Accuchiller NQ Series

Portable & Packaged Industrial Chillers

Benefits:

- Low GWP R-454B Refrigerant: NEW! EPA approved refrigerant provides a Global Warming Potential rating below 700 to combat climate change issues.
- Direct Drive Scroll Compressors: Hermetically sealed scroll compressors with proven performance in industrial cooling for reliable, low maintenance, and efficient operation.
- Stainless Steel Evaporators: High efficiency stainless steel plates with copper brazing provide maximum performance, long life, and an enhanced level of protection from harsh process conditions.
- Stainless Steel Pumps: 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: Insulated reservoir, fluid lines, pumps, and other components in the process fluid circuit will remain free of rust for maximum corrosion protection.
- 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: Indoor duty air cooled, water cooled, or remote air cooled condensers as well as outdoor. air cooled chillers fit a variety of applications.
- Warranty: 18 months parts on entire unit; 12 months labor.



The Accuchiller NQ Series offers a versatile line of portable and packaged chillers designed for efficient and reliable temperature control. These durable units feature a compact footprint with an easily accessible interior, making them ideal for diverse applications.

NQ Series chillers are available with air cooled, water cooled, or remote condenser options. Each model is packed with innovative features that optimize performance and reliability. Scroll compressors, microchannel condensers, stainless steel brazed plate evaporators, and low-noise

fans ensure smooth operation and energy savings. The userfriendly PLC control system with a large color touchscreen provides intuitive operation, advanced diagnostics, and precise temperature control. With its compact footprint, user-friendly controls, and innovative features, the Accuchiller NQ Series delivers the ultimate in chiller performance and reliability.

For even great efficiency, consider the Accuchiller NQV Series chillers with variable speed scroll compressor available from 5 to 30 tons (18 to 106 kW).



Additional Benefits:

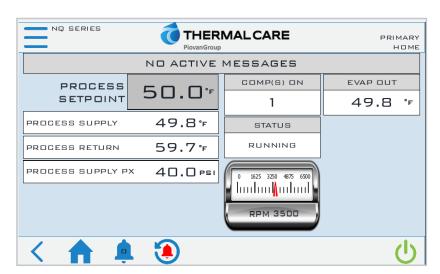
- Easy Access Cabinet: Heavy-gauge machine access doors with industrial grade tools-free latches provide quick access to all components for easy operation and maintenance.
- Compressor Protection Technology: Uses start-to-start anti-recycle control logic to limit cycling under low-load operating conditions to extend compressor life.
- Compressor and Pump Run Hour Displays: Monitor compressor and pump running hours to assist with scheduling maintenance.
- **Power Monitor:** Protects the chiller from extensive damage to the compressor and pump due to loss of phase or phase reversal in the main supply.
- Reservoir Low Level Alarm: Indicates a low process fluid condition and protects the process pump and chiller from damage caused by a critically low operating level in the reservoir.
- **Temperature Deviation Warnings and Alarms:** 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.
- **High-Quality 24 VDC Power Supply:** Ensures dependable control circuit power and isolates the control circuit from static interference for stable and precise operation.
- Modbus RTU: Communications protocol.

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
- Indoor duty low temperature (0°F to 120°F; -18°C to 49°C)
- Outdoor duty temperature (-20°F to 120°F; -29°C to 49°C)
- Air-cooled condenser coating for coastal regions

- Pump and tank deduct
- Oversized reservoirs
- Water circuit for use with de-ionized water
- Stainless steel cabinetry
- Automatic electric water make-up valve
- High pressure fans for ducting of discharge air
- Emergency stop button
- Remote HMI with 50 foot wire
- Special color paint
- 5 year compressor parts warranty

7-Inch Color Touch Screen



Home Screen



Description of Functions	Standard Controls	Premium Controls
Display I	Parameters	
Process Fluid Supply and Return Temperatures	•	•
Evaporator Fluid Leaving Temperature	•	•
Process Fluid Supply Pressure	•	•
Compressor Running Hours	•	•
Pump Running Hours	•	•
Condenser Fan Running Hours	•	•
Refrigerant Suction Pressure	•	•
Refrigerant Suction Temperature and Superheat	_	•
Refrigerant Liquid Temperature and Subcooling	_	•
Refrigeration Discharge Pressure	_	•
Refrigerant Discharge Temperature	_	•
	nd Warnings	
High Process Fluid Temperature	•	•
Low Process Fluid Temperature	•	•
Evaporator Fluid Freeze	•	•
Evaporator Fluid Low Flow	•	•
Refrigerant High Pressure	•	•
Refrigerant Low Pressure	•	•
Compressor Overload	•	•
Pump Overload	•	•
Condenser Fan Overload	•	•
Reservoir Low Level	•	•
Communications a	nd Remote Interfaces	
Process Fluid Supply Temperature (0-10 VDC)	•	•
Remote Start / Stop	•	•
Alarm Contact	•	•
CONNEX4.0 Ready	•	•
Modbus RTU	•	•
Modbus TCP / IP	_	•
BACnet MS / TP	_	0
BACnet / IP	_	0

