Environmental Statement

for Gasketed Plate & Frame Type Heat Exchangers

General Statement

The Company endeavours to perform its own operations as cleanly and efficiently as possible, and to take environmental aspects into consideration when developing, designing, manufacturing, servicing and marketing the products within the Company portfolio.

A plate heat exchanger consists of a pack of corrugated heat transfer metal plates.

- Each heat transfer plate is fitted with a rubber gasket, which seals the channel formed between two adjacent plates. The plate pack is assembled between a fixed frame plate and a movable pressure plate and compressed by tightening bolts. The frame plate and the pressure plate are suspended from an upper carrying bar and guided by a lower guiding bar.
- The size, shape, material and quantity of heat transfer plates required are determined by the performance parameters required and the liquids passing through the heat exchanger.
- Heat transfer plate materials are typically stainless steel type 304 and grade 316. Other materials such as Titanium and C276 Alloy are also used but less common. All of these metals can be re-cycled at end of service life.
- Typical rubber gasket materials are Nitrile, EPDM and FKM. Rubber gaskets can either be sent for incineration, thus recovering energy, or be used as landfill.
- The head frame, the moving pressure plate and other frame components are normally made of carbon steel, although stainless steel is sometimes used depending upon customer specification. All of these metals can be re-cycled at end of service life.
- Each individual plate heat exchanger is optimised for its duty and, as a result, the usage of materials is kept to a minimum.
- Transportation packing material consists of wood, plastics, cardboard boxes, plastic and sometimes metal straps. Packing Wood and cardboard boxes can be reused, recycled or used for energy recovery. Plastics should be recycled or incinerated at a licenced incineration plant. Transportation accounts for a large part of UK Exchangers CO2 emissions. In order to reduce these emissions, bulk carrier forwarders are used whenever possible.
- All components are checked against EU legislation and the REACH Candidate List for the use of Restricted Substances. Waste of the product is not hazardous (EU Directive 91/689/EEC). Chemicals must be drained off before any end of life treatment and treated according to local regulations

- The major environmental impact during manufacturing comes from the construction materials.
- The heat exchanger as such does not give rise to any emissions and does not consume any energy. However, to create a pressure drop – the driving force for heat transfer – across the heat exchanger, external pumps are normally needed.
- During the lifetime of the heat exchanger, there may be the need for the replacement of parts such as gaskets and plates. Also, In order to maintain the level of performance, it is recommended that the heat transfer surfaces are cleaned at regular intervals, of which the frequency depends on application and duty.