SUNTEC™ OIL PUMP TYPE TAR
for Marine Residual Fuels applications

TAR

TAR - US - Ed.4 - June 2019

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

Designed from the well known TA pump range, the SUNTEC **TAR** oil pump is specially designed for industrial heating applications using Marine Residual Fuels (as defined in ISO 8217 standard). **TAR** pump offer superior resistance to wear and improved pump life for abrasive fuels applications.

APPLICATIONS

- Marine Residual Fuels (RMG).
- Fuel oil #3 to #6, B6-B20 (blends from 6% up to 20% biodiesel, per ASTM D396).
- Marine Distillate Fuels applications possible.
- One or two-pipe system.

PUMP OPERATING PRINCIPLE

The gear set draws oil from the tank and transfers it to the valve regulating the oil pressure to the nozzle line. All oil which 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 the gear-set.

Bleed :

The plug of the pressure gauge port must be loosened until the air is evacuated from the system.

Note :

All TAR models are delivered for two-pipe system (by-pass plug fitted in vacuum gauge port).

For one-pipe system, the by-pass plug must be removed and the return port sealed by steel plug and washer.

PREHEATING FACILITY

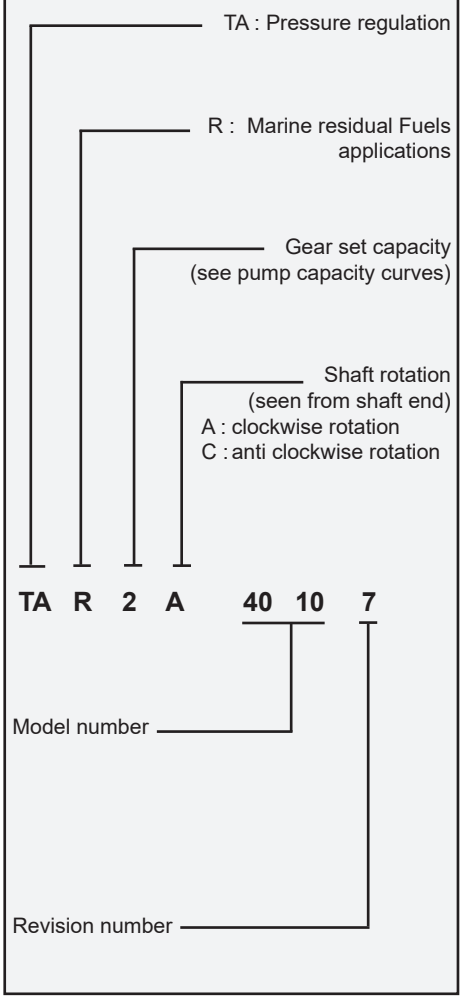
Care should be taken to avoid starting pump with high viscosity cold oil leading to pump and coupling damage. For this reason, the TAR pump body includes a cavity to accept an electric preheater. This cavity has been located to give maximum heat transfer from the heater to the oil in the pump without direct contact between the heater cartridge and the oil.

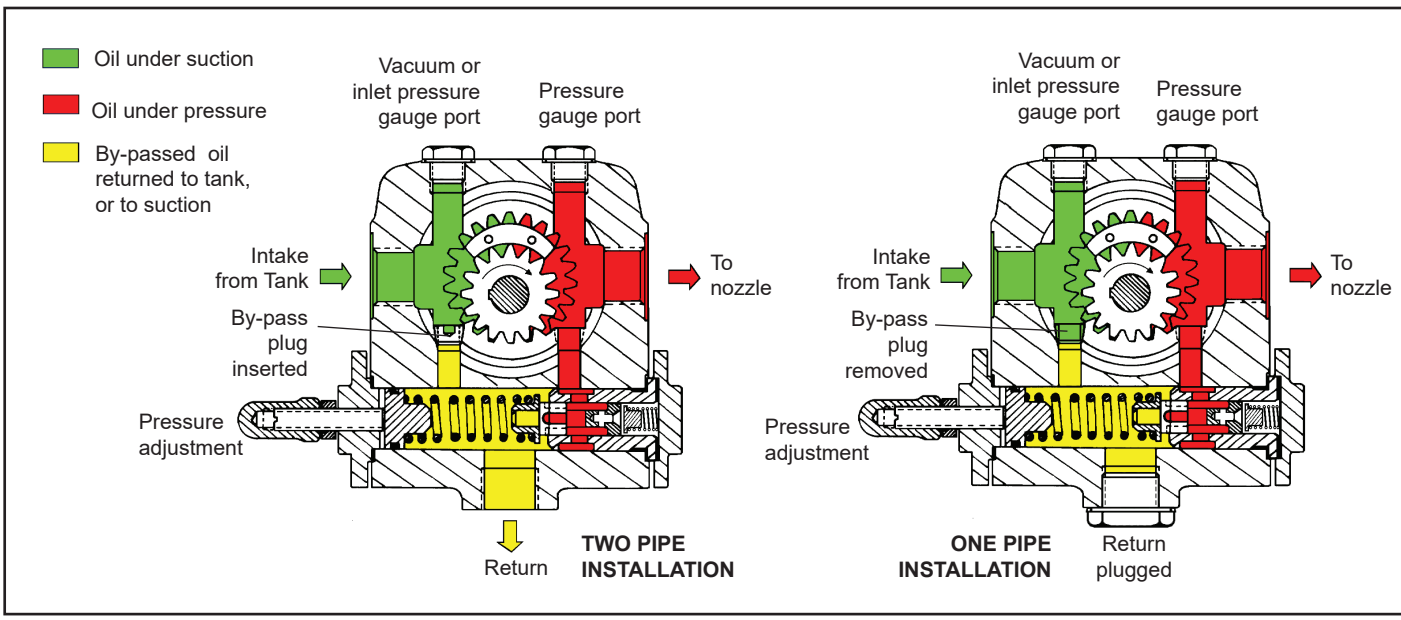
Heaters should be connected for a period of time prior to starting the pump. When the right temperature is reached, they can be switched off or left permanently switched on to maintain fluid oil in the pump during the periodic burner shut-downs.

