

RE-INNOVATION OF PROCESS COOLING IN THE
FOOD INDUSTRY



PRODUCTIVITY AND SUSTAINABILITY

FOOD



INTELLIGENT PROCESS COOLING

FRIGEL FOR FOOD



REDUCED
OPERATING
COSTS



REDUCED
CARBON
FOOTPRINT



ENERGY
SAVING



REDUCED
WATER
FOOTPRINT

“ Performance meets Sustainability ”

Whether your business is sauces or jams, yoghurt or pastries, chocolate or snacks, pasta or baby food, your products always need a variety of thermal treatments. Process Cooling and temperature control are key elements of them. Effectiveness and precision of these treatments can make a difference in the quality of your product.

But the energy used by these processes can **make a difference for your costs**, and the resources consumed can **make a difference for the environment**.

Frigel has worked restlessly to provide you the right recipe

- 60+ years of **experience in refrigeration equipment** and temperature control units
- A **team of engineers** with deep knowledge in the Food & Beverage industry
- A **global network** of service support teams
- A lifetime commitment to design solutions that put together **high performances** and **environmental sustainability**

Frigel's solutions:

- Use patented Adiabatic Coolers allowing up to 95% water saving vs a traditional cooling tower
- Experience the latest technology in compressors, cooling fans and evaporators design to provide up to 40% energy saving
- Maximize productivity and reduce cooling time
- Stop using chemicals, biocides and water treatment for your cooling system

Advanced Engineering Support

- Complete project management, from process analysis to commissioning
- Engineering support in plant sizing and 3D layouts
- ROI analysis of alternative solutions
- Turnkey solutions including installation and piping

Intelligent Process Cooling philosophy for Food & Beverage Industry

> ② Microgel™

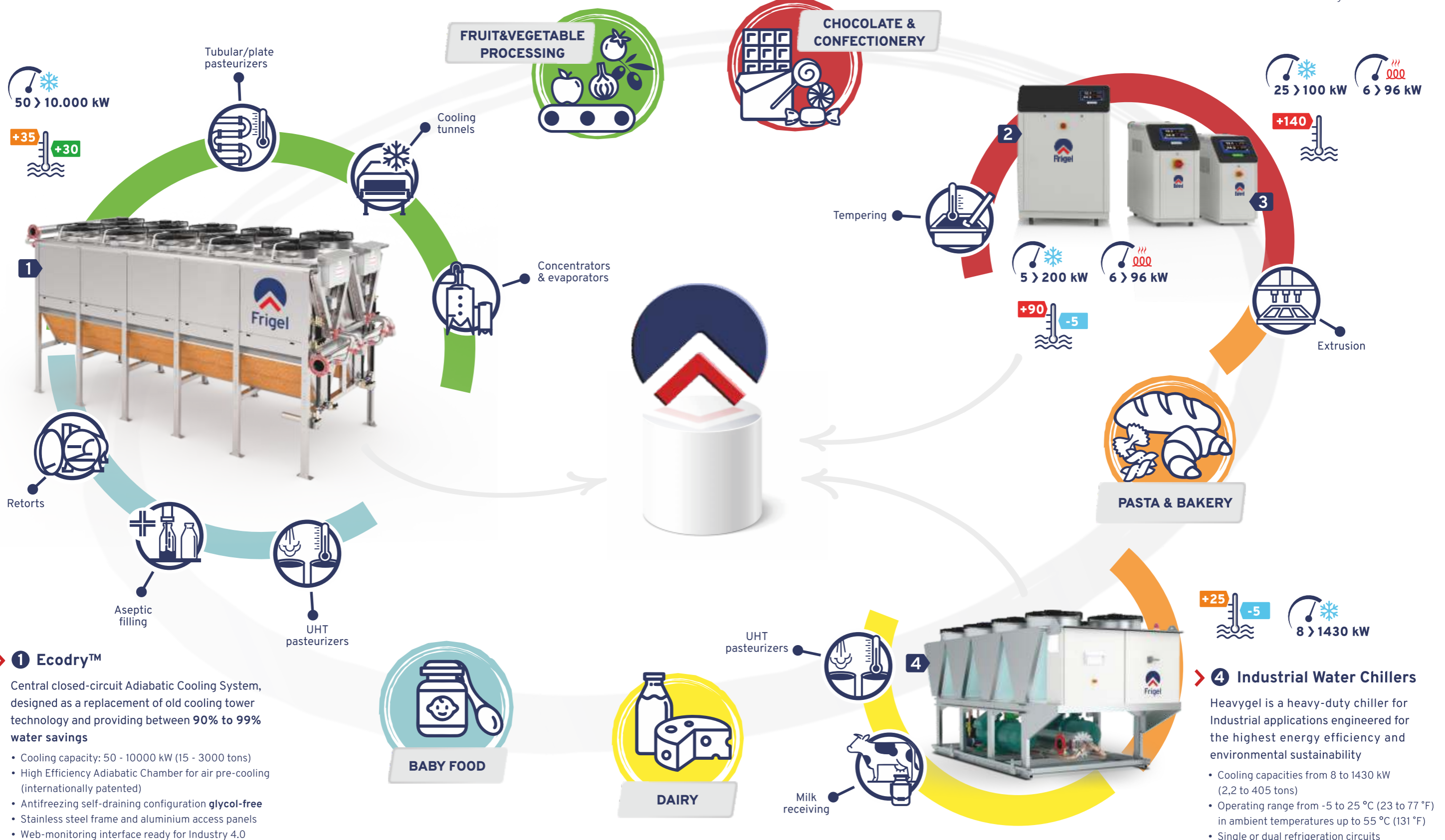
Super-compact TCU which combines a water cooled chiller with one or two high flow booster pump temperature controllers with heating elements and a free-cooling valve