Optional = O Not Available = — Legend: Standard = ●



Air Cooled Condenser Chillers	NQA04	NQA05	NQA08	NQA10	NQA13
Cooling Capacity ¹	4 tons	5 tons	8 tons	11 tons	13 tons
	14 kW	18 kW	28 kW	39 kW	46 kW
Set Point Range	20 to 80°F				
	-7 to 27°C				
Compressor (qty)	1	1	1	1	1
Sound Pressure @ 1 meter (dBA)	74	74	76	76	76
Pump Motor Size	2 hp	2 hp	2 hp	3 hp	3 hp
	1.5 kW	1.5 kW	1.5 kW	2.2 kW	2.2 kW
Pump Flow	10 gpm	12 gpm	19 gpm	27 gpm	30 gpm
	38 lpm	45 lpm	72 lpm	102 lpm	114 lpm
Net Available Pump Pressure ²	43 psi	41 psi	41 psi	48 psi	46 psi
	3.0 bar	2.8 bar	2.8 bar	3.3 bar	3.2 bar
Reservoir Holding Capacity	14 gal	14 gal	30 gal	30 gal	30 gal
	53 L	53 L	114 L	114 L	114 L
Dimensions	48 x 34 x 61	48 x 34 x 61	75 x 34 x 61	75 x 34 x 61	75 x 34 x 61
L x W x H inch	(1,219 x 864	(1,219 x 864	(1,905 x 864	(1,905 x 864	(1,905 x 864
(mm)	x 1,549)				
Shipping Weight	720 lbs	720 lbs	1,195 lbs	1,195 lbs	1,215 lbs
	327 kg	327 kg	542 kg	542 kg	551 kg
Operating Weight	810 lbs	810 lbs	1,380 lbs	1,380 lbs	1,400 lbs
	367 kg	367 kg	626 kg	626 kg	635 kg

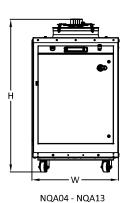
Air Cooled Condenser Chillers (additional models)	NQA15	NQA20	NQA25	NQA30
Cooling Capacity ¹	15 tons	21 tons	26 tons	31 tons
	53 kW	74 kW	91 kW	109 kW
Set Point Range	20 to 80°F	20 to 80°F	20 to 80°F	20 to 80°F
	-7 to 27°C	-7 to 27°C	-7 to 27°C	-7 to 27°C
Compressor (qty)	1	2	2	2
Sound Pressure @ 1 meter (dBA)	82	84	84	86
Pump Motor Size	3 hp	5 hp	5 hp	5 hp
	2.2 kW	3.7 kW	3.7 kW	3.7 kW
Pump Flow	36 gpm	48 gpm	60 gpm	72 gpm
	136 lpm	182 lpm	227 lpm	273 lpm
Net Available Pump Pressure ²	40 psi	45 psi	48 psi	43 psi
	2.8 bar	3.1 bar	3.3 bar	3.0 bar
Reservoir Holding Capacity	60 gal	60 gal	67 gal	67 gal
	227 L	227 L	254 L	254 L
Dimensions	87 x 41 x 94	87 x 41 x 94	105 x 41 x 94	105 x 41 x 94
L x W x H inch	(2,210 x 1,041	(2,210 x 1,041	(2,667 x 1,041	(2,667 x 1,041
(mm)	x 2,388)	x 2,388)	x 2,388	x 2,388
Shipping Weight	3,200 lbs	3,300 lbs	3,800 lbs	4,150 lbs
	1,452 kg	1,497 kg	1,724 kg	1,882 kg
Operating Weight	3,535 lbs	3,715 lbs	4,360 lbs	4,710 lbs
	1,603 kg	1,685 kg	1,978 kg	2,136 kg

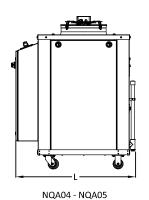
¹Cooling tons based on 12,000 BTU/Hr/ton with 50°F (10°C) leaving coolant and 95°F (35°C) ambient air, R410A or R454B refrigerant.

