

## 2-1/2" to 6" Cast Iron Globe Valves



TAC VA, VF, and VS-8000 series valve assemblies are complete actuator/valve assemblies that accept two-position, floating, and proportional electric/electronic control signals. Great for the control of chilled water, hot water, or low pressure steam. These valve assemblies consist of electric or electronic valve actuators either direct-coupled or linked to a 2-1/2 to 6 inch 2-way or 3-way valve body with ASA flanged end connections.

Globe Valves

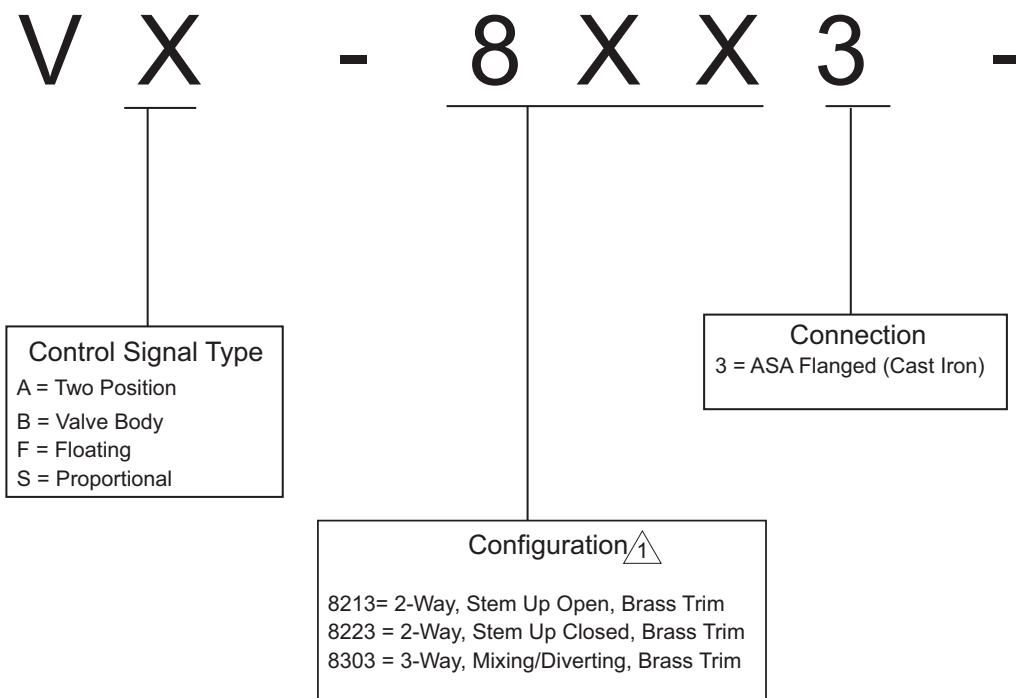
### Features

- Balanced plug design provides high close-offs using economical actuation.
- Up to 125 psi (856 kPa) close off on 2-way models, 35 psi (240 kPa) on 3-way models.
- Universal 3-way valve can be piped in either mixing or diverting configurations.
- Valve sizes 2-1/2 to 6 in., ASA 125 flanged.
- ANSI IV shutoff (0.01% of Cv) on 2-way models, ANSI III (0.1% of Cv) on 3-way models.
- Self-adjusting spring loaded TFE/EPDM packing.
- Expanded temperatures 20 to 281 °F (-6 to 138.3 °C).
- ISO 9001:2000 Certified Quality Management System.
- 2-1/2 to 6" balanced cast iron valves.
- High close-offs with small actuators.
- Designed and made in USA.

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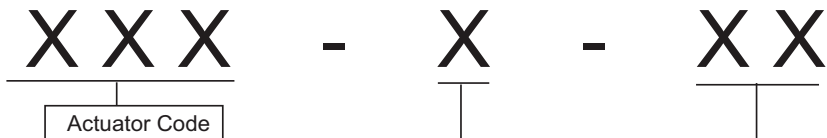
## 8000 Series Globe



<sup>1</sup> The configuration of the valve assembly determines the valve stem position and flow, as shipped from the factory. See the table below.

