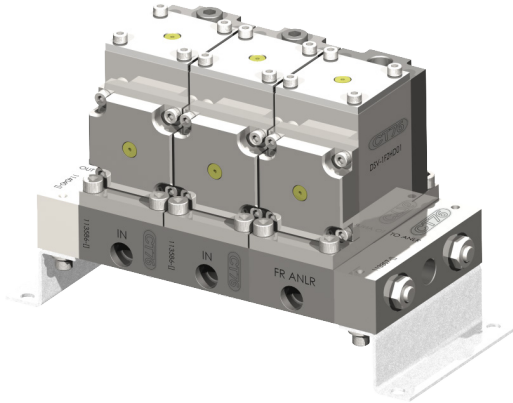




DBA SERIES

GC Manifold Assembly with DBB and DSV Series Atmospheric Reference Valve



The DBA and DBC 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 DBC Series consists of DBB Series valves stacked with a single DSS Series valve. The individual valves can easily be integrated into an ANSI/ISA-76 compliant system.

¹ Patent pending

DBC SERIES

GC Manifold Assembly with DBB and DSS Series Atmospheric Reference Valve

Combines:

- Multiple DBB Series (Double-Block-and-Bleed Diaphragm Valve)
- One DSV Series (GC Diaphragm Valve Normally Closed, with atmospheric reference Normally Open) or DSS Series (GC Diaphragm Valve Normally Open, with atmospheric reference Normally Closed)

Available as:

- Multi-stream manifold

Features & Benefits

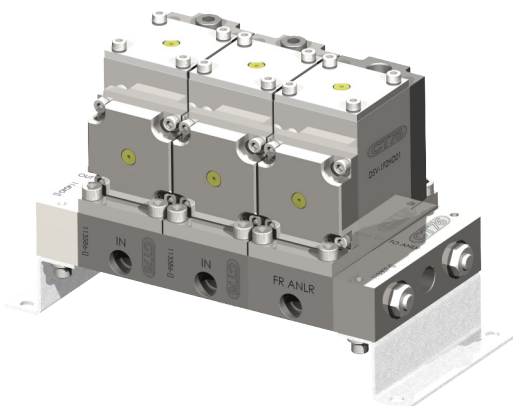
- Stream select manifold assembly
- Surface mount ANSI/ISA-76 compliant*
- Metal-to-metal seals to atmosphere to prevent leakage
- Wide choice of materials for virtually all applications
- Replaceable seats for extended service life
- No dynamic o-rings, springs, or lubricant in wetted flow path to eliminate 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 × 2.6" H × 1.5" W)

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



Crane Instrumentation & Sampling

diaphragm valves

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

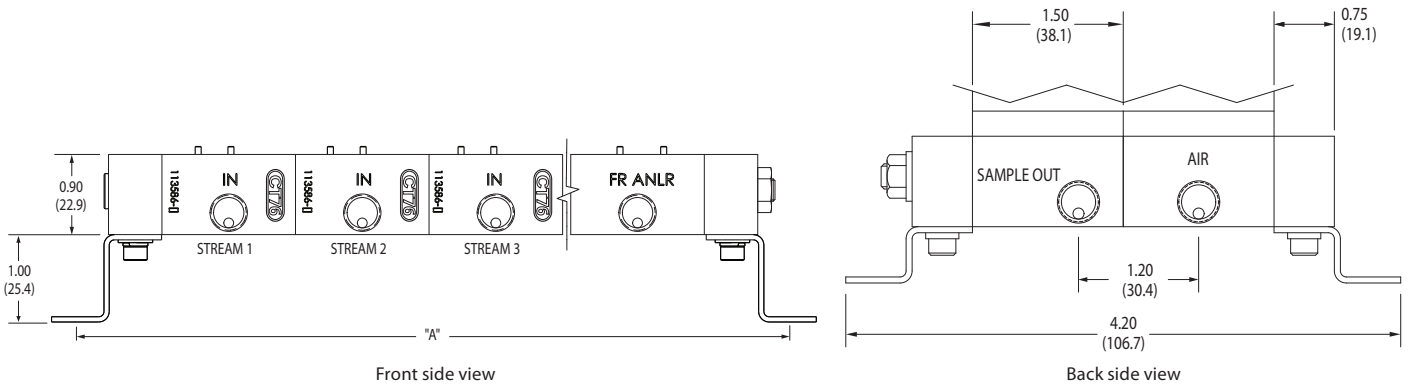
SEAT MATERIAL	TEMPERATURE	
PCTFE	-40° F to +212° F	-40° C to +100° C
PEEK™	0° F to +400° F	-18° C to +204° C

