

Process Gas

New

RoHS

# Diaphragm Valve

For wide variety of applications  
from semiconductor to general.

Multiple port available in various configurations

Compression, Rc, R, NPT

Cleaned for O<sub>2</sub> service

## Air Operated Type

Series **AK3542/4542**

- Compact and lightweight by making the actuator shorter
- M5 actuation port

Weight

**280 g**

Height

**57 mm**



## Manually Operated Type

Series **AK3652/4652**

- Compact and lightweight by modifying the knob design
- The knob is a unique design that combines a scalloped round knob with a raised rectangular section to provide two choices of gripping.

Actuation is 90 degrees open to closed with a cutout window, on both sides of raised rectangular section, providing visual status of open or closed state.

Weight

**260 g**

Height

**55 mm**



Direction of a raised rectangular section indicate open/close status



Series **AK**

**APTech**

**SMC**

CAT.NAS100-106A

## Air Operated Type

Series **AK3542/AK4542**



## Manually Operated Type

Series **AK3652/AK4652**





### Body material

316 SS  
Passivation internals



### Various configurations available

Body			
Connection	Compression	Rc NPT female	R NPT male
Connection size (inch)	1/4, 3/8		

### Air Operated Type

 	Series	Status	Body material	Max. operating pressure psig (MPa)	Cv (Note)	Connections	Page
						Fitting	
Female thread type    Compression	AK3542	N.C.	316 SS	125 (0.9)	0.29	Compression Rc, R, NPT	P.1
	AK4542				0.5		

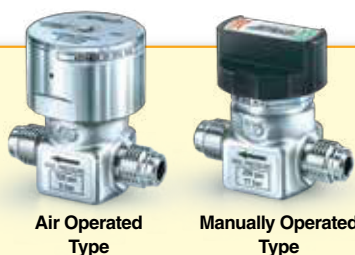
### Manually Operated Type

 	Series	Knob	Body material	Max. operating pressure psig (MPa)	Cv (Note)	Connections	Page
						Fitting	
Female thread type    Compression	AK3652	Knob with a raised section on top (indication window)	316 SS	250 (1.7)	0.29	Compression Rc, R, NPT	P.3
	AK4652				0.5		

Note) Cv calculation based on SEMI Standard

### Series **AZ**

- SEMI standard
- Body material: 316L SS
- Face seal
- Tube weld



For details, refer to the product catalog available on SMC website.

<http://www.smcworld.com>





# Series AK

## Applicable Fluid

### Precautions for selection

The proper regulator and valve selection can be significantly affected by parameters such as system design, flow duration, frequency of use, ambient conditions and outlet pressure. It is important to understand that one may follow this guide's recommendation, yet have a failure due to a parameter specific to the given application, as noted.

### Applicable Fluid

Process Gas	Molecular Formula
Argon	Ar
Halocarbon 114	C2Cl2F4
Halocarbon 115	C2ClF5
Halocarbon 116	C2F6
Acetylene	C2H2
Halocarbon 134A	C2H2F4
Halocarbon 125	C2HF5
Halocarbon R218	C3F8
Propene	C3H6
Propane	C3H8
Halocarbon C318	C4F8
Butene-1	C4H8
Halocarbon 13B1	CBrF3
Halocarbon 12	CCl2F2

Process Gas	Molecular Formula
Halocarbon 13	CClF3
Halocarbon 14	CF4
Halocarbon 32	CH2F2
Methane	CH4
Halocarbon 23	CHF3
Carbon Dioxide	CO2
Hydrogen	H2
Helium	He
Krypton	Kr
Nitrogen	N2
Neon	Ne
Oxygen	O2
Xenon	Xe

· Following\* symbols indicate toxic gas (allowable concentration 200 ppm or less). In Japan, according to METI, pipe thread (Rc, R, NPT etc) should not be used as connections of piping, fittings, and valves installed in gas systems.

