

GENERAL SPECIFICATIONS:

- Maximum Flow: 3000 GPM (No minimum flow requirement).
- Maximum Pressure: 150 PSI (Higher pressure models available).
- Not Designed for Suction / Vacuum.
- Screen Surface Area: 2434 Sq. In.
- Dry Weight: 466 lbs.
- Volume: 175 gal.
- Maximum Temperature: **135° F.**
(Consult Factory for higher temperature applications).

MATERIALS:

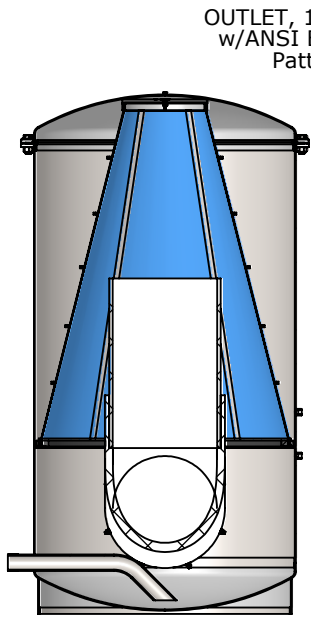
- Housing: 304 Stainless standard (316 Stainless optional).
- Gasket: EPDM standard (other compounds available).
- Screen Mesh: 316 Stainless (1/4" perforated sheet backup).

SCREEN OPTIONS:

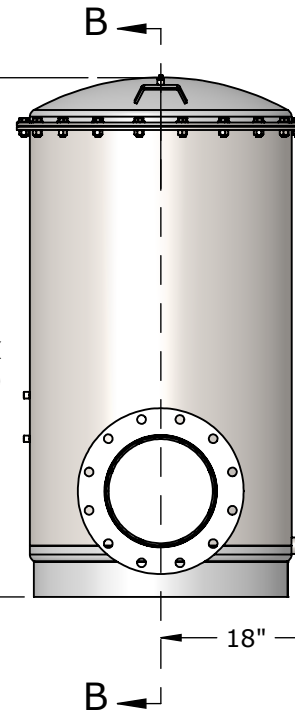
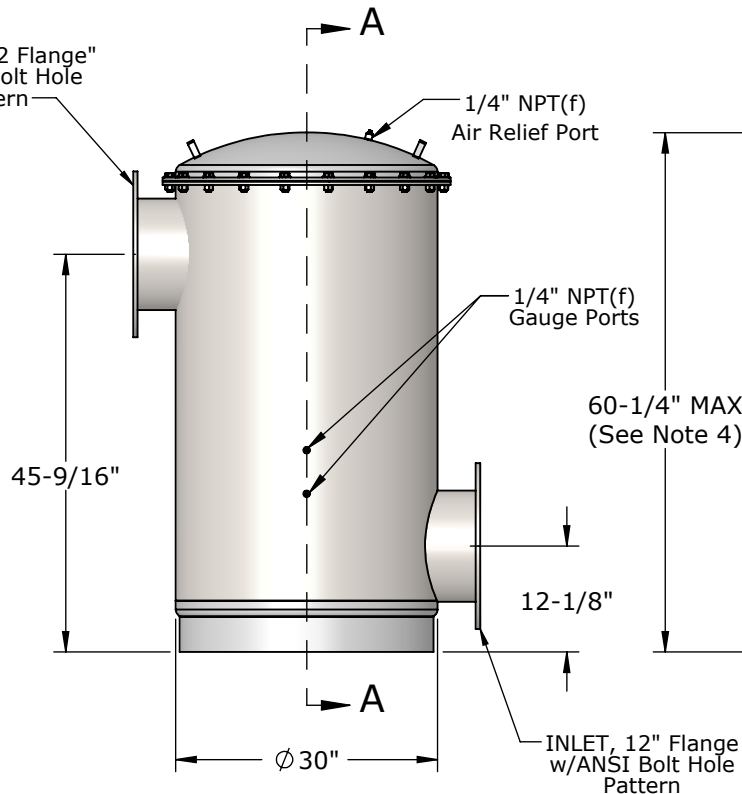
- Multiple screen mesh and perforated sheet sizes available.
(See product catalog for samples).

