Data Sheet

Oil Pump Type RSA Size 28, 40, 60, 95, 125

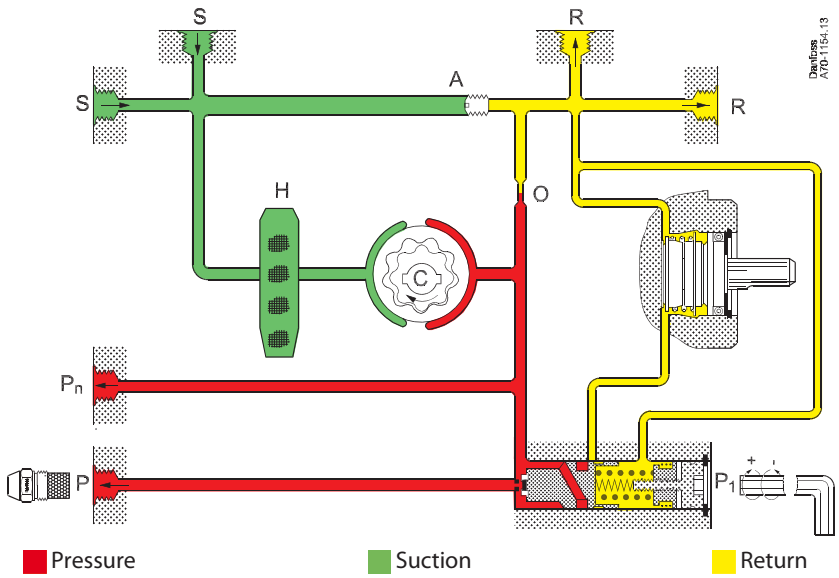
Application

RSA oil pumps are designed for small/medium sized domestic and commercial oil burners up to 255 l/h.
The pumps have a built-in pressure regulator with shut-off function.
A special regulation spring is available for feed/transfer applications.

Features

- Light oil and Kerosene
- 1 or 2-pipe operation
- 1-stage
- Built-in pressure regulator with shut-off
- Ring filter
- Spec. spring available for feed/transfer applications

Function



From the suction inlet (S) oil is drawn through the gear set, where the pressure is increased. By means of the piston and the spring in the pressure regulator 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). In 1-pipe systems with plugged return outlet (R) and removed by-pass screw (A), the oil is returned internally to the gear set (see figure).
When the pump is stopped the pressure drops and the spring force in the pressure regulator will move the piston until it seats and the oil flow is shut off effectively.

Bleeding

In 2-pipe systems the pumps are 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) and by-pass screw (A) removed, bleeding must be performed through the pressure gauge port (P_n).

In 1-pipe systems with underlying tank, the closing function of the regulating valve must be rendered inoperative. This is made by connecting the nozzle line to the pressure gauge port (P_n) and plug the pressure port (P). In this application a cut-off valve must be installed in the nozzle line.

Warranty

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

Please note!

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

Identification

Example:

RSA 60

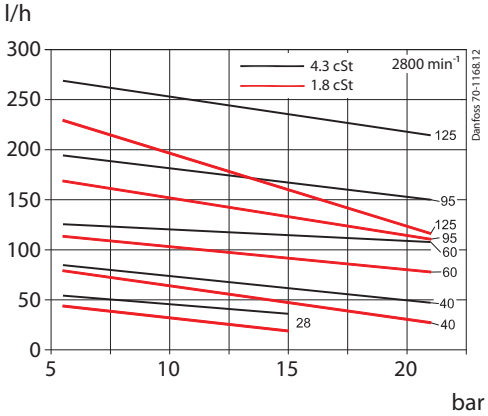
28 = Capacity 46 l/h
40 = Capacity 75 l/h
60 = Capacity 120 l/h
95 = Capacity 184 l/h
125 = Capacity 255 l/h

