



## SC2 PUMP TYPE TWO STEP

This is a general specification leaflet; for specific applications not covered herein, contact SUNTEC. All information and data given on this specification are for information only.

This SUNTEC **SC2** combustible pump has a reduced gearset which allows the pump to consume less power. Its modular and compact design allows to fit easily into any environment. It has an integrated solenoid valve that controls the built-in pressure regulator, which allows a speed and independent shutdown and opening.

This model is characterized by 2 mode pressure operation and incorporates a blocking solenoid valve with in-line cut-off function. Switching between low and high modes is assured by a 2<sup>nd</sup> integral solenoid valve

### COMPATIBILITY

- Domestic oil, HVO, B100 (biofuel blend with the addition up to 100% FAME, as defined in DIN SPEC 51603-6 and EN 14214)
- Two firing rates (with a sole nozzle line)
- 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 regulator which allows to regulate the pressure to the nozzle line.

Switching between low and high pressure is assured by a "normally open" by-pass solenoid valve. When this solenoid valve is non-activated, a by-pass channel is open, allowing the normal functioning of the low pressure regulating valve which sets the nozzle pressure. When this solenoid is activated, the by-pass channel is closed, thus pressure will build up on both sides of the low pressure regulating valve eliminating its effect, and the high pressure regulating valve now determines the nozzle pressure.

#### Cut-off:

The solenoid valve of this pump is of the "normally closed" type. This design ensures an extremely fast response, in accordance with the different operating phases of the burner, and does not depend on the motor speed.

When the solenoid is non-activated, 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.

**Bleed:** Bleeding in two and one pipe operation is carried out by unscrewing the pressure port.

**Installation:** Note that configuration is not reversible.

#### - Two pipe installation:

All oil that does not go through the nozzle line will be dumped through the valve back to the return line.

#### - One pipe installation:

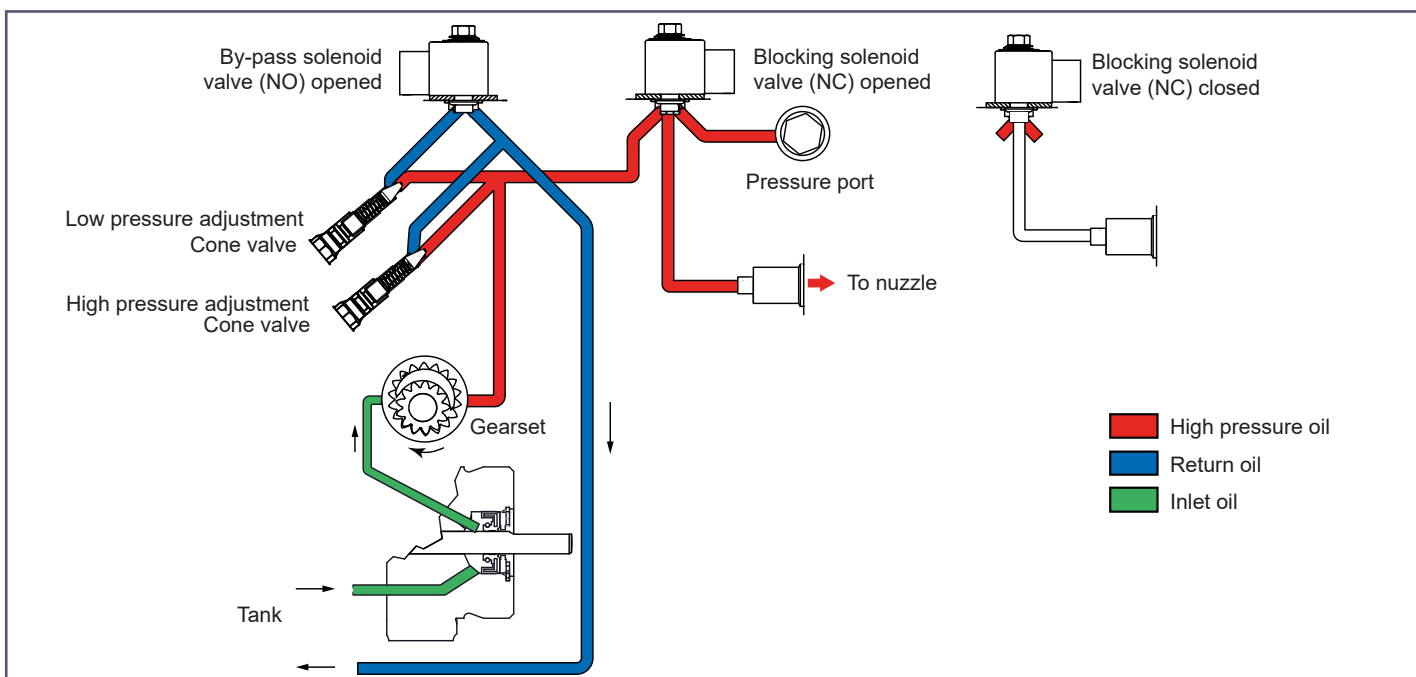
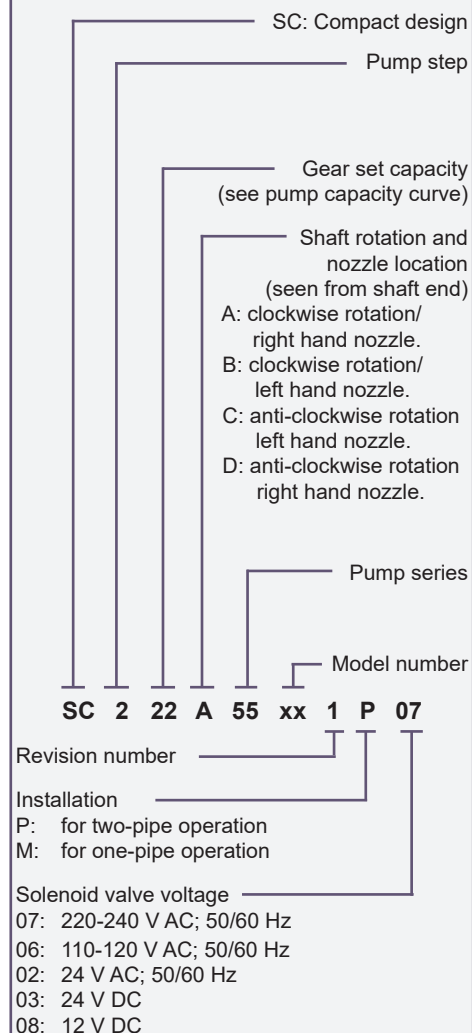
The excess oil is directly returned to the gear set at the suction point; the suction flow rate is then equal to the flow rate provided by the pump to the nozzle.

