

Direct Operated Precision Regulator Modular Style

Series ARP3000

- Setting sensitivity: 0.001 MPa
- Can be connected as a module to a mist separator.
(AFM30 + ARP3000)
(AFD30 + ARP3000)
- Direct-driven, bleed type
(With relieving function)

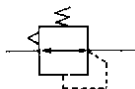


ARP3000-02



ARP3000-02BG

JIS Symbol



Standard Specifications

Model	ARP3000
Port size	1/4
Fluid	Air
Proof pressure	1.2 MPa
Maximum operating pressure	0.8 MPa
Regulating pressure range	0.005 to 0.3 MPa
Setting sensitivity	0.001 MPa
Repeatability	±0.003 MPa
Air consumption ^{Note)}	4 to 6 l/min (ANR) (0.3 MPa)
Pressure gauge port size	1/8
Ambient and fluid temperature	-5 to 60°C (No freezing)
Construction	Bleed type
Weight (kg)	0.42

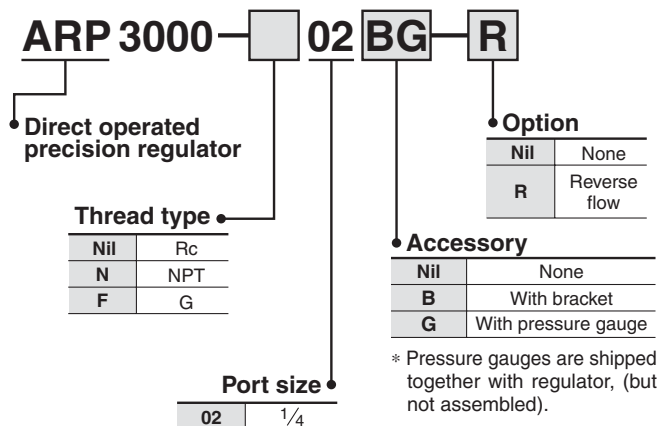
Note) Air consumption differs depending on the set pressure.

Accessory (Option)/Part No.

Description	Part no.
Bracket	B320
Pressure gauge ⁽¹⁾	0.4 MPa G36-4-□01

- Note 1) • □ in the gauge part no. indicates the threads used for connection. For Rc, leave the symbol blank, and for NPT, enter "N".
• Please contact SMC concerning the supply of NPT pressure gauges.
- Note 2) Use caution not to tighten excessively when mounting a pressure gauge, otherwise it will may result in a breakdown. (Fastening torque recommended: 7 to 9 N·m.) For sealing, use a pipe tape.

How to Order



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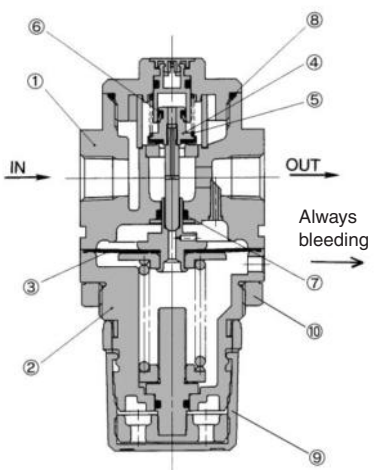
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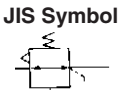
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Series ARP3000

Construction



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Component Parts

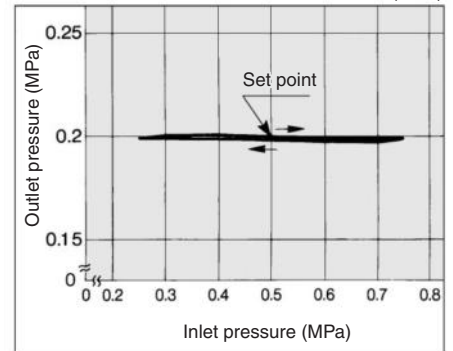
No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver painted
②	Bonnet	Aluminum die-casted	Black painted

