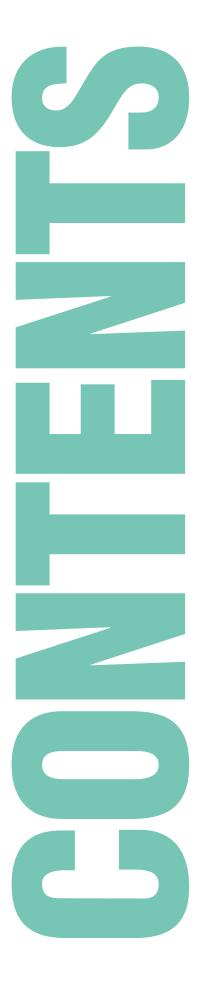
NEW PRODUCTS GUIDE

Digest version

Vol. 5







Wireless System EX600-Wp. 01
Stopper Cylinder RSQ p. 03
Cylinder with Lock MWB p. 04
Power Clamp Cylinder CKZ3T-X2734/X2568 p. 05
Vacuum Pad ZP3P p. 06
Multi-Axis Step Motor Controller JXC73/83/92/93p. 07
Refrigerated Air Dryer For Use in Southeast Asia IDFC p. 08
Compressed Air Preparation Filter AFF/AM/AMD p. 09
3-Screen Display High-Precision Digital Pressure Switch ZSE20□(F)/ISE20□
3-Screen Display High-Precision Digital Pressure Switch ISE7□/7□G······p. 11
3-Color Display Digital Gap Checker ISA3·····p. 12
3-Color Display Digital Flow Switch for Large Flow PF3A7□H······ p. 13
Low Particle Generation 2-Color Display Digital Flow Switch PFM7/PFMB7-X300
3-Color Display Electromagnetic Digital Flow Switch LFE □p. 15
3-Screen Display Digital Flow Monitor PFG300p. 16
Separate Controller Bar Type Ionizer IZT40/41/42 p. 17
Nozzle Type Ionizer IZN10E p. 19
Peltier-type Chiller Thermo-con/Rack Mount Type HECR p. 20
Composite Manifold p. 21



Wireless System EX600-W Series



Usable even in welding environments

Noise resistance

Uses the 2.4 GHz ISM frequency band Frequency hopping: Every 5 ms

Communication cables not required

Reduced wiring work, space, and cost Minimized disconnection risk

■ High-speed connection

From power supply ON to start of communication: Min. 250 ms*1
*1 For wireless slave

■ Number of I/O points

Max. 1280 inputs/1280 outputs (Registration and communication of up to 127 slave units is possible.)

Communication response

Signal response time: 5 ms

■ Compatible protocol

EtherNet/IP®



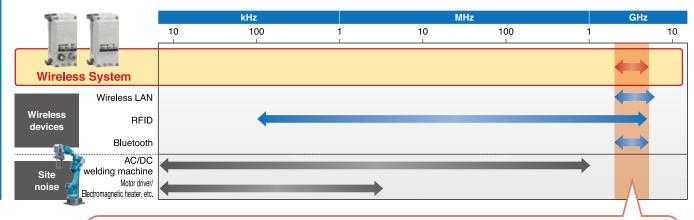


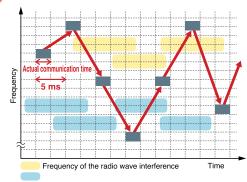


■TrademarkEtherNet/IP™ is a trademark of ODVA.









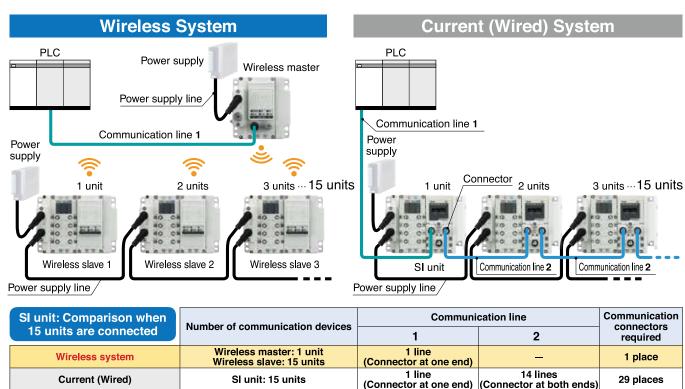
Frequency hopping: Every 5 ms

A stable wireless environment is established using an original protocol which is not affected by interference. Interference from other wireless equipment is prevented.

