

A superior performance and innovative technology in a dependable portable chiller.

**THERMAL
CARE** 
www.thermalcare.com

Portable Chillers NQ Series



Typical NQ Series air-cooled portable chiller with tools-free removable doors for easy access to all components. Features a lightweight aluminum condenser and nonferrous construction.

High efficiency, low noise fans (air-cooled units only) with integral condensers for reduced operating noise and increased efficiency feature totally enclosed air over (TEAO) motors for long life.



The Accuchiller NQ Series portable chillers come standard with the industry's best warranties:

- 18 months on parts
- 12 months on labor

Five year warranty on PLC controller and interface with lifetime exchange price of \$175 on the standard board.

Count on Thermal Care to be your one source for a complete line of dependable process cooling equipment. From system design through equipment start-up, to exceptional service and repair parts — Thermal Care does it all.

High performance, innovative technology, rugged construction, dependable and easy-to-use, Thermal Care has provided process chillers for decades to a multitude of different industries and applications. The NQ Series offers the best components and technology available for the highest level of performance and flexibility to meet the needs of today's industrial manufacturing environment.



NQA20 with premium controller

NQW08 with standard controller

NQA05 with standard controller

Dependable and Easy-to-Use

NQ Series portable chillers are available in air-cooled, water-cooled and remote condenser models in a wide range of sizes. Using components such as R410A refrigerant, scroll compressors, micro-channel condensers, low noise fans, stainless steel brazed plate evaporators, and sophisticated controls provide the best available technologies for the ultimate performance and reliability in a chiller package.

Features

- Environmentally friendly and energy efficient R410A refrigerant
- Compact micro-channel all aluminum air-cooled condensers for increased durability
- High efficiency, low noise fans
- Stainless steel brazed plate evaporators with flow and temperature safeties to prevent freezing
- Reliable and energy efficient scroll compressors
- Compressor staging for reduced energy use on 20 ton and larger units
- Compressor, pump, and condenser fan starters (air-cooled units only) mounted in control panel and wired to motors
- Low voltage 24 VDC control keeps the control circuit signals free from AC interference
- C-UL508A electrical control panel for increased safety and acceptability by a wider range of locations without the need for any special wiring modifications (USA/Canada UL specification)
- Rotary non-fused disconnect for quick and safe main power disconnect
- Remote 4-20 mA set point temperature input capability for increased application flexibility
- Internal insulated large capacity polyethylene reservoir
- Inlet air filter (air-cooled units only) is easily cleaned and protects condenser coils to assure maximum efficiency
- Wetted materials in the process water circuit, including a stainless steel pump, are 100% nonferrous to resist corrosion
- Solid state safety switches with electronic sensing devices
- Hot gas bypass provides accurate capacity control and extends compressor life
- Water regulating valve (water-cooled units only) keeps refrigerant pressure constant

For additional specifications and system information, please visit us on the web at www.thermalcare.com

**THERMAL
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7720 N. Lehigh Avenue
Niles, IL 60714-3491

Toll-free 888-828-7387
Telephone 847-966-2260
Fax 847-966-9358
www.thermalcare.com

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Only Thermal Care lets you choose between two exclusive microprocessor control options for our NQ Series portable chillers.

Easy to operate control panel options

Now our NQ Series portable chillers come with two exclusive microprocessor control options. Choose between our Standard controller – with 19 operational and diagnostic lights – or upgrade to our new Premium controller with touch-screen interface of operational and diagnostic screens for easier diagnosis of faults. Both control options are easy to operate and are sealed to protect against contamination from dirt or fluids.

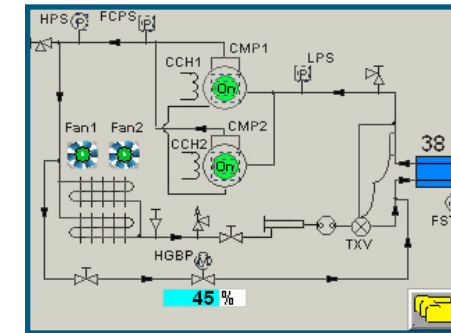
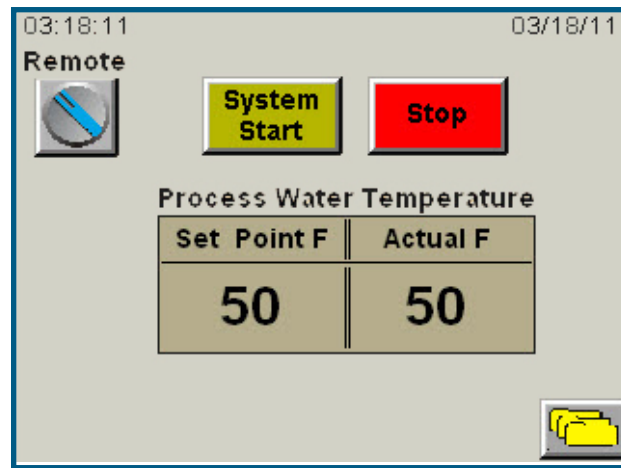


