

SAME DAY SHIPMENT MODEL AVAILABLE!

Medium Pressure Filter

RLT



Features and Benefits

- Durable, compact design
- Quick and easy cartridge element changeouts
- Available in 9" and 14" element lengths
- Lightweight at 8 pounds
- Offered in pipe, SAE straight thread, flange and ISO 228 porting
- Available with NPTF inlet and outlet female test ports
- WRLT model for water service also available – refer to Section 7 of this catalog
- Various Dirt Alarm® options
- Same day shipment model available

Model No. of filter in photograph is RLT9VZ10P20D5.

70 gpm
265 L/min
1000 psi
69 bar

GH
 GHHF
RLT
 KF5
 SRLT
 K9
 2K9
 3K9
 QF5



INDUSTRIAL



**AUTOMOTIVE
 MANUFACTURING**



**MACHINE
 TOOL**



**STEEL
 MAKING**



PULP & PAPER



AGRICULTURE



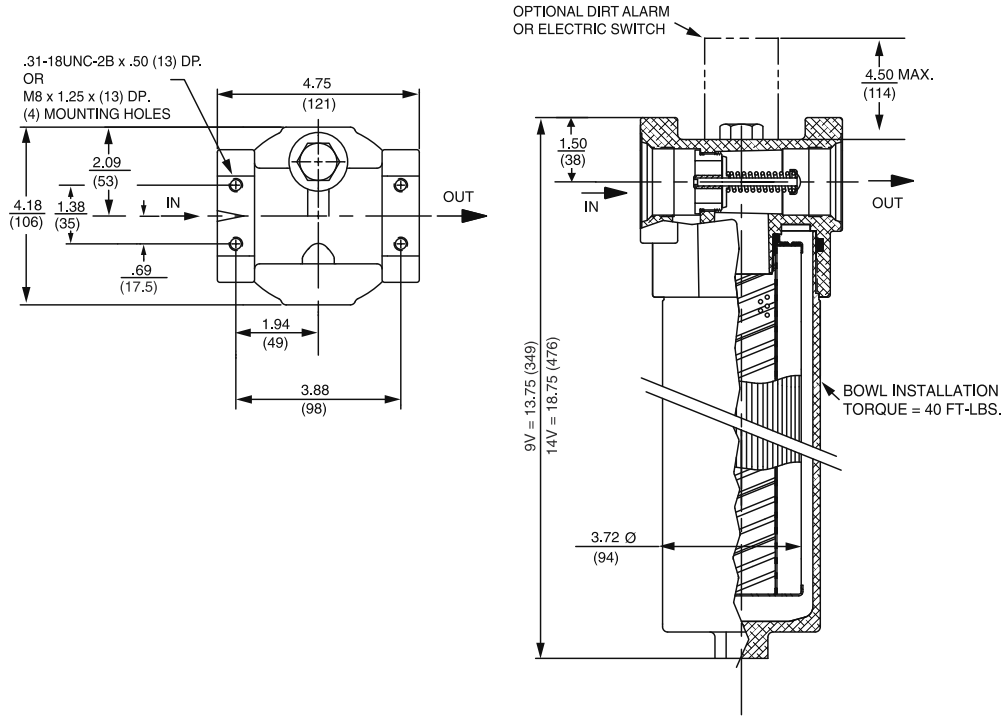
**MOBILE
 VEHICLES**

Applications

3QF5
 QFD2
 QFD5
 QF15
 QLF15
 SSQLF15

Flow Rating:	Up to 70 gpm (265 L/min) for 150 SUS (32 cSt) fluids for P20, S20, & B20 porting Up to 50 gpm (190 L/min) for 150 SUS (32 cSt) fluids for P16, S16, F16, F20 & B16 porting
Max. Operating Pressure:	1000 psi (69 bar)
Min. Yield Pressure:	4200 psi (290 bar) , per NFPA T2.6.1
Rated Fatigue Pressure:	415 psi (29 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) for all porting Full Flow: 57 psi (3.9 bar) for P20 & S20 porting Full Flow: 75 psi (5.2 bar) for P16, S16, F16 & F20 porting
Porting Head:	Aluminum
Element Case:	Aluminum
Weight of RLT-9V:	6.7 lbs. (3.0 kg)
Weight of RLT-14V:	8.0 lbs. (3.6 kg)
Element Change Clearance:	9V & 14V: 2.75" (70 mm)

**Filter
 Housing
 Specifications**



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 per ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
9V3/14V3	6.8	7.5	10.0	N/A	N/A
9V10/14V10	15.5	16.2	18.0	N/A	N/A
9VZ1/14VZ1	<1.0	<1.0	<1.0	<4.0	4.2
9VZ3/14VZ3	<1.0	<1.0	<2.0	<4.0	4.8
9VZ5/14VZ5	2.5	3.0	4.0	4.8	6.3
9VZ10/14VZ10	7.4	8.2	10.0	8.0	10.0
9VZ25/14VZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding Capacity

Element	DHC (gm)	Element	DHC (gm)
9V3	25	14V3	38
9V10	12	14V10	25
9VZ1	55	14VZ1	102
9VZ3	57	14VZ3	105
9VZ5	62	14VZ5	115
9VZ10	52	14VZ10	104
9VZ25	48	14VZ25	94

Element Collapse Rating: 150 psid (10 bar)
500 psid (34.5 bar) for hydrostatic high collapse (9V5Z and 14V5Z) version

Flow Direction: Outside In

Element Nominal Dimensions: 9V: 3.0" (75 mm) O.D. x 9.5" (240 mm) long
14V: 3.0" (75 mm) O.D. x 14.5" (370 mm) long

