OIL PUMP TYPE J
GEAR SIZES 4-6

J4/6

J4/6 - US - Ed 1 - November 2018

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

The SUNTEC **J** oil pump incorporates a pressure regulating valve with (or without) cut-off function*.

APPLICATIONS

- Kerosene, #4 and lighter fuel oil.
- One or two-pipe system.
- Normally associated with in-line solenoid valve.

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 which does not go through the nozzle line will be bypassed through the valve back to the suction port in the gear-set.

For a two pipe installation, the plug of the return port must be removed and the by-pass plug must be inserted in the return port, so that the by-passed oil is tranfered to the return.

For models with a cut-off function* operations are as follows :

During starting period when the gear-set speed is increasing, all the oil passes through a special flat on the piston, back to the return. Once the speed reaches a certain value and the flow can no longer pass through this flat, then the pressure increases rapidly overcoming the valve spring force and opens the valve.

During the stop sequence, the gear-set speed slows down and the valve closes when the gear-set capacity is lower than the flat flow.

The cut-on and cut-off speeds depend on the gear-set size, and set pressure.

*Models without cut-off must be provided by an external solenoid valve.

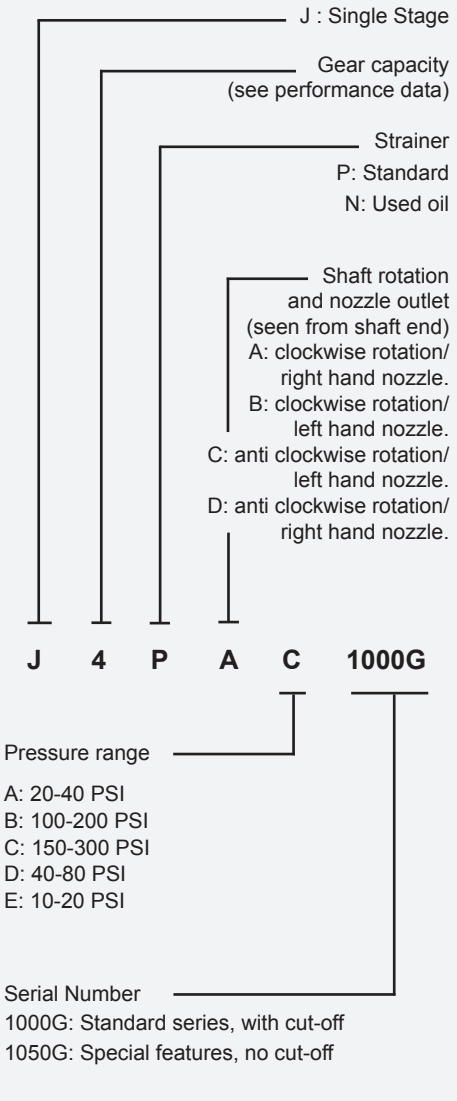
Bleed :

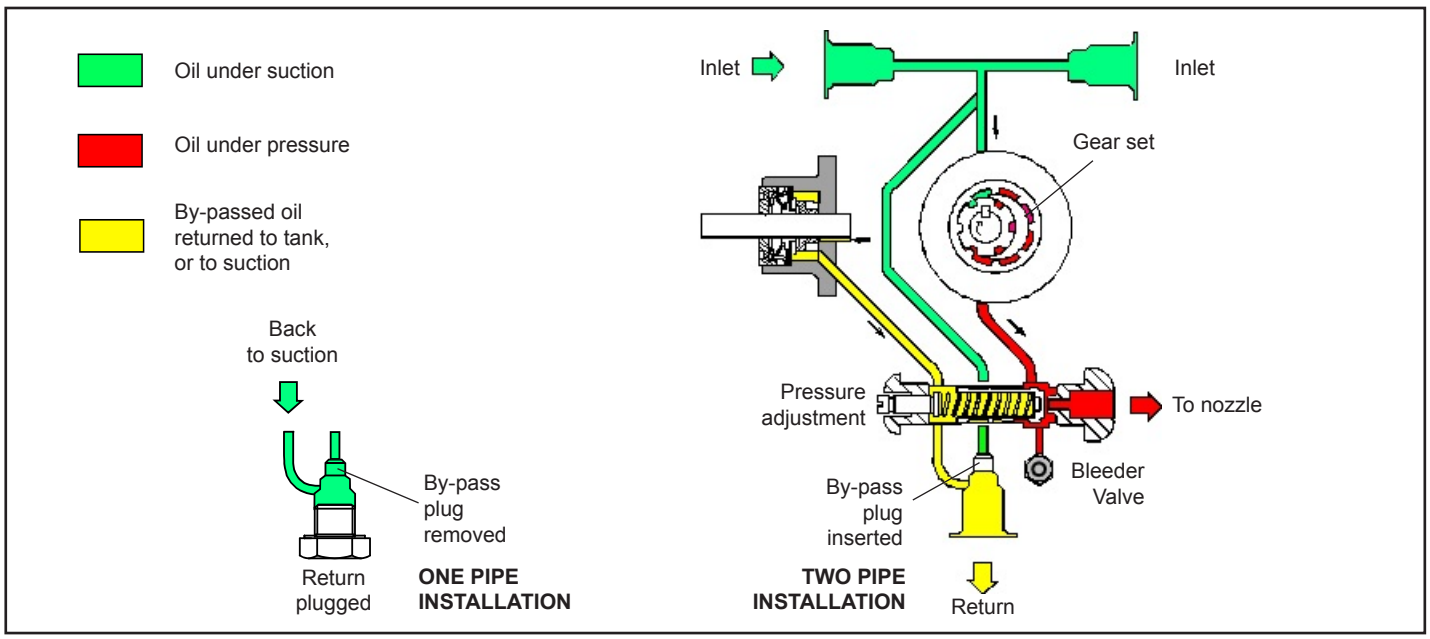
In one pipe operation, bleed the system by opening the bleeder valve.

