2023.8

CATALOGUE No.ZP07

VALFLON™ LINED PRODUCTS

Standard Dimensions of Piping Equipment

VALQUA, LTD.

https://www.valqua.co.jp

Contents

The quality assurance details of lining products are as follows.
The warranty period shall not exceed 18 months after delivery and within one year of use.
If a defect in the product occurs within this period and is clearly the result of faulty manufacturing, the product will be repaired free of charge.
However, no secondary repairs will be made.
In the case that the operating condition is not disclosed, liability is also exempted.

Registered Trademark List
Though descriptions of trademarks are omitted in this catalogue, the followings are our trademarks
●Spray Ball™
●VALFLON™

Properties of fluorocarbon resins

◉ : Shows better resistance than ◎ ◎ : Shows very good resistance ○ : Shows good resistance △ : Usable

	Properties		Unit	ASTM examination method	PTFE	PFA	FEP	ETFE	PVDF	ECTFE	PCTFE
Physical properties	Melting point		℃	–	327	310	260	270	156-170	245	220
	Specific gravity		–	D792	2.14-2.20	2.12-2.17	2.12-2.17	1.70	1.75-1.78	1.68-1.69	2.1-2.2
Mechanical properties	Tensile strength		MPa	D638	27.4-34.3	24.5-34.3	21.6-31.4	45.1	34.3-43.1	48	30.9-41.2
	Elongation		%	D638	200-400	300	250−330	100-400	80-300	200-300	80-250
	Compressive strength		MPa	D695	11.8	16.7	15.2	49	66.6-96	–	31.4-51
	Impact strength (Izod)		J/m	D256A	160	Undestroyed	Undestroyed	Undestroyed	160-374	Undestroyed	133-144
	Hardness (Rock well)		–	D785	–	–	–	R50	R77-83	–	R75-95
	Hardness (Shore)		–	D2240	D50-55	D60	D55	D75	D75-77	D55	–
	Flexural modulus		MPa	D790	550	600-690	650	1400	2000-2480	660-690	–
	Tensile modulus		MPa	D638	400-550	–	340	820	1310-1500	–	1030-2100
	Coefficient of dynamic friction		–	0.69MPa 3m/min	0.10	0.2	0.3	0.4	0.39	–	0.37
Thermal properties	Thermal conductivity		W/(m²·K)	C177	25	25	25	24	10-13	16	20-22
	Specific heat		J/(g·K)	–	1.0	1.0	1.2	1.9−2.0	1.4	–	0.92
	Liner expansion coefficient		10^{-5}/℃	D696	10	12	8.3-10.5	5.9	7-14	8	4.5-7.0
	Ball pressure temperature		℃	–	180	230	170	185	–	–	170
	Heat distortion temperature	1.81MPa	℃		55	50	50	74	87-115	77	–
		0.45MPa	℃		121	74	72	104	149	116	126
	Temperature limit		℃	No load	260	260	200	150-180	150	165-180	177-200
Electrical properties	Specific volume resistivity		Ω−cm	D257 (50% RH.23℃)	$>10^{18}$	$>10^{18}$	$>10^{18}$	$>10^{16}$	2×10^{14}	$>10^{18}$	1.2×10^{18}
	Dielectric breakdown voltage		kV/mm (3.2mmThickness)	D149	19	20	20-24	16	10	20	20-24
	Dielectric constant	60Hz	–	D150	<2.1	<2.1	2.1	2.6	8.4	2.6	2.24-2.8
		10^3Hz	–	D150	<2.1	<2.1	2.1	2.6	8.4	2.6	2.3-2.8
		10^6Hz	–	D150	<2.1	<2.1	2.1	2.6	6.43	2.6	2.3-2.5
	Dielectric tangent	60Hz	–	D150	<0.0002	<0.0002	<0.0002	0.0006	0.049	<0.0005	0.0012
		10^3Hz	–	D150	<0.0002	<0.0002	<0.0002	0.0008	0.018	0.0015	0.023-0.027
		10^6Hz	–	D150	<0.0002	0.0003	<0.0005	0.005	<0.015	0.009-0.017	
	Arc-resistance		s	D495	>300	>300	>300	75	50−70	18	>360
Durability and others	Coefficient of water absorption 24 hours		%	D570	<0.01	<0.03	<0.01	0.029	0.04-0.06	0.01	0.00
	Combustibility 3.2mm thickness		–	(UL-94)	V-0	V-0	V-0	V-0	V-0	V-0	V-0
	Limiting oxygen index		–	D2863	>95	>95	>95	30	44	60	>95
	Effect of sunlight		–	–	None	None	None	None	None	None	None
	Acid/resistance				◉	◉	◉	◎	○	◎	◎
	Alkali/resistance				◉	◉	◉	◎	○	◎	◎
	Solvent/resistance				◉	◉	◉	◎	△	◎	○

Note Fluoropolymers are high molecular weight resins, so permeation will always occur, especially under the following three conditions: low temperature (40℃ or lower), high pressure (0.8 MPa or higher), and high permeation chemicals (hydrochloric acid, hydrofluoric acid, bromine, organic solvents, and mixtures containing additives). However, especially when these three conditions are combined, permeation may occur rapidly, so please contact us in advance.

Product lineup

Applicable range/ Material specification

▼Applicable range

Types of product	VALQUA No.	Liner type	Used in positive pressure	Applicable product	Used in negative pressure
Pipe	7042-P	Standard · Permeation		Negative-pressure 200A or below	
90° Elbow	7042-90L	Standard · Permeation		Negative-pressure 200A or below	
45° Elbow	7042-45L	Standard · Permeation		Negative-pressure 200A or below	
Tee	7042-ST	Standard · Permeation		Negative-pressure 200A or below	
Reducing Tee	7042-RT	Standard · Permeation	-30℃～120℃ 1.37MPa 120℃～150℃ 1.18MPa 150℃～180℃ 0.98MPa	Negative-pressure 200A or below	
Concentric Reducer	7042-CR	Standard · Permeation		Negative-pressure 200A or below	-30℃～150℃
Eccentric Reducer	7042-ER	Standard · Permeation		Negative-pressure 200A or below	Full vacuum
Cross	7042-C	Standard		Negative-pressure 50A or below	
Instrument Tee	7042-GP	Standard · Permeation		Negative-pressure 100A or below	
Reducing Spacer	7042-RS	Standard · Permeation		Negative-pressure	
Spacer	7042-S	Standard · Permeation		Negative-pressure	
Blind Flange	7042-BF	Standard · Permeation			
Sight Glass	7042-SG	Standard · Permeation	0℃～120℃:0.98MPa	Negative-pressure	0℃～120℃:Full vacuum

Note 1. Standard : standard liner, Permeation : permeation liner, Negative-pressure : negative-pressure liner
2. Please inquire regarding the sizes, not applicable to the chart.
3. For service temperatures 0 ℃ or below, conditions vary depending on the metal material.

[250℃ or above] Please contact us and advise the condition of usage.

▼Material specification

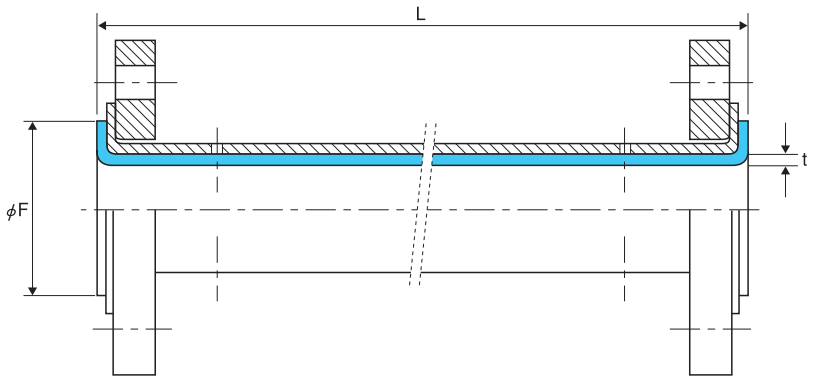
VALQUA No.	Size class	Steel pipe materials				Liner material
		JIS specification		JPI specification		
		Flange	Pipe	Flange	Pipe	
7042-P		JIS G3101 (SS400)	JIS G3452 (SGP)	JIS G3202 (SFVC2A)	JIS G3452 (SGP)	Listed within the dimensions table for each pipe
7042-90L						
7042-45L						
7042-ST	100A or below	FCD-S However, in case of JIS specification, the flange outer diameter is in common use with JIS specification.				
	125A or higher	JIS G3101 (SS400)	JIS G3452 (SGP) JIS G3454 (STPG)	JIS G3202 (SFVC2A)	JIS G3452 (SGP) JIS G3454 (STPG)	
7042-RT						
7042-CR	150A or below	FCD450				
	200A or higher	JIS G3101 (SS400)	JIS G3452 (SGP)	JIS G3202 (SFVC2A)	JIS G3452 (SGP)	
7042-ER						
7042-C	100A or below	JIS G3101 (SS400)	JIS G3454 (STPG)	JIS G3202 (SFVC2A)	JIS G3454 (STPG)	
	125A or higher		JIS G3452 (SGP)		JIS G3452 (SGP)	
7042-GP		JIS G3101 (SS400)	Branch:JIS G3454(STPG) Main:JIS G3101 (SS400)	JIS G3202 (SFVC2A)	Branch:JIS G3454(STPG) Main:JIS G3101 (SS400)	
7042-RS		JIS G3101 (SS400)				
7042-S						
7042-BF		JIS G3101 (SS400)	–	JIS G3202 (SFVC2A)	–	
7042-SG		FCD450				

Note 1. In regards to the flange dimensions standards, JIS specification complies JIS B2220(10K), JPI specification does JPI-7S-15(150LB).
2. Stainless steel type is also available as a steel pipe material. Please feel free to contact us.

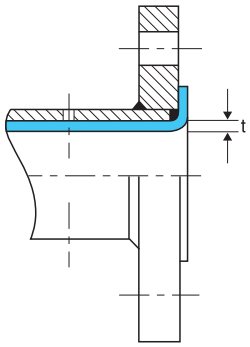
Pipe

VALQUA №7042-P

▼Structure



SS specification 40A to 100A, with loose flange on both side



Fixed flange

▼Standard dimensions

PTFE lined pipe

(Unit : mm)

Nominal size		Flare diameter	Liner thickness t			Length L(1)			Weight of standard products[kg]		
							Maximum		Weight of the both flanges		Pipe weight
A	B	F	Standard	Permeation	Negative-pressure	Minimum	Standard·Permeation	Negative-pressure	JIS 10k	JPI 150lb	kg/m
15	1/2	35	1.5	2.0		180(60)	5400(5500)	5400(5500)	1.3	1.1	1.4
20	3/4	43	1.5	2.0		180(65)	5400(5500)	5400(5500)	1.6	1.5	1.9
25	1	51	1.5	2.0		180(75)	5400(5500)	5400(5500)	2.5	1.9	2.7
40	1 1/2	73	2.0	3.0		180(80)	5400(5500)	5400(5500)	3.4	3.1	4.4
50	2	92	2.0	3.0		180(80)	5400(5500)	5400(5500)	4.0	4.8	6.0
65	2 1/2	105	2.0	3.0	3.5	270(85)	5400(5500)	5400(5500)	5.5	7.3	8.3
80	3	127	3.0		4.0	270(85)	5400(5500)	5400(5500)	5.8	8.6	10.3
100	4	151	3.0		6.0	270(90)	5400(5500)	3000	6.8	12.1	14.2
125	5	182	3.0		6.0	90	3000	3000	10.5	14.4	17.6
150	6	212	3.0		6.0	95	3000	3000	13.8	17.5	22.8
200	8	262	4.0		8.0	105	2000	3000	16.7	27.4	34.1
250	10	324	4.0		Please contact us.	105	2000	Please contact us.	26.0	39.8	49.1
300	12	368	4.0			105	2000		28.4	61.0	61.0
350	14	413	4.0			150	2000		36.2	87.4	76.6
400	16	475	4.0			150	2000		50.9	112.4	87.8

PFA lined pipe

Nominal size		Flare diameter	Liner thickness t	Length L(1)		Weight of standard products[kg]		
				Minimum	Maximum	Weight of the both flanges		Pipe weight
A	B	F	Standard		Standard·Permeation	JIS 10k	JPI 150lb	kg/m
20	3/4	43	1.5	250(100)	4000(4000)	1.6	1.5	1.9
25	1	51	1.5	250(100)	4000(4000)	2.5	1.9	2.7
40	1 1/2	73	1.75	250(100)	4000(4000)	3.4	3.1	4.4
50	2	92	1.75	250(100)	4000(4000)	4.0	4.8	6.0

Note (1) Dimensions in parentheses () are for double-sided fixed flanges.
Note 1. In regarding to the flange structure, having loose flanges on the both sides is the standard for SS specification 40A to 100A, and the stationary-type flange is the standard for other items.
2. Vent holes are located at a total of 4 spots: 2 positions symmetric to the center for 500L or below, and 2 at symmetric positions, 100mm from the both ends, for 501L or above.

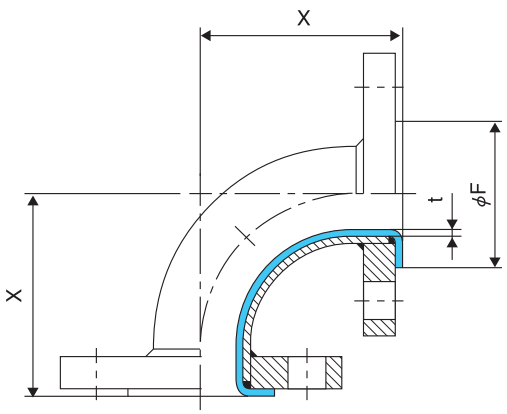
Steel pipe standard

		Flange		Pipe
		Materials	Dimensions	Materials and dimensions
SS specification	JIS	JIS G3101(SS400)	JIS B2220(10k)	JIS G3452(SGP)
	JPI	JIS G3202(SFVC2A)	JPI-7S-15-93(Class150)	
SUS specification	JIS	JIS G3214(SUS304)	JIS B2220(10k)	40A≧JIS G3459(sch20)
	JPI		JPI-7S-15-93(Class150)	50A≦JIS G3459(sch10)

90° Elbow

VALQUA №7042-90L

▼Structure



▼Standard dimensions

(Unit : mm)

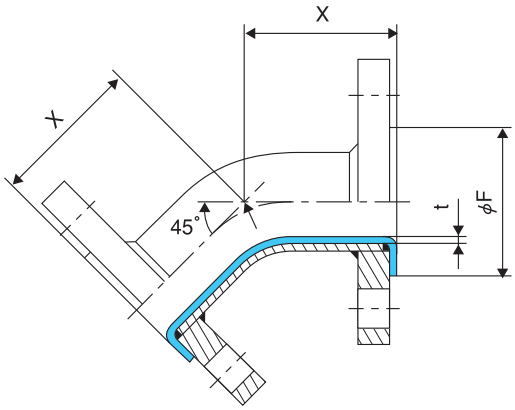
Nominal size A	Nominal size B	Elbow length X	Flare diameter F	Liner thickness t: Standard Permeation	Liner thickness t: Negative-pressure	Weight[kg] (Standard·Permeation): JIS 10k	Weight[kg] (Standard·Permeation): JPI 150lb	Liner material
15	1/2	70	35	2.0		1.5	1.3	PTFE
20	3/4	80	43	2.0		1.9	1.8	PTFE
25	1	90	51	2.0		3.0	2.4	PTFE
40	1 1/2	100	73	3.0		4.3	4.1	PTFE
50	2	115	92	3.0		5.4	6.3	PTFE
65	2 1/2	130	105	3.5		8.0	9.8	PTFE
80	3	140	127	4.0		9.0	11.7	PTFE
100	4	165	151	6.0		12.2	17.5	PTFE
125	5	180	182	6.0	7.0	17.8	21.6	PTFE
150	6	200	212	6.0	8.0	24.1	27.8	PTFE
200	8	250	262	6.0	8.0	35.8	46.4	PTFE
250	10	300	324	6.0	Please contact us.	57.5	71.2	PTFE
300	12	380	368	6.0		77.9	110.5	PTFE
350	14	450	413	6.0		109.2	160.4	PTFE
400	16	500	475	6.0		144.0	205.5	PTFE

