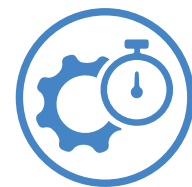


## PERFORMANCE



### INCREASED PRODUCTIVITY

up to **50%**

Each mold runs with shortest cooling time, consistently producing high quality parts at the highest throughput.



### REDUCED OPERATING COSTS

**-40%**

Energy savings (**up to 30%**), water savings (**up to 95%**) and maintenance costs Savings (**up to 90%**).

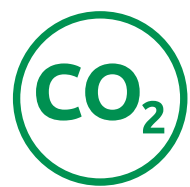


### TOTAL MODULARITY

**100%**

Plug & Play Concept. Easily expandable at any time. Total reliability.

## SUSTAINABILITY



### REDUCED "CARBON FOOTPRINT"

**-40%**

Unbeatable overall efficiency: intelligent use of energy and free-cooling opportunities.



### MINIMIZED WATER FOOTPRINT

**-95%**

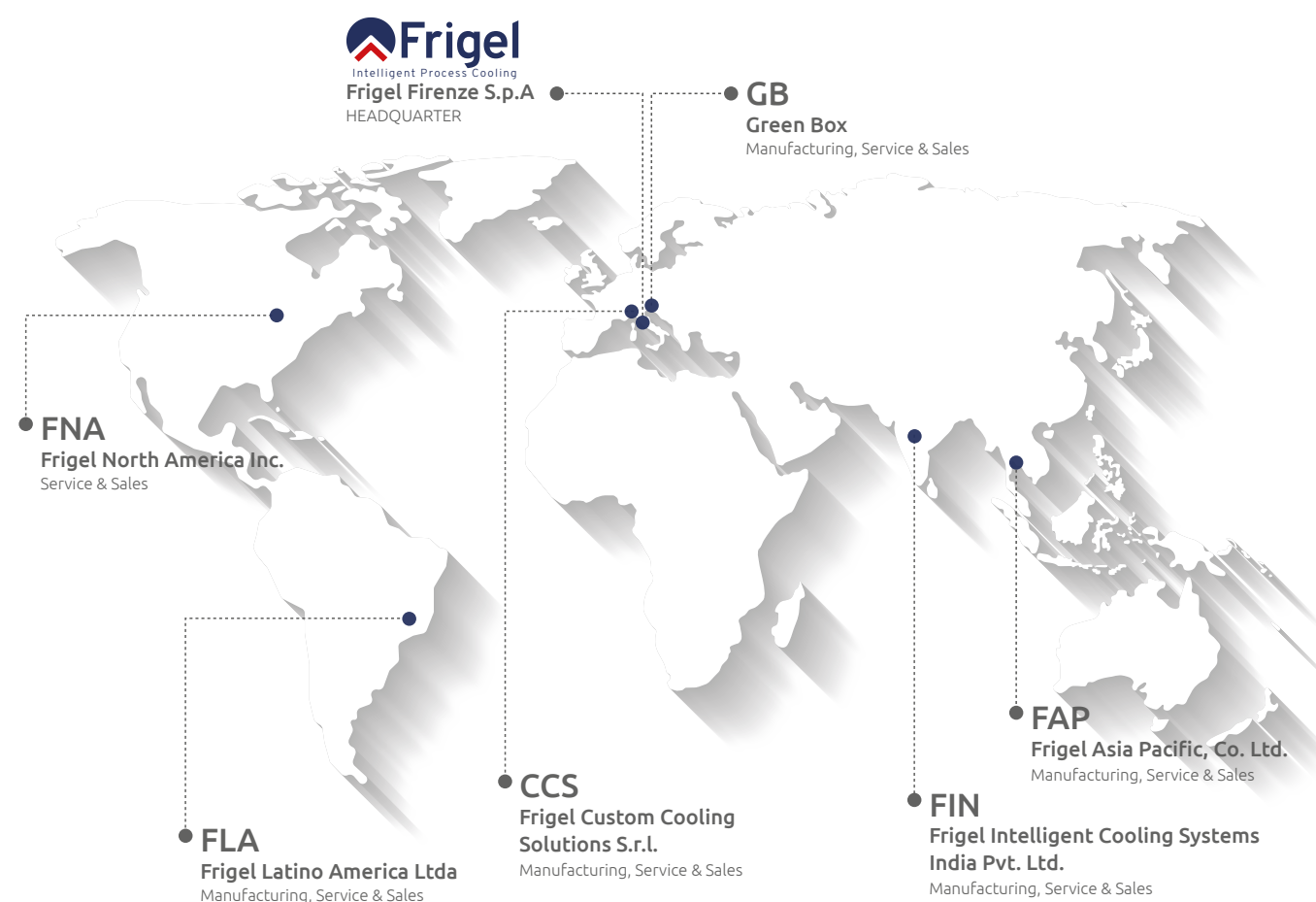
Adiabatic, closed circuit heat rejection technology with no process water evaporation or bleed-off.



