



Mix&Match to Get What You Need

Donaldson's Mix&Match system provides the great performance and functional advantages of custom-engineered filters with the convenience and speedy delivery of in-stock parts. Choose your options and build a filter model that exactly suits your cleanliness requirements.

Technical Data

- Operating pressure up to 2,4 MPa (24 bar).
- Static pressure testing up to 5,5 MPa (55 bar).
- By-pass valve setting 170 kPa (1,7 bar) differential per ISO 3968.
- Available by-pass valve with setting 350 kPa (3,5 bar) differential.
- Operating temperature -20 +120°C.
- Pressure fatigue strength per NFPA T3.10.17 0-2,4 MPa (0-24 bar) for 100.000 cycles.
- Compatibility with hydraulic fluids per ISO 2943.
- Flow rate and pressure drop determined per ISO 3968 with oil kinematic viscosity 30 cSt at 40°C and density 0,875 kg/dm³.

Filter Elements

- Operating pressure up to 2,4 MPa (24 bar).
- Static spin-on burst resistance 5,5 MPa (55 bar).
- Element collapse resistance 1,4 MPa (14 bar) per ISO 2941.
- Cellulose paper: 23 micron.
- Synteq® synthetic media: 7-11-33-50 micron.
- Heavy duty steel can with die cast baffle for added strength and a special head-to-spin-on O-ring seal.
- Available intermediate length spin-on L=200 mm.



Components

	CELLULOSE MEDIA		SYNTHETIC MEDIA								CARTRIDGE CODE
	#10		#20		#7		XP10		XP5		
	$\beta_{23\mu(m)} \geq 1000$		$\beta_{50\mu(m)} \geq 1000$		$\beta_{33\mu(m)} \geq 1000$		$\beta_{11\mu(m)} \geq 1000$		$\beta_{7\mu(m)} \geq 1000$		
Family	RMF		RMF		RMF		RMF		RMF		
HMK513	160	P165705	200	P165672	180	P165569	170	P165659	160	P165675	K513

RMF = Recommended Maximum Flow in liters/minute with use of standard head.
BPV = Bypass Valve Setting.

