

Connectable Modular Components



Line Filter
AFF Series



Mist Separator
AM Series



Micro Mist Separator
AMD Series



Activated Carbon Filter
AMK Series



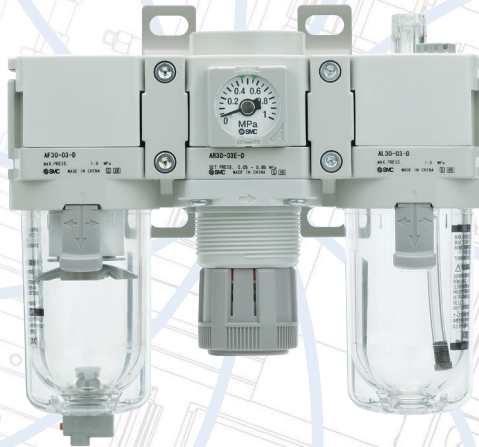
Mist Separator
Regulator
AWM-D Series



Micro Mist Separator
Regulator
AWD-D Series



5-Port Solenoid Valve **Plug-in** Type
SY3000/5000-X990



F.R.L. Units
AC Series



Common Supply Regulator
AR-M-D Series



3-Port Solenoid Valve/Residual
Pressure Release Valve with
Detection of Main Valve Position
VP546/746 Series



Residual Pressure Relief
3-Port Solenoid Valve
VP546E/746E Series



2-Port Solenoid Valve
JSXM Series



OSHA Standard Compliant
Pressure Relief 3-Port Valve
with Locking Holes
VHS-D Series



3-Color Display Digital Flow Switch
PF3A7H Series

Allows for space saving and reduced piping labor

Installation area: Max. **59%** reduction

(356,970 mm² ← 866,700 mm²)

Width Reduced by **255 mm** (815 mm ← 1070 mm)

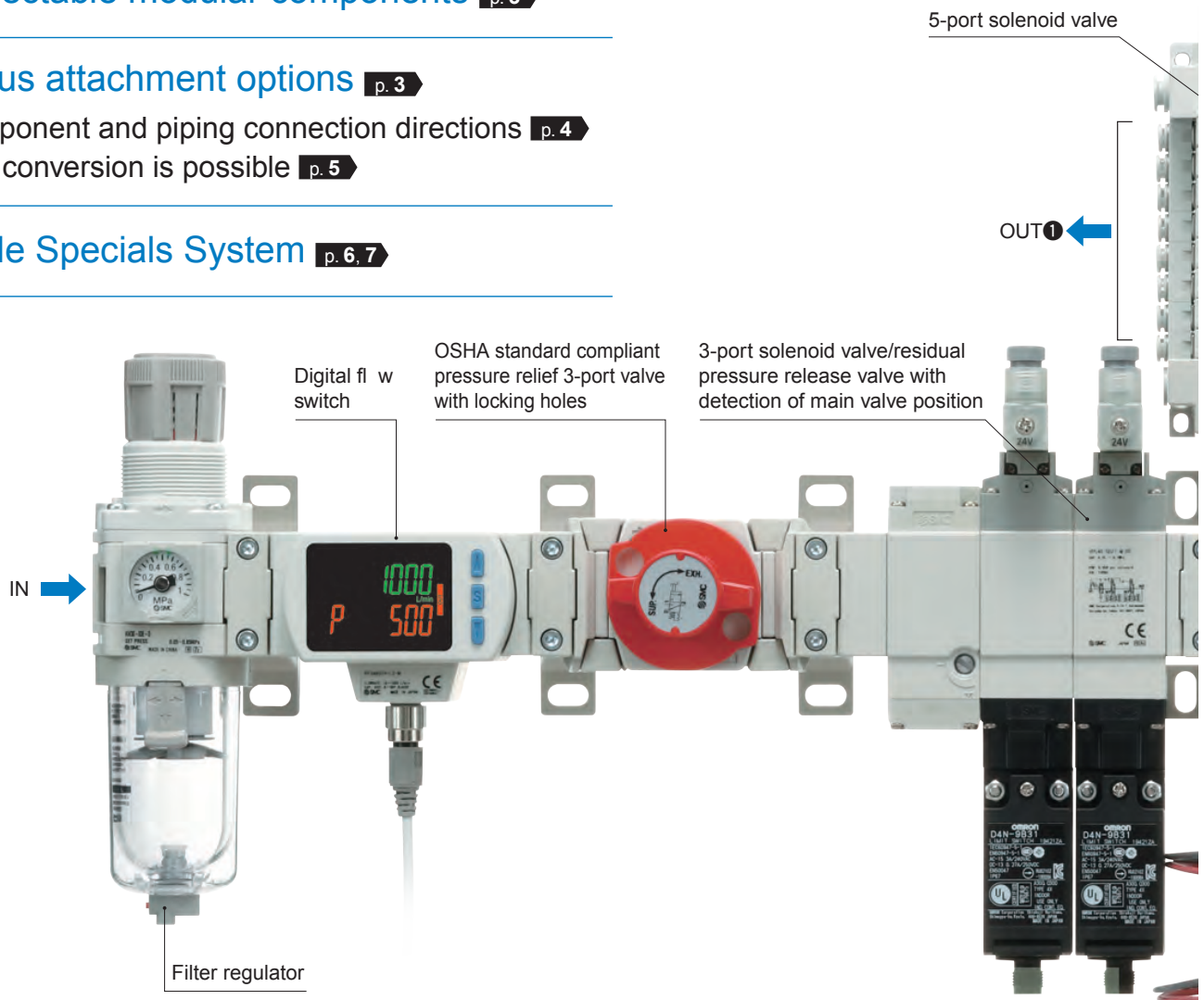
Height Reduced by **372 mm** (438 mm ← 810 mm)

