THERMAL CARE
Superior equipment, Exceptional service

Accuchiller NQ

5-ton Air-Cooled Chiller

Standard Features

Direct Drive Scroll Compressors
Direct drive hermetically sealed scroll compressors with their proven reliability in industrial cooling for outstanding reliability, low-maintenance, and high-efficiency operation.

Stainless Steel Evaporators
High-efficiency stainless steel plates with copper brazing provide maximum performance, long life, and enhanced level of protection from harsh process conditions.

Stainless Steel Pump
Stainless steel pump selected for peak performance with the utmost in corrosion protection to ensure a long useful life under severe industrial conditions.

Nonferrous Reservoir and Water Lines
The insulated reservoir, fluid lines, pumps, and other components in the process fluid circuit will remain free of rust to provide maximum corrosion protection.

Evaporator Inlet Strainer
The evaporator inlet strainer removes any debris present in the process fluid to prevent costly downtime and repair due to a clogged chiller evaporator.

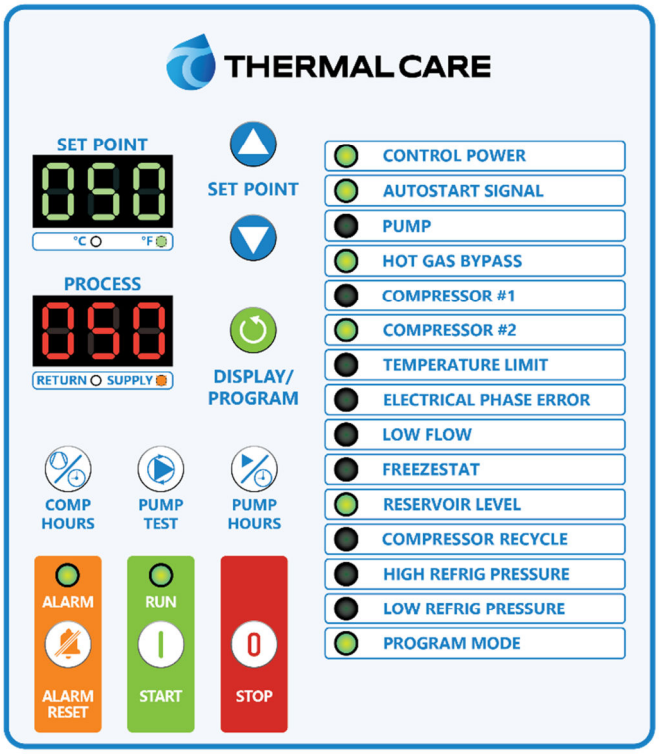
Wide Ambient Range
A wide range of indoor-duty air-cooled, water-cooled, or remote air-cooled condensers as well as outdoor air-cooled chillers fit a variety of applications.

Easy Access Cabinet
Heavy-gauge machine access doors with industrial grade tools-free latches provide quick access to all components for easy operation and maintenance.

Compressor Protection Technology
Our compressor protection technology uses start-to-start anti-recycle control logic to limit cycling under low-load operating conditions to extend compressor life.

Compressor and Pump Run Hour Displays
The ability to monitor compressor and pump running hours is useful and is an important tool to assist with scheduling maintenance.

Power Monitor
The main power monitoring system protects the chiller from extensive damage to the compressor and pump due to loss of phase or phase reversal in the main supply.



Standard Controller

Temperature Deviation Warnings and Alarms
A warning alerts the operator of a potential problem before a fault occurs and if the condition gets worse, an alarm stops the chiller to prevent damage.

Adjustable Deviation Alarm Time Delays
Allows for programing a start-up alarm time delay to deactivate the alarms long enough for the process loop to stabilize before activating the alarms.

Reservoir Low Level Alarm
Indicates a low process fluid condition and protects the process pump and chiller from expensive damage caused by a critically low operating level in the reservoir.

Master Reset
The master reset function is a quick and easy way to reset and restore the control system to factory default settings if a control parameter is mistakenly changed.

Supply and Return Temperature Displays
The ability to view the process supply and return temperatures provides an additional tool for monitoring process conditions.

High-Quality 24 VDC Power Supply
The 24-volt DC power supply ensures dependable control circuit power and isolates the control circuit from static interference to ensure stable and precise operation.

Other Alarms
All chillers include loss of flow, freezestat, high and low refrigeration pressure, temperature sensor faults, and freezestat sensor fault alarms.

Warranty
5 year parts on the standard controller with a lifetime exchange price of $175
3 year parts on the optional premium PLC controller
18 months parts on entire unit
1 year labor

Variable-Speed Compressor Option
Chillers usually operate with process heat loads less than 100% of available chiller capacity. With increasing emphasis on energy efficiency, we offer a variable-speed scroll compressor option for improved part-load efficiency.

