



Globe Valve for Building Automation System

2/3 Port, Flange Connection **PN16/PN25**

TF...Series

Features Introduction



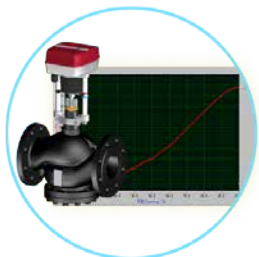
• Low Leakage Rate

The leakage rate of valve is no more than 0.01% Kvs, the valve core and valve seat sealing surface are all stainless steel which could avoid the damage caused by debris in medium.



• V-ring Sealing Gland+ Spring Auto-compensation

Due to V-ring shape 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.



• Perfect Control Curve

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



• High-quality Material

The valve body is made of high-quality ductile iron material (QT450-10), and the surface adopts electrostatic spraying craft, the body has better intensity and corrosion resistance.

Type Summary

Flanged Water Valve

PN16

Series	TW600...	TW1000...	TW1001...	TW3000...	TW5000...	TW16000...
Actuator Rated Stroke	30mm	30mm	50mm	50mm	70mm	110mm
Nominal Output Force	600N	1000N	1000N	3000N	5000N	16000N
Icon						
Proportional Type 0(2)~10VDC,0(4)~20mA	TW600- XD24-S.12	TW1000- XD24-S.12	TW1001- XD24-S.14	TW3000- XD24-S.14	TW5000- XD24-S.14	TW16000- XD220-S.15
3-position Type (on/off)	TW600- XD24-S.12	TW1000- XD24-S.12	TW1001- XD24-S.14	TW3000- XD24-S.14	TW5000- XD24-S.14	TW16000- XD220-S.15
RS485 bus and NFC(optional)	TW600- XD24-S485.12	TW1000- XD24-S485.12	TW1001- XD24-S485.14	TW3000- XD24-S485.14	TW5000- XD24-S485.14	/
2 SPDT Feedback Function(optional)	TW600-XD24- SF2.12	TW1000-XD24- SF2.12	TW1001-XD24- SF2.14	TW3000-XD24- SF2.14	TW5000-XD24- SF2.14	/

Valve Body			Type	DN	Valve Stroke	Max.Flow Parameter Kvs	ΔPs	ΔPs	ΔPs	ΔPs	ΔPs
				[mm]	[mm]	[m³/h]	[MPa]	[MPa]	[MPa]	[MPa]	[MPa]
PN16, Medium Temp. -25 °C ~ 130 °C		Flanged water valve	TF15-2VGC-S.12 ¹⁾	DN15	20	4	1.60				
			TF20-2VGC-S.12	DN20	20	6.3	1.60				
			TF25-2VGC-S.12	DN25	20	10	1.00	1.60			
			TF32-2VGC-S.12	DN32	20	16	0.60	1.00			
			TF40-2VGC-S.12	DN40	20	25	0.40	0.70			
			TF50-2VGC-S.12	DN50	20	40		0.50			
			TF65-2VGC-S.14	DN65	20	63			1.00		
			TF80-2VGC-S.14	DN80	30	100			1.00		
			TF100-2VGC-S.14	DN100	40	160			1.00		
			TF125-2VGC-S.14	DN125	40	250				1.60	
			TF150-2VGC-S.14	DN150	40	350				1.60	
			TF200-2VGC-S.14	DN200	40	520				1.60	
			TF250-2VGC-S.14	DN250	40	700				1.60	
			TF300-2VGC-S.14	DN300	60	1000					1.60
			TF350-2VGC-S.14	DN350	60	1300					1.60
PN16, Medium Temp. -25 °C ~ 130 °C		3-port flange water valve (mixing)	TF15-3VGC-S.12 ¹⁾	DN15	20	4	1.60				
			TF20-3VGC-S.12	DN20	20	6.3	1.60				
			TF25-3VGC-S.12	DN25	20	10	1.00	1.60			
			TF32-3VGC-S.14	DN32	20	16			1.00	1.60	
			TF40-3VGC-S.14	DN40	20	25			0.70	1.60	
			TF50-3VGC-S.14	DN50	20	40			0.50	1.10	
			TF65-3VGC-S.14	DN65	20	63				0.90	
			TF80-3VGC-HS.14	DN80	30	100				0.55	
			TF100-3VGC-HS.14	DN100	40	160				0.35	
			TF125-3VGC-HS.14	DN125	40	250				0.24	0.35
			TF150-3VGC-HS.14	DN150	40	350				0.15	0.25
			TF200-3VGC-HS.14	DN200	40	520					0.15
			TF250-3VGC-HS.14	DN250	40	700					0.10
			TF300-3VGC-HS.15	DN300	100	1200					0.20
			TF350-3VGC-HS.15	DN350	100	1800					0.15
PN16, Medium Temp. -25 °C ~ 130 °C		3-port flange water valve (diverting)	TF15-3VGC-S.12 ¹⁾	DN15	20	4	0.80				
			TF20-3VGC-S.12	DN20	20	6.3	0.80				
			TF25-3VGC-S.12	DN25	20	10	0.50	0.80			
			TF32-3VGC-S.14	DN32	20	16			0.50	0.80	
			TF40-3VGC-S.14	DN40	20	25			0.35	0.80	
			TF50-3VGC-S.14	DN50	20	40			0.25	0.55	
			TF65-3VGC-S.14	DN65	20	63				0.45	
			TF80-3VGC-FS.14	DN80	30	100				0.55	
			TF100-3VGC-FS.14	DN100	40	160				0.35	
			TF125-3VGC-FS.14	DN125	40	250				0.24	0.35
			TF150-3VGC-FS.14	DN150	40	350				0.15	0.25
			TF200-3VGC-FS.14	DN200	40	520					0.15
			TF250-3VGC-FS.14	DN250	40	700					0.10
			TF300-3VGC-FS.15	DN300	100	1200					0.20
			TF350-3VGC-FS.15	DN350	100	1800					0.15
			TF400-3VGC-FS.15	DN400	100	2200					0.12
			TF450-3VGC-FS.15	DN450	100	2600					0.10
			TF500-3VGC-FS.15	DN500	100	3200					0.08

