

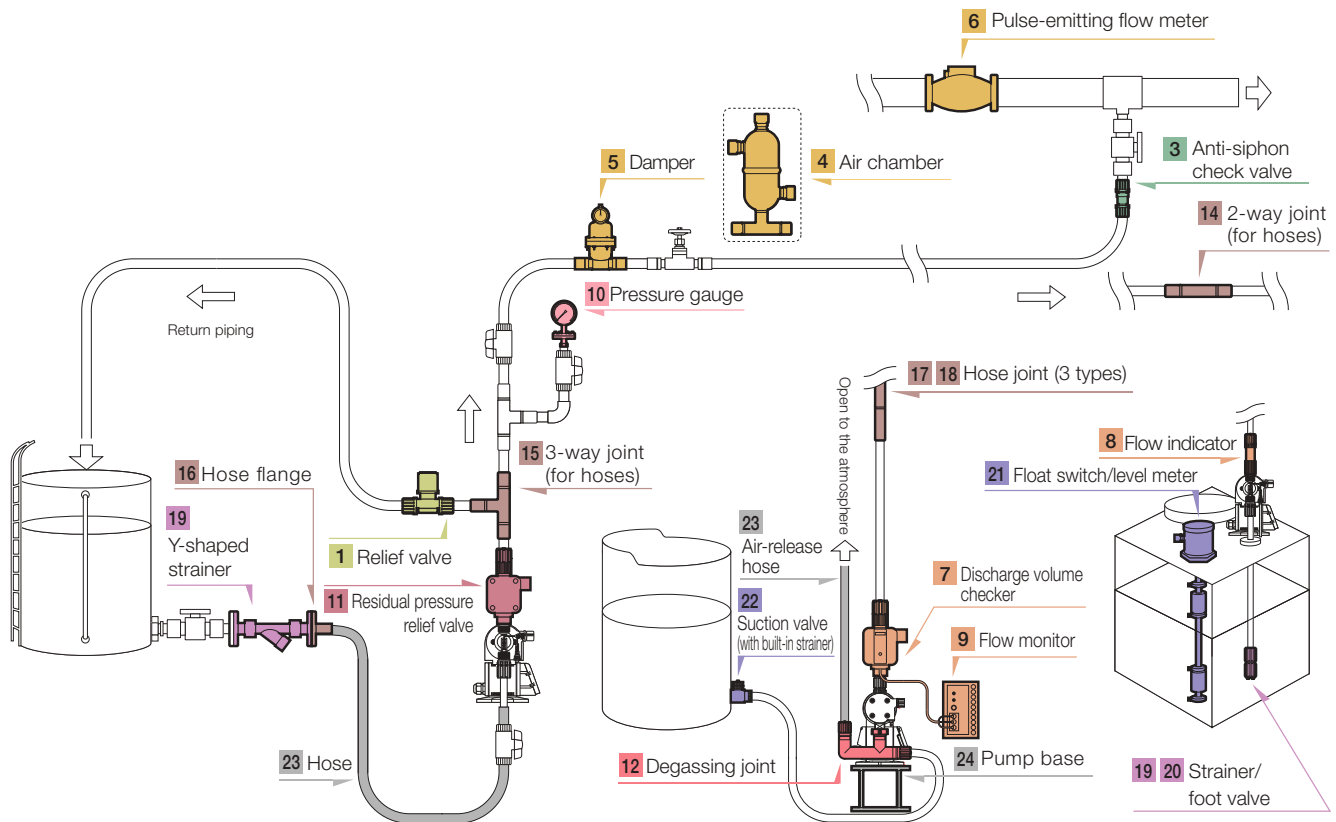
TACMINA

Metering Pump Accessories



Metering Pump Accessories for Drawing Out the Performance of Pumps

Hose Piping



Installation Precautions

- Select products that match the pump model to enable the pump to fully exhibit its intended performance.
- The products listed in this catalog have been developed for TACMINA pumps. The accuracy and performance of these products are not guaranteed when they are used in combination with products made by other companies.
- To prevent accidents caused by the selection of incorrect products, contact TACMINA when purchasing products.
- The information included in this catalog is focused on products with standard specifications. Contact TACMINA for details on special specifications such as different materials and connection methods.
- For details such as the operating methods of these products, see documentation such as the operation manual of the pump or of these products.
- For product improvement, the specifications and other information may be changed without notification.

1 Relief valve Pages 5 and 6

Diaphragm pumps always discharge the suctioned liquid. Therefore, if the discharge-side piping is blocked, while the pump is operating, the pressure will continue to increase until something breaks. A relief valve automatically releases excessive pressure that occurs in the discharge-side piping due to issues such as clogged foreign matter and valve closures. In this way, relief valves prevent accidents such as pump and piping damage.

- Structurally, a dead space exists in ball-type valves. Vaporizable liquids such as hydrogen peroxide water (H_2O_2) and hypochlorous acid soda (NaClO) may vaporize within this dead space, leading to an abnormal increase in pressure within the valve. This abnormal increase in pressure causes vaporization, resulting in pressurized gas that may explode if the valve is damaged, which can cause shards to go flying, resulting in an extremely hazardous situation. When handling vaporizable liquids, do not leave the valve closed for long periods of time. If leaving the valve closed for a long period of time, drain all the remaining liquid from the valve.

2 Back pressure valve Pages 7 and 8

The overfeeding phenomenon and the siphoning phenomenon are prevented by sealing the liquid outlet with a diaphragm and applying just enough force (back pressure) to overcome the force of inertia of the liquid.

* Overfeeding phenomenon

A phenomenon that occurs in flows with pulsation. With this phenomenon, liquid continues flowing even when it should be stopped and is discharged at a volume larger than the rated volume due to the discharge momentum (inertia).

* Siphoning phenomenon

A phenomenon where the chemical is naturally sucked out and continues to flow even when the pump is stopped because the position of the end of the pump's discharge-side piping is lower than the level of the liquid in the suction-side tank.

3 Anti-siphon check valve .. Pages 9 and 10

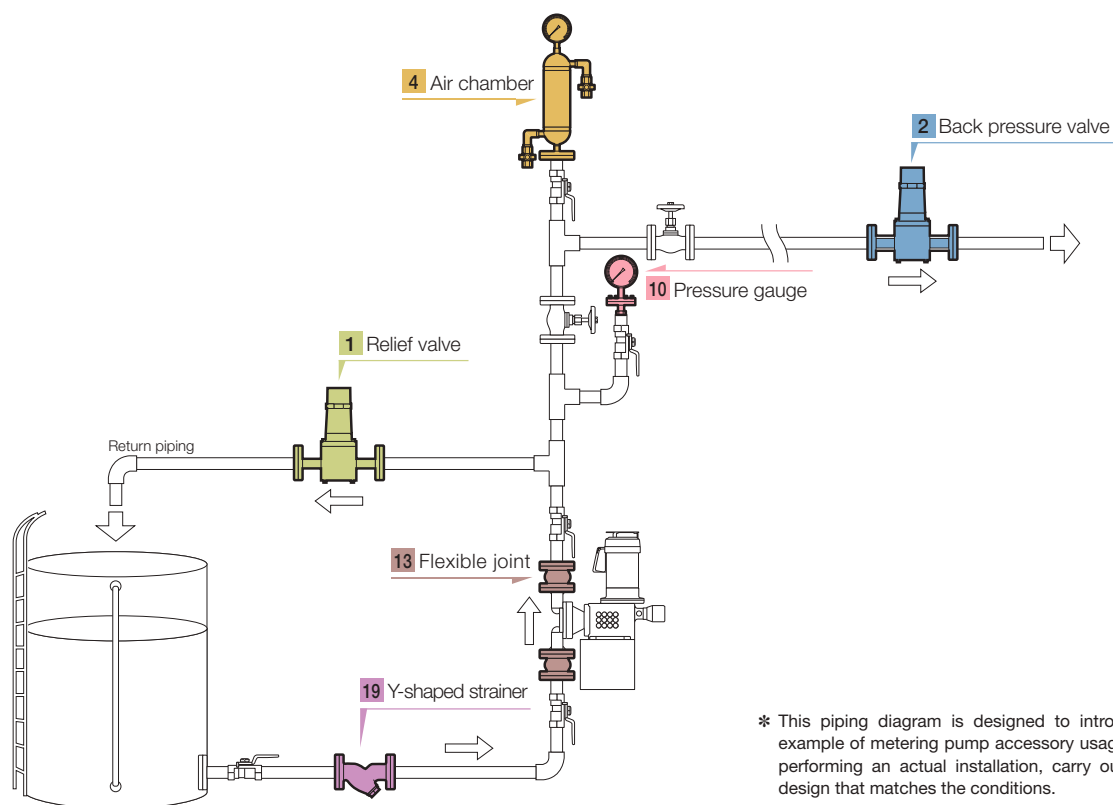
This accessory not only prevents the overfeeding phenomenon and the siphoning phenomenon but also has a check valve function that prevents the liquid from being discharged from the main pipe. When injecting chemicals into a boiler pipe, if the boiler stops and the temperature drops, a negative pressure (a vacuum) develops within the boiler. This causes the chemical to be suctioned even when the pump is stopped. An anti-siphon check valve applies a back pressure slightly higher than 0.1 MPa to prevent the chemical from being suctioned.

4 Air chamber Pages 11 and 12

This accessory uses the elasticity of air to attenuate the pulsation of a reciprocating pump. This makes it possible to reduce piping vibrations, the overfeeding phenomenon, and other such problems related to pulsation. Note that in order to use an air chamber, it is necessary to install a throttle valve for pressure adjustment.

* If the amount of air within an air chamber is reduced, it loses its ability to reduce pulsations, so it is necessary to periodically recharge the air chamber with air. TACMINA produces "Smoothflow pumps," which are diaphragm pumps that do not require an air chamber.

Stainless Steel Piping



* This piping diagram is designed to introduce an example of metering pump accessory usage. When performing an actual installation, carry out piping design that matches the conditions.

5 Damper Page 13

This accessory prevents piping vibrations and is very effective during long-distance transfers of chemicals. Furthermore, the liquid does not come into direct contact with the air, which reduces the frequency of maintenance such as air chamber recharging.

6 Pulse-emitting flow meter Page 14

This is a flow meter that does not require a power supply. Combining this accessory with a TACMINA pulse signal input metering pump creates a simple and inexpensive flow rate proportional injection system.

7 Discharge volume checker .. Pages 15 and 16

This accessory is resistant to acids and alkalis and can be used to monitor the pump's injection operation at a low cost. Two types are available: a type that is connected directly to the pump and a hose connection type. Combining this accessory with the PZI Series of metering pumps makes it possible to monitor the discharge volume, display the accumulated discharge volume, and perform metered batch dosing.

8 Flow indicator Page 16

Attaching this accessory to the discharge side of a metering pump makes it easy to check the discharge operation, which is useful in preventing injection failures. Types that are equipped with a photoelectric sensor can automatically output an alarm when an injection failure occurs.

9 Flow monitor Page 17

This is a discharge alarm for metering pumps and is used in combination with a discharge volume checker and a flow indicator that is equipped with a photoelectric sensor. This accessory monitors for metering pump discharge errors by outputting an alarm when it does not receive a signal within the specified time interval during pump operation.

10 Diaphragm pressure gauge Page 18

This accessory is used to monitor the pressure inside a pipe and to adjust back pressure valves and relief valves.

11 Residual pressure relief valve Page 18

Installing this accessory on the discharge side of a pump makes it possible to safely release the pressure within the piping when abnormal pressure occurs. This also makes it possible to safely discharge the residual pressure and residual liquid during maintenance.

12 Degassing joint Page 19

With sodium hypochlorite and similar materials that easily generate decomposed gas, the gas lock phenomenon occurs and makes the pump unable to discharge. Installing a degassing joint on the pump's suction side separates the suctioned bubbles and liquid to prevent the bubbles from entering the pump head.

* Gas lock: A state in which gas enters the pump head and prevents the pump from transferring liquid.

13 Flexible joint Page 19

Use this accessory to prevent loads from being applied to the pump such as due to piping vibrations and piping loads.

14 2-way joint Page 20

Use this accessory to connect hoses to each other.

15 3-way joint Page 20

Use this accessory to fork hose piping.

16 Hose flange Page 20

Use this accessory as the adapter between a hose and flange piping.

17 Screw-type hose joint Page 21

No hose band is required. Just tighten the hose nut to reliably connect hoses together.

18 Socket hose joint Page 21

This joint is used to connect a hose to a TS socket. This accessory can be used to easily and reliably connect these parts together with no hose band required.

19 Strainer Page 22

When the liquid is suctioned from the top of the tank, attach this accessory to the tip of the suction-side hose to prevent the intrusion of debris.

20 Foot valve Page 23 and 24

This is the check valve-equipped strainer that is attached to the tip of the suction-side hose when the liquid is suctioned from the top of the tank.

21 Float switch/level meter Page 25

This accessory can be used to stop the pump and generate an alarm to indicate that the liquid needs to be refilled when the amount of chemical liquid remaining in the tank is low. Two types are available: a float type with a selectable number of sensors (one or two) and an electrode type that has excellent chemical resistance.

22 Suction valve Page 26

Attach this accessory to the chemical tank outlet to easily and reliably connect the tank and the piping. The built-in strainer also prevents the intrusion of debris.

23 Hose Page 30

Hoses made from a wide range of materials (such as PVC, PE, FEP, and PTFE) and having a wide range of diameters are available.

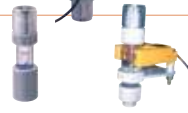
24 Pump base Page 30

These bases are dedicated for use with pumps and reliably fix pumps in place.

25 Pump cover Page 30

This is a pump cover made from transparent PVC. It protects the pump from rain and wind.

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Pump base	30
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Excessive Pressure Prevention
Overfeeding Prevention
Siphoning Phenomenon Prevention
Backflow Prevention
Pulsation Attenuation
Flow Rate Proportional Control
Discharge Checking
Pressure Checking
Residual Pressure Relief
Gas Lock Prevention
Piping Connection
Foreign Matter Suction Prevention
Tank Accessories
Other

Relief valve (safety valve, pressure relief valve)

Diaphragm pumps always discharge the suctioned liquid. Therefore, if the discharge-side piping is blocked, while the pump is operating, the pressure will continue to increase until something breaks. A relief valve automatically releases excessive pressure that occurs in the discharge-side piping due to issues such as clogged foreign matter and valve closures. In this way, relief valves prevent accidents such as pump and piping damage.



