



Product Catalog

Components and Systems for thermal applications

Heat Exchanger

Wärmetauscher

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Introduction

UHS is specialized in process cooling and heating for

- General industry
- Chemical, pharmaceutical
- Food & beverage
- Heating, ventilation, air conditioning (HVAC)
- Biogas plants
- Sewage sludge plants
- Laundries

With a wide range of heat exchangers.

All heat exchangers are designed, manufactured and inspected according

European Pressure Equipment Directive PED 97/23/EG

Under a new logo **UHS** and **XLG** develop and manufacture heat exchangers for thermal processes worldwide.



In addition **UHS** plans and builds systems and complete turnkey solutions with

- Heat exchangers
- Pumps
- Fittings
- Piping
- Measurement and control
- PLC

According to customer requirements. Depending on the needs of the customer and possibilities to install the systems are turnkey pre assembled or mounted on site.

Attention!

Because of ongoing product development, UHS GmbH reserves the right to make changes at both product design as well as in the pricing without prior notice.

We refer to our general terms of sales and delivery.

Product Catalog

UHS Components

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C-Tube

Coil-tube heat exchanger



Description

The **C-Tube** heat exchanger is used in many areas and is ideal for liquids, gases and steam.

The robust construction, a hermetically sealed unit and the extensive range of materials of the **C-Tube** ensure high operational availability.

The **UHS** team calculates every **C-Tube** individually as a customer project.

An extensive range of **C-Tube** accessories, e.g., different connections, brackets or insulation, complement the supply range.

The **C-Tube** series consists of corrugated precision tubes which are coiled to form a tube bundle.

The tube bundle (primary medium) is welded to the head plate (distributor plate). The tube shell (secondary medium), a cylindrical pressure vessel with beaded tube shell ends, embraces the tube bundle.

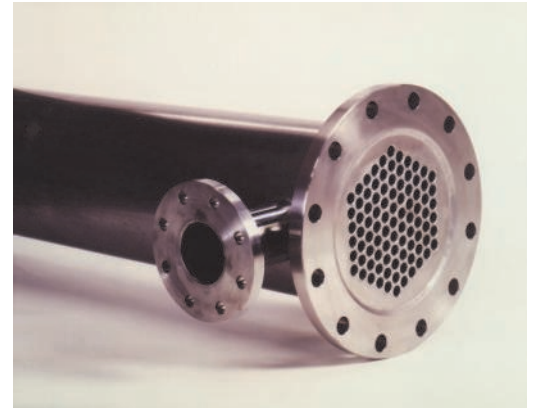
The following materials are used as standard:

- W 1.4541 (AISI 321)
- W 1.4404 (AISI 316L)

Depending on the application and the medium, the **C-Tube** is also available in

- Titanium
- 254 SMO
- Hastelloy

etc., or other special materials, on request.



C-Tube

Coil-tube heat exchanger

Application

HVAC

- Steam systems
- District heat
- Swimming pool equipment
- Solar systems
- System separation
- Hot water preparation

Refrigeration

- Desuperheater
- Condensers
- Oil coolers
- Oil preheaters
- Evaporators
- Heat recovery

Tempering

- Chemical industry
- Surface treatment
- Pharmaceutical industry
- Process engineering



Technical information

- Operating pressure from 0 to 25 bar, higher pressure ratings on request
- Operating temperatures from -20 °C to 250 °C
- Flexible design
- Wide range of models
- Different materials or material combinations available
- Can also be used for gases, steams, etc.
- Suitable as evaporator or condenser
- High heat transfer capacity and compact design
- Little soiling
- Very little wear or maintenance

F-Tube

Finned tube heat exchanger

Description

The **F-Tube** finned tube heat exchanger is a combination of tubes and small plates (fins), that are fixed on the tubes.

F-Tube finned tube heat exchanger are used for gases with very low pressures in the range of Pascal (Pa) to transfer the energy out or into a liquid media, with normal or very high pressures.

The fins serve to increase the surface area on the gas side in order to better compensate the poor heat transfer of gases into liquid and to decrease the size of heat exchanger.

Depending on the application and operational data, the tubes may be performed with different spiral fins.

- I-Fin straight coiled fins
- W-Fin corrugated coiled fins
- S-Fin straight welded fins
- LF-Fin straight laser welded fins
- G-FIN straight grooved fins
- E-FIN extruded fins

The challenge in the production of the **F-Tube** is the careful connection between fins and tubes because this is the actual heat-conducting connection between the two media.

The **F-Tube** is available in 4 different designs

- NC without cases for individual installation
- OC Rack cases, atmospherically not close
- TC cases for installation in duct system
- GC gas tight cases up to an overpressure of 10.000 Pa

The mounting position of each **F-Tube** must be known during design and production, since the terminal positions,

