



## Product Data

# Split System Heat Pump Outdoor Unit

6 to 20 Nominal Tons



## Gemini®



38AXQ07-25 60 Hz Heat Pump Outdoor Unit Split  
System with Puron Advance™ (R-454B) Refrigerant

## Introducing Carrier's new Gemini™ heat pump condensing units with Puron Advance™ — offering maximum flexibility for even the most demanding jobs.

Major design features of 38AXQ heat pump condensing units include:

- Puron Advance (R-454B) refrigerant, which delivers a 75% reduction in global warming potential (GWP) compared to the original Puron. Puron Advance's GWP of 466 easily exceeds the EPA (Environmental Protection Agency) requirement of <700 GWP
- Single circuit, two-stage, and dual circuit, three-stage designs for maximum performance and flexibility in new construction and replacement situations
- Economical cooling designs with a rugged, dependable build
- Cooling capability up to 125°F (52°C) ambient and down to 35°F (2°C) ambient standard

### Installation flexibility

Carrier knows that split system installations are never easy. For that reason 38AXQ units were designed with application flexibility in mind. With a variety of offerings in single circuit, two-stage models (two pipe) and dual circuit, three-stage models (4 pipe), our heat pump condensing units can handle a variety of site design requirements. With piping guidelines similar to legacy R-410A and R-22 systems, replacements are easier than ever. All dissipation equipment is pre-installed in the 40RLQ heat pump fan coil and works seamlessly with the 38AXQ condensing unit through standard thermostat connections.

38AXQ products can be mounted on grade, on rails, or on a roof, and can accommodate air handlers installed above or below the condensing unit. That flexibility is perfect for decorative buildings like churches with pitched roofs where rooftop cooling equipment may not be practical or buildings that were originally designed without air conditioning.

Now, rather than mount an entire curb, all you need is a location to mount a fan coil and a few small holes for piping to pass through to keep occupants comfortable all year round. For complete product information and installation requirements, please consult the rest of this document and installation manuals.

### Efficient operation

Our heat pump condensing units are tested and designed with our matched 40RLQ heat pump air handlers. This ensures reliable operation by minimizing issues with piping design and oil return. All systems are tested in accordance with AHRI standard 340/360 and offer IEERs up to 15.3. Increased IEER values help reduce overall operating cost and energy consumption.

### Factory-installed options (FIOPs)

Pre-engineered and certified factory-installed options (FIOPs) minimize installation time at site, reducing installation cost.

FIOPs include:

- Low ambient controls which provide cooling operation down to -20°F (-29°C) ambient temperatures
- Non-fused disconnect
- Special coil coating protection
- Louvered hail guards

For situations where time is critical Carrier also offers a full line of field

installed accessories to upgrade stocked equipment at site to meet customer needs.

### Constructed for a long life

The 38AXQ heat pump condensing units are designed and built to last. Featuring our new Puron Advance™ R-454B refrigerant, our split systems can be customized to suit a variety of building designs. Where conditions require, special coil coatings and coil protection are available and cabinets are constructed of pre-painted galvanized steel, delivering unparalleled protection from the environment to ensure long life, good looks, and reliable operation. Onboard Comfort Alert™<sup>1</sup> diagnostic controls are included standard to enhance system protection and reliability. When there is an issue, valuable diagnostic information is easily readable to get equipment back up and running fast.

### Controls for performance dependability

The 38AXQ heat pump condensing units offer operating controls and components designed for dependable performance. The high efficiency hermetic scroll compressors are engineered for long life and durability and include vibration isolation for quiet operation. High-pressure switches protect the entire refrigeration system from abnormally high operating pressures and a low-pressure switch protects the system from loss of charge. These units also include anti-short-cycling protection, which helps to guard the units against compressor failure. All units include a crankcase heater to eliminate liquid slugging at start-up. Each unit comes standard with the Comfort Alert control system which provides:

- System Go LED indicator
- Fault LED indicator
- Compressor fault LED indicator
- Phase loss protection
- Phase reversal protection
- Safety pressure indicator
- Anti-short cycle protection

Innovative Carrier 40RLQ packaged heat pump air handlers are custom matched to 38AXQ condensing units. The 40RLQ Series has excellent fan performance, efficient heat pump coils, a unique combination of indoor-air quality features, and easy installation. Its versatility and state-of-the-art features help to ensure economical performance of the split system both

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now and in the future. See separate product data for more details.

### Heat pump flexibility

38AXQ heat pump models offer onboard electromechanical heating standard. Our systems are tested for reliable reverse cycle heating operation. The result is a clean, environmentally responsible electric heat source to keep occupants comfortable year-round. All 38AXQ models can be easily controlled with a standard thermostat and remove the need to burn fossil fuels to heat your building. Should you need supplemental heat, we offer a full line of single point powered electric heaters for 40RLQ heat pump air handlers that can easily be installed at site.

### Puron Advance™ features

In 2018, Carrier announced Puron Advance (R-454B) as our next generation refrigerant for light commercial products. With a GWP of 466 and similar working pressure and performance to R-410A, Puron Advance easily

exceeds the EPA's new, stringent <700 GWP refrigerant requirement while minimizing unit redesign. Like other next generation refrigerants (R-32, etc.), R-454B is classified as an "A2L" refrigerant by ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers). This designation means that R-454B is "mildly flammable" under certain conditions. While this is a change from legacy "A1 — No Flame Propagation" refrigerants like Puron (R-410A), A2Ls are still very low on the flammability scale and quite safe for use. A2L refrigerants are difficult to ignite and have an extremely low flame speed — much less so than natural gas, propane, or even rubbing alcohol. At Carrier, we are committed to safety. As such, all of our Puron Advance systems include a factory installed dissipation control board and leak sensor designed to last the lifetime of the unit. This system is certified to UL 60335-2-40 and designed to work right away, without any field configuration or wiring. In the event of

a leak, these systems automatically identify and resolve the issue by safely dissipating the refrigerant to minimize risk to equipment, buildings, or occupants.

### Economy and rugged dependability

The 38AXQ heat pump condensing units and 40RLQ heat pump air handlers have low initial cost and energy-efficient operation to continue to save building owners money. With code compliant two or three stage operation, and mechanically bonded coil fins to improve heat transfer, Carrier's split systems help ensure occupants are comfortable with minimal energy spend. Our die-formed galvanized steel panels help ensure structural integrity under all operating conditions for a long operating life. With large control boxes and readily accessible components, 38AXQ units are designed for maintenance. In the event a full replacement is necessary, units can often be found in inventory.

## 38AXQ 07-12 Model Number Nomenclature

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3	8	A	X	Q	M	1	2	A	0	A	5	-	0	A	0	A	0

### Model Type

38AX = Carrier Condensing Unit  
Puron Advance™ R-454B Refrigerant

### Heat Pump

Q = Heat Pump

### Refrigerant Options<sup>1</sup>

M = Single Circuit / 2-Stage  
N = Single Circuit / 2-Stage with Low Ambient

### Nominal Tonnage

07 = 6 Tons  
08 = 7.5 Tons  
12 = 10 Tons

### Not Used

A = Not Used

### Not Used

0 = Not Used

### Coil Options (RTPF)

A = Al/Cu  
B = Precoat (Al/Cu)  
C = E-Coat (Al/Cu)  
E = Cu/Cu  
M = Al/Cu with Louvered Hail Guard  
N = Precoat (Al/Cu) with Louvered Hail Guard  
P = E-Coat (Al/Cu) with Louvered Hail Guard  
R = Cu/Cu with Louvered Hail Guard

### Packaging

0 = Standard

### Electrical Options

A = None  
C = Non-Fused Disconnect

### Service Options

0 = None  
1 = Un-powered Convenience Outlet  
2 = Powered Convenience Outlet

### Not Used

A = Not Used

### Base Unit Controls

0 = Standard Electromechanical Controls

### Not Used

- = Not Used

### Voltage

1 = 575-3-60  
5 = 208/230-3-60  
6 = 460-3-60

<sup>1</sup> All units meet Department of Energy 2023 IEER requirements.

## 38AXQ 16-25 Model Number Nomenclature

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
3	8	A	X	Q	T	1	6	A	0	A	5	-	0	A	0	A	0

### Model Type

38AX = Carrier Condensing Unit  
Puron Advance™ (R-454B) Refrigerant

### Heat Pump

Q = Heat Pump

### Refrigerant Options<sup>1</sup>

T = Dual Circuit, 3-Stage  
U = Dual Circuit, 3-Stage with Low Ambient

### Nominal Tonnage

16 = 15 Tons  
25 = 20 Tons

### Not Used

A = Not Used

### Not Used

0 = Not Used

### Coil Options (RTPF)

A = Al/Cu  
B = Precoat (Al/Cu)  
C = E-Coat (Al/Cu)  
E = Cu/Cu  
M = Al/Cu with Louvered Hail Guard  
N = Precoat (Al/Cu) with Louvered Hail Guard  
P = E-Coat (Al/Cu) with Louvered Hail Guard  
R = Cu/Cu with Louvered Hail Guard

### Packaging

0 = Standard

### Electrical Options

A = None  
C = Non-Fused Disconnect

### Service Options

0 = None  
1 = Un-powered Convenience Outlet  
2 = Powered Convenience Outlet

### Not Used

A = Not Used

### Base Unit Controls

0 = Standard Electro-Mechanical Controls

### Not Used

- = Not Used

### Voltage

1 = 575-3-60  
5 = 208/230-3-60  
6 = 460-3-60

<sup>1</sup> All units meet Department of Energy 2023 IEER requirements.

# AHRI capacity ratings



## Cooling<sup>a,b,c</sup>

UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (kW)	EER	IEER w/ 2-SPEED
38AXQ(M,N)07 / 40RLQ07	2	6.0	70.0	6.0	11.7	15.3
38AXQ(M,N)08 / 40RLQ08	2	7.5	92.0	8.2	11.2	15.3
38AXQ(M,N)12 / 40RLQ12	2	10.0	112.0	10.2	11.0	15.3
38AXQ(T,U)16 / 40RLQ16	3	15.0	178.0	16.8	10.6	13.5
38AXQ(T,U)25 / 40RLQ25	3	20.0	240.0	23.8	10.1	13.4

NOTE(S):

- Rated in accordance with AHRI Standard. Ratings are based on:  
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 95°F (35°C) db outdoor air temp.
- All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.
- All units are AHRI listed as factory defined matched combinations of specific indoor and outdoor unit components.

LEGEND

**AHRI** — Air-Conditioning, Heating and Refrigeration Institute  
**ASHRAE** — American Society of Heating, Refrigerating and Air Conditioning, Inc.  
**EER** — Energy Efficiency Ratio  
**IEER** — Integrated Energy Efficiency Ratio

## High Heat at 47°F (8°C)<sup>a,b,c</sup>

UNIT	HEATING STAGES	NOM. CAPACITY (TONS)	NET HEATING CAPACITY (MBH)	TOTAL POWER (kW)	COP
38AXQ(M,N)07 / 40RLQ07	1	6.0	66.0	5.7	3.4
38AXQ(M,N)08 / 40RLQ08	1	7.5	88.0	7.4	3.5
38AXQ(M,N)12 / 40RLQ12	1	10.0	112.0	9.7	3.4
38AXQ(T,U)16 / 40RLQ16	1	15.0	178.0	14.9	3.5
38AXQ(T,U)25 / 40RLQ25	1	20.0	214.0	18.4	3.4

NOTE(S):

- Rated in accordance with AHRI Standard. Ratings are based on:  
IEER Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 4 various outdoor temperatures.
- All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.
- All units are AHRI listed as factory defined matched combinations of specific indoor and outdoor unit components.

LEGEND

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**COP** — Coefficient Of Performance  
**EER** — Energy Efficiency Ratio  
**IEER** — Integrated Energy Efficiency Ratio

## Low Heat at 17°F (-8°C)<sup>a,b,c</sup>

UNIT	HEATING STAGES	NOM. CAPACITY (TONS)	NET HEATING CAPACITY (MBH)	TOTAL POWER (kW)	COP
38AXQ(M,N)07 / 40RLQ07	1	6.0	39.0	4.8	2.4
38AXQ(M,N)08 / 40RLQ08	1	7.5	54.0	6.6	2.4
38AXQ(M,N)12 / 40RLQ12	1	10.0	69.0	8.4	2.4
38AXQ(T,U)16 / 40RLQ16	1	15.0	108.0	13.2	2.4
38AXQ(T,U)25 / 40RLQ25	1	20.0	130.0	16.6	2.3

NOTE(S):

- Rated in accordance with AHRI Standard. Ratings are based on:  
IEER Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temp and 4 various outdoor temperatures.
- All units comply with ASHRAE 90.1 Energy Standard for minimum EER and IEER requirements.
- All units are AHRI listed as factory defined matched combinations of specific indoor and outdoor unit components.

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## Sound Power Levels, dB<sup>a</sup>

UNIT	COOLING STAGES	A-WEIGHTED	LINEAR OCTAVE OUTDOOR SOUND (dB)							
			63	125	250	500	1000	2000	4000	8000
38AXQ(M,N)07	2	83.6	87.8	84.9	83.2	81.4	78.7	74.5	68.8	63.8
38AXQ(M,N)08	2	82.4	86.8	85.7	80.3	80.3	77.7	72.3	70.2	65.4
38AXQ(M,N)12	2	84.2	84.8	92.0	80.8	82.6	78.4	74.0	69.2	67.8
38AXQ(T,U)16	3	79.6	90.3	81.8	78.0	76.7	75.2	70.5	66.4	61.9
38AXQ(T,U)25	3	85.2	91.0	85.0	80.0	86.0	79.0	73.0	68.0	63.0

NOTE(S):

- Outdoor sound data is measure in accordance with AHRI standard 270.

LEGEND

**dB** — Decibel

## Physical Data — 38AXQ\*07-25 Units — English

UNIT	38AXQM/N07	38AXQM/N08	38AXQM/N12	38AXQT/U16	38AXQT/U25
<b>Nominal Capacity (tons)</b>	6	7.5	10	15	20
<b>Operating Weights (lb)</b>					
<b>Aluminum-Fin Coils</b>	444	523	575	768	1015
<b>Refrigeration System<sup>a</sup></b>	Puron Advance™ (R-454B)				
<b>No. Circuits / No. Comp. / Type</b>	1 / 1 / Scroll	1 / 1 / Scroll	1 / 1 / Scroll	2 / 2 / Scroll	2 / 2 / Scroll
<b>Shipping Charge A/B (lb)</b>	9.0	9.0	9.0	9.0 / 9.0	9.0 / 9.0
<b>System Charge with Fan Coil A/B (lb)<sup>b</sup></b>	18	24.5	27	24 / 25	23.5 / 22.5
<b>Metering Device</b>	Acutrol™ <sup>c</sup>	Acutrol™	Acutrol™	Acutrol	Acutrol
<b>High-Press. Trip / Reset (psig)</b>	630 / 505	630 / 505	630 / 505	630 / 505	630 / 505
<b>Low-Press. Trip / Reset (psig)</b>	27 / 44	27 / 44	27 / 44	27 / 44	27 / 44
<b>Compressor</b>					
<b>Oil Charge A/B (oz)</b>	38	54	81	54 / 56	81 / 81
<b>Speed (rpm)</b>	3500	3500	3500	3500	3500
<b>Outdoor Coil</b>					
<b>Material</b>	Al/Cu	Al/Cu	Al/Cu	Al/Cu	Al/Cu
<b>Coil Type</b>	RTPF	RTPF	RTPF	RTPF	RTPF
<b>Rows / FPI</b>	2 / 17	2 / 17	2 / 17	2 / 17	2 / 17
<b>Total Face Area (ft<sup>2</sup>)</b>	17.5	28.1	28.1	47.1	55.3
<b>Outdoor Fan / Motor</b>					
<b>Qty / Motor Drive Type</b>	2 / Direct	2 / Direct	2 / Direct	3 / Direct	4 / Direct
<b>Motor HP / RPM</b>	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100	1/4 / 1100
<b>Fan Diameter (in.)</b>	22	22	22	22	22
<b>Nominal Airflow (cfm)</b>	6,000	6,000	6,000	10,000	14,000
<b>Watts (total)</b>	610	610	610	970	1150
<b>Piping Connections</b>					
<b>Qty / Vapor (in. ODS)</b>	1 / 1-1/8	1 / 1-1/8	1 / 1-3/8	2 / 1-3/8	2 / 1-3/8
<b>Qty / Liquid (in. ODS)</b>	1 / 3/8	1 / 1/2	1 / 1/2	2 / 1/2	2 / 1/2

**NOTE(S):**

- a. Unit is factory-supplied with partial charge only.
- b. Approximate system charge with 25 ft piping of sizes indicated with matched 40RLQ.
- c. Third-party trademarks and logos are the property of their respective owners.

**LEGEND**

- ODS** — Outside Diameter Sweat (socket)
- RTPF** — Round Tube/Plate Fin

## Suction Line Diameter — Condenser Above Evaporator<sup>a,b,c</sup>

UNIT	NOMINAL TONNAGE	CIRCUITS	SUCTION RISER TYPE	LINEAR LENGTH (ft)	0-25	26-50	51-75	76-100				
				EQUIV. LINEAR LENGTH (ft)	0-37	38-74	75-112	113-149				
					Nominal	Nominal	Allowable	Nominal	Allowable	Nominal	Allowable	
38AXQ*07 40RLQA07	6	1	None	Suction Line Dia. (in.) (S)	7/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
				Capacity Loss	—	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
				Suction Line Dia. (in.) (S)	7/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Speed Riser	Suction Riser Dia. (in.) (A)	3/4	7/8	1-1/8	7/8	1-1/8	7/8	1-1/8	
				Capacity Loss	2.4%	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
				Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Double Suction Riser	Suction Riser Dia. (in.) (A)	3/4	3/4	7/8	3/4	7/8	3/4	7/8	
				Suction Riser Dia. (in.) (B)	7/8	7/8	1-1/8	7/8	1-1/8	7/8	1-1/8	
				Capacity Loss	1.1%	2.5%	0.6%	3.3%	0.9%	4.0%	1.1%	
38AXQ*08 40RLQA08	7.5	1	None	Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
				Capacity Loss	—	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
				Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Speed Riser	Suction Riser Dia. (in.) (A)	7/8	7/8	1-1/8	7/8	1-1/8	7/8	1-1/8	
				Capacity Loss	0.3%	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
				Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Double Suction Riser	Suction Riser Dia. (in.) (A)	3/4	3/4	7/8	3/4	7/8	3/4	7/8	
				Suction Riser Dia. (in.) (B)	7/8	7/8	1-1/8	7/8	1-1/8	7/8	1-1/8	
				Capacity Loss	1.1%	2.5%	0.6%	3.3%	0.9%	4.0%	1.1%	
38AXQ*12 40RLQA12	10	1	None	Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
				Capacity Loss	—	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
				Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Speed Riser	Suction Riser Dia. (in.) (A)	7/8	7/8	1-1/8	7/8	1-1/8	7/8	1-1/8	
				Capacity Loss	0.3%	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
				Suction Line Dia. (in.) (S)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Double Suction Riser	Suction Riser Dia. (in.) (A)	3/4	3/4	7/8	3/4	7/8	3/4	7/8	
				Suction Riser Dia. (in.) (B)	7/8	7/8	1-1/8	7/8	1-1/8	7/8	1-1/8	
				Capacity Loss	1.1%	2.5%	0.6%	3.3%	0.9%	4.0%	1.1%	
38AXQ*16 40RLQA16	15 Tons	2	A Circuit	None	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
					Capacity Loss	—	0.1%	—	0.4%	—	0.6%	0.0%
					Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
				Speed Riser	Suction Riser Dia. (in.) (A)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8
					Capacity Loss	—	0.1%	—	0.4%	—	0.6%	0.0%
					Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
				Double Suction Riser	Suction Riser Dia. (in.) (A)	7/8	7/8	7/8	7/8	7/8	7/8	7/8
					Suction Riser Dia. (in.) (B)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8
					Capacity Loss	0.1%	0.6%	0.0%	0.9%	0.1%	1.1%	0.2%
		B Circuit	None	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	—	1-3/8	—	1-3/8	—	
				Capacity Loss	—	—	—	—	—	—	—	
				Suction Line Dia. (in.) (S)	1-3/8	1-3/8	—	1-3/8	—	1-3/8	—	
			Speed Riser	Suction Riser Dia. (in.) (A)	1-1/8	1-1/8	—	1-1/8	—	1-1/8	—	
				Capacity Loss	—	—	—	—	—	—	—	
				Suction Line Dia. (in.) (S)	1-3/8	1-3/8	—	1-3/8	—	1-3/8	—	
			Double Suction Riser	Suction Riser Dia. (in.) (A)	7/8	7/8	—	7/8	—	7/8	—	
				Suction Riser Dia. (in.) (B)	1-1/8	1-1/8	—	1-1/8	—	1-1/8	—	
				Capacity Loss	—	—	—	0.1%	—	0.2%	—	

## Suction Line Diameter — Condenser Above Evaporator<sup>a,b,c</sup> (cont)

UNIT	NOMINAL TONNAGE	CIRCUITS	SUCTION RISER TYPE	LINEAR LENGTH (ft)	0-25		26-50		51-75		76-100	
				EQUIV. LINEAR LENGTH (ft)	0-37		38-74		75-112		113-149	
					Nominal	Nominal	Allowable	Nominal	Allowable	Nominal	Allowable	
38AXQ*25 40RLQA25	20 Tons	2	A Circuit	None	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
					Capacity Loss	—	—	—	0.0%	—	0.2%	—
				Speed Riser	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
					Suction Riser Dia. (in.) (A)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8
				Double Suction Riser	Capacity Loss	—	—	—	0.0%	—	0.2%	—
					Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
			Suction Riser Dia. (in.) (A)		7/8	7/8	7/8	7/8	7/8	7/8	7/8	
			Suction Riser Dia. (in.) (B)		1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			B Circuit	None	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
					Capacity Loss	—	—	—	0.1%	—	0.3%	—
				Speed Riser	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
					Suction Riser Dia. (in.) (A)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8
				Double Suction Riser	Capacity Loss	—	—	—	0.1%	—	0.3%	—
					Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
			Suction Riser Dia. (in.) (A)		7/8	7/8	7/8	7/8	7/8	7/8	7/8	
			Suction Riser Dia. (in.) (B)		1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Capacity Loss	—	0.3%	—	0.5%	—	0.6%	0.0%		

NOTE(S):

- a. A continuous rise of 0-10ft; no riser required.  
A continuous rise of 11-30ft; speed riser required.  
A continuous rise of 31-75ft; double riser required.  
A continuous rise of more than 75ft is not recommended.
- b. For Speed Riser:  
Tube S is the horizontal line size.  
Tube A is the reduced diameter riser size.  
See installation manual for further details.
- c. For Double Suction Riser:  
Tube S is the horizontal line size.  
Tube A is the reduced diameter riser size without bottom trap.  
Tube B is the parallel riser size with bottom oil trap.  
See installation manual for further details.

## Liquid Line Diameter — Condenser Below Evaporator

UNIT	NOMINAL TONNAGE	CIRCUITS	LINEAR LENGTH (ft)	0-25	26-50		51-75		76-100		
			EQUIV. LINEAR LENGTH (ft)	0-37	38-74		75-112		113-149		
				Nominal	Nominal	Allowable	Nominal	Allowable	Nominal	Allowable	
38AXQ*07 40RLQA07	6	1	Liquid Line Dia. (in.)	3/8	3/8	1/2	3/8	1/2	3/8	1/2	
			Max. Lift (ft)	85	74	92	63	91	52	89	
38AXQ*08 40RLQA08	7.5	1	Liquid Line Dia. (in.)	1/2	1/2	5/8	1/2	5/8	1/2	5/8	
			Max. Lift (ft)	68	65	69	62	68	59	67	
38AXQ*12 40RLQA12	10	1	Liquid Line Dia. (in.)	1/2	1/2	5/8	1/2	5/8	1/2	5/8	
			Max. Lift (ft)	92	86	94	80	92	74	91	
38AXQ*16 40RLQA16	15	2	A Circuit	Liquid Line Dia. (in.)	1/2	1/2	5/8	1/2	5/8	—	—
			Max. Lift (ft)	60	57	61	54	60	—	—	
		B Circuit	Liquid Line Dia. (in.)	1/2	1/2	5/8	1/2	5/8	—	—	
			Max. Lift (ft)	60	41	45	38	44	—	—	
38AXQ*25 40RLQA25	20	2	A Circuit	Liquid Line Dia. (in.)	1/2	1/2	5/8	1/2	5/8	5/8	3/4
			Max. Lift (ft)	53	48	55	44	54	52	55	
		B Circuit	Liquid Line Dia. (in.)	1/2	1/2	5/8	1/2	5/8	1/2	5/8	
			Max. Lift (ft)	53	64	72	58	70	52	69	

## Suction Line Diameter — Condenser Level or Below Evaporator

UNIT	NOMINAL TONNAGE	CIRCUITS	LINEAR LENGTH (ft)	0-25	26-50		51-75		76-100		
			EQUIV. LINEAR LENGTH (ft)	0-37	38-74		75-112		113-149		
				Nominal	Nominal	Allowable	Nominal	Allowable	Nominal	Allowable	
38AXQ*07 40RLQA07	6	1	Suction Line Dia. (in.)	7/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Capacity Loss	—	1.1%	0.1%	1.8%	0.4%	2.5%	0.6%	
38AXQ*08 40RLQA08	7.5	1	Suction Line Dia. (in.)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Capacity Loss	—	1.06%	0.11%	1.81%	0.37%	2.54%	0.62%	
38AXQ*12 40RLQA12	10	1	Suction Line Dia. (in.)	1-1/8	1-1/8	1-3/8	1-1/8	1-3/8	1-1/8	1-3/8	
			Capacity Loss	—	1.06%	0.11%	1.81%	0.37%	2.54%	0.62%	
38AXQ*16 40RLQA16	15	2	A Circuit	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
			Capacity Loss	—	0.1%	—	0.4%	—	0.6%	0.0%	
		B Circuit	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	—	1-3/8	—	1-3/8	—	
			Capacity Loss	—	—	—	—	—	—	—	
38AXQ*25 40RLQA25	20	2	A Circuit	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8
			Capacity Loss	—	—	—	0.0%	—	0.2%	—	
		B Circuit	Suction Line Dia. (in.) (S)	1-3/8	1-3/8	1-5/8	1-3/8	1-5/8	1-3/8	1-5/8	
			Capacity Loss	—	—	—	0.1%	—	0.3%	—	

### 38AXQ\*07-12 Base Unit Dimensions



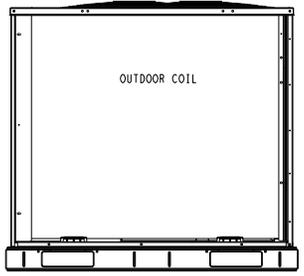
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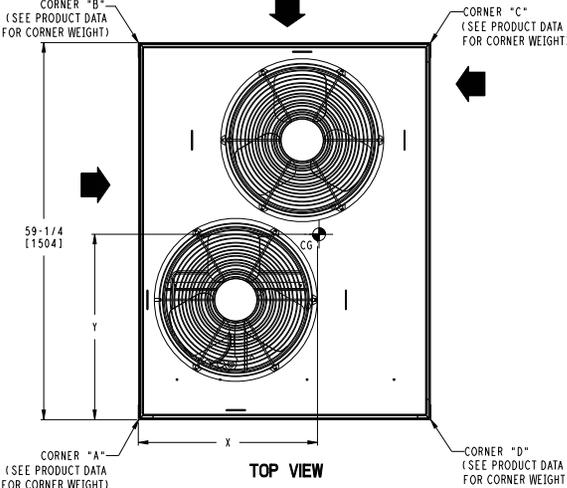
CG CENTER OF GRAVITY

