



Product Data

WeatherMaster® Single Packaged Rooftop

3 to 5 Nominal Tons

ecoblue™  technology



48/50GC**04, 05, 06

48GC: Single-Package Gas Heating/Electric Cooling Rooftop Units
50GC: Electric Cooling Rooftop Units with Optional Electric Heat
with Puron® Refrigerant (R-410A)

The New Carrier WeatherMaster® rooftop units (RTU) with EcoBlue™ Technology were designed by customers for customers and integrate new technology to provide value added benefits never seen in this type of equipment before.

New major design features include:

- Patented, industry's first efficient indoor fan system using Vane Axial Fan technology — with electronically commutated variable speed motor.
- Reliable 2-stage scroll compressor on all sizes.
- Upgraded unit control board with intuitive indoor fan adjustment.
- Reliable copper tube/aluminum fin condenser coil with 5/16 in. tubing to help reduce refrigerant charge verses prior designs.
- New outdoor fan system with rugged — lightweight high impact composite fan blade

48/50GC WeatherMaster® units up to 5 tons are specifically designed to fit on Carrier roof curbs that were installed back to 1989, which makes replacement easy and eliminates the need for curb adapters or changing utility connections.

Two-stage cooling capacity control delivers efficiencies of up to 17.4 SEER and 16.5 SEER2. All models are capable of either vertical or horizontal airflow.

The Carrier rooftop unit (RTU) was designed by customers for customers. With “no-strip” screw collars, handled access panels, and more, the unit is easy to install, easy to maintain, and easy to use. Your new 3 to 5 ton WeatherMaster Carrier rooftop unit (RTU) provides optimum comfort and control from a packaged rooftop.

Value-added features include:

- optional Humidi-MiZer® adaptive dehumidification system for improved part load humidity performance
- Puron® refrigerant (R-410A)
- single point gas and electrical connections
- optional fully integrated SystemVu™ controls
- RTU Open controller for BACnet™1, LonWorks®1, Modbus®1 and Johnson Controls N2
- optional fully insulated cabinet with optional foil faced insulation
- TXV refrigerant metering system
- Scroll compressors with internal line-break overload protection
- Units come with an easy access tool-less filter door. Filter track tilts out for filter removal and replacement. All filters are the same size in each unit.

Installation ease

All WeatherMaster units are field-convertible to horizontal airflow, which makes it easy to adjust to unexpected

jobsite complications. Lighter units make for easy replacement. Simple, fast plug-in connections to the standard integrated unit control board (UCB). Clearly labeled connections points to reduce installation time. Also, a large control box provides room to work and room to mount Carrier accessory controls.

Easy to maintain

With the new EcoBlue Vane Axial fan system and direct drive ECM motor — there is no longer a need to adjust belts or pulleys as in past designs. This frees up maintenance and installation time.

Easy access handles by Carrier provide quick and easy access to all normally serviced components. Our “no-strip” screw system has superior holding power and guides screws into position while preventing the screw from stripping the unit's metal.

Sloped, corrosion resistant composite drain pan sheds water; and won't rust.

Easy to use

The newly re-designed Unit Control Board by Carrier puts all connections and troubleshooting points in one convenient place. Most low voltage connections are made to the same board and make it easy to access it. Setting up the fan is simple by an intuitive switch and rotary dial arrangement. Carrier rooftops have high and low pressure switches, a filter drier, and 2-in. filters standard.

Table of contents

	Page
Features/Benefits	2
Model Number Nomenclature	4
Capacity Ratings	6
Physical Data	10
Options and Accessories	18
Base Unit Dimensions	23
Accessory Dimensions	29
Performance Data	30
Fan Data	44
Electrical Data	93
Typical Wiring Diagrams	119
Sequence of Operation	127
Application Data	130
Guide Specifications — 48GC	132
Guide Specifications — 50GC	144

EcoBlue Technology

Direct drive EcoBlue™ Technology indoor fan system uses Vane Axial fan design and electronically commutated motors.

This new Vane Axial design over past belt drive systems has 75% fewer moving parts, uses up to 40% less energy and has no fan belts, blower bearings and shaft.

Streamlined control and integration

Carrier controllers make connecting WeatherMaster® rooftops into existing building automation systems easy. The units are compatible with conventional

thermostat controls, SystemVu™ controls and Carrier RTU Open multi-protocol controller.

Operating efficiency and flexibility

The 48/50GC rooftops exceed ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) 90.1-2016, IECC®¹ (International Energy Conservation Code) IECC-2018 minimum efficiency requirements.

Field convertible airflow

All WeatherMaster 3 to 5 ton units are field-convertible to horizontal airflow, which makes it easy to adjust to unexpected jobsite complications.

Comfort control

Carrier's patented Humidi-MiZer® adaptive dehumidification system is an all-inclusive factory-installed option on gas heating/electric cooling and electric cooling/electric heat models. This system provides reliable, flexible operation to meet indoor part load sensible and latent requirements.

1. Third-party trademarks and logos are the property of their respective owners.



48GC Model Number Nomenclature

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	4	8	G	C	D	L	0	4	A	2	A	5	-	0	A	0	A	0

Unit Heat Type
48 = Gas Heat Packaged Rooftop

Model Series — WeatherMaster®
GC = 17.4 SEER and 16.5 SEER2 High Eff.

Heat Options

D = Low Gas Heat
E = Medium Gas Heat
F = High Gas Heat
L = Low NOx – Low Gas Heat¹
S = Low Heat w/ Stainless Steel Exchanger
R = Medium Heat w/ Stainless Steel Exchanger
T = High Heat w/ Stainless Steel Exchanger

Refrig. Systems Options

H = Two-Stage Cooling with Low Ambient Control (1-phase only)²,³
J = Two-Stage Cooling²
K = Two-Stage Cooling with Humidi-MiZer system (includes Low Ambient control)²
L = Two-Stage Cooling with Low Ambient control²
T = Two-Stage Cooling (1-phase only)²,³

Cooling Tons

04 = 3 ton
05 = 4 ton
06 = 5 ton

Sensor Options

A = None
B = RA (Return Air) Smoke Detector
C = SA (Supply Air) Smoke Detector
D = RA + SA Smoke Detector
E = CO₂
F = RA Smoke Detector and CO₂
G = SA Smoke Detector and CO₂
H = RA + SA Smoke Detector and CO₂
J = Condensate Overflow Switch
K = Condensate Overflow Switch and RA Smoke Detector
L = Condensate Overflow Switch and RA and SA Smoke Detectors
M = Condensate Overflow Switch and SA Smoke Detector

Indoor Fan Options

1 = Direct Drive EcoBlue™ — Standard Static
2 = Direct Drive EcoBlue — Medium Static
3 = Direct Drive EcoBlue — High Static

Coil Options — Round Tube/Plate Fin Condenser Coil (Outdoor - Indoor — Hail Guard)

