

DIN

TUBES & FITTINGS
SANITARY VALVES
TANKS

DIN

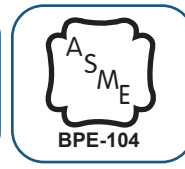
Hygienic Fluid Equipment Professional Manufacturers.

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



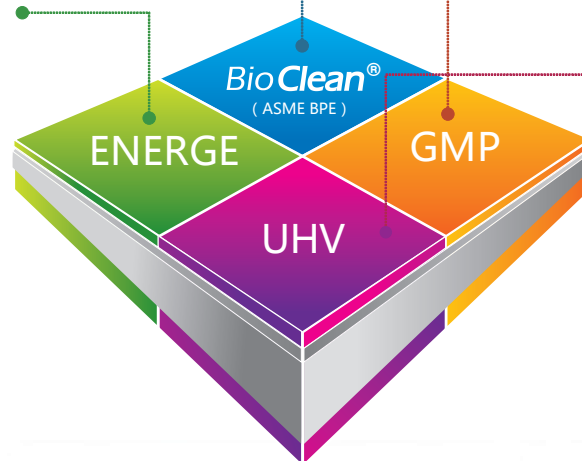
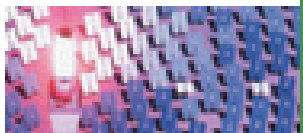
FOODS & BEVERAGE SAFETY PRODUCTION

DRINKS, DAIRY, BREW, WINES,



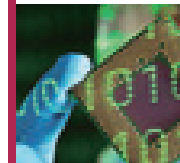
ENERGY SAVING & ENVIRONMENTS

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.

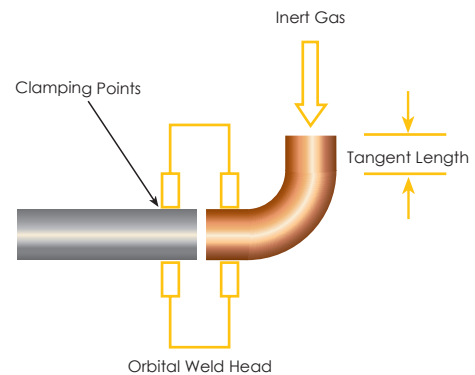
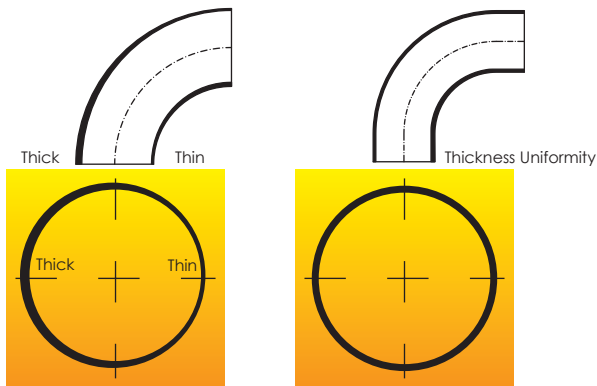
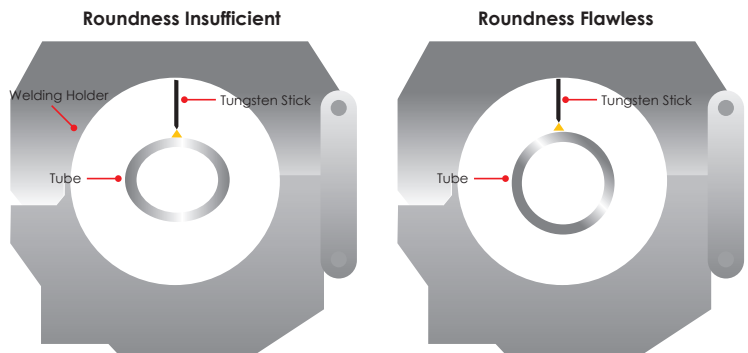
King Lai is constantly improving and upgrading to meet all technological requirements. King Lai's ISO 9001 certification and 3A certification are the results of our dedication to customer service and product quality. With this in mind, we are proud to say "customer success is our success". King Lai supplies 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

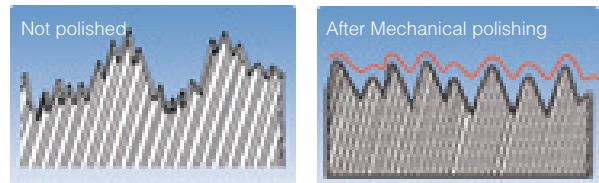
1. Crack
2. Non-fusion
3. Lack of penetration
4. Bubble
5. Undercut
6. Crater
7. Slag inclusion
8. Burn through
9. Overlap
10. Forming uneven
11. Weld repair

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.

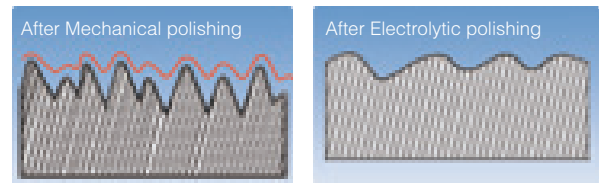
Mechanically Polished (MP)

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°C with hydrogen protection, after reaching 1050°C. 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.



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						
			1/2"	12.7	1.65	DN15	19	1.5	DN15	18	1.0	DN15	18	1.5	3/8"	9.53	0.89	1/2"	12.7	1.6	1/2"	12.7	1.5
			3/4"	19.05	1.65	DN20	23	1.5	DN20	22	1.0	DN20	22	1.5	1/2"	12.7	1.65	3/4"	19.05	1.6	3/4"	19.05	1.5
25	25.0	1.2	1.0"	25.4	1.65	DN25	29	1.5	DN25	28	1.0	DN25	28	1.5	3/4"	19.1	1.65	1.0"	25.4	1.6	1.0"	25.4	1.5
32	31.8	1.2				DN32	35	1.5	DN32	34	1.0	DN32	34	1.5	1.0"	25.4	1.65	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															
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															
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															
129	129.0	2	6.0"	152.4	2.77	DN150	154	2							6.0"	152.4	2.77	5.0"	129	2	6.0"	154	2
204	204.0	2	8.0"	203.2	2.77	DN200	204	2										6.0"	154	2	8.0"	204	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								

Sanitary stainless steel pipe rated pressure

OD	WALL	WELD	Max. allowable pressure in bar							
			20°C	100°C	150°C	200°C	250°C	300°C	350°C	400°C
mm	mm	Factor(v)								
6.35	0.89	1.0	361	303	309	280	260	245	234	222
6.35	1.24	1.0	503	422	456	414	384	362	345	323
9.53	0.71	1.0	192	161	154	139	129	122	116	111
9.53	0.89	1.0	240	202	196	178	165	156	149	141
9.53	1.24	1.0	335	281	284	257	239	225	215	204
12.70	0.71	1.0	144	121	113	103	95	90	86	82
12.70	0.89	1.0	130	151	144	131	121	114	109	104
12.70	1.24	1.0	251	211	206	137	173	164	156	148
12.70	1.65	1.0	334	281	283	257	238	225	215	204
15.88	0.71	1.0	115	97	90	81	75	71	68	65
15.88	0.89	1.0	144	121	114	103	96	90	86	82
15.88	1.24	1.0	201	169	162	147	136	129	122	116
15.88	1.65	1.0	257	224	221	200	186	175	167	159
19.05	0.71	1.0	96	81	74	67	62	59	56	53
19.05	0.89	1.0	120	101	94	65	79	75	71	68
19.05	1.24	1.0	168	141	133	121	112	106	101	96
19.05	1.65	1.0	223	187	181	164	152	144	137	130
19.05	2.11	1.0	285	239	237	215	199	188	179	171
25.40	0.89	1.0	90	76	70	63	59	56	53	50
25.40	1.24	1.0	126	106	98	89	83	76	74	71
25.40	1.65	1.0	167	140	133	120	112	106	101	96
25.40	2.11	1.0	214	179	173	157	145	137	131	124
25.40	2.77	1.0	291	236	233	211	196	185	176	168
31.75	0.89	1.0	72	61	55	50	47	44	42	40
31.75	1.24	1.0	101	64	78	71	66	62	59	56
31.75	1.65	1.0	134	112	105	96	88	83	79	76
31.75	2.11	1.0	171	144	136	123	115	108	103	98
31.75	2.77	1.0	225	188	132	165	153	145	138	131
38.10	0.89	1.0	50	50	46	42	39	37	35	32
38.10	1.24	1.0	84	76	65	59	54	51	49	46

Sanitary stainless steel pipe rated pressure

OD	WALL	WELD	Max. allowable pressure in bar							
			20°C	100°C	150°C	200°C	250°C	300°C	350°C	400°C
mm	mm	Factor(v)								
38.10	1.50	1.0	101	85	79	71	66	62	60	57
38.10	1.65	1.0	111	94	87	79	73	69	66	62
38.10	2.11	1.0	143	120	112	102	94	89	85	81
38.10	2.77	1.0	137	157	150	136	125	119	113	108
44.50	1.24	1.0	72	80	55	50	46	44	42	40
44.50	1.65	1.0	95	80	74	67	62	59	56	53
44.50	2.11	1.0	122	102	95	86	80	76	72	69
44.50	2.77	1.0	160	134	127	115	107	101	96	91
50.80	1.24	1.0	63	63	48	44	40	38	36	35
50.80	1.50	1.0	76	64	58	53	49	48	44	42
50.80	1.65	1.0	84	70	64	56	54	61	49	46
50.80	2.11	1.0	107	90	83	75	70	66	63	60
50.80	2.77	1.0	140	118	110	100	93	88	84	79
50.80	3.40	1.0	172	145	137	124	115	109	104	99
63.5	1.24	1.0	50	42	38	35	32	30	29	28
63.5	1.65	1.0	57	56	51	46	43	41	39	37
63.5	2.11	1.0	86	72	66	68	55	52	50	47
63.5	2.77	1.0	112	94	87	79	74	69	66	63
63.5	3.40	1.0	138	116	108	98	91	86	82	78
76.2	1.65	1.0	55	47	43	39	36	34	32	31
76.2	2.11	1.0	71	60	55	50	46	43	41	39
76.2	2.77	1.0	94	79	72	66	64	57	55	52
76.2	3.40	1.0	115	96	90	81	75	71	68	64
76.2	4.00	1.0	135	113	106	96	89	84	80	76
88.9	1.65	1.0	43	40	36	33	31	29	23	25
88.9	2.11	1.0	61	51	47	42	39	37	35	34
88.9	2.77	1.0	80	67	62	56	52	49	47	44
88.9	3.05	1.0	88	74	66	62	57	54	52	49
88.9	3.40	1.0	98	83	76	69	64	61	58	55
88.9	4.00	1.0	116	97	90	82	76	72	68	65
101.5	1.65	1.0	42	35	32	29	27	25	24	23
101.5	2.11	1.0	53	45	41	37	34	32	31	29
101.5	2.77	1.0	70	59	54	49	45	43	41	39
101.5	3.40	1.0	86	72	66	60	56	53	50	48
101.5	4.00	1.0	101	86	79	71	66	62	60	57
114.3	1.65	1.0	37	31	28	26	24	22	21	20
114.3	2.11	1.0	48	40	36	33	30	29	27	26
114.3	2.77	1.0	52	52	48	43	40	38	36	34
114.3	3.05	1.0	59	58	53	48	44	42	40	38
114.3	3.40	1.0	77	64	59	53	50	47	45	42
114.3	4.00	1.0	90	76	70	63	59	55	53	50
127.0	1.65	1.0	33	28	25	23	21	20	19	18
127.0	2.11	1.0	43	36	32	29	27	26	25	23
127.0	2.77	1.0	56	47	43	39	36	34	32	31
127.0	3.40	1.0	69	58	53	48	44	42	40	38
127.0	4.00	1.0	81	68	62	57	53	50	47	45
139.7	1.65	1.0	30	26	23	21	19	18	17	17

Sanitary stainless steel pipe rated pressure

OD	WALL	WELD	Max. allowable pressure in bar							
			20°C	100°C	150°C	200°C	250°C	300°C	350°C	400°C
mm	mm	Factor(v)								
139.7	2.11	1.0	39	33	29	27	25	23	22	21
139.7	2.77	1.0	51	43	39	35	33	31	29	28
139.7	3.40	1.0	63	53	48	43	40	38	36	34
139.7	4.00	1.0	74	62	57	51	48	45	43	41
152.4	1.65	1.0	28	23	21	19	18	17	16	15
152.4	2.11	1.0	36	30	27	24	23	21	20	19
152.4	2.77	1.0	47	39	36	32	30	26	27	26
152.4	3.40	1.0	57	48	44	40	37	35	33	32
152.4	4.00	1.0	63	57	52	47	44	41	39	37

Hygienic Union



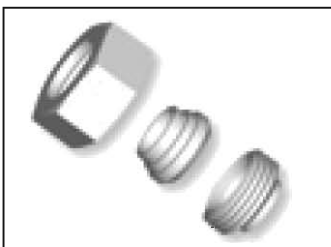
3A



DIN1212002



RJT1412001



ISO



IDF

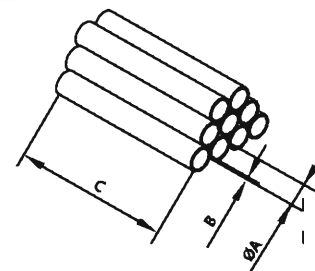
Material features of union ring seals

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.	Nom.Size	A	B	C
1480001XX000012	10	12	1.5	6000
1480001XX000013	10	13	1.5	6000
1480001XX000018	15	18	1.5	6000
1480001XX000019	15	19	1.5	6000
1480001XX000022	20	22	1.5	6000
1480001XX000023	20	23	1.5	6000
1480001XX000028	25	28	1.5	6000
1480001XX000029	25	29	1.5	6000
1480001XX000034	32	34	1.5	6000
1480001XX000035	32	35	1.5	6000
1480001XX000040	40	40	1.5	6000
1480001XX000041	40	41	1.5	6000
1480001XX000052	50	52	1.5	6000
1480001XX000053	50	53	1.5	6000
1480001XX000065	60	65	2.0	6000
1480001XX000070	65	70	2.0	6000
1480001XX000085	80	85	2.0	6000
1480001XX000104	100	104	2.0	6000
1480001XX000129	125	129	2.0	6000
1480001XX000154	150	154	2.0	6000
1480001XX000204	200	204	2.0	6000



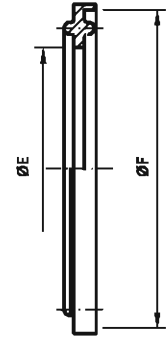
Remark: XX Polishing grade

Polishing grade

- QQ:** External surface finish average $Ra \leq 0.8\mu\text{m}$, Internal bright anneal $Ra \leq 0.8\mu\text{m}$
- QG:** External surface finish $Ra \leq 0.8\mu\text{m}$, Internal surface finish $Ra \leq 0.8\mu\text{m}$
- GG:** External surface finish $Ra \leq 0.8\mu\text{m}$, Internal surface finish $Ra \leq 0.8\mu\text{m}$
- HG:** External surface finish $Ra \leq 0.8\mu\text{m}$, Internal surface finish $Ra \leq 0.5\mu\text{m}$
- 4G:** External surface finish $Ra \leq 0.8\mu\text{m}$, Internal surface finish $Ra \leq 0.375\mu\text{m}$ electro polish

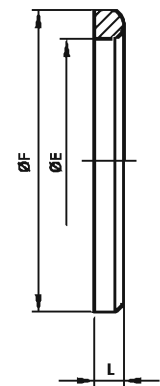
Seal Ring

No.	Nom.Size	E	F
1415002-000010	10	10.2	34.0
1415002-000015	15	16.2	34.0
1415002-000020	20	20.2	34.0
1415002-000025	25	26.2	50.5
1415002-000032	32	32.2	50.5
1415002-000040	40	38.2	50.5
1415002-000050	50	50.2	64.0
1415002-000065	65	66.2	91.0
1415002-000080	80	81.2	106.0
1415002-000100	100	100.2	119.0
1415002-000125	125	125.2	155.0
1415002-000150	150	150.2	183.0



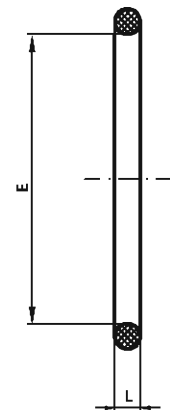
O-Ring

No.	Nom.Size	E	F	L
1415001-000010	10	12.0	20.0	4.5
1415001-000015	15	18.0	26.0	4.5
1415001-000020	20	23.0	33.0	4.5
1415001-000025	25	30.0	40.0	5.0
1415001-000032	32	36.0	46.0	5.0
1415001-000040	40	42.0	52.0	5.0
1415001-000050	50	54.0	64.0	5.0
1415001-000065	65	71.0	81.0	5.0
1415001-000080	80	85.0	95.0	5.0
1415001-000100	100	104.0	114.0	6.0
1415001-000125	125	130.0	142.0	7.0
1415001-000150	150	155.0	167.0	7.0



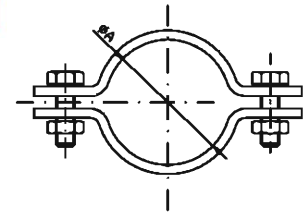
DIN11864-R Seal Ring

No.	Nom.Size	E	L
5415001-000010	10	12.0	3.5
5415001-000015	15	18.0	3.5
5415001-000020	20	22.0	3.5
5415001-000025	25	28.0	3.5
5415001-000032	32	34.0	5.0
5415001-000040	40	40.0	5.0
5415001-000050	50	52.0	5.0
5415001-000065	65	68.0	5.0
5415001-000080	80	83.0	5.0
5415001-000100	100	102.0	5.0
5415001-000125	125	127.0	5.0
5415001-000150	150	152.0	5.0



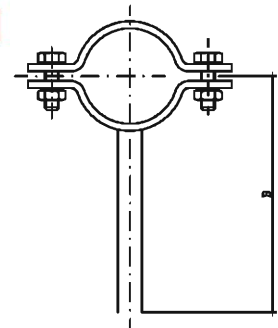
Tube holder without shaft

No.	Nom.Size	A
1424005-000010	DN10	12.0
1424005-000015	DN15	18.0
1424005-000020	DN20	22.0
1424005-000025	DN25	28.0
1424005-000032	DN32	34.0
1424005-000040	DN40	40.0
1424005-000050	DN50	52.0
1424005-000065	DN65	70.0
1424005-000080	DN80	85.0
1424005-000100	DN100	104.0
1424005-000125	DN125	129.0
1424005-000150	DN150	154.0
1424005-000200	DN200	204.0



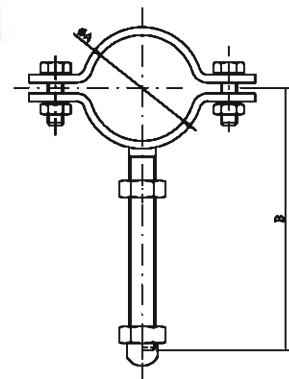
Tube holder with long shaft

No.	Nom.Size	A	B
1424006-000010	DN10	12.0	64.0
1424006-000015	DN15	18.0	67.0
1424006-000020	DN20	22.0	69.0
1424006-000025	DN25	28.0	72.0
1424006-000032	DN32	34.0	75.0
1424006-000040	DN40	40.0	78.0
1424006-000050	DN50	52.0	84.0
1424006-000065	DN65	70.0	93.0
1424006-000080	DN80	85.0	100.5
1424006-000100	DN100	104.0	110.0
1424006-000125	DN125	129.0	140.0
1424006-000150	DN150	154.0	180.0
1424006-000200	DN200	204.0	241.0



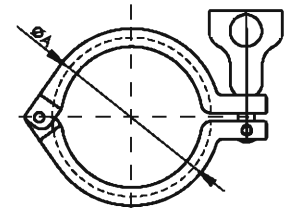
Tube holder with male attachment

No.	Nom.Size	A	B
1424007-000010	DN10	12.0	74.0
1424007-000015	DN15	18.0	77.0
1424007-000020	DN20	22.0	79.0
1424007-000025	DN25	28.0	102.0
1424007-000032	DN32	34.0	105.0
1424007-000040	DN40	40.0	108.0
1424007-000050	DN50	52.0	114.0
1424007-000065	DN65	70.0	123.0
1424007-000080	DN80	85.0	130.5
1424007-000100	DN100	104.0	140.0
1424007-000125	DN125	129.0	168.5
1424007-000150	DN150	154.0	202.0



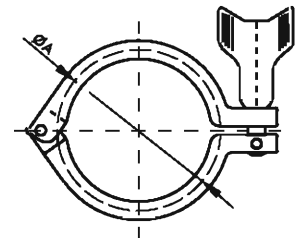
13MHH Clamp

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



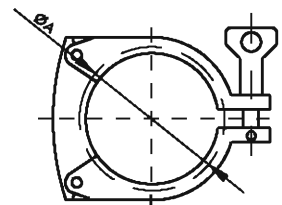
13MHH Clamp

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



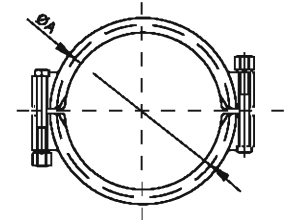
13MHH3 Clamp

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



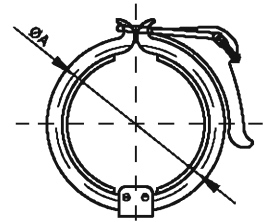
13MHP Clamp

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



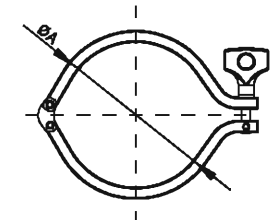
13MHL Clamp

No.	Nom.Size	A
1513004-000051	1.0"	53.9
1513004-000051	1.5"	53.9
1513004-000064	2.0"	67.4
1513004-000078	2.5"	80.9
1513004-000091	3.0"	94.4
1513004-000119	4.0"	122.4



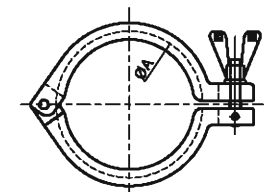
TC Clamp

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



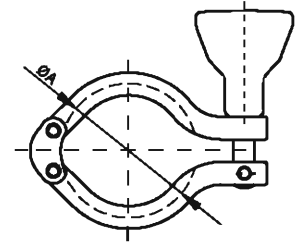
13MHH Clamp

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



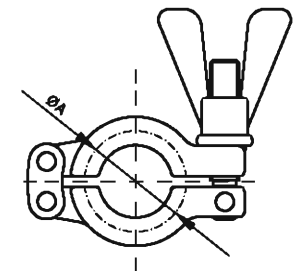
TC Clamp

No.	Nom.Size	A
1213007-000100	1.0"	53.9
1213007-000150	1.5"	53.9
1213007-000200	2.0"	67.4
1213007-000250	2.5"	80.9
1213007-000300	3.0"	94.4
1213007-000400	4.0"	122.4



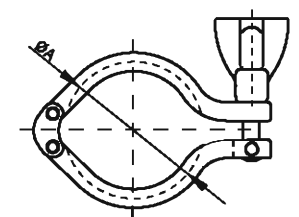
TC Clamp

No.	Nom.Size	A
1513028-000025	1/2"	28.0
1513028-000025	3/4"	28.0
1513028-000051	1.0"	53.9
1513028-000051	1.5"	53.9
1513028-000064	2.0"	67.4
1513028-000078	2.5"	80.9
1513028-000091	3.0"	94.4
1513028-000119	4.0"	122.0



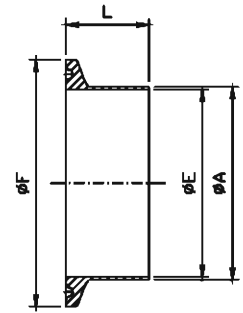
TC Clamp

No.	Nom.Size	A
1213001-000100	1.0"	53.9
1213001-000150	1.5"	53.9
1213001-000200	2.0"	67.4
1213001-000250	2.5"	80.9
1213001-000300	3.0"	94.4
1213001-000400	4.0"	122.4



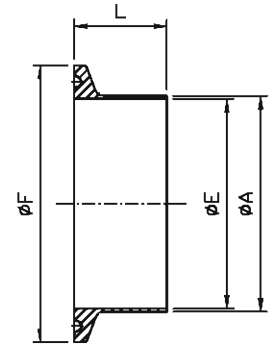
DIN11852 Clamp Ferrule

No.	Nom.Size	A	E	F	L
1414A05-000025	25	29	26	50.5	13.0
1414A05-000032	32	35	32	50.5	13.0
1414A05-000040	40	41	38	50.5	13.0
1414A05-000050	50	53	50	64.0	13.0
1414A05-000065	65	70	66	91.0	13.0
1414A05-000080	80	85	81	106.0	13.0
1414A05-000100	100	104	100	119.0	13.0



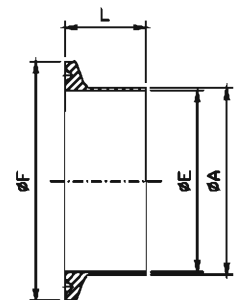
DIN11852 Clamp Ferrule

No.	Nom.Size	A	E	F	L
1414A06-000010	10	13	10	34.0	38.0
1414A06-000015	15	19	16	34.0	38.0
1414A06-000020	20	23	20	34.0	38.0
1414A06-000025	25	29	26	50.5	38.0
1414A06-000032	32	35	32	50.5	38.0
1414A06-000040	40	41	38	50.5	38.0
1414A06-000050	50	53	50	64.0	38.0
1414A06-000065	65	70	66	91.0	38.0
1414A06-000080	80	85	81	106.0	38.0
1414A06-000100	100	104	100	119.0	38.0



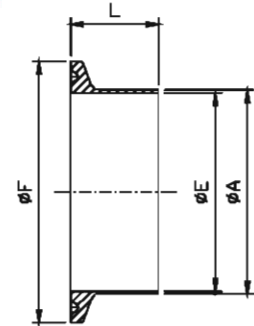
DIN11852 Clamp Ferrule

No.	Nom.Size	A	E	F	L
1414001-000010	10	12	90	34.0	18.0
1414001-000015	15	18	15	34.0	18.0
1414001-000020	20	22	19	34.0	18.0
1414001-000025	25	28	25	50.5	21.5
1414001-000032	32	34	31	50.5	21.5
1414001-000040	40	40	37	50.5	21.5
1414001-000050	50	52	49	64.0	21.5



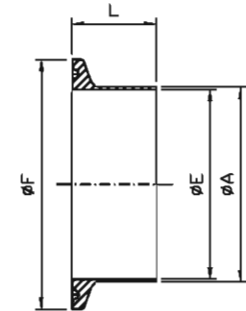
DIN11852 Clamp Ferrule

No.	Nom.Size	A	E	F	L
1414A04-000010	10	13	10	34.0	35.0
1414A04-000015	15	19	16	34.0	35.0
1414A04-000020	20	23	20	34.0	35.0
1414A04-000025	25	29	26	50.5	35.0
1414A04-000032	32	35	32	50.5	40.0
1414A04-000040	40	41	38	50.5	40.0
1414A04-000050	50	53	50	64.0	40.0
1414A04-000065	65	70	66	91.0	50.0
1414A04-000080	80	85	81	106.0	50.0
1414A04-000100	100	104	100	119.0	50.0



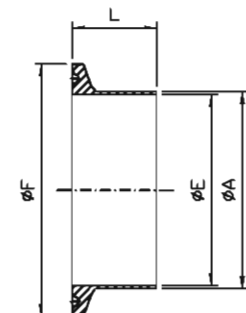
DIN11852 Clamp Ferrule

No.	Nom.Size	A	E	F	L
1414A01-000010	10	13	10	34.0	18.0
1414A01-000015	15	19	16	34.0	18.0
1414A01-000020	20	23	20	34.0	18.0
1414A01-000025	25	29	26	50.5	21.5
1414A01-000032	32	35	32	50.5	21.5
1414A01-000040	40	41	38	50.5	21.5
1414A01-000050	50	53	50	64.0	21.5
1414A01-000065	65	70	66	91.0	28.0
1414A01-000080	80	85	81	106.0	28.0
1414A01-000100	100	104	100	119.0	28.0
1414A01-000125	125	129	125	155.0	28.0
1414A01-000150	150	154	150	183.0	28.0
1414A01-000200	200	204	200	233.5	28.0



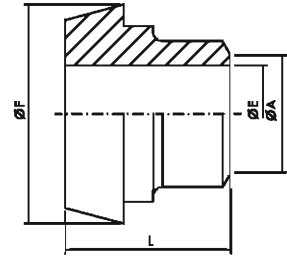
DIN11852 Clamp Ferrule

No.	Nom.Size	A	E	F	L
1414A02-000010	10	13	10	34.0	36.0
1414A02-000015	15	19	16	34.0	36.0
1414A02-000020	20	23	20	34.0	36.0
1414A02-000025	25	29	26	50.5	36.0
1414A02-000032	32	35	32	50.5	36.0
1414A02-000040	40	41	38	50.5	36.0
1414A02-000050	50	53	50	64.0	36.0
1414A02-000065	65	70	66	91.0	48.0
1414A02-000080	80	85	81	106.0	48.0
1414A02-000100	100	104	100	119.0	48.0
1414A02-000125	125	129	125	155.0	66.0
1414A02-000150	150	154	150	183.0	66.0
1414A02-000200	200	204	200	233.5	66.0



