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

The SUNTEC **E 1001** oil pump incorporates a pressure regulating valve with cut-off function. Its design is basically similar to that of J pumps, but E pumps can also be used with kerosene and heavy oil.

APPLICATIONS

- Light oil, B10 heating oil/biofuel blend (as defined in DIN V51603-6), medium and heavy oil. For kerosene applications, contact Suntec.
- One or two-pipe system.
- Normally associated with in-line solenoid valve.

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 that does not go through the nozzle line will be dumped through the valve back to the return line in two pipe installation or, if it is a one-pipe installation, 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.

The valve also has a cut-off function as follows :

During starting period when the gear-set speed is increasing, all the oil passes through a special flat on the piston, back to the return. Once the speed reaches a certain value and the flow can no longer pass through this flat, then the pressure increases rapidly overcoming the valve spring force and opens the valve.
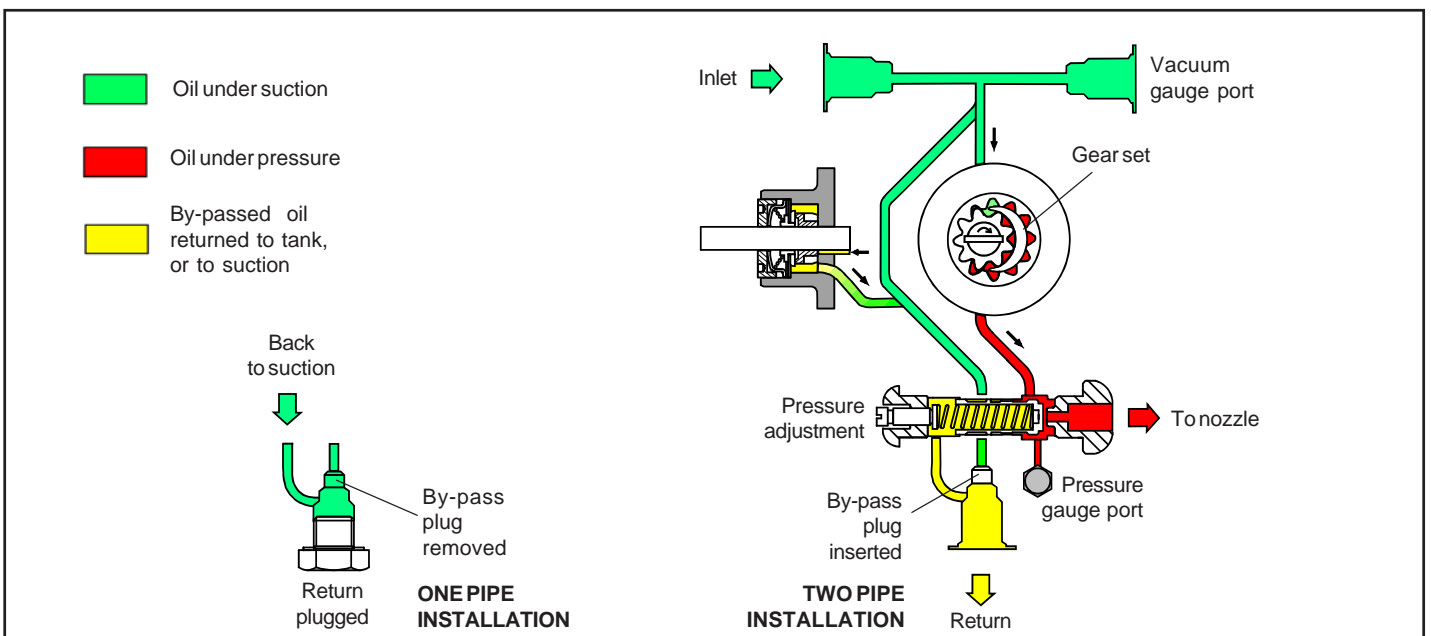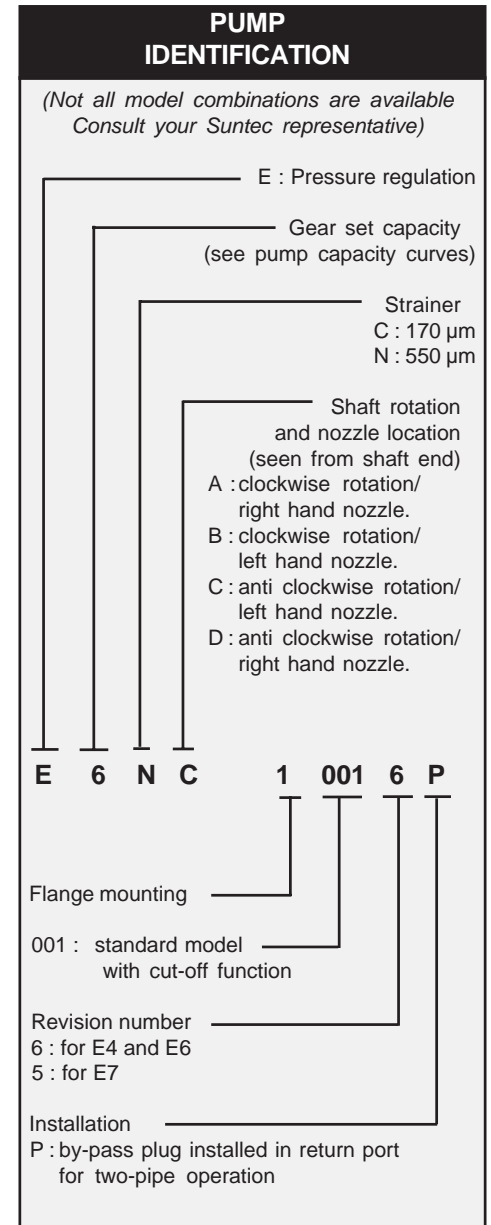
During the stop sequence, the gear-set speed slows down and the valve closes when the gear-set capacity is lower than the flat flow.

