Globe Valves Quick Selection Guide

Honeywell



Honeywell Globe Valves provide precise control for any application

QUALITY

For more than 50 years, Honeywell has provided a legacy of globe valves with the most precise control for any application. The current families of globe valves and actuators provide the rangeablity and close off needed to keep the tightest control of your environment.



THREADED GLOBE VALVES AND ACTUATORS

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	A	ctuator Features		ML6425A3022	ML6425B3013	ML7425A3013	ML7425B3012	ML6420A3049	ML6420A3056	ML7420A3055	ML7420A3063	ML6421A1017	ML7421A1032				
	S	tem force (lbf)	135	135	135	135	135	135	135	135	405	405					
		pring return in 12 sec. /alve stem direction on powe	Down	Up	Down	Up											
	s	troke (in.)		3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4				
	0	- 10, 2 - 10 Vdc Control	, 2 - 10 Vdc Control				•			•	•		•				
	F	loating Control	•	•			•	•			•						
	Т	iming (sec.)	90	90	90	90	60	30	60	30	95	95					
Thread	ed Globe	Valve Specifications															
150, 3/4" S	troke, Ser	ni-Red Brass Body, PTFE Pac															
Flow ^a	Action	Trim Materials	Valve Number			Valve/	Actuato	r Close-	off Ratin	gs (PSI)	b						
Equal %	Direct		V5011N1008	230	230	230	230	230	230	230	230						

	ANSI Body Class 150, 3/4" Stroke, Semi-Red Brass Body, PTFE Packing Materials																		
	Valve Size	Cv	Flow ^a	Action	Trim Materials Valve Number			Valve/Actuator Close-off Ratings (PSI) ^b											
	1/2"	0.73	Equal %	Direct		V5011N1008	230	230	230	230	230	230	230	230					
	1/2"	1.16	Equal %	Direct		V5011N1016	230	230	230	230	230	230	230	230					
	1/2"	1.85	Equal %	Direct		V5011N1024	230	230	230	230	230	230	230	230					
	1/2"	2.9	Equal %	Direct		V5011N1032	230	230	230	230	230	230	230	230					
	1/2"	4.7	Equal %	Direct	Brass Plug	V5011N1040	230	230	230	230	230	230	230	230					
	3/4"	7.3	Equal %	Direct	Stainless Steel Seat	V5011N1057	230	230	230	230	230	230	230	230					
	1"	11.7	Equal %	Direct		V5011N1065	163	163	163	163	163	163	163	163	230	230			
	1 1/4"	18.7	Equal %	Direct		V5011N1073	104	104	104	104	104	104	104	104	230	230			
	1 1/2"	29.3	Equal %	Direct	V	V5011N1081	67	67	67	67	67	67	67	67	230	230			
	2"	46.8	Equal %	Direct		V5011N1099	37	37	37	37	37	37	37	37	126	126			
	2 1/2"	63	Equal %	Direct	D DI 10	V5011F1105	28	28	28	28	28	28	28	28	100	100			
	3"	100	Equal %	Direct	Brass Plug and Seat	V5011F1113	16	16	16	16	16	16	16	16	61	61			
	1/2"	0.73	Linear	Direct		V5011N2006	100	100	100	100	100	100	100	100					
2-Way	1/2"	1.16	Linear	Direct		V5011N2014	100	100	100	100	100	100	100	100					
≥	1/2"	1.85	Linear	Direct	Stainless Steel Plug and Seat	V5011N2022	100	100	100	100	100	100	100	100					
2	1/2"	2.9	Linear	Direct		V5011N2030	100	100	100	100	100	100	100	100					
	1/2"	4.7	Linear	Direct		V5011N2048	100	100	100	100	100	100	100	100					
	3/4"	7.3	Linear	Direct		V5011N2055	100	100	100	100	100	100	100	100					
	1"	11.7	Linear	Direct		V5011N2063	100	100	100	100	100	100	100	100	100	100			
	1 1/4"	18.7	Linear	Direct		V5011N2071	100	100	100	100	100	100	100	100	100	100			
	1 1/2"	29.3	Linear	Direct		V5011N2089	67	67	67	67	67	67	67	67	100	100			
	2"	46.8	Linear	Direct		V5011N2097	37	37	37	37	37	37	37	37	100	100			
	2 1/2"	63	Linear	Direct	Brass Plug and Seat	V5011G1111	28	28	28	28	28	28	28	28	100	100			
	3"	100	Linear	Direct	Diass Flug and Seat	V5011G1129	16	16	16	16	16	16	16	16	61	61			
	1/2"	2.9	Equal %	Reverse	Brass Plug	V5011N3004	230	230	230	230	230	230	230	230					
	1/2"	4.7	Equal %	Reverse	Stainless Steel Seat	V5011N3012	230	230	230	230	230	230	230	230					
	3/4"	7.3	Equal %	Reverse	Proce Diversed	V5011N3020	230	230	230	230	230	230	230	230					
	1"	11.7	Equal %	Reverse	Brass Plug and Integral Brass Seat	V5011N3038	163	163	163	163	163	163	163	163	230	230			
	1 1/4"	18.7	Equal %	Reverse	integral brass seat	V5011N3046	104	104	104	104	104	104	104	104	230	230			
	1/2"	2.9	Equal %	Mixing	Brass Plug	V5013N1030	230	230	230	230	230	230	230	230					
	1/2"	4.7	Equal %	Mixing	Stainless Steel Seat	V5013N1048	230	230	230	230	230	230	230	230					
3-Way	3/4"	7.3	Equal %	Mixing		V5013N1055	230	230	230	230	230	230	230	230					
∣≶	1"	11.7	Equal %	Mixing		V5013N1063	163	163	163	163	163	163	163	163	230	230			
က	1/4"	18.7	Equal %	Mixing	Brass Plug and Seat	V5013N1071	104	104	104	104	104	104	104	104	230	230			
	1 1/2"	29.3	Equal %	Mixing	-	V5013N1089	67	67	67	67	67	67	67	67	230	230			
	2"	46.8	Equal %	Mixing		V5013N1097	37	37	37	37	37	37	37	37	126	126			