Process Gas	Molecular Formula
Boron 11 Trifluoride*	11BF3
Arsine*	AsH3
Boron Trichloride*	BCl3
Boron Trifluoride*	BF3
Ethylene*	C2H4
Dimethylsilane*	C2SiH8
Perfluoro-butadiene*	C4F6
Octafluorocyclopentene*	C5F8
Halocarbon 12B2*	CBr2F2
Trimethylsilane*	(CH3)3SiH
Methyl Chloride*	CH3Cl
Methyl Fluoride*	CH3F
Methanol*	CH3OH
Methylsilane*	CH3SiH3
Halocarbon 21*	CHCl2F
Chlorine*	Cl2
Chlorine Trifluoride*	ClF3
Carbon Monoxide*	CO
Germane*	GeH4
Hydrogen Sulfide*	H2S
Hydrogen Selenide*	H2Se

Process Gas	Molecular Formula
Hydrogen Bromide*	HBr
Hydrogen Chloride*	HCl
Hydrogen Fluoride*	HF
Nitrogen Oxide*	N2O
Nitrogen Trifluoride*	NF3
Ammonia*	NH3
Nitric Oxide*	NO
Phosphorous Pentafluoride*	PF5
Phosphine*	PH3
Sulfur Tetrafluoride*	SF4
Sulfur Hexafluoride*	SF6
Disilane*	Si2H6
Silicon Tetrachloride*	SiCl4
Silicon Tetrafluoride*	SiF4
Dichlorosilane*	SiH2Cl2
Silane*	SiH4
Trichlorosilane*	SiHCl3
Sulfur Dioxide*	SO2
Diethyltelluride*	Te(C2H5)2
Tungsten Hexafluoride*	WF6

· This applicable fluid is a reference guide and does not apply to product guarantee.

· Please consult SMC for a specific recommendation beyond the scope of this document.



### Caution

Since the product specified here is used under various operating conditions, its compatibility with fluid and specific equipment must be decided by the person who designs the equipment or decided 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 regardless of any recommendation. Proper installation, operation and maintenance are also required to assure safe, trouble free performance.

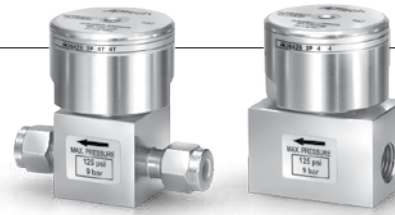


# Diaphragm Valves for General Applications

Air  
operated type

## Series AK3542 & 4542

- Body material: 316 SS
- Normally closed



RoHS

### How to Order

AK **3** **542** **S** **2P** **4T** **4T**

#### Size

Code	Cv
<b>3</b>	0.29
<b>4</b>	0.5

#### Model

Code	Status	Maximum operating pressure
<b>542</b>	Normally closed (N.C.)	125 psig (0.9 MPa)

#### Material

Code	Body material
<b>S</b>	316 SS

#### Ports

Code	Ports
<b>2P</b>	2 ports

#### Seat material

Code	Material
<b>No code</b>	PCTFE (Standard)
<b>VS</b>	Polyimide

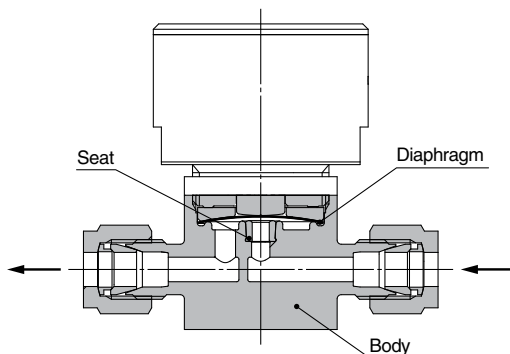
#### Connections

Code	Connections	AK3	AK4
<b>4T</b>	1/4 inch compression	●	—
<b>4BR</b>	Rc 1/4		
<b>4BRN</b>	R 1/4		
<b>4</b>	NPT 1/4 female		
<b>4N</b>	NPT 1/4 male	—	●
<b>6T</b>	3/8 inch compression		
<b>6BR</b>	Rc 3/8		
<b>6BRN</b>	R 3/8		
<b>6</b>	NPT 3/8 female	—	●
<b>6N</b>	NPT 3/8 male		

Note) Only available with same type fittings inlet and outlet.