Note PFA lining is available for 20A to 50A

45° Elbow

VALQUA No. 7042-45L

▼Structure



▼Standard dimensions

(Unit : mm)

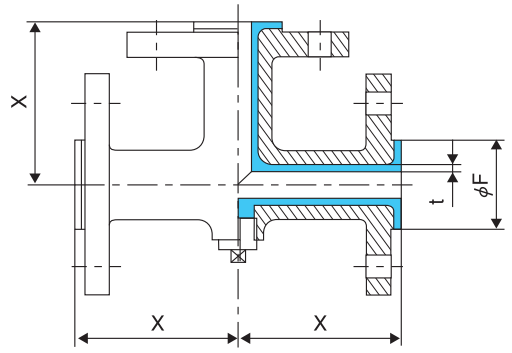
Nominal size A	Nominal size B	Elbow length X	Flare diameter F	Liner thickness t: Standard Permeation	Liner thickness t: Negative-pressure	Weight[kg] (Standard·Permeation): JIS 10k	Weight[kg] (Standard·Permeation): JPI 150lb	Liner material
15	1/2	60	35	2.0		1.4	1.3	PTFE
20	3/4	60	43	2.0		1.8	1.7	PTFE
25	1	65	51	2.0		2.8	2.3	PTFE
40	1 1/2	75	73	3.0		4.1	3.8	PTFE
50	2	85	92	3.0		5.1	5.9	PTFE
65	2 1/2	95	105	3.5		7.3	9.1	PTFE
80	3	105	127	4.0		8.2	10.9	PTFE
100	4	125	151	6.0		10.9	16.2	PTFE
125	5	150	182	6.0		16.6	20.4	PTFE
150	6	180	212	6.0		23.1	26.8	PTFE
200	8	230	262	8.0		34.3	44.9	PTFE
250	10	260	324	8.0	Please contact us.	53.3	67.0	PTFE
300	12	300	368	8.0		67.4	100.1	PTFE

Note 1. PFA lining is available for 20A to 50A.
2. Please contact us for 350A and 400A.

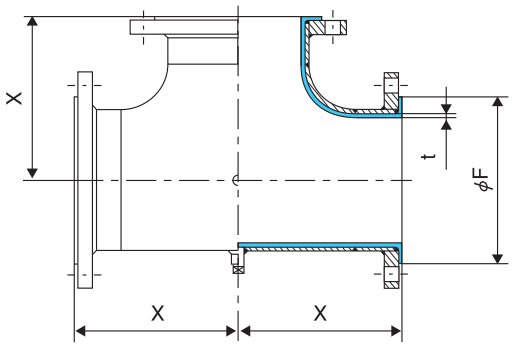
Tee

VALQUA №7042-ST

▼Structure



（15A～100A）



（125A～400A）

▼Standard dimensions

(Unit : mm)

Nominal size		Elbow length X	Flare diameter F	Liner thickness t		Weight[kg] (Standard·Permeation)		Liner material
				Standard Permeation	Negative-pressure			
A	B					JIS 10k	JPI 150lb	
15	1/2	70	35	3.0		1.7	1.3	PFA
20	3/4	80	43	3.0		2.8	2.4	PFA
25	1	90	51	3.0		4.4	4.0	PFA
40	1 1/2	100	73	3.5		6.3	5.6	PFA
50	2	115	92	3.5		8.3	9.2	PFA
65	2 1/2	130	105	3.5		11.5	12.6	PFA
80	3	140	127	4.0		14.0	17.9	PFA
100	4	165	151	4.0		19.6	26.0	PFA
125	5	180	182	6.0		19.8	24.0	PTFE
150	6	200	212	6.0		32.3	48.7	PTFE
200	8	250	262	6.0	8.0	47.2	60.6	PTFE
250	10	300	324	6.0	Please contact us.	76.0	90.3	PTFE
300	12	330	368	6.0		93.3	134.0	PTFE
350	14	380	413	6.0		129.4	128.0	PTFE
400	16	400	475	6.0		164.7	169.0	PTFE

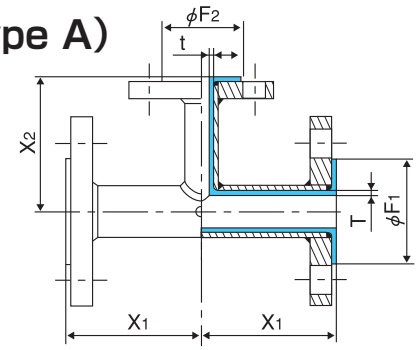
Note The liner thickness listed above are nominal values. Please consult with us if you have any dimensional specifications for liner inner diameter.

Reducing Tee

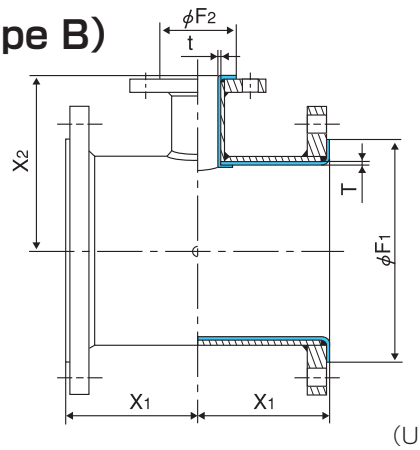
VALQUA №7042-RT

▼Structure

(Type A)



(Type B)



▼Standard dimensions

(Type A)

(Unit : mm)

Nominal size		Elbow length		Flare diameter		Liner thickness		Weight[kg]		Liner material
A	B	X_1	X_2	F_1	F_2	T	t	JIS 10k	JPI 150lb	
20 × 15	3/4 × 1/2	80	80	43	35	3.0	3.0	2.7	2.5	PFA
25 × 15	1 × 1/2	90	90	51	35	3.0	3.0	3.8	3.1	PFA
25 × 20	1 × 3/4	90	90	51	43	3.0	3.0	4.0	3.4	PFA
40 × 15	1 1/2 × 1/2	100	100	73	35	3.5	3.0	5.1	4.8	PFA
40 × 20	1 1/2 × 3/4	100	100	73	43	3.5	3.0	5.3	5.0	PFA
40 × 25	1 1/2 × 1	100	100	73	51	3.5	3.0	5.9	5.4	PFA
50 × 15	2 × 1/2	115	115	92	35	3.5	3.0	6.3	7.0	PFA
50 × 20	2 × 3/4	115	115	92	43	3.5	3.0	6.5	7.2	PFA
50 × 25	2 × 1	115	115	92	51	3.5	3.0	7.0	7.6	PFA
50 × 40	2 × 1 1/2	115	115	92	73	3.5	3.5	7.7	8.4	PFA
65 × 20	2 1/2 × 3/4	130	130	105	43	3.5	3.0	8.8	11.0	PFA
65 × 25	2 1/2 × 1	130	130	105	51	3.5	3.0	9.4	10.9	PFA
65 × 40	2 1/2 × 1 1/2	130	130	105	73	3.5	3.5	10.0	11.6	PFA
80 × 20	3 × 3/4	140	140	127	43	4.0	3.0	10.0	14.0	PFA
80 × 25	3 × 1	140	140	127	51	4.0	3.0	10.4	12.9	PFA
80 × 40	3 × 1 1/2	140	140	127	73	4.0	3.5	11.1	13.7	PFA
80 × 50	3 × 2	140	140	127	92	4.0	3.5	11.7	14.9	PFA
80 × 65	3 × 2 1/2	140	140	127	105	4.0	3.5	13.3	17.1	PFA
100 × 20	4 × 3/4	165	165	151	43	4.0	3.0	13.1	18.4	PFA
100 × 25	4 × 1	165	165	151	51	4.0	3.0	13.4	18.4	PFA
100 × 40	4 × 1 1/2	165	165	151	73	4.0	3.5	14.1	19.2	PFA
100 × 50	4 × 2	165	165	151	92	4.0	3.5	14.6	20.3	PFA
100 × 65	4 × 2 1/2	165	165	151	105	4.0	3.5	16.5	22.8	PFA
100 × 80	4 × 3	165	150	151	127	4.0	4.0	16.2	–	PFA

(Type B)

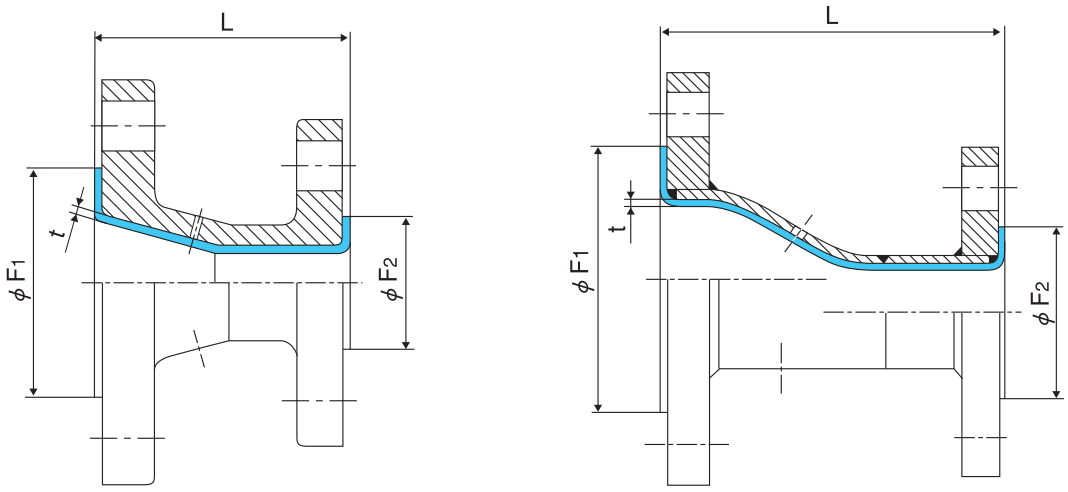
Nominal size		Elbow length		Flare diameter		Liner thickness		Weight[kg]		Liner material
A	B	X_1	X_2	F_1	F_2	T	t	JIS 10k	JPI 150lb	
150 × 25	6 × 1	150	160	212	51	3.0	3.0	25.9	29.3	PTFE
150 × 40	6 × 1 1/2	150	160	212	73	3.0	3.0	26.5	30.1	PTFE
150 × 50	6 × 2	150	160	212	92	3.0	3.0	27.1	31.2	PTFE
200 × 25	8 × 1	150	180	262	51	4.0	3.0	37.7	48.0	PTFE
200 × 40	8 × 1 1/2	150	180	262	73	4.0	3.0	38.3	48.8	PTFE
200 × 50	8 × 2	150	180	262	92	4.0	3.0	38.9	49.9	PTFE
200 × 65	8 × 2 1/2	200	180	262	105	4.0	3.0	40.1	51.6	PTFE
250 × 25	10 × 1	150	200	324	51	4.0	3.0	59.4	72.9	PTFE
250 × 40	10 × 1 1/2	200	200	324	73	4.0	3.0	60.1	73.7	PTFE
250 × 50	10 × 2	200	200	324	92	4.0	3.0	60.7	74.8	PTFE
250 × 65	10 × 2 1/2	200	200	324	105	4.0	3.0	61.9	76.5	PTFE
250 × 80	10 × 3	200	200	324	127	4.0	3.0	70.1	85.7	PTFE
300 × 25	12 × 1	200	230	368	51	4.0	3.0	73.4	105.7	PTFE
300 × 40	12 × 1 1/2	200	230	368	73	4.0	3.0	74.0	106.5	PTFE
300 × 50	12 × 2	200	230	368	92	4.0	3.0	74.6	107.7	PTFE
300 × 100	12 × 4	200	230	368	151	4.0	3.0	77.8	113.1	PTFE
350 × 50	14 × 2	200	250	413	92	4.0	3.0	101.2	152.8	PTFE

Note 1. Please contact us if the product is being used in negative pressure.
2. There are other sizes available for type B. Please feel free to contact us.

Reducer

VALQUA №7042-CR, №7042-ER

▼Structure



▼Standard dimensions

(Unit : mm)

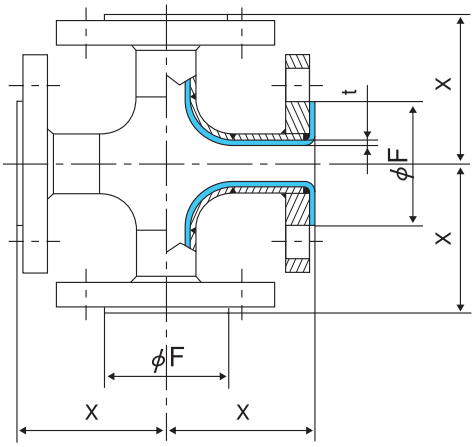
Nominal size		CR(Concentric Reducer)						ER(Eccentric Reducer)					
		Length	Flare diameter		Liner thickness	Weight[kg]	Liner	Length	Flare diameter		Liner thickness	Weight[kg]	Liner
A	B	L	F_1	F_2	t	JIS 10k	material	L	F_1	F_2	t	JIS 10k	material
20 × 15	3/4 × 1/2	100	43	35	2.0	2.2	PTFE	–	–	–	–	–	–
25 × 15	1 × 1/2	100	51	35	3.0	2.4	PFA	100	51	35	3.0	2.0	PTFE
25 × 20	1 × 3/4	100	51	43	3.0	2.7	PFA	100	51	43	3.0	2.2	PTFE
40 × 15	1 1/2 × 1/2	100	73	35	3.0	3.0	PTFE	–	–	–	–	–	–
40 × 20	1 1/2 × 3/4	100	73	43	3.5	3.1	PFA	100	73	43	3.0	2.7	PTFE
40 × 25	1 1/2 × 1	100	73	51	3.5	3.8	PFA	100	73	51	3.0	3.1	PTFE
50 × 20	2 × 3/4	100	92	43	3.0	4.3	PTFE	–	–	–	–	–	–
50 × 25	2 × 1	100	92	51	3.5	4.5	PFA	150	92	51	4.0	3.7	PTFE
50 × 40	2 × 1 1/2	100	92	73	3.5	5.2	PFA	150	92	73	3.0	4.2	PTFE
65 × 40	2 1/2 × 1 1/2	100	105	73	3.5	5.9	PFA	150	105	73	4.0	5.2	PTFE
65 × 50	2 1/2 × 2	100	105	92	3.5	6.9	PFA	–	–	–	–	–	–
80 × 40	3 × 1 1/2	100	127	73	4.0	6.6	PFA	150	127	73	5.0	5.3	PTFE
80 × 50	3 × 2	100	127	92	4.0	7.1	PFA	150	127	92	5.0	5.7	PTFE
80 × 65	3 × 2 1/2	100	127	105	3.0	8.2	PTFE	150	127	105	3.0	6.6	PTFE
100 × 50	4 × 2	100	151	92	3.0	8.5	PTFE	150	151	92	5.0	6.5	PTFE
100 × 65	4 × 2 1/2	100	151	105	3.0	9.3	PTFE	150	151	105	5.0	7.4	PTFE
100 × 80	4 × 3	100	151	127	3.0	10.0	PTFE	150	151	127	3.0	7.5	PTFE
150 × 80	6 × 3	100	212	127	3.0	14.1	PTFE	200	212	127	4.5	13.5	PTFE
150 × 100	6 × 4	100	212	151	3.0	15.0	PTFE	200	212	151	4.5	14.0	PTFE
200 × 80	8 × 3	150	262	127	3.0	19.3	PTFE	–	–	–	–	–	–
200 × 100	8 × 4	150	262	151	3.0	20.3	PTFE	200	262	151	5.0	18.0	PTFE
200 × 150	8 × 6	150	262	212	3.0	24.6	PTFE	200	262	212	5.0	22.0	PTFE
250 × 100	10 × 4	150	324	151	3.0	27.5	PTFE	–	–	–	–	–	–
250 × 150	10 × 6	150	324	212	3.0	31.7	PTFE	250	324	212	6.0	27.0	PTFE
250 × 200	10 × 8	150	324	262	3.0	34.4	PTFE	250	324	262	6.0	30.0	PTFE

Note 1. Please contact us if the product is being used in negative pressure.
2. "t" means the wall thickness of large diameter part.
3. Pay attention to the flange thickness for CR casting based material.
4. The liner thickness listed above are nominal values. Please consult with us if you have any dimensional specifications for liner inner diameter.