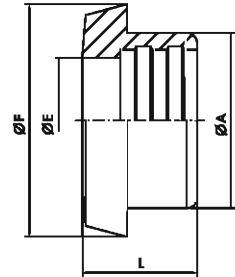
DIN11852 Liner

No.	Nom.Size	A	E	F	L
1410001-000010	10	12.0	10.0	22.0	17.0
1410001-000015	15	18.0	16.0	28.0	17.0
1410001-000020	20	22.0	20.0	36.0	18.0
1410001-000025	25	28.0	26.0	44.0	22.0
1410001-000032	32	34.0	32.0	50.0	25.0
1410001-000040	40	40.0	38.0	56.0	26.0
1410001-000050	50	50.0	50.0	68.0	28.0
1410001-000065	65	65.0	66.0	86.0	32.0
1410001-000080	80	80.0	81.0	100.0	37.0
1410001-000100	100	101.6	100.0	121.0	44.0
1410001-000125	125	127.0	125.0	150.0	34.0
1410001-000150	150	152.0	150.0	176.0	37.0



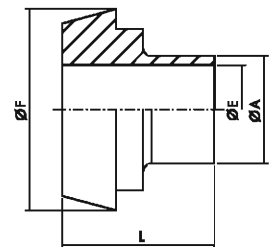
DIN11852 Liner

No.	Nom.Size	A	E	F	L
1410002-000010	10	18.0	10.0	22.5	17.0
1410002-000015	15	24.0	16.0	28.5	17.0
1410002-000020	20	30.0	20.0	36.5	18.0
1410002-000025	25	35.0	26.0	44.0	22.0
1410002-000032	32	41.0	32.0	50.0	25.0
1410002-000040	40	48.0	38.0	56.0	26.0
1410002-000050	50	61.0	50.0	68.5	28.0
1410002-000065	65	79.0	66.0	86.0	32.0
1410002-000080	80	93.0	81.0	100.0	37.0
1410002-000100	100	114.0	100.0	121.0	44.0



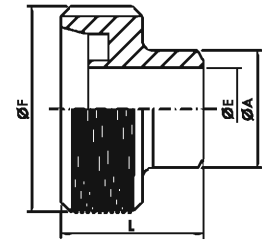
DIN11852 Liner

No.	Nom.Size	A	E	F	L
1410015-000010	10	12.0	9.0	22.0	17.0
1410015-000015	15	18.0	15.0	28.0	17.0
1410015-000020	20	22.0	19.0	36.0	18.0
1410015-000025	25	28.0	25.0	44.0	22.0
1410015-000032	32	34.0	31.0	50.0	25.0
1410015-000040	40	40.0	37.0	56.0	26.0
1410015-000050	50	52.0	49.0	68.0	28.0



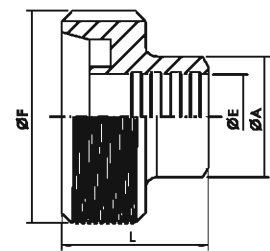
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409001-000010	10	15.0	10.0	RD 28x1/8"	21.0
1409001-000015	15	21.0	16.0	RD 34x1/8"	21.0
1409001-000020	20	25.0	20.0	RD 44x1/6"	24.0
1409001-000025	25	31.0	26.0	RD 52x1/6"	29.0
1409001-000032	32	37.0	32.0	RD 58x1/6"	32.0
1409001-000040	40	43.0	38.0	RD 65x1/6"	33.0
1409001-000050	50	55.0	50.0	RD 78x1/6"	35.0
1409001-000065	65	72.0	66.0	RD 95x1/6"	40.0
1409001-000080	80	87.0	81.0	RD110x1/4"	45.0
1409001-000100	100	106.0	100.0	RD130x1/4"	54.0
1409001-000125	125	132.0	125.0	RD160x1/4"	46.0
1409001-000150	150	157.0	150.0	RD110x1/4"	50.0



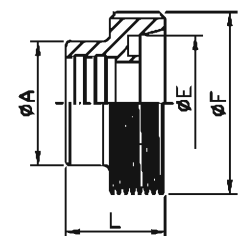
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409002-000010	10	18.0	10.0	RD 28x1/8"	21.0
1409002-000015	15	24.0	16.0	RD 34x1/8"	21.0
1409002-000020	20	30.0	20.0	RD 44x1/6"	24.0
1409002-000025	25	35.0	26.0	RD 52x1/6"	29.0
1409002-000032	32	41.0	32.0	RD 58x1/6"	32.0
1409002-000040	40	48.0	38.0	RD 65x1/6"	33.0
1409002-000050	50	61.0	50.0	RD 78x1/6"	35.0
1409002-000065	65	79.0	66.0	RD 95x1/6"	40.0
1409002-000080	80	93.0	81.0	RD110x1/4"	45.0
1409002-000100	100	114.0	100.0	RD130x1/4"	54.0
1409002-000101	101.6	112.0	99.0	RD130x1/4"	54.0



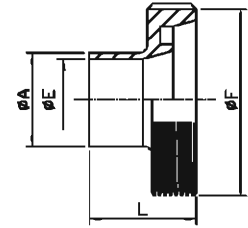
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409005-000100	1.0"	35.0	22.1	RD 52x1/6"	29.0
1409005-000150	1.5"	48.0	34.8	RD 65x1/6"	33.0
1409005-000200	2.0"	61.0	47.6	RD 78x1/6"	35.0
1409005-000250	2.5"	79.0	60.2	RD 95x1/6"	40.0
1409005-000300	3.0"	93.0	72.9	RD110x1/4"	45.0
1409005-000400	4.0"	114.0	97.4	RD130x1/4"	54.0



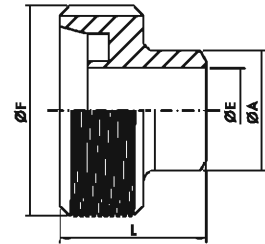
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409007-000025	25	25.65	22.2	RD 52x1/6"	29.0
1409007-000032	32	32.05	28.5	RD 65x1/6"	32.0
1409007-000040	40	38.35	34.9	RD 78x1/6"	33.0
1409007-000050	50	51.05	47.6	RD 95x1/6"	35.0
1409007-000065	65	63.75	60.3	RD 95x1/6"	40.0
1409007-000075	75	76.45	73.0	RD110x1/4"	45.0
1409007-000100	100	101.85	97.6	RD130x1/4"	54.0
1409007-000150	150	152.65	148.4	RD110x1/4"	50.0



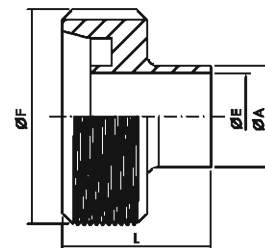
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409008-000015	15	18.0	15.0	RD34x1/8"	21.0
1409008-000020	20	22.0	19.0	RD44x1/6"	24.0
1409008-000025	25	28.0	25.0	RD52x1/6"	29.0
1409008-000032	32	34.0	31.0	RD58x1/6"	32.0
1409008-000040	40	40.0	37.0	RD65x1/6"	33.0
1409008-000050	50	52.0	49.0	RD78x1/6"	35.0



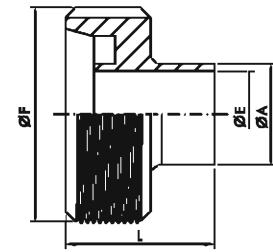
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409020-000010	1.0"	25.4	22.2	RD 52x1/6"	29.0
1409020-000015	1.5"	38.1	34.9	RD 65x1/6"	33.0
1409020-000020	2.0"	50.8	47.6	RD 78x1/6"	35.0
1409020-000025	2.5"	63.5	60.3	RD 95x1/6"	40.0
1409020-000300	3.0"	76.2	73.0	RD110x1/4"	45.0
1409020-000400	4.0"	101.6	97.6	RD130x1/4"	54.0
1409020-000600	6.0"	152.4	148.4	RD190x1/4"	50.0



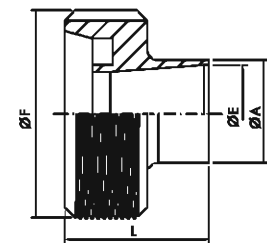
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409022-000010	10	13.0	10.0	RD 28-1/8"	21.0
1409022-000015	15	19.0	16.0	RD 34-1/8"	21.0
1409022-000020	20	23.0	20.0	RD 44-1/6"	24.0
1409022-000025	25	29.0	26.0	RD 52-1/6"	29.0
1409022-000032	32	35.0	32.0	RD 58-1/6"	32.0
1409022-000040	40	41.0	38.0	RD 65-1/6"	33.0
1409022-000050	50	53.0	50.0	RD 78-1/6"	35.0
1409022-000060	60	61.0	57.0	RD 85-1/6"	36.0
1409022-000065	65	70.0	66.0	RD 95-1/6"	40.0
1409022-000080	80	85.0	81.0	RD110-1/4"	45.0
1409022-000090	90	93.0	89.0	RD120-1/4"	54.0
1409022-000100	100	104.0	100.0	RD130-1/4"	54.0
1409022-000125	125	129.0	125.0	RD160-1/4"	46.0
1409022-000150	150	154.0	150.0	RD190-1/4"	50.0



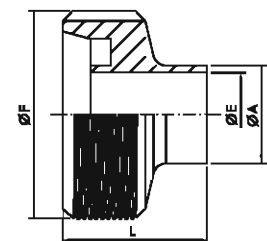
DIN11852 Male part

No.	Nom.Size	A	F	L	F
1409026-000010	10	17.2	14.0	RD 28x1/8"	21.0
1409026-000015	15	21.3	18.1	RD 34x1/8"	21.0
1409026-000020	20	26.9	23.7	RD 44x1/6"	24.0
1409026-000025	25	33.7	29.7	RD 52x1/6"	29.0
1409026-000032	32	42.4	38.4	RD 58x1/6"	32.0
1409026-000040	40	48.3	44.3	RD 65x1/6"	33.0
1409026-000050	50	60.3	56.3	RD 78x1/6"	35.0
1409026-000065	65	76.1	72.1	RD 95x1/6"	40.0
1409026-000080	80	88.9	84.9	RD110x1/4"	45.0
1409026-000100	100	114.3	110.3	RD130x1/4"	54.0



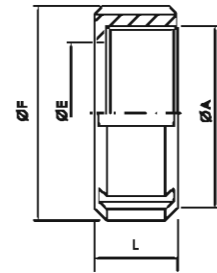
DIN11852 Male part

No.	Nom.Size	A	E	F	L
1409027-000100	1.0"	25.4	23.0	RD 52x1/6"	29.0
1409027-000125	1.25"	31.8	29.4	RD 58x1/6"	32.0
1409027-000150	1.5"	38.1	35.1	RD 65x1/6"	33.0
1409027-000200	2.0"	50.8	47.8	RD 78x1/6"	35.0
1409027-000250	2.5"	63.5	60.5	RD 95x1/6"	40.0
1409027-000300	3.0"	76.1	73.1	RD110x1/4"	45.0
1409027-000300	4.0"	101.6	97.6	RD130x1/4"	54.0



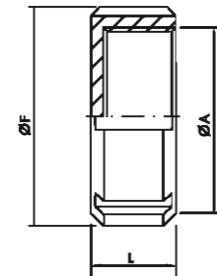
DIN11852 Nut

No.	Nom.Size	A	E	F	L
1408001-000010	10	RD28x1/8"	19.0	38.0	18.0
1408001-000015	15	RD34x1/8"	25.0	44.0	18.0
1408001-000020	20	RD44x1/6"	31.0	54.0	20.0
1408001-000025	25	RD52x1/6"	36.0	63.0	21.0
1408001-000032	32	RD58x1/6"	42.5	70.0	21.0
1408001-000040	40	RD65x1/6"	49.0	78.0	21.0
1408001-000050	50	RD78x1/6"	62.0	92.0	22.0
1408001-000060	60	RD85x1/6"	70.0	99.0	22.0
1408001-000065	65	RD95x1/6"	80.0	112.0	25.0
1408001-000075	75	RD104x1/6"	88.0	119.0	25.0
1408001-000080	80	RD110x1/4"	94.0	127.0	29.0
1408001-000100	100	RD130x1/4"	115.0	148.0	31.0
1408001-000125	125	RD160x1/4"	138.0	178.0	35.0
1408001-000150	150	RD190x1/4"	164.0	210.0	40.0



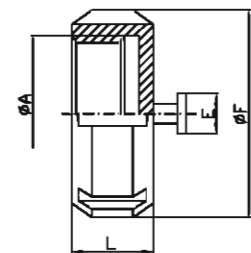
DIN11852 Nut

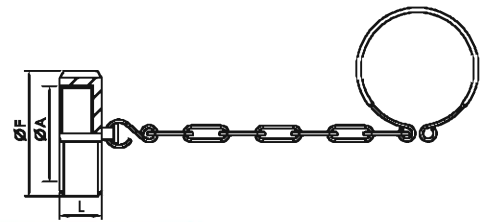
No.	Nom.Size	A	F	L
1408003-000010	10	RD28x1/8"	38.0	18.0
1408003-000015	15	RD34x1/8"	44.0	18.0
1408003-000020	20	RD44x1/6"	54.0	20.0
1408003-000025	25	RD52x1/6"	63.0	21.0
1408003-000032	32	RD58x1/6"	70.0	21.0
1408003-000040	40	RD65x1/6"	78.0	21.0
1408003-000050	50	RD78x1/6"	92.0	22.0
1408003-000065	65	RD95x1/6"	112.0	25.0
1408003-000080	80	RD110x1/4"	127.0	30.0
1408003-000100	100	RD130x1/4"	148.0	31.0
1408003-000125	125	RD160x1/4"	178.0	35.0
1408003-000150	150	RD190x1/4"	210.0	40.0



DIN11852 Nut

No.	Nom.Size	A	E	F	L
1408008-000010	10	RD28x1/8"	10.0	38.0	18.0
1408008-000015	15	RD34x1/8"	10.0	44.0	18.0
1408008-000020	20	RD44x1/6"	10.0	54.0	20.0
1408008-000025	25	RD52x1/6"	10.0	63.0	21.0
1408008-000032	32	RD58x1/6"	10.0	70.0	21.0
1408008-000040	40	RD65x1/6"	10.0	78.0	21.0
1408008-000050	50	RD78x1/6"	10.0	92.0	22.0
1408008-000065	65	RD95x1/6"	10.0	112.0	25.0
1408008-000080	80	RD110x1/4"	10.0	127.0	30.0
1408008-000100	100	RD130x1/4"	10.0	148.0	31.0
1408008-000125	125	RD160x1/4"	10.0	178.0	35.0
1408008-000150	150	RD190x1/4"	10.0	210.0	40.0



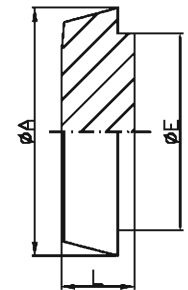


DIN11852 End Cap With Chain

No.	Nom.Size	A	E	F	L
1408006-000010	10	RD28x1/8"	10.0	38.0	18.0
1408006-000015	15	RD34x1/8"	10.0	44.0	18.0
1408006-000020	20	RD44x1/6"	10.0	54.0	20.0
1408006-000025	25	RD52x1/6"	10.0	63.0	21.0
1408006-000032	32	RD58x1/6"	10.0	70.0	21.0
1408006-000040	40	RD65x1/6"	10.0	78.0	21.0
1408006-000050	50	RD78x1/6"	10.0	92.0	22.0
1408006-000065	65	RD95x1/6"	10.0	112.0	25.0
1408006-000080	80	RD110x1/4"	10.0	127.0	30.0
1408006-000100	100	RD130x1/4"	10.0	148.0	31.0
1408006-000125	125	RD160x1/4"	10.0	178.0	35.0
1408006-000150	150	RD190x1/4"	10.0	210.0	40.0

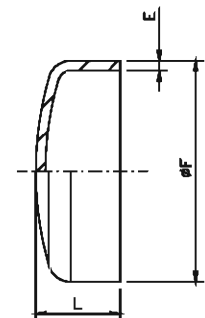
DIN11852 Blank

No.	Nom.Size	A	E	L
1416001-000010	10	22.5	18.0	9.0
1416001-000015	15	28.5	24.0	9.0
1416001-000020	20	36.5	30.0	11.0
1416001-000025	25	44.0	35.0	13.0
1416001-000032	32	50.0	41.0	13.0
1416001-000040	40	56.0	48.0	13.0
1416001-000050	50	68.5	61.0	14.0
1416001-000065	65	86.0	79.0	16.0
1416001-000075	75	93.0	86.0	16.0
1416001-000080	80	100.0	93.0	16.0
1416001-000100	100	125.0	114.0	20.0
1416001-000125	125	150.0	137.0	22.0
1416001-000150	150	176.0	163.0	24.0



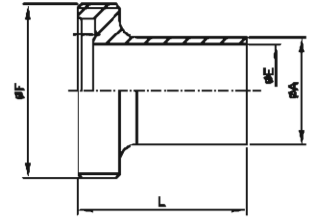
DIN11852 Blank End Cap

No.	Nom.Size	E	F	L
1416004-000025	25	1.5	28.0	11.5
1416004-000032	32	1.5	34.0	13.0
1416004-000040	40	1.5	40.0	14.0
1416004-000050	50	1.5	52.0	17.0
1416004-000065	65	2.0	70.0	21.5
1416004-000080	80	2.0	85.0	24.5
1416004-000100	100	2.0	104.0	28.5
1416004-000125	125	2.0	129.0	33.0
1416004-000150	150	2.0	154.0	38.0
1416004-000200	200	2.0	204.0	48.0
1416004-000300	300	3.0	307.0	87.0



DIN11864-1-GS-A

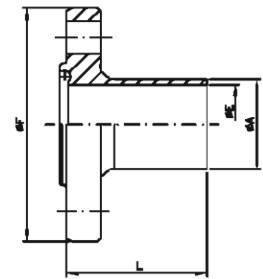
No.	Nom.Size	A	E	F	L
5409A01-000010	10	13.0	10.0	RD28x1/8"	41.0
5409A01-000015	15	19.0	16.0	RD34x1/8"	41.0
5409A01-000020	20	23.0	20.0	RD44x1/6"	43.0
5409A01-000025	25	29.0	26.0	RD52x1/6"	43.0
5409A01-000032	32	35.0	32.0	RD58x1/6"	48.0
5409A01-000040	40	41.0	38.0	RD65x1/6"	48.0
5409A01-000050	50	53.0	50.0	RD78x1/6"	48.0
5409A01-000065	65	70.0	66.0	RD95x1/6"	60.0
5409A01-000080	80	85.0	81.0	RD110x1/4"	64.0
5409A01-000100	100	104.0	100.0	RD130x1/4"	64.0



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1.1

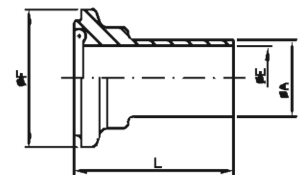
DIN11864-2-NF-A-DIN

No.	Nom.Size	A	E	F	L
5414A01-000010	10	13.0	10.0	54.0	41.5
5414A01-000015	15	19.0	16.0	59.0	41.5
5414A01-000020	20	23.0	20.0	64.0	41.5
5414A01-000025	25	29.0	26.0	70.0	41.5
5414A01-000032	32	35.0	32.0	76.0	46.5
5414A01-000040	40	41.0	38.0	82.0	46.5
5414A01-000050	50	53.0	50.0	94.0	46.5
5414A01-000065	65	70.0	66.0	113.0	55.5
5414A01-000080	80	85.0	81.0	133.0	59.5
5414A01-000100	100	104.0	100.0	159.0	59.5
5414A01-000125	125	129.0	125.0	183.0	61.5
5414A01-000150	150	154.0	150.0	213.0	61.5



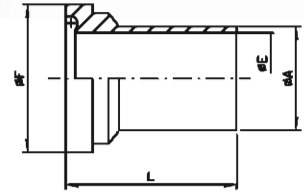
DIN11864-3-NKS-A-DIN

No.	Nom.Size	A	E	F	L
5414A03-000010	10	13.0	10.0	34.0	39.5
5414A03-000015	15	19.0	16.0	34.0	39.5
5414A03-000020	20	23.0	20.0	50.5	39.5
5414A03-000025	25	29.0	26.0	50.5	40.5
5414A03-000032	32	35.0	32.0	50.5	45.5
5414A03-000040	40	41.0	38.0	64.0	45.5
5414A03-000050	50	53.0	50.0	77.0	46.0
5414A03-000065	65	70.0	66.0	91.0	58.0
5414A03-000080	80	85.0	81.0	106.0	60.0
5414A03-000100	100	104.0	100.0	130.0	61.5



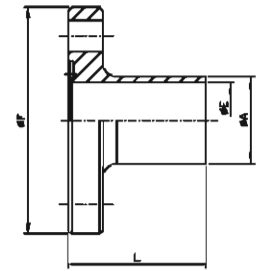
DIN11864-1-BS-A

No.	Nom.Size	A	E	F	L
5410A01-000010	10	13.0	10.0	RD28x1/8"	41.0
5410A01-000015	15	19.0	16.0	RD34x1/8"	41.0
5410A01-000020	20	23.0	20.0	RD44x1/6"	43.0
5410A01-000025	25	29.0	26.0	RD52x1/6"	43.0
5410A01-000032	32	35.0	32.0	RD58x1/6"	48.0
5410A01-000040	40	41.0	38.0	RD65x1/6"	48.0
5410A01-000050	50	53.0	50.0	RD78x1/6"	48.0
5410A01-000065	65	70.0	66.0	RD95x1/6"	60.0
5410A01-000080	80	85.0	81.0	RD110x1/4"	64.0
5410A01-000100	100	104.0	100.0	RD130x1/4"	64.0



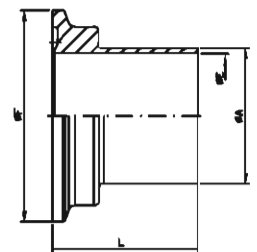
DIN11864-2-BF-A-DIN

No.	Nom.Size	A	E	F	L
5414A02-000010	10	13.0	10.0	54.0	40.0
5414A02-000015	15	19.0	16.0	59.0	40.0
5414A02-000020	20	23.0	20.0	64.0	40.0
5414A02-000025	25	29.0	26.0	70.0	40.0
5414A02-000032	32	35.0	32.0	76.0	45.0
5414A02-000040	40	41.0	38.0	82.0	45.0
5414A02-000050	50	53.0	50.0	94.0	45.0
5414A02-000065	65	70.0	66.0	113.0	54.0
5414A02-000080	80	85.0	81.0	133.0	58.0
5414A02-000100	100	104.0	100.0	159.0	58.0
5414A02-000125	125	129.0	125.0	183.0	60.0
5414A02-000150	150	154.0	150.0	213.0	60.0



DIN11864-3-BKS-A-DIN

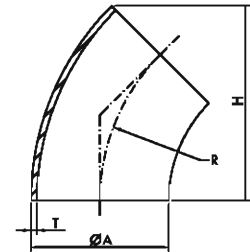
No.	Nom.Size	A	E	F	L
5414A03-000010	10	13.0	10.0	34.0	38.0
5414A03-000015	15	19.0	16.0	34.0	38.0
5414A03-000020	20	23.0	20.0	50.5	38.0
5414A03-000025	25	29.0	26.0	50.5	38.5
5414A03-000032	32	35.0	32.0	50.5	44.0
5414A03-000040	40	41.0	38.0	64.0	44.0
5414A03-000050	50	53.0	50.0	77.0	44.5
5414A03-000065	65	70.0	66.0	91.0	58.5
5414A03-000080	80	85.0	81.0	106.0	58.5
5414A03-000100	100	104.0	100.0	130.0	60.0



DIN11852 Automatic Tube Weld: 45° Elbow, Short

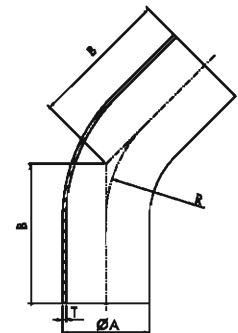
No.	Nom.Size	AxT	H	R
1406001-000015	15	18.0x1.5	30.4	35.0
1406001-000020	20	22.0x1.5	35.4	40.0
1406001-000025	25	28.0x1.5	44.5	50.0
1406001-000032	32	34.0x1.5	50.2	55.0
1406001-000040	40	40.0x1.5	55.9	60.0
1406001-000050	50	52.0x1.5	67.2	70.0

No.	Nom.Size	AxT	H	R
14060A1-000015	15	19.0x1.5	32.2	35.0
14060A1-000020	20	23.0x1.5	36.5	40.0
14060A1-000025	25	29.0x1.5	45.7	50.0
14060A1-000032	32	35.0x1.5	51.3	55.0
14060A1-000040	40	41.0x1.5	57.0	60.0
14060A1-000050	50	53.0x1.5	68.2	70.0
14060A1-000065	65	70.0x2.0	80.7	80.0
14060A1-000080	80	85.0x2.0	93.0	90.0
14060A1-000100	100	104.0x2.0	106.8	100.0
14060A1-000125	125	129.0x2.0	178.2	187.5
14060A1-000150	150	154.0x2.0	213.6	225.0
14060A1-000200	200	204.0x2.0	284.3	300.0



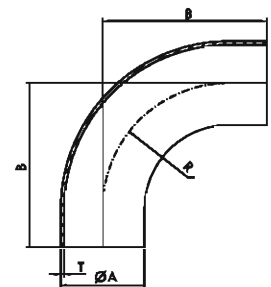
DIN11852 Automatic Tube Weld: 45° Elbow, Long

No.	Nom.Size	AxT	B	R
14061B1-000010	10	13.0x1.5	35.8	26.0
14061B1-000015	15	19.0x1.5	39.5	35.0
14061B1-000020	20	23.0x1.5	41.6	40.0
14061B1-000025	25	29.0x1.5	60.7	50.0
14061B1-000032	32	35.0x1.5	62.8	55.0
14061B1-000040	40	41.0x1.5	64.9	60.0
14061B1-000050	50	53.0x1.5	69.0	70.0
14061B1-000065	65	70.0x2.0	73.1	80.0
14061B1-000080	80	85.0x2.0	92.3	90.0
14061B1-000100	100	104.0x2.0	96.4	100.0
14061B1-000125	125	129.0x2.0	160.2	187.5
14061B1-000150	150	154.0x2.0	193.2	225.0
14061B1-000200	200	204.0x2.0	224.3	300.0



DIN11852 Automatic Tube Weld: 90° Elbow, Long

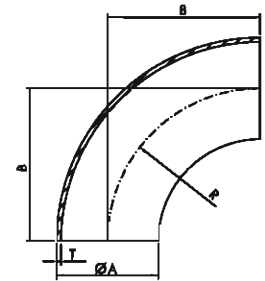
No.	Nom.Size	AxT	B	R
14061B0-000010	10	13.0x1.5	51.0	26.0
14061B0-000015	15	19.0x1.5	60.0	35.0
14061B0-000020	20	23.0x1.5	65.0	40.0
14061B0-000025	25	29.0x1.5	90.0	50.0
14061B0-000032	32	35.0x1.5	95.0	55.0
14061B0-000040	40	41.0x1.5	100.0	60.0
14061B0-000050	50	53.0x1.5	110.0	70.0
14061B0-000065	65	70.0x2.0	120.0	80.0
14061B0-000080	80	85.0x2.0	145.0	90.0
14061B0-000100	100	104.0x2.0	155.0	100.0
14061B0-000125	125	129.0x2.0	270.0	187.5
14061B0-000150	150	154.0x2.0	325.0	225.0
14061B0-000200	200	204.0x2.0	400.0	300.0



DIN11852 Automatic Tube Weld: 90° Elbow, Short

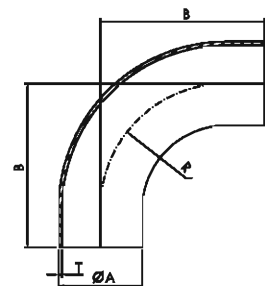
No.	Nom.Size	AxT	B	R
1406000-000010	10	12.0x1.5	26.0	26.0
1406000-000015	15	18.0x1.5	35.0	35.0
1406000-000020	20	22.0x1.5	40.0	40.0
1406000-000025	25	28.0x1.5	50.0	50.0
1406000-000032	32	34.0x1.5	55.0	55.0
1406000-000040	40	40.0x1.5	60.0	60.0
1406000-000050	50	52.0x1.5	70.0	70.0

No.	Nom.Size	AxT	B	R
14060A0-000010	10	13.0x1.5	26.0	26.0
14060A0-000015	15	19.0x1.5	35.0	35.0
14060A0-000020	20	23.0x1.5	40.0	40.0
14060A0-000025	25	29.0x1.5	50.0	50.0
14060A0-000032	32	35.0x1.5	55.0	55.0
14060A0-000040	40	41.0x1.5	60.0	60.0
14060A0-000050	50	53.0x1.5	70.0	70.0
14060A0-000065	65	70.0x2.0	80.0	80.0
14060A0-000080	80	85.0x2.0	90.0	90.0
14060A0-000100	100	104.0x2.0	100.0	100.0
14060A0-000125	125	129.0x2.0	187.0	187.0
14060A0-000150	150	154.0x2.0	225.0	225.0
14060A0-000200	200	204.0x2.0	300.0	300.0
14060A0-000300	300	306.0x3.0	450.0	450.0



