

Cool well, cool with the Microgel

The Microgel Temperature Control Unit is a super-compact mould cooling unit specifically designed for “cycle-cooling time reduction” from Frigel as part of its world renowned ‘Frigel System’ and is supplied and installed by Summit Systems to the UK plastics market.

The Microgel is suitable for multiple plastic processes such as injection moulding, blow moulding and extrusion. They are used in various industrial sectors such as automotive, pharmaceutical, chemical, and packaging, with over 35,000 units currently installed globally.

The Microgel is water cooled from a central air-blast, adiabatic or cooling tower system or in some cases it can even be used with an existing central chilled system. *Air cooled versions are available too although these take a more basic form, they can be ideal where central system water supplies are unavailable.

Why would you use a Microgel Temperature Control Unit?

- Pressure, flow, and temperature control of each individual process
- Precision in process temperature control
- Stable and controlled cooling conditions
- High cooling efficiency and minimal temperature differential on the mould
- Maximum flexibility to eliminate common process cooling problems
- Maximum integration between unit, machine, and the operator
- Perfect repeatability and high productivity
- Searching and storing the best cooling conditions
- Complete independence in setting work parameters
- High reliability

This veteran industry proven product combines a water-cooled chiller with one or two high flow booster pump temperature controllers with heating elements and a free-cooling valve, the Microgel will optimise your production processes with minimal cycle cooling times (up to 50% reductions when compared to other models) and reduced operation costs. Thanks to improvements in technology on the major components and constant development by Frigel, the Microgel is now even better than ever!

What latest updates have been made to the Microgel?

The following developments, put the already leading Microgel, far ahead of alternative solutions when it comes to mould tool temperature control.

- Improved colour HMI layout creates a better UX and enables intuitive interaction to the extensive range of standard features
- Monitoring of points such as pressure and flows with graphical analysis in real-time.
- Improved environmental footprint as the refrigeration circuits now contain (model dependant) up to 72% less refrigerant and moved onto R410a.
- Solid-state relays and mould drain kits are incorporated into each model.
- Dual circuit model options are available enabling different flows and temperatures to be set on each zone.
- Improved temperature control precision, with 50% improvement against setpoint on certain models.

Rob Pritchard, Sales Manager for Summit Process Cooling “*Our partners, [Frigel](#), have invested an enormous amount of design time and detailed analysis into improving this already market-leading range of innovative equipment.*”

What are the differences between Microgel and Turbogel Temperature Control Units?

Both are standalone temperature control units which are easily installed next to your existing machinery, suitable for single or dual zone applications. Both deliver constant high pressure and flow to process resulting in optimal heat transfer and a drastic cut to cycle times. However, the Turbogel unit does not use a Chiller Circuit unlike the Microgel. The Turbogel is recommended for medium to high temperature applications, whereas the Microgel can bring down temperatures down to as low as 8°C.

Why should I choose the Microgel for my plastics processing?

- Drastically reduce cycle time by up to 50%
- Intelligent use of energy consumption

- High energy savings with automatic free cooling
- Automatic mould draining
- Web-monitoring interface
- Temperature, flow, and pressure digital readings
- Fast start up times, reducing production hours
- Super compact mould cooling unit
- Minimum environmental impact – up to 80% less refrigerant

Rob Pritchard, *“Once proven through Summit’s no commitment trials, the quality and cycle-time reduction benefits of turbulent flow, all deliverable via the latest in control, monitoring, and communication technology, are changing the mindset of even the most traditionalist processors across many industry categories.”*

Long-standing customer, Prysmian Cables, have 3 Microgels installed on their site and have reported a 50% increase in production output, improved product quality with reduced scrap levels, alongside a drastic reduction in energy consumption, recording as high as a 60% reduction in cycle time.

Summit Systems has all the in-house knowledge and tools available within the ‘Frigel System’ to help our clients optimise for tomorrow’s production and energy efficiency expectations.

The Microgel is only one component of the ‘Frigel System’ which is revolutionising the plastics processing industry and is changing the way processors think about cooling, being adequate is no longer enough. Reduced energy and water consumption, with improved product quality and reduced cycle times in a complete system which can be fully centrally monitored in-house or remotely – what’s not to like.

For more information on the Frigel Microgel range and the ‘Frigel System’ from Summit Systems [click here](#) or call the Summit Process Cooling team to discuss the new generation temperature control units on 01827 213 401.