

# HydraSPIN Filter **GH**



## Features and Benefits

- Variety of differential indicator port options (visual and electrical indicators)
- Leak proof bar indicator, rugged visual indicator with protective aluminum shield is standard
- Proprietary bowl to element seal - minimizes potential leakage point by use of one seal on element
- Cartridge style element (non spin-on) that is proprietary and patented with integrated bypass valve features
- Wide variety of media grades that can be application specific
- Light weight bowl design with replaceable element minimizes landfill waste
- Mounting interchangeability with competitor's filter head
- The inherent capability to pre-print the perforated outer element wrap provides a branding solution that helps to capture after-market replacement element sales

Model No. of filters in photograph are GH6G10S12B and GH9G10S12B.

- Hydrostatic Charge Circuit
- Closed-loop
- Return Lines
- Cooling Circuit Systems
- Lubrication Systems

**35 gpm**  
**130 L/min**  
**725 psi**  
**50 bar**

**GH**

RLT

KF5

SRLT

K9

2K9

3K9

QF5

3QF5

QFD2

QFD5

QF15

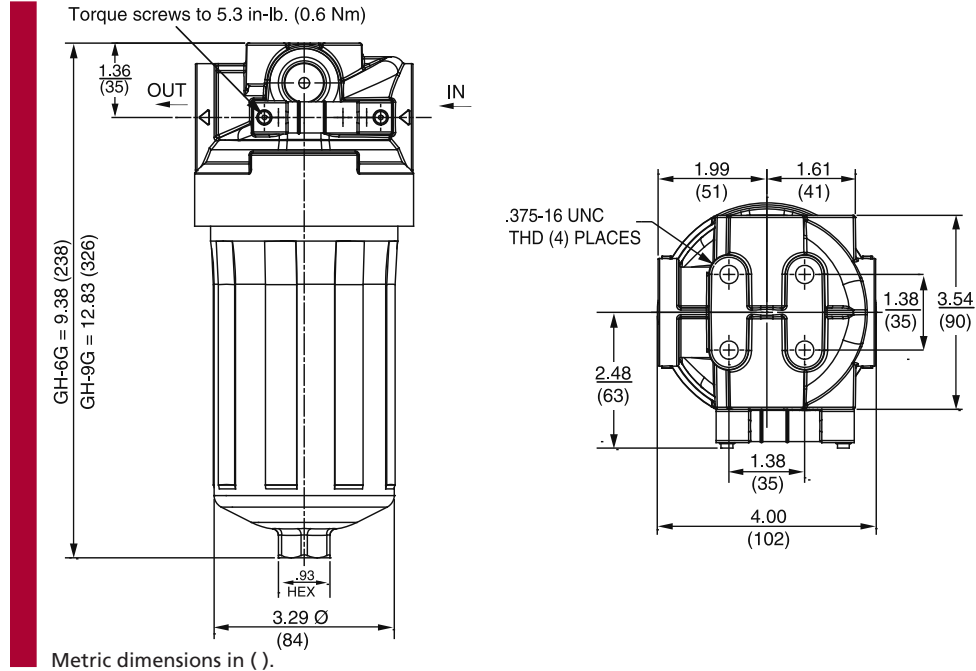
QLF15

SSQLF15

## Applications

Flow Rating:	Up to 35 gpm (130 L/min)
Max. Operating Pressure:	725 psi (50 bar)
Min. Yield:	2600 psi (179 bar)
Rated Fatigue Pressure:	725 psi (50 bar)
Temp. Range:	-20°F to 250°F (-29°C to 121°C)
Bypass Setting:	25 psi (1.7 bar) standard 50 psi (3.5 bar) optional Non-bypassing model also available
Porting Head:	Die Cast Aluminum
Element Case:	Aluminum
Porting Options:	SAE-12 SAE-16 ISO 228 G-3/4" ISO 228 G-1"
Weight of GH-6G:	3.2 lbs. (1.4 kg)
Weight of GH-9G:	3.8 lbs. (1.7 kg)
Element Change Clearance:	2" (50 mm)

