

Installation Guidelines

IMPORTANT: Please follow these guidelines when designing an exhaust gas heat recovery installation.

1. Bowman exhaust gas heat exchangers should be installed horizontally and levelled accurately with the water connections on top, so that they are always full of water.
2. The heat exchanger should be connected for counter flow so that the cooling medium flows in the opposite direction to the exhaust gas stream. Please see below for reference.
3. The heat exchanger should be installed below the level of the cylinder head, so that in the unlikely event of a tube leak occurring, water will not leak back into the engine.
4. **IMPORTANT:** the water circuit must be fully vented via the vent plug to prevent the possibility of air pockets being present or aeration taking place.
5. If ethylene glycol, or any other cooling medium is used in the water circuit, use the correct concentration advised by the engine manufacturer.
6. Automatic engine shutdown equipment must be provided with temperature probes in the exhaust gas heat exchanger and the engine.
7. Under no circumstances should the pressure relief valve be removed or tampered with.
8. The inlet and exit exhaust pipe bore must not be smaller than the heat exchanger connections.

Operation Guidelines

1. Should the gas circuit be shut down, it is important to ensure that the water circuit continues to operate for a period of time to enable residual heat to disperse from within the heat exchanger, to prevent the possibility of damage.
2. It is important to ensure that the water circuit pumps operate continually whenever the gas circuit is in operation, to prevent the possibility of damage to the unit through overheating.
3. It is also important to ensure that any valves or ancillary equipment fitted to the heat exchanger cannot be accidentally turned off, preventing water flow through the heat exchanger.

