

FEATURES

The in line pressure filter W331 is ideal for charge pump and pressure line applications. The all aluminum housing has a rated fatigue value of 1500 psi. Western Filter’s proprietary BetaPore™ 5 layer media is offered in a variety of Pak™ designs. Four media grades are offered down to 5.1µ(c). WF elements core collapse options range from 150 to 3000 PSI. The differential pressure indicator line is designed to work with a wide assortment of bypass valves. Thermal lockout and surge control are two key features incorporated in many of the valves.

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

Technical Data:

Maximum Working Pressure	3000 psi (210 bar)
Fatigue Pressure Rating	1500 psi max (100 bar)
Typical Burst Pressure	7500 psi max (517 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 and Bowl Material	Aluminum
Weight (without elements)	
Assembly length 1	4.25 lbs. (1,9 kg.)

W331

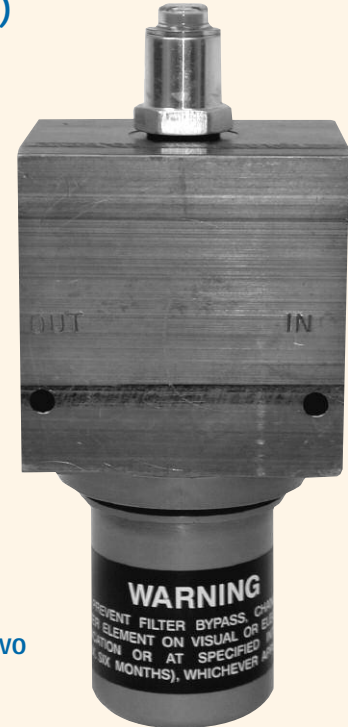
6 gpm (23 l/min)

Positive sealing poppet type bypass for reliability and zero leakage

Wide range of indicator options

High collapse H-Pak™ element available for use with non-bypass applications

Compact, light-weight design for use with servo or proportional valve



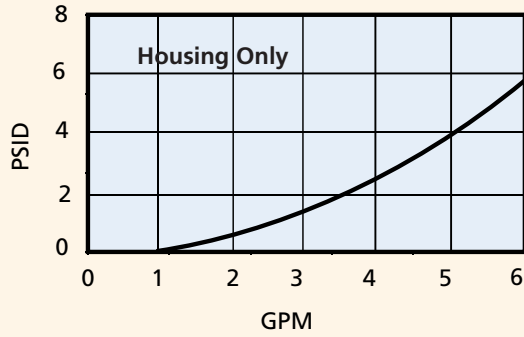
ACCESSORIES

Seal Kit -Buna N	P-427466-28
Seal Kit -E.P.R.	P-427466-29
Seal Kit -Viton	P-427466-30

Housing and Filter Element

Flow versus Pressure Drop

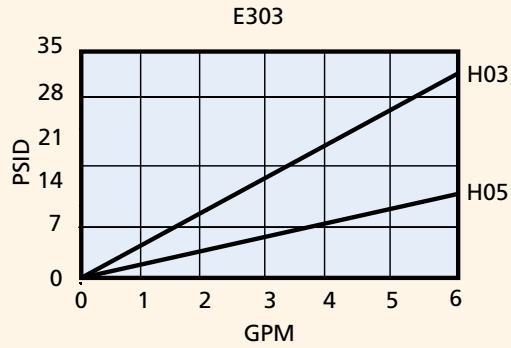
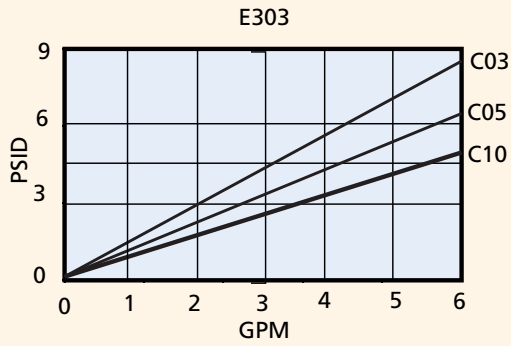
150 SUS (32 cSt.) oil with specific gravity ≤ 0.9



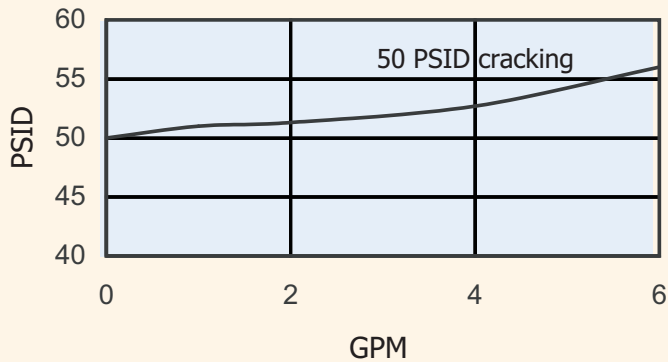
Viscosity Correction Formula

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

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

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


Bypass Valve



HIGH PRESSURE SPIN-ON FILTERS

LOW PRESSURE SPIN-ON FILTERS

IN-TANK FILTERS

LOW PRESSURE FILTERS

MEDIUM PRESSURE FILTERS

HIGH PRESSURE FILTERS

Filter Assembly	W331 TABLE 1	1 TABLE 2	O TABLE 3	4 TABLE 4	L N TABLE 5	B TABLE 6	C TABLE 7	10 TABLE 8
Service Element	E303 TABLE 1	1 TABLE 2	B TABLE 6	1 TABLE 6	C TABLE 7	10 TABLE 8		

Table 1

Filter Assembly / Service Element	
CODE	DESCRIPTION
W331	Assembly
E303	Element

Table 2

Element Collapse Options	
CODE	DESCRIPTION
1	150 psid for housing w/bypass valve
4	3000 psid for housing without bypass valve (H-Pak™ only)

Table 3

Port Size Options	
CODE	PORT SIZE
O	3/4" - 16 UN (SAE 8)

Table 4

Bypass Setting Options	
CODE	BYPASS SETTING
1	Non-bypass
4	50 psid

Note: Use option code 1 only with 3000 psid collapse filter element.

