CARACTERISTIQUES TECHNIQUES

Fournisseur	CARTEN - LES AUTOMATISMES APPLIQUÉS (LAA)
Application	Système Ultra Haute Pureté (UHP)
Type	Vannes à soufflet Actionneur manuel à volant Raccordements à souder 2 voies avec ports de purge amont/ aval
Matière	Inox 316L
Rugosité interne	Ra < 0.25
Traitement de surface	Electropoli
Diamètre	Ø25.4
Fluide	N2
	<u>REFERENCE</u>
Numérotation	HB1000-065-PC1 - 10 Ra (Ø25.4)

HB SERIES Ultra-High Purity Bellows Valves



PRODUCT APPLICATIONS

This HB stainless steel (bellows design) valve series[‡] is intended for bulk gas distribution service where containment, cleanliness and purity are of utmost importance.

Applications for these valves include:

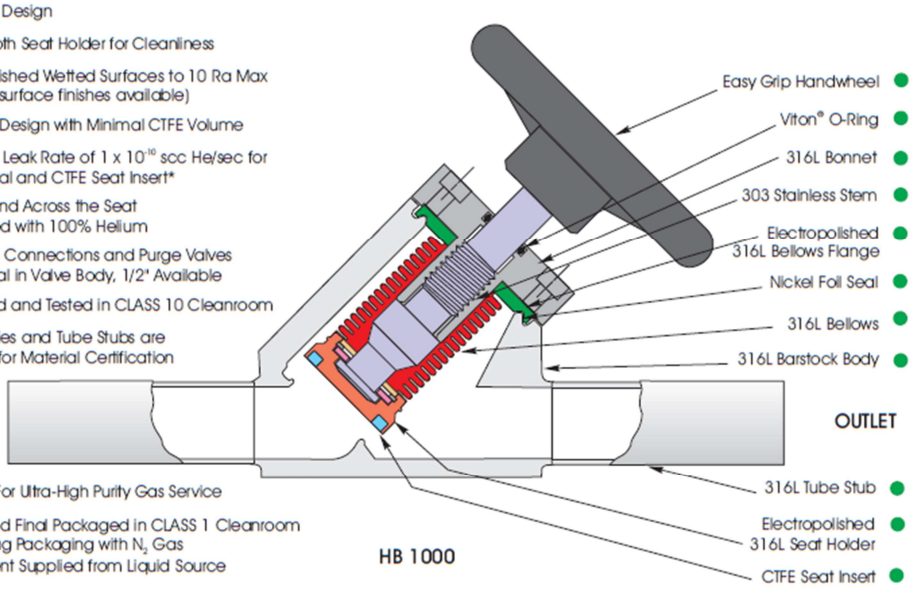
- High-purity gas distribution system control
- High-purity gas valves for point-of-use service
- Superior containment and cleanliness for your most critical valve applications
- Use with inert and most toxic gases

PRODUCT FEATURES

- Bellows Design for Ultra-High Purity and Long Cycle Life
- Compact Design
- Ultra Smooth Seat Holder for Cleanliness
- Electropolished Wetted Surfaces to 10 Ra Max (Optional surface finishes available)
- New Seat Design with Minimal CTFE Volume
- Maximum Leak Rate of 1 x 10^{-10} scc He/sec for Bellows Seal and CTFE Seat Insert*
- Inboard and Across the Seat Leak Tested with 100% Helium
- 1/4" Purge Connections and Purge Valves are Integral in Valve Body, 1/2" Available
- Assembled and Tested in CLASS 10 Cleanroom
- Valve Bodies and Tube Stubs are Serialized for Material Certification
- Cleaned For Ultra-High Purity Gas Service
- Purged and Final Packaged in CLASS 1 Cleanroom Double-Bag Packaging with N_2 Gas Environment Supplied from Liquid Source

Excluding Permeation of CTFE

CONSTRUCTION MATERIALS



[‡]*U.S. Patent # D347,882 and other patents worldwide*

HB and GBV SERIES - Technical Data

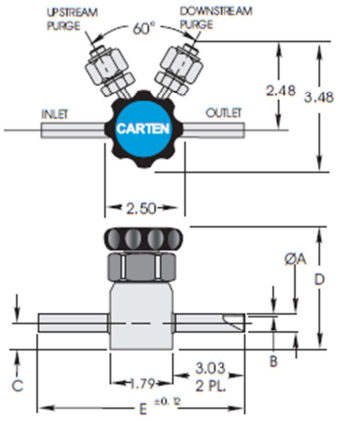
CONSTRUCTION MATERIAL	Wetted Areas	316L Stainless Steel, Nickel, CTFE
	Non-Wetted Areas	316L Stainless Steel, Brass (GBV 500 only)
MAXIMUM OPERATING PRESSURE	HB Series	Vacuum to 375 psi (25 BAR)
OPERATING TEMPERATURE RANGE	HB Series	-22° F (-30°C) to 180° F (82°C)
FLOW COEFFICIENT (C_V)	GBV500	1.93
	HB 751	10.2
	HB 1000	14.3
	HB 1501	16.6
	HB 1502	63.3
	HB 2000	74.1
	HB 3004	175.0
	HB 4000	181.0
	HB 6004	185.0

HELIUM LEAK TEST	Inboard/across the seat	1x10^{-10} scc/s He max.	Rated
		1x10^{-9} scc/s He max.	Std. Production
	Helium leak test performed with 100% He		
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 N_2 gas environment supplied from a liquid source.		
STANDARD FINISH	Electropolished to 10 Ra (0.25 Ra µm) on all wetted surfaces		
OPTIONS	Surface finish - 5 Ra, 20 Ra Particle, moisture, THC and O_2 testing SEM and ESCA testing, Auger analysis Fitting type and location Material: VAR; VIM / VAR, Vespel® seat Handwheel color (Std. Black, GBV White) JIS tube stubs and tube length		

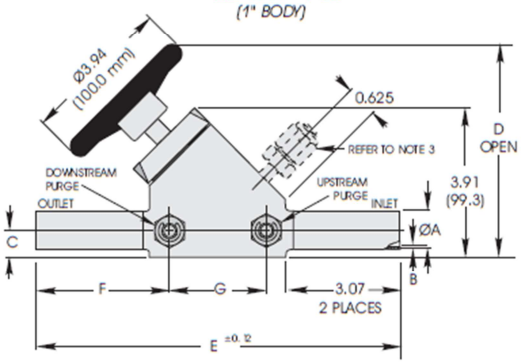
Specifications are subject to change without notice.

