PRESS RELEASE

FOR IMMEDIATE RELEASE:
Paolo Aliani
Area Manager
p.aliani@frigel.com

Simone Serni
Marketing Manager
s.serni@frigel.com

Frigel presents Intelligent Process Cooling philosophy for the Food & Beverage Industry @CibusTec2023

The Latest Developments in Cooling and Temperature Control solutions for Food and Beverage

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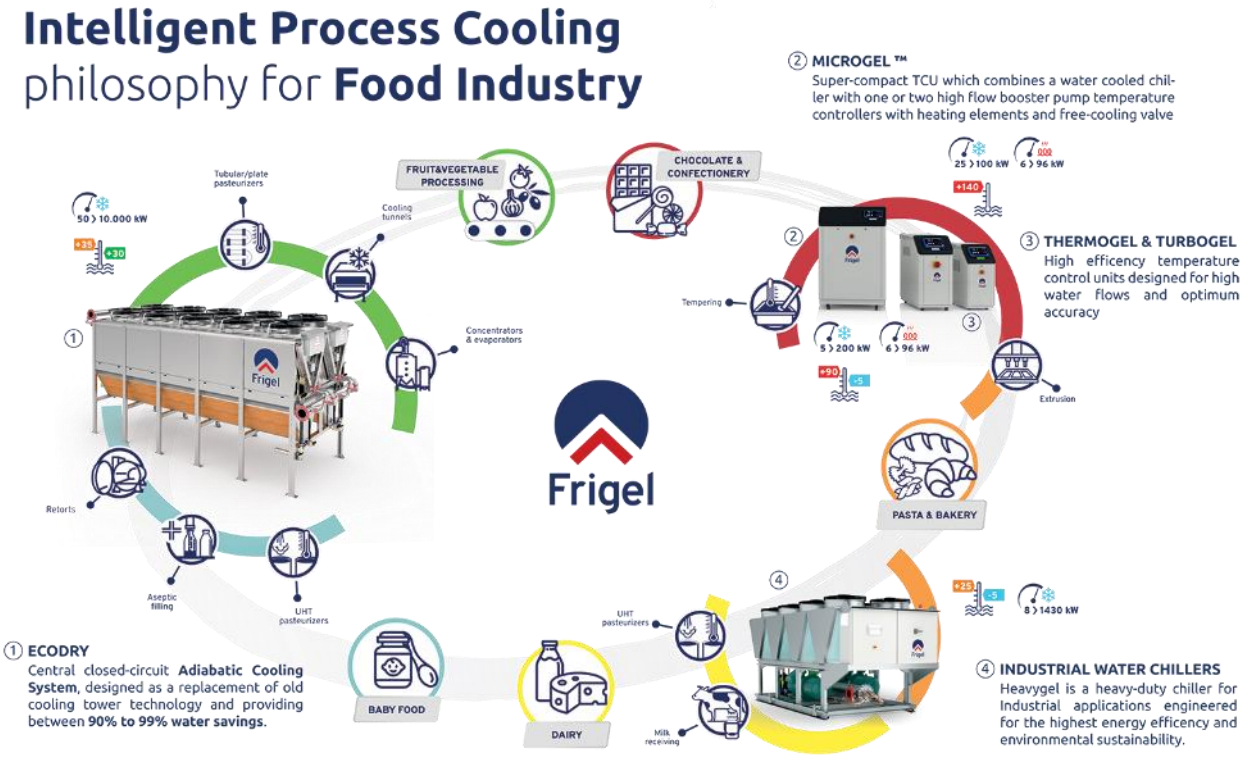
Frigel is proud to announce its presence at the CIBUSTEC Trade Fair, October 24-27, 2023, in Parma (Italy). For years, Frigel has been bringing its Intelligent Process Cooling philosophy to the Food & Beverage Industry. Precision is a key element for Process Cooling in the food industry. When Precision meets Sustainability, you'll find Frigel!

Our systems for Food & Beverage are designed to cut water usage to nearly zero, improve energy efficiency and help your decarbonization journey. Whether your business is Pasta, Cheese, Meat, Dairy, Vegetable processing, Fruit Processing, Bakery, Baby Food, Confectionery or Sweets and Chocolate...

Visit us: Hall 03, Booth F020 or www.frigel.com



“Engineering a more efficient and sustainable industry” - Sustainability means meeting our own needs without compromising the ability of future generations to meet their own needs. The design and development of new Adiabatic Cooling Systems has been carried out having as goal an improvement of all KPI linked with the Environment. Less kW of electricity per kW of cooling and lower usage of water (up to 95% less).