DIN11852 Automatic Tube Weld: 90° Elbow, Long

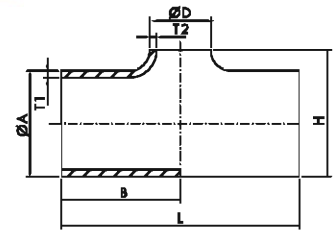
No.	Nom.Size	AxT	B	R
1406100-000010	10	12.0x1.5	38.0	26.0
1406100-000015	15	18.0x1.5	47.0	35.0
1406100-000020	20	22.0x1.5	52.0	40.0
1406100-000025	25	28.0x1.5	70.0	50.0
1406100-000032	32	34.0x1.5	80.0	55.0
1406100-000040	40	40.0x1.5	85.0	60.0
1406100-000050	50	52.0x1.5	97.0	70.0
1406100-000060	60	60.0x2.0	110.0	75.0



No.	Nom.Size	AxT	B	R
14061A0-000010	10	13.0x1.5	38.0	26.0
14061A0-000015	15	19.0x1.5	47.0	35.0
14061A0-000020	20	23.0x1.5	52.0	40.0
14061A0-000025	25	29.0x1.5	70.0	50.0
14061A0-000032	32	35.0x1.5	80.0	55.0
14061A0-000040	40	41.0x1.5	85.0	60.0
14061A0-000050	50	53.0x1.5	97.0	70.0
14061A0-000065	65	70.0x2.0	110.0	80.0
14061A0-000080	80	85.0x2.0	118.0	90.0
14061A0-000100	100	104.0x2.0	140.0	100.0

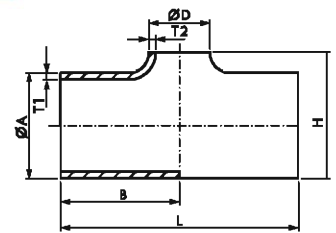
DIN11852 Automatic Tube Weld: Short Outlet, Reducing Tee

No.	Nom.Size	AxT1	DxT2	B	H	L
14030A0-020010	DN20x10	23.0x1.5	13.0x1.5	40.0	24.5	80.0
14030A0-020015	DN20x15	23.0x1.5	19.0x1.5	40.0	24.5	80.0
14030A0-025010	DN25x10	29.0x1.5	13.0x1.5	50.0	29.9	100.0
14030A0-025015	DN25x15	29.0x1.5	19.0x1.5	50.0	29.9	100.0
14030A0-025020	DN25x20	29.0x1.5	23.0x1.5	50.0	29.9	100.0
14030A0-032010	DN32x10	35.0x1.5	13.0x1.5	55.0	38.5	110.0
14030A0-032015	DN32x15	35.0x1.5	19.0x1.5	55.0	38.5	110.0
14030A0-032020	DN32x20	35.0x1.5	23.0x1.5	55.0	38.5	110.0
14030A0-032025	DN32x25	35.0x1.5	29.0x1.5	55.0	38.5	110.0
14030A0-040010	DN40x10	41.0x1.5	13.0x1.5	60.0	42.9	120.0
14030A0-040015	DN40x15	41.0x1.5	19.0x1.5	60.0	42.9	120.0
14030A0-040020	DN40x20	41.0x1.5	23.0x1.5	60.0	42.9	120.0
14030A0-040025	DN40x25	41.0x1.5	29.0x1.5	60.0	42.9	120.0
14030A0-040032	DN40x32	41.0x1.5	35.0x1.5	60.0	42.9	120.0
14030A0-050010	DN50x10	53.0x1.5	13.0x1.5	70.0	55.7	140.0
14030A0-050015	DN50x15	53.0x1.5	19.0x1.5	70.0	55.7	140.0
14030A0-050020	DN50x20	53.0x1.5	23.0x1.5	70.0	55.7	140.0
14030A0-050025	DN50x25	53.0x1.5	29.0x1.5	70.0	55.7	140.0
14030A0-050032	DN50x32	53.0x1.5	35.0x1.5	70.0	55.7	140.0
14030A0-050040	DN50x40	53.0x1.5	41.0x1.5	70.0	55.7	140.0
14030A0-065010	DN65x10	70.0x2.0	13.0x1.5	80.0	73.5	160.0
14030A0-065015	DN65x15	70.0x2.0	19.0x1.5	80.0	73.5	160.0
14030A0-065020	DN65x20	70.0x2.0	23.0x1.5	80.0	73.5	160.0
14030A0-065025	DN65x25	70.0x2.0	29.0x1.5	80.0	73.5	160.0
14030A0-065032	DN65x32	70.0x2.0	35.0x1.5	80.0	73.5	160.0
14030A0-065040	DN65x40	70.0x2.0	41.0x1.5	80.0	73.5	160.0
14030A0-065050	DN65x50	70.0x2.0	53.0x1.5	80.0	73.5	160.0
14030A0-080010	DN80x10	85.0x2.0	13.0x1.5	90.0	88.7	180.0
14030A0-080015	DN80x15	85.0x2.0	19.0x1.5	90.0	88.7	180.0
14030A0-080020	DN80x20	85.0x2.0	23.0x1.5	90.0	88.7	180.0
14030A0-080025	DN80x25	85.0x2.0	29.0x1.5	90.0	88.7	180.0
14030A0-080032	DN80x32	85.0x2.0	35.0x1.5	90.0	88.7	180.0
14030A0-080040	DN80x40	85.0x2.0	41.0x1.5	90.0	88.7	180.0
14030A0-080050	DN80x50	85.0x2.0	53.0x1.5	90.0	88.7	180.0
14030A0-080065	DN80x65	85.0x2.0	70.0x2.0	90.0	88.7	180.0
14030A0-100025	DN100x25	104.0x2.0	29.0x1.5	100.0	108.0	200.0
14030A0-100032	DN100x32	104.0x2.0	35.0x1.5	100.0	108.0	200.0
14030A0-100040	DN100x40	104.0x2.0	41.0x1.5	100.0	108.0	200.0
14030A0-100050	DN100x50	104.0x2.0	53.0x1.5	100.0	108.0	200.0
14030A0-100065	DN100x65	104.0x2.0	70.0x1.5	100.0	108.0	200.0
14030A0-100080	DN100x80	104.0x2.0	85.0x1.5	100.0	108.0	200.0
14030A0-125050	DN125x50	129.0x2.0	53.0x1.5	187.5	133.0	375.0
14030A0-125065	DN125x65	129.0x2.0	70.0x2.0	187.5	133.0	375.0
14030A0-125080	DN125x80	129.0x2.0	85.0x2.0	187.5	133.0	375.0
14030A0-125100	DN125x100	129.0x2.0	104.0x2.0	187.5	133.0	375.0
14030A0-150080	DN150x80	154.0x2.0	85.0x2.0	225.0	157.0	450.0
14030A0-150100	DN150x100	154.0x2.0	104.0x2.0	225.0	157.0	450.0
14030A0-150125	DN150x125	154.0x2.0	129.0x2.0	225.0	157.0	450.0
14030A0-200100	DN200x100	204.0x2.0	104.0x2.0	300.0	207.0	600.0
14030A0-200125	DN200x125	204.0x2.0	129.0x2.0	300.0	207.0	600.0
14030A0-200150	DN200x150	204.0x2.0	154.0x2.0	300.0	207.0	600.0



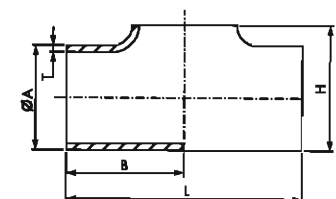
DIN11852 Automatic Tube Weld: Short Outlet, Reducing Tee

No.	Nom.Size	AxT1	DxT2	B	H	L
1403000-020015	DN20x15	22.0x1.5	18.0x1.5	40.0	24.0	80.0
1403000-025015	DN25x15	28.0x1.5	18.0x1.5	50.0	30.0	100.0
1403000-025020	DN25x20	28.0x1.5	22.0x1.5	50.0	30.0	100.0
1403000-032015	DN32x15	34.0x1.5	18.0x1.5	55.0	38.0	110.0
1403000-032020	DN32x20	34.0x1.5	22.0x1.5	55.0	38.0	110.0
1403000-032025	DN32x25	34.0x1.5	28.0x1.5	55.0	38.0	110.0
1403000-040020	DN40x20	40.0x1.5	22.0x1.5	60.0	44.0	120.0
1403000-040025	DN40x25	40.0x1.5	28.0x1.5	60.0	44.0	120.0
1403000-040032	DN40x32	40.0x1.5	34.0x1.5	60.0	44.0	120.0
1403000-050025	DN50x25	52.0x1.5	28.0x1.5	70.0	56.0	140.0
1403000-050032	DN50x32	52.0x1.5	34.0x1.5	70.0	56.0	140.0
1403000-050040	DN50x40	52.0x1.5	40.0x1.5	70.0	56.0	140.0
1403000-065025	DN65x25	70.0x2.0	28.0x1.5	80.0	72.0	160.0
1403000-065032	DN65x32	70.0x2.0	34.0x1.5	80.0	72.0	160.0
1403000-065040	DN65x40	70.0x2.0	40.0x1.5	80.0	72.0	160.0
1403000-065050	DN65x50	85.0x2.0	52.0x1.5	80.0	72.0	160.0
1403000-080025	DN80x25	85.0x2.0	28.0x1.5	90.0	89.0	180.0
1403000-080032	DN80x32	85.0x2.0	34.0x1.5	90.0	89.0	180.0
1403000-080040	DN80x40	85.0x2.0	40.0x1.5	90.0	89.0	180.0
1403000-080050	DN80x50	85.0x2.0	52.0x1.5	90.0	89.0	180.0
1403000-080065	DN80x65	104.0x2.0	70.0x2.0	90.0	89.0	180.0
1403000-100025	DN100x25	104.0x2.0	28.0x1.5	100.0	108.0	200.0
1403000-100032	DN100x32	104.0x2.0	34.0x1.5	100.0	109.0	200.0
1403000-100040	DN100x40	104.0x2.0	40.0x1.5	100.0	108.4	200.0
1403000-100050	DN100x50	104.0x2.0	52.0x1.5	100.0	108.0	200.0
1403000-100065	DN100x65	104.0x2.0	70.0x2.0	100.0	110.0	200.0
1403000-100080	DN100x80	104.0x2.0	85.0x2.0	100.0	109.5	200.0



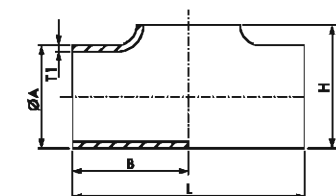
DIN11852 Automatic Tube Weld: Short Outlet Tee

No.	Nom.Size	AxT	B	H	L
1403000-000015	15	18.0x1.5	35.0	19.5	70.0
1403000-000020	20	22.0x1.5	40.0	23.5	80.0
1403000-000025	25	28.0x1.5	50.0	29.5	100.0
1403000-000032	32	34.0x1.5	55.0	36.0	110.0
1403000-000040	40	40.0x1.5	60.0	42.5	120.0
1403000-000050	50	52.0x1.5	70.0	55.0	140.0



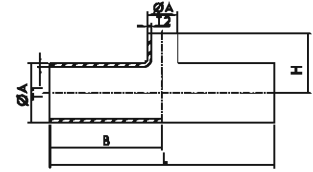
DIN11865 Automatic Tube Weld: Short Outlet Tee

No.	Nom.Size	AxT	B	H	L
14030A0-000010	10	13.0x1.5	35.0	14.1	70.0
14030A0-000015	15	19.0x1.5	35.0	20.5	70.0
14030A0-000020	20	23.0x1.5	40.0	24.5	80.0
14030A0-000025	25	29.0x1.5	50.0	29.9	100.0
14030A0-000032	32	35.0x1.5	55.0	38.5	110.0
14030A0-000040	40	41.0x1.5	60.0	42.9	120.0
14030A0-000050	50	53.0x1.5	70.0	55.7	140.0
14030A0-000065	65	70.0x2.0	80.0	73.5	160.0
14030A0-000080	80	85.0x2.0	90.0	88.7	180.0
14030A0-000100	100	104.0x2.0	100.0	108.0	200.0
14030A0-000125	125	129.0x2.0	189.5	132.0	375.0
14030A0-000150	150	154.0x2.0	225.0	157.0	450.0
14030A0-000200	200	204.0x2.0	300.0	207.0	600.0



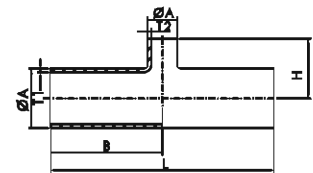
DIN11852 Automatic Tube Weld: Short Outlet, Reducing Tee

No.	Nom.Size	AxT1	DxT2	B	H	L
14031A0-020015	DN20x15	23.0x1.5	19.0x1.5	40.0	37.0	80.0
14031A0-025015	DN25x15	29.0x1.5	19.0x1.5	50.0	40.0	100.0
14031A0-025020	DN25x20	29.0x1.5	23.0x1.5	50.0	43.0	100.0
14031A0-032015	DN32x15	35.0x1.5	19.0x1.5	55.0	43.0	110.0
14031A0-032020	DN32x20	35.0x1.5	23.0x1.5	55.0	46.0	110.0
14031A0-032025	DN32x25	35.0x1.5	29.0x1.5	55.0	53.0	110.0
14031A0-040020	DN40x20	41.0x1.5	23.0x1.5	60.0	49.0	120.0
14031A0-040025	DN40x25	41.0x1.5	29.0x1.5	60.0	56.0	120.0
14031A0-040032	DN40x32	41.0x1.5	35.0x1.5	60.0	58.0	120.0
14031A0-050025	DN50x25	53.0x1.5	29.0x1.5	70.0	52.0	140.0
14031A0-050032	DN50x32	53.0x1.5	35.0x1.5	70.0	64.0	140.0
14031A0-050040	DN50x40	53.0x1.5	41.0x1.5	70.0	66.0	140.0
14031A0-065025	DN65x25	70.0x2.0	29.0x1.5	80.0	70.5	160.0
14031A0-065032	DN65x32	70.0x2.0	35.0x1.5	80.0	72.5	160.0
14031A0-065040	DN65x40	70.0x2.0	41.0x1.5	80.0	74.5	160.0
14031A0-065050	DN65x50	70.0x2.0	53.0x1.5	80.0	78.5	160.0
14031A0-080040	DN80x40	85.0x2.0	41.0x1.5	90.0	82.0	180.0
14031A0-080050	DN80x50	85.0x2.0	53.0x1.5	90.0	86.0	180.0
14031A0-080065	DN80x65	85.0x2.0	70.0x2.0	90.0	87.5	180.0
14031A0-100050	DN100x50	104.0x2.0	53.0x1.5	100.0	95.5	200.0
14031A0-100065	DN100x65	104.0x2.0	70.0x1.5	100.0	97.0	200.0
14031A0-100080	DN100x80	104.0x2.0	85.0x1.5	100.0	99.5	200.0
14031A0-125065	DN125x65	129.0x2.0	70.0x2.0	187.5	109.5	375.0
14031A0-125080	DN125x80	129.0x2.0	85.0x2.0	187.5	112.0	375.0
14031A0-125100	DN125x100	129.0x2.0	104.0x2.0	187.5	112.5	375.0
14031A0-150080	DN150x80	154.0x2.0	85.0x2.0	225.0	124.5	450.0
14031A0-150100	DN150x100	154.0x2.0	104.0x2.0	225.0	125.0	450.0
14031A0-150125	DN150x125	154.0x2.0	129.0x2.0	225.0	200.0	450.0
14031A0-200100	DN200x100	204.0x2.0	104.0x2.0	300.0	150.0	600.0
14031A0-200125	DN200x125	204.0x2.0	129.0x2.0	300.0	225.0	600.0
14031A0-200150	DN200x150	204.0x2.0	154.0x2.0	300.0	250.0	600.0



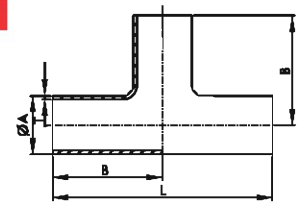
DIN11852 Automatic Tube Weld: Short Outlet, Reducing Tee

No.	Nom.Size	AxT1	DxT2	B	H	L
1403100-020015	DN20x15	22.0x1.5	18.0x1.5	40.0	37.0	80.0
1403100-025015	DN25x15	28.0x1.5	18.0x1.5	50.0	40.0	100.0
1403100-025020	DN25x20	28.0x1.5	22.0x1.5	50.0	43.0	100.0
1403100-032015	DN32x15	34.0x1.5	18.0x1.5	55.0	43.0	110.0
1403100-032020	DN32x20	34.0x1.5	22.0x1.5	55.0	46.0	110.0
1403100-032025	DN32x25	34.0x1.5	28.0x1.5	55.0	55.0	110.0
1403100-040020	DN40x20	40.0x1.5	22.0x1.5	60.0	60.0	120.0
1403100-040025	DN40x25	40.0x1.5	28.0x1.5	60.0	60.0	120.0
1403100-040032	DN40x32	40.0x1.5	34.0x1.5	60.0	60.0	120.0
1403100-050025	DN50x25	52.0x1.5	28.0x1.5	70.0	70.0	140.0
1403100-050032	DN50x32	52.0x1.5	34.0x1.5	70.0	70.0	140.0
1403100-050040	DN50x40	52.0x1.5	40.0x1.5	70.0	70.0	140.0
1403100-065025	DN65x25	70.0x2.0	28.0x1.5	80.0	80.0	160.0
1403100-065032	DN65x32	70.0x2.0	34.0x1.5	80.0	80.0	160.0
1403100-065040	DN65x40	70.0x2.0	40.0x1.5	80.0	80.0	160.0
1403100-065050	DN65x50	70.0x2.0	52.0x1.5	80.0	80.0	160.0
1403100-080025	DN80x25	85.0x2.0	28.0x1.5	90.0	90.0	180.0
1403100-080032	DN80x32	85.0x2.0	34.0x1.5	90.0	90.0	180.0
1403100-080040	DN80x40	85.0x2.0	40.0x1.5	90.0	90.0	180.0
1403100-080050	DN80x50	85.0x2.0	52.0x1.5	90.0	90.0	180.0
1403100-100050	DN100x50	104.0x2.0	52.0x1.5	100.0	100.0	200.0



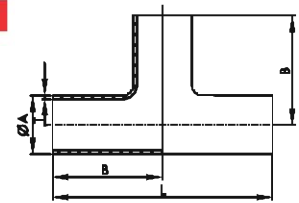
DIN11852 Automatic Tube Weld: Straight Tee

No.	Nom.Size	AxT	B	L
1403100-000010	10	12.0x1.5	35.0	70.0
1403100-000015	15	18.0x1.5	35.0	70.0
1403100-000020	20	22.0x1.5	40.0	80.0
1403100-000025	25	28.0x1.5	50.0	100.0
1403100-000032	32	34.0x1.5	55.0	110.0
1403100-000040	40	40.0x1.5	60.0	120.0
1403100-000050	50	52.0x1.5	70.0	140.0



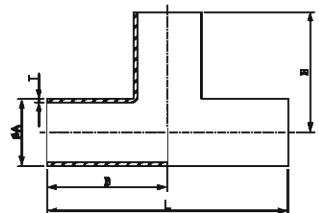
DIN11852 Automatic Tube Weld: Straight Tee

No.	Nom.Size	AxT	B	L
14031A0-000010	10	13.0x1.5	35.0	70.0
14031A0-000015	15	19.0x1.5	35.0	70.0
14031A0-000020	20	23.0x1.5	40.0	80.0
14031A0-000025	25	29.0x1.5	50.0	100.0
14031A0-000032	32	35.0x1.5	55.0	110.0
14031A0-000040	40	41.0x1.5	60.0	120.0
14031A0-000050	50	53.0x1.5	70.0	140.0
14031A0-000065	65	70.0x2.0	80.0	160.0
14031A0-000080	80	85.0x2.0	90.0	180.0
14031A0-000100	100	104.0x2.0	100.0	200.0
14031A0-000125	125	129.0x2.0	187.5	375.0
14031A0-000150	150	154.0x2.0	225.0	450.0
14031A0-000200	200	204.0x2.0	300.0	600.0



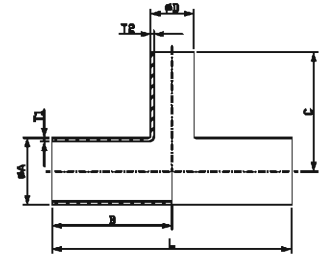
DIN11852 Automatic Tube Weld: Straight Tee

No.	Nom.Size	AxT1	B	L
54031A0-000006	DN6	8x1.0	30.0	60.0
54031A0-000008	DN8	10x1.0	30.0	60.0
54031A0-000010	DN10	13x1.5	35.0	70.0
54031A0-000015	DN15	19x1.5	35.0	70.0
54031A0-000020	DN20	23x1.5	40.0	80.0
54031A0-000025	DN25	29x1.5	50.0	100.0
54031A0-000032	DN32	35x1.5	55.0	110.0
54031A0-000040	DN40	41x1.5	60.0	120.0
54031A0-000050	DN50	53x1.5	80.0	160.0
54031A0-000065	DN65	70x2.0	105.0	210.0
54031A0-000080	DN80	85x2.0	130.0	260.0
54031A0-000100	DN100	104x2.0	155.0	310.0
54031A0-000125	DN125	129x2.0	187.5	375.0
54031A0-000150	DN150	154x2.0	225.0	450.0
54031A0-000200	DN200	204x2.0	300.0	600.0



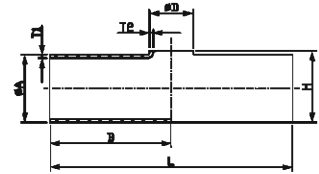
DIN11865 Automatic Tube Weld: Long Outlet, Reducing Tee

No.	Nom.Size	AxT1	DxT2	B	C	L
54031A0-008006	DN8x6	10x1.0	8x1.0	30.0	30.0	60.0
54031A0-010006	DN10x6	13x1.5	8x1.0	30.0	30.0	60.0
54031A0-010008	DN10x8	13x1.5	10x1.0	30.0	30.0	60.0
54031A0-015008	DN15x8	19x1.5	10x1.0	35.0	35.0	70.0
54031A0-015010	DN15x10	19x1.5	13x1.5	35.0	35.0	70.0
54031A0-020010	DN20x10	23x1.5	13x1.5	40.0	40.0	80.0
54031A0-020015	DN20x15	23x1.5	19x1.5	40.0	40.0	80.0
54031A0-025015	DN25x15	29x1.5	19x1.5	50.0	50.0	100.0
54031A0-025020	DN25x20	29x1.5	23x1.5	50.0	50.0	100.0
54031A0-032015	DN32x15	35x1.5	19x1.5	55.0	55.0	110.0
54031A0-032020	DN32x20	35x1.5	23x1.5	55.0	55.0	110.0
54031A0-032025	DN32x25	35x1.5	29x1.5	55.0	55.0	110.0
54031A0-040020	DN40x20	41x1.5	23x1.5	60.0	60.0	120.0
54031A0-040025	DN40x25	41x1.5	29x1.5	60.0	60.0	120.0
54031A0-040032	DN40x32	41x1.5	35x1.5	60.0	60.0	120.0
54031A0-050025	DN50x25	53x1.5	29x1.5	80.0	80.0	160.0
54031A0-050032	DN50x32	53x1.5	35x1.5	80.0	80.0	160.0
54031A0-050040	DN50x40	53x1.5	41x1.5	80.0	80.0	160.0
54031A0-065032	DN65x32	70x2.0	35x1.5	105.0	80.0	210.0
54031A0-065040	DN65x40	70x2.0	41x1.5	105.0	80.0	210.0
54031A0-065050	DN65x50	70x2.0	53x1.5	105.0	80.0	210.0
54031A0-080040	DN80x40	85x2.0	41x1.5	130.0	105.0	260.0
54031A0-080050	DN80x50	85x2.0	53x1.5	130.0	105.0	260.0
54031A0-080065	DN80x65	85x2.0	70x2.0	130.0	105.0	260.0
54031A0-100050	DN100x50	104x2.0	53x1.5	155.0	130.0	310.0
54031A0-100065	DN100x65	104x2.0	70x2.0	155.0	130.0	310.0
54031A0-100080	DN100x80	104x2.0	85x2.0	155.0	130.0	310.0
54031A0-125065	DN125x65	129x2.0	70x2.0	187.5	155.0	375.0
54031A0-125080	DN125x80	129x2.0	85x2.0	187.5	155.0	375.0
54031A0-125100	DN125x100	129x2.0	104x2.0	187.5	155.0	375.0
54031A0-150080	DN150x80	154x2.0	85x2.0	225.0	187.5	450.0
54031A0-150100	DN150x100	154x2.0	104x2.0	225.0	187.5	450.0
54031A0-150125	DN150x125	154x2.0	129x2.0	225.0	187.5	450.0
54031A0-200100	DN200x100	204x2.0	104x2.0	300.0	225.0	600.0
54031A0-200125	DN200x125	204x2.0	129x2.0	300.0	225.0	600.0
54031A0-200150	DN200x150	204x2.0	154x2.0	300.0	225.0	600.0



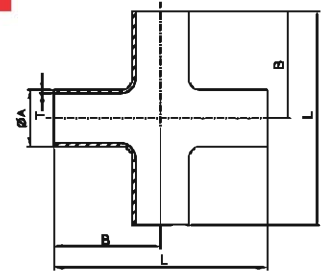
DIN11865 Automatic Tube Weld: Short Outlet, Reducing Tee

No.	Nom.Size	AxT1	DxT2	B	H	L
54030A0-008006	DN8x6	10x1.0	8x1.0	30.0	/	60.0
54030A0-010006	DN10x6	13x1.5	8x1.0	30.0	/	60.0
54030A0-010008	DN10x8	13x1.5	10x1.0	30.0	/	60.0
54030A0-015008	DN15x8	19x1.5	10x1.0	35.0	20.5	70.0
54030A0-015010	DN15x10	19x1.5	13x1.5	35.0	20.5	70.0
54030A0-020010	DN20x10	23x1.5	13x1.5	40.0	24.5	80.0
54030A0-020015	DN20x15	23x1.5	19x1.5	40.0	24.5	80.0
54030A0-025015	DN25x15	29x1.5	19x1.5	50.0	29.9	100.0
54030A0-025020	DN25x20	29x1.5	23x1.5	50.0	29.9	100.0
54030A0-032015	DN32x15	35x1.5	19x1.5	55.0	38.5	110.0
54030A0-032020	DN32x20	35x1.5	23x1.5	55.0	38.5	110.0
54030A0-032025	DN32x25	35x1.5	29x1.5	55.0	38.5	110.0
54030A0-040020	DN40x20	41x1.5	23x1.5	60.0	42.9	120.0
54030A0-040025	DN40x25	41x1.5	29x1.5	60.0	42.9	120.0
54030A0-040032	DN40x32	41x1.5	35x1.5	60.0	42.9	120.0
54030A0-050025	DN50x25	53x1.5	29x1.5	80.0	55.7	160.0
54030A0-050032	DN50x32	53x1.5	35x1.5	80.0	55.7	160.0
54030A0-050040	DN50x40	53x1.5	41x1.5	80.0	55.7	160.0
54030A0-065032	DN65x32	70x2.0	35x1.5	105.0	73.5	210.0
54030A0-065040	DN65x40	70x2.0	41x1.5	105.0	73.5	210.0
54030A0-065050	DN65x50	70x2.0	53x1.5	105.0	73.5	210.0
54030A0-080040	DN80x40	85x2.0	41x1.5	130.0	88.7	260.0
54030A0-080050	DN80x50	85x2.0	53x1.5	130.0	88.7	260.0
54030A0-080065	DN80x65	85x2.0	70x2.0	130.0	88.7	260.0
54030A0-100050	DN100x50	104x2.0	53x1.5	155.0	108.0	310.0
54030A0-100065	DN100x65	104x2.0	70x2.0	155.0	108.0	310.0
54030A0-100080	DN100x80	104x2.0	85x2.0	155.0	108.0	310.0
54030A0-125065	DN125x65	129x2.0	70x2.0	187.5	133.0	375.0
54030A0-125080	DN125x80	129x2.0	85x2.0	187.5	133.0	375.0
54030A0-125100	DN125x100	129x2.0	104x2.0	187.5	133.0	375.0
54030A0-150080	DN150x80	154x2.0	85x2.0	225.0	157.0	450.0
54030A0-150100	DN150x100	154x2.0	104x2.0	225.0	157.0	450.0
54030A0-150125	DN150x125	154x2.0	129x2.0	225.0	157.0	450.0
54030A0-200100	DN200x100	204x2.0	104x2.0	300.0	207.0	600.0
54030A0-200125	DN200x125	204x2.0	129x2.0	300.0	207.0	600.0
54030A0-200150	DN200x150	204x2.0	154x2.0	300.0	207.0	600.0



DIN11852 Automatic Tube Weld: Straight Cross

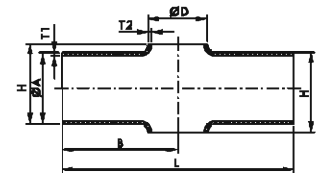
No.	Nom.Size	AxT	B	L
1404100-000025	DN25	28.0x1.5	50	100
1404100-000032	DN32	34.0x1.5	55	110
1404100-000040	DN40	40.0x1.5	60	120
1404100-000050	DN50	52.0x1.5	70	140



No.	Nom.Size	AxT	B	L
14041A0-000025	DN25	29.0x1.5	50	100
14041A0-000032	DN32	35.0x1.5	55	110
14041A0-000040	DN40	41.0x1.5	60	120
14041A0-000050	DN50	53.0x1.5	70	140
14041A0-000065	DN65	70.0x2.0	80	160
14041A0-000080	DN80	85.0x2.0	90	180
14041A0-000100	DN100	104.0x2.0	100	200

