



WS620

Max Flow: 150 gpm (568 lpm)



WS620 In-Line Cartridge Filters

Working Pressures to: 6000 *psi*
41,400 kPa
414 bar

Rated Static Burst to: 15,000 *psi*
103,400 kPa
1034 bar

Fatigue Pressure Rating: 3000 *psi*
20,700 kPa
207 bar

Flow Range to: 150 *gpm*
568 *lpm*



Applications

- High Pressure Circuits
- In-Plant Systems
- Meets HF3 Specification
- Mobile Equipment

Features

The WS620 filter assembly is manufactured to meet the HF3 specification. The flange mounted design is an ideal choice for direct mounting to the hydraulic system. Our standard housing drain plug helps relieve system pressure during filter change outs. Donaldson DT high-performance 4-layer media is offered in five different media grades. The differential pressure indicator line is designed to work with the wide assortment of bypass valves. Thermal lockout and surge control are two key features incorporated in many of the differential pressure indicators.

- Conforms to HF3 specifications
- Manifold mounting

- Head material: cast iron
- Housing material: steel

Beta Rating

- Performance to $\beta_{<4(c)}=1000$

Porting Size Options

- Manifold mounting

Assembly Weight

- 11.8": 37 lbs / 16.78 kg
- 15.5": 43 lbs / 19.50 kg
- 20.2": 52 lbs / 23.59 kg
- 24.1": 59 lbs / 26.76 kg

Replacement Filter Lengths

- 8" / 203.2mm
- 13" / 330.2mm
- 16" / 406.4mm

Standard Bypass Ratings

- 90 psi / 621 kPa / 6.2 bar
- 50 psi / 345 kPa / 3.5 bar
- No Bypass

Operating Temperatures

- -20° to 250°F (-29° to 121°C)

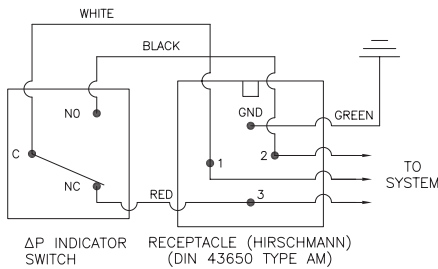
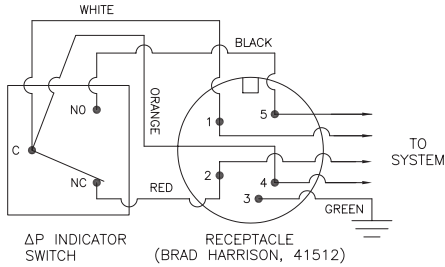
Filter Collapse Ratings

- 150 psi / 1034 kPa / 10.3 bar (standard)
- 3000 psi / 20,700 kPa / 206.8 bar (high collapse)

WS620 Specification Illustrations

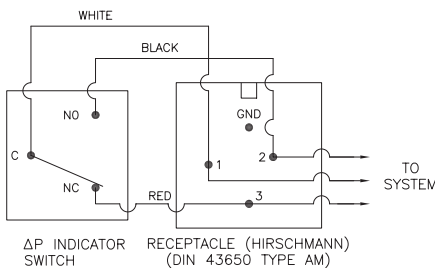
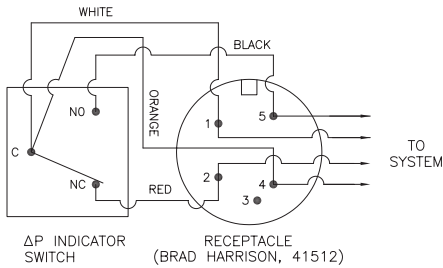
All dimensions are shown in millimeters [inches].