Cross

VALQUA No.7042-C

▼Structure



▼Standard dimensions (Unit : mm)

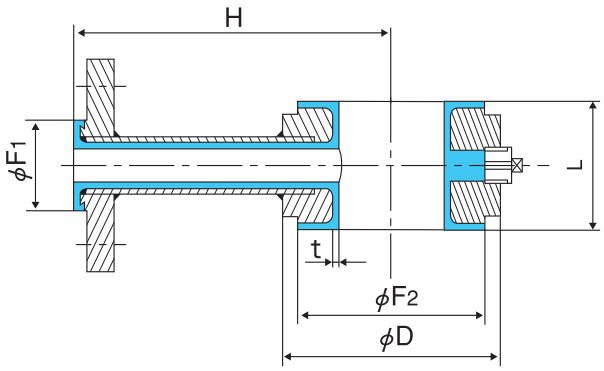
Nominal size A	Nominal size B	Elbow length X	Flare diameter F	Liner thickness t	Weight[kg] JIS 10k	Weight[kg] JPI 150lb	Liner material
25	1	90	51	3.0	7.8	6.6	PFA
40	1 1/2	100	73	3.5	10.8	10.2	PFA
50	2	115	91	3.5	14.5	16.1	PFA
65	2 1/2	130	105	3.5	20.3	23.9	PFA
80	3	140	127	4.0	22.0	27.6	PFA
100	4	165	151	4.0	28.1	38.7	PFA
125	5	180	182	6.0	33.2	41.0	PTFE
150	6	200	212	6.0	55.0	62.4	PTFE
200	8	250	262	6.0	76.5	97.9	PTFE

Note 1. Please contact us for 250A and 300A.
2. The liner thickness listed above are nominal values. Please consult with us if you have any dimensional specifications for liner inner diameter.

Instrument Tee

VALQUA No.7042-GP

▼Structure



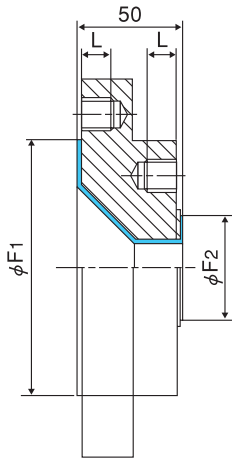
▼Standard dimensions (Unit : mm)

Nominal size Main pipe A	Nominal size Main pipe B	Nominal size Branch pipe A(B) 15 (1/2)	20 (3/4)	25 (1)	Face-to-face dimension L	Branch length H	Main pipe collar diameter F2	Liner thickness t	Main pipe outer diameter D JIS 10k	JPI 150lb	Weight[kg] in the case of branch pipe 20(3/4) JIS 10k	JPI 150lb	Liner material
25	1	○	○	–	60	130	51	3.0	73	66	2.7	2.2	PFA
40	1 1/2	○	○	○	60	140	73	3.0	88	85	3.2	2.9	PFA
50	2	○	○	○	60	150	88	3.0	103	103	4.0	3.8	PFA
65	2 1/2	○	○	○	60	150	105	3.0	123	122	5.0	4.8	PFA
80	3	○	○	○	60	160	120	3.0	133	135	5.1	5.2	PFA
100	4	–	○	○	60	170	145	3.0	158	173	6.5	8.2	PFA
125	5	–	○	○	60	200	180	3.0	190	195	8.5	9.4	PFA
150	6	–	○	○	60	220	205	3.0	219	221	10.4	10.6	PFA
200	8	–	○	○	60	240	255	3.0	269	278	13.0	14.6	PFA
250	10	–	○	○	60	270	315	3.0	332	339	18.6	20.2	PFA
300	12	–	○	○	60	300	360	3.0	377	408	20.3	29.1	PFA
Branch pipe collar diameter F1		35	42	51									

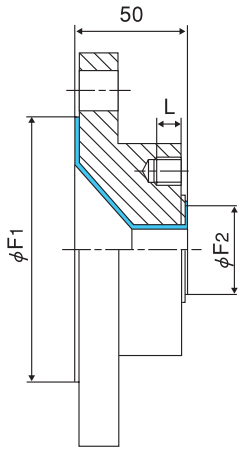
Reducing Spacer
VALQUA №7042-RS

▼Structure

(TypeA)



(TypeB)



▼Standard dimensions

A Type | B Type

Nominal size A		15	20	25	40	50	65	80	100	125	150	200	250
	B	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10
20	3/4	○											
25	1	○	○										
40	1 1/2	○	○	○									
50	2	○	○	○	○								
65	2 1/2	□	◎	◎	◎	◎							
80	3	□	○	○	◎	◎	◎						
100	4	□	◎	○	○	○	◎	◎					
125	5	□	□	□	□	□	□	□	□				
150	6	□	□	□	□	◎	□	◎	◎	□			
200	8	□	□	□	□	□	□	□	◎	□	◎		
250	10	□	□	□	□	□	□	□	□	□	□	□	
300	12	□	□	□	□	□	□	□	□	□	□	□	□

(Unit : mm)

Nominal size A	Nominal size B	Flare diameter F	Bolt size	Depth (L)
15	1/2	35	M12	12
20	3/4	43	M12	12
25	1	51	M16	16
40	1 1/2	73	M16	16
50	2	92	M16	16
65	2 1/2	105	M16	16
80	3	127	M16	16
100	4	151	M16	16
125	5	182	M20	20
150	6	212	M20	20
200	8	262	M20	20
250	10	324	M22	22
300	12	368	M22	22

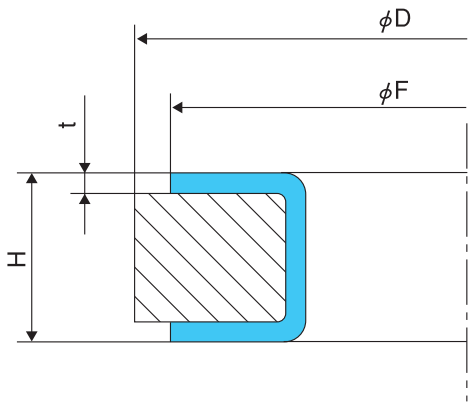
◎PTFE
○PFA
□PTFE build-to-order products

Note Please contact us for liner thickness.

Spacer

VALQUA №7042-S

▼Structure



▼Standard dimensions

(Unit : mm)

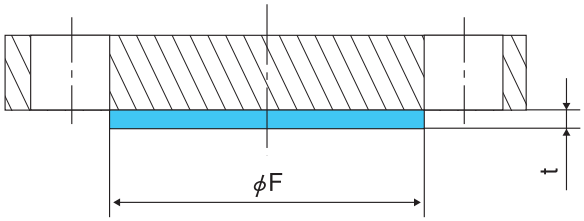
Nominal size		Outer diameter D		Flare diameter F	Liner thickness t	Minimum thickness H	Liner material
A	B	JIS 10k	JPI 150lb				
15	1/2	56	46	35	2.0		PTFE
20	3/4	61	56	43	2.0		PTFE
25	1	73	65	51	2.0		PTFE
40	1 1/2	88	84	73	2.0	11	PTFE
50	2	103	103	92	2.0		PTFE
65	2 1/2	123	122	105	2.0		PTFE
80	3	133	135	127	3.0		PTFE
100	4	158	173	151	3.0		PTFE
125	5	189	195	182	3.0		PTFE
150	6	219	221	212	3.0		PTFE
200	8	269	278	262	3.0		PTFE
250	10	332	339	324	4.0	30	PTFE
300	12	376	409	368	4.0		PTFE
350	14	421	450	413	4.0		PTFE
400	16	484	513	475	4.0		PTFE

Note 1. Please contact us if the product is being used in negative pressure.
2. Products with a thickness of 11 mm can be manufactured for 125 A or above, but the product shape and liner thickness will be changed.

Blind Flange

VALQUA №7042-BF

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size		Flare diameter F		Liner thickness t	Weight [kg] JIS 10k	Liner material
A	B	JIS 10k	JPI 150lb			
15	1/2	55	35	3.0	0.7	PTFE
20	3/4	60	43	3.0	0.9	PTFE
25	1	71	51	3.0	1.5	PTFE
40	1 1/2	86	73	3.0	2.0	PTFE
50	2	101	92	3.0	2.4	PTFE
65	2 1/2	121	105	3.0	3.4	PTFE
80	3	131	127	3.0	3.7	PTFE
100	4	156	157	3.0	4.8	PTFE
125	5	187	186	3.0	7.5	PTFE
150	6	217	216	3.0	10.2	PTFE
200	8	267	270	3.0	15.2	PTFE
250	10	330	324	3.0	22.3	PTFE
300	12	375	381	3.0	27.3	PTFE
350	14	420	413	3.0	35.8	PTFE
400	16	483	470	3.0	58.4	PTFE

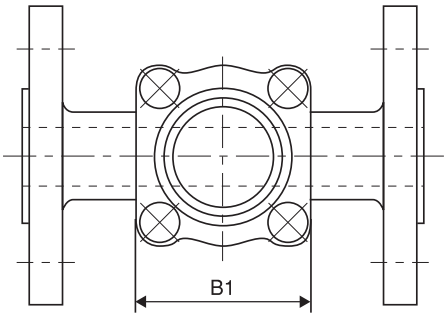
Note Please contact us if the product is being used in negative pressure.

Sight Glass

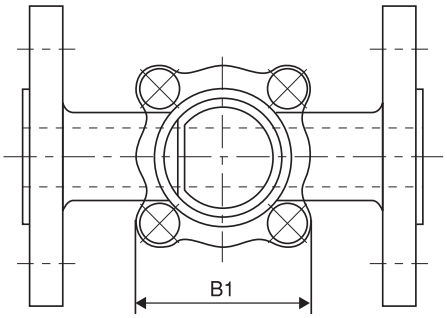
VALQUA №7042-SG

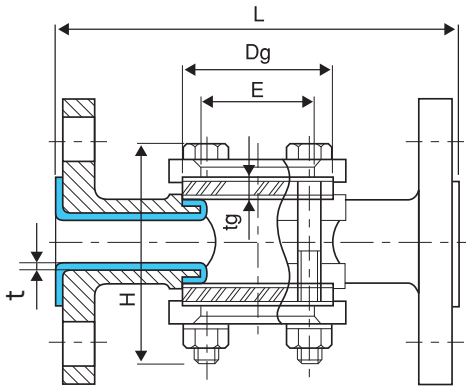
▼Structure

FCD450



SCS13A





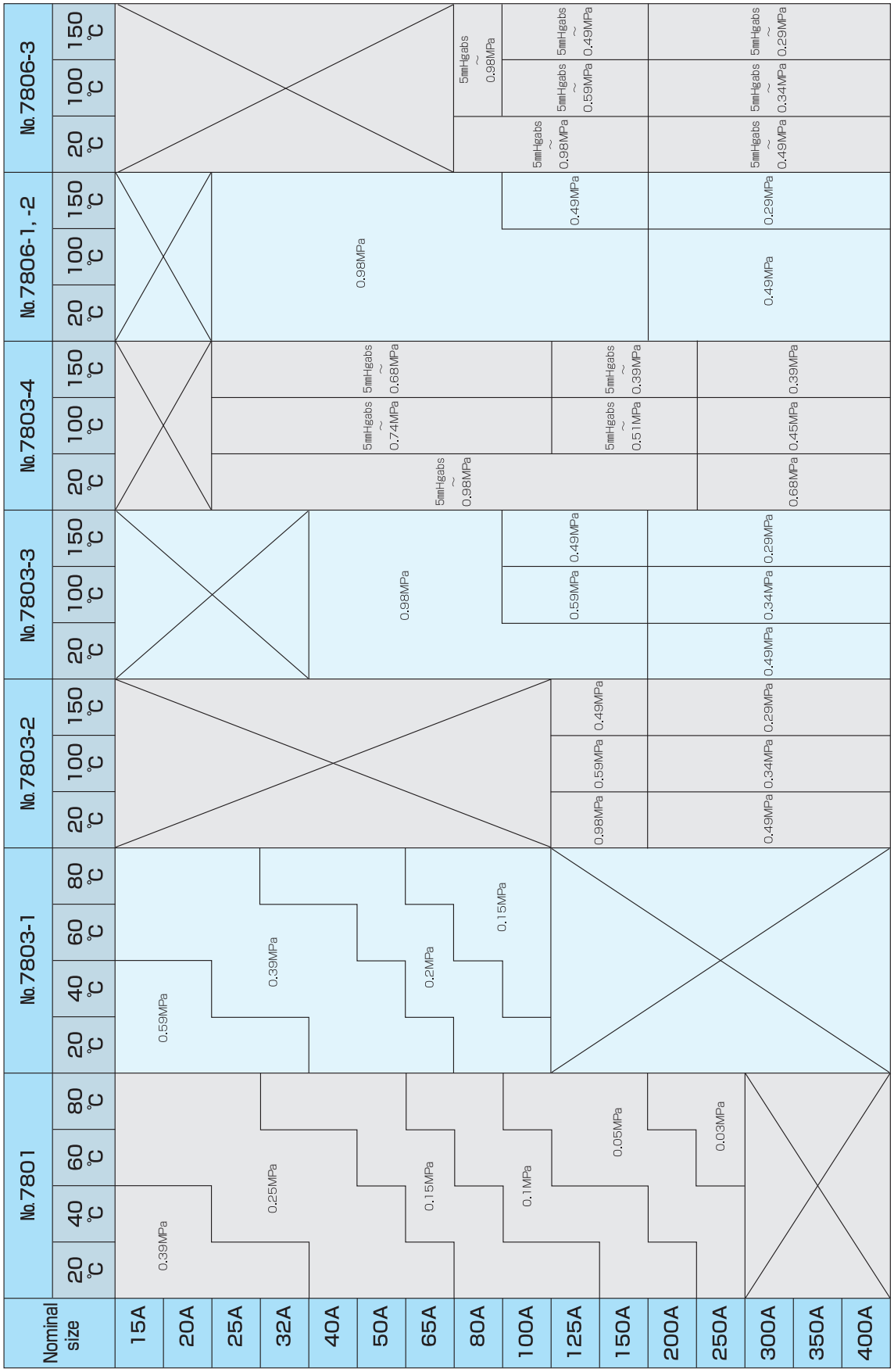
▼Standard dimensions

(Unit : mm)

Nominal size A	Nominal size B	Face-to-face dimension L	Bolt length H(Approx.)	Window diameter E	External dimension B_1	GLASS Dg×tg	Flare diameter F	Liner thickness t	Liner material
20	3/4	156(136)	83(75)	40	63	50 × 6	43	3.0	PFA
25	1	176(156)	97(87)	50	77	65 × 8	51	3.0	PFA
40	1 1/4	206(176)	128(118)	65	94	80 × 10	73	3.0	PFA
50	2	226(206)	148(128)	80	107	95 × 12	92	3.0	PFA
65	2 1/2	276(236)	165	120(80)	184(140)	140×15(95×12)	105	3.0	PFA
80	3	276(256)	180	120(100)	184(165)	140×15(120×15)	127	3.0	PFA
100	4	326(286)	215	155(120)	224(184)	180×19(140×15)	151	3.0	PFA

Note 1. In regards to steel pipe materials, FCD450 is used for the standard product, and SCS13A is used for SUS specification.
2. Numbers in ( ) indicate the dimensions for SUS specification.
3. SCS13A material that is 65A or above will have different sizing than other listed above.
4. Tempered glass is used as glass material.
5. For usage with the liquid (Alkali) which affects glasses, PFA film is available optionally. However it can be used in positive pressure, not negative pressure.

