Oil Pump Type BFP 20/21
Size 3 and 5

General Data Sheet
For specific information on this product, please contact Danfoss Burner Components

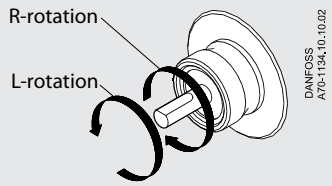
Identification

BFP 21 L5 L *(Example)*

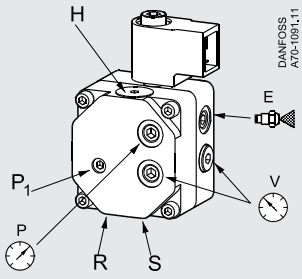
- **L** Left hand nozzle outlet
  R Right hand nozzle outlet
- **3** Capacity 24 l/h
  5 Capacity 42 l/h
- **R** Clockwise rotation
  L Counterclockwise rotation
- **0** Without solenoid valve
  1 With one solenoid valve
- **2** Cartridge filter, pressure adjustment on front

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

Note!
Shaft rotation, location of nozzle outlet and other connections are seen from shaft end.



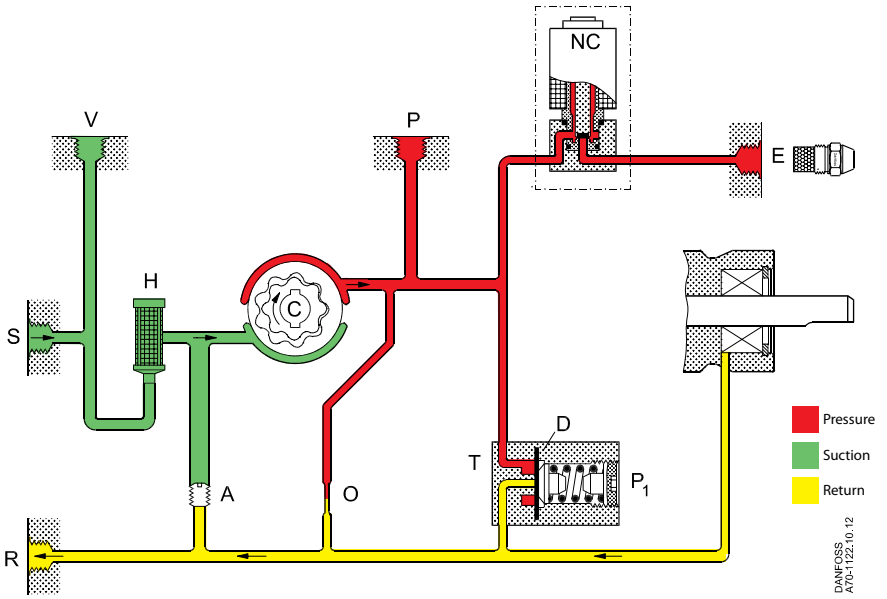
Connections
Example shows BFP 21 L5L.



P$_1$ Pressure adjustment
S Suction inlet G 1/4
R Return outlet G 1/4
E Nozzle outlet G 1/8
P Pressure gauge port G 1/8
V Vacuum gauge port G 1/8
H Filter

BFP 20/21 sizes 3 and 5 oil pumps are designed for small/medium-sized domestic oil burners up to 42 l/h.

Application and features
- Light oil and kerosene
- 1 or 2-pipe operation
- 1-stage
- Built-in pressure regulator
- Solenoid valve cut-off (BFP 21)
- Cartridge filter



Function

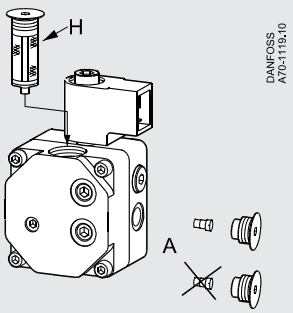
From the suction inlet (S) oil is drawn through the filter (H) to the gear set, where the pressure is increased. When voltage is applied to the NC-valve, it opens and releases oil to the nozzle outlet.

By means of the diaphragm (D) in the pressure regulator (T), the pressure is kept constant at the value set on adjustment screw (P$_1$).

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 details in below figure).

