

Regulator with Built-in Pressure Gauge with Back Flow Mechanism

Series ARG20K/30K/40K

How to Order



ARG20K



ARG40K

ARG 20 K- 01 G1

Body size

Symbol	Port size
20	1/8
30	3/8
40	1/2

With back flow mechanism

Note 1) If the set pressure is not exceeding 0.15 MPa, back flow may not occur. Contact SMC when a back flow mechanism is required with a set pressure of less than 0.15 MPa.

Thread type

Symbol	Type
Nil	Rc
N	NPT
F	G

Port size

Symbol	Port size	Body size		
		20	30	40
01	1/8	●	—	—
02	1/4	●	●	●
03	3/8	—	●	●
04	1/2	—	—	●

Option

Symbol	Description
Nil	—
1 ⁽²⁾	0.02 to 0.2 MPa setting
N	Non-relieving type
Z ⁽³⁾	Name plate and pressure gauge in imperial units (PSI)

* When more than one specification is required, indicate in ascending alphanumeric order.

Note 2) Adjusting spring and pressure gauge (full-span 0.3 MPa) are different from those for the standard specification.

Outlet pressure may increase by 0.2 MPa or more.

Note 3) For thread type NPT.

This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)

Accessory (2)

Symbol	Description
Nil	—
H	With set nut

Accessory (1)

Symbol	Description
Nil	—
B	With bracket (With nuts)

Mounting Angle of Pressure Gauge

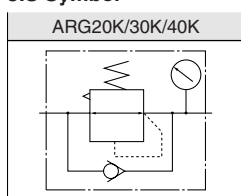
Symbol	G1	G2	G3	G4
Mounting angle	0°	90°	180°	270°
Mounting angle view				

* Mounting angles other than 45° 135° 225° and 315° are available through the Made to Order (page 29).

* Possible to change to the optional mounting angles.

For details, refer to the back of page 6, "Procedure for replacing or changing the mounting angle of a pressure gauge"

JIS Symbol



Accessory/Optional Combinations

- ◎: Combination available
- : Varies depending on a model
- : Combination not available
- △: Available only with NPT thread

Accessory/ Optional specifications		Symbol	Accessory		Option			Applicable regulator
			B	H	1	N	Z	ARG20 to 40
Accessory	With bracket	B			⊙	⊙	△	⊙
	With set nut	H			⊙	⊙	△	⊙
Option	0.02 to 0.2 MPa setting	-1	⊙	⊙		⊙	△	⊙
	Non-relieving type	-N	⊙	⊙	⊙		△	⊙
	Name plate and pressure gauge in imperial units (PSI)	-Z	△	△	△	△		△

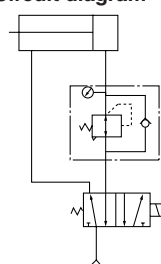
Application examples of a regulator with a back flow mechanism

With a built-in mechanism which enables reliable discharge of air pressure from outlet to inlet

Example 1)

When the pressure in the rear and the front of the cylinder differs:

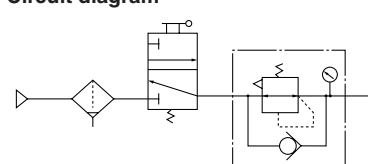
Circuit diagram



Example 2)

When the air supply is cut off and releasing the inlet pressure to the atmosphere, the residual pressure release of the outlet side can be ensured for a safety purpose.

Circuit diagram



Regulator with Built-in Pressure Gauge with Back Flow Mechanism *Series ARG20K/30K/40K*

Standard Specifications

Model	ARG20K	ARG30K	ARG40K
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2
Fluid	Air		
Proof pressure	1.5 MPa		
Maximum operating pressure	1.0 MPa		
Regulating pressure range ⁽¹⁾	0.05 to 0.85 MPa		
Relief pressure	Set pressure + 0.05 MPa (at relief flow rate of 0.1 ℓ /min (ANR))		
Ambient and fluid temperature	-5° to 60°C (With no freezing)		
Construction	Relieving type		
Weight (kg)	0.31	0.40	0.57

Note 1) Set the inlet pressure to 0.05 MPa or higher than the set pressure.

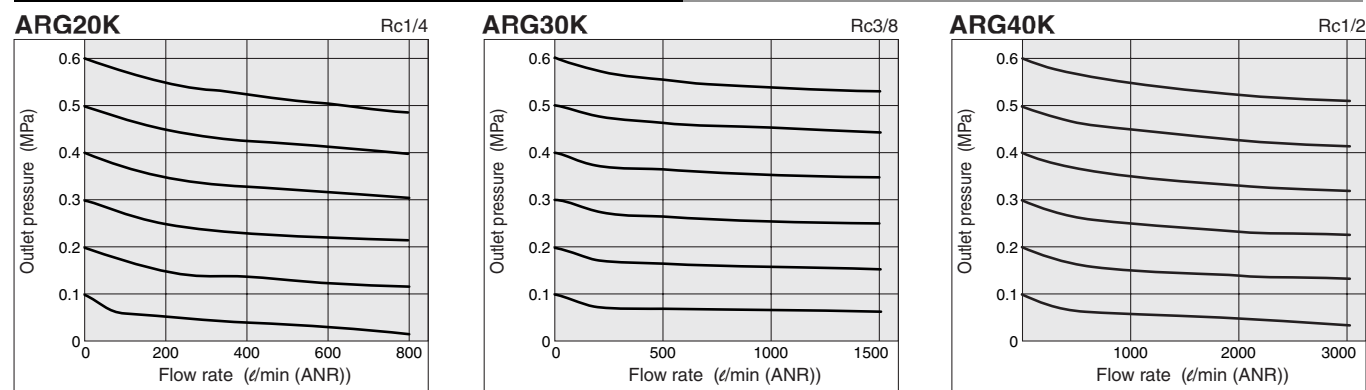
Accessory Part No.

Applicable model				ARG20K	ARG30K	ARG40K
Accessory						
Bracket assembly ⁽¹⁾				ARG20P-270AS	ARG30P-270AS	ARG40P-270AS
Set nut				ARG20P-260S	ARG30P-260S	ARG40P-260S
Pressure gauge	Pressure gauge display range	Standard	0 to 1.0 MPa	GB2-10AS	GB3-10AS	GB4-10AS
		Optional	0 to 0.3 MPa	GB2-3AS	GB3-3AS	GB4-3AS
			0 to 150 PSI	GB2-P10AS	GB3-P10AS	GB4-P10AS
			0 to 45 PSI	GB2-P3AS	GB3-P3AS	GB4-P3AS

Note 1) Assembly includes a bracket and set nuts.

Flow Characteristics (Representative values)

Condition: Inlet pressure 0.7 MPa



Pressure Characteristics (Representative values)

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

