UMITTS

HEAT TRANSFER PRODUCTS
&
FLOW EQUIPMENTS

UMITTS

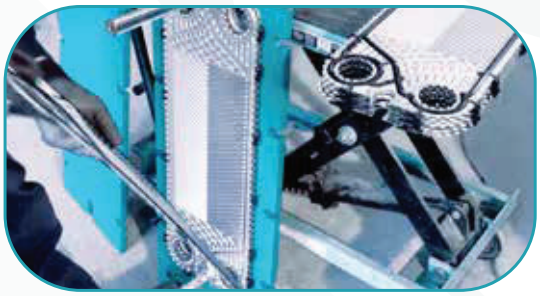
Plate Heat Exchanger

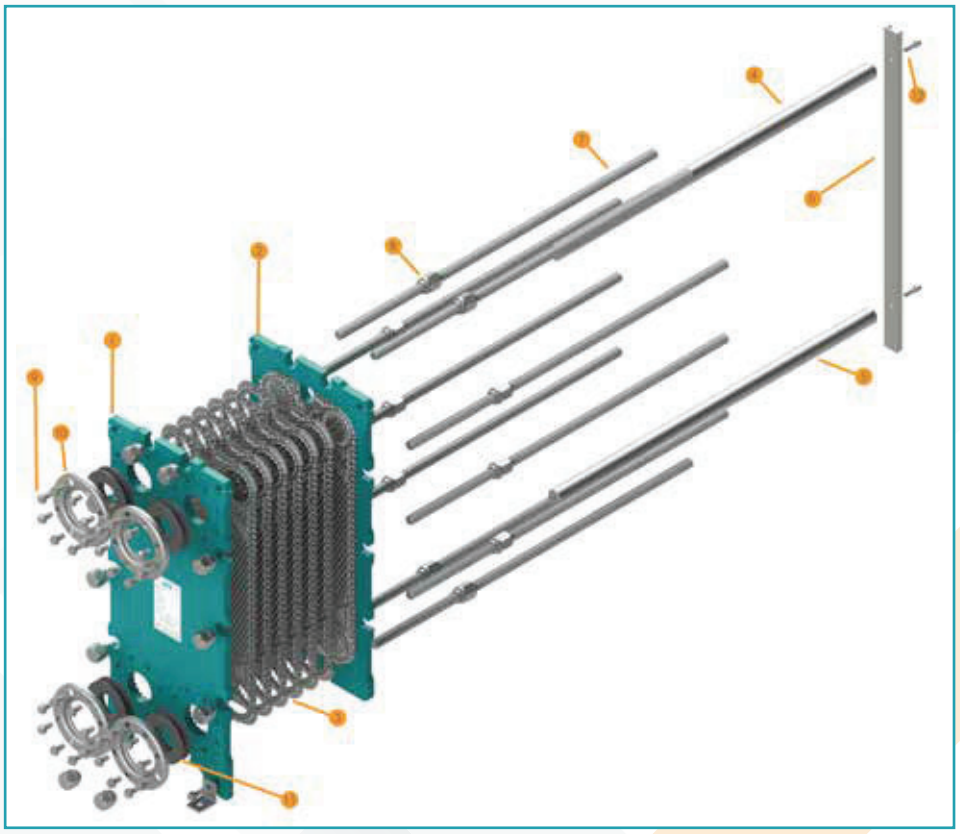
UMITTS has many years experience in the field of heat transfer and all aspects of design and calculation of equipment. Consistent development in the field of sealed plate heat exchangers has resulted in a wide range of plate versions with respect to surface structure, materials and gaskets.

The high-performance plates from UMITTS 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.

Manufacturing

With the variety of heat transfer plates and flow gaskets we are able to supply heat exchangers with a maximum design temperature of 180 °C and design pressure of 25 bar.