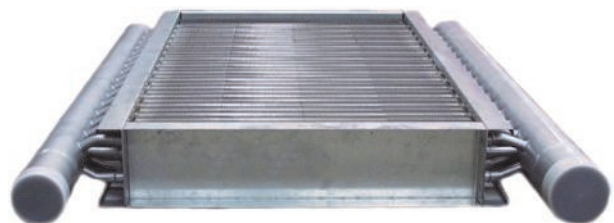
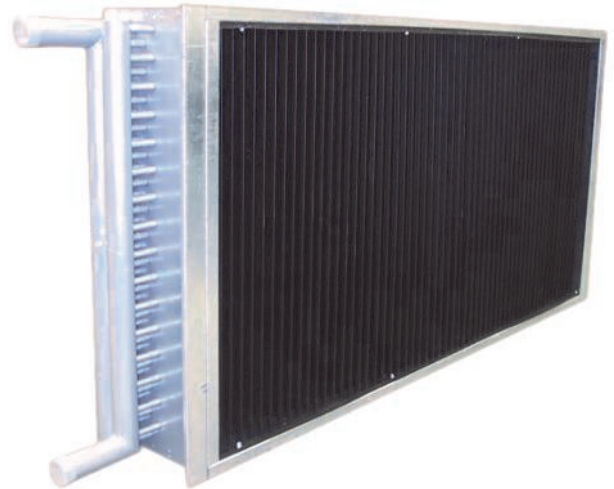
Liquid medium inlet/outlet
Liquid medium vent/drain

are essential.

A distinction is made between 3 mounting position,

- VH- vertical tubes, horizontal air flow
- HH- horizontal tubes, horizontal air flow
- HV- horizontal tubes, vertical air flow

Which must be taken into account when offering.



F-Tube

Finned tube heat exchanger

Application

Highly viscous media

oils, engine oil etc.
Isocyanate
Polyol

Drying by cooling

Gases with moisture content
Condensate loss, cold trap

HVAC

Heating
Cooling and air conditioning
Humidification
Swimming pool technology
Heat pumps

Textile industry

Process exhaust
Heat recovery of dryer
Steam dryer



Technical information

- Compact design
- high operating pressures on the tube side
- high operating temperatures
- different materials and combinations
- also suitable as a gas / gas heat exchanger
- Construction according to ASME Sec. VIII Div. 1 possible
- with external bypass valve in the delivery program

M-Tube

Tube-in-tube (monotube) twisted tube heat exchanger

Description

The **M-Tube** is a tube-in-tube heat exchange system used where conventional heat exchange systems fail, e.g., for high-viscosity fluids, liquids with a high solids load, mash, fruit pulp, cellulose pulp, textile fibres.

Depending on the hydraulic or thermal requirements, the **M-Tube** is made with

- hard
- medium
- or without

pipe corrugations.

M-Tube heat exchangers can also be service-fitted in spaces or systems to which access is difficult.

As separate modules or in fully welded design, the **M-Tube** can be adapted to local conditions.

Floor, wall or ceiling mounting the heat exchanger is made easy by mounting brackets, which are available extra.

The spiral corrugation of the heat exchanger causes turbulences to be introduced in the media flow which

- improve heat transfer by up to 30 %
- substantially reduce or prevent deposits on the surface
- and improve the mechanical stability of the heat exchanger.



M-Tube

Tube-in-tube (monotube) twisted tube heat exchanger

Application

General industry

Heat recovery from waste water

Biomass systems

External fermenter heating
Hygienisation / pasteurization
Heat recovery

Landfill systems

Percolate
Substrate

Sewage sludge treatment plants

Sewage sludge

Food industry

Butter, Milk, Cheese, Quark
Meat processing
Fruit-, vegetable processing
Beetroot and sugar cane processing
Sauces
Chocolate
Winery

Paper industry

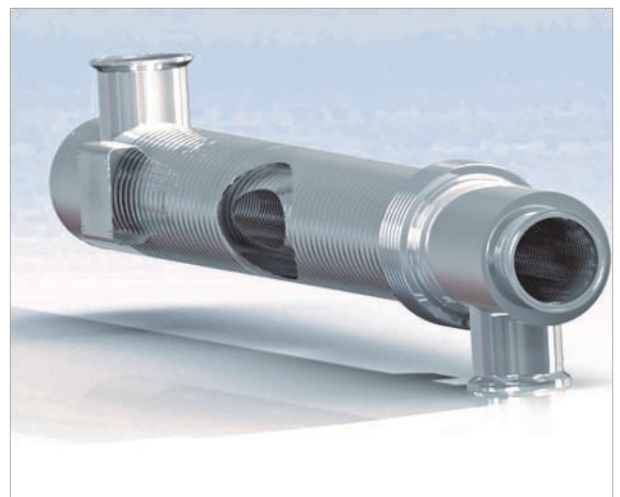
Waste water
Process water

Pharmaceutical industry

Vaccines
Pharmaceutical processes

Textile industry

Waste water
Process water



Technical information

- Operating pressure and temperature according requirement
- Modular or fully welded design
- Modular version can be fully dismantled and expanded
- Also available as hygienic version
- High heat transfer capacity and compact design
- Simple installation of modules
- Self-cleaning action due to corrugation
- Used with high-viscosity media
- Heat treatment of sensitive products
- For liquids, including solid substances
- Low maintenance

P-Tube

Tube bundle heat exchanger

Description

The **P-Tube** belongs to the family of tube bundle heat exchangers which are used in many areas.

Essentially, the **P-Tube** consists of

- the tube bundle
- a distributor or connecting plate
- the tube shell
- and the inlet and outlet on the shell side.

The bundle of tubes is installed in a tube shell.

Located at both ends are the distributor plates with connections where the primary medium, which flows through the tube bundle, leaves the bundle or is turned.

The secondary medium enters the tube shell at the inlet/outlet, flows through the **P-Tube** on the shell side and flows around the tube bundle.

