

VH58 series

Globe Valves



Overview

Globe valves are widely used in BAS such as air conditioning, refrigeration and heating etc., suitable for chilled water, hot water, steam and other non corrosive media flow adjustment. At the same time, it is also applicable to many industries' automatic control system of production process such as chemical industry, petroleum, metallurgy, electric power, and light industry etc.

The globe valve is used together with the electric actuator, and can receive the standard control signals output by various controllers. In the automatic control system, it controls parameters such as temperature, humidity, pressure, flow, etc.

The globe valve has the advantages of high control accuracy, convenient installation, reliable operation and so on.

Features

Caliber	2-way: DN40-DN250; 3-way: DN65-DN250
Matched actuator force	2500N, 3500N
Proportional control signals	0(2)~10VDC, 0(4)~20mA
Material of Valve body	Ductile Iron
Connection standard	Flanged connection ISO7005-2
Protection level	IP54

Technical parameters

Valve

Caliber	DN40-DN250
Permissible Pressure	PN16
Leakage Rate	0.02% of Kvs
Medium Temperature	for water: 2°C~150°C for steam: 2°C~180°C
Valve Body	Ductile iron(QT450-10)
Valve Core	Stainless steel 304
Valve Stem	Stainless steel 304
Sealing ring	PTFE
Sealed structure	V-shaped Sealing Ring Gland+ Spring Auto-compensation

Actuator

Power supply	24VAC, 50Hz
Power dissipation	15VA
Control signal	0(2)~10VDC, 0(4)~20mA
Feedback signal	0(2)~10VDC, 0(4)~20mA
Protection level	IP54
Ambient temperature	-10°C~50°C (≤95%RH)
Manual function	Standard equipped
Cover	Die-cast aluminum
Bracket	Die-cast aluminum

Valve Model

Model	DN (in.)	DN (mm)	Kvs (m ³ /h)	Stroke (mm)	Recommend Actuator	ΔP (Mpa)
VH58E20040	1-1/2"	40	22	20	2500N	≤1.60
VH58E20050	2"	50	31	20	2500N	≤1.60
VH58E20065	2-1/2"	65	50	20	2500N	≤1.60
VH58E20080	3"	80	80	20	2500N	≤1.60
VH58E20100	4"	100	126	40	2500N	≤1.60
VH58E20125	5"	125	200	40	2500N	≤1.60
VH58E20150	6"	150	280	40	2500N	≤1.60
VH58E20200	8"	200	400	40	3500N	≤1.60
VH58E20250	10"	250	580	40	3500N	≤1.60

Table 1 2-way for water (2°C~150°C)

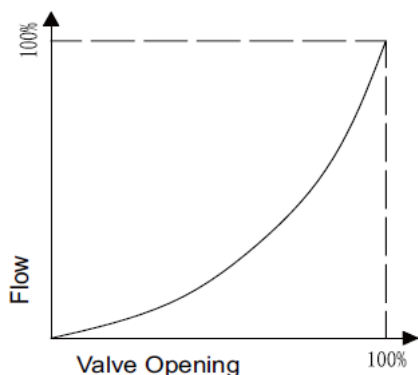
Model	DN (in.)	DN (mm)	Kvs (m ³ /h)	Stroke (mm)	Recommend Actuator	ΔP (Mpa)
VH58S20040	1-1/2"	40	22	20	2500N	≤1.60
VH58S20050	2"	50	31	20	2500N	≤1.60
VH58S20065	2-1/2"	65	50	20	2500N	≤1.60
VH58S20080	3"	80	80	20	2500N	≤1.60
VH58S20100	4"	100	126	40	2500N	≤1.60
VH58S20125	5"	125	200	40	2500N	≤1.60
VH58S20150	6"	150	280	40	2500N	≤1.60
VH58S20200	8"	200	400	40	3500N	≤1.60
VH58S20250	10"	250	580	40	3500N	≤1.60

Table 2 2-way for steam (2°C~180°C)

Model 3-way mixing	Model 3-way diverting	DN (in.)	DN (mm)	Kvs (m ³ /h)	Stroke (mm)	Recommend Actuator	ΔP (Mpa)
VH58EM30065	VH58ED30065	2-1/2"	65	50	20	3500N	≤0.45
VH58EM30080	VH58ED30080	3"	80	80	20	3500N	≤0.27
VH58EM30100	VH58ED30100	4"	100	126	40	3500N	≤0.16
VH58EM30125	VH58ED30125	5"	125	200	40	3500N	≤0.12
VH58EM30150	VH58ED30150	6"	150	280	40	3500N	≤0.09
VH58EM30200	VH58ED30200	8"	200	400	40	3500N	≤0.08
VH58EM30250	VH58ED30250	10"	250	580	40	3500N	≤0.05

Table 3 3-way for water (2°C~150°C)

Flow Characteristic



Equal-percentage Flow Characteristic

Relationship between Differential Pressure and Flow

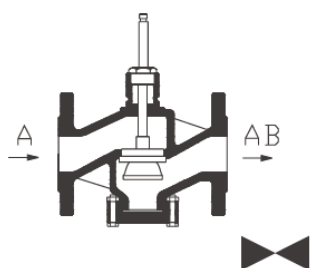
$$Kvs = \frac{V}{\sqrt{\frac{\Delta P}{100}}}$$

ΔP : Differential pressure when valve is full open (Unit: KPa)

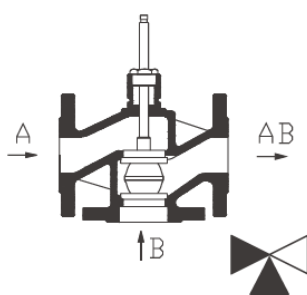
V: Rating flow at the ΔP (Unit: m³/h)

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.

