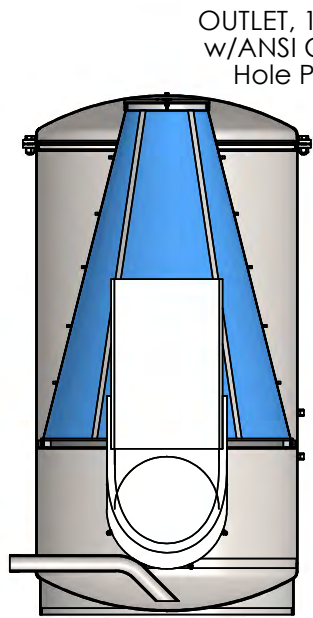
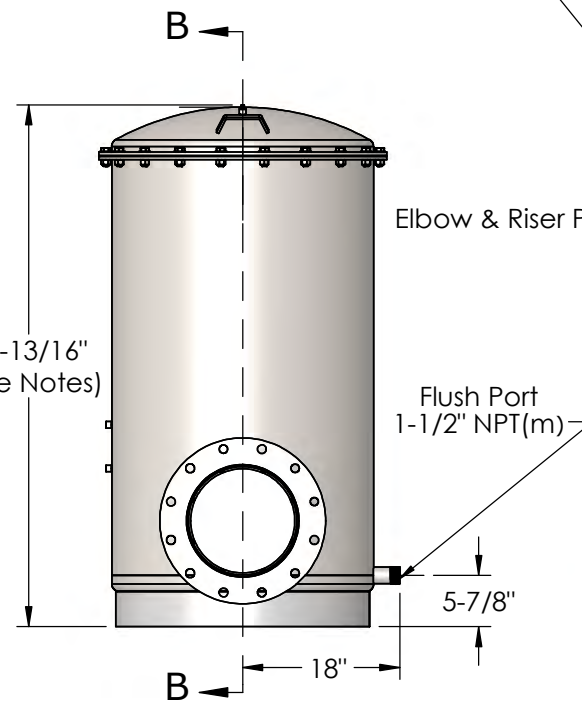
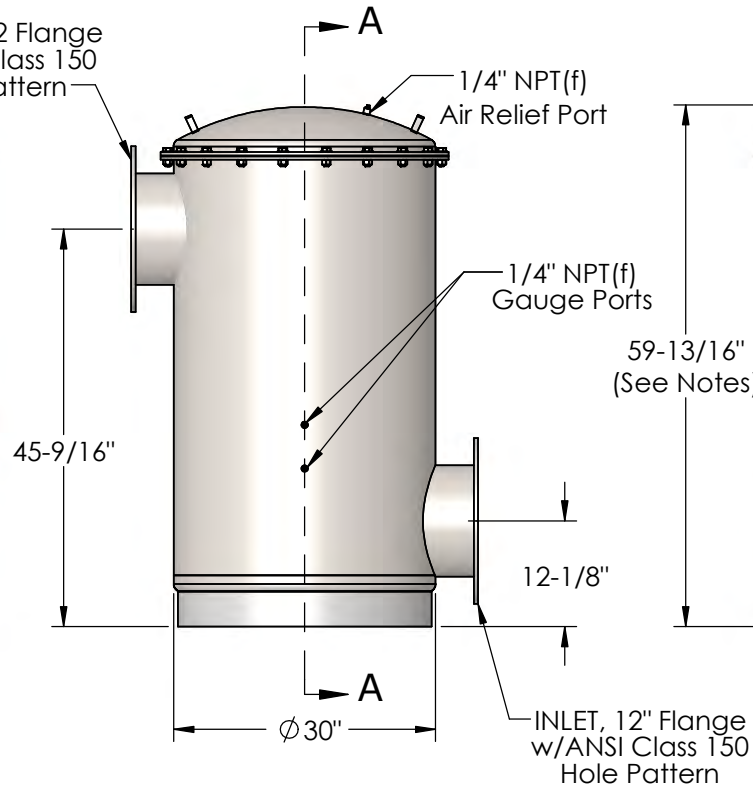


| GENERAL SPECIFICATIONS | |
|-------------------------|------|
| DESIGN FLOW (GPM) | 3000 |
| MAX PRESSURE (PSI) | 150 |
| FILTRATION AREA (SQ IN) | 2434 |
| DRY WEIGHT (LBS) | 448 |
| VOLUME (US GAL) | 172 |
| MAX TEMP (°F) | 135 |

| MATERIALS | | |
|--|--|-------|
| HOUSING / SCREEN FRAME | | 304SS |
| SCREEN | | 316SS |
| GASKETS | | EPDM |
| ELBOW & RISER PIPE | | PVC |
| CONICAL FILTER ELEMENT | | |
| PERFORATED SCREEN | | TBD |
| MESH SCREEN | | TBD |
| SCREEN HEIGHT (IN) | | 40.10 |
| NOTES | | |
| CLEARANCE ABOVE STRAINER EQUAL TO SCREEN HEIGHT REQUIRED FOR SERVICE | | |



