Oil Pump Type BFP 52E
Size 3 and 5

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

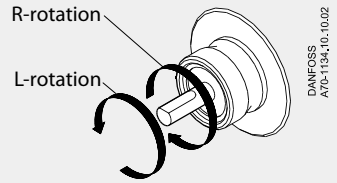
Identification

BFP 52 E L5 L *(Example)*

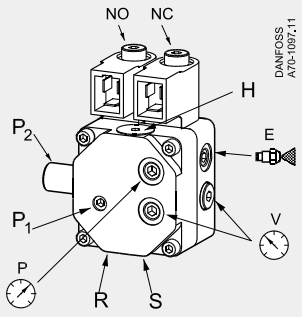
- L Left hand nozzle outlet
- R Right hand nozzle outlet
- 3 Capacity 24 l/h
- 5 Capacity 42 l/h
- R Clockwise rotation
- L Counterclockwise rotation
- E Use electrical air damper
- 2 Two solenoid valves
- 5 Two stages, two pressure regulators

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.



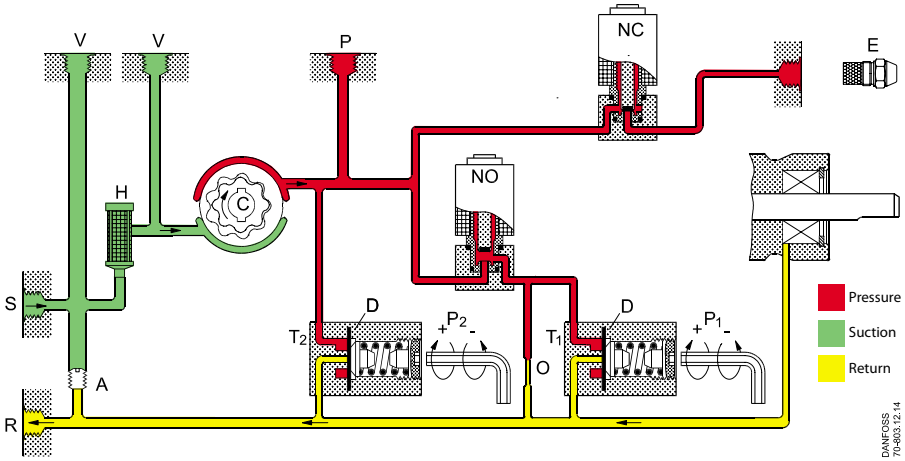
Connections
Example shows BFP 52E L5L.



P_1 Pressure adjustment stage 1
P_2 Pressure adjustment stage 2
S Suction inlett G 1/4
R Return outlett 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 52E sizes 3 and 5 oil pumps are designed for small/medium-sized 2-stage domestic oil burners up to 42 l/h.

Application and features
- Light oil and kerosene
- 1 or 2-pipe operation
- 2-stage
- Two built-in pressure regulators
- Solenoid valve cut-off
- 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 for stage 1 (T_1), the pressure is kept constant at the value set on adjustment screw (P_1).
When voltage is applied to the NC-valve, it opens and releases oil to the nozzle outlet. When voltage is applied to the NO-valve, it closes and puts the pressure regulator (T_1) out of function.

The pressure now rises to the value for stage 2 set on adjustment screw (P_2).

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).

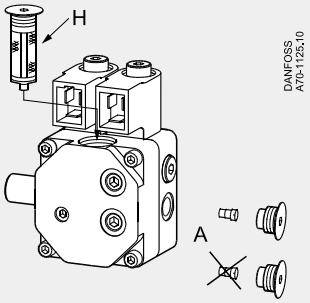
Cut-off function, solenoid valve
When the burner stops, the voltage to the solenoid valves is cut off.
The NO-valve opens and the NC-valve closes and cuts off the oil flow to the nozzle outlet immediately.

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).

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



2-pipe operation: screw fitted

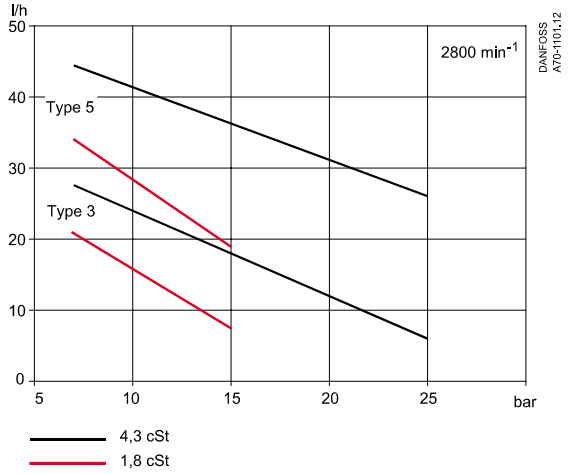
1-pipe operation: without screw

Technical Data

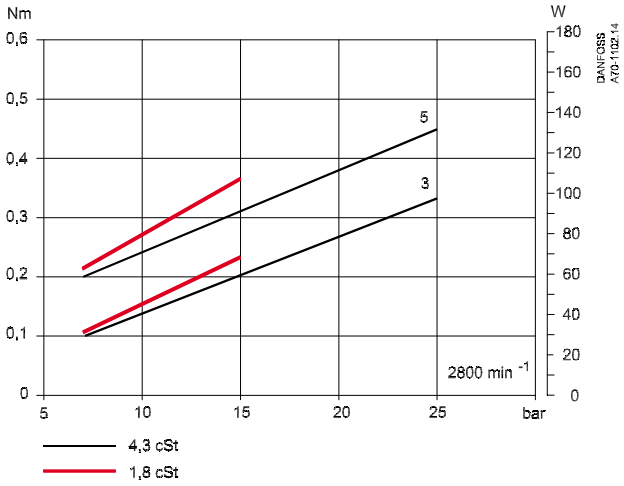
BFP 52E	Size	3	5
Oil types		Standard fuel gas oil and fuel gas oil acc. to DIN V 51603-6 EL A Bio-5 (max. 5% FAME)	
Viscosity range (measured in suction inlet) [1]	cSt. (mm^2/s)	(1.3) 1.8 - 12.0	
Filter area/mesh	$cm^2/\mu m$	11/200	
Pressure range, stage 1 [2]	bar	7-15	
Pressure range, stage 2 [2]	bar	10-25	
Factory setting stage 1/stage 2	bar	10/13 ±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)		230 V, 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.

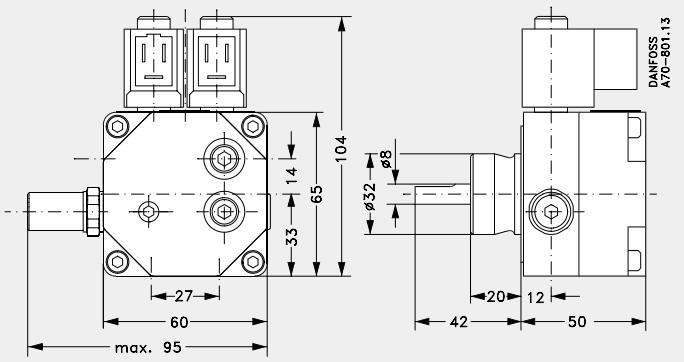
Nozzle capacity



Operating torque **Power consumption**



Dimensions



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