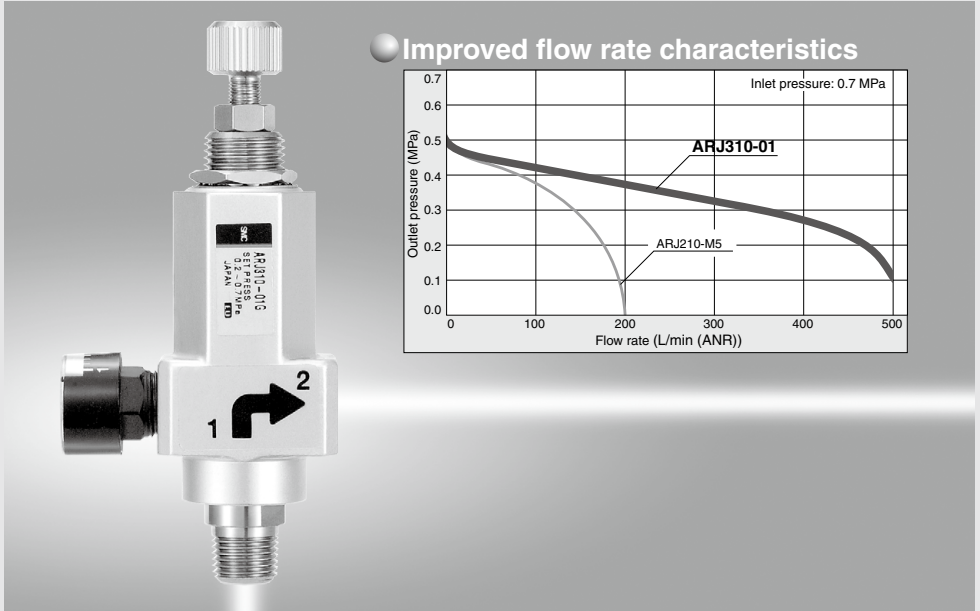


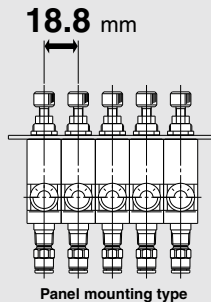
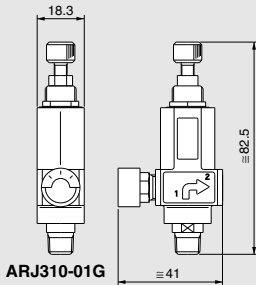
Miniature Regulator

ARJ310 Series



● **Compact and lightweight**
(Main body 65 g)

● **Allows smaller mounting pitch**



● **Accommodates two types of threads**

Inside: Female thread (M5 x 0.8)
Outside: Male thread (1/8)



● **Built-in One-touch fitting**

ø4, ø6 (Metric size)
ø5/32", ø1/4" (Inch size)

ARJ

AR425
to 935

ARX

AMR

ARM

ARP

IR□-A

IR

IRV

VEV

SRH

SRP

SRF

ITV

IC

ITVH

ITVX

PVQ

VY1

VBA

VBAT

AP100

Miniature Regulator

ARJ310 Series



Symbol



Standard Specifications

Pressure gauge port size	Rc 1/8, NPT 1/8 (Female thread)
Fluid	Air
Proof pressure	1.2 MPa
Maximum operating pressure	0.8 MPa
Regulating pressure range	Standard: 0.2 to 0.7 MPa, Low pressure use (0.2 MPa setting): 0.05 to 0.2 MPa
Ambient and operating temperature range	-5 to 60°C (No freezing)
Construction	Relieving type
Weight (kg)	0.065

Model

Model	Port size	
	IN *	OUT
ARJ310-01	R1/8, M5 x 0.8	Rc 1/8
ARJ310-N01	NPT1/8, M5 x 0.8	NPT 1/8
ARJ310F-01-04	R1/8, M5 x 0.8	ø4 One-touch fitting
ARJ310F-01-06		ø6 One-touch fitting
ARJ310F-N01-03	NPT1/8, M5 x 0.8	ø5/32" One-touch fitting
ARJ310F-N01-07		ø1/4" One-touch fitting

* M5 x 0.8 female thread is cut inside the pipe.

Accessory (Option) Part No.

Bracket	134856
Pressure gauge ^{Note}	G15-10-01(Rc1/8)/G15-P10-N01(NPT1/8)

Note) Pressure gauges (G15) for 0.2 MPa are not available.

How to Order

With One-touch fitting

ARJ 3 10 - [] 01 BG - [] - []

ARJ 3 10 F - [] 01 BG - 04 - []

Body size

Model

10 Relieving type

Thread type

Nil	R, Rc
N	NPT

Port size (IN)

01	1/8 (Male thread), M5 x 0.8 (Female thread)
----	---

Accessory

Nil	None
B	Bracket
G	Pressure gauge

Note 2) For products with pressure gauge, pressure gauge is shipped together with product.

