EKİN ENDÜSTRİYEL

Brazed Plate Heat Exchangers User Manual

MIT

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EKIN ENDUSTRIYEL
Isıtma - Soğutma San. Tic. A.Ş.

The first condition of innovation is to question. Sustainable innovation is to never stop questioning.

For us, the journey of innovation started with a question: “Why not produce value-added technology in Türkiye?”. The first turning point in this long journey was the birth of the MIT (Made In Türkiye) brand. The founding vision of MIT, which enabled us to become Türkiye’s first domestic manufacturer in the field of “Plate Heat Exchanger”, was not to be a domestic “alternative”, but to create a quality brand that could compete in the global market

By working for this goal, we have been entitled to receive many international quality certificates such as ISO, TSE, CE, GOST... for our products and processes over many years. For us, questioning the current situation was a natural result of our desire to exceed ourselves.

New Generation Engineering

With our engineering approach that focuses on the process, not the problem, we do not only specialise in one product, but also consider the entire ecosystem of that product. Therefore, we provide an end-to-end application by producing all other components that will form a system as well as the plate heat exchanger. For this, we focus on the continuous development of the necessary engineer staff. With our business development, pre-sales, sales and after-sales services provided by our expert engineers, we produce not only products but also “solutions”.

At the point we have reached; we offer complementary services with our internationally approved plate heat exchangers, components such as accumulation tanks, boilers, industrial pumps and installation materials that turn these heat exchangers into a system. With our team of more than 100 expert engineers, we continue to develop as a solution partner for projects requiring high technology in more than 60 countries.

ISO 9001:2015 CE TSE TSEK EAC FDA ADR YERLİ ÜRETİM

PRODUCT RANGE

HEAT TRANSFER PRODUCTS

- Gasketed Plate Heat Exchangers
- Brazed Heat Exchangers
- Shell & Tube Heat Exchangers
- Evaporators and Condensers
- DC Fan Driven Oil Coolers
- Heat Coils
- Serpentines / Radiators / Economizers

PRESSURE VESSELS

- Water Heater Tanks
- Water Storage Tanks
- Buffer Tanks
- Expansion Tanks
- Stainless Steel Tanks
- Balance Tanks / Dirt Separators / Air Separators / Air Tubes
- Steam Separators
- Pressured Air Tanks
- Neutralization Units

INDUSTRIAL AND FOOD GRADE SYSTEMS

- Heat Stations
- Industrial Process Systems
- Dosing Systems
- Substations
- Thermoregulators
- Pasteurizers
- CIP and Hygienic Process Systems
- Hygienic Storage and Process Tanks / Reactors
- Homogenizers
- Turn-key Projects

FLUID TRANSFER PRODUCTS

- Lobe Pumps
- Hygienic Centrifugal Pumps
- Twin Screw Pumps
- Gear Pumps
- Magnetic Drive Pumps / Thermoplastic Pumps
- Dosing Pumps
- Air Operated Double Diaphragm Pumps (AODD)
- Drum Pumps
- Monopumps
- Peristaltic (Hose) Pumps
- Centrifugal Blowers
- Roots Blowers
- Turbo Blowers

FLOW CONTROL UNITS

- Butterfly Valves
- Ball Valves
- Globe Valves
- Knife Gate Valves
- Actuators
- Check Valves and Strainers
- Thermoplastic Valves