Frequency Hopping

The communication technology rapidly changes frequency (hopping), to prevent interference from other wireless equipment. When the frequency of Wi-Fi and other wireless communications compete, or radio wave interference is present, then other frequencies are used for communication.

Wiring material cost and installation man-hours can be reduced.





Stopper Cylinder



Ø16, Ø20, Ø32, Ø40, Ø50

RSQ Series

Additional variations now include the option to have a female rod end on the "round bar type" and the "chamfered type".

8 types → 10 types

The new body allows for auto switch mounting on 4 faces.

Mounting brackets are not required. Compact auto switches are mountable.

Solid state auto switch D-M9□



Reed auto switch D-A9□

Magnetic field-resistant auto switch D-P3DWA





Cylinder with Lock

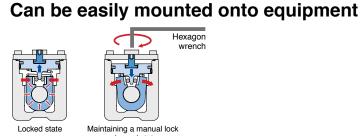


Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

MWB Series

- Bore sizes Ø80 and Ø100 have been added.
- Lock units 80 and 100 have been added. (Applicable rod size: Ø25, Ø30)

Lock can be manually operated with a hexagon wrench.



Separable construction for improved ease of maintenance

The lock unit and the cylinder can be separated. This allows for easier maintenance.



Holding force improved by 15%

(MNB, Ø50: 308 lb.f (1370 N) → MWB: 353 lb.f (1570 N))

Overall length reduced by 0.7"(18mm) max.

(Compared with an MNB, ø80, 100 mm stroke)

High stopping accuracy within ±0.04"(±1mm)
(With Ø50 and 30 kg of load)

Lock Unit

A safety mechanism can be designed if required. It can also be combined with a wide variety of actuators.

- Prevents the workpiece from falling
- Retains the workpiece position even when the air supply is shut off due to power failure, etc.





Power Clamp Cylinder

ø**50**, ø**63**

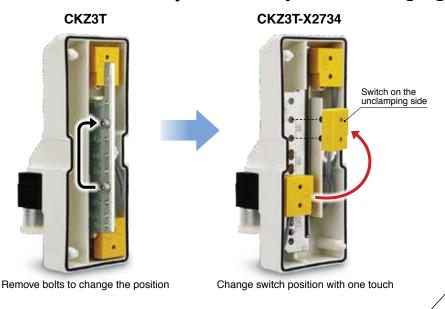
CKZ3T-X2734 (Base Type)
-X2568 (With Manually Operated Handle)

A model with a manually operated handle is available.

• For manual workpiece setting processes

Manually operated handle (Unclamping position)

Simple switch adjustment greatly reduces work hours.
Switch can be adjusted easily when changing the arm opening angle.



With metal switch cassette cover
Protects switch cassette from unexpected impact

■ Weight reduced by up to 39%

Aluminum body with greatly reduced weight Suitable for robot material handling

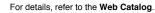
Bore size	CKZT → CKZ3T-X2734	Reduction rate
50	11 lbs (5.0 kg) - 6.83 lbs (3.1kg)	38% reduction
63	15.65 lbs (7.1 kg) → 9.48 lbs (4.3kg)	39% reduction

^{*} Arm opening angle: 90°

■ High clamping force 899.23 lb.f (4000 N)

(ø63, Arm length: 100 mm, 0.5 MPa pressure)







Vacuum Pad

Ø20, Ø25, Ø35, Ø50

ZP3P Series

Good for film packaging applications where the shape of the workpiece changes easily from being lifted.