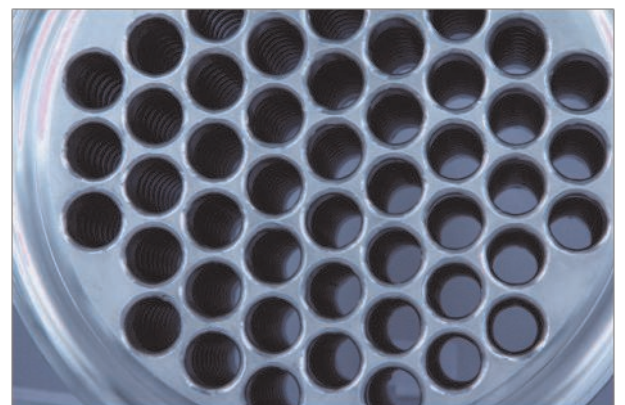
Like the **M-Tube**, the **P-Tube** is also available with

- hard
- medium
- or without

pipe corrugations, as required.

The spiral corrugation of the **P-Tube** produces turbulences in the media flows and

- improves the heat transfer by up to 30 %
- substantially reduces or prevents deposits on the surface and improve the mechanical stability of the **P-Tube**.



P-Tube

Tube bundle heat exchanger

Application

Automotive

- Gear oil
- Hydraulics
- Engine oil

Cogeneration

- Exhaust
- Engine oil
- Engine water

Chemical industry

- Lyes
- Acids

Electroplating

- Coating
- Degreasing

HVAC

- District heat
- Hot water preparation
- Swimming pool equipment
- Solar system construction
- System separation

Cryogenic applications

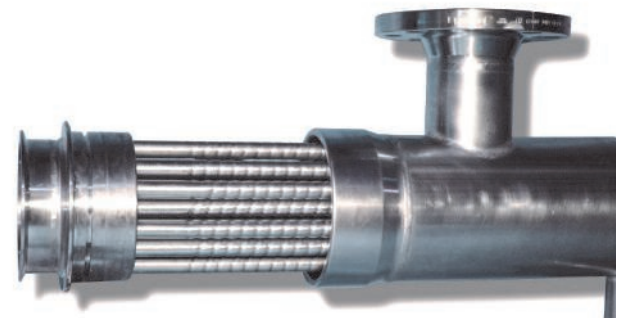
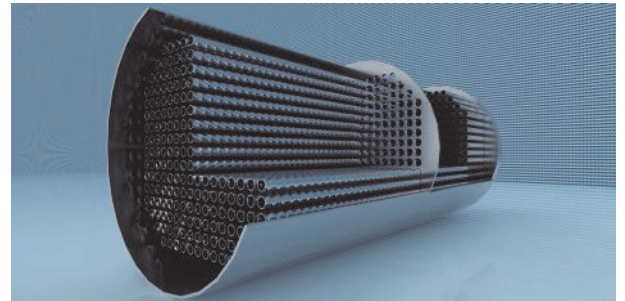
- Economizer
- Condenser
- Evaporator

Food industry

- Wine press house
- Pasteurisation
- Sterilisation
- cookers

Pharmaceutical industry

- Vaccines



Technical information

- Operating pressure and temperature according requirement
- Modular or fully welded design
- Modular version can be fully dismantled and expanded
- Also available as hygienic version
- High heat transfer capacity and compact design
- Simple installation of modules
- Self-cleaning action due to corrugation
- For low and high viscous media
- Low maintenance

X-Tube

Self-cleaning gas/water heat exchanger

Description

The **X-Tube Boxer** is an intelligent improvement of a tube-in-tube heat exchanger (S&T) with a cleaning system for which a patent is pending.

The self-cleaning **X-Tube Boxer** was developed for heat recovery from processes whose exhaust air contains high humidity, contamination or chemical pollutants.

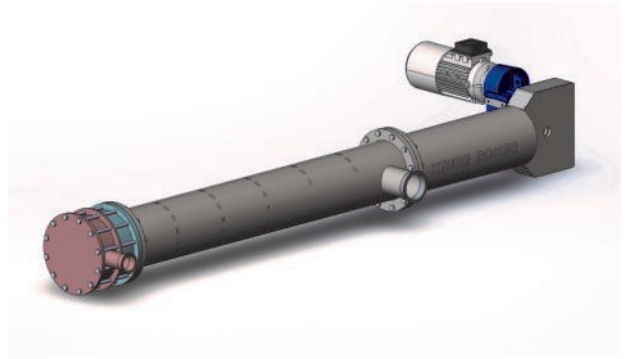
The heat of condensation from the exhaust air is transferred to a liquid heat carrier, e.g., water.

Contaminations, deposits or fouling normally occur where the temperature in the tubes is lowest, which impairs heat transfer in the course of time.

The **X-Tube Boxer** is equipped with a cleaning system which mechanically cleans the outside of the inner heat exchange tubes.

A perforated plate, powered by an electric motor with spindle, travels, like a scraper, along the full length of the inner tubes and removes all contaminating material from the tubes.