Indicator Switch Schematic Wiring Diagram Aluminum Electrical Housings



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

Plastic Electrical Housings



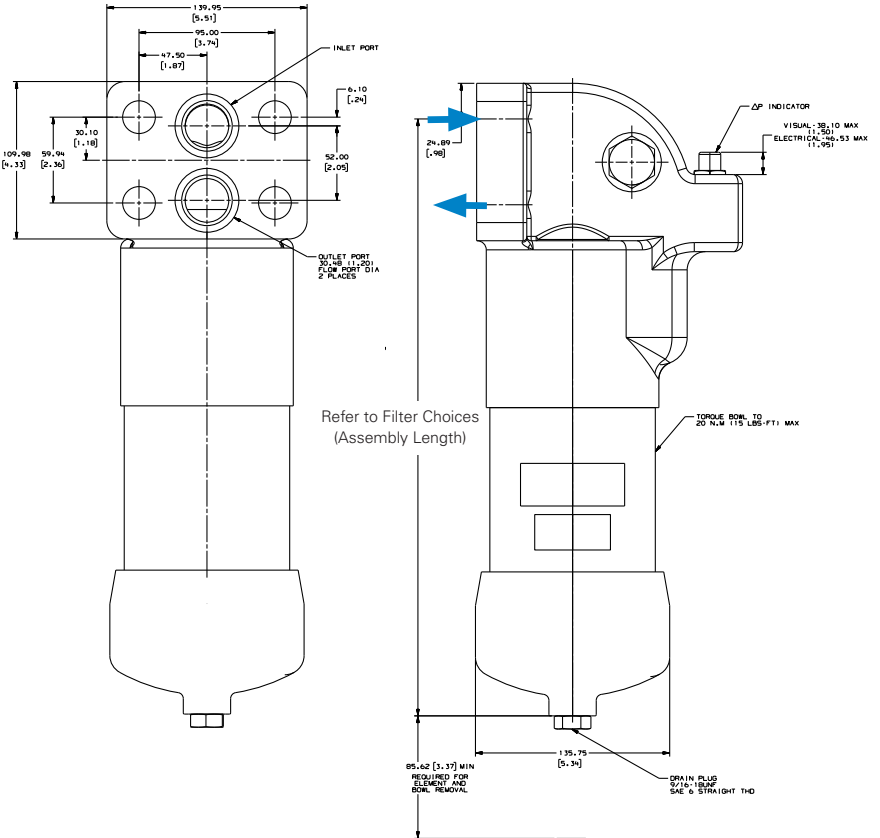
Note: The female plug (connector) is to be furnished by customer.

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.

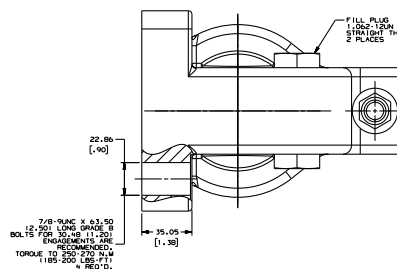
Surge Control: This optional feature is used to dampen pressure surges or spikes to avoid premature actuation of the indicator. Surge control delays the indicator response.

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°F / 27°C.

Assembly - Side View



Head - Top View





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WS620 Components

High-Performance DT Filter Choices

Media Type	$\beta_{x(c)} = 1000$ Rating based on ISO 16889	Length		Donaldson Part No.	Comments
		in	mm		
DT Synteq Synthetic	<4 μm	8	208.8	P566209	DT-9600-8-2UM
	5 μm	8	208.8	P566210	DT-9600-8-5UM
	8 μm	8	208.8	P566211	DT-9600-8-8UM
	12 μm	8	208.8	P566212	DT-9600-8-14UM
	23 μm	8	208.8	P566213	DT-9600-8-25UM
	5 μm	8	208	P566366	DT-9601-8-5UM, High collapse
	12 μm	8	208	P566367	DT-9601-8-14UM, High collapse
	<4 μm	8	208	P567875	DX2-9600-8-2UM
	5 μm	8	209	P565122	DX2-9600-8-5UM
	8 μm	8	209	P565123	DX2-9600-8-8UM
	12 μm	8	209	P564936	DX2-9600-8-14UM
	<4 μm	13	327.8	P566214	DT-9600-13-2UM
	5 μm	13	327.8	P566215	DT-9600-13-5UM
	8 μm	13	327.8	P566216	DT-9600-13-8UM
	12 μm	13	327.8	P566217	DT-9600-13-14UM
	23 μm	13	327.8	P566218	DT-9600-13-25UM
	5 μm	13	326.3	P566368	DT-9601-13-5UM, High collapse
	12 μm	13	326.3	P566369	DT-9601-13-14UM, High collapse
	<4 μm	13	327	P567876	DX2-9600-13-2UM
	5 μm	13	327	P565188	DX2-9600-13-5UM
	8 μm	13	327	P565189	DX2-9600-13-8UM
	12 μm	13	327	P565187	DX2-9600-13-14UM
	<4 μm	16.84	427.8	P566219	DT-9600-16-2UM
	5 μm	16.84	427.8	P566220	DT-9600-16-5UM
	8 μm	16.84	427.8	P566221	DT-9600-16-8UM
	12 μm	16.84	427.8	P566222	DT-9600-16-14UM
	23 μm	16.84	427.8	P566223	DT-9600-16-25UM
	5 μm	16.84	427.8	P566370	DT-9601-16-5UM, High collapse
	12 μm	16.84	427.8	P566371	DT-9601-16-14UM, High collapse
	<4 μm	16.81	427	P567877	DX2-9600-16-2UM
	5 μm	16.81	427	P565196	DX2-9600-16-5UM
	8 μm	16.81	427	P565197	DX2-9600-16-8UM
	12 μm	16.81	427	P565195	DX2-9600-16-14UM



