Medium Pressure Filter   SRLT

25 gpm
100 L/min
1400 psi
100 bar

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
- Same day shipment model available

Model No. of filter in photograph is SRLT6RZ10S12D5.

Filter Housing Specifications

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: Weight of SRLT-12R:	3.0 lbs. (1.4 kg) 4.5 lbs. (2 kg)
Element Change Clearance:	2.75" (70 mm)

Fluid Compatibility

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)

Medium Pressure Filter

OPTIONAL DIRT ALARM OR ELECTRIC SWITCH

.94 (24)

4.50 MAX. (114)

¢ PORTS

IN

OUT

.84 (21)

3.50 (89) PORT TO PORT

.94 (24) IN

3.50 (89)

OUT

6R = 9.39 (239)
12R = 15.32 (389)

2.84 (72) Ø

.81 (21)

1.62 (41)

.31-18UNC-2B x .50 (13) DEEP
OR
M8 x 1.25 x (13) DEEP
(2) MOUNTING HOLES

BOWL INSTALLATION TORQUE = 40 FT-LBS.
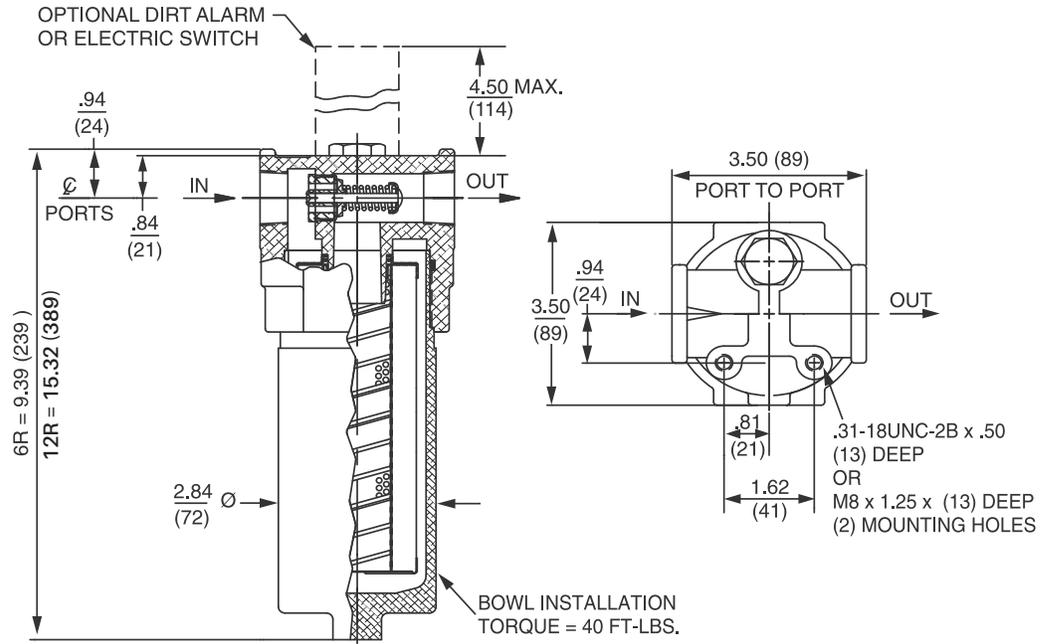
Metric dimensions in ( ).
Dimensions shown are inches (millimeters) for general information and overall envelope size only.
For complete dimensions please contact Schroeder Industries to request a certified print.

## 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	
	$ß_X \geq 75$	$ß_X \geq 100$	$ß_X \geq 200$	$ß_X(c) \geq 200$	$ß_X(c) \geq 1000$
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)	Element	DHC (gm)
6RZ1	15	12RZ1	30
6RZ3	15	12RZ3	30
6RZ5	17	12RZ5	34
6RZ10	14	12RZ10	28
6RZ25	25	12RZ25	50

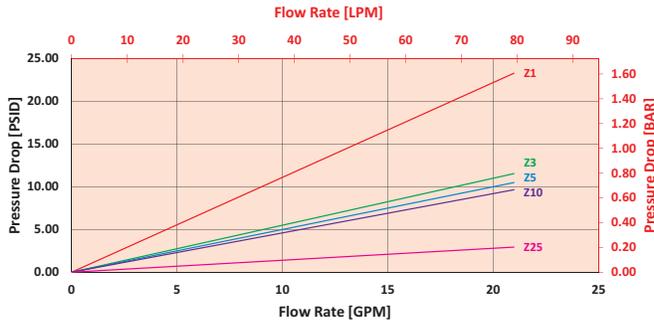|	
Element Collapse Rating:	150 psid (10 bar)
Flow Direction:	Outside In
Element Nominal Dimensions:	2.0" (50 mm) O.D. x 6.0" (150 mm) long

