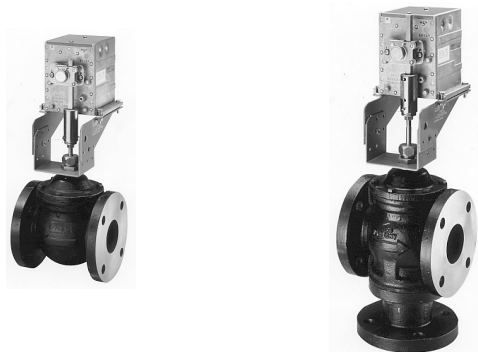


VG2x31 Series

Electric Cast Iron Flanged Globe Valves

VG2231 and VG2831 Series Valves with M150 Series Electric Actuators

**M150 Series Actuators Mounted to VG2000 Series Valves**

Selection Chart

				Non-Spring Return	
				Floating Without Switches	0 to 10 VDC Proportional
Valve	Size	Cv	Closeoff	M150AGA Actuator, Y20EBD-3 Linkage	M150GGA Actuator, Y20EBD-3 Linkage
Two-Way Push-Down-to-Close					
VG2231TM	2-1/2"	51	46	VG2231TM+5UAGA	VG2231TM+5UGGA
VG2231UM	3"	83	32	VG2231UM+5UAGA	VG2231UM+5UGGA
VG2231VM	4"	150	18	VG2231VM+5UAGA	VG2231VM+5UGGA
Three-Way Mixing					
VG2831TM	2-1/2"	54	28	VG2831TM+5UAGA	VG2831TM+5UGGA
VG2831UM	3"	80	19	VG2831UM+5UAGA	VG2831UM+5UGGA
VG2831VM	4"	157	11	VG2831VM+5UAGA	VG2831VM+5UGGA

Accessories for M150 Series Electric Actuators (Order Separately)

Code Number	Description	Ship Wt. lb (a)
S91DJ-1	Auxiliary Switch Kit with One Single-Pole, Double-Throw Switch	1.8
S91EJ-1	Auxiliary Switch Kit with Two Single-Pole, Double-Throw Switches	1.9
S91PT-1	Auxiliary Potentiometer Switch Kit (1,000 Ohms, 1/3 Watt)	1.8
CVR83A-600R	Weather Resistant Cover	0.4
Y68AA-1	Cover Mounted Transformer (120 VAC Primary Power Supply, 40 VA Transformer Capacity)	1.9
Y68DA-1	Cover Mounted Transformer (240 VAC Primary Power Supply, 40 VA Transformer Capacity)	1.9
Y68HA-1	Cover Mounted Transformer (24 VAC Primary Power Supply, 40 VA Transformer Capacity – Used when an Isolation Transformer is Needed)	1.9

(a) lb x 0.454 = kg.

VG2231 and VG2831 Valves

- controls – hot or chilled water, 35 psig saturated steam
- ANSI 125 flange – per ANSI B16.1
- ANSI III closeoff, leakage: 0.1% of maximum flow
- 175 psig static pressure rating – water temperatures 35 to 150°F; decreasing to 125 psig at 281°F
- maximum recommended operating pressure drop: 35 psig
- inherent flow characteristics: modified linear
- packing – EPT ring packs, field replaceable
- bronze seat and plug, stainless steel stem – field replaceable
- disk – VG2231: stainless steel filled PTFE
- disk – VG2831: metal-to-metal

M150 Series Actuators

- factory or field mounted
- 270 lb (1,200 N) closing/opening force
- long-life, oil-immersed gear train
- buffer spring protects actuator and linkage
- 24 VAC, 50/60 Hz, 20 VA
- ambient temperature rating -40 to 125°F (-40 to 52°C)

For complete details, refer to Product/Technical Bulletin LIT-977133.

To Order

Specify the code number from the selection chart.

