



LQ Family of Chillers

General

The LQ Series portable chillers are designed for indoor use in industrial manufacturing locations. The chillers are produced in our ISO 9001:2000 certified facility. Water-cooled and air-cooled units ship with a full refrigerant charge. Units with a remote air-cooled condenser ship with a nitrogen charge. All units are housed in a heavy gauge painted steel cabinet with tool-free access.

Mechanical Features

- Energy efficient and reliable scroll compressor(s)
- Electronic hot gas bypass for capacity control
- Stainless steel brazed plate evaporator provides higher heat transfer coefficients due to reduced fouling.
- (Air-Cooled Units) Generously sized copper tube/aluminum finned air-cooled condensers designed for industrial environments. Includes air inlet filters.
- (Water-Cooled Units) Generously sized cleanable shell-and-tube water-cooled condenser for industrial environments.
- (Remote Condenser Units) Modular design with divided fan sections to prevent 'wind-milling' during fan cycling. Includes galvanized steel fan sections and coil baffles, copper tube/aluminum fin coils tested to 400 PSIG, direct drive multi-blade propeller fans with venture orifices to optimize efficiency, and a nitrogen holding charge.
- (Water-Cooled Units) Condenser water regulating valve to provide constant head pressure
- Refrigerant TXV, filter/drier, and sight glass
- Freezestat safety switch with solid state sensor
- Encapsulated high and low refrigerant pressure safeties
- Nonferrous water circuit construction

- Insulated polyethylene reservoir with removable cover
- Stainless steel process pump with pressure gauge
- Fail safe flow switch interlocked with compressor
- Y-strainer to protect evaporator from contamination
- Internal valved bypass line to protect pump and evaporator
- (Air and Water-Cooled Units) Factory tested under full load conditions prior to shipment

Electrical Features

- NEMA-12 electrical enclosure with single point electrical connection
- Control transformer to provide 115V/1/60 control voltage
- Compressor, pump and condenser fan (air-cooled units only) starters mounted in control panel and wired to motors
- Single-point main power block for simple wiring connection

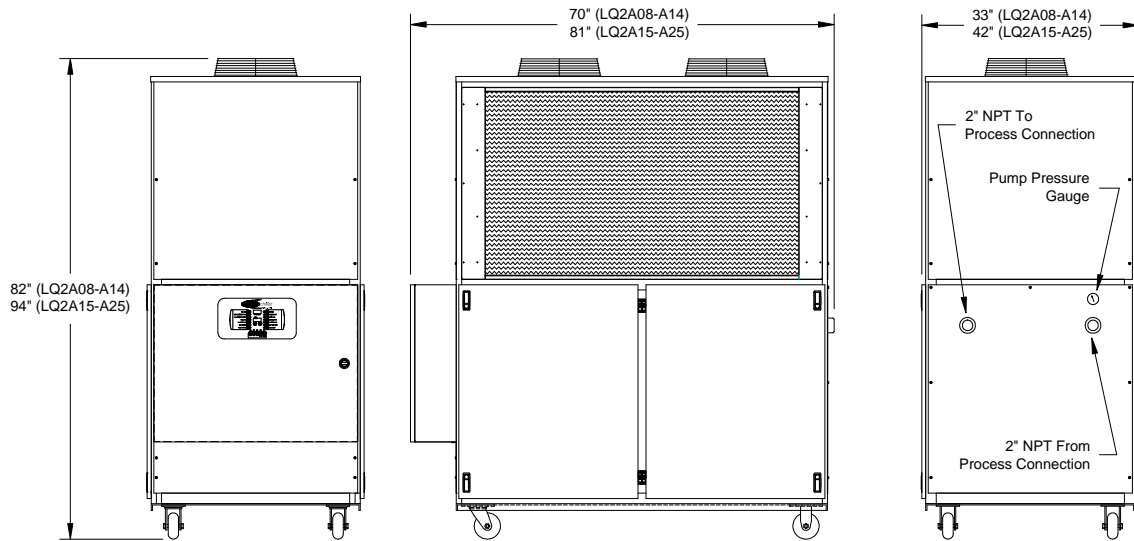
Microprocessor Features

- Dual LED digital displays of actual and set point temperatures
- Anti-cycle 2.5 minute timer to prevent short-cycling of compressor
- Deviation alarm 30 minute timer delay to prevent nuisance alarms during start-up and set point changes
- Display temperatures easily switched from °F to °C from the front panel
- Easy front panel alarm reset button
- Diagnostic lights: no flow, high refrigerant pressure, low refrigerant pressure, freezestat, over set point, under set point, pump on, compressor on, partial load, water make-up (active if option is purchased), low water level (active if option is purchased), high water temperature and probe fault
- Operation lights: control power on, start, stop, alarm reset, alarm horn silence (active if option is purchased)
- PID control algorithm

