

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 O₂ 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**

ATech

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 | | | |
| | 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



Air Operated Type



Manually Operated Type

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

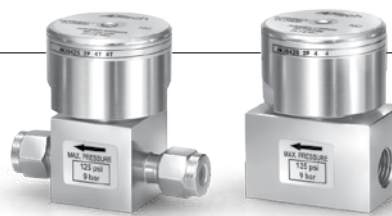
Since the product specified here is used under various operating conditions, its compatibility with fluid and specific equipment must be decided by the person who designs the equipment or decided its specifications based on necessary analysis and test results. The expected performance and safety assurance 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 |
|------|------|
| 3 | 0.29 |
| 4 | 0.5 |

Model

| Code | Status | Maximum operating pressure |
|------|------------------------|----------------------------|
| 542 | Normally closed (N.C.) | 125 psig (0.9 MPa) |

Material

| Code | Body material |
|------|---------------|
| S | 316 SS |

Ports

| Code | Ports |
|------|---------|
| 2P | 2 ports |

Seat material

| Code | Material |
|---------|------------------|
| No code | PCTFE (Standard) |
| VS | Polyimide |

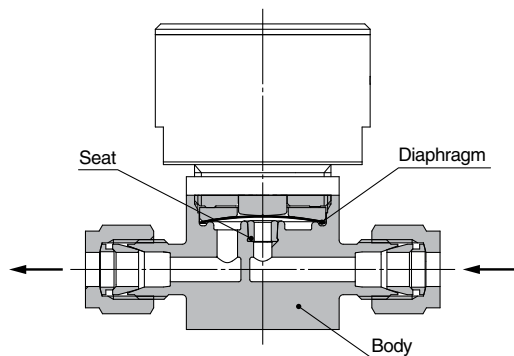
Connections

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

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

Construction

AK3542



Wetted Parts Material

| Wetted Parts | S |
|--------------|---------------------------|
| Body | 316 SS |
| Diaphragm | Ni-Co Alloy |
| Seat | PCTFE (Option: Polyimide) |

Diaphragm Valves for General Applications

Air Operated Type **Series AK3542 & 4542**

Specifications

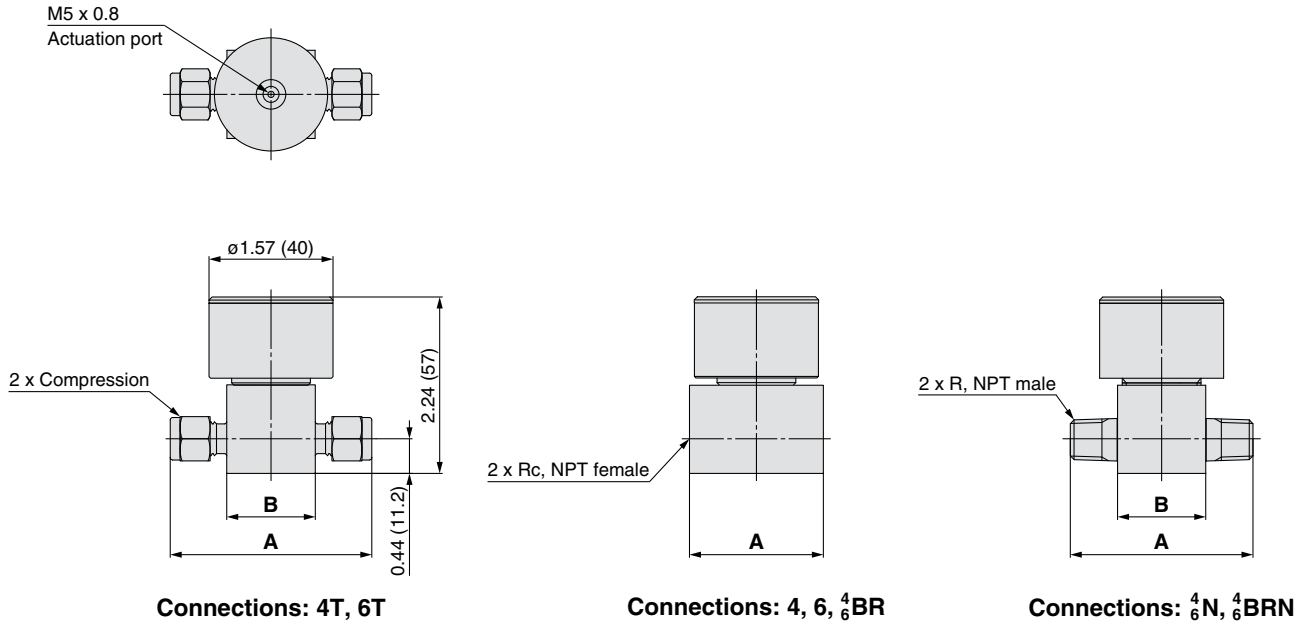
| Operating Parameters | AK3542 | AK4542 |
|-----------------------------------|---|--------|
| Status | Normally closed (N.C.) | |
| Gas | Select compatible materials of construction for the gas | |
| Operating pressure | Vacuum to 125 psig (0.9 MPa) | |
| Proof pressure | 200 psig (1.4 MPa) | |
| Ambient and operating temperature | 14 to 160°F (-10 to 71°C) (No freezing) | |
| Cv | 0.29 | 0.5 |
| Leak rate | 1 x 10 ⁻¹⁰ Pa·m ³ /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 ³ (1.07 cm ³) | |
| 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



