

# 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.

# Regulator for 2 MPa

# ARX20

## How to Order

ARX2 0 — 01

Regulator for 2 MPa

Regulating pressure range

0	0.05 to 0.85 MPa
1 Note 1)	0.05 to 0.30 MPa

Thread type

Nil	Rc
N	NPT
F	G

Port size

01	1/8
02	1/4

Option

—	None	
B	Bracket	1348112
G	Pressure gauge Note 2)	ARX20- Nil F □□
		ARX21- Nil F □□
		ARX20-N□□
		ARX21-N□□
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

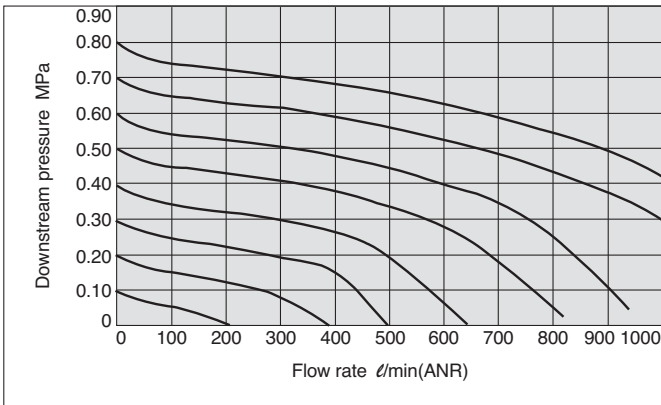


Model		<b>ARX20</b>
Regulator construction		Piston type regulator
Relief mechanism		Relieving type
Port size		Rc 1/8, 1/4
Pressure gauge port size		Rc 1/8, 1/4
Proof pressure		3.0 MPa
Maximum operating pressure		2.0 MPa
Regulating pressure range	Standard type	0.05 to 0.85 MPa
	Low pressure type	0.05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

