Modular design
SELEX F.R.L.

■ **Components for air preparation / pressure adjustment / F.R.L. unit**

Overview

F.R.L. module unit is a standard series that the major dimensions (width/depth) are compactly designed and unified per filter (F), regulator (R), and lubricator (L), etc., seeking ultimate performance in all of functionality, operation, maintainability, an safety, etc.

Features

(1) Standard modular design
Compact modular design whose major dimensions such as filters, regulators, and lubricator, etc., are unified.
(2) Hybrid materials
Aluminum is provided for the body, and the resin for the cover. Light weight and also durable.
(3) Supplying various clean air
Supplying clean air and oil free air, etc., according to applications/purposes.
(4) Various combination
Combination is enables according to applications.
(5) Long Service life element
Clogging is dramatically eliminated due to original chemical fiber structure.
(6) Embedded pressure gauge for space saving
Simple front surface design

C O N T E N T S

Enhanced Systems Using Full-Scale Modules

Systems are easily upgraded using unifed key dimensions
and a diverse range of options and variations.

* indicates model no. 1, 2, 3, 4, 6, 8.
Outlines are shown on this page. Refer to individual pages for details.

F.R.L. combination

"C*000-W"
Products using air flter, regulator, and lubricator combined.

Lubricator
"L*000-W" supplies oil mist to pneumatic lines.

Air flter
"F*000-W"
Effectively removes dust and moisture.

Regulator
Standard type "R*000-W"
Reverse type "R*100-W"
Depressurizes supply pressure and supplies stable set pressure.

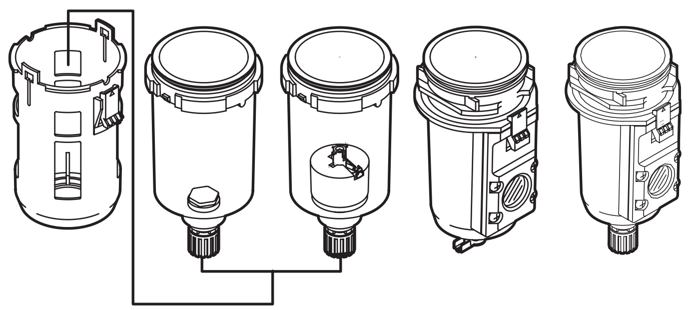
Element — Air flter F*000-W, flter and regulator W*000-W/W*100-W

Standard (5µm) element " blank "
This long-life element filters out harmful dirt and foreign matter, etc., from air.

Submicron (0.3µm) element "Y" option
This dedicated element effectively separates tar and carbon. (No regeneration)

Bowl, bowl guard and drainage — Air flter F*000-W, oil mist flter M*000-W, flter regulator W*000-W/W*100-W

* A bowl guard is installed on the plastic bowl as a standard.

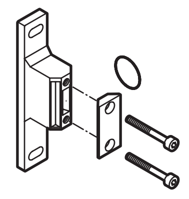


▲Plastic bowl and bowl guard ▲Metal bowl

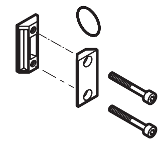
		Bowl			
		Polycarbonate bowl	Nylon bowl	Metal bowl	Metal bowl with manual drain cock
Drainage	Manual drain cock	Blank (standard)	Z	M	M1
	Automatic drain with manual override NO	F	FZ	FM*	FM1
	Automatic drain with manual override NC	F1	F1Z	F1M*	F1M1

Refer to page 283 for the chemical resistance of the bowl.
A metal bowl is not available for 1000 Series.
The asterisk (*) indicates the manual cock with an Rc1/4 port.

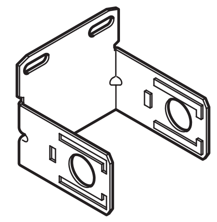
Mounting bracket — Page 425



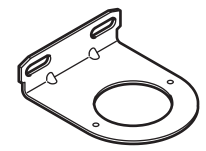
T type bracket "B*10-W"
This bracket has two holes on the top and bottom to fix the device, together with the system upgrade, to a wall.
The 3000-W Series and 4000-W Series are coupled using B410-W.



Joiner "C*000-J*00-W"
Use this as a joint when upgrading the system.
The 2000-W Series, 3000-W Series and 4000-W Series are coupled using J400-W.



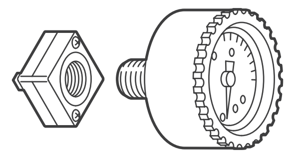
C type bracket "B*20"
This bracket fxes isolated parts just by ftting them in.



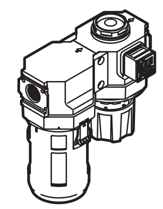
L type bracket "B*30"
This bracket fxes parts using the panel mounting nut on the flter regulator or regulator.

Pressure gauge — Page 659 — Regulator R*000-W/R*100-W, Filter and regulator W*000-W/W*100-W

Standard integrated pressure gauge "G401-W"



Pressure gauge with safety mark "G*OD"
The pressure's actual usage range is displayed with red and green zones making visible control easier.
* This gauge is assembled with the gauge plug.

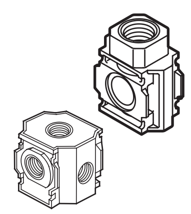


Pressure switch with digital display "PPD"
This unit functions as the pressure detector and display, the ON-OFF switch, and the switch's external output.
* Assembly is an option, indicated by "R1."

Filter/regulator

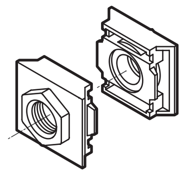
Standard type "W*000-W" (page 334)
Reverse type "W*100-W" (page 342)
The air flter and regulator are integrated to simplify the space-saving assembly.

Distributor — Page 426



One way branch type "D*01-W"
This distributor, which is installed facing either upward or downward, branches pneumatic pressure piping. The effective area of the branch is large.
4 way branch type "D300-W"
The pipe branches in four directions.
* For 3000-W/4000-W Series.

Piping adaptor — Page 428



Straight

L type

Straight "A*00-W"
Using an adaptor, isolated devices are removed for maintenance instead of piping being removed.
The adaptor is convenient for changing the connection bore size of the isolated device.
L type "A*01-W"
The device's in and out ports are turned by 90° and piped from top or bottom.
* Consult with CKD for the vertical piping type.

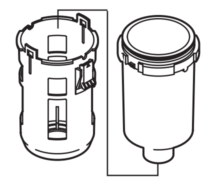
Oil mist flter — Page 360

"M*000-W" "MX000-W"
Effectively removes oil and oil mist from pneumatic lines.

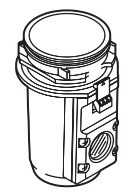
Shut-off valve — Pages 408 to 413

"V*000-W"
The pneumatic line is shut off and residual pressure is released.
Maintenance and inspection. This is also used to prevent accidents from residual pressure during maintenance.
The V3010-W with key holes is also used.

Bowl and bowl guard — Lubricator L*000-W



Plastic bowl and bowl guard
Material:Polycarbonate " blank " standard
Nylon "Z" option
* Manual drain cock is a "C" option.
* A bowl guard is installed on the plastic bowl as a standard.



Metal bowl
Use the metal bowl in an atmosphere where plastic bowls cannot be used.
Material: Aluminum "M" option
* A metal bowl is not available for 1000 Series.

Pressure switch — Pages 402 to 407, 1069

Pneumatic line pressure is repeatedly and accurately checked.

"P4000-W"

"PPD"

"PPX"

Consult with CKD for other system upgrades.

It's NEW CONCEPT

Pursuing high performance for all aspects, functionality, operability, serviceability and safety.

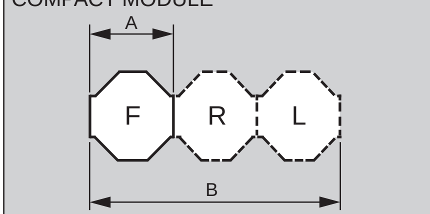
&RPSUHVVHG DLU ¿OWHU UHJXODWRU OXEULFDWRU DQG RW

FUNCTIONAL FEATURES

MCompact module

F.R.L. main dimensions (width and depth) are integrated into a compact module. Accurate assembly dimensions are obtained with simple calculation.

COMPACT MODULE

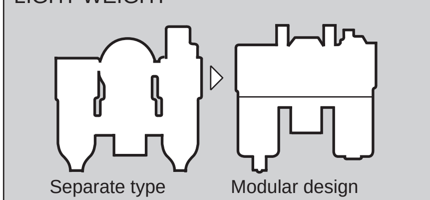


	C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
A	40	50 50 63	63 50 63	63	80	90 90 100	100
B	40×3	50×2+63	63×2+50	63×3	80×3	90×2+100	100×3

MLight weight (1/2 (CKD comparison))

The hybrid material (body: aluminum die cast, cover: resin) provides strength, and reduces weight by 50% compared to the conventional type. (C4000 comparison)

LIGHT WEIGHT

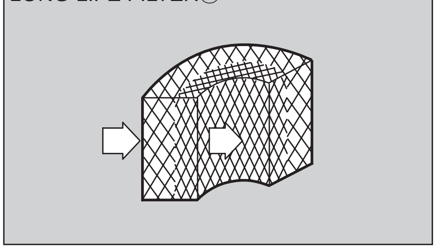


	C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
Modular design	0.4	1.01	1.01	1.15	1.79	3.64	4.5
Conventional	0.7	-	1.8	1.8	3.4	7.2	7.2

MLong-life element

7KLV HOHPHQW LQFRUSRUDWHV &.'V structure (patent pending), which has a rough surface DQG JUDGXDOO\ EHFRPHV ¿QHU WRZDUG is greatly reduced, and the element life is greatly extended. There is no worry of rust forming.

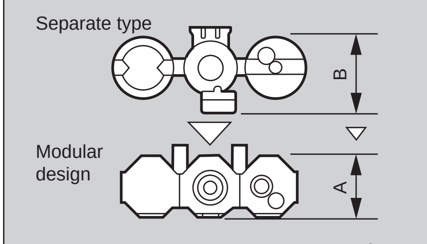
LONG LIFE FILTER①



MEmbedded pressure gauge for saving space

The conventional protruding pressure gauge wasted space on the front, and endangered personnel. A flat design and safety have been realized by embedding the pressure gauge into the body.

FLAT FACE



	C1000-W	C2000-W	C2500-W	C3000-W	C4000-W	C6500-W	C8000-W
Modular design A	57	62	70.5	63	79	100	100
Conventional B	74	-	109	109	124	131	131

MMechanism to prevent oil dripping during primary side pressure drop

2LO GULSSLQJ FDXVHG E\ UHYHUVH ÀRZ released with the shut-off valve, etc., is suppressed.

MCorrosion resistant, safe bowl guard

Very safe and corrosion resistant bowl guard is integrated.

MGauge plug

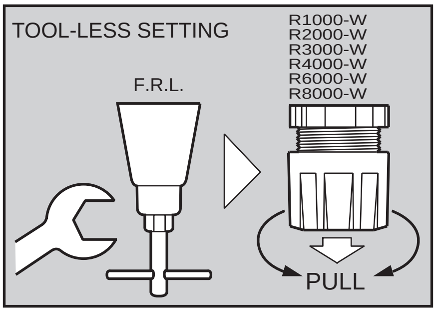
The gauge plus is sealed even without a pipe plug. (Refer to page 672 when using the screw in pressure gauge.)

Read Precautions in the introduction and on page 276 to 283 before use.

OPERATIVE FEATURES

MPressure adjustment without tool

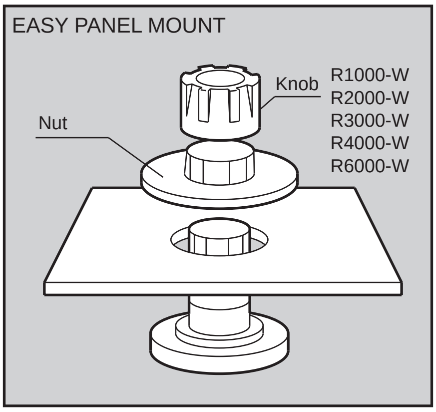
Pressure is adjusted with a hand. The knob is locked with a single push, and easily operated when setting pressure.



MEasily install in panels

when the panel mounting nut is loosed the nut acts as a jack and allows the knob to be removed easily. Fix the nut to mount in the panel. The L-type bracket is also installed similarly to the nut.

:KHQ WKH / W\SH EUDFNHW LV X securely without play.) *8000-W Series is excluded.

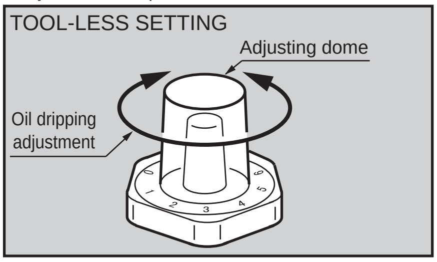


Note:Install the nut before installing the knob. (With the R2000-W, the nut is removed without removing the knob.)

MOil drip adjustment knob with lock

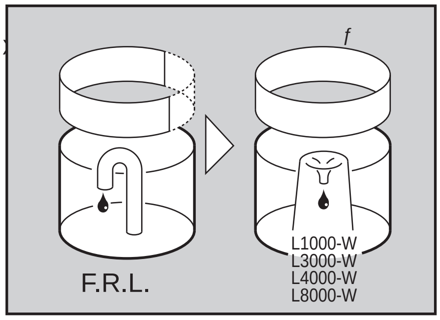
Oil drips are adjusted easily by hands without using tools. A stopper is provided in the opening direction to function as a lock, and increase safety. The number on the dial are used as a guide after adjusting dripping.

* Adjust the oil drip to 0.5 N·m or less.



MDouble plastic structure

A double plastic structure is adopted, so oil GULSSLQJ FDQ EH FRQ¿UPHG IURP f



MOne-touch integrated attachment

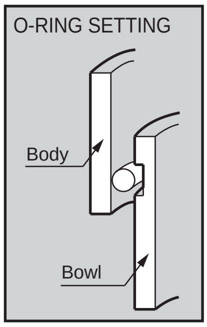
The integrated bowl and bowl guard are easily attached and removed by operating the latch (The 1000-W Series has no latch)

* Confirm that pressure has been released before mounting or removing the bowl and bowl guard.

MO-ring position locking

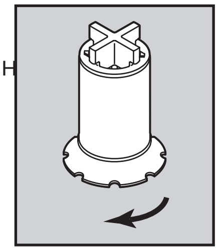
An O-ring slot is provided on the bowl side to prevent problems caused if the O-ring falls off during bowl attachment and removal.

The O-ring does not fall off during maintenance, and safe and accurate seal in attained.



M2QH WRXFK LQWHJUDW

The integrated element is removed by WXUQLQJ WKH to the left.
(Only 1000-W Series)



Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Option explanation

&RPELQDWLRQ OLVWV RI GUDLQDJH DQG ERZO PDWHULDO RI

Applicable series	Bowl material		Manual drain cock	Automatic drain with manual cock		Large automatic drain with manual cock	
				NO type	NC type	NO type	NC type
1000-W Series	Plastic bowl	Polycarbonate	○ (blank)		○ (symbol: F1)		
		Nylon	○ (symbol: Z1)		○ (symbol: F1Z)		
	Metal bowl	Aluminum					
2*00-W Series 3000-W Series 4000-W Series 6000-W Series	Plastic bowl	Polycarbonate	○ (blank)	○ (symbol: F)	○ (symbol: F1)		
		Nylon	○ (symbol: Z)	○ (symbol: FZ)	○ (symbol: F1Z)		
	Metal bowl	Aluminum	○ (symbol: M,M1)	○ (symbol: FM,FM1)	○ (symbol: F1M,F1M1)		
8000-W Series	Plastic bowl	Polycarbonate	○ (blank)	○ (symbol: F)	○ (symbol: F1)	○ (symbol: FF)	○ (symbol: FF1)
		Nylon	○ (symbol: Z)	○ (symbol: FZ)	○ (symbol: F1Z)	○ (symbol: FFZ)	○ (symbol: FF1Z)
	Metal bowl	Aluminum	○ (symbol: M,M1)	○ (symbol: FM,FM1)	○ (symbol: F1M,F1M1)	○ (symbol: FFM,FFM1)	○ (symbol: FF1M,FF1M1)
Features			-	In a nonpressurized state, such as at night, the valve opens and drainage is discharged automatically.	Air is not purged during initial pressurization.	Discharge performance is high and drainage is automatically discharged when the unit is not pressurized.	Discharge performance is high and air is not purged during initial pressurization.

Combination lists of drainage and bowl material of lubricator (item model no. display (D))

Applicable series	Bowl material		Without manual cock	With manual cock
1000-W Series	Plastic bowl	Polycarbonate	○ (blank)	○ (symbol: C)
		Nylon	○ (symbol: Z)	○ (symbol: CZ)
	Metal bowl	Aluminum		
2000-W Series 2500-W Series 3000-W Series 4000-W Series 6000-W Series 8000-W Series	Plastic bowl	Polycarbonate	○ (blank)	○ (symbol: C)
		Nylon	○ (symbol: Z)	○ (symbol: CZ)
	Metal bowl	Aluminum	○ (symbol: M)	○ (symbol: CM,CM1)

2SWLRQ DQG H[SODQDWLRQ RI V\PERO ZLWK SUHVVXUH UDQJH UHOLHI SUHVVXU

Option symbol: L

‡ 3UHVVXUH GLVSOD\ WR 03D
‡ 3UHVVXUH UDQJH WR 03D
‡ 3UHVVXUH JDXJH * 3

Option symbol: N

‡ $LU LV QRW UHOLHYHG

Option symbol: T

‡ $ W\SH ZLWKRXW SUHVVXUH JDXJ
‡7KH 5F JDXJH SRUW LV VHDOHG
plug is assembled.
‡5HIHU WR SDJH WR LQVWDOO S
gauge.

Option symbol: T8,T6

‡'XH WR URXQG SUHVVXUH JDXJH DWWDFKHG D
pressure gauge is not included.
‡7KH SUHVVXUH JDXJH PRX
ventilated.
‡Refer to page 672 to install pressure gauge.

Option symbol: R1,R2 (note)

R1 R2

‡Pressure switch with display PPD assembly
‡ :LWK GLJLWDO SUHVVXUH VHQVRU 33;
(Refer to page 1069 for the details.)

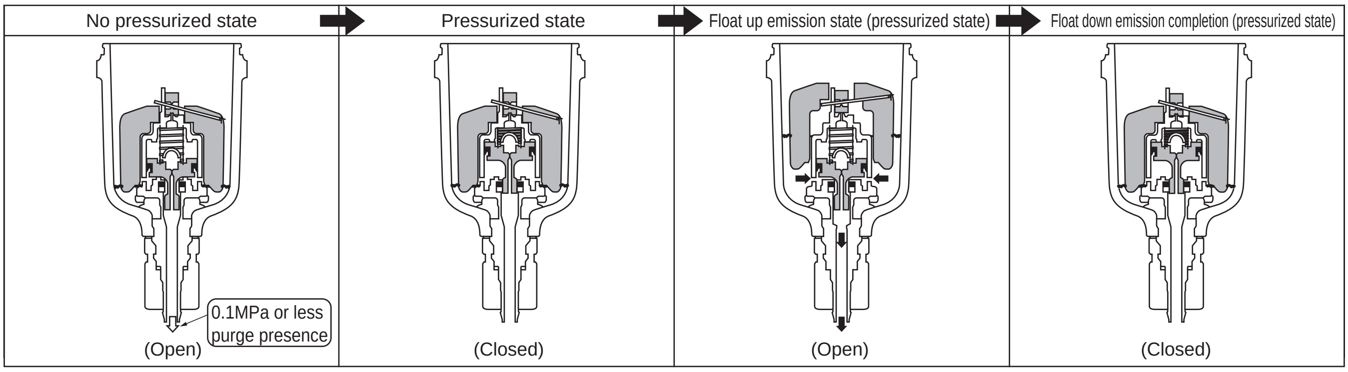
Option symbol: X1

‡The pressure gauge faces forward, with IN on the right side.

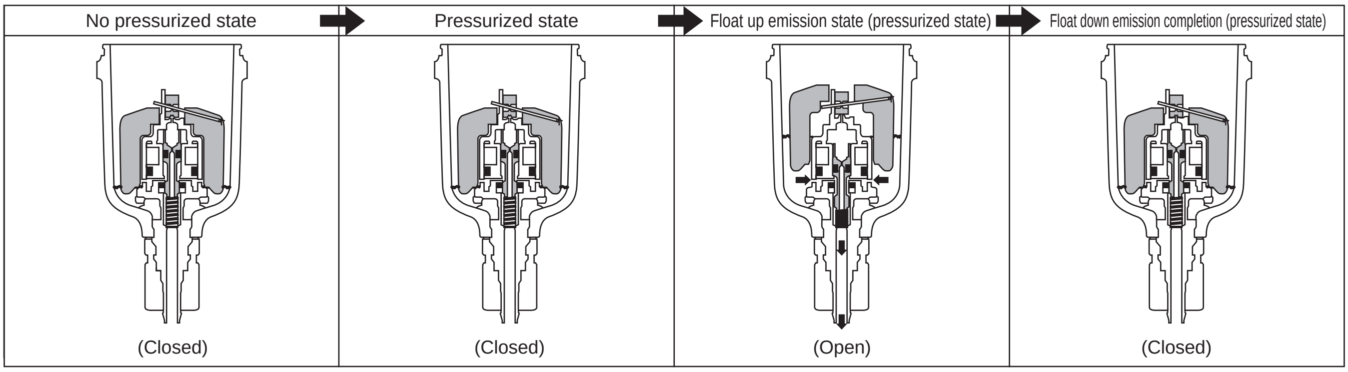
(Note) Option symbol "R1" is not used for the C*000-W Series or C*010-W Series.

2SHUDWLRQDO H[SODQDWLRQ RI ÀRDW W\SH DXWRPDWLF GUDLQ

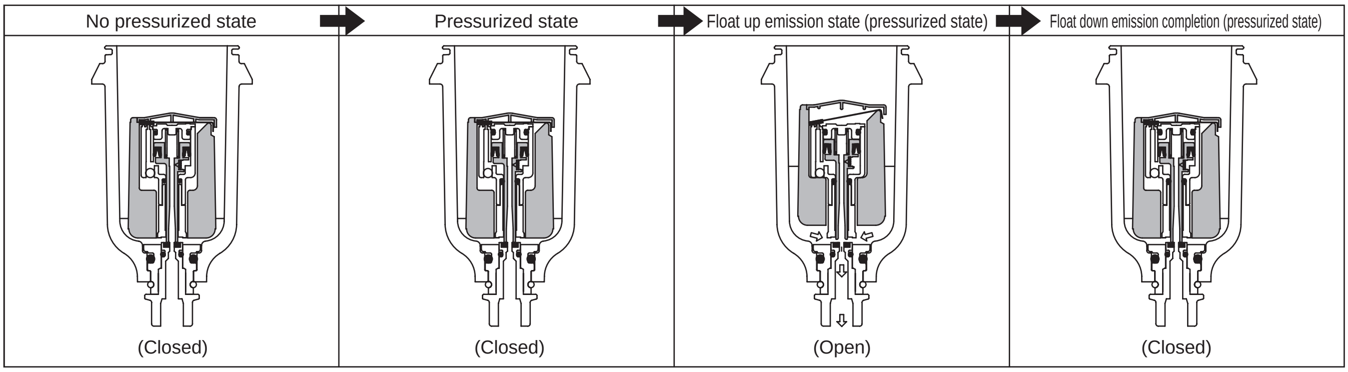
M NO type (F and FF)
3000-W/4000-W/6000-W/8000-W Series



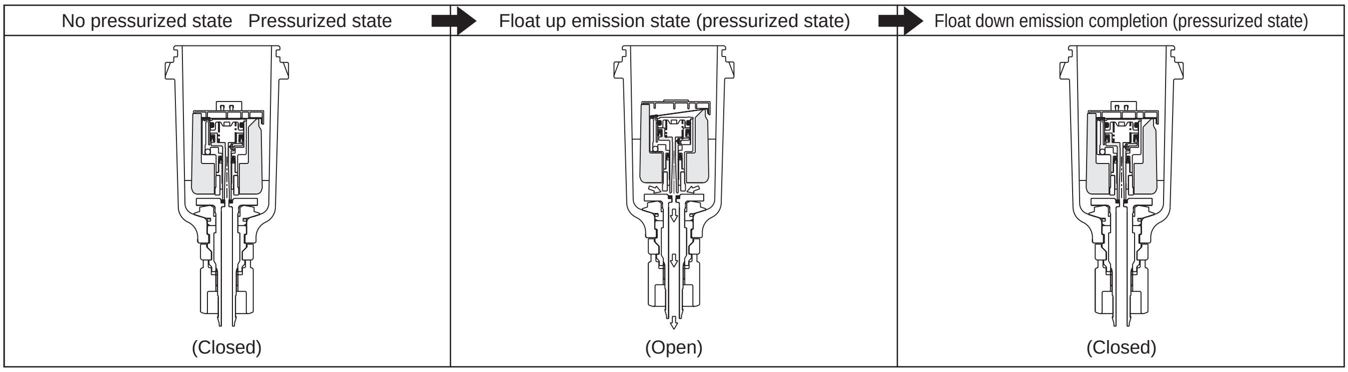
M NC type (F1, FF1)
3000-W/4000-W/6000-W/8000-W Series



M NC type (F1)
1000-W Series



M NC type (F1)
2000-W Series



	Operation overview		Features	Cautions
	No pressurized (evening, etc.)	With pressurized		
NO Type	Drainage discharge is opened and drainage is discharged naturally.	Drainage is discharged with air from the drainage discharge section temporarily until pressure becomes WKH PLQLPXP DFWLYDWLRQ SUHVVXUH... the drainage discharge section is closed.	Drainage is discharged naturally in the nonpressurized state (nighttime, etc.), so user discharge is not required. In the pressurized state, once pressure is attained, drainage is automatically discharged when it accumulates at a set level.	As indicated in features, air and drainage are temporarily discharged until the SUHVVXUH DWWDLQV WKH PLQLPXP DFWLYDWLRQ VR SUHVVX FRPSUHVVRU N: RU OHVV KDYLQJ D VPDOO GLVFKDUJH Use the NC type in this case.
NC Type	The drainage discharge section is closed		This type is suitable for a compressor (0.75 kW or less) having a small discharge. There is no temporary air purging during pressurization. Once pressure is maintained, drainage is automatically discharged when it accumulates at a set level.	Drainage is not discharged in a nonpressurized state (nighttime, etc.), so user discharge is required in applications where large amounts of drainage are generated in a nonpressurized state (nighttime, etc.).

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
F.R.L. unit

Safety precautions

Always read this section before starting use.
Refer to Intro 63 for pneumatic components general precautions

F.R.L. unit (modular design)

Design & Selection

1. Common

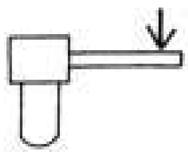
WARNING

This product is for industrial use. Must not be used in components or circuits for medical equipment or components that involve human lives.

Air filter, lubricator plastic bowl, lubricator' drip window, and pressure gauge lens.
These parts are made of polycarbonate, and cannot be used in environments containing synthetic oil, organic solvents, chemicals, coolant, screw locking agent, leak detection solutions, or hot water, etc., or where these substances may come in contact with them.
Refer to page 283 for details on bowl chemical resistance.

Piping load torque
Check that the piping load or torque is not applied to the body or piping sections.

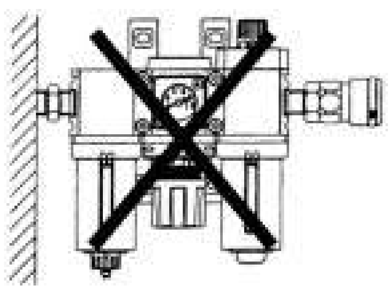
Series	1000-W	2000-W	3000-W	4000-W	6000-W	8000-W
Max. torque Nám	15	15	50	50	100	100



With the 1000-W Series, application of a torque of 30 Nám or more on piping is ÒhazardousÓ as the piping could be damaged. Use within the specified torque, even when using the piping adapter.

Avoid piping as followings.

Avoid piping fixed with a single support, as this can result in excessive force and lead to damage.
With the 1000-W Series in particular, application of a torque of 30Nám and over on piping is "hazardous" as the piping could be damaged.
Use within the specified torque, even when using the piping adaptor.



CAUTION

Large drainage
Install the air dryer and drain separator before the air filter.
If there is a large drainage from the compressor. Hot and highly humid air could shorten the device life or result in corrosion.

Dry air
Rubber parts for the regulator could deteriorate quickly, so use of a fluorine rubber valve assembly is recommended. Consult with CKD when required.

For compressor circuit of water lubrication method
Take measures to prevent chlorine-based substances from entering the compressed air.

Use the automatic drain under the working conditions below. Failure to observe this could result in operation faults.
NO type automatic drain (exhaust without pressurized): For "F" and "FF"
Use a compressor with a capacity of 0.75 kW {90 ℓ/min. [ANR]} or more.
Set the working pressure to 0.1 MPa or more. (Air is purged with initial drainage until pressure reaches 0.1 MPa.)
NC type automatic drain (no exhaust without pressurized): For "F1" and "FF1"
A compressor with a capacity of 0.75 kw or less is used.
Set the working pressure to 0.15 MPa or more.
For 1000 series NC automatic drain
Set the working flow to less than the maximum working flow.
In places with high vibration, such as where the compressor is installed, air could leak from the drain port when the float vibrates. Avoid this use.
Overflowing drainage causes operation faults.

2. Regulator, filter and regulator

WARNING

Install a safety device where an output pressure exceeding the regulator's set pressure value could result in damage or faulty operation of secondary side devices.

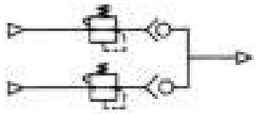
The regulator cannot process residual pressure (remove secondary pressure) when primary pressure is released.
Use a regulator with a check valve when residual pressure must be processed.

In some cases, the regulator cannot be used for secondary side sealing circuits or balance circuits.
Check with CKD for these applications.

CAUTION

Set secondary pressure of the regulator to 85% or less of the primary side, or else the pressure drop could increase.

When using regulators in parallel as shown below, do not use the OUT side as a closed circuit. If a closed circuit is required, set a check valve at the regulator's OUT side.



3. Lubricator

WARNING

Lubricator

Consult with CKD for lubrication of the air motor and bearing. Also consult with CKD when using this unit at a high frequency such as in a press machine.

CAUTION

If the working air rate is low for the lubricator, oil may not drip.

Check the minimum air rate required for dripping oil.

4. Pressure switch

CAUTION

When using the compact pressure switch PPD and digital pressure sensor PPX, avoid using as a set with the lubricator. The switch is not a drip-proof structure, so operation could be disabled if the lubricating oil comes in contact with it.

5. Shut-off valve

WARNING

Cautions on shut-off valve

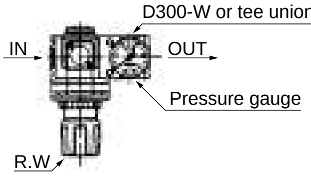
The EXH port is dedicated for installation of the silencer. Tighten with a torque of 3 Nám or less -- as far as is tightened manually. Avoid piping that applies piping load or torque, etc., to the EXH port.

If exhaust is incomplete because of air quality, manually discharge air by operating the knob (turn and raise).

6. Pressure gauge

CAUTION

When using this unit for a large flow, etc., install a pressure gauge as shown below so that secondary pressure is measured accurately.



About G45D

The chemical resistance of lens is shown below.

Avoid using products in an atmosphere where chemicals are contained in compressed air, the atmosphere, or where they could adhere to parts.

Use in the above state could lead to lens damage.

Chemical resistance of lens

Chemicals	Category of chemicals	Main products of chemicals	General usage examples	Lens
Inorganic chemicals	Acid	Hydrochloric acid, sulfuric acid, hydrofluoric acid, phosphoric acid, chromic acid, etc.	Acid washing of metals, acidic degreasing solution, film treatment solution, etc.	
Organic chemicals	Aromatic hydrocarbon	Benzene, toluene, xylene, ethyl benzen, stylene, etc.	Contained in paint thinner (benzene, toluene and xylene)	
	Alcohol	Methyl alcohol, ethyl alcohol, cyclohexanol, benzyl alcohol	Used as freezing prevention agent leakage detection agent	
	Phenol	Carbolic acid, cresol, naphthol, etc.	Liquid disinfectant	
	Ketone	Acetone, methyl ethyl keton, cyclohexanone, acetophenone, etc.		
	Carboxylic acid	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid, etc.	Dyes; oxalic acid for aluminum processing; phthalic acid for paint base and leak-detection agents Used as leakage detection agent	
	Oxyacid	Glycol acid, lactic acid, malic acid, citric acid, tartaric acid		
	Amine	Methylamine, diemethylamine, ethylamine, aniline, acetoacetanilide, etc.	Additive of brake oil	

: Not available (Lens will breake.)

7. Flame resistant Series

WARNING

The regulator's diaphragm, check valve resin parts (inside of aluminum plate), and silencer element are not made of flame-resistant materials. Avoid use where spatter could accumulate.

8. Oil-prohibition Series

CAUTION

Check the working circuit and working fluid.

Operating faults could occur if fluids containing solids or nonspecified fluids pass. Connect a filter to the product's primary side so that solids do not enter.

Working or piping conditions could cause pulsation.

Lower primary pressure if pulsation occurs. Select the proper size as pulsation can occur easily if the flow rate is extremely small in respect to the maximum flow rate.

Consult with CKD if material restrictions apply (copper- based, silicon-based, halogen-based materials not permissible (fluorine, chlorine, oxalic-based)).

An oxalic-acid-based cleaning agent is used to clean parts in some cases.

If low-dust generation and cleanliness higher than the oil-free regulator are required, use the clean regulator RC2000 series.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Design & Selection

9. Oil-prohibition Series

CAUTION

Pressure and flow characteristics and relief start pressure may be less than the standard regulator (R3000 Series, etc.).

Depending on use, such as when back pressure rises, set pressure may increase 0.2 MPa. It is recommended to use a pressure gauge compatible with set pressure + 0.2 MPa.

When the primary pressure is released, the secondary pressure flows to the primary side.

If flowing of the secondary side fluid to the primary side causes faults in other devices, provide a circuit to maintain the pressure.

When used in applications where primary pressure is 0.7 MPa or more, keep the difference in primary and set pressure within 0.4 MPa.

Pulsation could occur if the difference in pressures is high or if secondary piping is large. If so, lower primary side pressure or restrict the secondary line. If pulsation continues, contact CKD.

Set primary pressure to 0.1 MPa or higher than set pressure. Pressure adjustment faults or leaks from the relief valve could result depending on use.

Installation & Adjustment

1. Common

CAUTION

Avoid installing this product where it is subject to direct sunlight.

Flush and wash pipes to be used.

Dirt or foreign materials in piping will lower product performance.

Check that foreign materials do not enter when tightening pipes or joints.

When screwing in piping or joints, check that swarf from piping threads or sealing agent does not get inside. Dirt or foreign materials in piping will lower product performance.

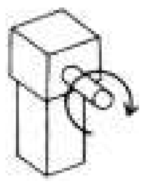
To use F.R.L. correctly

1. Set the regulator pressure setting to increase. After setting pressure, lock the handle. Check primary pressure carefully before setting pressure.
2. Check the arrow indicating the air inlet before connecting. A reverse connection could result in improper operation.
3. Install the air filter and the lubricator case downward vertical. Emission defective and dripping of drain could not be checked.
4. Use of the automatic drain where vibration is present could cause faults and malfunctions.

Pipe automatic drain piping as follows:
Not doing so could cause malfunctions.
Use an inner diameter of 5.7 or more and piping of 5 m or less for the drainage section. Do not use vertical piping.
Pipe so that no lateral load acts on the bowl.
Fix the hexagon side of the cock before screwing the joint, etc., into the Rc1/4 female screw.

Piping screw-in torque
Make sure that excessive torque is not applied on the body and piping when piping.

Series	1000-W	2000-W	3000-W	4000-W	6000-W	8000-W
Max. torque Nám	15	30	30	30	70	70



Drain piping

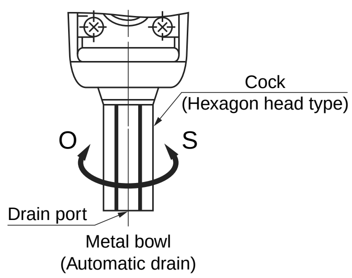
The drain piping for the plastic bowl has a barbed nipple, and can be directly installed. However, confirm that the drain cock is closed before inserting the tube.
Pipe so that no lateral load acts on the bowl.

Tightening torque of drain cock

Max. tightening torque of drain cock of a plastic bowl is as follows.
á 1000 Series: 0.1Nám
á Other: 0.5Nám

Drain piping of metal bowl with automatic drain

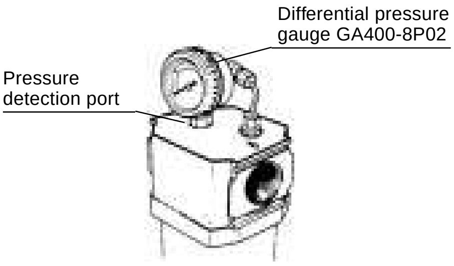
á Fix the cock's hexagonal face before screwing the joint, etc., into the drain port's female threads. When using the metal bowl with automatic drain, if the drain is piped with tightening joint, manual operation is not possible.



Piping the unit with pressure detection port

F6000-*-W-Q/M6000-*-W-Q MX6000-*-W-Q/F8000-*-W-Q M8000-*-W-Q/MX8000-*-W-Q

Pressure detection port is available as option for F6000-W/M6000-W/MX6000-W/F8000-W/M8000-W/MX8000-W.
The life of the filter element or oil mist filter mantle assembly is visually checked by assembling the differential pressure gauge GA400-8-P02 into the pressure detection port.
When selecting option Q and X1 simultaneously for F6000-W and M6000-W and mounting differential pressure gauge GA400, raise the gauge with piping material so that it does not interfere.



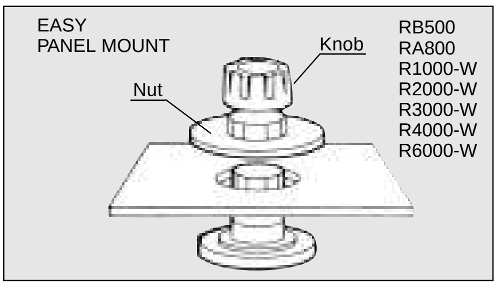
2. Regulator, filter and regulator

⚠CAUTION

Regulator, filter regulator

Lightly tighten (0.6 Nám or less) mounting screws for embedded pressure gauge G401-OP, G401, and gauge plug.
When installing the pressure gauge with a safety mark on the gauge plug, or when installing a general screw-in pressure gauge, tighten with a torque of 10 to 15 Nám or less.
Do not move or swing the product holding the adjustment knob on the regulator.
Check that pressure exceeding the pressure gauge's full scale is not applied because the pressure gauge could be damaged. (Pay special attention when using the full-scale 0.2 or 0.4 MPa pressure gauge.)

Panel mount of regulator
When the panel mounting nut is loosened, the nut acts as a jack and enables the knob to be removed easily. Fix the nut to mount in the panel. The L-type bracket is also installed similarly to the nut.
(When the L-type bracket is used, the body is fixed securely without play.)
* 8000-W Series is excluded.



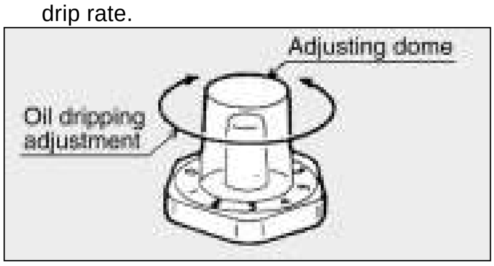
Note: Install the nut before installing the knob.
(With the R2000-W, the nut is removed without removing the knob.)

3. Lubricator

⚠CAUTION

Adjustment of lubricator drop down

Adjust the oil rate by turning the adjusting dome with bare hands. When closing the dome, tighten with a torque of 0.5 Nám or less. The numbers (scale) on the dial are a guide used after adjustment, and do not indicate the oil drip rate.

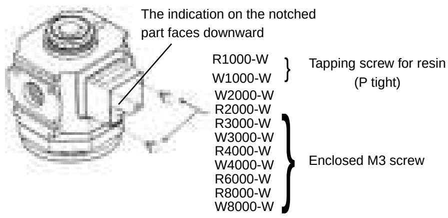


4. Pressure switch

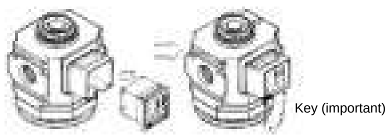
⚠CAUTION

Pressure switch (PPD) installation method

Separate the body from base.
Install the O-ring
* Refer to the dimension drawing for the direct installation type (PPD-****-1F-1)(PPD-****-1F-2) on the left, and install the O-ring to the O-ring groove with a clean finger.
Install the base.
Install the base with the two enclosed screw (M3).
* Carefully install at the designated position in the designed direction while taking care not to dislocate the O-ring.
* Do not tighten one screw completely at once, and instead tighten the two screws so that they are balanced. (Tightening torque 0.5 ± 0.1Nám)



This completes installing the main unit.
Confirm no dirt or foreign matter on the base, and then insert the body. Make sure that the body does not catch on the base. Next, insert the two keys. While pressing the body exterior against the base, face the head of the keys so that they face each other, and then insert them so that they are completely stored on the recesses on the base.



Note) Insert two keys. Check that both keys are installed before pressurizing.
Note) When changing the position or orientation of the PPD which has been installed once, install using the new keys, O rings and installing screws enclosed with the option kit.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
F.R.L. unit

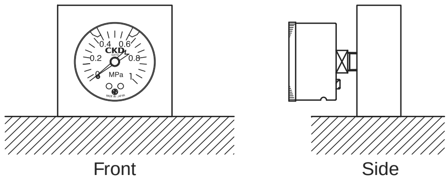
Installation & Adjustment

5. Pressure gauge

CAUTION

□ Pressure gauge
Repeated and sudden increases and decreases in pressure and pressure pulsation must be avoided because it could adversely affect pressure gauge life. Either ease pressure fluctuation in the circuit or check with CKD so that a pressure gauge with cushioning screw is prepared. Applying pressure exceeding the pressure range could damage the pressure gauge.

□ Mount vertically in respect to the ground so that the scale can be viewed straightforward. (See below) Mounting in any other direction can cause the needle movement to become unstable, and can cause the accuracy to drop.



6. Flame resistant Series

CAUTION

□ When installing a general screw-in pressure gauge, tighten with a torque of 3 to 5 Nám or less.

During use & Maintenance

1. Common

WARNING

□ Regularly, once or more in six months, check the air filter and lubricator's plastic bowl for cracks, damage, and other deterioration.
Cracks, damage or other deterioration could result in breakage, so if found, replace with a new bowl or with a metal bowl.

□ Check the air filter, lubricator plastic bowl, and lubricator drip window periodically for contamination.
- □ If parts are heavily contaminated or if transparency has dropped, replace with a new bowl or drip window.
- □ Use a diluted neutral household detergent to wash parts, and then rinse well with clean water. Use of other agents could result in breakage.

□ Removing bowl of filter and lubricator
Before removing the bowl, the compressed air, discharge pressure in the bowl completely, and confirm that no residual pressure remains.

CAUTION

□ Check the oil drip rate once a day.
If the oil drip is faulty, problems could occur in the unit being lubricated.

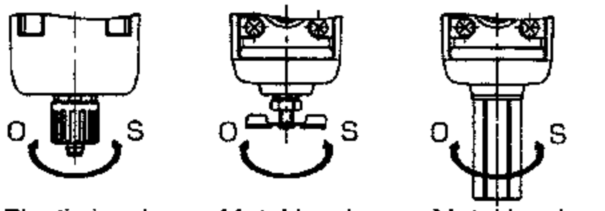
□ Do not branch the air into lubricating air and oilless air with a distributor. The lubricator oil could reverse flow.

□ Performance could drop if the filter element is clogged. Regularly inspect and replace the element.

□ Do not disassemble or modify the product.

□ Read instructions and precautions enclosed with the product before starting use or maintenance.

Discharging drainage

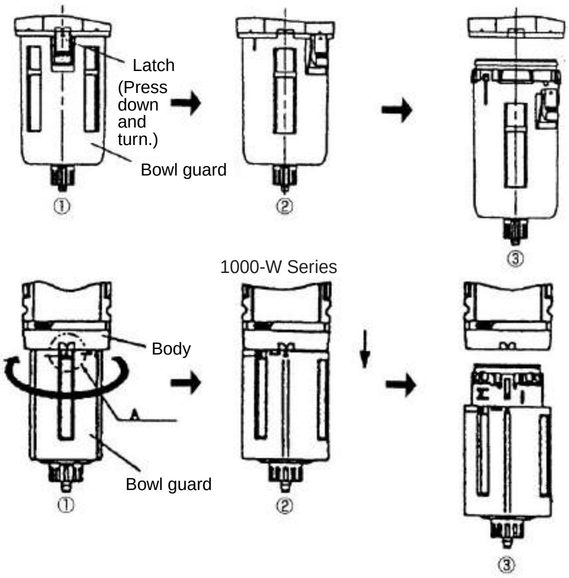


Plastic bowl | Metal bowl (Manual cock) | Metal bowl (Automatic drain)

- □ Drainage is started when the cock is turned to the O side, and the discharge is stopped when the cock is turned in the S direction.
Tighten by hand in the S direction.
- □ When the automatic drain is provided, drainage is discharged automatically when it accumulates. Drainage is also discharged manually.

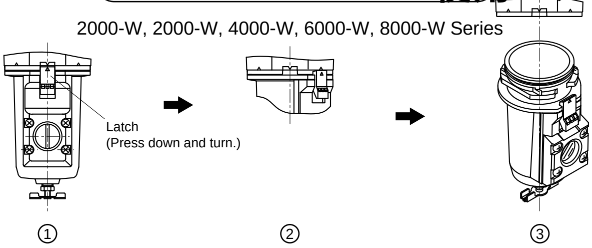
Removing resin bowl

2000-W, 2500-W, 3000-W, 4000-W, 6000-W, 8000-W Series



Removing metal bowl

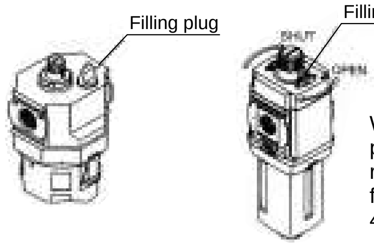
2000-W, 2000-W, 4000-W, 6000-W, 8000-W Series



Removing filling plug

3000-W, 4000-W, 8000-W Series

1000-W Series



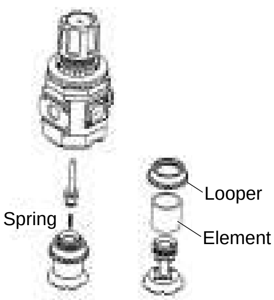
With the 1000 Series, pressure in the bowl is released by sliding the filling plug approximately 45û to the OPEN side.

Close the filling plug after lubricating.
Never remove the bowl without removing the filling plug (while the bowl is pressurized). (L3000-W to L8000-W)
With 1000 Series, never remove the bowl with the filling plug set to the SHUT side (while the bowl is pressurized). (L1000-W)

2. Filter and regulator

⚠CAUTION

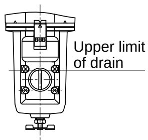
Element of W1000-W to W8000-W
Inspect the valve assembly when it is removed during maintenance.
Do not lose springs, etc., during maintenance.



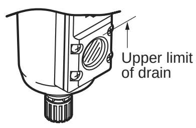
3. Filter

⚠WARNING

Drain so that air filter drainage does not accumulate beyond the maximum.
Components could malfunction if drainage flows into the secondary side.



Metal bowl



Metal bowl (flame resistant type, M1 type)

The resin bowl must not be filled more than the "drain upper limit" or "MAX LEVEL" stamped on the bowl guard.

使用・メンテナンス時 ⚠CAUTION

Submicron 0.3μm element
This filter cannot be washed and reused. When the pressure drops to 0.07 MPa, replace the filter with a new one. (1000 and 2000 Series are excluded.)

Oil mist filter
The mantle (element) life ends after one year (6000 hours) or when pressure drops to 0.1 MPa. (excluding the X type) Replace the mantle when life is reached. (Do not touch the urethane foam layer when replacing the mantle.)

If a differential indicator is provided, replace the mantel (element) before the differential indicator's color changes completely to red.

4. Regulator, filter regulator

⚠CAUTION

Pull the pressure adjustment knob and release the lock before setting the regulator pressure. The regulator could be damaged if the pressure is set without unlock.

Pulsation may occur depending on the working conditions or piping conditions. If pulsation occurs, the working conditions or piping conditions should be changed, such as by lowering the primary pressure.

5. Lubricator

⚠WARNING

Use Class 1 turbine oil (nonadditive) ISO VG32 for the lubricator.
Other oils could cause breakage or improper operation.

Removing filling plug of lubricator
To prevent the filling plug from popping out, loosen the filling plug by one turn, and then completely depressurize the bowl before removing the filling plug. Wipe away any dirt around the fill plug that could scatter.

⚠CAUTION

Periodically replenish oil in the lubricator bowl so that it does not drop below the lower limit.

When lubricating the L1000, pressure in the bowl is released by turning the fill plug. Refer to the section on During use & Maintenance, above, for details on using the fill plug. (Lubrication is done while pipes are pressurized.)
Check that there is no pressure in the bowl, remove the bowl and bowl guard, and then directly lubricate to the bowl.
Refer to the previous page for details on removing the bowl.

During use & Maintenance

When lubricating the L3000-W to L8000-W, loosen the fill plug slightly to release pressure in the bowl, then remove the fill plug. Refer to the section on During use & Maintenance, above, for details on using the fill plug.
(Removing the fill plug enables lubrication to be done while pipes are pressurized.)
Oil is supplied from the fill plug hole, and the bowl is directly lubricated by removing the bowl and bowl guard.
With L8000, oil is supplied to the spacer by lubricating from the fill plug hole.

6. Pressure gauge

Make sure that impact and vibration are not applied directly onto the main unit.

The limit marks will not completely seat against each other. There may e a clearance of approx. one gradient.

7. Oil-prohibition Series

CAUTION

Stop fluid supply and confirm that no residual pressure exists before starting maintenance.

Keeping

Do not leave the product in a hot or highly humid atmosphere or outside of the specified range for a long time. Resin or rubber parts could deteriorate, and the resin bowl could become discolored. Contact CKD before storing the product outside of the specified range.

Release the lock before adjusting pressure.

Turning a locked pressure adjustment knob could cause damage.

Adjust pressure in the direction of pressure increase.

The correct pressure cannot be set if pressure is adjusted downward.

The nonrelief type cannot be depressurized until the secondary side is spent.

Chemical resistance of plastic

⚠WARNING

The chemical resistance of plastic parts is shown below.
Avoid using products in an atmosphere where chemicals are contained in compressed air, the atmosphere, or where they could adhere to parts.
Use in the above state could lead to bowl damage and accidents.
Avoid using these types of chemicals or in an atmosphere containing these chemicals.
A metal bowl is available if these chemicals must be used.

Chemical resistance of plastic bowl and body

Use a metal bowl in an atmosphere containing the following chemicals.
Check whether the testing solutions, sealing agents and adhesives contain the following chemicals.

Types of chemicals	Category of chemicals	Main products of chemicals	General usage examples	Polycarbonate bowl	Nylon bowl	Nylon body
Inorganic chemicals	Acid	Hydrochloric acid, sulfuric acid, hydrofluoric acid, phosphoric acid, chromic acid, etc.	Acid washing of metals, acidic degreasing solution, film treatment solution, etc.			
	Alkaline	Alkalis such as caustic soda, caustic potash, calcium hydroxide, ammonium water, sodium carbonate	Alkaline degreasing of metal water-based coolant, leakage detection agent			
	Inorganic salt	Sodium sulfide, nitrate of soda, potassium bichromate, sodium sulfide, etc.				
Organic chemicals	Aromatic hydrocarbon	Benzene, toluene, xylene, ethyl benzene, styrene, etc.	Contained in paint thinner (benzene, toluene and xylene)			
	Chlorine aliphatic hydrocarbon	Methyl chloride, ethylene chloride, methylene chloride, acetylene chloride, chloroform, trichylene, perchloroethylene, carbon tetrachloride	Organic solvent-based washing solution for metals (Trichylene, perchloroethylene, carbon tetrachloride)			
	Chlorinated aromatic hydrocarbon	Chlorobenzene, dichloro benzene, benzene hexachloride (B, H, C), etc.	Agricultural chemicals			
	Petroleum components	Solvent naphtha, gasoline, kerosene				
	Alcohol	Methyl alcohol, ethyl alcohol, cyclohexanol, benzyl alcohol	Used as freezing prevention agent leakage detection agent			
	Phenol	Carbolic acid, cresol, naphthol, etc.	Liquid disinfectant			
	Ether	Methyl ether, methyl, ethyl ether	Additive of brake oil			
	Ketone	Acetone, methyl ethyl ketone, cyclohexanone, acetophenone, etc.				
	Carboxylic acid	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid, etc.	Dyes; oxalic acid for aluminum processing; phthalic acid for paint base and leak-detection agents Used as leakage detection agent			
	Ester	Dimethyl phthalate (DMP), diethyl phthalate (DEP), dibutyl phthalate (DBP), dioctyl phthalate (DOP)	Used as plasticizer of attached agent composite resin of lubricant, synthetic oil and rust proof oil			
	Oxyacid	Glycol acid, lactic acid, malic acid, citric acid, tartaric acid				
	Nitro compound	Nitro methane, nitro ethane, nitro ethylene, nitro benzene, etc.				
	Amine	Methylamine, diemethylamine, ethylamine, aniline, acetoacetanilide, etc.	Additive of brake oil			
	Nitrile	Acetonitril, acrylonitrule, benznitrile, acetoylidyne nitrile, etc.	Raw material for nitrile rubber			

: Available, X: Not available (plastic will be damaged.)

Modular design

Standard white series

Components for air preparation and pressure adjustment / F.R.L. unit

CONTENTS

F.R.L. combination standard white Series

C1000/C2000/C2500-W C3000/C4000/C6500/C8000-W Series

6SDFH VDYLQJ W\SH LQWHJUDWHG ¿OWHU UHJ

Port size: 1/8 to 1

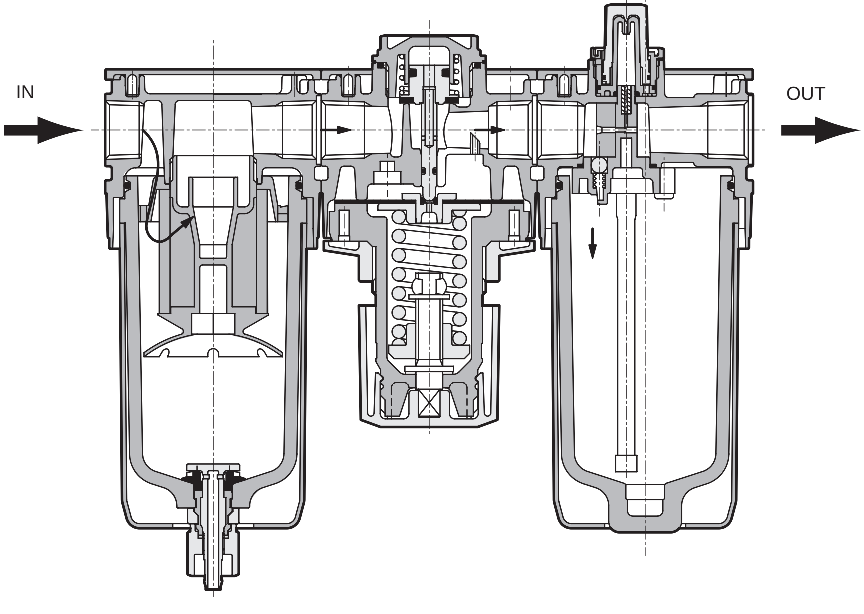
-,6 V\PERO

6SHFL¿FDWLRQV

'HVFULSWLRQV		& :	& :	& :	& :	& :	& :	& :
Appearance								
&RPSRQHQW	$LU ¿OWHU	) :	) :	) :	) :	) :	) :	) :
	5HJXODWRU	5 :	5 :	5 :	5 :	5 :	5 :	5 :
	/XEULFDWRU	/ :	/ :	/ :	/ :	/ :	/ :	/ :
:RUNLQJ ÀXLG		&RPSUHVVHG DLU						
0D[ZRUNLQJ SUHVVXUH 03D		1RWH						
:LWKVWDQGLQJ SUHVVXUH 03D								
$PELHQW WHPSHUDWXUH &		WR						
)LOWUDWLRQ UDWLQJ —P								
6HW SUHVVXUH UDQJH 03D Note 2		WR						
0LQ GULS ÀRZ UDWH 2 OPLQ $15								
5HOLHI		:LWK UHOLHI PHFKDQLVP						
2LO FDSDFLW\ FP								0$;
'UDLQ FDSDFLW\ FP		12						1RWH
8VH RLO		7XUELQH RLO &ODVV ,62 9* VSLQGOH RLO FDQ QRW EH X						
3RUW VL]H 5F 137 *		XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
3URGXFW ZHLJKW NJ								
Standard accessories		3UHVVXUH JDXJH EUDFNHW ERZO JXDUG						

1RWH 7KH PLQLPXP GULS ÀRZ LV WKDW DW ZKLFK ¿YH GURSV RI WXUELQH RLO GULS SHU PLQXWH DW
1RWH :KHQ XVLQJ & : VHULHV) ZLWK DQ DXWRPDWLF GUDLQ WKH PLQLPXP RSHUDWLQJ SUHVVXUH L
5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ WDEOH SDJH IRU WKH) :) DXWRPDWLF GUDLQ IRU WKH PD[LPXP ZRUN
1RWH 'UDLQDJH DFFXPXODWLRQ DOORZDQFH ZLWK WKH PD[LPXP GUDLQ FRFN
Note 4: 7KH DXWRPDWLF GUDLQ V PLQLPXP RSHUDWLQJ SUHVVXUH IRU) RU)) ZLWK DQ DXWRPDWLF GUDLQ LV 03D ,QL
1RWH 7KH PLQLPXP RSHUDWLQJ SUHVVXUH RI WKH DXWRPDWLF GUDLQ LV 03D IRU WKH) RU))
Note 6: :KHQ HOHPHQW RSWLRQ < LV VHOHFWHG UHIHU WR WKH PD[LPXP ZRUNLQJ ÀRZ WDEOH SDJH IRU PD[LPXP
1RWH :KHQ XVLQJ WKH) ZLWK DXWRPDWLF GUDLQ XVH WKH & : 6HULHV DW OHVV WKDQ WKH PD[LPXP ÀRZ UDWH

,QWHUQDO VWUXFWXUH



How to order

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

C1000 - 6 - W - C - U DSV - A6W

A 0RGHO QR Note 2

B Port size

& Port thread type

' Option

($VVHPEO\ DWWDFKPHQW

F 'LVSOD\ XQLW

* Piping adaptor VHW DWWDFKHG

H Attachment DWWDFKHG

I 3UHVVXUH JDXJH RSWLRQ DWWDFKHG

Symbol	Descriptions	A Model no. Note 1						
		&	&	&	&	&	&	&
B Port size								
6	1/8	M						
8	1/4	M	M	M	M	M		
10			M	M	M	M		
15	1/2					M		
20						M Note 1	M	M
25	1						M	M
& Port thread type Note 2								
Blank	Rc thread	M	M	M	M	M	M	M
N	NPT thread	M	M	M	M	M	M	M
G	* WKUHDG	M	M	M	M	M	M	M
' Option Note 3								
Drainage Note 4 Blank	)LOWHU ZLWK PDQXDO GUDLQ FRFN	[illegible]						
C	/XEULFDWRU ZLWK PDQXDO GUDLQ FRFN	[illegible]						M
F	)LOWHU DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH	[illegible]						
F1	)LOWHU DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH	[illegible]						
FF	)LOWHU ODUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH	[illegible]						
FF1	)LOWHU ODUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH	[illegible]						
Bowl material Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M	M	M
Z	1\ORQ ERZO	M	M	M	M	M	M	M
M	0HWDO ERZO			M	M	M	M	M
M1	0HWDO ERZO ZLWK PDQXDO GUDLQ FRFN	[illegible]		M	M	M	M	M
Element Blank	P	M		M	M	M	M	M
Y	—P VXEPLFURQ 1RWH			M	M	M	M	M
Differential pressure detection Blank	:LWKRXW GLIIHUHQWLDO SUHVVXUH GHWHFWRU	[illegible]						
Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ	[illegible]						
Pressure range Blank	WR 03D	M	M	M	M	M	M	M
L	WR 03D 1RWH	M	M	M	M	M	M	M
Relief Blank	:LWK UHOLHI PHFKDQLVP	M	M	M	M	M	M	M
N	1RQ UHOLHI W\SH	M	M	M	M	M	M	M
Pressure gauge Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	[illegible]						
T	: R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW	[illegible]						
T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH	[illegible]						
Flow direction Blank	6WDQGDUG ÀRZ OHIW	M	[illegible]				M	M
X1	5HYHUVH ÀRZ ULJKW	[illegible]					M	M
(Assembly attachment Pages 402 to 413, 426, 427								
Blank	:LWKRXW DVVHPEO\ DWWDFKPHQW	[illegible]						
U	$VVHPEO\ DWWDFKPHQW	[illegible]					M	M
D	'LVWULEXWRU	:M	'M	M:	M	M	M	M
S	3UHVVXUH VZLWFK 3	M	M	M	M	M	M	M
R	3UHVVXUH VZLWFK 3		M	M	M	M		
V	6KXW RII YDOYH 9	M	M	M	M			
K	/RFNRXW YDOYH 9	:	M	M	M	M	M	M
F Display unit								
Blank	03D 8QLW	[illegible]		M	M	M	M	M
M1	03D GLVSOD\ 137 * WKUHDG	[illegible]		M	M	M	M	M
**** Piping adaptor set (attached)** Page 428 Note 9								
Blank	Not attached	M	M	M	M	M	M	M
A6*W	Rc1/8 piping adaptor set	M						
A8*W	Rc1/4 piping adaptor set	M	M	M	M	M		
A10*W	5F SLSLQJ DGDSWRU VHW	[illegible]		M	M	M		
A15*W	Rc1/2 piping adaptor set		M	M	M	M		
A20*W	5F SLSLQJ DGDSWRU VHW					M	M	M
A25*W	Rc1 piping adaptor set						M	M
A32*W	Rc1 1/4 piping adaptor set						M	M
Adaptor screw type								
Blank	Rc thread	M	M	M	M	M	M	M
N	NPT thread	M	M	M	M	M	M	M
G	* WKUHDG	M	M	M	M	M	M	M
H Attachment (attached)								
Blank	Not attached	M	M	M	M	M	M	M
SW	3UHVVXUH VZLWFK 3	:	M	[illegible]				
VW	6KXW RII YDOYH 9 : 9	:M	[illegible]					
I Pressure gauge option (attached) Note 10 Page 659								
Blank	Not attached	M	M	M	M	M	M	M
G45P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G49P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G59P	* ' 3 / * ' 3	M		M	M	M	M	M
G40P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G50P	* ' 3 / * ' 3	M		M	M	M	M	M
G41P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G52P	* ' 3 / * ' 3	M	M	M	M	M	M	M

1RWH RQ PRGHO QR VHOHFWLRQ

1RWH 7KH SLSLQJ DGDSWRU $ LV DVVHPEOHG RQ ERWK HQGV RI & : $: GRHV QRW QHHG WR EH VHOHFWHG IRU WKH SLSLQJ DGDSWRU VHW

1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH ,1 287 JDXJH SRUW DQG GUDLQ GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF GUDLQ DUH WKH WDUJHW DV DUH DWWDFKPHQWV 3 DQG 9

1RWH 6HOHFW RSWLRQV IRU HDFK GUDLQDJH ERZO PDWHULDO HOHPHQW GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ DQG UHOLHI IXQFWLRQ LWHPV :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS

1RWH 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH conditions.

1RWH 1RWH :KHQ VHOHFWLQJ RSWLRQ 0 VHOHFW WKH GUDLQ GLVFKDUJH RSWLRQ &) RU)

1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVVLQJ ÀRZ ZKHQ RSWLRQ < LV VHOHFWHG

1RWH 7KH SUHVVXUH JDXJH V LQGLFDWLRQ UDQJH LV WR 03D IRU RSWLRQ /

1RWH ,QVWDOODWLRQ SRVLWLRQ IRU DVVHPEO\ DWWDFKPHQWV

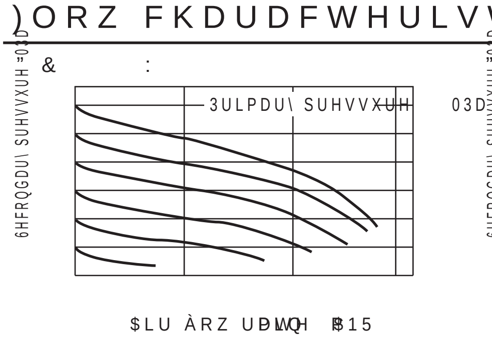
6\PERO	,QVWDOODWLRQ SRVLWLRQ	
'	) ' 5 /	& : WR & :
S or P	) 5 6 3 /	& : WR & : ([FOXGLQJ IRU 3
9 or K	) 5 / 9 .	& : WR & : ([FOXGLQJ IRU 9 RU .

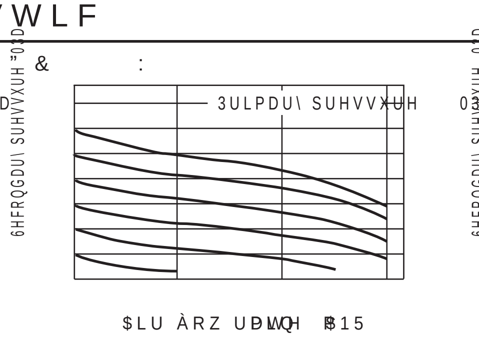
1RWH ,QGLFDWH 8 ' 6 3 9 DQG . ZKHQ VHOHFWLQJ DQ DVVHPEO\ DWWDFKPHQW 8VH FXVWRP FRPELQDWLRQV VSHFLILFDWLRQV IRU DQ\ RWKHU combination.

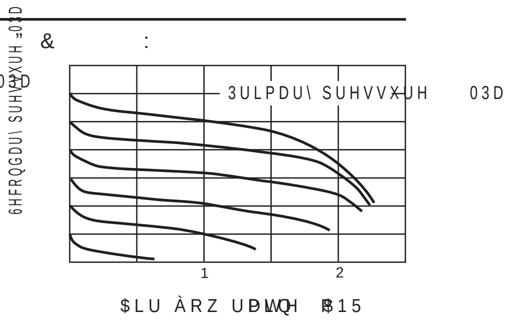
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

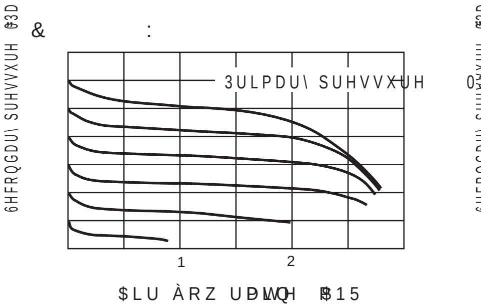
1RWH ,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG D 137 SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV VHOHFWHG DQ 5 WKUHDG SUHVVXUH JDXJH LV HQFORVHG

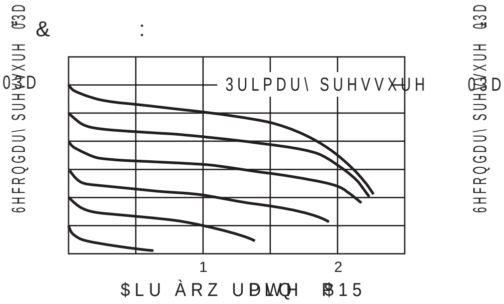
)ORZ FKDUDFWHULVWLF

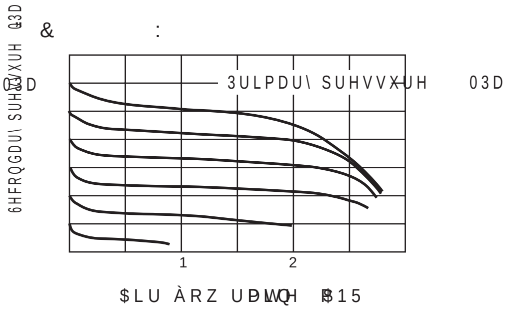


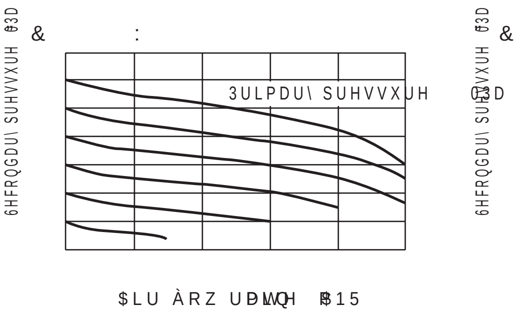


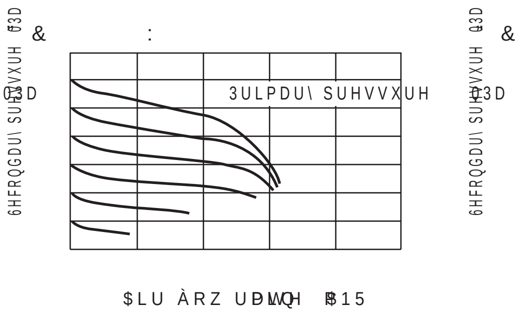


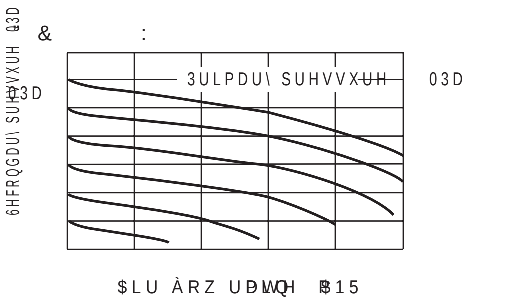


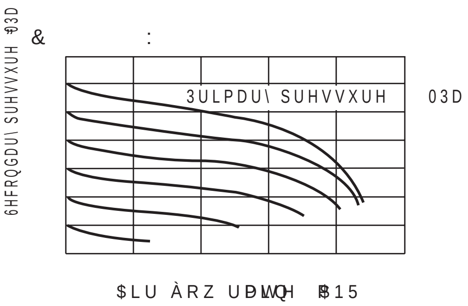


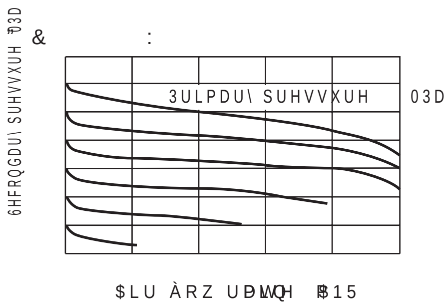


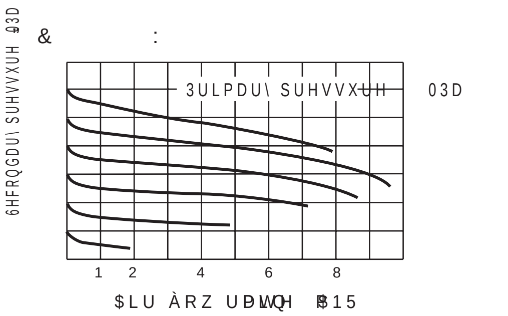


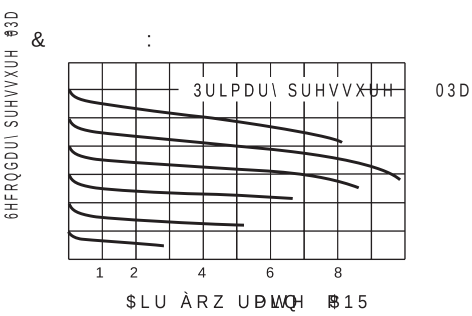


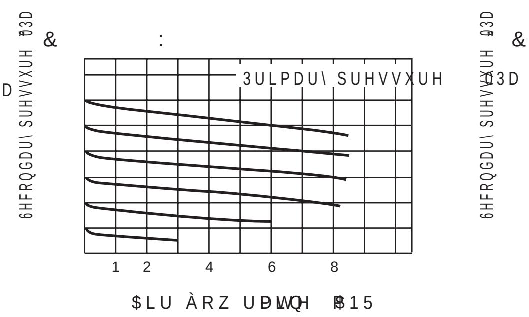


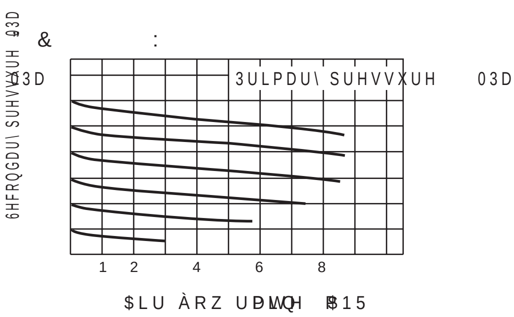










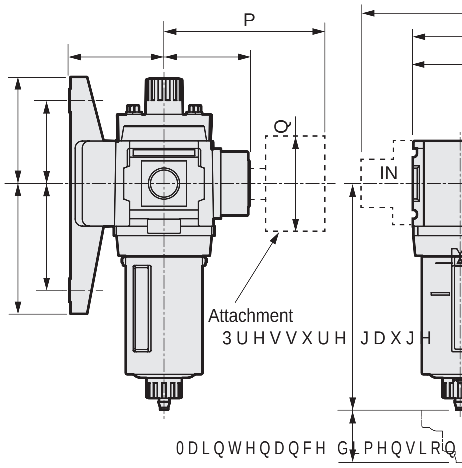


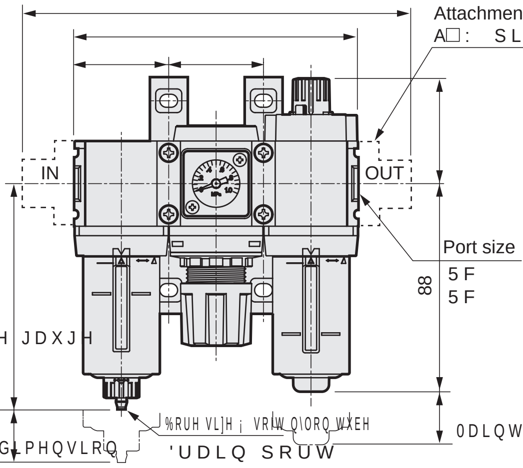
MEMO

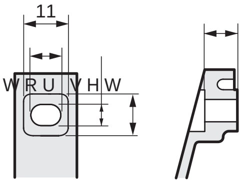
F.R.L. Combination

'LPHQVLRQV QV

M & :

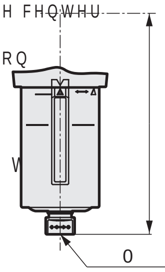






(QODUJHG YLHZ RI EUDFNHW VHFWLRQ

‡ 2SWLRQ GLPHQVLRQV
:LWK DXWRPDWLF GUDLQ



3UHVVXUH JDXJH DWWDFKHG RSWLRQDO GLPHQVLRQV

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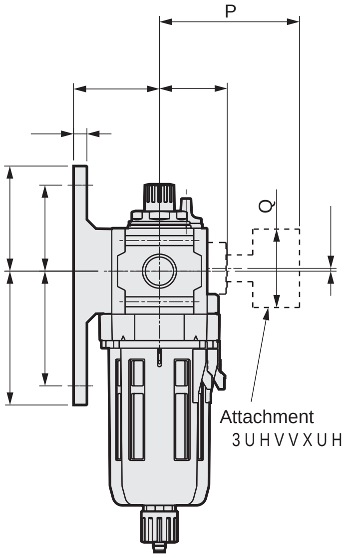
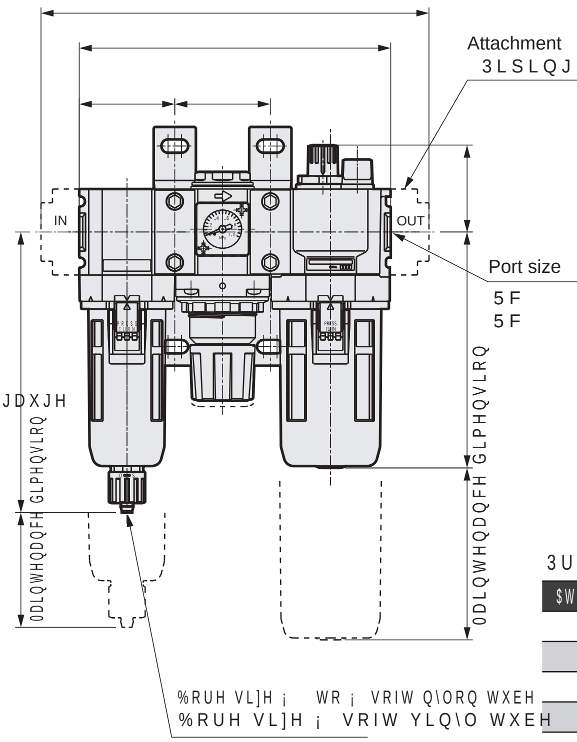
M & :





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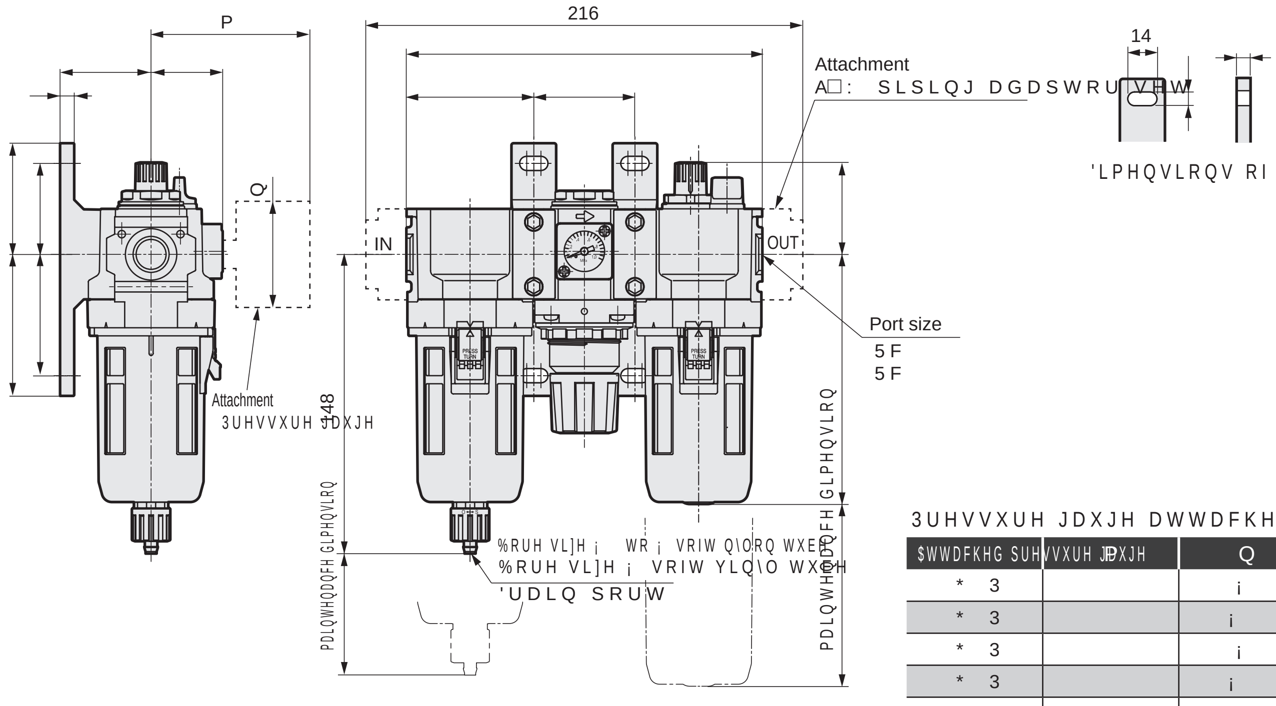

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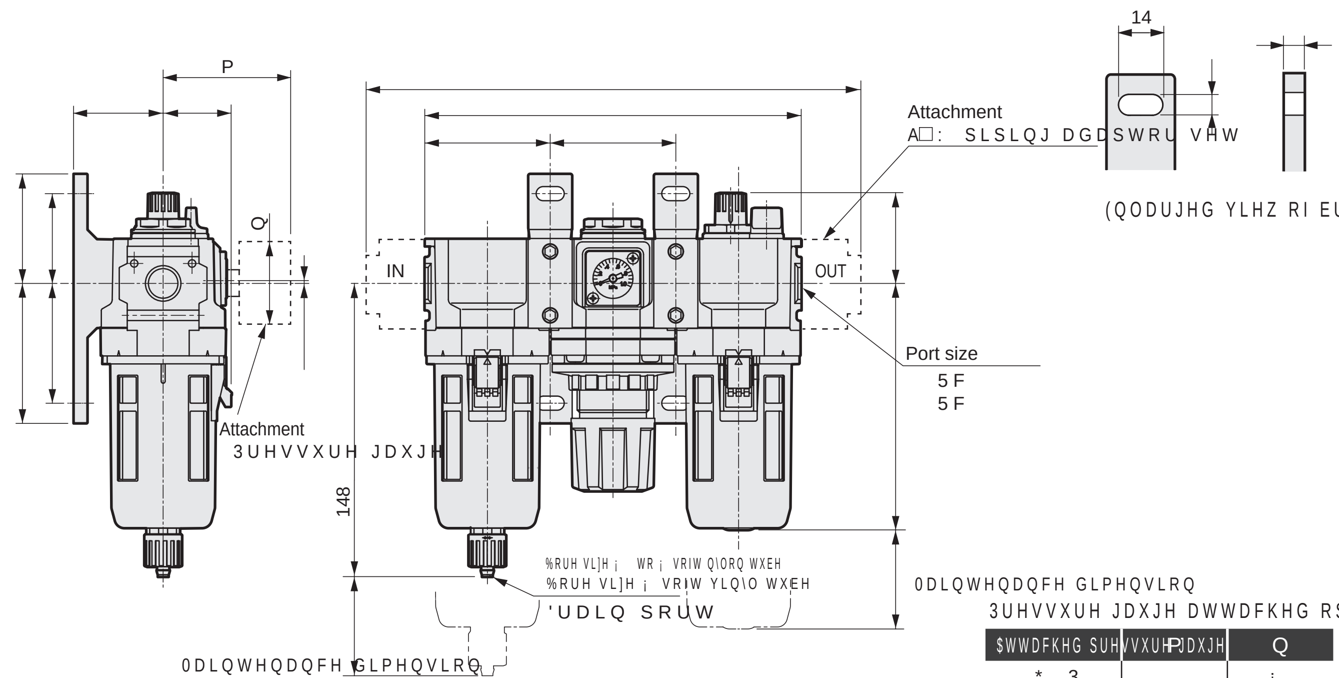

3UHVVXUH JDXJH DWWDFKHG RSWLRQDO

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”5HIHU WR SDJH IRU GLPHQVLRQV RI PHWDO ERZO RSWLRQ ILOWHU *DQG WR SDJH IRU GLPHQVLRQV RI OXEULFDWRU

'LPHQVLRQV CAD QV

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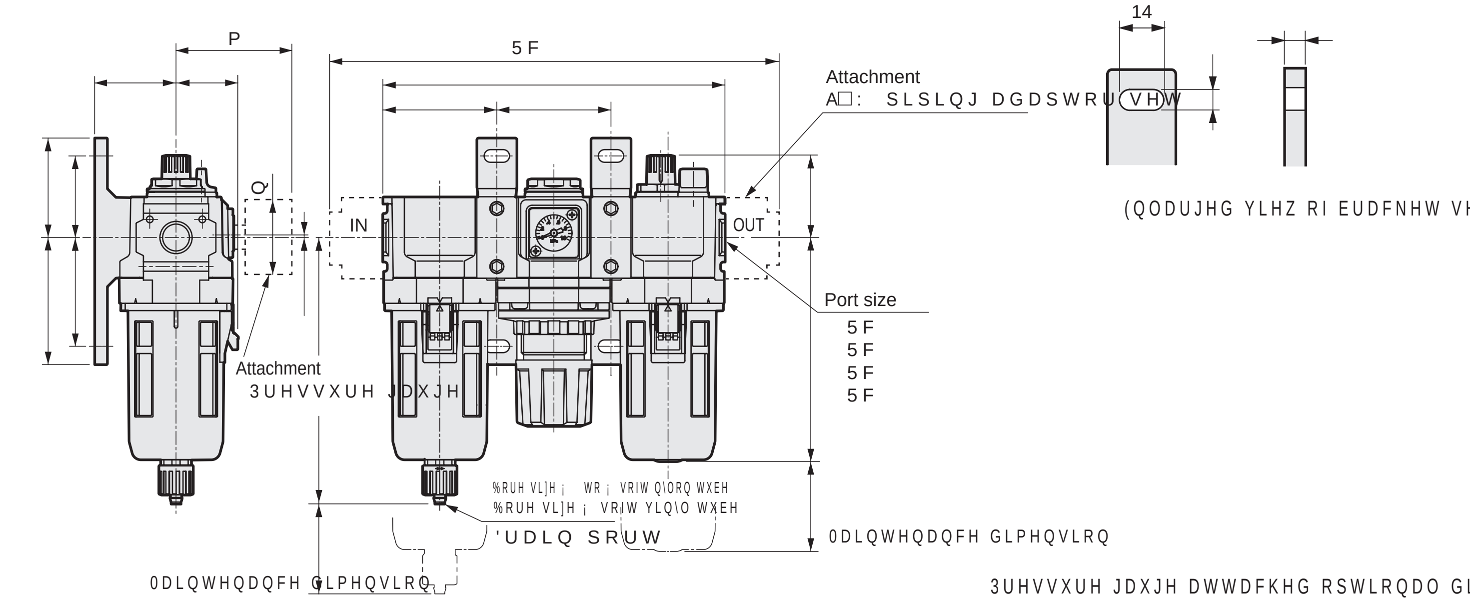

O5HIHU WR SDJH IRU GLPHQVLRQV RI PHWDO ERZO RSWLRQ ILOWHU .DQG WR SDJH IRU GLPHQVLRQV RI OXEULFDWRU

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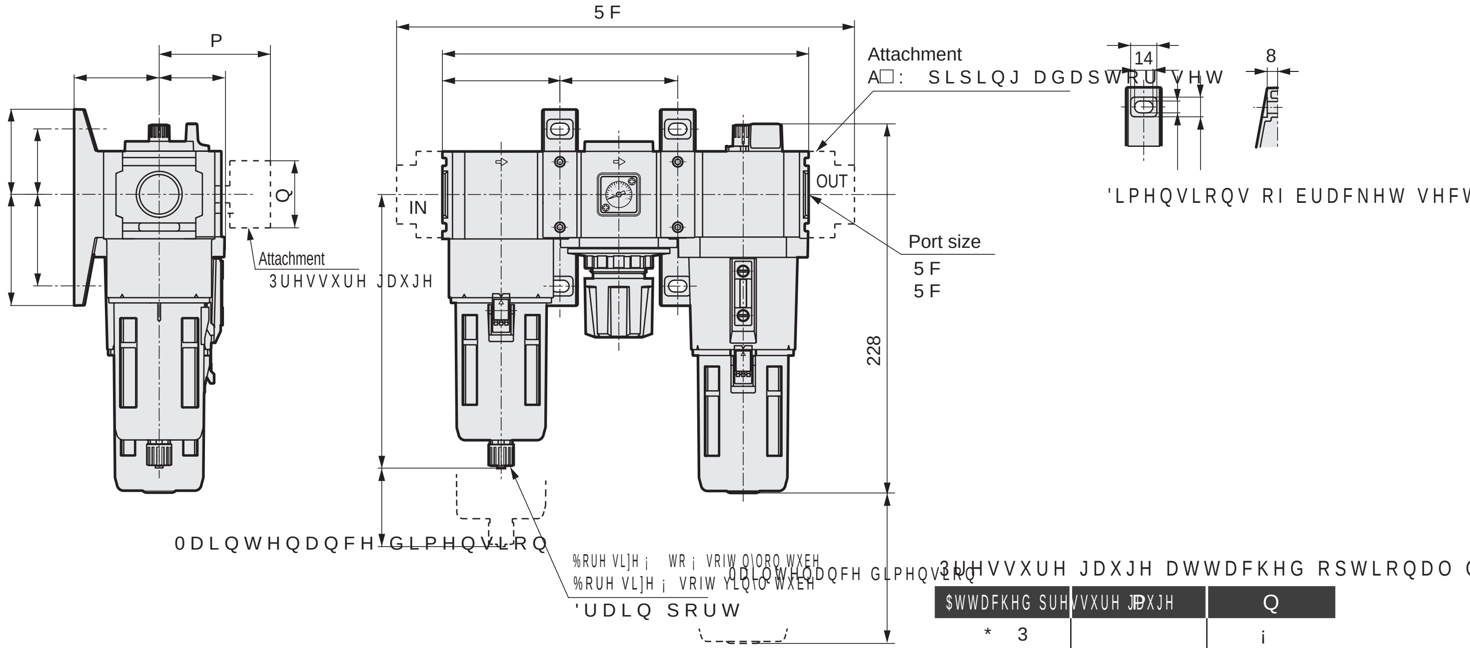

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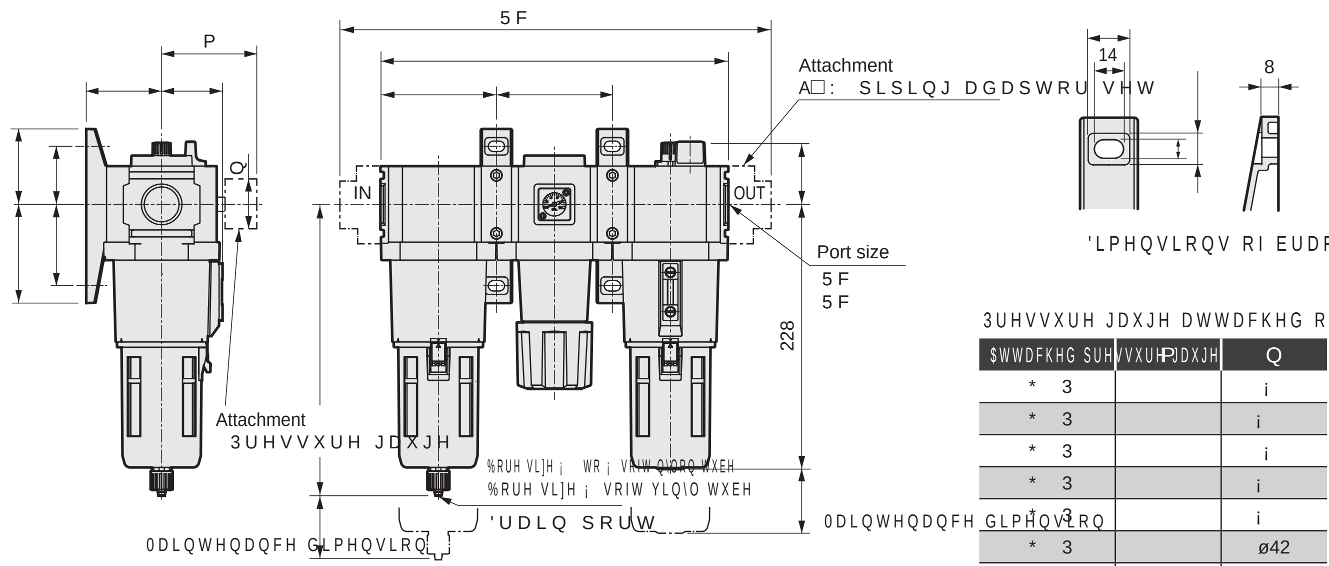

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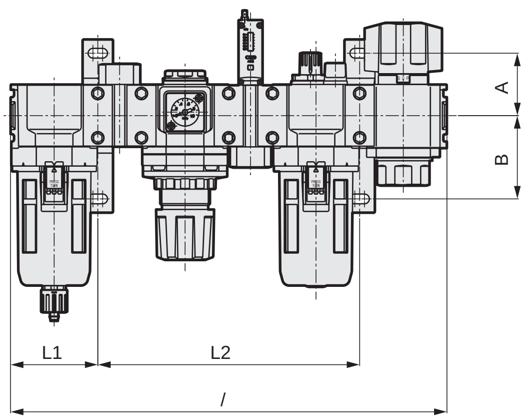
2SWLRQ DVVHPEO\ GLPHQVLRQV

M& : WR & :



Model no.	A	B
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$VVHPEOHG	RSW6RQ			'6.			'39			'3.			69			SK			39			PK		
0RGHO QR	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
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L1: 'LPHQVLRQV IURP WKH ,1 HGJH WR FHQWHU RI WKH 7 W\SH EUDFNHW PRXQWLQJ KROH
L2: 6SDFLQJ GLPHQVLRQV RI WKH PRXQWLQJ KROH IURP WKH ¿UVW 7 W\SH EUDFNHW WR WKH VHFRQG 7 W\SH EUDFNHW
/ 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH 287 HGJH

5HIHU WR SDJH IRU GHWDLOV RQ EUDFNHW PRXQWLQJ
1RWH &KHFN SLSLQJ DGDSWRU LV DVVHPEOHG RQ WKH 287 VLGH 3LSLQJ DGDSWRU VHW LV DVVHPEOHG RQ WKH ERWK HQGV RI & :

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

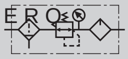
W.L. combination standard white Series

C1010/C2010/C3010/C4010/C8010-W Series

)LOWHU UHJXODWRU DQG OXEULFDWRU LQWHJ

Port size: 1/8 to 1

-,6 V\PERO



6SHFL¿FDWLRQV

'HVFULSWLRQV	& :	& :	& :	& :	& :
Appearance					
&RPSRQHQWV)LOWHU UHJXODWRU	: :	: :	: :	: :	: :
&RPSRQHQWV /XEULFDWRU	/ :	/ :	/ :	/ :	/ :
:RUNLQJ ÀXLG	&RPSUHVVHG DLU				
0D[ZRUNLQJ SUHVVXUH 03D	1RWH				
:LWKVWDQGLQJ SUHVVXUH 03D					
$PELHQW WHPSHUDWXUH UDQJH &	WR				
)LOWUDWLRQ UDWLQJ —P					
6HW SUHVVXUH UDQJH 03D	WR 1RWH	WR			
0LQ GULS ÀRZ Oࡂ PLQ 1RWH5					
5HOLHI	:LWK UHOLHI PHFKDQLVP				
2LO FDSDFLW\ FP					0$;
'UDLQ FDSDFLW\ FP 12					1RWH
8VH RLO	7XUELQH RLO &ODVV ,62 9* VSLQGOH RLO FDQ QRW EH X				
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	DQ DGDSWRU	DQ DGDSWRU	DQ DGDSWRU	XVHV DQ DGDSWRU
3URGXFW ZHLJKW NJ					
Standard accessories	3UHVVXUH JDXJH EUDFNHW ERZO JXDUG				

1RWH 7KH PLQLPXP GULS ÀRZ LV WKDW DW ZKLFK ¿YH GURSV RI WXUELQH RLO GULS SHU PLQXWH DW V
1RWH :KHQ XVLQJ & : VHULHV) ZLWK DQ DXWRPDWLF GUDLQ WKH PLQLPXP RSHUDWLQJ SUHVVX
5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ WDEOH SDJH IRU WKH) :) DXWRPDWLF GUDLQ IR
WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ
1RWH 'UDLQDJH DFFXPXODWLRQ OHYHO ZLWK WKH PDQXDO GUDLQ FRFN
1RWH 7KH DXWRPDWLF GUDLQ V PLQLPXP RSHUDWLQJ SUHVVXUH IRU) RU)) ZLWK DQ DXWRPDWLF GUD
SUHVVXUH UHDFKHV 03D
1RWH 7KH PLQLPXP RSHUDWLRQ SUHVVXUH RI WKH DXWRPDWLF GUDLQ LV 03D IRU WKH) RU))
1RWH 5HIHU WR PD[LPXP ÀRZ UDWH RQ SDJH IRU HOHPHQW RSWLRQ < 6HW WKH ZRUNLQJ ÀRZ WR
1RWH :KHQ XVLQJ WKH) ZLWK DXWRPDWLF GUDLQ XVH WKH & : 6HULHV DW OHVV WKDQ WKH PD[LP
ÀRZ UDWH

JUDWHG

How to order

C1010 - 6 ( ) - W - C - U SV - ( ) - A6W ( )

A 0RGHO QR
B Port size
C Port thread type
D Option
E $VVHPEO\ DWWDFKPHQW
F 'LVSOD\ XQLW
G Piping adaptor set DWWDFKHG
H 3UHVVXUH JDXJH RSWLRQ DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

6\PERO	'HVFULSWLRQ	&	&	&	&	&
B Port size						
6	1/8	M				
8	1/4	M	M	M	M	
10			M	M	M	
15	1/2				M	
20					M Note 1	M
25	1					M
C Port thread type Note 2						
Blank	Rc thread	M	M	M	M	M
N	NPT thread	M	M	M	M	M
G	* WKUHDG	M	M	M	M	M
D Option Note 3						
Drainage Note 4 — Blank	)LOWHU ZLWK PDQXDO GUDLQ FRFN	M	M	M	M	M
C	/XEULFDWRU ZLWK PDQXDO FRFN	M	M	M	M	M
F	)LOWHU DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH		M	M	M	M
F1	)LOWHU DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH		M	M	M	M
FF	)LOWHU ODUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH				M	M
FF1	)LOWHU ODUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH				M	M
Bowl material — Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M
Z	1\ORQ ERZO	M	M	M	M	M
M	0HWDO ERZO			M	M	M
M1	0HWDO ERZO ZLWK PDQXDO GUDLQ FRFN		M	M	M	M
Element — Blank	P	M	M	M	M	M
Y	P VXEPLFURQ 1RWH			M	M	M
Pressure Range — Blank	WR 03D	M	M	M	M	M
L	WR 03D 1RWH	M	M	M	M	M
Relief — Blank	:LWK UHOLHI PHFKDQLVP	M	M	M	M	M
N	1RQUHOLHI W\SH	M	M	M	M	M
Pressure gauge — Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M	M
T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW	M	M	M	M	M
T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH	M	M	M	M	M
Flow Direction — Blank	6WDQGDUG ÀRZ OHIW	M	M	M	M	M
X1	5HYHUVH ÀRZ ULJKW	M	M	M	M	M
E Assembly attachment Pages 402 to 413, 426, 427						
Blank	:LWKRXW DVVHPEO\ DWWDFKPHQW	M	M	M	M	M
U	$VVHPEO\ DWWDFKPHQW	M	M	M	M	M
S	3UHVVXUH VZLWFK 3	M	M	M	M	M
P	3UHVVXUH VZLWFK 3		M	M	M	
V	6KXW RII YDOYH 9	M	M	M	M	
V1	&KHFN YDOYH 9		M	M	M	M
F Display unit						
Blank	03D GLVSOD\ 5F WKUHDG	M	M	M	M	M
J1	03D GLVSOD\ DXWR 137 * WKUHDG	M	M	M	M	M
G Piping adaptor set (attached) Page 428 Note 9						
Blank	Not attached	M	M	M	M	M
A6*W	Rc1/8 piping adaptor set	M				
A8*W	Rc1/4 piping adaptor set	M	M	M	M	
A10*W	5F GLVSOD\ SLSLQJ DGDSWRU VHW	M	M	M	M	
A15*W	Rc1/2 piping adaptor set		M	M	M	
A20*W	5F SLSLQJ DGDSWRU VHW				M	M
A25*W	Rc1 piping adaptor set					M
A32*W	Rc1 1/4 piping adaptor set					M
***Adaptor screw type**						
Blank	Rc thread	M	M	M	M	M
N	NPT thread	M	M	M	M	M
G	* WKUHDG	M	M	M	M	M
H Pressure gauge option (attached) Note 10 Page 659						
Blank	Not attached	M	M	M	M	M
G45P	* ' 3 / * ' 3	M	M	M	M	M
G49P	* ' 3 / * ' 3	M	M	M	M	M
G59P	* ' 3 / * ' 3	M		M	M	M
G40P	* ' 3 / * ' 3	M	M	M	M	M
G50P	* ' 3 / * ' 3	M		M	M	M
G41P	* ' 3 / * ' 3	M	M	M	M	M
G52P	* ' 3 / * ' 3	M	M	M	M	M

1RWH RQ PRGHO QR VHOHFWLRQ

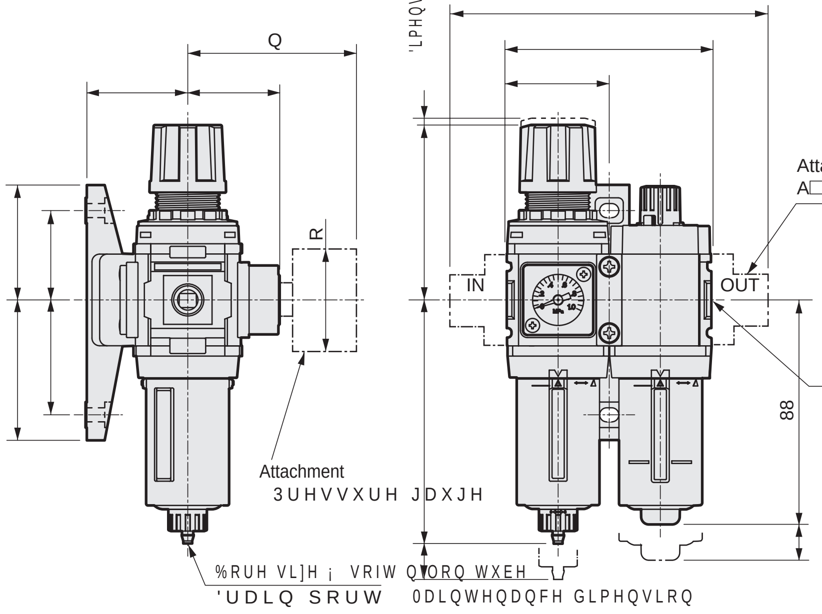
1RWH 3LSLQJ DGDSWRU $:LV DWWDFKHG RQ WKH & : $: GRHV QRW QHHG WR piping adaptor set.
1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH 1 2 87 JDXJH SRUW DQG GUDLQDJH GLVFKDUJH SRUW GUDLQ DUH WKH WDUJHW DV DUH DWWDFKPHQW
1RWH 6HOHFW RSWLRQV SHU GUDLQDJH ERZO PDWHULDO HOHPHQW UHJXODWRU VHFWLRQV :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS
1RWH 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV
1RWH :KHQ VHOHFWLQJ RSWLRQ 0 VHOHFW ZLWK GUDLQ &) RU)
1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVVLQJ ÀRZ ZKHQ < LV VHOHFWHG
1RWH 7KH SUHVVXUH JDXJH V LQGLFDWLRQ UDQJH LV WR 03D IRU RSWLRQ /
1RWH ,QVWDOODWLRQ SRVLWLRQ IRU DVVHPEO\ DWWDFKPHQW

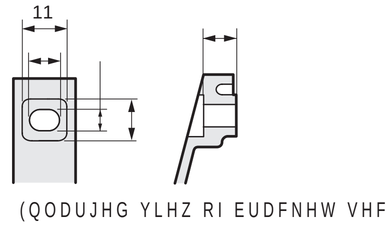
6\PERO	,QVWDOODWLRQ SRVLWLRQ		
S or P	: 6 3 /	& : WR & ([FOXGLQJ	IRU 3
9 RU .	: 0 9 .	& : WR & ([FOXGLQJ RU IRU .	IRU 9

1RWH,QGLFDWH 8 ' 6 3 9 DQG . ZKHQ VHOHFWLQJ DQ DVVHPEO\ DWWDFKPHQW
8VH FXVWRP FRPELQDWLRQV VSHFL¿FDWLRQV IRU DQ\ RWKHU FRPELQDWLRQ
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW
1RWH,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG D 137 SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV VHOHFWHG DQ 5 WKUHDG SUHVVXUH JDXJH LV HQFORVHG

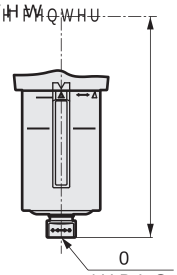
'LPHQVLRQV

M & :





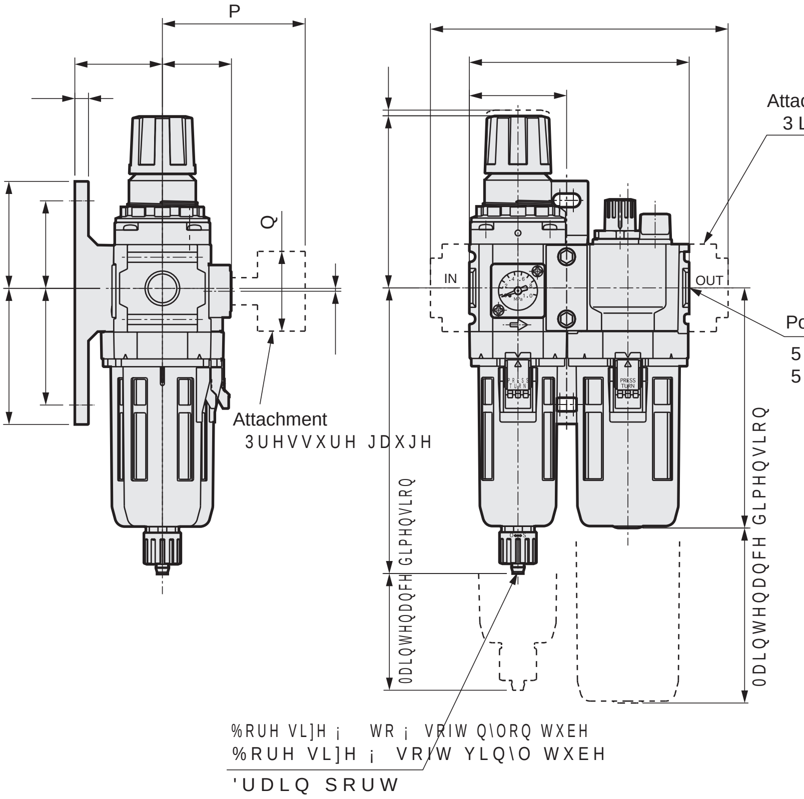
· Option dimensions
:LWK DXWRPDWLF GUDLQ



3UHVVXUH JDXJH DWWDFKHG RSWLRQDO GL

$WWDFKHG SUHVVXUH JDXJH	Q	R
3		i
* 3		i
* 3		i
* 3		i
* 3		i
* 3		ø42
* 3		i

M & :

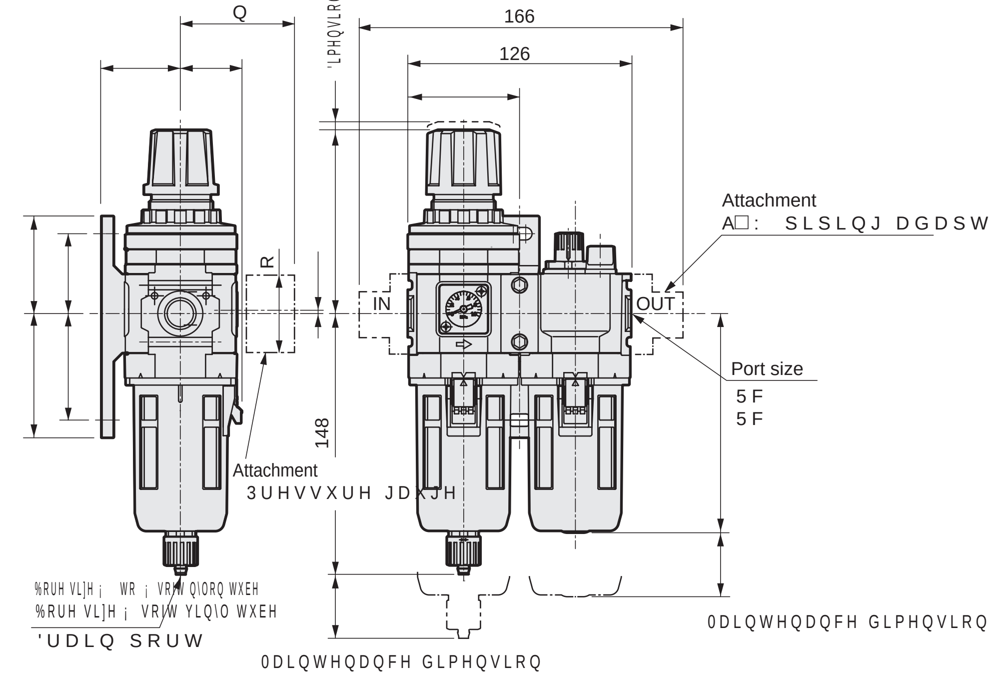


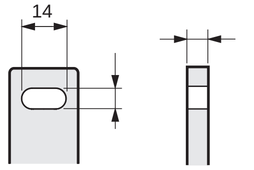
3UHVVXUH JDXJH DWWDFKHG RSWLRQDO

$WWDFKHG SUHVVXUH JDXJH P		Q
* 3		ø
* 3		ø
* 3		ø
* 3		ø42
* 3		ø

'LPHQV CAD QV

M& :





(QODUJHG YLHZ RI EUDFNHW V

3UHVVXUH JDXJH DWWDFKHG RS

$WWDFKHG SUHVVXUH JDXJH	Q	R
* 3		i
* 3		i
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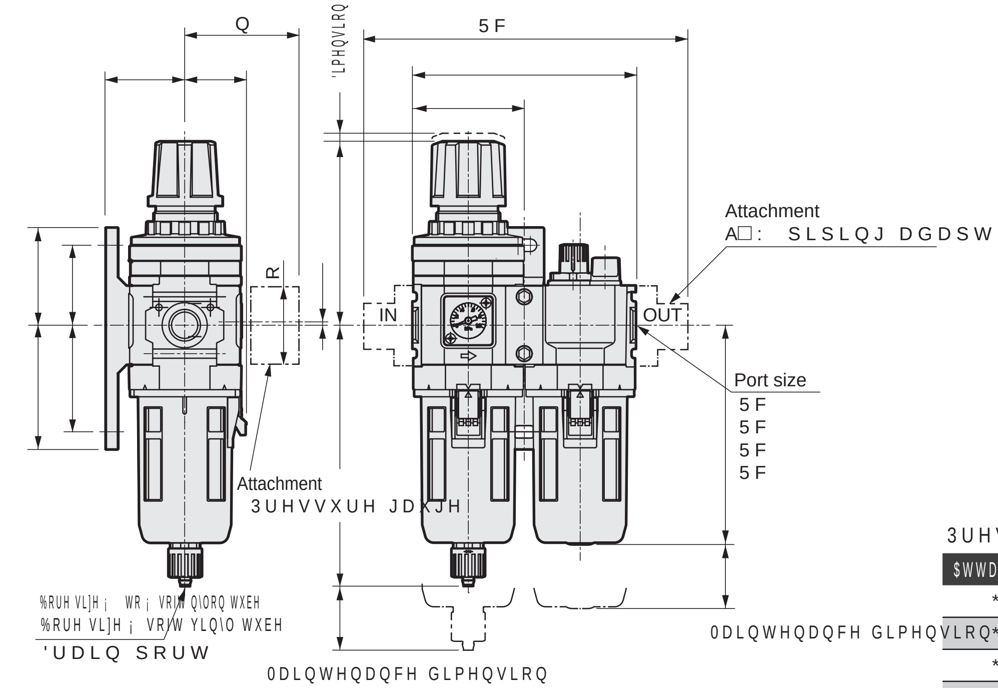
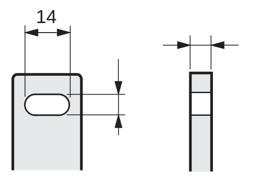
* 3		ø42
* 3		i

" 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSW UHJXODWRU DQG SDJH IRU WKH OXEULFDWRU

M& :





(QODUJHG YLHZ RI EUD

3UHVVXUH JDXJH DWWDFKHG RSWLRQ

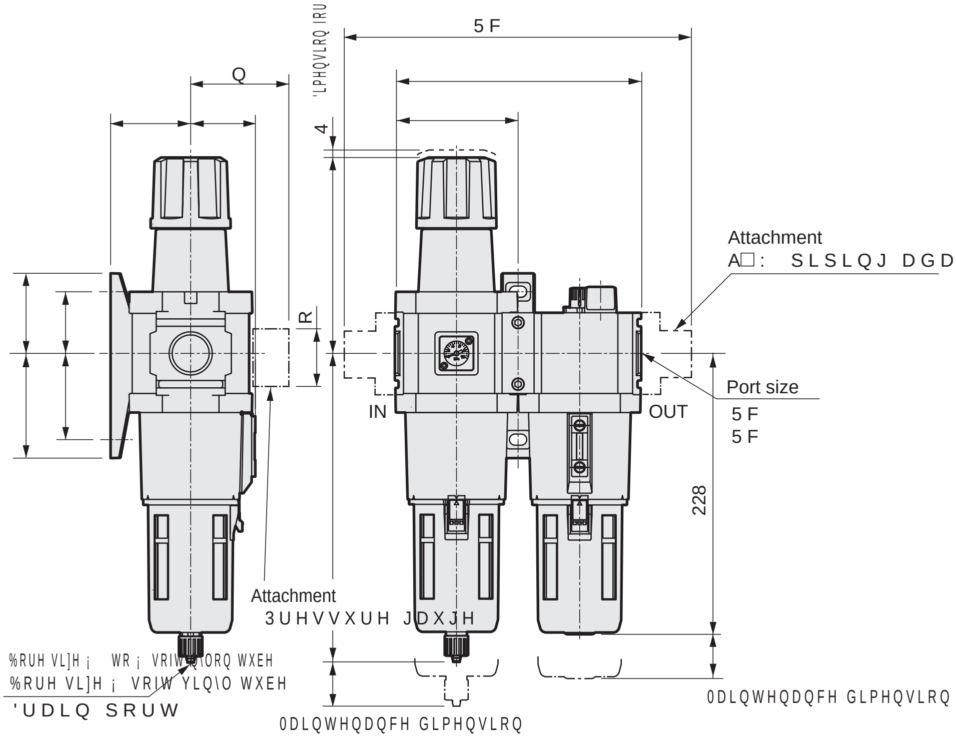
$WWDFKHG SUHVVXUH JDXJH	Q	R
* 3		i
* 3		i
* 3		i
* 3		i
* 3		i
* 3		ø42
* 3		i

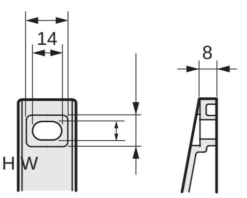
5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ILOWHU UHJXODWRU DQG SDJH IRU WKH OXEULFDWRU

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

'LPHQVLRQV CAD QV

M& :





(QODUJHG YLHZ RI EUDFNHW VHF

3UHVVXUH JDXJH DWWDFKHG RSWLRQDO GL

$WWDFKHG SUHVVXUH JDXJH	Q	R
* 3		¡
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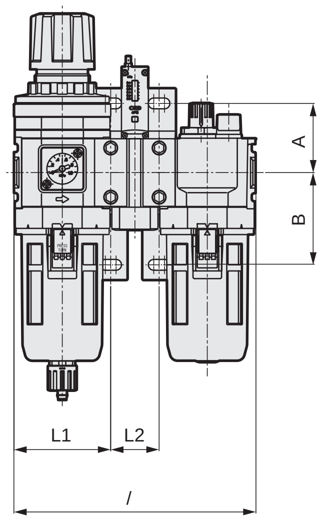
" 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU UHJXODWRU DQG SDJH IRU WKH OXEULFDWRU

2SWLRQ DVVHPEO\ GLPHQVLRQV

M&   : WR &   :



0RGHO QR	A	B
& :		
& :		
& :		
& :		
& :		

$VVHPEOHG RSWLRQ / 0RGHO QR	L1	L2	/	P L1	P L2	P /	9 L1	9 L2	9 /	K L1	K L2	K /	69 L1	69 L2	69 /	SK L1	SK L2	SK /	39 L1	39 L2	39 /	PK L1	PK L2	PK /
& :		28		-	-	-				-	-	-		68	148	-	-	-	-	-	-	-	-	-
& :																								
& :																								
& :																								
& : 1RWH																								
& :				-	-	-	-	-	-				-	-	-				-	-	-	-	-	-

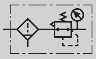
L1: 'LPHQVLRQV IURP WKH ,1 HGJH WR FHQWHU RI W5KHIFUWWSR SDDFNHWIRP XGHWLQ1KVRH EUDFNHW PRXQV
L2: 6SDFLQJ GLPHQVLRQV RI WKH PRXQWLQJ KROH IURP WKH ¿UVW1RWWKHEUDFNHW WR DWKDSHFRQ7LW\SHVEHFRPEOHG RQ WKH
/ 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH 287 HG$JH   : LV DWWDFKHG RQ WKH ERWK HQGV RI &

F.R. combination standard white Series

C1020/C2020/C2520-W C3020/C4020/C6020/C8020-W Series

Filter and regulator integrated.