### Construction

#### AK3542



### Wetted Parts Material

Wetted Parts	<b>S</b>
Body	316 SS
Diaphragm	Ni-Co Alloy
Seat	PCTFE (Option: Polyimide)

## Specifications

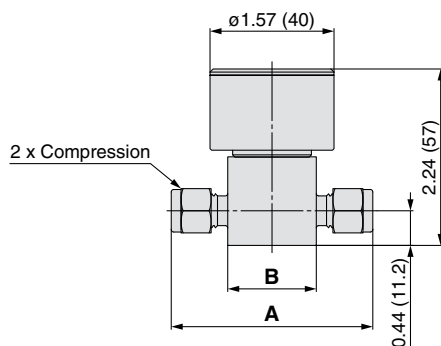
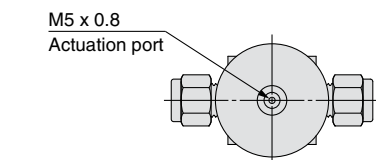
Operating Parameters	AK3542	AK4542
Status	Normally closed (N.C.)	
Gas	Select compatible materials of construction for the gas	
Operating pressure	Vacuum to 125 psig (0.9 MPa)	
Proof pressure	200 psig (1.4 MPa)	
Ambient and operating temperature	14 to 160°F (-10 to 71°C) (No freezing)	
Cv	0.29	0.5
Leak rate	1 x 10 <sup>-10</sup> Pa·m <sup>3</sup> /sec	
Connections	Compression, Rc, R, NPT	
Actuation pressure	60 to 110 psig (0.4 to 0.76 MPa)	
Actuation port connection	M5 x 0.8	
Actuation port location	Top	
Installation	Bottom mount	
Internal volume	0.06 in <sup>3</sup> (1.07 cm <sup>3</sup> )	
Weight	0.28 kg <small>Note)</small>	

Note) Weight for AK3542S2P4T4T including individual boxed weight. It may vary depending on connections or options.

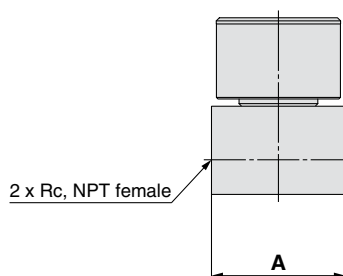
## Dimensions

inch (mm)

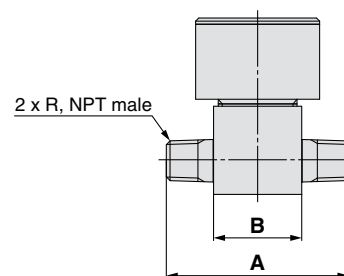
### AK3542 & 4542



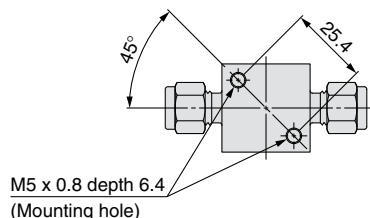
Connections: 4T, 6T



Connections: 4, 6, <sup>4</sup>/<sub>6</sub>BR



Connections: <sup>4</sup>/<sub>6</sub>N, <sup>4</sup>/<sub>6</sub>BRN



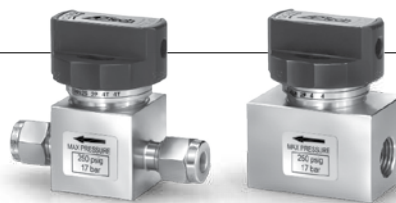
Ports	A		B		Connections
	inch	(mm)	inch	(mm)	
<b>4T</b>	2.56	(65.0)	1.12 sq.	(28.4)	1/4 inch compression
<b>4BR</b>	1.70	(43.2)	—	—	Rc 1/4
<b>4BRN</b>	2.32	(58.9)	1.12 sq.	(28.4)	R 1/4
<b>4</b>	1.70	(43.2)	—	—	NPT 1/4 female
<b>4N</b>	2.32	(58.9)	1.12 sq.	(28.4)	NPT 1/4 male
<b>6T</b>	2.68	(68.1)	1.12 sq.	(28.4)	3/8 inch compression
<b>6BR</b>	2.32	(58.9)	—	—	Rc 3/8
<b>6BRN</b>	2.32	(58.9)	1.12 sq.	(28.4)	R 3/8
<b>6</b>	2.32	(58.9)	—	—	NPT 3/8 female
<b>6N</b>	2.32	(58.9)	1.12 sq.	(28.4)	NPT 3/8 male

# Diaphragm Valves for General Applications

Manually  
operated type

## Series **AK3652 & 4652**

- Body material: 316 SS



RoHS

### How to Order

AK **3** **652** **S** **2P** **4T** **4T**  

#### Size

Code	Cv
<b>3</b>	0.29
<b>4</b>	0.5

#### Model

Code	Knob	Max. operating pressure
<b>652</b>	1/4 turn indicating round knob with a raised rectangular section	250 psig (1.7 MPa)