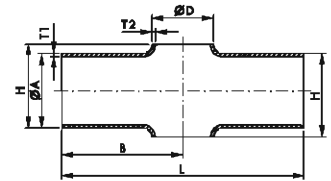
DIN11852 Automatic Tube Weld: Reducing Cross

No.	Nom.Size	AxT1	DxT2	B	H	L
1404000-020015	DN20x15	22.0x1.5	18.0x1.5	40.0	24.0	80.0
1404000-025015	DN25x15	28.0x1.5	18.0x1.5	50.0	30.0	100.0
1404000-025020	DN25x20	28.0x1.5	22.0x1.5	50.0	30.0	100.0
1404000-032015	DN32x15	34.0x1.5	18.0x1.5	55.0	38.0	110.0
1404000-032020	DN32x20	34.0x1.5	22.0x1.5	55.0	38.0	110.0
1404000-032025	DN32x25	34.0x1.5	28.0x1.5	55.0	38.0	110.0
1404000-040020	DN40x20	40.0x1.5	22.0x1.5	60.0	44.0	120.0
1404000-040025	DN40x25	40.0x1.5	28.0x1.5	60.0	44.0	120.0
1404000-040032	DN40x32	40.0x1.5	34.0x1.5	60.0	44.0	120.0
1404000-050025	DN50x25	52.0x1.5	28.0x1.5	70.0	56.0	140.0
1404000-050032	DN50x32	52.0x1.5	34.0x1.5	70.0	56.0	140.0
1404000-050040	DN50x40	52.0x1.5	40.0x1.5	70.0	56.0	140.0
1404000-065025	DN65x25	70.0x2.0	28.0x1.5	80.0	72.0	160.0
1404000-065032	DN65x32	70.0x2.0	34.0x1.5	80.0	72.0	160.0
1404000-065040	DN65x40	70.0x2.0	40.0x1.5	80.0	72.0	160.0
1404000-065050	DN65x50	70.0x2.0	52.0x1.5	80.0	72.0	180.0
1404000-080025	DN80x25	85.0x2.0	28.0x1.5	90.0	89.0	180.0
1404000-080032	DN80x32	85.0x2.0	34.0x2.0	90.0	89.0	180.0
1404000-080040	DN80x40	85.0x2.0	40.0x1.5	90.0	89.0	180.0
1404000-080050	DN80x50	85.0x2.0	52.0x1.5	90.0	89.0	180.0
1404000-100015	DN100x15	104.0x2.0	18.0x1.5	100.0	108.0	200.0
1404000-100025	DN100x25	104.0x2.0	28.0x1.5	100.0	108.0	200.0
1404000-100032	DN100x32	104.0x2.0	34.0x1.5	100.0	109.0	200.0
1404000-100040	DN100x40	104.0x2.0	40.0x1.5	100.0	108.4	200.0
1404000-100050	DN100x50	104.0x2.0	52.0x1.5	100.0	108.0	200.0



DIN11852 Automatic Tube Weld: Reducing Cross

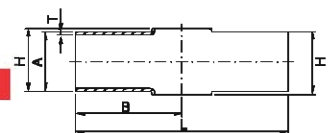
No.	Nom.Size	AxT1	DxT2	B	H	L
14040A0-020015	DN20x15	23.0x1.5	19.0x1.5	40.0	24.0	80.0
14040A0-025015	DN25x15	29.0x1.5	19.0x1.5	50.0	30.0	100.0
14040A0-025020	DN25x20	29.0x1.5	23.0x1.5	50.0	30.0	100.0
14040A0-032015	DN32x15	35.0x1.5	19.0x1.5	55.0	38.0	110.0
14040A0-032020	DN32x20	35.0x1.5	23.0x1.5	55.0	38.0	110.0
14040A0-032025	DN32x25	35.0x1.5	29.0x1.5	55.0	38.0	110.0
14040A0-040020	DN40x20	41.0x1.5	23.0x1.5	60.0	44.0	120.0
14040A0-040025	DN40x25	41.0x1.5	29.0x1.5	60.0	44.0	120.0
14040A0-040032	DN40x32	41.0x1.5	35.0x1.5	60.0	44.0	120.0
14040A0-050025	DN50x25	53.0x1.5	28.0x1.5	70.0	56.0	140.0
14040A0-050032	DN50x32	53.0x1.5	34.0x1.5	70.0	56.0	140.0
14040A0-050040	DN50x40	53.0x1.5	41.0x1.5	70.0	56.0	140.0
14040A0-065025	DN65x25	70.0x2.0	29.0x1.5	80.0	72.0	160.0
14040A0-065032	DN65x32	70.0x2.0	35.0x1.5	80.0	72.0	160.0
14040A0-065040	DN65x40	70.0x2.0	41.0x1.5	80.0	72.0	160.0
14040A0-065050	DN65x50	70.0x2.0	53.0x1.5	80.0	72.0	180.0
14040A0-080025	DN80x25	85.0x2.0	29.0x1.5	90.0	89.0	180.0
14040A0-080032	DN80x32	85.0x2.0	35.0x2.0	90.0	89.0	180.0
14040A0-080040	DN80x40	85.0x2.0	41.0x1.5	90.0	89.0	180.0
14040A0-080050	DN80x50	85.0x2.0	53.0x1.5	90.0	89.0	180.0
14040A0-080065	DN80x65	85.0x2.0	70.0x2.0	90.0	89.0	180.0
14040A0-100015	DN100x15	104.0x2.0	18.0x1.5	100.0	108.0	200.0
14040A0-100025	DN100x25	104.0x2.0	28.0x1.5	100.0	108.0	200.0
14040A0-100032	DN100x32	104.0x2.0	34.0x1.5	100.0	109.0	200.0
14040A0-100040	DN100x40	104.0x2.0	40.0x1.5	100.0	108.4	200.0
14040A0-100050	DN100x50	104.0x2.0	52.0x1.5	100.0	108.0	200.0
14040A0-100065	DN100x65	104.0x2.0	70.0x1.5	100.0	110.0	200.0
14040A0-100080	DN100x80	104.0x2.0	85.0x1.5	100.0	109.5	200.0



DIN11852 Automatic Tube Weld: Cross

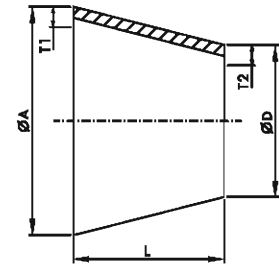
No.	Nom.Size	AxT	B	H	L
1404000-000025	DN25	28.0x1.5	50	29.5	100
1404000-000032	DN32	34.0x1.5	55	36.0	110
1404000-000040	DN40	40.0x1.5	60	42.5	120
1404000-000050	DN50	52.0x1.5	70	55.0	140

No.	Nom.Size	AxT	B	H	L
14040A0-000025	DN25	29.0x1.5	50	29.5	100
14040A0-000032	DN32	35.0x1.5	55	36.0	110
14040A0-000040	DN40	41.0x1.5	60	42.5	120
14040A0-000050	DN50	53.0x1.5	70	55.0	140
14040A0-000065	DN65	70.0x2.0	80	73.5	160
14040A0-000080	DN80	85.0x2.0	90	88.0	180
14040A0-000100	DN100	104.0x2.0	100	108.0	200



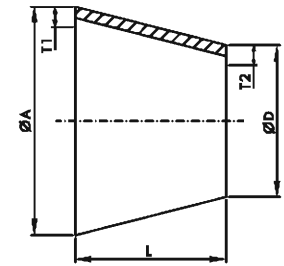
DIN11852 Automatic Tube Weld: Concentric Reducer

No.	Nom.Size	AxT1	DxT2	B
1405000-015010	DN15x10	18.0x1.5	12.0x1.5	11.0
1405000-020010	DN20x10	22.0x1.5	12.0x1.5	18.0
1405000-020015	DN20x15	22.0x1.5	18.0x1.5	7.0
1405000-025010	DN25x10	28.0x1.5	12.0x1.5	12.0
1405000-025015	DN25x15	28.0x1.5	18.0x1.5	18.0
1405000-025020	DN25x20	28.0x1.5	22.0x1.5	11.0
1405000-032020	DN32x20	34.0x1.5	22.0x1.5	22.0
1405000-032025	DN32x25	34.0x1.5	28.0x1.5	11.0
1405000-040015	DN40x15	40.0x1.5	18.0x1.5	40.0
1405000-040020	DN40x20	40.0x1.5	22.0x1.5	33.0
1405000-040025	DN40x25	40.0x1.5	28.0x1.5	22.0
1405000-040032	DN40x32	40.0x1.5	34.0x1.5	11.0
1405000-050025	DN50x25	52.0x1.5	28.0x1.5	44.0
1405000-050032	DN50x32	52.0x1.5	34.0x1.5	33.0
1405000-050040	DN50x40	52.0x1.5	40.0x1.5	22.0
1405000-065025	DN65x25	70.0x2.0	28.0x1.5	73.0
1405000-065032	DN65x32	70.0x2.0	34.0x1.5	62.0
1405000-065040	DN65x40	70.0x2.0	40.0x1.5	51.0
1405000-065050	DN65v50	70.0x2.0	52.0x1.5	29.0
1405000-080025	DN80x25	85.0x2.0	28.0x1.5	100.0
1405000-080032	DN80x32	85.0x2.0	34.0x1.5	89.0
1405000-080040	DN80x40	85.0x2.0	40.0x1.5	78.0
1405000-080050	DN80x50	85.0x2.0	52.0x1.5	56.0
1405000-100025	DN100x25	104.0x2.0	28.0x1.5	134.0
1405000-100032	DN100x32	104.0x2.0	34.0x1.5	123.0
1405000-100040	DN100x40	104.0x2.0	40.0x1.5	112.0
1405000-100050	DN100x50	104.0x2.0	52.0x1.5	90.0



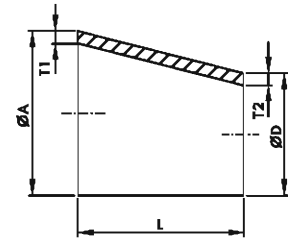
DIN11852 Automatic Tube Weld: Concentric Reducer

No.	Nom.Size	AxT1	DxT2	B
14050A0-015010	DN15x10	19.0x1.5	13.0x1.5	11.0
14050A0-020010	DN20x10	23.0x1.5	13.0x1.5	18.0
14050A0-020015	DN20x15	23.0x1.5	19.0x1.5	7.0
14050A0-025010	DN25x10	29.0x1.5	13.0x1.5	28.0
14050A0-025015	DN25x15	29.0x1.5	19.0x1.5	18.0
14050A0-025020	DN25x20	29.0x1.5	23.0x1.5	11.0
14050A0-032015	DN32x15	35.0x1.5	19.0x1.5	29.0
14050A0-032020	DN32x20	35.0x1.5	23.0x1.5	22.0
14050A0-032025	DN32x25	35.0x1.5	29.0x1.5	11.0
14050A0-040015	DN40x15	41.0x1.5	19.0x1.5	40.0
14050A0-040020	DN40x20	41.0x1.5	23.0x1.5	33.0
14050A0-040025	DN40x25	41.0x1.5	29.0x1.5	22.0
14050A0-040032	DN40x32	41.0x1.5	35.0x1.5	11.0
14050A0-050015	DN50x15	53.0x1.5	19.0x1.5	66.0
14050A0-050020	DN50x20	53.0x1.5	23.0x1.5	55.0
14050A0-050025	DN50x25	53.0x1.5	29.0x1.5	44.0
14050A0-050032	DN50x32	53.0x1.5	35.0x1.5	33.0
14050A0-050040	DN50x40	53.0x1.5	41.0x1.5	22.0
14050A0-065025	DN65x25	70.0x2.0	29.0x1.5	73.0
14050A0-065032	DN65x32	70.0x2.0	35.0x1.5	62.0
14050A0-065040	DN65x40	70.0x2.0	41.0x1.5	51.0
14050A0-065050	DN65x50	70.0x2.0	53.0x1.5	29.0
14050A0-080032	DN80x32	85.0x2.0	35.0x1.5	89.0
14050A0-080040	DN80x40	85.0x2.0	41.0x1.5	78.0
14050A0-080050	DN80x50	85.0x2.0	53.0x1.5	56.0
14050A0-080065	DN80x65	85.0x2.0	70.0x2.0	27.0
14050A0-100050	DN100x50	104.0x2.0	53.0x1.5	90.0
14050A0-100065	DN100x65	104.0x2.0	70.0x2.0	61.0
14050A0-100080	DN100x80	104.0x2.0	85.0x2.0	34.0
14050A0-125065	DN125x65	129.0x2.0	70.0x2.0	106.0
14050A0-125080	DN125x80	129.0x2.0	85.0x2.0	79.0
14050A0-125100	DN125x100	129.0x2.0	104.0x2.0	45.0
14050A0-150065	DN150x65	154.0x2.0	70.0x2.0	151.0
14050A0-150080	DN150x80	154.0x2.0	85.0x2.0	124.0
14050A0-150100	DN150x100	154.0x2.0	104.0x2.0	90.0
14050A0-150125	DN150x125	154.0x2.0	129.0x2.0	45.0
14050A0-200050	DN200x50	204.0x2.0	53.0x1.5	271.0
14050A0-200100	DN200x100	204.0x2.0	104.0x2.0	203.0
14050A0-200125	DN200x125	204.0x2.0	129.0x2.0	134.0
14050A0-200150	DN200x150	204.0x2.0	154.0x2.0	90.0



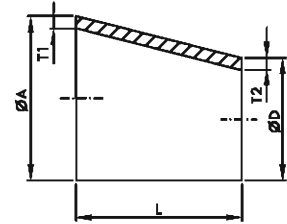
DIN11852 Automatic Tube Weld: Eccentric Reducer

No.	Nom.Size	AxT1	DxT2	B
1405100-020015	DN20x15	22.0x1.5	18.0x1.5	11.0
1405100-025010	DN25x10	28.0x1.5	12.0x1.5	44.0
1405100-025015	DN25x15	28.0x1.5	18.0x1.5	27.5
1405100-025020	DN25x20	28.0x1.5	22.0x1.5	16.5
1405100-032020	DN32x20	34.0x1.5	22.0x1.5	33.0
1405100-032025	DN32x25	34.0x1.5	28.0x1.5	16.5
1405100-040015	DN40x15	40.0x1.5	18.0x1.5	60.5
1405100-040020	DN40x20	40.0x1.5	22.0x1.5	49.5
1405100-040025	DN40x25	40.0x1.5	28.0x1.5	33.0
1405100-040032	DN40x32	40.0x1.5	34.0x1.5	16.5
1405100-050025	DN50x25	52.0x1.5	28.0x1.5	66.0
1405100-050032	DN50x32	52.0x1.5	34.0x1.5	49.5
1405100-050040	DN50x40	52.0x1.5	40.0x1.5	33.0
1405100-065025	DN65x25	70.0x2.0	28.0x1.5	73.0
1405100-065032	DN65x32	70.0x2.0	34.0x1.5	62.0
1405100-065040	DN65x40	70.0x2.0	40.0x1.5	77.0
1405100-065050	DN65x50	70.0x2.0	52.0x1.5	44.0
1405100-080025	DN80x25	85.0x2.0	28.0x1.5	100.0
1405100-080032	DN80x32	85.0x2.0	34.0x1.5	89.0
1405100-080040	DN80x40	85.0x2.0	40.0x1.5	78.0
1405100-080050	DN80x50	85.0x2.0	52.0x1.5	85.0
1405100-100025	DN100x25	104.0x2.0	28.0x1.5	134.0
1405100-100032	DN100x32	104.0x2.0	34.0x1.5	123.0
1405100-100040	DN100x40	104.0x2.0	40.0x1.5	112.0
1405100-100050	DN100x50	104.0x2.0	52.0x1.5	137.5



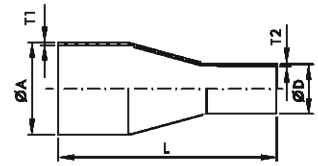
DIN11852 Automatic Tube Weld: Eccentric Reducer

No.	Nom.Size	AxT1	DxT2	B
14051A0-015010	DN15x10	19.0x1.5	13.0x1.5	16.5
14051A0-020010	DN20x10	23.0x1.5	13.0x1.5	27.5
14051A0-020015	DN20x15	23.0x1.5	19.0x1.5	11.0
14051A0-025010	DN25x10	29.0x1.5	13.0x1.5	44.0
14051A0-025015	DN25x15	29.0x1.5	19.0x1.5	27.5
14051A0-025020	DN25x20	29.0x1.5	23.0x1.5	16.5
14051A0-032020	DN32x20	35.0x1.5	23.0x1.5	33.0
14051A0-032025	DN32x25	35.0x1.5	29.0x1.5	16.5
14051A0-040015	DN40x15	41.0x1.5	19.0x1.5	60.5
14051A0-040020	DN40x20	41.0x1.5	23.0x1.5	49.5
14051A0-040025	DN40x25	41.0x1.5	29.0x1.5	33.0
14051A0-040032	DN40x32	41.0x1.5	35.0x1.5	16.5
14051A0-050025	DN50x25	53.0x1.5	29.0x1.5	66.0
14051A0-050032	DN50x32	53.0x1.5	35.0x1.5	49.5
14051A0-050040	DN50x40	53.0x1.5	41.0x1.5	33.0
14051A0-065025	DN65x25	70.0x2.0	29.0x1.5	110.0
14051A0-065032	DN65x32	70.0x2.0	35.0x1.5	93.5
14051A0-065040	DN65x40	70.0x2.0	41.0x1.5	77.0
14051A0-065050	DN65x50	70.0x2.0	53.0x1.5	44.0
14051A0-080040	DN80x40	85.0x2.0	41.0x1.5	118.0
14051A0-080050	DN80x50	85.0x2.0	53.0x1.5	85.0
14051A0-080065	DN80x65	85.0x2.0	70.0x2.0	41.2
14051A0-100040	DN100x40	104.0x2.0	53.0x1.5	770.5
14051A0-100050	DN100x50	104.0x2.0	41.0x1.5	137.5
14051A0-100065	DN100x65	104.0x2.0	70.0x2.0	93.5
14051A0-100080	DN100x80	104.0x2.0	85.0x2.0	52.5
14051A0-125050	DN125x50	129.0x2.0	53.0x1.5	106
14051A0-125065	DN125x65	129.0x2.0	70.0x2.0	102
14051A0-125080	DN125x80	129.0x2.0	85.0x2.0	121.0
14051A0-125100	DN125x100	129.0x2.0	104.0x2.0	68.5
14051A0-150050	DN150x50	154.0x2.0	53.0x1.5	124.0
14051A0-150065	DN150x65	154.0x2.0	70.0x2.0	274.5
14051A0-150080	DN150x80	154.0x2.0	85.0x2.0	230.5
14051A0-150100	DN150x100	154.0x2.0	104.0x2.0	137.5
14051A0-150125	DN150x125	154.0x2.0	129.0x2.0	68.5
14051A0-200100	DN200x100	204.0x2.0	104.0x2.0	178.0
14051A0-200150	DN200x150	204.0x2.0	154.0x2.0	125.0



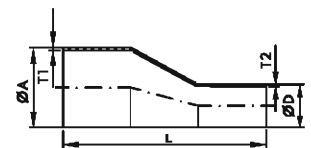
DIN11852 Automatic Tube Weld: Concentric Reducer

No.	Nom.Size	AxT1	DxT2	L
14050B1-020015	DN20x15	23.0x1.5	19.0x1.5	84.0
14050B1-025015	DN25x15	29.0x1.5	19.0x1.5	84.0
14050B1-025020	DN25x20	29.0x1.5	23.0x1.5	84.0
14050B1-032015	DN32x15	35.0x1.5	19.0x1.5	90.6
14050B1-032020	DN32x20	35.0x1.5	23.0x1.5	84.0
14050B1-032025	DN32x25	35.0x1.5	29.0x1.5	84.0
14050B1-040015	DN40x15	41.0x1.5	19.0x1.5	102.0
14050B1-040020	DN40x20	41.0x1.5	23.0x1.5	94.5
14050B1-040025	DN40x25	41.0x1.5	29.0x1.5	84.0
14050B1-040032	DN40x32	53.0x1.5	35.0x1.5	84.0
14050B1-050015	DN50x15	53.0x1.5	19.0x1.5	125.0
14050B1-050020	DN50x20	53.0x1.5	23.0x1.5	117.5
14050B1-050025	DN50x25	53.0x1.5	29.0x1.5	106.0
14050B1-050032	DN50x32	53.0x1.5	35.0x1.5	94.5
14050B1-050040	DN50x40	53.0x1.5	41.0x1.5	84.0
14050B1-065025	DN65x25	70.0x2.0	29.0x1.5	138.5
14050B1-065032	DN65x32	70.0x2.0	35.0x1.5	127.0
14050B1-065040	DN65x40	70.0x2.0	41.0x2.0	115.5
14050B1-065050	DN65x50	70.0x2.0	53.0x1.5	92.0
14050B1-080032	DN80x32	85.0x2.0	35.0x1.5	156.0
14050B1-080040	DN80x40	85.0x2.0	41.0x2.0	144.5
14050B1-080050	DN80x50	85.0x2.0	53.0x1.5	121.5
14050B1-080065	DN80x65	85.0x2.0	70.0x2.0	88.0
14050B1-100050	DN100x50	104.0x2.0	53.0x1.5	158.0
14050B1-100065	DN100x65	104.0x2.0	70.0x2.0	125.0
14050B1-100080	DN100x80	104.0x2.0	85.0x2.0	95.0
14050B1-150080	DN150x80	154.0x2.0	85.0x2.0	184.0



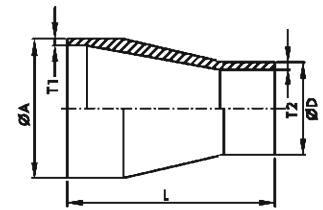
DIN11852 Automatic Tube Weld: Eccentric Reducer

No.	Nom.Size	AxT1	DxT2	L
14051B1-020015	DN20x15	23.0x1.5	19.0x1.5	71.0
14051B1-025015	DN25x15	29.0x1.5	19.0x1.5	87.5
14051B1-025020	DN25x20	29.0x1.5	23.0x1.5	76.5
14051B1-032020	DN32x20	35.0x1.5	23.0x1.5	93.0
14051B1-032025	DN32x25	35.0x1.5	35.0x1.5	76.5
14051B1-040020	DN40x20	41.0x1.5	23.0x1.5	109.5
14051B1-040025	DN40x25	41.0x1.5	29.0x1.5	93.0
14051B1-040032	DN40x32	41.0x1.5	35.0x1.5	76.5
14051B1-050025	DN50x25	53.0x1.5	29.0x1.5	126.0
14051B1-050032	DN50x32	53.0x1.5	35.0x1.5	109.5
14051B1-050040	DN50x40	53.0x1.5	41.0x1.5	93.0
14051B1-065032	DN65x32	70.0x2.0	35.0x1.5	153.5
14051B1-065040	DN65x40	70.0x2.0	41.0x1.5	137.0
14051B1-065050	DN65x50	70.0x2.0	53.0x1.5	104.0
14051B1-080050	DN80x50	85.0x2.0	53.0x1.5	145.0
14051B1-080065	DN80x65	85.0x2.0	70.0x2.0	101.2
14051B1-100065	DN100x65	104.0x2.0	70.0x2.0	153.5
14051B1-100080	DN100x80	105.0x2.0	85.0x2.0	112.5
14051B1-150080	DN150x80	154.0x2.0	85.0x2.0	184.0



DIN11865 Automatic Tube Weld: Concentric Reducer

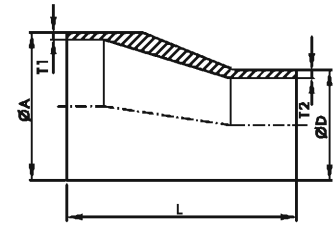
No.	Nom.Size	AxT1	DxT2	L
54050A0-008006	DN8x6	10x1.0	8x1.0	38.0
54050A0-010006	DN10x6	13x1.5	8x1.0	38.0
54050A0-010008	DN10x8	13x1.5	10x1.0	38.0
54050A0-015008	DN15x8	19x1.5	10x1.0	60.0
54050A0-015010	DN15x10	19x1.5	13x1.5	60.0
54050A0-020010	DN20x10	23x1.5	13x1.5	60.0
54050A0-020015	DN20x15	23x1.5	19x1.5	60.0
54050A0-025015	DN25x15	29x1.5	19x1.5	70.0
54050A0-025020	DN25x20	29x1.5	23x1.5	70.0
54050A0-032020	DN32x20	35x1.5	23x1.5	80.0
54050A0-032025	DN32x25	35x1.5	29x1.5	80.0
54050A0-040020	DN40x20	41x1.5	23x1.5	90.0
54050A0-040025	DN40x25	41x1.5	29x1.5	90.0
54050A0-040032	DN40x32	41x1.5	35x1.5	90.0
54050A0-050025	DN50x25	53x1.5	29x1.5	90.0
54050A0-050032	DN50x32	53x1.5	35x1.5	90.0
54050A0-050040	DN50x40	53x1.5	41x1.5	90.0
54050A0-065040	DN65x40	70x2.0	41x1.5	110.0
54050A0-065050	DN65x50	70x2.0	53x1.5	110.0
54050A0-080050	DN80x50	85x2.0	53x1.5	110.0
54050A0-080065	DN80x65	85x2.0	70x2.0	110.0
54050A0-100065	DN100x65	104x2.0	70x2.0	135.0
54050A0-100080	DN100x80	104x2.0	85x2.0	135.0
54050A0-125080	DN125x80	129x2.0	85x2.0	150.0
54050A0-125100	DN125x100	129x2.0	104x2.0	150.0
54050A0-150100	DN150x100	154x2.0	104x2.0	170.0
54050A0-150125	DN150x125	154x2.0	129x2.0	170.0
54050A0-200125	DN200x125	204x2.0	129x2.0	230.0
54050A0-200150	DN200x150	204x2.0	154x2.0	230.0



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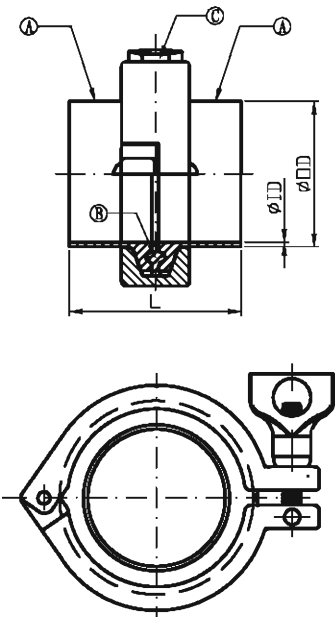
DIN11865 Automatic Tube Weld: Eccentric Reducer

No.	Nom.Size	AxT1	DxT2	L
54051A0-008006	DN8x6	10x1.0	8x1.0	38.0
54051A0-010006	DN10x6	13x1.5	8x1.0	38.0
54051A0-010008	DN10x8	13x1.5	10x1.0	38.0
54051A0-015008	DN15x8	19x1.5	10x1.0	60.0
54051A0-015010	DN15x10	19x1.5	13x1.5	60.0
54051A0-020010	DN20x10	23x1.5	13x1.5	60.0
54051A0-020015	DN20x15	23x1.5	19x1.5	60.0
54051A0-025015	DN25x15	29x1.5	19x1.5	70.0
54051A0-025020	DN25x20	29x1.5	23x1.5	70.0
54051A0-032020	DN32x20	35x1.5	23x1.5	80.0
54051A0-032025	DN32x25	35x1.5	29x1.5	80.0
54051A0-040020	DN40x20	41x1.5	23x1.5	90.0
54051A0-040025	DN40x25	41x1.5	29x1.5	90.0
54051A0-040032	DN40x32	41x1.5	35x1.5	90.0
54051A0-050025	DN50x25	53x1.5	29x1.5	90.0
54051A0-050032	DN50x32	53x1.5	35x1.5	90.0
54051A0-050040	DN50x40	53x1.5	41x1.5	90.0
54051A0-065040	DN65x40	70x2.0	41x1.5	110.0
54051A0-065050	DN65x50	70x2.0	53x1.5	110.0
54051A0-080050	DN80x50	85x2.0	53x1.5	110.0
54051A0-080065	DN80x65	85x2.0	70x2.0	110.0
54051A0-100065	DN100x65	104x2.0	70x2.0	135.0
54051A0-100080	DN100x80	104x2.0	85x2.0	135.0
54051A0-125080	DN125x80	129x2.0	85x2.0	150.0
54051A0-125100	DN125x100	129x2.0	104x2.0	150.0
54051A0-150100	DN150x100	154x2.0	104x2.0	170.0
54051A0-150125	DN150x125	154x2.0	129x2.0	170.0
54051A0-200125	DN200x125	204x2.0	129x2.0	230.0
54051A0-200150	DN200x150	204x2.0	154x2.0	230.0



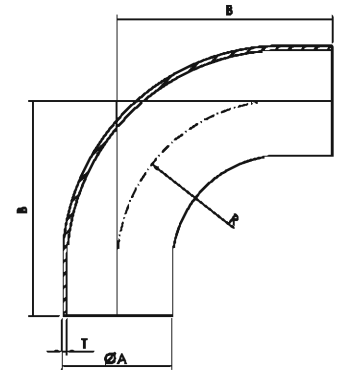
DIN32676 Union

A	B	C	Size	OD	ID	L
1414A02-0010	1415002-0010	1513016-0034	10	13	10	58.9
1414A02-0015	1415002-0015	1513016-0034	15	19	15	58.9
1414A02-0020	1415002-0020	1513016-0034	20	23	20	58.9
1414A02-0025	1415002-0025	1513016-0051	25	29	25	73.7
1414A02-0032	1415002-0032	1513016-0051	32	35	32	73.7
1414A02-0040	1415002-0040	1513016-0051	40	41	40	73.7
1414A02-0050	1415002-0050	1513016-0064	50	53	50	73.7
1414A02-0065	1415002-0065	1513016-0091	65	70	65	97.7
1414A02-0080	1415002-0080	1513016-0106	80	85	80	97.7
1414A02-0100	1415002-0100	1513016-0119	100	104	100	97.7
1414A02-0125	1415002-0125	1513016-0155	125	129	125	133.7
1414A02-0150	1415002-0150	1513016-0183	150	154	150	133.7