DIRECTION OF AIR FLOW

DIMENSIONS IN [ ] ARE IN MM

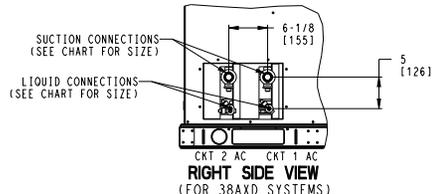


REAR VIEW

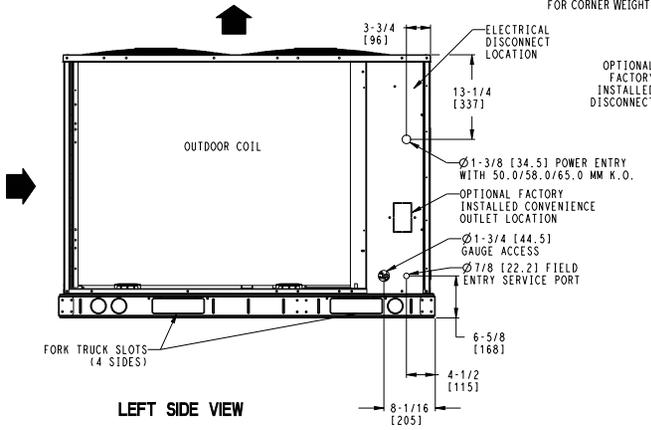


TOP VIEW

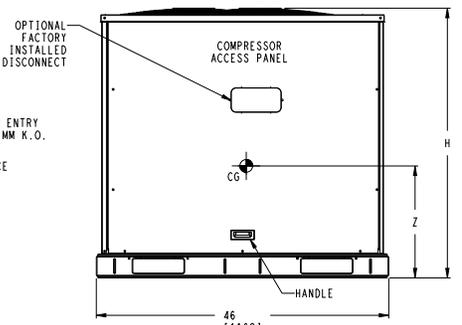
SERVICE VALVE CONNECTIONS				QTY
UNIT	SUCTION	LIQUID		
38AXZ07	1-1/8 [28.6]	3/8 [9.5]		1
38AXZ08	1-1/8 [28.6]	1/2 [12.7]		1
38AXZ12	1-3/8 [34.9]	1/2 [12.7]		1
38AXZ14	1-3/8 [34.9]	5/8 [15.9]		1
38AXD12	1-1/8 [28.6]	3/8 [9.5]		2
38AXD14	1-3/8 [34.9]	1/2 [12.7]		2
38AXQ07	1-1/8 [28.6]	3/8 [9.5]		1
38AXQ08	1-1/8 [28.6]	1/2 [12.7]		1
38AXQ12	1-3/8 [34.9]	1/2 [12.7]		1



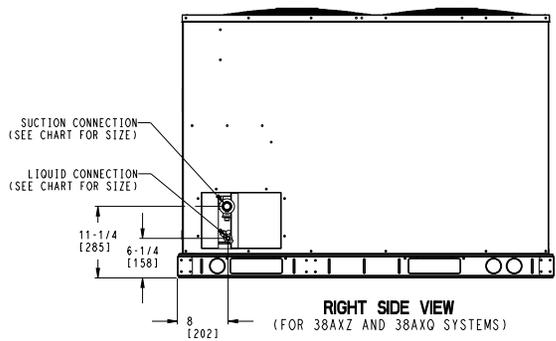
RIGHT SIDE VIEW (FOR 38AXD SYSTEMS)



LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW (FOR 38AXZ AND 38AXQ SYSTEMS)

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	CONDENSING UNIT	38AU002464	REV
U.S. ECCN:NSR	2 OF 2	7/15/24	-	38AXZ/ 38AXD/ 38AXQ-07/08/12/14		-



## 38AXQ\*16 Base Unit Dimensions



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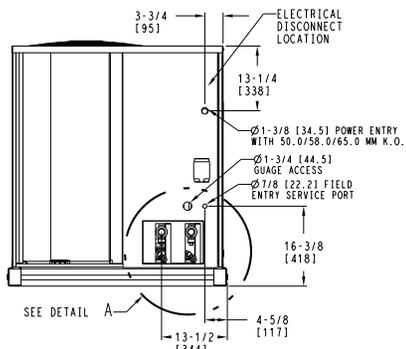
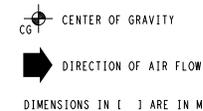
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UNIT	ELECTRICAL CHARACTERISTICS	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT			
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	H			
38AXZ16 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	731	332	237	107	172	78	135	61	186	84	38	[965]	19	[483]	17	[432]	50-3/8 [1280]
38AXD16 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	731	332	237	107	172	78	135	61	186	84	38	[965]	19	[483]	17	[432]	50-3/8 [1280]
38AXQ16 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	768	348	236	107	183	83	153	69	196	89	39	[997]	20	[502]	23	[584]	50-3/8 [1280]

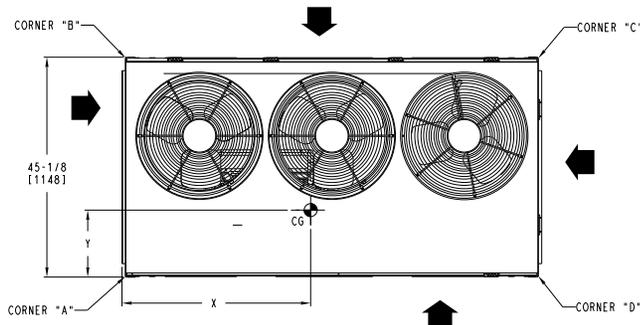
**NOTES:**

1. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
  - A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
  - B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
  - C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
  - D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
  - E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
  - F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
2. WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
3. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

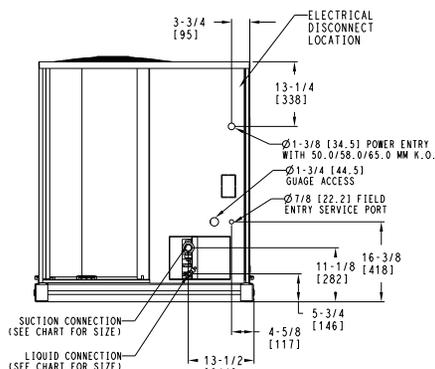
UNIT	SERVICE VALVE CONNECTIONS		QTY
	SUCTION	LIQUID	
38AXZ16	1-3/8 [34.9]	5/8 [15.9]	1 EA
38AXD16	1-3/8 [34.9]	1/2 [12.7]	2 EA
38AXQ16	1-3/8 [34.9]	1/2 [12.7]	2 EA



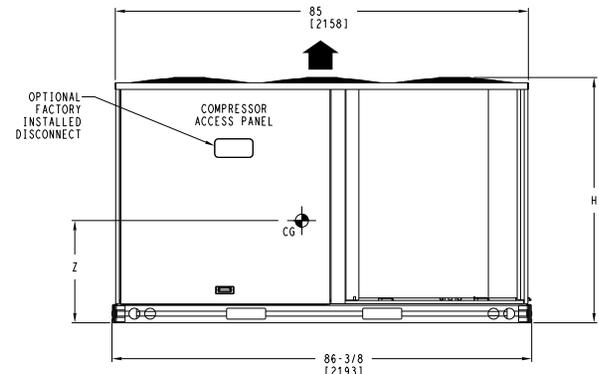
**LEFT SIDE VIEW**  
(FOR 38AXD/38AXQ SYSTEMS)



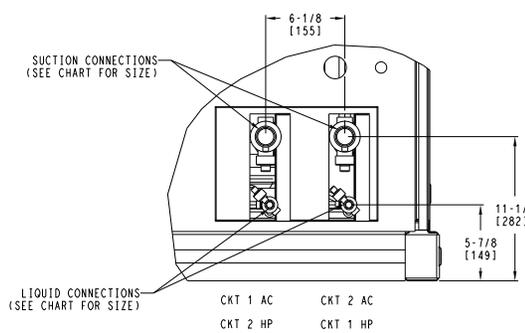
**TOP VIEW**



**LEFT SIDE VIEW**  
(FOR 38AXZ SYSTEMS)



**FRONT VIEW**



**DETAIL A**  
(NOTE POSITION OF CKT1)

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	38AXZ, 38AXD, 38AXQ 16 CONDENSING UNIT	38AU002467	REV
U.S. ECCN:NSR	1 OF 1	7/15/24	-			-

Base unit dimensions (cont)



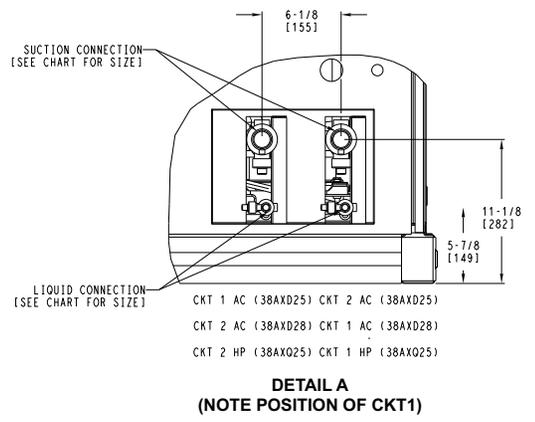
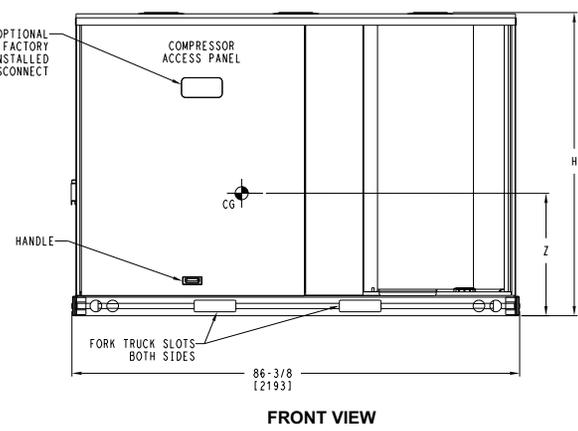
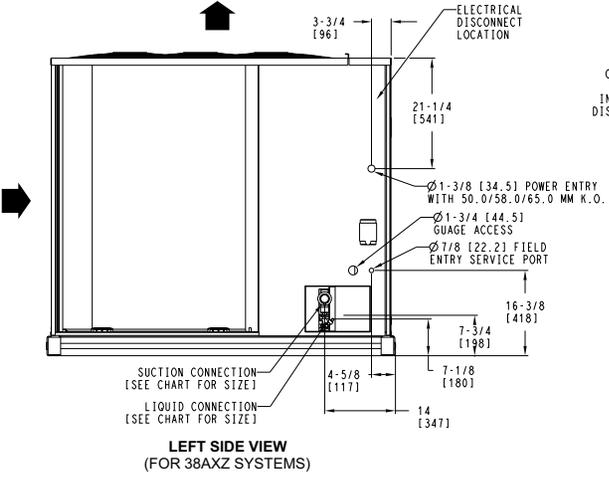
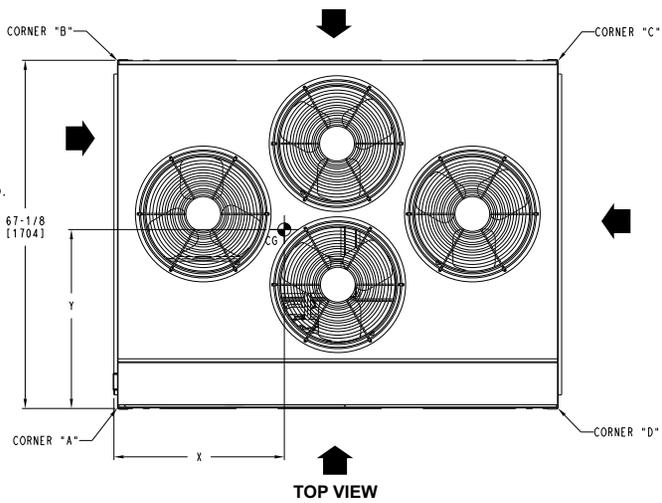
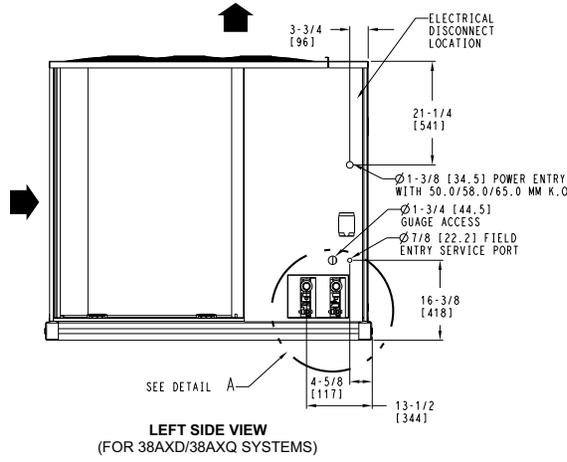
### 38AXQ\*25 Base Unit Dimensions

UNIT	ELECTRICAL CHARACTERISTICS	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY			UNIT HEIGHT			
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z	H			
38AXZ25 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	978	444	360	163	188	85	147	67	283	128	38	[965]	23	[584]	17	[432]	50-3/8 [1280]
38AXD25 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	978	444	360	163	188	85	147	67	283	128	38	[965]	23	[584]	17	[432]	50-3/8 [1280]
38AXD28 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	1174	533	377	171	267	121	220	100	310	141	41	[1041]	28	[711]	17	[432]	50-3/8 [1280]
38AXQ25 (RTPF)	208/230-3-60, 460-3-60, 575-3-60	983	446	354	161	197	89	155	70	278	126	38	[965]	24	[610]	23	[584]	50-3/8 [1280]

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- NOTES:
- MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
    - A. BOTTOM TO COMBUSTIBLE SURFACES: 0 INCHES.
    - B. OUTDOOR COIL, FOR PROPER AIR FLOW: 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
    - C. OVERHEAD: 60 INCHES, TO ASSURE PROPER OUTDOOR FAN OPERATION.
    - D. BETWEEN UNITS: CONTROL BOX SIDE, 42 INCHES PER NEC.
    - E. BETWEEN UNIT AND UNGROUNDED SURFACES: CONTROL BOX SIDE, 36 INCHES PER NEC.
    - F. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES: CONTROL BOX SIDE, 42 INCHES PER NEC.
  - WITH EXCEPTION OF THE CLEARANCE FOR THE OUTDOOR COIL AS STATED IN NOTE 1B, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
  - UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B OR C ROOF COVERING MATERIAL.

SERVICE VALVE CONNECTIONS			
UNIT	SUCTION	LIQUID	QTY
38AXZ25	1-5/8 [41.3]	5/8 [15.9]	1 EA
38AXD25	1-3/8 [34.9]	1/2 [12.7]	2 EA
38AXD28	1-3/8 [34.9]	1/2 [12.7]	2 EA
38AXQ25	1-3/8 [34.9]	1/2 [12.7]	2 EA



CG CENTER OF GRAVITY  
 → DIRECTION OF AIR FLOW  
 DIMENSIONS IN [ ] ARE IN MM

DATE	SUPERCEDES	38AXZ, 38AXD, 38AXO 25/28 CONDENSING UNIT	38AU002470
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# Base unit dimensions (cont)



## 38AXQ\*07-25 Corner Weights<sup>a</sup>

38AXQ UNIT	STD. UNIT WT.		CORNER A		CORNER B		CORNER C		CORNER D		CENTER OF GRAVITY in. (mm)			UNIT HEIGHT in. (mm)
	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	X	Y	Z	H
*07	444	201	134	61	97	44	90	41	123	56	22 (559)	25 (635)	13 (330)	42-3/8 (1076)
*08	523	237	174	79	118	54	96	44	135	61	21 (533)	24 (610)	23 (584)	50-3/8 (1280)
*12	575	261	186	84	126	57	106	48	157	71	21 (533)	24 (610)	23 (584)	50-3/8 (1280)
*16	768	348	236	107	183	83	153	69	196	89	39 (997)	20 (502)	23 (584)	50-3/8 (1280)
*25	983	446	354	161	197	89	155	70	278	126	38 (965)	24 (610)	23 (584)	50-3/8 (1280)

NOTE(S):

a. See Base Unit Dimensions on pages 10-12 for corner locations.

## 38AXQ

38AXQ ITEMS	OPTION <sup>a</sup>	ACCESSORY <sup>b</sup>
Convenience Outlet (115-v) Powered	X	
Convenience Outlet Non-powered	X	
Outdoor Coil Coatings	X	
Louvered Hail Guard	X	X
Low Ambient Temperature Control	X	X
Non-Fused Disconnect Switch <sup>c</sup>	X	
Programmable Thermostats		X

NOTE(S):

- a. Factory-installed option.
- b. Field-installed accessory.
- c. Not available when unit MOCP electrical rating exceeds 80 amps.

### Factory-installed options

#### 115-v convenience outlet (powered, non-powered)

A powered convenience outlet is available to provide power to electric drills, lights, and refrigerant recovery machines. This means that a separate 115-v power supply is no longer required.

Non-powered convenience outlet requires the field installation of a general purpose 125-volt 15-A circuit powered from a source elsewhere in the building.

#### Outdoor coil coatings

Outdoor coil coating options are available to match coil protection to site conditions for optimum durability. Refer to the Outdoor Coil Coating Applications table below for selection guidance. Consult a Carrier representative for further information.

**Outdoor Coil Coating Applications**

DESCRIPTION	ENVIRONMENT					
	STANDARD NON-CORROSIVE	MILD COASTAL	MODERATE COASTAL	SEVERE COASTAL	INDUSTRIAL	COMBINED COASTAL AND INDUSTRIAL
Alum Fin / Cu Tube	X					
Pre-Coated Al / Cu		X				
E-Coated Al / Cu		X	X	X	X	X
Cu / Cu			X	X		

### Outdoor coil louvered hail guard

The outdoor coil louvered hail guard protects outdoor units from hail and other flying debris.

### Low ambient temperature head pressure control

The head pressure control operates in Cooling mode at outdoor temperatures below 35°F (2°C). The low ambient control varies the speed of outdoor-fan motors to maintain correct condensing temperature down to -20°F (-29°C).

### Non-fused disconnect switch

The non-fused disconnect switch removes power locally at the condensing unit. This switch also includes a power lockout capability to protect the service person. This lockout switch saves time and effort as the service person no longer needs to access a distant disconnect switch while servicing the unit.

### Field-installed accessories

#### Outdoor coil louvered hail guard

The outdoor coil louvered hail guard protects outdoor units from hail and other flying debris.

#### Low ambient temperature head pressure control

The head pressure control operates in Cooling mode at outdoor temperatures below 35°F (2°C). The low ambient control varies the speed of outdoor-fan motors to maintain correct condensing temperature down to -20°F (-29°C).

#### Carrier commercial thermostats

Our commercial thermostats provide 7-day programmable capability for commercial applications.

## 40RLQ

40RLQ ITEMS	OPTION <sup>a</sup>	ACCESSORY <sup>b</sup>
Alternate Fan Motors	X	
Alternate Drive	X	
CO <sub>2</sub> Sensors		X
Condensate Drain Trap		X
Discharge Duct Adapter (40RLQ 07-12 only)		X
Discharge Plenum		X
Economizer		X
Electric Heater		X
Hot Water Heating Coils		X
Optional Display Kit for Staged Air Volume (SAV) with VFD (40RLQ 16-25 only)		X
Overhead Suspension Package		X
Pre-Painted Units	X	
Programmable Thermostats		X
Return Air Grille		X
Steam Heating Coil (1 row)		X

NOTE(S):

- a. Factory-installed option.
- b. Field-installed accessory.

### Factory-installed options

#### Alternate fan motors and drives

Alternate fan motors and drives are available to provide the widest possible range of performance.

#### Pre-painted steel units

Pre-painted steel units are available from the factory for applications that require painted units. Units are painted with American Sterling Gray color.

### Field-installed accessories

#### Optional VFD display kit (40RLQ16-25 only)

There is an optional VFD display kit offered (as an accessory) to allow the user to troubleshoot any VFD faults in the field after startup.

NOTE: Do not use the VFD display kit to adjust the frequency and voltage in the VFD to required performance requirements. This could lead to decreased life of the motor and VFD.

#### CO<sub>2</sub> sensors

CO<sub>2</sub> sensors can be used in conjunction with the economizer accessory to help meet indoor air quality requirements. The sensor signals the economizer to open when the CO<sub>2</sub> level in the space exceeds the set point. A Carrier Comfort System programmable thermostat can be used to override the sensor if the outside-air temperature is too high or too low.

#### Condensate drain trap

The condensate drain trap includes an overflow shutoff switch that can be wired to turn off the unit if the trap becomes plugged. Kit also includes a wire harness that can be connected to an alarm if desired. The transparent trap is designed for easy service and maintenance.

#### Discharge plenum

The discharge plenum directs the air discharge directly into the occupied space; integral horizontal and vertical louvers enable redirection of airflow. This accessory is available unpainted or painted. Field assembly is required (only applicable for vertical application).

#### Economizer (enthalpy controlled)

The enthalpy controlled Economizer provides ventilation air and “free” cooling if outside ambient temperature and humidity are suitable. It can also be used with CO<sub>2</sub> sensors to help meet indoor air quality requirements.

#### Electric heater

Electric heaters are available as factory-supplied and field-installed accessories for nominal 240v, 480v, and 575v, 3-phase, 60 Hz units. Electric heaters are UL and CSA agency-approved. They have single-point power wiring. The heater assembly includes contactors with 24-v coils, power wiring, 24- v control wiring terminal blocks, and a hinged access panel. Electric heaters should not be used with an air discharge plenum.

#### Two-row hot water coils

Two-row hot water coils have copper tubes mechanically bonded to aluminum plate fins and non-ferrous headers.

#### Overhead suspension package

The overhead suspension package includes necessary brackets to support units in horizontal ceiling installations.

#### Return-air grille

The return-air grille provides a protective barrier over the return-air opening and gives a finished appearance to units installed in the occupied space. This accessory is available unpainted or painted.

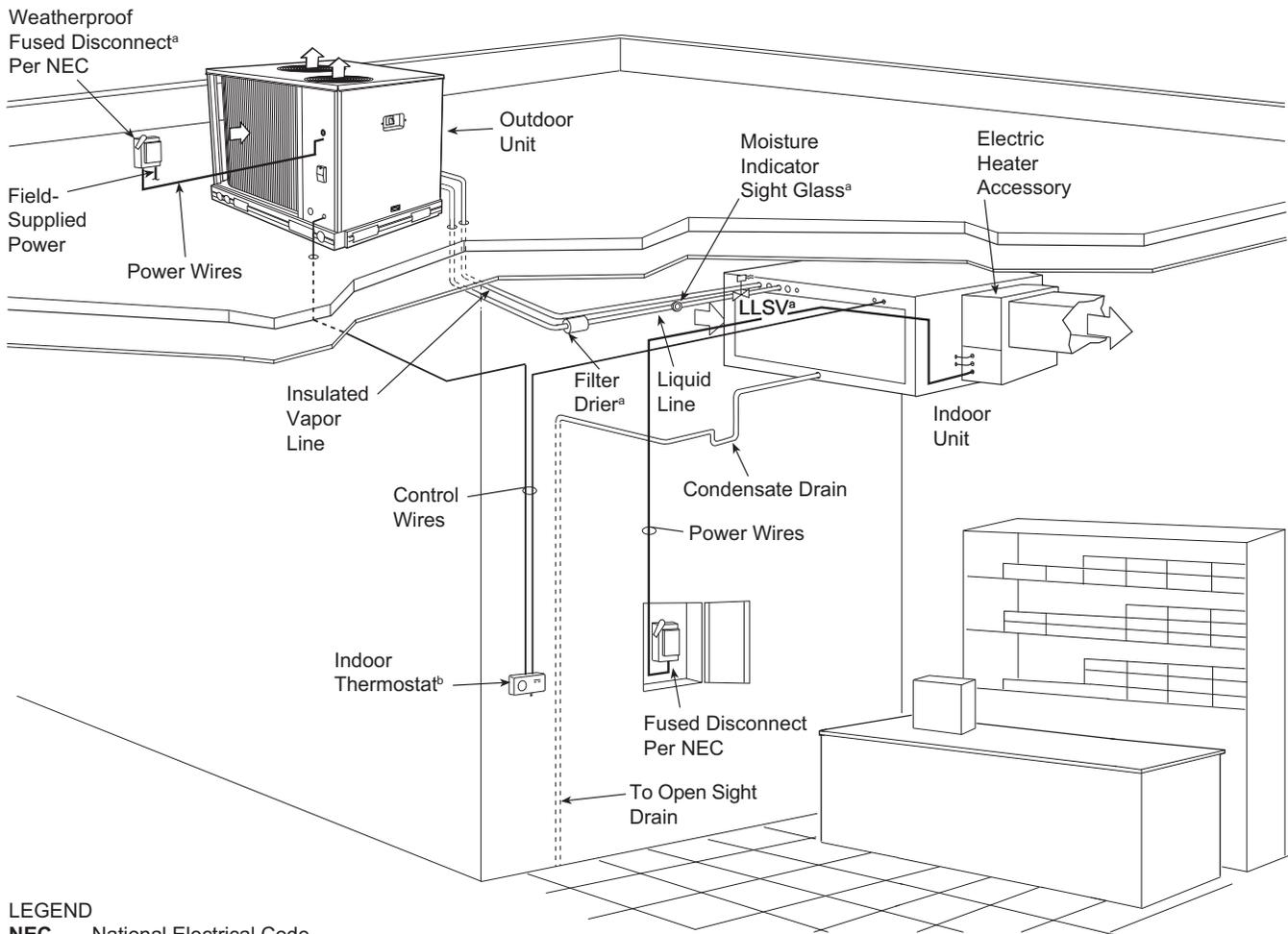
#### One-row steam coil

The one-row steam coil has copper tubes and aluminum fins. The Inner Distributing Tube (IDT) design provides uniform temperatures across the coil face. The steam coil has a broad operating pressure range; up to 20 psi (138 kPag) at 260°F (126°C). The IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

#### Discharge duct adapter (Sizes 07-12)

This accessory is required for replacements using 40RLQ units with or without electric heat. It is not required for new installations for when using steam coil, hot water coil, or discharge plenum accessories.

