

Award Winning Product Design **Multi-Purpose Secondary Containment**



Fugitive Emissions

Maintenance Repair

Secondary Containment

High / Low Temperature Safety

Severe Service Stem Extension

Address Concerns of Tomorrow With A Valve Built For Today

**A Great Concept! Upgrade Standard Ball Valves
with a simple low cost device**

Consistent bolt mounting dimensions make adaptations effortless

Anti-Extrusion Packing Protector to contain packing material

Precision investment casting makes the M/C unit highly corrosion-resistant and capable of withstanding harsh environments

Precision polished stem is blow-out proof to ensure maximum operating safety

A strategically placed monitoring connection allows for the adaptation of a pressure gauge, sniffer sensor or sealant injection, early detection of primary stem leaks

Plugged port as standard

A PTFE gasket placed between the valve and M/C unit blocks possible leak and isolates media from atmosphere

Our precision machined stem Double D flat provides easy installation of manual handle or actuator device

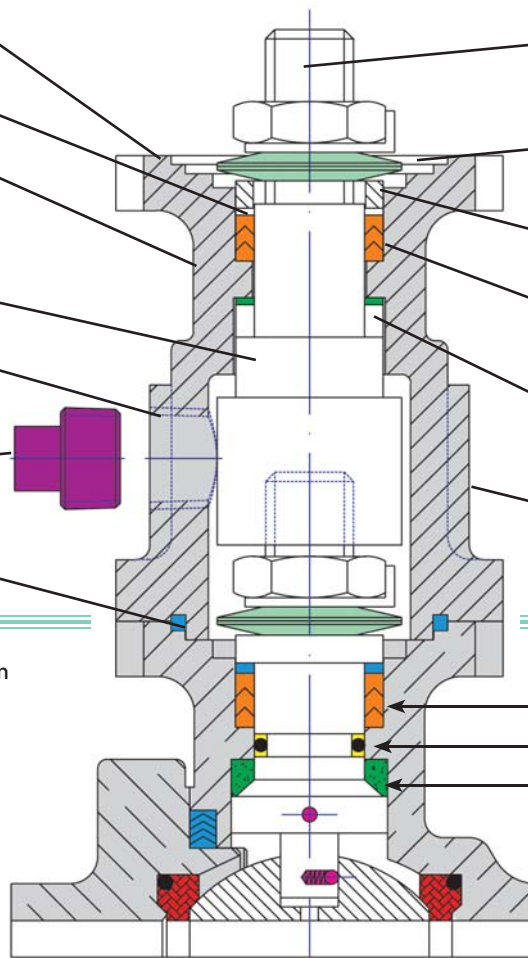
Two sets of Belleville washers provide automatic compensation of temperature and pressure fluctuation to maintain valve leak-tight seal for longer cycle life

Packing follower to provide better stem seal

4-6pcs of V-ring TFM stem packing rings form a rigid secondary stem seal to isolate media from atmosphere

One 50/50 thrust bearing and one TFM thrust washer function as a primary stem seal

Optional 2nd port for check valve injection or positive displacement. The other standard port can also be utilized.



Flo-Tite's Van Guard Stem Sealing System

This High Tech Sealing System is standard on the following Valve Series:

Multi-Choice	3PC
Tri-Pro	3PC
Full Flo	Flanged

Stage III

Stage II

Stage I

For additional information, please see Tech Bulletin Page 45-15 and Tech Bulletin Page 58-15 or Consult Factory

Stage I: Blow-out proof stem shoulder with 45 degree machined slope adds more sealing surface, effectively blocking all leak paths during rotation.

Stage II: O-Ring provides low torque resilient type seal, bringing old and new technologies together (O-Ring & V-Ring).

Stage III: Energized with spring washers and V-Ring packing set.



CARING ABOUT OUR ENVIRONMENT

Recent years have been marked by the increasing demands for a cleaner environment. This translates into unyielding regulations for emission control of hazardous materials. While the United States has taken the primary steps in passing clean air legislation, few additional countries, until now, have followed our example. Today, many nations now recognize that early detection of fugitive emissions is a key step in ensuring cleaner air and waters.