Valve Assemblies	Valve Body Action	Factory Shipped Position	
		Valve Stem	Flow
Vx-8213-xxx-5-P	2-Way Stem Up Open	Up	Open
Vx-8223-xxx-5-P	2-Way Stem Up Closed	Up	Closed
Vx-8303-xxx-5-P	3-Way Mixing	Up	Flow B to AB
Vx-8303-xxx-5-P	3-Way Diverting	Up	Flow AB to B

## Valve Assemblies



Actuator Code

Pattern Code  
 5 = ASA Globe Flanged  
 (Cast Iron)

Port Code

Actuator Code				
Model	Code	Normal Position	Voltage	Type
<b>Two-Position</b>				
MA40-7170	572	SR Up	120 Vac	2-Position
MA40-7173	576	SR Up	24 Vac	2-Position
MA41-7150	552	SR Up	120 Vac	2-Position
MA41-7153	556	SR Up	24 Vac	2-Position
MA61-7200	595	SR Up	120 Vac	2-Position
MA61-7203	596	SR Up	24 Vac	2-Position
<b>Floating</b>				
MF-63103	301	NSR	24 Vac	3-Wire Floating
MF41-6343	516	NSR	24 Vac	3-Wire Floating
MF41-7153	556	SR	24 Vac	3-Wire Floating
MF40-7173	576	SR	24 Vac	3-Wire Floating
MF61-7203	596	SR	24 Vac	3-Wire Floating
<b>Proportional</b>				
MF-63123-411 <sup>a</sup>	422	NSR	24 Vac	4 to 20 mA
MS40-7170	572	SR	120 Vac	2 to 10 Vdc
MS41-6340	512	NSR	120 Vac	2 to 10 Vdc
MS41-7153	556	SR	24 Vac	2 to 10 Vdc
MS40-7173	576	SR	24 Vac	2 to 10 Vdc
MS61-7203	596	SR	24 Vac	2 to 10 Vdc

SR = Spring Return  
NSR = Non-Spring Return

- <sup>a</sup> MF-63103 with MFC-420 card added.
- <sup>b</sup> Mixing configuration, flow from either A or B to AB.
- <sup>c</sup> Diverting configuration, flow AB to A.
- <sup>d</sup> Diverting configuration, flow AB to B.
- <sup>e</sup> All flow configurations.

Size	2-Way		3-Way	
	Cv	P Code	Cv	P Code
2-1/2"	56.0	12	80 <sup>b</sup>	12
	56.0	12	95 <sup>c</sup>	12
	56.0	12	115 <sup>d</sup>	12
3"	85.0	13	110 <sup>b</sup>	13
	85.0	13	120 <sup>c</sup>	13
	85.0	13	120 <sup>d</sup>	13
4"	145.0	14	190 <sup>e</sup>	14
5"	240.0	15	290 <sup>e</sup>	15
6"	370.0	16	500 <sup>e</sup>	16

Size	2-Way		3-Way	
	Kvs	P Code	Kvs	P Code
2-1/2"	48	12	69 <sup>b</sup>	12
	48	12	82 <sup>c</sup>	12
	48	12	99 <sup>d</sup>	12
3"	74	13	95 <sup>b</sup>	13
	74	13	104 <sup>c</sup>	13
	74	13	104 <sup>d</sup>	13
4"	125	14	164 <sup>e</sup>	14
5"	208	15	251 <sup>e</sup>	15
6"	320	16	433 <sup>e</sup>	16

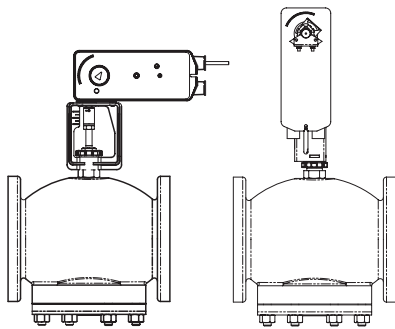
Note: For detailed information on the 8000 Series Globe Valves, refer to publication F-27199.