NOTES:

- 1- Flush Port is available in larger sizes. (Bottom Flush also available).
- 2- Dimensions are for informational purposes only and are subject to change.
- 3- Stainless Steel Internals (Elbow & Riser Pipe) are also available.
- 4- 96" Overall height is required for filter element removal.



SECTION A-A



SECTION B-B

Fischer-Robertson, Inc.

3890 Symmes Road
Hamilton, OH 45015
Ph 513-860-3445 Fx 513-860-4744
www.fischer-robertson.com

PRODUCT SPECIFICATION

MILLER LEAMAN INC.

800 Orange Avenue, Daytona Beach, FL 32114

DRAWN	J. Larsen	7/14/15
CHECKED		
ENG APPR.		
REVISION		
SHEET 1 of 1 Ref: ML21994-F-X-R/REV: D		

TITLE

**Thompson Strainer
MLS-12**

MILLER-LEAMAN

INCORPORATED

800 Orange Avenue/Daytona Beach, FL 32114

Tel: (386) 248-0500 / Fax: (386) 248-3033

www.millerleaman.com

MESH / MICRON DATA SHEET

STANDARD MESH OPTIONS

Mesh	Opening (inches)	Microns	Wire Diameter (inches)	Open Area
16	0.0395	1003	0.023	39.90%
20	0.0340	864	0.016	46.20%
30	0.0203	516	0.013	37.10%
40	0.0150	381	0.01	36.00%
50	0.0110	279	0.009	30.30%
60	0.0092	234	0.0075	30.50%
80	0.0070	178	0.0055	31.40%
100	0.0055	140	0.0045	30.30%
120*	0.0046	117	0.0037	30.70%
150*	0.0041	104	0.0026	37.40%
200*	0.0029	74	0.0021	33.60%

HEAVY-DUTY MESH OPTIONS

24 x 110 (≈120 Mesh)	0.0045	112 - 117	.014 / .010	N/A
30 x 150 (≈150 Mesh)	0.0039	95 - 100	.009 / .007	N/A
40 x 200 (≈200 Mesh)	0.0030	72 - 77	.007 / .0055	N/A
50 x 250	0.0024	55 - 60	.0055 / .0045	N/A

*Miller-Leaman recommends the purchase of the heavy-duty mesh options as alternatives to the finer, more fragile standard screen options (120, 150, and 200 mesh). Be advised, however, that the heavy-duty mesh options have less open area percentage and will require more frequent maintenance in some applications.

Mesh/Micron Conversion Formula
 Microns = opening in inches / .00003937

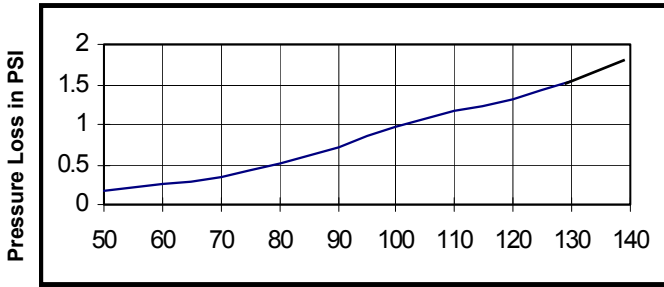
THOMPSON STRAINER

EFFICIENCY CURVES

INDUSTRY'S LOWEST PRESSURE DROP

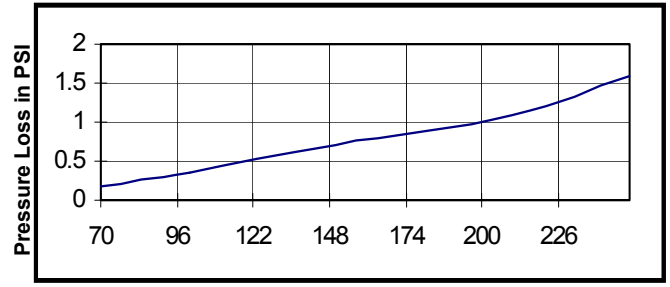
All Thompson Strainers have been designed to operate with less than a 1 PSI pressure loss during maximum flow when clean. This exceptional efficiency results in less energy consumption and reduced operating costs. Call us today for a free energy savings