## Horizontal Installation



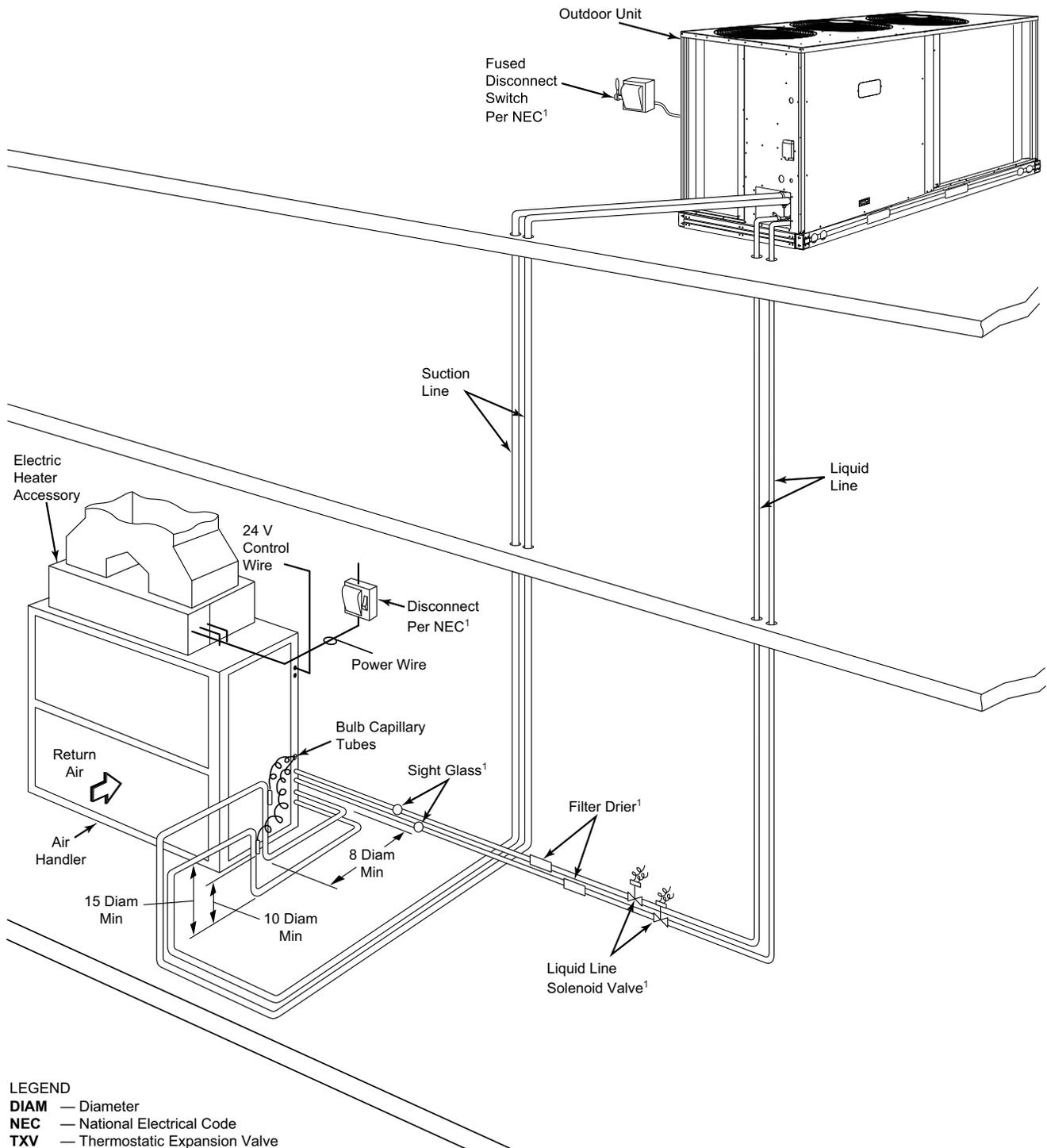
### LEGEND

- NEC** — National Electrical Code
- TXV** — Thermostatic Expansion Valve
- LLSV** — Liquid Line Solenoid Valve

### NOTE(S):

- a. Field-supplied.
- b. Double riser may be required. Consult condensing unit product data catalog for details.
- c. All piping must follow standard refrigerant piping techniques. Refer to Carrier System Design Manual for details.
- d. All wiring must comply with the applicable local and national codes.
- e. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
- f. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor.
- g. Internal factory-supplied TXVs not shown.

## Vertical Installation



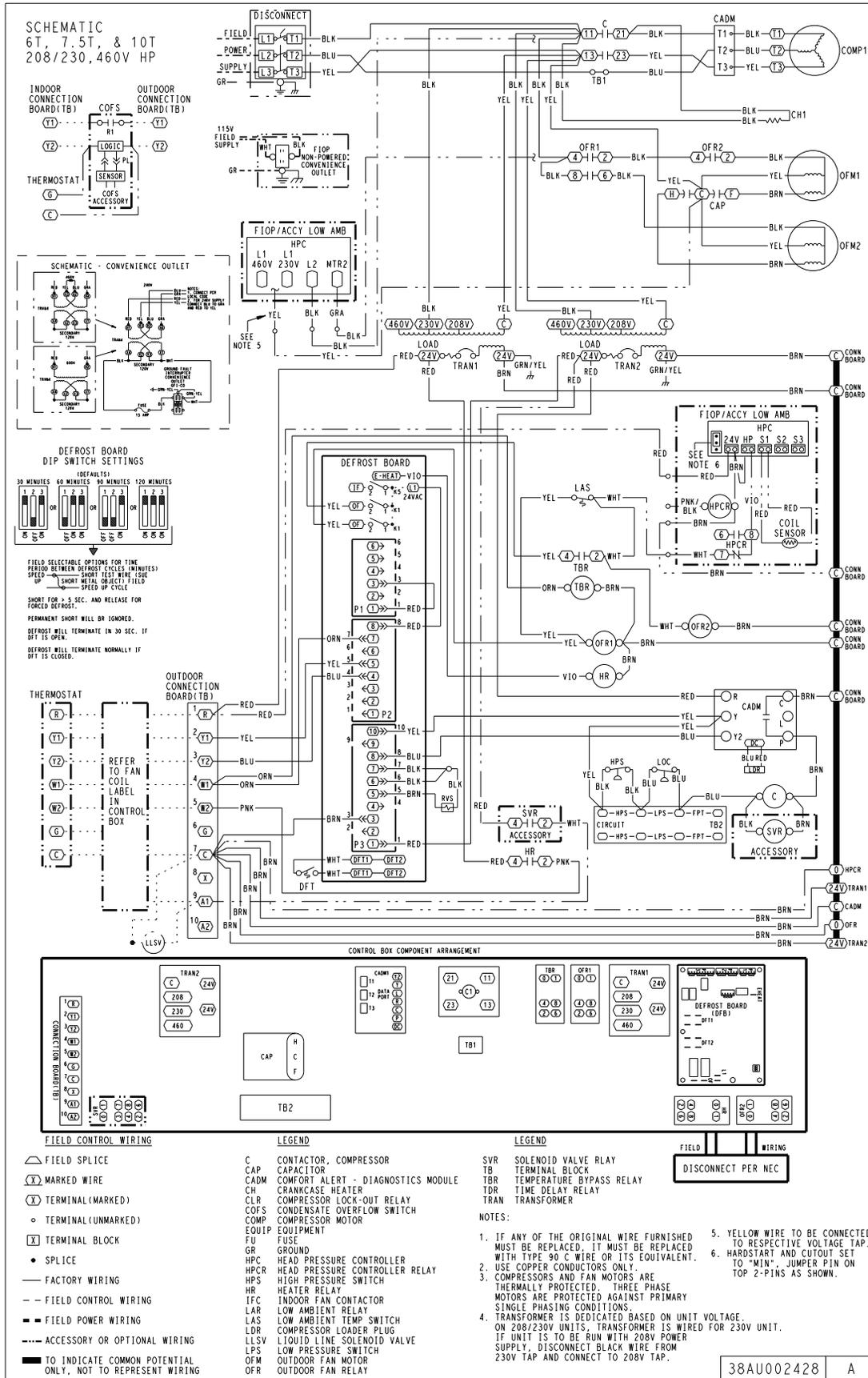
### LEGEND

- DIAM** — Diameter
- NEC** — National Electrical Code
- TXV** — Thermostatic Expansion Valve

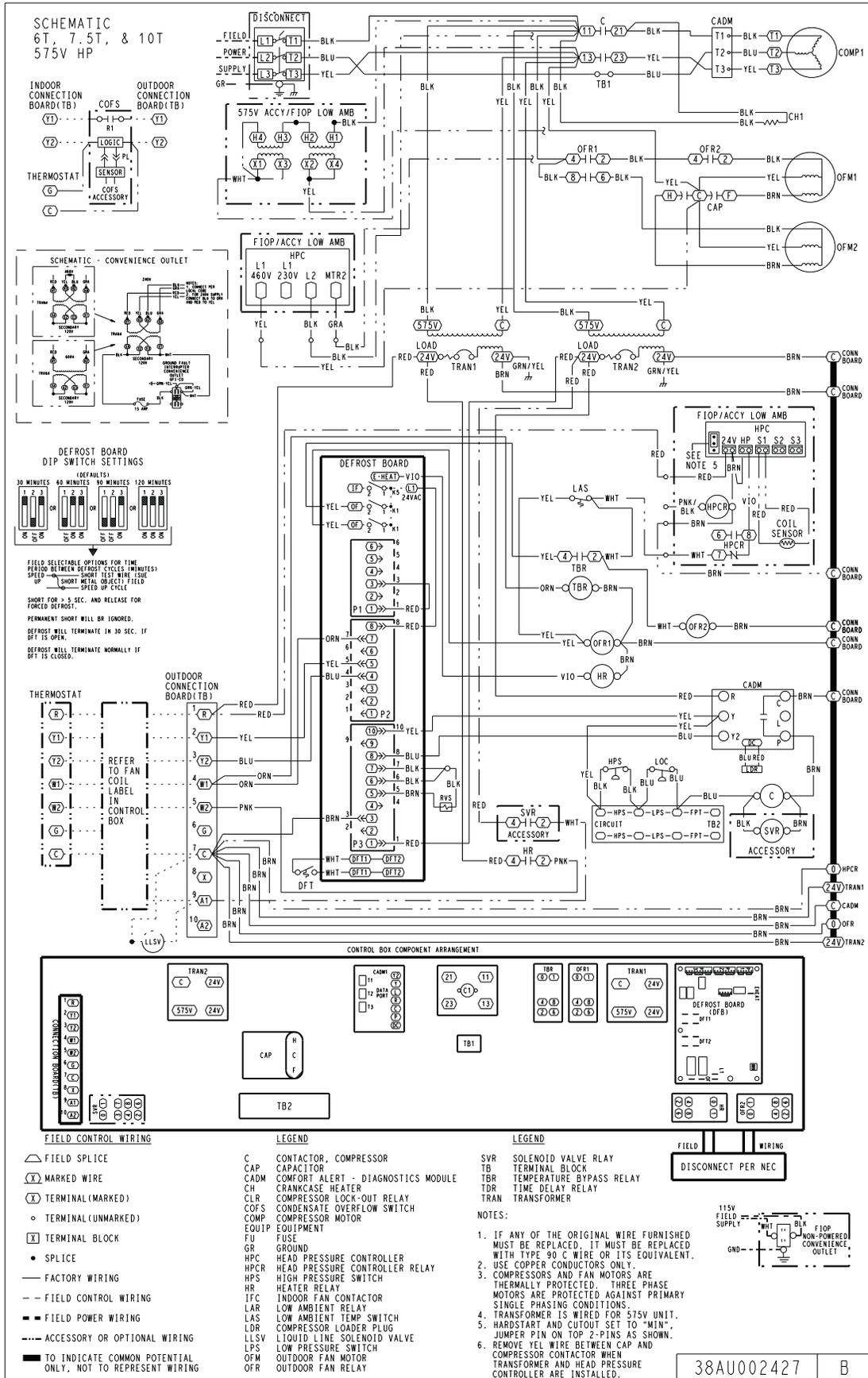
### NOTE(S):

1. Field-supplied.
2. All piping must follow standard refrigerant piping techniques. Refer to Carrier System Design Manual for details.
3. All wiring must comply with the applicable local and national codes.
4. Wiring and piping shown are general points-of-connection guides only and are not intended for, or to include all details for, a specific installation.
5. Filter driers must be bi-flow type suited for heat pump duty.
6. Liquid line solenoid valve (solenoid drop control) is recommended to prevent refrigerant migration to the compressor on line links above 75 ft.
7. Internal factory-supplied TXVs and check valves not shown.

## 38AXQ\*07-12 Wiring Diagram (208/230-3-60, 460-3-60 shown)



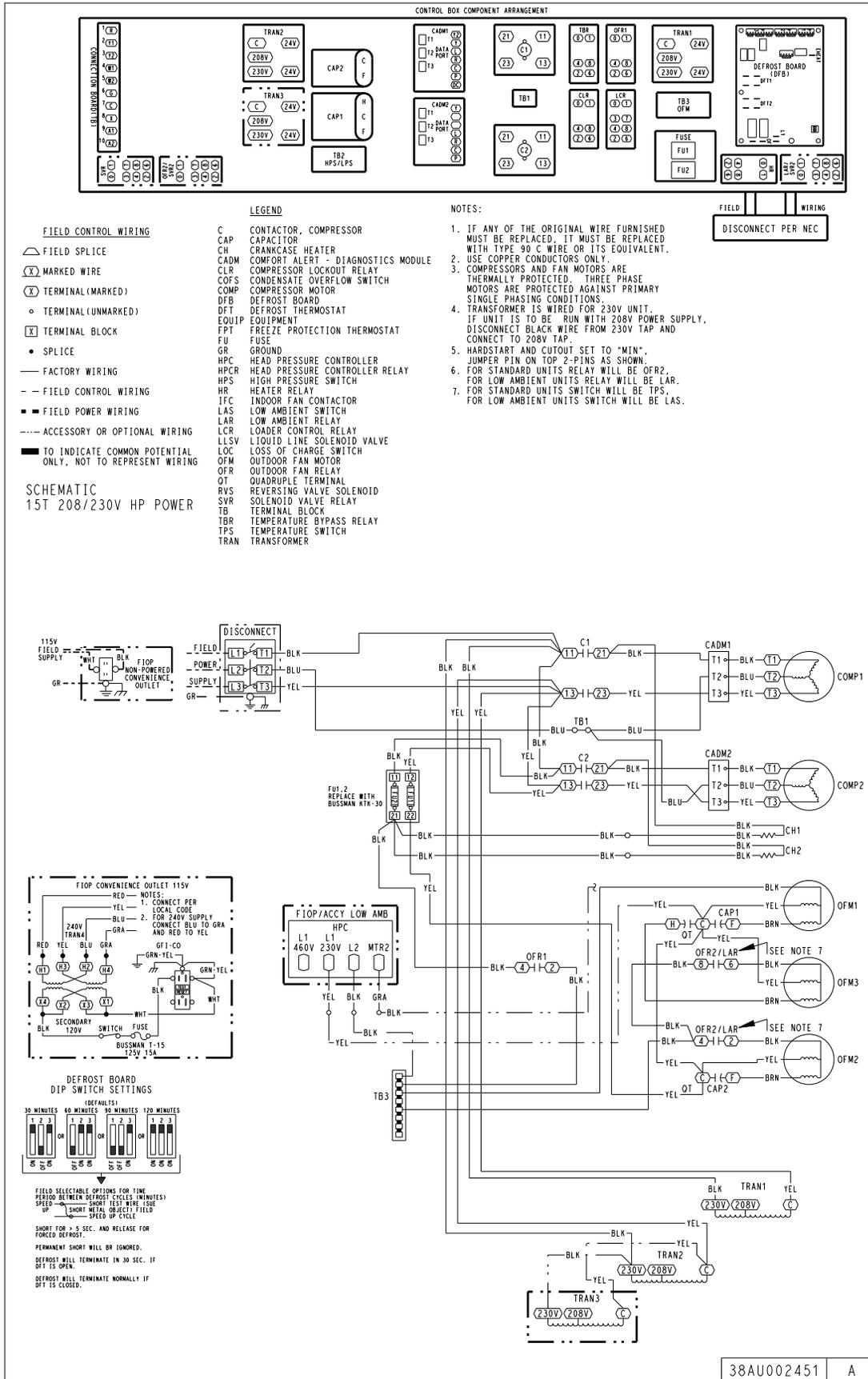
## 38AXQ\*07-12 Wiring Diagram (575-3-60 shown)



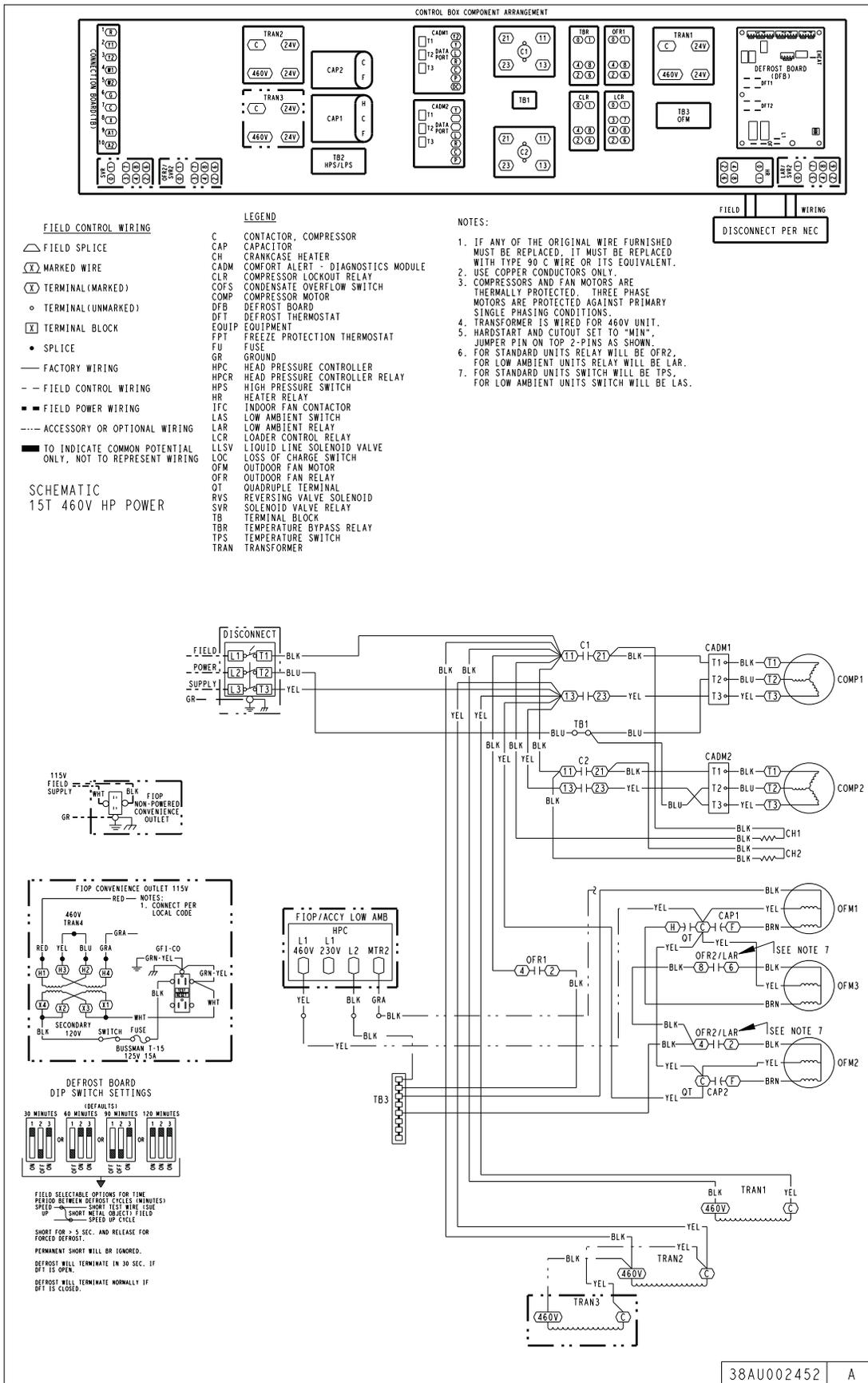
# Typical piping and wiring diagrams (cont)



## 38AXQ\*16 Power Schematic (208/230-3-60 shown)



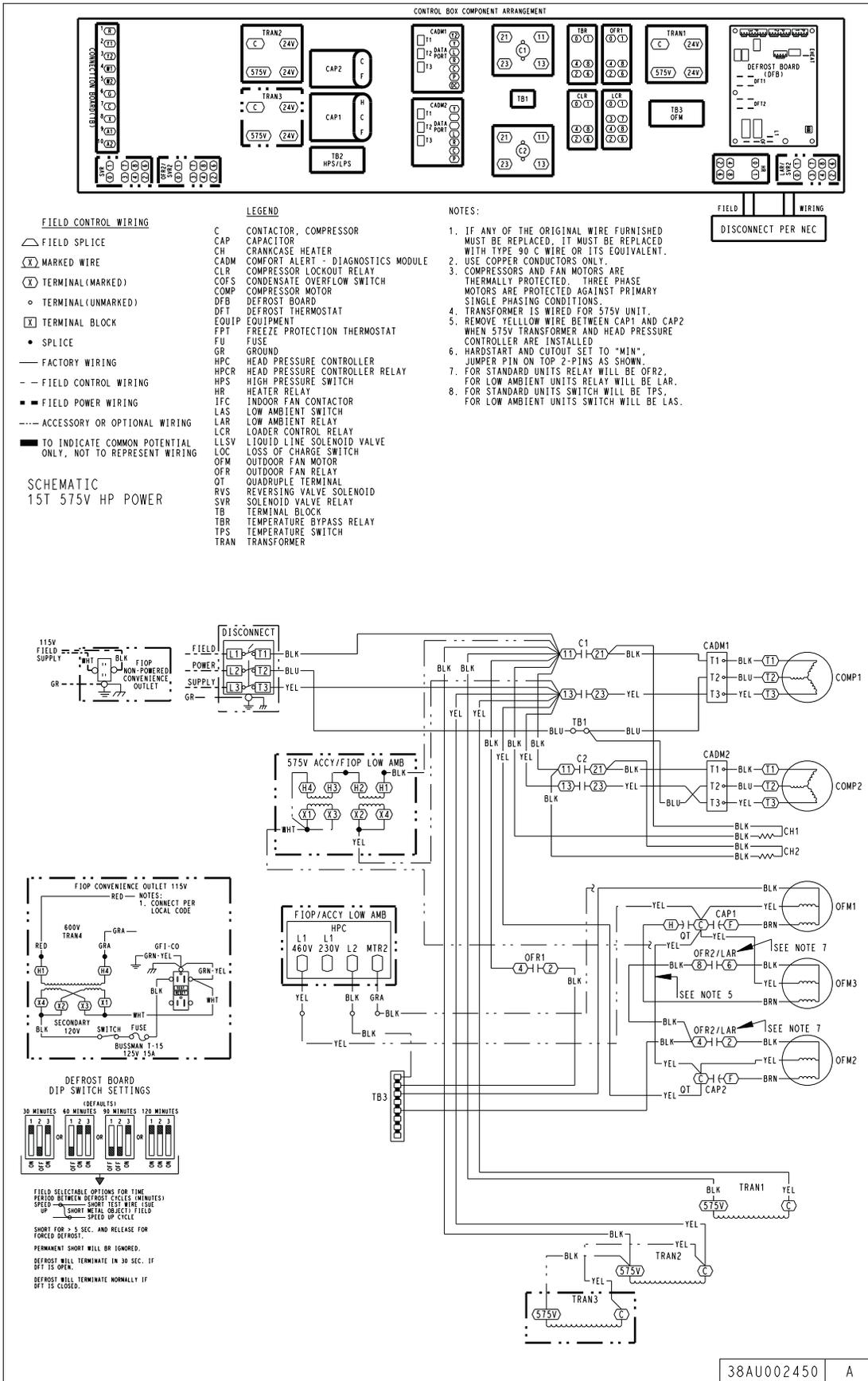
## 38AXQ\*16 Power Schematic (460-3-60 shown)



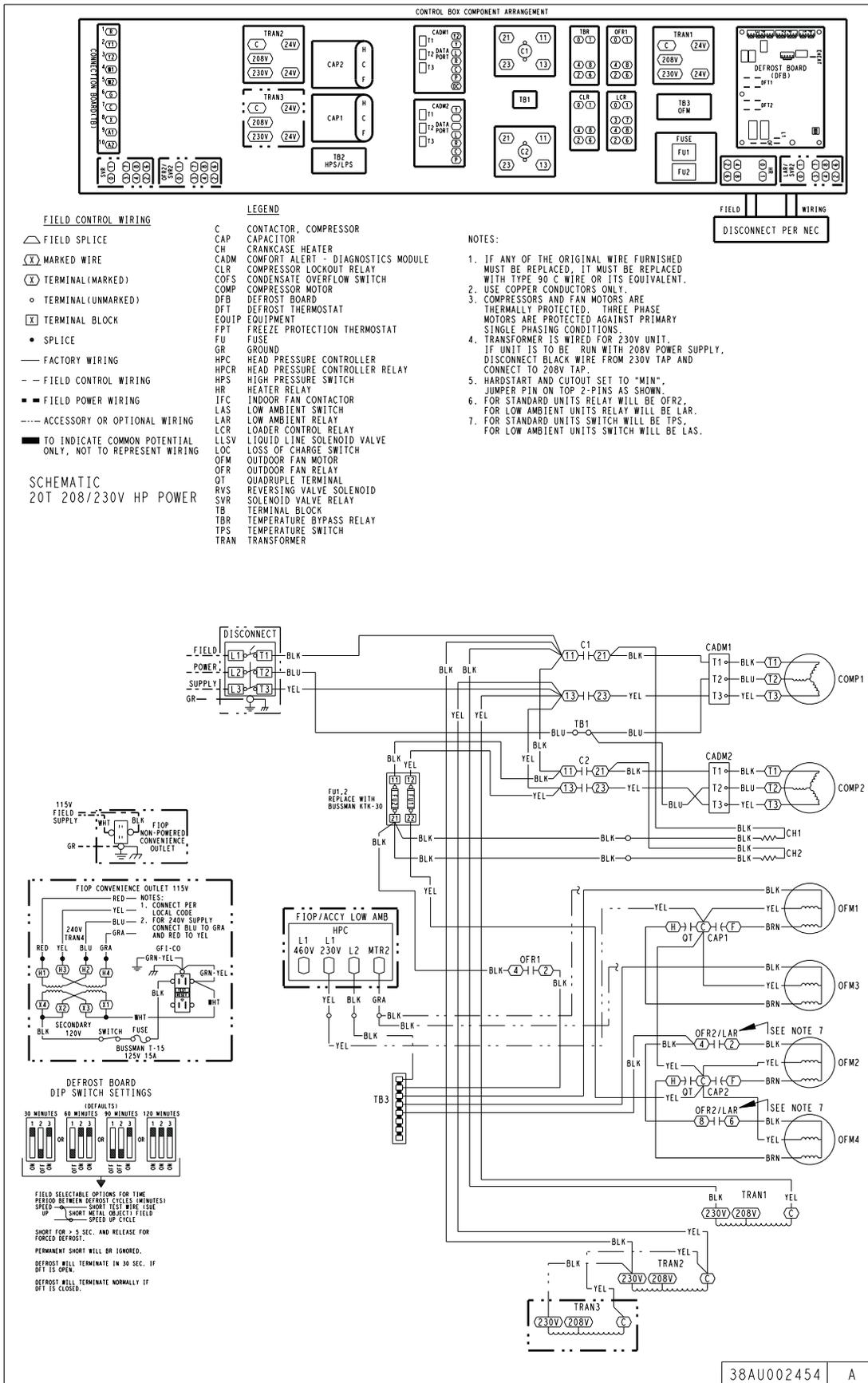
# Typical piping and wiring diagrams (cont)