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

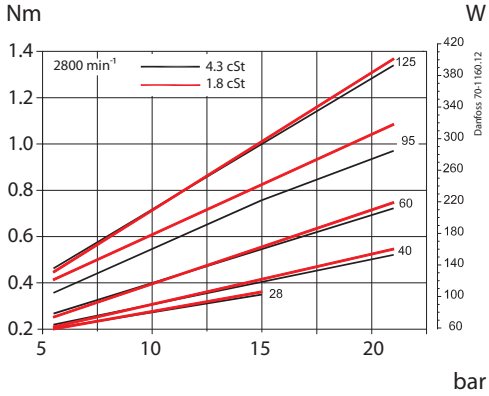
Technical Data

RSA	28	40	60	95	125
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)	1.3 - 75 cSt. (mm^2/s)				
Filter area/mesh	75/150 cm^2/µm			170/150 cm^2/µm	
Pressure range, stage	5.5-15 bar	5.5-21 bar			
Factory setting	7 ±1 bar			10 ±1 bar	
Max. pressure in suction inlet/return outlet	4 bar				
Speed	2400-3450 min^{-1}	1400-3450 min^{-1}			
Max. starting torque	0.20 Nm	0.22 Nm	0.24 Nm	0.30 Nm	0.35 Nm
Ambient temperature	–20 to +120 °C				
Storage temperature	–25 to +120 °C				
Temperature of medium	–10 to +120 °C				
Neck/Flange	EN 225				

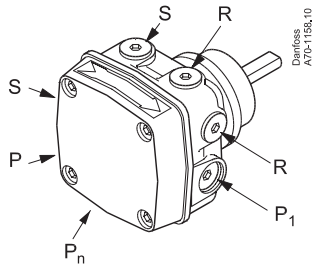
Nozzle capacity



Operating torque **Power consumption**

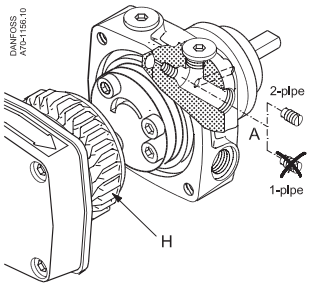


Connections



P_1: Pressure adjustment
S: Suction inlet G1/4
R: Return outlet G1/4
P: Pressure outlet G1/8 (G1/4 for RSA 125)
P_n: Pressure gauge port G 1/8
H: Filter

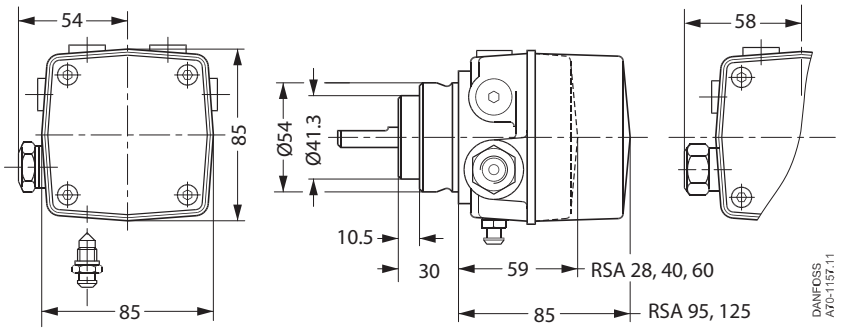
Change-over and Filter Replacement

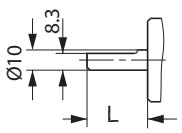
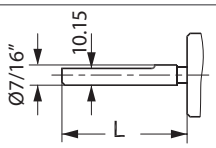
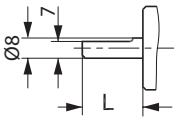


H: Filter.
A: 2-pipe operation, with screw.
B: 1-pipe operation, without screw,

Dimensions

RSA 28, 40, 60, 95, (125*) ***RSA 125**



			
Type	**L**	**L**	**L**
RSA 28	30.0	62.0	11.4
RSA 40	28.8	60.8	10.2
RSA 60	26.8	58.8	-
RSA 95	30.0	62.0	-
RSA 125	-	62.0	-

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