a Use linear flow characteristic for steam service applications.
b Blank spaces indicate combinations not recommended, because lower force actuators meet maximum close-off ratings specified by the valve body.

GLOBE VALVE FEATURES

- Direct coupled actuators available for easy mounting
- Stainless steel trim standard on all VGF Series flanged valve models
- Models for both water and steam control
- Accurate positioning to ensure state-of-the-art temperature control
- Pressure balanced models for applications that require high close-off pressure



FLANGED GLOBE VALVES AND ACTUATORS

	Actuator Number 201 21 300 20 20 20 20 20 20 20 20 20 20 20 20 2											
Actuator Features		ML6425B3013	ML7425A3013	ML7425B3012	ML6420A3049	ML6420A3056	ML7420A3055	ML7420A3063	ML6421A1017	ML7421A1032	ML6421B1040	ML7421B1023
Stem force (lbf)	135	135	135	135	135	135	135	135	405	405	405	405
Spring return in 12 sec. (Valve stem direction on power failure)	Down	Up	Down	Up								
Stroke (in.)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	1 1/2	1 1/2
0 - 10, 2 - 10 Vdc Control			•	•			•	•		•		•
Floating Control	•	•			•	•			•		•	
Timing (sec.)	90	90	90	90	60	30	60	30	95	95	175	175

