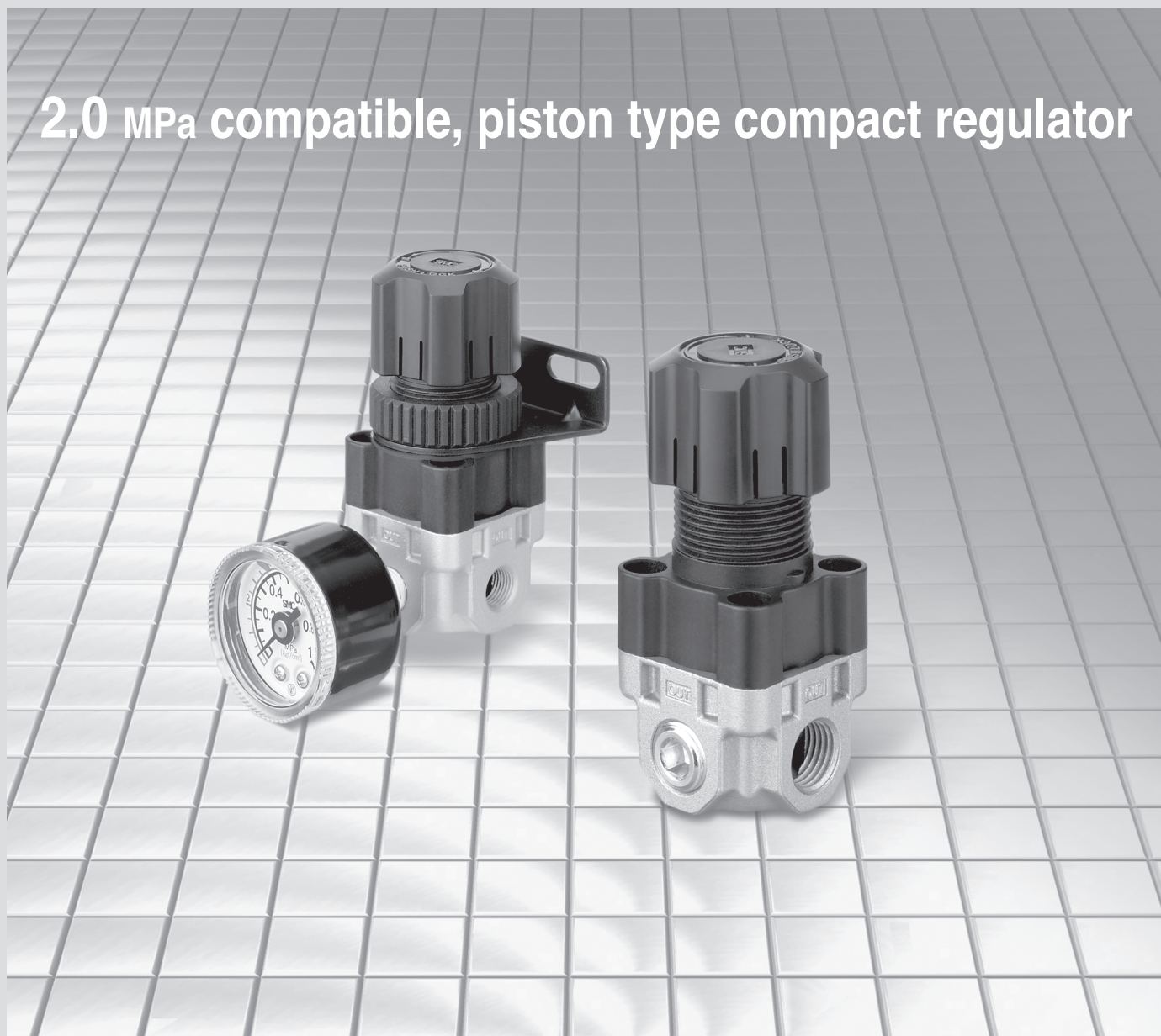


# Compact Regulator

## ARX20 Series

2.0 MPa compatible, piston type compact 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 knob shape for easy operation
- Ideal for discharge pressure adjustment on a small compressor
- Ideal for pressure adjustment of air blowing applications