VG2x31 Series Electric Cast Iron Flanged Globe Valves (Continued)

VG2231 and VG2931 Series Valves with M91xx Series Electric Actuators



VG2x31 Valves with
M91xx Series Non-Spring Return
Electric Valve Actuators

VG2231 and VG2831 Valves

- controls – hot or chilled water, 35 psig saturated steam
- ANSI 125 flange – per ANSI B16.1
- ANSI III closeoff, leakage: 0.1% of maximum flow
- 175 psig static pressure rating – water temperatures 35 to 150°F; decreasing to 125 psig at 281°F
- maximum recommended operating pressure drop: 35 psig
- inherent flow characteristics: modified linear
- packing – EPT ring packs, field replaceable
- bronze seat and plug, stainless steel stem – field replaceable
- disk – VG2231: stainless steel filled PTFE
- disk – VG2831: metal-to-metal

M91xx Series Electric Actuators

- factory of field mounted
- 24 VAC 50/60 Hz or 24 VDC, 7.5 VA
- ambient temperature rating –4 to 122°F (-20 to 50°C)
- two-bolt coupler clamp – easy coupling of linkage to valve stem
- single to tandem actuator convertible

To Order

Specify the code number from the selection chart.

Selection Chart

			Non-Spring Return			
			On/Off Floating without switches	Proportional without switches	On/Off Floating with two switches	Proportional with two switches
Size in.	Cv	Closeoff psig	M9116-AGA-2 or M9124-AGA-2	M9116-GGA-2 or M9124-GGA-2	M9116-AGC-2 or M9124-AGC-2	M9116-GGC-2 or M9124-GGC-2
Two-Way, Push-Down-To-Close						
2-1/2	51	62	VG2231TM+916AGA	VG2231TM+916GGA	VG2231TM+916AGC	VG2231TM+916GGC
2-1/2	51	101	VG2231TM+924AGA	VG2231TM+924GGA	VG2231TM+924AGC	VG2231TM+924GGC
3	83	27	VG2231UM+916AGA	VG2231UM+916GGA	VG2231UM+916AGC	VG2231UM+916GGC
3	83	43	VG2231UM+924AGA	VG2231UM+924GGA	VG2231UM+924AGC	VG2231UM+924GGC
3	83	88	VG2231UM2924AGA ^(a)	VG2231UM2924GGA ^(a)	VG2231UM2924AGC ^(a)	VG2231UM2924GGC ^(a)
4	150	24	VG2231VM+924AGA	VG2231VM+924GGA	VG2231VM+924AGC	VG2231VM+924GGC
4	150	49	VG2231VM2924AGA ^(a)	VG2231VM2924GGA ^(a)	VG2231VM2924AGC ^(a)	VG2231VM2924GGC ^(a)
5	240	26	VG2231WN2924AGA ^(a)	VG2231WN2924GGA ^(a)	VG2231WN2924AGC ^(a)	VG2231WN2924GGC ^(a)
6	350	16	VG2231YN2924AGA ^(a)	VG2231YN2924GGA ^(a)	VG2231YN2924AGC ^(a)	VG2231YN2924GGC ^(a)
Three-Way, Mixing						
2-1/2	54	37	VG2831TM+916AGA	VG2831TM+916GGA	VG2831TM+916AGC	VG2831TM+916GGC
2-1/2	54	60	VG2831TM+924AGA	VG2831TM+924GGA	VG2831TM+924AGC	VG2831TM+924GGC
3	80	16	VG2831UM+916AGA	VG2831UM+916GGA	VG2831UM+916AGC	VG2831UM+916GGC
3	80	26	VG2831UM+924AGA	VG2831UM+924GGA	VG2831UM+924AGC	VG2831UM+924GGC
3	80	53	VG2831UM2924AGA ^(a)	VG2831UM2924GGA ^(a)	VG2831UM2924AGC ^(a)	VG2831UM2924GGC ^(a)
4	157	9	VG2831VM+916AGA	VG2831VM+916GGA	VG2831VM+916AGC	VG2831VM+916GGC
4	157	14	VG2831VM+924AGA	VG2831VM+924GGA	VG2831VM+924AGC	VG2831VM+924GGC
4	157	30	VG2831VM2924AGA ^(a)	VG2831VM2924GGA ^(a)	VG2831VM2924AGC ^(a)	VG2831VM2924GGC ^(a)
5	238	7	VG2831WN+924AGA	VG2831WN+924GGA	VG2831WN+924AGC	VG2831WN+924GGC
5	238	15	VG2831WN2924AGA ^(a)	VG2831WN2924GGA ^(a)	VG2831WN2924AGC ^(a)	VG2831WN2924GGC ^(a)
6	347	4	VG2831YN+924AGA	VG2831YN+924GGA	VG2831YN+924AGC	VG2831YN+924GGC
6	347	9	VG2831YN2924AGA ^(a)	VG2831YN2924GGA ^(a)	VG2831YN2924AGC ^(a)	VG2831YN2924GGC ^(a)

(a) Valve assemblies have two actuators mounted in tandem. On tandem actuator assemblies with switches, only one actuator is provided with auxiliary switches.

