

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

The SUNTEC **J7** oil pump incorporates a pressure regulating valve with (or without) cut-off function*.

APPLICATIONS

- Fuel oil #1 to #4, not compatible for use with blends higher than 5% biodiesel.
- 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 :

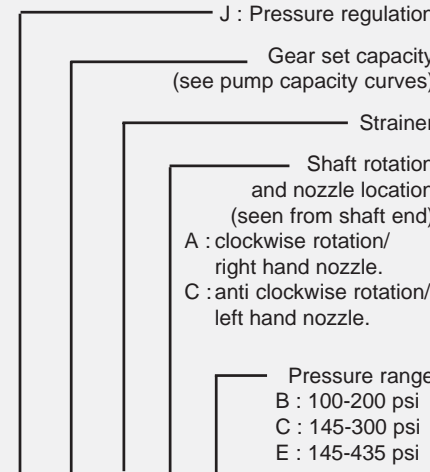
Bleeding in two pipe operation is automatic, but it may be accelerated by loosening the plug in a pressure gauge port.

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

* Owing to the presence of the nozzle by-pass hole, J 1002 models have no cut-off function. Cut-off must be provided by an external solenoid valve.

PUMP IDENTIFICATION

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



J : Pressure regulation

7 : Gear set capacity (see pump capacity curves)

C : Strainer

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

1 : Pressure range
B : 100-200 psi
C : 145-300 psi
E : 145-435 psi

J 7 C A C 1 001 4 P

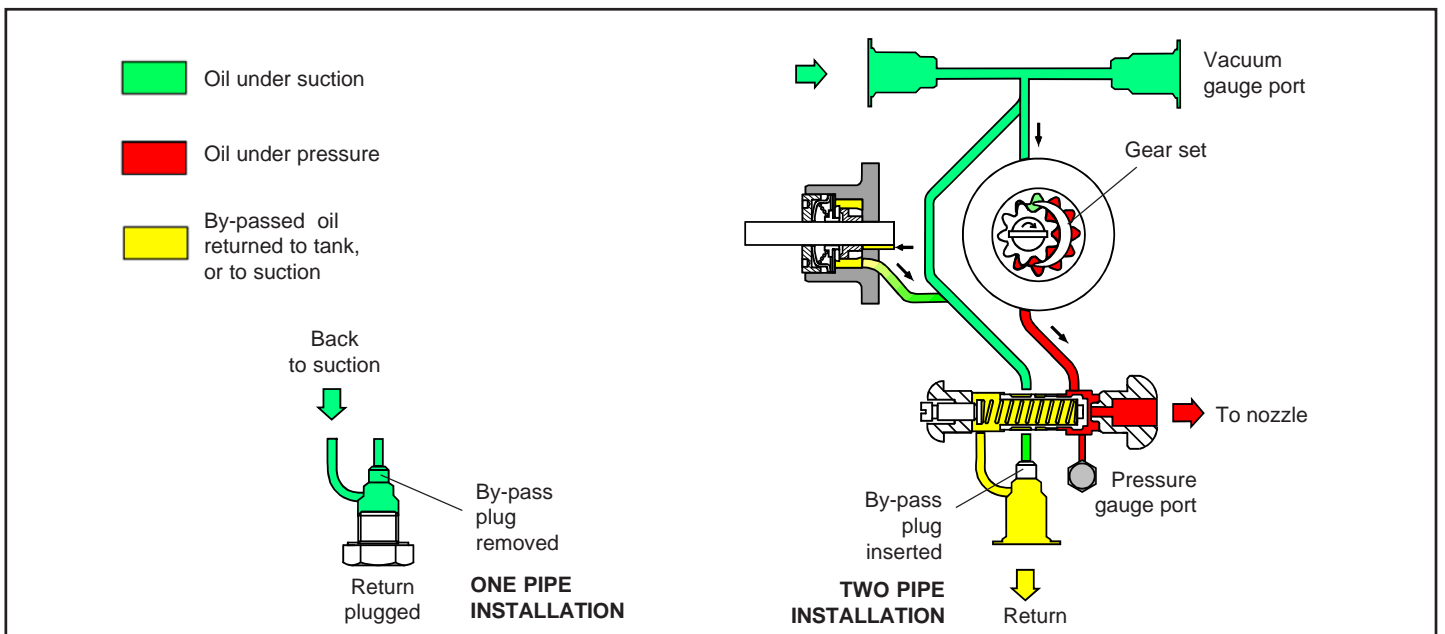
J : Flange mounting

001 : cylindrical connection threads cut-off function

002 : cylindrical connection threads by-pass nozzle, no cut-off function

4 : Revision number

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



TECHNICAL DATA

General

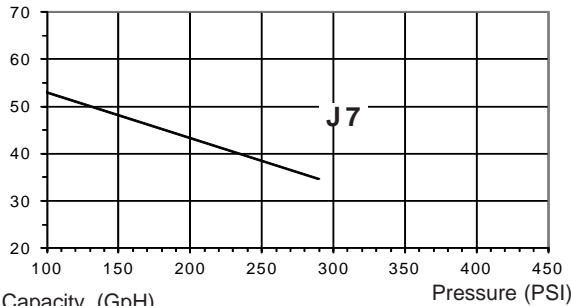
Mounting	Flange mounting according to EN 225.
Connection threads	Cylindrical (according to ISO 228/1)
Inlet and return	G 1/2
Nozzle outlet	G 1/4
Pressure gauge port	G 1/8
Vacuum gauge port	G 1/2
Valve function	Pressure regulating and cut-off (except for J 1002 model).
Strainer	Open area : 45 cm ² Opening size : 170 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	8,8 lbs