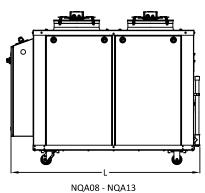
³Units with variable speed fans are 2 in (51 mm) taller.



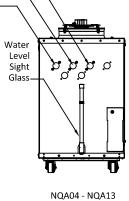
²Net available pressure at outlet of chiller is pump discharge pressure less the internal pressure loss through the fluid circuit.



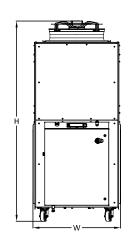


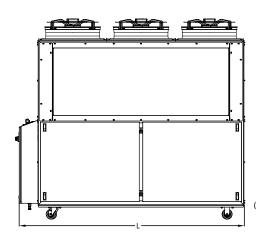


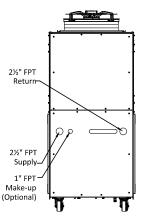
 $1\frac{1}{2}$ " FPT Return $\frac{3}{4}$ " Water Makeup (Optional)_ 1½" FPT Supply



NQA15 - NQA30







Water Cooled Condenser Chillers	NQW05	NQW08	NQW10	NQW15	NQW20
Cooling Capacity ¹	6 tons	8 tons	12 tons	17 tons	23 tons
	21 kW	28 kW	42 kW	60 kW	81 kW
Set Point Range	20 to 80°F				
	-7 to 27°C				
Compressor (qty)	1	1	1	1	2
Sound Pressure @ 1 meter (dBA)	70	70	71	73	74
Pump Motor Size	2 hp	2 hp	3 hp	3 hp	5 hp
	1.5 kW	1.5 kW	2.2 kW	2.2 kW	3.7 kW
Pump Flow	13 gpm	20 gpm	29 gpm	39 gpm	54 gpm
	49 lpm	76 lpm	110 lpm	148 lpm	204 lpm
Net Available Pump Pressure ²	40 psi	40 psi	46 psi	35 psi	41 psi
	2.8 bar	2.8 bar	3.2 bar	2.4 bar	2.8 bar
Reservoir Holding Capacity	14 gal	30 gal	30 gal	30 gal	60 gal
	53 L	114 L	114 L	114 L	227 L
Dimensions	48 x 34 x 53	75 x 34 x 53	75 x 34 x 53	75 x 34 x 53	87 x 41 x 47
L x W x H inch	(1,219 x 864	(1,905 x 864	(1,905 x 864	(1,905 x 864	(2,210 x 1,041
(mm)	x 1,346)	x 1,346)	x 1,346)	x 1,346)	x 1,194)
Shipping Weight	720 lbs	1,195 lbs	1,195 lbs	1,315 lbs	1,900 lbs
	327 kg	542 kg	542 kg	597 kg	862 kg
Operating Weight	810 lbs	1,380 lbs	1,380 lbs	1,500 lbs	2,315 lbs
	367 kg	626 kg	626 kg	680 kg	1,050 kg