Operating Pressures

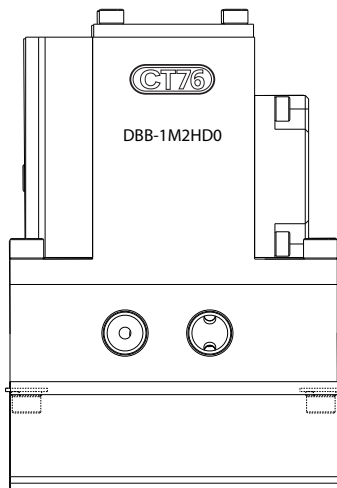
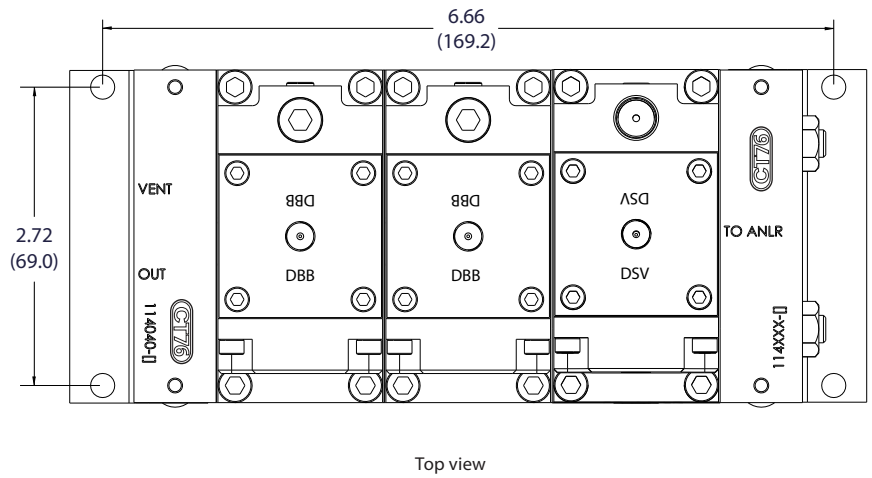
OPERATING PRESSURE	Vacuum (50 torr) to 500 psig (34 barg)
PROOF PRESSURE	2000 psig (138 barg)
BURST PRESSURE	8000 psig (552 barg)

DIMENSIONS

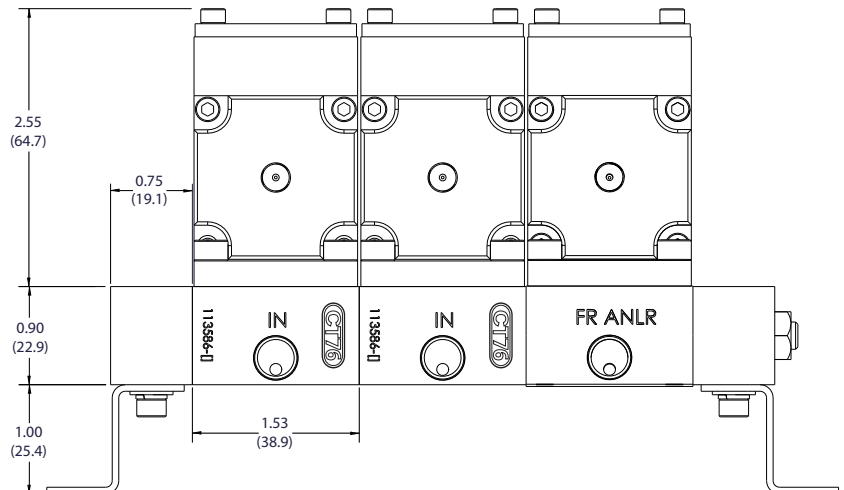
Dimensions are inches (millimeters) for reference only and are subject to change.



