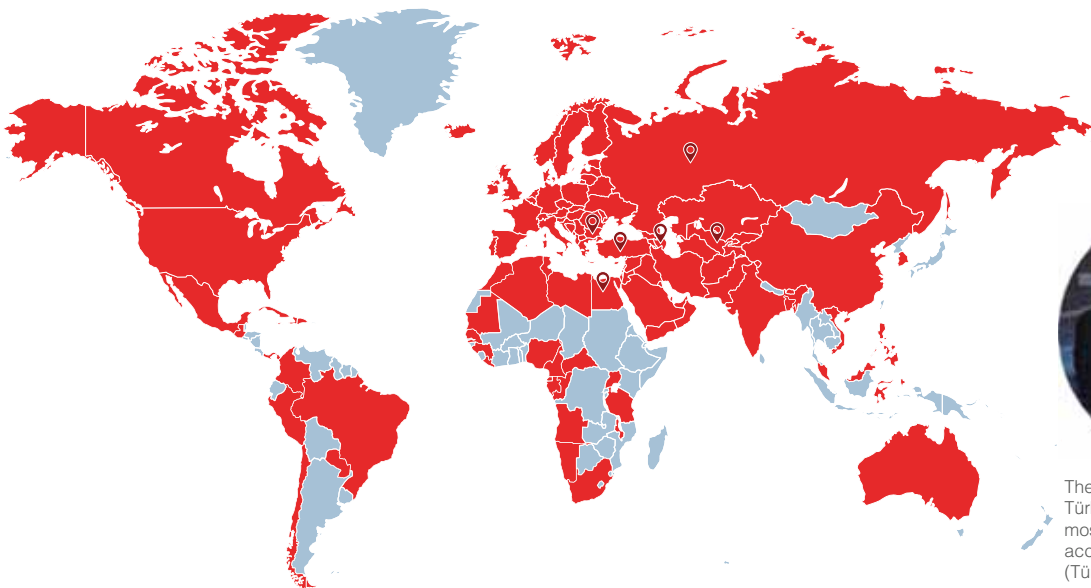




*Reactors  
Product Catalog*



Your Satisfaction Is Our Priority;  
Globalization Is Our Goal!



The second-rated company in Türkiye has exported to the most different countries in 2021, according to ISIB (Türkiye HVAC-R).



## **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.



## HEAT TRANSFER PRODUCTS

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

## PRESSURE VESSELS

- Water Heater Tanks
- Water Storage Tanks
- Buffer Tanks
- Expansion Tanks / Automatic Pump Controlled Expansion System
- 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
- Pneumatic Piston Valves

## ENERGY SYSTEMS

- Domestic and Industrial Boilers
- Steam Generators
- Chillers
- Cooling Towers

PRODUCT RANGE



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*From our product quality to value-added services; we owe our sustainable success to our established corporate culture in every field from employee to customer satisfactions.*

*Our comprehensive corporate policies pave the way for our corporate culture. Thanks to these policies, we design all our activities to offer the same quality regardless of individuals and market dynamics.*

# CORPORATE POLICIES



The secret of being the leading company in the heating and cooling sector lies in the people. We know in order to make a difference; it is necessary to have the staff to implement these policies flawlessly as well as the corporate policies created by experts in their fields with nearly 20 years of experience. We demonstrate our customer-oriented approach by reflecting the needs and expectations of the industry to our MIT branded products in the best possible way. We are raising the standards of the heating-cooling and air conditioning industry by combining our modern production and marketing understanding with our innovative approach with the valuable experience of our expert engineers.



## OUR VISION

To make the MIT brand a reputable and leading global brand in all sectors in which Ekin Endüstriyel operates.

## OUR MISSION

To provide sustainable benefit to all our stakeholders by using our resources effectively and efficiently within the framework of human and moral values.



## AN ENGINEERING APPROACH FROM SALES TO MAINTENANCE

We offer value added pre and after sale services with our customer satisfaction-oriented approach and deep expertise we are more than happy to share. Thanks to our expert engineers that provide proactive solutions, we focus on making a difference throughout the process, from presales to maintenance. With our “quality product, quality service, quality solution” approach, we are more than a manufacturer and supplier, we are a highly motivated solution partner for all kinds of heating and cooling projects.





## OUR QUALITY POLICY

It is our pleasure to share our knowledge; through value-added Before & After Sales Services. By generating proactive solutions, we are in close contact with our customer; from the pre-sale, up to the final production stages. By viewpoints of “High-Quality Products, Services & Solutions”, we manage our operations based on Sustainability and efficiency. We recognize ourselves as a Solution Partner in all Local & International projects & proceed through this motivation.



## CUSTOMER SATISFACTION POLICY

We aim for sustainable quality with a proactive approach that anticipates rather than meets the need. We bring together a corporate management approach based on strategy, not personal considerations, with effective decision-making mechanisms, including our employees and suppliers. We run an operation based on efficiency and sustainability.





## ETHICAL VALUES

We conduct all our activities in accordance with the laws and then with ethical values. We believe in growing together and we look for mutual benefit in all our business relationships.

## PRIVACY POLICY

All your personal information shared with our company is guaranteed by our ethical values and our processes in compliance with the Law No. 6698 on Protection of Personal Data.

## OCCUPATIONAL HEALTH AND SAFETY (OHS) POLICY

We prioritize a single rule in all our operations: "It is the right of every human being to work in a healthy and safe environment." We minimize risks with preventive OHS practices and analyzes. We increase the awareness of our own personnel, our suppliers and subcontractors with trainings and guidance. We work with the understanding of "zero concessions" in compliance with Occupational Health and Safety Regulations and related laws.

## ENVIRONMENTAL POLICY

We care about the prevention of waste in natural resource consumption. We keep the environmental pollutants and our wastes under constant control. We constantly inform our employees in this topic. We never compromise on compliance with the relevant legal legislation, and we wholeheartedly support all kinds of work that will benefit environmentally friendly technologies and social awareness.

