

# Tank-Mounted Filter Kit

**LTK**



## Features and Benefits

- Special tank-mounted filter kit
- Includes: cap assembly, weld ring assembly, element and bushing
- Available with standard 18L sized element
- Bypass valve in cap assembly

**150 gpm**  
**570 L/min**  
**100 psi**  
**7 bar**

Model No. of filter in photograph is LTK18LZ3.

Flow Rating:	Up to 150 gpm (570 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	100 psi (7 bar) exclusive of tank design
Min. Yield Pressure:	Contact factory
Rated Fatigue Pressure:	Contact factory
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 47 psi (3.2 bar)
Porting Cap:	Die Cast Aluminum
Weld Ring:	Steel
Element Change Clearance:	17.0" (435 mm)

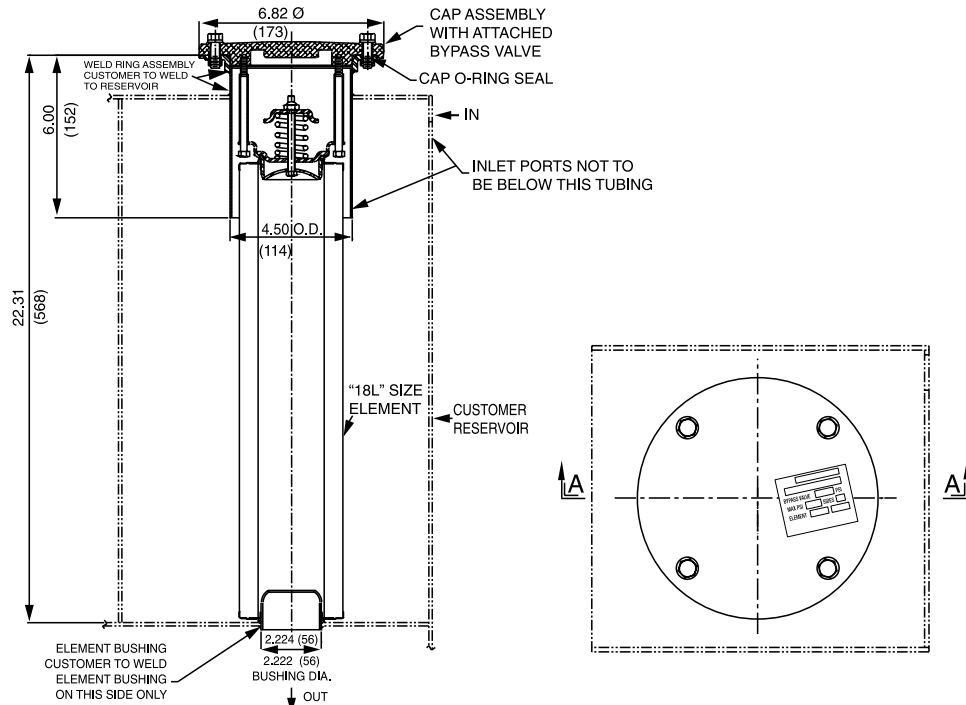
## Filter Housing Specifications

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All E media (cellulose) and Z-Media® (synthetic)
High Water Content	All Z-Media® (synthetic)
Invert Emulsions	10 and 25 μ Z-Media® (synthetic)
Water Glycols	3, 5, 10 and 25 μ Z-Media® (synthetic)
Phosphate Esters	All Z-Media® (synthetic) with H (EPR) seal designation and 3 and 10 μ E media (cellulose) with H (EPR) seal designation
Skydrol®	3, 5, 10 and 25 μ Z-Media® (synthetic) with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)

## Fluid Compatibility

## Accessories For Tank-Mounted Filters

- IRF
- TF1
- KF3
- KL3
- LF1
- MLF1
- RLD
- GRTB
- MTA
- MTB
- ZT
- KFT
- RT
- RTI
- LRT
- ART
- BFT
- QT
- KTK
- LTK**
- MRT
- PAF1
- MAF1
- MF2