2" THOMPSON STRAINER (MLS-2)
Maximum Flow 100 GPM



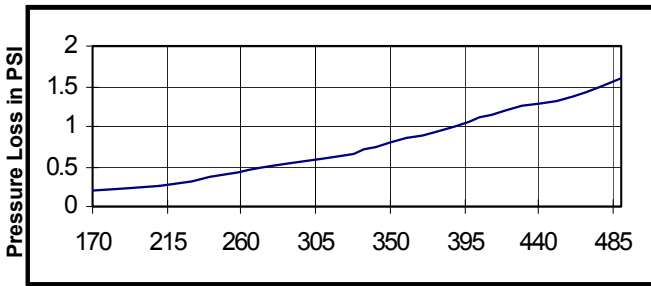
Gallons Per Minute

3" THOMPSON STRAINER (MLS-3)
Maximum Flow 200 GPM



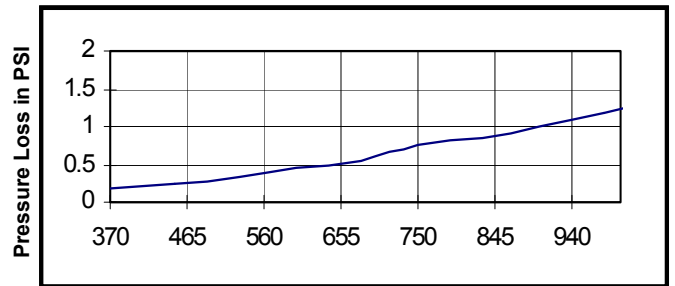
Gallons Per Minute

4" THOMPSON STRAINER (MLS-4B & MLS-4C)
Maximum Flow 350 GPM



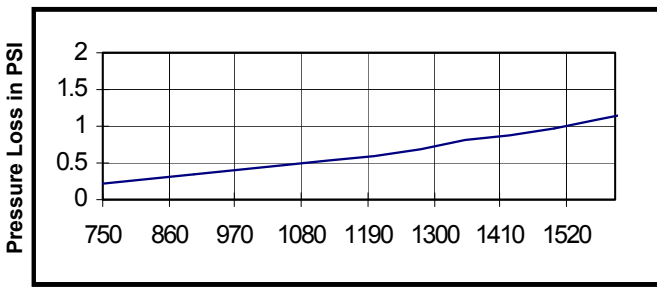
Gallons Per Minute

6" THOMPSON STRAINER (MLS-6)
Maximum Flow 750 GPM



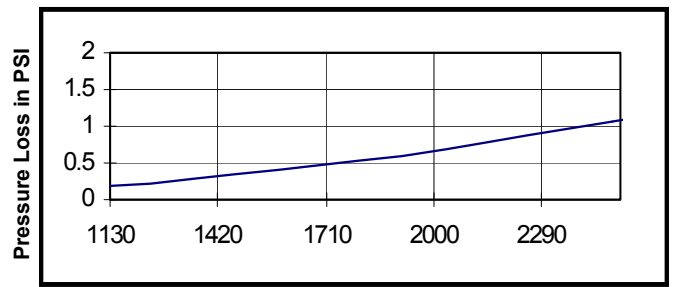
Gallons Per Minute

8" THOMPSON STRAINER (MLS-8)
Maximum Flow 1300 GPM



Gallons Per Minute

10" THOMPSON STRAINER (MLS-10)
Maximum Flow 2000 GPM



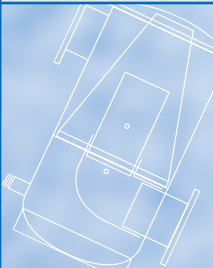
Gallons Per Minute

** ALL PRESSURE LOSS CURVES REFLECT STANDARD MESH SIZING OF 16 - 200 MESH.*



MILLER-LEAMAN
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FOR MORE TECHNICAL DATA ONLINE: www.millerleaman.com



The Thompson Strainer is a unique, yet brilliantly simple product, used in a variety of applications to remove particles from water and other liquids.

Available in Type 304 and Type 316 stainless steel construction, the patented design features a large conical screen element with substantially more surface area compared to traditional strainers on the market.

You can select the screen that meets your needs. A large variety of screen options are available, ranging from large perforated hole-openings down to 250-mesh (approximately 50-micron).

The Thompson Strainer's internal flow patterns force heavy particles down to the large reservoir at the base of the strainer. The particles are then purged from the strainer via the flush port, either manually, or automatically with the optional **Automatic Timer Flush Package (ATF-EA-1.5)**.....



