

Regulators

Miniature Regulator **ARJ1020F**



- Compact and lightweight (16 g)
- Low cracking pressure: 0.02 MPa
- Standard model comes equipped with backflow function.
- Manifold base (Option)

Series	Features	Port size	Set pressure [MPa]
ARJ1020F	Direct operated relieving type with backflow function	M5	0.1 to 0.7

Miniature Regulator **ARJ210**



- Lightweight with an aluminum body (60g)

Series	Features	Port size	Set pressure [MPa]
ARJ210	Direct operated relieving type	Male thread: 1/8 Female thread: M5 x 0.8	0.2 to 0.7

Miniature Regulator **ARJ310**



- Compact and lightweight (Body 65 g)
- Short-pitch mounting is possible: Mounting pitch 18.5 mm
- Series with One-touch fittings

Series	Features	Port size	Set pressure [MPa]
ARJ310	Direct operated relieving type	IN: 1/8 (Male thread), M5 x 0.8 (Female thread) OUT: 1/8 (Female thread)	0.2 to 0.7

Pilot Operated Regulator **AR**



- Internal pilot-operated relieving type

Series	Port size	Set pressure [MPa]
AR425 to 925	1/4, 3/8, 1/2, 3/4, 1 1/4, 1 1/2, 2	0.05 to 0.83
AR435 to 935	1/4, 3/8, 1/2, 3/4, 1 1/4, 1 1/2, 2	0.02 to 0.2

Compact Regulator **ARX**



- Compatible with inlet supply pressures of 2.0 MPa
- Ideal for discharge pressure adjustment on small compressors
- Piston type
- Ideal for the pressure adjustment of air blowing applications

Series	Port size	Set pressure [MPa]
ARX20	1/4, 1/8	0.05 to 0.85

Regulators

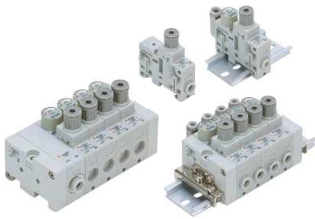
MR Unit (Regulator with Mist Separator) **AMR**



- Integrated mist separator and regulator
- Filtration: 0.3 μm.

Series	Port size	Set pressure [MPa]
AMR	1/4, 3/8, 1/2, 3/4, 1	0.05 to 0.85

Compact Manifold Regulator **ARM5**



- Width: 14 mm
- Select from 2 kinds of mounting methods: Direct mounting and DIN rail mounting
- Standard model comes equipped with backflow function.
- Select from a variety of One-touch fitting sizes.

Series	Model	Features	Applicable tubing bore size		Set pressure [MPa]
			Metric size	Inch size	
ARM5A	Manifold specifications	Common air supply	ø4, ø6, ø8	ø5/32, ø1/4, ø5/16	0.05 to 0.7
ARM5B	Manifold specifications	Individual air supply	ø4, ø6	ø5/32, ø1/4	0.05 to 0.7
ARM5S	Single unit specifications	Individual air supply	ø4, ø6	ø5/32, ø1/4	0.05 to 0.7

Compact Manifold Regulator **ARM10/11**



- Free selection in response to positioning conditions
Knob positions: Top/Front/Bottom
Piping directions: Up/Down
One-touch fitting types: Straight/Elbow
- Types and sizes of One-touch fittings can be changed.
- Standard model comes equipped with backflow function.
- Compatible with digital pressure switches

Series	Model	Features	Applicable tubing bore size		Set pressure [MPa]
			Metric size	Inch size	
ARM11A	Manifold specifications	Common air supply	ø4 to ø10	ø5/32 to ø3/8	0.05 to 0.7
ARM11B	Manifold specifications	Individual air supply	ø4, ø6	ø5/32, ø1/4	0.05 to 0.7
ARM10	Single unit specifications	Standard	ø4, ø6	ø5/32, ø1/4	0.05 to 0.7
ARM10F	Single unit specifications	Knob front face	ø4, ø6	ø5/32, ø1/4	0.05 to 0.7

Manifold Regulator **ARM1000/2000**



- With a ø15 compact pressure gauge (Option)
- Standard model comes equipped with backflow function.