Flanged Steam Valve PN16

Series	TW1000...	TW3000...	TW5000...	TW16000...
Actuator Rated Stroke	30mm	50mm	70mm	110mm
Nominal Output Force	1000N	3000N	5000N	16000N
Icon				
Proportional Type 0(2)~10VDC,0(4)~20mA	TW1000-XD24-S.12	TW3000-XD24-S.14	TW5000-XD24-S.14	TW16000-XD220-S.15
3-position Type(on/off)	TW1000-XD24-S.12	TW3000-XD24-S.14	TW5000-XD24-S.14	TW16000-XD220-S.15
RS485 bus and NFC(optional)	TW1000-XD24-S485.12	TW3000-XD24-S485.14	TW5000-XD24-S485.14	/
2 SPDT Feedback Function(optional)	TW1000-XD24-SF2.12	TW3000-XD24-SF2.14	TW5000-XD24-SF2.14	/

Valve Body			Type	DN [mm]	Valve Stroke [mm]	Max.Flow Parameter Kvs [m³/h]	ΔPs [MPa]	ΔPs [MPa]	ΔPs [MPa]	ΔPs [MPa]
PN16, Medium Temp. 2 °C ~ 180°C			TF15-2SGC-S.12 ¹⁾	DN15	20	4	1.60			
			TF20-2SGC-S.12	DN20	20	6.3	1.60			
			TF25-2SGC-S.12	DN25	20	10	1.60			
			TF32-2SGC-S.12	DN32	20	16	1.00			
			TF40-2SGC-S.12	DN40	20	25	1.00			
			TF50-2SGC-S.12	DN50	20	40	1.00			
			TF65-2SGC-S.14	DN65	20	63		1.60		
			TF80-2SGC-S.14	DN80	30	100		1.60		
			TF100-2SGC-S.14	DN100	40	160		1.60		
			TF125-2SGC-S.14	DN125	40	250		1.60		
			TF150-2SGC-S.14	DN150	40	350		1.60		
			TF200-2SGC-S.14	DN200	60	600			1.60	
			TF250-2SGC-S.14	DN250	60	750			1.60	
			TF300-2SGC-S.15	DN300	100	1200				1.60
			TF350-2SGC-S.15	DN350	100	1800				1.60
			TF400-2SGC-S.15	DN400	100	2200				1.60
PN16, Medium Temp. 2 °C ~ 220°C			TF15-2AGC-S.14	DN15	20	4		1.60		
			TF20-2AGC-S.14	DN20	20	6.3		1.60		
			TF25-2AGC-S.14	DN25	20	10		1.60		
			TF32-2AGC-S.14	DN32	20	16		1.60		
			TF40-2AGC-S.14	DN40	20	25		1.60		
			TF50-2AGC-S.14	DN50	20	40		1.60		
			TF65-2AGC-S.14	DN65	40	63		1.60		
			TF80-2AGC-S.14	DN80	40	100		1.60		
			TF100-2AGC-S.14	DN100	40	160		1.60		
			TF125-2AGC-S.14	DN125	40	250		1.60		
			TF150-2AGC-S.14	DN150	40	350		1.60		
			TF200-2AGC-S.14	DN200	60	600			1.60	
			TF250-2AGC-S.14	DN250	60	750			1.60	
			TF300-2AGC-S.15	DN300	100	1200				1.60
			TF350-2AGC-S.15	DN350	100	1800				1.60
			TF400-2AGC-S.15	DN400	100	2200				1.60
PN16, Medium Temp. 2 °C ~ 450°C			TF15-2PGC-S.14	DN15	20	2		1.60		
			TF20-2PGC-S.14	DN20	20	3		1.60		
			TF25-2PGC-S.14	DN25	20	5		1.60		
			TF32-2PGC-S.14	DN32	20	8		1.60		
			TF40-2PGC-S.14	DN40	20	20		1.60		
			TF50-2PGC-S.14	DN50	20	31		1.60		
			TF65-2PGC-S.14	DN65	40	50		1.60		
			TF80-2PGC-S.14	DN80	40	80		1.60		
			TF100-2PGC-S.14	DN100	40	125		1.60		
			TF125-2PGC-S.14	DN125	40	200		1.60		
			TF150-2PGC-S.14	DN150	40	300		1.60		
			TF200-2PGC-S.14	DN200	60	600			1.60	
			TF250-2PGC-S.14	DN250	60	750			1.60	
			TF300-2PGC-S.15	DN300	100	1200				1.60
			TF350-2PGC-S.15	DN350	100	1800				1.60
			TF400-2PGC-S.15	DN400	100	2200				1.60

*Remark¹⁾: DN15 valve has various types according to the Kvs, such as 0.63, 1.0, 1.6, 2.5. If the KVS 0.63 is selectable, just add it after the regular type, eg: TF15-2VGC-S.12-KVS0.63

