

Technical Catalogue

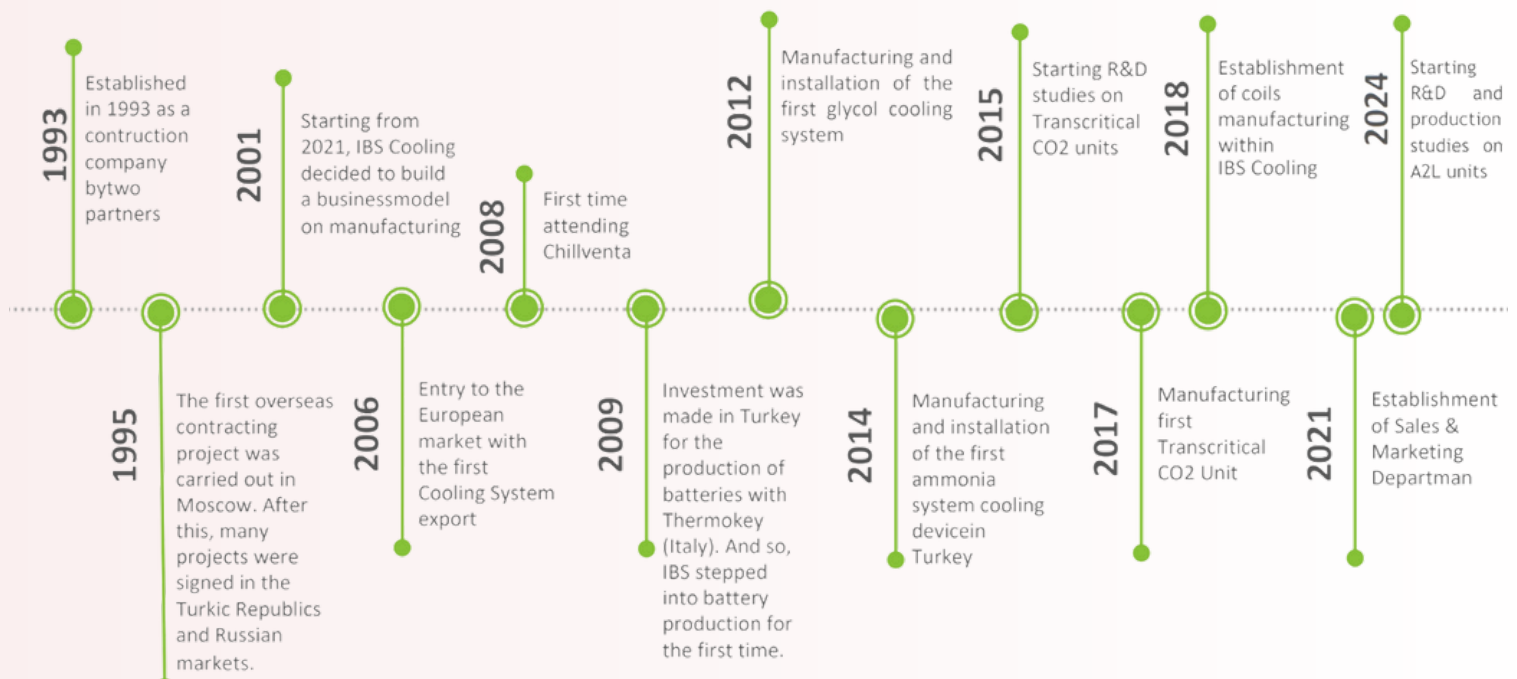
CSE

AIR COOLED CHILLERS



About us

IBS Cooling stands as a leader in the cooling industry, bringing 35 years of expertise and innovation. With a state-of-the-art 10,000 m² production facility, the company delivers 24,000 high-performance units annually. Serving 70% of Turkey's market chains, IBS Cooling supports 20,000 discount stores, 1,500 supermarkets and 2,000 industrial cold rooms with reliable and efficient refrigeration solutions tailored to meet diverse needs.



PREMIUM QUALITY COMPONENTS

IBS units are crafted using globally acclaimed, top-quality components. Renowned for its sophisticated and diverse range of refrigeration solutions, the company excels in designing and manufacturing bespoke products that are fully tailored to meet the specific needs and preferences of its customers.



CSE – HIGH-EFFICIENCY CHILLERS FOR INDUSTRIAL COOLING SOLUTIONS

Engineered to meet the toughest industrial cooling demands, IBS COOLING offers exceptional efficiency, versatile refrigerant options, and unparalleled performance, all while prioritizing eco-friendly solutions and low carbon emissions for a sustainable future



Outstanding Energy Efficiency

The CSE chiller is meticulously designed to deliver superior Seasonal Energy Performance Ratio (SEPR), ensuring optimal cooling efficiency for industrial operations while significantly reducing energy consumption. This not only lowers operational costs but also promotes environmental sustainability, all without compromising on performance.



