



GBV30 Series Ball Valves



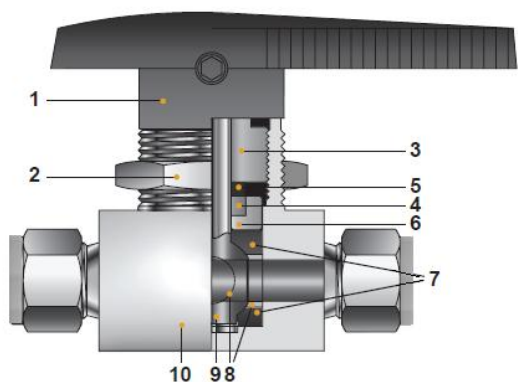
Features

Pressure Rating	3000psig (206bar)@70°F (21°C)
Temperature rating	50 to 150°F (10 to 65°C) with PTFE seat and packing
Body Material	Stainless Steel 316
Port End Connections	1/16" to 3/4" and 3mm to 12mm
Orifice	0.052" and 0.406" (1.3mm to 10.3mm)
Handle	Black Nylon

Pressure Rating with standard PTFE seat

Valve Designator	Straight 2-way	Angle 2-way	Switching 3-way	Temperature Range
GBV1	2500psig (172bar)			50°F to 150°F (10°C to 65°C)
GBV2	3000psig (206bar)	2500psig (172bar)		
GBV3	2500psig	1500psig		
GBV4	(172bar)	(103bar)		

Material of Constructions

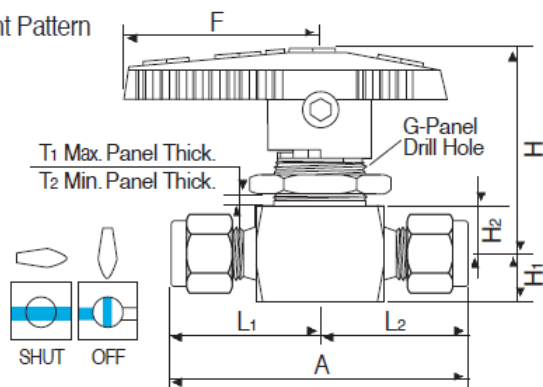


No	Description	Materials
1	Handle	Black Nylon
	Set Screw	Stainless Steel
2	Panel Nut	Stainless Steel
3	Packing Bolt	SS316 / A479
*4	Packing	PTFE
5	Upper Packing Gland	SS316 / A479
6	Lower Packing Gland	
*7	Upper & Lower Ball Seat	PTFE
*8	Side Disc	SS316 - Sintered
	Side Ring	
*9	Ball Stem	SS316 / A479
*10	Body	SS316 / A479

※ Wetted components are marked "*"

2-Way (Shut-Off Valve)