## INFORMATION SECURITY POLICY

All our information technology operations are protected by our information security processes, which are managed in accordance with ISO 27001 Information Security Management System requirements.



## SPONSORSHIP AND SOCIAL RESPONSIBILITY

As Ekin Endüstriyel, we have been supporting projects that will bring social benefit from day one with our desire to develop and grow together. We strive to create and promote a sensitivity towards the future of our country and our world.

With our understanding of "Sponsorship and Social Responsibility", we regularly support various social sharing projects on education, health, and environment with great interest. We work diligently to fulfill our responsibilities towards our employees and heir families, customers, dealers, universities, non-governmental organizations, and other stakeholders.

In addition to the projects, we have implemented in a corporate sense, we support the projects created by students with all our strength in order to contribute to the raising of environmentally sensitive generations and to enlighten future generations. In addition, we prioritize the demands and needs of the projects in our region.

In the field of education, we are proud to provide support for many projects carried out domestically and nationwide. As the leading institution of the industry, we carry out projects focused on education and employment with vocational high schools and universities. In addition, innovation, we support the renewable energy, research, and R&D projects of student communities in Türkiye's elite universities.

We are also working with non-governmental organizations in the field of health. We regularly organize seminars to inform our employees in topics like blood donation, harms of smoking and similar health-related issues. We wholeheartedly support projects carried out in the field of health at every opportunity.

While contributing to the national economy and employment with our investments, we strive to achieve a vision that tries to be a pioneer and an example to the society with our sponsorship and social responsibility projects and the voluntary support of our employees. We prioritize projects that generate permanent benefits to create sustainable effects with our social responsibility efforts.



WE USE THE RESOURCES WE HAVE MORE EFFICIENTLY AND TAKE CARE TO PROVIDE THE MOST EFFECTIVE RECYCLING WITHIN OUR COMPANY. **WE ADOPT TO ACT WITH CARE AND SEE IT AS A REFLECTION OF OUR RESPECT FOR THE ENVIRONMENT, HUMANITY, FUTURE GENERATIONS, AND OURSELVES.**



# OUR FACILITIES

 DUDULLU



HIGH  
QUALITY, FAST  
SHIPMENT &  
AFTER SALES  
SUPPORT!







We continue to produce solutions with designs suitable for the process and specific to your demand.



# OUR FACILITIES



KIRKLARELİ



QUALITY  
PRODUCTION  
WITH INNOVATIVE  
MANUFACTURING  
APPROACH







# OUR FACILITIES



AKSARAY









# OUR PRODUCTIONS



FROM  
THE FIELD









# OUR PRODUCTIONS



FROM  
THE FIELD





## OUR HISTORY

- 2005** As Ekin Endüstriyel, we have established our foot print as the very "First Domestic Plate Heat Exchanger" producer, applying "New Generation Engineering" approach.
- 2006** We succeeded as a locally technology possessor & pioneer of domestically producing company of heat exchanger; entiteled with MIT (Made in Türkiye) brand.
- 2007** We added the production of "Pressure Vessels" alongside our Plate Heat Exchanger, and continously growing.
- 2008** We added "Tubular Heat Exchangers" to our Heat Transfer Portfolio...
- 2009** In order to determine the most suitable heat exchangers for our customers' needs, our expert engineers started to offer the best solutions via using the heat exchanger selection software.
- 2010** Expansion Tank took its place in our product range, which provides pressure control and water support in plumbing systems.
- 2011** "MIT Brazed Plate Heat Exchanger" designed & produced for cooling-heating & ventilation processes.
- 2012** MIT brand has made its presence felt in 60 countries.
- 2013** Ekin moved the Headquarter to a new location in Des Industrial Zone.
- 2014** Foundation of our Kırklareli factory launched.
- 2015** "Fluid & Air Transfer" products added to Ekin product portfolio; & that enabled us to be responsive to our customers, in each & every field.
- 2016** Our 2500 m<sup>2</sup> factory in Kırklareli started commissioning.
- 2017** We started providing services in various engineering fields to meet our customers' expectations with "Package System" solutions.
- 2018** "MIT Cooling Towers", "Chillers" and "Steam Generators" have been included in our product range. "MIT point" Regional directorates started operations in four different countries.
- 2019** We never stopped moving forward and started manufacturing "MIT Boilers".
- 2020** We added Truevalve brand to our group of products.
- 2021** We added the hose pump group to our Fluid Transfer product range.
- 2022** We have been granted "2nd-Exporting Company of the Year 2021" award, by İSİB in Air Conditioning Sector.

## Today;

Alongside our various production facilities (Dudullu Organized Industrial Zone, Aksaray, Kırklareli, Maltepe), we have been trying to provide our business partners with best services, end-to-end equipment supply and unlimited supports. With our innovative manufacturing approach and team-work spirit...

## Product Introduction



Our stainless steel reactor tanks are designed to provide solutions suitable for various industrial processes. Customizable to customer requirements, these tanks meet industry standards for reliability, longevity and efficiency.

### Main Features

- **Material:** Stainless steel (304L, 316L, or other alloys according to customer demand).
- **Volume Options:** From 50 liters to 30,000 liters with different capacity options.
- **Surface treatment:** Glossy or matt surface for hygienic design.
- **Heating and Cooling Systems:**
  - o Roljant (Jacket): External surface mounted jacket system.
  - o Serpentine: Tubular solution placed inside the tank.
- **Mixing Systems**
  - o Vertical or horizontal agitator shafts.
  - o Low, medium or high speed motor options.
- **Pressure Resistance:** Atmospheric or pressurized tank options.
- **Optional Components:** Automation systems, CIP compatibility and flushing nozzles.

| Technical Specifications |   |
|--------------------------|---|
| Feature                  | Description                               |
| Material                 | Stainless Steel 304L/316L                 |
| Volume                   | 50 L – 30.000 L                           |
| Heating System           | Jacket or Serpentine                      |
| Mixing Type              | Single, double or multiple mixer system   |
| Compressive Strength     | Atmospheric or Pressurized                |
| Automation Option        | PLC Controlled                            |
| Surface Roughness        | Ra<0.8 $\mu$ m (hygienic design optional) |

## Usage Areas

1. Chemical Industry: Reaction and polymerization processes.
2. Food Industry: Mixing and heating of liquid and semi-solid products.
3. Cosmetics and Pharmacy: Creams, lotions and pharmaceutical raw materials.
4. Petrochemicals: Reaction tanks for oils, fuels and solvents.