Port size: 1/8 to 1

JIS symbol 

6SHFL¿FDWLRQV

Descriptions		& :	& :	& :	& :	& :	& :	& :
Appearance								
Components	Filter	) :	) :	) :	) :	) :	) :	) :
	Regulator	5 :	5 :	5 :	5 :	5 :	5 :	5 :
:RUNLQJ ÀXLG		Compressed air						
Max. working pressure MPa		1.0 Note 2						
Withstanding pressure MPa		1.5						
Ambient temperature range °C		5 to 60 Note 1						
Filtration rating µm		5						
Set pressure range MPa		0.05 to 0.85 Note 2	0.05 to 0.85					
Relief		With relief mechanism						
Drain capacity cm		12	25	45	45	80	80	1RWH
Port size RC, NPT, G		1/8, 1/4 XVHV DQ	DGDSWHU DQ	DGDSWHU DQ	DGDSWHU DQ	DGDSWHU DQ	DGDSWRU DQ	DGDSWRU DQ DGDSWRU
Product weight kg		0.28	0.64	0.65	0.79	1.25	2.07	
Standard accessories		Pressure gauge, bracket, bowl guard						

Note 1: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

Note 2: When using C1020 series "F1" with an automatic drain, the minimum operating pressure is 0.2 MPa and maximum operation pressure is 0.7 MPa.
5HIHU WR WKH PD[LPXP SURFHVV ÀRZ LQ EDJH IRU WKH) DXWRPDWLF GUDLQ WKH PD[LPXP ZRUNLQJ ÀRZ 6HW WKH ZRUNLQJ ÀRZ WR OHVV WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ

1RWH 'UDLQDJH DFFXPXODWHV Only with the manual drain cock FP

Note 4: The automatic drain's minimum operating pressure for "F" or "FF" with an automatic drain is 0.1 MPa. Initially generated drainage and air are purged until pressure reaches 0.1 MPa.

Note 5: The automatic drain's minimum operating pressure for "F1" or "FF1" with an automatic drain is 0.15 MPa.

1RWH :KHQ HOHPHQW RSWLRQ < LV VHOHFWHG UHIHU WR SDJH IRU PD[LPXP ÀRZ 6HW WKH ZRUN

1RWH :KHQ XVLQJ WKH ZLWK DXWRPDWLF GUDLQ WKH & :6HULHV VHW WKH PD[LPXP ÀRZ UDWH 5HIHU WR :RQ SDJH IRU WKH PD[LPXP ÀRZ UDWH

How to order

C1020 - 6 - ◯ - W - L - U DSV - ◯ - A6W - ◯

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Display unit
Ⓖ Piping adaptor VHW DWWDFKHG
Ⓗ 3UHVVXUH JDXJH RSWLRQ DWWDFKHG

5HIHU WR SDJH IRU WKH explanation of the option.

Symbol	Descriptions	&	&	&	&	&	&	&
Ⓑ Port size								
6	1/8	M						
8	1/4	M	M	M	M	M		
10			M	M	M	M		
15	1/2					M		
20						M Note 1	M	M
25	1						M	M
Ⓒ Port thread type	**Note 2**							
Blank	Rc thread	M	M	M	M	M	M	M
N	NPT thread	M	M	M	M	M	M	M
G	G thread	M	M	M	M	M	M	M
Ⓓ Option	**Note 3**							
Drainage Note 4 Blank	Filter with manual drain cock	M	M	M	M	M	M	M
F	)LOWHU DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 WNSH M([KDXVW MZ RMSU			M	M		M	M
F1	)LOWHU DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1&M WNSH 1RMH[KDXVW ZMRS	M	M	M	M	M	M	M
FF	)LOWHU ODUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW ZMR							M
FF1	)LOWHU ODUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW ZMR							M
Bowl material Blank	Polycarbonate bowl	M	M	M	M	M	M	M
Z	Nylon bowl	M	M	M	M	M	M	M
M	Metal bowl			M	M	M	M	M
M1	Metal bowl with manual drain cock		M	M	M	M	M	M
Element Blank	P	M	M	M	M	M	M	M
Y	P VXEPLFURQ 1RWH	M		M	M	M	M	M
Differential pressure detection Blank	Without differential pressure detection port	M	M	M	M	M	M	M
Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ SRUW						M	M
Pressure Range Blank	0.05 to 0.85MPa	M	M	M	M	M	M	M
L	WR 03D 1RWH	M	M	M	M	M	M	M
Relief Blank	With relief mechanism	M	M	M	M	M	M	M
N	Nonrelief type	M	M	M	M	M	M	M
Pressure gauge Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M*	M	M	M
T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M	M
T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M	M
T6	Digital pressure sensor PPX attachment option Note 7	M	M	M	M	M	M	M
R1	Pressure switch with display PPD assembly Note 8	M		M	M	M	M	M
Flow direction Blank	6WDQGDUG ÀRZ OHIW :ULJKW	M	M	M	M	M	M	M
X1	,1 287 UHYHUVH ÀRZ ULJKW : OHIW	M	M	M	M	M	M	M
Ⓔ Assembly attachment	**Pages 402 to 413, 426, 427**							
Blank	Without assembly attachment type	M	M	M	M	M	M	M
U	Assembly attachment type Note 9	M	M	M	M	M	M	M
Assembled D	'LVWULEXWRU ' : '	M	M	M	M	M	M	M
S	3UHVVXUH VZLWFK 3 :	M	M	M	M	M	M	M
P	3UHVVXUH VZLWFK 3		M	M	M	M		
V	6KXW RII YDOYH 9	M	M	M	M	M		
K	/RFNRXW YDOYH 9		M	M	M	M	M	M
Ⓕ Display unit								
Blank	MPa display, Rc thread	M	M	M	M	M	M	M
J1	MPa display, NPT, G thread	M	M	M	M	M	M	M
Ⓖ Piping adaptor set (attached)	**Page 428 Note 10**							
Blank	Not attached	M	M	M	M	M	M	M
A6*W	Rc1/8 piping adaptor set	M						
A8*W	Rc1/4 piping adaptor set	M	M	M	M	M		
A10*W	5F SLSLQJ DGDSWRU VHW	M	M	M	M	M		
A15*W	Rc1/2 piping adaptor set		M	M	M	M		
A20*W	5F SLSLQJ DGDSWRU VHW					M	M	M
A25*W	Rc1 piping adaptor set						M	M
A32*W	Rc1 1/4 piping adaptor set						M	M
***Adaptor screw type**								
Blank	Rc thread	M	M	M	M	M	M	M
N	NPT thread	M	M	M	M	M	M	M
G	G thread	M	M	M	M	M	M	M
Ⓗ Pressure gauge option (attached)	**Note 11 Page 659**							
Blank	Not attached	M	M	M	M	M	M	M
G45P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G49P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G59P	* ' 3 / * ' 3	M		M	M	M	M	M
G40P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G50P	* ' 3 / * ' 3	M		M	M	M	M	M
G41P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G52P	* ' 3 / * ' 3	M	M	M	M	M	M	M
R2 Note 9	'LJLWDO SUHVVXUH VHQVRU 33;	M	M	M	M	M	M	M

⚠ Note on model no. selection

1RWH 3LSLQJ DGDSWRU : LV DWWDFKHG WR WKH HQG RI & : $: GRHV QRW KDYH WKH VHOHFWHG piping adaptor set.

Note 2: When G threads or NPT threads are selected, the IN, OUT, JDXJH SRUW DQG G UDLQ GLVFKDUJH SRUW EHFRPH WKH VHOHFWHG WKUHDG DXWRPDWLF GUDLQ DUH WKH WKUHDG 9 DV DUH DWWDFKPHQWV 3

1RWH 6HOHFW RSWLRQV IRU GUDLQDJH ERZO PDWHULDO HOHPHQW differential pressure detection, and regulator items. When selecting options for several items, list options in order from the top.

Note 4: Refer to page 276 for the automatic drain use conditions.

1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVV ÀRZ ZKHQ RSWLRQ "Y" is selected.

Note 6: The pressure gauge's indication range is 0 to 0.4MPa for option "L".

Note 7: When option "T6" is selected, only "Blank" or "R2" can be VHOHFWHG IRU + SUHVVXUH JDXJH DWWDFKHG 7KH GLJLWDO SUHVVXUH VHQVRU 33; PRXQWLQJ SRUW 5F LV assembled by open.

Note 8: The output type is NPN transistor output. Contact CKD when the PNP transistor output is required.

Note 9: Installation position for assembly attachments

Symbol	Installation position	Applicable model
D	) ' 5	& : WR & :
S or P	) 5 6 3	& : WR & : ([FOXGLQJ IRU 3
9 or K	) 5 9 .	& : WR & : ([FOXGLQJ IRU 9 RU .

1RWH ,QGLFDWH 6 3 9DQG ZKHQ VHOHFWLQJ assembly attachment. Use custom combinations specifications for any other combination.

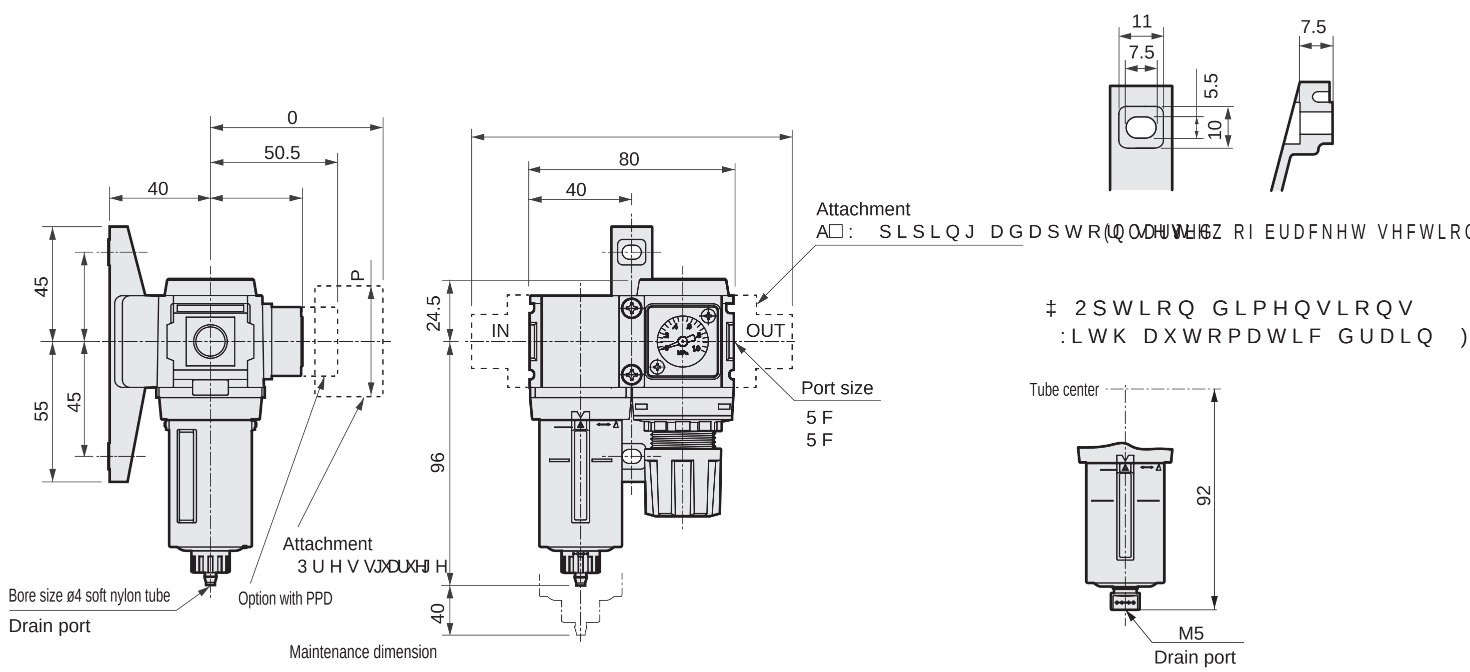
Note 10: The joiner set is enclosed with the piping adaptor set.

Note 11: If NPT is selected for the "C" piping thread, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Dimensions

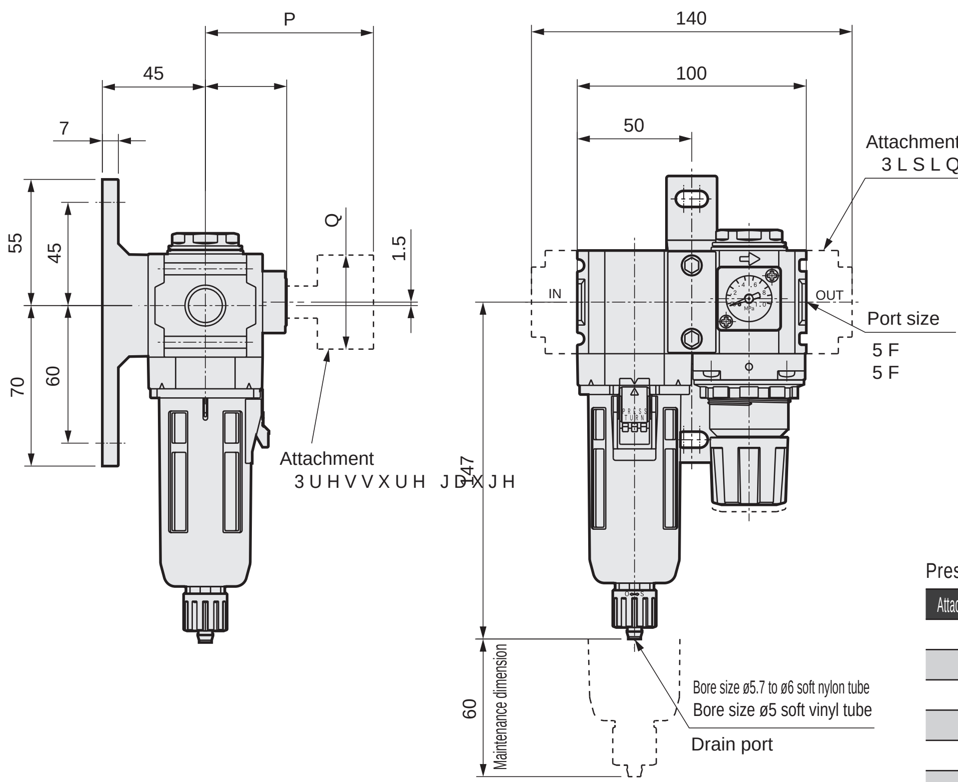
M & :



Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

M & :

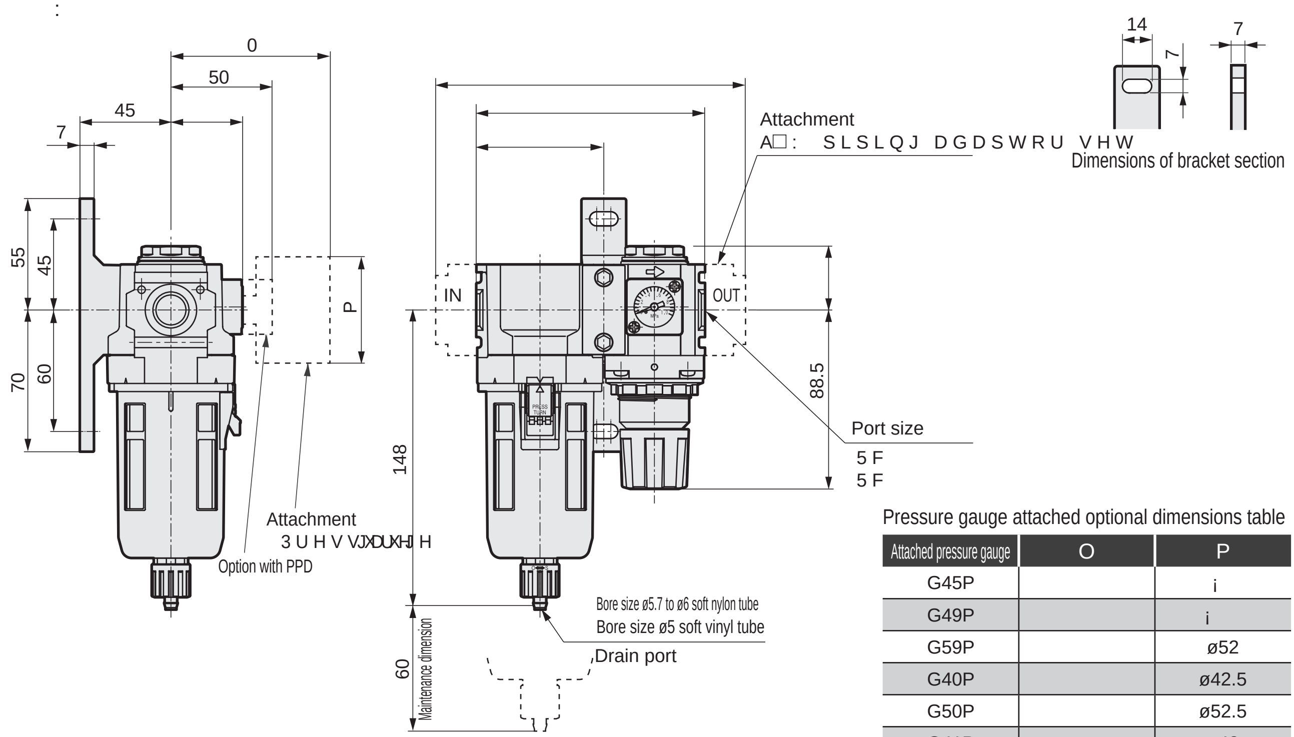


Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
G45P		ø
G49P		ø
G40P		ø42.5
G41P		ø42
G52P		ø52.5
R2		□

Dimensions

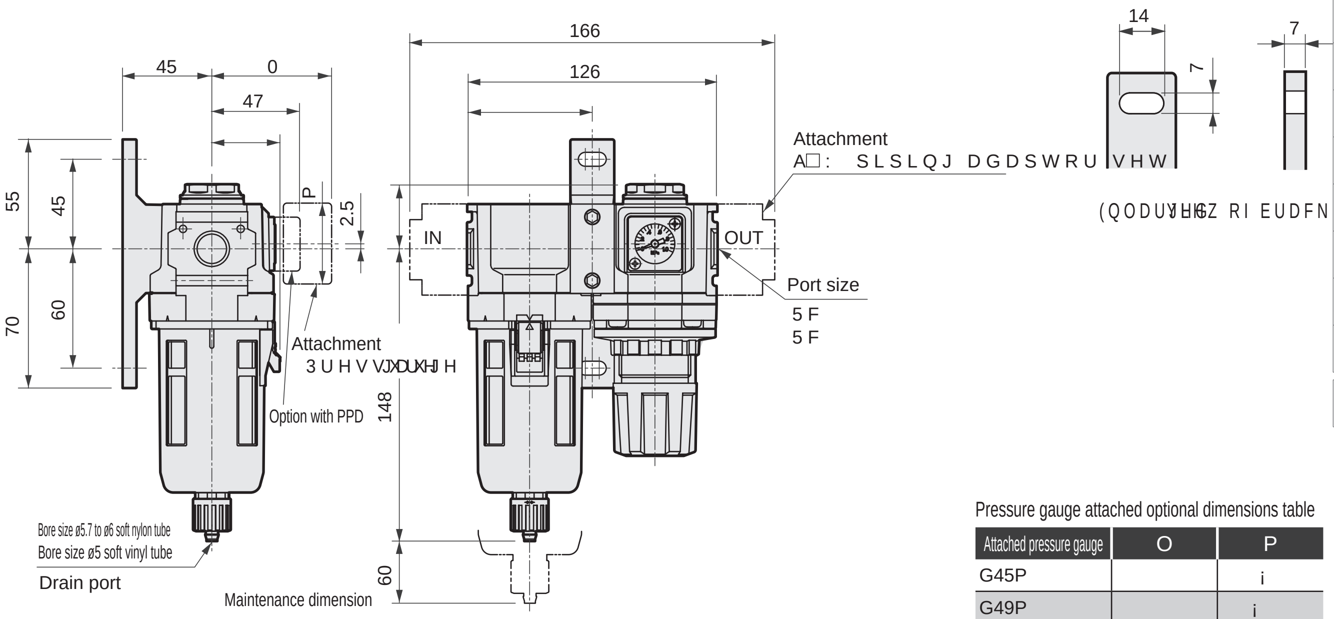
M&　　:



Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

M&　　:



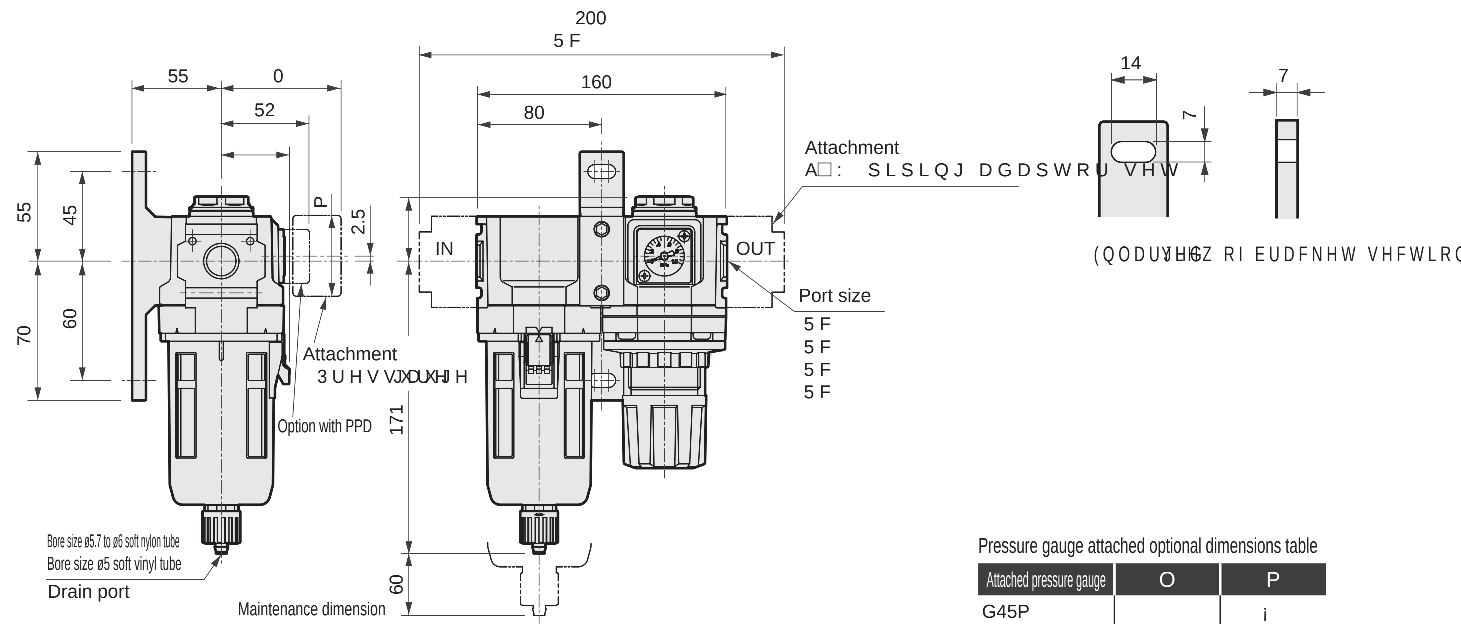
Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

" 5HIHU WR SDJH　　IRU RSWLRQ GLPHQVLRQV RI PHWDO ERZO

Dimensions

M & :

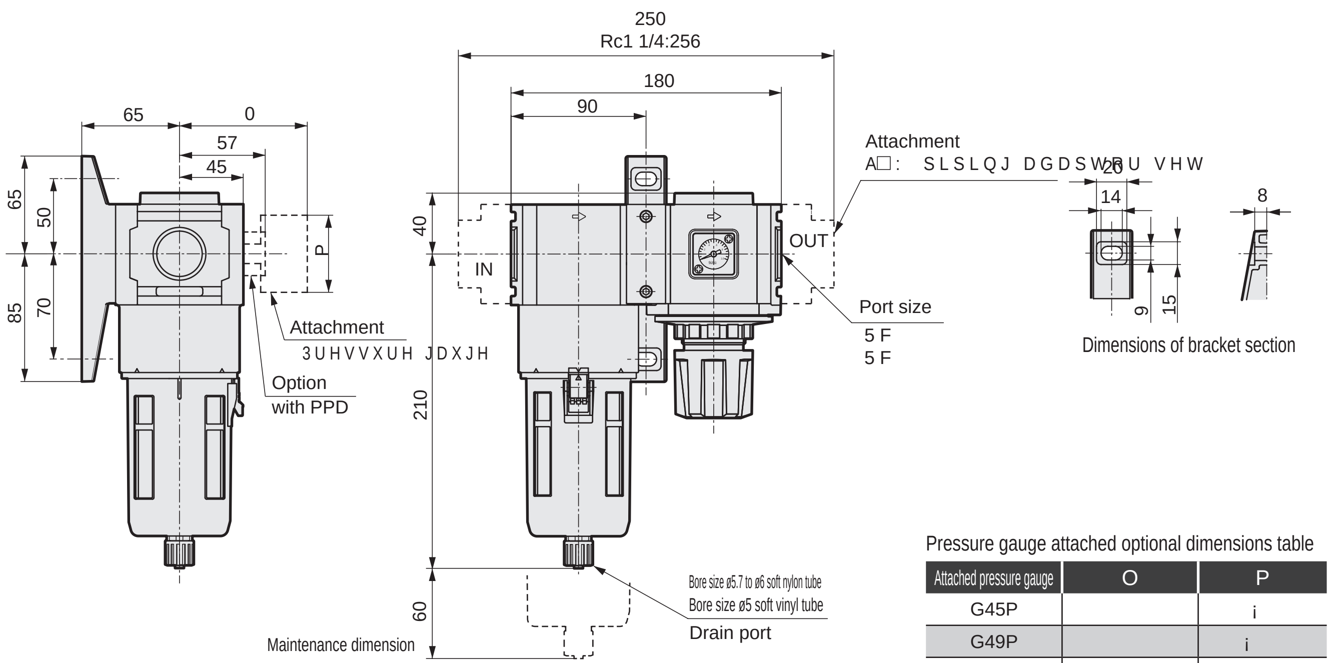


” 5HIHU WR SDJH IRU RSWLRQ GLPHQVLRQV RI PHWDO ERZO

Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

M & :

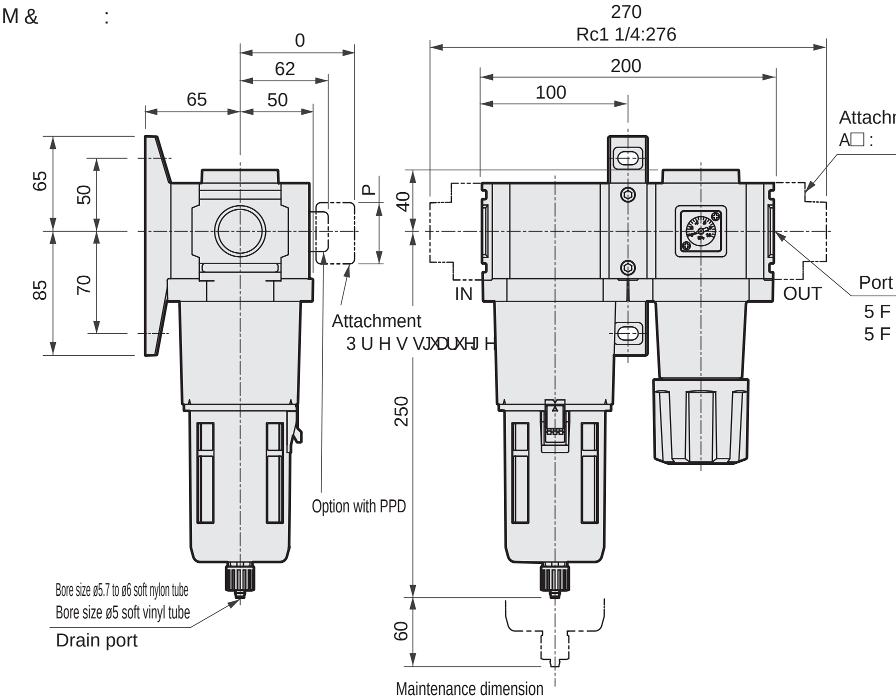


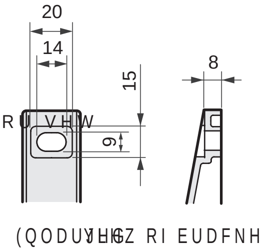
Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

Dimensions CAD

M& :





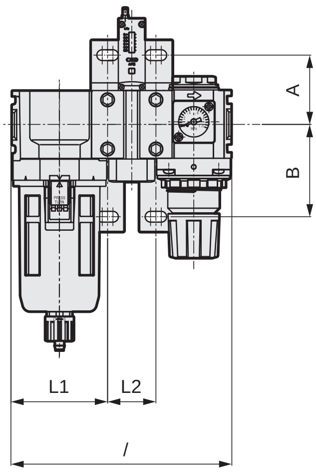
Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		í
G49P		í
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

" 5HIHU WR SDJH IRU RSWLRQ GLPHQVLRQV RI PHWDO ERZO

Option assembly dimensions

M& : WR & :



Model no.	A	B
& :		45
& :	45	60
& :		
& :		
& :		
& :	50	70
& :		

Assembled option	D			6 1RWH			P			9			K			'6 1RWH			DP			'9			DK		
Model no.	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
& :	40	28	108	40	40	129.5	í	í	í	40	40	120	í	í	í	40	68	157.5	í	í	í	40	68	148	í	í	í
& :	50			50	50	151.5	50	50	180	50	50		50	50		50	81.5		50	81.5	211.5	50	81.5	194.5	50	81.5	194.5
& :			144.5		50	164.5		50			50	176		50	176		81.5	196		81.5	224.5		81.5	207.5		81.5	207.5
& :			157.5			177.5			206			189			189		94.5	209		94.5			94.5	220.5		94.5	220.5
& :	80		191.5	80	80	211.5	80	80	240	80	80		80	80		80	111.5		80	111.5	271.5	80	111.5	254.5	80	111.5	254.5
& : 1RWH	100			100	80		100	80	280	100	80		100	80		100	111.5		100	111.5		100	111.5	294.5	100	111.5	294.5
& :	90	50		90	90	265	í	í	í	í	í	í	90	90	270	90	140		í	í	í	í	í	í	90	140	
& :	100	50	250	100	100	285	í	í	í	í	í	í	100	100	290	100	150		í	í	í	í	í	í	100	150	

Assembled option	'69			DSK			'39			DPK			69			SK			39			PK		
Model no.	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
& :	40	96	176	í	í	í	í	í	í	í	í	í	40	68	148	í	í	í	í	í	í	í	í	í
& :	50		226	50		226	50	162	274.5	50	162	274.5	50	81.5	194.5	50	81.5	194.5	50			50		
& :								162	287.5		162	287.5		81.5	207.5		81.5	207.5			256			256
& :		126	252		126	252		175			175			94.5	220.5		94.5	220.5			269			269
& :	80		286	80		286	80	191.5		80	191.5		80	111.5	254.5	80	111.5	254.5	80	160		80	160	
& : 1RWH	100			100			100	191.5		100	191.5		100	111.5	294.5	100	111.5	294.5	100	160		100	160	
& :	í	í	í	90	190		í	í	í	í	í	í	í	í	í	90	140		í	í	í	í	í	í
& :	í	í	í	100	200		í	í	í	í	í	í	í	í	í	100	150		í	í	í	í	í	í

L1: 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH FHQWHU RI WKH RSWLRQ 5HIHU WR SDJH IRU GHWDLOV RQ EUDFNHW PRXQWLQJ
L2: 6SDFLQJ GLPHQVLRQV IURP WKH FHQWHU RI WKH RSWLRQ WR WKH FHQWHU RI WKH SLSLQJ DGDSWRU 1RWH 7KH SLSLQJ DGDSWRU LV DVVHPEOHG LQ WKH SDWWHUQ
/ 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH 287 RQ WKH ERWK HQGV RI & :

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

F.M.R. combination standard white Series

C1030/C2030/C2530-W C3030/C4030/C6030/C8030-W Series

)LOWHU RLOPLVW ¿OWHU DQG UHJXODWRU LQ

Port size: 1/8 to 1

JIS symbol

6SHFL¿FDWLRQV

Descriptions		& :	& :	& :	& :	& :	& :	& :
Appearance								
Components	Filter	) :	) :	) :	) :	) :	) :	) :
	2LO PLVW ¿OWHU	0 :	0 :	0 :	0 :	0 :	0 :	0 :
	Regulator	5 :	5 :	5 :	5 :	5 :	5 :	5 :
:RUNLQJ ÀXLG		Compressed air						
Max. working pressure MPa		1RWH						
Withstanding pressure MPa		1.5						
Ambient temperature range °C		5 to 60						Note 2
Set pressure range MPa		0.05 to 0.85 1RWH	0.05 to 0.85					
Relief		With relief mechanism						
Port size Rc, NPT, G		1/8, 1/4 XVHV DQ	DGDSWRU DQ	DGDSWRU DQ	DGDSWRU DQ	DGDSWRU DQ	DGDSWRU DQ	DGDSWRU DQ DGDSWRU
Product weight kg		0.40	0.98	1.02	1.10	1.86		4.45
Secondary oil concentration 2LO PLVW ¿OWHU RXWOHW VLGH		0.01mg/m or less						
0D[ÀRZ UDWH m/min 1RWH		0.15	0.25			0.825	1.27	2.6

1RWH 7KH PD[LPXP ÀRZ LV IRU D SULPDU\ SUHVVXUH RI 03D 5HIHU WR SDJH IRU WKH PD[LPXP ÀRZ U

Note 2: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

1RWH KHQ) ZLWK DXWRPDWLF GUDLQ HOHFWURGH : VHULHV & DXWRPDWLF DVVHPEOHG WKH LQOHW RI LV ¿OWHU 0LQLPXP RSHUDWLQJ SUHVVXUH 03D DQG PD[LPXP RSHUDWLQJ SUHVVXUH 03D 5HIHU WR WKH PD[LPXP SURFHVV ÀRZ DW SDJH IRU WKH 0 :) DXWRPDWLF GUDLQ IRU WKH PD[LPXP ZRUNLQJ ÀRZ

1RWH 5HIHU WR SDJH IRU GHWDLOV RQ RWKHU RLO PLVW ¿OWHUV

1RWH KHQ) ZLWK DXWRPDWLF GUDLQ HOHFWURGH WKH DSSOLHG SUHVVXUH 03D RU PRUH ¿UVW DQG DXWRPDWLF GUDLQ GRHV QRW VWDUW WR GUDLQ until pressure reaches 0.1 MPa.

1RWH KHQ) ZLWK DXWRPDWLF GUDLQ HOHFWURGH ZLWK ¿OWHU DQG & DXWRPDWLF GUDLQ DVVHPEOHG WKH VXSSO\ SUHVVXUH VKRXOG EH MPa or more.

How to order

C1030 - 6 - ○ - W - L - U DSV - ○ - A6W - ○

5HIHU WR SDJH IRU WKH explanation of the option.

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Display unit
Ⓖ Piping adaptor VHW DWWDFKHG
Ⓗ 3UHVVXUH JDXJH RSWLRQ DWWDFKHG

Symbol		Descriptions	Ⓐ Model no. &	&	&	&	&	&	&
Ⓑ Port size									
6		1/8	M						
8		1/4	M	M	M	M	M		
10				M	M	M	M		
15		1/2					M		
20							M	M	M
25		1						M	M
Ⓒ Port thread type		Note 2							
Blank		Rc thread	M	M	M	M	M	M	M
N		NPT thread	M	M	M	M	M	M	M
G		G thread	M	M	M	M	M	M	M
Ⓓ Option		Note 3							
Drainage Note 4, Note 5	Blank	With manual drain cock	M	M	M	M	M	M	M
	F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH	M	M	M	M	M	M	M
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH	M	M	M	M	M	M	M
	FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH						M	M
	FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH						M	M
Bowl material	Blank	Polycarbonate bowl	M	M	M	M	M	M	M
	Z	Nylon bowl	M	M	M	M	M	M	M
	M	Metal bowl			M	M	M	M	M
	M1	Metal bowl with manual drain cock		M	M	M	M	M	M
Element	Blank	P	M	M	M	M	M	M	M
	Y	—P VXEPLFURQ1RWH			M	M	M	M	M
Differential pressure detection	Blank	Without differential pressure detection port	M	M	M	M	M	M	M
	Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ SRUW 5F						M	M
Pressure Range	Blank	0.05 to 0.85MPa	M	M	M	M	M	M	M
	L	WR 03D 1RWH	M	M	M	M	M	M	M
Relief	Blank	With relief mechanism	M	M	M	M	M	M	M
	N	Nonrelief type	M	M	M	M	M	M	M
Pressure gauge	Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M	M	* M	M
	T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M	M
	T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M	M
	T6	Digital pressure sensor PPX attachment option Note 8	M	M	M	M	M	M	M
	R1	Pressure switch with display PPD assembly Note 9	M		M	M	M	M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW WR ULJKW	M	M	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW WR OHIW	M	M	M	M	M	M	M
Ⓔ Assembly attachment		Pages 402 to 413, 426, 427							
Blank		Without assembly attachment type	M	M	M	M	M	M	M
U		Assembly attachment type Note 10	M	M	M	M	M	M	M
Assembled	D	'LVWULEXWRU ' : '	M	M	M	M	M	M	M
	S	3UHVVXUH VZLWFK 3 :	M	:M	M	M	M	M	M
	P	3UHVVXUH VZLWFK 3		M	M	M	M		
	V	6KXW RII YDOYH 9	:M	M	M	:M	M		
	K	/RFNRXW YDOYH 9	:	:M	M	M	M	M	M
Ⓕ Display unit									
Blank		MPa display, Rc thread	M	M	M	M	M	M	M
J1		MPa display, NPT, G thread	M	M	M	M	M	M	M
Ⓖ Piping adaptor set (attached)		Page 428 Note 11							
Blank		Not attached	M	M	M	M	M	M	M
A6*W		Rc1/8 piping adaptor set	M						
A8*W		Rc1/4 piping adaptor set	M	M	M	M	M		
A10*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M	M		
A15*W		Rc1/2 piping adaptor set		M	M	M	M		
A20*W		5F SLSLQJ DGDSWRU VHW					M	M	M
A25*W		Rc1 piping adaptor set						M	M
A32*W		Rc1 1/4 piping adaptor set						M	M
***Adaptor screw type**									
Blank		Rc thread	M	M	M	M	M	M	M
N		NPT thread	M	M	M	M	M	M	M
G		G thread	M	M	M	M	M	M	M
Ⓗ Pressure gauge option (attached)		Note 12 Page 659							
Blank		Not attached	M	M	M	M	M	M	M
G45P		* ' 3 / * ' 3	M	M	M	M	M	M	M
G49P		* ' 3 / * ' 3	M	M	M	M	M	M	M
G59P		* ' 3 / * ' 3	M		M	M	M	M	M
G40P		* ' 3 / * ' 3	M	M	M	M	M	M	M
G50P		* ' 3 / * ' 3	M		M	M	M	M	M
G41P		* ' 3 / * ' 3	M	M	M	M	M	M	M
G52P		* ' 3 / * ' 3	M	M	M	M	M	M	M
R2 Note 8		'LJLWDO SUHVVXUH VHQVRU 33;	M	M	M	M	M	M	M

Note on model no. selection

1RWH 3LSLQJ DGDSWRU :LWK DWWDFKPHQW LV RQO\ IRU & : $: GRHV QRW QHHG WR EH VHOHFWHG piping adaptor set.

Note 2:When G threads or NPT threads are selected, the IN, OUT, JDXJH SRUW DQG GUDLQ GLVFKDUJH SRUW RI WKH PDQXDO DXWRPDWLF GUDLQ DUH WKH WKUHDG W\SH DV.

1RWH 6HOHFW RSWLRQV IRU GUDLQ ERZO PDWHULDO HOHPHQW differential pressure detection, and regulator items. When selecting options for several items, list options in order from the top.

Note 4:Refer to page 276 for the automatic drain use conditions.

Note 5:When option symbol "F" is selected, the NO automatic drain is enclosed for the air filter and the NC automatic drain is HQFORVHG IRU WKH RLO PLVW ¿OWHU)RU)) DQG)) RQO\ WKH ¿OWHU KDV D ODUJH GLVFKDUJH 7KH RLO PLVW ¿OWHU LV D QRUPDO 1& DXWRPDWLF GUDLQ

1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVV ÀRZ ZKHQ RSWLRQ "Y" is selected.

Note 7:The pressure gauge's indication range is 0 to 0.4MPa for option "L".

Note 8:When option "T6" is selected, only "Blank" or "R2" can be VHOHFWHG IRU + SUHVVXUH JDXJH DWWDFKHG 7KH GLJLWDO SUHVVXUH VHQVRU 33; PRXQWLQJ 5F LV assembled by open.

Note 9:The output type is NPN transistor output. Consult with CKD when the PNP transistor output is required.

Note10: Installation position for assembly attachments

Symbol	Installation position	Applicable model
D	) 0 ' 5	& : WR & :
S or P	) 0 5 6 3	& : WR & : ([FOXGLQJ IRU 3
9 or K	) 0 5 9 .	& : WR & : ([FOXGLQJ IRU 9 RU IRU .

1RWH,QGLFDWH 6 3 DQG 9 . ZKHQ VHOHFWLQJ an assembly attachment. 8VH FXVWRP ELQ DWWDFKPHQW LQ DQ\ FRPELQDWLRQ RWKHU combination.

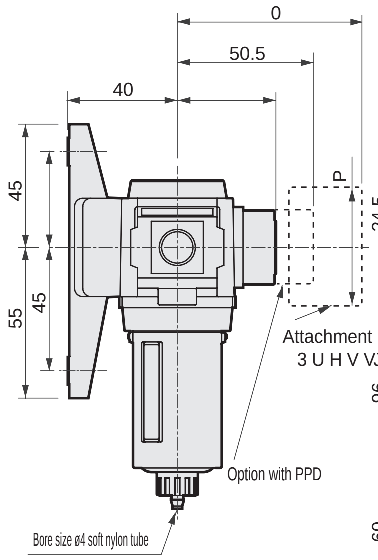
Note 11: The joiner set is enclosed with the piping adaptor set.

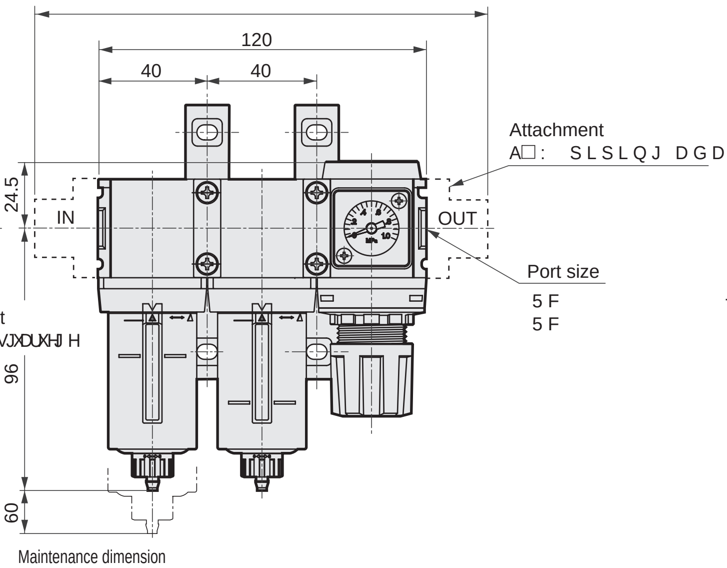
Note 12: If NPT is selected for the "C" piping thread, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

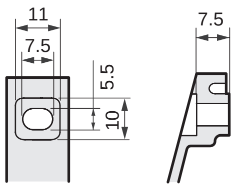
F.M.R. Combination

Dimensions CAD

M & :

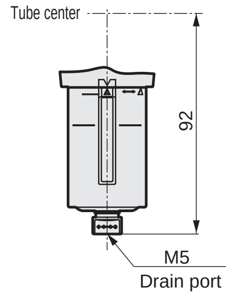






(QODUJHG YLHZ RI EUDFNHW VHFWLRQ

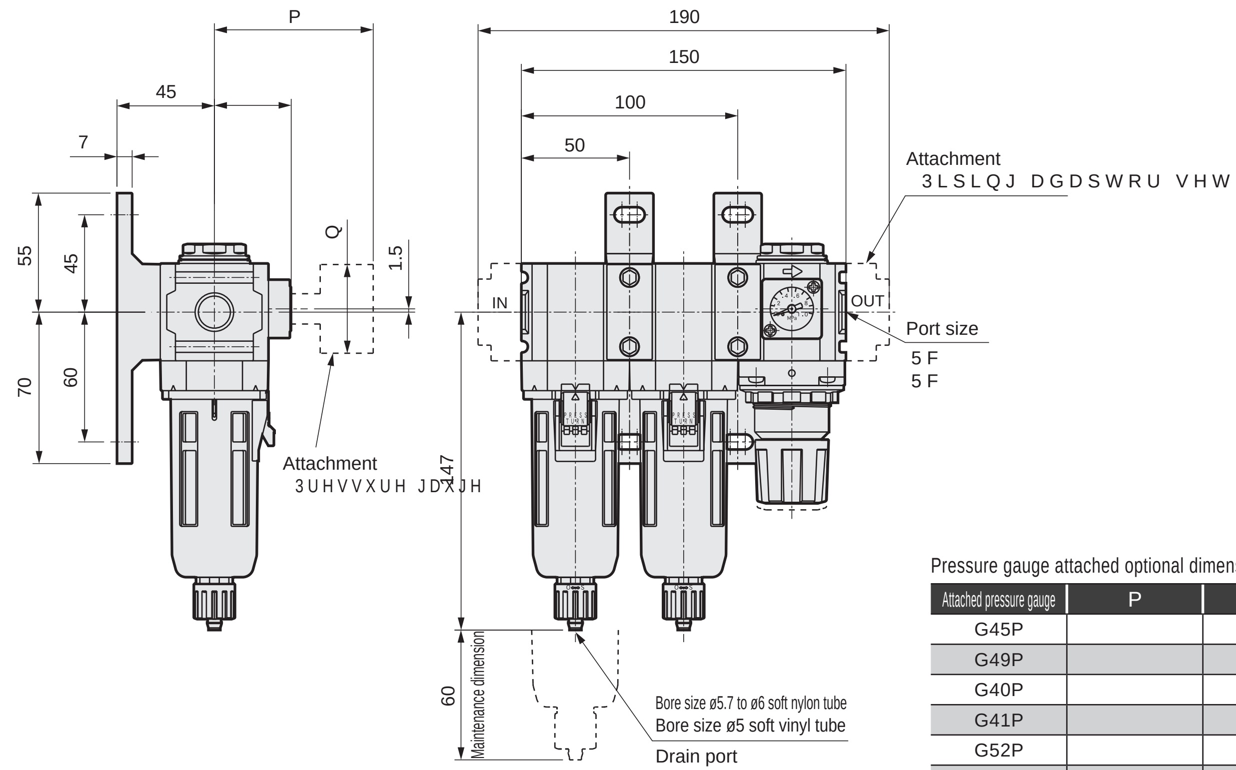
‡ 2SWLRQ GLPHQVLRQV
:LWK DXWRPDWLF GUDL



Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

M & :

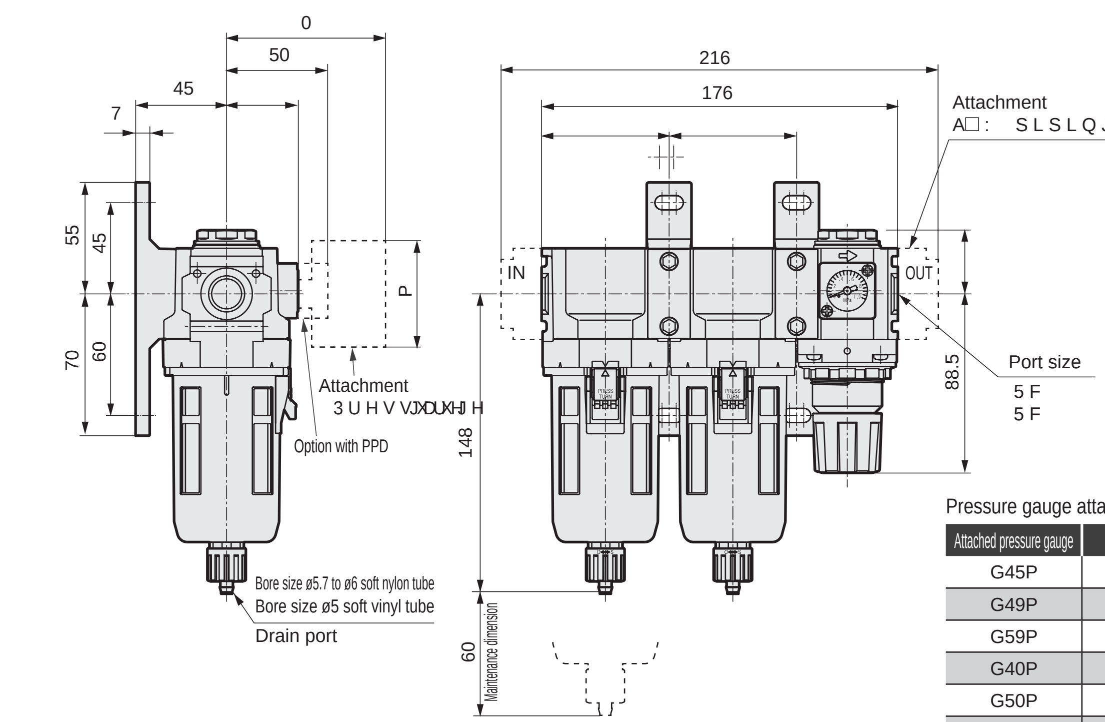


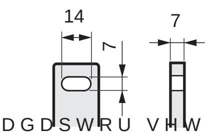
Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
G45P		ø
G49P		ø
G40P		ø42.5
G41P		ø42
G52P		ø52.5
R2		□

Dimensions

M&   :



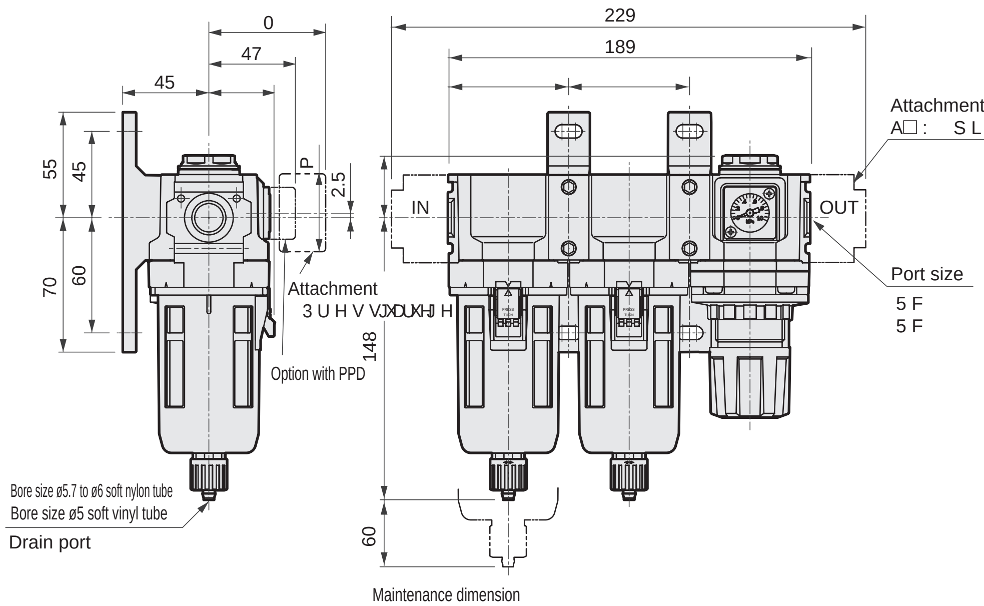


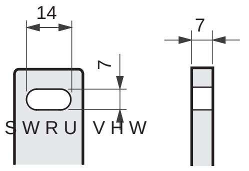
Dimensions of bracket section

Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

M&   :





(QODUJHGYLHZ RI EUDFNHW

Pressure gauge attached optional dimensions table

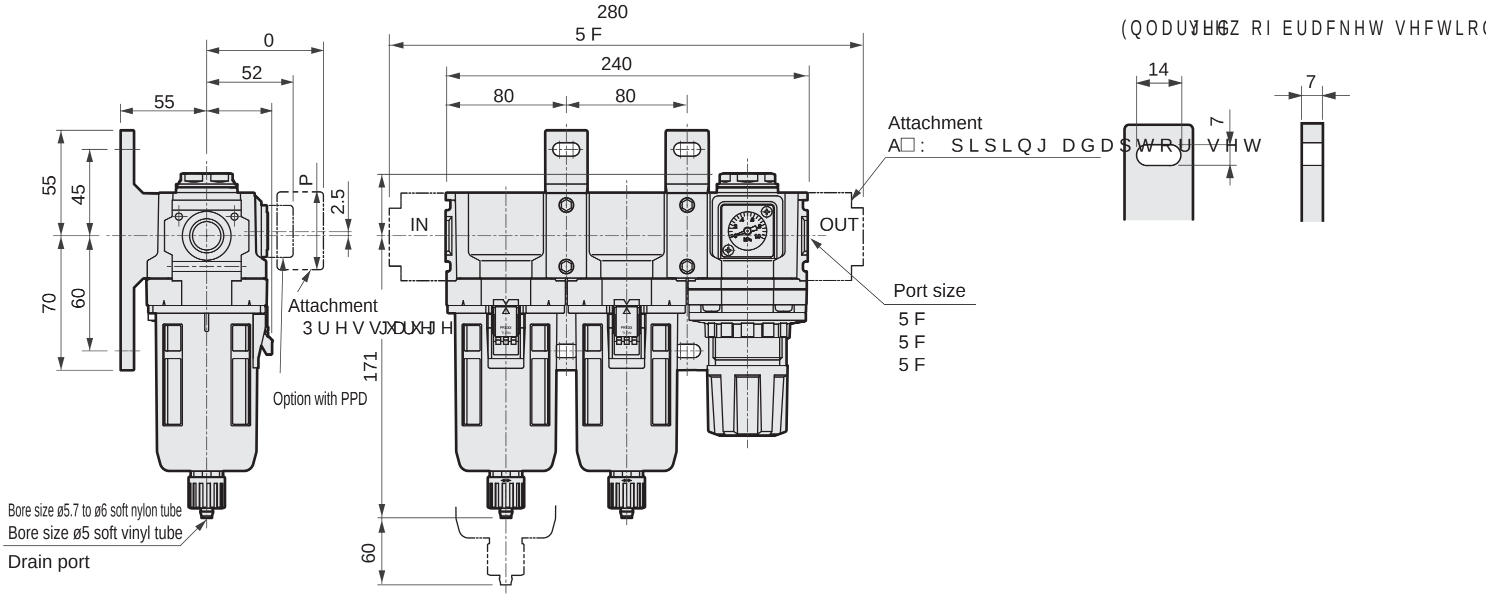
Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

”5HIHUWRSDJH IRUWKHGLPHQVLRQVRIWKHPHWDOERZORSWLRQ ¿QHQG
SDJH IRU WKH RLO PLVW ¿OWHU

F.M.R. Combination

Dimensions

M   :

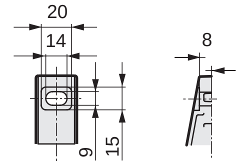


Pressure gauge attached optional dimensions table

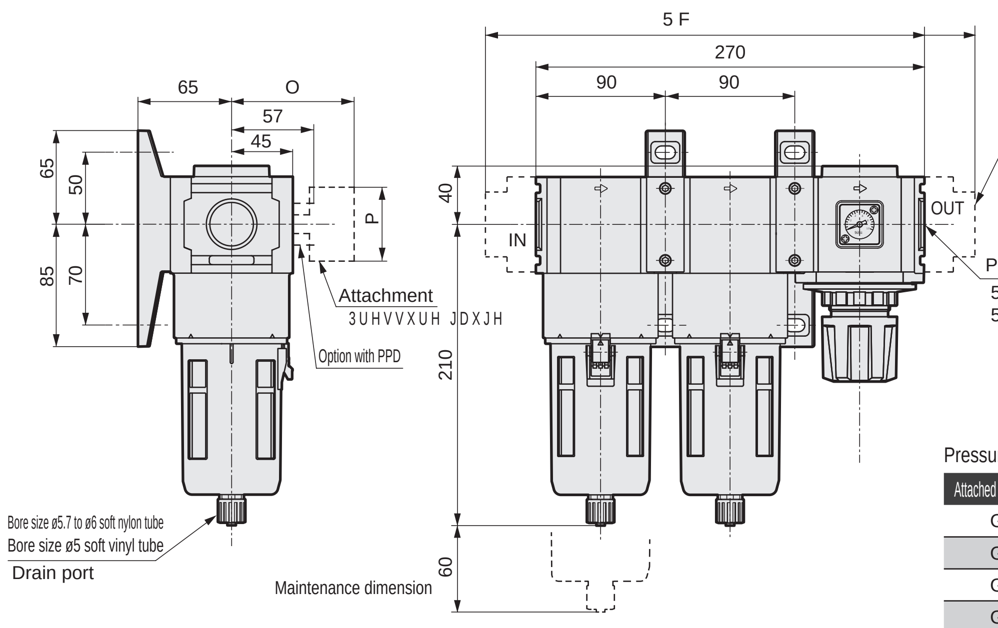
Attached pressure gauge	O	P
G45P		ø29
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

” 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH EDFNHWRS W\SH SUHVVXUH JDXJH
SDJH IRU WKH RLO PLVW ¿OWHU

M   :



Dimensions of bracket section

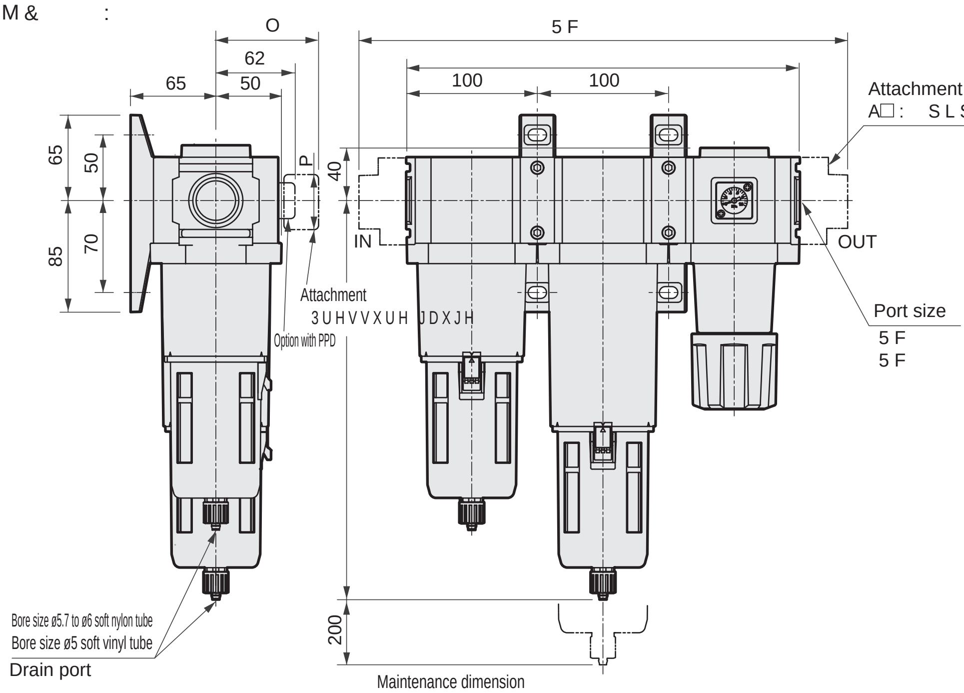


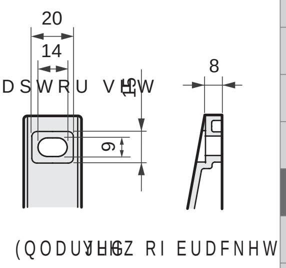
Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

Dimensions

M& :





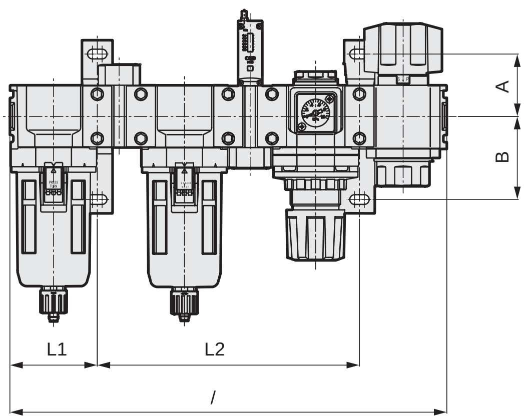
Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
G45P		ø29
G49P		í
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

"5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH EDOO FRFN ZLWK WKH 2ULHQWHG HQG SDJH IRU WKH RLO PLVW ¿OWHU

Option assembly dimensions

M& : WR & :



Model no.	A	B
& :		45
& :	45	60
& :		
& :		
& :		
& :	50	70
& :		

Assembled option	D			6 1RWH			P			9			K		
Model no.	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
& :	40	68	148	40	80	169.5	í	í	í	40	80	160	í	í	í
& :	50	94.5	181.5	50		201.5	50			50			50		
& :		94.5	207.5			227.5			256						
& :		94.5	220.5		126	240.5		126	269		126	252		126	252
& :	80	111.5	271.5	80	160	291.5	80	160		80	160		80	160	
& : 1RWH	100	111.5		100	160		100	160		100	160		100	160	
& :	90	140		90	180		í	í	í	í	í	í	90	180	
& :	100	150		100	200		í	í	í	í	í	í	100	200	

Assembled option	'6 1RWH			DP			'9			DK		
Model no.	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
& :	40	108	197.5	í	í	í	40	108	188	í	í	í
& :	50	144.5		50	144.5	261.5	50	144.5	244.5	50	144.5	244.5
& :		144.5	259		144.5	287.5		144.5	270.5		144.5	270.5
& :		157.5	272		157.5			157.5			157.5	
& :	80	191.5		80	191.5		80	191.5		80	191.5	
& : 1RWH	100	191.5		100	191.5		100	191.5		100	191.5	
& :	90		405	í	í	í	í	í	í	90		410
& :	100	250		í	í	í	í	í	í	100	250	440

Assembled option	'69			DSK			'39			DPK			69			SK			39			PK		
Model no.	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
& :	40		216	í	í	í	í	í	í	í	í	í	40	108	188.0	í	í	í	í	í	í	í	í	í
& :	50	176	276	50	176	276	50	225		50	225		50	144.5	244.5	50	144.5	244.5	50			50		
& :		176			176			225			225			144.5	270.5		144.5	270.5						
& :		189			189									157.5			157.5			206			206	
& :	80			80			80	271.5	414.5	80	271.5	414.5	80	191.5		80	191.5		80	240		80	240	
& : 1RWH	100		406	100		406	100	271.5	454.5	100	271.5	454.5	100	191.5		100	191.5		100	240		100	240	
& :	í	í	í	90	280	460	í	í	í	í	í	í	í	í	í	90		410	í	í	í	í	í	í
& :	í	í	í	100		490	í	í	í	í	í	í	í	í	í	100	250	440	í	í	í	í	í	í

L1: 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH EUDFNHW PRXQWLQJ KROH 5HIHU WR SDJH IRU GHWDLOV RQ EUDFNHW PRXQWLQJ
L2: 6SDFLQJ GLPHQVLRQV EHWZHHQ PRXQWLQJ KROHV RI WKH EUDFNHWV ZKHQ WKH \ W\SH EUDFNHW LV XVHG 1RWH 7KH SLSLQJ DGDSWRU LV DVVHPEOHG ZLWK DWWDFKHG
/ 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH 287 RQ WKH ERWK HQGV RI & :

W.M. combination standard white Series

C1040/C2040/C3040/C4040/C8040-W Series

)LOWHU UHJXODWRU DQG RLOPLVW ¿OWHU LQV

Port size: 1/8 to 1

JIS symbol

RoHS CAD

6SHFL¿FDWLRQV

Descriptions		& :	& :	& :	& :	& :
Appearance						
Components	Filter regulator	: :	: :	: :	: :	: :
	2LO PLVW ¿OWHU	:	0 :	0 :	0 :	0 :
:RUNLQJ ÀXLG		Compressed air				
Max. working pressure MPa		1RWH				
Withstanding pressure MPa		1.5				
Ambient temperature range °C		5 to 60 Note 2				
Set pressure range MPa		0.1 to 0.85 1RWH	0.1 to 0.85 Note 5 / Note 6			
Relief		With relief mechanism				
Port size Rc, NPT, G		XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
Product weight kg			0.74	0.97	1.52	
Secondary oil concentration		0.01mg/m or less				
0D[ÀRZ UDWH m³/min 1RWH		0.15	0.25		0.825	2.6

1RWH 0D[LPXP ÀRZ UDWH LV IRU WKH UHJXODWRU VHWWLQJ SUHVVXUH 03D 5HIHU WR SDJH IRU W

Note 2: The working temperature range of the pressure switch with indicator PPD assembly "R1" is 5 to 50°C.

1RWH KHQ XVLQJ : VHULHV ZLWK DQ DXWRPDWLF GUDLQ WKH PLQLPXP RSHUDWLQJ SUHVVXUH 03D DQG PD[LPXP RSHUDWLQJ SUHVVXUH 03D 5HIHU WR WKH PD[LPXP SURFHVV ÀRZ UDWH RQ SDJH IRU WKH) :) DXWRPDWLF GUDLQ 7KH PD[LPXP ZRUNLQJ 6HW WKH ZRUNLQJ ÀRZ WR OHVV WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ

1RWH 5HIHU WR SDJH IRU GHWDLOV RQ RWKHU RLO PLVW ¿OWHUV

Note 5: When "F" with an automatic drain is selected, the supply air pressure is 0.2MPa or more. The minimum setting pressure is 0.15MPa. Automatic drain VXSSO\ DLU SUHVVXUH RI D ¿OWHU UHJXODWRU LV 03D ,QLWLDOO\ JHQHUDWHG GUDLQDJH DQG D

Note 6: When "F1" with an automatic drain is selected, the supply air pressure is 0.2MPa or more. The minimum setting pressure is 0.15MPa.

How to order

C1040 - 6 ( ) - W - F1 - U SV - ( ) - A6W ( )

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Assembly attachment
Ⓕ Display unit
Ⓖ Piping adaptor VHW DWWDFKHG
Ⓗ 3UHVVXUH JDXJH RSWLRQ DWWDFKHG

5HIHU WR SDJH IRU WKH explanation of the option.

Symbol		Descriptions	Ⓐ Model no. &	&	&	&	&
Ⓑ Port size							
6		1/8	M				
8		1/4	M	M	M	M	
10				M	M	M	
15		1/2				M	
20						M Note 1	M
25		1					M
Ⓒ Port thread type		**Note 2**					
Blank		Rc thread	M	M	M	M	M
N		NPT thread	M	M	M	M	M
G		G thread	M	M	M	M	M
Ⓓ Option		**Note 3**					
Drainage Note 4, Note 5	Blank	With manual drain cock	M	M	M	M	M
	F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH (NKDXVWZ			M	M	
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW Z		M	M	M	M
	FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW Z					M
	FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW Z					M
Bowl material	Blank	Polycarbonate bowl	M	M	M	M	M
	Z	Nylon bowl	M	M	M	M	M
	M	Metal bowl			M	M	M
	M1	Metal bowl with manual drain cock		M	M	M	M
Element	Blank	P	M	M	M	M	M
	Y	P VXEPLFURQ 1RWH			M	M	M
Differential pressure detection	Blank	Without differential pressure detection port	M	M	M	M	M
	G	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ					M
Pressure Range	Blank	0.05 to 0.85MPa	M	M	M	M	M
	L	WR 03D 1RWH	M	M	M	M	M
Relief	Blank	With relief mechanism	M	M	M	M	M
	N	Nonrelief type	M	M	M	M	M
Pressure gauge	Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M	M*
	T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F LV VHDOHG ZLWK	M	M	M	M	M
	T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH SRUW 5F LV DVVHPEOHG	M	M	M	M	M
	T6	Digital pressure sensor PPX attachment option Note 8	M	M	M	M	M
	R1	Pressure switch with display PPD assembly Note 9	M		M	M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW : OHIW	M	M	M	M	M
Ⓔ Assembly attachment		**Pages 402 to 413, 426, 427**					
Blank		Without assembly attachment type	M	M	M	M	M
U		Assembly attachment type Note 10	M	M	M	M	M
Assembled	S	3UHVVXUH VZLWFK 3 :	M	:M	M	:M	M
	P	3UHVVXUH VZLWFK 3	:	M	M	M	
	V	6KXW RII YDOYH 9 :	M	M	:M	M	
	K	/RFNRXW YDOYH 9 :	:	M	M	M	M
Ⓕ Display unit							
Blank		MPa display, Rc thread	M	M	M	M	M
J1		MPa display, NPT, G thread	M	M	M	M	M
Ⓖ Piping adaptor set (attached)		**Page 428 Note 11**					
Blank		Not attached	M	M	M	M	M
A6*W		Rc1/8 piping adaptor set	M				
A8*W		Rc1/4 piping adaptor set	M	M	M	M	
A10*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M	
A15*W		Rc1/2 piping adaptor set		M	M	M	
A20*W		5F SLSLQJ DGDSWRU VHW				M	M
A25*W		Rc1 piping adaptor set					M
A32*W		Rc1 1/4 piping adaptor set					M
***Adaptor screw type**							
Blank		Rc thread	M	M	M	M	M
N		NPT thread	M	M	M	M	M
G		G thread	M	M	M	M	M
Ⓗ Pressure gauge option (attached)		**Note 12 Page 659**					
Blank		Not attached	M	M	M	M	M
G45P		* ' 3 / * ' 3	M	M	M	M	M
G49P		* ' 3 / * ' 3	M	M	M	M	M
G59P		* ' 3 / * ' 3	M		M	M	M
G40P		* ' 3 / * ' 3	M	M	M	M	M
G50P		* ' 3 / * ' 3	M		M	M	M
G41P		* ' 3 / * ' 3	M	M	M	M	M
G52P		* ' 3 / * ' 3	M	M	M	M	M
R2 Note 8		'LJLWDO SUHVVXUH VHQVRU 33; 5 1 0	M	M	M	M	M

⚠ Note on model no. selection

1RWH 3LSLQJ DGDSWRU :LWK DWWDFKPHQW GHWHUPLQHG & : $: GRHV QRW QHHG WR EH VHOHFWHG piping adaptor set.

Note 2:When G threads or NPT threads are selected, the IN, OUT, JDXJH SRUW DQG GUDLQ GLVFKDUJH SRUW RI WKH WDQN DXWRPDWLF GUDLQ DUH WKH VWDQGDUG 5F

1RWH 6HOHFW RSWLRQV IRU GUDLQ ERZO HOHPHQW differential pressure detection, and regulator items. When selecting options for several items, list options in order from the top.

Note 4:Refer to page 276 for the automatic drain use conditions.

Note 5:When option symbol "F" is selected, the NO automatic drain LV HQFORVHG IRU WKH ILOWHU UHJXODWRU DQG WKH & DXWRPDWLF GUDLQ LV HQFORVHG IRU WKH PLVW ILOWHU ZKHQ RSWLRQ) LV selected, the NC automatic drain is enclosed for both the air ¿OWHU UHJXODWRU DQG PLVW ¿OWHU)) DQG)) RQO\ WKH ¿OWHU UHJXODWRU JXDUDQWHHG ZLWK D ODUJH FDSDFLW\ ¿OWHU LV D QRUPDO 1& DXWRPDWLF GUDLQ

1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVV ÀRZ ZKHQ RSWLRQ "Y" is selected.

Note 7:The pressure gauge's indication range is 0 to 0.4MPa for option "L".

Note 8:When option "T6" is selected, only "no symbol" or "R2" can be VHOHFWHG IRU + SUHVVXUH JDXJH DWWDFKHG 7KH GLJLWDO SUHVVXUH VHQVRU 33; PRXQWLQJ 5F LV assembled by open.

Note 9:The output type is NPN transistor output. Consult with CKD when the PNP transistor output is required.

Note10: Installation position for assembly attachments

Symbol	Installation position	Applicable model
S or P	: 6 3 0	& : WR & : ([FOXGLQJ IRU 3
9 or K	: 0 9 .	& : WR & : ([FOXGLQJ IRU 9 RU IRU .

1RWH ,QGLFDWH 6 3 9 DQG ZKHQ VHOHFWLQJ an assembly attachment. 8VH FXVWRP EXLOW VSHFLILFDWLRQV IRU FRPELQDWLRQ RWKHU combination.

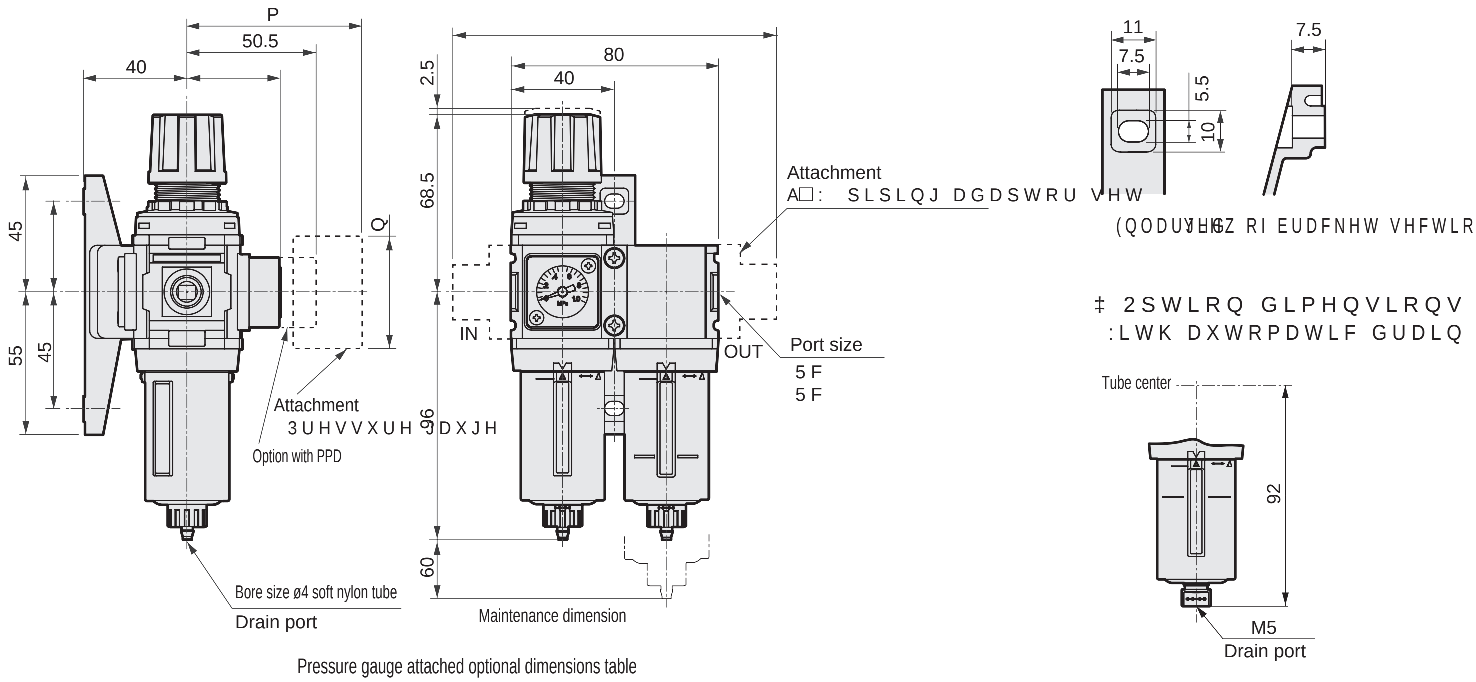
Note 11: The joiner set is enclosed with the piping adaptor set.

Note 12: If NPT is selected for the "C" piping thread, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Dimensions

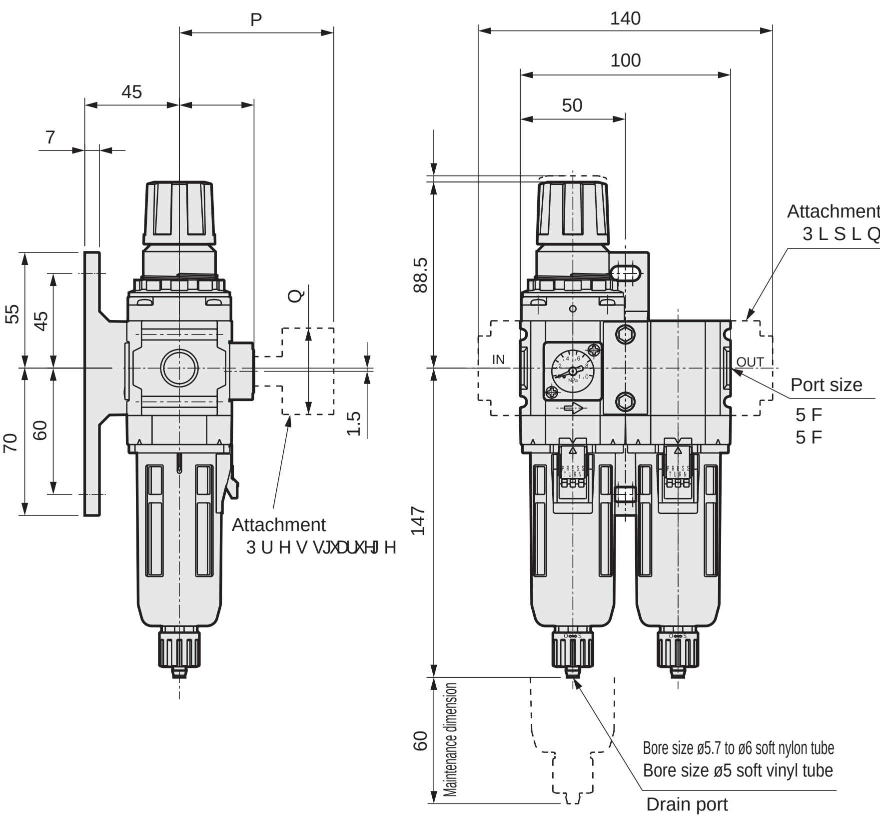
M & :



Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

M & :

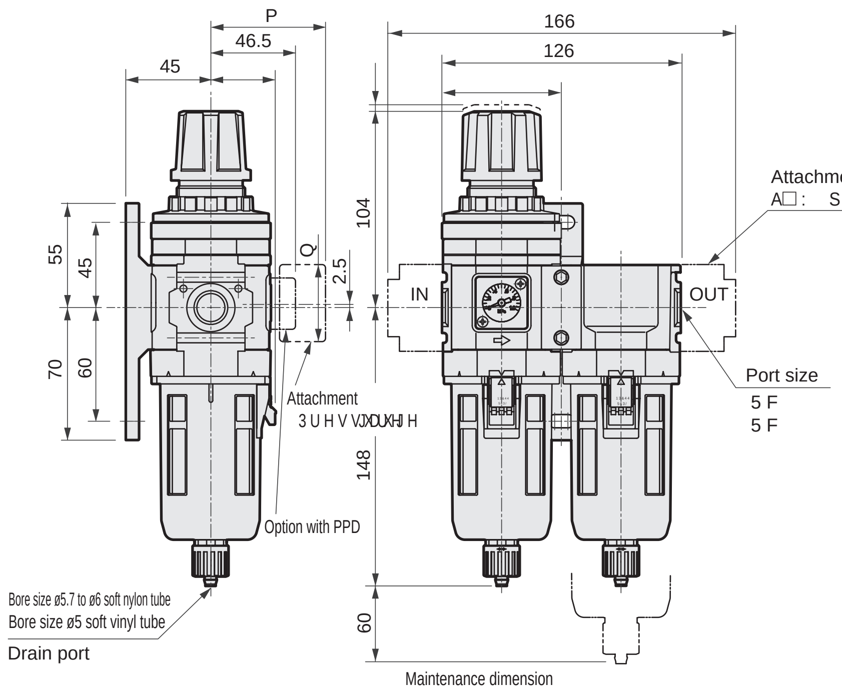


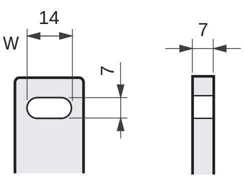
Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
G45P		ø
G49P		ø
G40P		ø42.5
G41P		ø42
G52P		ø52.5
R2		□

Dimensions CAD

M& :



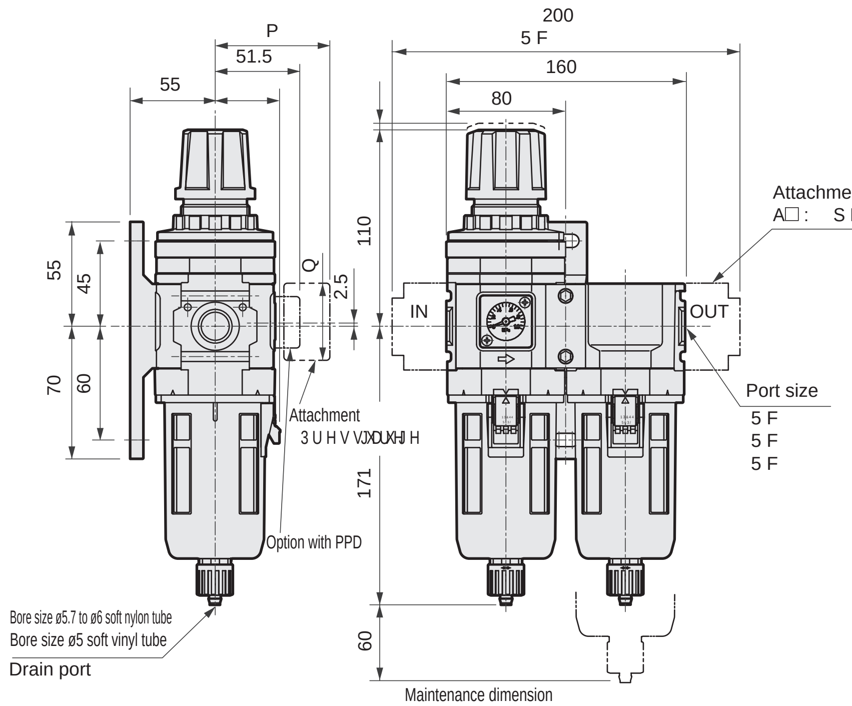


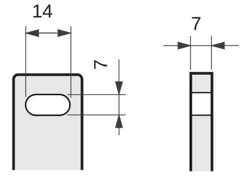
Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

” 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH WDEOH WRS ZLWK LQWHU
UHJXODWRU DQG SDJH IRU WKH RLO PLVW ¿OWHU

M& :





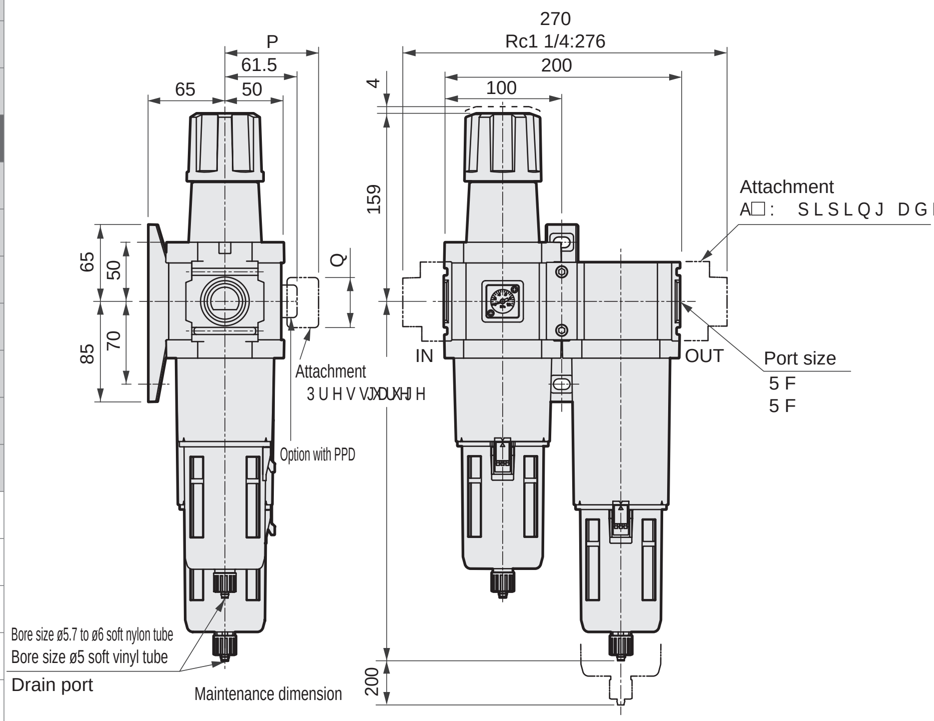
Pressure gauge attached optional dimensions table

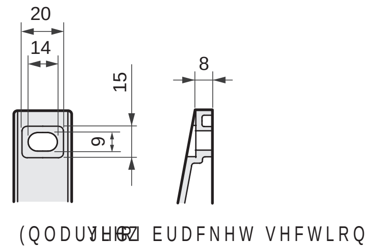
Attached pressure gauge	P	Q
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

” 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH WDEOH WRS ZLWK LQWHU
UHJXODWRU DQG SDJH IRU WKH RLO PLVW ¿OWHU

Dimensions

M & :





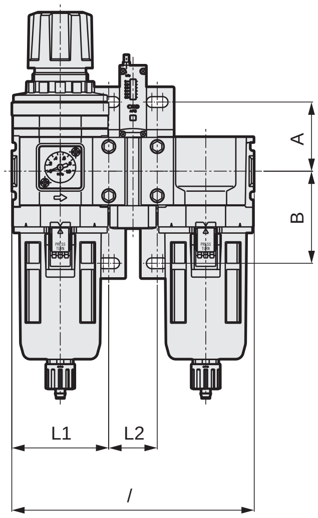
” 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH WDEOH PRXQW LI D WLRQ WKH
UHJXODWRU DQG SDJH IRU WKH RLO PLVW ¿OWHU

Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
G45P		i
G49P		i
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□

Option assembly dimensions

M& : WR & :



Model no.	A	B
& :		45
& :	45	60
& :		
& :		
& :	50	70

Assembled option	S			P			9			K			6 9			SK			3 9			PK		
Model no.	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/	L1	L2	/
& :	40	28	108	í	í	í	40	40	120	í	í	í	40	68	148	í	í	í	í	í	í	í	í	í
& :	50			50	80	180	50			50			50	81.5	194.5	50	81.5	194.5	50			50		
& :			157.5		80	206			189			189		94.5	220.5		94.5	220.5			269			269
& :	80		191.5	80	80	240	80	80		80	80		80	111.5	254.5	80	111.5	254.5	80	160		80	160	
& : 1RWH	100			100	80	280	100	100		100	100		100	111.5	294.5	100	111.5	294.5	100	160		100	160	
& :	100	50	250	í	í	í	í	í	í	100	100	290	í	í	í	100	150		í	í	í	í	í	í

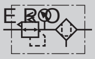
L1: 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH FHQWHU RI WKH ILOWHU 5HIHU WR SDJH IRU GHWDLOV RQ EUDFNHW PRX
L2: 6SDFLQJ GLPHQVLRQV RQ WKH FRQQHFWLQJ SLSH EUDFNHW RU WKH VSDFHU W\SH EUDFNHW Note 1: The piping adaptor is assembled on the OUT side.
/ 'LPHQVLRQV IURP WKH ,1 HGJH WR WKH 287 3LSLQJ DGDSWRUV DWWDFKHG RQ WKH ERWK H

R.M. combination standard white Series

C1050/C2050/C2550 C3050/C4050/C6050/C8050-W Series

5HJXODWRU DQG RLOPLVW ¿OWHU LQWHJUDWH

Port size: 1/8 to 1

-,6 V\PERO 

6SHFL¿FDWLRQV

'HVFULSWLRQV		& :	& :	& :	& :	& :	& :	& :
Appearance								
&RPSRQHQWV	Regulator	5 :	5 :	5 :	5 :	5 :	5 :	5 :
	2LO PLVW ¿OWHU	0 :	0 :	0 :	0 :	0 :	0 :	0 :
:RUNLQJ ÀXLG		&RPSUHVVHG DLU						
Max. working pressure MPa		1RWH						
Withstanding pressure MPa								
$PELHQW WHPSHUDWXUH UDQJH		WR Note 2						
Set pressure range MPa		WR Note 3	WR 1RWH					
5HOLHI		:LWK UHOLHI PHFKDQLVP						
3RUW VL]H 137 *		XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
Product weight kg						1.32	2.12	3.12
6HFRQGDU\ RLO FRQFHQWUDWLRQ		PJ ^{3} or less						
0D[ÀRZ UDWH m^3/min 1RWH								

1RWH 0D[LPXP ÀRZ UDWH LV IRU WKH UHJXODWRU VHWWLQJ SUHVVXUH 03D

1RWH 7KH ZRUNLQJ WHPSHUDWXUH UDQJH RI WKH SUHVVXUH VZLWFK ZLWK LQGLFDWRU 33' DVVHPEO\

1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG IRU WKH & :VHULHV PLQLPXP RSHUDWLQJ 5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ WDEOH SDJH IRU WKH 0 :) DXWRPDWLF GUDLQ IR WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ

1RWH 7KH VXSSO\ DLU SUHVVXUH LV 03D RU PRUH ZLWK D PLQLPXP VHWWLQJ SUHVVXUH RI 03D

1RWH 5HIHU WR SDJH IRU GHWDLOV RQ RWKHU RLO PLVW ¿OWHUV

How to order

C1050 - 6 - ( ) - W - L - ( ) - A6W - ( )

A Model no. B Port size

& 3RUW WKUHDG W\SH

' Option

E 'LVSOD\ XQLW

) Piping adaptor set DWWDFKHG

* 3UHVVXUH JDXJH RSWLRQ DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

Symbol	Descriptions	A Model no. &	&	&	&	&	&	&
6\PERO	'HVFULSWLRQV							
B Port size								
6	1/8	M						
8	1/4	M	M	M	M	M		
10	3/8		M	M	M	M		
15	1/2					M		
20	3/4					M (Note 1)	M	M
25	1						M	M
& Port thread type (Note 2)								
Blank	Rc thread	M	M	M	M	M	M	M
N	NPT thread	M	M	M	M	M	M	M
G	* WKUHDG	M	M	M	M	M	M	M
' Option (Note 3)								
Drainage Note 4 Blank	)LOWHU ZLWK PDQXDO GUDLQ						M	M
F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1&							
Bowl material Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M	M	M
Z	1\ORQ ERZO	M	M	M	M	M	M	M
M	Metal bowl			M	M	M	M	M
M1	Metal bowl with manual drain cock		M	M	M	M	M	M
Differential pressure detection Blank	:LWKRXW GLIIHUHQWLDO SUHVVXUH GHWHFWRU							
Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWRU							
Pressure Range Blank	WR 03D	M	M	M	M	M	M	M
L	WR 03D 1RWH	M	M	M	M	M	M	M
Relief Blank	:LWK UHOLHI PHFKDQLVP	M	M	M	M	M	M	M
N	1RQUHOLHI W\SH	M	M	M	M	M	M	M
Pressure gauge Blank	:LWK VWDQGDUG SUHVVXUH JDXJH							
T	: R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW							
T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH							
T6	'LJLWDO SUHVVXUH VHQVRU							
R1	3UHVVXUH VZLWFK ZLWK GLVSOD\						M	M
Flow Direction Blank	6WDQGDUG ÀRZ OHIW : ULJKW			M	M	M	M	M
X1	5HYHUVH ÀRZ ULJKW : OHIW		M	M	M	M	M	M
E Display unit								
Blank	03D GLVSOD\ 5F WKUHDG	M	M	M	M	M	M	M
J1	03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M	M	M
) Piping adaptor set (attached) (Page 428 Note 8)								
Blank	Not attached	M	M	M	M	M	M	M
A6*W	Rc1/8 piping adaptor set	M						
A8*W	Rc1/4 piping adaptor set	M	M	M	M			
A10*W	Rc3/8 piping adaptor set	M	M	M	M			
A15*W	Rc1/2 piping adaptor set		M	M	M			
A20*W	Rc3/4 piping adaptor set					M	M	M
A25*W	Rc1 piping adaptor set						M	M
A32*W	Rc1 1/4 piping adaptor set						M	M
***Adaptor screw type**								
Blank	Rc thread	M	M	M	M	M	M	M
N	NPT thread	M	M	M	M	M	M	M
G	* WKUHDG	M	M	M	M	M	M	M
*** Pressure gauge option (attached)** (Note 9 Page 659)								
Blank	Not attached	M	M	M	M	M	M	M
G45P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G49P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G59P	* ' 3 / * ' 3	M		M	M	M	M	M
G40P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G50P	* ' 3 / * ' 3	M		M	M	M	M	M
G41P	* ' 3 / * ' 3	M	M	M	M	M	M	M
G52P	* ' 3 / * ' 3	M	M	M	M	M	M	M
R2 Note 6	'LJLWDO SUHVVXUH VHQVRU 03D							

Note on model no. selection

1RWH 3LSLQJ DGDSWRU $: LV DWWDFKHG RQ WKH ERWK HQGV RI & : $: GRHV QRW QHHG WR EH VHOHFWHG IRU WKH SLSLQJ DGDSWRU VHW

1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG 287 JDXJH SRUW DQG GUDLQDJH GLVFKDUJH SRUW RI WKH ERZO DXWRPDWLF GUDLQ DUH WKH WDUJHW

1RWH 6HOHFW RSWLRQV IRU HDFK GUDLQ HOHPHQW GLIIHUHQWLDO SUHVVXUH LWHPV :KHQ VHOHFWLQJ RSWLRQV RSWLRQV LQ RUGHU IURP WKH WRS

Note 4: 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV

1RWH 7KH SUHVVXUH JDXJH V LQGLFDWLRQ UDQJH LV WR 03D IRU RSWLRQ /

1RWH 7KH RSWLRQ 7 LV VHOHFWHG RQO\ %ODQN RU 5 FDQ EH VHOHFWHG IRU * SUHVVXUH JDXJH DWWDFKHG 7KH GLJLWDO SUHVVXUH VHQVRU 33; PRXQWLQJ SRUW 5F 3 LV DVVHPEOHG E\ RSHQ

1RWH 7KH RXWSXW W\SH LV 131 WUDQVLVWRU RXWSXW . &RQVXOW &.' ZKHQ WKH 313 WUDQVLVWRU RXWSXW LV UHTXLUHG

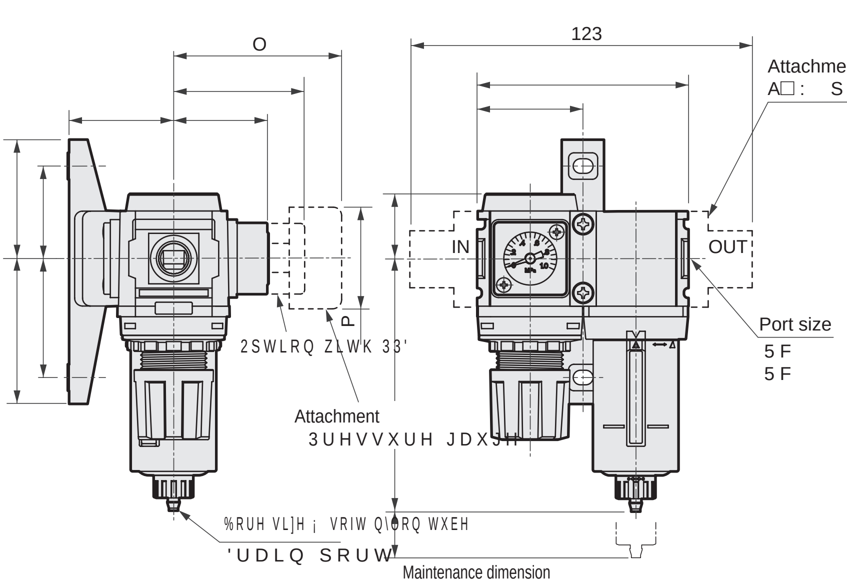
Note 8: The joiner set is enclosed with the piping adaptor set.