## ARX20 Series



EMC-ARX20-01A-UK

# Compact Regulator ARX20 Series

## 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**

—	Rc
N	NPT
F	G

**Port size**

01	1/8
02	1/4

**Option**

—	None		
B	Bracket	1348112	
G	Pressure gauge Note 2)	ARX20- — F □□	G36-10-01 G46-10-02
		ARX21- — F □□	G36-4-01 G46-4-02
	ARX20-N□□	G36-P10-N01-X30 G46-P10-N02-X30	
		ARX21-N□□	G36-P4-N01-X30 G46-P4-N02-X30
P	Panel nut	1348110A	

**Option combination numbers**

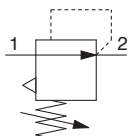
B	BG	* Panel nut is also included with B.
G	GP	
P		

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



### Symbol

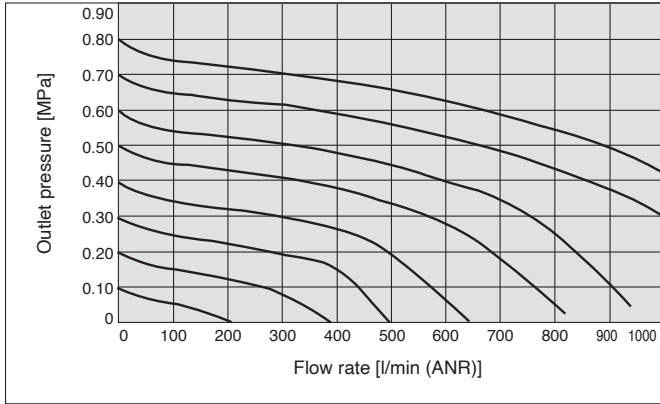


Model	ARX20	
Regulator construction	Piston type regulator	
Relief mechanism	Relieving type	
Port size	Rc 1/8, 1/4	
Pressure gauge port size	Rc 1/8, 1/4	
Proof pressure	3.0 MPa	
Maximum operating pressure	2.0 MPa	
Regulating pressure range	Standard type	0.05 to 0.85 MPa ( 0.51 a 8.7 bar)
	Low pressure type	0.05 to 0.3 MPa (0.51 a 3.1 bar)
Fluid	Air	
Ambient and fluid temperature	-5 to 60 °C (No freezing)	
Weight	110 g	

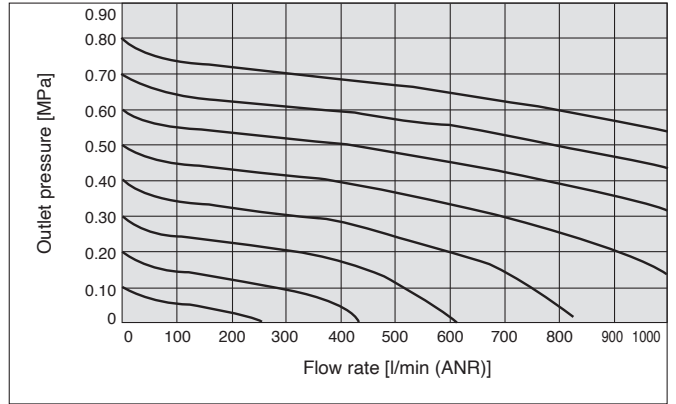
**Flow Rate Characteristics (Representative Value)**