Type Summary

Flanged Water Valve PN25

Series						TW600...	TW1000...	TW1001...	TW3000...	TW5000...	TW16000...
Actuator Rated Stroke						30mm	30mm	50mm	50mm	70mm	110mm
Nominal Output Force						600N	1000N	1000N	3000N	5000N	16000N
Icon											
Proportional Type 0(2)~10VDC,0(4)~20mA						TW600-XD24-S.12	TW1000-XD24-S.12	TW1001-XD24-S.14	TW3000-XD24-S.14	TW5000-XD24-S.14	TW16000-XD220-S.15
3-position Type(on/off)						TW600-XD24-S.12	TW1000-XD24-S.12	TW1001-XD24-S.14	TW3000-XD24-S.14	TW5000-XD24-S.14	TW16000-XD220-S.15
RS485 bus and NFC(optional)						TW600-XD24-S485.12	TW1000-XD24-S485.12	TW1001-XD24-S485.14	TW3000-XD24-S485.14	TW5000-XD24-S485.14	/
2 SPDT Feedback Function(optional)						TW600-XD24-SF2.12	TW1000-XD24-SF2.12	TW1001-XD24-SF2.14	TW3000-XD24-SF2.14	TW5000-XD24-SF2.14	/
Valve Body		Type	DN	Valve Stroke	Max.Flow Parameter Kvs	ΔPs	ΔPs	ΔPs	ΔPs	ΔPs	ΔPs
			[mm]	[mm]	[m ³ /h]	[MPa]	[MPa]	[MPa]	[MPa]	[mPa]	[MPa]
PN25, Medium Temp. -25 °C ~ 130 °C		TF15-2VGD-S.12 ¹⁾	DN15	20	4	1.60					
		TF20-2VGD-S.12	DN20	20	6.3	1.60					
		TF25-2VGD-S.12	DN25	20	10	1.00	1.60				
		TF32-2VGD-S.12	DN32	20	16	0.60	1.00				
		TF40-2VGD-S.12	DN40	20	25	0.40	0.70				
		TF50-2VGD-S.12	DN50	20	40		0.50				
		TF65-2VGD-S.14	DN65	20	63			1.00			
		TF80-2VGD-S.14	DN80	30	100			1.00			
		TF100-2VGD-S.14	DN100	40	160			1.00			
		TF125-2VGD-S.14	DN125	40	250				1.60		
		TF150-2VGD-S.14	DN150	40	350				1.60		
		TF200-2VGD-S.14	DN200	40	520				1.60		
		TF250-2VGD-S.14	DN250	40	700				1.60		
		TF300-2VGD-S.14	DN300	60	1000					1.60	
PN25, Medium Temp. -25 °C ~ 130 °C		TF15-3VGD-S.12 ¹⁾	DN15	20	4	1.60					
		TF20-3VGD-S.12	DN20	20	6.3	1.60					
		TF25-3VGD-S.12	DN25	20	10	1.00	1.60				
		TF32-3VGD-S.14	DN32	20	16			1.00	1.60		
		TF40-3VGD-S.14	DN40	20	25			0.70	1.60		
		TF50-3VGD-S.14	DN50	20	40			0.50	1.10		
		TF65-3VGD-S.14	DN65	20	63				0.90		
		TF80-3VGD-HS.14	DN80	30	100				0.55		
		TF100-3VGD-HS.14	DN100	40	160				0.35		
		TF125-3VGD-HS.14	DN125	40	250				0.24	0.35	
		TF150-3VGD-HS.14	DN150	40	350				0.15	0.25	
		TF200-3VGD-HS.14	DN200	40	520					0.15	
		TF250-3VGD-HS.14	DN250	40	700					0.10	
		TF300-3VGD-HS.15	DN300	100	1200						0.20
PN25, Medium Temp. -25 °C ~ 130 °C		TF15-3VGD-S.12 ¹⁾	DN15	20	4	0.80					
		TF20-3VGD-S.12	DN20	20	6.3	0.80					
		TF25-3VGD-S.12	DN25	20	10	0.50	0.80				
		TF32-3VGD-S.14	DN32	20	16			0.50	0.80		
		TF40-3VGD-S.14	DN40	20	25			0.35	0.80		
		TF50-3VGD-S.14	DN50	20	40			0.25	0.55		
		TF65-3VGD-S.14	DN65	20	63				0.45		
		TF80-3VGD-FS.14	DN80	30	100				0.55		
		TF100-3VGD-FS.14	DN100	40	160				0.35		
		TF125-3VGD-FS.14	DN125	40	250				0.24	0.35	
		TF150-3VGD-FS.14	DN150	40	350				0.15	0.25	
		TF200-3VGD-FS.14	DN200	40	520					0.15	
		TF250-3VGD-FS.14	DN250	40	700					0.10	
		TF300-3VGD-FS.15	DN300	100	1200						0.20
		TF350-3VGD-FS.15	DN350	100	1800						0.15
		TF400-3VGD-FS.15	DN400	100	2200						0.12
		TF450-3VGD-FS.15	DN450	100	2600						0.10
		TF500-3VGD-FS.15	DN500	100	3200						0.08

Flanged Steam Valve PN25

Series	TW1000...	TW3000...	TW5000...	TW16000...
Actuator Rated Stroke	30mm	50mm	70mm	110mm
Nominal Output Force	1000N	3000N	5000N	16000N
Icon				
Proportional Type 0(2)~10VDC,0(4)~20mA	TW1000-XD24-S.12	TW3000-XD24-S.14	TW5000-XD24-S.14	TW16000-XD220-S.15
3-position Type(on/off)	TW1000-XD24-S.12	TW3000-XD24-S.14	TW5000-XD24-S.14	TW16000-XD220-S.15
RS485 bus and NFC(optional)	TW1000-XD24-S485.12	TW3000-XD24-S485.14	TW5000-XD24-S485.14	/
2 SPDT Feedback Function(optional)	TW1000-XD24-SF2.12	TW3000-XD24-SF2.14	TW5000-XD24-SF2.14	/

