



Integral Bonnet GNV1 Needle Valves



Features

Pressure Rating	5000psig (345bar)@ 100°F (38°C)
Temperature rating	-65°F(54°C) to 450°F(232°C) with standard PTFE packing, and up to 600°F(315°C) with optional PEEK packing.
Body Material	Stainless Steel 316
Orifice	0.08" to 0.375"(2.0mm to 9.5mm)

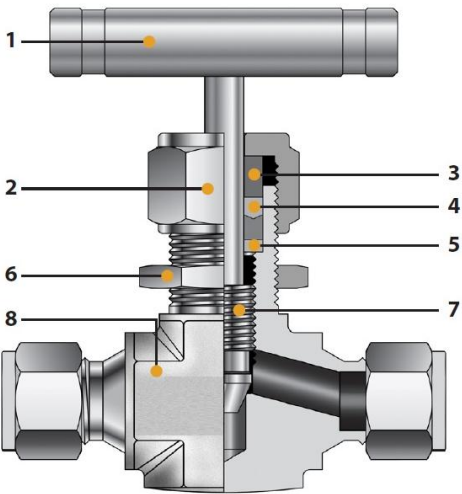
Applications

- Regulation and shut-off of fluids and gases for wide range of general purpose
- Sampling systems, laboratories, corrosive and high pressure service, valves - pressure gauge and cylinder, panel board instrumentation

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.
- Hydrostatic shell test is performed at 1.5 times of the working pressure. (OPTION)

Material of Constructions



No	Description	Materials
1	Bar Handle	Stainless Steel
	knob Handle	Phenolic with brass insert
	Set Screw	Stainless Steel
2	Packing Nut	SS316 / A276
3	Packing Gland	SS316 / A276
4	Packing	PTFE (Standard) , PEEK (Optional)
5	Packing Support	SS316 / A276
6	Panel Nut	SS316 / A276
7	Vee Stem	Chrome-plated SS316 / A276
	Regulating Stem	
	Soft Seat Stem with PCTFE	
8	Body	SS 316 / A182

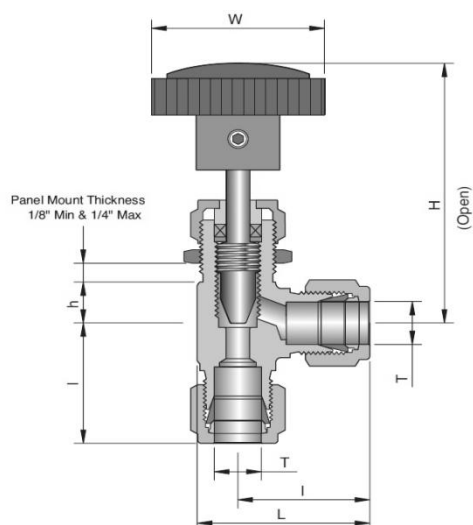
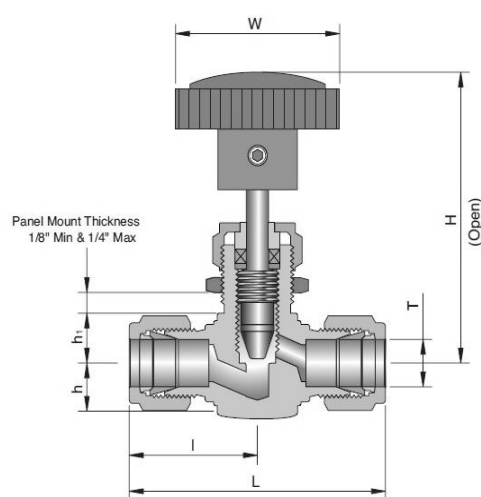