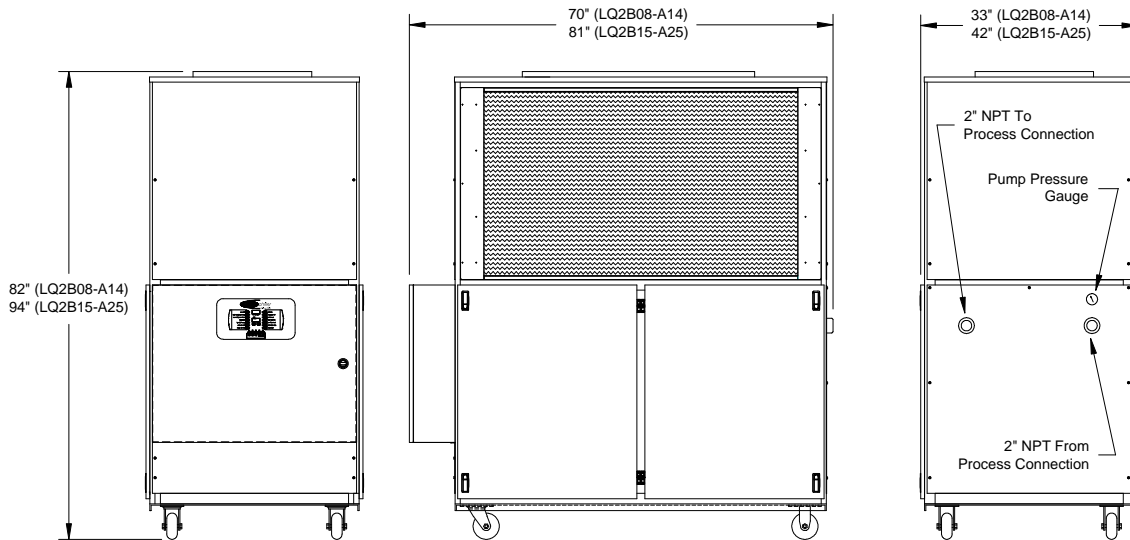
Warranty

- 5 year parts warranty for microprocessor with a lifetime \$175 exchange policy after initial 5 year warranty period
- 18 months parts warranty
- 1 year labor warranty

