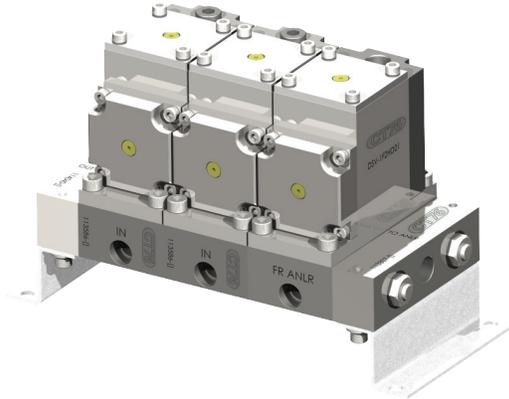




DBA SERIES

GC Manifold Assembly with DBB and DSV Series



The DBA Series¹ diaphragm valve is a modular, stream-switching, manifold assembly containing double-block-and-bleed valves and a fast loop shut-off with an atmospheric reference. The DBA Series consists of DBB Series valves stacked with a single DSV Series valve. The individual valves can easily be integrated into an ANSI/ISA-76 compliant system with the use of a simple adapter plate (see our μ MS³® Modular Substrate System brochure CTMS3 for additional information).

¹ Patent pending

DBC SERIES

GC Manifold Assembly with DBB and DSS Series

Combines:

- Multiple DBB Series (Double-Block-and-Bleed Diaphragm Valve)
- One DSV Series (GC Diaphragm Valve, normally closed, with atmospheric reference)

Available as:

- Multi-stream manifold

Features & Benefits

- Stream select manifold assembly
- Surface mount ANSI/ISA-76 compliant*
- Metal-to-metal seals to atmosphere to prevent leakage
- Wide choice of materials for virtually all applications
- Replaceable seats for extended service life
- No dynamic o-rings, springs, or lubricant in wetted flow path to eliminate sample contamination
- Stacked diaphragms for extended service life
- Integrated sweep loop in manifold
- Pneumatic actuation (DSV valve is top air only)
- Pressures from vacuum (50 torr) to 500 psig (34 barg)
- Compact package (3" L x 2.6" H x 1.5" W)

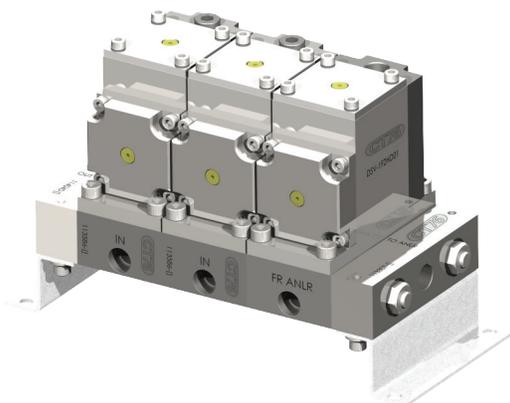
* CT-76 base adapter plate required for non-CT-76 manufactured surface mount systems

diaphragm valves



Crane Instrumentation & Sampling

TECHNICAL DATA



BODY	316L stainless steel, Monel® or Hastelloy® C-276
SEATS	PCTFE or PEEK™
DIAPHRAGMS	Elgiloy® AMS 5876
WORKING PRESSURE RANGE	Vacuum (50 torr) to 500 psig (34 bar)
ORIFICE SIZE	0.110" (2.8 mm)
EXTERNAL LEAKAGE	1x10 ⁻⁵ cc/sec helium (inboard)
ACTUATION PRESSURE	50 psig