△P$_{housing}$

SRLT △P$_{housing}$ for fluids with sp gr (specific gravity) = 0.86:
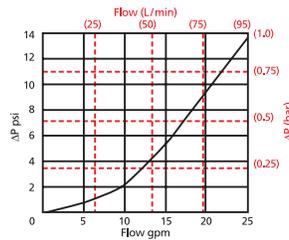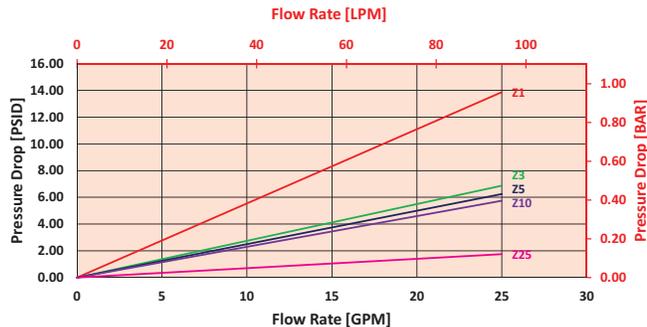

△P$_{element}$

6RZ

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

12RZ **Element Pressure Drop versus Flow Rate at 32 cSt (150 SUS)**

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

Pressure Drop Information
Based on Flow Rate and Viscosity

Exercise:

Determine △P$_{filter}$ at 15 gpm (57 L/min) for SRLT6RZ10S12D5 using 100 SUS (21.3 cSt) fluid.

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

Use the element pressure curve to determine △P$_{element}$ at 15 gpm. In this case, △P$_{element}$ 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, △P$_{filter}$, is calculated by adding △P$_{housing}$ with the true element pressure differential, (△P$_{element}$*V$_f$). The △P$_{element}$ from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:

△P$_{housing}$ = 5 psi [.34 bar] | △P$_{element}$ = 7 psi [.48 bar]

V$_f$ = 100 SUS (21.3 cSt) / 150 SUS (32 cSt) = .67

△P$_{filter}$ = 5 psi + (7 psi * .67) = 9.7 psi

   OR

△P$_{filter}$ = .34 bar + (.48 bar * .67) = .66 bar

Note:
If your element is not graphed, use the following equation:
△P$_{element}$ = Flow Rate x △P$_f$. Plug this variable into the overall pressure drop equation.

Ele.	△P
6R3	0.45
6R10	0.38

Filter Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
SRLT						
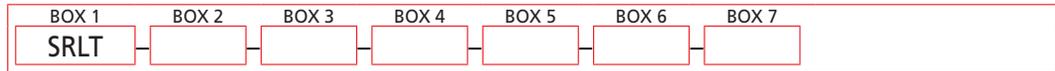
Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
SRLT	6	RZ10		S12		D5	= SRLT6RZ10S12D5

BOX 1

Filter Series

SRLT (requires RZ elements only)

SRLTN (Non-bypassing requires R5Z elements only)

BOX 2

Length of Element (in)

6

12

BOX 3 — Element Size and Media

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

BOX 4 — Seal Material

Omit = Buna N

H = EPR

V = Viton®

H.5 = Skydrol® Compatibility

BOX 5 — Porting

P12	= ¾" NPTF
S12	= SAE-12
B12	= ISO 228 G-¾"

BOX 6 — Additional Options

Omit = 40 psi bypass setting
L = Two ⅛" NPTF inlet and outlet female test ports
30 = 30 psi bypass setting
50 = 50 psi bypass setting
60 = 60 psi bypass setting

BOX 7 — 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
	MS16	= Electrical w/ weather packed sealed connector
	MS16LC	= Low current MS16
	MS17LC	= Electrical w/ 4 pin Brad Harrison male connector
Electrical with Thermal Lockout	MS5T	= MS5 (see above) w/ thermal lockout
	MS5LCT	= Low current MS5T
	MS10T	= MS10 (see above) w/ thermal lockout
	MS10LCT	= Low current MS10T
	MS12T	= MS12 (see above) w/ thermal lockout
	MS12LCT	= Low current MS12T
	MS16T	= MS16 (see above) w/ thermal lockout
	MS16LCT	= Low current MS16T
Electrical Visual	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.