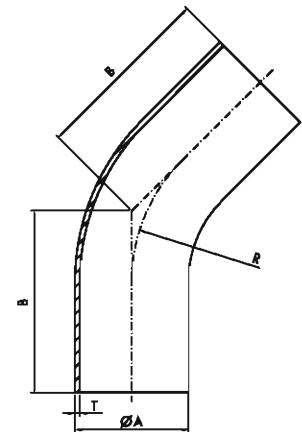
DIN11865 Automatic Tube Weld: 90° Elbow

No.	Nom.Size	AxT	B	R
54061A0-000006	DN6	8x1.0	45.0	20.0
54061A0-000008	DN8	10x1.0	50.0	25.0
54061A0-000010	DN10	13x1.5	51.0	26.0
54061A0-000015	DN15	19x1.5	60.0	35.0
54061A0-000020	DN20	23x1.5	65.0	40.0
54061A0-000025	DN25	29x1.5	90.0	50.0
54061A0-000032	DN32	35x1.5	95.0	55.0
54061A0-000040	DN40	41x1.5	100.0	60.0
54061A0-000050	DN50	53x1.5	110.0	70.0
54061A0-000065	DN65	70x2.0	120.0	80.0
54061A0-000080	DN80	85x2.0	145.0	90.0
54061A0-000100	DN100	104x2.0	155.0	100.0
54061A0-000125	DN125	129x2.0	270.0	187.0
54061A0-000150	DN150	154x2.0	325.0	225.0
54061A0-000200	DN200	204x2.0	400.0	300.0



DIN11865 Automatic Tube Weld: 45° Elbow

No.	Nom.Size	AxT	B	R
54061A1-000006	DN6	8x1.0	33.3	20.0
54061A1-000008	DN8	10x1.0	35.4	25.0
54061A1-000010	DN10	13x1.5	35.8	26.0
54061A1-000015	DN15	19x1.5	39.5	35.0
54061A1-000020	DN20	23x1.5	41.6	40.0
54061A1-000025	DN25	29x1.5	62.7	50.0
54061A1-000032	DN32	35x1.5	62.8	55.0
54061A1-000040	DN40	41x1.5	64.9	60.0
54061A1-000050	DN50	53x1.5	69.0	70.0
54061A1-000065	DN65	70x2.0	73.1	80.0
54061A1-000080	DN80	85x2.0	92.3	90.0
54061A1-000100	DN100	104x2.0	96.4	100.0
54061A1-000125	DN125	129x2.0	160.2	187.0
54061A1-000150	DN150	154x2.0	193.2	225.0
54061A1-000200	DN200	204x2.0	224.3	300.0



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 dismantled 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

Duplex Filtration Systems (Straight thought type)

Size	A	L	L1	L2	H1	H	D
1.0"	50.4	486	75.4	225.4	402	507.6	101.6
1.5"	50.4	524	75.4	225.4	402	545.8	101.6
2.0"	63.9	562	75.4	225.4	402	583.8	101.6
2.5"	77.5	620	75.4	245.2	402	622	114.3
3.0"	90.9	658	75.4	245.2	402	660	114.3

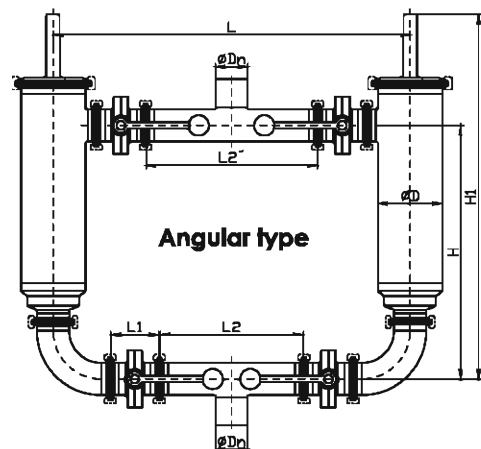
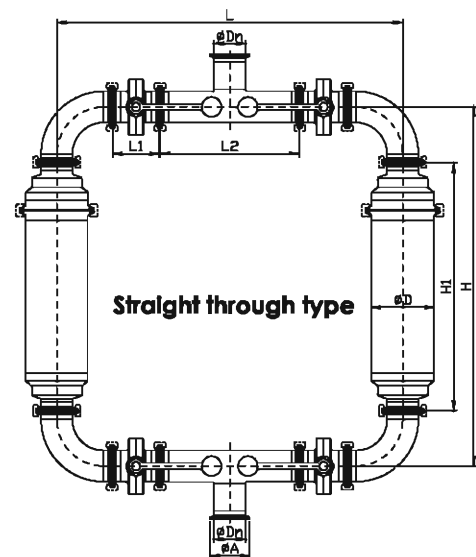
Duplex Filtration Systems (Angular type)

Size	A	L	L1	L2	H1	H	D
1.0"	50.4	486	225.4	193.2	536.55	361.45	101.6
1.5"	50.4	524	225.4	231.4	555.65	380.55	101.6
2.0"	63.9	562	225.4	269.4	574.65	399.55	101.6
2.5"	77.5	620	245.2	314.6	593.55	408.65	114.3
3.0"	90.9	658	245.2	352.6	612.55	427.65	114.3



Options

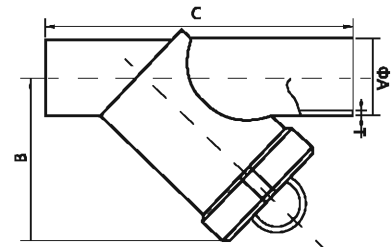
- Inlet and outlet pressure gauge are available;
- Butterfly valve available with standard handle, pull rod or pneumatic actuator.



Y-Type filter (Weld)

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

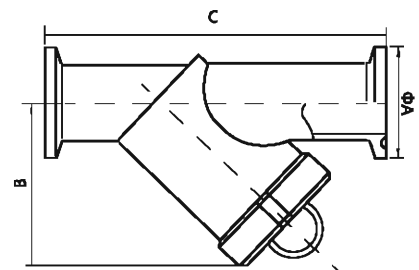
NO.	Size	A	B	C	T
1439710-000025	DN25	28.0	95.0	125.0	1.5
1439710-000032	DN32	34.0	104.0	140.0	1.5
1439710-000040	DN40	40.0	110.0	165.0	1.5
1439710-000050	DN50	52.0	140.0	195.0	1.5
1439710-000065	DN65	70.0	185.0	230.0	2.0
1439710-000080	DN80	85.0	220.0	280.0	2.0
1439710-000100	DN100	104.0	248.0	340.0	2.0



Y-Type filter (Clamp)

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

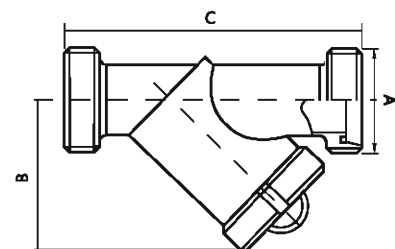
NO.	Size	A	B	C
1439700-000025	DN25	50.5	95.0	125.0
1439700-000032	DN32	50.5	104.0	140.0
1439700-000040	DN40	50.5	110.0	165.0
1439700-000050	DN50	64.0	140.0	195.0
1439700-000065	DN65	91.0	185.0	230.0
1439700-000080	DN80	106.0	220.0	280.0
1439700-000100	DN100	119.0	248.0	340.0



Y-Type filter (Thread)

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

NO.	Size	A	B	C
1439720-000025	DN25	RD52X1/6	95.0	125.0
1439720-000032	DN32	RD58X1/6	104.0	140.0
1439720-000040	DN40	RD65X1/6	110.0	165.0
1439720-000050	DN50	RD78X1/6	140.0	195.0
1439720-000065	DN65	RD95X1/6	185.0	230.0
1439720-000080	DN80	RD110X1/6	220.0	280.0
1439720-000100	DN100	RD130X1/6	248.0	340.0



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Applications:

Application fields of magnetic filter: Cylinder type magnetic filter mainly applies to removal of magnetic impurities in liquid sizing agent, is widely used in chemicals (industrial syrup, paper pulp and brine), pharmaceuticals (medicine online manufacturing and filtration), pigments, dyes, food (syrup, fruit juice, jams, edible oil), beverage, ceramics and other fields. The product has strong magnetism, good impurity removal effect, easy to clean, installation method is simple and flexible, simple disassembly. The magnetic rod is made of high magnetic NdFeB permanent magnetic material, its magnetic force is 5-20 times higher than that of similar conventional magnetic materials (ferrite or AlNiCo permanent magnetic material), can be used for removing 0.5µm tiny magnetic impurity particles. Our products can be continuously used for over ten years, surface finish is high; can meet the hygienic requirements of high cleanliness.

Working principle:

Install a magnetic Filtration Systems in the liquid transport pipeline and transmit the fluid medium into the Filtration Systems through the magnetic Filtration Systems via a number of flow ports, and then fully contact magnetic rod in the big pipe of the Filtration Systems with magnetic force of the magnetic fields 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 complete and effective than the contact of a general Filtration Systems in the process of removing impurities.

Technical data:

Over -flow parts: ALSI316L/304L

Other parts: ALSI304

Surface treatment: Ra≤0.8µm

Seal parts of overflow products: VITON, EPDM, TEFLON, SILICON

Connection: Clamp type, welded type, flanged type, threaded type (ACME, NPT)

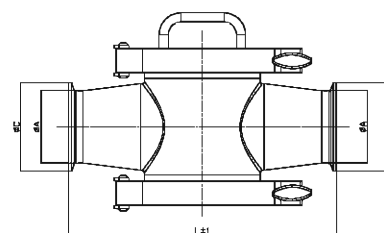






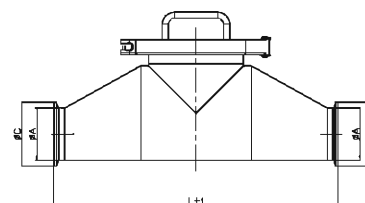
BS-C Cylinder type magnetic filter

SIZE	A (mm)	C (mm)	L (mm)	Number of magnetic rods (Piece)	Range of operating temperature (°C)	Magnetic force (GS)	Operating pressure (Mpa)
DN40	29	50.5	310.4	4	≤120°C	≥12,000	1Mpa
DN50	41	50.5	368.4	4			
DN65	53	64	276.4	6			
DN80	70	91	503.7	6			
DN100	85	106	435.7	6			



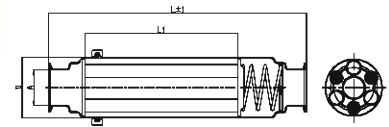
BS-E Cylinder type magnetic filter

SIZE	A (mm)	C (mm)	L (mm)	Number of magnetic rods (Piece)	Range of operating temperature (°C)	Magnetic force (GS)	Operating pressure (Mpa)
DN40	29	50.5	475	4	≤120°C	≥12,000	1Mpa
DN50	41	50.5	540	4			
DN65	53	64	407	4			
DN80	70	91	741	6			
DN100	85	106	555	6			



TS-N Magnetic filter

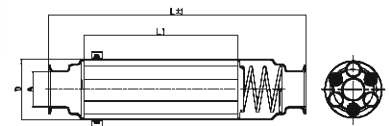
SIZE	A (mm)	C (mm)	L (mm)	L1 (mm)	Number of magnetic rods (Piece)	Range of operating temperature (°C)	Magnetic force (GS)	Operating pressure (Mpa)
DN25	26	101.6	420	240	3	≤120°C	≥12,000	1Mpa
DN40	38	101.6	420	240	3			
DN50	50	101.6	420	240	3			
DN65	66	114.3	432	240	3			
DN80	81	114.3	432	240	4			
DN100	104	114.3	432	240	4			



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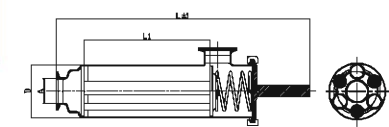
TS-L Magnetic filter

SIZE	A (mm)	C (mm)	L (mm)	L1 (mm)	Number of magnetic rods (Piece)	Range of operating temperature (°C)	Magnetic force (GS)	Operating pressure (Mpa)
DN25	26	101.6	937	790	3	≤120°C	≥12,000	1Mpa
DN40	38	101.6	937	790	3			
DN50	50	101.6	937	790	3			
DN65	66	114.3	963	790	3			
DN80	81	114.3	963	790	4			
DN100	104	114.3	432	240	4			



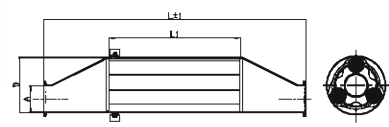
TS-A Magnetic filter

SIZE	A (mm)	C (mm)	L (mm)	L1 (mm)	Number of magnetic rods (Piece)	Range of operating temperature (°C)	Magnetic force (GS)	Operating pressure (Mpa)
DN25	26	101.6	505	240	3	≤120°C	≥12,000	1Mpa
DN40	38	101.6	510	240	3			
DN50	50	101.6	510	240	3			
DN65	66	114.3	520	240	3			
DN80	81	114.3	520	240	4			
DN100	104	114.3	432	240	4			



TS-B Magnetic filter

SIZE	A (mm)	C (mm)	L (mm)	L1 (mm)	Number of magnetic rods (Piece)	Range of operating temperature (°C)	Magnetic force (GS)	Operating pressure (Mpa)
DN25	26	101.6	509	240	3	≤120°C	≥12,000	1Mpa
DN40	38	101.6	459	240	3			
DN50	50	101.6	411	240	3			
DN65	66	114.3	419	240	3			
DN80	81	114.3	465	240	4			
DN100	104	114.3	432	240	4			



KSV Sampling Valve

The Unique sampling valve is specially designed for the food and pharmaceutical and biotechnological industries. The valve is equipped with a double seat which make it possible to sterilize the entire seat between sampling, thereby elimination the risk of cross contamination.

KSV sampling valve body can design based on the assembling surface, can be welding as exist on tank, fitting, connector. Exist branch can be different from the connection type, now matter it is soft tube, clamp connection, thread:

KSV sampling valve: rotate the handle, material is POM which can ensure the strength and will not too in high working temperature



2
2.1

Products

KSV-S6 sampling valve / KSV-SS6 CIP sampling valve

Low Viscosity: 0-200cp, particles diameter<2mm.

Application: brew, dairy, pharmaceutical, and industrial.

Suitable For : water, milk, brewery, cosmetically, oil, pharmaceutical.

KSV-SS9 CIP Sampling Valve

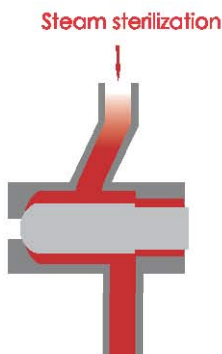
Low Viscosity: 0-200cp, particles diameter<2mm,

Application: brew, dairy, pharmaceutical, and biotechnology

Suitable For: milk, brewery, cosmetically, toothpaste

Sterilize

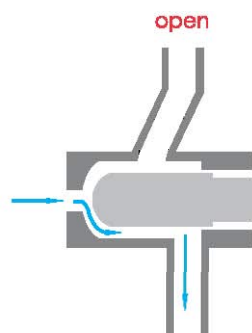
- 1, turn off the valve,
- 2, dry steam,
- 3,pressure 2bar,
- 4, temperature 121°C for one minutes



Sampling

turning on valve, retracts the valve stem and membrane seal and enables the product to flow freely through the open valve.

By utilizing the standard components and sampling, ensure the smooth work in condition(2 bar, 121°C)



Welding

- 1, the thickness of tank is less 4mm, welding inside
- 2, more than 4mm thickness of tank. welding uniform inside and outside:
- 3, welding on the fitting,
- 4, argon gas welding,
- 5, polish inside welding line, in case of the gasket material.

Maintains

100 time sampling, replace the sealing component, based on working temperature and experience to replace, sealing plug should reply per 6 months;
Installation the new sealing component, turn off the valve, position actually, insert the stick. When installation, do not hurt the sealing material avoiding the pollution.

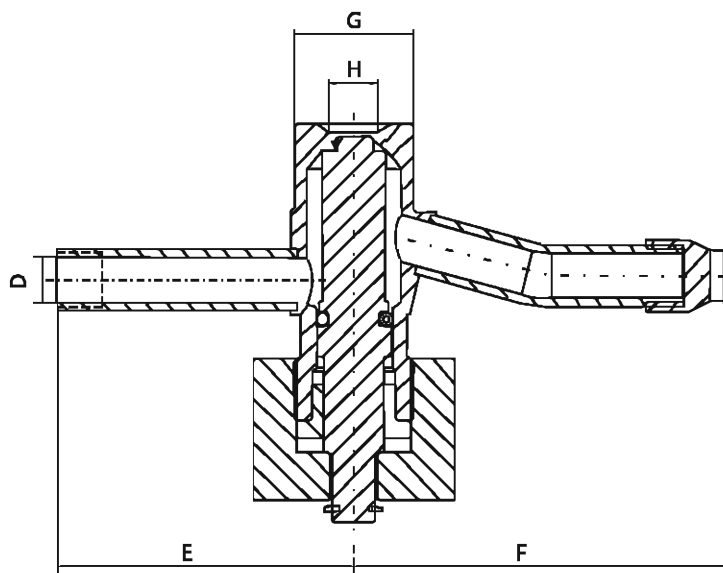
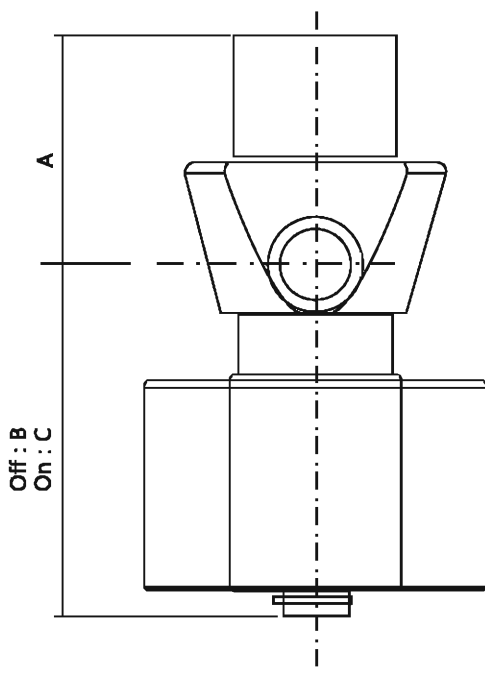
KSV-S6/SS6/SS9 Sampling valve
KL BioClean Sampling valves

Product wetted steel parts	316L
Other steel parts	304
Seal materials	PTFE/EPDM
Valve heads	POM
Surface Finish	Internally Ra≤0.5μm (SF1) , Externally Ra≤0.8μm
Max. pressure	0.6Mpa
Min. pressure	0.04Mpa
Temperature range	-20℃~120℃
Sterilization temperature	≤ 121℃ (Max20min)
Connection	weld, clamp



Size

No.	A	B	C	D	E	F	G	H	Trip
KSB-S6	24.5	49.5	51.9	6	49.5	/	19	6	4
KSB-SS6	34.5	47	50.4	6	51	62.7	19	6	3.4
KSB-SS9	32	49.5	55	9	62	78.5	25	9	5.5



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

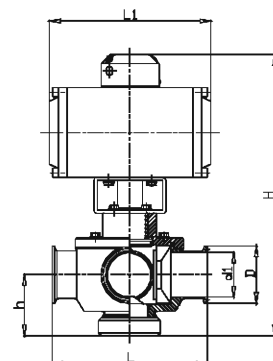
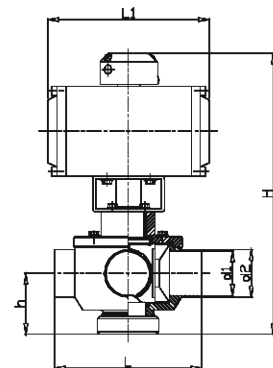
Product pressure	Pressure behind arc: 0 ~ 10 Bar; Pressure against arc: 0 ~ 3 Bar
Operating temperature	-10°C ~ 135°C
Size	DN50~DN85
Shutter	PTFE
Parts in contact with products	CF3M 1.4409(316L)
Other parts in stainless steel	AISI304/1.4301
O-ring seals	EPDM、Viton
Outer surface	sandblastina
Inner surface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

THA three-way welded pneumatic arc valve

No.	SIZE	d1	d2	H	h	L	L1
15500X1-000200	2"	47.5	50.8	314	73	119	204
15500X1-000250	2.5"	60.2	63.5	339	80.5	141	262
15500X1-000300	3"	72.9	76.2	369	85.9	151	268

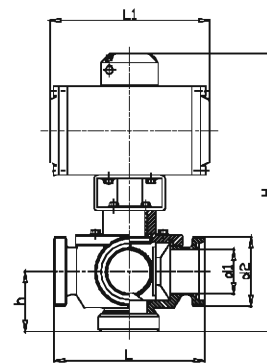
THA three-way clamp type pneumatic arc valve

No.	SIZE	d1	d2	H	h	L	L1
15501X1-000200	2"	47.5	64	314	73	162	204
15501X1-000250	2.5"	60.2	77.5	339	80.5	184	262
15501X1-000300	3"	72.9	91	369	85.9	265.4	268

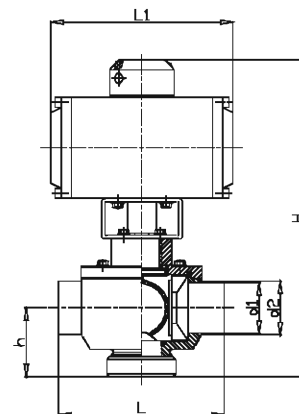


THA three-way thread type pneumatic arc valve

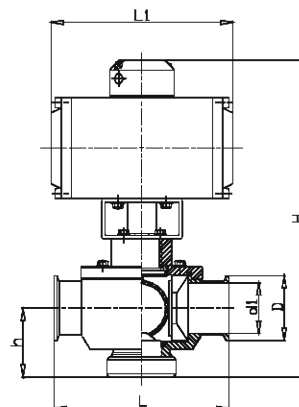
No.	SIZE	d1	d2	H	h	L	L1
15502X1-000200	2"	47.5	70	314	73	159	204
15502X1-000250	2.5"	60.2	85	339	80.5	163	262
15502X1-000300	3"	72.9	110	369	85.9	201	268

**TWA two-way welded pneumatic arc valve**

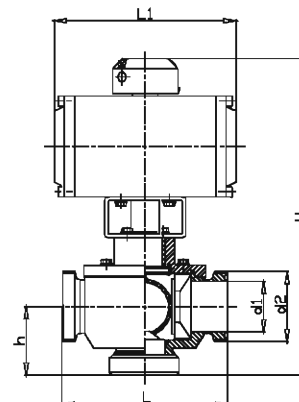
No.	SIZE	d1	d2	H	h	L	L1
1550301-000200	2"	47.5	50.8	314	73	119	204
1550301-000250	2.5"	60.2	63.5	339	80.5	141	262
1550301-000300	3"	72.9	76.2	369	85.9	151	268

**TWA two-way clamp type pneumatic arc valve**

No.	SIZE	d1	d2	H	h	L	L1
1550401-000200	2"	47.5	64	314	73	162	204
1550401-000250	2.5"	60.2	77.5	339	80.5	184	262
1550401-000300	3"	72.9	91	369	85.9	265.4	268

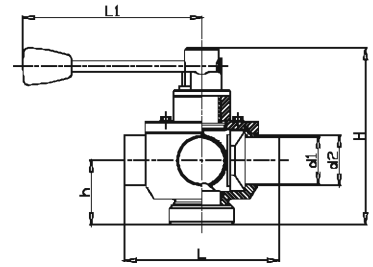
**TWA two-way thread type pneumatic arc valve**

No.	SIZE	d1	d2	H	h	L	L1
1550501-000200	2"	47.5	70	314	73	159	204
1550501-000250	2.5"	60.2	85	339	80.5	163	262
1550501-000300	3"	72.9	110	369	85.9	201	268



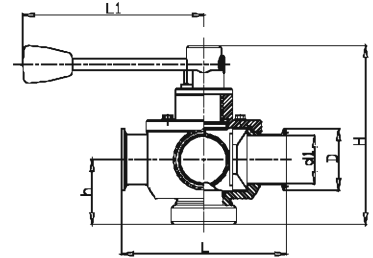
THA three-way welded manual arc valve

No.	SIZE	d1	d2	H	h	L	L1
15500X0-000200	2"	47.5	50.8	190	73	119	190
15500X0-000250	2.5"	60.2	63.5	215	80.5	141	190
15500X0-000300	3"	72.9	76.2	230	85.9	151	190



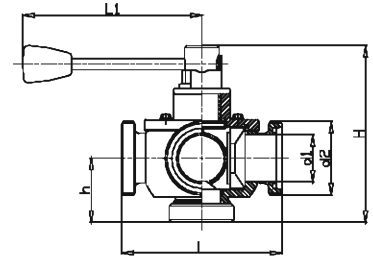
THA three-way clamp type manual arc valve

No.	SIZE	d1	d2	H	h	L	L1
15501X0-000200	2"	47.5	64	190	73	162	190
15501X0-000250	2.5"	60.2	77.5	215	80.5	184	190
15501X0-000300	3"	72.9	91	230	85.9	265.4	190



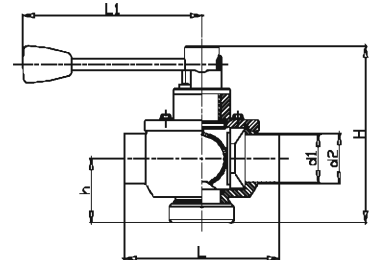
THA three-way thread type manual arc valve

No.	SIZE	d1	d2	H	h	L	L1
15502X0-000200	2"	47.5	70	190	73	159	190
15502X0-000250	2.5"	60.2	85	215	80.5	163	190
15502X0-000300	3"	72.9	110	230	85.9	201	190



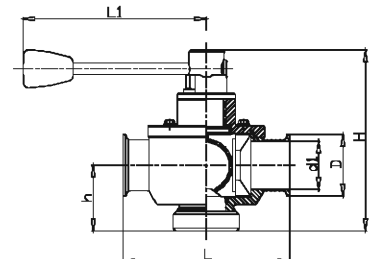
TWA two-way welded manual arc valve

No.	SIZE	d1	d2	H	h	L	L1
15503X0-000200	2"	47.5	50.8	190	73	119	190
15503X0-000250	2.5"	60.2	63.5	215	80.5	141	190
15503X0-000300	3"	72.9	76.2	230	85.9	151	190



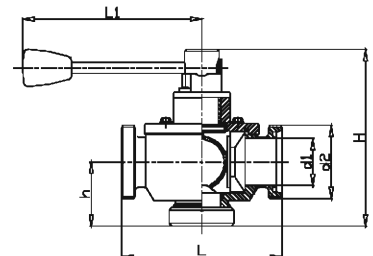
TWA two-way clamp type manual arc valve

No.	SIZE	d1	d2	H	h	L	L1
15504X0-000200	2"	47.5	64	190	73	162	190
15504X0-000250	2.5"	60.2	77.5	215	80.5	184	190
15504X0-000300	3"	72.9	91	230	85.9	265.4	190



TWA two-way thread type manual arc valve

No.	SIZE	d1	d2	H	h	L	L1
15505X0-000200	2"	47.5	70	190	73	159	190
15505X0-000250	2.5"	60.2	85	215	80.5	163	190
15505X0-000300	3"	72.9	110	230	85.9	201	190



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.

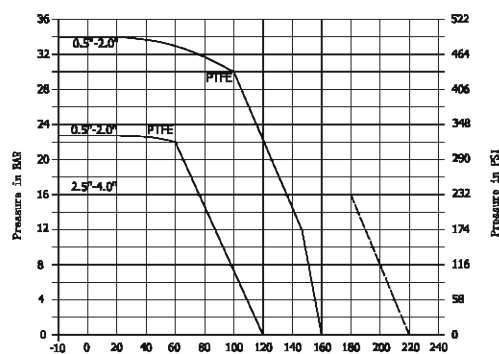
Standard design

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).