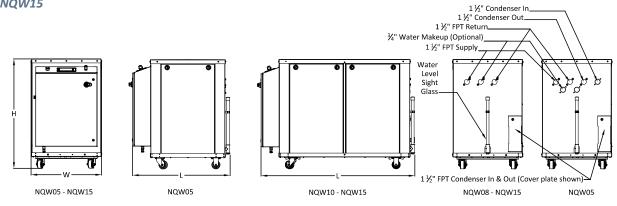


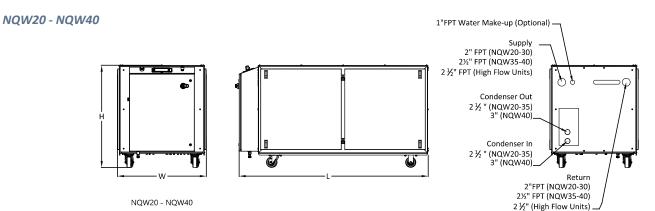
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Water Cooled Condenser Chillers (additional models)	NQW25	NQW30	NQW35	NQW40
Cooling Capacity ¹	28 tons 98 kW	33 tons 116 kW	38 tons 134 kW	43 tons 151 kW
Set Point Range	20 to 80°F	20 to 80°F	20 to 80°F	20 to 80°F
	-7 to 27°C	-7 to 27°C	-7 to 27°C	-7 to 27°C
Compressor (qty)	2	2	2	2
Sound Pressure @ 1 meter (dBA)	74	75	77	78
Pump Motor Size	5 hp	5 hp	5 hp	5 hp
	3.7 kW	3.7 kW	3.7 kW	3.7 kW
Pump Flow	67 gpm	79 gpm	92 gpm	102 gpm
	254 lpm	299 lpm	348 lpm	386 lpm
Net Available Pump Pressure ²	44 psi	39 psi	38 psi	34 psi
	3.0 bar	2.7 bar	2.6 bar	2.3 bar
Reservoir Holding Capacity	60 gal	67 gal	67 gal	67 gal
	227 L	254 L	254 L	254 L
Dimensions	87 x 41 x 47	105 x 41 x 47	105 x 41 x 47	105 x 41 x 47
L x W x H inch	(2,210 x 1,041	(2,667 x 1,041	(2,667 x 1,041	(2,667 x 1,041
(mm)	x 1,194)	x 1,194)	x 1,194)	x 1,194)
Shipping Weight	2,100 lbs	2,250 lbs	3,400 lbs	3,900 lbs
	953 kg	1,021 kg	1,542 kg	1,769 kg
Operating Weight	2,515 lbs	2,810 lbs	3,960 lbs	4,460 lbs
	1,141 kg	1,275 kg	1,796 kg	2,023 kg

¹Cooling tons based on 12,000 BTU/Hr/ton with 50°F (10°C) leaving coolant and 85°F (29°C) condenser water, R410A or R454B refrigerant. ²Net available pressure at outlet of chiller is pump discharge pressure less the internal pressure loss through the fluid circuit.

NQW05 - NQW15







Remote Air Cooled Condenser Chillers	NQR05	NQR08	NQR10	NQR15	NQR20
Cooling Capacity ¹	5 tons	8 tons	11 tons	15 tons	21 tons
	18 kW	28 kW	39 kW	53 kW	74 kW
Set Point Range	20 to 80°F				
	-7 to 27°C				
Compressor (qty)	1	1	1	1	2
Sound Pressure @ 1 meter (dBA) ²	70	70	71	73	74
Pump Motor Size	2 hp	2 hp	3 hp	3 hp	5 hp
	1.5 kW	1.5 kW	2.2 kW	2.2 kW	3.7 kW
Pump Flow	13 gpm	18 gpm	27 gpm	36 gpm	50 gpm
	49 lpm	68 lpm	102 lpm	136 lpm	189 lpm
Net Available Pump Pressure ³	40 psi	41 psi	48 psi	40 psi	44 psi
	2.8 bar	2.8 bar	3.3 bar	2.8 bar	3.0 bar
Reservoir Holding Capacity	14 gal	30 gal	30 gal	30 gal	60 gal
	53 L	114 L	114 L	114 L	227 L
Dimensions	48 x 34 x 53	75 x 34 x 53	75 x 34 x 53	75 x 34 x 53	87 x 41 x 47
L x W x H inch	(1,219 x 864	(1,905 x 864	(1,905 x 864	(1,905 x 864	(2,210 x 1,041
(mm)	x 1,346)	x 1,346)	x 1,346)	x 1,346)	x 1,194)
Shipping Weight	720 lbs	1,195 lbs	1,195 lbs	1,315 lbs	1,900 lbs
	327 kg	542 kg	542 kg	597 kg	862 kg
Operating Weight	810 lbs	1,380 lbs	1,380 lbs	1,500 lbs	2,315 lbs
	367 kg	626 kg	626 kg	680 kg	1,050 kg

