

# Integra® Manual Valves, 1" Orifice, 2-way, Multi-turn

*Ideal for high-flow bulk chemical distribution applications*

Designed for applications where greater flow is required, the molded 1" orifice Integra® valve is ideal for valve boxes and bulk chemical distribution applications. The vacuum rated Integra valve can be installed in the upstream side of pressure vacuum vessels and pumps.

The valve maintains a high flow rate while reducing the footprint in manufacturer's equipment. This Integra valve illustrates our ability to address customer space constraints while still providing superior performance.

## APPLICATIONS

Our 1" orifice valves are ideal in applications where greater flow is required, including:

- CMP slurry, ultrapure water and high-purity, corrosive chemical handling
- Valve boxes and high flow bulk chemical distribution applications
- Upstream or downstream side of pressure vacuum vessels and pumps
- Chemical line sizes in 3/4" to 1"

## FEATURES & BENEFITS

High-purity PFA construction	Provides broad chemical resistance
Vacuum rated	Enables use in the upstream side of pressure vacuum vessels and pumps
Small footprint	Saves valuable equipment space



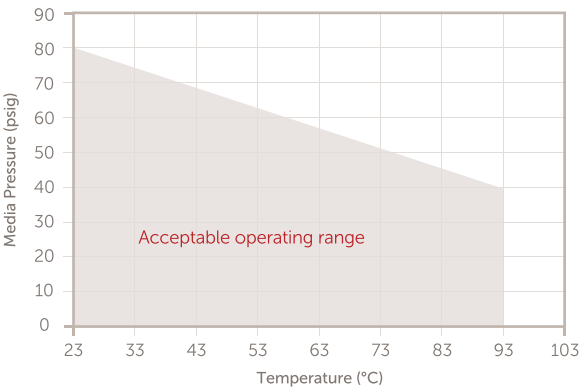
*Maintains a high flow rate while reducing footprint*

## SPECIFICATIONS

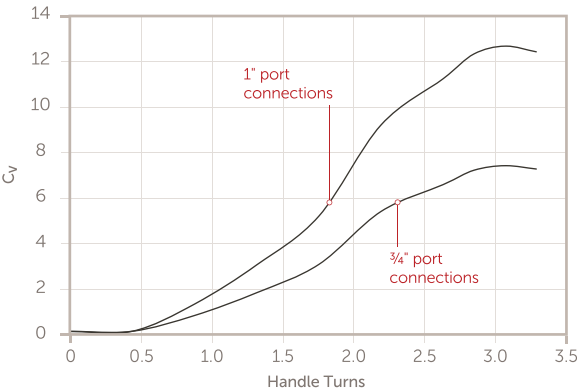
Materials	All wetted parts	PFA, PTFE
	Exterior actuator parts	PVDF
	Interior actuator parts	PVDF, Viton®, PFA
Pressure Range	29" Hg to 80 psig (980 mbar to 552 kPa) @ 70°F (21°C) fluid temperature	
	29" Hg to 40 psig (980 mbar to 276 kPa) @ 200°F (93°C) fluid temperature	
Ambient Temperature	100°F (38°C)	

