

Dairy Processing, Refrigeration & Process Control Applications



Modern dairy processing requires continuous monitoring, precise control, and complete process traceability to ensure product quality and regulatory compliance. A practical and integrated solution begins with the Climate Air+ system, where RHT Air+ sensors continuously monitor temperature and humidity in processing areas, cold rooms, and refrigerated storage. Using wireless long-range LoRa communication through the AirGate Air+ Gateway, environmental data is securely transmitted over distances of up to 3km outdoors, and 100–300m inside metal structures, while its onboard memory continues to record measurements during temporary communication outages, thereby ensuring that there is no loss of monitoring data.

Milk storage and process tanks can be monitored by the TL400 non-intrusive level sensor, which measures liquid levels within ± 2 mm accuracy. It does not contact the product which eliminates sensor wear and contamination risks. As milk moves through cooling and processing stages, the N322T temperature controller maintains precise heating or refrigeration control while managing automatic defrost, agitator, fan, and compressor protection cycles, ensuring stable operating conditions and improved equipment life by maintaining precise temperature control while reducing compressor cycling and electrical stress, which helps extending the service life of refrigeration equipment. The use of the N322T on refrigeration equipment such as milk cooling tanks, cold rooms, and ice banks, is essential to compressor management and timed functions.

Use the N20K48 on process equipment such as pasteurizers, cheese vats, yogurt incubators, and CIP systems, where precise PID control and programmable process profiles deliver better product quality and process consistency. This combination provides an economical and technically appropriate solution by matching each controller to the application it is designed to perform best. The N20K48 IoT controller provides advanced PID control with Bluetooth, Wi-Fi, and USB connectivity, enabling remote configuration, diagnostics, and expansion through modular ClickNGo micromodules.

Process information from multiple sensors is consolidated by the industrial FieldLogger, which records analogue, digital, and remote Modbus measurements. It generates alarms, stores encrypted production records, and communicates with SCADA systems through Ethernet, USB, or RS485.

Together, these technological devices create an intelligent dairy automation platform that delivers reliable environmental monitoring, accurate inventory management, precise temperature control, comprehensive data logging, and connected process automation, all of which is designed to improve operational efficiency while supporting food safety, quality assurance, and regulatory compliance.

Call us for more information on automation, processing and temperature control devices.