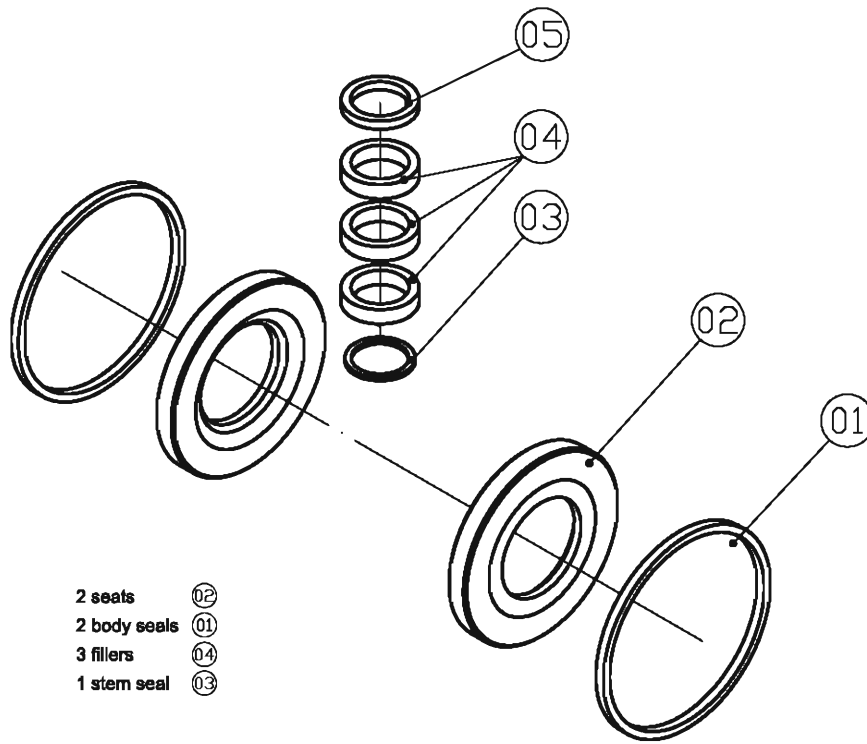


Items	Details
Operating temperature	PTFE: -20~100°C PTFE(TFM): -20~150°C
Ambient temperature	-20~80°C, -4~176°F
Working pressure	Refer to Pressure vs. Temperature diagram
Automatic control unit	Feedback device, locator, cylindrical position sensor
Seat material	PTFE, PTFE(TFM)
Seat form	Standard, Encapsulated (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≤0.5μm(SF1), Ra≤0.375μm(SF4)
Certifications	3A, CE

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).



- 2 seats 02
- 2 body seals 01
- 3 fillers 04
- 1 stem seal 03

Seat	1	2	3	4	5
PTFE(standard / encapsulated)	PTFE	PTFE	PTFE	PTFE	Graphite
PTFE(TFM)	PTFE	PTFE(TFM)	PTFE	PTFE	Graphite



Standard



Encapsulated



TFM

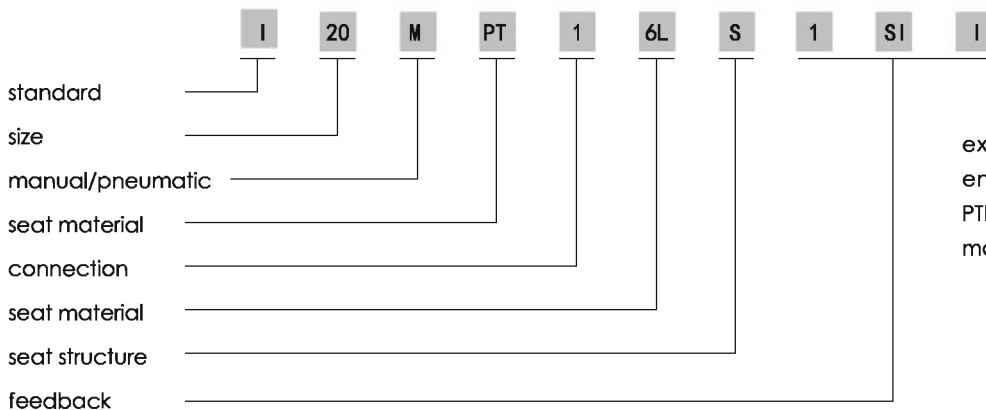
Minimum torque range of the actuator

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"		Feedback form (Only applies to pneumatic)	
	2.5"		Electromagnetic valve	Have
	3.0"			No
	4.0"		Sensor	No
	Single induction			
	Double induction			
Actuator	Manual	Sensor form	Induction type	
	Pneumatic normally open		Machine type	
	Pneumatic normally closed			
Body form	Double action			
	straightway			
	T-Type			

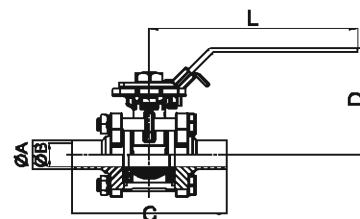
Code example



example: ISO, 0.75", welding end, manual ball valve, 316L, PTFE standard seat, with electron magnetic and sensor.

Manual ball valve (Welded) KBV-MW-S standard type

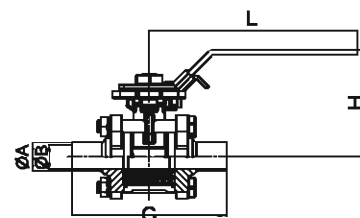
Code	Size	A	B	C	H	L
1407021-000010	10	13	10	88.6	65.5	138.2
1407021-000015	15	19	16	102.7	69.8	138.2
1407021-000020	20	23	20	115.2	78.7	138.2
1407021-000025	25	29	26	120.6	78.7	138.2
1407021-000032	32	35	32	139.9	96.6	190.5
1407021-000040	40	41	38	139.9	96.6	190.5
1407021-000050	50	53	50	158.1	106.7	190.5
1407021-000065	65	70	66	198.0	142	293.3
1407021-000080	80	85	81	227.5	148.5	293.3
1407021-000100	100	104	100	241.0	179.4	293.3



2
2.3

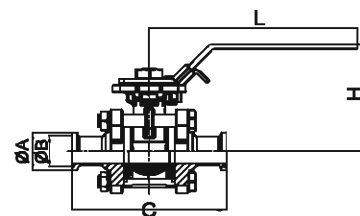
Manual ball valve (Welded) KBV-MW-E encapsulated

Code	Size	A	B	C	H	L
1407020-000010	10	13	10	88.6	65.5	138.2
1407020-000015	15	19	16	102.7	69.8	138.2
1407020-000020	20	23	20	115.2	78.7	138.2
1407020-000025	25	29	26	120.6	78.7	138.2
1407020-000032	32	35	32	139.9	96.6	190.5
1407020-000040	40	41	38	139.9	96.6	190.5
1407020-000050	50	53	50	158.1	106.7	190.5
1407020-000065	65	70	66	198.0	142	293.3
1407020-000080	80	85	81	227.5	148.5	293.3
1407020-000100	100	104	100	241.0	179.4	293.3



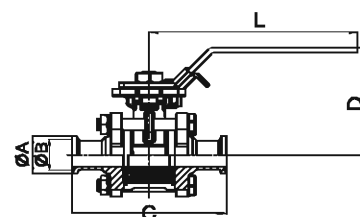
Manual ball valve (Clamp) KBV-MW-S standard type

Code	Size	A	B	C	H	L
1407121-000010	10	34	10	88.6	65.5	138.2
1407121-000015	15	34	16	102.7	69.8	138.2
1407121-000020	20	34	20	115.2	78.7	138.2
1407121-000025	25	50.5	26	120.6	78.7	138.2
1407121-000032	32	50.5	32	139.9	96.6	190.5
1407121-000040	40	50.5	38	139.9	96.6	190.5
1407121-000050	50	64	50	158.1	106.7	190.5
1407121-000065	65	91	66	198.0	142	293.3
1407121-000080	80	106	81	227.5	148.5	293.3
1407121-000100	100	119	100	241.0	179.4	293.3



Manual ball valve (Clamp) KBV-MW-E encapsulated

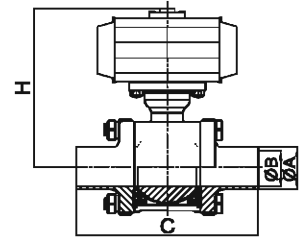
Code	Size	A	B	C	H	L
1407120-000010	10	34	10	88.6	65.5	138.2
1407120-000015	15	34	16	102.7	69.8	138.2
1407120-000020	20	34	20	115.2	78.7	138.2
1407120-000025	25	50.5	26	120.6	78.7	138.2
1407120-000032	32	50.5	32	139.9	96.6	190.5
1407120-000040	40	50.5	38	139.9	96.6	190.5
1407120-000050	50	64	50	158.1	106.7	190.5
1407120-000065	65	91	66	198.0	142	293.3
1407120-000080	80	106	81	227.5	148.5	293.3
1407120-000100	100	119	100	241.0	179.4	293.3



Pneumatic ball valve (Welded)

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

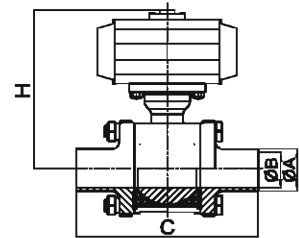
Code	Size	A	B	C	H
1407321-000010	10	13	10	88.6	131.5
1407321-000015	15	19	16	102.7	135.8
1407321-000020	20	23	20	115.2	144.7
1407321-000025	25	29	26	120.6	148.2
1407321-000032	32	35	32	139.9	185.1
1407321-000040	40	41	38	139.9	185.1
1407321-000050	50	53	50	158.1	204.4
1407321-000065	65	70	66	198.0	231.1
1407321-000080	80	85	81	227.5	254.5
1407321-000100	100	104	100	241.0	285.4



Pneumatic ball valve (Welded)

KBV-PW-E (single-action and double-action, optional) encapsulated

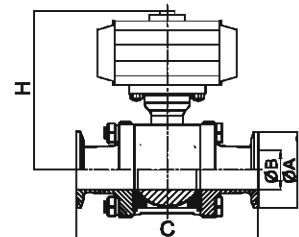
Code	Size	A	B	C	H
1407320-000010	10	13	10	88.6	131.5
1407320-000015	15	19	16	102.7	135.8
1407320-000020	20	23	20	115.2	144.7
1407320-000025	25	29	26	120.6	148.2
1407320-000032	32	35	32	139.9	185.1
1407320-000040	40	41	38	139.9	185.1
1407320-000050	50	53	50	158.1	204.4
1407320-000065	65	70	66	198.0	231.1
1407320-000080	80	85	81	227.5	254.5
1407320-000100	100	104	100	241.0	285.4



Pneumatic ball valve (Clamp)

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

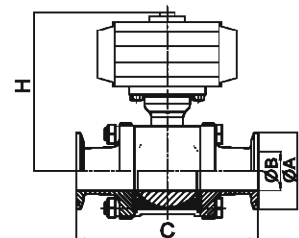
Code	Size	A	B	C	H
1407421-000010	10	34	10	88.6	131.5
1407421-000015	15	34	16	102.7	135.8
1407421-000020	20	34	20	115.2	144.7
1407421-000025	25	50.5	26	120.6	148.2
1407421-000032	32	50.5	32	139.9	185.1
1407421-000040	40	50.5	38	139.9	185.1
1407421-000050	50	64	50	158.1	204.4
1407421-000065	65	91	66	198.0	231.1
1407421-000080	80	106	81	227.5	254.5
1407421-000100	100	119	100	241.0	285.4



Pneumatic ball valve (Clamp)

KBV-PW-E (single-action and double-action, optional) encapsulated

Code	Size	A	B	C	H
1407420-000010	10	34	10	88.6	131.5
1407420-000015	15	34	16	102.7	135.8
1407420-000020	20	34	20	115.2	144.7
1407420-000025	25	50.5	26	120.6	148.2
1407420-000032	32	50.5	32	139.9	185.1
1407420-000040	40	50.5	38	139.9	185.1
1407420-000050	50	64	50	158.1	204.4
1407420-000065	65	91	66	198.0	231.1
1407420-000080	80	106	81	227.5	254.5
1407420-000100	100	119	100	241.0	285.4



Sanitary high platform three-way ball valve

Product introduction

Three-way ball valve has multiple-flow-direction control function and can turn on/off the valve, doesn't need to add the extra valve, thus it is very economical.

Applications

The valve adopts sanitary design, is widely used in food, pharmaceutical and other fields.

Tee can make three orthogonal pipes connect together and cut off the third channel, play a role in diverging and converging.

Four-sided valve seat sealing type, balanced force, and guarantee reliable sealing of channel.

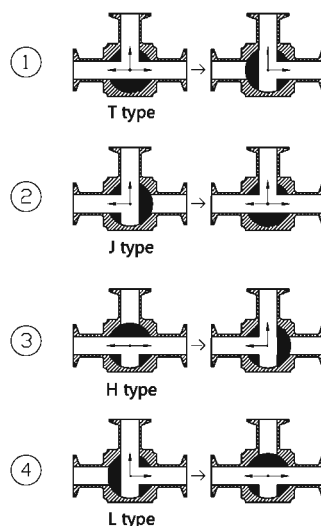
Flow map

Operating temperature	-10°C ~ 120°C	PTFE	
	-10°C ~ 160°C	TFM	
Control method	Manual control and pneumatic control		
Pneumatic control	Single action (SA)	Double action (DA)	
Controlling pressure	5-7 bar(NC)		
Automatic control unit	Feedback device	Positioner	Cylindrical position sensor
Sealing material	PTFE/IFM		
Valve core form	T type		
Materials of valves body	CF8(304)/CF3M(316L)		
Interface form	Hoop - type		
Interface caliber	0.5" ~ 2.0"		
Surface treatment:	Outer surface electrolysis, inner surface: Ra ≤ 0.8μm , Ra ≤ 0.375μm(SF4)		
Codes and standards	Conform to 3A, ISO, DIN standards		

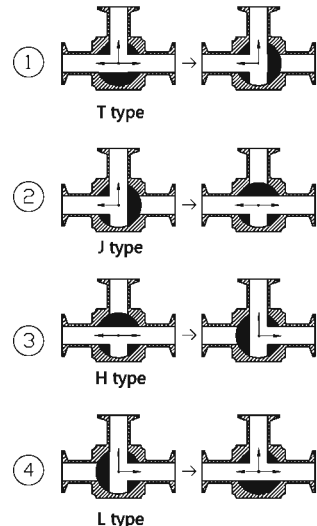
Select the code according to the customer demand

Manual T type: 01
Manual J type: 02
Manual L type: 03
Manual H type: 04
Pneumatic single action T type: 05
Pneumatic single action J type: 06
Pneumatic single action L type: 07
Pneumatic single action H type: 08
Pneumatic double action T type: 15
Pneumatic double action J type: 16
Pneumatic double action L type: 17
Pneumatic double action H type: 18

Manual



Pneumatic

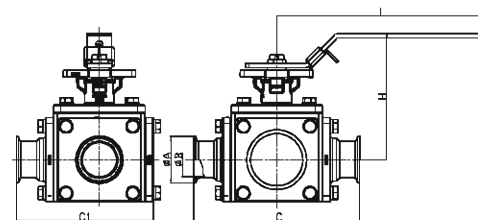




Clamp type manual ball valve

14171XX—XXXXXX (standard)

Code	Size	A	B	C	C1	L	H
000015	15	34	16	149	114.4	187	93.8
000020	20	34	20	149	114.4	187	93.8
000025	25	50.5	26	156.8	127.8	187	100.9
000040	40	50.5	38	188.8	146.8	190.5	114.2
000050	50	64	50	229	189	293.3	168

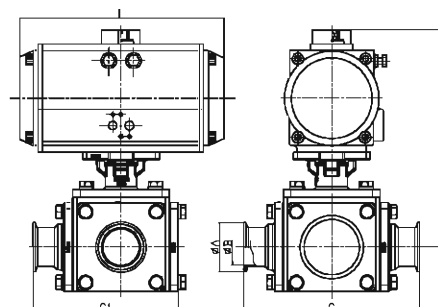


Note: Please replace XX with the corresponding codes, replace XXXXXX with the codes of standard combination; and then place an order.

Clamp type pneumatic ball valve

14171XX—XXXXXX (standard)

Code	Size	A	B	C	C1	L	H
000015	15	34	16	149	114.4	147	184.6
000020	20	34	20	149	114.4	147	184.6
000025	25	50.5	26	156.8	127.8	204	233.7
000040	40	50.5	38	188.8	146.8	204	247.2
000050	50	64	50	229	189	262	318



Note: Please replace XX with the corresponding codes, replace XXXXXX with the codes of standard combination; and then place an order.



KBFV Hygienic Butterfly Valve

KBFV is a Hygienic pneumatically or manually operated butterfly valve for use in stainless steel pipe systems. Due to their large opening areas, the valves offer low flow resistance and provide gentle treatment of low and medium viscosity product . The valve is the main solution of modern processing technology.

The actuator is made in three standard versions, normally closed (NC), normally open (NO) and air/air activated (A/A).

A 90° rotation of the valve stem is transferred to the stainless steel disc and thereby opening or closing the valve. When the valve disc contacts the seal ring, the torque will be increased.



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Products

KBFV-MM: Multipositioning handle

KBFV-ML: Lockable Multiposition Handle

KBFV-MR: Regulating handle

Feature

- Fire Protecting, long lifetime, No-maintenance
- Special sealing design, No liquid residue , EHEDG certified
- Finish open and close within 1s under 80psi air pressure
- Over 100,000 times safety testing
- Circulation time of actuator can be adjusted by air valve freely.
- Can be set feedback sign per your request

Seal Ring

Feature	EPDM	Viton	Silicone
Temperature Range	-48~135°C	-29~204°C	-62~232°C
Acid Resistance	Good-Excellent	Good	Good
Alkali Resistance	Good-Excellent	Poor-Good	Poor-Fair
Gasoline Resistance	Poor-Fair	Good-Excellent	Good
Diesel Resistance	Good	Good-Excellent	Good
Abrasion Resistance	Good-Excellent	Good	Good-Excellent
Compression Set	Fair	Good-Excellent	Good-Excellent

* Good-Excellent>Good>Poor-Good>Fair>Poor-Fair



EHEDG has authorised the use of the EHEDG Certification logo for KingLai equipment complying with the EHEDG hygienic design criteria. The Certification include cleanability testing of equipment according to the methodology described in EHEDG guidelines.

Pressure ranges (kg/cm²)

Size	In 20 °C
1.0	9.6
1.5	9.6
2.0	9.6
2.5	7.5
3.0	7.5
4.0	5.8

Torque ranges

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

Air consumption ranges (kg/cm²)

Size	Air Pressure	In 6.2kg/cm ² , air consumption
1.0	0.5	1.3
1.5	0.7	1.3
2.0	1.1	1.3
2.5	2.2	1.3
3.0	2.6	1.3
4.0	3.9	2.7



Selection table

Connection Standard

DIN	D
ISO	I
3A	A
BPE	B

Connection Size

1.0"	25
1.5"	40
2.0"	50
2.5"	65
3.0"	80
4.0"	100

Actuator Type

Lockable Multiposition Handle	L
Multipositioning handle	M
Regulating handle	R
Normally Open	NO
Normally Closed	NC
Air/Air	AA

Body Material

316L	6L
304L	4L

Connection Type

Welding ends	1
clamp/clamp	2
Welding/clamp	3
Two male parts	4
Male part/Welding ends	5
Male part/clamp	6

Sealing Material

EPDM	E
Viton	V
Silicone	S

Feedback Type(only for pneumatic)

Magnetic Valve

Have	1
None	0

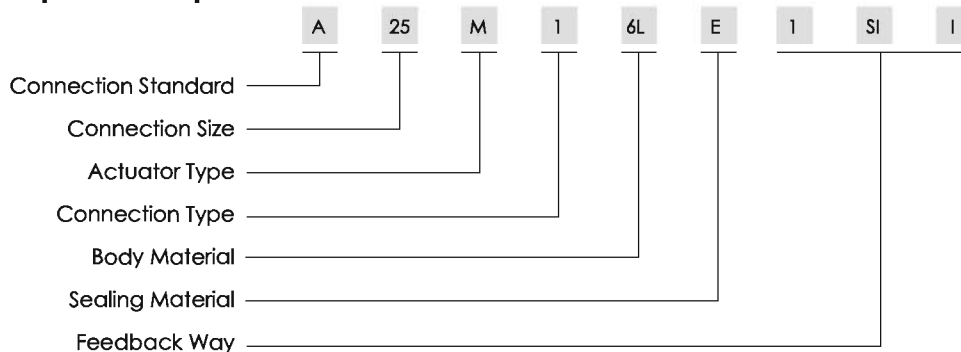
Sensor

None	N
Single Indicator	SI
Double Indicator	DI

Sensor Type

Sensor Indicator	I
Mechanical Type	M

Option samples:



Remark: 3A, 1.0" weld, Multipositioning handle butterfly valve, 316L, EPDM Sealing Material, with magnetic valve and single sensor.

Remark: 1, Request about GMP & DMP valve, Please contact with Kinglai; 2, if the valve with feedback device used in dangerous area, please inform the anti-explosion lever of electronic components:



KBFV-P with pneumatically operated KingLai Hygienic Butterfly Valves

Technical Data

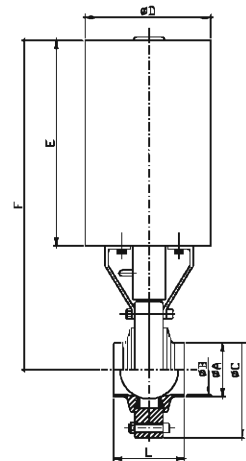
Items	Details
Operating temperature	EPDM: -40~130°C VITON: -20~200°C SILICON: -60~230°C
Ambient temperature	-10~95°C
Pneumatic pressure	6±1bar
Body material	1.4404(316L), 1.4307(304L) EN10088, forging
Bushing material	PVDF
Other parts	1.4301(304) EN10088
Connections	Butt-Weld, Clamp, flange, thread 3A,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



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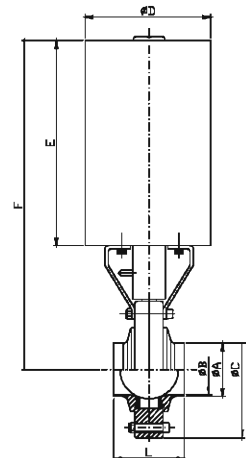
KBFV-PW:Welding ends ,NC

NO.	SIZE	L±0.5	A	B	C	D	E
1401300-000028	25	40	28	25	67	83.5	133.5
1401300-000029	25	40	29	26	67	83.5	133.5
1401300-000032	32	42	34	31	77	83.5	133.5
1401300-000035	32	42	35	32	77	83.5	133.5
1401300-000040	40	50	40	37	77	83.5	133.5
1401300-000041	40	50	41	38	77	83.5	133.5
1401300-000050	50	50	52	49	90	83.5	133.5
1401300-000053	50	50	53	50	90	83.5	133.5
1401300-000065	65	50	70	66	108.5	83.5	133.5
1401300-000080	80	60	85	81	127.1	83.5	133.5
1401300-000100	100	64	104	100	140	101.6	158.5



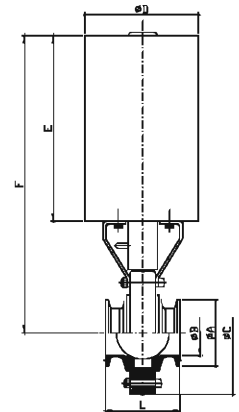
KBFV-PW:Welding ends ,A/A

NO.	SIZE	L±0.5	A	B	C	D	E
1401301-000028	25	40	28	25	67	83.5	133.5
1401301-000029	25	40	29	26	67	83.5	133.5
1401301-000032	32	42	34	31	77	83.5	133.5
1401301-000035	32	42	35	32	77	83.5	133.5
1401301-000040	40	50	40	37	77	83.5	133.5
1401301-000041	40	50	41	38	77	83.5	133.5
1401301-000050	50	50	52	49	90	83.5	133.5
1401301-000053	50	50	53	50	90	83.5	133.5
1401301-000065	65	50	70	66	108.5	83.5	133.5
1401301-000080	80	60	85	81	127.1	83.5	133.5
1401301-000100	100	64	104	100	140	101.6	158.5



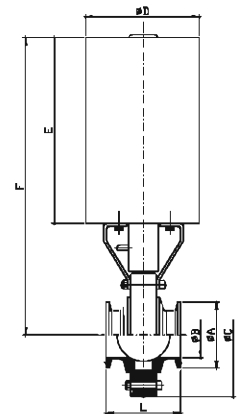
KBFV-PC:Clamp ends ,NC

NO.	SIZE	L±0.5	A	B	C	D	E
1401400-000028	25	83	50.5	25	67	83.5	133.5
1401400-000029	25	83	50.5	26	67	83.5	133.5
1401400-000032	32	85	50.5	31	77	83.5	133.5
1401400-000035	32	85	50.5	32	77	83.5	133.5
1401400-000040	40	93	50.5	37	77	83.5	133.5
1401400-000041	40	93	50.5	38	77	83.5	133.5
1401400-000050	50	93	64.0	49	90	83.5	133.5
1401400-000053	50	93	64.0	50	90	83.5	133.5
1401400-000065	65	106	91.0	66	108.5	83.5	133.5
1401400-000080	80	116	106.0	81	127.1	83.5	133.5
1401400-000100	100	120	119.0	100	140	101.6	158.5



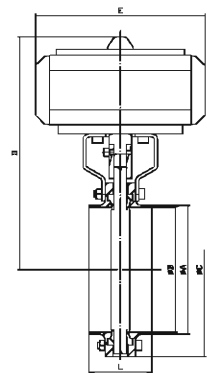
KBFV-PC:Clamp ends ,A/A

NO.	SIZE	L±0.5	A	B	C	D	E
1401401-000028	25	83	50.5	25	67	83.5	133.5
1401401-000029	25	83	50.5	26	67	83.5	133.5
1401401-000032	32	85	50.5	31	77	83.5	133.5
1401401-000035	32	85	50.5	32	77	83.5	133.5
1401401-000040	40	93	50.5	37	77	83.5	133.5
1401401-000041	40	93	50.5	38	77	83.5	133.5
1401401-000050	50	93	64.0	49	90	83.5	133.5
1401401-000053	50	93	64.0	50	90	83.5	133.5
1401401-000065	65	106	91.0	66	108.5	83.5	133.5
1401401-000080	80	116	106.0	81	127.1	83.5	133.5
1401401-000100	100	120	119.0	100	140	101.6	158.5



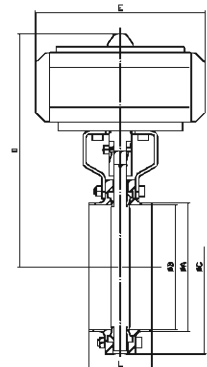
KBFV-PW:Welding ends ,NC

NO.	SIZE	L±0.5	A	B	C	D	E
1401300-000125	125	80	129	125	181	319	268
1401300-000150	150	78	154	150	218	341	268
1401300-000200	200	100	204	200	276	368	268



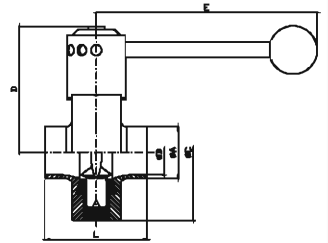
KBFV-PC:Welding ends ,A/A

NO.	SIZE	L±0.5	A	B	C	D	E
1401301-000125	125	80	129	125	181	319	268
1401301-000150	150	78	154	150	218	341	268
1401301-000200	200	100	204	200	276	368	268



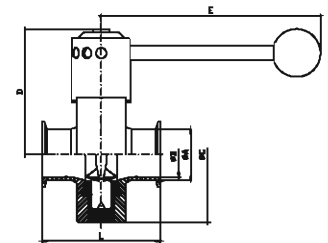
KBFV-MM: Multipositioning handle, Welding ends

NO.	SIZE	L±0.5	A	B	C	D	E
1401008-000028	25	40	28	25	67	72	134
1401009-000029	25	40	29	26	67	72	134
1401008-000032	32	42	34	31	77	78	134
1401009-000035	32	42	35	32	77	78	134
1401008-000040	40	50	40	37	77	78	134
1401009-000041	40	50	41	38	77	78	134
1401009-000050	50	50	52	49	90	83	134
1401009-000053	50	50	53	50	90	83	134
1401008-000065	65	50	70	66	108.5	93	134
1401008-000080	80	60	85	81	127.1	104	134
1401008-000100	100	64	104	100	140	109	134
1401008-000125	125	80	129	125	181	140	319
1401008-000150	150	78	154	150	218	172	319
1401008-000200	200	100	204	200	276	201	319



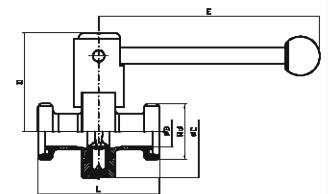
KBFV-MM: Multipositioning handle, Clamp/Clamp

NO.	SIZE	L±0.5	A	B	C	D	E
1401008-000028	25	83	50.5	25	67	72	134
1401009-000029	25	83	50.5	26	67	72	134
1401008-000032	32	85	50.5	31	77	78	134
1401009-000035	32	85	50.5	32	77	78	134
1401008-000040	40	93	50.5	37	77	78	134
1401009-000041	40	93	50.5	38	77	78	134
1401009-000050	50	93	64.0	49	90	83	134
1401009-000053	50	93	64.0	50	90	83	134
1401008-000065	65	106	91.0	66	108.5	93	134
1401008-000080	80	116	106.0	81	127.1	104	134
1401008-000100	100	120	119.0	100	140	109	134
1401008-000125	125	136	129	125	181	140	319
1401008-000150	150	134	154	150	218	172	319
1401008-000200	200	156	204	200	276	201	319
1501101-000100	101.6	91.6	119	97.6	140	109	134



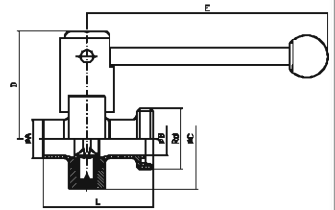
KBFV-MM: Multipositioning handle, Two male parts

NO.	SIZE	L±0.5	RD	B	C	D	E
1401008-000028	25	80	28	25	67	72	134
1401009-000029	25	80	29	26	67	72	134
1401008-000032	32	80	34	31	77	78	134
1401009-000035	32	80	35	32	77	78	134
1401008-000040	40	80	40	37	77	78	134
1401009-000041	40	80	41	38	77	78	134
1401009-000050	50	80	52	49	90	83	134
1401009-000053	50	80	53	50	90	83	134
1401008-000065	65	80	70	66	108.5	93	134
1401008-000080	80	100	85	81	127.1	104	134
1401008-000100	100	100	104	100	140	109	134