Operating Temperatures

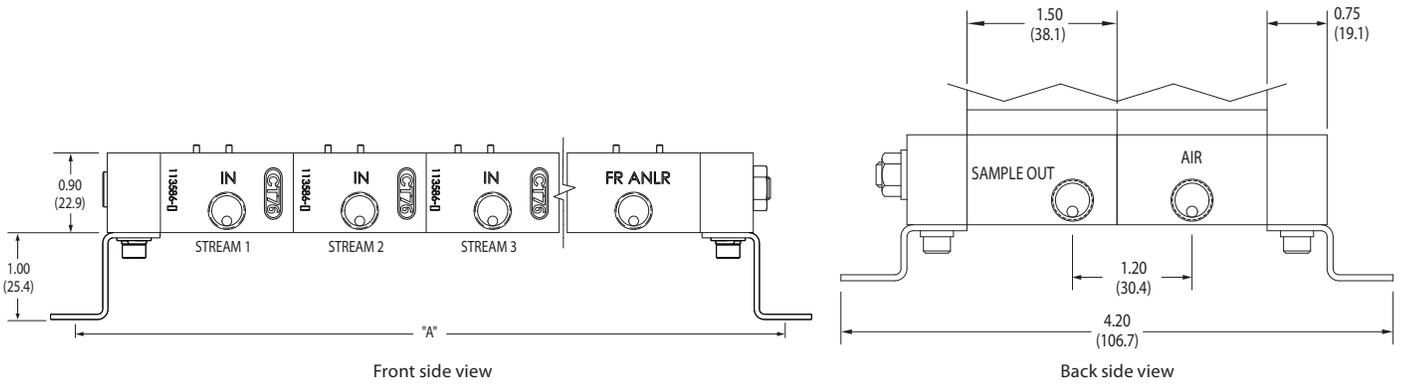
SEAT MATERIAL	TEMPERATURE	
PCTFE	-40° F to +212° F	-40° C to +100° C
PEEK™	0° F to +400° F	-18° C to +204° C

Operating Pressures

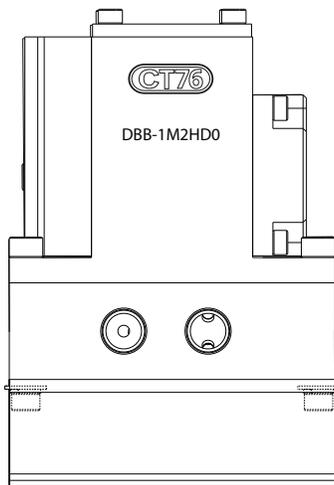
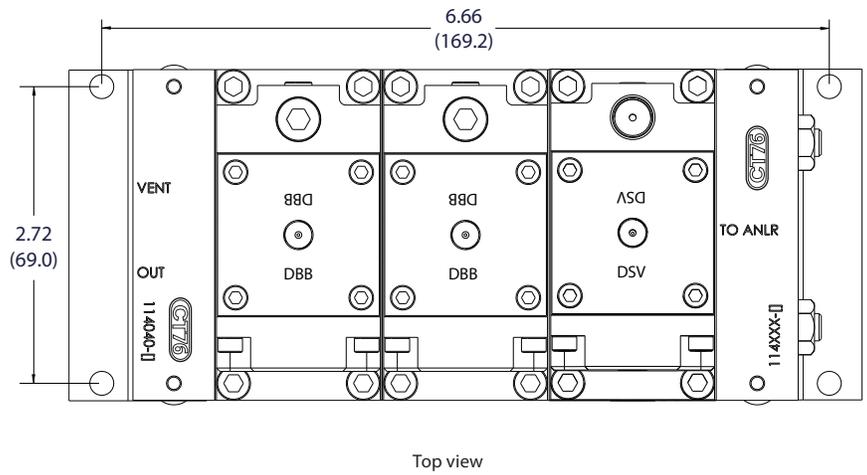
OPERATING PRESSURE	Vacuum (50 torr) to 500 psig (34 barg)
PROOF PRESSURE	2000 psig (138 barg)
BURST PRESSURE	8000 psig (552 barg)

