



W023

Max Flow: 60 gpm (227 lpm)

W023 Spin-On Filters

Working Pressures to: 150 *psi*
10.3 bar

Rated Static Burst to: 250 *psi*
17.2 bar

Flow Range to: 60 *gpm*
227 *lpm*

Features

This versatile spin-on series is an excellent choice for use in high corrosion environments. The gray iron head construction can be ordered with gauge or differential pressure indicator ports. Take advantage of our mix and match system of heads and filters, so you get exactly what you need. You can choose the media type and configurations that's best for your application.

Applications

- Fluid Conditioning Systems
- In-Plant Systems
- Mobile Equipment
- Power Transmissions
- Process Systems



W023

Beta Rating

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

Porting Size Options

- 1¼" NPT
- SAE-20 O-ring

Replacement Filter Lengths

- 6.7" / 170 mm
- 10.7" / 271 mm

Filter Collapse Ratings

- 100 *psid* / 690 kPa / 6.9 bar

Standard Bypass Ratings

- 50 psi / 345 kPa / 3.5 bar
- 25 psi / 172.5 kPa / 1.72 bar
- No bypass

Assembly Weight

- 7.0lbs / 3.2 kg (short)
- 8.0 lbs / 3.6 kg (long)

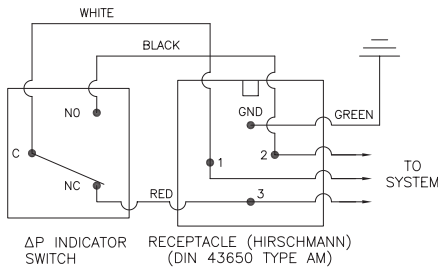
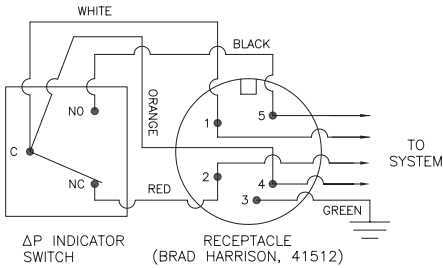
Operating Temperatures

- -22°F to 225°F / -30°C to 107°C

W021/023 Specification Illustrations

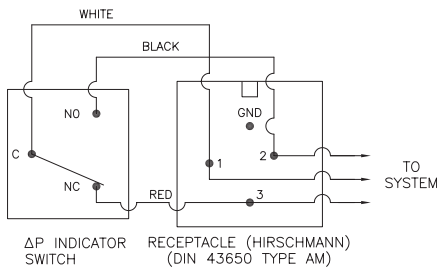
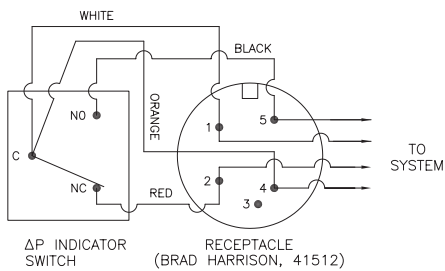
All dimensions are shown in millimeters [inches].

Indicator Switch Schematic Wiring Diagram Aluminum Electrical Housings



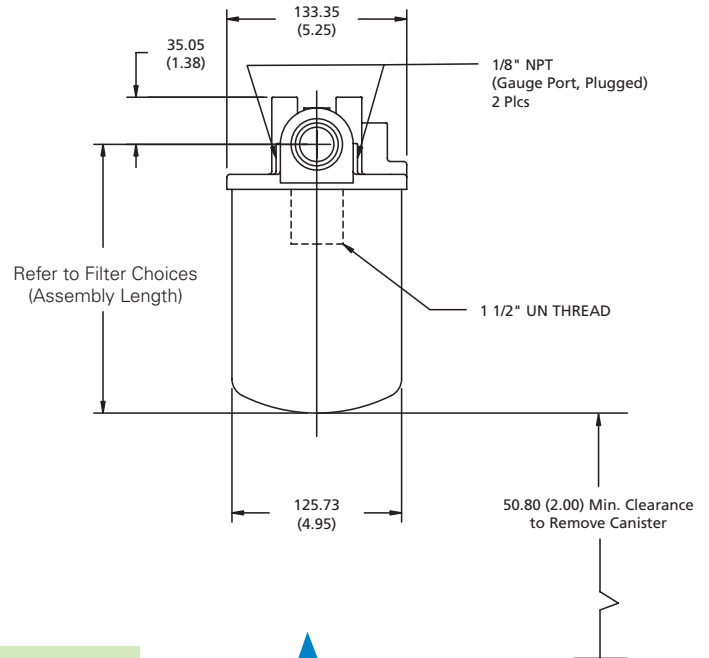
Note: The female plug (connector) is to be furnished by customer.