The oil supply, pipes and filters must be separately heated.

PUMP IDENTIFICATION

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





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TECHNICAL DATA

General

Mounting	Flange mounting	
Connection threads	Cylindrical according to ISO 228/1	Conical
Inlet and return	G 1/2	1/2 NPTF
Nozzle outlet	G 1/2	1/2 NPTF
Pressure gauge port	G 1/4	1/4 NPTF
Vacuum gauge port	G 1/4	1/4 NPTF
Shaft	Ø 12 mm	
By-pass plug	Inserted in vacuum gauge port for 2 pipe system; to be removed with a 3/16" Allen key for 1 pipe system	
Weight	11,9 lbs (TAR2) 13,2 lbs (TAR4)	12,6 lbs (TAR3) 14,1 lbs (TAR5)

Choice of heater

Cartridge	Ø 12 mm
Fitting	according to EN 50262
Rating	80-100 W

Hydraulic data

Nozzle pressure range*	@ 2 cSt	@75 cst
TAR 2/3/4:	100-350 psi	100-580 psi
TAR 5:	100-350 psi	100-435 psi

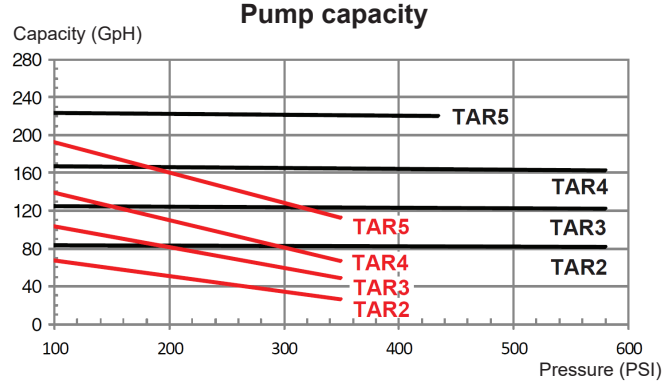
** : optional pressure range = 30 - 100 psi, contact SUNTEC*

Delivery pressure setting	435 psi
Operating viscosity**	1,25 - 75 mm²/s (cSt)

***: for viscosity lower than 2 cSt, the maximum pressure has to be reduced to 290 psi for TAR2/3/4 and 245 psi for TAR5*

Oil temperature	32 - 302°F in the pump
Inlet pressure	6,5 psi max. vacuum to prevent air separation from oil Inlet feed pressure : 75 psi max.
Return pressure	75 psi max.
Rated speed	3600 rpm max.
Torque (@ 40 rpm)	0.3 N.m

