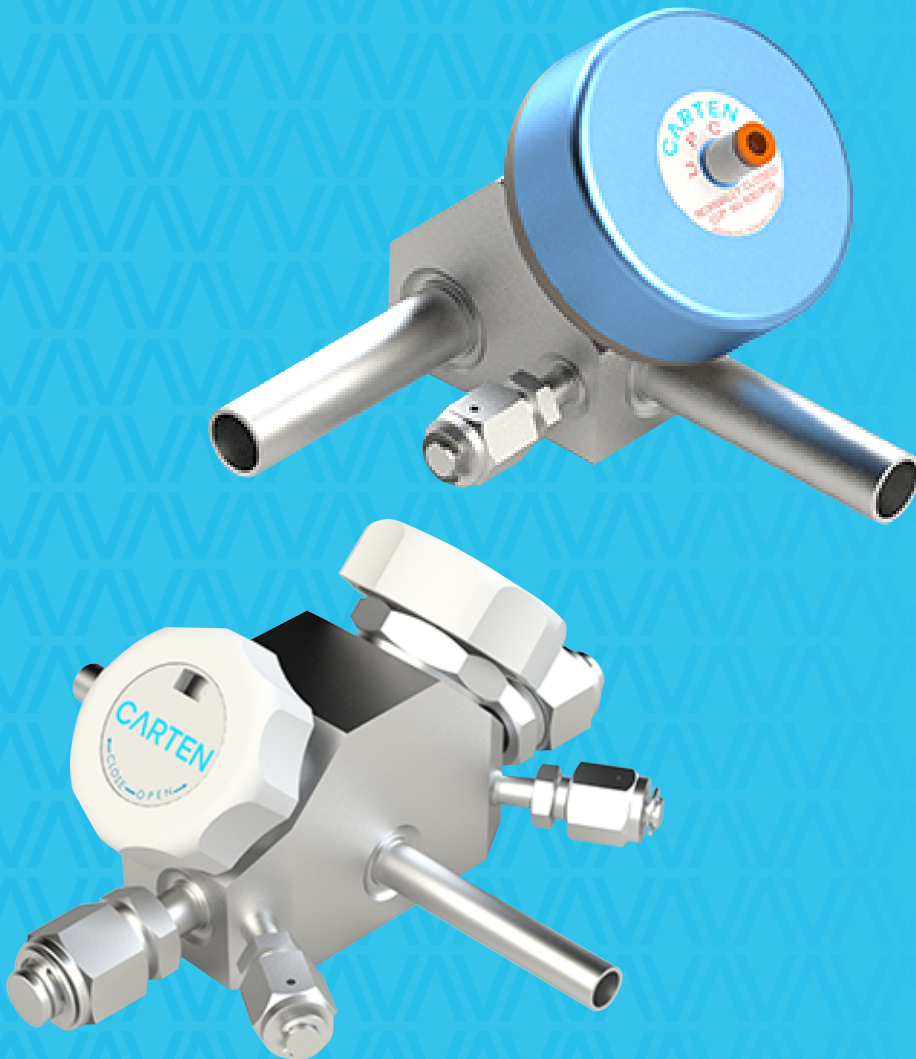


CARTEN

FLOW SOLUTIONS - **WE GO BEYOND**

INTRODUCING CARTEN'S UPC, DPC SERIES

ULTRA-HIGH PURITY TEE
BLOCK DIAPHRAGM VALVES



UPC / DPC Series

Ultra-High Purity TEE Block Diaphragm Valves

Utilises all SPDS parts and advantages of the No.1 diaphragm valve for semiconductor applications, combined with the lowest dead space within any UHP valve on the market.

Key Features

Available in line sizes up to 6" main / 1" branch

Metal-to-metal external seals

Minimal dead space

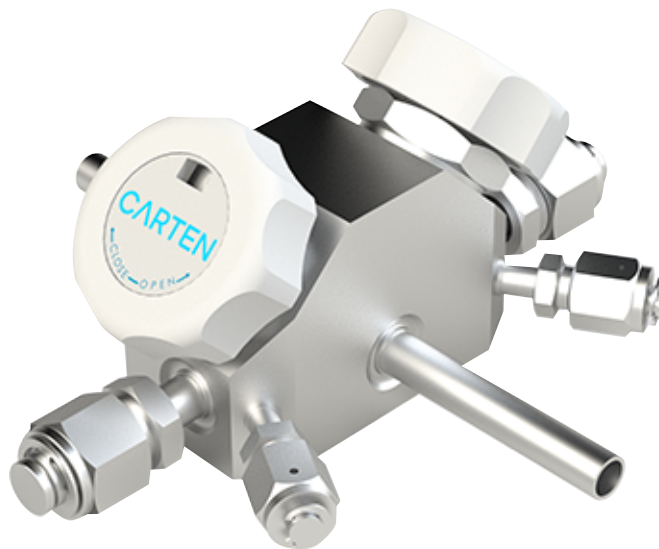
Standard & bespoke multiport / block options