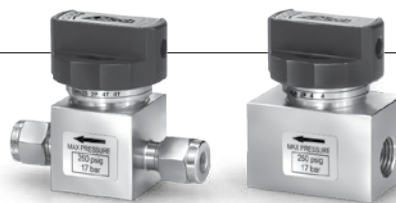
| Ports | A | | B | | Connections |
|-------------|------|--------|----------|--------|----------------------|
| | inch | (mm) | inch | (mm) | |
| 4T | 2.56 | (65.0) | 1.12 sq. | (28.4) | 1/4 inch compression |
| 4BR | 1.70 | (43.2) | — | — | Rc 1/4 |
| 4BRN | 2.32 | (58.9) | 1.12 sq. | (28.4) | R 1/4 |
| 4 | 1.70 | (43.2) | — | — | NPT 1/4 female |
| 4N | 2.32 | (58.9) | 1.12 sq. | (28.4) | NPT 1/4 male |
| 6T | 2.68 | (68.1) | 1.12 sq. | (28.4) | 3/8 inch compression |
| 6BR | 2.32 | (58.9) | — | — | Rc 3/8 |
| 6BRN | 2.32 | (58.9) | 1.12 sq. | (28.4) | R 3/8 |
| 6 | 2.32 | (58.9) | — | — | NPT 3/8 female |
| 6N | 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 |
|----------|------|
| 3 | 0.29 |
| 4 | 0.5 |

Seat material

| Code | Material |
|-----------|------------------|
| No code | PCTFE (Standard) |
| VS | Polyimide |

Model

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

Material

| Code | Body material |
|----------|---------------|
| S | 316 SS |

Ports

| Code | Ports |
|-----------|---------|
| 2P | 2 ports |

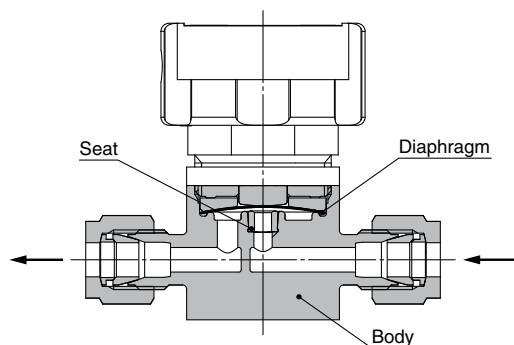
Connections

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

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

Construction

AK3652



Wetted Parts Material

| Wetted Parts | S |
|--------------|---------------------------|
| Body | 316 SS |
| Diaphragm | Ni-Co Alloy |
| Seat | PCTFE (Option: Polyimide) |

Specifications

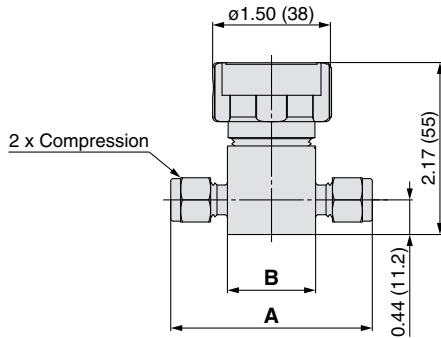
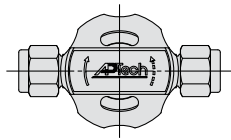
| Operating Parameters | AK3652 | AK4652 |
|-----------------------------------|--|--------|
| Gas | Select compatible materials of construction for the gas | |
| Operating pressure | Vacuum to 250 psig (1.7 MPa) | |
| Proof pressure | 375 psig (2.6 MPa) | |
| Ambient and operating temperature | -40 to 160°F (-40 to 71°C)(No freezing) | |
| Cv | 0.29 | 0.5 |
| Leak rate | 1 x 10 ⁻¹⁰ Pa·m ³ /sec | |
| Connections | Compression, Rc, R, NPT | |
| Installation | Bottom mount | |
| Internal volume | 0.06 in ³ (1.07 cm ³) | |
| Weight | 0.26 kg ^{Note)} | |
| Knob | 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.