#### Material

Code	Body material
<b>S</b>	316 SS

#### Ports

Code	Ports
<b>2P</b>	2 ports

#### Seat material

Code	Material
No code	PCTFE (Standard)
<b>VS</b>	Polyimide

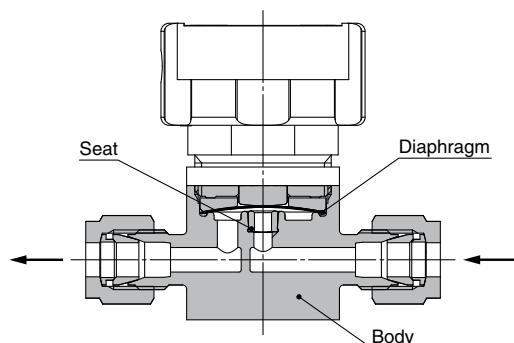
#### Connections

Code	Connections	AK3	AK4
<b>4T</b>	1/4 inch compression	●	—
<b>4BR</b>	Rc 1/4		
<b>4BRN</b>	R 1/4		
<b>4</b>	NPT 1/4 female		
<b>4N</b>	NPT 1/4 male	—	●
<b>6T</b>	3/8 inch compression		
<b>6BR</b>	Rc 3/8		
<b>6BRN</b>	R 3/8		
<b>6</b>	NPT 3/8 female	—	●
<b>6N</b>	NPT 3/8 male		

Note) Only available with same type fittings inlet and outlet.

## Construction

### AK3652



## Wetted Parts Material

Wetted Parts	<b>S</b>
Body	316 SS
Diaphragm	Ni-Co Alloy
Seat	PCTFE (Option: Polyimide)



## Specifications

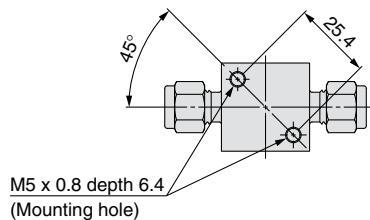
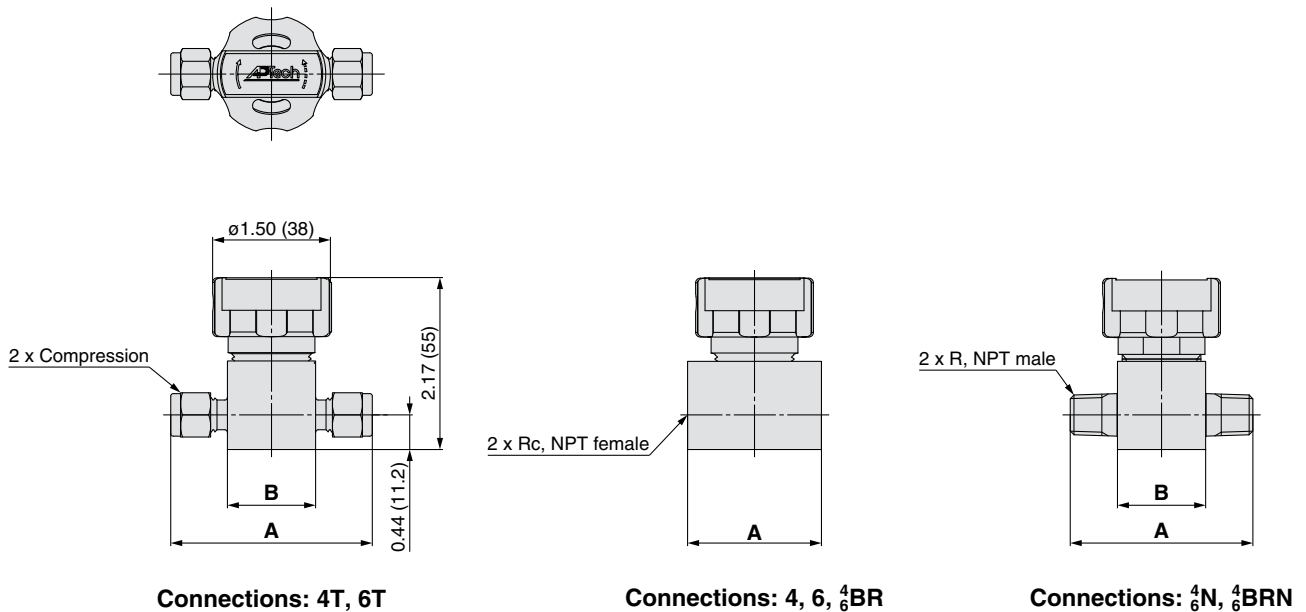
Operating Parameters	AK3652	AK4652
<b>Gas</b>	Select compatible materials of construction for the gas	
<b>Operating pressure</b>	Vacuum to 250 psig (1.7 MPa)	
<b>Proof pressure</b>	375 psig (2.6 MPa)	
<b>Ambient and operating temperature</b>	-40 to 160°F (-40 to 71°C)(No freezing)	
<b>Cv</b>	0.29	0.5
<b>Leak rate</b>	1 x 10 <sup>-10</sup> Pa·m <sup>3</sup> /sec	
<b>Connections</b>	Compression, Rc, R, NPT	
<b>Installation</b>	Bottom mount	
<b>Internal volume</b>	0.06 in <sup>3</sup> (1.07 cm <sup>3</sup> )	
<b>Weight</b>	0.26 kg <sup>Note)</sup>	
<b>Knob</b>	1/4 turn indicating round knob with a raised rectangular section	