VG2x31 Series Electric Cast Iron Flanged Globe Valves (Continued)**VG2231 and VG2931 Series Valves with M9216 Series Electric Actuators with or without Switches**

**VG2x31 Valves with
M9216 Series Spring Return
Electric Valve Actuators**

VG2231 and VG2831 Valves

- controls – hot or chilled water, 35 psig saturated steam
- ANSI 125 flange – per ANSI B16.1
- ANSI III closeoff, leakage: 0.1% of maximum flow
- 175 psig static pressure rating – water temperatures 35 to 150°F; decreasing to 125 psig at 281°F
- maximum recommended operating pressure drop: 35 psig
- inherent flow characteristics: modified linear
- packing – EPT ring packs, field replaceable
- bronze seat and plug, stainless steel stem – field replaceable

- disk – VG2231: stainless steel filled PTFE
- disk – VG2831: metal-to-metal

M9216 Series Electric Actuators with or without Switches

- factory of field mounted
- 24 VAC 50/60 Hz or 24 VDC, 14 VA
- ambient temperature rating –4 to 122°F (-20 to 50°C)
- two-bolt coupler clamp – easy coupling of linkage to valve stem
- single to tandem actuator convertible

To Order

Specify the code number from the selection chart

Selection Chart

Selection Chart				Spring Return					
Valve	Size, in.	Cv	Close-off psig	Floating		On/Off		Proportional	
				Without Switches	With Two Switches	Without Switches	With Two Switches	Without Switches	With Two Switches
				M9216-AGA-2	M9216-AGC-2	M9216-BGA-2	M9216-BGC-2	M9216-GGA-2	M9216-GGC-2
Two-Way – Spring Return Normally Open – Valve Stem Up									
VG2231TM	2-1/2	51	47	VG2231TM+926AGA	VG2231TM+926AGC	VG2231TM+926BGA	VG2231TM+926BGC	VG2231TM+926GGA	VG2231TM+926GGC
VG2231UM	3	83	20	VG2231UM+926AGA	VG2231UM+926AGC	VG2231UM+926BGA	VG2231UM+926BGC	VG2231UM+926GGA	VG2231UM+926GGC
VG2231UM	3	83	41	---	---	VG2231UM2926BGA ^(a)	VG2231UM2926BGC ^(a)	VG2231UM2926GGA ^(a)	VG2231UM2926GGC ^(a)
VG2231VM	4	150	23			VG2231VM2926BGA ^(a)	VG2231VM2926BGC ^(a)	VG2231VM2926GGA ^(a)	VG2231VM2926GGC ^(a)
VG2231WN	5	240	12			VG2231WN2926BGA ^(a)	VG2231WN2926BGC ^(a)	VG2231WN2926GGA ^(a)	VG2231WN2926GGC ^(a)
Two-Way – Spring Return Normally Closed – Valve Stem Down									
VG2231TM	2-1/2	51	47	VG2231TM+946AGA	VG2231TM+946AGC	VG2231TM+946BGA	VG2231TM+946BGC	VG2231TM+946GGA	VG2231TM+946GGC
VG2231UM	3	83	20	VG2231UM+946AGA	VG2231UM+946AGC	VG2231UM+946BGA	VG2231UM+946BGC	VG2231UM+946GGA	VG2231UM+946GGC
VG2231UM	3	83	41	---	---	VG2231UM2946BGA ^(a)	VG2231UM2946BGC ^(a)	VG2231UM2946GGA ^(a)	VG2231UM2946GGC ^(a)
VG2231VM	4	150	23			VG2231VM2946BGA ^(a)	VG2231VM2946BGC ^(a)	VG2231VM2946GGA ^(a)	VG2231VM2946GGC ^(a)
VG2231WN	5	240	12			VG2231WN2946BGA ^(a)	VG2231WN2946BGC ^(a)	VG2231WN2946GGA ^(a)	VG2231WN2946GGC ^(a)
Three-Way Mixing – Spring Return – Valve Stem Up									
VG2831TM	2-1/2	54	28	VG2831TM+926AGA	VG2831TM+926AGC	VG2831TM+926BGA	VG2831TM+926BGC	VG2831TM+926GGA	VG2831TM+926GGC