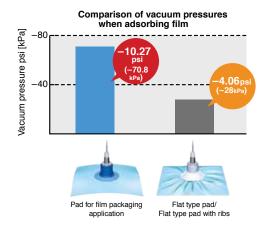
Silicone rubber compliant with the FDA (USA Food and Drug Administration) 21CFR§177.2600 elution test is used.

Blue colored pad

Easy to distinguish the vacuum pad by color during contamination inspection.

Reduced leakage

Sealing skirt design, better sealing performance even for thin films.



stopper in the center of the vacuum pad

Wrinkle prevention with the

Reduction of wrinkles made on thin workpieces (film, vinyl, etc.) during adsorption



Variations

variations								
Form		Pad Di	iameter		Vacuum Inlet/Mounting	Buffer Stroke		
FUIII	ø20 ø25 ø35		ø50	vacuum mienvounting	Dullel Stroke			
Pad Unit	-	-	-	-	_	_		
Male thread	-	-	-		M5 x 0.8, M12 x 1.75 G1/8, G1/4, G3/8	_		
Female thread	-	-	-	-	M5 x 0.8 M8 x 1.25	_		
Female thread	-	-	-	-	Vacuum inlet: M5 x 0.8, Rc1/8 Mounting: M10 x 1, M14 x 1	10 mm/20 mm		

For details, refer to the Web Catalog.

RoHS



Multi-Axis Step Motor Controller

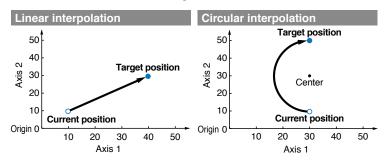
JXC73/83/92/93 Series



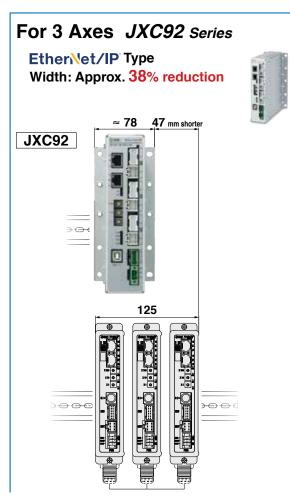


The JXC92 series for 3 axes has been added.

- Speed tuning control *1 (3 Axes: JXC92 4 Axes: JXC73/83/93)
- Linear/circular interpolation



- Positioning/pushing operation
- Step data input (Max. 2048 points)
- Space saving, reduced wiring
- Absolute/relative position coordinate instructions
- This controls the speed of the slave axis when the speed of the main axis drops due to the effects of an external force and when a speed difference with the slave axis occurs. This control is not for synchronizing the position of the main axis and slave axis.



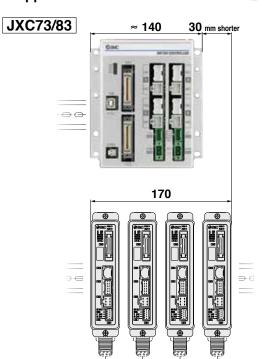
EtherNet/IP™ is a trademark of ODVA.

For 4 Axes JXC73/83/93 Series

¡ Parallel I/O/ EtherNet/IP Type

Width:

Approx. 18% reduction



For details, refer to the Web Catalog.

∗ For LE□. size 25 or larger



Refrigerated Air Dryer

For Use in Southeast Asia

IDFC ☐ Series

Applicable for the high-temperature environments of tropical regions

Can be used in high-temperature environments

Ambient temperature: Max. 113°F (45°c) Inlet air temperature: Max. 149°F (65°c)

Dew point range: 37.4°F to 68°F (3°c to 20°c)

Air flow capacity *IDFC90-23, Dew point of 50°F (10°C)

325 cfm (9.2 m³/min) (52% increase compared to the current model)

Power supply voltage

Single-phase 230 VAC (50 Hz)







Compressed Air Preparation Filter AFF/AM/AMD Series

Compressed Air Purity Class | ISO 8573

Main Line Filter AFF Series

1 μm

Water droplet removal

Mist Separator AM Series

Oil mist separation and remove

Micro Mist Separator AMD Series

0.01 μm

Oil mist separation and removal

Flow Capacity

512°cfm (14.5 m³/min)(ANR)