LQ2A Series Air-Cooled Chillers With Fans



LQ2B Series Air-Cooled Chillers With Blowers

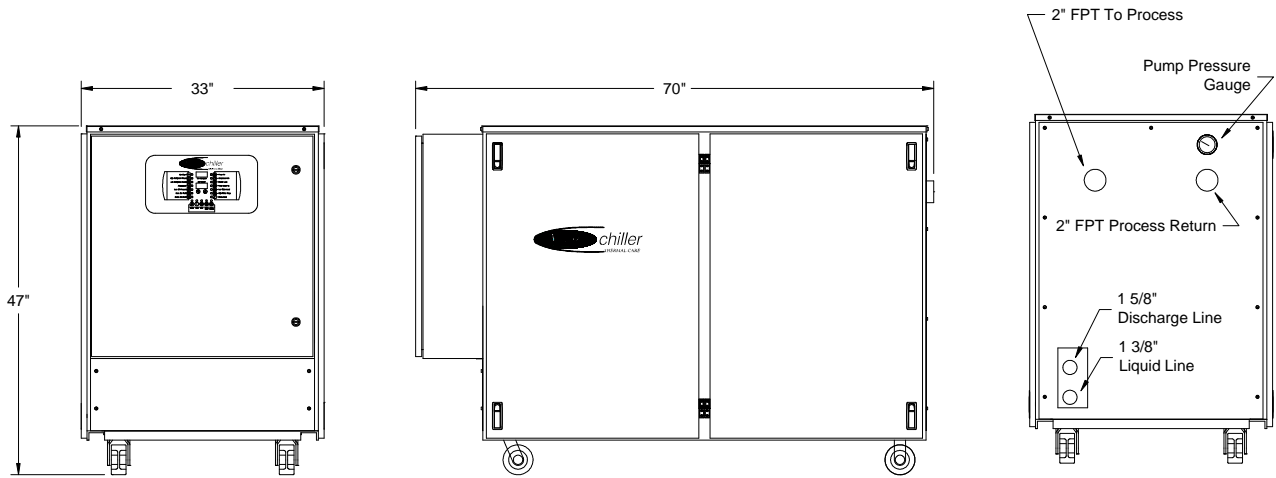


| Model | Cooling Tons ¹ | Set Point Range °F | Refrigerant Type | Condenser Fan Air Flow CFM | Standard Pump | | | Unit MCA @ 460/3/60 | Shipping Weight Lbs. |
|---------------------|---------------------------|--------------------|------------------|----------------------------|---------------|-----|-----|---------------------|----------------------|
| | | | | | HP | GPM | PSI | | |
| LQ2A08 | 7.0 | 20 – 80 | HCFC-22 | 10,000 | 1½ | 17 | 40 | 22 | 1,650 |
| LQ2A10 | 10.0 | 20 – 80 | HCFC-22 | 10,000 | 1½ | 24 | 37 | 27 | 1,800 |
| LQ2A14 | 13.6 | 20 – 80 | HCFC-22 | 10,000 | 1½ | 33 | 34 | 42 | 2,000 |
| LQ2A15 | 15.0 | 20 – 80 | HCFC-22 | 14,000 | 3 | 36 | 57 | 46 | 3,200 |
| LQ2A20 ² | 20.0 | 20 – 80 | HCFC-22 | 14,000 | 3 | 48 | 52 | 53 | 3,300 |
| LQ2A25 ² | 23.2 | 20 – 80 | HCFC-22 | 14,000 | 5 | 56 | 74 | 68 | 3,800 |
| LQ2B08 | 7.0 | 20 – 80 | HCFC-22 | 10,000 | 1½ | 17 | 40 | 27 | 1,750 |
| LQ2B10 | 10.0 | 20 – 80 | HCFC-22 | 10,000 | 1½ | 24 | 37 | 31 | 1,900 |
| LQ2B14 | 13.6 | 20 – 80 | HCFC-22 | 10,000 | 1½ | 33 | 34 | 47 | 2,100 |
| LQ2B15 | 15.0 | 20 – 80 | HCFC-22 | 14,000 | 3 | 36 | 57 | 49 | 3,300 |
| LQ2B20 ² | 20.0 | 20 – 80 | HCFC-22 | 14,000 | 3 | 48 | 52 | 61 | 3,400 |
| LQ2B25 ² | 23.2 | 20 – 80 | HCFC-22 | 14,000 | 5 | 56 | 74 | 76 | 3,900 |

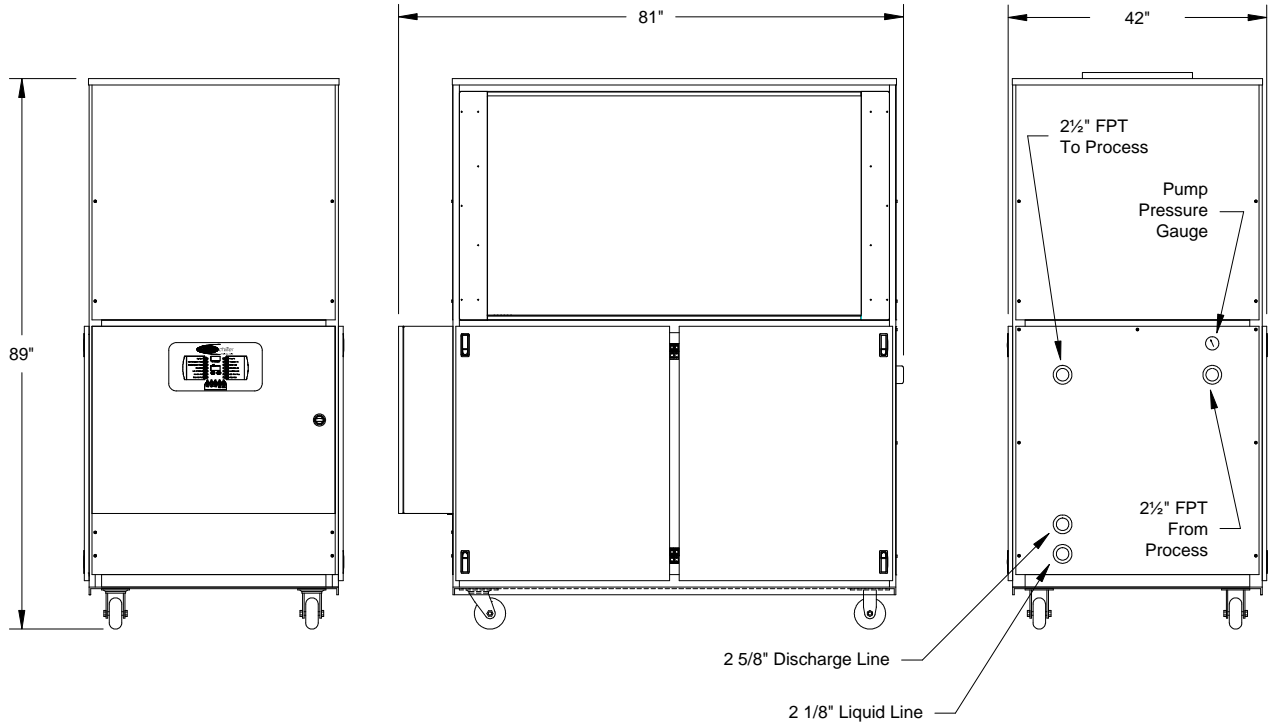
¹Cooling tons based on 12,000 BTU/Hr/ton with 50°F leaving coolant and 95°F ambient air