VG2831UM	3	80	12	VG2831UM+926AGA	VG2831UM+926AGC	VG2831UM+926BGA	VG2831UM+926BGC	VG2831UM+926GGA	VG2831UM+926GGC
VG2831UM	3	80	24	---	---	VG2831UM2926BGA ^(a)	VG2831UM2926BGC ^(a)	VG2831UM2926GGA ^(a)	VG2831UM2926GGC ^(a)
VG2831VM	4	157	6	VG2831VM+926AGA	VG2831VM+926AGC	VG2831VM+926BGA	VG2831VM+926BGC	VG2831VM+926GGA	VG2831VM+926GGC
VG2831VM	4	157	14	---	---	VG2831VM2926BGA ^(a)	VG2831VM2926BGC ^(a)	VG2831VM2926GGA ^(a)	VG2831VM2926GGC ^(a)
VG2831WN	5	238	7			VG2831WN2926BGA ^(a)	VG2831WN2926BGC ^(a)	VG2831WN2926GGA ^(a)	VG2831WN2926GGC ^(a)
VG2831YN	6	347	4			VG2831YN2926BGA ^(a)	VG2831YN2926BGC ^(a)	VG2831YN2926GGA ^(a)	VG2831YN2926GGC ^(a)
Three-Way Mixing – Spring Return – Valve Stem Down									
VG2831TM	2-1/2	54	28	VG2831TM+946AGA	VG2831TM+946AGC	VG2831TM+946BGA	VG2831TM+946BGC	VG2831TM+946GGA	VG2831TM+946GGC
VG2831UM	3	80	12	VG2831UM+946AGA	VG2831UM+946AGC	VG2831UM+946BGA	VG2831UM+946BGC	VG2831UM+946GGA	VG2831UM+946GGC
VG2831UM	3	80	24	---	---	VG2831UM2946BGA ^(a)	VG2831UM2946BGC ^(a)	VG2831UM2946GGA ^(a)	VG2831UM2946GGC ^(a)
VG2831VM	4	157	6	VG2831VM+946AGA	VG2831VM+946AGC	VG2831VM+946BGA	VG2831VM+946BGC	VG2831VM+946GGA	VG2831VM+946GGC
VG2831VM	4	157	14	---	---	VG2831VM2946BGA ^(a)	VG2831VM2946BGC ^(a)	VG2831VM2946GGA ^(a)	VG2831VM2946GGC ^(a)
VG2831WN	5	238	7			VG2831WN2946BGA ^(a)	VG2831WN2946BGC ^(a)	VG2831WN2946GGA ^(a)	VG2831WN2946GGC ^(a)
VG2831YN	6	347	4			VG2831YN2946BGA ^(a)	VG2831YN2946BGC ^(a)	VG2831YN2946GGA ^(a)	VG2831YN2946GGC ^(a)

(a) Valve assemblies have two actuators mounted in tandem.

VG2x31 Series Electric Cast Iron Flanged Globe Valves (Continued)

VG2231 and VG2831 Series Valves with VA-3100 Series Electric Actuators



VA-3100 Series Actuators Mounted to VG2000 Series Valves

To Order

Specify the code number from the selection chart.

Selection Chart

				Non-Spring Return		
				Floating without Switches	Floating with Feedback and Two Switches	0 to 10 VDC Proportional with Two Switches
Valve	Size	Cv	Close-off	VA-3100-AGA	VA-3100-AGC	VA-3100-HGC
Two-Way Push-Down-to-Close						
VG2231TM	2-1/2"	51	115	VG2231TM+300AGA	VG2231TM+300AGC	VG2231TM+300HGC
VG2231UM	3"	83	79	VG2231UM+301AGA	VG2231UM+301AGC	VG2231UM+301HGC
VG2231VM	4"	150	45	VG2231VM+301AGA	VG2231VM+301AGC	VG2231VM+301HGC
VG2231WN	5"	240	29	VG2231WN+302AGA	VG2231WN+302AGC	VG2231WN+302HGC
VG2231YN	6"	350	20	VG2231YN+302AGA	VG2231YN+302AGC	VG2231YN+302HGC
Three-Way Mixing						
VG2831TM	2-1/2"	54	69	VG2831TM+300AGA	VG2831TM+300AGC	VG2831TM+300HGC
VG2831UM	3"	80	48	VG2831UM+301AGA	VG2831UM+301AGC	VG2831UM+301HGC
VG2831VM	4"	157	27	VG2831VM+301AGA	VG2831VM+301AGC	VG2831VM+301HGC
VG2831WN	5"	238	17	VG2831WN+302AGA	VG2831WN+302AGC	VG2831WN+302HGC
VG2831YN	6"	347	12	VG2831YN+302AGA	VG2831YN+302AGC	VG2831YN+302HGC

