

MiniMiser™ Tank-Mounted Filter

MTA



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

IRF
TF1
KF3
KL3
LF1-2"
MLF1
RLD
GRTB
MTA

Model No. of filter in photograph is MTA3TAZ10P8.



INDUSTRIAL



AUTOMOTIVE
MANUFACTURING



MOBILE
VEHICLES



PULP & PAPER



AGRICULTURE

Applications

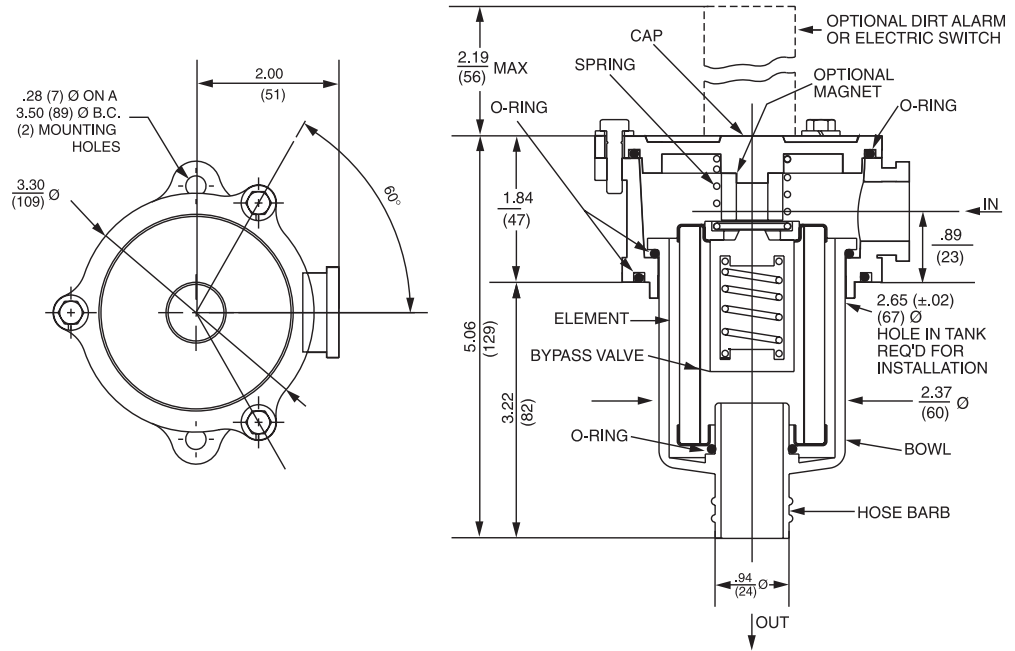
KFT
RT
RTI
LRT
ART
BFT
QT
KTK
LTK
MRT

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:	Die Cast Aluminum
Element Case:	Glass Filled Nylon
Weight of MTA-3:	1.0 lbs. (0.5 kg)
Element Change Clearance:	3.0" (76 mm)

Filter Housing Specifications

Accessories for Tank-Mounted Filters

PAF1
MAF1
MF2



Metric dimensions in ().

Element Performance Information

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
3TA10	15.5	16.2	18.0	N/A	N/A
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

Dirt Holding Capacity

Element	DHC (gm)
3TA10	N/A
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

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

Fluid Compatibility

IRF
TF1
KF3
KL3

Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 25 psi (1.7 bar) bypass valve.			
	Series	Part No.				
Return Line -Tank-Mounted	E Media	10	3TA10		See MTB	
		25	3TA25			
		Z3	3TAZ3		See MTB	
	Z-Media®	Z5	3TAZ5		See MTB	
		Z10	3TAZ10		See MTB	
		Z25	3TAZ25		See MTB	
Flow	gpm	0	5	10	15	
	(L/min)	0	(25)	(50)		

Element Selection Based on Flow Rate

LF1-2"
MLF1
RLD
GRTB

MTA

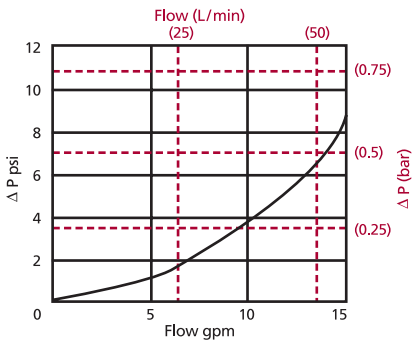
MTB
ZT

Shown above are the elements most commonly used in this housing.

Note: Contact factory regarding use of E media in High Water Content, Invert Emulsion and Water Glycol Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.

$\Delta P_{\text{housing}}$

MTA $\Delta P_{\text{housing}}$ for fluids with sp gr = 0.86:



sp gr = specific gravity

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

$\Delta P_{\text{element}}$

$\Delta P_{\text{element}} = \text{flow} \times \text{element } \Delta P \text{ factor} \times \text{viscosity factor}$

El. ΔP factors @ 150 SUS (32 cSt):

	3TA
3TA10	1.40
3TA25	.33
3TAZ1	4.27
3TAZ3	2.20
3TAZ5	1.73
3TAZ10	1.48
3TAZ25	.68

If working in units of bars & L/min, divide above factor by 54.9.

Viscosity factor: Divide viscosity by 150 SUS (32 cSt).

Pressure Drop Information Based on Flow Rate and Viscosity

RT
RTI
LRT
ART
BFT
QT
KTK
LTK
MRT

Notes

$$\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$$

Exercise:

Determine ΔP at 7 gpm (27 L/min) for MTA3TAZ10P8 using 150 SUS (32 cSt) fluid.

Solution:

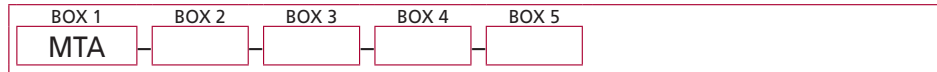
$$\begin{aligned} \Delta P_{\text{housing}} &= 2.0 \text{ psi } [.14 \text{ bar}] \\ \Delta P_{\text{element}} &= 7 \times 1.48 = 10.3 \text{ psi} \\ &\text{or} \\ &= [27 \times (1.48 \div 54.9)] = .73 \text{ bar} \\ \Delta P_{\text{total}} &= 2.0 + 10.3 = 12.3 \text{ psi} \\ &\text{or} \\ &= [.14 + .73 = .87 \text{ bar}] \end{aligned}$$

Accessories for Tank-Mounted Filters

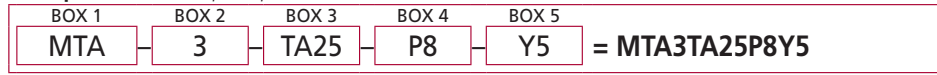
PAF1
MAF1
MF2

Filter Model Number Selection

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



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3
Filter Series	Element Length (in)	Element Size and Media
MTA	3	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	BOX 5
Porting Options	Dirt Alarm® Options
P8 = ½" NPTF S8 = SAE-8	Omit = None Visual Y2C = Bottom-mounted gauge in cap Y5 = Back-mounted gauge in cap Electrical ESC = Electric pressure switch (2 terminals)

NOTE:

Box 2. Replacement element part numbers are a combination of Boxes 2 and 3.
Example: 3TA10