



FUJIKURA COMPOSITES

PRECISION AIR REGULATOR

RP SERIES

- ▶ Highly accurate pressure control
- ▶ Direct acting, and Non-bleeding type



FUJIKURA COMPOSITES Inc.



PRECISION AIR REGULATOR

FEATURES

- **Accurate Pressure Regulation**
Repeatability: within $\pm 0.5\%$ F.S.
- **Superior Supply Pressure Characteristics**
output pressure variation to changes in supply pressure: within 0.5kPa
- **Excellent Non-Bleed Pressure Regulation**
Generates a Zero-based precision output pressure unmatched by any other direct acting type of regulators.
- **Free from Dust Trouble**
Incorporated Screen Filter assures long trouble-free operation.



SPECIFICATIONS

TYPE	Relieving	RP-0.5-2	RP-2-2	RP-4-2	RP-7-2
	Non-Relieving	RP·NR-0.5-2	RP·NR-2-2	RP·NR-4-2	RP·NR-7-2
Working Fluid	Clean Compressed Air				
Set Pressure Range MPa	0.05	0.2	0.4	0.7	
Supply Pressure Range MPa	0.5 max.	1 max.			
Repeatability % F.S.	Within ± 0.5				
Sensitivity % F.S.	Within 1	Within 0.5		Within 0.3	
Operating Temperature °C	5 ~ 60				
Pipe Port	Rc	1/4			
Gauge Port	Rc	1/4 (2 Ports)			
Bracket	Standard Equipment				
Weight kg	0.41				

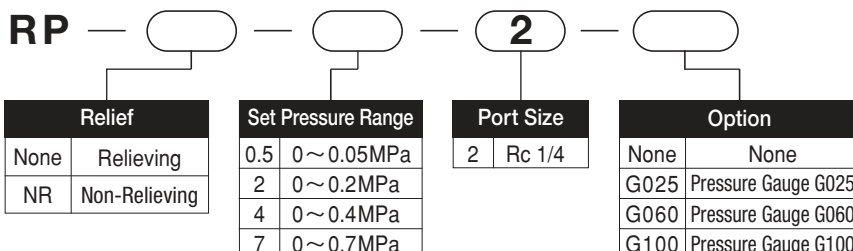
Note: When you use extreme low pressure, Please consult us at the address printed on the back cover.

PRESSURE GAUGE (OPTION)

- **Accuracy** $\pm 1.6\%$ F.S.

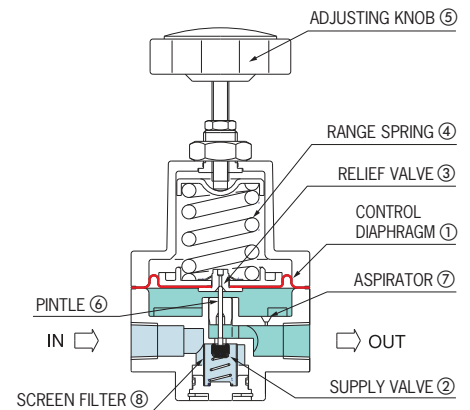
Opt. No.	G025	G060	G100
Unit	MPa		
Pressure Range	0 ~ 0.25	0 ~ 0.6	0 ~ 1
Min. Graduation	0.005	0.01	0.02

MODEL DESIGNATION



* Set pressure range up to 0.02, 0.03MPa are also available. For details, consult us

EXPLANATORY CONSTRUCTION AND PRINCIPLE OF OPERATION



Range spring ④, which has been compressed by Adjusting knob ⑤, causes Pintle ⑥ to move downward, opening Supply valve ② and allowing air flow to the downstream. The pressure builds up against Control diaphragm ① until Supply valve ② closes.

This is the equilibrium or set pressure, which is closely maintained under changes in operating conditions in the following manner.

1. Downstream Pressure Drop

A drop in downstream pressure reduces the diaphragm pressure force, upsetting the equilibrium condition.

This unbalance causes Supply valve ② to open until the pressure builds up once more to the set value.

2. Downstream Pressure Increase

An increase in downstream pressure acts on Control diaphragm ①, causing the relief seat to lift and Relief valve ③ to open.

