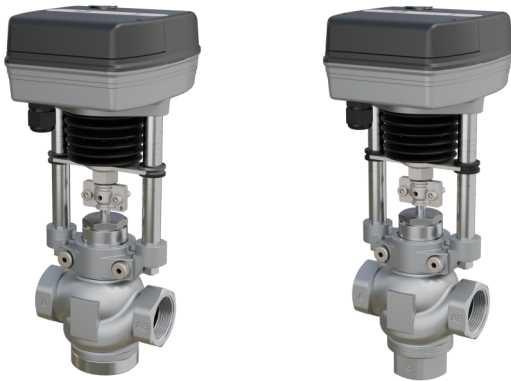


Threaded Connection

2-way globe valve
3-way globe valve



Equipped with HA series electric actuator, the valve has a rich function and compact shape which is suitable for limited space inside of AHU.

Product Features

- **Low leakage rate**

The valve core and valve seat sealing surface are all stainless steel which could avoid the damage caused by debris in medium and ensure the low leakage rate after long time running.

- **V-shaped Sealing Ring Gland+ Spring Auto-compensation**

Due to V-shaped ring of the sealing gland, the effects of the inner hole shrinkage and cylindrical expansion of the sealing gland in the case of pressing by the spring, which ensures the sealing of the stem part is effective for a long time.

- **Equal-percentage Flow Characteristics**

The rangeability of valve is 100:1, equipped with TW...series actuator which can get a perfect equal-percentage control curve.

- **Wide Flow Passage, Low Noise**

The design of wide and smooth flow passage can effectively reduce the noise.

- **High-quality Materials**

The valve body is made of high-quality stainless steel with a much higher strength than brass. The precision casting process gives the valve exquisite appearance.

Type Overview

PN16 series				Series	HA600...	HA1000...	
				Actuator Rated Stroke Nominal Output Force	30mm 600N	30mm 1000N	
				Icon			
Type	Model	DN [mm]	Stroke [mm]	Max. flow coefficient K _{vs} [m³/h]	ΔPs [kPa]	ΔPs [kPa]	
PN16 2-port water valve 	HL15-2VBC-S.12-KVS0.63	DN15	10	0.63	1600		
	HL15-2VBC-S.12-KVS1.00	DN15	10	1.0			
	HL15-2VBC-S.12-KVS1.60	DN15	10	1.6			
	HL15-2VBC-S.12-KVS2.50	DN15	10	2.5			
	HL15-2VBC-S.12	DN15	10	4			
	HL20-2VBC-S.12	DN20	10	6.3			
	HL25-2VBC-S.12	DN25	15	10		1600	
	HL32-2VBC-S.12	DN32	20	16		1000	
Medium temperature: -10~130°C	HL40-2VBC-S.12	DN40	20	25	400	700	
	HL50-2VBC-S.12	DN50	20	40		500	
PN16 2-port steam valve 	HL15-2SBC-S.12-KVS0.63	DN15	10	0.63		1600	
	HL15-2SBC-S.12-KVS1.00	DN15	10	1.0		1600	
	HL15-2SBC-S.12-KVS1.60	DN15	10	1.6		1600	
	HL15-2SBC-S.12-KVS2.50	DN15	10	2.5		1600	
	HL15-2SBC-S.12	DN15	10	4		1600	
	HL20-2SBC-S.12	DN20	10	6.3		1600	
	HL25-2SBC-S.12	DN25	15	10		1600	
	HL32-2SBC-S.12	DN32	20	16		1000	
Medium temperature: 2~180°C	HL40-2SBC-S.12	DN40	20	25	700		
	HL50-2SBC-S.12	DN50	20	40	500		
PN16 3-port mixing valve 	HL15-3VBC-S.12-KVS0.63	DN15	10	0.63	1600		
	HL15-3VBC-S.12-KVS1.00	DN15	10	1.0		1600	
	HL15-3VBC-S.12-KVS1.60	DN15	10	1.6		1600	
	HL15-3VBC-S.12-KVS2.50	DN15	10	2.5		1600	
	HL15-3VBC-S.12	DN15	10	4		1600	
	HL20-3VBC-S.12	DN20	10	6.3		1600	
	HL25-3VBC-S.12	DN25	15	10		1000	1600
	HL32-3VBC-S.12	DN32	20	16		600	1000
Medium temperature: -10~130°C	HL40-3VBC-S.12	DN40	20	25	400	700	
	HL50-3VBC-S.12	DN50	20	40		500	
PN16 3-port diverting valve 	HL15-3VBC-S.12-KVS0.63	DN15	10	0.63	800		
	HL15-3VBC-S.12-KVS1.00	DN15	10	1.0		800	
	HL15-3VBC-S.12-KVS1.60	DN15	10	1.6		800	
	HL15-3VBC-S.12-KVS2.50	DN15	10	2.5		800	
	HL15-3VBC-S.12	DN15	10	4		800	
	HL20-3VBC-S.12	DN20	10	6.3		800	
	HL25-3VBC-S.12	DN25	15	10		500	800
	HL32-3VBC-S.12	DN32	20	16		300	500
Medium temperature: -10~130°C	HL40-3VBC-S.12	DN40	20	25	200	350	
	HL50-3VBC-S.12	DN50	20	40		250	

