

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

HFLD SERIES

Ultra-High Purity 316L Stainless Steel High-Flow,
Large-Diameter Bellows Valves



HFLD SERIES

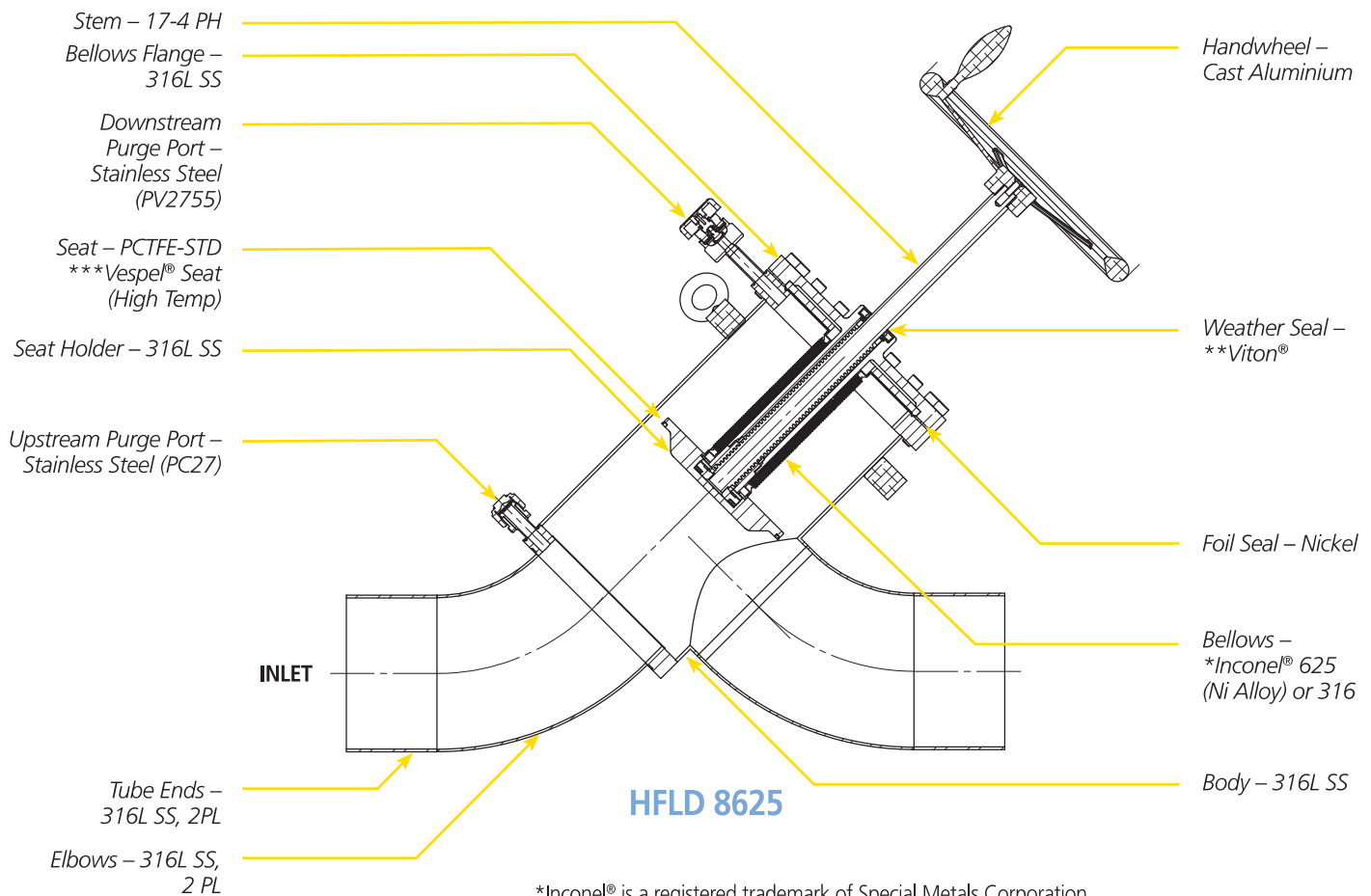
This HFLD valve series is designed to achieve the highest flow applications in the industry. Maintaining critical high performance delivery of Ultra High Purity gases to exceed your exacting specifications today and tomorrow.