²Uses multiple compressors in one common refrigerant circuit

LQ2R08 to LQ2R30 Remote Condenser Chillers



LQ2R35 to LQ2R40 Remote Condenser Chillers

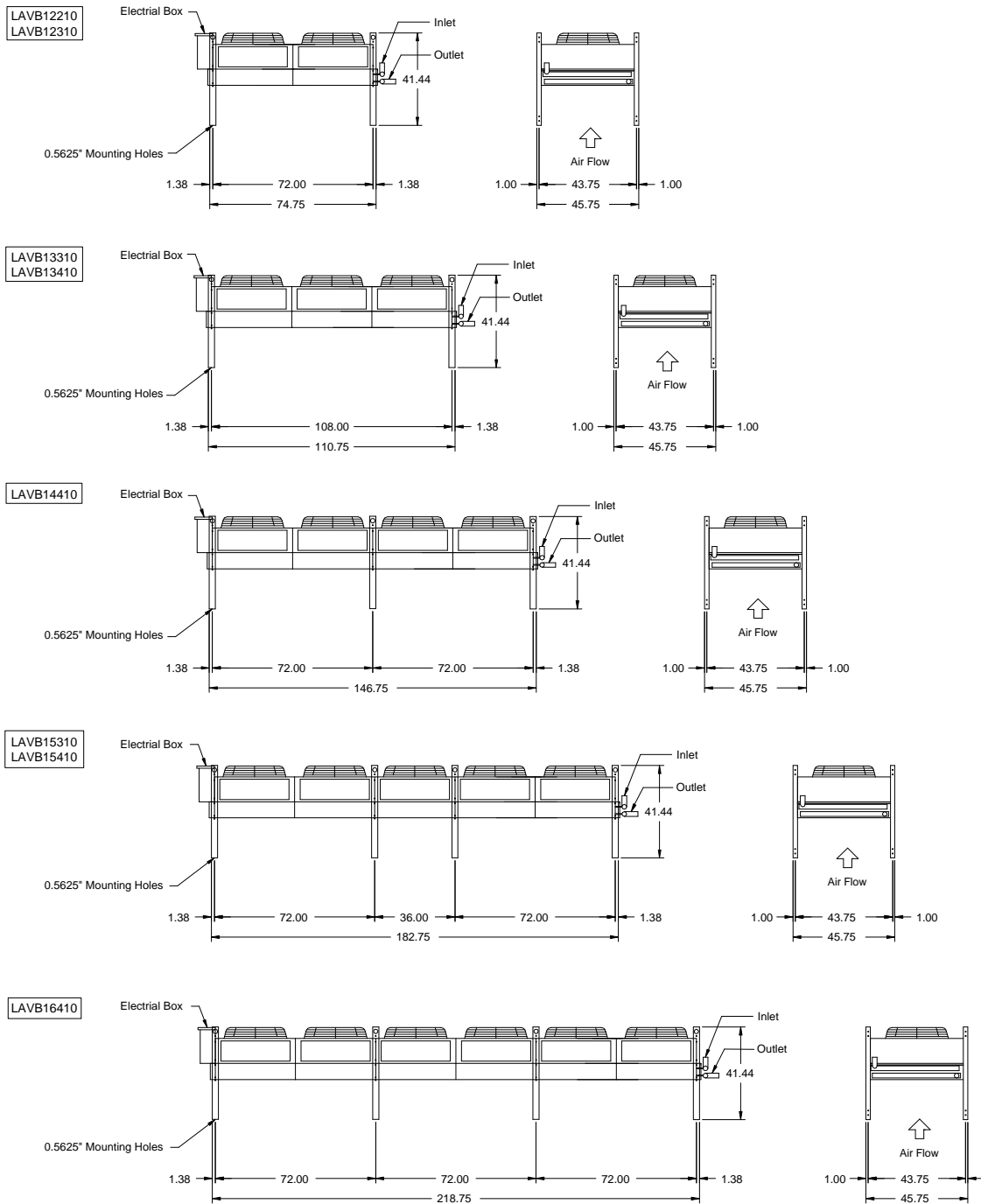


| Model | Cooling Tons ¹ | Set Point Range °F | Refrigerant Type | Standard Pump | | | Unit MCA @ 460/3/60 | Shipping Weight Lbs. |
|---------------------|---------------------------|--------------------|------------------|---------------|-----|-----|---------------------|----------------------|
| | | | | HP | GPM | PSI | | |
| LQ2R08 | 7.0 | 20 – 80 | HCFC-22 | 1½ | 17 | 40 | 18 | 1,200 |
| LQ2R10 | 10.0 | 20 – 80 | HCFC-22 | 1½ | 24 | 37 | 22 | 1,300 |