PN25 series



Series
Actuator Rated Stroke
Nominal Output Force

HA600...
30mm
600N

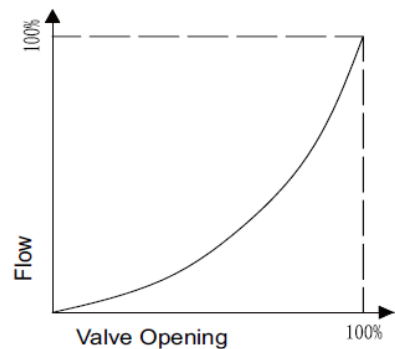
HA1000...
30mm
1000N

Icon

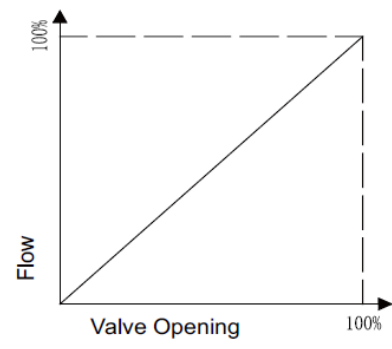


Type	Model	DN [mm]	Stroke [mm]	Max. flow coefficient Kvs [m³/h]	ΔPs [kPa]	ΔPs [kPa]
PN25 2-port water valve Medium temperature: -10~130°C	HL15-2VBD-S.12-KVS0.63	DN15	10	0.63	1600	
	HL15-2VBD-S.12-KVS1.00	DN15	10	1.0	1600	
	HL15-2VBD-S.12-KVS1.60	DN15	10	1.6	1600	
	HL15-2VBD-S.12-KVS2.50	DN15	10	2.5	1600	
	HL15-2VBD-S.12	DN15	10	4	1600	
	HL20-2VBD-S.12	DN20	10	6.3	1600	
	HL25-2VBD-S.12	DN25	15	10	1000	1600
	HL32-2VBD-S.12	DN32	20	16	600	1000
	HL40-2VBD-S.12	DN40	20	25	400	700
	HL50-2VBD-S.12	DN50	20	40		500
PN25 2-port steam valve Medium temperature: 2~180°C	HL15-2SBD-S.12-KVS0.63	DN15	10	0.63		1600
	HL15-2SBD-S.12-KVS1.00	DN15	10	1.0		1600
	HL15-2SBD-S.12-KVS1.60	DN15	10	1.6		1600
	HL15-2SBD-S.12-KVS2.50	DN15	10	2.5		1600
	HL15-2SBD-S.12	DN15	10	4		1600
	HL20-2SBD-S.12	DN20	10	6.3		1600
	HL25-2SBD-S.12	DN25	15	10		1600
	HL32-2SBD-S.12	DN32	20	16		1000
	HL40-2SBD-S.12	DN40	20	25		700
	HL50-2SBD-S.12	DN50	20	40		500
PN25 3-port mixing valve Medium temperature: -10~130°C	HL15-3VBD-S.12-KVS0.63	DN15	10	0.63	1600	
	HL15-3VBD-S.12-KVS1.00	DN15	10	1.0	1600	
	HL15-3VBD-S.12-KVS1.60	DN15	10	1.6	1600	
	HL15-3VBD-S.12-KVS2.50	DN15	10	2.5	1600	
	HL15-3VBD-S.12	DN15	10	4	1600	