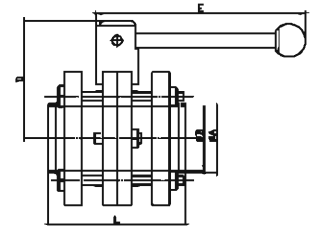


KBFV-MM: Multipositioning handle, Male/Welding end

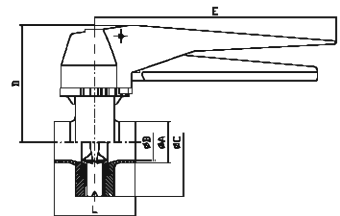
NO.	SIZE	L±0.5	RD	A	B	C	D	E
1401008-000028	25	60	28	28	25	67	72	134
1401009-000029	25	60	29	29	26	67	72	134
1401008-000032	32	61	34	34	31	77	78	134
1401009-000035	32	61	35	35	32	77	78	134
1401008-000040	40	65	40	40	37	77	78	134
1401009-000041	40	65	41	41	38	77	78	134
1401009-000050	50	65	52	52	49	90	83	134
1401009-000053	50	65	53	53	50	90	83	134
1401008-000065	65	65	70	70	66	108.5	93	134
1401008-000080	80	80	85	85	81	127.1	104	134
1401008-000100	100	81	104	104	100	140	109	134

**KBFV-MF: Multipositioning handle, Three panel welding ends**

NO.	SIZE	L±0.5	A	B	D	E
1401011-000028	25	100	28	25	77	134
1401011-000029	25	100	29	26	77	134
1401011-000032	32	100	34	31	82	134
1401011-000035	32	100	35	32	82	134
1401011-000040	40	100	40	37	82	134
1401011-000041	40	100	41	38	82	134
1401011-000050	50	100	52	49	88	134
1401011-000053	50	100	53	50	88	134
1401011-000065	65	100	70	66	98	134
1401011-000080	80	100	85	81	108	134
1401011-000100	100	100	104	100	115	134

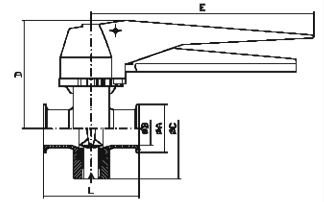
**KBFV-ML: lockable Multiposition Handle, Welding ends**

NO.	SIZE	L±0.5	A	B	C	D	E
1401000-000028	25	40	28	25	67	73	150
1401000-000029	25	40	29	26	67	73	150
1401000-000032	32	42	34	31	77	79	150
1401000-000035	32	42	35	32	77	79	150
1401000-000040	40	50	40	37	77	79	150
1401000-000041	40	50	41	38	77	79	150
1401000-000050	50	50	52	49	90	85	150
1401000-000053	50	50	53	50	90	85	150
1401000-000065	65	50	70	66	108.5	94	150
1401000-000080	80	60	85	81	127.1	105	150
1401000-000100	100	64	104	100	140	110	150
1401000-000125	125	80	129	125	181	182	351
1401000-000150	150	78	154	150	218	201	351
1401000-000200	200	100	204	200	276	230	351



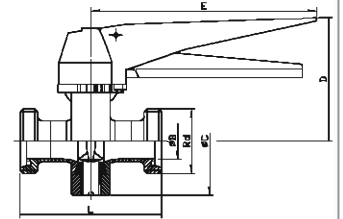
KBFV-ML:lockable Multiposition Handle,Clamp/Clamp

NO.	SIZE	L±0.5	A	B	C	D	E
1401105-000028	25	83	50.5	25	67	73	150
1401105-000029	25	83	50.5	26	67	73	150
1401105-000032	32	85	50.5	31	77	79	150
1401105-000035	32	85	50.5	32	77	79	150
1401105-000040	40	93	50.5	37	77	79	150
1401105-000041	40	93	50.5	38	77	79	150
1401105-000050	50	93	64.0	49	90	85	150
1401105-000053	50	93	64.0	50	90	85	150
1401105-000065	65	106	91.0	66	108.5	94	150
1401105-000080	80	116	106.0	81	127.1	105	150
1401105-000100	100	120	119.0	100	140	110	150
1401105-000125	125	136	129	125	181	182	351
1401105-000150	150	134	154	150	218	201	351
1401105-000200	200	156	204	200	276	230	351



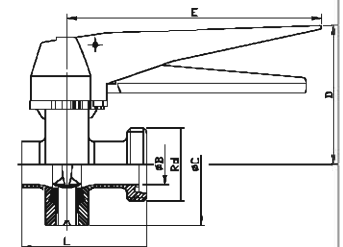
KBFV-ML:lockable Multiposition Handle,Two male parts

NO.	SIZE	L±0.5	RD	B	C	D	E
1401200-000028	25	80	28	25	67	72	134
1401200-000029	25	80	29	26	67	72	134
1401200-000032	32	80	34	31	77	78	134
1401200-000035	32	80	35	32	77	78	134
1401200-000040	40	80	40	37	77	78	134
1401200-000041	40	80	41	38	77	78	134
1401200-000050	50	80	52	49	90	83	134
1401200-000053	50	80	53	50	90	83	134
1401200-000065	65	80	70	66	108.5	93	134
1401200-000080	80	100	85	81	127.1	104	134
1401200-000100	100	100	104	100	140	109	134



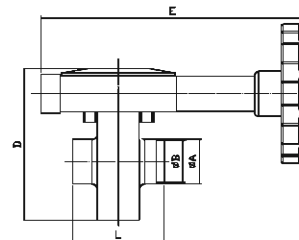
KBFV-ML:lockable Multiposition Handle,Male part/Welding end

NO.	SIZE	L±0.5	RD	A	B	C	D	E
1401501-000028	25	60	28	28	25	67	73	150
1401501-000029	25	60	29	29	26	67	73	150
1401501-000032	32	61	34	34	31	77	79	150
1401501-000035	32	61	35	35	32	77	79	150
1401501-000040	40	65	40	40	37	77	79	150
1401501-000041	40	65	41	41	38	77	79	150
1401501-000050	50	65	52	52	49	90	85	150
1401501-000053	50	65	53	53	50	90	85	150
1401501-000065	65	65	70	70	66	108.5	94	150
1401501-000080	80	80	85	85	81	127.1	105	150
1401501-000100	100	81	104	104	100	140	110	150



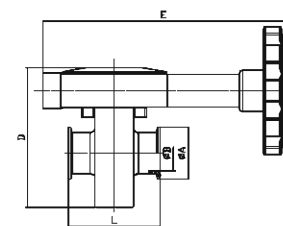
KBFV-MR:Regulation Handle,Welding ends

NO.	SIZE	L±0.5	A	B	D	E
1401000-000028	25	40	28	25	86.87	149.5
1401000-000029	25	40	29	26	86.87	149.5
1401000-000032	32	42	34	31	96.87	149.5
1401000-000035	32	42	35	32	96.87	149.5
1401000-000040	40	50	40	37	96.87	149.5
1401000-000041	40	50	41	38	96.87	149.5
1401000-000050	50	50	52	49	109.5	149.5
1401000-000053	50	50	53	50	109.5	149.5
1401000-000065	65	50	70	66	128	149.5
1401000-000080	80	60	85	81	146.6	149.5
1401000-000100	100	64	104	100	159.5	149.5



KBFV-MR:Regulation Handle,Clamp/Clamp

NO.	SIZE	L±0.5	A	B	D	E
1401105-000028	25	83	50.5	25	86.87	149.5
1401105-000029	25	83	50.5	26	86.87	149.5
1401105-000032	32	85	50.5	31	96.87	149.5
1401105-000035	32	85	50.5	32	96.87	149.5
1401105-000040	40	93	50.5	37	96.87	149.5
1401105-000041	40	93	50.5	38	96.87	149.5
1401105-000050	50	93	64.0	49	109.5	149.5
1401105-000053	50	93	64.0	50	109.5	149.5
1401105-000065	65	106	91.0	66	128	149.5
1401105-000080	80	116	106.0	81	146.6	149.5
1401105-000100	100	120	119.0	100	159.5	149.5



KPV Hygienic Piston Valve

KPV is an extremely reliable and hygienic design for stopping or diverting flow in single or multi-directional systems.

KPV is a pneumatic seat valve in a hygienic and modular design for a wide field of duties, e.g. as a shut-off valve with two (2) or three (3) ports or as a change-over valve with three (3) to five (5) ports. The valve is remote-controlled by means of compressed air. It has few and simple moveable parts which results in a very reliable valve and low maintenance cost.

To ensure a high degree of flexibility the valve seat between the two bodies in the Change-over version is loose. The valve features an optimized life span of the seals through a defined compression design. The actuator is connected to the valve body using a yoke and all components are assembled with clamp ring.



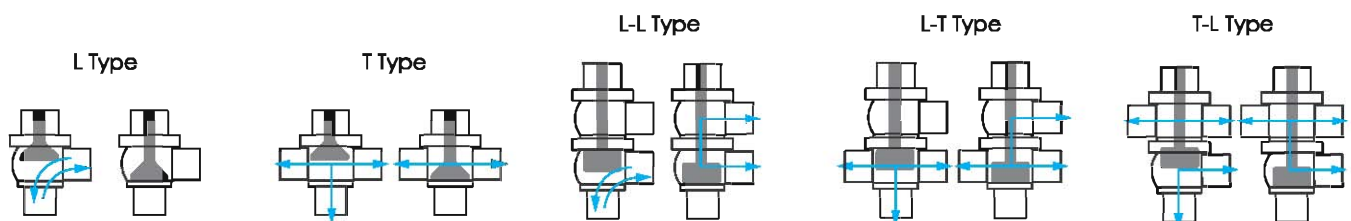
Feature (Pneumatically operated)

- SS316L applied to valve body, high thickness for controlling ball design guarantee the satisfiability.
- Tri-clamp joint makes multiple assemblies possible, simple design and easy to operate.
- Certified by 3A
- All parts contact with product can be cleaned separately.
- Signal feedback device is available upon request.
- Valve body can turn around 180 degree, NO/NC is available.

Feature (Manually operated)

It's been used widely in controlling pressure and flow rate, and different assembly is available upon request, like 2-3 for Shut-off valve, or 3-5 for changeover valve.

Flow Direction



Selection table

Connection Standard

DIN	D
ISO	I
3A	A

Connection Size

1.0"	25
1.5"	40
2.0"	50
2.5"	65
3.0"	80

Actuator Type

Manual	M
Normally Open	NO
Normally Closed	NC
Air/Air	AA

Body Configuration

L-L Type	1
T-L Type	2
T-T Type	3
L Type	4
T Type	5
L-T Type	6

Connection Type

welding ends	1
clamp/clamp	2

Body Material

316L	6L
304L	4L

Sealing Material

EPTM+PTFE	EP
Silicone+PTFE	SP
Viton+PTFE	VP

Feedback Type(only for pneumatic)

Magnetic Valve

Have	1
None	0

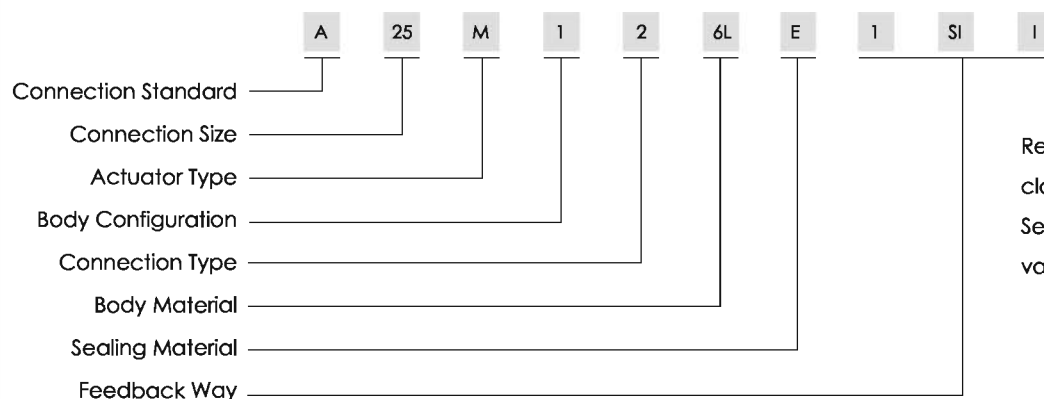
Sensor

None	N
Single Indicator	SI
Double Indicator	DI

Sensor Type

Sensor Indicator	I
Mechanical Type	M

Option samples:



Remark: 3A, 1.0" piston valve, clamp/clamp, 316L, EPTM+PTFE Sealing Material, with magnetic valve and single sensor.

Remark: 1, Request about GMP & DMP valve, Please contact with Kinglai; 2, if the valve with feedback device used in dangerous area, please inform the anti-explosion lever of electronic components:

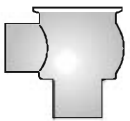
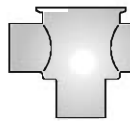
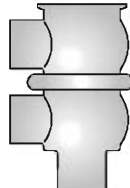
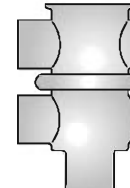
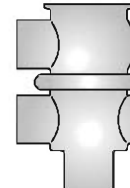
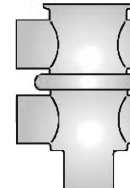
KPV-P with pneumatically operated KingLai Hygienic Piston Valves

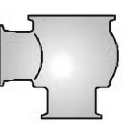
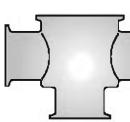
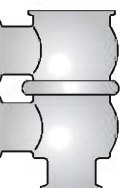
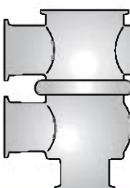
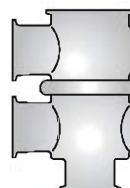
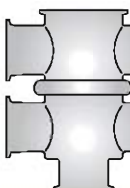
Working Pressure	0-10 bar
Working Temp.	-40~140°C (Standard) , -40~120°C (Encapsulated)
Actuator	pneumatically operated: Normally Open (NO) , Normally Closed (NC) , Air/Air (A/A)
Seal Material	EPDM / Viton / Silicone
Body Design	L-L Type, T-L Type, T-T Type, L Type, T Type, L-T Type
Body Material	316L (EN1.4409 CF3M) , 304 (EN1.4308)
Port Size	DN25~DN80
Connection	Welding ends, Clamp/Clamp
Surface Finish	outside surface sanding , Internally Ra≤0.8μm
Connection Standard	DIN, ISO, 3A, JIS

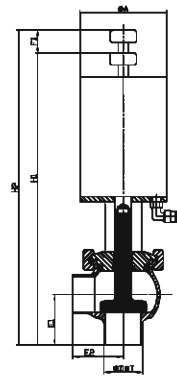


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2.5

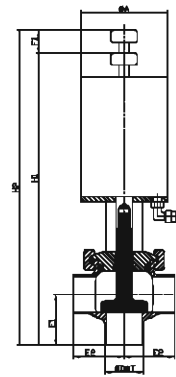
Valve Body compositions

					
L 200	T 300	L-L 210	T-L 220	L-T 310	T-T 320
DIN:1426411	DIN:1426511	DIN:1426111	DIN:1426211	DIN:1426611	DIN:1426311
DIN:1426412	DIN:1426512	DIN:1426112	DIN:1426212	DIN:1426612	DIN:1426312

					
L 2001	T 3002	L-L 2102	T-L 2203	L-T 3103	T-T 3204
DIN:1426431	DIN:1426531	DIN:1426311	DIN:1426231	DIN:1426631	DIN:1426331
DIN:1426432	DIN:1426532	DIN:1426132	DIN:1426232	DIN:1426632	DIN:1426332



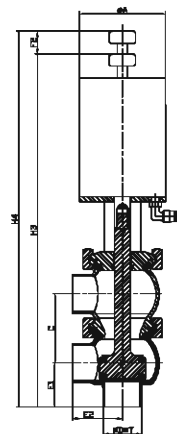
L Type Weld Check Valve



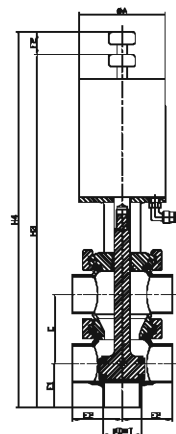
T Type Weld Check Valve

KPV-PW:L-type, T-type divert seat valve with welding ends

NO	SIZE	ODXT(DIN)	ODXT(11850-2)	E1	E2	H1	H2	F1	Ø A
XXXXXXXX-000025	25	28x1.5	29x1.5	49.5	49.5	285	301	16	85
XXXXXXXX-000032	32	34x1.5	35x1.5	49.5	49.5	289	316	27	85
XXXXXXXX-000040	40	40x1.5	41x1.5	49.5	49.5	289	316	27	85
XXXXXXXX-000050	50	52x1.5	53x1.5	61.0	61.0	311	342	31	104
XXXXXXXX-000065	65	70x2.0	70x2.0	81.0	81.0	397	436	39	154
XXXXXXXX-000080	80	85x2.0	85x2.0	86.0	86.0	406	448	42	154



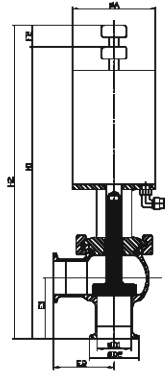
L-L Type Weld Regulating Seat Valve



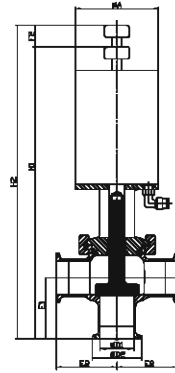
T-T Type Weld Divert Seat Valve

KPV-PW:L-L type, T-T type divert seat valve with welding ends

NO	SIZE	ODXT(DIN)	ODXT(11850-2)	E1	E2	C	H3	H4	F2	Ø A
XXXXXXXX-000025	25	28x1.5	29x1.5	49.5	49.5	56	340	352	12	85
XXXXXXXX-000032	32	34x1.5	35x1.5	49.5	49.5	67	356	375	19	85
XXXXXXXX-000040	40	40x1.5	41x1.5	49.5	49.5	67	356	375	19	85
XXXXXXXX-000050	50	52x1.5	53x1.5	61.0	61.0	84	397	421.5	24.5	104
XXXXXXXX-000065	65	70x2.0	70x2.0	81.0	81.0	107	505	525.5	20.5	154
XXXXXXXX-000080	80	85x2.0	85x2.0	86.0	86.0	121	527	553	26	154



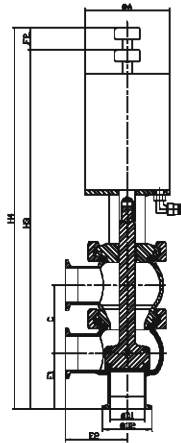
L Type Clamp Check Valve



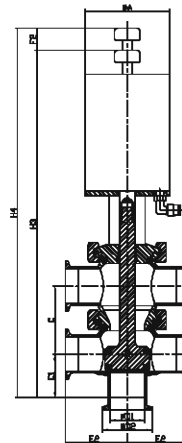
T Type Clamp Check Valve

KPV-PC:L-type, T-type divert seat valve with clamp ends

NO	SIZE	D1(DIN)	D1(DIN11850-2)	D2	E1	E2	H1	H2	F2	Ø A
XXXXXXXX-000025	25	25	26	50.5	71.0	71.0	306.5	322.5	16	85
XXXXXXXX-000032	32	31	32	50.5	71.0	71.0	310.5	337.5	27	85
XXXXXXXX-000040	40	37	38	50.5	71.0	71.0	310.5	337.5	27	85
XXXXXXXX-000050	50	49	50	64.0	82.5	82.5	332.5	363.5	31	104
XXXXXXXX-000065	65	-	66	91.0	109.0	109.0	425	464	39	154
XXXXXXXX-000080	80	-	81	106.0	114.0	114.0	434	476	42	154



L-L Type Clamp Regulating Valve



T-T Type Clamp Change Over Valve

KPV-PC:L-L type, T-T type divert seat valve with clamp ends

NO	SIZE	D1(DIN)	D1(11850-2)	D2	E1	E2	C	H3	H4	F2	Ø A
XXXXXXXX-000025	25	25	26	50.5	71.0	71.0	56	361.5	373.5	12	85
XXXXXXXX-000032	32	31	32	50.5	71.0	71.0	67	377.5	396.5	19	85
XXXXXXXX-000040	40	37	38	50.5	71.0	71.0	67	377.5	396.5	19	85
XXXXXXXX-000050	50	49	50	64.0	82.5	82.5	84	418.5	443	24.5	104
XXXXXXXX-000065	65	-	66	91.0	109.0	109.0	107	533	553.5	20.5	154
XXXXXXXX-000080	80	-	81	106.0	114.0	114.0	121	555	581	26	154

KPV-M with manually operated
KingLai Hygienic Piston Valves

Working Pressure 0-10 bar
Working Temp. -40~140°C
Actuator manually operated
Seal Material EPDM / Viton / Silicone
Body Design L-L Type, T-L Type, T-T Type,
L Type, T Type, L-T Type
Body Material 316L (EN1.4409 CF3M) , 304 (EN1.4308)
Port Size 1.0"~ 3.0"
Connection Welding ends, Clamp/Clamp
SurfaceFinish outside surface sanding , Internally Ra≤0.8µm
Connection Standard DIN, ISO, 3A, JIS



2
2.5

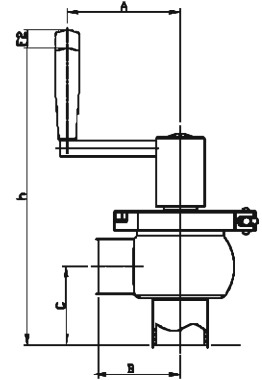
Valve Body compositions

L 200	T 300	L-L 210	T-L 220	L-T 310	T-T 320
DIN:1426413	DIN:1426513	DIN:1426113	DIN:1426213	DIN:1426613	DIN:1426313
DIN:1426423	DIN:1426523	DIN:1426123	DIN:1426223	DIN:1426623	DIN:1426323

L 2001	T 3002	L-L 2102	T-L 2203	L-T 3103	T-T 3204
DIN:1426433	DIN:1426533	DIN:1426133	DIN:1426233	DIN:1426633	DIN:1426333
DIN:1426443	DIN:1426543	DIN:1426143	DIN:1426243	DIN:1426643	DIN:1426343

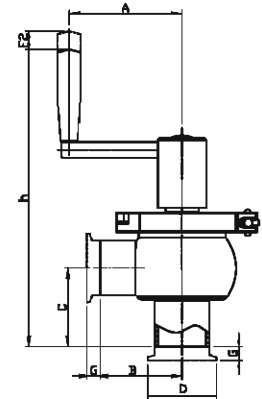
KPV-MW:L-type Manual Divert Seat Valve with welding ends

NO	SIZE	ODxT	A	B	C	F2	G	H
XXXXXXXX-000032	32	34/35X1.5	105	49.5	49.5	22	21.5	153
XXXXXXXX-000040	40	40/41X1.5	105	49.5	49.5	22	12.7	153
XXXXXXXX-000050	50	52/53X1.5	105	61	61	30	12.7	166
XXXXXXXX-000060	65	70X2	105	81	81	30	12.7	218
XXXXXXXX-000080	80	85X2	105	86	86	30	12.7	214



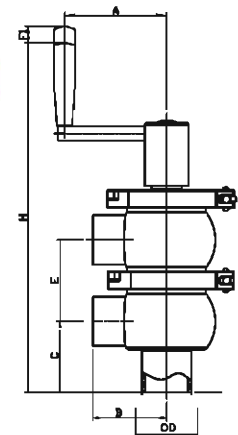
KPV-MC:L-type Manual Divert Seat Valve with clamp ends

NO	SIZE	A	B	C	D	F2	G	H
XXXXXXXX-000032	32	105	49.5	49.5	50.4	22	21.5	153
XXXXXXXX-000040	40	105	49.5	49.5	50.4	22	12.7	153
XXXXXXXX-000050	50	105	61	61	63.9	30	12.7	166
XXXXXXXX-000060	65	105	81	81	77.5	30	12.7	218
XXXXXXXX-000080	80	105	86	86	90.9	30	12.7	214



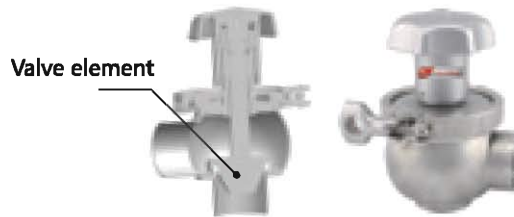
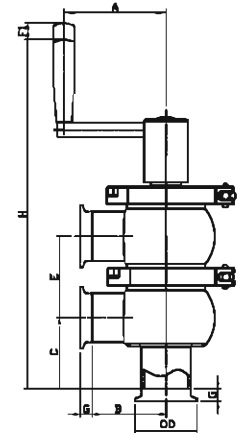
KPV-MW:L/L Type Manual Divert Seat Valve with welding ends

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



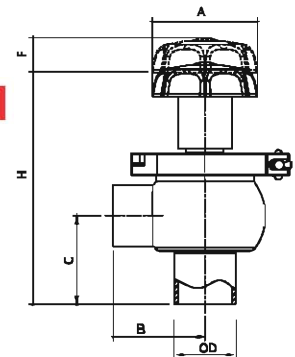
KPV-MC:L/L Type Manual Divert Seat Valve with clamp ends

NO	SIZE	ODxT	A	B	C	E	F1	G	H
XXXXXXXX-000032	32	34/35X1.5	105	49.5	49.5	56	17	21.5	222
XXXXXXXX-000040	40	40/41X1.5	105	49.5	49.5	67	17	21.5	221
XXXXXXXX-000050	50	52/53X1.5	105	61	61	84	24	21.5	252
XXXXXXXX-000060	65	70X2	105	81	81	107	24	21.5	328
XXXXXXXX-000080	80	85X2	105	86	86	121	27	21.5	338



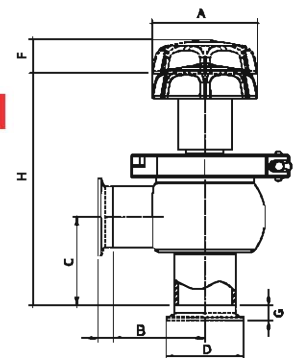
KPV-MW:L-type Manual regulating Seat Valve with welding ends

NO	SIZE	A	B	C	OD	E	F1	G	H
XXXXXXXX-000032	32	105	49.5	49.5	50.4	56	17	21.5	222
XXXXXXXX-000040	40	105	49.5	49.5	50.4	67	17	21.5	221
XXXXXXXX-000050	50	105	61	61	63.9	84	24	21.5	252
XXXXXXXX-000060	65	105	81	81	77.5	107	24	21.5	328
XXXXXXXX-000080	80	105	86	86	90.9	121	27	21.5	338



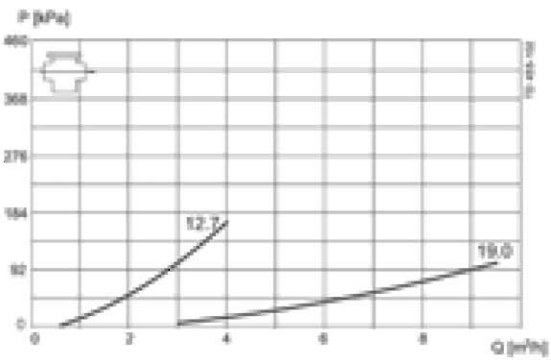
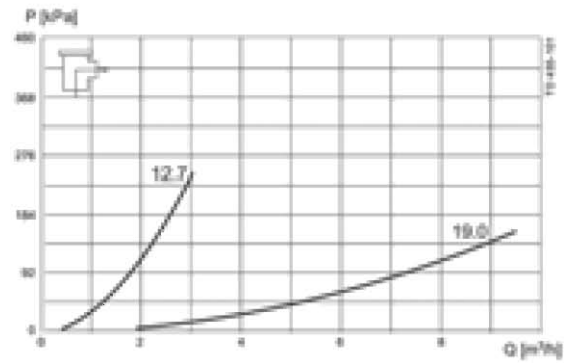
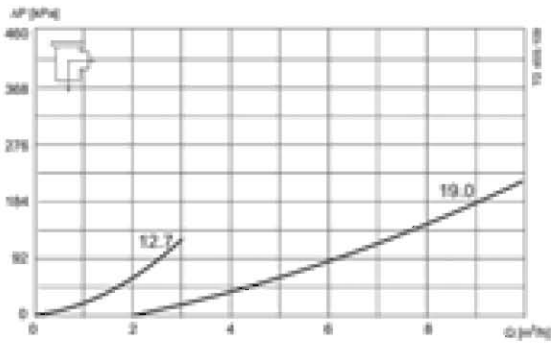
KPV-MC:L-type Manual regulating Seat Valve with clamp ends

NO	SIZE	A	B	C	D	F	G	H
XXXXXXXX-000032	32	45	49.5	49.5	50.4	22	21.5	159
XXXXXXXX-000040	40	45	49.5	49.5	50.4	22	21.5	159
XXXXXXXX-000050	50	45	61	61	63.9	30	21.5	183.8
XXXXXXXX-000065	65	45	81	81	77.5	30	21.5	215.3
XXXXXXXX-000080	80	45	86	86	90.9	30	21.5	202.3

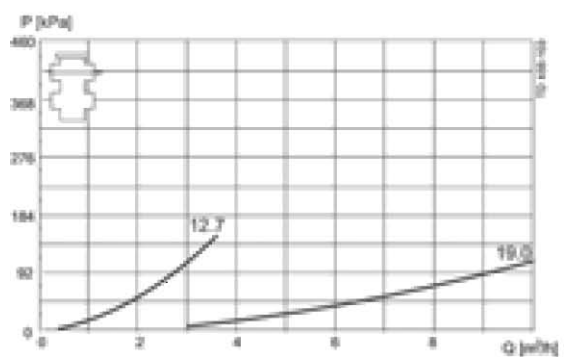
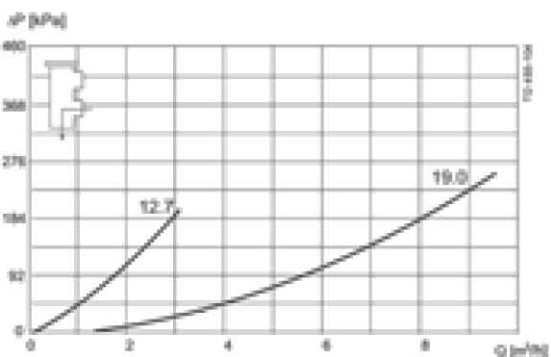
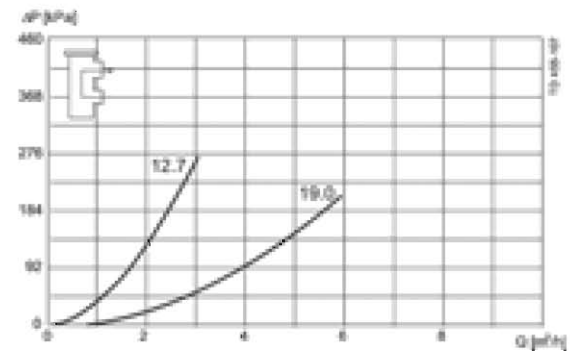
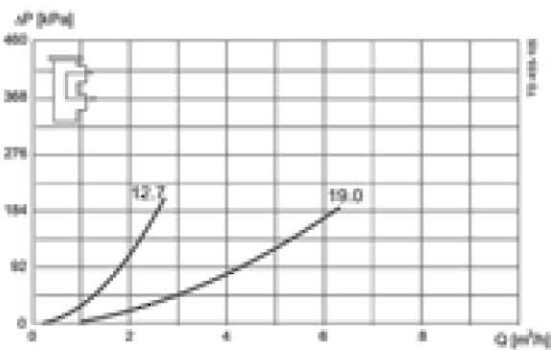
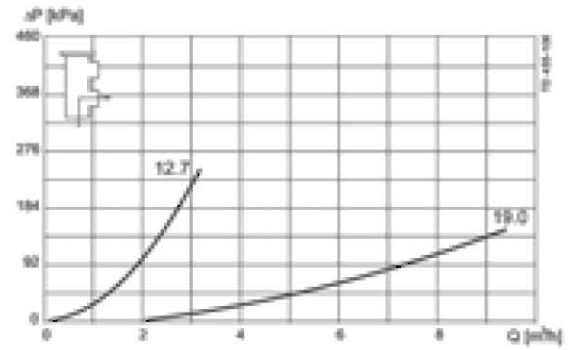


Pressure/Flow

shut-off valve



change-over valve



KCV Hygienic Check Valves

KCV is designed to guarantee flow not go back in piping system. Self-active check valve MUST be installed in vertical direction, only allows flow down to upper side. There is no spring involved; it relies on gravity to seal the valve. The valve body is forged, it's hygienic and easy to clean, no dead area. Tri-clamp assembly, easy to be installed and inspection.