Cut-off function, solenoid valve (BFP 21)
When the burner stops, the voltage to the NC-valve is cut off and the oil flow to the nozzle outlet is cut off immediately.
BFP 20 has no solenoid valve. In systems using this pump, a separate cut-off valve must be fitted in the nozzle line.

Change-over between 1 and 2-pipe operation. Filter replacement



2-pipe operation: screw fitted

1-pipe operation: without screw

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.

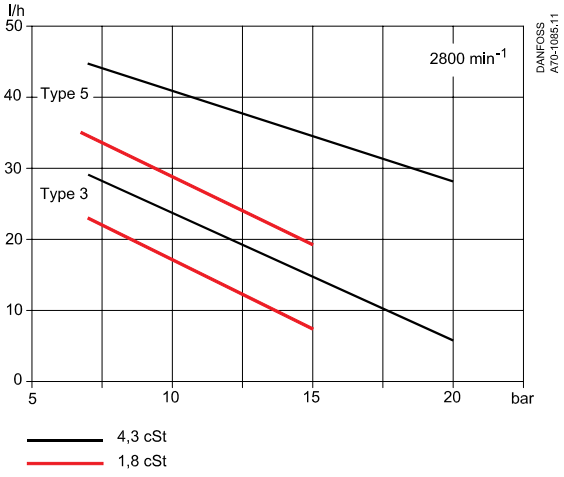
Please note that the solenoid valve must be replaced after 250.000 operations or 10 years (approved life expectancy).

Technical Data

BFP 20/21	Size	3	5
Oil types		Standard fuel gas oil and fuel gas oil acc. to DIN V 51603-6 EL A Bio-5 (Max. 5% FAME)	
Viscosity range (measured in suction inlet) [1]	cSt. (mm^2/s)	(1.3) 1.8 - 12.0	
Filter area/mesh	$cm^2/\mu m$	11/200	
Pressure range [2]	bar	7-20	
Factory setting	bar	10 ±1	
Max. pressure in suction inlet/return outlet	bar	2	
Speed	min^{-1}	2400-3450	1400-3450
Max. starting torque	Nm	0.1	0.12
Ambient/transport temperature	°C	–20 to +70	
Temperature of medium	°C	0 to +70	
Coil power consumption	W	9	
Rated voltage (other voltages on request)		220/240V, 50/60 Hz	
Coil enclosure		IP 40	
Shaft/neck		EN 225	

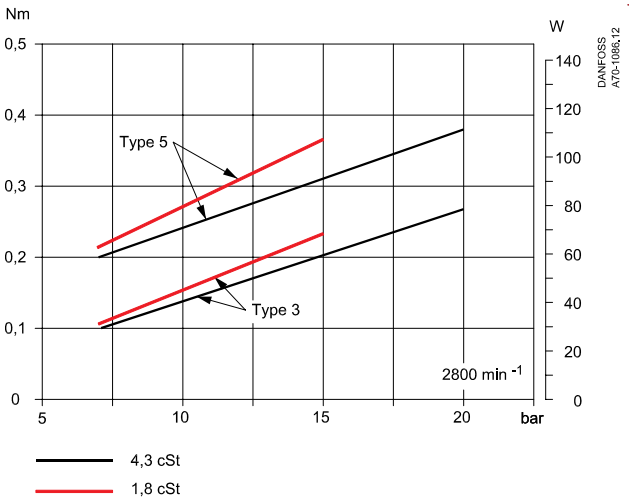
[1] Special pumps for Kerosene
[2] Max. 12 bar at 1.3 cSt., max. 15 bar at 1.8 cSt.

Nozzle capacity

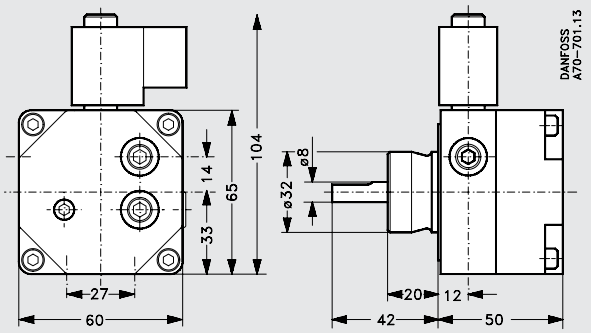


Operating torque

Power consumption



Dimensions



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