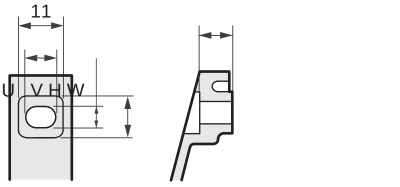
1RWH ,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG' D 137 * SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV VHOHFWHG DQ 5 WKUHDG SUHVVXUH JDXJH LV HQFORVHG

R.M. Combination

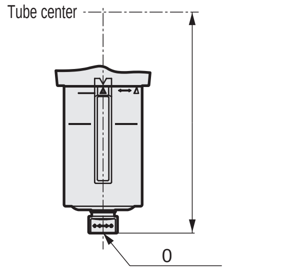
'LPHQVLRQV

M & :





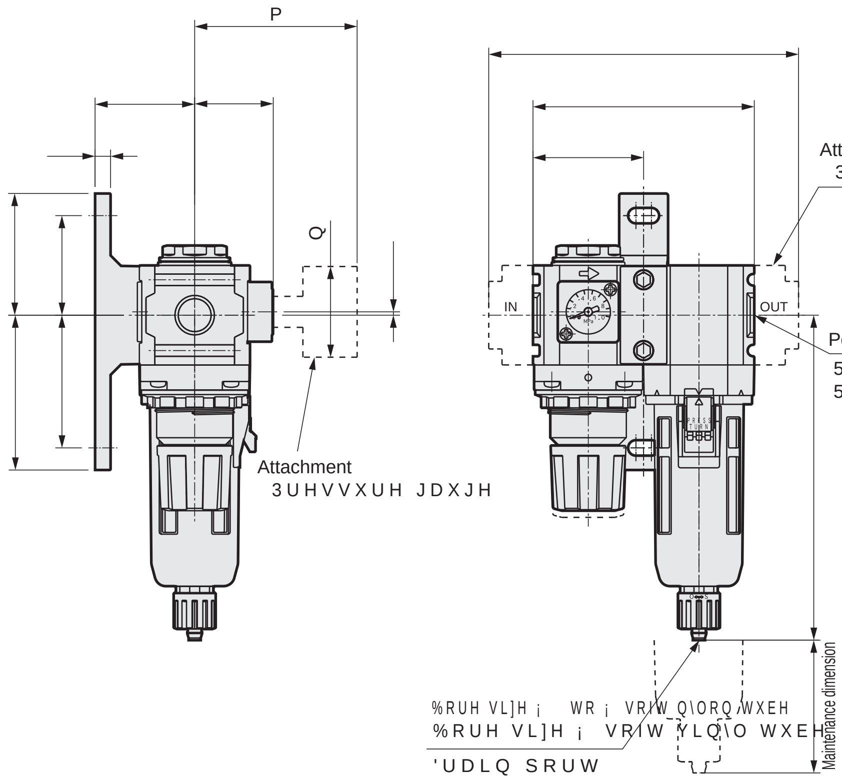
(QODUJHG YLHZ RI EUDFNHW VHFW
‡ 2SWLRQ GLPHQVLRQV
:LWK DXWRPDWLF GUDLQ



Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
* 3		i
* 3		i
* 3		i
* 3		i
* 3		i
* 3		ø42
* 3		i
R2		□

M & :

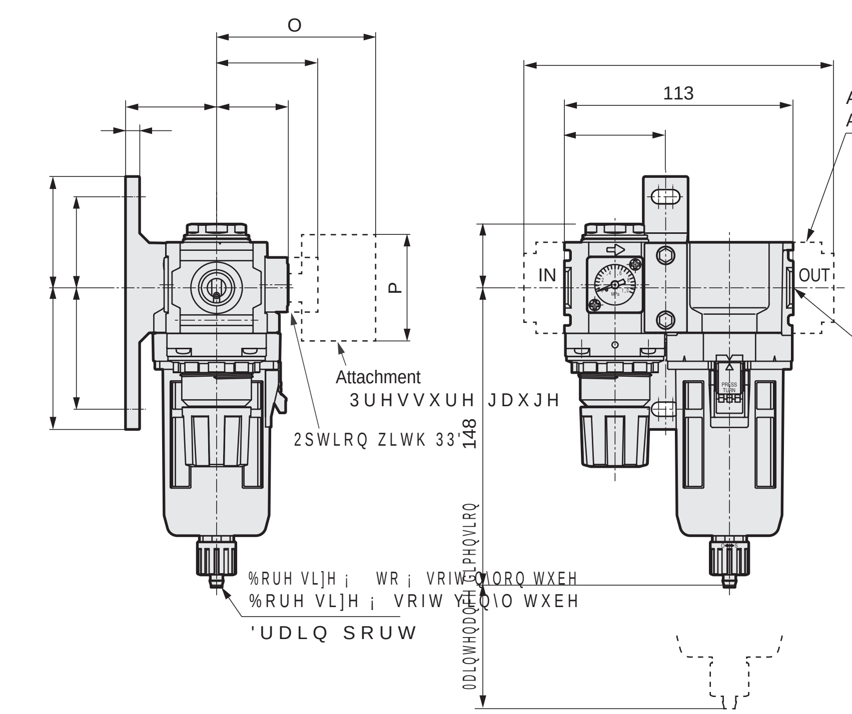


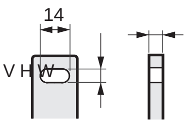
Pressure gauge attached optional dimensions table

Attached pressure gauge	P	Q
* 3		ø
* 3		ø
* 3		ø
* 3		ø42
* 3		ø
R2		□

'LPHQVLRQV

M&   :



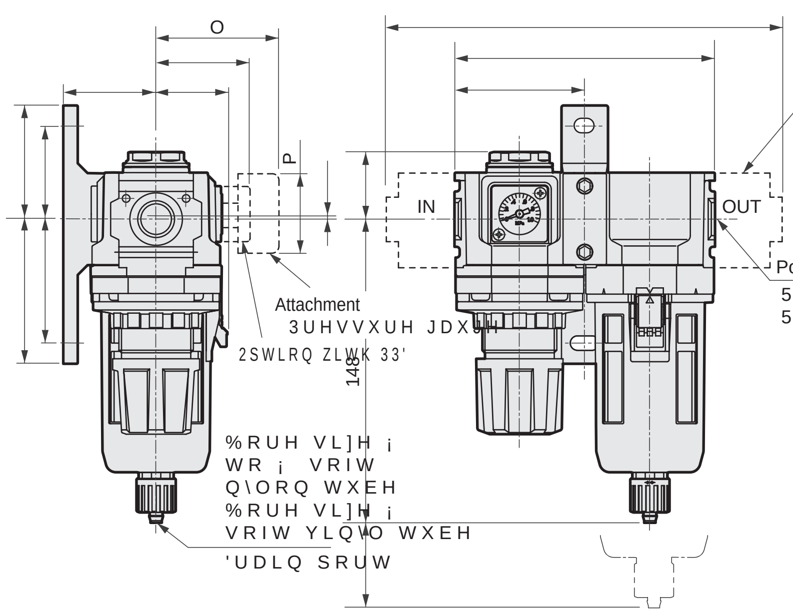


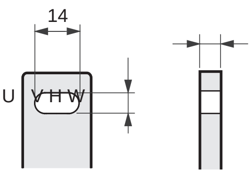
'LPHQVLRQV RI EUD

Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
* 3		¡
* 3		¡
* 3		¡
* 3		¡
* 3		¡
* 3		ø42
* 3		¡
R2		□

M&   :





(QODUJHG YLHZ RI EUD

Pressure gauge attached optional dimensions table

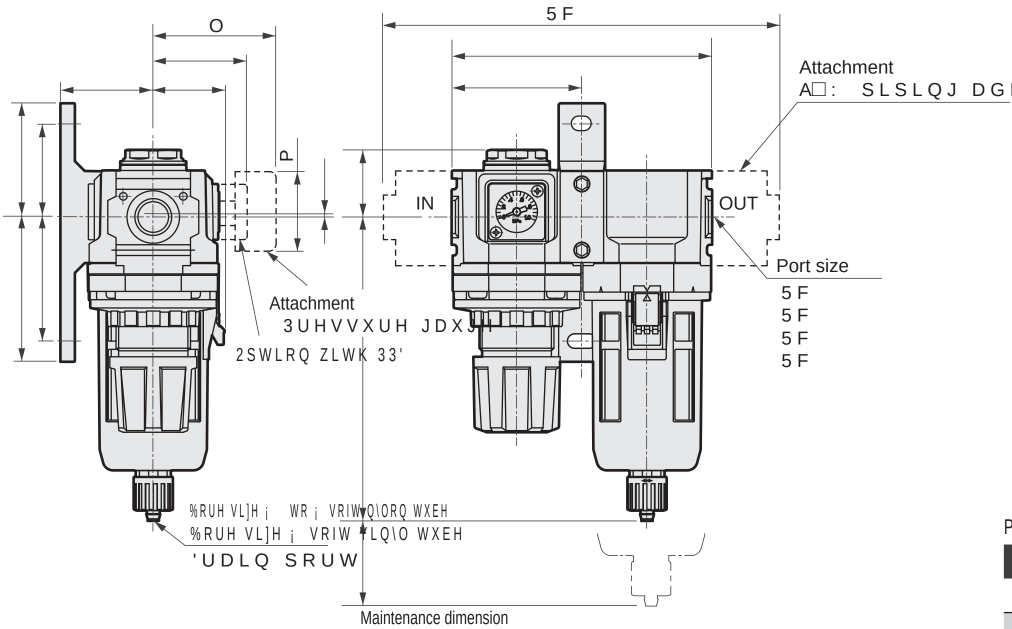
Attached pressure gauge	O	P
* 3		¡
* 3		¡
* 3		¡
* 3		¡
* 3		¡
* 3		ø42
* 3		¡
R2		□

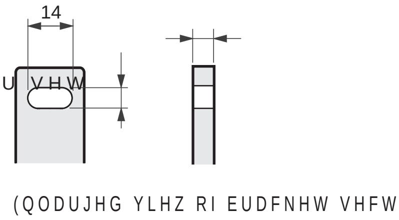
" 5HIHU WR SDJH   IRU WKH GLPHQVLRQV RI PHWDO ERZO

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

'LPHQVLRQV

M& :



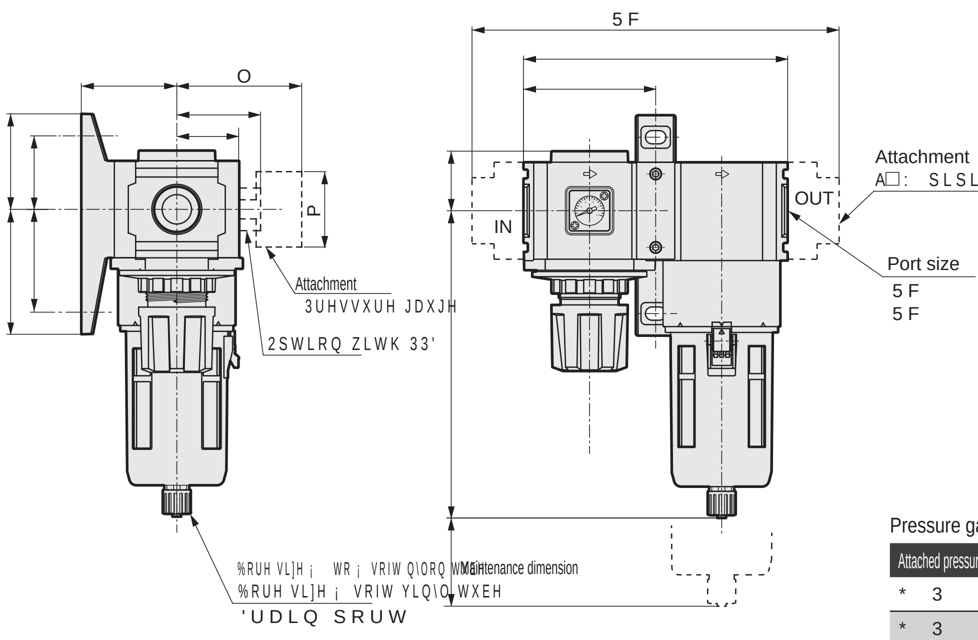


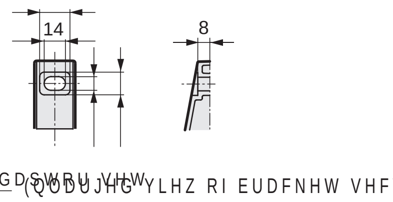
Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
* 3		i
* 3		i
* 3		i
* 3		i
* 3		i
* 3		ø42
* 3		i
R2		□

" 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI PHWDO ERZO

M& :



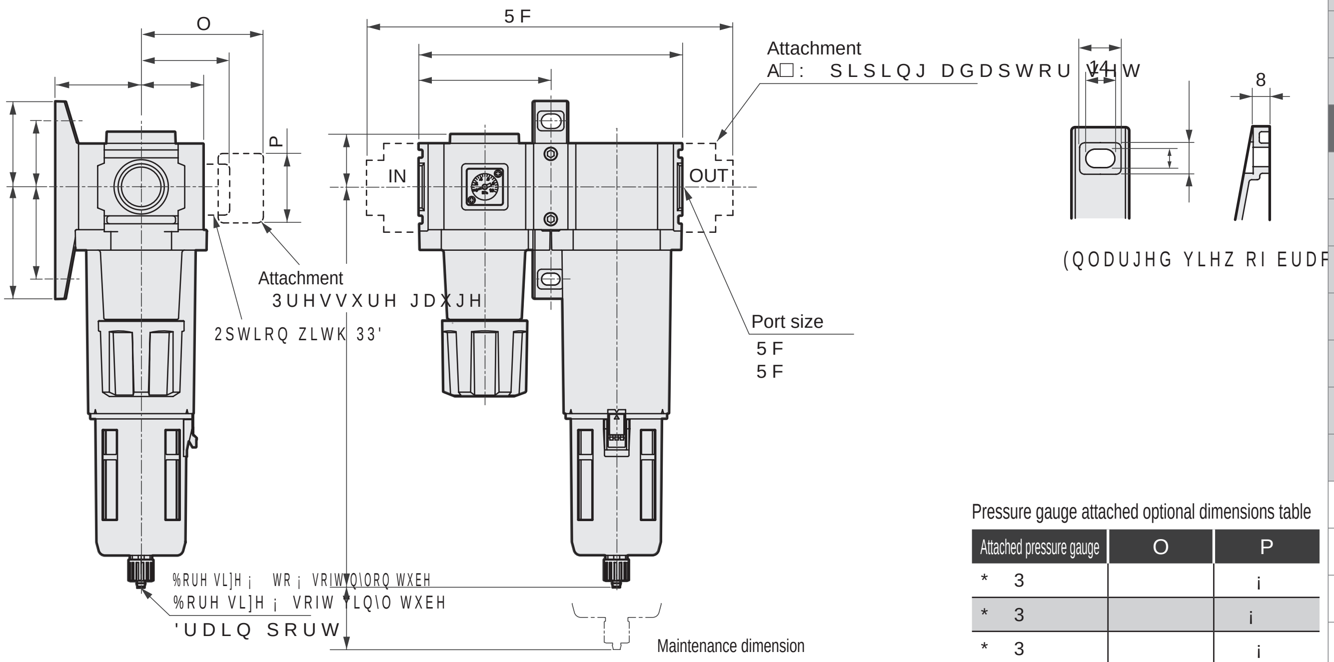


Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
* 3		i
* 3		i
* 3		i
* 3		i
* 3		i
* 3		ø42
* 3		i
R2		□

'LPHQVLRQV

M&   :



” 5HIHU WR SDJH   IRU WKH GLPHQVLRQV RI PHWDO ERZO

Pressure gauge attached optional dimensions table

Attached pressure gauge	O	P
* 3		i
* 3		i
* 3		i
* 3		i
* 3		i
* 3		ø42
* 3		i
R2		□

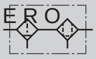
)0 FRPELQDWLRQ VWDQGDUG ZKLWH 6HULHV

C1060/C2060/C3060/ C4060/C6060/C8060-W Series

)LOWHU DQG RLOPLVW ¿OWHU LQWHJUDWHG

Port size: 1/8 to 1

-,6 V\PERO



RoHS CAD

6SHFL¿FDWLRQV

'HVFULSWLRQV		& :	& :	& :	& :	& :	& :
Appearance							
&RPSRQHQWV	)LOWHU	) :	) :	) :	) :	) :	) :
	2LO PLVW ¿OWHU	0 :	0 :	0 :	0 :	0 :	0 :
:RUNLQJ ÀXLG		&RPSUHVVHG DLU					
Max. working pressure MPa		1RWHV					
Withstanding pressure MPa		1RWH					
$PELHQW WHPSHUDWXUH UDQJH &		WR					
3RUW VL]H 5F 137 *		XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
Product weight kg							
6HFRQGDU\ RLO FRQFHQWUDWLRQ		PJ ^{3}P or less					
0D[ÀRZ 1RWH ^{3}P/min.			1RWH				

1RWH 7KH PD[LPXP ÀRZ LV IRU D SULPDU\ SUHVVXUH RI 03D

1RWH :KHQ VHOHFWLQJ WKH HOHPHQW RSWLRQ <7KH ZRUNLQJ ÀRZ PXVW EH OHVV WKDQ WKH PD[LPXP ÀRZ 7KH PD[LPXP

1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG WKH 1& DXWRPDWLF GUDLQ LV HQFORVHG IRU 03D PD[LPXP RSHUDWLRQ SUHVVXUH LV 03D DQG ZLWKVWDQGLQJ SUHVVXUH LV 03D 5HIHU 0 :) DXWRPDWLF GUDLQ IRU WKH PD[LPXP ZRUNLQJ ÀRZ 7KH ZRUNLQJ ÀRZ PXVW EH OHVV WKDQ

1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG WKH VXSSO\ DLU SUHVVXUH LV 03D RU PR MPa.

1RWH :KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG WKH VXSSO\ DLU SUHVVXUH LV 03D RU

1RWH 5HIHU WR SDJH IRU GHWDLOV RQ RWKHU RLO PLVW ¿OWHUV

How to order

C1060 - 6 - ( ) - W - Z - ( ) - A6W

- A Model no.
- B Port size
- & 3RUW WKUHDG W\SH
- ' Option
- E 'LVSOD\ XQLW
-) Piping adaptor set DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

6\PERO	'HVFULSWLRQV		&	&	&	&	&	&
B Port size								
	6	1/8	M					
	8	1/4	M	M	M	M		
	10	3/8		M	M	M		
	15	1/2				M		
	20	3/4				M*1	M	M
	25	1					M	M
& Port thread type (Note 2)								
	Blank	Rc thread	M	M	M	M	M	M
	N	NPT thread	M	M	M	M	M	M
	G	* WKUHDG	M	M	M	M	M	M
' Option (Note 3)								
Drainage (Note 4, Note 5)	Blank	With manual drain cock	M	M	M	M	M	M
	F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH (H[KDXVW Z RXW)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH (H[KDXVW Z RXW)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH (H[KDXVW Z RXW)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW Z RXW	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bowl material	Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M	M	M
	M	Metal bowl			M	M	M	M
	M1	Metal bowl with manual drain cock		M	M	M	M	M
Element	Blank	P	M	M	M	M	M	M
	Y	P VXEPLFURQ 1RWH			M	M	M	M
Differential pressure detection	Blank	:LWKRXW GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW	M	[illegible]	[illegible]	[illegible]	M	M
	X1	5HYHUVH ÀRZ ULJKW	[illegible]	[illegible]	[illegible]	M	M	M
E Display unit								
	Blank	03D GLVSOD\ 5F WKUHDG	[illegible]	[illegible]	M	M	M	M
	J1	03D GLVSOD\ 137 * WKUHDG	[illegible]	[illegible]	M	M	M	M
) Piping adaptor set (Attached) (Page 428 Note 7)								
	Blank	Not attached	M	M	M	M	M	M
	A6*W	Rc1/8 piping adaptor set	M					
	A8*W	Rc1/4 piping adaptor set	M	M	M	M		
	A10*W	Rc3/8 piping adaptor set	M	M	M	M		
	A15*W	Rc1/2 piping adaptor set		M	M	M		
	A20*W	Rc3/4 piping adaptor set					M	M
	A25*W	Rc1 piping adaptor set					M	M
	A32*W	Rc1 1/4 piping adaptor set					M	M
***Adaptor screw type**								
	Blank	Rc thread	M	M	M	M	M	M
	N	NPT thread	M	M	M	M	M	M
	G	* WKUHDG	M	M	M	M	M	M

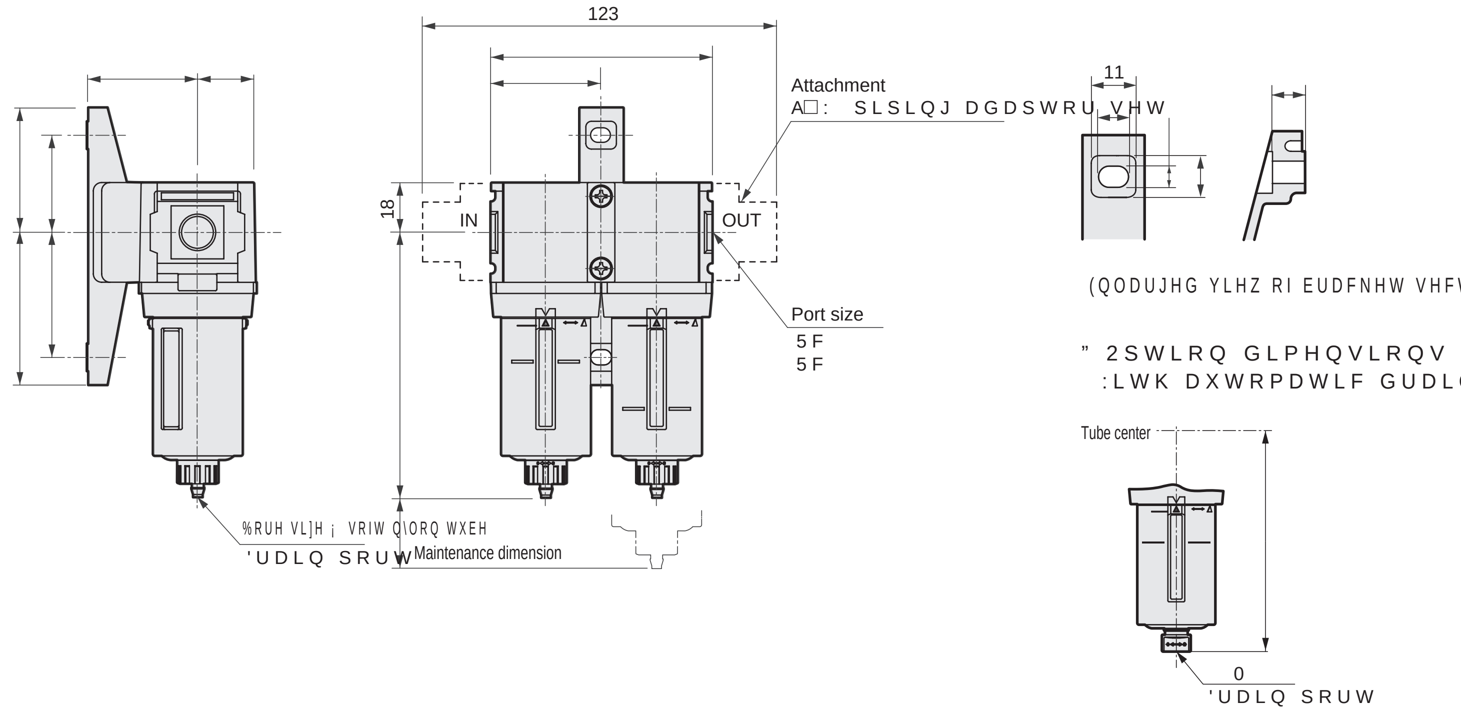
Note on model no. selection

1RWH 3LSLQJ DGDSWRU $: LV DWWDFKHG RQ WKH ERWK HQGV RI
& : $: GRHV QRW QHHG WR EH VHOHFWHG IRU WKH
piping adaptor set.
1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG 287
DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF GUDLQ DUH
the target.
1RWH 6HOHFW WKH RSWLRQV IURP GUDLQDJH ERZO PDWHULDO HOHPHQW DQG
GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ :KHQ VHOHFWLQJ RSWLRQV IRU
VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS
1RWH 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV
1RWH :KHQ RSWLRQ V\PERO) LV VHOHFWHG WKH 12 DXWRPDWLF GUDLQ
LV HQFORVHG IRU WKH DLU ILOWHU DQG WKH 1& DXWRPDWLF GUDLQ LV
HQFORVHG IRU WKH RLO PLVW ¿OWHU :KHQ RSWLRQ V\PERO) LV
VHOHFWHG WKH 1& DXWRPDWLF GUDLQ LV HQFORVHG IRU WKH DLU
¿OWHU DQG RLO PLVW ¿OWHU)RU)) D
D ODUJH GLVFKDUJH UDWH DQG WKH RLO PLVW ¿OWHU LV D QRUPDO 1&
automatic drain.
1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVVLQJ ÀRZ ZKHQ RSWLRQ
< LV VHOHFWHG
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

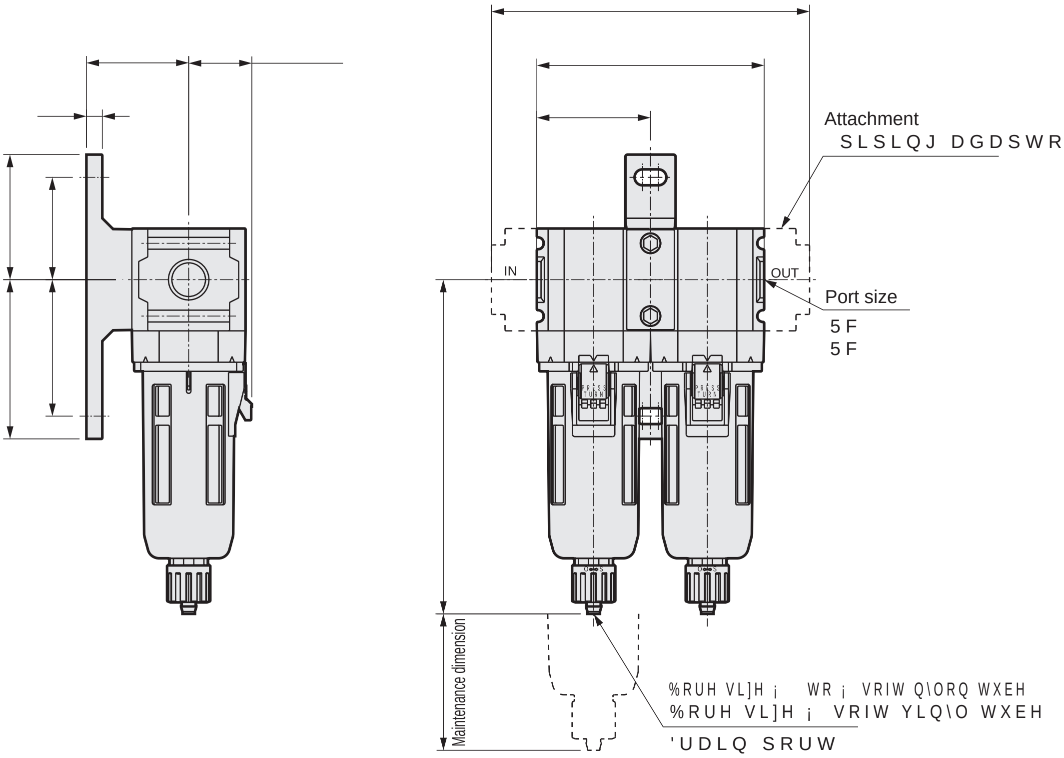
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

'LPHQVLRQV

M & :

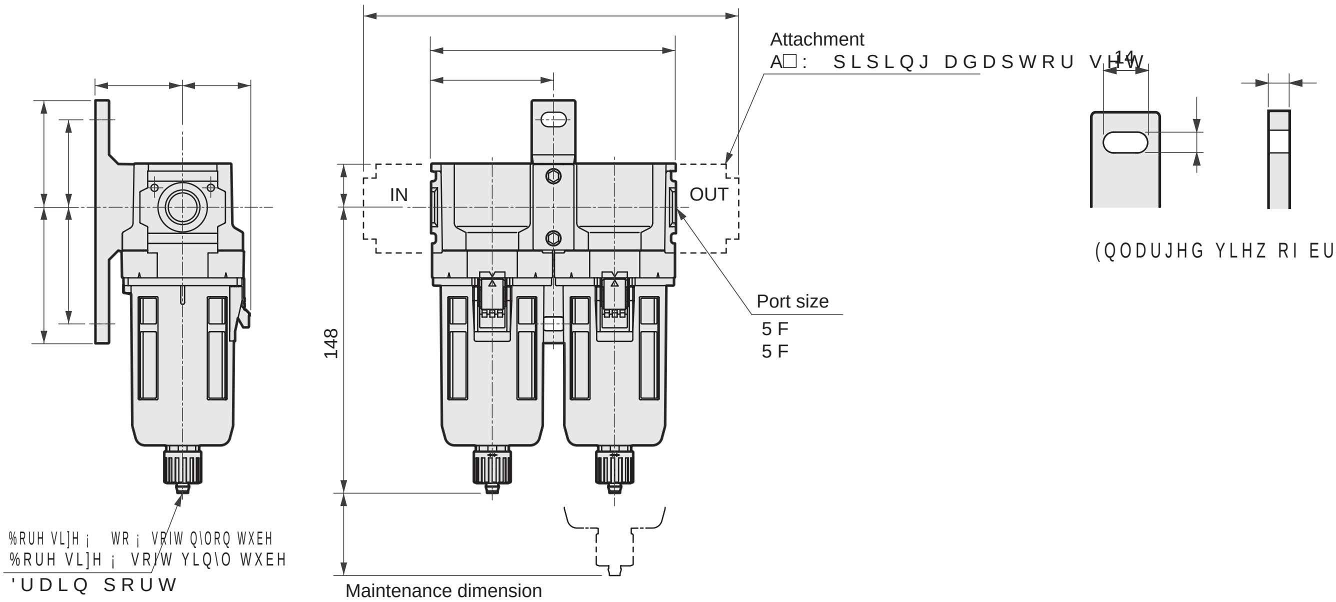


M & :



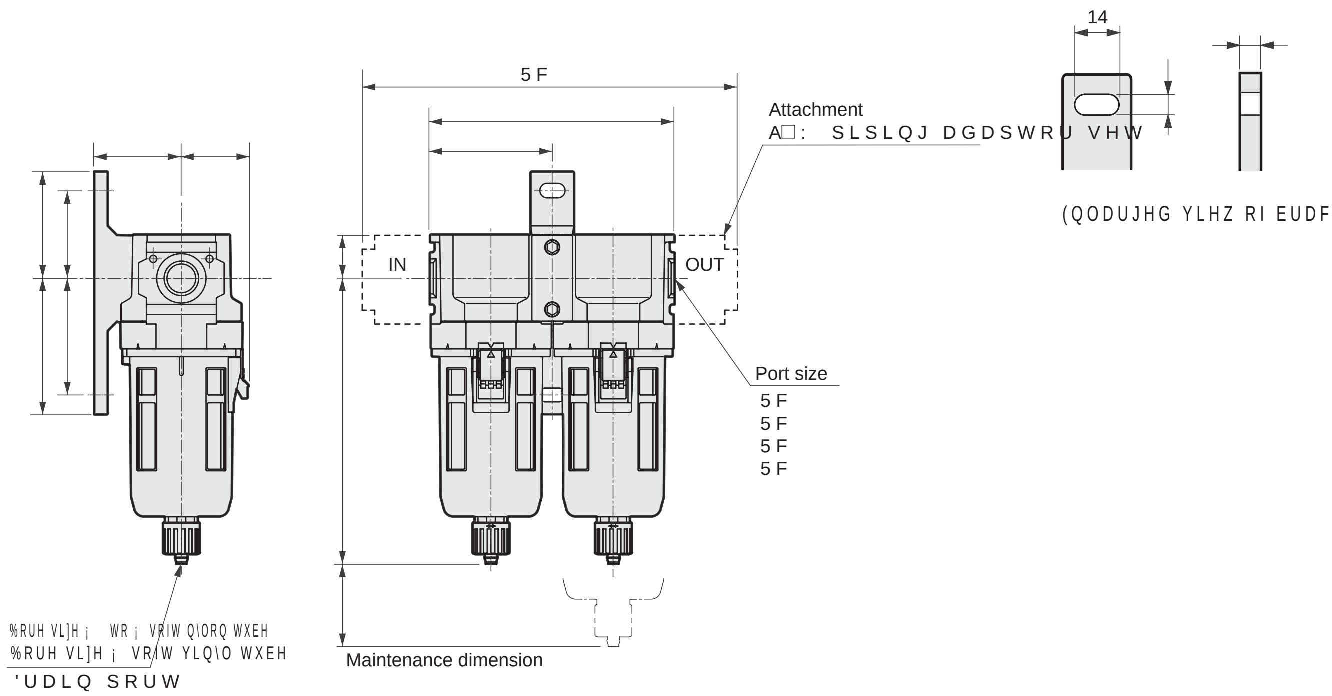
'LPHQVLRQV

M&   :



" 5HIHU WR SDJH   IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG SDJH   IRU WKH RLO PLVW ¿OWHU

M&   :

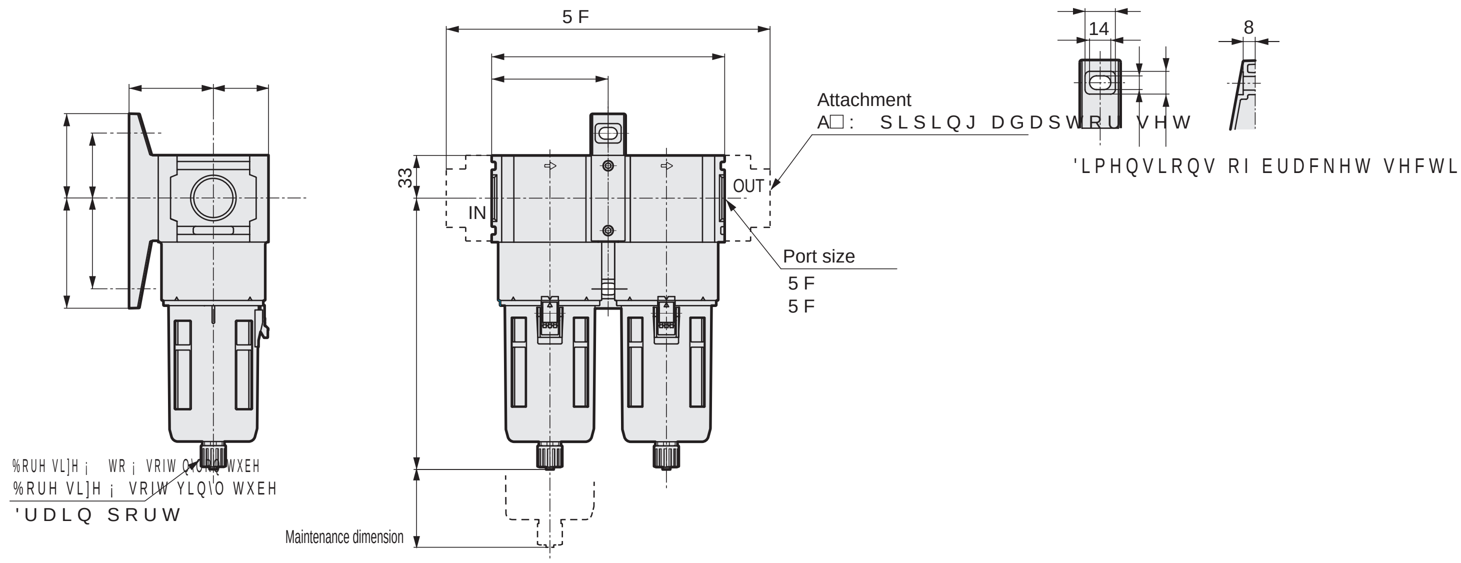


" 5HIHU WR SDJH   IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG SDJH   IRU WKH RLO PLVW ¿OWHU

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

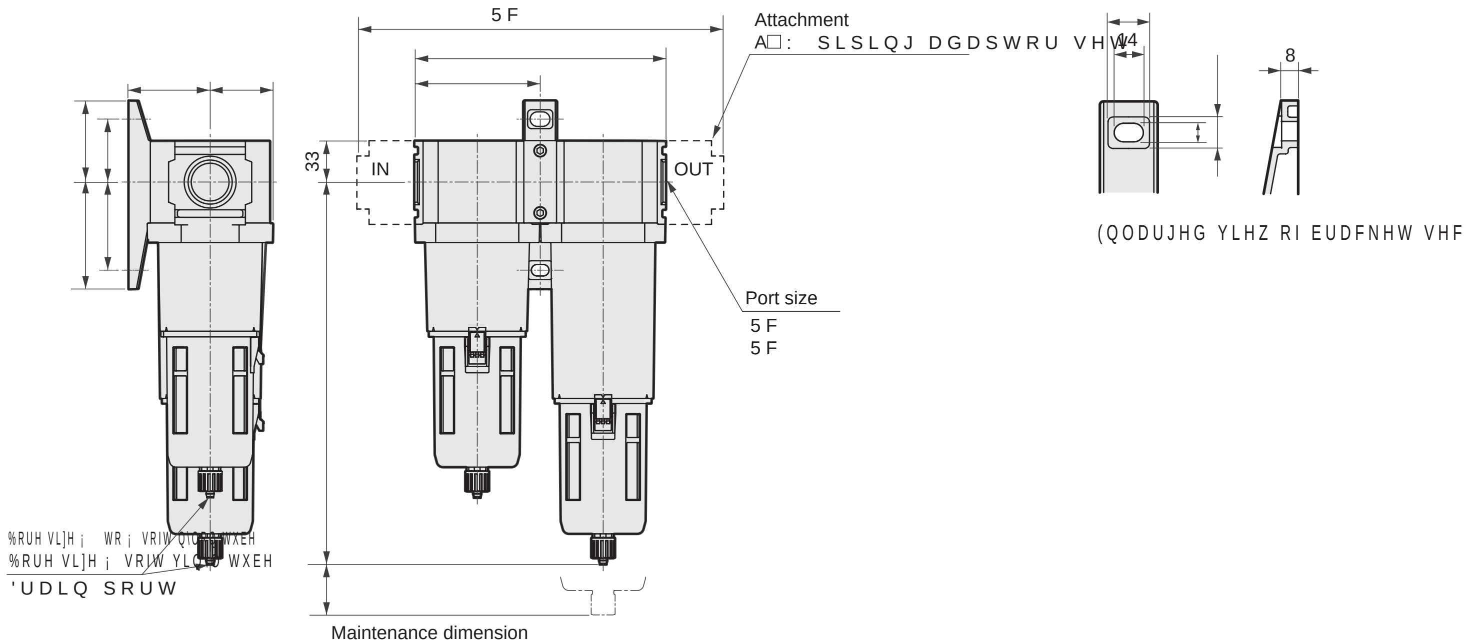
'LPHQVLRQV

M & :



" 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG SDJH IRU WKH RLO PLVW ¿OWHU

M & :



" 5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG SDJH IRU WKH RLO PLVW ¿OWHU

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series
F.R.L. unit

)) 0 FRPELQDWLRQ VWDQGDUG ZKLWH 6HULH

C3070/C4070/C6070/C8070-W Series

—P ¿OWHU —P ¿OWHU DQG RLOPLVW ¿OWH

Port size: 1/4 to 1

-,6 V\PERO

6SHFL¿FDWLRQV

'HVFULSWLRQV		& :	& :	& :	& :
Appearance					
&RPSRQHQW	)LOWHU —P	) :	) :	) :	) :
	)LOWHU	—P) :	) :	) :	) :
	2LO PLVW ¿OWHU	0 :	0 :	0 :	0 :
:RUNLQJ ÀXLG		&RPSUHVVHG DLU			
Max. working pressure MPa		1RWHV			
Withstanding pressure MPa					
$PELHQW WHPSHUDWXUH UDQJH		WR			
3RUW VL]H 5F 137 *		XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSW
Product weight kg					
6HFRQGDU\ RLO FRQFHQWUDWLRQ		PJ^{3}P or less			
0D[ÀRZ UDWH m^3/min 1RWH					1.1

1RWH 7KH PD[LPXP ÀRZ LV IRU D SULPDU\ SUHVVXUH RI 03D
Note 2: :KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG WKH VXSSO\ DLU SUHVVXUH LV 03D RU PRUH
1RWH :KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG WKH VXSSO\ DLU SUHVVXUH LV 03D RU
1RWH 5HIHU WR SDJH IRU GHWDLOV RQ RWKHU RLO PLVW ¿OWHUV

How to order

C3070 - 6 ○ ○ - W - Z - ○ - A6W

Ⓐ Model no.

Ⓑ Port size

Ⓒ 3RUW WKUHDG W\SH

Ⓓ Option

Ⓔ 'LVSOD\ XQLW

Ⓕ Piping adaptor set DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

6\PER	'HVFULSWLRQ	Ⓐ Model no. &	&	&	&
Ⓑ Port size					
8	1/4	M	M		
10	3/8	M	M		
15	1/2		M		
20	3/4		M Note 1	M	M
25	1			M	M
Ⓒ Port thread type Note 2					
Blank	Rc thread	M	M	M	M
N	NPT thread	M	M	M	M
G	* WKUHDG	M	M	M	M
Ⓓ Option Note 3					
Drainage Note 4, Note 5 — Blank	With manual drain cock	M	M	M	M
F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW Z	M	M	M	M
F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW Z	M	M	M	M
FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW Z			M	M
FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW			M	M
Bowl material — Blank	3RO\FDUERQDWH ERZO	M	M	M	M
Z	1\ORQ ERZO	M	M	M	M
M	Metal bowl	M	M	M	M
M1	Metal bowl with manual drain cock	M	M	M	M
Differential pressure detection — Blank	:LWKRXW GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ	M	M	M	M
Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ			M	M
Flow Direction — Blank	6WDQGDUG ÀRZ OHIW	M	M	M	M
X1	5HYHUVH ÀRZ ULJKW	M	M	M	M
Ⓔ Display unit					
Blank	03D GLVSOD\ 5F WKUHDG	M	M	M	M
J1	03D GLVSOD\ 137 * WKUHDG	M	M	M	M
Ⓕ Piping adaptor set (attached) Page 428 Note 6					
Blank	Not attached	M	M	M	M
A8*W	Rc1/4 piping adaptor set	M	M		
A10*W	Rc3/8 piping adaptor set	M	M		
A15*W	Rc1/2 piping adaptor set	M	M		
A20*W	Rc3/4 piping adaptor set		M	M	M
A25*W	Rc1 piping adaptor set			M	M
A32*W	Rc1 1/4 piping adaptor set			M	M
***Adaptor screw type**					
Blank	Rc thread	M	M	M	M
N	NPT threads	M	M	M	M
G	* WKUHDG	M	M	M	M

⚠ Note on model no. selection

1RWH 3LSLQJ DGDSWRU $: LV DWWDFKHG RQ WKH ERWK HQGV RI & : $: GRHV QRW QHHG WR EH VSHFLILHG IRU the piping adaptor set.

1RWH 1 * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH 1 287 DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF GUDLQ are the target.

1RWH 6HOHFW WKH RSWLRQ IURP GUDLQDJH ERZO PDWHULDO HOHPHQW DQG GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS

1RWH 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV

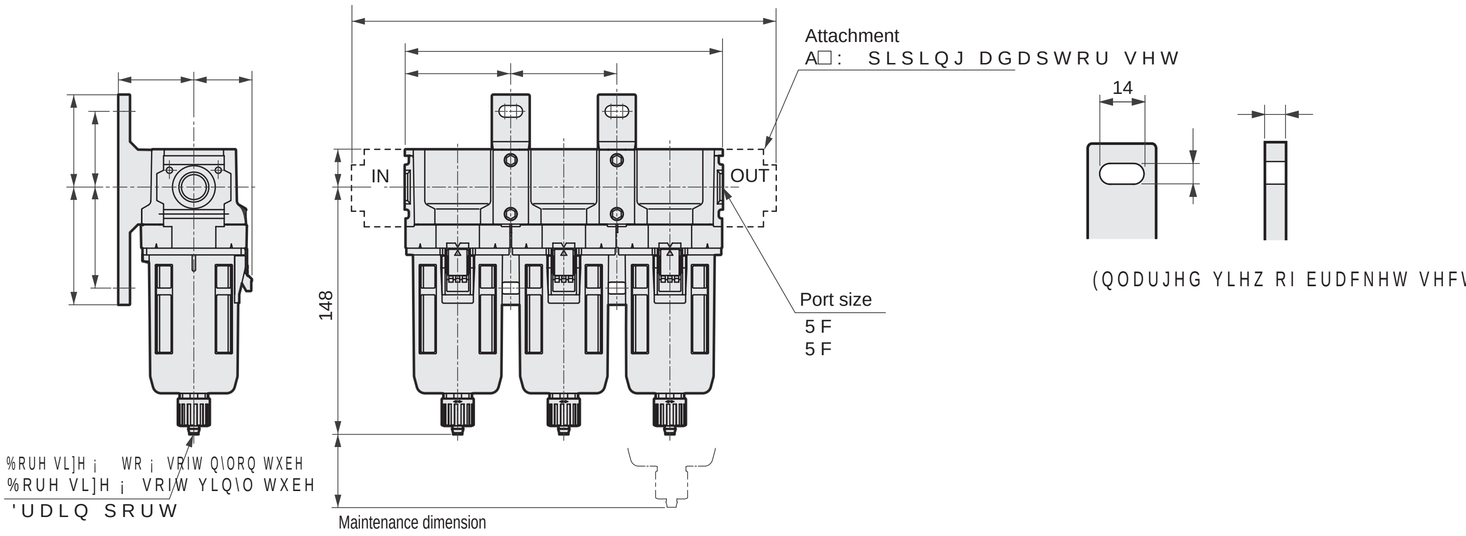
1RWH KHQ RSWLRQ V\PERO) LV VHOHFWHG WKH 12 DXWRPDWLF GUDLQ LV HQFORVHG IRU WKH DLU ¿OWHU DQG WKH 1& DXWRPDWLF GUDLQ LV HQFORVHG IRU WKH RLO PLVW ¿OWHU :KHQ RSWLRQ V\PERO) LV VHOHFWHG WKH 1& DXWRPDWLF GUDLQ LV HQFORVHG IRU ERWK WKH DLU ¿OWHU DQG RLO PLVW ¿OWHU)RU)) DQG)) RQO\ WKH ¿OWHU KDV D ODUJH GLVFKDUJH UDWH DQG WKH RLO PLVW ¿OWHU LV D QRUPDO 1& automatic drain.

1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

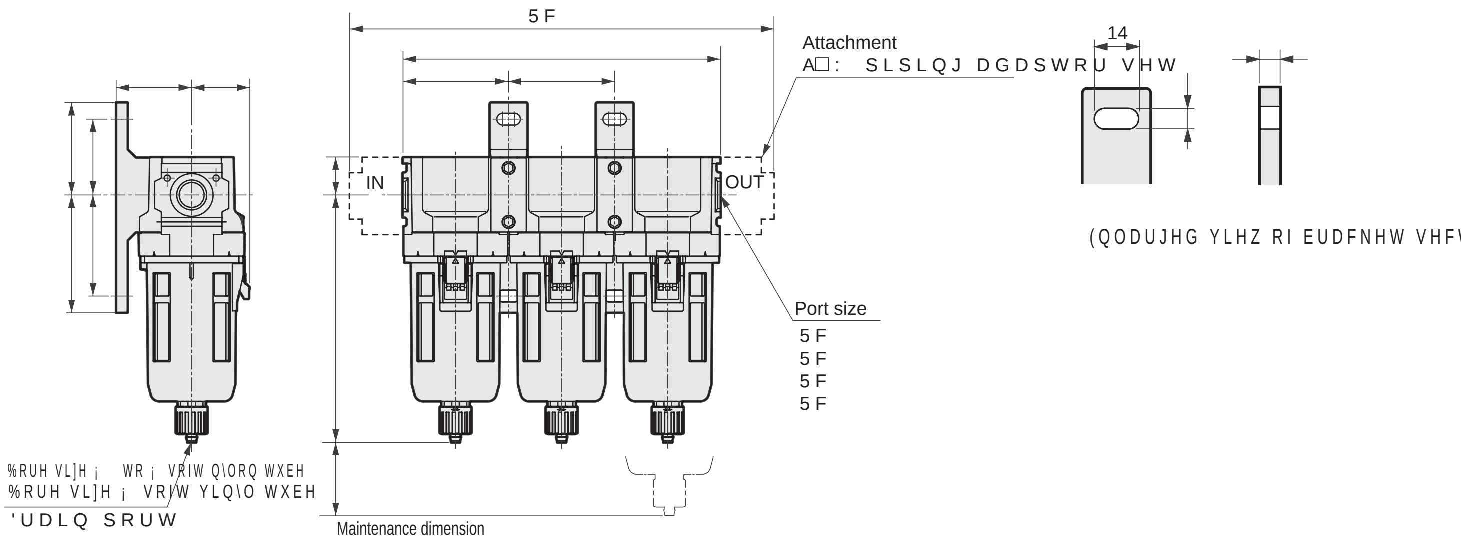
'LPHQVLRQV

M& :



”5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG SDJH IRU WKH RLO PLVW ¿OWHU

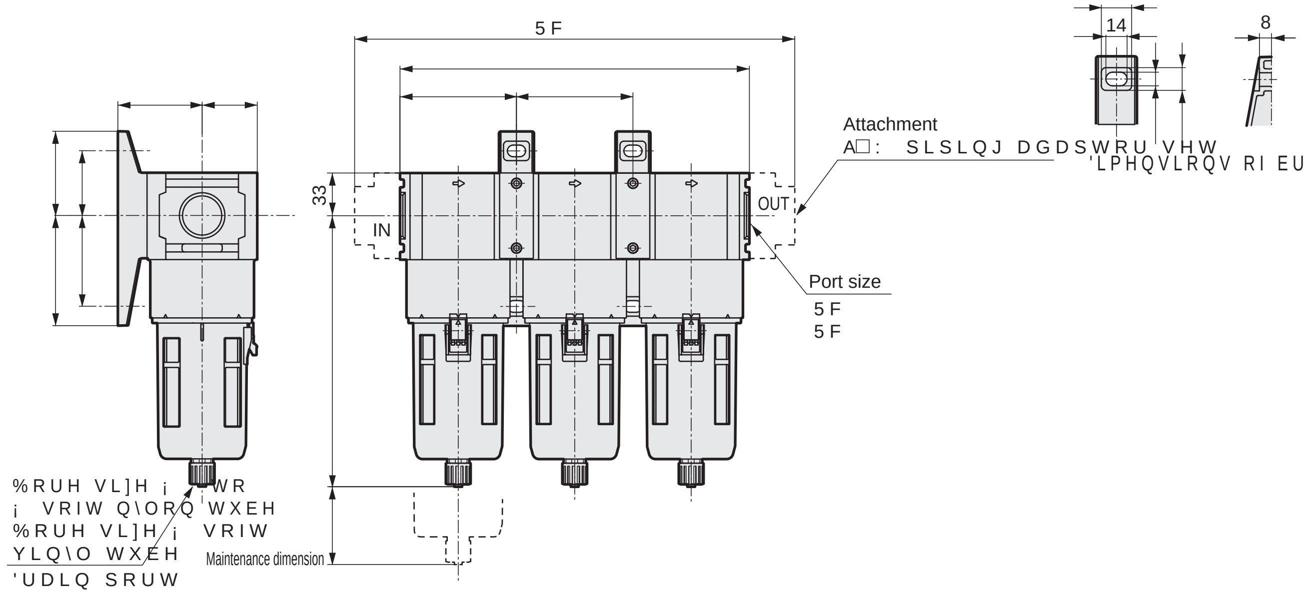
M& :



”5HIHU WR SDJH IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG SDJH IRU WKH RLO PLVW ¿OWHU

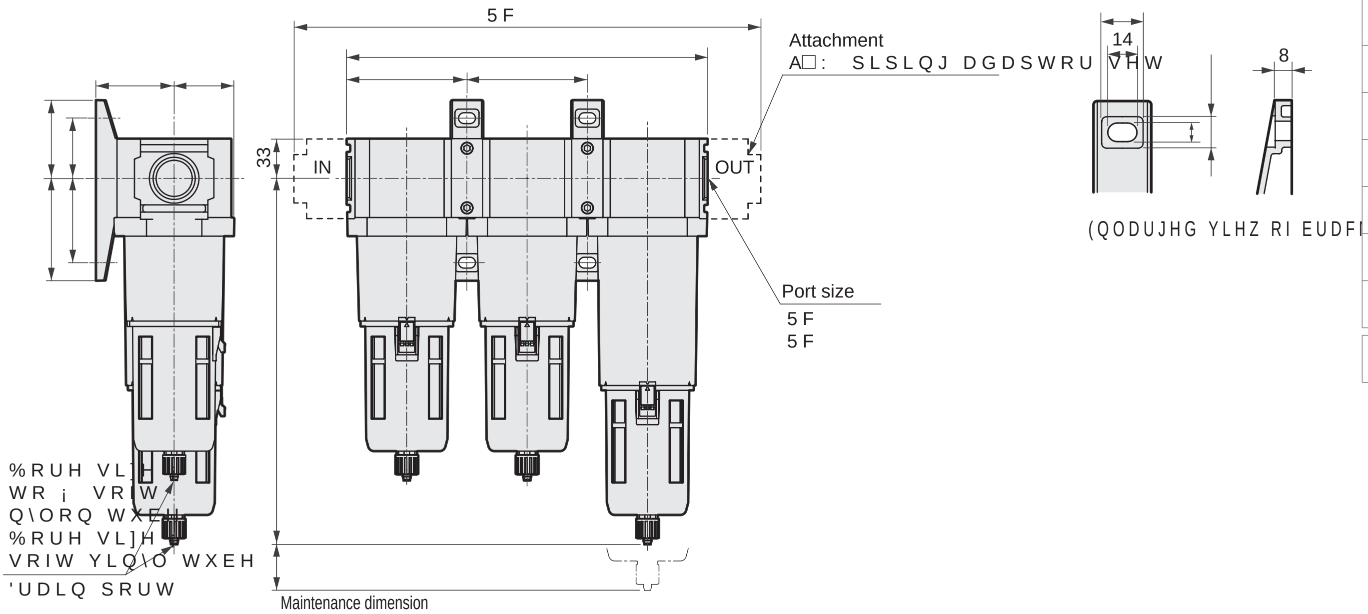
'LPHQVL CAD QV

M&   :



” 5HIHU WR SDJH   IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG
SDJH   IRU WKH RLO PLVW ¿OWHU

M&   :



” 5HIHU WR SDJH   IRU WKH GLPHQVLRQV RI WKH PHWDO ERZO RSWLRQ ¿OWHU DQG
SDJH   IRU WKH RLO PLVW ¿OWHU

)LOWHU UHJXODWRU VWDQGDUG ZKLWH 6HUL

W1000/W2000/W3000/W4000/W8000-W Series

1HZ 6HULHV RI —P HOHPHQWV IRU GXVW UHPRYDO DQG

Port size: 1/8 to 1

-,6 V\PERO

6SHFL¿FDWLRQV

'HVFULSWLRQV	:	: :	: :	: :	: :
Appearance					
:RUNLQJ ÀXLG	&RPSUHVVHG DLU				
Max. working pressure MPa	1RWHV				
Withstanding pressure MPa	1RWH				
$PELHQW WHPSHUDWXUH UDQJH	WR				Note 4
)LOWUDWLRQ —UDWLQJ			RU		
Set pressure range MPa	WR Note 1	WR			
5HOLHI	:LWK UHOLHI PHFKDQLVP				
'UDLQ FDSDFLW\ FP3	12				1RWH
3RUW VL]H 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
Product weight kg					
Standard accessories	Pressure gauge and bowl guard				

1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG IRU WKH : : VHULHV PLQLPXP RSHUDWLQJ S
DQG ZLWKVWDQGLQJ SUHVVXUH LV 03D 5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ WDEOH SDJ
ZRUNLQJ ÀRZ 6HW WKH ZRUNLQJ ÀRZ WR OHVV WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ
1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLQJ SUHVVXUH PXVW EH 0
$LU LV SXUJHG ZLWK LQLWLDO GUDLQDJH XQWLO SUHVVXUH UHDFKHV 03D
1RWH :KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLQJ SUHVVXUH PXVW EH
1RWH 7KH ZRUNLQJ WHPSHUDWXUH UDQJH RI WKH SUHVVXUH VZLWFK ZLWK LQGLFDWRU 33' DVVHPEO\
1RWH 'UDLQDJH DFFXPXODWLRQ FP3 RQ PRGHOV ZLWK WKH PDQXDO GUDLQ FRFN
1RWHKHQ XVLQJ WKH) ZLWK DXWRPDWLF GUDLQ XVH WKH : : 6HULHV DW OHVV WKDQ WKH PD[LPXP ÀRZ U

2]RQH VSHFL¿FDWLRQV (Option)

W*000 - ······ - W - ······ - P11

&OHDQ URRP VSHFL¿FDWLRQV FDWDORJ 1R &% 6

M'XVW JHQHUDWLRQ SUHYHQWLQJ VWUXFWXUH IRU XVH LQ FOHDQURRPV

W*000 - ················ - P7*

6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV FDWDORJ 1R &% 6

M6WUXFWXUHG IRU XVH LQ VHFRQGDU\ EDWWHU\ PDQXIDFWXULQJ SURFHVVHV

W*000 - ················ - P4*

How to order

W1000 - 6 - ○ - W - Z - ○ - A6W ○

Ⓐ Model no.
Ⓑ Port size
Ⓒ 3RUW WKUHDG W\SH
Ⓓ Option
Ⓔ 'LVSOD\ XQLW
Ⓕ Piping adaptor set DWWDFKHG
Ⓖ Attachment DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

6\PERO		'HVFULSWLRQV	Ⓐ Model no.				
Ⓑ Port size							
6		1/8	M				
8		1/4	M	M	M	M	
10		3/8		M	M	M	
15		1/2				M	
20		3/4					M
25		1					M
Ⓒ Port thread type Note 1							
Blank		Rc thread	M	M	M	M	M
N		NPT thread	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M
Ⓓ Option Note 2							
Drainage Note 3	Blank	With manual drain cock	M	M	M	M	M
	F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH (K DXV			M	M	M
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDX	M	M	M	M	M
	FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([K					M
	FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[K					M
Bowl material	Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M	M
	M	Metal bowl			M	M	M
	M1	Metal bowl with manual drain cock		M	M	M	M
Element	Blank	P	M	M	M	M	M
	Y	—P VXEPLFURQ 1RWH			M	M	M
Pressure Range	Blank	WR 03D	M	M	M	M	M
	L	WR 03D 1RWH	M	M	M	M	M
Relief	Blank	:LWK UHOLHI PHFKDQLVP	M	M	M	M	M
	N	1RQUHOLHI W\SH	M	M	M	M	M
Pressure gauge	Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M	M
	T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F		M	M	M	M
	T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH SRUW 5F	M		M	M	M
	T6	'LJLWDO SUHVVXUH VHQVRU 313 WUDQVLVWRU RXWSXW	M		M	M	M
	R1	3UHVVXUH VZLWFK ZLWK GLVSOD\ 33	M		M	M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW : OHIW	M	M	M	M	M
Ⓔ Display unit							
Blank		03D GLVSOD\ 5F WKUHDG	M	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M
Ⓕ Piping adaptor set (attached) Note 8, Note 9 Page 428							
Blank		Not attached	M	M	M	M	M
A6*W		Rc1/8 piping adaptor set	M				
A8*W		Rc1/4 piping adaptor set	M	M	M	M	
A10*W		Rc3/8 piping adaptor set	M	M	M	M	
A15*W		Rc1/2 piping adaptor set		M	M	M	
A20*W		Rc3/4 piping adaptor set				M	M
A25*W		Rc1 piping adaptor set					M
A32*W		Rc1 1/4 piping adaptor set					M
***Adaptor screw type**							
Blank		Rc thread	M	M	M	M	M
N		NPT thread	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M
Ⓖ Attachment (attached) Note 10 Page 425, page 659							
Blank		Not attached	M	M	M	M	M
BW		& W\SH EUDFNHW	M	M	M	M	M
B3W		&RQVWDQW Z DWH & ' ZKHQ 1RWH	M	M	M	M	
G45P		* ' 3 / * ' 3	M	M	M	M	M
G49P		* ' 3 / * ' 3	M	M	M	M	M
G59P		* ' 3 / * ' 3	M		M	M	M
G40P		* ' 3 / * ' 3	M	M	M	M	M
G50P		* ' 3 / * ' 3	M		M	M	M
G41P		* ' 3 / * ' 3	M	M	M	M	M
G52P		* ' 3 / * ' 3	M	M	M	M	M
R2 Note 6		'LJLWDO SUHVVXUH VHQVRU	M	M	M	M	M

⚠ Note on model no. selection

1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH 1 287 JDXJH SRUW DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF GUDLQ DUH WKH WDUJHW

1RWH 6HOHFW RSWLRQV SHU GUDLQDJH ERZO PDWHULDO HOHPHQW DQG regulator sections.
:KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS

1RWH 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV

1RWH 5HIHU WR SDJH IRU PD[LPXP SURFHVVLQJ ÀRZ ZKHQ RSWLRQ < is selected.

1RWH 7KH SUHVVXUH JDXJH V LQGLFDWLRQ UDQJH LV WR 03D IRU RSWLRQ /

1RWH :KHQ ' RSWLRQ 7 LV VHOHFWHG RQO\ %ODQN RU 5 FDQ EH VHOHFWHG IRU SUHVVXUH JDXJH HQFORVHG 7KH GLJLWDO SUHVVXUH VHQVRU 33; PRXQWLQJ SRUW 5F LV DVVHPEOHG E\ RSHQ

1RWH 7KH RXWSXW W\SH LV 131 WUDQVLVWRU RXWSXW :KHQ WKH 313 WUDQVLVWRU RXWSXW LV UHTXLUHG

1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW be used at the same time.

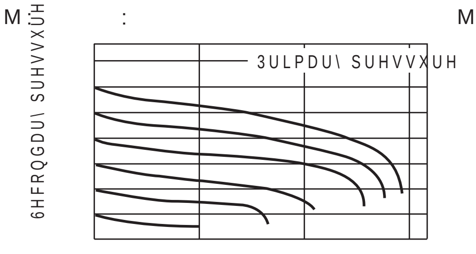
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

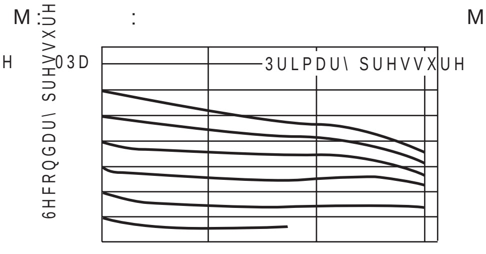
1RWH ,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG * D 137 SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV VHOHFWHG 3D * 5 WKUHDG pressure gauge is enclosed.

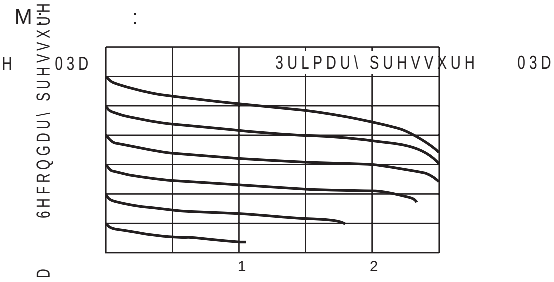
1RWH 5HIHU WR 6HFWLRQ ⚠5HJXODWRU LQ 35(&$87,216 IRU ,QVWDOODWLRQ DQG $GMXVWPHQW SDJH IRU GHWDLOV RQ PRXQWLQJ WKH / W\SH EUDFNHW

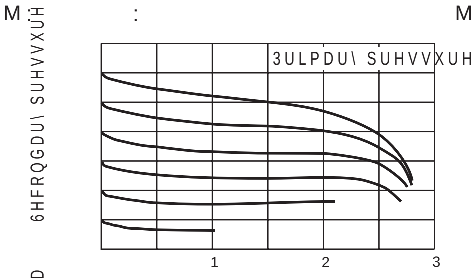
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

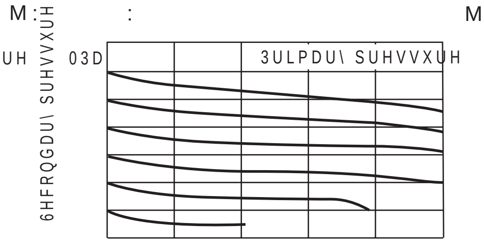
)ORZ FKDUDFWHULVWLF

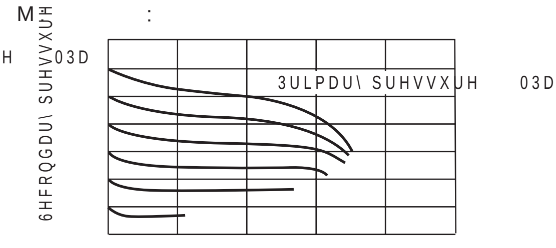


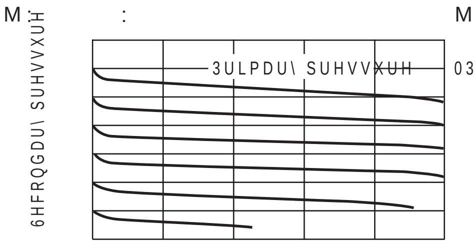


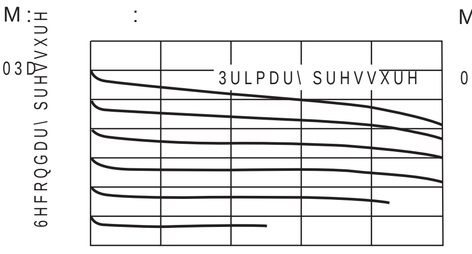


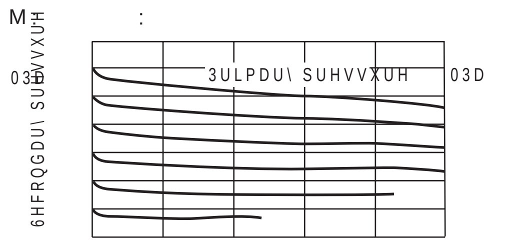


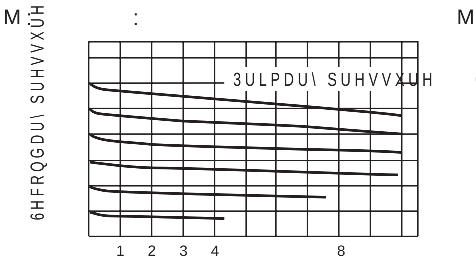


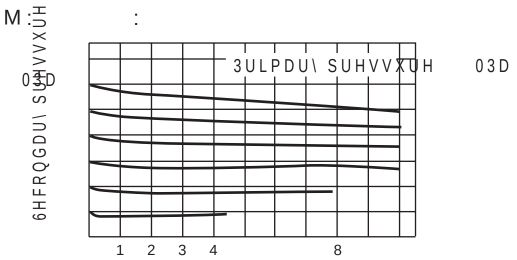




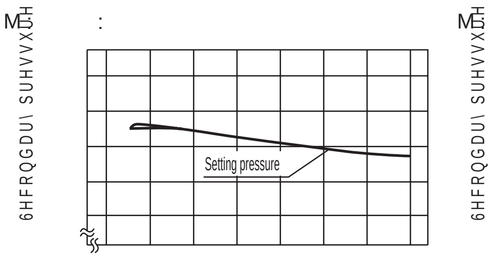


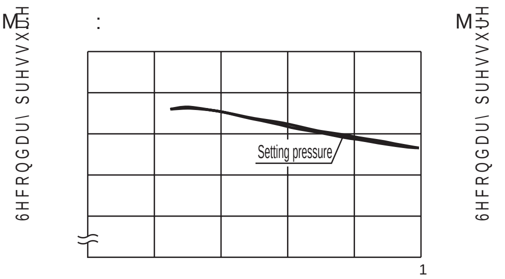


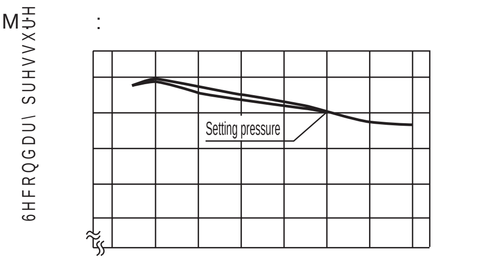


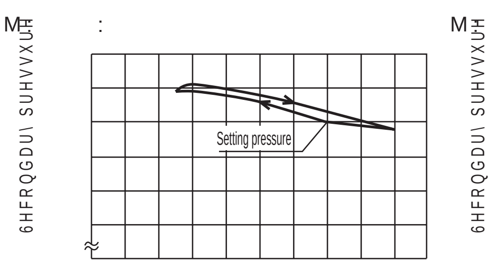


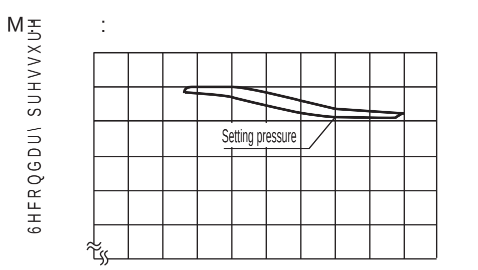
Pressure characteristic





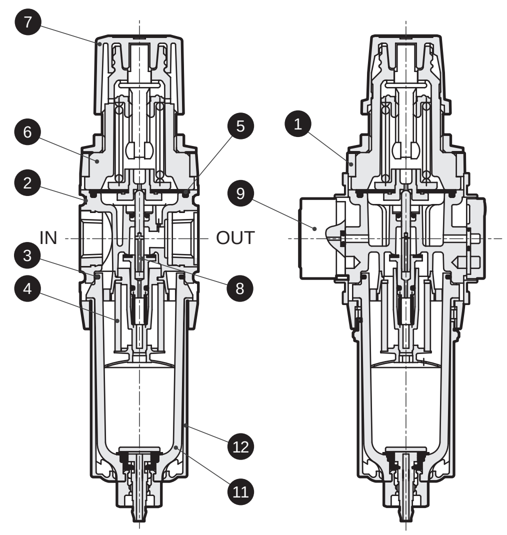




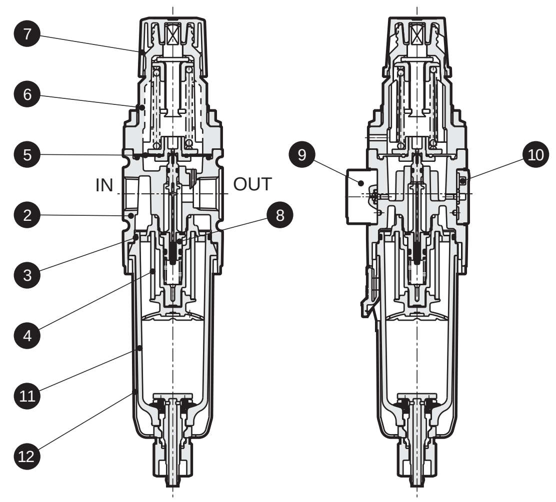


Internal structure and parts list

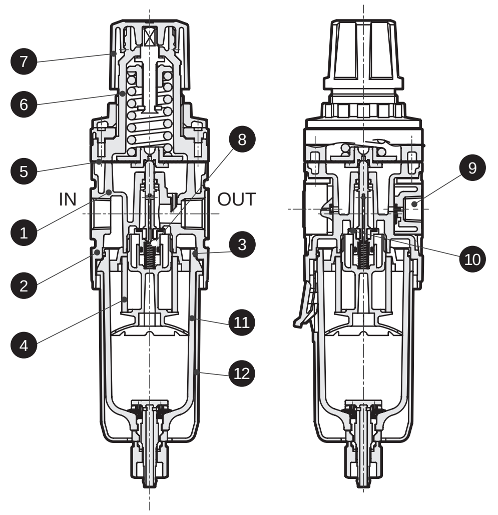
M: :



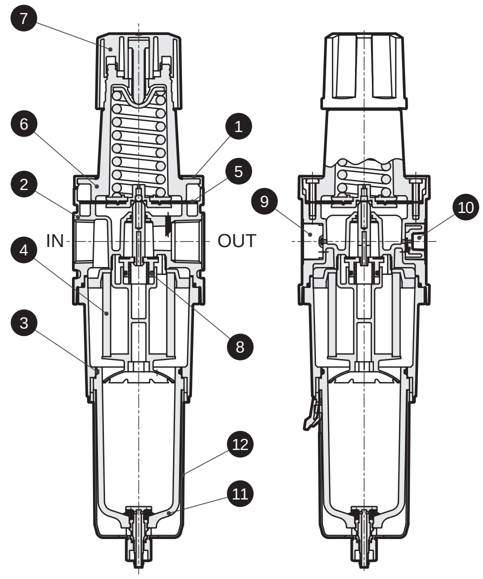
M: :



M: : : :



M: :



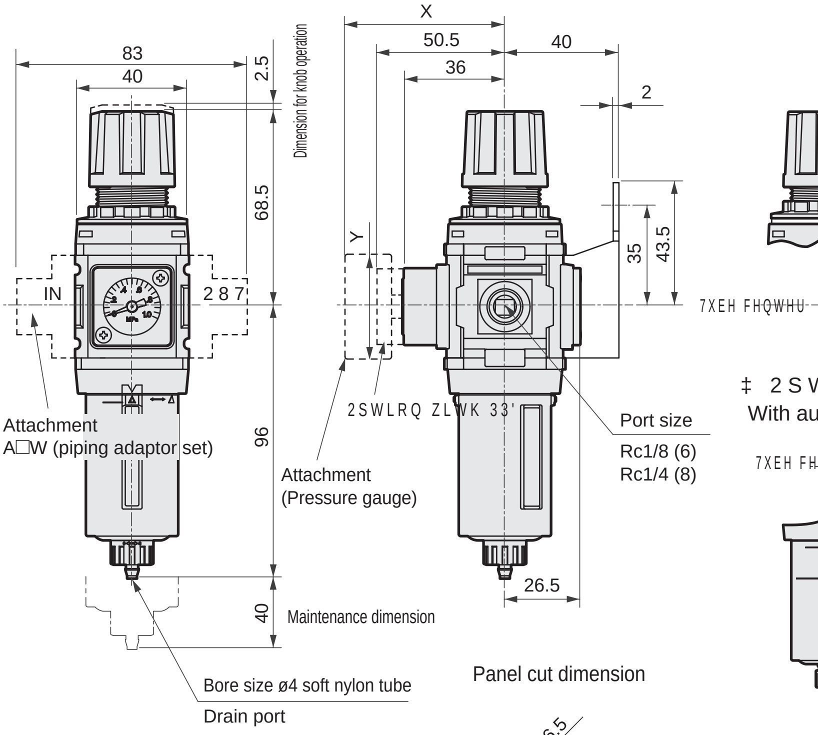
No.	Parts name	Material W1000-W	W2000-W	W3000-W	W4000-W	W8000-W
1	Plate cover	ABS resin		ABS resin		
2	%RG\	3RO\DPLGH UHVLQ VWHHO		$OXPLQXP DOOR\ GLH FDVWLQJ		
3	O ring Note 2	Special nitrile rubber				
4	Element Note 1	3RO\DFHWDO UHVLQ	3RO\SURS\OHQH	3RO\SURS\OHQH		
	'LDSKUDJP DVVHPEO\	3RO\DFHWDO UHVLQ	3RO\DFHWDO UHVLQ 3RO\SURS\OHQH	QLWULOH UXEEHU =LQF DOOR\ GLH FDVWLQJ QL		
	&RYHU	3RO\DPLGH UHVLQ		PBT resin		$OXPLQXP DOOR\ GLH FDVW
	.QRE	3RO\DFHWDO UHVLQ				
8	9DOYH DVVHPEO\	%UDVV K\GURJHQ QLWULOH UXEEHU SRO\DFHWDO UHVLQ :				
	3UHVVXUH JDXJH DVVHPEO\	3%7 UHVLQ SRO\DFHWDO UHVLQ SRO\FDUERQDWH UHVLQ QL				
	*DJH SOXJ DVVHPEO\			3RO\DPLGH UHVLQ QLWULOH UXEEHU		
	%ODQNLQJ SOXJ DVVHPEO\	3%7 UHVLQ QLWULOH UXEEHU VWHHO				
11	%RZO DVVHPEO\	3RO\FDUERQDWH UHVLQ SRO\DFHWDO UHVLQ XUHWKD				
12	Bowl guard	3RO\DPLGH UHVLQ		3RO\DPLGH UHVLQ		

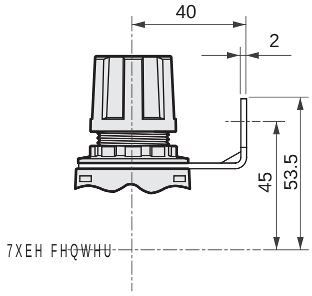
1RWH : :LV HOHPHQW DVVHPEO\
1RWH 2 ULQJ RI : :LV VSHFLDO VKDSHG

Dimensions

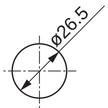
CAD

MW1000-W





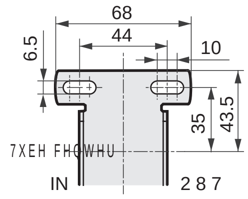
Panel cut dimension



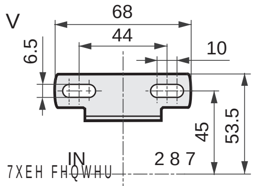
Panel plate thickness: Max. 6 mm

‡ $WWDFKPHQW

C type bracket (-BW)
Part model no.: B120

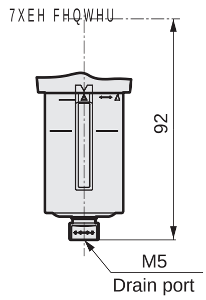


L type bracket (-B3W)
Part model no.: B130



‡ 2SWLRQ GLPHQVLRQV

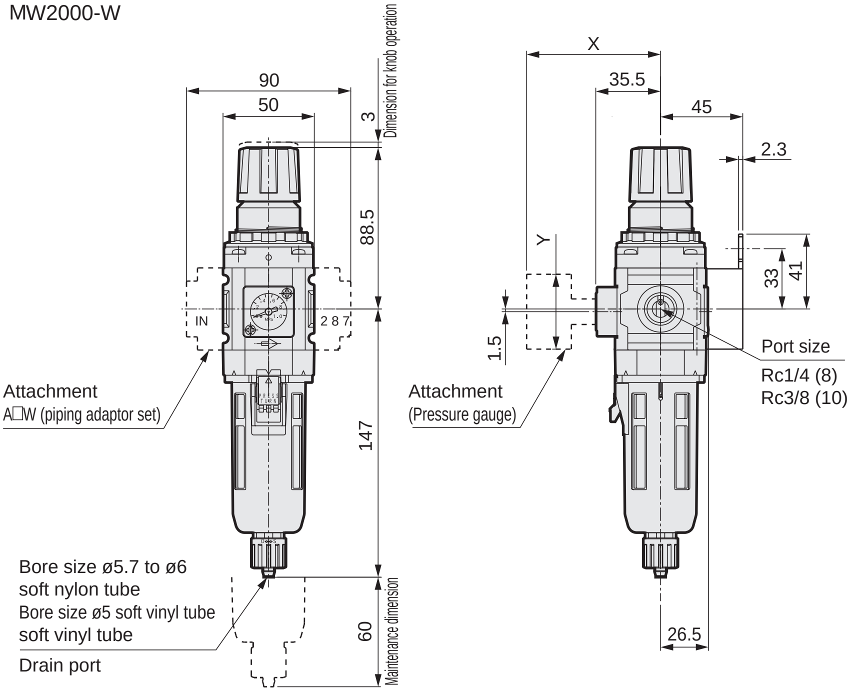
With automatic drain (F1)

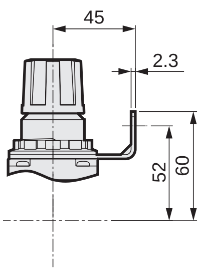


Pressure gauge attached optional dimensions table

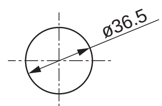
Attached pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

MW2000-W





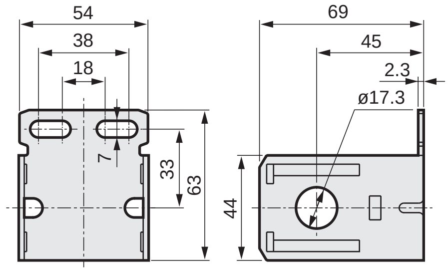
Panel cut dimension



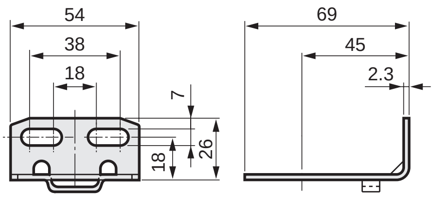
Panel plate thickness: Max. 4 mm

‡ $WWDFKPHQW

C type bracket (-BW)
Part model no.: B220



L type bracket (-B3W)
Part model no.: B230

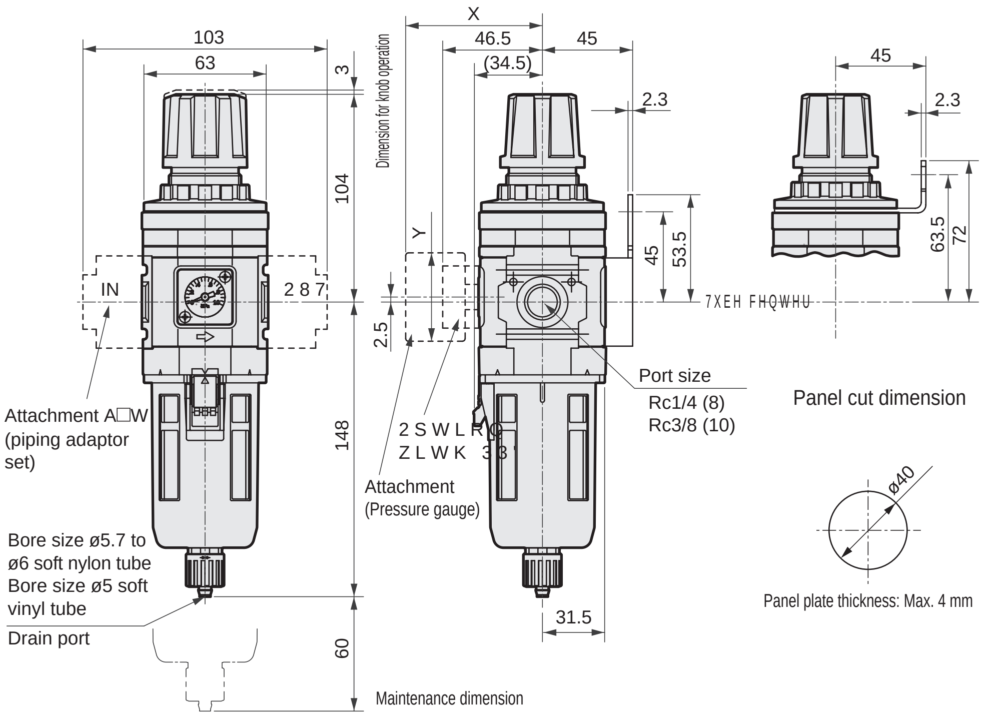


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

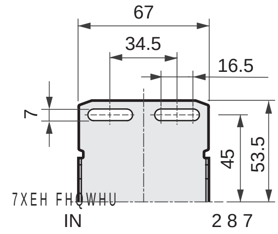
Dimensions CAD

MW3000-W

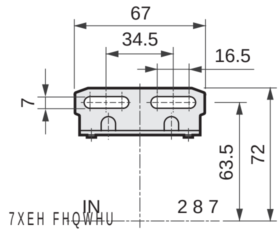


‡ $WWDFKPHQW

C type bracket (-BW)
Part model no.: B320



L type bracket (-B3W)
Part model no.: B330

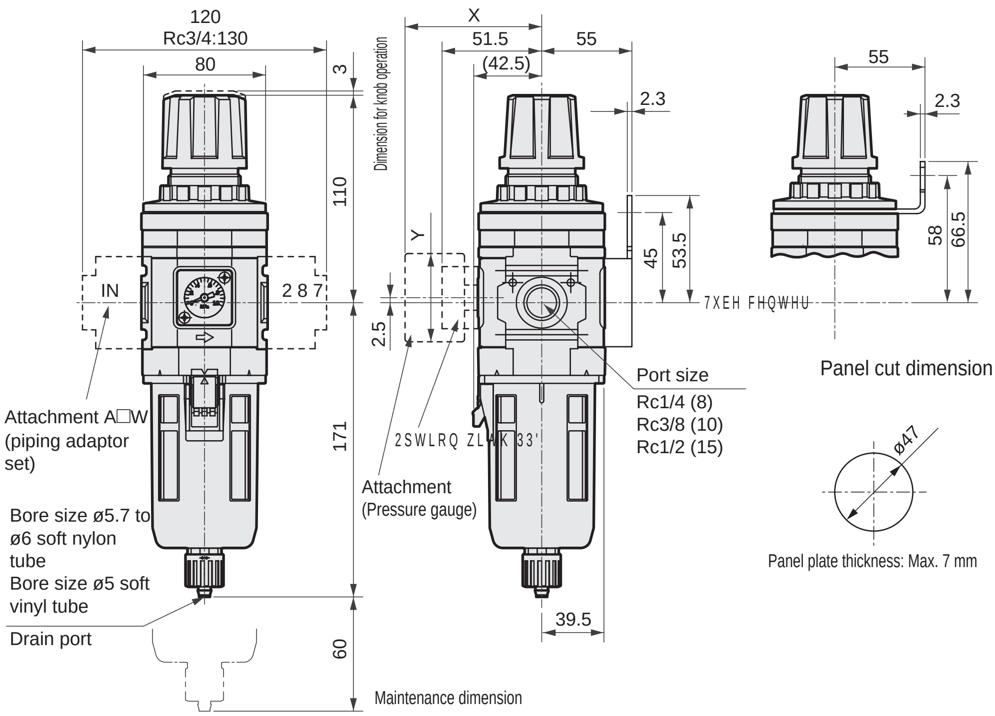


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

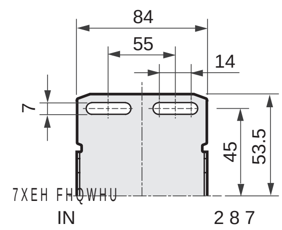
M)RU WKH SODVWLF ERZO WKH GLPHQV
cock and the automatic drain are same.

MW4000-W

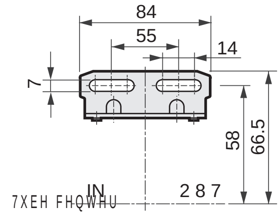


‡ $WWDFKPHQW

C type bracket (-BW)
Part model no.: B420



L type bracket (-B3W)
Part model no.: B430



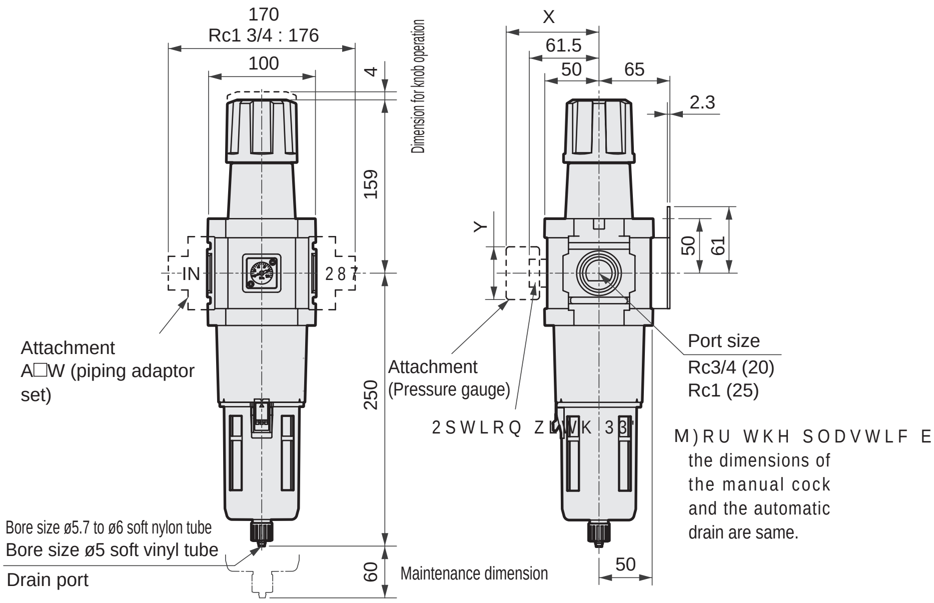
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

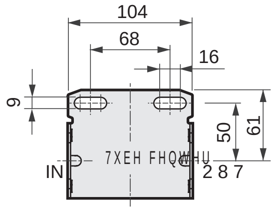
M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV RI WKH PDQXDO
cock and the automatic drain are same.

Dimensions CAD

MW8000-W



‡ $WWDFKPHQW
C type bracket (-BW)
Part model no.: B820

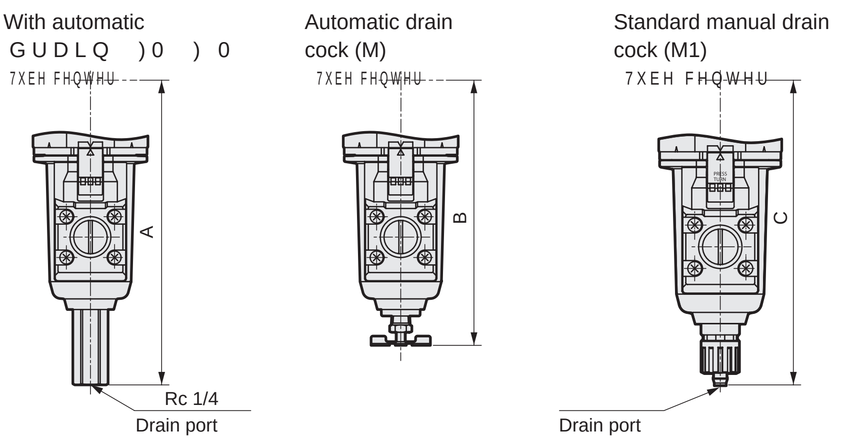


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

2SWLRQDO GLPHQVLRQV CAD

M0HWDO ERZO RSWLRQ
>: : : : :@



Dimensions

Model no.	F1M	M	M1
	A	B	C
W2000-W	-	-	147
W3000-W	163.5	143.5	154
W4000-W	187	166.5	177
W8000-W	266	245.5	256

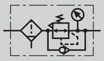
MEMO

5HYHUVH ¿OWHU UHJXODWRU VWDQGDUG ZKL

W1100/W2100/W3100/W4100/W8100-W Series

,QWURGXFLQJ WKH —P GXVW UHPRYLQJ HOHPHQW DQG —P WDU UHPRYLQJ

Port size: 1/8 to 1

JIS symbol 

RoHS CAD

6SHFL¿FDWLRQV

Descriptions	W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
Appearance					
:RUNLQJ ÀXLG	Compressed air				
0D[ZRUNLQJ SUHVVXUH 03D	1RWHV				
Withstanding pressure MPa	1.5 Note 3				
$PELHQW WHPSHUDWXUH UDQJH ƒ&	5 to 60 Note 4				
Filtration rating µm	5		5 or 0.3		
Set pressure range (Note 2) MPa	0.05 to 0.85 Note 1	0.05 to 0.85			
Relief	With relief mechanism				
Drain capacity cm^3	12	25	45	80	80 (Note 5)
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
3URGXFW ZHLJKW NJ	0.175	0.40	0.6	0.9	2.0
Standard accessories	3UHVVXUH JDXJH DQG ERZO JXDUG				

Note 1: :KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLRQ SUHVVXUH PXVW EH 03D $
1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLRQ SUHVVXUH PXVW EH 0
1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG IRU WKH : VHULHV PLQLPXP RSHUDWLQJ SU
ZLWKVWDQGLQJ SUHVVXUH LV 03D 5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ WDEOH SDJH
ÀRZ 6HW WKH ZRUNLQJ ÀRZ WR OHVV WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ
1RWH 7KH ZRUNLQJ WHPSHUDWXUH UDQJH RI WKH SUHVVXUH VZLWFK ZLWK LQGLFDWRU 33' DVVHPEO\
1RWH 8S WR ^{3} LV VWRUHG RQO\ ZLWK WKH PDQXDO GUDLQ FRFN W\SH
Note 6: Check that the primary pressure is at least 0.05 MPa or more than the secondary pressure.
1RWH 5HIHU WR WKH VHW SUHVVXUH UDQJH IRU WKH EDFN SUHVVXUH JLYHQ RQ SDJH ZKHQ VHOHFWL
Note 8: :KHQ XVLQJ WKH) ZLWK DXWRPDWLF GUDLQ XVH WKH : : 6HULHV DW OHVV WKDQ WKH PD[LPXP ÀRZ U

2]RQH VSHFL¿FDWLRQV (Ending 11)

W*000 - ······- W - ······- P11

&OHDQ URRP VSHFL¿FDWLRQV (catalog No.CB-033S)

MDust generation preventing structure for use in cleanrooms

W*100 - ······- ···- ·········- P7*

6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV (Catalog No.CC-947)

MStructured for use in secondary battery manufacturing processes

W*100 - ····················- P4*

+RZ WR RUGHU

W1100 – 6 ◯ – W – Z – ◯ – A6W ◯

A Model no. B Port size C Port thread type D 2SWLRQ E Display unit F Piping adaptor set (attached) G Attachment (attached)

* Refer to page 274 for the explanation of the option.

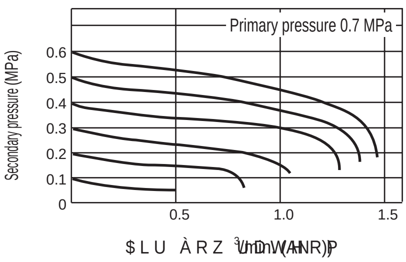
Symbol		Descriptions	W1100	W2100	W3100	W4100	W8100
B Port size							
6		1/8	M				
8		1/4	M	M	M	M	
10		3/8		M	M	M	
15		1/2				M	
20		3/4					M
25		1					M
C Port thread type Note 1							
Blank		Rc thread	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M
G		G thread	M	M	M	M	M
D Option Note 2, Note 3							
Drainage Note 4	Blank	With manual drain cock	M	M	M	M	M
	F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH (]KDXVWV		M	M	M	M
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW	M		M	M	M
	FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW					M
	FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW					M
Bowl material	Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M	M
	M	0HWDO ERZO			M	M	M
	M1	0HWDO ERZO ZLWK PDQXDO GUDLQ FR		M	M	M	M
Element	Blank	P	M	M	M	M	M
	Y	0.3 m (submicron) Note 5			M	M	M
Pressure Range	Blank	0.05 to 0.85MPa	M	M	M	M	M
	L	0.05 to 0.35MPa Note 6	M	M	M	M	M
Relief	Blank	With relief mechanism	M	M	M	M	M
	N	Nonrelief type	M	M	M	M	M
Pressure gauge	Blank	With standard pressure gauge (G401-W)	M	M	M	M	M
	T	: R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F LV DVVHPEOHG	M	M	M	M	M
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)	M	M	M	M	M
	T6	Digital pressure sensor PPX attachment option Note 7	M	M	M	M	M
	R1	3UHVVXUH VZLWFK ZLWK GLVSOD\ 33 'MD WV HMP Note 8	M		M	M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW : OHIW	M	M	M	M	M
E Display unit							
Blank		03D GLVSOD\ 5F WKUHDG	M	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M
F Piping adaptor set (attached) Note 9, Note 10 428 pages							
Blank		Not attached	M	M	M	M	M
A6*W		Rc1/8 piping adaptor set	M				
A8*W		Rc1/4 piping adaptor set	M	M	M	M	
A10*W		Rc3/8 piping adaptor set	M	M	M	M	
A15*W		Rc1/2 piping adaptor set		M	M	M	
A20*W		Rc3/4 piping adaptor set				M	M
A25*W		Rc1 piping adaptor set					M
A32*W		Rc1 1/4 piping adaptor set					M
*Adaptor screw type							
Blank		Rc thread	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M
G		G thread	M	M	M	M	M
G Attachment (attached) Note 11 425, 659 pages							
Blank		Not attached	M	M	M	M	M
BW		C type bracket	M	M	M	M	M
B3W		L type bracket Note 12	M	M	M	M	
G45P		G45D-8-P10(L:G45D-8-P04)	M	M	M	M	M
G49P		G49D-8-P10(L:G49D-8-P04)	M	M	M	M	M
G59P		G59D-8-P10(L:G59D-8-P04)	M		M	M	M
G40P		G40D-8-P10(L:G40D-8-P04)	M	M	M	M	M
G50P		G50D-8-P10(L:G60D-8-P04)	M		M	M	M
G41P		G41D-8-P10(L:G41D-8-P04)	M	M	M	M	M
G52P		G52D-8-P10(L:G52D-8-P10)	M	M	M	M	M
R2 Note 7		Digital pressure sensor: PPX-R10N-6M	M	M	M	M	M

⚠ Note on model no. selection

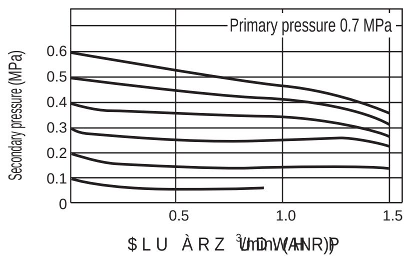
1RWH:KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH 1 287 JDXJH SRUW DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF drain) are the target.
1RWH6HOHFW RSWLRQV SHU GUDLQDJH ERZO PDWHULDO HOHPHQW DQG regulator sections.
:KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW WKH RSWLRQV LQ RUGHU from the top.
Note 3: Positions of a check valve and pressure gauge can not be changed. If the IN and OUT direction must be reversed, indicate "X1" **at the end of the option field.**
Note 4: Refer to page 276 for the automatic drain use conditions.
Note 5: 5HIHU WR SDJH IRU PD[LPXP SURFHVVLQJ ÀRZ ZKHQ RSWLRQ < LV VHOHFWHG
Note 6: 7KH SUHVVXUH JDXJH V LQGLFDWLRQ UDQJH LV WR 03D IRU RSWLRQ /
Note 7: :KHQ ' RSWLRQ 7 LV VHOHFWHG RQO\ %UDFNHW RU 5 FDQ EH VHOHFWHG IRU SUHVVXUH JDXJH HQFORVHG 7KH GLJLWDO SUHVVXUH VHQVRU PPX mounting port (Rc1/8) is assembled by open.
1RWH7KH RXWSXW W\SH LV 131 WUDQVLVWRU RXWSXW &RQVXOW ZLWK &.' ZKHQ the PNP transistor output is required.
1RWH7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW be used at the same time.
1RWH7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW
1RWH,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG D 137 SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV VHOHFWHG DQ 5 WKUHDG pressure gauge is enclosed.
1RWH5HIHU WR 6HFWLRQ ⚠5HJXODWRU LQ 35(&$87,216 IRU ,QVWDOODWLRQ DQG $GMXVWPHQW SDJH IRU GHWDLOV RQ PRXQWLQJ the L-type bracket.