- **Higher purity gas distribution system control**
- **Superior containment and cleanliness for your most critical valve applications**
- **Suitable for inert and most spec. gases**

HFLD 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 – 20 Ra Max Surface Finish – Standard/10 Ra Option
- 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

HFLD Construction Materials



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

HFLD SERIES

HFLD8625 8"

HFLD8625 SERIES TECHNICAL DATA

MATERIAL OF CONSTRUCTION	Wetted Areas	316L SS, *Inconel® 625/316L, PCTFE, Nickel
	Non-Wetted Areas	17-4 PH, 316L SS, **Viton®, Aluminium, ABS
MAXIMUM OPERATING PRESSURE	HFLD 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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VALVE MODELS	BODY DATA	FLOW COEFFICIENT (CV)
SERIES/SIZE (Inch)	Pipe/Body (Seat-Orifice) Sizes	
HFLD 8625	Ø8.625 / 8.625 (Ø8.625 in. (Ø219.1mm)-Orifice)	1917
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. Double-bag Packaging (2 mil nylon inner bag, 6 mil Polyethylene outer bag) with Ultra-High Purity N ₂ gas environment. Purged and Final Packaged in Class 1 Cleanroom.	
STANDARD FINISH	20 Ra (0.5 µm) (10 Ra (0.25 µm) option) EP on all wetted surfaces	
NOTES AND OPTIONS	Testing: Particle, Moisture, O ₂ , SEM, ESCA, and AES	

Specifications are subject to change without notice.

HFLD6000 6"

HFLD6000 SERIES TECHNICAL DATA

MATERIAL OF CONSTRUCTION	Wetted Areas	316L SS, *Inconel® 625/316L, PCTFE, Nickel
	Non-Wetted Areas	17-4 PH, 316L SS, **Viton®, Aluminium, ABS
MAXIMUM OPERATING PRESSURE	HFLD 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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VALVE MODELS	BODY DATA	FLOW COEFFICIENT (CV)
SERIES/SIZE (Inch)	Pipe/Body (Seat-Orifice) Sizes	
HFLD 6000	Ø6.00 / Ø6.00 (Ø5.42 in. (Ø137.7 mm)-Orifice)	814
CYCLE LIFE	>350 @ 375 Psig (26.0 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. Double-bag Packaging (2 mil nylon inner bag, 6 mil Polyethylene outer bag) with Ultra-High Purity N ₂ gas environment. Purged and Final Packaged in Class 1 Cleanroom.	
STANDARD FINISH	20 Ra (0.5 µm) (10 Ra (0.25 µm) option) EP on all wetted surfaces	
NOTES AND OPTIONS	Testing: Particle, Moisture, O ₂ , SEM, ESCA, and AES	