# Regulator for 2 MPa **ARX20**

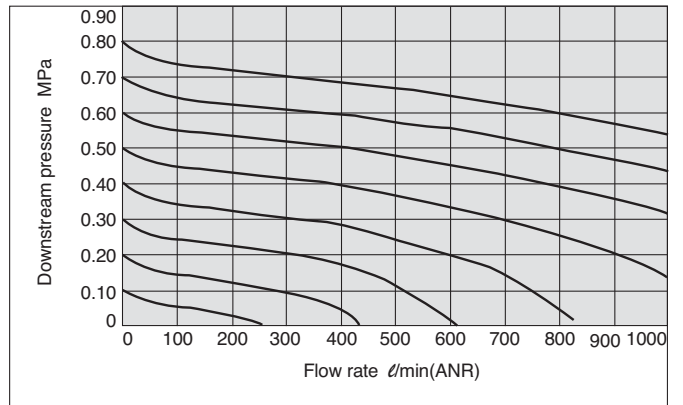
## Flow rate characteristics

**ARX20-01**

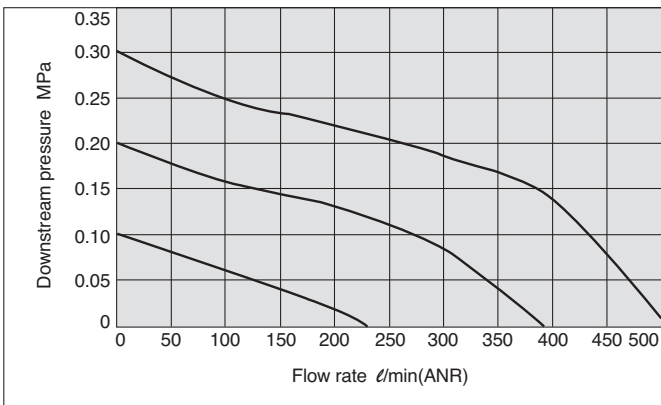


**ARX20-02**

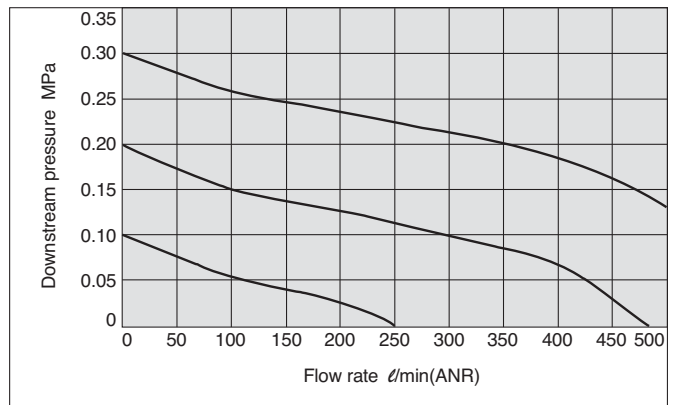
Conditions: Upstream pressure 2.0MPa



**ARX21-01**



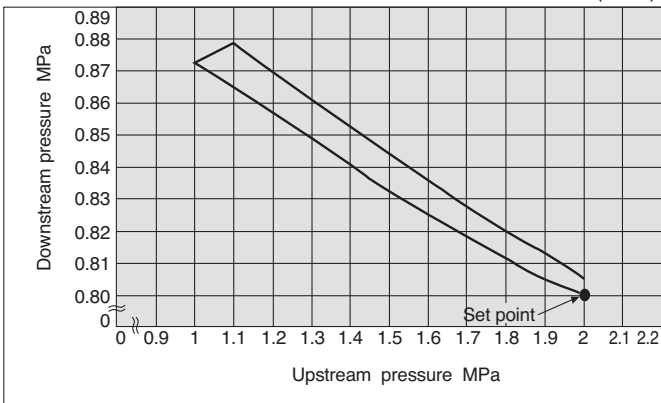
**ARX21-02**



## Pressure characteristics

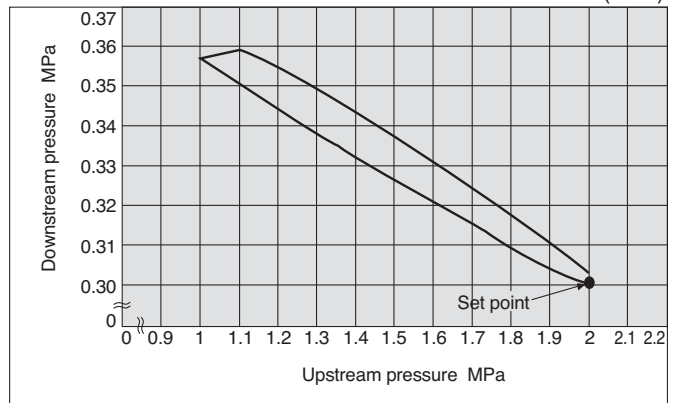
Conditions: Upstream pressure 2.0MPa  
Downstream pressure 0.8MPa  
Flow rate 60l/min (ANR)

**ARX20**

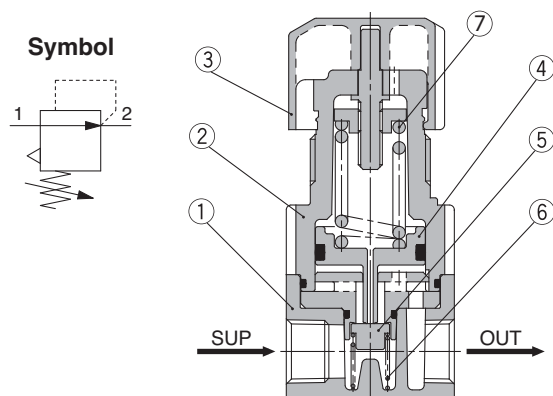


Conditions: Upstream pressure 2.0MPa  
Downstream pressure 0.3MPa  
Flow rate 60l/min (ANR)

**ARX21**



## Construction



### Parts list

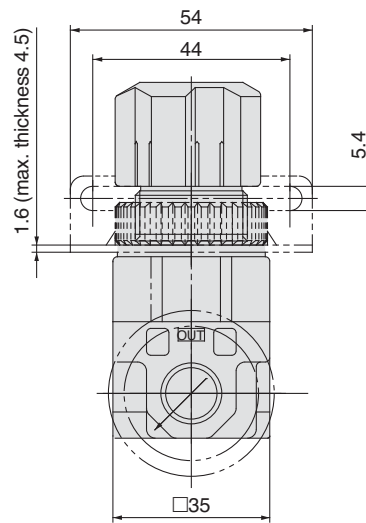
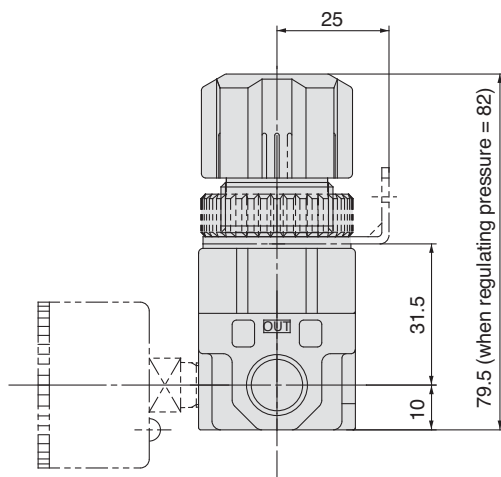
No.	Description	Material	Note
1	Body	ADC	Chromate treated
2	Bonnet	POM	
3	Handle	POM	1348102#1