Components

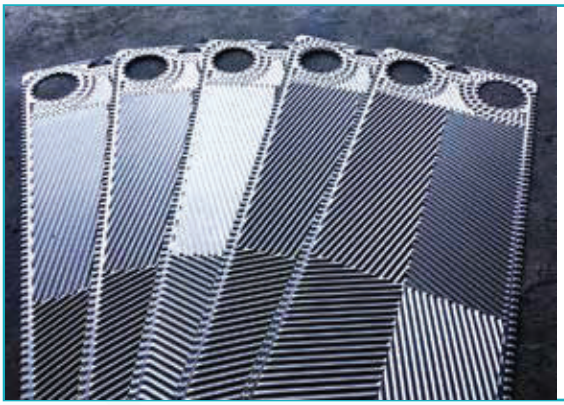
1. Head Plate
2. Follower Plate
3. Flow Plates
4. Guide Bar
5. Carring Bar
6. Supporting Column
7. Clamping Rods
5. Nut
6. Connecting Bolts
7. Connection
5. Collar Gasket
6. Bolt


TYPE/MODEL
YR27
CAPACITY
YEAR
2021
SERIAL NUMBER
POWER/MOTOR
22 KW
STROKE
WORKING VOLTAGE
380 Volt
DAY LIGHT
FREQUENCY
50 Hz
TABLE SIZE
MAX PRESSURE
79.4 Mpa
CYLINDER Φ
SLIDE FAST APPROACH SPEED
50 mm/s
SLIDE FAST RETURN SPEED
YR27-4500 SHEET FORMING HYDRAULIC PRESS

The Heat Transfer Plate

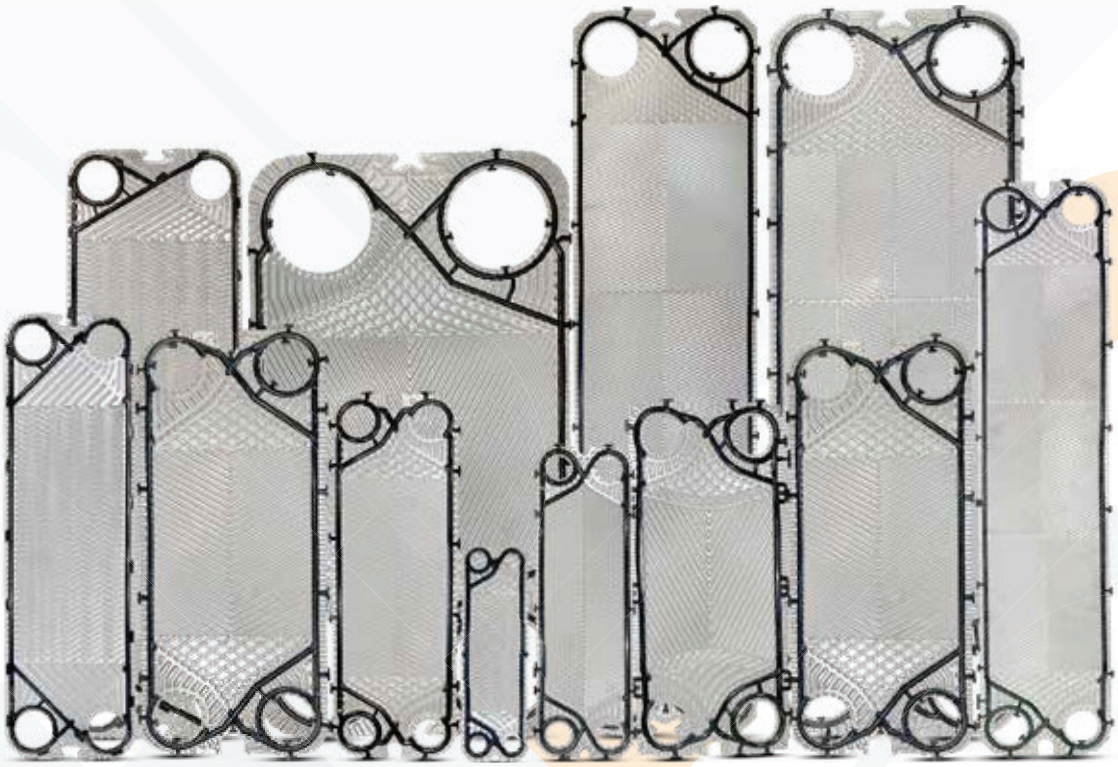
The heat transfer plates are characterised by optimum embossing, resulting in high heat transfer coefficients. Variable flow gaps can be generated by a result of the different types and angles of embossing.