Globe Valves

# 8000 Series Globe Valves

## Two-Way Spring Return

Globe Valves



### 2-1/2 to 6 in. Flanged Two-Way Spring Return Stem Up Normally Open

<b>Flow Type</b>	Equal %.
<b>Material</b>	
<b>Body</b>	Cast iron.
<b>Seat</b>	Forged brass.
<b>Stem</b>	Stainless steel.
<b>Plug</b>	Forged brass.
<b>Packing</b>	Spring loaded TFE/EPDM.
<b>Seat Ring</b>	EPDM.
<b>ANSI Pressure Class</b>	125 psig (862 kPa).
<b>Max. Inlet Pressure Steam</b>	35 psig (240 kPa).
<b>Allowable Control Media Temperature</b>	20 to 281 °F (-7 to 138 °C).
<b>Close-Off Pressure</b>	125 psi (862 kPa).
<b>Close-Off Rating</b>	ANSI IV (0.01% leakage).

#### Two-Way Normally Open Assemblies.


Size in.	Cv (K <sub>vs</sub> )	Close-Off Pressure/ Max. Operating Differential Pressure <sup>a</sup> psi (kPa)	Stem Up	Two Position	Floating	Proportional <sup>b</sup>	Input Voltage Vac
2-1/2	56 (48)	125/35 (862/241)	Open	VA-8213-595-5-12	—	—	120
				VA-8213-596-5-12	VF-8213-596-5-12	VS-8213-596-5-12	24
3	85 (74)			VA-8213-595-5-13	—	—	120
VA-8213-596-5-13				VF-8213-596-5-13	VS-8213-596-5-13	24	
4	145 (125)			VA-8213-595-5-14	—	—	120
5	240 (208)			VA-8213-596-5-14	VF-8213-596-5-14	VS-8213-596-5-14	24
				VA-8213-595-5-15	—	—	120
				VA-8213-596-5-15	VF-8213-596-5-15	VS-8213-596-5-15	24
				6	370 (320)	VA-8213-552-5-16	—
VA-8213-556-5-16	VF-8213-556-5-16			VS-8213-556-5-16		24	
VA-8213-572-5-16	—	—	120				
VA-8213-576-5-16	VF-8213-576-5-16	VS-8213-576-5-16	24				

<sup>a</sup> Close-off pressure is the maximum pressure differential across the valve in the closed position. Maximum operating differential pressure is the maximum differential across the valve in the open position. Do not exceed either value.

<sup>b</sup> Factory proportional control signal is direct-acting. An increase in control signal will open a N.C. valve and close a N.O. valve.

# 8000 Series Globe Valves Two-Way Spring Return

**Actuator Code Table.**

Vx-8213-xxx-5-1x  


Actuator Codes	Model Prefix	Actuator Model (Reference pages 73 thru 75)	Description	Wiring Diagrams		Dimension Information	
				Page	Figure	Page	Figure
552	VA	MA41-7150	120 Vac, 2-Position	176	12	216	92
556	VA	MA41-7153	24 Vac, 2-Position	176	12	216	92
556	VF	MF41-7153	24 Vac, 3-Wire Floating	179 to 181	21 to 24	216	92
556	VS	MS41-7153	24 Vac, 2-10 Vdc Input <sup>a</sup>	180, 194 to 195	22, 55 to 57	216	92
572	VA	MA40-7170	120 Vac, 2-Position, NEMA 4 <sup>b</sup>	175	10	214	88
576	VA	MA40-7173	24 VAc, 2-Position, NEMA 4 <sup>b</sup>	175	10	214	88
576	VF	MF40-7173	24 Vac, 3-Wire, Floating, NEMA 4 <sup>b</sup>	178	17 to 18	214	88
576	VS	MS40-7173	24 Vac, 2-10 Vdc Input, NEMA 4 <sup>b</sup>	190 to 192	45 to 48	214	88
595	VA	MA61-7200	120 Vac, 2-Position	177	14	217	94
596	VA	MA61-7203	24 Vac, 2- Position	177	14	217	94
596	VF	MF61-7203	24 Vac, 3-Wire Floating	185	32 to 35	217	94
596	VS	MS61-7203	24, Vac, 2-10 Vdc Input <sup>a</sup>	197 to 199	61, 63 to 66	217	94

<sup>a</sup> Reversible control signal.

