

GBA SERIES

Ultra-High Purity Air-Actuated Bellows Valves



PRODUCT APPLICATIONS

This air-actuated GBA stainless steel bellows valve series is intended for bulk gas distribution service where containment, cleanliness and purity are of utmost importance. Applications for this valve include:

- Ultra-high-purity gas service for the semiconductor industry
- Ultra-high-purity gas control for point-of-use service or gas cabinets
- Superior containment and cleanliness for your most critical valve applications
- Suitability for inert and most toxic gases

GENERAL PRODUCT FEATURES	CONSTRUCTION MATERIALS
<ul style="list-style-type: none"> ▶ Bellows Design for Ultra-High Purity and Long Cycle Life ▶ Ultra-High Purity Stainless/CTFE Gas Containment ▶ 321 SS Bellows for Maximum Flow ▶ No Internal Particle Shedding Components ▶ Electropolished Wetted Surfaces to 10 Ra (Optional surface finishes available) ▶ Maximum Leak Rate of 1×10^{-10} scc He/sec for Bellows Seal and CTFE* ▶ Optional Tube Extensions, Purge Connections or Fittings Available ▶ Assembled and Tested in CLASS 10 Cleanroom ▶ Inboard and Across the Seat Leak Tested with 100% Helium ▶ Valve Bodies and Tube Stubs are Serialized for Material Certification ▶ Purged and Final Packaged in CLASS 1 Cleanroom. Double-Bag Packaging with N₂ Supplied from Liquid Source. ▶ Cleaned for High-Purity Gas Service 	

GBA 500-01-NC

**Excluding Permeation of CTFE*

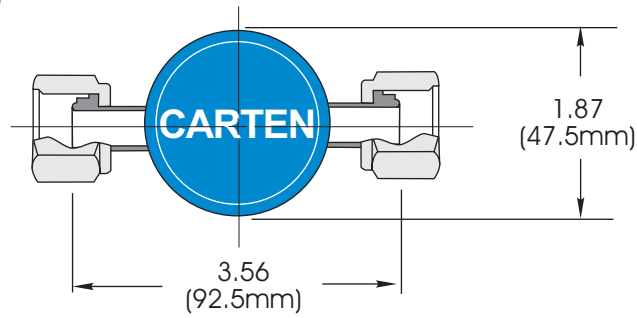
GBA SERIES - Technical Data

CONSTRUCTION MATERIAL	Wetted Areas	316L Stainless Steel, CTFE 321 Stainless Steel
	Non-Wetted Areas	316L Stainless Steel, Aluminum, 303 Stainless Steel
ACTUATOR PRESSURE	GBA Series	60 - 75 psi. (5 - 6 BAR)
MAXIMUM OPERATING PRESSURE	GBA Series	Vacuum to 250 psi. (0 - 17 BAR)
MAXIMUM OPERATING TEMPERATURE	GBA Series	180° F (82°C)
FLOW COEFFICIENT (C _v)	GBA 500	1.93

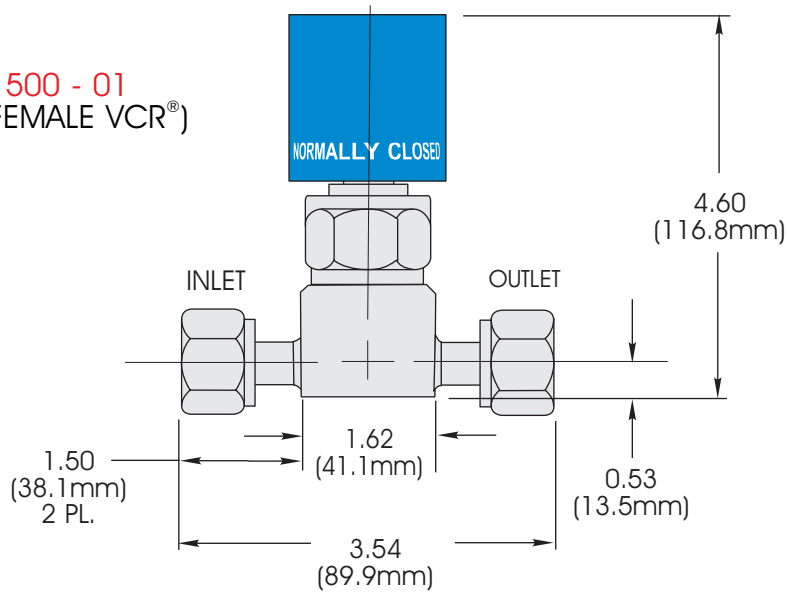
HELIUM LEAK TEST	Inboard/across the seat	1×10^{-10} scc/s He max.	Rated
		1×10^{-9} scc/s He max.	Std. Production
Helium test performed with 100% helium			
LIFE CYCLE TEST	GBA 500	>500,000 cycles at 150 psi.	
CLEANLINESS	Assembled and tested in CLASS 10 cleanroom. Purged and final packaged in CLASS 1 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 μm) on all wetted surfaces		
OPTIONS	Proximity Switch (open/close) Surface finish - 5 Ra, 20 Ra Particle, moisture, THC and O ₂ testing Inlet and Outlet type (fitting, tube stub) SEM and ESCA testing, Auger analysis Note: Normally open option not available		

Specifications are subject to change without notice.
Teflon is a registered trademark of DuPont Company
VCR is a registered trademark of Cajon Company

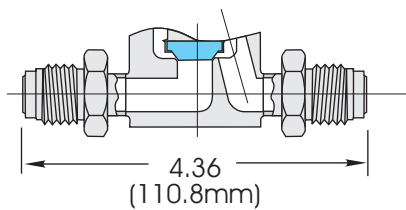
GBA SERIES - Valve Dimensions



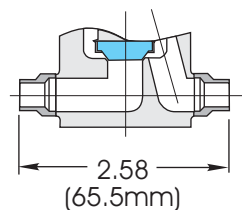
GBA 500 - 01
(0.500 FEMALE VCR®)



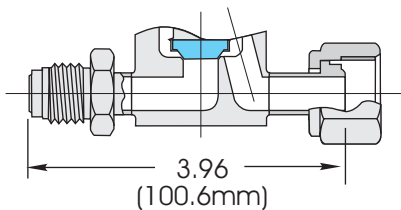
Optional GBA 500 Fittings



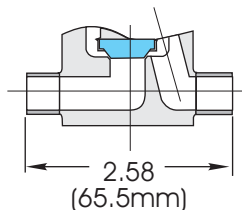
-02 (0.500 MALE(SWIVEL) VCR)



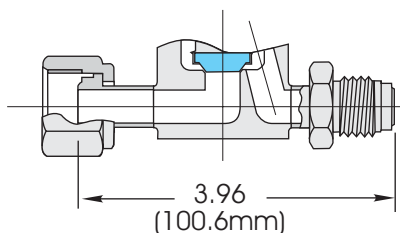
-03 (0.375 x 0.035 TUBE STUB)



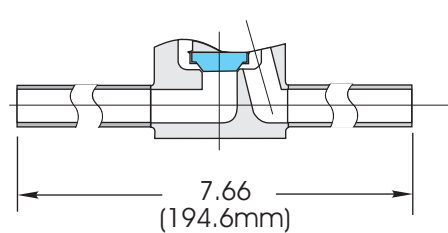
-05 (0.500 MALE(SWIVEL)/FEMALE VCR)



-04 (0.500 x 0.049 TUBE STUB)



-06 (0.500 FEMALE/MALE(SWIVEL))



-07 (0.500 x 0.049 TUBE END)

Approximate weight = 2 Lbs (0.91Kg)

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

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