

S series Low Pressure Spin-ons

Featuring Hy-Pro G7 Dualglass high performance filter element technology



APPLICATIONS

- Hy-Pro Low pressure S series filters are ideal for installation on the return line to remove contaminate ingested or generated by the system. Functions include off-line filtration (kidney loop or filter cart) and some suction applications.
- Automotive manufacturing/assembly machine tools.
- Mobile applications such as waste haulers & transit .
- Filter carts and filter panels.
- Power unit return line/suction.

“S” FEATURES, BENEFITS, ADVANTAGES

DFE rated elements	G7 Dualglass elements are DFE rated to assure performance even when exposed to the toughest conditions that hydraulic systems can generate (See DFE for details).
Low housing pressure drop	Unique internal flow paths provide low resistance to flow. (Low pressure drop)
True Differential Pressure gage	Visual differential bar gage makes element service decision easier than typical pressure gages.

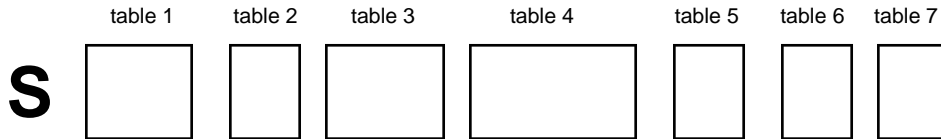


PRODUCT SPECIFICATIONS

Operating Pressure	S75 200 psi (14 bar) max S75D 200 psi (14 bar) max S76 200 psi (14 bar) max
Flow rate	S75 50 gpm (186 lpm) S75D 100 gpm (373 lpm) S76 18 gpm (67 lpm)
Design safety factor	2.5:1
Element collapse	100 psid (7 bar)
Assembly material	Head: Aluminum Canister: Steel
Fluid compatibility (ISO 2948)	Compatible with all petroleum, based oils, High Water Based, oil/water emulsion, and specified synthetic fluids with Fluorocarbon or EPR seals (call factory)
Bypass setting	25 psid (1.77 bar) standard see reverse for other options
Weight (w/element)	S75 single 5.5 lbs S75 double 12 lbs S76 single 2.3 lbs
Temperature rating	Nitrile -40°F(-40°C) ~ 225°F (107°C) Viton -15°F(-26°C) ~ 275°F(135°C)



SPIN-ON ASSEMBLY PART NUMBER GUIDE



SPIN-ON ELEMENT PART NUMBER GUIDE

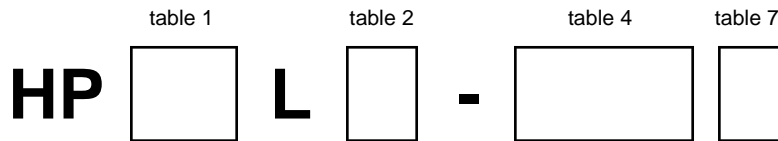


table 1 code	series
75	Single head, 50 gpm, 186 lpm max
75D*	Double head, 100 gpm, 373 lpm max
76	Single head, 30 gpm, 111 lpm max

*For 75D element replacement series is HP75

table 2 code	length
4	single
8	double

table 5 code	indicator
M	Visual Pressure Gage
E	Electrical Pressure Switch
D*	Visual Differential Indicator on right side (75,75D only)

table 3 code	porting options (series availability)
N1	BSPT 3/4" (76)
N2*	NPT 3/4" (76)
N3	NPT 1" (76)
N4*	NPT 1 1/4" (75)
N5*	NPT 1 1/2" threaded port + 2" SAE-32 Code 61 Flange (75D)
B5	1 1/4" BSP (75)
S1	SAE-8 (76)
S2	SAE-12 (76)
S4	SAE-20 (75)
S5*	SAE 1 1/2" threaded ORB port + 2" SAE-32 Code 61 Flange (75D)