SECTION A-A



SECTION B-B



PRODUCT SPECIFICATION

MILLER LEAMAN
800 Orange Avenue, Daytona Beach, FL 32114

Dimensions are for reference only.

| | |
|------------|---------|
| CUST. REF. | |
| PREV. MOD. | MLS-12 |
| ENG. REF. | ML21994 |
| DWG. DATE | 1/27/22 |

SERIES:
THOMPSON

MODEL:
STRAINER

MODEL NUMBER: MLS-12
CONFIGURATION: MLS-12B-FP2-304E

PDA/ATF-MAX

PRESSURE DIFFERENTIAL ALARM (PDA)

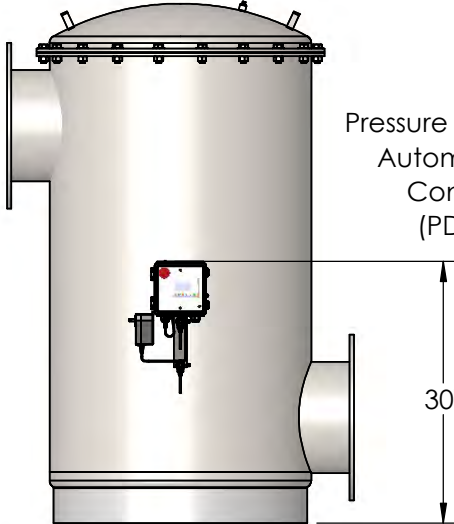
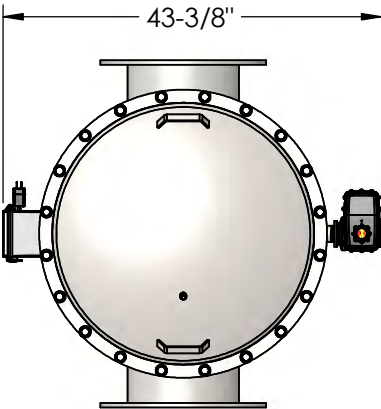
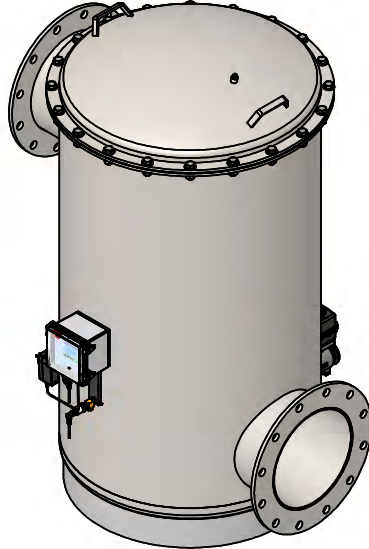
- Monitors Differential Pressure
- Signals operator at user-defined set point
- Audible & Visual Alarm
- Auxiliary contact for remote monitoring optional

AUTOMATIC TIMER FLUSH (ATF)

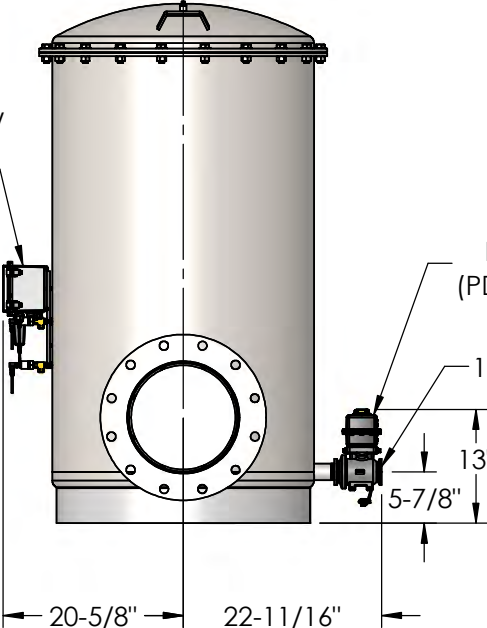
- Purges particles from strainer at user-defined intervals
- Adjustable flush frequency & duration
- Manual override

ELECTRICAL REQUIREMENT (PDA/ATF-MAX)