Depending on the degree of contamination, the deposits can be removed from the shell space of the heat exchanger regularly for disposal



X-Tube



Self-cleaning gas/water heat exchanger

Application

General industry

Heat recovery from highly contaminated exhaust air

Refinery

Exhaust air with high fouling potential

Cogeneration

Exhaust

Chemical industry

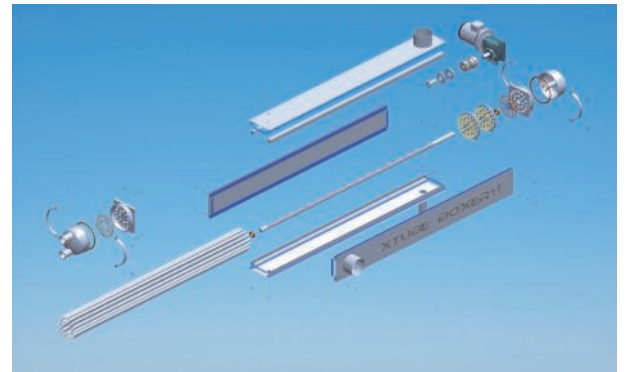
Exhaust air
Vapours

Food industry

Viscous media, that fouled like chocolate

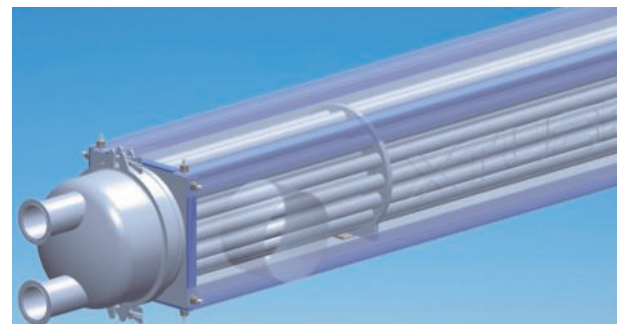
Textile processing

Exhaust air with high fouling potential
Heat recovery



Technical information

- Operating pressure and temperature according requirement
- Operating temperatures up to 150°C, higher temperatures on request
- Cleaning system patent applied for
- can be fully dismantled
- Also used with high-viscosity medium
- For liquids and gases
- Low maintenance



B-Plate

Brazed plate heat exchanger

Description

The **B-Plate** plate-type heat exchangers are made of stainless steel W 1.4401 (AISI316) or W 1.4547 (SMO254).

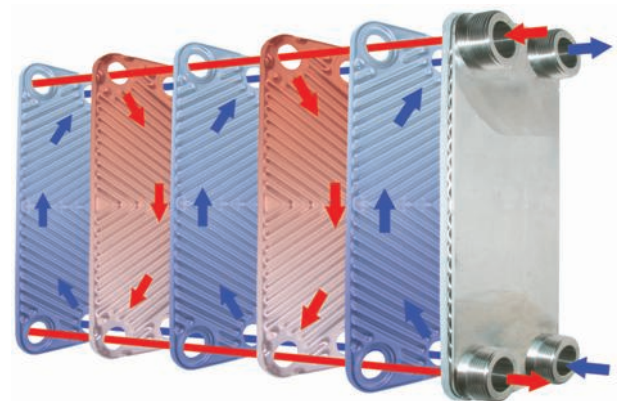
The plates are brazed to form the heat exchanger in a vacuum furnace at a temperature of 1,150°C.

A very thin brazing foil of copper or nickel combines the plates into a pressure-tight heat exchange unit.

Brazed heat exchangers are subject to the general Pressure Vessel Regulations and are subjected to extensive pressure and leak tests at the end of production.

Two plate pairs each form one plate channel, primary and secondary, which are separate of each other.

Through the connecting plate, the two media, flowing in opposite directions, enter the plate channels via the distributor, where heat exchange occurs without mixing of the two media.



B-Plate



Brazed plate heat exchanger

Application

General industry

- Oil cooling
- Process water
- Tempering
- Preheating
- Heat recovery

Cogeneration

- Engine water
- Oil cooling

HVAC

- District heat
- Hot water preparation
- Swimming pool equipment
- Solar system construction
- System separation

Refrigeration

- Desuperheater
- Condensers
- Oil coolers
- Oil preheaters
- Evaporators
- Heat recovery



Technical information

- Operating temperatures from -100 °C to 250 °C
- Operating pressure up to 40 bar
- Suitable for vacuum
- Very compact design
- Copper or nickel brazed version
- Wide range of models
- Very high heat transfer coefficient



Accessories

A variety of useful accessories for all **B-Plate** heat exchangers, from screw unions to heat and cold insulation, mounting frame, complement the supply range.



C-Plate

Welded plate heat exchanger in housing

Description

The **C-Plate** is similar to **S-Plate** a combination of plate (PHE) and tubular heat exchangers (S&T), also called hybrid heat exchanger.

Basically it consists of a number of welded plates in a housing.

Since plate and tubular heat exchangers have their strengths and weaknesses, which are also used fully in their main fields, it comes for specific applications that they have reached their limits

