

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

The SUNTEC **ALE** oil pump incorporates a blocking solenoid valve fitted with a built-in return valve ensuring an in-line cut-off function and a nozzle line pressure relief. The integration of the return valve into the solenoid valve means that the ALE pump performance and dimensions are identical to the AL pump.

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

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 must be fitted in the return port, which ensures that the oil by-passed 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 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. In that case, the by-pass plug must be removed from the return port, and the return port sealed by steel plug and washer.

Bleed

Bleeding in two-pipe operation is automatic : it is assured by a bleed flat on the piston. In one-pipe operation, the plug of a pressure gauge port must be loosened until the air is evacuated from the system.

Cut-off

The solenoid valve of the ALE 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 the suction or 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.

Nozzle line pressure relief

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.

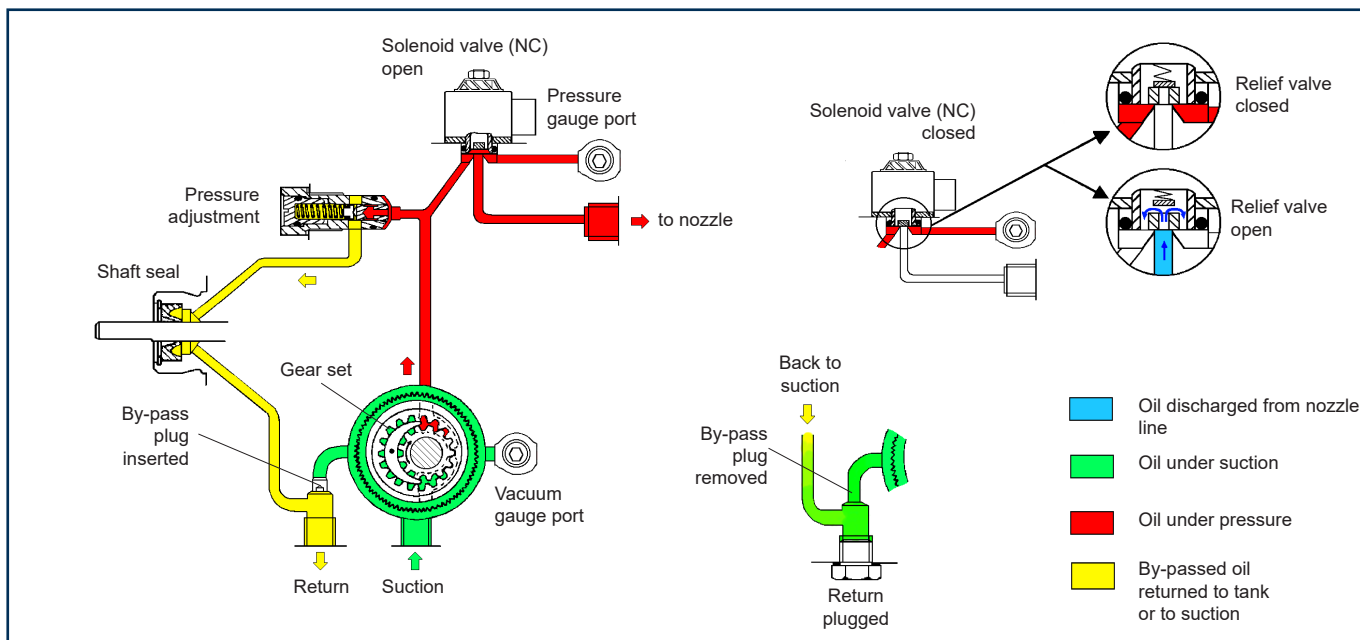
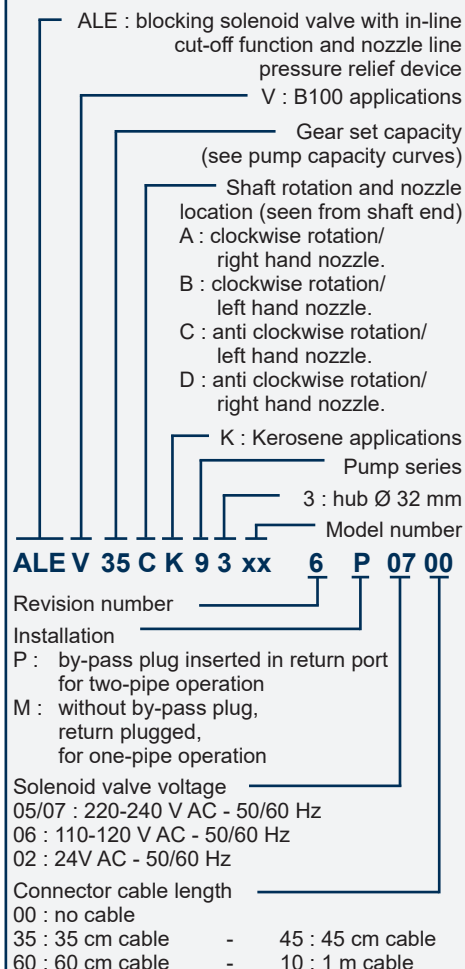
Note : For a boosted pump, the overpressure applies to the safety shut-off device and the relief valve.

