HYDAC INTERNATIONAL

Optimicron® Diesel filter elements ON-DF

Description

The HYDAC Optimicron® Diesel filter elements were specially developed to remove large amounts of contamination from diesel fuels in a single pass. The elements excel with their special filter mesh pack design and innovative Helios technology. This stabilises the pleats and increases the available area of incident flow.

A clear advantage of this is very good flow characteristics and therefore a lower differential pressure. As a result, the mesh pack enables the optimum combination of filtration efficiency, filter service life and low pressure loss.

The filter elements are used in the LowViscosity Housing filter series (LVH-F)

Applications

- Diesel storage, transport and refuelling applications
- Mining
- Ports
- Refineries
- Chemical industry

Advantages

- Good price/performance ratio
- High separation in a single pass
- High level of cleanliness due to graduated depth filter construction
- Simple element replacement
- Excellent contamination retention capacity
- Stable pleat structure
- Low Δp
- Low maintenance costs due to long intervals between filter changes
- Significant reduction in pressure loss and very long filter service life thanks to the use of innovative Helios pleat geometry
- High fluid compatibility

Technical data

General data	
Maximum permitted differential pressure	2.5 bar
Filtration type	Absolute
Type of filter element	Single-use element
Filtration rating	3, 5, 10, 20 µm
Beta values	$\beta_{(x)} > 1000$
Flow direction	N10 to N32: from outside to inside N42 : from inside to outside
Permitted fluid temperature	-10 °C … 60 °C*
Permitted storage temperature	5 ... 50 °C
Permitted fluids	Diesel according to EN590, ASTMD975 Biodiesel according to EN14214, B0 to B100 Fuel oil according to EN51603-1 Marine gas oil DMA, DMB, DMC, DMX, DMZ
Sealing material	FPM (FKM, Viton®)

* or at least 10 °C below the flash point of the fluid used / deployed

Model code

N42 - ON–DF 010 FA - 40 F

Length of filter elements
N10 = 10″ (can be used in LVH-F-110)
N16 = 16″ (can be used in LVH-F-115
N20 = 20″ (can be used in LVH-F-120)
N32 = 32″ (can be used in LVH-F-130)
N42 = 42″ (can be used in LVH-F-140 to 840)

Filter type
ON-DF = Optimicron Diesel Filter

Filtration rating
3 = 3 µm
5 = 5 µm
10 = 10 µm
20 = 20 µm

Filter material
A = Filter material type A

Cap type
40 = necessary for length N42
41 = necessary for length N10 and N20
42 = necessary for length N16 and N32

Sealing material
F = FPM (FKM, Viton®)

R factors

	Filter element filtration rating			
Filter element	**3 µm**	**5 µm**	**10 µm**	**20 µm**
N10ON-DF-xxx	0.38	0.38	0.32	0.30
N16ON-DF-xxx	0.14	0.14	0.14	0.14
N20ON-DF-xxx	0.37	0.32	0.28	0.27
N32ON-DF-xxx	0.16	0.16	0.16	0.16
N42ON-DF-xxx	0.24	0.24	0.24	0.24

NOTE

The information in this brochure relates to the operating conditions and applications described.

For applications and/or operating conditions not described please contact the relevant technical department.

Subject to technical modifications.

Pressure drop

The total pressure drop of a filter at a certain flow rate Q is the sum of the housing Δp and the element Δp and is calculated as follows:

$\Delta p_{total} = \Delta p_{housing} + \Delta p_{element}$

$\Delta p_{housing}$ = see housing curve in filter housing brochure

$\Delta p_{element\ [bar]} = \frac{(R*v*Q)}{n*1000}$

R = R factor $[\frac{mbar}{\frac{l}{min}*\frac{mm^2}{s}}]$

v = kinematic viscosity $[\frac{mm^2}{s}]$

Q = flow rate $[\frac{l}{min}]$

n = number of filter elements

HYDAC FILTER SYSTEMS GMBH
Industriegebiet
D-66280 Sulzbach / Saar
Tel.:+49 (0) 6897/509-01
Fax:+49 (0) 6897/509-9046
Internet: www.hydac.com
E-mail: filtersystems@hydac.com