

HYDAC INTERNATIONAL



Filter element Dimicron N15DM

Description

The filter elements of the Dimicron series have been specially developed for:

- filtering ultra-fine solid particle contamination and
- removing oil degradation products from hydraulic and lubrication oils in the bypass flow.

The elements can also be used when there is free water in the hydraulic fluid and remove some of the water.

Fields of application

- Offline filtration in lubrication systems
- Offline filtration in hydraulic systems

Advantages

- Outstanding filtration performance ($\beta_x > 1000$)
- Low input differential pressure
- High contamination retention capacity
- Fine particle contamination, water and oil degradation products are removed by depth filter material
- Fully incinerable for simple waste disposal
- Low oil carry-over during element change
- Compatible with a broad range of fluids
- Simple element replacement

Technical data

	N15DM
Contamination retention capacity in metalworking applications	~ 4,000 g
Contamination retention capacity with iron oxide	~ 2,400 g
Contamination retention capacity in acc. with ISO 16889 with ISOMTD	~ 500 g
Water retention capacity	~ 1,000 ml
Filtration ratings	2 μ m, 5 μ m, 10 μ m, 20 μ m, 30 μ m
β_x values	> 1000
Permitted fluid temperature	-10 to 80 °C / 14 to 176 °F
Storage temperature	5 to 40 °C / 41 to 104 °F
Filter material	Cellulose
Sealing material	FKM (FPM, Viton®)
Other materials	Standard: polypropylene Optional: polyamide

Compatibilities with pressure fluids in acc. with ISO 2943

- Hydraulic oils H to HLPD DIN 51524
- Lubrication oils DIN 51517, API, ACEA, DIN 51515, ISO 6743
- Compressor oils DIN 51506
- Biodegradable operating fluids VDMA 24568 HETG, HEES, HEPG
- Fire-resistant fluids HFA, HFB, HFC and HFD

Preferred models

Filter element	Part number
N15DM002	1251590
N15DM010	3115180

Model code

N15 DM 002 / - PA

Element size

N15

Element type

DM = Dimicron

Filtration rating

002 = 2 µm

005 = 5 µm

010 = 10 µm

020 = 20 µm

030 = 30 µm

Supplementary details

- = polypropylene

PA = polyamide

Pressure drop

The pressure drop of the elements is calculated using the R factors. The following calculation is based on clean filter elements.

$$\frac{R \cdot v \cdot Q}{n} \Delta p_{\text{element}} [\text{mbar}] =$$

$$R = \text{R-factor} \left[\frac{\text{mbar}}{\frac{\text{l}}{\text{min}} \cdot \frac{\text{mm}^2}{\text{s}}} \right]$$

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

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

$$n = \text{number of filter elements}$$

R-factors

Filter element	R-factor	
	15 to 500 cSt	500 to 1000 cSt
	(mbar/(mm ² /s * l/min))	
N15DM002	0,458	0,458
N15DM005	0,292	0,292
N15DM010	0,215	0,222
N15DM020	0,142	0,150
N15DM030	0,067	0,054