

CBV SERIES High Purity Ball Valves

CARTEN
Ultra High Purity Valves

PRODUCT APPLICATIONS



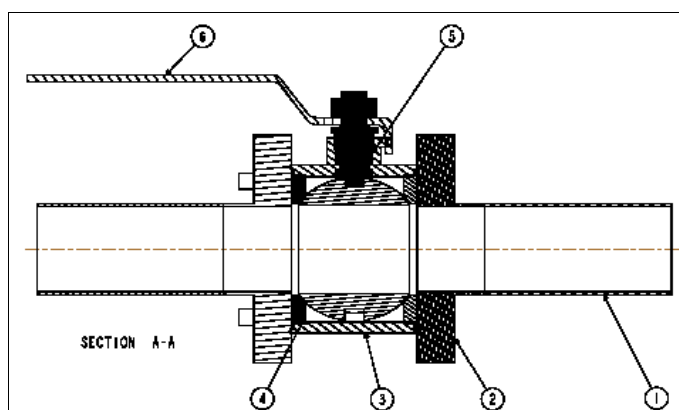
The Carten CBV series stainless steel ball valves are intended for clean dry air (CDA), utility nitrogen, house nitrogen, instrument air (IA) and other non process distribution services. The CBV series is a Full Bore, High Flow design for bulk gas distribution requirements. The CBV series is the first choice in the semiconductor industry where containment, purity and integrity are critical to the customers needs. Applications include:

- ▶ High purity gas service
- ▶ CDA, UN2, HN2, IA systems
- ▶ In line isolation valve, duplex lateral and uniplex lateral configurations

PRODUCT FEATURES

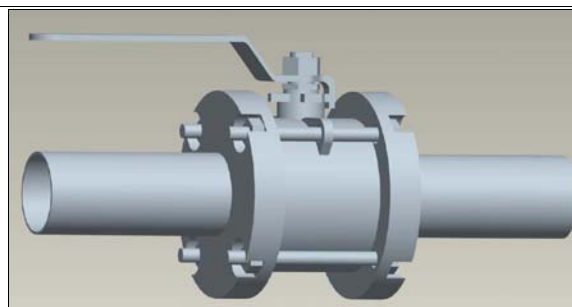
- ▶ 316 CF8M Body and 316L Barstock Flanges Design for High Integrity
- ▶ Standard Operating Pressure of 375psi (25bar).
- ▶ Operating Temperature Range -17°C (0°F) to 82.2°C (180°F)
- ▶ Outboard Leak Tested, Rated to 1×10^{-6} at 250PSI
- ▶ Cleaned to Semiconductor Standards for High Purity Systems
- ▶ Purged and Final packaged in CLASS 10 Cleanroom. Double-bag packaging with N₂ Gas supplied from liquid source
- ▶ Available from 1/4" to 4" line sizes for Full Bore

CBV SERIES - Cut Section View (Full Bore Type)



CONSTRUCTION MATERIALS

- ▶ 316 CF8M Body & 316L St. St. Barstock Flanges (Items 2 & 3)
- ▶ Virgin PTFE Seats & Seals (standard) (Items 4 & 5)
- ▶ 316L Tube Stubs (Item 1)



CBV SERIES - Technical Data

CONSTRUCTION MATERIAL	Wetted Areas	316L Stainless Steel, PTFE
	Non-Wetted Areas	Stainless Steel
TEMPERATURE RANGE	CBV Series	-17°C to 82°C (-0°F to 180°F)
FLOW COEFFICIENT	CBV250	1.00
	CBV375	2.50
	CBV500	8.00
	CBV750	20.00
	CBV1000	34.00
	CBV1500	130.00
	CBV2000	480.00
	CBV2500	480.00
	CBV3000	1250.00
	CBV4000	2500.00
	CBV6000	2600.00
LINE PRESSURE	CBV Series	375psi (25bar) Standard

LEAK RATES	Across The Seat	1×10^{-6} scc/s He Max. at 250PSI
	Outboard	1×10^{-6} scc/s He Max. at 250PSI
CLEANLINESS/ PACKAGING	Assembled and tested in CLASS 10 cleanroom. Double-bag packaging (2 mil nylon inner bag, 6 mil polyethylene outer bag) with N ₂ gas environment supplied from liquid source.	
STANDARD FINISH	Electropolished to 30Ra (0.80 µm) on all wetted surfaces	
OPTIONS	<ul style="list-style-type: none"> ◆ Surface Finish – 15Ra, 25Ra, etc. ◆ Delrin Seats & Seals ◆ Pneumatic Actuation ◆ Integrated Compression End Connections from 1/4" through to 1" ◆ Duplex and Uniplex Configurations Available 	

Specifications subject to change without notice

Component Selection

The total system design must be considered when selecting a valve to ensure performance. Valve application, materials compatibility, installation, operation and maintenance are the responsibility of the system design engineer.

NOTE 1: Dimensional drawings shown are for reference only. Please contact the manufacturer for customer drawings showing updated dimensions. Also contact the manufacturer for the various configurations available.