RV



TRV



TRV

Product specifications

RV Series

Model	Connection	Pressure adjustment range (MPa)	Standard set pressure (MPa)	Material		Weight (kg)
				Body	Diaphragm	
RV-F15-VE	JIS 10K 15A	0.3 to 1.2	0.5	PVC	EPDM	1
RV-F15-VT				PVC	PTFE	1
RV-F15-ST				SUS304	PTFE	3
RV-F15-6T				SUS316	PTFE	3
RV-F15-FT				PVDF	PTFE	1
RV-F20-VE	JIS 10K 20A		0.3	PVC	EPDM	2
RV-F20-VT				PVC	PTFE	2
RV-F20-ST				SUS304	PTFE	6
RV-F20-6T				SUS316	PTFE	6
RV-F20-FT				PVDF	PTFE	2
RV-F25-VE	JIS 10K 25A	0.3 to 0.7	0.6	PVC	EPDM	5
RV-F25-VT				PVC	PTFE	5
RV-F25-ST				SUS304	PTFE	10
RV-F25-6T				SUS316	PTFE	10
RV-F25-FT				PVDF	PTFE	5
RV-F40-VE	JIS 10K 40A		0.65	PVC	EPDM	5
RV-F40-VT				PVC	PTFE	5
RV-F40-ST				SUS304	PTFE	12
RV-F40-6T				SUS316	PTFE	12
RV-F40-FT				PVDF	PTFE	5
RV-F50-VE	JIS 10K 50A	0.15 to 0.65	0.35	PVC	EPDM	8
RV-F50-VT				PVC	PTFE	8
RV-F50-ST				SUS304	PTFE	14
RV-F50-6T				SUS316	PTFE	14
RV-F65-VE	JIS 10K 65A			PVC	EPDM	13
RV-F65-VT				PVC	PTFE	13
RV-F65-ST				SUS304	PTFE	18
RV-F65-6T				SUS316	PTFE	18

* For details on our high-pressure relief valve with residual pressure relief function (set pressure: 2.4 MPa), see the separate, dedicated pamphlet for this accessory.

TRV Series

Model	Connection	Pressure adjustment range (MPa)	Standard set pressure (MPa)	Material			Weight (kg)
				Body	Diaphragm	O-ring	
TRV-VE-4H	Φ4 x Φ9	0.3 to 1.2	0.5	PVC	EPDM	EPDM	0.3
TRV-VE-6H	Φ6 x Φ11						0.3
TRV-VE-12H	Φ12 x Φ18						0.3
TRV-VE-15F	JIS 10K 15A						0.3
TRV-VE-4 x 9/Z-X	Φ4 x Φ9* ¹						0.4
TRV-VE-6 x 11/Z-X	Φ6 x Φ11* ¹						0.4
TRV-VE-12 x 18/Z-X	Φ12 x Φ18* ¹						0.4
TRV-VF-4H	Φ4 x Φ9				Special fluoro rubber	Fluoro rubber	0.3
TRV-VF-6H	Φ6 x Φ11						0.3
TRV-VF-12H	Φ12 x Φ18						0.3
TRV-VF-15F	JIS 10K 15A						0.3
TRV-VF-4 x 9/Z-X	Φ4 x Φ9* ¹						0.4
TRV-VF-6 x 11/Z-X	Φ6 x Φ11* ¹						0.4
TRV-VF-12 x 18/Z-X	Φ12 x Φ18* ¹						0.4

*¹ The outlet side is R3/8 or R1/2.

* For details on our high-pressure relief valve with residual pressure relief function (set pressure: 2.4 MPa), see the separate, dedicated pamphlet for this accessory.

Model code



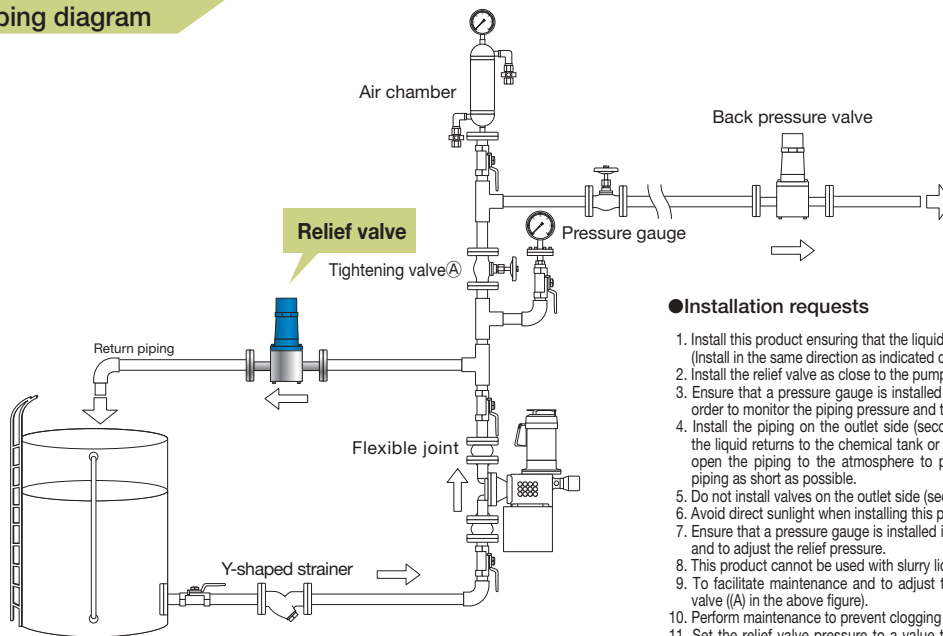
- 1 Series name**
RV : Relief valve
- 2 Connection**
F : Standard
- 3 Body size**
15
20
25
40
50
65
- 4 Body liquid end material**
V : PVC
S : SUS304
6 : SUS316
F : PVDF
- 5 Diaphragm material**
E : EPDM
T : PTFE



- 1 Series name**
TRV : Relief valve
- 2 Body liquid end material**
V : PVC
- 3 Diaphragm material**
E : EPDM
F : Special fluoro rubber
- 4 Inlet diameter**
4 : $\Phi 4 \times \Phi 9$
6 : $\Phi 6 \times \Phi 11$
12 : $\Phi 12 \times \Phi 18$
15 : JIS 10K 15A
- 5 Connection type**
H : Hose
F : Flange
X : Special

* Model code combinations are determined in advance. For details, contact TACMINA.

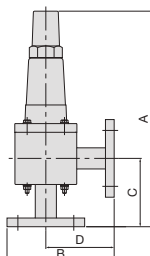
Piping diagram



● Installation requests

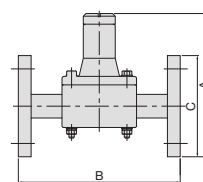
1. Install this product ensuring that the liquid flows in the injection direction.
(Install in the same direction as indicated on the injection direction arrow labels.)
2. Install the relief valve as close to the pump as possible.
3. Ensure that a pressure gauge is installed on the discharge side of the pump in order to monitor the piping pressure and to adjust the relief pressure.
4. Install the piping on the outlet side (secondary side) of the relief valve so that the liquid returns to the chemical tank or is discharged properly. In either case, open the piping to the atmosphere to prevent back pressure and make the piping as short as possible.
5. Do not install valves on the outlet side (secondary side) of the relief valve.
6. Avoid direct sunlight when installing this product outdoors.
7. Ensure that a pressure gauge is installed in order to monitor the piping pressure and to adjust the relief pressure.
8. This product cannot be used with slurry liquids.
9. To facilitate maintenance and to adjust the relief pressure, install a tightening valve (A) in the above figure).
10. Perform maintenance to prevent clogging with contaminants.
11. Set the relief valve pressure to a value that is 120% or less of the maximum discharge pressure of the pump.
12. Only use this product to protect metering pumps made by TACMINA and the piping.

External dimensions



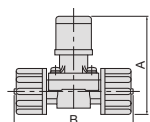
RV Series

Model	A(mm)	B(mm)	C(mm)	D(mm)
RV-F25-VE/RV-F25-VT RV-F25-ST/RV-F25-6T RV-F25-FT	347	172.5	110	110
RV-F40-VE/RV-F40-VT RV-F40-ST/RV-F40-6T RV-F40-FT	362	195	125	125
RV-F50-VE/RV-F50-VT RV-F50-ST/RV-F50-6T	407	232.5	155	155
RV-F65-VE/RV-F65-VT RV-F65-ST/RV-F65-6T	407	242.5	155	155



RV Series

Model	A(mm)	B(mm)	C
RV-F15-VE/RV-F15-VT RV-F15-6T/RV-F15-ST	134.5	152	$\Phi 95$
RV-F20-VE/RV-F20-VT RV-F20-6T/RV-F20-ST RV-F20-FT	149	196	$\Phi 100$

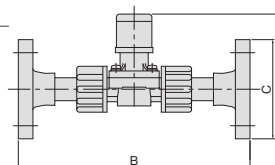


TRV Series

Model	A(mm)	B(mm)
TRV-VE-4H/TRV-VF-4H TRV-VE-6H/TRV-VF-6H	94	114
TRV-VE-12H/TRV-VF-12H	94	116

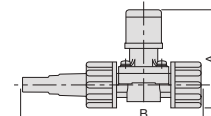
TRV Series

Model	A(mm)	B(mm)	C
TRV-VE-15F/TRV-VF-15F	119.5	222	$\Phi 95$



TRV Series

Model	A(mm)	B(mm)
TRV-VE-4 x 9/Z / TRV-VF-4 x 9/Z	94	174
TRV-VE-6 x 11/Z / TRV-VF-6 x 11/Z	94	175
TRV-VE-12 x 18/Z / TRV-VF-12 x 18/Z	94	175



Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Back pressure valve

The overfeeding phenomenon^{*1} and the siphoning phenomenon^{*2} are prevented by sealing the piping outlet with a diaphragm and applying just enough force (back pressure) to overcome the force of inertia of the liquid.

^{*1} A phenomenon that occurs in flows with pulsation. With this phenomenon, liquid continues flowing even when it should be stopped and is discharged at a volume larger than the rated volume due to the discharge momentum (inertia).

^{*2} A phenomenon where the chemical is naturally sucked out and continues to flow even when the pump is stopped because the position of the end of the pump's discharge-side piping is lower than the level of the liquid in the suction-side tank.



BV



TBV



TBV

Product specifications

BV Series

Model	Connection	Pressure adjustment range (MPa)	Standard set pressure (MPa)	Material		Weight (kg)
				Body	Diaphragm	
BV-F15-VE	JIS 10K 15A	0.1 to 0.3	0.1	PVC	EPDM	1
BV-F15-VT				PVC	PTFE	1
BV-F15-ST				SUS304	PTFE	3
BV-F15-6T				SUS316	PTFE	3
BV-F15-FT				PVDF	PTFE	1
BV-F20-VE	JIS 10K 20A			PVC	EPDM	2
BV-F20-VT				PVC	PTFE	2
BV-F20-ST				SUS304	PTFE	6
BV-F20-6T				SUS316	PTFE	6
BV-F20-FT				PVDF	PTFE	2
BV-F25-VE	JIS 10K 25A	0.1 to 0.25		PVC	EPDM	5
BV-F25-VT				PVC	PTFE	5
BV-F25-ST				SUS304	PTFE	10
BV-F25-6T				SUS316	PTFE	10
BV-F25-FT				PVDF	PTFE	5
BV-F40-VE	JIS 10K 40A			PVC	EPDM	5
BV-F40-VT				PVC	PTFE	5
BV-F40-ST				SUS304	PTFE	12
BV-F40-6T				SUS316	PTFE	12
BV-F40-FT				PVDF	PTFE	5
BV-F50-VE	JIS 10K 50A	0.1 to 0.15		PVC	EPDM	8
BV-F50-VT				PVC	PTFE	8
BV-F50-ST				SUS304	PTFE	14
BV-F50-6T				SUS316	PTFE	14
BV-F65-VE				JIS 10K 65A	PVC	EPDM
BV-F65-VT	PVC				PTFE	13
BV-F65-ST	SUS304				PTFE	18
BV-F65-6T	SUS316				PTFE	18

* For the BV-F25, BV-F40, BV-F50, and BV-F65 models, it is possible to design special valves that can exceed the pressures listed in the pressure adjustment range, so please contact us for details.

Possible adjustable pressure ranges for special design valve: (0.26 to 0.3 MPa for BV-F25 and BV-F40, 0.16 to 0.25 MPa for BV-F50 and BV-F65)

TBV Series

Model	Connection	Pressure adjustment range (MPa)	Standard set pressure (MPa)	Material			Weight (kg)
				Body	Diaphragm	O-ring	
TBV-VE-4H	φ4×φ9	0.05 to 0.3	0.1	PVC	EPDM	EPDM	0.3
TBV-VF-4H					Special fluoro rubber	Fluoro rubber	0.3
TBV-VE-6H	φ6×φ11				EPDM	EPDM	0.3
TBV-VF-6H					Special fluoro rubber	Fluoro rubber	0.3
TBV-VE-6×11/Z	φ6×φ11* ¹				EPDM	EPDM	0.4
TBV-VF-6×11/Z					Special fluoro rubber	Fluoro rubber	0.4
TBV-VE-12H	φ12×φ18				EPDM	EPDM	0.3
TBV-VF-12H					Special fluoro rubber	Fluoro rubber	0.3
TBV-VE-12×18/Z	φ12×φ18* ¹				EPDM	EPDM	0.4
TBV-VF-12×18/Z					Special fluoro rubber	Fluoro rubber	0.4
TBV-VE-15F	JIS 10K 15A				EPDM	EPDM	0.3
TBV-VF-15F					Special fluoro rubber	Fluoro rubber	0.3
TBV-VE-15F/Z	JIS 10K 15A* ¹				EPDM	EPDM	0.3
TBV-VF-15F/Z					Special fluoro rubber	Fluoro rubber	0.3
TBV-VE-19×26/Z	φ19×φ26* ¹				EPDM	EPDM	0.4
TBV-VF-19×26/Z					Special fluoro rubber	Fluoro rubber	0.4

^{*1} The outlet side is R3/8 or R1/2.