Replacement Parts

No.	Description	Material	Part no.
③	Diaphragm assembly	Weather resistant NBR	1315510A
④	Valve assembly	Brass, HNBR	1315506A
⑤	Valve spring	Stainless steel	1315516-2
⑥	Valve mini Y packing	NBR	MYN-5
⑦	O-ring	NBR	JIS B 2401P6
⑧	O-ring	NBR	131545
⑨	Handle	Polyacetal	1315513
⑩	Set nut	Zinc die-casted	131532

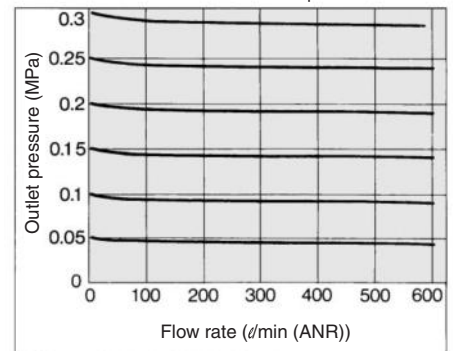
Pressure Characteristics

Inlet pressure: 0.5 MPa
Outlet pressure: 0.2 MPa
Flow rate: 0 ℓ/min (ANR)

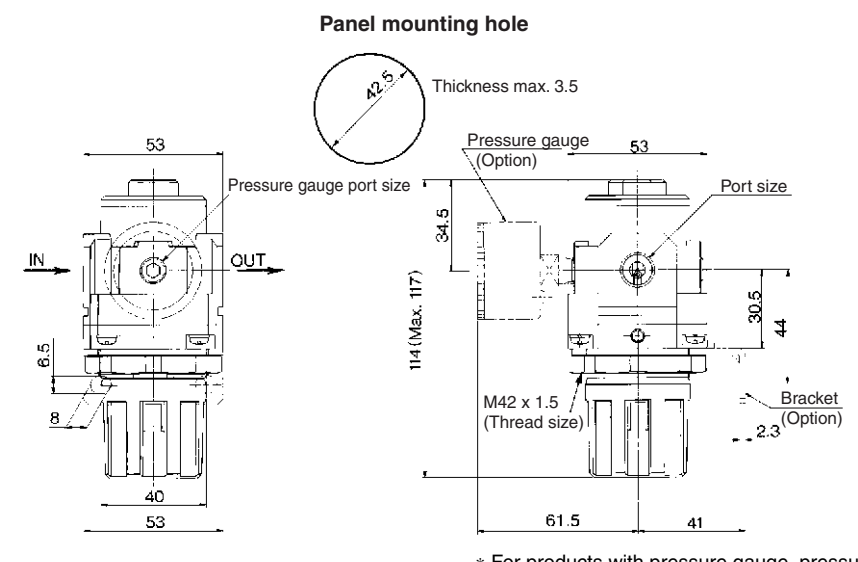


Flow Characteristics

Inlet pressure: 0.7 MPa



Dimensions



Panel mounting hole

Thickness max. 3.5

Pressure gauge port size

Pressure gauge (Option)

Port size

M42 x 1.5 (Thread size)

Bracket (Option)

* For products with pressure gauge, pressure gauge is shipped together with product.

Set nut: Width across flats 50

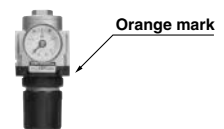
Caution

1. Release the lock to adjust the pressure. After the adjustment, engage the lock.

Failure to observe this procedure could damage the handle or cause the outlet pressure to fluctuate.

1) Pull the adjustment handle to release the lock. (An orange colored line is provided at the bottom of the adjustment handle for visual checking.)

Push the adjustment handle to engage the lock. If it does not lock easily, turn the handle slightly clockwise or; then, push it until the orange colored line is no longer visible.



Precautions

Be sure to read before handling. Refer to pages 14-21-3 to 14-21-4 for Safety Instructions and Common Precautions.

Selection

Caution

1. Set the output pressure to 90% or less of the inlet pressure.
Failure to observe this procedure could result in an excessive pressure drop.

Air Supply

Warning

1. Use a mist separator on the inlet side. If the air contains drain or debris, it could clog the bleed holes and lead to a malfunction.