### REDUCED "RISKS OF EMISSIONS"

**-95%**

Uses small quantities of innocuous low GWP refrigerant. No disposal of any water treatment chemicals.



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dellanestait



## THE INNOVATION ECODRY SYSTEM 4.0 PROCESS-SYNCHRONIZED COOLING



A PARADIGM SHIFT IN THE PLASTICS INDUSTRY

PACKAGING







# THE NEW COOLING SOLUTION FOR PACKAGING ECODRY SYSTEM 4.0®

The new approach covers all the variety of applications in packaging molding with unbeatable performance improvements: real cooling cycle time reduction and running costs savings together with outstanding reduction of environmental impact.

## 1 ECODRY Adiabatic Cooling System

Ecody is a central closed-circuit Adiabatic Cooling System, designed as a replacement of old cooling tower technology. Ecody is installed outdoors in order to reject to ambient the heat extracted from processes. This system provides direct cooling to all water consuming devices, such as hydraulic heat exchangers, extruder barrels, resin dryers, as well as water cooled air compressors and chillers, etc.

### Main Features

- Maximum cooling water temperature: 30/35°C (85/95°F)
- Cooling capacity: 50 - 10000 kW (15 - 3000 tons)
- Process Flow range: 10 - 2000 m³/h (50 - 9000 gpm)
- High Efficiency Adiabatic Chamber for air pre-cooling (internationally patented)
- Antifreezing self-draining configuration
- Large surface heat exchangers, with copper coils and aluminum fins with hydrophilic protection
- Axial fans with built in brushless EC inverter driven motors individually wired
- Modular design with preassembled stainless steel manifolds for interconnection
- Stainless steel structural frame and aluminum access panels
- Web-monitoring interface

### Highlights

- Guaranteed operation, with minimum water consumption and maintenance also in extreme weather conditions, up to 50°C (120°F) ambient temperature
- Safe winter operation without glycol down to -40°C (-40°F) ambient temperature
- High energy savings of fans during partial load operation
- Compact design with minimum footprint required between units
- High reliability with electrical redundancy and 100% rust free materials

## 2 MICROGEL for Injection Molding Temperature Control Unit with Chiller & Booster Pumps

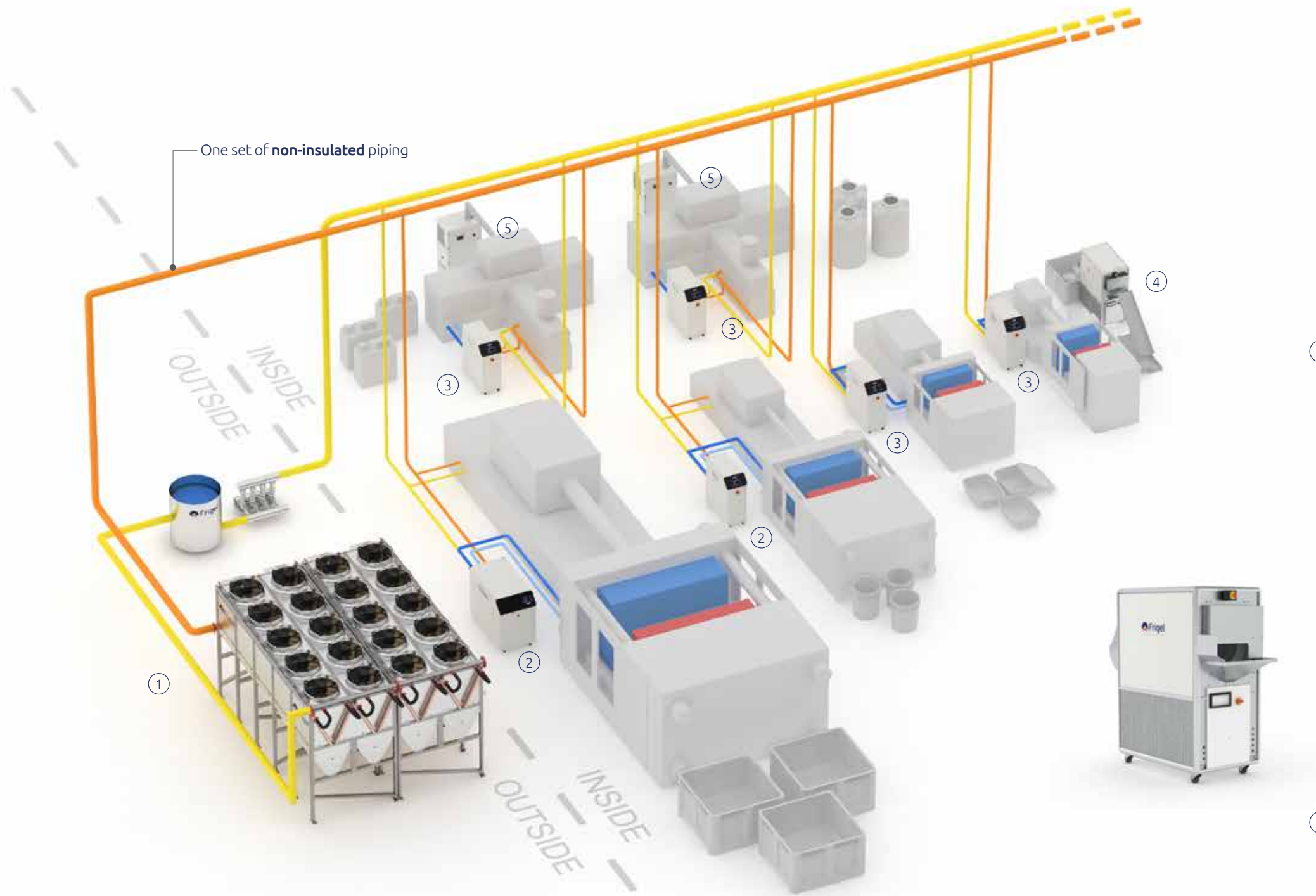
Microgel is a super-compact mold cooling unit specifically designed for "cycle cooling time reduction". Combines a water cooled chiller with one or two high flow booster pump temperature controllers with heating elements and a free-cooling valve. Digitally-synchronized with the molding machine, allows for researching and recording the best setting of flow rate and temperature for each zone, optimizing product quality with the minimum cycle cooling time.