Most chillers use fixed-speed compressors with a hot gas bypass valve that bypasses hot discharge refrigerant gas back into the compressor to simulate 100% load. This keeps the compressor running at full speed all the time.

Our variable-speed scroll compressor technology varies the compressor speed to match the process load. This means the compressor slows down under part load conditions for peak performance and reduced power use.

10-Ton Variable-Speed Option Payback (Years)

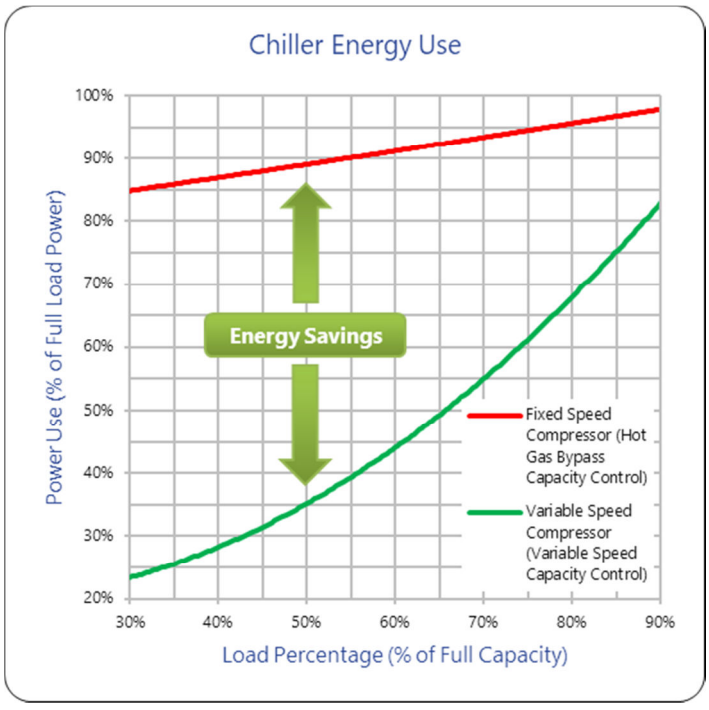
Hours of Operation	Process Load (Percent of Full Capacity)								
	50%	55%	60%	65%	70%	75%	80%	85%	90%
4,000/year	1.1	1.2	1.3	1.4	1.6	1.9	2.4	3.2	5.1
6,000/year	0.7	0.8	0.9	0.9	1.0	1.2	1.6	2.1	3.4
8,400/year	0.5	0.6	0.6	0.7	0.7	0.9	1.1	1.5	2.4

Based on $0.10/kWHr power cost

20-Ton Variable-Speed Option Payback (Years)

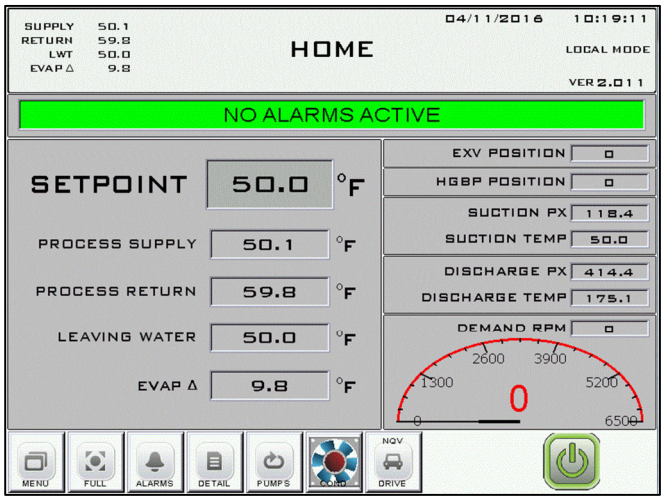
Hours of Operation	Process Load (Percent of Full Capacity)								
	50%	55%	60%	65%	70%	75%	80%	85%	90%
4,000/year	1.4	1.4	1.4	1.4	1.5	1.8	2.2	3.3	6.5
6,000/year	0.9	0.9	0.9	0.9	1.0	1.2	1.5	2.2	4.4
8,400/year	0.7	0.7	0.7	0.7	0.7	0.8	1.1	1.6	3.1