## Tank Reactor Main Components

The design and operation of chemical reactors is crucial to obtain the desired products. The correct setting of reaction conditions affects the reaction rate, selectivity and efficiency. Therefore, chemical engineers and industrial specialists play an important role in optimizing and controlling reactors.

Tank reactors are closed systems in which chemical reactions take place and are often used for reactions that take place in the liquid phase. These reactors consist of large tanks, usually with the use of an agitator, which ensures a homogeneous distribution of the reaction mixture.







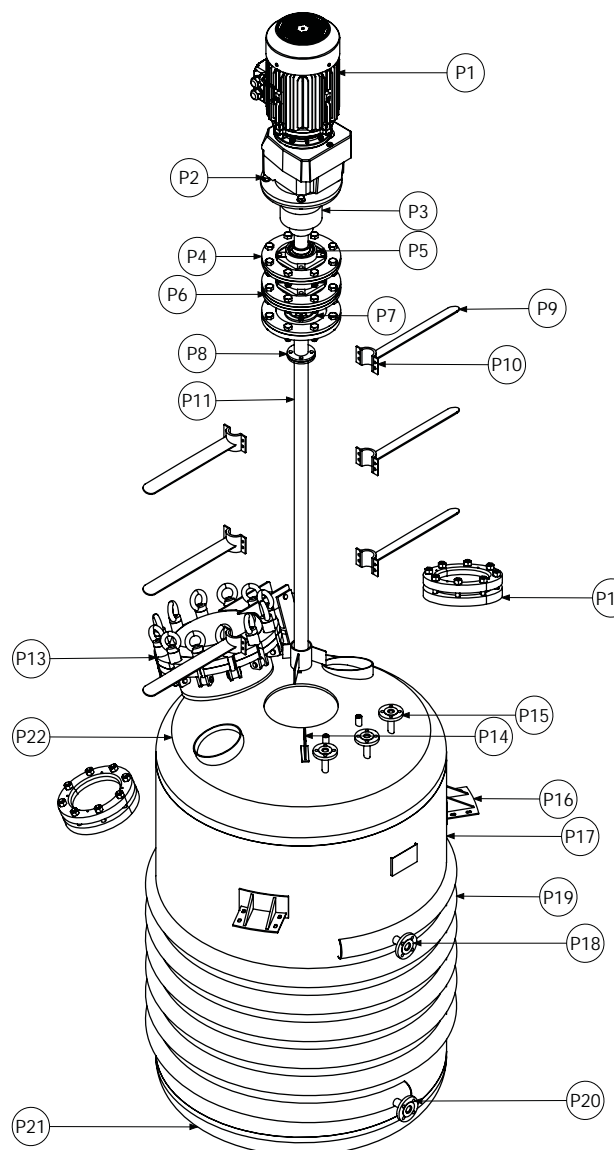
The main components of tank reactors are:

**Tank (Reactor):** The main closed chamber containing the reaction mixture. This tank is usually made of stainless steel or glass fiber reinforced plastic and must be resistant to reaction conditions.

**Agitator:** There is an agitator that ensures homogeneous dispersion of the reaction mixture in the tank. Agitators can take various forms such as mechanical rotors, rods or air bubbles.

**Heating or Cooling Systems:** Heating or cooling systems can be used to maintain reaction conditions. These systems are used to control the temperature inside the tank and provide the desired reaction conditions.

**Entry and Exit Points:** The materials required for the reaction enter the tank and the products of the reaction exit the tank. These points are equipped with valves to control the flow rate.



| Material List |                          |
|---------------|--------------------------|
| Number        | Description              |
| P1            | Reducer                  |
| P2            | Hexagon Bolt             |
| P3            | Coupling                 |
| P4            | Flange                   |
| P5            | Bearing Housing          |
| P6            | Dull Flange              |
| P7            | Engine Packing           |
| P8            | Shaft Mating Flange      |
| P9            | Stirrer Wing             |
| P10           | Imbus Bolt               |
| P11           | Stirrer Shaft            |
| P12           | Sight Glass              |
| P13           | Manhole                  |
| P14           | Lifting                  |
| P15           | Tank Inlet Flange        |
| P16           | Connection Leg           |
| P17           | Body                     |
| P18           | Serpentine Outlet Flange |
| P19           | Serpentine               |
| P20           | Serpentine Inlet Flange  |
| P21           | Bottom boom              |
| P22           | Upper Boom               |

## Advantages

- **Strength** : Long life thanks to stainless steel material.
- **Hygienic Design** : Compliant with food and pharmaceutical standards.
- **Engineering Flexibility** : Design to suit process needs.
- **Energy Efficiency** : High efficiency heating and cooling systems.

## Visuals and Technical Drawings

- Detailed technical drawings and application examples for each product type.
- Sectional views of rougher and serpentine systems.
- Details of agitator systems.

## Process Features

Our reactor tanks provide excellent performance in a variety of processes:

- Homogeneous Mixing:
  - o Homogeneous product is obtained with specially designed mixers.
  - o Systems suitable for high viscosity liquids.
- Temperature Control:
  - o Heating and cooling systems precisely control the process temperature.
  - o Rolbont and serpentine systems provide energy savings.
- Pressurized and Vacuum Operation:
  - o Safe operation under high pressure and vacuum.
  - o Optimized design according to process needs.
- Flexible Process Adaptation:
  - o Integration of different process equipment according to customer requirements.
  - o Controllable mixing processes with variable speed adjustment.





