

- √ Reliability
- √ Sustainability
- ✓ Productivity
- √ High Quality
- ✓ Strong Sales Network
- ✓ Service Networks



## Focus on Excellence

Maxwor Makina is the supplier needed by the leader companies in the sector with its engineering solutions and special products it produces.

Carry out in heating, cooling, transfer and storage of fluids; specializes in technology and process equipment manufacturing and offers sustainable solutions in these areas.







# HEAT EXCHANGERS

- ✓ GASKETED PLATE
  HEAT EXCHANGERS
- ✓ BRAZED PLATE

  HEAT EXCHANGERS
- ✓ SHELL & TUBE

  HEAT EXCHANGERS
- ✓ FINNED TUBE

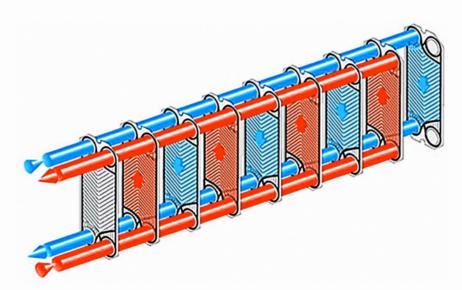
  HEAT EXCHANGERS

# **MAXWOR**

Focus on Excellence

### **GASKETED PLATE HEAT EXCHANGERS**

Maxwor Gasketed Plate Heat Exchangers (GPHE) are equipment that enables heat transfer with maximum efficiency by using each point of the plate surface thanks to their special plate design. It can be easily to service and maintain due compact structure. The working principle of the heat exchanger is to transfer the heat of the fluid with a high temperature to the other fluid at low temperature that is in contact with the other surface of the plate. Thus, the hot fluid starts to cool by transferring its energy, the cold fluid starts to heat up and heat transfer takes place. Both fluids are directed with the help of gaskets, preventing them from mixing with each other.



### FEATURES of GASKETED PLATE HEAT EXCHANGERS

- ✓ Plate material is very important for different applications. Our plate materials: 1.4301 / AISI304, 1.4401 / AISI316, 1.4404 / AISI316L, 1.4539 / AISI904L, 1.4547 / 254SMO, 2.4819 / Hastelloy C276, Titanyum
- ✓ Gasket materials for different applications : EPDM, NBR, VITON
- √ Frame materials: St-37, St-52 or AISI304
- ✓ Between DN25-DN500 connection diameter
- √ 25 Bar max operating pressure
- ✓ Between -15 / +180°C operating temperature
- √ Easy installation & fast maintenance
- ✓ Long slide and stud designed with capacity increase in the future.
- ✓ High efficiency heat transfer rate thanks to special plate desing



### **USAGE AREAS**

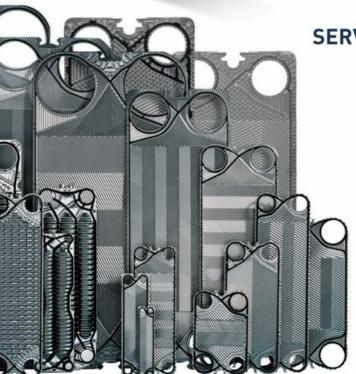
- ✓ Iron and Steel Industry
- ✓ Milk And Beverage
- ✓ Power Plants
- ✓ Building Heating & Cooling
- ✓ Petroleum & Petrochemicals
- √ Food Industry
- √ Shipbuilding & Marine 
  Industry
- ✓ Chemical Industry
- ✓ Refrigeration Industry
- ✓ Heat Recovery Systems
- ✓ Evaporation & Condensation

### MAXWOR PLATE HEAT EXCHANGER GASKETS

Gaskets are selected according to the prescriptions prepared specially for plate heat exchangers are divided into EPDM, NBR & VITON according to the which fluid used. The most sensitive point in Plate Heat Exchangers is the gasket, therefore, choosing the gaskets that will ensure the sealing is the most important element of the plate heat exchanger.

You can contact us for the supply of all brand model plates & gaskets.





SERVICE AND SPARE PARTS SERVICE

We provide Turkey's largest stock of plates and gaskets to all brand models exchanger having our company as maxw service and spare parts to speed.

