

***motivair***<sup>®</sup>  
COOLING SOLUTIONS

## CTC Low Temperature Process Chillers

5 - 500 Tons



OUR BUSINESS IS COOLING YOURS<sup>™</sup>



## When commercial grade isn't enough

When it comes to process cooling, every application is unique in its requirements. That is why Motivaire's® CTC range of process chillers specifically focuses on low temperature applications with a versatile range of cooling capabilities. A broad selection of available options allows the design engineer or customer to tailor a chiller to their specific process cooling need.

As an industry leader in chiller and cooling systems, we aim to deliver innovative and customized products for unique applications, reliable solutions and an unwavering commitment to excellence.

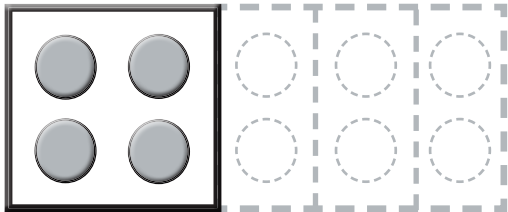
# Your Process. Your Chiller.

Since every cooling application is unique, Motivair's Low-Temperature Chillers are custom designed and built to your exact specifications with flexible compressor options and cabinet sizes.



## COMPRESSOR TYPES

Scroll, Low-Temp Screw,  
Low-Temp Reciprocating



## AIR COOLED CABINET SIZE

Length: 87" – 389"  
Width: 44" – 87"  
Height: 89" – 91"

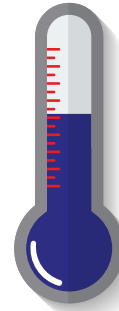


## WATER COOLED CABINET SIZE

Length: 84" – 201"  
Width: 44" – 67"  
Height: 55" – 87"

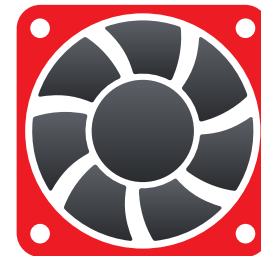
# Your Process. Your Chiller.

Let our team of engineers design your low-temperature process chiller with a full range of features to meet the needs of your specific cooling application.



## GLYCOL TEMPERATURE RANGE

-25F through 32F



## CONDENSER OPTIONS

Air-Cooled or Water-Cooled



## REFRIGERANT OPTIONS

R-404A, R-410A, R-134A

# Designed for Your Unique Process Application



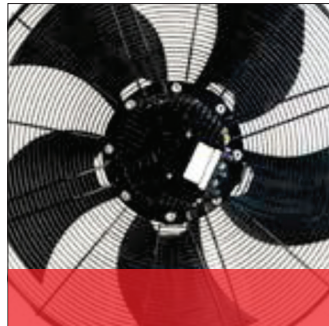
## Compressor Options

Low-Temperature chillers can be supplied with the following compressor options depending on the application or design requirements:

- Scroll
- Low Temp Reciprocating
- Low Temp Screw

Compressors can be mounted in 2, 3 or 4 completely independent refrigeration circuits.

Each compressor features four step of unloading for unlimited capacity control.



## Air-Cooled and Water Cooled Condenser Options

- **Air Cooled**  
Constructed from seamless copper tubes expanded into aluminum fins creates a high efficiency design with minimal pressure drops.
- **Water Cooled**  
Shell and tube condensers feature a carbon steel shell with heavy gauge copper tubes, removable end bonnets and pressure operated water regulating valves.



## Evaporator

The Low-Temperature chillers feature an ASME U stamped, multi-circuited shell and tube evaporator mounted on the chiller base. Carbon steel shell with heavy gauge copper tubes insures long life and highly efficient heat transfer under varying loads.

All chiller evaporators feature removable end bonnets and pressure relief valves.