Inlet pressure: 2.0 MPa

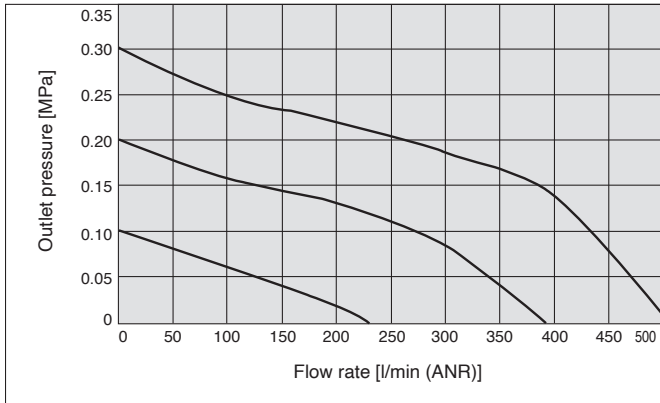
**ARX20-01**



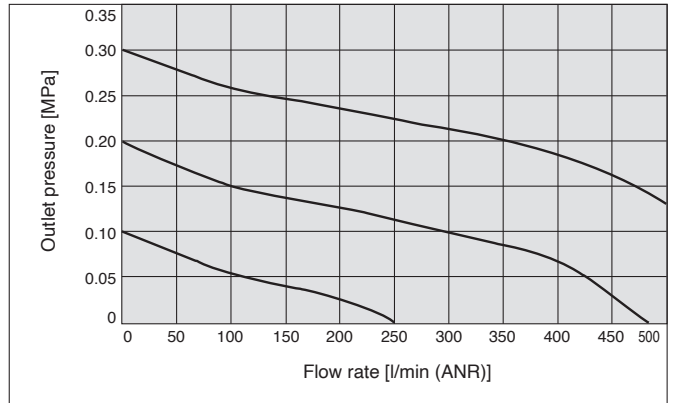
**ARX20-02**



**ARX21-01**



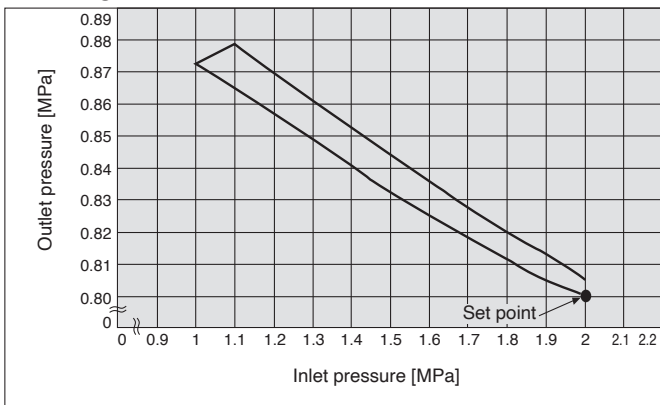
**ARX21-02**



**Pressure Characteristics (Representative Value)**

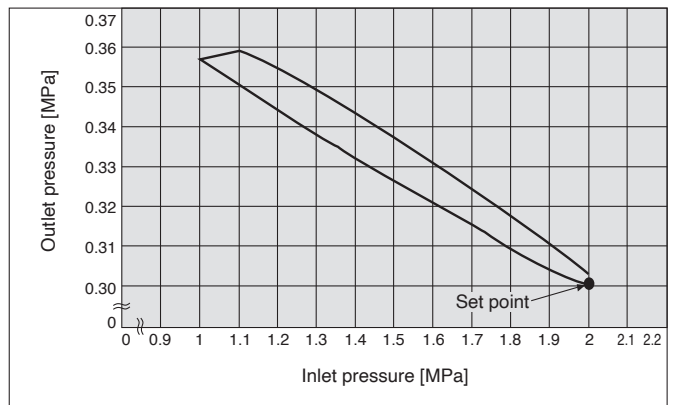
**ARX20**

Inlet pressure: 2.0 MPa  
Outlet pressure: 0.8 MPa  
Flow rate: 60 l/min (ANR)



**ARX21**

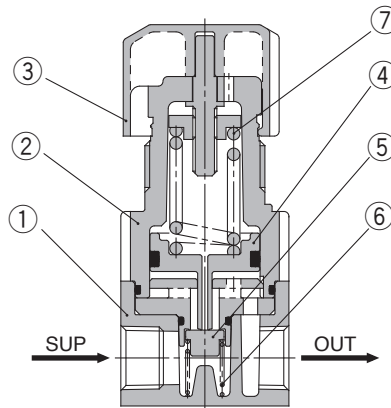
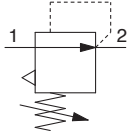
Inlet pressure: 2.0 MPa  
Outlet pressure: 0.3 MPa  
Flow rate: 60 l/min (ANR)



