

CARTEN-Fujikin Inc.
High Performance Valves & Process Flow Solutions

HFCP SERIES

Ultra-High Purity Investment Cast Stainless Steel
High-Flow Manual Bellows Valves



HFCP SERIES

HFCP Series Product Applications

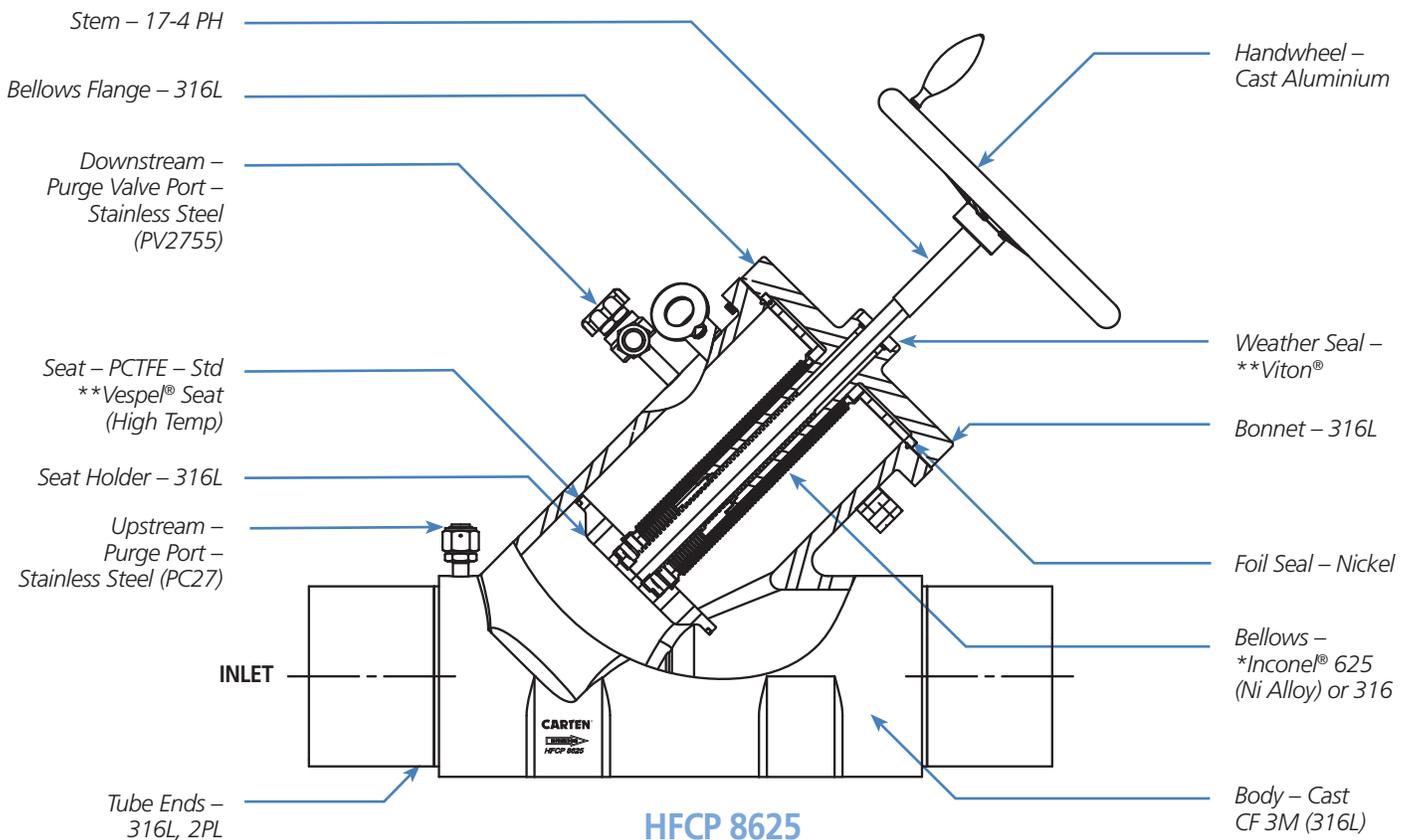
The HFCP series is designed for cost-efficient delivery of high-purity gases and distribution systems where high flows are demanded with high containment and safe delivery in critical process systems. The HFCP's high Cv capacity provides the best flow value and operational costs, and makes this range an excellent consideration for:

- High-purity process gas distribution systems
- Purifier systems
- Filter skid systems
- High-purity chemical distribution systems

HFCP Series Product Features

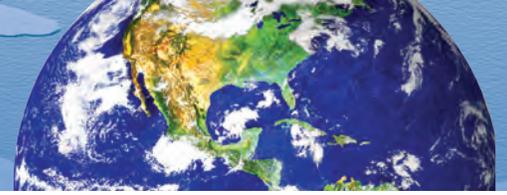
- Highest Cv in the Industry
- Ultra-High Purity Stainless Steel Gas Construction
- *Inconel® 625 Bellows for High Cycle Life and Superior Corrosion Resistance
- Electropolished – 32 Ra Max Surface Finish – Standard
- Industry Leader in Ultra-High Purity Gas Containment
- Purge Connections are Integrated in Valve Body
- Valve Body and Tube Ends are Serialized for Material Certification

HFCP Construction Materials



*Inconel® is a registered trademark of Special Metals Corporation.
**Vespel® and Viton® are registered trademarks of DuPont Company.