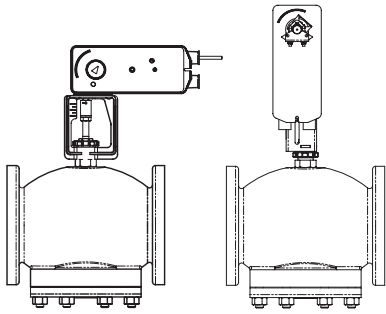
<sup>b</sup> NEMA 4 with customer supplied water tight connector.

**Globe Valves**

# 8000 Series Globe Valves

## Two-Way Spring Return

Globe Valves



### 2-1/2 to 6 in. Flanged

### Two-Way Spring Return

### Stem Up Normally Closed

<b>Flow Type</b>	Equal %.
<b>Body</b>	Cast iron.
<b>Seat</b>	Forged brass.
<b>Stem</b>	Stainless steel.
<b>Material</b>	<b>Plug</b> Forged brass.
	<b>Packing</b> Spring loaded TFE/EPDM.
	<b>Seat Ring</b> EPDM.
<b>ANSI Pressure Class</b>	125 psig (862 kPa).
<b>Max. Inlet Pressure Steam</b>	35 psig (240 kPa) .
<b>Allowable Control Media Temperature</b>	20 to 281 °F (-7 to 138 °C).
<b>Close-Off Pressure</b>	125 psi (862 kPa).
<b>Close-Off Rating</b>	ANSI IV (0.01% leakage).

#### Two-Way Normally Closed Assemblies.


Size in.	Cv (Kvs)	Close-Off Pressure/ Max. Operating Differential Pressure <sup>a</sup> psi (kPa)	Stem Up	Two Position	Floating	Proportional <sup>b</sup>	Input Voltage Vac
2-1/2	56 (48)	125/35 (862/241)	Closed	VA-8223-595-5-12	—	—	120
				VA-8223-596-5-12	VF-8223-596-5-12	VS-8223-596-5-12	24
3	85 (74)			VA-8223-595-5-13	—	—	120
				VA-8223-596-5-13	VF-8223-596-5-13	VS-8223-596-5-13	24
4	145 (125)			VA-8223-595-5-14	—	—	120
				VA-8223-596-5-14	VF-8223-596-5-14	VS-8223-596-5-14	24
5	240 (208)			VA-8223-595-5-15	—	—	120
				VA-8223-596-5-15	VF-8223-596-5-15	VS-8223-596-5-15	24
6	370 (320)			VA-8223-552-5-16	—	—	120
				VA-8223-556-5-16	VF-8223-556-5-16	VS-8223-556-5-16	24
		VA-8223-572-5-16	—	VS-8223-572-5-16	120		
		VA-8223-576-5-16	VF-8223-576-5-16	VS-8223-576-5-16	24		
		125/25 (862/172)					

<sup>a</sup> Close-off pressure is the maximum pressure differential across the valve in the closed position. Maximum operating differential pressure is the maximum differential across the valve in the open position. Do not exceed either value.

<sup>b</sup> Factory proportional control signal is direct-acting. An increase in control signal will open a N.C. valve and close a N.O. valve.

# 8000 Series Globe Valves Two-Way Spring Return

**Actuator Code Table.**

Vx-8223-xxx-5-1x  


Actuator Codes	Model Prefix	Actuator Model (Reference pages 73 thru 75)	Description	Wiring Diagrams		Dimension Information	
				Page	Figure	Page	Figure
552	VA	MA41-7150	120 Vac, 2-Position	176	12	216	92
556	VA	MA41-7153	24 Vac, 2-Position	176	12	216	92
556	VF	MF41-7153	24 Vac, 3-Wire Floating	179 to 181	21 to 24	216	92
556	VS	MS41-7153	24 Vac, 2-10 Vdc Input <sup>a</sup>	180, 194 to 195	22, 55 to 57	216	92
572	VA	MA40-7170	120 Vac, 2-Position, NEMA 4 <sup>b</sup>	175	10	214	88
572	VS	MS40-7170	120 Vac, 2-10 Vdc Input, NEMA 4 <sup>b</sup>	190	43 to 44	214	88
576	VA	MA40-7173	24 Vac, 2-Position, NEMA 4 <sup>b</sup>	175	10	214	88
576	VF	MF40-7173	24 Vac, 3-Wire, Floating, NEMA 4 <sup>b</sup>	178	17 to 18	214	88
576	VS	MS40-7173	24 Vac, 2-10 Vdc Input, NEMA 4 <sup>b</sup>	190 to 192	45 to 48	217	94
595	VA	MA61-7200	120 Vac, 2-Position	177	14	217	94
596	VA	MA61-7203	24 Vac, 2- Position	177	14	217	94
596	VF	MF61-7203	24 Vac, 3-Wire Floating	185 to 186	32 to 35	217	94
596	VS	MS61-7203	24, Vac, 2-10 Vdc Input <sup>a</sup>	197 to 199	61, 63 to 66	217	94