- 120VAC, 50/60Hz, 1.5Amps
- Power supply fits U.S. Type A or Type B outlet

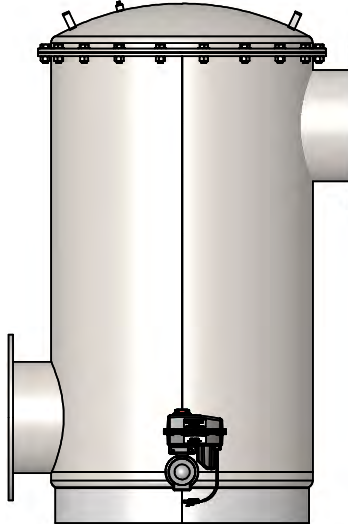


Pressure Differential Alarm/
Automatic Timer Flush
Control Package
(PDA/ATF-MAX)



Flush Valve
(PDA/ATF-MAX)

1-1/2" NPT(f)



PRODUCT SPECIFICATION

MILLER LEAMAN
800 Orange Avenue, Daytona Beach, FL 32114

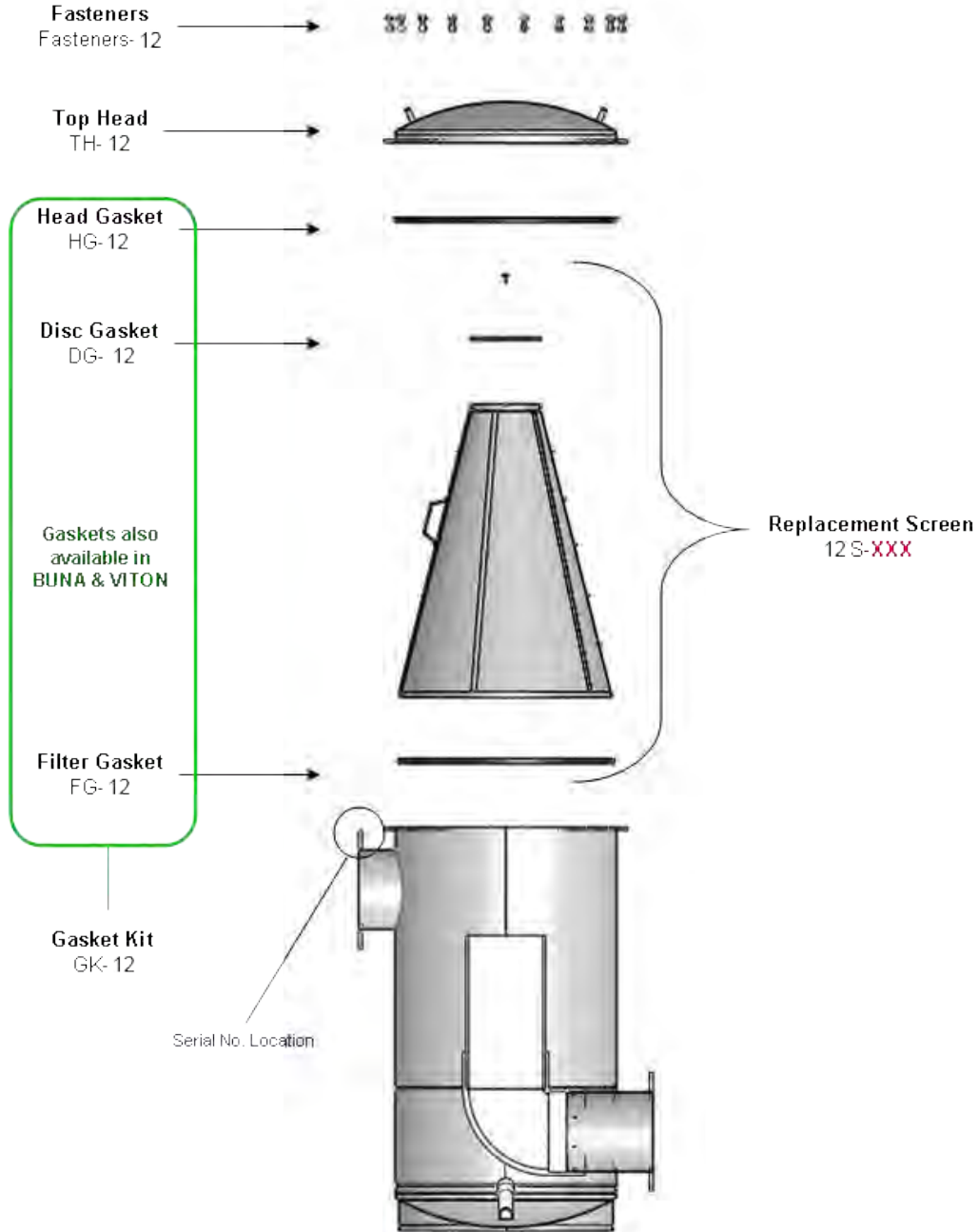
Dimensions are for reference only.