## 38AXQ\*16 Power Schematic (575-3-60 shown)



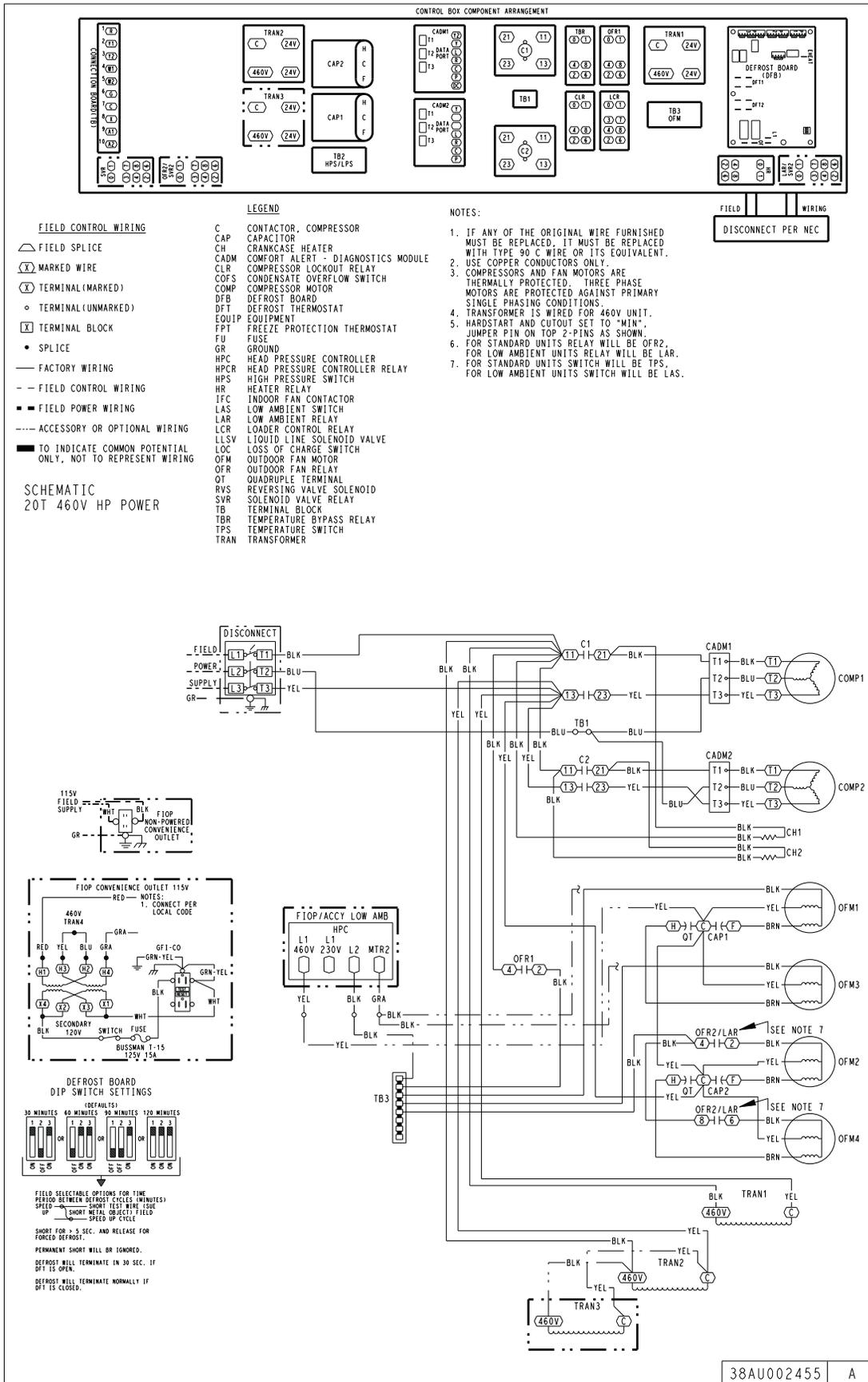
## 38AXQ\*25 Power Schematic (208/230-3-60 shown)



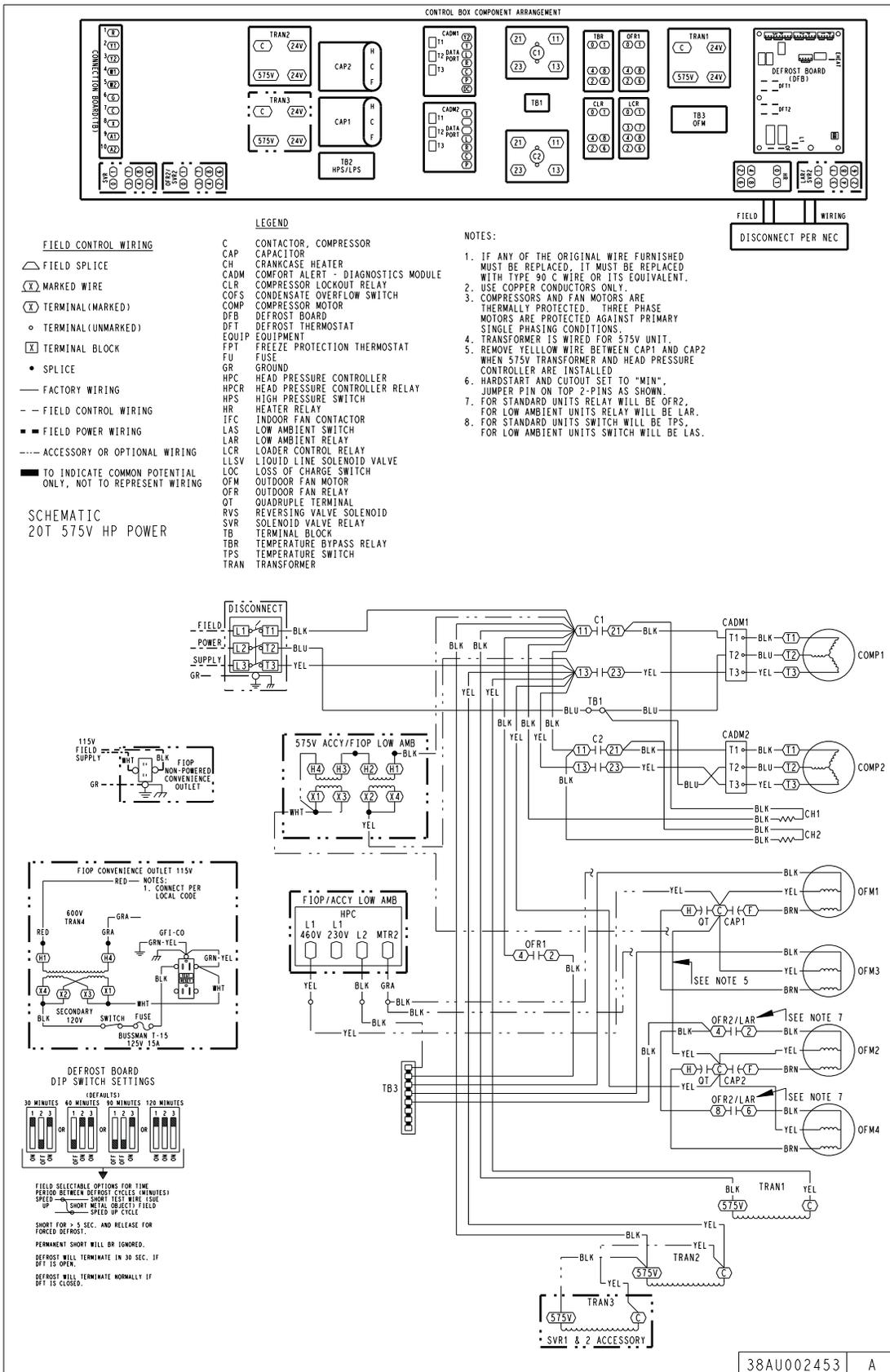
# Typical piping and wiring diagrams (cont)



## 38AXQ\*25 Power Schematic (460-3-60 shown)



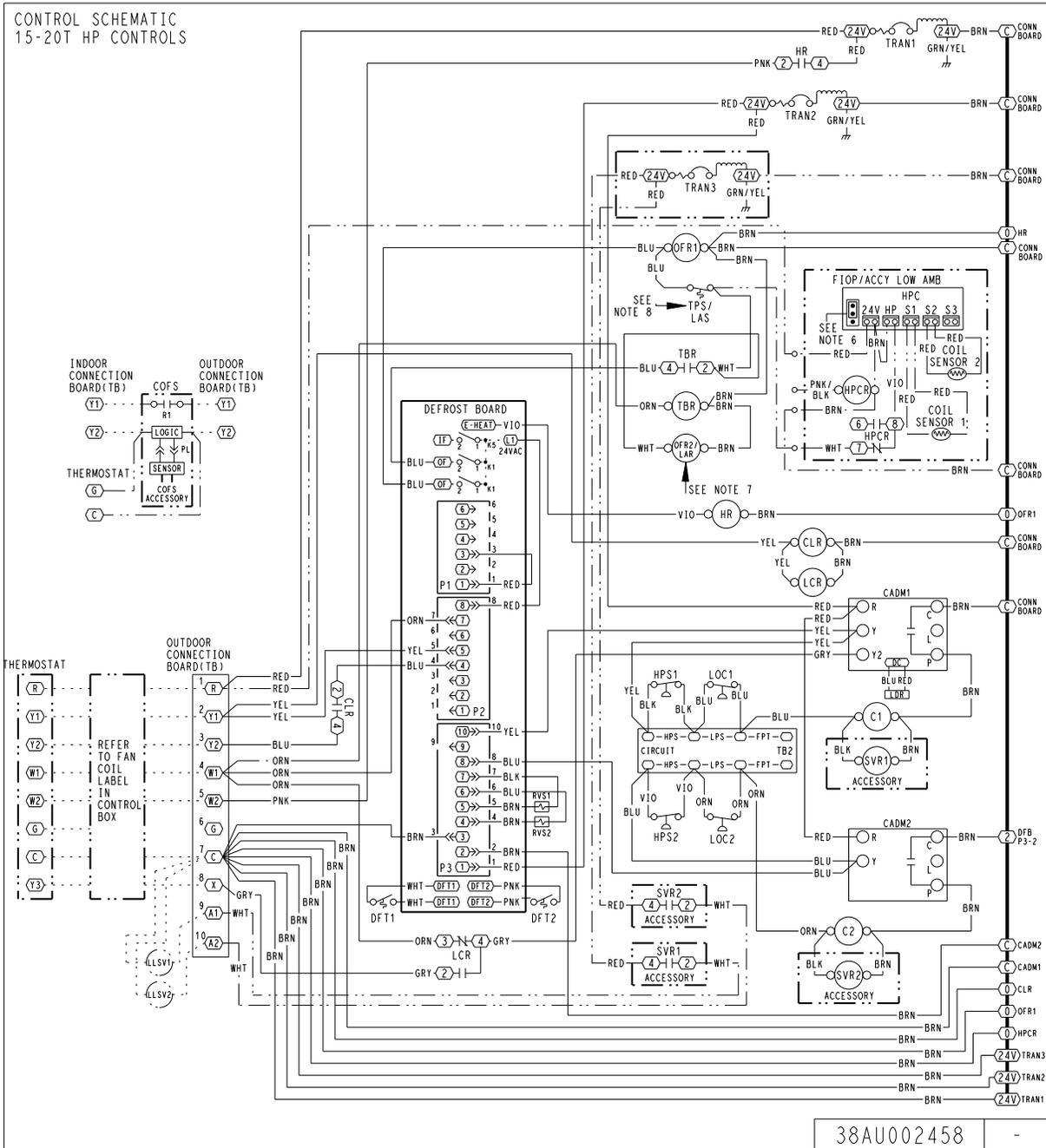
## 38AQ\*25 Power Schematic (575-3-60 shown)



# Typical piping and wiring diagrams (cont)



## 38AXQ\*16-25 Control Schematic



## 38AXQ07/40RLQ07 Stage 2 Cooling Combination Ratings

38AXQ07/40RLQ07			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1800 (cfm)	EA (wb)	58	TC	63.3	63.3	71.3	61.1	61.1	68.9	58.8	58.8	66.2	56.1	56.1	63.2	53.3	53.3	60.0	
			SHC	55.3	63.3	71.3	53.4	61.1	68.9	51.3	58.8	66.2	49.0	56.1	63.2	46.5	53.3	60.0	
		62	TC	66.4	66.4	68.6	63.6	63.6	67.2	60.5	60.5	65.7	57.1	57.1	63.9	54.1	54.1	58.7	
			SHC	50.4	59.5	68.6	49.1	58.1	67.2	47.6	56.6	65.7	46.0	54.9	63.9	42.6	50.7	58.7	
		67	TC	73.3	73.3	73.3	70.1	70.1	70.1	66.7	66.7	66.7	62.9	62.9	62.9	58.9	58.9	58.9	
			SHC	41.6	50.8	59.9	40.3	49.4	58.5	38.9	48.0	57.1	37.3	46.4	55.5	35.7	44.8	53.9	
	72	TC	80.8	80.8	80.8	77.3	77.3	77.3	73.5	73.5	73.5	69.2	69.2	69.2	64.9	64.9	64.9		
		SHC	32.6	41.8	51.0	31.2	40.4	49.6	29.8	39.0	48.1	28.2	37.4	46.5	26.6	35.8	44.9		
	76	TC	—	87.3	87.3	—	83.4	83.4	—	79.3	79.3	—	74.7	74.7	—	70.1	70.1		
		SHC	—	34.4	43.8	—	33.1	42.4	—	31.6	40.9	—	30.0	39.3	—	28.5	37.7		
	2100 (cfm)	EA (wb)	58	TC	66.8	66.8	75.2	64.4	64.4	72.6	61.8	61.8	69.6	58.9	58.9	66.4	55.8	55.8	62.9
				SHC	58.3	66.8	75.2	56.3	64.4	72.6	54.0	61.8	69.6	51.5	58.9	66.4	48.8	55.8	62.9
62			TC	68.5	68.5	75.0	65.6	65.6	73.4	62.4	62.4	71.5	59.6	59.6	66.2	55.9	55.9	65.3	
			SHC	54.2	64.6	75.0	52.8	63.1	73.4	51.1	61.3	71.5	47.7	56.9	66.2	46.4	55.9	65.3	
67			TC	75.5	75.5	75.5	72.1	72.1	72.1	68.4	68.4	68.4	64.4	64.4	64.4	60.2	60.2	60.2	
			SHC	44.2	54.7	65.2	42.8	53.3	63.8	41.3	51.8	62.3	39.7	50.2	60.7	38.1	48.6	59.1	
72		TC	83.1	83.1	83.1	79.4	79.4	79.4	75.3	75.3	75.3	70.9	70.9	70.9	66.4	66.4	66.4		
		SHC	33.7	44.3	54.8	32.3	42.9	53.4	30.8	41.4	51.9	29.2	39.8	50.3	27.6	38.1	48.7		
76		TC	—	89.7	89.7	—	85.6	85.6	—	81.3	81.3	—	76.4	76.4	—	71.6	71.6		
		SHC	—	35.8	46.5	—	34.4	45.1	—	32.9	43.6	—	31.3	41.9	—	29.7	40.3		
2400 (cfm)		EA (wb)	58	TC	69.7	69.7	78.5	67.1	67.1	75.6	64.4	64.4	72.5	61.3	61.3	69.0	58.0	58.0	65.3
				SHC	60.9	69.7	78.5	58.7	67.1	75.6	56.2	64.4	72.5	53.5	61.3	69.0	50.6	58.0	65.3
	62		TC	70.7	70.7	79.0	68.2	68.2	74.0	64.4	64.4	75.3	61.3	61.3	71.7	58.0	58.0	67.8	
			SHC	56.8	67.9	79.0	53.6	63.8	74.0	53.6	64.4	75.3	51.0	61.3	71.7	48.2	58.0	67.8	
	67		TC	77.1	77.1	77.1	73.6	73.6	73.6	69.8	69.8	69.8	65.6	65.6	65.6	61.2	61.2	63.9	
			SHC	46.6	58.4	70.3	45.1	57.0	68.8	43.6	55.5	67.3	42.0	53.8	65.6	40.3	52.1	63.9	
	72	TC	84.9	84.9	84.9	81.0	81.0	81.0	76.8	76.8	76.8	72.1	72.1	72.1	67.5	67.5	67.5		
		SHC	34.7	46.6	58.5	33.3	45.2	57.1	31.8	43.7	55.5	30.1	42.0	53.9	28.5	40.4	52.2		
	76	TC	—	91.6	91.6	—	87.3	87.3	—	82.7	82.7	—	77.8	77.8	—	72.8	72.8		
		SHC	—	37.0	49.0	—	35.6	47.6	—	34.0	46.0	—	32.4	44.4	—	30.8	42.7		
	2700 (cfm)	EA (wb)	58	TC	72.2	72.2	81.3	69.5	69.5	78.3	66.5	66.5	75.0	63.3	63.3	71.3	59.8	59.8	67.3
				SHC	63.1	72.2	81.3	60.7	69.5	78.3	58.1	66.5	75.0	55.3	63.3	71.3	52.2	59.8	67.3
62			TC	73.0	73.0	80.7	70.3	70.3	77.4	66.6	66.6	77.8	63.3	63.3	74.0	59.8	59.8	69.9	
			SHC	58.2	69.4	80.7	55.9	66.6	77.4	55.4	66.6	77.8	52.6	63.3	74.0	49.7	59.8	69.9	
67			TC	78.4	78.4	78.4	74.7	74.7	74.7	70.8	70.8	72.1	66.5	66.5	70.3	62.1	62.1	68.5	
			SHC	48.8	62.0	75.1	47.4	60.5	73.6	45.8	59.0	72.1	44.1	57.2	70.3	42.4	55.4	68.5	
72		TC	86.3	86.3	86.3	82.2	82.2	82.2	77.9	77.9	77.9	73.1	73.1	73.1	68.3	68.3	68.3		
		SHC	35.6	48.8	62.0	34.2	47.4	60.5	32.6	45.8	59.0	31.0	44.1	57.3	29.3	42.5	55.7		
76		TC	—	93.0	93.0	—	88.6	88.6	—	83.9	83.9	—	78.8	78.8	—	73.7	73.7		
		SHC	—	38.1	51.4	—	36.6	49.9	—	35.1	48.4	—	33.4	46.7	—	31.8	45.0		
3000 (cfm)		EA (wb)	58	TC	74.4	74.4	83.8	71.5	71.5	80.6	68.4	68.4	77.1	65.0	65.0	73.2	61.3	61.3	69.1
				SHC	65.0	74.4	83.8	62.5	71.5	80.6	59.7	68.4	77.1	56.7	65.0	73.2	53.6	61.3	69.1
	62		TC	74.4	74.4	87.0	71.6	71.6	83.6	68.5	68.5	80.0	65.0	65.0	76.0	61.4	61.4	71.7	
			SHC	61.9	74.4	87.0	59.5	71.6	83.6	56.9	68.5	80.0	54.0	65.0	76.0	51.0	61.4	71.7	
	67		TC	79.5	79.5	79.8	75.7	75.7	78.3	71.7	71.7	76.6	67.2	67.2	74.7	62.8	62.8	72.7	
			SHC	51.0	65.4	79.8	49.5	63.9	78.3	47.9	62.3	76.6	46.2	60.4	74.7	44.4	58.6	72.7	
	72	TC	87.4	87.4	87.4	83.3	83.3	83.3	78.8	78.8	78.8	73.9	73.9	73.9	69.0	69.0	69.0		
		SHC	36.4	50.9	65.4	35.0	49.4	63.9	33.4	47.9	62.3	31.7	46.2	60.6	30.1	44.6	59.0		
	76	TC	—	94.2	94.2	—	89.7	89.7	—	84.8	84.8	—	79.6	79.6	—	74.4	74.4		
		SHC	—	39.1	53.6	—	37.6	52.2	—	36.1	50.6	—	34.4	48.9	—	32.7	47.3		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ07/40RLQ07 Stage 1 Cooling Combination Ratings

38AXQ07/40RLQ07			AMBIENT TEMPERATURE (°F)																	
			85			95			105			115			125					
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)					
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85			
1500 (cfm)	EA (wb)	58	TC	46.8	46.8	52.7	45.1	45.1	50.8	43.2	43.2	48.6	41.0	41.0	46.2	38.5	38.5	43.4		
			SHC	40.8	46.8	52.7	39.4	45.1	50.8	37.7	43.2	48.6	35.8	41.0	46.2	33.6	38.5	43.4		
		62	TC	48.0	48.0	52.9	45.8	45.8	51.7	43.9	43.9	48.1	41.8	41.8	45.1	38.6	38.6	45.1		
			SHC	38.1	45.5	52.9	37.0	44.4	51.7	34.7	41.4	48.1	32.7	38.9	45.1	32.0	38.6	45.1		
		67	TC	53.4	53.4	53.4	51.0	51.0	51.0	48.2	48.2	48.2	45.2	45.2	45.2	41.8	41.8	41.8		
			SHC	31.3	38.7	46.2	30.3	37.7	45.2	29.1	36.6	44.1	27.9	35.4	42.8	26.6	34.1	41.5		
		72	TC	59.4	59.4	59.4	56.8	56.8	56.8	53.8	53.8	53.8	50.5	50.5	50.5	46.9	46.9	46.9		
			SHC	24.1	31.6	39.1	23.1	30.6	38.1	22.0	29.5	37.0	20.8	28.3	35.8	19.5	27.0	34.5		
		76	TC	—	64.6	64.6	—	61.8	61.8	—	58.6	58.6	—	55.1	55.1	—	51.3	51.3		
			SHC	—	25.8	33.4	—	24.8	32.4	—	23.7	31.3	—	22.5	30.1	—	21.2	28.8		
		1800 (cfm)	EA (wb)	58	TC	49.8	49.8	56.1	47.9	47.9	54.0	45.8	45.8	51.6	43.4	43.4	49.0	40.8	40.8	46.0
					SHC	43.5	49.8	56.1	41.8	47.9	54.0	40.0	45.8	51.6	37.9	43.4	49.0	35.6	40.8	46.0
62	TC			50.5	50.5	55.4	48.6	48.6	53.3	45.9	45.9	53.6	43.5	43.5	50.9	40.8	40.8	47.7		
	SHC			40.0	47.7	55.4	38.5	45.9	53.3	38.1	45.9	53.6	36.1	43.5	50.9	33.9	40.8	47.7		
67	TC			55.2	55.2	55.2	52.6	52.6	52.6	49.7	49.7	49.7	46.5	46.5	47.8	43.0	43.0	46.4		
	SHC			33.7	42.5	51.3	32.6	41.4	50.2	31.5	40.3	49.1	30.2	39.0	47.8	28.9	37.6	46.4		
72	TC			61.4	61.4	61.4	58.5	58.5	58.5	55.4	55.4	55.4	51.9	51.9	51.9	48.1	48.1	48.1		
	SHC			25.2	34.0	42.8	24.1	33.0	41.8	23.0	31.9	40.7	21.8	30.6	39.5	20.5	29.3	38.1		
76	TC			—	66.7	66.7	—	63.7	63.7	—	60.3	60.3	—	56.6	56.6	—	52.6	52.6		
	SHC			—	27.1	36.0	—	26.1	35.0	—	25.0	33.9	—	23.7	32.6	—	22.4	31.3		
2100 (cfm)	EA (wb)			58	TC	52.2	52.2	58.9	50.2	50.2	56.6	48.0	48.0	54.1	45.5	45.5	51.2	42.6	42.6	48.0
					SHC	45.6	52.2	58.9	43.9	50.2	56.6	41.9	48.0	54.1	39.7	45.5	51.2	37.2	42.6	48.0
		62	TC	52.3	52.3	61.2	50.3	50.3	58.8	48.0	48.0	56.2	45.5	45.5	53.2	42.7	42.7	49.9		
			SHC	43.4	52.3	61.2	41.8	50.3	58.8	39.9	48.0	56.2	37.8	45.5	53.2	35.4	42.7	49.9		
		67	TC	56.5	56.5	56.5	53.8	53.8	55.0	50.8	50.8	53.8	47.5	47.5	52.4	43.8	43.8	50.8		
			SHC	35.9	46.0	56.1	34.9	44.9	55.0	33.7	43.7	53.8	32.4	42.4	52.4	30.9	40.8	50.8		
		72	TC	62.8	62.8	62.8	59.8	59.8	59.8	56.6	56.6	56.6	53.0	53.0	53.0	49.0	49.0	49.0		
			SHC	26.1	36.2	46.4	25.0	35.2	45.3	23.9	34.0	44.2	22.7	32.8	42.9	21.3	31.4	41.6		
		76	TC	—	68.2	68.2	—	65.0	65.0	—	61.6	61.6	—	57.7	57.7	—	53.5	53.5		
			SHC	—	28.2	38.5	—	27.2	37.4	—	26.1	36.3	—	24.8	35.0	—	23.5	33.7		
		2400 (cfm)	EA (wb)	58	TC	54.3	54.3	61.2	52.2	52.2	58.8	49.8	49.8	56.1	47.1	47.1	53.1	44.1	44.1	49.8
					SHC	47.4	54.3	61.2	45.5	52.2	58.8	43.5	49.8	56.1	41.1	47.1	53.1	38.5	44.1	49.8
62	TC			54.3	54.3	63.6	52.2	52.2	61.1	49.8	49.8	58.3	47.2	47.2	55.2	44.2	44.2	51.7		
	SHC			45.1	54.3	63.6	43.4	52.2	61.1	41.4	49.8	58.3	39.2	47.2	55.2	36.7	44.2	51.7		
67	TC			57.5	57.5	60.6	54.7	54.7	59.4	51.6	51.6	58.1	48.3	48.3	56.5	44.6	44.6	54.6		
	SHC			38.0	49.3	60.6	36.9	48.2	59.4	35.7	46.9	58.1	34.3	45.4	56.5	32.7	43.6	54.6		
72	TC			63.9	63.9	63.9	60.8	60.8	60.8	57.4	57.4	57.4	53.7	53.7	53.7	49.7	49.7	49.7		
	SHC			26.9	38.3	49.7	25.8	37.2	48.6	24.7	36.1	47.4	23.4	34.8	46.2	22.1	33.5	44.8		
76	TC			—	69.4	69.4	—	66.1	66.1	—	62.5	62.5	—	58.5	58.5	—	54.3	54.3		
	SHC			—	29.3	40.8	—	28.2	39.6	—	27.1	38.5	—	25.8	37.2	—	24.5	35.9		
2700 (cfm)	EA (wb)			58	TC	56.0	56.0	63.2	53.8	53.8	60.6	51.3	51.3	57.8	48.5	48.5	54.7	45.4	45.4	51.2
					SHC	48.9	56.0	63.2	47.0	53.8	60.6	44.8	51.3	57.8	42.4	48.5	54.7	39.7	45.4	51.2
		62	TC	56.1	56.1	65.6	53.9	53.9	63.0	51.4	51.4	60.1	48.6	48.6	56.8	45.5	45.5	53.2		
			SHC	46.6	56.1	65.6	44.7	53.9	63.0	42.7	51.4	60.1	40.3	48.6	56.8	37.8	45.5	53.2		
		67	TC	58.3	58.3	64.8	55.5	55.5	63.5	52.4	52.4	62.0	49.0	49.0	60.1	45.5	45.5	57.1		
			SHC	39.9	52.3	64.8	38.8	51.1	63.5	37.5	49.7	62.0	36.0	48.0	60.1	34.0	45.5	57.1		
		72	TC	64.7	64.7	64.7	61.6	61.6	61.6	58.1	58.1	58.1	54.3	54.3	54.3	50.2	50.2	50.2		
			SHC	27.7	40.3	52.9	26.6	39.2	51.8	25.4	38.0	50.6	24.2	36.7	49.3	22.8	35.4	48.0		
		76	TC	—	70.3	70.3	—	67.0	67.0	—	63.3	63.3	—	59.2	59.2	—	54.8	54.8		
			SHC	—	30.2	42.9	—	29.1	41.8	—	28.0	40.6	—	26.7	39.3	—	25.4	38.0		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ08/40RLQ08 Stage 2 Cooling Combination Ratings