)ORZ FKDUDFWHULVWLF

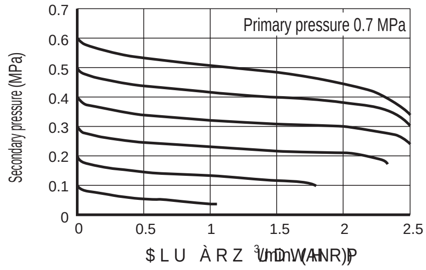
MW1100-6-W



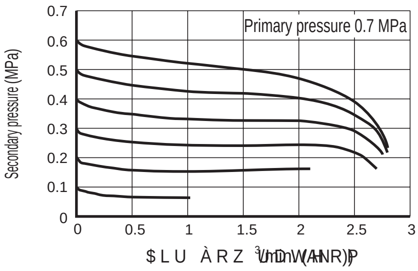
MW1100-8-W



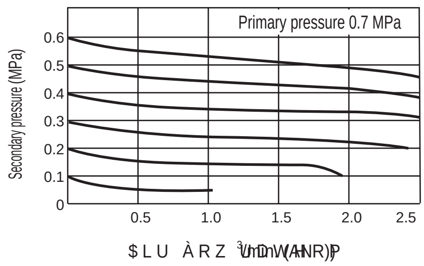
MW2100-8-W



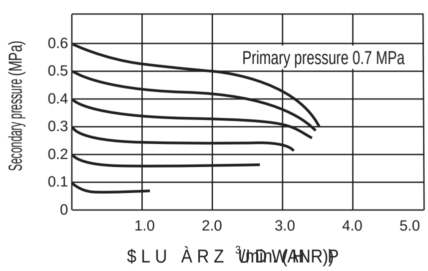
MW2100-10-W



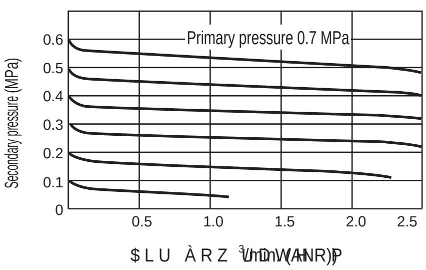
MW3100-8-W



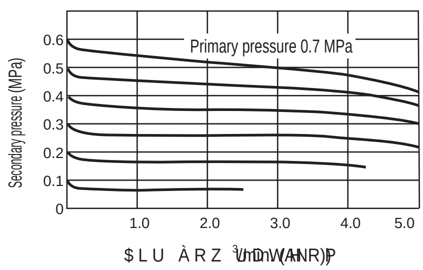
MW3100-10-W



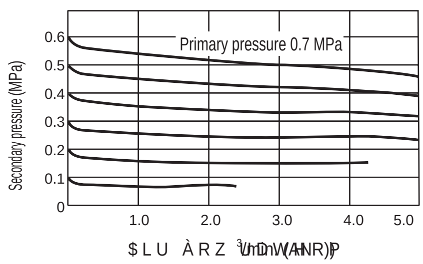
MW4100-8-W



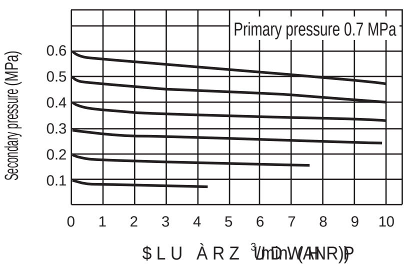
MW4100-10-W



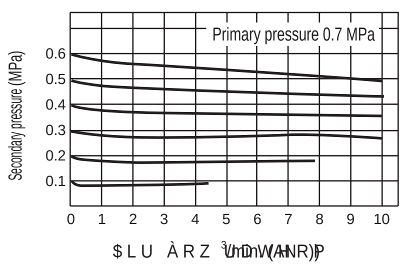
MW4100-15-W



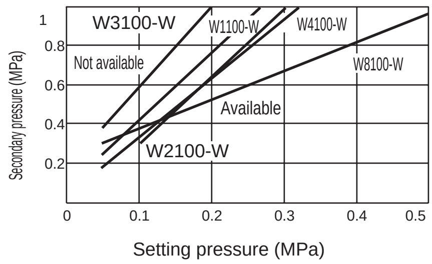
MW8100-20-W



MW8100-25-W



MSet pressure range to back pressure

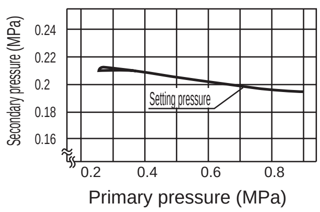


1RWH7KH XSSHU VLGH RI WKH JUDSK LV Q
WKH ORZHU VLGH XVDEOH

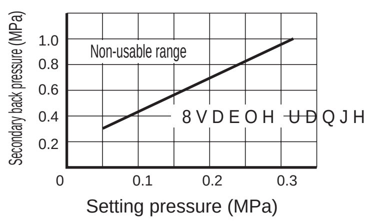
Example:If W4100-W is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa RU PRUH WKH VHFRQGDU\ SUHVVXU released to the primary side.

Pressure characteristic

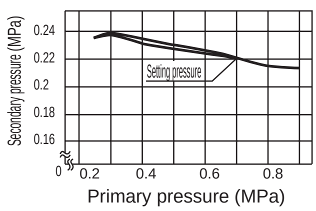
MW1100-W



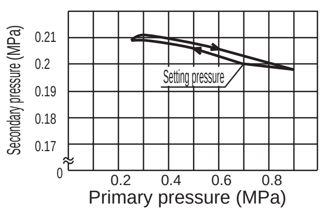
MW2100-W



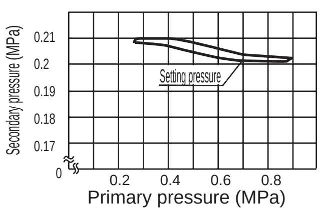
MW3100-W



MW4100-W

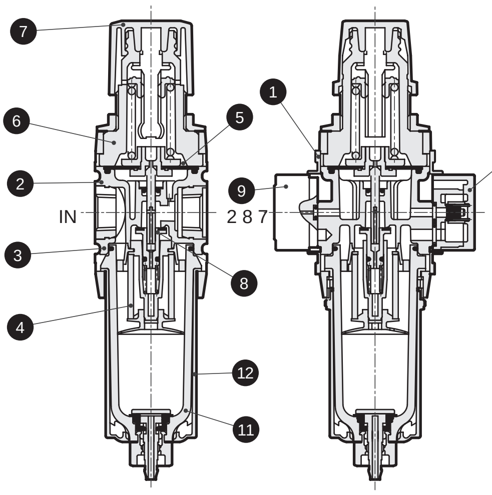


MW8100-W

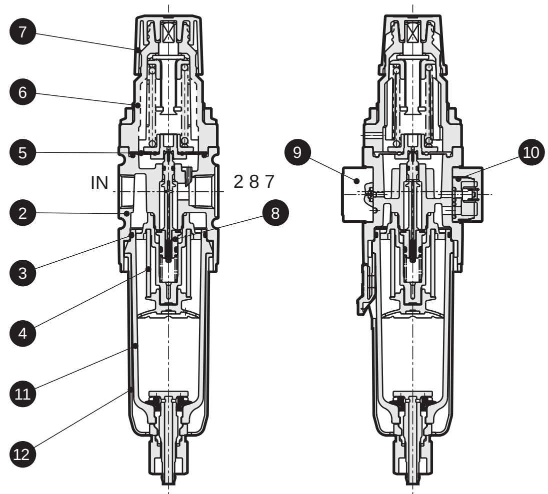


Internal structure and parts list

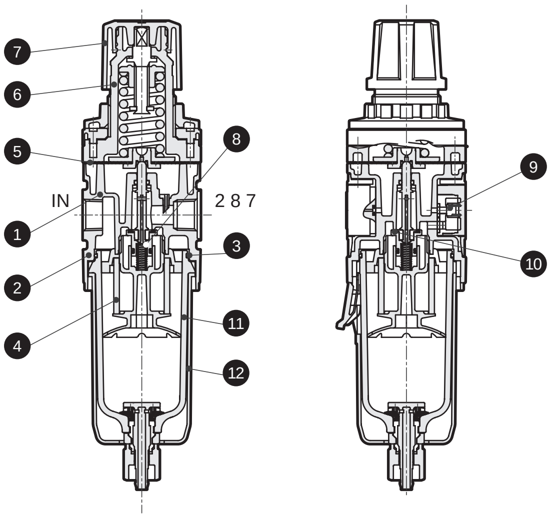
MW1100-W



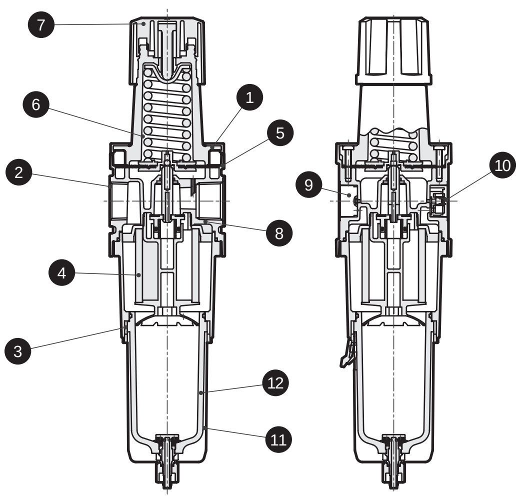
MW2100-W



MW3100-W/W4100-W



MW8100-W



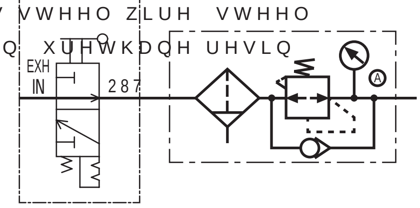
No.	Parts name	Material				
		W1100-W	W2100-W	W3100-W	W4100-W	W8100-W
1	Plate cover	ABS resin	-	ABS resin		
2	Body	3RO\DPLGH UHVLQ VWHHO	Aluminum alloy die-casting			
3	2 ULQJ Note 2	Special nitrile rubber				
4	Element Note 1	Polyacetal resin Polypropylene	Polypropylene			
5	Diaphragm assembly	Polyacetal resin Nitrile rubber		=LQF DOOR\ GLH FDVWLQJ		
6	Cover	Polyamide resin	3%7 UHVLQ			Aluminum alloy die-casting
7	.QRE	Polyacetal resin				
8	Valve assembly	%UDVV K\GURJHQ QLWULOH UXEEHU SRO\DFHWDO UHVLQ				
9	Pressure gauge assembly	3%7 UHVLQ SRO\DFHWDO UHVLQ SRO\FDUERQDWH UHVLQ QLWULOH UXEEHU EUDVV VWHHO				
10	Check valve total assembly	3%7 UHVLQ QLWULOH UXEEHU VWDLQOHVV VWHHO ZLUH VWHHO				
11	%RZO DVVHPEO\	3RO\FDUERQDWH UHVLQ SRO\DFHWDO UHVLQ XUHWKDQH UHVLQ				
12	%RZO JXDUG	Polyamide resin	3RO\DPLGH UHVLQ VWHHO			

Note 1: W1100-W is element assembly.
1RWH 2 ULQJ RI : : LV VSHFLDO VKDSHG
Note 3: Refer to page 349 for repair kits model No.

Functional explanation

:KHQ WKH SULPDU\ SUHVVXUH LV LQWURGXFH IXQFWLRQV DV D UHJXODU UHJXODWRU EHFDX VSULQJ ORDG :KHQ SULPDU\ SUHVVXUH LV UHO VKXW RII YDOYH WKH FKHFN YDOYH RSHQV ZLW GLDSKUDJP FKDPEHU LV UHOHDVHG DQG SUHVV WR EH SUHVVHG GRZQ E\ WKH SUHVVXUH DGMX DVVHPEO\ RSHQV DQG WKH DLU RQ WKH 287 V QRW EH WKH EDFN SUHVVXUH $ IRU ZKHQ WKH SULP UDQJH LQ WKH JUDSK IRU WKH UHJXODWRU V VHH for the graph)

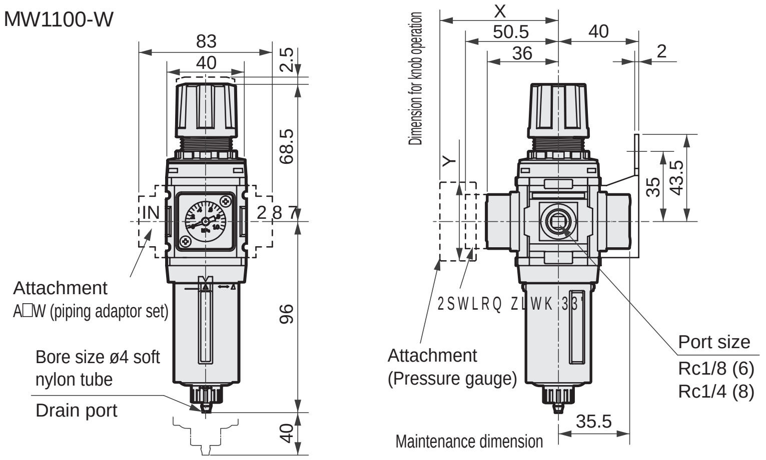
Circuit diagram

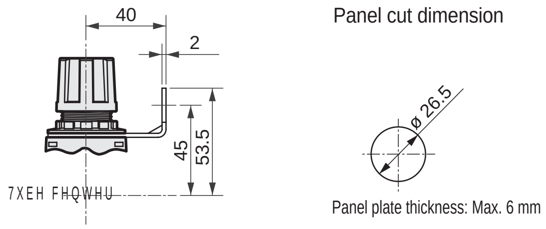


:KHQ XVLQJ VKXW RII YDOYH LQ IURQW RI UHY

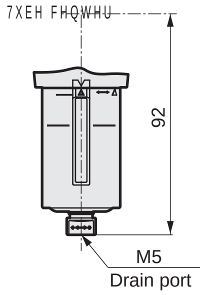
Dimensions CAD

MW1100-W

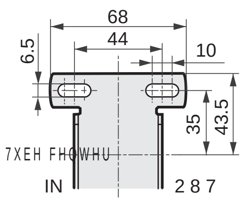




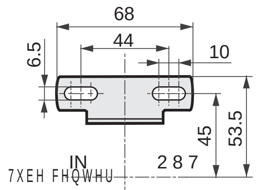
‡ 2SWLRQ GLPHQVLRQV
With automatic drain (F1)



‡ $WWDFKPHQW
C type bracket (-BW)
Part model no.: B120



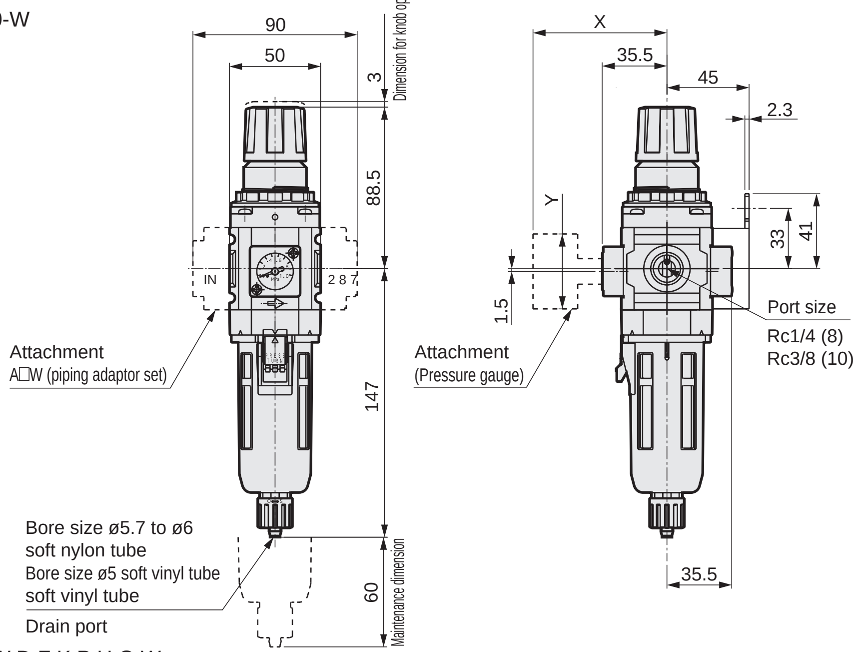
L type bracket (-B3W)
Part model no.: B130

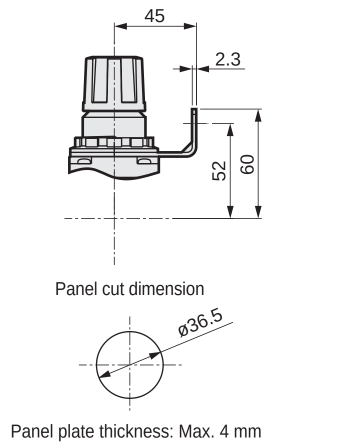


Pressure gauge attached optional dimensions table

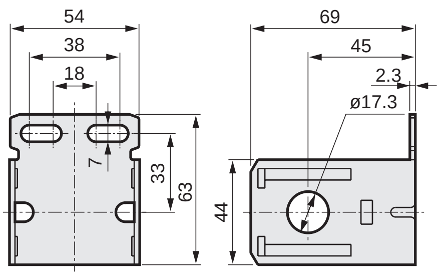
Attached pressure gauge	X	Y
G45P	(74)	ø39
G49P	(73.5)	ø43.5
G59P	(76)	ø52
G40P	(75.5)	ø42.5
G50P	(75.5)	ø52.5
G41P	(74)	ø42
G52P	(86)	ø52.5
R2	(74)	□30

MW2100-W

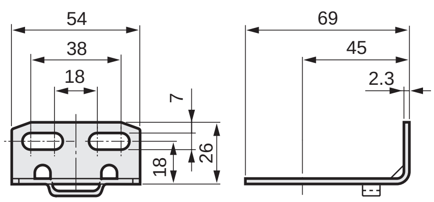




‡ $WWDFKPHQW
C type bracket (-BW)
Part model no.: B220



L type bracket (-B3W)
Part model no.: B230

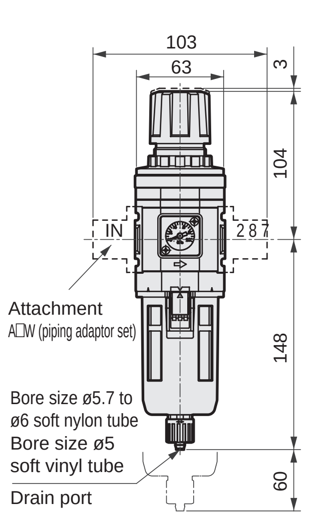


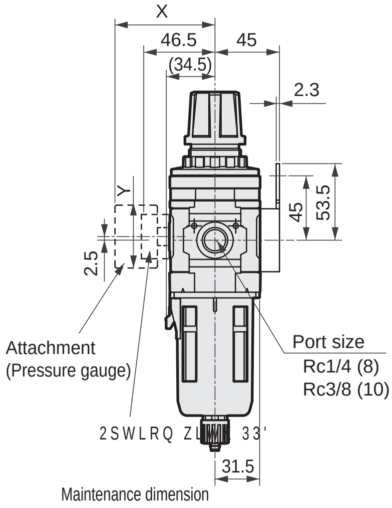
Pressure gauge attached optional dimensions table

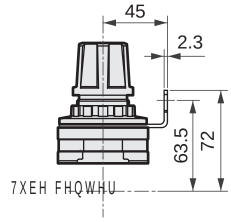
Attached pressure gauge	X	Y
G45P	(73.5)	ø39
G49P	(73)	ø43.5
G40P	(75)	ø42.5
G41P	(73.5)	ø42
G52P	(85.5)	ø52.5
R2	(73)	□30

Dimensions

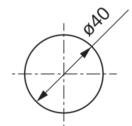
MW3100-W







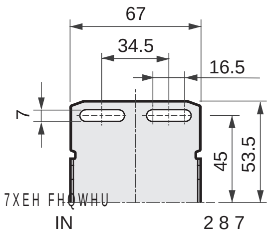
Panel cut dimension



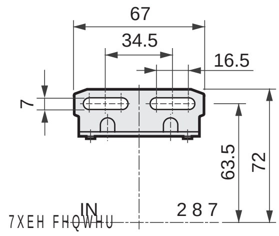
Panel plate thickness: Max. 4 mm

‡ $WWDFKPHQW

C type bracket (-BW)
Part model no.: B320



L type bracket (-B3W)
Part model no.: B330

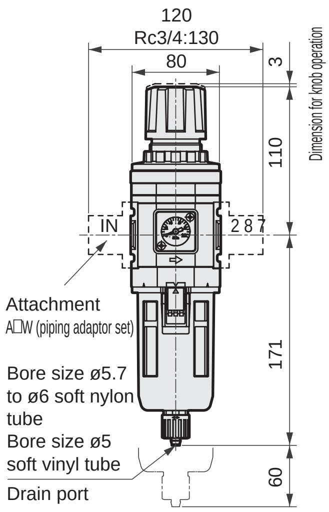


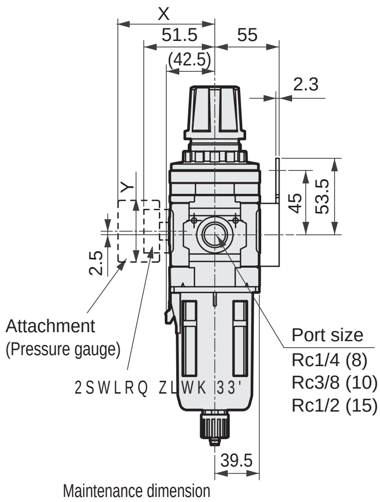
Pressure gauge attached optional dimensions table

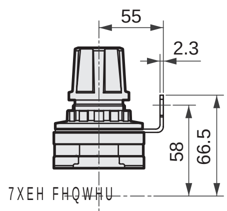
Attached pressure gauge	X	Y
G45P	(70)	ø39
G49P	(69.5)	ø43.5
G59P	(72)	ø52
G40P	(71.5)	ø42.5
G50P	(71.5)	ø52.5
G41P	(70)	ø42
G52P	(82)	ø52.5
R2	(69.5)	□30

M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV RI WKH
manual cock and the automatic drain are same.

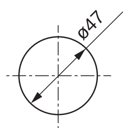
MW4100-W







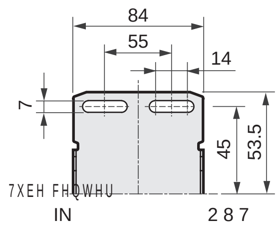
Panel cut dimension



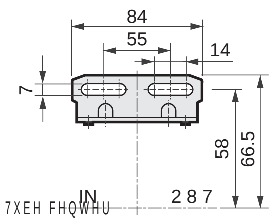
Panel plate thickness: Max. 7 mm

‡ $WWDFKPHQW

C type bracket (-BW)
Part model no.: B420



L type bracket (-B3W)
Part model no.: B430



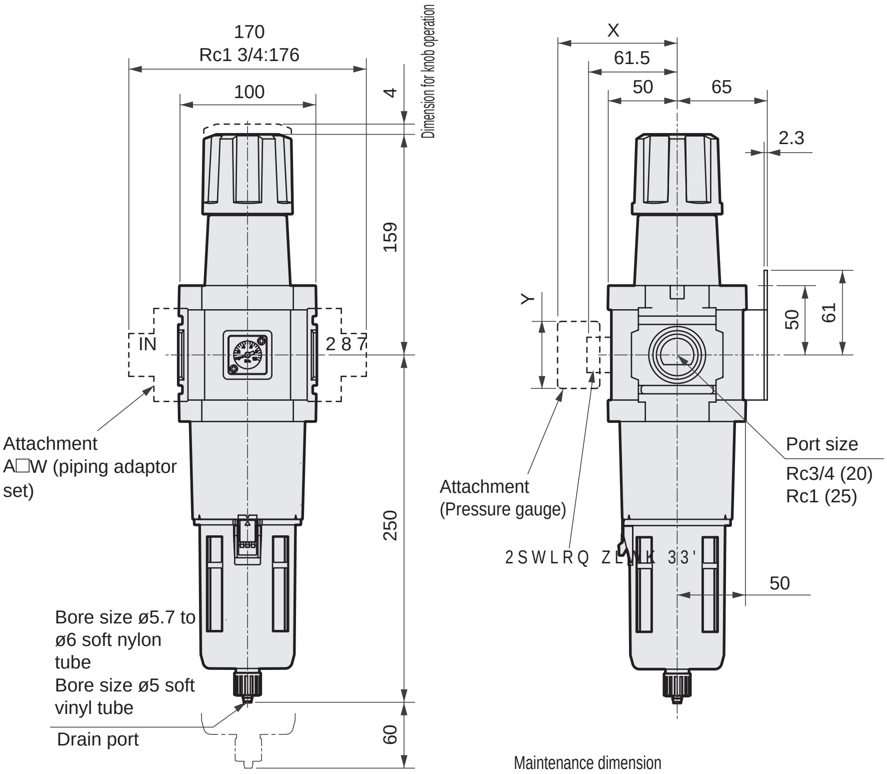
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(75)	ø39
G49P	(74.5)	ø43.5
G59P	(77)	ø52
G40P	(76.5)	ø42.5
G50P	(76.5)	ø52.5
G41P	(75)	ø42
G52P	(86)	ø52.5
R2	(75)	□30

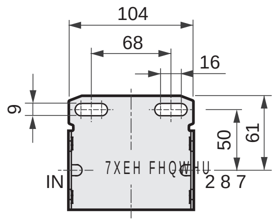
M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV RI WKH PDQXDO
cock and the automatic drain are same.

Dimensions CAD

MW8100-W



‡ $WWDFKPHQW
C type bracket (-BW)
Part model no.: B820



M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV RI WKH PDQXDO cock and the automatic drain are same.

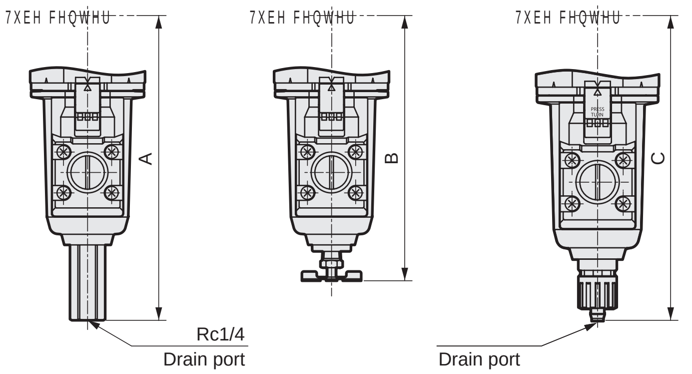
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P	(85)	ø39
G49P	(84.5)	ø43.5
G59P	(87)	ø52
G40P	(86.5)	ø42.5
G50P	(86.5)	ø52.5
G41P	(85)	ø42
G52P	(98)	ø52.5
R2	(85)	□30

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

2SWLRQDO GLP CAD QVLRQV

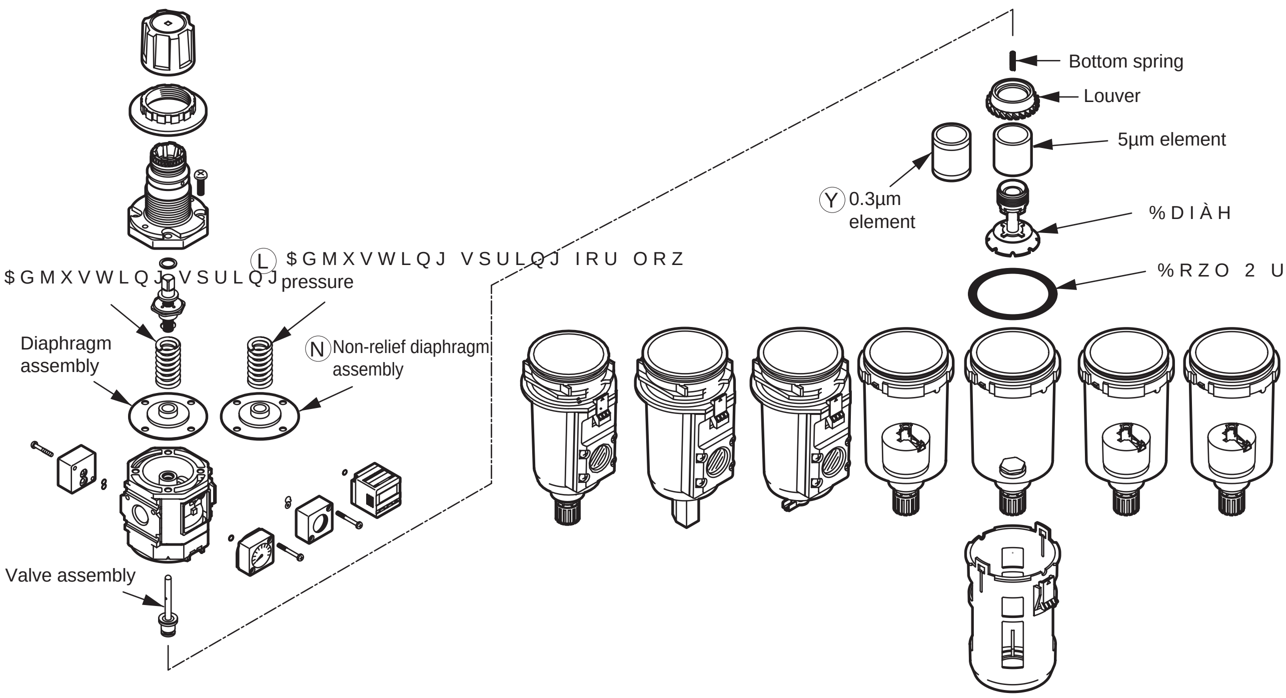
M0HWDO ERZO : : : : : : : RSWLRQ



Dimensions

Model no.	F1M	M	M1
	A	B	C
W2100-W	-	-	147
W3100-W	163.5	143.5	154
W4100-W	187	166.5	177
W8100-W	266	245.5	256

2SWLRQDO SDUWV GLDJUDP



5HSDLU NLWV VHW RI GLDSKUDJP DVVHPEO\ YDOYH DVVHPEO\ ERWW

Repair kits model no. / Model	Relief diaphragm assembly 5µm element (blank)	Non-relief diaphragm assembly 5µm element (N)	Relief diaphragm assembly 0.3 µm element (Y)	Non-relief diaphragm assembly 0.3 µm element (NY)
: : : :	: .,7	: .,7 1	Š	Š
: : : :	: .,7	: .,7 1	Š	Š
: : : :	: .,7	: .,7 1	: .,7 <	: .,7 1<
: : : :	: .,7	: .,7 1	: .,7 <	: .,7 1<
: : : :	: .,7	: .,7 1	: .,7 <	: .,7 1<

1RWH :LWK WKH : : DQG : : WKH HOHPHQW DQG EDIÀH DUH DVVHPEO\ SDUWV DQG WKH ORXYHU LV DVVHPEO

Valve assembly (set of valve assembly and bottom spring)

Model	Valve assembly model no.
: : : :	W1000-VALVE-ASSY
: : : :	W2000-VALVE-ASSY
: : : :	W3000-VALVE-ASSY
: : : :	W4000-VALVE-ASSY
: : : :	W8000-VALVE-ASSY

5HIHU WR WKH UHJXODWRU RSWLRQV DQG SDUWV WDEOH SDJH IRU GHWDLOV RQ WKH DGMXVWPH
5HIHU WR DLU ¿OWHU RSWLRQV DQG SDUWV WDEOH SDJHV DQG WKH GUDLQ FRFN WDEOH IRU GHWDLOV RQ WKH HOHPHQW

$LU ¿OWHU VWDQGDUG ZKLWH 6HULHV

F1000/F2000/F3000
F4000/F6000/F8000-W Series

,QWURGXFLQJ WKH —P HOHPHQW IRU GXVW UHPRYDO
([FOXGLQJ) 6HULHV 3RUW VL]H WR

-,6 V\PERO

RoHS CAD

6SHFL¿FDWLRQV

'HVFULSWLRQV	:	) :	) :	) :	) :	) :
$SSHDUDQFH						
:RUNLQJ ÀXLG	&RPSUHVVHG DLU					
0D[ZRUNLQJ SUHVVXUH 03D	1RWHV					
:LWKVWDQGLQJ SUHVVXUH 03D	1RWH					
$PELHQW WHPSHUDWXUH &	WR					
)LOWUDWLRQ UDWLQJ —P			RU			
'UDLQ FDSDFLW\ FP						1RWH
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU		XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
3URGXFW ZHLJKW NJ						
6WDQGDUG DFFHVVRULHV	%RZO JXDUG					

1RWHKHQ VHOHFWLQJ) ZLWK DXWRPDWLF GUDLQ IRU WKH) : 6HULHV WKH PLQLPXP RSHUDWLRQ
WKH JXDUDQWHHG ZLWKVWDQG SUHVVXUH LV 03D)RU WKH PD[LPXP ÀRZ UDWH UHIHU WR WKH
DXWRPDWLF GUDLQ 7KH ZRUNLQJ ÀRZ UDWH PXVW EH OHVV WKDQ WKH PD[LPXP ZRUNLQJ ÀRZ UDWH
6HULHV UHIHU WR WKH PD[LPXP ZRUNLQJ ÀRZ UDWH WDEOH EHORZ 7KH ZRUNLQJ ÀRZ UDWH PXVW
1RWHKHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLRQ SUHVVXUH PXVW EH 0
UHDFKHV 03D
1RWH :KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLRQ SUHVVXUH PXVW EH
1RWH 8S WR FP LV VWRUHG RQO\ ZLWK WKH PDQXDO GUDLQ FRFN W\SH

&OHDQ URRP VSHFL¿FDWLRQV

FDWDORJ 1R &%

M'XVW JHQHUDWLRQ SUHYHQWLQJ VWUXFWXUH IRU XVH LQ FOHDQURRPV

F*000 - . . . . - P7*

6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV

FDWDORJ 1R &%

M6WUXFWXUHG IRU XVH LQ VHFRQGDU\ EDWWHU\ PDQXIDFWXULQJ SURFHVVHV

F*000 - . . . . - P4*

M0D[XVDJH UDWH ZLWK) :) DXWRPDWLF GUDLQ

P PLQ $15

3ULPDU\ SUHVVXUH 03D / 3RUW VL]H						
6						
8						

M0D[XVDJH UDWH ZLWK) :) DXWRPDWLF GUDLQ

P PLQ $15

3ULPDU\ SUHVVXUH 03D										1
Flow										

+RZ WR RUGHU

F1000 - 6 ◯ - W - Z - ◯ - A6W ◯

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

Ⓐ 0RGHO QR

Ⓑ 3RUW VL]H

Ⓒ 3RUW WKUHDG W\SH

Ⓓ 2SWLRQ

Ⓔ 'LVSOD\ XQLW

Ⓕ 3LSLQJ DGDSWRU VHW DWWDFKHG

Ⓖ %UDFNHW DWWDFKHG

6\PERO	'HVFULSWLRQV		F1000	F2000	F3000	F4000	F6000	F8000
Ⓑ Port size								
6			M					
8			M	M	M	M		
10				M	M	M		
15						M		
20							M	M
25							M	M
Ⓒ Port thread type		Note 1						
Blank		5F WKUHDG	M	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M	M
Ⓓ Option		Note 2						
Drainage Note 3	Blank	:LWK PDQXDO GUDLQ	M	M	M	M	M	M
	F	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW ZLWK SLSLQJ			M	M	M	M
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW ZLWK SLSLQJ	M	M	M	M	M	M
	FF	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 12 W\SH ([KDXVW ZLWK SLSLQJ						M
	FF1	/DUJH DXWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1R H[KDXVW ZLWK SLSLQJ						M
Bowl material	Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M	M	M
	M	0HWDO ERZO			M	M	M	M
	M1	0HWDO ERZO ZLWK PDQXDO GUDLQ		M	M	M	M	M
Element	Blank	P	M	M	M	M	M	M
	Y	—P VXEPLFURQ			M	M	M	M
Differential pressure detection	Blank	:LWKRXW GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ	M	M	M	M	M	M
	Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ					M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW WR ULJKW	M	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW WR OHIW	M	M	M	M	M	M
Ⓔ Display unit								
Blank		03D GLVSOD\ 5F WKUHDG	M	M	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M	M
Ⓕ Piping adaptor set (attached)		Note 4, Note 5 page 428						
Blank		1RW DWWDFKHG	M	M	M	M	M	M
A6*W		5F SLSLQJ DGDSWRU VHW	M					
A8*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M		
A10*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M		
A15*W		5F SLSLQJ DGDSWRU VHW		M	M	M		
A20*W		5F SLSLQJ DGDSWRU VHW				M	M	M
A25*W		5F SLSLQJ DGDSWRU VHW					M	M
A32*W		5F SLSLQJ DGDSWRU VHW					M	M
***Adaptor screw type**								
Blank		5F WKUHDG	M	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M	M
Ⓖ Bracket (attached)		page 425						
Blank		1RW DWWDFKHG	M	M	M	M	M	M
BW		& W\SH EUDFNHW	M	M	M	M	M	M

⚠ 1RWH RQ PRGHO QR VHOHFWLRQ

1RWH 1: :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH ,1 287 DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF GUDLQ DUH WKH WDUJHW

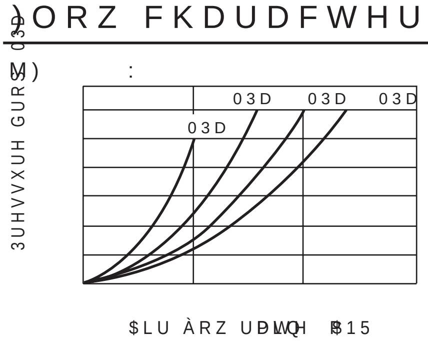
1RWH 2: 6HOHFW WKH RSWLRQV IURP GUDLQDJH HOHPHQW DQG GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS

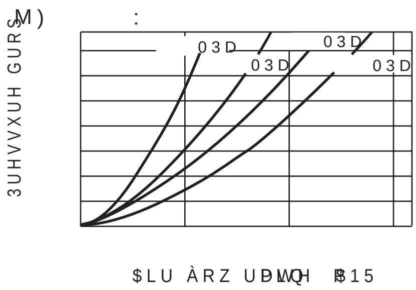
1RWH 3: 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV

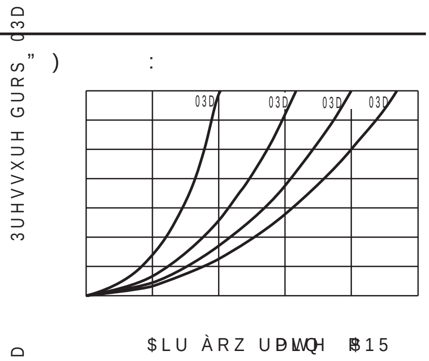
1RWH 4: 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH

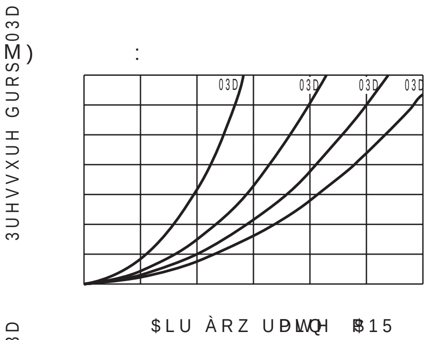
1RWH 5: 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

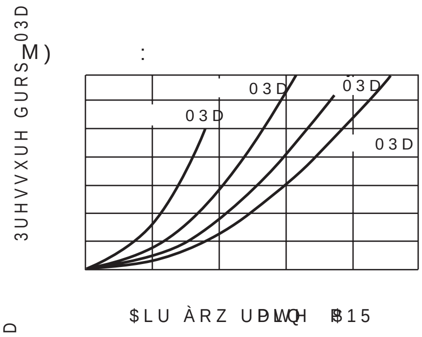
)ORZ FKDUDFWHULVWLF

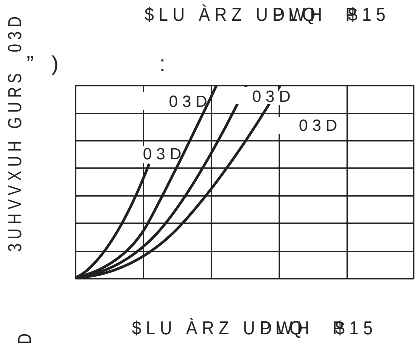


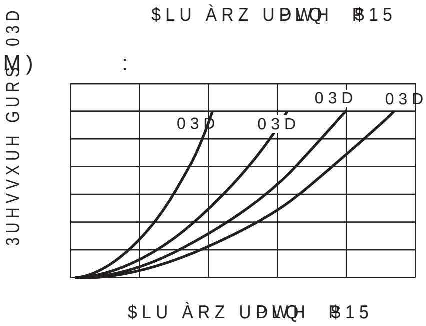


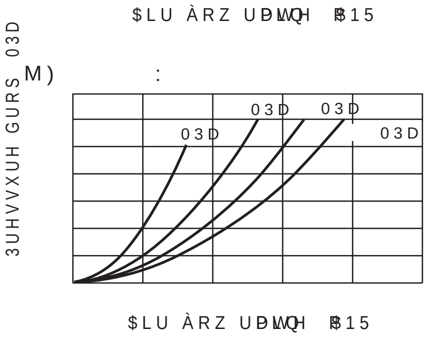


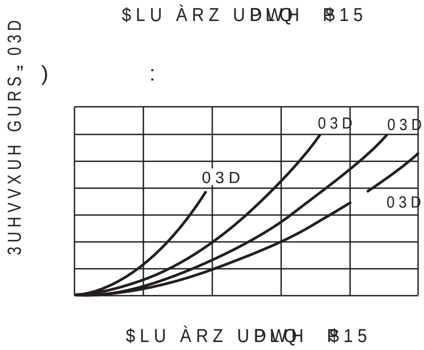


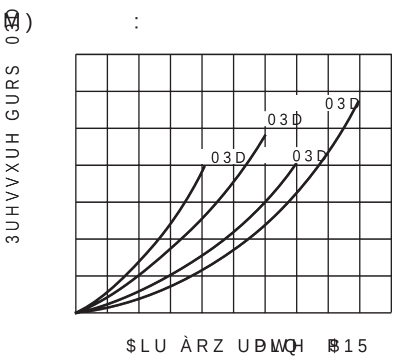


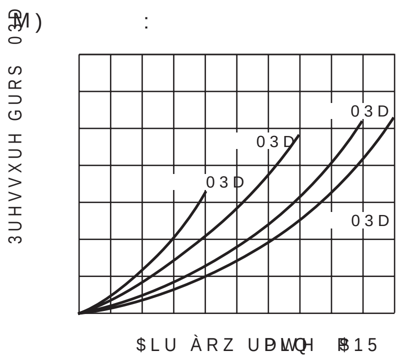


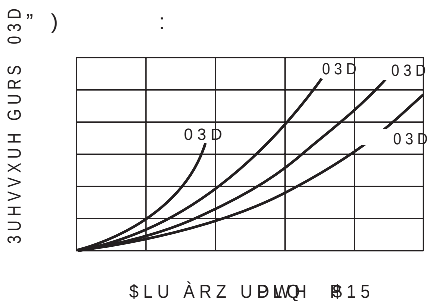


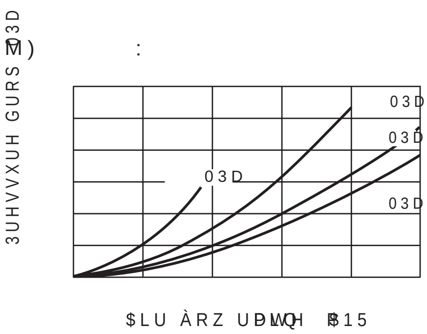




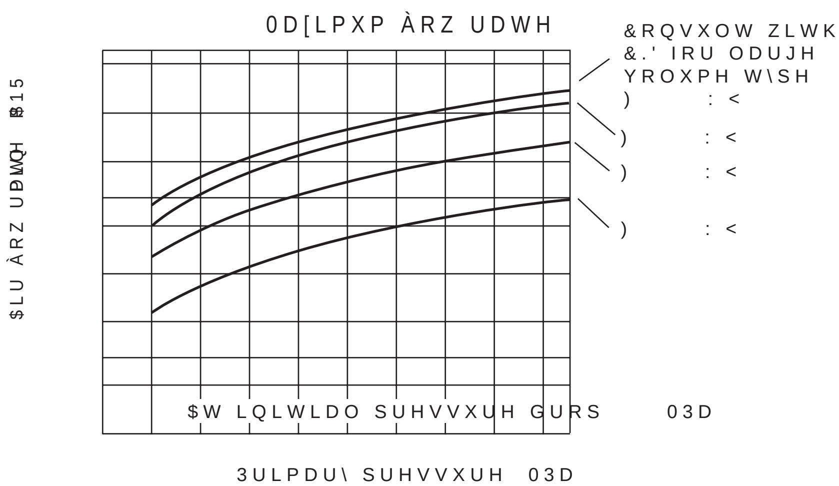






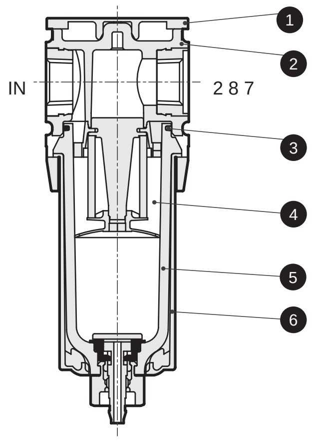


)
)
)
)
M : < —P HOHPHQW



,QWHUQDO VWUXFWXUH DQG SDUWV OLVW

M) :



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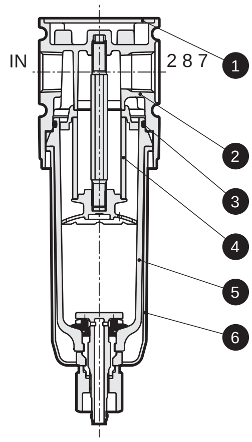

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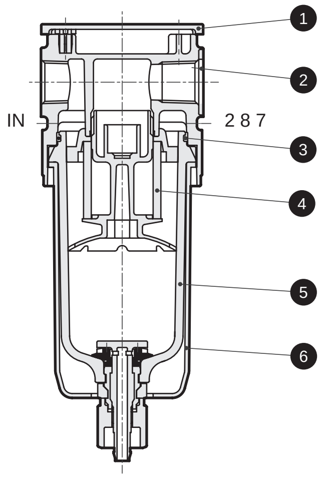

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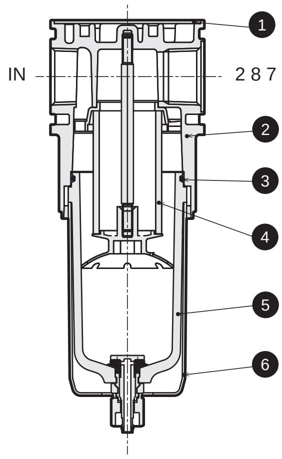

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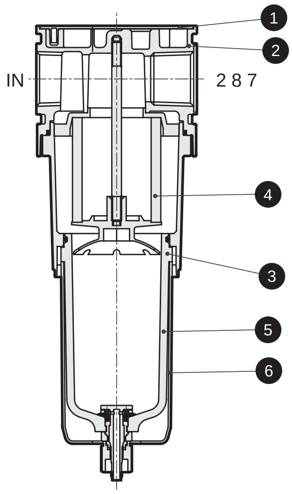


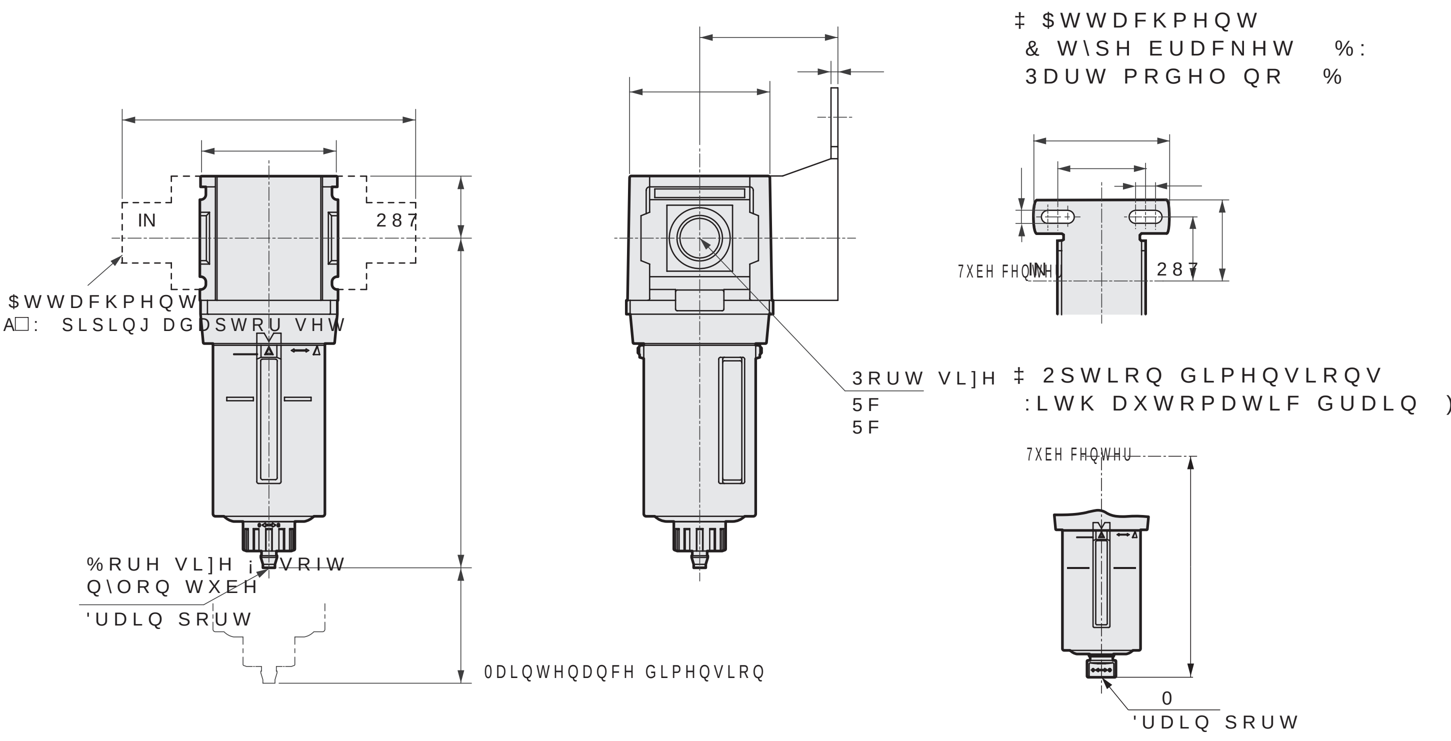
1R	3DUWV QDPH	0DWHULDO					
		) :	) :	) :	) :	) :	) :
	3ODWH FRYHU	$%6 UHVLQ					
	%RG\	3RO\DPLGH UHVLQ VWHHO		$OXPLQXP DOOR\ GLH FDVWLQJ			
	2 ULQJ 1RWH	6SHFLDO QLWULOH UXEEHU					
	(OHPHQW —P 1RWH	3RO\DFHWDO UHVLQ 3RO\SURS\OHQH		3RO\SURS\OHQH			
	(OHPHQW —P						
	%RZO DVVHPEO\	3RO\FDUERQDWH UHVLQ SRO\DFHWDO UHVLQ XUHWKD					
	%RZO JXDUG	3RO\DPLGH UHVLQ		3RO\DPLGH UHVLQ VWHHO			

1RWH 2 ULQJ RI) : LV VSHFLDO VKDSHG
1RWH) : LV HOHPHQW DVVHPEO\
1RWH 5HIHU WR SDJH IRU UHSDLU NLWV

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

'LPHQVLRQV CAD

M) :



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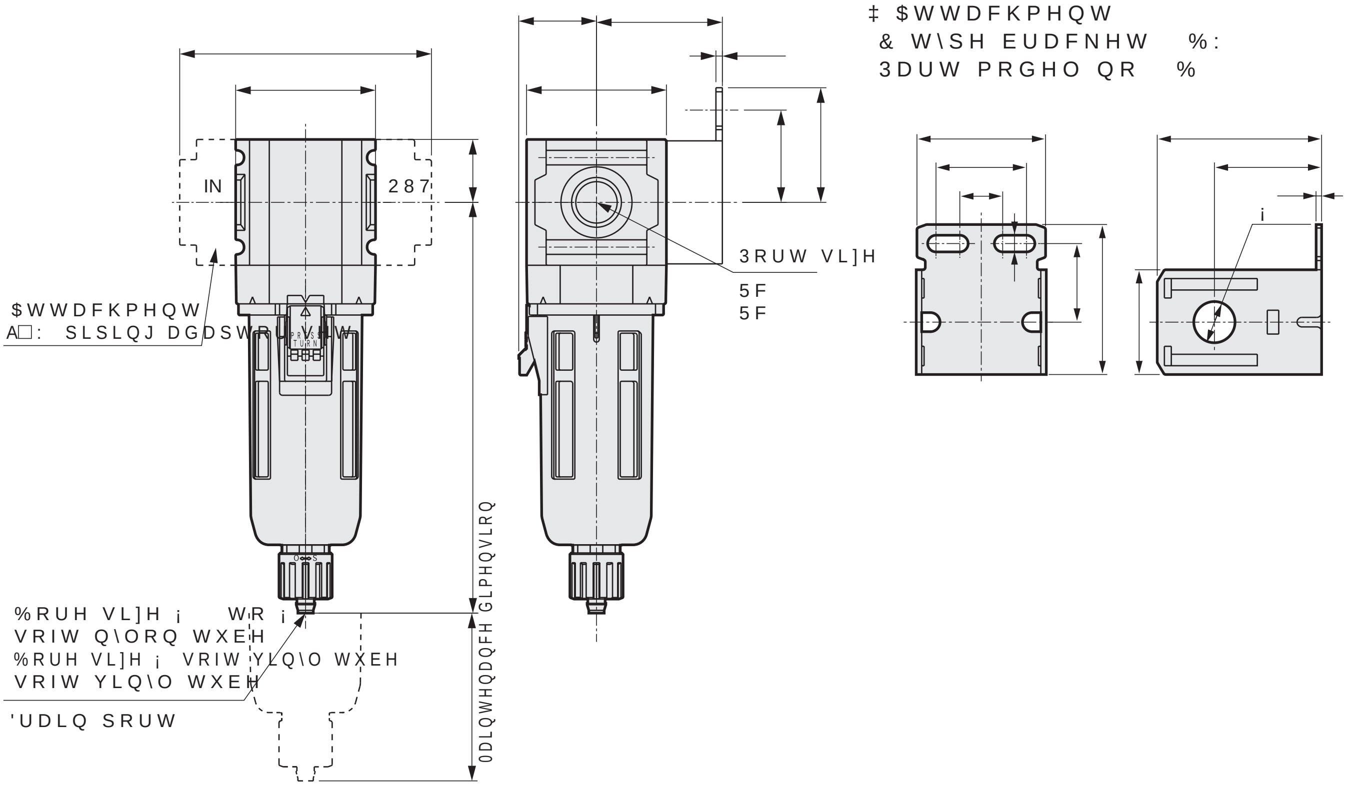
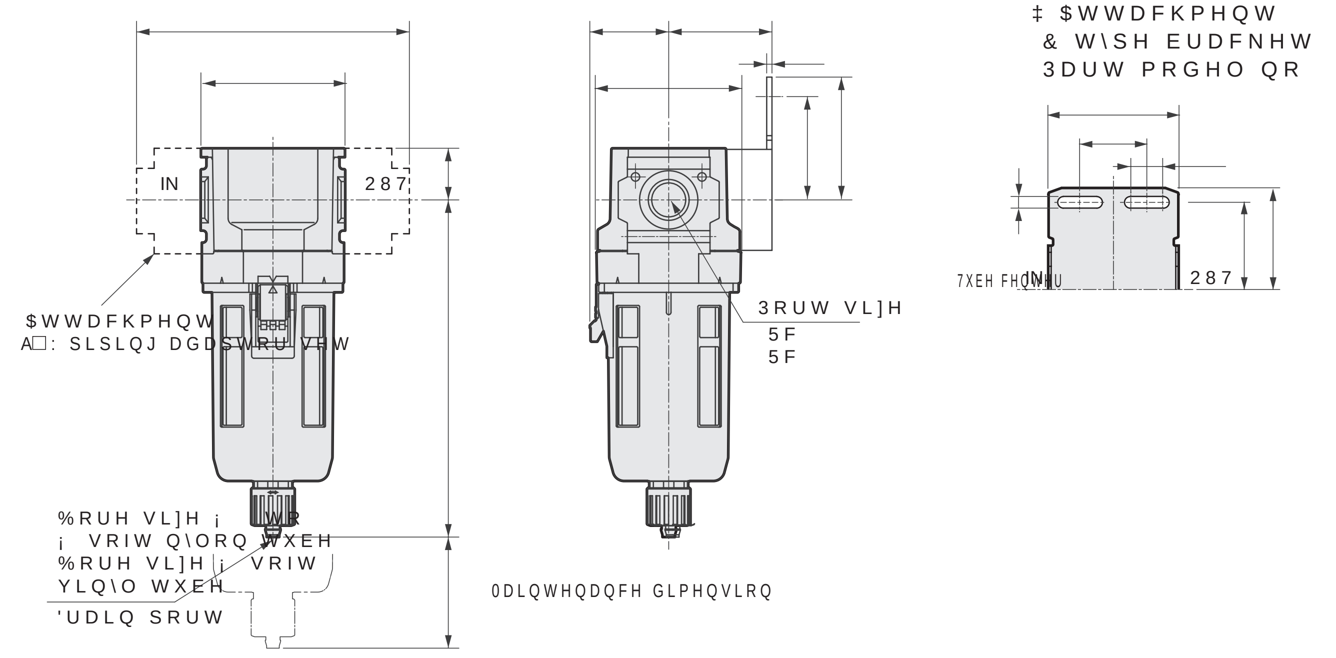


'LPHQVLRQV

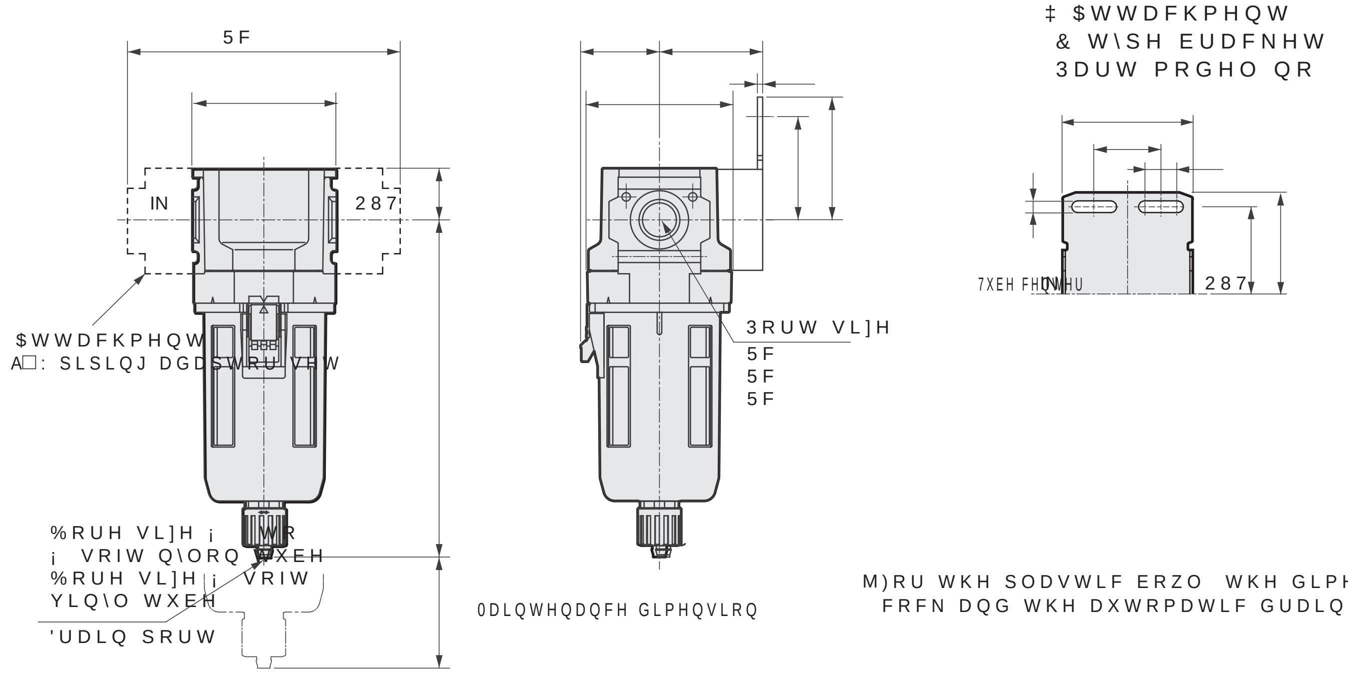
M) :



M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV RI WKH PDQXDO FRFN DQG WKH DXWRPDWLF GUDLQ

1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW W

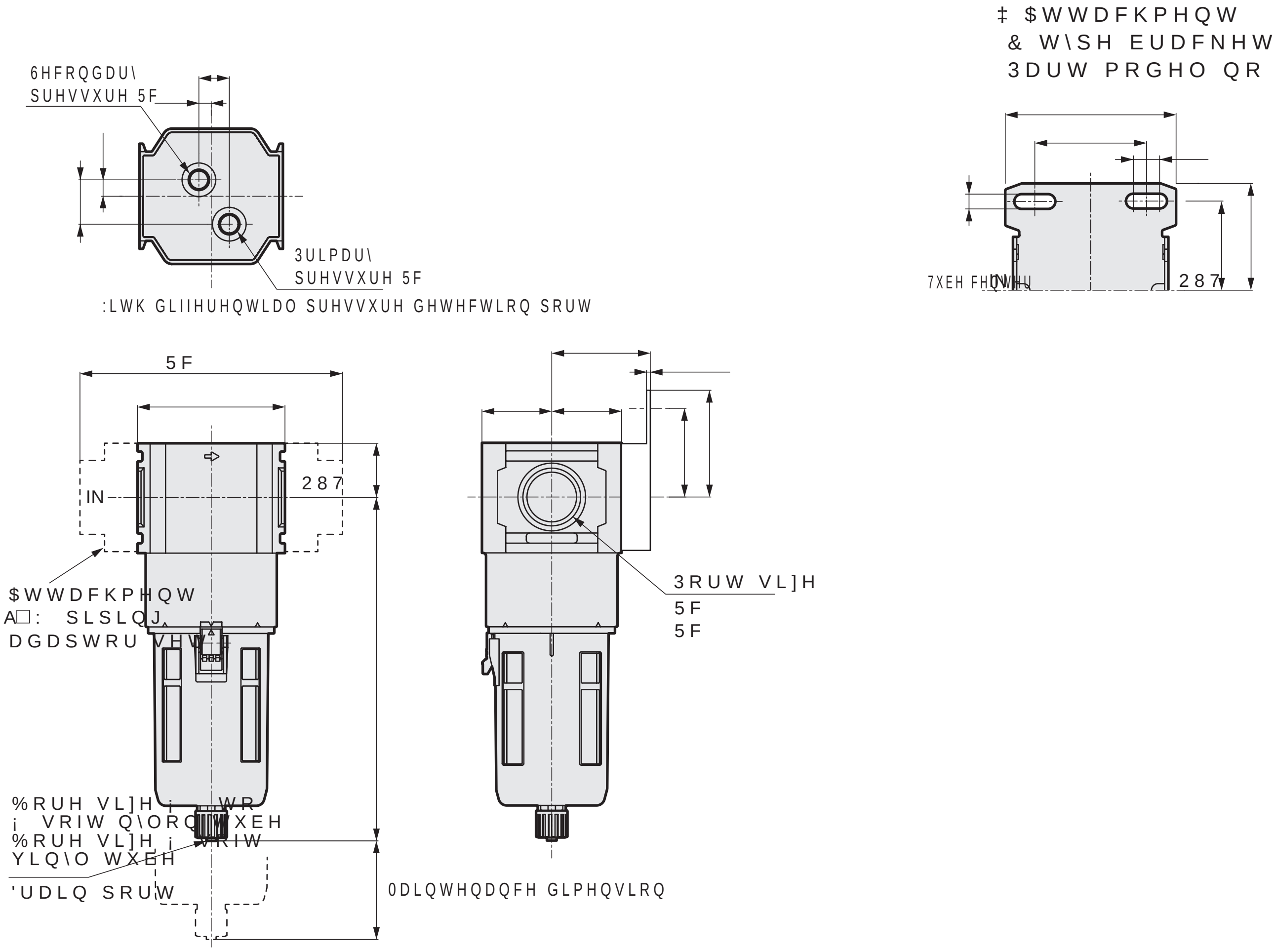
M) :



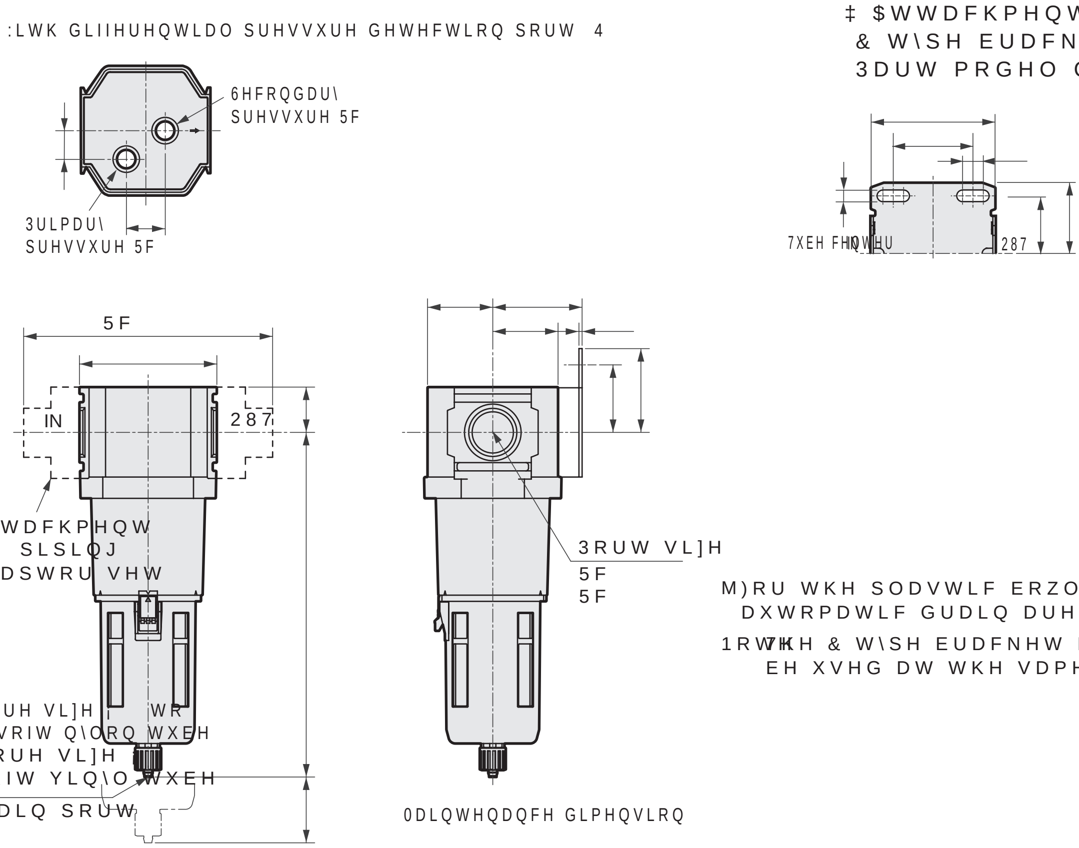
M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV
FRFN DQG WKH DXWRPDWLF GUDLQ VD

'LPHQVLRQV

M) :



M) :



M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV RI DXWRPDWLF GUDLQ DUH VDPH

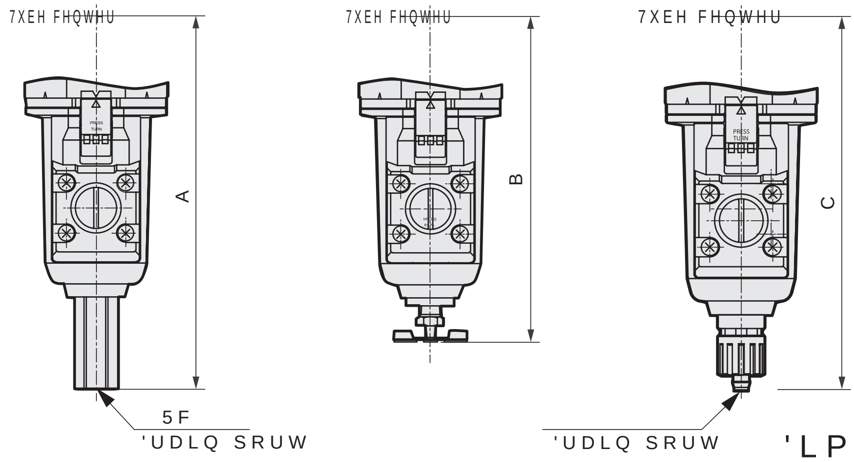
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU FDQ EH XVHG DW WKH VDPH WLPH

2SWLRQDO GHQVLRQV

M0HWDO ERZO)   :)   :)   :)   :)   :RSWLRQ

0HWDO PDQXDO FRFN ZLWK DXWRPDWLF GUDLQ)LOWK SHWFRFN 0

6WDQGDUG PDQXDO GUDLQ FRFN 0



'LPHQVLRQV

0RGHO QR	) 0	0	0
	A	B	C
) :			
) :			
) :			
) :			
) :			

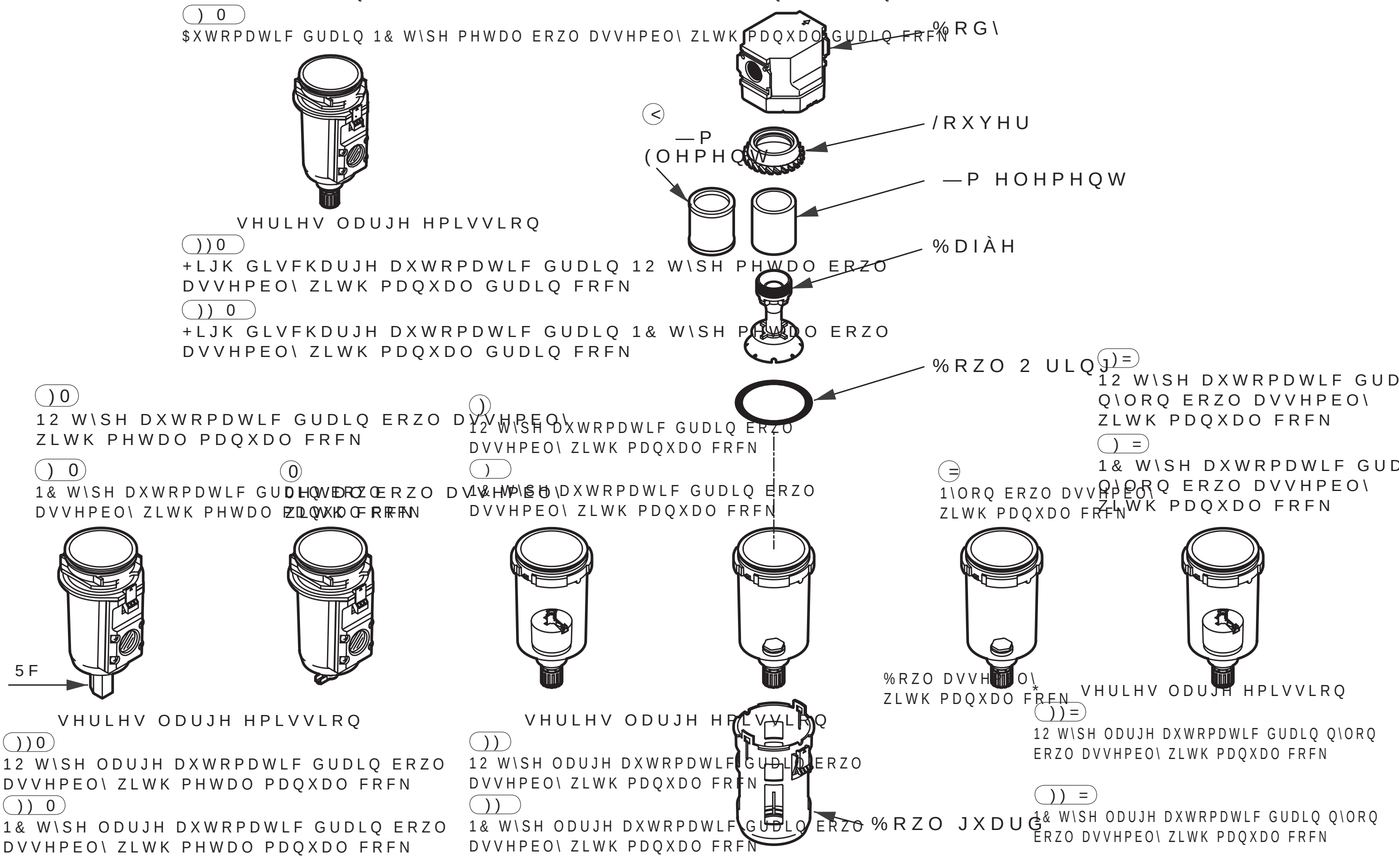
Air Filter Series

2SWLRQDO SDUWV GLDJUDP

(OHPHQW

(OHPHQW PRGHO QR / 0RGHO	—P (OHPHQW	—P (OHPHQW <
) :	) (/(0(17 $66<	
: : : :	: (/(0(17 $66<	
) :	) (/(0(17	
: : : :	: (/(0(17	
) :)0 :	) (/(0(17	) (/(0(17 <
: : : :	: (/(0(17	: (/(0(17 <
) :)0 :	) (/(0(17	) (/(0(17 <
: : : :	: (/(0(17	: (/(0(17 <
) :)0 :	) (/(0(17	) (/(0(17 <
) :)0 :	) (/(0(17	) (/(0(17 <
: : : :	: (/(0(17	: (/(0(17 <

1RWH)RU WKH) : DQG : : WKH EDIÀH DQG HOHPHQW DUH DVVHPEO\ SDUWV



5HSDLU NLWV PRGHO QR

6HW RI ORXYHU EDIÀH HOHPHQW

5HSDLU NLWV PRGHO QR / 0RGHO	—P (OHPHQW	—P (OHPHQW
) : 1RWH	) .,7	
) :	) .,7	
) :)0 :	) .,7	) .,7 <
) :)0 :	) .,7	) .,7 <
) :)0 :	) .,7	) .,7 <
) :)0 : 1RWH	) .,7	) .,7 <

1RWH)RU WKH) : WKH EDIÀH DQG HOHPHQW DUH DVVHPEO\ SDUWV VR WKH VHW FRQVLVWV RI WKH HOHPHQW DVVHPEO\ DQG ERZO 2 ULQJ

1RWH)RU WKH) : WKH VHW FRQVLVWV RI WKH EDIÀH HOHPHQW DQG ERZO 2 ULQJ

%RZO JXDUG

%RZO JXDUG PRGHO QR / 0RGHO	3RO\FDUERQDWH ERZO	1\ORQ ERZO
) : : : : :	) : %2:/ *8$5'	) : %2:/ *8$5' =
/ :	/ : %2:/ *8$5'	/ : %2:/ *8$5' =
0 :	0 : %2:/ *8$5'	0 : %2:/ *8$5' =
) : : : : :	) : %2:/ *8$5'	) : %2:/ *8$5' =
: :) : : : 0 :	) : %2:/ *8$5'	) : %2:/ *8$5' =
/ :	/ : %2:/ *8$5'	/ : %2:/ *8$5' =
: 0) 0	) : %2:/ *8$5'	) : %2:/ *8$5' =
/ : / :	/ : %2:/ *8$5'	/ : %2:/ *8$5' =
: :) : : :))))	'7 : %2:/ *8$5'	'7 : %2:/ *8$5' =

1RWH 7KH ERZO JXDUG IRU WKH 6HULHV) LV VROG DV D VH
7KH PRGHO LV) : %2:/ %2:/ *8$5')

%RZO DVVHPEO\ VHW RI ERZO DVVHPEO\ DQG ERZO 2 ULQJ

%RZO DVVHPEO\ / 0RGHO	:LWK PDQXDO ... 3& ERZO DVVHPEO\	:LWK FRQ... 3& ERZO DVVHPEO\	:LWK PDQXDO\ ERZO DVVHPEO\	:LWK FRQ... PHWDO ERZO DVVHPEO\	:LWK PDQXDO FRFN 12 W\SH $XWRPDWLF 3& ERZO DVVHPEO\	:LWK PDQXDO 1& W\SH $XWRPDWLF 3& ERZO DVVHPEO\
) : : : 0 : : :	) : %2:/	) : %2:/ =				) : %2:/ %2:/ *8$5') 1RWH
) : : : 0 : : :	) : %2:/	) : %2:/ =		) : %2:/ 0		0 : %2:/)
) : 0 : : : : :	) : %2:/	) : %2:/ =	) : %2:/ 0	) : %2:/ 0	) : %2:/)	0 : %2:/)
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) :) : 0 : 0 :) : 0 : : : : : : : : :	) : %2:/	) : %2:/ =	) : %2:/ 0	) : %2:/ 0	) : %2:/)	0 : %2:/)
)0 :)0 :)0 : 00 : 00 : 00 :						

%RZO DVVHPEO\ / 0RGHO	:LWK PDQXDO 12 W\SH $XWRPDWLF 3$ ERZO DVVHPEO\	:LWK FRQ... 1& W\SH $XWRPDWLF 3$ ERZO DVVHPEO\	:LWK PHWDO 12 W\SH $XWRPDWLF PHWDO ERZO DVVHPEO\	:LWK FRQ... 12 W\SH $XWRPDWLF PHWDO ERZO DVVHPEO\	:LWK PHWDO 1& W\SH $XWRPDWLF PHWDO ERZO DVVHPEO\	:LWK FRQ... 12 W\SH $XWRPDWLF PHWDO ERZO DVVHPEO\	)RU DEVRUE... 1& W\SH $XWRPDWLF ... ERZO DVVHPEO\
) : : : 0 : : :		) : %2:/ %2:/ *8$5') = 1RWH						
) : : : 0 : : :		0 : %2:/) =				0 : %2:/) 0		
) : 0 : : : : :	) : %2:/)=	0 : %2:/) =	) : %2:/)0	) : %2:/)0	0 : %2:/) 0	0 : %2:/) 0		
)0 : 00 :							)0 : %2:/)	00 : %2:/)
) :) : 0 : 0 :) : 0 : : : : : : : : :	) : %2:/)=	0 : %2:/) =	) : %2:/)0	) : %2:/)0	0 : %2:/) 0	0 : %2:/) 0		
)0 :)0 :)0 : 00 : 00 : 00 :							)0 : %2:/)	00 : %2:/)

%RZO DVVHPEO\ / 0RGHO	:LWK PDQXDO 12 W\SH /DUJH DXWRPDWLF GUDLQ 3& ERZO DVVHPEO\	:LWK FRQ... 1& W\SH 3$ ERZO	:LWK PDQXDO 12 W\SH 3$ ERZO	:LWK FRQ... 1& W\SH 3$ ERZO	:LWK PHWDO 12 W\SH PHWDO ERZO	:LWK PHWDO 1& W\SH PHWDO ERZO	:LWK PHWDO 12 W\SH PHWDO ERZO	:LWK PHWDO 1& W\SH PHWDO ERZO
) : : : : :	) : %2:/))	) : %2:/))	) : %2:/))=	) : %2:/)) =	) : %2:/))0	) : %2:/)) 0	) : %2:/))0	) : %2:/)) 0

1RWH 7KH 12 DXWRPDWLF GUDLQ FDQQRW EH VHOHFWHG IRU WKH RLO 0LVW ¿OWHU 0 : 0 SUHVVXUH 00 : 00 : 00 : 00 :

1RWH 7KH ODUJH GLVFKDUJH DXWRPDWLF GUDLQ FDQQRW EH LQVWDOOHG RQ WKH 0 :

1RWH 7KH ERZO DVVHPEO\ IRU WKH 6HULHV) LV VROG DV D VHW ZLWK WKH ERZO JXDUG

2LO PLVW ¿OWHU VWDQGDUG ZKLWH 6HULHV

M1000/M2000/M3000
M4000/M6000/M8000-W Series

,GHDO IRU FLUFXLWV VXVFHSWLEOH WR RLO LQFOXGLQJ
3RUW VL]H WR

-,6 V\PERO

RoHS CAD

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

6SHFL¿FDWLRQV

'HVFULSWLRQV	0 :	0 :	0 :	0 :	0 :	0 :
$SSHDUDQFH						
:RUNLQJ ÀXLG	&RPSUHVVHG DLU					
:RUNLQJ SUHVVXUH UDQJH 03D	WR 1RWHV					
:LWKVWDQGLQJ SUHVVXUH 03D	1RWH					
'UDLQ FDSDFLW\ FP³	3					
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	
3URGXFW ZHLJKW NJ						
6WDQGDUG DFFHVVRULHV	%RZO JXDUG					

0DQWOH RSWLRQ QDPH		%ODQN 0 W\SH	6 6 W\SH	; ; W\SH
0D[LPXP ÀRZ UDWH 1RWH ℓ PLQ $15 3ULPDU\ SUHVVXUH 3UHVVXUH GURS	0 :	1RWH	1RWH	
	0 :			
	0 :	360		
	0 03D			
	0 03D:			
	0 :	2600		
$PELHQW WHPSHUDWXUH ƒ& UDQJH		WR		WR
)LOWUDWLRQ UDWLQJ —P		QRPLQDO		6XFWLRQ E\ DFWLYDWHG FKDUF
6HFRQGDU\ VLGH RLO FRQFHQWUDWLRQ 1RWH		RLO FRQFHQWUDWLRQ 1RWH	1RWH RU OHVV 1RWH	RU OHVV 1RWH
0DQWOH HOHPHQW FKDQJH		\HDU	KRXUV RU SUHVVXUH GURS 03D	1RWH

1RWH 8VH ZLWKLQ WKH PD[LPXP SURFHVVLQJ ÀRZ UDWH
,I WKH PD[LPXP SURFHVVLQJ ÀRZ LV H[FHHGHG WHPSRUDULO\ RU LI WKH ¿OWHU LV LQVWDOOHG DW
RLO RU GUDLQDJH HWF FRXOG VSODWWHU WR WKH VHFRQGDU\ VLGH DQG UHVXOW LQ IDXOWV DW
1RWH LWK 0 :) DXWRPDWLF GUDLQ PLQLPXP RSHUDWLQJ SUHVVXUH LV 03D PD[LPXP RSHUDWLRQ
03D 5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ JUDSK SDJH IRU WKH PD[LPXP ZRUNLQJ ÀRZ
1RWH KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLRQ SUHVVXUH PXVW EH
1RWH $FWLYDWHG FKDUFRDO SDUWLFOHV FRXOG ÀRZ WR WKH VHFRQGDU\ VLGH VR LQVWDOO DQ DLU ¿OWHU
1RWH 7KH VHFRQGDU\ RLO FRQFHQWUDWLRQ LV WKH YDOXH ZKHQ WKH SULPDU\ VLGH RLO FRQFHQWUDWLRQ
1RWH ,QVWDOO DQ RLO PLVW ¿OWHU 6 W\SH DV D SUH¿OWHU RQ WKH SULPDU\ VLGH WR SUHYHQW HD
1RWH :KHQ DQ RLO PLVW ¿OWHU 0 6HULHV 0 W\SH LV LQVWDOOHG RQ WKH SULPDU\ VLGH
1RWH 7KH PDQWOH HOHPHQW UHSODFHPHQW SHULRG GLIIHUV ZLWK WKH RGRU GHQVLW\ LQ FRPSUHVVHG
&RQVLGHU WKH WRWDO SHULRG IURP LQLWLDO LQVWDOODWLRQ WR ZKHQ WKH VPHOO RI RLO LV FR
WKH 0 W\SH RU FRQWURO ZLWK XVDJH WLPH :KHQ WKH LQOHW WHPSHUDWXUH LV ƒ& UHSODFH D
.HHS WKH SULPDU\ DLU WHPSHUDWXUH DW ƒ& RU OHVV 7KH GHRGRUL]LQJ HIIHFW ZLOO GURS LI W

&OHDQ URRP VSHFL¿FDWLRQ FDWDORJ 1R &% | 6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQ FDWDORJ 1R &%

M'XVW JHQHUDWLRQ VXSSUHVVLRQ VWUXFWXUH | M6WUXFWXUH WR UHVWULFW HOLPLQDWH FRSSHU DQG]LQF LQ VHFRQGDU\ EDWWHU\ PDQXI

M*000 - P7*

M*000 - P4*

+RZ WR RUGHU

M1000 - 6 ◯ - W - S - ◯ - A6W - ◯

Ⓐ 0RGHO QR
Ⓑ 3RUW VL]H
Ⓒ 3RUW WKUHDG W\SH
Ⓓ 2SWLRQ
Ⓔ 'LVSOD\ XQLW
Ⓕ 3LSLQJ DGDSWRU VHW DWWDFKHG
* %UDFNHW DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

6\PER	'HVFULSWLRQ		M1000	M2000	M3000	M4000	M6000	M8000
Ⓑ Port size								
6			M					
8 Note 1			M	M	M	M		
10				M	M	M		
15						M		
20							M	M
25							M	M
Ⓒ Port thread type Note 2								
Blank		5F WKUHDG	M	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M	M
Ⓓ Option Note 3								
Drainage Note 4, Note 5	Blank	:LWK PDQXDO GUDLQ	M	M	M	M	M	M
	F1	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1&	M	M	M	M	M	M
Bowl material	Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M	M	M
	M	0HWDO ERZO 1RWH			M	M	M	M
	M1	0HWDO ERZO ZLWK PDQXDO GUDLQ		M	M	M	M	M
Mantle (Element)	Blank	0 W\SH QRPLQDO —P	M	M	M	M	M	M
	S	6 W\SH —P	M	M	M	M	M	M
	X Note 7	; W\SH GHRGRUL]DWLRQ	M	M	M	M	M	M
Differential pressure Detection	Blank	:LWKRXW GLIIHUHQWLDO	M	M	M	M	M	M
	Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ		M	M	M	M	M
Differential pressure detection	Blank	:LWKRXW GLIIHUHQWLDO	M	M	M	M	M	M
	Q1 Note 6, Note 7	:LWK GLIIHUHQWLDO SUHVVXUH					M	M
Flow direction	Blank	6WDQGDUG ÀRZ OHIW	M	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW	M	M	M	M	M	M
Ⓔ Display unit								
Blank		03D GLVSOD\ 5F WKUHDG	M	M	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M	M
Ⓕ Piping adaptor set (attached) Note 8, Note 9 page 428								
Blank		1RW DWWDFKHG	M	M	M	M	M	M
A6*W		5F SLSLQJ DGDSWRU VHW	M					
A8*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M		
A10*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M		
A15*W		5F SLSLQJ DGDSWRU VHW		M	M	M		
A20*W		5F SLSLQJ DGDSWRU VHW				M	M	M
A25*W		5F SLSLQJ DGDSWRU VHW					M	M
A32*W		5F SLSLQJ DGDSWRU VHW					M	M
*Adaptor screw type								
Blank		5F WKUHDG	M	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M	M
* Bracket (attached) page 425								
Blank		1RW DWWDFKHG	M	M	M	M	M	M
BW		& W\SH EUDFNHW	M	M	M	M	M	M

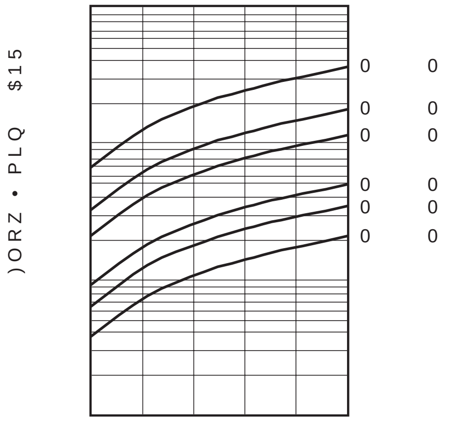
⚠ 1RWH RQ PRGHO QR VHOHFWLRQ

1RWH 4 ZLWK GLIIHUHQWLDO LQGLFDWRU FDQQRW EH VHOHFWHG IRU SRUW VL]H
1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH 1 287 DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DXWRPDWLF GUDLQ DUH WKH WDUJHW
1RWH 6HOHFW RSWLRQV IRU HDFK GUDLQDJH ERZO PDWHULDO DQG GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ
:KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS
1RWH 12 DXWRPDWLF GUDLQ FDQQRW EH VHOHFWHG
1RWH 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ VSHFLILFDWLRQV
1RWH 4 ZLWK GLIIHUHQWLDO LQGLFDWRU FDQQRW EH VHOHFWHG IRU ERZO PDWHULDO 0
1RWH &DQQRW EH FRPELQHG ZLWK RSWLRQ) RU 4 ZLWK GLIIHUHQWLDO LQGLFDWRU
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

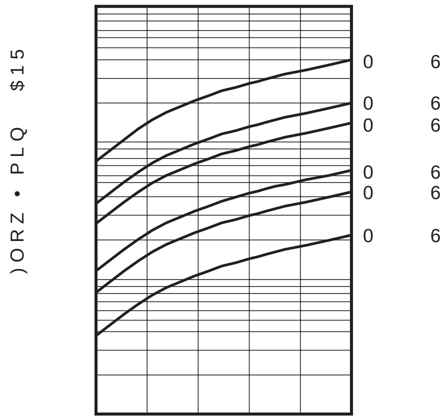
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

)ORZ FKDUDFWHULVWLF PD[LPXP ÀRZ UDWH

M0 : 0



M0 : 6



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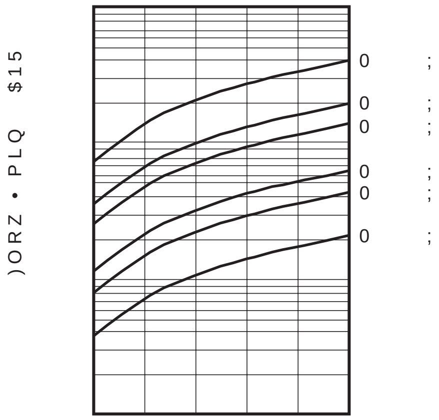
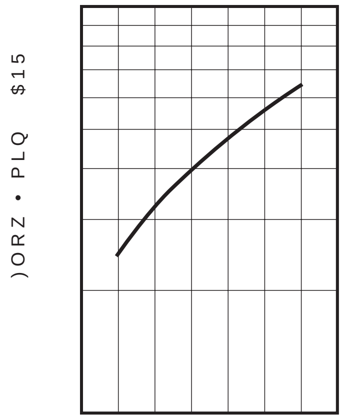


M0 :)
:LWK DXWRPDWLF GUDLQ 0 W\SH 6 W\S



2LO PLVW ¿OWHU 8VLQJ RSWLRQDO SDUWV

0DMRU UHFRPPHQGHG $SSOLFDWLRQV

× 6 W\SH

F S

*HQHUDO LQGXVWULDO DLU
‡ $LU WRRO
DLU GULOO DLU VFUHZ GULYHU
DLU JULQGHU
‡ /DERU VDYLQJ GHYLFH DQG FRPSRQHQWV
‡ 3QHXPDWLF MLJV DQG WRROV
‡ $LU FKXFN
‡ $LU YDOYH
‡ 3UHFLVLRQ SDUW FOHDQLQJ DLU EORZ

× 0 W\SH

F S M

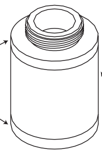
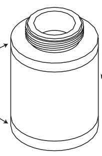
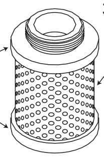
2LO IUHH DLU
‡ ,QVWUXPHQWDWLRQ
‡ 0HDVXUHPHQW
‡/RJLF FRQWURO
PRYDEOH HOHPHQW SXUH ÀXLG HOHPHQW
‡ /X[XU\ SDLQWLQJ
‡ 3UHFLVH LQGXVWU\

× ; W\SH

F S M X

'HRGRUL]DWLRQ DLU
‡)RRG LQGXVWU\
‡ 3KDUPDFHXWLFDO LQGXVWU\
‡ $JLWDWLRQ
‡ 7UDQVSRUWDWLRQ
‡ 'U\
‡ 3DFNDJH
‡ $LU IRU EUHZLQJ

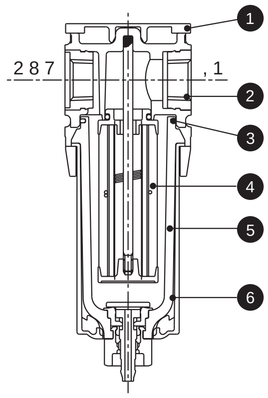
2SWLRQ V\PERO RI PDQWOH DQG VKDSH

2SWLRQ V\PERO	$SSHDUDQFH
%ODQN 0 W\SH	 (QG SODWH %ODFN 3ODVWLF IRUP 5HG
6 6 W\SH	 (QG SODWH *UHHQ 3ODVWLF IRUP 5HG
X ; W\SH	 (QG SODWH %ODFN 3XQFKLQJ PHWDO

127(&KDQJHV IRU SURGXFW XSJUDGHV PD\ EH PDGH ZLWKRXW SULRU QRWLFH
:KHQ SODFLQJ DQ RUGHU FRQ¿UP WKH RSWLRQ V\ IRU WKH SDUW PRGHO JLYHQ KHUH

,QWHUQDO VWUXFWXUH DQG SDUWV OLVW

M0 :



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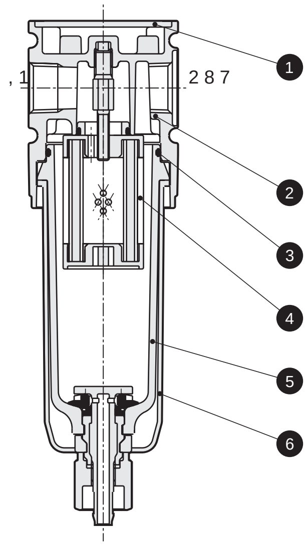

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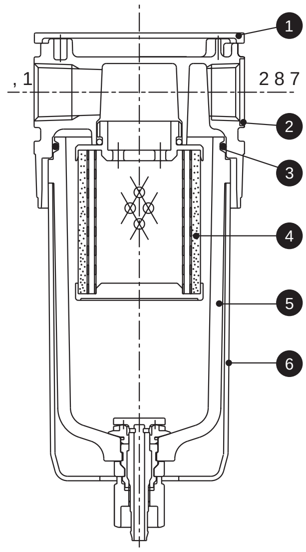

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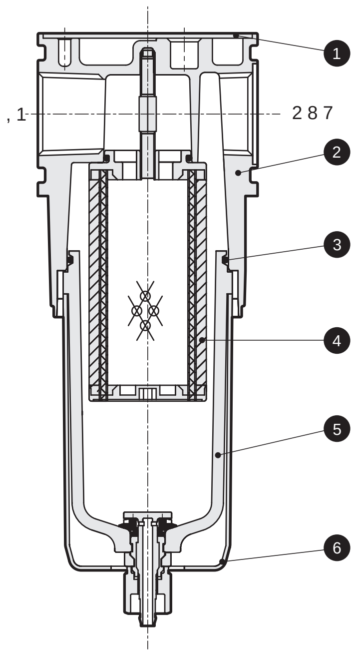

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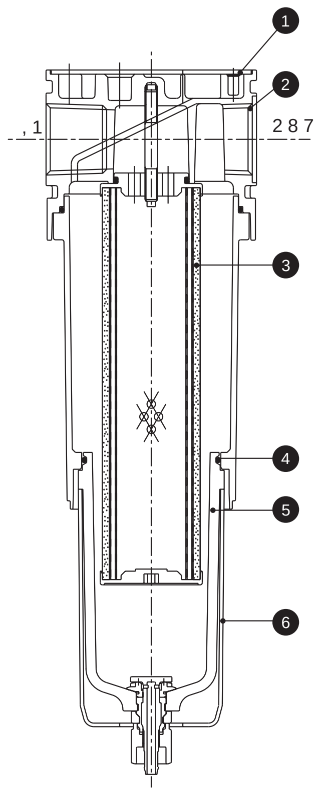


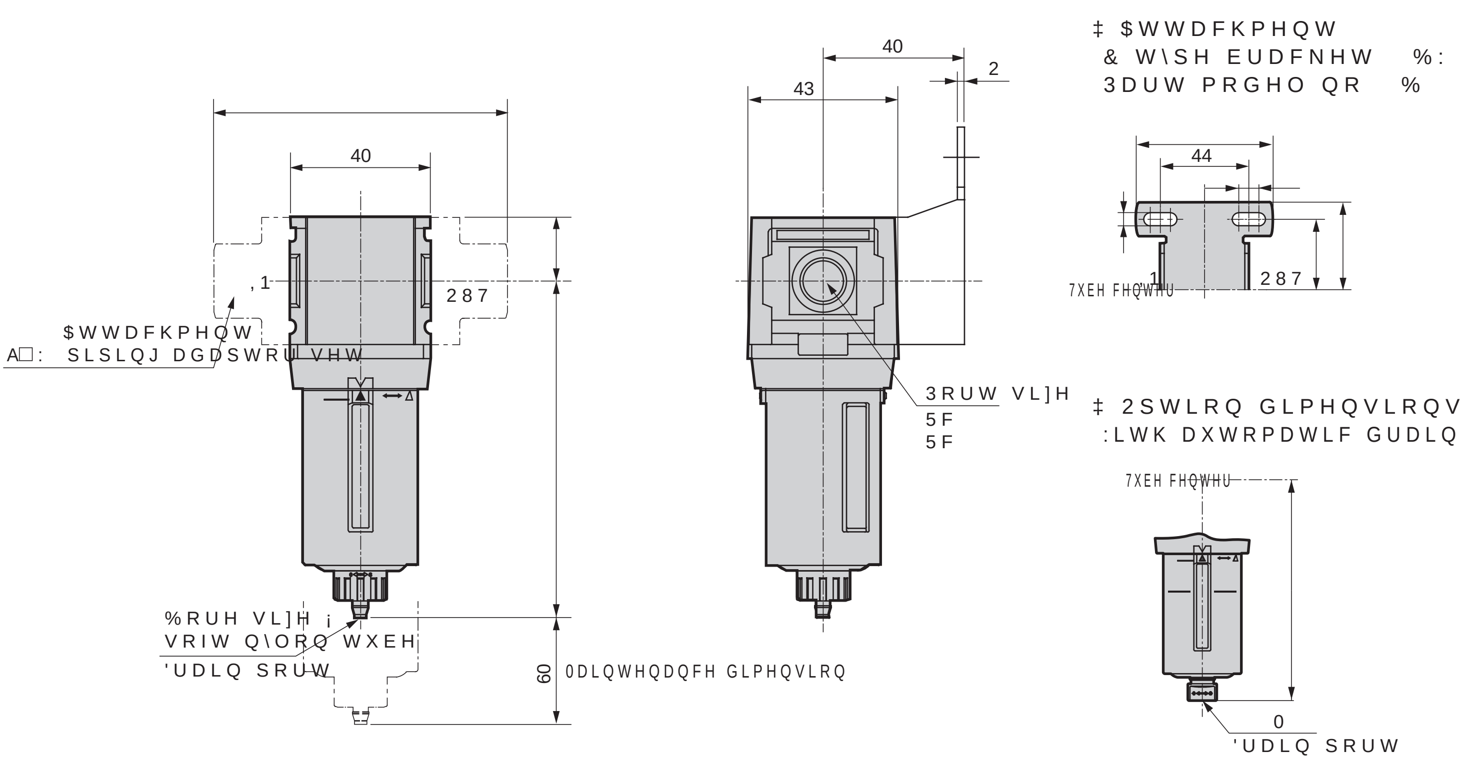
1R	3DUWV QDPH	0DWHULDO					
		0 :	0 :	0 :	0 :	0 :	0 :
	3ODWH FRYHU	$%6 UHVLQ					
2	%RG\	3RO\DPLGH UHVLQ	$OXPLQXP DOOR\ GLH FDVWLQJ				
3	2 ULQJ1RWH	6SHFLDO QLWULOH UXEEHU					
4	0DQWOH DVVHPEO\						
	%RZO DVVHPEO\	3RO\FDUERQDWH UHVLQ SRO\DFHWDO UHVLQ XUHWKDQH					
6	%RZO JXDUG	3RO\DPLGH UHVLQ	3RO\DPLGH UHVLQ VWHHO				

1RWH 2 ULQJ RI 0 : LV VSHFLDO VKDSHG

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

'LPHQVL QV

M0 :



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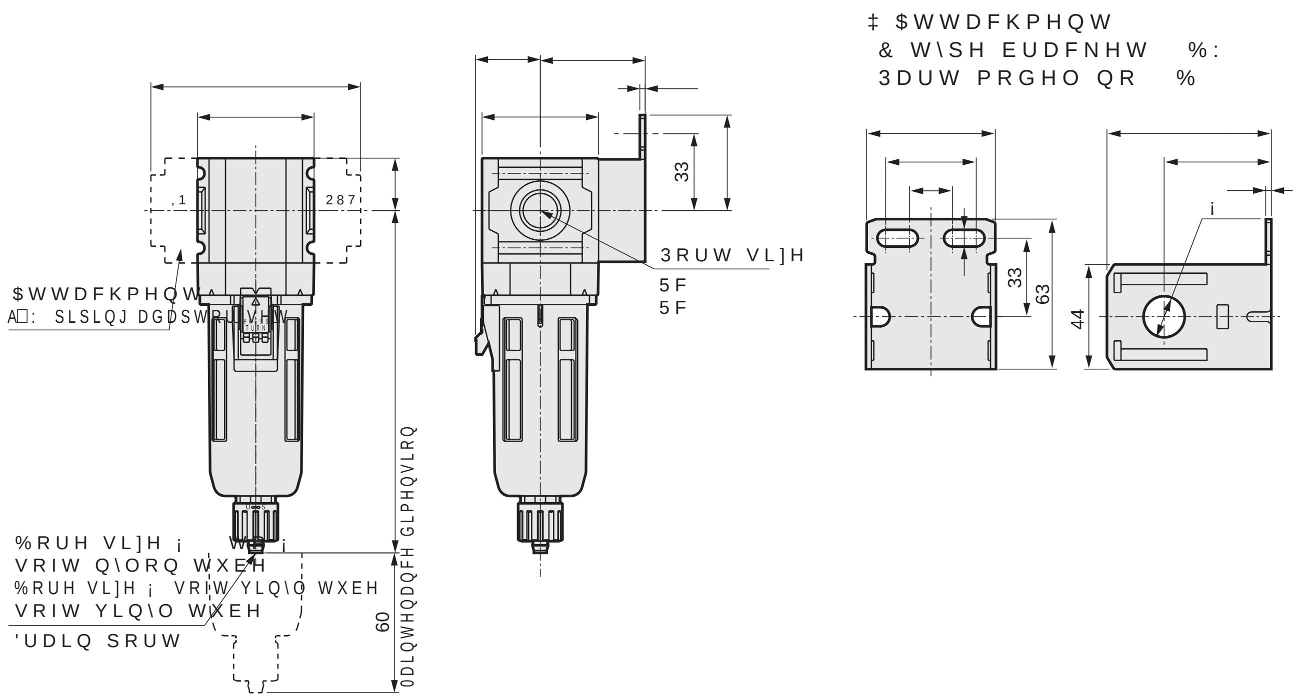
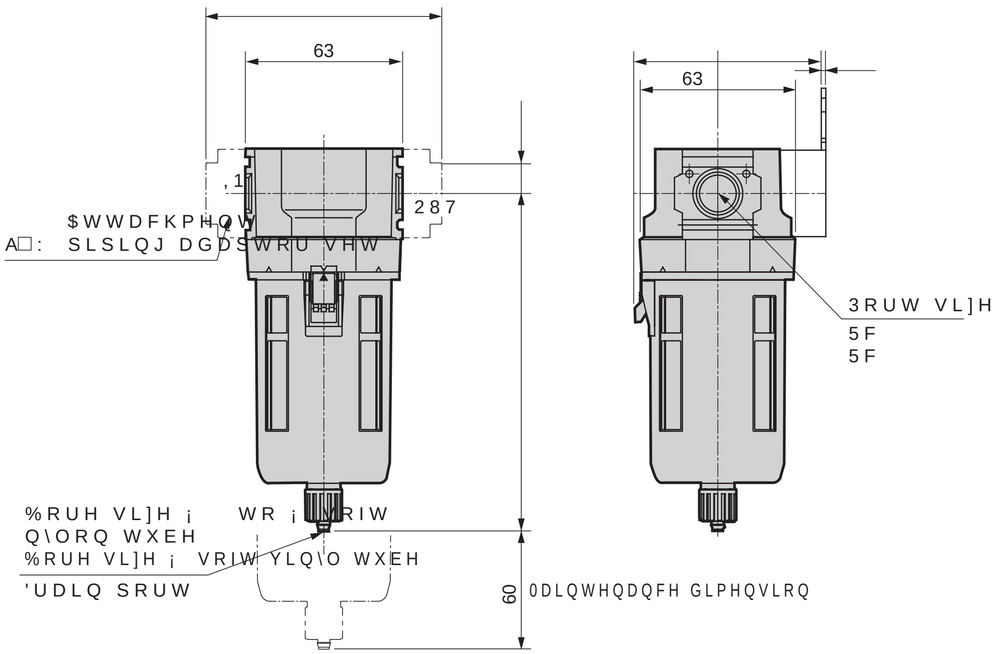
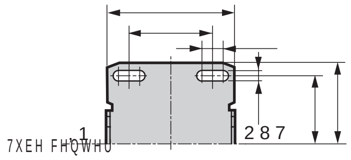


'LPHQVLRQV

M0 :

‡ $WWDFKPHQW
& W\SH EUDFNHW
3DUW PRGHO QR

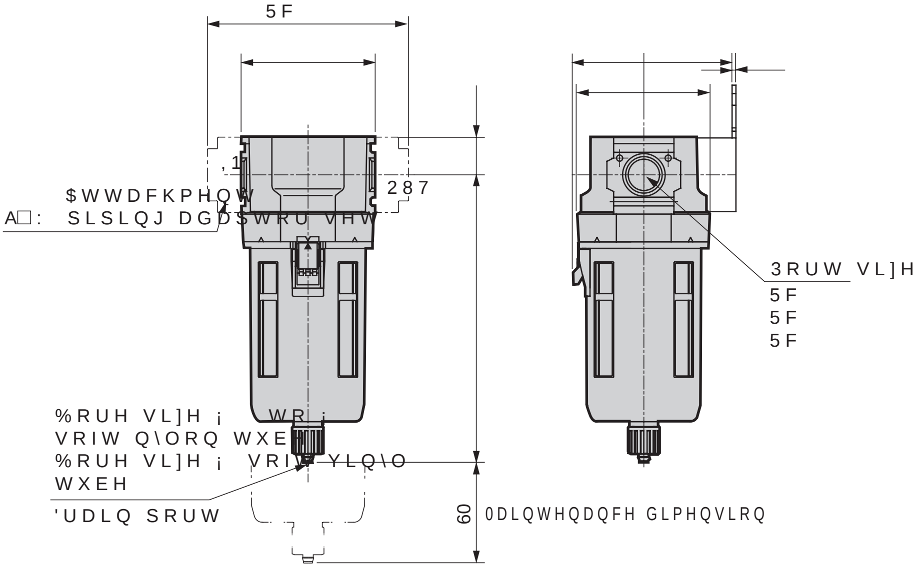


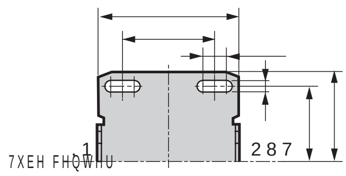


M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV DUH WKH VDPH UHJDUGOHVV RI ZKHWKHU WKH PDQXDO FRFN RU ZLWK DXWRPDWLF
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH

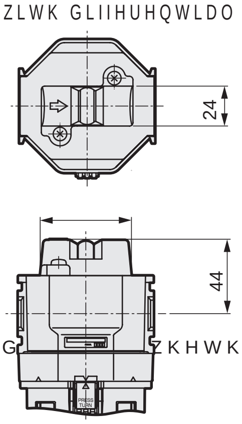
M0 :

‡ $WWDFKPHQW
& W\SH EUDFNHW %
3DUW PRGHO QR %





‡ 2SWLRQ GLPHQVLRQ
ZLWK GLIIHUHQWLDO SUHVVX

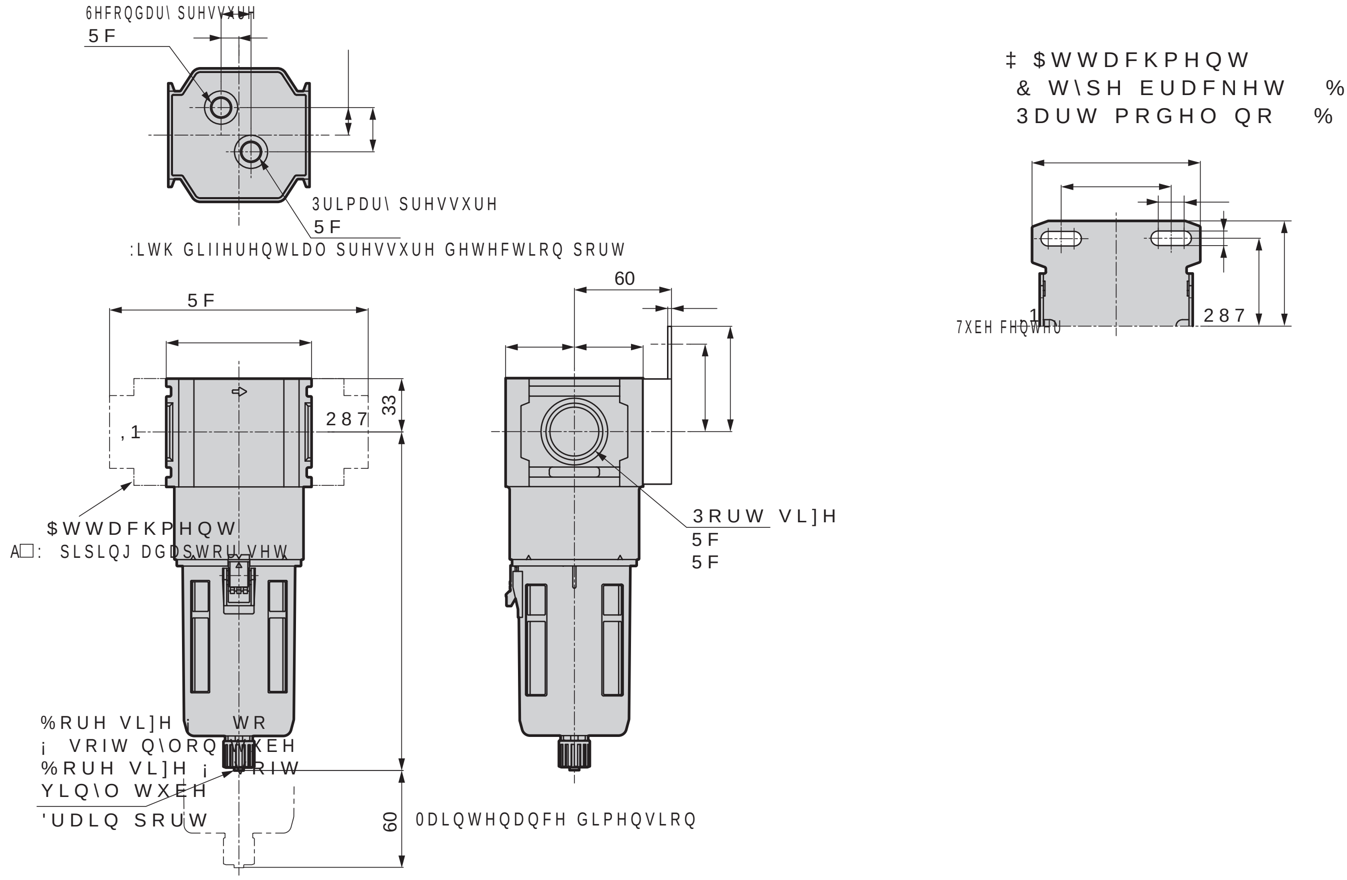


M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV DUH WKH VDPH UHJDUG ZKHWKHU WKH PDQXDO FRFN RU ZLWK DXWRPDWLF GUDLQ

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

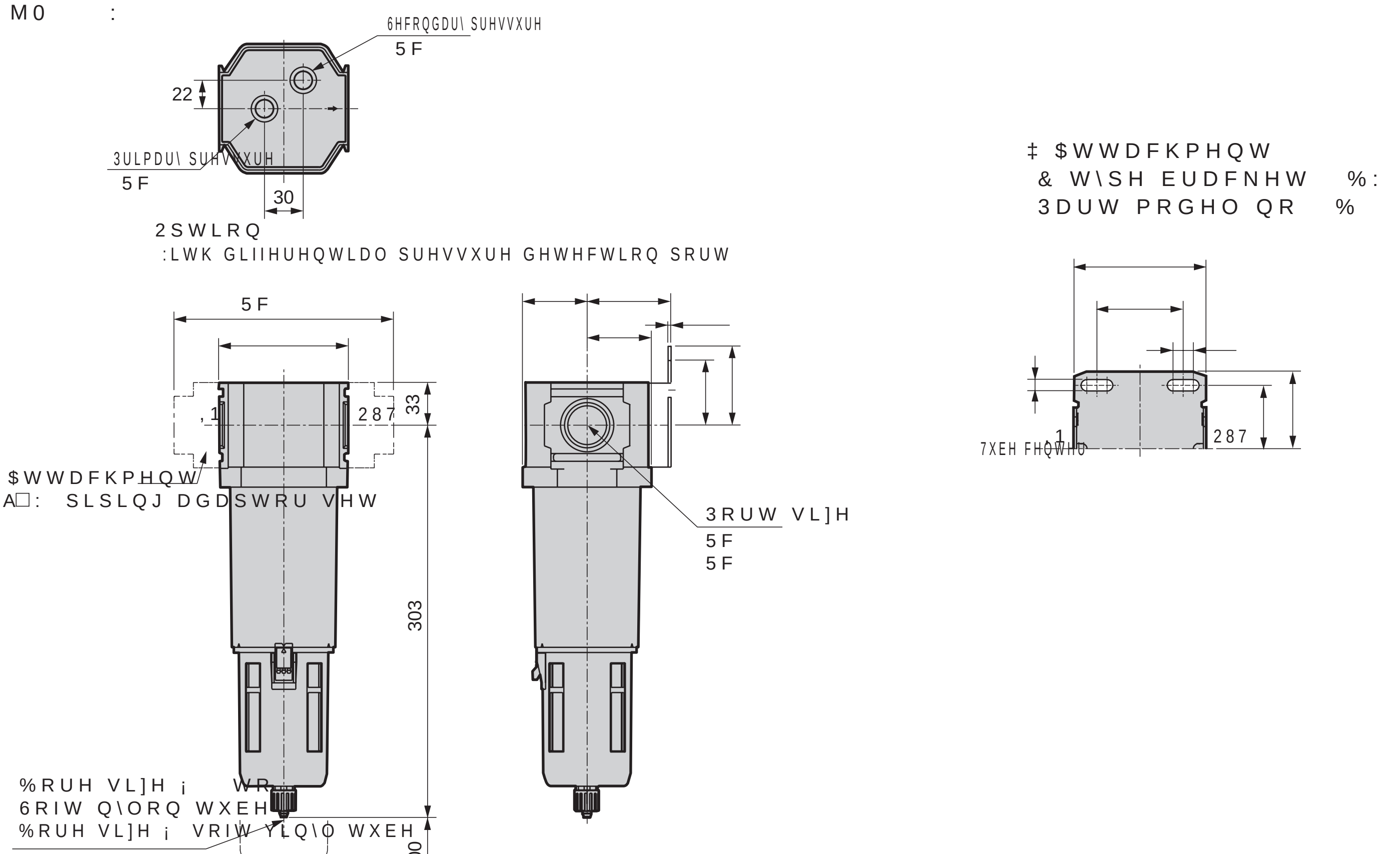
'LPHQVLRQV CAD

M0 :



M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV DUH WKH VDPH UHJDUGOHVV RI ZKHWKHU WKH PDQXDO FRFN RU ZLWK DXWRPDWLF
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH

M0 :

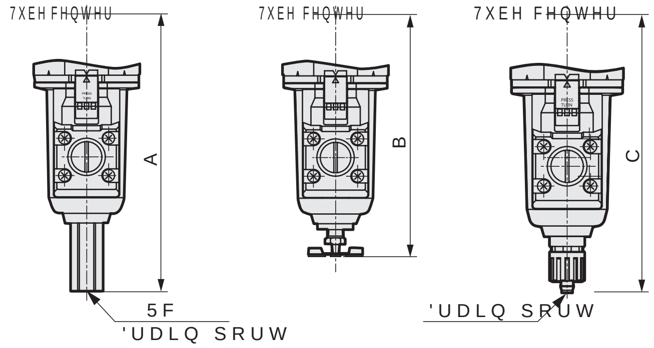


M)RU WKH SODVWLF ERZO WKH GLPHQVLRQV DUH WKH VDPH UHJDUGOHVV RI ZKHWKHU WKH PDQXDO

2SWLRQDO GLPHQVLRQV

M0HWDO ERZO RSWLRQ
(0 : 0 : 0 : 0 : 0 :

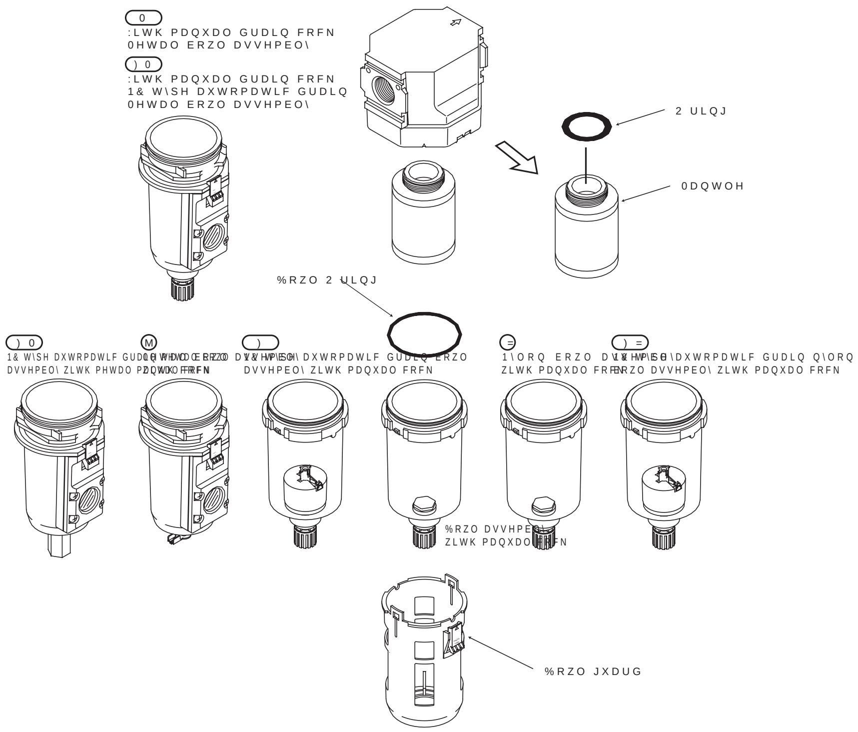
0HWDO PDQXDO FRFN ZLWK DXWRPDWLF GUDLQ 1& W\SH
6WDQGDUG PDQXDO GUDLQ FRFN
0HWDO ERZO ZLWK 0HWFRFN 0



LPHQVLRQV

Model no.	F1M	M	M1
	A	B	C
0 :			
0 :			
0 :			
0 :	226		
0 :			

2SWLRQDO SDUWV WDEOH RLO PLVW ¿OWHU



5HSDLU NLWV PRGHO QR 6HW RI 2 ULQJ PDQWOH ERZO 2

0RGHO	0 W\SH	6 W\SH	; W\SH
0 :	0 .,7	0 .,7 6	0 .,7 ;
0 :)	0 .,7)	0 .,7) 6	
0 :	0 .,7	0 .,7 6	0 .,7 ;
0 : 00 :	0 .,7	0 .,7 6	0 .,7 ;
0 : 00 :	0 .,7	0 .,7 6	0 .,7 ;
0 : 00 :	0 .,7	0 .,7 6	0 .,7 ;
0 : 00 :	0 .,7	0 .,7 6	0 .,7 ;

5HSDLU NLWV PRGHO QR 6HW RI 2 ULQJ PDQWOH

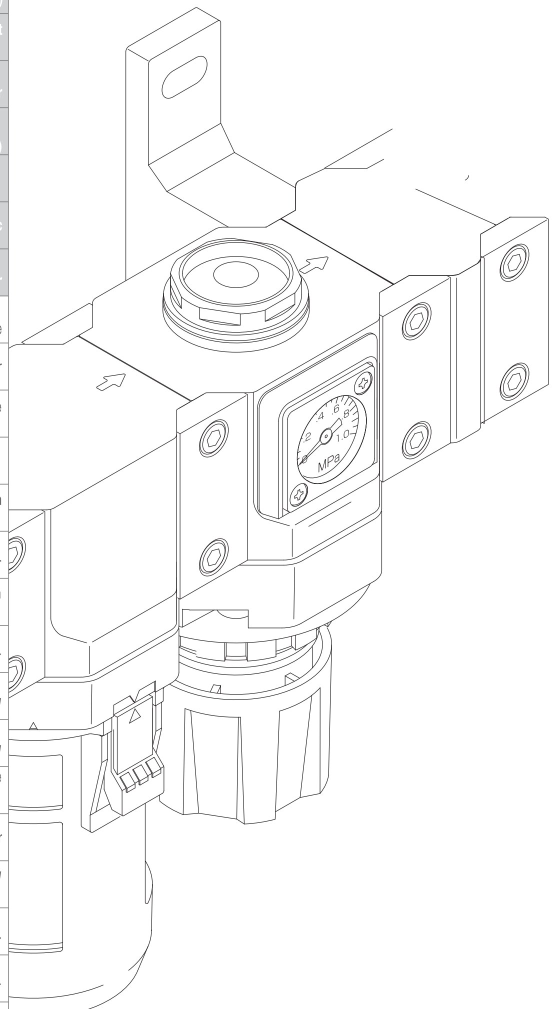
0RGHO	0 W\SH	6 W\SH	; W\SH
0 :	0 0$17/($66<	0 0$17/($66< 6	0 0$17/($66< ;
0 :)	0 0$17/($66<)	0 0$17/($66<) 6	
0 :	0 0$17/($66<	0 0$17/($66< 6	0 0$17/($66< ;
0 : 00 :	0 0$17/($66<	0 0$17/($66< 6	0 0$17/($66< ;
0 : 00 :	0 0$17/($66<	0 0$17/($66< 6	0 0$17/($66< ;
0 : 00 :	0 0$17/($66<	0 0$17/($66< 6	0 0$17/($66< ;
0 : 00 :	0 0$17/($66<	0 0$17/($66< 6	0 0$17/($66< ;

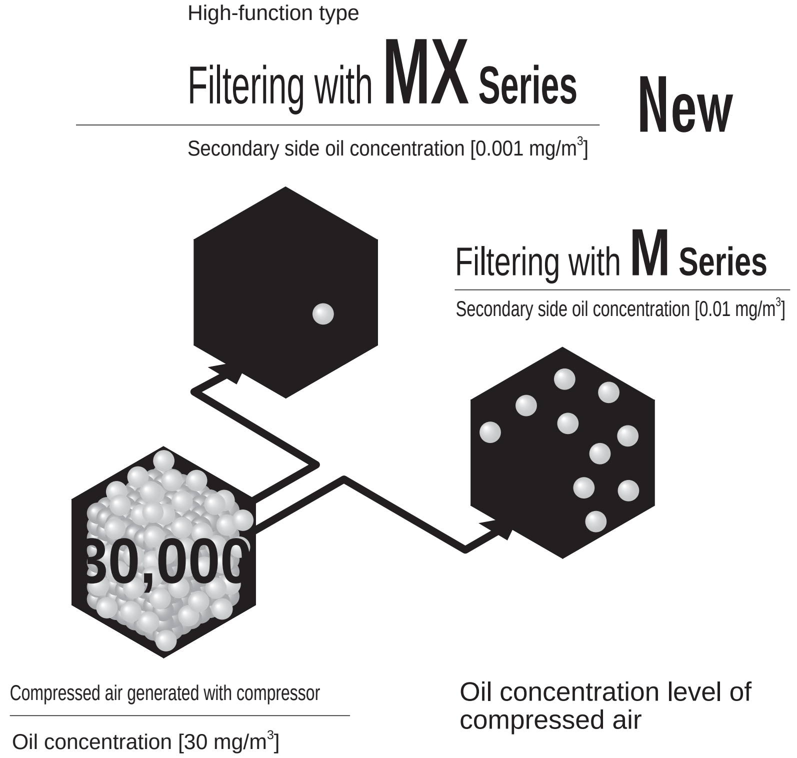
0 : : : DQG : 6HULHV SURGXFWV UHOHDVHG EHIRUH 0D\ DUH FRPSDWLEOH ZLWK 0 S
5HIHU WR WKH DLU ¿OWHU RSWLRQV DQG SDUWV WDEOH IRU GHWDLOV RQ WKH ERZO DVVHPEO\ DQG

High-performance with x10 oil removal.

Highly eff cient oil removing mantle removes oil up to a secondary oil concentration 0.001mg/m³.

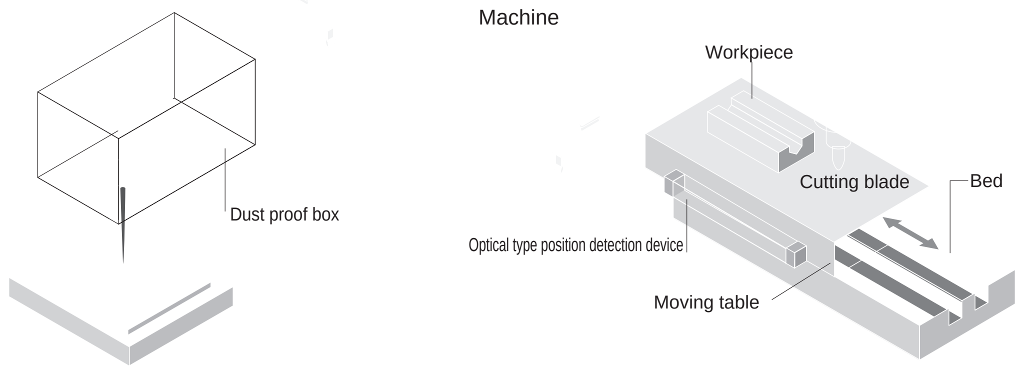
06HULHVKLJKHURLOUHPRYDOHIILFLHQWOHWHDVWK[FRPSDUHGWRRLOPLVW
QWHU06HULHVRLOUHPRYDO





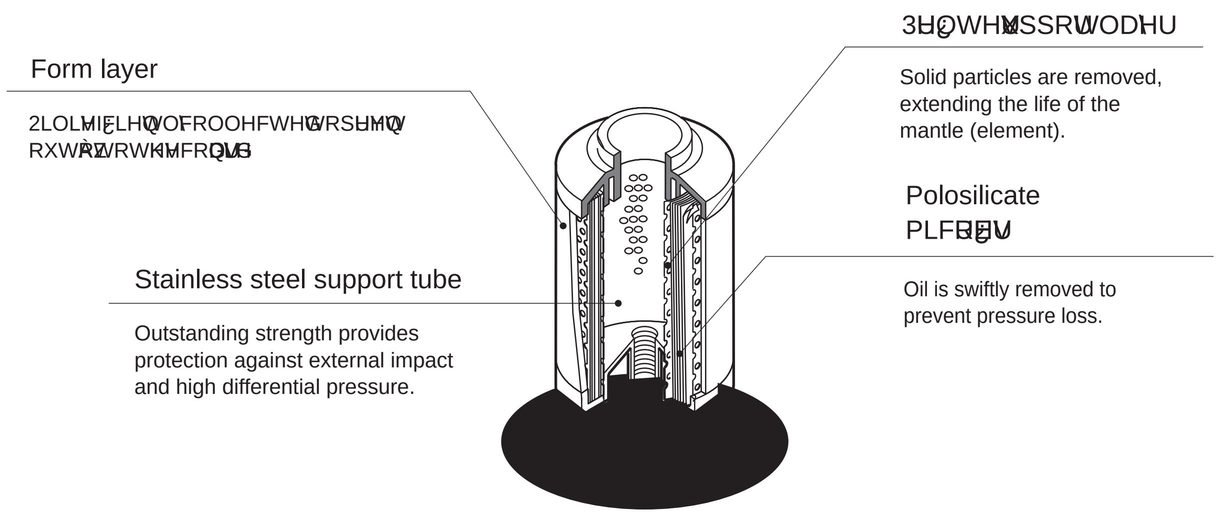
Further expanding high-purity oilless air applications

This series is ideal for applications requiring high-purity oilless air, including laser processing systems, optical positioning units, and foodstuff and pharmaceutical manufacturing lines.



ĿJKHURLOUHPRYDOHIILFLHQWOLQWHU
MX Series

O Mantle structural explanation



Secondary side oil concentration 0.001mg/m³ or less

7KLVKLJKHIILFLHQWRLOUHPRYLQJPDQWOHUHPRYHVRLOXSWRWKH
secondary oil concentration of 0.001 mg/m³ at 21°C.
This series is compatible with the JIS Standards Oil Class 1-·-1.

ĿJKDFFXUDF\QWDWLRQ

Impurities up to 0.01µm are removed.

Long life, low pressure loss

7KHJDSDWHZLWKLQWKHPDQWOHHOHPHQWLVKLJK
at 94%, suppressing pressure loss and extending life.

Module connections

$WHPLFRQQHFWLRQWRROHFRQQHFWLRQZLWK
VDPHPDQQHUDVWKHFRQQHFWLRQOLQHQWHU06HULHVDQG
RLOPLVWOLQWHU06HULHV

Diverse models

Dive types -- MX1000, 3000, 4000, 6000 and 8000 --
DUHXVHGWRPDWFKWKHIORZ

Cleanroom-compatible

The P70 Series is available.
(3000, 4000 and 6000 Series are available)

MX Series variations

Series	Type	Filtration rating µm	Secondary side oil concentration mg/m³(21°C)	Treating f ow rate ℓ/min 1000 Series	3000 Series	4000 Series	6000 Series	8000 Series	Ambient temperature range °C
MX Series		0.01	0.001 or less	75	180	370	670	1490	5 to 60
M Series	M Type	0.01	0.01 or less	150	360	825	1270	2600	5 to 60
	S Type	0.3	0.5 or less	150	450	1000	1400	2900	5 to 60
	X Type	Suction by activated charcoal	0.003 or less	150	450	1000	1400	2900	5 to 30

Read Safety Precautions to ensure correct, safe product use.

Standard series
F.R.L. unit

+LJK SHUIRUPDQFH RLO PLVW ¿OWHU   VWDQG

MX1000 MX3000 MX4000
MX6000 MX8000-W Series

6HFRQGDU\ VLGH RLO FRQFHQWUDWLRQ   PJ/P³

$SSURSULDWH IRU RSWLFDO GHYLFH VXFK DV RSWLFDO W\SH SRVLWLR

3RUW VL]H   WR

-,6 V\PERO

RoHS CAD

6SHFL¿FDWLRQV

'HVFULSWLRQV	0; :	0; :	0; :	0; :	0; :
$SSHDUDQFH					
:RUNLQJ ÀXLG	&RPSUHVVHG DLU				
:RUNLQJ SUHVVXUH UDQJH 03D	WR 1RWH 1RWH				
:LWKVWDQGLQJ SUHVVXUH 03D	1RWH				
$PELHQW WHPSHUDWXUH UDQJH ℃	WR				
)LOWUDWLRQ UDWLQJ μP	QRPLQDO				
6HFRQGDU\ VLGH RLO FRQFHQWUDWLRQ PJ/P³	RU OHVV 1RWH 1RWH				
0D[LPXP ÀRZ UDWH ℓ/PLQ $151RWH	1RWH				
'UDLQ FDSDFLW\ FP³	3				
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
3URGXFW ZHLJKW NJ					
0DQWOH HOHPHQW FKDQJH	\HDU KRXUV RU SUHVVXUH GURS 03D				
6WDQGDUG DFFHVVRULHV	%RZO JXDUG				

1RWH 9DOXHV IRU SULPDU\ SUHVVXUH 03D DQG SUHVVXUH GURS 03D 8VH ZLWKLQ WKH PD[LPXP SUR
,I WKH PD[LPXP SURFHVVLQJ ÀRZ LV H[FHHGHG WHPSRUDULO\ RU LI WKH ¿OWHU LV LQVWDOOHG DW
RLORU GUDLQDJH HWF FRXOG VSODWWHU WR WKH VHFRQGDU\ VLGH DQG UHVXOW LQ IDXOWV DW

1RWH KHQ 0; :) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG WKH PLQLPXP RSHUDWLRQ SUHVVXUH LV
WKH JXDUDQWHHG SUHVVXUH UHVLVWDQFH LV 03D 5HIHU WR WKH PD[LPXP SURFHVVLQJ ÀRZ JU

1RWH KHQ) ZLWK DQ DXWRPDWLF GUDLQ LV VHOHFWHG PLQLPXP RSHUDWLRQ SUHVVXUH PXVW EH

1RWH 7KH VHFRQGDU\ RLO FRQFHQWUDWLRQ LV WKH YDOXH ZKHQ WKH SULPDU\ RLO FRQFHQWUDWLRQ LV
VDWXUDWHG

1RWH ,QVWDOO DQ RLO PLVW ¿OWHU 6 W\SH DV D SUH¿OWHU RQ WKH SULPDU\ VLGH WR SUHYHQW HDUO

&OHDQ URRP VSHFL¿FDWLRQV

FDWDORJ 1R &% 6

M'XVW JHQHUDWLRQ SUHYHQWLQJ VWUXFWXUH IRU XVH LQ FOHDQURRPV

MX*000 - ··········- P7*

+RZ WR RUGHU

MX1000 - 6 - W - Z - A6W

Ⓐ 0RGHO QR
Ⓑ 3RUW VL]H
Ⓒ 3RUW WKUHDG W\SH
Ⓓ 3RUW WKUHDG W\SH
Ⓔ 'LVSOD\ XQLW
Ⓕ 3LSLQJ DGDSWRU VHW DWWDFKHG
Ⓖ %UDFNHW DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

Symbol		'HVFULSWLRQV	Ⓐ Model no. MX1000	MX3000	MX4000	MX6000	MX8000
Ⓑ Port size							
6			M				
8			M	M	M		
10				M	M		
15					M		
20						M	M
25						M	M
Ⓒ Port thread type		Note 1					
Blank		5F WKUHDG	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M
Ⓓ Option		Note 2					
Drainage	Blank	:LWK PDQXDO GUDLQ FRFN	M	M	M	M	M
	F1 Note 3, Note 4	$XWR GUDLQ ZLWK PDQXDO RYHUULGH 1& W\SH 1RUPDOO\ RSHQ ZKHQ WKHUH LV QR SUHVVXUH	M	M	M	M	M
Bowl material	Blank	3RO\FDUERQDWH ERZO	M	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M	M
	M	0HWDO ERZO		M	M	M	M
	M1	0HWDO ERZO ZLWK PDQXDO GUDLQ FRFN		M	M	M	M
Differential pressure detection	Blank	:LWKRXW GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ	M	M	M	M	M
	Q	:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ SRUW				M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW ULJKW	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW :OHIW	M	M	M	M	M
Ⓔ Display unit							
Blank		03D GLVSOD\ 5F WKUHDG	M	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M
Ⓕ Piping adaptor set (attached)		Note 5 page 428 Note 6					
Blank		1RW DWWDFKHG	M	M	M	M	M
A6*W		5F SLSLQJ DGDSWRU VHW	M				
A8*W		5F SLSLQJ DGDSWRU VHW	M	M	M		
A10*W		5F SLSLQJ DGDSWRU VHW	M	M	M		
A15*W		5F SLSLQJ DGDSWRU VHW		M	M		
A20*W		5F SLSLQJ DGDSWRU VHW			M	M	M
A25*W		5F SLSLQJ DGDSWRU VHW				M	M
A32*W		5F SLSLQJ DGDSWRU VHW				M	M
***Adaptor screw type**							
Blank		5F WKUHDG	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M
Ⓖ Bracket (attached)		page 425					
Blank		1RW DWWDFKHG	M	M	M	M	M
BW		& W\SH EUDFNHW	M	M	M	M	M

⚠ 1RWH RQ PRGHO QR VHOHFWLRQ

1RWH 1 : KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH ,1 287 DQG GUDLQDJH GLVFKDUJH SRUW PHWDO ERZO DX[LOLDU\ GUDLQ DUH WKH WDUJHW.

1RWH 2 6HOHFW RSWLRQV IRU HDFK GUDLQDJH ERZO PDWHULDO DQG GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ. :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW WKHP LQ RUGHU IURP WKH WRS.

1RWH 3 12 DXWRPDWLF GUDLQ FDQQRW EH VHOHFWHG.

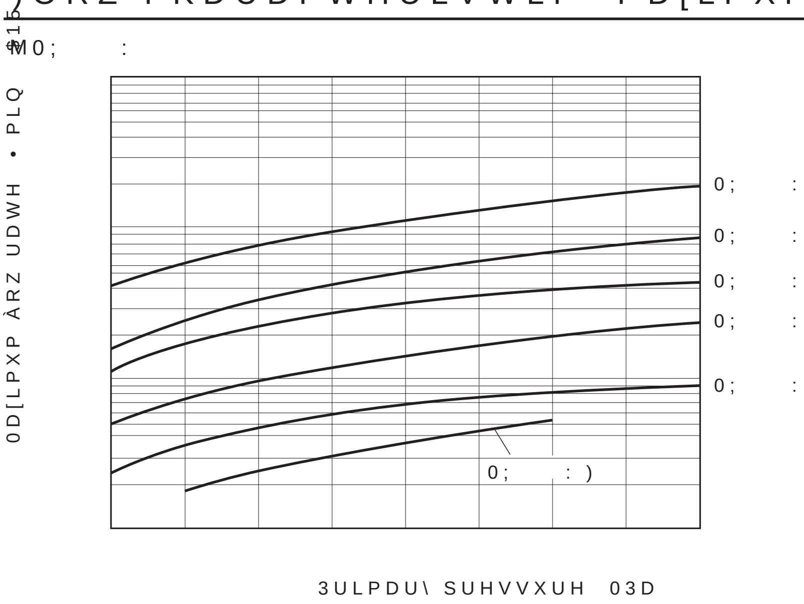
1RWH 4 5HIHU WR SDJH IRU WKH DXWRPDWLF GUDLQ XVH FRQGLWLRQV.

1RWH 5 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH.

1RWH 6 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

)ORZ FKDUDFWHULVWLF PD[LPXP ÀRZ UDWH



2LO PLVW ¿OWHU 8VLQJ RSWLRQDO PD[LPXP

0DMRU UHFRPPHQGHG DSSOLFDWLRQV

× 6 W\SH

F S

*HQHUDO LQGXVWULDO DLU
6HFRQGDU\ VLGH RLO FRQWHQW GLOLWLRQ
PJ 3PRU OHVV

‡ $LU FRPSUHVVRU DLU VFUHZ GULYHU DLU JULQGHU
‡/DERU VDYLQJ GHYLFH DQG FRPSRQHQWV
‡ 3QHXPDWLF MLJV DQG WRROV
‡ $LU FKXFN
‡ $LU YDOYH
‡3UHFLVLRQ SDUW FOHDQLQJ DLU EORZ

× 0 W\SH

F S M

2LO IUHH DLU
6HFRQGDU\ VLGH RLO FRQWHQW
PJ 3PRU OHVV

‡ ,QVWUXPHQWDWLRQ
‡ 0HDVXUHPHQW
‡ /X[XU\ SDLQWLQJ
‡ 3UHFLVH LQGXVWU\

× ; W\SH

F S M X

'HRGRUL]DWLRQ DLU
6HFRQGDU\ VLGH RLO FRQWHQW
PJ 3PRU OHVV

‡)RRG LQGXVWU\
‡ 3KDUPDFHXWLFDO LQGXVWU\
‡ 9DJLWDWLRQ
‡ 7UDQVSRUWDWLRQ
‡ 'U\
‡ 3DFNDJH
‡ $LU IRU EUHZLQJ

× 0; W\SH

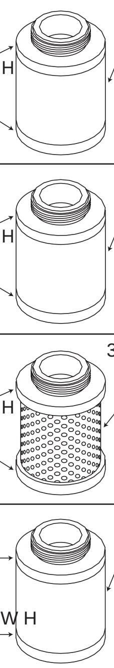
F S MX

6XSHU RLOOHVV DLU
6HFRQGDU\ VLGH RLO FRQWHQW
PJ 3PRU OHVV

‡ 2SWLFDO W\SH SRVLWLRQLQJ GHYLFH
‡ 6(0 JULQGLQJ PDFKLQH

2SWLRQ V\PERO RI PDQWOH DQG VKDGH

2SWLRQ V\PERO	$SSHDUDQFH
%ODQN 0 W\SH	(QG SODWH %ODFN; 3ODVWLF IRUP 5HG
6 W\SH	(QG SODWH *UHHQ; 3ODVWLF IRUP 5HG
; W\SH	(QG SODWH %ODFN; 3XQFKLQJ PHWDO
0; W\SH	%ODFN; (QG SODWH *UHHQ; 3ODVWLF IRUP 5HG

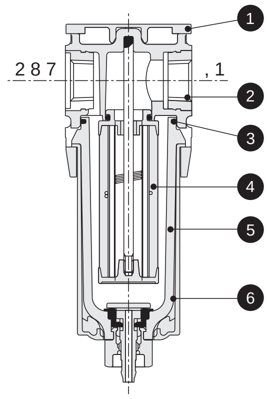


127(&KDQJHV IRU SURGXFW XSJUDGHV PD\ EH PDGH Z
:KHQ SODFLQJ DQ RUGHU FRQ¿UP WKH RSWL
PRGHO JLYHQ KHUH

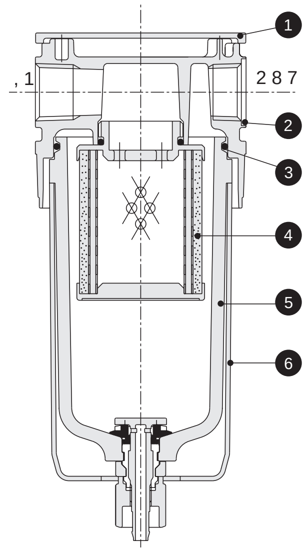
127(7KH VHFRQGDU\ RLO GHQVLW\ LV WKH YDOXH ZKHQ WKH SULPDU\ RLO GHQVLW\ LV PJ P
WKH LQOHW DLU WHPSHUDWXUH LV ƒ& DQG EHIRUH WKH RLO LV VDWXUDWHG

,QWHUQDO VWUXFWXUH DQG SDUWV OLVW

M0; :



M0; : 0; :



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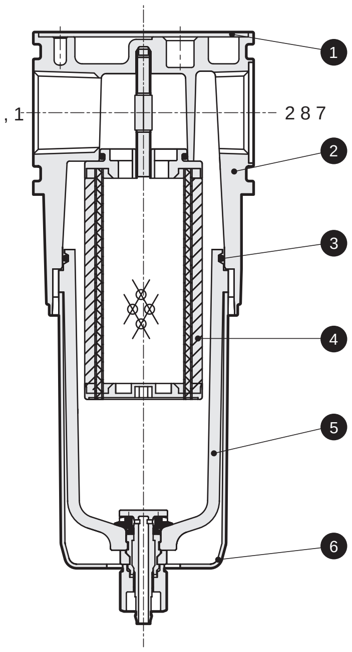

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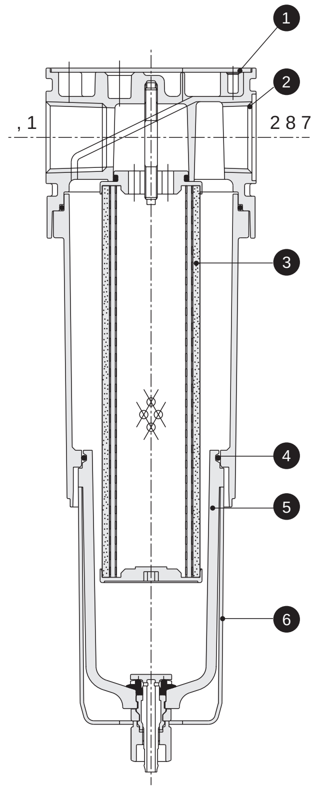


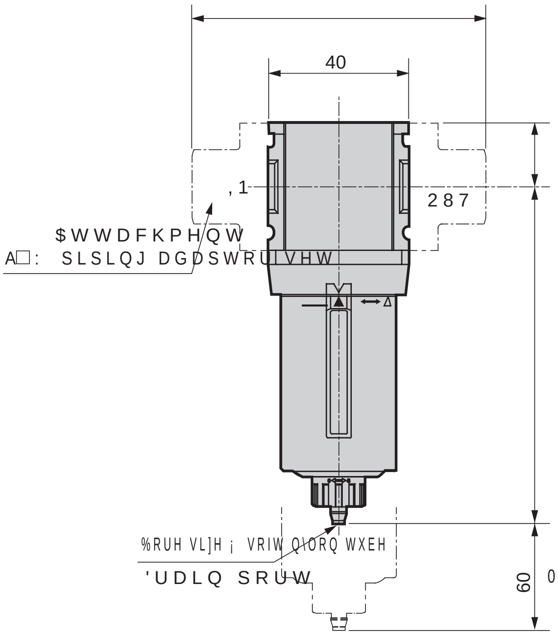
1R	3DUWV QDPH	0DWHULDO				
		0; :	0; :	0; :	0; :	0; :
	3ODWH FRYHU	$%6 UHVLQ				
2	%RG\	3RO\DPLGH UHVLQ	$OXPLQXP DOOR\ GLH FDVWLQJ			
3	2 ULQJ 1RWH	6SHFLDO QLWULOH UXEEHU				
4	0DQWOH DVVHPEO\					
	%RZO DVVHPEO\	3RO\FDUERQDWH UHVLQ SRO\DFHWDO UHVLQ XUHWKDQH U				
6	%RZO JXDUG	3RO\DPLGH UHVLQ	3RO\DPLGH UHVLQ VWHHO			

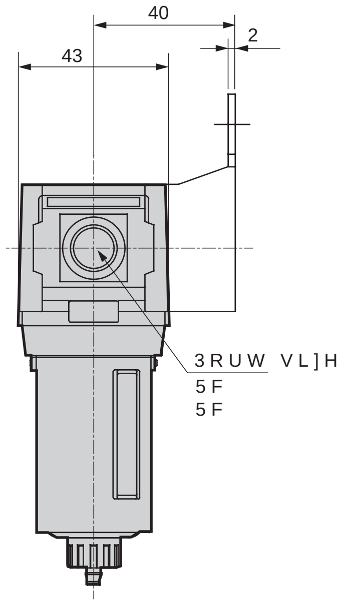
1RWH 2 ULQJ RI 0; : LV VSHFLDO VKDSHG

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

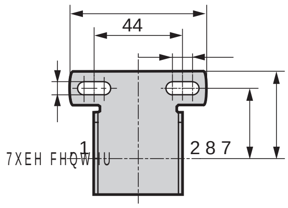
'LPHQVLRQV

M0; :

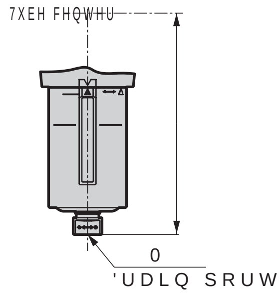




‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



‡ 2SWLRQ GLPHQVLRQV
ZLWK DXWRPDWLF GUDLQ



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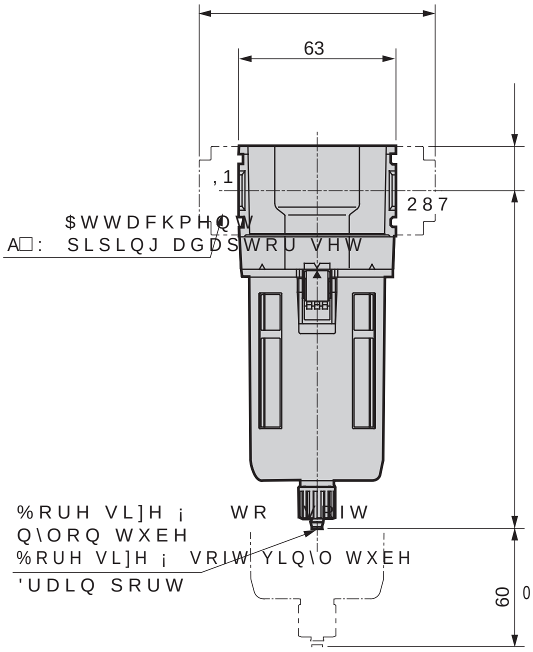
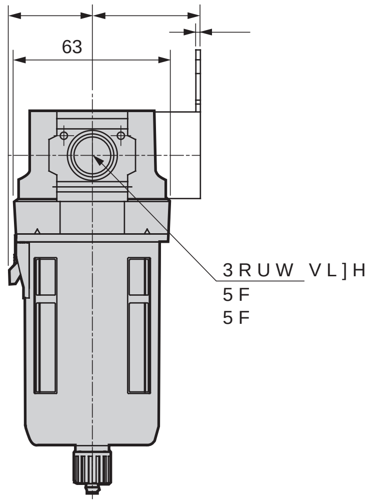
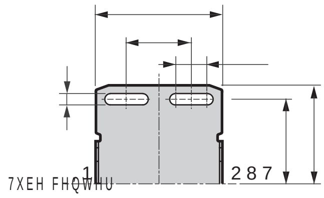




‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



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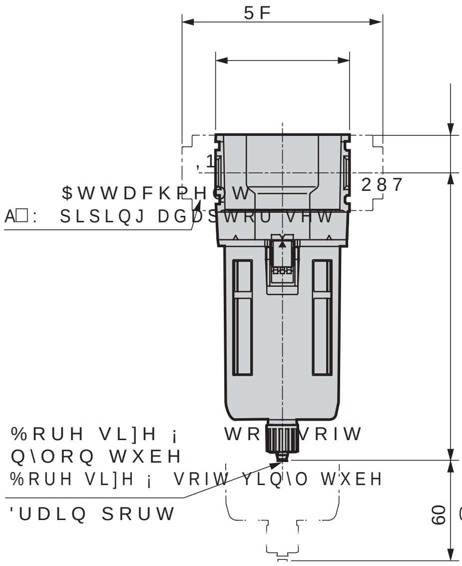
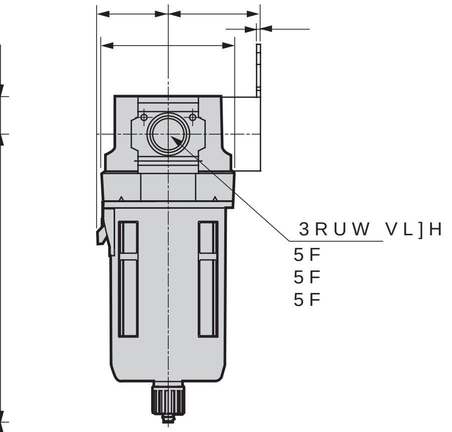
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH

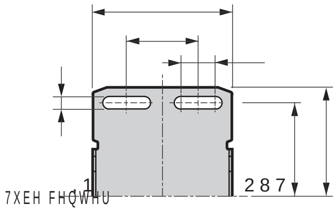
'LPHQVLRQV

M0;　　:

‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %







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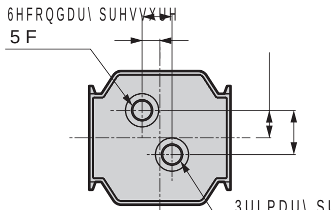
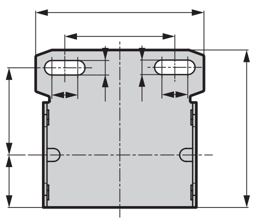
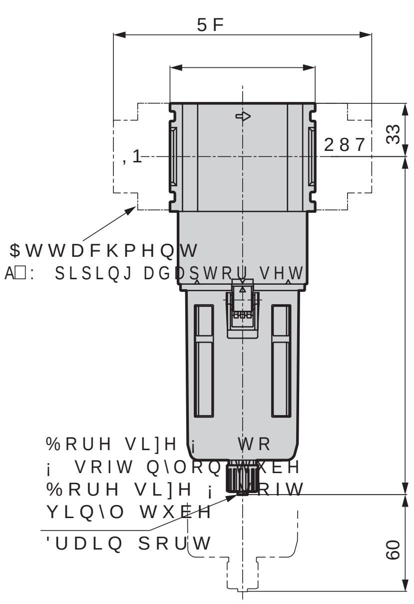
M0;　　:

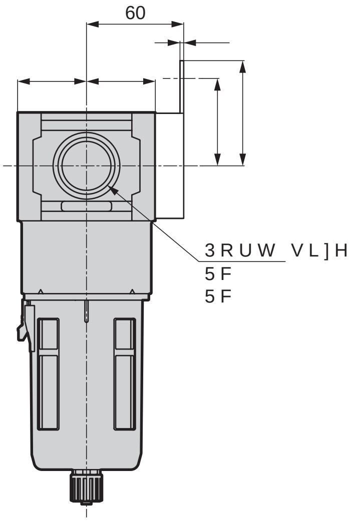
‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ SRUW







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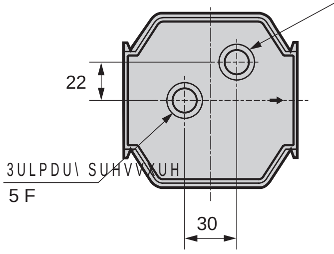
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH

Super Oil Mist Filter Series

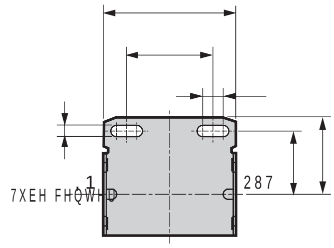
'LPHQVLRQV

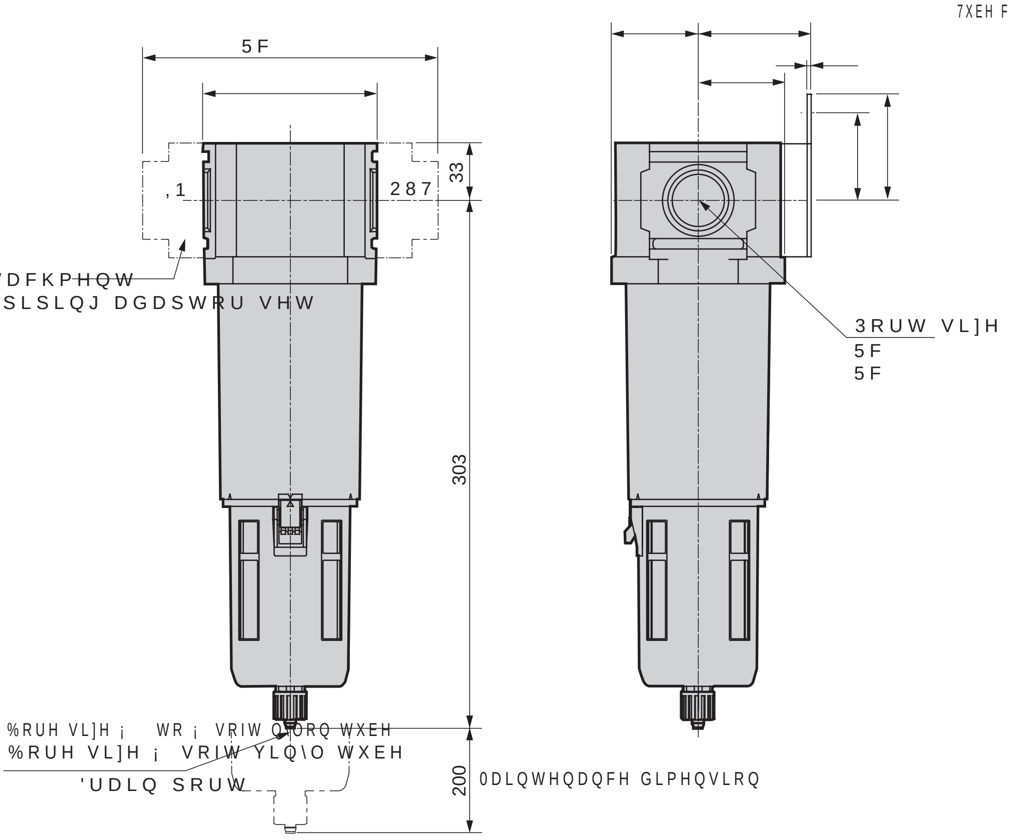
M0;   :



2SWLRQ
:LWK GLIIHUHQWLDO SUHVVXUH GHWHFWLRQ SRUW

‡ $WWDFKPHQW
& W\SH EUDFNHW   %:
3DUW PRGHO QR   %





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M0HWDO ERZO RSWLRQ

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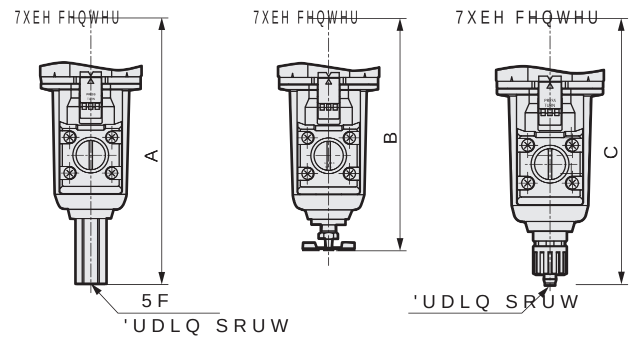
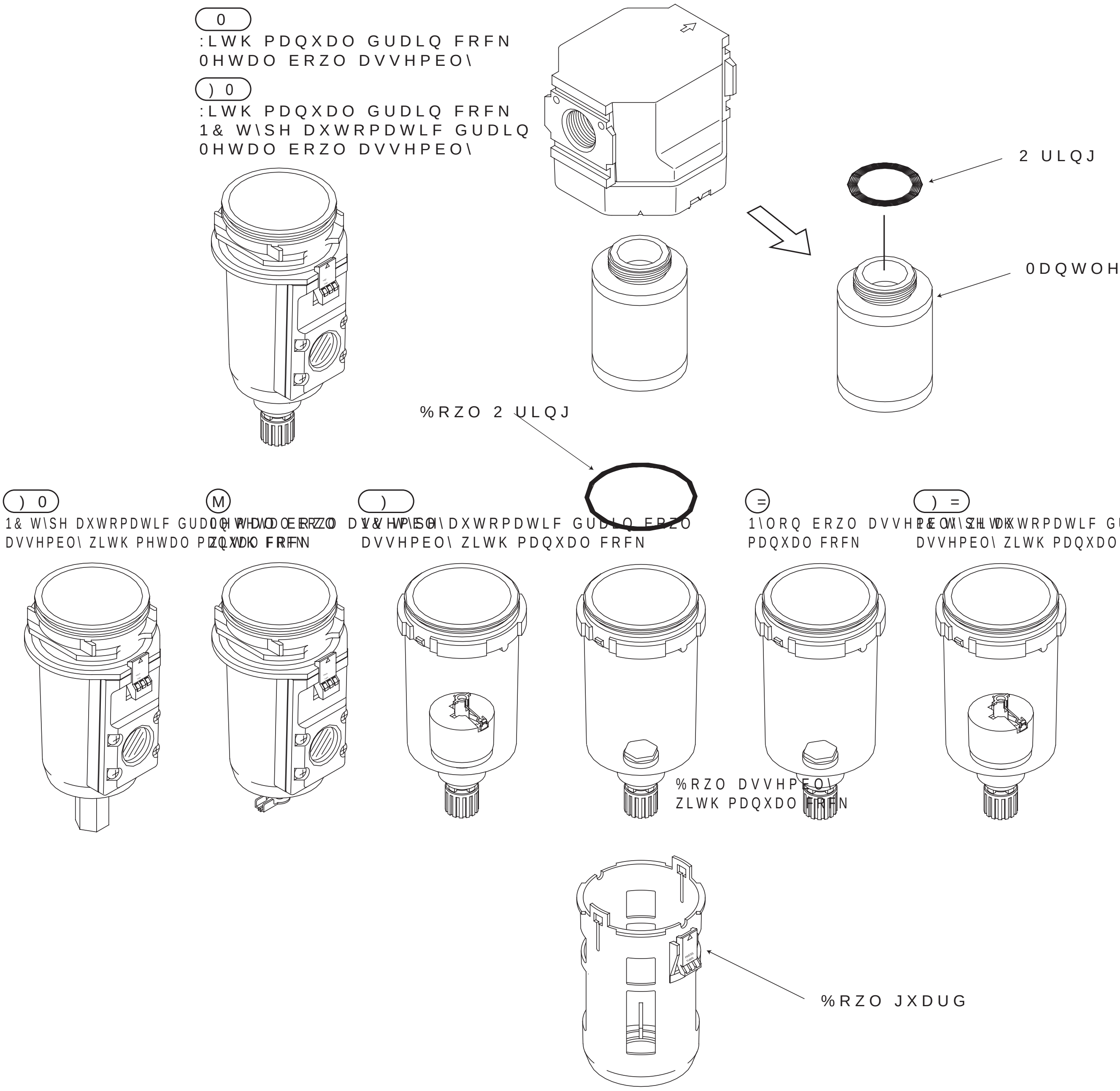


'LPHQVLRQV

0RGHO QR	)0	M	0
	A	B	C
0; :			
0; :			
0; :	226		
0; :			

2SWLRQDO SDUWV WDEOH RLO PLVW ¿OWHU



5HSDLU NLWV PRGHO QR 6HW RI 2 ULQJ PDQWOH ERZ

0RGHO	
0; :	0; .,7
0; :)	0; .,7)
0; :	0; .,7
0; :	0; .,7
0; :	0; .,7
0; :	0; .,7

5HSDLU NLWV PRGHO QR 6HW RI 2 ULQJ PDQWOH

0RGHO	
0; :	0; 0$17/($66<
0; :)	0; 0$17/($66<)
0; :	0; 0$17/($66<
0; :	0; 0$17/($66<
0; :	0; 0$17/($66<
0; :	0; 0$17/($66<

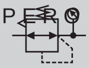
5HIHU WR WKH DLU ¿OWHU RSWLRQV DQG SDUWV WDEOH RQ SDJHV IRU WKH ERZO DVVHPEO\ D

5HJXODWRU VWDQGDUG ZKLWH 6HULHV

R1000 R2000 R3000 R4000 R6000 R8000-W Series

&RPSDFW SUHVVXUH JDXJH HPEHGGHG
3RUW VL]H WR

-,6 V\PERO



RoHS CAD

6SHFL¿FDWLRQV

'HVFULSWLRQV	:	5 :	5 :	5 :	5 :	5 :
$SSHDUDQFH						
:RUNLQJ ÀXLG	&RPSUHVVHG DLU					
0D[ZRUNLQJ SUHVVXUH	03D					
:LWKVWDQGLQJ SUHVVXUH	03D					
$PELHQW WHPSHUDWXUH UDQJH	WR 1RWH					
6HW SUHVVXUH UDQJH	03D WR					
5HOLHI	:LWK UHOLHI PHFKDQLVP					
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
3URGXFW ZHLJKW						
6WDQGDUG DFFHVVRULHV	3UHVVXUH JDXJH QXW IRU SDQHO PRXQW				3UHVVXUH JDXJH	

1RWH 7KH ZRUNLQJ WHPSHUDWXUH UDQJH RI WKH SUHVVXUH VZLWFK ZLWK LQGLFDWRU 33' DVVHPEO\ 5 LV WR ƒ&

2]RQH VSHFL¿FDWLRQV (QGLQJ

R*000 - . . . . - W . . . - P11

&OHDQ URRP VSHFL¿FDWLRQV (FDWDORJ 1R &% 6)

M'XVW JHQHUDWLRQ SUHYHQWLQJ VWUXFWXUH IRU XVH LQ FOHDQURRPV

R*000 - . . . . - P7*

6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV (FDWDORJ 1R &&)

M6WUXFWXUHG IRU XVH LQ VHFRQGDU\ EDWWHU\ PDQXIDFWXULQJ SURFHVVHV

R*000 - . . . . - P4*

+RZ WR RUGHU

R1000 - 6 - ○ - W - L - ○ - A6W ○

Ⓐ 0RGHO QR
Ⓑ 3RUW VL]H
Ⓒ 3RUW WKUHDG W\SH
Ⓓ 2SWLRQ
Ⓔ 'LVSOD\ XQLW
Ⓕ 3LSLQJ DGDSWRU VHW DWWDFKHG
* $WWDFKPHQW DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH PRGHO QR

6\PERO		'HVFULSWLRQV	R1000	R2000	R3000	R4000	R6000	R8000
Ⓑ Port size								
6			M					
8			M	M	M	M		
10				M	M	M		
15						M		
20							M	M
25							M	M
Ⓒ Port thread type		Note 1						
Blank		5F WKUHDG	M	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M	M
Ⓓ Option		Note 2						
Pressure Range	Blank	WR 03D	M	M	M	M	M	M
	L	WR 03D 1RWH	M	M	M	M	M	M
Relief	Blank	:LWK UHOLHI PHFKDQLVP	M	M	M	M	M	M
	N	1RQUHOLHI W\SH	M	M	M	M	M	M
Pressure gauge	Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M	M	M
	T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M
	T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M
	T6	'LJLWDO SUHVVXUH VHQVRU 1RWH	M	M	M	M	M	M
	R1	3UHVVXUH VZLWFK ZLWK GLVSOD\	M	M	M	M	M	M
Flow Direction	Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW : OHIW	M	M	M	M	M	M
Ⓔ Display unit								
Blank		03D GLVSOD\ 5F WKUHDG	M	M	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M	M
Ⓕ Piping adaptor set (attached)		Note 6, Note 7 page 428						
Blank		1RW DWWDFKHG	M	M	M	M	M	M
A6*W		5F SLSLQJ DGDSWRU VHW	M					
A8*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M		
A10*W		5F SLSLQJ DGDSWRU VHW	M	M	M	M		
A15*W		5F SLSLQJ DGDSWRU VHW		M	M	M		
A20*W		5F SLSLQJ DGDSWRU VHW				M	M	M
A25*W		5F SLSLQJ DGDSWRU VHW					M	M
A32*W		5F SLSLQJ DGDSWRU VHW					M	M
***Adaptor screw type**								
Blank		5F WKUHDG	M	M	M	M	M	M
N		137 WKUHDG	M	M	M	M	M	M
G		* WKUHDG	M	M	M	M	M	M
*** Attachment (attached)**		Note 8 pages 425, 659						
Blank		1RW DWWDFKHG	M	M	M	M	M	M
BW		& W\SH EUDFNHW	M	M	M	M	M	M
B3W		/ W\SH EUDFNHW 1RWH	M	M	M	M	M	
B4W		% W\SH EUDFNHW		M				
G45P		* ' 3 / * ' 3	M	M	M	M	M	M
G49P		* ' 3 / * ' 3	M	M	M	M	M	M
G59P		* ' 3 / * ' 3	M	M	M	M	M	M
G40P		* ' 3 / * ' 3	M	M	M	M	M	M
G50P		* ' 3 / * ' 3	M	M	M	M	M	M
G41P		* ' 3 / * ' 3	M	M	M	M	M	M
G52P		* ' 3 / * ' 3	M	M	M	M	M	M
R2 Note 4		'LJLWDO SUHVVXUH VHQVRU 1RWH 3;M5	M	M	M	M	M	M

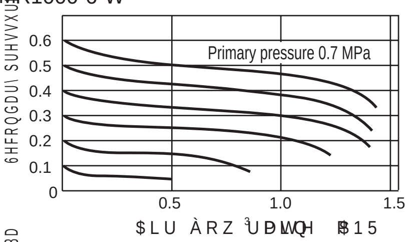
⚠ 1RWH RQ PRGHO QR VHOHFWLRQ

1RWH :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH ,1 287 DQG JDXJH SRUW DUH WKH WDUJHW
1RWH :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS
1RWH 7KH SUHVVXUH JDXJH V LQGLFDWLRQ UDQJH LV WR 03D IRU RSWLRQ /
1RWH :KHQ ' RSWLRQ 7 LV VHOHFWHG RQO\ %ODQN RU 5 FDQ EH VHOHFWHG IRU SUHVVXUH JDXJH HQFORVHG 7KH GLJLWDO SUHVVXUH VHQVRU 33; PRXQWLQJ SRUW 5F LV DVVHPEOHG E\ RSWLRQ
1RWH 7KH RXWSXW W\SH LV 131 WUDQVLVWRU RXWSXW &RQVXOW ZLWK &.' ZKHQ WKH 313 WUDQVLVWRU RXWSXW LV UHTXLUHG
1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW
1RWH ,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG 3D 1/37 SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV VHOHFWHG DQ 5 WKUHDG SUHVVXUH JDXJH LV HQFORVHG
1RWH 5HIHU WR 6HFWLRQ ⚠ 5HJXODWRU LQ 35(&$87,216 SDJH IRU GHWDLOV IRU ,QVWDOODWLRQ DQG $GMXVWPHQW RQ PRXQWLQJ WKH / W\SH EUDFNHW

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

Flow characteristic

MR1000-6-W



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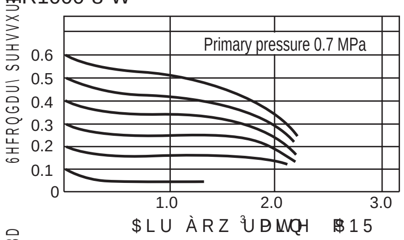

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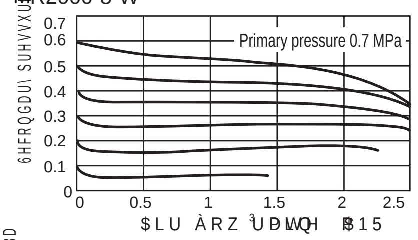

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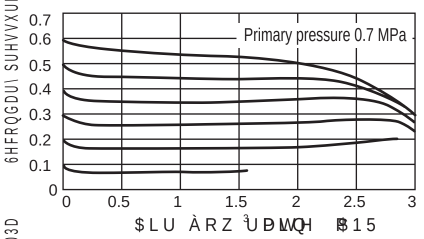

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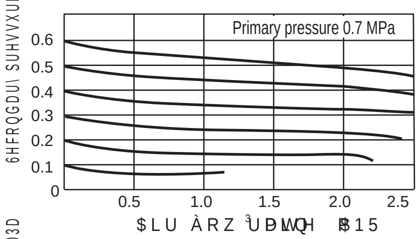

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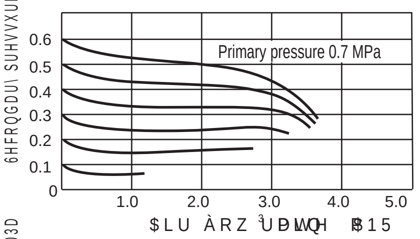

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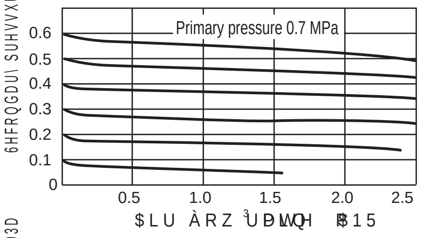

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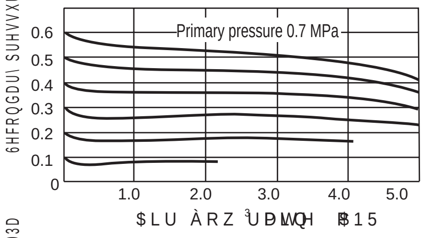

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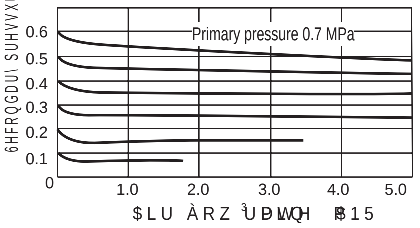

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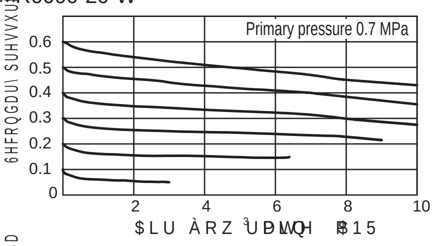

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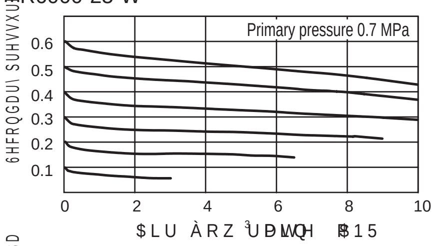

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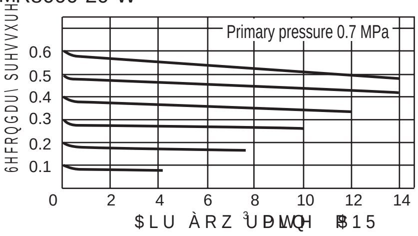

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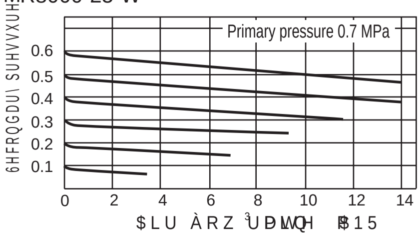
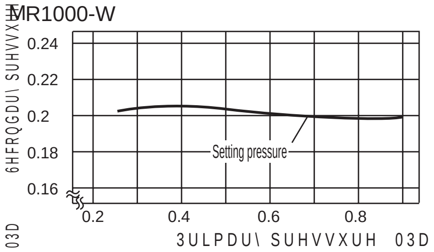


Pressure characteristic

MR1000-W



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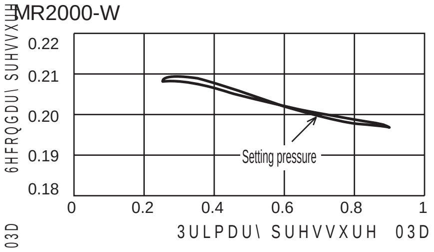

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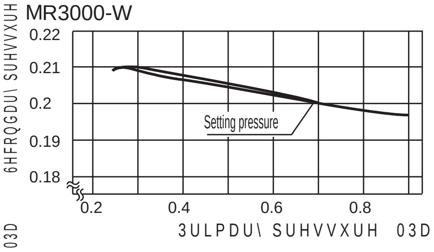

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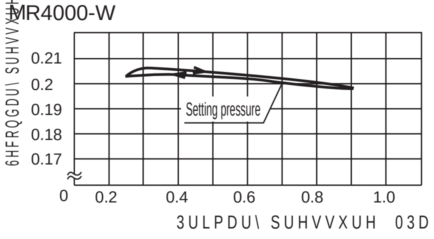

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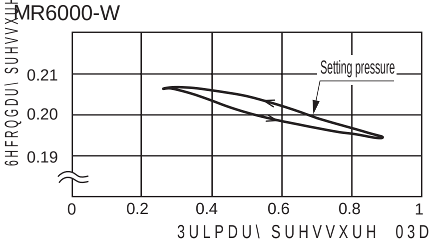

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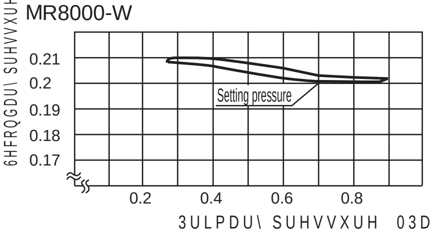
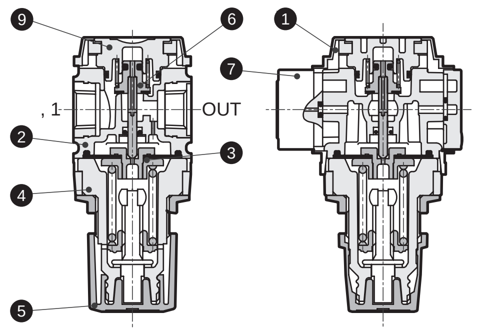
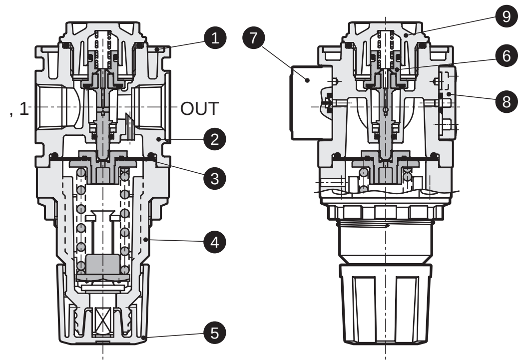


Internal structure and parts list

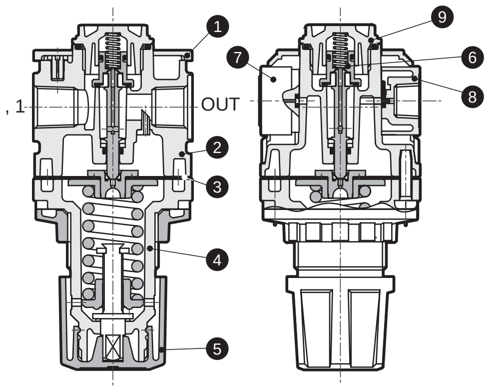
MR1000-W



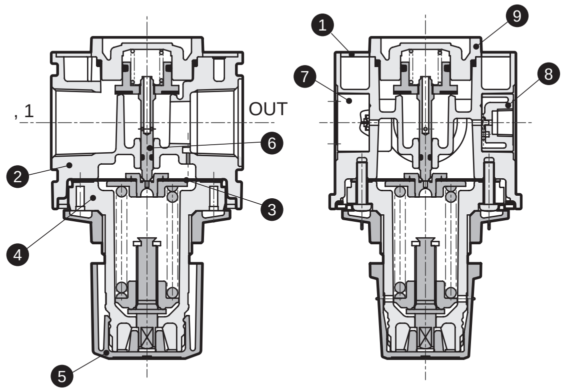
MR2000-W



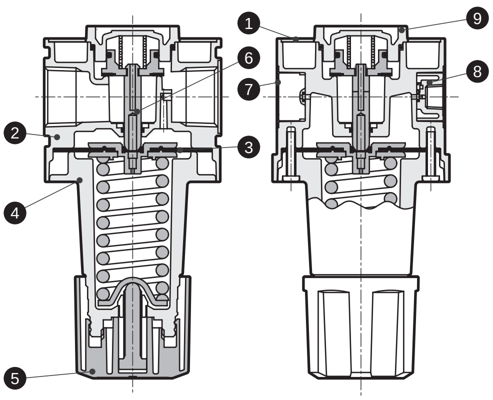
MR3000-W / R4000-W



MR6000-W



MR8000-W

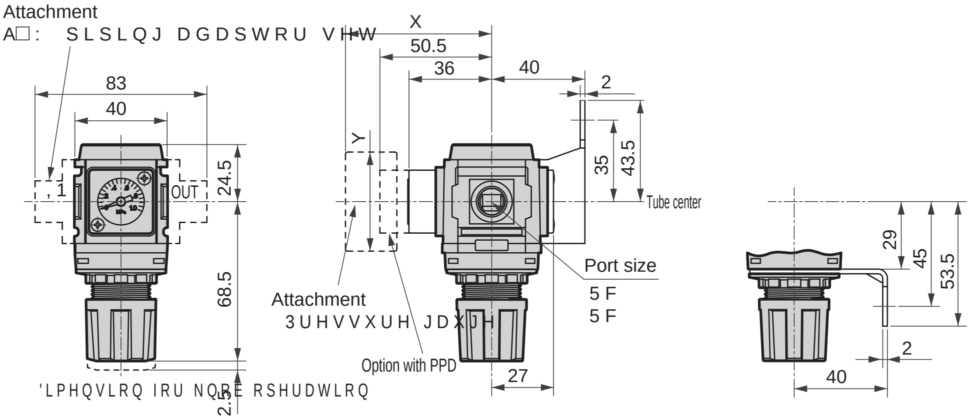


1 R	Parts name	Material					
		R1000-W	R2000-W	R3000-W	R4000-W	R6000-W	R8000-W
1	Plate cover	ABS resin					
2	Body	Polyamide resin, steel	Aluminum alloy die-casting	Aluminum alloy die-casting			
3	Diaphragm assembly	Polyacetal resin, nitrile rubber		=LQF DOOR\ GLH FDVWLQJ QLWULOH UXEEHU			
4	Cover	Polyamide resin	PBT resin				Aluminum alloy die-casting
5	Knob	Polyacetal resin					
6	Valve assembly	%UDVV K\GURJHQ QLWULOH UXEEHU SRO\DFHWDO UHVLQ 5					
7	Pressure gauge assembly	PBT resin, nitrile rubber, polyacetal resin, polycarbonate resin, brass, steel					
8	Gage plug assembly	-	-	Polyamide resin, nitrile rubber, steel			
	%ODQNLQJ SOXJ DVVHPEO\ 1RWH	PBT resin, nitrile rubber, copper		-		-	-
9	%RWWRP SOXJ 1RWH	Polyacetal resin				Aluminum alloy die-casting	

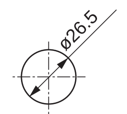
1RWH $ EODQN SOXJ LV HQFORVHG ZLWK WKH 5 : VWDQGDUG W\SH
1RWH 5HIHU WR SDJH IRU UHSDLU SDUWV
1RWH $OXPLQXP LV DGGHG IRU WKH 5 : ORZ SUHVVXUH W\SH
1RWH 7KH PDWHULDO RI 50 : DQG 50 : LV DOXPLQXP GLH FDVWLQJ

Dimensions

MR1000-W

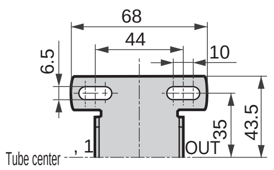


Panel cut dimension

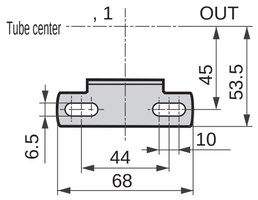


3DQHO SODWH WKLFNQHVV 0D[PP

‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



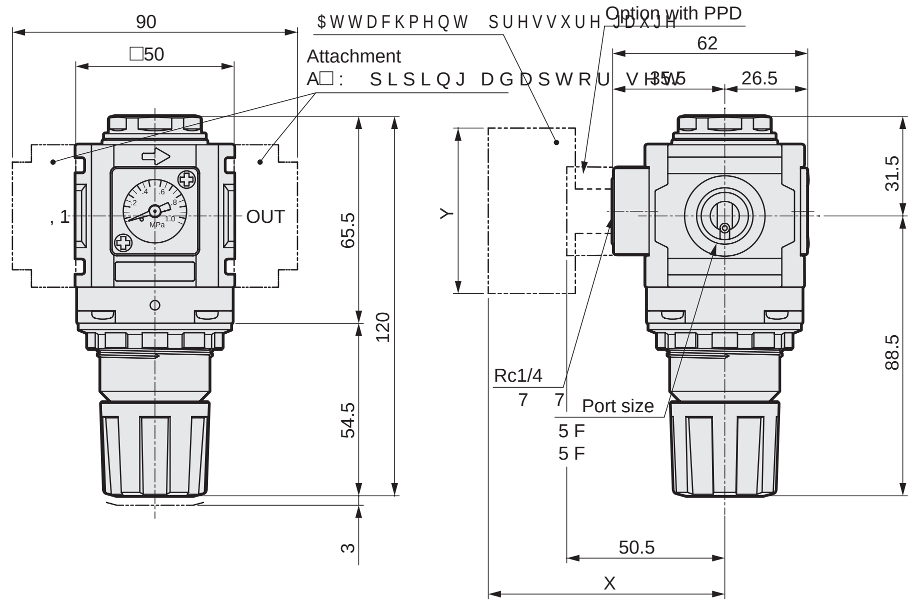
/ W\SH EUDFNHW %:
3DUW PRGHO QR %



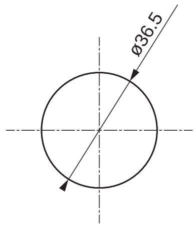
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

MR2000-W



Panel cut dimension

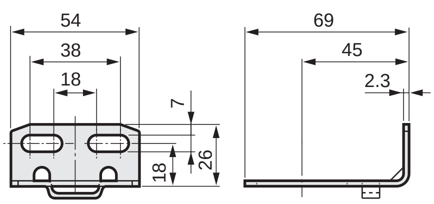


3DQHO SODWH WKLFNQHVV 0D[PP

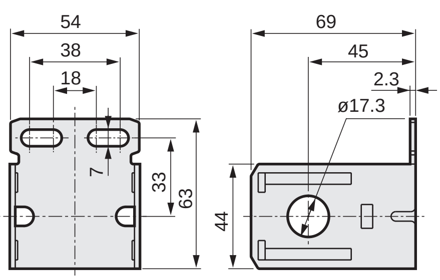
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

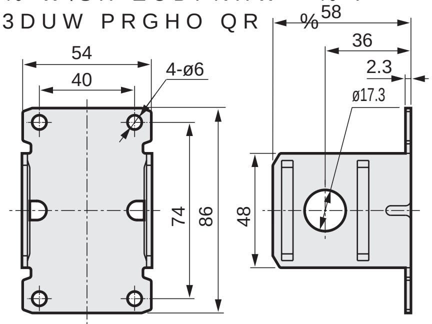
M/ W\SH EUDFNHW %:
3DUW PRGHO QR %



M& W\SH EUDFNHW %:
3DUW PRGHO QR %

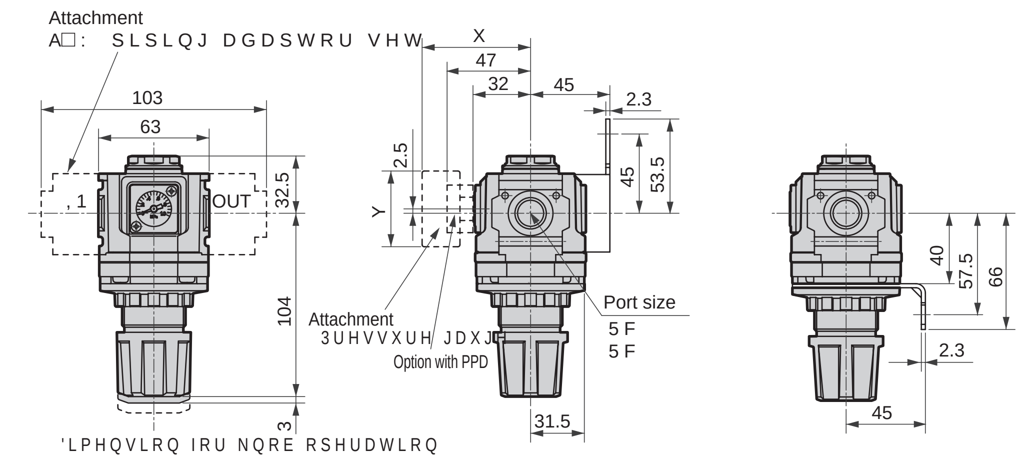


M% W\SH EUDFNHW %:
3DUW PRGHO QR %

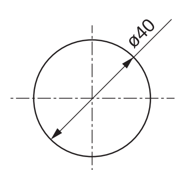


Dimensions

MR3000-W

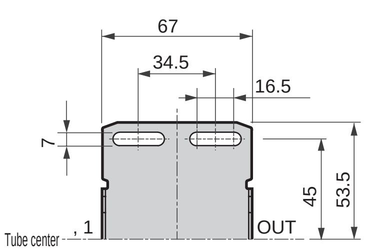


Panel cut dimension

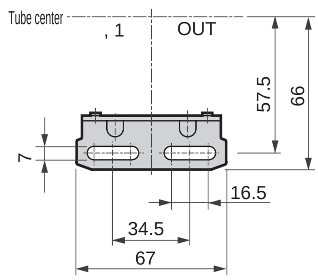


3DQHO SODWH WKLFNQHVV 0D[

‡ $WWDFKPHQW & W\SH EUDFNHW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



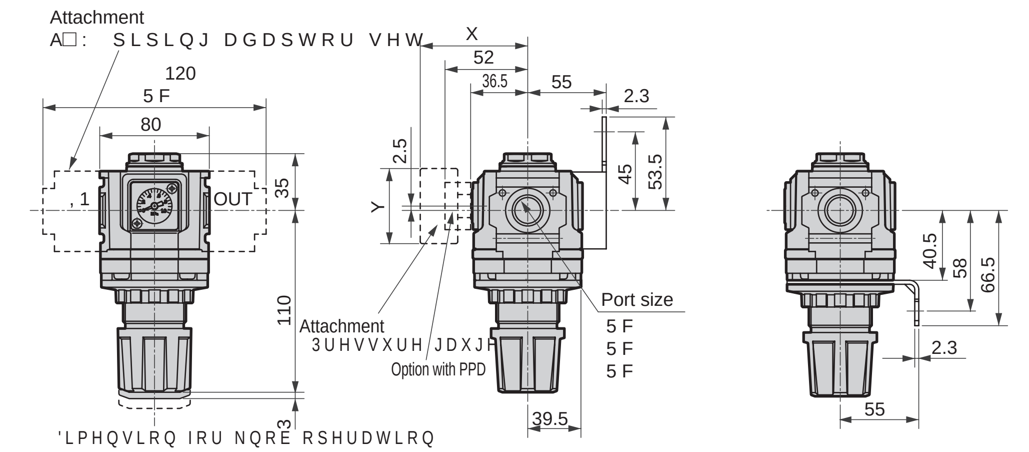
/ W\SH EUDFNHW %:
3DUW PRGHO QR %



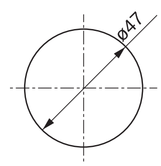
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

MR4000-W

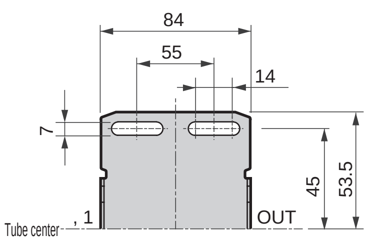


Panel cut dimension



3DQHO SODWH WKLFNQHVV 0D[

‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



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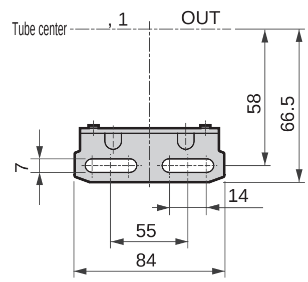
3DUW PRGHO QR %



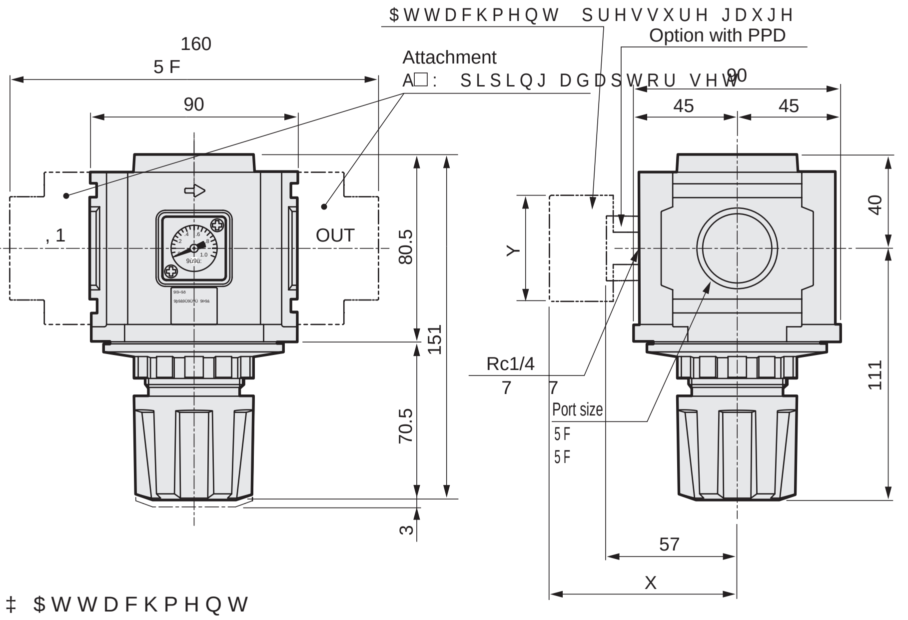
Pressure gauge attached optional dimensions table

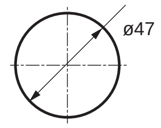
Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

Dimensions

CAD

MR6000-W

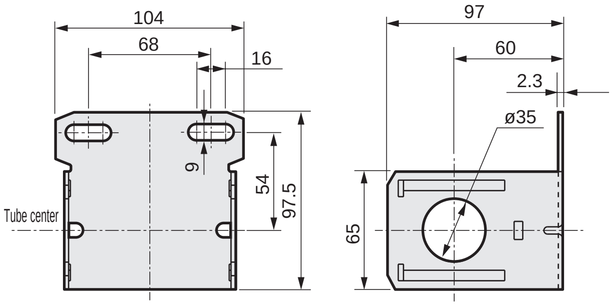




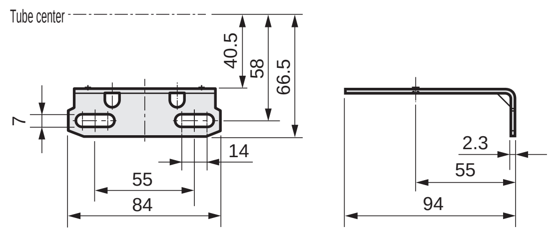
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

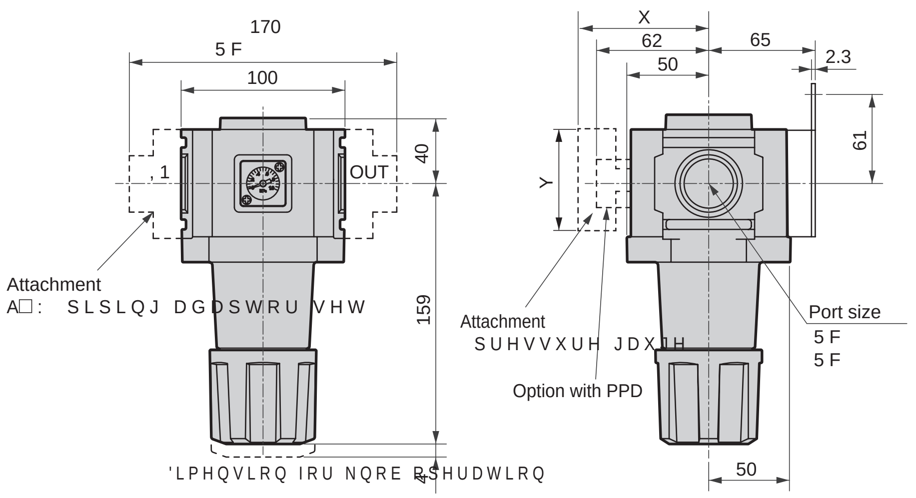
‡ $WWDFKPHQW
& W\SH EUDFNHW %:
3DUW PRGHO QR %



/ W\SH EUDFNHW %:
3DUW PRGHO QR %



MR8000-W



‡ $WWDFKPHQW
& W\SH EUDFNHW %:
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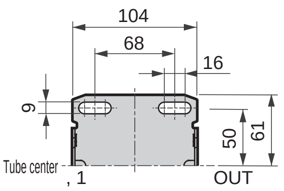


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

MEMO

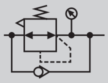
Reverse regulator standard white Series

R1100/R2100/R3100 R4100/R6100/R8100-W Series

)URP VHFRQGDU\ SUHVVXUH WR SULPDU\ SUHV

3RUW VL]H WR

JIS symbol



6SHFL¿FDWLRQV

Descriptions	R1100-W	R2100-W	R3100-W	R4100-W	R6100-W	R8100-W
Appearance						
:RUNLQJ ÀXLG	Compressed air					
0D[ZRUNLQJ SUHVVXUH MPa	1.0					
Withstanding pressure MPa	1.5					
Ambient temperature range °C	WR 1RWH					
6HW SUHVVXUH UDQJH MPa 1RWH	0.05 to 0.85					
5HOLHI	:LWK UHOLHI PHFKDQLVP					
3RUW VL]H 5F 137 *	1/8, 1/4 XVHV DQ DGDSWRU	1/4, 3/8 XVHV DQ DGDSWRU	1/4, 3/8 XVHV DQ DGDSWRU	1/4, 3/8, 1/2 XVHV DQ DGDSWRU	3/4, 1 XVHV DQ DGDSWRU	3/4, 1 XVHV DQ DGDSWRU
Product weight kg	0.16	0.31	0.45	0.7	1.0	1.6
Standard accessories	3UHVVXUH JDXJH QXW IRU SDQHO PRXQW Pressure gauge					

1RWH 5HIHU WR WKH VHW SUHVVXUH UDQJH IRU WKH EDFN SUHVVXUH JLYHQ RQ SDJH ZKHQ VHOHFWL
1RWH 7KH ZRUNLQJ WHPSHUDWXUH UDQJH RI WKH SUHVVXUH VZLWFK ZLWK LQGLFDWRU 33' DVVHPEO\
1RWH &KHFN WKDW WKH SULPDU\ SUHVVXUH LV DW OHDVW 03D RU PRUH WKDQ WKH VHFRQGDU\ SU

2]RQH VSHFL¿FDWLRQV (QJLQH

R*100 - · · · W · · · - P11

&OHDQ URRP VSHFL¿FDWLRQV FDWDORJ 1R &%% 6

M'XVW JHQHUDWLRQ SUHYHQWLQJ VWUXFWXUH IRU XVH LQ FOHDQURRPV

R*100 - · · · · · · · · · · - P7*

6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV FDWDORJ 1R &&

M6WUXFWXUHG IRU XVH LQ VHFRQGDU\ EDWWHU\ PDQXIDFWXULQJ SURFHVVHV

R*100 - · · · · · · · · · · - P4*

How to order

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH R

R1100 - 6 - W - L - - A6W

A Model no.
B Port size
C Port thread type
D Option
E Display unit
F 3LSLQJ DGDSWRU VHW DWWDFKHG
G $WWDFKPHQW DWWDFKHG

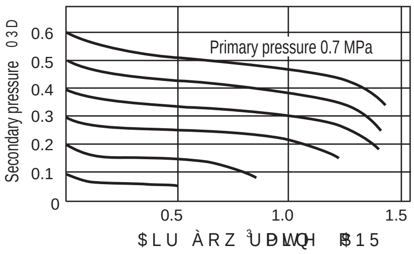
Symbol	Descriptions	R1100	R2100	R3100	R4100	R6100	R8100
B Port size							
6	1/8	M					
8	1/4	M	M	M	M		
10	3/8		M	M	M		
15	1/2				M		
20	3/4					M	M
25	1					M	M
C Port thread type Note 1							
Blank	Rc thread	M	M	M	M	M	M
N	137 WKUHDG	M	M	M	M	M	M
G	G thread	M	M	M	M	M	M
D Option Note 2, Note 3							
Pressure Range Blank	0.05 to 0.85MPa	M	M	M	M	M	M
Pressure Range L	WR 03D 1RWH	M	M	M	M	M	M
Relief Blank	:LWK UHOLHI PHFKDQLVP	M	M	M	M	M	M
Relief N	1RQUHOLHI W\SH	M	M	M	M	M	M
Pressure gauge Blank	:LWK VWDQGDUG SUHVVXUH JDXJH	M	M	M	M	M	M
Pressure gauge T	:R SUHVVXUH JDXJH SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M
Pressure gauge T8	3UHVVXUH JDXJH DWWDFKHG SUHVVXUH JDXJH SRUW 5F	M	M	M	M	M	M
Pressure gauge T6	'LJLWDO SUHVVXUH VHQVRU 1RWH	M	M	M	M	M	M
Pressure gauge R1	3UHVVXUH VZLWFK ZLWK GLVSOD\ 1RWH	M	M	M	M	M	M
Flow Direction Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M	M	M	M	M
Flow Direction X1	5HYHUVH ÀRZ ULJKW : OHIW	M	M	M	M	M	M
E Display unit							
Blank	MPa display, Rc thread	M	M	M	M	M	M
J1	03D GLVSOD\ 137 * WKUHDG	M	M	M	M	M	M
F Piping adaptor set (attached) Note 7, Note 8 page 428							
Blank	1RW DWWDFKHG	M	M	M	M	M	M
A6*W	Rc1/8 piping adaptor set	M					
A8*W	Rc1/4 piping adaptor set	M	M	M	M		
A10*W	Rc3/8 piping adaptor set	M	M	M	M		
A15*W	Rc1/2 piping adaptor set		M	M	M		
A20*W	Rc3/4 piping adaptor set				M	M	M
A25*W	Rc1 piping adaptor set					M	M
A32*W	Rc1 1/4 piping adaptor set					M	M
*** Adaptor screw type**							
Blank	Rc thread	M	M	M	M	M	M
N	137 WKUHDG	M	M	M	M	M	M
G	G thread	M	M	M	M	M	M
G Attachment (attached) Note 9 pages 425, 659							
Blank	1RW DWWDFKHG	M	M	M	M	M	M
BW	C type bracket	M	M	M	M	M	M
B3W	/ W\SH EUDFNHW 1RWH	M	M	M	M	M	
B4W	B type bracket		M				
G45P	*' 3	M	M	M	M	M	M
G49P	*' 3 / *' 3	M	M	M	M	M	M
G59P	*' 3 / *' 3	M	M	M	M	M	M
G40P	1/37 *' 3	M	M	M	M	M	M
G50P	*' 3 / *' 3	M	M	M	M	M	M
G41P	35(&$87,21 3 / *' 3	M	M	M	M	M	M
G52P	*' IRU GHWDLOV 3	M	M	M	M	M	M
R2 Note 5	'LJLWDO SUHVVXUH VHQVRU 1RWH	M	M	M	M	M	M

1RWH RQ PRGHO QR VHOHFWLRQ

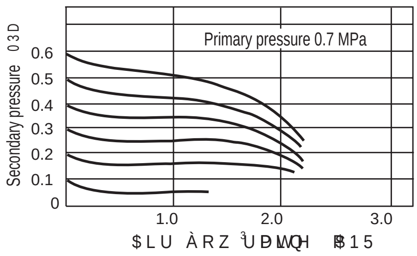
1RWH 1: :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH ,1 287 DQG JDXJH SRUW DUH WKH VDPH
1RWH 2: :KHQ VHOHFWLQJ RSWLRQV IRU WKH LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS
Note 3: Positions of a check valve and pressure gauge can not be changed. If the IN and OUT direction must be reversed, indicate "X1" at **the end of the option f eld.**
1RWH 4: 7KH SUHVVXUH JDXJH V LQGLFDWHG WR 03D IRU RSWLRQ /
1RWH 5: :KHQ ' RSWLRQ 7 LV VHOHFWHG RU only %ODQN 5 FDQ EH VHOHFWHG IRU SUHVVXUH JDXJH HQFORVHG 7KH GLJLWDO SUHVVXUH VHQVRU PRXQWLQJ SRUW 5F LV DVVHPEOHG E\ RSHQ
1RWH 6: 7KH RXWSXW W\SH LV 131 WUDQVLVWRU RXWSXW &RQVXOW ZLWK &.' ZKHQ WKH 313 WUDQVLVWRU RXWSXW LV UHTXLUHG
1RWH 7: 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW attachments cannot be used at the same time.
1RWH 8: The joiner set is enclosed with the piping adaptor set.
1RWH 9: ,I 137 LV VHOHFWHG IRU WKH & SLSLQJ WKUHDG 3D 137 SUHVVXUH JDXJH LV HQFORVHG ,I 5F RU * WKUHDG LV selected, an R thread pressure gauge is enclosed.
1RWH 10: 5HIHU WR 6HFWLRQ 5HJXODWRU IRU ,QVWDOODWLRQ DQG $GMXVWPHQW SDJH on mounting the L-type bracket.

Flow characteristic

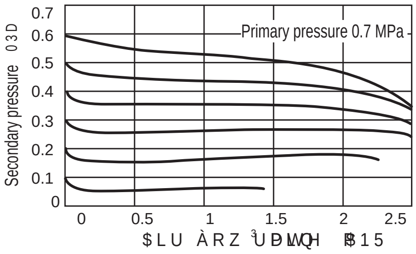
MR1100-6-W



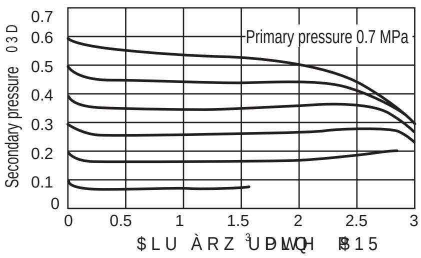
MR1100-8-W



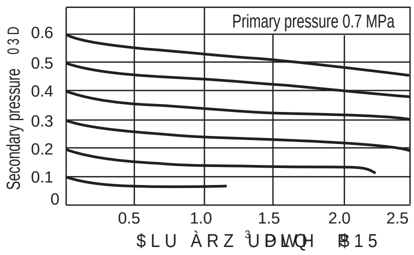
MR2100-8-W



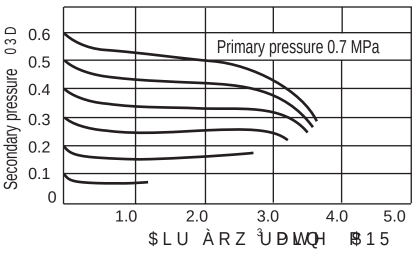
MR2100-10-W



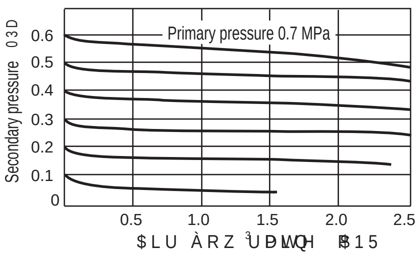
MR3100-8-W



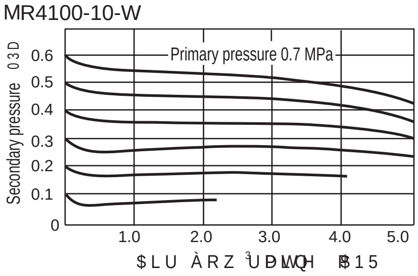
MR3100-10-W



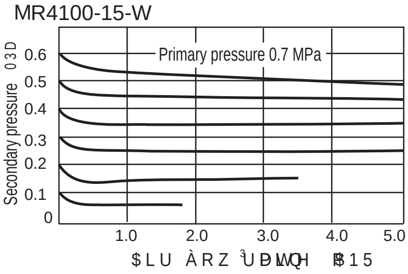
MR4100-8-W



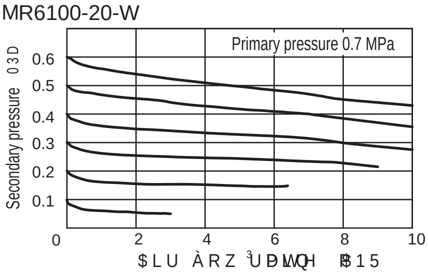
MR4100-10-W



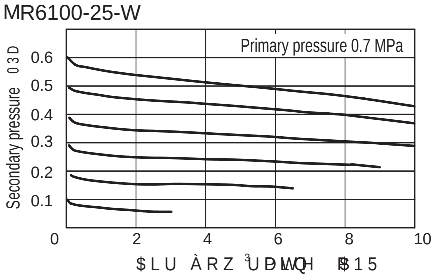
MR4100-15-W



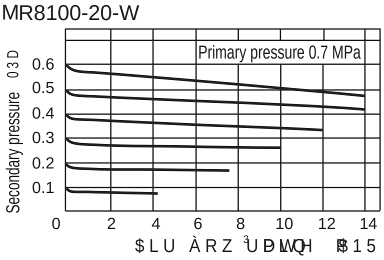
MR6100-20-W



MR6100-25-W



MR8100-20-W



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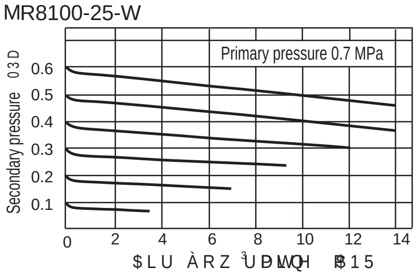
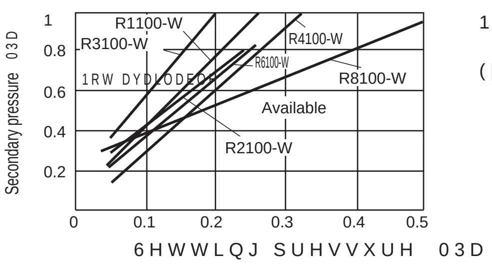


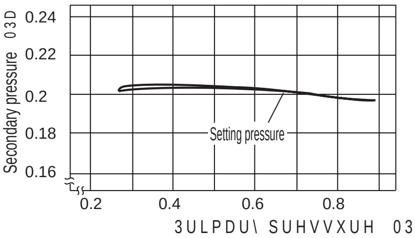
MSet pressure range to back pressure



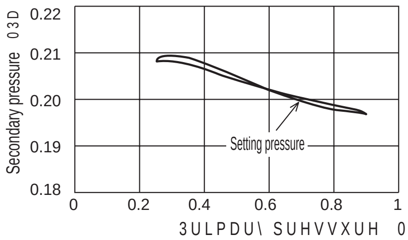
1RWH7KH XSSHU VLGH RI WKH JUDSK LV QRQXVDEOH DQG the lower side usable.
([DPSOIH5 : LV VHW WR VHW SUHVVXUH 03D and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

Pressure characteristic

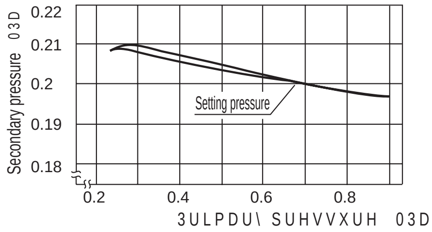
MR1100-W



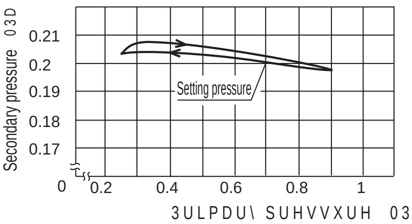
MR2100-W



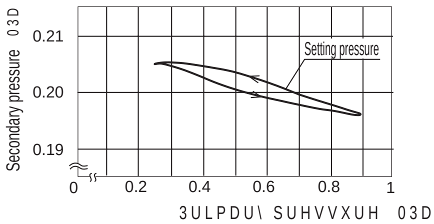
MR3100-W



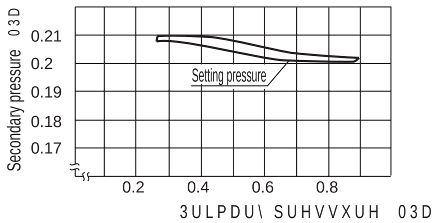
MR4100-W



MR6100-W

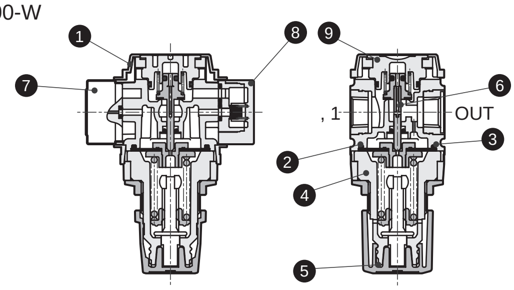


MR8100-W

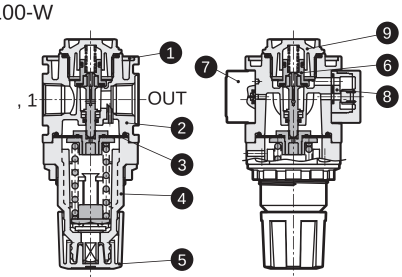


Internal structure and parts list

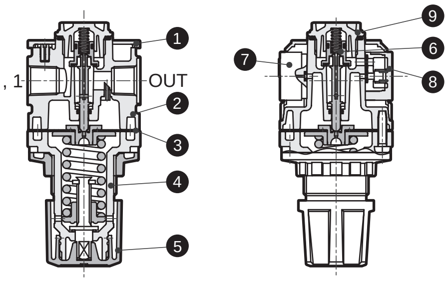
MR1100-W



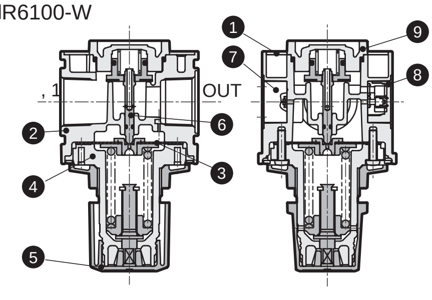
MR2100-W



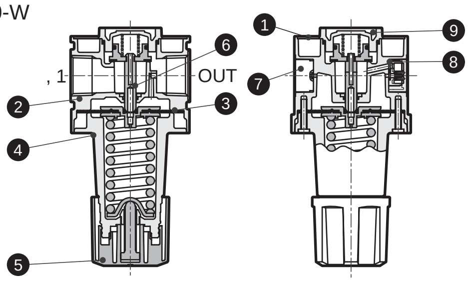
MR3100-W / R4100-W



MR6100-W



MR8100-W



1R	Parts name	Material					
		R1100-W	R2100-W	R3100-W	R4100-W	R6100-W	R8100-W
1	Plate cover	ABS resin					
2	Body	Polyamide resin, steel	Aluminum alloy die-casting				
3	Diaphragm assembly	Polyacetal resin, nitrile rubber	=LQF DOOR\ GLH FDVWLQJ QLWULOH UXEEHU				
4	Cover	Polyamide resin	PBT resin				Aluminum alloy die-casting
5	Knob	Polyacetal resin					
6	Valve assembly	%UDVV K\GURJHQ QLWULOH UXEEHU SRO\DFHWDO UHVLQ 5 : : : :					
7	Pressure gauge assembly	PBT resin, nitrile rubber, polyacetal resin, polycarbonate resin, brass, steel					
8	Check valve total assembly	PBT resin, nitrile rubber, stainless steel wire, steel					
9	Bottom plug	Polyacetal resin				Aluminum alloy die-casting	

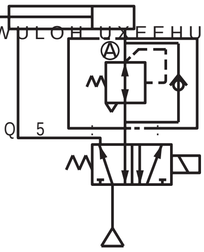
1RWH 5HIHU WR SDJH IRU UHSDLU NLWV
1RWH $OXPLQXP LV DGGHG IRU WKH 5 : ORZ SUHVVXUH W\SH

)XQFWLRQDO H[SODQD

:KHQ WKH SULPDU\ SUHVVXUH LV LQWURG
YDOYH IXQFWLRQV DV D UHJXODU UHJXOD
pressure and spring load. When primary pressure is released by a
VZLWFKLQJ YDOYH VXFK DV D VKXW RII Y
secondary pressure. Pressure in the diaphragm chamber is released
and pressure drops. This causes the diaphragm to be pressed down
E\ WKH SUHVVXUH DGMXVWPHQW VSULQJ
opens, and the air on the OUT side is discharged.

