High-Flow, High Pressure Filter **LW60**

Features and Benefits

- Horizontal alignment allows straight-through flow, maximizing efficiency and minimizing pressure drop
- Propriety synthetic media designed specifically for the mining industry. Excellement-MD™ provides level of filtration not achievable using alternative wire mesh elements because of their lack of absolute ratings
- Two-inch BSPP ports are easily adaptable to Super Stecko fittings commonly used underground
- Stainless steel bypass valve that ensures smooth integration with 95/5 fluid
- Non-bypassing version available with high crush (4500 psid) cleanable metal mesh (25 micron) element

Model No. of filter in photograph is LW6039ZPZ5VB32DPG.

300 gpm
1135 L/min
6000 psi
415 bar

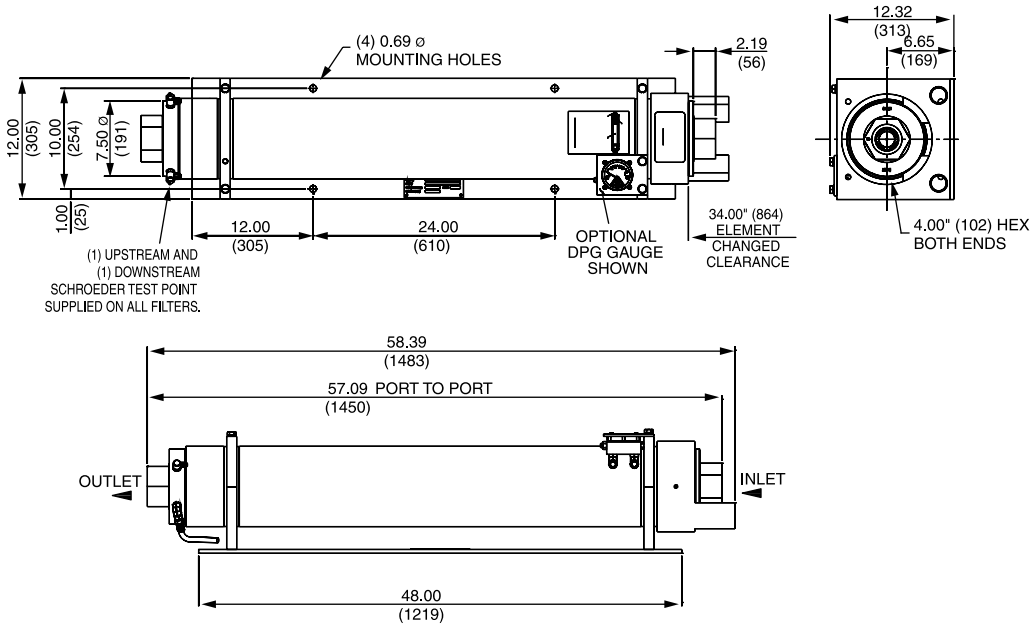
Filter Housing Specifications

Flow Rating:	Up to 300 gpm (1135 L/min) for use with 95/5 fluids
Max. Operating Pressure:	6000 psi (414 bar)
Min. Yield Pressure:	18,000 psi (1240 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	4500 psi (310 bar), per NFPA T2.6.1
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 50 psi (3.4 bar) **LWN60 non-bypassing model available with high crush element**
Porting Cap: Housing:	Steel Steel
Weight:	550 lb. (250 kg)
Element Change Clearance:	34.0" (864 mm)

Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
95/5 fluids	Specifically designed for use with 95/5 fluids applications

LW60 High-Flow, High Pressure Filter



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

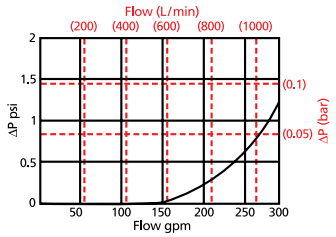
Element	Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171 $\beta_{x(c)} \geq 1000$
39ZPZ3V	5.1
39ZPZ5V	6.1
39ZPZ10V	12.1
39ZPZ25V	17.7