| LQ2R15 | 14.4 | 20 – 80 | HCFC-22 | 3 | 35 | 47 | 40 | 1,500 |
| LQ2R20 ² | 20.0 | 20 – 80 | HCFC-22 | 3 | 51 | 51 | 47 | 1,900 |
| LQ2R25 ² | 23.2 | 20 – 80 | HCFC-22 | 5 | 63 | 67 | 58 | 2,100 |
| LQ2R30 ² | 28.8 | 20 – 80 | HCFC-22 | 5 | 75 | 65 | 71 | 2,250 |
| LQ2R35 ² | 34.4 | 20 – 80 | HCFC-22 | 5 | 83 | 62 | 79 | 3,400 |
| LQ2R40 ² | 40.0 | 20 – 80 | HCFC-22 | 7½ | 96 | 63 | 88 | 3,900 |

¹Cooling tons based on 12,000 BTU/Hr/ton with 50°F leaving coolant and 95°F ambient air

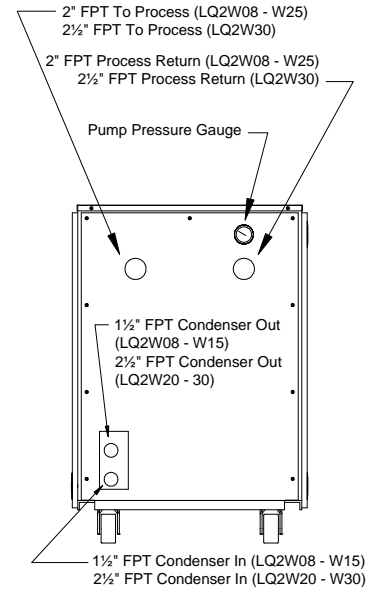
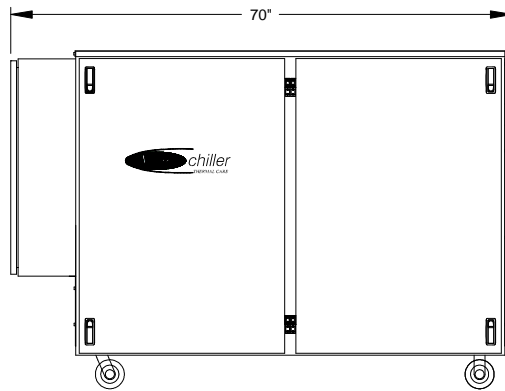
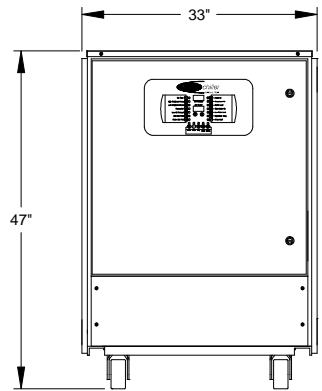
²Uses multiple compressors in one common refrigerant circuit

