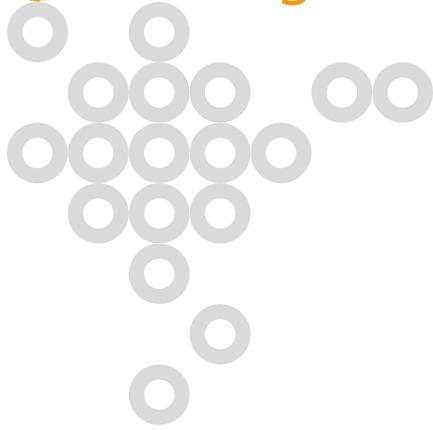




PLATE HEAT EXCHANGERS

HRS High Performance Plate Heat Exchangers



HRS offer a wide range of plate heat exchangers for an extensive range of applications across a diverse spectrum of industries.

- Chemical & Process
- Pharmaceutical & Biotechnological
- Dairy, Meat, Food & Beverages
- Waste & Waste Water Treatment

HRS has many years experience in the field of heat transfer and all aspects of design and calculation of equipment. Consistent development in the field of sealed plate heat exchangers has resulted in a wide range of plate versions with respect to surface structure, materials and gaskets.

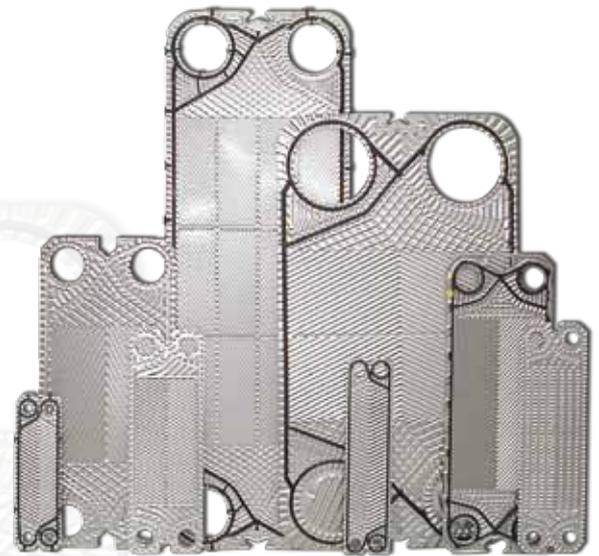
The high-performance plates from HRS provide the optimum heat exchanger for every thermal problem. High heat transfer coefficients and thus best possible utilisation of the surface guarantee a compact, low price solution to the problem. Plate heat exchangers offer additional flexibility, by changing the number of plates, the heat exchanger can also be adapted to other thermal operating conditions.

HRS is certified in accordance with ISO 9001. All designs have preliminary approval from TUV (Germany Technical Inspectorate) and comply with the appropriate inspection and acceptance regulations such as LRS, DNV, BV, GL and ASME.

Heat Transfer Plates



All plates are provided with a double gasket at the ports which prevents mixing of the two media. For safety reasons, the gasket is also provided with an outer leakage groove at the ports. If one of the two gaskets fails and starts to leak, the medium passes to atmosphere.



All plate heat exchangers can be supplied with following gasket materials:

- NBR
- EPDM
- FKM Viton®

The heat transfer plates are characterised by optimum embossing, resulting in high heat transfer coefficients. Variable flow gaps can be generated by a result of the different types and angles of embossing.

Heat transfer plates are supplied as standard in material grades AISI 304 or AISI 316 and depending on the operating conditions high grade materials may be offered such as titanium, for sea water applications.