Viton and Vespel are registered trademarks of Dupont Company

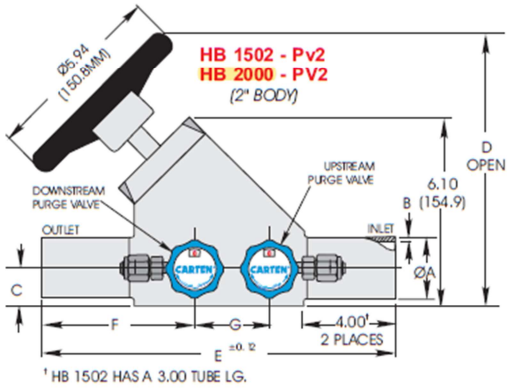
HB and GBV SERIES - Valve Dimensions (1/2" TO 6")



GBV 500 - PC2
(1/2" BODY)

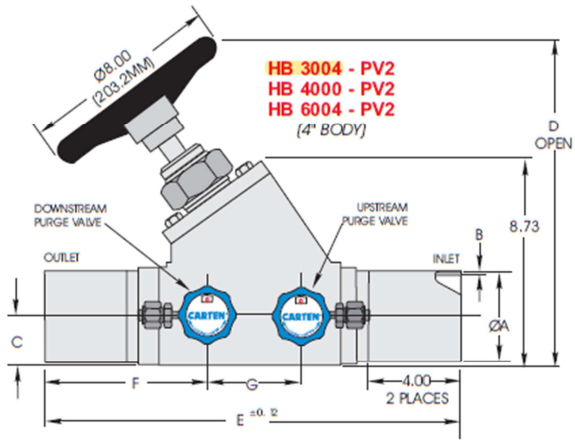


HB 751 - PC2
HB 1000 - PC2
HB 1501 - PC2
(1" BODY)



HB 1502 - Pv2
HB 2000 - PV2
(2" BODY)

[1] HB 1502 HAS A 3.00 TUBE LG.



HB 3004 - PV2
HB 4000 - PV2
HB 6004 - PV2
(4" BODY)

Standard purge connections and purge valve sizes are 1/4".

MODEL NO.	A*	B*	C	D	E	F	G	Body Width	Approx. Weight
GBV 500	0.500	0.049	0.715 (18.1mm)	3.75 (95.2mm)	7.84 (199.1mm)	N/A	N/A	2.00 (50.8mm)	2.25 Lb (1.02 Kg)
HB 751	0.750	0.065	0.75 (19.05mm)	5.62 (142.8mm)	11.55 (293.4mm)	4.57 (116.1mm)	2.50 (63.5mm)	2.25 (57.2mm)	5.5 Lb (2.5 Kg)
HB 1000	1.000	0.065	0.75 (19.05mm)	5.62 (142.8mm)	9.57 (243.1mm)	3.58 (90.9mm)	2.50 (63.5mm)	2.25 (57.2mm)	5.5 Lb (2.5 Kg)
HB 1501	1.500	0.065	0.75 (19.05mm)	5.62 (142.8mm)	13.45 (341.6mm)	5.52 (140.2mm)	2.50 (63.5mm)	2.25 (57.2mm)	5.5 Lb (2.5 Kg)
HB 1502	1.500	0.065	1.25 (31.75mm)	8.63 (219.2mm)	15.42 (391.7mm)	7.03 (178.6mm)	2.50 (63.5mm)	3.38 (85.8mm)	20.0 Lb (9.08 Kg)
HB 2000	2.000	0.065	1.25 (31.75mm)	8.63 (219.2mm)	13.50 (342.9mm)	6.07 (154.2mm)	2.50 (63.5mm)	3.38 (85.8mm)	20.0 Lb (9.08 Kg)
HB 3004	3.000	0.065	2.12 (53.8mm)	13.93 (353.8mm)	25.62 (650.7mm)	10.43 (264.9mm)	4.25 (107.9mm)	5.12 (130.0mm)	50Lb (22.6 Kg)
HB 4000	4.000	0.083	2.12 (53.8mm)	13.93 (353.8mm)	17.90 (454.7mm)	6.57 (166.9mm)	4.25 (107.9mm)	5.12 (130.0mm)	50 Lb (22.6Kg)
HB 6004	6.000	0.109	2.12 (53.8mm)	13.93 (353.8mm)	32.98 (837.7mm)	14.11 (358.4mm)	4.25 (107.9mm)	5.12 (130.0mm)	55 Lb (25.0Kg)

*Metric tube sizes and wall thicknesses are available on request.

NOTE 1: All tolerances are ±0.06 in. unless otherwise stated

NOTE 2: *Dimensional drawings shown are for reference only. Please contact the the manufacturer for customer drawings showing updated dimensions.*

NOTE 3: Optional downstream purge connection location available on all HB models.

REV. 99-1

CARTEN CONTROLS INC.