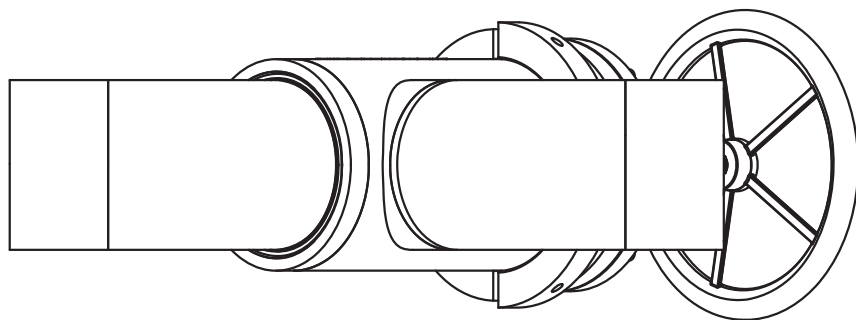
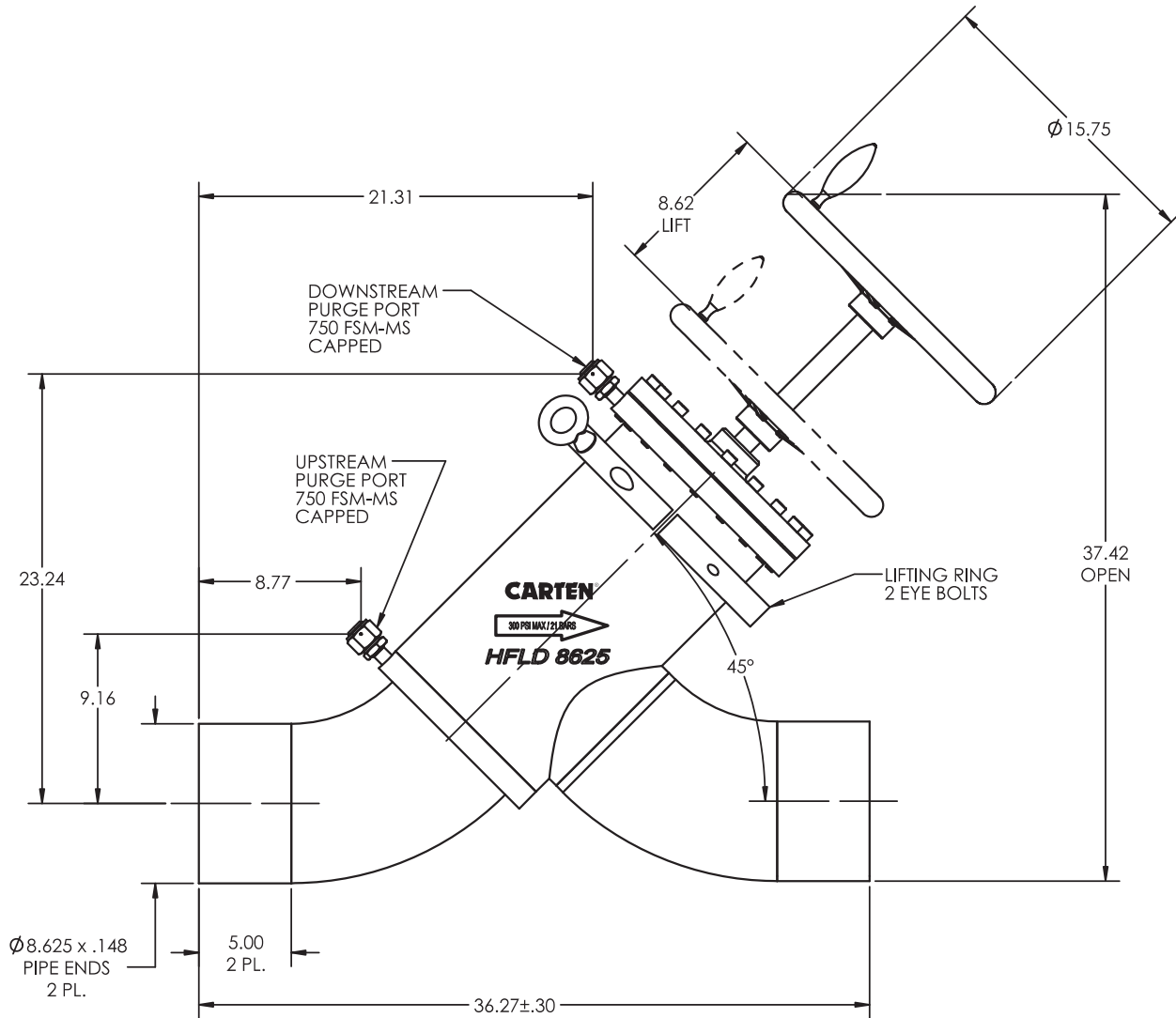
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HFLD SERIES



