

# CV SERIES High Purity Brass Check Valves



## PRODUCT APPLICATIONS

This CV brass check valve series is intended for bulk gas distribution service where containment, cleanliness and purity are of utmost importance. Applications for this check valve include:

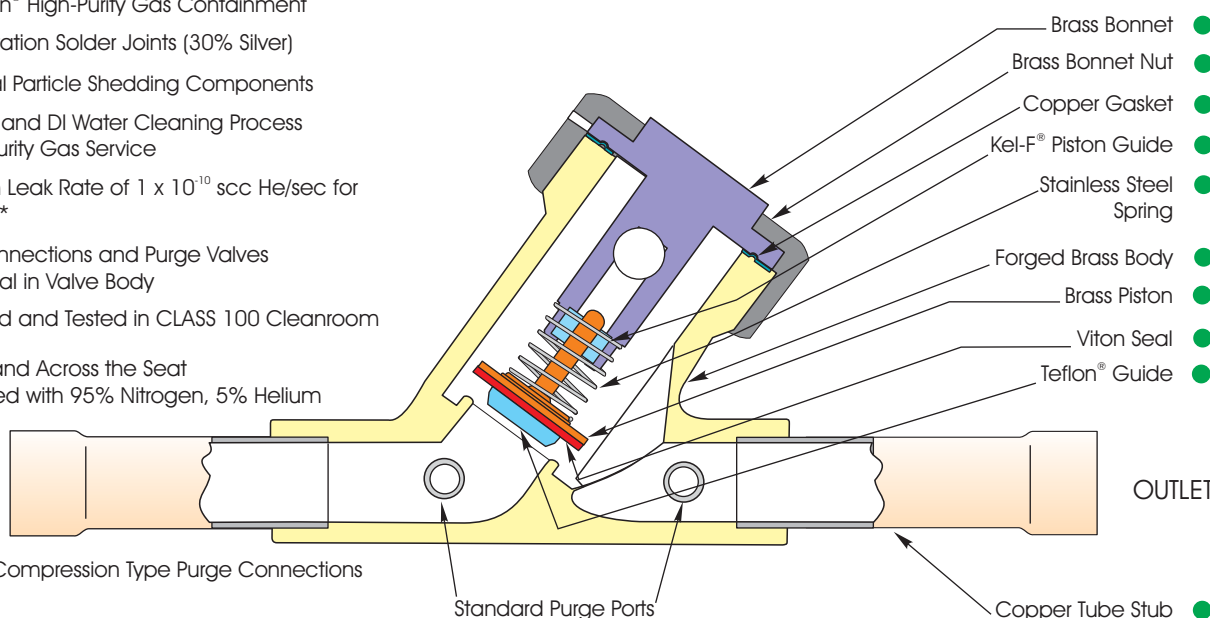
- High-purity gas service for the semiconductor industry
- Prevention of undesired reverse gas flow in UHP gas systems
- Superior containment and cleanliness for your most critical valve applications
- Clean dry air and inert gas applications

## PRODUCT FEATURES

- ▶ Designed for High Purity and Long Cycle Life
- ▶ Brass/Teflon® High-Purity Gas Containment
- ▶ Full Penetration Solder Joints (30% Silver)
- ▶ No Internal Particle Shedding Components
- ▶ Bright Dip and DI Water Cleaning Process for High-Purity Gas Service
- ▶ Maximum Leak Rate of  $1 \times 10^{-10}$  scc He/sec for Viton Seal\*
- ▶ Purge Connections and Purge Valves are Integral in Valve Body
- ▶ Assembled and Tested in CLASS 100 Cleanroom
- ▶ Inboard and Across the Seat Leak Tested with 95% Nitrogen, 5% Helium

INLET

OUTLET



CV 875

- ▶ Standard Compression Type Purge Connections
- ▶ Double-Bag Packaging with N<sub>2</sub> Gas Environment Supplied from a Liquid Source

\*Excluding Permeation of Viton

## CONSTRUCTION MATERIALS

## CV SERIES - Technical Data

CONSTRUCTION MATERIAL	Wetted Areas	Copper/Brass,Teflon, Stainless Steel, Silver Solder, Kel-F, Viton		
	Non-Wetted Areas	Brass		
MAXIMUM OPERATING PRESSURE	CV Series	Vacuum to 250 psi (17 BAR)		
MAXIMUM OPERATING TEMPERATURE	CV Series	-22° F (-30°C) to 180° F (82°C)		
FLOW COEFFICIENT (C <sub>v</sub> )*	MODEL	C <sub>v</sub>	CP	PFO
	CV 625	2.32	0.1 psi	6.0 psi
CRACKING PRESSURE (CP)	CV 875	5.05	0.1 psi	6.0 psi
	CV 1125	12.69	3.4 psi	6.0 psi
PRESSURE TO FULL OPEN (PFO)	CV 1625	22.36	3.2 psi	9.0 psi
	CV 2125	31.53	0.1 psi	6.0 psi
*Full open without spring	CV 3125	56.71	0.1 psi	3.5 psi
	CV 4125	67.61	0.1 psi	3.5 psi

HELIUM LEAK TEST	Inboard/across the seat	1x10 <sup>-10</sup> scc/s He max.	Rated
		1x10 <sup>-6</sup> scc/s He max.	Std. Production
		Leak test performed with 95% Nitrogen, 5% Helium	
CLEANLINESS AND PACKAGING	Assembled and tested in CLASS 100 cleanroom Double-bag packaging (6 mil polyethylene inner and outer bag) with N <sub>2</sub> gas environment supplied from a liquid source		
OPTIONS	Stainless steel Ultra-Seal® type purge connection Single purge valve/connection Tube extension length or fittings Straight or swaged copper tube extensions Stainless steel tube extensions		

Specifications are subject to change without notice.