## PERFORMANCE DATA

Temperature vs. Media Pressure

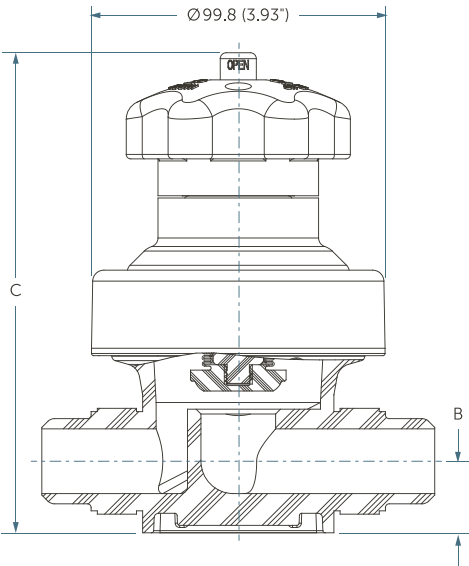


1" Integra Manual Multi-turn Valve  
C<sub>v</sub> vs. Number of Handle Turns

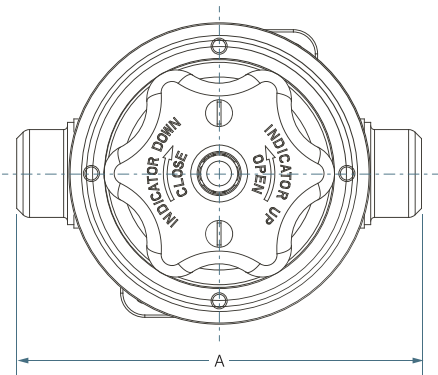


## DIMENSIONS

Front View



Top View

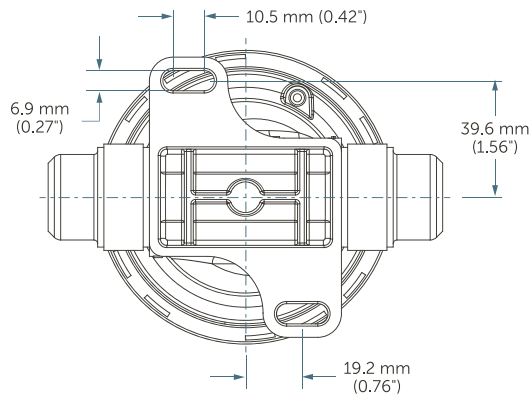


## DIMENSIONS

Port connection	Flow factor	A	B	C
3/4" Flaretek <sup>1</sup>	7.2 C <sub>v</sub> (103 K <sub>v</sub> )	5.08" (129.0 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)
3/4" PrimeLock	7.2 C <sub>v</sub> (103 K <sub>v</sub> )	5.58" (141.7 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)
3/4" PureBond	10.4 C <sub>v</sub> (149 K <sub>v</sub> )	6.59" (167.4 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)
1" Flaretek <sup>1</sup>	12.4 C <sub>v</sub> (177.1 K <sub>v</sub> )	5.26" (133.6 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)
1" Super 300 Type Pillar fitting	12.4 C <sub>v</sub> (177.1 K <sub>v</sub> )	5.79" (147.1 mm)	1.06" (26.9 mm)	6.57" (166.9 mm)
1" PrimeLock	12.4 C <sub>v</sub> (177.1 K <sub>v</sub> )	5.94" (150.9 mm)	1.12" (28.4 mm)	6.63" (168.4 mm)
1" PureBond	13.6 C <sub>v</sub> (194.2 K <sub>v</sub> )	6.59" (167.4 mm)	0.96" (24.4 mm)	6.47" (164.3 mm)
1 1/4" Extended Flaretek	13.6 C <sub>v</sub> (194.2 K <sub>v</sub> )	6.72" (170.7 mm)	1.54" (39.1 mm)	7.05" (179.1 mm)*

<sup>1</sup>(PVDF), -3 (PFA), -6 (CPFA) or -II (PFA FlareLock® II) nuts, \*with spacer