DIMENSIONS

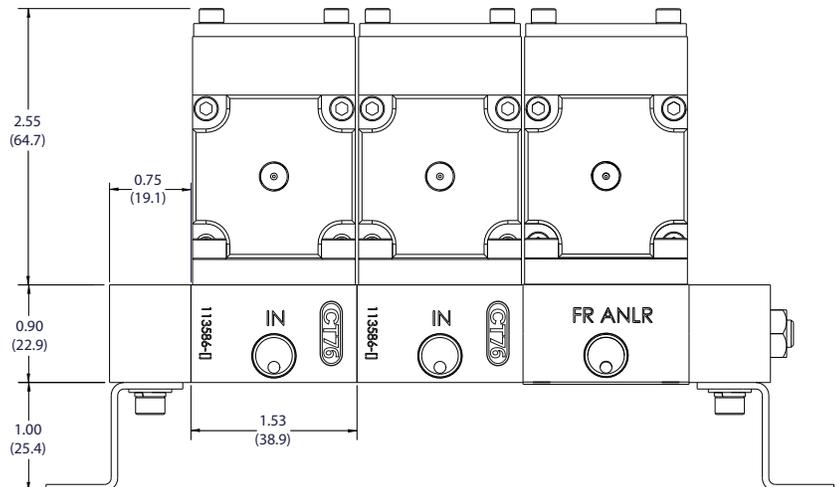
Dimensions are inches (millimeters) for reference only and are subject to change.



NUMBER OF MANIFOLDS		2	3	4	5	6	7	8	9	10	11	12
	A	inches	5.13	6.66	8.19	9.72	11.25	12.78	14.31	15.84	17.37	18.90
	mm	135	169	208	247	286	325	364	402	441	480	519

