MiniMiser™ Tank-Mounted Filter **MTA**

Model No. of filter in photograph is MTA3TAZ10P8.

Features and Benefits

- Low pressure tank-mounted filter
- Compact size minimizes space requirements
- Minimizer is cost-effective alternative to spin-on filters
- Special filter element design provides aftermarket benefits

15 *gpm*
55 L/min
100 psi
7 bar

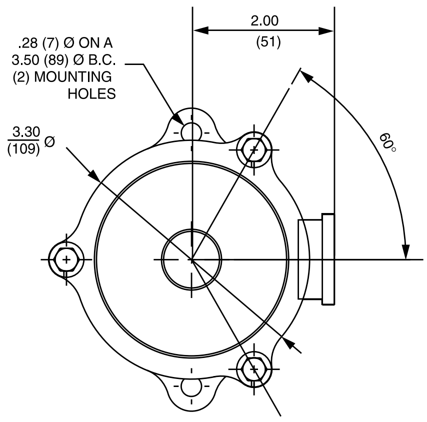
Filter Housing Specifications

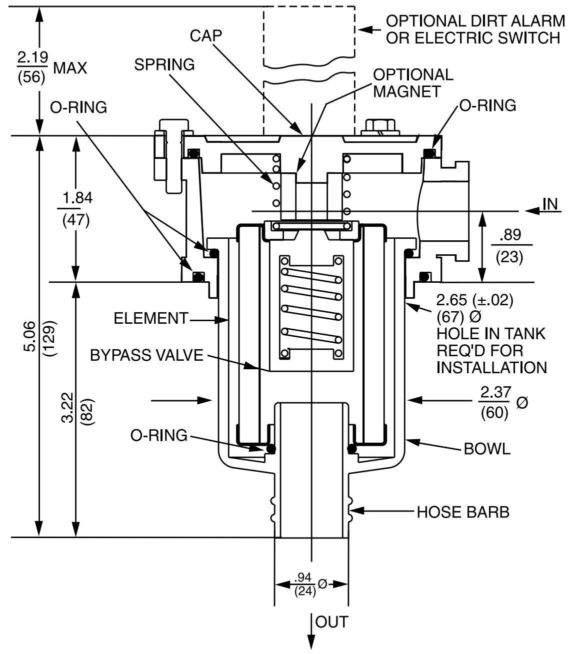
Flow Rating:	Up to 15 gpm (55 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	100 psi (7 bar)
Min. Yield Pressure:	269 psi (18 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	Contact factory
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 25 psi (2 bar) Full Flow: 48 psi (3.3 bar)
Porting Head & Cap: Element Case:	Die Cast Aluminum Glass Filled Nylon
Weight of MTA-3:	1.0 lbs. (0.5 kg)
Element Change Clearance:	3.0" (76 mm)

Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All E media (cellulose) and Z-Media® (synthetic)

MiniMiser™ Tank-Mounted Filter





Metric dimensions in ( ).

Element Performance Information & Dirt Holding Capacity

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
3TAZ3	<1.0	<1.0	<2.0	<4.0	4.8
3TAZ5	2.5	3.0	4.0	4.8	6.3
3TAZ10	7.4	8.2	10.0	8.0	10.0
3TAZ25	18.0	20.0	22.5	19.0	24.0

Element	DHC (gm)
3TAZ3	4
3TAZ5	6
3TAZ10	4
3TAZ25	4

Element Collapse Rating: 150 psid (10 bar)