Series	Features	Port size	Set pressure [MPa]
ARM1000, 2000	Manifold (Common IN, Individual IN) Direct operated relieving type With backflow function	1/8	0.05 to 0.7

Manifold Regulator **ARM2500/3000**



- A modular type that can be freely mounted on a manifold station
- Optimal for central pressure control
- Uses a One-touch lock handle

Series	Features	Port size	Set pressure [MPa]
ARM2500, 3000	Manifold (Common IN, Individual IN) Modular type	1/4, 3/8	0.05 to 0.85

Regulators

Direct Operated Precision Regulator **ARP**



- Setting sensitivity: Within 0.2% F.S.
 - Energy saving: Reduces air consumption by 80% (SMC comparison)
 - Repeatability: Within $\pm 1\%$ F.S. (or within ± 3 kPa)
 - With backflow function (ARP20K/30K/40K)
- Can be mounted between a solenoid valve and a cylinder

Series	Port size	Set pressure range
ARP20 (K)	1/8, 1/4	0.005 to 0.4 MPa
ARP30 (K)	1/4, 3/8	0.005 to 0.2 MPa
ARP40 (K)	1/4, 3/8, 1/2	0.005 to 0.6 MPa

Regulator **IR1200-A/2200-A/3200-A**



- Air consumption: Bleed air "0"
- High flow rate: Up to approx. twice that of the current SMC product
- Lightweight: Reduced by up to approx. 27% (Compared to the current SMC product)
- Repeatability: $\pm 1\%$ (Full span)

Series	Port size	Set pressure [MPa]
IR1200-A	1/8	0.02 to 0.2
		0.02 to 0.4
		0.02 to 0.8
IR2200-A	1/4	0.02 to 0.2
		0.02 to 0.4
		0.02 to 0.8
IR3200-A	1/4, 3/8, 1/2	0.02 to 0.2
		0.02 to 0.4
		0.02 to 0.8

Precision Regulator **IR1000-A/2000-A/3000-A**



- Air consumption: Reduced by up to approx. 90% (Compared to the current SMC product)
- High flow rate: Up to approx. twice that of the current SMC product
- Lightweight: Reduced by up to approx. 27% (Compared to the current SMC product)
- Sensitivity: 0.2% (Full span)
- Repeatability: $\pm 0.5\%$ (Full span)

Series	Port size	Set pressure [MPa]
IR1000-A	1/8	0.005 to 0.2
		0.01 to 0.4
		0.01 to 0.8
IR2000-A	1/4	0.005 to 0.2
		0.01 to 0.4
		0.01 to 0.8
IR3000-A	1/4, 3/8, 1/2	0.01 to 0.2
		0.01 to 0.4
		0.01 to 0.8

Precision Regulator **IR**



- Tension control
- Contact pressure control
- Setting sensitivity: Within 0.2% F.S.
- Repeatability: Within $\pm 0.5\%$ F.S.

Series	Port size	Set pressure [MPa]
IR1000	1/8	0.005 to 0.2
IR2000	1/4	0.01 to 0.4
IR3000	1/4, 3/8, 1/2	0.01 to 0.8
		0.01 to 0.2
		0.01 to 0.4
		0.01 to 0.8

Regulators

Vacuum Regulator **IRV**



- Allows for the adjustment of vacuum line pressure
- Single-sided connection series
- Weight reduced by 20% (Compared with the current IRV2000 with IRV20 fitting)
- Built-in One-touch fittings
- The pressure gauge and digital pressure switch can be easily attached/detached due to being attached by a clip.
- Mounting direction of the pressure gauge and digital pressure switch can be changed. (Standard connections only)
- Mounting angle of the pressure gauge and digital pressure switch can be changed easily (in 60 degree increments).

