



## 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 42 MPa (420 bar).
- Static pressure testing up to 63 MPa (630 bar).
- Fatigue pressure of 2.000.000 cycles at 0-30 MPa (0-300 bar) per NFPA T 3.10.5.1, R2-2000.
- By-pass valve setting 600 kPa (6 bar) per ISO 3968.
- Operating temperature -20 +120°C.
- Compatibility with hydraulic fluids per ISO 2943.
- Flow rate and pressure drop per ISO 3968 with oil kinematic viscosity 30 cSt at 40°C and density 0,875 kg/dm<sup>3</sup>.
- Filter head casting in spheroidal cast iron.
- Extruded steel bowl.

### Filter Elements

- Synteq<sup>®</sup> synthetic media: 6-8-11-23 micron, reinforced with wire mesh.
- Collapse resistance 2 MPa (20 bar) per ISO 2941.
- Available high collapse 21 MPa (210 bar) – on customer's request.



## Components

		SYNTHETIC MEDIA								CARTRIDGE CODE
		/03		XP10		XP5		/00		
		$\beta_{23\mu m(c)} \geq 1000$		$\beta_{11\mu m(c)} \geq 1000$		$\beta_{6\mu m(c)} \geq 1000$		$\beta_{6\mu m(c)} \geq 1000$		
Family	Collapse	RMF		RMF		RMF		RMF		
AP358	Standard	30	P171715	30	P171714	20	P171713	20	P761392	CM230
	High		on request		P176939		P173106		on request	CM231
AP359	Standard	50	P165136	50	P165006	40	P165041	40	P169429	CM250
	High		on request		P167181		P176613		on request	CM251
AP360	Standard	90	P165138	90	P165015	70	P165043	70	P167838	CM290
	High		on request		P167183		P176616		on request	CM291

RMF = Recommended Maximum Flow in liters/minute with use of standard housing.

BPV = Bypass Valve Setting.

High Collapse elements are non-stock items, request your sales contact for offer and lead-time.

Other medias available on request.

