

# Miniature Regulator

## Series ARJ310



**ARJ**

AR425  
to 935

**AMR**

**ARM**

**ARP**

**IR**

**IRV**

VEX1□

**SRH**

**SRP**

**SRF**

ARX20

VCHR

**ITV**

**IC**

**PVQ**

VEF  
VEP

**VER**

**VEA**

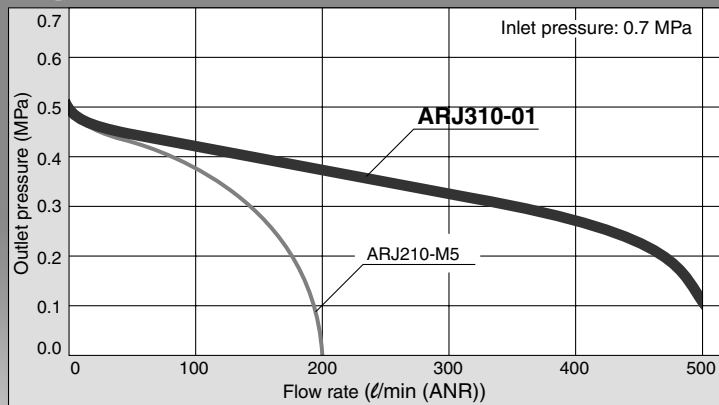
**VY2**

VBA  
VBAT

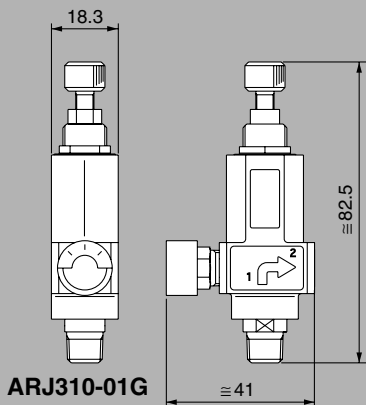
AP100



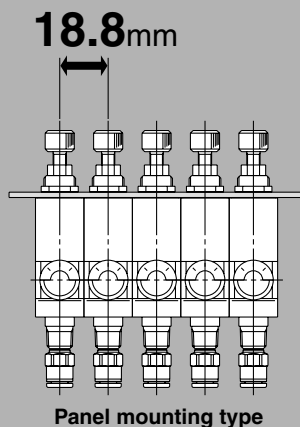
### Improved flow characteristics



- Compact and lightweight (Main body 65 g)
- Allows smaller mounting pitch



ARJ310-01G



Panel mounting type

- 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)

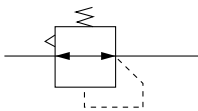
# Miniature Regulator

## Series ARJ310

### Standard Specifications



JIS Symbol



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)
Mass	Approx. 65 g

### 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 <sup>Note)</sup>	G15-10-01(Rc1/8)/G15-P10-N01(NPT1/8)

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

### How to Order

**Port size (IN, OUT)**

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

**ARJ 3 10** - [ ] - [ ] - [ ] - [ ] - [ ]

**ARJ 3 10 F** - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

**With One-touch fitting**

**Body size**

**Model**

10	Relieving type
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**With One-touch fitting**

**Thread type**

Nil	R, Rc
N	NPT

**Port size (IN)**

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

Nil	None
B	Bracket
G	Pressure gauge

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

**Option**

Nil	0.7 MPa setting (Standard)
1	0.2 MPa setting <sup>Note 1)</sup>
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.

**Made to Order**  
Refer to page 460 for details.

**Applicable tubing O.D. (OUT)**

**Metric size**

04	4 mm	ARJ310-01
06	6 mm	

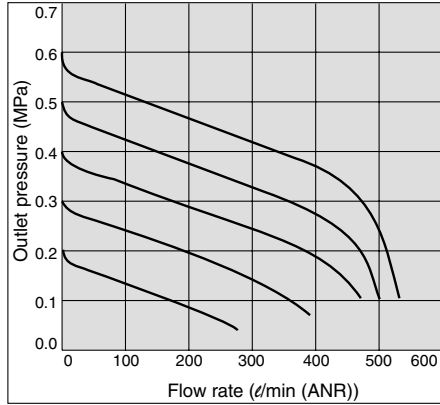
**Inch size**

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

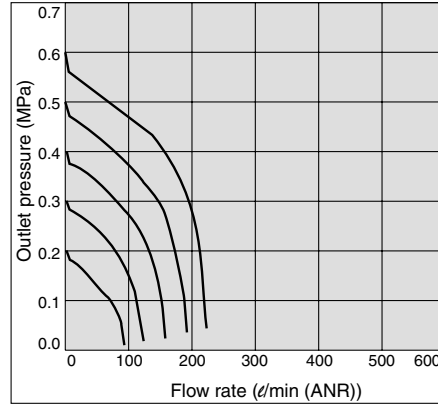
## Flow Characteristics (Representative Values)