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 245 SMO and titanium.



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 a 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;

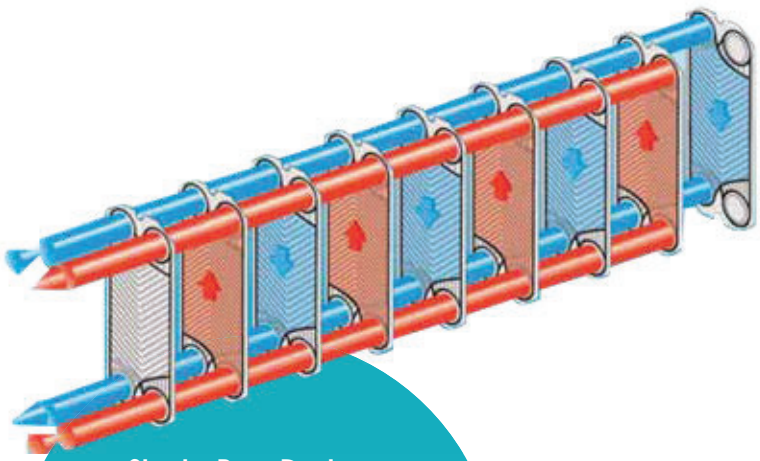
NBR
EPDM
Viton



Technical Data

UMITTS plate heat exchangers can be supplied with all of the usual connections for all fields of application (Industrial, building services, chemicals, food). Alternative materials and welded designs are also available, subject to approval and feasibility.

Materials	
Plate Material	AISI 316, Titanium, Hastelloy
Connection Material	Carbon Steel, Stainless Steel, Plastic
Body Material	Carbon Steel, Stainless Steel
Gasket Material	EPDM, EPDM-HT, NBR, NBR-HT, H-NBR, VITON-A, VITON-G

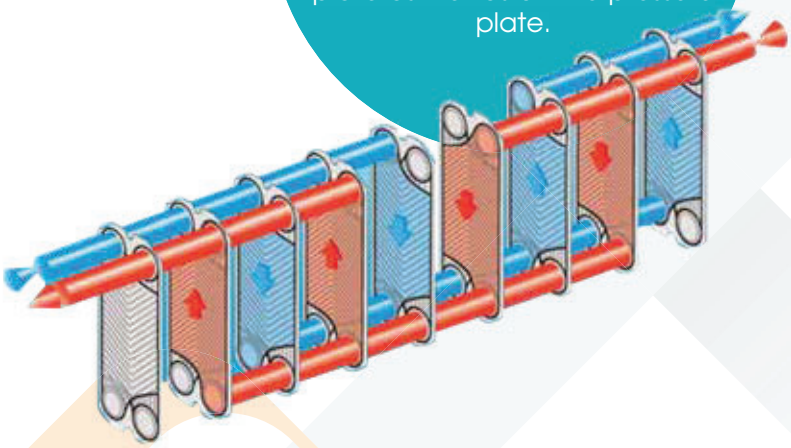


Single-Pass Design

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.

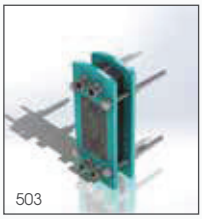
Multi-Pass Design

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.