Connectable modular components [p. 3](#)

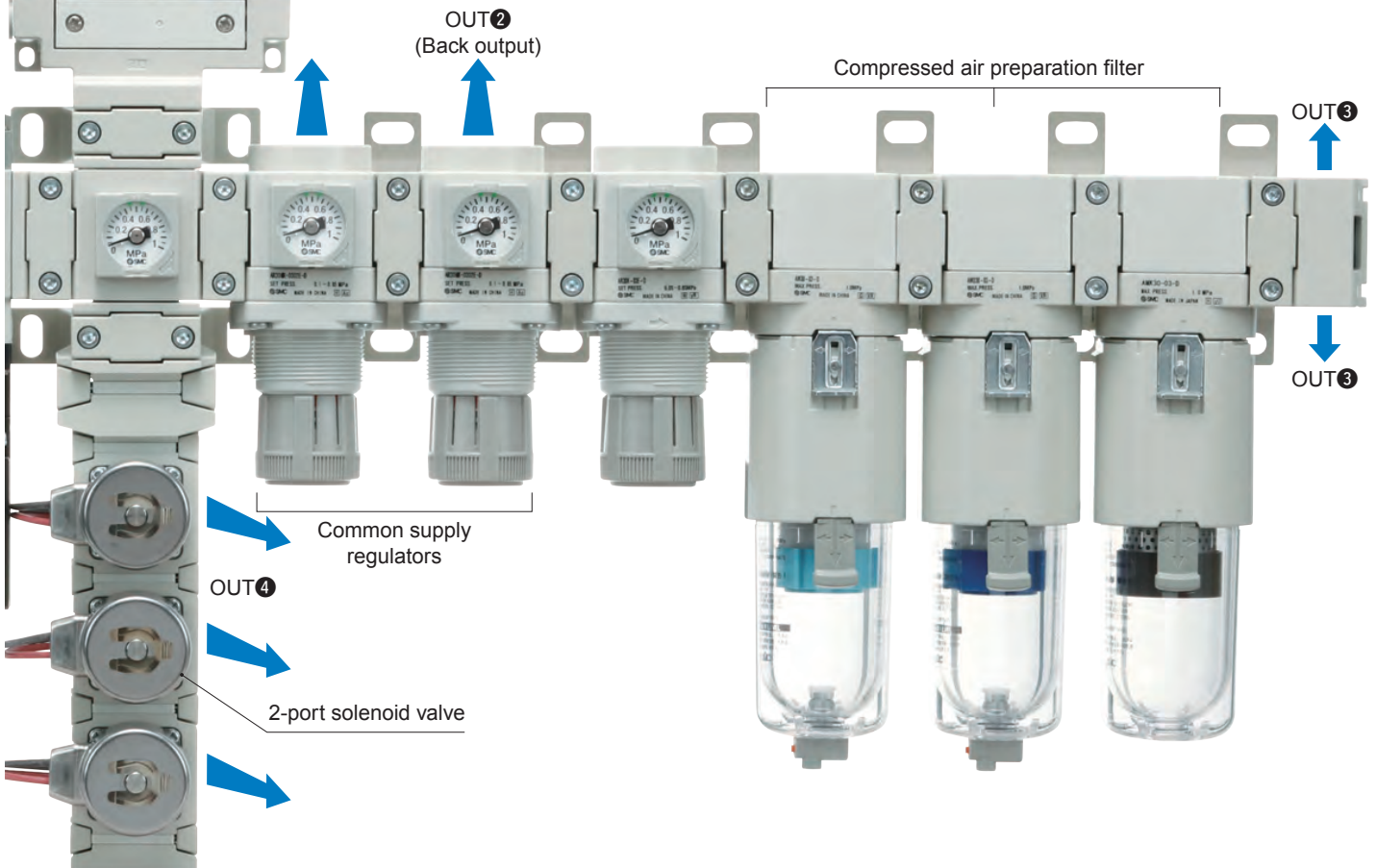