# SC2

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### PUMP IDENTIFICATION

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



# TECHNICAL DATA

## General

Mounting	Ø25 hub	In option Plastic adaptor Ø32 according to EN 225
Connection threads	Cylindrical according to ISO 228/1	
Inlet and return	G1/8	
Nozzle outlet	G1/8	
Shaft	Ø6 mm, 1 flat	
Strainer	Open area : 33mm <sup>2</sup> Opening size : 150µm	
Weight	600g	
Certification		

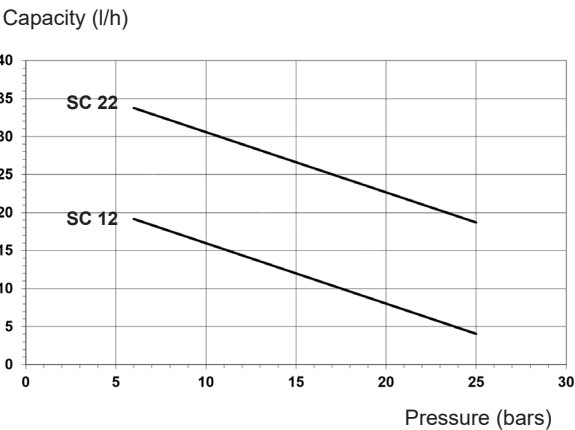
## Hydraulic Data

Nozzle pressure range	Low mode: 7 - 15 bars @ 5 cSt High mode: 7 - 25 bars @ 5 cSt
Delivery pressure	Low mode: 9 bars High mode: 22 bars
Operating viscosity	2 - 12 mm <sup>2</sup> /s (cSt) for kerosene applications contact SUNTEC
Oil temperature	0 - 60°C in the pump
Inlet pressure	2 bars max.
Return pressure	2 bars max.
Suction height	0,45 bar max. vacuum to prevent air separation from oil
Rated speed	3600 rpm max.
Torque (@ 45 rpm)	0.09 N.m