The Thompson Strainer is exceptionally efficient; all models operate with less than a 1 PSI pressure loss at maximum flow, when clean. Strainer housings come standard with two gauge ports, allowing maintenance personnel to monitor the differential pressure across the internal screen. The optional **Pressure Differential Alarm Package (PDA)** will alert maintenance personnel if the conical screen needs to be removed for manual cleaning.



At Miller-Leaman, we take pride in innovation and workmanship. Efficient, clean design. Highly polished stainless. Rigorously tested welds. Technically adept customer service technicians. Superior technology and made in the USA.

- FLUSH PARTICLES ON-LINE, VIA BOTTOM FLUSH PORT
- GREATER SCREEN SURFACE AREA, REDUCES MAINTENANCE
- LESS THAN 1 PSI PRESSURE LOSS, MINIMIZING SYSTEM OPERATING COSTS
- SIMPLE DESIGN, NO MOVING PARTS
- SPACE SAVING PROFILE TO FIT TIGHT SPACES
- HIGH QUALITY STAINLESS STEEL CONSTRUCTION

TYPICAL APPLICATIONS INCLUDE:

- Cooling Tower / Chilled Water
- Well Water / Surface Water
- Process Water
- Wastewater / Reclaim Water / Municipal Water
- Mining Applications
- Chemical Processing
- Food / Beverage Applications (Sanitary Design)
- Spray Nozzle Protection
- Marine (Seawater)
- Agricultural Applications (Irrigation / Liquid Fertilizer)

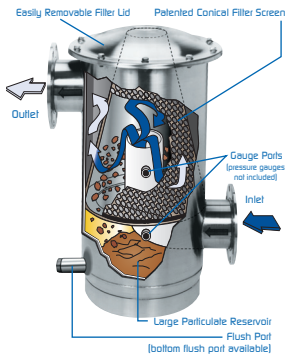
simply better

The shape and size of the conical screen are what make the Thompson Strainer more functionally efficient than the competition.

As water enters the bottom of the strainer housing and flows upward, heavier debris and particulate is accelerated downward, away from the conical screen, into the sizable reservoir at the base of the strainer. The particulate is then flushed from the reservoir, under pressure, via the 1/2" flush port, without interrupting downstream flow. The top lid of the strainer is easily removed if the internal screen requires manual cleaning.

Due to the non-tortuous flow path through the strainer, in combination with the generous amount of surface area on the conical screens, all models operate with less than a 1 PSI pressure drop.

The Thompson Strainer can be customized to fit your specific needs.



CONSTRUCTION MATERIALS

Housing & Internal Piping:

- Type 304 Stainless Steel (Type 316 is optional)
- 4"-10" models come standard with internal PVC elbow and riser pipe assembly; stainless steel internal piping is available by special order.

Internal Conical Screen Elements:

- Screen Support Frames:
- Type 304 Stainless Steel (Type 316 is optional)
- Screen Mesh:
- Type 316 Stainless Steel is standard

Gaskets:

- EPDM is standard; other compounds are available by special order

Lid Fasteners:

- Clamp Lid Models:
- Clamp is type 304 stainless steel
- Bolted Lid Models:
- Grade 5 bolts/nuts; zinc plated washers

SCREEN SIZES AVAILABLE

Mesh Options:

- 16, 20, 30, 40, 50, 60, 80, 100, 120, 150, 200
- 24x110", 30x150", 40x200", 50x250"
- *Heavy-duty Dutch-weave screens (lower open area %)

Perforated Options:

- 1/4", 1/8", 1/16"

Other mesh and perforated options available by special order

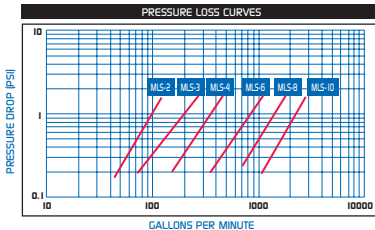
Model #	Inlet/Outlet Size & Type	Max Flow* (GPM)	Max Pressure Rating***	Lid Closure Type	Gauge Ports****	Flush Port****
MLS-2	2"/NPT	100 GPM	125 PSI	CLAMP	1/4" FPT	1/2" NPT
MLS-3	3"/NPT	200 GPM	125 PSI	CLAMP	1/4" FPT	1/2" NPT
MLS-4C	4"/FLANGED	350 GPM	125 PSI	CLAMP	1/4" FPT	1/2" NPT
MLS-4B	4"/FLANGED	350 GPM	150 PSI	BOLTED	1/4" FPT	1/2" NPT
MLS-6	6"/FLANGED	750 GPM	150 PSI	BOLTED	1/4" FPT	1/2" NPT
MLS-8	8"/FLANGED	1300 GPM	150 PSI	BOLTED	1/4" FPT	1/2" NPT
MLS-10	10"/FLANGED	2000 GPM**	150 PSI	BOLTED	1/4" FPT	1/2" NPT

