FNA1HV 008 / 016

Viscosity range 15-1500 mm²/s / 70-6950 SUS · Operating pressure up to 6 bar / 87 psi · Nominal flow rate up to 16 l/min / 4.23 gpm

FNA1HV Off-line Filter Unit

Description

Application

In the by-pass flow of hydraulic and lubrication systems.
The unit is designed to operate with viscosities between 15 and 1500 mm²/s / 70 and 6950 SUS. This allows, for example, the filtration of transmission fluids and high viscosity oils even at low temperatures.

Performance features

Protection against wear:
By means of filter elements that meet the highest demands regarding cleanliness class and dirt-holding capacity.

Protection against failure:
By means of continuous partial filtration, excellent cleanliness classes can be achieved. Machine failures, due to contamination, are reduced, maintenance and oil change intervals are extended.

Special design features

Housing cover:
The cover can be opened without special auxiliary tools.

Compact:
The unique cover design allows that the filter element can be changed without losing any oil.
No pipes are needed except for the connection lines. The filter units feature low power consumption and minimal operational noise.

Pressure relief valve:
An integrated PRV (pressure relief valve) protects against overload.

Dirt retention valve:
At the bottom of the filter element, flown through from the inside to the outside, there is a dirt retention valve. This closes while pulling the filter element, which is hung up at the cover, out of the housing. Sedimented dirt is removed together with the filter element. Because of the cover design, the filter element change can be carried out almost without losing any oil.

Filter elements

Flow direction from the inside to the outside. The star-shaped pleating of the filter material results in:

- large filter surfaces
- low pressure drop
- high dirt-holding capacities
- particularly long maintenance intervals

Filter maintenance

By using a clogging indicator, the correct moment for maintenance is stated, what guarantees optimum utilization of the filter life.

Materials

Pump housing:	Aluminum alloy
Filter housing:	Aluminum alloy, powder painted RAL 5015
Cover:	Aluminum alloy
Seals:	NBR (FPM on request)
Filter media:	EXAPOR®MAX 2 - inorganic, multi-layer microfiber web EXAPOR®AQUA - combination of water absorbing filter layers and inorganic, multi-layer microfiber web

Remarks

Other colors of the filter housing are available on request.

Accessories

With Part No. FNA 008.1700, a mounting set is available, that facilitates the fitting of incoming and outgoing pipes onto an existing filling / venting connection.

Electrical and / or optical clogging indicators may be ordered together with the off-line filter unit. For choosing the proper clogging indicator see table Clogging Indicator in the Ordering Code. A separate order of the clogging indicator is possible. For dimensions and technical data of the clogging indicators see catalog sheet 60.30.

Hydraulic fittings and hoses for installation of the unit in the system are available on request.

Characteristics

Nominal flow rate

Up to 16 l/min / 4.23 gpm

Viscosity range

FNA1HV 008:
Motor 3~400/460 VAC: 15 - 2400 mm²/s / 70 - 11100 SUS
Motor 1~230 VAC: 15 - 1800 mm²/s / 70 - 8325 SUS

FNA1HV 016:
Motor 3~400/460 VAC: 15 - 1400 mm²/s / 70 - 6487 SUS
Motor 1~230 VAC: 15 - 1200 mm²/s / 70 - 5560 SUS

Connection

Threaded port according to ISO 228
(see Dimension Drawing)

Filter fineness

3 µm(c) ... 10 µm(c) for EXAPOR®MAX 2
separating solid particles
3 µm(c) ... 7 µm(c) for EXAPOR®AQUA
separating water and solid particles

Dirt-holding capacity

The dirt-holding capacity values in grams from the ISO MTD test dust are in accordance with the ISO 16889 requirements (see Ordering Code, table Filter Element).

