

## Data sheet

# Oil Pump Type BFP 10/11, sizes 8 & 12

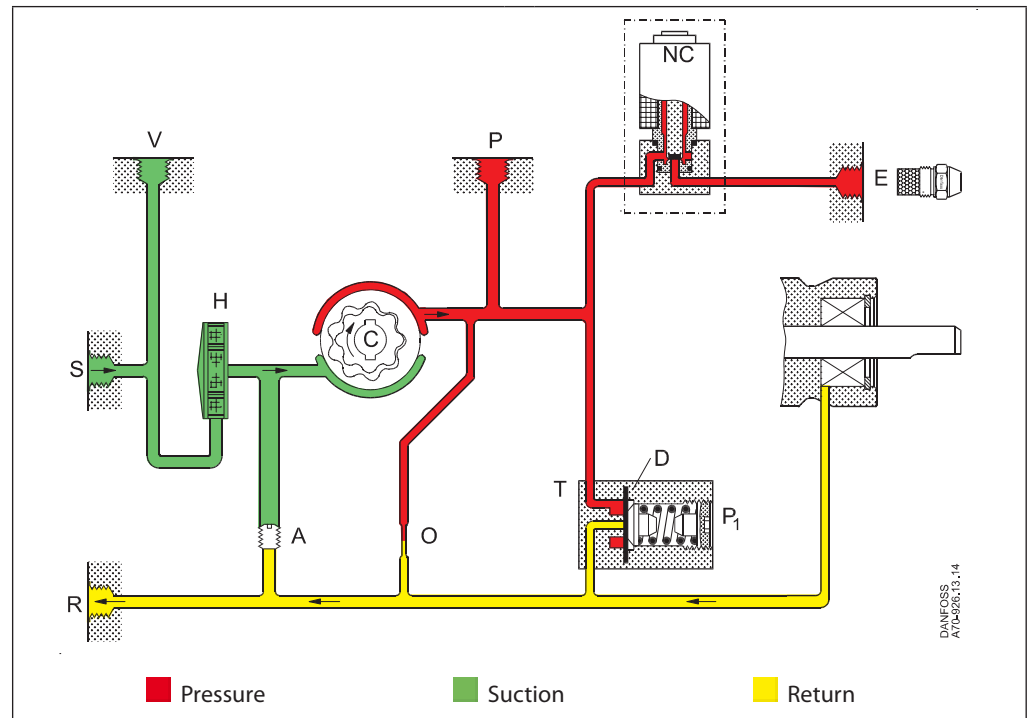
## Application

BFP 10/11 sizes 8 and 12 oil pumps are designed for medium/large-sized domestic oil burners up to 120 l/h.

**BFP 10/11 features:**

- Light oil and kerosene
- 1 or 2-pipe operation
- 1-stage
- Built-in pressure regulator
- Solenoid valve cut-off (BFP 11)
- Ring 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 (normally closed), 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<sub>1</sub>). 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 a bypass washer (horseshoe) mounted on screw (A), the oil is returned internally to the gear set (see figure).

**Cut-off function, solenoid valve (BFP 11)**

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 10 has no solenoid valve. In systems using this pump, a separate cut-off valve must be fitted in the nozzle line.

**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.

*Note! The solenoid valve must be replaced after 250.000 operations or 10 years (approved life expectancy).*

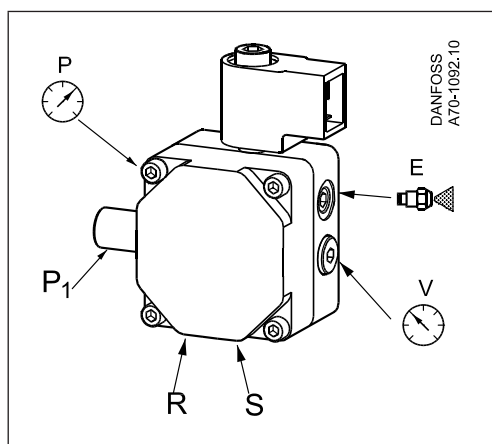
## Identification

BFP	1	1	L	8	L	
						<b>L:</b> left hand nozzle outlet
						<b>R:</b> right hand nozzle outlet
						<b>8:</b> capacity 80 l/h
						<b>12:</b> capacity 120 l/h
						<b>L:</b> left hand rotation
						<b>R:</b> right hand rotation
						<b>0:</b> without solenoid valve
						<b>1:</b> with one solenoid valve
						<b>1:</b> ring filter, pressure adjustment on side

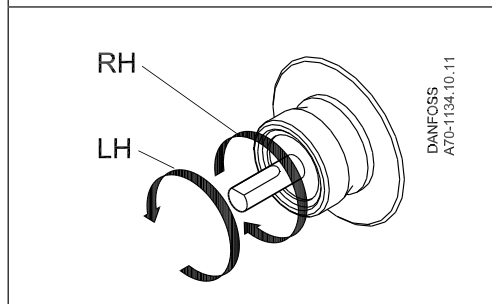
Nozzle capacity at 4.3 cSt., 10 bar, 2800 min<sup>-1</sup>

