PREHEAT ENGINEERING LIMITED





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GENERAL FITTING INFORMATION FOR PUMPED INSTALLATIONS

Position the heater/pump assembly approximately in place, away from the engine to minimise possible enginerelated vibration damage, as low down as possible near the side of engine where water connection points are being utilised, and drill suitable mounting holes for the assembly, such that the hoses running from the heater/pump assembly run directly upwards from the heater/pump to the engine connections rather than twisting and looping, to avoid airlocks. The heater must be mounted either horizontally or tilted such that the metal electrical connector box is at the lower end. Mount heater in position away from the engine to reduce vibration. On mobile applications where excessive vibration may be encountered, e.g. locomotives, vehicles, lifeboats etc., the use of suitable anti-vibration mounts may be advisable to avoid heater damage.

On each engine, one coolant heater inlet connection and one or two coolant heater outlets are used to connect the heater/pump assembly to the engine (two outlets are used on some 'V' engines). One cold connection, fairly low down on the engine such as block drain, is used to feed the heater assembly via the pump, the return/s to the engine from the heater body using connections higher in the engine's cooling system such as a core plug, head connection etc.

If advised of the engine make and type to which the assembly is to be fitted, we will be able to supply suitable coolant connections. If these prove unsuitable for any reason, or if you require alternative connections, we can supply such alternative connections as you require to complete the installation.

When the suitable engine coolant connection points have been decided upon, drain down the engine and flush thoroughly to ensure that there are no deposits within the cooling system that may impede the pump impellor or prevent it from revolving. Once this is done, connect the lower engine connection to the inlet on the pump. Connect the heater outlet/s to the higher engine connection/s.

<u>Wiring.</u>

55, 110, 220 and 240 volt wiring. 2 Metre wires will be fitted to the unit, in 1760mm flexible conduit. Connect blue to neutral, brown to live, and green/yellow to earth, suitably fusing the supply. We would recommend an earth leakage breaker is installed for safety. DC wiring, red to +ve, black to -ve.

Three phase wiring. 2 metre wires will be fitted to the unit, in flexible conduit. L1, L2 and L3 will be detailed on wiring ends for your convenience. Ensure therefore that supply is connected such that pump motor rotates the right way, suitably fusing the supply. We would recommend an earth leakage breaker is installed for safety.

NOTE: Please ensure that power is disconnected from the heater/pump when engine is running.

Re-fill engine with coolant. When engine is full, release the air-bleed to be found on the horizontal copper pipe at the highest point on the heater/pump assembly. If the unit has been installed correctly, this will release all air from the heater unit bar a small amount left in the extreme top of the heater.

Wire heater/pump to supply. Turn on supply. The thermostat is pre-set at 50° C, but may be adjusted between 35° and 70° C should it seem necessary to do so by removing the connector box. It is not usually necessary to adjust. After the system has been running for a few hours, re-bleed the valve, re-checking at suitable intervals should any air be found.

If you have any queries on the operation of this unit, please contact our Sales Department. Thank you.