
DN25	25.4	101.6	575	240	3	0~120°C 0~150°C 0~180°C	12,000 ~ 14,000 Gs	2.5Mpa
DN40	38.1	101.6	509	240	3			
DN50	50.8	101.6	459	240	3			
DN65	63.5	114.3	411	240	3			
DN80	76.1	114.3	419	240	3			
DN100	101.6	127.0	465	240	4			



KBV Sanitary ball valves

Application

KBV is a new type hygienic ball valve developed by King Lai and is designed for use as a product valve for the food, beverage, pharmaceutical and chemical industries. With full diameter design, without any fluid barrier, KBV becomes the best choice for viscous fluid or liquids with particle.

Working Principle

KBV ball valve consists of a ball with a circular channel as an opening and closing part. It is open when the ball's hole is in line with the flow and closed when it is pivoted 90-degrees. It is applicable to fully linear design of the valve to reduce the turbulence and pressure drop of the pipeline. An encapsulated seat option is available for critical process applications requiring maximum reduction of potential for product entrapment.

Standard design

The O-ring design and disc spring at mandrel are for better seal and easy operation. High platform design without stent and connecting shaft can save the installation time and cost of pneumatic actuator. The valve body is made of ASTM 316L stainless steel, valve seat is made of PTFE material, in line with USP6 and FDA certification. The seat is divided into standard and encapsulated type. The valve can be operated by a stainless steel handle or an pneumatic actuator and both of them can be equipped feedback elements. Pneumatic ball valve is divided into three types: normally closed (NC), normally open (NO), double action (DA).

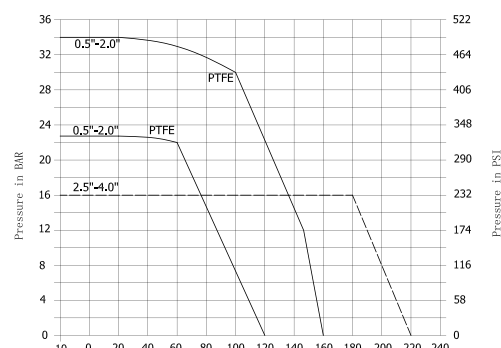


Technical Data

Items	Details
Operating temperature	PTFE: -20~100° C PTFE(TFM): -20~150° C
Ambient temperature	-20~80° C, -4~176° F
Working pressure	Refer to Pressure vs. Temperature diagram
Automatic control unit	Feedback device, locator, cylindrical position sensor
Seat material	PTFE, PTFE(TFM)
Seat form	Standard, Encapsulated (TFM/PEEK is standard only)
Material	1.4404, 1.4409 (CF3M, 316L) EN10088
Connections	Butt-Weld, Clamp 3A, DIN, ISO, GB
Size	DN15~DN100
Surface treatment	Outer surface electro-brightening Inner surface $Ra \leq 0.5\mu m$ (SF1), $Ra \leq 0.375\mu m$ (SF4)
Certifications	3A, CE

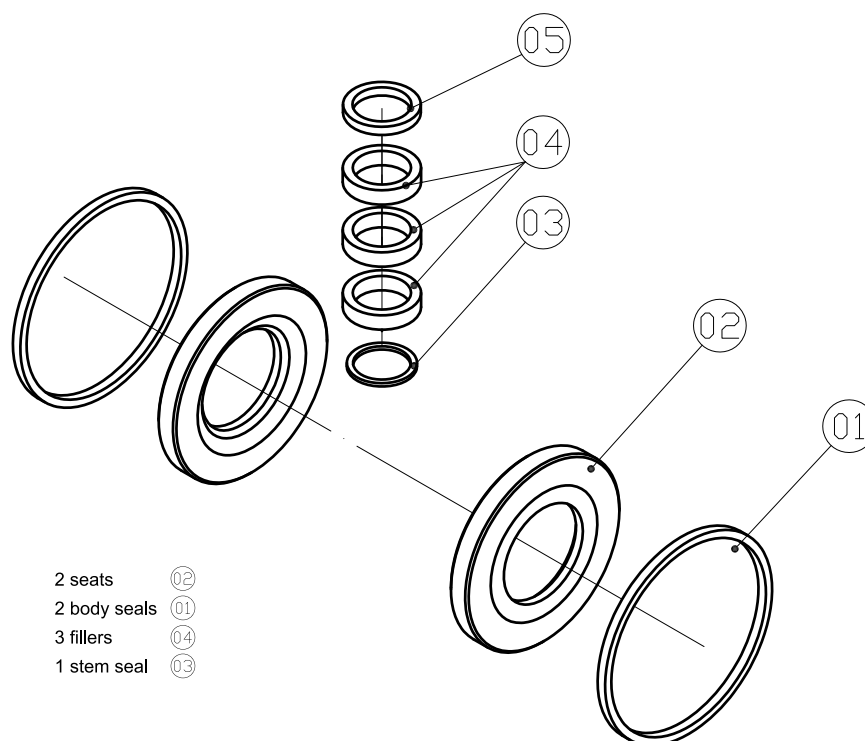
Pressure vs. Temperature

Pressure vs. Temperature



SIP (stem in place) up to 150°C is possible but only when using PTFE, and without operating it. Any seal material must be 95°C before operating. When welding both flanges, make sure they are axially movable 30-40mm (depending on the specifications) for valve maintenance (see instructions).





Valve Type	01	02	03	04	05
PTFE(standard / encapsulated)	PTFE	PTFE	PTFE	PTFE	Graphite
PTFE(TFM)(Standard only)	PTFE	TFM	PTFE	PTFE	Graphite



Standard



Encapsulated



White means PTFE/PTFE(TFM)

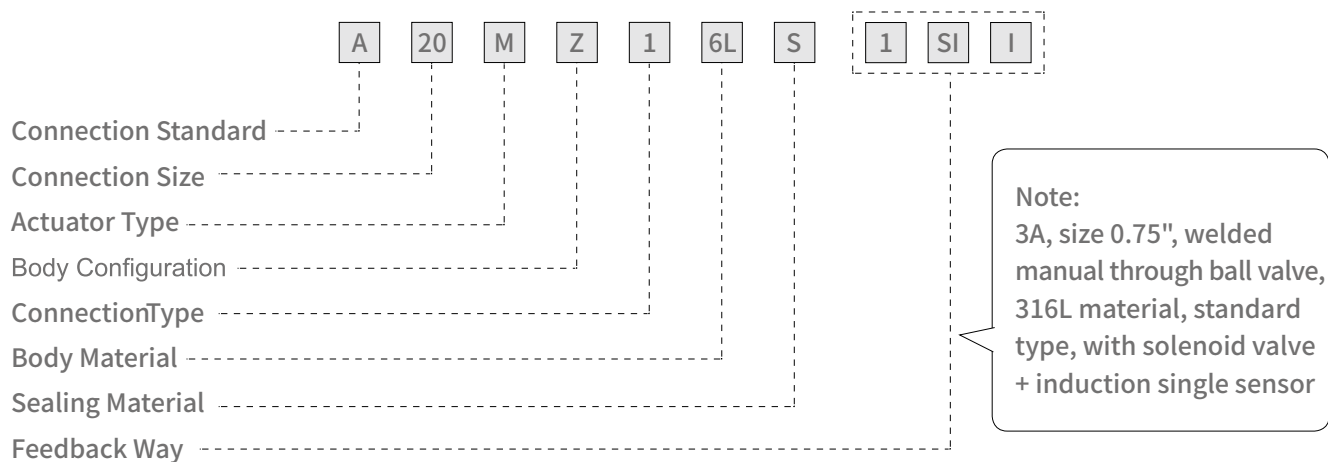
Minimum torque range of the actuator

Pipe	Torque(kgf.m)
15.0	0.9
20.0	1.1
25.0	1.4
38.0	2.7
51.0	3.1
63.5	5.0
76.1	7.3
101.6	10.7

Optional Configurations

Connection standard	DIN	Connection ends	Welded
	ISO		Clamp
	3A		Welded / Clamp
	GB		
Size of connector	0.5"	Material of valve body	316L
	0.75"		304L
	1.0"	valve	Encapsulated
	1.5"		Standard type
	2.0"		
	2.5"		
	3.0"		
	4.0"		
Actuator	Manual	Feedback form (Only applies to pneumatic)	
	Pneumatic normally open		
	Pneumatic normally closed	Electromagnetic valve	Have
	Double action		No
Body form	straightway	Sensor	No
	T-Type		Single induction
			Double induction
		Sensor form	Induction type
			Machine type

Selection code example

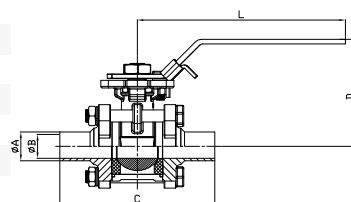


Note: If the valve with feedback signal is used at a hazardous area, please specify the explosion-proof grade of the electronic component when ordering!

Manual ball valve (welded -end)

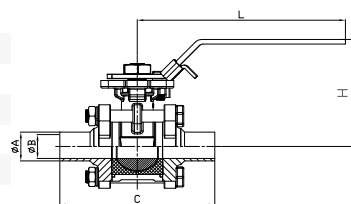
KBV-MW-S (single-action and double-action, optional); 1507021-XXXXXX (standard type)

No.	SIZE	A	B	C	H	L
1507021-000050	1/2"	12.7	9.4	88.6	65.5	138.2
1507021-000075	3/4"	19.05	15.8	102.7	69.8	138.2
1507021-000100	1.0"	25.4	22.1	115.2	78.7	138.2
1507021-000150	1.5"	38.1	34.8	139.9	96.6	190.5
1507021-000200	2.0"	50.8	47.5	158.1	106.7	190.5
1507021-000250	2.5"	63.5	60.2	198.0	142	293.3
1507021-000300	3.0"	76.2	72.9	227.5	148.5	293.3
1507021-000400	4.0"	101.6	97.4	241.0	179.4	293.3

**Manual ball valve (welded -end)**

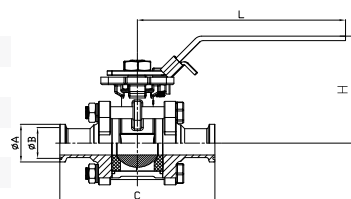
KBV-MW-E (single-action and double-action, optional); 1507020-XXXXXX (Encapsulated)

No.	SIZE	A	B	C	H	L
1507020-000050	1/2"	12.7	9.4	88.6	65.5	138.2
1507020-000075	3/4"	19.05	15.8	102.7	69.8	138.2
1507020-000100	1.0"	25.4	22.1	115.2	78.7	138.2
1507020-000150	1.5"	38.1	34.8	139.9	96.6	190.5
1507020-000200	2.0"	50.8	47.5	158.1	106.7	190.5
1507020-000250	2.5"	63.5	60.2	198.0	142	293.3
1507020-000300	3.0"	76.2	72.9	227.5	148.5	293.3
1507020-000400	4.0"	101.6	97.4	241.0	179.4	293.3

**Manual ball valve (Clamp-end)**

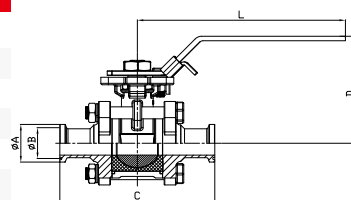
KBV-MW-S (M dynamic and double action, optional); 1507121-XXXXXX (standard type)

No.	SIZE	A	B	C	H	L
1507121-000050	1/2"	12.7	9.4	88.6	65.5	138.2
1507121-000075	3/4"	19.05	15.8	102.7	69.8	138.2
1507121-000100	1.0"	25.4	22.1	115.2	78.7	138.2
1507121-000150	1.5"	38.1	34.8	139.9	96.6	190.5
1507121-000200	2.0"	50.8	47.5	158.1	106.7	190.5
1507121-000250	2.5"	63.5	60.2	198.0	142	293.3
1507121-000300	3.0"	76.2	72.9	227.5	148.5	293.3
1507121-000400	4.0"	101.6	97.4	241.0	179.4	293.3

**Manual ball valve (Clamp-end)**

KBV-MW-E (single-action and double-action, optional); 1507120-XXXXXX (Encapsulated)

No.	SIZE	A	B	C	H	L
1507120-000050	1/2"	12.7	9.4	88.6	65.5	138.2
1507120-000075	3/4"	19.05	15.8	102.7	69.8	138.2
1507120-000100	1.0"	25.4	22.1	115.2	78.7	138.2
1507120-000150	1.5"	38.1	34.8	139.9	96.6	190.5
1507120-000200	2.0"	50.8	47.5	158.1	106.7	190.5
1507120-000250	2.5"	63.5	60.2	198.0	142	293.3
1507120-000300	3.0"	76.2	72.9	227.5	148.5	293.3
1507120-000400	4.0"	101.6	97.4	241.0	179.4	293.3

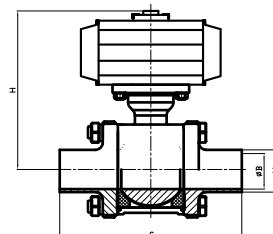


Note: Please replace XXXXXX with the combination code in the Code column and not change the first 6 digits in the order

Pneumatic ball valve (welded-end)

KBV-PW-S (M-action and double-action, optional); 1507321-XXXXXX (standard type)