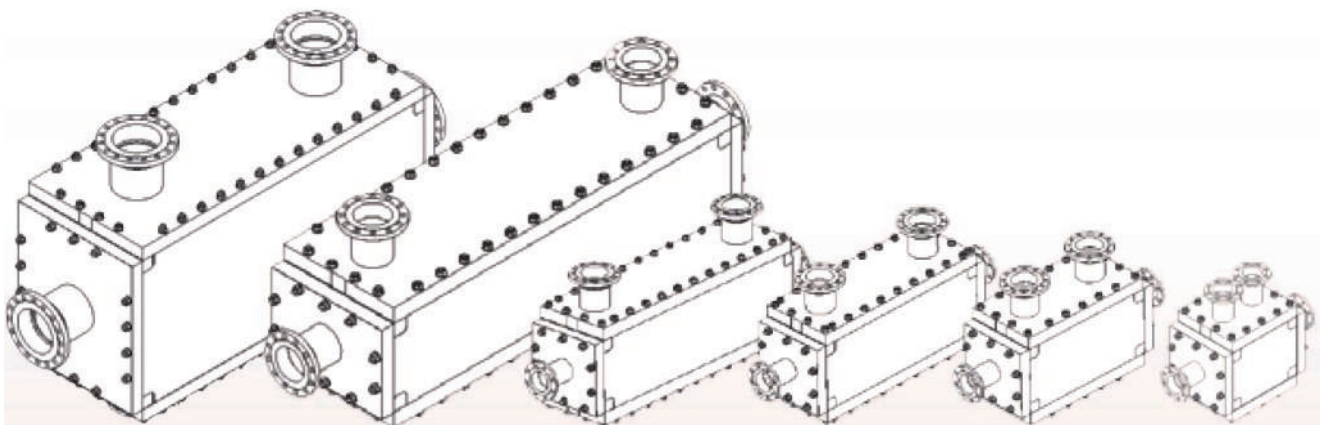
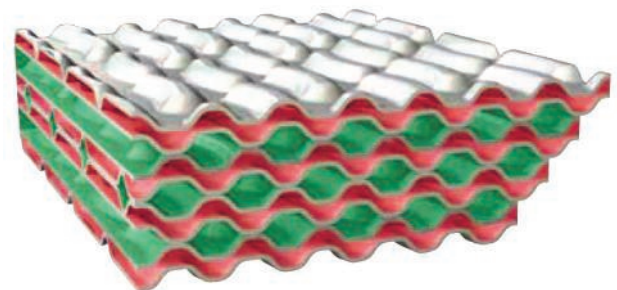
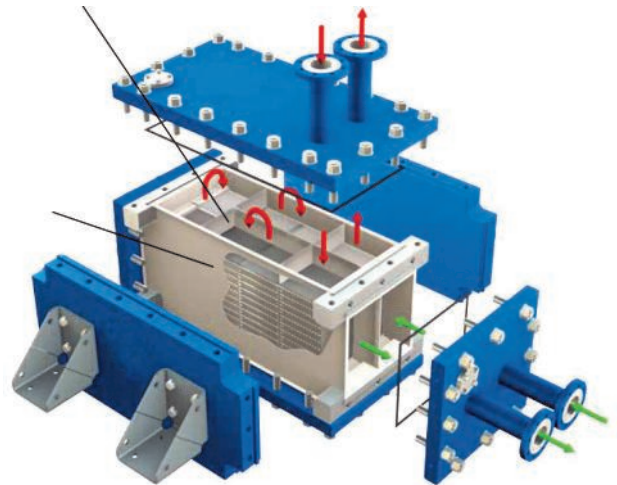
- High temperatures
- High pressures
- Critical media, e.g. fibres or solids
- corrosive media

The **C-Plate** is always the first choice for use under extreme conditions, as described above, if PHE and S&T are no longer or only to a limited usable.

The main advantages are,

- Compact design
- Long service life
- Long life
- Easy maintenance and cleaning

That make the difference to other heat exchangers.



C-Plate

Welded plate heat exchanger in housing

Application

General industry

- Oil cooling
- Process water
- Gas desulfurization
- Gas drying
- Petro chemical
- Refinery

Chemical industry

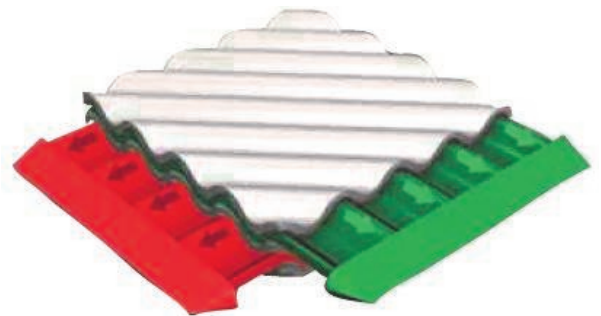
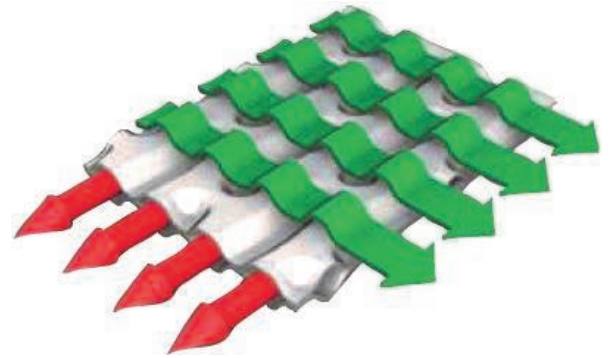
- heating
- cooling
- evaporation
- condensing

HVAC

- District heating
- Steam condensation

Refrigeration NH₃

- Desuperheater
- Condensers
- Oil coolers
- Oil preheaters
- Evaporators
- Heat recovery



Technical information

- 6 different sizes
- 3 different plate combinations
- Operating temperature up to 350°C
- Operating pressure up to 40 bar
- Large selection of materials for corrosive media
- W 1.4404 (AISI 316L)
- W 1.4547 (254 SMO)
- W 1.4571 (AISI 316Ti)
- W 1.4301 (AISI 304)
- W 1.4539 (AISI 904L)

G-Plate

Gasketed plate heat exchanger

Description

The **G-Plate** plate-type heat exchanger consists of a number of embossed and gasketed plates.

