

PRYSMIAN CABLES AND SYSTEMS

The Frigel Microgel unit has once again proven itself to be the market leader in aiding injection moulding manufacturers to reduce their cycle time and optimise their process, resulting in maximum efficiency.

In a partnership spanning over 10 years, Summit Systems have supplied Prysmian Cables and Systems Ltd with various ancillary machines for their UK based production, from Maguire blenders to temperature control units.

Prysmian Cables and Systems Ltd manufactures a wide range of building wires and specialist fire rated cables, which are available through a first-class network of wholesalers. They also offer a comprehensive range of accessories designed with the cables in mind. Prysmian is a brand of the Prysmian Group, the world leader in high-technology cables and systems for energy and telecommunications, with sales of over €11 billion in 2019. The Prysmian Group is a truly global company with subsidiaries in more than 50 countries, 106 plants, 25 research and development centres with approximately 29,000 employees.

The Summit Systems and Prysmian relationship began with the supplying of the Maguire Blenders which helped them to make huge materials savings. Following this, Summit recommended the Loss-in-Weight blenders which saw further material savings and a drastic improvement to product quality.

Technical Sales Engineer, Jason Culleton approached Prysmian to assist in the concept of further product quality improvement and cycle time reduction, after witnessing staff operating moulding machines, handling hot parts which posed as a health and safety risk to the machine operator. Summit Systems knew that within their portfolio of plastic ancillary machinery, there was the appropriate equipment to help eliminate these issues.

Summit specified the Microgel – a temperature control unit from Frigel.

The Microgel is a super-compact mould cooling unit specifically designed for process temperature control with the ability to reduce the cooling time of the injection moulding process. The Microgel consists of a water-cooled chiller with one or two high flow booster pumps, temperature controllers with heating elements, and a free-cooling valve. The Microgel allows the user to optimise their process by looking at historical data from the unit and being able to maintain temperatures to 0.1°C.

Users of the Microgel Temperature Control units can benefit from lower energy consumption and faster start up times. The units require minimal maintenance, saving additional time and money. They have minimum environmental impact, having up to 80% less refrigerant than a centralised system, and offer advanced energy savings with the individual free cooling function. Preheating and downtime are also reduced during the mould changeover period.

Summit Systems offered Prysmian Cables a free trial of the Microgel, to prove the concept of operation before purchase, and being so confident in the quality of the machine were positive the unit would be able to make drastic changes to their production quality and cycle times.

A short and simple installation with no modifications needed to their process meant the unit was in operation quickly. Summit Systems' technical engineers were on site throughout the day to provide equipment training and familiarise the staff with the operation of the machine.

The purpose of the trial was to demonstrate to Prysmian how the Microgel could improve product quality, drastically reduce cycle time, and ensure a safer working environment for the mould machine operators.

Trial Details	Existing Unit	Dual Zone Microgel
Material	40% Glass Filled Nylon	40% Glass Filled Nylon
Part Weight	740g	740g
Cycle Time	90 seconds	36 seconds
Tool Weight	1650 kgs	1650 kgs
Water Temperature Fixed Half	65°C	65°C
Water Temperature Moving Half	15°C	15°C
Water Connections	1"	1"
Water Supply	Central Chiller for moving half & TCU for fixed half	1 off Dual Zone Microgel

The trial demonstrated to Prysmian a 150% productivity increase as a result of the 60% reduction in cycle time (originally 90 seconds, down to 36 seconds).

At a time when energy prices are so high, it is crucial to also consider the energy savings delivered from the machine. With cycle times 60% lower than their existing machinery, they would be saving copious amounts of energy to produce better quality products from their moulding machine.

Additionally, due to the function of the Microgels there is no longer the need for a central chiller, which will be replaced by a Summit Systems adiabatic cooler, saving further energy costs.

Based on the above improvements and the successful completion of the Microgel trial, Summit Systems are thrilled that Prysmian Cables have opted to purchase a further 5 units to aid in the reduction of cycle cooling times, energy savings and health and safety throughout their UK based processes.

Luiz Ferizolla, Production and Logistics Manager at Prysmian, "The savings from the 1 off Microgel unit we have has paid for the 5 additional unit we are ordering, and that is just on production hours saved, we have not yet considered the energy savings. The Microgel has doubled our production output, improved our product quality, and reduced our scrap levels. We'd highly recommend the Microgel and Summit Systems!"

Matt Ross, Sales Director at Summit Systems, "The Frigel Microgel unit has once again proven itself to be the market leader in aiding injection moulding manufacturers to reduce their cycle time and optimise their process, resulting in maximum efficiency. We are delighted to work in conjunction with Prysmian Group and with the strong partnership and work input from both sides, the results were exceptional."