

SV162X, SV163X

Small Linear Valves PN16

PRODUCT DATA



GENERAL

These small linear valves are used in combination with small electric linear valve actuators for the control of hot and/or chilled water for fan coil units and small reheaters/recoolers in electric/electronic temperature control systems.

FEATURES

- Pressure balanced plug
- Easy to mount, no tools required
- Flat sealing connections
- Flat surfaces on body to fit installation tools
- Supplied with connection sets for external threaded pipework
- Standard external threads for field supplied fittings
- Adjustment cap for manual operation

SPECIFICATIONS

Model	Two-way: SV162X Three-way: SV163X
Operation	Stem up to close port A to AB
Nominal pressure rating	PN16
Capacity index (k_{VS})	see tables on page 2
Leakage rate	$\leq 0.05\%$ of k_{VS}
Valve body:	
Material	Brass
Size	DN25 (1"), DN32 (1 1/4"), DN40 (1 1/2")
Trim:	
Stem	Stainless steel
Plug	Brass
Suitable medium	Water, with max. 50% Glycol
Controlled water temperature:	2...130°C
Rangeability	50:1
Flow characteristic	Linear for port A-AB, linear for bypass port B-AB
Stroke	6.5 mm
Dimensions	see Fig. 3 on page 4

FLOW CAPACITIES AND CLOSE OFF PRESSURE RATINGS

TWO-WAY VALVES

Valves			Actuators (300-500 N)	
			AL0306-24-K, AL0306-230-K AL0406-P-K, AL0406-P-SU	
DN	k _{VS}	Order Number	Operating Pressure (kPa)	Close-Off Pressure (kPa)
25	6.3	SV162X-25-6.3	600	1600
25	10.0	SV162X-25-10	600	1600
32	16.0	SV162X-32-16	500	1200
40	25.0	SV162X-40-25	400	1000

THREE-WAY VALVES

Valves			Actuators (300-500 N)	
			AL0306-24-K, AL0306-230-K AL0406-P-K, AL0406-P-SU	
DN	k _{VS}	Order Number	Operating Pressure (kPa)	Close-Off Pressure (kPa)
25	6.3	SV163X-25-6.3	600	1600
25	10.0	SV163X-25-10	600	1600
32	16.0	SV163X-32-16	500 </td <td>1200</td>	1200
40	25.0	SV163X-40-25	400	1000

OPERATION

A built-in return spring produces a closing force. The valves are supplied with an adjustment cap for manual operation and to protect the stem. This allows the stem to be set up for filling or initial heating/cooling during the building construction phase without the use of a controller or actuator. The small electric valve actuators provide automatic control during the opening and closing movement of the valve stem.

TYPICAL OPERATION

All types of valves should be mounted in the return flow.

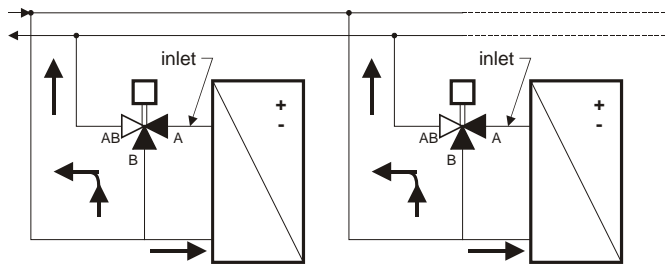


Fig. 2. Three-way valve operation

Two-Way Valves

Direction of flow always from port A to port B
Port B: Outlet

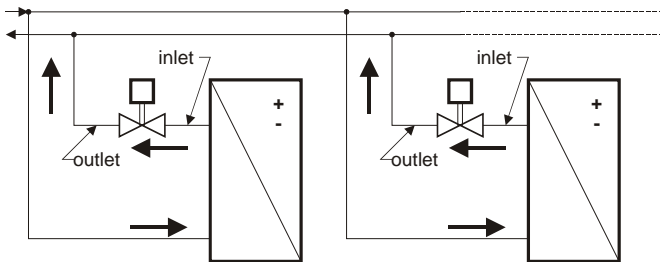


Fig. 1. Two-way valve operation

Three-Way Valves

These valves are preferably used as mixing valves, this means:

- Port AB: Total flow outlet
- Port A: Controlled flow inlet
- Port B: Bypass inlet

MOUNTING


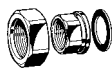
When installing the valve care must be taken that the flow direction is correct (see section "Typical Operation"). The valve must not be mounted with the stem pointing downward.

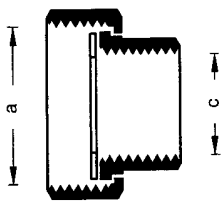
The adjustment cap must be removed from the valve only when the actuator is fitted. The valve should be installed as stress-free as possible with a tightening torque of 25 to 30 Nm.

The valve is supplied complete with mounting instructions. The water quality should meet VDI 2035 requirements.

CONNECTIONS

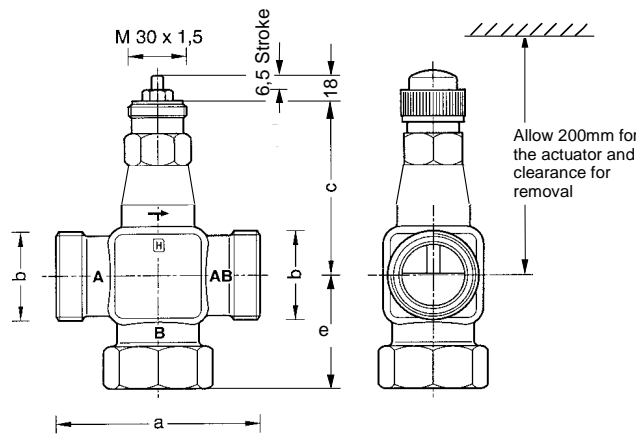
Valves SV162X are supplied with two internal thread connection sets, valves SV163X are supplied with three internal thread connection sets.

Connection	Pipe Size	DN	Connection Set		Description
Internal Thread	Rp1" Rp1 1/4" Rp1 1/2"	25 32 40			Consisting of 1 union nut 1 tailpiece and 1 gasket

Dimensions of Connection Sets			
	a	b	c
	G1 1/2"		Rp1"
	G2"		Rp1 1/4"
	G2 1/4"		Rp1 1/2"

DIMENSIONS

SV162X



DN	a	b	c	d	e
25	105	G1 1/2"	92	52.5	62
32	105	G2"	92	52.5	62
40	130	G2 1/4"	98	65.0	77

SV163X

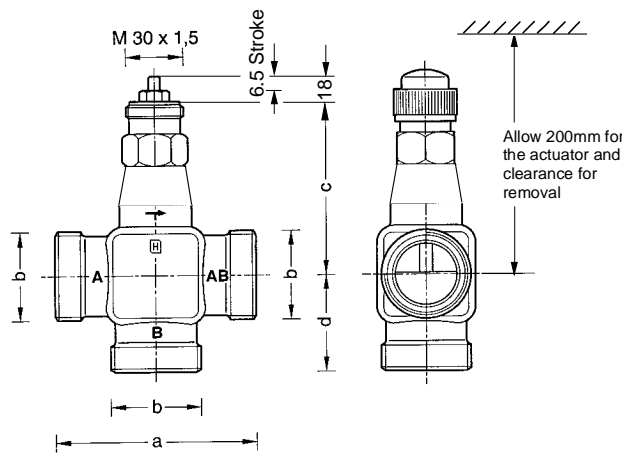


Fig. 3. Dimensions (in mm)

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Ecublens, Route du Bois 37, Switzerland by its Authorized Representative.

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