	Flanged Globe Valve Specifications					Valve Number			30 30 30 30 30 30 30 30 30 30 30 30 30 3											
	Valve Size	Cv	Steam Travel	Valve Style	ANSI Body Class Rating	OS Number	Close-Off Ratings (PSI)													
		75	3/4"	Pressure Balanced	Equal %	ANSI 125	VGF21EP25	175	175	175	175	175	175	175	175	175	175			
	†	63	3/4"	Standard	Equal %	ANSI 125	VGF21ES25	18	18	18	18	18	18	18	18	18	18	1		
	2-1/2"	75	3/4"	Pressure Balanced	Linear	ANSI 125	VGF21LP25	175	175	175	175	175	175	175	175	175	175			
		63	3/4"	Standard	Linear	ANSI 125	VGF21LS25	18	18	18	18	18	18	18	18	18	18	İ		
	†	63	3/4"	Standard	Equal %	ANSI 250	VGF22ES25	18	18	18	18	18	18	18	18	18	18	İ		
		116	3/4"	Pressure Balanced	Equal %	ANSI 125	VGF21EP30	175	175	175	175	175	175	175	175	175	175	1		
	1	100	3/4"	Standard	Equal %	ANSI 125	VGF21ES30	8	8	8	8	8	8	8	8	8	8	1		
	3"	116	3/4"	Pressure Balanced	Linear	ANSI 125	VGF21LP30	175	175	175	175	175	175	175	175	175	175	1		
	†	100	3/4"	Standard	Linear	ANSI 125	VGF21LS30	8	8	8	8	8	8	8	8	8	8	1		
	†	100	3/4"	Standard	Equal %	ANSI 250	VGF22ES30	8	8	8	8	8	8	8	8	8	8	1		
		178	1-1/2"	Pressure Balanced	Equal %	ANSI 125	VGF21EP40											175	175	
 		160	1-1/2"	Standard	Equal %	ANSI 125	VGF21ES40											34	34	
ğ	4"	178	1-1/2"	Pressure Balanced	Linear	ANSI 125	VGF21LP40											175	175	
2-Way		160	1-1/2"	Standard	Linear	ANSI 125	VGF21LS40											34	34	
		160	1-1/2"	Standard	Equal %	ANSI 250	VGF22ES40											34	34	
		318	1-1/2"	Pressure Balanced	Equal %	ANSI 125	VGF21EP50											175	175	
		250	1-1/2"	Standard	Equal %	ANSI 125	VGF21ES50											13	13	
	5"	318	1-1/2"	Pressure Balanced	Linear	ANSI 125	VGF21LP50											175	175	
		250	1-1/2"	Standard	Linear	ANSI 125	VGF21LS50											13	13	
		250	1-1/2"	Standard	Equal %	ANSI 250	VGF22ES50											13	13	
	6"	390	1-1/2"	Pressure Balanced	Equal %	ANSI 125	VGF21EP60											175	175	
		400	1-1/2"	Standard	Egual %	ANSI 125	VGF21ES60											13	13	
		390	1-1/2"	Pressure Balanced	Linear	ANSI 125	VGF21LP60	1										175	175	
		400	1-1/2"	Standard	Linear	ANSI 125	VGF21LS60											13	13	
		400	1-1/2"	Standard	Equal %	ANSI 250	VGF22ES60											13	13	
		63	3/4"	Mixing	Equal %	ANSI 125	VGF31EM25	24	24	24	24	24	24	24	24	24	24			
	Ī	63	3/4"	Diverting	Linear	ANSI 125	VGF31LD25	18	18	18	18	18	18	18	18	18	18	1		
	2-1/2"	63	3/4"	Mixing	Equal %	ANSI 250	VGF32EM25	24	24	24	24	24	24	24	24	24	24			
	1	63	3/4"	Diverting	Linear	ANSI 250	VGF32LD25	18	18	18	18	18	18	18	18	18	18	İ		
		100	3/4"	Mixing	Equal %	ANSI 125	VGF31EM30	15	15	15	15	15	15	15	15	15	15	1		
		100	3/4"	Diverting	Linear	ANSI 125	VGF31LD30	8	8	8	8	8	8	8	8	8	8	1		
	3"	100	3/4"	Mixing	Equal %	ANSI 250	VGF32EM30	15	15	15	15	15	15	15	15	15	15			
		100	3/4"	Diverting	Linear	ANSI 250	VGF32LD30	8	8	8	8	8	8	8	8	8	8			
_		160	1-1/2"	Mixing	Equal %	ANSI 125	VGF31EM40											34	34	
3-Way		160	1-1/2"	Diverting	Linear	ANSI 125	VGF31LD40											34	34	
ļ≩	4"	160	1-1/2"	Mixing	Equal %	ANSI 250	VGF32EM40											34	34	
က		160	1-1/2"	Diverting	Linear	ANSI 250	VGF32LD40											34	34	
		250	1-1/2"	Mixing	Equal %	ANSI 125	VGF31EM50											13	13	
		250	1-1/2"	Diverting	Linear	ANSI 125	VGF31LD50											13	13	
	5"	250	1-1/2"	Mixing	Equal %	ANSI 250	VGF32EM50											13	13	
		250	1-1/2"	Diverting	Linear	ANSI 250	VGF32LD50											13	13	
		400	1-1/2"	Mixing	Equal %	ANSI 125	VGF31EM60											13	13	
		360	1-1/2"	Diverting	Linear	ANSI 125	VGF31LD60											13	13	
	6"	400	1-1/2"	Mixing	Equal %	ANSI 250	VGF32EM60											13	13	
		360	1-1/2"	Diverting	Linear	ANSI 250	VGF32LD60											13	13	
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Globe Valve & Electronic Actuator Guide Specifications