Hydraulic fluids

Mineral oil and biodegradable fluids
(HEES and HETG, see info-sheet 00.20)

Temperature range of fluids

0 °C ... +65 °C / +32 °F ... +149 °F
(also see viscosity range)

Ambient temperature range

0 °C ... +50 °C / +32 °F ... +122 °F

Maximum suction height

1.5 m / 4.9 ft

Operating pressure

Max. 6 bar / 87 psi, pressure protection with pressure relief valve

Operating position

Vertical, motor at the bottom

Weight

Approx. 11 kg / 24.3 lbs

Recommended tank capacities

Up to 1500 l / 400 gal

Ordering code

FNA1HV ___ ___ - ___ / ___ -

Type of filter unit	Code
Off-line filter unit, high viscosity version	FNA1HV

Nominal flow rate*	Code
8 l/min / 2.11 gpm	008
16 l/min / 4.23 gpm	016

Connection ports	Code
In: G1 Out: G¾	G
In: $1^{5}/_{16}$-12 UN-2B Out: $1^{1}/_{16}$-12 UN-2B	U

Filter element					Code
	Fineness (β=200) Dirt-holding capacity according to ISO 16889 / water capacity			Spare filter element code	
		FNA1HV 008	FNA1HV 016		
EXAPOR®MAX 2	3 µm	490 g	280 g	V7.1220-113	V003
EXAPOR®MAX 2	5 µm	460 g	270 g	V7.1220-13	V005
EXAPOR®MAX 2	10 µm	340 g	190 g	V7.1220-06	V010
EXAPOR®AQUA	7 µm	145 g / 320 ml	85 g / 190 ml	Y7.1220-05	Y007
EXAPOR®AQUA	3 µm	165 g / 340 ml	105 g / 205 ml	Y7.1220-113	Y003

Electric motor* (other motor on request)				Code
Phase(s), voltage	Frequency	Power FNA1HV 008 / 016	Elec. connection	
3~400/460 VAC	50/60 Hz	0.37 / 0.55 kW	1	40050
1~230 VAC	50/60 Hz	0.25 / 0.45 kW	2	23050

Clogging indicator						Code
Type		Code of indicator	Connection	Datasheet number	Hydraulic symbol	
Differential pressure clogging indicator	optical	DG 042-01	Flange	60.30	1	OD
	electrical	DG 041-31	Flange	60.30	2	ED
	electrical + optical	DG 041-44	Flange	60.30	3	EOD
Without clogging indicator					4	XD

* Indications at 50 Hz. At 60 Hz, the value increases by approx. 20%.

Order example:

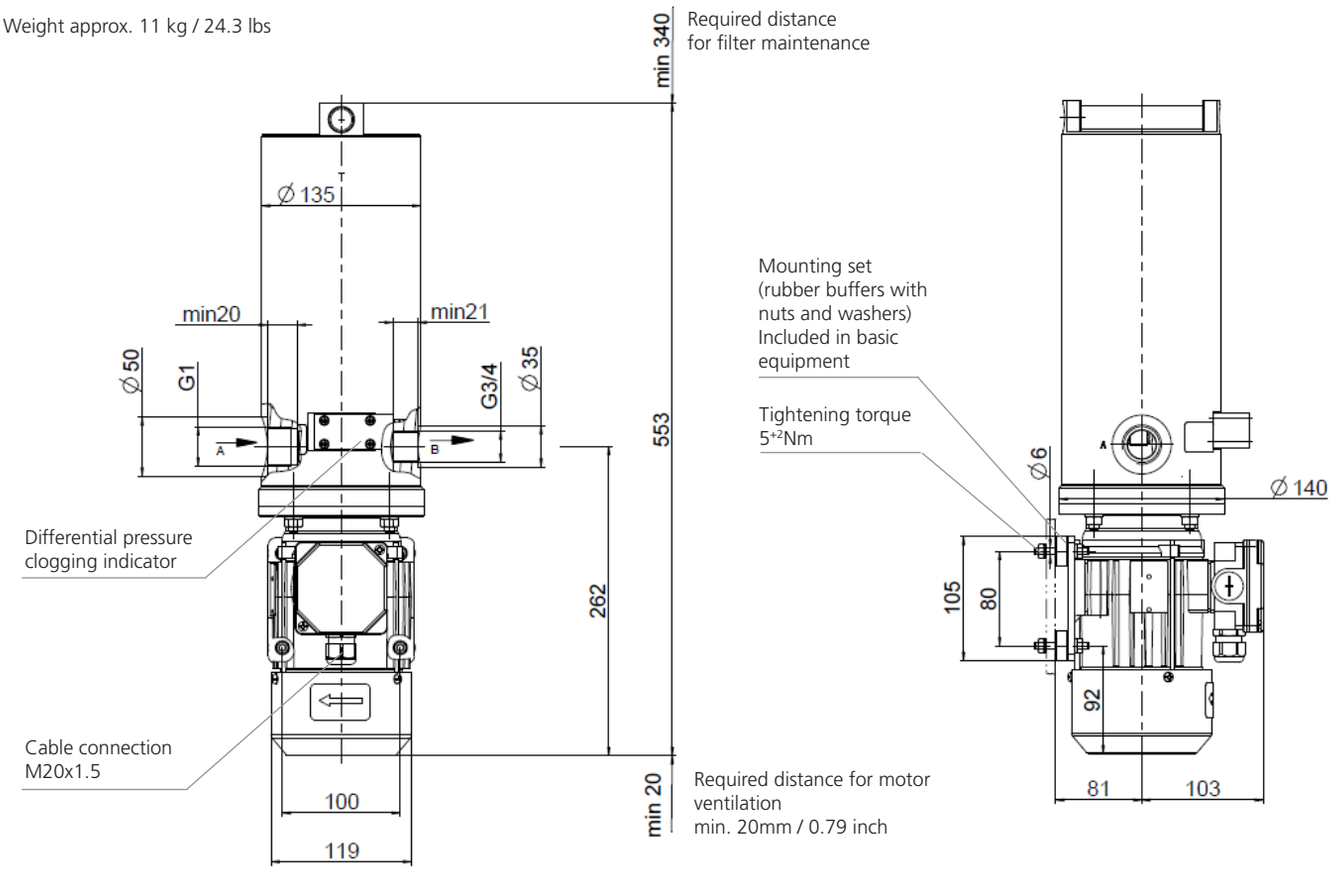
FNA1HV 008G-V003/40050ED off-line filter unit, high viscosity version, nominal flow rate 8 l/min / 2.11gpm, with inlet port G1, outlet port G¾, equipped with 3 µm filter element, 3~phase electric motor and electrical differential pressure clogging indicator.