Pressure Drop

60, reduction

AMD

0.73 psi or less

(5 kPa or less)(For AMD)

Weight

52, reduction

11 lbs (5.0 kg)



Improved Nominal Filtration Rating

AFF $1_{\mu m}$ (Current model: 3 μm)

AM $0.1_{\mu m}$ (Current model: 0.3 μm)



3-Screen Display High-Precision Digital Pressure Switch

ZSE20 (F)/ISE20 Series (& RoHS)







Added Variations! ZSE20A(F)/ISE20A Series ZSE20B(F)/ISE20B Series ZSE20C(F)/ISE20C(H) Series

The **IO**-Link compatible type has been added to the 20B series.



It is possible to change the settings while checking the measured value.



Measured value (Current pressure value)

Sub screen

Label (Display item), Set value (Threshold value)



Visualization of **Settings**



Peak value **Delay time**

Delay Time



Current Consumption

mA*2 or less

*1 Select from 1.5 ms or less, 20 ms, 100 ms, 500 ms, 1000 ms, 2000 ms, *2 Further reduced by approx. 60% in power-saving mode (For 20 series)

The 20A, 20B, and 20C series have been added to the product lineup.

						•	•					
ole	Applicable and Applicable Series					Piping						
Applicat fluid			Output type	Enclosure	Copy function	M5 female thread	1/8 (R, NPT)	1/4 (R, NPT, G) (URJ*1/TSJ*2)				
	ZSE20(F)/ ISE20		1 output	IP40	_	•	•	-				
Air	ZSE20A(F)/ ISE20A		2 outputs Analog output (Voltage/Current)	IP40	•	•	•	-				
	ZSE20B(F)/ ISE20B		2 outputs Analog output (Voltage/Current)	IP65	•	•	•	-				
General fluids	ZSE20C(F)/ ISE20C(H)	2 outputs Analog output (Voltage/Current)		IP65	•	● *3	(Rc thread only)	•				
				*1 Face sea	I fitting *2 C	compression fitting *	3 With 1/4 (R, NPT, 0	G) M5 female thread				



3-Screen Display High-Precision Digital Pressure Switch

ISE7□/7□G Series







Air

145 psi /232 psi (1.0 MPa) (1.6 MPa)

General **Fluids**

145 psi/290 psi (1.0 MPa) (2.0 MPa)

725.2 psi / 1450.4 psi (5.0 MPa) (10 MPa)

IO-Link

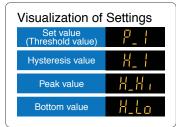
It is possible to change the settings while checking the measured value.

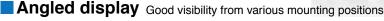
Main screen

Measured value (Current pressure value)

Sub screen

Label (Display item), Set value (Threshold value)











Rotating display

Display rotates 336 degrees after installation.



■3 setting modes

- 3-step setting mode
- Simple setting mode
- Function selection (detailed setting) mode



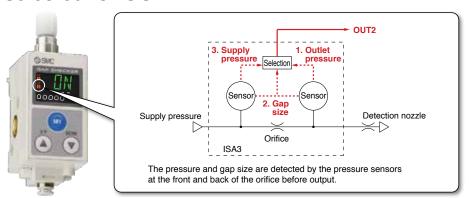
3-Color Display Digital Flow Switch for Large Flow

ISA3 Series





- A 2 outputs type has been added.
- ■1. Outlet pressure, 2. Gap size, or 3. Supply pressure can be selected for OUT2.