### Main features

- More than 50 models, MONO or DUO (one or two temperature zones)
- Wide temperature range: -5 to 90°C ± 0.2°C (23 to 194°F ± 0.5°F)
- Chiller capacity: from 5 to 200 kW (1.5 to 60 tons)
- Heating Capacity: from 6 to 96 kW
- Booster pump per zone: from 1 to 50 m³/h (5 to 220 gpm) - inverter (VFD) optional
- Temperature, flow and pressure digital readings (IN/OUT)

### Highlights

- Process-Synchronized Mold Temperature Control
- Cycle time reduction up to 50%
- Intelligent use of energy consumption
- High energy savings with automatic free-cooling
- Automatic mold draining
- Web-monitoring interface



## 3 MICROGEL for Packaging

Microgel for packaging is a super-compact high performance mold cooling unit that combines, in one machine, a water cooled chiller with a high pressure booster pump temperature controller. It is designed specifically for "cycle cooling time reduction" in PET preform, Caps and blow molding applications. Digitally-synchronized with the molding machine, allows for researching and recording the best settings of flow rate and temperature that optimizes product quality with the minimum cycle cooling time.

### Main features

- Temperature range: -5 to 30°C ± 0.2°C (23 to 86°F ± 0.5°F)
- Chiller capacity: from 25 to 450 kW (7 to 128 tons)
- Booster pumps: from 5 to 250 m³/h @ 5 bar (20 to 1100 gpm @ 70 psi)
- Inverter driven pumps and compressors (optional)

### Highlights

- Process-Synchronized Cooling
- Cycle time reduction up to 30%
- High energy efficiency (pumps and compressors)
- Perfect repeatability
- Intelligent use of energy consumption
- High energy savings with automatic free-cooling
- Web-monitoring interface



## 4 CAP COOLER

Cap Coolers are specially designed for cooling caps directly from the molds and before they are discharged into collection boxes, thus reducing molding cycle times. The innovative cooling system provides constant quality and drastically reduces cap ovalization and deformation. There are 2 models available: the standard one and the Cap Cooler for capacities exceeding 70000 caps / hour.

### Main features

- Compact design, mounted on wheels (adjustable legs optional)
- II stainless steel product contact surfaces
- Variable speed drives for the fans and drum tumblers allow for easy adjustment for different product types, sizes and outputs
- Optional H13 HEPA air inlet filters
- Special version for extremely critical ambient conditions: temperatures higher than 38°C / 100°F

### Highlights

- Easy to install
- Low energy consumption
- Suitable for different cap sizes and outputs
- Small footprint ( 0.95 m² / 10ft² )



## 5 MOLD DRYER

Mold Dryers are designed to prevent moisture condensation on the mold surfaces due to low cooling water temperatures. These units provide optimum operating conditions to improve productivity, maintain high quality levels, minimize production waste and allow for constant production all year long.

Main applications are in packaging fields:

- Extrusion blow molding
- Injection blow molding
- Injection molding

### Main features

- 8 Models with air flows from 300 to 4000 m³/h
- Dehumidification system designed with moisture-absorbing desiccants using active metal silicate rotors
- Pre-cooler and post-cooler heat exchangers
- Compact dimensions and easy to install machine-side
- Average air dew point: - 9.5°C (15°F)
- Available PLUS version with PLC digital control

### Highlights

- Production independent of ambient conditions with constant quality
- Reduced maintenance costs and increased mold life
- Considerable energy savings compared to traditional drying systems
- Easy maintenance