Applicable range



Note 1. The pressure resistance range listed above indicates the value when the axial difference (perpendicular to the axis) is 0.
2. In the case of No.7801, pressure resistance will improve by adjusting the liner wall thickness when machining.
3. Please contact us regarding No. 7803-4 that is 250A or above for negative pressure use. Data using a flat ring are shown for 350A and 400A.

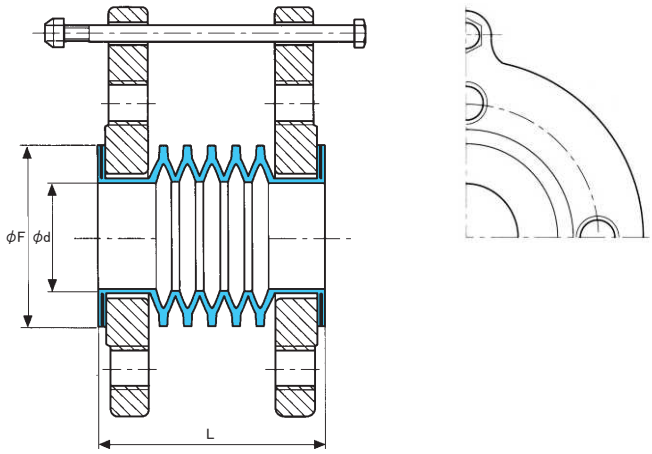
Machined Bellows
VALQUA №7801

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	SS400	Other materials are also applicable. Metric threads shall be used as the standard. However, whitworth threads can be used as well.
Bellows	Material	PTFE	
Limit bolt	Material	SS400	
	Structure	Hexagon head bolt (Metric thread)	Welded nuts are used to prevent loosening, but double nut method is also acceptable.
Back-up gasket	Compressed Non-asbestos Fiber Sheet VALQUA No. 6500		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movement in the range of displacement.
3. Please make pipes which are next to bellows fixed.

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Allowable displacement L					
			2 convolutions		5 convolutions		8 convolutions	
			Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
15	16	36	34	40	40	54	46	68
20	22	47	38	45	44	62	50	78
25	29	54	38	45	44	62	50	78
40	42	72	42	51	48	71	54	90
50	54	84	42	51	48	71	54	90
65	70	105	46	56	52	79	58	101
80	82	117	47	57	53	80	59	102
100	105	145	51	63	57	88	63	113
125	131	171	51	63	57	88	63	113
150	156	196	55	67	61	92	67	117
200	207	257	60	76	66	106	72	136
250	258	308	64	80	70	110	76	140

Note 1. The minimum and the maximum listed above indicate the allowable operating range of the bellows.However, the minimum is the product length so it can't cohere absolutely.
2. The product can be made in sizes other than those listed above.

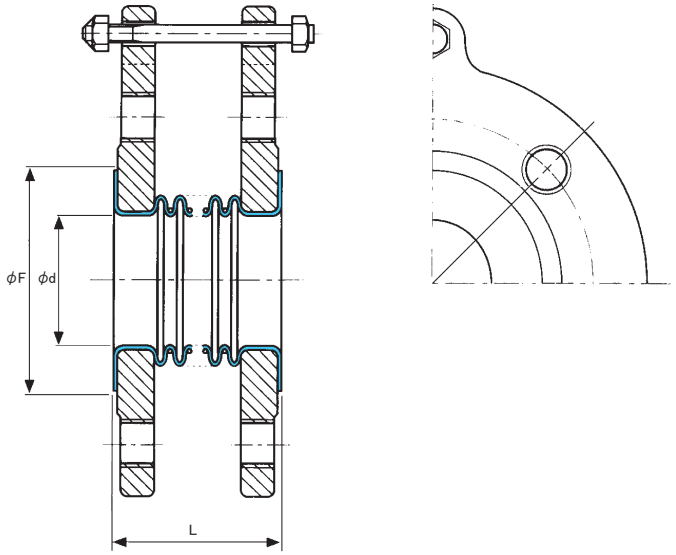
Formed Bellows
VALQUA No.7803-1

Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B2220)	JIS 5k and JPI 150 are also acceptable.
	Material	SS400	Other materials are also applicable. Tapped bolt holes are the standard for flange bolts. Metric threads are used for JIS 10K, and unified screw threads are used for JPI 150.
Bellows	Material	PTFE	
Limit bolt	Material	SS400	
	Structure	Hexagon head bolt (Metric thread)	
Control ring	SUS304		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

Structure



Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Allowable displacement L					
			2 convolutions		5 convolutions		8 convolutions	
			Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
15	15	32	36	42	45	60	60	80
20	21	42	36	42	45	60	60	80
25	27	50	40	46	50	65	60	85
40	40.5	72	40	46	50	65	60	85
50	53	87	48	58	60	80	75	110
65	66	102	48	58	60	80	75	110
80	79	118	55	70	70	100	85	140
100	103	143	55	70	70	100	85	140

Note The minimum and the maximum listed above indicate the allowable operating range of the bellows.

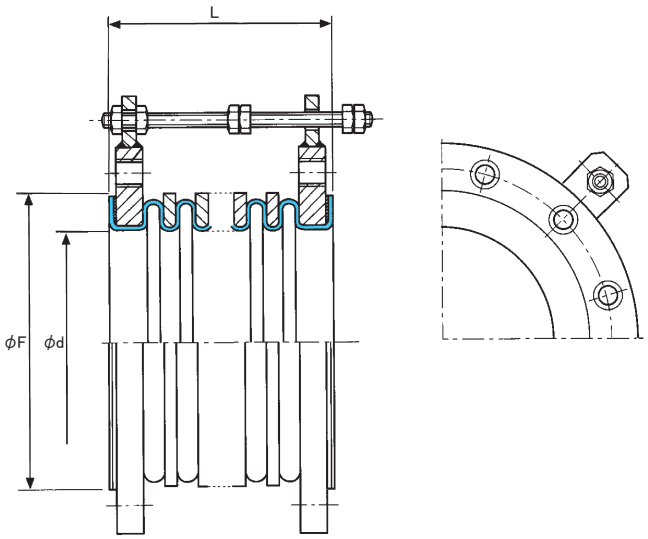
Formed Bellows With Control Ring
VALQUA №7803-2

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	SS400	Other materials are also applicable. Tapped bolt holes are the standard for flange bolts. Metric threads are used for JIS 10k, and unified screw threads are used for JPI 150.
Bellows	Material	PTFE	
Limit bolt	Material	SS400	
	Structure	Stud bolt · nut(Metric thread)	
Control ring	Material	SS400 unichrome plating	
Back-up gasket	Compressed Non-asbestos Fiber Sheet VALQUA No. 6500		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Flange-to-flange dimension L				Allowable displacement			
			JIS 10k		JPI 150lb		Expansion		Shrinkage	
			5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions
125	125	185	140	200	150	210	15	20	25	30
150	149	205	155	220	165	230	15	20	25	30
200	198	255	160	235	175	250	15	25	30	40
250	246	315	175	255	190	270	20	30	40	60
300	297	370	175	255	190	270	20	30	40	60
350	332	415	190	270	210	290	20	30	40	60
400	382	475	190	270	210	290	20	30	40	60

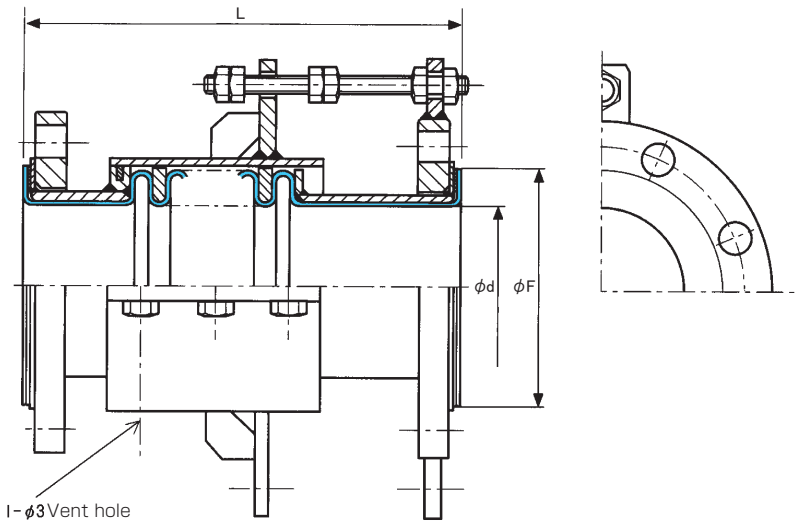
Formed Bellows With Control Ring And Outer Jacket
VALQUA №7803-3

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	SS400	Other materials are also applicable.
	Structure	Fixed on side, and loose on the other	
Outer jacket	SS400		2-piece type
Control ring	SS400 unichrome plating		
Bellows	PTFE		
Ring	SS400		
Limit bolt	SS400 stud bolt · nut(metric thread)		
Back-up gasket	Compressed Non-asbestos Fiber Sheet VALQUA No. 6500		
End pipe	SGP		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Flange-to-flange dimension L				Allowable displacement			
			JIS 10k		JPI 150lb		Expansion		Shrinkage	
			5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions
40	39	73	195	240	200	250	5	7	11	17
50	50	92	205	245	220	270	6	9	12	18
65	65	105	225	275	240	290	8	12	14	24
80	77	127	240	280	260	300	8	12	14	24
100	102	151	260	315	290	350	10	15	20	30
125	129	182	300	370	330	410	15	20	25	30
150	149	212	300	370	330	410	15	20	25	30
200	198	262	330	405	380	450	15	25	30	40
250	246	324	370	450	420	500	20	30	40	60
300	297	368	385	470	450	530	20	30	40	60
350	332	413	405	490	460	550	20	30	40	60
400	382	475	410	495	480	570	20	30	40	60

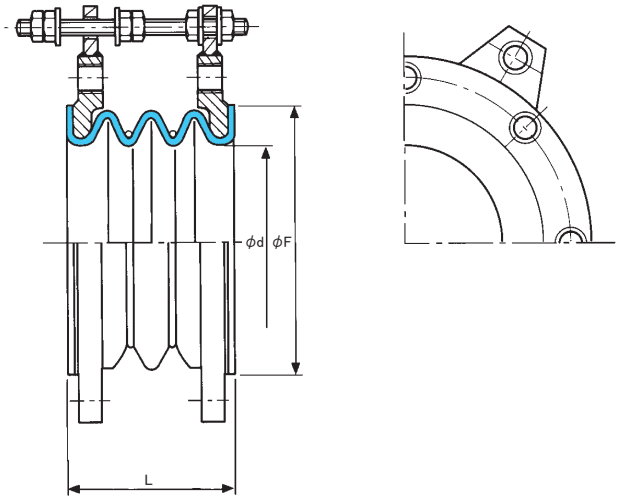
Formed Thick-Skinned Bellows
VALQUA №7803-4

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	FCD450	Other materials are also applicable. Tapped bolt holes are the standard for flange bolts. Metric threads are used for JIS 10k, and unified screw threads are used for JPI 150.
Bellows	Material	PTFE	
Limit bolt	Material	SS400	
	Structure	Stud bolt · nut(metric thread)	
Control ring	SUS304		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Flange-to-flange dimension L		Allowable displacement			
					Axial direction		Direction perpendicular to the axis	
			3 convolutions	5 convolutions	3 convolutions	5 convolutions	3 convolutions	5 convolutions
25	27	70	70	100	±15	±25	±7	±7
40	39	85	75	110	±20	±30	±10	±10
50	47	100	85	125	±20	±30	±10	±10
65	63	120	90	135	±25	±35	±12	±12
80	71	130	90	135	±25	±35	±12	±12
100	93	155	95	140	±25	±40	±12	±12
125	113	185	110	160	±25	±40	±12	±12
150	143	215	110	160	±30	±50	±15	±15
200	190	265	125	–	±30	–	±15	–
250	235	325	140	–	±30	–	±15	–
300	290	370	145	–	±35	–	±17	–
350	320	415	155	–	±35	–	±17	–
400	375	475	160	–	±40	–	±20	–

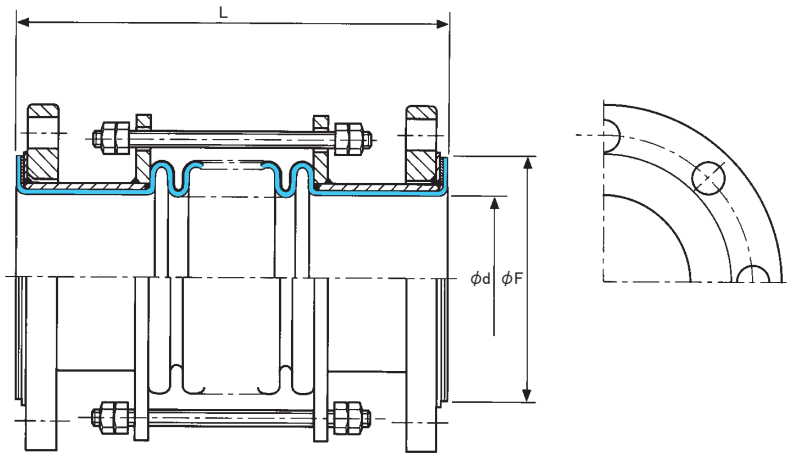
Metal-Jacketed Bellows With Sleeve
VALQUA No.7806-1

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	SS400	Other materials are also applicable.
	Structure	Loose on both ends	
Lap joint	SS400		
Ring	SS400		
Metal coating	SUS304		
Bellows	PTFE		
Limit bolt	SS400 stud bolt・nut(metric thread)		
Back-up gasket	Compressed Non-asbestos Fiber Sheet VALQUA No. 6500		
End pipe	SGP		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Flange-to-flange dimension L				Allowable displacement					
			JIS 10k		JPI 150lb		Expansion		Shrinkage		Axial difference	
			5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions
25	28	51	170	200	175	205	3	5	5	8		
40	39	73	195	240	200	250	5	7	11	17		
50	50	92	205	245	220	270	6	9	12	18		
65	65	105	225	275	240	290	8	12	14	24		
80	77	127	240	280	260	300						
100	102	151	260	315	290	350	10	15	20	30	2	5
125	129	182	300	370	330	410		20				
150	149	212	300	370	330	410	15		25	30		
200	198	262	330	405	380	450		25	30	40		
250	246	324	370	450	420	500	20	30	40	60		
300	297	368	385	470	450	530						
350	332	413	405	490	460	550						
400	382	428	410	495	480	570						