Model code



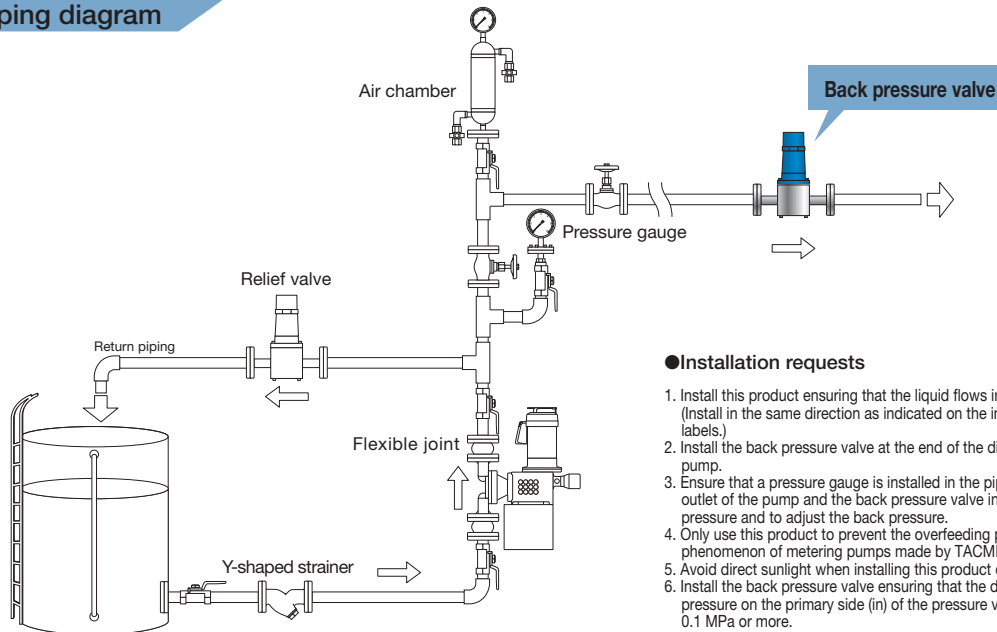
- 1 Series name**
BV : Back pressure valve
- 2 Connection**
F : Standard
- 3 Body size**
15
20
25
40
50
65
- 4 Body liquid end material**
V : PVC
S : SUS304
6 : SUS316
F : PVDF
- 5 Diaphragm material**
E : EPDM
T : PTFE



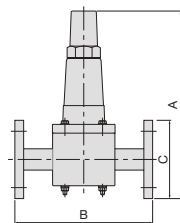
- 1 Series name**
TBV : Back pressure valve
- 2 Body liquid end material**
V : PVC
- 3 Diaphragm material**
E : EPDM
F : Special fluoro rubber
- 4 Inlet diameter**
4 : $\Phi 4 \times \Phi 9$
6 : $\Phi 6 \times \Phi 11$
12 : $\Phi 12 \times \Phi 18$
15 : JIS 10K 15A
- 5 Connection type**
F : Flange
H : Hose (special order)
X : Other

* Model code combinations are determined in advance. For details, contact TACMINA.

Piping diagram

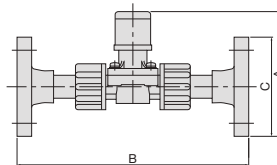


External dimensions



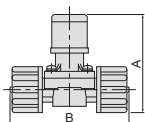
BV Series

Model	A(mm)	B(mm)	C
BV-F15-VE/BV-F15-VT BV-F15-ST/BV-F15-6T BV-F15-FT	134.5	152	$\Phi 95$
BV-F20-VE/BV-F20-VT BV-F20-ST/BV-F20-6T BV-F20-FT	149	196	$\Phi 100$
BV-F25-VE/BV-F25-VT BV-F25-ST/BV-F25-6T BV-F25-FT	299.5	220	$\Phi 125$
BV-F40-VE/BV-F40-VT BV-F40-ST/BV-F40-6T BV-F40-FT	307	250	$\Phi 140$
BV-F50-VE/BV-F50-VT BV-F50-ST/BV-F50-6T	329.5	310	$\Phi 155$
BV-F65-VE/BV-F65-VT BV-F65-ST/BV-F65-6T	339.5	310	$\Phi 175$



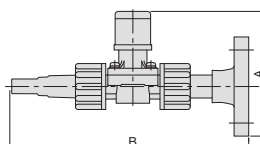
TBV Series

Model	A(mm)	B(mm)	C
TBV-VE-15F/TBV-VF-15F	119.5	222	$\Phi 95$



TBV Series

Model	A(mm)	B(mm)
TBV-VE-4H/TBV-VF-4H TBV-VE-6H/TBV-VF-6H TBV-VE-12H/TBV-VF-12H	94	114 116



TBV Series

Model	A(mm)	B(mm)
TBV-VE-6 x 11/Z TBV-VF-6 x 11/Z	94	174
TBV-VE-12 x 18/Z TBV-VF-12 x 18/Z	94	175
TBV-VE-19 x 26/Z TBV-VF-19 x 26/Z	94	206

TBV Series

Model	A(mm)	B(mm)
TBV-VE-15F/Z TBV-VF-15F/Z	119.5	228

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Anti-siphon check valve (anti-siphon valve, siphon valve)

This accessory not only prevents the overfeeding phenomenon and the siphoning phenomenon but also has a check valve function that prevents the liquid from being discharged from the main pipe. When injecting chemicals into a boiler pipe, if the boiler stops and the temperature drops, a negative pressure (a vacuum) develops within the boiler. This causes the chemical to be suctioned even when the pump is stopped. An anti-siphon check valve applies a back pressure slightly higher than 0.1 MPa to prevent the chemical from being suctioned.



Model code

TSV — **V** **E** — **12** **H** / **15F** — **BV**

1 2 3 4 5 6 7

1 Series name

TSV : Anti-siphon check valve

3 Diaphragm material

E : EPDM
F : Special fluoro rubber
X : Special

4 Inlet connection shape

4 : $\Phi 4 \times \Phi 9$
5 : $\Phi 5 \times \Phi 9$
6 : $\Phi 6 \times \Phi 11$
12 : $\Phi 12 \times \Phi 18$
19 : $\Phi 19 \times \Phi 26$
15 : JIS 10K 15A

5 Inlet connection type

H : PVC hose
P : PE hose
F : Flange
X : Special

7 Ball valve

None : Without ball valve
BV : With ball valve

2 Body liquid end material

V : PVC
X : Special

6 Outlet connection type

This is omitted when a nozzle is used for the outlet connection type.

SC1 — **4** **F** — **BV** **C**

1 2 3 4 5

1 Series name

SC□ : Anti-siphon check valve

2 Inlet diameter

4 : $\Phi 4 \times \Phi 9$ ★
6 : $\Phi 6 \times \Phi 11$
★ 4 x 6 for the SC3

3 Body liquid end material

E : EPDM
F : Fluoro rubber

4 Ball valve

None : Without ball valve
BV : With ball valve

5 Anti-flow cap

None : Without anti-flow cap
C : With anti-flow cap

SV — **S** **F** — **5** **H** — **A**

1 2 3 4 5 6

1 Series name

SV□ : Anti-siphon check valve

2 Body material

F : PVDF
S : SUS304
6 : SUS316
X : Special

3 Siphon packing material

E : EPDM
F : ETFE
X : Special

4 Inlet connection shape

5 : $\Phi 5 \times \Phi 9$
6 : $\Phi 6 \times \Phi 11$
10 : $\Phi 10 \times \Phi 12$
12 : $\Phi 12 \times \Phi 15$
6 x 8 : $\Phi 6 \times \Phi 8$
12 x 18 : $\Phi 12 \times \Phi 18$

5 Inlet connection type

H : Hose

6 Head material

A : PVC
B : SUS304

* Model code combinations are determined in advance. For details, contact TACMINA.

Product specifications

TSV Series

Model	Inlet side	Outlet side	Standard set pressure (MPa)	Material			
				Body	Diaphragm	Check ball	O-ring
TSV-VE-4H	Φ4 x Φ9	R1/2 or R3/8	0.1	PVC	EPDM	EPDM	EPDM
TSV-VE-5H	Φ5 x Φ9						
TSV-VE-5H-BV	Φ5 x Φ9						
TSV-VE-6H	Φ6 x Φ11						
TSV-VE-6H-BV	Φ6 x Φ11						
TSV-VE-12H	Φ12 x Φ18						
TSV-VE-12H-BV	Φ12 x Φ18						
TSV-VE-19H	Φ19 x Φ26						
TSV-VE-15F	JIS10K15A	R1/2 or R3/8			Special fluoro rubber	Special fluoro rubber	Fluoro rubber
TSV-VE-15F/15F	JIS10K15A	JIS10K15A					
TSV-VF-4H	Φ4 x Φ9	R1/2 or R3/8					
TSV-VF-5H	Φ5 x Φ9						
TSV-VF-5H-BV	Φ5 x Φ9						
TSV-VF-6H	Φ6 x Φ11						
TSV-VF-6H-BV	Φ6 x Φ11						
TSV-VF-12H	Φ12 x Φ18						
TSV-VF-12H-BV	Φ12 x Φ18						
TSV-VF-19H	Φ19 x Φ26						
TSV-VF-15F	JIS10K15A	R1/2 or R3/8					
TSV-VF-15F/15F	JIS10K15A	JIS10K15A					

SC Series

Model	Inlet side	Outlet side	Standard set pressure (MPa)	Material			
				Body	O-ring	Anti-flow cap	
SC1-4E	Φ4 x Φ9	R1/2	0.15	PVC	EPDM	-	
SC1-4E-BV	Φ4 x Φ9	R1/2 or R3/8			Fluoro rubber		Special fluoro rubber
SC1-4F	Φ4 x Φ9	R1/2				Fluoro rubber	
SC1-4F-BV	Φ4 x Φ9	R1/2 or R3/8			EPDM		-
SC1-4F-BVC	Φ4 x Φ9	R1/2				Fluoro rubber	
SC1-4F-C	Φ4 x Φ9	R1/2			EPDM		-
SC1-6E	Φ6 x Φ11	R1/2				Fluoro rubber	
SC1-6E-BV	Φ6 x Φ11	R1/2 or R3/8			Fluoro rubber		Special fluoro rubber
SC1-6F	Φ6 x Φ11	R1/2				EPDM	
SC1-6F-BV	Φ6 x Φ11	R1/2 or R3/8			Fluoro rubber		Special fluoro rubber
SC1-6F-BVC	Φ6 x Φ11	R1/2				EPDM	
SC1-6F-C	Φ6 x Φ11	R1/2			Fluoro rubber		Special fluoro rubber
SC3-4E	Φ4 x Φ6	R1/2	0.12	SCS13		EPDM	
SC3-6E	Φ6 x Φ8	R1/2			Fluoro rubber	Special fluoro rubber	
SC5-6X8-E-PE	Φ6 x Φ8	R1/2	0.15	PVDF			EPDM
SC5-6X8-F-PE	Φ6 x Φ8	R1/2		PVC	Fluoro rubber	Special fluoro rubber	
SC6-12 x 18-E-PVC	Φ12 x Φ18	R1/2 or R3/8			PVDF	Fluoro rubber	Special fluoro rubber
SC6-12 x 18-F-PVC	Φ12 x Φ18	R1/2 or R3/8		Special fluoro rubber		Special fluoro rubber	Special fluoro rubber
SC7-12 x 15-T-PTFE	Φ12 x Φ15	R1/2 or R3/8					

SV Series

Model	Inlet side	Outlet side	Standard set pressure(MPa)	Material				Model	Inlet side	Outlet side	Standard set pressure(MPa)	Material									
				Body	Siphon packing	Check ball	O-ring					Body	Siphon packing	Check ball	O-ring						
SV-FF-10H	Φ10 x Φ12	R1/2 or R3/8	0.1	PVDF	ETFE	PTFE	PTFE	SV-SF-10H-A	Φ10 x Φ12	R1/2 or R3/8	0.1	SUS304	ETFE	PTFE	PTFE						
SV-FF-12H	Φ12 x Φ15							SV-SF-12H-A	Φ12 x Φ15												
SV-FF-6X8	Φ6 x Φ8							SV-SF-12 x 18H-A	Φ12 x Φ18												
SV-SF-5H-A	Φ5 x Φ9							SV-SF-12 x 18H-B	Φ12 x Φ18												
SV-SF-5H-B	Φ5 x Φ9			SUS304				SV-6F-10H	Φ10 x Φ12			SUS316									
SV-SF-6H-A	Φ6 x Φ11							SV-6F-6X8	Φ6 x Φ8												
SV-SF-6H-B	Φ6 x Φ11							SV2-FF-6 x 8	Φ6 x Φ8												
SV-SF-6H-B	Φ6 x Φ11																				

* An accessory with boiler specifications is also available.

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Air chamber

This accessory uses the elasticity of air to attenuate the pulsation of a reciprocating pump. This makes it possible to reduce piping vibrations, the overfeeding phenomenon, and other such problems related to pulsation. Note that in order to use an air chamber, it is necessary to install a throttle valve for pressure adjustment.

* If the amount of air within an air chamber is reduced, it loses its ability to reduce pulsations, so it is necessary to periodically refill the air chamber with air.

TACMINA produces "Smoothflow pumps," which are diaphragm pumps that do not require an air chamber.



Stainless steel



PVC

* The pressure gauge in the photograph is optional.

Model code

AC - **05** - **V** **E** - **F** **15** - **S**

1

2

3

4

5

6

7

1 Series name

AC : Air chamber

2 Capacity

05 : 0.5L
3 : 3L
7 : 7L
10 : 10L
15 : 15L

3 Body material

V : PVC
S : SUS304
6 : SUS316
X : Special

4 O-ring/packing material

E : EPDM
F : Fluoro rubber
N : None
X : Special

5 Joint

F : Flange
HP : PVC hose
HT : PTFE hose

6 Connection diameter

15 : 15A 4 x 9 : Φ4 x Φ9
20 : 20A 6 x 11 : Φ6 x Φ11
25 : 25A 10 x 12 : Φ10 x Φ12
40 : 40A 12 x 15 : Φ12 x Φ15
50 : 50A 12 x 18 : Φ12 x Φ18
65 : 65A

7 Overall specifications

S : Standard
X : Special

* Model code combinations are determined in advance. For details, contact TACMINA.