The cut-on and cut-off speeds depend on the gear-set size and set pressure.

Bleed :

Bleeding in two pipe operation is automatic, but it may be accelerated by loosening the plug in a pressure gauge port.

In one pipe operation, a pressure port must be opened to bleed the system.

PUMP IDENTIFICATION

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

E : Pressure regulation

Gear set capacity (see pump capacity curves)

Strainer
C : 170 µm
N : 550 µm

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.

E   6   N   C   1   001   6   P

Flange mounting

001 : standard model with cut-off function

Revision number
6 : for E4 and E6
5 : for E7

Installation
P : by-pass plug installed in return port for two-pipe operation

Oil under suction

Oil under pressure

By-passed oil returned to tank, or to suction

Inlet

Vacuum gauge port

Gear set

Back to suction

Pressure adjustment

To nozzle

By-pass plug removed

By-pass plug inserted

Pressure gauge port

Return plugged

ONE PIPE INSTALLATION

TWO PIPE INSTALLATION

Return

TECHNICAL DATA

General

|	
Mounting	Flange mounting according to EN 225.
Connection threads	Cylindrical according to ISO 228/1
Inlet and return	G 1/2
Nozzle outlet	G 1/4
Pressure gauge port	G 1/8
Vacuum gauge port	G 1/2
Valve function	Pressure regulating and cut-off
Strainer	Open area : 45 cm²
	Opening size : C = 170 µm
	N = 550 µm
Shaft	Ø 11mm according to EN 225.
By-pass plug	Inserted in return port for 2 pipe system;
	to be removed with a 3/16" Allen key for 1 pipe system.
Weight	4 kg

Hydraulic data

Nozzle pressure range	14 - 30 bars (@ viscosity > 3 cSt)
Delivery pressure setting	20 bars
Operating viscosity	2 - 75 mm²/s (cSt) for E4/E6
	3 - 75 mm²/s (cSt) for E7
	(For kerosene applications, contact SUNTEC)
Oil temperature	0 - 90°C in the pump.
Inlet pressure	1,5 bars max.
Return pressure	1,5 bars max.
Suction height	0,45 bars max. vacuum to prevent air separation from oil.
Rated speed	3600 rpm max.
Torque (@ 45 rpm)	0,30 N.m