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

GH

GHHF

RLT

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KF5

Pressure	Series	Element Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 40 psi (2.8 bar) bypass valve.						
			9V3	14V3	Contact Factory				
To 800 psi (55 bar)	E Media	9V3 & 14V3	9V3	14V3	Contact Factory				
		9V10 & 14V10	9V10	14V10	Contact Factory				
	Z-Media®	9VZ1 & 14VZ1	9VZ1	14VZ1	Contact Factory				
		9VZ3 & 14VZ3	9VZ3	14VZ3	Contact Factory				
		9VZ5 & 14VZ5	9VZ5	14VZ5					
		9VZ10 & 14VZ10	9VZ10 & 14VZ10						
		9VZ25 & 14VZ25	9VZ25 & 14VZ25						
Flow	gpm	0	10	20	30	40	50	60	70
	(L/min)	0	50	100	150	200	270		

Element Selection

Based on Flow Rate

SRLT

K9

2K9

3K9

QF5

3QF5

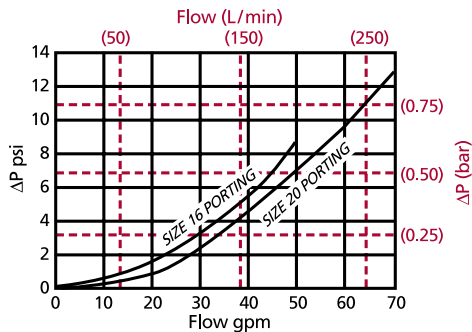
Shown above are the elements most commonly used in this housing.

requires size 20 porting

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, page 21 and 22.

ΔP_{housing}

RLT ΔP_{housing} for fluids with sp gr = 0.86:



ΔP_{element}

ΔP_{element} = flow x element ΔP factor x viscosity factor

El. ΔP factors @ 150 SUS (32 cSt):

	9V	14V
9V3	.32	14V3 .19
9V10	.24	14V10 .15
9VZ1	.34	14VZ1 .21
9VZ3	.21	14VZ3 .17
9VZ5	.13	14VZ5 .09
9VZ10	.11	14VZ10 .08
9VZ25	.06	14VZ25 .05

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

QFD2

QFD5

QF15

QLF15

SSQLF15

sp gr = specific gravity

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

Notes

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

Exercise:

Determine ΔP at 40 gpm (150 L/min) for RLT9VZ5S16D5 using 200 SUS (44 cSt) fluid.

Solution:

$$\Delta P_{\text{housing}} = 5.5 \text{ psi } [.35 \text{ bar}]$$

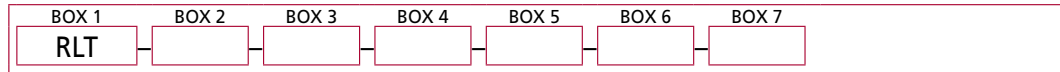
$$\begin{aligned} \Delta P_{\text{element}} &= 40 \times .13 \times (200 \div 150) = 6.9 \text{ psi} \\ &\text{or} \\ &= [150 \times (.13 \div 54.9) \times (44 \div 32) = .49 \text{ bar}] \end{aligned}$$

$$\begin{aligned} \Delta P_{\text{total}} &= 5.5 + 6.9 = 12.4 \text{ psi} \\ &\text{or} \\ &= [.35 + .49 = .84 \text{ bar}] \end{aligned}$$

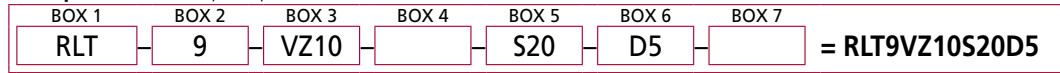
Filter Model Number Selection

Same Day Shipment Model
See inside back cover for details.

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



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3	BOX 4
Filter Series	Element Length (in)	Element Size and Media	Seal Material
RLT (See Section 7 for Water Service version)	9	V3 = V size 3 μ E media (cellulose) V10 = V size 10 μ E media (cellulose) VZ1 = V size 1 μ Excellement® Z-Media® (synthetic) VZ3 = V size 3 μ Excellement® Z-Media® (synthetic) VZ5 = V size 5 μ Excellement® Z-Media® (synthetic) VZ10 = V size 10 μ Excellement® Z-Media® (synthetic) VZ25 = V size 25 μ Excellement® Z-Media® (synthetic) VW = V size W media (water removal)	Omit = Buna N H = EPR V = Viton® H.5 = Skydrol® Compatibility
RLTN (Non-bypassing: requires VSZ high collapse elements)	14	V5Z10 = V size 10 μ Excellement® media, 500 psid collapse V5Z25 = V size 25 μ Excellement® media, 500 psid collapse	

BOX 5	BOX 6	BOX 7
Porting Options	Dirt Alarm® Options	Additional Options
P16 = 1" NPTF P20 = 1¼" NPTF S16 = SAE-16 S20 = SAE-20 F20 = 1¼" SAE 4-bolt flange Code 61 B16 = ISO 228 G-1" B20 = ISO 228 G-1¼"	Omit = None Visual Visual with Thermal Lockout Electrical Electrical with Thermal Lockout Electrical Visual Electrical Visual with Thermal Lockout	Omit = None L = Two ¼" NPTF inlet and outlet female test ports
	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	
	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 MS17LCT = Low current MS17T	
	MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)	
	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: 9VZ10V
- Box 3. E media elements are only available with Buna N seals. V5Z10 and V5Z25 are only available with RLTN 9".
- 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 supplied with metric mounting holes.