

FULLY SUBMERSIBLE HIGH-TEMPERATURE

TF  **SERIES**



Patent pending

FULLY SUBMERSIBLE HIGH-TEMPERATURE STABLE FLOW UCV

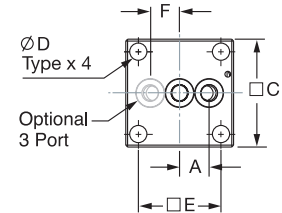
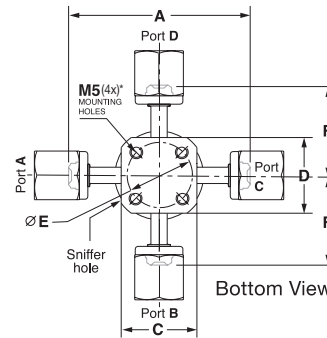
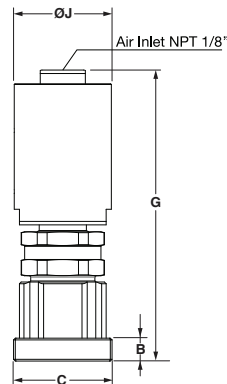
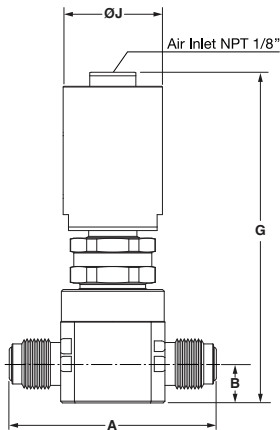
Metal Diaphragm Valves

Ultra-high purity valve that provides steady flow performance consistently, through a wide range of temperatures, with a long-life cycle. The TF series was specially designed to be fully submersible up to 200°C making it the best solution for a wide variety of applications.



STANDARD CONFIGURATION DIMENSIONS

Body Size	SERIES	End Connection	A		B		C		D		E		F		G		J	
			in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/2	TF	Male Face seal	2.99	76.0	0.69	17.5	1.46	37.0	1.46	37.0	1.10	28.0	1.5	38.0	5.24	133.0	1.50	38.0
		Swivel Male Face seal	3.45	87.6									1.72	43.8				
		Swivel Female Face seal	3.45	87.6									1.72	43.8				
		Butt Weld	2.25	57.2									1.13	28.6				
TFS	Surface Mount	0.46	11.6	0.31	8.0	1.49	37.9	0.20	5.2	1.19	30.2	0.46	11.6	4.7	119.4	1.50	38.0	



* M5 holes are compatible with 10-32 mounting screws

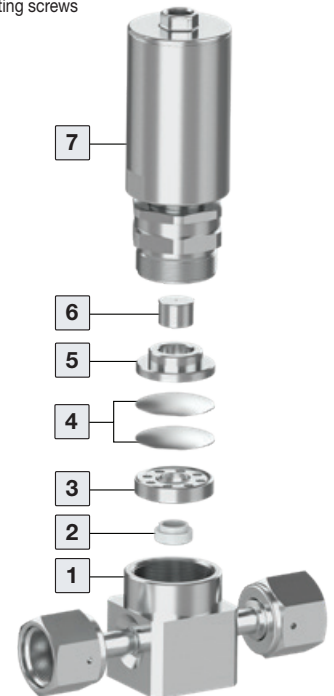
SPECIFICATIONS

Size	Design Pressure	Burst pressure	Proof pressure	Temp.	Cv	Leak Rates	
						Inboard	Across Seat
1/2	1MPa (150 psi)	31MPa (4500 psi)	1.5MPa (225 psi)	-10 to 200°C	0.8	1X10 ⁻⁹	3X10 ⁻¹¹

STRUCTURE

Item No.	Part No.	Material
1	Body	Stainless steel, 316L VAR or VIM/VAR ⁽¹⁾
2	Seat	Polyimide
3	Seat Holder	Stainless steel, 316L VAR or VIM/VAR ⁽¹⁾
4	Diaphragm	Co-Cr-Ni Alloy
5	Act. Button Holder	Stainless steel, ASTM 630 H900
6	Bushing	Carbon steel + PTFE
7	Actuator Assembly	Stainless steel, 316L

(1) Per SEMI F20-0305



ORDERING INFORMATION TF SERIES

Valve Description Example:

TF 2 1 - 8 V S LC - BW 4 BW 4

Port (A) Port (B)

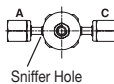
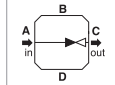
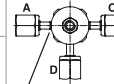
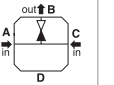
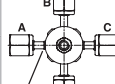
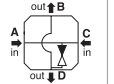
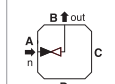
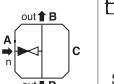
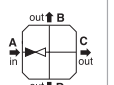
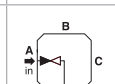
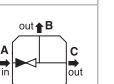
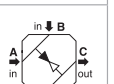
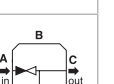
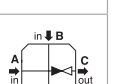
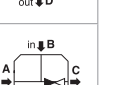
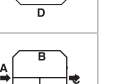
Valve Series	Valve Type	Port Designator	Body Material	Seat Material	Actuation Device	End Size
TF Inline	2 2-Port Valve	0,1,2,3,4,5	V SS316L VAR or VIM/VAR ⁽¹⁾	S Polyimide	LC Air Operated N.C.	6* 3/8"
TFS Surface mount	3 3-Port Valve					8 1/2"
	4 4-Port Valve ⁽²⁾					

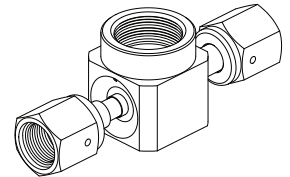
Body Size	End Connection ⁽²⁾
8 - 1/2	BW Butt Weld
	GF Swivel female Face-seal
	GM Swivel male Face-seal
	M Male Face-seal

* For BW Only

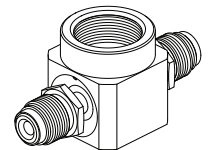
(1) Per SEMI F20-0305 | (2) For inline valves only

PORT DESIGNATOR - (TOP VIEW)

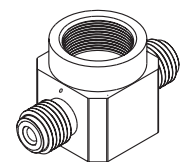
Valve Configuration	Port Designator	Schematic Flow Chart	Valve Configuration	Port Designator	Schematic Flow Chart	Valve Configuration	Port Designator	Schematic Flow Chart
2 Port Valve TF2_ 	0		3 Port Valve TF3_ 	0		4 Port Valve UF4_ 	0	
	1 L-Port			1			1	
	2 L-Port			2			2	
			3				3	
			4					
			5					



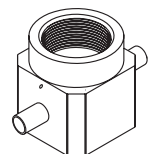
Swivel Female Face-Seal Ends



Swivel Male Face-Seal Ends



Male Face-Seal Ends



Butt Weld Ends

Warning!

The system designer and user have the sole responsibility for selecting products suitable for their special application requirements, ensuring their safe and trouble-free installation, operation, and maintenance. Application details, material compatibility and product ratings should all be considered for each selected product. Improper selection, installation or use of products can cause property damage or personal injury.

TF | 2020_Rev00