Remarks:

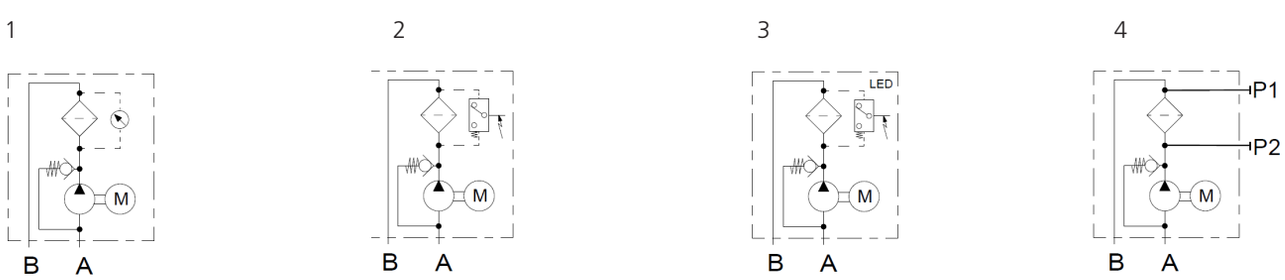
Combinations listed in this ordering code are standard units. If modifications are required, we kindly ask for your request.

Dimensions

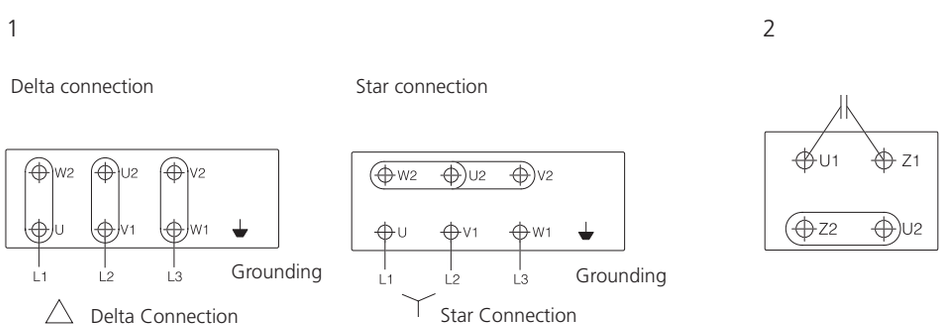
Weight approx. 11 kg / 24.3 lbs



Hydraulic symbol



Electric connections



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