TECH BULLETIN 140-24

AIR-CON

MEDIA CONTAINMENT UNIT

AWARD WINNING PRODUCT DESIGN



AN ECONOMICAL DEVICE THAT ALLOWS YOU TO MONITOR FUGITIVE EMISSIONS OR REPAIR A STEM LEAK WITHOUT SHUTTING YOUR LINES DOWN

Media Containment Unit Certified ISO 15848-1:2015 Methane Fugitive Emission Testing



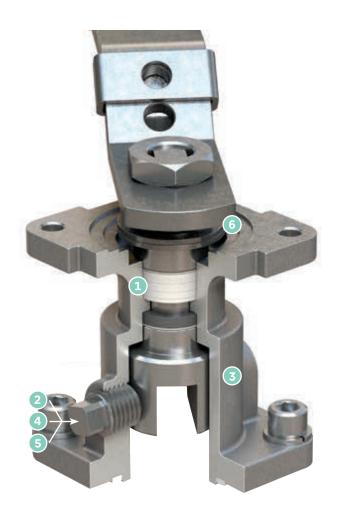
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Flo-Tite's Media Containment Unit (MCU) is engineered to provide increased environmental protection and plant safety by offering a secondary seal which can be monitored for early detection of stem leak. The investment case stainless steel unit is highly corrosion resistant and ideal for harsh environments.

Design for both automated and manual service, the MCU is easily installed in the field onto existing Flo-Tite ball valves. The MCU lowers operating costs by reducing lost production time due to fugitive emissions and unscheduled maintainance.

FEATURES AND BENEFITS

- **1 TIGHT SEALING:** Flo-Tite's MCU features live-loaded stem sealing with Belleville springs that automatically compensates for temperature and pressure fluctuations, maintaining a leak-tight seal for extended cycle life. Multiple TFM V-ring stem packing provides the rigid secondary steam seal. A TFM gasket seals against possible leaks between the unit and the valve.
- 2 LEAK DETECTION: A strategically placed monitoring connection allowes the customer/operator to use a pressure gauge or sniffer sensor for early detection of primary steam seal leaks.
- **3 EXTENDED TEMPERATURE RANGE:** The additional height of the MCU elevates the packing further away from the valve's service media and potential temperature extremes. This allows for tight sealing in both high and low temperature applications.
- 4 SEALANT INJECTION: The MCU can be adapted with a button head check valve to inject sealant for a third seal for emergency shut-off. An optional second port allows for a combination of monitors, check valve injection or pressure displacement line.
- **5 POSITIVE PRESSURE SEAL:** A positive pressure seal can be accomplished by permanently connecting a pneumatic line to the unit to provide a positive pressure supply that barely exceeds the valve line operating pressure. This protects against possible valve steam leaks to the atmosphere.
- 6 MOUNTING EASE: The housing top pad and stem slot meet Flo-Tite's Secure Mount standards for easy installation of handles or actuators. Installation and maintenance procedures (such as monitoring) can be performed while valve is under pressure.







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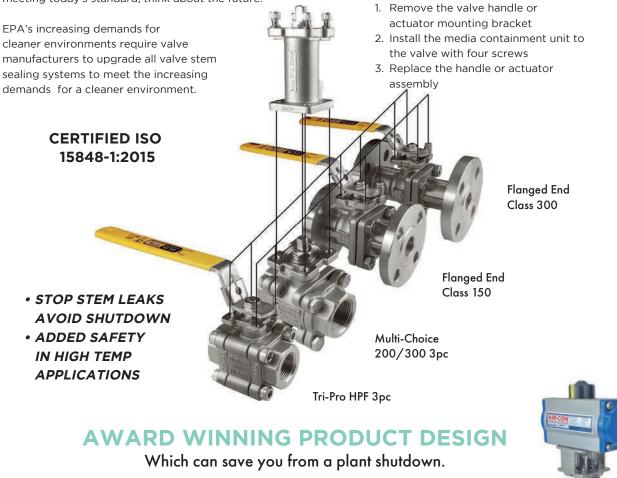
MEDIA CONTAINMENT

PLANNING FOR TOMORROW! ONE FOR ALL!

FUGITIVE EMISSIONS

When you make the decision to select a ball valve meeting today's standard, think about the future.

The standard Flo-Tite valve is ready to be upgraded easily with three easy steps without special tools:



YOU CAN STILL AUTOMATE WITH OUR MEDIA CONTAINMENT DESIGN

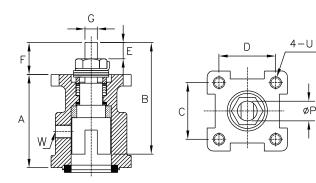
DANGEROUS HIGH TEMPERATURE SEVERE SERVICE APPLICATIONS

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. 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 dangerously high temperature media.

CONTROL MAINTENANCE

Flo-Tite's valves with ISO 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. Flo-Tite's media cap seals off unlikely valve stem leaks easily and quickly in line and under pressure.