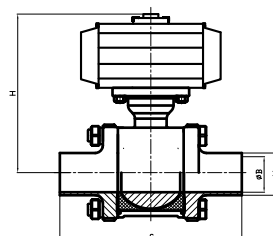
No.	SIZE	A	B	C	H
1507321-000050	1/2"	12.7	9.4	88.6	131.5
1507321-000075	3/4"	19.1	15.8	102.7	135.8
1507321-000100	1.0"	25.4	22.1	115.2	144.7
1507321-000150	1.5"	38.1	34.8	139.9	173
1507321-000200	2.0"	50.8	47.5	158.1	195.2
1507321-000250	2.5"	63.5	60.3	198.0	223.7
1507321-000300	3.0"	76.1	72.9	227.5	238
1507321-000400	4.0"	101.6	97.6	241.0	285.4



Pneumatic ball valve (welded-end)

KBV-PW-E (single-action and double-action, optional); 1507320-XXXXXX (Encapsulated)

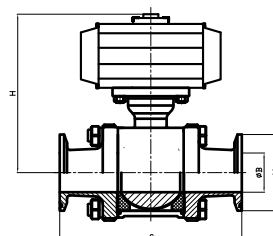
No.	SIZE	A	B	C	H
1507320-000050	1/2"	12.7	9.4	88.6	131.5
1507320-000075	3/4"	19.1	15.8	102.7	135.8
1507320-000100	1.0"	25.4	22.1	115.2	144.7
1507320-000150	1.5"	38.1	34.8	139.9	173
1507320-000200	2.0"	50.8	47.5	158.1	195.2
1507320-000250	2.5"	63.5	60.3	198.0	223.7
1507320-000300	3.0"	76.1	72.9	227.5	238
1507320-000400	4.0"	101.6	97.6	241.0	285.4



Pneumatic ball valve (Clamp-end)

KBV-PW-S (single action and double action, optional); 1507421-XXXXXX (standard type)

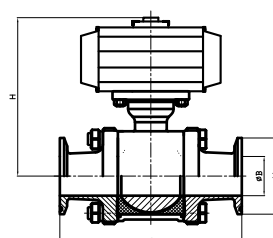
No.	SIZE	A	B	C	H
1507421-000050	1/2"	12.7	9.4	88.6	131.5
1507421-000075	3/4"	19.1	15.8	102.7	135.8
1507421-000100	1.0"	25.4	22.1	115.2	144.7
1507421-000150	1.5"	38.1	34.8	139.9	173
1507421-000200	2.0"	50.8	47.5	158.1	195.2
1507421-000250	2.5"	63.5	60.3	198.0	223.7
1507421-000300	3.0"	76.1	72.9	227.5	238
1507421-000400	4.0"	101.6	97.6	241.0	285.4



Pneumatic ball valve (Clamp-end)

KBV-PW-E (single-action and double-action, optional); 1507420-XXXXXX (Encapsulated)

No.	SIZE	A	B	C	H
1507420-000050	1/2"	12.7	9.4	88.6	131.5
1507420-000075	3/4"	19.1	15.8	102.7	135.8
1507420-000100	1.0"	25.4	22.1	115.2	144.7
1507420-000150	1.5"	38.1	34.8	139.9	173
1507420-000200	2.0"	50.8	47.5	158.1	195.2
1507420-000250	2.5"	63.5	60.3	198.0	223.7
1507420-000300	3.0"	76.1	72.9	227.5	238
1507420-000400	4.0"	101.6	97.6	241.0	285.4



Note: Please replace XXXXXX with the combination code in the Code column and not change the first 6 digits in the order



KBFV Sanitary butterfly valves

Application

KBFV Butterfly Valve KBFV is a hygienic on/off valve that can be used in automated or manual systems. Due to the large opening areas, the resistance to fluid is small, and the treatment for the products with medium and low viscosity is relatively gentle, making it the main solution of modern processing technology. The valve is used in food, dairy and brewing systems as well as biopharmaceutical applications.

Working Principle

KBFV is a kind of valve with a metal disc mounted on a rod. In operation, the valve is open or closed when the disc rotate with the rod. The disc is installed in the vertical direction of the pipeline. In the butterfly valve body, the circular disc is rotating around the axis with the angle between 0 ~ 90°. When rotating at 90°, the valve is in fully open state. When the spool contacts seal ring of the butterfly valve, the actuator's torque will increase. KBFV is available for either pneumatic or manual control.

Product Series

There are four types of the driving method: pneumatic, manual lever, manual grip, manual fine-tuning. Pneumatic butterfly valve has three standard states: normally open (NO), normally closed (NC), gas/gas (A/A).



Technical Data

Items	Details
Operating temperature	EPDM: -40~130°C VITON: -20~200°C SILICON: -60~230°C
Ambient temperature	-10~95°C
Pneumatic pressure	6±1bar
Body material	1.4404(316L), 1.4307(304L) EN10088, forging
Bushing material	PVDF
Other parts	1.4301(304) EN10088
Connections	Butt-Weld, Clamp, flange, thread 3A, DIN, ISO, GB
Size	DN25~DN200
Surface treatment	Outer surface Ra≤2.4μm Inner surface Ra≤0.8μm
Certifications	EHEDG, CE, TS

Minimum torque range of the actuator

Standard size	Torque (Kgf.m)
1.0"	0.3
1.5"	0.4
2.0"	0.5
2.5"	1.5
3.0"	2
4.0"	2.5
5.0"	3
6.0"	3.5
8.0"	4.5



EHEDG has authorized the use of the EHEDG certification mark for the KINGLAI butterfly valves that conform to the EHEDG hygienic design standard, which includes testing the cleanliness of the equipment according to the method described in the EHEDG guidelines.

Features

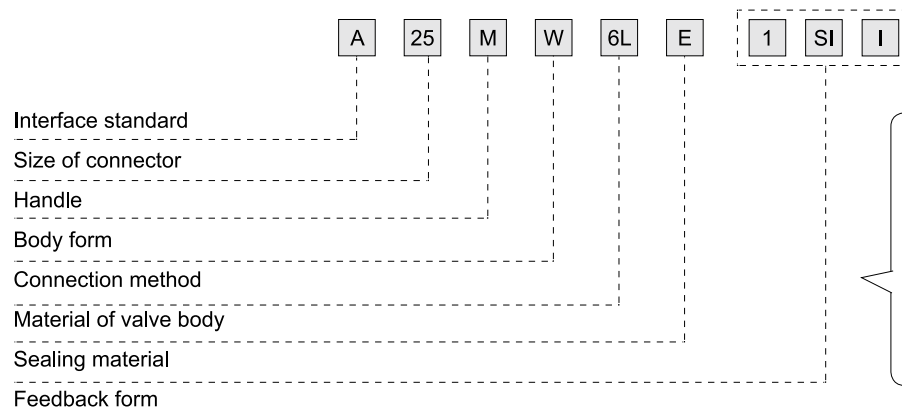
- Long- life, maintenance-free pneumatic actuator;
- Valve body forged with 316L or 304L stainless steel;
- Special sealing ring design, without residual fluid, with an European EHEDG Hygienic design certification;
- Product stability and safety are certified by European CE and Chinese TS;
- More than 100,000 times of safety test;
- Visual signs can clearly show the current position of the valve;
- The height of the drive support of the manual butterfly valve can be customized according to customer requirements;
- Install device feedback signal according to customer's requirements;



Optional Configurations

Interface standard	DIN	D	Connection method	Weld	W
	ISO	I		Clamp	C
	3A	A		Male	T
	GB	G		Weld/Male	WT
Size of connector	1.0"	25	Material of valve body	Flange	F
	1.5"	40		316L	6L
	2.0"	50		304L	4L
	2.5"	65	Sealing material	EPDM	E
	3.0"	80		Viton	V
	4.0"	100		Silicone	S
Handle	manual handle	L	Feedback form (Only applies to pneumatic)		
	Pull handle	M			
	multi-position handle	R	Electromagnetic valve	Have	1
	pneumatic normally open	NO		No	0
	Pneumatic normally close	NC	Sensor	No	N
	double acting	AA		Single induction	SI
Body form	316L	6L	Sensor form	Double induction	DI
	304L	4L		Induction type	I
				Machine type	M

Selection code example



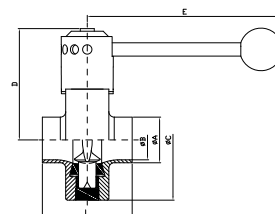
Note:

standard, 1.0" welded manual fine-tuning butterfly valve, 316L material, EPDM gasket, with solenoid valve + mechanical single sensor

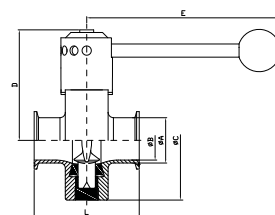
Note: If the valve with feedback signal is used at a hazardous area, please specify the explosion-proof grade of the electronic component when ordering!

**Butterfly valve with welding ends and pull handle**

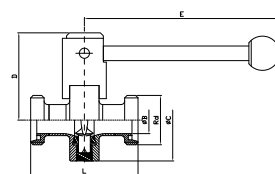
No.	SIZE	L±0.5	A	B	C	D	E
1501001-000100	1.0"	50	25.4	22.1	67	72	134
1501001-000150	1.5"	50	38.1	34.8	77	78	134
1501001-000200	2.0"	50	50.8	47.5	90	83	134
1501001-000250	2.5"	50	63.5	60.2	105	92	134
1501001-000300	3.0"	50	76.2	72.9	115	97	134
1501001-000400	4.0"	60	101.6	97.6	140	109	134
1501001-000600	6.0"	78	152.4	146.8	218	172	319
1501001-000800	8.0"	100	203.2	197.6	276	201	319

**Butterfly valve with Clamp ends and pull handle**

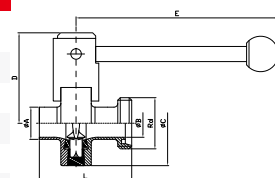
No.	SIZE	L±0.5	A	B	C	D	E
1501101-000100	1.0"	75.4	50.4	22.1	67	72	134
1501101-000150	1.5"	75.4	50.4	34.8	77	78	134
1501101-000200	2.0"	75.4	63.9	47.5	90	83	134
1501101-000250	2.5"	75.4	77.5	60.2	105	92	134
1501101-000300	3.0"	75.4	90.9	72.9	115	97	134
1501101-000400	4.0"	91.6	118.9	97.6	140	109	134
1501001-000600	6.0"	116.1	152.4	146.8	218	172	319
1501001-000800	8.0"	144.4	203.2	197.6	276	201	319

**Butterfly valve with Male ends and pull handle**

No.	SIZE	L±0.5	RD	B	C	D	E
1501201-000100	1.0"	80	RD40X1/6	22.1	67	72	134
1501201-000150	1.5"	90	RD60X1/6	34.8	77	78	134
1501201-000200	2.0"	90	RD70X1/6	47.5	90	83	134
1501201-000250	2.5"	98	RD85X1/6	60.2	105	92	134
1501201-000300	3.0"	98	RD98X1/6	72.9	115	97	134
1501201-000400	4.0"	110	RD125X1/6	97.6	140	109	134

**Butterfly valve with welding/male ends and pull handle**

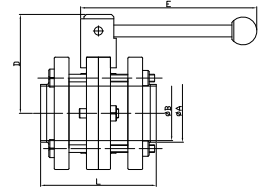
No.	SIZE	L±0.5	RD	A	B	C	D	E
1501201-000100	1.0"	65	RD40X1/6	50.4	22.1	67	72	134
1501201-000150	1.5"	70	RD60X1/6	50.4	34.8	77	78	134
1501201-000200	2.0"	70	RD70X1/6	63.9	47.5	90	83	134
1501201-000250	2.5"	74	RD85X1/6	77.5	60.2	105	92	134
1501201-000300	3.0"	74	RD98X1/6	90.9	72.9	115	97	134
1501201-000400	4.0"	95	RD125X1/6	118.9	97.6	140	109	134





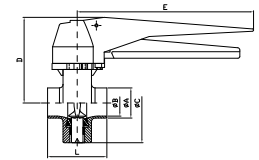
Three-piece butterfly valve with pull handle

No.	SIZE	L±0.5	A	B	D	E
1501011-000100	1.0"	100	25.4	22.1	77	134
1501011-000150	1.5"	100	38.1	34.8	82	134
1501011-000200	2.0"	100	50.8	47.5	88	134
1501011-000250	2.5"	100	63.5	60.2	98	134
1501011-000300	3.0"	100	76.2	72.9	108	134
1501011-000400	4.0"	100	101.6	97.6	115	134



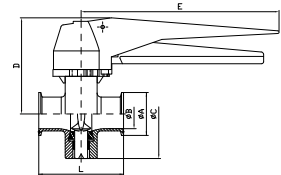
Butterfly valve with welding ends and manual handle

No.	SIZE	L±0.5	A	B	C	D	E
1501000-000100	1.0"	50	25.4	22.1	67	73	150
1501000-000150	1.5"	50	38.1	34.8	77	79	150
1501000-000200	2.0"	50	50.8	47.5	90	85	150
1501000-000250	2.5"	50	63.5	60.2	105	93	150
1501000-000300	3.0"	50	76.2	72.9	115	98	150
1501000-000400	4.0"	60	101.6	97.6	140	110	150
1501000-000600	6.0"	78	152.4	146.8	218	201	351
1501000-000800	8.0"	100	203.2	197.6	276	230	351



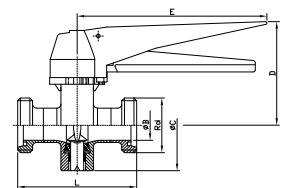
Butterfly valve with clamp ends and manual handle