Note) Weight for AK3652S2P4T4T including individual boxed weight. It may vary depending on connections.

## Dimensions

inch (mm)

### AK3652 & 4652



Ports	A		B		Connections
	inch	(mm)	inch	(mm)	
<b>4T</b>	2.56	(65.0)	1.12 sq.	(28.4)	1/4 inch compression
<b>4BR</b>	1.70	(43.2)	—	—	Rc 1/4
<b>4BRN</b>	2.32	(58.9)	1.12 sq.	(28.4)	R 1/4
<b>4</b>	1.70	(43.2)	—	—	NPT 1/4 female
<b>4N</b>	2.32	(58.9)	1.12 sq.	(28.4)	NPT 1/4 male
<b>6T</b>	2.68	(68.1)	1.12 sq.	(28.4)	3/8 inch compression
<b>6BR</b>	2.32	(58.9)	—	—	Rc 3/8
<b>6BRN</b>	2.32	(58.9)	1.12 sq.	(28.4)	R 3/8
<b>6</b>	2.32	(58.9)	—	—	NPT 3/8 female
<b>6N</b>	2.32	(58.9)	1.12 sq.	(28.4)	NPT 3/8 male



# Process Gas Equipment Common Precautions 1

Be sure to read before handling.

## Design

### ⚠ Warning

#### 1. Confirm the specifications.

The compatibility of the product with specific equipment must be decided by the person who designs the equipment or decided 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.

## Selection

### ⚠ Warning

#### 1. Confirm the specifications.

When selecting the product, confirm the operating conditions, such as type of gas, operating pressure (inlet and outlet), flow rate, operating temperature etc., and use within the operating range specified in the catalog. The product may not be suitable for use with specific gases and applications/environments. Check the compatibility of the product materials with the process gas.

Design the equipment and select the product by understanding the characteristics of gas.

#### 2. Follow the regulations and laws, defined by the country or local government, or organization standards.

Reference: High Pressure Gas Safety Act, Labor Safety and Sanitation Law etc.

## Mounting

### ⚠ Warning

#### 1. Operation Manual

Mount and operate the product after reading the manual carefully and understanding its contents. Also keep the manual where it can be referred to as necessary.

### ⚠ Caution

#### 1. Flush the piping thoroughly with inert gas before installing the products.

Remove any dust or scales thoroughly as they could cause malfunction or failure of the product. Do not flush with gas other than inert gas, as this could cause dangerous situations.

#### 2. Do not touch the fitting or the wetted parts of the products by hand. Do not apply grease or oil to the products.

#### 3. Ensure sufficient space for maintenance activities.

Ensure sufficient space for maintenance activities.

#### 4. Connect compression fittings.

Typically 1-1/4 turn past finger tight of the nut after inserting the tube into the fitting. Please use stainless steel material for piping. After installation, perform a leak test.

## Mounting

### ⚠ Caution

#### 5. Connect pipe thread fittings.

Thread fitting or piping into body and tighten it at recommended torque. When holding the product, hold its body section.

Apply PTFE tape or sealant on the thread of the piping, fitting, etc. When using the sealant, other than the PTFE, it will be difficult to fully remove the sealant and this could cause malfunction or failure of the product.

#### 6. After installation, perform a leak test.

Perform a leak test, such as helium leak test, pressure decay test, bubble leak test, etc., depending on the application. It is recommended to perform a helium leak test on all face seal connections and tube welds per the industry standards (refer to SEMI F1).