<sup>a</sup> Reversible control signal.

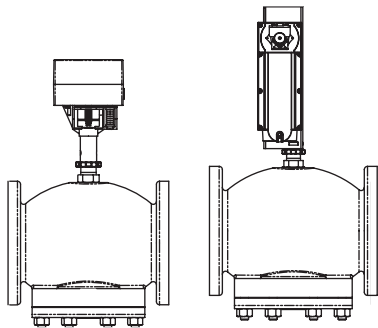
<sup>b</sup> NEMA 4 with customer supplied water tight connector.

Globe Valves

# 8000 Series Globe Valves

## Two-Way Non-Spring Return

Globe Valves



### 2-1/2 to 6 in. Flanged

### Two-Way Non-Spring Return

### Stem Up Open

<b>Flow Type</b>	Equal %.
<b>Body</b>	Cast iron.
<b>Seat</b>	Forged brass.
<b>End Connections</b>	ASA flanged.
<b>Material Stem</b>	Stainless steel.
<b>Plug</b>	Forged brass.
<b>Packing</b>	Spring loaded TFE/EPDM.
<b>Seat Ring</b>	EPDM.
<b>ANSI Pressure Class</b>	125 psig (862 kPa).
<b>Max. Inlet Pressure Steam</b>	35 psig (240 kPa).
<b>Allowable Control Media Temperature</b>	20 to 281 °F (-7 to 138 °C).
<b>Close-Off Pressure</b>	125 psi (862 kPa).
<b>Close-Off Rating</b>	ANSI IV (0.01% leakage).

Size in.	Cv (Kvs)	Close-Off Pressure/ Max. Operating Differential Pressure <sup>a</sup> psi (kPa)	Stem Up	Floating	Proportional <sup>b</sup>
2-1/2	56 (48)	125/35 (862/241)	Open	VF-8213-301-5-12	VS-8213-422-5-12
3	85 (74)			VF-8213-301-5-13	VS-8213-422-5-13
4	145 (125)			VF-8213-301-5-14	VS-8213-422-5-14
5	240 (208)			VF-8213-301-5-15	VS-8213-422-5-15
6	370 (320)			VF-8213-516-5-16	VS-8213-516-5-16
				—	VS-8213-512-5-16

<sup>a</sup> Close-off pressure is the maximum pressure differential across the valve in the closed position. Maximum operating differential pressure is the maximum differential across the valve in the open position. Do not exceed either value.

<sup>b</sup> Factory proportional control signal is direct-acting. An increase in control signal will close a stem up open valve.

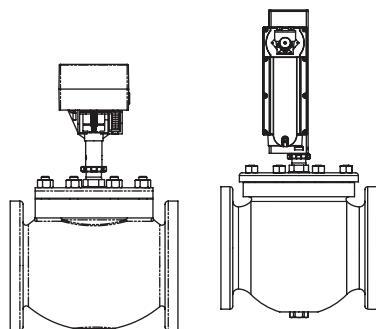
#### Actuator Code Table.