## Filter Housing Specifications



## Element Performance Information

Media Type	Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171	
		$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
Resin Impregnated Cellulose media	6G3 / 9G3	6.8	7.5	10.0	N/A	N/A
	6G10 / 9G10	15.5	16.2	18.0	N/A	N/A
Traditional Excellement® Z-Media®	6GZ3 / 9GZ3	<1.0	<1.0	<2.0	<4.0	4.8
	6GZ5 / 9GZ5	2.5	3.0	4.0	4.8	6.3
	6GZ10 / 9GZ10	7.4	8.2	10.0	8.0	10.0
	6GZ25 / 9GZ25	18.0	20.0	22.5	19.0	24.0
Hydraspin H media, designed to specifically reduce filter pressure drop	6GH10 / 9GH10	N/A	N/A	N/A	10.6	13.0

## Dirt Holding Capacity

Media Type	Element	DHC (gm)
Resin Impregnated Cellulose media	6G3 / 9G3	18/30
	6G10 / 9G10	15/25
Traditional Excellement® Z-Media®	6GZ3 / 9GZ3	30/51
	6GZ5 / 9GZ5	24.5/42
	6GZ10 / 9GZ10	31/49
	6GZ25 / 9GZ25	34/58
Hydraspin H media, designed to specifically reduce filter pressure drop	6GH10 / 9GH10	12/20

Element Collapse Rating: 250 psid (17.2 bar) for standard and non-bypassing elements

Flow Direction: Outside In

Element Nominal Dimensions: 6G: 3.25" (82 mm) O.D. x 5.7" (144 mm) long  
9G: 3.25" (82 mm) O.D. x 9.0" (229 mm) long

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	All E media (cellulose), Z-Media® (synthetic) and H media (Hydraspin)

## Fluid Compatibility

GH

RLT

KF5

SRLT

K9

2K9

3K9

QF5

3QF5

QFD2

QFD5

QF15

QLF15

SSQLF15

Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid, SAE-12 porting, and a 25 psi (1.7 bar) bypass valve.					
	Series	Part No.						
To 725 psi (50 bar)	E Media	G3	6G3	9G3	Contact Factory			
		G10	6G10		9G10	Contact Factory		
		G25	6G25 & 9G25					
	Z- Media®	GZ3	Contact Factory					
		GZ5	6GZ5	9GZ5	Contact Factory			
		GZ10	6GZ10			9GZ10		
	GZ25	Contact Factory						
Hydraspin Media	GH10	Contact Factory						
Flow	gpm	0	10	15	20	25	30	35
	(L/min)	0	50	75	95	125	135	

## Element Selection

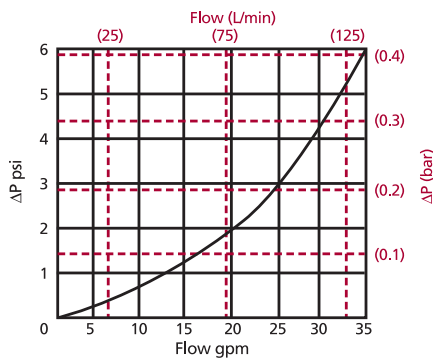
Based on Flow Rate

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

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, pages 19 and 20.

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

GH  $\Delta P_{\text{housing}}$  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):

6G3	.60	9G3	.35	6GH10	CF	9GH10	CF
6G10	.40	9G10	.24				
6G25	.08	9G25	.05				
6GZ3	CF	9GZ3	CF	6GP3	CF	9GP3	CF
6GZ5	.45	9GZ5	.26	6GP5	.45	9GP5	.26
6GZ10	.27	9GZ10	.16	6GP10	.27	9GP10	.16
6GZ25	CF	9GZ25	CF	6GP25	CF	9GP25	CF

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

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

CF = Contact factory.

## 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

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

### Exercise:

Determine  $\Delta P$  at 20 gpm (76 L/min) for GH6GZ10S16L using 200 SUS (44 cSt) fluid.