Dimensions

UMITTS plate heat exchangers can be supplied with all of the usual connections for all fields of application (Industrial, building services, chemicals, food). Alternative materials and welded designs are also available, subject to approval and feasibility.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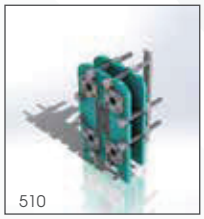
504


508-509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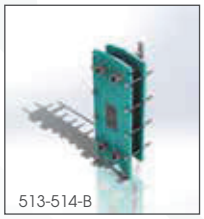
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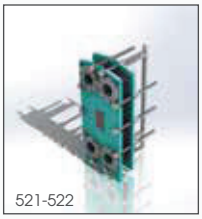
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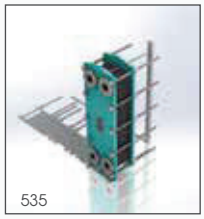
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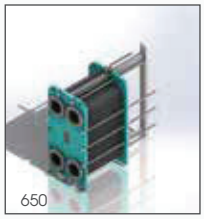
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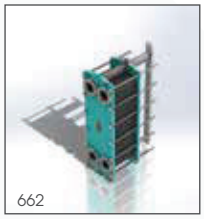

662

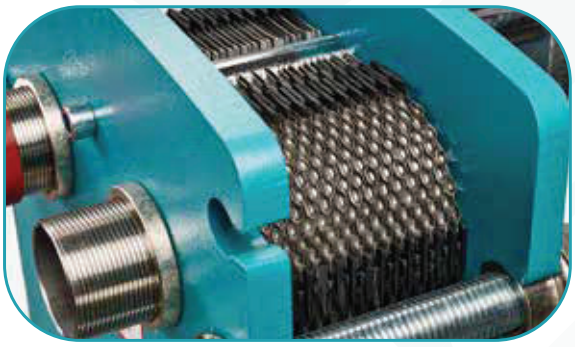
Model	503	504	704	505	708	707	508	509	513
Width (mm)	167,5	200	200	184	200	283	292	292	350
Height (mm)	397	490	490	478	748	596	782	782	942
Distance Between Connections (Horizantal mm)	50	72	70	59,5	70	126	100	100	140
Distance Between Connections (Vertical mm)	298	383	381	357	381	394	546	546	640
Max. Operating Pressure (bar)	25	25	25	25	25	25	25	25	25
Max. Test Operating Pressure (bar)	37,5	37,5	37,5	37,5	37,5	37,5	37,5	37,5	37,5
Connection Diameter	1" Threaded	1 1/4" Threaded	1 1/4" Threaded	1 1/4" Threaded	1 1/4" Threaded	2" Threaded / DN50 Flanged	2" Threaded / DN50 Flanged	2" Threaded / DN50 Flanged	2" Threaded/ DN50 Flanged

Model	514	713	523	510	517	520	535	521	522
Width (mm)	350	350	327	425	340	436,5	465	470	470
Height (mm)	942	942	1292	704	1070	980	1445	1090	1090
Distance Between Connections (Horizantal mm)	140	140	140	203	150	190	238	223,5	223,5
Distance Between Connections (Vertical mm)	640	640	1036	380	800	608	1070	718	718
Max. Operating Pressure (bar)	25	25	25	25	25	25	25	25	25
Max.Test Operating Pressure (bar)	37,5	37,5	37,5	37,5	37,5	37,5	37,5	37,5	37,5
Connection Diameter	2" Threaded/ DN50 Flanged	2" Threaded / DN50 Flanged	2" Threaded / DN50 Flanged	2 1/2" Threaded/ DN65 Flanged	2 1/2" Threaded / DN65 Flanged	DN80 Flanged	DN80 Flanged	DN100 Flanged	DN100 Flanged

