

# UBC Series

Ultra-High Purity  
TEE Block Valves

**CARTEN**  
Ultra High Purity Valves



## PRODUCT APPLICATIONS

The compact UBC range of Carten TEE block bellows valves is intended for bulk gas distribution service where containment, cleanliness and purity are of the utmost importance. Our compact valve design minimises the space consideration over the conventional isolation valve and weld TEE option. Applications for this valve include :

- ✍ Ultra-high purity gas system distribution valves
- ✍ Point of use service or hook up applications
- ✍ Suitable for inert and most toxic gases

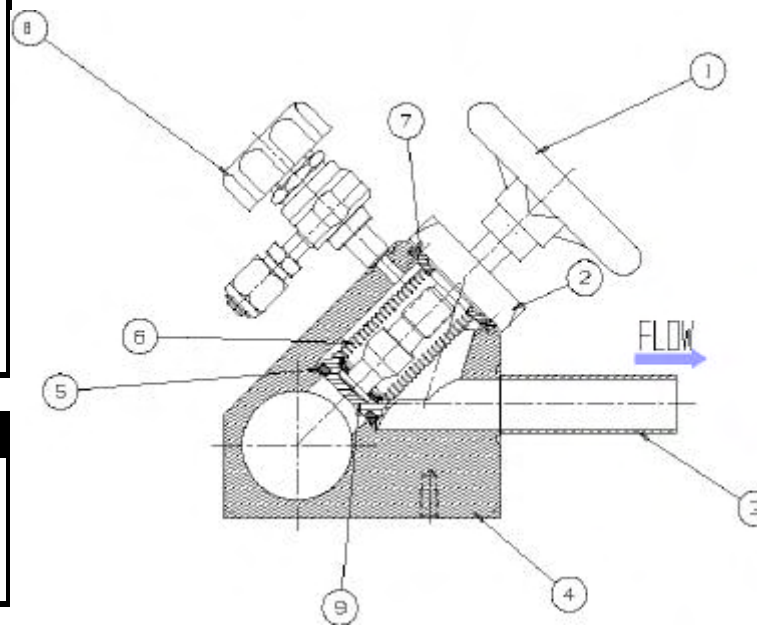
**▶ PRODUCT FEATURES**

- ▶ High Performance and Compact Design
- ▶ Ultra-High Purity Stainless Steel/CTFE Gas Containment
- ▶ Minimal CTFE volume in the seat design
- ▶ Inboard and across the seat leak tested with 100% helium
- ▶ Purge ports and purge valves are integral to the valve
- ▶ Electropolished to 10Ra on the internal wetted area
- ▶ Purged and Final packaged in CLASS 1 Cleanroom. Double-bag packaging with N<sub>2</sub> Gas supplied from liquid source

**● CONSTRUCTION MATERIALS**

- 316L Stainless Steel Body and Tube Extensions
- Kel-F (CTFE) Seat Insert
- Easy Grip Handle for Open/Close Operation

## UBC Series – Cut Section View



## UBC Series - Technical Data

|                       |              |   |
|-----------------------|--------------|---|
| CONSTRUCTION MATERIAL | Wetted Areas | 316 L Stainless Steel<br>CTFE (Kel-F)   |
|                       | Non-Wetted   | 316 Stainless Steel<br>Nickel Foil Seal Gasket<br>303 Stainless Steel<br>Viton 'O' Ring |
| TEMPERATURE RANGE     | UBC Series   | -22°F (-30°C) to 180°F (82°C)   |
| OPERATING PRESSURE    | UBC Series   | Vacuum to 375psi (25Bar)  |
| FLOW COEFFICIENT (Cv) | UBC1000-750  | 10.20   |
|                       | UBC1500-750  | 10.20   |
|                       | UBC1000-1000 | 14.30   |
|                       | UBC1500-1000 | 14.30   |
|                       | UBC2000-1000 | 14.30   |
|                       | UBC2000-1500 | 16.60   |
|                       | UBC3000-1000 | 14.30   |
| UBC3000-1500          | 16.60        |   |