2. Do not use a lubricator on the inlet side because it could clog the bleed holes and lead to a malfunction.

2) Install the valve guide (on the opposite side of the handle) 60 mm away from the ground surface. Maintenance and inspection will be facilitated.

3) Air is normally released from the bleed hole. This is necessary for direct-operated precision regulator construction.

4) Please contact SMC if this product is to be used between solenoid valve and actuator.

5) Fasten the main body with a set nut tightly and fix it.
Recommended torque for set nut: 22.5 ± 4.5 N·m

Regulator for 2 MPa Series ARX20

2.0 MPa compatible, piston type regulator



- Compatible with inlet supply pressure of 2.0 MPa
- Compact type (face to face dimensions 35 mm, overall length 80 mm)
- Piston type
- 3 out ports for convenient use
- Employs a handle shape for easy operation
- Ideal for discharge pressure adjustment on a small compressor
- Ideal for pressure adjustment of air blowing applications

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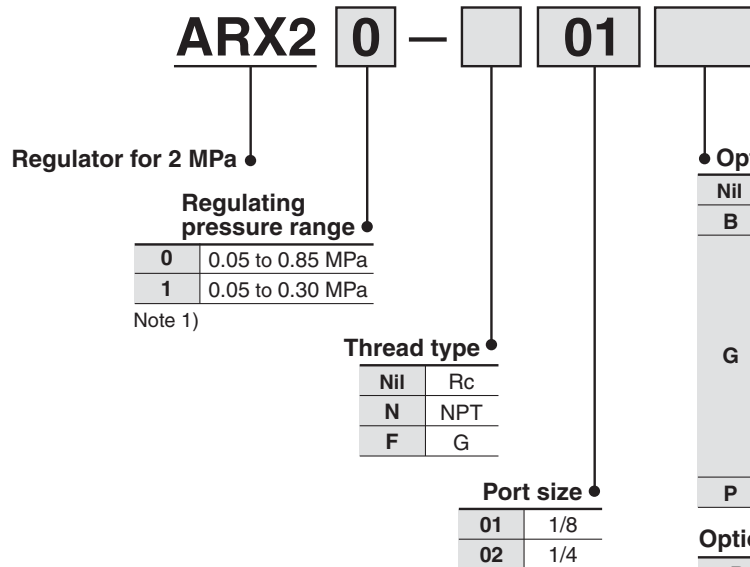
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Regulator for 2 MPa

Series ARX20

How to Order



Option

Nil	None		
B	Bracket	1348112	
G	Pressure gauge ⁽²⁾	ARX20- <input type="checkbox"/> Nil <input type="checkbox"/> F <input type="checkbox"/> □ □	G36-10-01 G46-10-02
		ARX21- <input type="checkbox"/> Nil <input type="checkbox"/> F <input type="checkbox"/> □ □	G36-4-01 G46-4-02
		ARX20-N□□□	G36-P10-N01 G46-P10-N02
		ARX21-N□□□	G36-P4-N01 G46-P4-N02
P	Panel nut	1348110A	

Option combination numbers

B	BG	* Panel nut is also included with B.
G	GP	
P		

Note 1) Compared with ARX20, ARX21 is the product which adjusting spring has only been changed. It is not the product, which does not allow the pressure more than 0.3 MPa.

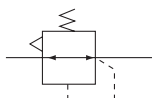
Note 2) Pressure gauges are shipped together, (but not assembled).

Specifications



Model	ARX20	
Regulator construction	Piston type regulator	
Relief mechanism	Relieving type	
Port size	Rc 1/8, 1/4	
Pressure gauge port size	Rc 1/8, 1/4	
Proof pressure	3.0 MPa	
Maximum operating pressure	2.0 MPa	
Regulating pressure range	Standard type	0.05 to 0.85 MPa
	Low pressure type	0.05 to 0.3 MPa
Fluid	Air	
Ambient and fluid temperature	-5 to 60°C (No freezing)	
Weight	110 g	