Element	DHC (gm)
39ZPZ3V	449
39ZPZ5V	359
39ZPZ10V	429
39ZPZ25V	284

Element Collapse Rating:	150 psid (10 bar)
Flow Direction:	Outside In
Element Nominal Dimensions:	5.0" (127 mm) O.D. x 38.0" (965 mm) long

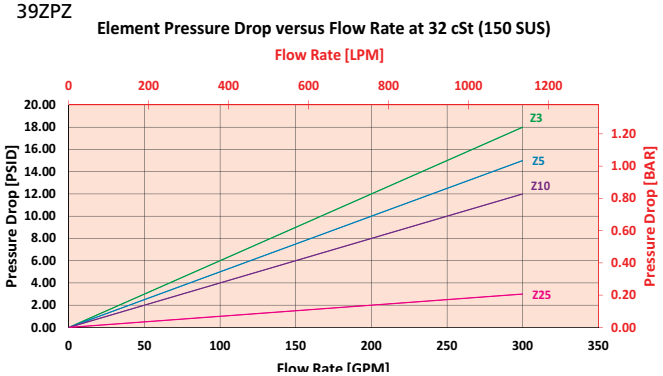
$\Delta P_{housing}$

LW60 $\Delta P_{housing}$ for fluids with sp gr (specific gravity) = 0.86:



$\Delta P_{element}$

39ZPZ



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

Exercise:

Determine ΔP_{filter} at 200 gpm (757 L/min) for LW6039ZPZ3VB32DPG using 75 SUS (16 cSt) fluid.

Use the housing pressure curve to determine $\Delta P_{housing}$ at 200 gpm. In this case, $\Delta P_{housing}$ is .25 psi (.02 bar) on the graph for the LW60 housing.

Use the element pressure curve to determine $\Delta P_{element}$ at 200 gpm. In this case, $\Delta P_{element}$ is 12 psi (.83 bar) according to the graph for the 39ZPZ3 element.

Because the viscosity in this sample is 75 SUS (16 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, ΔP_{filter} , is calculated by adding $\Delta P_{housing}$ with the true element pressure differential, ($\Delta P_{element} * V_f$). The $\Delta P_{element}$ from the graph has to be multiplied by the viscosity factor to get the true pressure differential across the element.

Solution:

$\Delta P_{housing}$ = .25 psi [.02 bar] | $\Delta P_{element}$ = 12 psi [.83 bar]

V_f = 75 SUS (16 cSt) / 150 SUS (32 cSt) = .50

ΔP_{filter} = .25 psi + (12 psi * .50) = 6.25 psi

OR

ΔP_{filter} = .02 bar + (.83 bar * .50) = .44 bar

LW60 High-Flow, High Pressure Filter

Filter Model Number Selection

How to Build a Valid Model Number for a Schroeder LW60:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
LW60 –		–	–	

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	
LW60 –	39ZPZ3V –	B32 –		DPG	**= LW6039ZPZ3VB32DPG**

BOX 1

Filter Series
LW60

BOX 2

Element Part Number
39ZPZ3V = 3 µ Excellement® Z-Media® (synthetic)
39ZPZ5V = 5 µ Excellement® Z-Media® (synthetic)
39ZPZ10V = 10 µ Excellement® Z-Media® (synthetic)
39ZPZ25V = 25 µ Excellement® Z-Media® (synthetic)

BOX 3

Porting
B32 = ISO 228 G-2" (2-11 BSPP)

BOX 4

Bypass Settings
Omit = 50 psi cracking
30 = 30 psi cracking

BOX 5

Dirt Alarm® Options
DPG = Differential pressure gauge

How to Build a Valid Model Number for a Schroeder LWN60:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
LWN60 –		–	–	

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	
LWN60 –	39ZPMX25V –	B32 –		DPG	**= LW6039ZMX25VB32DPG**

BOX 1

Filter Series
LWN60 (Non-bypassing: requires MX high collapse elements)

BOX 2

Element Part Number
39ZPMX25V = 25 µ Excellement® Z-Media® (high collapse center tube)

BOX 3

Porting
B32 = ISO 228 G-2" (2-11 BSPP)

BOX 4

Bypass Settings
Omit = Blocked

BOX 5

Dirt Alarm® Options
DPG = Differential pressure gauge