Port size (IN, OUT)

01	IN 1/8 (Male thread), M5 x 0.8 (Female thread)	OUT 1/8 (Female thread)
----	--	-------------------------

Metric size

04	4 mm	ARJ310-01
06	6 mm	

Inch size

03	5/32"	ARJ310F-N01
07	1/4"	

• Made to Order
Refer to page 676 for details.

• Semi-standard

Nil	0.7 MPa setting (Standard)
1	0.2 MPa setting ^{Note 1)}
S	With seal

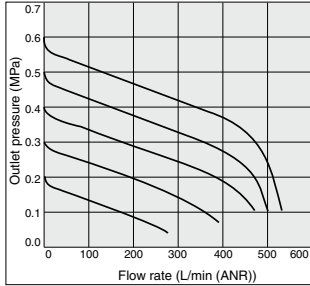
Note 1) Compared with standard specifications, its adjusting spring has been only changed for 0.2 MPa. It is not the product which does not allow the pressure more than 0.2 MPa. Adjusting spring is not replaceable. Besides, in the case with the pressure gauge, the pressure gauge will be the one for 1 MPa.

• Applicable tubing O.D. (OUT)

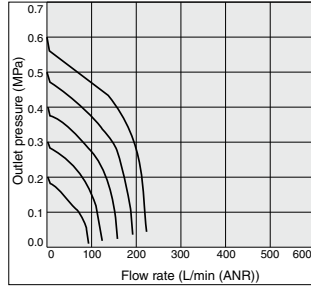
Flow Rate Characteristics (Representative Values)

Inlet pressure: 0.7 MPa

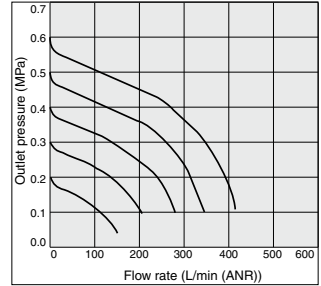
ARJ310-01



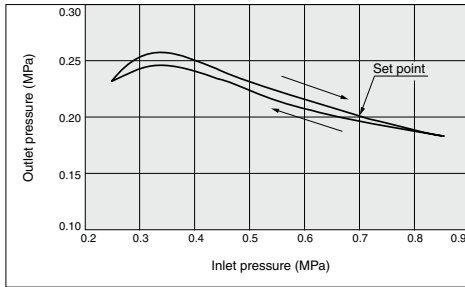
ARJ310F-01-04



ARJ310F-01-06



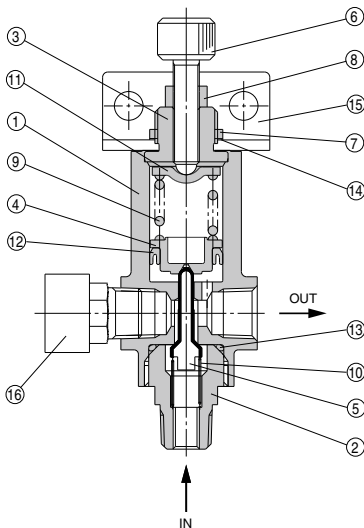
Pressure Characteristics (Representative Values)



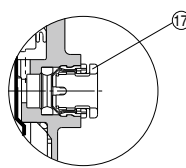
Conditions:
Inlet pressure 0.7 MPa
Outlet pressure 0.2 MPa
Flow rate Q = 20 L/min (ANR)