1. GLOBE VALVE (LINEAR) ELECTRONIC ACTUATORS

- a) Direct coupled linear valve actuators shall be supplied by Honeywell.
 Actuators shall be UL and CSA listed, meet CE requirements, and be manufactured under ISO 9001 International Quality Control Standards.
- b) Linear electronic actuators shall mount directly to the bonnet of the valve, and connect to the valve stem without requiring adjustments, linkages, brackets, or adapters. Once mounted, a U-bolt must be used to secure the actuator to the valve collar. Single point, bolt, or single screw actuator type fastening techniques are not acceptable.
- c) Linear actuators shall be floating control with controllers that provide a switched or floating single pole double throw output, or modulating control actuators that provide a selectable analog output of 0 10 Vdc and 2 10 Vdc in one model.
- d) Optional auxiliary switches shall be available.
- e) Linear actuators shall have an ambient temperature rating of 14°F to 122F and storage rating of -40°F to 158°F.
- f) Linear actuator will operate at 24 Vac (+10%, -15%) and 60Hz.
- g) Maximum power consumption shall equal 6 VA for ML6420, 7 VA for ML7420, 11 VA for ML6421, 12 VA for ML7421, 11 VA for ML6425, and 12 VA for ML7425.

2. GLOBE VALVES

- a) Globe valves shall be supplied by Honeywell. Valves shall be manufactured under ISO 9001 International Quality Control Standards.
- b) Globe valves shall have a Canadian registration number (CRN).
- Globe valves will be used for chilled or hot water, steam, or glycol solutions up to 50%.
- d) Valves shall have a nominal rangeability of 50:1 or better.
- e) Valves shall be designed for equal percentage flow characteristics with water and linear flow characteristics with steam applications.

A. Threaded

- a) Threaded globe valves 1/2" through 3" shall have brass bodies rated at ANSI Class 150.
- b) Valves shall have metal-to-metal seats, stainless-steel stems, and replaceable spring-loaded Teflon packings.

B. Flanged

- a) Two-way and three-way flanged globe valves 2-1/2" to 6" shall have cast iron bodies rated for ANSI Class 125 or 250.
- b) Valves shall allow for steam inlet pressures up to 100 psig and water inlet pressures up to 175 and 400 psig, on ANSI 125 and 250, respectively.

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