| | |
|------------|---------------------|
| CUST. REF. | |
| PREV. MOD. | |
| ENG. REF. | ML21994-PDA-ATF-MAX |
| DWG. DATE | 1/27/22 |

| | |
|---|--------------------|
| SERIES: THOMPSON | MODEL: STRAINER |
| CONFIGURATION: Instrumentation Package Options | |

Thompson Strainer - 12" Exploded View

Complete Strainer MLS-12-**XXX**



XXX Denotes Mesh Options

Mesh Options – 16, 20, 30, 40, 50, 60, 80, 100, 120, 150, 200

Heavy Duty Mesh – 24x110, 30x150, 40x200, 50x250 (Dutch weave screens; heavier wire gauge, lower open area %)



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.

Standard screens are comprised of 1/4" perforated backup material with selected screen mesh. Optional perforated only (no mesh) screens are available in 1/4", 1/8" 1/16" and 5/64". Other sizes or sintered mesh available by special order.

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



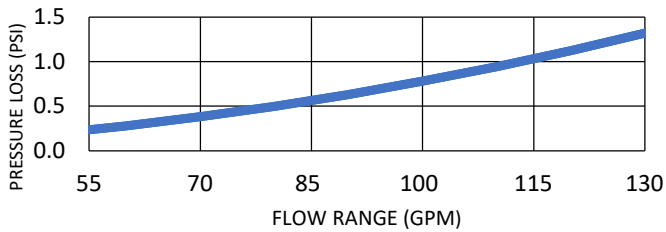
"THOMPSON" STRAINER

EFFICIENCY CURVES

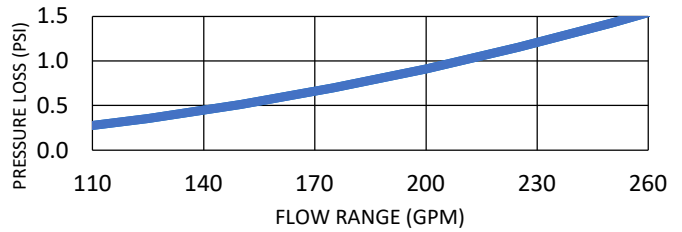
INDUSTRY'S LOWEST PRESSURE DROP

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

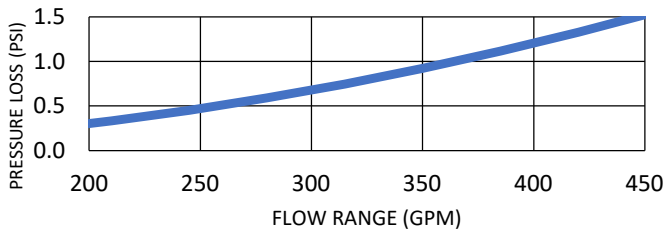
MLS-2 Design Flow Rate: 100 GPM



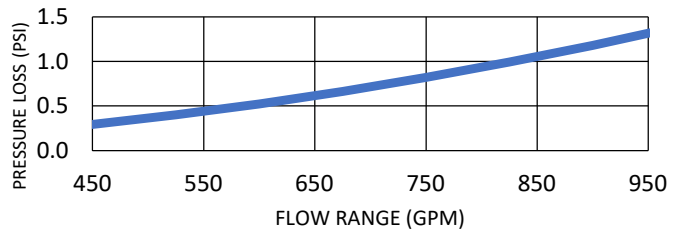
MLS-3 Design Flow Rate: 200 GPM



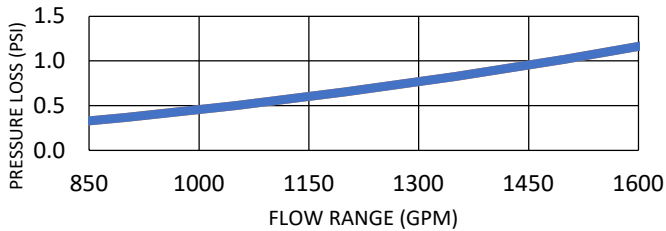
MLS-4 Design Flow Rate: 350 GPM



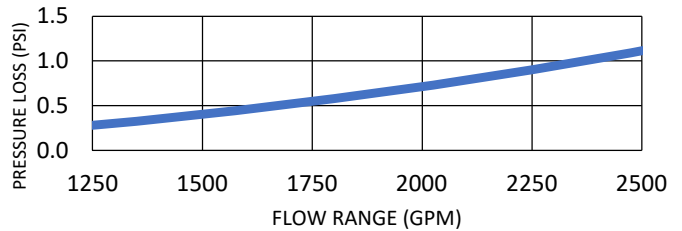
MLS-6 Design Flow Rate: 750 GPM



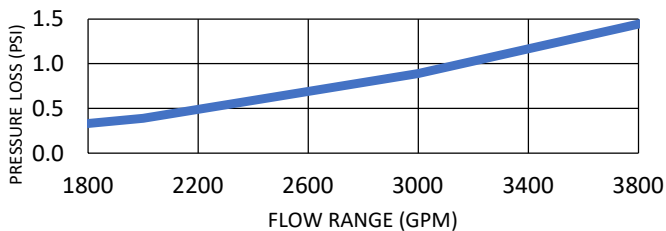
MLS-8 Design Flow Rate: 1300 GPM



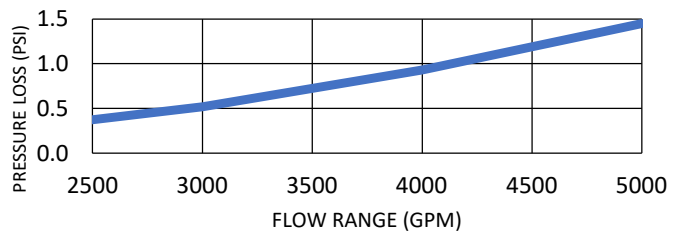
MLS-10 Design Flow Rate: 2000 GPM



