UNIVERSAL PUMP TYPE AUV

AUV 47L 9877 6P 0700
AUV 47R 9876 6P 0700

AUV 987x - 11 - Ed 5 - April 2024

These two SUNTEC **AUV** models are specially designed for the replacement market : they replace the majority of one-stage pumps on the market of which most SUNTEC AS 47, AL 35, ALE 35 references. They incorporate a blocking solenoid valve fitted with a built-in return valve ensuring an in-line cut-off function and a nozzle line pressure relief. They feature two nozzle possible outlets.

COMPATIBILITY

- Domestic oil, HVO, B100 (biofuel blend with the addition up to 100% FAME, as defined in DIN SPEC 51603-6 and EN 14214), kerosene.
- One or two-pipe system.

SPECIAL FEATURES

- Choice of nozzle outlet connection on either side (right or left).
- Nozzle line pressure relief device (only for nozzles with build-in cut-off function).
- Performance and reliability of SUNTEC "AL" pumps, also adapted to kerosene applications.

PUMP OPERATING PRINCIPLE

The gear set draws oil from the tank through the built-in filter and transfers it to the nozzle line via the cut-off solenoid valve. A pressure regulating valve is used to dump all oil which is not required at the nozzle.
In two-pipe operation, the by-pass plug fitted in the return port ensures that the oil dumped by the regulating valve is returned to the tank and the suction line flow is equal to the gear set capacity.
In one-pipe operation , the by-pass plug must be removed and the return plugged, so that the oil which does not go through the nozzle line is returned directly to the gear inlet and the suction line flow is equal to the nozzle flow.

Cut-off

The solenoid valve of the AUV pump is of the "normally closed" type and is situated in the nozzle line. This design ensures extremely fast response and the switching can be selected according to the burner operating sequence and is independent of motor speed. When the solenoid is non-activated, the valve is closed and all oil pressurized by the gear set passes through the regulator to suction or the return line, depending upon pipe arrangement.
As soon as the solenoid is activated, oil passes to the nozzle line at the pressure set by the pressure regulating valve.

Bleed

Caution: The non-used nozzle outlet must be loosened, thoroughly bleeded and retightened, to obtain a perfect cut-off function.

Nozzle line pressure relief (for nozzle incorporating a cut-off function)
The nozzle line pressure relief function operates only when the installation is fitted with a nozzle incorporating a cut-off function which opens at 4 bars or above. Any subsequent expansion of the oil due to residual heat from the preheater or the boiler is discharged through the relief valve in the pump which opens at a lower pressure than the nozzle opening pressure.
Note : For a boosted pump, the overpressure applies to the safety shut-off device and the relief valve.

PUMP IDENTIFICATION

(only for 9877 and 9876 models)

AU : pressure regulation, blocking solenoid valve with in-line cut-off function, two possible nozzle outlets.

V : B100 applications

Gear set capacity (see pump capacity curve)

Shaft rotation (seen from shaft end)
R : clockwise rotation
L : anti-clockwise rotation.

Model number (these 2 models incorporate a nozzle line pressure relief device)

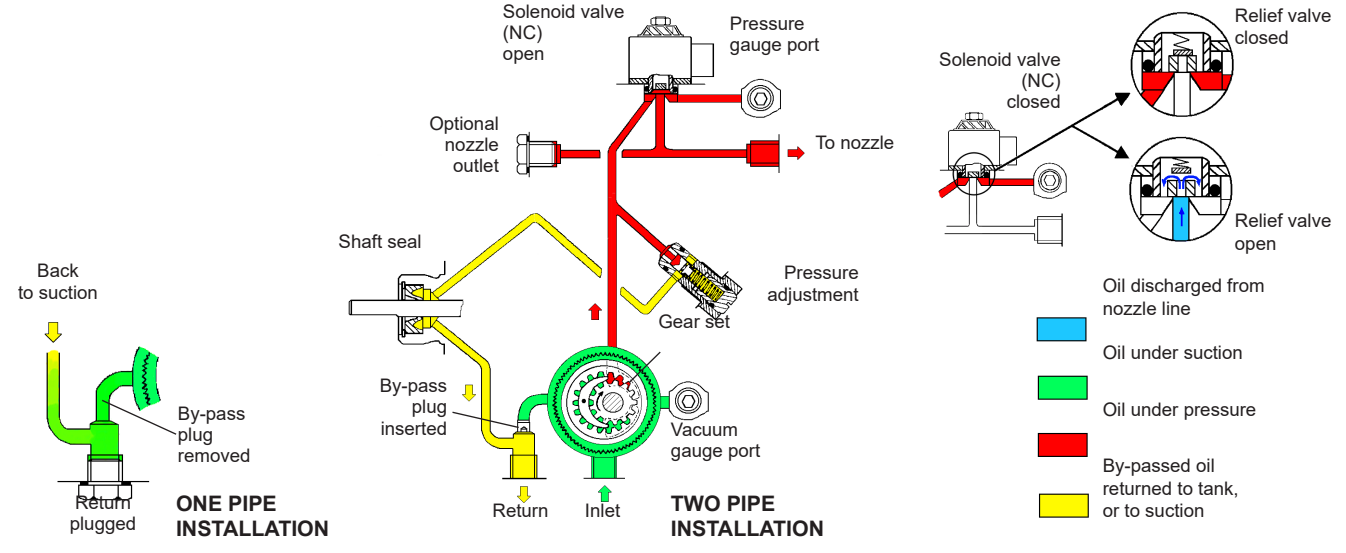
AU	V	47	L	9877	6	P	07	00
AU	V	47	R	9876	6	P	07	00

