Data Sheet

Oil Motor Pump type BFPM 20

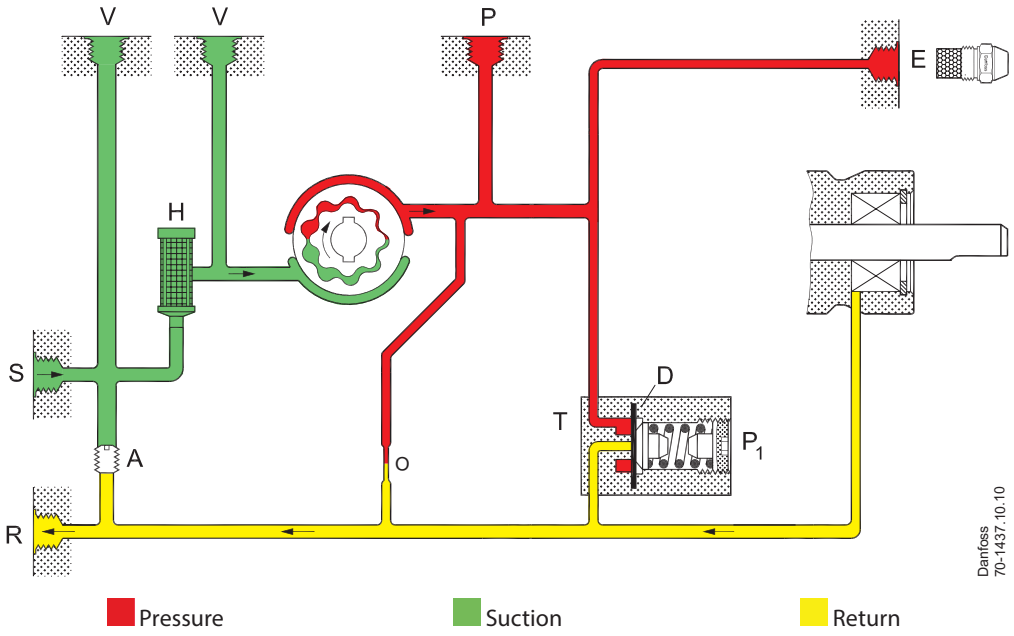
Application

The BFPM range is a series of Danfoss oil pumps in combination with a highly efficient permanent magnet motor.
The BFPM Electronic Controller must be used for controlling BFPM motor pumps (see separate data sheet for BFPM Electronic Controller).

BFPM 20 is designed for small domestic oil burners up to 24 l/h.

BFPM 20 features:
- Light oil and kerosene
- 1- or 2-pipe operation
- 1-stage
- Built-in pressure regulator
- Cartridge filter

Function



From the suction inlet (S) oil is drawn through the filter (H) to the gear set, where the pressure is increased.
By means of the diaphragm (D) in the pressure regulator (T), the pressure is kept constant at the value set on adjustment screw (P1).
In 2-pipe systems the excess oil is led back to the return outlet (R) and the tank.
In 1-pipe systems with plugged return outlet (R) and screw (A) removed, the oil is returned internally to the gear set (see figure).

Bleeding
In 2-pipe systems the pump is self-priming, i.e. bleeding is performed via the constriction (O) to the return outlet (R).
In 1-pipe systems with plugged return outlet (R), bleeding must be performed through the nozzle outlet (E) or the pressure gauge port (P).

Warranty
For pumps used outside the stated technical data and used with oil containing abrasive particles Danfoss cannot give any warranty.

Identification

BFPM	2	0	L	3	L	
					L:	left hand nozzle outlet
				3:		capacity 24 l/h
			L:			left hand rotation
		0:				without solenoid valve
	2:					cartridge filter, pressure adjustment on front