Pump capacity

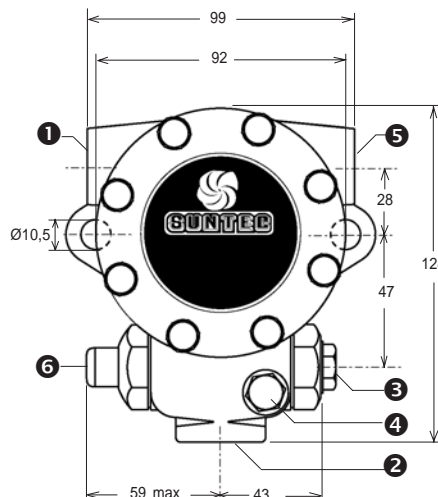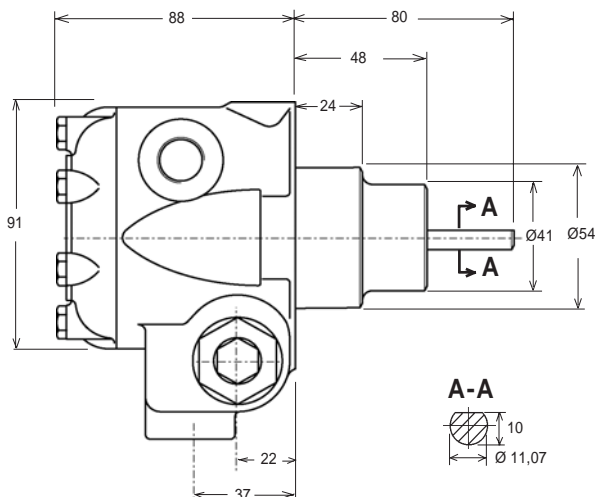Viscosity = ▬▬ 75 cSt
▬▬ 20 cSt (red)
– – – 5 cSt - Rated speed = 2850 rpm
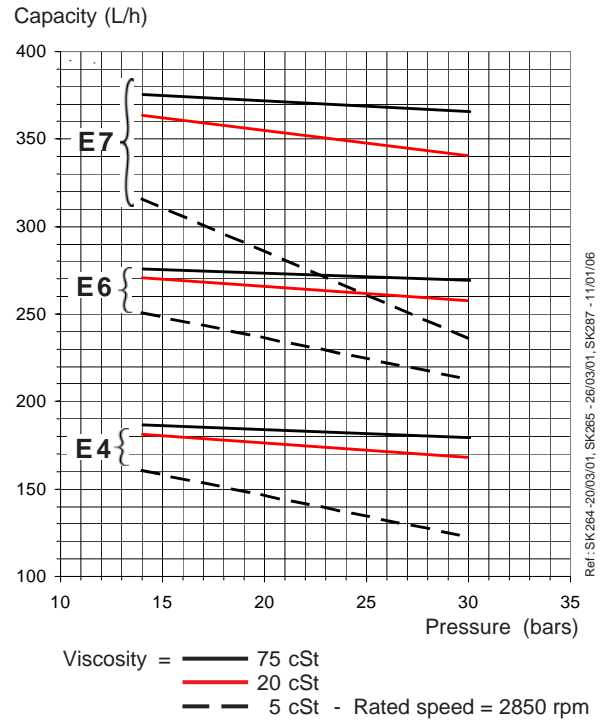
Data shown take into account a wear margin. Do not oversize the pump when selecting the gear capacity.

Power consumption

Viscosity = ▬▬ 75 cSt
▬▬ 20 cSt (red)
– – – 5 cSt - Rated speed = 2850 rpm
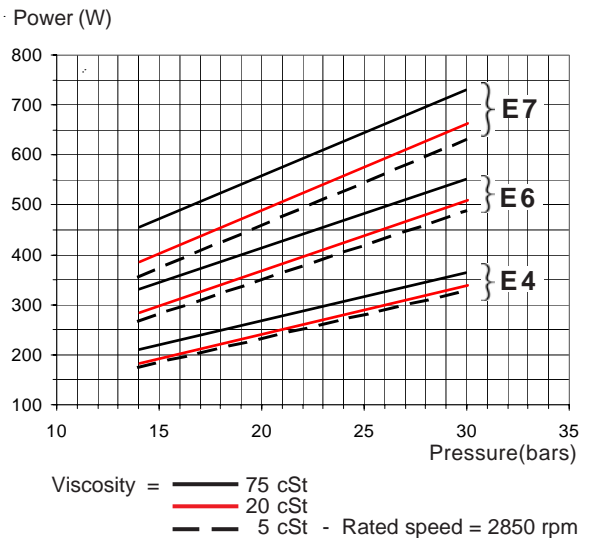
PUMP DIMENSIONS   *Example shows "C" rotation and nozzle outlet.*

❶ Suction or vacuum gauge port

❷ Return and internal by-pass plug

❸ Nozzle outlet

❹ Pressure gauge port

❺ Vacuum gauge port or suction

❻ Pressure adjustment

We reserve the right to change specifications without prior notice.