A = Al/Cu - Al/Cu
B = Precoat Al/Cu - Al/Cu
C = E-coat Al/Cu - Al/Cu
D = E-coat Al/Cu - E-coat Al/Cu
E = Cu/Cu - Al/Cu
F = Cu/Cu - Cu/Cu
M = Al/Cu - Al/Cu — Louvered Hail Guard
N = Precoat Al/Cu - Al/Cu — Louvered Hail Guard
P = E-coat Al/Cu - Al/Cu — Louvered Hail Guard
Q = E-coat Al/Cu - E-coat Al/Cu — Louvered Hail Guard
R = Cu/Cu - Al/Cu — Louvered Hail Guard
S = Cu/Cu - Cu/Cu — Louvered Hail Guard

Factory Assigned

0 = Standard
1 = LTL

Electrical Options

A = None
B = HACR Breaker
C = Non-Fused Disconnect (NFD)
D = Thru-the-Base (TTB) Connections
F = Non-Fused Disconnect and TTB Conn.
N = Phase Monitor Protection
P = Phase Monitor Protection and HACR
Q = Phase Monitor Protection and NFD
R = Phase Monitor Protection and TTB Conn.
S = Phase Monitor Protection, HACR Breaker, and TTB Conn.
T = Phase Monitor Protection, NFD, and TTB Conn.

Service Options

0 = None
1 = Unpowered Convenience Outlet (CO)
2 = Powered Convenience Outlet
3 = Hinged Access Panels
4 = Hinged Access Panels and Unpowered CO
5 = Hinged Panels and Powered CO
6 = MERV-8 High Efficiency Filters
C = Foil Faced Insulation

Intake / Exhaust Options

A = None
B = Temperature Economizer w/ Barometric Relief
F = Enthalpy Economizer w/ Barometric Relief
U = Temperature Ultra Low Leak Economizer with Barometric Relief
W = Enthalpy Ultra Low Leak Economizer with Barometric Relief

Base Unit Controls

0 = Base Controls, set up for field-installed air mgmt devices
2 = RTU Open Multi-Protocol Controller
3 = SystemVu™ Controls with Display
6 = Electromechanical Controls — can be used with W7220 EconoMi\$er X (with Fault Detection and Diagnostic)

Design Revision

- = Factory Design Revision

Voltage

1 = 575-3-60
3 = 208/230-1-60³
5 = 208/230-3-60
6 = 460-3-60

¹ Low NOx models include Stainless Steel HX.

² Units meet Department of Energy 2023 SEER2 requirements.

³ The following are not available as a factory-installed options for models with this voltage code: Humidi-MiZer System, Coated Coils or Cu Fin Coils, Louvered Hail Guards, Economizer, Powered 115 Volt Convenience Outlet.

Model number nomenclature (cont)



50GC Model Number Nomenclature

Position:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Example:	5	0	G	C	-	L	0	4	A	1	A	5	-	0	A	0	A	0

Unit Heat Type

50 = Electric Heat
Packaged Rooftop

Model Series — WeatherMaster®

GC = 17.4 SEER and 16.5 SEER2 High Eff.

Heat Options

- = No Heat
A = Low Electric Heat
B = Medium Electric Heat
C = High Electric Heat

Refrig. Systems Options

H = Two-Stage Cooling with Low Ambient Control (1-phase only)^{1,2}
J = Two Stage Cooling Models¹
K = Two Stage Cooling Models with Humidi-MiZer® system (includes Low Ambient control)¹
L = Two Stage Cooling Models with Low Ambient Control¹
T = Two-Stage Cooling (1-phase only)^{1,2}

Cooling Tons

04 = 3 ton
05 = 4 ton
06 = 5 ton

Sensor Options

A = None
B = RA (Return Air) Smoke Detector
C = SA (Supply Air) Smoke Detector
D = RA + SA Smoke Detector
E = CO₂
F = RA Smoke Detector and CO₂
G = SA Smoke Detector and CO₂
H = RA + SA Smoke Detector and CO₂
J = Condensate Overflow Switch (electromechanical controls only)
K = Condensate Overflow Switch and RA Smoke Detectors
L = Condensate Overflow Switch and RA and SA Smoke Detectors
M = Condensate Overflow Switch and SA Smoke Detectors

Indoor Fan Options

1 = Direct Drive — EcoBlue — Standard Static
2 = Direct Drive — EcoBlue — Medium Static
3 = Direct Drive — EcoBlue — High Static

Coil Options (RTPF) (Outdoor - Indoor — Hail Guard)

A = Al/Cu - Al/Cu
B = Precoat Al/Cu - Al/Cu
C = E-coat Al/Cu - Al/Cu
D = E-coat Al/Cu - E-coat Al/Cu
E = Cu/Cu - Al/Cu
F = Cu/Cu - Cu/Cu
M = Al/Cu - Al/Cu — Louvered Hail Guard
N = Precoat Al/Cu - Al/Cu — Louvered Hail Guard
P = E-coat Al/Cu - Al/Cu — Louvered Hail Guard
Q = E-coat Al/Cu - E-coat Al/Cu — Louvered Hail Guard
R = Cu/Cu - Al/Cu — Louvered Hail Guard
S = Cu/Cu - Cu/Cu — Louvered Hail Guard

Factory Assigned

0 = Standard
1 = LTL

Electrical Options

A = None
B = HACR Breaker
C = Non-Fused Disconnect (NFD)
D = Thru-The-Base (TTB) Connections
E = HACR and Thru-The-Base Connections
F = Non-Fused Disconnect and TTB Conn.
N = Phase Monitor Protection
P = Phase Monitor Protection and HACR Breaker
Q = Phase Monitor Protection and NFD
R = Phase Monitor Protection and TTB Conn.
S = Phase Monitor Protection, HACR Breaker, and TTB Conn.
T = Phase Monitor Protection, NFD, and TTB Conn.

Service Options

0 = None
1 = Unpowered Convenience Outlet (CO)
2 = Powered Convenience Outlet
3 = Hinged Panels
4 = Hinged Panels and Unpowered CO
5 = Hinged Panels and Powered CO
6 = MERV-8 High Efficiency Filters
C = Foil-Faced Insulation

Intake / Exhaust Options

A = None
B = Temperature Economizer with Barometric Relief
F = Enthalpy Economizer with Barometric Relief
K = Two-Position Damper
U = Temperature Ultra Low Leak Economizer with Barometric Relief
W = Enthalpy Ultra Low Leak Economizer with Barometric Relief

Base Unit Controls

0 = Base Controls, set up for field-installed air mgmt devices
2 = RTU Open Multi-Protocol Controller
3 = SystemVu™ Controller
6 = Electro-mechanical - can be used with W7220 EconoMiSer X (with Fault Detection and Diagnostic)

Design Revision

- = Factory Design Revision

Voltage

1 = 575/3/60
3 = 208-230/1/60²
5 = 208-230/3/60
6 = 460/3/60

¹ Units meet Department of Energy 2023 SEER2 requirements; available.