JIS Symbol

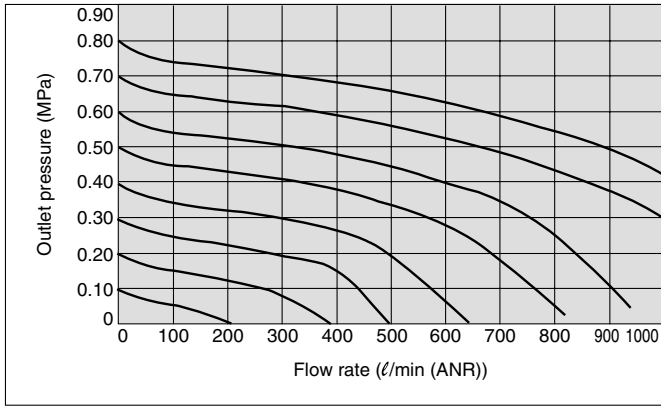


Regulator for 2 MPa Series ARX20

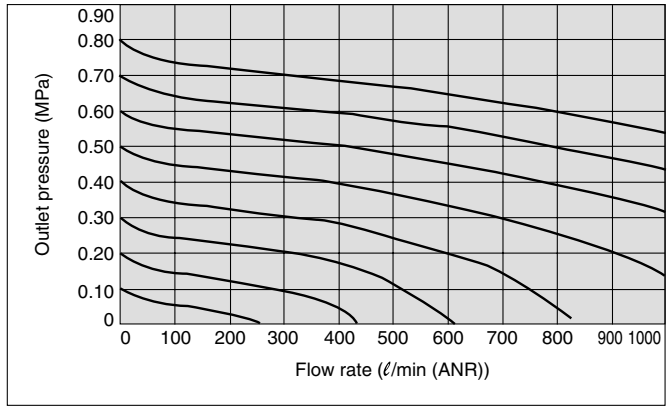
Flow Characteristics

Inlet pressure: 2.0 MPa

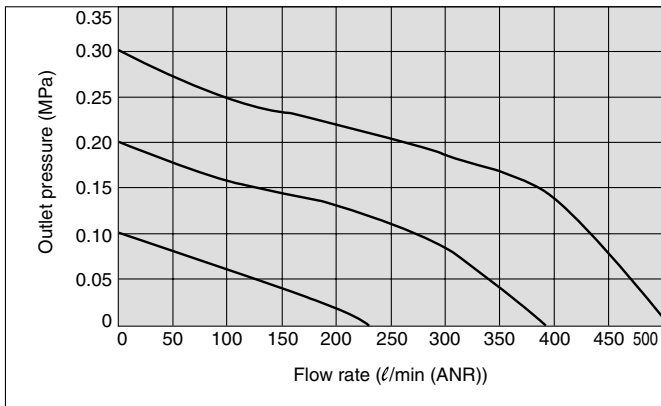
ARX20-01



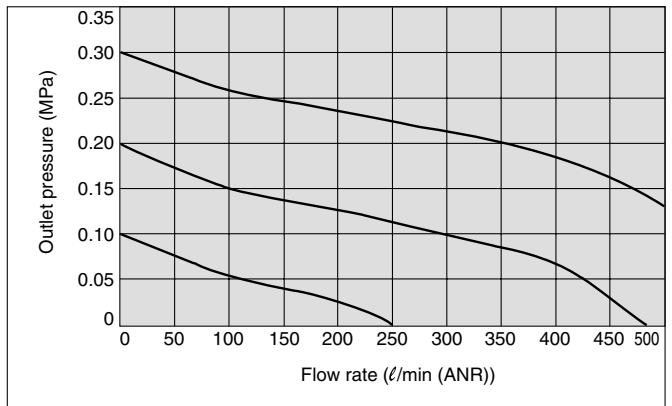
ARX20-02



ARX21-01



ARX21-02



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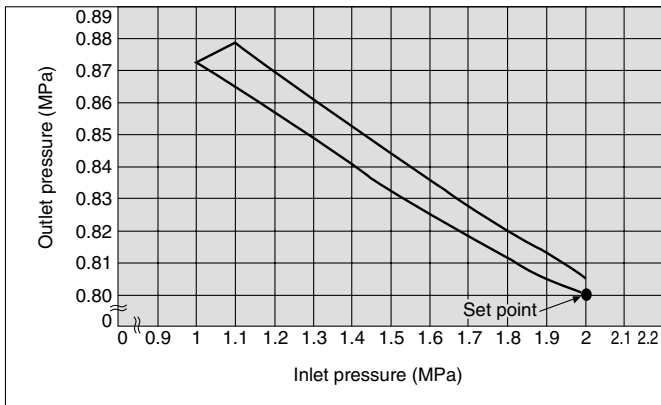
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Pressure Characteristics