Longer delivery and quantity requirements for non-standard ports

table 4 code	filtration rating	media type
1M	$\beta_{2.5[c]} = 1000$ ($\beta_1 = 200$)	G7 Dualglass
3M	$\beta_{5[c]} = 1000$ ($\beta_3 = 200$)	G7 Dualglass
6M	$\beta_{7[c]} = 1000$ ($\beta_6 = 200$)	G7 Dualglass
10C	$\beta_{12[c]} = 2$ ($\beta_{12} = 2$)	Cellulose
12A	$\beta_{12[c]} = 1000$ ($\beta_{12} = 200$)	G7+H ₂ O removal
12M	$\beta_{12[c]} = 1000$ ($\beta_{12} = 200$)	G7 Dualglass
25A	$\beta_{22[c]} = 1000$ ($\beta_{25} = 200$)	G7+H ₂ O removal
25C	$\beta_{22[c]} = 2$ ($\beta_{25} = 2$)	Cellulose
25M	$\beta_{22[c]} = 1000$ ($\beta_{25} = 200$)	G7 Dualglass
40W	40u nominal	wire mesh
74W	74u nominal	wire mesh
149W	149u nominal	wire mesh

table 6 code	bypass valve
1	3 psid, 0,21 bar (suction)
2	5 psid 0,35 bar (suction)
3	15 psid, 1,06 bar
4	25 psid, 1,77 bar (standard)
5*	50 psid, 3,5 bar (S75D only)
x	No bypass

* ΔP indicators & pressure gauges are indicate at 25 psid & 25 psi respectively even if the bypass is set for 50 psid (3,5 bar) crack. S75D series only.

table 7 code	seal material
B	Buna-Nitrile
V	Viton (75 only)

FILTER MEDIA SELECTION GUIDE

code	media description
A	"G7 Dualglass" high performance glass media combined with water removal scrim. $\beta_{x[c]} = 1000$ ($\beta_x = 200$)
C	Nominally rated "Cellulose" fiber media $\beta_{x[c]} = 2$ ($\beta_x = 2$)
M	"G7 Dualglass" is our latest generation of DFE rated, high performance glass media for use in all hydraulic fluids. $\beta_{x[c]} = 1000$ ($\beta_x = 200$)
W	Stainless steel "Wire mesh" media

Hy-Pro filters are tested to the latest industry standard ISO16889 (replacing ISO4572) resulting in A new scale for defining particle sizes and determining filtration ratio (formerly known as beta ratio)

New (ISO16889) vs Old (ISO4572) size comparison

$\beta_{x(c)}=1000$ (ISO16889)	2.5	5	7	12	22
$\beta_x=200$ (ISO4572)	<1	3	6	12	25

FILTER MEDIA . . . THE HEART OF A FILTER

Dynamic Filter Efficiency (DFE) Testing

Revolutionary test methods assure that DFE rated elements perform true to rating even under demanding variable flow and vibration conditions. Today's industrial and mobile hydraulic circuits require elements that deliver specified cleanliness under ALL circumstances. Wire mesh supports the media to ensure against cyclical flow fatigue, temperature, and chemical resistance failures possible in filters with synthetic support mesh. Contact your distributor or Hy-Pro for more information and published articles on DFE testing.

Media Options

Through extensive testing we have developed media choices to handle any application. Options include G6 Dualglass, Cellulose, and Wire mesh (stainless).

Fluid Compatibility

Petroleum based fluids, water glycol, polyol ester, phosphate ester, high water based fluids, and many other synthetics. Contact us for seal material selection assistance.

SPIN-ON ASSEMBLY FLOW vs PRESSURE DROP DATA

Differential Pressure Flow Factor - $\Delta P/GPM$ ($\Delta Bar/lpm$)

Media Code	S764 assembly (20 gpm max)	S768 assembly (30 gpm max)	S754 assembly (40 gpm max)	S758 assembly (60 gpm max)	S75D4 assembly (80 gpm max)	S75D8 assembly (120 gpm max)
1M	1.210 (0.0232)	0.726 (0.0139)	0.521 (0.0100)	0.313 (0.0060)	0.261 (0.0050)	0.156 (0.0030)
3C	0.773 (0.0148)	0.464 (0.0089)	0.429 (0.0082)	0.257 (0.0049)	0.214 (0.0041)	0.129 (0.0025)
3M	0.909 (0.0174)	0.545 (0.0104)	0.0367 (0.0070)	0.220 (0.0042)	0.183 (0.0035)	0.110 (0.0021)
6M	0.695 (0.0133)	0.417 (0.0080)	0.298 (0.0057)	0.179 (0.0034)	0.149 (0.0028)	0.089 (0.0017)
10C	0.500 (0.0096)	0.300 (0.0057)	0.182 (0.0035)	0.109 (0.0021)	0.091 (0.0018)	0.055 (0.0011)
12M	0.471 (0.0090)	0.283 (0.0054)	0.168 (0.0032)	0.101 (0.0019)	0.084 (0.0016)	0.050 (0.0009)
25A	0.479 (0.0092)	0.287 (0.0055)	0.178 (0.0034)	0.107 (0.0020)	0.089 (0.0017)	0.053 (0.0010)
25C	0.444 (0.0085)	0.266 (0.0051)	0.162 (0.0031)	0.097 (0.0018)	0.081 (0.0016)	0.049 (0.0009)
25M	0.43 (0.0082)	0.258 (0.0049)	0.158 (0.0030)	0.095 (0.0017)	0.079 (0.0015)	0.047 (0.0009)
74W	0.172 (0.0033)	0.103 (0.0019)	0.063 (0.0012)	0.038 (0.0007)	0.032 (0.0006)	0.019 (0.0003)
149W	0.129 (0.0024)	0.077 (0.0014)	0.047 (0.0009)	0.028 (0.0006)	0.024 (0.0005)	0.014 (0.0002)