|                           |   |   |                          |
|---------------------------|---|---|--------------------------|
| HELIUM LEAK TEST DATA     | Inboard/Across the Seat   | 1x10 <sup>-10</sup> scc/s He max.<br>1x10 <sup>-9</sup> scc/s He max. | Rated<br>Std. Production |
|                           | Helium Leak Test Performed with 100% Helium   |   |                          |
| CLEANLINESS/<br>PACKAGING | Assembled and tested in CLASS 10 cleanroom. Purge and final packaged in Class 1 cleanroom. Double-bag packaging (2 mil nylon inner bag, 6 mil polyethylene outer bag) with N <sub>2</sub> gas environment supplied from liquid source.  |   |                          |
| STANDARD FINISH           | Electropolished to 10 Ra (0.25 µm) on all wetted surfaces   |   |                          |
| OPTIONS                   | Surface Finish Options: 5Ra, 15Ra, 20Ra, 30Ra, etc.<br>Particle, Moisture, THC and O <sub>2</sub> Testing Available<br>Handwheel Colour Options Available on Request<br>Air Actuated Operation Available on All Sizes<br>Optional Branch Connections – VCR, Tube Stub, DW Cap<br>Optional Seat Material Available for Higher Temperature Applications |   |                          |

Specifications subject to change without notice

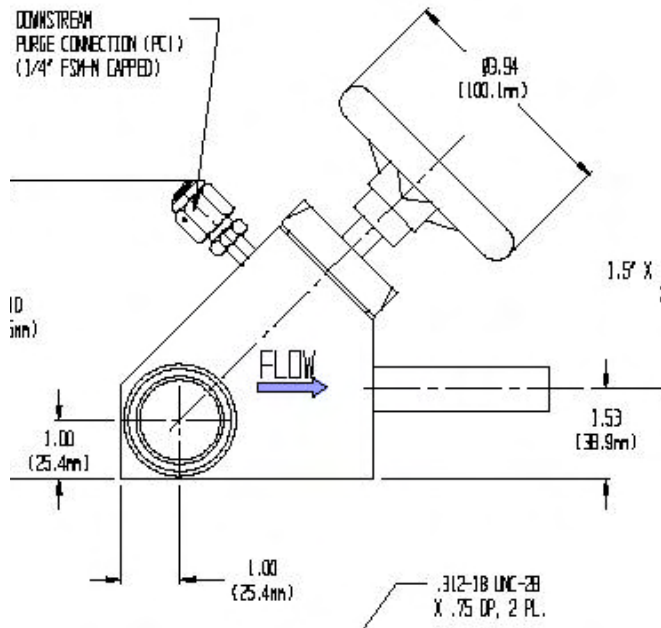
### Component Selection

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.

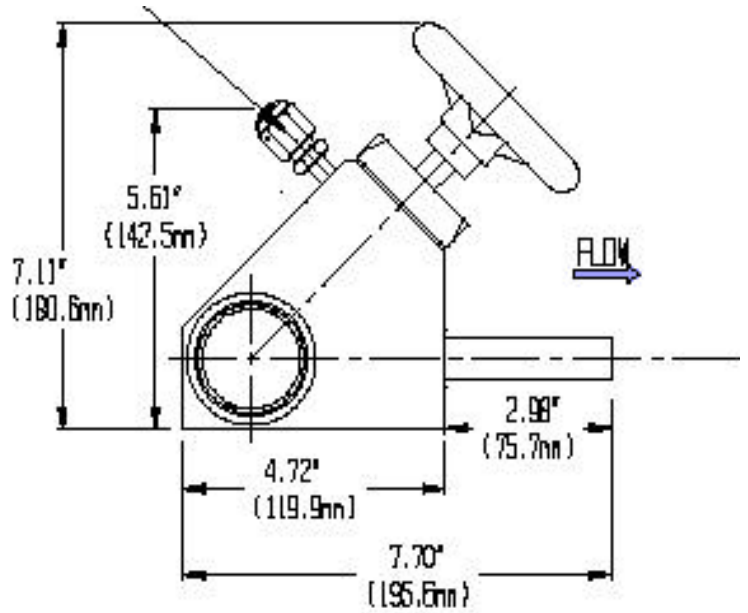
NOTE 1: Dimensional drawings shown are for reference only. Please contact the manufacturer for customer drawings showing updated dimensions