² The following are not available as a factory-installed options for models with this voltage code: Humidi-MiZer® System, Coated Coils or Cu Fin Coils, Louvered Hail Guards, Economizer or Two-Position Damper, Powered 115 Volt Convenience Outlet.

48GC*T 1-Phase AHRI Rating^{a,b,c,d}

48GC UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (tons)	NET COOLING CAPACITY 2 (MBtuh)	TOTAL POWER (kW)	SEER2	EER2
48GC*T04	3	2	3	35.0	2.9	16.0	12.0
48GC*T05	3	2	4	46.5	3.9	16.0	12.0
48GC*T06	3	2	5	59.0	4.9	16.5	12.0

NOTE(S):

- Rated in accordance with AHRI Standards 210/240.
- Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
- Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum SEER2 and EER2 requirements.
- 48GC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

48GC 3-Phase AHRI Rating^{a,b,c,d}

48GC UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY (MBtuh)	TOTAL POWER (kW)	SEER	EER
48GC*J04	1, 5, 6	2	3	36.0	2.8	17.4	12.8
48GC*J05	1, 5, 6	2	4	48.0	3.8	17.4	12.8
48GC*J06	1, 5, 6	2	5	59.5	4.6	17.4	12.8

48GC UNIT	NET COOLING CAPACITY 2 (MBtuh)	TOTAL POWER 2 (kW)	SEER 2	EER2
48GC*J04	35.0	2.9	16.0	12.0
48GC*J05	46.5	3.9	16.0	12.0
48GC*J06	59.0	4.9	16.5	12.0

NOTE(S):

- Rated in accordance with AHRI Standards 210/240.
- Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
- Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) requirements, as well as DOE-2018 (Department of Energy) Energy Standard for minimum SEER and EER requirements or DOE-2023 Energy Standards for minimum SEER2 and EER2 requirements.
- 48GC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

LEGEND

- AHRI** — Air-Conditioning, Heating and Refrigeration Institute
EER — Energy Efficiency Ratio
IEER — Integrated Energy Efficiency Ratio
MBtuh — Btuh in thousands
SEER — Seasonal Energy Efficiency Ratio



Capacity ratings (cont)



50GC 1-Phase AHRI Ratings^{a,b,c,d}

50GC UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY 2 (MBtuh)	TOTAL POWER (kW)	SEER2	EER2
50GC*T04	3	2	3	35.0	2.9	16.0	12.0
50GC*T05	3	2	4	46.5	3.9	16.0	12.0
50GC*T06	3	2	5	59.0	4.9	16.5	12.0

NOTE(S):

- Rated in accordance with AHRI Standards 210/240.
- Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
- Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) and DOE-2023 (Department of Energy) Energy Standard for minimum SEER2 and EER2 requirements.
- 50GC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

50GC 3-Phase AHRI Rating^{a,b,c,d}

50GC UNIT	VOLTAGE	COOLING STAGES	NOMINAL CAPACITY (TONS)	NET COOLING CAPACITY (MBtuh)	TOTAL POWER (kW)	SEER	EER
50GC*J04	1, 5, 6	2	3	36.0	2.8	17.4	12.8
50GC*J05	1, 5, 6	2	4	46.5	3.8	17.4	12.8
50GC*J06	1, 5, 6	2	5	59.0	4.6	17.4	12.8

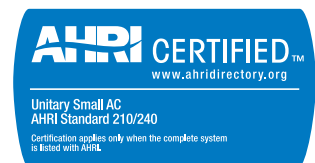
50GC UNIT	NET COOLING CAPACITY 2 (MBtuh)	TOTAL POWER 2 (kW)	SEER2	EER2
50GC*J04	35.0	2.9	16.0	12.0
50GC*J05	46.5	3.9	16.0	12.0
50GC*J06	59.0	4.9	16.0	12.0

NOTE(S):

- Rated in accordance with AHRI Standards 210/240.
- Rating are based on:
Cooling Standard: 80°F (27°C) db, 67°F (19°C) wb indoor air temperature and 95°F (35°C) db outdoor air temperature.
- Units comply with ASHRAE 90.1-2016 (American Society of Heating, Refrigerating, and Air-Conditioning Engineers) requirements, as well as DOE-2018 (Department of Energy) Energy Standard for minimum SEER and EER requirements or DOE-2023 Energy Standard for minimum SEER2 and EER2 requirements..
- 50GC units comply with US Energy Policy Act (2005). To evaluate code compliance requirements, refer to state and local codes.

LEGEND

- AHRI** — Air-Conditioning, Heating and Refrigeration Institute
EER — Energy Efficiency Ratio
IEER — Integrated Energy Efficiency Ratio
MBtuh — Btuh in thousands
SEER — Seasonal Energy Efficiency Ratio



Capacity ratings (cont)



Sound Ratings^{a,b,c}

48/50GC UNIT	COOLING STAGES	OUTDOOR SOUND (dB) AT 60 Hz								
		A-Weighted	63	125	250	500	1000	2000	4000	8000
**04	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
**05	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3
**06	2	79	85.6	84.7	80.5	76.0	72.4	68.0	62.8	59.3

NOTE(S):

- Outdoor sound data is measured in accordance with AHRI.
- Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environmental factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.
- A-weighted sound ratings filter out very high and very low frequencies, to better approximate the response of "average" human ear. A-weighted measurements for Carrier units are taken in accordance with AHRI.

LEGEND

db — Decibel

Minimum - Maximum Airflow Ratings (cfm) — Natural Gas and Propane

UNIT	VOLTAGE	HEAT LEVEL	COOLING				HEATING ^a	
			Minimum Airflow cfm	Minimum 2-Speed Airflow (low speed)	Minimum 2-Speed Airflow (high speed)	Maximum Airflow cfm	Minimum Airflow cfm	Maximum Airflow cfm
48GC**04	1 phase	LOW	900	675	900	1500	890	1950
		MED					800	1520
		HIGH					—	—
	3 phase	LOW	900	675	900	1500	910	2010
		MED					960	1160
		HIGH					—	—
48GC**05	1 phase	LOW	1200	900	1200	2000	890	2440
		MED					1050	2280
		HIGH					1220	2170
	3 phase	LOW	1200	900	1200	2000	910	2010
		MED					1250	2330
		HIGH					1390	2220
48GC**06	1 phase	LOW	1500	1125	1500	2500	890	3250
		MED					1050	2730
		HIGH					—	—
	3 phase	LOW	1500	1125	1500	2500	910	2510
		MED					1250	2720
		HIGH					1390	2780

NOTE(S):

- Heating rating values are identical for aluminum heat exchangers and stainless steel heat exchangers.