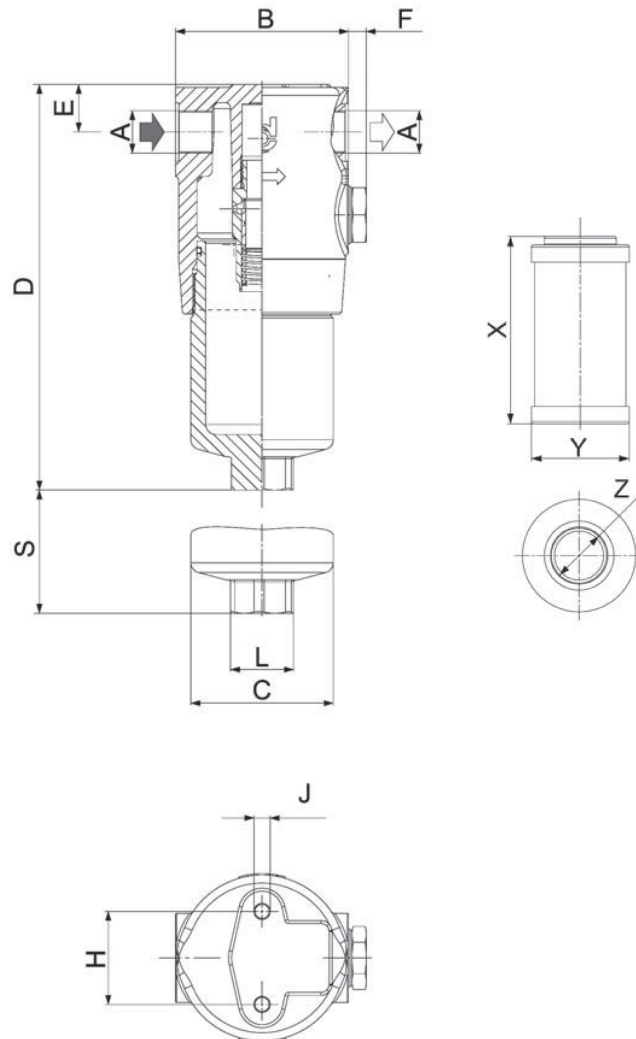
## Indicator Choices

Part	Kind		Reference Drawing	Setting (bar)	Contact	Protection Class	Cable Clamp	Max. Values	Remark
P171945	Visual	Differential	H	5					
P171947	Electrical	Differential	K	5	Normally Open/Closed	IP65	PG11	250V AC; 30 VDC; 5A res. and ind.	
P171944	Electrical	Differential	K	5	Normally Open/Closed	IP65	PG11	250V AC; 30 VDC; 5A res. and ind.	with thermostat at min. temperature at 30°C
P761056	Electrical	Differential	L	5	Normally Open/Closed	IP65	PG11	30 V DC; 30 V AC; 0,5 A res. and 0,2 A ind.	

HIGH PRESSURE FILTERS



Standard Housing	HOUSING DIMENSIONS													CARTRIDGE DIMENSIONS			POSSIBLE INDICATOR
	A	B	C	D	E	F	H	J	L	M	N	S	BPV	X	Y	Z	
		mm	mm	mm	mm	mm	mm		mm	predrilled holes	plugged	mm	bar	mm	mm	mm	
P766377	G1/2	85	70	197	23	9	46	M8	Hex30	G1/2	yes	40	6	87	46	25,4	P171945 P171947 P171944 P761056
P766378	G1/2	85	70	223	23	9	46	M8	Hex30	G1/2	yes	40	6	113	46	25,4	
P766379	G3/4	85	70	324	23	9	46	M8	Hex30	G1/2	yes	40	6	280	46	25,4	



