



heatexchangerspares.com



Plate Heat Exchanger Servicing

HeatexchangerSpares.com offer a complete plate heat exchanger refurbishment program. Our engineers are available to attend site to open heat exchangers and remove the existing plates and gaskets. We would recommend using our rotating plate pack solution with this service.

Stage 1: Pre-Clean & Initial Inspection

When the plates and gaskets arrive back at our works they are checked in against your specifications. After a visual inspection, the old gaskets are removed and the heat transfer plates are pre-cleaned using a pressure washer.

Stage 2: Chemical Clean

The heat transfer plates are then dipped in a series of chemical baths to remove deposits and scale. They are then completely rinsed with clean water and visually inspected for a second time.

Stage 3: Dye Penetrant Testing

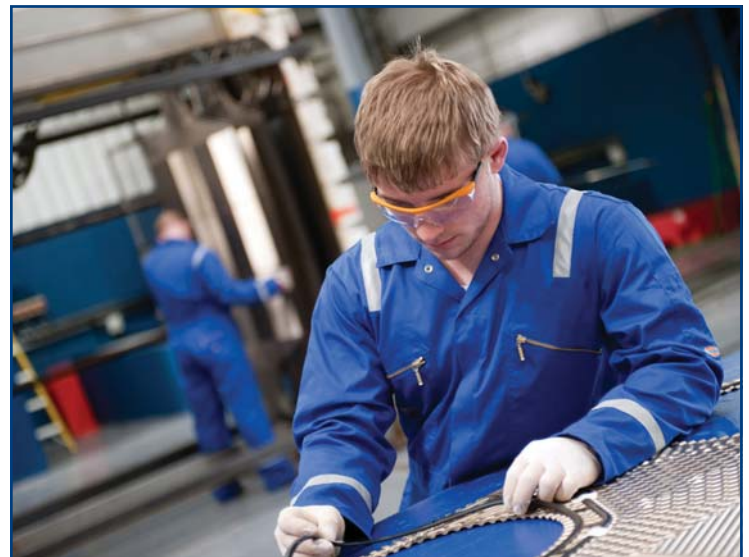
The cleaned plates are sprayed with a fluorescent dye and inspected with an ultra violet lamp, for pit corrosion, pin holes and cracks.

To help reduce servicing costs, we first select a random percentage for testing. This allows us to efficiently identify any failure trends before the entire plate pack is tested.

Stage 4: Regasketing

The heat transfer plates are regasketed with new gaskets and assembled in plate pack order ready for installation in the heat exchanger frame.

Should the Heat transfer plates require glued gaskets. During the regasketing process the gaskets are tapped to the plates and stacked to minimize gasket movement, ready for the next stage.



Stage 5: Oven Cure

Heat transfer plates with glued gaskets are placed inside a temperature controlled oven, for a specific time period. The curing is an important stage as it eliminates gasket movement during final assembly.

Stage 6: Final Assembly

The heat transfer plates will be installed in the plate heat exchanger frame. This work is completed by trained service engineers, as each plate heat exchanger has a specific heat transfer plate arrangement.

A full hydraulic pressure test will be carried out on all plate heat exchangers, which have been serviced at our works.



Rotating Plate Pack

If your heat exchanger is part of a critical application or if downtime for servicing must be kept to an absolute minimum we would recommend a rotating plate pack.

- Minimised Downtime
- Reduced Risk
- Damage Limitation
- Prolonged Heat Exchanger Life

Minimise Downtime

When the heat exchanger is first serviced the existing plate pack is removed and replaced with a new set of plates and gaskets. This minimises downtime, usually 1 - 3 hours, as no cleaning or regasketing is required.

The old plate pack is removed to be cleaned, regasketed and held ready for the next service. When the heat exchanger is next serviced the process is repeated. The existing plate pack is removed and replaced with the refurbished plate pack, once again downtime is kept to just a few hours rather than the 1 - 2 weeks that would normally be required to refurbish the plates.

This method of plate pack rotation is particularly cost effective if you have several heat exchangers on site that have identical plate packs, as just one rotating plate pack can be used to service many heat exchangers.

Reduced Risk

In critical applications unexpected heat exchanger failures can cost thousands of pounds for every day the heat exchanger is not running. Adopting the rotating plate pack system means you have a spare plate pack ready to install in the event that a heat exchanger fails unexpectedly.