Remote Condensers (used with LQ2R Series Chillers)

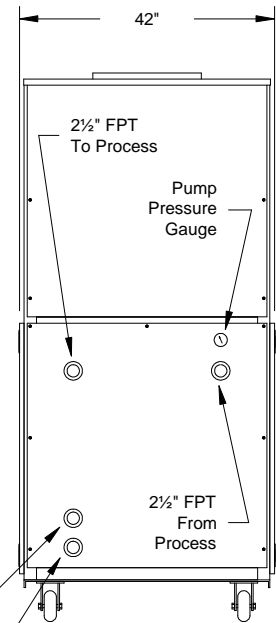
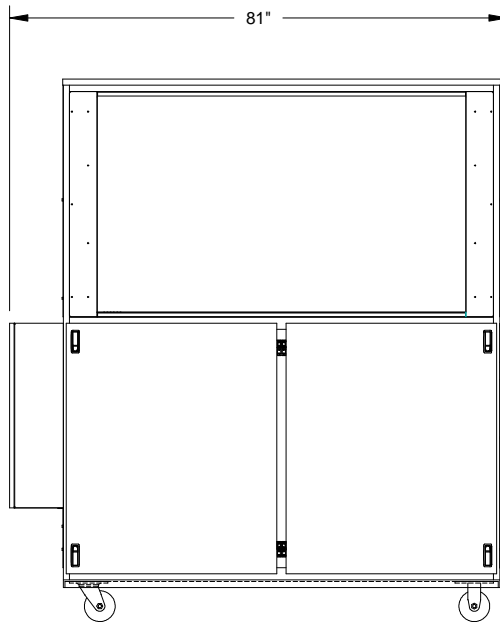
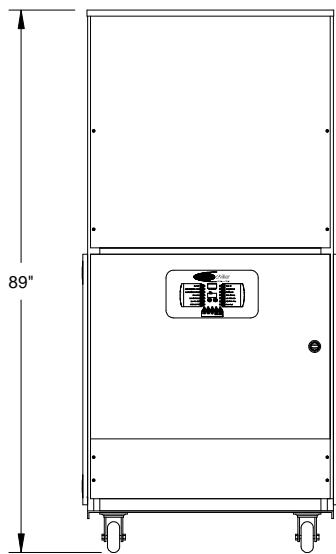


| Model | Chiller Model Used With | Refrigerant Type | Condenser Air Flow CFM | Connection Size (inch) | | Condenser Fans | | Unit MCA @ 460/3/60 | Shipping Weight Lbs. |
|-----------|-------------------------|------------------|------------------------|------------------------|--------|----------------|---------|---------------------|----------------------|
| | | | | Inlet | Outlet | Qty | HP Each | | |
| LAVB12210 | LQ2R08 | HCFC-22 | 13,500 | 1 3/8 | 1 1/8 | 2 | 1/2 | 5 | 355 |
| LAVB12310 | LQ2R10 | HCFC-22 | 12,800 | 1 5/8 | 1 3/8 | 2 | 1/2 | 5 | 375 |
| LAVB13310 | LQ2R15 | HCFC-22 | 19,200 | 2 1/8 | 1 5/8 | 3 | 1/2 | 7 | 560 |
| LAVB13410 | LQ2R20 | HCFC-22 | 18,000 | 2 5/8 | 2 1/8 | 3 | 1/2 | 7 | 600 |
| LAVB14410 | LQ2R25 | HCFC-22 | 24,000 | 2 5/8 | 2 1/8 | 4 | 1/2 | 9 | 900 |
| LAVB15310 | LQ2R30 | HCFC-22 | 32,000 | 2 5/8 | 2 1/8 | 5 | 1/2 | 11 | 865 |
| LAVB15410 | LQ2R35 | HCFC-22 | 30,000 | 2 5/8 | 2 5/8 | 5 | 1/2 | 11 | 950 |
| LAVB16410 | LQ2R40 | HCFC-22 | 35,850 | 2 5/8 | 2 5/8 | 6 | 1/2 | 13 | 1,150 |