Heads Choices

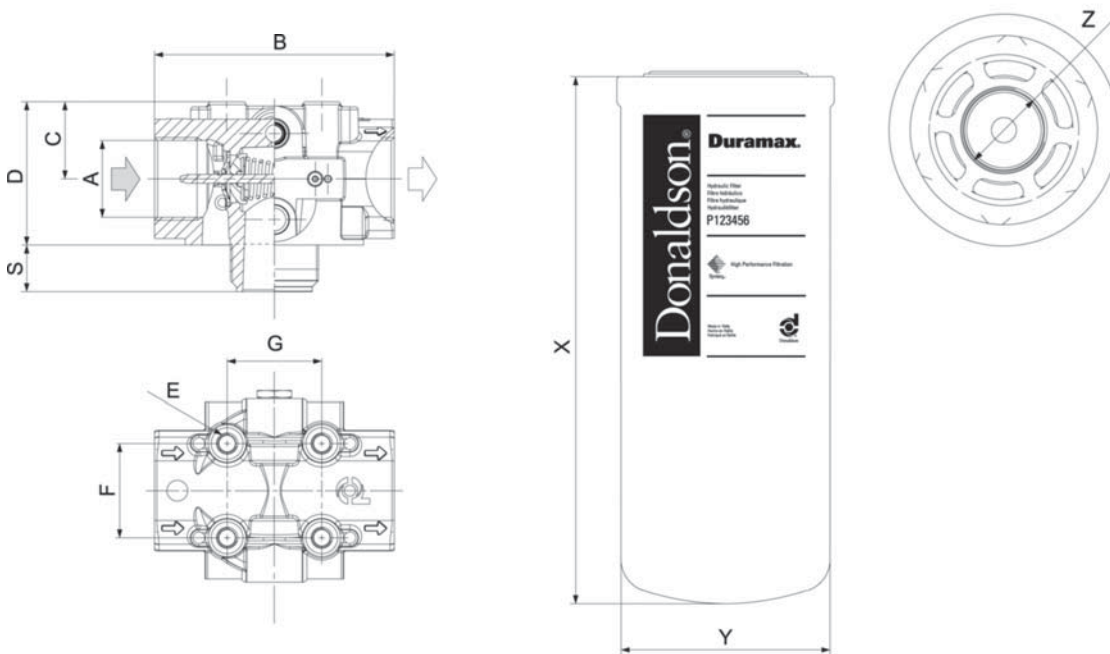


Head for Family	Part	Ports	Bypass Valve Setting	Indicator Info			Snout	Mounting holes
				Drilled holes for indicator	Side	Indicator to use		
K513	P175095	1 5/8-12 UN	3,5 bar	plugged	left	P165194, P167455, P171087, P170926 or P173893	1 3/4-12 UN	M10
	P173448	G 1 1/4	1,7 bar	plugged used	left left	P162400, P163839, P171143 or P173944 P162696 (installed)	1 3/4-12 UN	M10
	P766297*	G 1 1/4	1,7 bar	no	-	none	1 3/4-12 UN	M10
	P766298	G 1 1/4	1,7 bar	used	left	P162696 (installed)	1 3/4-12 UN	M10
	P766299	G 1 1/4	1,7 bar	plugged	left	P162400, P163839, P171143 or P173944	1 3/4-12 UN	M10
	P761446	G 1 1/4	3,5 bar	used	left	P165194 (installed)	1 3/4-12 UN	M10

HMK 05 – Duramax Filters aren't delivered with drilled holes for indicators or bypass valve, heads are.
Unless otherwise mentioned, the usage of indicators is mandatory, because the drilled holes for indicators are not plugged.

* Standard Head

Standard Head	HEAD DIMENSIONS									SPIN-ON DIMENSIONS		
	A	B	C	D	E	F	G	S	BPV	X	Y	Z
		mm	mm	mm		mm	mm	mm	bar	mm	mm	
P766297	G1 1/4	121	39	72,6	M10	48	48	21	1,7	295	117	1 3/4-12 UNF 2B

