

# Tank-Mounted Suction Filter

**ST**



## Features and Benefits

- Tank-mounted suction filter for hydrostatic suction service
- Optional check valve prevents reservoir siphoning
- Easy Element changeout
- Inlet filter protects pump, reduces start-up failures

**20 gpm**  
**75 L/min**

**ST**

TF-SKB

KF3-SKB

BFT-SKB

Model No. of filter in photograph is ST1K105Y.



INDUSTRIAL



MOBILE  
VEHICLES

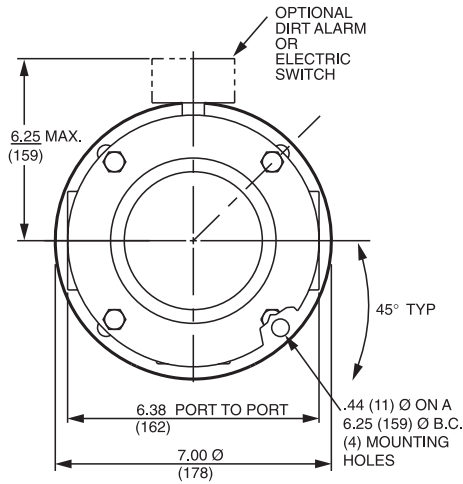
## Applications

|                           |   |
|---------------------------|---|
| Flow Rating:              | Up to 20 gpm (75 L/min) for 150 SUS (32 cSt) fluids |
| Max. Operating Pressure:  | Suction Filter                                      |
| Min. Yield Pressure:      | Not Applicable                                      |
| Rated Fatigue Pressure:   | Not Applicable                                      |
| Temp. Range:              | -20°F to 225°F (-29°C to 107°C)                     |
| Bypass Setting:           | Non-bypassing                                       |
| Porting Head:             | Die Cast Aluminum                                   |
| Cap:                      | Steel   |
| Element Case:             | Steel   |
| Weight of ST-1K:          | 11.1 lbs. (5.0 kg)                                  |
| Weight of ST-2K:          | 14.7 lbs. (6.7 kg)                                  |
| Element Change Clearance: | 7.25" (185 mm) for 1K; 17.50" (445 mm) for KK       |

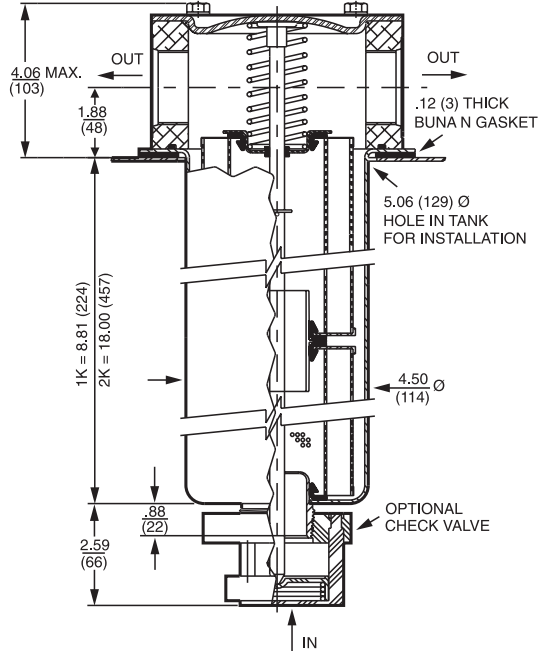
## Filter Housing Specifications



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Optional mounting ring (P/N A-LFT-813) available to weld to tank.



Metric dimensions in ( ).

## Element Performance Information

| Element | Filtration Ratio Per ISO 4572/NFPA T3.10.8.8<br>Using automated particle counter (APC) calibrated per ISO 4402 |                    |                    | Filtration Ratio wrt ISO 16889<br>Using APC calibrated per ISO 11171 |                        |
|---------|--|--------------------|--------------------|--|------------------------|
|         | $\beta_x \geq 75$  | $\beta_x \geq 100$ | $\beta_x \geq 200$ | $\beta_x(c) \geq 200$  | $\beta_x(c) \geq 1000$ |
| K10     | 15.5   | 16.2               | 18.0               | N/A  | N/A                    |
| KTZ10   | 7.4  | 8.0                | 10.0               | 8.0  | 10.0                   |

## Dirt Holding Capacity

| Element | DHC (gm) |
|---------|----------|
| K10     | 44       |
| KTZ10   | 56       |

Element Collapse Rating: 150 psid (10 bar)

Flow Direction: Inside Out

Element Nominal Dimensions: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

# Tank-Mounted Suction Filter



| Type Fluid             | Appropriate Schroeder Media  |
|------------------------|--|
| Petroleum Based Fluids | All E media (cellulose) and Z-Media® (synthetic)   |
| High Water Content     | 10 μ Z-Media® (synthetic)  |
| Invert Emulsions       | 10 μ Z-Media® (synthetic)  |
| Water Glycols          | 10 μ Z-Media® (synthetic)  |
| Phosphate Esters       | 10 μ Z-Media® (synthetic) with H (EPR) seal designation and 10 μ E media (cellulose) with H (EPR) seal designation                                 |
| Skydrol®               | 10 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