Model	547	741	662	762	650	765	685	6125	6180
Width (mm)	491	608	608	608	765	750	780	920	1190
Height (mm)	1775	1450	1830	1830	1485	1700	2100	2895	2920
Distance Between Connections (Horizantal mm)	222,5	296	297	296	366	395	353	439	596
Distance Between Connections (Vertical mm)	1338	890	1292	1292	935	1091	1478	1939	1842
Max. Operating Pressure (bar)	25	25	25	25	25	25	25	25	25
Max. Test Operating Pressure (bar)	37,5	37,5	37,5	37,5	37,5	37,5	37,5	37,5	37,5
Connection Diameter	DN100 Flanged	DN150 Flanged	DN150 Flanged	DN150 Flanged	DN200 Flanged	DN200 Flanged	DN200 Flanged	DN250 Flanged	DN300 Flanged

Professional Service Networks

UMITTS provides service for spare parts for all brands and models as well as manufacturing UMITTS plate heat exchangers. The content of the professional service is determined and applied according to the need and it is ensured that your system complies with the performance of the first day.



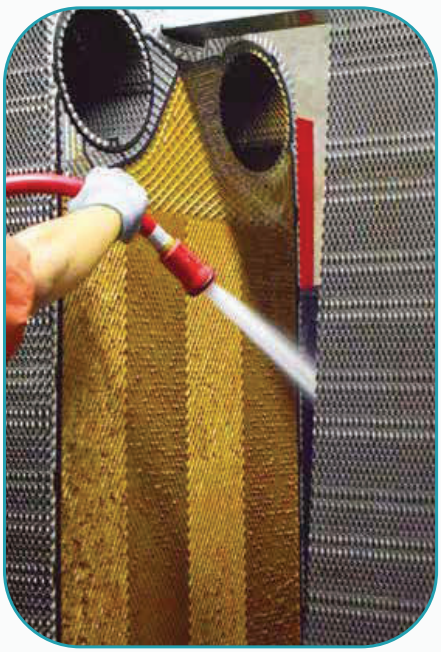
Professional Service Package Contents

- Plate supply for each brand and model.
- Supply of gasket for all brands and models.
- Revision and cleaning of heat exchanger frames.
- Quick and detailed cleaning of the heat exchanger plates.
- Descaling of heat exchanger plates with special chemicals.
- Supply and manufacture of all types of nuts and bolts in heat exchangers.
- Delivery of the heat exchanger as it was on the first day.
- 7/24 continuous service.

Professional Plate Heat Exchanger Service

Possible Problems in Plate Heat Exchangers

- Performance decrease due to calcification,
- Clogging due to sediment and dirt that may come from the installation,
- Excessive pressure losses due to clogging,
- Reduction of heat transfer due to clogging,
- Wearing of gaskets over time,
- Loss of sealing properties of gaskets,
- Deformation of the plates due to corrosion,
- There are reasons such as deformation of the body due to internal and external factors.



Service in Case of Pollution in the Heat Exchanger

Plate heat exchangers get dirty over time depending on the systems and they need to be cleaned in order to regain their former performance.

As a result of pollution in plate heat exchangers, situations such as increase in differential pressures between inlet and outlet of fluids and decrease in heat transfer occur. Although the cause of pollution is directly related to the system used and the fluids passing through the heat exchanger; mainly seen in the form of sediment accumulation, calcification, oil contamination.