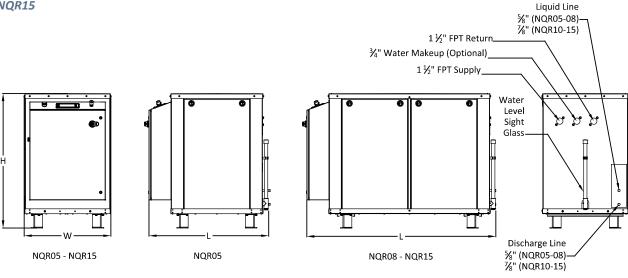
Remote Air Cooled Condenser Chillers (additional models)	NQR25	NQR30	NQR35	NQR40
Cooling Capacity ¹	26 tons 91 kW	31 tons 109 kW	35 tons 123 kW	40 tons 141 kW
Set Point Range	20 to 80°F	20 to 80°F	20 to 80°F	20 to 80°F
	-7 to 27°C	-7 to 27°C	-7 to 27°C	-7 to 27°C
Compressor (qty)	2	2	2	2
Sound Pressure @ 1 meter (dBA) ²	74	75	77	78
Pump Motor Size	5 hp	5 hp	5 hp	5 hp
	3.7 kW	3.7 kW	3.7 kW	3.7 kW
Pump Flow	61 gpm	73 gpm	83 gpm	92 gpm
	231 lpm	276 lpm	314 lpm	348 lpm
Net Available Pump Pressure ³	47 psi	43 psi	42 psi	40 psi
	3.2 bar	2.9 bar	2.9 bar	2.8 bar
Reservoir Holding Capacity	60 gal	67 gal	67 gal	67 gal
	227 L	254 L	254 L	254 L
Dimensions	87 x 41 x 47	105 x 41 x 47	105 x 41 x 47	105 x 41 x 47
L x W x H inch	(2,210 x 1,041	(2,667 x 1,041	(2,667 x 1,041	(2,667 x 1,041
(mm)	x 1,194)	x 1,194)	x 1,194)	x 1,194)
Shipping Weight	2,100 lbs	2,250 lbs	3,400 lbs	3,900 lbs
	953 kg	1,021 kg	1,542 kg	1,769 kg
Operating Weight	2,515 lbs	2,810 lbs	3,960 lbs	4,460 lbs
	1,141 kg	1,275 kg	1,796 kg	2,023 kg

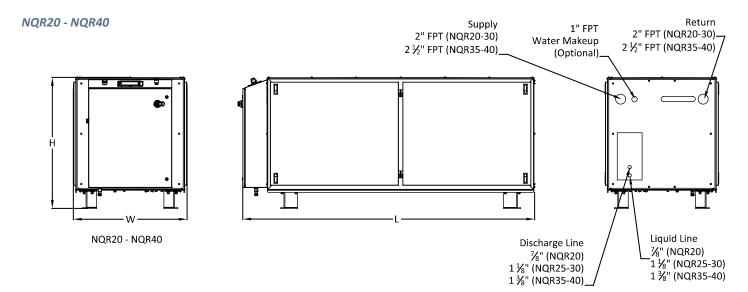
¹Cooling tons based on 12,000 BTU/Hr/ton with 50°F (10°C) leaving coolant and 95°F (35°C) ambient air, R410A or R454B refrigerant.

³Net available pressure at outlet of chiller is pump discharge pressure less the internal pressure loss through the fluid circuit.



²Sound pressure is for the chiller unit only. See the Remote Air-Cooled Condenser table for remote condenser sound pressures.





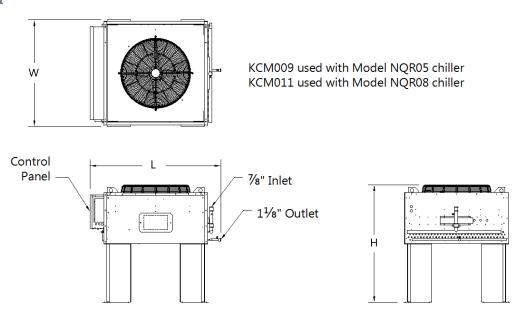
Remote Air Cooled Condensers	ксм009	KCM011	KCM014	KCL023	KCL030		
Chiller Used With	NQR05	NQR08	NQR10	NQR15	NQR20		
Fans (qty)	1	1	2	2	2		
Dimensions L x W x H inch (mm)	54 x 44 x 48 (1,372 x 1,118 x 1,219)	54 x 44 x 48 (1,372 x 1,118 x 1,219)	94 x 44 x 48 (2,388 x 1,118 x 1,219)	126 x 46 x 54 (3,200 x 1,168 x 1,372)	126 x 46 x 54 (3,200 x 1,168 x 1,372)		
Shipping Weight	245 lbs 111 kg	265 lbs 120 kg	415 lbs 188 kg	680 lbs 308 kg	720 lbs 327 kg		
Operating Weight	Varies based on system charge and operating conditions						



