

Model GL Series, Micro Flow Globe Control Valves

Valution's Model GL, Micro Flow series is designed with a traditional straight and 90 degree angular pattern flow path structure with a high 'F_L factor'. Generally, the body size is applied to 1/2"~1", the pressure rating is limited to ASME 150~2500#, and the adjustable flow rate range is limited to Rated Cv 0.00013~4.5.

This model can implement EQ-%, linear, and modified-% flow characteristics with the shape of the contoured plug. The body is streamlined, S-shaped and 90-degree angled, with less fluid resistance and plenty of space around the trim.

Since the model has a very low rated flow rate, careful attention should be paid to the conditions of use and selection such as the flow range, temperature, pressure, and connection method to be controlled.

This model can apply a spring diaphragm, cylinder and electric motor type actuator.
Traditional E/P Positioners and Smart and HART Positioners are selectively applied.



<Fig. 1>

1. Numbering System

V10	-	GL	1	1	1	5
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Actuator Type	Model	Body Type	Trim Type	Flow Characteristics	Plug Type
V10. Spring Diaphragm V20. Spring Cylinder V90. Electric Motor V01. Other Type	GL	1. Straight Pattern 4. Angle Pattern 9. Custom Pattern	0. Undefined 1. Un-balanced 7. Breeze Trim (Disk Stack) 9. Custom Trim	0. Undefined 1. Linear 2. Equal % 3. Modified % 4. Quick Open 9. Custom Char.	0. Undefined 1. Contoured 4. Cascade 5. Micro 9. Custom

2. Features

1. Globe style with high FL factor and flow paths with streamlined structure
2. Top entry structure that can be applied to Contoured and Disk Stact trim in metal and soft seat
3. Various Rated Cvs and Customized Rated Cv can be applied to implement the desired opening plan of the customer according to the special specifications
4. In addition to basic EQ-%, Linear, and Quick Open flow characteristics, Customized Flow Characters can be applied to implement the desired flow characteristics of customers
5. Customized valve can be manufactured to improve specific weakness of existing same type valve
6. Applicable to the latest smart positioners as well as traditional P/P and E/P positioners with other instruments

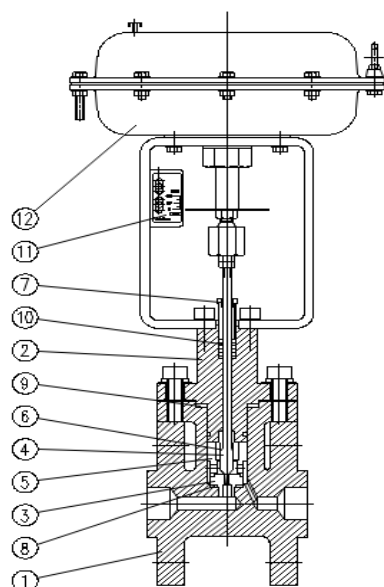
3. Specifications

■ Body Technical Specifications

Body Style	Straight Globe, 90° Angle		
Body Size	1/4", 3/8", 1/2", 3/4", 1" NPT or RC	1/2", 3/4", 1"	1/2", 3/4", 1"
End Connection	Female Threaded Ends	Flange Ends	Welding Ends
Pressure Ratings	ANSI Class 150 to 2500		
Flow Characteristics	EQ-% : Larger than Rated Cv= 0.013 Linear & Quick Open : All Cv		
Bonnet Style	Standard, Extension, Bellows according to Temp. ranges		
Rangeability	15:1 ~ 50 : 1		
Leakage Class	Standard : Class IV, Optional : Class V & VI		

■ Materials

Body & Bonnet	316/316L, A105(CS), Hastelloy, Inconel, Monel and others
Plug	316/316L, 630, Stellite, Hastelloy, Monel and others
Seat	316/316L, 630, Stellite, Hastelloy, Monel and others
Packing	PTFE(V), Graphite, PTFE+Carbon Fiber, Graphite PTFE
Gasket	316L+Graphite, PTFE
Bellows	316/316L, Hastelloy, Inconel, Monel and others



<Fig. 2>

No.	Part Name	Re.	No.	Part Name	Re.
1	Valve Body		7	Gland	
2	Bonnet		8	Seat Gasket	
3	Seat		9	Bonnet Gasket	
4	Plug & Stem		10	Packing	
5	Retainer		11	Indicator	
6	Guide		12	Actuator	

*. Note

1. All data shown in this product specification are currently standard specifications of Valution and can be customized by order specification.
2. All data shown above are subject to change without notice.

