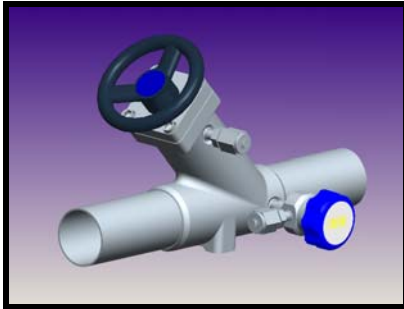


HFC SERIES

Ultra-High Purity Cast Stainless Steel High Flow Bellows Valves



PRODUCT APPLICATIONS

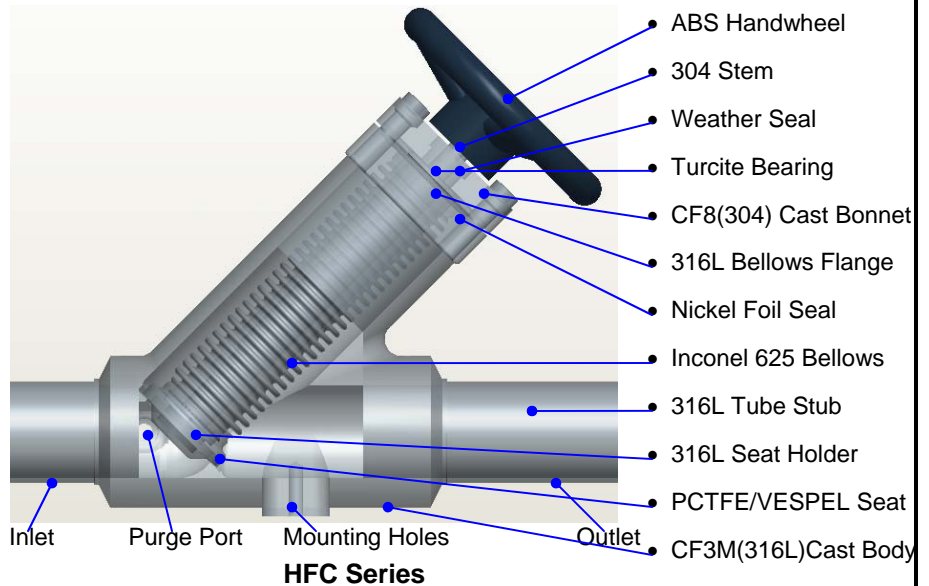
This HFC valve Series is designed for high performance gas and chemical distribution systems combined with the lowest overall operating costs, make this valve series an excellent consideration for:

- High purity gas distribution system control
- Superior containment and cleanliness for your most critical valve applications
- Suitable for inert and most toxic gases

PRODUCT FEATURES

- High Cv and Most Compact Design
- High-Purity Stainless Steel/PCTFE Gas Containment
- Inconel 625 or 316L Bellows for High Cycle Life and Superior Corrosion Resistance
- BA Grade Wetted Surfaces to 20 Ra Max (Optional Electropolished 10 Ra max surface finishes available)
- Maximum Leak Rate of 1×10^{-9} atm.cc Helium/second
- Purge Connections and Purge Valves are Integrated in Valve Body
- Field Retrofit Manual or pneumatic Actuated
- Valve Body and Tube Stubs Are Serialized for Material Certification