Metric dimensions in ( ). SECTION A-A

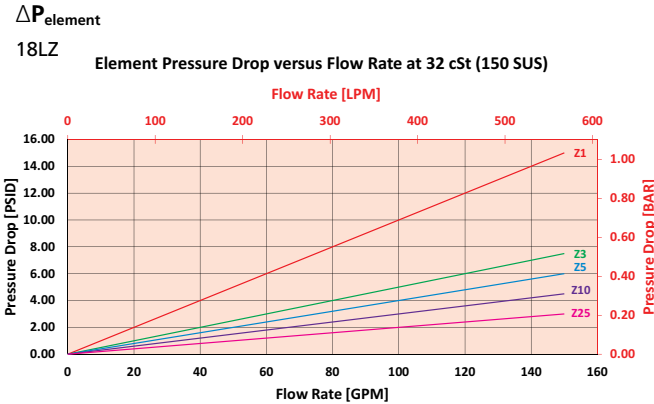
## Element Performance Information & Dirt Holding Capacity

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	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
18LZ1	<1.0	<1.0	<1.0	<4.0	4.2
18LZ3	<1.0	<1.0	<2.0	<4.0	4.8
18LZ5	2.5	3.0	4.0	4.8	6.3
18LZ10	7.4	8.2	10.0	8.0	10.0
18LZ25	18.0	20.0	22.5	19.0	24.0

Element	DHC (gm)
18LZ1	224
18LZ3	230
18LZ5	238
18LZ10	216
18LZ25	186

Element Collapse Rating: 150 psid (10 bar)  
 Flow Direction: Outside In  
 Element Nominal Dimensions: 4.0" (100 mm) O.D. x 18.5" (470 mm) long

\*LTK Dirty Box Pressure Drop is Customer Tank Design Dependant. Please account for this when designing system.



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

**Exercise:**

Determine  $\Delta P_{\text{filter}}$  at 80 gpm (303.2 L/min) for LTK18LKZ3 using 160 SUS (34 cSt) fluid.

Use the element pressure curve to determine  $\Delta P_{\text{element}}$  at 80 gpm. In this case,  $\Delta P_{\text{element}}$  is 4 psi (.27 bar) according to the graph for the 18LZ3 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,  $\Delta P_{\text{filter}}$ , is calculated by adding  $\Delta P_{\text{housing}}$  with the true element pressure differential, ( $\Delta P_{\text{element}} * V_f$ ). The  $\Delta P_{\text{element}}$  from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

**Solution:**

$$\Delta P_{\text{element}} = 4 \text{ psi } [.27 \text{ bar}]$$

$$V_f = 160 \text{ SUS } (34 \text{ cSt}) / 150 \text{ SUS } (32 \text{ cSt}) = 1.1$$

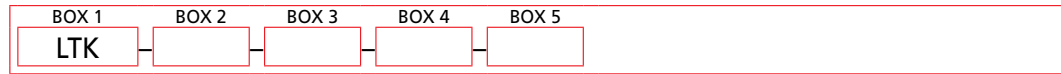
$$\Delta P_{\text{filter}} = (4 \text{ psi} * 1.1) = 4.4 \text{ psi}$$

**OR**

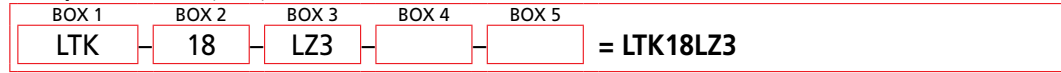
$$\Delta P_{\text{filter}} = (.27 \text{ bar} * 1.1) = .30 \text{ bar}$$

**Filter Model Number Selection**

**How to Build a Valid Model Number for a Schroeder LTK:**



**Example:** NOTE: One option per box



BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Length of Element (in)	Element Size and Media	Seal Material
LTK	18	L3 = L size 3 μ E media (cellulose) L10 = L size 10 μ E media (cellulose) L25 = L size 25 μ E media (cellulose) LZ1 = L size 1 μ Excellement® Z-Media® (synthetic) LZ3 = L size 3 μ Excellement® Z-Media® (synthetic) LZ5 = L size 5 μ Excellement® Z-Media® (synthetic) LZ10 = L size 10 μ Excellement® Z-Media® (synthetic) LZ25 = L size 25 μ Excellement® Z-Media® (synthetic)	Omit = Buna N H = EPR W = Buna N H.5 = Skydrol® Compatibility

BOX 5	
Dirt Alarm® Options	
Omit	= None
Visual	Y2C = Bottom-mounted gauge in cap

**NOTES:**

Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4.  
 Example: 18LZ3H

Box 4. For options H and W, cap is anodized.  
 H.5 seal designation includes the following:  
 EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior.  
 Skydrol® is a registered trademark of Solutia Inc.