

DynoTronics

Dynamometer -- Service Training Consulting

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Pressurized Water Cooling System DT- PWCS - (E) or (M)

Short Description

This cooling system enables engine water jacket cooling for power levels up to 600 Hp. The pressure in the system is set by the type of cap installed on the expansion tank. This cap is the same as used on a vehicle radiator system.

The system consists of 2 major parts : heat exchanger and temperature control. The heat exchanger used is an industrial grade type, normally found on industrial engines. Cooling fluid (tubes) and engine water (shell) are entirely separated, allowing the use of conditioned water in the engine.

The control system controls the water temperature by sensing the fluid temperature inside the shell. An electronically controlled (E) or mechanically controlled system (M) is available. The electronically controlled version has a control unit in the operator room while the mechanically controlled version needs adjusting in the dyno room.



Pressurized Cooling System DT- PWCS- (E) or (M)

General Specifications

Power rating (continuous)	600 Hp
Temperature Range	60degC 110degC
Max cooling fluid pressure	8 bar (10 bar for mechanic system)
Temperature control loop	Mechanically or Electronically
Engine Water connection	hose barb 30 mm (in and out)
Cooling Water connection	PN16 flange (DN15)
	(Other dimensions and flexible tubing on request)
Level gage	Yes, Standard
Stand alone or wall mounted	
Pre-Heater	No, Optional
Circulating Pump	No, Optional
Colour Powder Painting	RAL7001
	(other colours on request)

Detailed Specifications

Heat Exchanger

Max Power	600 Hp
Max Tubes Pressure	10 bar
Max Shell Flow	450 l/min
Max Tubes Flow	170 l/min
Max Temperature	170 degC
Shell Volume	10 litre

Electronically Controlled Temperature (E type)

Servo Valve

Max Pressure	8 Bar
Max Flow	500 l/min
Max Temperature	170 degC
Principle	0-10 Volt industrial servomotor
Safety	normal open valve

Control Unit

4 Digit Digital indicator, Process Value and Setpoint Value
Auto tune PID loop for ease of control
Control Range 0 200 degC
Control precision 1 degC
Power Supply 110 240 Vac (50 - 60 Hz)
Setpoint changes through front panel (up down buttons)
Flash memory for retaining set-up parameters

Mechanically Controlled Temperature (M type)

Valve

Max Pressure	10 Bar
Temp Range	70-110 degC
Setpoint by manual control	