Typical Applications

Lateral **inline** points-of-connection (POC), ultra-high-purity gas control for point-of-use service, zero dead space bulk gas tee-off, UHP gas sampling, and critical application containment functionality.

Key Specifications

Materials of Construction	Cleanliness	Specifications	Options
316L stainless body	Manufactured in Class 10 Cleanroom	Leak tested using Mass spectrometer <math> < 1 \times 10^{-9}</math> mbar.l/s	Manual or pneumatic, LOTO failsafe configurations
Elgiloy Diaphragm	Zero particles @0.1µm	<math> < 10</math>Ra micro-inch surface roughness	PFA / PI seat high temperature (up to 150C)
Barstock-only source	<math> < 10</math>ppb O ₂ /H ₂ O outgassing	Vacuum and pressure tested 100% production control	Multiple block orientations and configurations (DPV etc)
PCTFE standard seat (minimal volume)	Cleaned using 18.2MΩ·cm DI water	Manual 375 p.s.i. Pneumatic 250 p.s.i.	2.5 - 9.0 Cv (flow coefficient)



Order Information

Sample: UPC500 - 049 - 1/2" FSM FM - PC1

UPC Series Manual Valve with a 1/2" Tube End Connection x 1/2" Female Connection and a 1/4" Downstream Purge Connection

Series	Size	Inlet (Thru) Connection	Outlet (Branch) Connection ^{1, 4}	Purge Type	Handle Colour ²	Actuator Designator ³	Actuator Accessories ³
UPC – Manual Multi Turn Version	500 (1/2")	½" TE = 049	3/8" TE = 375-035	Blank - No Purge	Blank (Blue Handwheel Supplied)	NC - Normally Closed	PS (Proximity Sensor)
UPCL – High Flow Manual Multi Turn Version	750 (¾")	¾" TE = 065	½" TE = 500-049	PC1 - 1/4" Downstream Purge Connection	Red (Red Handwheel Supplied)	NO - Normally Open	PSEx (Explosion Proof Proximity Sensor)
UPCA – Pneumatic Air Operated Version	1000 (1")	1" TE = 065	¼" FSM M	PVI - 1/4" Downstream Purge Valve	Yellow (Yellow Handwheel Supplied)		
DPC – Manual Multi Turn Version	1500 (1.5")	1.5" TE = 065	¼" FSM M(C)		Green (Green Handwheel Supplied)		
DPCA – Pneumatic Air Operated Version	2000 (2")	2" TE = 065	¼" FSM FM		Orange (Orange Handwheel Supplied)		
	3000 (3")	3" TE = 065	1/4" C/LOK		Black (Black Handwheel Supplied)		
			3/8" FSM M(S)		Blue (Blue Handwheel Supplied)		
			3/8" FSM M(S)(C)		Pink (Pink Handwheel Supplied)		
			3/8" FSM FM		Brown (Brown Handwheel Supplied)		
			3/8" C/LOK		Gold (Gold Handwheel Supplied)		
			1/2" FSM M(S)		Grey (Grey Handwheel Supplied)		
			1/2" FSM M(S)(C)		Silver (Silver Handwheel Supplied)		
			1/2" FSM FM		Purple (Purple Handwheel Supplied)		
			1/2" C/LOK				
			¾" TE = 750-065				
			¾" FSM M(S)				
			¾" FSM M(S)(C)				
			¾" FSM FM				
			¾" C/LOK				
			1" TE = 1000-065				
			1" FSM M(S)				
			1" FSM M(S)(C)				
			1" FSM FM				
			1" C/LOK				

FSM = Face Seal Metal - VCR® type connections
100% compatible with VCR® brand

¹ Only Specify the Outlet connection when different from the Inlet connection

² Manual Version only

³ Actuated Version only

⁴ Bottom Branch Outlet Available

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