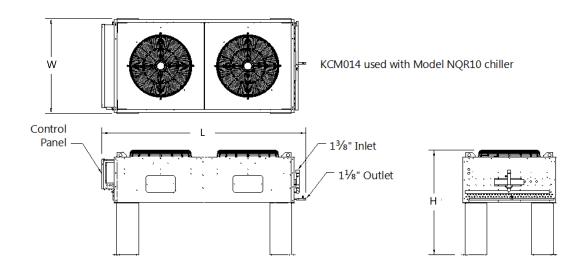
Remote Air Cooled Condensers (additional models)	KCL037	KCL045	KCL054	KCL056		
Chiller Used With	NQR25	NQR30	NQR35	NQR40		
Fans (qty)	2	3	3	3		
Dimensions L x W x H inch (mm)	126 x 46 x 54 (3,200 x 1,168 x 1,372)	181 x 46 x 54 (4,597 x 1,168 x 1,372)	181 x 46 x 54 (4,597 x 1,168 x 1,372)	181 x 46 x 54 (4,597 x 1,168 x 1,372)		
Shipping Weight	Shipping Weight 1,050 lbs 476 kg		1,175 lbs 533 kg	1,450 lbs 658 kg		
Operating Weight	Varies based on system charge and operating conditions					

¹MCA is Minimum Circuit Amps with standard condenser fan(s) and pump under full load, used for minimum wire size requirement. ²MOP is Maximum Overcurrent Protection with standard condenser fans and pump, used for sizing main power protection devices.

KCM009 & KCM011

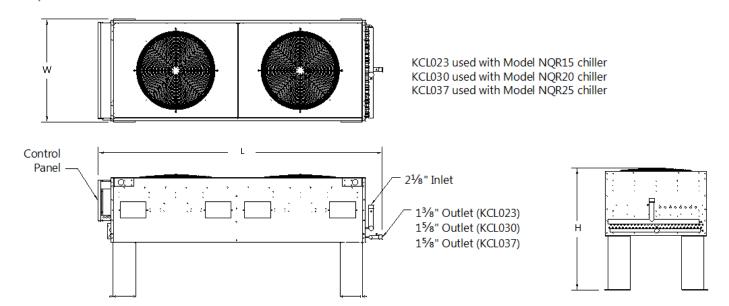


KCM014

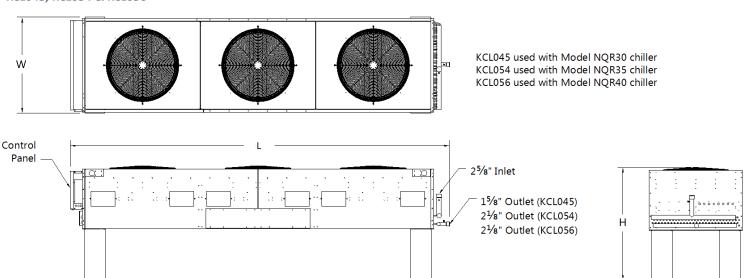




KCL023, KCL030 & KCL037



KCL045, KCL054 & KCL056





ELECTRICAL DATA (60 Hz)

Air Cooled Condenser	Pump Motor		Voltage ୭ 208		Voltage ଡ଼ି 230		Voltage ୭ 460		Voltage D 575
Chillers	Size	MCA ¹	MOP ²	MCA ¹	MOP ²	MCA ¹	MOP ²	MCA ¹	MOP ²
NQA04	2 hp 1.5 kW	N/A	N/A	38	60	19	30	N/A	N/A
NQA05	2 hp 1.5 kW	N/A	N/A	50	80	23	40	N/A	N/A
NQA08	2 hp 1.5 kW	N/A	N/A	54	90	28	45	N/A	N/A
NQA10	3 hp 2.2 kW	N/A	N/A	73	125	36	60	N/A	N/A
NQA13	3 hp 2.2 kW	N/A	N/A	79	150	41	70	N/A	N/A
NQA15	3 hp 2.2 kW	N/A	N/A	88	150	46	80	N/A	N/A
NQA20	5 hp 3.7 kW	N/A	N/A	128	175	62	90	N/A	N/A
NQA25	5 hp 3.7 kW	N/A	N/A	139	200	71	100	N/A	N/A
NQA30	5 hp 3.7 kW	N/A	N/A	164	225	86	125	N/A	N/A