## Reactor Types



The reactors that provide the environments in which chemical reactions take place can be of many different types. Here are some of them:

### 1- Stagnant Bed Reactors

In this type of reactors, the reaction mixture passes through a solid bed. They are generally preferred for reactions using solid catalysts.

### 2- Fluidized Bed Reactors

Here the reaction mixture circulates through a solid bed. These reactors provide good mixing of solid and liquid phase or solid and gas phase. This can increase the efficiency of the reaction.

### 3- Tank Reactors

Chemical reactions take place in a liquid. The reaction mixture is mixed in a tank and the reaction is completed in the desired time.

### 4- Tube Reactors

In these reactors, the reaction mixture passes through a pipe or tube. They are generally used in gas phase reactions or reactions requiring high pressure.

### 5- Continuous Reactor

In these reactors, there is a continuous flow of material and the reaction products are taken continuously. Such reactors are widely used in continuous production processes.

| Reactor Type       | Reaction Speed | Energy Efficiency | Mixture Homogeneity | Raw Material Utilization | Product Purity |
|--------------------|----------------|-------------------|---------------------|--------------------------|----------------|
| Still Bed          | Medium         | High              | Low                 | Medium                   | High           |
| Fluidized Bed      | High           | Medium            | High                | Medium                   | Medium         |
| Tank Reactor       | Medium         | Medium            | High                | Low                      | Medium         |
| Tube Reactor       | High           | High              | Medium              | High                     | High           |
| Continuous Reactor | Very High      | Very High         | High                | Very High                | Very High      |



## Mixer Types

Agitators are tools used to homogeneously mix materials in a tank or reactor or to ensure the mobility of a reaction mixture. There are various types of agitators used in chemical, food, pharmaceutical, petrochemical and many other industries. Here are some common types of agitators:

### 1. Mechanical Mixers:

- **Rod Agitators:** They are simple rods used to stir the reaction mixture. Generally suitable for low viscosity liquids.
- **Propeller Agitators:** Propellers or blades rotating around a shaft are used to stir the reaction mixture. They are suitable for high viscosity liquids or solid-wet mixtures.
- **Jet Mixers:** High-pressure jets of gas or liquid are used to mix the reaction mixture. They are especially preferred for homogeneous mixing in large volume reactors.



## 2. Static Mixers:

- Layer Mixers: Utilize static plates that divide and mix the reaction mixture into layers. They have a simple structure and provide homogeneous mixing with low energy consumption.
- Spiral Mixers: They mix the reaction mixture with the help of rotating spiral blades. The position and inclination of the spiral blades affect the speed and homogeneity of the mixture.

## 3. Hydraulic Mixers:

- Floating Rod Agitators: Rods floating on the liquid surface are used to mix the liquid. This type of agitators provide mixing by moving between layers on the surface.
- Wave Agitators: Agitators that mix the reaction mixture with the help of an underwater pump system or a wave-generating mechanism.

## 4. Vortex Agitators:

- Agitators that create a circular motion on the liquid surface are used to mix the reaction mixture. This type of agitators is preferred to ensure homogeneous mixing, especially in large volume tanks.

Each mixer type may be better suited to specific applications under certain conditions. The choice will depend on factors such as reaction conditions, viscosity, properties of the materials to be mixed and operational requirements.

| Mixer Type          | Mixture Homogeneity | Energy Efficiency | Application Area             | Ease of Maintenance | Featured Feature               |
|---------------------|---------------------|-------------------|------------------------------|---------------------|--------------------------------|
| Rod Agitators       | Medium              | Medium            | Chemical & Food Industry     | High                | Simple mechanism               |
| Propeller Agitators | High                | Medium            | Liquid mixtures              | Medium              | High rotational speed          |
| Jet Mixers          |                     | High              | Large volume tanks           | Medium              | Mixing with fluid jet          |
| Static Mixers       | High                | Very Low          | Continuous processes         | Low                 | No moving parts                |
| Layer Mixers        | High                | Medium            | Multiphase mixtures          | Medium              | Mixing with flow diversion     |
| Spiral Mixers       | Medium              | Medium            | Viscous liquids              | Medium              | Spiral moving flow             |
| Hydraulic Mixers    | High                | Medium            | Water & Wastewater Treatment | Medium              | Working on the water surface   |
| Floating Rod Mixers | Medium              | Medium            | Lakes & Tanks                | Low                 | Mixing with wave motion        |
| Wave Agitators      | Medium              | High              | Large volumes of liquids     | Medium              | High speed with vortex motion  |
| Vortex Agitators    | Very High           | Medium            | High speed blends            | Orta                | Girdap hareketi ile yüksek hız |

## Packing Seal Types

These systems can be used in different combinations depending on the reaction conditions and industrial requirements. A good heating and cooling system is critical for obtaining the desired products. The seals used in reactors are gaskets or sealing systems that keep the reaction mixture in the desired zone inside the reactor and prevent leakage of the mixture to the external environment. Seals are important to ensure the safe and efficient operation of reactors. Here are some commonly used types of packing:

**Felt Seals:** Felt seals are used to prevent liquid or gas from leaking out of the reactor. They are generally preferred in high temperature and pressure applications.

**Radial Seals:** Radial seals are used to seal between a shaft or other rotating parts and the reactor body. Such seals are used around rotating parts inside reactors.

**Mechanical Seals:** Mechanical seals are seals that are mounted around the rotating shaft and have a sealing element and sealing surface to provide a seal. Mechanical seals are commonly used in high speed rotating equipment and high pressure applications.

**Rotary Seals:** Rotary seals are used to provide sealing between the parts that make rotary movement around the rotary axis and the reactor body. This type of packing can be used in equipment such as rotary valves, mixers and agitators.

**Static Seals:** Static seals are used for sealing between non-rotating parts. Such seals can be used between the reactor body and stationary parts and can prevent liquid or gas from leaking out.

**Fireproof Seals:** Non-combustible glands are specially designed for use in applications with high temperature or fire risk. Made from non-combustible materials, these seals are used to reduce the risk of fire.