Before your heat exchanger becomes unusable, maintenance services with low costs prevent large-scale malfunctions for the future, prolonging the product life by periodic maintenance, preventing material loss from prolonged downtime in case of malfunction, and preventing the loss of quality of the produced product.

### USE OF HEAT EXCHANGERS IN FOOD AND HEALTH SECTOR

MCP series plate is designed in accordance with completely hygienic applications, taking into account maximum smoothness, minimum pollution and perfect homogeneous distribution. It can be used for long periods without the need for intermediate CIP. Maxwor, knows the importance of hygiene and offers plates developed with human health in mind above all.





# FEATURES OF MAXWOR MCP SERIES FOOD HEAT EXCHANGERS

- ✓ Complete Stainless Structure,
- ✓ Gradual heating and cooling structure,
- √ Homogeneous flow,
- ✓ Surface roughness rate below 3.1RA.
- ✓ Wide gap plate usage according to usage conditions,
- ✓ Withstand temperature up to -15 / 180 ° C,
- ✓ Long slide and stud designed with capacity increase in the future,
- ✓ Maximum 25 Bar operating pressure,
- ✓ It has the advantage of fast maintenance and easy assembly.



### **BRAZED PLATE HEAT EXCHANGERS**



Brazed plate heat exchangers, which are different from gasketed plate heat exchangers, are used where sealing is important. They are equipment that is sealed at high temperature, under vacuum, using copper or nickel materials.

### FEATURES OF BRAZED HEAT EXCHANGERS

- ✓ High Pressure Resistance 45 bar
- ✓ Due to their compact structure, they occupy less space than gasketed heat exchangers.
- √ High resistance temperature MIN -180 ° C
  / MAX 250 ° C
- √ Can be used as super coolers and condensers
- ✓ Can be used as an evaporator in cooling systems.
- ✓ Can be produced from plate materials such as AISI 304, AISI 316.

MODEL	LMW-14	LMW-20	LMW-26	LMW-26C
Width (mm)	78	76	111	124
Height (mm)	206	310	310	304
Length (mm)	9+2,3*N	9+2,3*N	10+2,36*N	10+2,4*N
Horizontal Port Distance (mm)	42	42	50	70
Vertical Port Distance (mm)	172	282	250	250
Heat Exchange Area (m²)	0,014*(N-2)	0,02*(N-2)	0,026*(N-2)	0,026*(N-2)
Max Pressure (Mpa)	4,5	4,5	4,5	4,5
Max Flowrate (m³/h)	3,5	3,8	8,1	8,1
Weight (mm)	0,6+0,06N	1+0,08N	1,3+0,12N	2,2+0,16N

MODEL	LMW-50	LMW-95	LMW-100	LMW-120
Width (mm)	111	191	111	124
Height (mm)	525	616	310	304
Length (mm)	10+2,35*N	11+2,35*N	10+2,36*N	13+2,4*N
Horizontal Port Distance (mm)	50	92	50	70
Vertical Port Distance (mm)	466	519	250	250
Heat Exchange Area (m²)	0,05*(N-2)	0,095*(N-2)	0,1*(N-2)	0,12*(N-2)
Max Pressure (Mpa)	4,5	4,5	4,5	4,5
Max Flowrate (m³/h)	12,8	40	42,5	42,5
Weight (mm)	2,6+0,19N	7,8+0,36N	6,5+0,37N	7,2+0,52N

### SHELL & TUBE HEAT EXCHANGERS

Maxwor Shell & Tube Heat Exchangers consist of a cylindrical body with parallel heat transfer tubes. While one of the fluids passes through the tubes, the other passes through the body and provides the heat transfer between the fluids. It is the most widely used heat exchanger in oil refineries and large chemical plants and is suitable for higher pressure applications.



Necessary information to design a shell and tube heat exchanger; flow rate, temperature and physical properties of fluids. Besides, other data that may be important depending on the application are the inlet pressure, maximum acceptable pressure drop and flow rate.

Maxwor Shell & Tube Heat Exchangers's thermodynamic and mechanical calculations are designed according to international standards (TEMA, ASME, API and EN 13445) with professional software. We provide the most suitable heat exchanger technology with minimum cost, maximum reliability and efficiency in our designs.