This can be vital, especially as the lead time for spare parts can be several weeks for some heat exchangers, particularly obsolete models.



Damage Limitation

The normal plate cleaning process downtime may be kept to 1 week assuming all the plates pass the dye penetrant test but what happens if some of the plates fail? If new plates are not available from stock your downtime can suddenly change from 1 week to several weeks with dramatic consequences.

Having a rotating pack gives you precious time to replace any plates that have failed whilst keeping your heat exchanger in operation.

Prolonged Heat Exchanger Life

Regularly refurbishing your heat exchanger plates will prolong their life in the long run. Deposits and scale left in a heat exchanger for long periods of time may damage the heat transfer plates, often rendering them useless even after the first service.

Regular preventative maintenance will ensure consistently high efficiency and maximum heat exchanger life.

On Site Servicing

Our fully trained engineers have over 20 years experience servicing plate heat exchangers and are available to carry out work on all the leading brands of plate heat exchanger throughout the UK, and overseas if required.

Our services include:

- Installation of new equipment
- Fitting new plate packs
- Removal & re-fit of plates for off-site refurbishment
- Pressure testing
- Service training
- Service contracts

Plate heat exchangers are used in a wide range of industries and we have the expertise at working on a variety of sites including:

- Food Factories
- CHP Plants
- Oil Refineries
- Pharmaceutical Companies
- Water Treatment Works
- Office, Government and Residential Buildings
- Hotels and Health Clubs



All engineers receive regular Health & Safety training from ROSPA and IOSH approved providers. Along with this standard training engineers are also trained in first aid at work, confined spaces, received "Nominated Supervisor" training from the top utilities companies and have been security cleared at sensitive government buildings.

Additionally, our engineers carry the CSCS (Construction Skills Certificate Scheme) Skill card, which qualifies them to carry out installation and service work for all the leading construction companies.

The CSCS card provides evidence that the holder has undergone health and safety awareness training and testing, specifically for the construction industry.



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Plate Heat Exchanger Installation

If access is poor or your plate heat exchangers are simply too big to be installed in one piece, our engineers can flat pack them for ease of transporting and positioning.

The heat exchangers are broken down into their key components and palletised ready for transporting to the plant room.

Following a site survey the flat packed heat exchanger is positioned in line with the plant room drawing, rebuilt and pressure tested. As the work is undertaken by our own engineers your 12 month warranty is not affected.

This is a common problem when refurbishing existing buildings but can also affect new builds.



Preventative Maintenance Service Contracts

The performance of heat exchange equipment will steadily reduce from the first time it's used. To maintain your water temperature you will have to adjust flow rates and boiler or chiller temperatures. This in turn will increase time, effort and more importantly costs.

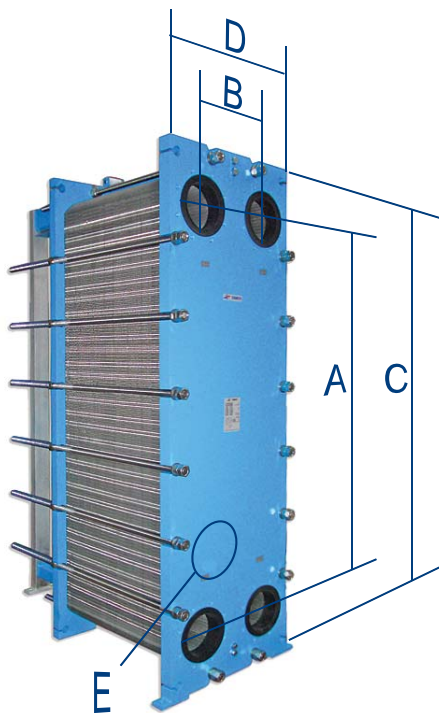
With a Heatexchangerspares.com service contract you can be safe in the knowledge that your essential heat exchange equipment will be fully functional. Regular inspections enable us to identify any reduction in performance or mechanical problems early, reducing their impact and likelihood of a breakdown occurring.

How It Works.

During the annual contract period, you will receive a minimum of two visits. These can be either scheduled or used as an emergency visit. You will also benefit from discount on spare parts.

After each visit you will receive a detailed service report on the condition of the equipment, this allows us to tailor the maintenance programme more accurately to your requirements.