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

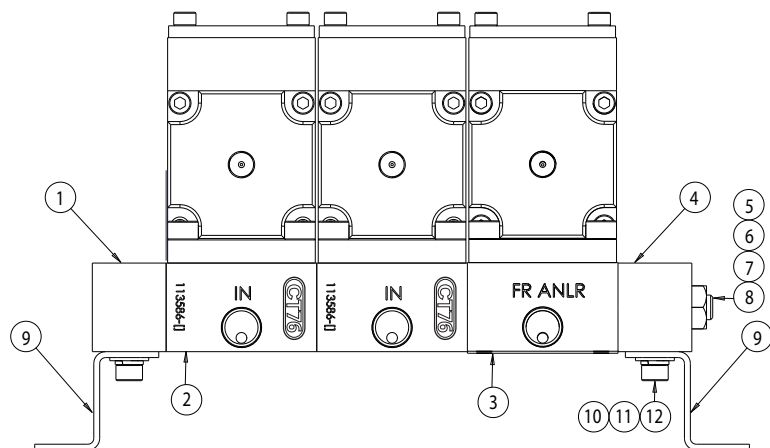


Front side view



Right end view

MATERIALS OF CONSTRUCTION

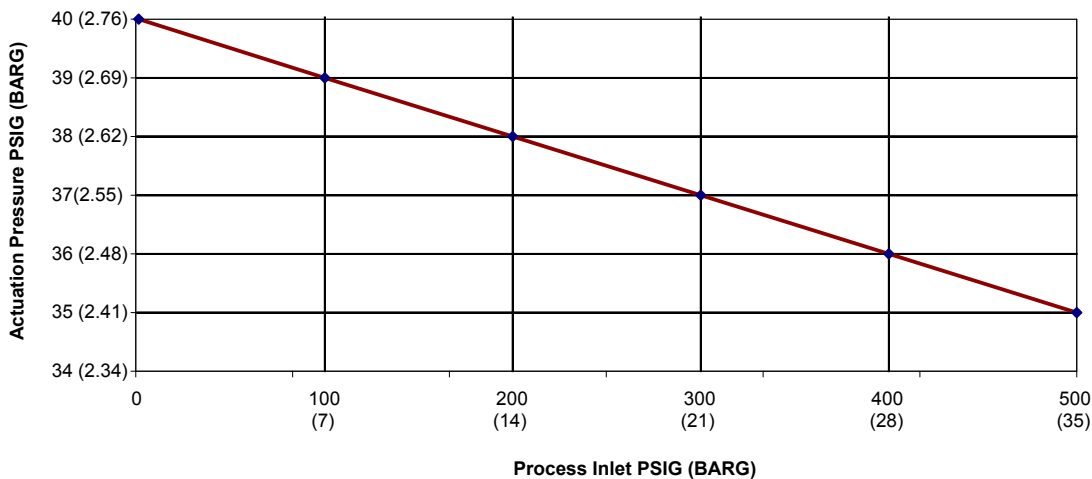


#	PART	MATERIALS
1	End plate*	316L stainless steel, Monel®, or Hastelloy® C-276
2	Manifold baseplate (DBB)*	316L stainless steel, Monel®, or Hastelloy® C-276
3	Manifold baseplate (DSV)*	316L stainless steel, Monel®, or Hastelloy® C-276
4	End plate to analyzer	316L stainless steel, Monel®, or Hastelloy® 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