MLS-12 Design Flow Rate: 3000 GPM



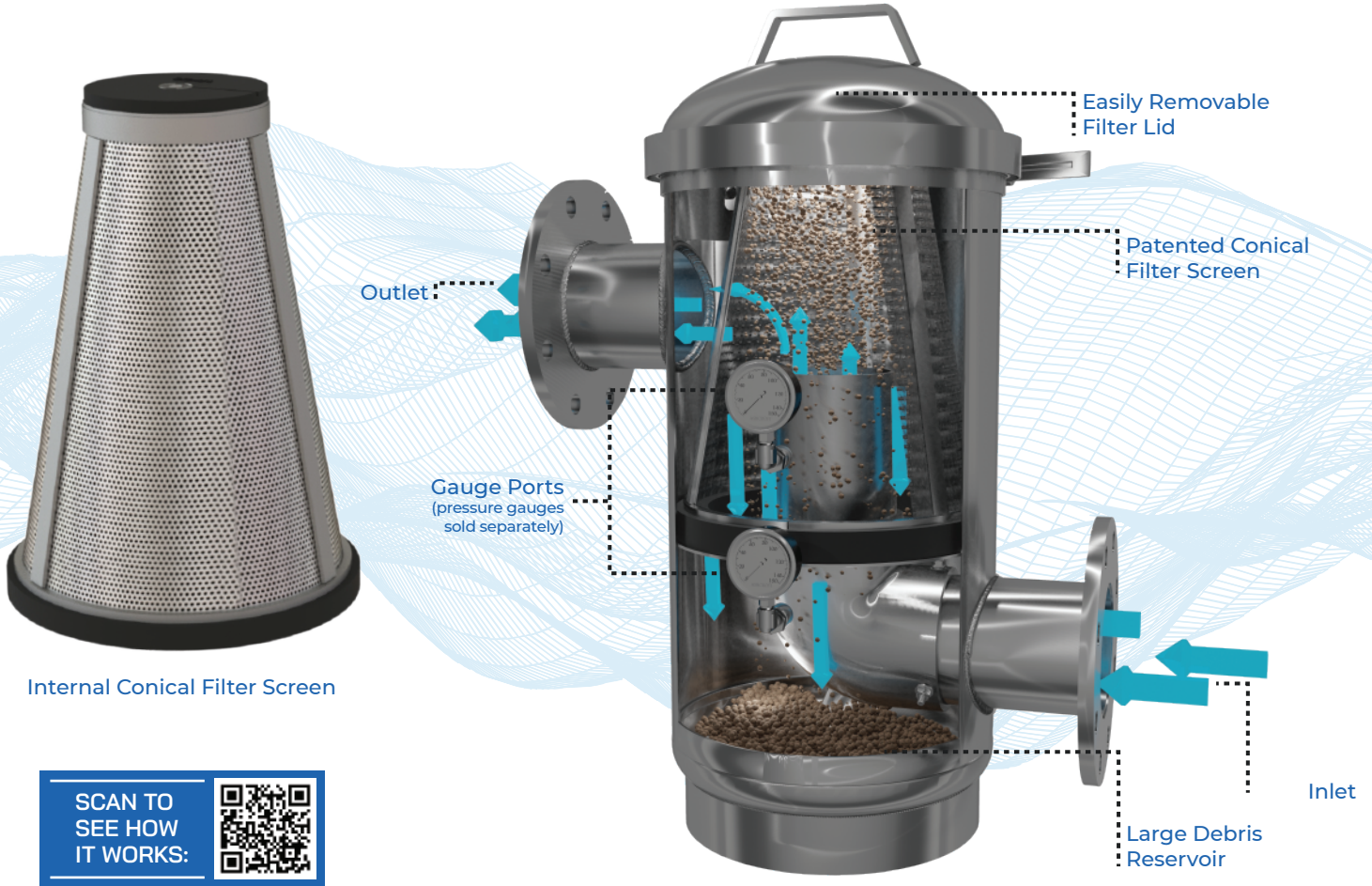
MLS-14 Design Flow Rate: 4000 GPM



MILLER LEAMAN

800 Orange Ave. · Daytona Beach, FL 32114
 tel: 386.248.0500 · toll free: 800.881.0320
 fax: 386.248.3033 · www.millerleaman.com

THE RIGHT SOLUTION FOR A WIDE RANGE OF SCREEN FILTRATION PROJECTS



SCAN TO SEE HOW IT WORKS:



APPLICATIONS

- | | | | | | |
|-------------------------------|---------------|------------------------------|---------------------|-----------|-------------------------|
| Cooling Tower / Chilled Water | Process Water | Food / Beverage Applications | Chemical Processing | Hot Water | Pump & Valve Protection |
| Plastics / Extrusion | Agricultural | Wastewater / Reclaim Water | Liquid Fertilizer | Mining | Marine |

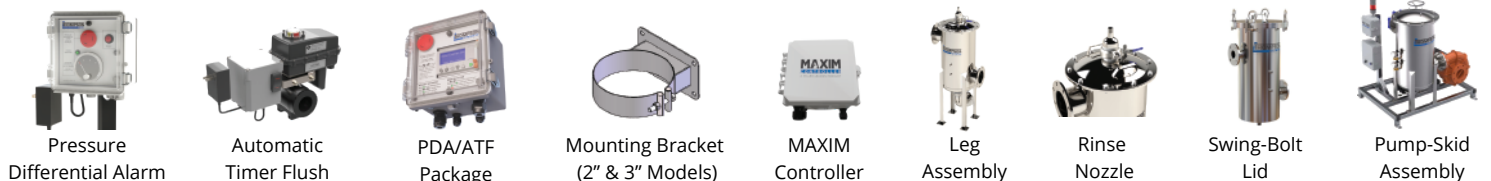
HOW IT WORKS

1. Dirty water enters inlet at bottom of housing.
2. Dirty water flows up through riser pipe assembly.
3. "Hydraulic" action and gravity accelerates heavier particles down to bottom debris reservoir.
4. Particles are flushed from strainer reservoir via 1.5" port.
5. Clean water exits through outlet port at top of housing.

BENEFITS

- Large screen surface area
- Minimizes operating costs
- Less than 1 PSI of pressure loss (clean)
- Streamlined design
- Space saving profile
- Completely customizable
- High-quality stainless steel construction

OPTIONAL ADD-ONS



STANDARD MODELS

| Model # | Inlet/Outlet Size & Type | Recommended Flow* (GPM) | Max Pressure Rating** | Lid Closure Type | Screen Surface Area (sq. in.) | Dimensions (inches) | | | | | Weight (lb) | |