Each type of packing may be suitable for a specific application or reactor type. The selection of packing is based on factors such as the operating conditions of the reactor, temperature, pressure, flow rate and chemical compatibility.

## Heating and Cooling Systems

In reactors, heating and cooling systems are used to control reaction conditions and ensure desired reaction conditions. These systems help to optimize reaction rate, selectivity and efficiency by keeping the temperature of the reaction mixture within the desired range. Here are some commonly used heating and cooling systems:

### 1- Steam Heating and Cooling

In this system, heat or cold water is supplied to the reaction tank from a steam or water line.

The steam heats or cools the reaction mixture through heating coils or heat transfer plates located inside the tank. The steam heating and cooling system is generally preferred for reactions requiring high temperature and pressure.

### 2- Electric Heaters

Heat is provided through electric resistors or heaters placed inside the reaction vessel. Electric heaters are ideal for applications requiring precise temperature control and rapid heating or cooling.

### 3- Hot Water or Cold Water Circulation

Hot or cold water is pumped into the reaction tank through a circulation system. The circulating water circulates on the outer surface of the tank to heat or cool the reaction mixture. This system is commonly used for reactions operating in the low and medium temperature ranges.

### 4- Jacketed Reactors

In this system, the outer surface of the reaction vessel is covered with a heater or coolant. Heating or cooling takes place through the fluid passing through the outer surface of the tank. This system provides a larger contact area on the outer surface of the tank, resulting in more efficient heat transfer.

### 5- Cooling Baths or Chillers

The reaction tank is placed in a cooling bath or a chiller. In this system, a coolant circulating around the tank is used to cool the reaction mixture. Cooling baths or chillers are preferred for reactions that require low temperatures.





## Key Points

There are many important factors to consider when working in reactors. These factors are critical for safety, efficiency and to obtain the desired products. Here are some important points to be aware of in reactors:

**Safety:** Safety must always be the top priority when working in reactors. Appropriate safety precautions must be taken for reactions where hazardous chemicals are used or where high temperature and pressure conditions exist. This includes using the right personal protective equipment, establishing operating procedures and emergency plans.

**Choosing the Right Equipment:** Selecting the right equipment for the reaction is very important. The appropriate reactor type, agitator, heating/cooling systems and seals should be selected taking into account the reaction conditions, the properties of the materials and the operational requirements.

**Good Mixing:** Homogeneous mixing of the reaction mixture is critical for reaction efficiency and product quality. The correct mixing speed, mixer type and mixing time must be selected.

**Temperature and Pressure Control:** Factors such as temperature and pressure of the reaction conditions must be kept under control. This ensures the desired reaction rate, product selectivity and efficiency.

**Material Compatibility:** Reactor materials must be suitable for the chemicals used and the reaction conditions. Chemical compatibility and material durability should be considered.

**Process Control:** The reaction process must be continuously monitored and controlled. This includes determining reaction parameters, monitoring reaction progress and making adjustments as necessary.

**Maintenance and Cleaning:** Regular maintenance and cleaning of reactors ensures long life and safe operation. Regular cleaning and maintenance of the interior and exterior surfaces of the reactor should be carried out.

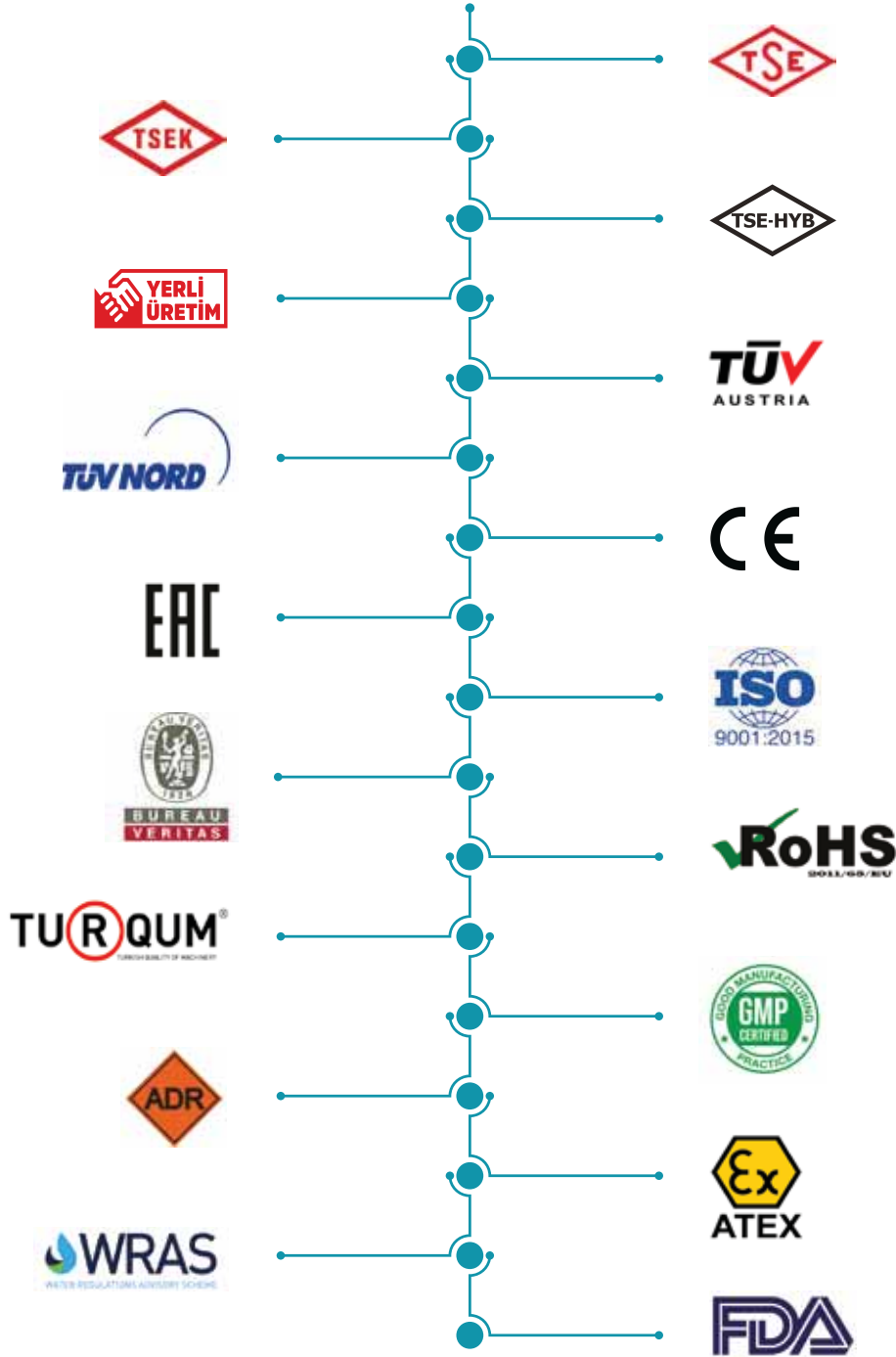
**Waste Management:** It is important that the waste generated as a result of the reaction is properly managed and disposed of. This ensures that environmental impacts are minimized and includes ensuring compliance.