LQ2W08 to LQ2W30 Water Cooled Chillers



LQ2W35 to LQ2W40 Water Cooled Chillers



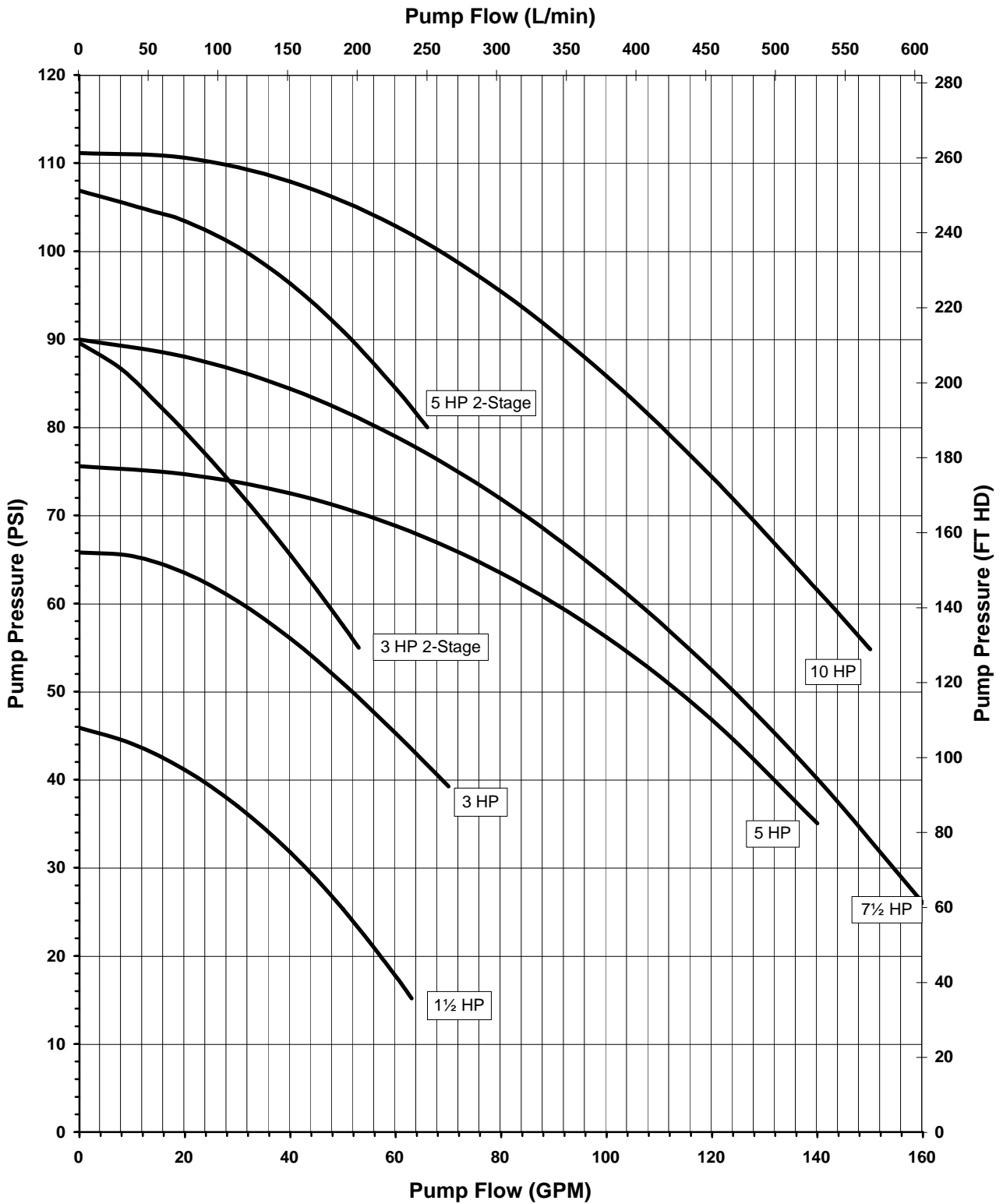
2 1/2" FPT (LQ2W35), 3" FPT (LQ2W40)
Condenser Water Out
2 1/2" FPT (LQ2W35), 3" FPT (LQ2W40)
Condenser Water In