Standard Controller (above left)

Our conventional microprocessor control panel has a large, user-friendly interface, includes 19 operational and diagnostic lights, and comes with a unique 4-plug wiring design that makes it easy to replace the entire control board in just minutes. The entire panel is easy to access, view and operate without cryptic codes or confusing instruction manuals.

Premium Controller (above right)

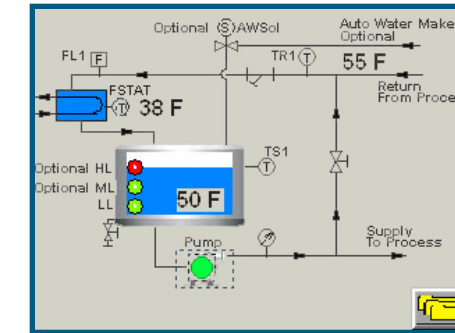
Our most advanced controller option comes with a Panasonic PLC that features operational and diagnostic screens with touch-screen interface. Controller display screens are easy to read and easy to operate. This sophisticated controller option guarantees maximum chiller performance and reliability.



Refrigeration PID

Refrigeration Diagnostic			
Compressors	CMP1	CMP2	HGBP
State	On	Off	45%
Running Hours hrs	125	18	
Process Water Temperature			
Set Point F	Actual F		
50	50		

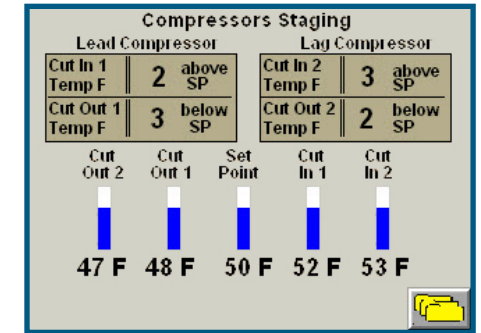
Refrigeration Diagnostic



Process PID

Possible System Warnings Alarms		
N	Description	Details
1.	Water Pump OL	[Details]
2.	Return Water No Flow Alarm	[Details]
3.	Hi/HiHi Supply Water Temperature	[Details]
4.	Lo/LoLo Supply Water Temperature	[Details]
5.	Hi/HiHi Return Water Temperature	[Details]

System Warnings/Alarms



Compressor Staging



Typical Diagnostic Screen

Features

- Set point and process supply and return temperature displays
- Unit alarms easily reset on control panel
- Password protected operational parameters
- Start-to-start anti-cycle timer prevents short-cycling of compressor while minimizing unnecessary off periods
- RTD temperature sensors and full PID temperature control loops provide accurate and consistent temperatures for +/- 1°F accuracy
- Temperature readout easily switched from °F to °C
- Display of compressor and pump running hours helps with scheduling routine maintenance
- Loss of phase/phase reversal/phase imbalance alarm
- Pump test button allows for quick and easy pump rotation check from the main control panel
- Master reset function to restore factory default settings
- Adjustable deviation alarm timer delay to prevent nuisance alarms during start-up
- Temperature deviation warnings provide an adjustable deviation set point to indicate abnormal operation of chiller or process equipment without shutting down the chiller
- Temperature deviation alarms provide critical condition shut down of the chiller to protect against equipment damage
- Autostart signal capability provides outputs from the control board to allow for remote on/off contacts to remotely start and stop the chiller
- Return water temperature display for quick monitoring from the control panel
- Reservoir low level alarm and cut-off safety shuts down if there is not enough water
- High supply temperature deviation warning and alarm
- Low supply temperature deviation warning and alarm
- Tank critical low level alarm
- Loss of flow alarm
- Freezestat alarm
- Pump motor overload alarm
- Refrigeration high pressure and low pressure alarms
- Supply and return temperature sensor fault alarms
- Freezestat sensor fault alarm
- 3-way water temperature control valve*

Options

- Refrigeration pressure transducers with sensor fault alarms*
- Process flow meter*
- Set point ambient tracking or remote control*
- Hand-held, remote control operator panel**
- SPI or ModBus RTU communication port**

*premium controller only

** standard controller only