

# In-Line Filter

# LC50



Model No. of filter in photograph is LC501LZX10S.

### Features and Benefits

- Compact design allows for in-line installation on hose reels
- High quality synthetic ZX-Media high collapse elements ensure all fluid is filtered
- Available with SAE or NPT threading
- Convenient 2 1/4" Hex for easy service

**9 gpm**  
**35 L/min**  
**5000 psi**  
**350 bar**

NF30  
NFS30  
YF30  
CFX30  
PLD  
DF40  
CF40  
PF40  
**LC50**

RFS50  
RF60  
CF60  
CTF60

VF60  
LW60  
KF30

TF50  
KF50  
KC50

MKF50  
KC65  
NOF30-05

NOF50-760  
FOF60-03  
NMF30

RMF60  
Cartridge Elements  
HS60

MHS60  
KFH50

### Applications



AGRICULTURE



INDUSTRIAL



CONSTRUCTION



MINING TECHNOLOGY



DEFENSE



FORESTRY



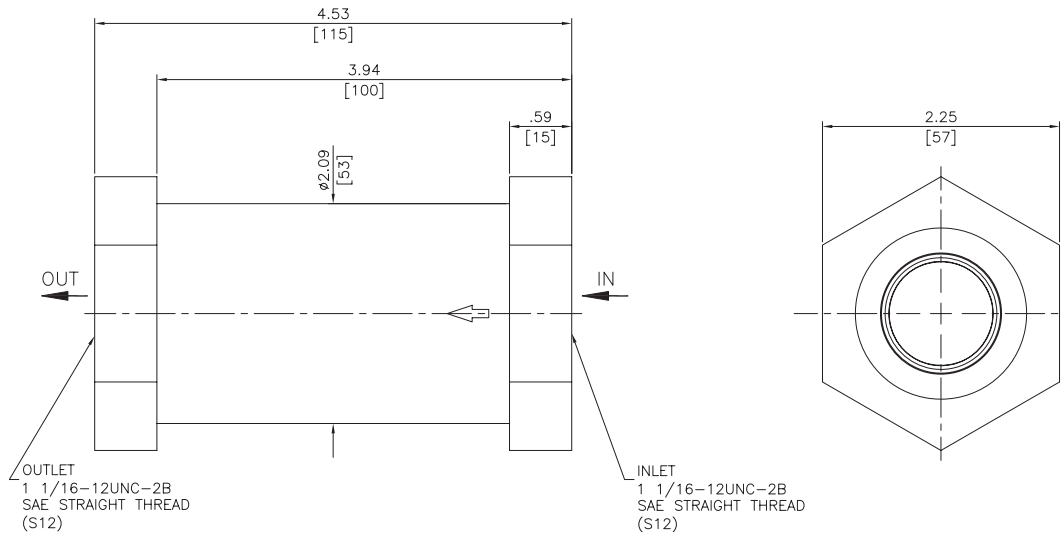
CHEMICAL PROCESSING



MOBILE VEHICLES

Flow Rating:	Up to 9 gpm (35 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	5000 psi (350 bar)
Min. Yield Pressure:	15,000 psi (1050 bar)
Rated Fatigue Pressure:	5000 psi (350 bar), per NFPA T2.6.1-R1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Body and Cap:	Steel
Element Case:	Steel
Weight of LC50:	3.63 lbs. (1.65 kg)
Element Change Clearance:	3.25" (83 mm)

### Filter Housing Specifications



Metric dimensions in ( ).

## Element Performance Information

Element	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
LZX10	8.0	10.0
LZX25	19.0	24.0

## Dirt Holding Capacity

Element	DHC (gm)
LZX10	1.0
LZX25	1.0
LZX40	0.9

Element Collapse Rating: 3000 psi (207 bar)  
 Flow Direction: Outside In  
 Element Nominal Dimensions: 1.4" (43 mm) O.D. x 1.7" (35 mm) long

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All Z-Media® (synthetic)
High Water Content	All Z-Media® (synthetic)
Invert Emulsions	10 and 25 µ Z-Media® (synthetic)
Water Glycols	10 and 25 µ Z-Media® (synthetic)