ENERGY SYSTEMS

- Boilers
- Steam Generators
- Solar Collectors
- Chillers
- Cooling Towers

MIT mitrojen DORIS magneto AIROO TRUEVALVE myra inoxen NNSUN

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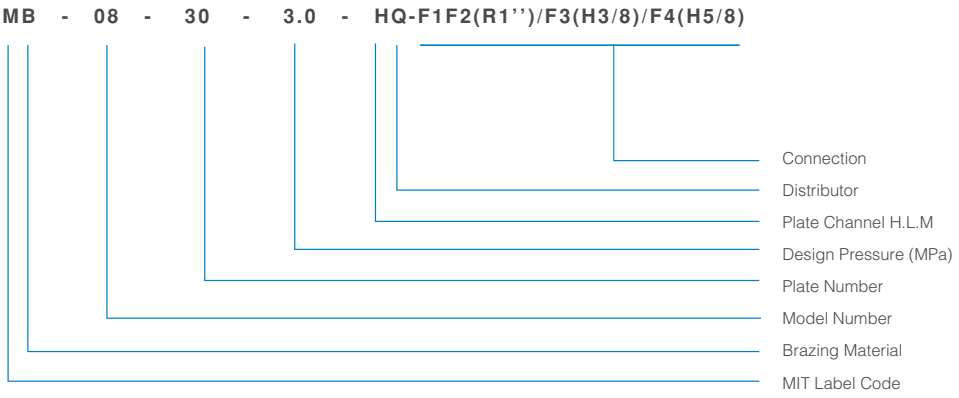
Contents

Exhanger Model And Plate Number

MIT PHE's labels above cover plate has information that you need. For more information please contact Ekin Endüstriyel.



Double Gas System: HDQ

Warranty

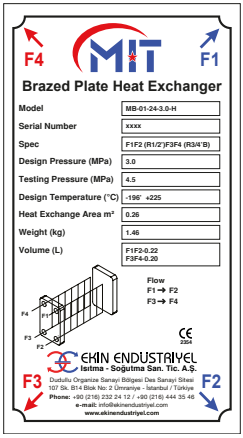
Ekin Endüstriyel offers a 12-month warranty from the date of installation. The warranty covers only manufacturing and material defects.

Disclaimer

The performance of MIT BPHE's is based on their installation, maintenance and operating conditions being in conformance with this manual.

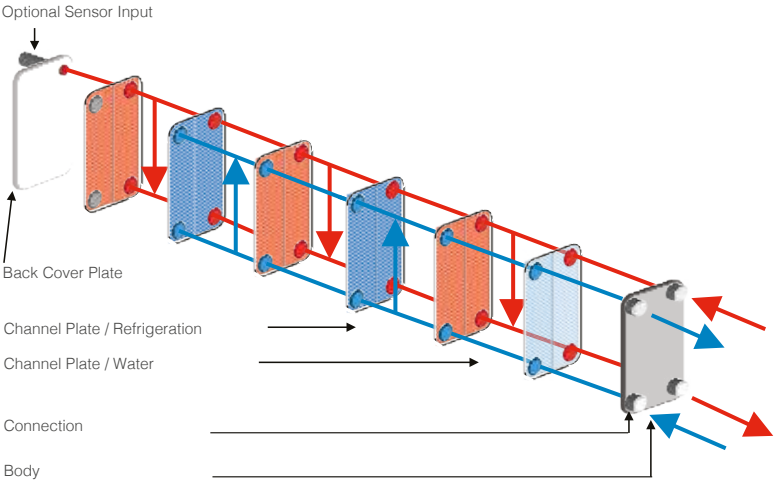
General Information

MIT-MB series exchangers has a label of the front side that showing connection location, you can also check working pressure the label.