### Replacement parts list

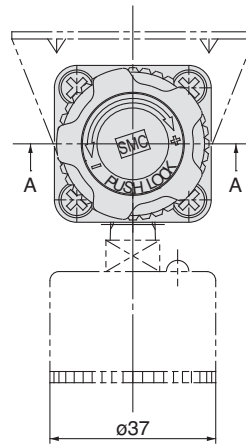
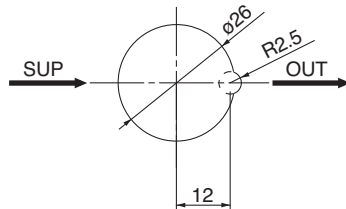
No.	Description	Material	Part No.
4	Piston assembly	POM/NBR	1348104A
5	Valve	Brass/NBR	1348114#1
6	Valve spring	Stainless steel	1348109
7	Adjusting spring	Steel wire	1348108 (For 0.85 MPa) 1348108-1 (For 0.3 MPa)

# ARX20

## Dimensions



### Panel cutout dimensions

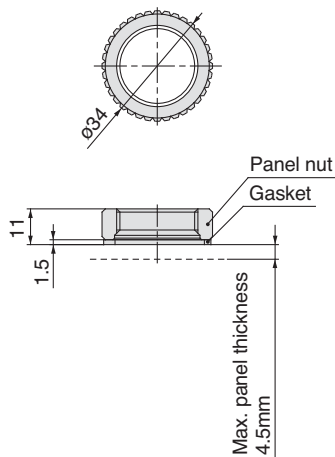


## Options

### Panel nut

Part No.	1348110A
Material	POM, NBR (gasket)

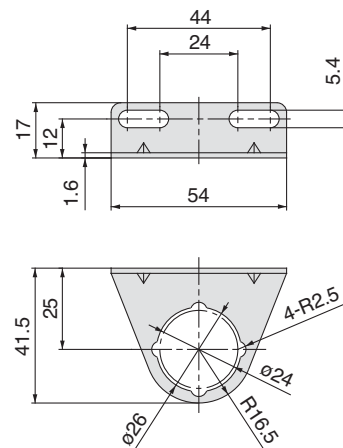
### Dimensions



### Bracket

Part No.	1348112
Material	SPCC (Electrophoretic coating)

### Dimensions

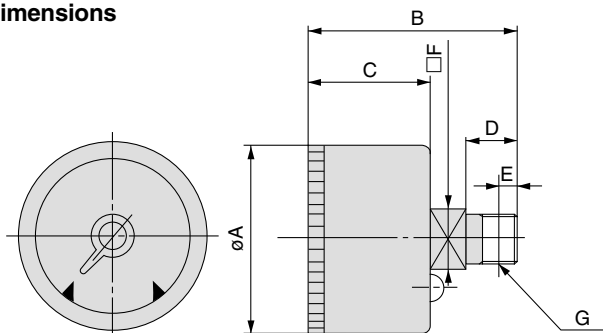


\* Install the gasket underneath the panel and bracket (bonnet side).  
Tighten the panel nut by hand without the use of tools.

## Options

### Pressure gauge

#### Dimensions



#### Dimension table

Model	A	B	C	D	E	F	G
G36-□-01	37	40.8	23.8	10	4	12	1/8
G46-□-02	42	44.5	24.5	12	6	14	1/4

#### Specifications

Model	G36-□-01	G46-□-02	
Piping port size	R(PT) 1/8	R(PT) 1/4	
Scale angle	270°		
Materials	Case	Rolled steel plate (black melamine coated)	
	Clear cover	Polycarbonate	
	Stem	Brass	
Weight	55g	80g	

#### Models

Model	Pressure range		Indicator units
	MPa	kgf/cm <sup>2</sup>	
G36-2-01	0 to 0.2	0 to 2	MPa kgf/cm <sup>2</sup> combined
G46-2-02			
G36-4-01	0 to 0.4	0 to 4	
G46-4-02			
G36-7-01	0 to 0.7	0 to 7	
G46-7-02			
G36-10-01	0 to 1.0	0 to 10	
G46-10-02			

#### Instructions for Pressure Gauge with Limit Gauge Indicators

##### • Removing the Cover

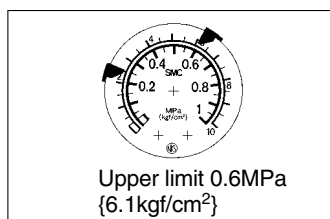
Grasp the outer edge of the front cover with your fingers, push it in while turning to the left (about 6 to 7mm) until it stops, and then pull it off.