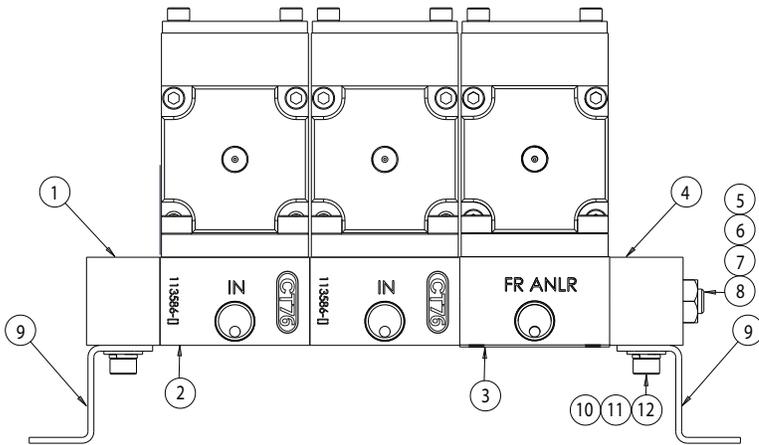


Front side view



Right end view

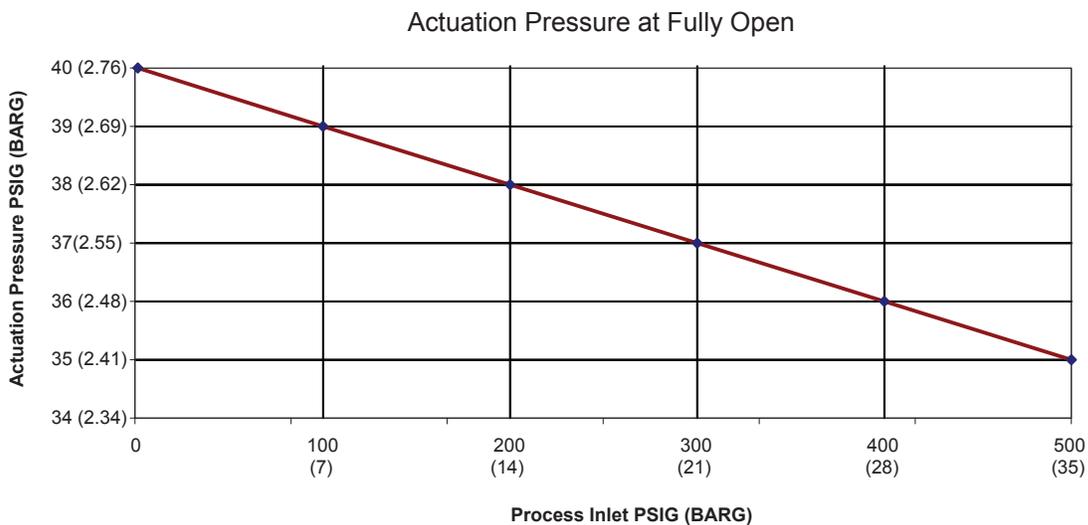
MATERIALS OF CONSTRUCTION



#	PART	MATERIALS
1	End plate*	316L stainless steel, Monel®, or Hastelloy® C-276
2	Manifold baseplate (DBB)*	316L stainless steel, Monel®, or Hastelloy® C-276
3	Manifold baseplate (DSV)*	316L stainless steel, Monel®, or Hastelloy® C-276
4	End plate to analyzer	316L stainless steel, Monel®, or Hastelloy® C-276
5	Flat washer	18-8 stainless steel
6	Lock washer	18-8 stainless steel
7	Nut	18-8 stainless steel
8	Threaded rod	18-8 stainless steel
9	Mounting bracket	18-8 stainless steel
10	Screw	18-8 stainless steel
11	Flat washer	18-8 stainless steel
12	Lock washer	18-8 stainless steel