### VALVE DIMENSIONS

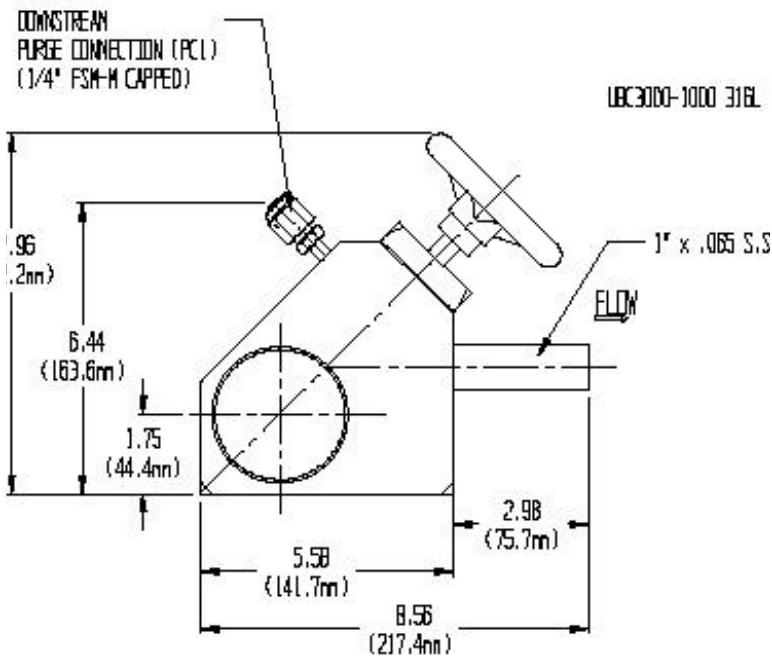
**UBC1500-065-1000-065-PC1**



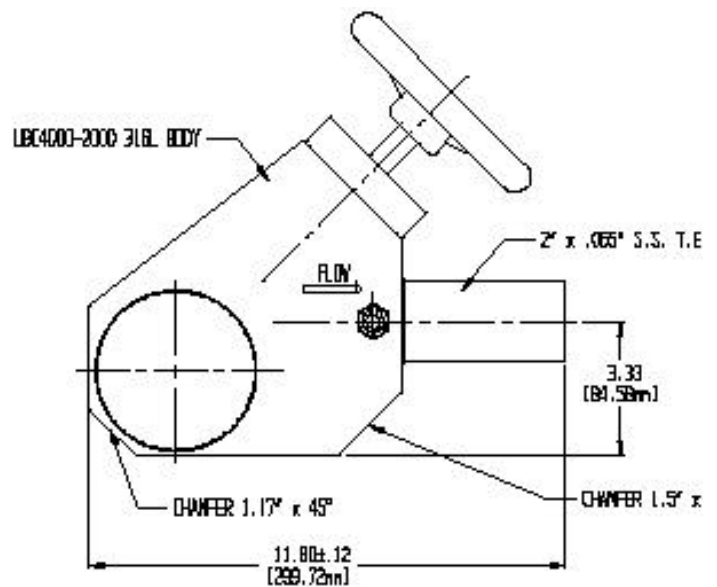
**UBC2000-065-1000-065-PC1**



**UBC3000-065-1000-065-PC1**



**UBC4000-065-2000-065-PC1**



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