Inlet pressure: 0.7 MPa

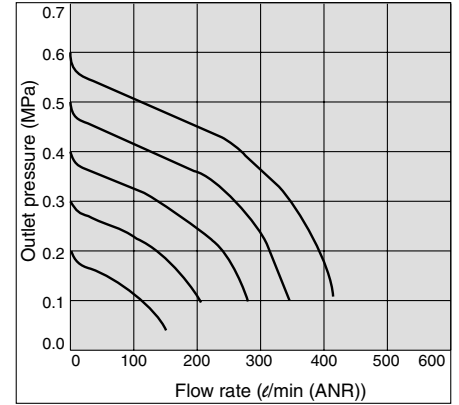
**ARJ310-01**



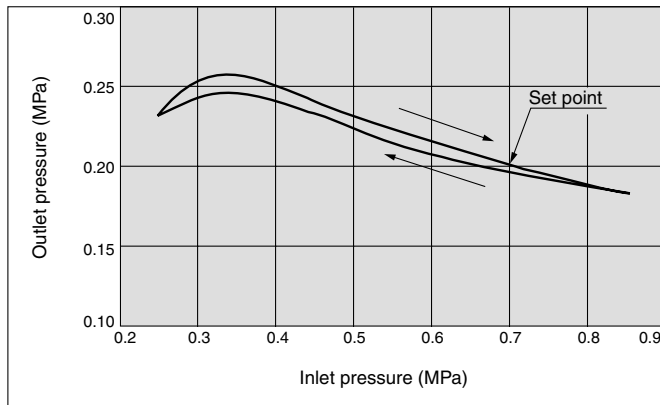
**ARJ310F-01-04**



**ARJ310F-01-06**



## Pressure Characteristics (Representative Values)

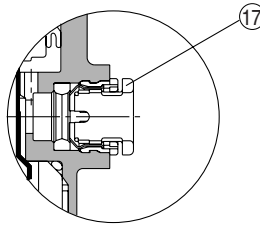
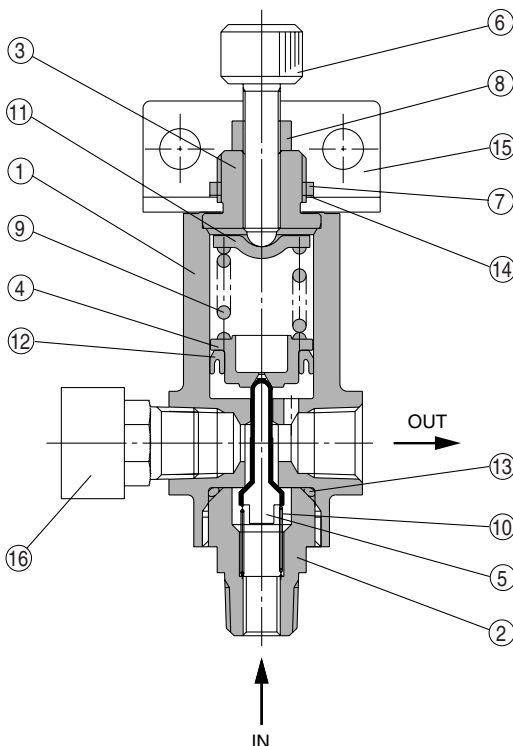


Conditions:  
 Inlet pressure 0.7 MPa  
 Outlet pressure 0.2 MPa  
 Flow rate Q = 20 l/min (ANR)

## Construction

**ARJ310-01**

**ARJF310F-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	Nickel plated
8	Hexagon nut	Iron	Nickel plated
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	Nickel plated
15	Bracket	Steel band	Electrophoretic painting / Accessory
16	Pressure gauge	—	Accessory
17	Cassette	POM, Stainless steel	