Residue Accumulation

Calcification

Fat Accumulation

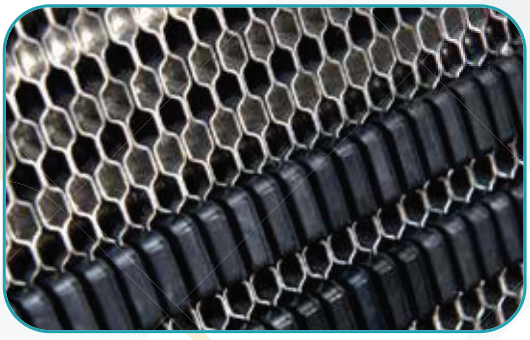
Plate Heat Exchanger & Spare Parts

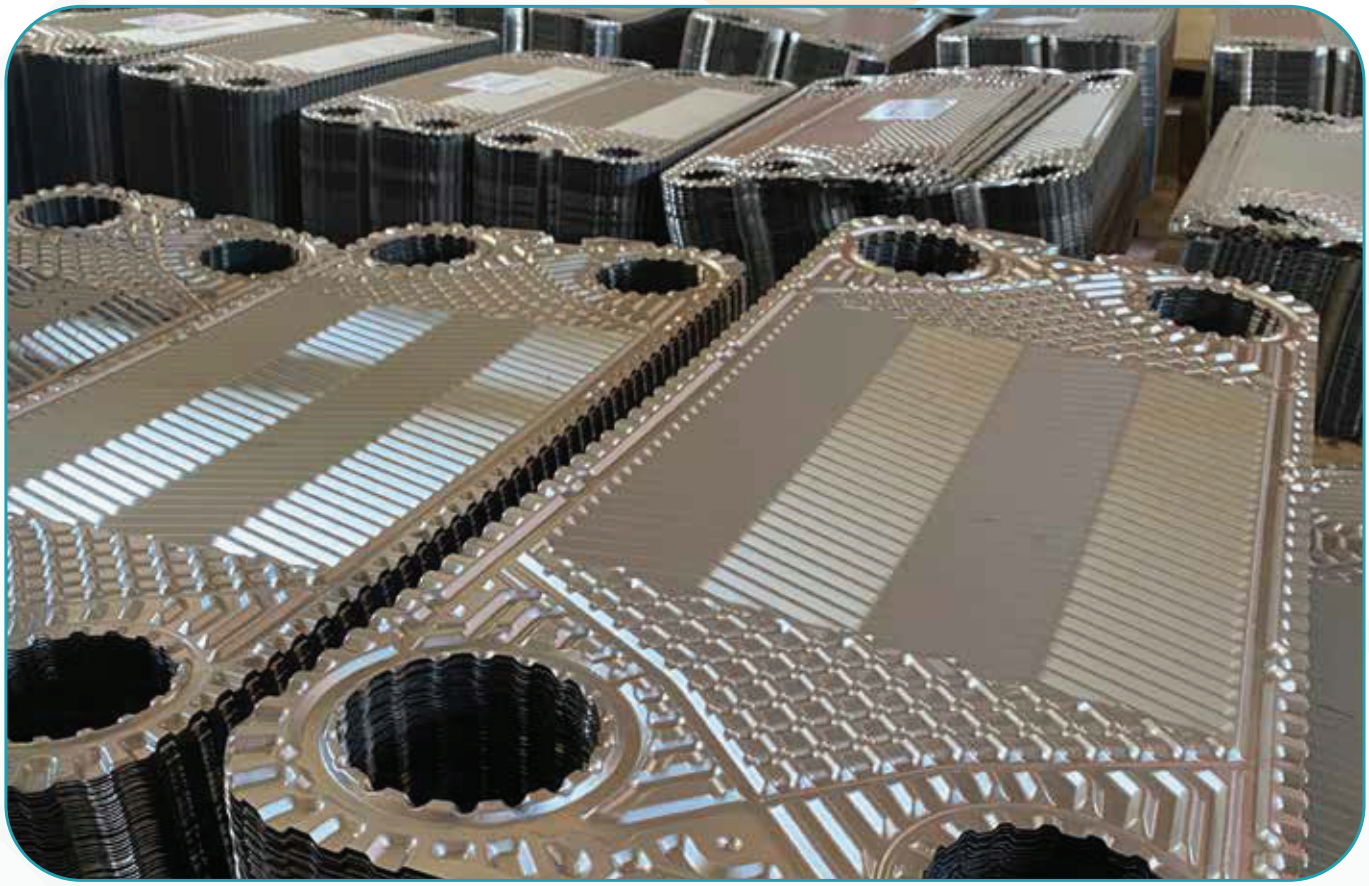
With the widest mold variety in the sector, plate and gasket production for all brand and model heat exchangers is also among our services. The design and production of heat exchanger plates and gaskets is one of our areas of expertise.