1. Monitoring of the outlet pressure

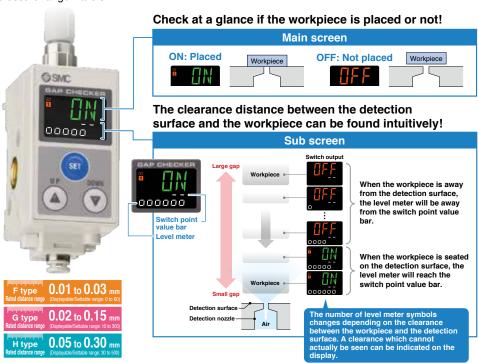
- · When the workpiece is not placed, OUT2 can detect the nozzle clogging pressure.
- Can discern between 2 different types of workpiece Can detect raw material workpieces and defective workpieces via the pressure (OUT2)

2. Monitoring of gap size

Can discern between 2 different types of workpiece Can detect the difference between raw material workpieces and defective workpieces via the gap size

3. Monitoring of supply pressure

Detection of rated pressure range via OUT2





3-Color Display Digital Flow Switch for Large Flow

PF3A7□**H** Series



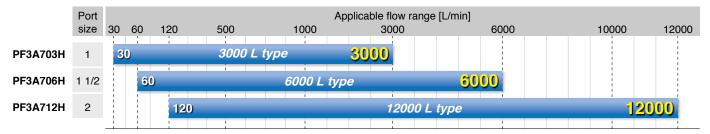




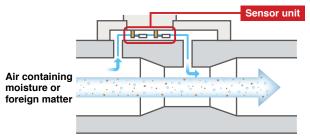
- The digital flow monitor PFG300 series has been added.
- Flow range: Max. 423.78 cfm (12000 L/min)
- ■Flow ratio*1 100:1 Wide range of flow measurement with one product

*1 The flow ratio is 20 : 1 for the current model (PF2A7□H/Large flow type).

1 L/min = 0.035 cfm



Improved drainage and resistance to foreign matter



Bypass construction reduces the moist air or foreign matter in contact with the sensor, reducing the accuracy deterioration and damage of the sensor.

Pressure loss: 75% reduction*1 (2.9psi (20 kPa) / 0.73psi (5 kPa))

*1 Compared with the current model (PF2A7 H/Large flow type).

Through bore construction

Reduced pressure loss Maintenance-free fluid passage









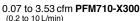
Low Particle Generation 2-Color Dispaly Digital Flow Switch

PFM7/PFMB7-X300

C C C ROHS







0.02 to 0.88 cfm PFM725-X300 (0.5 to 25 L/min)

0.04 to 1.77 cfm PFM750-X300

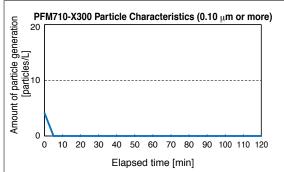


 $0.07 \ to \ 3.53 \ cfm \ (2 \ to \ 100 \ L/min)$ **PFM711-X300**



0.07 to 7.06 cfm (2 to 200 L/min) PFMB7201-X300

Particle Generation **Characteristics** (Reference Data)



Specifications

Ultrasonic cleaning	Metal parts in contact with fluid: Fitting, Orifice, Mesh
Degreasing treatment	Body, O-ring
Air blow	Air blow of the fluid passage*1
Clean packaging	Antistatic bag (Double packaged)

*1 With Class 100 air in a Class 10000 clean room

Metal Material of Parts in **Contact with Fluid: Stainless** Steel 304

<Application Example>

Flow control of clean air blow in clean room environments



* When the product is used for blowing, use caution to prevent the workpiece from being damaged by air entrained from the surrounding area.

Model	Detection	Smallest	Port size	Rated flow range [1 L/min = 0.035 cfm]											Reversible	
Model	fluid	method	settable increment	(Rc)	0.3	2	0.5	1	2	2	5	10	50	100	200	display mode
PFM710-X300	Dry air		0.01 L/min	1/8	0.0		-	-			-	10			1	
		Thermal type (MEMS)			1/8 0.2	-	1	-	_		1	10	,			
PFM725/750/711-X300	N ₂ Argon		0.1 L/min	1/8		0.5							25		1	None
100 1	CO ₂			1/8			-	1	-	!	-	-	50	!		
以				1/4				-	2			-		100	1	
PFMB7201-X300	Dry air N2	Thermal type (MEMS) Bypass flow type	1L/min	1/4					2						200	# 200 E

