

# OIL PUMP TYPE AP GEAR SIZES 47-57-67

AP

AP - 11 - Ed 6 - June 2001

# PUMP IDENTIFICATION

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

(one nozzle line and two pressure modes)

(see pump capacity curves)

Shaft rotation and nozzle location (seen from shaft end)

AP: two step model

without cut-off

Pump series

model number

05 00

Gear set capacity

- 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.

1000 : standard 7000 : with side pressure ports 4 : hub Ø 54 mm 5 : hub Ø 32 mm

Revision number

Installation
P: by-pass plug installed in return port

1 5 xx

Solenoid coil voltage 01 : 110 - 120 V ; 50/60 Hz 02 : 24 V ; 50/60 Hz

for two-pipe operation

05 : 220 - 240 V ; 50/60 Hz Connector cable length —

00 : no cable

35 : 35 cm - 45 : 45 cm 60 : 60 cm - 10 : 1 m

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

The SUNTEC **AP** oil pump has a built-in solenoid which provides a two-mode pressure operation.

# **APPLICATIONS**

- Light oil.
- 2 firing rates (with a sole nozzle line).
- Two-pipe or one-pipe system.
- Requires a separate cut-off valve.

# **PUMP OPERATING PRINCIPLE**

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

The high pressure mode is obtained with the solenoid valve activated (ie. closed); activating this solenoid valve closes the by-pass channel to the return. Oil is then transferred to the nozzle line at the pressure given by the high pressure regulating valve.

The low pressure mode is obtained with the solenoid valve open (ie. non activated); the by-pass channel is open, the oil is supplied to the nozzle line via the by-pass hole and the low pressure adjustment is made by the screw on the solenoid tube.

It is preferable to set the high pressure given by the pump valve (with solenoid activated) before the low pressure, with solenoid non activated. Care should be taken not to overtighten the low pressure adjusting screw of the solenoid tube, as this may eliminate the low pressure range.

For two pipe installation, the by-pass plug fitted in the return port allows any oil not required at the nozzle to be dumped back to the tank. For one pipe installation, the by-pass plug must be removed and the return port plugged, oil which is not required at the nozzle is then returned back to the suction port in the gear set .

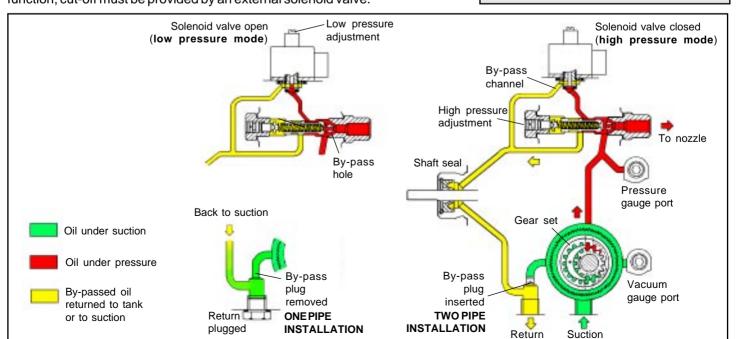
#### Bleed:

Bleeding is assured by the by-pass hole of the nozzle plug.

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



# **TECHNICAL DATA**

## General

Mounting	Flange or hub mounting according to EN 225	
	3 3	
Connection threads	cylindrical according to ISO 228/1	
Inlet and return	G 1/4 (with facilities for conical sealing on revision 5 models)	
Nozzle outlet	G 1/8	
Pressure gauge port	G 1/8	
Vacuum gauge port	G 1/8	
Valve function	Pressure regulation	
Strainer	open area :14 cm² - opening size : 150 μm	
Shaft	Ø 8 mm according to EN 225	
By-pass plug	inserted in return port for two-pipe system;	
	to be removed from return port with a 4 mm Allen key	
	for one pipe system.	
Weight	1,1 - 1,5 kg (depending on the model)	

# **Hydraulic Data**

Gear size		Nozzle pressure	Delivery pressure	
		range*	settings	
47/57	Low mode:	3 -15 bars	9 bars	
	High mode:	10 - 28 bars	22 bars	
67	Low mode:	5 -15 bars	9 bars	
	High mode:	10 - 28 bars	22 bars	
* Other ranges available on request, refer to the specified range of the particular				
fuel unit.				
Operating viscosity	2-12 cSt			
Oil temperature	0 - 60°C max. ii	n the pump		
Inlet pressure	2 bars max.			
Return pressure	2 bars max.			
Suction height	0,45 bars max.	vacuum to prevent a	air separation from oil	
Rated speed	3600 rpm max.			
Torque (@ 45 rpm)	0,10 N.m (AP 4	7/57) - 0,12 N.m (AP	67)	

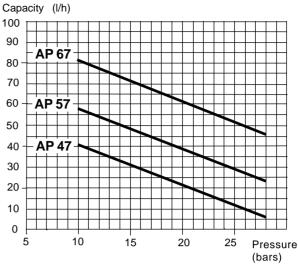
## Solenoid valve characteristics

Voltage	220 - 240 or 110 - 120 or 24 V; 50/60 Hz
Consumption	9 V.A (@ voltage = 230 or 110 or 24 V)
Ambient temperature	0 - 60°C
Maximum pressure	28 bars
Protection class	IP 41 according to IEC 529, when used with
	SUNTEC connector cable

## **Connector characteristics**

Material	Polyamide
	,
Cable type	H03 VV-F
Cross section area	0,5 mm² per conductor
Wire end terminals	in accordance with DIN 46228 D1-7Ms

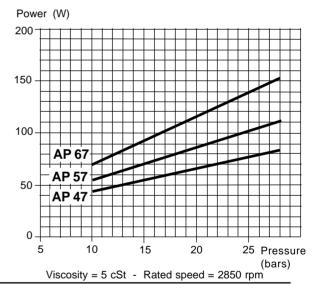
# Pump capacity - High mode



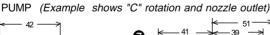
Viscosity= 5 cSt - Rated speed = 2850 rpm

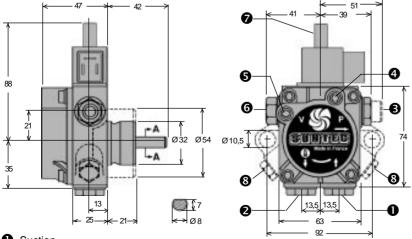
Data shown take into account a wear margin. Do not oversize the pump when selecting the gear capacity.

# **Power consumption**



# **DIMENSIONS**





Suction

Nozzle outlet

2 Return and internal by-pass plug

4 Pressure gauge port

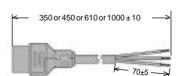
**5** Vacuum gauge port

6 High pressure adjustment

Low pressure adjustment

Pressure port (only for "7000" series)

### CONNECTOR



Inlet **1** and Return **2** with direct sealing for revision 5 models (sealing with washers can also be used)