Pressure Drop Calculation

Pressure drop curves based on oil viscosity of 150 SSU, and specific gravity = 0.86. Δp across element is proportionally related to viscosity and specific gravity. For new Δp use the following conversion formula:

$$\Delta p \text{ element} = \Delta p \text{ curve} \times \text{Vis}/150 \times \text{SG}/0.86$$

ELEMENT SERVICING

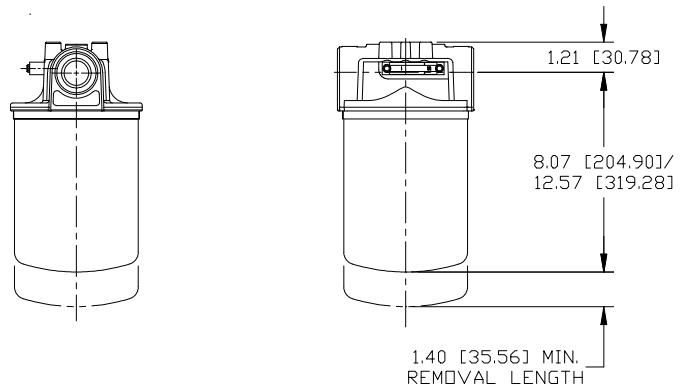
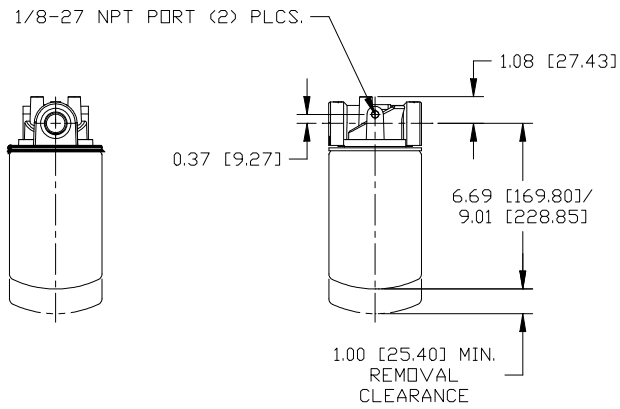
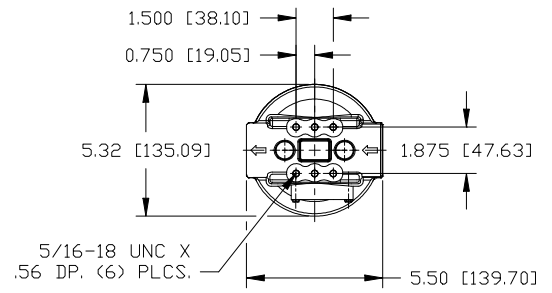
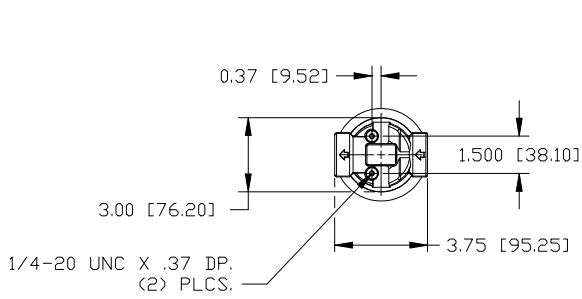
1. Stop and/or isolate the power unit from the filter.
2. Relieve pressure in the filter line and drain fluid.
3. Lubricate filter gasket prior to installation.
4. Screw on filter until gasket makes contact then tighten one half turn.
5. Bleed air from system.
6. Start system and check for leaks.



S76 INSTALLATION DRAWING

S75 INSTALLATION DRAWING

For more detailed or full-sized drawings contact Hy-Pro Filtration



S75D INSTALLATION DRAWING