##### • Setting the Indicator Needles

Move the indicator needles with your fingers. If it is done with a small screw driver, etc., take care not to bend the indicator needles or scratch the gauge dial.

There are 2 green indicator needles, to be set at the upper and lower limits of the pressure range.



##### • Installing the Cover

After setting the indicator needles, return the cover to its original position by aligning the indentation at the top of the black case with the notch in the cover, and then pushing the cover back into place.

Turn the cover to the right (about 6 to 7mm) until it stops, and confirm that the cover is firmly in place.



## ⚠ Pressure Gauge Precautions

Be sure to read before handling.

### Selection

#### ⚠ Caution

- Avoid use in locations with strong pressure pulsation or vibration.
- Contact SMC if the product will be used in an application with a high frequency of operation.

### Mounting

#### ⚠ Caution

- Do not subject the gauge to impacts, such as dropping, during transportation and mounting.  
This can cause loss of indication accuracy.
- Do not use in locations with high temperature and humidity.  
This can cause malfunction.
- When screwing the pressure gauge into place, be sure to apply your wrench on the square wrench flats. If the wrench is applied on any other area, air leakage or damage can occur.



# Regulator for 2 MPa ARX 20/Precautions

Be sure to read before handling.

## Design & Selection

### Warning

#### 1. Confirm the specifications.

The products appearing in this catalog are designed for use only in compressed air systems. Do not use outside the specified ranges of pressure, temperature, etc., as this may cause damage or faulty operation. Consult with SMC if fluids other than compressed air are to be used.

#### 2. 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 downstream.

#### 3. 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.

#### 4. When used with a closed downstream circuit and balance circuit.

Contact SMC as there are cases in which the product cannot be used.

#### 5. Perform downstream pressure setting in a range that is 85% or less of the supply pressure.

However, the setting should be performed within the regulating pressure range.

## Mounting

### Warning

#### 1. Read the instruction manual carefully.

The product should be mounted and operated with a good understanding of its contents. Also, keep the manual where it can be easily referred to at any time.

#### 2. Ensure space for maintenance.

Ensure the necessary space for maintenance activities.

## Mounting

### Warning

#### 3. Strictly observe the fastening of screws and their tightening torques.

When mounting is performed, use the recommended tightening torques in the table below.

PT, NPT, PF	Recommended tightening torque
1/8	7 to 9N·m
1/4	12 to 14N·m

### 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.

## Piping

### Caution

#### 1. Preparation before piping.

Before piping is connected, it should be thoroughly blown out with air (flushing) or washed to remove cutting chips, cutting oil and other debris from inside the pipe.

#### 2. Wrapping of pipe tape.

When screwing together pipes and fittings, etc., be certain that cutting chips from the pipe threads and sealing material do not get inside the piping. Further, when pipe tape is used, leave 1.5 to 2 thread ridges exposed at the end of the threads.

## Air Supply

### Warning

#### 1. Types of fluid.

This product is designed for use with pressurized air. Consult with SMC if a different fluid is to be used.

#### 2. Type of air

Compressed air which contains substances such as organic solvents, synthetic oils, chemicals, salt, or corrosive gases can cause damage and malfunction of equipment.

## Operating Environment

### Warning

#### 1. Do not operate in locations having an atmosphere of corrosive gases, chemicals, sea water, fresh water or water vapor, or where there will be contact with the same.

#### 2. In locations which receive direct sunlight, the sunlight should be blocked.

#### 3. Do not operate in locations where vibration or impact occurs.

#### 4. Do not operate in a location near a heat source or where radiated heat will be received.

## Maintenance

### Warning

#### 1. Maintenance operations.

Improper handling of compressed air is dangerous. Therefore, in addition to observing the product specifications, replacement of elements and other maintenance activities should be performed by personnel having sufficient knowledge and experience pertaining to pneumatic equipment.

#### 2. Pre-maintenance inspection.

When removing this product, turn off the electric power, and be certain to shut off the supply pressure and exhaust the compressed air in the system. Proceed only after confirming that all pressure has been released to the atmosphere.

#### 3. Post maintenance inspection.

After installation, repair or reconstruction, reconnect pressurized air and electric power, and then perform inspections for proper operation and air leakage. If the sound of air leakage can be heard, or if the equipment does not operate properly, stop operation and confirm that it is mounted correctly.

#### 4. Modification prohibited.

Do not modify or reconstruct the unit.