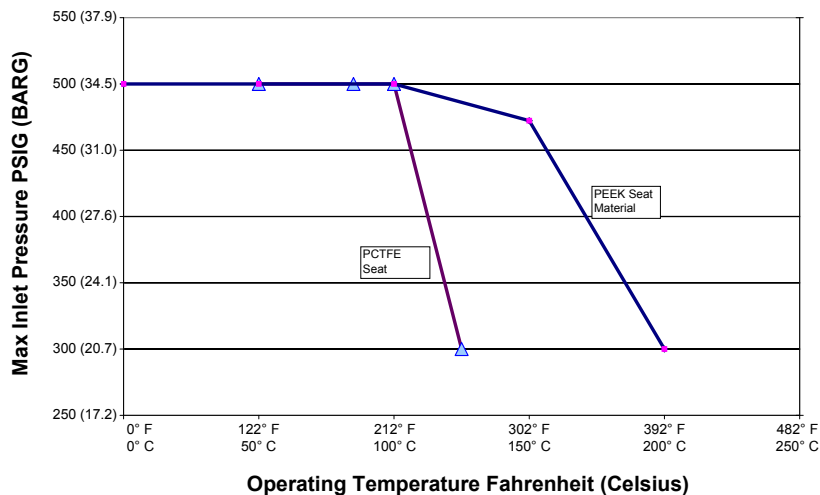
ACTUATION PRESSURE CURVE

Actuation Pressure at Fully Open



DBA SERIES

PRESSURE TEMPERATURE CURVE

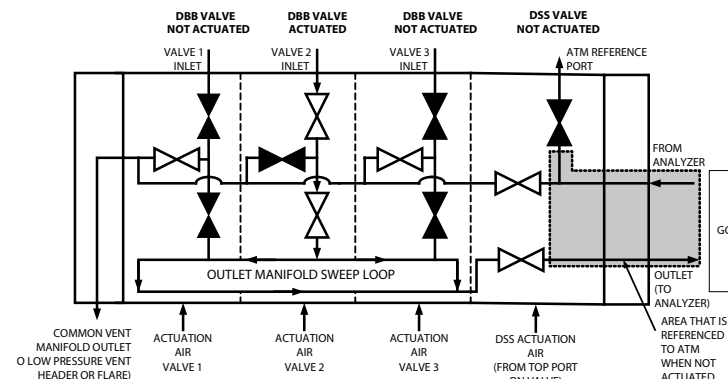
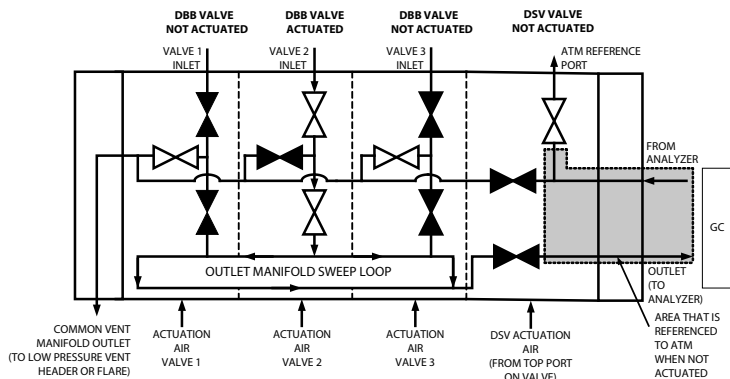
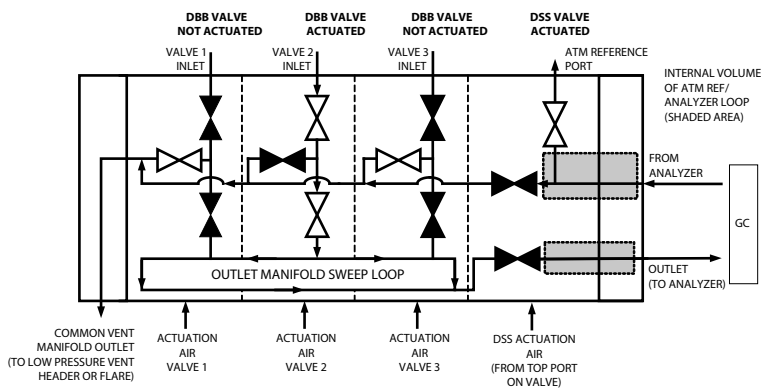
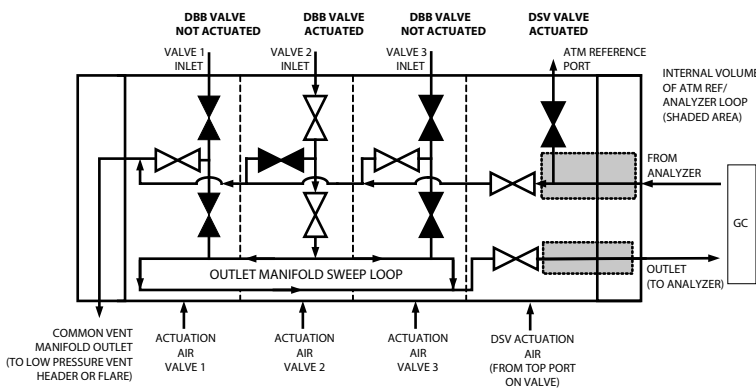


TYPICAL FLOW SCHEMATICS

Pressures in psig (barg)

DBA

DBC



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	-						Double Block and Bleed valve stack with DSV GC Valve
/							
DBC							Double Block and Bleed valve stack with DSS GC Valve
	1						316 Stainless Steel
	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 or DSS valve
						02	2 DBB valves and 1 DSV or DSS valve
						03	3 DBB valves and 1 DSV or DSS valve
						04	4 DBB valves and 1 DSV or DSS valve
						05	5 DBB valves and 1 DSV or DSS valve
						06	6 DBB valves and 1 DSV or DSS valve
						07	7 DBB valves and 1 DSV or DSS valve
						08	8 DBB valves and 1 DSV or DSS valve
						09	9 DBB valves and 1 DSV or DSS valve
						10	10 DBB valves and 1 DSV or DSS valve
						11	11 DBB valves and 1 DSV or DSS valve
						12	12 DBB valves and 1 DSV or DSS valve

PART NUMBER EXAMPLE CONFIGURATION

Part Number	Description
DBA-1F2HD003	3 stream DBB stack with DSV GC Valve, 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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