Filter Notes

- All Donaldson DT and DX2 filters utilize glass fiber media with an epoxy-based resin system for the ultimate in chemical compatibility.
- All Donaldson DT and DX2 filters are potted with epoxy-based adhesives.
- Standard collapse DT designs are double wire-backed using epoxy-coated steel mesh for maximum pleat support and dirt capacity.
- High collapse designs are double wire-backed using stainless steel mesh.
- High collapse designs are also potted into machined aluminum endcaps for greater filter integrity in critical applications.
- Viton® seals are standard on all Donaldson DT and DX2 filters. Viton® is a registered trademarks of E. I. DuPont de Nemours and Company.
- DX2 filters utilize nylon mesh for pleat support.



Housing Ordering Guide

Filter Assembly	WS620 TABLE 1	1 TABLE 2	S TABLE 3	4 TABLE 4	D H TABLE 5	B TABLE 6	2 TABLE 7
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Service Filter: Filters ordered separately. See previous page for filter options.

LEAD TIME NOTE:
This product is configured with the specifications and features of your choice. Please contact your Donaldson sales representative for lead time details.

Table 1

Filter Assembly	
CODE	DESCRIPTION
WS620	Assembly

Table 2

Filter Collapse Options	
CODE	DESCRIPTION
1	150 psid for housing w/bypass valve
4	3000 psi for housing w/o bypass valve

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.

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 indicator

Table 6

Seal Options*	
CODE	MATERIAL
B	Buna-N®
V	Viton®

*For certain application requirements, E.P.R. seals may be available. Contact your Donaldson representative for more details.

Table 7

Assembly & Filter Length	
CODE (LGTH)	FILTER LENGTH
2 (15.5")*	8.0"
4 (20.2")	13.0"
5 (24.1")	16.0"

*HF3

Media Ratings

Western Filter elements have been replaced by Donaldson DT high-performance cartridges.	
WESTERN MEDIA CODE	DONALDSON DT MEDIA
01	<4µm DT Synteq Synthetic
03	5µm DT Synteq Synthetic
05	8µm DT Synteq Synthetic
10	12µm DT Synteq Synthetic
20	23µm DT Synteq Synthetic

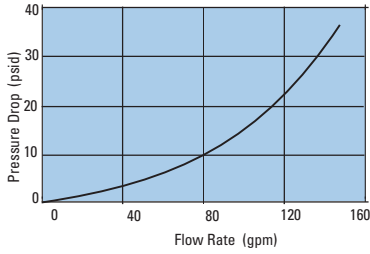
For a complete filter interchange, visit crossreference.donaldson.com.

Brad Harrison® is a registered trademark of Woodhead Industries, Inc.
Hirschmann® is a registered trademark of Richard Hirschmann of America Inc.
Buna-N® and Viton® are registered trademarks of E. I. DuPont de Nemours and Co.

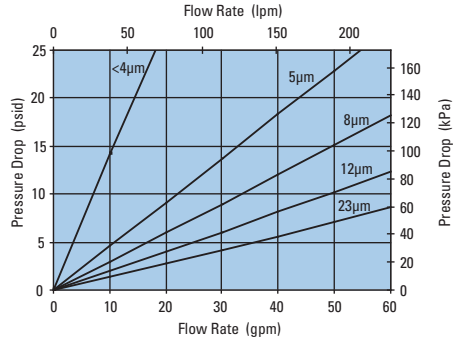


Performance Data

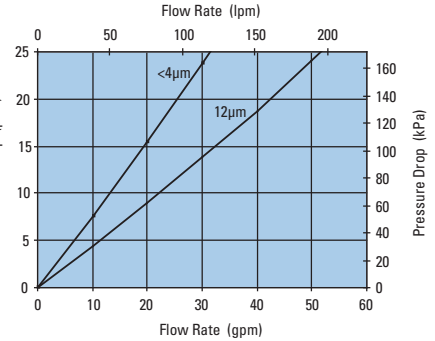
WS620 Housing Only



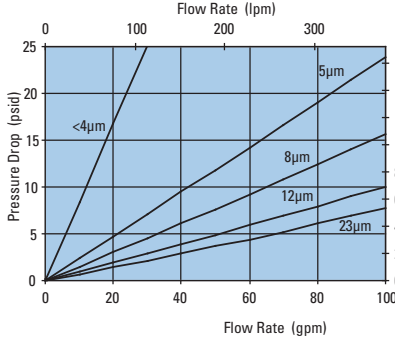
WS620 4" DT Filter Only
DT-9600-4, 4.59"/116.7mm