Product specifications

Model	Capacity (L)	Material		Joint	Connection diameter	Weight (Kg)	Applicable models
		Body	O-ring/packing				
AC-05-VE-F15-S	0.5	PVC	EPDM	Flange	15A	3	SXDA1/SXWA1-31/61/12/22/32/62/82(standard specifications) FXD1/FXW1-003/006/01/02/03/06/08(standard specifications)
AC-05-VF-F15-S			Fluoro rubber			3	
AC-05-SN-F15-S		SUS304	None			5	
AC-05-6N-F15-S		SUS316				5	
AC-3-VE-F20-S	3	PVC	EPDM		20A	4.5	SXDA1/SXWA1-62/82(high-viscosity specifications) FXD1/FXW1-06/08(high-viscosity specifications)
AC-3-VF-F20-S			Fluoro rubber			4.5	
AC-3-SN-F20-S		SUS304	None			7.5	
AC-3-6N-F20-S		SUS316				7.5	
AC-3-VE-F25-S		PVC	EPDM		25A	4.5	SXDA1/SXWA1-13/23/33/43(standard specifications) SXDA1/SXWA1-13/23/33(high-viscosity specifications) FXD1/FXW1-1/2/3/4(standard specifications) FXD1/FXW1-1/2/3(high-viscosity specifications)
AC-3-VF-F25-S			Fluoro rubber			4.5	
AC-3-SN-F25-S		SUS304	None			7.5	
AC-3-6N-F25-S		SUS316				7.5	
AC-7-VE-F40-S	7	PVC	EPDM		40A	5.5	ZD1/ZW1-14/14L/153 ZD1-24/24L FXD1/FXW1-10P/10/15 FXD1-20P/20 RYD1/RYW1-14
AC-7-VF-F40-S			Fluoro rubber			5.5	
AC-7-SN-F40-S		SUS304	None			10.5	
AC-7-6N-F40-S		SUS316				10.5	
AC-10-VE-F50-S	10	PVC	EPDM		50A	6	ZD1-34 FXD1-30
AC-10-VF-F50-S			Fluoro rubber			6	
AC-10-SN-F50-S		SUS304	None			13	
AC-10-6N-F50-S		SUS316				13	
AC-15-VE-F65-S	15	PVC	EPDM		65A	9	RYD1/RYW1-44
AC-15-VF-F65-S			Fluoro rubber			9	
AC-15-SN-F65-S		SUS304	None			18	
AC-15-6N-F65-S		SUS316				18	
AC-05-VE-HP4 x 9-S	0.5	PVC	EPDM	Hose	Φ4 x Φ9	3	SXDA1/SXWA1-31/61/12(standard specifications) FXD1/FXW1-003/006/01(standard specifications)
AC-05-VF-HP4 x 9-S			Fluoro rubber			3	
AC-05-VE-HP6 x 11-S			EPDM		Φ6 x Φ11	3	SXDA1/SXWA1-22/32(standard specifications) FXD1/FXW1-02/03(standard specifications)
AC-05-VF-HP6 x 11-S			Fluoro rubber			3	
AC-05-VE-HP12 x 18-S			EPDM		Φ12 x Φ18	3	SXDA1/SXWA1-62/82(standard specifications) FXD1/FXW1-06/08(standard specifications)
AC-05-VF-HP12 x 18-S			Fluoro rubber			3	
AC-05-SN-HT10 x 12-S		SUS304	None		Φ10 x Φ12	5	SXDA1/SXWA1-31/61/12/22/32(standard specifications) FXD1/FXW1-003/006/01/02/03(standard specifications)
AC-05-6N-HT10 x 12-S		SUS316				5	
AC-05-SN-HT12 x 15-S		SUS304			Φ12 x Φ15	5	SXDA1/SXWA1-62(standard specifications) FXD1/FXW1-06(standard specifications)
AC-05-6N-HT12 x 15-S		SUS316				5	

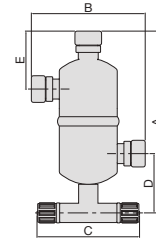
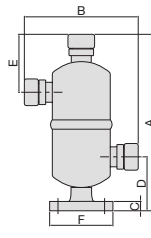
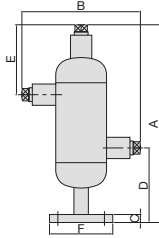
* Liquid temperature: 0°C to 40°C for PVC, 0°C to 80°C for SUS (flange), 0°C to 40°C for SUS (hose) [no freezing for all temperature ranges]

* Maximum operating pressure: 0.5 MPa for PVC, 0.98 MPa for SUS (flange), 0.5 MPa for SUS (hose)

* The motor attachment direction (vertical/horizontal) does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FYD1 is also applicable.)

* The presence/absence of a relief mechanism does not affect the selection. (Example: If the FXD1-01 is listed under the applicable models, the FXD1-01R is also applicable.)

External dimensions



Flange joint stainless steel type

Model	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F
AC-05-6N-F15-S	297	178	12	112	105	Φ95
AC-05-SN-F15-S	297	178	12	112	105	Φ95
AC-3-6N-F20-S	497	217	14	116.5	90.5	Φ100
AC-3-SN-F20-S	497	217	14	116.5	90.5	Φ100
AC-3-6N-F25-S	497	217	14	116.5	90.5	Φ125
AC-3-SN-F25-S	497	217	14	116.5	90.5	Φ125
AC-7-SN-F40-S	540.5	268	16	143	118	Φ140
AC-7-6N-F40-S	540.5	268	16	143	118	Φ140
AC-10-6N-F50-S	505	316	16	182	131	Φ155
AC-10-SN-F50-S	505	316	16	182	131	Φ155
AC-15-6N-F65-S	707	316	18	182	131	Φ175
AC-15-SN-F65-S	707	316	18	182	131	Φ175

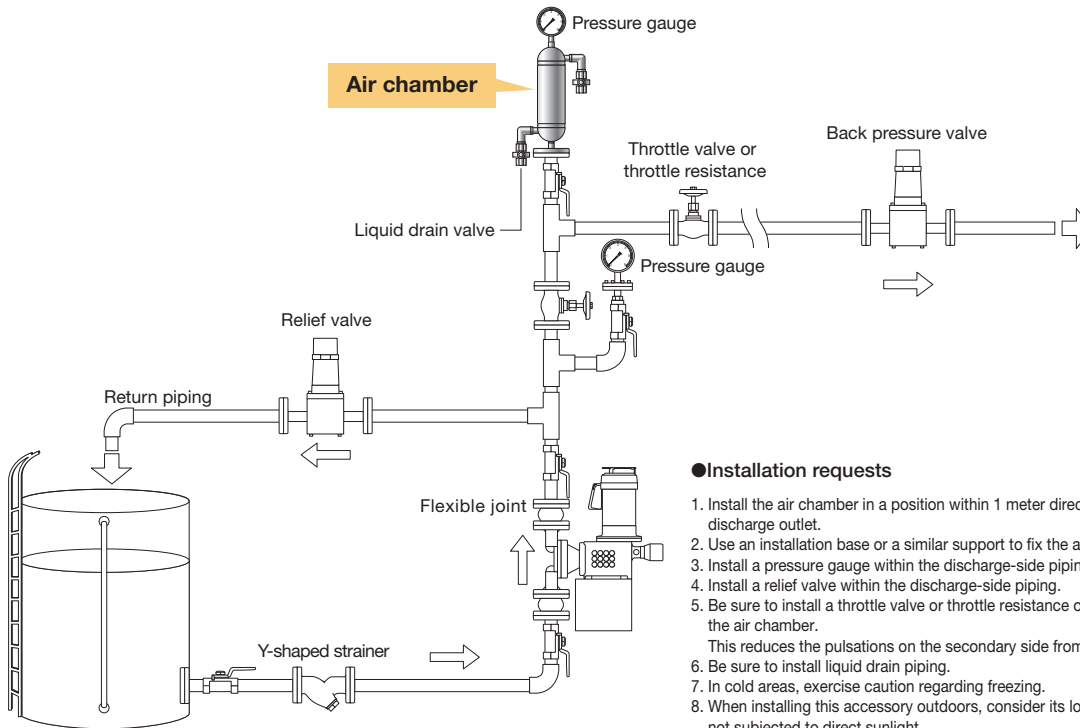
Flange joint PVC type

Model	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F
AC-05-VE-F15-S	265	171	14	81	87	Φ95
AC-05-VF-F15-S	265	171	14	81	87	Φ95
AC-3-VE-F20-S	586	214	15	98	100	Φ100
AC-3-VF-F20-S	586	214	15	98	100	Φ100
AC-3-VE-F25-S	592	214	15	104	100	Φ125
AC-3-VF-F25-S	592	214	15	104	100	Φ125
AC-7-VE-F40-S	578.5	270	16	156.5	137	Φ140
AC-7-VF-F40-S	578.5	270	16	156.5	137	Φ140
AC-10-VE-F50-S	793	270	20	166	137	Φ155
AC-10-VF-F50-S	793	270	20	166	137	Φ155
AC-15-VE-F65-S	1102	270	22	168	137	Φ175
AC-15-VF-F65-S	1102	270	22	168	137	Φ175

Hose joint

Model	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
AC-05-VE-HP4 x 9-S	273	171	154	89	87
AC-05-VF-HP4 x 9-S	273	171	154	89	87
AC-05-VE-HP6 x 11-S	273	171	154	89	87
AC-05-VF-HP6 x 11-S	273	171	154	89	87
AC-05-VE-HP12 x 18-S	273	171	150	89	87
AC-05-VF-HP12 x 18-S	273	171	150	89	87
AC-05-SN-HT10 x 12-S	322	178	94	118	107
AC-05-6N-HT10 x 12-S	322	178	94	118	107
AC-05-SN-HT12 x 15-S	322	178	94	118	107
AC-05-6N-HT12 x 15-S	322	178	94	118	107

Piping diagram



Excessive Pressure
Prevention

Overfeeding
Prevention

Siphoning
Phenomenon
Prevention

Backflow
Prevention

Pulsation
Attenuation

Flow Rate
Proportional Control

Discharge
Checking

Pressure
Checking

Residual
Pressure Relief

Gas Lock
Prevention

Piping
Connection

Foreign Matter
Suction Prevention

Tank
Accessories

Other

Damper(for use with the PZiG)

This accessory prevents piping vibrations and is very effective during long-distance transfers of chemicals. Furthermore, the liquid does not come into direct contact with the air, which reduces the frequency of maintenance such as air chamber refilling.



Model code



1 Series name

DM : Damper

3 Connecting section material

V : PVC
F : PVDF
X : Special

5 Connection diameter

12 x 18
12 x 15
20A
X : Special

7 Joint

H : Hose
U : Union

2 Applicable models

1 : For use with the PZiG

4 Bladder/bellows material

E : EPDM
F : Fluoro rubber
T : PTFE

6 Connection hose material

PVC : For use with soft PVC hoses
PTFE : For use with PTFE hoses
(no indications are given for uses other than those with hoses)

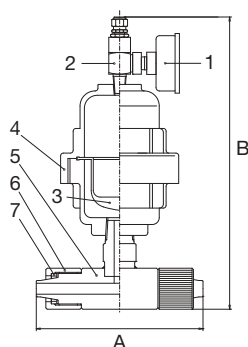
* Model code combinations are determined in advance. For details, contact TACMINA.

Product specifications

Model	Capacity (mL)	Material		Joint	Connection diameter	Applicable models
		Body	Bladder/bellows			
DM-1-VE-12 x 18-PVC-H	163	PVC	EPDM	Hose	$\phi 12 \times \phi 18$	PZiG Series
DM-1-VF-12 x 18-PVC-H			Fluoro rubber		$\phi 12 \times \phi 15$	
DM-1-FT-12 x 15-PTFE-H		PVDF	PTFE	Union	20A	
DM-1-VF-20A-U		PVC	Fluoro rubber			

* The air supply valve is American (Schrader) type.

External dimensions/structural drawing



* The DM-1V□-12 x 18 is shown in the illustration. The appearance and structure varies depending on the model.

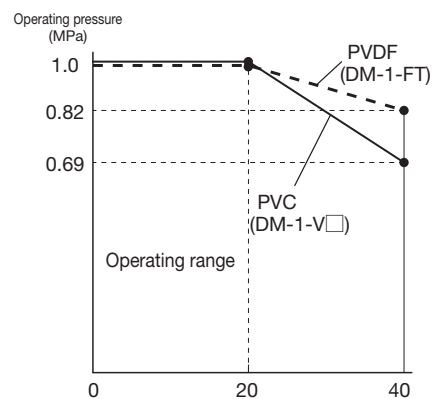
External dimensions

Model	A	B
DM-1-VE-12 x 18_PVC-H	122	214
DM-1-VF-12 x 18_PVC-H	122	214
DM-1-FT-12 x 15_PTFE-H	110	197
DM-1-VF-20A-U	234	229

Structure

No.	Part name
1	Pressure gauge
2	Filling valve
3	Bladder (rubber membrane)
4	Accumulator
5	Hose 3-way joint
6	Hose nut
7	Pressing ring

Operating range



Ambient temperature and transferrable temperature (°C)

* Use the accessory within the operating range shown in the graph.

Pulse-emitting flow meter

This is a flow meter that does not require a power supply. Combining this accessory with a TACMINA pulse signal input metering pump creates a simple and inexpensive flow rate proportional injection system.

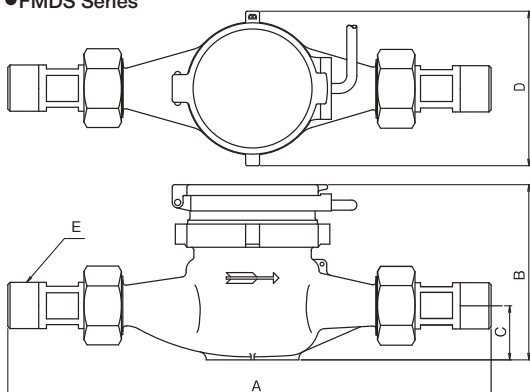


Product specifications

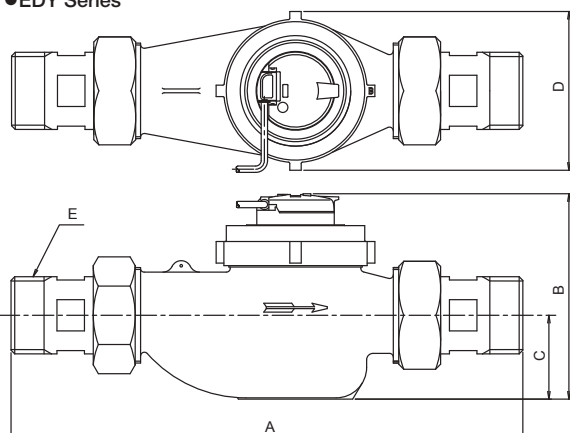
Model	Connection diameter	Minimum operating flow rate (m³/h)	Suitable operating flow rate range (m³/h)	Maximum operating flow rate		Pulse output unit (L/Pulse)	Set weight(kg)
				m³/day	m³/month		
FMDS13SII	R1/2	0.05	0.15 to 1.2	7.5	125	0.1	1.6
FMDS20II	R3/4	0.05	0.2 to 1.6	10	170	0.1	1.8
FMDS25II	R1	0.06	0.23 to 1.8	11	190	0.1	2
FMDS30II	R1 1/4	0.15	0.4 to 6	36	630	1	2.7
FMDS40II	R1 1/2	0.18	0.4 to 6.5	39	700	1	3
EDY50	R2	0.3	0.6 to 9.6	43	1,000	1	5.1
NVW-50RC	JIS 10K 50A	0.09	1.25 to 15	90	2,100	5	Approx. 23.0
VW-65RCII	JIS 10K 65A	0.3	1.75 to 20	120	3,300	5	Approx. 30.5
NVW-75RC	JIS 10K 75A	0.12	2.5 to 30	180	4,200	5	Approx. 36.6
NVW-100RC	JIS 10K 100A	0.15	4 to 48	288	6,700	5	Approx. 45.1
VW-125RC	JIS 10K 125A	1.2	5 to 60	360	8,300	50	Approx. 119.0
VW-150RC	JIS 10K 150A	1.2	7.5 to 90	540	12,500	50	Approx. 153.8

External dimensions

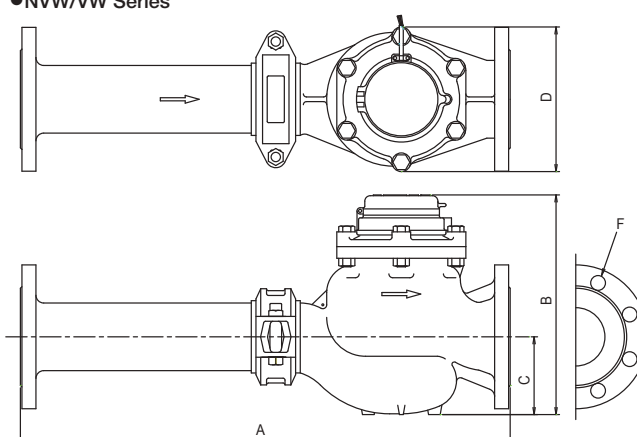
●FMDS Series



●EDY Series



●NVW/VW Series



Model	A	B	C	D	E	F	
						d	n
FMDS13SII	251	116	34	100	R1/2	-	-
FMDS20II	298	114	35	100	R3/4	-	-
FMDS25II	351	114	35	100	R1	-	-
FMDS30II	362	126	40	108	R1 1/4	-	-
FMDS40II	387	131	45	108	R1 1/2	-	-
EDY50	403	162	66	125	R2	-	-
NVW-50RC	560	233	80	155	-	φ19	4
VW-65RCII	580	283	100	186	-	φ19	4
NVW-75RC	630	283	100	186	-	φ19	8
NVW-100RC	750	325	120	210	-	φ19	8
VW-125RC	797	409	160	270	-	φ23	8
VW-150RC	1000	446	189	310	-	φ23	8

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation
Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Discharge volume checker

This accessory is resistant to acids and alkalis and can be used to check the pump's injection operation at a low cost. Two types are available: a type that is connected directly to the pump and a hose connection type.