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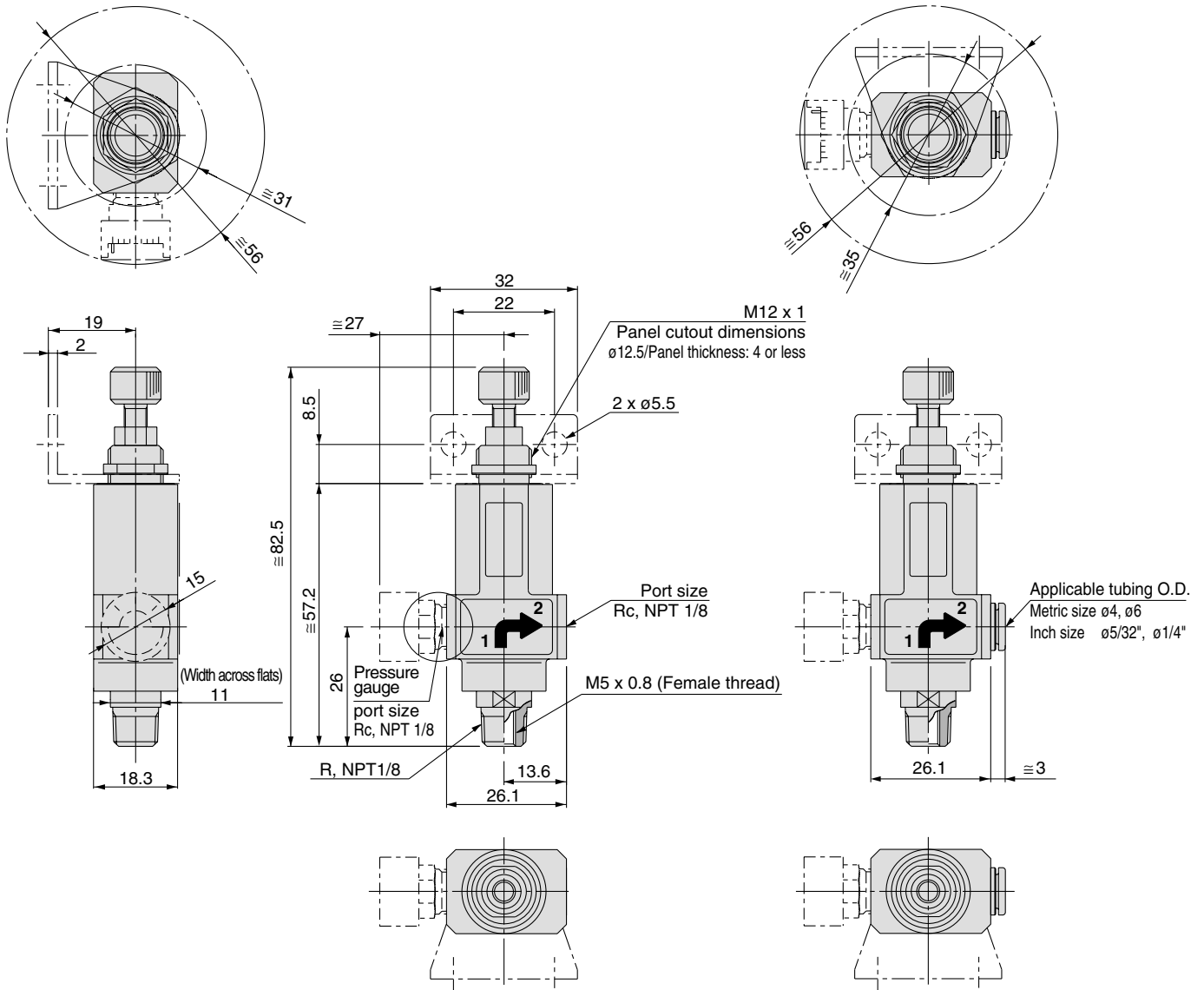
AP100

# Series ARJ310

## Dimensions

### ARJ310-01

### ARJ310F-01



## Made to Order Specifications



Consult with SMC for detailed dimensions, specifications and delivery.

**For middle pressure (0.4MPa 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 0.4MPa Setting (For middle pressure)

Option

Nil	0.7 MPa setting (Standard)
1	0.2 MPa setting <sup>Note)</sup>
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.



# Series ARJ310 Specific Product Precautions

Be sure to read before handling. Refer to front matters 42 and 43 for Safety Instructions and pages 287 to 291 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 (M5: 1.5 to 2 N·m, R 1/8: 7 to 9 N·m) 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 handle, ensure that an excess bending moment should not be applied to a product, because it may result in damage.

## Mounting

### Caution

#### To set the correct pressure

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

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