Straight Pattern



Angle Pattern

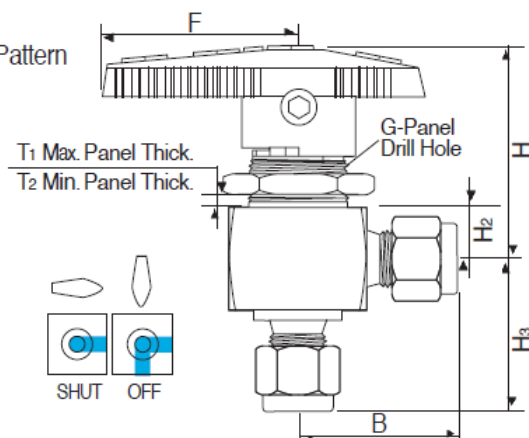


Table of Dimensions

Order Number		End Connections		Orifice (mm)	Cv		Dimensions (mm)										
Series	Part No.	Inlet	Outlet		Inline	Angle	A	L1/L2	H3	H2	H1	F	T1	T2	G	H	W
GBV1	G-1T	1/16" GPI Lok		1.3	0.1	-	42.7	21.3	-	8.6	7.1	28.4	6.4	2.0	15.1	34.5	14.7
	G-2T	1/8" GPI Lok		2.4	0.2	0.15	51.1	25.6	24.6								
	G-3M	3mm GPI Lok		0.2	0.15	51.1	25.6	24.6									
	G-4T	1/4" GPI Lok		0.6	0.35	56.1	28.1	27.2									
	G-6M	6mm GPI Lok		0.6	0.35	56.1	28.1	27.2									
	F-2N	1/8" Female NPT		0.5	0.3	41.1	20.6	20.6									
GBV2	G-4T	1/4" GPI Lok		4.8	2.4	0.9	59.9	30.0	29.7	11.2	9.7	38.9	4.8	2.5	19.8	39.6	19.8
	G-6T	3/8" GPI Lok			1.5	0.9	65.5	32.8	32.8								
	G-6M	6mm GPI Lok			2.4	0.9	60.7	30.4	29.7								
	G-8M	8mm GPI Lok			1.5	0.9	62.5	31.2	30.5								
	F-2N	1/8" Female NPT			1.2	0.7	50.8	25.4	25.4								
	F-4N	1/4" Female NPT			0.9	0.75	52.3	26.2	26.2								
	M-4N	1/4" Male NPT			1.2	0.75	50.8	25.4	26.2								
	F-4R	1/4" ISO Female Tapered			0.9	0.75	52.3	26.2	-								
GBV3	G-6T	3/8" GPI Lok		7.1	6.0	2.0	77.5	38.8	36.3	14.2	14.2	50.8	9.5	3.0	28.6	52.6	28.4
	G-10M	10mm GPI Lok			6.0	2.0	78.0	38.9	36.9								
	F-4N	1/4" Female NPT			3.0	1.7	63.5	31.8	31.8								
	F-6N	3/8" Female NPT			2.6	1.5	63.5	31.8	31.8								
	F-6R	3/8" ISO Female Tapered			2.6	1.5	63.5	31.8	-								
GBV4	G-8T	1/2" GPI Lok		10.3	12.0	4.6	99.6	49.8	44.2	17.5	17.5	76.2	9.5	3.0	38.1	61.7	38.1
	G-12T	3/4" GPI Lok			6.4	3.8	99.6	49.8	44.2								
	G-12M	12mm GPI Lok		9.5	12.0	4.6	99.6	49.8	44.2								
	F-8N	1/2" Female NPT		10.3	6.3	3.5	79.2	39.6	39.6								
	F-8R	1/2" ISO Female Tapered			6.3	3.5	79.2	39.6	-								

*Dimensions are for reference only and are subject to change without prior notice.

Flow Data

Pressure Drop to Atmosphere (Δp) in		CV															
		0.1	0.2	0.5	0.6	0.9	1.2	1.5	1.6	2.4	2.6	3.0	6.0	6.3	6.4	12.0	
Air SCFM @70°F (21°C)	10	1.1	2.7	6.9	8.3	12.0	17.0	21.0	22.0	33.0	36.0	41.5	83.0	87.2	88.6	166.0	
	50	3.0	7.6	19.1	23.0	34.0	46.0	57.0	61.0	92.0	99.5	115.0	230.0	241.0	245.0	459.0	
	100	5.3	14.0	33.9	40.7	61.0	81.0	100.0	110.0	160.0	176.0	203.0	407.0	427.0	434.0	814.0	
Water US GPM @70°F (21°C)	10	0.3	0.6	1.6	1.9	2.8	3.7	4.7	5.0	7.5	8.2	9.5	19.0	19.9	20.2	37.9	
	50	0.7	1.4	3.5	4.2	6.3	8.4	11.0	11.0	17.0	18.4	21.2	42.3	44.5	45.3	84.9	
	100	1.0	2.0	5.0	6.0	9.0	12.0	15.0	16.0	24.0	26.0	30.0	60.0	63.0	64.0	120.0	