**Fluid Compatibility**

NF30  
NFS30  
YF30  
CFX30  
PLD

Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid.		
	Series	Part No.			
To 5000 psi (350 bar)	Z-Media®	Z10	LZX10		
		Z25	LZX25		
		Z40	LZX40		
Flow	gpm (L/min)	0	5	9	
		0	17.5	35	

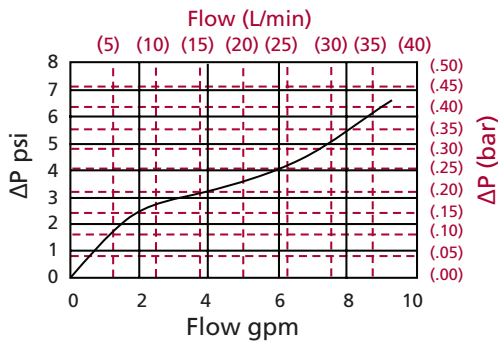
**Element Selection Based on Flow Rate**

DF40  
CF40  
PF40  
**LC50**

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

**ΔP<sub>housing</sub>**

LC50 ΔP<sub>housing</sub> for fluids with sp gr = 0.86:



**ΔP<sub>element</sub>**

$\Delta P_{element} = \text{flow} \times \text{element } \Delta P \text{ factor} \times \text{viscosity factor}$

El. ΔP factors @ 150 SUS (32 cSt):

LZX10	5.0
LZX25	3.0
LZX40	3.0

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**

sp gr = specific gravity

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

Notes

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

**Exercise:**

Determine ΔP at 5 gpm (19 L/min) for LC501LZX10S using 200 SUS (44 cSt) fluid.

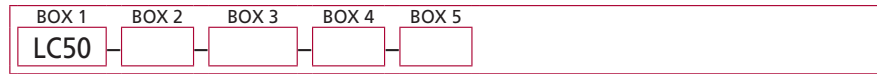
**Solution:**

$\Delta P_{housing} = 3.5 \text{ psi } [.24 \text{ bar}]$   
 $\Delta P_{element} = 5 \times 5.0 \times (200 \div 150) = 33.3 \text{ psi}$   
 or  
 $= [19 \times (5 \div 54.9) \times (44 \div 32) = 2.38 \text{ bar}]$   
 $\Delta P_{total} = 3.5 + 33.3 = 36.8 \text{ psi}$   
 or  
 $= [.24 + 2.38 = 2.62 \text{ bar}]$

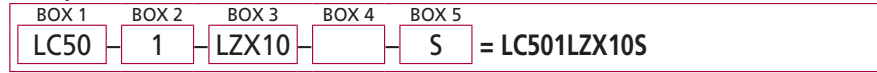
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VF60  
LW60  
KF30  
TF50  
KF50  
KC50  
MKF50  
KC65  
NOF30-05  
NOF50-760  
FOF60-03  
NMF30  
RMF60  
Cartridge Elements  
HS60  
MHS60  
KFH50

## Filter Model Number Selection

### How to Build a Valid Model Number for a Schroeder LC50:



Example:



BOX 1	BOX 2	BOX 3	BOX 4								
<table border="1"> <tr> <th>Filter Series</th> </tr> <tr> <td> <b>LC50</b>                      (non-bypassing only)                 </td> </tr> </table>	Filter Series	<b>LC50</b> (non-bypassing only)	<table border="1"> <tr> <th>Number of Elements</th> </tr> <tr> <td>1</td> </tr> </table>	Number of Elements	1	<table border="1"> <tr> <th>Element Part Number</th> </tr> <tr> <td>                     LZX10 = 10 μ Excellement® Z-Media® (high collapse center tube)                       LZX25 = 25 μ Excellement® Z-Media® (high collapse center tube)                       LZX40 = 40 μ Excellement® Z-Media® (high collapse center tube)                 </td> </tr> </table>	Element Part Number	LZX10 = 10 μ Excellement® Z-Media® (high collapse center tube)  LZX25 = 25 μ Excellement® Z-Media® (high collapse center tube)  LZX40 = 40 μ Excellement® Z-Media® (high collapse center tube)	<table border="1"> <tr> <th>Seal Material</th> </tr> <tr> <td>                     Omit = Buna N                      V = Viton®                 </td> </tr> </table>	Seal Material	Omit = Buna N V = Viton®
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NOTES:

Box 4. Viton® is a registered trademark of DuPont Dow Elastomers.