Table of Dimensions

Order Number		End Connections		Orifice (mm)	Cv	Dimensions (mm)					Panel Hole	
Series	Part No.	Inlet	Outlet			L	I	h	h1	H(open)	W	Drill Size
GNV	F-2N	1/8" Female NPT		2.0	0.09	42.0	21.0	9.5	11	51.2	38.0	13.5
	M-2N	1/8" Male NPT				42.0	21.0					
	MG-2N2T	1/8" Male NPT	1/8" GPI Lok			47.0	21.0					
	G-2T	1/8" GPI Lok				52.0	26.0					
	G-3M	3mm GPI Lok				52.0	26.0					
	F-2N	1/8" Female NPT		4.4	0.37	42.0	21.0	9.5	11	51.2	38.0	13.5
	M-2N	1/8" Male NPT				42.0	21.0					
	M-4N	1/4" Male NPT				50.0	25.0					
	MG-4N4T	1/4" Male NPT	1/4" GPI Lok			53.8	25.0					
	G-6M	6mm GPI Lok				57.6	28.8					
	G-4T	1/4" GPI Lok		6.3	0.73	57.6	28.8	13.0	13.5	63.6	50.0	20.0
	G-8M	8mm GPI Lok				59.2	29.6					
	F-4N	1/4" Female NPT				56.0	28.0					
	F-4R	1/4" Female ISO Tapered				56.0	28.0					
	MF-4N	1/4" Male NPT	1/4" Female NPT			56.0	28.0					
	MG-4N6T	1/4" Male NPT	3/8" GPI Lok	61.2	28.0							
	M-6N	3/8" Male NPT		58.0	29.0							
	MG-6N6T	3/8" Male NPT	3/8" GPI Lok	62.2	29.0							
	MG-6N8T	3/8" Male NPT	1/2" GPI Lok	65.0	29.0							
	M-10M	10mm GPI Lok		66.4	33.2							
	G-6T	3/8" GPI Lok		66.4	33.2							
	G-12M	12mm GPI Lok		72.0	36.0							
	G-8T	1/2" GPI Lok		72.0	36.0							
	F-6N	3/8" Female NPT		76.0	38.0							
	F-6R	3/8" Female ISO Tapered		76.0	38.0							
	F-8N	1/2" Female NPT		76.0	38.0							
	F-8R	1/2" Female ISO Tapered		76.0	38.0							
	M-8N	1/2" Male NPT		76.0	38.0							
	MF-8N	1/2" Male NPT	1/2"Female NPT	76.0	38.0							
	G-8T	1/2" GPI Lok		97.0	48.5							
	G-12T	3/4" GPI Lok		97.0	48.5							

*All dimensions shown are for reference only and are subject to change. Dimensions with GPI Lok nuts are in finger-tight position.

Ordering Information

GNV

▽

G

▽

A

04T

▽

BF

▽

S316

▽

Valve Series	End Connection	Flow Pattern	Size	Handle	Packing Materials	Stem Type	Body Materials
1	2	Nil: Straight A: Angle Pattern	3	Nil: lever handle BH: butterfly handle	Nil: PTFE PK: PEEK	Nil: Vee R: Regulating S: Soft Seat	S316: 316 Stainless Steel
▽	▽		▽ ▽				

1 GNV1: 2.0mm Orifice
GNV2: 4.4mm Orifice
GNV3: 6.3mm Orifice
GNV4: 9.5mm Orifice

2 G: Tube Fitting
M: Male Pipe Thread
F: Female Thread
MS: Male Pipe Thread x GPI Tube Fitting
MF: Male Pipe Thread x Female Pipe Thread

3

Tube O.D	inch	1/8	1/4	3/8	1/2	3/4
Designator		02T	04T	06T	08T	12T
Tube O.D	mm	3	6	8	10	12
Designator		3M	6M	8M	10M	12M
Pipe Thread	inch	1/8	1/4	3/8	1/2	
Designator		02N®	04N®	06N®	08N®	

Temperature & Pressure Rating with Packing and Body Material

Valve Material	Stem	with PTFE packing (Standard)		with PEEK packing (Optional)	
		Temperature °F(°C)	Pressure Rating @100°F(37°C)	Temperature °F(°C)	Pressure @Temp. Rating psig (bar)
Stainless Steel S316	Metal to metal (Vee & Regulating)	-65°F to 450°F (-54°C to 232°C)	5000psig (344bar)	-65°F to 600°F (-54°C to 315°C)	3130psig (215bar)
	Soft Seat	-65°F to 200°F (-54°C to 93°C)		-65°F to 200°F (-54°C to 93°C)	

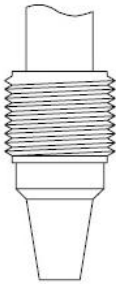
Stem Type

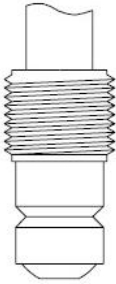
Vee Stem(Standard)

Regulating Stem

Soft Seat Stem









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