Top-Ported Medium Pressure Filter GHHF

Model No. of filter in photograph is:
GHHF11GZ10S24D5

Features and Benefits

- Bowl seal on element functions as no-element indicator
- Variety of differential indicator port options (visual and electrical indicators)
- Leak proof bar indicator, rugged visual indicator with protective aluminum shield is standard
- Cartridge style element (non spin-on)
- Wide variety of media grades for application specific requirements (static discharge, low pressure drop, etc.)
- Port to port and mounting pattern dimensions match standard spin-on assembly
- Ideal for hydrostatic charge lines, high flow return applications where traditional spin-on filters fail (flow surge or cold start)

100 gpm
380 L/min
725 psi
50 bar

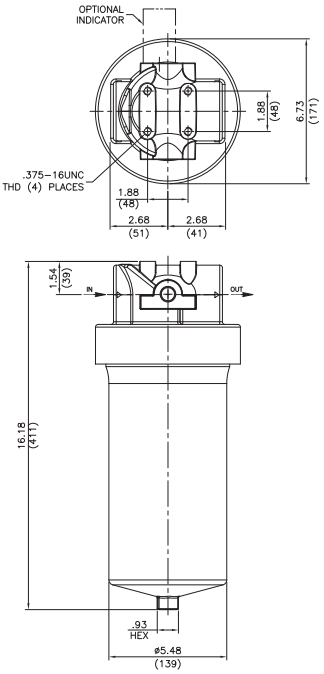
Applications

INDUSTRIAL
AUTOMOTIVE MANUFACTURING
MACHINE TOOL
MOBILE VEHICLES
STEEL MAKING
PULP & PAPER
AGRICULTURE

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 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 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 50 psi (3.5 bar) Full Flow: 52 psi (3.6 bar)
Porting Head: Element Case:	Cast Aluminum Aluminum
Weight of GHHF:	11.82 lbs. (5.36 kg)
Element Change Clearance:	2" (50 mm)

GHHF Top-Ported Medium Pressure Filter



Metric dimensions in ( ).

Element Performance Information

Media Type	Element	Filtration Ratio per ISO 16889 Using APC calibrated per ISO 11171 $\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
Traditional Excellement® Z-Media®	11GZ1	<4.0	4.5
	11GZ3	4.6	5.8
	11GZ5	5.9	7.8
	11GZ10	11.4	13.2
	11GZ25	15.8	17.5

Hydraspin H media, designed to specifically reduce filter pressure drop 11GH10 10.6 13.0

Dirt Holding Capacity

Media Type	Element	DHC (gm)
Traditional Excellement® Z-Media®	11GZ1	158
	11GZ3	136
	11GZ5	160
	11GZ10	152
	11GZ25	150

Element Collapse Rating: 150 psid (10.3 bar) for standard and non-bypassing elements

Flow Direction: Outside In

Element Nominal Dimensions: 11G: 5.52" (140 mm) O.D. x 11.25" (286 mm) long

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Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	Z-Media® (synthetic), H media (Hydraspin) and ASP® Media (synthetic)
Invert Emulsions	10 and 25 µ Z-Media® (synthetic), 10 µ ASP® Media (synthetic)

Element Selection
Based on Flow Rate

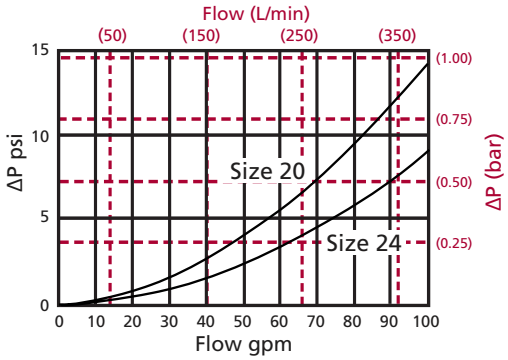
Pressure	Series	Element Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid, SAE-20 porting, and a 50 psi (3.4 bar) bypass valve.
	Z-Media®	GZ1	11GZ1
		GZ3	11GZ3
		GZ5	11GZ5
		GZ10	11GZ10
		GZ25	11GZ25
	Flow	gpm	0 20 40 60 80 100
		(L/min)	0 50 150 250 380

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

Pressure Drop Information
Based on Flow Rate and Viscosity

$\Delta P_{housing}$

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



$\Delta P_{element}$

$\Delta P_{element}$ = flow x element ΔP factor x viscosity factor

El. ΔP factors @ 150 SUS (32 cSt):

11GZ1/11GAS1 0.33 **11GZ3/11GAS3** 0.23
11GZ5/11GAS5 0.22 **11GZ10/11GAS10** 0.22
11GZ25/11GAS25 0.17

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.

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 80 gpm (303 L/min) for GHHF11GZ10S24 using 200 SUS (44 cSt) fluid.

Solution:

$\Delta P_{housing}$ = 6psi [.41 bar]

$\Delta P_{element}$ = 80 x .22 x (200÷150) = 23.5 psi
or
= [303 x (.22÷54.9) x (44÷32) = 1.66 bar]

ΔP_{total} = 6 + 23.5 = 29.5 psi
or
= [.41 + 1.66 = 2.07 bar]

GHHF Top-Ported Medium Pressure Filter

Filter Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
GHHF							

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
GHHF	11G	Z	10			S20	L	**= GHHF11GZ10S20L**

BOX 1 – Filter Series

GHHF

BOX 2 – Element Length (in)

11G

BOX 3 – Element Media

AS = Anti-Static Pleat Media (synthetic)
Z = Excellement® Z-Media® (synthetic)
H = Excellement® HydraSpin Media

BOX 4 – Micron Rating

1 = (AS and Z media)
3 = (AS and Z media)
5 = (AS and Z media)
10 = (AS, Z and H media)
25 = (AS and Z media)

BOX 5 – Element Seal Material

Omit = Buna N

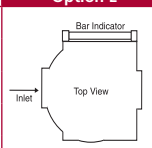
BOX 6 – Bypass Setting

Omit = 50 psid

BOX 7 – Inlet Port

S20 = SAE-20
S24 = SAE-24
P20 = 1.25" NPTF
P24 = 1.5" NPTF

BOX 8 – Dirt Alarm® Options

	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 D10 = Visual pop-up w/auto reset D5 = Visual pop-up w/manual reset	
Electrical	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	
Electrical with Thermal Lockout	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	
Electrical Visual	MS = Cam operated switch w/ ½" conduit female connection MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)	
Electrical Visual with Thermal Lockout	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

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