

# DUPLEX SERIES Ultra-High Purity Duplex Diaphragm Valves



## PRODUCT APPLICATIONS

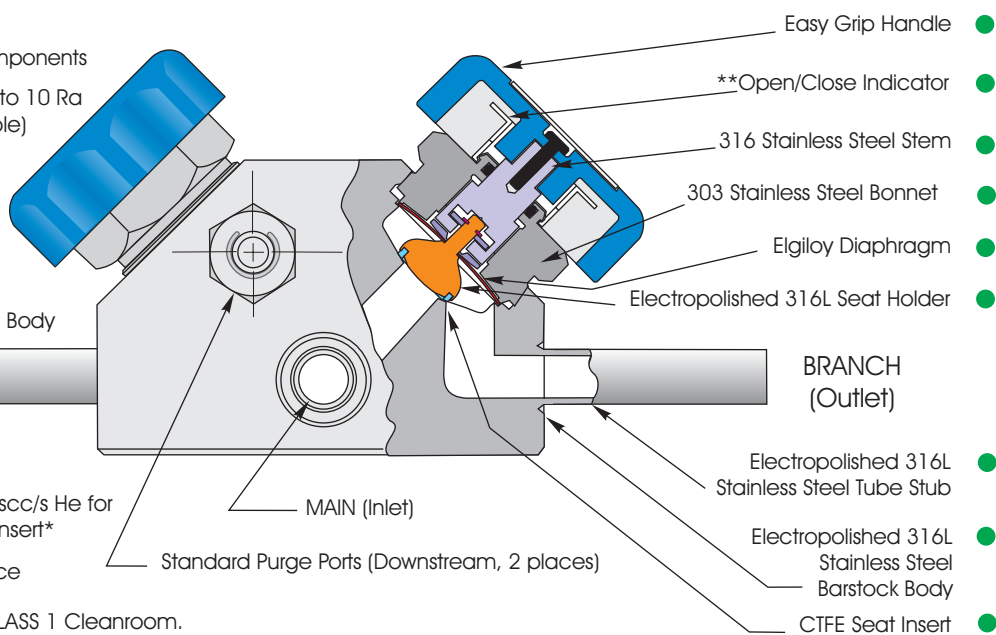
This compact Duplex (diaphragm design) valve series is intended for bulk gas distribution service where containment, cleanliness and purity are of utmost importance. Applications for this valve include:

- Ultra-high purity gas system control valves
- Ultra-high purity gas control for point-of-use or service for hookups
- Superior containment and cleanliness for your most critical valve applications
- Suitable for inert and most toxic gases

## PRODUCT FEATURES

- ▶ Diaphragm Design for Ultra-High Purity and Long Cycle Life
- ▶ Ultra-High Purity Stainless/CTFE Gas Containment
- ▶ Eligoy Tied-Diaphragm for Maximum Flow and High Life Cycle
- ▶ Springless, Packless Design
- ▶ No Internal Particle Shedding Components
- ▶ Electropolished Wetted Surfaces to 10 Ra (Optional surface finishes available)
- ▶ Assembled and Tested in CLASS 10 Cleanroom
- ▶ Valve Bodies and Tube Stubs are Serialized for Material Certification
- ▶ Purge Connections are Integral in Body
- ▶ Inboard and Across the Seat Leak Tested with 100% Helium
- ▶ Maximum Leak Rate of  $1 \times 10^{-10}$  scc/s He for Diaphragm Seal and CTFE Seat Insert\*
- ▶ Cleaned for High-Purity Gas Service
- ▶ Purged and Final Packaged in CLASS 1 Cleanroom. Double-Bag Packaging with N<sub>2</sub> Gas Environment Supplied from Liquid Source