HFLD Series Typical Valve Dimensions

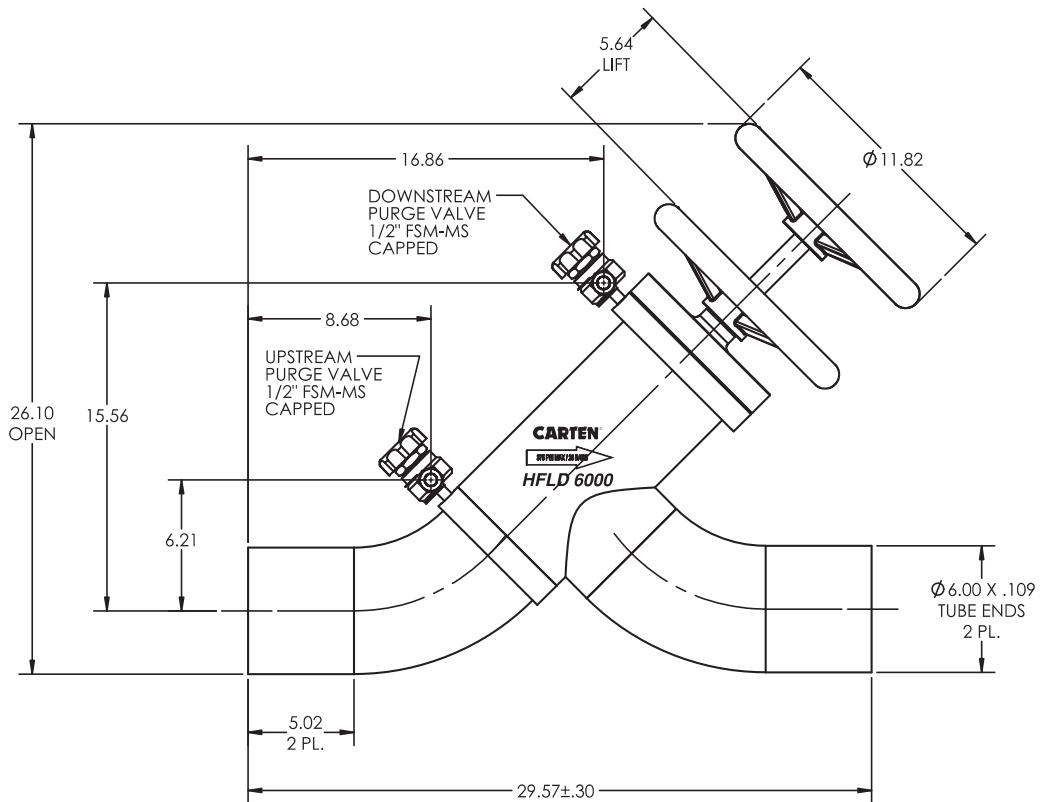
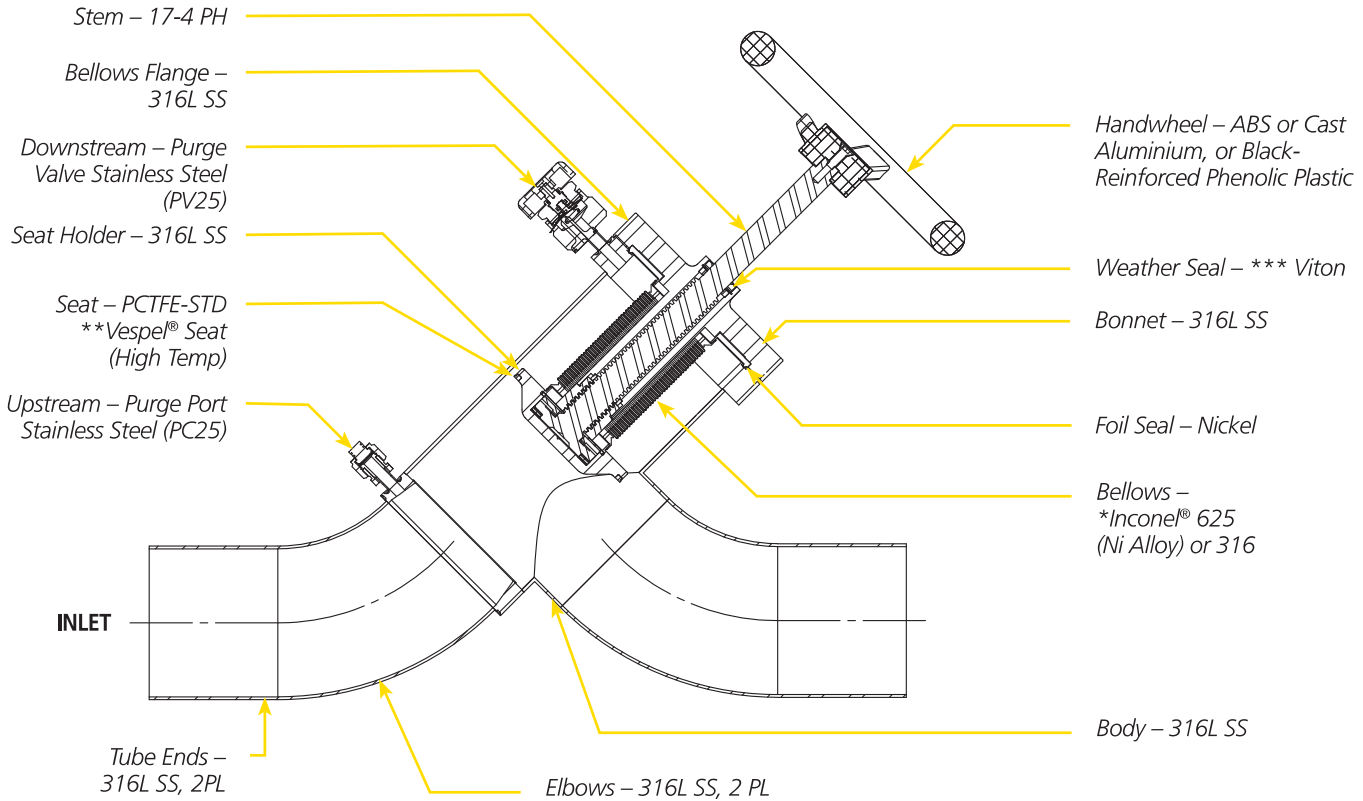
8" HFLD 8625 BODY