No.	SIZE	L±0.5	A	B	C	D	E
1501100-000100	1.0"	75.4	50.4	22.1	67	73	150
1501100-000150	1.5"	75.4	50.4	34.8	77	79	150
1501100-000200	2.0"	75.4	63.9	47.5	90	85	150
1501100-000250	2.5"	75.4	77.5	60.2	105	93	150
1501100-000300	3.0"	75.4	90.9	72.9	115	98	150
1501100-000400	4.0"	91.6	118.9	97.6	140	110	150
1501100-000600	6.0"	116.1	152.4	146.8	218	201	351
1501100-000800	8.0"	144.4	203.2	197.6	276	230	351



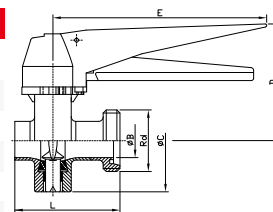
Butterfly valve with male ends and manual handle

No.	SIZE	L±0.5	RD	B	C	D	E
1501200-000100	1.0"	80	RD40X1/6	22.1	67	73	150
1501200-000150	1.5"	90	RD60X1/6	34.8	77	79	150
1501200-000200	2.0"	90	RD70X1/6	47.5	90	85	150
1501200-000250	2.5"	98	RD85X1/6	60.2	105	93	150
1501200-000300	3.0"	98	RD98X1/6	72.9	115	98	150
1501200-000400	4.0"	110	RD125X1/6	97.6	140	110	150

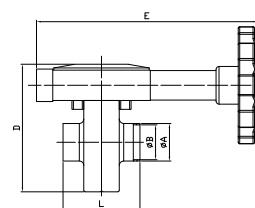


Butterfly valve with welding/male ends and manual handle

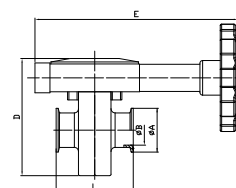
No.	SIZE	L±0.5	RD	A	B	C	D	E
1501501-000100	25	65	RD40X1/6	50.4	22.1	67	73	150
1501501-000150	38	70	RD60X1/6	50.4	34.8	77	79	150
1501501-000200	51	70	RD70X1/6	63.9	47.5	90	85	150
1501501-000250	63	74	RD85X1/6	77.5	60.2	105	93	150
1501501-000300	76	74	RD98X1/6	90.9	72.9	115	98	150
1501501-000400	101.6	95	RD125X1/6	118.9	97.6	140	110	150

**Butterfly valve with welding ends and multiposition handle**

No.	SIZE	L±0.5	A	B	D±4	E
1501055-000100	1.0"	50	25.4	22.1	86.87	149.5
1501055-000150	1.5"	50	38.1	34.8	96.87	149.5
1501055-000200	2.0"	50	50.8	47.5	109.5	149.5
1501055-000250	2.5"	50	63.5	60.2	124.5	149.5
1501055-000300	3.0"	50	76.2	72.9	134.5	149.5
1501055-000400	4.0"	60	101.6	97.6	159.5	149.5

**Butterfly valve with clamp ends and multiposition handle**

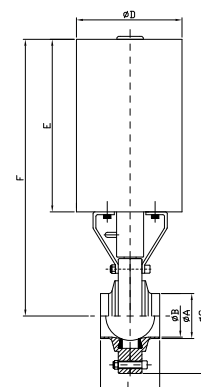
No.	SIZE	L±0.5	A	B	D±4	E
1501155-000100	1.0"	75.4	50.4	22.1	86.87	149.5
1501155-000150	1.5"	75.4	50.4	34.8	96.87	149.5
1501155-000200	2.0"	75.4	63.9	47.5	109.5	149.5
1501155-000250	2.5"	75.4	77.5	60.2	124.5	149.5
1501155-000300	3.0"	75.4	90.9	72.9	134.5	149.5
1501155-000400	4.0"	91.6	118.9	97.6	159.5	149.5





Pneumatic butterfly valve with welding ends (Single action)

No.	SIZE	L±0.5	A	B	C	D	E
1501300-000100	1.0"	50	25.4	22.1	67	83.5	133.5
1501300-000150	1.5"	50	38.1	34.8	77	83.5	133.5
1501300-000200	2.0"	50	50.8	47.5	90	83.5	133.5
1501300-000250	2.5"	50	63.5	60.2	105	83.5	133.5
1501300-000300	3.0"	50	76.2	72.9	115	83.5	133.5
1501300-000400	4.0"	60	101.6	97.6	140	101.6	158.5



Pneumatic butterfly valve with welding ends (Double action)

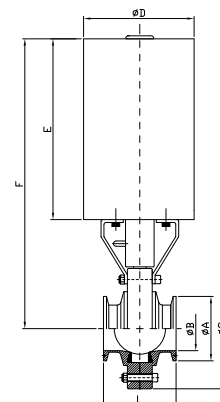
No.	SIZE	L±0.5	A	B	C	D	E
1501301-000100	1.0"	50	25.4	22.1	67	83.5	133.5
1501301-000150	1.5"	50	38.1	34.8	77	83.5	133.5
1501301-000200	2.0"	50	50.8	47.5	90	83.5	133.5
1501301-000250	2.5"	50	63.5	60.2	105	83.5	133.5
1501301-000300	3.0"	50	76.2	72.9	115	83.5	133.5
1501301-000400	4.0"	60	101.6	97.6	140	101.6	158.5

Pneumatic butterfly valve with clamp ends (Single action)

No.	SIZE	L±0.5	A	B	C	D	E
1501400-000100	1.0"	75.4	50.4	22.1	67	83.5	133.5
1501400-000150	1.5"	75.4	50.4	34.8	77	83.5	133.5
1501400-000200	2"	75.4	63.9	47.5	90	83.5	133.5
1501400-000250	2.5"	75.4	77.5	60.2	105	83.5	133.5
1501400-000300	3.0"	75.4	90.9	72.9	115	83.5	133.5
1501400-000400	4.0"	91.6	118.9	97.6	140	101.6	158.5

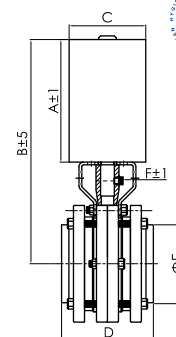
Pneumatic butterfly valve with clamp ends (Double action)

No.	SIZE	L±0.5	A	B	C	D	E
1501401-000100	1.0"	75.4	50.4	22.1	67	83.5	133.5
1501401-000150	1.5"	75.4	50.4	34.8	77	83.5	133.5
1501401-000200	2.0"	75.4	63.9	47.5	90	83.5	133.5
1501401-000250	2.5"	75.4	77.5	60.2	105	83.5	133.5
1501401-000300	3.0"	75.4	90.9	72.9	115	83.5	133.5
1501401-000400	4.0"	91.6	118.9	97.6	140	101.6	158.5

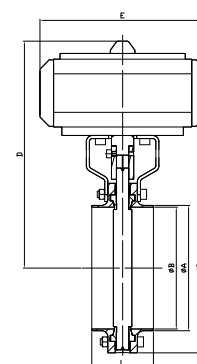


**Pneumatic three-piece butterfly valve (Single action)**

No.	SIZE	A	B	C	D	E	F±1
1501303-000100	1.0"	133.5	215	83.5	100	25.4	8.5
1501303-000150	1.5"	133.5	220	83.5	100	38.1	8.5
1501303-000200	2.0"	133.5	226	83.5	100	50.8	8.5
1501303-000250	2.5"	133.5	236	83.5	100	63.5	8.5
1501303-000300	3.0"	133.5	243	83.5	100	76.1	8.5
1501303-000400	4.0"	158.5	277	101.6	100	101.6	18

**Pneumatic butterfly valve with welding ends (Single action)**

No.	SIZE	L±0.5	A	B	C	D	E
1501300-000600	6.0"	78	152.4	146.8	218	341	268
1501300-000800	8.0"	100	203.2	197.6	276	368	268

**Pneumatic butterfly valve with welding ends (Double action)**

No.	SIZE	L±0.5	A	B	C	D	E
1501301-000600	6.0"	78	152.4	146.8	218	341	268
1501301-000800	8.0"	100	203.2	197.6	276	368	268



KPV Sanitary piston valve

Application

KPV Sanitary piston valve with reliable performance, hygienic design for stopping the flow or change the flow direction in a one-way or multi-directional systems. It can meet your highest requirements for hygienic and safe processing. The valve has a wide range of applications in the food processing industry, beverage production, pharmaceutical and fine chemical industries.

Working Principle

KPV is a pneumatic valve with hygienic design and modular design for wide applications as a shut-off valve with 2-3 ports, or a change-over valve with 3-5 ports. The unique manual single seat valve can be used to control the flow and pressure manually. Automatic operation is realized by single or double action pneumatic actuators, and the opening and closing of the valve shall be axially positioned by compressed air.

Standard Design

To ensure a high degree of flexibility, the valve seat between the two valve bodies in the switching is released. The valve ensures the optimum service life through a specified compression design. The actuators are connected to the valve body using clamp, and all of components are assembled with clamp rings. With few movable parts, the reliability is extremely high.



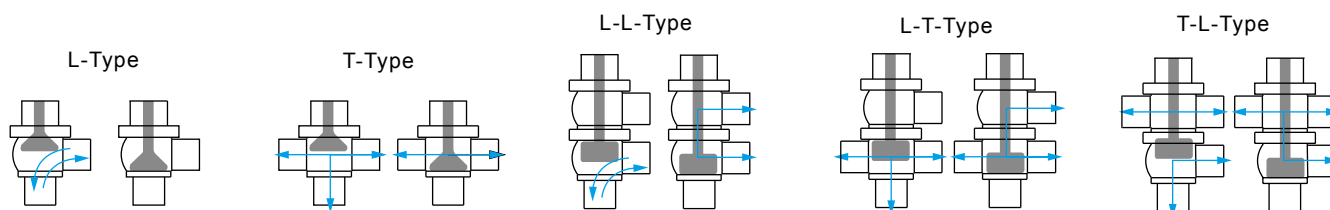
Technical Data

Items	Details
Temperature range	EPDM: -40~140°C, -40~284°F VITON: -20~100°C, -4~212°F SILICON: -60~200°C, -76~392°F
Working pressure	0~10bar, 0~145psi
Pneumatic pressure	Minimum 4bar, 58psi
Wetted parts material	1.4409(316L, CF3M), EN10088
Seal material	EPDM/ Silicon/ Viton
Other parts	1.4308(304) EN10088
Connections	Butt-Weld, Clamp 3A, DIN, ISO
Size	DN25~DN80
Surface finish	outer surface ,sandblastina Inner surface Ra≤0.8μm
Certifications	3A

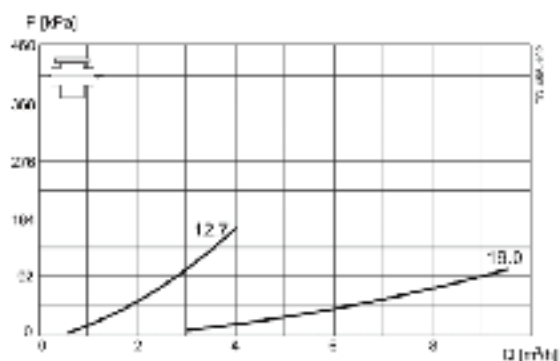
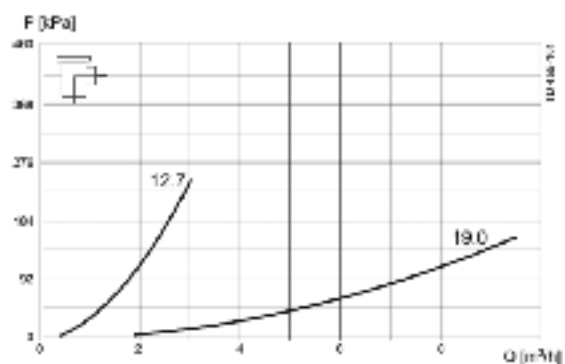
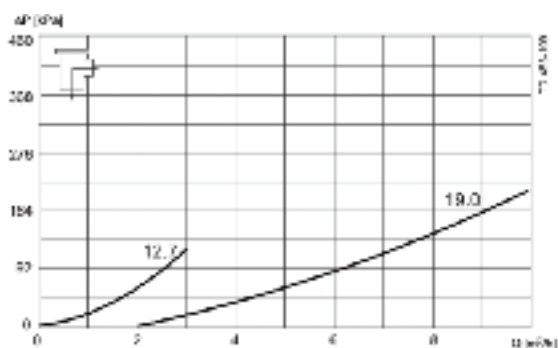
Features

- The valve body is made of 316L stainless steel, and the overthick spherical design avoids deformation caused by stress or heat;
- With clamp connections and simple structure, the combination of L-type, T-type valve bodies meets a wider range of needs;
- The overall manufacturing process is in line with 3A Hygienic requirements;
- All parts that come into contact with the material can be cleaned together or individually;
- The feedback devices can be assembled according to customer' s requirements;
- Users may rotate single-acting cylinder at 180 degrees, to change between normally open or normally closed.

