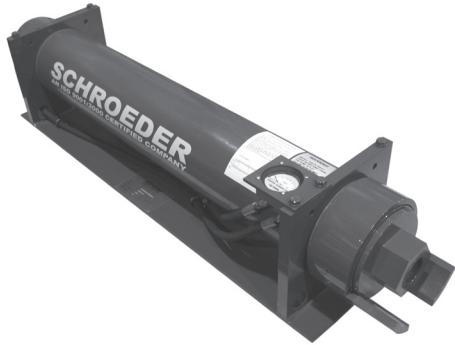


# Longwall Filter

# LW60



## Features and Benefits

- Horizontal alignment allows straight-through flow, maximizing efficiency and minimizing pressure drop
- Proprietary 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.



**MINING TECHNOLOGY**



**WASTE WATER TREATMENT**



**POWER GENERATION**

- NF30
- NFS30
- YF30
- CFX30
- PLD
- DF40
- CF40
- PF40
- RFS50
- RF60
- CF60
- CTF60

## Applications

**LW60**

KF30

TF50

KF50

KC50

MKF50

KC65

NOF30-05

NOF50-760

FOF60-03

NMF30

RMF60

Cartridge Elements

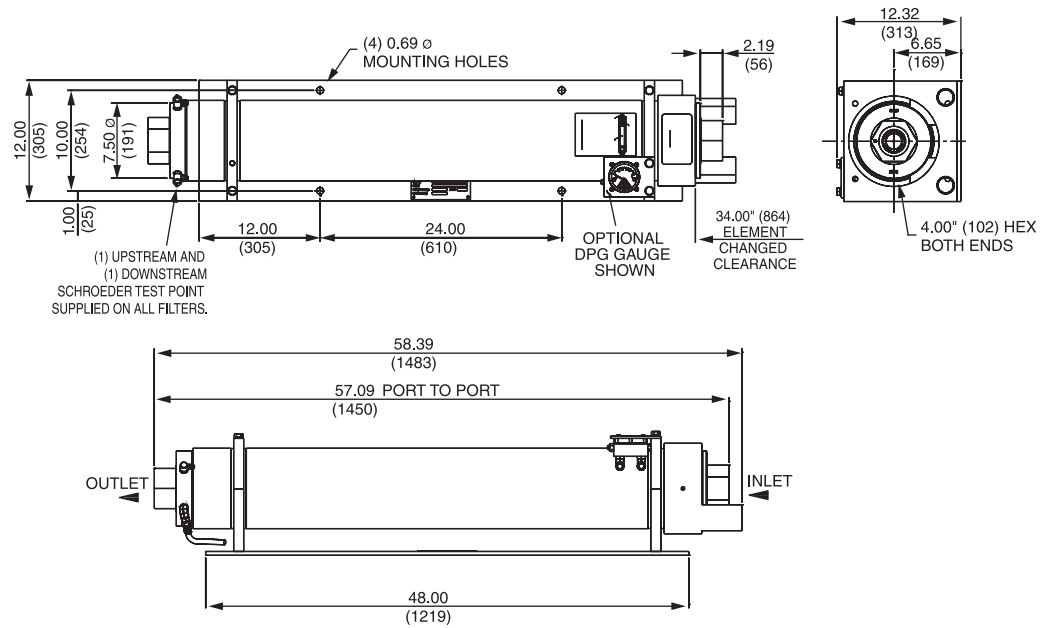
HS60

MHS60

KFH50

Flow Rating:	Up to 300 gpm (1135 L/min) for use with 95/5 fluids
Max. Operating Pressure:	6000 psi (400 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:	Steel
Housing Cap:	Steel
Weight:	550 lb. (250 kg)
Element Change Clearance:	34.0" (864 mm)

## Filter Housing Specifications



Metric dimensions in ( ).

### Element Performance Information

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

### Dirt Holding Capacity

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

# Longwall Filter

# LW60

Specifically designed for use with 95/5 fluids in mining longwall applications

## Fluid Compatibility

NF30  
NFS30  
YF30  
CFX30  
PLD

## Element Selection

Based on Flow Rate

DF40  
CF40  
PF40  
RFS50  
RF60  
CF60

Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 50 psi (3.4 bar) bypass valve.					
	Series	Part No.						
To 6000 psi (415 bar)	Z- Media®	39ZPZ3V	39ZPZ3V					
		39ZPZ5V	39ZPZ5V					
		39ZPZ10V	39ZPZ10V					
		39ZPZ25V	39ZPZ25V					
Flow	gpm	0	100	150	200	250	300	
	(L/min)	0	400	600	800	1000	1135	