*Max flow varies depending on solids loading and screen sizing.

**Manifold multiple strainers for higher flow rates.

***High pressure models available by special order.

****Pressure gauges and flush valve not included.





INSTRUMENTATION PACKAGE OPTIONS



PRESSURE DIFFERENTIAL ALARM PACKAGE (PDA)

The Pressure Differential Alarm Package (PDA) continuously monitors the pressure drop across the internal conical screen. When the strainer screen becomes dirty, the switch-gauge triggers an audible and visual flashing alarm, intended to alert maintenance personnel when the screen needs to be removed from the housing for manual cleaning. At maximum flow, all Thompson Strainer models operate with less than a 1 PSI pressure loss (when clean). The alarm is factory set to engage when the differential pressure reaches approximately 7 PSID; however, this setting is adjustable by changing the set point contact at the base of the differential pressure gauge. The PDA package comes standard with auxiliary contacts for remote monitoring of the alarm. The PDA is housed inside a NEMA rated enclosure and comes with a 110V / 12VDC wall mount power supply.

AUTOMATIC TIMER FLUSH PACKAGE (ATF-EA-1.5)

The Automatic Timer Flush Package (ATF-EA-1.5) automatically purges particles that have gravitated down into the debris reservoir at the base of the strainer. Purging the reservoir; however, does not clean the internal screen (see above PDA explanation). Depending on the solids' loading of the application, the user simply dials in the FLUSH FREQUENCY (time between flushes) and FLUSH DURATION (length of flush) of the valve. The flush frequency is preset for (24) hours and the flush duration is preset for (8) seconds; these settings can be substantially changed. Based on the parameters programmed, the robust stainless steel ball valve opens and closes. The user can override the timer by engaging a manual flush cycle.

The controller attached to the valve is housed inside a NEMA enclosure. If ordered with the PDA alarm package, an electrical cord from the PDA supplies power to the ATF-EA-1.5 valve package. If the ATF-EA-1.5 is ordered separately, a 110V / 12VDC wall mount power supply is included.



PRESSURE DIFFERENTIAL ALARM:

- Monitors Differential Pressure
- Signals When Screen Cleaning is Required
- Audible and Visual Alarm
- Auxiliary Contacts For Remote Monitoring
- Comes With Bracket for Mounting