### Bottom View



## ORDERING INFORMATION

Integra 2-Way, Manual Multi-Turn Valve: part number

DS16



### Port configuration

- 12F = Port 1 (inlet), Port 2 (outlet) 3/4" Flaretek
- 12S2 = Port 1 (inlet) 3/4" Flaretek, Port 2 (outlet) 3/4" Flaretek "SpaceSaver"
- 12F12P = Port 1 (inlet) 3/4" Flaretek, Port 2 (outlet) 3/4" PureBond
- 12S12F = Port 1 (inlet) 3/4" Flaretek "SpaceSaver", Port 2 (outlet) 3/4" Flaretek
- 12S1S2 = Port 1 (inlet), Port 2 (outlet) 3/4" Flaretek "SpaceSaver"
- 12K = Port 1 (inlet), Port 2 (outlet) 3/4" PrimeLock
- 12KV = Port 1 (inlet) 3/4" PrimeLock, Port 2 (outlet) 3/4" PrimeLock "SpaceSaver"
- 12KP = Port 1 (inlet) 3/4" PrimeLock, Port 2 (outlet) 3/4" PureBond
- 12VK = Port 1 (inlet) 3/4" PrimeLock "SpaceSaver", Port 2 (outlet) 3/4" PrimeLock
- 12VV = Port 1 (inlet), Port 2 (outlet) 3/4" PrimeLock "SpaceSaver"
- 12P12F = Port 1 (inlet) 3/4" PureBond, Port 2 (outlet) 3/4" Flaretek
- 12PK = Port 1 (inlet) 3/4" PureBond, Port 2 (outlet) 3/4" PrimeLock
- 12P = Port 1 (inlet), Port 2 (outlet) 3/4" PureBond
- 12F-TS = Port 1 (inlet), Port 2 (outlet) 3/4" Tube stub no nuts
- 16F = Port 1 (inlet), Port 2 (outlet) 1" Flaretek
- 16S2 = Port 1 (inlet) 1" Flaretek, Port 2 (outlet) 1" Flaretek "SpaceSaver"
- 16F16P = Port 1 (inlet) 1" Flaretek, Port 2 (outlet) 1" PureBond
- 16S16F = Port 1 (inlet) 1" Flaretek "SpaceSaver", Port 2 (outlet) 1" Flaretek
- 16S1S2 = Port 1 (inlet), Port 2 (outlet) 1" Flaretek "SpaceSaver"
- 16PS3 = Port 1 (inlet), Port 2 (outlet) 1" Super 300 Type Pillar
- 16PS316P = Port 1 (inlet) 1" Super 300 Type Pillar, Port 2 (outlet) 1" PureBond
- 16K = Port 1 (inlet), Port 2 (outlet) 1" PrimeLock
- 16KV = Port 1 (inlet) 1" PrimeLock, Port 2 (outlet) 1" PrimeLock "SpaceSaver"
- 16KP = Port 1 (inlet) 1" PrimeLock, Port 2 (outlet) 1" PureBond
- 16VK = Port 1 (inlet) 1" PrimeLock "SpaceSaver", Port 2 (outlet) 1" PrimeLock
- 16VV = Port 1 (inlet), Port 2 (outlet) 1" PrimeLock "SpaceSaver"
- 16P = Port 1 (inlet), Port 2 (outlet) 1" PureBond
- 16P16F = Port 1 (inlet) 1" PureBond, Port 2 (outlet) 1" Flaretek
- 16P16PS3 = Port 1 (inlet) 1" PureBond, Port 2 (outlet) 1" Super 300 Type Pillar
- 16PK = Port 1 (inlet) 1" PureBond, Port 2 (outlet) 1" PrimeLock
- 16F-TS = Port 1 (inlet), Port 2 (outlet) 1" Tube stub no nuts
- 20MLF = Port 1 (inlet), Port 2 (outlet) 1 1/4" Flaretek (Extended Flare)

### Actuator

2M = Manual multi-turn

### Special order

- 3 = PFA\*
- 6 = CPFA\*
- 3A = 1 1/4" Flaretek only (extended flare)\*\*\*
- II = FlareLock II\*
- N = Pillar nuts, inserts, and gauge rings included\*\*
- = N/A

\* Available for Flaretek port connections only.

\*\* Available for Super 300 Type Pillar port connections only.

\*\*\* Available for 1 1/4" 2-way manual and pneumatic only.

Note: Not all configurations are permitted. Consult Entegris if multiple special order features are required. Contact Entegris if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.

#### FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](http://entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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