HFLD SERIES

HFLD Series Typical Valve Dimensions

6" HFLD 6000 BODY



HFLD SERIES

HFLD Series Ordering Code

HFLD – **8625** – **20** – **PC27** – **FSM-MS** – **BK**

SERIES	TYPE
HFLD	Manual

CODE	BODY (SEAT) SIZES
8625- 8.0" PIPE ENDS (Ø 8.52)	8.625 (8.625)
6000-6.0" TUBE ENDS (Ø 6.00)	6.000 (4.625)

CODE	SURFACE FINISH
20	EP 20 Ra Max.
10	EP 10 Ra Max.

CODE	TYPE
FSM-MS	Male-RH

CODE	SIZE/LOCATION	TYPE
PC27	3/4" Up & Downstream	Purge
PV2755	3/4" Up & Downstream	Purge Valve
PC25	1/2" Up & Downstream	Purge
PV25	1/2" Up & Downstream	Purge Valve

CODE	OPTIONS
	Handwheel
BL	Blue
BK	Black-Standard
BR	Brown
DG	Dark Gold
GL	Gold
GR	Green
GY	Grey
OR	Orange
PR	Purple
PK	Pink
RD	Red
SL	Silver
TL	Teal
WT	White
YL	Yellow
	Options
V	*Vespel® Seat

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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