PUMP TYPE D

D

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This is a general specification leaflet; for specific applications not covered herein, contact Suntec.

The SUNTEC **D** oil pump is specially adapted for heavy oil (up to 75 cSt) and high working temperature (up to 90°C).

COMPATIBILITY

- Domestic oil, heavy oil, HVO, B100 (biofuel blend with the addition up to 100% FAME, as defined in DIN SPEC 51603-6 and EN 14214).
- One-pipe or two-pipe system.
- System with in-line solenoid valve for cut-off.

PUMP OPERATING PRINCIPLE

The gear set draws oil from the tank through the built-in filter and transfers it to the valve that regulates the oil pressure to the nozzle line.

All oil which does not go through the nozzle line will be dumped through the valve back to the return line, in a two-pipe installation or, if installation is one-pipe, back to the suction port in the gear set. In that case the by-pass plug must be removed from the return port and the return port sealed by steel plug and washer.

Bleed

Bleeding in two pipe operation is automatic.

In one pipe operation, during the starting period, air is purged through the nozzle line : the by-pass hole of the nozzle plug allows air to pass to the nozzle line without opening of the regulator valve.

For the first start up, bleeding can be accelerated by loosening the plug in a pressure gauge port.

Note

Owing to the presence of the nozzle by-pass hole, the pump has no cut-off function. Cut-off must be provided by an external solenoid valve.

Models gear sizes "45" and "55" have a piston with a bleed slot to avoid build up of pressure in the nozzle and suction lines during shut down due to the expansion of oil caused by nozzle line heaters.

PUMP IDENTIFICATION

(Not all model combinations are available. Consult your Suntec representative)

D : basic valve without cut-off heavy oil applications.

V : B100 applications

Gear set capacity (see pump capacity curves)

Shaft rotation and nozzle location (seen from shaft end)
A : clockwise rotation right hand nozzle
B : clockwise rotation left hand nozzle
C : anti-clockwise rotation left hand nozzle
D : anti-clockwise rotation right hand nozzle.

D V 57 C 7 2 xx 3 P

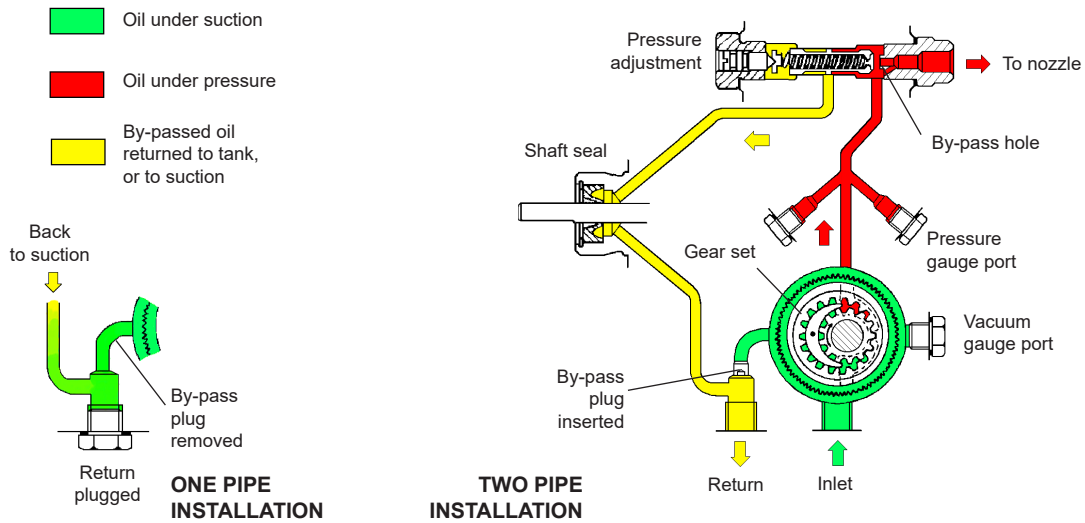
Pump series

2 : hub Ø 54 mm
3 : hub Ø 32 mm

Model number

Revision number

Installation
P : by-pass plug inserted in return port for two-pipe operation.
M : without by-pass plug, return port sealed by steel plug for one-pipe operation.