Reactor considerations ensure that the reaction process takes place in a safe, efficient and environmentally friendly manner. Therefore, attention should be paid to factors such as proper equipment selection, safety precautions, continuous control and maintenance.

## Notes



## QUALITY MANAGEMENT SYSTEM



Ekin Heating and Cooling Endüstriyel Co. applies engineering approach; to focus on the process, not the problem; respectively, not only specializes in concerned products, but also take the entire aspects of the product, into consideration. Therefore, alongside the plate heat exchanger, Ekin has the capability to produce all other components to form a system. Advanced quality control structure are fully equipped, in order to present the products with a quality that goes beyond the acceptable regulations and standards.

With respect to "ISO 9001: 2015 Quality Management System" certification, which covers all processes from production, domestic / international sales and after-sales services, aiming at continuous improvement, respecting optimum results. With our expert engineers and solution-oriented approaches, the products have been certified with TSE, CE, Rosh and FDA quality certificates.

## General Conditions

- 1- Unless otherwise agreed, our company issues all invoices in Turkish Lira (TL). For products priced in foreign currency, the TL amount will be determined and collected based on the effective selling rate of the Central Bank of the Republic of Turkey (T.C.M.B.) on the invoice date.
- 2- In cases where invoices are issued in foreign currency as required by the agreement, the TL amount will be determined and collected based on the T.C.M.B. effective selling rate on the payment date. If payments are made in TL-denominated bills of exchange, they will be converted into foreign currency using the T.C.M.B. exchange rate on the bill's maturity date, and then deducted from the debt. The buyer, under this contract, accepts, declares, and undertakes to pay any possible exchange rate differences.
- 3- Our prices do not include Value Added Tax (VAT) and Special Consumption Tax (ÖTV) unless stated otherwise. All taxes and duties arising from the contract, unless otherwise stated, are the responsibility of the buyer. Due to changes in Turkish Republic legislation, all existing or newly added taxes and other financial obligations will be applied to existing and ongoing offers and orders, as announced in the Official Gazette.
- 4- Our products are under a 2-year guarantee against material and manufacturing defects. The warranty period starts upon product delivery. Consumables and parts subject to normal wear and tear (seals, stators, rotors, diaphragms, membranes, resistors, etc.) are excluded from the warranty. The warranty terms are void if the recommended product is used outside the specified working conditions.
- 5- Failures resulting from the improper use of the product contrary to the usage instructions are not covered by the warranty. Ekin Endüstriyel provides usage manuals with the product and publishes them on the website. If the usage manual does not reach the buyer, the product should not be put into operation, and the manual should be requested in writing from Ekin Endüstriyel. Otherwise, it is assumed that you are aware of the installation, maintenance, and usage conditions, and Ekin Endüstriyel cannot be held responsible for any problems that may arise.
- 6- Warranty terms are valid only when periodic maintenance is carried out using original parts by authorized service centers of Ekin Endüstriyel.
- 7- If the buyer does not adhere to the payment plan mentioned above and cancels the order even if the goods or services have not been delivered or completed, Ekin Endüstriyel may unilaterally terminate the order contract without any notice. In such a case, Ekin Endüstriyel will request a penalty payment of 40% of the total amount as compensation for damages, while reserving the right to claim additional damages. If the buyer has made an advance payment, Ekin Endüstriyel records the amount received as revenue.
- 8- In the event of product returns, a 40% deduction will be made from the invoice amount if the return is accepted. The shipping cost for returns is not the responsibility of Ekin Endüstriyel. In customer-specific orders or supply of special-order products, changes to the order, return, or order suspension, will not be accepted under any circumstances including force majeure. In case of cancellation, revision, return, or suspension, the fee for the work will be invoiced as a penalty and collected from the buyer. For customer-specific orders or supply of special-order products, in cases where there are events that may damage mutual trust between the parties, Ekin Endüstriyel reserves the right to request additional security within the limits of the product cost. Products must be received and installed as soon as they are ready. This period should not exceed 4 weeks. If exceeded, Ekin Endüstriyel has the right to invoice the order amount and request payment of the product price.
- 9- Unpaid invoices will incur a monthly default interest rate of 5% until paid in full. Until the total amount of the invoiced product is paid, the ownership of the product remains with Ekin Endüstriyel Heating, Cooling, Industry and Trade Inc.
- 10- When placing orders with Ekin Endüstriyel, it is the responsibility of the buyer to provide complete and accurate information regarding the type of product, the type of fluid used, pressure, temperature, density, and other relevant details. Otherwise, any problems that may arise due to incorrect information are not the responsibility of our company.
- 11- Problems arising from the quality of the fluid used in our products or from the installation or piping system are not covered by the warranty. Damage caused by corrosion, cavitation, vibration, water hammer, or freezing is not covered by our warranty.
- 12- Damage resulting from the absence or improper functioning of the necessary fixtures in the system or the non-use of safety fixtures (safety valve, thermostat, pressure sensor, temperature sensor, etc.) will not be considered under the warranty. Any financial or moral losses that may arise are not the responsibility of our company.
- 13- Goods are not insured during transportation, but can be insured at the expense of the buyer if requested. Otherwise, the risk is borne by the buyer. In deliveries that include transportation, delivery is made on the vehicle. Our responsibility ends from the moment the product is delivered to the buyer's carrier.
- 14- Mechanical assembly, commissioning, external certification, and third-party tests are not included in our offer. Any fixtures and additional parts not mentioned in our offer are not included in our prices.