DIMENSIONS

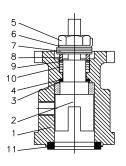
UNIT	mm/inch	А	В	с	D	E	F	G	Р	U	W	Weight
MCU-1	inch	1.97	2.32	1.17	1.17	0.24	0.54	0.25	0.38	#10-24	1/8" NPT	0.71
	mm	50	59	29.7	29.7	6	14	6.4	9.5		1/0 NP1	0.7lbs
MCU-2	inch	2.91	3.25	1.39	1.39	0.35	0.72	0.32	0.437	1/4-20unc	1/4" NPT	1.5lbs
	mm	74	82.5	35.4	35.4	9	18	8	11.1		1/4 NPT	
	inch	2.91	3.35	1.95	1.95	0.43	0.9	0.38	0.625	5/16-18unc	1 / 41 NIDT	2.1lbs
MCU-3	mm	74	85	49.5	49.5	11	23	9.5	15.9		1/4" NPT	
	inch	4.53	6.06	2.84	2.84	1.75	3.05	0.67	1.1	1/2-13unc	1 / 41 NIDT	11.0
MCU-4	mm	115	154	72.1	72.1	44	77	17	28		1/4" NPT	11.3lbs
	inch	7.22	8.87	3.48	3.48	1.65	3.61	1.02	1.71	1/2-13unc		C /F
MCU-5	mm	183	225	88.4	88.4	42	91	26	43.5		1/4" NPT	C/F

VALVE SIZE SELECTION

Unit	F150/F300 300/200, HPF/HPS	SF150 RF15/RF30
MC-1	¹ /4- ³ /4 6–20	_
MC-2	1–1¼ 25–32	-
MC-3	11/2–2 40/50	2 50
MC-4*	2½-4 65-100	3–6 75–150
MC-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	\$\$316	1
3	Thrust Bearing	50/50	1
4	Thrust Washers	TFM	2
5	Gland Nut	\$\$304	1
6	Lock Washer	\$\$304	2
7	Belleville Washers	\$\$304	1
8	Packing Gland Sleeve	\$\$304	1
9	Packing Protector	50/50	1
10	Stem Packing	RPTFE/Graphite	3/1
11	Gasket	RPTFE/Graphite	1



*MC4 & MC5 cannot be field mounted

MC1, MC2, & MC3 field mounts to standard valves with our ISO Mount Pads, either at the factory or in the field onto existing Flo-Tite ball valves. Designed for both automated and manual service.

Flo-Tites Media Containment Unity (MC) can be mounted directly to the following valve models:

Flanged Ends

2 pc Full-Port, F150 & F300 ½-2"

1 pc Reduced Port, SF150 & SF300

3 pc Threaded, Socket, & Buttweld Connections Multi-Choice & Tri-pro Series sizes ¼-2"

UNIQUE MEDIA CONTAINMENT BY FLO-TITE



FUGITIVE EMISSIONS

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

POSTIVE DISPLACEMENT

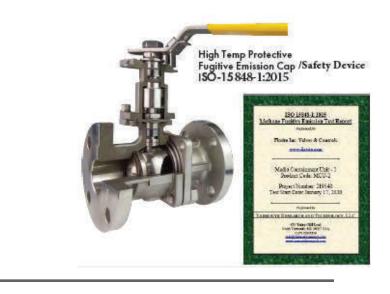
An air line may be permanently connected to our M/C device, providing a positive pressure supply that exceeds the valve line pressure. This will insure against the possibility of any valve stem leak into the atmosphere.

ELIMINATION OR REDUCTION OF FUGITIVE EMISSIONS ALLOWS PROCESS INDUSTRIES TO SAVE MILLIONS OF DOLLARS WHILE SAFEGUARDING OUR ENVIRONMENT.

BENEFITS OF THE MEDIA CONTAINMENT UNIT

- AVOID HEFTY FUGITIVE EMISSION FINES
- SECONDARY CONTAINMENT
- EASE OF STEM LEAK REPAIR
- HIGH\LOW TEMPERATURE SAFETY
- SEVERE SERVICE STEM EXTENSION

50 ppm(parts per million) allowable during the helium test for ISO-15848 certification and Flo-Tite's Media Containment Unit only allowed 11ppm during the test.







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Due to continuous development & improvement of our product range, we reserve the right to alter the dimensions and technical data included in this brochure.

NOTES



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UATORS & CONTROLS

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All Types of Rotary Actuators Rack & Pinion - Aircon Series Air-Max Series - Cylinder Type Kompact 4 Series - 4 Piston Pneumatic Automator - Spring Diaphragm EZ Vane vane actuator, Inox Series -All SS Rack & Pinion, Pro-Torg Electric

Resilient Seated & High Performance Double and Triple Offsets Actuators & Controls Sizes: 2" - 84"



All Types of Industrial Process Ball Valves and Controls : 1/4" - 48" SERIES

Extreme Corrosion Alloys All Design Valves

INTERNATIONAL VALVE
T E C H N O L O G I E S

Gate, Globe & Check 1/2" - 36" Forged & Cast Designs Warldwide Sales Agent

INTERNATIONA

Worldwide Sales Agent – All Types & Special Designs



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RCON

Flo-Tite is a preferred vendor of choice.

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