Vx-8213-xxx-5-1x

Actuator Codes	Model Prefix	Actuator Model (Reference pages 73 thru 75)	Description	Wiring Diagrams		Dimension Information	
				Page	Figure	Page	Figure
301	VF	MF-63103	24 Vac 3-Wire Floating	177	16	218	96
422	VS	MF-63123-411	24 Vac 4 to 20 mA Input	186	36	218	96
512	VS	MS41-6340	120 Vac 2 to 10 Vdc Input	193 to 194	53 to 54	215	90
516	VF	MF41-6343	24 Vac 3-Wire Floating	178	17	215	90
516	VS	MS41-6343	24 Vac 4 to 20 mA input	193 to 194	53 to 54	215	90



# 8000 Series Globe Valves Two-Way Non-Spring Return



## 2-1/2 to 6 in. Flanged Two-Way Non-Spring Return Stem Up Closed

<b>Flow Type</b>	Equal %.
<b>Body</b>	Cast iron.
<b>Seat</b>	Forged brass.
<b>End Connections</b>	ASA flanged.
<b>Material Stem</b>	Stainless steel.
<b>Plug</b>	Forged brass.
<b>Packing</b>	Spring loaded TFE/EPDM.
<b>Seat Ring</b>	EPDM.
<b>ANSI Pressure Class</b>	125 psig (862 kPa).
<b>Max. Inlet Pressure Steam</b>	35 psig (240 kPa).
<b>Allowable Control Media Temperature</b>	20 to 281 °F (-7 to 138 °C).
<b>Close-Off Pressure</b>	125 psi (862 kPa).
<b>Close-Off Rating</b>	ANSI IV (0.01% leakage).

Globe Valves

Size in.	Cv (K <sub>vs</sub> )	Close-Off Pressure/ Max. Operating Differential Pressure <sup>a</sup> psi (kPa)	Stem Up	Floating	Proportional <sup>b</sup>
2-1/2	56 (48)	125/35 (862/241)	Closed	VF-8223-301-5-12	VS-8223-422-5-12
3	85 (74)			VF-8223-301-5-13	VS-8223-422-5-13
4	145 (125)			VF-8223-301-5-14	VS-8223-422-5-14
5	240 (208)			VF-8223-301-5-15	VS-8223-422-5-15
6	370 (320)			VF-8223-516-5-16	VS-8223-516-5-16
				—	VS-8223-512-5-16

<sup>a</sup> Close-off pressure is the maximum pressure differential across the valve in the closed position. Maximum operating differential pressure is the maximum differential across the valve in the open position. Do not exceed either value.

<sup>b</sup> Factory proportional control signal is direct-acting. An increase in control signal will open a stem up closed valve.

**Actuator Code Table.**

Vx-8223-xxx-5-1x

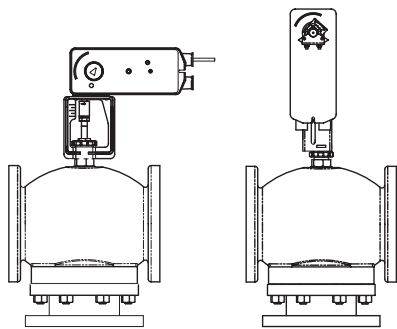


Actuator Codes	Model Prefix	Actuator Model (Reference pages 73 thru 75)	Description	Wiring Diagrams		Dimension Information	
				Page	Figure	Page	Figure
301	VF	MF-63103	24 Vac 3-Wire Floating	177	16	218	96
422	VS	MF-63123-411	24 Vac 4 to 20 mA Input	186	36	218	96
512	VS	MS41-6340	120 Vac 2 to 10 Vdc Input	193 to 194	53 to 54	215	90
516	VF	MF41-6343	24 Vac 3-Wire Floating	178	17	215	90
516	VS	MS41-6343	24 Vac 4 to 20 mA input	193 to 194	53 to 54	215	90

# 8000 Series Globe Valves

## Three-Way Spring Return

Globe Valves



**2-1/2 to 6 in. Flanged**  
**Three-Way Spring Return**  
**Stem Up**  
**Mixing Closed A to AB**  
**Diverting Closed AB to A**

<b>Flow Type</b>	Equal %.
<b>Body</b>	Cast iron.
<b>Seat</b>	Forged brass.
<b>Stem</b>	Stainless steel.
<b>Material</b>	<b>Plug</b> Forged brass.
	<b>Packing</b> Spring loaded TFE/EPDM.
	<b>Seat Ring</b> EPDM.
<b>ANSI Pressure Class</b>	125 psig (862 kPa).
<b>Allowable Control Media Temperature</b>	20 to 281 °F (-7 to 138 °C).
<b>Close-Off Pressure</b>	125 psi (862 kPa).
<b>Close-Off Rating</b>	ANSI III (0.1% leakage).