Minimum - Maximum Airflow Ratings (cfm) — Cooling Units and Accessory Electric Heat

UNIT	COOLING				ELECTRIC HEAT ^a	
	Minimum Airflow cfm	Minimum 2-Speed Airflow (low speed)	Minimum 2-Speed Airflow (high speed)	Maximum Airflow cfm	Minimum Airflow cfm	Maximum Airflow cfm
50GC**04	900	675	900	1500	900	1500
50GC**05	1200	900	1200	2000	1200	2000
50GC**06	1500	1125	1500	2500	1500	2500

NOTE(S):

- Electric heat modules are available as both factory-installed options or field-installed accessories for 50GC units.

Capacity ratings (cont)



Heat Rating — Natural Gas and Propane

48GC UNIT		GAS HEAT	AL/SS HEAT EXCHANGER		TEMPERATURE RISE (°F)	THERMAL EFFICIENCY (%)	AFUE EFFICIENCY (%)
			Input/Output Stage 1 (MBH)	Input/Output Stage 2 (MBH)			
04	Single Phase	LOW	—/—	65/53	25-55	81	81
		MED	—/—	90/73	45-85	82	81
		HIGH	—/—	—/—	—	—	—
	Three Phase	LOW	50/40	67/54	25-55	81	—
		MED	82/65	110/88	50-85	80	—
		HIGH	—/—	—/—	—	—	—
05	Single Phase	LOW	—/—	65/53	20-55	81	81
		MED	—/—	90/73	30-65	82	81
		HIGH	—/—	130/106	45-80	81	81
	Three Phase	LOW	50/40	67/54	25-55	81	—
		MED	82/65	110/88	35-65	80	—
		HIGH	120/96	150/120	50-80	80	—
06	Single Phase	LOW	—/—	65/53	15-55	81	81
		MED	—/—	90/73	25-65	82	81
		LOW	50/40	67/54	20-55	81	—
	Three Phase	MED	82/65	110/88	30-65	80	—
		HIGH	120/96	150/120	40-80	80	—
		—	—	—	—	—	—

Heat Rating — Low NOx

48GC UNIT		GAS HEAT	AL/SS HEAT EXCHANGER		TEMPERATURE RISE (°F)	THERMAL EFFICIENCY (%)	AFUE EFFICIENCY (%)
			Input/Output Stage 1 (MBH)	Input/Output Stage 2 (MBH)			
04	Single Phase	LOW	—	60 / 49	20-50	81%	81%
	Three Phase	LOW	—	60 / 49	20-50	81%	—
05	Single Phase	LOW	—	60 / 49	20-50	81%	81%
	Three Phase	LOW	—	60 / 49	20-50	81%	—
06	Single Phase	LOW	—	60 / 49	15-50	81%	81%
	Three Phase	LOW	—	60 / 49	15-50	81%	—

48/50GC 3 Ton Physical Data

48/50GC UNIT	48/50GC*J04	48/50GC*K04	48/50GC*T04
NOMINAL TONS	3	3	3
BASE UNIT OPERATING WT (lb) 48GC/50GC ^a	513/468	513/468	513/468
REFRIGERATION SYSTEM			
No. Circuits/No. Compressors/Type	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll
Puron® (R-410A) Charge A/B (lb-oz)	8-4	—	8-4
Humidi-MiZer® Puron (R-410A) Charge A/B (lb-oz)	—	11-3	—
Metering Device	TXV	—	TXV
Humidi-MiZer Metering Device	—	TXV	—
High-Pressure Trip/Reset (psig)	630/505	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44	54/117
EVAPORATOR COIL			
Material (Tube/Fin)	Cu/Al	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	2/15	2/15	2/15
Total Face Area (ft²)	5.5	5.5	5.5
Condensate Drain Connection Size	3/4 in.	3/4 in.	3/4 in.
CONDENSER COIL			
Material	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	2/18	2/18	2/18
Total Face Area (ft²)	11.7	11.7	11.7
HUMIDI-MIZER COIL			
Material	—	Cu/Al	—
Coil Type	—	3/8 in. RTPF	—
Rows/FPI	—	1/17	—
Total Face Area (ft²)	—	4.1	—
EVAPORATOR FAN AND MOTOR			
Standard Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	0.44
Rpm Range	—	—	189-1890
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
Medium Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	0.71
Rpm Range	—	—	219-2190
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
High Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	1.07
Rpm Range	—	—	249-2490
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
Standard Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	0.44	0.44	—
Rpm Range	189-1890	189-1890	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—
Medium Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	0.71	0.71	—
Rpm Range	219-2190	219-2190	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—

Physical data (cont)



48/50GC 3 Ton Physical Data (cont)

48/50GC UNIT	48/50GC*J04	48/50GC*K04	48/50GC*T04
High Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	1.07	1.07	—
Rpm Range	249-2490	249-2490	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—
CONDENSER FAN AND MOTOR			
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct
Motor HP/Rpm	1/3 / 1000/800	1/3 / 1000/800	1/3 / 1000/800
Fan Diameter (in.)	23 in.	23 in.	23 in.
FILTERS			
RA Filter Qty / Size (in.)	2 / 16 x 25 x 2	2 / 16 x 25 x 2	2 / 16 x 25 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):

- a. Base unit operating weight does not include weight of options.

LEGEND

Bhp — Break Horsepower
FPI — Fins Per Inch
OA — Outdoor Air
RA — Return Air

48/50GC 4 Ton Physical Data

48/50GC UNIT	48/50GC*J05	48/50GC*K05	48/50GC*T05
NOMINAL TONS	4	4	4
BASE UNIT OPERATING WT (lb) 48GC/50GC ^a	555/510	555/510	555/510
REFRIGERATION SYSTEM			
No. Circuits/No. Compressors/Type	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll
Puron® (R-410A) Charge A/B (lb-oz)	9	—	9
Humidi-MiZer® Puron (R-410A) Charge A/B (lb-oz)	—	12-12	—
Metering Device	TXV	—	TXV
Humidi-MiZer Metering Device	—	TXV	—
High-Pressure Trip/Reset (psig)	630/505	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44	54/117
EVAPORATOR COIL			
Material (Tube/Fin)	Cu/Al	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	4/15	4/15	4/15
Total Face Area (ft²)	5.5	5.5	5.5
Condensate Drain Connection Size	3/4 in.	3/4 in.	3/4 in.
CONDENSER COIL			
Material	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	2/18	2/18	2/18
Total Face Area (ft²)	15.9	15.9	15.9
HUMIDI-MIZER COIL			
Material	—	Cu/Al	—
Coil Type	—	3/8 in. RTPF	—
Rows/FPI	—	2/17	—
Total Face Area (ft²)	—	4.1	—
EVAPORATOR FAN AND MOTOR			
Standard Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	0.72
Rpm Range	—	—	190-1900
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
Medium Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	1.06
Rpm Range	—	—	217-2170
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
High Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	1.53
Rpm Range	—	—	246-2460
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
Standard Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	0.72	0.72	—
Rpm Range	190-1900	190-1900	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—
Medium Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	1.06	1.06	—
Rpm Range	217-2170	217-2170	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—

Physical data (cont)



48/50GC 4 Ton Physical Data (cont)

48/50GC UNIT	48/50GC*J05	48/50GC*K05	48/50GC*T05
High Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	1.96	1.96	—
Rpm Range	266-2660	266-2660	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—
CONDENSER FAN AND MOTOR			
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct
Motor HP/Rpm	1/3 / 1000/800	1/3 / 1000/800	1/3 / 1000/800
Fan Diameter (in.)	250	250	250
FILTERS			
RA Filter Qty / Size (in.)	2 / 16 x 25 x 2	2 / 16 x 25 x 2	2 / 16 x 25 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):

- a. Base unit operating weight does not include weight of options.