38AXQ08/40RLQ08			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
2250 (cfm)	EA (wb)	58	TC	78.3	78.3	88.9	74.4	74.4	84.6	70.2	70.2	80.0	65.7	65.7	75.1	60.9	60.9	69.8	
			SHC	67.7	78.3	88.9	64.1	74.4	84.6	60.3	70.2	80.0	56.3	65.7	75.1	51.9	60.9	69.8	
		62	TC	83.8	83.8	83.8	78.9	78.9	80.5	73.7	73.7	77.3	68.2	68.2	74.0	62.3	62.3	70.4	
			SHC	60.8	72.2	83.5	57.8	69.1	80.5	54.7	66.0	77.3	51.4	62.7	74.0	47.9	59.2	70.4	
		67	TC	93.0	93.0	93.0	87.8	87.8	87.8	82.2	82.2	82.2	76.2	76.2	76.2	69.8	69.8	69.8	
			SHC	50.1	61.5	72.8	47.1	58.5	69.8	44.0	55.3	66.7	40.8	52.1	63.4	37.4	48.7	60.1	
	72	TC	103.0	103.0	103.0	97.3	97.3	97.3	91.3	91.3	91.3	84.8	84.8	84.8	77.9	77.9	77.9		
		SHC	39.3	50.5	61.7	36.3	47.5	58.7	33.1	44.4	55.6	29.9	41.1	52.4	26.5	37.8	49.0		
	76	TC	—	112.0	112.0	—	105.0	105.0	—	98.9	98.9	—	92.0	92.0	—	84.7	84.7		
		SHC	—	41.5	51.7	—	38.5	49.1	—	35.4	46.1	—	32.2	43.0	—	28.8	39.7		
	2650 (cfm)	EA (wb)	58	TC	83.5	83.5	94.7	79.3	79.3	90.1	74.8	74.8	85.1	69.9	69.9	79.9	64.8	64.8	74.2
				SHC	72.3	83.5	94.7	68.4	79.3	90.1	64.4	74.8	85.1	60.0	69.9	79.9	55.4	64.8	74.2
62			TC	86.9	86.9	92.4	81.8	81.8	89.2	76.4	76.4	85.8	70.7	70.7	82.0	66.4	66.4	71.9	
			SHC	66.1	79.2	92.4	63.0	76.1	89.2	59.7	72.7	85.8	56.3	69.1	82.0	49.7	60.8	71.9	
67			TC	96.3	96.3	96.3	90.8	90.8	90.8	84.9	84.9	84.9	78.6	78.6	78.6	71.9	71.9	71.9	
			SHC	53.6	66.8	79.9	50.6	63.7	76.9	47.4	60.5	73.7	44.1	57.2	70.4	40.7	53.8	66.9	
72		TC	107.0	107.0	107.0	100.5	100.5	100.5	94.1	94.1	94.1	87.3	87.3	87.3	80.1	80.1	80.1		
		SHC	40.9	53.9	66.9	37.8	50.8	63.8	34.6	47.6	60.6	31.3	44.3	57.3	27.9	40.9	53.9		
76		TC	—	115.0	115.0	—	109.0	109.0	—	102.0	102.0	—	94.6	94.6	—	86.9	86.9		
		SHC	—	43.4	55.7	—	40.3	52.7	—	37.1	49.6	—	33.8	46.3	—	30.4	42.9		
3000 (cfm)		EA (wb)	58	TC	87.3	87.3	98.9	82.8	82.8	94.1	78.1	78.1	88.9	73.1	73.1	83.3	67.6	67.6	77.4
				SHC	75.7	87.3	98.9	71.6	82.8	94.1	67.3	78.1	88.9	62.8	73.1	83.3	57.9	67.6	77.4
	62		TC	89.2	89.2	99.5	84.0	84.0	96.0	79.1	79.1	89.9	74.7	74.7	81.0	67.7	67.7	80.7	
			SHC	70.4	85.0	99.5	67.2	81.6	96.0	62.6	76.2	89.9	56.7	68.8	81.0	54.7	67.7	80.7	
	67		TC	98.6	98.6	98.6	92.8	92.8	92.8	86.7	86.7	86.7	80.2	80.2	80.2	73.3	73.3	73.3	
			SHC	56.5	71.2	85.9	53.4	68.1	82.8	50.2	64.9	79.5	46.9	61.5	76.2	43.4	58.0	72.7	
	72	TC	109.0	109.0	109.0	103.0	103.0	103.0	96.0	96.0	96.0	89.0	89.0	89.0	81.6	81.6	81.6		
		SHC	42.1	56.6	71.1	39.0	53.5	68.0	35.8	50.3	64.8	32.4	46.9	61.4	28.9	43.4	57.9		
	76	TC	—	117.3	117.3	—	111.0	111.0	—	104.0	104.0	—	96.3	96.3	—	88.4	88.4		
		SHC	—	44.7	58.7	—	41.6	55.6	—	38.4	52.4	—	35.1	49.1	—	31.6	45.6		
	3550 (cfm)	EA (wb)	58	TC	92.2	92.2	104.4	87.4	87.4	99.2	82.4	82.4	93.6	77.0	77.0	87.7	71.2	71.2	81.3
				SHC	80.0	92.2	104.4	75.7	87.4	99.2	71.1	82.4	93.6	66.3	77.0	87.7	61.1	71.2	81.3
62			TC	92.4	92.4	108.7	87.5	87.5	103.2	82.5	82.5	97.5	77.1	77.1	91.4	71.3	71.3	84.8	
			SHC	76.1	92.4	108.7	71.8	87.5	103.2	67.4	82.5	97.5	62.7	77.1	91.4	57.7	71.3	84.8	
67			TC	101.3	101.3	101.3	95.2	95.2	95.2	88.9	88.9	88.9	82.2	82.2	84.9	74.9	74.9	81.3	
			SHC	60.7	77.7	94.8	57.6	74.6	91.6	54.3	71.3	88.3	50.9	67.9	84.9	47.4	64.4	81.3	
72		TC	112.0	112.0	112.0	105.0	105.0	105.0	98.3	98.3	98.3	91.0	91.0	91.0	83.3	83.3	83.3		
		SHC	43.7	60.6	77.4	40.6	57.4	74.2	37.3	54.1	70.9	33.9	50.7	67.5	30.4	47.2	63.9		
76		TC	—	120.2	120.2	—	113.0	113.0	—	106.0	106.0	—	98.3	98.3	—	90.2	90.2		
		SHC	—	46.6	62.8	—	43.5	59.7	—	40.2	56.4	—	36.8	53.0	—	33.3	49.5		
3750 (cfm)		EA (wb)	58	TC	93.7	93.7	106.1	88.9	88.9	100.8	83.7	83.7	95.1	78.2	78.2	89.1	72.3	72.3	82.6
				SHC	81.3	93.7	106.1	77.0	88.9	100.8	72.3	83.7	95.1	67.3	78.2	89.1	62.0	72.3	82.6
	62		TC	93.8	93.8	110.3	89.0	89.0	104.9	83.8	83.8	99.1	78.3	78.3	92.8	72.4	72.4	86.1	
			SHC	77.3	93.8	110.3	73.0	89.0	104.9	68.6	83.8	99.1	63.8	78.3	92.8	58.7	72.4	86.1	
	67		TC	102.1	102.1	102.1	96.0	96.0	96.0	89.5	89.5	91.4	82.7	82.7	88.0	75.4	75.4	84.2	
			SHC	62.2	80.0	97.9	59.0	76.9	94.7	55.8	73.6	91.4	52.4	70.2	88.0	48.7	66.5	84.2	
	72	TC	112.0	112.0	112.0	106.0	106.0	106.0	98.9	98.9	98.9	91.6	91.6	91.6	83.9	83.9	83.9		
		SHC	44.3	61.9	79.6	41.1	58.7	76.4	37.8	55.4	73.1	34.4	52.0	69.6	30.9	48.5	66.0		
	76	TC	—	121.0	121.0	—	114.1	114.1	—	107.0	107.0	—	98.9	98.9	—	90.7	90.7		
		SHC	—	47.2	64.3	—	44.1	61.1	—	40.8	57.8	—	37.3	54.4	—	33.8	50.8		

LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ08/40RLQ08 Stage 1 Cooling Combination Ratings

38AXQ08/40RLQ08			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
1500 (cfm)	EA (wb)	58	TC	56.0	56.0	63.0	54.1	54.1	60.8	51.9	51.9	58.3	49.5	49.5	55.6	46.9	46.9	52.6	
			SHC	49.0	56.0	63.0	47.3	54.1	60.8	45.5	51.9	58.3	43.4	49.5	55.6	41.2	46.9	52.6	
		62	TC	59.3	59.3	59.6	56.7	56.7	58.5	53.8	53.8	57.2	50.7	50.7	55.7	47.3	47.3	53.9	
			SHC	44.4	52.0	59.6	43.2	50.8	58.5	42.0	49.6	57.2	40.6	48.2	55.7	39.0	46.5	53.9	
		67	TC	65.4	65.4	65.4	62.6	62.6	62.6	59.5	59.5	59.5	56.1	56.1	56.1	52.3	52.3	52.3	
			SHC	37.0	44.6	52.2	35.9	43.5	51.1	34.7	42.3	49.9	33.4	41.0	48.6	32.0	39.6	47.2	
	72	TC	72.0	72.0	72.0	69.0	69.0	69.0	65.7	65.7	65.7	62.1	62.1	62.1	58.0	58.0	58.0		
		SHC	29.4	37.0	44.5	28.4	35.9	43.5	27.2	34.8	42.3	26.0	33.5	41.1	24.6	32.1	39.7		
	76	TC	—	77.8	77.8	—	74.6	74.6	—	71.1	71.1	—	67.2	67.2	—	62.9	62.9		
		SHC	—	30.7	38.9	—	29.7	36.6	—	28.6	35.7	—	27.3	34.5	—	26.0	33.3		
	1700 (cfm)	EA (wb)	58	TC	58.5	58.5	65.8	56.4	56.4	63.5	54.2	54.2	60.9	51.6	51.6	58.0	48.8	48.8	54.8
				SHC	51.2	58.5	65.8	49.4	56.4	63.5	47.5	54.2	60.9	45.3	51.6	58.0	42.8	48.8	54.8
62			TC	60.8	60.8	64.0	58.1	58.1	62.8	55.2	55.2	61.4	52.6	52.6	57.0	48.9	48.9	56.9	
			SHC	47.0	55.5	64.0	45.8	54.3	62.8	44.5	53.0	61.4	41.7	49.3	57.0	40.9	48.9	56.9	
67			TC	67.0	67.0	67.0	64.1	64.1	64.1	60.9	60.9	60.9	57.3	57.3	57.3	53.4	53.4	53.4	
			SHC	38.7	47.2	55.8	37.6	46.1	54.7	36.4	44.9	53.4	35.1	43.6	52.1	33.6	42.2	50.7	
72		TC	73.8	73.8	73.8	70.7	70.7	70.7	67.2	67.2	67.2	63.4	63.4	63.4	59.2	59.2	59.2		
		SHC	30.2	38.6	47.1	29.1	37.6	46.0	27.9	36.4	44.8	26.7	35.1	43.6	25.3	33.7	42.2		
76		TC	—	79.6	79.6	—	76.3	76.3	—	72.6	72.6	—	68.6	68.6	—	64.1	64.1		
		SHC	—	31.6	39.4	—	30.5	38.5	—	29.4	37.5	—	28.2	36.3	—	26.8	35.0		
1900 (cfm)		EA (wb)	58	TC	60.7	60.7	68.3	58.5	58.5	65.8	56.1	56.1	63.1	53.4	53.4	60.0	50.5	50.5	56.7
				SHC	53.1	60.7	68.3	51.2	58.5	65.8	49.1	56.1	63.1	46.9	53.4	60.0	44.3	50.5	56.7
	62		TC	62.1	62.1	68.2	59.4	59.4	66.8	57.1	57.1	61.7	53.6	53.6	62.4	50.5	50.5	58.8	
			SHC	49.4	58.8	68.2	48.2	57.5	66.8	45.0	53.4	61.7	44.7	53.6	62.4	42.3	50.5	58.8	
	67		TC	68.4	68.4	68.4	65.3	65.3	65.3	62.0	62.0	62.0	58.3	58.3	58.3	54.3	54.3	54.3	
			SHC	40.3	49.8	59.2	39.2	48.6	58.1	38.0	47.4	56.9	36.6	46.1	55.5	35.2	44.6	54.1	
	72	TC	75.2	75.2	75.2	72.0	72.0	72.0	68.4	68.4	68.4	64.5	64.5	64.5	60.1	60.1	60.1		
		SHC	30.9	40.2	49.6	29.8	39.1	48.5	28.6	38.0	47.3	27.3	36.7	46.0	25.9	35.3	44.6		
	76	TC	—	81.1	81.1	—	77.7	77.7	—	73.9	73.9	—	69.7	69.7	—	65.1	65.1		
		SHC	—	32.4	41.3	—	31.3	40.3	—	30.2	39.2	—	29.0	38.0	—	27.6	36.7		
	2250 (cfm)	EA (wb)	58	TC	63.9	63.9	71.9	61.6	61.6	69.3	59.0	59.0	66.3	56.1	56.1	63.1	52.9	52.9	59.5
				SHC	55.9	63.9	71.9	53.9	61.6	69.3	51.6	59.0	66.3	49.2	56.1	63.1	46.4	52.9	59.5
62			TC	64.8	64.8	71.5	61.6	61.6	71.9	59.8	59.8	65.2	56.2	56.2	65.4	53.0	53.0	61.7	
			SHC	51.7	61.6	71.5	51.4	61.6	71.9	47.4	56.3	65.2	46.9	56.2	65.4	44.3	53.0	61.7	
67			TC	70.2	70.2	70.2	67.0	67.0	67.0	63.5	63.5	63.5	59.6	59.6	61.2	55.4	55.4	59.6	
			SHC	43.0	54.0	65.0	41.9	52.9	63.9	40.6	51.6	62.6	39.2	50.2	61.2	37.7	48.6	59.6	
72		TC	77.2	77.2	77.2	73.8	73.8	73.8	70.0	70.0	70.0	65.9	65.9	65.9	61.4	61.4	61.4		
		SHC	31.9	42.8	53.7	30.8	41.7	52.6	29.6	40.5	51.4	28.3	39.2	50.2	26.9	37.8	48.7		
76		TC	—	83.1	83.1	—	79.5	79.5	—	75.6	75.6	—	71.2	71.2	—	66.4	66.4		
		SHC	—	33.7	44.1	—	32.6	43.1	—	31.5	42.0	—	30.2	40.8	—	28.8	39.4		
3000 (cfm)		EA (wb)	58	TC	69.1	69.1	77.8	66.5	66.5	74.8	63.6	63.6	71.5	60.3	60.3	67.8	56.8	56.8	63.8
				SHC	60.4	69.1	77.8	58.1	66.5	74.8	55.6	63.6	71.5	52.8	60.3	67.8	49.8	56.8	63.8
	62		TC	69.2	69.2	80.8	66.5	66.5	77.6	63.6	63.6	74.2	60.4	60.4	70.4	56.8	56.8	66.2	
			SHC	57.6	69.2	80.8	55.4	66.5	77.6	53.0	63.6	74.2	50.4	60.4	70.4	47.5	56.8	66.2	
	67		TC	72.7	72.7	76.4	69.3	69.3	75.2	65.6	65.6	73.7	61.6	61.6	72.0	57.8	57.8	66.0	
			SHC	48.2	62.3	76.4	47.0	61.1	75.2	45.7	59.7	73.7	44.2	58.1	72.0	40.9	53.4	66.0	
	72	TC	79.9	79.9	79.9	76.2	76.2	76.2	72.2	72.2	72.2	67.8	67.8	67.8	63.1	63.1	63.1		
		SHC	33.8	47.9	61.9	32.7	46.8	60.8	31.5	45.6	59.6	30.2	44.2	58.3	28.8	42.8	56.9		
	76	TC	—	86.0	86.0	—	82.1	82.1	—	77.9	77.9	—	73.3	73.3	—	68.2	68.2		
		SHC	—	36.0	49.6	—	35.0	48.6	—	33.8	47.4	—	32.5	46.2	—	31.1	44.8		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ12/40RLQ12 Stage 2 Cooling Combination Ratings

38AXQ12/40RLQ12			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
3000 (cfm)	EA (wb)	58	TC	94.8	94.8	108.7	87.9	87.9	101.0	80.7	80.7	94.0	73.2	73.2	86.0	65.3	65.3	77.2	
			SHC	80.9	94.8	108.7	74.4	87.9	101.0	67.7	80.7	94.0	60.7	73.2	86.0	53.3	65.3	77.2	
		62	TC	102.0	102.0	102.0	94.0	94.0	97.0	85.2	85.2	91.0	76.4	76.4	84.0	65.4	65.4	79.1	
			SHC	72.3	87.3	102.4	66.5	81.6	97.0	60.5	75.5	91.0	54.4	69.4	84.0	51.7	65.4	79.1	
		67	TC	115.0	115.0	115.0	106.0	106.0	106.0	97.3	97.3	97.3	88.0	88.0	88.0	77.9	77.9	77.9	
			SHC	58.9	73.6	88.4	53.1	67.9	82.7	47.2	62.0	76.9	41.1	56.0	70.9	34.8	49.8	64.7	
	72	TC	129.0	129.0	129.0	120.0	120.0	120.0	110.0	110.0	110.0	100.0	100.0	100.0	90.0	90.0	90.0		
		SHC	45.8	59.9	74.0	39.9	54.1	68.4	33.8	48.2	62.6	27.7	42.2	56.6	21.4	35.9	50.5		
	76	TC	—	141.0	141.0	—	131.0	131.0	—	121.0	121.0	—	110.0	110.0	—	99.0	99.0		
		SHC	—	48.5	65.0	—	42.6	59.1	—	36.9	53.4	—	30.9	43.4	—	24.8	38.1		
	3500 (cfm)	EA (wb)	58	TC	102.0	102.0	116.0	94.0	94.0	109.0	87.0	87.0	101.0	79.0	79.0	92.0	70.5	70.5	83.0
				SHC	87.1	102.0	116.3	80.3	94.0	109.0	73.3	87.0	101.0	65.9	79.0	92.0	58.1	70.5	83.0
62			TC	106.0	106.0	114.0	97.7	97.7	108.0	89.0	89.0	101.0	79.1	79.1	94.0	70.8	70.8	87.0	
			SHC	79.3	97.0	114.0	73.4	91.0	108.0	67.2	84.3	101.0	63.9	79.1	94.0	53.9	70.5	87.0	
67			TC	119.0	119.0	119.0	110.0	110.0	110.0	101.0	101.0	101.0	91.0	91.0	91.0	80.7	80.7	80.7	
			SHC	63.6	80.7	98.0	57.7	74.8	92.0	51.7	68.8	86.0	45.4	62.6	79.7	39.1	56.3	73.5	
72		TC	133.0	133.0	133.0	124.0	124.0	124.0	114.0	114.0	114.0	103.0	103.0	103.0	92.0	92.0	92.0		
		SHC	47.9	64.4	80.9	42.0	58.5	75.1	35.8	52.5	69.1	29.6	46.3	63.0	23.2	39.9	56.6		
76		TC	—	145.0	145.0	—	135.0	135.0	—	124.0	124.0	—	113.0	113.0	—	102.0	102.0		
		SHC	—	51.1	70.3	—	45.3	59.5	—	39.3	54.4	—	33.1	48.6	—	26.7	42.6		
4000 (cfm)		EA (wb)	58	TC	108.0	108.0	123.0	100.0	100.0	115.0	92.0	92.0	106.0	83.6	83.6	97.0	74.9	74.9	88.0
				SHC	92.2	108.0	123.0	85.2	99.9	114.6	77.8	92.0	106.0	70.1	83.6	97.0	62.0	74.9	88.0
	62		TC	110.0	110.0	124.0	101.0	101.0	117.0	94.0	94.0	107.0	84.7	84.7	100.0	75.0	75.0	92.3	
			SHC	85.7	105.0	124.0	79.4	98.0	117.0	71.5	89.3	107.0	64.9	82.5	100.0	57.8	75.0	92.3	
	67		TC	122.0	122.0	122.0	113.0	113.0	113.0	104.0	104.0	104.0	93.0	93.0	93.0	82.8	82.8	83.0	
			SHC	68.0	87.3	107.0	62.0	81.3	101.0	55.8	75.2	95.0	49.5	68.9	88.0	43.1	62.5	82.0	
	72	TC	136.6	136.6	136.6	127.0	127.0	127.0	117.0	117.0	117.0	106.0	106.0	106.0	95.0	95.0	95.0		
		SHC	49.8	68.5	87.2	43.8	62.5	81.3	37.5	56.4	75.2	31.2	50.0	68.9	24.7	43.6	62.4		
	76	TC	—	148.0	148.0	—	138.0	138.0	—	127.0	127.0	—	115.0	115.0	—	103.0	103.0		
		SHC	—	53.4	70.1	—	47.4	64.6	—	41.3	58.8	—	34.9	52.7	—	28.4	46.4		
	4500 (cfm)	EA (wb)	58	TC	112.0	112.0	128.0	104.0	104.0	120.0	96.0	96.0	111.0	88.0	88.0	102.0	78.6	78.6	92.0
				SHC	97.0	112.0	128.0	89.3	104.0	120.0	81.6	96.0	111.0	73.7	88.0	102.0	65.3	78.6	92.0
62			TC	113.0	113.0	132.0	105.0	105.0	125.0	96.0	96.0	116.0	88.0	88.0	106.0	78.7	78.7	96.0	
			SHC	91.0	112.0	132.0	84.3	105.0	125.0	76.9	96.0	116.0	69.0	88.0	106.0	60.9	78.7	96.0	
67			TC	125.0	125.0	125.0	116.0	116.0	116.0	106.0	106.0	106.0	95.0	95.0	97.0	84.4	84.4	90.0	
			SHC	72.1	93.5	115.0	66.0	87.5	109.0	59.8	81.3	103.0	53.4	74.9	97.0	46.9	68.3	90.0	
72		TC	139.2	139.2	139.2	129.0	129.0	129.0	119.0	119.0	119.0	108.0	108.0	108.0	96.0	96.0	96.0		
		SHC	51.4	72.3	93.1	45.3	66.2	87.1	39.0	59.9	80.8	32.6	53.5	74.4	26.0	47.0	67.9		
76		TC	—	151.0	151.0	—	140.0	140.0	—	129.0	129.0	—	117.0	117.0	—	105.0	105.0		
		SHC	—	55.2	74.5	—	49.1	68.7	—	42.8	62.6	—	36.4	56.3	—	29.7	49.7		
5000 (cfm)		EA (wb)	58	TC	117.0	117.0	133.0	108.0	108.0	124.0	100.0	100.0	115.0	91.0	91.0	105.0	81.7	81.7	95.0
				SHC	100.0	117.0	133.0	92.8	108.0	124.0	84.9	100.0	115.0	76.7	91.0	105.0	68.1	81.7	95.0
	62		TC	118.6	118.6	133.0	109.0	109.0	129.0	100.0	100.0	120.0	91.0	91.0	110.0	81.8	81.8	100.0	
			SHC	92.8	113.0	133.0	87.7	109.0	129.0	80.0	100.0	120.0	72.0	91.2	110.0	63.6	81.8	99.9	
	67		TC	127.0	127.0	127.0	118.0	118.0	118.0	107.5	107.5	110.7	91.0	91.0	114.0	86.0	86.0	97.0	
			SHC	76.0	100.0	123.0	69.8	94.0	117.0	63.6	87.2	110.7	69.1	91.3	114.0	50.5	73.9	97.0	
	72	TC	141.0	141.0	141.0	131.0	131.0	131.0	121.0	121.0	121.0	109.0	109.0	109.0	98.0	98.0	98.0		
		SHC	52.9	75.8	99.0	46.7	69.6	93.0	40.3	63.3	86.2	33.9	56.8	79.7	27.2	50.1	73.0		
	76	TC	—	153.0	153.0	—	142.0	142.0	—	130.0	130.0	—	118.0	118.0	—	106.0	106.0		
		SHC	—	56.8	78.2	—	50.6	72.3	—	44.2	66.0	—	37.5	59.4	—	30.7	52.4		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ12/40RLQ12 Stage 1 Cooling Combination Ratings

38AXQ12/40RLQ12			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
2500 (cfm)	EA (wb)	58	TC	73.4	73.4	83.4	68.8	68.8	78.4	63.9	63.9	73.0	58.6	58.6	67.2	53.0	53.0	61.4	
			SHC	63.4	73.4	83.4	59.3	68.8	78.4	54.8	63.9	73.0	50.0	58.6	67.2	44.7	53.0	61.4	
		62	TC	75.3	75.3	83.5	69.8	69.8	80.0	64.3	64.3	75.3	58.7	58.7	70.2	53.1	53.1	63.8	
			SHC	58.8	71.1	83.5	55.4	67.7	80.0	51.5	63.4	75.3	47.2	58.7	70.2	42.4	53.1	63.8	
		67	TC	84.4	84.4	84.4	78.5	78.5	78.5	72.1	72.1	72.1	65.3	65.3	65.3	57.9	57.9	58.4	
			SHC	47.5	59.8	72.2	44.3	56.7	69.0	41.0	53.4	65.7	37.4	49.8	62.2	33.7	46.1	58.4	
	72	TC	94.4	94.4	94.4	88.2	88.2	88.2	81.5	81.5	81.5	74.3	74.3	74.3	66.6	66.6	66.6		
		SHC	36.0	48.0	59.9	32.9	44.9	56.9	29.5	41.6	53.7	26.1	38.2	50.3	22.4	34.6	46.8		
	76	TC	—	102.8	102.8	—	96.6	96.6	—	89.4	89.4	—	81.9	81.9	—	73.7	73.7		
		SHC	—	38.2	51.9	—	36.6	49.5	—	32.1	43.1	—	28.7	40.1	—	25.2	36.8		
	3000 (cfm)	EA (wb)	58	TC	78.6	78.6	89.2	73.8	73.8	83.9	68.5	68.5	78.1	62.9	62.9	72.0	56.9	56.9	65.3
				SHC	68.1	78.6	89.2	63.7	73.8	83.9	58.9	68.5	78.1	53.8	62.9	72.0	48.4	56.9	65.3
62			TC	79.0	79.0	92.0	74.0	74.0	87.1	68.6	68.6	81.4	63.0	63.0	75.1	57.0	57.0	68.3	
			SHC	64.2	78.1	92.0	60.2	73.6	87.1	55.7	68.6	81.4	50.9	63.0	75.1	45.7	57.0	68.3	
67			TC	87.2	87.2	87.2	81.1	81.1	81.1	74.4	74.4	74.4	67.3	67.3	70.7	59.8	59.8	66.8	
			SHC	51.7	66.3	80.8	48.5	63.1	77.7	45.0	59.6	74.3	41.5	56.1	70.7	37.7	52.2	66.8	
72		TC	97.4	97.4	97.4	91.0	91.0	91.0	84.0	84.0	84.0	76.5	76.5	76.5	68.5	68.5	68.5		
		SHC	37.8	52.0	66.2	34.6	48.9	63.1	31.2	45.5	59.9	27.7	42.1	56.4	24.0	38.4	52.9		
76		TC	—	105.8	105.8	—	99.2	99.2	—	91.8	91.8	—	84.1	84.1	—	75.7	75.7		
		SHC	—	40.4	53.3	—	37.4	50.6	—	34.1	47.6	—	30.7	44.4	—	27.1	41.0		
3500 (cfm)		EA (wb)	58	TC	82.8	82.8	93.9	77.8	77.8	88.4	72.3	72.3	82.3	66.3	66.3	75.8	60.0	60.0	68.8
				SHC	71.8	82.8	93.9	67.2	77.8	88.4	62.2	72.3	82.3	56.9	66.3	75.8	51.2	60.0	68.8
	62		TC	82.9	82.9	97.7	77.8	77.8	92.0	72.4	72.4	85.8	66.4	66.4	79.0	60.0	60.0	71.8	
			SHC	68.1	82.9	97.7	63.7	77.8	92.0	58.9	72.4	85.8	53.8	66.4	79.0	48.3	60.0	71.8	
	67		TC	89.4	89.4	89.9	83.0	83.0	85.7	72.4	72.4	88.0	69.0	69.0	78.4	61.4	61.4	74.3	
			SHC	55.9	72.9	89.9	52.2	69.0	85.7	56.9	72.4	88.0	45.1	61.7	78.4	41.2	57.7	74.3	
	72	TC	99.5	99.5	99.5	93.0	93.0	93.0	83.1	83.1	83.1	78.1	78.1	78.1	69.9	69.9	69.9		
		SHC	39.3	55.7	72.1	36.1	52.5	69.0	41.8	57.4	73.1	29.1	45.6	62.2	25.4	42.0	58.5		
	76	TC	—	108.0	108.0	—	101.2	101.2	—	93.8	93.8	—	85.6	85.6	—	77.2	77.2		
		SHC	—	42.3	57.6	—	39.2	54.8	—	35.9	51.6	—	32.4	48.2	—	28.8	44.7		
	4000 (cfm)	EA (wb)	58	TC	86.3	86.3	97.7	81.0	81.0	92.0	75.2	75.2	85.6	69.1	69.1	78.8	62.5	62.5	71.6
				SHC	74.8	86.3	97.7	70.1	81.0	92.0	64.8	75.2	85.6	59.3	69.1	78.8	53.4	62.5	71.6
62			TC	86.4	86.4	101.7	81.1	81.1	95.7	75.3	75.3	89.2	69.1	69.1	82.2	62.6	62.6	74.8	
			SHC	71.0	86.4	101.7	66.4	81.1	95.7	61.4	75.3	89.2	56.1	69.1	82.2	50.4	62.6	74.8	
67			TC	90.9	90.9	96.8	84.5	84.5	93.4	77.6	77.6	89.4	70.4	70.4	85.4	63.0	63.0	79.7	
			SHC	59.2	78.0	96.8	55.8	74.6	93.4	52.1	70.8	89.4	48.4	66.9	85.4	44.0	61.8	79.7	
72		TC	101.2	101.2	101.2	94.5	94.5	94.5	87.2	87.2	87.2	79.3	79.3	79.3	70.9	70.9	70.9		
		SHC	40.6	59.1	77.7	37.4	56.0	74.5	34.0	52.6	71.2	30.4	49.0	67.6	26.7	45.4	64.0		
76		TC	—	109.7	109.7	—	102.8	102.8	—	95.2	95.2	—	86.9	86.9	—	78.2	78.2		
		SHC	—	43.9	61.5	—	40.8	58.5	—	37.4	55.2	—	33.9	51.8	—	30.2	48.2		
4500 (cfm)		EA (wb)	58	TC	89.1	89.1	100.8	83.7	83.7	94.9	77.7	77.7	88.4	71.4	71.4	81.4	64.6	64.6	73.9
				SHC	77.3	89.1	100.8	72.4	83.7	94.9	67.1	77.7	88.4	61.3	71.4	81.4	55.3	64.6	73.9
	62		TC	89.2	89.2	105.0	83.7	83.7	98.7	77.8	77.8	92.1	71.5	71.5	84.9	64.6	64.6	77.1	
			SHC	73.5	89.2	105.0	68.7	83.7	98.7	63.6	77.8	92.1	58.0	71.5	84.9	52.2	64.6	77.1	
	67		TC	92.2	92.2	103.9	85.9	85.9	100.3	79.0	79.0	96.1	75.9	75.9	79.7	65.6	65.6	81.6	
			SHC	62.5	83.2	103.9	59.1	79.7	100.3	55.3	75.7	96.1	45.6	62.6	79.7	45.4	63.5	81.6	
	72	TC	102.5	102.5	102.5	95.7	95.7	95.7	88.3	88.3	88.3	80.3	80.3	80.3	71.8	71.8	71.8		
		SHC	41.8	62.4	83.0	38.6	59.2	79.8	35.2	55.8	76.5	31.6	52.3	73.0	27.9	48.6	69.3		
	76	TC	—	111.1	111.1	—	104.1	104.1	—	96.3	96.3	—	87.9	87.9	—	79.1	79.1		
		SHC	—	45.3	65.0	—	42.2	61.9	—	38.8	58.6	—	35.2	55.1	—	31.5	51.4		

LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ16/40RLQ16 Stage 3 Cooling Combination Ratings

38AXQ16/40RLQ16				AMBIENT TEMPERATURE (°F)																
				85			95			105			115			125				
				EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
				75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
4500 (cfm)	EA (wb)	58	TC	170.0	170.0	192.0	165.0	165.0	185.0	158.0	158.0	178.0	151.0	151.0	171.0	144.0	144.0	162.0		
			SHC	149.0	170.0	192.0	144.0	165.0	185.0	138.0	158.0	178.0	132.0	151.0	171.0	126.0	144.0	162.0		
		62	TC	180.0	180.0	180.0	173.0	173.0	176.0	165.0	165.0	172.0	156.0	156.0	168.0	146.0	146.0	163.0		
			SHC	134.0	157.0	180.0	130.0	153.0	176.0	126.0	149.0	172.0	122.0	145.0	168.0	118.0	140.0	163.0		
		67	TC	198.0	198.0	198.0	189.0	189.0	189.0	180.0	180.0	180.0	170.0	170.0	170.0	160.0	160.0	160.0		
			SHC	110.0	133.0	157.0	107.0	130.0	153.0	102.8	126.0	149.0	98.8	122.0	145.0	94.4	118.0	141.0		
		72	TC	216.0	216.0	216.0	207.0	207.0	207.0	197.0	197.0	197.0	186.0	186.0	186.0	174.0	174.0	174.0		
			SHC	86.0	109.0	133.0	82.4	106.0	129.0	78.6	101.9	125.0	74.5	97.8	121.0	70.2	93.4	117.0		
		76	TC	—	231.7	231.7	—	222.0	222.0	—	211.0	211.0	—	199.0	199.0	—	186.0	186.0		
			SHC	—	89.7	114.0	—	86.1	110.0	—	82.2	106.0	—	78.1	102.0	—	73.7	97.4		
		5250 (cfm)	EA (wb)	58	TC	179.0	179.0	202.0	173.0	173.0	195.0	166.0	166.0	187.0	159.0	159.0	179.0	150.0	150.0	169.0
					SHC	157.0	179.0	202.0	151.0	173.0	195.0	145.0	166.0	187.0	139.0	159.0	179.0	131.0	150.0	169.0
62	TC			186.0	186.0	196.0	178.0	178.0	192.0	169.0	169.0	188.0	160.0	160.0	183.0	151.0	151.0	175.0		
	SHC			143.0	170.0	196.0	140.0	166.0	192.0	136.0	162.0	188.0	131.0	157.0	183.0	125.0	150.0	175.0		
67	TC			203.0	203.0	203.0	194.0	194.0	194.0	185.0	185.0	185.0	174.0	174.0	174.0	163.0	163.0	163.0		
	SHC			116.0	143.0	170.0	113.0	139.0	166.0	109.0	135.0	162.0	105.0	131.0	158.0	100.1	127.0	153.0		
72	TC			222.0	222.0	222.0	212.0	212.0	212.0	201.0	201.0	201.0	190.0	190.0	190.0	178.0	178.0	178.0		
	SHC			88.3	115.0	142.0	84.6	111.0	138.0	80.6	107.0	134.0	76.5	103.0	130.0	72.2	98.9	125.6		
76	TC			—	238.0	238.0	—	227.0	227.0	—	215.0	215.0	—	203.0	203.0	—	190.0	190.0		
	SHC			—	92.4	120.0	—	88.7	116.0	—	84.7	112.0	—	80.5	108.0	—	76.1	103.0		
6000 (cfm)	EA (wb)			58	TC	187.0	187.0	210.0	180.0	180.0	203.0	173.0	173.0	194.0	165.0	165.0	185.0	156.0	156.0	176.0
					SHC	163.0	187.0	210.0	157.0	180.0	203.0	151.0	173.0	194.0	144.0	165.0	185.0	137.0	156.0	176.0
		62	TC	190.0	190.0	211.0	182.0	182.0	207.0	173.0	173.0	200.0	165.0	165.0	192.0	156.0	156.0	182.0		
			SHC	152.0	182.0	211.0	148.0	178.0	207.0	143.0	172.0	200.0	137.0	165.0	192.0	130.0	156.0	182.0		
		67	TC	207.0	207.0	207.0	198.0	198.0	198.0	188.0	188.0	188.0	177.0	177.0	177.0	166.0	166.0	166.0		
			SHC	122.0	152.0	182.0	118.0	148.0	179.0	114.0	145.0	175.0	110.0	140.0	170.0	106.0	136.0	166.0		
		72	TC	226.0	226.0	226.0	216.0	216.0	216.0	205.0	205.0	205.0	193.0	193.0	193.0	180.0	180.0	180.0		
			SHC	90.2	121.0	151.0	86.5	117.0	147.0	82.5	113.0	142.9	78.3	109.0	139.0	74.0	104.0	134.0		
		76	TC	—	242.0	242.0	—	231.0	231.0	—	219.0	219.0	—	206.0	206.0	—	192.0	192.0		
			SHC	—	94.8	126.0	—	91.0	122.0	—	87.0	118.0	—	82.7	113.0	—	78.3	109.0		
		6750 (cfm)	EA (wb)	58	TC	193.0	193.0	217.0	186.0	186.0	209.0	178.0	178.0	201.0	170.0	170.0	191.0	160.0	160.0	180.0
					SHC	169.0	193.0	217.0	162.0	186.0	209.0	156.0	178.0	201.0	148.0	170.0	191.0	140.0	160.0	180.0
62	TC			194.0	194.0	225.0	186.0	186.0	217.0	178.0	178.0	208.0	170.0	170.0	198.0	160.0	160.0	187.0		
	SHC			160.0	192.0	225.0	155.0	186.0	217.0	148.0	178.0	208.0	141.0	170.0	198.0	133.0	160.0	187.0		
67	TC			211.0	211.0	211.0	201.0	201.0	201.0	191.0	191.0	191.0	179.0	179.0	182.0	168.0	168.0	178.0		
	SHC			128.0	161.0	195.0	124.0	157.0	191.0	120.0	153.0	187.0	116.0	149.0	182.0	111.0	144.0	178.0		
72	TC			230.0	230.0	230.0	219.0	219.0	219.0	207.0	207.0	207.0	195.0	195.0	195.0	182.0	182.0	182.0		
	SHC			92.0	126.0	159.0	88.2	122.0	155.0	84.2	118.0	151.0	80.0	114.0	147.0	75.7	109.0	143.0		
76	TC			—	246.0	246.0	—	234.0	234.0	—	222.0	222.0	—	208.0	208.0	—	194.0	194.0		
	SHC			—	97.0	131.0	—	93.1	127.0	—	89.0	123.0	—	84.8	119.0	—	80.3	114.0		
7500 (cfm)	EA (wb)			58	TC	198.0	198.0	224.0	191.0	191.0	215.0	183.0	183.0	206.0	174.0	174.0	196.0	164.0	164.0	185.0
					SHC	173.0	198.0	224.0	167.0	191.0	215.0	159.0	183.0	206.0	152.0	174.0	196.0	143.0	164.0	185.0
		62	TC	199.0	199.0	232.0	191.0	191.0	223.0	183.0	183.0	214.0	174.0	174.0	203.0	164.0	164.0	192.0		
			SHC	165.0	199.0	232.0	159.0	191.0	223.0	152.0	183.0	214.0	145.0	174.0	203.0	137.0	164.0	192.0		
		67	TC	213.0	213.0	213.0	203.0	203.0	203.0	193.0	193.0	198.0	181.0	181.0	194.0	169.0	169.0	189.0		
			SHC	133.0	170.0	206.0	129.0	166.0	202.0	125.0	162.0	198.0	121.0	157.0	194.0	116.0	153.0	189.0		
		72	TC	232.0	232.0	232.0	221.0	221.0	221.0	210.0	210.0	210.0	197.0	197.0	197.0	184.0	184.0	184.0		
			SHC	93.6	131.0	167.0	89.8	127.0	164.0	85.8	123.0	159.0	81.6	118.0	155.0	77.3	114.0	151.0		
		76	TC	—	249.0	249.0	—	237.0	237.0	—	224.0	224.0	—	210.0	210.0	—	196.0	196.0		
			SHC	—	98.8	136.0	—	95.0	132.0	—	90.9	128.0	—	86.6	124.0	—	82.1	119.0		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ16/40RLQ16 Stage 2 Cooling Combination Ratings

38AXQ16/40RLQ16			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
3750 (cfm)	EA (wb)	58	TC	141.0	141.0	155.0	135.0	135.0	150.0	129.0	129.0	146.0	124.0	124.0	140.0	117.0	117.0	133.0	
			SHC	120.0	137.0	155.0	116.0	133.0	150.0	113.0	129.0	146.0	108.0	124.0	140.0	102.0	117.0	133.0	
		62	TC	148.0	148.0	149.0	142.0	142.0	145.0	135.0	135.0	140.0	128.0	128.0	135.0	120.0	120.0	129.0	
			SHC	110.0	129.0	149.0	106.0	126.0	145.0	102.0	121.0	140.0	98.0	116.0	135.0	93.0	111.0	129.0	
		67	TC	164.0	164.0	164.0	157.0	157.0	157.0	149.0	149.0	149.0	141.0	141.0	141.0	131.0	131.0	131.0	
			SHC	91.0	111.0	130.0	88.0	108.0	127.0	84.6	104.0	124.0	81.2	101.0	120.0	77.5	97.0	117.0	
	72	TC	181.0	181.0	181.0	173.0	173.0	173.0	164.0	164.0	164.0	155.0	155.0	155.0	145.0	145.0	145.0		
		SHC	71.3	91.0	111.0	68.2	88.0	108.0	65.0	84.8	105.0	61.6	81.3	101.0	57.9	77.7	97.0		
	76	TC	—	194.9	194.9	—	186.0	186.0	—	178.0	178.0	—	167.0	167.0	—	156.0	156.0		
		SHC	—	75.0	95.0	—	72.0	92.0	—	68.9	89.0	—	65.4	86.0	—	61.7	81.8		
	4500 (cfm)	EA (wb)	58	TC	149.0	149.0	169.0	144.0	144.0	162.0	138.0	138.0	156.0	131.0	131.0	148.0	125.0	125.0	141.0
				SHC	130.0	149.0	169.0	125.0	144.0	162.0	120.0	138.0	156.0	115.0	131.0	148.0	109.0	125.0	141.0
62			TC	154.0	154.0	162.0	148.0	148.0	157.0	141.0	141.0	152.0	134.0	134.0	147.0	126.0	126.0	141.0	
			SHC	118.0	140.0	162.0	114.0	136.0	157.0	110.0	131.0	152.0	105.0	126.0	147.0	100.0	121.0	141.0	
67			TC	170.0	170.0	170.0	162.0	162.0	162.0	154.0	154.0	154.0	145.0	145.0	145.0	135.0	135.0	135.0	
			SHC	98.0	121.0	144.0	94.0	118.0	141.0	91.0	114.0	138.0	87.0	111.0	134.0	83.6	107.0	130.0	
72		TC	187.0	187.0	187.0	179.0	179.0	179.0	170.0	170.0	170.0	160.0	160.0	160.0	149.0	149.0	149.0		
		SHC	73.9	97.0	121.0	70.8	94.0	118.0	67.5	91.0	114.0	64.0	87.0	111.0	60.2	83.6	107.0		
76		TC	—	202.0	202.0	—	192.0	192.0	—	183.0	183.0	—	172.0	172.0	—	—	—		
		SHC	—	78.3	102.0	—	75.2	99.0	—	71.8	96.0	—	68.3	92.0	—	—	—		
5250 (cfm)		EA (wb)	58	TC	157.0	157.0	177.0	151.0	151.0	171.0	145.0	145.0	163.0	138.0	138.0	156.0	130.0	130.0	147.0
				SHC	137.0	157.0	177.0	132.0	151.0	171.0	126.0	145.0	163.0	120.0	138.0	156.0	113.0	130.0	147.0
	62		TC	161.0	161.0	174.0	154.0	154.0	169.0	147.0	147.0	164.0	139.0	139.0	158.0	130.0	130.0	152.0	
			SHC	125.0	149.0	174.0	121.0	145.0	169.0	117.0	140.0	164.0	112.0	135.0	158.0	107.0	129.0	152.0	
	67		TC	174.0	174.0	174.0	166.0	166.0	166.0	157.0	157.0	157.0	148.0	148.0	148.0	138.0	138.0	142.0	
			SHC	104.0	130.0	157.0	100.0	127.0	154.0	97.0	124.0	150.0	93.0	120.0	146.0	89.0	116.0	142.0	
	72	TC	192.0	192.0	192.0	183.0	183.0	183.0	173.0	173.0	173.0	163.0	163.0	163.0	152.0	152.0	152.0		
		SHC	76.2	103.0	130.0	73.0	100.0	127.0	69.6	97.0	123.6	66.1	93.0	120.0	62.3	89.0	116.0		
	76	TC	—	206.0	206.0	—	197.0	197.0	—	186.0	186.0	—	—	—	—	—	—		
		SHC	—	81.0	108.0	—	77.8	105.0	—	74.4	102.0	—	—	—	—	—	—		
	6000 (cfm)	EA (wb)	58	TC	164.0	164.0	185.0	157.0	157.0	178.0	151.0	151.0	170.0	143.0	143.0	161.0	135.0	135.0	152.0
				SHC	143.0	164.0	185.0	137.0	157.0	178.0	131.0	151.0	170.0	125.0	143.0	161.0	118.0	135.0	152.0
62			TC	165.0	165.0	185.0	158.0	158.0	180.0	151.0	151.0	175.0	143.0	143.0	168.0	135.0	135.0	158.0	
			SHC	132.0	159.0	185.0	128.0	154.0	180.0	124.0	149.0	175.0	119.0	143.0	168.0	112.0	135.0	158.0	
67			TC	178.0	178.0	178.0	169.0	169.0	169.0	160.0	160.0	162.0	151.0	151.0	158.0	141.0	141.0	150.0	
			SHC	109.0	139.0	170.0	106.0	136.0	166.0	102.0	132.0	162.0	98.0	128.0	158.0	93.0	122.0	150.0	
72		TC	195.0	195.0	195.0	186.0	186.0	186.0	176.0	176.0	176.0	165.0	165.0	165.0	154.0	154.0	154.0		
		SHC	78.2	109.0	139.0	74.9	105.0	136.0	71.5	102.0	132.0	68.0	98.0	129.0	64.1	95.0	125.0		
76		TC	—	210.0	210.0	—	—	—	—	—	—	—	—	—	—	—	—		
		SHC	—	83.3	114.0	—	—	—	—	—	—	—	—	—	—	—	—		
6750 (cfm)		EA (wb)	58	TC	169.0	169.0	191.0	162.0	162.0	183.0	155.0	155.0	175.0	147.0	147.0	166.0	139.0	139.0	157.0
				SHC	147.0	169.0	191.0	142.0	162.0	183.0	135.0	155.0	175.0	128.0	147.0	166.0	121.0	139.0	157.0
	62		TC	170.0	170.0	196.0	162.0	162.0	190.0	155.0	155.0	182.0	148.0	148.0	173.0	139.0	139.0	163.0	
			SHC	139.0	167.0	196.0	135.0	162.0	190.0	129.0	155.0	182.0	122.0	148.0	173.0	115.0	139.0	163.0	
	67		TC	180.0	180.0	181.0	172.0	172.0	178.0	162.0	162.0	173.0	153.0	153.0	166.0	143.0	143.0	158.0	
			SHC	115.0	148.0	181.0	111.0	144.0	178.0	107.0	140.0	173.0	102.0	134.0	166.0	97.0	128.0	158.0	
	72	TC	198.0	198.0	198.0	188.0	188.0	188.0	178.0	178.0	178.0	167.0	167.0	167.0	156.0	156.0	156.0		
		SHC	79.9	114.0	148.0	76.7	111.0	144.0	73.3	107.0	141.0	69.7	104.0	137.0	65.9	100.0	133.0		
	76	TC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
		SHC	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ16/40RLQ16 Stage 1 Cooling Combination Ratings

38AXQ16/40RLQ16			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
3750 (cfm)	EA (wb)	58	TC	62.0	62.0	77.0	60.0	60.0	74.0	76.0	76.0	76.0	54.0	54.0	67.0	51.0	51.0	63.0	
			SHC	47.0	62.0	77.0	45.0	60.0	74.0	35.0	56.0	76.0	41.0	54.0	67.0	39.0	51.0	63.0	
		62	TC	63.0	63.0	77.0	60.0	60.0	75.0	57.0	57.0	73.0	54.0	54.0	70.0	66.0	66.0	78.0	
			SHC	42.0	59.0	77.0	40.0	57.0	75.0	38.0	56.0	73.0	37.0	54.0	70.0	43.0	61.0	78.0	
		67	TC	69.0	69.0	69.0	67.0	67.0	68.0	76.0	76.0	76.0	75.0	75.0	54.0	54.0	54.0	63.0	
			SHC	32.0	50.0	68.0	31.0	49.0	68.0	35.3	53.0	71.0	34.6	53.0	71.0	26.2	44.0	63.0	
	72	TC	75.0	75.0	75.0	71.0	71.0	71.0	67.0	67.0	67.0	81.0	81.0	81.0	59.0	59.0	59.0		
		SHC	21.5	41.0	61.0	20.1	40.0	60.0	18.7	38.4	58.0	24.1	42.9	62.0	16.0	34.5	53.0		
	76	TC	—	80.0	80.0	—	76.0	76.0	—	72.0	72.0	—	68.0	68.0	—	63.0	63.0		
		SHC	—	32.6	53.0	—	31.1	52.0	—	29.9	51.0	—	27.1	42.0	—	26.3	45.0		
	4500 (cfm)	EA (wb)	58	TC	65.0	65.0	80.0	62.0	62.0	77.0	81.0	81.0	82.0	56.0	56.0	69.0	52.0	52.0	65.0
				SHC	49.0	65.0	80.0	47.0	62.0	77.0	32.0	57.0	82.0	42.0	56.0	69.0	40.0	52.0	65.0
62			TC	65.0	65.0	84.0	63.0	63.0	73.0	59.0	59.0	78.0	56.0	56.0	74.0	69.0	69.0	87.0	
			SHC	44.0	64.0	84.0	40.0	57.0	73.0	40.0	59.0	78.0	38.0	56.0	74.0	46.0	66.0	87.0	
67			TC	71.0	71.0	76.0	67.0	67.0	74.0	64.0	64.0	73.0	60.0	60.0	72.0	55.0	55.0	69.0	
			SHC	33.0	54.0	76.0	32.0	53.0	74.0	30.0	52.0	73.0	29.0	51.0	72.0	27.0	48.0	69.0	
72		TC	77.0	77.0	77.0	73.0	73.0	73.0	69.0	69.0	69.0	65.0	65.0	60.0	60.0	60.0	60.0		
		SHC	20.6	44.0	68.0	19.2	43.0	67.0	17.8	41.0	65.0	16.8	39.0	61.0	15.2	36.8	58.4		
76		TC	—	82.0	82.0	—	78.0	78.0	—	74.0	74.0	—	68.0	68.0	—	64.0	64.0		
		SHC	—	33.8	58.0	—	32.3	56.0	—	30.8	54.0	—	28.2	50.0	—	26.8	48.0		
5250 (cfm)		EA (wb)	58	TC	67.0	67.0	83.0	64.0	64.0	80.0	61.0	61.0	76.0	58.0	58.0	72.0	54.0	54.0	67.0
				SHC	51.0	67.0	83.0	49.0	64.0	80.0	46.0	61.0	76.0	44.0	58.0	72.0	41.0	54.0	67.0
	62		TC	68.0	68.0	83.0	64.0	64.0	85.0	88.0	88.0	88.0	72.0	72.0	95.0	71.0	71.0	93.0	
			SHC	44.0	64.0	83.0	43.0	64.0	85.0	29.0	58.0	86.0	49.0	72.0	95.0	48.0	71.0	93.0	
	67		TC	72.0	72.0	83.0	68.0	68.0	82.0	64.0	64.0	81.0	60.0	60.0	77.0	55.0	55.0	74.0	
			SHC	34.0	59.0	83.0	33.0	57.0	82.0	31.0	56.0	81.0	29.0	53.0	77.0	27.0	51.0	74.0	
	72	TC	78.0	78.0	78.0	74.0	74.0	74.0	95.0	95.0	95.0	66.0	66.0	66.0	61.0	61.0	64.0		
		SHC	20.5	45.0	68.0	19.2	43.0	67.0	15.1	44.0	72.8	16.0	41.0	66.0	14.5	39.0	64.0		
	76	TC	—	83.0	83.0	—	79.0	79.0	—	75.0	75.0	—	71.0	71.0	—	64.0	64.0		
		SHC	—	34.7	61.0	—	33.1	60.0	—	31.4	56.0	—	29.7	54.0	—	27.7	52.0		
	6000 (cfm)	EA (wb)	58	TC	69.0	69.0	86.0	66.0	66.0	82.0	80.0	80.0	91.0	59.0	59.0	74.0	56.0	56.0	69.0
				SHC	52.0	69.0	86.0	50.0	66.0	82.0	58.0	75.0	91.0	45.0	59.0	74.0	42.0	56.0	69.0
62			TC	69.0	69.0	91.0	66.0	66.0	87.0	63.0	63.0	83.0	59.0	59.0	79.0	55.0	55.0	73.0	
			SHC	47.0	69.0	91.0	44.0	66.0	87.0	42.0	63.0	83.0	40.0	59.0	79.0	37.0	55.0	73.0	
67			TC	73.0	73.0	88.0	69.0	69.0	86.0	65.0	65.0	84.0	61.0	61.0	83.0	77.0	77.0	90.0	
			SHC	35.0	61.0	88.0	33.0	60.0	86.0	32.0	58.0	84.0	30.0	57.0	83.0	36.0	63.0	90.0	
72		TC	79.0	79.0	79.0	75.0	75.0	75.0	71.0	71.0	71.0	67.0	67.0	71.0	62.0	62.0	70.0		
		SHC	19.8	47.0	73.0	18.4	45.0	72.0	17.0	44.0	70.0	15.3	43.0	71.0	13.9	42.0	70.0		
76		TC	—	85.0	85.0	—	80.0	80.0	—	76.0	76.0	—	70.0	70.0	—	89.0	89.0		
		SHC	—	35.2	63.0	—	33.7	62.0	—	32.4	60.0	—	30.9	60.0	—	36.8	66.0		
6750 (cfm)		EA (wb)	58	TC	70.0	70.0	88.0	67.0	67.0	84.0	64.0	64.0	80.0	60.0	60.0	75.0	57.0	57.0	71.0
				SHC	53.0	70.0	88.0	51.0	67.0	84.0	48.0	64.0	80.0	46.0	60.0	75.0	43.0	57.0	71.0
	62		TC	71.0	71.0	94.0	67.0	67.0	90.0	64.0	64.0	85.0	61.0	61.0	81.0	56.0	56.0	75.0	
			SHC	47.0	71.0	94.0	45.0	67.0	90.0	43.0	64.0	85.0	41.0	61.0	81.0	38.0	56.0	75.0	
	67		TC	73.0	73.0	94.0	70.0	70.0	92.0	78.0	78.0	95.0	62.0	62.0	88.0	57.0	57.0	85.0	
			SHC	35.0	65.0	94.0	34.0	63.0	92.0	37.0	66.0	95.0	31.0	60.0	88.0	29.0	57.0	85.0	
	72	TC	80.0	80.0	80.0	75.0	75.0	76.0	71.0	71.0	75.0	67.0	67.0	78.0	61.0	61.0	73.0		
		SHC	19.1	49.0	78.0	17.7	47.0	76.0	16.3	45.0	75.0	14.4	46.0	78.0	12.8	43.0	73.0		
	76	TC	—	86.0	86.0	—	81.0	81.0	—	75.0	75.0	—	95.0	95.0	—	67.0	67.0		
		SHC	—	36.1	67.0	—	34.8	66.0	—	32.6	63.0	—	37.3	62.0	—	30.3	61.0		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ25/40RLQ25 Stage 3 Cooling Combination Ratings