Series	Port size	Set pressure range [kPa]
IRV10	ø6, ø8, ø1/4, ø5/16	-100 to -1.3
IRV20	ø6, ø8, ø10, ø1/4, ø5/16, ø3/8	-100 to -1.3

Power Valve/Precision Regulator **VEX**



- Large-capacity exhaust regulator
- Sensitivity: Within 0.2% F.S.
- Repeatability: Within ±0.5% F.S.

Series	Port size	Set pressure range [MPa]
VEX1A33, 1B33	M5, 1/8	0.01 to 0.7
VEX1□30, 1□33	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2	0.05 to 0.7

Clean Regulator **SRH**



- Contamination-controlled stainless steel regulator
- Oil-free
- 2 types of diaphragm materials: PTFE, Fluororubber

Series	Relief mechanism	Port size	Set pressure [MPa]
SRH	Non-relief	Rc1/8, 1/4, 3/8, 1/2 9/16-18UNF, 7/8-14UNF	Low pressure type: 0.02 to 0.2 High pressure type: 0.05 to 0.7
SRH	Relief	Rc1/8, 1/4, 3/8, 1/2	

Precision Clean Regulator **SRP**



- High-precision low flow consumption stainless steel regulator
- Bleed air flow of 0.5 L/min (ANR) or less (0.2 MPa at outlet pressure)
- Setting sensitivity: 0.3% F.S.
- Repeatability: 1% F.S.

Series	Port size	Set pressure [MPa]
SRP	M5, 1/8	Low pressure type: 0.005 to 0.2 High pressure type: 0.01 to 0.4

Clean Regulator/Fluororesin Type **SRF**



- Wetted parts Body: New PFA, Diaphragm: PTFE
- Recommended maximum flow rate: 20 L/min (SRF50), (0.3 MPa at inlet pressure, fluidization)

Series	Type	Applicable tubing O.D.		Set pressure [MPa]
		Metric size	Inch size	
SRF	Integrated with fitting	ø4 to ø19	ø1/8 to ø3/4	0.02 to 0.4
SRF	With nut	Fitting size: 2 to 6	Fitting size: 2 to 6	0.02 to 0.4
SRF	Tube extension	—	Tubing O.D.: ø1/4 to ø3/4	0.02 to 0.4

Regulators

Direct Operated Regulator for 6.0 MPa (Relieving Type) **VCHR**



- Service life: 10 million times
Improved durability in high-pressure environments using a polyurethane elastomer poppet
- Uses NSF-H1 approved grease on guide rings (sliding parts)
- Improved durability using a metal seal type relief valve
- Uses special fluoro-resin seals for sliding parts
Stable unattached response, Not easily affected by pressure

Series	Model	Type	Port size	Set pressure [MPa]
VCHR	VCHR30/40	Direct operated regulator (Relieving type)	G3/4, 1, 1 1/2	0.5 to 5.0 (Max. operating pressure: 6.0)

Regulator for General Applications **AK1000T**



- For a wide variety of applications from semiconductor to general
- Compact and lightweight
Weight: 0.52 kg, Height: 97.5 mm
- Minimum dead leg construction
- Multiple port types are available.
Select from compression, NPT female, or Rc thread.

Series	Type	Body material	Connection type	Connection size
AK1000T	Manually operated type	316 SS	Compression Rc, NPT	1/4", 3/8"

Water Regulator **WR110**



- Pressure adjustment for water lines

Series	Port size	Set pressure [MPa]
WR110-□-X224	Rc1/8, 1/4	0.08 to 0.39
WR110-□-X215	Rc1/8, 1/4, NPT1/8, 1/4	0.05 to 0.69

Water Strainer **WF300**



- Removes foreign matter from water lines

Series	Port size	Mesh
WF300	Rc1/4, 3/8, 1/2	100/70/50/25 mesh

Pressure Control Valve (Relief Valve) **AP100**



- Releases pressure over the set range into the atmosphere and constantly maintains the pressure in a pipe

Series	Port size	Set pressure [MPa]
AP100	1/8, 1/4	0.05 to 0.69