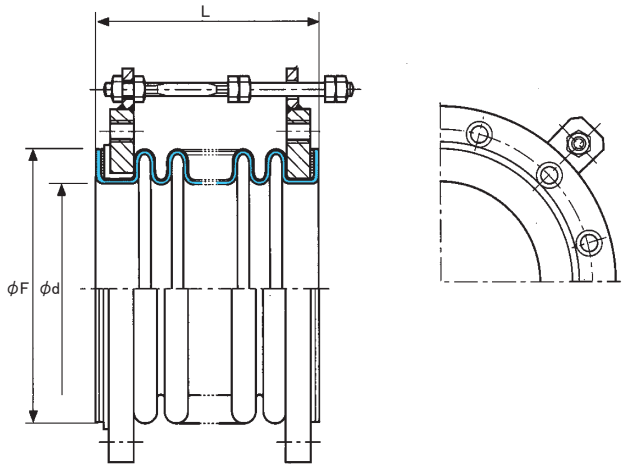
Metal-Jacketed Bellows Without Sleeve
VALQUA №7806-2

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	SS400	Other materials are also applicable.
	Structure	Fixed on both ends	Tapped bolt holes are the standard for flange bolts. Metric threads are used for JIS 10K, and unified screw threads are used for JPI 150.
Metal coating	SUS304		
Bellows	PTFE		
Limit bolt	SS400 stud bolt・nut(Metric thread)		
Back-up gasket	Compressed Non-asbestos Fiber Sheet VALQUA No. 6500		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

▼Structure



▼Standard dimensions

(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Flange-to-flange dimension L				Allowable displacement					
			JIS 10k		JPI 150lb		Expansion		Shrinkage		Axial difference	
			5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions	5 convolutions	8 convolutions
25	28	51	80	110	80	110	3	5	5	8		
40	39	73	95	135	100	140	5	7	11	17		
50	50	92	95	135	100	140	6	9	12	18		
65	65	105	110	155	115	160	8	12	14	24		
80	77	127	115	165	130	180	8	12	14	24		
100	102	151	125	180	140	195	10	15	20	30		
125	129	182	140	200	145	205	15	20	25	30	2	5
150	149	212	155	220	165	230	15	20	25	30		
200	198	262	160	235	175	250	15	25	30	40		
250	246	324	175	255	190	270	20	30	40	60		
300	297	368	175	255	190	270	20	30	40	60		
350	332	413	190	270	210	295	20	30	40	60		
400	382	475	190	270	210	295	20	30	40	60		

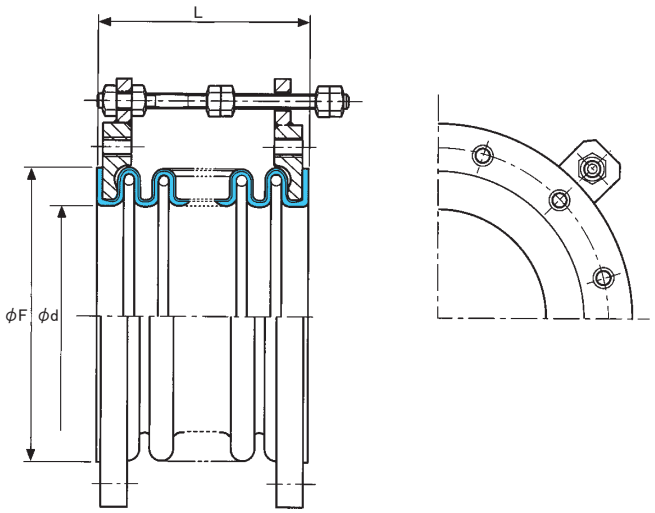
Metal-Jacketed Bellows With Inner Ring
VALQUA No.7806-3

▼Material specification

Description	Specification		Remarks
Flange	Nominal pressure	JIS 10K (JIS B 2220)	JPI 150 is also acceptable.
	Material	SS400	Other materials are also applicable.
	Structure	Fixed on both ends	Tapped bolt holes are the standard for flange bolts. Metric threads are used for JIS 10K, and unified screw threads are used for JPI 150.
Metal coating	SUS304		
Bellows	PTFE		
Limit bolt	SS400・stud bolt ・nut(Metric thread)		
Inner ring	SUP+PFA coating		

Note 1. Flange and limit bolt will have aluminum paint coating unless otherwise specified.
2. Limit bolts are used for restricting the bellows' movements in the range of displacement.
3. Pipes before and after the bellows should be fixed.

▼Structure



▼Standard dimensions

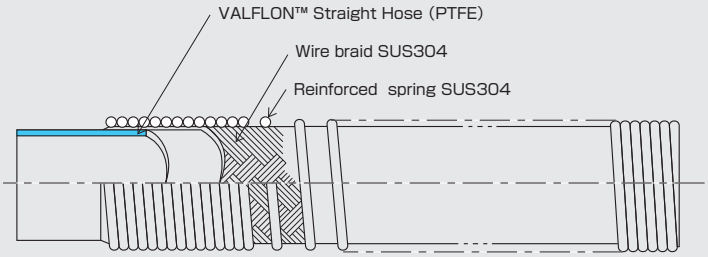
(Unit : mm)

Nominal size A	Internal diameter d	Flare diameter F	Flange-to-flange dimension L				Allowable displacement					
			JIS 10k		JPI 150lb		Expansion		Shrinkage		Axial difference	
			6 convolutions	9 convolutions	6 convolutions	9 convolutions	6 convolutions	9 convolutions	6 convolutions	9 convolutions	6 convolutions	9 convolutions
80	77	127	115	–	130	–	8	–	14	–		
100	102	151	125	175	135	195	10	15	20	30		
125	129	182	140	195	145	200	15	20	25	30		
150	149	212	160	220	160	230	15	20	25	30		
200	198	262	170	235	180	250	15	25	30	40	2	5
250	246	324	175	245	185	260	20	30	40	60		
300	297	368	175	245	190	265	20	30	40	60		
350	332	413	190	265	210	290	20	30	40	60		
400	382	475	195	270	210	295	20	30	40	60		

Product features

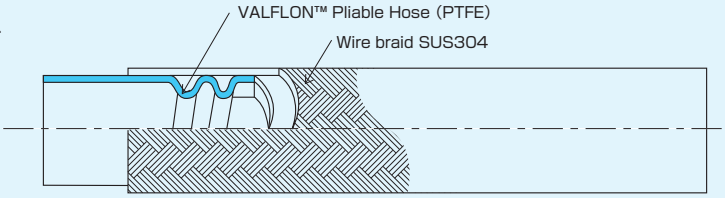
TypeA

This is the flexible hose with improved pressure resistance, heat resistance and flexibility by adding stainless steel wire blade and reinforced spring to VALFLON™ straight hose.
●This is for general purpose and available at low cost. Also, there is hardly any liquid pool inside, and it is easy to clean.



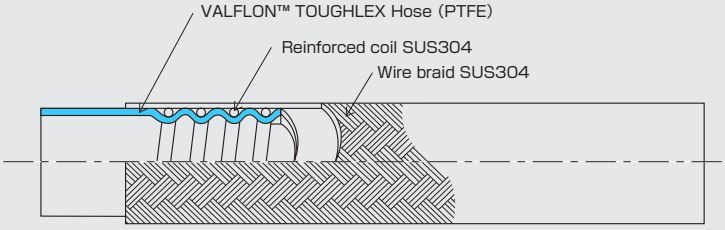
TypeB

This is a flexible hose with optimum flexibility by adding stainless steel wire blade to VALFLON™ Pliable Hose.
●Since the hose can achieve the bending radius of up to about 3 to 4 times more than the hose internal diameter, it is ideal for use in locations with high vibration or in locations where frequent part changes are needed.
●To get the equivalent size of inner diameter, it adopts 1 over size hoses.



TypeC

This is a flexible hose with moderate flexibility, pressure resistance and heat resistance by adding stainless steel wire blade to VALFLON™ TOUGHLEX Hose.
●Liquid pooling rarely occurs in this hose by controlling unnecessary curvature factor and adding a slight slope.



Applicable range

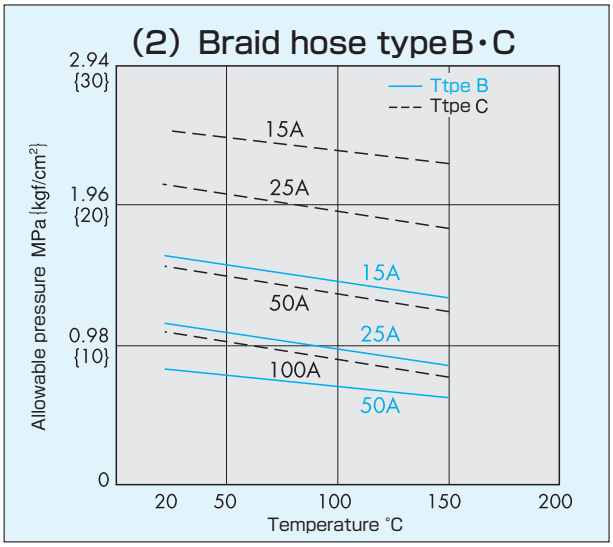
▼Allowable pressure

(1) Description hose type

Nominal Size		At normal temperature MPa
A	B	
6	1/8	7.84
8	1/4	5.88
10	3/8	4.90
15	1/2	3.92
20	3/4	3.23
25	1	2.84
32	1 1/4	2.45
40	1 1/2	2.06
50	2	1.57

Note Except for flange joint type

Operating temperature range 0℃～150℃



Note 1. Depending on temperature conditions and sizes, the product can be use in full-vacuum conditions without any problems.
2. The product can be used at a temperature below 0℃ to 20℃. However, the minimum bending radius will differ, please feel free to contact us for more information.

▼Minimum bending radius

Nominal size		Type A mm	Type B mm	Type C mm
A	B			
6	1/8	60	–	–
8	1/4	80	–	–
10	3/8	100	–	–
15	1/2	140	80	120
20	3/4	250	100	150
25	1	450	120	200
32	1 1/4	600	140	250
40	1 1/2	800	180	320
50	2	1000	250	400
65	2 1/2	–	–	500
80	3	–	–	600
100	4	–	–	800

VALFLON™ Braid Hose Model number display explanation

VALQUA №7041 – □ □ □ – □ – L

- Length
- Nominal diameter
- No. by joints
- Hose type
- Model joint

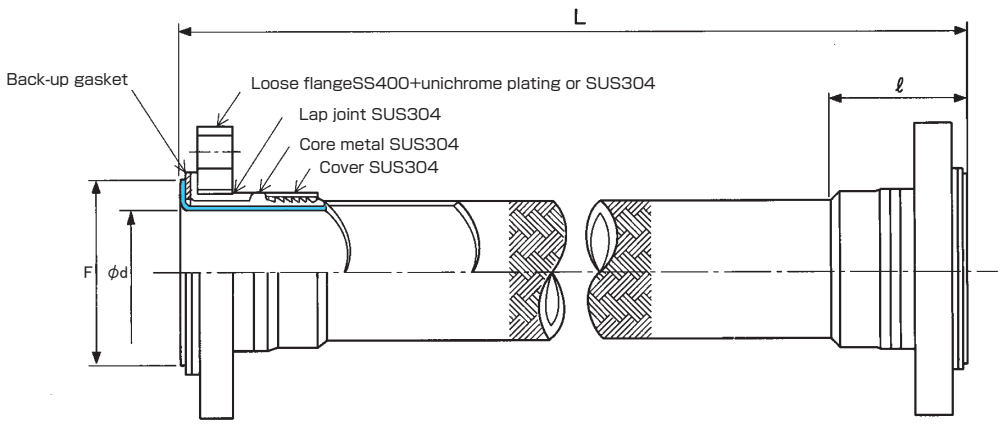
Flange Joint Type

FA1 [Type A]

FB1 [Type B]

FC1 [Type C]

VALQUA №7041-F□1



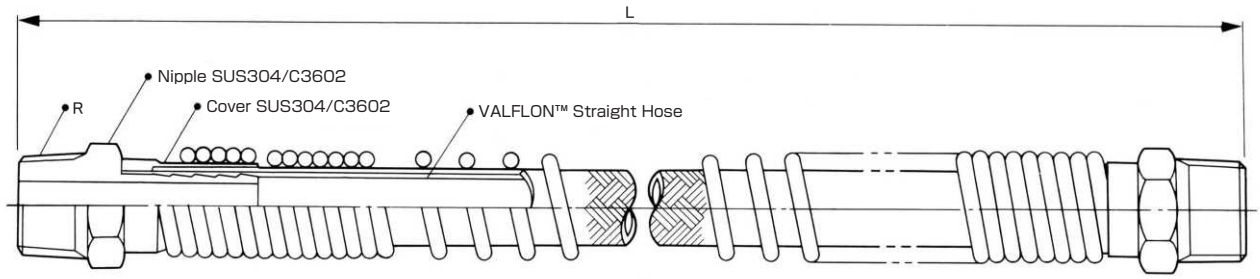
Nominal size		Model number	Hose dimensions mm(1)						Allowable pressure MPa	Minimum bending radius mm	Length L	
A	B		d	D	d_1	D_1	ℓ	F			Minimum mm	Maximum m
15	1/2	7041-FA1-15-L	14	16.5	–	–	50	35	0.98	140	230	10.0
		7041-FB1-15-L	22	25	15	25	57	50	0.98	80	250	4.3
		7041-FC1-15-L	16	19	13	19	52	38	0.98	120	250	7.8
20	3/4	7041-FA1-20-L	19.5	22	–	–	52	43	0.98	250	250	10.0
		7041-FB1-20-L	28	31	19	30	62	55	0.98	100	300	4.3
		7041-FC1-20-L	22	25	17	25	57	43	0.98	150	250	4.8
25	1	7041-FA1-25-L	25.5	28	–	–	59	51	0.98	450	300	6.0
		7041-FB1-25-L	33	36	25	36	62	65	0.98	120	300	4.1
		7041-FC1-25-L	28	31	23	30	62	55	0.98	200	300	4.7
32	1 1/4	7041-FA1-32-L	33	36	–	–	62	62	0.98	600	300	6.0
		7041-FB1-32-L	42	45	31	44	62	78	0.98	140	300	4.0
		7041-FC1-32-L	35	38	29	38	62	65	0.98	250	300	5.1
40	1 1/2	7041-FA1-40-L	39	42	–	–	62	73	0.98	800	300	6.0
		7041-FB1-40-L	50	53.5	38	53	62	85	0.78	180	300	4.1
		7041-FC1-40-L	42	45	35	44	62	78	0.98	320	300	5.1
50	2	7041-FA1-50-L	50	53.5	–	–	62	88	0.98	1,000	300	6.0
		7041-FB1-50-L	65	68.5	51	68	72.5	100	0.78	250	300	3.9
		7041-FC1-50-L	50	53.5	45	53	62	88	0.98	400	300	4.8
65	2 1/2	7041-FC1-65-L	77	81	62	80	77.5	120	0.98	500	350	4.3
80	3	7041-FC1-80-L	89.5	93.5	75	93	77.5	130	0.98	600	400	3.4
100	4	7041-FC1-100-L	112	116	96	116	93	155	0.98	800	400	2.7

※(1) Hose dimensions d = inside diameter, D = outside diameter, d_1 = inside diameter of corrugation valley, D_1 = outside diameter of corrugation mount.
Note Hose type A is equipped with reinforcement springs as standard. ■The standard is JIS 10K flange.

