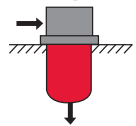


RF Series

In-tank / Inline Filters

360 psi • up to 400 gpm

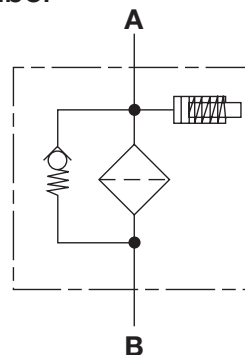


Features

- RF 30 filters are constructed of polyamide plastic.
- RF 60 - 330 filters are constructed of aluminum material. Aluminum alloy is water tolerant - anodization is not required for high water based fluids (HWBF).
- RF 660 - 1300 filters are constructed of ductile iron.
- Non-welded housing design reduces stress concentrations and prevents fatigue failure.
- Inlet/outlet port options include NPT, SAE straight thread O-ring boss, and SAE 4-bolt flange to allow easy installation without costly adapters.
- O-ring seals are used to provide positive, reliable sealing. Choice of O-ring materials (nitrile rubber, fluorocarbon elastomer, ethylene propylene rubber) provides compatibility with petroleum oils, synthetic fluids, water-glycols, oil/water emulsions, and high water base fluids.
- Bolt-on lid requires minimal clearance for removal.
- Reusable contamination basket prevents loss of retained contaminants into the reservoir during element replacement.
- Single piece casting provides rigidity for inline or in-tank mounting.

Note: This filter is configured with an R type (return/low pressure) element, so if the filter requires a bypass, the bypass is located in the closed end cap of the cartridge element.

Hydraulic Symbol



Technical Specifications

Mounting Method	4 Mounting holes - filter housing	
Port Connections	Inlet / Outlet	
30	1/2" Threaded / 0.71" Dia Smooth	
60/110	SAE-12 / SAE-12; 3/4" NPT / SAE-12	
160/240	SAE-20 / SAE-20; 1 1/4" NPT (with adapter) / SAE-20	
330	SAE-20 / 2" NPT (with flange port adapter)	
	2" Threaded (NPT/BSPP/SAE) / same as inlet	
660	2" SAE Flange, Code 61 / 2" NPT	
	3" SAE Flange, Code 61 / 3" NPT	
950	3" SAE Flange, Code 61 /	
	3" SAE Flange, Code 61	
1300	3-1/2" SAE Flange, Code 61 /	
	3-1/2" SAE Flange, Code 61	
	4" SAE Flange, Code 61 /	
	4" SAE Flange, Code 61	
Direction of Flow	Inlet: Side	Outlet: bottom
Materials of Construction	Housing	Lid
30	Polyamide	Polyamide
60-330	Aluminum	Aluminum
660-1300	Ductile Iron	Ductile Iron
Flow Capacity		
30	8 gpm (30 lpm)	
60	16 gpm (60 lpm)	
110	29 gpm (110 lpm)	
160	42 gpm (160 lpm)	
240	63 gpm (240 lpm)	
330	87 gpm (330 lpm)	
660	174 gpm (660 lpm)	
950	251 gpm (950 lpm)	
1300	343 gpm (1300 lpm)	
Housing Pressure Rating		
Max. Allowable		
Working Pressure*	360 psi (25 bar); (size 30 - 145 psi, 10 bar)	
Fatigue Pressure	478 psi (33 bar) @ 700,000 cycles;	
Burst Pressure	30	580 psi (40 bar)
	60/110	1080 psi (75 bar)
	160/240	1230 psi (85 bar)
	330	1440 psi (100 bar)
	660-1300	3045 psi (210 bar)
Element Collapse Pressure Rating		
ON, W/HC,	290 psid (20 bar)	
ECON2, BN4AM, P/HC, AM	145 psid (10 bar)	
V	435 psid (30 bar)	
Fluid Temp. Range	14°F to 212°F (-10°C to 100°C)	
	Consult HYDAC for applications below 14°F (-10°C)	
Fluid Compatibility	Compatible with all hydrocarbon based, synthetic, water glycol, oil/water emulsion, and high water based fluids when the appropriate seals are selected.	
Indicator Trip Pressure		
	P = 29 psi (2 bar) -10% (standard)	
	P = 72 psi (5 bar) -10% (optional)	
Bypass Valve Cracking Pressure		
	ΔP = 43 psid (3 bar) +10% (standard)	
	ΔP = 87 psid (6 bar) +10% (optional)	

*Note: All RF Filters MAWP reduce to 7 bar (101.5 psi) when using the following "VMF" and "VR" indicators: B, BM, E, ES, GC, LE, LZ.