## Additional Options

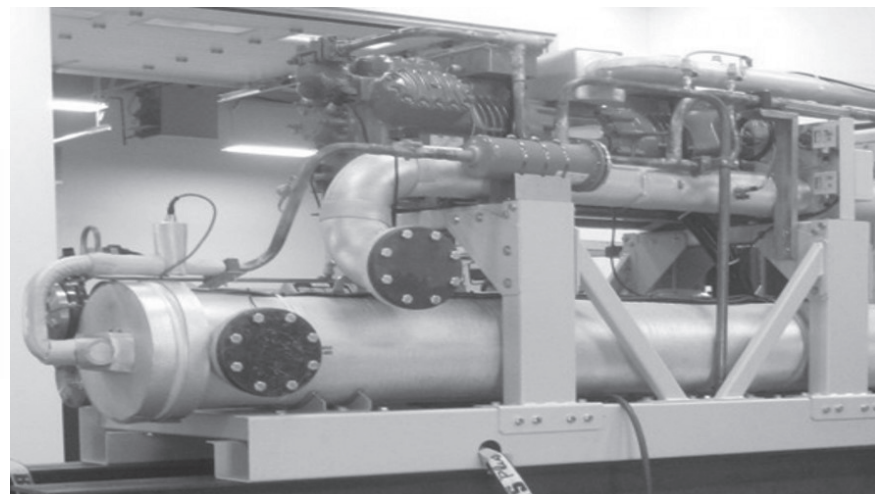
Available options include:

- Simplex (1) Pump Package
- Duplex (2) Pump Package
- Storage Tank
- Low Noise or Ultra Low Noise Package
- High Ambient Package
- Stainless Steel Cabinet Construction
- Condenser Coil Coating
- Security Guards for Open Areas

## Options

Refrigerants available depending on the application:

- 404A, 134A, 410A





# PLC Controls

The Motivair® low temperature process chillers feature the PCO5 control system, which is an advanced Programmable Logic Controller, with a base-operating platform that can be easily modified to adapt to various applications. A multi-character LCD display, and easy to follow directional prompts, give the operator complete control over all chiller functions. Multiple digital and analog inputs as well as digital and PWM outputs offer unparalleled control possibilities.



PCO5 Display

PCO5 Board



## Intelligent Chiller Response

The Latest generation of Motivair® software allows the chillers to respond to system changes in real time and to adjust performance accordingly. The proprietary control logic in the Motivair Low-Temperature Process chillers provides:

- Automatic restart after a power outage
- Rapid restart of refrigeration compressors after a power outage, while affording maximum compressor protection
- Selective decision on which compressor(s) to start first based on run-time and fastest possible response to system load
- Liquid injection to the compressors under high ambient operation

## Control features of the PCO5 include:

- Highly visible LCD display
- Tactile push-buttons
- Adjustable alarm set points
- °F/°C selectable
- Compressor Lead/Lag control
- Anti-Compressor short cycle
- Compressor failure alarm
- Adjustable water set point
- Supply water temp. display
- Return water temp. display
- Low water temperature alarm
- Freeze alarm
- Low water/glycol flow alarm
- High water temperature alarm
- Low refrigeration pressure alarm
- High refrigeration pressure alarm
- Irregular voltage alarm
- General Alarm Relay
- Remote Start/Stop Relay
- Manual alarm reset
- RS 232/RS 485 communication
- Ethernet Communication
- LON, BACNET, MODBUS communication (optional)

## Centurion Monitoring System

This optional feature empowers the owner by providing a wide range of safeties and access to critical data from a remote location via cellular service, outside of the customer's firewall. If the chiller is operating in an unsafe condition or in the unlikely event of an alarm, designated contacts are immediately notified by the chiller of its condition. The pending alarm can then be avoided or quickly corrected. Features:

- Data trending
- Password protected multi-level access
- Adjustable warning thresholds

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## MPC & MPC-FC

1/2-90 ton packaged air-cooled or water-cooled chillers for Industrial cooling, Medical cooling or custom HVAC applications. Includes integrated microprocessor, pump station, and storage reservoir.



## MLC & MLC-FC

60-500 tons air-cooled, water-cooled & split system chillers for industrial or HVAC applications. Available Integrated Free-Cooling.



## MLC-SC Air-Cooled Scroll Chillers

100 – 285 tons air-cooled with scroll compressors to accommodate a wide range of operating points and customization for today's advanced industrial manufacturing and mission critical environments. Available Integrated Free-Cooling.



## PTS

Pump/Tank Stations for chillers and cooling systems. Standard and custom designs available.



## MFC

Closed loop dry-coolers for process cooling and remote "Free-Cooling" applications.



## ChilledDoor® Rack Cooling System

Advanced server rack cooling system fits and standard or OEM computer rack. Removes up to 75 kW of server heat per door. Learn more at [www.chilleddoor.com](http://www.chilleddoor.com)



## CDU

In-Rack and Floor Mount Coolant Distribution Units (CDUs) provide 100% sensible cooling up to 1.25MW, depending on the model. For use with the ChilledDoor® or other IT cooling systems.

***motivair***®

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