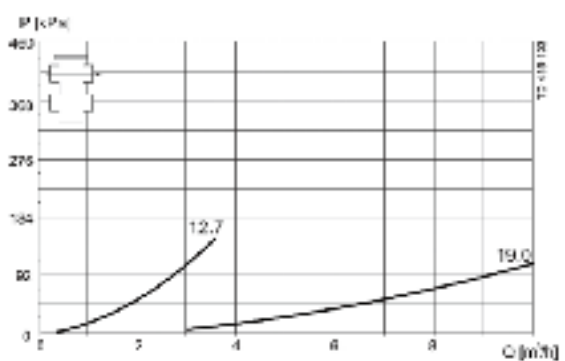
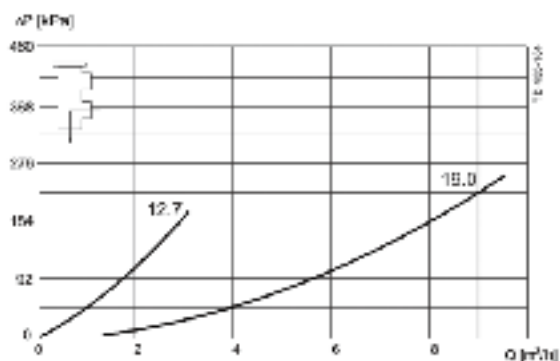
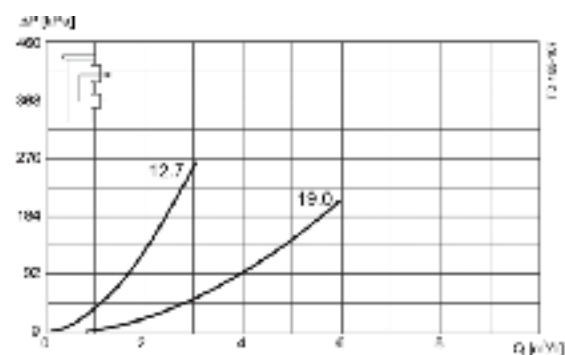
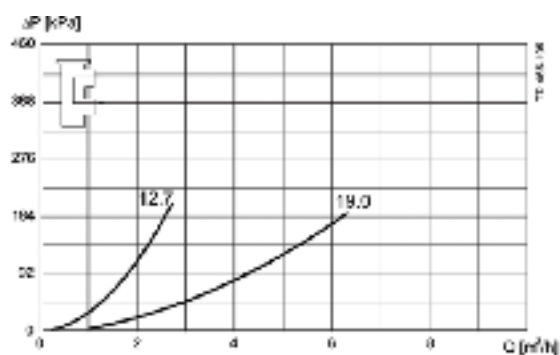
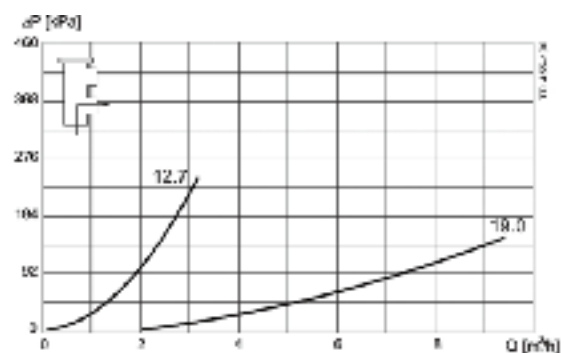
Flow Direction



Pressure drop vs. Capacity diagrams



换向阀



Optional Configurations

Interface standard	DIN	D	Connection	Weld
	ISO	I		Clamp
	3A	A		
	BPE	B		
Size of connector	1.0"	25	Material of valve body	316L
	1.5"	40		304L
	2.0"	50	Sealing material	EP+PTEE
	2.5"	65		SI+PTFE
	3.0"	80		VI+PTFE
Actuator	Manual	M	Feedback form (Only applies to pneumatic)	
	Pneumatic normally open	NO		
	Pneumatic normally closed	NC		
	Double action	AA		
Body form	L Type	4	Electromagnetic valve	Have
	L-L Type	1		No
	L-T Type	6	Sensor	No
	T Type	5		Single induction
	T-T Type	3	Double induction	
	T-L Type	2	Sensor form	Induction type
				Machine type

Selection code example

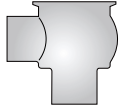
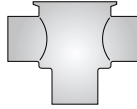
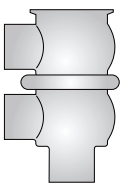
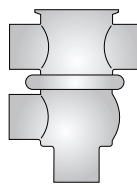
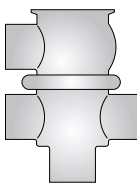
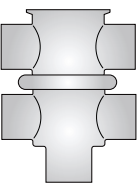
Interface standard	A	25	M	4	6L	EPP	1	SI	I
Size of connector									
Driven form									
Body form									
Connection method									
Material of valve body									
Sealing material									
Feedback form									

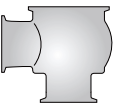
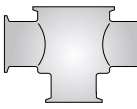
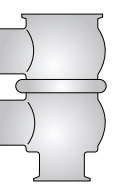
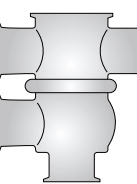
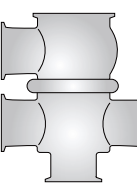
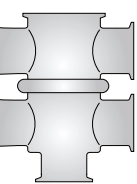
Note:
3A, size 1.0", welded manual seat valve, L-type valve body, 316L material, EPP, with solenoid valve + induction single sensor

Note: If the valve with feedback signal is used at a hazardous area, please specify the explosion-proof grade of the electronic components in the order!

Combination of valves bodies

Valve Body compositions

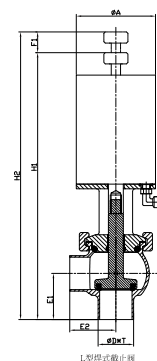
						
	L 200	T 300	L-L 210	T-L 220	L-T 310	T-T 320
Welded valves (normally closed)	3A:1526411	3A:1526511	3A:1526111	3A:1526211	3A:1526611	3A:1526311
Welded valves (normally open)	3A:1526412	3A:1526512	3A:1526112	3A:1526212	3A:1526612	3A:1526312

						
	L 2001	T 3002	L-L 2102	T-L 2203	L-T 3103	T-T 3204
Welded valves (normally closed)	3A:1526431	3A:1526531	3A:1526311	3A:1526231	3A:1526631	3A:1526331
Welded valves (normally open)	3A:1526432	3A:1526532	3A:1526132	3A:1526232	3A:1526632	3A:1526332

Note: Replace XXXXXX with the code in the valves body combination and not change the last 6 digits in the order.

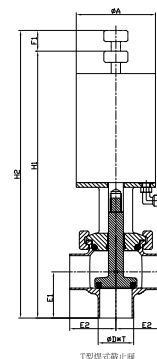
L-type divert seat valve with welding ends

No.	SIZE	OD×T	E1	E2	H1	H2	F1	∅A
XXXXXXX-000100	1.0"	25.4x1.65	49.5	49.5	285	301	16	85
XXXXXXX-000150	1.5"	38.1x1.65	49.5	49.5	289	316	27	85
XXXXXXX-000200	2.0"	50.8x1.65	61.0	61.0	311	342	31	104
XXXXXXX-000250	2.5"	63.5x1.65	81.0	81.0	397	436	39	154
XXXXXXX-000300	3.0"	76.2x1.65	86.0	86.0	406	448	42	154



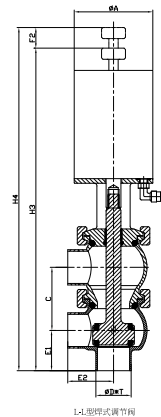
T-type divert seat valve with welding ends

No.	SIZE	OD×T	E1	E2	H1	H2	F1	∅A
XXXXXXX-000100	1.0"	25.4x1.65	49.5	49.5	285	301	16	85
XXXXXXX-000150	1.5"	38.1x1.65	49.5	49.5	289	316	27	85
XXXXXXX-000200	2.0"	50.8x1.65	61.0	61.0	311	342	31	104
XXXXXXX-000250	2.5"	63.5x1.65	81.0	81.0	397	436	39	154
XXXXXXX-000300	3.0"	76.2x1.65	86.0	86.0	406	448	42	154



L/L type divert seat valve with welding ends

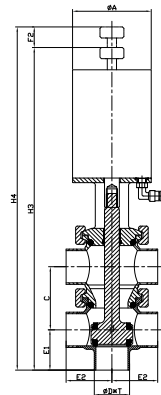
No.	SIZE	OD×T	E1	E2	C	H3	H4	F1	ØA
XXXXXXXX-000100	1.0"	25.4x1.65	49.5	49.5	56	340	352	12	85
XXXXXXXX-000150	1.5"	38.1x1.65	49.5	49.5	67	356	375	19	85
XXXXXXXX-000200	2.0"	50.8x1.65	61.0	61.0	84	397	421.5	24.5	104
XXXXXXXX-000250	2.5"	63.5x1.65	81.0	81.0	107	505	525.5	20.5	154
XXXXXXXX-000300	3.0"	76.2x1.65	86.0	86.0	121	527	553	26	154



L-L型卧式调节阀

T/T type divert seat valve with welding ends

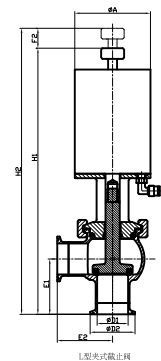
No.	SIZE	OD×T	E1	E2	C	H3	H4	F1	ØA
XXXXXXXX-000100	1.0"	25.4x1.65	49.5	49.5	56	340	352	12	85
XXXXXXXX-000150	1.5"	38.1x1.65	49.5	49.5	67	356	375	19	85
XXXXXXXX-000200	2.0"	50.8x1.65	61.0	61.0	84	397	421.5	24.5	104
XXXXXXXX-000250	2.5"	63.5x1.65	81.0	81.0	107	505	525.5	20.5	154
XXXXXXXX-000300	3.0"	76.2x1.65	86.0	86.0	121	527	553	26	154



T-T型卧式调节阀

L-type divert seat valve with clamp ends

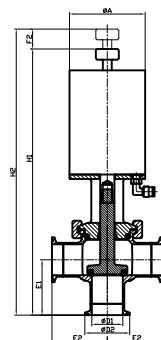
No.	SIZE	D1	D2	E1	E2	H1	H2	F1	ØA
XXXXXXXX-000100	1.0"	22.1	50.4	62.2	62.2	297.7	313.7	16	85
XXXXXXXX-000150	1.5"	34.8	50.4	62.2	62.2	301.7	328.7	27	85
XXXXXXXX-000200	2.0"	47.5	63.9	73.7	73.7	323.7	354.7	31	104
XXXXXXXX-000250	2.5"	60.2	77.5	93.7	93.7	409.7	448.7	39	154
XXXXXXXX-000300	3.0"	72.9	90.9	98.7	98.7	418.7	460.7	42	154



L型立式截止阀

T-type divert seat valve with clamp ends

No.	SIZE	D1	D2	E1	E2	H1	H2	F1	ØA
XXXXXXXX-000100	1.0"	22.1	50.4	62.2	62.2	297.7	313.7	16	85
XXXXXXXX-000150	1.5"	34.8	50.4	62.2	62.2	301.7	328.7	27	85
XXXXXXXX-000200	2.0"	47.5	63.9	73.7	73.7	323.7	354.7	31	104
XXXXXXXX-000250	2.5"	60.2	77.5	93.7	93.7	409.7	448.7	39	154
XXXXXXXX-000300	3.0"	72.9	90.9	98.7	98.7	418.7	460.7	42	154



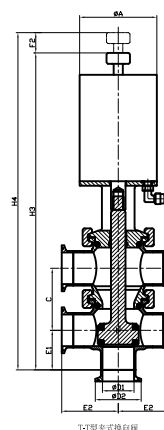
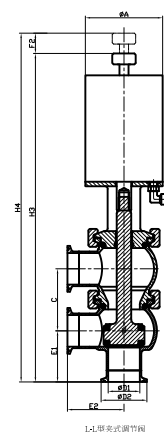
T型立式截止阀

L/L type divert seat valve with clamp ends

No.	SIZE	D1	D2	E1	E2	C	H3	H4	F1	ØA
XXXXXXXX-000100	1.0"	22.1	50.4	62.2	62.2	56	352.7	364.7	12	85
XXXXXXXX-000150	1.5"	34.8	50.4	62.2	62.2	67	368.7	387.7	19	85
XXXXXXXX-000200	2.0"	47.5	63.9	73.7	73.7	84	409.7	434.2	24.5	104
XXXXXXXX-000250	2.5"	60.2	77.5	93.7	93.7	107	517.7	538.2	20.5	154
XXXXXXXX-000300	3.0"	72.9	90.9	98.7	98.7	121	539.7	565.7	26	154

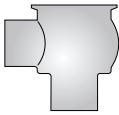
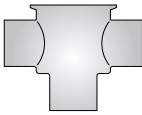
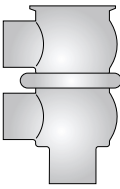
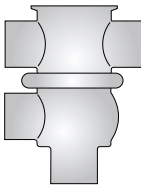
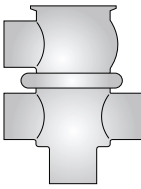
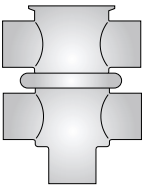
T/T type divert seat valve with clamp ends