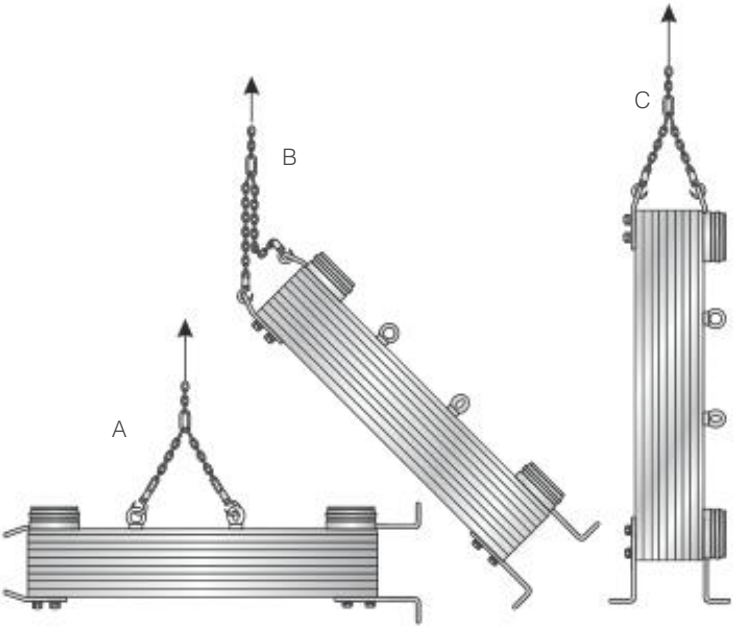
Flow Chart

MIT-MB series BPHE works with parallel flow princibles flow direction shows below;



Lifting Instructions For Larger BPHE

A. Lifting horizontal position.
B. Lifting from horizontal to vertical position.
C. Lifting in vertical position.



Risk of personal injury. Maintain a safety separation of 3 m when lifting.

Assembly

Never expose the BPHE to excessive pulsations (i.e. cyclic pressure or temperature changes). It is also important that no vibrations are transferred to the BPHE. If there is a risk of this, install vibration absorbers. For large connection diameters, we advise you to use an expanding device in the pipeline. It is also suggested that a buffer (e.g. a rubber mounting strip) be installed between the BPHE and the mounting clamp.

Mounting Directions

MIT BPHE's should install vertical position.Primer side hot fluid inlet should be upper connection and return lower connection. Seconder side cold fluid should be inlet lower connection and hot fluid will going upper connection. Exchangers working parallel flow.

Mounting suggestions

- Mounting suggestions.
- Sheet metal bracket (x = rubber insert).
- Crossbar and bolts (x = rubber insert).
- With mounting stud bolts on the front or back cover plate.
- Support legs are available for some larger BPHE's.
- Insulation for refrigerant applications.
- Insulation for heating applications.

Soldering Method

Degrease and polish the surfaces. Apply flux. Insert the copper tube into the connection, hold it in place and braze with min. 45% silver solder at max. 450 ºC when soft soldering and 450-800 ºC when hard soldering. Do not direct the flame at the BPHE. Use a wet rag to avoid overheating the BPHE. Protect the BPHE's interior (refrigerant side) from oxidation with N2 gas.

Freezing Protection

- Use a filter < 1 mm, 16 mesh.
- Use an antifreeze when the evaporation temperature is close to the liquid-side freezing point.
- Use a freeze protection thermostat and flow switch to guarantee a constant water flow before, during, and after compressor operation.
- When starting up a system, pause briefly before starting the condenser (or have a reduced flow through it).
- If any of the media contain particles larger than 1 mm (0.04 inch) a strainer should be installed before the BPHE.

! Excessive heating can lead to fusion of the copper and thus to the destruction of the BPHE.

Cleaning of the BPHE's

The normally very high degree of turbulence in BPHE's produces a self-cleaning effect in the channels. However, in some applications the fouling tendency can be very high (e.g. when using extremely hard water at high temperatures). In such cases, it is always possible to clean the BPHE by circulating a cleaning liquid (CIP – Cleaning In Place). Use a tank with weak acid, 5% phosphoric acid, or if the BPHE is cleaned frequently, 5% oxalic acid. Pump the cleaning liquid through the BPHE, for optimal cleaning, the flow rate should be at least 1.5 times the normal flow rate, preferably in a back-flush mode. Reverse the flow direction every 30 min if possible. After cleaning, remember to rinse the BPHE carefully with clean water. A solution of 1-2% sodium hydroxide (NaOH) or sodium bicarbonate (NaHCO3) before the final rinse ensures that all acid is neutralized. Clean at regular intervals.

Notes

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CERTIFICATE OF WARRANTY

2 YEARS WARRANTY

The Document's Confirmation Date and Number:
The usage of this document has been authorized by T. C. Sanayi Bakanlığı İl Müdürlüğü in accordance with the Law No: 4077 on the Protection of Consumers and the Communiqué on the Implementation of the Guarantee Certificate put into effect based on this Law.