- 15- Technical details of our products have been sent in attached files. Acceptance of the offer by the buyer implies approval. Ekin Endüstriyel reserves the right to make changes to the specified dimensions and values. Descriptions in catalogs and advertisements, as well as measurements, weights, and other documents, are for reference only.
- 16- Products that use in our products or we sell but we do not manufacture are not covered by the Ekin Endüstriyel guarantee. The guarantee and liability for any damage that may occur are the responsibility of their respective manufacturing companies. By accepting this offer, the buyer agrees not to hold Ekin Endüstriyel responsible.
- 17- Our company is not responsible for any process, production, or immovable losses that may arise from our products. Claims for compensation will only be accepted in cases of deliberate or gross negligence. The compensation for any damage that may occur cannot exceed the invoice amount. By placing this order, the customer accepts, declares, and undertakes this.
- 18- Unless otherwise agreed in writing by the parties, the sales and delivery conditions stated here will apply to all of Ekin Endüstriyel Heating, Cooling, Industry, and Trade Inc.'s sales. Any requests from the buyer that deviate from these terms and conditions will not be accepted. These terms and conditions will remain valid for future deliveries and services, even if they have not been explicitly agreed upon in individual cases within ongoing business relationships.
- 19- The delivery period begins upon the issuance of the order confirmation notice. However, the delivery period will not start until the buyer sends the required documents and approvals (technical drawing approvals) to Ekin Endüstriyel via email or registered mail. If there is an agreed prepayment, the delivery period will not start until payment is made. In cases of force majeure or unexpected obstacles beyond our control, as well as industrial disputes, specific strikes, and lockouts that have an impact on the production or delivery of ordered goods, delivery times will be extended accordingly, provided that it is proven that such events have an impact. This clause also applies when subcontractors are affected by such situations.
- 20- If there is no special agreement or contract between the parties regarding the delay of delivery for the products ordered, the buyer cannot claim compensation for the delay.
- 21- After receiving the products, the buyer has a direct or indirect control, inspection, and notification period of 2 business days for obvious defects and 8 business days for hidden defects. Products for which written notice has not been made within this period will be considered accepted.
- 22- We have an obligation to improve in case of errors caused by the manufacturer, except for errors due to installation and use. We also reserve the right to replace the product with a new one. However, the buyer does not have the right to request a replacement. When improvement or repair is impossible or when improvement or new delivery cannot be made, the buyer can request the cancellation of the contract or a price reduction.
- 23- The selection of a product that meets the needs, its suitability for special applications, its safe and trouble-free installation, its operation and maintenance are the responsibility of the system designer and the user. Otherwise, we are not responsible for any damage or work accidents that may occur.
- 24- Our company is only responsible for ensuring that the goods to be delivered are prepared carefully for shipment. Since our company does not provide engineering services, application details, material compatibility with the system, product specifications must be evaluated technically by the buyer before product selection. The wrong selection, installation, or improper use of the products can cause material damage or injury. Our company does not assume responsibility for product selection.
- 25- In cases where the buyer is a trader or a legal entity governed by public law, all legal disputes will be resolved by the court within our jurisdiction. All legal disputes arising exclusively from common legal relationships, including all kinds of disputes, are subject to the exclusive jurisdiction and authority of the Anadolu Courthouse/Turkey. In the event of a dispute, Istanbul Anadolu court and enforcement offices have the authority.
- 26- The buyer is obliged to confirm the offer letter sent for the organization of the order in writing, or to send their official order form. For orders that are not notified in writing, the acceptance of products is considered as acceptance of this contract. The order form, contract, or change request forms sent by the buyer will only come into effect with the written acceptance of Ekin Endüstriyel Heating, Cooling, Industry, and Trade Inc.
- 27- If this offer is approved and turned into an order, it becomes a contract, and the buyer declares that they have fully accepted the above clauses.





### **A chain is only as strong as its weakest link.**

Running and maintaining a quality production process that meets international standards requires focusing on quality all along the ecosystem. Maintaining this focus requires a unifying vision of constant improvement shared by all stakeholder, and a certain level of expertise for all parties involved. Ekin Academy was established with the principles of continuous development and growing together to share the knowledge and experience that will realize this vision.

We support the development of our employees with training programs that directly contribute to the results in their business processes and make a difference in their personal development. We offer technical trainings on heat transfer, pressure vessels, package systems, food systems and liquid transfer. We help them become individuals who will make a difference with our development programs that covers topics like leadership, strategy, sales and many more. In addition, we provide information regarding installation, operating, maintenance and repairs with our pre and after sales training modules prepared for our business partners and customers.

At Ekin Academy we do not solely focus on the development of our staff, partners and customers. Thanks to our university collaborations, we provide the means for future engineers to put their theoretical knowledge to use with practical applications.



We organize seminars, conferences and trainings for professional chambers, and institutions we collaborate on social responsibility projects. Because we know that only by investing in the society, the industry and the future of the industry, we can become a country known for its high-quality engineering products.

## Sales Team

### An Engineering Approach from Sales to Maintenance

We offer value added pre and after sale services with our customer satisfaction-oriented approach and deep expertise we are more than happy to share. Thanks to our expert engineers that provide proactive solutions, we focus on making a difference throughout the process, from presales to maintenance.