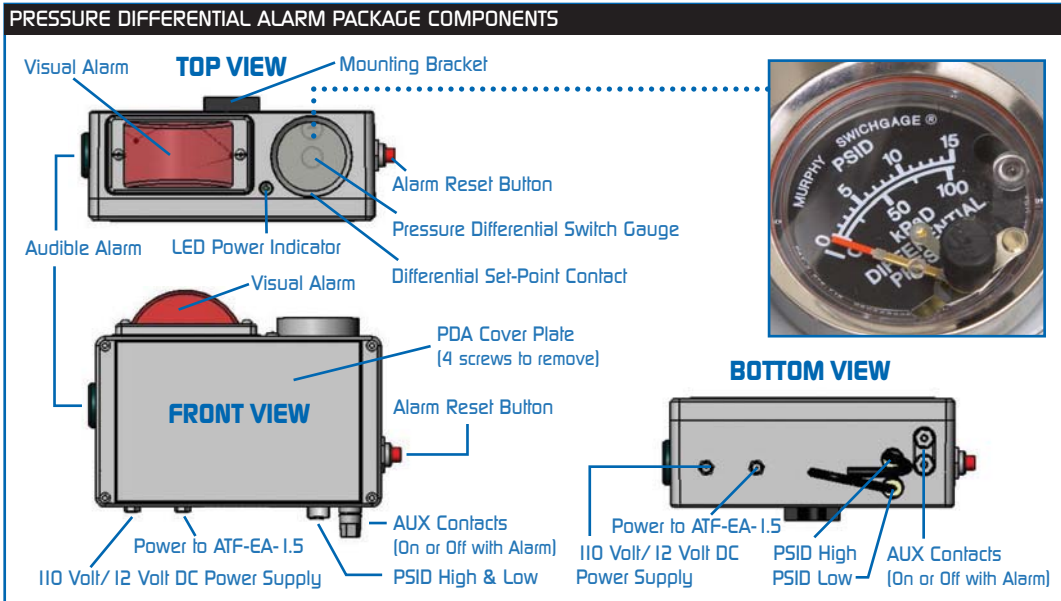


AUTOMATIC TIMER FLUSH VALVE:

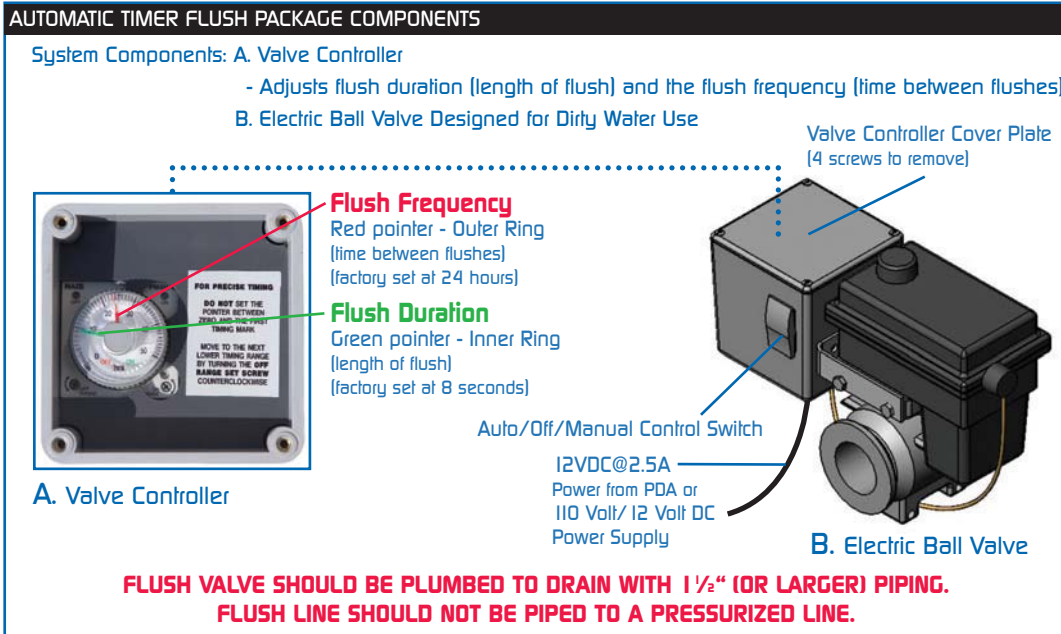
- Automatically Purges Particles from Bottom Reservoir
- Robust Stainless Steel Ball Valve
- Adjustable Flush Frequency and Flush Duration
- Manual Flush Override
- Valve Threads On Strainer Flush Port



PRESSURE DIFFERENTIAL ALARM PACKAGE (PDA)



AUTOMATIC TIMER FLUSH PACKAGE (ATF-EA-1.5)



PART NUMBER	DESCRIPTION	ELECTRICAL
PDA	Pressure Differential Alarm Package (comes with mounting bracket to mount on strainer)	Comes with 110V/ 12VDC Power Supply
ATF-EA-1.5*	Automatic Timer Flush Package - (Threads on 1 1/2" Flush Port) - For use on all Thompson Strainer models: MLS-2, MLS-3, MLS-4, MLS-6, MLS-8, MLS-10	Power from PDA Package or Comes with 110V/ 12VDC Power Supply
ATFR-2000	110 V/ 12VDC Wall Mount Power Supply (included with purchase of PDA and/or ATF-EA-1.5)	Plugs in 110V Wall Plug
PG-1/4-150	Pressure Gauges (0-150 PSI); (2) required per strainer	N/A

*1" and 2" valve packages also available: 1" valve part# ATF-EA-1.0; 2" valve part # ATF-EA-2.0



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