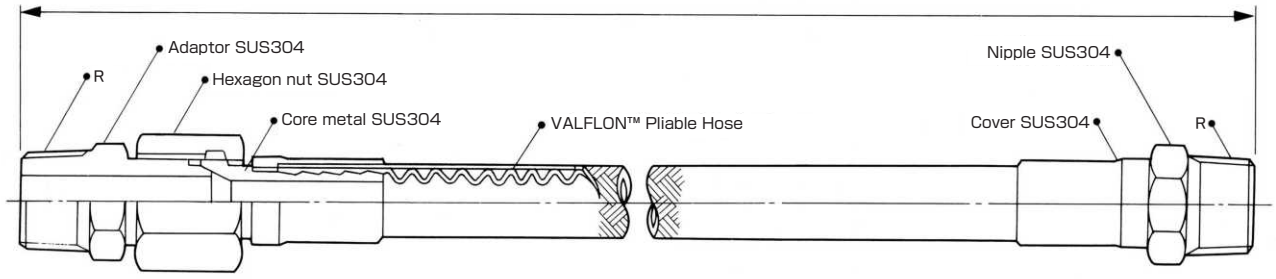
Threaded Joint

VALQUA №7041-NA1, №7041-NB2, №7041-NC3

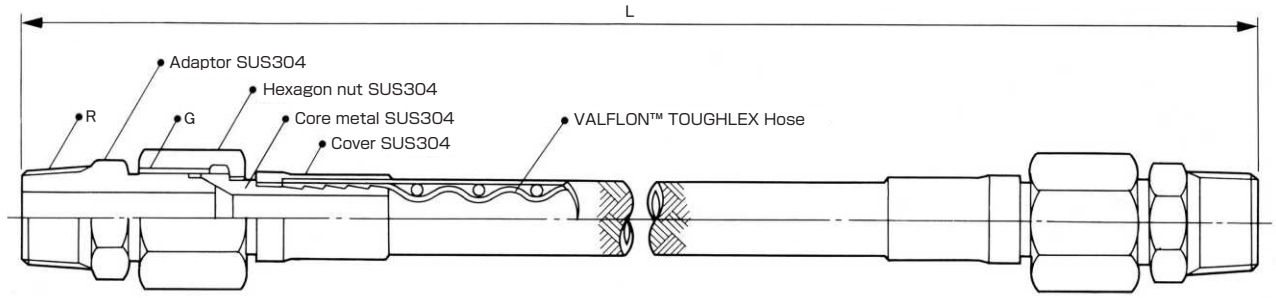
▼VALQUA №7041-NA1 (Fixed male + Fixed male)



▼VALQUA №7041-NB2 (Male union + Male fixed)



▼VALQUA №7041-NC3 (Male union + Male union)

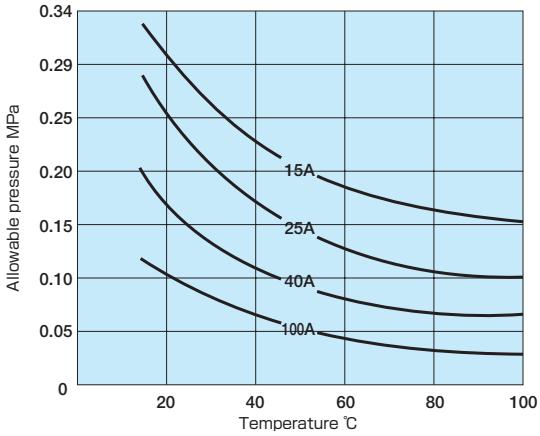


Number of joint type	4 = Male union + Female union
	5 = Female union + Male fixed
	6 = Female union + Female union

Type of hose	A= VALFLON™ Straight Hose
	B= VALFLON™ Pliable Hose
	C= VALFLON™ TOUGHLEX Hose (Pliable hose + supporting coil)

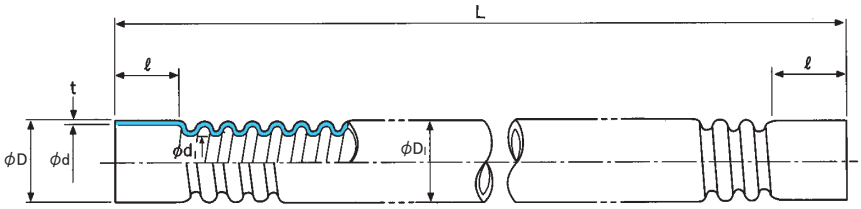
Allowable pressure

Operating temperature range 0℃ to 100℃
The product can be used at a temperature below 0℃ to 20℃; however, the minimum bending radius will differ, please feel free to contact us for more information.



Straight End(PTFE)

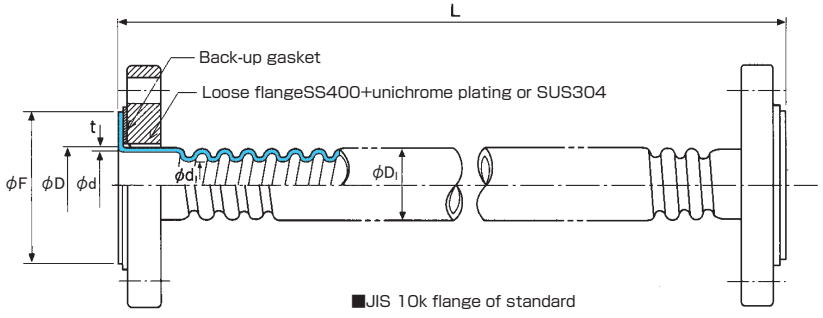
VALQUA №7046-1



Nominal size		Model number	Hose dimensions mm						Allowable pressure MPa	Minimum bending radius mm	Length L	
A	B		d	D	d1	D1	t	ℓ			Minimum mm	Maximum m
15	1/2	7046-1-15-L	22	25	15	25	1.5	50	0.29	80	160	4.3
20	3/4	7046-1-20-L	28	31	19	30	1.5	50	0.25	100	180	4.3
25	1	7046-1-25-L	33	36	25	36	1.5	50	0.25	120	200	4.1
32	1 1/4	7046-1-32-L	42	45	31	44	1.5	50	0.20	140	250	4.0
40	1 1/2	7046-1-40-L	50	53.5	38	53	1.75	50	0.15	180	250	4.1
50	2	7046-1-50-L	65	68.5	51	68	1.75	50	0.15	250	250	3.9
65	2 1/2	7046-1-65-L	77	81	62	80	2.0	50	0.12	500	250	4.3
80	3	7046-1-80-L	89.5	93.5	75	93	2.0	50	0.10	600	250	3.4
100	4	7046-1-100-L	112	116	96	116	2 0	50	0.10	800	250	2.7

Flange End(PTFE)

VALQUA №7046-2



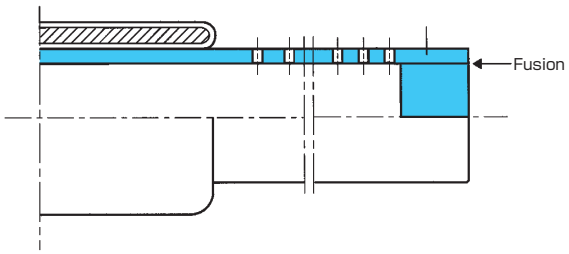
Nominal size		Model number	Hose dimensions mm						Allowable pressure MPa	Minimum bending radius mm	Length L	
A	B		d	D	d1	D1	t	F			Minimum mm	Maximum m
15	1/2	7046-2-15-L	22	25	15	25	1.5	50	0.29	80	160	4.3
20	3/4	7046-2-20-L	28	31	19	30	1.5	57	0.25	100	180	4.3
25	1	7046-2-25-L	33	36	25	36	1.5	65	0.25	120	200	4.1
32	1 1/4	7046-2-32-L	42	45	31	44	1.5	73	0.20	140	250	4.0
40	1 1/2	7046-2-40-L	50	53.5	38	53	1.75	85	0.15	180	250	4.1
50	2	7046-2-50-L	65	68.5	51	68	1.75	100	0.15	250	250	3.9
65	2 1/2	7046-2-65-L	77	81	62	80	2.0	120	0.12	500	250	4.3
80	3	7046-2-80-L	89.5	93.5	75	93	2.0	130	0.10	600	250	3.4
100	4	7046-2-100-L	112	116	96	116	2.0	155	0.10	800	250	2.7

Type/ Applicable range/ Material specification

▼Type

Type	VALQUA No.	Use environment	Remarks
Single-Flanged Insertion Pipe	No.7043-A1	Less vibration and bending stress	A1 and A2 indicate the size of companion flange.
	No.7043-A2		
Double-Flanged Insertion Pipe	No.7043-B1	A certain level of vibration and bending stress	B1 and B2 indicate the size of the nozzle flange and pipe flange.
	No.7043-B2		

Note 1. Please contact us for inquires regarding curved pipes.
2. Regarding the suction pipes listed above, we can also make the pipe type that can disperse/blow from pores to the direction perpendicular to the axis (see the diagram on the right)



▼Applicable range

1 Heat resistance

-30℃～150℃
For service temperatures 0℃ and below, conditions vary depending on the quality of the metal material.

2 Vacuum insertion pipe

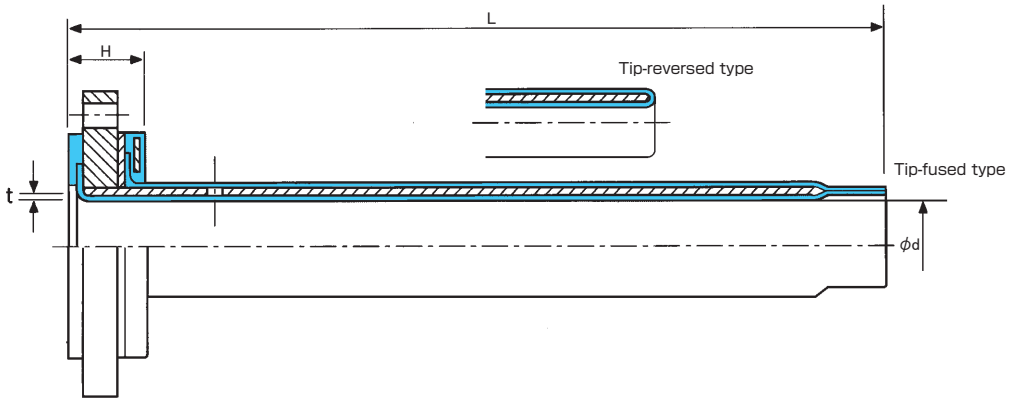
When VALQUA No.7043-A1, No.7043-A2, No.7043-B1, No.7043-B2 are used in vacuum conditions, special specifications will be required. Please make sure to specify the temperature and the vacuum level.

▼Material specification

Description	Specification		Remarks
Connecting flange	Nominal pressure	JIS 10k (JIS B2220)	JPI 150lb is also applicable.
	Material	SS400	
Nozzle flange	Nominal pressure	JIS 10k (JIS B2220)	JPI 150lb is also applicable.
	Material	SS400	
Steel pipe	Material	50A or below(Nominal size)、STPG (JIS G3454)、Sch40	Other material is also acceptable. Bending process is also available.
		65A or above(Nominal size)、STPG (JIS G3454)、Sch20	
Ring	PTFE ring with metal core(SS400)		
Gasket	Compressed Non-asbestos Fiber Sheet VALQUA No. 6500		

Single-Flanged Insertion Pipe
VALQUA №7043-A1, №7043-A2

▼Structure



Note 1. Nominal size 15A and 20A are fused at the tip.
However, for nominal size 20A, the reverse can also be produced, but the maximum length will be 2,000mm.
2. **Please contact us if you use it in a high-purity chemicals.**
3. **Please contact us if you use it in negative pressure.**
4. Please contact us each time if the value is 125A or above.
5. Service temperature range
Tip reversed type : 0℃ ~ 150℃
Tip fused type : -30℃ ~ 150℃
However, for service temperatures 0℃ or below, conditions vary depending on the quality of the metal material.
6. Please make sure to specify model and nominal size × length for order.

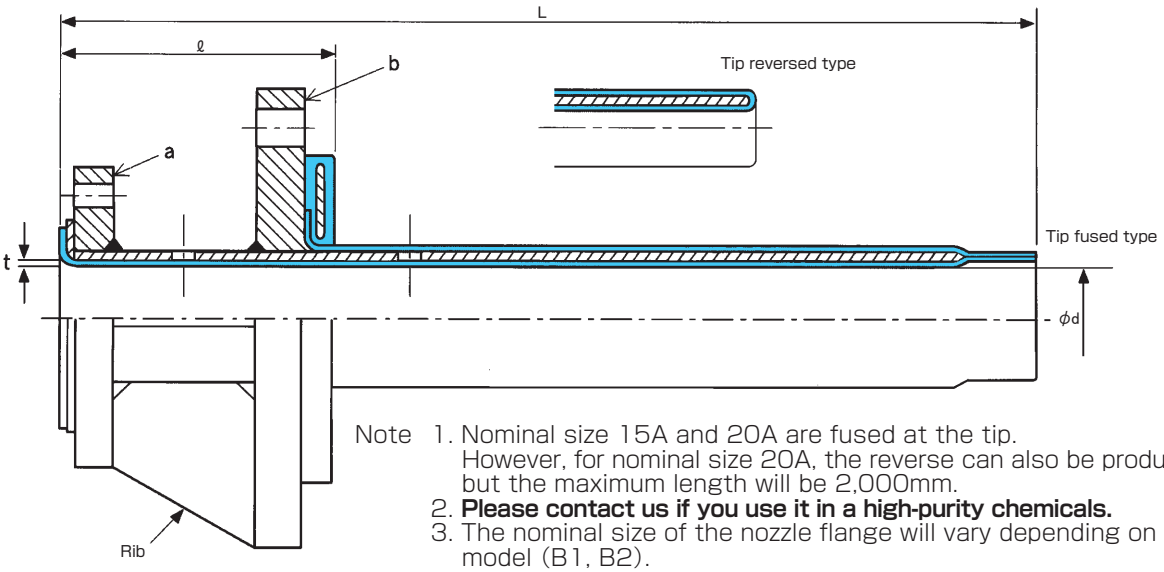
▼Standard dimensions

(Unit : mm)

Type	Nominal size A	Approximate inner diameter d	Liner thickness t	Thickness H	Nominal size of nozzle flange A	Maximum length L
A1	15	13.5	1.5	30	25	3000
	20	18.5	1.5	32	40	3000
	25	24	1.5	32	40	3000
	40	37.5	1.75	38	65	3000
	50	49.5	1.75	38	80	3000
	65	63	2.0	39	100	3000
	80	76	2.0	44	125	3000
	100	100.5	2.0	46	150	3000
	125	114.5	3.0	52	150	3000
	150	137	3.0	48	200	3000
A2	15	13.5	1.5	32	40	3000
	20	18.5	1.5	35	50	3000
	25	24	1.5	35	50	3000
	40	37.5	1.75	38	80	3000
	50	49.5	1.75	38	100	3000
	65	63	2.0	44	125	3000
	80	76	2.0	46	150	3000
	100	100.5	2.0	48	200	3000

Double-Flanged Insertion Pipe
VALQUA №7043-B1, №7043-B2

▼Structure



Note
1. Nominal size 15A and 20A are fused at the tip.
   However, for nominal size 20A, the reverse can also be produced, but the maximum length will be 2,000mm.
2. **Please contact us if you use it in a high-purity chemicals.**
3. The nominal size of the nozzle flange will vary depending on the model (B1, B2).
4. **Please contact us if you use it in negative pressure.**
5. Service temperature range
   Tip reversed type : 0℃ ～ 150℃
   Tip fused type : -30℃ ～ 150℃
   However, for service temperatures 0℃ or below, conditions vary depending on the quality of the metal material.
6. Please contact us each time if the value will be 125A or above.
7. Please make sure to specify model and nominal size × length for order.