Valve Body		Type	DN [mm]	Valve Stroke [mm]	Max.Flow Parameter Kvs [m³/h]	ΔPs [MPa]	ΔPs [MPa]	ΔPs [MPa]	ΔPs [MPa]
PN25, Medium Temp. 2 °C ~ 180 °C			TF15-2SGD-S.12 ¹⁾	DN15	20	4	1.60		
			TF20-2SGD-S.12	DN20	20	6.3	1.60		
			TF25-2SGD-S.12	DN25	20	10	1.60		
			TF32-2SGD-S.12	DN32	20	16	1.00		
			TF40-2SGD-S.12	DN40	20	25	1.00		
			TF50-2SGD-S.12	DN50	20	40	1.00		
			TF65-2SGD-S.14	DN65	20	63		1.60	
			TF80-2SGD-S.14	DN80	30	100		1.60	
			TF100-2SGD-S.14	DN100	40	160		1.60	
			TF125-2SGD-S.14	DN125	40	250		1.60	
			TF150-2SGD-S.14	DN150	40	350		1.60	
			TF200-2SGD-S.14	DN200	60	600			1.60
			TF250-2SGD-S.14	DN250	60	750		1.60	
			TF300-2SGD-S.15	DN300	100	1200			1.60
			TF350-2SGD-S.15	DN350	100	1800			1.60
			TF400-2SGD-S.15	DN400	100	2200			1.60
			TF450-2SGD-S.15	DN450	100	2600			1.60
			TF500-2SGD-S.15	DN500	100	3200			1.60
PN25, Medium Temp. 2 °C ~ 220 °C			TF15-2AGD-S.14	DN15	20	4		1.60	
			TF20-2AGD-S.14	DN20	20	6.3		1.60	
			TF25-2AGD-S.14	DN25	20	10		1.60	
			TF32-2AGD-S.14	DN32	20	16		1.60	
			TF40-2AGD-S.14	DN40	20	25		1.60	
			TF50-2AGD-S.14	DN50	20	40		1.60	
			TF65-2AGD-S.14	DN65	40	63		1.60	
			TF80-2AGD-S.14	DN80	40	100		1.60	
			TF100-2AGD-S.14	DN100	40	160		1.60	
			TF125-2AGD-S.14	DN125	40	250		1.60	
			TF150-2AGD-S.14	DN150	40	350		1.60	
			TF200-2AGD-S.14	DN200	60	600			1.60
			TF250-2AGD-S.14	DN250	60	750		1.60	
			TF300-2AGD-S.15	DN300	100	1200			1.60
			TF350-2AGD-S.15	DN350	100	1800			1.60
			TF400-2AGD-S.15	DN400	100	2200			1.60
PN25, Medium Temp. 2 °C ~ 450 °C			TF15-2PGD-S.14	DN15	20	2		1.60	
			TF20-2PGD-S.14	DN20	20	3		1.60	
			TF25-2PGD-S.14	DN25	20	5		1.60	
			TF32-2PGD-S.14	DN32	20	8		1.60	
			TF40-2PGD-S.14	DN40	20	20		1.60	
			TF50-2PGD-S.14	DN50	20	31		1.60	
			TF65-2PGD-S.14	DN65	40	50		1.60	
			TF80-2PGD-S.14	DN80	40	80		1.60	
			TF100-2PGD-S.14	DN100	40	125		1.60	
			TF125-2PGD-S.14	DN125	40	200		1.60	
			TF150-2PGD-S.14	DN150	40	300		1.60	
			TF200-2PGD-S.14	DN200	60	600			1.60
			TF250-2PGD-S.14	DN250	60	750		1.60	
			TF300-2PGD-S.15	DN300	100	1200			1.60
			TF350-2PGD-S.15	DN350	100	1800			1.60
			TF400-2PGD-S.15	DN400	100	2200			1.60

*Remark: ¹⁾DN15 valve has various types according to the Kvs, such as 0.63, 1.0, 1.6, 2.5. If the KVS 0.63 is selectable, just add it after the regular type, eg: TF15-2VGC-S.12-KVS0.63

Type Summary

Flanged Water Valve

Low noise series

PN16

Flanged Water Valve Low noise series		Series				TW3000...	TW5000...	
		Actuator Rated Stroke				50mm	70mm	
		Nominal Output Force				3000N	5000N	
		Icon						
		Proportional Type 0(2)~10VDC,0(4)~20mA				TW3000-XD24-S.14	TW5000-XD24-S.14	
PN16		3-position Type (on/off)				TW3000-XD24-S.14	TW5000-XD24-S.14	
		RS485 bus and NFC(optional)				TW3000-XD24-S485.14	TW5000-XD24-S485.14	
		2 SPDT Feedback Function(optional)				TW3000-XD24-SF2.14	TW5000-XD24-SF2.14	
Valve Body		Type	DN	Valve Stroke	Max.Flow Parameter Kvs [m³/h]	ΔPs	ΔPs	
			[mm]	[mm]		[MPa]	[mPa]	
PN16, Medium Temp. -25 °C ~ 130°C	 3-port flange water valve(mixing) Low noise series²⁾		TF32-3VGC-S.14-D	DN32	20	16	1.60	
			TF40-3VGC-S.14-D	DN40	20	25	1.60	
			TF50-3VGC-S.14-D	DN50	20	40	1.10	
			TF65-3VGC-S.14-D	DN65	20	63	0.90	
			TF80-3VGC-HS.14-D	DN80	30	100	0.55	
			TF100-3VGC-HS.14-D	DN100	40	160	0.35	
			TF125-3VGC-HS.14-D	DN125	40	250	0.24	0.35
			TF150-3VGC-HS.14-D	DN150	40	350	0.15	0.25
			TF200-3VGC-HS.14-D	DN200	40	520		0.15
TF250-3VGC-HS.14-D	DN250	40	700		0.10			
PN16, Medium Temp. -25 °C ~ 130°C	 3-port flange water valve(diverting) Low noise series²⁾		TF32-3VGC-S.14-D	DN32	20	16	0.80	
			TF40-3VGC-S.14-D	DN40	20	25	0.80	
			TF50-3VGC-S.14-D	DN50	20	40	0.55	
			TF65-3VGC-S.14-D	DN65	20	63	0.30	
			TF80-3VGC-FS.14-D	DN80	30	100	0.55	
			TF100-3VGC-FS.14-D	DN100	40	160	0.35	
			TF125-3VGC-FS.14-D	DN125	40	250	0.24	0.35
			TF150-3VGC-FS.14-D	DN150	40	350	0.15	0.25
			TF200-3VGC-FS.14-D	DN200	40	520		0.15
			TF250-3VGC-FS.14-D	DN250	40	700		0.10

Flanged Water Valve

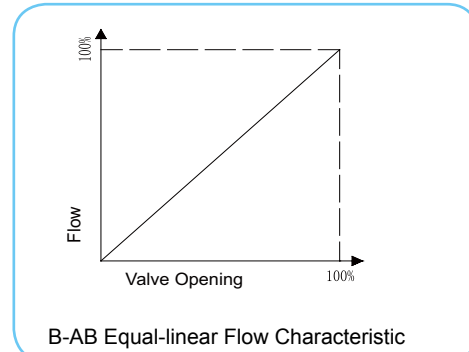
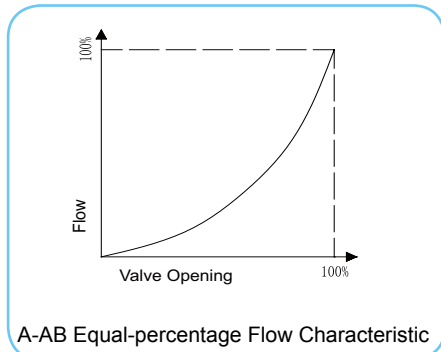
Low noise series

