

## FEATURES

Filter assembly WS620 is manufactured to meet the HF3 automotive standard. The HF3 element (E6021) series is offered throughout the product line. Working pressure up to 6000 psi combined with a choice of 4 bowl lengths, offer a wide range of flows and dirt holding capabilities. The flange mounted design is an ideal choice for direct mounting to the hydraulic system. The rugged cast iron head and steel bowl design are required to meet today's high pressure system demands. Our standard bowl drain plug helps relieve system pressure during filter change outs. Western Filter's proprietary BetaPore™ 5 layer media is offered in a variety of Pak™ constructions. Five different media grades are offered down to 4.0µ(c).

Western Filter elements are compatible with petroleum oils, water glycol, oil/water, HWCF and synthetic fluids.

### Technical Data:

Maximum Working Pressure	6000 psi (414 bar)
Fatigue Pressure Rating	3000 psi max (207 bar)
Typical Burst Pressure	15000 psi max (1034 bar)
Temperature Range	Operating
Buna N	-45°F to + 225°F (-43°C to + 107°C)
Viton	-20°F to + 250°F (-29°C to + 121°C)
Head Material	Cast Iron
Bowl Material	Steel
Weight (without elements)	
Assembly length 1	25 lbs. (11,4 kg.)
Assembly length 2	27 lbs. (12,3 kg.)
Assembly length 4	29 lbs. (13,2 kg.)
Assembly length 5	33 lbs. (15,1 kg.)

## WS620

150 gpm (568 l/min)

Conforms to HF3 specifications

Replacement element available in C-Pak™ or H-Pak™ media

Accepts coreless elements with removable coretube

Wide range of indicator options

Four bowl length options for design flexibility



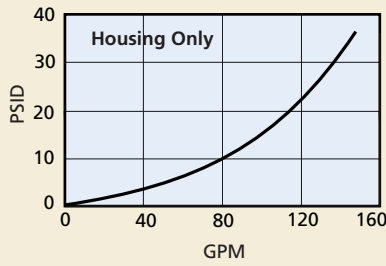
## ACCESSORIES

Seal Kit -Buna N	P-427466-13
Seal Kit -E.P.R.	P-427466-14
Seal Kit -Viton	P-427466-15
Mounting Bracket	P-426218-01
Core Tube Assembly-Code Length-1	PW620R1BN
Core Tube Assembly-Code Length-2	PW620R2BN
Core Tube Assembly-Code Length-4	PW620R4BN
Core Tube Assembly-Code Length-5	PW620R5BN

