



Gasket Plate Heat Exchangers

IWC is a thermal solutions provider with an extensive range of heat exchangers for all applications and industries.

Our primary goal is customer satisfaction, and we achieve this by providing bespoke, affordable solutions to solve particular requirements.



Plate Heat Exchangers

Plate Heat Exchangers (PHE) are one of the most efficient technologies for the transfer of heat from one medium to another.

PHE's consist of a frame in which a number of heat transfer plates with rubber seals are clamped. We use thin stainless steel plates (or more exotic materials for corrosive applications) with rubber seals to indirectly transfer heat from one medium (liquid or vapor) to another. The thickness of the plates ranges from 0.4mm to 1.0mm, and are cold pressed, creating a turbulent flow path for the medium to enhance and maximize heat transfer coefficient, and at the same time minimize potential fouling.

Components

Frame

The frame of a Plate Heat Exchanger is designed for industrial application and made of Carbon Steel and coated with a Poly-urethane paint. Tightening bolts are fitted on each side of the frame to clamp the plate pack to the correct tightening size.

For hygienic or corrosive environments, the frame can be manufactured in solid or clad 304L / 316L stainless steel.

Connections

The Inlet and Outlet connections for both the hot and cold sides are made to ANSI or DIN standards, but can also be made to other standards. Connections can be lined with either rubber or in the same material as the plates. An option of Studded or Weld Neck Flanges are available.

Plates

For standard applications, such as water to water, or water to oil heating/cooling, we use 304SS or 316SS plate material. Chloride content and operating temperature needs to be considered when making the plate selection. Chlorides of 150-200ppm at 40°C is the recommended limit. A more exotic material is advisable if chloride concentration and/or temperatures are higher. Materials such as Titanium, SMO254, Nickel and Hastelloy C276 are used for more aggressive applications.



Gaskets

The standard material for gaskets is Nitrile (NBR) and EPDM. These are used for most applications, for acids, ammonia, etc. gasket materials such as Viton and Neoprene are used.

Selection criteria

IWC heat exchanger specialists have many years of experience, with access to global trends and expertise to ensure we provide the best solution when selecting the PHE type, plate and gasket material to be used, to ensure longevity of the PHE, care free operation and affordable pricing.

Advantages



Cost effective, small footprint and light weight compared to Shell & Tube HE's



Very close temperature approach achievable, up to 1 degree Celsius



Flexible design. Plates can be added or removed to compensate for production changes. In case of compromised plates (pinholes or cracks), these can easily be removed and replaced with new ones



Low energy consumption due to low hold up volumes and quick response to process fluctuations



Easy to maintain



Compact and light design results in simple, economical installation



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