Visit us and talk to our engineers. They will be able to show you the best solutions for your precise industrial process. Learn about our important innovations in cooling and temperature control systems.

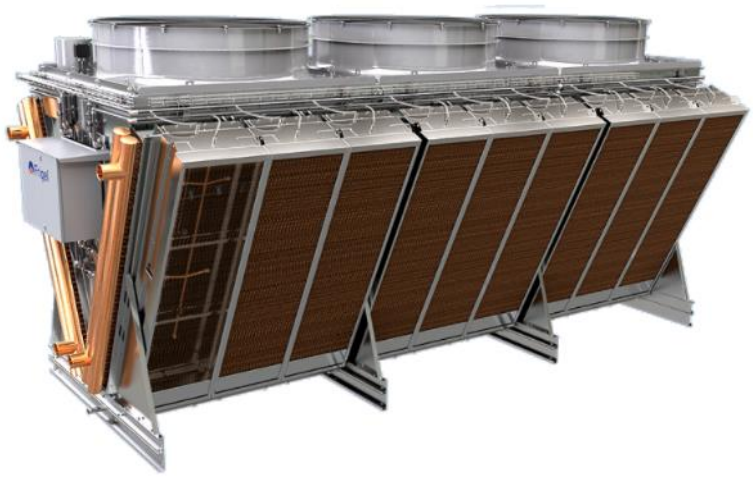
- **LDK Adiabatic Cooler Series** (unbeatable efficiency, the ultimate solution towards more efficient heat rejection)
- **3DK Adiabatic Cooler** (centralized closed-circuit adiabatic cooling systems designed to replace old cooling tower technology)
- **New 3PR 4.0 control system** (complete real-time control of the entire cooling system, parameters, functions, alarms etc.)
- **Thermogel TDK Series** (pressurized water temperature control units with direct cooling)
- **Industrial Chiller 3FA Series** (air-cooled water chillers, specially designed to build complete systems with multiple chillers, either connecting them in series or in parallel)
- **Modular Chiller Series** (Modular water-cooled chillers from 100 to 600 kW, 28.4 to 170.7 tons, with single Multi-Scroll or screw compressor)

Ecodry LDK Series

With more than 25 years of experience in adiabatic cooling, Frigel is happy to introduce the **new generation of large capacity adiabatic coolers: Frigel LDK**.

Using **Frigel's internationally recognized patent**, the “adiabatic chamber”, the LDK is capable of **reducing water consumption by 95% compared to old style cooling towers**.

The unit is available in four different versions, based on the temperatures required by the process and customer location. Starting from dry-spray-adiabatic up to Hybrid cooler, the LDK range is **able to cover a complete and broad range of applications**, with the highest performance and highest reliability in the market. The unit also offers a **complete fan by fan redundancy and broad modularity**.



ECODRY MDK Series
Adiabatic Closed Loop Fluid Coolers with enclosed chambers and patented booster cooling technologies

Frigel expands its Adiabatic product family, introducing the Ecodry MDK range, designed to allow the flexible configuration of modular adiabatic solutions for small to large factories. MDK takes advantage of some of the technological advances already introduced in the LDK range (new efficient PADs, new generation of EC fans, modular design, wide and deep configuration).

MDK is characterized by a high efficiency humidification system (COOLPAD™) and by a new generation of EC fans which, combined with a more effective dry cooler, obtain a new level of compactness in a powerful new adiabatic cooler product line.

The new Ecodry MDK is designed to integrate easily into existing Ecodry 3DK systems, of which Frigel has an existing installation base of thousands of units, in addition to responding to the new needs of industries; energy efficiency, sustainability and saving of raw resources such as water.

NETGEL 3PR 4.0

Industry 4.0 Intelligent Central System Control Platform

The 3PR 4.0 product platform is a dedicated Frigel solution that provides complete control of Frigel central cooling systems. 3PR 4.0 control meets the needs of processors to supervise and manage the whole cooling system from a single control point. All the connected central system components are controlled via a unique control panel that has been designed specifically for Frigel systems. 3PR 4.0 is available in two versions, Lite and Premium, depending on the size of the system and the equipment to control.

Full native connectivity to MiND™ and its new HMI (*Human Machine Interface*) offer a flawless user experience and compatibility with Industry 4.0 architectures, providing easy visualization and process diagrams of the connected equipment, dashboards for main parameters, performance graphs and alarm management and history.

NETGEL MiND™ - Industry 4.0 central system and machine-side Web Interface and Monitoring Platform.