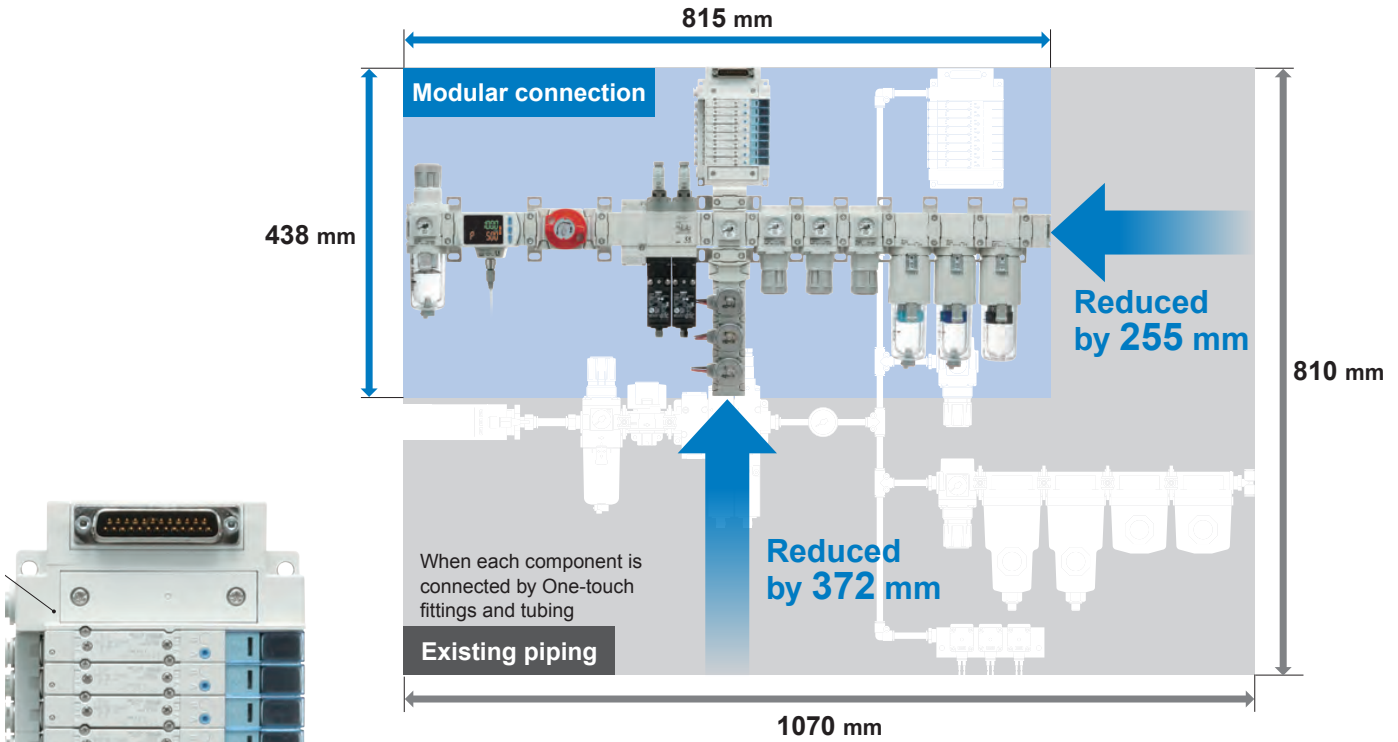
Various attachment options [p. 3](#)