# ARX20 Series

## Construction

### Symbol



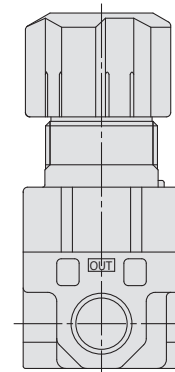
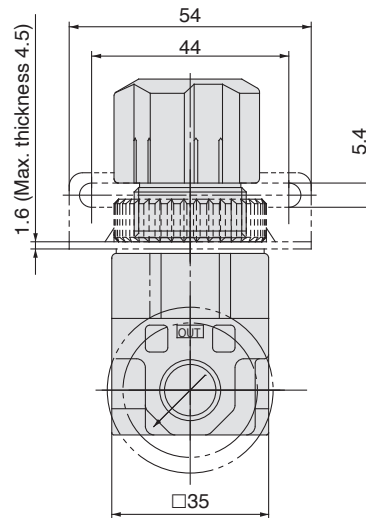
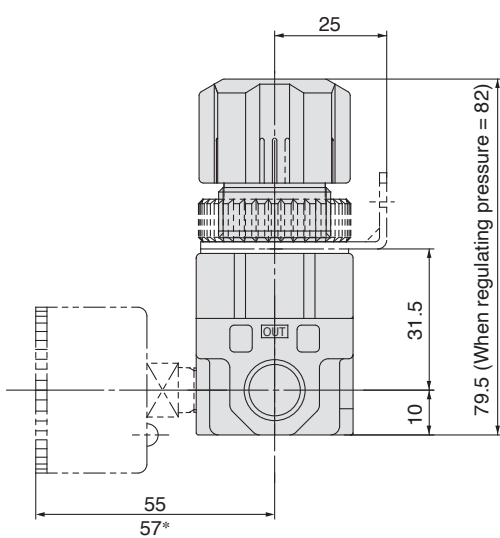
### Component Parts

No.	Description	Material	Note
1	Body	ADC	Chromate treated
2	Bonnet	POM	
3	Knob	POM	

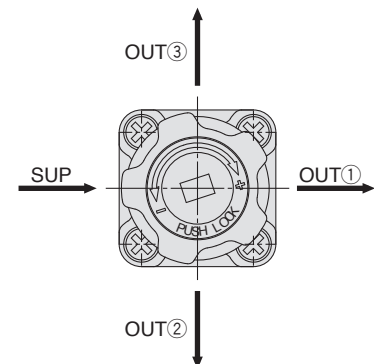
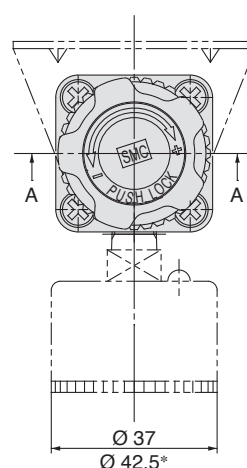
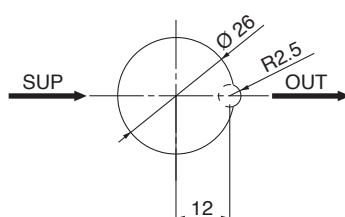
### Replacement Parts

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)

## Dimensions



### Panel fitting dimension



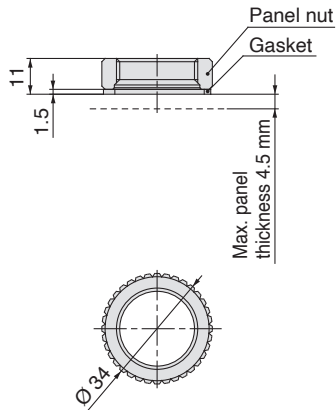
\* Dimensions with an asterisk (\*) are for the pressure gauge G46.