Based on $0.10/kWHr power cost

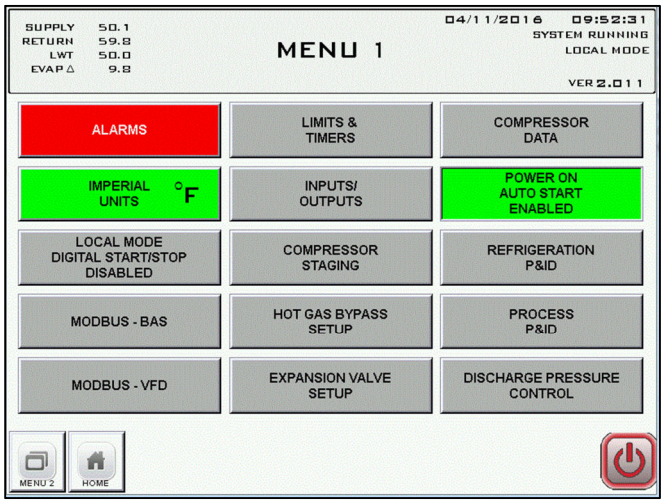


PLC Option

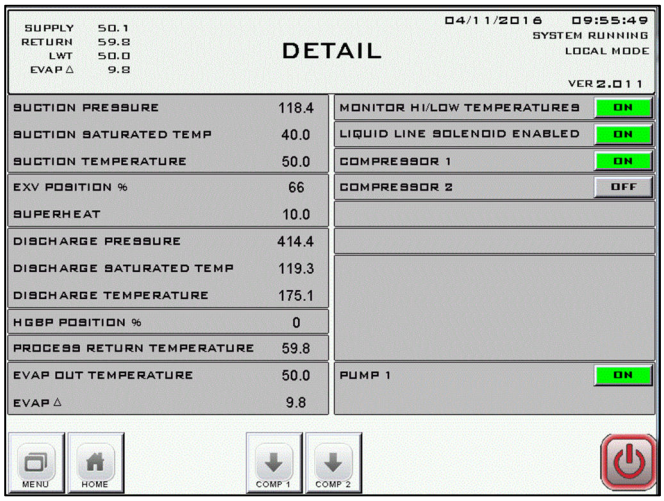
Standard on units with the variable-speed option and available on all others is a PLC with 7-inch touch screen to provide an enhanced level of monitoring and control.



Sample of Home Screen (unit with variable-speed compressor option)