The plates are mounted between the upper and lower guide rail and clamped between the two frame plates by bolts.

Depending on the application, all cold-drawing materials, such as

- Stainless steel
- Nickel alloys
- Titanium
- 254 SMO
- Hastelloy

and other materials are can be used, to name only a few .

The gaskets are elastomers used as required by temperature, pressure and the chemical properties of the two media, e.g.:

- NBR
- EPDM
- FKM (Viton), etc.

and other gasket materials.

Mixing of the two media in case of defective gaskets is prevented by double gaskets at the transition openings and the leakage space in-between, which is open to the outside.

Any leak will be detected from outside immediately before the two media have a chance of mixing through the gasket.



G-Plate



Gasketed plate heat exchanger

Application

General industry

- Cooling tower water
- Oil cooling
- Process water
- System separation
- Preheating
- Heat recovery

Cogeneration

- Engine water
- Oil cooling

Chemical industry

- Acids
- Lyes

Electroplating

- Degreasing
- Product baths

HVAC

- District heat
- Swimming pool equipment
- Solar system construction
- System separation
- Hot water preparation

Steel industry

- Hydraulic oil
- Rolling oil



Technical information

- Operating temperatures from -20°C to 155°C
- Operating pressure up to 25 bar, suitable for vacuum
- Plate thicknesses from 0,4 to 0,9 mm
- Compact design, expandable
- Very high heat transfer coefficient
- Low maintenance
- Wide range of materials
- Suitable for many different media



S-Plate

Fully welded plate & shell heat exchanger

Description

The **S-Plate** is a fully welded plate & shell heat exchanger that combines the benefits of plate heat exchangers and shell & tube heat exchanger.

Plate heat exchanger

- + high heat transfer coefficient
- + compact
- + low fouling because of high turbulence
- + close approach temperatures
- pressure limitations
- temperature limitations
- gaskets

Shell & Tube heat exchanger

- + high pressure
- + high temperature
- + no gaskets
- higher fouling risk because of lower turbulence
- large size
- low heat transfer coefficient

S-Plate

- + high heat transfer coefficient
- + wide pressure range
- + wide temperature range
- + no gaskets
- + compact
- + low fouling risk
- + close approach temperatures
- + high heat loads



S-Plate



Fully welded plate & shell heat exchanger

Application

General industry

- Oil cooling
- Process water
- System separation
- Preheating
- Heat recovery

Cogeneration

- Engine water
- Oil cooling

HVAC

- District heat
- Swimming pool equipment
- System separation
- Hot water preparation

Refrigeration NH₃

- Desuperheater
- Condensers
- Oil coolers
- Oil preheaters
- Evaporators
- Heat recovery



Technical information

- Operating temperatures from -80 °C up to 400 °C
- Operating pressure up to 100 bar
- Up to 300m² heat transfer area per m³
- High heat transfer area 1-1800m²
- Low liquid residues
- Low maintenance



V-Plate

Air/air crossflow plate type heat exchanger

Description

The standard **V-Plate** consists of aluminium or epoxy-coated aluminium plate.

Sealing is obtained with permanently elastomeric seal, silicone-free (max. 90°C) or with silicone (max. 200°C).

Depending on the application, different corrugated plate patterns and plate spacings (channel widths) are available.

- Model UVH
- Model UVF
- Model UVL
- Model UVR

Hard corrugation improves heat transfer substantially and more heat can be transferred in a small space.

High channel speeds prevent fouling and clogging of the **V-Plate**.

- Design according European Norm EN 308
- EUROVENT certified

The surface of the **V-Plate UVL** has a special corrugation so that the heat transfer is due to higher turbulences significantly improved.

Of course this heat exchanger can also be produced with an epoxy-coating.

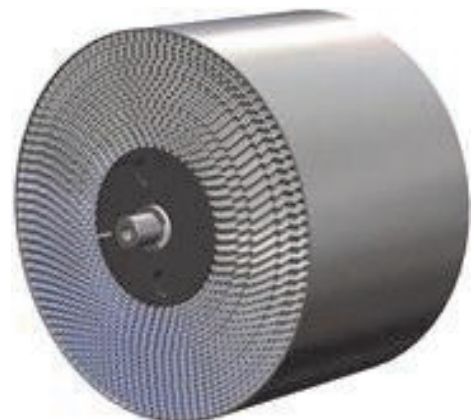
The air leakage is maximum 0,5% of the nominal volume flow. The maximum difference pressure is 700Pa.

The **V-Plate UVR** is a circulating heat exchanger for applications with low volume flows (50 to 2.000m³/h).

The **UVR** is a glued rotor, without spokes, that can easily be installed in ventilation systems.

The diameter can be individually offered.

Optional it is possible to get the suitable housing for each heat exchanger.