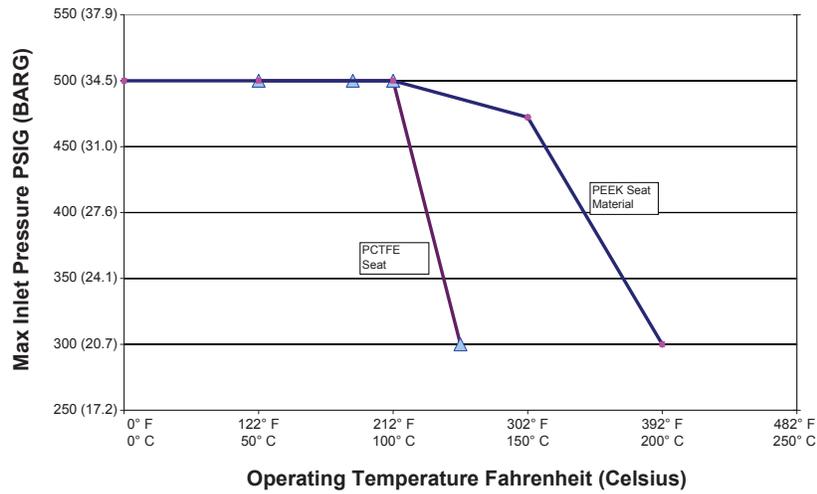
* Wetted components

ACTUATION PRESSURE CURVE



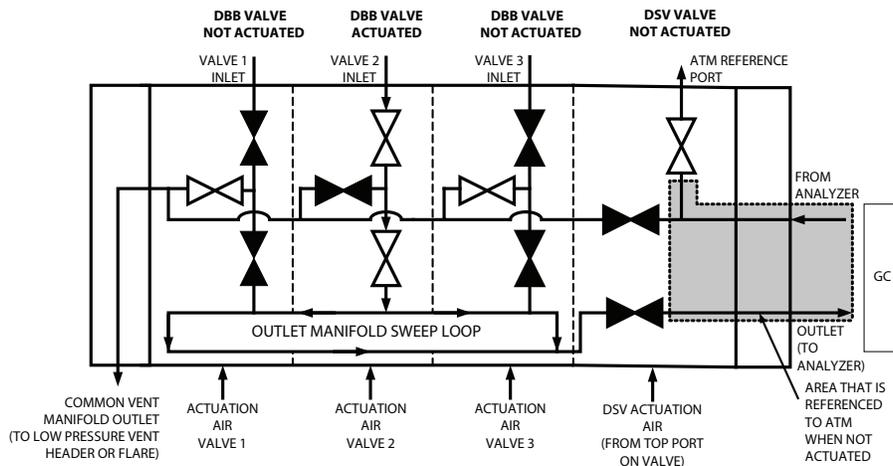
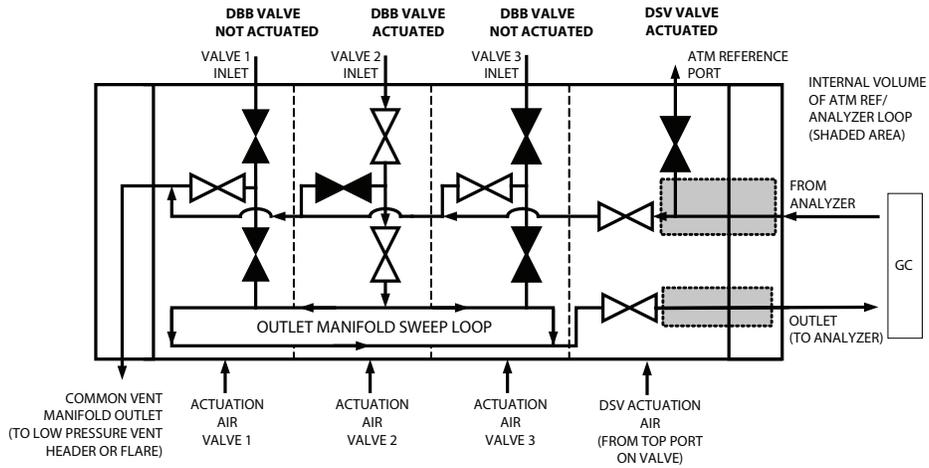
DBA SERIES

PRESSURE TEMPERATURE CURVE



TYPICAL FLOW SCHEMATICS

Pressures in psig (barg)



HOW TO ORDER

STANDARD ITEMS IN BOLD. Consult Customer Service for pricing and lead times for non-standard items.

Product Family	Material Designator	Process Connection Type	Seat Material	Process O-Ring Material	Surface Treatment	# of Streams	Description
DBA & DBC	-						Double Block and Bleed valve stack with Normally Closed atmospheric reference.
	1						SST
	4						Monel
	6						Hastelloy
		F2					1/8" FNPT process connection option
			H				Kel-F Seat
			Q				Peek Seat
				D			Viton® o-rings
				K			Perfluoroelastomer (Kalrez®) o-rings
				F			PTFE o-rings *2
					0		Finish as processed
					1		Cleaned for O2
					5		Silco Steel coated
					9		Sulfinert coated
						01	1 DBB valve and 1 DSV valve or DSS
						02	2 DBB valves and 1 DSV valve or DSS
						03	3 DBB valves and 1 DSV valve or DSS
						04	4 DBB valves and 1 DSV valve or DSS
						05	5 DBB valves and 1 DSV valve or DSS
						06	6 DBB valves and 1 DSV valve or DSS
						07	7 DBB valves and 1 DSV valve or DSS
						08	8 DBB valves and 1 DSV valve or DSS
						09	9 DBB valves and 1 DSV valve or DSS
						10	10 DBB valves and 1 DSV valve or DSS
						11	11 DBB valves and 1 DSV valve or DSS
						12	12 DBB valves and 1 DSV valve or DSS

PART NUMBER EXAMPLE CONFIGURATION

Part Number	Description
DBA-1F2HD003	3 stream DV5 stack with 1/8" FNPT process connection, Kel-F seats, and Viton process o-rings
Note *1	PTFE o-rings are available however over time they exhibit some element of cold flow under the pressure of sealing which can potentially lead to flow restrictions or envelope leakage. If PTFE o-rings are desired it is suggested by CT76 that the valves be placed on an o-ring replacement preventative maintenance program to help offset unplanned down time due to the sample valves.



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