Model code

FC - 1 - V E - 4 H / 4 H

1

2

3

4

5

6

1 Main sensor material

V:PVC (polyvinyl chloride)
O:PPO (NORYL)

3 Suction-side connection diameter

4:φ4(φ4×φ9)
6:φ6(φ6×φ11)

5 Discharge-side connection diameter

4:φ4×φ9(φ4×φ6 for boiler)
6:φ6×φ11

2 O-ring material

E:EPDM
F:Fluoro rubber

4 Suction-side connection type

H:Hose connection type
P:Pump direct connection type
B:Boiler direct connection type
C:Direct connection type dedicated for sodium hypochlorite injection
CPW: Direct connection type dedicated for use with the DCLPW/CLPW/DCLV/CLV

6 Discharge-side connection type

H:Hose connection type
B:Boiler hose connection type

Product specifications

Pump direct connection type

Model	Applicable models
FC-1-VE-4B/4B	PW-30-VTCET
	V-10/40
	CS2-10N/30N-VTCET
FC-1-VE-4P/4H	PW-30-VTCE
	FXD1/FXW1-003/006/01-VECE
	V-10/40
FC-1-OF-4P/4H	CS2-10N/30N-VTCE
	PW-30-VTCF
	FXD1/FXW1-003/006/01-VTCF
FC-1-OF-6CPW/4H	V-10/40
	CS2-10N/30N-VTCF
	DCLPW-30-ATCF
FC-1-VE-6P/6H	CLPW-30-ATCF
	DCLV-10/40
	CLV-10/40
FC-1-OF-6P/6H	PW-60/100-VTCE
	FXD1/FXW1-02/03-VECE
	V-70/100/300
FC-1-OF-6CPW/6H	CS2-60N/100N/300N-VTCE
	PW-60/100-VTCF
	FXD1/FXW1-02/03-VTCF
FC-1-OF-6CPW/6H	V-70/100/300
	CS2-60N/100N/300N-VTCF
	DCLPW-60/100-ATCF
FC-1-OF-6CPW/6H	CLPW-60/100-ATCF
	DCLV-70/100
	CLV-70/100

* When using this accessory with the CLPW Series/DCLPW Series, CLV Series/DCLV Series, if air-mixed liquid is being discharged and the prescribed volume is not discharged, the signal is also output when only air and no liquid is discharged such as when the tank is empty.

* The motor attachment direction (vertical/horizontal) does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FYD1 is also applicable.)

* The number of pump heads does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FXD2 is also applicable.)

* The presence/absence of a relief mechanism does not affect the selection. (Example: If the PW-30 is listed under the applicable models, the PW-30R is also applicable.)

* The control function does not affect the selection. (Example: If the PW is listed under the applicable models, the PWM/PWT is also applicable.)

Flow rate range	0.2 to 1.8 L/min (1 to 50 mPa•s) [during continuous flow]
Pulse constant	1 mL/pulse
Accuracy	±10%
Normal operating pressure	1.0MPa
Liquid temperature	-10°C to 50°C (no freezing)
Ambient temperature	0°C to 40°C
Liquid viscosity	1 to 50 mPa•s
Output	Open collector (collector capacity: 30 V, 30 mA) Green LED lights when pulse output is high
Power supply	4.5 VDC to 25 VDC (20 mA max.), red LED lights when the power supply is ON

- Notes) 1. Install the flow meter so that it is horizontal and its display is perpendicular to the flow meter.
2. If there is the chance that particulate matter may mix into the liquid, do not use this accessory.
3. The pressure loss is 0.05 MPa (for water at the maximum flow rate).
4. The standard code length is 1.3m. The transfer distance is 50 m or less.
5. Small capacities cannot be measured on the secondary side of the air chamber.

Main applicable liquids

Chemical name	Conditions	Recommended model
Hydrochloric acid	10% or less, room temperature (23°C)	FC-1-VE
Sulfuric acid	10% or less, room temperature (23°C)	
Caustic soda	30% or less, room temperature (23°C)	
Ammonia water	Room temperature (23°C)	
Methyl alcohol	Room temperature (23°C)	
Acetic acid	Room temperature (23°C)	FC-1-OF
Sodium hypochlorite	12% or less, room temperature (23°C)	

- * When using boiler cleaning chemicals, the ingredients vary from one manufacturer to another, so contact the chemical manufacturer for details such as the applicable materials.
* The applicable liquids and conditions vary depending on the pump that is used. See the pump specifications.

Liquid end materials

Model	Connection type	Material										
		Discharge volume sensor					Joint	Check ball	O-ring	Valve seat	Ball stopper	Air-release valve
		Bottom case	Plate	Inner case	Rotor	O-ring						
FC-1-VE-4H/4H	Hose connection	PVC	PVC	PPS	PPS	EPDM	PVC	Ceramic	EPDM	EPDM	PVC	HDPE
FC-1-OF-4H/4H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-VE-6H/6H		PVC	PVC	PPS	PPS	EPDM			EPDM	EPDM		
FC-1-OF-6H/6H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-VE-4B/4B	Pump direct connection	PVC	PVC	PPS	PPS	EPDM			EPDM	PTFE		
FC-1-VE-4P/4H		PVC	PVC	PPS	PPS	EPDM			EPDM	EPDM		
FC-1-OF-4P/4H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-OF-4C/4H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-OF-6CPW/4H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-VE-6P/6H		PVC	PVC	PPS	PPS	EPDM			EPDM	EPDM		
FC-1-OF-6P/6H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-OF-6C/6H		PPO	PPO	PPO	PPO	Fluoro rubber			Fluoro rubber	Special fluoro rubber		
FC-1-OF-6CPW/6H	PPO	PPO	PPO	PPO	Fluoro rubber	Fluoro rubber	Special fluoro rubber					

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Flow indicator(flow sight glass)

Attaching this accessory to the discharge side of a metering pump makes it easy to check the discharge operation, which is useful in preventing injection failures.

Types that are equipped with a photoelectric sensor can automatically output an alarm when an injection failure occurs.



Pump direct connection



Equipped with a photoelectric sensor

Product specifications

Model	Part number	Connection diameter	Dimension (mm)	Connection method	Material			Applicable models			
					Body	Valve stopper	Check ball		O-ring/packing		
B-1	UN0826	Φ4 x Φ9	116	Hose on both ends	PVC	PE	PTFE	EPDM	PW-30, CLPW-30 DCLPW-30, FXD1-003 V-10/40, CS2-10/30		
	UN0827		112	Pump direct connection				Fluoro rubber			
	UN0828							EPDM			
	UN0829							Fluoro rubber			
B-2	UN0348	Φ4 x Φ9	126	Hose on both ends	PVC	PE	PTFE	EPDM	F□D1-006/01		
	UN0355		118	Pump direct connection				Fluoro rubber			
	UN0504							EPDM			
	UN0505		Φ6 x Φ11	126				Hose on both ends		Fluoro rubber	PW-60/100/200, CLPW-60/100 DCLPW-60/100,FXD1-02/03 V/CLV/DCLV-70/100/300 F□D1-02/03
	UN0347	118		Pump direct connection				EPDM			
	UN0354							126	Hose on both ends	Fluoro rubber	
	UN0830	118		Pump direct connection						EPDM	
	UN0831		Φ12 x Φ18					126	Pump direct connection	Fluoro rubber	FXD1-06/08 V-600 CS2-600
	UNT0057	126		Hose on both ends						EPDM	
	UNT0232							121	Pump direct connection	Fluoro rubber	
	UN0353	134		Flange on both ends						EPDM	
	UN0360		JIS 10K 15A					134	Flange on both ends	Fluoro rubber	
	UN0491	126		Hose on both ends						EPDM	
	UN0495		121					Pump direct connection	Fluoro rubber		
	UN0328	JIS 10K 15A		134					Flange on both ends	EPDM	
	UN0330		JIS 10K 15A					134		Flange on both ends	Fluoro rubber
B-2 Equipped with a photoelectric sensor* ¹	UN0506	Φ4 x Φ9		153	Pump direct connection	PVC	PE		Ceramic		EPDM
	UN0507		Fluoro rubber								
	UN0496	Φ6 x Φ11	EPDM					PW-60/100/200, CLPW-60/100, DCLPW-60/100 F□D1-02-03, V/CLV/DCLV-70/100/300, CS2/CLCS2-60/100/300			
	UN0500		Fluoro rubber								
	UNT0460	Φ12 x Φ18	161					EPDM		PZD/PZi/PZiG-300/500	
	UNT0387							Fluoro rubber			
	UN0499							EPDM			FXD1-06/08, V-600 CS2-600
	UN0503							Fluoro rubber			
B-3	UN1146	JIS 10K 15A	217	Flange on both ends	PVC	PVC	PTFE	EPDM	FXD1-1/2, V-1000 CS2-1000		
	UN1145	JIS 10K 20A	215			PE		Fluoro rubber			
	UN0331							JIS 10K 25A	EPDM	—	
	UN0333	Fluoro rubber									
	UN0332	JIS 10K 25A						EPDM	FXD1-3/4		
	UN0334		Fluoro rubber								

*1 This accessory can be used in combination with the flow monitors on the next page.

* When using this accessory with the CLPW Series/DCLPW Series, CLV Series/DCLV Series, if air-mixed liquid is being discharged and the prescribed volume is not discharged, the check ball also moves when only air and no liquid is discharged such as when the tank is empty. (If the accessory is equipped with a photoelectric sensor, a signal is output.)

* The motor attachment direction (vertical/horizontal) does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FYD1 is also applicable.)

* The number of pump heads does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FXD2 is also applicable.)

* The presence/absence of a relief mechanism does not affect the selection. (Example: If the PW-30 is listed under the applicable models, the PW-30R is also applicable.)

* The control function does not affect the selection. (Example: If the PW is listed under the applicable models, the PWM/PWT is also applicable.)

Outer appearance drawings



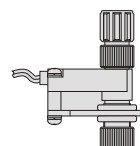
Pump direct connection



Hose on both ends



Flange on both ends



Equipped with a photoelectric sensor

Flow monitor

This is a discharge alarm for metering pumps and is used in combination with a discharge volume checker and a flow indicator that is equipped with a photoelectric sensor. This accessory monitors for metering pump discharge errors by outputting an alarm when it does not receive a signal within the specified time interval during pump operation.



Product specifications

Model	FM-01	Contact rating	200 VAC, 1 A (resistive load)
Time setting	5 to 55 sec, or 5 to 300 sec	Power supply	100/200 VAC ±10% (terminal selection)
Sensor power supply	DC12V 30mA	Power consumption	Approx. 5 VA
Alarm	Output contact 1C		

Diaphragm pressure gauge

This accessory is used to monitor the pressure inside a pipe and to adjust back pressure valves and relief valves.



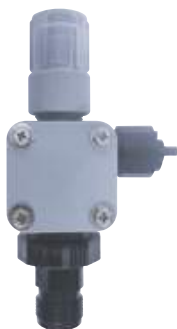
Product specifications

Pressure range(MPa)		Connecting section	Material		
Metal film	Non-metal film		Indicator	Diaphragm	Main section
0.05 to 0.1	0.03 to 0.1	Thread type Flange type	Φ75 Φ100	SUS316 PTFE	SUS304 SUS316 PVC
0.1 to 5	0.1 to 5				
0.6 to 7	0.1 to 5				
10 to 25	10 to 25				

* Combinations are determined in advance. For details, contact TACMINA.

Residual pressure relief valve

Installing this accessory on the discharge side of a pump makes it possible to safely release the pressure within the piping when abnormal pressure occurs. This also makes it possible to safely discharge the residual pressure and residual liquid during maintenance.



Model code

ZV	-	V	E	-	4P	/	4	H
1		2	3		4		5	6

1 Series name

ZV : Residual pressure relief valve

2 Body material

V : PVC

3 O-ring material

E : EPDM
F : Fluoro rubber

4 Pump suction side check ball size

4P : 4
6P : 6

5 Discharge-side connection diameter for residual pressure relief valve

4 : Φ4 x Φ9 / Φ4 x Φ6 *1
6 : Φ6 x Φ11

6 Discharge-side connection shape

H : Hose joint
B : Boiler joint

* Model code combinations are determined in advance. For details, contact TACMINA.
*1 Φ4 x Φ6 is available with the ZV-VE-4P/4B.

Product specifications

Model	Applicable models	Model	Applicable models
ZV-VE-4P/4H	PW-30-VTCE	ZV-VF-6P/6H	PW-60/100-VTCF
	V-10/40-VTCE		V-70/100-VTCF
	CS2-10/30-VTCE		CS2-60/100-VTCF
	CS2-10/30-VTCF		CLCS2-60/100-ATCF
	FXD1/FXW1-003/006/01-VECE		DCLPW/CLPW-60/100-ATCF
ZV-VF-4P/4H	PW-30-VTCF	ZV-VF-6P/4H	CLV/DCLV-70/100-ATCF
	V-10/40-VTCF		DCLPW/CLPW-30-ATCF
	CS2-10/30-VTCF		DCLV/CLV-10/40-ATCF
	CLCS2-10/30-ATCF	ZV-VE-4P/4B	PW-30-VTCET
	FXD1/FXW1-003/006/01-VTCF		V-10/40-VTCET
ZV-VE-6P/6H	PW-60/100-VTCE		CS2-10/30-VTCET
	V-70/100-VTCE		
	CS2-60/100-VTCE		

* The presence/absence of a relief mechanism does not affect the selection. (Example: If the PW-30 is listed under the applicable models, the PW-30R is also applicable.)

* The number of pump heads does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FXD2 is also applicable.)

* The motor attachment direction (vertical/horizontal) does not affect the selection. (Example: If the FXD1 is listed under the applicable models, the FYD1 is also applicable.)

* The control function does not affect the selection. (Example: If the PW is listed under the applicable models, the PWM/PWT is also applicable.)

Degassing joint

With sodium hypochlorite and similar materials that easily generate decomposed gas, the gas lock phenomenon*¹ occurs and makes the pump unable to discharge.

Installing a degassing joint on the pump's suction side separates the suctioned bubbles and liquid to prevent the bubbles from entering the pump head.