| Model | Cooling Tons ¹ | Set Point Range °F | Refrigerant Type | Condenser Water GPM | Standard Pump | | | Unit MCA @ 460/3/60 | Shipping Weight Lbs. |
|---------------------|---------------------------|--------------------|------------------|---------------------|---------------|-----|-----|---------------------|----------------------|
| | | | | | HP | GPM | PSI | | |
| LQ2W08 | 7.5 | 20 – 80 | HCFC-22 | 23 | 1 1/2 | 18 | 39 | 18 | 1,200 |
| LQ2W10 | 10.6 | 20 – 80 | HCFC-22 | 32 | 1 1/2 | 25 | 37 | 22 | 1,300 |
| LQ2W15 | 15.5 | 20 – 80 | HCFC-22 | 47 | 3 | 37 | 56 | 40 | 1,500 |
| LQ2W20 ² | 21.2 | 20 – 80 | HCFC-22 | 64 | 3 | 51 | 51 | 47 | 1,900 |
| LQ2W25 ² | 26.1 | 20 – 80 | HCFC-22 | 79 | 5 | 63 | 67 | 58 | 2,100 |
| LQ2W30 ² | 31.0 | 20 – 80 | HCFC-22 | 93 | 5 | 75 | 65 | 71 | 2,250 |
| LQ2W35 ² | 35.0 | 20 – 80 | HCFC-22 | 105 | 5 | 83 | 62 | 79 | 3,400 |
| LQ2W40 ² | 40.0 | 20 – 80 | HCFC-22 | 120 | 7 1/2 | 96 | 63 | 88 | 3,900 |

¹Cooling tons based on 12,000 BTU/Hr/ton with 50°F leaving coolant and 85°F condenser water

²Uses multiple compressors in one common refrigerant circuit

Pump Curves (60 Hz)



Unit MCA @ 460/3/60 with Optional Pumps

| Pump | 1½ HP | 3 HP | 3 HP 2-stage | 5 HP | 5 HP 2-Stage | 7½ HP | 10 HP |
|-------------|--------------|-------------|-------------------------|-------------|-------------------------|--------------|--------------|
| LQ2A08 | 22 | 24 | 24 | 28 | 28 | 30 | --- |
| LQ2A10 | 26 | 28 | 28 | 32 | 32 | 35 | --- |
| LQ2A14 | 42 | 44 | 44 | 48 | 48 | 51 | --- |
| LQ2A15 | --- | 46 | 46 | 50 | 50 | 53 | 58 |
| LQ2A20 | --- | 53 | 53 | 57 | 57 | 60 | 65 |
| LQ2A25 | --- | --- | --- | 69 | 69 | 71 | 76 |
| LQ2B08 | 26 | 28 | 28 | 32 | 32 | 35 | --- |
| LQ2B10 | 31 | 33 | 33 | 37 | 37 | 40 | --- |
| LQ2B14 | 47 | 49 | 49 | 53 | 53 | 56 | --- |
| LQ2B15 | --- | 49 | 49 | 53 | 53 | 56 | 61 |
| LQ2B20 | --- | 61 | 61 | 65 | 65 | 67 | 72 |
| LQ2B25 | --- | --- | --- | 76 | 76 | 79 | 84 |
| LQ2R08 | 18 | 19 | 19 | 23 | 23 | 26 | --- |
| LQ2R10 | 22 | 24 | 24 | 28 | 28 | 31 | --- |
| LQ2R15 | --- | 40 | 40 | 44 | 44 | 47 | 53 |
| LQ2R20 | --- | 47 | 47 | 51 | 51 | 54 | 59 |
| LQ2R25 | --- | --- | --- | 63 | 63 | 65 | 70 |
| LQ2R30 | --- | --- | --- | 71 | 82 | 75 | 80 |
| LQ2R35 | --- | --- | --- | 79 | 79 | 82 | 87 |
| LQ2R40 | --- | --- | --- | --- | --- | 88 | 93 |
| LQ2W08 | 18 | 19 | 19 | 23 | 23 | 26 | --- |
| LQ2W10 | 22 | 24 | 24 | 28 | 28 | 31 | --- |
| LQ2W15 | --- | 40 | 40 | 44 | 44 | 47 | 53 |
| LQ2W20 | --- | 47 | 47 | 51 | 51 | 54 | 59 |
| LQ2W25 | --- | --- | --- | 63 | 63 | 65 | 70 |
| LQ2W30 | --- | --- | --- | 71 | 82 | 75 | 80 |
| LQ2W35 | --- | --- | --- | 79 | 79 | 82 | 87 |
| LQ2W40 | --- | --- | --- | --- | --- | 88 | 93 |



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