

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

The SUNTECAN oil pump is the basic model incorporating a pressure regulating valve with cut-off.

## APPLICATIONS

- Light oil.
- One or two-pipe system.
- Normally associated with Rapa 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 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 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.

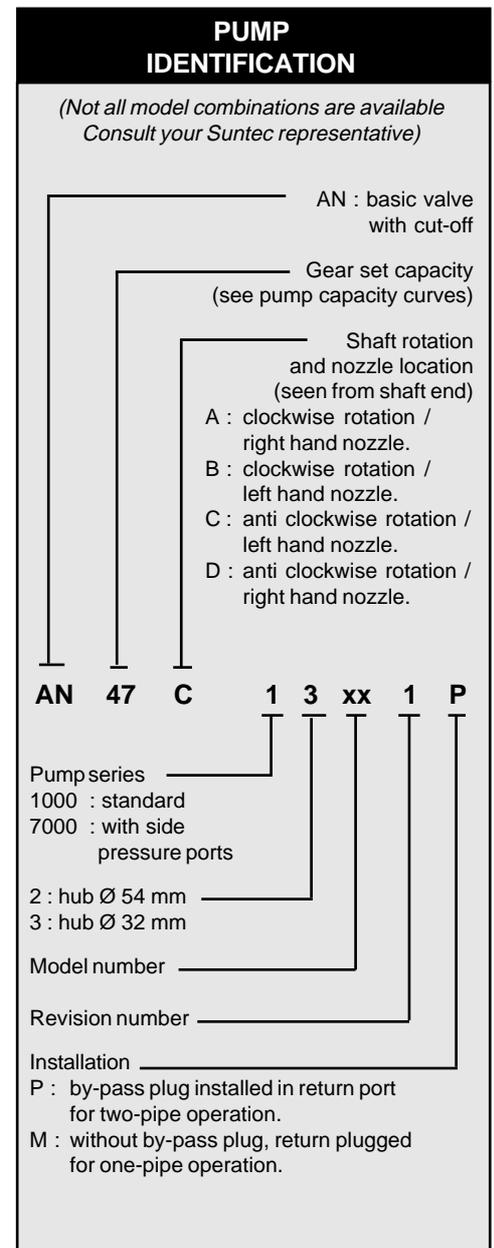
### Bleed :

Bleeding in two pipe operation is automatic, but it could 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)



AN : basic valve with cut-off

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.

**AN 47 C 1 3 xx 1 P**

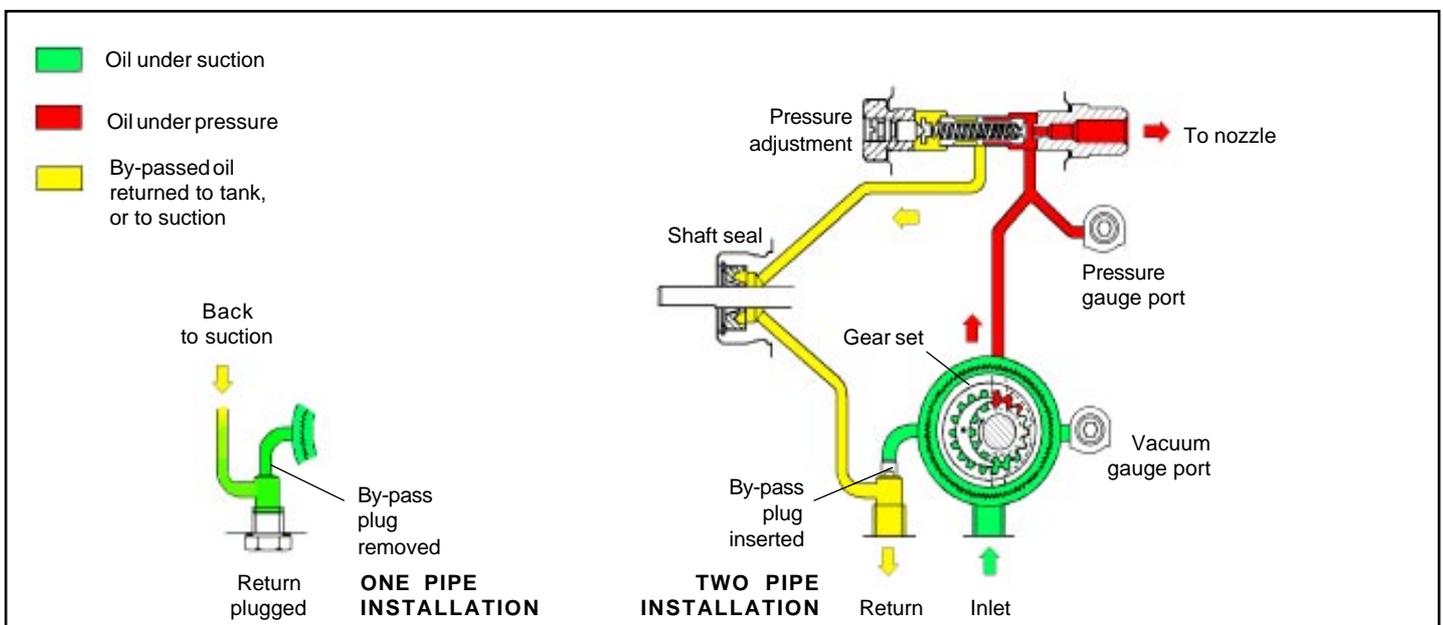
Pump series  
1000 : standard  
7000 : with side pressure ports