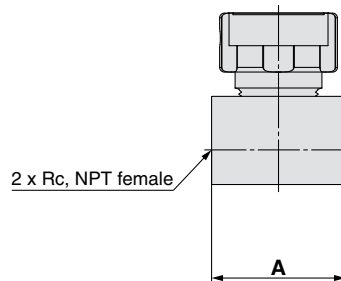
Dimensions

inch (mm)

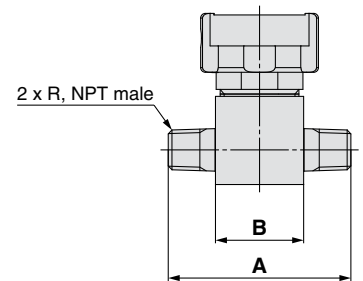
AK3652 & 4652



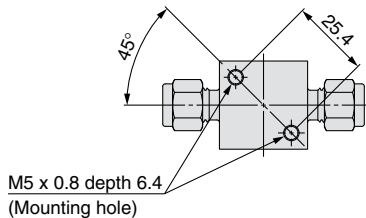
Connections: 4T, 6T



Connections: 4, 6, ⁴/₆BR



Connections: ⁴/₆N, ⁴/₆BRN



| Ports | A | | B | | Connections |
|-------|------|--------|----------|--------|----------------------|
| | inch | (mm) | inch | (mm) | |
| 4T | 2.56 | (65.0) | 1.12 sq. | (28.4) | 1/4 inch compression |
| 4BR | 1.70 | (43.2) | — | — | Rc 1/4 |
| 4BRN | 2.32 | (58.9) | 1.12 sq. | (28.4) | R 1/4 |
| 4 | 1.70 | (43.2) | — | — | NPT 1/4 female |
| 4N | 2.32 | (58.9) | 1.12 sq. | (28.4) | NPT 1/4 male |
| 6T | 2.68 | (68.1) | 1.12 sq. | (28.4) | 3/8 inch compression |
| 6BR | 2.32 | (58.9) | — | — | Rc 3/8 |
| 6BRN | 2.32 | (58.9) | 1.12 sq. | (28.4) | R 3/8 |
| 6 | 2.32 | (58.9) | — | — | NPT 3/8 female |
| 6N | 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 Neumatica 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
-  SWEDEN SMC Pneumatics Sweden AB
-  ESTONIA SMC Pneumatics Estonia Oü
-  LATVIA SMC Pneumatics Latvia 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) Byms
-  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

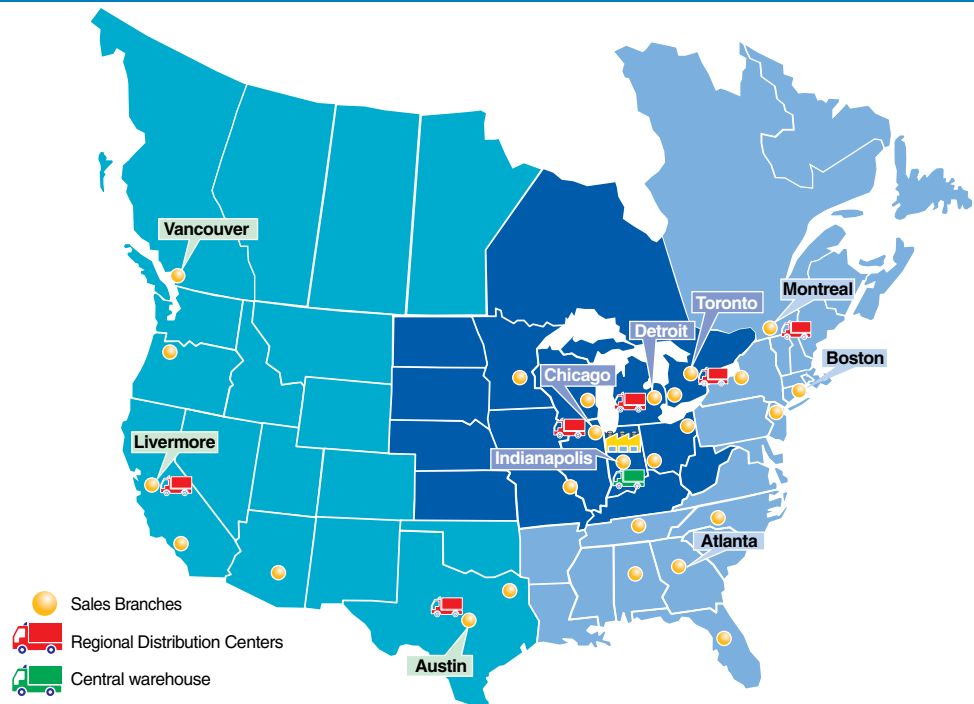
- Austin
- Dallas
- Los Angeles
- Phoenix
- Portland
- San Francisco
- Vancouver

EAST

- Atlanta
- Birmingham
- Boston
- Charlotte
- Nashville
- New Jersey
- Rochester
- Tampa
- Montreal

CENTRAL

- Chicago
- Cincinnati
- Cleveland
- Detroit
- Indianapolis
- Milwaukee
- Minneapolis
- St. Louis
- Toronto
- Windsor



SMC Corporation of America

10100 SMC Blvd., Noblesville, IN 46060

www.smcusa.com

SMC Pneumatics (Canada) Ltd.

www.smcpcanada.com

(800) SMC.SMC1 (762-7621)

e-mail: sales@smcusa.com

For International inquiries: www.smcworld.com