LEGEND

Bhp — Break Horsepower
FPI — Fins Per Inch
OA — Outdoor Air
RA — Return Air

48/50GC 5 Ton Physical Data

48/50GC UNIT	48/50GC*J06	48/50GC*K06	48/50GC*T06
NOMINAL TONS	5	5	5
BASE UNIT OPERATING WT (lb) 48GC/50GC ^a	600/555	600/555	600/555
REFRIGERATION SYSTEM			
No. Circuits/No. Compressors/Type	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll	1 / 1 / 2-Stage Scroll
Puron® (R-410A) Charge A/B (lb-oz)	11-0	—	11-0
Humidi-MiZer® Puron (R-410A) Charge A/B (lb-oz)	—	18-0	—
Metering Device	TXV	—	TXV
Humidi-MiZer Metering Device	—	TXV	—
High-Pressure Trip/Reset (psig)	630/505	630/505	630/505
Low-Pressure Trip/Reset (psig)	54/117	27/44	54/117
EVAPORATOR COIL			
Material (Tube/Fin)	Cu/Al	Cu/Al	Cu/Al
Coil Type	3/8 in. RTPF	3/8 in. RTPF	3/8 in. RTPF
Rows/FPI	4/15	4/15	4/15
Total Face Area (ft²)	7.3	7.3	7.3
Condensate Drain Connection Size	3/4 in.	3/4 in.	3/4 in.
CONDENSER COIL			
Material	Cu/Al	Cu/Al	Cu/Al
Coil Type	5/16 in. RTPF	5/16 in. RTPF	5/16 in. RTPF
Rows/FPI	2/18	2/18	2/18
Total Face Area (ft²)	18.8	18.8	18.8
HUMIDI-MIZER COIL			
Material	—	Cu/Al	—
Coil Type	—	3/8 in. RTPF	—
Rows/FPI	—	2/17	—
Total Face Area (ft²)	—	5.5	—
EVAPORATOR FAN AND MOTOR			
Standard Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	1.06
Rpm Range	—	—	215-2150
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
Medium Static 1 Phase			
Motor Qty/Drive Type	—	—	1 / Direct
Maximum Cont Bhp	—	—	1.44
Rpm Range	—	—	239-2390
Fan Qty/Type	—	—	1 / Vane Axial
Fan Diameter (in.)	—	—	16.6 in.
Standard Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	1.06	1.06	—
Rpm Range	215-2150	215-2150	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—
Medium Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	1.44	1.44	—
Rpm Range	239-2390	239-2390	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—

Physical data (cont)



48/50GC 5 Ton Physical Data (cont)

48/50GC UNIT	48/50GC*J06	48/50GC*K06	48/50GC*T06
High Static 3 Phase			
Motor Qty/Drive Type	1 / Direct	1 / Direct	—
Maximum Cont Bhp	2.43	2.43	—
Rpm Range	284-2836	284-2836	—
Fan Qty/Type	1 / Vane Axial	1 / Vane Axial	—
Fan Diameter (in.)	16.6 in.	16.6 in.	—
CONDENSER FAN AND MOTOR			
Qty / Motor Drive Type	1 / Direct	1 / Direct	1 / Direct
Motor HP/Rpm	1/3 / 1000/1000	1/3 / 1000/1000	1/3 / 1000/1000
Fan Diameter (in.)	250	250	250
FILTERS			
RA Filter Qty / Size (in.)	4 / 16 x 16 x 2	4 / 16 x 16 x 2	4 / 16 x 16 x 2
OA Inlet Screen Qty / Size (in.)	1 / 20 x 24 x 1	1 / 20 x 24 x 1	1 / 20 x 24 x 1

NOTE(S):

- a. Base unit operating weight does not include weight of options.

LEGEND

Bhp — Break Horsepower
FPI — Fins Per Inch
OA — Outdoor Air
RA — Return Air

48GC 3 to 5 Ton Gas Heat Data — 1-Phase Units

48GC UNIT	48GC**04	48GC**05	48GC**06
GAS CONNECTION			
No. of Gas Valves	1	1	1
Natural Gas Supply Line Pressure (in. wg)/ (psig)	4-13 / 0.18-0.47	4-13 / 0.18-0.47	4-13 / 0.18-0.47
Liquid Propane Supply Line Pressure (in. wg)/ (psig)	11-13 / 0.40-0.47	11-13 / 0.40-0.47	11-13 / 0.40-0.47
HEAT ANTICIPATOR SETTING (AMPS)			
First Stage	0.14	0.14	0.14
Second Stage	0.14	0.14	0.14
NATURAL GAS HEAT			
LOW			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	20-55	15-55
MEDIUM			
No. of Stages / No. of Burners (total)	1 / 3	1 / 3	1 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	45-85	30-65	25-65
HIGH			
No. of Stages / No. of Burners (total)	—	1 / 3	1 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115
Temperature Rise (°F)	—	45-80	35-80
LIQUID PROPANE HEAT			
LOW			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	20-55	15-55
MEDIUM			
No. of Stages / No. of Burners (total)	1 / 3	1 / 3	1 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	45-85	30-65	25-65
HIGH			
No. of Stages / No. of Burners (total)	—	1 / 3	1 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115
Temperature Rise (°F)	—	45-80	35-80
LOW NOx HEAT			
LOW			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	20-50	20-50	15-50