*1 A state in which gas enters the pump head and prevents the pump from transferring liquid.

* Be sure to use the "tank-over-pump" configuration for degassing joints.



D Series



S Series
PZiG Series
PZ Series

Model code

D - 4 H / H - F

1 2 3 4 5

1 Series name 2 Inlet diameter 3 Inlet connection shape 4 Air-release connection shape

D : D Series 4 : $\Phi 4 \times \Phi 9$ H : Hose H : Hose
6 : $\Phi 6 \times \Phi 11$

5 O-ring material

E : EPDM
F : Fluoro rubber

S - H 12 / H - F -

1 2 3 4 5 6

1 Series name 2 Inlet connection shape 3 Inlet diameter 4 Air-release connection shape

S : S Series H : Hose 6 : $\Phi 6 \times \Phi 11$ H : Hose
PZiG : PZiG Series 12 : $\Phi 12 \times \Phi 18$ F : Flange*¹
PZ : PZ Series

5 O-ring material

E : EPDM
F : Fluoro rubber

6 Overall specifications

S : Standard
X : Special

* Model code combinations are determined in advance.
For details, contact TACMINA.
*1 Applies to the S Series.

Product specifications

Model	Inlet diameter	Air-release connection diameter	Applicable models
D-4H/H-E	Φ4 x Φ9	3/8" x 1/4"	PW/CLPW-30, FXD1-003/006/01
D-4H/H-F			V/CLV-10/40, CS2/CLCS2-10/30
D-6H/H-E	Φ6 x Φ11		PW/CLPW-60/100
D-6H/H-F			V/CLV-70/100, CS2/CLCS2-60/100
S-H6/H-E	Φ6 x Φ11	Φ12 x Φ18	FXD1-02/03
S-H6/H-F			V-300, CS2-300
S-H12/H-E	Φ12 x Φ18		FXD1-06/08/1/2
S-H12/H-F			V-600/1000
S-H12/F-E		JIS10K15A	CS2-600/1000
S-H12/F-F			
PZiG-H12/H-E-X	Φ12 x Φ18	Φ12 x Φ18	PZiG-300/500
PZiG-H12/H-F-X			
PZ-H12/H-F-X			
PZ-H12/H-E-X			PZD/PZi-300/500

* The presence/absence of a relief mechanism does not affect the selection.

(Example: If the PW-30 is listed under the applicable models, the PW-30R is also applicable.)

* The number of pump heads does not affect the selection.

(Example: If the FXD1 is listed under the applicable models, the FXD2 is also applicable.)

* The motor attachment direction (vertical/horizontal) does not affect the selection.

(Example: If the FXD1 is listed under the applicable models, the FYD1 is also applicable.)

* The control function does not affect the selection.

(Example: If the PW is listed under the applicable models, the PWM/PWT is also applicable.)

Flexible joint

Use this accessory to prevent loads from being applied to the pump such as due to piping vibrations and piping loads.



Product specifications

Model	Connection diameter	Face-to-face dimension (mm)	Material		Maximum operating pressure (MPa)
			Liner	Flange	
B7760	25A	70	PTFE	SS400 + Unichrome plating	1.0
B7761	32A	74			
B7762	40A	74			
B7763	50A	104			
B7764	65A	106			

Hose 2-way joint Hose 3-way joint

Use this accessory to connect hoses to each other. Use this accessory to diverge hose piping.



Product specifications

Type	Part number	Model	Applicable hose	Body material
Hose 2-way joint	UN0824	4PVC-PVC	Φ4 × Φ9 PVC hose	PVC
	UN0840	6PVC-PVC	Φ6 × Φ11 PVC hose	
	UN0614	19PVC-PVC	Φ19 × Φ26 PVC hose	
	UN0615	10PTFE-304	Φ10 × Φ12 PTFE hose	SUS304
	UN0617	10PTFE-316	Φ10 × Φ12 PTFE hose	SUS316
	UN0616	12PTFE-304	Φ12 × Φ15 PTFE hose	SUS304
	UN0618	12PTFE-316	Φ12 × Φ15 PTFE hose	SUS316
Hose 3-way joint	UN0613	12PVC-PVC	Φ12 × Φ18 PVC hose	PVC
	UN0825	4PVC-PVC	Φ4 × Φ9 PVC hose	PVC
	UN0841	6PVC-PVC	Φ6 × Φ11 PVC hose	
	UN0625	12PVC-PVC	Φ12 × Φ18 PVC hose	
	UN0626	19PVC-PVC	Φ19 × Φ26 PVC hose	
	UN0627	10PTFE-304	Φ10 × Φ12 PTFE hose	SUS304
	UN0629	10PTFE-316	Φ10 × Φ12 PTFE hose	SUS316
	UN0628	12PTFE-304	Φ12 × Φ15 PTFE hose	SUS304
	UN0630	12PTFE-316	Φ12 × Φ15 PTFE hose	SUS316

Hose flange

Use this accessory as the adapter between a hose and flange piping.



Product specifications

Part number	Applicable hose	Flange size	Body material	Part number	Applicable hose	Flange size	Body material
UN0821	Φ4 × Φ9 PVC hose	JIS 10K 15A	PVC	UN0701	Φ10 × Φ12 PTFE hose	JIS 10K 10A	SUS304
UN0822		JIS 10K 20A		UN0709			SUS316
UN0823		JIS 10K 25A		UN0702		JIS 10K 15A	SUS304
UN0837	Φ6 × Φ11 PVC hose	JIS 10K 15A		UN0710			SUS316
UN0838		JIS 10K 20A		UN0703		JIS 10K 20A	SUS304
UN0839		JIS 10K 25A		UN0711			SUS316
UN0694	Φ12 × Φ18 PVC hose	JIS 10K 15A		UN0704	Φ12 × Φ15 PTFE hose	JIS 10K 25A	SUS304
UN0695		JIS 10K 20A		UN0712			SUS316
UN0696		JIS 10K 25A		UN0705		JIS 10K 10A	SUS304
UN0698	Φ19 × Φ26 PVC hose	JIS 10K 15A		UN0713			SUS316
UN0699		JIS 10K 20A		UN0706		JIS 10K 15A	SUS304
UN0700		JIS 10K 25A		UN0714			SUS316
				UN0707	Φ12 × Φ15 PTFE hose	JIS 10K 20A	SUS304
				UN0715			SUS316
				UN0708		JIS 10K 25A	SUS304
				UN0716			SUS316

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Screw-type hose joint

No hose band is required. Just tighten the hose nut to reliably connect hoses together.



Model code

6PVC – **R1** – **PVC**

1

1 Applicable hose

4PVC : $\Phi 4 \times \Phi 9$ PVC hose
6PVC : $\Phi 6 \times \Phi 11$ PVC hose
12PVC : $\Phi 12 \times \Phi 18$ PVC hose
19PVC : $\Phi 19 \times \Phi 26$ PVC hose

2

10PTFE : $\Phi 10 \times \Phi 12$ PTFE hose
12PTFE : $\Phi 12 \times \Phi 15$ PTFE hose

3

2 Thread size

R 1
R 1 / 2
R 1 / 4
R 3 / 4
R 3 / 8

3 Body material

PVC : PVC
304 : SUS304
316 : SUS316

* Model code combinations are determined in advance. For details, contact TACMINA.

Product specifications

Model	Applicable hose	Thread size	Body material	Model	Applicable hose	Thread size	Body material
4PVC-R1/4-PVC	$\Phi 4 \times \Phi 9$ PVC hose	R1/4	PVC	10PTFE-R1/2-304	$\Phi 10 \times \Phi 12$ PTFE hose	R1/2	SUS304
4PVC-R3/8-PVC		R3/8		10PTFE-R1/2-316		R1/2	SUS316
4PVC-R1/2-PVC		R1/2		10PTFE-R3/4-304		R3/4	SUS304
4PVC-R3/4-PVC		R3/4		10PTFE-R3/4-316		R3/4	SUS316
4PVC-R1-PVC	$\Phi 6 \times \Phi 11$ PVC hose	R1		10PTFE-R1-304	$\Phi 12 \times \Phi 15$ PTFE hose	R1	SUS304
6PVC-R1/2-PVC		R1/2		10PTFE-R1-316		R1	SUS316
6PVC-R3/4-PVC		R3/4		12PTFE-R1/2-304		R1/2	SUS304
6PVC-R1-PVC		R1		12PTFE-R1/2-316		R1/2	SUS316
12PVC-R1/2-PVC	$\Phi 12 \times \Phi 18$ PVC hose	R1/2		12PTFE-R3/4-304		R3/4	SUS304
12PVC-R3/4-PVC		R3/4		12PTFE-R3/4-316		R3/4	SUS316
12PVC-R1-PVC		R1		12PTFE-R1-304		R1	SUS304
19PVC-R1/2-PVC		R1/2		12PTFE-R1-316		R1	SUS316
19PVC-R3/4-PVC	$\Phi 19 \times \Phi 26$ PVC hose	R3/4					
19PVC-R1-PVC		R1					

Socket hose joint

This joint is used to connect a hose to a TS socket. This accessory can be used to easily and reliably connect these parts together with no hose band required.



Product specifications

Part number	Applicable hose	TS socket size	Body material	Part number	Applicable hose	TS socket size	Body material
UN0932	$\Phi 4 \times \Phi 9$ PVC hose	15A	PVC	UN0973	$\Phi 12 \times \Phi 18$ PVC hose	15A	PVC
UN0933		20A		UN0974		20A	
UN0934		25A		UN0975		25A	
UN0961	$\Phi 6 \times \Phi 11$ PVC hose	15A		UN0977	$\Phi 19 \times \Phi 26$ PVC hose	15A	
UN0962		20A		UN0978		20A	
UN0963		25A		UN0979		25A	

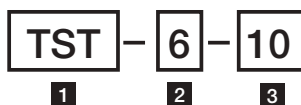
Strainer

When the liquid is suctioned from the top of the tank, attach this accessory to the tip of the suction-side hose to prevent the intrusion of debris.



TST-P-12 x 18-V

Model code



1 Series name

TST : Strainer

2 Body connecting section material

V : PVC F : PVDF
P : PP, FRPP T : PTFE
S : SUS304 X : Special
6 : SUS316

3 Hose size

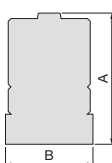
10 : $\Phi 10 \times \Phi 12$
12 : $\Phi 12 \times \Phi 15$
12 : $\Phi 12 \times \Phi 18$
12 x 18 : $\Phi 12 \times \Phi 18$

* Model code combinations are determined in advance. For details, contact TACMINA.

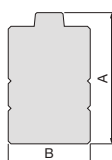
Product specifications

Model	Body liquid end part	Hose size
TST-V-12V	PVC	$\Phi 12 \times \Phi 18$
TST-6-10T	SUS316	$\Phi 10 \times \Phi 12$
TST-6-12T	SUS316	$\Phi 12 \times \Phi 15$
TST-F-10T	PVDF	$\Phi 10 \times \Phi 12$
TST-F-12T	PVDF	$\Phi 12 \times \Phi 15$
TST-S-10T	SUS304	$\Phi 10 \times \Phi 12$
TST-S-12T	SUS304	$\Phi 12 \times \Phi 15$
TST-P-12 x 18-V	PP, FRPP	$\Phi 12 \times \Phi 18$

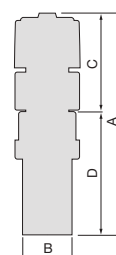
External dimensions



Model	A(mm)	B(mm)
TST-V-12V	48	32



Model	A(mm)	B(mm)
TST-6-10T	48	26
TST-6-12T	50	26
TST-F-10T	48	30
TST-F-12T	50	30
TST-S-10T	48	26
TST-S-12T	50	26



Model	A(mm)	B(mm)	C(mm)	D(mm)
TST-P-12 x 18-V	117	34	52	65

PVC Y-shaped strainer

Prevents entry of dirt and other foreign matter.



Product specifications

Part number	Nominal diameter	Face-to-face dimension(mm)	Body material	Packing material	Part number	Nominal diameter	Face-to-face dimension(mm)	Body material	Packing material
B6049	JIS 10K 15A	206	Transparent PVC	EPDM	B4979	JIS 10K 40A	336	Transparent PVC	EPDM
B5085				Fluoro rubber	B7569				Fluoro rubber
B8395	JIS 10K 20A	254		EPDM	B7568	JIS 10K 50A	361		EPDM
B8394				Fluoro rubber	B7570				Fluoro rubber
B4981	JIS 10K 25A	280		EPDM	B8397	JIS 10K 80A	477		EPDM
B5065				Fluoro rubber	B8396				Fluoro rubber

* Screen: PVC 40 mesh

Stainless steel Y-shaped strainer

Prevents entry of dirt and other foreign matter.



Product specifications

Part number	Nominal diameter(mm)	Face-to-face dimension(mm)	Body material	Cap	Gasket	Screen
B7676	10	110	SCS13A	SCS13A SUS304	Filler-containing PTFE	40 mesh stainless-steel wire screen reinforced with 304 stainless-steel plate
B7675	15	120				
B7674	20	130				
B7578	25	150				
B7579	32	170				
B7580	40	190				
B7581	50	220				

Foot valve (strainer-equipped foot valve)

This is the check valve-equipped strainer that is attached to the tip of the suction-side hose when the liquid is suctioned from the top of the tank.

* For sodium hypochlorite and other liquids that easily bubble, use a Y-shaped strainer.



TFT



TFT



FV



FV



FV

Model code

TFT — **6** **6** **C** — **10**

1 **2** **3** **4** **5**

1 Series name
TFT : Foot valve

2 Body liquid end material
V : PVC
P : PP, FRPP
S : SUS304
6 : SUS316
F : PVDF
T : PTFE
X : Special

3 Main valve seat material
V : PVC
P : PP, FRPP
S : SUS304
6 : SUS316
F : Fluoro rubber
T : PTFE
E : EPDM
X : Special

4 Check ball material
E : EPDM
F : Fluoro rubber
S : SUS304
6 : SUS316
H : Hastelloy C
T : PTFE
C : Ceramic
X : Special

5 Hose size
05 : Φ5 x Φ9
06 : Φ6 x Φ11
10 : Φ10 x Φ12
12 : Φ12 x Φ18*1
6 x 8 : Φ6 x Φ8
*1 If the body liquid end material is PVDF, the hose size will be Ø12 x Ø15.

FV1 — **4** **E** —

1 **2** **3**

1 Connection diameter
4 : Φ4 x Φ9
6 : Φ6 x Φ11

2 O-ring material
E : EPDM
F : FPM

3 Main valve seat material
None : Same as O-ring material
T : PTFE

FV — **F** **F** **C** — **10**

1 **2** **3** **4**

1 Body connecting section material
F : PVDF
X : Special

2 Main valve seat material
F : Fluoro rubber
T : PTFE
E : EPDM
X : Special

3 Check ball material
C : Ceramic
X : Special

4 Hose size
10 : Φ10 x Φ12
6 x 8 : Φ6 x Φ8

* Model code combinations are determined in advance. For details, contact TACMINA.