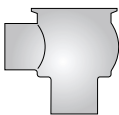
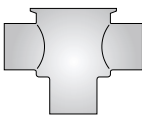
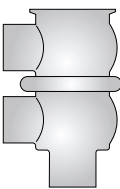
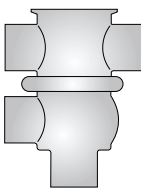
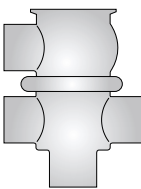
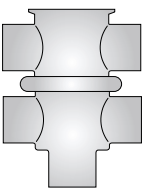
No.	SIZE	D1	D2	E1	E2	C	H3	H4	F1	ØA
XXXXXXXX-000100	1.0"	22.1	50.4	62.2	62.2	56	352.7	364.7	12	85
XXXXXXXX-000150	1.5"	34.8	50.4	62.2	62.2	67	368.7	387.7	19	85
XXXXXXXX-000200	2.0"	47.5	63.9	73.7	73.7	84	409.7	434.2	24.5	104
XXXXXXXX-000250	2.5"	60.2	77.5	93.7	93.7	107	517.7	538.2	20.5	154
XXXXXXXX-000300	3.0"	72.9	90.9	98.7	98.7	121	539.7	565.7	26	154



KingLai Hygienic Piston Valves

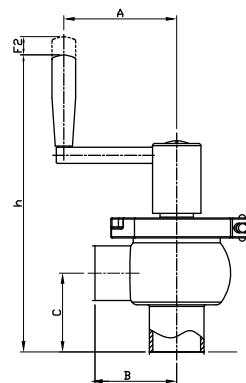
Combination of valves bodies

						
	L 200	T 300	L-L 210	T-L 220	L-T 310	T-T 320
Welded switching valves	3A:1526413	3A:1526513	3A:1526113	3A:1526213	3A:1526613	3A:1526313
Welded directional valves	3A:1526423	3A:1526523	3A:1526123	3A:1526223	3A:1526623	3A:1526323

						
	L 2001	T 3002	L-L 2102	T-L 2203	L-T 3103	T-T 3204
Hoop-type switching valves	3A:1526433	3A:1526533	3A:1526133	3A:1526233	3A:1526633	3A:1526333
Hoop-type directional valves	3A:1526443	3A:1526543	3A:1526143	3A:1526243	3A:1526643	3A:1526343

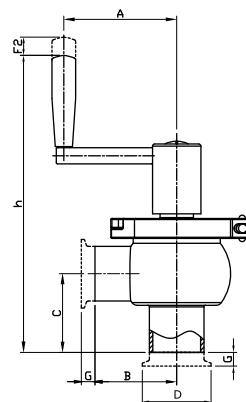
KPV-MW:L-type Manual Divert Seat Valve with welding ends

No.	SIZE	OD×T	A	B	C	F	H
XXXXXXX-000100	1"	25.4*1.65	105	49.5	49.5	17	153
XXXXXXX-000150	1.5"	38.1*1.65	105	49.5	49.5	17	153
XXXXXXX-000200	2"	50.8*1.65	105	61	61	24	166
XXXXXXX-000250	2.5"	63.5*1.65	105	81	81	24	218
XXXXXXX-000300	3"	76.2*1.65	105	86	86	27	214



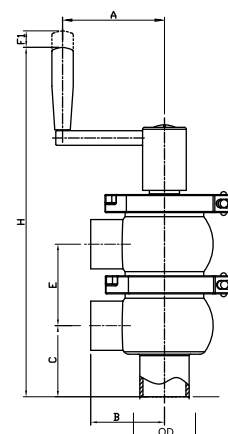
KPV-MC:L-type Manual Divert Seat Valve with clamp ends

No.	SIZE	A	B	C	D	F2	G	H
XXXXXXX-000100	1"	105	49.5	49.5	50.4	22	12.7	153
XXXXXXX-000150	1.5"	105	49.5	49.5	50.4	22	12.7	153
XXXXXXX-000200	2"	105	61	61	63.9	30	12.7	166
XXXXXXX-000250	2.5"	105	81	81	77.5	30	12.7	218
XXXXXXX-000300	3"	105	86	86	90.9	30	12.7	214

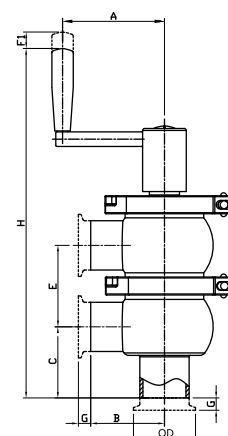


KPV-MW:L/L Type Manual Divert Seat Valve with welding ends

No.	SIZE	OD×T	A	B	C	E	F	G	H
XXXXXXXX-000100	1"	25.4*1.65	105	49.5	49.5	66	17	12.7	222
XXXXXXXX-000150	1.5"	38.1*1.65	105	49.5	49.5	66	17	12.7	222
XXXXXXXX-000200	2"	50.8*1.65	105	61	61	84	24	12.7	252
XXXXXXXX-000250	2.5"	63.5*1.65	105	81	81	106.5	24	12.7	328
XXXXXXXX-000300	3"	76.2*1.65	105	86	86	120	27	12.7	337

**KPV-MC:L/L Type Manual Divert Seat Valve with clamp ends**

No.	SIZE	A	B	C	OD	E	F1	G	H
XXXXXXXX-000100	1"	105	49.5	49.5	50.4	66	17	12.7	222
XXXXXXXX-000150	1.5"	105	49.5	49.5	50.4	66	17	12.7	222
XXXXXXXX-000200	2"	105	61	61	63.9	84	24	12.7	252
XXXXXXXX-000250	2.5"	105	81	81	77.5	106.5	24	12.7	328
XXXXXXXX-000300	3"	105	86	86	90.9	120	27	12.7	337



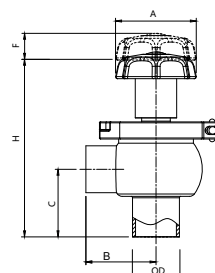
KingLai Hygienic Piston Valves

Valve element



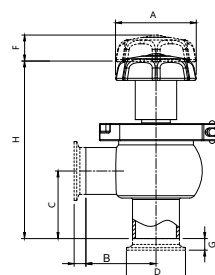
KPV-MW:L-type Manual regulating Seat Valve with welding ends

No.	SIZE	A	B	C	OD	F	G	H
XXXXXXX-000150	1.5"	45	57.8	43.5	38.1	22	12.7	153
XXXXXXX-000200	2.0"	45	66	43.2	50.8	30	12.7	166
XXXXXXX-000250	2.5"	45	85	83.7	63.5	30	12.7	218
XXXXXXX-000300	3.0"	45	90	74.3	76.2	30	12.7	214



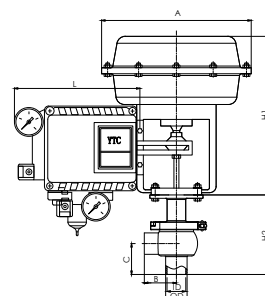
KPV-MC:L-type Manual regulating Seat Valve with clamp ends

No.	SIZE	A	B	C	D	F	G	H
XXXXXXX-000150	1.5"	45	57.8	43.5	50.4	22	12.7	153
XXXXXXX-000200	2.0"	45	66	43.2	63.9	30	12.7	166
XXXXXXX-000250	2.5"	45	85	83.7	77.5	30	12.7	218
XXXXXXX-000300	3.0"	45	90	74.3	90.9	30	12.7	214



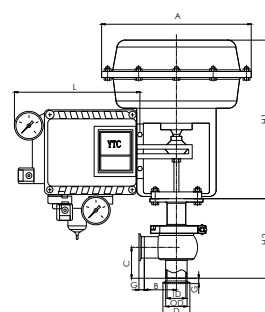
KPV-PW:L-type Pneumatic Diaphragm Control Valve with welding ends

No.	SIZE	A	B	C	OD	L	H1	H2
1526421-000100	1.0"	285	49.5	49.5	25.4	186	270	128.5
1526421-000150	1.5"	285	49.5	49.5	38.1	186	300	133.0
1526421-000200	2.0"	285	61.0	61.0	50.8	186	300	159.5
1526421-000250	2.5"	360	81.0	81.0	63.5	186	375	209.8
1526421-000300	3.0"	360	86.0	86.0	76.2	186	375	221.0



KPV-PC:L-type Pneumatic Diaphragm Control Valve with clamp ends

No.	SIZE	A	B	C	OD	D	L	G	H1	H2
1526431-000100	1.0"	285	49.5	49.5	25.4	50.4	186	12.7	270	128.5
1526431-000150	1.5"	285	49.5	49.5	38.1	50.4	186	12.7	300	133.0
1526431-000200	2.0"	285	61.0	61.0	50.8	63.9	186	12.7	300	159.5
1526431-000250	2.5"	360	81.0	81.0	63.5	77.5	186	12.7	375	209.8
1526431-000300	3.0"	360	86.0	86.0	76.2	90.6	186	12.7	375	221.0



• Above-mentioned valves bodies are available for L-type and T-type

KCV Hygienic check valves

Application

The King Lai sanitary check valve is designed for use in the pipeline to prevent reverse flow. Self-operated check valves CK3 must be installed on a vertical pipe, allowing fluid to flow from bottom to top only. The valve body is sealed by gravity without spring support. It can be applied to clean fluid or gas, with simple structure and easy maintain. Spring-type check valves CK1 or CK2 is manufactured with full forging process. The valve body is connected with clamp rings so as to disassemble easier. All these check valves are sanitary, prevent from bacterial and without any dead-end.

Features

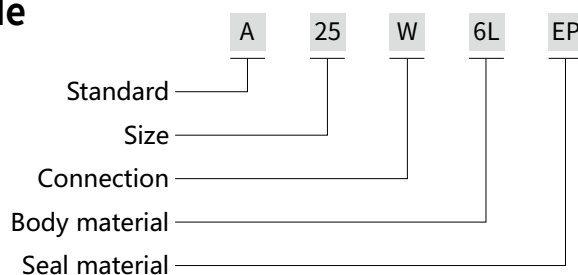
- Forge with High-quality 316L stainless steel, provides a comprehensive mechanical processing;
- Simple structure and easy to maintenance;
- VITON, SILICON sealing materials are available for choose;
- Hygienic without dead ends to prevent bacterial from breeding;
- Size: From 0.5" to 4"
- CK3 check valve is installed vertically in pipeline. valve is sealed without spring, and can be used in high level sanitary fluid systems.



Optional Configurations

Interface standard	DIN	D	Connection method	Welded type	D
	ISO	I		Clamp	I
	3A	A			
	BPE	B			
Size of connector	1.0"	25	Materials of valves body	316L	6L
	1.5"	40		304L	4L
	2.0"	50	Sealing material	EP	EP
	2.5"	65		SI	SI
	3.0"	80		VI	VI

Selection Code



examples: 3A, 1.0", self-operated check valve, weld, 316L, EPDM

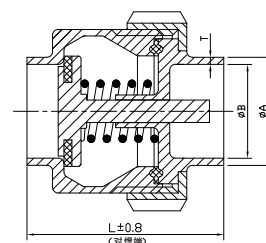
KingLai Hygienic Check Valves

Max. product pressure	10 bar
Max. temperature	140°C
Sealing material	EPDM, Viton, Silicone
Steel parts	304/316L
Size	DN15-DN50(CK3), DN25-DN100(CK2)
Connection	Weld, Clamp, Thread
Surface treatment	Inner surface $Ra \leq 0.8\mu m$, Outer surface $Ra \leq 3.2\mu m$
Opening Pressure	0.06bar
Interface standard	Interface standard: 3A, BPE, DIN, ISO
Product certification	Product certification 3A, CE, TS



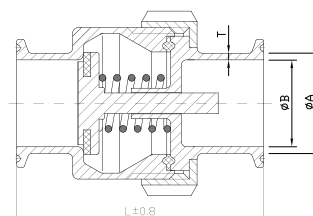
Ck1 Check valve (3A/ASME BPE)

SIZE	L(Butt end)	A	B	T
1"	69.4	25.4	22.1	1.65
1.5"	68.7	38.1	34.8	1.65
2"	75.7	50.8	47.5	1.65
2.5"	99.8	63.5	60.2	1.65
3"	101.1	76.2	72.9	1.65
4"	126.8	101.6	97.38	2.11



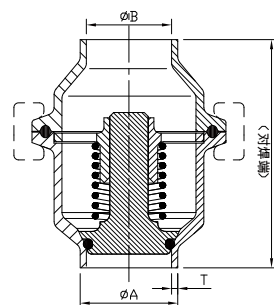
Ck1 Check valves (3A/ASME BPE)

SIZE	L2 (Clamp end)	A	B	T
1"	94.8	25.4	22.1	1.65
1.5"	94.1	38.1	34.8	1.65
2"	101.1	50.8	47.5	1.65
2.5"	125.2	63.5	60.2	1.65
3"	126.5	76.2	72.9	1.65
4"	158.4	101.6	97.38	2.11

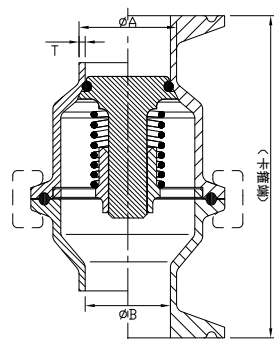


Ck2 Check valves (3A/ASME BPE)

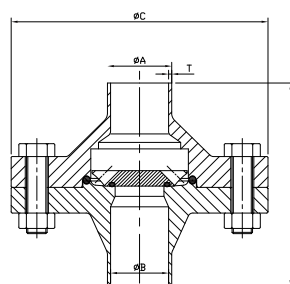
SIZE	L (Butt end)	A	B	T
1/2"	99.4	12.7	9.4	1.65
3/4"	95.4	19.1	15.8	1.65
1"	85.4	25.4	22.1	1.65
1.5"	100.4	38.1	34.8	1.65
2.0"	100.4	50.8	47.5	1.65
2.5"	100.4	63.5	60.2	1.65
3.0"	100.4	76.2	72.9	1.65
4.0"	150.6	101.6	97.38	2.11