3-Color Display Electromagnetic Digital Flow Switch

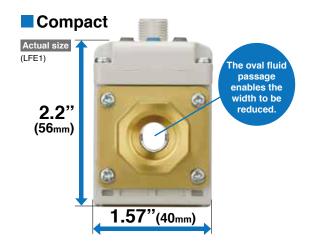
LFE Series







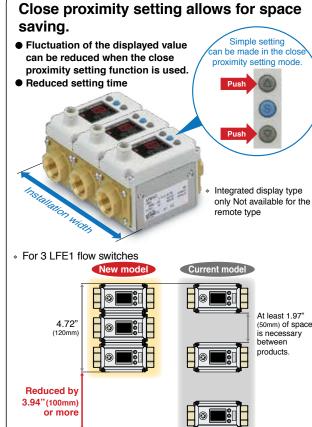
- Stainless steel 304 has been added to the piping connection parts material.
- Functions (close proximity setting and zero-reset setting) have been added.



- **Weight: 12oz (340g)** (LFE1□3)
- Pressure loss: 2.9psi (0.02MPa) or less
- Applicable fluids:
 Water, Water-soluble coolant
- Current consumption: 45 mA

 Reduced by up to 10% when the display is off
- Operating fluid temperature: 32 to 185°F













1 L/min = 0.035 cfm

Variations

Flow range Integrated display type/ Remote type 0.5 L/min 2 L/min 5 L/min 10 L/min 100 L/min 200 L/min 20 I /min 50 I /min LFE₁ Display flow range Rated flow range LFE₂ Display flow range Rated flow range Display flow range





3-Screen Display Display Flow Monitor

PFG300 Series





Can measure up to

423.8 cfm (12,000 L/min)!

It is possible to change the settings while checking the measured value.

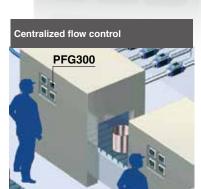
Main screen Measured value (Current flow value)

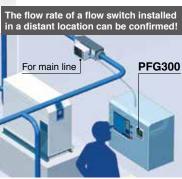
Left side Label (Display item) Sub screen Right side Accumulated flow, Set value (Threshold value)

Visualization of Settings

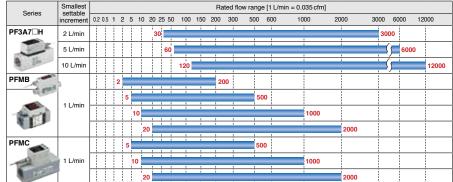


Current consumption 25 mA or less





Applicable Flow Switch Variations





Separate Controller Bar Type Ionizer

IZT40/41/42 Series



■ Space saving: Height 1.46"x Width 1.18" (37mm) (30mm)

Potential amplitude: 25 V or less*1

Rapid neutralization of static electricity:

Fastest time 0.1 S*2

High-voltage power supply module





Dual AC Type IZT42 Series

Potential amplitude of the workpiece is reduced with Dual AC.

AC Type

IZT41 Series

Auto balance function With external signal input/output function

Standard Type

IZT40 Series

Simple operation: Can be controlled by powering the ionizer ON.

- *1 IZT42, Installation height: 11.81" (300mm)

Conditions: Discharge time from 1000 V to 100 V Discharged object: Charged plate (5.91" (150mm) x 5.91" (150mm), Capacitance 20 pF) Installation distance: 3.94" (100mm) (High speed de-ionizing cartridge,

Tungsten emitter with air purge)

Bar length: 44.1" (1120 mm)



Separate Controller Bar Type Ionizer

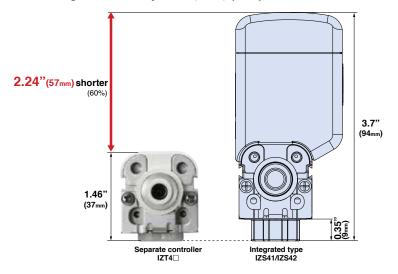
IZT40/41/42 Series





Space Saving

○ Height reduced by 2.24" (57mm) (60%)



Ocan be mounted in a narrow space

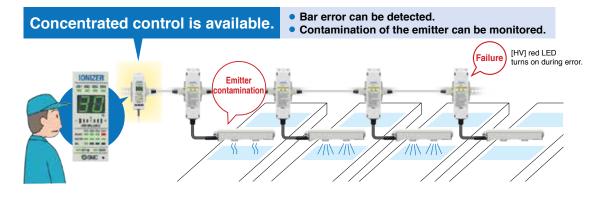


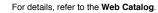
Flexible Layout

The controller and high-voltage power supply module can be mounted separately.