MCircuit diagram

:KHQ F\OLQGHU KHDG HQG DQG URG HQ

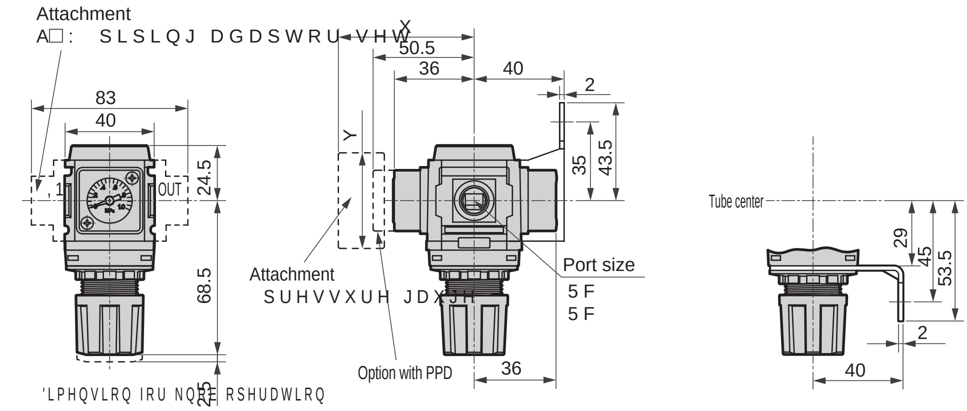


1RWH QLWULOH UXEEHU 1RWH
1RWH EDFN SUHVVXUH
when the primary pressure
is released within the
UDQJH LQ WKH JUDSK
UHJXODWRU V VHW SUH

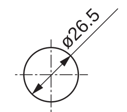
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard Series F.R. unit

Dimensions CAD

MR1100-W



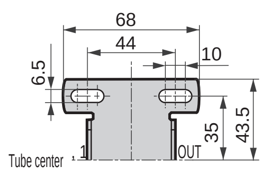
Panel cut dimension



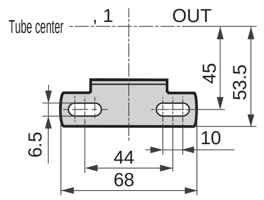
3DQHO SODWH WKLFNQHVV 0D[PP

‡Attachment

& W\SH EUDFNHW %:
3DUW PRGHO QR %



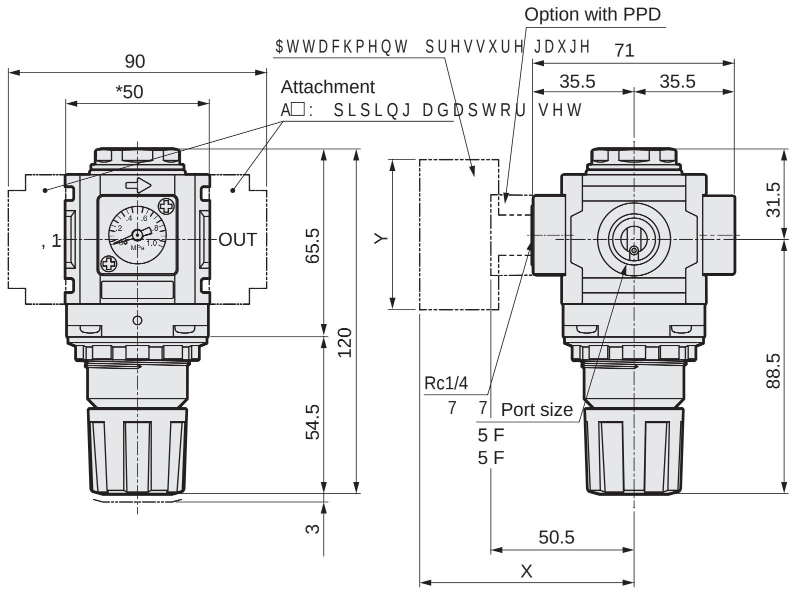
/ W\SH EUDFNHW %:
3DUW PRGHO QR %



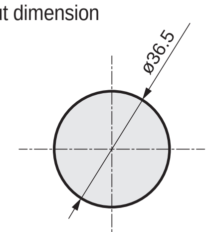
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

MR2100-W



Panel cut dimension



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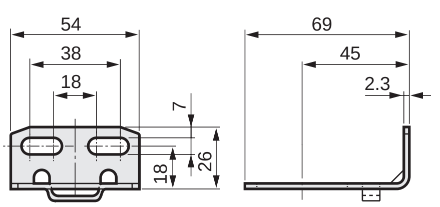
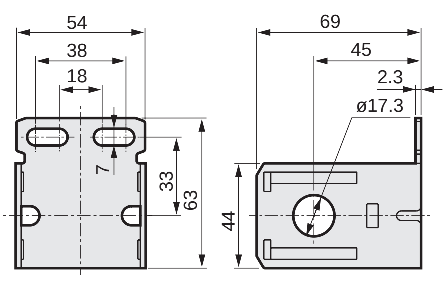
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

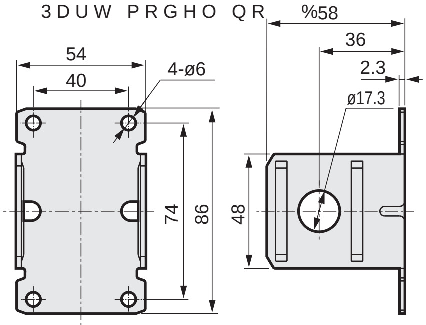
M/ W\SH EUDFNHW %:
3DUW PRGHO QR %



M& W\SH EUDFNHW %:
3DUW PRGHO QR %

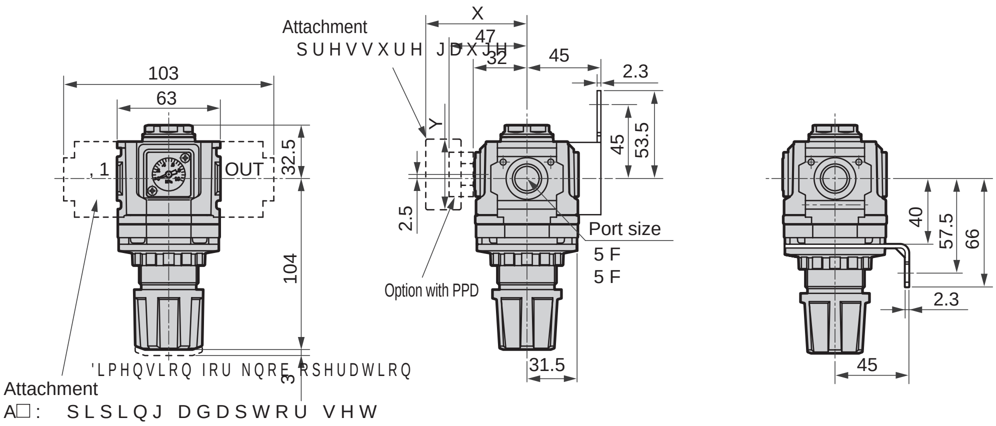


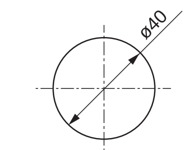
M% W\SH EUDFNHW %:
3DUW PRGHO QR %58



Dimensions

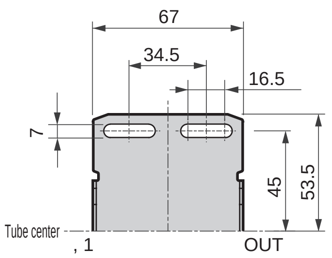
MR3100-W

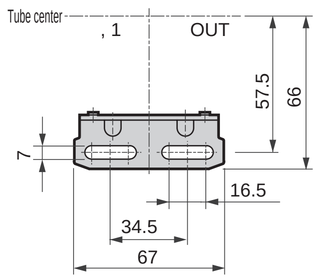




‡Attachment
& W\SH EUDFNHW %: 3DUW PRGHO QR %

/ W\SH EUDFNHW % : 3DUW PRGHO QR %

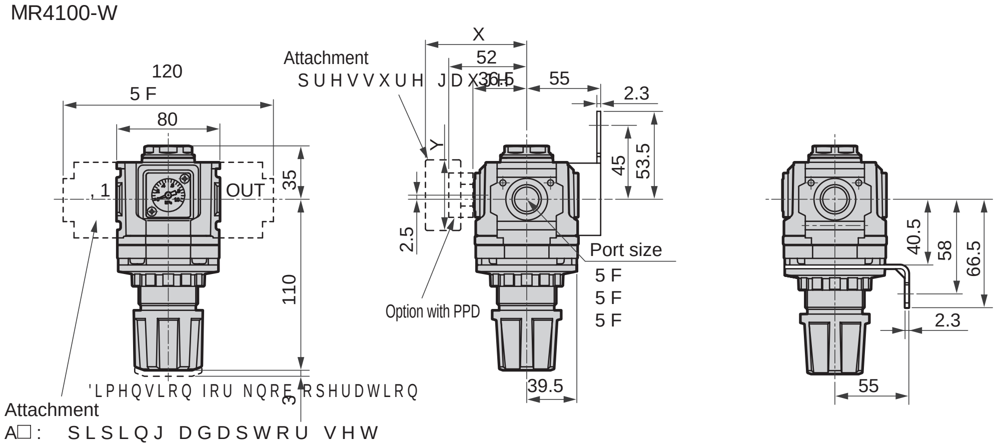


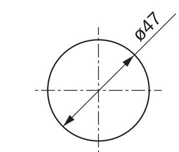


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

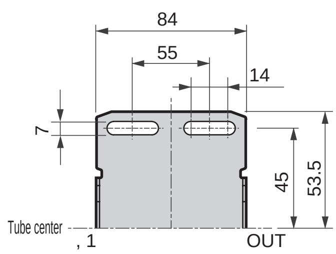
MR4100-W

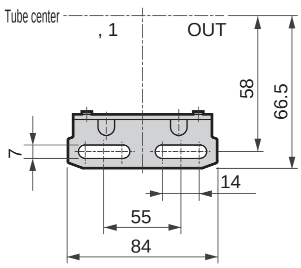




‡Attachment
& W\SH EUDFNHW %: 3DUW PRGHO QR %

/ W\SH EUDFNHW % : 3DUW PRGHO QR %





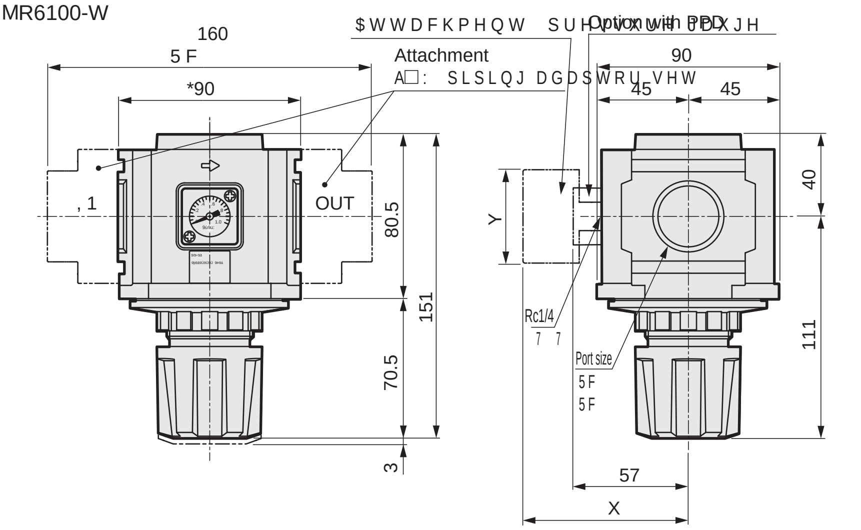
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

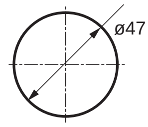
Dimensions

CAD

MR6100-W

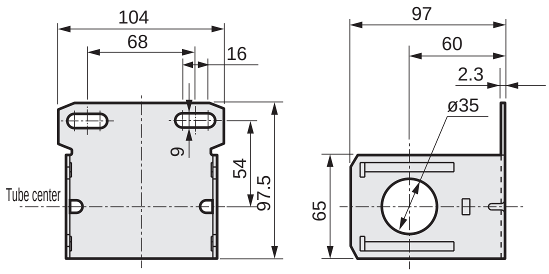


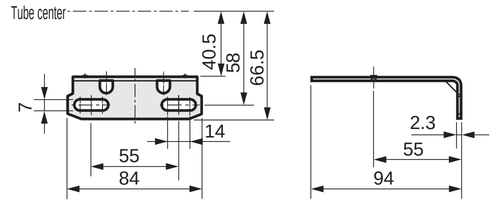
Panel cut dimension



‡Attachment
& W\SH EUDFNHW %:
3DUW PRGHO QR %

/ W\SH EUDFNHW % :
3DUW PRGHO QR %





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Attached pressure gauge	X	Y
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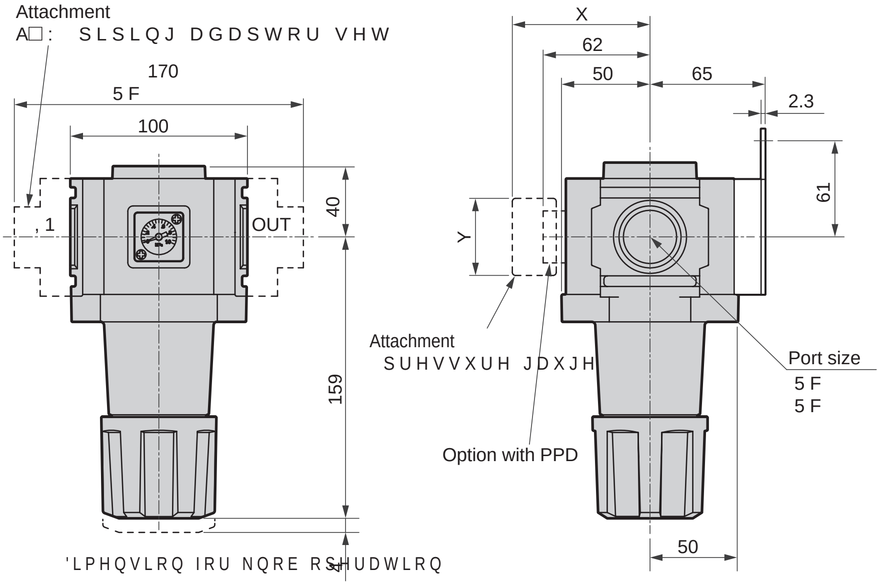
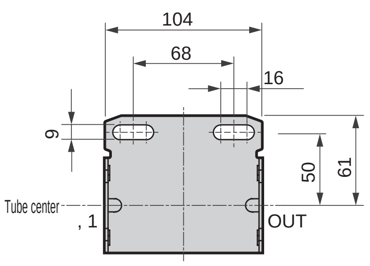
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

MR8100-W



'LPHQVLRQ IRU NQRE RSHUDWLRQ

‡Attachment
& W\SH EUDFNHW %:
3DUW PRGHO QR %



Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G45P		ø39
G49P		ø43.5
G59P		ø52
G40P		ø42.5
G50P		ø52.5
G41P		ø42
G52P		ø52.5
R2		□30

Optional parts diagram

5HSDLU NLWV VHW RI GLDSKUDJP DVVHPEO\ YDOYH DVVHPEO

Repair kits model no. / Model	5HOLHI GLDSKUDJP DVVHPEO\	1RQUHOLHI GLDSKUDJP D
R1000-W, R1100-W	R1000-KIT	5 .,7 1
R2000-W, R2100-W	R2000-W-KIT	5 : .,7 1
R3000-W, R3100-W, RM3000-W	R3000-KIT	5 .,7 1
R4000-W, R4100-W, RM4000-W	R4000-KIT	5 .,7 1
R6000-W, R6100-W	R6000-KIT 5 .,7 / ORZ SUHVVXUH UDQJH	5 .,7 1 5 .,7 /1 ORZ SUHVVXUH UD
R8000-W, R8100-W	R8000-KIT	5 .,7 /1

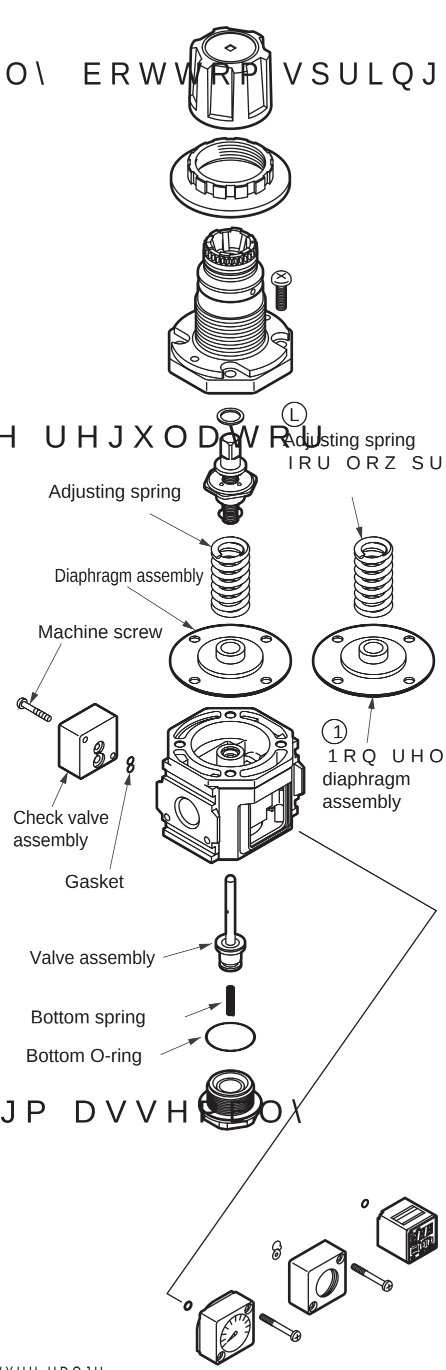
9DOYH DVVHPEO\ VHW RI YDOYH DVVHPEO\ ERWWRP VSULQJ

Model	Valve assembly model no.
R1000-W, R1100-W	R1000-VALVE-ASSY
R2000-W, R2100-W	R2000-W-VALVE-ASSY
R3000-W, R3100-W, RM3000-W	R3000-VALVE-ASSY
R4000-W, R4100-W, RM4000-W	R4000-VALVE-ASSY
R6000-W, R6100-W	R6000-VALVE-ASSY
R8000-W, R8100-W	R8000-VALVE-ASSY

5HIHU WR SDJH IRU WKH JDXJH SOXJ DVVHPEO\

&KHFN YDOYH DVVHPEO\ IRU UHYHUVH UHJXODWRU

Model	Check valve assembly model no.
R1000-W, R1100-W	R1100-W-CHECK-VALVE-ASSY
R2100-W	R3100-W-CHECK-VALVE-ASSY
R3100-W, RM3000-W, W3100-W R4100-W, RM4000-W, W4100-W R6100-W, R8100-W W8100-W	R3100-W-CHECK-VALVE-ASSY



Adjusting spring

Adjusting spring model no. / Model	Standard spring WR 03D	6SULQJ IRU ORZ WR 03D
R1000-W, R1100-W W1000-W, W1100-W	5 635,1*	5 635,1* /
R2000-W, R2100-W	5 : 635,1*	5 : 635,1* /
R3000-W, R3100-W, RM3000-W W3000-W, W3100-W	5 635,1*	5 635,1* /
R4000-W, R4100-W, RM4000-W W4000-W, W4100-W	5 635,1*	5 635,1* /
R8000-W, R8100-W	5 635,1*	5 635,1* /
W8000-W, W8100-W	: 635,1*	: 635,1* /

'LDSKUDJP DVVHPEO\ RQO\ GLDSKUDJP DVVHPEO\

Diaphragm assembly model no. / Model	5HOLHI W\SH diaphragm	1RQUHOLHI W diaphragm
R1000-W, R1100-W W1000-W, W1100-W	R1000-DIAPHRAGM-ASSY	5 ',$3+5$*0 $66< 1
R2000-W, R2100-W	R2000-DIAPHRAGM-ASSY	5 ',$3+5$*0 $66< 1
R3000-W, R3100-W, RM3000-W W3000-W, W3100-W	R3000-DIAPHRAGM-ASSY	5 ',$3+5$*0 $66< 1
R4000-W, R4100-W, RM4000-W W4000-W, W4100-W	R4000-DIAPHRAGM-ASSY	5 ',$3+5$*0 $66< 1
R6000-W, R6100-W	R6000-DIAPHRAGM-ASSY 5 ',$3+5$*0 $66< / ORZ SUHVVXUH UDQJH	5 ',$3+5$*0 $66< 1 5 ',$3+5$*0 $66< /1 ORZ SUHVVXUH UDQJH
R8000-W, R8100-W	R8000-DIAPHRAGM-ASSY	5 ',$3+5$*0 $66< 1
W8000-W, W8100-W	W8000-DIAPHRAGM-ASSY	: ',$3+5$*0 $66< 1

L1000/L3000/L4000/L8000-W Series

6XSSOLHV ¿QH RLO PLVW
3RUW VL]H WR

JIS symbol

6SHFL¿FDWLRQV

Descriptions	L1000-W	L3000-W	L4000-W	L8000-W
Appearance				
:RUNLQJ ÀXLG	Compressed air			
0D[ZRUNLQJ SUHVVXUH MPa	1.0			
Withstanding pressure MPa	1.5			
Working temperature °C	5 to 60			
0LQLPXP GULS ÀRZ P^3/PLQ $15	0.015	0.03	0.065	0.065
Oil capacity cm^3	20	85	170	0$;
Use oil	7XUELQH RLO &ODVV ,62 9* VSLQGOH RLO FDQ QRW EH			
3RUW VL]H 5F 137 *	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU	XVHV DQ DGDSWRU
Product weight kg	0.1	0.28	0.45	1.4
Standard accessories	Bowl guard			

1RWH 7KH PLQLPXP GULS ÀRZ LV WKH UDWH DW ZKLFK ¿YH GURSV RI WXUELQH RLO GULS SHU PLQXWH
7KLV FDQQRW EH XVHG IRU GU\ IRJ

)ORDW VZLWFK HOHFWULF VSHFL¿FDWLRQV

Descriptions	
Control point	1 point
Operation	6ZLWFK WXUQV RII ZKHQ ÀRDW ULVHV RLO OHYHO GHWHFWHG DQG W
0D[DSSOLFDEOH YROWDJH	240VAC, 200VDC
0D[FRQWDFW FDSDFLWDQFH	50 VA or 50 W, whichever is smaller
0D[RSHQ DQG FORVH FXUUHQW	0.5A
Withstanding pressure between contacts	9'& IRU RQH PLQXWH DQG OHDN FXUUHQW P$ RU OHV
Contact resistance	PŸ RU OHVV EHWZHHQ WHUPLQDO VHFWLRQV
Insulation resistance	0Ÿ DQG RYHU EHWZHHQ WHUPLQDO DQG FDVHV 9'& PH
Withstand voltage	9$& IRU RQH PLQXWH EHWZHHQ WHUPLQDO DQG FDV
(OHFWULF VHUYLFH OLIH	10^6 WLPH FDXVHG E\ 9$& P$ RU UHVLVWDQFH ORDG

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

How to order

L1000 - 6 - [ ] - W - C - [ ] - A6W [ ]

A Model no.
B Port size
C Port thread type
D Option
E Display unit
F Piping adaptor set
DWWDFKHG

5HIHU WR SDJH IRU WKH H[SODQDWLRQ RI WKH RSWLRQ

G %UDFNHW DWWDFKHG

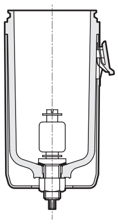
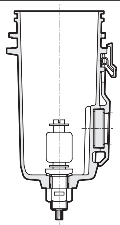
Symbol		Descriptions	L1000	L3000	L4000	L8000
B Port size						
6		1/8	M			
8		1/4	M	M	M	
10		3/8		M	M	
15		1/2			M	
20		3/4				M
25		1				M
C Port thread type		Note 1				
Blank		Rc thread	M	M	M	M
N		137 WKUHDG	M	M	M	M
G		G thread	M	M	M	M
D Option		Note 2				
Drainage	Blank	Without manual cock	M	M	M	M
	C	With manual cock	M	M	M	M
	LL	:LWK ÀRDW VZLWFK		M	M	M
Bowl material	Blank	Polycarbonate bowl	M	M	M	M
	Z	1\ORQ ERZO	M	M	M	M
	M	Metal bowl		M	M	M
Note 3	M1	0HWDO ERZO ZLWK PDQXDO GUDLQ FR	1RWH	M	M	M
Flow direction	Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M	M	M
	X1	5HYHUVH ÀRZ ULJKW : OHIW	M	M	M	M
E Display unit						
Blank		MPa display, Rc thread	M	M	M	M
J1		03D GLVSOD\ 137 * WKUHDG	M	M	M	M
F Piping adaptor set (attached)		Note 5, Note 6 page 428				
Blank		1RW DWWDFKHG	M	M	M	M
A6*W		Rc1/8 piping adaptor set	M			
A8*W		Rc1/4 piping adaptor set	M	M	M	
A10*W		Rc3/8 piping adaptor set	M	M	M	
A15*W		Rc1/2 piping adaptor set		M	M	
A20*W		Rc3/4 piping adaptor set			M	M
A25*W		Rc1 piping adaptor set				M
A32*W		Rc1 1/4 piping adaptor set				M
***Adaptor screw type**						
Blank		Rc thread	M	M	M	M
N		137 WKUHDG	M	M	M	M
G		G thread	M	M	M	M
G Bracket (attached)						
Blank		1RW DWWDFKHG	M	M	M	M
BW		C type bracket	M	M	M	M

⚠ 1RWH RQ PRGHO QR VHOHFWLRQ

1RWH 1 :KHQ * WKUHDGV RU 137 WKUHDGV DUH VHOHFWHG WKH ,1 DQG 287 DUH WKH WDUJHW
1RWH 2 :KHQ VHOHFWLQJ RSWLRQV IRU VHYHUDO LWHPV OLVW RSWLRQV LQ RUGHU IURP WKH WRS
1RWH 3 7KH DGMXVWLQJ GRPH V PDWHULDO ZLOO FKDQJH WR polyacetal resin when the nylon bowl or metal bowl is selected.
1RWH 4 :KHQ VHOHFWLQJ RSWLRQ 0 VHOHFW GLVFKDUJH RSWLRQ &
1RWH 5 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW attachments cannot be used at the same time.
1RWH 6 The joiner set is enclosed with the piping adaptor set.

Drainage and bowl material combination

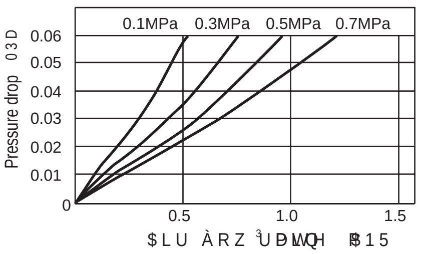
,WHP ' LQ +RZ WR RUGHU
2SWLRQ " :LWK ÀRDW VZLWFK

	3000/4000/8000 Series		
Shape			
Material	Plastic bowl		Metal bowl
	Polycarbonate	Nylon	Aluminum
Lubricator L*000-W	LL	LLZ	LLM

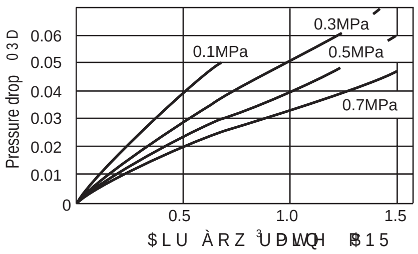
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Flow characteristic

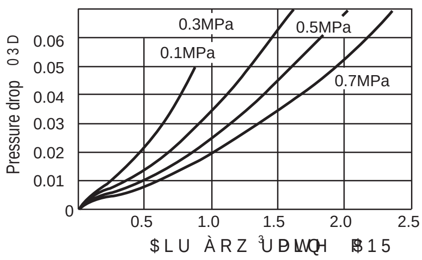
ML1000-6-W



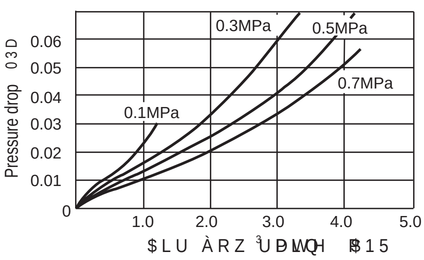
ML1000-8-W



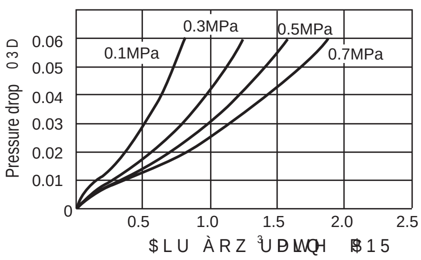
ML3000-8-W



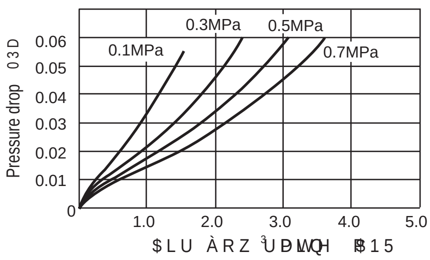
ML3000-10-W



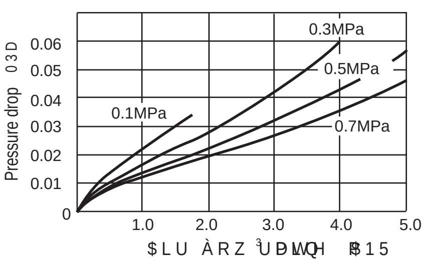
ML4000-8-W



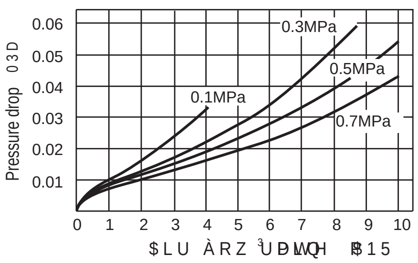
ML4000-10-W



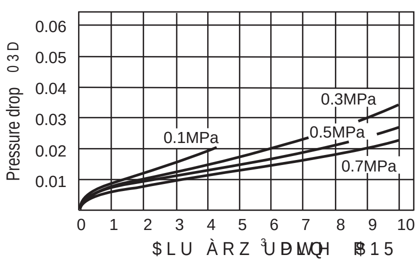
ML4000-15-W



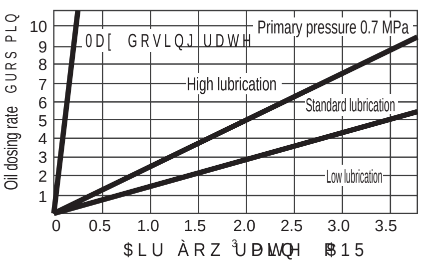
ML8000-20-W



ML8000-25-W

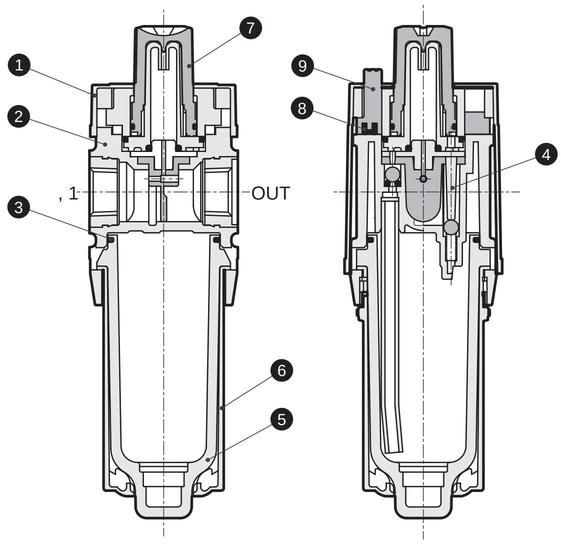


Oil dosing rate

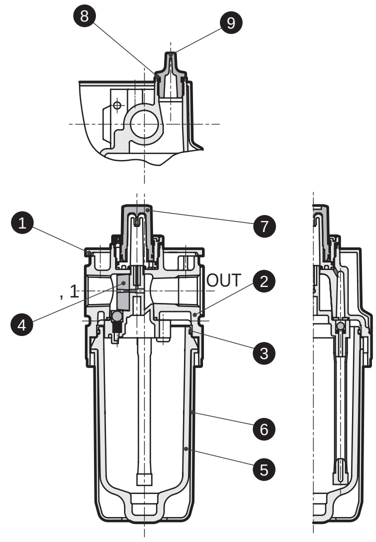


Internal structure and parts list

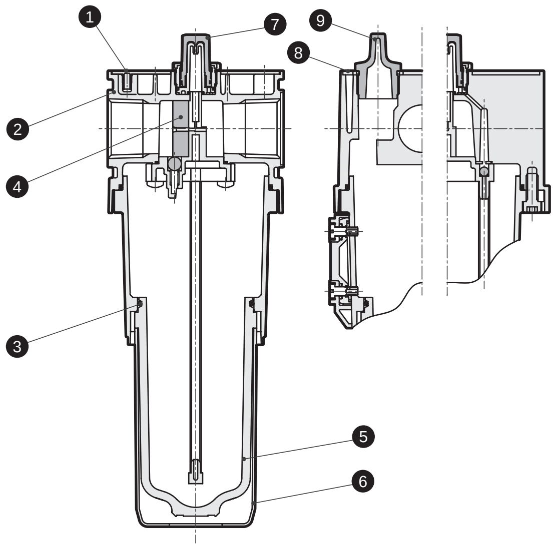
ML1000-W



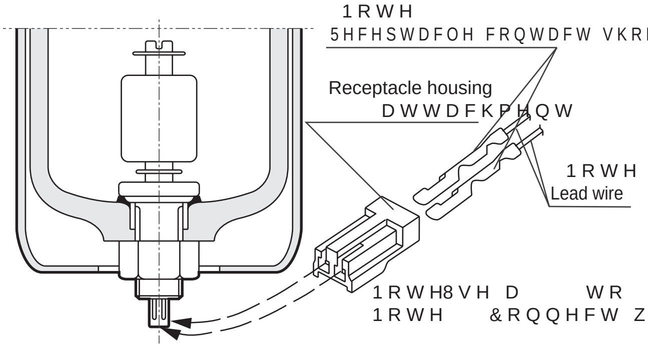
ML3000-W / L4000-W



ML8000-W



M2SWLRQ ÀRDW VZLWFK



$ -DSDQ $03 SRVW KHDGHU SDUW 1R $03 LV
8VH DQ $03 VWDQGDUG RU $03 URSH

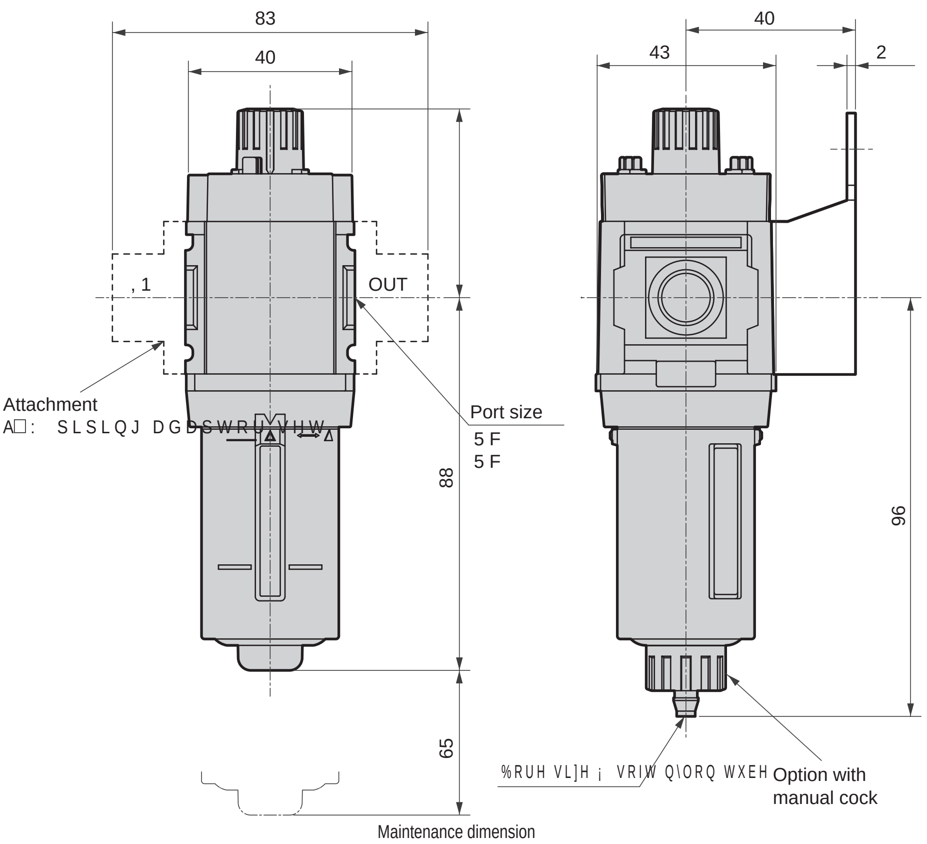
1 R	Parts name	Material			
		L1000-W	L3000-W	L4000-W	L8000-W
1	Plate cover	ABS resin			
2	Body	Polyamide resin, steel	Aluminum alloy die-casting		
3	2 ULQJ 1RWH	Special nitrile rubber			
4	Flow guide	Urethane rubber resin		1LWULOH UXEEHU	
5	Bowl	Polycarbonate resin			
6	Bowl guard	Polyamide resin	Polyamide resin, steel		
7	Adjusting dome	Polycarbonate resin			
8	O-ring	1LWULOH UXEEHU			
9	Filling plug	Polyacetal resin			

1RWH 2 ULQJ RI / : LV VSHFLDO VKDSHG

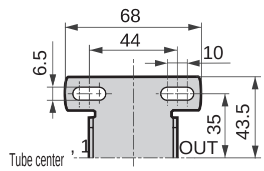
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Dimensions

ML1000-W

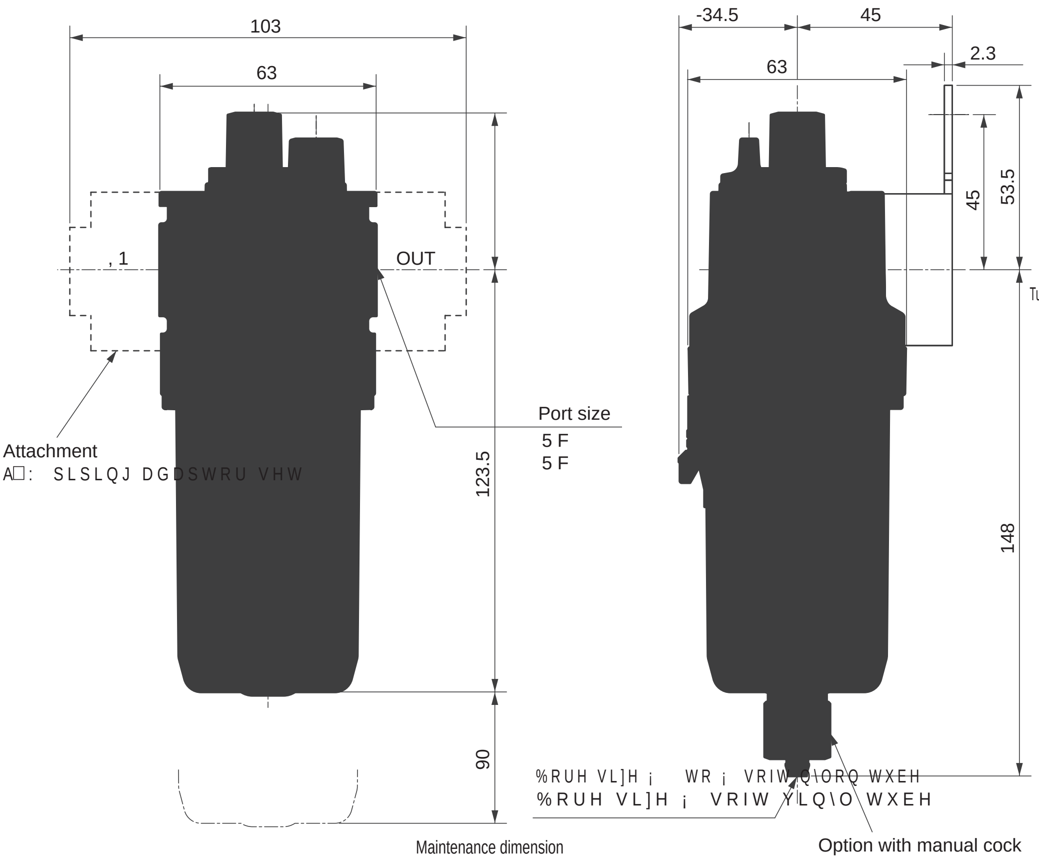


Attachment
& W\SH EUDFNHW
3DUW PRGHO QR %

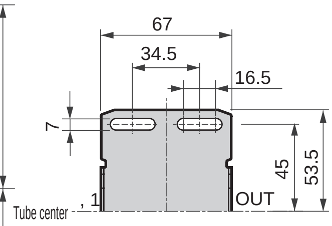


1RWH & W\SH EUDFNHW DQG SLS adaptor set attachments cannot be used at the same time.

ML3000-W



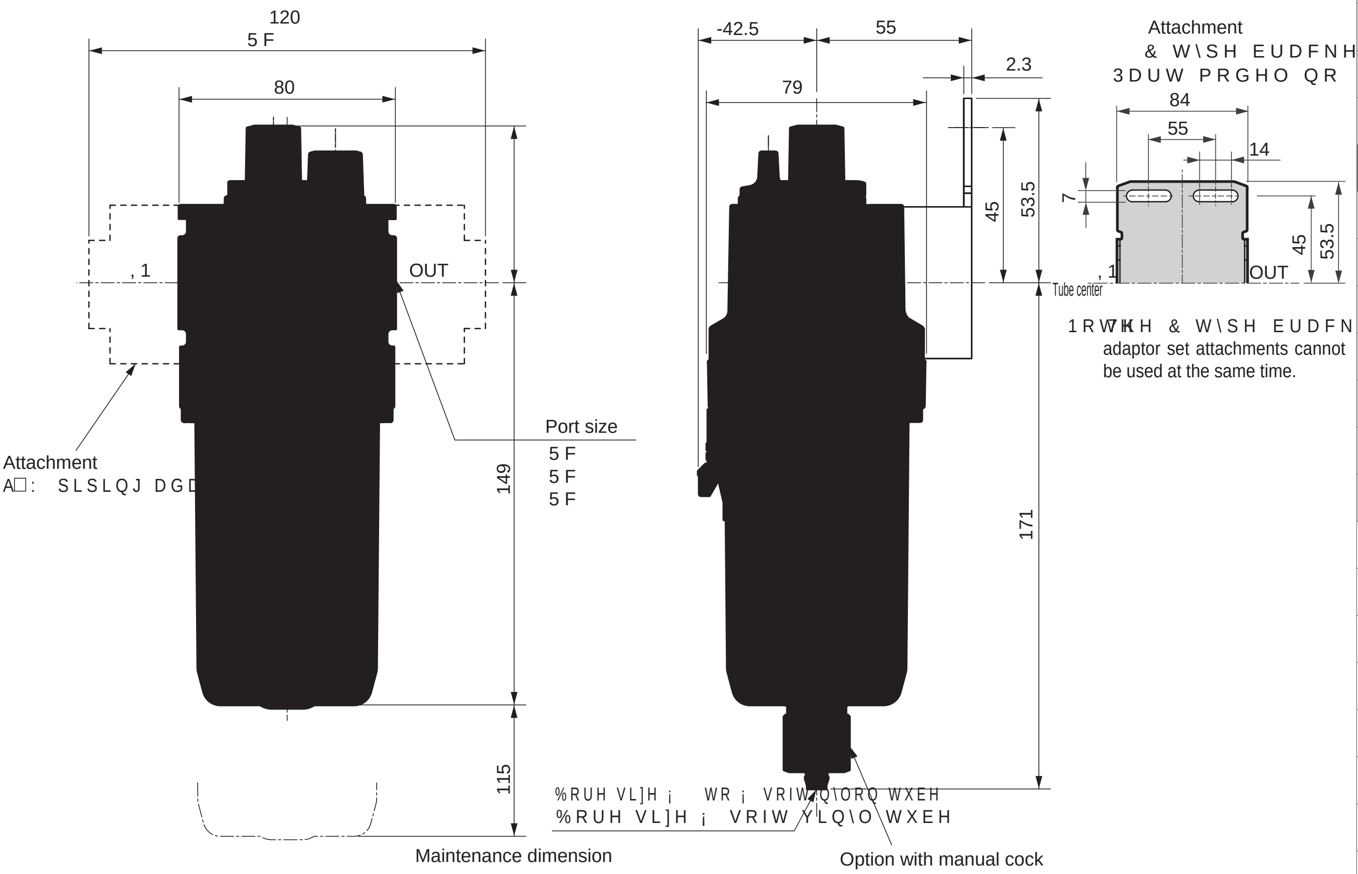
Attachment
& W\SH EUDFNHW
3DUW PRGHO QR %



1RWH & W\SH EUDFNHW DQG S adaptor set attachments cannot be used at the same time.

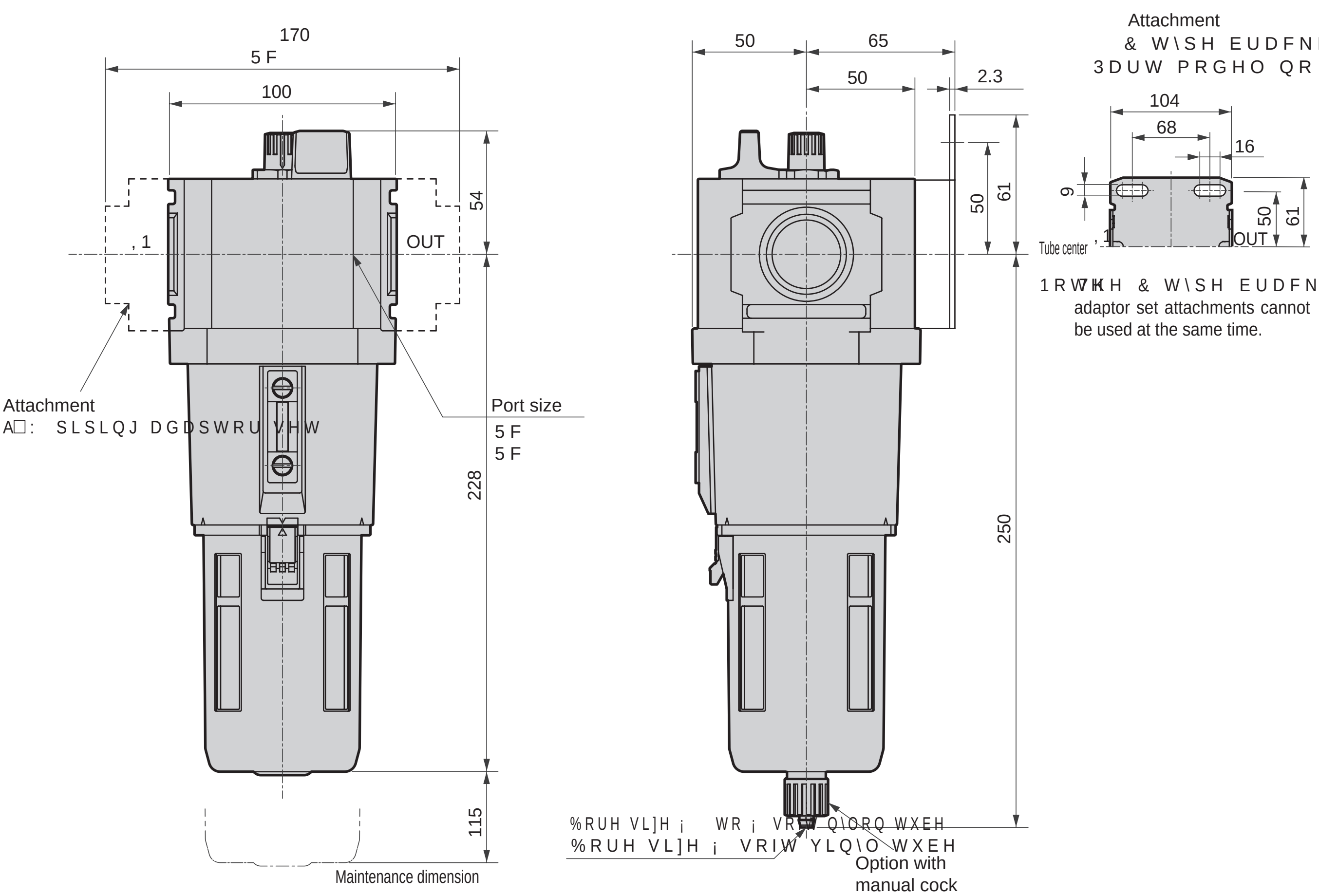
Dimensions

ML4000-W



1RWH 7KH & W\SH EUDFNHW DQG SLSLQJ DGDSWRU VHW DWWDFKPHQWV FDQQRW EH XVHG DW WKH VDPH WLPH

ML8000-W

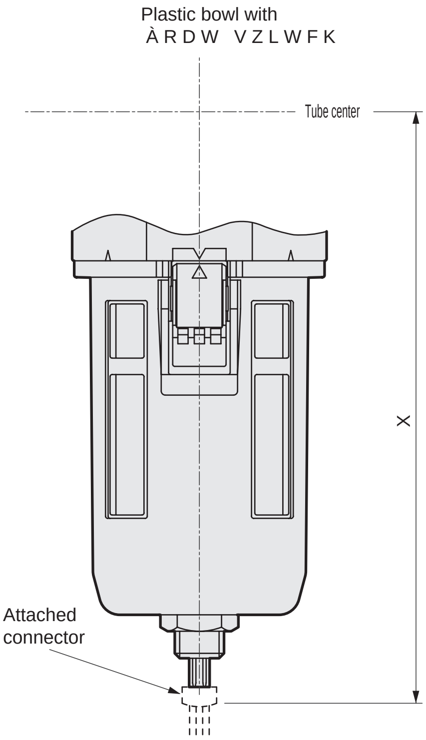


Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

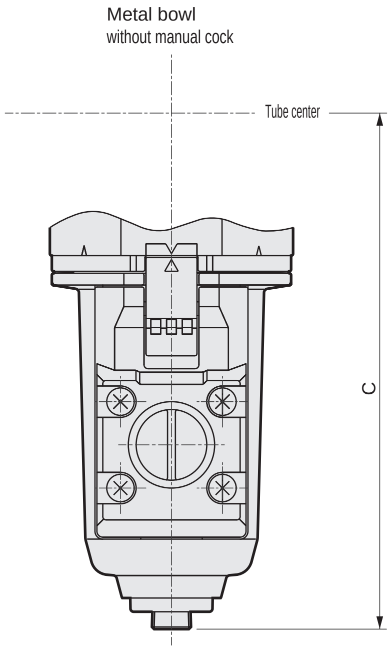
Optional dimensions

Other options (L3000-W, 4000-W, 8000-W)

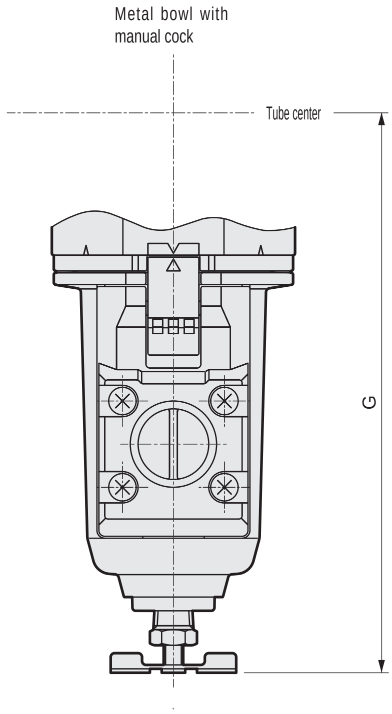
MPlastic bowl (blank)



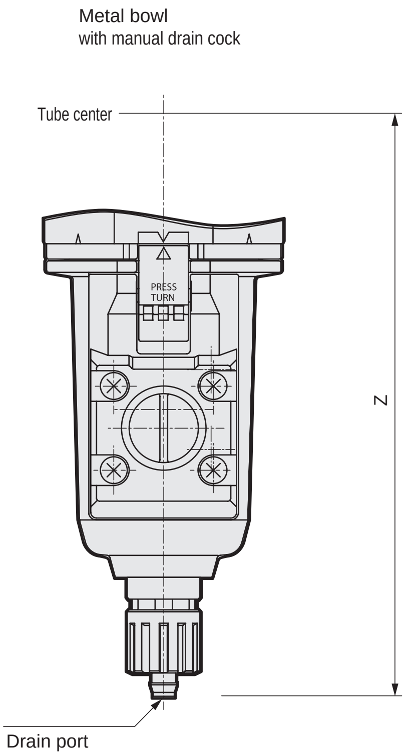
MMetal bowl without manual cock (M)



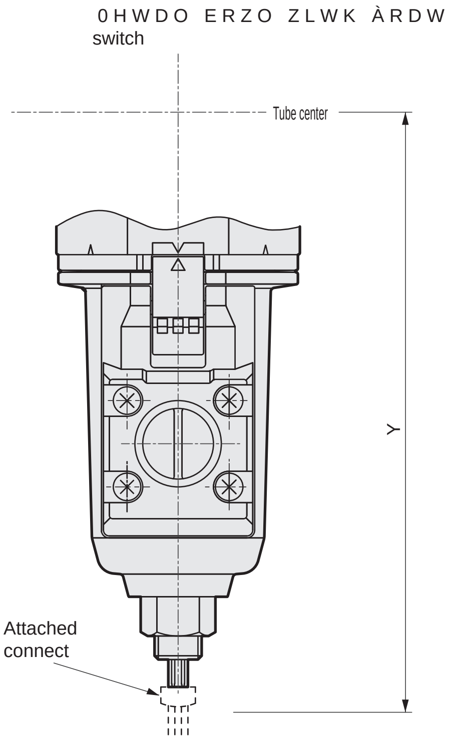
MMetal bowl with manual cock (CM)



MMetal bowl with manual cock (CM1)

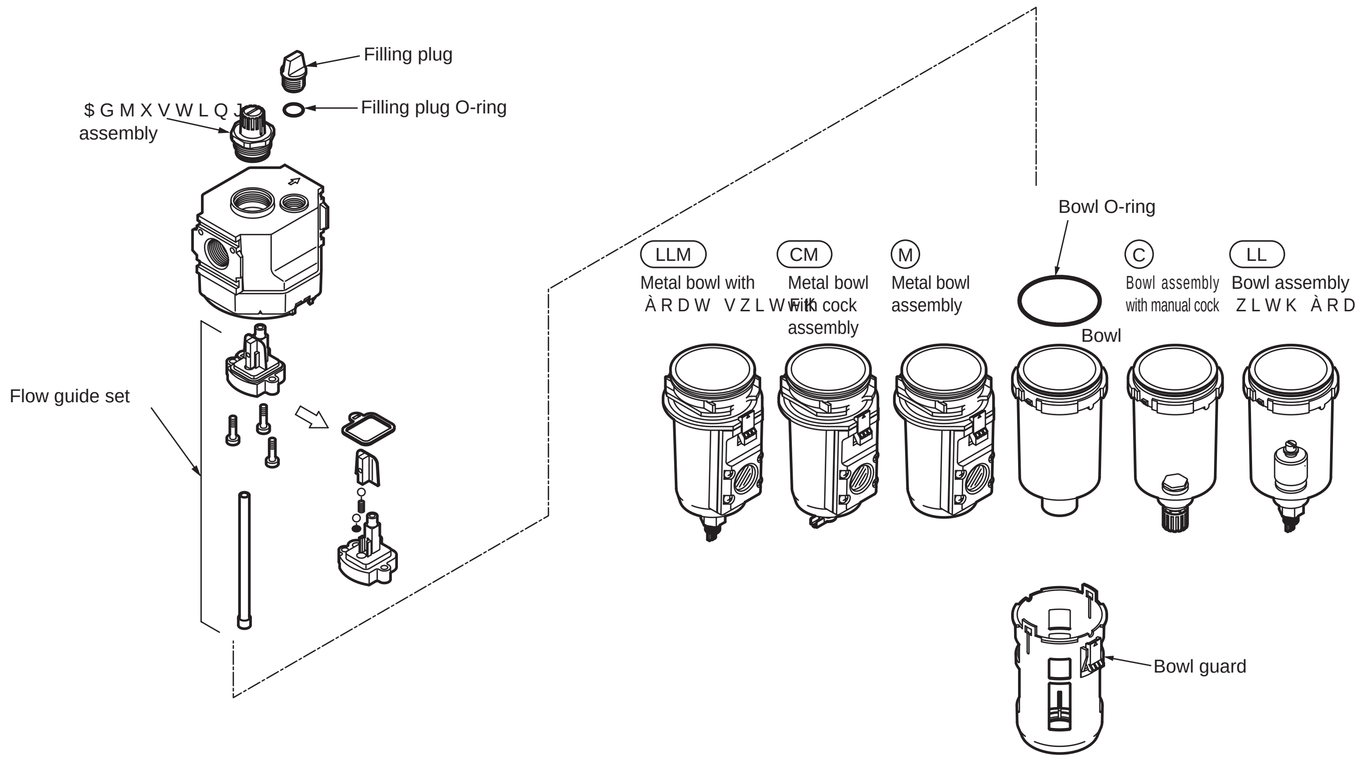


M0HWDO ERZO ZLWK ÀRDW VZLWFK //0



Model no.	C	G	X	Y	Z
L3000-W	129	143.5	147	153.5	154
L4000-W	152	166.5	170	177	177
L8000-W	231.5	245.5	249	256	256

Optional dimensions



5HSDLU NLWV 6HW RI ¿OO SOXJ 2ULQJ DGMXVWPHQW

Model no.	Repair kits model no. (for polycarbonate bowl)	Repair kits model no. (for nylon bowl, metal bowl)
L3000-W	L3000-W-KIT	L3000-W-KIT-Z
L4000-W	L4000-W-KIT	L4000-W-KIT-Z
L8000-W	L8000-W-KIT	L8000-W-KIT-Z

Bowl assembly (Set of bowl assembly and bowl O ring)

Bowl assembly / Model no.	Polycarbonate bowl w/o cock (Blank)	Nylon bowl without cock (Z)	Metal bowl without cock (M)	Polycarbonate bowl w/ cock (C)	Nylon bowl with cock (CZ)	Metal bowl with cock (CM)	Polycarbonate bowl Z ÀRDW VZLWK (LL)	Nylon bowl ZLWK ÀRDW VZLWK (LLZ)	Metal bowl ZLWK ÀRDW (LLM)
L1000-W	L1000-BOWL	L1000-BOWL-Z	-	F1000-W-BOWL	F1000-W-BOWL-Z	-	-	-	-
L3000-W	L3000-BOWL	L3000-BOWL-Z	L3000-W-BOWL-M	F3000-W-BOWL	F3000-W-BOWL-Z	F3000-W-BOWL-M	L3000-BOWL-LL	L3000-BOWL-LLZ	L3000-W-BOWL-LLM
L4000-W, L8000-W	L4000-BOWL	L4000-BOWL-Z	L4000-W-BOWL-M	F4000-W-BOWL	F4000-W-BOWL-Z	F4000-W-BOWL-M	L4000-BOWL-LL	L4000-BOWL-LLZ	L4000-W-BOWL-LLM

5HIHU WR WKH DLU ¿OWHU RSWLRQV DQG SDUWV WDEOH IRU GHWDLOV RQ WKH ERZO JXDUG

$GMXVWLQJ DVVHPEO\

Model no.	$GMXVWLQJ DVVHPEO\ PRGHO QR IRU SRO\FDUERQDWH ERZO	$GMXVWLQJ DVVHPEO\ PRGHO QR IRU Q\ORQ ERZO PHWDO ERZO
L3000-W, L4000-W, L8000-W	L3000-W-AJ-KIT	L3000-W-AJ-KIT-Z

Flow guide set

Model no.	Flow guide set model no.
L3000-W	L3000-FLOW-GUIDE
L4000-W	L4000-FLOW-GUIDE
L8000-W	L8000-FLOW-GUIDE

)LOOLQJ SOXJ VHW VHW RI ¿OOLQJ SOXJ DQG ¿OOLQJ SOXJ

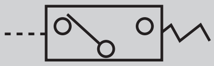
Model no.	Filling plug set model no.
L3000-W, L4000-W	L3000-W-PLUG
L8000-W	L8000-W-PLUG

Mechanical pressure switch standard white series

P4000-W Series

Wide pressure setting range covers 0.1 to 0.8 MPa.
MPort size: 1/4 to 1/2

JIS symbol



RoHS CAD

6SHFL¿FDWLRQV

Descriptions	P4000-8-W	P4000-10-W	P4000-15-W
:RUNLQJ ÀXLG	Compressed air		
Max. working pressure MPa	1.0		
Withstanding pressure MPa	1.5		
3UHVVXUH DGMXVWLQJ UDQJH MPa	0.1 to 0.8		
Fluid temperature °C	5 to 60		
Port size Rc	1/4	3/8	1/2
Micro switch type	Z-15GD-B (OMRON)		
&RQWDFW FRQ¿JXUDWLRQ	1		
Hysteresis MPa	0.1 to 0.49, hysteresis within 0.049		
	0.5 to 0.8, hysteresis within 0.078		
Repeatability MPa	±0.02 of set pressure		
Allowable operation frequency cycle/min.	20		
,QVXODWLRQ UHVLVWDQFH	100 MΩ and over (with 500 VDC megger)		
Product weight kg	0.5		
Mounting attitude	,QVWDOO DGMXVWLQJ VFUHZ YHUWLFDOO\		

Micro switch rated								
Load	No inductive load (A)				Inductive load (A)			
Circuit	Resistance load		Light load		Inductive load		Electric motor load	
Voltage	N.C	N.O	N.C	N.O	N.C	N.O	N.C	N.O
125 VAC	15	15	3.0	1.5	15	15	5.0	2.5
250 VAC	15	15	2.5	1.25	15	15	3.0	1.5
30 VDC	6.0	6.0	3.0	1.5	5.0	5.0	5.0	2.5

How to order

P4000 - 8 - W - 1N - BW

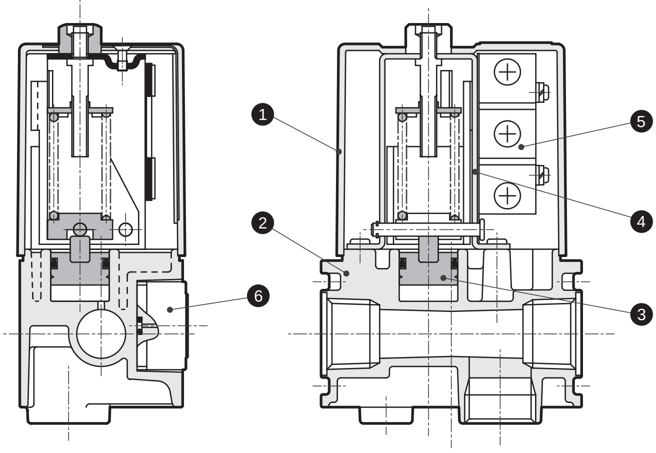
Ⓐ Port size
Ⓑ Option
Ⓒ Attachment

Symbol	Descriptions
Ⓐ Port size	
8	Rc1/4
10	Rc3/8
15	Rc1/2
Ⓑ Option	
Blank	Without indicator light
1N	100 V/200 VAC with indicator light
3N	24 VDC with indicator light
T	Without pressure gauge
Ⓒ Attachment (attached) Note 1, Note 3	
Blank	Not attached
A8W	Rc1/4 piping adaptor set
A10W	Rc3/8 piping adaptor set
A15W	Rc1/2 piping adaptor set
A20W	Rc3/4 piping adaptor set
BW	C type bracket

⚠ Note on model no. selection

Note 1: C type bracket and piping adaptor set can not be used together.
Note 2: Due to modular design, a gasket is attached.
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ adaptor set.

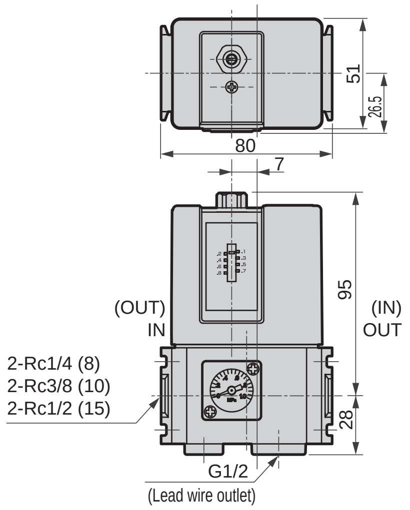
Internal structure and parts list



No.	Parts name	Material	No.
1	Cover	Resin	-
2	Body	Aluminum alloy die-casting	-
3	Piston assembly	Polyacetal resin, nitrile rubber	-
4	Frame	Steel	-
5	Micro switch	-	Z-15GD-B (OMRON)
6	Pressure gauge assembly	PBT resin, brass	G401-W

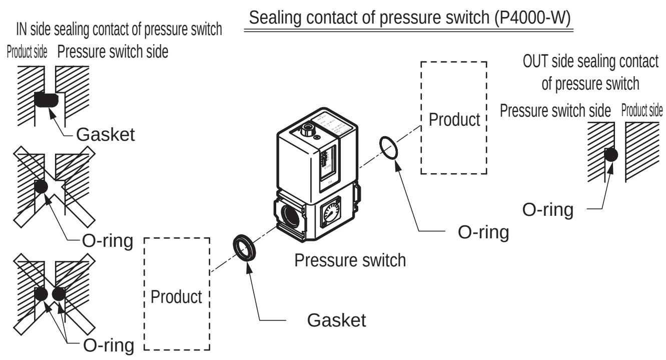
* To wire, remove cover (1), and connect directly to the microswitch (5).
* One gasket is enclosed.

Dimensions CAD



Reduction rate 0.24. (Photocopy at 141% four times to see actual dimensions.)

How to assemble



Safety precautions

○Design & Selection

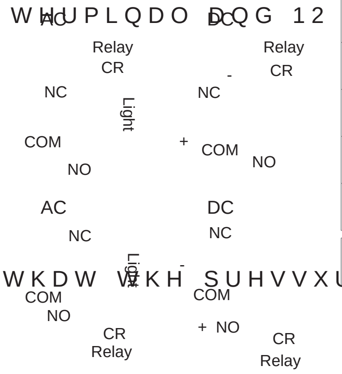
Caution

1 0LFUR VZLWFK FRQWDFW VSHFL¿FDWLRQV
Closed circuit max. 30A Open circuit max.15A
Rush current should be measured beforehand.

○,QVWDOODWLRQ $GMXVWPHQW

Caution

1 When wiring, loosen cover mounting screws, remove the cover, then wire to the microswitch inside.
2 Wiring the sensor with light
M7KH OLJKW LV FRQQHFWHG WR WKH PLFURVZLWFK V 1& WHUPLQDO DQG 12
even when the load (relay, etc.) is not energized, so take care when selecting the load.
100 VAC 1.5mA 200 VAC 2.0mA 24 VDC 4.5mA
MTo turn the light on at a level higher than the set pressure and off at a level less than the set pressure, wire to the microswitch COM terminal and NC terminal. Attach the Pressure Rise Light ON plate at a visible section on the cover.
MTo turn the light on at a level less than the set pressure and off at a level higher than the set pressure, wire to the microswitch COM terminal and NO terminal. Attach the Pressure Rise Light OFF plate at a visible section of the cover.
M,I WKHUH LV D ODUJH DPRXQW RI GUDLQDJH SLSH VR WKDW WKH SUHVVXU
upward.



3 Due to a guard is resin, avoid use in the high ambient temperature.
4 Hold the body when piping or installing.
5 8VH ZLWK DLU WKDW KDV EHHQ SDVVHG WKURXJK DQ DLU ¿OWHU
6 8VH WKH SUHVVXUH DEVRUELQJ QLSSOH WR GHWHFW VXGGHQ FK
cylinder pressure.
7 Use the pressure absorbing nipple (6556) if pressure rise/lower pulsation is frequent. The product life could be shortened if the pressure absorbing nipple is not used.
8 /RRVHQ WKH QXW RQ WKH WRS RI WKH FRYHU DQG DGMXVW WKH SUH
will rise when the screw is turned to the plus (+) side and will drop when turned to the minus (-) side. (Working
WRROV :UHQFK PP ÀDW WLS VFUHZGULYHU)L[ZLWK WKH QXW DIW
9 The scale plate is for reference. (Scale error within ±0.05 MPa)

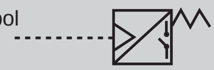
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

Compact read switch type mechanical pressure switch   standard white series

P1100-W/P4100-W/P8100-W Series

Compatible with module connection to SELEX F.R.L.

JIS symbol



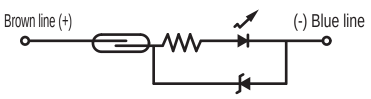
6SHFL¿FDWLRQV

Descriptions	P*100-W
:RUNLQJ ÀXLG	Compressed air
Max. working pressure MPa	1.0
Set pressure range MPa	0.1 to 0.6
Hysteresis MPa	0.08 or less
Repeatability MPa	±0.02 or less
&RQWDFW FRQ¿JXUDWLRQ	1a Note 1
Wiring	Lead wire (oil resistant vinyl cabtire code 2-conductor 0.2mm^2)
$PELHQW WHPSHUDWXUH ÀXLG WHPSHUDWXUH	5 to 60°C
Protective structure Note 2	IP20 or equivalent

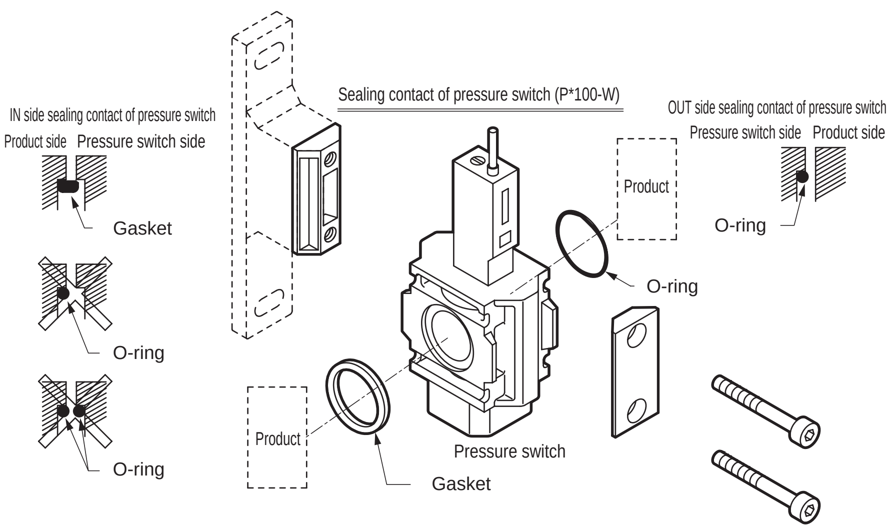
Note 1: The contact turns on if air pressure exceeding the scale setting pressure is applied.
1RWH1RWH WKDW ZKHQ FRQQHFWLQJ DQ RSWLRQ MRLQW LQWR WKH DWPRVSKHULF UHOHDVH SRUW DQG until water does not entrain, IP65 or equivalent is applied. This port can not be used outdoors.

(OHFWULF FRPSRQHQW VHFWLRQ VSHFL¿FDWLRQ		
Load voltage	12/24 VDC	100 VAC
Load current	5 to 50mA	7 to 20mA
Internal voltage drop	3 V or less	
Light	LED (ON lighting)	
Maximum shock resistance	294m/S^2	
Insulation resistance	0Ÿ DQG RYHU DW 9'& PHJJHU	
Withstand voltage	No failure when 1000 VAC is applied for one minute	

Internal circuit design



How to assemble (P1100-W, P4100-W, P8100-W)



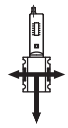
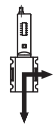
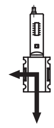
How to order (modular design)

P 1100 - 6 L - W - B11W - 3 -
(White type)

A Series
B Port size
C Branch direction
D Attachment
E Length of lead wire
F Option

Symbol	Descriptions			
A Series				
1100	1000-W Series modular design			
4100	2500-W, 3000-W, 4000-W Series modular design			
8100	6000-W, 8000-W Series modular design			
B Port size				
		1100	4100	8100
6	Rc1/8	M		
8	Rc1/4	M	M	
10	Rc3/8		M	
15	Rc1/2		M	
20	Rc3/4			M
25	Rc1			M

C Branch direction Note 1

Blank Note 2	L	R
		

Symbol	Descriptions	1100	4100	8100
D Attachment				
Blank	Joiner set, gasket	M	M	M
B11W	T type bracket, gasket	M		
B31W	T type bracket, gasket		M	
B41W	T type bracket, gasket		M	
B81W	T type bracket, gasket			M
4	Joint for atmospheric release port attached (M3 elbow)	M	M	M
E Length of lead wire				
Blank	1m			
3	3m			
5	5m			
F Option				
Blank	None			
P6	&RSSHU DQG 37)(IUHH VSHFL¿FDWLRQ			

⚠ Note on model no. selection

Note 1: This is used for intermediate connection of the module series so the module connection section is not threaded.
Note 2: A masking plug matching the port size is enclosed.
Note 3: When piping the isolated p*100-W unit, use piping adaptor A*00-W.
(The horizontal direction port does not have threads.)

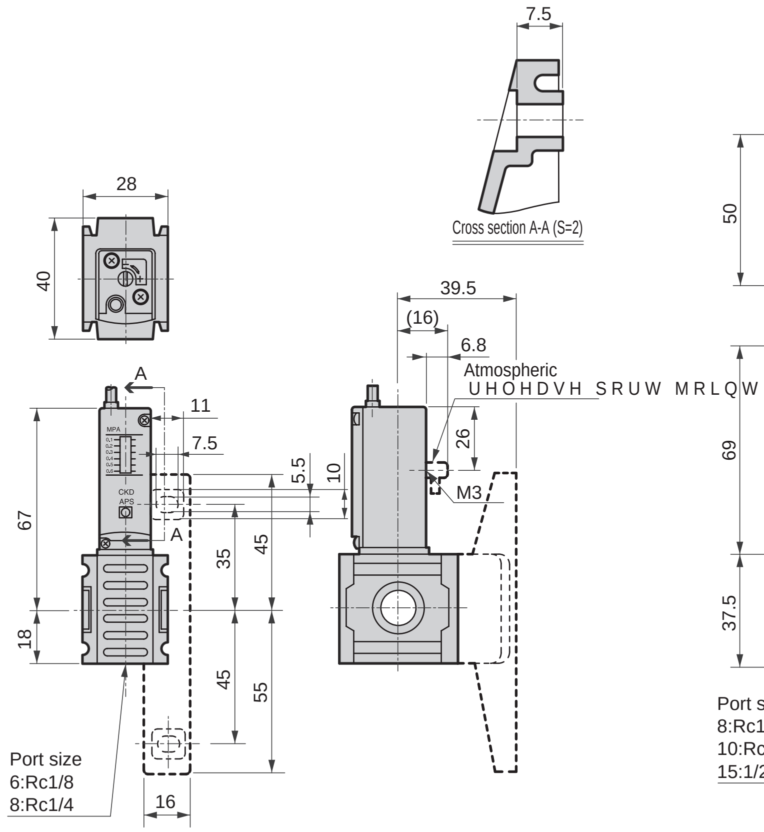
6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV (catalog No. CC-947)

MStructured for use in secondary battery manufacturing processes

P4100 - .... - P4

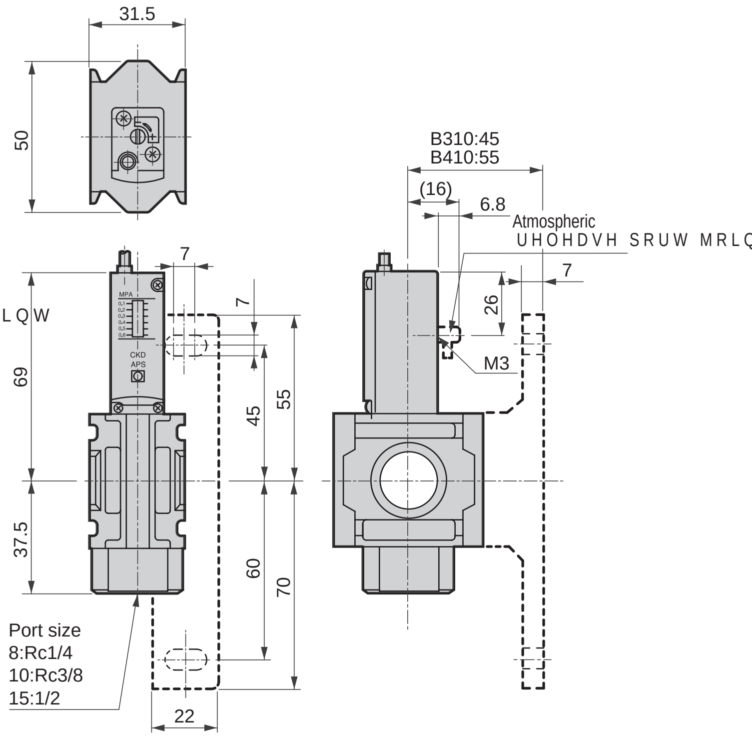
Dimensions

MP1100-W



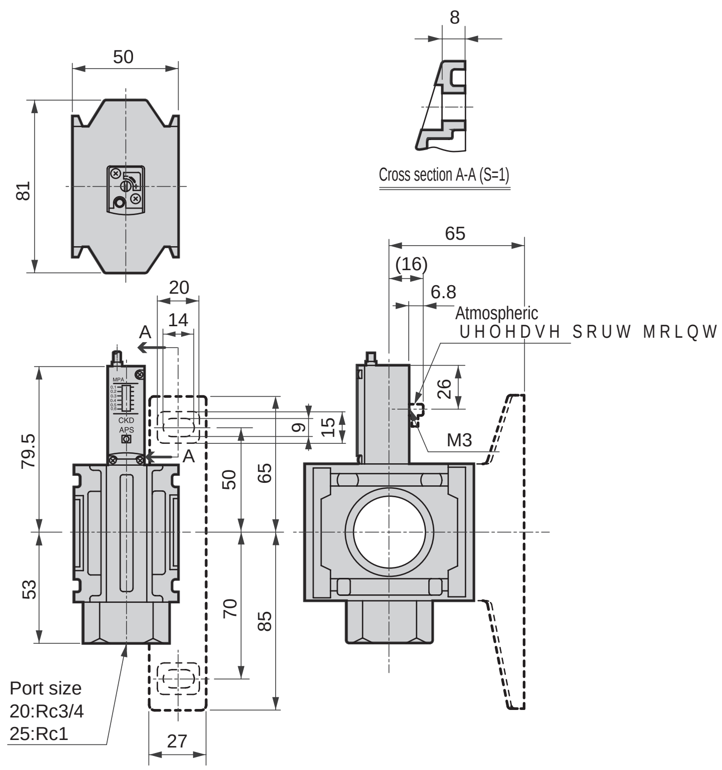
Weight 126g

MP4100-W



Weight 190g

MP8100-W



Weight 467g

Safety precautions

O ,QVWDOODWLRQ $GMXVWPHQW

Caution

1 Setting pressure

MPressure displayed on the scale plate is used as the reference. When setting pressure, refer to the separate pressure gauge.

MPressure displayed on the scale plate is the value when the contact is off. To set the scale plate to a value smaller than that from which hysteresis has been subtracted. Refer to the chart diagram below. If not set, operation may not take place at the set value.
(Hysteresis refer to the pressure width from when the switch operates once with the set pressure to when the pressure drops and the switch turns off.)

Operation chart

Hysteresis
Air pressure
Atmospheric pressure
OFF
ON
Scale plate setting pressure
High pressure

2 Installation

MDo not drop or bump the panel when handling it.

MWire the lead so that the repeated bending strain and tensile strength are not applied to the wire. Failure to do so could lead to disconnection.

M'R QRW XVH WKLV VHQVRU QHDU D VWURQJ PDJQHWLF ¿HOG RU ODUJH current (large magnet or spot water, etc.) because the sensor could malfunction.

MThe pressure switch is equivalent to IP-20, but the installation direction is limited to upward vertical. If water enters the atmospheric release port for atmospheric pressure from below, pipe DQ 0 MRLQW DQG H[WHQG ZLWK WXELQJ WR ZKHUH water will not enter. Do not plug the introduction port for atmospheric pressure or else malfunctions could occur. This port can not be used outdoors.

Top
Bottom

MP*100 Series
If there is drainage in pneumatic piping, install so that the pressure switch is higher than the drain.

MDo not pressurize the atmospheric release port or blow it with compressed air. Product performance could drop or the product could be damaged.

3

MConnecting the lead
(1) Do not connect the lead directly to the power supply. Connect the load serially. Failure to do so could result in lamp blowing or contact melting.
(2) When using for DC, connect the brown wire to the + side and the blue wire to the - side. The lamp will not light if wires are connected in reverse.
(3) When connected to the AC relay or PC input, if half ZDYH UHFWL¿FDWLRQ LV GRQH ZLWK WKHVH FLUFXLWV WKH VZLWFK lamp may not light. In this case, the lamp will light if the switch lead polarity is reversed.

MContact capacity
'R QRW H[FHHG WKH VSHFL¿HG ORDG YROWDJH DQG ORDG FXUUHQW range.
Failure to observe this could result in problems such as lamp blowing and contact melting.
The lamp may not light if the current is less than the rated current value.

MContact protection
(1) When using this sensor with a conductive load such as a relay, provide the contact protection circuit shown at right. The contact could melt if this protection circuit is not provided.

MDiode
Brown line
Blue line
+
Switch
-
Applied voltage V DC
-
Load
User wiring
Protective circuit
5HFWL¿HU GLRGH IRU JHQHUDO
Recommended value
Forward current: 1A and over
Non-repeated backward voltage: 200 V and over
HITACHI Ltd. V06C or equivalent

MCapacitor and resistance used
Brown line
Blue line
+
Switch
-
Applied voltage V AC DC
-
Load
Capacitor resistance
C R
User wiring
Protective circuit (spark quenching circuit)
Recommended C capacitor 0.033 to 0.1µF
5 UHVLVWDQFH WR .
Okaya Electric XEB1K1 or equivalent product

(2) DC wiring exceeds 50m or AC wiring exceeds 10m, the wiring capacity will be attained. A rush current will occur, damaging the switch or shortening life.
Install a contact protection circuit if the wiring length is exceeded.

MChoke coil used
Brown line
Blue line
Switch
Within 2m
Applied voltage AC DC
V
L
Load
MChoke coil
L=Several hundred µH to several mH with outstanding high frequency characteristics

MResistance used
Brown line
Blue line
Switch
Within 2m
Applied voltage AC DC
V
R
Load
MRush current limiting resistor
R=Largest resistor tolerated by load circuit side

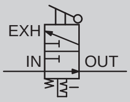
Shut-off valve standard white Series

V1000-W/V3000-W Series

One action exhaust operation. Prevent residual pressure accidents in pneumatic lines.

Port size: 1/8 to 1/2

JIS symbol



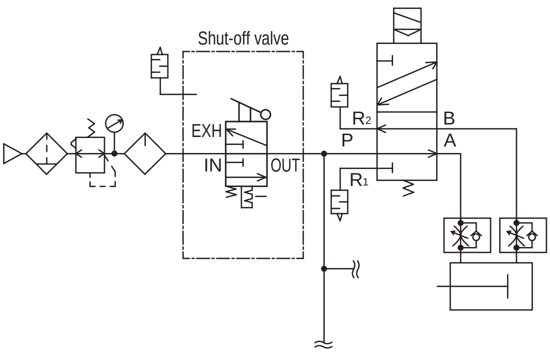
6SHFL¿FDWLRQV

Descriptions	V1000-W	V3000-W
Appearance		

Descriptions		V1000-6-W	V1000-8-W	V3000-8-W	V3000-10-W	V3000-15-W
:RUNLQJ ÀXLG		Compressed air				
Max. working pressure MPa		1.0				
Withstanding pressure MPa		1.5				
Fluid temperature °C		5 to 60				
Operation lever switchover angle		90°				
Operating force	Pushing force N	18		80		
	Torque N·m	0.5		2		
Valve section leakage cm^3/min. (ANR)		10				
External leakage cm^3/min. (ANR)		10				
Port size	IN-OUT	1/8	1/4	1/4	3/8	1/2
(Rc, NPT, G)	EXH	1/8		3/8		
Product weight kg		0.17		0.25		
Effective sectional	IN/OUT	15	18	40	70	85
area {mm^2}	OUT/EXH	5		40	50	50

Application

([SODQD)RU VDIHW\ UHOHDVH FRPSUHVVHG DLU LQ WKH SQHXPDWLF FLUFXLW IURP WKH ORF
solenoid valve or air cylinder, etc.



How to order

MF.R.L.1000 Series

V1000 - 6 ◯ - W - ◯ - ◯ - A6W
(White type)

MF.R.L.3000, 4000 Series

V3000 - 8 ◯ - W - ◯ - ◯ - A6W
(White type)

A Model no.
B Port size
C Port thread type
D Option
E Display unit
F Attachment

Symbol	Descriptions	A Model no. V1000	A Model no. V3000
B Port size			
6	Rc1/8	M	
8	Rc1/4	M	M
10	Rc3/8		M
15	Rc1/2		M
C Port thread type			
Blank	Rc thread	M	M
N	NPT thread	M	M
G	G thread	M	M
D Option			
Blank	6WDQGDUG ÀRZ OHIW : ULJKW	M	M
X1	,1 287 UHYHUVH ÀRZ ULJKW : OHIW	M	M
E Display unit			
Blank	MPa display, Rc thread	M	M
J1	MPa display, NPT, G thread	M	M
F Attachment (attached) Note 1, Note 2			
Blank	Without attachment	M	M
A6*W	Rc1/8 piping adaptor set	M	
A8*W	Rc1/4 piping adaptor set	M	M
A10*W	Rc3/8 piping adaptor set	M	M
A15*W	Rc1/2 piping adaptor set		M
A20*W	Rc3/4 piping adaptor set		M
BW	C type bracket	M	M
S	Silencer	M	M
***Adaptor screw type**			
Blank	Rc thread	M	M
N	NPT thread	M	M
G	G thread	M	M

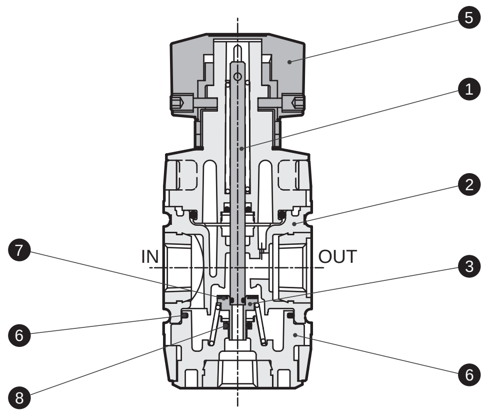
⚠ Note on model no. selection

Note 1:The C-type bracket and piping adaptor set attachments cannot be used at the same time.
1RWH 7KH MRLQHU VHW LV HQFORVHG ZLWK WKH SLSLQJ DGDSWRU VHW

⚠ 6HOHFW WKH UHYHUVH UHJXODWRU 5 : RU UHYHUVH ¿OWHU UHJXODWRU : : ZK
9 : RQWR WKH SULPDU\ VLGH RI WKH UHJXODWRU RU ¿OWHU UHJXODWRU

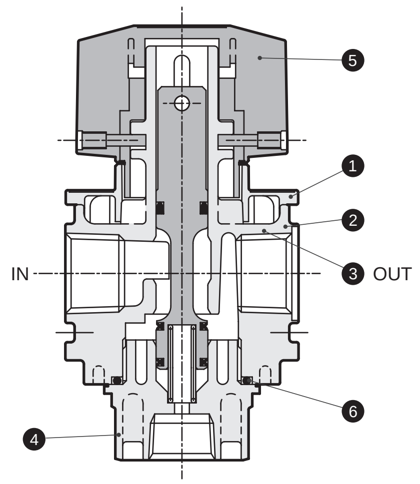
Internal structure and parts list

MV1000-W



No.	Parts name	Material
1	Spool	Steel
2	Body assembly	Polyamide resin, steel
3	Valve element	Brass, nitrile rubber
4	Bottom plug	Polyamide resin, steel
5	Knob	Polyacetal resin
6	Packing seal	Nitrile rubber
7	O-ring	Nitrile rubber
8	O-ring	Nitrile rubber

MV3000-W

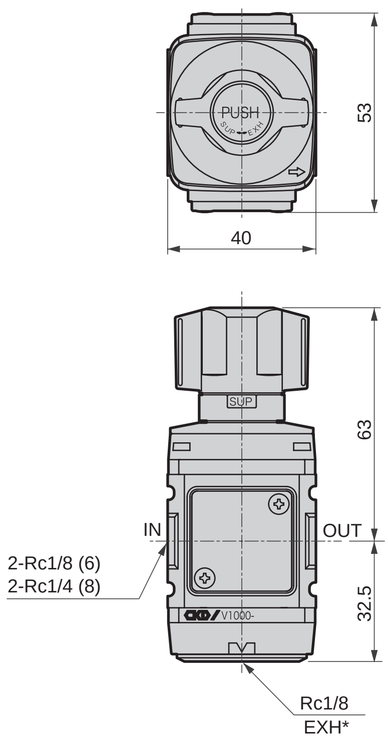


No.	Parts name	Material
1	Plate cover	ABS resin
2	Body	Aluminum alloy die-casting
3	Spool assembly	Aluminum alloy urethane rubber resin
4	Bottom plug	PBT resin Note 1
5	Knob	Polyacetal resin
6	O-ring	Nitrile rubber

Note 1: The metal bottom plug is used as a custom-order part.

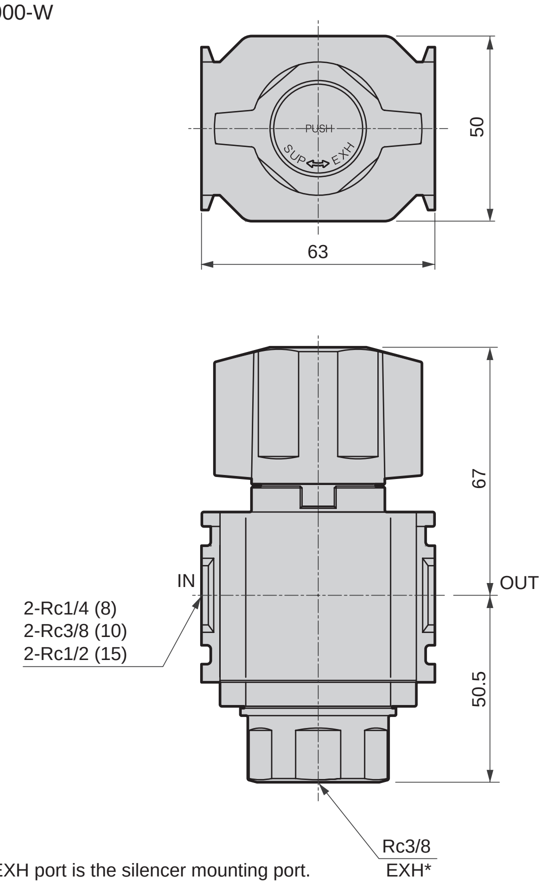
Dimensions CAD

MV1000-W



* The EXH port is the silencer mounting port.

MV3000-W

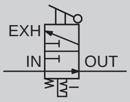


* The EXH port is the silencer mounting port.

Lockout valve (OSHA compliant) standard white series

V3010-W/V6010-W Series

Prevent residual pressure accidents in pneumatic lines.
Port size: 1/4 to 1

JIS symbol 

CAD RoHS

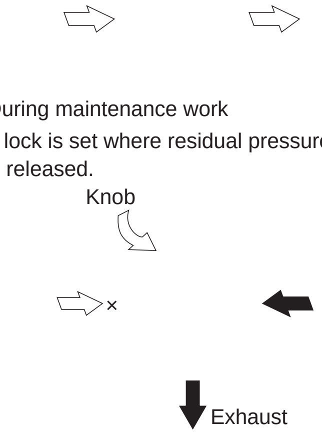
6SHFL¿FDWLRQV

Descriptions		V3010-8-W	V3010-10-W	V3010-15-W	V6010-20-W	V6010-25-W
:RUNLQJ ÀXLG		Compressed air				
Max. working pressure MPa		1.0				
Withstanding pressure MPa		1.5				
Fluid temperature °C		5 to 60				
Operation lever switchover angle		90°				
Operating force	Pushing force N	80 or less				
	Torque N·m	2.5 or less				
Valve seat leakage cm^3/min. (ANR)		10 or less				
External leakage cm^3/min. (ANR)		10 or less				
Port size (Rc, NPT, G)	IN-OUT	1/4	3/8	1/2	Rc 3/4	Rc1
	EXH	3/8			Rc1/2	
Product weight kg		0.3			0.8	
Effective sectional area (mm^2)	,1:287	40	70	85	145	150
	287:(;+	40	50	50	105	110

How to use

MRegular use

MDuring maintenance work
A lock is set where residual pressure is released.



OSHA (Occupational Safety and Health Administration)

US Safety Standards related to worker safety are set.

<Code of Lockout/Tagout>
When serving or maintaining machinery, the air source shall be closed with a shut-off valve (lockout valve), and residual pressure shall be discharged. If a third party inadvertently operates the valve during such operation and compressed air is applied, the cylinder, etc., could move suddenly and injure personnel. This standard states that, "All valves used for such purposes shall have a key or a structure which can be locked with a key."

How to order

MSELEX F.R.L.2000, 3000, 4000 Series

V3010 - 8 [ ] - W - [ ] - [ ] - A8W

MSELEX F.R.L.6000, 8000 Series

V6010 - 20 [ ] - W - [ ] - [ ] - A20W
(White type)

A Model no.
B Port size
C Port thread type
D Option
E Display unit
F Attachment

Symbol	Descriptions	A Model no. V3010	V6010
B Port size			
8	1/4	M	
10	3/8	M	
15	1/2	M	
20	3/4		M
25	1		M
C Port thread type			
Blank	Rc thread	M	M
N	NPT thread	M	M
G	G thread	M	M
D Option			
Blank	None	M	M
X1	,1 287 UHYHUVH ¢Àe R)Z UL\KW	M	M
E Display unit			
Blank	MPa display, Rc thread	M	M
J1	MPa display, NPT, G thread	M	M
F Attachment (attached) Note 1, Note 2			
Blank	Without attachment	M	M
A8W	Rc1/4 piping adaptor set	M	
A10W	Rc3/8 piping adaptor set	M	
A15W	Rc1/2 piping adaptor set	M	
A20W	Rc3/4 piping adaptor set	M	M
A25W	Rc1 piping adaptor set	M	M
A32W	Rc1 1/4 piping adaptor set		M
BW	C type bracket	M	M
S	Silencer	M	M
***Adaptor screw type**			
Blank	Rc thread	M	M
N	NPT thread	M	M
G	G thread	M	M

Note on model no. selection

Note 1:The C-type bracket and piping adaptor set attachments cannot be used at the same time.
Note 2:The joint set is enclosed with the piping adaptor set.

Select the reverse regulator (R*100-W) or reverse ¿OWHU UHJXODWRU : : ZKHQ LQVWDOOLQJ WKH V*010-W onto the primary side of the regulator or ¿OWHU UHJXODWRU

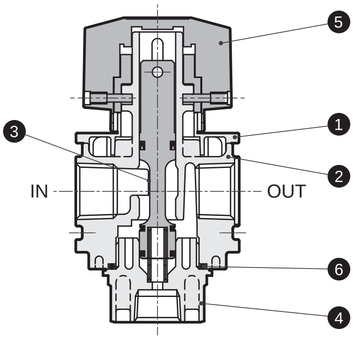
6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV
(catalog No. CC-947)

MStructured for use in secondary battery manufacturing processes

V3010 - .... - P4*

Internal structure and parts list

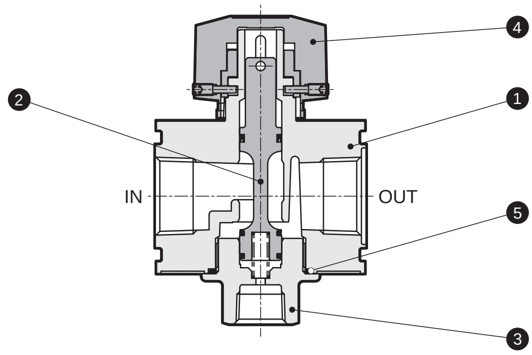
MV3010-W



No.	Parts name	Material
1	Plate cover	ABS resin (Note 2)
2	Body	Aluminum alloy die-casting
3	Spool assembly	Aluminum alloy urethane rubber resin
4	Bottom plug	PBT resin (Note 1) (Note 2)
5	Knob	Aluminum alloy die-casting
6	O-ring	Nitrile rubber

Note 1: The metal bottom plug is used as a custom-order part.
Note 2: Flame resistance resin equivalent to UL94 Standard V-O

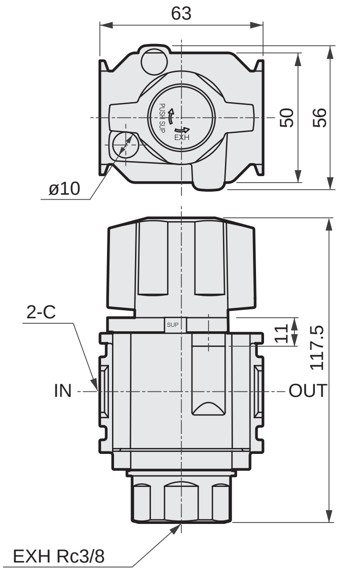
MV6010-W



No.	Parts name	Material
1	Body	Aluminum alloy die-casting
2	Spool assembly	Aluminum, hydrogen nitrile rubber
3	Bottom plug	Aluminum alloy die-casting
4	Knob	Aluminum alloy die-casting
5	O-ring	Nitrile rubber

Dimensions (V3010-W)

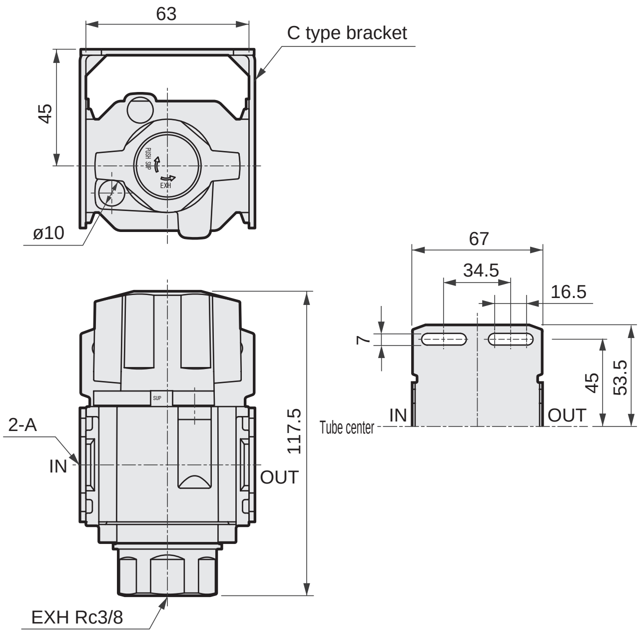
CAD



* The EXH port is the silencer mounting port.

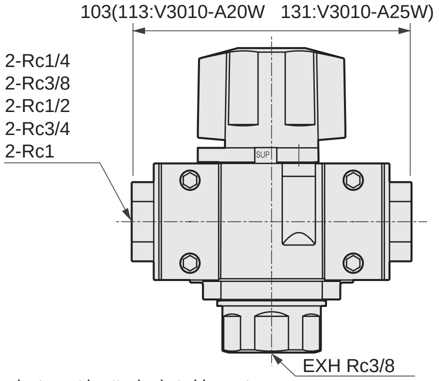
Descriptions	C
V3010-8-W	Rc1/4
V3010-10-W	Rc3/8
V3010-15-W	Rc1/2

MC type bracket (-BW)
Part model no.: B320



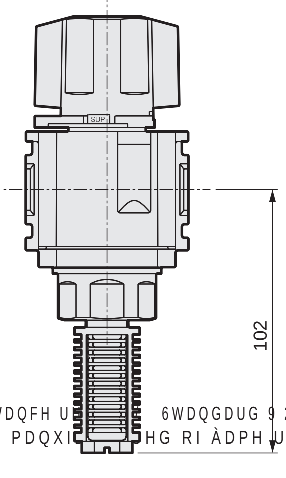
The C type bracket is attached at shipment.
C type bracket and piping adaptor set can not be used together.

MAdaptor attachment



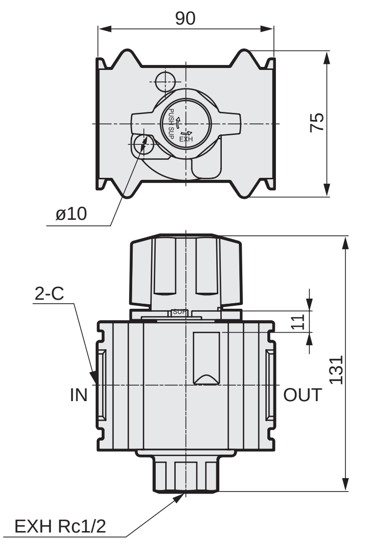
The piping adaptor set is attached at shipment.