|---------|--------------------------|-------------------------|-----------------------|------------------|-------------------------------|---------------------|-------|-------|-------|-------|-------------|------|
| | | | | | | A | B | C | D | E | DRY | WET |
| MLS-2 | 2"/NPT or Grooved | 100 GPM | 125 PSI | CLAMP | 122 | 7.5 | 17.62 | 6.18 | 11.75 | -- | 14 | 30 |
| MLS-3 | 3"/NPT or Grooved | 200 GPM | 125 PSI | CLAMP | 200 | 10 | 26 | 8.19 | 16.82 | -- | 30 | 60 |
| MLS-4C | 4"/Flanged or Grooved | 350 GPM | 125 PSI | CLAMP | 367 | 12.75 | 28.75 | 9.62 | 18.25 | 6.81 | 60 | 160 |
| MLS-4B | 4"/Flanged or Grooved | 350 GPM | 150 PSI | BOLTED | 367 | 14.5 | 25.88 | 9.62 | 18.25 | 6.81 | 60 | 160 |
| MLS-6 | 6"/Flanged or Grooved | 750 GPM | 150 PSI | BOLTED | 745 | 20.52 | 38 | 12.25 | 29.12 | 10.25 | 125 | 425 |
| MLS-8 | 8"/Flanged or Grooved | 1000 GPM | 150 PSI | BOLTED | 1659 | 26 | 49.06 | 16.89 | 35.31 | 11.88 | 200 | 995 |
| MLS-10 | 10"/Flanged or Grooved | 2000 GPM** | 150 PSI | BOLTED | 2432 | 14.5 | 60.25 | 19.88 | 45.56 | 13.19 | 400 | 1840 |
| MLS-12 | 12"/Flanged or Grooved | 3000 GPM | 150 PSI | BOLTED | 2432 | 20.52 | 60.25 | 19.88 | 45.56 | 12.12 | 425 | 1865 |
| MLS-14 | 14"/Flanged or Grooved | 4000 GPM | 150 PSI | BOLTED | 2432 | 26 | 63.75 | 19.88 | 47.50 | 15 | 553 | 2013 |

Each strainer comes with 1/4" NPT gauge and air relief ports and 1.5" NPT threaded flush ports. Pressure gauges and flush valves are not included.