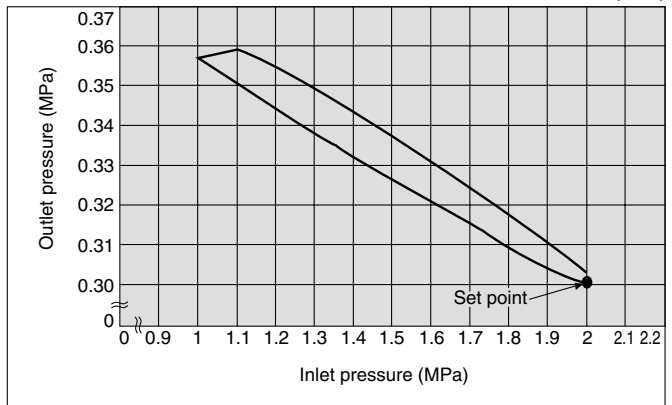
ARX20

Inlet pressure: 2.0 MPa
Outlet pressure: 0.8 MPa
Flow rate: 60 ℓ/min (ANR)



ARX21

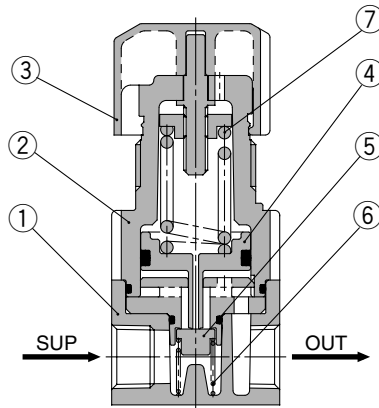
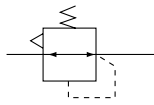
Inlet pressure: 2.0 MPa
Outlet pressure: 0.3 MPa
Flow rate: 60 ℓ/min (ANR)



Series ARX20

Construction

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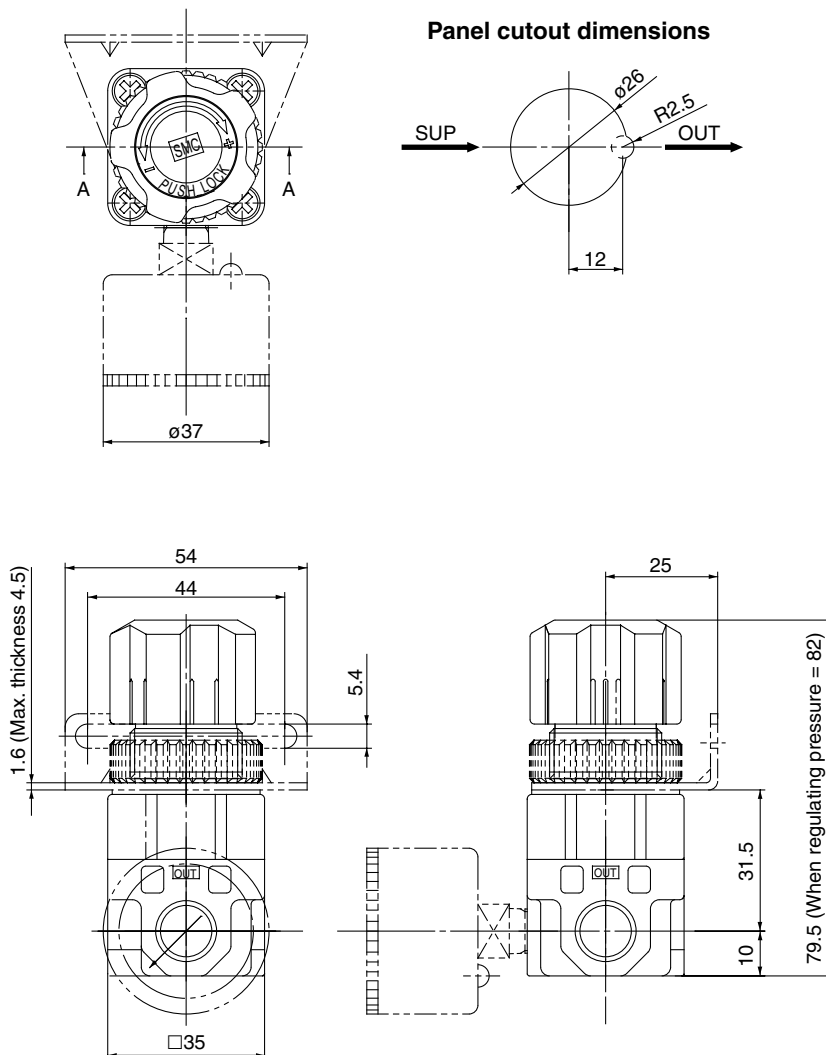
Component Parts