We come forward with the feature of being the only company that can meet all your brand and model spare parts needs. All of our products are guaranteed for 2 years, we offer lifetime service and 10 years spare parts warranty.
You can also contact us for our plate heat exchanger maintenance and heat exchanger spare parts services with our expert engineer staff.

Some of the companies that we have produced spare parts for are as follows:

- Alfa laval
- Apv
- Sondex
- Thermowave
- Fischer
- Tranter
- Hisaka
- Funke
- Vicarb
- Ciat
- Cipriani
- Kelvion
- Botai
- Reheat
- Stork
- Junkers
- API Schmidt






UMITTS

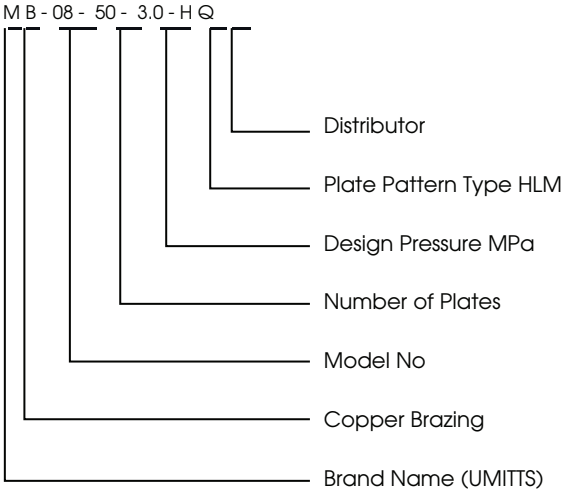
Brazed Heat Exchangers

UMITTS brazed plate heat exchangers have been designed for cooling, ventilation and heating processes and have been used safely in these systems for years.

Information

- Minimum temperature: -196 °C
- Maximum temperature: +200 °C
- Design pressure: 30-70 bar
- Suitable for standard and high pressures
- Cooling capacity
- Connection type: Threaded, brazed
- Copper, nickel and stainless Certificates
- CE Certified (PED) 97/23/EC
- UL
- ISO 9001: 2000

Display of Brazed Heat Exchangers



UMITTS brazed plate heat exchangers can be designed with channel plates with different heat transfer characteristics.

H-Type: The plate has wide-angle channels to make the heat transfer to turbulence the fluid's flow characteristic.
L-Type: Has narrow angles. This reduces the loss of pressure, but the reduction in turbulence reduces heat transfer.
M-Type: A combination of L and H type plates. These plates are particularly preferred when the heat exchange on one side of the plate heat exchanger is much larger than the other side.

Stainless Steel Plate Heat Exchangers

The difference of plate heat exchangers for food industry from other heat exchangers is that their bodies and all surfaces in contact with food are made of stainless steel in terms of hygiene. In addition, its seals have FDA (Food and Drug Administration) certificate.

General Areas of Usage

- Milk Heating - Cooling
- Pasteurizers
- Fruit Juice Pasteurizations
- Cream Cooling
- Brine Heating - Cooling
- Whey Processing

Pasteurizers

Pasteurizers For Daily Products

We are a manufacturer of machining solutions, equipped to assist you in the processing of daily products. Whether you're producing milk for room temperature milk dispensing or a cold chain or fermented products or daily products, we're on your side to process this delicate product.

- UHT Milk Sterilizer
- Pasteurized and ESL Milk
- Cream
- Flavored and Formulated Milk
- Fermented Milk
- Concentrated and Condensed Milk
- Milk Powder
- Recombinated Milk

Beverage Pasteurizers

We are a manufacturer of machining solutions, equipped to assist you in beverage processing applications. Whether you are distributing beverages at room temperature or producing carbonated and non-carbonated beverages or alcohol products for the cold chain, we are on your side to process this delicate product.