	HL20-3VBD-S.12	DN20	10	6.3	1600	
	HL25-3VBD-S.12	DN25	15	10	1000	1600
	HL32-3VBD-S.12	DN32	20	16	600	1000
	HL40-3VBD-S.12	DN40	20	25	400	700
	HL50-3VBD-S.12	DN50	20	40		500
PN25 3-port diverting valve Medium temperature: -10~130°C	HL15-3VBD-S.12-KVS0.63	DN15	10	0.63	800	
	HL15-3VBD-S.12-KVS1.00	DN15	10	1.0	800	
	HL15-3VBD-S.12-KVS1.60	DN15	10	1.6	800	
	HL15-3VBD-S.12-KVS2.50	DN15	10	2.5	800	
	HL15-3VBD-S.12	DN15	10	4	800	
	HL20-3VBD-S.12	DN20	10	6.3	800	
	HL25-3VBD-S.12	DN25	15	10	500	800
	HL32-3VBD-S.12	DN32	20	16	300	500
	HL40-3VBD-S.12	DN40	20	25	200	350
	HL50-3VBD-S.12	DN50	20	40		250

Flow Characteristics



A-AB Equal-percentage Flow Characteristics



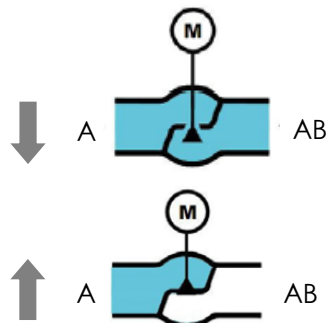
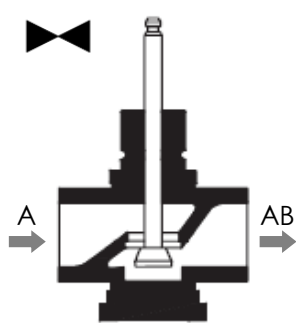
B-AB Equal-linear Flow Characteristics

Relationship between Differential Pressure and Flow

$$Kvs = \frac{V}{\sqrt{\frac{\Delta P}{100}}}$$

ΔP : Differential pressure when valve is full open (Unit: KPa)
 V : Rating flow at the ΔP (Unit: m³/h)
 Kvs : Nominal flow coefficient, which refers to the flow when medium (Density = 1g/cm³) goes through the full open control valve, whose ΔP is 100KvPa.

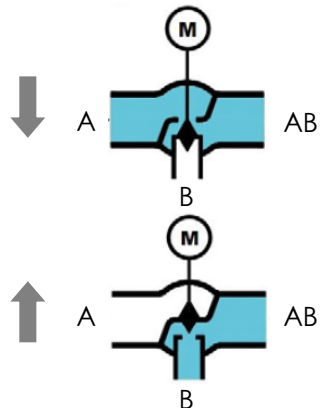
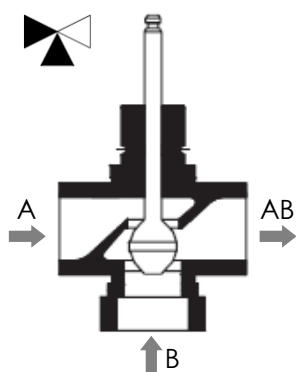
Structure Characteristics



2-port Valve

When the valve stem is at lower limit, the valve will be opened from A to AB.