## Solenoid valve characteristics

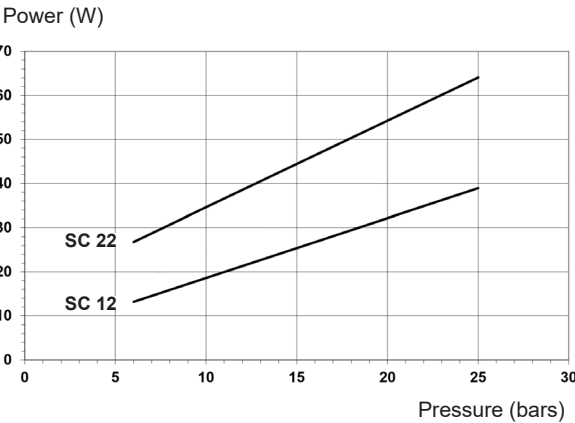
Consumption	9W max.
Code coil*	Ambient temperature
06/02/03/08	0 - 60°C
07	0 - 80°C
* Refer to "Pump identification - solenoid coil voltage".	
Maximum pressure	25 bars
Certified	TÜV Nr on pump
Protection class	IP 54 according to EN 60529, when used with SUNTEC connector cable.

## Pump capacity



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

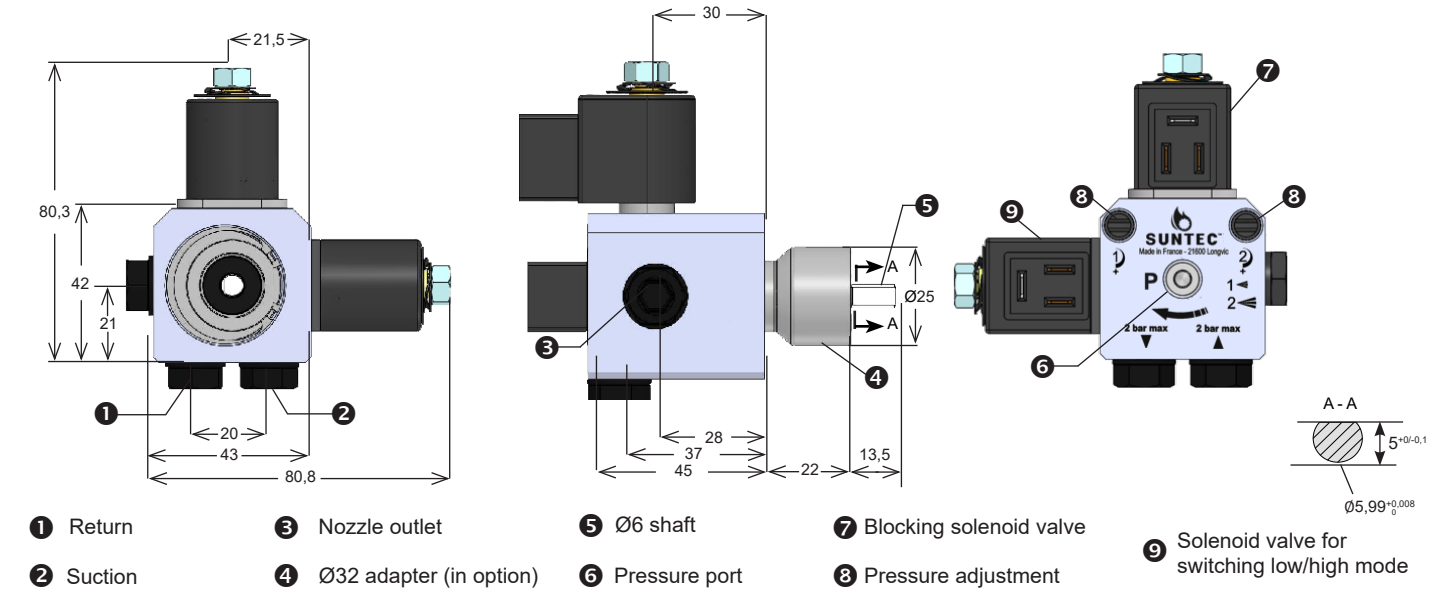
## Power consumption



Viscosity: 5 cSt – Rated speed = 2850 rpm

## DIMENSIONS (in mm)

Example show "C" rotation and nozzle outlet.



Additional information given on side notes.