## Storage and Operating Environment

### ⚠ Warning

#### 1. Do not use in an area having chemicals, sea water or water, or where there is direct contact with any of these.

#### 2. Do not use in a place subject to heavy vibration and/or shock.

#### 3. Keep ambient temperature and use gas within the specified operating temperature. Remove any sources of excessive heat.

#### 4. Do not keep the products in stock in an area, where any dust or water coming in, and keep in dry conditions, where there is no contact with humidity.





# Process Gas Equipment Common Precautions 2

Be sure to read before handling.

## Maintenance

### Warning

#### 1. Perform a routine maintenance.

Perform a routine maintenance at customer's responsibility by taking into consideration the operating conditions of the equipment. It is recommended to perform a routine maintenance for the following:

External leakage, Internal leakage (Across the seat leak), Performance etc.

#### 2. Shut down system before removing the product from system for repair or replacement.

Follow the proper procedures to shut off the process gas supply and vent the system.

#### 3. Purge hazardous gases from system before removing the product from system.

#### 4. Do not disassemble products under warranty.

The warranty may be voided if product is disassembled.

## Operation

### Warning

#### 1. Do not put the heavy objects on the products. Do not use the products as scaffold.

#### 2. Do not use the products in conditions that do not meet the product specifications.

## Product Returns

When returning the product to SMC, make sure to properly purge to remove all hazardous materials and return the product complying with SMC specified procedures.

For details, please contact SMC.

## Export

### Warning

The products fall within the United States Export Administration Regulations (EAR) regarding sale, export and re-exports. It is the exporter's responsibility to assure that these regulations are followed when the products are exported. Export Control Classification Number (ECCN) related to the products is as follows.

Regulations (including ECCN) are subject to change with amendment of law.

Latest information regarding these regulations should be checked by customer.

Reference: Bureau of Industry and Security (USA)

<http://www.bis.doc.gov/>

#### 1) 2B999.g <Applicable conditions>

(1) Product name : Diaphragm valve

(2) Body material : 316 SS



# Process Gas Equipment / Diaphragm Valve

## Specific Product Precautions

Be sure to read before handling. Refer to back cover for Safety Instructions and page 5 and 6 and the Operation Manual for common precautions. Operation manual is available from the SMC website.  
<http://www.smcworld.com>

### Selection

#### Warning

##### 1. Confirm the specifications.

This product is used in gas delivery systems to shutoff gas flow. When selecting the product, confirm the operating conditions, such as type of gas, operating pressure (inlet and outlet), flow rate, actuating pressure, operating temperature etc., and use within the operating range specified in the catalog. The product may not be suitable for use with specific gases and applications/environments. Check the compatibility of the product materials with the process gas. Design the equipment and select the product by understanding the characteristics of gas.

### Mounting

#### Warning

##### 1. Confirm the mounting direction of the product.

Direction of gas flow from inlet to outlet is indicated by an arrow on each label. Orient the valve as specified by the system designer.

##### 2. Connect actuation pressure to the valve actuator connection. (Air operated type)

Use nitrogen or clean dry air for actuation pressure. The connection M5 thread. Tighten thread to recommended torque value.

##### 3. After installation, check internal leakage (leakage across seat) with inert gases.

Perform a helium leak test depending on applications.

### Maintenance

#### Warning

##### 1. If a valve requires repair, contact SMC or sales representative.

### Operation (Air operate type)

#### Warning

##### 1. Use nitrogen or clean dry air as actuation pressure.

##### 2. Confirm the valve type (N.C.).

In the case of N.C. (Normally Closed), valve will open when applying actuation pressure to the valve actuator connection and valve will close when actuation pressure is vented to atmospheric pressure.

##### 3. Apply actuation pressure within the range of specifications.

### Operation (Manually operated type)

#### Warning

##### 1. When closing the valve, rotate the handle clockwise until it completely stops.

There is the internal stop in the handle or in the valve body. Rotate the handle clockwise until the internal stop is reached and it completely stops.

##### 2. When opening the valve, rotate the handle counterclockwise until it completely stops.




There is the internal stop in the handle. Rotate the handle counterclockwise until the internal stop is reached and it completely stops.

##### 3. Do not use a tool when rotating the handle.

When the handle is rotated with a tool, it may apply excessive torque to the handle or inside the valve body and it may cause damage. Rotate the handle by hand.