PN25

Flanged Water Valve Low noise series PN25						Series	TW3000...	TW5000...
						Actuator Rated Stroke	50mm	70mm
						Nominal Output Force	3000N	5000N
						Icon		
						Proportional Type 0(2)~10VDC,0(4)~20mA	TW3000-XD24-S.14	TW5000-XD24-S.14
3-position Type (on/off)						TW3000-XD24-S.14	TW5000-XD24-S.14	
RS485 bus and NFC(optional)						TW3000-XD24-S485.14	TW5000-XD24-S485.14	
2 SPDT Feedback Function(optional)						TW3000-XD24-SF2.14	TW5000-XD24-SF2.14	
Valve Body	Type	DN	Valve Stroke	Max.Flow Parameter Kvs [m³/h]	ΔPs	ΔPs		
		[mm]	[mm]		[MPa]	[mPa]		
PN25,Medium Temp. -25 °C ~ 130°C  3-port flange water valve(mixing) Low noise series ²⁾	TF32-3VGD-S.14-D	DN32	20	16	1.60			
	TF40-3VGD-S.14-D	DN40	20	25	1.60			
	TF50-3VGD-S.14-D	DN50	20	40	1.10			
	TF65-3VGD-S.14-D	DN65	20	63	0.90			
	TF80-3VGD-HS.14-D	DN80	30	100	0.55			
	TF100-3VGD-HS.14-D	DN100	40	160	0.35			
	TF125-3VGD-HS.14-D	DN125	40	250	0.24	0.35		
	TF150-3VGD-HS.14-D	DN150	40	350	0.15	0.25		
	TF200-3VGD-HS.14-D	DN200	40	520		0.15		
TF250-3VGD-HS.14-D	DN250	40	700		0.10			
PN25,Medium Temp. -25 °C ~ 130°C  3-port flange water valve(diverting) Low noise series ²⁾	TF32-3VGD-S.14-D	DN32	20	16	0.80			
	TF40-3VGD-S.14-D	DN40	20	25	0.80			
	TF50-3VGD-S.14-D	DN50	20	40	0.55			
	TF65-3VGD-S.14-D	DN65	20	63	0.45			
	TF80-3VGD-FS.14-D	DN80	30	100	0.55			
	TF100-3VGD-FS.14-D	DN100	40	160	0.35			
	TF125-3VGD-FS.14-D	DN125	40	250	0.24	0.35		
	TF150-3VGD-FS.14-D	DN150	40	350	0.15	0.25		
	TF200-3VGD-FS.14-D	DN200	40	520		0.15		
	TF250-3VGD-FS.14-D	DN250	40	700		0.10		

*Remark: ²⁾ Low noise series 3-port valve has the noise reduction function and suitable for the high pressure differential and high velocity environment with water medium.