WARRANTY CONDITIONS

1. Warranty period starts from the delivery date of the goods.
2. In case of malfunction of the products within the warranty period, the time spent in the repair is added to the warranty period. The repair period of the goods is maximum 30 working days. This period starts from the date of notification to the service station of the defect goods. In the absence of service station, this period starts from the date of notification to the seller, dealer, agent, representative, importer or manufacturer of the goods.
3. In case of malfunction of the goods within the warranty period due to material, workmanship or assembly or assembly defects, the goods will be repaired at no cost and no additional cost will be asked from buyer under the name of changed part price or any other name.
4. Defects caused by the use of the product contrary to the items in the user manual are out of the warranty.
5. For the problems that may arise regarding the Warranty Certificate can be applied to the Sanayi ve Ticaret Bakanlığı Tüketicinin ve Rekabetin Korunması Genel Müdürlüğü.
6. The manufacturer may request that the product be sent to its own production facility at its own discretion. The shipping cost to be spent by the customer belongs to the manufacturer if it is evaluated within the scope of warranty as a result of the examination made on the product. If the defect is not evaluated under the warranty, all costs incurred will be invoiced to the customer.
7. The manufacturer is not responsible for any damages and losses that may occur in the cargo or warehouse during the shipment of the product.
8. The manufacturer accepts no liability for the damage cause by the following reasons;
   - Failure to comply with temperature, pressure or other conditions specified in the technical specifications.
   - Incorrect applications and normal abrasion conditions.
   - Damages that may occur from sudden opening and closing of the fluid valves.
   - Damages cause by the usage of non-original spare parts.
   - Damages that may occur during shipping.
   - Damages that may arise from corrosion.
   - Blockages cause by the fluid passed through inside the product.
   - Damages that may arise from condensate discharge in products which are used in steam applications.
   - Damages that may occur by the blockages cause by the solid materials which can block the products.
   - Damages that may occur as a result of incorrect interventions by the un-authorized services.
   - Damages that may be caused by the lack of fixtures or not working properly.
   - Accidents and problems that may occur in the system if the safety fixtures (safety valve, thermostat, pressure sensors, temperature sensors etc.) are not used are not considered under warranty. The manufacturer is not responsible for any of the pecuniary and non-pecuniary damages that may occur.
9. Manufacturer is not responsible for secondary damages, loss of production and accidents whether it is under warranty or not.
10. All of the above items have been specified in our offer and order confirmations and you have been informed that they supersedes the contract. Commissioning of the product means acceptance of the contract.

For the product that was sold to …….. LTD. ŞTİ. /A. Ş / Legal Entity on …../……/20… with stated model, brand and serial number, all kinds of manufacturing and material defects are covered by the warranty of our company for 2 (two) years.

SELLER **DEALER** **END USER**

Brand : _____
Product Type : _____
Product Code : _____
Serial No : _____
Product No : _____

NOTE: User mistakes are not covered by warranty.
www.ekinendustriyel.com

Please keep this certificate!

Notes

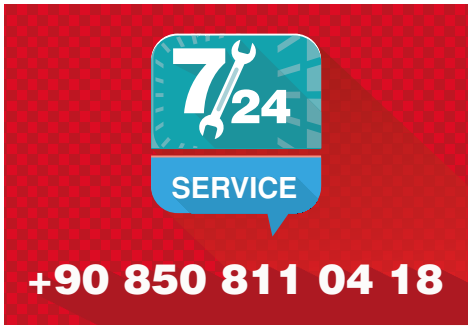
Notes

Professional System Solution Center

You can get answers to the problems you experience with your pumps,heat exchangers and system from our Ekin professional system solution center. You can also benefit from our 7/24 uninterrupted service with our solution center consisting of our expert engineers.

- Domestic hot water installations.
- Central and district heating systems.
- Milk, yogurt, heating, cooling and pasteurization systems.
- Industrial cooling and heating systems.
- Oil cooling systems.
- Energy recovery systems.
- Pool heating systems.
- Steam installations.