No.	Description	Material	Note
①	Body	ADC	
②	Bonnet	POM	

Replacement Parts

No.	Description	Material	Part no.
③	Handle	POM	1348102#1
④	Piston assembly	POM, NBR	1348104A
⑤	Valve	Brass, NBR	1348105
⑥	Valve spring	Stainless steel	1348109
⑦	Adjusting spring	Steel wire	1348108 (For 0.85 MPa) 1348108-1 (For 0.3 MPa)

Dimensions



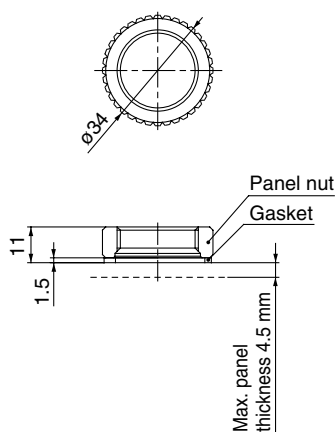
Regulator for 2 MPa Series ARX20

Option

Panel Nut

Part no.	1348110A
Material	POM, NBR (Gasket)

Dimensions

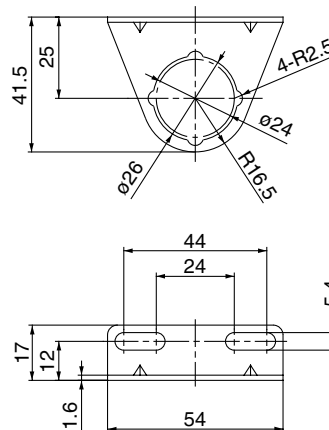


- * Install the gasket underneath the panel and bracket (bonnet side).
Tighten the panel nut by hand without the use of tools.

Bracket

Part no.	1348112
Material	SPCC (Black zinc chromated)

Dimensions



⚠ Precautions

Be sure to read before handling. Refer to pages 14-21-3 to 14-21-4 for Safety Instructions and Common Precautions.

Design and Selection

⚠ Warning

1. Confirm the regulating pressure range.

Be sure to install safety devices in locations where output pressure above the regulating pressure range can lead to damage or malfunction of equipment in the outlet pressure side.

2. Residual pressure relief without supply pressure.

In cases where the supply pressure is removed with the downstream pressure in a low pressure setting state, it may not be possible to eliminate the downstream pressure (residual pressure relief). Provide a residual pressure relief circuit for cases in which reliable elimination of downstream pressure must be performed.

Mounting

⚠ Caution

1. To set the correct pressure

- 1) Set the pressure by increasing from a lower pressure to the desired setting, and lock the handle after the pressure is set.
- 2) Make connections after confirming the "SUP" mark which indicates the air inlet. Reversed connections will cause malfunction.

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