VG2231 and VG2831 Valves

- controls – hot or chilled water, 35 psig saturated steam
- ANSI 125 flange – per ANSI B16.1
- ANSI III closeoff, leakage: 0.1% of maximum flow
- 175 psig static pressure rating – water temperatures 35 to 150°F; decreasing to 125 psig at 281°F
- maximum recommended operating pressure drop: 35 psig
- inherent flow characteristics: modified linear
- packing – EPT ring packs, field replaceable
- bronze seat and plug, stainless steel stem – field replaceable
- disk – VG2231: stainless steel filled PTFE
- disk – VG2831: metal-to-metal

VA-3100 Series Actuators

- direct coupled – factory or field mounted
 - 675 lb (3,000 N) closing/opening force
 - long-life, ACME drive screw
 - force limit switches ensure tight closeoff in all applications
 - NEMA 3/3R rated enclosure – IP 54
 - 24 VAC, 60 Hz, 18 VA maximum
 - ambient temperature rating 14 to 122°F (-10 to 50°C)
 - manual hand crank
 - manual or automatic operation
- For complete details, refer to Product/Technical Bulletin LIT-977133.

Tool Kit for VA-310x Series Electric Actuators (Order Separately)

Code Number	Description
VA-3100-101	Auxiliary Switch Cam Adjusting Wrench (Used on VA-3100 Series Electric Actuators – One Wrench is Supplied with Each Actuator)

VG2x31 Series Electric Cast Iron Flanged Globe Valves (Continued)

VG2231 and VG2831 Series Valves with VA-6100 Series Electric Actuators



VA-6100 Series Actuators Mounted to VG2000 Series Valves

To Order

Specify the code number from the selection chart.

Selection Chart

				Non-Spring Return	
				Floating with Two Switches	0 to 10 VDC Proportional with Two Switches
Valve	Size	Cv	Closeoff	VA-6100-AGC	VA-6100-HGC
Two-Way Push-Down-to-Close					
VG2231VN	4"	150	89	VG2231VN+602AGC	VG2231VN+602HGC
VG2231WN	5"	240	57	VG2231WN+602AGC	VG2231WN+602HGC
VG2231YN	6"	350	40	VG2231YN+602AGC	VG2231YN+602HGC
Three-Way Mixing					
VG2831VM	4"	157	54	VG2831VN+602AGC	VG2831VN+602HGC
VG2831WN	5"	238	34	VG2831WN+602AGC	VG2831WN+602HGC
VG2831YN	6"	347	24	VG2831YN+602AGC	VG2831YN+602HGC

VG2231 and VG2831 Valves

- controls – hot or chilled water, 35 psig saturated steam
- ANSI 125 flange – per ANSI B16.1
- ANSI III closeoff, leakage: 0.1% of maximum flow
- 175 psig static pressure rating – water temperatures 35 to 150°F; decreasing to 125 psig at 281°F
- maximum recommended operating pressure drop: 35 psig
- inherent flow characteristics: modified linear
- packing – EPT ring packs, field replaceable
- bronze seat and plug, stainless steel stem – field replaceable
- disk – VG2231: stainless steel filled PTFE
- disk – VG2831: metal-to-metal

VA-6100 Series Actuators

- direct coupled – factory or field mounted
- 1,350 lb (6,000 N) closing/opening force
- long-life, ACME drive screw
- force limit switches ensure tight closeoff in all applications
- NEMA 4 rated enclosure – IP 65
- 24 VAC, 60 Hz, 42 VA maximum
- ambient temperature rating -4 to 140°F (-20 to 60°C)
- manual hand wheel
- manual or automatic operation

For complete details, refer to Product/Technical Bulletin LIT-977133.