Product specifications

TFT Series

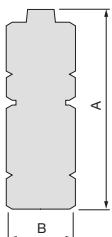
Model	Material			Hose size
	Body liquid end part	Main valve seat section	Check ball	
TFT-PEC-12	FRPP	EPDM	Ceramic	Φ12 x Φ18
TFT-PFC-12	FRPP	Special fluoro rubber		Φ12 x Φ18
TFT-STC-10	SUS304	PTFE		Φ10 x Φ12
TFT-STC-12	SUS304	PTFE		Φ12 x Φ15
TFT-66C-10	SUS316	SUS316		Φ10 x Φ12
TFT-FTC-10	PVDF	PTFE		Φ10 x Φ12
TFT-FTC-12	PVDF	PTFE		Φ12 x Φ15
TFT-TTC-10	PTFE	-		Φ10 x Φ12
TFT-FC-6 x 8	PVDF	-		Φ6 x Φ8
TFT-6C-6 x 8	SUS316	-		Φ6 x Φ8

FV Series

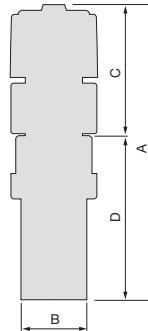
Model	Material			Hose size
	Body liquid end part	Main valve seat section	O-ring	
FV1-4E	PVC	EPDM	EPDM	Φ4 x Φ9
FV1-4ET		PTFE	EPDM	
FV1-4F		Fluoro rubber	Fluoro rubber	
FV1-6E		EPDM	EPDM	Φ6 x Φ11
FV1-6ET		PTFE	EPDM	
FV1-6F		Fluoro rubber	Fluoro rubber	

Model	Material			Hose size
	Body liquid end part	Main valve seat section	Check ball	
FV1-FFC-10	PVDF	-	Ceramic	Φ10 x Φ12
FV2-FEC-6 x 8		EPDM		Φ6 x Φ8
FV2-FFC-6 x 8		Fluoro rubber		
FV2-FTC-6 x 8		PTFE		

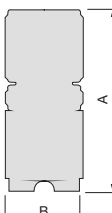
External dimensions



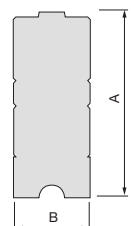
Model	A(mm)	B(mm)
TFT-FC-6 x 8	73	30
TFT-66C-10/TFT-6C-6 x 8	77	30
TFT-STC-10T/TFT-TTC-10	80	30
TFT-FTC-10/TFT-FTC-12	80	30
TFT-STC-12	80	30



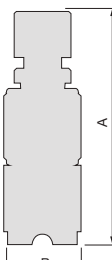
Model	A(mm)	B(mm)	C(mm)	D(mm)
TFT-PEC-12/TFT-PFC-12	117	34	52	65



Model	A(mm)	B(mm)
FV1-4E/FV1-4F/FV1-6/FV1-6	70	30



Model	A(mm)	B(mm)
FV1-FFC-10	73	30



Model	A(mm)	B(mm)
FV2-FEC-6 x 8/FV2-FFC-6 x 8	91	30
FV2-FTC-6 x 8	91	30

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Float switch/level meter

This accessory can be used to stop the pump and generate an alarm to indicate that the liquid needs to be refilled when the amount of chemical liquid remaining in the tank is low. Two types are available: a float type with a selectable number of sensors (one or two), and an electrode type that has excellent chemical resistance.

• Float switch



For solution tanks, PE tanks,
PVC (iron-frame) tanks, and PVC tanks (for GLX)



For chemical injection system PTS
(with mounting cap)

• Electrode-type
level meter *1



*1 Contact TACMINA for details.

Float switches for solution tanks, PE tanks, PVC (iron-frame) tanks, and PVC tanks (for GLX)

Model code

FSW **1** - **G50** - **1L**

1 **2** **3** **4**

1 Series name

FSW : Float switch

2 No. of contacts

1 : 1 contact

2 : 2 contacts

3 : 3 contacts *2

*2 Three-contact models
are made-to-order.

3 Tank type

See product specifications

4 Operation details

1L : ON at the lower limit
2L : ON at the lower limit,
ON at the lowermost limit
HL : ON at the upper limit,
ON at the lower limit

Product specifications

Model	Applicable tank	Tank capacity(L)	Output signal	Model	Applicable tank	Tank capacity(L)	Output signal
FSW1-S50-1L	Solution tank (new model) *3 / Solution tank (for GLX)	50	ON at the lower limit	FSW1-P200-1L	PVC tank	200, 300	ON at the lower limit
FSW2-S50-2L			ON at the lower limit, ON at the lowermost limit	FSW2-P200-2L			ON at the lower limit, ON at the lowermost limit
FSW2-S50-HL			ON at the upper limit, ON at the lower limit	FSW2-P200-HL			ON at the upper limit, ON at the lower limit
FSW1-S100-1L		100	ON at the lower limit	FSW1-P500-1L		500	ON at the lower limit
FSW2-S100-2L			ON at the lower limit, ON at the lowermost limit	FSW2-P500-2L			ON at the lower limit, ON at the lowermost limit
FSW2-S100-HL			ON at the upper limit, ON at the lower limit	FSW2-P500-HL			ON at the upper limit, ON at the lower limit
FSW1-S200-1L		200	ON at the lower limit	FSW1-P1000-1L	Iron-frame PVC tank	1000	ON at the lower limit
FSW2-S200-2L			ON at the lower limit, ON at the lowermost limit	FSW2-P1000-2L			ON at the lower limit, ON at the lowermost limit
FSW2-S200-HL			ON at the upper limit, ON at the lower limit	FSW2-P1000-HL			ON at the upper limit, ON at the lower limit
FSW1-S300-1L	Solution tank (previous model) *3	300	ON at the lower limit	FSW1-T100-1L		100	ON at the lower limit
FSW2-S300-2L			ON at the lower limit, ON at the lowermost limit	FSW2-T100-2L			ON at the lower limit, ON at the lowermost limit
FSW2-S300-HL			ON at the upper limit, ON at the lower limit	FSW2-T100-HL			ON at the upper limit, ON at the lower limit
FSW1-S500-1L		500	ON at the lower limit	FSW1-T200-1L	PVC tank (for GLX)	200	ON at the lower limit
FSW2-S500-2L			ON at the lower limit, ON at the lowermost limit	FSW2-T200-2L			ON at the lower limit, ON at the lowermost limit
FSW2-S500-HL			ON at the upper limit, ON at the lower limit	FSW2-T200-HL			ON at the upper limit, ON at the lower limit
FSW1-S1000-1L		1000	ON at the lower limit	FSW1-T500-1L		500	ON at the lower limit
FSW2-S1000-2L			ON at the lower limit, ON at the lowermost limit	FSW2-T500-2L			ON at the lower limit, ON at the lowermost limit
FSW2-S1000-HL			ON at the upper limit, ON at the lower limit	FSW2-T500-HL			ON at the upper limit, ON at the lower limit
FSW1-K50-1L	Solution tank (previous model) *3	50	ON at the lower limit	FSW1-T1000-1L	PVC tank (for GLX)	1000	ON at the lower limit
FSW2-K50-2L			ON at the lower limit, ON at the lowermost limit	FSW2-T1000-2L			ON at the lower limit, ON at the lowermost limit
FSW2-K50-HL			ON at the upper limit, ON at the lower limit	FSW2-T1000-HL			ON at the upper limit, ON at the lower limit
FSW1-K100-1L		100	ON at the lower limit	FSW1-G50-1L		50	ON at the lower limit
FSW2-K100-2L			ON at the lower limit, ON at the lowermost limit	FSW2-G50-2L			ON at the lower limit, ON at the lowermost limit
FSW2-K100-HL			ON at the upper limit, ON at the lower limit	FSW2-G50-HL			ON at the upper limit, ON at the lower limit
FSW1-E50-1L	PE tank *4	50	ON at the lower limit	FSW1-G100-1L	PVC tank (for GLX)	100	ON at the lower limit
FSW2-E50-2L			ON at the lower limit, ON at the lowermost limit	FSW2-G100-2L			ON at the lower limit, ON at the lowermost limit
FSW2-E50-HL			ON at the upper limit, ON at the lower limit	FSW2-G100-HL			ON at the upper limit, ON at the lower limit
FSW1-E100-1L		100	ON at the lower limit	FSW1-G200-1L		200	ON at the lower limit
FSW2-E100-2L			ON at the lower limit, ON at the lowermost limit	FSW2-G200-2L			ON at the lower limit, ON at the lowermost limit
FSW2-E100-HL			ON at the upper limit, ON at the lower limit	FSW2-G200-HL			ON at the upper limit, ON at the lower limit
FSW1-P50-1L	PVC tank	50	ON at the lower limit	FSW1-P200-1L	PVC tank (for GLX)	500, 1000	ON at the lower limit
FSW2-P50-2L			ON at the lower limit, ON at the lowermost limit	FSW2-P200-2L			ON at the lower limit, ON at the lowermost limit
FSW2-P50-HL			ON at the upper limit, ON at the lower limit	FSW2-P200-HL			ON at the upper limit, ON at the lower limit
FSW1-P100-1L		100	ON at the lower limit				
FSW2-P100-2L			ON at the lower limit, ON at the lowermost limit				
FSW2-P100-HL			ON at the upper limit, ON at the lower limit				

*3 Both new and old solution tank (50 L, 100 L) models are available. Corresponding models differ.
The new model has a locking piece at the injection port.

*4 The FSW float switch cannot be installed on a PE tank (25 L).

Locking piece



Float switch for chemical injection system PTS

Product specifications

Part number	Tank capacity(L)	Output signal	Part number	Tank capacity(L)	Output signal	Part number	Tank capacity(L)	Output signal
STPTS0010	30	ON at the lower limit	STPTS0011	50	ON at the lower limit	STPTS0012	120	ON at the lower limit
STPTS0013		ON at the upper limit, ON at the lower limit	STPTS0014		ON at the upper limit, ON at the lower limit	STPTS0015		ON at the upper limit, ON at the lower limit
STPTS0016		ON at the lower limit, ON at the lowermost limit	STPTS0017		ON at the lower limit, ON at the lowermost limit	STPTS0018		ON at the lower limit, ON at the lowermost limit

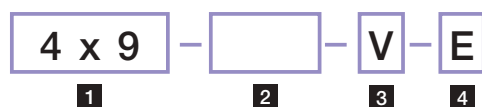
Suction valve

Attach this accessory to the chemical tank outlet to easily and reliably connect the tank and the piping.
The built-in strainer also prevents the entry of debris.



For chemical tanks

Model code



1 Applicable hose

4 x 9 : $\Phi 4 \times \Phi 9$
 6 x 11 : $\Phi 6 \times \Phi 11$
 9 x 15 : $\Phi 9 \times \Phi 15$
 12 x 18 : $\Phi 12 \times \Phi 18$

2 Applicable tank

PTS : Chemical injection system PTS Series
 PTU : Chemical injection unit PTU Series
 PES : Solution tank
 None : Chemical tank

3 Body material

V : PVC

4 Packing material

E : EPDM
 F : Fluoro rubber
 (Special fluoro rubber)

* Model code combinations are determined in advance. For details, contact TACMINA.

Product specifications

Model	Applicable tank	Applicable hose	Body material	Packing material
4x9-PTS-VE	Chemical injection system PTS	$\Phi 4 \times \Phi 9$	PVC	EPDM
4x9-PTS-VF				Fluoro rubber
6x11-PTS-VE		$\Phi 6 \times \Phi 11$		EPDM
6x11-PTS-VF				Fluoro rubber
12x18-PTS-VE		$\Phi 12 \times \Phi 18$		EPDM
12x18-PTS-VF				Fluoro rubber
4 x 9-PTU-VE	Chemical injection unit PTU	$\Phi 4 \times \Phi 9$		EPDM
4 x 9-PTU-VF				Fluoro rubber
6 x 11-PTU-VE		$\Phi 6 \times \Phi 11$		EPDM
6 x 11-PTU-VF				Fluoro rubber
4 x 9-PES-VE	Solution tank	$\Phi 4 \times \Phi 9$		EPDM
4 x 9-PES-VF				Special fluoro rubber
6 x 11-PES-VE		$\Phi 6 \times \Phi 11$		EPDM
6 x 11-PES-VF				Special fluoro rubber
9 x 15-PES-VE		$\Phi 9 \times \Phi 15$		EPDM
9 x 15-PES-VF				Special fluoro rubber
12 x 18-PES-VE		$\Phi 12 \times \Phi 18$		EPDM
12 x 18-PES-VF				Special fluoro rubber
4 x 9-VE	Chemical tank	$\Phi 4 \times \Phi 9$		EPDM
4 x 9-VF				Special fluoro rubber
6 x 11-VE		$\Phi 6 \times \Phi 11$		EPDM
6 x 11-VF				Special fluoro rubber
9 x 15-VE		$\Phi 9 \times \Phi 15$		EPDM
9 x 15-VF				Special fluoro rubber
12 x 18-VE		$\Phi 12 \times \Phi 18$		EPDM
12 x 18-VF				Special fluoro rubber

Excessive Pressure Prevention

Overfeeding Prevention

Siphoning Phenomenon Prevention

Backflow Prevention

Pulsation Attenuation

Flow Rate Proportional Control

Discharge Checking

Pressure Checking

Residual Pressure Relief

Gas Lock Prevention

Piping Connection

Foreign Matter Suction Prevention

Tank Accessories

Other

Parts kit (for metering pumps)

Regular replacement of consumables keeps the metering pump in optimal condition, allowing for a sufficient demonstration of performance.

Having all necessary regular replacement parts available in a set is more economical than purchasing individual parts separately. Components are less likely to be lost when part of a package, and inventory management is easy.

* For discontinued models, contact TACMINA.



Product specifications

For PW/PZ Series models

Model	Applicable models	Kit details
BK0053	PW-30-VTCE	Diaphragm x1,
BK0054	PW-30-VTCF	Protective diaphragm x1,
BK0056	PW-30-VTCET	O-ring x2,
BK0057	PW-60-VTCE	Ball stopper x4,
BK0058	PW-60-VTCF	Check ball x4,
BK0060	PW-100-VTCE	Valve seat x4,
BK0061	PW-100-VTCF	O-ring for outer circumference of pump head x1
BK0055	CLPW-30-ATCF	Diaphragm x1,
BK0059	CLPW-60-ATCF	Protective diaphragm x1,
BK0062	CLPW-100-ATCF	O-ring x2, Ball stopper x4,
BK0063	DCLPW-30-ATCF	Check ball x4, Valve seat x4,
BK0064	DCLPW-60-ATCF	Packing x1, Spacer x2,
BK0065	DCLPW-100-ATCF	O-ring for outer circumference of pump head x1,
BK0001	PZ□-30-VTCE	Degassing joint connection O-ring x1
BK0040	PZ□-30-VTCET	Diaphragm x1,
BK0002	PZ□-30-VTCF	Protective diaphragm (with spacer) x1,
BK0003	PZ□-60-VTCE	O-ring x2, Ball stopper x4,
BK0004	PZ□-60-VTCF	Check ball x4, Valve seat x4
BK0005	PZ□-100-VTCE	
BK0006	PZ□-100-VTCF	
BK0014	CLPZ□-30	Diaphragm x1,
BK0015	CLPZ□-60	Protective diaphragm (with spacer) x1,
BK0016	CLPZ□-100	O-ring x2, Ball stopper x4,
BK0017	ARPZ□-31	Check ball x4, Valve seat x4,
BK0018	ARPZ□-61	Packing x1, Spacer x2
BK0019	ARPZ□-12	Diaphragm set x1,
		Discharge-side joint / Suction-side joint /
		Air-release joint valve seat assembly x1

* The presence/absence of a relief mechanism does not affect the selection. (Example: If the PW-30 is listed under the applicable models, the PW-30R is also applicable.)