**Ck2 Check valves (3A/ASME BPE)**

SIZE	L1(Clamp end)	A	B	T
1/2"	99.4	12.7	9.4	1.65
3/4"	95.4	19.1	15.8	1.65
1"	85.4	25.4	22.1	1.65
1.5"	100.4	38.1	34.8	1.65
2.0"	100.4	50.8	47.5	1.65
2.5"	100.4	63.5	60.2	1.65
3.0"	100.4	76.2	72.9	1.65
4.0"	150.6	101.6	97.38	2.11

**Ck3 Check valves (3A/ASME BPE)**

SIZE	L(Butt end)	A	B	C	T
1/2"	100	12.7	9.4	100	1.65
3/4"	100	19.1	15.8	100	1.65
1"	112	25.4	22.1	100	1.65
1.5"	115	38.1	34.8	110	1.65
2.0"	115	50.8	47.5	110	1.65

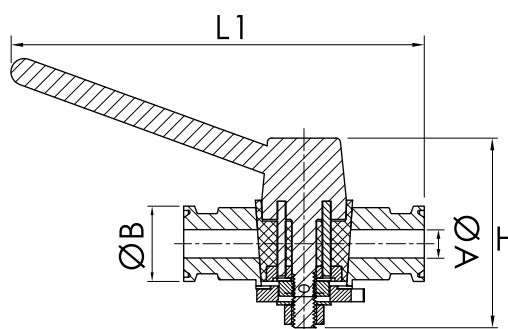
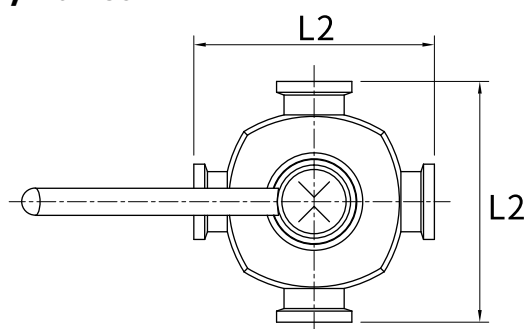


KingLai Hygienic 4-Way Valves

Operating pressure	0-10 bar
Operating temperature	-10°C ~ 150°C
Control method	Manual
Sealing material	PTFE
Materials of valves body	316L
Size	1/4 ~ 1"
Connection	Weld, Clamp
Finish	Outer surface $Ra \leq 1.6\mu m$, Inner surface $Ra \leq 0.8\mu m$
Status display	The position of the scale on the valves represents the position where the valves is through
Applications	Mainly used for chromatography system, to achieve the quick replacement of sample, buffer and other pipelines. CIP and SIP are allowed.

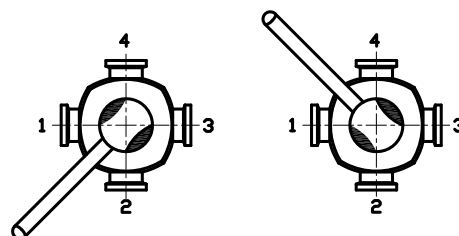


4-Way Valves



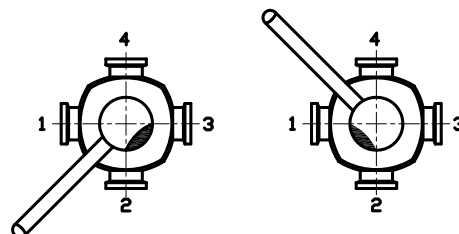
Four-direction and two-way valves:

No.	A	B	H	L1	L2
1507199-000025	4.57	25	63	137.4	80
1507199-000038	7.75	25	63	137.4	80
1507199-000050	9.4	25	63	137.4	80
1507199-000100	22.1	50.4	107	224.0	150



Four-direction and 2-Way valves:

No.	A	B	H	L1	L2
1507198-000025	4.57	25	63	137.4	80
1507198-000038	7.75	25	63	137.4	80
1507198-000050	9.4	25	63	137.4	80



Pneumatic Angle Seat Valve

The Sanitary angle seat Valves are widely used in food, beverages, pharmaceutical, fine chemicals and other industries for the seat structure of the body with a large flow, space, high pressure and other features. The product is perfect for short-term frequent start, featuring fast response and accurate. It is used with solenoid valves for pneumatic control to accurately control the flow of liquid, steam and other fluid the angle seat Valves is used on the hot and humid sterilizer can accurately control the volume of the steam. In the same type of valves, it is more economical, maintenance-free, easy to install with low energy consumption Various connection methods: Butt interface: DIN, SMS 3008, ASME BPE, BS 4825 part 1, EN ISO 1127; Threaded connection: Internal thread DIN ISO 228, in ternal thread NPT. Standard: With visual display.



Features of pneumatic angle seat valves

Options: Limit bolt (on/off), electronic position feedback, adjustment positioner;
Stainless steel pneumatic head features UV resistance, with life longer than that of plastic and aluminum alloy pneumatic heads, suitable in harsh environments;
With corrosion resistance, GMP design and easy cleanliness;
Advanced valves body seat structure, with flow approx 30% more than the standard valves, liquidity (Kv value) better than similar products, especially other standard cut-off valves.
The valves bodies of different sizes share a pneumatic head so as to effectively reduce costs. Pneumatic head can be rotated 360 degrees, easy to be installed;
The sealing material PTFE, usable under high temperature up to 180°C;
The seal between the pneumatic head and the valves body is composed of layers of seal rings made of different materials, with better sealing effect;
Without water hammer effect, the water hammer (impact) is absorbed when the fluid flows into from the lower part of the valves rod.

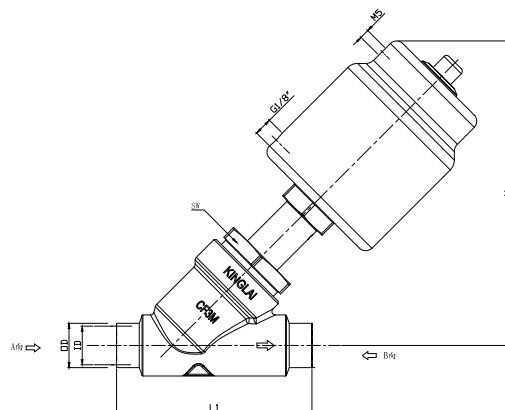
Technical Parameters

Size	1/2" ~ 2"
Controlling pressure	5 ~ 6 bar
Circulation media	Gas, liquid
Medium pressure	0 ~ 25 Bar
Operating temperature	-10 ~ 180°C
Materials of valves body	CF3M ~ 1.4409(316L)
Control method	Normally closed (NC), Normally open (NO), Double acting (DA)
Connection method	Internal thread, welded junction
Materials of actuator	304
Sealing material	PTFE(NBR, FPM and EPDM are available at request)
Packing seal (with silicone grease)	The PTFE V-shaped ring with spring compensation
Interface standard	3A, ISO, DIN



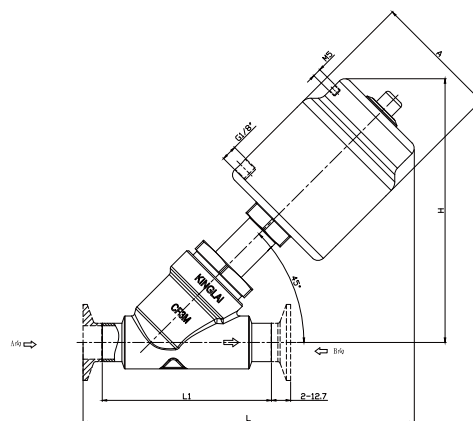
Pneumatic angle seat valve with welding ends

DN	H	L1	L	A	SW	3A		D	Operating pressure (Bar)	
						ID	OD		Direction A	Direction B
1/2"	166.4	98	211.1	83	36	9.4	12.7	/	15	10
3/4"	171.4	106	216.1	83	41	15.8	19.1	/	15	10
1.0"	174.6	112	219.3	83	46	22.1	25.4	/	10	10
1.25"	181.5	133	231.5	83	55	28.5	31.8	/	7	10
1.5"	188.8	147	241.5	83	60	34.8	38.1	/	5	10
2.0"	199.8	160	250.5	83	75	47.5	50.8	/	3	10



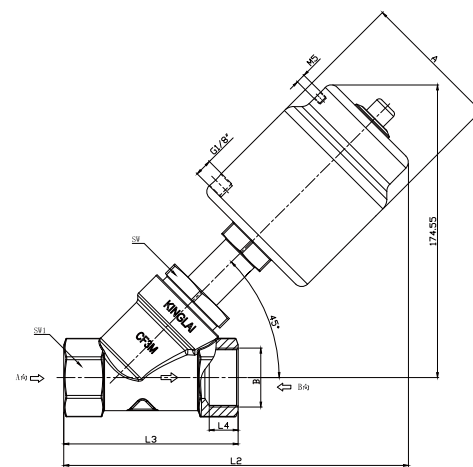
Pneumatic angle seat valve with clamp ends

DN	H	L1	L	A	SW	3A		D	Operating pressure (Bar)	
						ID	OD		Direction A	Direction B
1/2"	166.4	98	211.1	83	36	9.4	12.7	25	15	10
3/4"	171.4	106	216.1	83	41	15.8	19.1	25	15	10
1.0"	174.6	112	219.3	83	46	22.1	25.4	50.4	10	10
1.25"	181.5	133	231.5	83	55	28.5	31.8	50.4	7	10
1.5"	188.8	147	241.5	83	60	34.8	38.1	50.4	5	10
2.0"	199.8	160	250.5	83	75	47.5	50.8	63.9	3	10



Pneumatic angle seat valve with thread ends

DN	A	SW	L2	L3	L4	B	SW1		Operating pressure (Bar)	
							对边	对数	Direction A	Direction B
15	83	36	199.4	67	9	G1/2"	25	6	15	10
20	83	41	208.4	79	12	G3/4"	31	6	15	10
25	83	46	205.6	104	19	G1"	41	6	10	10
32	83	55	210.8	108	15	G1 1/4"	48	8	7	10
40	83	60	227.3	137	20	G1 1/2"	55	8	5	10
50	83	75	236.3	147	18	G2"	66	8	3	10



KAV Pneumatic Arc Valve

Kinglai arc valves have been designed according to hygienic design guidelines to meet the high demands of process engineering applications. Arc valves are particularly for viscous/pasty products and fluids containing solid particles on account of a totally clear passage, as well as easy and thorough cleaning in place.

No dead ends

No dead pockets

Totally clear passage-no pressure loss

No product remainders or sticking of solid particles

Designed to be passed with Pigs

Minimum number of components and wearing parts

Can be completely dismantled even when welded in place

Optionally with 3-A approval/FDA



Technical Parameters

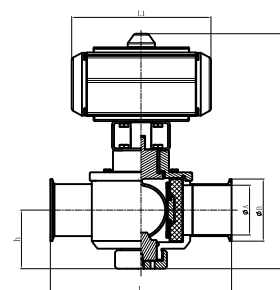
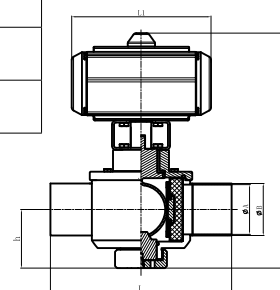
Product pressure	Pressure behind arc: 0 ~ 10 Bar; Pressure against arc: 0 ~ 3 Bar
Operating temperature	-10°C ~ 135°C
Size	DN50 ~ DN85
shutter	PTFE
Parts in contact with products	CF3M 1.4409(316L)
Other parts in stainless steel	AISI304/1.4301
O-ring seals	EPDM, Viton
Outer surface	sandblastina
Inner surface	Ra≤0.8 μm
Connection	Weld, Clamp
Control method	Pneumatic (90 °/180 ° rotary cylinder)
Interface standard	3A, DIN, ISO

Pneumatic arc valves with welding ends

SIZE	A	B	H	h	L	L1
2.0"	47.5	50.8	314.2	73	162	204
2.5"	60.2	63.5	350.9	80.5	184	262
3.0"	72.9	76.2	404.8	85.9	265.4	268

Pneumatic arc valves with clamp ends

SIZE	A	B	H	h	L	L1
2.0"	47.5	63.9	314.2	73	162	204
2.5"	60.2	77.5	350.9	80.5	184	262
3.0"	72.9	90.9	404.8	85.9	265.4	268



Friction Loss Table

The following table was developed to indicate loss of head due to friction-in meter loss per fitting or in meter loss per meter of tubing - through stainless steel tubes and sanitary fittings.

