CLARKE®

AN INSTALLATION CHOICE

HEAT EXCHANGER VS RADIATOR

It's a known fact; An engine cannot run properly without a proper cooling system. But how do you know if you should select a heat exchanger or radiator cooled Clarke fire pump driver when both options are closed circuit and NFPA 20 compliant?

WHERE TO USE?

HEAT EXCHANGER vs. RADIATOR

HEAT EXCHANGER

1. Horizontal Split Case, Vertical Turbine and End Suction Applications
2. Basement Pumproom or Interior Locations
3. Installations Where Water Can Be Returned to Drain

RADIATOR

1. Ideal for Vertical Turbine Applications with Natural Water Sources
2. Engine Located at Ground Level and Used In Isolated Areas or Returning Water to Sensitive Areas
3. Areas With Limited Water or Using Sea Water or Contaminated Water

COOLING METHOD

WATER from the pump flows through the cooling loop to the heat exchanger to remove heat.

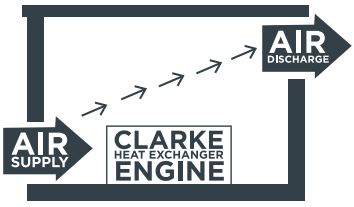
AIR removes heat from the coolant.

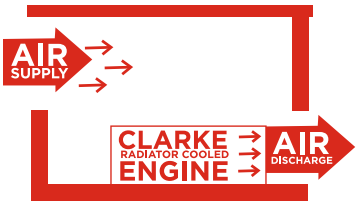
LASTING IMPACT

PUMP DISCHARGE **WATER** can increase costs and contaminate water sources.

SAVE WATER and lessen the impact of nearby water sources.

PUMPROOM VENTILATION





Air flow is essential for all pump room installations. Check out our Pump Room Ventilation Calculator on our website at clarkefire.com/pump-room-ventilation.

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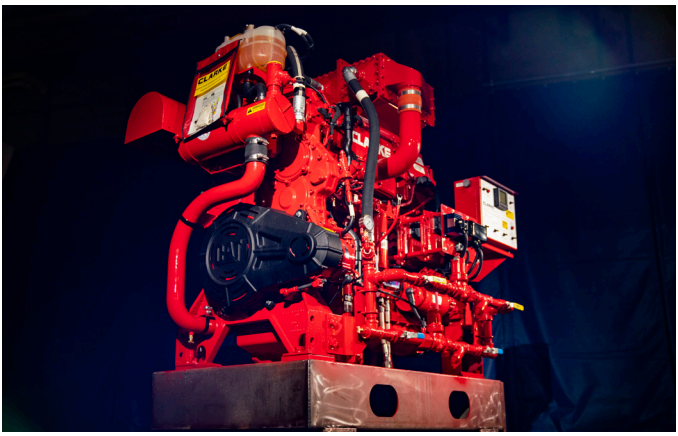
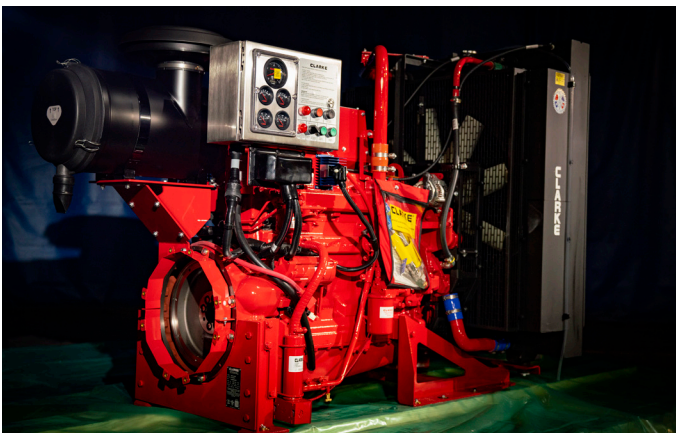
HOW DOES IT WORK?

HEAT EXCHANGER



Heat exchanger cooled engines receive raw water from the pump which then travels though the cooling loop. This pump water then travels through small tubes within the heat exchanger and absorbs the heat from the coolant. Once the pump water cycles through the heat exchanger, it then travels to the discharge drain or, back to the suction reservoir. The chilled coolant returns back to the engine block and the cooling cycle continues this process while the engine is running. The coolant is circulated around the closed system by the engine water pump.

RADIATOR



Radiator cooled engines have coolant that is sent to the radiator. The coolant flows through tubes that penetrate through the fins. An engine driven fan blows air across the radiator fins, which then removes the heat from the coolant. The coolant then travels back to the engine block through the engine water pump and the cycle continues while the engine is running.