Revolutionary Multiscroll Technology

The CSE Chiller is equipped with a cutting-edge multiscroll compressor system, designed for optimal efficiency and stable performance. This technology reduces vibrations, enhances energy efficiency, and extends the chiller's lifespan, ensuring long-term reliability and minimal maintenance in demanding industrial environments.



Broad Cooling Capacity Range

The CSE Chiller offers an extensive range of cooling capacities, designed to meet diverse industrial demands. With capacities ranging from 190 kW to an impressive 610 kW (@7/35°C), our chiller is engineered to efficiently handle the most demanding thermal loads, ensuring reliable performance across various applications and operational conditions.



Eco-Friendly Refrigerant

R454B is an environmentally friendly refrigerant with a low GWP of 466, 78% lower than R410A. It complies with the EU F-Gas Regulation and reduces the carbon footprint. Offering high energy efficiency, it provides a sustainable and reliable solution for the future.



Versatility and Custom Configurations

The CSE Chiller is offering customizable configurations to meet the demands of any industrial application. Its versatile design ensures optimal performance across various cooling requirements, adapting to different thermal loads, space constraints, and operational conditions.



Unmatched Reliability

With its robust design, CSE delivers reliable and continuous performance, ensuring stable operation even in the most demanding industrial conditions.

CSE APPLICATIONS AND INDUSTRY SOLUTIONS

The CSE range presents a highly versatile and robust solution, designed to seamlessly integrate into a wide array of industrial segments and applications. Whether you're dealing with large-scale cooling requirements or intricate temperature management in complex industrial settings, the CSE ensures superior performance and unparalleled reliability across a variety of process cooling scenarios.

CSE Application Areas

The CSE Chiller is a versatile cooling solution designed to meet the needs of a wide range of industries and applications:



Industrial Applications

- **Plastic and Rubber Processing:** Ensures precise temperature control for injection molding and extrusion processes.
- **Metalworking:** Cools CNC machines, welding systems and laser cutting equipment to enhance efficiency and precision.
- **Chemical and Petrochemical:** Stabilizes temperatures in reactors and chemical processing tanks for optimized performance.
- **Food and Beverage:** Ideal for food processing, beverage cooling and maintaining product quality during storage.

SHAPING THE FUTURE OF ENERGY

The CSE series is the result of a design that places energy efficiency at the core of its development.

Thanks to innovative technological and control advancements, the CSE achieves significantly higher Seasonal Energy Performance Ratio (SEPR) values compared to market standards, delivering exceptional performance with minimal energy consumption. Moreover, prioritizing environmental sustainability, the CSE utilizes refrigerants with low Global Warming Potential (GWP), contributing to the reduction of carbon footprint. In this way, it offers an energy-saving solution that is also environmentally responsible.



Exceptional SEPR Ratings: The Future of Efficient Cooling



Efficiency Perfected with Precision Fan Management



Dynamic Efficiency Management for Thermal Load Changes

CSE CHILLER SERIES



MINICHILL & MIDICHILL

Air cooled Outdoor installation
Capacity from 10 to 50 kW

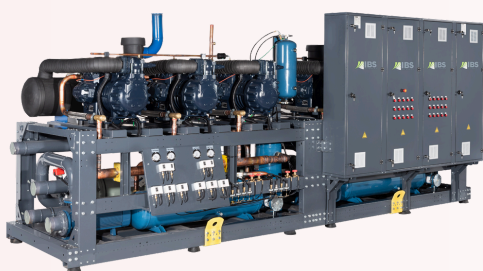
- ✓ Scroll compressors, microchannel coils and one and two independent circuits
- ✓ Refrigerant R454B - GWP = 698
- ✓ For low capacity cold rooms
- ✓ Plate heat exchanger or shell & tube exchanger
- ✓ MiniChill, MidiChill Models
- ✓ Optional integrated hydronic assembly, system tank and partial heat recovery



MAXICHILL

Air cooled Outdoor installation
Capacity from 60 to 230 kW

- ✓ Scroll & Semi-Hermetic compressors, microchannel coils and one and two independent circuits
- ✓ Refrigerant R454B - GWP = 698
- ✓ For medium capacity cold rooms
- ✓ Plate heat exchanger or shell & tube exchanger
- ✓ MaxiChill Model
- ✓ Optional integrated hydronic assembly, system tank and partial heat recovery



ULTRACHILL

Air cooled Outdoor installation
Capacity from 100 to 1500 kW

- ✓ Screw compressors, microchannel coils and one and two independent circuits
- ✓ Refrigerant R134A - GWP =
- ✓ For high capacity cold rooms
- ✓ Plate heat exchanger or shell & tube exchanger
- ✓ UltraChill Model



THE PROCESS FRE CHILLER



FANS

AC (Standard): Low-speed axial-flow fans with protective grilles, directly coupled motors with thermal cut-out, and aerodynamic blades for high efficiency and low noise. Protection class: IP 54.