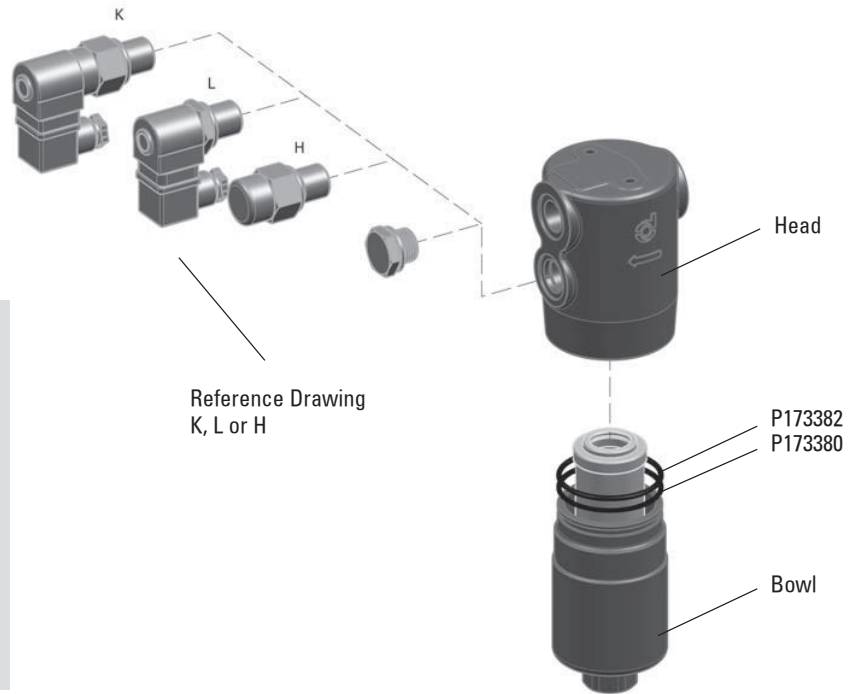
HIGH PRESSURE FILTERS

## Installation & Service Guidelines

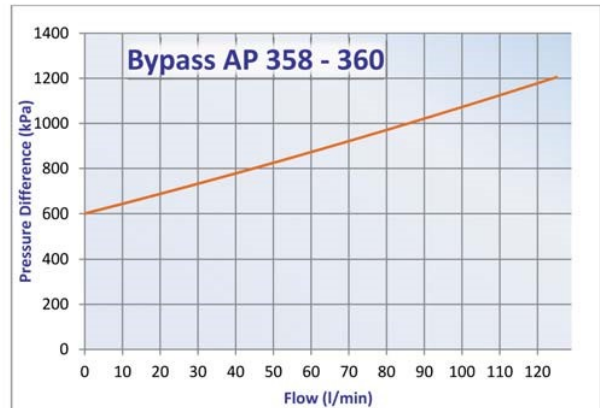
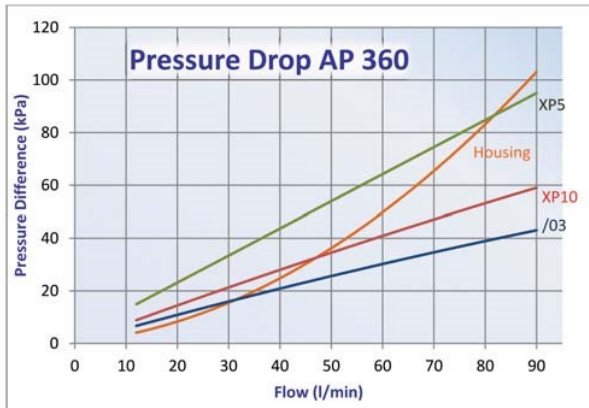
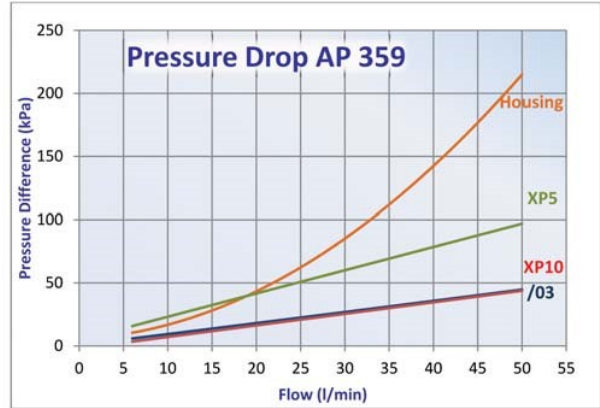
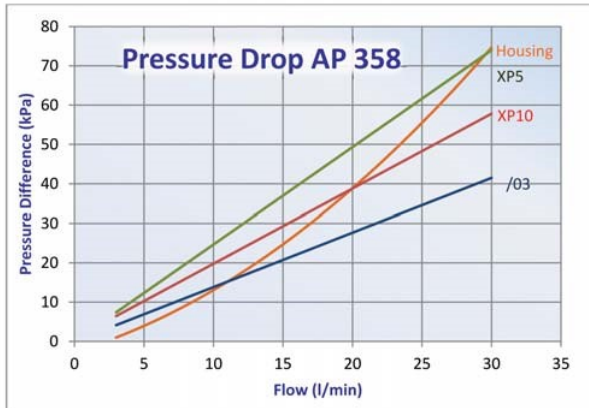
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**Important**

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



## Performance Curves



HIGH PRESSURE  
FILTERS

**FPK02&04-AP220**

**FPK02-AP280**

**FPK03&04-AP420**

**FMK-FM**

**FCK-LC**



Open empty housing  
in correct order



Remove carton ring  
before use



Check if O-ring between  
lid and housing is installed and intact

Check if O-Ring on cartridge is installed and  
intact

For FIK:  
Mount O-ring over stud



For Low Pressure cartridges:  
Mount spring on cartridge



Mount element in  
housing



For Combo 120:  
Align arrows as shown



Assemble lid on housing



Assemble bolts and  
screws in correct order



Tighten screws, bolts or lid until thread ends  
For spin-ons: hand tighten until contact  
between O-ring and head is made; and then  
continue by hand as indicated on spin-on



Degrease surface where sparepart sticker  
will be mounted  
Only for cartridge type filters



Sparepart sticker in each sparepart box



Fix sparepart sticker in area indicated –  
Ready!



Do not forget seals