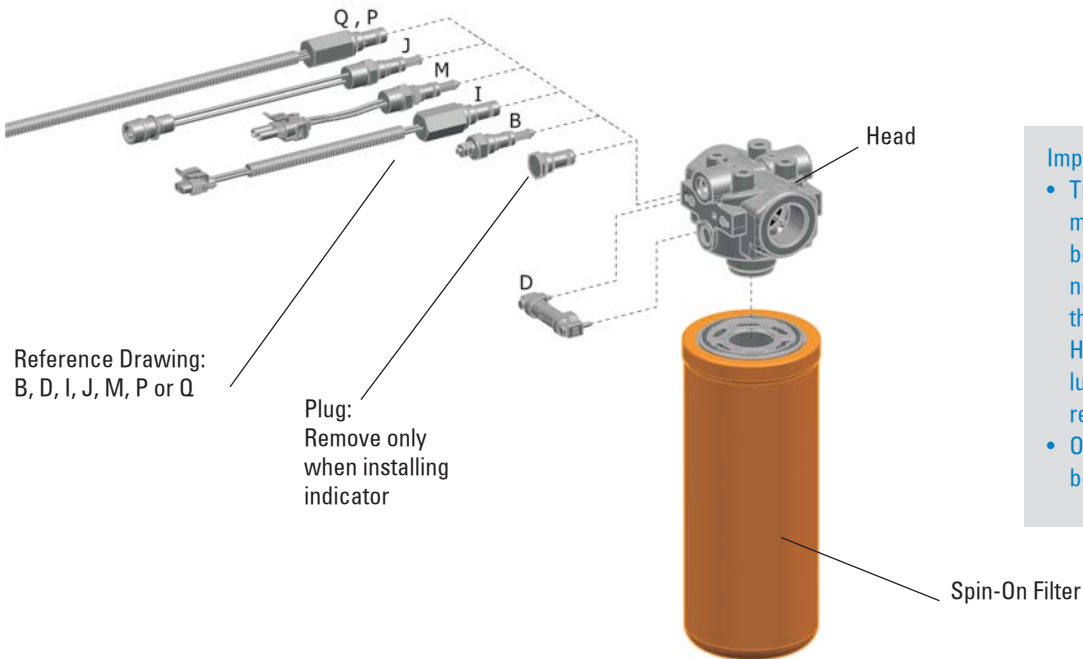


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Indicator Choices

Indicator	Kind		Reference Drawing	Setting (bar)	Contact	Cable Clamp	Max. Values
P162400	Electrical	Differential	B	1,25	Normally Open		6-30 V DC; 200 mA
P163839	Electrical	Differential	B	1,25	Normally Closed		6-30 V DC; 200 mA
P165194	Electrical	Differential	B	2,75	Normally Open		30 V DC; 0,2A
P167455	Electrical	Differential	B	2,75	Normally Closed		30 V DC; 0,2A
P162696	Visual	Differential	D	1,7			
P167580	Visual	Differential	D	3,4			
P170926	Electrical	Differential	I	2,75	Normally Closed	Packard Connector	6-30 V DC; 100 mA
P171087	Electrical	Differential	M	2,75	Normally Open	Packard Connector	6-30 V DC; 200 mA
P171143	Electrical	Differential	J	1,25	Normally Open	Canon Connector	6-30 V DC; 200 mA
P173944	Electrical	Differential	Q	1,4	Normally Open or Closed	3 Wires	24V DC; 110 V AC; 2A
P173893	Electrical	Differential	P	2,75	Normally Open or Closed	3 Wires	6-30 V DC; 100 mA

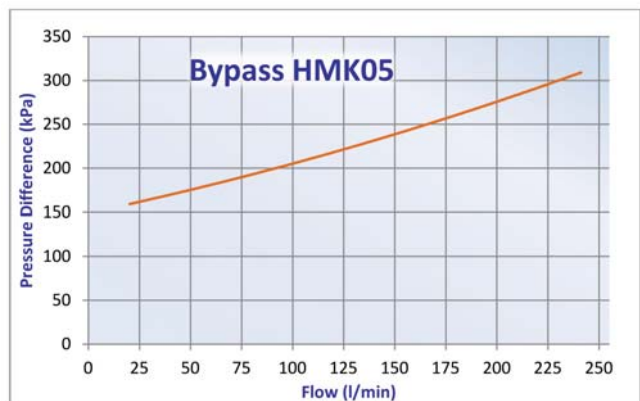
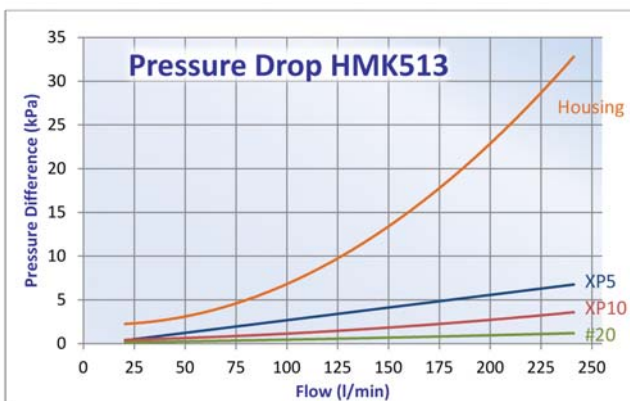
Installation & Service Guidelines



Important

- The filter head snout must be lubricated before spinning on a new filter to prevent thread damage. Heavyweight gear lube is recommended.
- Oil the O-Rings before assembly.

Performance Curves



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