EC (Optional): Premium axial fans with bionic blades and high-efficiency EC motors (IE4), sealed to IP 54 and THCL 155 standards, ensuring superior performance and energy savings.

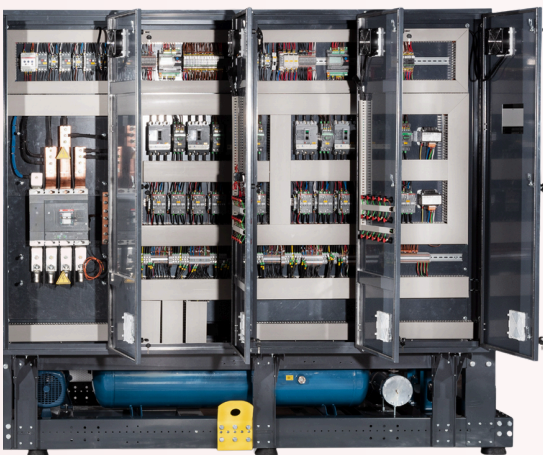


LARGE SURFACE HEAT EXCHANGER

Manufactured in our state-of-the-art facility, the finned coil features copper pipes arranged in staggered rows, mechanically expanded into a dense pack of aluminum fins. This design ensures a high heat exchange surface area, maximizing performance and efficiency. By producing these coils in-house, we maintain stringent quality control and deliver superior durability and reliability.



ELECTRIC PANEL



- **Smart Control Technology:** Featuring advanced microprocessors and software, our electrical panels provide precise temperature control, energy optimization, and system automation. A user-friendly interface ensures seamless management.
- **High-Level Safety:** Intelligent safety measures protect against overcurrent, short circuits, voltage fluctuations, and phase faults, ensuring your system operates reliably and lasts longer.
- **Energy Efficiency:** With innovative energy management features, our panels help reduce operational costs while promoting environmentally responsible usage. This aligns with your sustainability goals.
- **Easy Maintenance and Diagnostics:** Ergonomically designed with advanced fault detection systems, our panels allow technical teams to intervene quickly and effectively. Their modular structure ensures easy replacement of components when necessary.
- **Compatibility and Flexibility:** IBS Cooling panels are designed to comply with industry standards, making them easy to integrate into various projects and systems. Remote access capabilities meet the demands of modern operations.



COMPRESSOR

Our products stand out with innovative technologies and user-friendly maintenance features. At IBS Cooling, we prioritize quality in every detail, aiming to contribute to the success of your projects.

- **Scroll Compressor Chillers:** Known for their compact design, quiet operation, and energy efficiency, these chillers are the perfect choice for small to medium-scale applications. Their modern design ensures reliable performance for various needs.
- **Semi-Hermetic Compressor Chillers:** Offering robust construction and flexible usage, these models deliver outstanding results for industrial and commercial projects. They are ideal for applications requiring higher capacity and durability.
- **Screw Compressor Chillers:** Designed for large-scale projects, these chillers provide maximum efficiency and performance. Perfect for industrial applications, they support environmental sustainability with superior energy savings.



R452B: THE ECO-FRIENDLY REFRIGERANT OF THE FUTURE

R452B is a next-generation, environmentally friendly refrigerant, primarily used in HVAC systems and chiller units. It is an HFO (Hydrofluoroolefin)-based blend that stands out for its low global warming potential (GWP) and high energy efficiency.

GWP Value and Carbon Footprint: The GWP value of R452B is just 466, which is approximately 78% lower than older refrigerants like R410A. This significantly reduces the carbon footprint, making it fully compliant with the environmental requirements outlined in the European Union's F-Gas Regulation.

Validity and Compliance in Europe: The European Union, under the F-Gas Regulation and Kyoto Protocol, limits the use of refrigerants with high GWP values. Thanks to its low GWP, R452B aligns with these regulations and provides a sustainable solution against future restrictions.



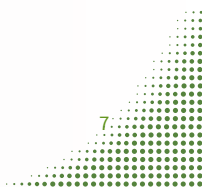
Environmental Benefits:

- Minimal impact on global warming due to its low GWP.
- Short atmospheric lifetime with zero ozone depletion potential.
- Reduced energy consumption, leading to lower operational costs.

Operational Advantages: R452B is designed to be compatible with existing R410A systems. However, its lower working pressure enables new-generation designs to enhance safety and efficiency. It offers notable benefits in terms of energy savings and environmental impact.

dimensions and clearances

technical data





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