Friction Loss in Sanitary OD Tubes and Fittings

Capacity in m ³ /hr.	Tube Size																	
	1" ID=0.870"			1-1/2" ID=1.370"			2" ID=1.870"			2-1/2" ID=2.370"			3" ID=2.870"			4" ID=3.834"		
	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee
0.5	0.01	0.003	0.030															
1.0	0.025	0.006	0.061															
1.1	0.035	0.008	0.076															
2.3	0.12	0.018	0.021	0.02	0.003	0.045	0.005	0.005	0.030									
3.4	0.25	0.030	0.242	0.04	0.006	0.076	0.013	0.006	0.045									
4.5	0.43	0.067	0.455	0.06	0.009	0.091	0.02	0.008	0.061	0.005	0.006	0.030	0.003	0.006	0.018			
5.7	0.66	0.021	0.697	0.08	0.012	0.121	0.025	0.009	0.076	0.006	0.009	0.045	0.004	0.009	0.024			
6.8	0.93	0.212	1.000	0.105	0.018	0.167	0.035	0.015	0.091	0.008	0.015	0.061	0.005	0.012	0.030			
8.0	1.22	0.379	1.576	0.135	0.027	0.242	0.04	0.018	0.121	0.011	0.018	0.076	0.006	0.015	0.039			
9.1				0.17	0.033	0.303	0.05	0.024	0.152	0.015	0.021	0.091	0.007	0.018	0.045			
10.2				0.21	0.048	0.394	0.063	0.030	0.182	0.02	0.027	0.106	0.008	0.020	0.055			
11.4				0.25	0.061	0.485	0.073	0.036	0.212	0.022	0.030	0.121	0.01	0.021	0.061			
13.6				0.34	0.106	0.667	0.1	0.055	0.273	0.03	0.036	0.136	0.015	0.024	0.076			
18.2				0.57	0.230	1.121	0.16	0.091	0.455	0.05	0.045	0.167	0.02	0.030	0.121			
22.7				0.85	0.409	1.758	0.23	0.133	0.697	0.075	0.055	0.182	0.03	0.033	0.152	0.008	0.012	0.030
27.3				1.18	0.621	2.758	0.32	0.194	1.000	0.105	0.064	0.303	0.04	0.039	0.182	0.01	0.015	0.045
31.8							0.42	0.258	1.364	0.14	0.070	0.379	0.05	0.048	0.242	0.013	0.018	0.061
36.4							0.54	0.342	1.758	0.17	0.085	0.485	0.07	0.061	0.333	0.015	0.021	0.076
40.9							0.67	0.439	2.242	0.205	0.094	0.606	0.08	0.064	0.394	0.02	0.024	0.091
45.5							0.81	0.552	2.727	0.245	0.106	0.758	0.1	0.079	0.485	0.025	0.027	0.121

Friction Loss in Sanitary OD Tubes and Fittings

Capacity in m ³ /hr.	Tube Size																	
	1" ID=0.870"			1-1/2" ID=1.370"			2" ID=1.870"			2-1/2" ID=2.370"			3" ID=2.870"			4" ID=3.834"		
	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee	Tube	Elbow	Tee
50.0							0.95	0.673	3.333	0.29	0.124	0.909	0.12	0.091	0.576	0.028	0.030	0.152
54.5							1.10	0.797	4.091	0.34	0.145	1.121	0.14	0.100	0.667	0.035	0.033	0.167
59.1										0.39	0.161	1.364	0.165	0.118	0.758	0.04	0.035	0.182
63.6										0.45	0.185	1.606	0.19	0.127	0.848	0.045	0.036	0.197
68.2										0.515	0.212	1.879	0.22	0.152	0.939	0.05	0.039	0.212
79.5										0.68	0.318	2.576	0.28	0.203	1.242	0.07	0.045	0.273
90.9										0.86	0.470	3.333	0.36	0.267	1.576	0.85	0.055	0.364
102.3										1.05	0.682	4.091	0.44	0.333	2.000	0.105	0.061	0.455
113.6													0.54	0.424	2.424	0.13	0.070	0.530
125.0													0.64	0.515	2.879	0.15	0.082	0.636
136.4													0.75	0.621	3.091	0.175	0.091	0.758
147.7													0.87	0.730	3.939	0.2	0.103	0.848
159.1													1.0	0.848	4.545	0.23	0.121	1.030
170.5																0.26	0.130	1.152
181.8																0.3	0.152	1.333
193.2																0.33	0.170	1.515
204.5																0.37	0.188	1.727
215.9																0.41	0.212	1.909
227.3																0.45	0.242	2.121
250.0																0.53	0.321	2.606

The pressure vessel business of KINGLAI was founded in 2010. The company has been focusing on the development, design, manufacture, sales and service of pressure vessels in the field of clean and ultra clean areas. We boasts a complete quality system, advanced manufacturing equipment, experienced engineers, fullprocess technical documentation and other resources. Our goal is to provide customers with high quality products and services and keep exceeding customers' expectation in quality and value with our complete quality system and professional team. In a long period in the future, KINGLAI will become a highend clean pressure vessel product provider through timely communication and excellent organization.

Customized containers

KL will produce containers for food, beverage, pharmaceutical, chemical, and electronic applications as below:

Capacity of container:The largest diameter is 4.2 meters, the volume is 90 tons.

Pressure Level:The design and manufacture meet ASME & GB requirements and with ASME & .GB labels.

Corrosion resistance:The construction materials contain stainless steel and nickel-based alloys.

Quality: The best quality container in today' s market.

Performance ensured by high technology and testing.

First of all, the test starts from the inspection of raw materials and covers the entire production process. The rigorous testing and recording procedures ensure the compliance with the most stringent industry standards. Before shipment, record the results of your container testing, which may include dye penetration test, X-ray inspection, pressure test, surface roughness reading of surface treatment, salt and ferrite test and endoscopy check of optical fiber on the cut -off surface.



To ensure the level of pressure vessel process, KINGLAI Group has built an independent modern pressure vessel manufacturing plant with a huge investment, whose plant area exceeding 10,000 m2 so as to meet the demands of different customers on the delivery and budget.



Our new factory has everything you need.

The crane 9 m long has capacity up to 20 tons.

The state-of-the-art tools in China, include: oil-free compressed air, reverse osmosis/deionized water, clean steam, nitrogen, helium and argon

Advanced equipment, including: Material handling equipment (20 -ton bridge crane), welding equipment (tungsten gas and natural gas metal, track, welding and polishing locator/mechanical arm, automatic sewing machine) automatic polishing equipment, positive raw material identification equipment, molding and cutting equipment (straight and round shear, 75 -ton press, hydraulic pipe press which molded interlocking which is able to curl 3/4" stainless steel plate), testing and inspection equipment (endoscope, portable ultrasonic flaw detector, iron salt detection, profile detection, liquid penetration testing equipment, portable CMM, linear measurement tools and measuring instruments and dedicated customization FAT detectors)

Dedicated FAT video conference room

A safe truck handling area

Functions of specification/authentication: CE/PED, ASME, TS, ASME U/S

Materials include: Stainless steel and nickel-based alloys

Providing various types of devices which include: CIP containers, dispensing tanks, large tanks, bioreactors and fermenting tank

Engineering, customized design and manufacturing

Professional project management and specific project teams

The workshops with a variety of facilities enable us to produce superior components and assemble modular systems for customers.

We have a strong capability of customization

KI' s customized cylindrical containers and pressure vessels are suitable for pharmaceutical, biotechnology, fine chemicals, cosmetics and other ultra-pure water manufacturing environment.

As a part of the integrated electric polishing process, your container has gone through strict pre-cleaning, final high -clean washing and electric polishing protection.

We provide this service in our own plant, so we have a competitive price and fast production speed to meet your needs for high quality products.



Advantage of customization

We know that there is difference between each two working conditions and we designed each container independently, so you never need to adjust your production process to suit our products. The customized design can meet your stringent specifications and requirements, including:

Capacity and pressure level

Mechanical and electric polishing and roughness degree of surface ($Ra \leq 0.4\mu m$)

Fixed or removable design

Cone, sloping or concave bottom

Fixed or moveable lid

Type, size and location of port

Honeycomb, traditional and semi-tube heated/cooled shells

Stainless steel insulating jacket

The accessories such as light sources, mirrors, manholes, sensors, pressure gauges, sampling valves and sprayers. The mixers are installed at both top and bottom.



All KL' s provided customized containers

Materials include stainless steel and nickel-based alloys

Registered labels meeting ASME specifications

G/B150, TSGR0004-2009

JB/T4730-2005 NB/T47015-2011

Certified contour reading instrument and the roughness of electric polished surface

Endoscopy



KRSH Rotary Spray Head

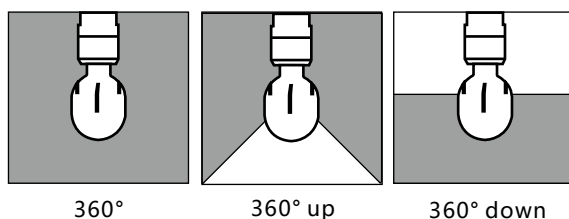
KRSH is a rotary spray head that uses cleaning media to provide coverage and impact. The device represents an effective alternative to traditional static spray balls because it uses low volumes of cleaning fluid at low pressure. The double ball bearing in the RSH's rotating head makes the device suitable for all industrial cleaning applications, including tanks, reactors, vessels and other containers ranging from 0.05 m³ to 50 m³, depending on dimensions and cleaning task.

The flow of the cleaning media causes the head of the KRSH to rotate, and the fan-shaped jets lay out a swirling pattern throughout the tank or reactor. This generates the impact needed for the efficient removal of residual product; the cascading flow covers all internal surfaces of the vessel.



Technical Data
Raw material
AISI 316L (UNS S31603)
Min. tank opening
RSH-Ø25 25mm diameter(DN25)
RSH-Ø45 45mm diameter(DN45)
RSH-Ø65 65mm diameter(DN65)
Maximum operating temperature
95C (maximum ambient temperature is 140°C)
Cleaning radius
RSH-Ø25 max. r=0.6M
RSH-Ø45 max. r=1.4M
RSH-Ø65 max. r=2M
Operating pressure
1-3 bar
Spray form
360°, above 270°, below 180°
Interface form
Thread type, welded type, pin tpe type

Spray form



360°

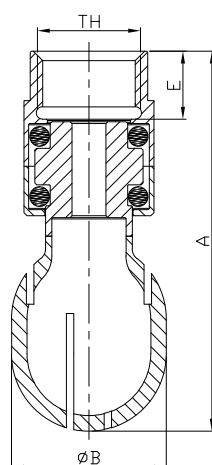
360° up

360° down

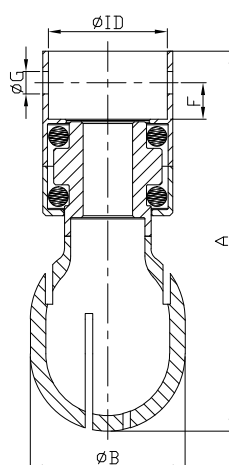
Working method		Connection method:	Cleaning range	Ball diameter	2bar/flow	Cleaning range M	1bar/flow	Cleaning range M	Number of installed balls in a single tank	Material
Spiral type	3/4"	☐ 3/8" screw ☐ pin type ☐ welded type	360°UP 270°UP 180°Down	Ø25	3M ³ /H	MAX.R0.8M	1.8M ³ /H	MAX.R0.6M	Please attach a simple picture	☐ 316L ☐ 304
	1"	☐ 4/3" screw ☐ pin type ☐ welded type		Ø45	5.5M ³ /H	MAX.R1.4M	4M ³ /H	MAX.R1M	Please attach a simple picture	☐ 316L ☐ 304
	1.5"/2"	☐ pin type ☐ welded type		Ø65	16M ³ /H	MAX.R2M	11M ³ /H	MAX.R1.5M	Please attach a simple picture	☐ 316L ☐ 304
Fixed	SMS25	☐ pin type ☐ welded type	316°UP 180°UP 180°Down	Ø65	15M ³ /H	MAX.R2.7M	11M ³ /H	MAX.R2M	Please attach a simple picture	☐ 316L ☐ 304
	SMS38	☐ pin type ☐ welded type		Ø65	17M ³ /H	MAX.R3M	11M ³ /H	MAX.R2.5M	Please attach a simple picture	☐ 316L ☐ 304
	SMS51	☐ pin type ☐ welded type		Ø91	35M ³ /H	MAX.R4.5M	28M ³ /H	MAX.R4M	Please attach a simple picture	☐ 316L ☐ 304
	SMS76	☐ pin type ☐ welded type		Ø119	48M ³ /H	MAX.R4.5M	32M ³ /H	MAX.R3.5M	Please attach a simple picture	☐ 316L ☐ 304

Tank Cleaning Equipment

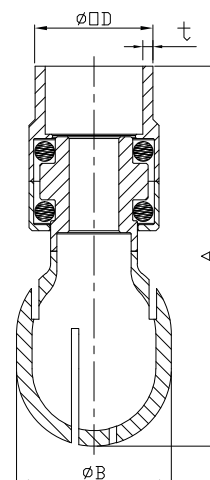
Lubricant	Self-lubricating through the cleaning solution
Material	AISI 316L (UNSS31603)
Size	Min.Φ25mm
Operating pressure	1 ~ 3bar
Recommended pressure	2bar
Operating temperature	95°C
Ambient temperature	140°C
Wetting radius	2.5m
Cleaning radius	Max.0.6m
Interface form Thread type	3/8"Rp (BSP)
Plug type	3/4"(BPE/3A)
Welded type	3/4"(BPE/3A)
Surface treatment	Inner surface Ra0.5μm, Outer surface Ra0.8μm