## Option

### Panel Nut

Part no.	1348110A
Material	POM, NBR (Gasket)

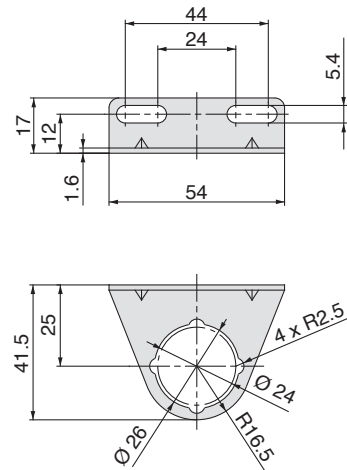
#### Dimensions



### Bracket

Part no.	1348112#1
Material	SPCC (Zinc chromated)

#### Dimensions



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

## ⚠ Precautions

Be sure to read this before handling the products.

### Design and Selection

#### ⚠ Warning

##### 1. Confirm the set pressure range.

Be sure to install safety devices in locations where output pressure above the set pressure range could lead to damage or malfunction of equipment in the outlet side.

##### 2. Residual pressure relief without inlet pressure.

When the inlet pressure is relieved with the outlet pressure in a low pressure setting state, it may not be possible to eliminate the outlet pressure (residual pressure relief).

Provide a residual pressure relief circuit when reliable elimination of the outlet pressure must be performed.

#### ⚠ 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 the "Product Selection Guide."

### Mounting




#### ⚠ Caution

##### 1. To set the correct pressure

- 1) Set the pressure by increasing from a lower pressure to the desired setting, and lock the knob after the pressure is set.
- 2) Make connections after confirming the "SUP" mark which indicates the air inlet. Reversed connections will cause malfunction.

## Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)<sup>1)</sup>, and other safety regulations.

-  **Danger:** **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
-  **Warning:** **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
-  **Caution:** **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

- 1) ISO 4414: Pneumatic fluid power – General rules and safety requirements for systems and their components.
- ISO 4413: Hydraulic fluid power – General rules and safety requirements for systems and their components.
- IEC 60204-1: Safety of machinery – Electrical equipment of machines. (Part 1: General requirements)
- ISO 10218-1: Robots and robotic devices - Safety requirements for industrial robots - Part 1: Robots.
- etc.

### Warning

#### **1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.**

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

#### **2. Only personnel with appropriate training should operate machinery and equipment.**

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

#### **3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.**

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

#### **4. SMC products cannot be used beyond their specifications. They are not developed, designed, and manufactured to be used under the following conditions or environments.**

**Use under such conditions or environments is not allowed.**

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Use for nuclear power, railways, aviation, space equipment, ships, vehicles, military application, equipment affecting human life, body, and property, combustion equipment, entertainment equipment, emergency shut-off circuits, press clutches, brake circuits, safety equipment, etc., and use for applications that do not conform to standard specifications such as catalogues and operation manuals.
3. Use for interlock circuits, except for use with double interlock such as installing a mechanical protection function in case of failure. Please periodically inspect the product to confirm that the product is operating properly.

### Caution

**SMC develops, designs, and manufactures products to be used for automatic control equipment, and provides them for peaceful use in manufacturing industries. Use in non-manufacturing industries is not allowed.**

Products SMC manufactures and sells cannot be used for the purpose of transactions or certification specified in the Measurement Act of each country.

The new Measurement Act prohibits use of any unit other than SI units in Japan.

## Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

### Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.<sup>2)</sup> Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.

#### **2) Suction cups (Vacuum pads) are excluded from this 1 year warranty.**

A suction cup (vacuum pad) is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the suction cup (vacuum pad) or failure due to the deterioration of rubber material are not allowed by the limited warranty.

### Compliance Requirements

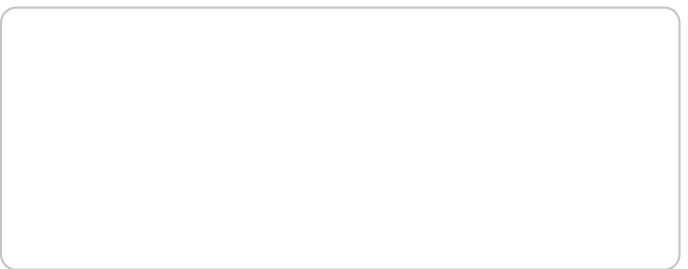
1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

## Safety Instructions

Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.

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