38AXQ25/40RLQ25			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
5000 (cfm)	EA (wb)	58	TC	219.5	219.5	238.2	209.0	209.0	229.0	198.1	198.1	220.2	191.1	191.1	204.5	173.9	173.9	201.6	
			SHC	178.6	208.4	238.2	170.6	199.8	229.0	162.7	191.4	220.2	151.2	177.8	204.5	146.2	173.9	201.6	
		62	TC	235.1	235.1	235.1	223.3	223.3	223.3	210.7	210.7	210.7	197.2	197.2	200.0	182.9	182.9	192.2	
			SHC	161.0	191.2	221.4	154.2	184.4	214.7	147.1	177.4	207.6	139.7	169.9	200.0	131.9	162.0	192.2	
		67	TC	256.0	256.0	256.0	243.5	243.5	243.5	230.1	230.1	230.1	215.9	215.9	215.9	200.7	200.7	200.7	
			SHC	136.6	166.8	196.9	129.8	159.9	190.1	122.7	152.8	183.0	115.3	145.4	175.6	107.5	137.7	167.8	
	72	TC	278.9	278.9	278.9	265.6	265.6	265.6	251.3	251.3	251.3	236.1	236.1	236.1	219.9	219.9	219.9		
		SHC	111.6	141.5	171.5	104.7	134.7	164.6	97.5	127.5	157.5	90.1	120.1	150.0	82.3	112.3	142.3		
	76	TC	—	298.7	298.7	—	284.6	284.6	—	269.6	269.6	—	253.5	253.5	—	236.4	236.4		
		SHC	—	120.7	149.7	—	113.8	143.0	—	106.6	135.9	—	99.1	128.5	—	91.4	120.9		
	6000 (cfm)	EA (wb)	58	TC	229.4	229.4	257.4	218.6	218.6	248.9	207.6	207.6	238.8	196.3	196.3	226.3	184.2	184.2	212.8
				SHC	192.4	224.9	257.4	184.8	216.8	248.9	176.3	207.6	238.8	166.3	196.3	226.3	155.6	184.2	212.8
62			TC	242.6	242.6	244.0	230.1	230.1	236.8	216.9	216.9	229.4	203.0	203.0	221.2	188.7	188.7	210.4	
			SHC	174.6	209.3	244.0	167.5	202.2	236.8	160.2	194.8	229.4	152.4	186.8	221.2	143.0	176.7	210.4	
67			TC	264.7	264.7	264.7	251.5	251.5	251.5	237.4	237.4	237.4	222.5	222.5	222.5	206.5	206.5	206.5	
			SHC	145.2	179.9	214.5	138.2	172.9	207.5	131.0	165.6	200.3	123.5	158.1	192.7	115.7	150.3	184.9	
72		TC	288.6	288.6	288.6	274.6	274.6	274.6	259.6	259.6	259.6	243.6	243.6	243.6	226.6	226.6	226.6		
		SHC	115.1	149.5	183.9	108.1	142.5	176.9	100.8	135.2	169.6	93.2	127.6	162.0	85.3	119.7	154.2		
76		TC	—	309.2	309.2	—	294.4	294.4	—	278.6	278.6	—	261.6	261.6	—	243.7	243.7		
		SHC	—	124.5	158.0	—	117.5	151.1	—	110.2	143.9	—	102.6	136.4	—	94.7	128.5		
7000 (cfm)		EA (wb)	58	TC	238.9	238.9	273.3	228.5	228.5	261.8	217.4	217.4	249.5	205.5	205.5	236.3	192.8	192.8	222.1
				SHC	204.5	238.9	273.3	195.2	228.5	261.8	185.3	217.4	249.5	174.7	205.5	236.3	163.4	192.8	222.1
	62		TC	248.4	248.4	264.8	235.6	235.6	257.0	222.4	222.4	247.2	208.8	208.8	237.0	194.5	194.5	226.1	
			SHC	187.0	225.9	264.8	179.6	218.3	257.0	171.0	209.1	247.2	162.2	199.6	237.0	152.9	189.5	226.1	
	67		TC	271.4	271.4	271.4	257.7	257.7	257.7	243.1	243.1	243.1	227.6	227.6	227.6	211.1	211.1	211.1	
			SHC	153.1	192.1	231.2	146.1	185.2	224.2	138.8	177.9	216.9	131.2	170.3	209.3	123.4	162.4	201.4	
	72	TC	296.2	296.2	296.2	281.6	281.6	281.6	266.0	266.0	266.0	249.3	249.3	249.3	231.7	231.7	231.7		
		SHC	118.0	156.7	195.4	110.9	149.7	188.4	103.5	142.3	181.0	95.8	134.6	173.4	87.9	126.7	165.4		
	76	TC	—	317.4	317.4	—	302.0	302.0	—	285.5	285.5	—	267.9	267.9	—	249.3	249.3		
		SHC	—	127.7	165.4	—	120.6	158.4	—	113.2	151.1	—	105.5	143.5	—	97.5	135.6		
	8000 (cfm)	EA (wb)	58	TC	248.3	248.3	283.6	237.4	237.4	271.5	225.7	225.7	258.6	213.3	213.3	244.8	200.0	200.0	229.9
				SHC	213.0	248.3	283.6	203.2	237.4	271.5	192.9	225.7	258.6	181.8	213.3	244.8	170.0	200.0	229.9
62			TC	253.7	253.7	281.7	241.2	241.2	272.2	228.2	228.2	262.3	214.3	214.3	251.7	200.1	200.1	238.8	
			SHC	197.3	239.5	281.7	189.0	230.6	272.2	180.5	221.4	262.3	171.6	211.7	251.7	161.5	200.1	238.8	
67			TC	276.8	276.8	276.8	262.7	262.7	262.7	247.6	247.6	247.6	231.6	231.6	231.6	214.7	214.7	217.5	
			SHC	160.7	204.0	247.3	153.6	196.9	240.3	146.3	189.6	232.9	138.7	182.0	225.3	130.9	174.2	217.5	
72		TC	302.2	302.2	302.2	287.2	287.2	287.2	271.1	271.1	271.1	253.9	253.9	253.9	235.8	235.8	235.8		
		SHC	120.5	163.5	206.4	113.3	156.3	199.3	105.9	148.9	191.9	98.1	141.1	184.1	90.1	133.2	176.2		
76		TC	—	324.0	324.0	—	308.0	308.0	—	291.1	291.1	—	272.9	272.9	—	253.8	253.8		
		SHC	—	130.3	172.2	—	123.1	165.2	—	115.6	157.7	—	107.9	150.0	—	99.8	142.0		
9000 (cfm)		EA (wb)	58	TC	256.4	256.4	292.5	245.1	245.1	279.9	232.9	232.9	266.5	220.0	220.0	252.1	206.1	206.1	236.7
				SHC	220.4	256.4	292.5	210.2	245.1	279.9	199.4	232.9	266.5	187.9	220.0	252.1	175.6	206.1	236.7
	62		TC	259.3	259.3	296.3	246.7	246.7	286.6	233.3	233.3	276.8	220.2	220.2	261.7	206.3	206.3	245.8	
			SHC	206.5	251.4	296.3	198.2	242.4	286.6	189.8	233.3	276.8	178.7	220.2	261.7	166.8	206.3	245.8	
	67		TC	281.2	281.2	281.2	266.7	266.7	266.7	251.3	251.3	251.3	234.9	234.9	241.0	217.4	217.4	232.8	
			SHC	168.0	215.5	263.0	160.9	208.4	255.9	153.6	201.1	248.6	146.0	193.5	241.0	138.0	185.4	232.8	
	72	TC	307.2	307.2	307.2	291.7	291.7	291.7	275.2	275.2	275.2	257.7	257.7	257.7	239.1	239.1	239.1		
		SHC	122.6	169.7	216.8	115.4	162.5	209.7	107.9	155.1	202.3	100.2	147.3	194.5	92.1	139.3	186.5		
	76	TC	—	329.3	329.3	—	313.0	313.0	—	295.6	295.6	—	277.0	277.0	—	257.4	257.4		
		SHC	—	132.5	178.5	—	125.2	171.3	—	117.7	163.9	—	109.8	156.1	—	101.7	148.1		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ25/40RLQ25 Stage 2 Cooling Combination Ratings

38AXQ25/40RLQ25			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
5000 (cfm)	EA (wb)	58	TC	162.7	162.7	173.5	154.6	154.6	167.2	145.8	145.8	160.6	136.5	136.5	154.2	128.3	128.3	144.9	
			SHC	131.4	152.5	173.5	126.0	146.6	167.2	120.5	140.5	160.6	115.1	134.7	154.2	108.7	126.8	144.9	
		62	TC	169.1	169.1	169.1	160.4	160.4	160.7	151.2	151.2	153.9	141.5	141.5	146.5	131.0	131.0	138.8	
			SHC	120.8	143.5	166.2	116.0	138.4	160.7	110.4	132.2	153.9	104.4	125.5	146.5	98.1	118.5	138.8	
		67	TC	183.3	183.3	183.3	173.3	173.3	173.3	162.3	162.3	162.3	150.4	150.4	150.4	137.9	137.9	137.9	
			SHC	105.2	128.7	152.2	101.1	124.7	148.3	96.6	120.2	143.8	91.6	115.1	138.6	85.5	108.5	131.5	
	72	TC	198.5	198.5	198.5	187.6	187.6	187.6	176.0	176.0	176.0	163.6	163.6	163.6	150.4	150.4	150.4		
		SHC	85.9	108.9	131.9	81.8	104.9	128.1	77.4	100.8	124.2	72.8	96.3	119.8	68.0	91.6	115.2		
	76	TC	—	212.7	212.7	—	200.2	200.2	—	187.8	187.8	—	175.5	175.5	—	160.6	160.6		
		SHC	—	92.5	116.0	—	88.4	109.8	—	84.3	106.6	—	80.3	103.0	—	75.4	98.6		
	6000 (cfm)	EA (wb)	58	TC	170.0	170.0	191.6	162.4	162.4	185.4	153.9	153.9	175.7	144.9	144.9	165.4	135.1	135.1	154.2
				SHC	144.0	167.8	191.6	139.4	162.4	185.4	132.1	153.9	175.7	124.4	144.9	165.4	115.9	135.1	154.2
62			TC	176.5	176.5	179.6	167.1	167.1	175.7	159.4	159.4	168.8	146.9	146.9	160.5	135.7	135.7	152.5	
			SHC	129.1	154.3	179.6	125.0	150.3	175.7	121.2	145.0	168.8	112.9	136.7	160.5	106.4	129.5	152.5	
67			TC	190.7	190.7	190.7	180.1	180.1	180.1	167.0	167.0	167.0	154.5	154.5	154.5	143.1	143.1	143.1	
			SHC	112.5	138.8	165.1	109.3	136.2	163.0	103.3	130.9	158.5	96.7	123.5	150.3	89.9	115.4	141.0	
72		TC	205.0	205.0	205.0	193.8	193.8	193.8	181.7	181.7	181.7	168.6	168.6	168.6	154.5	154.5	154.5		
		SHC	88.5	115.9	143.3	84.4	112.0	139.5	80.1	107.7	135.4	75.5	103.3	131.1	70.5	98.4	126.2		
76		TC	—	218.3	218.3	—	206.8	206.8	—	194.0	194.0	—	180.1	180.1	—	165.2	165.2		
		SHC	—	95.3	121.1	—	91.6	118.0	—	87.5	114.4	—	83.1	110.3	—	78.5	106.0		
7000 (cfm)		EA (wb)	58	TC	178.4	178.4	203.3	170.0	170.0	193.7	160.9	160.9	183.3	151.1	151.1	172.2	140.6	140.6	160.2
				SHC	153.5	178.4	203.3	146.3	170.0	193.7	138.4	160.9	183.3	130.1	151.1	172.2	121.0	140.6	160.2
	62		TC	181.7	181.7	196.2	172.3	172.3	189.2	162.0	162.0	181.9	151.3	151.3	175.2	141.3	141.3	164.6	
			SHC	139.0	167.6	196.2	133.3	161.2	189.2	127.4	154.7	181.9	122.1	148.7	175.2	115.2	139.9	164.6	
	67		TC	196.0	196.0	196.0	182.2	182.2	182.2	170.3	170.3	170.3	159.2	159.2	159.6	146.5	146.5	152.6	
			SHC	122.2	152.0	181.7	114.1	145.7	177.2	107.9	138.7	169.5	101.0	130.3	159.6	95.1	123.9	152.6	
	72	TC	209.8	209.8	209.8	198.3	198.3	198.3	185.7	185.7	185.7	173.4	173.4	173.4	158.0	158.0	158.0		
		SHC	90.8	122.4	154.0	86.7	118.5	150.2	82.4	114.2	146.0	78.9	109.4	139.9	75.2	106.6	138.0		
	76	TC	—	224.2	224.2	—	211.6	211.6	—	198.3	198.3	—	184.0	184.0	—	168.8	168.8		
		SHC	—	98.3	128.6	—	94.4	125.1	—	90.2	121.3	—	85.8	117.2	—	81.1	112.7		
	8000 (cfm)	EA (wb)	58	TC	185.0	185.0	210.5	176.2	176.2	200.5	166.6	166.6	189.6	156.3	156.3	177.9	145.2	145.2	165.3
				SHC	159.5	185.0	210.5	151.9	176.2	200.5	143.7	166.6	189.6	134.8	156.3	177.9	125.2	145.2	165.3
62			TC	186.1	186.1	209.7	176.6	176.6	203.9	167.0	167.0	196.5	157.1	157.1	181.5	145.4	145.4	171.1	
			SHC	147.2	178.4	209.7	142.6	173.3	203.9	137.5	167.0	196.5	127.5	154.5	181.5	119.7	145.4	171.1	
67			TC	196.5	196.5	196.5	185.3	185.3	188.2	174.5	174.5	178.5	162.2	162.2	171.6	149.4	149.4	162.8	
			SHC	124.5	159.8	195.1	118.8	153.5	188.2	112.1	145.3	178.5	106.4	139.0	171.6	99.9	131.3	162.8	
72		TC	213.6	213.6	213.6	201.7	201.7	201.7	188.7	188.7	188.7	174.8	174.8	174.8	160.9	160.9	160.9		
		SHC	92.9	128.5	164.2	88.8	124.5	160.3	84.4	120.1	155.9	79.8	115.7	151.5	79.5	114.0	148.5		
76		TC	—	227.7	227.7	—	215.4	215.4	—	201.6	201.6	—	187.0	187.0	—	171.3	171.3		
		SHC	—	100.5	135.1	—	96.8	131.7	—	92.6	127.8	—	88.2	123.7	—	83.5	119.3		
9000 (cfm)		EA (wb)	58	TC	190.5	190.5	216.5	181.6	181.6	206.4	171.4	171.4	194.8	160.8	160.8	182.8	149.1	149.1	169.4
				SHC	164.5	190.5	216.5	156.8	181.6	206.4	148.0	171.4	194.8	138.9	160.8	182.8	128.7	149.1	169.4
	62		TC	191.8	191.8	220.3	181.8	181.8	213.7	171.8	171.8	200.5	160.7	160.7	189.0	149.3	149.3	175.5	
			SHC	155.2	187.8	220.3	149.8	181.8	213.7	140.8	170.6	200.5	132.5	160.7	189.0	123.1	149.3	175.5	
	67		TC	199.4	199.4	205.9	189.3	189.3	196.6	177.5	177.5	189.0	165.0	165.0	181.8	151.9	151.9	172.7	
			SHC	129.1	167.5	205.9	122.7	159.6	196.6	116.9	152.9	189.0	111.2	146.5	181.8	104.6	138.6	172.7	
	72	TC	216.6	216.6	216.6	204.4	204.4	204.4	191.1	191.1	191.1	177.0	177.0	177.0	163.3	163.3	163.3		
		SHC	94.7	134.3	173.9	90.6	130.3	170.0	86.3	126.0	165.6	83.3	122.9	162.5	83.7	121.3	158.8		
	76	TC	—	230.9	230.9	—	218.3	218.3	—	204.4	204.4	—	189.4	189.4	—	173.4	173.4		
		SHC	—	102.6	141.3	—	98.9	137.8	—	94.8	134.0	—	90.3	129.8	—	85.7	125.4		

### LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ25/40RLQ25 Stage 1 Cooling Combination Ratings

38AXQ25/40RLQ25			AMBIENT TEMPERATURE (°F)																
			85			95			105			115			125				
			EA (db)			EA (db)			EA (db)			EA (db)			EA (db)				
			75	80	85	75	80	85	75	80	85	75	80	85	75	80	85		
5000 (cfm)	EA (wb)	58	TC	84.6	84.6	104.0	80.8	80.8	99.4	76.7	76.7	94.3	72.1	72.1	88.7	67.1	67.1	82.6	
			SHC	65.2	84.6	104.0	62.3	80.8	99.4	59.0	76.7	94.3	55.4	72.1	88.7	51.6	67.1	82.6	
		62	TC	82.9	82.9	102.2	79.2	79.2	101.3	76.7	76.7	98.9	72.1	72.1	93.0	67.1	67.1	86.5	
			SHC	52.9	77.6	102.2	52.8	77.0	101.3	54.6	76.7	98.9	51.3	72.1	93.0	47.7	67.1	86.5	
		67	TC	88.0	88.0	89.8	83.5	83.5	87.9	78.4	78.4	85.9	72.9	72.9	84.0	67.1	67.1	82.1	
			SHC	39.4	64.6	89.8	37.6	62.8	87.9	35.6	60.7	85.9	33.7	58.8	84.0	32.1	57.1	82.1	
	72	TC	95.0	95.0	95.0	90.3	90.3	90.3	85.0	85.0	85.0	79.1	79.1	79.1	72.7	72.7	72.7		
		SHC	28.6	53.9	79.2	26.8	52.1	77.4	24.8	50.1	75.4	22.7	48.0	73.2	20.4	45.7	70.9		
	76	TC	—	101.1	101.1	—	96.1	96.1	—	90.6	90.6	—	84.5	84.5	—	77.8	77.8		
		SHC	—	45.1	70.6	—	43.3	68.8	—	41.3	66.8	—	39.2	64.7	—	36.9	62.3		
	6000 (cfm)	EA (wb)	58	TC	89.3	89.3	108.8	85.3	85.3	103.9	80.8	80.8	98.5	75.9	75.9	92.5	70.5	70.5	86.0
				SHC	69.8	89.3	108.8	66.7	85.3	103.9	63.1	80.8	98.5	59.2	75.9	92.5	55.0	70.5	86.0
62			TC	89.4	89.4	114.1	85.4	85.4	109.0	80.9	80.9	103.3	75.9	75.9	97.0	70.5	70.5	90.1	
			SHC	64.7	89.4	114.1	61.8	85.4	109.0	58.5	80.9	103.3	54.9	75.9	97.0	51.0	70.5	90.1	
67			TC	90.8	90.8	101.1	86.1	86.1	99.6	80.9	80.9	98.1	75.4	75.4	96.6	69.7	69.7	95.2	
			SHC	42.0	71.6	101.1	40.7	70.2	99.6	39.4	68.7	98.1	38.5	67.5	96.6	38.6	66.9	95.2	
72		TC	98.2	98.2	98.2	93.2	93.2	93.2	87.6	87.6	87.6	81.4	81.4	81.5	74.7	74.7	79.1		
		SHC	28.1	57.7	87.4	26.3	56.0	85.6	24.3	54.0	83.7	22.2	51.8	81.5	19.9	49.5	79.1		
76		TC	—	104.5	104.5	—	99.4	99.4	—	93.5	93.5	—	87.1	87.1	—	79.9	79.9		
		SHC	—	46.4	76.3	—	44.7	74.6	—	42.8	72.6	—	40.6	70.5	—	38.2	68.0		
7000 (cfm)		EA (wb)	58	TC	92.9	92.9	112.4	88.7	88.7	107.3	83.9	83.9	101.6	78.7	78.7	95.3	73.0	73.0	88.5
				SHC	73.4	92.9	112.4	70.0	88.7	107.3	66.3	83.9	101.6	62.1	78.7	95.3	57.6	73.0	88.5
	62		TC	93.0	93.0	117.9	88.8	88.8	112.5	84.0	84.0	106.6	78.8	78.8	100.0	73.1	73.1	92.8	
			SHC	68.1	93.0	117.9	65.0	88.8	112.5	61.5	84.0	106.6	57.6	78.8	100.0	53.4	73.1	92.8	
	67		TC	93.3	93.3	113.9	88.6	88.6	112.6	83.4	83.4	111.2	78.6	78.6	109.0	73.2	73.2	101.0	
			SHC	47.2	80.6	113.9	46.5	79.5	112.6	46.2	78.7	111.2	48.2	78.6	109.0	45.4	73.2	101.0	
	72	TC	100.6	100.6	100.6	95.4	95.4	95.4	89.6	89.6	91.9	83.2	83.2	89.8	76.2	76.2	87.4		
		SHC	27.9	61.7	95.6	26.1	60.0	93.8	24.2	58.1	91.9	22.2	56.0	89.8	20.0	53.7	87.4		
	76	TC	—	107.2	107.2	—	101.8	101.8	—	95.7	95.7	—	89.1	89.1	—	81.6	81.6		
		SHC	—	47.7	81.7	—	45.9	80.0	—	44.0	78.1	—	41.9	75.9	—	39.5	73.5		
	8000 (cfm)	EA (wb)	58	TC	95.8	95.8	115.3	91.4	91.4	110.0	86.5	86.5	104.1	81.0	81.0	97.6	75.1	75.1	90.4
				SHC	76.3	95.8	115.3	72.8	91.4	110.0	68.8	86.5	104.1	64.5	81.0	97.6	59.7	75.1	90.4
62			TC	95.9	95.9	120.9	91.5	91.5	115.3	86.5	86.5	109.1	81.1	81.1	102.3	75.1	75.1	94.8	
			SHC	70.8	95.9	120.9	67.6	91.5	115.3	63.9	86.5	109.1	59.8	81.1	102.3	55.4	75.1	94.8	
67			TC	95.5	95.5	126.4	91.0	91.0	124.7	86.6	86.6	118.8	81.1	81.1	111.3	75.2	75.2	103.2	
			SHC	54.0	90.2	126.4	54.4	89.6	124.7	54.4	86.6	118.8	50.9	81.1	111.3	47.2	75.2	103.2	
72		TC	102.3	102.3	103.5	97.0	97.0	101.8	91.0	91.0	100.0	84.4	84.4	97.9	77.3	77.3	95.9		
		SHC	27.8	65.7	103.5	26.2	64.0	101.8	24.3	62.1	100.0	22.4	60.2	97.9	20.6	58.2	95.9		
76		TC	—	109.1	109.1	—	103.6	103.6	—	97.4	97.4	—	90.5	90.5	—	82.9	82.9		
		SHC	—	48.6	86.6	—	46.9	84.9	—	45.0	83.0	—	42.9	80.9	—	40.6	78.5		
9000 (cfm)		EA (wb)	58	TC	98.1	98.1	117.6	93.6	93.6	112.2	88.5	88.5	106.1	82.9	82.9	99.4	76.7	76.7	92.0
				SHC	78.7	98.1	117.6	75.0	93.6	112.2	70.9	88.5	106.1	66.4	82.9	99.4	61.4	76.7	92.0
	62		TC	98.2	98.2	123.3	93.7	93.7	117.6	88.6	88.6	111.2	82.9	82.9	104.1	76.8	76.8	96.4	
			SHC	73.2	98.2	123.3	69.7	93.7	117.6	65.9	88.6	111.2	61.7	82.9	104.1	57.1	76.8	96.4	
	67		TC	98.3	98.3	134.1	93.8	93.8	128.0	88.6	88.6	121.0	83.0	83.0	113.3	76.8	76.8	105.0	
			SHC	62.4	98.3	134.1	59.5	93.8	128.0	56.3	88.6	121.0	52.6	83.0	113.3	48.7	76.8	105.0	
	72	TC	103.6	103.6	111.2	98.2	98.2	109.6	92.1	92.1	107.7	85.4	85.4	106.1	78.2	78.2	104.5		
		SHC	27.8	69.5	111.2	26.2	67.9	109.6	24.5	66.1	107.7	23.1	64.6	106.1	22.3	63.4	104.5		
	76	TC	—	110.6	110.6	—	105.0	105.0	—	98.6	98.6	—	91.6	91.6	—	83.8	83.8		
		SHC	—	49.0	90.9	—	47.3	89.2	—	45.4	87.3	—	43.4	85.2	—	41.2	83.0		

LEGEND

- EA (db) — Entering Air Temperature (dry bulb)
- EA (wb) — Entering Air Temperature (wet bulb)
- SHC — Sensible Cooling Capacity, Gross (1000 Btuh)
- TC — Total Cooling Capacity, Gross (1000 Btuh)

## 38AXQ07 / 40RLQ07 Heating Combination Ratings

RETURN AIR (°F db)	STANDARD AIR (cfm)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	1800	TH	20.3	27.5	35.3	41.2	52.9	63.2	70.8	73.9	84.2
		THI	18.8	25.3	32.4	37.5	46.4	63.2	70.8	73.9	84.2
		kW	3.53	3.66	3.80	3.92	4.17	4.40	4.59	4.66	4.91
	2400	TH	20.9	28.1	35.9	41.8	52.9	64.0	71.7	74.2	84.8
		THI	19.3	25.8	32.9	38.1	46.3	64.0	71.7	74.2	84.8
		kW	3.55	3.65	3.76	3.85	4.06	4.23	4.38	4.43	4.61
	3000	TH	21.6	28.7	36.5	42.5	54.6	64.7	72.1	74.6	85.1
		THI	19.9	26.4	33.5	38.8	47.8	64.7	72.1	74.6	85.1
		kW	3.65	3.73	3.83	3.90	4.07	4.23	4.35	4.38	4.54
70	1800	TH	19.0	26.3	34.1	40.0	51.9	61.8	69.0	72.4	82.2
		THI	17.6	24.2	31.3	36.5	45.5	61.8	69.0	72.4	82.2
		kW	3.94	4.11	4.29	4.42	4.71	4.97	5.19	5.28	5.56
	2400	TH	19.7	27.0	34.9	40.9	52.9	63.0	70.5	73.7	83.5
		THI	18.2	24.8	32.1	37.3	46.4	63.0	70.5	73.7	83.5
		kW	3.98	4.11	4.25	4.36	4.58	4.79	4.96	5.02	5.22
	3000	TH	20.4	27.7	35.7	41.7	53.8	64.0	71.4	74.6	84.0
		THI	18.9	25.5	32.8	38.0	47.2	64.0	71.4	74.6	84.0
		kW	4.09	4.20	4.33	4.41	4.60	4.78	4.92	4.96	5.12
80	1800	TH	18.0	25.3	33.1	39.0	50.7	60.5	67.7	70.8	80.5
		THI	16.6	23.3	30.4	35.6	44.4	60.5	67.7	70.8	80.5
		kW	4.24	4.43	4.64	4.80	5.12	5.41	5.64	5.74	6.07
	2400	TH	18.7	26.1	34.0	40.0	52.0	62.0	69.2	72.6	82.2
		THI	17.3	24.0	31.2	36.5	45.5	62.0	69.2	72.6	82.2
		kW	4.28	4.44	4.61	4.73	4.98	5.21	5.39	5.47	5.69
	3000	TH	19.5	26.9	34.9	40.9	53.0	63.1	70.4	73.8	83.1
		THI	18.0	24.8	32.0	37.3	46.4	63.1	70.4	73.8	83.1
		kW	4.41	4.54	4.69	4.79	5.00	5.19	5.35	5.40	5.58