Nozzle capacity at 4.3 cSt., 10 bar, 2800 min^{-1}

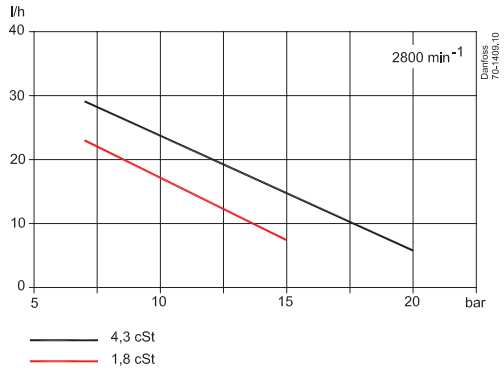
Technical Data

Oil types	Standard fuel gas oil and fuel gas oil acc. to DIN V 51603-6 EL A Bio-10 (Max. 10% FAME)
Viscosity range (measured in suction inlet)	(1.3) 1.8 to 12.0 cSt. (mm^2/s)
Filter area/mesh	11/200 cm^2/µm
Pressure range[1)]	7 to 20 bar
Default setting	10 ±1 bar
Max. pressure in suction inlet/return outlet	2 bar
Speed	400 - 3400 min^{-1}
Ambient/transport temperature	-20 to +70° C
Temperature of medium	0 to +70° C
Power supply/drive BFPM motor[2)]	230 V switched from controller

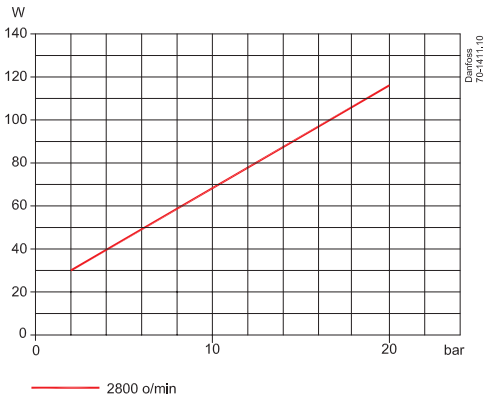
[1)] Max. 12 bar at 1.3 cSt., max. 15 bar at 1.8 cSt.

[2)] Warning: Do not connect BFPM motor directly to 230 V/50 Hz power supply!

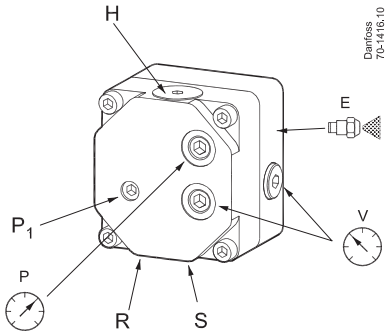
Nozzle capacity



Power consumption

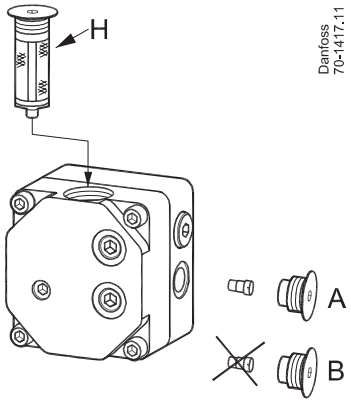


Connections



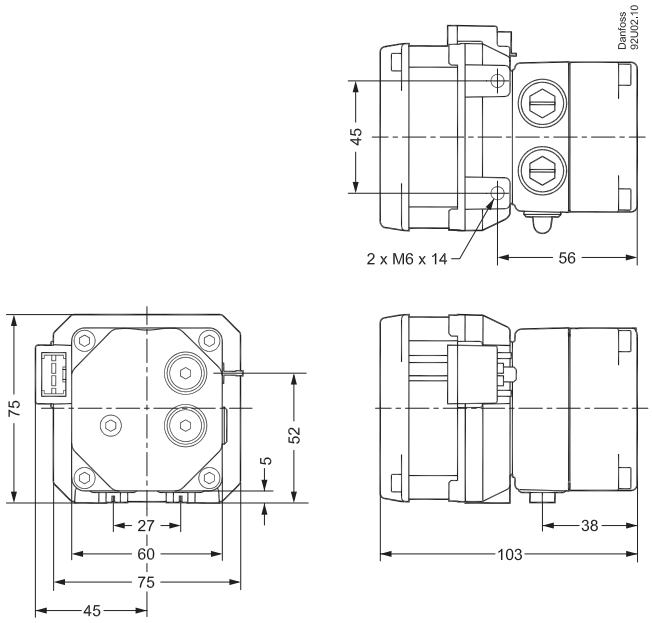
P_1: Pressure limiter
S: Suction inlet G1/4
R: Return outlet G1/4
E: Nozzle outlet G1/8
P: Pressure gauge port G1/8
V: Vacuum gauge port G1/8
H: Filter

Change-over and Filter Replacement



H: Filter
A: 2-pipe operation, with screw
B: 1-pipe operation, without screw

Dimensions



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