## CONSTRUCTION MATERIALS



DPC 750 / 500

\*Excluding Permeation of CTFE

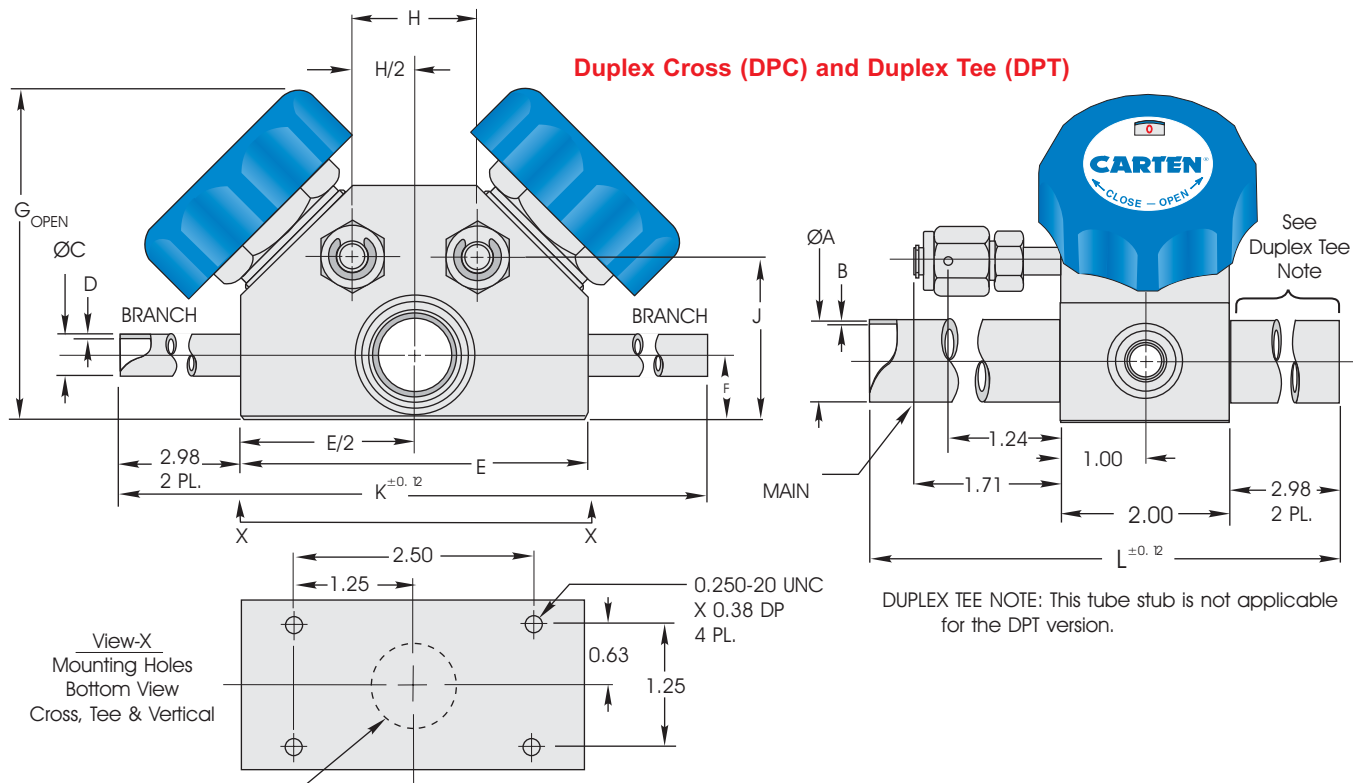
## DUPLEX SERIES - Technical Data

CONSTRUCTION MATERIAL	Wetted Areas	Eligoy, 316L Stainless Steel, CTFE	HELIUM LEAK TEST	Inboard/across the seat	1x10 <sup>-10</sup> scc/s He max.	Rated
	Non-Wetted Areas	316L Stainless Steel, 303 Stainless Steel			1x10 <sup>-9</sup> scc/s He max.	Std. Production
MAXIMUM OPERATING PRESSURE	DPC / DPV /DPT Series	Vacuum to 375 psi (25 BAR)	Helium leak test performed with 100% helium			
MAXIMUM OPERATING TEMPERATURE	DPC / DPV /DPT Series	180° F (82°C)	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 <sub>2</sub> gas environment supplied from a liquid source		
FLOW COEFFICIENT (C <sub>v</sub> )	DPC Series	2.96	STANDARD FINISH	Electropolished to 10 Ra (0.25 μm) on all wetted surfaces		
	DPV / DPT Series	3.10	OPTIONS	Surface finish - 5 Ra, 20 Ra Particle, moisture, THC and O <sub>2</sub> testing SEM and ESCA testing, Auger analysis Fitting type and location Material: VAR; VIM / VAR, Vespel® seat Handle color (Std. white) JIS tube stubs and tube length		