- Fruit Juice
- Carbonated Soft Drinks
- Non-Carbonated Soft Drinks
- Pulpy Drinks
- Soy
- Tea
- Coconut Milk
- Syrup
- Alcohol

Ice Cream Pasteurizers

We are a manufacturer of machining solutions, equipped to assist you in ice cream processing applications. We are at your side for the precision processing of cold chain.

Cheese And Whey Pasteurizers

We are a manufacturer of cheese processing solutions to help you with cheese processing applications. We are at your side in this precision production process for all kinds of cheese you produce.

Successful production requires maintaining milk quality and eliminating negative particles during sensitive processes to ensure high quality and efficiency. UMITTS provides the application of gentle and effective heat and pumping, which is essential to achieve optimum quality and yield of components.

Egg Pasteurizers

The egg pasteurizer is used for pasteurization of egg liquid products (egg white, egg yolk, whole egg). Pasteurization stops the vital activity of pathogenic bacteria Escherichia coli, forms such as brucellosis and heat resistant bacteria.

Advantages of egg pasteurization machine compared to other machines are; no need to get hot water boiler, no need to buy a homogenizer, may be listed as having a precise temperature control.

With its compact design, it can even fit into small areas. It is capable of pasteurization at high temperatures without requiring long-term cleaning.

Shell & Tube Heat Exchangers

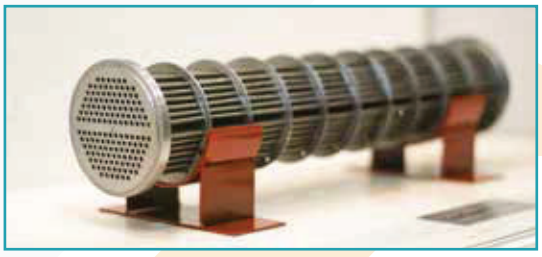
UMITTS shell&tube heat exchangers are used in the public and private sectors of iron and steel, machinery industry, petroleum, petrochemical, gas, power plants, food, pharmaceutical, health, paper industry, leather, textile, air conditioning, ship and marine industrial facilities. in military, construction, swimming pool, geothermal and contracting sectors, in the areas of heating and cooling.

- Shell and Tube Heat Exchangers
- Shell and Tube Standard Heat Exchangers
- Serpentines
- Radiators
- Batteries
- Economizers
- Ship Towers
- Maintenance & Repair

Products are designed according to customer requirements. UMITTS designs its heat exchangers by means of licensed computer programs.
Different tests can be applied according to the necessity of manufacturing in our workshop. While some of these tests are carried out by UMITTS quality control engineers, some of them can be done by neutral control organizations.

Advantages of Shell & Tube Heat Exchangers;

- They can be designed and manufactured to operate at very high pressures.
- Highly flexible and robust design.
- They can be designed and manufactured to operate at very high and very low temperatures.
- They are resistant to thermal shocks.
- There is no size limitation.
- They can be used in all applications.
- Pressure losses are minimal and can be kept to a minimum in accordance with the process purpose.
- They can be easily dismantled and reassembled for maintenance, repair and cleaning.
- Maintenance and repairs are easy.
- Pipe diameter, pipe number, pipe length, pipe pitch and pipe arrangement can be changed. Therefore, the design of tube heat exchangers has a lot of flexibility.



Customized Shell &Tube Heat Exchangers

Heat transfer applications often require different solutions for different processes. After obtaining the necessary information in the process, it is designed by the expert engineers in the field and the schematic drawing is extracted. After the schematic drawing is checked, there is no dimensional problem and production pictures are taken.

Customized and Hygienic Heat Exchangers

In some food and chemistry applications, heat treatments are carried out at very high temperatures or pressures. The use of plate heat exchangers at the mentioned temperatures and pressures is not used because the gasket temperature and pressure resistance is exceeded.

Heat Stations

UMITTS

DEFENSE INDUSTRY

HVAC

INDUSTRY

FOOD

SEAMANSHIP

ENERGY

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