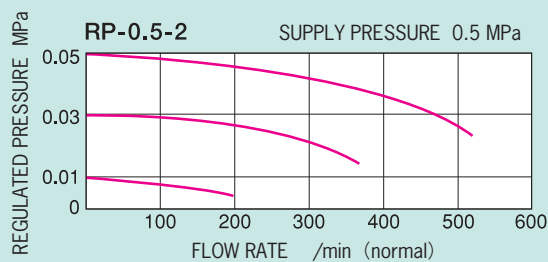
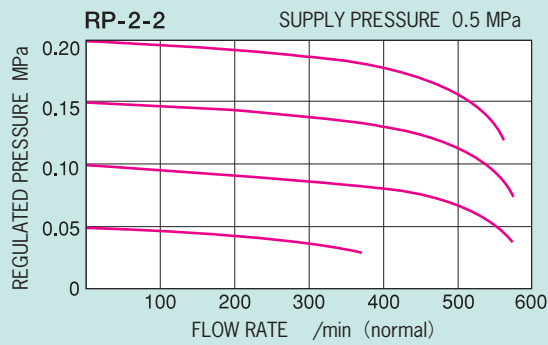
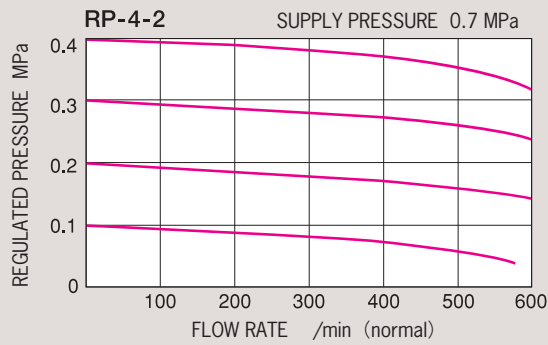
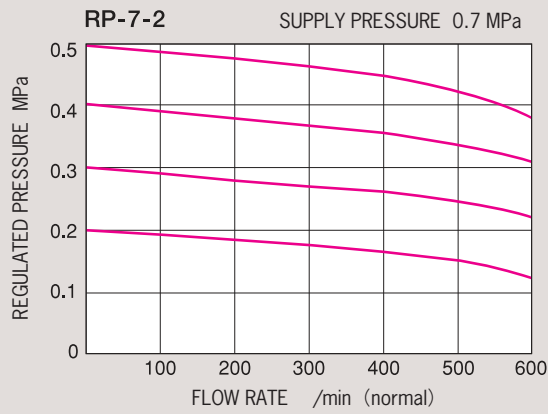
The excess pressure drops quickly to the set value.

3. Changes in Forward Flow

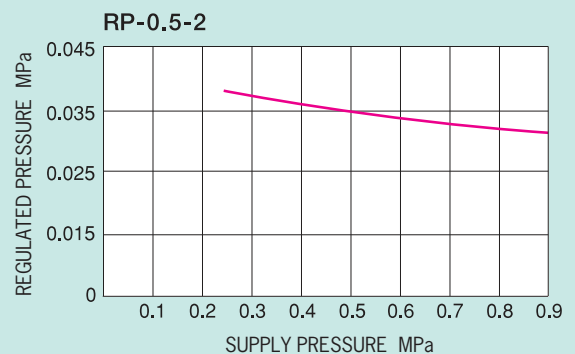
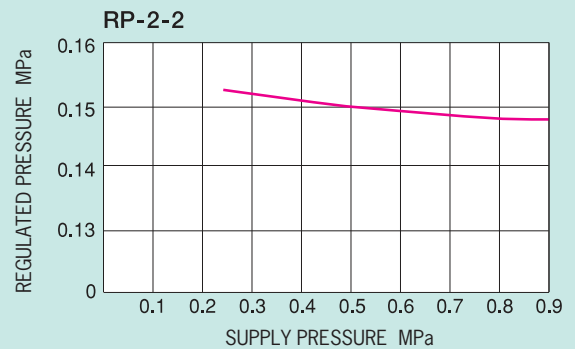
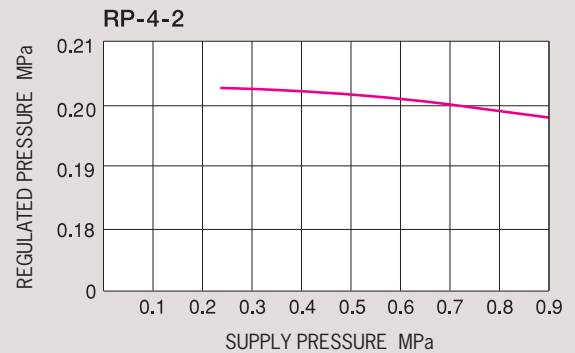
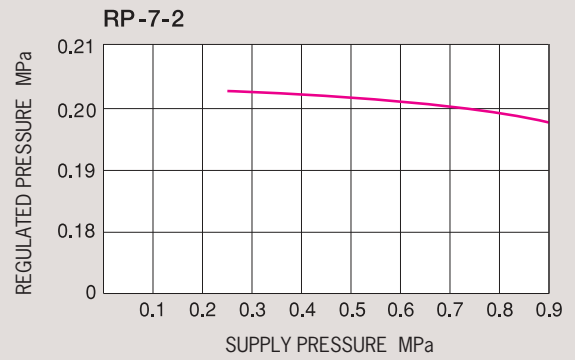
Under stable forward flow condition, the range spring force is balanced by the diaphragm pressure force, with Supply valve ② open just enough to maintain the required equilibrium pressure.