48GC 3 to 6 Ton Gas Heat Data — 3 phase units

48GC UNIT	48GC**04	48GC**05	48GC**06
GAS CONNECTION			
No. of Gas Valves	1	1	1
Natural Gas Supply Line Pressure (in. wg)/ (psig)	4-13 / 0.18-0.47	4-13 / 0.18-0.47	4-13 / 0.18-0.47
Liquid Propane Supply Line Pressure (in. wg)/ (psig)	11-13 / 0.40-0.47	11-13 / 0.40-0.47	11-13 / 0.40-0.47
HEAT ANTICIPATOR SETTING (AMPS)			
First Stage	0.14	0.14	0.14
Second Stage	0.14	0.14	0.14
NATURAL GAS HEAT			
LOW			
No. of Stages / No. of Burners (total)	2 / 2	2 / 2	2 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	25-55	20-55
MEDIUM			
No. of Stages / No. of Burners (total)	2 / 3	2 / 3	2 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	50-85	35-65	30-65
HIGH			
No. of Stages / No. of Burners (total)	—	2 / 3	2 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115
Temperature Rise (°F)	—	50-80	40-80
LIQUID PROPANE HEAT			
LOW			
No. of Stages / No. of Burners (total)	2 / 2	2 / 2	2 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	25-55	25-55	20-55
MEDIUM			
No. of Stages / No. of Burners (total)	2 / 3	2 / 3	2 / 3
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	50-85	35-65	30-65
HIGH			
No. of Stages / No. of Burners (total)	—	2 / 3	2 / 3
Connection Size	—	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	—	195 / 115	195 / 115
Temperature Rise (°F)	—	50-80	40-80
LOW NOx HEAT			
LOW			
No. of Stages / No. of Burners (total)	1 / 2	1 / 2	1 / 2
Connection Size	1/2 in. NPT	1/2 in. NPT	1/2 in. NPT
Rollout Switch Opens / Closes (°F)	195 / 115	195 / 115	195 / 115
Temperature Rise (°F)	20-50	20-50	15-50

Options and accessories



ITEM	FACTORY- INSTALLED OPTION	FIELD- INSTALLED ACCESSORY
GAS HEAT (48GC units only)		
Low, Medium or High Gas Heat — Aluminized Heat Exchanger	X	
Low, Medium or High Gas Heat — Stainless Steel Heat Exchanger	X	
Low NOx, Low Heat — Stainless Steel Heat Exchanger	X	
Propane Conversion Kit		X
High Altitude Conversion Kit		X
Flue Discharge Deflector		X
Flue Shield		X
ELECTRIC HEAT (50GC units only)		
Electric Resistance Heaters	X	X
Single Point Kits		X
CABINET		
Thru-the-Base Electrical or Gas-Line Connections	X	X
Hinged Access Panels	X	
COIL OPTIONS		
Cu/Cu Indoor and/or Outdoor Coils ^a	X	
Pre-coated Outdoor Coils ^a	X	
Premium, E-coated Outdoor Coils ^a	X	
HUMIDITY CONTROL		
Humidi-MiZer [®] Adaptive Dehumidification System ^a	X	
CONDENSER PROTECTION		
Condenser Coil Hail Guard (louvered design) ^a	X	X
CONTROLS		
Thermostats, Temperature Sensors, and Subbases		X
SystemVu [™] DDC Communicating Controller	X	
RTU Open Multi-Protocol Controller	X	
Smoke Detector (supply and/or return air)	X	
Horn Strobe Annunciator ^b		X
Time Guard II Compressor Delay Control Circuit		X
Phase Monitor		X
Condensate Overflow Switch	X	X
FILTERS		
MERV-8 Return Air Filters	X	
ECONOMIZERS AND OUTDOOR AIR DAMPERS		
EconoMi\$er [®] IV for Electro-mechanical Controls — Non FDD (Standard air leak damper models) ^{a,c}		X
EconoMi\$er2 for DDC Controls (Standard and Ultra Low Leak air damper models) ^{a,d}	X	X
EconoMi\$er X for Electro-mechanical Controls, complies with FDD (Standard and Ultra Low Leak damper models) ^{a,c}	X	X
Motorized Two-Position Outdoor-Air Damper ^a		X
Manual Outdoor-Air Damper (25% and 50%)		X
Barometric Relief ^e	X	X
Power Exhaust — Prop Design		X

ITEM	FACTORY- INSTALLED OPTION	FIELD- INSTALLED ACCESSORY
ECONOMIZER SENSORS AND IAQ DEVICES		
Single Dry Bulb Temperature Sensors ^f	X	X
Differential Dry Bulb Temperature Sensors ^f		X
Single Enthalpy Sensors ^f	X	X
Differential Enthalpy Sensors ^f		X
CO ₂ Sensor (wall, duct, or unit mounted) ^f	X	X
INDOOR MOTOR AND DRIVE		
Multiple Motor and Drive Packages	X	
LOW AMBIENT CONTROL		
Winter Start Kit ^g		X
Low Ambient Controller to -20°F (-29°C) ^g	X	X
POWER OPTIONS		
Convenience Outlet (powered) ^a	X	
Convenience Outlet (unpowered)	X	
HACR Circuit Breaker ^h	X	
Non-Fused Disconnect ⁱ	X	
ROOF CURBS		
Roof curb 14 in. (356 mm)		X
Roof curb 24 in. (610 mm)		X

NOTE(S):

- Not available as a factory-installed option on single phase (-3 voltage code) models. Use field-installed accessory where available.
- Requires a field-supplied 24V transformer for each application. See price pages for details.
- FDD (Fault Detection and Diagnostic) capability per California Title 24 section 120.2.
- Models with SystemVu and RTU Open DDC controls comply with California Title 24 Fault Detection and Diagnostic (FDD).
- Included with economizer.
- Sensors used to optimize economizer performance.
- See application data for assistance.
- HACR circuit breaker cannot be used on 04-06 sizes when unit FLA electrical rating exceeds:
208/230/1/60 and 208/230/3/60 = 100 amps (FLA)
460/3/60 = 90 amps (FLA)
Carrier RTUBuilder automatically selects the amps limitations.
- Non-fused disconnect switch cannot be used when unit electrical rating exceeds:
Without factory-installed electric heat:
208-230/1/60 and 208-230/3/60 = 80 amps (FLA).
480/3/60 and 575/3/60 = 80 amps (FLA).
With factory-installed electric heat:
208-230/1/60 and 208-230/3/60 = 100 amps (FLA).
480/3/60 and 575/3/60 = 80 amps (FLA).
Carrier RTUBuilder automatically selects the amp limitations.

Factory-installed options

Economizer (dry-bulb or enthalpy)

Economizers save money. They bring in fresh, outside air for ventilation; and provide cool, outside air to cool your building. This is the preferred method of low-ambient cooling. When coupled to CO₂ sensors, economizers can provide even more savings by coupling the ventilation air to only that amount required.

Economizers are available, installed and tested by the factory, with either enthalpy or dry-bulb temperature inputs. Additional sensors are available as accessories to optimize the economizers. Economizers include a powered exhaust system to help equalize building pressures.

Economizers include gravity controlled barometric relief that helps equalize building pressure and ambient air pressures. This can be a cost effective solution to prevent building pressurization. Economizers are available in Ultra Low Leak and standard low leak versions. Economizers can be factory-installed or easily field-installed.