Revision number

Installation
P : two-pipe operation

Solenoid valve voltage
07 : 220-240 V AC ; 50/60 Hz

Connector cable length
00 : no cable



TECHNICAL DATA

General

Mounting	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)
Nozzle outlets	G 1/8
Pressure gauge port	G 1/8
Vacuum gauge port	G 1/8
Valve function	Pressure regulation
Strainer	open area : 6 cm² - opening size : 150 µm
Shaft	Ø 8 mm with 2 flats
By-pass plug	inserted in return port for two-pipe system; to be removed with a 4mm Allen key for one pipe system.
Weight	1,1 kg

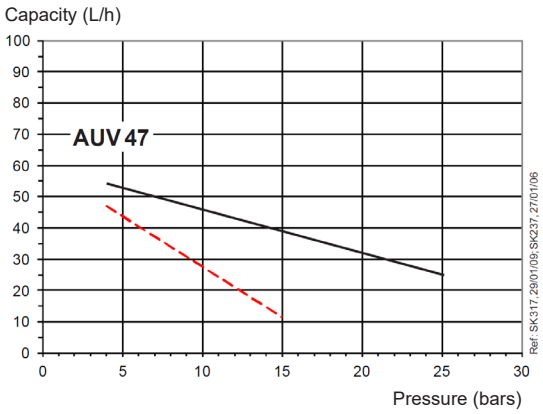
Hydraulic Data

Nozzle pressure range	4 - 25 bars @ 5 cSt (light oil and B10 applications) 4 - 15 bars @ 1,8 cSt (kerosene application)
Delivery pressure setting	9 bars
Viscosity range	1,25 - 12 mm²/s (cSt)
Oil temperature	0 - 60°C max. 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.
Torque (@ 45 rpm)	0,10 N.m

Solenoid valve characteristics

Voltage	220-240 V; 50/60 Hz
Consumption	9 W
Ambient temperature	0 - 80 °C
Maximum pressure	25 bars
Relief valve opening pressure	3,5 bars max. (without booster)
Certified	TÜV - Nr stamped on pump cover
Protection class	IP 54 according to EN 60529, when used with SUNTEC connector cable

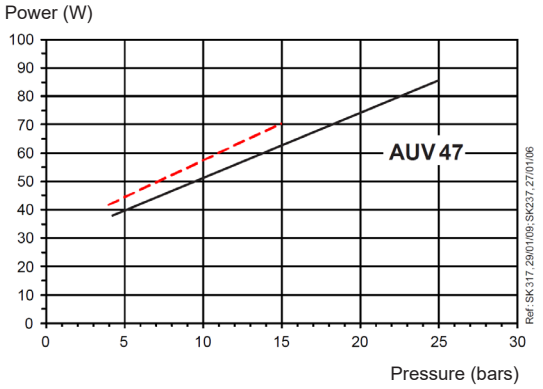
Pump capacity



Viscosity = 5 cSt - Rated speed = 2850 rpm
1,8 cSt

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

Power consumption

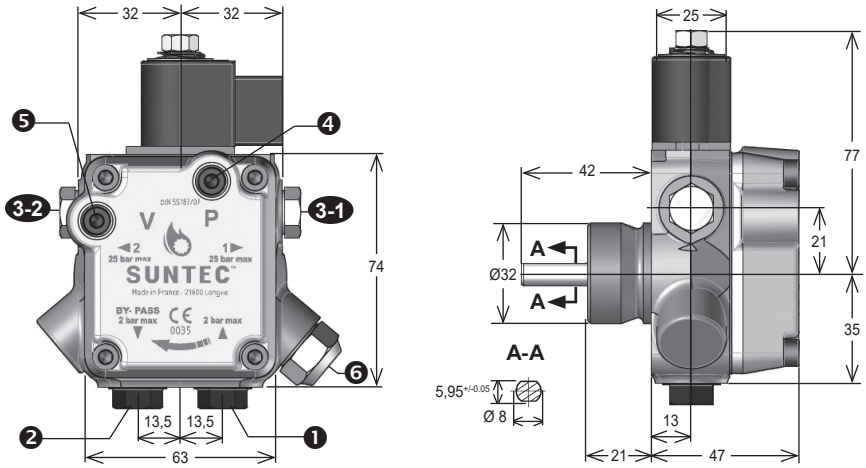


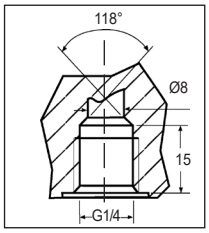
Viscosity = 5 cSt - Rated speed = 2850 rpm
1,8 cSt

Caution: When replacing an AS 47 or an AL(E) 35 pump by an AUV 47, take care of the inlet and return ports location. These ports may be inverted on the AUV model with regard to the replaced model (refer to the arrows on the cover face of the pump)

DIMENSIONS *(in mm)*

Example shows model AUV 47L 9877 6P 0700, for model ref AUV 47R 9876 6P 0700, reverse the rotation direction.





Inlet ❶ and Return ❷ with direct sealing (sealing with washers can also be used)

❶ Suction
❷ Return and internal by-pass plug
3-1 Nozzle outlet
3-2 Optional Nozzle outlet
❹ Pressure gauge port
❺ Vacuum gauge port
❻ Pressure adjustment