V-Plate

Air/air crossflow plate type heat exchanger

Application

General industry

Reversible product cooling / heating
Heat recovery

Electrical industry

Control panel / switchboard cooling

HVAC

Heating
Cooling and air conditioning
Air moistening
Swimming pool equipment
Heat pump

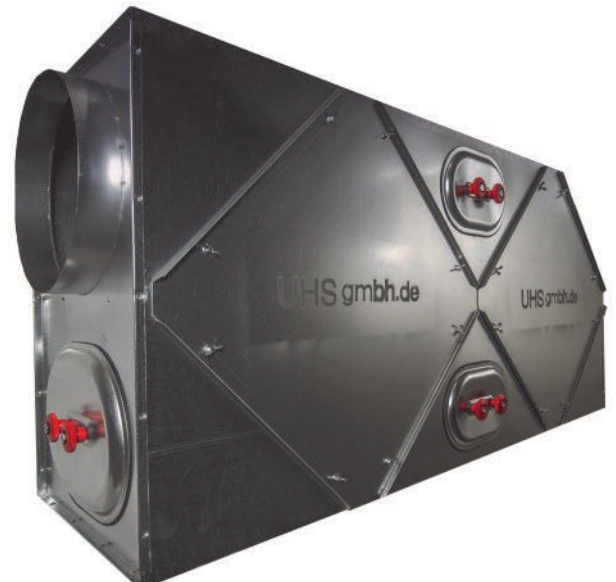
Textile industry

Exhaust of process
Heat recovery of dryers



Technical information

- Compact design
- Plate dimensions from 425mm² to 3.000mm²
- High operating temperatures
- Aluminium with and without epoxy coating
- Plate material also in stainless steel
- Different plate gaps
- Optional external bypass with flaps
- Wide range of accessories: Module rack, connector hoods, access panel and filter



Heat recovery systems



Exhaust air / gas heat recovery

Systems solution

Exhaust air of dryer

UHS offers every customer for his existing dryers the correct **V-Plate** heat exchanger with suitable accessories, which simplifies the installation significantly.

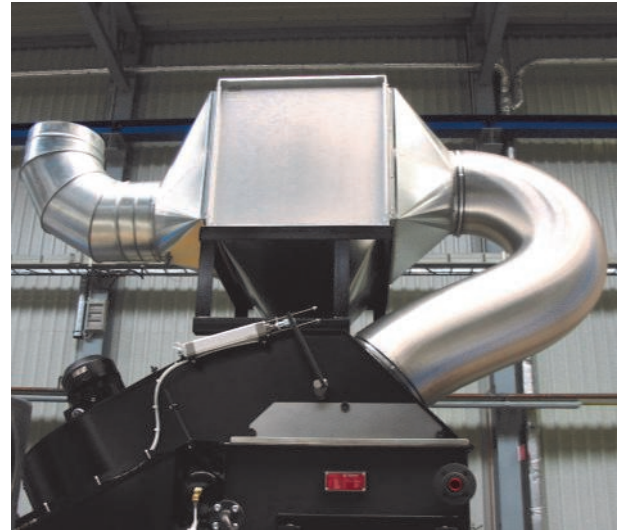
- Module rack
- Fibre filter
- connector hoods, with or without access panel
- By-Pass

The pull-out possibility of the heat exchanger out of the flange enclosure simplifies the maintenance of the **V-Plate** in high heights.

A fibre filter does not only protect the **V-Plate**, but also the damper register.

The connecting hoods connect the **V-Plate** with the air ducts, ideally in combination with the flange enclosure.

The By-Pass allows to by-pass the **V-Plate**, e.g. at cool down.



Exhaust gas heat recovery

The P-Tube-tube heat exchanger is a new development for heating fresh water from exhaust air / gas.

The inner tubes are made of specially corrugated stainless steel tubes. The gas flows around the tubes in cross-flow to enhance the heat transfer of air / gas in the water.

- Low cost
- Material W 1.4301 / AISI 304
- Compact design
- 3 nominal diameter, DN300, DN400 u. DN500
- Low weight
- Water connection clamp connection ISO/DIN
- Transition connection to air duct

The P-Tube can be used in conjunction with the M-Tube in the composite for heat recovery in laundries to return e.g. the heat energy from waste and ironer exhaust air back into the washing process.



Heat recovery systems



Waste water heat recovery

Systems solution

Waste water heat exchanger

The M-Tube tube in tube heat exchanger for heat recovery from heavily contaminated media, for small and large flows, e.g. from wastewater, is also offered as a complete system solution.

UHS offers each customer, according to individual needs, complete turnkey systems or components in the field of heat recovery, which can be installed, monitored and maintained from UHS.

- Heat exchanger
- pumps
- fittings
- tanks
- Pressure vessel
- Control panel with instrumentation and control
- Energie evaluation unit
- Mounting and installation
- Maintenance

Such systems can be supplied individually, component by component, installed on site, or be delivered completely installed on a rack.

This holistic approach leads to an optimal process integration of heat exchangers during operation.

Since in certain processes, the fresh and waste water are not synchronized, it is more important to coordinate all components with a individually designed control panel.

This works often only with the tank or pressure vessel which must be integrated and fitted in the system in order to ensure optimal energy recovery.

UHS uses two terms:

Continuous heat recovery Circulation heat recovery

The essential difference between the two systems is that with the continuous heat recovery the heat energy is transmitted on demand and with the circulation heat recovery the thermal energy is stored in a tank or pressure vessel.



Heat recovery systems



MI-4000 waste water heat recovery

Description

Heat recovery system

The **MI-4000** is a turnkey „End of Pipe“ solution for heat recovery out of waste water, which can be operated in different ways:

Continuous heating Circulation heating

The **MI-4000** with continuous heating uses the waste water tank as heat storage tank. A flow rate measuring sensor has been installed in the fresh water pipe upstream of the heat exchanger and monitors the fresh water flow. As soon as a flow is measured and there is waste water in the waste water tank, the system starts operating and the waste water pump will pump the waste water through the counter-current heat exchanger.