**Housing and Filter Element**

Flow versus Pressure Drop

150 SUS (32 cSt.) oil with specific gravity ≤ 0.9

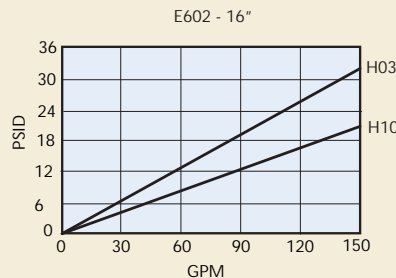
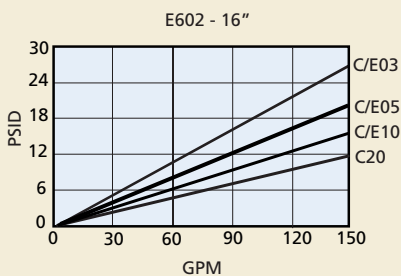
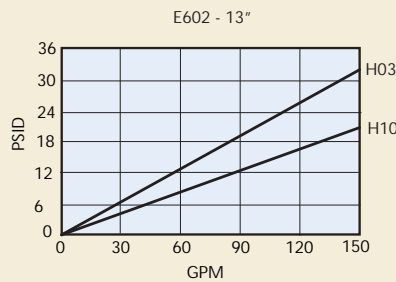
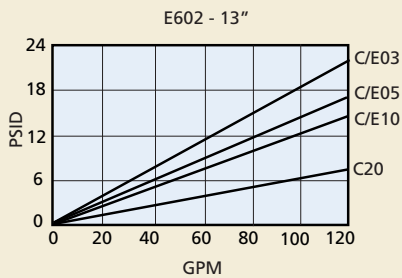
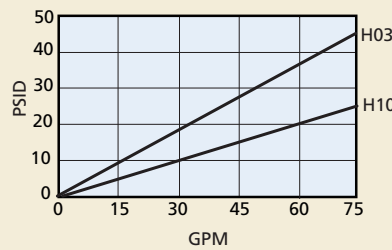
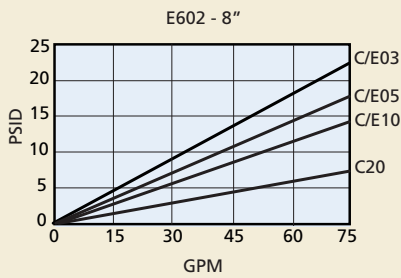
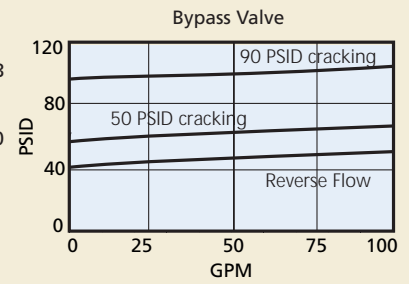
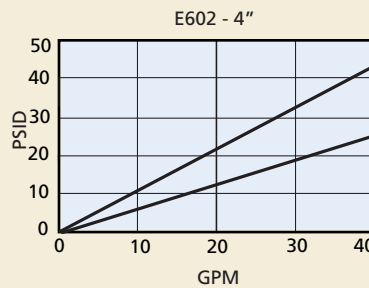
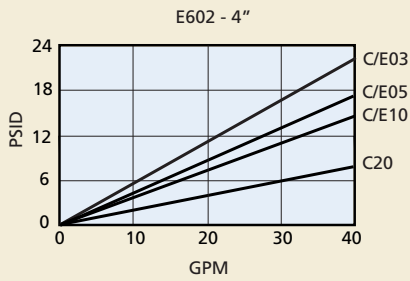


**Viscosity Correction Formula**

$$\Delta P \text{ Element} = \text{psid from catalog} \times \frac{\text{New Viscosity (SUS)}}{150} \times \frac{\text{New Specific Gravity}}{0.90}$$

$$\Delta P \text{ Housing} = \text{psid from catalog} \times \frac{\text{New Specific Gravity}}{0.90}$$

$$\Delta P \text{ Assembly} = \Delta P \text{ Element} + \Delta P \text{ Housing}$$



LOW PRESSURE  
SPIN-ON FILTERS

MEDIUM PRESSURE  
SPIN-ON FILTERS

IN-TANK FILTERS

LOW PRESSURE FILTERS

MEDIUM PRESSURE FILTERS

HIGH PRESSURE FILTERS

Filter Assembly	WS620 TABLE 1	1 TABLE 2	S TABLE 3	4 TABLE 4	D   H TABLE 5	B TABLE 6	2 TABLE 7	C TABLE 8	10 TABLE 9
Service Element	E602 TABLE 1	1 TABLE 2	B TABLE 6	2 TABLE 7	C TABLE 8	10 TABLE 9			

**Table 1**

Filter Assembly / Service Element	
CODE	DESCRIPTION
WS620	Assembly
E602	Element

**Table 2**

Element Collapse Options	
CODE	DESCRIPTION
1	150 psid for housing w/bypass valve
4	3000 psi for housing w/o bypass valve (H-Pak™ only)

**Note:** E-Pak™ elements rated at 100 psid collapse. If used in non-bypass housing, a differential pressure indicator (70 psid max.) should be used.