Bleeding in two pipe operation is automatic, but it could be accelerated by opening the bleeder valve.

PUMP IDENTIFICATION

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





TECHNICAL DATA

General

Mounting	Flange mounting
Connection threads Inlet and return Nozzle outlet Bleeder valve port	 1/4”NPTF 1/8”NPTF 1/8”NPSF
Valve function	Pressure regulation and cut-off (except special models*)
**: Models without cut-off must be provided by an external solenoid valve*	
Strainer	P: Standard – Screen mesh : 90x100 N: Used Oil – Screen mesh : 30x30
Shaft	7/16” (Ø 0.4365" - flat 0.396”)
By -pass plug	1/8” NPTF bypass plug to be inserted with a 3/16”Allen key in the return port for 2 pipe system

Hydraulic data

Nozzle pressure range		Delivery pressure
A:	20 - 40 psi	40 psi
B:	100 - 200 psi	100 psi
C:	150 - 300 psi	150 psi
D:	40 - 80 psi	80 psi
E:	10 - 20 psi	10 psi

Oil temperature	32 - 194 F in the pump
Inlet and return pressures	10 psi max.
NFPA limits pressures to 3 psi max	
Suction height	Single pipe : 6” Hg max vacuum Two pipe: 13,5”Hg max vacuum to prevent air separation from oil

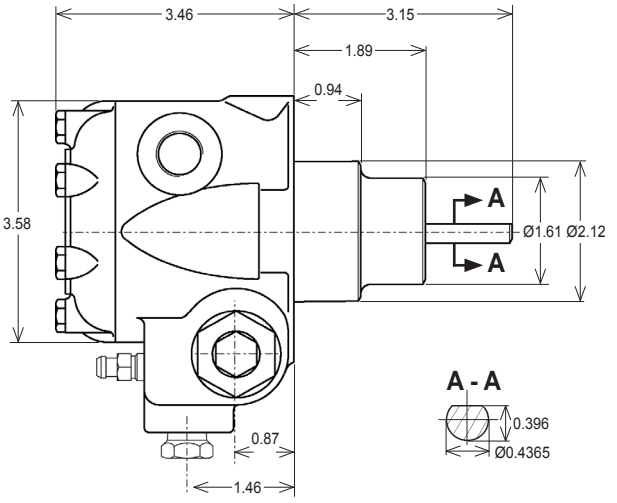
Performance Data

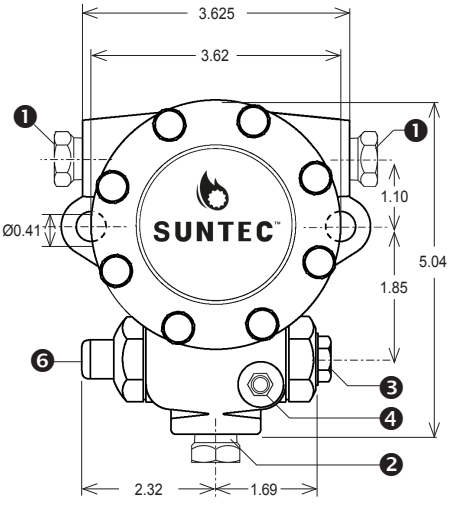
Max . #2 Nozzle flow (GPH)	J4		J6	
Rotation	**1725 rpm**	**3450 rpm**	**1725 rpm**	**3450 rpm**
20 psi	28	60	42	90
40 psi	26	58	40	86
80 psi	24	57	38	85
100 psi	22	54	36	83
200 psi	12	44	26	73
300 psi	2	35	17	63

Power (Watts)	J4		J6	
Rotation	**1725 rpm**	**3450 rpm**	**1725 rpm**	**3450 rpm**
100 psi	60	135	95	215
200 psi	100	215	150	330
300 psi	140	295	2015	445

PUMP DIMENSIONS

Example shows "A" rotation and nozzle outlet.





❶ Inlet port

❷ Return (and internal by-pass plug for 2 pipe installations)

❸ Nozzle outlet

❹ Bleeder valve*

❻ Pressure adjustment

**Pressure check may be made at the nozzle or bleed port*