The controller can control a maximum of 4 ionizers.







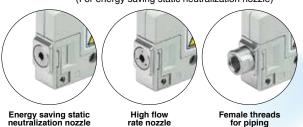
Nozzle Type Ionizer

RoHS

IZN10E Series

- Slim 16 mm x 100 mm x 46 mm
- Lightweight 33% reduction 120 g a 80 g
- Offset voltage: ±10 V

(For energy saving static neutralization nozzle)





With right angles -X367 Energy saving static neutralization nozzle Circular diffusion nozzle Bar nozzle (straight type) Circumferential jet bar nozzle (straight type)

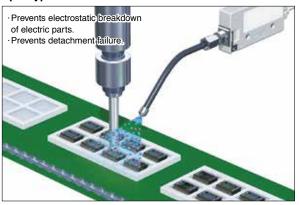
Bender tube nozzle

Application Examples

Dust removal and static neutralization by air blow



Spot type static neutralization





Peltier-type Chiller

Thermo-con/Rack Mount Type

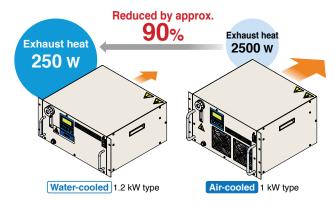
HECR Series Air-cooled Water-cooled







- The water-cooled type has been added. (800 W, 1.2 kW)
 - Reduces the amount of exhaust heat by 90% Suppresses rises in the ambient temperature



Space-saving design with reduced height





cooled 200 W, 400 W, 510 W





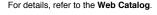
Mountable in a 19-inch rack

Space can be saved by mounting multiple pieces of equipment together in a single rack.

- Temperature stability: ±0.01°C to 0.03°C
- Set temperature range: 10°C to 60°C
- Cooling capacity (With heating function): 200 W, 400 W, 510 W, 800 W, 1 kW, 1.2 kW









Composite Manifold

The unitization of devices allows for the whole unit to be made more compact. Expansion into a wide range of industries is now possible!

Required space reduced by 50%

Weight reduced by 70%

No piping work required



Space saving

Reduction in piping volume, manifold can be designed to suit the space

Flow passage style with high flexibility

Three-dimensional flow passage that cannot be created by machining or injection molding

Lightweight

Weight reduced by using resin material

Reduced piping work

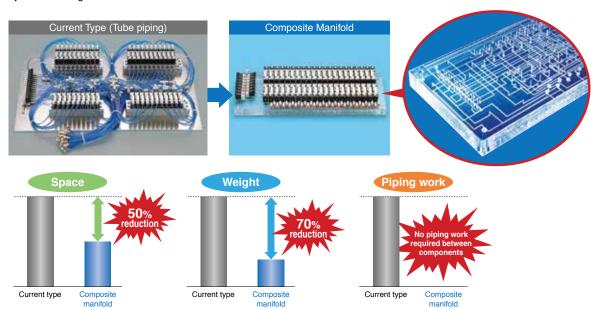
Reduction in piping work and wiring faults Improved reliability against leakage

Reduced wiring

Wiring and wiring time reduced by integrating manifold and PCB

Transparent flow passage (Acrylic)

Easy visual detection of fluid





Global Manufacturing, Distribution and Service Network

Worldwide Subsidiaries

EUROPE

AUSTRIA

SMC Pneumatik GmbH (Austria)

BELGIUM

SMC Pneumatics N.V./S.A.

BULGARIA

SMC Industrial Automation Bulgaria EOOD

CROATIA

SMC Industrijska Automatika d.o.o.