Size in.	Cv (M) Mixing/ (D) Diverting (K <sub>vs</sub> )	Close-Off Pressure/ Max. Operating Differential Pressure <sup>a</sup> psi (kPa)	Stem Up	Two Position	Floating	Proportional <sup>b</sup>	Input Voltage Vac	
2-1/2	80 (69) m	35/35 (241/241)	A Port Closed	VA-8303-595-5-12	—	—	120	
	3			110 (95) m	VA-8303-596-5-12	VF-8303-596-5-12	VS-8303-596-5-12	24
					VA-8303-595-5-12	—	—	120
					VA-8303-596-5-12	VF-8303-596-5-12	VS-8303-596-5-12	24
					VA-8303-595-5-12	—	—	120
					VA-8303-596-5-12	VF-8303-596-5-12	VS-8303-596-5-12	24
VA-8303-595-5-13					—	—	120	
4	120 (104) d			VA-8303-596-5-13	VF-8303-596-5-13	VS-8303-596-5-13	24	
				VA-8303-595-5-13	—	—	120	
				VA-8303-596-5-13	VF-8303-596-5-13	VS-8303-596-5-13	24	
				VA-8303-595-5-14	—	—	120	
				VA-8303-596-5-14	VF-8303-596-5-14	VS-8303-596-5-14	24	
		VA-8303-595-5-15	—	—	120			
5	190 (164) m or d	VA-8303-596-5-15	VF-8303-596-5-15	VS-8303-596-5-15	24			
		VA-8303-595-5-15	—	—	120			
		VA-8303-596-5-15	VF-8303-596-5-15	VS-8303-596-5-15	24			
		VA-8303-552-5-16	—	—	120			
		6	500 (433) m or d	VA-8303-556-5-16	VF-8303-556-5-16	VS-8303-556-5-16	24	
				VA-8303-572-5-16	—	VS-8303-572-5-16	120	
VA-8303-576-5-16	VF-8303-576-5-16			VS-8303-576-5-16	24			

<sup>a</sup> Close-off pressure is the maximum pressure differential across the valve in the closed position. Maximum operating differential pressure is the maximum differential across the valve in the open position. Do not exceed either value.

<sup>b</sup> Factory proportional control signal is direct-acting. An increase in control signal will open A and AB while closing B port.

# 8000 Series Globe Valves Three-Way Spring Return

**Actuator Code Table.**

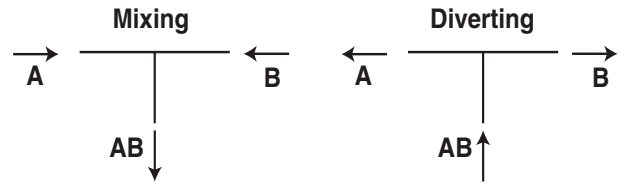
Vx-8303-xxx-5-1x

Actuator Codes	Model Prefix	Actuator Model (Reference pages 73 thru 75)	Description	Wiring Diagrams		Dimension Information	
				Page	Figure	Page	Figure
552	VA	MA41-7150	120 Vac, 2-Position	176	12	216	93
556	VA	MA41-7153	24 Vac, 2-Position	176	12	216	93
556	VF	MF41-7153	24 Vac, 3-Wire Floating	179 to 181	21 to 24	216	93
556	VS	MS41-7153	24 Vac, 2-10 Vdc Input <sup>a</sup>	180, 194 to 195	22, 55 to 57	216	93
572	VA	MA40-7170	120 Vac, 2-Position, NEMA 4 <sup>b</sup>	175	10	214	89
572	VS	MS40-7170	120 Vac, 2-10 Vdc Input, NEMA 4 <sup>b</sup>	190	43 to 44	214	89
576	VA	MA40-7173	24 Vac, 2-Position, NEMA 4 <sup>b</sup>	175	10	214	89
576	VF	MF40-7173	24 Vac, 3-Wire, Floating, NEMA 4 <sup>b</sup>	178	17 to 18	214	89
576	VS	MS40-7173	24 Vac, 2-10 Vdc Input, NEMA 4 <sup>b</sup>	190 to 192	45 to 48	214	89
595	VA	MA61-7200	120 Vac, 2-Position	177	14	217	94
596	VA	MA61-7203	24 Vac, 2-Position	177	14	217	94
596	VF	MF61-7203	24 Vac, 3-Wire Floating	185 to 186	32 to 35	217	94
596	VS	MS61-7203	24, Vac, 2-10 Vdc Input <sup>a</sup>	197 to 199	61, 63 to 66	217	94