In any industry that uses valves and pipes, one of the primary concerns is the potential leak path through the valve stem seals. Repeated cycling of the valve over extended periods of time usually is the cause of fugitive emissions through the primary valve stem packing. Flo-Tite's M/C unit, in addition to serving as a monitoring system, also provides a secondary sealing system for the valve stem. Considering a potential plant shutdown due to emissions, EPA fines, workmen's compensation, public relations in the community, and higher insurance premiums, our M/C unit is well worth its modest investment cost.

Dangerous High Temperature Severe Service Applications

Severe Service Design

Flo-Tite's Media Cap unit provides an added safety feature with the addition of a secondary set of graphite stem packing with a live-loaded design using Belleville washers automatically compensates for temperature and pressure fluctuation, maintaining a leak proof seal for an extended cycle life. The unit's added height helps distance, the valve operator from dangerous high temperature media.

Control Maintenance

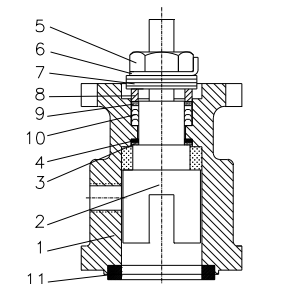
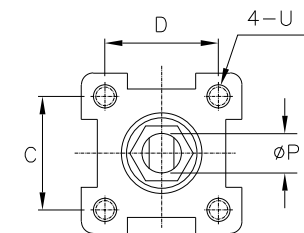
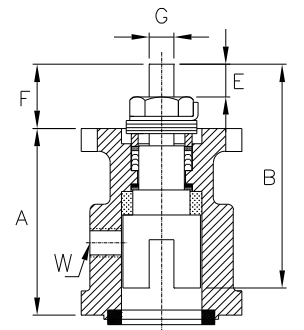
Flo-Tite's valves with I-SO-Mount pads are designed to accommodate the use of our media-cap. It's an ideal economical solution to reduce costly down time, due to unscheduled maintenance repairs on ball valves. In many plant environments valves with stem leaks must be shut down for immediate repairs, these unscheduled repairs in many systems will cost the plant many times more than the actual installed ball valve. There is no way for Flo-Tite to calculate your lost production cost due to valve repair or replacement. Flo-Tite's media-cap seals off unlikely valve stem leaks easily and quickly in line and under pressure.

Field mounts to standard valves with I-SO-Mount Pad. Either at the factory or in the field onto existing Flo-Tite ball valves. Designed for both automated and manual service.

Elimination or reduction of fugitive emissions allows process industries to save millions of dollars while safeguarding our environments.

DIMENSIONS:

UNIT	mm/inch	A	B	C	D	E	F	G	P	U	W
MCU-1	inch	1.97	2.32	1.17	1.17	0.24	0.54	0.25	0.38	#10-24	1/8" NPT
	mm	50	59	29.7	29.7	6	14	6.4	9.5		
MCU-2	inch	2.91	3.25	1.39	1.39	0.35	0.72	0.32	0.437	1/4-20unc	1/4" NPT
	mm	74	82.5	35.4	35.4	9	18	8	11.1		
MCU-3	inch	2.91	3.35	1.95	1.95	0.43	0.9	0.38	0.625	5/16-18unc	1/4" NPT
	mm	74	85	49.5	49.5	11	23	9.5	15.9		
MCU-4	inch	4.53	6.06	2.84	2.84	1.75	3.05	0.67	1.1	1/2-13unc	1/4" NPT
	mm	115	154	72.1	72.1	44	77	17	28		
MCU-5	inch	7.22	8.87	3.48	3.48	1.65	3.61	1.02	1.71	1/2-13unc	1/4" NPT
	mm	183	225	88.4	88.4	42	91	26	43.5		