With our “quality product, quality service, quality solution” approach, we are more than a manufacturer and supplier, we are a highly motivated solution partner for all kinds of heating and cooling projects.



### Customer Satisfaction



Our priority is to ensure customer satisfaction and protect the rights of our customers with our pre-sales processes that analyze customer needs well, quality-registered product range, expert staff and meticulous working methods.



### Ethical Values

We conduct all our activities in accordance with the laws and then with ethical values. We believe in growing together and we look for mutual benefit in all our business relationships.



### Privacy Policy

All your personal information shared with our company is guaranteed by our ethical values and our processes in compliance with the Law No. 6698 on Protection of Personal Data.



### Information Security

All our information technology operations are protected by our information security processes, which are managed in accordance with ISO 27001 Information Security Management System requirements.



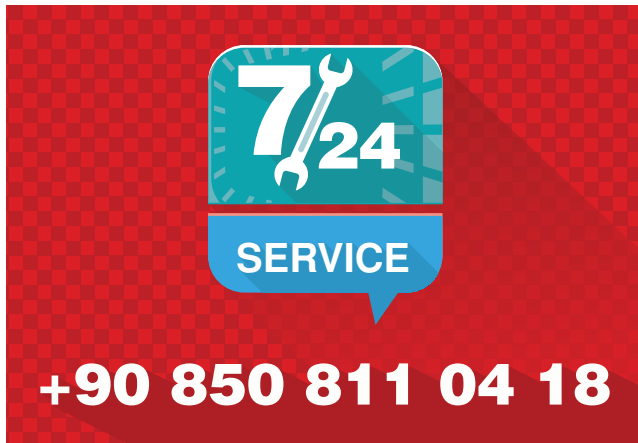
## Professional System Solution Center

You can get answers to the problems you experience with your pumps, heat exchangers and system from our MIT 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.



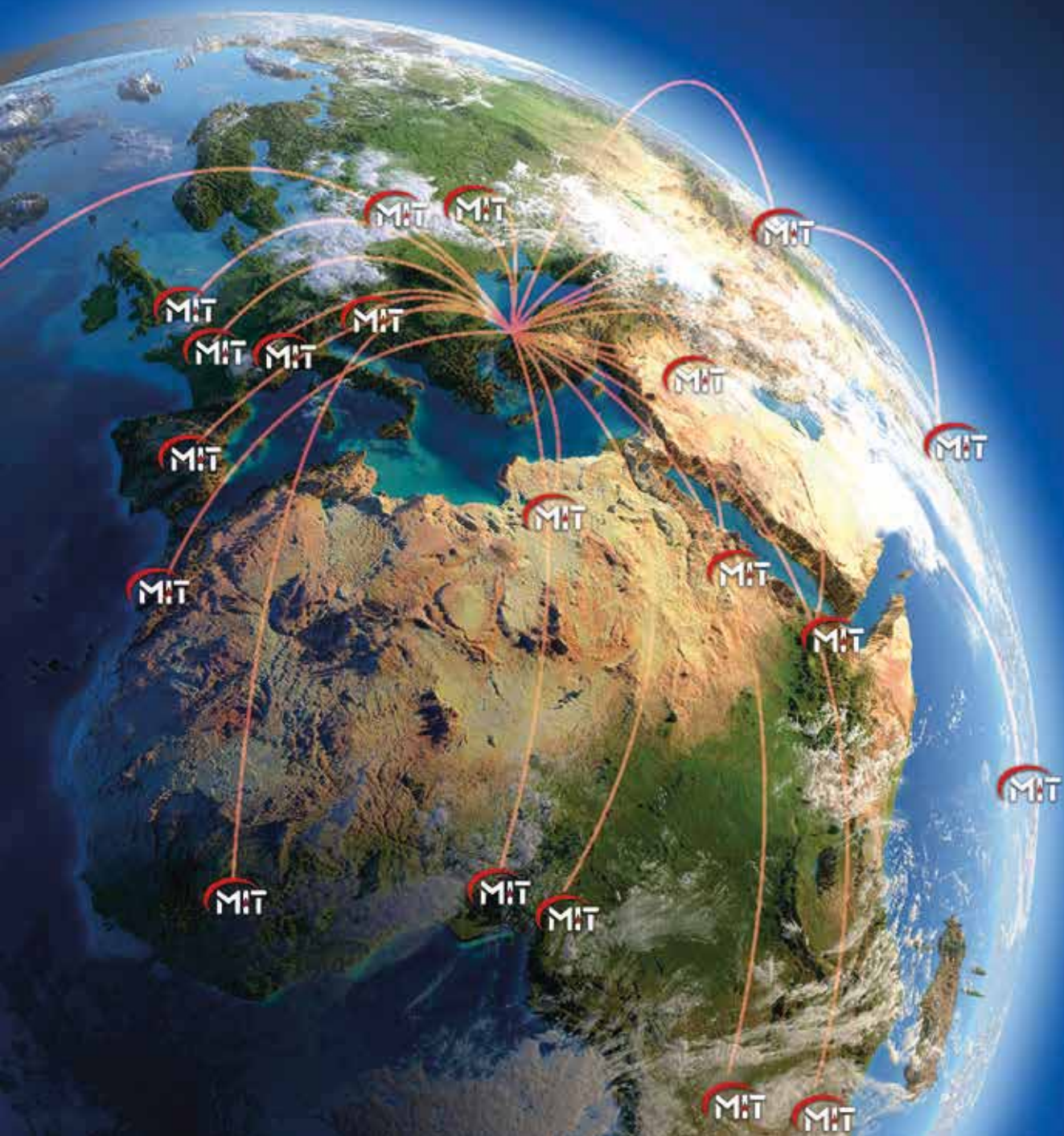
Producer; reserves the right to change the product features, technical dimensions and information and installation diagrams specified in this catalog without notice. No specified information can be copied and used without the permission of the manufacturer. In no way can the manufacturer be held responsible 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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