Thread type



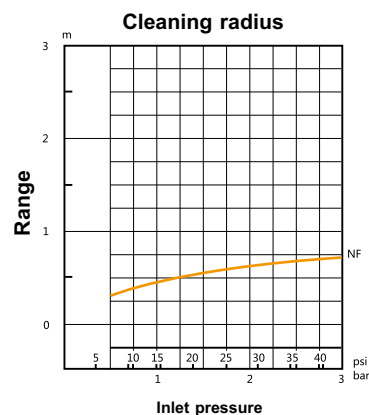
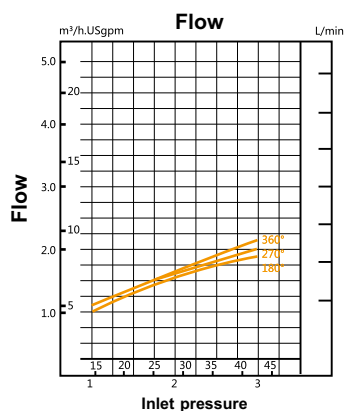
Plug type



Welded type

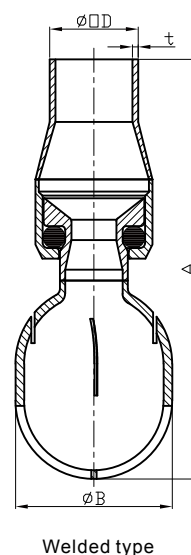
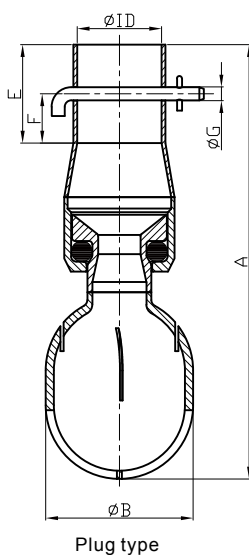
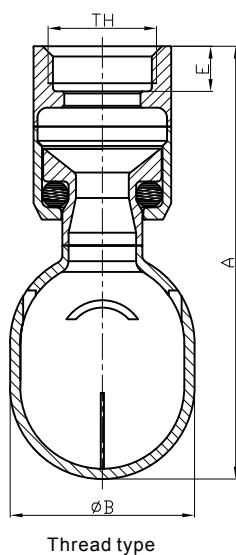
KRSH-25 Standard size

Types	A	B	E	F	G	Interface size
Thread type	61.4	25	11	/	/	3/8"Rp(BSP) or 3/8"NPT
Plug type	61.4	25	11	5.9	3.6	ID:19.2
Welding type	61.4	25	/	/	/	ODxt : 19.1x1.65



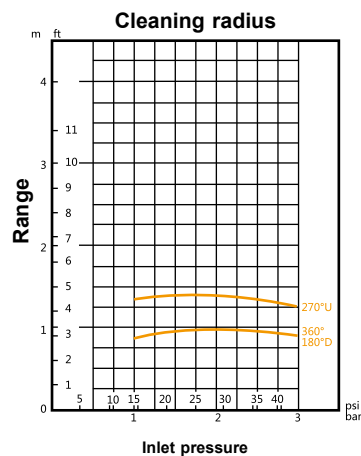
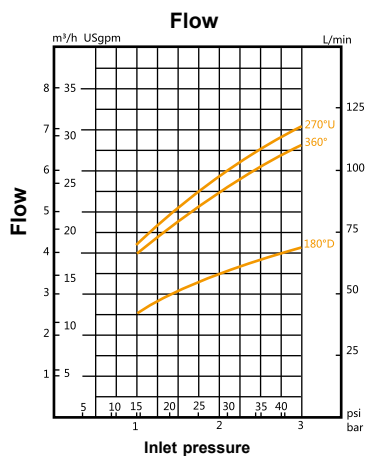
Tank Cleaning Equipment

Lubricant	Self-lubricating through the cleaning solution
Material	AISI 316L (UNSS31603)
Size	Min. $\Phi 25\text{mm}$
Operating pressure	1 ~ 3bar
Recommended pressure	2bar
Operating temperature	95°C
Ambient temperature	140°C
Wetting radius	2.5m
Cleaning radius	Max.0.6m
Interface form Thread type	Thread type: 3/4"Rp(BSP)
Plug type	1"(BPE/3A)
Welded type	1"(BPE/3A)
Surface treatment	Inner surface Ra0.5 μm , Outer surface Ra0.8 μm



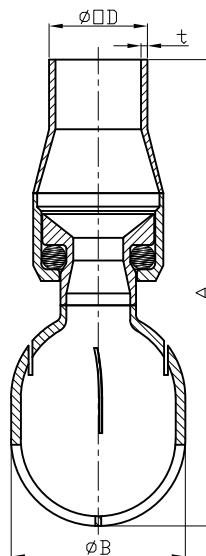
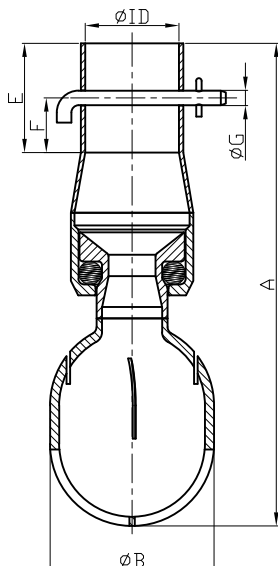
KRSH-25 Standard size

Types	A	B	E	F	G	Interface size
Thread type	105.6	45	11	/	/	3/4"Rp(BSP) or 3/4"NPT
Plug type	132.5	45	30	15	4.2	ID:25.7
Welding type	120.5,500	45	/	/	/	ODxt : 25.4x1.65



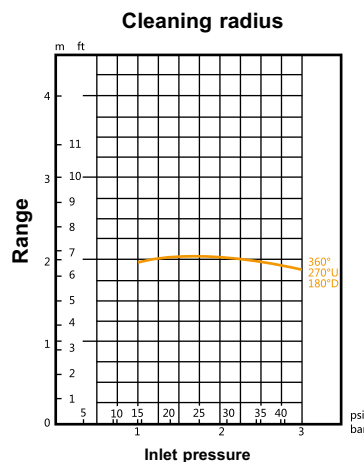
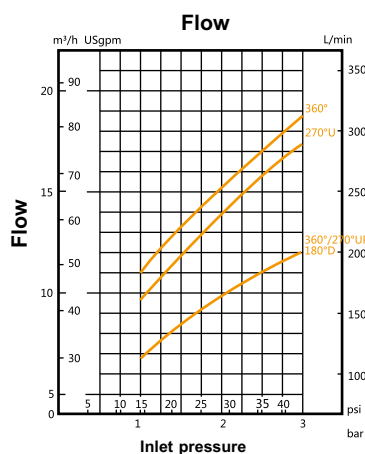
Tank Cleaning Equipment

Lubricant	Self-lubricating through the cleaning solution
Material	AISI 316L (UNSS31603)
Size	Min.Φ65mm
Operating pressure	1 ~ 3bar
Recommended pressure	2bar
Operating temperature	95°C
Ambient temperature	140°C
Wetting radius	3m
Cleaning radius	Max.2m
Interface form Thread type	Plug type: 1.5"/2.0"(BPE/ISO)
Welded type	1.5"/2.0"(BPE/ISO)
Surface treatment	Outer surface Ra0.5μm, Inner surface Ra0.8μm



KRSH-65 Standard size

Types	A	B	E	F	G	Interface size (1.5")	Interface size (2.0")
Plug type	154.8	65	30	15	4.2	ID:38.4	ID:51.1
Welding type	154.8	65	/	/	/	Od x t : 38.1x1.65	OD x t : 50.8x1.65

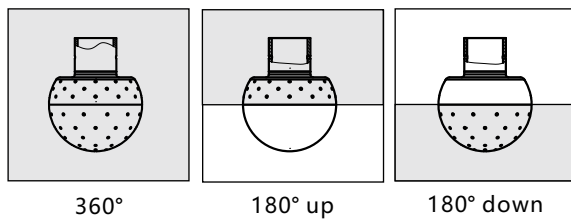


Tank Cleaning Equipment

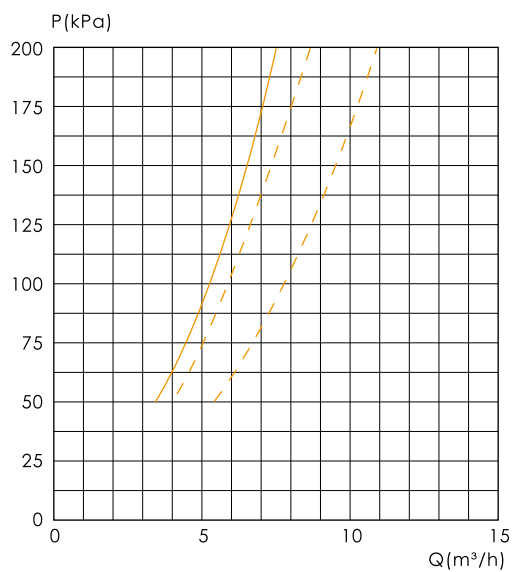
KSB is a fixed spray ball for cleaning the tank in the food and beverage industry

Fixed spray ball is used in cleaning task with lower requirement.

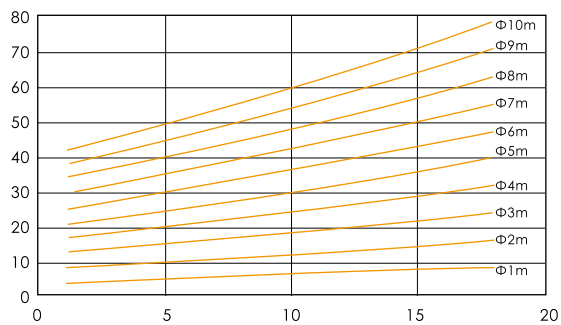
Spray Pattern

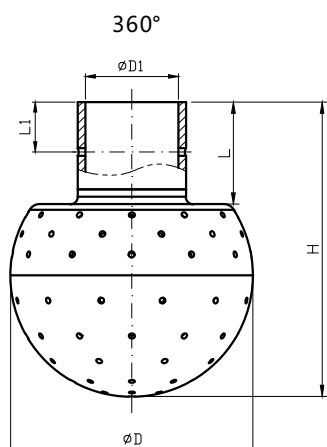


Flow chart



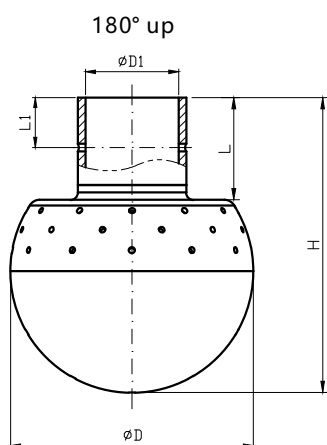
Flow demand/vertical tank





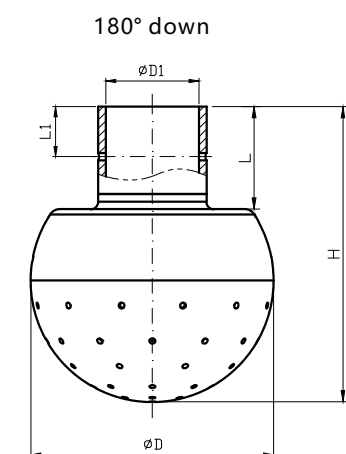
360°

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Overcurrent diameter(Øm)
3/4"	40	19.3	52.6	21.0	9.0	4.2		1.0-1.5
1.0"	65	25.3	79.0	27.4	13.4	11.0	17.3	2.5-3.0
1.5"	65	38.3	79.0	27.4	13.4	11.8	19.2	2.5-3.5
2.0"	91	51.3	114.0	38.5	17.25	28.6	41.7	4.0-5.0



180° up

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Overcurrent diameter(Øm)
3/4"	40	19.3	52.6	21.0	9.0	2.1		1.0-1.5
1.0"	65	25.3	79.0	27.4	13.4	8.7	12.8	2.5-3.0
1.5"	65	38.3	79.0	27.4	13.4	9.6	14.8	2.5-3.5
2.0"	91	51.3	114.0	38.5	17.25	19.5	30.6	4.0-5.0



180° down

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Overcurrent diameter(Øm)
3/4"	40	19.3	52.6	21.0	9.0	2.5		1.0-1.5
1.0"	65	25.3	79.0	27.4	13.4	7.0	10.9	2.5-3.0
1.5"	65	38.3	79.0	27.4	13.4	10.9	16.6	2.5-3.5
2.0"	91	51.3	114.0	38.5	17.25	17.0	28.0	4.0-5.0

Hygienic Double tube Sheet & Tube Heat Exchanger



Application:

Hygienic Double tube Sheet & Tube Heat Exchanger are widely used in the pharmaceutical, biopharmaceutical, food, and other industries; they are mainly used for heating and cooling injection water, purified water, and products.

Product Details:

- Product wetted material: Stainless steel 316L.
- Non-metallic materials: O-ring materials are available in EPDM, VITON, FDA 21CFR177 and USP Class VI.
- Design pressure: -1~10 Bar
- Design temperature: 150~200°C
- Heat exchanger types: Straight tube, U tube.
- Standards: GB, ASME VII, PED
- Surface finish: The tube pass can provide mechanical polishing Ra0.6um, Ra0.4um, electrolytic polishing Ra0.4um; the outer surface can be sandblasted or wire drawing.
- Insulation: The heat exchanger shell can provide rock wool or aluminosilicate insulation.

Documentation:

The following completion documents provides with heat exchanger pipe.

- FDA certificate and USP Class VI certificate.
- Weld layout, weld record, welder list, and welder qualification certificate.
- The non-destructive test report, pressure test report, and penetration test report.
- QC and QA inspection report.
- Pickling passivation report, electrolytic polishing report, and roughness test report.
- ASME U stamp or PED certificate.
- Installation, operation and maintenance manual
- Spare parts list.