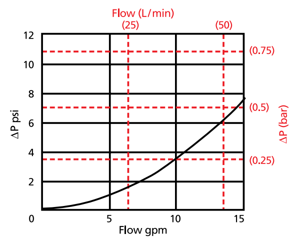
Flow Direction: Outside In

Element Nominal Dimensions: 2.0" (51 mm) O.D. x 3.0" (76 mm) long

Pressure Drop Information
Based on Flow Rate and Viscosity

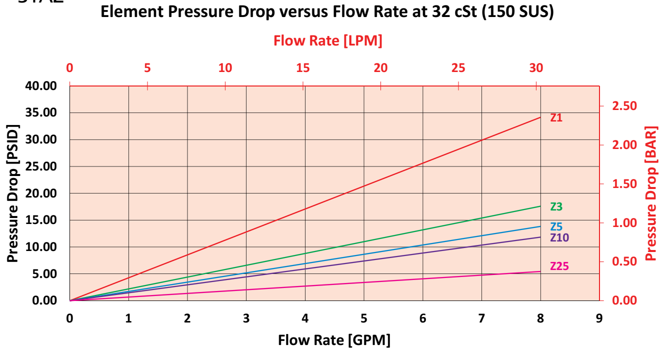
$\Delta P_{housing}$

MTA $\Delta P_{housing}$ for fluids with sp gr (specific gravity) = 0.86:



$\Delta P_{element}$

3TAZ



$$\Delta P_{filter} = \Delta P_{housing} + (\Delta P_{element} * V_f)$$

Exercise:

Determine ΔP_{filter} at 10 gpm (37.9 L/min) for MTA3TAZ25P8Y5 using 160 SUS (34 cSt) fluid.

Use the housing pressure curve to determine $\Delta P_{housing}$ at 10 gpm. In this case, $\Delta P_{housing}$ is 4 psi (.27 bar) on the graph for the MTA housing.

Use the element pressure curve to determine $\Delta P_{element}$ at 10 gpm. In this case, $\Delta P_{element}$ is 7 psi (.48 bar) according to the graph for the 3TAZ25 element.

Because the viscosity in this sample is 160 SUS (34 cSt), we determine the **Viscosity Factor** (V_f) by dividing the **Operating Fluid Viscosity** with the **Standard Viscosity** of 150 SUS (32 cSt). To best determine your Operating Fluid Viscosity, please reference the chart in Appendix D.

Finally, the overall filter pressure differential, ΔP_{filter} , is calculated by adding $\Delta P_{housing}$ with the true element pressure differential, ($\Delta P_{element} * V_f$). The $\Delta P_{element}$ from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:

$\Delta P_{housing}$ = 4 psi [.27 bar] | $\Delta P_{element}$ = 7 psi [.48 bar]

V_f = 160 SUS (34 cSt) / 150 SUS (32 cSt) = 1.1

ΔP_{filter} = 4 psi + (7 psi * 1.1) = 11.7 psi

OR

ΔP_{filter} = .27 bar + (.48 bar * 1.1) = .80 bar

Note:
If your element is not graphed, use the following equation:
$\Delta P_{element}$ = Flow Rate x ΔP_f. Plug this variable into the overall pressure drop equation.

Ele.	ΔP
3TA10	1.40
3TA25	0.33

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Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder MTA:

BOX 1		BOX 2		BOX 3		BOX 4		BOX 5
MTA	–		–		–		–	

Example: *NOTE: One option per box*

BOX 1		BOX 2		BOX 3		BOX 4		BOX 5	
MTA	–	3	–	TA25	–	P8	–	Y5	**= MTA3TA25P8Y5**

BOX 1

Filter Series
MTA

BOX 2

Element Length (in)
3

BOX 3

Element Size and Media
TA10 = TA size 10 μ E media (cellulose)
TA25 = TA size 25 μ E media (cellulose)
TAZ1 = TA size 1 μ Excellement® Z-Media® (synthetic)
TAZ3 = TA size 3 μ Excellement® Z-Media® (synthetic)
TAZ5 = TA size 5 μ Excellement® Z-Media® (synthetic)
TAZ10 = TA size 10 μ Excellement® Z-Media® (synthetic)
TAZ25 = TA size 25 μ Excellement® Z-Media® (synthetic)

BOX 4

Porting Options
P8 = ½" NPTF
S8 = SAE-8

BOX 5

Dirt Alarm® Options	
	Omit = None
Visual	Y2C = Bottom-mounted gauge in cap
	Y5 = Back-mounted gauge in cap
Electrical	ESC = Electric pressure switch (2 terminals)