3-Way Switching Valve

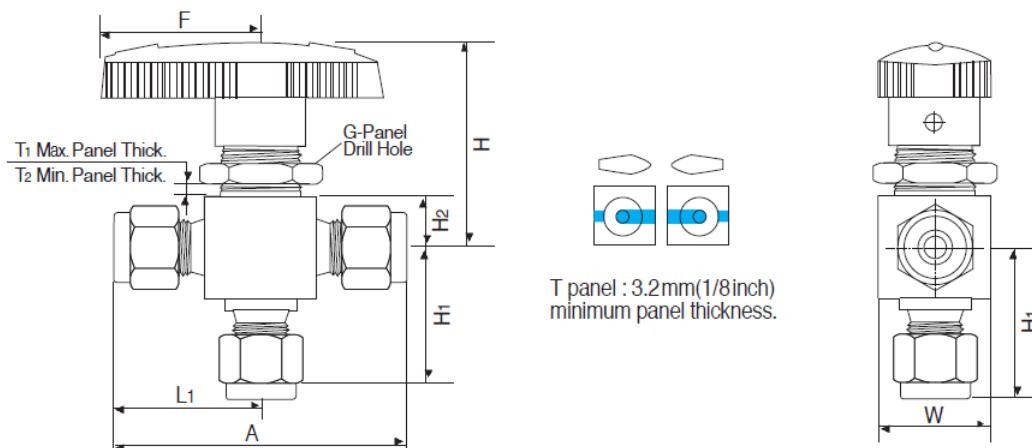


Table of Dimensions

Order Number		End Connections		Orifice (mm)	Cv	Dimensions (mm)									
Series	Part No.	Inlet	Outlet			A	L1	H1	H2	F	T1	T2	G	H	W
GBV1-3	G-1T	1/16" GPI Lok		1.3	0.08	42.7	21.3	20.6	8.6	28.7	6.4	2.0	15.1	34.5	14.7
	G-2T	1/8" GPI Lok		2.4	0.15	51.1	25.6	24.6							
	G-3M	3mm GPI Lok		2.4	0.15	51.1	25.6	24.6							
	G-4T	1/4" GPI Lok		3.2	0.35	56.1	28.1	27.2							
	G-6M	6mm GPI Lok		3.2	0.35	56.1	28.1	27.2							
	F-2N	1/8" Female NPT		3.2	0.30	41.1	20.6	20.6							
GBV2-3	G-4T	1/4" GPI Lok		4.8	0.90	60.7	30.4	29.7	11.2	38.9	4.8	2.5	19.8	39.6	19.8
	G-6M	6mm GPI Lok			0.90	60.7	30.4	29.7							
	G-8M	8mm GPI Lok			0.90	62.5	31.2	30.5							
	F-4N	1/4" Female NPT			0.75	52.3	26.2	26.2							
	F-4R	1/4" ISO Female Tapered			0.75	52.3	26.2	26.2							
GBV3-3	G-6T	3/8" GPI Lok		7.1	2.00	73.4	36.7	36.3	14.2	50.8	9.5	3.0	28.6	52.6	28.4
	G-10M	10mm GPI Lok			2.00	73.4	36.7	36.9							
	F-4N	1/4" Female NPT			1.70	63.5	31.8	31.8							
	F-6N	3/8" Female NPT			1.50	63.5	31.8	31.8							
	F-6R	3/8" ISO Female Tapered			1.50	63.5	31.8	31.8							
GBV4-3	G-8T	1/2" GPI Lok		10.3	4.60	88.4	44.2	44.2	17.5	76.2	9.5	3.0	38.1	61.7	38.1
	G-12T	3/4" GPI Lok		10.3	3.80	88.4	44.2	44.2							
	G-12M	12mm GPI Lok		9.5	4.60	88.4	44.2	44.2							
	F-8N	1/2" Female NPT		10.3	3.50	79.5	39.8	39.6							
	F-8R	1/2" ISO Female Tapered		10.3	3.50	79.5	39.8	39.6							

*Dimensions are for reference only and are subject to change without prior notice.

Flow Data

Pressure Drop to Atmosphere (Δp) in		CV												
		0.08	0.15	0.3	0.35	0.75	0.8	0.9	1.5	1.7	2.0	3.5	3.8	4.6
Air SCFM @70°F (21°C)	10	0.9	2.0	4.2	4.8	10.0	11.0	12.0	20.8	23.5	27.7	48.4	52.6	63.7
	50	2.4	5.7	11.5	13.4	29.0	31.0	34.0	57.4	65.0	76.5	134.0	145.0	176.0
	100	4.3	10.1	20.3	23.7	51.0	54.0	61.0	102.0	115.0	136.0	237.0	258.0	312.0
Water US GPM @70°F (21°C)	10	0.3	0.4	0.9	1.1	2.3	2.5	2.8	4.7	5.4	6.3	11.1	12.0	14.5
	50	0.6	1.0	2.1	2.5	5.3	5.6	6.3	10.6	12.0	14.1	24.7	26.9	32.5
	100	0.8	1.5	3.0	3.5	7.5	8.0	9.0	15.0	17.0	20.0	35.0	38.0	46.0

Ordering Information

GBV3



G



4T



S



Valve Series

GBV1~4

GBV1-3 ~ 4-3

End Connection

G: Tube Fitting

F: Female NPT

M: Male NPT

Size

Body Materials

S: 316 Stainless Steel

Fractional(Inch) Tube O.D. Designation							
Tube O.D	inch	1/4	1/4	1/4	3/8	1/2	3/4
O.D.	mm	1.59	3.17	6.35	9.52	12.7	19.05
Designator		1T	2T	4T	6T	8T	12T

Applications

GPI Ball valves with lowest dead volume is required in analytical purpose to prevent fluid entrapment which can cause contamination.

Testing

Every valve is 100% factory tested with air and nitrogen at 1000psig(69bar) for leakage at the seat and packing. Each test is performed to a maximum allowable leak rate of 0.1scc/min.

Cleaning

GPI valves are free from machine oils, loose particles and grease throughout the close cleaning process.

The special cleaning for high purity application is available upon request.



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