<sup>a</sup> Reversible control signal.

<sup>b</sup> With customer supplied water tight connector.

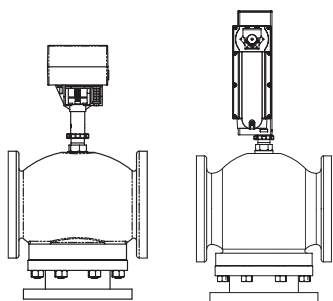
### Three-Way Flow Patterns



Globe Valves

# 8000 Series Globe Valves Three-Way Non-Spring Return

Globe Valves



**2-1/2 to 6 in. Flanged**  
**Three-Way Non-Spring Return**  
**Stem Up**  
**Mixing Closed A to AB**  
**Diverting Closed AB to A**

<b>Flow Type</b>	Equal %.
<b>Material</b>	Cast iron.
<b>Body</b>	Forged brass.
<b>Seat</b>	Stainless steel.
<b>Stem</b>	Forged brass.
<b>Plug</b>	Spring loaded TFE/EPDM.
<b>Packing</b>	EPDM.
<b>Seat Ring</b>	
<b>ANSI Pressure Class</b>	125 psig (862 kPa).
<b>Allowable Control Media Temperature</b>	20 to 281 °F (-7 to 138 °C).
<b>Close-Off Pressure</b>	35 psi (241 kPa).
<b>Close-Off Rating</b>	ANSI III (0.1% leakage).

Size in.	Cv (M) Mixing/ (D) Diverting (K <sub>vs</sub> )	Close-Off Pressure/ Max. Operating Differential Pressure <sup>a</sup> psi (kPa)	Stem Up	Three-Wire Floating	Proportional <sup>b</sup> 2-10 Vdc Input	Input Voltage Vac
2-1/2	80 (69) m 95 (82) d/A port 115 (99) d/ B port	35/35 (241/241)	A Port Closed	VF-8303-301-5-12	VS-8303-422-5-12	24
3	110 (95) m 120 (104) d			VF-8303-301-5-13	VS-8303-422-5-13	
4	190 (164) m or d			VF-8303-301-5-14	VS-8303-422-5-14	
5	290 (251) m or d			VF-8303-301-5-15	VS-8303-422-5-15	
6	500 (433) m or d	32/28 (222/193)		VF-8303-516-5-16	VS-8303-516-5-16	24
				—	VS-8303-512-5-16	120

<sup>a</sup> Close-off pressure is the maximum pressure differential across the valve in the closed position. Maximum operating differential pressure is the maximum differential across the valve in the open position. Do not exceed either value.

<sup>b</sup> Factory proportional control signal is direct-acting. An increase in control signal will open A and AB while closing B port.

**Actuator Code Table.**

Vx-8303-xxx-5-1x

Actuator Codes	Model Prefix	Actuator Model (Reference pages 73 thru 75)	Description	Wiring Diagrams		Dimension Information	
				Page	Figure	Page	Figure
301	VF	MF-63103	24 Vac, 3-Wire, Floating	177	16	218	97
422	VS	MF-63123-411	24 Vac 4-20 mA Input	186	36	218	97
512	VS	MS41-6340	120 Vac 2-10 Vdc Input	193 to 194	53 to 54	215	91
516	VF	MF41-6343	24 Vac 3-Wire Floating	178	17	215	91
516	VS	MS41-6343	24 Vac 4-20 mA Input	193 to 194	53 to 54	215	91

**Three-Way Flow Patterns**