MSilencer (-S)
Part model no.:SLW-10A



The silencer is attached at shipment.
7KH VLOHQFHU LV PDGH RI ÀDPH UHVLVWDQFH U 6WDQGDUG 9 2 RU HTXLYD
1RWH WKDW WKH HOHPHQW LV QRW PDQXI HG RI ÀDPH UHVLVWDQFH

Dimensions (V6010-W)

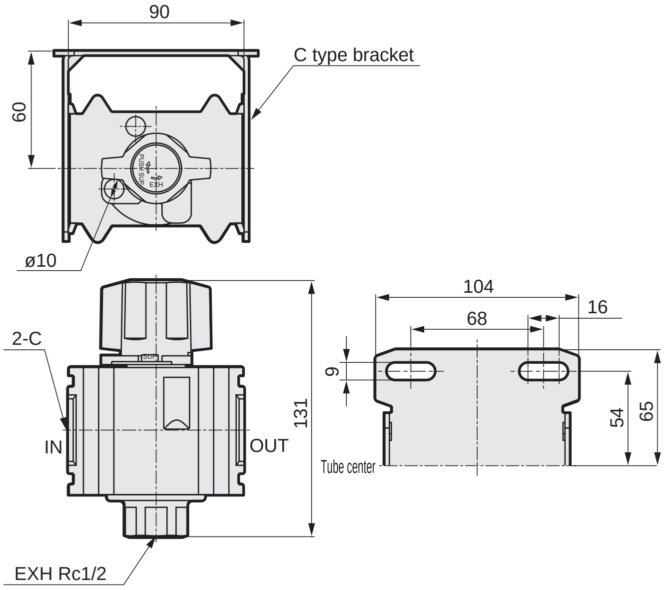


* The EXH port is the silencer mounting port.

Descriptions	C
V6010-20-W	Rc3/4
V6010-25-W	Rc1

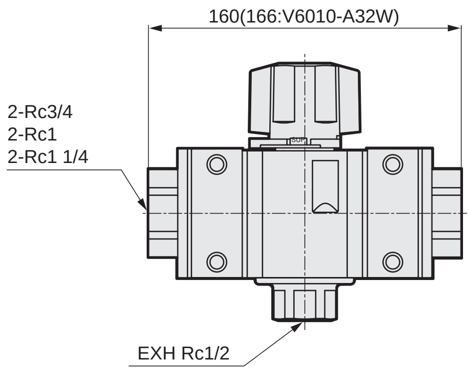
MC type bracket (-BW)

Part model no.: B620



The C type bracket is attached at shipment.
C type bracket and piping adaptor set can not be used together.

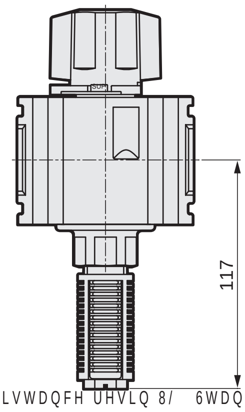
MAdaptor attachment



The piping adaptor set is enclosed with the shipment.

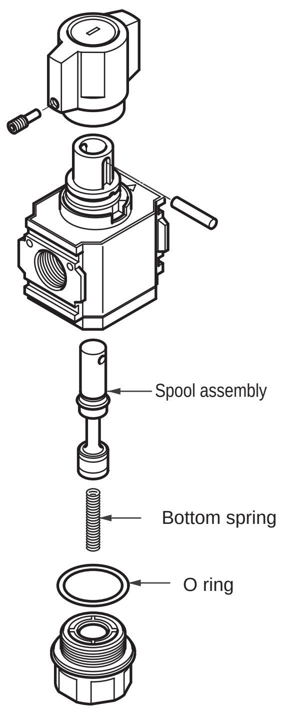
MSilencer (-S)

Part model no.: SLW-15A



The silencer is attached at shipment.
7KH VLOHQFHU LV PDGH RI ÀDPH UHVLVWDQFH UHVLQ 8/ 6WDQGDUG 9
1RWH WKDW WKH HOHPHQW LV QRW PDQXIDFWXUHG RI ÀDPH U

Shut-off valve (V3000-W, V3010-W) optional parts drawing



Spool assembly

(Sets of spool assembly, bottom spring)

Model	Spool assembly model no.
V3000, V3010	V3000-SPOOL

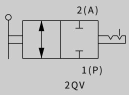
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

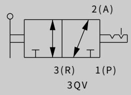
Quick exhaust valve

2QV/3QV Series

Port size: Push-in joint ¿4, ¿6, ¿8, ¿10, ¿12, R1/8 to R1/2

JIS symbol





Features

Straight flow path and large effective sectional area.
Flame resistance resin provided as standard. (Equivalent to flame resistance resin UL94 standards V-0)
Manifold enabled by optional bracket.
2 and 3 port valves are available.

Specifications

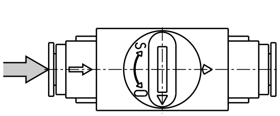
Descriptions	2QV/3QV
Working fluid	Air
Max. working pressure MPa	1
Min. working pressure kPa	-100 (Note 1)
Withstanding pressure MPa	1.5
Fluid temperature ûC	0 to 60
Ambient temperature ûC	0 to 60
Switching angle û	90
Applicable tube	Soft nylon tube (tube F-15**) Urethane tube (tube U-95**,NU-**)
Mounting attitude	Any

Note 1: When using urethane tube (U-95**, NU-**) at vacuum, use an insert ring.
Note 2: Lubricant is used, so oil-prohibited specification are not available.

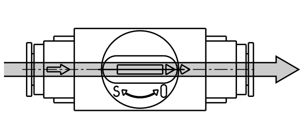
Operational explanation

2 port valve (2QV Series)

(closed state)

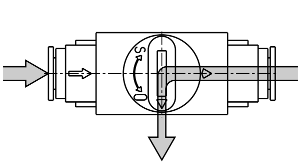


(open state)

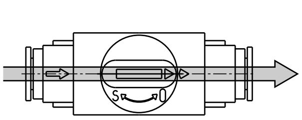


3 port valve (3QV Series)

(closed state)

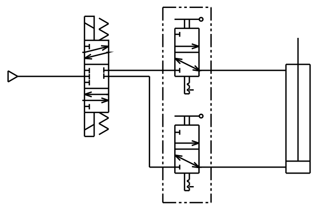


(open state)



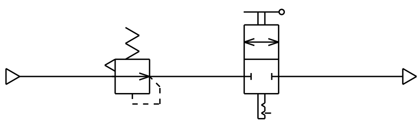
Applications

Shut-off valve in air cylinder circuit



Quick exhaust valve (3QV)

Stop valve in air blow circuit



Quick exhaust valve (2QV)

Clean room specifications (catalog No. CB-033S)

Dust generation preventing structure for use in cleanrooms

2QV- ááááááááááááááá P70 áááá -

How to order

Quick exhaust valve

2 QV - 04-04

Ⓐ Valve type

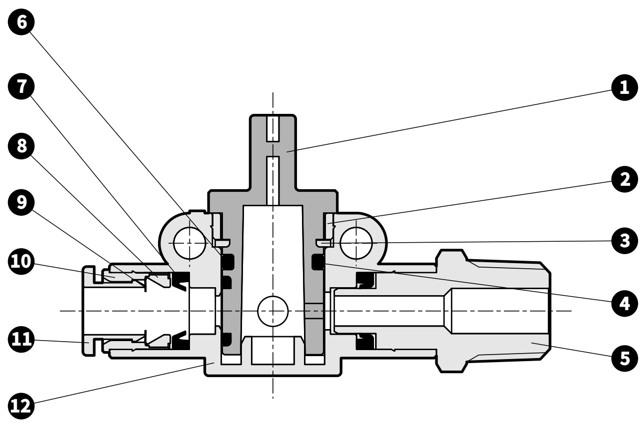
Ⓑ Port size (P port) - (A port)

	Symbol	Descriptions			Bracket *
Ⓐ Valve type					
	2	2 way valve			
	3	3 way valve			
Ⓑ Port size (P port) - (A port)		IN side	-	OUT side	
Standard	04-04	Push-in joint ¿4	-	Push-in joint ¿4	2QV-P1
	06-06	Push-in joint ¿6	-	Push-in joint ¿6	
	08S-08S	Push-in joint ¿8	-	Push-in joint ¿8	
	08-08	Push-in joint ¿8	-	Push-in joint ¿8	2QV-P2
	10-10	Push-in joint ¿10	-	Push-in joint ¿10	
	12-12	Push-in joint ¿12	-	Push-in joint ¿12	
Option	6A-04	R1/8	-	Push-in joint ¿4	2QV-P1
	6A-06	R1/8	-	Push-in joint ¿6	
	8A-06	R1/4	-	Push-in joint ¿6	
	8A-08S	R1/4	-	Push-in joint ¿8	
	10A-08	R3/8	-	Push-in joint ¿8	2QV-P2
	10A-10	R3/8	-	Push-in joint ¿10	
	15A-10	R1/2	-	Push-in joint ¿10	
	15A-12	R1/2	-	Push-in joint ¿12	
	04-6A	Push-in joint ¿4	-	R1/8	2QV-P1
	06-6A	Push-in joint ¿6	-	R1/8	
	06-8A	Push-in joint ¿6	-	R1/4	
	08S-8A	Push-in joint ¿8	-	R1/4	
	08-10A	Push-in joint ¿8	-	R3/8	2QV-P2
	10-10A	Push-in joint ¿10	-	R3/8	
	10-15A	Push-in joint ¿10	-	R1/2	
	12-15A	Push-in joint ¿12	-	R1/2	
	6A-6A	R1/8	-	R1/8	2QV-P1
	8A-8A	R1/4	-	R1/4	
	10A-10A	R3/8	-	R3/8	2QV-P2
	15A-15A	R1/2	-	R1/2	

*For 2 and 3 port valve, a bracket is common.
* Note that this may differ according to the body size.

⚠ Select the reverse regulator (R*100) or reverse filter regulator (W*100) when installing the 3QV onto the primary side of the regulator or filter regulator.

Internal structure and parts list



Parts list

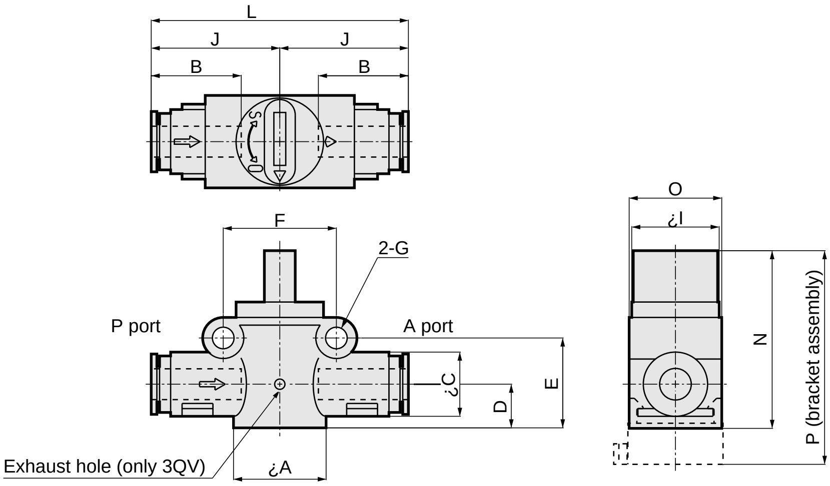
No.	Parts name	Material
1	Rotary shaft	PBT (UL94V-0 or equivalent)
2	Stopper	Brass (electroless nickeling treatment) *1
		Stainless steel *2
3	Ring	Steel
4	O-ring	Nitrile rubber
5	Nipple	Brass (electroless nickeling treatment)
6	O-ring	Nitrile rubber
7	Packing seal	Nitrile rubber
8	Chuck holder	Polyacetal
9	Chuck	Stainless steel
10	Outer ring	Brass (electroless nickeling treatment)
11	Push ring	PBT (UL94V-0 or equivalent)
12	Body	PBT (UL94V-0 or equivalent)

*1: The "A" dimensions in the outline drawing apply to the "18" model material.
*2: The "A" dimensions in the outline drawing apply to the "22" model material.

Dimensions

CAD

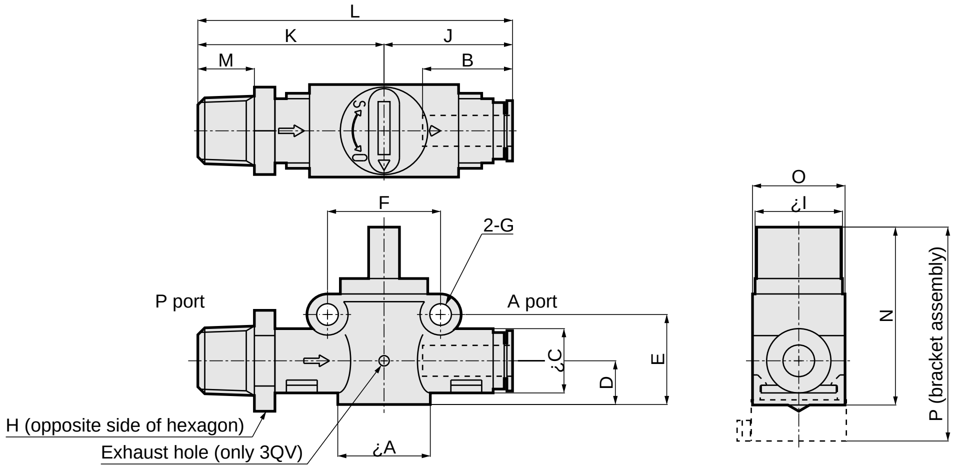
Port size
á P port (push-in joint), A port (push-in joint)



Applicable tube O.D. (mm) P port	A port	Model no.	A	B	C	D	E	F	G	I	J	L	N	O	P	Weight (g)	Effective sectional area (mm²) P A	A R
¿4	¿4	$^{2}_{3}$QV-04-04	18	16	12.5	8.5	17.5	22	4.2	17	25	50	34.5	18	41.5	20	4.2	1.8
¿6	¿6	$^{2}_{3}$QV-06-06		17.5												21	9.3	
¿8	¿8	$^{2}_{3}$QV-08S-08S		19	14.5						26.5	53				23	10.2	
¿8	¿8	$^{2}_{3}$QV-08-08	22	19	17.5	10.7	22.8	26.5	4.2	17	31.5	63	39.8	22	46.8	34	17.5	4.0
¿10	¿10	$^{2}_{3}$QV-10-10		21.5												35	22.5	
¿12	¿12	$^{2}_{3}$QV-12-12		23	20						33	66				38	22.5	

* Tolerance of effective sectional area is ±10%.

Port size
á P port (male thread), A port (push-in joint)



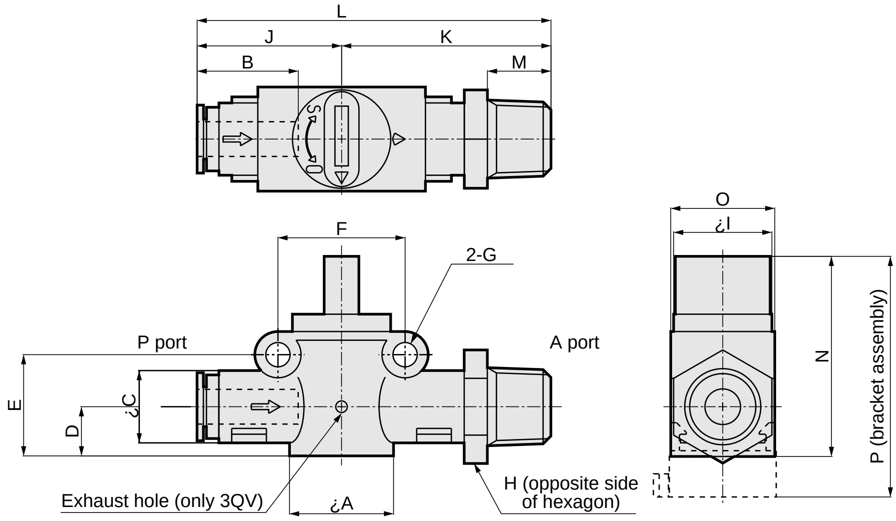
Port thread R P port	Applicable tube O.D.(mm) A port	Model no.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Weight (g)	Effective sectional area (mm²) P A	A R
1/8	¿4	$^{2}_{3}$QV-6A-04	18	16	12.5	8.5	17.5	22	4.2	14	17	25	33.5	58.5	8	34.5	18	41.5	26	4.2	1.8
1/8	¿6	$^{2}_{3}$QV-6A-06		17.5															32	9.3	
1/4	¿6	$^{2}_{3}$QV-8A-06								17			38	63	11				35	9.3	
1/4	¿8	$^{2}_{3}$QV-8A-08S		19	14.5							26.5		64.5					40	10.2	
3/8	¿8	$^{2}_{3}$QV-10A-08	22	19	17.5	10.7	22.8	26.5	4.2	17	17	31.5	44.5	76	12	39.8	22	46.8	57	16.3	4.0
3/8	¿10	$^{2}_{3}$QV-10A-10		21.5						19									63	21.4	
1/2	¿10	$^{2}_{3}$QV-15A-10								22			47.5	79	15				76	21.4	
1/2	¿12	$^{2}_{3}$QV-15A-12		23	20.0							33	49	82					85	21.4	

* Tolerance of effective sectional area is ±10%.

Dimensions

CAD

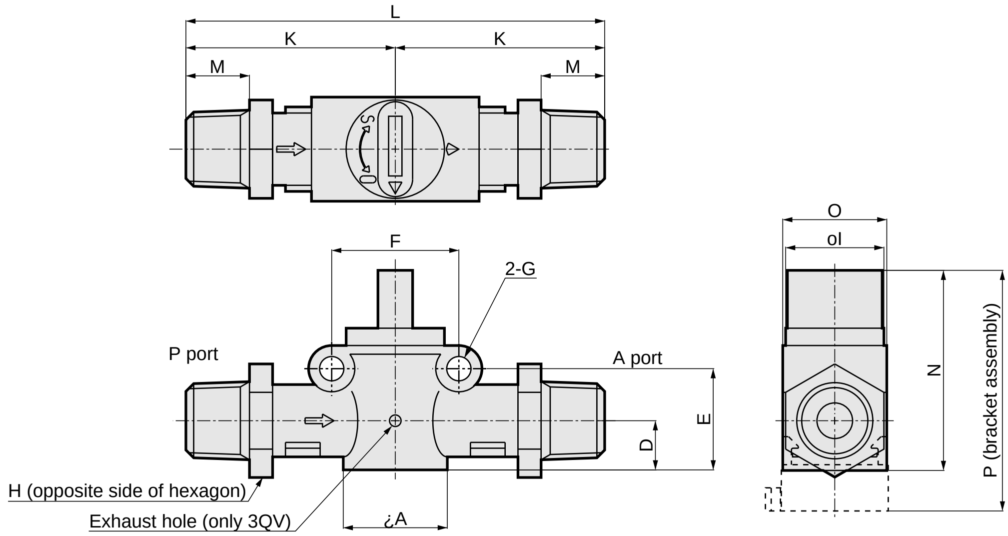
Port size
á P port (push-in joint), A port (male thread)



<table>
<tr><th>Applicable tube O.D.(mm)</th><th>Port thread R</th><th rowspan="2">Model no.</th><th rowspan="2">A</th><th rowspan="2">B</th><th rowspan="2">C</th><th rowspan="2">D</th><th rowspan="2">E</th><th rowspan="2">F</th><th rowspan="2">G</th><th rowspan="2">H</th><th rowspan="2">I</th><th rowspan="2">J</th><th rowspan="2">K</th><th rowspan="2">L</th><th rowspan="2">M</th><th rowspan="2">N</th><th rowspan="2">O</th><th rowspan="2">P</th><th rowspan="2">Weight (g)</th><th colspan="2">Effective sectional area (mm²)</th></tr>
<tr><th>P port</th><th>A port</th><th>P A</th><th>A R</th></tr>
<tr><td>¿4</td><td>1/8</td><td>$^2_3$QV-04-6A</td><td rowspan="4">18</td><td>16</td><td rowspan="3">12.5</td><td rowspan="4">8.5</td><td rowspan="4">17.5</td><td rowspan="4">22</td><td rowspan="4">4.2</td><td rowspan="2">14</td><td rowspan="4">17</td><td rowspan="3">25</td><td rowspan="2">33.5</td><td rowspan="2">58.5</td><td rowspan="2">8</td><td rowspan="4">34.5</td><td rowspan="4">18</td><td rowspan="4">41.5</td><td>26</td><td>3.5</td><td rowspan="4">1.8</td></tr>
<tr><td>¿6</td><td>1/8</td><td>$^2_3$QV-06-6A</td><td rowspan="2">17.5</td><td>32</td><td>9.3</td></tr>
<tr><td>¿6</td><td>1/4</td><td>$^2_3$QV-06-8A</td><td rowspan="2">17</td><td rowspan="2">38</td><td>63</td><td rowspan="2">11</td><td>35</td><td>9.3</td></tr>
<tr><td>¿8</td><td>1/4</td><td>$^2_3$QV-08S-8A</td><td>19</td><td>14.5</td><td>26.5</td><td>64.5</td><td>40</td><td>10.2</td></tr>
<tr><td>¿8</td><td>3/8</td><td>$^2_3$QV-08-10A</td><td rowspan="4">22</td><td>19</td><td rowspan="3">17.5</td><td rowspan="4">10.7</td><td rowspan="4">22.8</td><td rowspan="4">26.5</td><td rowspan="4">4.2</td><td>17</td><td rowspan="4">17</td><td rowspan="3">31.5</td><td rowspan="2">44.5</td><td rowspan="2">76</td><td rowspan="2">12</td><td rowspan="4">39.8</td><td rowspan="4">22</td><td rowspan="4">46.8</td><td>57</td><td>15.8</td><td rowspan="4">4.0</td></tr>
<tr><td>¿10</td><td>3/8</td><td>$^2_3$QV-10-10A</td><td rowspan="2">21.5</td><td>19</td><td>63</td><td>21.4</td></tr>
<tr><td>¿10</td><td>1/2</td><td>$^2_3$QV-10-15A</td><td rowspan="2">22</td><td>47.5</td><td>79</td><td rowspan="2">15</td><td>76</td><td>21.4</td></tr>
<tr><td>¿12</td><td>1/2</td><td>$^2_3$QV-12-15A</td><td>23</td><td>20.0</td><td>33</td><td>49</td><td>82</td><td>85</td><td>21.4</td></tr>
</table>

* Tolerance of effective sectional area is ±10%.

Port size
á P port (male thread), A port (male thread)



<table>
<tr><th colspan="2">Port thread R</th><th rowspan="2">Model no.</th><th rowspan="2">A</th><th rowspan="2">D</th><th rowspan="2">E</th><th rowspan="2">F</th><th rowspan="2">G</th><th rowspan="2">H</th><th rowspan="2">I</th><th rowspan="2">K</th><th rowspan="2">L</th><th rowspan="2">M</th><th rowspan="2">N</th><th rowspan="2">O</th><th rowspan="2">P</th><th rowspan="2">Weight (g)</th><th colspan="2">Effective sectional area (mm²)</th></tr>
<tr><th>P port</th><th>A port</th><th>P A</th><th>A R</th></tr>
<tr><td>1/8</td><td>1/8</td><td>$^2_3$QV-6A-6A</td><td rowspan="2">18</td><td rowspan="2">8.5</td><td rowspan="2">17.5</td><td rowspan="2">22</td><td rowspan="2">4.2</td><td>14</td><td rowspan="2">17</td><td>33.5</td><td>67</td><td>8</td><td rowspan="2">34.5</td><td rowspan="2">18</td><td rowspan="2">41.5</td><td>42</td><td>9.5</td><td rowspan="2">1.8</td></tr>
<tr><td>1/4</td><td>1/4</td><td>$^2_3$QV-8A-8A</td><td>17</td><td>38</td><td>76</td><td>11</td><td>48</td><td>9.5</td></tr>
<tr><td>3/8</td><td>3/8</td><td>$^2_3$QV-10A-10A</td><td rowspan="2">22</td><td rowspan="2">10.7</td><td rowspan="2">22.8</td><td rowspan="2">26.5</td><td rowspan="2">4.2</td><td>19</td><td rowspan="2">17</td><td>44.5</td><td>89</td><td>12</td><td rowspan="2">39.8</td><td rowspan="2">22</td><td rowspan="2">46.8</td><td>90</td><td>21.4</td><td rowspan="2">4.0</td></tr>
<tr><td>1/2</td><td>1/2</td><td>$^2_3$QV-15A-15A</td><td>22</td><td>47.5</td><td>95</td><td>15</td><td>116</td><td>21.4</td></tr>
</table>

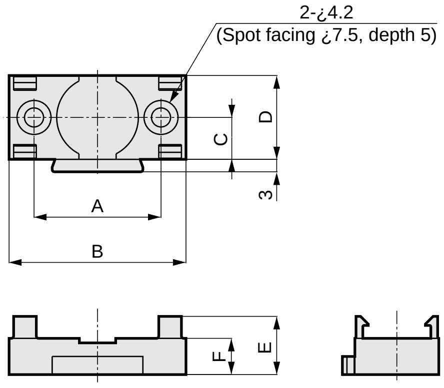
* Tolerance of effective sectional area is ±10%.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

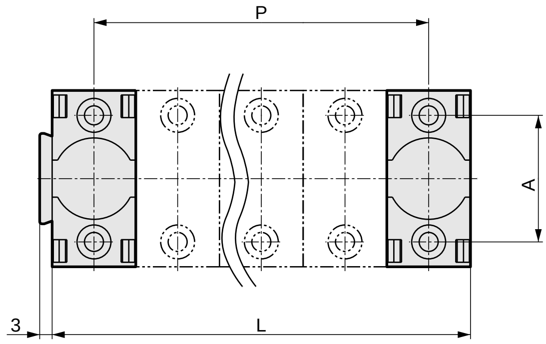
Dimensions

CAD

Bracket



Manifold mounting pitch dimension



Model no.	A	B	C	D	E	F	P	L	Subject dimension A
2QV-P1	28	39	9.25	18.5	13	8	D (n-1)	D n	18
2QV-P2	32	44	11.25	22.5	12.5	8			22

n = station number

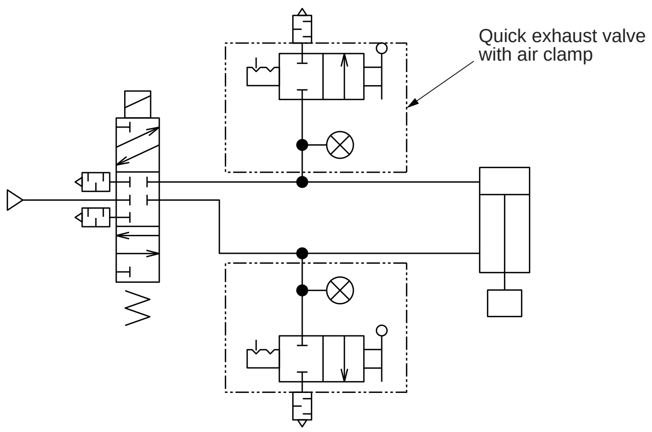
Introduction of custom order

A quick valve with air lamp is available as a customized order part. Contact CKD for details.
Note: Note that the ¿12 diameter type is not available.

Specifications

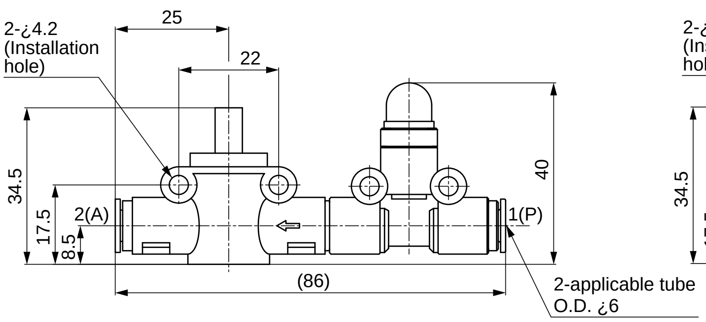
Descriptions	Air lamp
Working fluid	Air
Working pressure range MPa	0.05 to 0.8
Fluid temperature ûC	0 to 60
Ambient temperature ûC	0 to 60
Display color	Red, green

Application
á Cylinder residual pressure exhaust

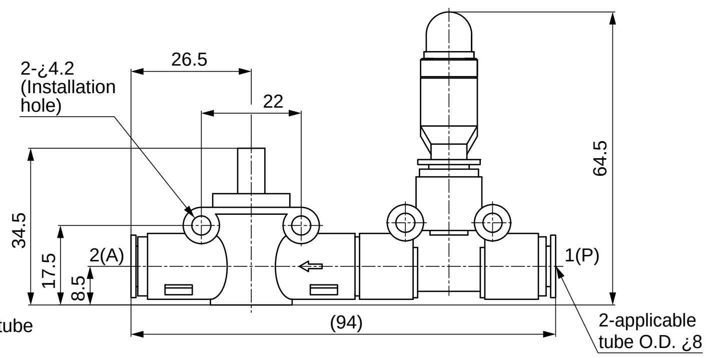


Example of assembly

2QV-06-06 with air lamp



2QV-08S-08S with air lamp



Types 3QV-06 to 10 with air lamps are also available. Contact CKD for details.

Quick exhaust valve 2QV/3QV Series

Design & Selection

⚠ WARNING

Use the product within specifications.
Using this product with fluid other than compressed air or at a pressure or temperature exceeding the specifications could result in rupture, the tube coming off, or leakage.

Avoid installing this product outdoors or where it is exposed to direct sunlight.

⚠ CAUTION

Confirm that the product will withstand the working environment.

This product cannot be used in environments where functional obstacles could occur.
Such environments include high temperatures, a chemical atmosphere, or where chemicals, vibration, moisture, water drip, or gas are present; or where ozone is generated. Outdoors or where the product could be subject to direct sunlight; or where cutting oil, coolant, or spatter could occur or where static electricity could pose a problem.

Confirm that PTFE can be used.

The sealant contains PTFE (polytetrafluoroethylene resin) powder. Check that this poses no problem during use.

Contact CKD if ozone could occur in supply air. (An ozone-resistant series is available.)

Avoid using this product in hot or humid places, outdoors, or where it could be subject to direct sunlight.

Installation & Adjustment

⚠ WARNING

Securely insert the tube until it contacts the joint's tube end, and check that it does not come off the joint.

Stop air and confirm that there is no residual pressure before replacing the tube.

Piping

⚠ CAUTION

Observe the following precautions when using nylon tubes or urethane tubes for piping material.

Use the designated tube and CKD plastic plug (GWP Series). Do not use metal plugs.
Tube outer diameter precision
á Polyamide tube áááááááááááááááááá: Within ±0.1 mm
á Polyurethane tube
(up to ¿6) áááááááááááá : Within ±0.1 mm
(¿8 to) áááááááááááááááá: Within $^{+0.1}_{-0.15}$ mm
Use a tube with a hardness of 92û or more. If a tube that does not satisfy diameter accuracy or hardness is used, chucking force may drop or the tube may come off or be difficult to insert.
Consult with CKD when using a nondesignated tube or plug.
Cut the tube with a dedicated cutter, and cut at a right angle.
Do not use a worn of damaged tube that could be crushed or rupture.
Do not reuse a tube that could be deteriorated and deformed.
Do not let the tube directly contact other surfaces, it could wear and break.

Do not use this product for applications that constantly rotate, vibrate or which have a tube that moves vigorously.

Use tubing within the minimum bending radius but long enough to avoid sudden bends.

Consider changes in tubing length caused by pressure when tubing is connected, and provide sufficient length within the minimum tube bending radius.

Always flush just before piping pneumatic component.

Any foreign matter that has entered during piping must be removed so it does not enter the pneumatic component. Remove all swarf and foreign debris generated during piping and tube insertion before starting use.

When supplying compressed air for the first time after connecting pipes, do not apply high pressure suddenly.

The pipe connection could dislocate causing the pipe tube to bounce and result in accidents.

After connecting piping, check pipe connections for air leaks before supplying compressed air.

Apply a leakage detection agent on pipe connections with a brush, and check for air leaks.

Handling push-in joints and tubes

Refer to cautions of joint and tube, and "Safety Precautions" (pages 918 to 921) for handling push-in joints and tubes.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

Installation & Adjustment

⚠CAUTION

Apply adequate torque when connecting pipes.

To prevent air leakage and screw damage. First tighten the screw by hand to prevent damage to screw threads, then use a tool.
Check that the tool's hexagon face and wrench are the correct size.
(Reference value)

Port thread	Tightening torque N·m
R1/8	3 to 5
R1/4	6 to 8
R3/8	13 to 15
R1/2	16 to 18

*The above values apply when the matching screw is a JISB0203 tapered female thread to piping (material: C3604BD)

Connect piping so that connections are not dislocated by system movement, vibration, or tension, etc.

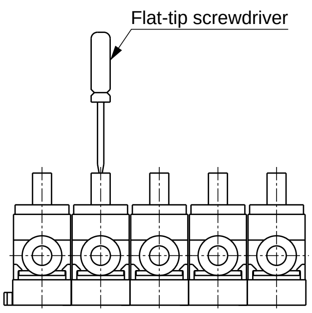
Control of actuator speed will be disabled if piping on the exhaust side of the pneumatic circuit is disengaged.
When using the chuck holding mechanism, the chuck will be released creating a hazardous state.
Confirm that the tube has been inserted properly, and make sure that there is no tension during use.
The tube could be dislocated or damaged if there is any tension.

Make sure that the joint and tube are not twisted or pulled, and that moment load is not applied.

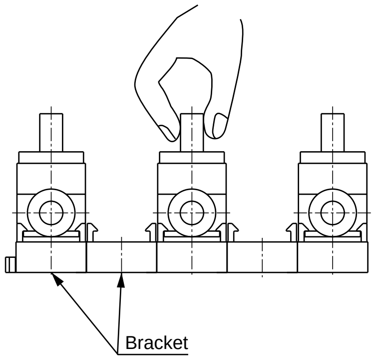
Do not tighten while pressure is applied.

When using a urethane rubber tube (U-95**, NU-**) for a vacuum, use an insert ring.

If the manifolds are installed with a priority on space, it may be difficult to operate the value manually. Operate by inserting a screwdriver, etc., into the slot on the top of the dial.



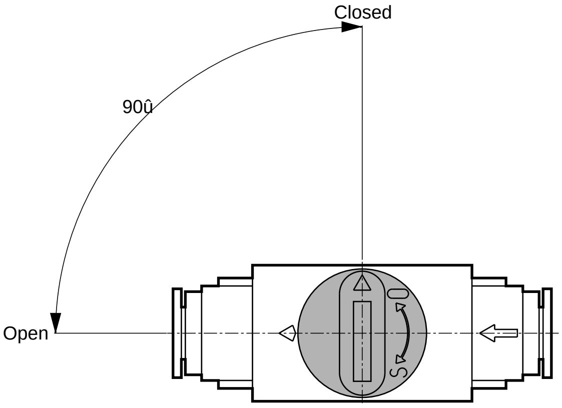
If manifolds are installed with a priority on manual operation, valves are operated easily by installing them every other space.



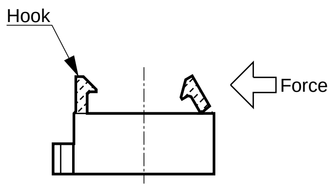
During use & Maintenance

⚠ CAUTION

Operation angle of this product is 90û
Do not turn the product more than 90û.

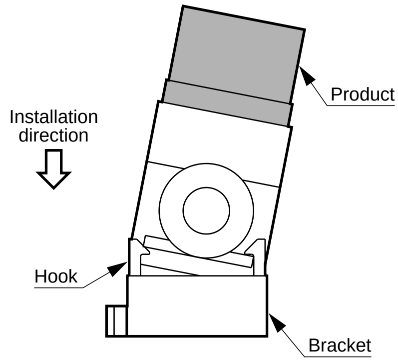


The dedicated bracket's hooks can be damaged by external force. Use brackets correctly.

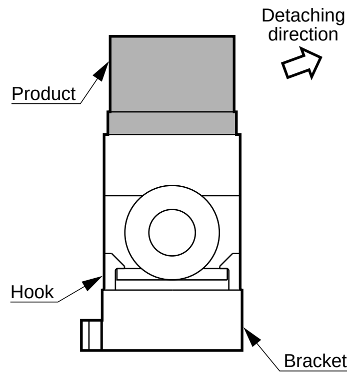


How to use bracket

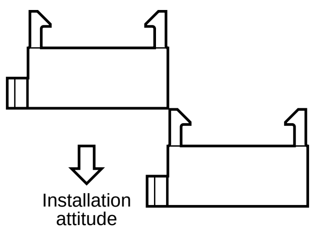
(1) Fix the bracket before starting use. To mount, insert the product at a slant into the bracket, and then fit into hooks.



(2) To remove the product, tilt it slightly to the side, and release one hook.



(3) When mounting a manifold, the project on the bracket into the other bracket's slot.



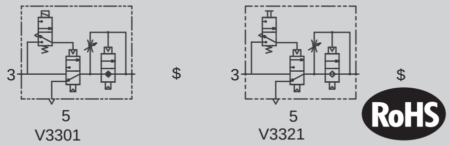
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series F.R.L. unit

Slow start valve standard white Series

V3301-W/V3321-W Series

To maintain safety at starting and stopping
MPort size: Rc1/4 to Rc1/2

JIS symbol



6SHFL¿FDWLRQV

Descriptions		V3301-W/V3321-W		
Operation method		Pilot operated soft spool valve		
:RUNLQJ ÀXLG		&RPSUHVVHG DLU H[FOXGLQJ XOWUD GU\ FRPSUHVVHG DLU 1RWH		
:RUNLQJ SUHVVXUH UDQJH MPa		0.2 to 1.0		
:LWKVWDQGLQJ SUHVVXUH MPa		1.5		
$PELHQW WHPSHUDWXUH UDQJH ℃		5 to 60		
Port size	3 $ SRUW	Rc1/4	Rc3/8	Rc1/2
	5 SRUW	Rc3/8		
	*DXJH SRUW	Rc1/4		
Effective sectional area mm²	/RZ VSHHG DLU VXSSO\	6		
	+LJK VSHHG DLU VXSSO\	40	64	76
	+LJK VSHHG H[KDXVW	50	74	78
Response time		0.2 sec or less		
/XEULFDWLRQ		RLO IUHH 1RWH		
Weight g		V3301-W:635 V3321-W:515		
6ROHQRLG YDOYH VSHFL¿FDWLRQV		V3301-W		
Rated voltage V		$& +]	$& +]	24 DC
6WDUWLQJ FXUUHQW A		0.076/0.058	0.038/0.030	0.092
+ROGLQJ FXUUHQW A		0.038/0.029	0.019/0.015	
3RZHU FRQVXPSWLRQ W		2.2/1.7	2.2/1.7	2.2
7HPSHUDWXUH ULVH ℃		40 or less		
9ROWDJH ÀXFWXDWLRQ UDQJH		±10%		
,QVXODWLRQ FODVV		Class B		
Electric connection		Grommet lead wire, terminal box		

1RWH &RQVXOW ZLWK &.' ZKHQ XVLQJ XOWUD GU\ DLU
1RWH 8VH WKH WXUELQH RLO &ODVV ,62 9* LI OXEULFDWHG

How to order

MSolenoid valve type V3301 - 08 - W - [B] [C] - 1 - BW
:KLWH W\SH

M0DQXDO V3321 - 08 - W - BW

A Port size
B 0DQXDO RSHUDWLRQ
C Electric connection
D Voltage
E $WWDFKPHQW

Symbol	Descriptions
A Port size	
	1(P)/2(A) port
08	Rc1/4
10	Rc3/8
15	Rc1/2
B Manual operation	
Blank	1RQ ORFNLQJ
M1	Locking
C Electric connection	
Blank	Grommet lead wire
S	*URPPHW OHDG ZLUH VXUJH VXSSUHVVRU
B	Terminal box
LS	7HUPLQDO ER[VXUJH VXSSUHVVRU
D Voltage	
1	100 VAC 50/60Hz (Standard)
2	200 VAC 50/60Hz (Standard)
3	24 VDC (Option)
4	12 VDC (Option)
5	110 VAC 50/60Hz (Option)
6	220 VAC 50/60Hz (Option)
E Attachment (attached)	
Blank	:LWKRXW DWWDFKPHQW
BW	C type bracket
G49P	3UHVVXUH JDXJH * ' 3
S	Silencer

⚠ 6HOHFW WKH UHYHUVH UHJXODWRU 5 RU UHYHUVH ILOWHU UHJXODWRU : ZKHQ LQVWDOOLQJ WKH 9 :9 : RQWR WKH SULPDU\ VLGH RI WKH UHJXODWRU RU ¿OWHU UHJXODWRU

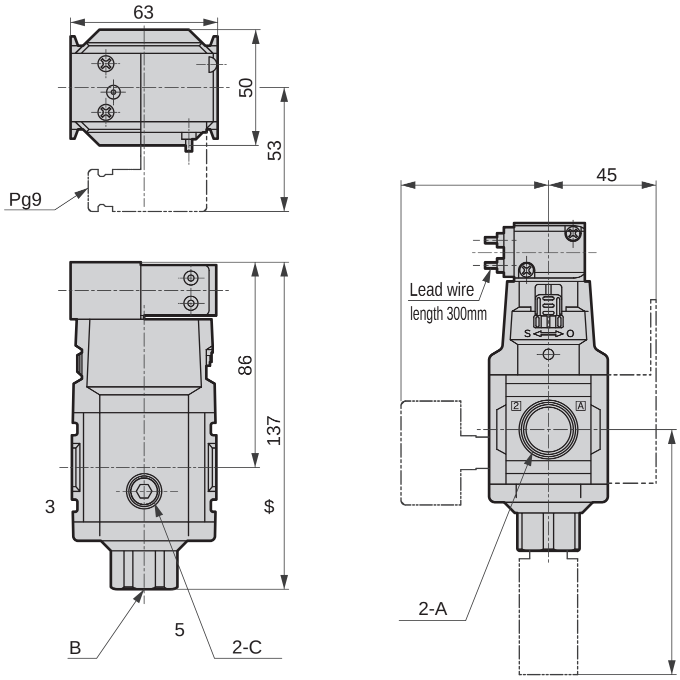
6HFRQGDU\ EDWWHU\ FRPSDWLEOH VSHFL¿FDWLRQV

M6WUXFWXUHG IRU XVH LQ VHFRQGDU\ EDWWHU\ PDQXIDFWXULQJ SURFHVVHV

V3301 - .... - P4*

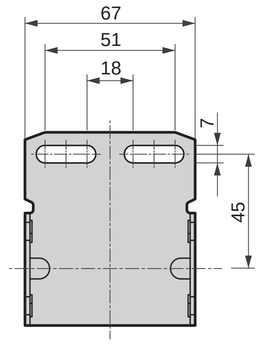
Dimensions

MV3301-W

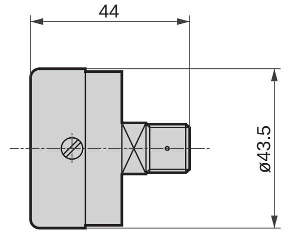


	A	B	C
V3301-08-W	Rc1/4	Rc3/8	Rc1/4
V3301-10-W	Rc3/8		
V3301-15-W	Rc1/2		

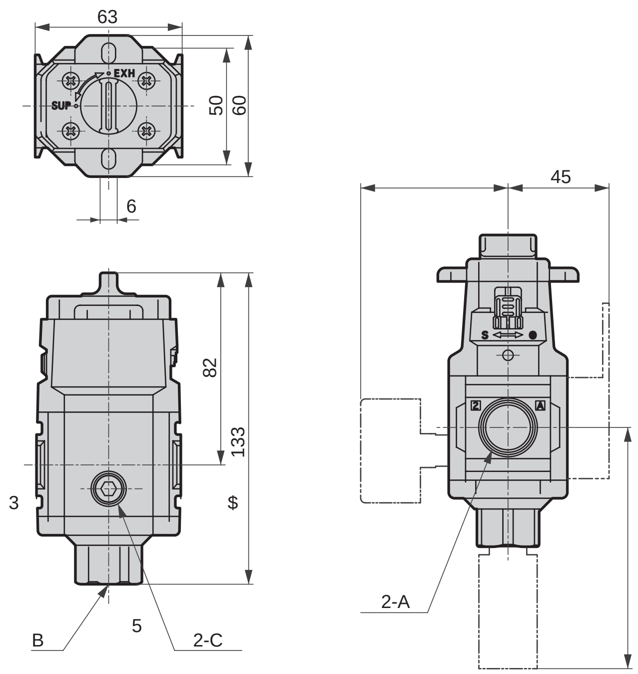
MBracket: B320



M3UHVVXUH JDXJH * ' 3

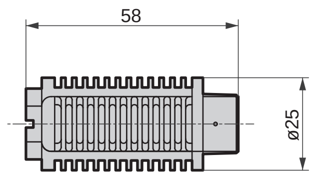


MV3321-W



	A	B	C
V3321-08-W	Rc1/4	Rc3/8	Rc1/4
V3321-10-W	Rc3/8		
V3321-15-W	Rc1/2		

MSilencer: SLW-10A



Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Standard series
F.R.L. unit

2SHUDWLRQDO H[SODQDWLRQ UHIHU WR WKH RSHUDWLRQ FK

7KH VORZ VWDUW YDOYH WXUQV 21 ZKHQ WKH VROHQRLG YDOYH LV HQHUJL]HG RU WKH PDQXDO VHFWLRQ LV VHW WR 683 7KH YDOYH WXUQV 2)) ZKHQ WKH VROHQRLG YDOYH LV GHHQHUJL]HG RU WKH PDQXDO VHFWLRQ LV VHW WR (;+

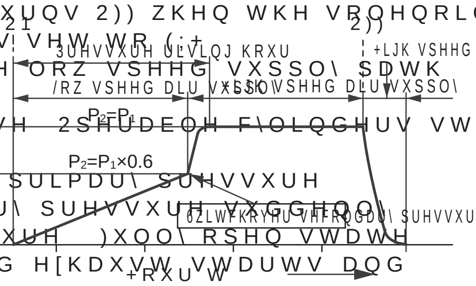
)LUVW ZKHQ WKH PDLQ XQLW LV WXUQHG 21 WKH ORZ VSHHG VXSSO\ SDWK opens and compressed air starts to flow to the secondary side.

6HFRQGDU\ SUHVVXUH JUDGXDOO\ VWDUWV WR ULVH 2SHUDEOH F\OLQGHUV VWDUW PRYLQJ DW D ORZ VSHHG DQG GR QRW SRS RXW

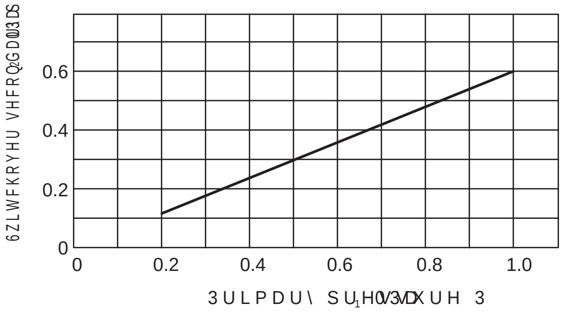
1H[W ZKHQ VHFRQGDU\ SUHVVXUH H[FHHGV RI SULPDU\ SUHVVXUH WKH KLJK VSHHG VXSSO\ SDWK RSHQV 6HFRQGDU\ SUHVVXUH VXGGHQO\ ULVHV WR WKH VDPH SUHVVXUH DV SULPDU\ SUHVVXUH)XOO\ RSHQ VWDWH

:KHQ WKH PDLQ XQLW LV WXUQHG 2)) KLJK VSHHG H[KDXVW VWDUWV DQG UHVLGXDO SUHVVXUH LQ WKH XQLW LV H[KDXVWHG

MOperation characteristics



M6ZLWFKRYHU VHFRQGDU\ SUHVVXUH



$GMXVWPHQW PHWKRG RI VORZ VWDUW UHIHU WR WKH VLGH

3UHVV XS WKH VOLGH NH\ DQG UHOHDVH WKH DGMXVWLQJ QXW ORFN

7XUQ WKH PDLQ XQLW 21 DQG FRQILUP F\OLQGHU RSHUDWLRQ VSHHG DQG VHFRQGDU\ SUHVVXUH ULVH WLPH 7XUQ WKH PDLQ XQLW 2))

7XUQ WKH DGMXVWLQJ QXWV H[SODLQHG EHORZ DQG DGMXVW WKH VWDWH

&\OLQGHU SRSV RXW : 7XUQ WR WKH 6 VLGH

/RZ VSHHG RSHUDWLRQ WLPH LV WRR ORQJ : 7XUQ WR WKH 2 VLGH

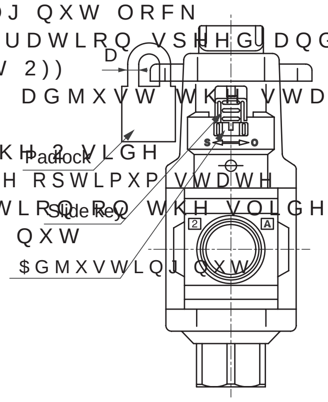
5HSHDW VWHSV DQG DV QHFHVVDU\ DQG DGMXVW WR WKH RSWLPXP VWDWH

$OLJQ WKH DGMXVWPHQW QXW NH\ZD\ WR WKH SURMHFWLRQ RQ WKH VOLGH NH\

3UHVV GRZQ WKH VOLGH NH\ DQG ORFN WKH DGMXVWLQJ QXW

&RQ¿UP WKDW WKH PDLQ XQLW LV 2))

MSide view



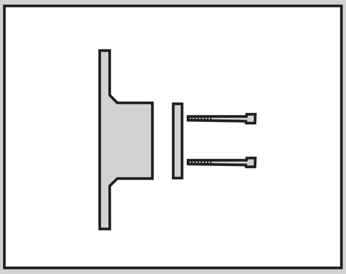
⚠ 6DIHW\ SUHFDXWLRQV

1RWH 7KLV YDOYH LV IRU GHYLFH VWDUWLQJ DQG VWRSSLQJ LQFOXGLQJ HPHUJHQF\ VWRSV 7KLV YDOYH VKRXOG QRW XVHG IRU F\OLQGHU UHSHDW RSHUDWLRQ RU as a normal 3-way valve.

1RWH ,I WKH PLQLPXP RSHUDWLQJ SUHVVXUH RI WKH F\OLQGHU ZKLFK LV WR EH SUHYHQWHG IURP SRSSLQJ RXW LV OHVV WKDQ RI ZRUNLQJ SUHVVXUH SRSSLQJ RXW LV QRW SUHYHQWHG

1RWH 7KH PDQXDO RYHUULGH LV ORFNHG ZLWK D PDQXDO YDOYH 6HOHFW D padlock with a D dimension of 3.8 to 5.8mm.

1RWH &RQQHFW D VLOHQFHU RU H[KDXVW ¿OWHU HWF RQ WKH H[KDXVW SRUW IRU VDIHW\ DQG QRLVH UHGXFWLRQ



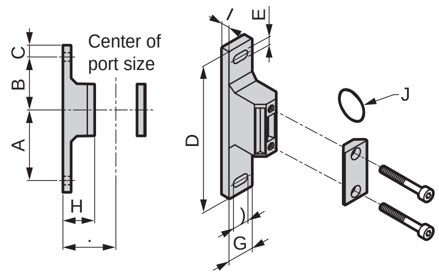
Bracket standard white Series
B-W/B Series
Joiner standard white Series
J-W Series

Dimensions / Applications

T type bracket set

M0RGHO 1R /%B310-W/B410-W/B810-W
MApplication

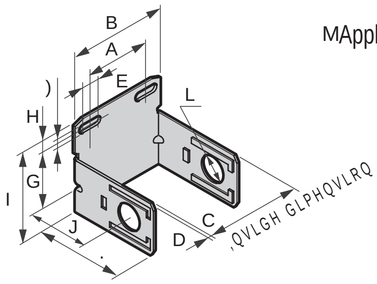
1RW6HOHFW %   : ZKHQ XVL
Series and 4000-W Series combined.



Model no.	Applicable model	A	B	C	D	E	)	G	H	I	J	.
B110-W	1000 Series	45	35	10	100	5.5	7.5	16	25	7.5	JASO-2013	40
B310-W	2000 Series 3000 Series	60	45	10	125	7	14	22	27	7	JISB2401-P21	45
B410-W	4000 Series	60	45	10	125	7	14	22	37	7	JISB2401-P21	55
B810-W	6000 Series 8000 Series	70	50	15	150	9	14	27	37	8	AS568-127	65

C type bracket

M0RGHO 1R/B220/B320/B420/B620/B820
MAttachment: BW

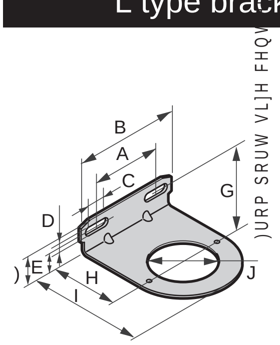


MApplication

Model no.	Applicable model	A	B	C	D	E	)	G	H	I	J	.	L
B120	1000 Series	44	68	40	t2.0	10	6.5	35	8.5	61.5	40	60	ø19.5
B220	2000 Series	28	54	50	t2.3	10	7	33	8	63	45	69	17.3
B320	3000 Series	34.5	67	63	t2.3	16.5	7	45	9	75.5	45	69	ø21.7
B420	4000 Series	55	84	80	t2.3	14.0	7	45	9	75.5	55	79	ø21.7
B620	6000 Series	68	104	90	t2.3	16	9	54	11	97.5	60	97	ø35
B820	8000 Series	68	104	100	t2.3	16	9	50	11	93.5	65	102	ø35

L type bracket

M0RGHO 1R/B230/B330/B430
MAttachment: B3W
/RRVHQ WKH PRXQWLQJ QXW WR UHPRYH WKH NQRE $IV
WKH PRXQWLQJ QXW 3UHVV WKH NQRE LQ PDQXDOO\ DI
Refer to page 279 for the details.

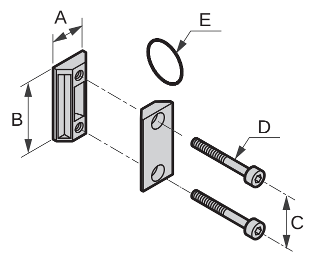


MApplication

Model no.	Applicable model	A	B	C	D	E	)	G	H	I	J	Other
B130	1000 Series	44	68	10	6.5	16	24.5	45	40	59	ø26.5	
B230	2000 Series	28	54	10	7	18	26	52	45	69	38	
B330	3000 Series	34.5	67	16.5	7	17.5	26	58	45	76	ø40	'LPHQVLRQV LQ W3000/3100
B430	4000 Series 6000 Series	55	84	14	7	17.5	26	58	55	94	ø47	

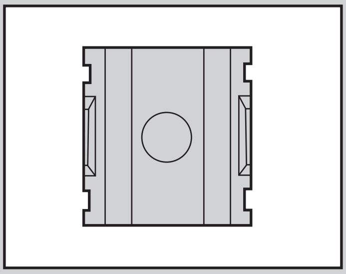
Joiner set

M0RGHO&1R - :
C4000-J400-W
C8000-J800-W



MApplication

Model no.	Applicable model	A	B	C	D	E
C1000-J100-W	1000 Series	10	36	26	M3.5	JAS0-2013
C4000-J400-W	2000 Series 3000 Series 4000 Series	21	44	32	M5	JIS B2401-P21
C8000-J800-W	6000 Series 8000 Series	26	65	50	M6	AS568-127



'LVWULEXWRU VWDQGDUG ZKLWH 6HULHV

D101/D401/D801/D300-W Series

Applicable for pipe branching.

Port size: 1/8 to 1

JIS symbol

RoHS CAD

6SHFL¿FDWLRQV

Descriptions	D101-00-W	D401-00-W	D801-00-W	D300-W
:RUNLQJ ÀXLG	Compressed air			
0D[ZRUNLQJ SUHVVXUH MPa	1.0			
:LWKVWDQGLQJ SUHVVXUH MPa	1.5			
1R RI EUDQFK SRUW	1			4
3RUW VL]H 5F 137 *	1/8, 1/4	1/4, 3/8, 1/2	3/4, 1	1/4, 3/8
:RUNLQJ WHPSHUDWXUH °C	5 to 60			
3URGXFW ZHLJKW kg	0.045	0.13	0.35	0.26

How to order

D101 - 00 - 6 ( ) - W - B11W

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
:KLWH W\SH
Ⓓ T type bracket

Symbol	Descriptions		
Ⓐ Model no.			
D101	1000 series		
D401	2000, 3000, 4000 series		
D801	6000, 8000 series		

Ⓑ Port size		D101	D401	D801
6	1/8	M		
8	1/4	M	M	
10	3/8		M	
15	1/2		M	
20	3/4			M
25	1			M

Ⓒ Port thread type	
Blank	Rc thread
N	137 WKUHDG
G	G thread

Ⓓ T type bracket		D101	D401	D801
Blank	1RQH	M	M	M
B11W	1000 series	M		
B31W series	2000 3000 series		M	
B41W	4000 series		M	
B81W series	6000 8000 series			M

D300 - 8 ( ) - W - Q

'LVWULEXWRU ZKLWH W\SH
Ⓐ Port size
Ⓑ Port thread type
Ⓒ Option

Symbol	Descriptions
Ⓐ Port size	
8	1/4
10	3/8
Ⓑ Port thread type	
Blank	Rc thread
N	137 WKUHDG
G	G thread
Ⓒ Option	
Blank	1RQH
Q	Enclosing two each of: EODQNLQJ SOXJ EODQNLQJ SOXJ

⚠ 1RWH RQ PRGHO QR selection

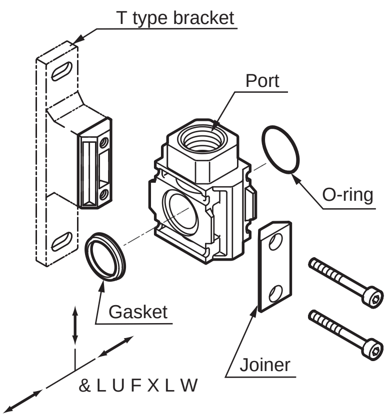
1RWH 7KH MRLQHU VHW MRLQHU EROW 2 ULQJ gasket are enclosed as a standard.
1RWH &RQWDFW &.' IRU ZD\ EUDQFK
1RWH : FDQ EH FRQQHFWHG ZLWK Series and 4000-W Series.

⚠ 1RWH RQ PRGHO QR VHO

1RWH KHQ XVLQJ ZLWK & : & : D MRL C4000-J400-W, or T type bracket set B310-W or % : LV UHTXLUHG WR FRQQHFW
1RWH RLQHU VHW & - : RU 7 W\SH EUDFNH EH RUGHUHG VHSDUDWHO\ 5HIHU WR SD

$VVHPEO\ PHWKRG ' : ' : '

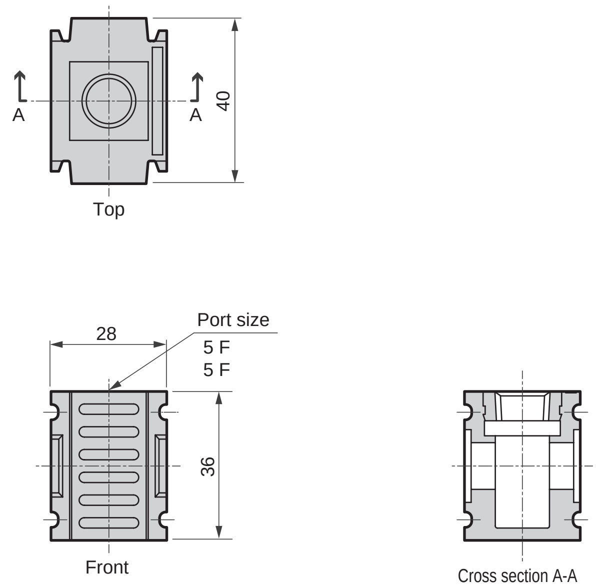
$SSOLFDWLRQ ' : ' : '



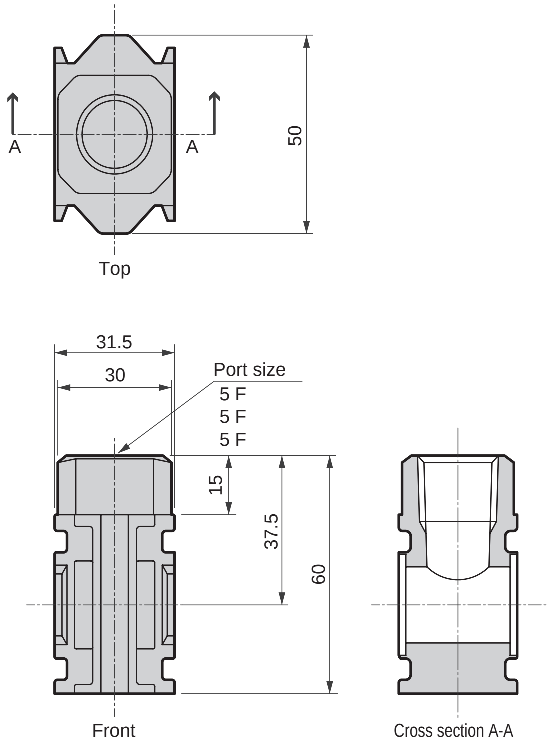
1RWH KHQ LQVWDOOLQJ DW WKH primary side, insert an O-ring, while installing at the secondary side, insert a gasket.
1RWH When inserting O-ring and gasket to assemble, 2 ULQJ DQG JDVNHW PXVW not be folded.

Dimensions

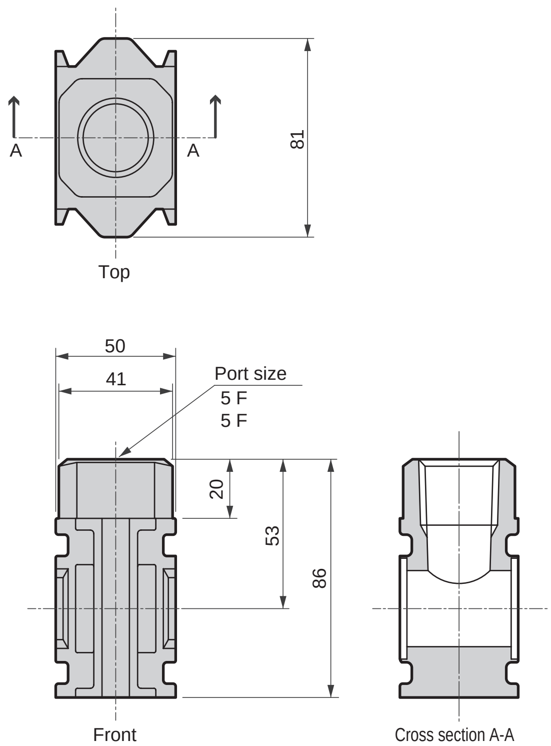
MD101-00-W



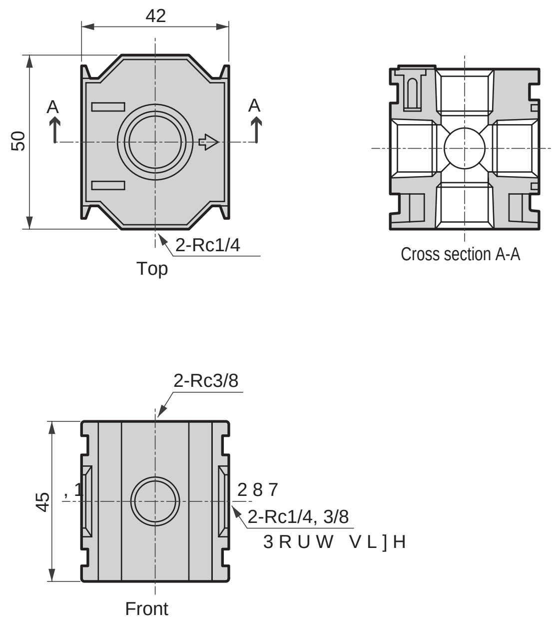
MD401-00-W

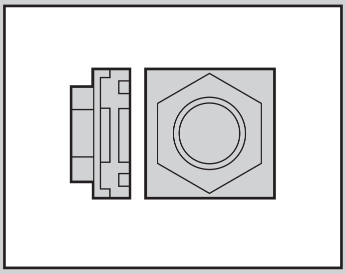


MD801-00-W



MD300-W





Piping adaptor standard white Series

A100/A400/A800-W Series

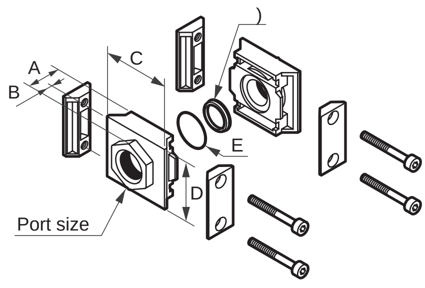
Port size: 1/8 to 1

Dimensions and Applications

Piping adaptor set

MApplication

M0RGHO$1R :
A400-8, 10, 15, 20-W
A800-20, 25, 32-W



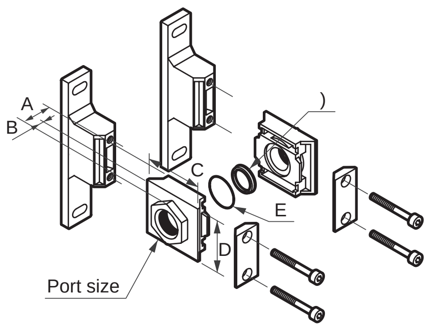
Model no.	Port size	Applicable model	A	B	C	D	(2 U L Q	J J D V N H W	Other
$:	1/8	1000 Series	21.5	13.5	40	36	JASO-2013 1 pc.	1 pc.	-
$:	1/4								
$:	3/8								
$:	1/4	2000 3000 Series / 4000 Series	20 {34}	6 {20}	50	45	JISB2401 P21 1 pc.	1 pc.	1 X P E H U V LQ is for 3/4. 1 X P E H U LQ ^ ` is for 1.
$:	3/8								
$:	1/2								
$:	3/4								
$:	1								
$:	3/4	6000 8000 Series	35	15	81	66	AS568-127 1 pc.	1 pc.	1 X P E H U V LQ is for 1 1/4.
$:	1								
$:	1 1/4								

%ODQN 5F WKUHDG 1 137 WKUHDG * * WKUHDG

Piping adaptor set

MApplication

M0RGHO$1R : % :
A400-8, 10, 15-W-B31W
A400-8, 10, 15, 20-W-B41W
A800-20, 25, 32-W-B81W
ZLWK 7 W\SH EUDFNHW VHW



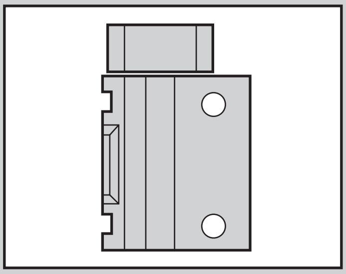
Model no.	Port size	Applicable model	A	B	C	D	(2 U L Q	J J D V N H W	Other
$: %	1/8	1000 Series	21.5	13.5	40	36	JASO-2013 1 pc.	1 pc.	-
$: %	1/4								
$: %	3/8								
$: %	1/4	2000 3000 Series	20	6	50	45	JISB2401 P21 1 pc.	1 pc.	
$: %	3/8								
$: %	1/2								
$: %	1/4	4000 Series	20 {34}	6 {20}	50	45	JISB2401 P21 1 pc.	1 pc.	1 X P E H U V LQ is for 3/4. 1 X P E H U LQ ^ ` is for 1.
$: %	3/8								
$: %	1/2								
$: %	3/4								
$: %	1								
$: %	3/4	6000 8000 Series	35	15	81	66	AS568-127 1 pc.	1 pc.	1 X P E H U V LQ is for 1 1/4.
$: %	1								
$: %	1 1/4								

%ODQN 5F WKUHDG 1 137 WKUHDG * * WKUHDG

L type piping adaptor standard white Series

A101/A401/A801-W Series

Port size: 1/8 to 1



CAD RoHS

6SHFL¿FDWLRQV

Descriptions	A101-W	$: 1RWH	A801-W
:RUNLQJ ÀXLG	Compressed air		
0D[ZRUNLQJ SUHVVXUH MPa	1.0		
:LWKVWDQGLQJ SUHVVXUH MPa	1.5		
3RUW VL]H 5F 137 *	1/8, 1/4	1/4, 3/8, 1/2	3/4, 1
:RUNLQJ WHPSHUDWXUH °C	5 to 60		
3URGXFW ZHLJKW kg	0.045	0.13	0.4

1RWH $: FDQ EH FRQQHFWHG WR ERWK : DQG : 6HULHV

How to order

A101 - 6 ( ) - W - B11W

A Model no.

:KLWH W\SH

B Port size

C Port thread type

D T type bracket

Symbol	Descriptions		
A Model no.			
A101	L type piping adaptor		
A401	L type piping adaptor		
A801	L type piping adaptor		

B Port size		A101	A401	A801
6	1/8	M		
8	1/4	M	M	
10	3/8		M	
15	1/2		M	
20	3/4			M
25	1			M

C Port thread type	
Blank	Rc thread
N	137 WKUHDG
G	G thread

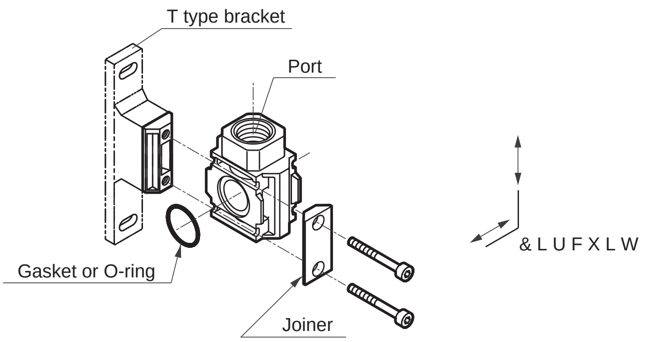
D T type bracket Note 1		A101	A401	A801
Blank	1RQH	M	M	M
B11W	1000 series	M		
B31W	2000 series 3000 series		M	
B41W	4000 series		M	
B81W	6000 series 8000 series			M

‡ $SSOLFDEOH PRGHO
‡ $:
1000-W Series
‡$:
2000/3000/4000-W Series
‡$:
6000, 8000-W Series

1RWH RQ PRGHO QR VHOHFWLRQ

1RWH7KH MRLQHU VHW MRLQHU ERRW 2 ULQJ DQG RQH JDVNHW are enclosed as a standard.

L type piping adaptor



MApplication

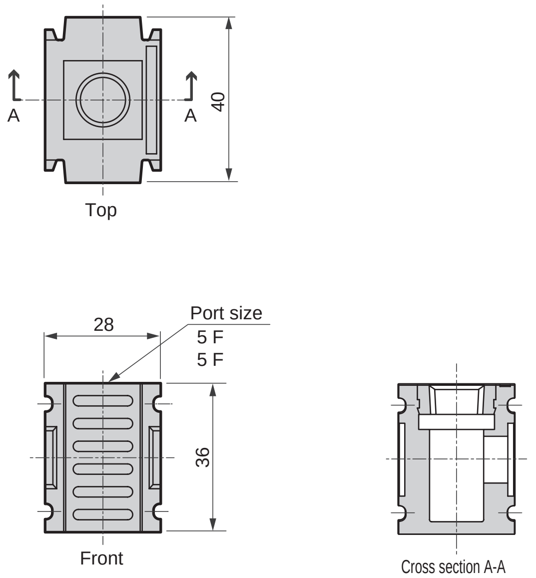
1RWH,QVHUW WKH 2 ULQJ ZKHQ PRXQWLQJ RQ WKH SULPDU\ VLGH IRU WKH DLU ÀRZ DQG LQVHUW WKH JDVNHW ZKHQ PRXQWLQJ RQ WKH VHFRQGDU\ VLGH

1RWH 5HIHU WR WKH IROORZLQJ SDJH RQ GLPHQVLRQV

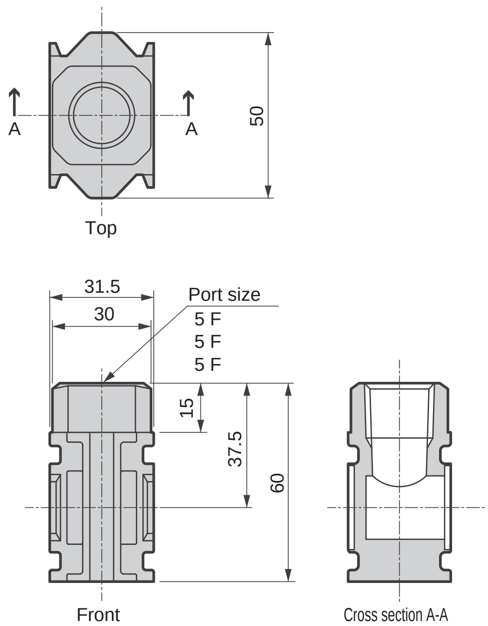
Piping adaptor

Dimensions

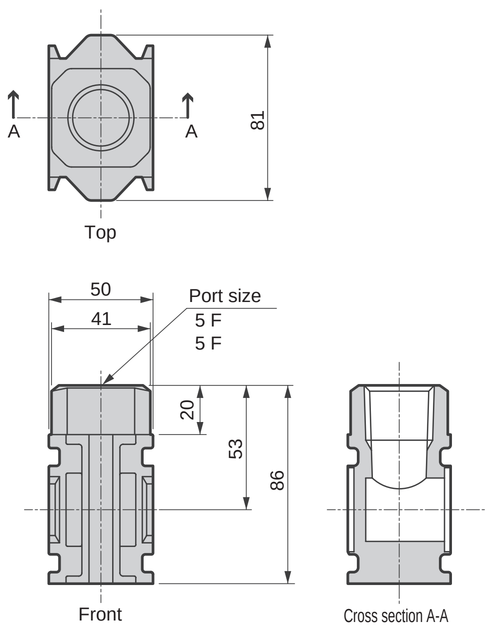
MA101-W



MA401-W



MA801-W



F.R.L. Modular design

Flame resistant Series

Components for air preparation / pressure adjustment / F.R.L. unit

CONTENTS

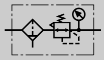
Filter and regulator flame resistant Series

W3000/W4000/W8000-G4 Series

New Series of 5µm elements for dust removal, and 0.3µm elements for tar removal.

Port size: 1/4 to 1

JIS symbol



RoHS

Specifications

Descriptions	W3000-G4	W4000-G4	W8000-G4
Working fluid	Compressed air		
Max. working pressure MPa	1.0 (Note 2, 3)		
Withstanding pressure MPa	1.5		
Working temperature ûC	5 to 60		
Filtration rating µm	5 or 0.3		
Set pressure range MPa	0.05 to 0.85		
Relief	With relief mechanism		
Drain capacity cm^3	45	80	80 (Note 3)
Port size Rc, NPT, G	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.72	1.08	2.16
Standard specifications	Exterior: Flame-resistant material, metal bowl		

Note 1: When "F" with an automatic drain is selected, minimum operation pressure must be 0.1MPa.
Air is purged with initial drainage until pressure reaches 0.1 MPa.
Note 2: When "F1" with an automatic drain is selected, minimum operation pressure must be 0.15 MPa.
Note 3: Drainage accumulates up to 170 cm^3 only with the manual drain cock.

How to order

W3000 - 8 ( ) - G4 - T8 - ( ) - A8W G49P

A Model no.
B Port size
Flame resistant type
C Port thread type
D Option
E Display unit
F Piping adaptor set (attached)
G Attachment (attached)

* Refer to page 274 for the explanation of the option.

Symbol	Descriptions	W3000	W4000	W8000
B Port size				
8	1/4			
10	3/8			
15	1/2			
20	3/4			
25	1			
C Port thread type	Note 1			
Blank	Rc thread			
N	NPT thread			
G	G thread			

D Option (Note 2)	Symbol	Descriptions	W3000	W4000	W8000
Drainage (Note 3)	Blank	With manual drain cock			
	F	Automatic drain with manual override (NO type: Exhaust w/o pressurized)			
	F1	Automatic drain with manual override (NC type: No exhaust w/o pressurized)			
	FF	Large automatic drain with manual override (NO type: Exhaust w/o pressurized)			
	FF1	Large automatic drain with manual override (NC type: No exhaust w/o pressurized)			
Bowl material	Blank	Metal bowl (resin cock)			
	M	Metal bowl (metal cock)			
Element	Blank	5µm			
	Y	0.3µm (submicron) Note 4			
Pressure range	Blank	0.05 to 0.85MPa			
	L	0.05 to 0.35MPa Note 5			
Relief	Blank	With relief mechanism			
	N	Nonrelief type			
Pressure gauge	T	Without pressure gauge (pressure gauge port (Rc1/4) is assembled with sealed)			
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)			
Flow direction	Blank	Standard flow (left right)			
	X1	Reverse flow (right left)			

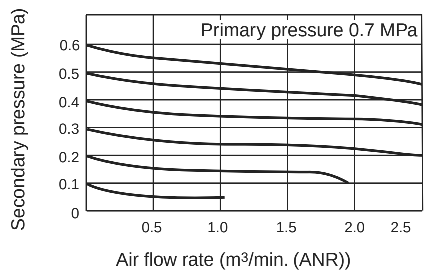
Symbol	Descriptions	W3000	W4000	W8000
E Display unit				
Blank	MPa display, Rc thread			
J1	MPa display, NPT/G thread			
F Piping adaptor set (attached)	Note 6 Page 428			
Blank	Not attached			
A8*W	1/4 piping adaptor set (white)			
A10*W	3/8 piping adaptor set (white)			
A15*W	1/2 piping adaptor set (white)			
A20*W	3/4 piping adaptor set (white)			
A25*W	1 piping adaptor set (white)			
A32*W	1 1/4 piping adaptor set (white)			
***Adaptor screw type**				
Blank	Rc thread			
N	NPT thread			
G	G thread			
G Attachment (attached)	Note 8 Pages 425, 659			
Blank	Not attached			
BW	C type bracket (silver)			
B3W Note 7	L type bracket (silver)			
G49P	G49D-8-P10(L: G49D-8-P04)			
G59P	G59D-8-P10(L: G59D-8-P10)			

⚠Note on model no. selection

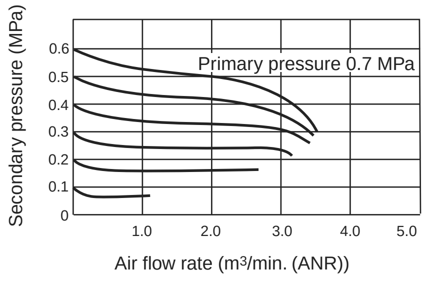
Note 1: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl (metal cock) automatic drain) are the target.
Note 2: Select options per drainage, bowl material, element, and regulator sections.
When selecting options for several items, list options in order from the top.
Note 3: Refer to page 276 for the automatic drain use conditions.
Note 4: Refer to page 476 for maximum processing flow when option "Y" is selected.
Note 5: The pressure gauge's indication range is 0 to 0.4MPa for option "L".
Note 6: The piping adaptor set and C bracket cannot be used together.
Note 7: Refer to Section (2. Regulator), in "⚠ PRECAUTIONS for Installation and Adjustment" (page 279) for details on mounting the L-type bracket.
Note 8: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Flow characteristic

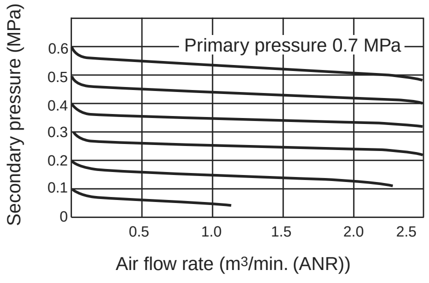
W3000-8-G4



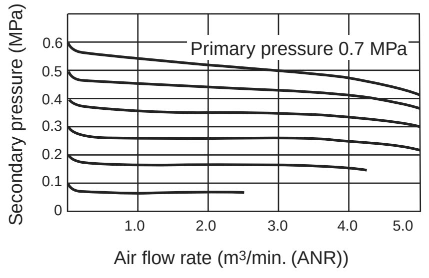
W3000-10-G4



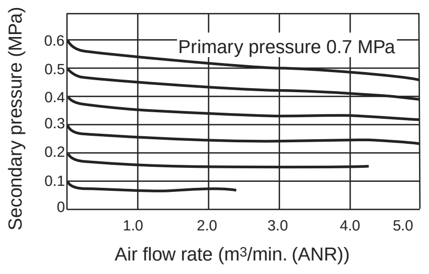
W4000-8-G4



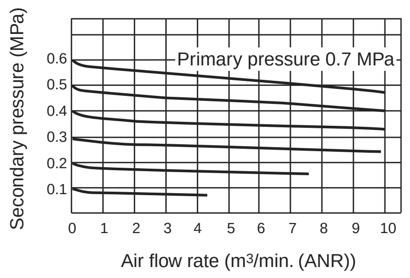
W4000-10-G4



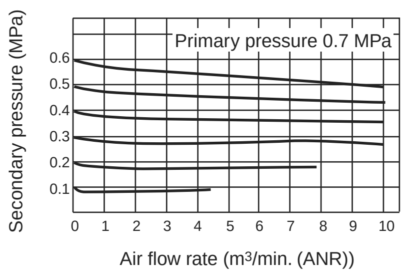
W4000-15-G4



W8000-20-G4

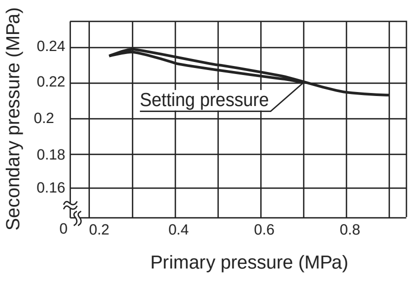


W8000-25-G4

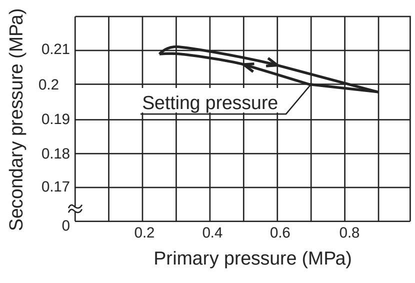


Pressure characteristic

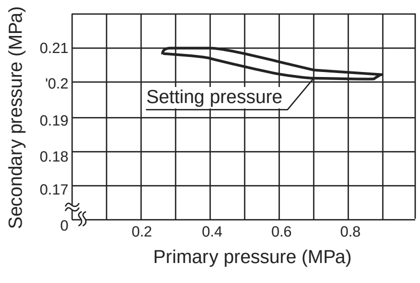
W3000-G4



W4000-G4

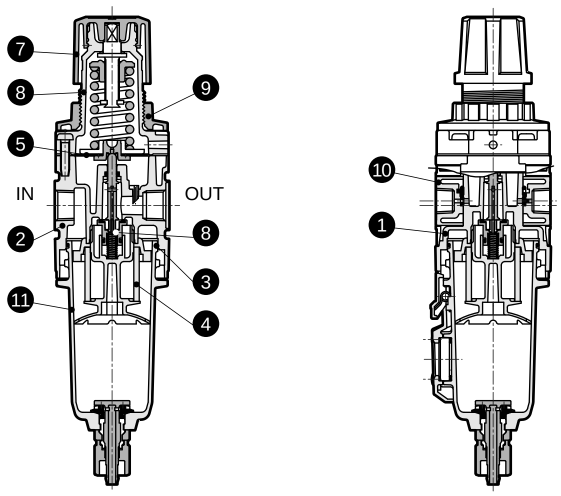


W8000-G4

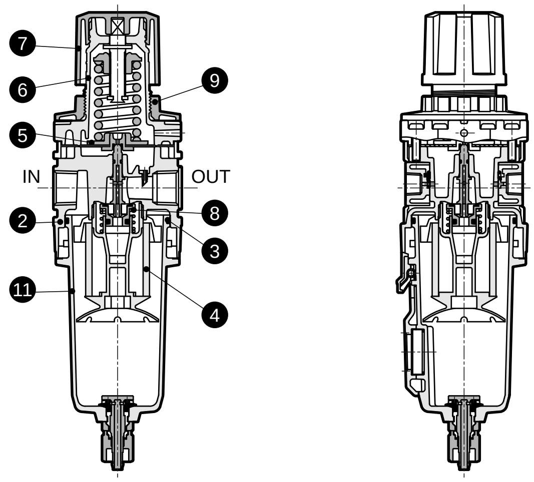


Internal structure and parts list

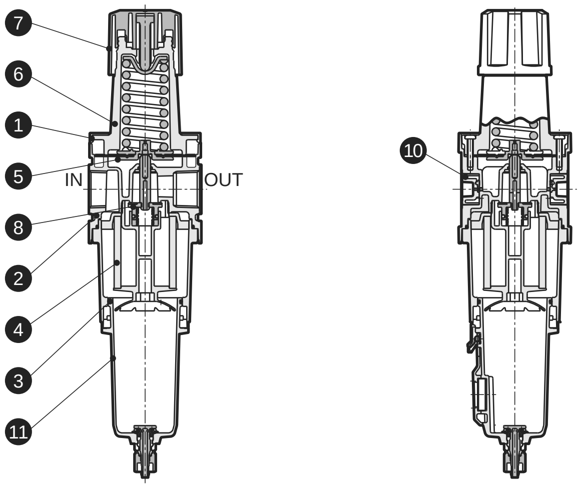
W3000-G4



W4000-G4



W8000-G4

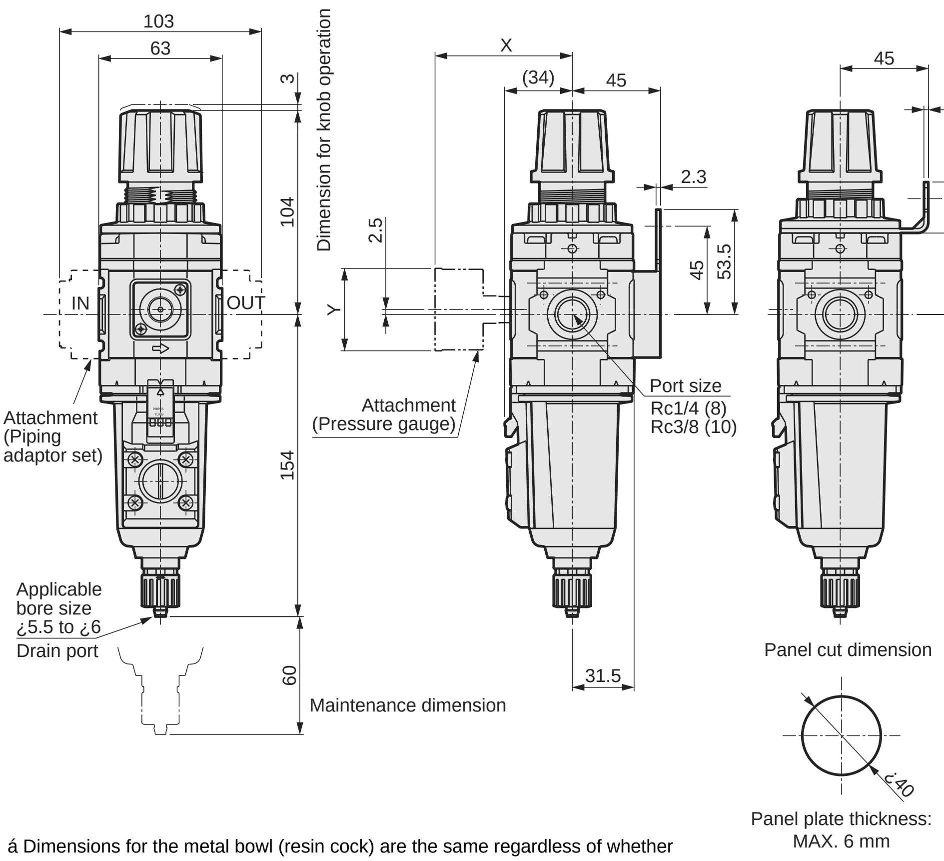


No.	Part name	Material		
		W3000-G4	W4000-G4	W8000-G4
1	Plate cover	ABS resin (Note 1)		
2	Body	Aluminum alloy die-casting		
3	O-ring	Special nitrile rubber		
4	Element	Polypropylene		
5	Diaphragm assembly	Zinc alloy die-casting, nitrile rubber		
6	Cover	Aluminum alloy die-casting		
7	Knob	PBT resin (Note 1)		
8	Valve assembly	Brass, hydrogen nitrile rubber (polyacetal resin: W3000, 4000)		
9	Mounting nut	PBT resin (Note 1)		-
10	Gauge plug assembly	Polyamide resin (Note 1), nitrile rubber, steel		
11	Bowl assembly	Aluminum alloy die casting, PBT resin (Note 1), glass, nitrile rubber, steel, polyacetal resin, urethane resin		

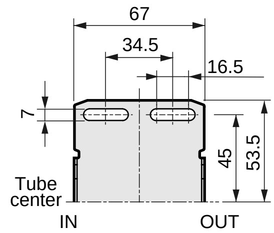
Note 1: Flame resistance resin and UL94 standards V-O or equivalent

Dimensions

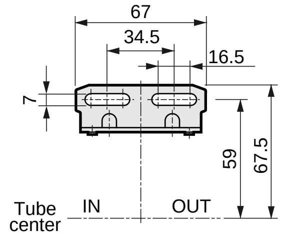
W3000-G4



á Attachment
C type bracket (-BW)
Parts No.: B320



L type bracket (-B3W)
Parts No.: B330



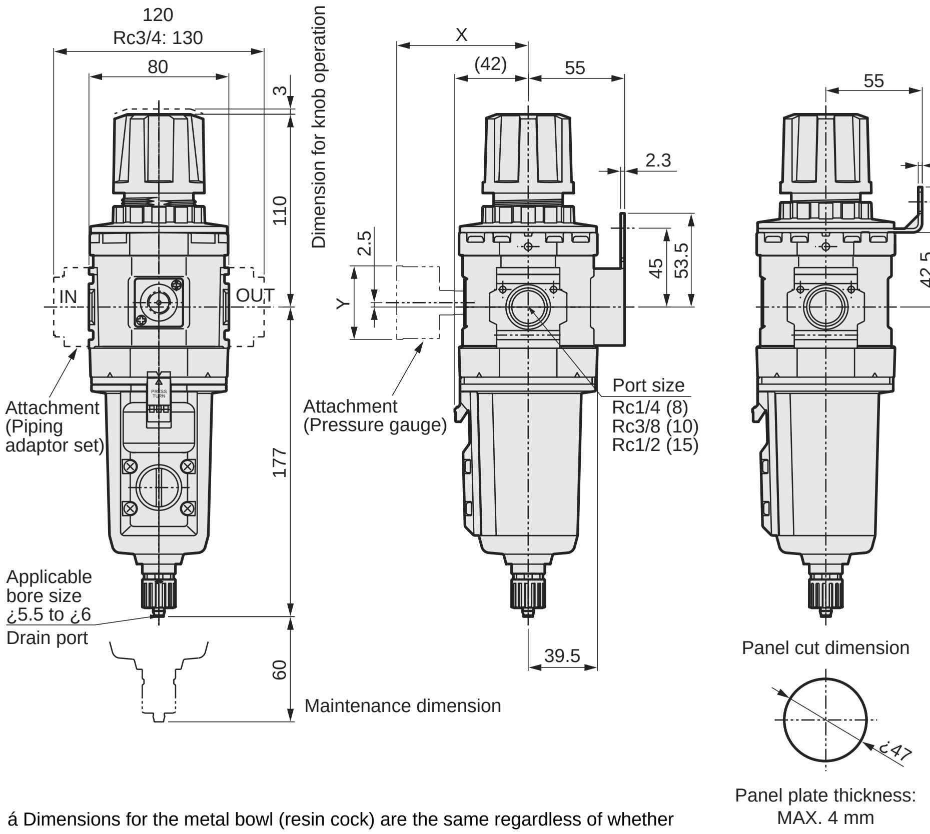
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(69.5)	¿43.5
G59P	(72)	¿52

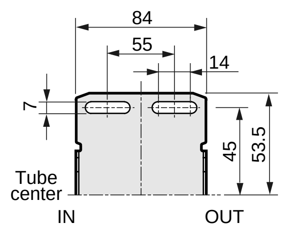
á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

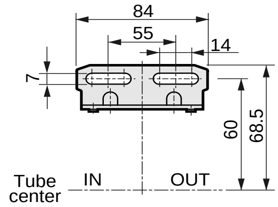
W4000-G4



á Attachment
C type bracket (-BW)
Parts No.: B420



L type bracket (-B3W)
Parts No.: B430



Pressure gauge attached optional dimensions table

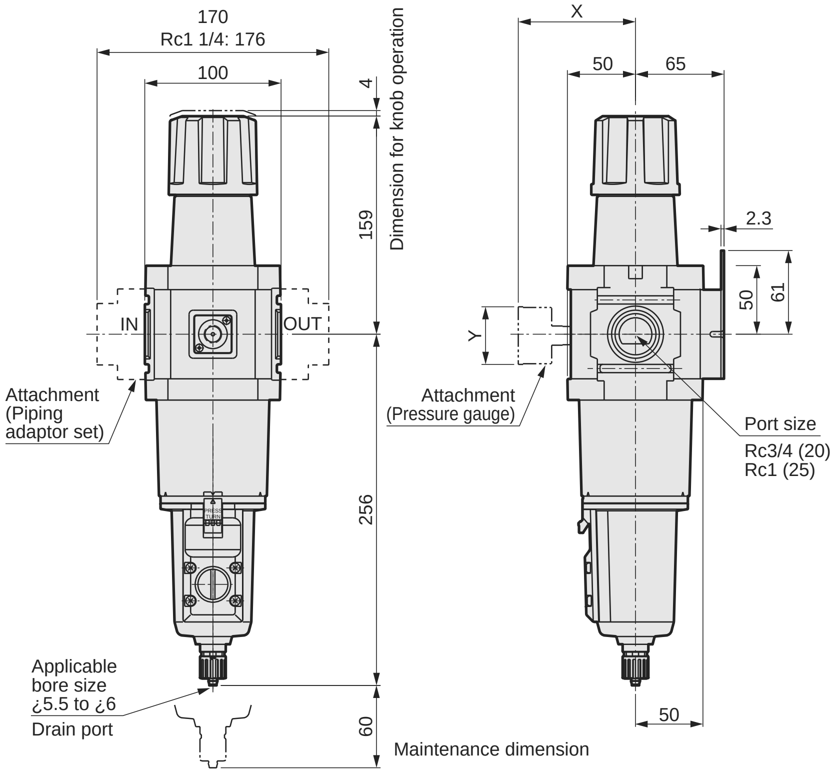
Attached pressure gauge	X	Y
G49P	(74.5)	¿43.5
G59P	(77)	¿52

á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

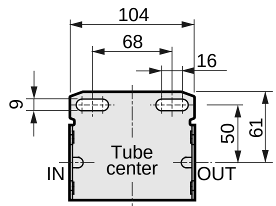
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

Dimensions

yW8000-G4



á Attachment
C type bracket (-BW)
Parts No.: B820



á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

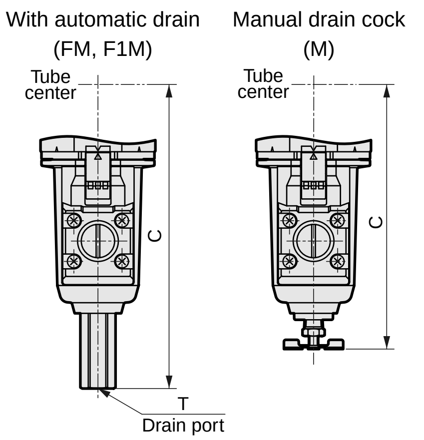
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(84.5)	¿43.5
G59P	(87)	¿52

Optional dimensions

Metal bowl (metal cock) W3000/4000/8000-G4



Dimensions table

Model no.	With automatic drain		Manual cock
	C	T	C
W3000-G4	164	Rc1/4	143.5
W4000-G4	187	Rc1/4	166.5
W8000-G4	266	Rc1/4	245.5

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Flame resistant Series
F.R.L. unit

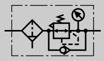
Reverse filter and regulator flame resistant Series

W3100/W4100/W8100-G4 Series

Introducing the 5µm dust removing element and 0.3µm tar removing element, with back flow function, to the lineup.

Port size: 1/4 to 1

JIS symbol



RoHS

Specifications

Descriptions		W3100-G4	W4100-G4	W8100-G4
Working fluid		Compressed air		
Max. working pressure	MPa	1.0 (Note 2, 3)		
Withstanding pressure	MPa	1.5		
Working temperature	ûC	5 to 60		
Filtration rating	µm	5 or 0.3		
Set pressure range (Note 1)	MPa	0.05 to 0.85		
Relief		With relief mechanism		
Drain capacity	cm^3	45	80	80 (Note 4)
Port size	Rc, NPT, G	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight	kg	0.72	1.08	2.16
Standard specifications		Exterior: Flame-resistant material, metal bowl		

Note 1: Refer to the set pressure range for the back pressure given on page 468 when selecting the model.
Note 2: When "F" with an automatic drain is selected, minimum operation pressure must be 0.1 MPa.
Initially generated drainage and air are purged until pressure reaches 0.1 MPa.
Note 3: When "F1" with an automatic drain is selected, minimum operation pressure must be 0.15 MPa.
Note 4: Up to 170 m^3 is stored only with the manual drain cock type.
Note 5: Check that the primary pressure is at least 0.05 MPa or more than the secondary pressure.

How to order

W3100 - 8 ( ) - G4 - T8 - ( ) - A8W G49P

Ⓐ Model no.
Ⓑ Port size
Flame resistant type
Ⓒ Port thread type
Ⓓ Option
Ⓔ Display unit
Ⓕ Piping adaptor set (attached)
Ⓖ Attachment (attached)

* Refer to page 274 for the explanation of the option.

	Symbol	Descriptions	Ⓐ Model no. W3100	W4100	W8100
Ⓑ Port size					
	8	1/4			
	10	3/8			
	15	1/2			
	20	3/4			
	25	1			
Ⓒ Port thread type		Note 1			
	Blank	Rc thread			
	N	NPT thread			
	G	G thread			
Ⓓ Option		Note 2, Note 3			
Drainage	Blank	With manual drain cock			
	F	Automatic drain with manual override (NO type: Exhaust w/o pressurized)			
	F1	Automatic drain with manual override (NC type: No exhaust w/o pressurized)			
	FF	Large automatic drain with manual override (NO type: Exhaust w/o pressurized)			
Note 4	FF1	Large automatic drain with manual override (NC type: No exhaust w/o pressurized)			
Bowl material	Blank	Metal bowl (resin cock)			
	M	Metal bowl (metal cock)			
Element	Blank	5μm			
	Y	0.3μm (submicron) Note 5			
Pressure range	Blank	0.05 to 0.85MPa			
	L	0.05 to 0.35MPa Note 6			
Relief	Blank	With relief mechanism			
	N	Nonrelief type			
Pressure gauge	T	Without pressure gauge (pressure gauge port (Rc1/4) is assembled with sealed)			
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)			
Flow direction	Blank	Standard flow (left right)			
	X1	Reverse flow (right left)			
Ⓔ Display unit					
	Blank	MPa display, Rc thread			
	J1	MPa display, NPT/G thread			
Ⓕ Piping adaptor set (attached)		Note 7 Page 428			
	Blank	Not attached			
	A8*W	1/4 piping adaptor set (white)			
	A10*W	3/8 piping adaptor set (white)			
	A15*W	1/2 piping adaptor set (white)			
	A20*W	3/4 piping adaptor set (white)			
	A25*W	1 piping adaptor set (white)			
	A32*W	1 1/4 piping adaptor set (white)			
***Adaptor screw type**					
	Blank	Rc thread			
	N	NPT thread			
	G	G thread			
Ⓖ Attachment (attached)		Note 9 Pages 425, 659			
	Blank	Not attached			
	BW	C type bracket (silver)			
	B3W Note 8	L type bracket (silver)			
	G49P	G49D-8-P10(L: G49D-8-P04)			
	G59P	G59D-8-P10(L: G59D-8-P04)			

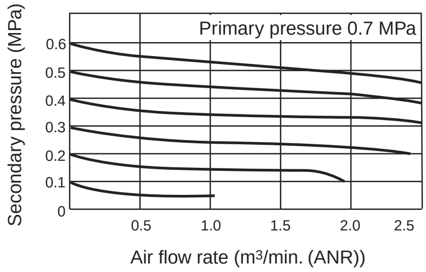
⚠Note on model no. selection

Note 1: When G threads or NPT threads are selected, the IN, OUT, gauge port, and drainage discharge port (metal bowl (metal cock) automatic drain) are the target.
Note 2: Select options per drainage, bowl material, element, and regulator sections.
When selecting options for several items, list options in order from the top.
Note 3: Positions of a check valve and pressure gauge can not be changed.
If the IN and OUT direction must be reversed, indicate "X1" at the end of the option field.
Note 4: Refer to page 276 for the automatic drain use conditions.
Note 5: Refer to page 476 for maximum processing flow when option "Y" is selected.
Note 6: The pressure gauge's indication range is 0 to 0.4MPa for option "L".
Note 7: The piping adaptor set and C bracket cannot be used together.
Note 8: Refer to Section (2. Regulator) in "⚠PRECAUTIONS For Installation and Adjustment" (page 279) for details on mounting the L-type bracket.
Note 9: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or thread is selected, an R thread pressure gauge is enclosed.