2 : hub Ø 54 mm  
3 : hub Ø 32 mm

Model number

Revision number

Installation  
P : by-pass plug installed in return port for two-pipe operation.  
M : without by-pass plug, return plugged for one-pipe operation.



## TECHNICAL DATA

### General

Mounting	Flange or hub according to European Standard EN 225
Connection threads	Cylindrical according to ISO 228/1
Inlet and return	G 1/4"
Nozzle outlet	G 1/8"
Pressure gauge ports	G 1/8"
Vacuum gauge port	G 1/8"
Valve function	Pressure regulating and cut-off
Strainer	Open area : 14 cm <sup>2</sup> (AN 47/57/67) 20 cm <sup>2</sup> (AN 77/97) Opening size : 150 µm
Shaft	Ø 8 mm according to European Standard 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 - 1,3 kg (depending on the model)

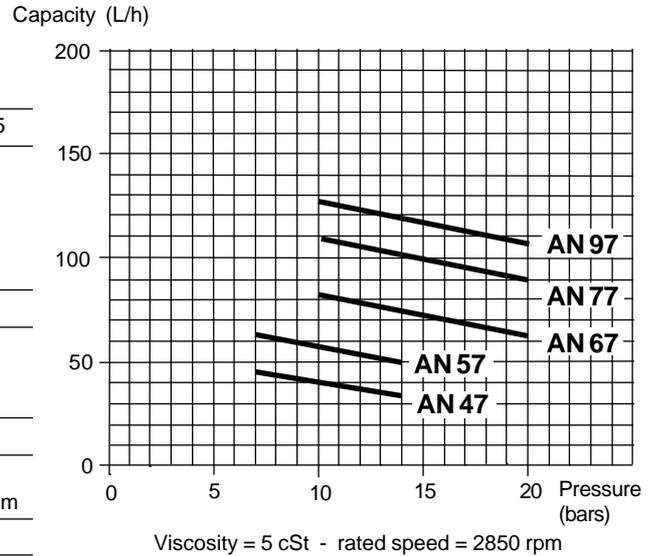
### Hydraulic data

Gear size	Nozzle pressure range*	Factory setting
47	7 - 14 bars	9 bars
57	7 - 14 bars	9 bars
67	10 - 20 bars	14 bars
77	10 - 20 bars	14 bars
97	10 - 20 bars	14 bars

\* other ranges available on request,  
refer to the specified range of the particular fuel unit