Plate Heat Exchanger Identification



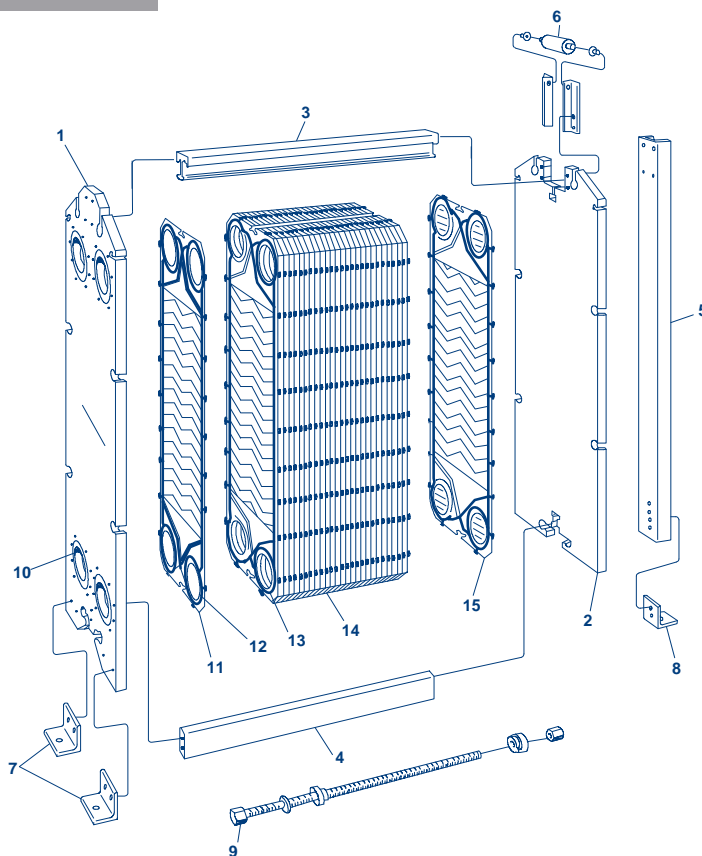
Most plate heat exchangers have a name plate label which states its make and model, unfortunately this label can be damaged or removed, making identification very difficult. By using our knowledge of plate heat exchangers we are able to identify most model types using the dimensional information below.

- A - Vertical Port Centres
- B - Horizontal Port Centres
- C - Frame Height
- D - Frame Width
- E - Frame Colour

Plate Heat Exchanger Components

During the service life of a plate heat exchanger you will be regularly changing the gaskets and cleaning the heat transfer plates. However, there may be times when other items become damaged, especially if the plate heat exchanger is installed in an aggressive environment or used in conjunction with corrosive liquids.

| Item | Description |
|------|---|
| 1. | Fixed frame plate |
| 2. | Mobile Pressure Plate |
| 3. | Top Carrier Bar |
| 4. | Bottom Carrier Bar |
| 5. | Back Leg |
| 6. | Pressure Plate Roller - Not On Small PHEs |
| 7. | Front Feet |
| 8. | Back Foot |
| 9. | Tie Bars |
| 10. | Liner - Rubber or Stainless Steel |
| 11. | Front Plate - End Plate 1 |
| 12. | Full 'D' Gasket |
| 13. | Flow Gasket |
| 14. | Flow Plates |
| 15. | Back Plate - End Plate 2 |



Hot Water Packages Parts & Service

Hot water packages are found wherever domestic hot water is required e.g. Hotels, Leisure Centres, Hospitals and offices.

Hot water packages vary from one manufacturer to the next but they all are based on the same principle:

A plate heat exchanger (PHE) is used to heat cold water typically from 15°C to 60°C, using primary water at 80-90°C. A sensor monitors the secondary outlet temperature and controls it, via a control panel, with an actuating valve on the primary flow. The primary and secondary flows will be pumped and the package may include various alarms.



There are many different manufacturers of hot water packages and it is not always clear which model of PHE has been fitted.

HeatExchangerSpares.com can identify the type of PHE fitted for you and provide a quotation for any spare parts and servicing required. By sourcing the parts through our global supply chain we can keep prices competitive and lead times to a minimum.

Serviceable items

- Plate Heat Exchanger
- Control Panel with PID control
- Primary Pump - Double or Single Head
- Secondary Pump - Double or Single Head
- Control Valve - 4 or 3 port
- Actuator - 240V or 12V
- Temperature Sensor
- High Temperature Safety Sensor
- Pressure Relief Valve



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SERVICE | CLEAN | INSPECT | RE-GASKET | INSTALL



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