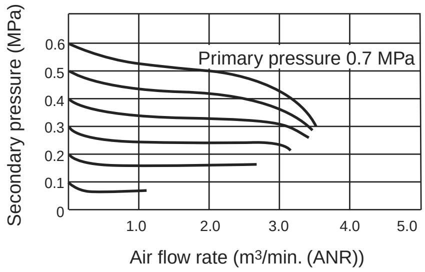
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Flow characteristic

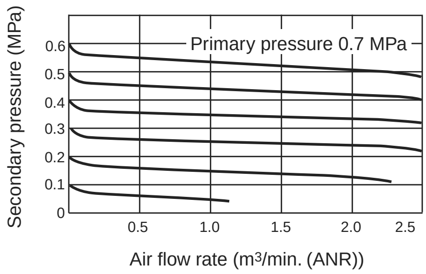
W3100-8-G4



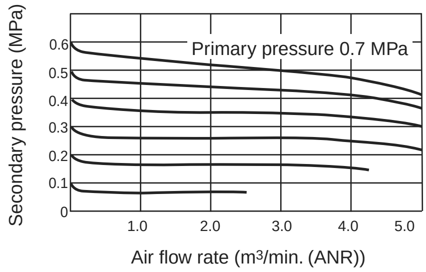
W3100-10-G4



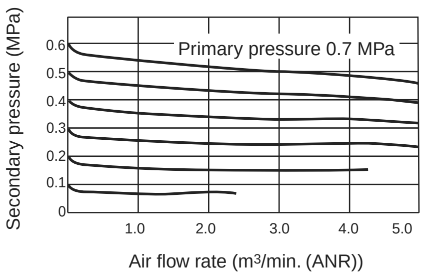
W4100-8-G4



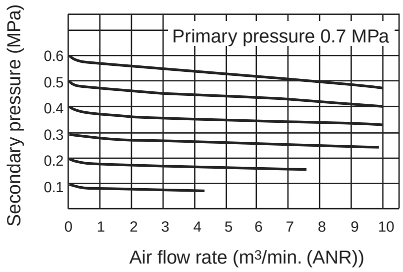
W4100-10-G4



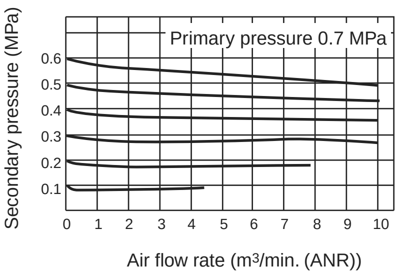
W4100-15-G4



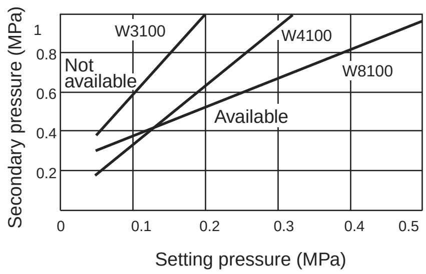
W8100-20-G4



W8100-25-G4



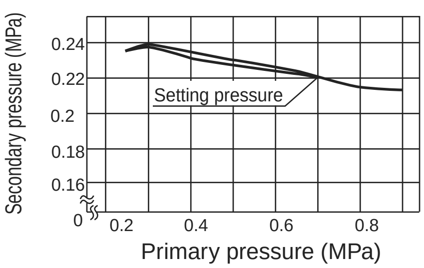
Set pressure range to back pressure



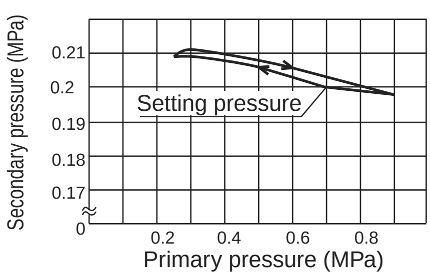
Note: The upper side of the graph is nonusable and the lower side usable.
Example: If W4100 is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

Pressure characteristic

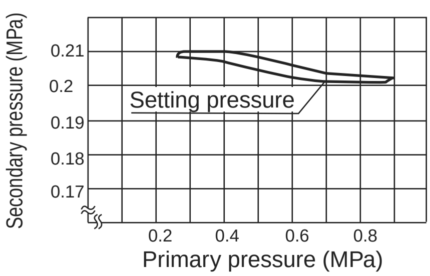
W3100-G4



W4100-G4

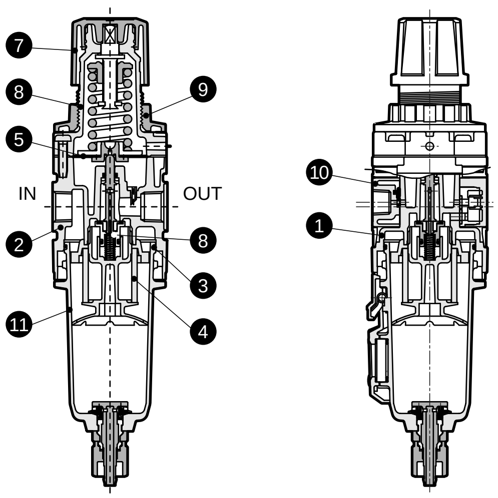


W8100-G4

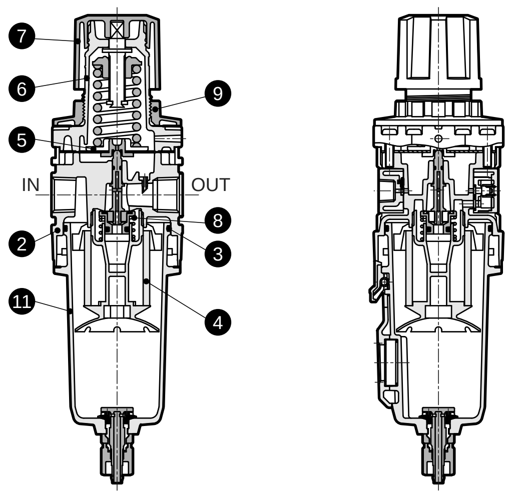


Internal structure and parts list

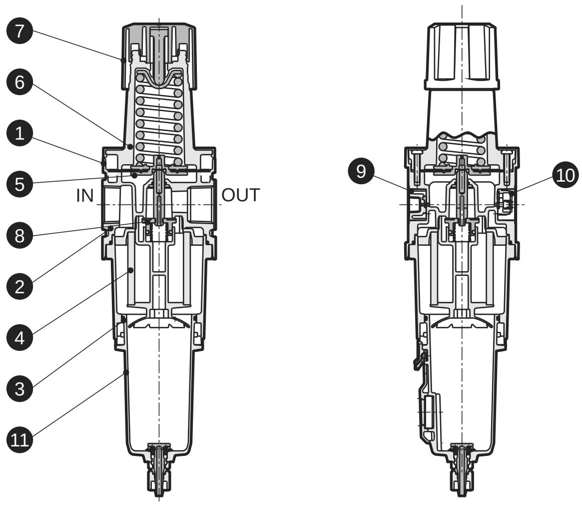
W3100-G4



W4100-G4



W8100-G4



No.	Part name	Material		
		W3100-G4	W4100-G4	W8100-G4
1	Plate cover	ABS resin (Note 1)		
2	Body	Aluminum alloy die-casting		
3	O-ring	Special nitrile rubber		
4	Element	Polypropylene		
5	Diaphragm assembly	Zinc alloy die-casting, nitrile rubber		
6	Cover	Aluminum alloy die-casting		
7	Knob	PBT resin (Note 1)		
8	Valve assembly	Brass, hydrogen nitrile rubber (polyacetal resin: W3100, 4100)		
9	Gauge plug assembly	Polyamide resin (Note 1), nitrile rubber, steel		
10	Check valve total assemblies	PBT resin, nitrile rubber, stainless steel wire, steel, aluminum		
11	Bowl assembly	Aluminum alloy die casting, PBT resin (Note 1), glass, nitrile rubber, steel, polyacetal resin, urethane resin		
12	Mounting nut	PBT resin (Note 1)		-

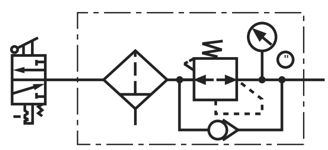
Note 1: Flame resistance resin and UL94 standards V-O or equivalent
Note 2: Refer to page 444 for repair kits model no.

'VODUJPOBM FYQMBOBUJPO

When the primary pressure is introduced from the IN side, the check valve functions as a regular regulator because it closes with primary pressure and spring load. When primary pressure is released by a switching valve such as a shut-off valve, the check valve opens with secondary pressure. Pressure in the diaphragm chamber is released and pressure drops. This causes the diaphragm to be pressed down by the pressure adjustment spring. The main valve (valve assembly) opens, and the air on the OUT side is discharged.

Note: Set back pressure A for when the primary pressure is released within the range in the graph for the regulator's set pressure. (Refer to page 440 for the graph)

Circuit diagram

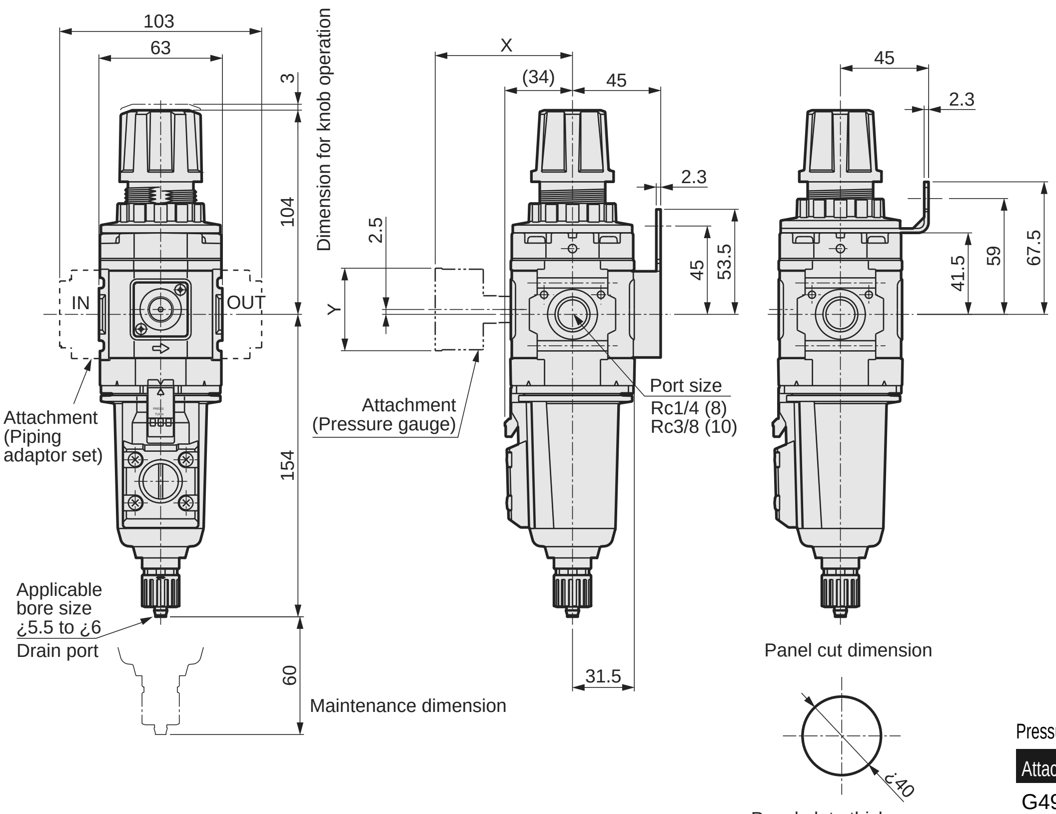


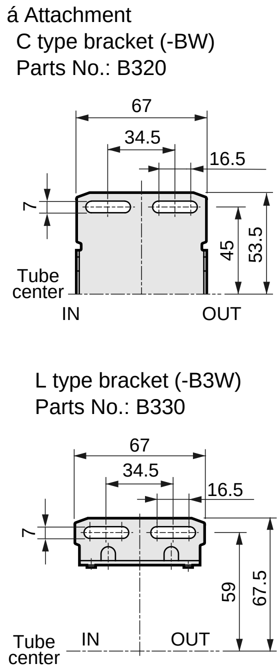
When using shut-off valve in front of reverse filter and regulator.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Dimensions

W3100-G4





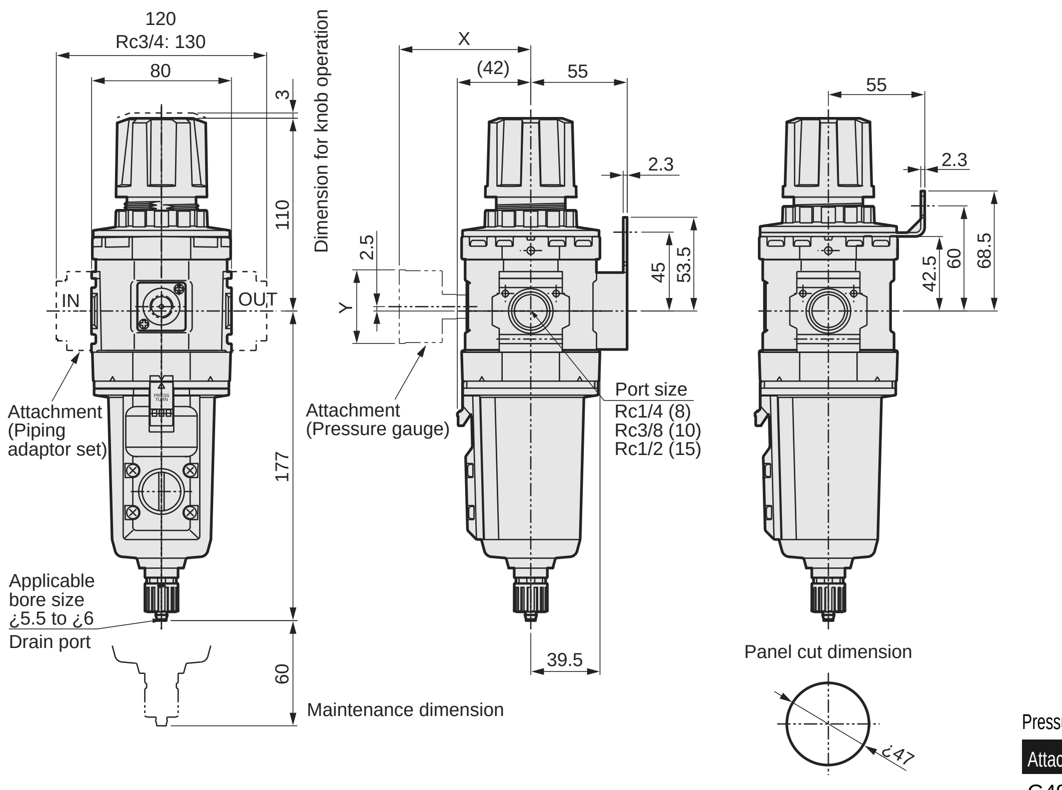
Pressure gauge attached optional dimensions table

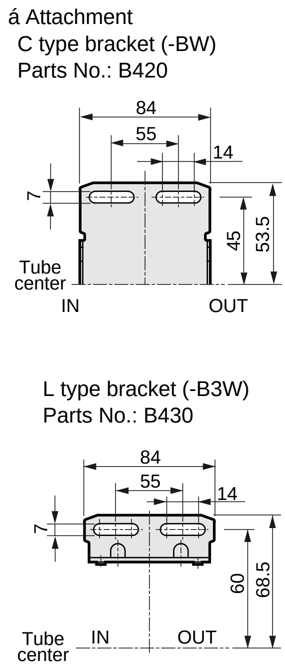
Attached pressure gauge	X	Y
G49P	(69.5)	¿43.5
G59P	(72)	¿52

á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

W4100-G4





Pressure gauge attached optional dimensions table

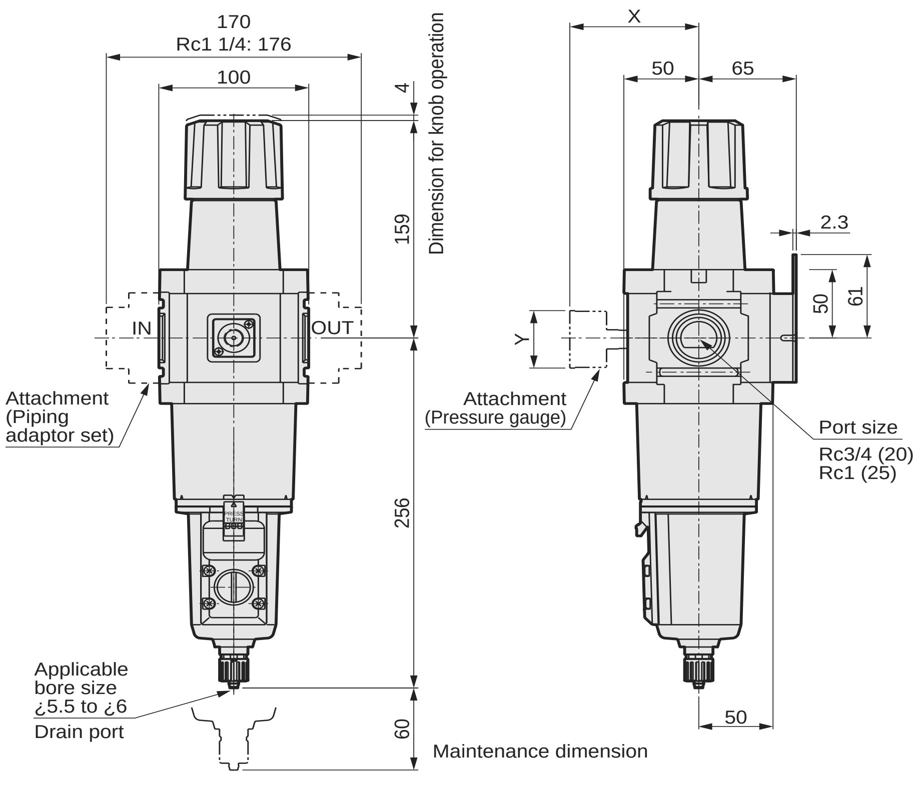
Attached pressure gauge	X	Y
G49P	(74.5)	¿43.5
G59P	(77)	¿52

á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

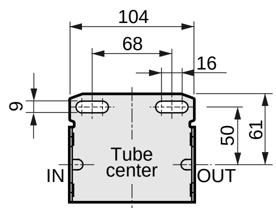
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

Dimensions

W8100-G4



á Attachment
C type bracket (-BW)
Parts No.: B820



á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

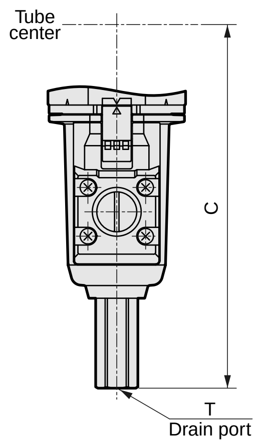
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(84.5)	¿43.5
G59P	(87)	¿52

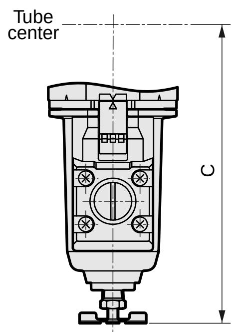
Optional dimensions

Metal bowl (metal cock) W3100-G/W4100-G4/W8100-G4

With automatic drain (FM, F1M)



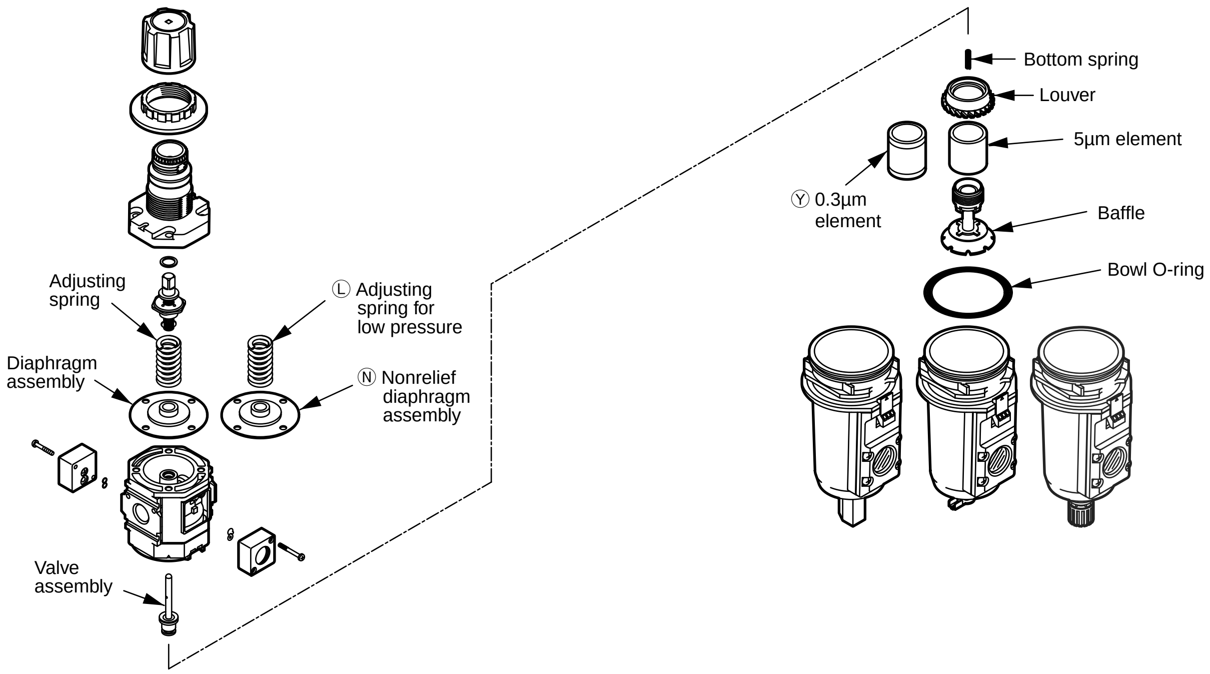
Manual drain cock (M)



Dimensions table

Model no.	With automatic drain		Manual cock
	C	T	C
W3100-G4	164	Rc1/4	143.5
W4100-G4	187	Rc1/4	166.5
W8100-G4	266	Rc1/4	245.5

Optional parts diagram



Repair kits (Set of diaphragm assembly, valve assembly, bottom spring, louver, element, baffle, bowl O-ring)

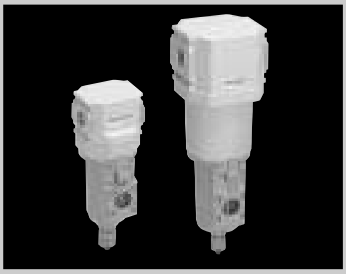
Repair kits model no. / Model	Relief type diaphragm 5µm element (blank)	Nonrelief Diaphragm assembly 5µm element (N)	Relief type diaphragm 0.3µm element (Y)	Nonrelief Diaphragm assembly 0.3µm element (NY)
W3000-G4, W3100-G4	W3000-KIT	W3000-KIT-N	W3000-KIT-Y	W3000-KIT-NY
W4000-G4, W4100-G4	W4000-KIT	W4000-KIT-N	W4000-KIT-Y	W4000-KIT-NY
W8000-G4, W8100-G4	W8000-KIT	W8000-KIT-N	W8000-KIT-Y	W8000-KIT-NY

Valve assembly (set of valve assembly and bottom spring)

Model	Valve assembly model no.
W3000-G4, W3100-G4	W3000-VALVE-ASSY
W4000-G4, W4100-G4	W4000-VALVE-ASSY
W8000-G4, W8100-G4	W8000-VALVE-ASSY

* Refer to the regulator options and parts table (page 466) for details on the adjustment spring, diaphragm, check valve assembly for reverse regulator, and gauge plug assembly.
Refer to air filter options and parts table (page 452) for details on the element, bowl assembly.

MEMO

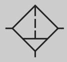


Air filter flame resistant Series

F3000/F4000/F8000-G4 Series

Introducing the 5µm element for dust removal and 0.3µm element for tar removal.

Port size: 1/4 to 1

JIS symbol 

RoHS

Specifications

Descriptions	F3000-G4	F4000-G4	F8000-G4
Working fluid	Compressed air		
Max. working pressure MPa	1.0 (Note 1, 2)		
Withstanding pressure MPa	1.5		
Working temperature ûC	5 to 60		
Filtration rating µm	5 or 0.3		
Drain capacity cm^3	45	80	80 (Note 3)
Port size Rc, NPT, G	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.35	0.55	1.26
Standard specifications	Exterior: Flame-resistant material, metal bowl		

Note 1: When "F" with an automatic drain is selected, minimum operation pressure must be 0.1MPa.
Air is purged with initial drainage until pressure reaches 0.1 MPa.
Note 2: When "F1" with an automatic drain is selected, minimum operation pressure must be 0.15 MPa.
Note 3: Drainage accumulates up to 170 cm^3 only with the manual drain cock.

How to order

F3000 – 8 ( ) – G4 ( ) – ( ) – A8W ( )

Flame resistant type

Ⓐ Model no.
Ⓑ Port size
Ⓒ Port thread type
Ⓓ Option
Ⓔ Display unit
Ⓕ Piping adaptor set (attached)
Ⓖ Bracket (attached)

* Refer to page 274 for the explanation of the option.

Symbol		Descriptions	Ⓐ Model no. F3000	F4000	F8000
Ⓑ Port size					
8		1/4			
10		3/8			
15		1/2			
20		3/4			
25		1			
Ⓒ Port thread type		Note 1			
Blank		Rc thread			
N		NPT thread			
G		G thread			
Ⓓ Option		Note 2			
Drainage	Blank	With manual drain cock			
	F	Automatic drain with manual override (NO type: Exhaust w/o pressurized)			
	F1	Automatic drain with manual override (NC type: No exhaust w/o pressurized)			
	FF	Large automatic drain with manual override (NO type: Exhaust w/o pressurized)			
Note 3	FF1	Large automatic drain with manual override (NC type: No exhaust w/o pressurized)			
Bowl material	Blank	Metal bowl (resin cock)			
	M	Metal bowl (metal cock)			
Element	Blank	5µm			
	Y	0.3µm (submicron)			
Differential pressure detection	Blank	Without differential pressure detection port			
	Q	With differential pressure detection port (Rc1/4)			
Flow direction	Blank	Standard flow (left right)			
	X1	Reverse flow (right left)			
Ⓔ Display unit					
Blank		MPa display, Rc thread			
J1		MPa display, NPT/G thread			
Ⓕ Piping adaptor set (attached)		Note 4 Page 428			
Blank		Not attached			
A8*W		1/4 piping adaptor set (white)			
A10*W		3/8 piping adaptor set (white)			
A15*W		1/2 piping adaptor set (white)			
A20*W		3/4 piping adaptor set (white)			
A25*W		1 piping adaptor set (white)			
A32*W		1 1/4 piping adaptor set (white)			
***Adaptor screw type**					
Blank		Rc thread			
N		NPT thread			
G		G thread			
Ⓖ Bracket (attached)		Page 425			
Blank		Not attached			
BW		C type bracket (silver)			

⚠Note on model no. selection

Note 1: When G threads or NPT threads are selected, the IN, OUT, and drainage discharge port (metal bowl (metal cock) automatic drain) are the target.

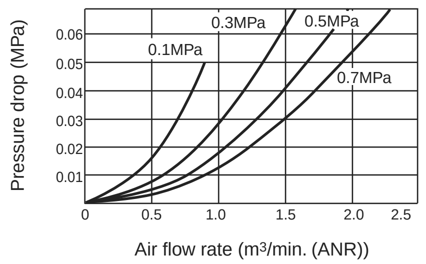
Note 2: Select options based on drainage, bowl material, element, and differential pressure detection.
When selecting options for several items, list options in order from the top.

Note 3: Refer to page 276 for the automatic drain use conditions.

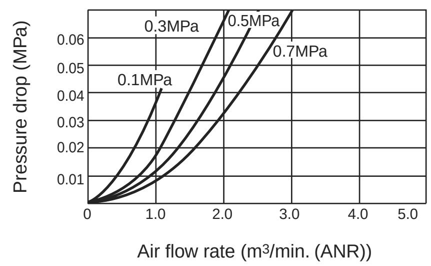
Note 4: The piping adaptor set and C bracket cannot be used together.

Flow characteristic

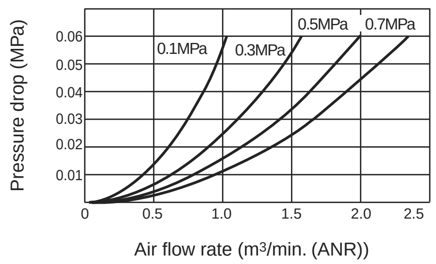
F3000-8-G4



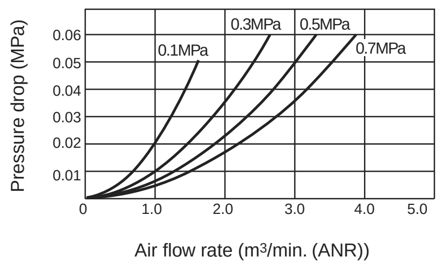
F3000-10-G4



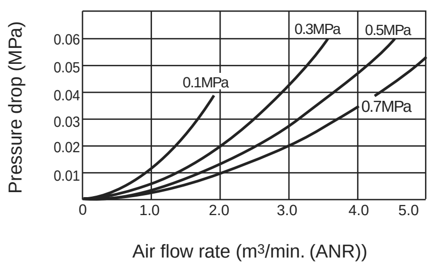
F4000-8-G4



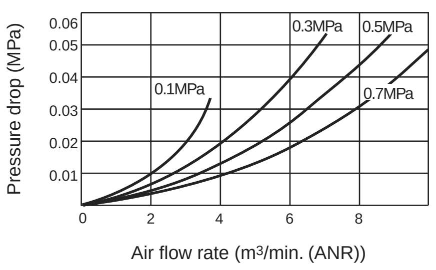
F4000-10-G4



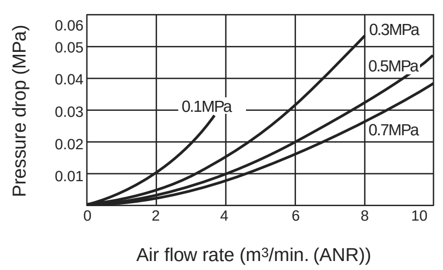
F4000-15-G4



F8000-20-G4

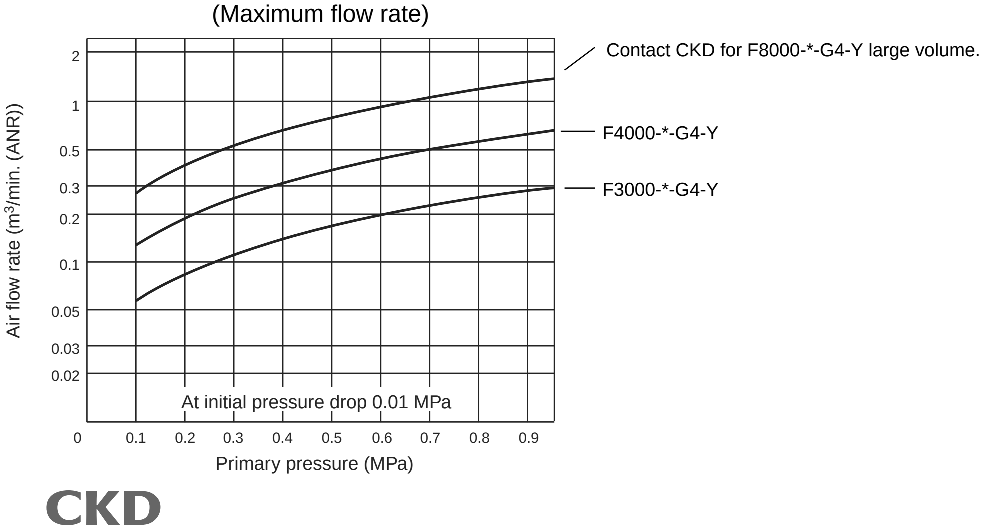


F8000-25-G4



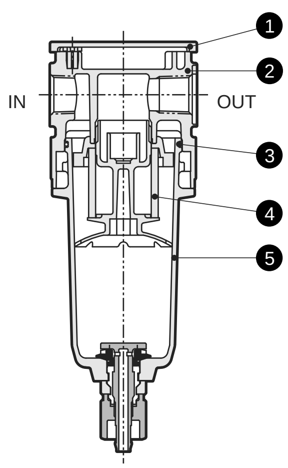
F3000
F4000 Ð * Ð G4 Ð Y (0.3μm element)
F8000

(Maximum flow rate)

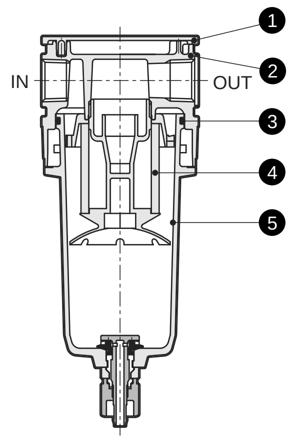


Internal structure and parts list

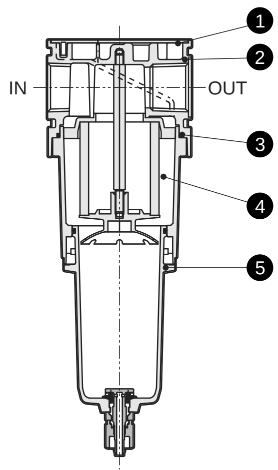
F3000-G4



F4000-G4



F8000-G4

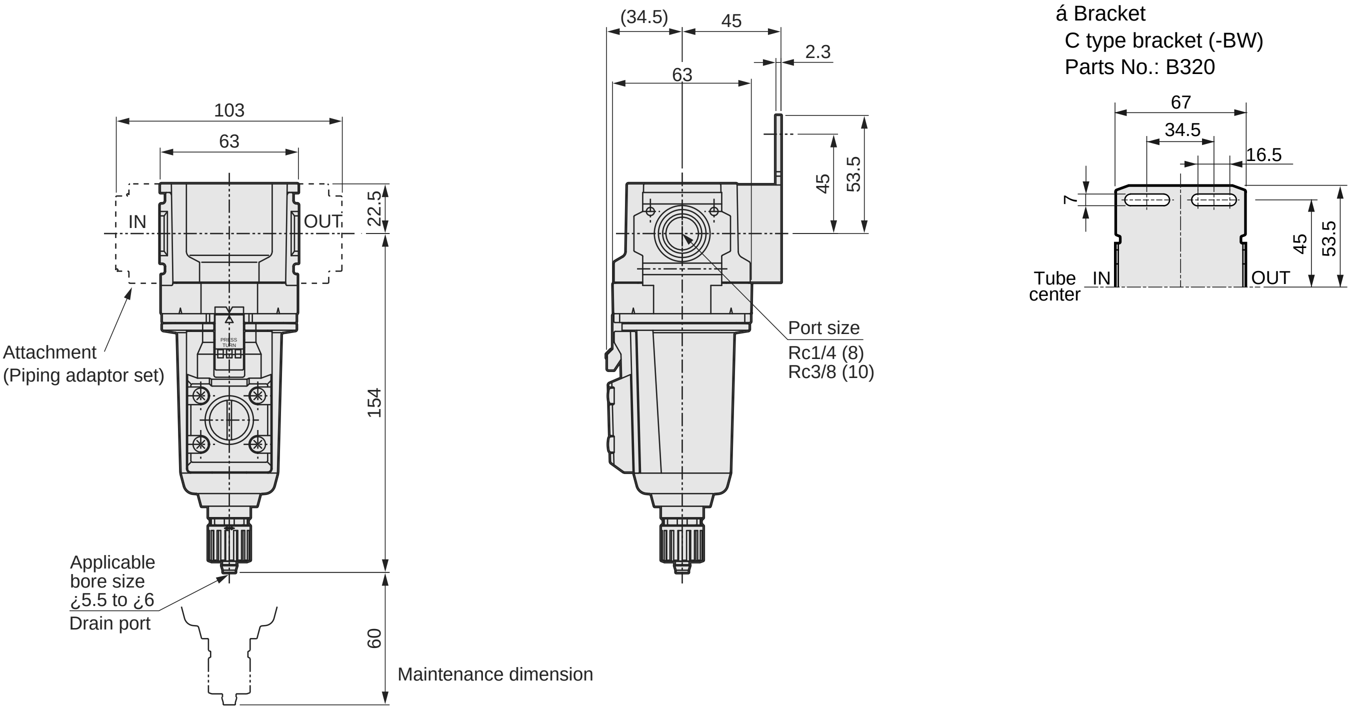


No.	Part name	Material		
		F3000-G4	F4000-G4	F8000-G4
1	Plate cover	ABS resin (Note 1)		
2	Body	Aluminum alloy die-casting		
3	O-ring	Special nitrile rubber		
4	Element (5µm)	Polypropylene		
	Element (0.3µm)	-		
5	Bowl assembly	Aluminum alloy die casting, PBT resin (Note 1), glass, nitrile rubber, steel, polyacetal resin, urethane resin		

Note 1: Flame resistance resin and UL94 standards V-O or equivalent
Note 2: Refer to page 452 for the repair kits.

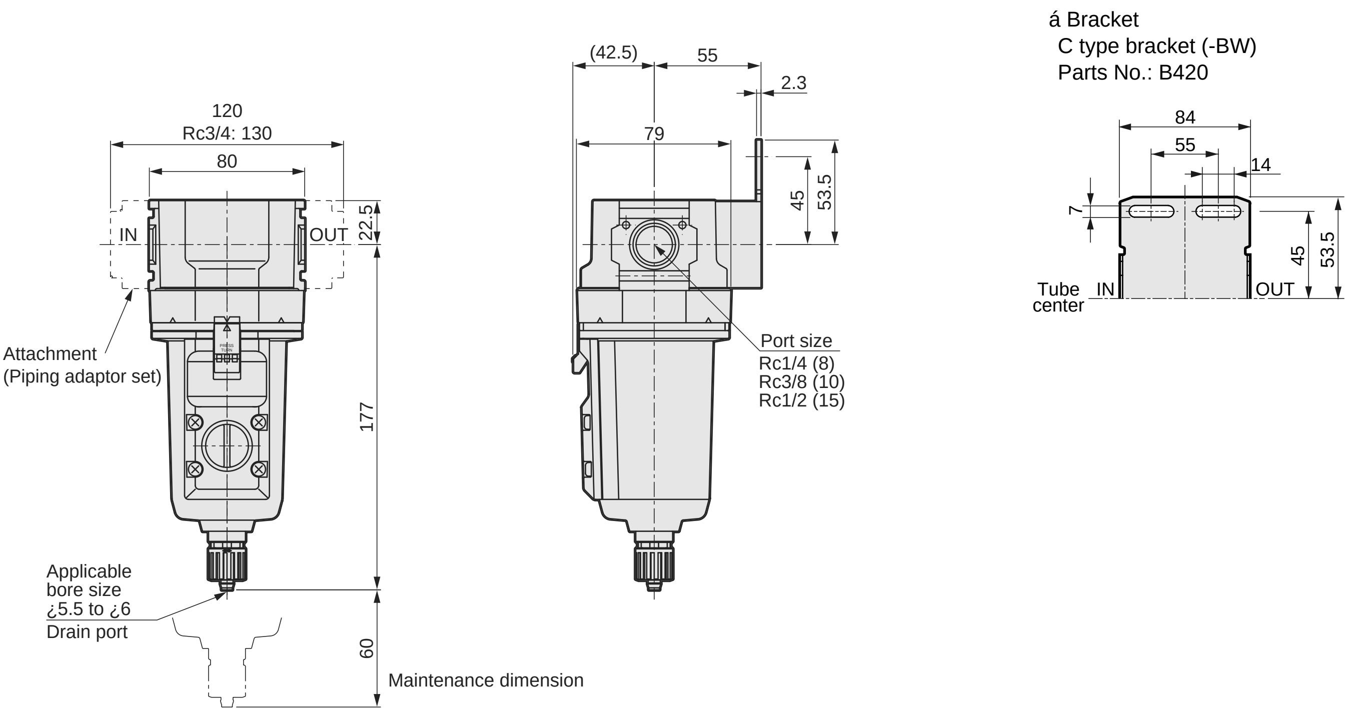
Dimensions

F3000-G4



á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain withmanual override is installed.
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

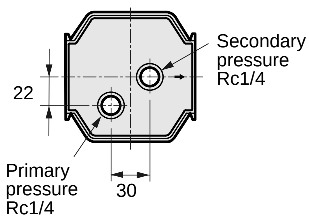
F4000-G4

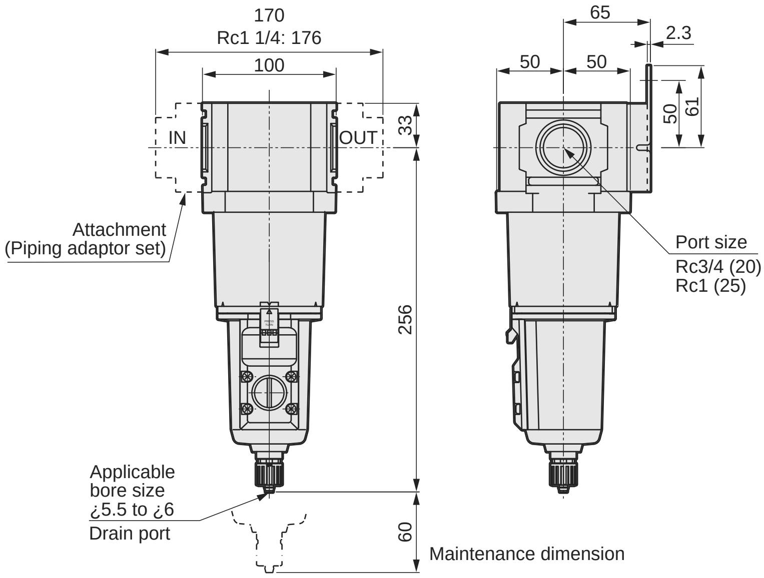


á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain withmanual override is installed.
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

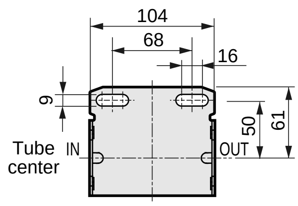
Dimensions

F8000-G4





á Bracket
C type bracket (-BW)
Parts No.: B820



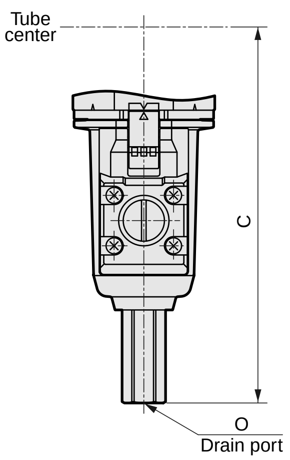
á Dimensions for the metal bowl (resin cock) are the same regardless of whether the manual drain cock or automatic drain with manual override is installed.

Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

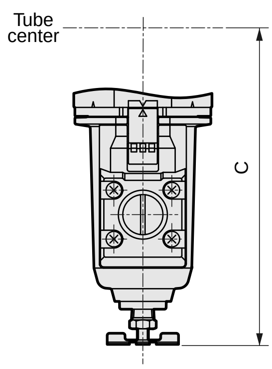
Optional dimensions

Metal bowl (metal cock) F3000-G4/F4000-G4/F8000-G4

With automatic drain (FM, F1M)



Manual drain cock (M)



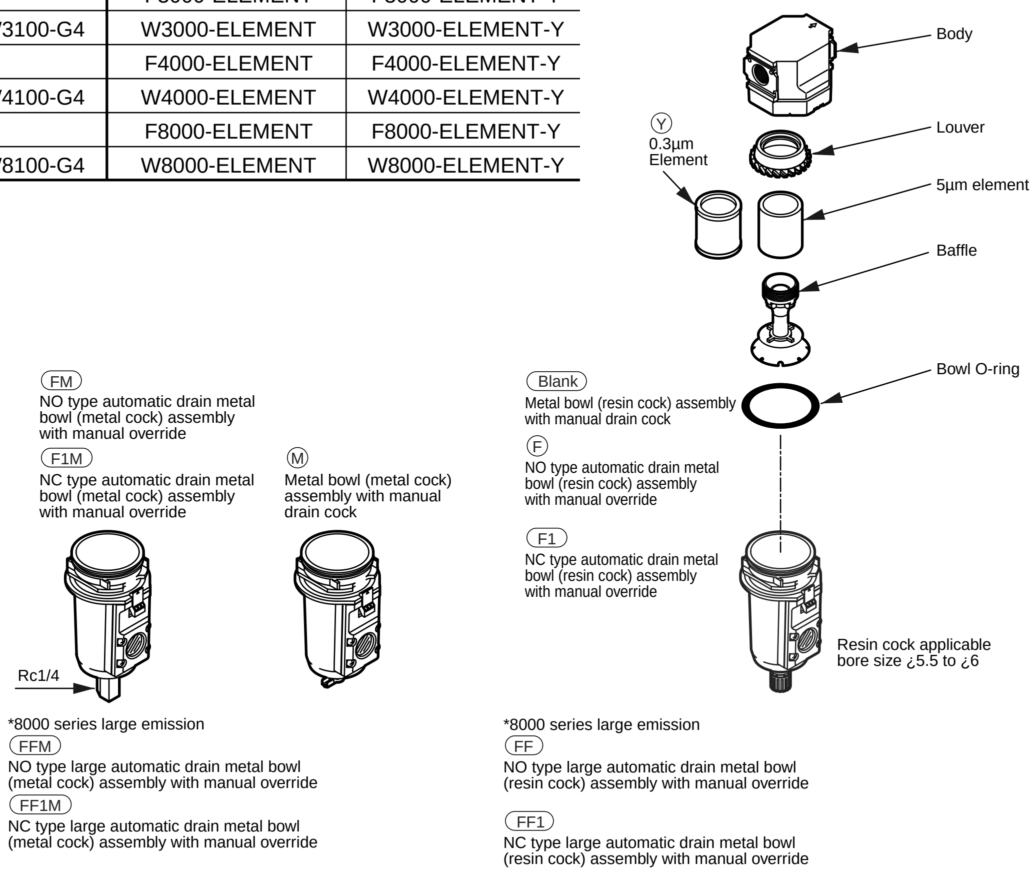
Dimensions table

Model no.	With automatic drain		Manual cock
	C	O	C
F3000-G4	164	Rc1/4	143.5
F4000-G4	187	Rc1/4	166.5
F8000-G4	266	Rc1/4	245.5

Optional parts diagram

Element

Element model no. / Model	5µm element	0.3µm element (Y)
F3000-G4	F3000-ELEMENT	F3000-ELEMENT-Y
W3000-G4, W3100-G4	W3000-ELEMENT	W3000-ELEMENT-Y
F4000-G4	F4000-ELEMENT	F4000-ELEMENT-Y
W4000-G4, W4100-G4	W4000-ELEMENT	W4000-ELEMENT-Y
F8000-G4	F8000-ELEMENT	F8000-ELEMENT-Y
W8000-G4, W8100-G4	W8000-ELEMENT	W8000-ELEMENT-Y



Repair kits
(Set of louver, baffle, element, bowl O-ring)

Repair kits model no. / Model	5µm element	0.3µm element (Y)
F3000-G4	F3000-KIT	F3000-KIT-Y
F4000-G4	F4000-KIT	F4000-KIT-Y
F8000-G4 Note 1	F8000-KIT	F8000-KIT-Y

Note 1: For the F8000, the baffle, element, and bowl O-ring are a set.

Bowl assembly (set of bowl assembly and bowl O-ring)

Bowl assembly model no. / Product option	Metal bowl (resin cock) assembly with manual drain cock	NO type automatic drain metal bowl (resin cock) assembly with manual override	NC type automatic drain metal bowl (resin cock) assembly with manual override	Metal bowl (metal cock) assembly with manual drain cock	NO type automatic drain metal bowl (metal cock) assembly with manual override	NC type automatic drain metal bowl (metal cock) assembly with manual override
Type	Blank	F	F1	M	FM	F1M
F3000, W3000, W3100-G4	F3000-G4-BOWL-M1	F3000-G4-BOWL-FM1	F3000-G4-BOWL-F1M1	F3000-G4-BOWL-M	F3000-G4-BOWL-FM	F3000-G4-BOWL-F1M
F4000, F8000, W4000, W4100, W8000, W8100-G4	F4000-G4-BOWL-M1	F4000-G4-BOWL-FM1	F4000-G4-BOWL-F1M1	F4000-G4-BOWL-M	F4000-G4-BOWL-FM	F4000-G4-BOWL-F1M

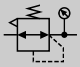
Bowl assembly model no. / Product option	NO type large automatic drain metal bowl (resin cock) assembly with manual override	NC type large automatic drain metal bowl (resin cock) assembly with manual override	NO type large automatic drain metal bowl (metal cock) assembly with manual override	NC type large automatic drain metal bowl (metal cock) assembly with manual override
Type	FF	FF1	FFM	FF1M
F8000, W8000, W8100-G4	F8000-G4-BOWL-FFM1	F8000-G4-BOWL-FF1M1	F8000-G4-BOWL-FFM	F8000-G4-BOWL-FF1M

MEMO

Regulator flame resistant Series

R3000/R4000/R8000-G4 Series

Port size: 1/4 to 1

JIS symbol 

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Specifications

Descriptions	R3000-G4	R4000-G4	R8000-G4
Working fluid	Compressed air		
Max. working pressure MPa	1.0		
Withstanding pressure MPa	1.5		
Working temperature ûC	5 to 60		
Set pressure range MPa	0.05 to 0.85		
Relief	With relief mechanism		
Port size Rc, NPT, G	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.52	0.77	1.6
Standard specifications	Exterior: Flame-resistant material, nut for panel mounting		Exterior: Flame-resistant material

How to order

R3000 – 8 ( ) – G4 – LT – ( ) – A8W ( )

A Model no.
B Port size
C Port thread type
Flame resistant type
D Option
E Display unit
F Piping adaptor set (attached)
G Attachment (attached)

* Refer to page 274 for the explanation of the option.

Symbol		Descriptions	A Model no. R3000	R4000	R8000
B Port size					
8		1/4			
10		3/8			
15		1/2			
20		3/4			
25		1			
C Port thread type		**Note 1**			
Blank		Rc thread			
N		NPT thread			
G		G thread			
D Option		**Note 2**			
Pressure range	Blank	0.05 to 0.85MPa			
	L	0.05 to 0.35MPa Note 3			
Relief	Blank	With relief mechanism			
	N	Nonrelief type			
Pressure gauge	T	Without pressure gauge (pressure gauge port (Rc1/4) is assembled with sealed)			
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)			
Flow direction	Blank	Standard flow (left right)			
	X1	Reverse flow (right left)			
E Display unit					
Blank		MPa display, Rc thread			
J1		MPa display, NPT/G thread			
F Piping adaptor set (attached)		**Note 4** Page 428			
Blank		Not attached			
A8*W		1/4 piping adaptor set (white)			
A10*W		3/8 piping adaptor set (white)			
A15*W		1/2 piping adaptor set (white)			
A20*W		3/4 piping adaptor set (white)			
A25*W		1 piping adaptor set (white)			
A32*W		1 1/4 piping adaptor set (white)			
***Adaptor screw type**					
Blank		Rc thread			
N		NPT thread			
G		G thread			
G Attachment (attached)		**Note 6** Pages 425, 659			
Blank		Not attached			
BW		C type bracket (silver)			
B3W Note 5		L type bracket (silver)			
G49P		G49D-8-P10(L: G49D-8-P04)			
G59P		G59D-8-P10(L: G59D-8-P04)			

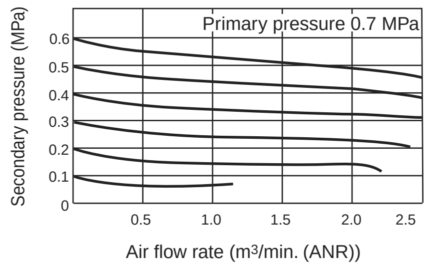
⚠ Note on model no. selection

Note 1: G and NPT threads are available for IN, OUT, and gauge ports.
Note 2: When selecting options for several items, list options in order from the top.
Note 3: The pressure gauge's indication range is 0 to 0.4MPa for option "L".
Note 4: The piping adaptor set and C bracket cannot be used together.
Note 5: Refer to Section 2. Regulator, in "⚠ PRECAUTIONS for Installation and Adjustment" (page 279) for details on mounting the L-type bracket.
Note 6: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

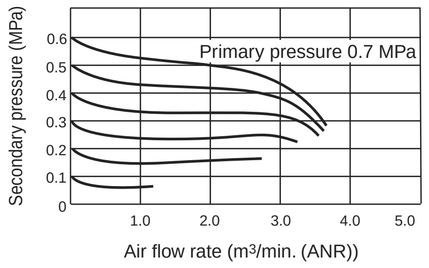
Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Flow characteristic

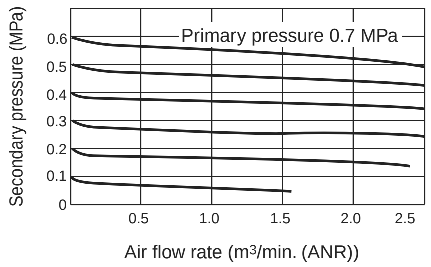
R3000-8-G4



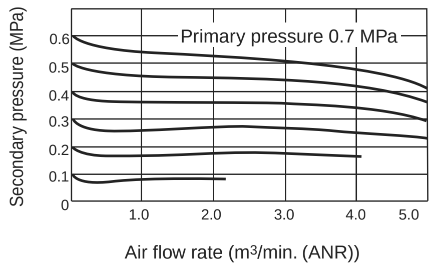
R3000-10-G4



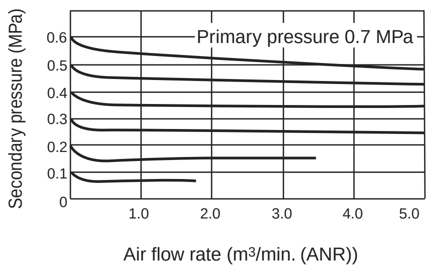
R4000-8-G4



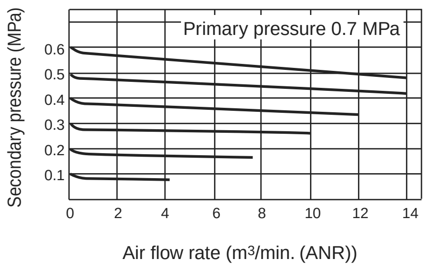
R4000-10-G4



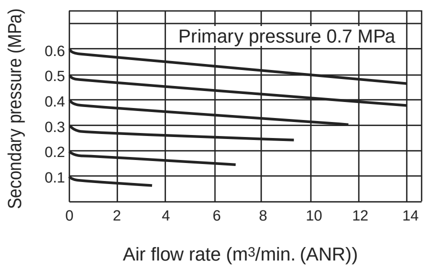
R4000-15-G4



R8000-20-G4

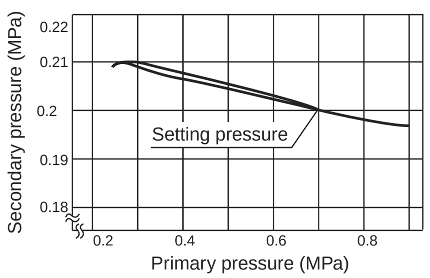


R8000-25-G4

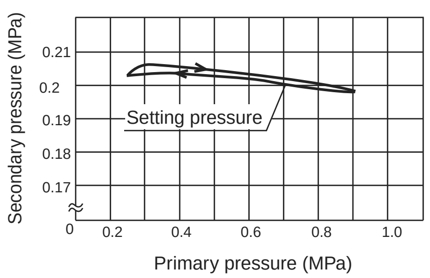


Pressure characteristic

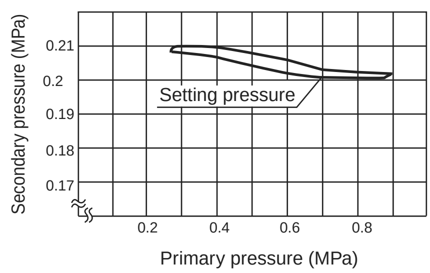
R3000-G4



R4000-G4

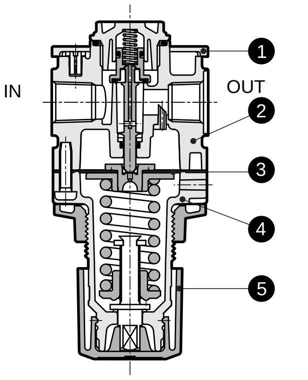


R8000-G4

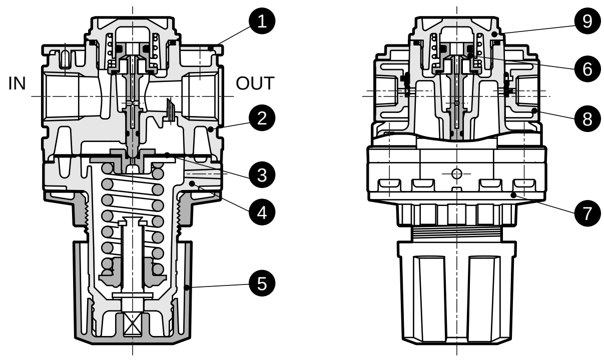


Internal structure and parts list

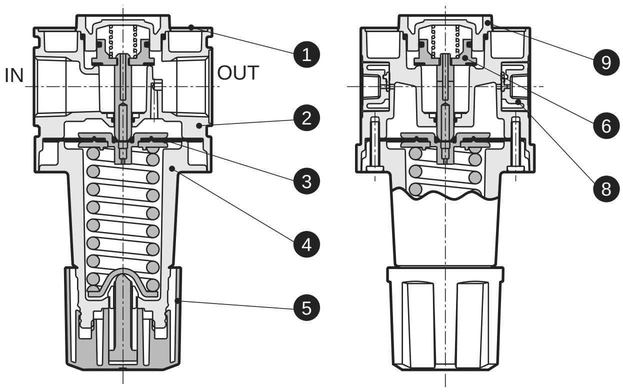
R3000-G4



R4000-G4



R8000-G4

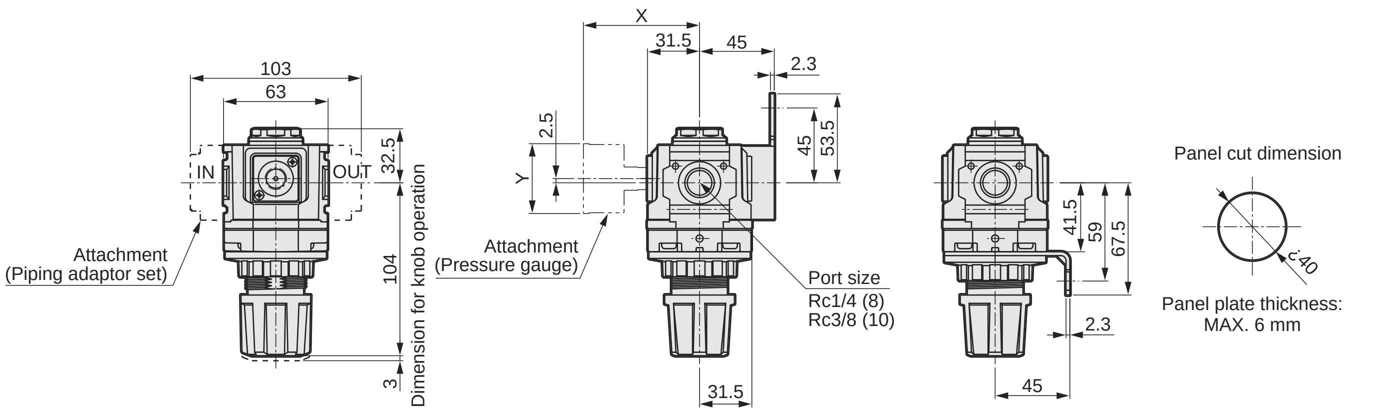


No.	Part name	Material		
		R3000-G4	R4000-G4	R8000-G4
1	Plate cover	ABS resin (Note 1)		
2	Body	Aluminum alloy die-casting		
3	Diaphragm assembly	Zinc alloy die-casting, nitrile rubber		
4	Cover	Aluminum alloy die-casting		
5	Knob	PBT resin (Note 1)		
6	Valve assembly	Brass, hydrogen nitrile rubber, polyacetal resin		
7	Mounting nut	PBT resin (Note 1)		-
8	Gauge plug assembly	Polyamide resin (Note 1), nitrile rubber, steel		
9	Bottom plug	Aluminum alloy die-casting		

Note 1: Flame resistance resin and UL94 standards V-O or equivalent
Note 2: Refer to page 466 for repair parts.

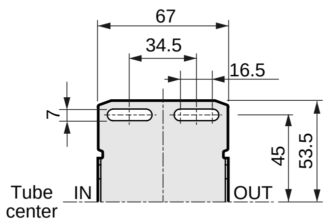
Dimensions

R3000-G4

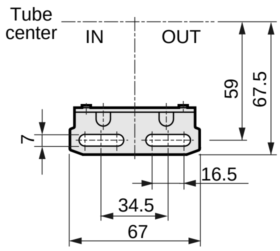


á Attachment

C type bracket (-BW)
Parts No.: B320



L type bracket (-BW)
Parts No.: B330

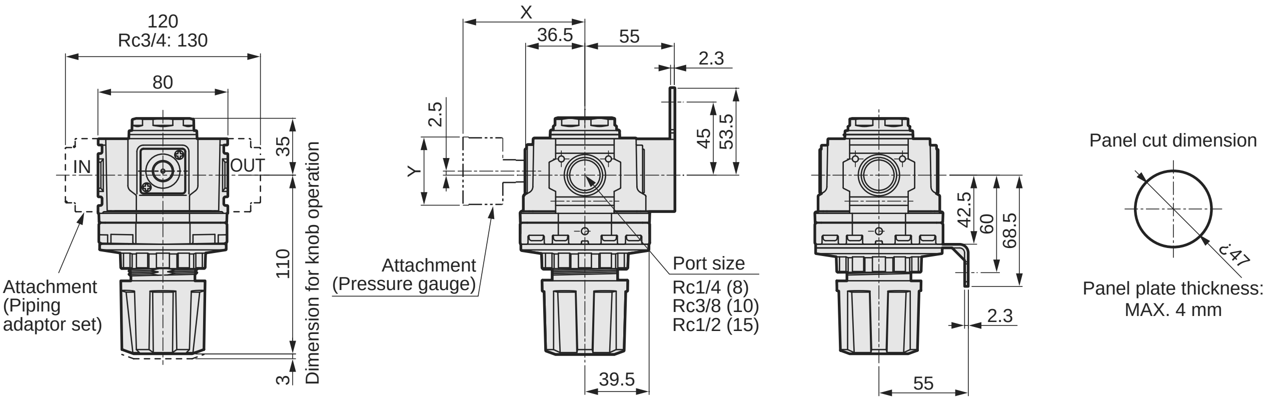


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(69.5)	¿43.5
G59P	(72)	¿52

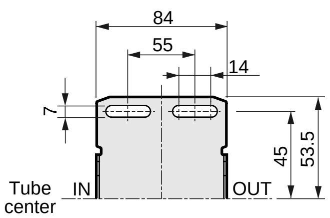
Note: The C-type bracket and piping adapter set attachments cannot be used at the same time.

R4000-G4

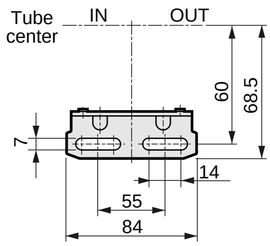


á Attachment

C type bracket (-BW)
Parts No.: B420



L type bracket (-BW)
Parts No.: B430



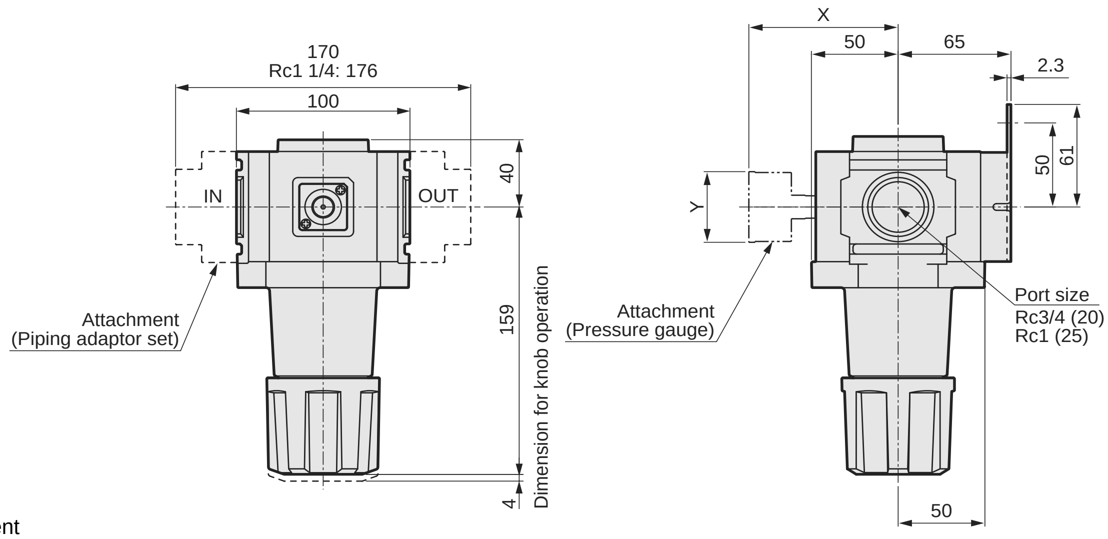
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(74.5)	¿43.5
G59P	(77)	¿52

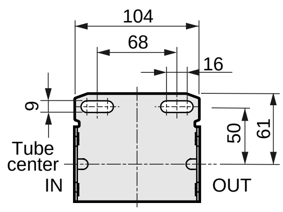
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

%JNFOTJPOT

R8000-G4



á Attachment
C type bracket (-BW)
Parts No.: B820



Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(84.5)	¿43.5
G59P	(87)	¿52

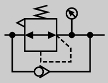
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

Reverse regulator   flame resistant Series

R3100/R4100/R8100-G4 Series

From secondary pressure to primary pressure with back flow function.
Port size: 1/4 to 1

JIS symbol



RoHS

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Specifications

Descriptions	R3100-G4	R4100-G4	R8100-G4
Working fluid	Compressed air		
Max. working pressure MPa	1.0		
Withstanding pressure MPa	1.5		
Working temperature ûC	5 to 60		
Set pressure range (Note 1) MPa	0.05 to 0.85		
Relief	With relief mechanism		
Port size Rc, NPT, G	1/4, 3/8 (1/2 uses an adaptor)	1/4, 3/8, 1/2 (3/4 uses an adaptor)	3/4, 1 (1 1/4 uses an adaptor)
Product weight kg	0.52	0.77	1.6
Standard specifications	Exterior: Flame-resistant material, nut for panel mounting		Exterior: Flame-resistant material

Note 1: Refer to the set pressure range for the back pressure given on page 462 when selecting the model.
Note 2: Check that the primary pressure is at least 0.05 MPa or more than the secondary pressure.

How to order

R3100 – 8 ( ) – G4 – LT – ( ) – A8W ( )

A Model no.
Flame resistant type
B Port size
C Port thread type
D Option
E Display unit
F Piping adaptor set (attached)
G Attachment (attached)

* Refer to page 274 for the explanation of the option.

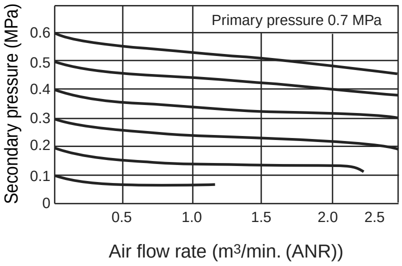
Symbol		Descriptions	R3100	R4100	R8100
B Port size					
8		1/4			
10		3/8			
15		1/2			
20		3/4			
25		1			
C Port thread type		Note 1			
Blank		Rc thread			
N		NPT thread			
G		G thread			
D Option		Note 2, Note 3			
Pressure range	Blank	0.05 to 0.85MPa			
	L	0.05 to 0.35MPa Note 4			
Relief	Blank	With relief mechanism			
	N	Nonrelief type			
Pressure gauge	T	Without pressure gauge (pressure gauge port (Rc1/4) is assembled with sealed)			
	T8	Pressure gauge attached (pressure gauge port (Rc1/4) is assembled by open)			
Flow direction	Blank	Standard flow (left right)			
	X1	Reverse flow (right left)			
E Display unit					
Blank		MPa display, Rc thread			
J1		MPa display, NPT/G thread			
F Piping adaptor set (attached)		Note 5 Page 428			
Blank		Not attached			
A8*W		1/4 piping adaptor set (white)			
A10*W		3/8 piping adaptor set (white)			
A15*W		1/2 piping adaptor set (white)			
A20*W		3/4 piping adaptor set (white)			
A25*W		1 piping adaptor set (white)			
A32*W		1 1/4 piping adaptor set (white)			
***Adaptor screw type**					
Blank		Rc thread			
N		NPT thread			
G		G thread			
G Attachment (attached)		Note 7 Pages 425, 659			
Blank		Not attached			
BW		C type bracket (silver)			
B3W Note 6		L type bracket (silver)			
G49P		G49D-8-P10(L: G49D-8-P04)			
G59P		G59D-8-P10(L: G59D-8-P04)			

Note on model no. selection

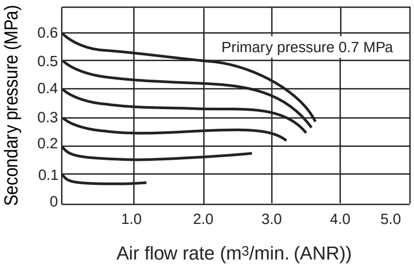
Note 1: G and NPT threads are available for IN, OUT, and gauge ports.
Note 2: When selecting options for several items, list options in order from the top.
Note 3: Positions of a check valve and pressure gauge can not be changed. If the IN and OUT direction must be reversed, indicate "X1" at the end of the option field.
Note 4: The pressure gauge's indication range is 0 to 0.4MPa for option "L".
Note 5: The piping adaptor set and C bracket cannot be used together.
Note 6: Refer to Section 2. Regulator, in " PRECAUTIONS for Installation and Adjustment" (page 279) for details on mounting the L-type bracket.
Note 7: If NPT is selected for the "C" piping thread type, a NPT pressure gauge is enclosed. If Rc or G thread is selected, an R thread pressure gauge is enclosed.

Flow characteristic

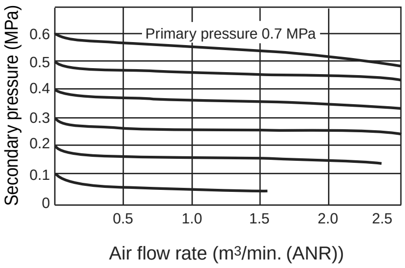
R3100-8-G4



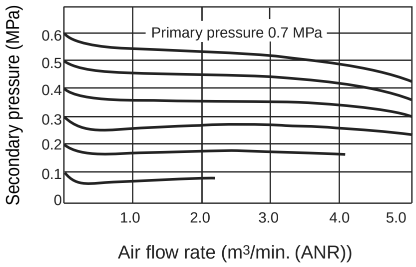
R3100-10-G4



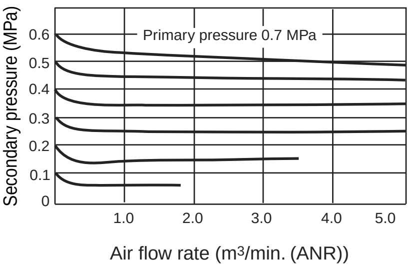
R4100-8-G4



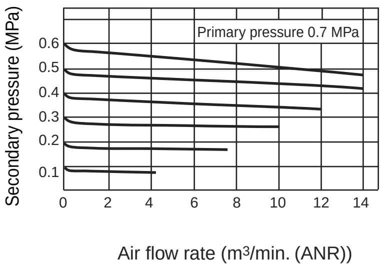
R4100-10-G4



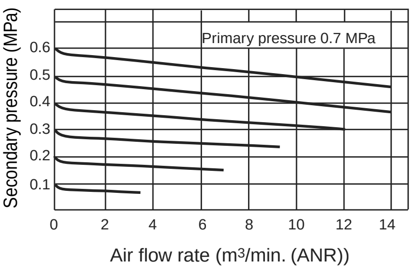
R4100-15-G4



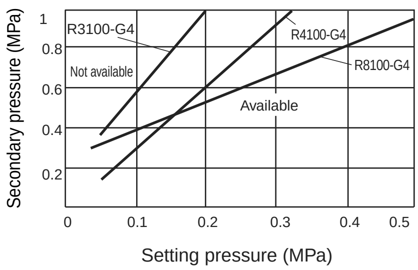
R8100-20-G4



R8100-25-G4



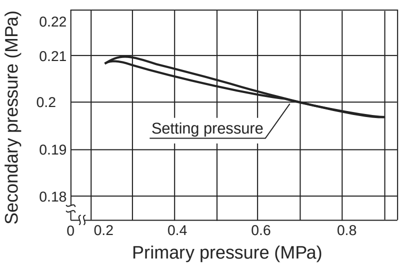
Set pressure range to back pressure



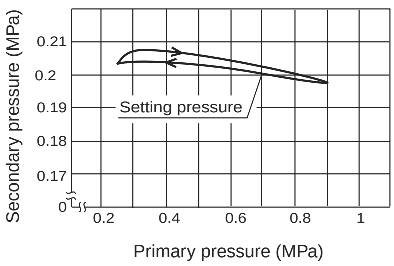
Note: The upper side of the graph is nonusable and the lower side usable.
Example: If R4100-G4 is set to set pressure 0.2 MPa and the secondary back pressure is 0.6 MPa or more, the secondary pressure will not be released to the primary side.

Pressure characteristic

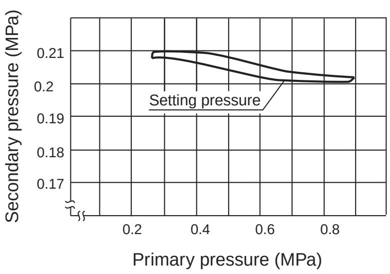
R3100-G4



R4100-G4

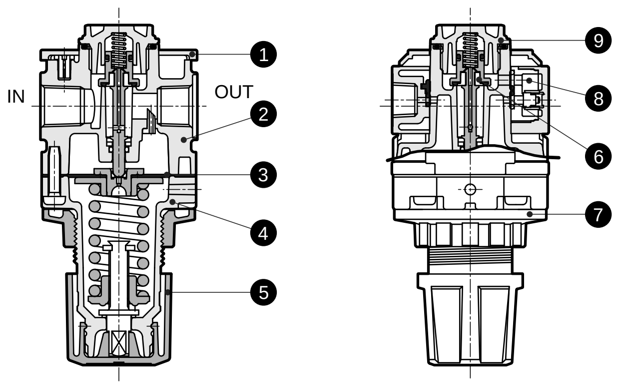


R8100-G4

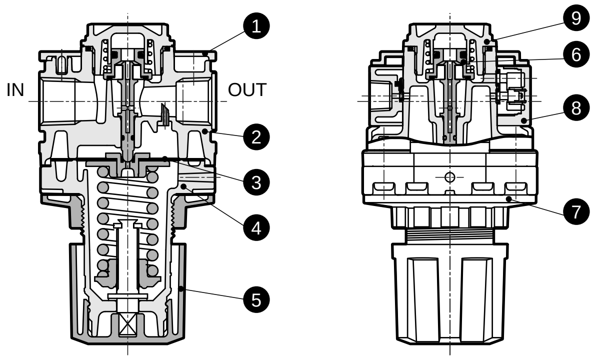


Internal structure and parts list

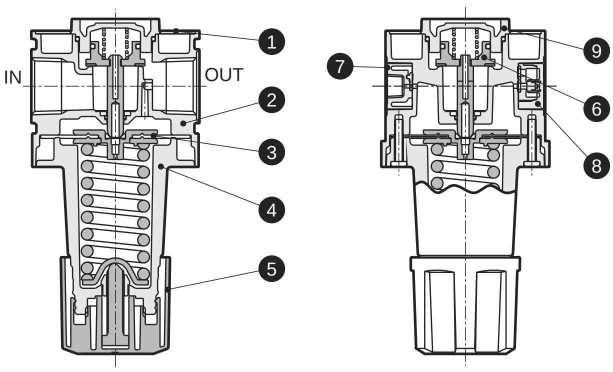
R3100-G4



R4100-G4



R8100-G4



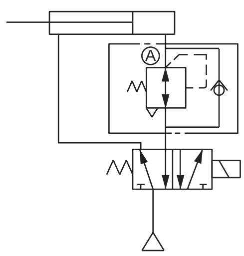
No.	Part name	Material		
		R3100-G4	R4100-G4	R8100-G4
1	Plate cover	ABS resin (Note 1)		
2	Body	Aluminum alloy die-casting		
3	Diaphragm assembly	Zinc alloy die-casting, nitrile rubber		
4	Cover	Aluminum alloy die-casting		
5	Knob	PBT resin (Note 1)		
6	Valve assembly	Brass, hydrogen nitrile rubber, polyacetal resin		
7	Gauge plug assembly	Polyamide resin (Note 1), nitrile rubber, steel		
8	Check valve total assemblies	PBT resin, nitrile rubber, stainless steel wire, steel, aluminum		
9	Bottom plug	Aluminum alloy die-casting		
10	Mounting nut	PBT resin (Note 1)		-

Note 1: Flame resistance resin and UL94 standards V-O or equivalent
Note 2: Refer to page 466 for repair kits.

Functional explanation

When the primary pressure is introduced from the IN side, the check valve functions as a regular regulator because it closes with primary pressure and spring load. When primary pressure is released by a switching valve such as a shut-off valve, the check valve opens with secondary pressure. Pressure in the diaphragm chamber is released and pressure drops. This causes the diaphragm to be pressed down by the pressure adjustment spring. The main valve (valve assembly) opens, and the air on the OUT side is discharged.

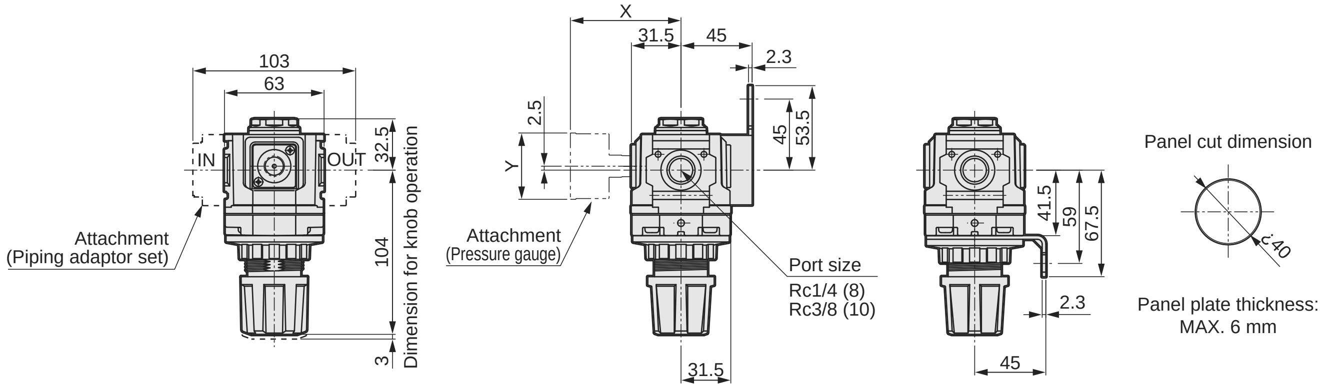
Circuit diagram
When cylinder head end and rod end pressure differs.



Note: Set back pressure A for when the primary pressure is released within the range in the graph for the regulator's set pressure.

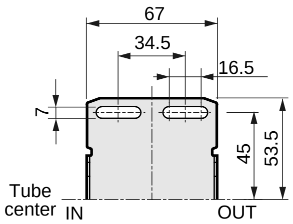
Dimensions

R3100-G4

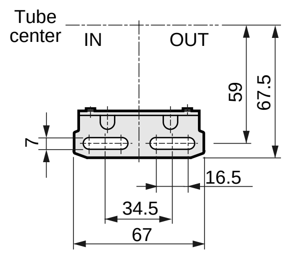


á Attachment

C type bracket (-BW)
Parts No.: B320



L type bracket (-B3W)
Parts No.: B330

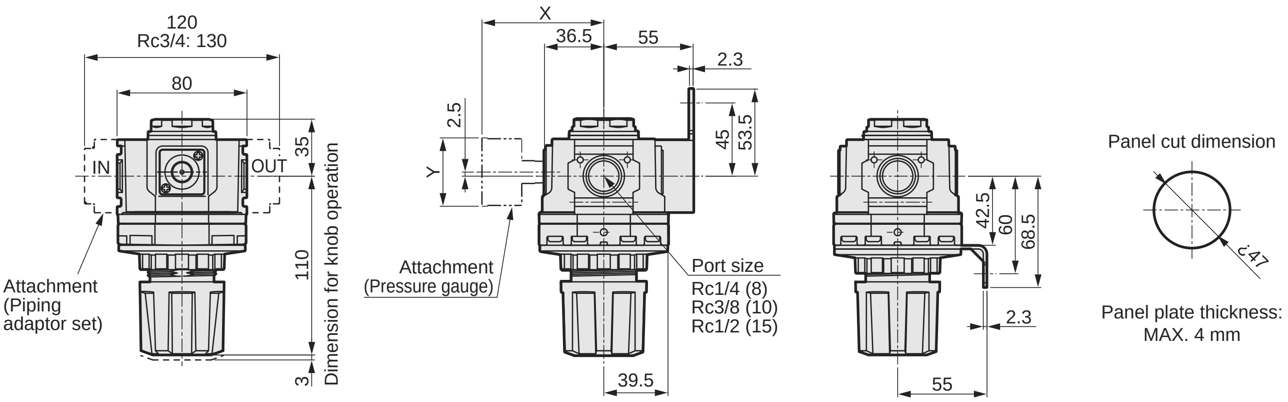


Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(69.5)	¿43.5
G59P	(72)	¿52

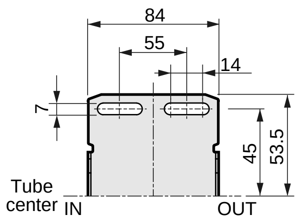
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

R4100-G4

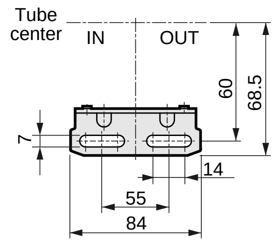


á Attachment

C type bracket (-BW)
Parts No.: B420



L type bracket (-B3W)
Parts No.: B430



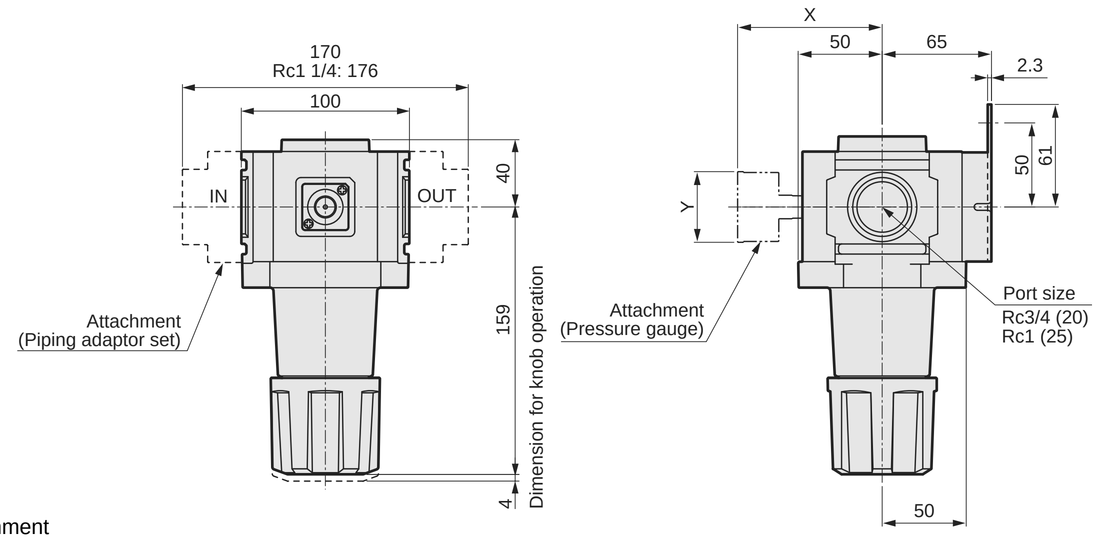
Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(74.5)	¿43.5
G59P	(77)	¿52

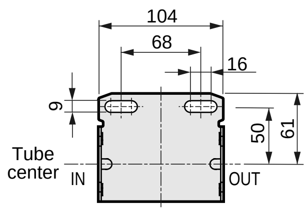
Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

Dimensions

R8100-G4



á Attachment
C type bracket (-BW)
Parts No.: B820



Pressure gauge attached optional dimensions table

Attached pressure gauge	X	Y
G49P	(84.5)	¿43.5
G59P	(87)	¿52

Note: The C-type bracket and piping adaptor set attachments cannot be used at the same time.

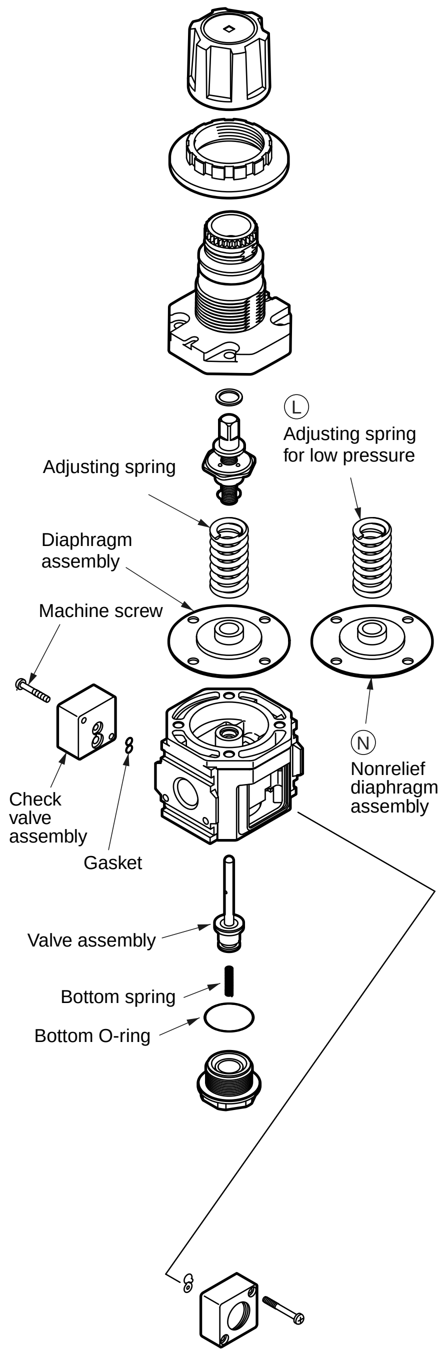
Optional parts diagram

Repair kits (Set of diaphragm assembly, valve assembly, bottom spring, bottom O-ring)

Repair kits model no. / Model	Relief type diaphragm	Nonrelief Diaphragm assembly
R3000-G4, R3100-G4	R3000-KIT	R3000-KIT-N
R4000-G4, R4100-G4	R4000-KIT	R4000-KIT-N
R8000-G4, R8100-G4	R8000-KIT	R8000-KIT-N

Valve assembly (Set of valve assembly, bottom spring, bottom O-ring)

Model	Valve assembly model no.
R3000-G4, R3100-G4	R3000-VALVE-ASSY
R4000-G4, R4100-G4	R4000-VALVE-ASSY
R8000-G4, R8100-G4	R8000-VALVE-ASSY



Check valve assembly for reverse regulator

Model	Check valve assembly model no.
R3100-G4, W3100-G4 R4100-G4, W4100-G4 R8100-G4, W8100-G4	R3100-G4-CHECK-VALVE-ASSY

Adjusting spring

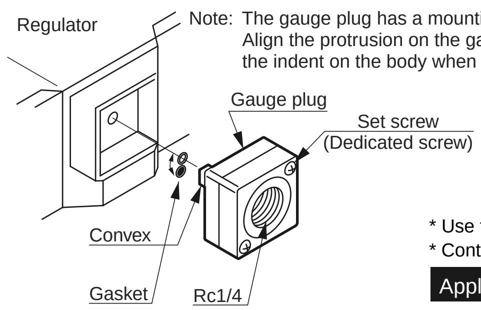
Adjusting spring model no. / Model	Standard spring (0.05 to 0.85MPa)	Spring for low pressure (0.05 to 0.35MPa)
R3000-G4, R3100-G4 W3000-G4, W3100-G4	R3000-SPRING	R3000-SPRING-L
R4000-G4, R4100-G4 W4000-G4, W4100-G4	R4000-SPRING	R4000-SPRING-L
R8000-G4, R8100-G4	R8000-SPRING	R8000-SPRING-L
W8000-G4, W8100-G4	W8000-SPRING	W8000-SPRING-L

Diaphragm assembly (only diaphragm assembly)

Diaphragm assembly model no. / Model	Relief type diaphragm	Nonrelief type diaphragm
R3000-G4, R3100-G4 W3000-G4, W3100-G4	R3000-DIAPHRAGM-ASSY	R3000-DIAPHRAGM-ASSY-N
R4000-G4, R4100-G4 W4000-G4, W4100-G4	R4000-DIAPHRAGM-ASSY	R4000-DIAPHRAGM-ASSY-N
R8000-G4, R8100-G4	R8000-DIAPHRAGM-ASSY	R8000-DIAPHRAGM-ASSY-N
W8000-G4, W8100-G4	W8000-DIAPHRAGM-ASSY	W8000-DIAPHRAGM-ASSY-N

Gauge plug assembly (assembly of gauge plug, gasket, set screw)

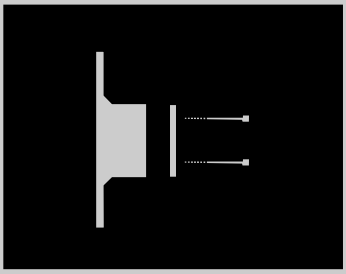
Use when mounting the pressure gauge.



If the gasket is turned 180û as shown in the drawing, regulator pressure flows to the pressure gauge.

* Use this when detecting external pressure.
* Contact CKD when NPT or G threads are required.

Applicable model	Gauge plug assembly model no.
3000-G4 4000-G4 Series 8000-G4	R3000-G4-G-PLUG



Bracket

B/B-W Series

Joiner

J-W Series

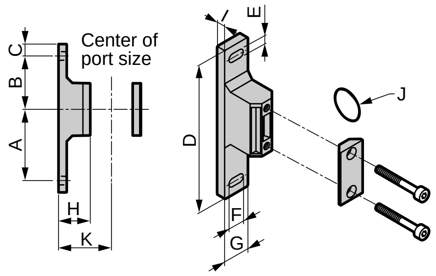
RoHS

Dimensions and Applications

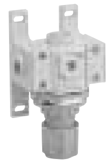
T type bracket set

Model No.: B310-W / B410-W / B810-W

Note: Select B410-W when using the 3000 Series and 4000 Series combined.



Application



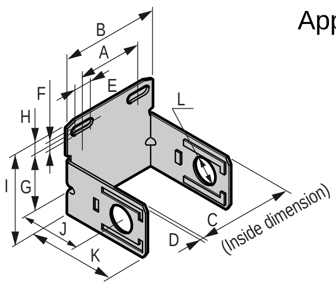
Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	K
B310-W	3000 Series	60	45	10	125	7	7	22	27	7	JISB2401-P21	45
B410-W	4000 Series	60	45	10	125	7	7	22	37	7	JISB2401-P21	55
B810-W	8000 Series	70	50	15	150	9	5	27	37	8	AS568-127	65

White type

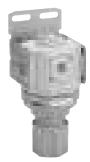
C type bracket

Model No.: B320/B420/B820

Attachment: BW



Application



Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	K	L
B320	3000 Series	34.5	67	63	t2.3	16.5	7	45	9	75.5	45	69	¿21.7
B420	4000 Series	55	84	80	t2.3	14.0	7	45	9	75.5	55	69	¿21.7
B820	8000 Series	68	104	100	t2.3	16	9	50	11	93.5	65	102	¿35

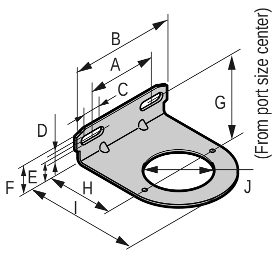
White type

L type bracket

Model No.: B330/B430

Attachment: B3W

Loosen the mounting nut to remove the knob.
After inserting L type bracket, fix the bracket by the mounting nut. Press the knob in manually after fixing.
Refer to " 2. Regulator , filter and regulator" on page 279.



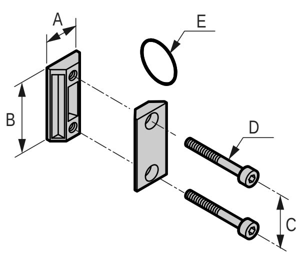
Application

Model no.	Applicable model	A	B	C	D	E	F	G	H	I	J	Other
B330	3000 Series	34.5	67	16.5	7	17.5	26	58 (63.5)	45	76	¿40	Dimensions in ( ) for W3000/3100
B430	4000 Series	55	84	14	7	17.5	26	58	55	94	¿47	

White type

Joiner set

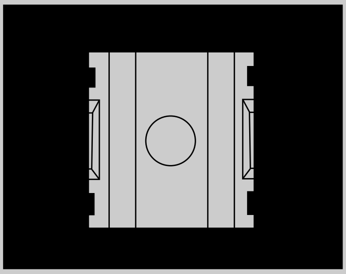
Model No.: C4000-J400-W
C8000-J800-W



Application

Model no.	Applicable model	A	B	C	D	E	
C4000-J400-W	3000 Series 4000 Series	21	44	32	M5	JIS B2401-P21	
C8000-J800-W	8000 Series	26	65	50	M6	AS568-127	

White type

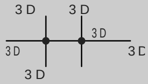


Distributor

D401/D801-W Series

Applicable for pipe branching.
Port size: 1/4 to 1

JIS symbol



RoHS

Specifications

Descriptions	D401-00-W	D801-00-W
Working fluid	Compressed air	
Max. working pressure MPa	1.0	
Withstanding pressure MPa	1.5	
No. of branch port	1	
Port size Rc	1/4, 3/8, 1/2	3/4, 1
Working temperature ûC	5 to 60	
Product weight kg	0.13	0.35

How to order

D401 - 00 - 8 [ ] - W - B31

White type

A Model no.

B Port size

C Port thread type

D T type bracket

Symbol	Descriptions	
A Model no.		
D401	Distributor	
D801	Distributor	

B Port size		D401	D801
8	1/4		
10	3/8		
15	1/2		
20	3/4		
25	1		

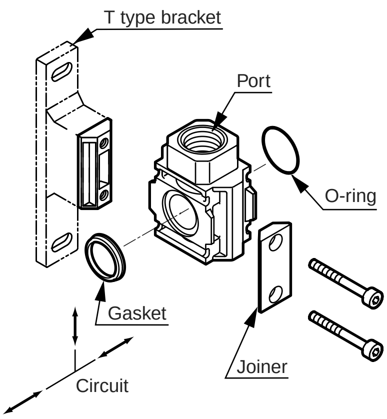
C Port thread type			
Blank	Rc thread		
N	NPT thread		
G	G thread		

D T type bracket			
Blank	None		
B31	3000 Series		
B41	4000 Series		
B81	8000 Series		

Note on model no. selection

Note 1: The joiner set (joiner, bolt, O-ring) and one gasket are enclosed as a standard.
Note 2: Consult with CKD for 2 way branch.
Note 3: D401 can be connected to both 3000 Series and 4000 Series.

Assembly method (D401-00-W/D801-00-W)

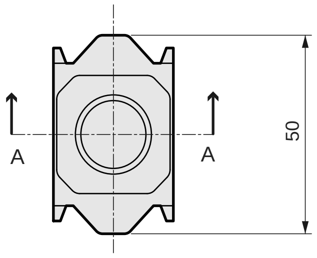


Note 1: When installing at the primary side, insert an O-ring, while installing at the secondary side, insert a gasket.
Note 2: When inserting O-ring and gasket to assemble, O-ring and gasket must not be folded.

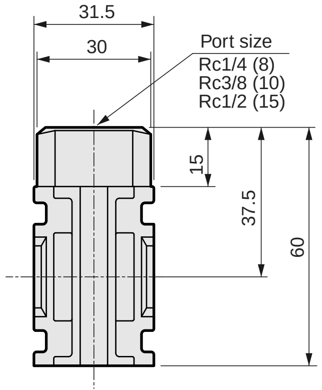
Application (D401-00-W/D801-00-W)

Dimensions

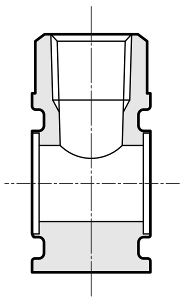
D401-00-W



Top



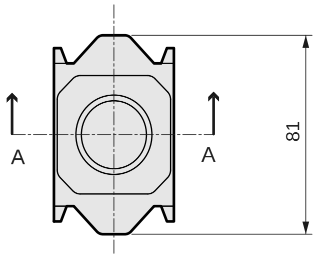
Front



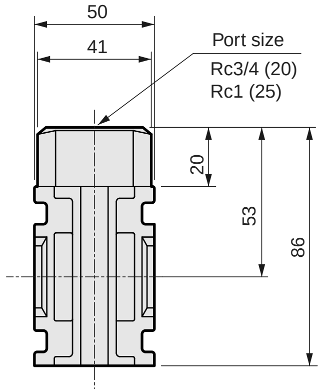
Cross section A-A

Note: Contact CKD for 2 way branch type.

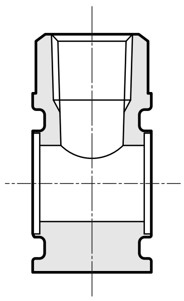
D801-00-W



Top



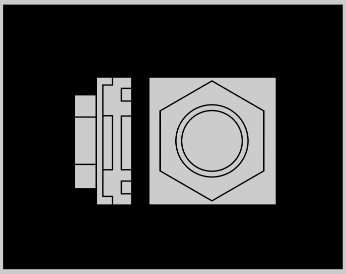
Front



Cross section A-A

Note: Contact CKD for 2 way branch type.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane type dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending
Flame resistant Series
F.R.L. unit



Piping adaptor

A400/A800-W Series

Port size: 1/4 to 1 1/4

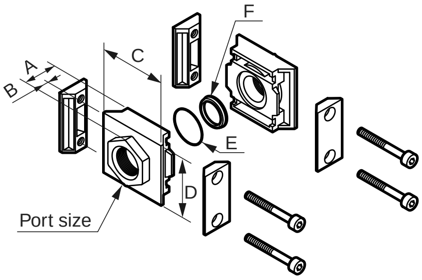
RoHS

Dimensions and Applications

Piping adaptor set

Model No.: A400-8,10,15,20-W
A800-20,25,32-W

Application



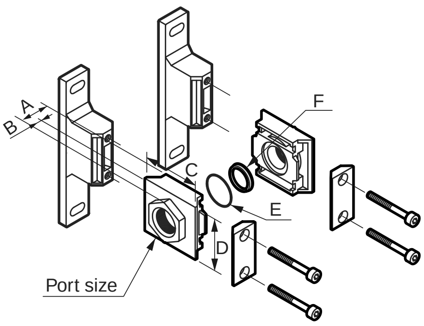
Model no.	Port size	Applicable model	A	B	C	D	E (O ring)	F (gasket)	Other
A400-8*-W	1/4	3000 Series / 4000 Series	20 (25) {34}	6 (11) {20}	50	45	C4000-ORING JISB2401 P21 1 pc.	C4000-GASKET 1 pc.	Numbers in ( ) are for Rc3/4 Numbers in { } are for Rc1
A400-10*-W	3/8								
A400-15*-W	1/2								
A400-20*-W	3/4	4000 Series							
A400-25*-W	1	Note 1							
A800-20*-W	3/4	8000 Series	35 (38)	15 (18)	81	66	C8000-ORING AS568-127 1 pc.	C8000-GASKET 1 pc.	Numbers in ( ) are for Rc1 1/4
A800-25*-W	1								
A800-32*-W	11/4								

*: Blank: Rc thread, N: NPT thread, G: G thread
Note 1: Available also as attachment for V3000/V3010.
White type

Piping adaptor set

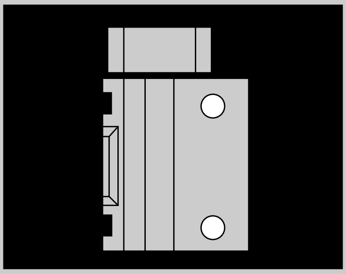
Model No.: A400-8,10,15-W-B31W
A400-8,10,15,20-W-B41W
A800-20,25,32-W-B81W
(with T type bracket set)

Application



Model no.	Port size	Applicable model	A	B	C	D	E (O ring)	F (gasket)	Other
A400-8*-W-B31W	1/4	3000 Series	20	6	50	45	C4000-ORING JISB2401 P-21 1 pc.	C4000-GASKET 1 pc.	
A400-10*-W-B31W	3/8								
A400-15*-W-B31W	1/2								
A400-8*-W-B41W	1/4	4000 Series	20 (25) {34}	6 (11) {20}	50	45	C4000-ORING JISB2401 P-21 1 pc.	C4000-GASKET 1 pc.	Numbers in ( ) are for Rc3/4 Numbers in { } are for Rc1
A400-10*-W-B41W	3/8								
A400-15*-W-B41W	1/2								
A400-20*-W-B41W	3/4								
A400-25*-W-B41W	1	Note 1							
A800-20*-W-B81W	3/4	8000 Series	35 (38)	15 (18)	81	66	C8000-ORING AS568-127 1 pc.	C8000-GASKET 1 pc.	Numbers in ( ) are for Rc1 1/4
A800-25*-W-B81W	1								
A800-32*-W-B81W	11/4								

*: Blank: Rc thread, N: NPT thread, G: G thread
Note 1: Available also as attachment for V3000/V3010.
White type



L type piping adaptor

A401/A801-W Series

Port size: 1/4 to 1

RoHS

Specifications

Descriptions	A401-W Note 1	A801-W
Working fluid	Compressed air	
Max. working pressure MPa	1.0	
Withstanding pressure MPa	1.5	
Port size Rc	1/4, 3/8, 1/2	3/4, 1
Working temperature ûC	5 to 60	
Product weight kg	0.13	0.4

Note 1: A401-W can be connected to both 3000-G4 and 4000-G4 Series.

How to order

A401 - 8 [ ] - W - B31W

White type

Ⓐ Model no.

Ⓑ Port size

Ⓒ Port thread type

Ⓓ T type bracket

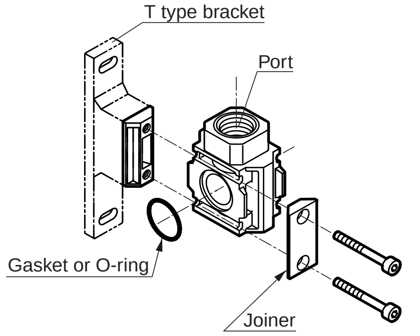
Symbol	Descriptions		
Ⓐ Model no.			
A401	L type adaptor		
A801	L type adaptor		
Ⓑ Port size		A401	A801
8	Rc1/4		
10	Rc3/8		
15	Rc1/2		
20	Rc3/4		
25	Rc1		
Ⓒ Port thread type			
Blank	Rc thread		
N	NPT thread		
G	G thread		
Ⓓ T type bracket Note 1			
Blank	None		
B31W	3000 Series		
B41W	4000 Series		
B81W	8000 Series		

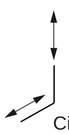
⚠ Note on model no. selection

Note 1: The joiner set (joiner, bolt, O-ring) and one gasket are enclosed as a standard.
Note 2: Contact CKD for vertical piping.

á Applicable model
á A401-8, 10, 15-W : 3000, 4000 Series
á A801-20, 25-W : 8000 Series

L type piping adapter





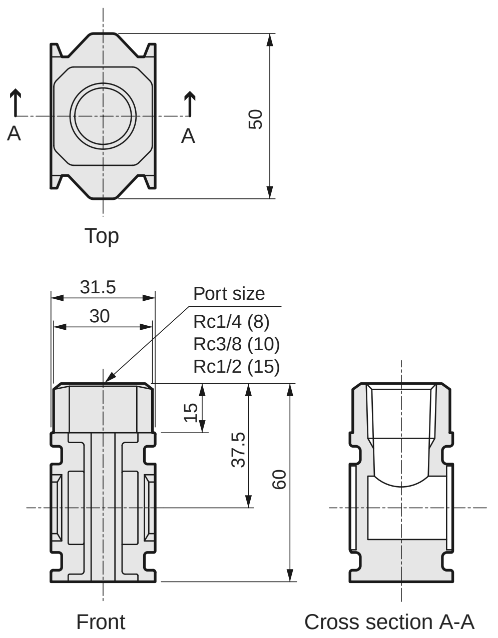
Application

Note: Insert the O-ring when mounting on the primary side for the air flow, and insert the gasket when mounting on the secondary side.

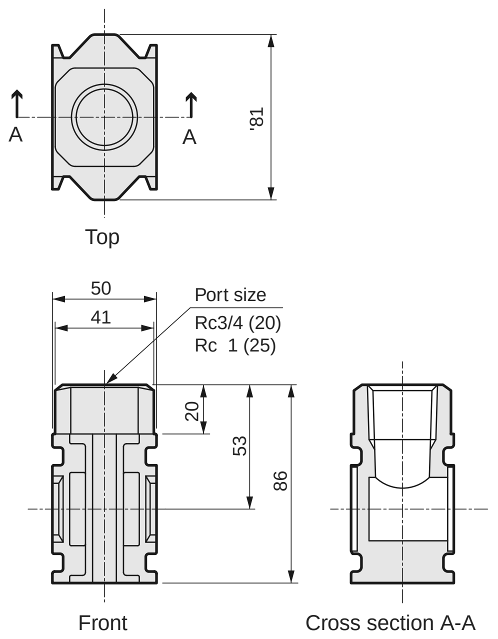
Piping adaptor

Dimensions

A401-W



A801-W



SELEX F.R.L.
Modular design

Oil-prohibition Series

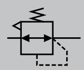
Components for air preparation / pressure adjustment / F.R.L. unit

CONTENTS

Oil-prohibited regulator

RN3000/RN4000/RN8000 Series

Ideal for applications susceptible to grease, including liquid crystals, semiconductors, foodstuffs, medicines, and electronic parts.
All parts in the fluid passage area are degreased and washed, and use no grease.
Port size: 1/4 to 1

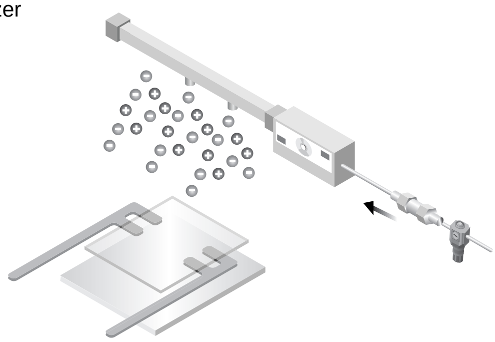


Specifications

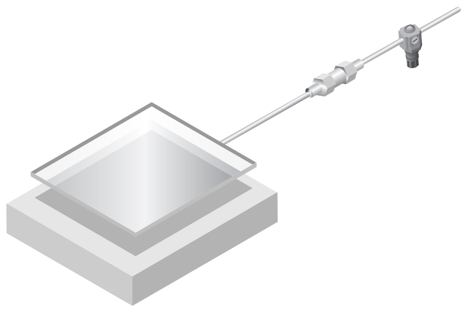
Descriptions	RN3000	RN4000	RN8000
Working fluid	Compressed air		
Max. working pressure MPa	0.8 (0.5 for low pressure)		
Withstanding pressure MPa	1.5		
Working temperature ûC	5 to 60		
Set pressure range MPa	0.05 to 0.7		
Relief	With relief mechanism		
Port size Rc	1/4, 3/8	1/4, 3/8, 1/2	3/4, 1
Product weight kg	0.5	0.7	1.9
Standard specifications	Fluid passage section: Oil-prohibited, nut for panel mount		Fluid passage section: Oil-prohibited

Application

Ionizer



Liquid crystal board transfer (noncontact)



Air knife