CZECH REPUBLIC

SMC Industrial Automation CZ s.r.o.

DENMARK

SMC Pneumatik A/S

ESTONIA

SMC Pneumatics Estonia

FINLAND

SMC Pneumatics Finland OY

FRANCE

SMC Pneumatique S.A.

GERMANY

SMC Pneumatik GmbH

GREECE

SMC Hellas EPE

HUNGARY

SMC Hungary Ipari Automatizálási Kft.

SMC Pneumatics (Ireland) Ltd.

ITALY

SMC Italia S.p.A.

KAZAKHSTAN

LLP "SMC Kazakhstan"

LATVIA

SMC Pneumatics Latvia SIA

LITHUANIA

UAB "SMC Pneumatics"

NETHERLANDS

SMC Pneumatics B.V.

NORWAY

SMC Pneumatics Norway AS

POLAND

SMC Industrial Automation Polska Sp. z o.o.

ROMANIA

SMC Romania S.r.I.

RUSSIA

SMC Pneumatik LLC.

SLOVAKIA

SMC Priemyselná Automatizácia, Spol s.r.o.

SLOVENIA

SMC Industrijska Avtomatika d.o.o.

SPAIN / PORTUGAL

SMC España, S.A.

SWEDEN

SMC Pneumatics Sweden AB

SWITZERLAND

SMC Pneumatik AG

TURKEY

SMC Pnömatik Sanayi Ticaret ve Servis A.Ş.

SMC Pneumatics (U.K.) Ltd.

ASIA / OCEANIA

AUSTRALIA

SMC Pneumatics (Australia) Pty. Ltd.

SMC (China) Co., Ltd.

SMC Pneumatics (Guangzhou) Ltd.

HONG KONG SMC Pneumatics (Hong kong) Ltd.

INDIA

SMC Pneumatics (India) Pvt. Ltd.

INDONESIA

PT. SMC Pneumatics Indonesia

JAPAN

SMC Corporation

MALAYSIA

SMC Pneumatics (S.E.A.) Sdn. Bhd.

NEW ZEALAND

SMC Pneumatics (N.Z.) Ltd.

PHILIPPINES

Shoketsu SMC Corporation

SINGAPORE

SMC Pneumatics (S.E.A.) Pte. Ltd.

SOUTH KOREA

SMC Pneumatics Korea Co., Ltd.

SMC Pneumatics (Taiwan) Co., Ltd.

THAILAND

SMC (Thailand) Ltd.

UNITED ARAB EMIRATES

SMC Pneumatics Middle East FZE

VIETNAM

SMC Pneumatics (VN) Co., Ltd

AFRICA

SOUTH AFRICA

SMC Pneumatics (South Africa) Pty Ltd

NORTH, CENTRAL & SOUTH AMERICA

ARGENTINA

SMC Argentina S.A.

BOLIVIA

SMC Pneumatics Bolivia S.R.L.

BRAZIL

SMC Pneumáticos do Brasil Ltda.

CANADA

SMC Pneumatics (Canada) Ltd.

CHILE

SMC Pneumatics (Chile) S.A.

COLOMBIA

SMC Colombia Sucursal de SMC Chile, S.A. MEXICO

SMC Corporation (Mexico) S.A. de C.V.

SMC Corporation Peru S.A.C.

USA

SMC Corporation of America

VENEZUELA

SMC Neumatica Venezuela S.A.

U.S. & Canadian Sales Offices

WEST

Austin

Dallas

Los Angeles **Phoenix**

Portland

San Jose

CENTRAL

Chicago Cincinnati

Cleveland

Detroit Des Moines

Grand Rapids Indianapolis

Kansas City Milwaukee Minneapolis

St. Louis

Albany

Atlanta

Birmingham Boston

Charlotte Knoxville

Nashville New Jersey Rochester

Tampa

CANADA Vancouver

Toronto Windsor Montreal

Sales Branches

(800) SMC.SMC1 (762-7621)

International inquiries: www.smcworld.com

Regional Distribution Centers