Flow Characteristic

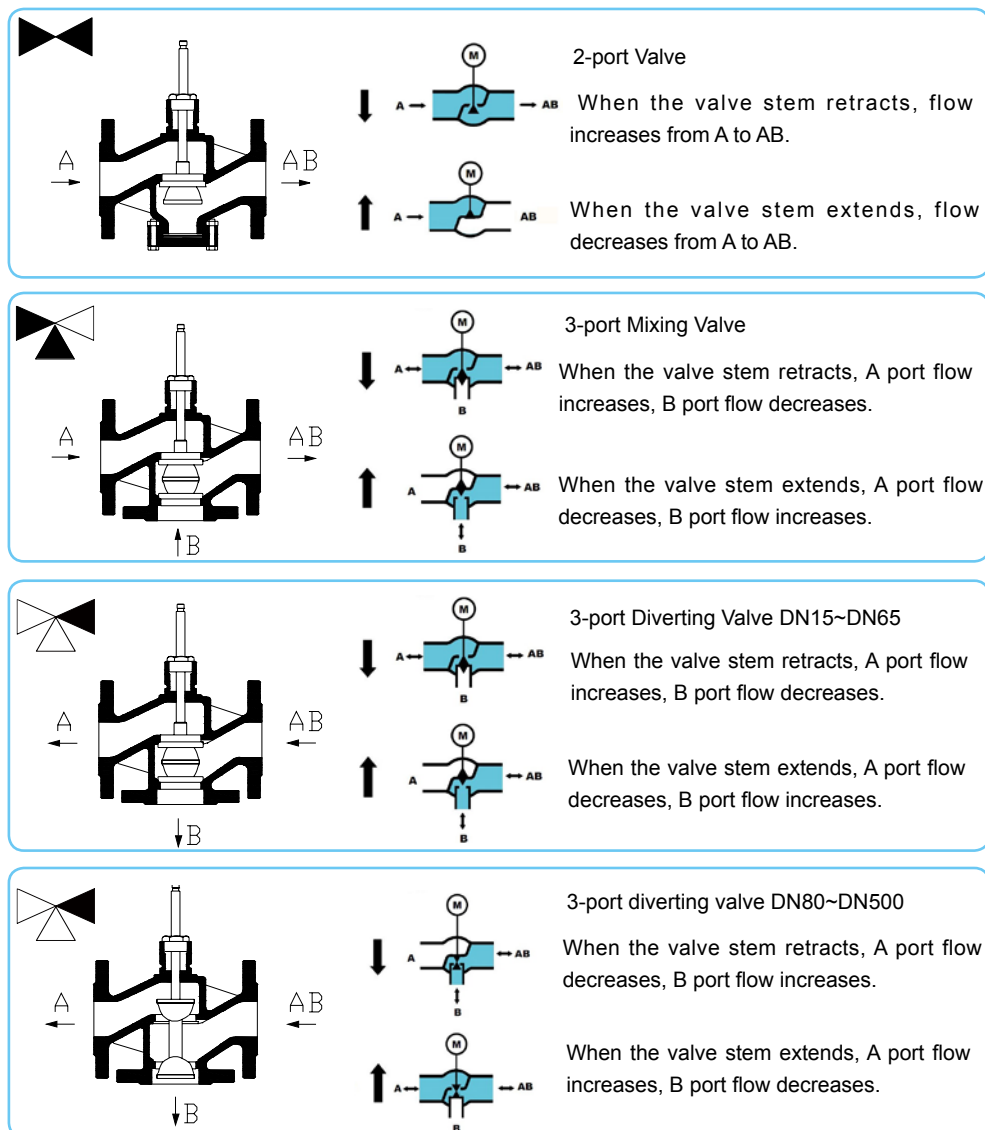


Relationship between Differential Pressure and Flow

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

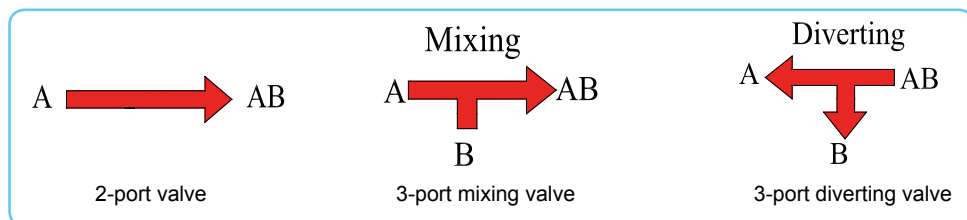
ΔP : Differential pressure when valve is full open (Unit: KPa)
 V : Rating flow at the ΔP (Unit: m³/h)
 Kvs : Nominal flow coefficient, which refer to the flow when medium (Density= 1g/cm³) go through the full open control valve, whose ΔP is 100KvPa.

Structure Characteristic

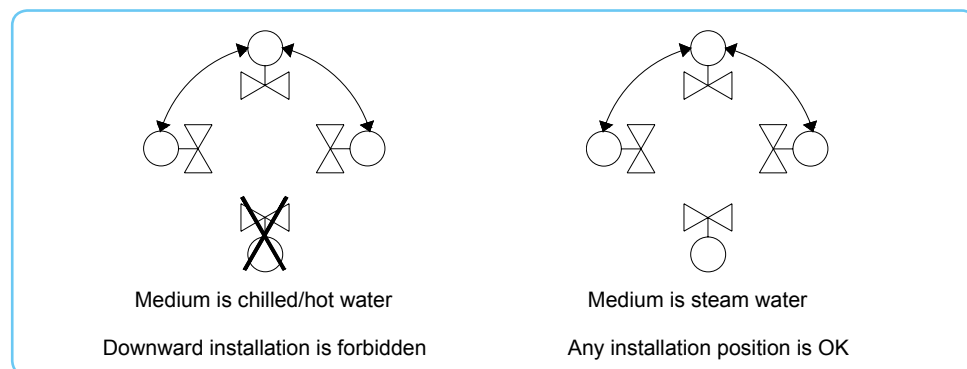


Installation Instruction

1. Please note that the medium flow direction in valve should be consistent with the medium of pipeline!



2. Please pay attention to the valve mounting orientation!



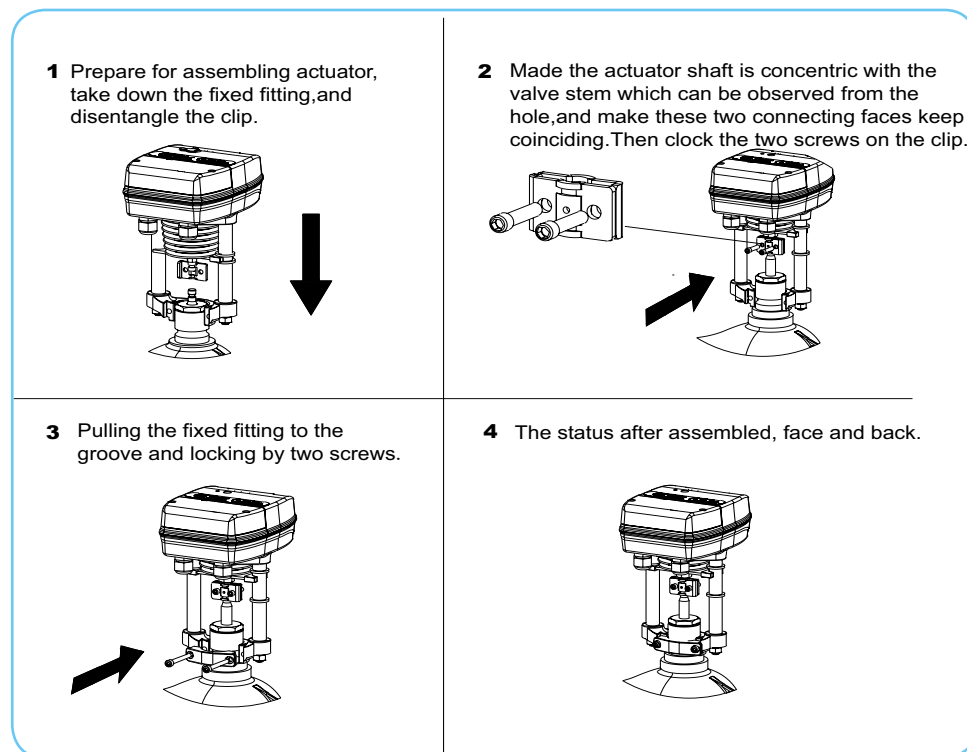
3. Valve can be installed on the water supply pipe or return water pipe (installed on the return water pipe can control the water flow more smoothly, meanwhile the return water temperature is lower which can extend the lifetime of valve). Besides, filter and check valve are recommended to be installed. When the medium is steam, install draw off valve in the pipe can remove the condensed water, or it will affect the lifetime of valve.

4. Valve and actuator can be assembled easily. Neither need any special tools nor need to do any adjustment.



Note:

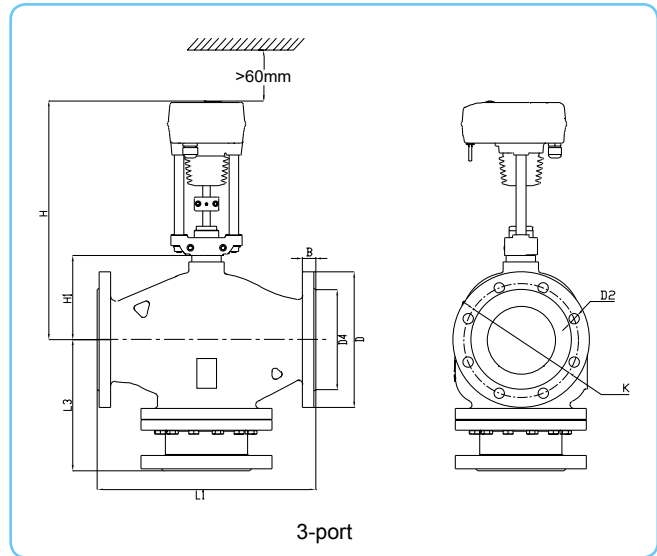
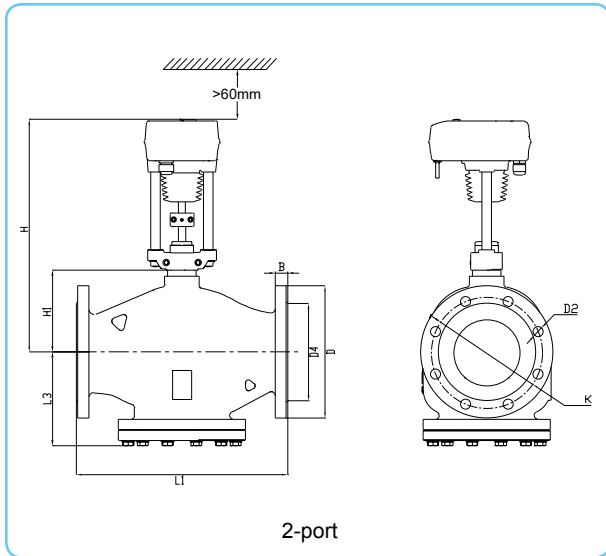
1. Prohibit installing outdoors to avoid PCB damage due to condensation and water
2. Rain cover and heating belt are necessary in case of outdoor installation



Item	Model	Description
Rain Cover	TRAIN-1	To prevent the actuator from rain
Heating Belt	THOT-3	To prevent condensation inside, the heating belt is built-in before delivery

Dimension Figure

Chilled/hot water valve, 180°C Steam valve, 220°C High-Temp. Steam valve series



• PN16 Series

DN (PN16)	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	2-port L3 mm	3-port L3' mm	H1	2-port Weight Kg	3-port Weight Kg	H 600/1000N mm	H 3000N mm	H 5000N mm	H 16000N mm
15	14	95	4-14	46	65	130	70	106	41	3.6	4.5	296	326	/	/
20	16	105	4-14	56	75	150	70	106	46	4.6	5.7	301	331	/	/
25	16	115	4-14	65	85	160	75	111	48	5.2	6.3	303	333	/	/
32	18	140	4-19	76	100	180	80	121	59	7.4	9.4	314	344	/	/
40	18	150	4-19	84	110	200	82	122	50	9.4	11.7	305	335	/	/
50	20	165	4-19	99	125	230	98	136	60	13	15.6	315	345	/	/
65	20	185	4-19	118	145	290	112	156	90	20	24	365	375	/	/
80	22	200	8-19	132	160	310	130	185	120	31	34	395	405	/	/
100-2-port	23	220	8-19	156	180	350	150	/	136	46	/	/	421	/	/
100-3-port	23	220	8-19	156	180	350	/	202	164	/	49	/	449	/	/
125	24	250	8-19	184	210	400	175	240	157	59	63	/	442	/	/
150	25	285	8-23	211	240	480	200	270	171	77	82	/	456	/	/
200	26	340	12-23	266	295	500	229	315	185	122	129	/	470	490	/
250	31	405	12-28	319	355	600	260	370	205	185	195	/	490	510	/
300	28	460	12-28	370	410	700	322	457	358	300	/	/	/	663	941
350	36	520	16-28	429	470	788	402	521	438	500	/	/	/	743	1021
400	40	580	16-31	480	525	912	424	578	487	715	/	/	/	/	1070
450	45	640	20-31	548	585	980	481	643	487	790	/	/	/	/	1070
500	45	715	20-34	609	650	985	504	663	473	926	/	/	/	/	1056

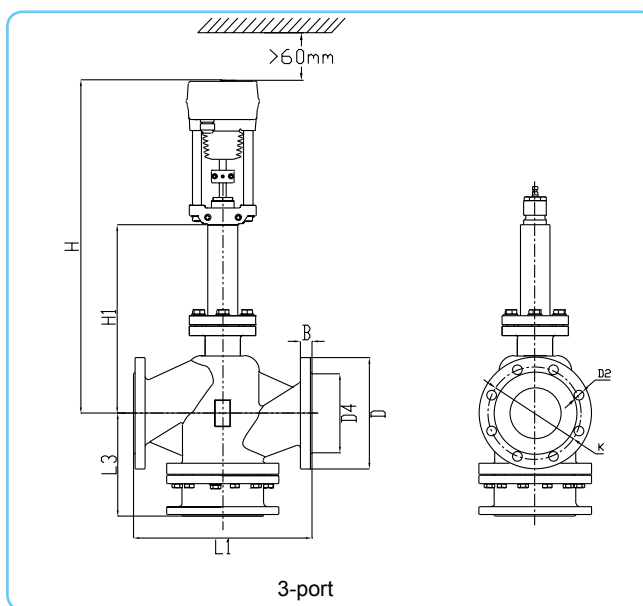
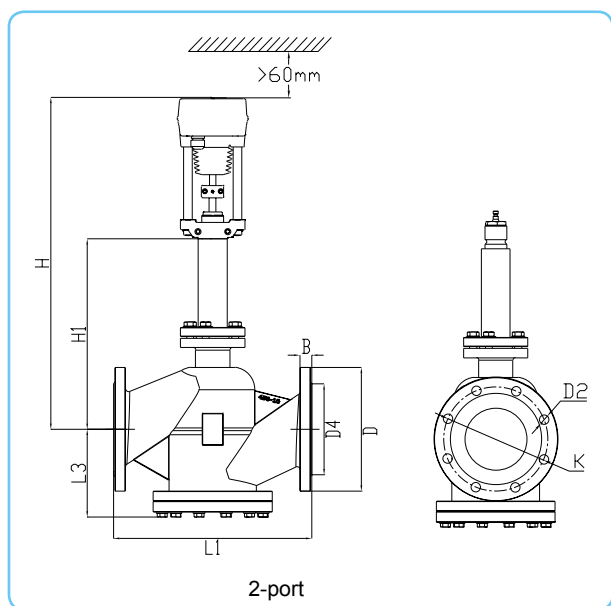
• PN25 Series