## Connections

Example shows L-rotation pump with solenoid valve



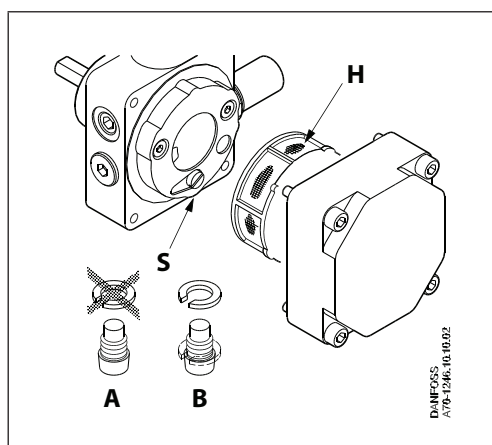
- P<sub>1</sub>:** Pressure adjustment
- S:** Suction inlet G1/4
- R:** Return outlet G1/4
- E:** Nozzle outlet G1/8
- P:** Pressure gauge port G1/8
- V:** Vacuum gauge port G1/8



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

- RH:** R-rotation
- LH:** L-rotation

## Change-over and Filter Replacement



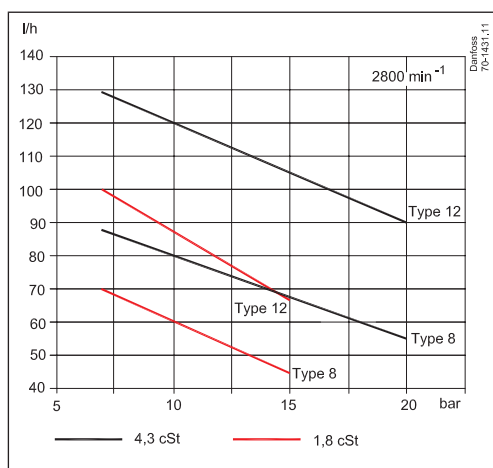
- A:** 2-pipe operation, screw S without bypass washer
- B:** 1-pipe operation, screw S with bypass washer
- H:** Filter

Technical data

BFP 10/11	8	12
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 <sup>2</sup> /s)	
Filter area/size	13 cm <sup>2</sup> /200 µm	
Pressure range <sup>1)</sup>	7 to 20 bar	
Factory setting	10 ± 1 bar	
Max. pressure in suction inlet/return outlet	2 bar	
Speed	1400 to 3450 min <sup>-1</sup>	1400 to 2850 min <sup>-1</sup>
Max. starting torque	0.22 Nm	0.24 Nm
Ambient/transport temperature	-20 to +60° C	
Temperature of medium	0 to +60° C	
Coil power consumption	9 W	
Rated voltage (other voltages on request)	230 V, 50/60 Hz	
Coil enclosure	IP 40	
Shaft/neck	EN225	

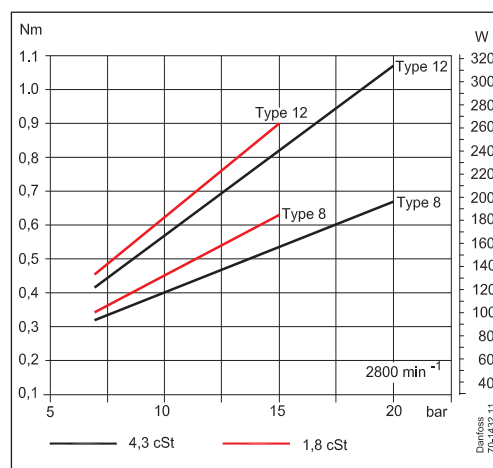
<sup>1)</sup> Max. 12 bar at 1.3 cSt., max. 15 bar at 1.8 cSt.

Nozzle capacity

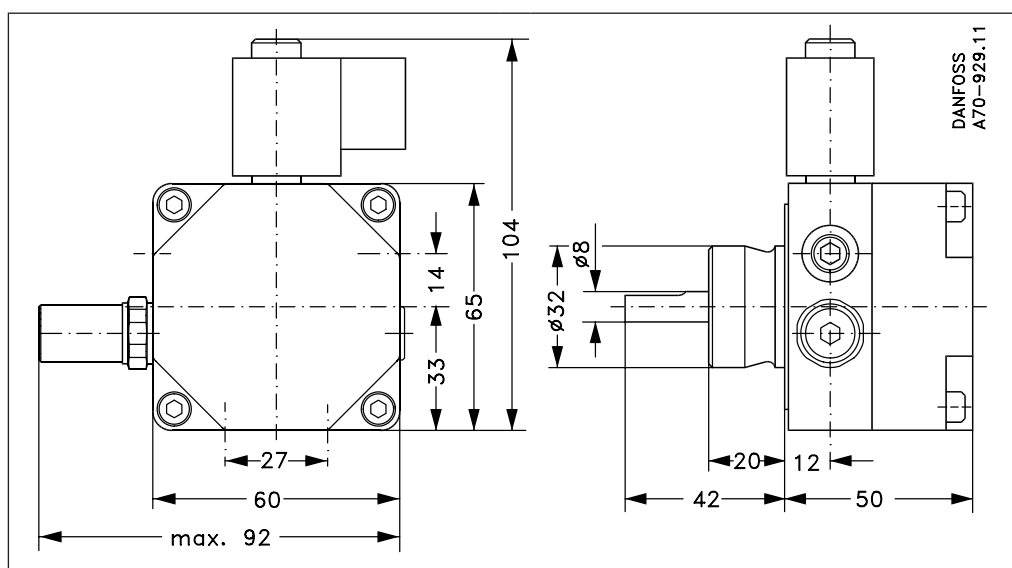


Operating torque

Power consumption



Dimensions





Additional documentation on burner components is available on <http://heating.danfoss.com/>

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