- Component and piping connection directions [p. 4](#)
- Size conversion is possible [p. 5](#)

Simple Specials System [p. 6, 7](#)



OUT 1	Output air from 5-port solenoid valve	OUT 3	Output air of required purity class
OUT 2	Output air from common air supply regulator	OUT 4	Output air from 2-port solenoid valve



Connectable Modular Components

F.R.L. Units
AC-D Series

p. 8



Common Supply Regulator
AR□M-D Series

p. 8



Mist/Micro Mist Separator Regulator
AWM-D/AWD-D Series

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Digital Flow Switch
PF3A7/8H(-L) Series

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Compressed Air Preparation Filter
AFF/AM/AMD/AMK Series

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OSHA Standard Compliant Pressure Relief 3-Port Valve with Locking Holes
VHS-D Series

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5-Port Solenoid Valve
SY3000/5000-X990 Series

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Residual Pressure Relief 3-Port Solenoid Valve
VP546E/746E Series

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3-Port Solenoid Valve/ Residual Pressure Release Valve with Detection of Main Valve Position
VP546/746 Series

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2-Port Solenoid Valve
JSXM Series

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Various Attachment Options

A wide range of component types, sizes, connection directions, and piping directions are available.

Pressure Switches

With T-Spacer IS10T-D Series	With L-Shaped Piping Adapter IS10L-D Series	Pressure Switch IS10M-D Series	With Piping Adapter IS10E-D Series

Piping Adapters

Piping Adapter E□00-D Series	L-Shaped Piping Adapter E□00L-D Series	T-Shaped Piping Adapter E□00T-D Series	End Plate E□00E-D Series

Spacers

T-Spacer Y□10-D Series	Cross Spacer Y□4-D Series	Spacer Y□00-D Series	Spacer with Bracket Y□00T-D Series

Right Angle Adapter E□10T-D Series	Reducing Adapter E□10R-D Series	Cross Adapter Y□4M-D Series
Allows for modular connection with the product rotated 90 degrees	Allows for modular connection with products 1 body size larger or smaller	Allows for devices to be connected on the top, bottom, left, and right

Component connection directions

Cross Adapter

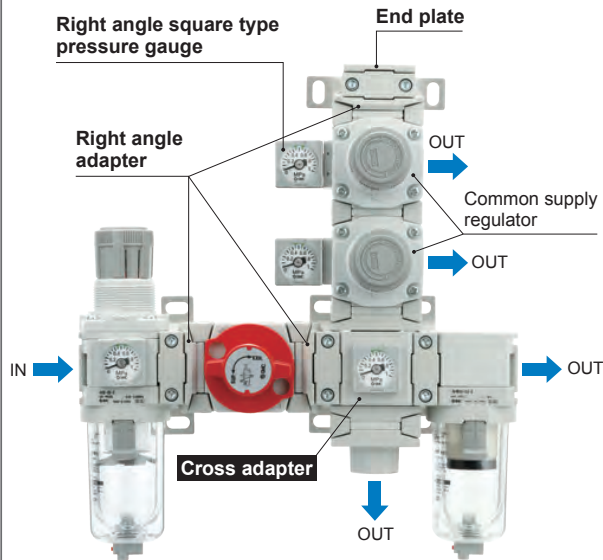
Allows for devices to be connected on the top, bottom, left, and right

* Size: 20 to 40



Ex.) Top/bottom spacer mounting direction

Left and Right mounting



Right Angle Adapter

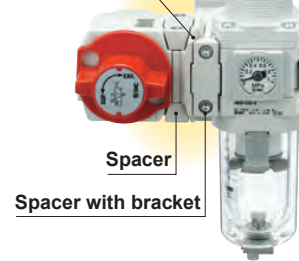
Modular connection with the product rotated 90 degrees is possible.

* Size: 20 to 40

Connection example with a residual pressure relief 3-port valve

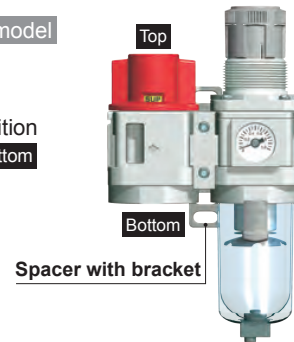


Right angle adapter



Existing model

Knob position
Top or Bottom

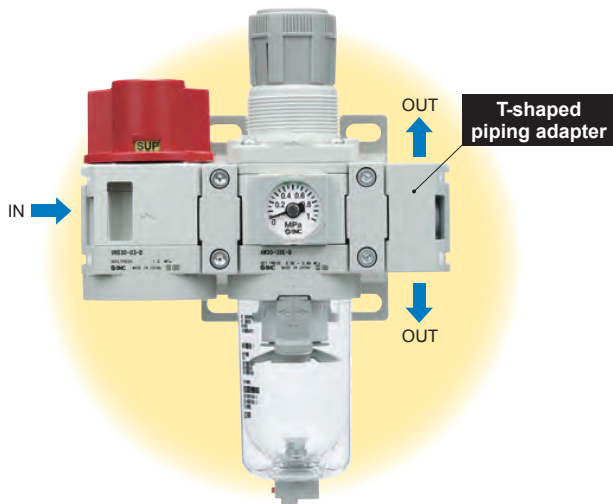


Piping connection directions

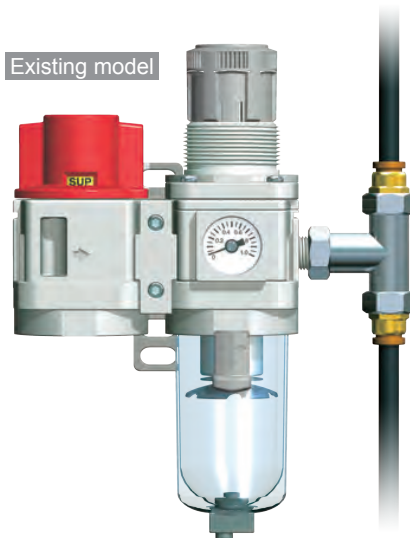
T-Shaped Piping Adapter

Air can be released either upward or downward.

