

OIL PUMP TYPE AS GEAR SIZES 47-57-67

AS - 11 - Ed 15 - Feb. 2007

PUMP

IDENTIFICATION

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

The SUNTEC **AS** oil pump has a built in solenoid valve which controls the regulator cut-off valve giving fast cut-off and cut-on function independent of the rotational speed.

APPLICATIONS

- Kerosene, light oil.
- One or two-pipe system.

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 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 solenoid valve of the AS pump is of the "normally opened" type.

When the solenoid valve is non-activated, the by-pass channel between the pressure and return sides of the valve is open. No pressure will then be built up to open the valve; it does not matter which speed the gear set has.

When the solenoid is activated, this by-pass channel is closed and because of the full speed of the gear set, the pressure necessary to open the valve will be built up very rapidly, which gives a very sharp cut-on function.

Cut-off:

When the burner stops, the solenoid opens the by-pass at the same moment, which drains all the oil down to the return, and the nozzle valve closes immediately. This gives a very sharp cut-off function.

The cut-on and cut-off can be actuated regardless of motor speed and have an extremely fast response.

When the solenoid is not activated, the torque requirement is low up to full motor speed.

Bleed:

Bleeding in two pipe operation is automatic, but it may be accelerated by opening a pressure port.

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

(Not all model combinations are available. Consult your Suntec representative) AS : pressure regulation and by-pass solenoid valve 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. K : Kerosene applications Pump series 1000 : standard 7000 : with side pressure ports 4 : hub Ø 54 mm 5, 6: hub Ø 32 mm Model number 47 CK1 05 00 XX Revision number P: by-pass plug inserted in return port for two-pipe operation M:without by-pass plug; return plugged for one-pipe operation Solenoid coil voltage

01:110-120 V;50/60 Hz

45:45 cm

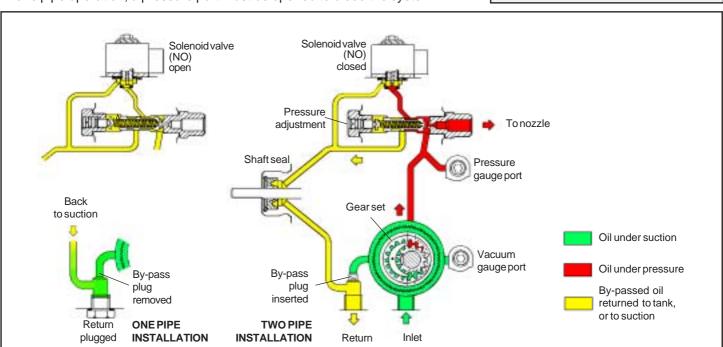
10:1 m

02 : 24 V ; 50/60 Hz 05 : 220 - 240 V ; 50/60 Hz

00: no cable

35:35 cm 60:60 cm

Connector cable length



TECHNICAL DATA

General

Mounting	Flange or hub mounting according to EN 225.	
Connection threads	cylindrical according to ISO 228/1.	
Inlet and return	G 1/4	
	(with facilities for conical sealing on revision 5 and 6 models)	
Nozzle outlet	G 1/8	
Pressure gauge ports	G 1/8	
Vacuum gauge port	G 1/8	
Valve function	Pressure regulation and cut-off*.	
	* cut-off function only assured for model pressure range.	
Strainer	open area : 6 cm ² - 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- 1,5 kg (depending on the model).	

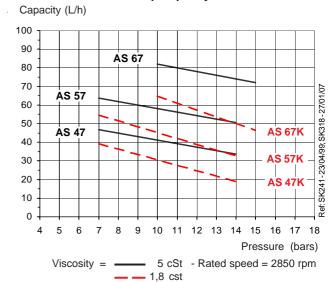
Hydraulic Data

Gear size	Nozzle pressure range*	Factory setting
47/47K	7- 14 bars	9 bars
57/57K	7- 14 bars	9 bars
67/67K	10 - 15 bars	10 bars
	* other ranges available on request,	
	refer to the specified range of the particular fuel unit.	
Operating viscosity	2 - 12 mm ² /s (cSt) for AS 47/AS 57/AS 67	
	1 - 12 mm ² /s (cSt) for AS 47K/AS 57K/AS 67K	
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. for AS 47/AS 47K/AS 57/AS 57K	
	2850 rpm max for AS 67/A	S 67K
Torque (@ 45 rpm)	0,10 N.m for AS 47/AS 47k	(/AS 57/AS 57K
	0,12 N.m for AS 67/AS 67K	

Solenoid valve characteristics

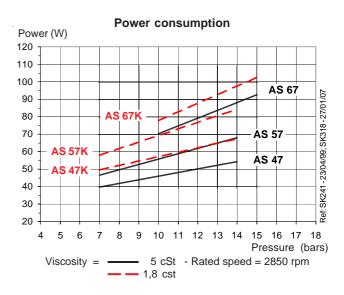
Voltage	220-240 or 110-120 or 24 V; 50/60 Hz.
Consumption	9 W
Ambient temperature	0 - 60°C
Maximum pressure	25 bars
Certified	TÜV Nr. stamped on pump cover.
Protection class IP 54 according to EN 60529, when used with	
	SUNTEC connector cable.

Pump capacity



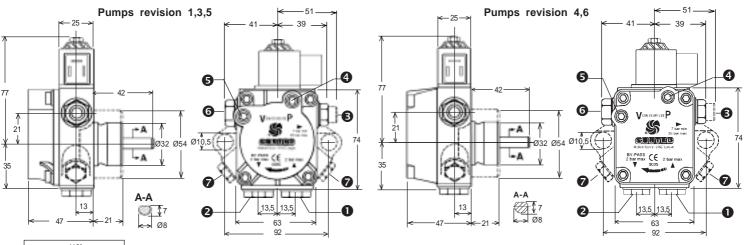
Data shown take into account a wear margin.

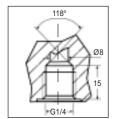
Do not oversize the pump when selecting the gear capacity.



PUMP DIMENSIONS

Examples show "C" rotation and nozzle outlet.





Inlet **1** and Return **2** with direct sealing for revision 5 and 6 models (sealing with washers can also be used)

- Suction
- 4 Pressure gauge port
- Return and internal by-pass plug
- **5** Vacuum gauge port
- Pressure port (only for "7000" series)

- 3 Nozzle outlet
- 6 Pressure adjustment