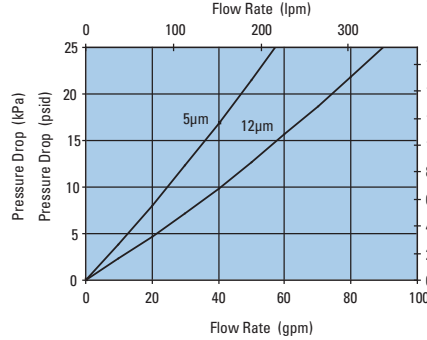
WS620 4" DT Filter Only
DT-9601-4, 4.59"/116.2mm



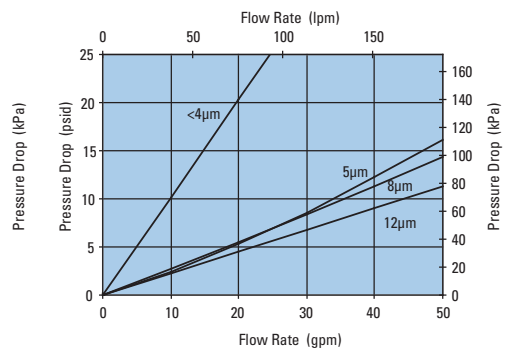
WS620 8" DT Filter Only
DT-9600-8, 8.22"/208.8mm



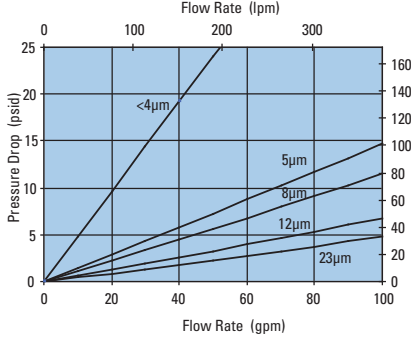
WS620 8" DT Filter Only
DT-9601-8, 8.19"/208mm



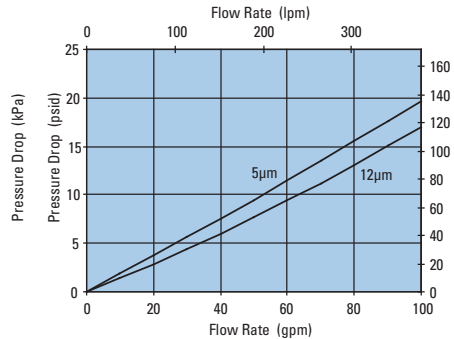
WS620 8" DX2 Filter Only
DX2-9600-8, 8.19"/208mm



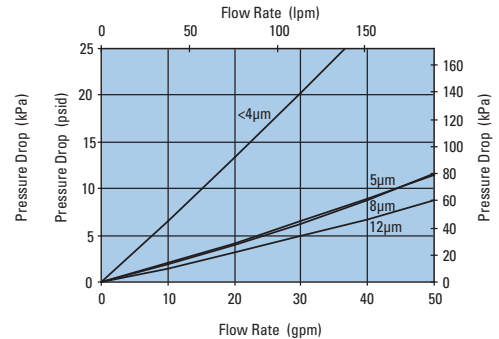
WS620 13" DT Filter Only
DT-9600-13, 12.91"/327.8mm



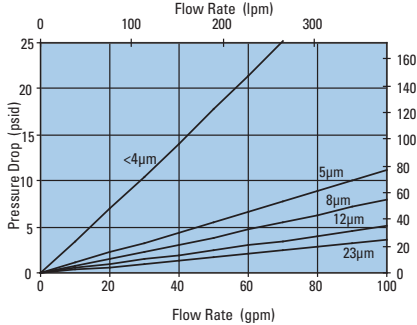
WS620 13" DT Filter Only
DT-9601-13, 12.85"/326.3mm



WS620 13" DX2 Filter Only
DX2-9600-13, 12.87"/327mm



WS620 16" DT Filter Only
DT-9600-16, 16.84"/427.8mm



WS620 16" DT Filter Only
DT-9601-16, 16.82"/427.1mm