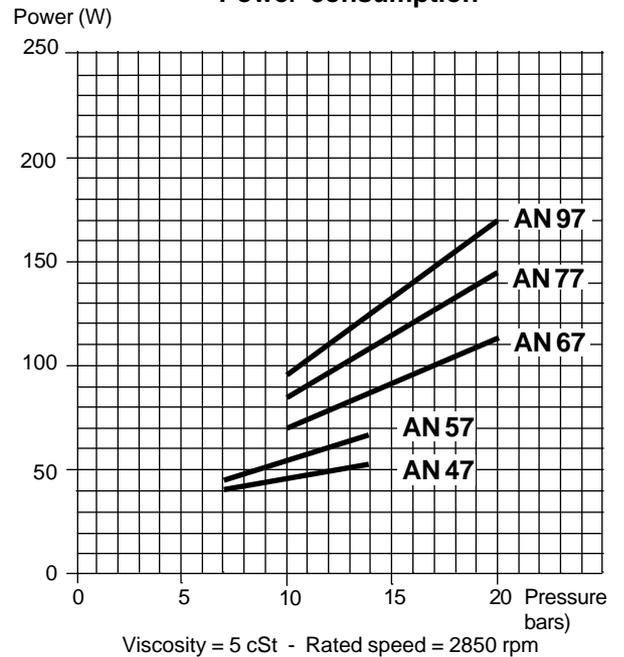
Operating viscosity	2 - 75 cSt
Oil temperature	0 - 60°C in the pump
Inlet pressure	2 bars max.
Return pressure	2 bars max.
Suction height	0,45 bars max. vacuum to prevent air separation from oil
Rated speed	3600 rpm max.
Starting torque	0,10 N.m (AN 47/57) 0,12 N.m (AN 67) 0,14 N.m (AN 77) 0,20 N.m (AN 97)

### Pump capacity



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

### Power consumption

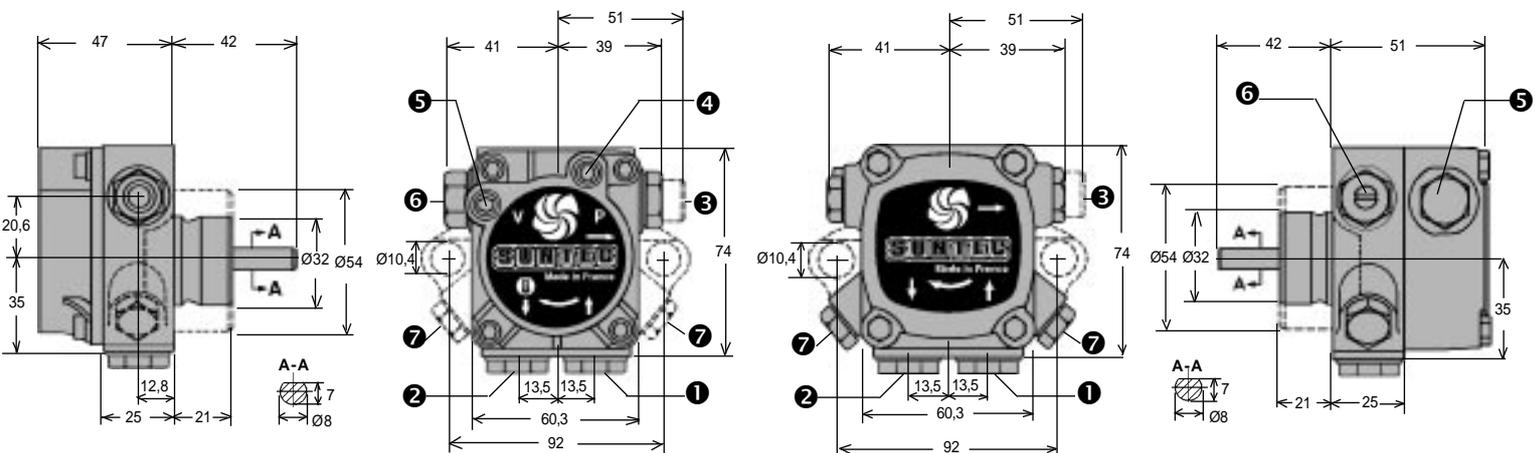


## PUMP DIMENSIONS

Examples show "C" rotation and nozzle outlet

Pumps AN 47/57/67

Pumps AN 77/97



- ① Suction
- ② Return and internal by-pass plug
- ③ Nozzle outlet
- ④ Pressure gauge port
- ⑤ Vacuum gauge port
- ⑥ Pressure adjustment
- ⑦ Pressure port (only for "7000" series)