VALVE SIZE SELECTION

Unit	F150/F300	SF150
	300/200, HPF/HPS	RF15/RF30
MC - 1	1/4 - 3/4 6 - 20	--
MC - 2	1 - 1 1/4 25 - 32	--
MC - 3	1 1/2 - 2 40/50	2 50
MC - 4 *	2 1/2 - 4 65 - 100	3 - 6 75 - 150
MCU- 5 *	6 - 8 150 - 200	8 - 10 200 - 250

BILL OF MATERIALS:

ITEM	PART NAME	MATERIAL	QTY.
1	Body Housing	A351 Gr CF8M	1
2	Stem	SS316	1
3	Thrust Bearing	50 / 50	1
4	Thrust Washer	TFM	2
5	Gland Nut	SS304	1
6	Belleville Washer	SS301	2
7	Lock Washer	SS304	1
8	Packing Gland Sleeve	SS301	2
9	Packing Protector	50 / 50	1
10	Stem Packing	RPTFE/Graphite	3/1
11	Gasket	RPTFE/Graphite	1

* MC4 & MC5 can not be field mounted

UNIQUE MEDIA CONTAINMENT BY Flo-Tite

Fugitive Emissions



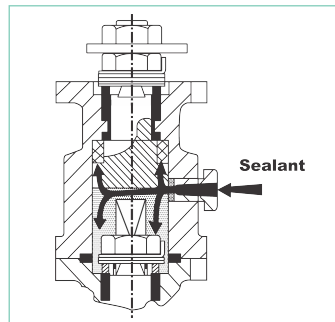
Flo-Tite's unique design allows for a strategically placed monitoring or sensing device to be fitted between the two sealing systems in the unlikely event of valve stem failure. An alert can be immediately identified.

Maintenance



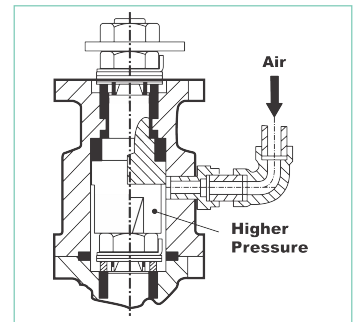
At Flo-Tite, we continue to work hard on the advancement of simple technology and sound ideas that offer economical solutions to reduce costly down time due to unscheduled maintenance repairs. Our M/C Unit seals off unlikely stem leaks easily and quickly. It is an ideal device that can be used many times over.

Lubricant/Sealing



Our Flo-Tite M/C unit can be adapted with a button head check valve to inject sealant providing an additional third seal or an emergency shut-off if needed.

Positive Displacement



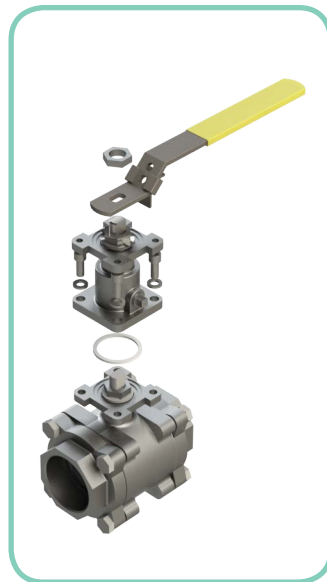
An air line may be permanently connected to our M/C unit, providing a positive pressure supply that exceeds the valve line pressure. This will insure against the possibility of any valve stem leak to the atmosphere.

Our M/C Unit Is Easily Adapted To Flo-Tite's Standard Ball Valve In 3 Easy Steps Without Special Tools

Ideal Design
when valve operation must be elevated from external temperatures range from -150° to +1000° F



Unbolt Actuator set (or dismantle handle from ball valve)



Place PTFE gasket with M/C unit on top of ball valve recess



Reinstall the actuator set (or handle) to M/C unit



Flo-Tite, Inc.
4815 West 5th St.
Lumberton, NC 28358

P. O. Box 1293
Lumberton, NC 28359
Website: www.flotite.com

Tel: (910) 738-8904
Fax: (910) 738-9112
E-mail: flotite@flotite.com