*Recommended flow varies depending on solids loading and screen sizing. Manifold multiple strainers for higher flow rates.

**High pressure and high temperature models available by special order.

CONSTRUCTION MATERIALS

Housing & Internal Piping:

- Type 304 stainless Steel (Type 316 is optional)
- 2"-14" models come standard with internal elbow and riser pipe assembly

Internal Conical Screen Elements

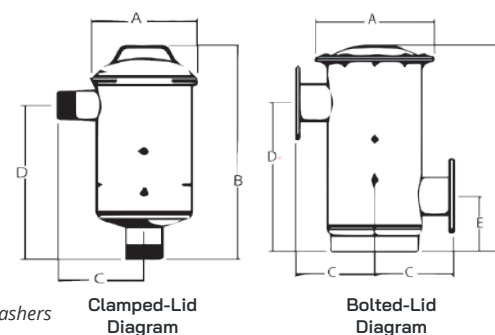
- Screen Support Frames: Type 304 stainless-steel
- Screen Mesh: Type 316 stainless-steel is standard

Gaskets

- EPDM is standard
- VITON and BUNA gaskets available by special order

Lid Fasteners

- Clamp Lid Models: 2"-4" *Clamp is type 304 SS*
- Optional: 316 SS
- Bolted Lid Models: 4"-14" *Grade 5 bolts/nuts; Zinc plated washers*
- Swing-Bolt lid optional



SCREEN SIZES AVAILABLE

| MESH / micron data | Mesh size | 16 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120* | 150* | 200* |
|--------------------|-----------|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| | Microns | 1003 | 864 | 516 | 381 | 279 | 234 | 178 | 140 | 117 | 104 | 74 |

*Heavy-duty mesh recommended

HEAVY-DUTY MESH / micron data

| | | | | |
|-------------------------------|---------|--------|--------|--------|
| Mesh size | 24x110 | 30x150 | 40x200 | 50x250 |
| Microns | 112-117 | 95-100 | 72-77 | 55-60 |
| Perforated Screen Sizes (in.) | 1/4 | 1/8 | 1/16 | 5/64 |



Custom filtration options



Conserving water and energy for sustainability



Rigorously tested welds



Efficient, clean designs



Agile customer service technicians

EFFICIENT & RELIABLE FILTRATION SOLUTIONS

With over 30 years of experience in manufacturing filtration products for our customers, Miller-Leaman, Inc. has proven credibility, expertise and quality with every system we design. We take pride in our craftsmanship and innovation while providing customizable solutions for our customers across multiple end markets.



Scan the QR code to find out more information about our products.

[f /MillerLeaman800](#)
[i /MillerLeaman](#)
[t /Miller-Leaman](#)



MILLER-LEAMAN

800 Orange Ave, Daytona Beach, FL 32114
 Phone: 386.248.0500 | Fax: 386.248.3033
www.millerleaman.com

THOMPSON INSTRUMENTATION PACKAGES

****NEW STATE-OF-THE-ART-DESIGNS!****

For enhanced capability, any Thompson Strainer can be outfitted with a Pressure Differential Alarm, Automatic Timer Flush Package or both.



APPLICATIONS

- Cooling Tower / Chilled Water
- Food / Beverage Applications
- Hot Water
- Plastics
- Wastewater / Reclaim Water
- Mining
- Process Water
- Chemical Processing
- Pump & Valve Protection
- Agricultural
- Liquid Fertilizer
- Marine



PDA/ATF-MAX-150 - POWERED BY MAXIM

The PDA/ATF-MAX combines the Automatic Timer Flush Package with Miller-Leaman's proprietary MAXIM controller PLC and pressure transducers to monitor the differential pressure across the internal screen. The MAXIM controller allows the user to adjust the PSID alarm set point which will trigger the audible siren and flashing red light alarms as well as actuate the Automatic Timer Flush Package.



