# V5852A, V5853A, V5862A, V5863A Cartridge Globe Valves

#### INSTALLATION INSTRUCTIONS

## INSTALLATION

## When Installing this Product...

- Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
- Check ratings given in instructions and on the product to ensure the product is suitable for your application.
- Installer must be a trained, experienced service technician.
- After installation is complete, check out product operation as provided in these instructions.
- Do not use Series 3000 actuators on 1/2 in. or 3/4 in. valves.



# **A** WARNING

#### Severe Scalding Hazard. Contact with hot liquid can lead to severe injury or cause death.

For a pressurized valve, only open with Valve Cartridge Replacement Tool. For complete safety, release system pressure to the valve body before changing cartridge.



# **!\ CAUTION**

Sweat Valve Damage Hazard. Soldering the valve with the cartridge in place can damage the device.

Prior to attaching valve to piping, remove cartridge from potential exposure to heat.

#### **IMPORTANT**

- Before installing the valve, use the protective cover/manual handle to ensure the valve stem operates freely. Impaired stem operation can indicate a bent stem (due to rough handling). This condition can require replacing the valve.
- When installing valves, make sure the flow direction is correct by checking the arrow on the valve body.
- Mount the valve only with the stem pointing upward.
- Leave the protective cover in place until ready to attach the actuator.

#### Location

Select a location where the valve and actuator are accessible.

#### **IMPORTANT**

Mount all 1/2 in. and 3/4 in. valves in return flow. When delta p-values exceed 8.70 psi (60 kPa), noise can develop.

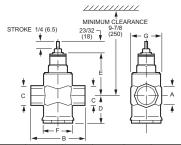
## Mounting

The valve body should be completely installed in the pipe line before the actuator is installed.

#### IMPORTANT

The insert is packed separately from the 1/2 in. and 3/4 in. V5852, V5853 Sweat Valves. The valve must be installed and soldered before installing the insert in the valve. Torque insert between 27 and 44 in.-lb.

- Verify pipe size and flow direction for the valve being used.
- 2. Position the valve for easy actuator installation.
- Install the valve using the applicable tools and supplies (wrenches, solder, flux, torch or soldering iron). Follow standard practices.



VALVE SIZE A (NPT)	В	С	D	E	F	G
1 (25)	4-1/8 (105)	1-5/8 (41)	2-1/16 (53)	3-5/8 (92)	2 (50)	2-5/16 (58)
1-1/4 (32)	4-15/16 (125)	2 (50)	2-7/16 (62)	3-5/8 (92)	2-3/16 (55)	2-5/16 (58)
1-1/2 (38)	5-1/8 (130)	2-3/16 (55)	2-9/16 (65)	3-7/8 (98)	2-3/8 (60)	2-11/16 (69)

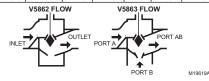
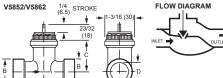


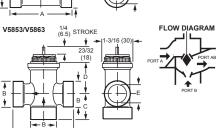
Fig. 1. Dimensions of Series 3000 V5862A and V5863A Valves in in. (mm).



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VALVE SIZE	А	В	С	D (NPT)	D (SWEAT)
1/2 (13)	3 (77)	3/4 (19)	1-5/16 (34)	1/2 (13)	5/8 (16)
3/4 (19)	3-1/2 (88)	1 (25)	1-1/4 (32)	3/4 (19)	7/8 (22)



VALVE SIZE	А	В	С	D	E (NPT)	E (SWEAT)
1/2 (13)	3 (77)	3/4 (19)	1-5/16 (34)	1-5/16 (34)	1/2 (13)	5/8 (16)
3/4 (19)	3-1/2 (88)	1 (25)	1-1/2 (38)	1-1/4 (32)	3/4 (19)	7/8 (22)

NOTE: SOLDER ENDS CONFORM TO ANSI R16-18

M7559A

Fig. 2. Dimensions of Series 1000 and 2000 V5852A, V5853A, V5862A and V5863A Valves in in. (mm).

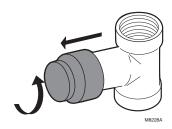


Fig. 3. Removing protective cover from valve.

# **OPERATION**

The valves are supplied with a threaded plastic protective cover/manual handle to protect the stem and to allow for manual operation. Use the protective cover/manual handle to fill the system during initial installation.

Turning the protective cover/manual handle:

- Clockwise: pushes the center stem of the valve down, compressing the valve spring and closing the valve.
- Counterclockwise: allows the spring to expand, pushing the center stem up and opening the valve.

#### NOTES:

- You can also use the protective cover/handle for heating/cooling with neither a controller nor actuator during building construction.
- Retain the protective cover. It can be needed for future manual operation.

## Two-Way Valve Flow

In the two-way valves, the direction of flow is always from inlet port to outlet port as indicated by the arrows on the valve body (see Fig. 4).

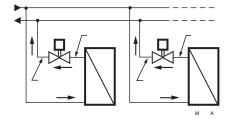


Fig. 4. Two-way valve operation block diagram.

### Three-Way Valve Flow

Three-way valves are designed as mixing valves. This means that port AB is total flow outlet; port A is controlled flow inlet; and port B is bypass inlet (see Fig. 5).

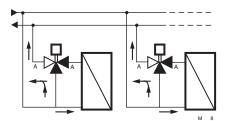


Fig. 5. Three-way valve operation block diagram.

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