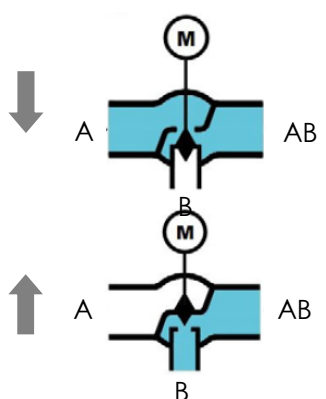
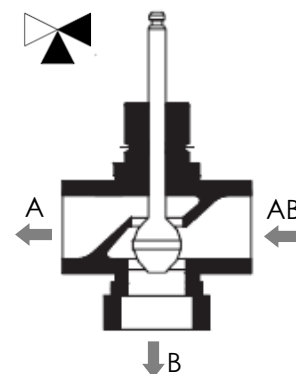
When the valve stem is at upper limit, the valve will be closed from A to AB.



3-port Mixing Valve

When actuator stem is at lower limit, the valve will be opened from A to AB and closed from B to AB.

When actuator stem is at lower limit, the valve will be closed from A to AB and opened from B to AB.



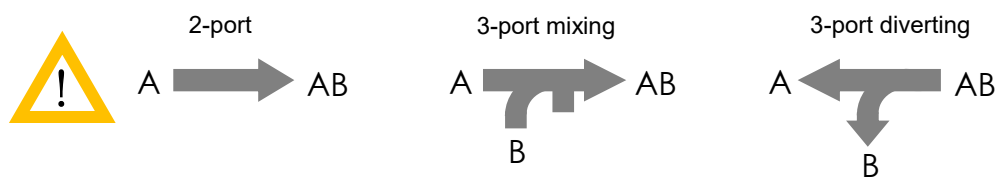
3-port Diverting Valve

When actuator stem is at lower limit, the valve will be opened from A to AB and closed from B to AB.

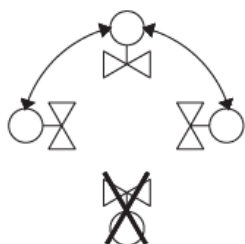
When actuator stem is at lower limit, the valve will be closed from A to AB and opened from B to AB.

Connection with Pipeline

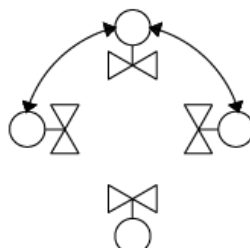
1. Valve can be installed on the water supply pipe or return water pipe (installed on the return water pipe can control the water flow more smoothly, meanwhile the return water temperature is lower which can extends the service time of valve).
2. Filter and check valve are recommended to be installed.
3. When the medium is steam, install drain valve in the pipe can remove the condensed water, or it will affect the service time of valve.
4. Please note that the medium flow direction in valve should be consistent with the medium of pipeline.



5. Please pay attention to the valve mounting orientation.



Medium is chilled/hot water
Downward installation is forbidden



Medium is steam
Any installation position is OK

Connection with Actuator

You can complete the installation with the actuator's Allen wrench. It doesn't need further tools or any adjustment. The actuator can start stroke test. Warning! Prohibit installing outdoors to avoid PCB damage due to the condensation and water. Rain cover and heating belt are necessary incase of outdoor installation.



1.

Use an Allen wrench to loosen the bottom slider of the actuator, press the clamp plate in the direction shown in Figure a, and let the valve stem pass through the clamp plate hole. When the low end of the actuator fits the valve end face, release the clamp plate as shown in Figure b, and fix the valve stem in the clamp groove.



2.