It is vital for your system to be designed and implemented correctly in the first installation in order to be able to operate at the desired capacity, smoothness and long life. For this reason, you can get first-hand the technical support you need during the installation phase of your system and the problems that may arise in the business; You can reach us **24 hours +90 (216) 232 24 12 in 7 days**.



We would like to reiterate that we will be happy to share our knowledge accumulated over many years with our valued customers in order for your system to work correctly and performance.

Ekin will continue to be the best solution partner for you in all applications with all kinds of heating and cooling applications.

Producer; reserves the right to change the product features, technical dimensions and information and installation diagrams specified in this catalog without notice. No specified information can be copied and used without the permission of the manufacturer. In no way can the manufacturer be held responsible by giving examples of technical information and diagrams. In case of need, we request you to request a special technical drawing for your project for exact dimensions.

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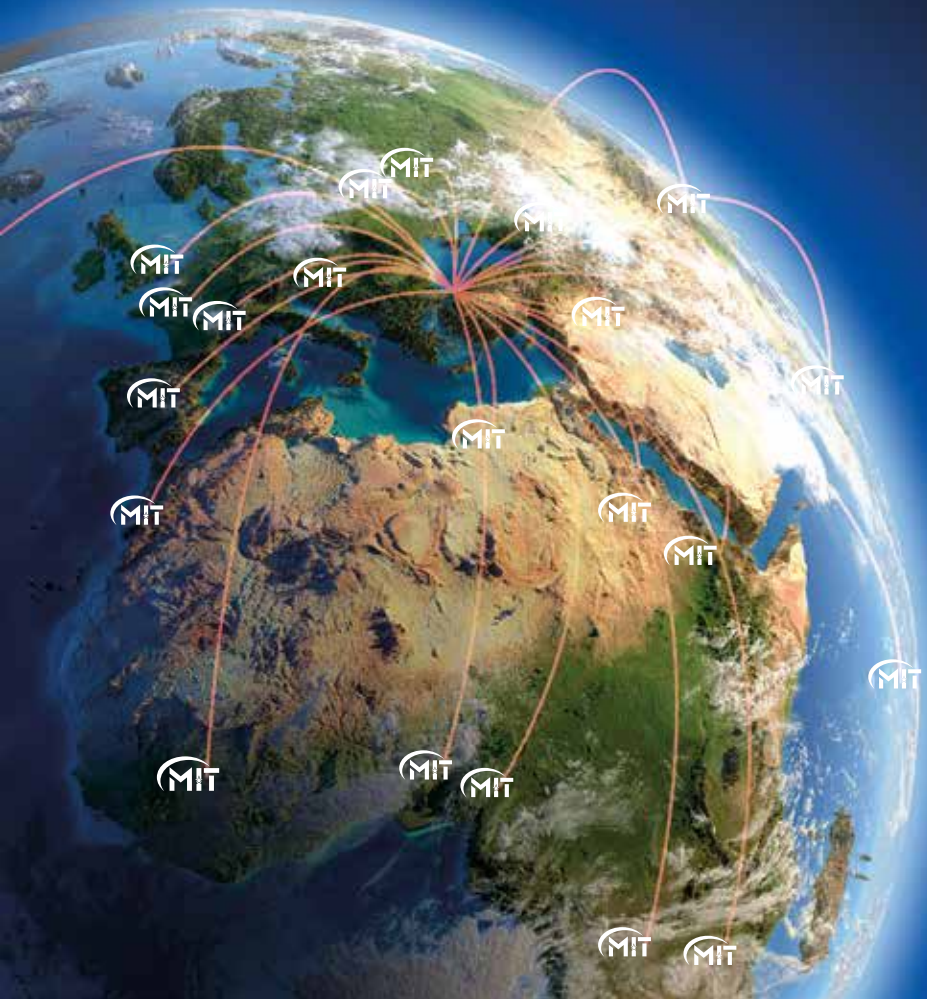

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