Water Cooled	Pump Motor	· FLA (@ 206 1			Voltage ଡ଼ି 230		Voltage ଡ଼ 460	Rated \ FLA @	
Condenser Chillers	Size	MCA ¹	MOP ²	MCA ¹	MOP ²	MCA ¹	MOP ²	MCA ¹	MOP ²
NQW05	2 hp 1.5 kW	N/A	N/A	47	50	21	35	N/A	N/A
NQW08	2 hp 1.5 kW	N/A	N/A	48	80	26	45	N/A	N/A
NQW10	3 hp 2.2 kW	N/A	N/A	67	125	32	60	N/A	N/A
NQW15	3 hp 2.2 kW	N/A	N/A	80	150	41	70	N/A	N/A
NQW20	5 hp 3.7 kW	N/A	N/A	111	175	53	80	N/A	N/A
NQW25	5 hp 3.7 kW	N/A	N/A	122	175	62	90	N/A	N/A
NQW30	5 hp 3.7 kW	N/A	N/A	139	200	72	100	N/A	N/A
NQW35	5 hp 3.7 kW	N/A	N/A	165	250	82	125	N/A	N/A
NQW40	5 hp 3.7 kW	N/A	N/A	186	300	90	150	N/A	N/A



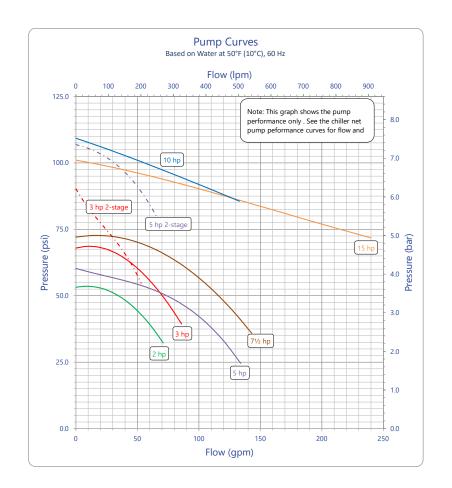
Remote Air Cooled	Pump Motor				Voltage ୭ 230		Voltage ୭ 460		Voltage ଭୁ 575
Condenser Chillers	Size	MCA ¹	MOP ²						
NQR05	2 hp 1.5 kW	N/A	N/A	47	80	21	35	N/A	N/A
NQR08	2 hp 1.5 kW	N/A	N/A	48	80	26	45	N/A	N/A
NQR10	3 hp 2.2 kW	N/A	N/A	67	125	32	60	N/A	N/A
NQR15	3 hp 2.2 kW	N/A	N/A	80	150	41	70	N/A	N/A
NQR20	5 hp 3.7 kW	N/A	N/A	111	175	53	80	N/A	N/A
NQR25	5 hp 3.7 kW	N/A	N/A	122	175	62	90	N/A	N/A
NQR30	5 hp 3.7 kW	N/A	N/A	139	200	72	100	N/A	N/A
NQR35	5 hp 3.7 kW	N/A	N/A	165	250	82	125	N/A	N/A
NQR40	5 hp 3.7 kW	N/A	N/A	186	300	90	150	N/A	N/A

Remote Air Cooled Condensers	Rated Voltage FLA @ 208		Rated Voltage FLA @ 230		Rated Voltage FLA @ 460		Rated Voltage FLA @ 575	
	MCA ¹	MOP ²						
КСМ009	N/A	N/A	N/A	N/A	1.4	15	N/A	N/A
KCM011	N/A	N/A	N/A	N/A	1.4	15	N/A	N/A
KCM014	N/A	N/A	N/A	N/A	2.6	15	N/A	N/A
KCL023	N/A	N/A	N/A	N/A	7	15	N/A	N/A
KCL030	N/A	N/A	N/A	N/A	7	15	N/A	N/A
KCL037	N/A	N/A	N/A	N/A	7	15	N/A	N/A
KCL045	N/A	N/A	N/A	N/A	10.1	15	N/A	N/A
KCL054	N/A	N/A	N/A	N/A	10.1	15	N/A	N/A
KCL056	N/A	N/A	N/A	N/A	10.1	15	N/A	N/A

¹MCA is Minimum Circuit Amps, used for minimum wire size requirement.



²MOP is Maximum Overcurrent Protection, used for sizing main power protection device.







Thermal Care is ISO 9001 Certified

Manufacturer reserves the right to change specification or design without notification or obligation.



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