

# Medium Pressure Filter

# SRLT



### Features and Benefits

- Smaller, compact version of the RLT
- Quick and easy cartridge element changeouts
- Lightweight at 3 pounds
- Offered in pipe, SAE straight thread and ISO 228 porting
- Available with NPTF inlet and outlet female test ports
- Various Dirt Alarm® options

**25 gpm**  
**100 L/min**  
**1400 psi**  
**100 bar**

GH

RLT

KF5

**SRLT**

K9

2K9

3K9

QF5

QF5i

3QF5

QFD5

QF15

QLF15

SSQLF15

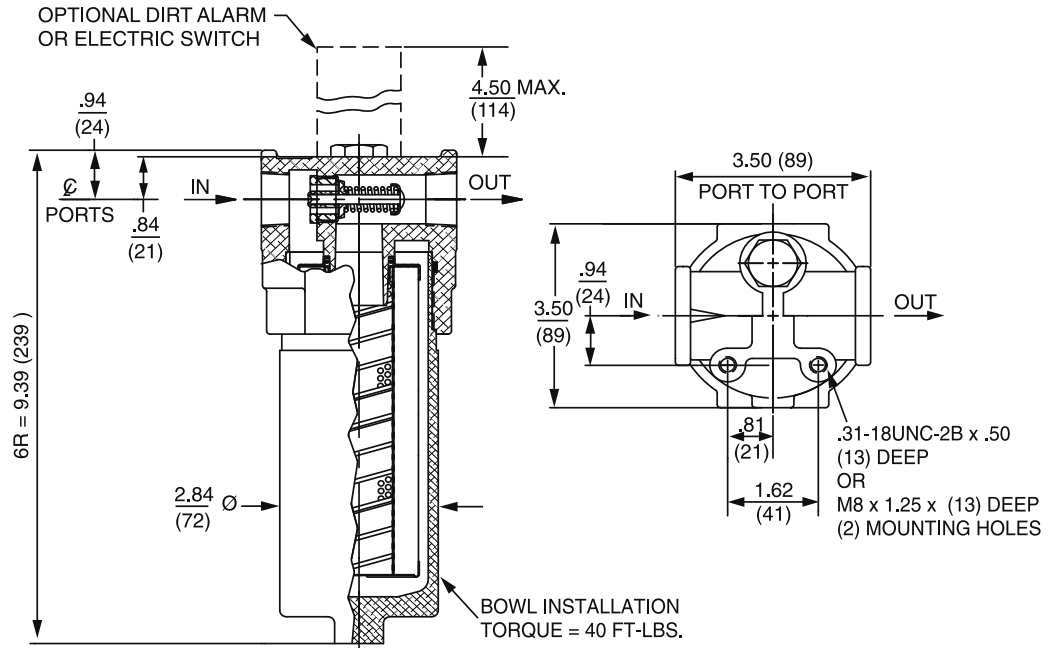
Model No. of filter in photograph is SRLT6RZ10S12D5.

Flow Rating:	Up to 25 gpm (100 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	1400 psi (100 bar)
Min. Yield Pressure:	4000 psi (276 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	750 psi (52 bar) per NFPA T2.6.1-R1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 55 psi (3.8 bar)
Porting Head:	Aluminum
Element Case:	Aluminum
Weight of SRLT-6R:	3.0 lbs. (1.4 kg)
Element Change Clearance:	2.75" (70 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
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



Metric dimensions in ( ).  
 Dimensions shown are inches (millimeters) for general information and overall envelope size only.  
 For complete dimensions please contact Schroeder Industries to request a certified print.

## Element Performance Information & Dirt Holding Capacity

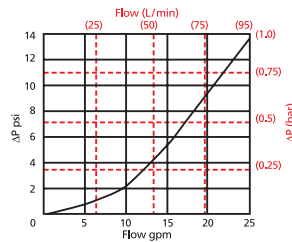
Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
6RZ1	<1.0	<1.0	<1.0	<4.0	4.2
6RZ3	<1.0	<1.0	<2.0	<4.0	4.8
6RZ5	2.5	3.0	4.0	4.8	6.3
6RZ10	7.4	8.2	10.0	8.0	10.0
6RZ25	18.0	20.0	22.5	19.0	24.0

Element	DHC (gm)
6RZ1	15
6RZ3	15
6RZ5	17
6RZ10	14
6RZ25	25

Element Collapse Rating: 150 psid (10 bar)  
 Flow Direction: Outside In  
 Element Nominal Dimensions: 2.0" (50 mm) O.D. x 6.0" (150 mm) long

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

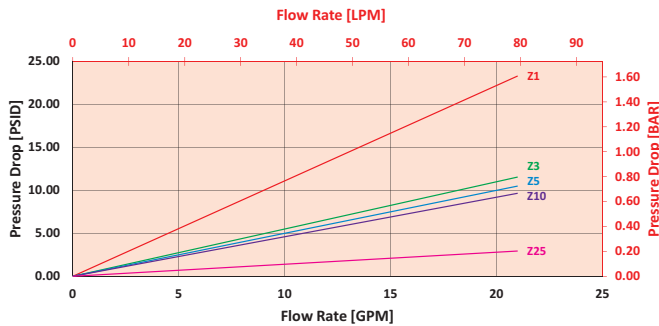
SRLT  $\Delta P_{\text{housing}}$  for fluids with sp gr (specific gravity) = 0.86:



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

6RZ

Element Pressure Drop versus Flow Rate at 32 cSt (150 SUS)



Pressure Drop Information Based on Flow Rate and Viscosity

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

**Exercise:**

Determine  $\Delta P_{\text{filter}}$  at 15 gpm (57 L/min) for SRLT6RZ10S12D5 using 100 SUS (21.3 cSt) fluid.