ALE

ALE - 11 - Ed 12 - April 2024

PUMP IDENTIFICATION

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



General

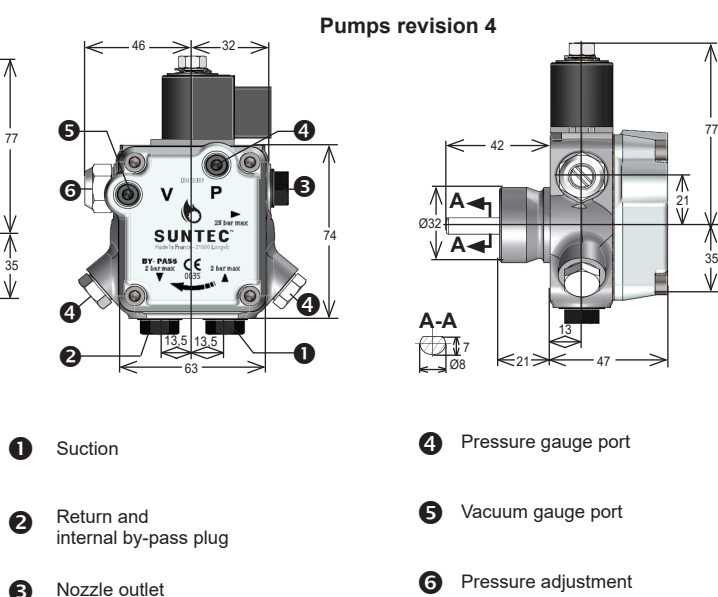
Hydraulic Data

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

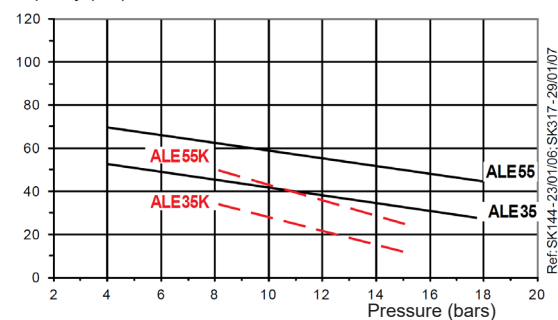
Solenoid valve characteristics

Voltage	220 -240 or 110-120 or 24 V; 50/60 Hz
Consumption	9 W max.
Coil Code*	Ambient temperature
06/02/05	0 - 60 °C
07	0 - 80 °C
<i>*Refer to "Pump identification - solenoid coil voltage".</i>	
Maximum pressure	25 bars
Relief valve	3,5 bars max. (without booster) opening pressure
Certified	TÜV Nr. stamped on pump cover
Protection class	IP 54 according to EN 60529, when used with SUNTEC connector cable.

Examples show "C" rotation and nozzle outlet.



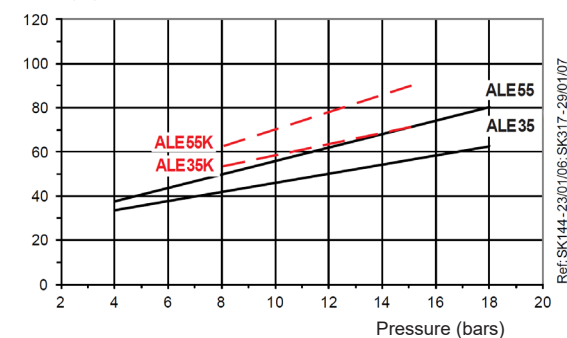
Capacity (L/h)



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 (W)



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