Frigel releases the MiND™ 2.0 platform, the evolution of its Industry 4.0 concept. MiND™ 2.0 is an innovative digital solution to meet the ever increasing needs of modern companies to reach *Industry 4.0* and *IIOT (Industrial Internet of Things)* standards. MiND™ 2.0 is now able to provide customers a perfect supervision and maintenance tool for all Frigel equipment and accessories, both central and machine-side, allowing for monitoring and management of all working parameters and events and registering performance and energy consumption of every single cooling system component through a multifunctional user interface, both locally and remotely, through a user-friendly webpage.

THERMOGEL TDK Series

High precision Single Zone pressurized water TCUs

Frigel introduces advancements in its growingly popular direct injection pressurized water TCUs up to 120°C for Food applications where accuracy, repeatability and process control are fundamental for the profitability of the process. The TDK units are fully adaptable to any condition and are equipped with reliable features and redundant safeties to operate over the entire temperature range. Flowmeter options and connectivity to MiND™ or other *Industry 4.0* architectures enable complete process monitoring and data recording.

HEAVYGEL 3FA Series

Industrial air cooled high efficiency Modular Screw Compressor Chillers

Frigel completes its platform of Industrial Modular Chillers (3F series) with a new integral air cooled package chiller line, the 3FA range, featuring: high efficiency screw technology with VFD option, microchannel high performance condenser, EC fans for increased part load efficiency and low ambient temperature control, low GWP refrigerant option (R-513a), wide process and ambient temperature operating ranges, modular design with factory pre-engineered piping configuration and recirculation water package options.

The 3FA (air cooled integral package) offers the advantage of a quick and ready-to-deploy centralized chiller system solution, with minimal indoor equipment footprint, ideal in moderate climates, but also in cold climates when the use of a water-glycol mixture is allowed. The Ecodry Dry range and the Aquagel pump and tank packages complete a fully integrated system solution with maximum cooling performance efficiency and minimal environmental impact. The 3FA range features 7 models and 3 versions with capacities ranging from 170 kW to 600 kW for centralized, expandable systems with capacities up to 3.500 kW.

HEAVYGEL 3FA 325 VF EC

MODULAR CHILLER 3FX Series

Water-cooled water chillers. 3FX is a super-compact, modular, industrial grade high efficiency water-cooled chiller family.

These units have been specially designed to build complete systems with multiple chillers, either connecting them in series or in parallel. Optionally, both configurations may be operated as Heat Pumps, able to recover 100% of the heat extracted from processes, producing hot water up to 60°C.

Each unit is equipped with a single refrigeration circuit, rotary compressor(s), stainless steel brazed plate evaporator and condenser, electronic thermostatic control valve and onboard digital controller.
These unique chillers combine high performance cooling capacity with unbeatable efficiency in self-contained packages with extremely small footprints and are designed to be used with closed-loop Ecodry Adiabatic Cooling Systems for dissipation of the condenser heat.

The product line covers a wide range of sizes for all needs:

- 5 models with twin tandem scroll compressors from 100 to 300 kW of cooling capacity per unit
- 7 models with high efficiency Bitzer screw compressors (optionally inverter driven) from 200 to 600 kW of cooling capacity each

ABOUT FRIGEL GROUP

The Frigel group has an international structure with offices located all over the world and consists of seven production sites, two of which in Europe (Florence and Padua), one in the United States (Chicago), two in Asia (Thailand and India), four commercial subsidiaries (Germany, Poland, Italy) and fifty-one distribution points (a worldwide network of agents and distributors). Our goal is to "Design a more efficient and sustainable industry". For decades we have been designing, manufacturing and installing efficient and technologically advanced solutions for the cooling of industrial processes. The Frigel range has been designed to cover a wide range of solutions, from on-board systems to large centralized systems.

Frigel products and solutions are designed to meet the cooling and temperature control requirements of industries such as plastics and rubber, food and beverage, power generation and transmission, data centers, chemicals and pharmaceuticals, metals and others. Frigel has gained in-depth knowledge of the thermodynamic requirements of industrial processes, enabling it to design "tailored to the application" equipment and systems to meet the specific needs of each process.

Four key factors guide the design of optimal solutions for each customer – productivity, efficiency, sustainability and reliability.

OUR PURPOSE: engineering a more efficient and sustainable industry.

OUR VISION: Be a global innovator of high performance, sustainable and quality engineered solutions for process cooling and temperature control technologies.

FRIGEL FIRENZE S.p.A.
www.frigel.com | marketing@frigel.com