▼Standard dimensions

(Unit : mm)

Type	Nominal size A	Approximate inner diameter d	Liner thickness t	Face-to-face dimension ℓ	Nominal size of flange A		Maximum length L
					a Connecting flange	b Nozzle flange	
B1	15	13.5	1.5	100	15	25	3000
	20	18.5	1.5	100	20	40	3000
	25	24	1.5	120	25	40	3000
	40	37.5	1.75	120	40	65	3000
	50	49.5	1.75	150	50	80	3000
	65	63	2	150	65	100	3000
	80	76	2	150	80	125	3000
	100	100.5	2	180	100	150	3000
	125	114.5	3	200	125	150	3000
	150	137	3	200	150	200	3000
	200	184.5	3	200	200	250	3000
B2	15	13.5	1.5	100	15	40	3000
	20	18.5	1.5	100	20	50	3000
	25	24	1.5	120	25	50	3000
	40	37.5	1.75	120	40	80	3000
	50	49.5	1.75	150	50	100	3000
	65	63	2	150	65	125	3000
	80	76	2	150	80	150	3000
	100	100.5	2	180	100	200	3000

Drip Pipe
VALQUA No.7043-C1, No.7043-C2

▼Type

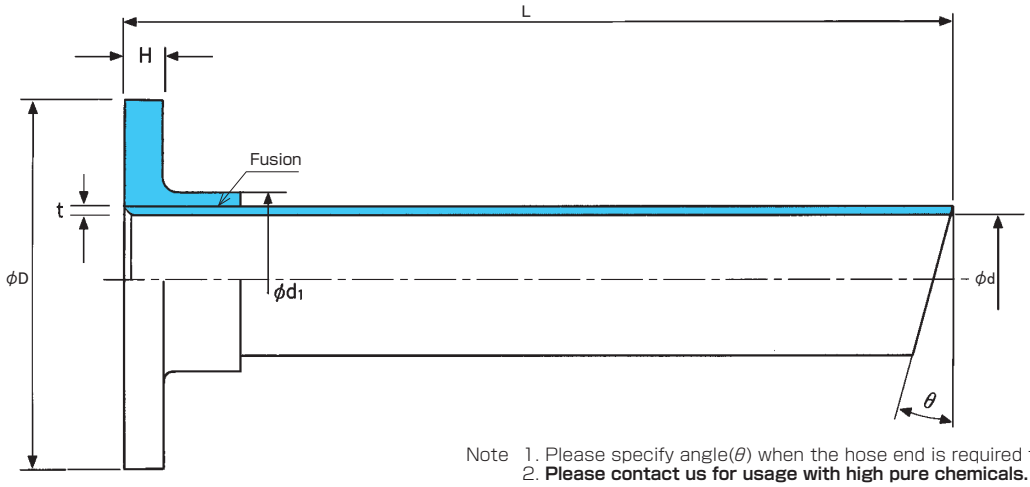
VALQUA No.	Use environment	Remarks
7043-C1	Dripping chemicals etc. mainly from above the liquid surface	C1 and C2 indicate opponent flange size
7043-C2		

▼Material specification

Name	Materials
Hose	PTFE
Collar	PTFE

Applicable range	
Temperature -30℃～150℃	Pressure 0～0.98MPa

▼Structure



Note 1. Please specify angle(θ) when the hose end is required to be cut.
2. **Please contact us for usage with high pure chemicals.**

▼Standard dimensions

(Unit : mm)

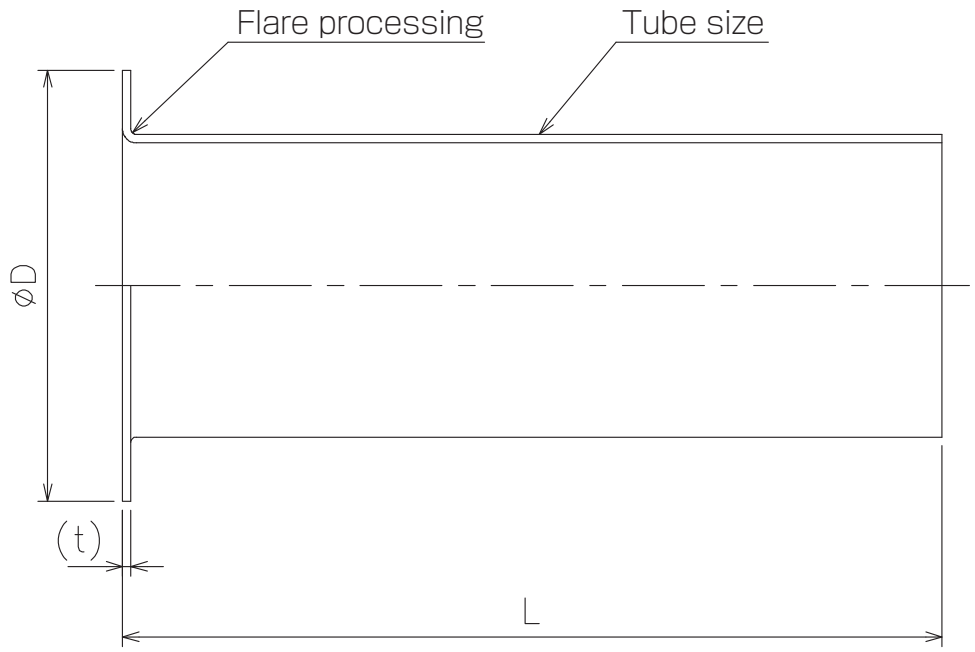
Type	Nominal size A	Approximate inner diameter d	Brim diameter D	Hub diameter d_1	Liner thickness t	Thickness H	Maximum length L	Nominal size of nozzle flange A
C1	15	13	70	20	1.5	5	3000	25
	20	22	85	30	1.5	5	3000	40
	25	28	85	36	1.5	5	3000	40
	32	33	100	41	1.5	5	3000	50
	40	39	100	47	1.5	5	3000	50
	50	50	120	58.5	1.75	5	3000	65
	65	65	130	73.5	1.75	5	3000	80
	80	77	140	86	2.0	5	3000	90
	90	89.5	155	98.5	2.0	5	3000	100
	100	102	185	111	2.0	5	3000	125
C2	15	13	85	20	1.5	5	3000	40
	20	22	100	30	1.5	5	3000	50
	25	28	100	36	1.5	5	3000	50
	32	33	120	41	1.5	5	3000	65
	40	39	120	47	1.5	5	3000	65
	50	50	130	58.5	1.75	5	3000	80
	65	65	140	73.5	1.75	5	3000	90
	80	77	155	86	2.0	5	3000	100
	90	89.5	185	98.5	2.0	5	3000	125
	100	102	215	111	2.0	5	3000	150

Note 1. Please make sure to specify model and nominal size × length for order.
2. If you order JPI 150lb flange, please specify on the order.

Drip Pipe (Flare type)
VALQUA №7043-C3

▼Structure

Material: PTFE



Note

1. Please specify angle (θ) when the hose end is required to be cut.
2. Please contact us for usage with high pure chemicals.
3. ϕD is the maximum length. Please contact us for longer length than below.
4. Please specify the length(L) for order.
5. Though flare parts (inner and outer surface) are rounded, there's no problem in use.
6. Please attach this product promptly after delivery.
7. Gaskets must be attached on and under flare part.

▼Standard dimensions

(Unit : mm)

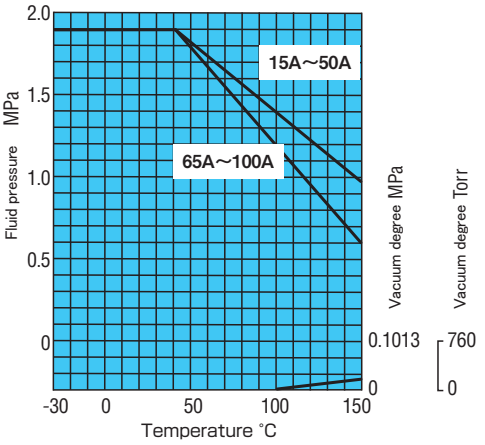
Nominal size A	Flare diameter ϕD	Thickness(t)	Tube size	Maximum length(L)
15	35	1.5	12×15	5000
20	43	1.5	16×19	5000
25	51	1.5	19×22	5000
32	60	1.5	28×31	5000
40	73	1.5	33×36	5000
50	92	1.5	42×45	5000
65	105	1.75	61×64.5	5000
80	127	1.75	65×68.5	4000
100	151	2.0	89.5×93.5	3000

【Applicable range】

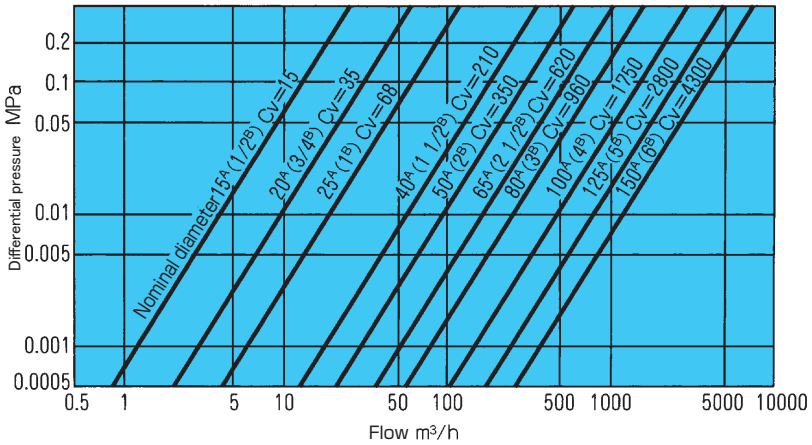
Use temperature range : -30℃～150℃

Maximum use pressure : 0.49MPa

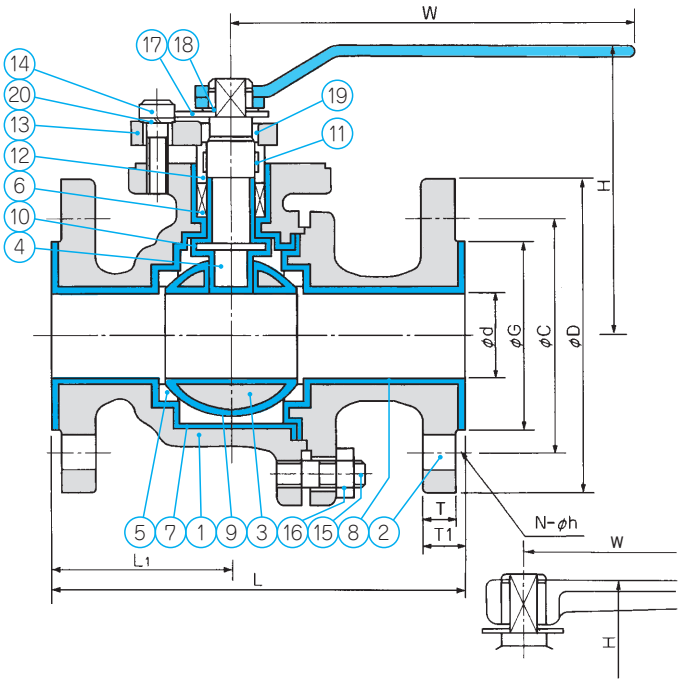
Applicable range/Structure/Material specification



The minimum operating temperature for FCD-S model is -10℃.



▼Structure



Handle for nominal size 65A to 100A

▼Material table for standard parts

No.	Description	Materials	
1	Body	SCS13A	FCD-S
2	Cap	SCS13A	FCD-S
3	Ball	SUS304 or SCS13	
4	Stem	SUS304 or SCS13A	
5	Seat packing	PTFE	
6	Grand packing	PTFE	
7	Body lining	PFA	
8	Cap lining	PFA	
9	Ball lining	PFA	
10	Stem lining	PFA	
11	Stem bearing	VALQUA №7980(1)	
12	Gland sleeve	SUS304	
13	Grand	SUS304 or SCS13A	
14	Grand bolt	STAINLESS steel	
15	Stud bolt	SUS304	
16	Nut	SUS304	
17	Stopper	SUS304	
18	Retaining ring	SUS304	
19	Stem bearing	C-TFE(2)	
20	Spring washer	SUS304	

※(1)Used for size 25A to 100A
※(2)Used for size 15A and 20A
Note FCD-S model is applied to 40A to 100A

▼Standard dimensions (JIS 10K flange)

(Unit : mm)

Nominal size A	d	L	L1	H	W	D	C	G	T	T1	N-h	Weight kg
15	15	140	55	93	135	95	70	45	12	15	4-15	3.0
20	20	152	62	100	135	100	75	50	14	17	4-15	3.5
25	25	165	65	111	150	125	90	61	14	17	4-19	5.5
40	38.5	191	81	136	250	140	105	76	16	19	4-19	10.0
50	51	216	90	146	250	155	120	91	16	19	4-19	14.0
65	65	240	105	167	400	175	140	113	18	21	4-19	22.5
80	76	250	115	178	400	185	150	125	18	21	8-19	27.5
100	102	280	137	207	500	210	175	150	18	21	8 19	43.5

Note 1. Reduced bore type can be manufactured. Please feel free to contact us.
2. Size 125A and 150A are available.
3. Class 150lb is also available.
4. Please refer to the catalog, "PFA Lined Ball Valve Model PF2(No.ZP09)" for the details.

PFA Lined Check Valve Model PSC20

Check Valve
Spring Type

▼Applicable range

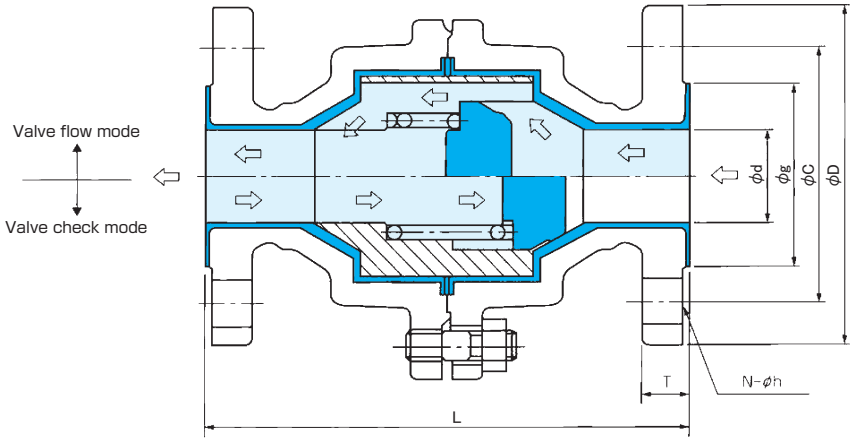
Operation mode	Range of temperature and pressure
FLOW	～100℃(1) 1.87MPa
CHECK	～100℃(1) 0.98MPa

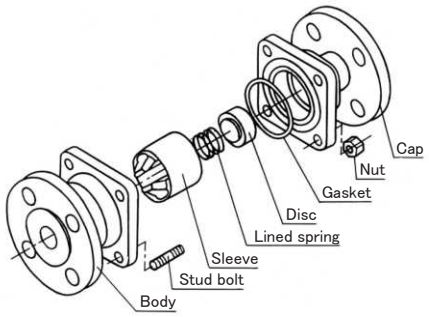
(1) In the case the material of disc sleeve is PTFE, temperature range is 60℃ or below.