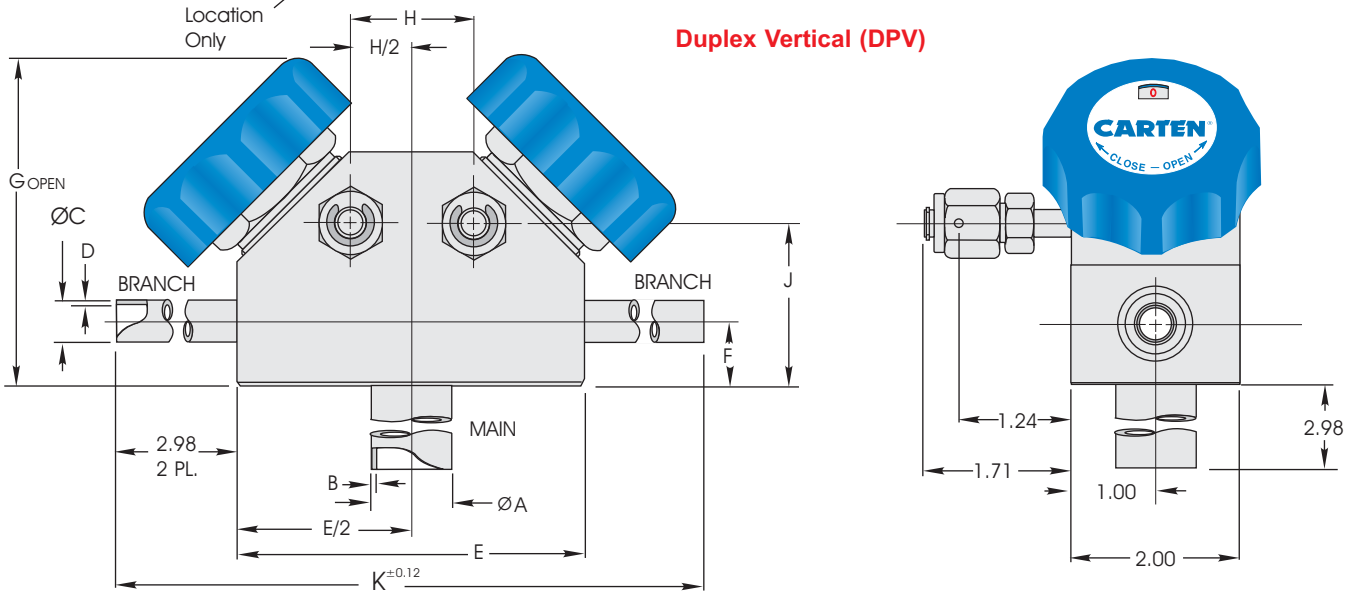
Specifications are subject to change without notice  
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\*\*The open/close indicator provides open/close status at the fully open or closed positions. It is not intended to act as a metering or proportioning system.

# Valve Dimensions - Duplex Cross (DPC), Duplex Vertical (DPV) Valves, and Duplex Tee (DPT) Valves



DUPLEX TEE NOTE: This tube stub is not applicable for the DPT version.



Note: Additional main and branch tube sizes are available on request.

Catalog No.		A*	B*	C*	D*	E	F	G	H	J	K	L	Approx. Weight
DPC	750/500	0.750	0.065	0.500	0.049	4.16 (105.6mm)	0.75 (19.1mm)	3.80 (96.5mm)	1.50 (38.1mm)	1.92 (48.8mm)	10.12 (257.0mm)	7.96 (202.2mm)	6.3 Lb (2.85 Kg)
DPV	750/750	0.750	0.065	0.750	0.065	4.16 (105.6mm)	0.75 (19.1mm)	3.80 (96.5mm)	1.50 (38.1mm)	1.92 (48.8mm)	10.12 (257.0mm)	7.96 (202.2mm)	6.3 Lb (2.85 Kg)
DPC	1000/500	1.000	0.065	0.500	0.049	4.16 (105.6mm)	0.75 (19.1mm)	3.80 (96.5mm)	1.50 (38.1mm)	1.92 (48.8mm)	10.12 (257.0mm)	7.96 (202.2mm)	6.3 Lb (2.85 Kg)
DPV	1000/750	1.000	0.065	0.750	0.065	4.16 (105.6mm)	0.75 (19.1mm)	3.80 (96.5mm)	1.50 (38.1mm)	1.92 (48.8mm)	10.12 (257.0mm)	7.96 (202.2mm)	6.3 Lb (2.85 Kg)
DPC	1500/500	1.500	0.065	0.500	0.049	4.86 (118.4mm)	1.25 (31.7mm)	4.40 (111.8mm)	2.00 (50.8mm)	2.67 (67.8mm)	10.58 (268.7mm)	8.46 (214.9mm)	10.2 Lb (4.62 Kg)
DPV	1500/750	1.500	0.065	0.750	0.065	4.86 (118.4mm)	1.25 (31.7mm)	4.40 (111.8mm)	2.00 (50.8mm)	2.67 (67.8mm)	10.58 (268.7mm)	8.46 (214.9mm)	10.2 Lb (4.62 Kg)
DPC	2000/500	2.000	0.065	0.500	0.049	4.66 (118.4mm)	1.25 (31.7mm)	4.40 (111.8mm)	2.00 (50.8mm)	2.67 (67.8mm)	10.58 (268.7mm)	8.46 (214.9mm)	10.2 Lb (4.62 Kg)
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\*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 manufacturer for customer drawings showing updated dimensions.