Table 5 (Primary)

Upstream Pressure Gauge and Switch Option	
CODE	ΔP INDICATOR STYLE & SETTING
D	Electrical/visual 35 psid
E	Electrical/visual 100 psid
G	Electrical/visual 35 psid w/TL
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
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

Table 6

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

Table 7

Element Code	
CODE	DESCRIPTION
C	(Glass) 03, 05, 10
H	(Glass) 03, 10

Table 8

Media Rating	
CODE	TARGET FLUID CLEANLINESS LEVEL
03	16/14/12 or better
05	18/16/14 or better
10	20/18/15 or better

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

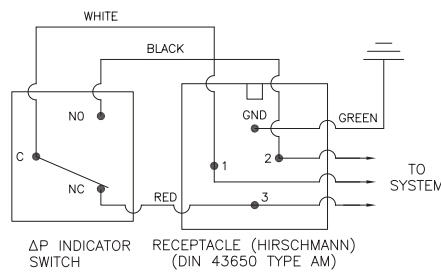
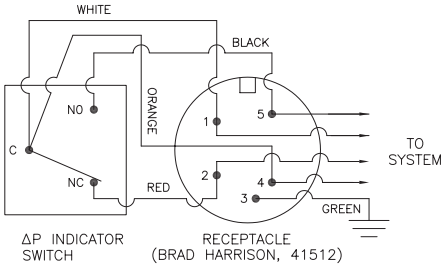
Metric Porting Available

Change W331 to G331
Porting code O becomes 1/2" ISO 228 BSPP

Indicator Switch Schematic Wiring Diagram

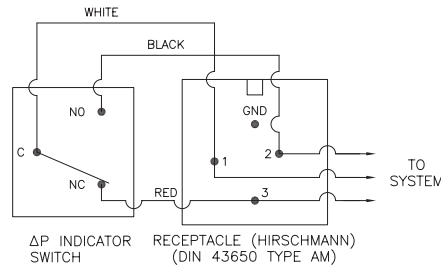
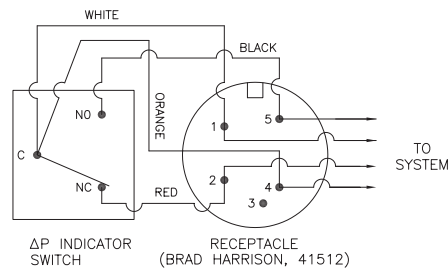
Dimensions:
millimeters/(inches)

Aluminum Electrical Housings

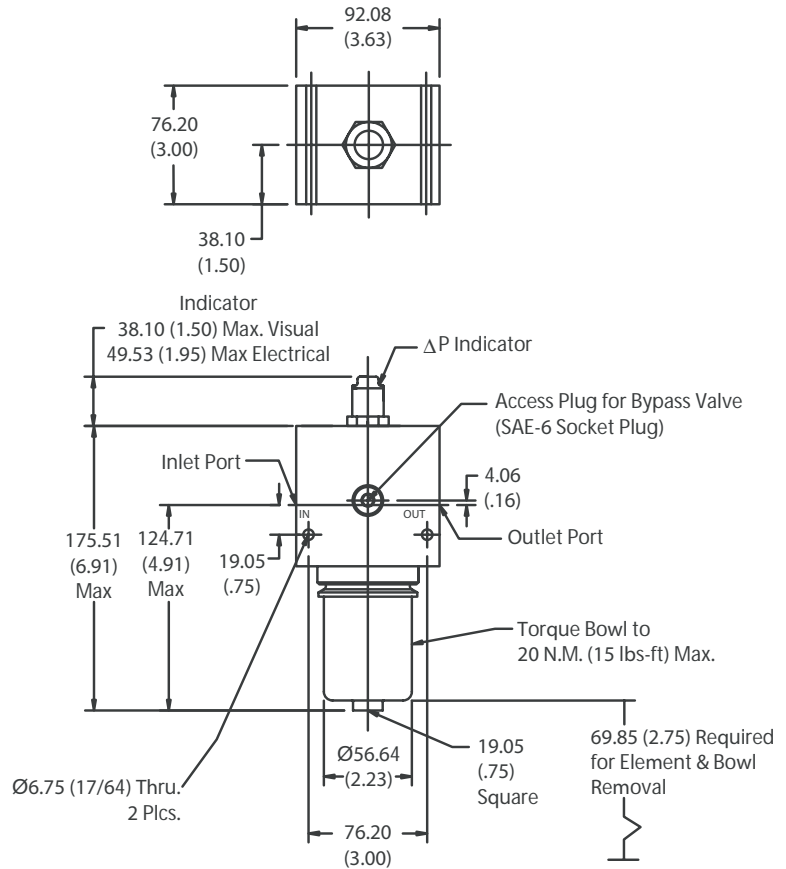


Note: The female plug (connector) is to be furnished by customer.

Plastic Electrical Housings



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



CAUTION
Before Servicing the element, the bleed plug in filter housing must be loosened to relieve pressure

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.