Hydraulic data

Nozzle pressure range	Delivery pressure setting
B : 100- 200 psi	100 psi
C : 145 - 300 psi	175 psi
E : 145 - 435 psi	175 psi
Operating viscosity	3 - 75 mm ² /s (cSt)
Oil temperature	32 - 194°F in the pump.
Inlet pressure	10 psi max.
Return pressure	10 psi max.
Suction height	6,5 psi max. vacuum to prevent air separation from oil.
Rated speed	3600 rpm max.
Torque (@ 45 rpm)	0,30 N.m

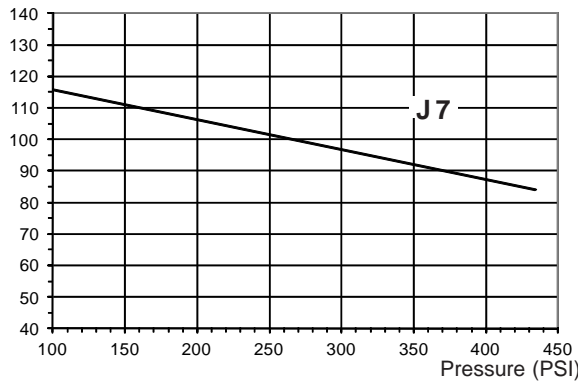
Pump capacity

Capacity (GpH)



Rated speed : 1725 rpm
Viscosity : 5 cSt

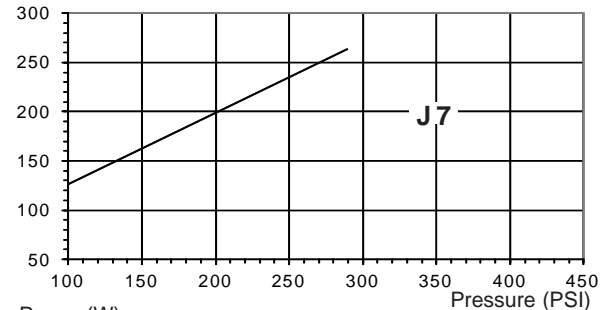
Capacity (GpH)



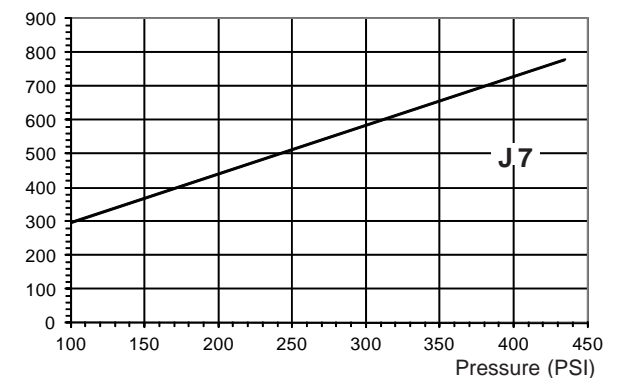
Rated speed : 3450 rpm
Viscosity : 5 cSt

Power consumption

Power (W)



Power (W)

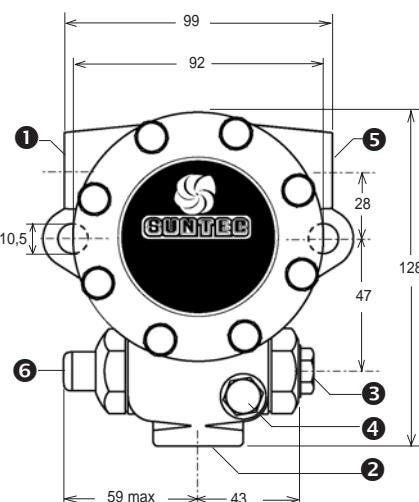
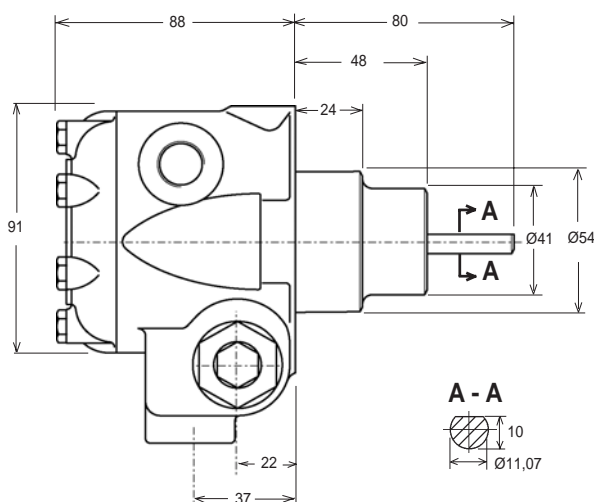


Data shown take into account a wear margin.

Do not oversize the pump when selecting the gear capacity.

PUMP DIMENSIONS

Example shows pump with "C" rotation - Pump dimensions in mm



- ① Suction or vacuum gauge port
- ② Return and internal by-pass plug
- ③ Nozzle outlet
- ④ Pressure gauge port
- ⑤ Vacuum gauge port or suction
- ⑥ Pressure adjustment