Sample of a Menu Screen



Sample of a Detail Screen

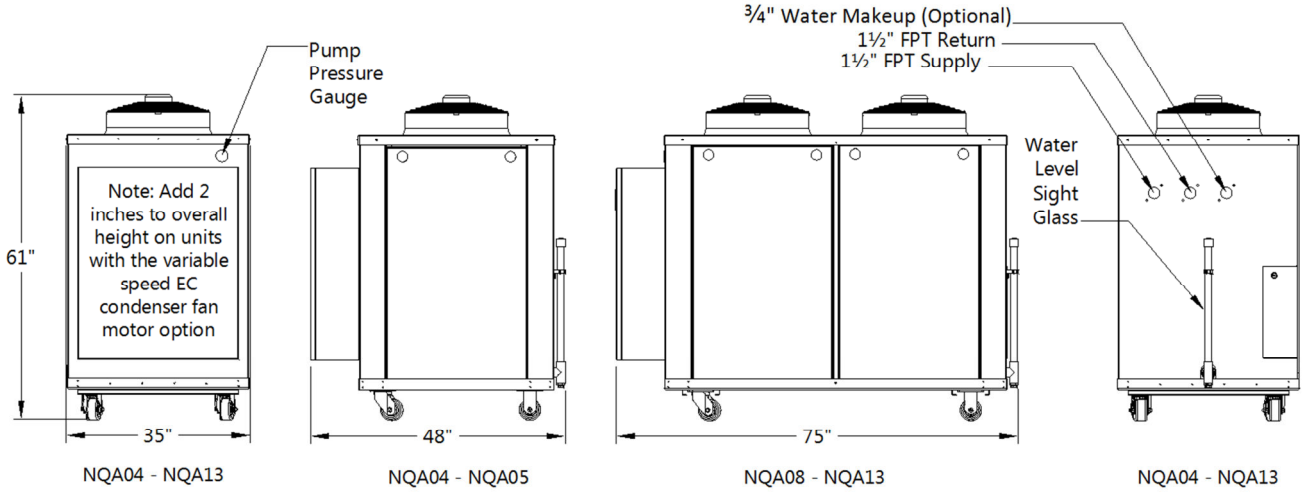
Other Available Options

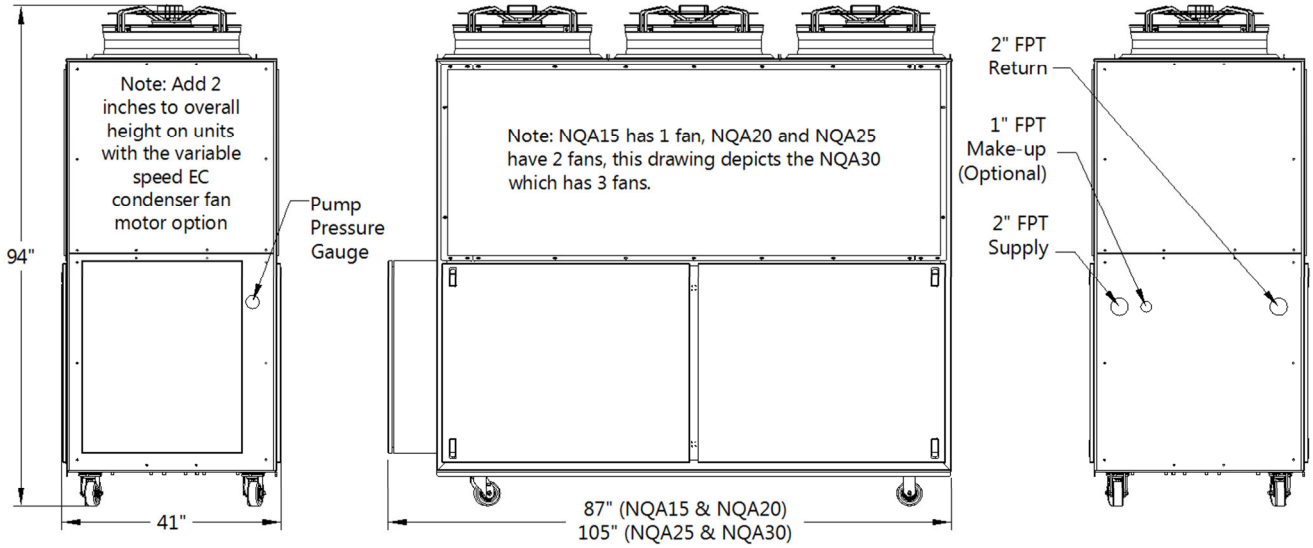
- High flow / high pressure pumps
- High flow unit design
- Alarm horn
- Alarm relay
- Rotary non-fused or fused disconnect switch
- C-UL508A industrial control panel construction
- Outdoor-duty construction
- Extended condenser air range (0°F to 110°F)
- High temperature condenser air range (60°F to 122°F)
- Low temperature condenser air range (-20°F to 110°F)
- Wide temperature condenser air range (0°F to 122°F)
- Air-cooled condenser coil coating for coastal regions
- Pump and tank deduct
- Oversized reservoirs
- Water circuit designed for use with de-ionized water
- Stainless steel cabinetry
- Automatic electric water make-up valve
- High pressure fans for ducting of discharge air
- 4 to 20 mA cooling supply temperature retransmit
- Emergency stop button
- Hand-held remote controller with 50 foot wire
- Special color paint
- Modbus RTU, BACnet, LonWorks, or SPI communications

Air-Cooled Portable Chillers

Model	NQA04	NQA05	NQA08	NQA10	NQA13	NQA15	NQA20
Cooling Capacity (tons)[1]	4.4	5.1	7.8	11.0	12.5	14.9	20.9
Set Point Range (°F)	20 to 80	20 to 80	20 to 80	20 to 80	20 to 80	20 to 80	20 to 80
Sound Pressure @ 1 meter (dBA)	73.8	74.0	75.8	76.2	76.2	82.2	84.4
Pump Motor Size (hp)	1.5	1.5	1.5	2	2	3	5
Pump Flow (gpm)	11	12	19	27	30	36	48
Net Available Pump Pressure (psi)[2]	38	39	37	38	35	43	50
Reservoir Holding Capacity (gal)	22	22	44	44	44	75	75
Shipping Weight (lbs)	720	720	1,195	1,195	1,215	3,200	3,300
Operating Weight (lbs)	810	810	1,380	1,380	1,400	3,535	3,715
MCA @ 230/3/60 (amps)[3]	31	35	51	75	79	90	109
MOP @ 230/3/60 (amps)[4]	50	60	90	125	150	150	150

[1]Cooling tons based on 12,000 BTU/Hr/ton with 50°F leaving coolant and 95°F ambient air, R410A refrigerant.
[2]Net available pressure at outlet of chiller is pump discharge pressure less the internal pressure loss through the fluid circuit.
[3]MCA is Minimum Circuit Amps with standard condenser fan(s) and pump under full load, used for minimum wire size requirement.
[4]MOP is Maximum Overcurrent Protection with standard condenser fans(s) and pump, used for sizing main power protection devices.





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