* Size: 20 to 60



Existing model



Size conversion is possible

Flow capacity UP

Reduced number of element replacements

Reducing Adapter

Modular connection with products 1 size larger (or 1 size smaller) is possible.

When using the reducing adapter

1500 L/min (ANR)*1

AR30 + AFF40 + AM40 + AMD40

Existing model

750 L/min (ANR)*1

AR30 + AFF30 + AM30 + AMD30

Size UP

*1 When at the max. flow capacity

Reducing adapter



Space-saving design and reduced piping labor

L-Shaped Piping Adapter

Upward or downward piping is possible on the inlet side and the outlet side of F.R.L. units.

Space-saving

Max. 16.4%*1 reduction

Approx. 46 mm ← Approx. 55 mm

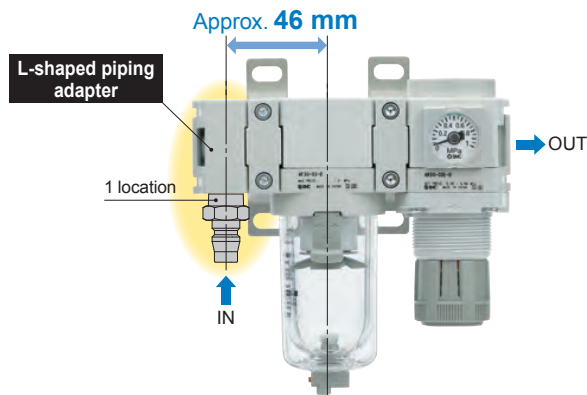
*1 For size 30

Reduced piping labor

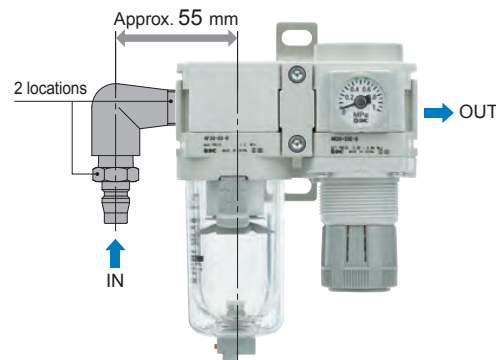
Number of screw-in connections

1 location ← 2 locations

When using an L-shaped piping adapter



When using a street elbow*1 *1 Commercially available



Simple Specials System

A system designed to respond quickly and easily to your special ordering needs



Short lead times

This system enables us to respond to your special needs (additional machining, accessory assembly, or the designing of a modular unit) and deliver your personalized products as quickly as standard products.

Repeat orders

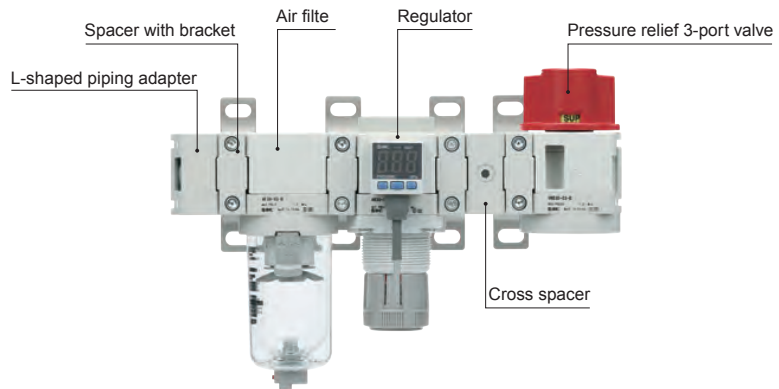
Once we receive a simple special part number from one of your previous orders, we will process the order, manufacture the product, and deliver it to you as quickly as possible.

Please contact your local sales representative for more details.

Combination example ①

* Please contact your local sales representative for ordering procedures.

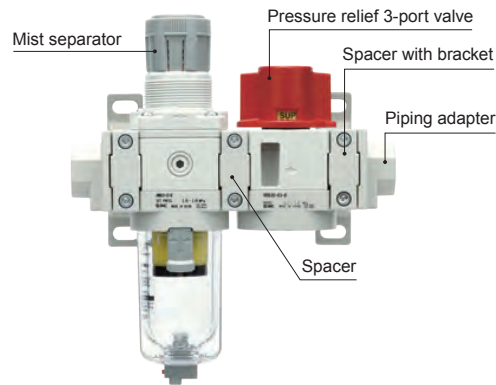
L-shaped piping adapter E300L-03-D	1 pc.
Spacer with bracket Y300T-D	4 pcs.
Air filter AF30-03-D	1 pc.
Regulator AR30-03E1-D	1 pc.
Cross spacer Y34-03-D	1 pc.
Pressure relief 3-port valve VHS30-03-D	1 pc.