CTF60  
VF60

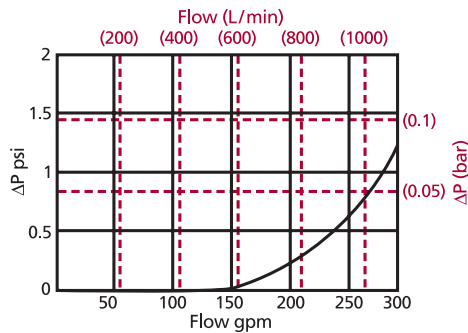
## Pressure Drop Information

Based on Flow Rate and Viscosity

**LW60**  
KF30  
TF50  
KF50  
KC50

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

LW60  $\Delta P_{\text{housing}}$  for fluids with sp gr = 0.86:



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

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

El.  $\Delta P$  factors @ 150 SUS (32 cSt):

<b>39ZPZ3V</b>	.06
<b>39ZPZ5V</b>	.05
<b>39ZPZ10V</b>	.04
<b>39ZPZ25V</b>	.01

If working in units of bars & L/min, divide above factor by 54.9.

Viscosity factor: Divide viscosity by 150 SUS (32 cSt).

sp gr = specific gravity

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

Please note that 95/5 fluid has a lower viscosity than 150 SUS and therefore pressure drops for 95/5 will actually be lower.

Notes

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

### Exercise:

Determine  $\Delta P$  at 250 gpm (950 L/min) for LW6039ZPZ3VB32 using 150 SUS (32 cSt) fluid.

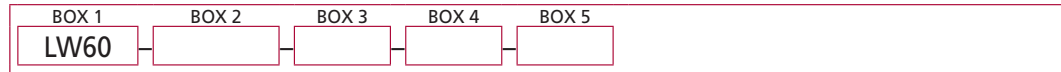
### Solution:

$$\begin{aligned} \Delta P_{\text{housing}} &= 0.7 \text{ psi } [.05 \text{ bar}] \\ \Delta P_{\text{element}} &= 250 \times .06 \times (150 \div 150) = 15.0 \text{ psi} \\ &\text{or} \\ &= [950 \times (.06 \div 54.9) \times (32 \div 32) = 1.1 \text{ bar}] \\ \Delta P_{\text{total}} &= 0.7 + 15.0 = 15.7 \text{ psi} \\ &\text{or} \\ &= [0.05 + 1.1 = 1.15 \text{ bar}] \end{aligned}$$

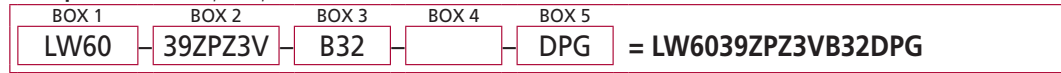
MKF50  
KC65  
NOF30-05  
NOF50-760  
FOF60-03  
NMF30  
RMF60  
Cartridge Elements  
HS60  
MHS60  
KFH50

## Filter Model Number Selection

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

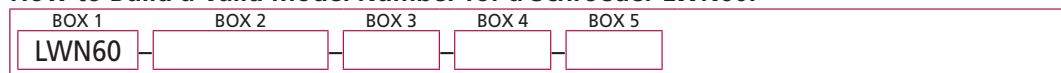


Example: NOTE: One option per box

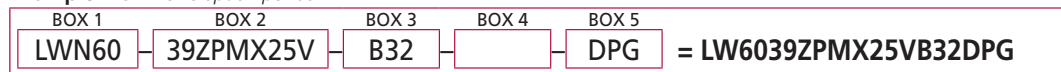


BOX 1	BOX 2	BOX 3
<b>Filter Series</b>	<b>Element Part Number</b>	<b>Porting</b>
LW60	39ZPZ3V = 3 μ Excellement® Z-Media® (synthetic) 39ZPZ5V = 5 μ Excellement® Z-Media® (synthetic) 39ZPZ10V = 10 μ Excellement® Z-Media® (synthetic) 39ZPZ25V = 25 μ Excellement® Z-Media® (synthetic)	B32 = ISO 228 G-2" (2-11 BSPP)
	<b>Bypass Settings</b>	<b>Dirt Alarm® Options</b>
	Omit = 50 psi cracking 30 = 30 psi cracking	DPG = Differential pressure gauge

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



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3
<b>Filter Series</b>	<b>Element Part Number</b>	<b>Porting</b>
LWN60 (Non-bypassing; requires MX high collapse elements)	39ZPMX25V = 25 μ Excellement® Z-Media® (high collapse center tube)	B32 = ISO 228 G-2" (2-11 BSPP)
	<b>Bypass Settings</b>	<b>Dirt Alarm® Options</b>
	Omit = Blocked	DPG = Differential pressure gauge