4. Rated Cv Values

■ Table for Rated Cv Values

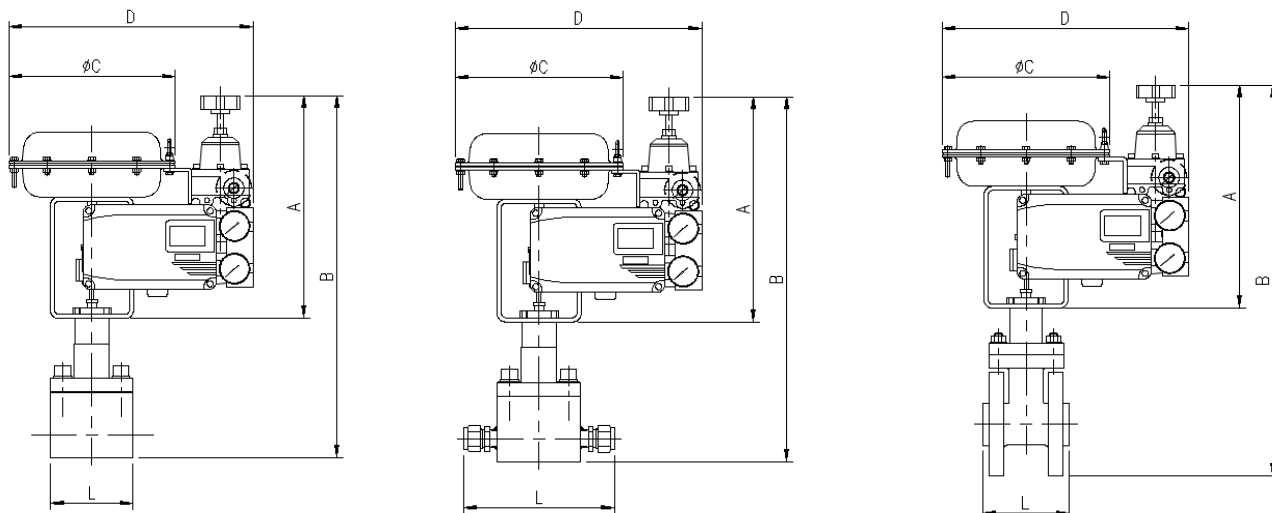
Seat No.	Rated Cv	Flow Characteristics		Threaded Ends 1/4", 3/8", 1/2", 3/4", 1"	Flange Ends			Welding Ends		
		EQ-%	Linear		1/2"	3/4"	1"	1/2"	3/4"	1"
1	0.00013	N/A	○	○	○	○	○	○	○	○
2	0.00020		○	○	○	○	○	○	○	○
3	0.00030		○	○	○	○	○	○	○	○
4	0.00050		○	○	○	○	○	○	○	○
5	0.00075		○	○	○	○	○	○	○	○
6	0.0010		○	○	○	○	○	○	○	○
7	0.0016		○	○	○	○	○	○	○	○
8	0.0030		○	○	○	○	○	○	○	○
9	0.0052		○	○	○	○	○	○	○	○
10	0.0080		○	○	○	○	○	○	○	○
11	0.013	○	○	○	○	○	○	○	○	○
12	0.020	○	○	○	○	○	○	○	○	○
13	0.030	○	○	○	○	○	○	○	○	○
14	0.060	○	○	○	○	○	○	○	○	○
15	0.073	○	○	○	○	○	○	○	○	○
16	0.12	○	○	○	○	○	○	○	○	○
17	0.19	○	○	○	○	○	○	○	○	○
18	0.30	○	○	○	○	○	○	○	○	○
19	0.45	○	○	○	○	○	○	○	○	○
20	0.75	○	○	○	○	○	○	○	○	○
21	1.2	○	○	○	○	○	○	○	○	○
22	2.0	○	○	○	○	○	○	○	○	○
23	3.0	○	○	○	○	○	○	○	○	○
24	4.5	○	○	○	○	○	○	○	○	○
Stroke(mm)				No.1~10= 8, No.11~No.24= 10						
Seat Dia.(mm)				No.1~10= 2, No.11~18= 3, No.19~20= 4.5, No.21= 10, No.24= 12						
Rangeability				No.1~10= 15:1, No.11~18= 15:1~50:1, No.19~24= 50:1						

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5. Dimensions for GL, Micro Flow Series

■ Dimensions for GL-M Series Control Valves



	Body Size		
	1/2"	3/4"	1"
"L"			
Threaded Ends(NPT or RC)	120	120	120
Flanged, ASME Class 150# RF	178	184	184
Flanged, ASME Class 300# RF	190	197	197
Flanged, ASME Class 600# RF	203	206	210
Flanged, ASME Class 900 & 1500# RF	216	229	254
Flanged, ASME Class 2500# RF	264	273	308
Weld Ends	120		
Threaded with Male Connector	182	190	200
Special "L"	Optional, request to Valution		
"A"	Approx. 280		
"B"			
Standard Bonnet #1	100		
Standard Bonnet #2	139		
Extension Bonnet #1	365		
Extension Bonnet #2	665		
Bellows Bonnet	200		
"C"	200		
"D"	300		

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