Unit mounted CO₂ sensor

The CO₂ sensor works with the economizer to intake only the correct amount of outside air for ventilation. As occupants fill your building, the CO₂ sensor detects their presence through increasing CO₂ levels, and opens the economizer appropriately. When the occupants leave, the CO₂ levels decrease, and the sensor appropriately closes the economizer. This intelligent control of the ventilation air, called demand controlled ventilation (DCV) reduces the overall load on the rooftop, saving money. Also available as a field-installed accessory.

Smoke detector (supply and/or return air)

Trust the experts. Smoke detectors make your application safer and your job easier. Carrier smoke detectors immediately shut down the rooftop unit when smoke is detected. They are available, installed by the factory, for supply air, return air, or both.

Optional Humidi-MiZer® adaptive dehumidification system

Carrier's Humidi-MiZer adaptive dehumidification system is an all-inclusive factory-installed option that can be ordered with any WeatherMaster® 48/50GC04-06 rooftop unit, with the exception of single phase voltage (208-230/1/60) units.

This system expands the envelope of operation of Carrier's WeatherMaker rooftop products to provide unprecedented flexibility to meet year round comfort conditions.

The Humidi-MiZer adaptive dehumidification system has a unique dual operational mode setting. The Humidi-MiZer system provides greater dehumidification of the occupied space by 2 modes of dehumidification operations in addition to its normal design cooling mode.

The WeatherMaster 48/50GC04-06 rooftop coupled with the Humidi-MiZer system is capable of operating in normal design cooling mode, sub-cooling mode, and hot gas reheat mode. Normal design cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions.

Sub-cooling mode will operate to satisfy part load type conditions when the space requires combined sensible and a higher proportion of latent load control. Hot Gas Reheat mode will operate when outdoor temperatures diminish and the need for latent capacity is required for sole

humidity control Hot Gas Reheat mode will provide neutral air for maximum dehumidification operation.

NOTE: Humidi-MiZer system includes Low Ambient controller.

Thru-the-base connection

Thru-the-base connections, available as a factory option, are necessary to ensure proper connection and seal when routing wire and piping through the rooftop's basepan and curb. These couplings eliminate roof penetration and should be considered for gas lines, main power lines, as well as control power.

Hinged access panels

Allows access to unit's major components with specifically designed hinged access panels. Panels are filter, control box access indoor fan motor access.

Cu/Cu (indoor) coils

Copper fins and copper tubes are mechanically bonded to copper tubes and copper tube sheets. A polymer strip prevents coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan.

E-coated (outdoor and indoor) coils

A flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation of tubes, fins and headers.

Pre-coated outdoor coils

A durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. The coating minimizes galvanic action between dissimilar metals. Coating is applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube.

Condenser coil hail guard

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact.

Single enthalpy sensor

Prevents the wheel from rotating if the outside air conditions are acceptable for free cooling. Both exhaust and supply blowers will remain on.

Stainless steel heat exchanger (48GC units only)

The stainless steel heat exchanger option provides the tubular heat exchanger be made out of a minimum 20 gauge type 409 stainless steel for applications where the mixed air to the heat exchanger is expected to drop below 45°F (7°C). Stainless steel may be specified on applications where the presence of airborne contaminants require its use (applications such as paper mills) or in area with very high outdoor humidity that may result in severe condensation in the heat exchanger during cooling operation.

Convenience outlet (powered or un-powered)

Reduce service and/or installation costs by including a convenience outlet in your specification. Carrier will install this service feature at our factory. Provides a convenient, 15 amp, 115v GFCI receptacle with "Wet in Use" cover. The "powered" option allows the installer to power the outlet from the line side of the disconnect or load side as

required by code. The “unpowered” option is to be powered from a separate 115/120v power source.

The unpowered convenience outlet is available as a 15 amp factory-installed option or a 20 amp field-installed accessory.

HACR Breaker

These manual reset devices provide overload and short circuit protection for the unit. Factory wired and mounted with the units with access cover to provide protection from the environment.

Non-fused disconnect

This OSHA-compliant, factory-installed, safety switch allows a service technician to locally secure power to the rooftop. When selecting a factory-installed non-fused disconnect, note they are sized for the unit as ordered from the factory. The sizing of these do not accommodate field-installed items such as power exhaust devices, etc. If field installing electric heat with factory-installed non-fused disconnect switch, a single point kit may or may not be required.

SystemVu™ controller

Carrier’s SystemVu controller is an optional factory-installed and tested controller.

This controller takes on a whole new approach to provide an intuitive, intelligent controller that not only monitors and controls the unit, but also provides linkage to multiple building automation systems.

Each SystemVu controller makes it easy to set up, service, troubleshoot, gain historical data, generate reports and provide comfort only Carrier is noted for.

Key features include:

- Easy to read back lit 4 line text screen for superior visibility.
- Quick operational condition LEDs of: Run, Alert, and Fault.
- Simple navigation with large keypad buttons of: Navigation arrows, Test, Back, Enter and Menu.
- Capable of being controlled with a conventional thermostat, space sensor or build automation system.
- Service capabilities include:
 - Auto run test
 - Manual run test
 - Component run hours and starts
 - Commissioning reports
 - Data logging
- Full range of diagnosis:
 - Read refrigerant pressures without the need of gauges
 - Sensor faults
 - Compressor reverse rotation
 - Economizer diagnostics that meet California Title 24 requirements
- Quick data transfer via USB port:
 - Unit configuration uploading/downloading
 - Data logging
 - Software upgrades

- Built in capacity for:
 - i-Vu® open systems
 - BACnet systems
 - CCN systems
- Configuration and alarm point capability:
 - Contain over 100 alarm codes
 - Contain over 260 status, troubleshooting, diagnostic and maintenance points
 - Contain over 270 control configuration setpoints

RTU Open, multi-protocol controller

Connect the rooftop to an existing BAS (building automation system) without needing complicated translators or adapter modules using the RTU Open controller. The RTU Open controller speaks the 4 most common building automation system languages (BACnet, Modbus, Johnson Controls N2, and LonWorks). Use this controller when you have an existing BAS. Besides the 4 protocols, it also communicates with a Carrier Open system (i-Vu and VVT®).

Condensate overflow switch

This sensor and related controller monitors the condensate level in the drain pan and shuts down compression operation when overflow conditions occur. It includes:

- Indicator light — solid red (more than 10 seconds on water contact — compressors disabled), blinking red (sensor disconnected)
- 10 second delay to break — eliminates nuisance trips from splashing or waves in pan (sensor needs 10 seconds of constant water contact before tripping)
- Disables the compressor(s) operation when condensate plug is detected, but still allows fans to run for economizer.

MERV-8 return air filters

This factory option upgrades the return air filters from standard unit filters to high efficiency MERV-8 filters. Non-woven MERV-8 filter media with high strength, moisture-resistant frame. Filter media is securely fastened inside the filter frame on all 4 sides.