Heat Exchanger Design

Single-Pass Design

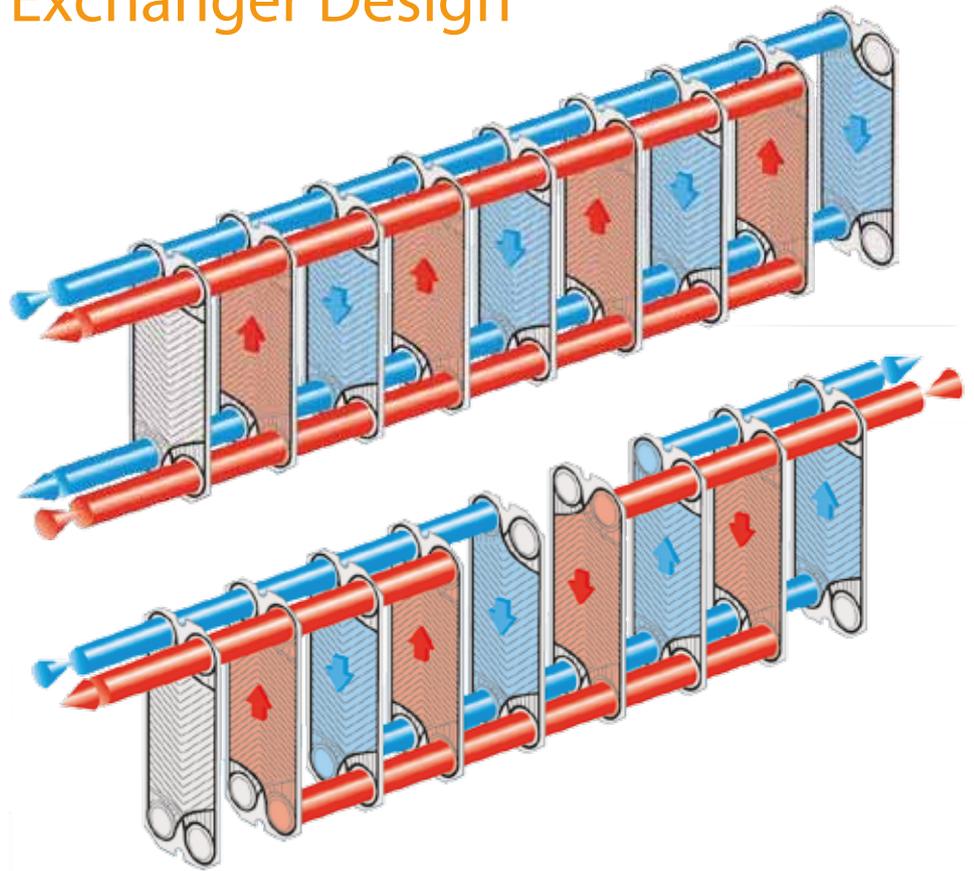
With this design both media is in counter flow.

All connections are on the fixed plate which allows the unit to be serviced without disturbing the pipework.

Multi-Pass Design

Multi-pass allows for better thermal efficiency and replaces the need for multiple units. Connections are on the fixed plate as well as on the pressure plate.

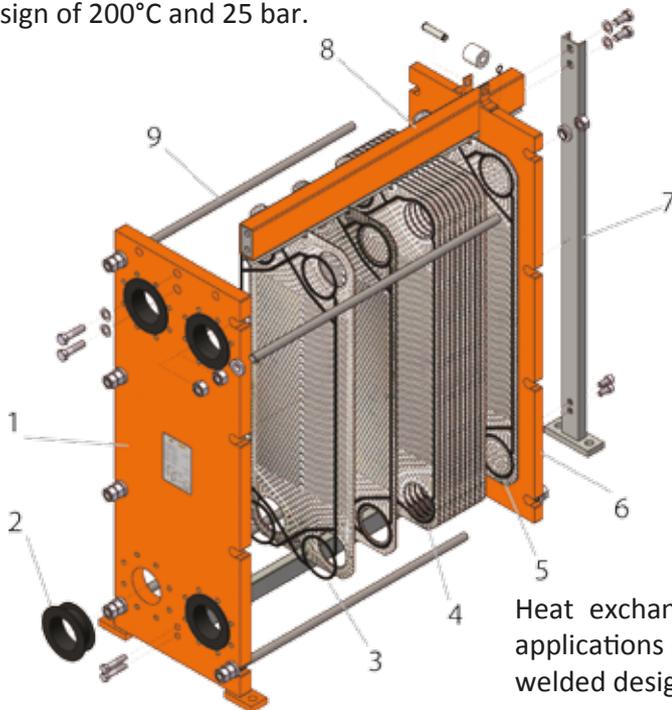
With many combinations of plates and gaskets, we are able to supply plate heat exchangers with a maximum design of 200°C and 25 bar.



Manufacturing

Plate Heat Exchangers

1. Fixed front plate
2. Nozzle liner
3. Full 'D' gasket
4. Plate pack
5. End plate
6. Pressure plate
7. Back leg
8. Carrier bars
9. Tie bars



Connections



Heat exchangers can be supplied with the usual connections for all applications (Industrial, HVAC, chemicals, food). Alternative materials and welded designs are also available, subject to approval and feasibility.

After Sales Service

HRS heat exchangers are designed to high quality and standards. However, during service life, the gaskets are subject to a normal fatigue process, after this time the gaskets will need to be replaced.

Our sister company HeatexchangerSpares.com offer a complete plate heat exchanger refurbishment program. Their engineers are available to attend site to open heat exchangers and remove and replace the existing plates and gaskets.



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OUR MARKETS AND APPLICATIONS:

Industrial:	Heating, cooling, condensing, steam to water, steam to product. Paint, automotive, chemical, petrochemical, etc.
Food:	Heating, cooling, pasteurisation, crystallisation, evaporation, CIP heating. Dairy, beverage, fruit, confectionary, aseptic processing, sauces, prepared food, etc.
Environmental:	Heating, cooling, condensing, evaporation, crystallisation. Sludge, factory effluents. Environmental waste concentration (pig manure, brine, waste water, digestate, etc). Multi effect evaporation
Biofuels:	Heating, cooling, condensing. Biodiesel, bioethanol, biogas, biomass, cogeneration, exhaust gas.
Pharmaceutical:	WFI, heating, cooling.
Cosmetics:	Heating and cooling of creams and gels.