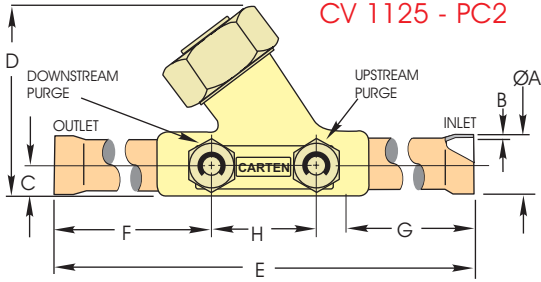
Kel-F is a registered trademark of the 3M Company

Viton and Teflon are registered trademarks of DuPont Company

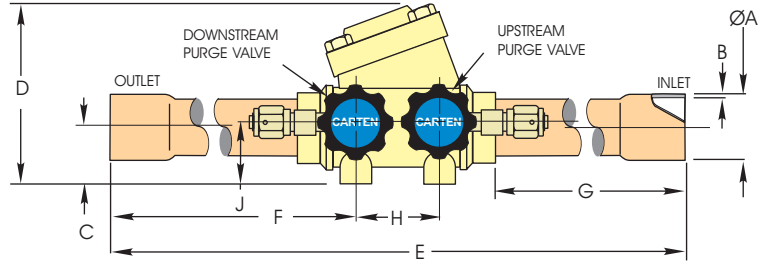
Ultra-Seal is a registered trademark of Parker Hannifin Corporation

## CV SERIES - Check Valve Dimensions

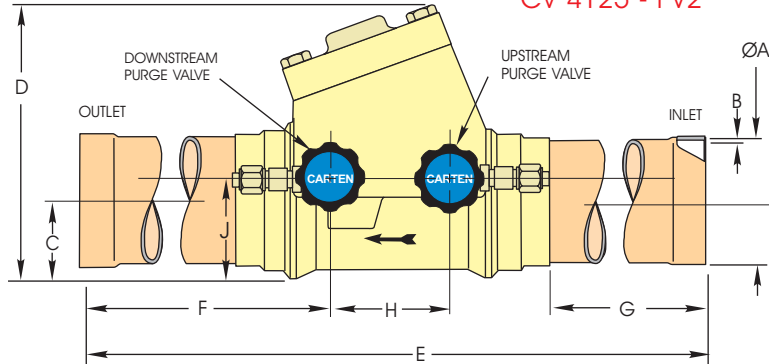
CV 625 - PC2  
CV 825 - PC2  
CV 1125 - PC2



CV 1625 - PV2



CV 2125 - PV2  
CV 3125 - PV2  
CV 4125 - PV2



CATALOG NO.	A*	B*	C	D	E	F	G	H	J	Body Width	Approx. Weight
CV 625	0.629	0.040	0.406 (10.3mm)	2.82 (7.16mm)	9.60 (243.8mm)	3.80 (96.5mm)	3.05 (77.5mm)	2.00 (50.8mm)	N/A	1.19 (30.2mm)	1.75 Lb (0.79) Kg
CV 875	0.879	0.045	0.562 (14.3mm)	3.14 (79.7mm)	11.63 (295.4mm)	4.81 (122.2mm)	3.94 (100.1mm)	2.00 (50.8mm)	N/A	1.50 (38.1mm)	2.5 Lb (1.13) Kg
CV 1125	1.130	0.050	0.687 (17.4mm)	3.97 (100.8mm)	15.76 (400.3mm)	6.88 (174.7mm)	5.38 (136.6mm)	2.00 (50.8mm)	N/A	1.92 (48.8mm)	4.25 Lb (1.92) Kg
CV1625	1.630	0.060	1.312 (33.3mm)	4.63 (117.6mm)	18.50 (469.9mm)	8.25 (209.5mm)	6.94 (176.3mm)	2.00 (50.8mm)	1.59 (40.4mm)	1.43 (36.3mm)	7.00 Lb (3.17) Kg
CV 2125	2.130	0.070	1.687 (42.8mm)	5.88 (149.3mm)	19.38 (492.2mm)	8.31 (211.1mm)	6.50 (165.1mm)	2.75 (69.8mm)	2.16 (54.9mm)	1.87 (47.5mm)	14.00 Lb (6.35) Kg
CV 3125	3.130	0.090	2.125 (54.0mm)	7.50 (190.5mm)	21.00 (533.4mm)	8.86 (225mm)	6.13 (155.7mm)	3.69 (93.7mm)	2.53 (64.3mm)	2.50 (63.5mm)	32.00 Lb (14.50) Kg
CV 4125	4.130	0.110	2.125 (54.0mm)	7.50 (190.5mm)	23.88 (606.5mm)	10.23 (259.8mm)	6.63 (168.4mm)	3.69 (93.7mm)	2.53 (64.3mm)	2.50 (63.5mm)	40.00 Lb (18.12) Kg

\* Metric tube sizes and wall thicknesses are available upon request

NOTE 1: All tolerances are  $\pm 0.06$  in. unless otherwise stated

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

REV. 99-1

CARTEN CONTROLS INC.