Combination example ②

* Please contact your local sales representative for ordering procedures.

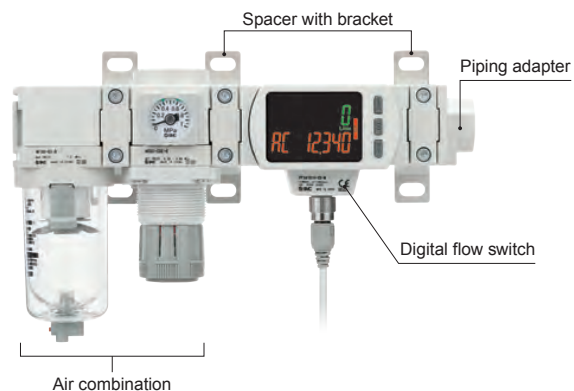
Piping adapter E300-03-D	2 pcs.
Spacer with bracket Y300T-D	2 pcs.
Mist separator regulator AWM30-03-D	1 pc.
Spacer Y300-D	1 pc.
Pressure relief 3-port valve VHS30-03-D	1 pc.



Combination example ③

* Please contact your local sales representative for ordering procedures.

Digital flow switch PF3A701H-CS-M	1 pc.
Air combination AC30B-03E-D	1 pc.
Spacer with bracket Y300T-D	2 pcs.
Piping adapter E300-03-D	1 pc.



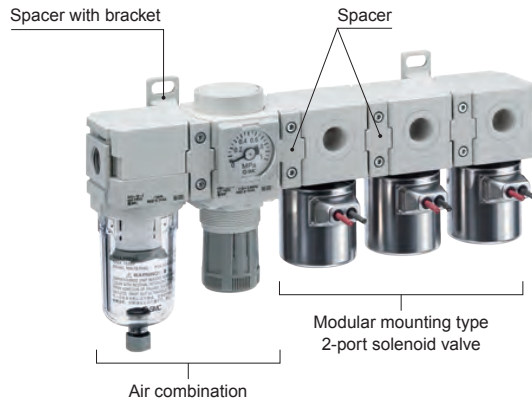
- * Avoid mounting the lubricator on the inlet side.
- * If a pressure relief 3-port valve is installed on the inlet side of the digital flow switch, causing a backflow of air, the measured value will change.

Simple Specials System

Combination example 4

* Please contact your local sales representative for ordering procedures.

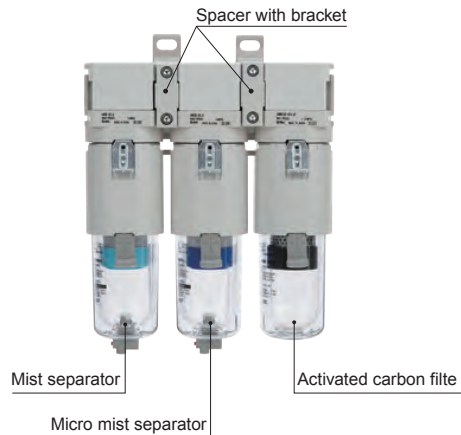
Air combination AC20B-02E-D	1 pc.
Modular mounting type 2-port solenoid valve JSXM21-AN302R-5G-U-F	3 pcs.
Spacer with bracket Y200T-D	1 pc.
Spacer Y200-D	2 pcs.



Combination example 5

* Please contact your local sales representative for ordering procedures.

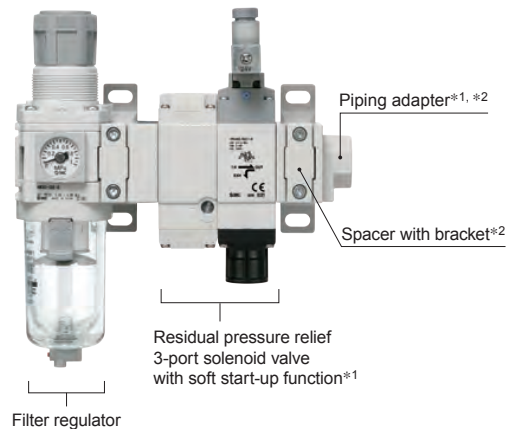
Mist separator AM30-03-D	1 pc.
Micro mist separator AMD30-03-D	1 pc.
Activated carbon filter AMK30-03-D	1 pc.
Spacer with bracket Y300T-D	2 pcs.



Combination example 6

* Please contact your local sales representative for ordering procedures.