Plastic Electrical Housings

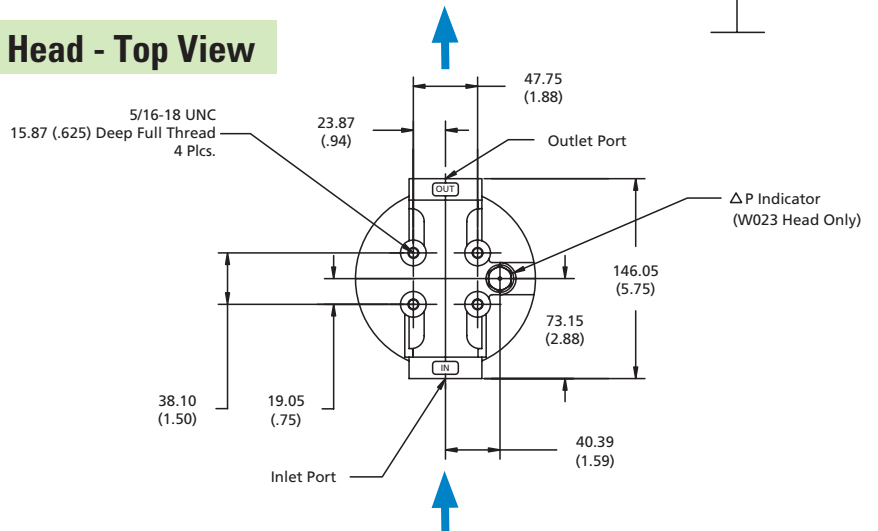


Note: The female plug (connector) is to be furnished by customer.

Assembly - Side View



Head - Top View



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.



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W023 Components Filter Choices