**Table 3**

Port Size Options	
CODE	PORT SIZE
S	Manifold Mounting

**Table 4**

Bypass Setting Options	
CODE	BYPASS SETTING
1	Non-bypass
4	50 psid
6	90 psid
7	90 psid w/reverse flow valve
8	Non-bypass w/reverse flow valve
9	50 psid w/reverse flow valve

**Note:** Use option 1 & 8 only with 3000 psid collapse filter element.

**Table 5 (Primary)**

Indicator Style and Setting	
CODE	ΔP INDICATOR STYLE & SETTING
A	Visual indicator 70 psid w/TL and surge
B	Electrical/visual 70 psid w/TL and surge
D	Electrical/visual 35 psid
E	Electrical/visual 100 psid
G	Electrical/visual 35 psid w/TL
I	Visual indicator 70 psid
J	ΔP indicator plug
L	Visual indicator 35 psid
M	Visual indicator 35 psid w/ TL and surge
N	Electrical/visual 35 psid w/12" 3-wire flying lead
O	Visual indicator 100 psid
P	Visual indicator 100 psid w/TL and surge
R	Electrical switch 35 psid
S	Electrical/visual 100 psid w/12" 3-wire flying lead
T	Electrical switch 100 psid
U	Electrical switch 70 psid
V	Electrical/visual 70 psid w/TL
W	Electrical/visual 100 psid w/TL
Y	Electrical/visual 35 psid w/TL and surge
Z	Electrical/visual 100 psid w/TL and surge

TL (thermal lockout)

**Table 5 (Secondary)**

Receptacle Options	
CODE	ELECTRICAL STYLE
B	Brad Harrison (5-pin)
H	Hirschmann (4-pin)
N	None, for visual ΔP

**Table 6**

Seal Options	
CODE	MATERIAL
B	Buna N
E	E.P.R.
V	Viton

**Table 7**

Assembly & Element Length	
CODE (LGTH)	ELEMENT LENGTH
1 (11.8")	4.0"
2 (15.5")*	8.0"*
4 (20.2")	13.0"
5 (24.1")	16.0"

\*HF3

**Table 8**

Element Code	
CODE	DESCRIPTION
C	(Glass) 01, 03, 05, 10, 20
E	(Coreless) 01, 03, 05, 10
H	(Glass) 03, 10

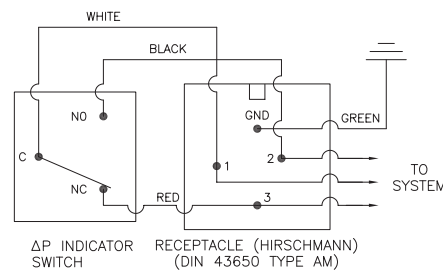
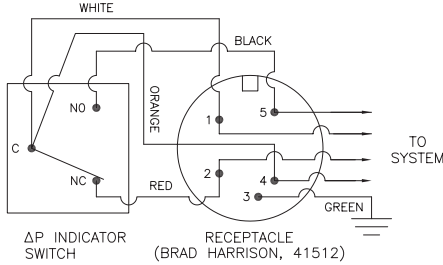
**Table 9**

Media Rating	
CODE	TARGET FLUID CLEANLINESS LEVEL
01	Flushing only
03	16/14/12 or better
05	18/16/14 or better
10	20/18/15 or better
20	22/19/16 or better

*Note: Information concerning fluid cleanliness codes is on page 6, the Media Grade Selection Guide.*

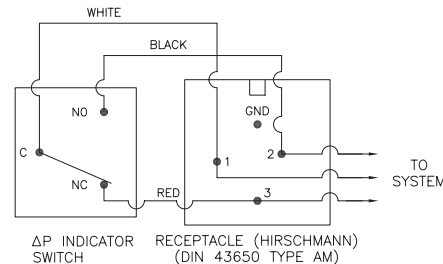
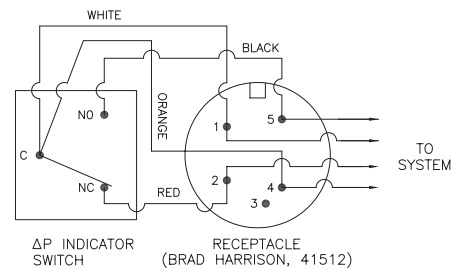
Indicator Switch Schematic Wiring Diagram