Filter regulator AW30-03E-D	1 pc.
Residual pressure relief 3-port solenoid valve with soft start-up function VP546E-5DZ1-S	1 pc.
Spacer with bracket Y300T-D	2 pcs.
Piping adapter E300-03-D	1 pc.



- *1 Connection threads are not available for the residual pressure relief 3-port solenoid valve. Select a piping adapter.
- *2 Refer to the **Web Catalog** for details on the spacer with bracket and piping adapter.

Connectable Modular Components

F.R.L. Units AC



- Modular design with uniform body style
- Better visibility & environmental resistance
2-layer construction: The bowl is covered with a transparent bowl guard.
Better visibility: 360°
- No tools are required.
Easier replacement of the element (AF-D only)

Series	Port size
AC20 to 60-D Air filter, Regulator, Lubricator	1/8, 1/4, 3/8, 1/2, 3/4, 1
AC20A to 60A-D Filter regulator, Lubricator	
AC20B to 60B-D Air filter, Regulator	
AC20C to 40C-D Air filter, Mist separator, Regulator	1/8, 1/4, 3/8, 1/2
AC20D to 40D-D Filter regulator, Mist separator	

Common Supply Regulator AR□M(K)-D



- Supply different pressure for multiple applications
OUT port is on the back of the product.
- Space-saving design and reduced piping labor
- Branch piping

Series	Port size	Set pressure [MPa]
AR20M-D to AR40M-D	1/8, 1/4, 3/8, 1/2	0.05 to 0.85 0.02 to 0.2
AR20MK to AR40MK-D With backflow function	1/8, 1/4, 3/8, 1/2	0.1 to 0.85 0.1 to 0.2

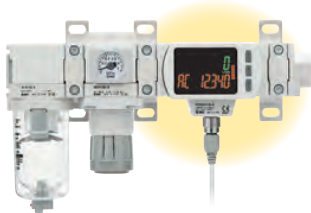
Mist Separator Regulator AWM-D Micro Mist Separator Regulator AWD-D



- Transparent bowl guard
Improved environmental durability due to 2-layer construction (Body sizes 30 and larger)
Better visibility: 360°
- Lightweight: Max. 40.7% reduction (0.24 kg)

Series	Port size	Set pressure [MPa]	Nominal filtration rating [μm]
AWM20 to 40-D	1/8, 1/4, 3/8, 1/2	0.05 to 0.85 0.05 to 0.2	0.3
AWD20 to 40-D	1/8, 1/4, 3/8, 1/2	0.05 to 0.85 0.05 to 0.2	0.01

3-Color Display Digital Flow Switch PF3A7/8□H(-L)



- Flow ratio 100:1
A wide range of flow measurement is possible with 1 product.
- IO-Link compatible (For "-L")
- A 4-screen display digital flow switch with pressure/temperature sensor is available.
Simultaneous measurement of the (accumulated) flow rate, pressure, and temperature is possible. [For the PF3A8□H(-L)]

Series	Applicable combinations	Flow range [L/min]
PF3A701H(-L)/PF3A801H-L	AC30-D	1000
PF3A702H(-L)/PF3A802H-L	AC40-D	2000

Connectable Modular Components

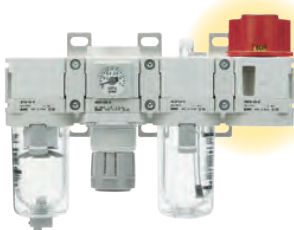
Compressed Air Preparation Filter Line Filter **AFF** Mist Separator **AM** Micro Mist Separator **AMD** Activated Carbon Filter **AMK**



- Compliant with ISO 8573-1 compressed air purity class
- Face-to-face and depth dimensions reduced by up to 30%
- Lightweight: Max. 50% reduction (0.19 kg)
- Flow capacity: Max. 50% increase
- Transparent bowl guard (2-layer construction) (Body size: 30, 40)
- Color-identifiable elements
- A model with an element service indicator is also available. (AFF, AM, AMD)

Series	Port size	Nominal filtration rating [μm]	Oil concentration on the outlet side [mg/m ³]
AFF20 to 60-D Line filter	1/8, 1/4, 3/8, 1/2, 3/4, 1	1.0 (Filtration efficiency: 99%)	—
AM20 to 60-D Mist separator		0.1 (Filtration efficiency: 99%)	Oil mist 1 (= 0.8 ppm) or less
AMD20 to 60-D Micro mist separator		0.01 (Filtration efficiency: 99.9%)	Oil mist 0.1 (= 0.08 ppm) or less
AMK20 to 60-D Activated carbon filter		—	Oil vapor 0.003 (= 0.0025 ppm) or less