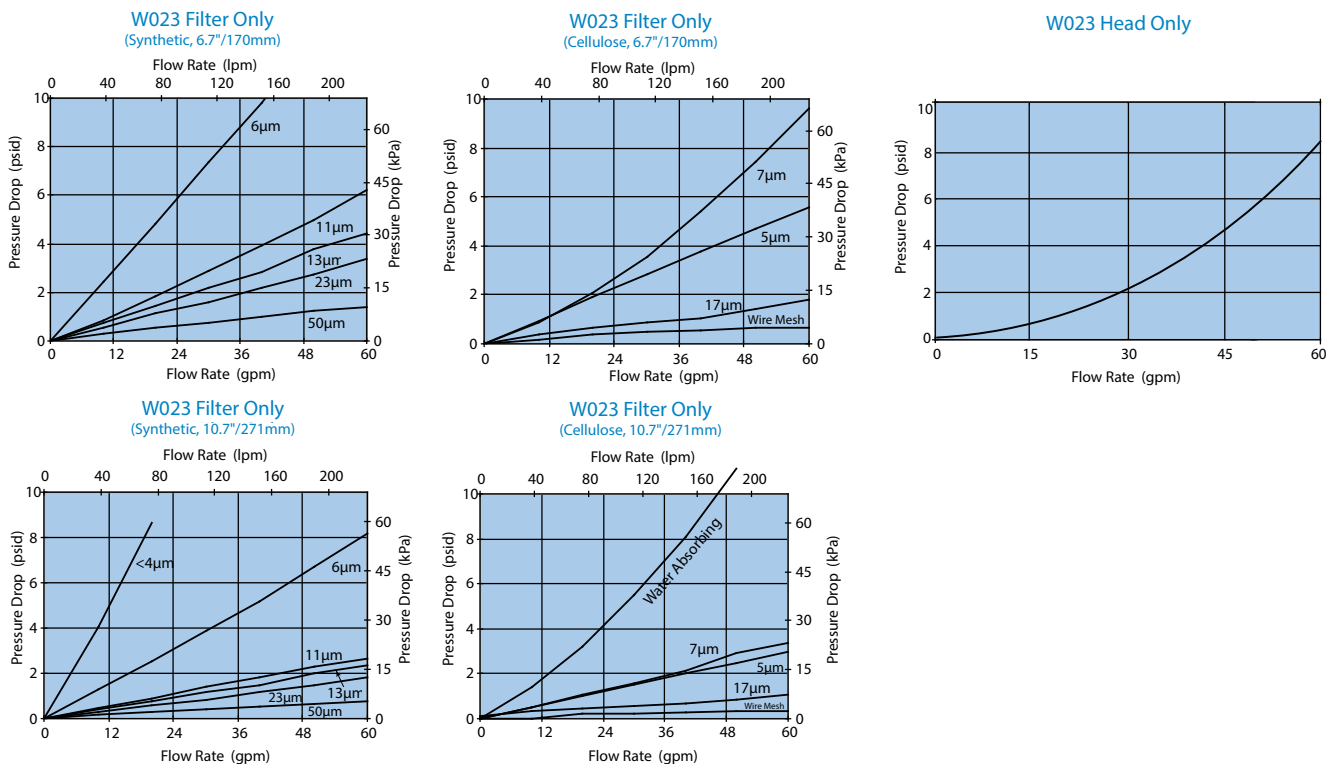
Media Type	$\beta_{x(c)} = 2$ Rating based on ISO 16889	$\beta_{x(c)} = 1000$	Length in	mm	Donaldson Part No.	Comments
Synteq Synthetic	<4 μm	10.7	271	P167796	Viton® O-ring & square seal kit	
	6 μm	6.7	170	P167162	3-seal kit	
	6 μm	10.7	271	P165762	3-seal kit	
	11 μm	6.7	170	P165875	3-seal kit	
	11 μm	10.7	271	P165876	3-seal kit	
	13 μm	6.7	170	P167944	Viton O-ring & square seal kit	
	13 μm	10.7	271	P167945	Viton O-ring & square seal kit	
	23 μm	6.7	170	P165877	3-seal kit	
	23 μm	10.7	271	P165878	3-seal kit	
	50 μm	6.7	170	P165879	3-seal kit	
50 μm	10.7	271	P165880	3-seal kit		
Cellulose	5 μm	6.7	170	P550386	3-seal kit	
	5 μm	10.7	271	P550250	3-seal kit	
	7 μm	6.7	170	P550388	3-seal kit	
	7 μm	10.7	271	P550251	3-seal kit	
	17 μm	6.7	170	P550387	3-seal kit	
	17 μm	10.7	271	P550252	3-seal kit	
Water Absorbing	10 μm	10.7	271	P561183	Cellulose media, 3-seal kit. Absorbs 350 ml water.	
Wire Mesh	150 μm	6.7	170	P550275	Stainless steel wire mesh, 3-seal kit	
	150 μm	10.7	271	P550276	Stainless steel wire mesh, 3-seal kit	

Filter Notes

- * All models have 1½-16 UNF threads except where otherwise noted. All models measure 5.0"/127 mm outer diameter.
- Some part numbers are offered with the same beta ratings to maintain customer ordering patterns.

Viton® is a registered trademark of E. I. DuPont de Nemours and Company.

Performance Data





Filter Head Ordering Guide

Filter Assembly	W023 TABLE 1	1 TABLE 2	C TABLE 3	3 TABLE 4	4 N TABLE 5	B TABLE 6
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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
W023	Machined for ΔP indicator only

Table 2

Filter Collapse Options	
CODE	DESCRIPTION
1	150 psid

Table 3

Port Size Options	
CODE	PORT SIZE
C	SAE-20 O-ring
P	1¼" NPT

Table 4

Bypass Setting Options	
CODE	BYPASS SETTING
1	Non-bypassed (plugged)*
3	25 psid
4	50 psid

*80 psid maximum operating pressure

Table 5 (Primary)

Indicator Style and Setting	
CODE	ΔP INDICATOR STYLE & SETTING
C	Electrical/visual 15 psid
D	Electrical/visual 35 psid
F	Electrical/visual 15 psid & TL
G	Electrical/visual 35 psid & TL
H	Electrical/visual 15 psid with 12" 3-wire flying lead
J	ΔP indicator plug
K	Visual indicator 15 psid
L	Visual indicator 35 psid
M	Visual indicator 35 psid with TL and surge
N	Electrical/visual 35 psid with 12" 3-wire flying lead
Q	Electrical switch 15 psid
R	Electrical switch 35 psid
X	Electrical/visual 15 psid with TL and surge
Y	Electrical/visual 35 psid with 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®

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Hirschmann® is a registered trademark of Richard Hirschmann of America Inc.
Buna-N® is a registered trademark of E. I. DuPont de Nemours and Company.