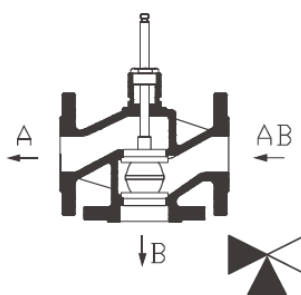
Flow Direction



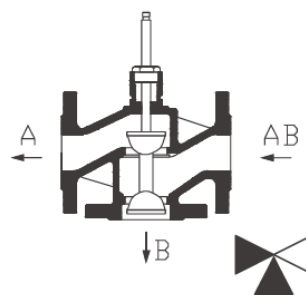
2-way DN40~DN250



3-way mixing DN65~DN250



3-way diverting DN65



3-way diverting DN80~DN250

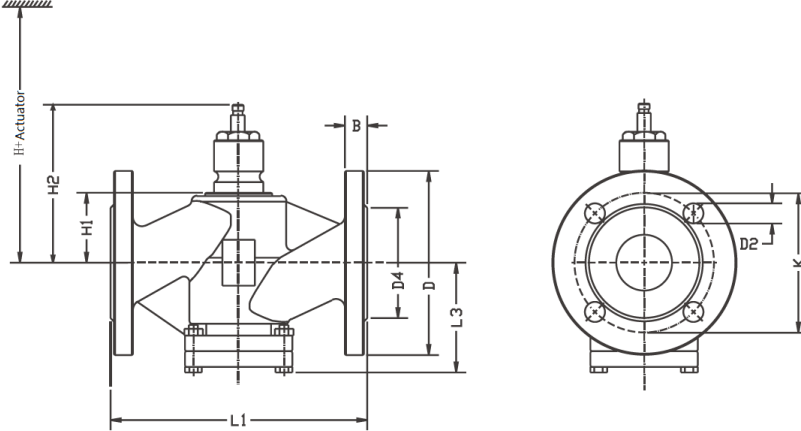
Structure Characteristic

	2-port Valve DN40~DN250	3-port Mixing Valve DN65	3-port Diverting Valve DN65
Flow Direction When valve stem extracts:	From A to B the flow increases the flow decreases	From A, B to AB the flow at A increases, the flow at B decreases; the flow at A decreases, the flow at B increases	From AB to A, B the flow at A increases, the flow at B decreases; the flow at A decreases, the flow at B increases
	3-port Mixing Valve DN80~DN250	3-port Diverting Valve DN80~DN250	
Flow Direction When valve stem extracts: When valve stem extends:	From A, B to AB the flow at A increases, the flow at B decreases; the flow at A decreases, the flow at B increases	From AB to A, B the flow at A increases, the flow at B decreases; the flow at A decreases, the flow at B increases	

Remarks:

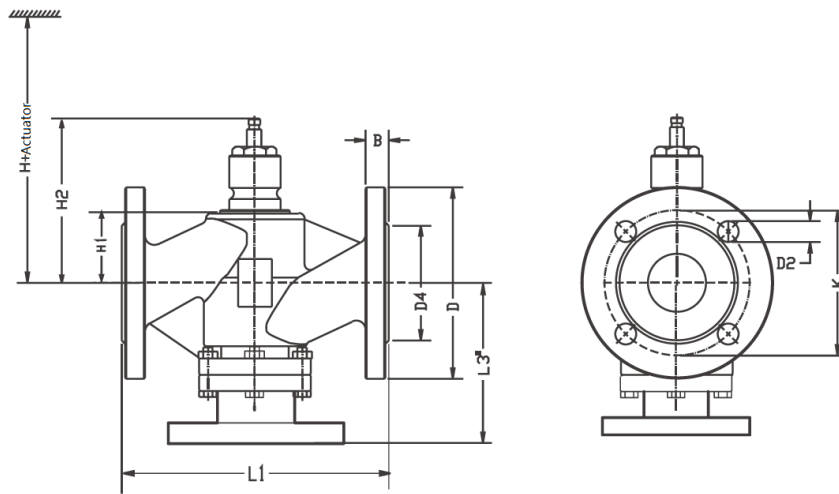
- When the stem of 2-way valve extends, the valve is closed.
- There are two types of 3-way valve ranging from DN65 to DN 250: mixing and diverting. The letter M in the valve model indicates that the valve is a mixing valve as shown in this VH58EM30100. While D means diverting as shown in VH58ED30100. Please pay attention to the model while placing model.

Dimension



DN	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	L3 mm	H1 mm	H2 mm	H mm	NW Kg
40	18	150	4-19	84	110	200	82	50	126	605	9.2
50	20	165	4-19	99	125	230	98	60	136	615	12.5
65	20	185	4-19	118	145	290	112	90	166	645	18.5
80	22	200	8-19	132	160	310	130	120	196	675	25.0
100	23	220	8-19	156	180	350	150	136	212	691	35.6
125	24	250	8-19	184	210	400	175	157	233	712	50.6
150	25	285	8-23	211	240	480	200	171	247	726	71.5
200	26	340	12-23	266	295	500	236	263	339	818	112.7
250	31	405	12-28	319	355	600	290	315	391	870	202.0

Table 4 2-way



DN	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	L3 mm	H1 mm	H2 mm	H mm	NW Kg
65	20	185	4-19	118	145	290	156	90	166	645	22.5
80	22	200	8-19	132	160	310	185	120	196	675	28.8
100	23	220	8-19	156	180	350	202	136	212	691	40.6
125	24	250	8-19	184	210	400	240	157	233	712	55.4
150	25	285	8-23	211	240	480	270	171	247	726	76.3
200	26	340	12-23	266	295	500	320	263	339	818	125.6
250	31	405	12-28	319	355	600	400	315	391	870	230.0

Table 5 3-way