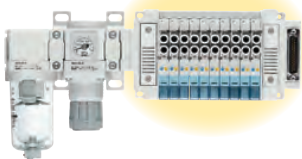
OSHA Standard Compliant Pressure Relief 3-Port Valve with Locking Holes **VHS□-D/VHS□W-D**



- Improved flow rate characteristics: Max. 88% increase (VHS40-04-D)
- Energy saving: Zero blow-by of the air during switching of the handle
- OSHA (Occupational Safety and Health Administration) standard compliant
- Lower pressure drop contributing to energy saving
Pressure drop reduced by up to 73%

Series	Port size	Applicable combinations
VHS20(W)-D	1/8, 1/4	AC20-D
VHS30(W)-D	1/4, 3/8	AC30-D
VHS40(W)-D	1/4, 3/8, 1/2	AC40-D
VHS40(W)-06-D	3/4	AC40-06-D
VHS50(W)-D	3/4, 1	AC50-D, AC60-D

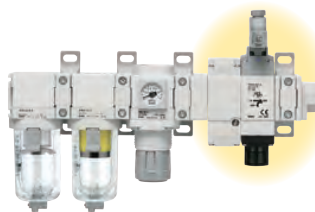
5-Port Solenoid Valve **SY3000/5000-X990**



- Allows for space saving and reduced piping labor
- Flow rate characteristics C [dm³/(s·bar)]
SY3000: 1.6, SY5000: 3.6
- Top ported/Side ported

Series	Applicable combinations
SY3000-X990	AC30-D
SY5000-X990	AC40-D

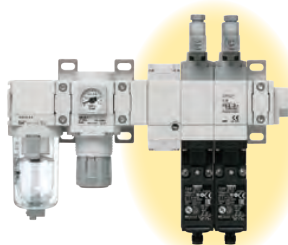
Residual Pressure Relief 3-Port Solenoid Valve **VP546E/746E**



- Flow rate characteristics C [dm³/(s·bar)]
VP546E: 7.5
VP746E: 12.6
- A model with a soft start-up function is also available.
- Power consumption: 0.35 W (Without light)
- Features a check valve built into the pilot flow path
(Supports pilot pressure drops caused by pressure fluctuations on the inlet side)

Series	Applicable combinations
VP546E	AC30-D
VP746E	AC40-D

3-Port Solenoid Valve/Residual Pressure Release Valve with Detection of Main Valve Position **VP546/746**



- With main valve position detection function
The main valve position detection function is used to detect inconsistencies between input signals and valve operations.
- Flow rate characteristics C [dm³/(s·bar)]
VP546: 8.3
VP746: 12.3
- A model with a soft start-up function is also available.

Series	Applicable combinations
VP546	AC30-D
VP746	AC40-D

Direct Operated/Pilot Operated 2-Port Solenoid Valve **JSX/JSX□**



- The coil orientation and blow port position can be selected.
- Electrical entry: Grommet, DIN terminal, Conduit, M12 connector

Series	Applicable combinations	Port size	Orifice diameter [mmø]
JSXM21	AC20-D	1/8, 1/4	3.2
JSXM31	AC30-D	1/4, 3/8	4
JSXM41	AC40-D	1/4, 3/8, 1/2	4

Related Product (Modular System Components)



Air Management System AMS20/30/40/60 Series

- Air consumption: Max. 62% reduction
Monitors the machine standby conditions (when production stops) and automatically decreases the pressure. Reduces unnecessary air consumption
- Simultaneous measurement of the (accumulated) flow rate, pressure, and temperature is possible.
- Supports industrial communication



- Compatible with SMC wireless systems

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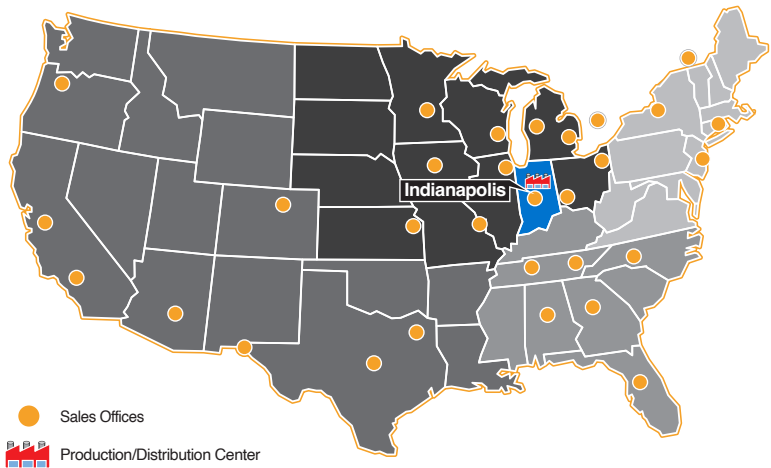
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