* The control function does not affect the selection. (Example: If the PW is listed under the applicable models, the PWM/PWT is also applicable.)

For CS2 Series models

Model	Applicable models	Kit details
BKCS2-10E	CS2-10N-VTCE	Diaphragm x1, O-ring x2, Ball stopper x4, Check ball x4, Valve seat x4
BKCS2-10ET-BW	CS2-10N-VTCET	
BKCS2-10F	CS2-10N-VTCF	
BKCS2-30E	CS2-30N-VTCE	
BKCS2-30ET-BW	CS2-30N-VTCET	
BKCS2-30F	CS2-30N-VTCF	
BKCS2-60E	CS2-60N/100N-VTCE	
BKCS2-60ET-BW	CS2-60N/100N-VTCET	
BKCS2-60F	CS2-60N/100N-VTCF	
BKCS2-300E	CS2-300N-VTCE	
BKCS2-300F	CS2-300N-VTCF	
BKCS2-10CL	CLCS2-10N	Diaphragm x1, O-ring x2, Ball stopper x4,
BKCS2-30CL	CLCS2-30N	Check ball x4, Valve seat x4, Packing x1, Spacer x2
BKCS2-60CL	CLCS2-60N/100N	Diaphragm x1, O-ring x2, Ball stopper x4, Check ball x4, Valve seat x4, Packing x1, Spacer x1

* The presence/absence of a relief mechanism does not affect the selection. If the CS2-10N is listed under the applicable models, the CS2-10R is also applicable.

For GLV/GLX Series models

Model	Applicable models	Kit details
BKGL0001	GLV-05 GLX-06	Suction joint set x1, Valve seat assembly x2, Slide ring x2, O-ring x9, Packing x2, Check ball x1
BKGL0002	GLV-10/20/30 GLX-12/25/40	
BKGL0003	GLV-150/300	
BKGL0004	GLX-200	
BKGL0005	GLX-400	
BKGL0006	GLX-90	

For V Series models

Model	Applicable models	Kit details
BKV-10E	V-10-VTCE	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-10B	V-10-VTCET-BW	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-10F	V-10-VTCF	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-10C	CLV-10	Diaphragm×1, O-ring×2, O-ring(for valve seat on discharge side)×1, Ball stopper(discharge side)×2, Check Ball(discharge side)×2, Valve seat(discharge side)×2, Spacer(discharge side)×1, O-ring(for valve seat on suction side)×1, Ball stopper(suction side)×2, Check Ball(suction side)×2, Valve seat(suction side)×2, Spacer(suction side)×1, Seat packing(suction side)×1, Protective diaphragm×1
BKV-10D	DCLV-10	Diaphragm×1, O-ring×2, O-ring(for valve seat on discharge side)×1, O-ring(for degassing joint)×1, Ball stopper(discharge side)×2, Check Ball(discharge side)×2, Valve seat(discharge side)×2, Spacer(discharge side)×1, O-ring(for valve seat on suction side)×1, Ball stopper(suction side)×2, Check Ball(suction side)×2, Valve seat(suction side)×2, Spacer(suction side)×1, Seat packing(suction side)×1, Protective diaphragm×1
BKV-40E	V-40-VTCE	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-40B	V-40-VTCET-BW	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-40F	V-40-VTCF	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-40C	CLV-40	Diaphragm×1, O-ring×2, O-ring(for valve seat on discharge side)×1, Ball stopper(discharge side)×2, Check Ball(discharge side)×2, Valve seat(discharge side)×2, Spacer(discharge side)×1, O-ring(for valve seat on suction side)×1, Ball stopper(suction side)×2, Check Ball(suction side)×2, Valve seat(suction side)×2, Spacer(suction side)×1, Seat packing(suction side)×1, Protective diaphragm×1

* The Connection method is for Hosejoint models. For details on Flangejoint models, contact your dealer or TACMINA.

* The presence/absence of a relief mechanism does not affect the selection. If the V-10 is listed under the applicable models, the V-10R is also applicable.

For V Series models

Model	Applicable models	Kit details
BKV-40D	DCLV-40	Diaphragm×1, O-ring×2, O-ring(for valve seat on discharge side)×1, O-ring(for degassing joint)×1, Ball stopper(discharge side)×2, Check Ball(discharge side)×2, Valve seat(discharge side)×2, Spacer(discharge side)×1, O-ring(for valve seat on suction side)×1, Ball stopper(suction side)×2, Check Ball(suction side)×2, Valve seat(suction side)×2, Spacer(suction side)×1, Seat packing(suction side)×1, Protective diaphragm×1
BKV-70E	V-70/100-VTCE	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-70B	V-70/100-VTCET-BW	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-70F	V-70/100-VTCF	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-70C	CLV-70/100	Diaphragm×1, O-ring×2, O-ring(for valve seat on discharge side)×1, Ball stopper(discharge side)×2, Check Ball(discharge side)×2, Valve seat(discharge side)×2, Spacer(discharge side)×1, O-ring(for valve seat on suction side)×1, Ball stopper(suction side)×2, Check Ball(suction side)×2, Valve seat(suction side)×2, Spacer(suction side)×1, Seat packing(suction side)×1, Protective diaphragm×1
BKV-70D	DCLV-70/100	Diaphragm×1, O-ring×2, O-ring(for valve seat on discharge side)×1, O-ring(for degassing joint)×1, Ball stopper(discharge side)×2, Check Ball(discharge side)×2, Valve seat(discharge side)×2, Spacer(discharge side)×1, O-ring(for valve seat on suction side)×1, Ball stopper(suction side)×2, Check Ball(suction side)×2, Valve seat(suction side)×2, Spacer(suction side)×1, Seat packing(suction side)×1, Protective diaphragm×1
BKV-300E	V-300-VTCE	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1
BKV-300F	V-300-VTCF	Diaphragm×1, O-ring×2, O-ring(for valve seat)×2, Ball stopper×4, Check Ball×4, Valve seat×4, Protective diaphragm×1

* The Connection method is for Hosejoint models. For details on Flangejoint models, contact your dealer or TACMINA.

* The presence/absence of a relief mechanism does not affect the selection. If the V-10 is listed under the applicable models, the V-10R is also applicable.

Excessive Pressure Prevention
Overfeeding Prevention
Siphoning Phenomenon Prevention
Backflow Prevention
Pulsation Attenuation
Flow Rate Proportional Control
Discharge Checking
Pressure Checking
Residual Pressure Relief
Gas Lock Prevention
Piping Connection
Foreign Matter Suction Prevention
Tank Accessories
Other

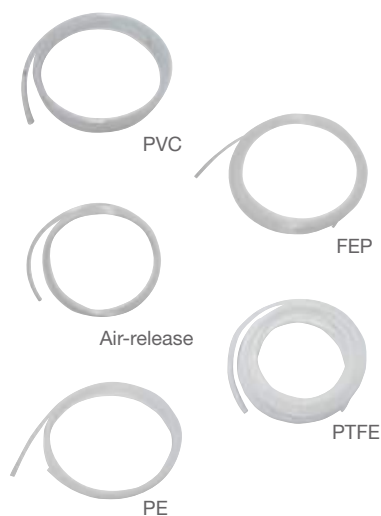
For F Series models

Model	Applicable models	Kit details
BK0069	FXD1-003-VECE	Drive diaphragm x1, Oil seal retaining ring set x1, Valve seat assembly x2, O-ring x2
BK0070	FXD1-003-VTCF	
BK0071	FXD1-006/01-VECE FYD1-003/006/01-VECE	
BK0072	FXD1-006/01-VTCF FYD1-003/006/01-VTCF	
BK0073	FXD1-02/03-VECE FYD1-03-VECE	
BK0074	FXD1-02/03-VTCF FYD1-03-VTCF	
BK0075	FXD1-003-VESE	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x5, Valve stopper x2, High-viscosity spring x2
BK0076	FXD1-003-VTSF	
BK0077	FXD1-006/01-VESE FYD1-003/006/01-VESE	
BK0078	FXD1-006/01-VTSF FYD1-003/006/01-VTSF	
BK0079	FXD1-02/03-VESE FYD1-03-VESE	
BK0080	FXD1-02/03-VTCF FYD1-03-VTSF	
BK0081	FXD1-003-STST	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x5, Valve stopper x2
BK0082	FXD1-006/01-STST FYD1-003/006/01-STST	
BK0083	FXD1-02/03-STST FYD1-03-STST	
BK0084	FXD1-003-FTCE	Drive diaphragm x1, Oil seal retaining ring set x1, Valve seat assembly x2, O-ring x2
BK0085	FXD1-003-FTCF	
BK0086	FXD1-003-FTCT	
BK0087	FXD1-006/01-FTCE FYD1-003/006/01-FTCE	
BK0088	FXD1-006/01-FTCF FYD1-003/006/01-FTCF	
BK0089	FXD1-006/01-FTCT FYD1-003/006/01-FTCT	
BK0090	FXD1-02/03-FTCE FYD1-03-FTCE	
BK0091	FXD1-02/03-FTCF FYD1-03-FTCF	
BK0092	FXD1-02/03-FTCT FYD1-03-FTCT	
BK0093	FXD1/FYD1-06/08-VECE	
BK0094	FXD1/FYD1-06-VTCF	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x5, Valve stopper x2
BK0095	FXD1/FYD1-1/2-VECE	
BK0096	FXD1/FYD1-1/2-VTCF	
BK0097	FXD1/FYD1-06/08-VESE	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x6, Ball guard x2, High-viscosity spring x2
BK0098	FXD1/FYD1-06-VTSF	
BK0099	FXD1/FYD1-1/2-VESE	
BK0100	FXD1/FYD1-1/2-VTSF	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x5, Valve stopper x2
BK0101	FXD1/FYD1-06-STST	
BK0102	FXD1/FYD1-1/2-STST	
BK0103	FXD1/FYD1-06-FTCT	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x6, Ball guard x2, High-viscosity spring x2
BK0104	FXD1/FYD1-1/2-FTCT	
BK0105	FXD1-3/4-VECE FYD1-4-VECE	
BK0106	FXD1-3/4-VTCF FYD1-4-VTCF	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x6, Ball guard x2
BK0107	FXD1-3/4-VESE FYD1-4-VESE	
BK0108	FXD1-3/4-VTSF FYD1-4-VTSF	
BK0109	FXD1-3/4-STST FYD1-4-STST	Drive diaphragm x1, Oil seal retaining ring set x1, Check ball x2, O-ring x6, Ball guard x2
BK0110	FXD1-3/4-FTCT FYD1-4-FTCT	

* The presence/absence of a relief mechanism does not affect the selection.
(Example: If the FXD1-003 is listed under the applicable models, the FXD1-003R is also applicable.)

Hose

Hoses made from a wide range of materials (such as PVC, PE, FEP, and PTFE) and in a wide range of sizes are available.



Product specifications			
Part number	Name	Size	Material
B2726	PVC braided hose	Φ4 x Φ9	PVC
B0600		Φ5 x Φ9	
B0601		Φ6 x Φ11	
B0603		Φ9 x Φ15	
B0604		Φ12 x Φ18	
B0605	Air-release hose	Φ19 x Φ26	PVC
B0606		Φ4 x Φ6	
B2152		Φ4 x Φ8	
B4070	PE tube	Φ6 x Φ8	PE
B0612	FEP tube	Φ6 x Φ9	FEP
B4117	PTFE tube	Φ4 x Φ6	PTFE
BB4821		Φ4 x Φ8	
B4071		Φ10 x Φ12	
B0607		Φ12 x Φ15	
B0608	Nylon tube	Φ4 x Φ6	PA
B2739		Φ6 x Φ8	
B4170			

Pump cover

This is a pump cover made from transparent PVC. It protects the pump from rain and wind.



Product specifications				
Part number	Material	Dimension(mm)	Applicable models	Specifications
TA0616	Transparent PVC	250 x 200 x 300	PW-30/60/100/200	Sealed type
TA0617		155 x 200 x 220		Open type
X9272		270 x 200 x 350	PZ□-300/500	Sealed type
X8296		160 x 200 x 255		Open type

★Cover retaining angle not included. Contact us for more information.

Pump base

These bases are dedicated for use with pumps and reliably fix pumps in place. * Contact TACMINA separately for pump cover installations.



Product specifications				
Part number	Material	Applicable models	Dimension(mm)	NOTE
TA0200	SS400	F	150 x 150 x 115	For 1 pump
TA0236	PVC		250 x 136 x 150	For 1 box, 2 heads
BPL0002	PPO	F, BPL	177.5 x 177.5 x 159	For 1 pump
TA0982	PVC	V	170 x 130 x 100	For 1 pump
TA0983			170 x 340 x 100	For 2 pumps
TA0984			170 x 540 x 100	For 3 pumps
TA0985			170 x 740 x 100	For 4 pumps
TA0986			170 x 940 x 100	For 5 pumps
TA0632		CS2	120 x 130 x 100	For 1 pump
TA0674			125 x 340 x 100	For 2 pumps
TA0675			125 x 540 x 100	For 3 pumps
TA0676			125 x 740 x 100	For 4 pumps
TA0677			125 x 940 x 100	For 5 pumps
TA0526		□PW□-30□/60□/100□	130 x 120 x 100	For 1 pump
TA0668			120 x 360 x 100	For 2 pumps
TA0669			120 x 590 x 100	For 3 pumps
TA0670			120 x 820 x 100	For 4 pumps
TA0671			120 x 1050 x 100	For 5 pumps
TA0526		PW□-200 PZ□-300/500	130 x 120 x 100	For 1 pump
TA0679			120 x 360 x 100	For 2 pumps
TA0680			120 x 590 x 100	For 3 pumps
TA0681			120 x 820 x 100	For 4 pumps
TA0682			120 x 1050 x 100	For 5 pumps

Excessive Pressure Prevention
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Siphoning Phenomenon Prevention
Backflow Prevention
Pulsation Attenuation
Flow Rate Proportional Control
Discharge Checking
Pressure Checking
Residual Pressure Relief
Gas Lock Prevention
Piping Connection
Foreign Matter Suction Prevention
Tank Accessories
Other

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Product designs and specifications are subject to change without notice for product improvement.

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JQA-EM0637 Production Department