## 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)\*1), Japan Industrial Standards (JIS)\*2) and other safety regulations\*3).

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

- \*1) ISO 4414: Pneumatic fluid power -- General rules relating to systems.  
\*2) JIS B 8370: General rules for pneumatic equipment.  
\*3) High Pressure Gas Safety Act, Labor Safety and Sanitation Law 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 catalog 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. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.**
  1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
  2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.
  3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
  4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

### Caution

- 1. The product is provided for use in manufacturing industries.**  
The product herein described is basically provided for peaceful use in manufacturing industries.  
If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.  
If anything is unclear, contact your nearest sales branch.

## 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 after the product is delivered to customer from SMC.
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 the products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

### 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 “Handling Precautions for SMC Products” (M-E03-3) before using.

# Global Manufacturing, Distribution and Service Network

## Worldwide Subsidiaries

### North & South America

- U.S.A. SMC Corporation of America
- CANADA SMC Pneumatics (Canada) Ltd.
- MEXICO SMC Corporation (México), S.A. de C.V.
- BRAZIL SMC Pneumáticos do Brasil Ltda.
- CHILE SMC Pneumatics (Chile) S.A.
- COLOMBIA SMC Colombia Sucursal de SMC Chile S.A.
- ARGENTINA SMC Argentina S.A.
- BOLIVIA SMC Pneumatics Bolivia S.r.l.
- VENEZUELA SMC Pneumatica Venezuela S.A.
- PERU (Distributor) IMPECO Automatización Industrial S.A.C.
- ECUADOR (Distributor) ASSISTECH CIA. LTDA.

### Asia/Oceania

- CHINA SMC (China) Co., Ltd.
- CHINA SMC Pneumatics (Guangzhou) Ltd.
- HONG KONG SMC Pneumatics (Hong Kong) Ltd.
- TAIWAN SMC Pneumatics (Taiwan) Co., Ltd.
- KOREA SMC Pneumatics Korea Co., Ltd.
- SINGAPORE SMC Pneumatics (S.E.A.) Pte. Ltd.
- MALAYSIA SMC Pneumatics (S.E.A.) Sdn. Bhd.
- THAILAND SMC (Thailand) Ltd.
- PHILIPPINES Shoketsu SMC Corporation
- INDIA SMC Pneumatics (India) Pvt. Ltd.
- ISRAEL (Distributor) Baccara Geva A.C.S. Ltd.
- INDONESIA (Distributor) PT. Sinar Mutiara Cemerlang
- VIETNAM (Distributor) Dy Dan Trading Co., Ltd.
- PAKISTAN (Distributor) Jubilee Corporation

### Asia/Oceania

- SRI LANKA (Distributor) Electro-Serv (Pvt.) Ltd.
- IRAN (Distributor) Abzarchian Co. Ltd.
- U.A.E. (Distributor) Machinery People Trading Co. L.L.C.
- KUWAIT (Distributor) Esco Kuwait Equip & Petroleum App. Est.
- SAUDI ARABIA (Distributor) Assaggaff Trading Est.
- BAHRAIN (Distributor) Mohammed Jalal & Sons W.L.L. Technical & Automotive Services
- SYRIA (Distributor) Miak Corporation
- JORDAN (Distributor) Atafawok Trading Est.
- BANGLADESH (Distributor) Chemie International
- AUSTRALIA SMC Pneumatics (Australia) Pty. Ltd.
- NEW ZEALAND SMC Pneumatics (N.Z.) Ltd.
- JAPAN SMC Corporation

### Europe/Africa

- GERMANY SMC Pneumatik GmbH
- SWITZERLAND SMC Pneumatik AG
- U.K. SMC Pneumatics (U.K.) Ltd.
- FRANCE SMC Pneumatique SA
- SPAIN / PORTUGAL SMC España S.A.
- ITALY SMC Italia S.p.A.
- GREECE SMC HELLAS E.P.E.
- IRELAND SMC Pneumatics (Ireland) Ltd.
- NETHERLANDS (Associated company) SMC Pneumatics BV
- BELGIUM (Associated company) SMC Pneumatics N.V./S.A.
- DENMARK SMC Pneumatik A/S
- AUSTRIA SMC Pneumatik GmbH (Austria)