- 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)

> ③ Thermogel™ & Turbogel™

High efficiency temperature control units designed for high water flows and optimum accuracy

- MONO or DUO (1 or 2 temperature zones)
- Temperature range up to 140 °C (284 °F)
- Integral heating elements: from 6 to 96 kW
- Booster pump per zone: from 1 to 250 m³/h (5 to 1100 gpm) - inverter (VFD) optional
- Direct or indirect cooling



> ① Ecodry™

Central closed-circuit Adiabatic Cooling System, designed as a replacement of old cooling tower technology and providing between 90% to 99% water savings

- Cooling capacity: 50 - 10000 kW (15 - 3000 tons)
- High Efficiency Adiabatic Chamber for air pre-cooling (internationally patented)
- Antifreezing self-draining configuration **glycol-free**
- Stainless steel frame and aluminium access panels
- Web-monitoring interface ready for Industry 4.0

> ④ Industrial Water Chillers

Heavygel is a heavy-duty chiller for Industrial applications engineered for the highest energy efficiency and environmental sustainability

- Cooling capacities from 8 to 1430 kW (2,2 to 405 tons)
- Operating range from -5 to 25 °C (23 to 77 °F) in ambient temperatures up to 55 °C (131 °F)
- Single or dual refrigeration circuits

Your process, our solutions

PASTA &
BAKERY



DAIRY

FRUIT &
VEGETABLE
DERIVATES



CHOCOLATE &
CONFECTIONERY



BABY FOOD



> **CONNECTIVITY**
web monitoring & industry 4.0



> **MODULARITY**
easy to expand any time



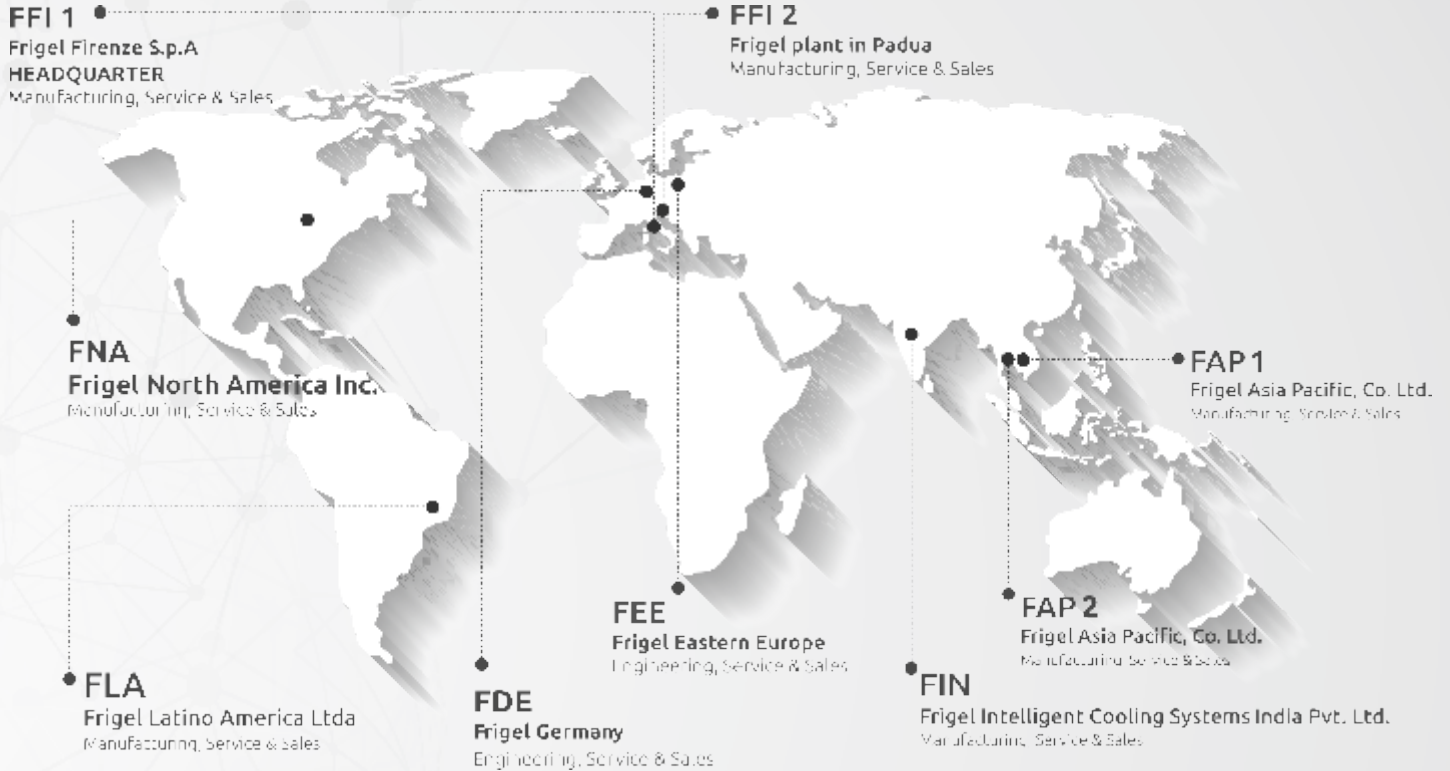
WATER SAVING
-95% less water



ENERGY SAVING
-40% less energy



> **CUSTOM
ENGINEERING**
and turnkey projects



“ We are much more than a manufacturer of cooling and temperature control systems. Side by side with the customers, from the research of the best solution in terms of performance, efficiency and environmental impact, to the investment return for each individual application ”

8 **Production sites**
(Production, Engineering, Service)
for a total of **45,000 m²** (485,000 ft²)
covered area

5 **Commercial branches**
Germany, Italy (Brescia, Parma and Verona), Poland

51 **Distribution/service points in the world**



> www.frigel.com