▼Material specification

Description	Material specification	Description	Material specification
Body･cap	SCS13A	Disc･sleeve	Glass fiber filled PTFE
Lining	PFA	Spring	SUS304-WP+PTFE

▼Structure





▼Standard dimensions

(Unit : mm)

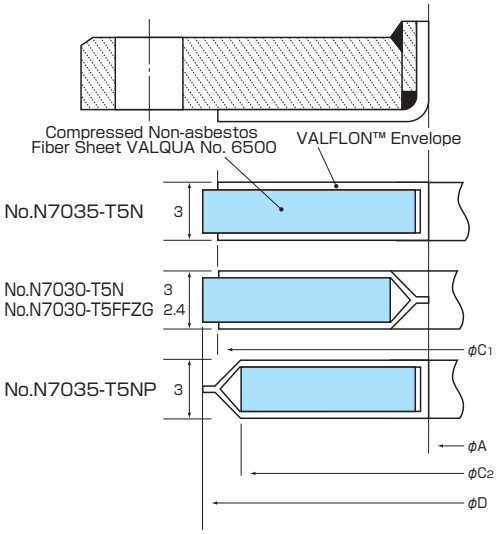
Nominal size		d	L	T	JIS 10K					CLASS 150					JIS 10K weight kg
A	B				D	C	N	h	g	D	C	N	h	g	
15	1/2	15	130	15	95	70	4	15	45	89	60.5	4	16	35	3.0
20	3/4	20	150	17	100	75	4	15	50	98	70.0	4	16	43	4.0
25	1	25	160	17	125	90	4	19	61	108	79.5	4	16	51	5.5
40	1 1/2	38.5	198	19	140	105	4	19	76	127	98.5	4	16	73	9.5
50	2	51	230	19	155	120	4	19	91	152	120.5	4	19	92	14.0
65	2 1/2	65	290	21	175	140	4	19	113	178	139.5	4	19	105	23.0
80	3	76	310	22.1	185	150	8	19	125	191	152.5	4	19	127	29.0
100	4	102	350	26.9	210	175	8	19	150	229	190.5	8	19	157	46.0

Note
1. Please contact us if you have a fluid that cannot be used with Glass fiber filled PTFE.
2. Check valves cannot be used with gases.
3. Please refer to the catalog, "PFA Lined Ball Valve Model PF2(No.ZP09)" for the details.
4. Please periodically replace springs
5. Do not use in areas with high flow velocity, near pumps, or in areas with strong pulsation.

VALFLON™ Envelope Gasket

VALQUA No.7030-T5N, No.7030-T5FFZG, No.7035-T5N, No.7035-T5NP

▼Standard dimensions of VALFLON™ Envelope for VALFLON™ Lined Steel Pipe and Fittings



Please use VALFLON™ Envelope Gasket for the connecting flange area of VALFLON™ piping equipment.

(Unit : mm)

Nominal size A	Nominal size B	Type of gasket	A	C1	C2 JIS 10K	C2 JPI 150Lb	D JIS 10K	D JPI 150Lb
15	1/2	No.N7035-T5N No.N7035-T5NP No.N7030-T5FFZG	14	35	42	32	58	48
20	3/4		19	43	47	41	63	57
25	1		25	51	58	51	74	67
32	1 1/4		33	64	68	60	84	76
40	1 1/2		39	73	73	70	89	86
50	2	No.N7030-T5N No.N7035-T5NP No.N7030-T5FFZG	50	92	88	88	104	104
65	2 1/2		65	105	108	107	124	123
80	3		77	127	118	119	134	135
90	3 1/2		89	140	128	145	144	161
100	4		102	157	143	157	159	173
125	5	No.N7030-T5N	125	185	174	180	190	196
150	6		149	215	204	205	220	221
200	8		198	265	254	261	270	277
250	10		246	325	317	322	333	338
300	12		297	370	362	392	378	408
350	14		334	415	407	433	423	449
400	16		384	475	470	496	486	512
450	18		435	530	525	531	541	547

Note 1. Product with all-around complete fusion is No.7035(No.N7035-T5NP) type only.
2. The size of No.7035-T5FFZG is 100A or above.

Bolt tightening torque value (per pieces)

Nominal size (A) mm	Nominal size (B) inch	Tightening torque [Nm] JIS 10K Liquid recommended	JIS 10K Gas recommended	JPI 150Lb Liquid recommended	JPI 150Lb Gas recommended
15	1/2	6	7	6	8
20	3/4	8	10	8	11
25	1	14	18	11	15
40	1 1/2	28	37	22	30
50	2	46	61	46	61
65	2 1/2	50	66	49	66
80	3	39	52	77	103
100	4	47	63	47	62
125	5	75	100	71	95
150	6	100	133	95	127
200	8	85	114	122	162
250	10	138	184	140	186
300	12	106	141	142	190
350	14	142	190	219	292
400	16	213	284	226	301
450	18	203	270	302	402

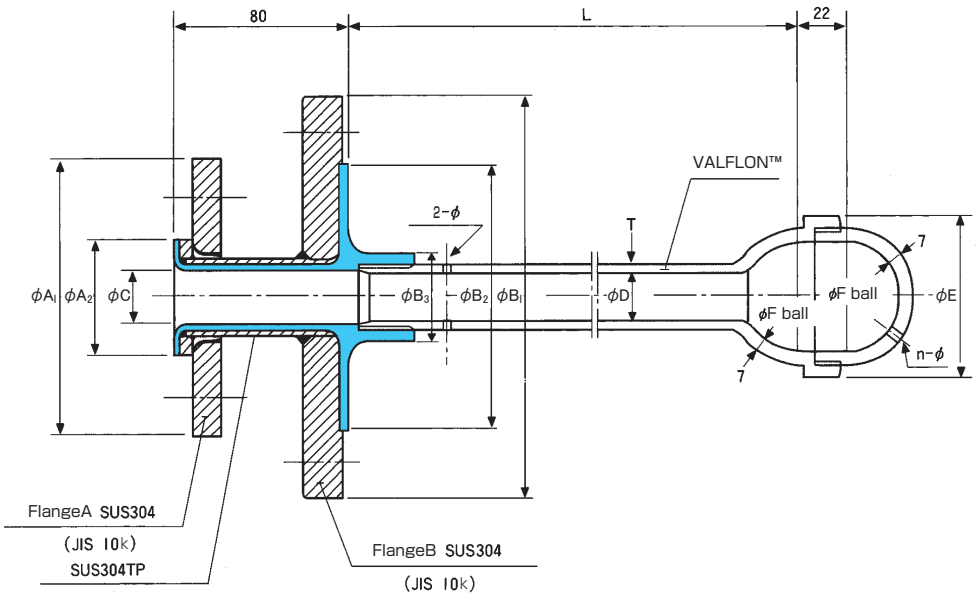
- Gasket factor for gaskets written in this page・・・m:3.5, Minimum design tightening force・・・y: 1.5kgf/mm²
- Please keep the gasket tightening stress at 15MPa for liquid, and at 20MPa for gas. Please avoid excessive tightening over 30MPa since it could cause a damage in the gasket and flare area.
- The gaskets' initial tightening stress could go down due to stress relaxation including the flare area; therefore, please make sure to re-tighten the gasket at below timings.
  - ▶ 24 to 30 hours after the initial tightening
  - ▶ Right before starting the operation
  - ▶ Right before resuming the operation after stopping the operation (Especially when there is a temperature difference)
- Use of spring washer is recommended when using the product in a condition where temperature differences occur.
- Please evenly tighten the bolts several times.

Spray Ball™
VALQUA №7FZ1

Spray ball is used for cleaning tanks such as reaction tanks, stirring tanks, and storage tanks. Since the spraying position is designed according to the customer's tank nozzle orientation, efficient cleaning is possible in a short time and the consumption of cleaning liquid can be suppressed.

- The exposure area is a fixedtype spray ball made of VALFLON™ (PTFE) and connects to the nozzle in the upper part of the can body in flange shape.
- The pressure of the cleaning liquid is pressured at 15 to 20m (liquid column) . If there is negative pressure inside the can, please be aware that, unless the cleaning liquid is inserted gradually and the negative pressure is resolved before pressurizing, the spray ball will break due to water hammer phenomenon.
- If the can body is in special shape or there are restrictions to attaching spray balls, we will create an individual design based on the standard dimensions.

▼Structure



▼Standard dimensions

(Unit : mm)

Type	Washing water volume ℓ/min	Flange combination	FlangeA		FlangeB			φC	φD	T	φE	φF ball	L
			φA1	φA2	φB1	φB2	φB3						
SB- 50	15～30	25A× 50A	125	51	155	100	40	24	16	4	46	32/22	400 (MAX.)
SB- 80	30～70	25A× 80A			185	120			22		72	48	600 (MAX.)
SB-100	70～100	40A×100A	140	85	210	155	55	38.6	35	5	97	71	500 (MAX.)

▼Example of use

Can body capacity	The number of spray ball		
	Type	Vertical reaction tank	Vertical storage tank
6㎥～10㎥	SB-100	2pcs	1pc
1㎥～ 5㎥	SB-80		
600ℓ below	SB-50		

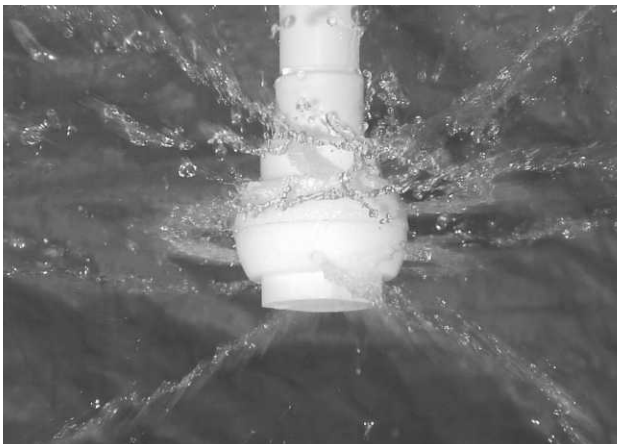
Rotary Spray Ball™
VALQUA №7FZ1-R

Rotary Spray Ball is the product which is developed for medical, chemical, food product industries or other.
The spray head portion of this product rotates in a vertically inverse manner, making it possible to wash parts that are prone to being a blind angle, and to evenly wash the insides of tanks.
It can be chosen from 3 types (50A, 80A, 100A) to meet all demands.

- Since the cleaning water itself controls the ball rotation, there are no parts for rotation inside the product. It is extremely simple structure.
- It is easy to maintain because the spray ball is Three-Body-Structure (top-bottom head and body) and is made from PTFE (high chemical resistance).
- The operating liquid pressure is basically set for 0.15MPa.
  Pressure setting range (0.1MPa to 0.2 MPa) can be changed.
  The amount of washing water can be changed.
- Washing range (Spraying range)
  Head angle is upward 50°
  sideways 180°
  downward -50°
- Even at low pressure, we can clean efficiently because the spraying pattern makes a straight bar flow.

▼Structure

▼Spraying condition



▼Features and dimensions

Type	Thread	Cleaning pressure	The amount of washing water(1)	Standard dimensions		Can capacity
A	Rc	MPa	ℓ/min.	Dia mm	Height mm	m³
SB- 50R	1/2″	0.1	Approx. 25	42	57	0.6
SB- 80R	3/4″	0.15	Approx. 90	64	86	1～5
SB-100R	1″	0.2	Approx. 140	88	118	6～10

Note (1) It is an example of calculation, not a guaranteed value.

Joint Type Spray Ring
VALQUA №7FZ2

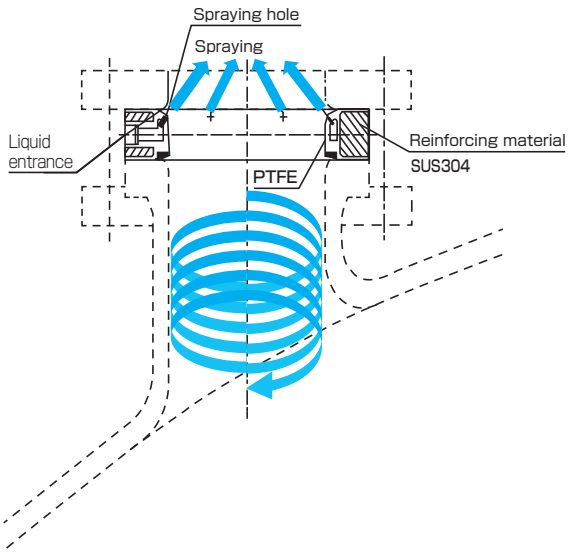
For the pharmaceutical, chemical, and food industries, which require cleanliness, this system cleans the inside of tank nozzles, agitator shafts and baffles, and the outside of other insertion tubes that have been difficult to clean.
The spray direction is two-directional for efficient cleaning. The central spray direction cleans baffles, agitator shafts, light ports, and viewing windows. Tornado jetting cleans the inside of the nozzle.

▼Structure and features

- Wetted part is all modified PTFE. They have superior resistance for chemical, thermal and creep.
- Conductivity PTFE which adapts volatile solvent is also available.
- Reinforced part, which made by SUS304, surpasses the deformation by compressive load.
- Thin design saves space and Weight.
- Pressure setting range is 0.1MPa to 0.2MPa.

▼Standard dimensions (Unit : mm)

Nominal size	Internal diameter	Outer diameter	Height	Liquid entrance
40A	40	85	24	Rc1/8
50A	50	100	24	Rc1/8
80A	80	125	24	Rc1/8
100A	100	155	24	Rc1/8
125A	125	185	24	Rc1/8
150A	150	215	24	Rc1/8
200A	200	265	40	Rc3/8
250A	250	330	40	Rc3/8
300A	300	375	40	Rc3/8

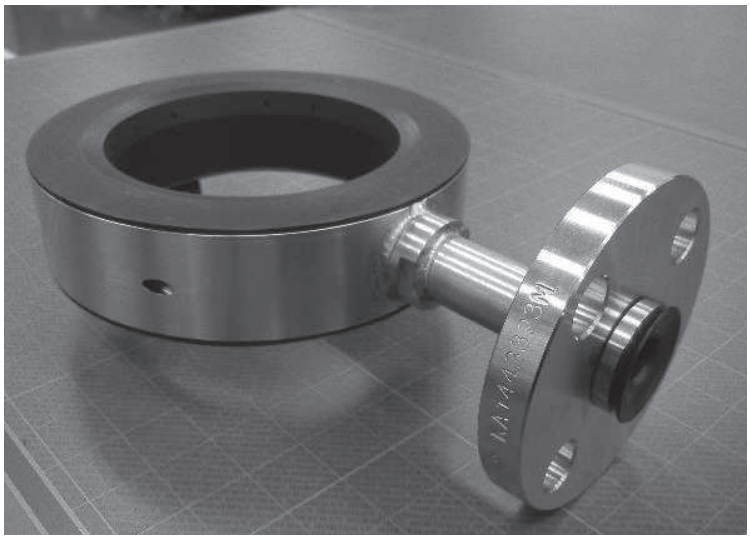


▲Set example

Flange Type Spray Ring
VALQUA №7FZ2-F

For the pharmaceutical, chemical, and food industries, which require cleanliness, this system cleans the inside of tank nozzles, agitator shafts and baffles, and the outside of other insertion tubes that have been difficult to clean.
The spray direction is two-directional for efficient cleaning. The central spray direction cleans baffles, agitator shafts, light ports, and viewing windows. Tornado jetting cleans the inside of the nozzle.

▼Structure and features



- It adapts the Fire Service Act by flange.
- Wetted part is all modified PTFE. It has superior resistance for chemical, thermal and creep.
- Conductivity PTFE which adapts Volatile solvent is also available.
- Reinforced part, which made by SUS304, surpasses the deformation by compressive load.
- Thin design saves space and Weight.
- Pressure setting range is 0.1MPa to 0.2MPa.

▼Standard dimensions (Unit : mm)

Nominal size	Internal diameter	Outer diameter	Height
40A	40	85	40
50A	50	100	40
80A	80	125	40
100A	100	155	40
125A	125	185	40
150A	150	215	40
200A	200	265	40
250A	250	330	40
300A	300	375	40

- The flange size of liquid entrance is JIS10K-15A.
- The length between the body and the edge of flare part (JIS 10K-15A) is 80mm.

"VALQUA" is a compounded word coming from VALUE and QUALITY which is the symbol and motto of the company.

VALQUA, LTD.

1-1, Osaki 2-chome, Shinagawa-ku, 141-6024Tokyo, Japan
TEL : 81-3-5434-7370 FAX : 81-3-5436-0560
https://www.valqua.co.jp

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