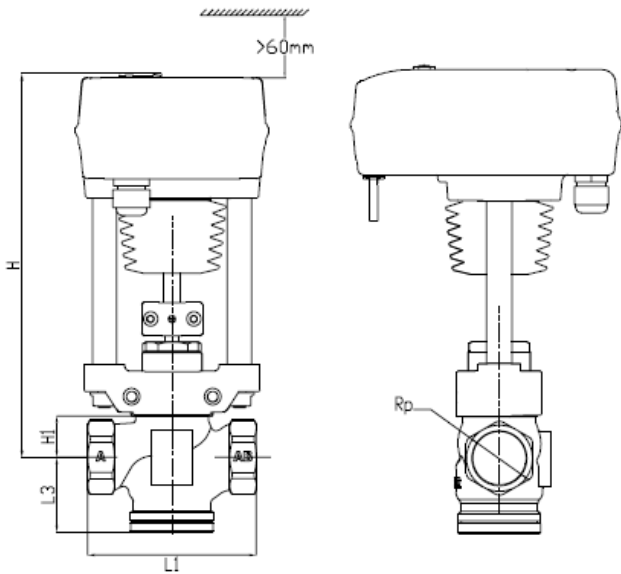
Place the slider into the actuator and tighten the two screws.



3.

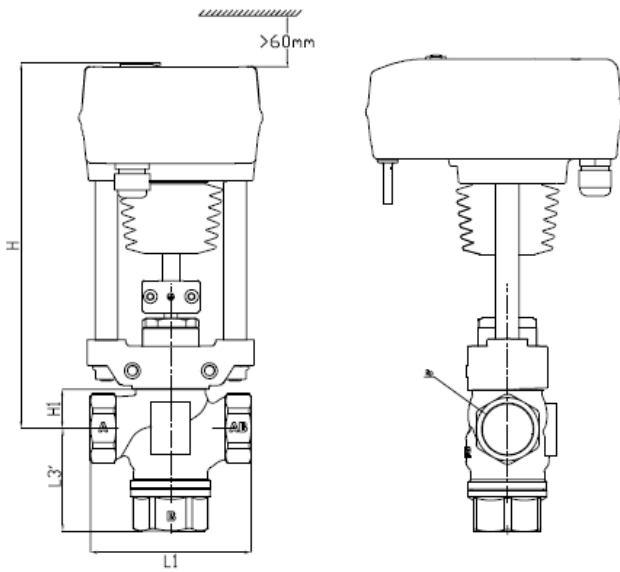
This is how the valve and actuator should look after correct assembly.

Dimension Figure for 2-port



DN	Rp	L1 (mm)	L3 (mm)	H1 (mm)	H (mm)	N.W. kg
DN15	1/2"	75	38	20	275	1
DN20	3/4"	80	38	20	275	1.08
DN25	1"	105	43	26	281	1.44
DN32	1-1/4"	120	52.5	29.5	285	1.9
DN40	1-1/2"	130	53	36	291	2.37
DN50	2"	150	68	51	306	3.21

Dimension Figure for 3-port



DN	Rp	L1 (mm)	L3 (mm)	H1 (mm)	H (mm)	N.W. kg
DN15	1/2"	75	53	20	275	1
DN20	3/4"	80	55	20	275	1.08
DN25	1"	105	60	26	281	1.43
DN32	1-1/4"	120	76	29.5	285	1.88
DN40	1-1/2"	130	79	36	291	2.33
DN50	2"	150	92	51	306	3.26

• Functional data	
Nominal size	DN15-DN50
Nominal pressure	PN16
Flow characteristics	A-AB: equal-percentage flow characteristics A-AB: equal-percentage flow characteristics B-AB: equal-linear flow characteristic
2-port 3-port	
Rangeability	>100: 1
Leakage rate	
2-port 3-port	≤0.01% kvs A-AB: ≤0.01% of kvs; B-AB: ≤0.02% of kvs
Permissible medium	
Water valve (-10~130℃)	Chilled/hot water, glycol under 50%
Connection standard	Female threaded connection ISO7-1 / NPT

• Spare Parts Material	
Valve body	Stainless steel
Valve Stem	Stainless steel
Valve core	Stainless steel
Sealing ring	PTFE

• Environmental condition	
Running	
Ambient temperature	-25~+65℃
Ambient humidity	≤95% RH non-condensation
Storage	
Ambient temperature	-25~+65℃
Ambient humidity	≤95% RH non-condensation