### **USAGE AREAS**

- ✓ Petroleum and Petrochemical Industry,
- ✓ Chemical Plants,
- ✓ Cement Factories.
- ✓ Iron and Steel Factories,
- ✓ Paper Plants,
- ✓ Textile Factories
- ✓ Food and Pharmaceutical Industry,
- ✓ Ship and Sea

  Transportation,
- ✓ Energy, Environment and Recycling Systems,
- ✓ HVAC (Ventilation-Air Conditioning, Heating-Cooling Systems)

The main engineering materials we use in heat exchanger manufacturing:

- ✓ Carbon steel,
- ✓ Low Alloy Steel,
- ✓ Stainless steel,
- ✓ Duplex Stainless Steel,
- ✓ Copper and Copper Alloys,
- √ Copper-Nickel Alloys,
- ✓ Nickel.
- ✓ Nickel Alloys,
- ✓ Titanium.



### **ADVANTAGES OF SHELL & TUBE EXCHANGERS**

- ✓ Provides the opportunity to work at high operating temperature and pressure,
- ✓ Pressure losses in the heat exchanger are low,
- ✓ Particulate or fibrous products are easy to process,
- ✓ As the pressure test is simple, pipe leaks are easily found and easy to repair,
- ✓ Thanks to the anode used on the heat exchanger, measures can be taken against corrosion.

### **DISADVANTAGES OF SHELL & TUBE EXCHANGERS**

- X The heat transfer coefficient is lower, so the heat transfer areas are usually large,
- X Cleaning and maintenance is inconvenient as movement space is required to remove the inner pipes,
- X In case of need, the heat exchanger capacity cannot be increased.



### FINNED TUBE HEAT EXCHANGERS

Finned tubes consist of thin fins wrapped over the tubes to increase the heat transfer area. Depending on the purpose of use and ambient conditions, straight pipe or finned pipe product design can be made. The blades are wrapped in pipes with thickness, height and pitch.





### **USAGE AREAS**

- ✓ Textile Drying Machines
- ✓ Drying Radiator in Food and Medicine Industry
- ✓ Tea and Tobacco Drying Radiator
- ✓ Economizers
- ✓ Air Curtains
- ✓ Air Handling Units
- ✓ Waste Incineration Plants
- ✓ Wind Tunnels

With the combination of finned pipes, product groups such as serpentine, economizer, radiator, recuperator are formed according to need.

### Serpentines:

- ✓ Spiral Finned Serpentines
- ✓ Scaling Serpentines
- ✓ Scrubbing Pipes
- ✓ Oval Tube Serpentines

### Radiators:

- √ Steam Radiators
- ✓ Hot Water Radiators
- ✓ Hot Oil Radiators

What materials of pipe and fin we use in our finned pipes,

- ✓ Carbon Steel Pipe Carbon Steel Finned Serpentines
- ✓ Copper Tube Copper Finned Serpentines
- ✓ Copper Tube Carbon Steel Finned Serpentines
- ✓ Brass Tubing Copper Finned Serpentines
- √ Stainless Tube Stainless Finned Serpentines
- √ Alloy Pipe Copper Finned Serpentines
- ✓ Electro galvanized coated coils
- ✓ Hot dip galvanized coils
- ✓ Copper Tube Aluminum Wing Retaining Coil
- ✓ Brass Tube Aluminum Wing Retaining Coil
- √ Stainless Tube Aluminum Wing Retaining Coil
- ✓ Carbon Steel Tube Aluminum Wing Retaining Coil



Fluids such as the following are generally used in our products.

- √ Weather
- ✓ Water
- ✓ Hot Oil
- √ Steam
- ✓ Oil
- ✓ Hot Water
- √ Flue gas
- √ Sea water
- ✓ Hot Water
- ✓ Chemical Containing Liquids
- √ Waste Gases





- √ Reliability
- √ Sustainability
- ✓ Productivity
- √ High Quality
- √ Strong Sales Network
- ✓ Service Networks



♥ 19 Mayis Mah. Halaskargazi Cad. No: 226 K: 7 D: 24-27 Sisli / Istanbul / TURKEY

**+** +90 850 346 54 81

✓ info@maxwor.com

www.maxwor.com











