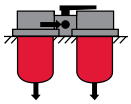
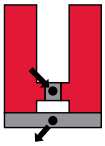
NFD Series

In-Tank / Inline Duplex Filters

360 psi • up to 450 gpm



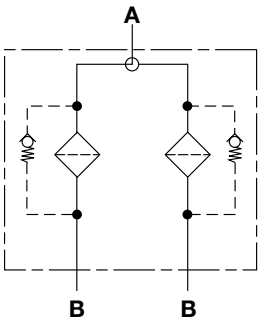
(1.0)



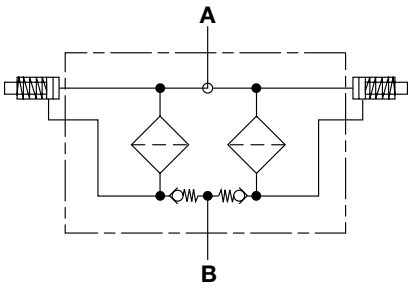
(2.0)

Version 2.0 pictured

Hydraulic Symbol



Version 1.0



Version 2.0

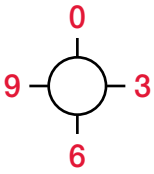
Inlet / Outlet Port Location Configurator

NFD1310/2610 2.X Inlet/Outlet Available Configurations

	03		09
	(33)		39
	93		99

NFD5210/7810/10410 2.X Inlet/Outlet Available Configurations

00	03		09
30	(33)		39
60			69
	93		99



0 = Pointed to Top
3 = Pointed to Front
6 = Pointed to Bottom
9 = Pointed to Back

(33) = Stand Configuration *(not given as supplementary details)*

First Number = Inlet Orientation
Second Number = Outlet Orientation

Features

- NFD Filters have an extremely large filtration area and flow capacity of 450 gpm *(4" pipe size limitation)*.
- NFD Filters can be configured for in-tank or inline applications
- Vent and drain ports are standard
- Aluminum alloy is water tolerant - anodization is not required for high water based fluids (HWBF)
- Screw-on lid provides easy access to filter element for replacement
- Reusable contamination basket prevents re-entry of retained contaminants into the reservoir during element replacement *(1.0 Version only)*
- Filters can be fitted with clogging indicators to monitor the contamination level of the element
- NFD duplex filters have a ball-type diverter valve to provide continuous filtration and eliminate the need to shut-down the system during element changeout
- Flange connection bolts included for all SAE-DIN flange ports

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.

Technical Specifications

Mounting Method	See drawings	
Port Connection	SAE-64 Flange Code 61	
Flow Direction		
1.0 version	Inlet: Side	Outlet: Bottom
2.0 version	Inlet: Side	Outlet: Side
Construction Materials		
Head, Housing, Lid	Aluminum	
Elbows, Manifolds	Ductile Iron	
Flow Capacity		
1310	343 gpm (1300 lpm)	
2610, 5210, 7810, 10410	450 gpm (1700 lpm)	
Housing Pressure Rating		
Max. Allowable Working Pressure*	360 psi (25 bar)	
Fatigue Pressure	360 psi (25 bar)	
Burst Pressure	Contact HYDAC office	
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 Temperature Range	-22°F to 212°F (-30°C to 100°C)	
Consult HYDAC for applications below -22°F (-30°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		
ΔP = 29 psid (2 bar) -10%	1.X - Static	
ΔP = 72 psid (5 bar) -10%	2.X - Differential	
Bypass Valve Cracking Pressure		
ΔP = 14.5 psid (1 bar) +10%		
ΔP = 43 psid (3 bar) +10% *(standard)*		
ΔP = 87 psid (6 bar) +10%		

*Note: All NFD...1.0 Filters MAWP reduce to 7 bar (101.5 psi) when using the following "VMF" and "VR" indicators: B, BM, E, ES, GC, LE, LZ.

info@hidrafluid.es
976 24 32 10

Model Code

NFD ON 1310 D A P 3 B 1.X / _ _ _ _ _

Filter Type
NFD = Duplex In-Tank Return Line Filter

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

Size
1310, 2610, 5210, 7810, 10410

Operating Pressure
D = 360 psi (25 bar)
V = 101.5 psi (7 bar) *(When using the following "VR" indicators: B, BM, E, ES, GC, LE, LZ)*

Type of Change Over
A = Ball valve

Type of Connection
P = SAE DN 100 (4") flange

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

Type of Static *(1.X Configuration)* **or ΔP** *(2.X Configuration)* **Clogging Indicator**
A, B, BM, C, D *(Others available upon request)*

Type Number / Modification Number
1.X = In-Tank Filter - Static Indicator
2.X = Inline Filter - ΔP Indicator

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)*
KB = no bypass *(flushing system)*
not available with ECON2

Supplementary Details
SO263 = Modification of ON and W/HC elements for Skydrol or HYJET phosphate ester fluids
LED = 2 light emitting diodes for up to 24V DC
L24, L48, L110, L220 = Lamp for D-type clogging indicator *(LXX, XX = voltage)*
SB = Equalization valve set
EM = Manual vent valve set
VKD = Drain manifold
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

Flow Path
00, 03, 09, 30, 39, 60, 69, 93, 99
(omit) = 33 - Front Inlet/Front Outlet *(standard)*
Note: See previous page of "Inlet / Outlet Port Configurator" for flow path positions.

Replacement Element Model Code

1300 R 003 ON / V _ _

Size
1300 - for housings: 1310
2600 - for housings: 2610, 5210, 7810, 10410

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

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

Seals
(omit) = standard - Nitrile rubber (NBR)
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

Supplementary Details
SO263 = *(same as above)*
SFREE = *(same as above)*
W = *(same as above)*
Note: Element contamination retainer = P/N 01204141

Clogging Indicator Model Code

VR 2 B . X /

Indicator Prefix
VR = Static Indicators *(1.X version)*
VM = ΔP Indicators *(2.X version)*

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 - 1.0)*
BM = Pop-up indicator *(manual reset)*
C = Electric switch - SPDT
D = Electric switch and LED light - SPDT

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.)

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