DN (PN25)	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	2-port L3 mm	3-port L3' mm	H1	2-port Weight Kg	3-port Weight Kg	H 600/1000N mm	H 3000N mm	H 5000N mm	H 16000N mm
15	14	95	4-14	46	65	130	70	106	41	3.6	4.5	296	326	/	/
20	16	105	4-14	56	75	150	70	106	46	4.6	5.7	301	331	/	/
25	16	115	4-14	65	85	160	75	111	48	5.2	6.3	303	333	/	/
32	18	140	4-19	76	100	180	80	121	59	7.4	9.4	314	344	/	/
40	18	150	4-19	84	110	200	82	122	50	9.4	11.7	305	335	/	/
50	20	165	4-19	99	125	230	98	136	60	13	15.6	315	345	/	/
65	20	185	8-19	118	145	290	112	156	90	20	24	365	375	/	/
80	22	200	8-19	132	160	310	130	185	120	31	34	395	405	/	/
100-2-port	23	235	8-23	156	190	350	150	/	136	46	/	/	421	/	/
100-3-port	23	235	8-23	156	190	350	/	202	164	/	49	/	449	/	/
125	24	270	8-28	184	220	400	175	240	157	59	63	/	442	/	/
150	25	300	8-28	211	250	480	200	270	171	77	82	/	456	/	/
200	26	360	12-28	274	310	500	229	315	185	122	129	/	470	490	/
250	31	425	12-31	330	370	600	260	370	205	185	195	/	490	510	/
300	28	485	16-31	389	430	700	322	457	358	300	/	/	/	663	941
350	36	555	16-34	448	490	788	402	521	438	500	/	/	/	743	1021
400	40	620	16-37	503	550	912	424	578	487	715	/	/	/	/	1070
450	45	670	20-37	548	600	980	481	643	487	790	/	/	/	/	1070
500	48	730	20-37	609	660	985	504	663	473	926	/	/	/	/	1056

Remark: 600N/1000N/3000N/5000N actuator shall reserve at least 60mm installation space; 255mm installation space should be reserved for 16000N.

Dimension Figure

450°C Super-High-Temp. Steam valve



• PN16 Series

DN (PN16)	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	2-port L3 mm	3-port L3' mm	H1	2-port Weight Kg	3-port Weight Kg	H 3000N mm	H 5000N mm	H 16000N mm
25	16	115	4-14	65	85	160	75	111	140	5.2	6.3	425	/	/
32	18	140	4-19	76	100	180	80	121	140	7.4	9.4	425	/	/
40	18	150	4-19	84	110	200	82	122	165	9.4	11.7	450	/	/
50	20	165	4-19	99	125	230	98	136	195	13	15.6	480	/	/
65	20	185	4-19	118	145	290	112	156	240	20	24	525	/	/
80	22	200	8-19	132	160	310	130	185	265	31	34	550	/	/
100-2-port	23	220	8-19	156	180	350	150	/	372	46	/	657	/	/
100-3-port	23	220	8-19	156	180	350	/	202	295	/	49	580	/	/
125	24	250	8-19	184	210	400	175	240	384	59	63	669	/	/
150	25	285	8-23	211	240	480	200	270	412	77	82	697	/	/
200	26	340	12-23	266	295	500	236	320	455	122	129	/	760	/
250	31	405	12-28	319	355	600	290	400	498	185	195	/	803	/
300	28	460	12-28	370	410	700	322	457	650	300	/	/	955	1233
350	46	520	16-28	429	470	788	402	520	837	500	/	/	1142	1420
400	48	580	16-31	480	525	912	424	595	867	715	/	/	/	1450

• PN25 Series

DN (PN25)	B mm	D mm	D2 mm	D4 mm	K mm	L1 mm	2-port L3 mm	3-port L3' mm	H1	2-port Weight Kg	3-port Weight Kg	H 3000N mm	H 5000N mm	H 16000N mm
25	16	115	4-14	65	85	160	75	111	140	5.2	6.3	425	/	/
32	18	140	4-19	76	100	180	80	121	140	7.4	9.4	425	/	/
40	18	150	4-19	84	110	200	82	122	165	9.4	11.7	450	/	/
50	20	165	4-19	99	125	230	98	136	195	13	15.6	480	/	/
65	20	185	8-19	118	145	290	112	156	240	20	24	525	/	/
80	22	200	8-19	132	160	310	130	185	265	31	34	550	/	/
100-2-port	23	235	8-23	156	190	350	150	/	372	46	/	657	/	/
100-3-port	23	235	8-23	156	190	350	/	202	295	/	49	580	/	/
125	24	270	8-28	184	220	400	175	240	384	59	63	669	/	/
150	25	300	8-28	211	250	480	200	270	412	77	82	697	/	/
200	26	360	12-28	274	310	500	236	320	455	122	129	/	760	/
250	31	425	12-31	330	370	600	290	400	498	185	195	/	803	/
300	28	485	16-31	389	430	700	322	457	650	300	/	/	955	1233
350	36	555	16-34	448	490	788	402	520	837	500	/	/	1142	1420
400	40	620	16-37	503	550	912	424	595	867	715	/	/	/	1450

Remark: 600N/1000N/3000N/5000N actuator shall reserve at least 60mm installation space; 255mm installation space should be reserved for 16000N.

• Operating Parameters

Caliber range	DN15~DN500
Permissible pressure	PN16, PN25 are optional
Connection standard	Flanged connection ISO7005-2
Leakage rate	
-25 ~ 130°C, -2 ~ 180°C 2-port valve	≤0...0.01% Kvs
-25 ~ 130°C, -2 ~ 180°C 3-port valve	≤0...0.02% Kvs
2 ~ 220°C, 2 ~ 450°C 2/3-port valve	≤0...0.05% Kvs
Permissible medium	
Water valve (-25~130°C)	Chilled/hot water, glycol under 50%
Steam valve (2~180°C)	Saturated steam (<0.69MPa), Overheated steam (<180°C)
Steam valve (2~220°C)	Overheated steam (≤220°C)
Steam valve (2~450°C)	Overheated steam (≤450°C)
Rangeability	>100:1
Flow characteristic	A-AB equal-percentage flow characteristic B-AB equal-linear flow characteristic
Life cycles	100 thousand cycles

• Spare Parts Material

Valve body	Ductile iron QT450-10
Valve stem	Stainless steel
Valve core	Stainless steel
Sealing ring	PTFE

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