PDA MAX - POWERED BY MAXIM

- 110V/24VDC Power Supply
- PLC Controller featuring –
 - LCD Screen for System Status Info, Setpoint Adjustability, and System Alarm Info.
 - Inlet/Outlet Pressure Transducers
 - Memory Module Interface for Program Backup.
 - I/O System Screen for Troubleshooting Assistance.
- Pressure Transducers for Increased Accuracy of Differential Pressure Calculation and System Pressures.
- Alarm Output Relay for Your Building Management System.
- Nema4X Enclosure Rating with Clear Enclosure Cover for Status and Alarm Viewing.

AUTOMATIC TIMER FLUSH (ATF2)

- Automatically Purges Particles from Bottom Reservoir
- Increased ATF function-ability – “TimedFlush” enabled only when System Flow is Detected.
- Manual Flush Override
- NEMA 4X Enclosure Rating
- 316 SS Ball and Stem
- Less Connections and Reduced Leak Point
- Open and Close Indicator
- Valve Threads On Strainer Flush Port (Standard 1.5”)
- Other Flush Sizes Available (0.75”, 1”, 2”, 3”).
- Adjustable Flush Frequency and Flush Duration controlled by MAXIM

Flush Interval
HOURS:MM 00024:00
Enter
PSID Setpoint 07

Manifold Pressure
Inlet : 0034.0
Outlet : 0032.0
PSID : 0002.0

Time Since Last
Flush 00000:04
Triggered By:
PD Transducers

Example of Multiple Controller Displays





We take pride in conserving water and energy for the sustainability of our environment

THOMPSON

PDA2

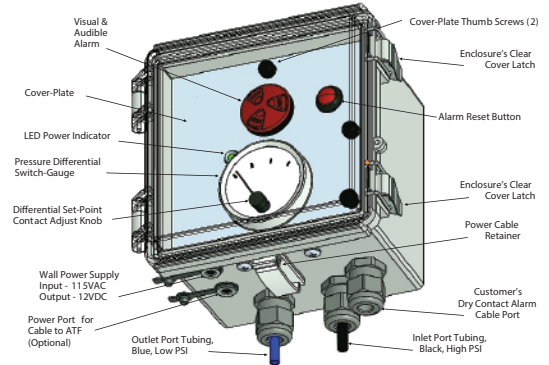
A MILLER-LEAMAN PRODUCT



PRESSURE DIFFERENTIAL ALARM PACKAGE (PDA2)

Our new and improved Pressure Differential Alarm Package (PDA2) 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. 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.

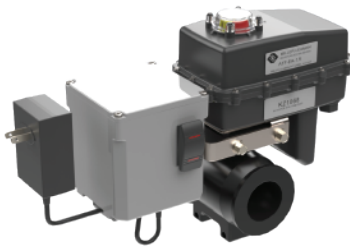
- 110V / 12VDC Power Supply
- Monitors Differential Pressure
- Signals When Screen Cleaning is Required
- Audible and Visual Alarm
- Auxiliary Contacts For BMS Monitoring
- Nema4X Enclosure Rating



THOMPSON

ATF2

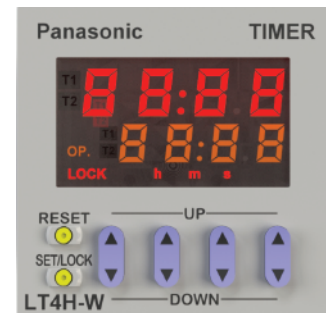
A MILLER-LEAMAN PRODUCT



AUTOMATIC TIMER FLUSH PACKAGE (ATF2-150)

The Automatic Timer Flush Package (ATF2-150) automatically purges particles that have gravitated down into the debris reservoir at the base of the strainer. 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, however, these settings can be 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.

- 110V / 12VDC Power Supply
- Automatically Purges Particles from Bottom Reservoir
- Robust Stainless Steel Ball Valve
- Adjustable Flush Frequency and Flush Duration
- Manual Flush Override
- Nema4X Enclosure Rating
- Valve Threads On Strainer Flush Port (Standard 1.5")
- Other flush sizes available (0.75", 1", 2", 3")



Digital Control Gauge

EFFICIENT & RELIABLE FILTRATION SOLUTIONS



Custom filtration options



Conserving water and energy for sustainability



Rigorously tested welds



Efficient, clean designs



Agile customer service technicians

With over 30 years of experience in manufacturing filtration products for our customers, Miller-Leaman, Inc. has proven credibility, expertise and quality with every system we design. We take pride in our craftsmanship and innovation while providing customizable solutions for our customers across multiple end markets.



800 Orange Ave, Daytona Beach, FL 32114
Phone: 386.248.0500 | Fax: 386.248.3033
www.millerleaman.com



Scan the QR code to find out more information about our products.

[f /MillerLeaman800](#)
[t /MillerLeaman](#)
[i /Miller-Leaman](#)