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HFCP Series Technical Data

MATERIAL OF CONSTRUCTION	Wetted Areas	CF3M, 316L SS, *Inconel® 625/316L, PCTFE, Nickel
	Non-Wetted Areas	17-4 PH, 316L SS, **Viton®, Aluminium, ABS
MAXIMUM OPERATING PRESSURE	HFCP Series	Vacuum-300 psig (21.0 bar)
MAXIMUM OPERATING TEMPERATURE	PCTFE Seat – Std **Vespel® Seat (High Temp)	-22°F (-30°C) to 180°F (82°C) 181°F (83°C) to 302°F (150°C)

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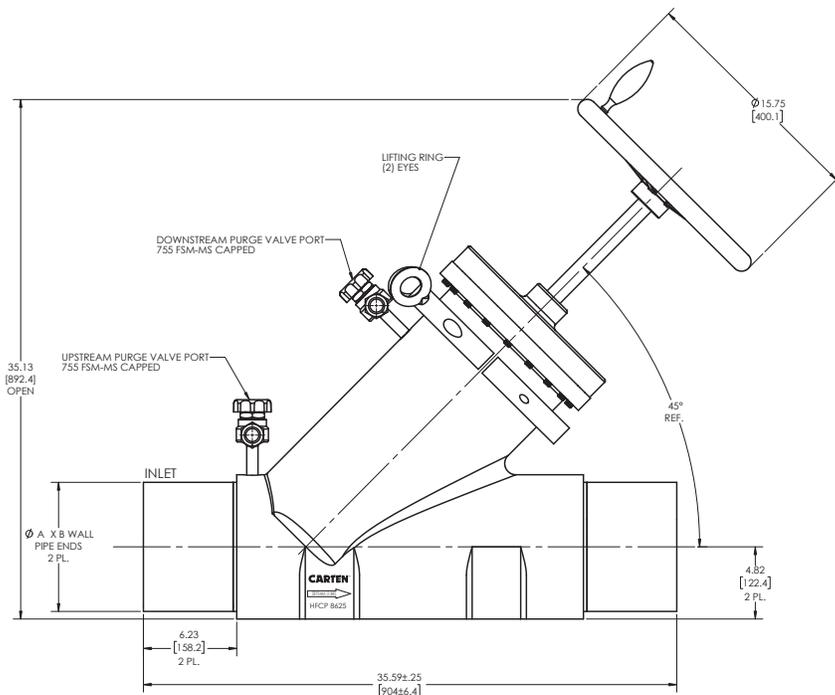
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VALVE MODELS	BODY DATA	FLOW COEFFICIENT (C _v)	VALVE MODELS	BODY DATA	FLOW COEFFICIENT (C _v)
Series/Size (Inch)	Pipe/Body (Seat-Orifice) Sizes		Series/Size (JIS)	Pipe/Body (Seat-Orifice) Sizes	
HFCP 8625	Ø8.625 / 8.625 (Ø8.625 in. (Ø219.1mm)-Orifice)	2024	HFCP 200A	Ø8.516 / 8.625 (Ø8.625 in. (Ø219.1mm)-Orifice)	1951
HFCP 1086	Ø10.75 / 8.625 (Ø8.625 in. (Ø219.1mm)-Orifice)	1679			
CYCLE LIFE		>350 @ 300 Psig (21.0 bar)			

HELIUM LEAK TEST	Inboard Across the Seat Outboard Pressure Test	≤ 1 x 10 ⁻⁹ std.cc (atm) He / sec ≤ 1 x 10 ⁻⁹ std.cc (atm) He / sec ≤ 1 x 10 ⁻⁶ std.cc (atm) He / sec
CLEANLINESS AND PACKAGING	Assembled and tested in Class 100 Cleanroom. Purged and Final Packaged in Class 1 Cleanroom. Double-bag Packaging (2 mil nylon inner bag, 6 mil polyethylene outer bag) with Ultra-High Purity N ₂ gas environment.	
STANDARD FINISH	32 Ra (0.80 µm) EP on all wetted surfaces	
NOTES AND OPTIONS	Surface Finish – BA (63 Ra Max.) Non EP Testing: Particle, Moisture, O ₂ , SEM, ESCA, and AES	

Specifications are subject to change without notice.

HFCP Series Typical Valve Dimensions



SERIES SIZES	DIMENSIONS	
	ØA	B
8625	Ø 8.625 (219.1mm)	.148 (3.8mm)
1086	Ø 10.75 (273.1mm)	.165 (4.2mm)
200A	Ø 8.516 (216.3mm)	.157 (4.0mm)

HFCP8625-PV2755 SHOWN

HFCP SERIES

HFCP Series Ordering Code

HFCP		–	8625		–	32		–	PC27		–	FSM-MS		–	BK	
SERIES	TYPE		CODE	SURFACE FINISH		CODE	TYPE		CODE	TYPE		CODE	OPTIONS		CODE	OPTIONS
HFCP	Manual		32	32 Ra Max - Std EP		FSM-MS	Male-RH		PC27	3/4" Up & Downstream	Purge			Handwheel		
			BA	64 Ra Max - Non EP					PV2755	3/4" Up & Downstream	Purge Valve		BL	Blue		
VALVE SIZES	PIPE/(BODY) INCH – SIZES – JIS												BR	Brown		
8625	Ø8.625	(8.625)											BR	Brown		
	PIPE ENDS												DG	Dark Gold		
1086	Ø10.75	(8.625)											GL	Gold		
	PIPE ENDS												GR	Green		
	JIS SIZES												GY	Grey		
200A	Ø8.516	(8.625)											OR	Orange		
	PIPE ENDS												PR	Purple		
													PK	Pink		
													RD	Red		
													SL	Silver		
													TL	Teal		
													WT	White		
													YL	Yellow		
														OPTIONS		
													V	*Vespel® Seat		

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Safe Product Selection

When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

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CARTEN®
 High Performance Valves & Process Flow Solutions

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Carten Controls is a member of Fujikin Corp Group (FCG) with Headquarters in Osaka, Japan.