### Solution:

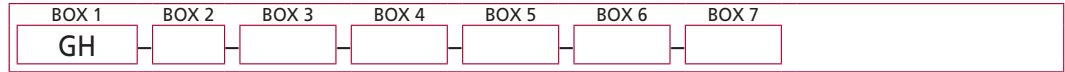
$$\Delta P_{\text{housing}} = 2.1 \text{ psi } [.15 \text{ bar}]$$

$$\begin{aligned} \Delta P_{\text{element}} &= 20 \times .27 \times (200 \div 150) = 7.2 \text{ psi} \\ &\text{or} \\ &= [76 \times (.27 \div 54.9) \times (44 \div 32) = .51 \text{ bar}] \end{aligned}$$

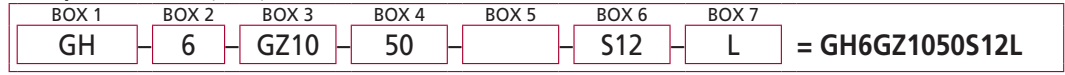
$$\begin{aligned} \Delta P_{\text{total}} &= 2.1 + 7.2 = 9.3 \text{ psi} \\ &\text{or} \\ &= [.15 + .51 = .66 \text{ bar}] \end{aligned}$$

## Filter Model Number Selection

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



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3	BOX 4
<b>Filter Series</b>	<b>Element Length (in)</b>	<b>Element Part Number</b>	
GH	6	G3 = 3 μ E media (cellulose)	<b>Bypass Setting</b> Omit = 25 psid 50 = 50 psid N = Non-bypassing
	9	G10 = 10 μ E media (cellulose)	
		G25 = 25 μ E media (cellulose)	
		GZ3 = 3 μ Excellement® Z-Media® (synthetic)	
		GZ5 = 5 μ Excellement® Z-Media® (synthetic)	
		GZ10 = 10 μ Excellement® Z-Media® (synthetic)	
		GZ25 = 25 μ Excellement® Z-Media® (synthetic)	
		GH10 = 10 μ Excellement® Hydraspin media	

BOX 5	BOX 6	BOX 7								
<b>Element Seal Material</b>	<b>Inlet Port</b>	<b>Dirt Alarm® Options</b>								
Omit = Buna N	S12 = SAE-12 S16 = SAE-16 B12 = ISO 228 G-3/4" B16 = ISO 228 G-1"	<table border="1"> <thead> <tr> <th></th> <th>Omit = None</th> <th>Indicator Location Option L</th> </tr> </thead> <tbody> <tr> <td>Visual</td> <td>                     L = Bar indicator, left side std                      R = Bar indicator, right side std                      B = Bar indicators, left and right side                      VA = Visual pop-up w/auto reset                      VM = Visual pop-up w/manual reset                 </td> <td rowspan="2"> </td> </tr> <tr> <td>Electrical</td> <td>                     Omit = None                      M = Drilled, tapped, plugged                      DTC = DC 2 wire, normally closed (NC)                      DTO = DC 2 wire, normally open (NO)                      DW = AC/DC 3-wire (NO or NC)                 </td> </tr> </tbody> </table>		Omit = None	Indicator Location Option L	Visual	L = Bar indicator, left side std R = Bar indicator, right side std B = Bar indicators, left and right side VA = Visual pop-up w/auto reset VM = Visual pop-up w/manual reset		Electrical	Omit = None M = Drilled, tapped, plugged DTC = DC 2 wire, normally closed (NC) DTO = DC 2 wire, normally open (NO) DW = AC/DC 3-wire (NO or NC)
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**NOTES:**

Box 2. Replacement element part numbers are a combination of Boxes 2, 3 and 4. Replacement elements contain bypass. For 50 psid setting or non-bypassing version, element part number includes suffix. Examples: 6GZ1050, 9GZ10N.

Box 7. VA and VM indicators are available with 50 psid bypass element only.



VA = Auto Reset

Indicator P/N 00303191 (VM2B.1)



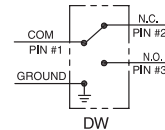
VM = Manual Reset

Indicator P/N 00303194 (VM2BM.1)



DW = AC/DC 3-wire

Indicator P/N 02078551 (VM1C.0) (NO or NC)



DTC, DTC = DC 2-wire

Indicator P/N 1294401 (VM1CD.0/-2M0-OE, NC) 1298354 (VM1CD.0/-2M0, NO)