The **MI-4000** with circulation heating uses a fresh water buffer tank as heat storage tank in addition to the waste water tank.

The fresh water continues to flow through the heat exchanger into a fresh water buffer tank, from where it will be channeled to the machines.

In both cases the **MI-4000** operates fully automatic and is equipped with a control panel.

In order to protect the **P-Tube** and the waste water pump against big particles, inside of the waste water tank there is installed a coarse filter, with 10 mm diameter of bore. This you can easily dismount for cleaning purposes.



Heat recovery systems



MI-4000 waste water heat recovery

Application

General industry

- Waste water treatment
- Process water dewatering

HVAC

- Waster water of showers
- Swimming pool water
- Fresh water pre heating
- Canteen kitchen

Textile industry

- Waster water out of washing process
- Waster water out of textile processing



Technical information

The **MI-4000** can be produced in 8 different versions. Dimensions and weight can change, depending of version.

Flow fresh water

- min. 16,7 l/min (1,0 m³/h)
- max. 333,3 l/min (20,0 m³/h)

Dimensions and weight

- | | |
|----------------------------|-----------------------|
| • Length | 3.600 mm |
| • Height | 1.300 mm |
| • Volume Waster water tank | 750 l / 1.125 l |
| • Wide | 520 mm / 750 mm |
| • Weight | 250 kg / 350 kg |
| • Floor loading | 667 kg/m ² |

UHS offers 2 fresh water pressure storage tanks

Version

- 1.000 l volume
- 2.000 l volume
- max. 6,0 bar
- max. 90,0°C
- Material W 1.4571/1.4404
- Insulation 50,0 mm Polyurethan foam
- 2,0 mm Polypropylen coating



Sludge system

Heat exchanger for biomass & sewage sludge

Description

External fermenter heater / sewage sludge tempering

With the M-tube heat exchanger biomass or sludge can be heated in an extremely compact way. Both, heating and cooling of the substrate is possible.

The system can be supplied pre-assembled.
Upon request, the complete measurement and control technology is offered with.
Also, a premounted or on site installed insulation is available on request.



Hygienisation

The system for Hygienisation / sterilisation of biomass can be if requested completely installed in a rack.
In this frame there are heat exchangers of type M-Tube, pipes, valves and pumps, which are interconnected.

The modules are insulated with PU panels.

All open hot areas are provided with a protective grille.
At the construction site, the system must only be connected to the product and energy management.



Temperature control / Steam system



Description

Machine cooling, system separation

UHS designs and builds customized cooling systems for system separation of engine cooling water.

Different machines cycles with heat exchangers, pumps and valves can be cooled with river or pond water due to system separation.



Tempering system

UHS designs and builds customized tempering systems.

The Tempering system is fully assembled with heat exchangers, temperature & pressure sensors, gate valves, butterfly valves, pumps, Energie evaluation unit, etc. fabricated on a stainless steel frame .



Steam system

In contrast to the classical quick steam generators (once-through boiler with coil and piston pump) this quick steam generators operate as follows:

Depending on the water level in the evaporation system, the boiler pump fills the feeding water through the economiser. The burner is controlled depending on the vapor pressure. A more rapid flue gas guide transfers the heat from the flue gas through the evaporation system on the water. In the economizer heat is additionally transferred from the flue gas to the fresh water in counter current flow. In the inner part of the evaporation system, the vapor is dried.

The energy consumption can be reduced by up to 25% compared to conventional steam generators.



Services



Service, Maintenance, Assembly and Installation

In addition to a wide range of heat exchangers and accessories UHS also offers a comprehensive service for its Products, such as

- Spare parts
- maintenance
- repair
- cleaning
- assembly
- installation

of heat exchangers and equipment.

This service can be done

- at the customer site
- or at UHS the workshop, e.g. gasketed plate heat exchangers.

UHS can send you after request a quotation for a cost overview.

If possible UHS works with service partners in order to keep service costs low.



Note



A large rectangular area with horizontal lines, intended for taking notes.

Heat exchanger



Terms and Models

Heat exchangers are available, depending on the application and operating conditions in a variety of designs and types.

The following overview is intended to provide a brief overview of "three" main groups of heat exchangers, to design and common name terms, without having the right to technical standards.

Plate heat exchanger

PHE (Plate Heat Exchanger)
PGH (Plate Gasket Heat Exchanger)

General term for gasketed plate heat exchanger in a frame, corrugated plates

- With gaskets
- As double wall, welded inlets, with gasket
- Pair welded with gasket and o-ring
- Fully welded, without gaskets

CBE (Compact Brazed Exchanger)

General term for brazed plate heat exchangers, corrugated plates

- Copper soldered
- Nickel soldered

Hybrid heat exchanger

P&S (Plate & Shell)

General term Hybrid (lat. hybrida „cross-breeding“) is a combination of a plate and a tubular heat exchanger, which can be significantly distinguished in design from each other:

- Round corrugated plates, different diameters, in a shell
- Rectangular corrugated plates in a rectangular pressure vessel

Tubular heat exchanger

S&T (Shell & Tube)

General term for tubular heat exchangers, is a heat exchanger with one or several inner tubes and one outer shell tube.

This is probably the oldest heat exchanger, since the invention of the steam engine and has ushered in the industrial age.

There are so many different S&T designs, so that we can just present the most common types:

- Multi Tube
- Mono Tube
- Spiral tube
- Fins
- Corrugated tube

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