TECHNICAL DATA

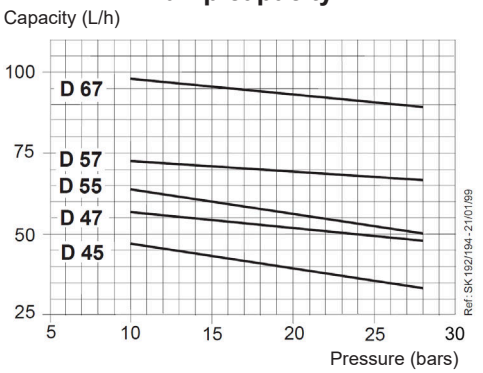
General

Mounting	Flange or hub according to EN 225
Connection threads	Cylindrical according to ISO 228/1
Inlet and return	G 1/4
Nozzle outlet	G 1/8
Pressure gauge port	G 1/8
Vacuum gauge port	G 1/4 or G 1/8
Valve function	Pressure regulating without cut-off
Strainer	Open area : 12 cm^2
	Opening size : 530 µm
Shaft	Ø 8 mm according to EN 225
By-pass plug	Inserted in return port for two-pipe system;
	to be removed with a 4 mm Allen key for one-pipe system
Weight	1,8 - 1,9 kg (depending on the model)

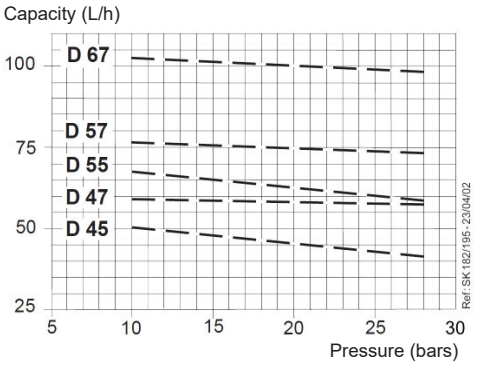
Hydraulic data

Nozzle pressure range	10 - 28 bars
(other ranges available on request, refer to the specified range of the particular fuel unit)	
Factory setting	14 bars
Operating viscosity	2 - 75 mm^2/s (cSt)
	(Higher viscosity oil can be used by feeding the pump or by heating the oil to lower its viscosity under 75 cSt)
Oil temperature	0 - 90°C in the pump
Inlet pressure	2 bars max.
Return pressure	2 bars max.
Suction height	0,45 bars max. vacuum to prevent air separation from oil
Rated speed	3600 rpm max.
Torque (@ 45 rpm)	0,10 N.m (D 45/47/55/57)
	0,12 N.m (D 67)

Pump capacity



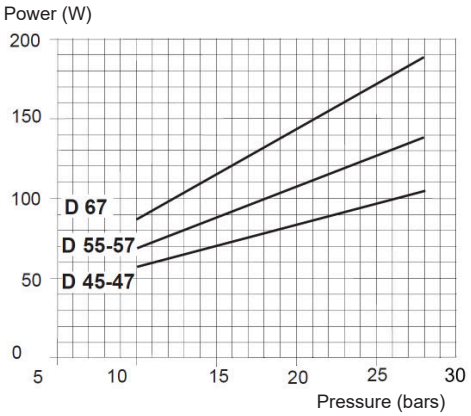
Viscosity = 20 cSt - Rated speed = 2850 rpm



Viscosity = 75 cSt - Rated speed = 2850 rpm

Data shown take into account a wear margin.
Do not oversize the pump when selecting the gear capacity.

Power consumption

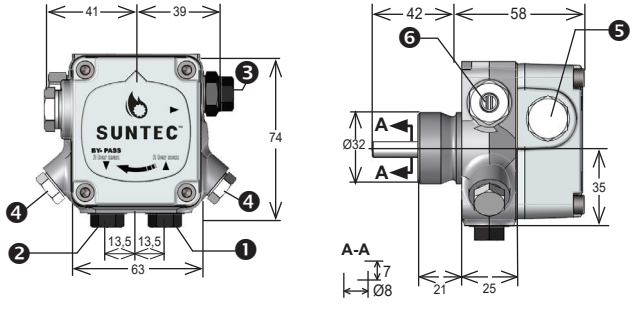


Viscosity = 20-75 cSt - Rated speed = 2850 rpm

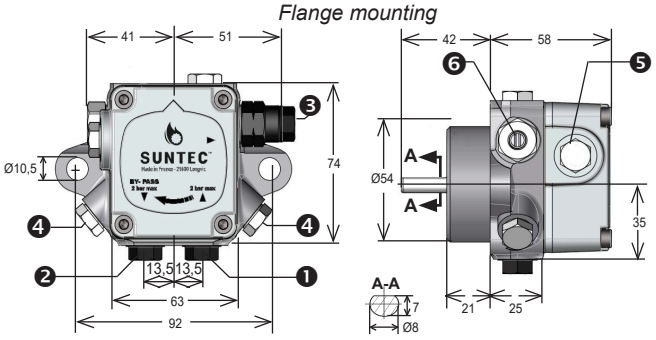
PUMP DIMENSIONS *(in mm)*

Examples show "C" rotation and nozzle outlet.

Hub mounting



Flange mounting



❶ Suction
❷ Return and internal by-pass plug
❸ Nozzle outlet
❹ Pressure gauge port
❺ Vacuum gauge port
❻ Pressure adjustment