Model Code

RF ON 330 D L 10 C 1 . X / 16 - V - B6

Filter Type

RF = Return Line Filter

Element Media

ON = Optimicron® BN/AM = Betamicron®/Aquamicron®
 ECON2 = ECOmicron® AM = Aquamicron®
 W/HC = Wire Mesh P/HC = Polyester
 V = Metal Fiber

Size

30, 60, 110, 160, 240, 330, 660, 950, 1300

Pressure Rating

B = 145 psi (10 bar) (size 30 only)
 D = 360 psi (25 bar)
 V = 101.5 psi (7 bar) when using following "VR" indicators: B, BM, E, ES, GC, LE, LZ

Type of Connection

B = 1/2" Threaded (size 30 - NPT / BSPP inlet/0.71" Outlet)
 C = 3/4" Threaded (sizes 60, 110 - NPT / BSPP inlet/3/4" SAE Outlet)
 E = 1 1/4" Threaded Inlet (SAE/NPT) / 1 1/4" threaded outlet (sizes 160 - 240) or 2" NPT outlet (size 330)
 G = 2" Threaded (size 330 - NPT / BSPP / SAE Inlet / Outlet - same as inlet)
 L = 2" SAE 32 Flange Inlet / 2" NPT Outlet (size 330)
 M = SAE 48 Flange Inlet / SAE 48 Flange Outlet (size 660)
 N = SAE 48 Flange Inlet / 3" NPT Outlet (size 660)
 O = SAE 56 Flange (size 950) - Inlet & Outlet
 P = SAE 64 Flange (size 1300) - Inlet & Outlet

NPT available with Adapter (to size 240)

Filtration Rating (micron)

1, 3, 5, 10, 15, 20 = ON 3, 10 = BN/AM 3, 5, 10, 20 = ECON2 40 = AM
 25, 50, 74, 100, 149, 200 = W/HC 10, 20 = P/HC 3, 5, 10, 20 = V

Type of Static or ΔP Clogging Indicator

A, B, BM, C, D, E, LE (Others available upon request)

Type Number

1 = Standard Connection

Modification Number (latest version always supplied)

Inlet Port Configuration

0 = BSPP Straight Thread (sizes 30 - 330)
 3 = NPT (sizes 30 - 330)
 12 = SAE Straight Thread Inlet/Outlet Connections (sizes 60, 110, 160, 240, 330 only)
 16 = SAE Flange Code 61 Inlet Connections (sizes 330 - 1300)

Seals

(omit) = Nitrile rubber (NBR) (standard) V = Fluorocarbon elastomer (FKM) EPR = Ethylene propylene rubber (EPR)

Bypass Valve

(omit) = 43 psid (3 bar) (standard)
 B1 = 14.5 psid (1 bar) (lube or coolant) B6 = 87 psid (6 bar) (return line extended life)] not available with ECON2
 B2 = 29 psid (2 bar) KB = No Bypass (flushing systems)

Supplementary Details

SO263 = Modification of ON and W/HC elements for Skydrol or HYJET phosphate ester fluids
 L24, L48, L110, L220 = Lamp for D-type clogging indicator (LXX, XX = voltage)
 DE = ΔP Indicator - For in-line applications (sizes 660, 950, 1300)
 T = With tank breather (size 30 only)
 W = Modification of "V" elements for use with oil water emulsions (HFA) and water polymer solutions (HFC)
 SFREE = Element specially designed to minimize electrostatic charge generation

Replacement Element Model Code

0330 R 010 ON / V B6

Size

0030, 0060, 0110, 0160, 0240,
 0330, 0660, 0950, 1300

Filtration Rating (micron)

1, 3, 5, 10, 15, 20 = ON 3, 10 = BN4AM
 3, 5, 10, 20 = ECON2 40 = AM
 25, 50, 74, 100, 149, 200 = W/HC
 10, 20 = P/HC 3, 5, 10, 20 = V

Element Media

ON, ECON2, BN4AM, AM, P/HC, W/HC, V

Seals

(omit) = Nitrile rubber (NBR) (standard)
 V = Fluorocarbon elastomer (FKM)
 EPR = Ethylene propylene rubber (EPR)

Bypass Valve

(omit) = 43 psid (3 bar) (standard) B6 = 87 psid (6 bar)
 B1 = 14.5 psid (1 bar) KB = no bypass
 B2 = 29 psid (2 bar)

Supplementary Details

SO263 = (same as above) W = (same as above)
 SFREE = (same as above)

Clogging Indicator Model Code

VR 5 C . X /

Indicator Prefix

VR = Return Filters
 VM = ΔP G 1/2 Indicator (sz. 660+, w/DE opt.)
 VD = ΔP LE Indicator (sz. 660+, w/DE opt.)

Trip Pressure

2 = 29 psid (2 bar) (return filters)
 5 = 72 psid (5 bar) (optional)

Type of Indicator

A = No indicator, plugged port
 B = Pop-up indicator (auto reset - static only)
 BM = Pop-up indicator (manual reset)
 C = Electric switch - SPDT
 D = Electric switch and LED light - SPDT
 E = Visual pressure gauge
 LE = Electric switch and pop-up

Modification Number

Supplementary Details

Seals
 (omit) = Nitrile rubber (NBR) (standard)
 V = Fluorocarbon elastomer (FKM)
 EPR = Ethylene propylene rubber (EPR)

Light Voltage (D type indicators only)

L24 = 24V L48 = 48V L110 = 110V L220 = 220V

(For additional details and options, see Section G - Clogging Indicators.)

Model Codes Containing RED are non-stock items — Minimum quantities may apply — Contact HYDAC for information and availability