Use the housing pressure curve to determine  $\Delta P_{\text{housing}}$  at 15 gpm. In this case,  $\Delta P_{\text{housing}}$  is 5 psi (.34 bar) on the graph for the SRLT housing.

Use the element pressure curve to determine  $\Delta P_{\text{element}}$  at 15 gpm. In this case,  $\Delta P_{\text{element}}$  is 7 psi (.48 bar) according to the graph for the 6RZ10 element.

Because the viscosity in this sample is 100 SUS (21.3 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:**

$\Delta P_{\text{housing}} = 5 \text{ psi } [.34 \text{ bar}] \mid \Delta P_{\text{element}} = 7 \text{ psi } [.48 \text{ bar}]$

$V_f = 100 \text{ SUS } (21.3 \text{ cSt}) / 150 \text{ SUS } (32 \text{ cSt}) = .67$

$\Delta P_{\text{filter}} = 5 \text{ psi } + (7 \text{ psi } * .67) = 9.7 \text{ psi}$

**OR**

$\Delta P_{\text{filter}} = .34 \text{ bar } + (.48 \text{ bar } * .67) = .66 \text{ bar}$

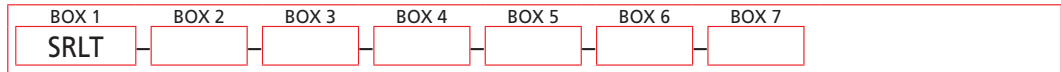
Note:

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

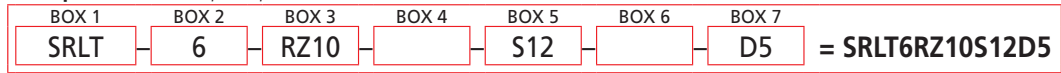
Ele.	$\Delta P$
6R3	0.45
6R10	0.38

## Filter Model Number Selection

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



Example: NOTE: One option per box



Filter Series	Length of Element (in)	Element Size and Media
<b>SRLT</b> (requires RZ elements only)	6	RZ1 = R size 1 μ Excellement® Z-Media® (synthetic) RZ3 = R size 3 μ Excellement® Z-Media® (synthetic) RZ5 = R size 5 μ Excellement® Z-Media® (synthetic) RZ10 = R size 10 μ Excellement® Z-Media® (synthetic) RZ25 = R size 25 μ Excellement® Z-Media® (synthetic) RW = R size W media (water removal) R5Z1 = R size 1 μ Excellement® Z-Media® 500 psid collapse R5Z3 = R size 3 μ Excellement® Z-Media® 500 psid collapse R5Z5 = R size 5 μ Excellement® Z-Media® 500 psid collapse R5Z10 = R size 10 μ Excellement® Z-Media® 500 psid collapse R5Z25 = R size 25 μ Excellement® Z-Media® 500 psid collapse
<b>SRLTN</b> (Non-bypassing requires R5Z elements only)		

Seal Material
Omit = Buna N
H = EPR
V = Viton®
H.5 = Skydrol® Compatibility

Porting
P12 = 3/4" NPTF
S12 = SAE-12
B12 = ISO 228 G-3/4"

Additional Options
Omit = None
L = Two 1/8" NPTF inlet and outlet female test ports
30 = 30 psi bypass setting
40 = 40 psi bypass setting
50 = 50 psi bypass setting
60 = 60 psi bypass setting

Dirt Alarm® Options	
	Omit = None
Visual	D5 = Visual pop-up
Visual with Thermal Lockout	D8 = Visual w/ thermal lockout
Electrical	MS5 = Electrical w/ 12 in. 18 gauge 4-conductor cable
	MS5LC = Low current MS5
	MS10 = Electrical w/ DIN connector (male end only)
	MS10LC = Low current MS10
	MS11 = Electrical w/ 12 ft. 4-conductor wire
	MS12 = Electrical w/ 5 pin Brad Harrison connector (male end only)
	MS12LC = Low current MS12
Electrical with Thermal Lockout	MS16 = Electrical w/ weather packed sealed connector
	MS16LC = Low current MS16
	MS17LC = Electrical w/ 4 pin Brad Harrison male connector
	MS5T = MS5 (see above) w/ thermal lockout
	MS5LCT = Low current MS5T
	MS10T = MS10 (see above) w/ thermal lockout
	MS10LCT = Low current MS10T
Electrical Visual	MS12T = MS12 (see above) w/ thermal lockout
	MS12LCT = Low current MS12T
	MS16T = MS16 (see above) w/ thermal lockout
	MS16LCT = Low current MS16T
	MS17LCT = Low current MS17T
	MS13 = Supplied w/ threaded connector & light
	MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)
Electrical Visual with Thermal Lockout	MS13DCT = MS13 (see above), direct current, w/ thermal lockout
	MS13DCLCT = Low current MS13DCT
	MS14DCT = MS14 (see above), direct current, w/ thermal lockout
	MS14DCLCT = Low current MS14DCT

#### NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. Example: 6R3V
- Box 3. E media elements are only available with Buna N seals.
- Box 4. For options H, V, and H.5, 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. Viton® is a registered trademark of DuPont Dow Elastomers. Skydrol® is a registered trademark of Solutia Inc.
- Box 5. B porting option supplied with metric mounting holes.