Construction

ARJ310-01



ARJ310F-01



Component Parts

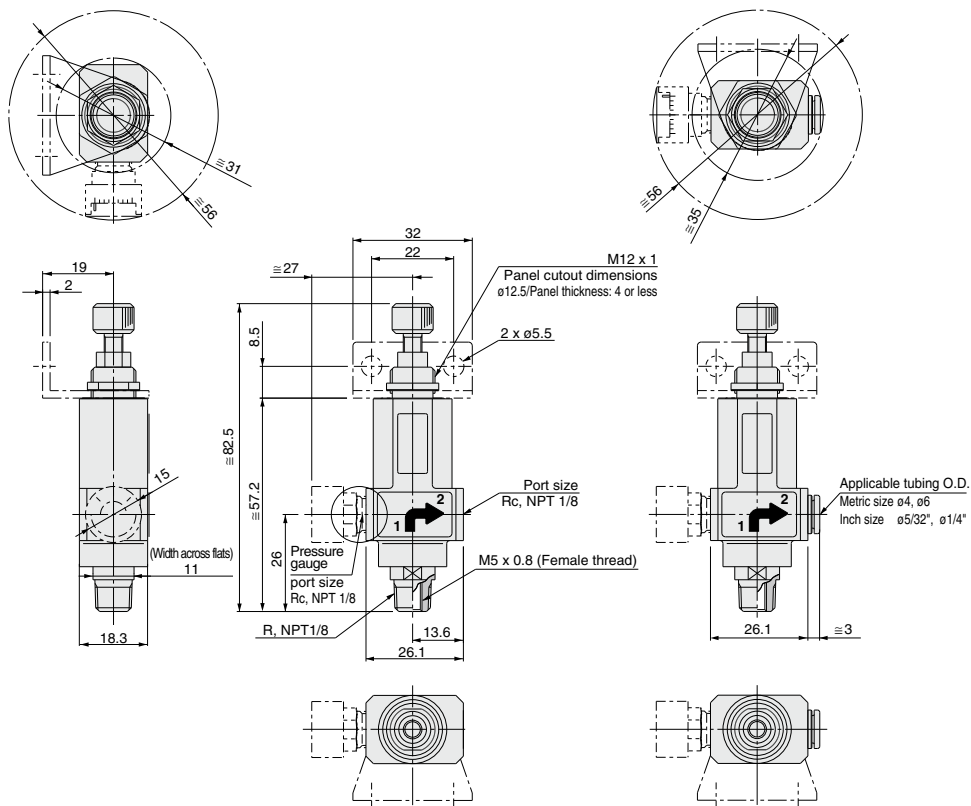
No.	Description	Material	Note
1	Body	Aluminum alloy	
2	Valve guide	Brass	Electroless nickel plated
3	Bonnet	Brass	Electroless nickel plated
4	Piston	POM	
5	Valve	Brass	Rubber lining material: HNBR
6	Adjusting screw	Iron	Nickel plated
7	Panel nut	Iron	Zinc chromated
8	Hexagon nut	Iron	Zinc chromated
9	Adjusting spring	Steel wire	Zinc chromated
10	Valve spring	Stainless steel	
11	Spring holder	Steel band	Zinc chromated
12	Mini Y-seal	NBR	
13	O-ring	NBR	
14	Lock washer	SS	Zinc chromated
15	Bracket	Steel band	Electrophoretic painting
16	Pressure gauge	—	Accessory
17	Cassette	POM, Stainless steel	Accessory

ARJ310 Series

Dimensions

ARJ310-01

ARJ310F-01



Made to Order Specifications



Please contact SMC for detailed dimensions, specifications and lead times.

For moderate pressure (0.4 MPa Setting): Compared with standard specifications, its adjusting spring has been only changed for 0.4 MPa. It is not the product which does not allow the pressure more than 0.4 MPa. Adjusting spring is not replaceable.

How to Order

ARJ 3 10- [] 01 B- [] -X204

Body size

Model
10 Relieving type

Thread type

Nil	R, Rc
N	NPT

Port size (IN-OUT)

01	IN	1/8 (Male thread), M5 x 0.8 (Female thread)
	OUT	1/8 (Female thread)

Accessory

Nil	None
B	Bracket

Made to Order

X204 0.4 MPa Setting (For moderate pressure)

Semi-standard

Nil	0.7 MPa setting (Standard)
1	0.2 MPa setting (Note)
S	With seal

Note 1) Compared with standard specifications, its adjusting spring has been only changed for 0.4 MPa. It is not the product which does not allow the pressure more than 0.4 MPa. Adjusting spring is not replaceable.



ARJ310 Series Specific Product Precautions

Be sure to read this before handling the products.

Refer to back page 50 for Safety Instructions and pages 387 to 391 for Precautions on every series.

Design and Selection

Warning

1. This product cannot be used as a check regulator by installing it between solenoid valve and actuator. It can result in causing breakdown and malfunction.
2. When piping, tighten the regulator with the recommended proper tightening torque shown in the table below while holding the wrench flats (width 11) of the valve guide for IN port and holding the hexagonal section of the body for the OUT port. Excessive tightening or holding a part other than those specified can cause damage.
3. While piping to products or operating the knob, ensure that an excess bending moment should not be applied to a product, because it may result in damage.

Recommended proper torque

Connection thread	Recommended proper torque [N·m]	Note
M5	1.0 to 1.5	The recommended torque when using a tightening tool to tighten an additional 1/6 to 1/4 turn after tightening by hand
R1/8	7 to 9	—

Caution

1. When operating at an inlet pressure lower than the inlet pressure used in the flow rate characteristics graph, the pressure drop on the outlet side may be greater. Therefore, be sure to conduct testing using the actual equipment.
For pressure control equipment selection, refer to page 123 in the "Product Selection Guide."

Mounting

Caution

To set the correct pressure

1. Make connections after confirming the mark which indicates the air inlet. Reversed connections can cause malfunction.

ARJ

AR425
to 935

ARX

AMR

ARM

ARP

IR□-A

IR

IRV

VEV

SRH

SRP

SRF

ITV

IC

ITVH

ITVX

PVQ

VY1

VBA

VBAT

AP100