## 38AXQ08 / 40RLQ08 Heating Combination Ratings

RETURN AIR (°F db)	STANDARD AIR (cfm)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	2250	TH	28.8	37.6	48.6	55.6	69.5	83.6	93.0	96.1	109.7
		THI	26.7	34.6	44.6	50.7	60.9	83.6	93.0	96.1	109.7
		kW	4.40	4.60	4.90	5.00	5.40	5.80	6.10	6.20	6.50
	3000	TH	30.8	39.8	51.1	58.3	72.7	87.1	96.7	99.9	113.8
		THI	28.5	36.6	46.9	53.1	63.7	87.1	96.7	99.9	113.8
		kW	4.70	4.80	5.10	5.20	5.50	5.90	6.10	6.10	6.50
	3750	TH	33.1	42.3	53.7	61.0	75.7	90.3	99.9	103.2	117.3
		THI	30.6	38.9	49.3	55.6	66.3	90.3	99.9	103.2	117.3
		kW	5.10	5.30	5.50	5.70	5.90	6.30	6.40	6.50	6.80
70	2250	TH	22.5	31.4	42.8	49.8	63.8	77.9	87.0	90.3	103.3
		THI	20.8	28.9	39.3	45.4	55.9	77.9	87.0	90.3	103.3
		kW	4.90	5.20	5.50	5.70	6.10	6.60	6.90	7.00	7.40
	3000	TH	24.4	33.7	45.3	52.5	66.9	81.5	91.0	94.2	107.8
		THI	22.6	31.0	41.6	47.9	58.6	81.5	91.0	94.2	107.8
		kW	5.20	5.50	5.70	5.90	6.30	6.60	6.90	7.00	7.30
	3750	TH	26.8	36.2	48.0	55.4	70.1	84.9	94.4	97.7	111.4
		THI	24.8	33.3	44.1	50.5	61.4	84.9	94.4	97.7	111.4
		kW	5.80	6.00	6.20	6.40	6.70	7.00	7.30	7.30	7.60
80	2250	TH	18.2	27.2	38.8	45.8	59.6	73.9	82.6	86.1	98.8
		THI	16.8	25.0	35.6	41.7	52.2	73.9	82.6	86.1	98.8
		kW	5.40	5.70	6.00	6.30	6.70	7.20	7.50	7.70	8.10
	3000	TH	20.1	29.4	41.3	48.6	63.1	77.7	86.8	90.2	103.4
		THI	18.6	27.1	37.9	44.3	55.3	77.7	86.8	90.2	103.4
		kW	5.70	6.00	6.30	6.50	6.80	7.20	7.60	7.60	8.00
	3750	TH	22.5	32.0	44.1	51.5	66.2	81.0	90.5	93.8	107.3
		THI	20.8	29.4	40.5	46.9	58.0	81.0	90.5	93.8	107.3
		kW	6.20	6.50	6.80	6.90	7.30	7.60	7.90	8.00	8.30

### LEGEND

- TH — Total Heating Capacity, Gross (1000 Btuh)
- THI — Integrated Heating Capacity, Gross (1000 Btuh)
- kW — Total Power Motor Input

## 38AXQ12 / 40RLQ12 Heating Combination Ratings

RETURN AIR (°F db)	STANDARD AIR (cfm)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	3000	TH	—	51.5	62.8	71.1	88.0	102.3	116.0	119.8	138.3
		THI	—	47.3	57.6	64.8	77.1	102.3	116.0	119.8	138.3
		kW	—	5.99	6.33	6.59	7.21	7.74	8.18	8.33	8.96
	4000	TH	—	52.1	63.1	71.7	87.7	101.8	115.5	119.2	137.2
		THI	—	47.9	57.9	65.3	76.9	101.8	115.5	119.2	137.2
		kW	—	6.07	6.39	6.59	7.19	7.55	7.86	7.96	8.44
	5000	TH	—	53.4	64.0	71.7	87.9	100.6	113.6	117.3	135.2
		THI	—	49.1	58.8	65.4	77.0	100.6	113.6	117.3	135.2
		kW	—	6.40	6.73	6.98	7.39	7.69	7.95	8.04	8.44
70	3000	TH	—	52.6	64.0	72.1	88.8	102.6	115.3	118.9	135.7
		THI	—	48.4	58.8	65.8	77.8	102.6	115.3	118.9	135.7
		kW	—	6.82	7.24	7.53	8.30	8.96	9.48	9.62	10.32
	4000	TH	—	53.5	64.8	72.7	88.9	102.3	114.7	118.0	133.4
		THI	—	49.2	59.4	66.3	77.9	102.3	114.7	118.0	133.4
		kW	—	6.91	7.27	7.54	8.26	8.71	9.06	9.17	9.68
	5000	TH	—	55.0	66.1	73.8	89.4	101.4	112.4	115.5	129.9
		THI	—	50.6	60.6	67.3	78.3	101.4	112.4	115.5	129.9
		kW	—	7.26	7.60	7.88	8.48	8.83	9.12	9.21	9.63
80	3000	TH	—	53.1	64.6	72.6	89.0	102.3	114.5	117.9	133.8
		THI	—	48.9	59.3	66.2	78.0	102.3	114.5	117.9	133.8
		kW	—	7.43	7.91	8.23	9.09	9.84	10.46	10.61	11.37
	4000	TH	—	54.2	65.6	73.5	89.6	102.5	114.4	117.5	131.7
		THI	—	49.9	60.2	67.0	78.5	102.5	114.4	117.5	131.7
		kW	—	7.52	7.93	8.22	9.04	9.59	9.97	10.09	10.65
	5000	TH	—	55.9	67.2	74.9	90.4	102.5	112.7	115.5	128.4
		THI	—	51.4	61.7	68.3	79.2	102.5	112.7	115.5	128.4
		kW	—	7.88	8.25	8.54	9.31	9.70	10.03	10.12	10.58

## 38AXQ16 / 40RLQ16 Heating Combination Ratings

RETURN AIR (°F db)	STANDARD AIR (cfm)		TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% rh)								
			-10	0	10	17	30	40	47	50	60
55	4500	TH	61.8	79.2	97.7	113.0	139.8	164.2	182.0	188.8	216.8
		THI	57.1	72.9	89.7	103.0	122.5	164.2	182.0	188.8	216.8
		kW	9.00	9.55	10.12	10.61	11.4	12.2	12.8	13.0	13.9
	6000	TH	64.8	82.6	101.6	115.6	144.9	169.0	186.9	194.1	222.1
		THI	59.9	76.0	93.2	105.4	126.9	169.0	186.9	194.1	222.1
		kW	9.34	9.81	10.29	10.65	11.4	11.9	12.8	12.5	13.2
	7500	TH	67.9	85.9	105.3	118.9	149.1	173.0	191.8	197.8	224.6
		THI	62.8	79.0	96.7	108.4	130.7	173.0	191.8	197.8	224.6
		kW	9.94	10.36	10.80	11.11	11.7	12.2	12.6	12.7	13.3
70	4500	TH	55.0	72.8	91.4	104.8	132.2	156.2	175.5	181.4	205.3
		THI	50.9	67.0	83.9	95.6	115.8	156.2	175.5	181.4	205.3
		kW	10.2	10.8	11.5	12.0	13.0	13.8	14.6	14.8	15.8
	6000	TH	58.3	76.0	94.9	109.0	137.6	162.4	181.7	187.4	215.3
		THI	53.9	69.9	87.1	99.4	120.5	162.4	181.7	187.4	215.3
		kW	10.5	11.1	11.6	12.1	12.9	13.6	14.1	14.3	15.1
	7500	TH	61.1	78.2	98.9	112.9	142.1	167.0	185.9	191.9	227.2
		THI	56.5	71.9	90.7	102.9	124.5	167.0	185.9	191.9	227.2
		kW	11.2	11.6	12.2	12.5	13.2	13.9	14.3	14.4	16.4
80	4500	TH	50.2	68.1	86.7	100.1	127.2	150.3	169.6	175.8	201.5
		THI	46.4	62.6	79.6	91.2	111.4	150.3	169.6	175.8	201.5
		kW	11.04	11.80	12.54	13.06	14.15	15.10	15.93	16.20	17.32
	6000	TH	53.6	71.6	90.7	104.5	132.9	156.7	176.5	182.8	208.4
		THI	49.5	65.9	83.2	95.3	116.4	156.7	176.5	182.8	208.4
		kW	11.44	12.07	12.70	13.13	14.05	14.80	15.45	15.63	16.47
	7500	TH	56.5	75.2	94.5	108.3	140.1	161.9	181.6	187.5	213.9
		THI	52.3	69.2	86.7	98.8	122.7	161.9	181.6	187.5	213.9
		kW	12.09	12.68	13.23	13.62	14.53	15.09	15.61	15.75	16.47

### LEGEND

- TH — Total Heating Capacity, Gross (1000 Btuh)
- THI — Integrated Heating Capacity, Gross (1000 Btuh)
- kW — Total Power Motor Input

## 38AXQ25 / 40RLQ25 Heating Combination Ratings

RETURN AIR (°F db)	STANDARD AIR (cfm)	TEMPERATURE AIR ENTERING OUTDOOR COIL (°F db at 70% rh)									
		-10	0	10	17	30	40	47	50	60	
55	6000	TH	75.8	99.4	126.5	143.2	188.4	222.3	247.8	255.1	270.5
		THI	70.1	91.5	116.1	130.6	165.1	222.3	247.8	255.1	270.5
		kW	12.45	13.09	13.85	14.34	15.84	17.02	17.93	18.13	18.70
	8000	TH	80.1	99.9	129.0	149.1	193.2	226.3	251.9	259.9	270.9
		THI	74.1	92.0	118.4	135.9	169.2	226.3	251.9	259.9	270.9
		kW	13.50	14.03	14.19	14.69	15.88	16.90	17.62	17.84	17.98
	10000	TH	84.4	113.1	132.0	153.8	197.6	230.1	244.9	252.9	272.2
		THI	78.0	104.1	121.2	140.3	173.1	230.1	244.9	252.9	272.2
		kW	14.01	14.56	15.00	15.49	16.56	17.43	17.73	17.91	18.33
70	6000	TH	73.5	102.6	126.6	144.7	182.9	219.1	245.9	253.6	286.0
		THI	68.0	94.4	116.2	131.9	160.2	219.1	245.9	253.6	286.0
		kW	13.99	14.91	15.74	16.37	17.78	19.19	20.40	20.71	22.05
	8000	TH	77.9	102.1	130.0	146.5	191.3	223.7	251.2	259.1	284.2
		THI	72.0	94.0	119.3	133.5	167.6	223.7	251.2	259.1	284.2
		kW	14.66	15.36	16.12	16.60	17.96	19.03	20.00	20.24	20.89
	10000	TH	82.3	107.4	134.0	152.9	195.1	228.1	255.2	262.9	287.1
		THI	76.1	98.8	122.9	139.4	170.9	228.1	255.2	262.9	287.1
		kW	15.70	16.36	17.01	17.49	18.63	19.61	20.40	20.57	21.12
80	6000	TH	72.2	100.6	125.4	143.7	177.3	215.8	243.0	212.1	284.3
		THI	66.7	92.6	115.1	131.0	155.4	215.8	243.0	212.1	284.3
		kW	15.12	16.15	17.12	17.82	19.73	21.36	22.17	20.66	24.10
	8000	TH	75.7	104.3	131.1	147.1	184.3	222.0	248.6	257.8	292.0
		THI	70.0	95.9	120.3	134.1	161.5	222.0	248.6	257.8	292.0
		kW	15.82	16.70	18.06	18.10	19.34	20.63	21.71	22.07	23.21
	10000	TH	80.1	108.9	133.6	152.0	184.3	225.3	254.1	262.1	286.5
		THI	74.1	100.2	122.6	138.6	161.5	225.3	254.1	262.1	286.5
		kW	16.91	17.70	18.44	18.96	19.34	21.18	22.17	22.38	23.00

### LEGEND

- TH** — Total Heating Capacity, Gross (1000 Btuh)
- THI** — Integrated Heating Capacity, Gross (1000 Btuh)
- kW** — Total Power Motor Input

## Electrical Data — 38AXQ\*07-25 Units<sup>a,b</sup>

UNIT	NOMINAL POWER SUPPLY <sup>c,d</sup>	VOLTAGE RANGE		COMPRESSOR				WITHOUT POWERED CONVENIENCE OUTLET					
				No. 1		No. 2		OFM (ea)		Power Supply		Disconnect Size	
				RLA	LRA	RLA	LRA	Qty	FLA	MCA <sup>e</sup>	Fuse or HACR Brkr	FLA	LRA
38AXQM/N07	208/230-3-60	187	253	19.2	162	—	—	2	1.5	28	45	26	170
	460-3-60	414	506	9.6	71	—	—	2	0.8	15	20	13	77
	575-3-60	518	633	6.6	58	—	—	2	0.7	11	15	10	64
38AXQM/N08	208/230-3-60	187	253	26.3	191	—	—	2	1.5	37	60	34	199
	460-3-60	414	506	10.9	95	—	—	2	0.8	16	25	15	101
	575-3-60	518	633	9.2	65	—	—	2	0.7	14	20	13	71
38AXQM/N12	208/230-3-60	187	253	26.6	255	—	—	2	1.5	37	60	35	263
	460-3-60	414	506	14.1	123	—	—	2	0.8	20	30	19	129
	575-3-60	518	633	11.5	94	—	—	2	0.7	17	25	15	100
38AXQT/U16	208/230-3-60	187	253	26.3	179	27.7	179	3	1.5	65/65	90/90	67/67	367/367
	460-3-60	414	506	10.9	95	11.5	103	3	0.8	28	35	29	204
	575-3-60	518	633	9.2	65	9.0	78	3	0.7	23	30	23	149
38AXQT/U25	208/230-3-60	187	253	28.3	255	35.6	255	4	1.5	79/79	100/100	80/80	522/522
	460-3-60	414	506	14.0	123	16.4	140	4	0.8	38	50	39	271
	575-3-60	518	633	12.3	94	13.8	108	4	0.7	32	45	33	210

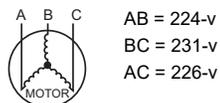
UNIT	NOMINAL POWER SUPPLY <sup>c,d</sup>	VOLTAGE RANGE		COMPRESSOR				WITH POWERED CONVENIENCE OUTLET					
				No. 1		No. 2		OFM (ea)		Power Supply		Disconnect Size	
				RLA	LRA	RLA	LRA	Qty	FLA	MCA <sup>e</sup>	Fuse or HACR Brkr	FLA	LRA
38AXQM/N07	208/230-3-60	187	253	19.2	162	—	—	2	1.5	33	50	32	175
	460-3-60	414	506	9.6	71	—	—	2	0.8	17	25	16	79
	575-3-60	518	633	6.6	58	—	—	2	0.7	12	15	12	66
38AXQM/N08	208/230-3-60	187	253	26.3	191	—	—	2	1.5	42	60	40	204
	460-3-60	414	506	10.9	95	—	—	2	0.8	18	25	17	103
	575-3-60	518	633	9.2	65	—	—	2	0.7	16	20	15	73
38AXQM/N12	208/230-3-60	187	253	26.6	255	—	—	2	1.5	42	60	40	268
	460-3-60	414	506	14.1	123	—	—	2	0.8	22	30	21	131
	575-3-60	518	633	11.5	94	—	—	2	0.7	19	25	17	102
38AXQT/U16	208/230-3-60	187	253	26.3	179	27.7	179	3	1.5	70/70	90/90	73/73	372/372
	460-3-60	414	506	10.9	95	11.5	103	3	0.8	30	40	31	206
	575-3-60	518	633	9.2	65	9.0	78	3	0.7	24	30	25	151
38AXQT/U25	208/230-3-60	187	253	28.3	255	35.6	255	4	1.5	84/84	100/100	86/86	527/527
	460-3-60	414	506	14.0	123	16.4	140	4	0.8	40	50	41	273
	575-3-60	518	633	12.3	94	13.8	108	4	0.7	34	45	35	212

**NOTE(S):**

- a. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- b. Motor RLA and LRA values are established in accordance with Underwriters Laboratories (UL) Standard 60335-2-40.
- c. The 575-v units are UL, Canada-listed only.
- d. Unbalanced 3-Phase Supply Voltage: Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the formula below to determine the percentage of voltage imbalance.
- e. The MCA values are calculated in accordance with NEC Article 440.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 230-3-60



$$\text{Average Voltage} = \frac{(224 + 231 + 226)}{3} = \frac{681}{3} = 227$$

Determine maximum deviation from average voltage.

(AB) 227-224 = 3-v

(BC) 231-227 = 4-v

(AC) 227-226 = 1-v

Maximum deviation is 4-v.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{4}{227} = 1.76\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

**LEGEND**

- BRKR** — Circuit Breaker
- FLA** — Full Load Amps
- LRA** — Locked Rotor Amps
- MCA** — Minimum Circuit Amps Protection
- NEC** — National Electrical Code
- RLA** — Rated Load Amps

## Refrigerant line sizing

Consider the length of the piping required between the outdoor and indoor units. The maximum allowable line length is 100 ft (30.5 m). See pages 7-9 for Piping Recommendation tables. Refrigerant vapor piping should be insulated.

**IMPORTANT:** A refrigerant receiver is not provided with the unit. Do not install a receiver.

## Install filter drier(s) and moisture indicator(s)

Every unit **MUST** have a bi-directional filter drier in the liquid line. Locate the filter drier at the indoor unit, close to the evaporator coil thermal expansion valve (TXV) inlets.

38AXQ units include one (two on 16 and 25 size models) Puron-duty filter drier, shipped in cartons attached to the unit base pan. Remove the filter drier and prepare to install in the liquid line at the evaporator coil. Do not remove connection fitting plugs until ready to connect and braze the filter drier into the liquid line position.

Installation of liquid line moisture indicating sight glass in each circuit is recommended. Locate the sight glass(es) between the outlet of the filter drier and the TXV inlet.

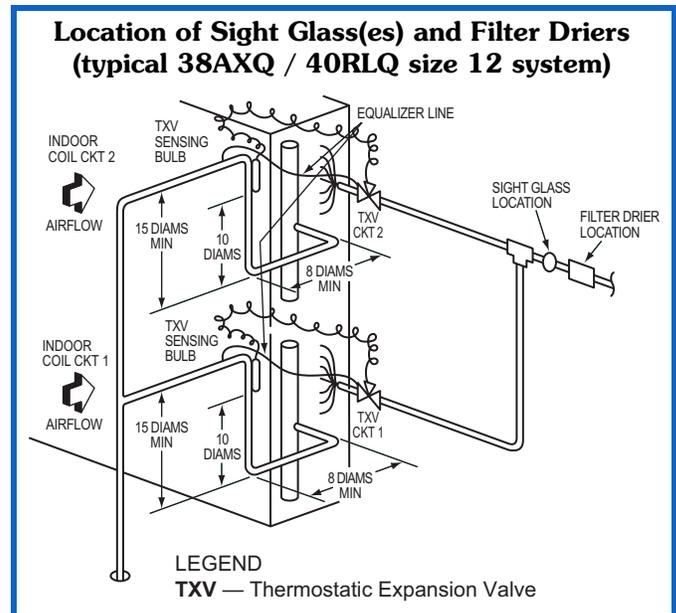
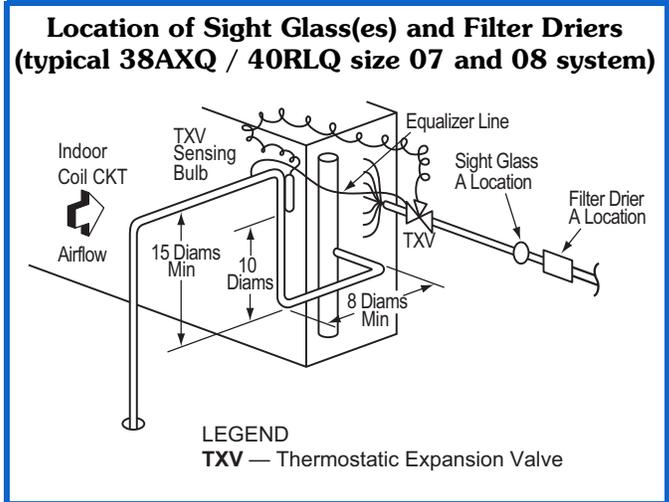
Refer to Refrigerant Specialties Part Numbers Table for recommendations on refrigeration specialties.

Select the filter drier for maximum unit capacity and minimum pressure drop. Complete the refrigerant piping from the indoor unit to the outdoor unit before opening the liquid and suction lines at the outdoor unit.

## Install liquid line solenoid valve

It is recommended that a bi-directional solenoid valve be placed in the main liquid line between the outdoor unit and the indoor coil. Locate the solenoid valve at the end of the liquid line, near the outdoor unit connections, with flow direction arrow pointed at the outdoor unit. Refer to Refrigerant Specialties Part Numbers Table below. (A liquid line solenoid valve is required when the liquid line length exceeds 75 ft [23 m].)

This valve prevents refrigerant migration (which causes oil dilution) to the compressor during the off cycle, at low outdoor ambient temperatures. Wire the solenoid according to the unit label diagram.



## Refrigerant Specialties Part Numbers

LIQUID LINE SIZE (in.)	LIQUID LINE SOLENOID VALVE (LLSV)	SOLENOID COIL	SIGHT GLASS
3/8	EF680033 plus EF680039 biflow kit	EF680037	KM680008
1/2	EF680035 plus EF680039 biflow kit	EF680037	KM680004
5/8	EF680036 plus EF680039 biflow kit	EF680037	KM680005

## Split System Heat Pump Outdoor Unit with Puron Advance™ Refrigerant HVAC Guide Specifications - Section 15678

Size Range: **6 to 20 Nominal Tons Cooling**

Carrier Model Numbers: **38AXQ07-25**

### Part 1 — General

#### 1.01 SYSTEM DESCRIPTION

- A. Outdoor-mounted, electrically controlled, air-cooled split system heat pump suitable for on-the-ground or rooftop installation. Unit shall consist of a scroll air-conditioning compressor assembly, an air-cooled coil, propeller-type condenser fans, and a control box. Unit shall discharge supply air upward as shown on contract drawings. Unit shall function as the outdoor component of an air to air electric heat pump system.
- B. Unit must be designed with a Puron Advance™ (R-454B) refrigerant circuit to match Packaged Heat Pump Air Handling Unit(s), 40RLQ for matched systems approved by the manufacturer.

#### 1.02 QUALITY ASSURANCE

- A. Unit shall be rated in accordance with AHRI Standard 340/360.
- B. Unit construction shall comply with ANSI/ASHRAE 15 safety code latest revision and comply with NEC.
- C. Unit shall be constructed in accordance with UL 60335-1 and 60335-2-40 standard and shall carry the UL and UL, Canada label.
- D. Unit cabinet shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- E. Air-cooled outdoor coils shall be leak tested at 150 psig and pressure tested at 650 psig and qualified to UL burst test at 1980 psig.
- F. Unit shall be manufactured in a facility registered to ISO 9001 manufacturing quality standard.

#### 1.03 DELIVERY, STORAGE AND HANDLING

Unit shall be shipped as single package only, and shall be stored and handled according to unit manufacturer's recommendations.

#### 1.04 WARRANTY (FOR INCLUSION BY SPECIFYING ENGINEER)

### Part 2 — Products

#### 2.01 EQUIPMENT

- A. General: Factory-assembled, single piece, air-cooled split system heat pump. Contained within the unit enclosure shall be all factory wiring, piping, controls, compressor, holding charge Puron Advance™ (R-454B), and special features required prior to field start-up.

#### B. Unit Cabinet:

1. Unit cabinet shall be constructed of galvanized steel, bonderized and coated with a pre-painted baked enamel finish.
2. A heavy-gauge roll-formed perimeter base rail with forklift slots and lifting holes shall be provided to facilitate rigging.

#### C. Fans:

1. Condenser fans shall be direct driven, propeller type, discharging air vertically upward.
2. Fan blades shall be balanced.
3. Condenser fan discharge openings shall be equipped with PVC coated steel wire safety guards.
4. Condenser fan and motor shaft shall be corrosion resistant.

#### D. Compressor:

1. Compressor shall be of the hermetic scroll type.
2. Compressor shall be mounted on rubber grommets.
3. Compressor shall include overload protection.
4. Compressors shall be equipped with a crank-case heater.
5. Compressor shall be equipped with internal high discharge temperature protection.

#### E. Coil:

1. Coil shall be air-cooled and circuited for sub cooling during cooling mode of operation.
2. Coil shall be constructed of aluminum fins (copper fins optional) mechanically bonded to internally grooved seamless copper tubes which are then cleaned, dehydrated, and sealed.

#### F. Refrigeration Components and Operation:

1. Refrigeration circuit components shall include liquid line service valve, suction line service valve, a full charge of compressor oil, holding charge of refrigerant, and loose shipped refrigerant filter drier (one per circuit).
2. Precision-sized suction line accumulator on each refrigerant circuit shall protect from oil being removed from the scroll compressor rotating orbiter and plate during the activation of the defrost mode and switching back and forth from cooling and heating operations.
3. Unit shall be capable of starting and running up to 125°F (52°C) and down to 35°F (2°C) ambient outdoor temperature.
4. Unit shall operate at ± 10% from rated voltage.

## G. Controls and Safeties:

1. Minimum control functions shall include:
  - a. Control wire terminal blocks.
  - b. Compressor lockout on auto-reset safety until reset from thermostat.
  - c. Each unit shall utilize the Comfort Alert™<sup>1</sup> Diagnostic Board that provides:
    - 1) System Pressure Trip fault code indication
    - 2) Short Cycling fault code indication
    - 3) Locked Rotor fault code indication
    - 4) Open Circuit fault code indication
    - 5) Reverse Phase 3 fault code indication
    - 6) Welded Contactor fault code indication
    - 7) Low Voltage fault code indication
    - 8) Anti-short cycle protection
    - 9) Phase reversal protection
2. Minimum safety devices which are equipped with automatic reset (after resetting first at thermostat), shall include:
  - a. High discharge pressure protection switch.
  - b. Loss-of-charge protection switch.

## H. Electrical Requirements:

1. Unit electrical power shall be single-point connection.
2. Unit control circuit shall contain a 75VA - 24-v transformer for unit control.

## I. Special Features:

1. Unit-Mounted, Non-Fused Disconnect Switch: (Not available when unit MOCP electrical rating exceeds 80 amps)  
Switch shall be factory-installed and internally mounted. NEC and UL-approved non-fused switch shall provide unit power shutoff. Switch shall be accessible from outside the unit and shall provide power off lock-out capability.
2. Convenience Outlet:
  - a. Powered convenience outlet.
    - 1) Outlet shall be powered from main line power to the rooftop unit.
    - 2) Outlet shall be powered from line side or load side of disconnect by installing contractor, as required by code. If outlet is powered from load side of disconnect, unit electrical ratings shall be UL certified and rated for additional outlet amperage.
    - 3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
    - 4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.

- 5) Voltage required to operate convenience outlet shall be provided by a factory-installed step-down transformer.
- 6) Outlet shall be accessible from outside the unit.
- 7) Outlet shall include a field-installed "Wet in Use" cover.
- b. Non-Powered convenience outlet.
  - 1) Outlet shall be powered from a separate 115/120v power source.
  - 2) A transformer shall not be included.
  - 3) Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle.
  - 4) Outlet shall include 15 amp GFI receptacles with independent fuse protection.
  - 5) Outlet shall be accessible from outside the unit.
  - 6) Outlet shall include a field-installed "Wet in Use" cover.

## 3. Low-Ambient Temperature Control:

A low-ambient temperature control shall be available as a factory-installed option or as a field-installed accessory. This low-ambient control shall regulate speed of the condenser-fan motors in response to the saturated condensing temperature of the unit. The control shall maintain correct condensing pressure at outdoor temperatures down to -20°F (-29°C).

## 4. Optional Outdoor Coil Materials:

### a. Pre-Coated Aluminum-Fin Coils:

Coils shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.

### b. E-Coated Aluminum-Fin Coils:

Coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss requirements of 60° of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to a minimum of 1000 and 250 hours respectively

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## Guide specifications (cont)



(ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be aluminum fins mechanically bonded to copper tubes.

5. Thermostat Controls:

- a. Programmable multi-stage thermostat with 7-day clock, holiday scheduling, large backlit

display, remote sensor capability, and Title 24 compliance.

- b. Commercial electronic thermostat with 7-day time clock, auto-changeover, multistage capability, and large LCD temperature display.
6. Louvered Hail Guard Package:  
Louvered hail guard package shall protect coils against damage from hail and other flying debris.