TF-SKB

KF3-SKB

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BFT-SKB

| Pressure                    | Element  |          | Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid. |    |         |    |
|-----------------------------|----------|----------|---|----|---------|----|
|                             | Series   | Part No. |   |    |         |    |
| Hydrostatic Suction Service | E Media  | K10      | 1K10  |    | 2K10†   |    |
|                             |          | K25      | 1K25  |    | 2K25†   |    |
|                             | Z-Media® | KTZ10    | 1KTZ10  |    | 2KTZ10† |    |
| Flow                        | gpm      | 0        | 5   | 10 | 15      | 20 |
|                             | (L/min)  | 0        | 25  | 50 | 75      |    |

## Element Selection

Based on Flow Rate

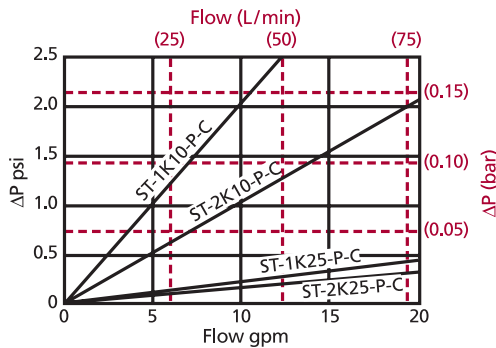
Note: Contact factory regarding use of E Media in High Water Content, Invert Emulsion and Water Glycol Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.

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

Note: Plotted curves shown in graph below include both housing and elements as indicated for fluids with sp gr = 0.86.

## Pressure Drop Information

Based on Flow Rate and Viscosity



sp gr = specific gravity

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

**Notes**

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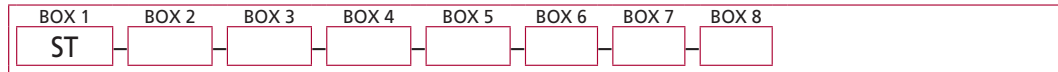
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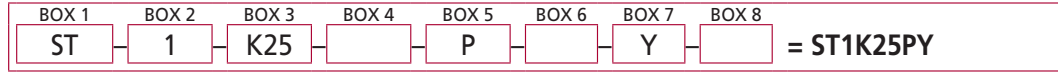
# Tank-Mounted Suction Filter

## Filter Model Number Selection

### How to Build a Valid Model Number for a Schroeder ST:



**Example:** NOTE: Only box 8 may contain more than one option



| BOX 1                | BOX 2                     | BOX 3  | BOX 4  |
|----------------------|---------------------------|--|--|
| <b>Filter Series</b> | <b>Number of Elements</b> | <b>Element Part Number</b>   | <b>Seal Material</b>   |
| ST                   | 1<br>2                    | K10 = K size 10 μ E media (cellulose)<br>K25 = K size 25 μ E media (cellulose)<br>KTZ3 = K size 3 μ Excellement® Z-Media® (synthetic) inside-out flow<br>KTZ5 = K size 5 μ Excellement® Z-Media® (synthetic) inside-out flow<br>KTZ10 = K size 10 μ Excellement® Z-Media® (synthetic) inside-out flow<br>KTZ25 = K size 25 μ Excellement® Z-Media® (synthetic) inside-out flow | Omit = Buna N<br>H = EPR<br>W = Buna N<br>H.5 = Skydrol® compatibility |

| BOX 5   | BOX 6  | BOX 7  | BOX 8                     |             |        |   |            |  |   |
|---|--|--|---------------------------|-------------|--------|---|------------|--|---|
| <b>Outlet Port</b>  | <b>Optional Check Valve</b>  | <b>Dirt Alarm® Options</b>   | <b>Additional Options</b> |             |        |   |            |  |   |
| P = 1½" NPTF<br>PP = Dual 1½" NPTF<br>S = SAE 24<br>SS = Dual SAE 24<br>B = ISO 228 G-1½"<br>BB = ISO 228 G-1½" | Omit = None<br>C = Check Valve   | <table border="1"> <tr> <td></td> <td>Omit = None</td> </tr> <tr> <td>Visual</td> <td>           Y = Vacuum guage<br/>           YR = Vacuum guage mounted on opposite side of standard location         </td> </tr> <tr> <td>Electrical</td> <td>           VS = Electrical Vacuum Switch<br/>           VSR = Electrical Vacuum Switch mounted on opposite side of standard location<br/>           VSR1 = Heavy-Duty Vacuum Switch         </td> </tr> </table> |                           | Omit = None | Visual | Y = Vacuum guage<br>YR = Vacuum guage mounted on opposite side of standard location | Electrical | VS = Electrical Vacuum Switch<br>VSR = Electrical Vacuum Switch mounted on opposite side of standard location<br>VSR1 = Heavy-Duty Vacuum Switch | Omit = None<br>G2293 = Cork Gasket<br>G547 = Two ⅛" guage ports |
|   | Omit = None  |  |                           |             |        |   |            |  |   |
| Visual  | Y = Vacuum guage<br>YR = Vacuum guage mounted on opposite side of standard location  |  |                           |             |        |   |            |  |   |
| Electrical  | VS = Electrical Vacuum Switch<br>VSR = Electrical Vacuum Switch mounted on opposite side of standard location<br>VSR1 = Heavy-Duty Vacuum Switch |  |                           |             |        |   |            |  |   |

**NOTES:**

Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4.

Box 4. For options H and W, all aluminum parts are anodized.  
 H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior.  
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Box 6. See also "Accessories for Tank-Mounted Filters," page 295.