When high flow occurs, Aspirator ⑦ helps maintain downstream pressure and compensates for droop.

■ **Flow Characteristic**



■ **Pressure Characteristic**



CAUTION

- ① Flush out all air lines thoroughly to remove dirt and scale before installation is made.
- ② Do not apply shock load on the top of fully tightened Adjusting knob to avoid possible damage of inner parts.
- ③ When attaching Mounting bracket to the body with two pan head screws which serve also for tightening Bonnet, make sure the screws are not tightened too hard.

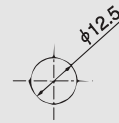
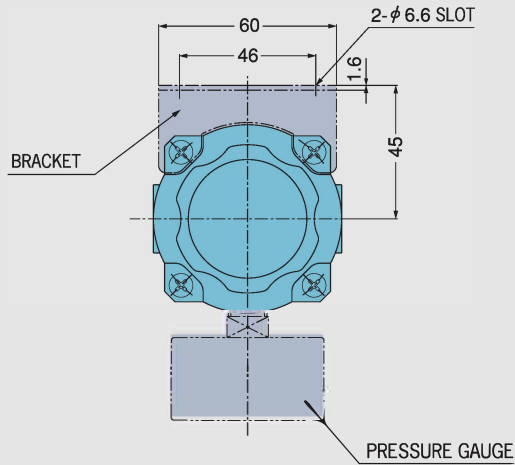


series

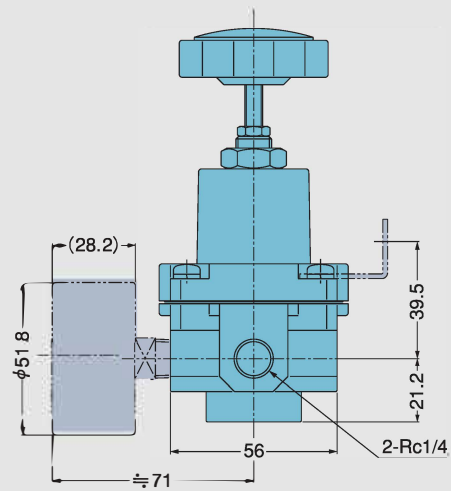
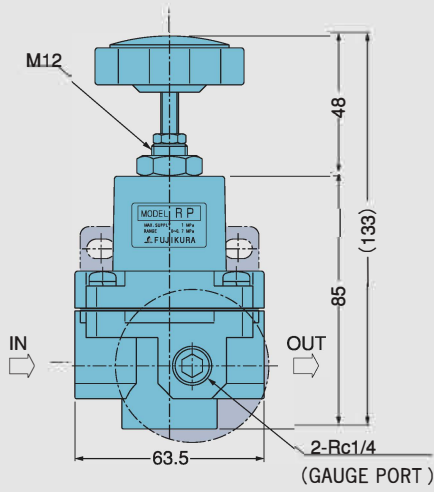
OUTSIDE DIMENSIONS

FUJIKURA PRECISION AIR REGULATOR

(Unit : mm)



PANEL MOUNTING HOLE
(Panel Thickness : 3 max.)



Note : Specifications subject to change without notice for improvements and modifications