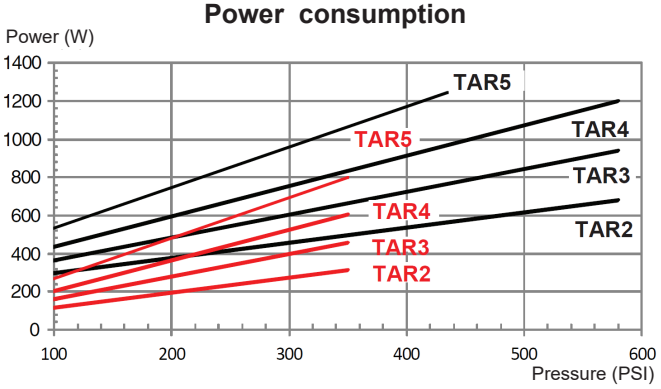
Pump capacity

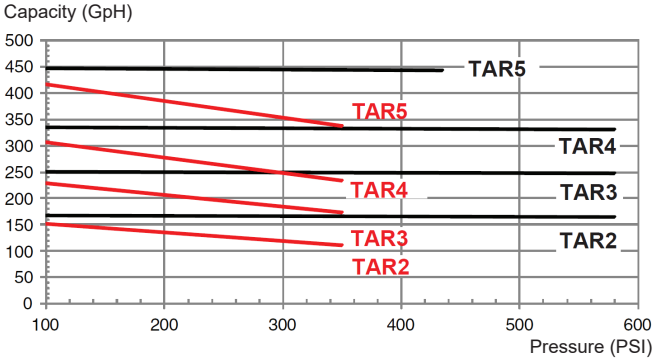


Rated speed : 1725 rpm

Viscosity :
75 cSt
2,4 cSt

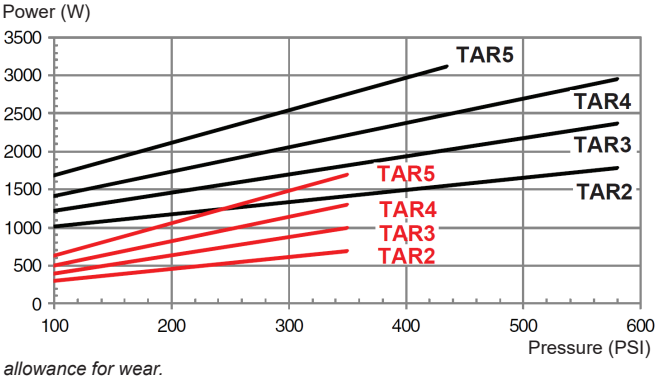
Power consumption





Rated speed : 3450 rpm

Viscosity :
75 cSt
2,4 cSt

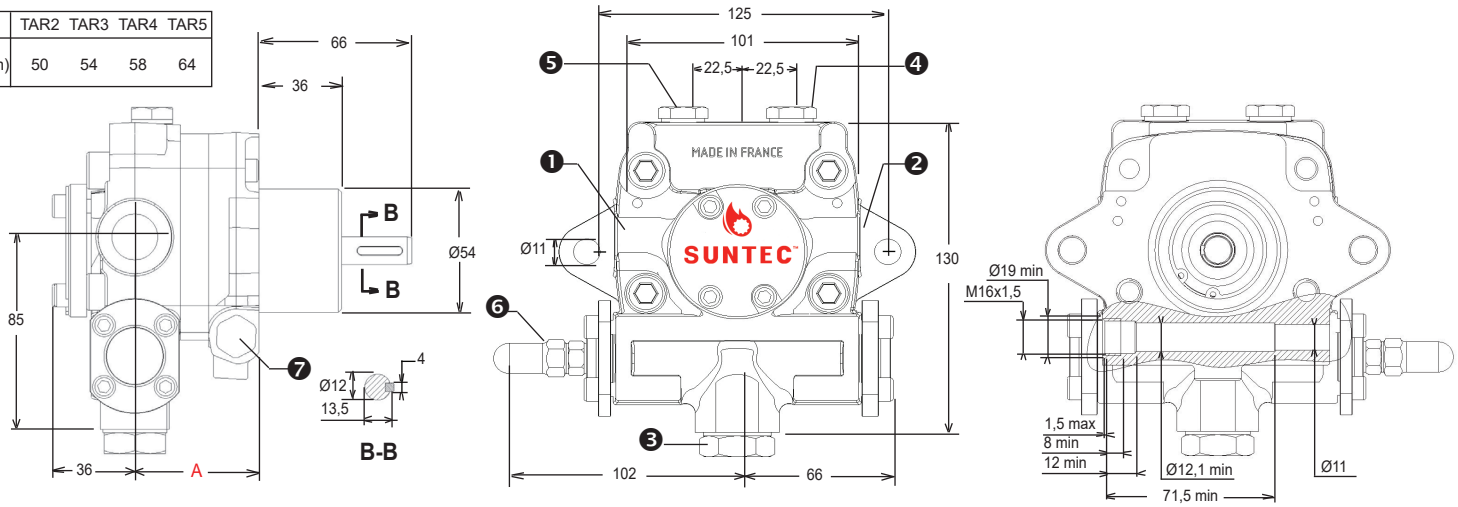


Data shown are for new pumps, with no allowance for wear.

PUMP DIMENSIONS

Example shows pump with "C" rotation - Reverse all pump connections for "A" rotation - Dimensions in mm.

	TAR2	TAR3	TAR4	TAR5
A (mm)	50	54	58	64



❶ Suction ❷ Nozzle outlet ❸ Return ❹ Pressure gauge port ❺ Vacuum or inlet pressure gauge port and internal by-pass plug ❻ Pressure adjustment ❼ Preheater cavity