CONSTRUCTION MATERIALS



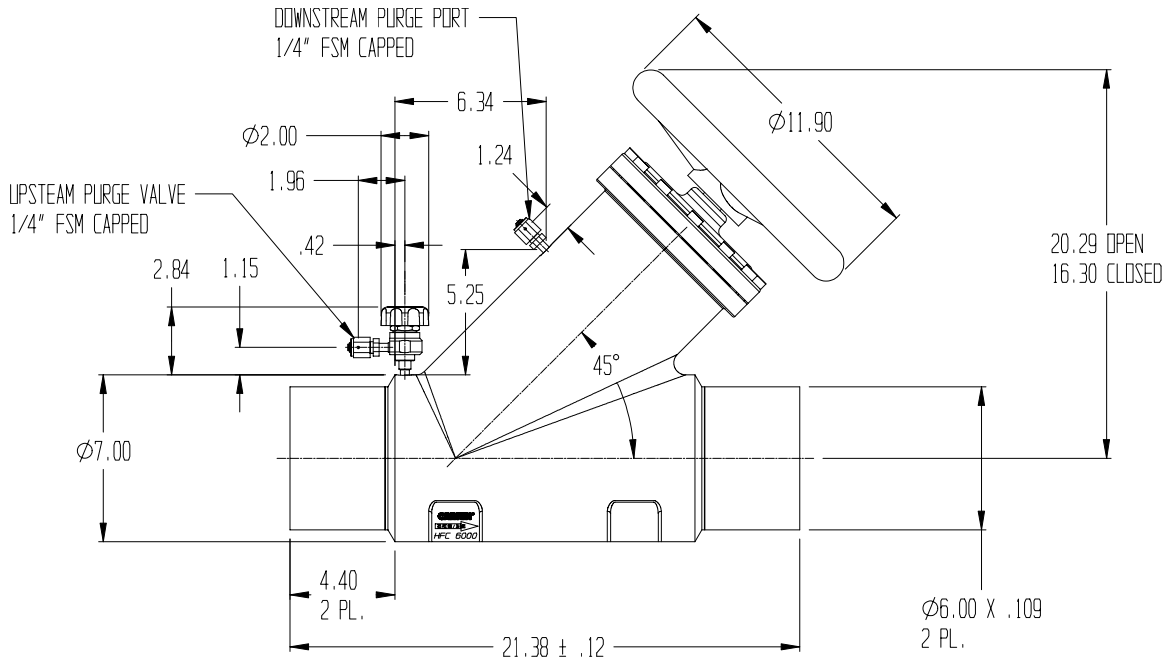
HFC Series – Technical Data

CONSTRUCTION MATERIAL	Wetted Areas	CF3M, 316L Stainless Steel, Inconel Nickel Alloy, PCTFE		
	Non-Wetted Areas	304, 316L Stainless Steel		
OPERATING PRESSURE	HFC Series HFC*A Series (Pneumatic)	Vacuum~375psig (0~26 bars) Vacuum~250psig (0~17 bars) 80-100psig for actuator		
MAXIMUM OPERATING TEMPERATURE	PCTFE Seat VESPEL Seat*	180°F (82°C) 550°F (288°C)		
ANSI Model		JIS Model		C _v
Catalog No.	Size (Inch)	Catalog No.	Size (A)	
HFC575	1/2			5
HFC750	3/4	HFC15A	15A	14.5
HFC1000	1	HFC20A	20A	19
		HFC25A	25A	20
HFC1015	1			28
HFC1500	1.5	HFC32A	32A	46
HFC2000	2	HFC40A	40A	48
		HFC50A	50A	48
HFC2003	2			157
HFC3000	3	HFC65A	65A	245
HFC4000	4	HFC80A	80A	247
		HFC100A	100A	247
HFC4006	4			758
HFC6000	6	HFC125A	125A	1000
HFC8000	8	HFC150A	150A	1000
		HFC200A	200A	1000

HELIUM LEAK TEST	Inboard/across the seat	1×10^{-10} scc/s He	Rated
		1×10^{-9} scc/s He	Standard
	Outboard	1×10^{-6} scc/s He	Standard
CLEANLINESS AND PACKAGING	Assembled and Tested in class 10 Cleanroom. Purged and Final Packaged in Class 1 Cleanroom. Double-bag packaging (2 mil nylon inner bag, 6 mil polyethylene outer bag) with N2 gas environment supplied from a liquid source.		
STANDARD FINISH	BA to 20 Ra.Max. (0.50µm) on all wetted surfaces		
OPTIONS	Pneumatic operating types: Normally open, normally closed, dual acting Surface finish – 10Ra, EP optional Testing: Particle, moisture, THC, O ₂ , SEM, ESCA, and Auger Purge fitting type and location Inlet/outlet end connection type		

Specifications are subject to change without notice. *Please contact Carten sales for available models.

Typical Valve Dimensions (HFC6000 valve shown):



Ordering Chart

HFC	2000	- 20	PC2	FSM	-BL	← Sample
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Code	Type
HFC	Manual
HFCA	Pneumatic

Code*	Size*
575	1/2"
750	3/4"
1000	1"
1015	1"
1500	1-1/2"
2000	2"
2003	2"
3000	3"
4000	4"
4006	4"
6000	6"
8000	8"
15A	15A
20A	20A
25A	25A
32A	32A
40A	40A
50A	50A
65A	65A
80A	80A
100A	100A
125A	125A
150A	150A
200A	200A

Code	Purge Connection Type
FSM	Fixed male
FSM-L	Fixed male (left handed)
FSM-F	Female swivel
VCR-MS	VCR Male swivel
VCR-F	VCR Female swivel

Code	Purge Size/Location	Type
LV	No purge available	None
PC1	1/4" Downstream	Port
PC2	1/4" Up & Downstream	Ports
PC3	1/4" Upstream	Port
PV1	1/4" Downstream	Valve
PV2	1/4" Up & Downstream	Valves
PV3	1/4" Upstream	Valve
PC15	1/2" Downstream	Port
PC25	1/2" Up & Downstream	Ports
PC35	1/2" Upstream	Port
PV15	1/2" Downstream	Valve
PV25	1/2" Up & Downstream	Valves
PV35	1/2" Upstream	Valve

Code	Surface Finish
10	EP, 10 Ra Max
20	EP, 20 Ra Max
BA-	BA, 20 Ra Max
AP-	AP, 20 Ra Max

Code	Pneumatic Type/Handle Color/Seat Material
NC	Pneumatic Normally Closed
NO	Pneumatic Normally Open
DA	Pneumatic Double Acting
BL	Manual Handle, Blue color
BR	Manual Handle, Black color
GL	Manual Handle, Gold color
GR	Manual Handle, Green color
GY	Manual Handle, Grey color
PR	Manual Handle, Purple color
RD	Manual Handle, Red color
SL	Manual Handle, Silver color
WT	Manual Handle, White color
YL	Manual Handle, Yellow color
Blank	Standard Black color handle w/ PCTFE seat
V	Vespel Seat

*Reference page 1 for all available sizes.

Please contact Carten sales for special requirements and customer drawings showing updated dimensions.