Aluminum Electrical Housings



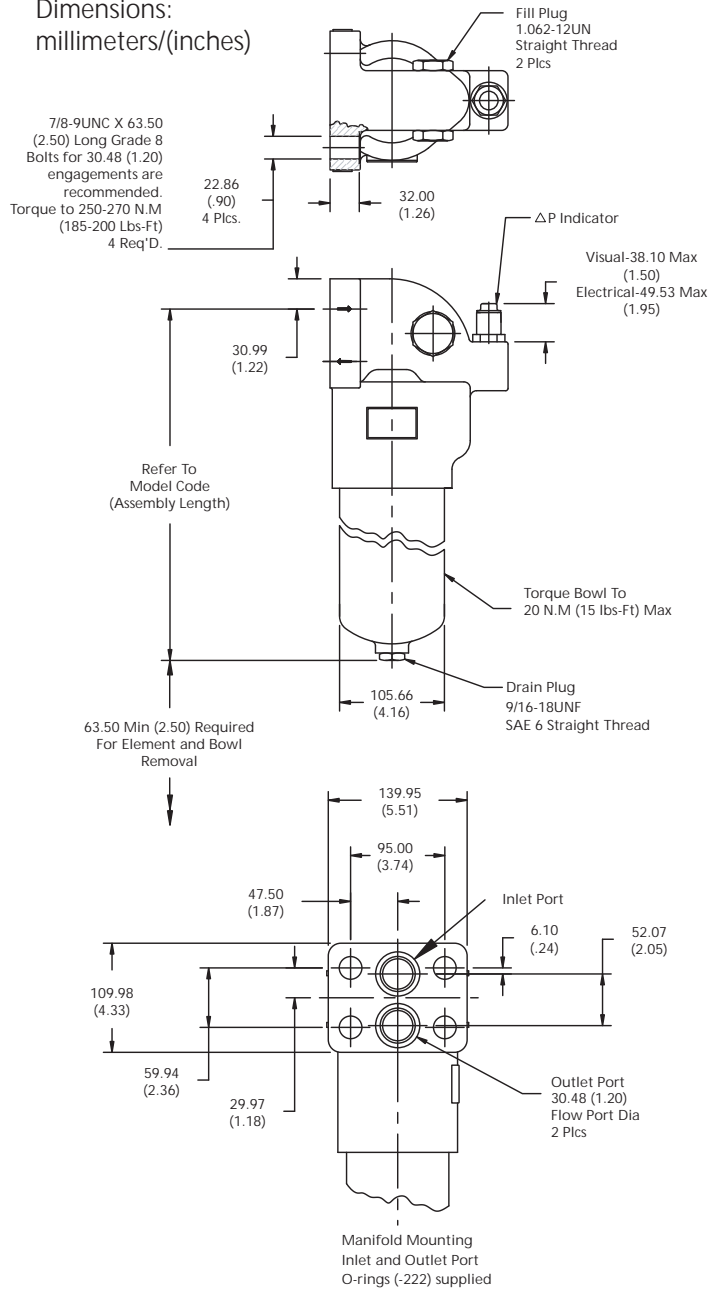
Note: The female plug (connector) is to be furnished by customer.

Plastic Electrical Housings



Note: The female plug (connector) is to be furnished by customer.

Dimensions:  
millimeters/(inches)



7/8-9UNC X 63.50 (2.50) Long Grade 8 Bolts for 30.48 (1.20) engagements are recommended. Torque to 250-270 N.M (185-200 Lbs-Ft) 4 Req'D.

Refer To Model Code (Assembly Length)

63.50 Min (2.50) Required For Element and Bowl Removal

**Differential Indicators:** Indicators are designed to actuate at approximately 80% of bypass valve cracking pressure. It is recommended that an indicator with a bypass setting of 100 psid is used with a non-bypass housing.

**Surge Control:** This optional feature is used to dampen pressure surges or spikes to avoid premature actuation of the indicator. Surge control delays the indicator response.

**Thermal Lockout:** The Thermal Lockout prevents premature signaling of a bypass condition created by viscous fluid during cold start-ups. Normal indicator actuation capability is resumed once the operating temperature of the fluid reaches approximately 80 Deg. F.

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