

## PRESS RELEASE

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### FOR IMMEDIATE RELEASE:

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## **Frigel introduces the Latest Developments in Cooling and Mold Temperature Control Solutions at CHINAPLAS 2024 (stand 2.1C73)**

*Frigel continues to innovate solutions to increase profitability for global plastic processors looking to improve productivity, quality and sustainability KPIs.*

**FLORENCE, ITALY – 14 March 2024**

Frigel Group is delighted to inform the participation at the annual plastics and rubber trade fair, this year held at **National Exhibition and Convention Center (NECC), Hongqiao, Shanghai, PR China**, April 23-26.

**Frigel Asia Pacific** team will host the **stand 2.1C73 located inside the Italian Pavilion area**, will be displayed the latest update of Frigel Microgel Series, portable water chiller suitable for every plastic process type such as injection, blow-moulding, extrusion, technical moulding and multiple plastic application fields including automotive, packaging, medical, household appliance, industrial components.

Our Engineers will be happy to welcome your visit and answer to any inquiries you might have and provide their expertise in the cooling's field applied to the plastic process.

New machine-side solutions have been designed to ensure the maximum profitability and quickest ROI for the processor, leveraging productivity, product quality and process repeatability improvements. These solutions are the result of 30 years of experience and successful stories of process optimization, with a global organization bringing not just process cooling expertise, but a vast know-how in plastic processing and technology dynamics.

Driven by the fundamental purpose of "Engineering a more efficient and sustainable industry", Frigel is also introducing to the CHINAPLAS show some of its recent highlights in centralized system solutions. The recent advancements in its **patented Adiabatic cooling solutions reconfirm Frigel's position as product leader in this very important technology for water and energy savings in process cooling**. Modular, scalable and flexible Frigel central chiller solutions are also offering opportunities for global plastic companies to adopt industrial cooling solutions designed to be installed anywhere, with full engineering and service support, leveraging the recent advancements of Frigel Industry 4.0 controls and connectivity platforms.

## ADIABATIC COOLING

### The ideal replacement for cooling towers

#### **ECODRY 4DK Series - Adiabatic Closed Loop Fluid Coolers with enclosed chambers and patented booster cooling technologies**

Frigel expands its Adiabatic product family line, introducing the Ecodry 4DK range, designed to allow for flexible configuration of modular adiabatic solutions for small to large plastic 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).

4DK 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 4DK 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.

#### **ECODRY 4DK Series**



## MACHINE SIDE SOLUTIONS

### **(NEW) Microgel SYNCRO**

#### **Process synchronized mold temperature control technology with onboard chiller (Patent Pending)**

Frigel introduces the **Microgel SYNCRO**, a new technology that revolutionizes the temperature control method of injection molding technical parts. The **Microgel Syncro technology** allows for a significant reduction in cycle time (up to 40%), guaranteeing very high product quality. Digitally synchronized with the molding process, **Microgel Syncro** provides cold water only during the cooling phase, reducing drastically the cooling time, while keeping the mold cavities hot during the injection phase. Independent, autonomous machine-side solution, simply synchronized with the molding process via single signal, Syncro technology is easy to implement and use, providing ROIs in less than 6 months.

The **Microgel SYNCRO** product line features more than 10 models, with cooling capacities from 16 kW to 56 kW and heating capacities from 12 kW to 24 kW.

### **MICROGEL RSY SYNCRO**



### **Microgel RS Series**

#### **High performance Single and Dual Zone TCUs with Booster Pumps and Integrated Portable Chillers**

Frigel releases the full range of *Microgel RS for Injection Molding*. These unique single zone (RSM) and dual zone (RSD) machine-side temperature control units are designed for molding throughputs ranging from 10 to 240 kg/hr (20 to 530 lb/hr). The new Microgel RS range includes important advancements in temperature accuracy over the entire control range (-5 to 90° C), functionalities, pumping performance and overall energy efficiency, all key factors in high performance mold cooling applications.

The RS range features additional configurations specifically designed for Packaging (RSP) and Extrusion (RSB). Options such as flow-meters, VFDs, return/remote temperature sensors are enabling full process control

capability. Its new user interface offers a flawless experience and full connectivity and interoperability via the Frigel MiND™ platform.

### **MICROGEL RSD**



### **TURBOGEL RB Series**

#### **High performance Single and Dual Zone TCUs with Booster Pumps**

The popular Frigel high performance booster TCU line is presented with upgraded digital control to allow full connectivity with MiND™ and other Industry 4.0 architectures. Designed with same goals and plastic process focus in mind, the Turbogel RB product range offers a wide spectrum of technical choices for productivity and process improvement for centralized cooling plants where control at the point of use is fundamental. Various equipment configurations are available including VFDs, increased heating capacities and SSR control, higher temperature ranges and customized pump selections based on mold-specific application data.

### **TURBOGEL RBD**



## **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 applications in Automotive, Medical and any other Technical Molding sectors where accuracy, repeatability and process control are fundamental for the profitability of the IMM cell. The TDK units are fully adaptable to any molding condition and are equipped with reliable features and redundant safeties to operate over the entire temperature range. Flow meter options and connectivity to MiND™ or other *Industry 4.0* architectures are enabling complete process monitoring and data recording.

## **THERMOGEL TDK**



## PROCESS COOLING

### MRA

#### Packaged Air Cooled Water Chillers

MRA high efficiency, modular chillers are available in 15 distinct models ranging in capacity from 15 to 440 nominal kW with a wide operating set-point temperature range from 7 to 25°C. Each unit is designed to operate in ambient temperatures up to 45.

According to the model, these units, designed for indoor or outdoor installation, are equipped with 1 to 4 hermetically sealed scroll or multi-scroll compressors and 1 or 2 refrigeration circuits with ozone-friendly refrigerant R407C, axial-flow fans and microchannel full-aluminium coils.



## 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 3PR 4.0 Premium



## 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.



## ABOUT THE FRIGEL GROUP

Frigel is much more than a manufacturer of cooling and temperature control systems. We are technical consultants with the ability to identify the best solutions, in terms of performance, efficiency, environmental impact and to calculate the return on investment for each individual application.

We offer solutions calibrated to the needs of each customer by studying innovative solutions, carefully designed and fully supported, to obtain the best results which are verifiable in terms of productivity, efficiency, quality and precision.

Seven production sites worldwide: Europe (Florence and Padua), America (USA), Asia (Thailand and India). Four commercial branches (Germany, Poland, Italy) and 51 distribution service points (a worldwide network of agents and distributors).

With more than 40 years of experience in industrial refrigeration, filled with innovative solutions and breakthrough technologies, Frigel has built a broad know how in different industry sectors and a solid position in the refrigeration market.

In Frigel, we are experts in refrigeration, but in our technical choices, there is always the premise of combining the improvement in performance with an indispensable reduction of the environmental impact. Sustainability is today a crucial principle of our ability to imagine and innovate. This is in Frigel's DNA.

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