### Europe/Africa

- CZECH REPUBLIC SMC Industrial Automation CZ s.r.o.
- HUNGARY SMC Hungary Ipari Automatizálási Kft.
- POLAND SMC Industrial Automation Polska Sp. z o.o.
- SLOVAKIA SMC Priemyselná Automatizácia Spol s.r.o.
- SLOVENIA SMC Industrijska Avtomatika d.o.o.
- BULGARIA SMC Industrial Automation Bulgaria EOOD
- CROATIA SMC Industrijska Avtomatika d.o.o.
- BOSNIA AND HERZEGOVINA (Distributor) A.M. Pneumatik d.o.o.
- SERBIA (Distributor) Best Pneumatics d.o.o.
- UKRAINE (Distributor) PNEUMOTEC Corp.
- FINLAND SMC Pneumatics Finland Oy
- NORWAY SMC Pneumatics Norway AS
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- ESTONIA SMC Pneumatics Estonia Oü
- LATVIA SMC Pneumatics Latvija SIA
- LITHUANIA (LIETUVA) UAB "SMC Pneumatics"
- ROMANIA SMC Romania S.r.l.
- RUSSIA SMC Pneumatik LLC.
- KAZAKHSTAN SMC Kazakhstan, LLC.
- TURKEY (Distributor) Entek Pnömatik Sanayi ve Ticaret Şirketi
- MOROCCO (Distributor) Soraflex
- TUNISIA (Distributor) Bymys
- EGYPT (Distributor) Saadani Trading & Industrial Services
- NIGERIA (Distributor) Faraday Engineering Company Ltd.
- SOUTH AFRICA (Distributor) Hyflo Southern Africa (Pty.) Ltd.

## U.S. & Canadian Sales Offices

### WEST

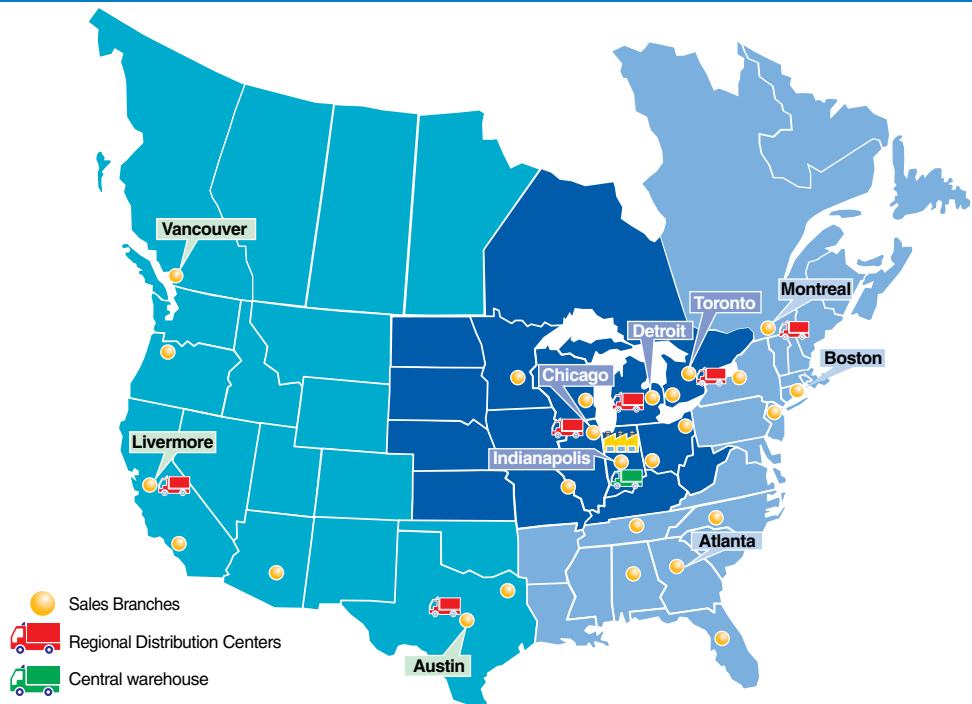
Austin  
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### EAST

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- Sales Branches
- Regional Distribution Centers
- Central warehouse

### SMC Corporation of America

10100 SMC Blvd., Noblesville, IN 46060

[www.smcusa.com](http://www.smcusa.com)

### SMC Pneumatics (Canada) Ltd.

[www.smcpcanada.com](http://www.smcpcanada.com)

**(800) SMC.SMC1 (762-7621)**

e-mail: [sales@smcusa.com](mailto:sales@smcusa.com)

For International inquiries: [www.smcworld.com](http://www.smcworld.com)