2
2.6

Selection table

Connection Standard	DIN	D
	ISO	I
	3A	A

DIN	D
ISO	I
3A	A

Connection Type	welding ends	1
	clamp/clamp	2

welding ends	1
clamp/clamp	2

Connection Size	1.0"	25
	1.5"	40
	2.0"	50
	2.5"	65
	3.0"	80

1.0"	25
1.5"	40
2.0"	50
2.5"	65
3.0"	80

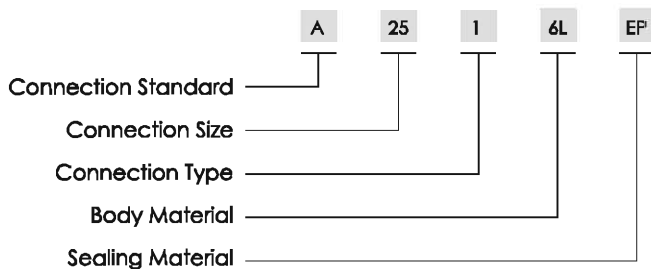
Body Material	316L	6L
	304L	4L

316L	6L
304L	4L

Sealing Material	EPDM	E
	Silicone	S
	Viton	V

EPDM	E
Silicone	S
Viton	V

Option samples:



Remark: 3A, 1.0", welding ends, check valve with manually operated, 316L, EPDM Sealing Material.

Remark: 1, Request about GMP & DMP valve, Please contact with Kinglai; 2, if the valve with feedback device used in dangerous area, please inform the anti-explosion lever of electronic components:

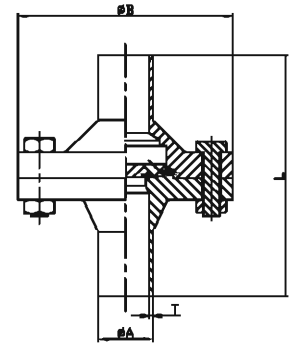
KCK no-return valve KingLai Hygienic Check Valves

Working Pressure	4.5 bar
Working Temp.	150°C
Seal Material	EPDM, Viton, Silicone
Body Material	316L
Port Size	0.5"~ 2.0", 1.0"~ 6.0"
Connection	Welding ends, Clamp/Clamp
Surface Finish	External surface finish Ra≤3.2μm, Internal surface finish Ra≤0.8μm
Connection Standard	DIN, ISO, 3A, BS



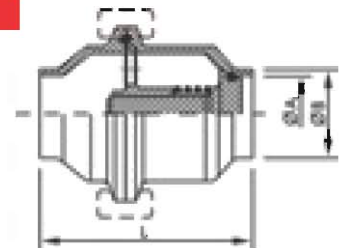
KCK-A: Wending ends

No.	No.	SIZE	A	B	L	T
1402008-000015	1402009-000015	25	28.0	100.0	100.0	1.5
1402008-000020	1402009-000020	32	34.0	100.0	100.0	1.5
1402008-000025	1402009-000025	40	40.0	100.0	112.0	1.5
1402008-000040	1402009-000040	50	52.0	110.0	115.0	1.5
1402008-000050	1402009-000050	65	70.0	110.0	115.0	2.0



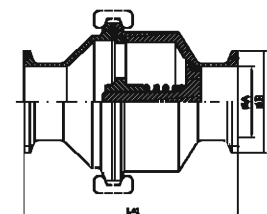
KCK-W: Wending ends

No.	SIZE	A	B	L
1402010-000025	25	25.0	28.0	60.0
1402010-000032	32	31.0	34.0	60.0
1402010-000040	40	37.0	40.0	75.0
1402010-000050	50	49.0	52.0	75.0
1402010-000065	65	66.0	70.0	75.0
1402010-000080	80	81.0	85.0	75.0
1402010-000100	100	100.0	104.0	119.0



KCK-C: Clamp/Clamp

No.	SIZE	A	B	L
1402110-000025	25	25.0	50.5	103.0
1402110-000032	32	31.0	50.5	103.0
1402110-000040	40	37.0	50.5	118.0
1402110-000050	50	49.0	64.0	118.0
1402110-000065	65	66.0	91.0	131.0
1402110-000080	80	81.0	106.0	131.0
1402110-000100	100	100.0	119.0	175.0



Four-Way Valves/ Air Pressure Valve

KingLai Hygienic Valves

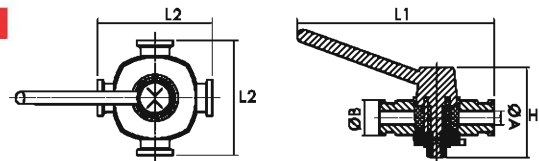
- Working Pressure** 0-10 bar
- Working Temp.** -10°C~150°C
- Seal Material** PTFE
- Body Material** 316L
- Connection** Welding ends, Clamp/Clamp
- SurfaceFinish** External surface finish $Ra \leq 1.6 \mu m$, Internal surface finish $Ra \leq 0.8 \mu m$
- Applivation** User friendly for chromato graphic system, CIP/SIP



2
2.7

Four-Way Valves

No .	A	B	H	L1	L2
1507199-000050	9.4	25	63	137.4	80
1507199-000775	7.75	25	63	137.4	80
1507199-000100	22.1	50.4	107	224.0	150
OEM/ODM	25	63	137.4	80	



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

Superior Tanks for Ultra-Pure Applications

KL Sterile storage tank design is in line with food and medical industry the most strict hygiene requirements, and fully compatible with in situ cleaning (CIP) process, the storage tank with hemispherical upper parts and hemispherical or conical bottom, and after a careful design and testing, can be in 4 bar of the maximum pressure and absolute vacuum conditions to complete the task. This means that even under the condition of hard work, they can work safely. KL Sterile storage tank has a variety of different diameter and height to choose from, so that adapted to the available space, and can be customized to meet the special needs of customers. KL Sterile storage tank is equipped with different mixing equipment, very suitable for special food and beverage applications. And the level of design to choose from, it is very suitable for products containing particles, such as the production of prepared foods. All surfaces in contact with the product through the mirror polishing, and outside surface with wool surface finish.

Custom Vessels

ABC-KL will manufacture customized vessels for your food, beverage, pharmaceutical, chemical and electronics applications under the following considerations:

Vessel Volume: Maximum 90,000 liters with a diameter of 14 feet

Pressure Rating: Design and built to ASME code and stamped

Corrosion Resistance: Material of construction is stainless steel and other nickel based alloys

Quality: Highest quality vessels available in the market today

Technology And Testing Ensure Performance

Beginning with the inspection of raw materials and throughout the manufacturing process, rigorous testing and documentation procedures assure compliance with the most stringent industry standards. Prior to shipment, your tanks undergo documented tests that may include dye penetrant examination, radiographic examination, pressure testing, profilometer readings of surface finish, saline & ferrite testing and fiber optic borescopic examination of contact surfaces.

The Custom Advantage

Because we know that every application is unique, we design each tank individually, so you never have to adapt your processing operations to our products. With customized designs from ABC-KL, you determine the precise specifications to meet your requirements, including:

- Capacity and pressure rating
- Mechanical and electropolished surface finish to less than 10 micro-inches Ra
- Stationary or portable design
- Cone, sloped or dished bottoms
- Fixed or removable tops
- Port types, sizes and locations
- Dimple, conventional and half pipe heating and cooling jackets
- Chloride-free insulation with stainless steel sheathing
- Accessories such as lights, sightglasses, handholes, sensors, load cells, sampling valves & spargers, Ingold fittings for instrumentation and top and bottom mount mixers

All ABC-KL custom tanks offer:

- Materials including stainless steel and other nickel based alloys
- ASME Code Stamping with National Board Registration
- CE/PED Certification
- G/B150, TSGR0004-2009
- JB/T4730-2005 NB/T47015-2011
- Certified profilometer readings on mechanical and electropolished surface finish
- Borescopic inspection



KRSH Rotary Spray Head

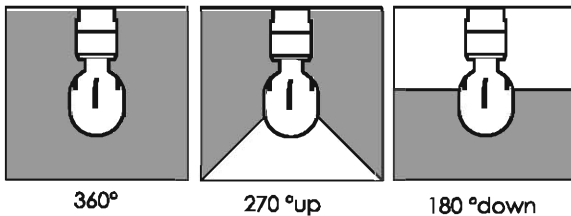
KRSH is a rotary spray head that uses cleaning media to provide coverage and impact. The device represents an effective alternative to traditional static spray balls because it uses low volumes of cleaning fluid at low pressure. The double ball bearing in the RSH's rotating head makes the device suitable 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.



3
3.2

Spray Pattern



Technical Expertise

Raw material
AISI 316L (UNS S31603)

Mln. tank opening
RSH-25 25mm diameter(DN25)
RSH-45 45mm diameter(DN45)
RSH-65 65mm diameter(DN65)

Max. working temp.
95°C (Max. ambient temp. 140°C)

Impact cleaning radius
RSH25 max. r=0.6M
RSH45 max. r=1.4M
RSH65 max. r=2M

Working pressure
1-3 bar (Recommended pressure: 2bar)

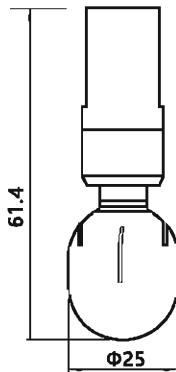
Spray pattern
360/270 up/180 down

Connection
Thread, Weld-on, Clip-on

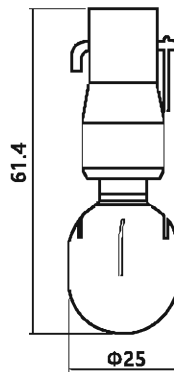
KRSH Rotary Spray Head-Φ25

Tank Cleaning Equipment

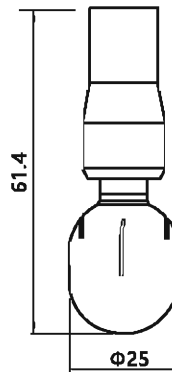
Lubricant	Self-lubricating with the cleaning fluid
Material	AISI 316L (UNSS31603)
Min.tankopening	25mm diameter(DN25)
Working pressure	1~3bar
Recommended pressure	2bar
Working temp.	95℃
Ambient temp.	140℃
Wetting radius	2.5m
Cleaning radius	Max. 0.6m
Connections	Thread: 3/8"Rp(BSP) Clip-on: 3/4"(BPE/3A) Weld-on: 3/4"(BPE/3A)
Standard Surface Finish	Ra0.8μm Internal, Ra0.8μm External
Improved Surface Finish	Ra0.8μm Internal, Ra0.8μm External+Mirror polish



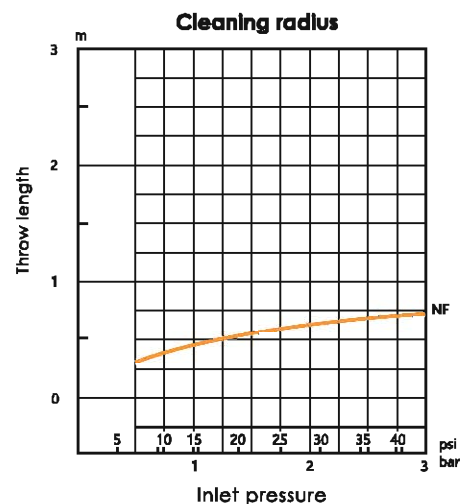
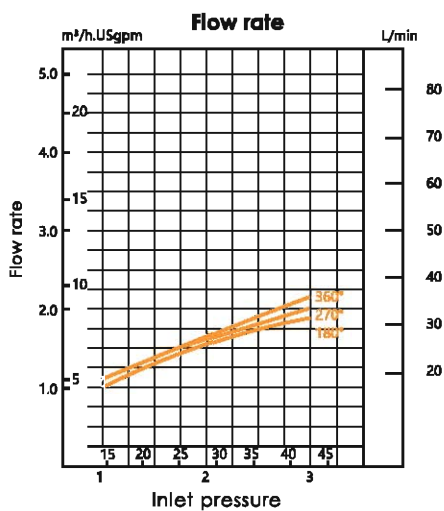
Thread



Clip-on



Weld-on

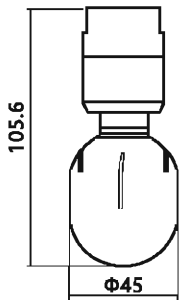


KRSH Rotary Spray Head-Φ45 Tank Cleaning Equipment

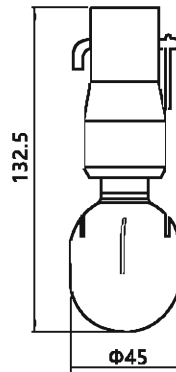
Lubricant	Self-lubricating with the cleaning fluid
Material	AISI 316L (UNSS31603)
Port Size	Min. Φ45mm
Working pressure	1~3bar
Recommended pressure	2bar
Working temp.	95°C
Ambient temp.	140°C
Wetting radius	3m
Cleaning radius	Max. 1.4m
Connections	Thread: 3/4"Rp(BSP) Clip-on: 1.0"(BPE/ISO) Weld-on: 1.0"
Standard Surface Finish	Ra0.8μm Internal, Ra0.8μm External
Improved Surface Finish	Ra0.8μm Internal, Ra0.8μm External+Mirror polish



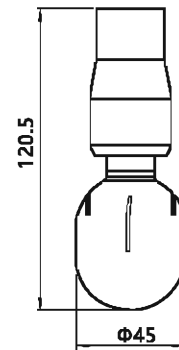
3
3.2



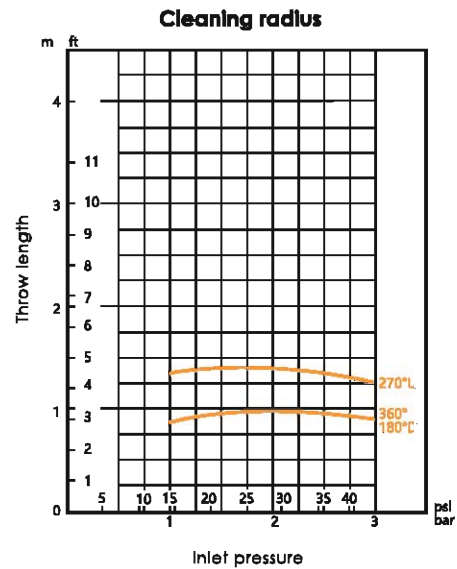
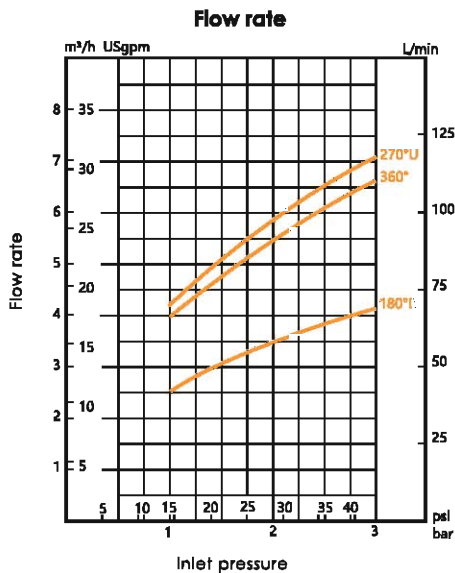
Thread



Clip-on



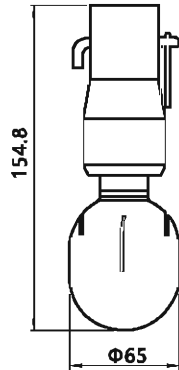
Weld-on



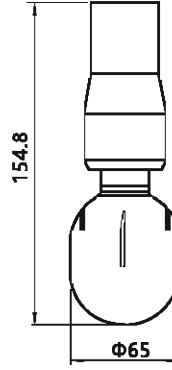
KRSH Rotary Spray Head-Φ65

Tank Cleaning Equipment

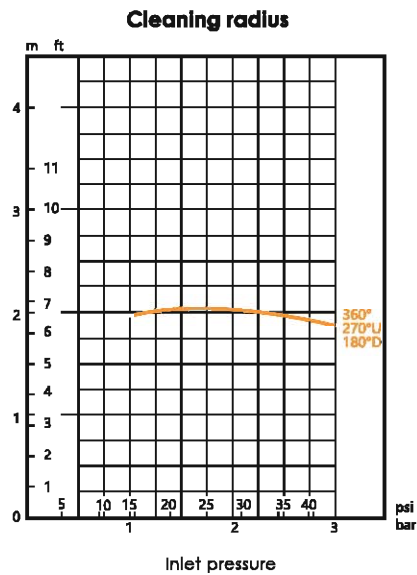
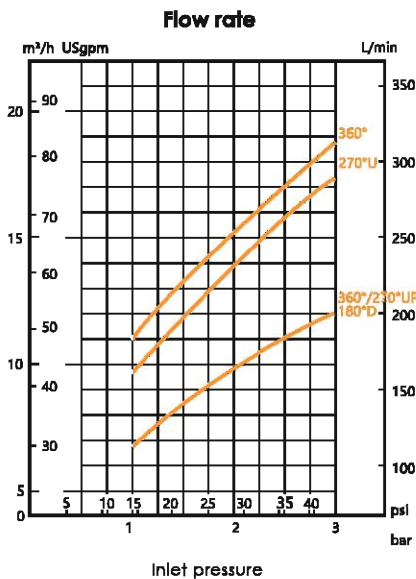
Lubricant	Self-lubricating with the cleaning fluid
Material	AISI 316L (UNSS31603)
Port Size	Min.Φ25mm
Working pressure	1~3bar
Recommended pressure	2bar
Working temp.	95°C
Ambient temp.	140°C
Wetting radius	3m
Cleaning radius	Max. 2m
Connections	Clip-on: 1.5"/2.0" (BPE/ISO) Weld-on: 1.5"/2.0" (BPE/ISO)
Standard Surface Finish	Ra0.8μm Internal, Ra0.8μm External
Improved Surface Finish	Ra0.8μm Internal, Ra0.8μm External+Mirror polish



Clip-on



Weld-on

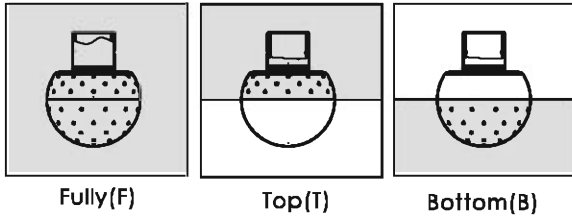


KSB Spray Ball Tank Cleaning Equipment

KSB is a fixed spray ball used for cleaning storage tanks.
Fixed spray balls are used for less demanding cleaning duties.
Can be customized to meet customers' specific needs.



Spray Pattern

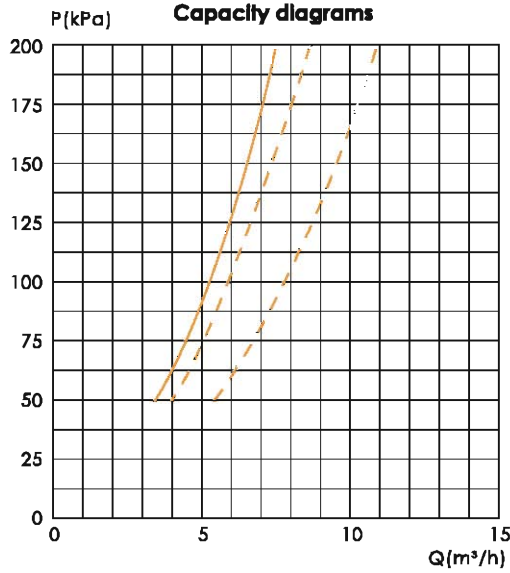


Fully (F)

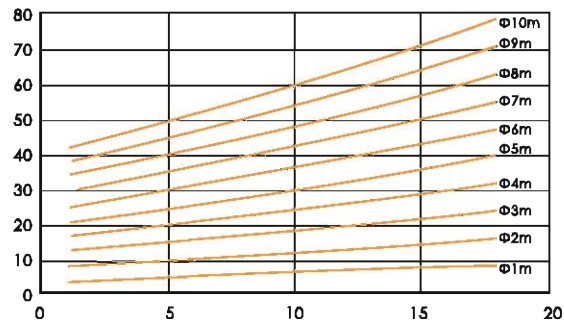
Top (T)

Bottom (B)

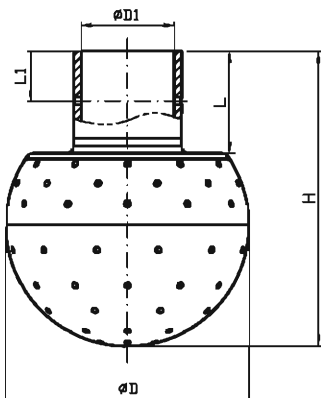
Capacity diagrams



Flow Rate Demand/Vertical Tank



360° Fully

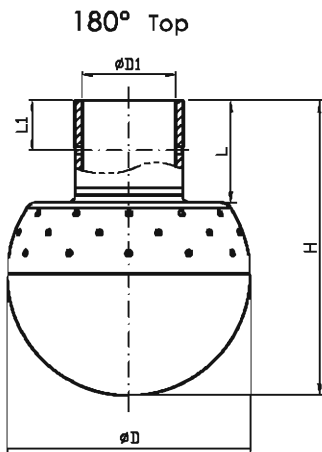


360° (Fully)

SIZE	D	D1	H	L	L1	Q(m³/h) 1bar	Q(m³/h) 2.5bar	Flow Diameter (Φm)
DN25	65	28.2	52.6	21.0	9.0	11.0	17.3	2.0-3.0
DN25-1	65	29.2	52.6	21.0	9.0	11.0	17.3	2.0-3.0
DN32	65	34.2	79.0	27.4	13.4	16.5	19.5	2.5-3.5
DN32-1	65	35.2	79.0	27.4	13.4	16.5	19.5	2.5-3.5
DN40	65	40.2	79.0	27.4	13.4	11.8	19.2	2.5-3.5
DN40-1	65	41.2	79.0	27.4	13.4	11.8	19.2	2.5-3.5
DN50	91	52.2	114.0	38.5	38.5	28.6	41.7	4.0-5.0
DN50	91	53.2	114.0	38.5	38.5	28.6	41.7	4.0-5.0

SIZE	D	D1	H	L	L1	Q(m³/h) 1bar	Q(m³/h) 2.5bar	Flow Diameter (Φm)
ISO19	40	19.3	52.6	21.0	9.0	4.2		1.0-1.5
ISO25	65	25.3	79.0	27.4	13.4	11.0	17.3	2.5-3.0
ISO38	65	38.3	79.0	27.4	13.4	11.8	19.2	2.5-3.5
ISO51	91	51.3	114.0	38.5	17.25	28.6	41.7	4.0-5.0

SIZE	D	D1	H	L	L1	Q(m³/h) 1bar	Q(m³/h) 2.5bar	Flow Diameter (Φm)
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

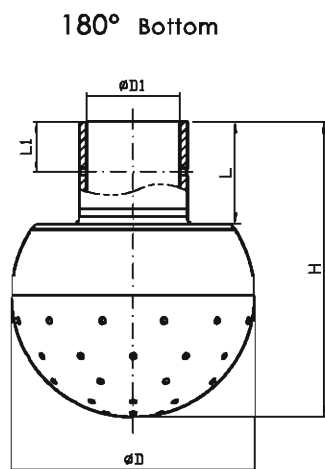


180° (Top)

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Flow Diameter (Φm)
DN25	65	28.2	52.6	21.0	9.0	8.7	12.8	2.5-3.0
DN25-1	65	29.2	52.6	21.0	9.0	8.7	12.8	2.5-3.0
DN32	65	34.2	79.0	27.4	13.4	9.8	15.6	2.5-3.5
DN32-1	65	35.2	79.0	27.4	13.4	9.8	15.6	2.5-3.5
DN40	65	40.2	79.0	27.4	13.4	9.6	14.8	2.5-3.5
DN40-1	65	41.2	79.0	27.4	13.4	9.6	14.8	2.5-3.5
DN50	91	52.2	114.0	38.5	38.5	19.5	30.6	4.0-5.0
DN50-1	91	53.2	114.0	38.5	38.5	19.5	30.6	4.0-5.0

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Flow Diameter (Φm)
ISO19	40	19.3	52.6	21.0	9.0	2.1		1.0-1.5
ISO25	65	25.3	79.0	27.4	13.4	8.7	12.8	2.5-3.0
ISO38	65	38.3	79.0	27.4	13.4	9.6	14.8	2.5-3.5
ISO51	91	51.3	114.0	38.5	17.25	19.5	30.6	4.0-5.0

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Flow Diameter (Φm)
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° (Bottom)

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Flow Diameter (Φm)
DN25	65	28.2	52.6	21.0	9.0	7.0	10.9	2.0-3.0
DN25-1	65	29.2	52.6	21.0	9.0	7.0	10.9	2.0-3.0
DN32	65	34.2	79.0	27.4	13.4	7.8	12.5	2.5-3.5
DN32-1	65	35.2	79.0	27.4	13.4	7.8	12.5	2.5-3.5
DN40	65	40.2	79.0	27.4	13.4	10.9	16.6	2.5-3.5
DN40-1	65	41.2	79.0	27.4	13.4	10.9	16.6	2.5-3.5
DN50	91	52.2	114.0	38.5	38.5	17.0	28.0	4.0-4.5
DN50-1	91	53.2	114.0	38.5	38.5	17.0	28.0	4.0-4.5

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Flow Diameter (Φm)
ISO19	40	19.3	52.6	21.0	9.0	2.5		1.0-1.5
ISO25	65	25.3	79.0	27.4	13.4	7.0	10.9	2.0-3.0
ISO38	65	38.3	79.0	27.4	13.4	10.9	16.6	2.5-3.5
ISO51	91	51.3	114.0	38.5	17.25	17.0	28.0	4.0-5.0

SIZE	D	D1	H	L	L1	Q(m ³ /h) 1bar	Q(m ³ /h) 2.5bar	Flow Diameter (Φm)
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	2.0-3.0
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	28.6	4.0-5.0



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