Low ambient controller

The low ambient controller is a head pressure controller kit that is designed to maintain the unit’s condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling when economizer usage is either not appropriate or desired. The low ambient controller will either cycle the outdoor fan motors or operate them at reduced speed to maintain the unit operation, depending on the model. This controller allows cooling operation down to -20°F (-29°C) ambient conditions.

Electric Heaters

Carrier offers a full-line of field-installed accessory heaters. The heaters are very easy to use, install and are all pre-engineered and certified. Electric heaters are available as either factory-installed options or field-installed accessories.

Field-installed accessories

Filter maintenance indicator

When the optional factory-installed filter maintenance indicator is used, a factory-installed differential pressure switch measures pressure drop across the outside air filter and activates a field-supplied dry contact indicator when the pressure differential exceeds the adjustable switch setpoint.

Condenser coil hail guard

Sleek, louvered panels protect the condenser coil from hail damage, foreign objects, and incidental contact. This can be purchased as a factory-installed option or as a field-installed accessory.

Differential enthalpy sensor

The differential enthalpy sensor is comprised of an outdoor and return air enthalpy sensors to provide differential enthalpy control. The sensor allows the unit to determine if outside air is suitable for free cooling.

Wall or duct mounted CO₂ sensor

The IAQ sensor shall be available in duct or wall mount. The sensor provides demand ventilation indoor air quality (IAQ) control.

Propane conversion kit (48GC units only)

Convert your gas heat rooftop from standard natural gas operation to Propane using this field-installed kit.

High altitude conversion kit (48GC units only)

High altitudes have less oxygen, which affects the fuel/air mixture in heat exchangers. In order to maintain a proper fuel/air mixture, heat exchangers operating in altitudes above 2000 ft (610 m) require different orifices. To select the correct burner orifices or determine the heat capacity for a high altitude application, use either the selection software, or the unit's service manual. High altitudes have less oxygen, which means heat exchangers need less fuel. The new gas orifices in this field-installed kit make the necessary adjustment for high altitude applications. They restore the optimal fuel to air mixture and maintain healthy combustion on altitudes above 2000 ft (610 m).

NOTE: Typical natural gas heating value ranges from 975 to 1050 Btu/ft³ at sea level nationally. The heating value goes down approximately 1.7% per every thousand feet elevation. Standard factory orifices can typically be used up to 2000 ft (610 m) elevation without any operational issues.

Flue discharge deflector (48GC units only)

The flue discharge deflector is a useful accessory when flue gas recirculation is a concern. By venting the flue discharge upwards, the deflector minimizes the chance for a neighboring unit to intake the flue exhaust.

Winter start kit

The winter start kit by Carrier extends the low ambient limit of your rooftop to 25°F (-4°C). The kit bypasses the low pressure switch, preventing nuisance tripping of the low pressure switch. Other low ambient precautions may still be prudent.

Low Ambient controller

The Low Ambient controller is a head pressure controller kit that is designed to maintain the unit's condenser head pressure during periods of low ambient cooling operation. This device should be used as an alternative to economizer free cooling not when economizer usage is either not appropriate or desired. The low ambient controller will either cycle the outdoor-fan motors or operate them at reduced speed to maintain the unit operation, depending on the model. This controller allows cooling operation down to -20°F (-29°C) ambient conditions.

Roof curb (14 in./356 mm or 24 in./610 mm)

Full perimeter roof curb with exhaust capability provides separate air streams for energy recovery from the exhaust air without supply air contamination.

Filter status indicator accessory

Monitors static pressure across supply and exhaust filters and provides indication when filters become clogged.

Manual OA Damper

Manual outdoor air dampers are an economical way to bring in ventilation air. The dampers are available in 25% and 50% versions.

Motorized Two-Position Damper

The Carrier two-position, motorized outdoor air damper admits up to 100% outside air. Using reliable, gear-driven technology, the 2-position damper opens to allow ventilation air and closes when the rooftop stops, stopping unwanted infiltration.

Time Guard II control circuit

This accessory protects your compressor by preventing short-cycling in the event of some other failure, prevents the compressor from restarting for 30 seconds after stopping. Not required with SystemVu™ controller, RTU Open controller, or authorized commercial thermostats.

Power exhaust

Superior internal building pressure control. This field-installed accessory may eliminate the need for costly, external pressure control fans.

Phase monitor protection

The Phase Monitor Control will monitor the sequence of 3-phase electrical system to provide a phase reversal protection; and monitor the 3-phase voltage inputs to provide a phase loss protection for the 3 phase device. It will work on either a Delta or Wye power connection.

Options and Accessory Weights

OPTION / ACCESSORY NAME ^a	48/50GC UNIT WEIGHT					
	04		05		06	
	lb	kg	lb	kg	lb	kg
Humidi-MiZer® System ^b	15	7	15	7	24	11
Power Exhaust — Vertical	51	23	51	23	51	23
Power Exhaust — Horizontal	39	18	39	18	39	18
EconoMiZer® (X, IV, or 2)	35	16	35	16	35	16
Two-Position Damper	39	18	39	18	39	18
Manual Damper	12	5	12	5	12	5
Medium Gas Heat (48GC units only)	9	4	9	4	9	4
High Gas Heat (48GC units only)	—	—	63	29	63	29
Hail Guard (louvered)	13	6	13	6	17	8
Cu/Cu Condenser Coil	37	17	74	34	90	41
Cu/Cu Condenser and Evaporator Coils	75	34	112	51	160	73
Roof Curb (14 in. curb)	95	43	95	43	95	43
Roof Curb (24 in. curb)	150	68	150	68	150	68
CO ₂ Sensor	2	1	2	1	2	1
Flue Discharge Deflector	7	3	7	3	7	3
Optional Indoor Motor/Drive	10	5	10	5	10	5
Low Ambient Controller	9	4	9	4	9	4
Winter Start Kit	5	2	5	2	5	2
Return Air Smoke Detector	7	3	7	3	7	3
Supply Air Smoke Detector	7	3	7	3	7	3
Fan Filter Switch	2	1	2	1	2	1
Non-Fused Disconnect	15	7	15	7	15	7
Powered Convenience Outlet	36	16	36	16	36	16
Unpowered Convenience Outlet	4	2	4	2	4	2
Enthalpy Sensor	2	1	2	1	2	1
Differential Enthalpy Sensor	3	1	3	1	3	1

NOTE(S):

- a. Where multiple variations are available, the heaviest combination is listed.
- b. For Humidi-MiZer system add Low Ambient controller.

48GC**04-06 Base Unit Dimensions

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [] ARE IN MILLIMETERS.
2.  CENTER OF GRAVITY
3.  DIRECTION OF AIR FLOW
4.  ALL VIEW DRAWN USING 3RD ANGLE

UNIT	J	K
48GC**04	33 3/8 [847]	18 5/8 [472]
48GC**05	33 3/8 [847]	14 7/8 [377]
48GC**06	41 3/8 [1051]	18 5/8 [472]

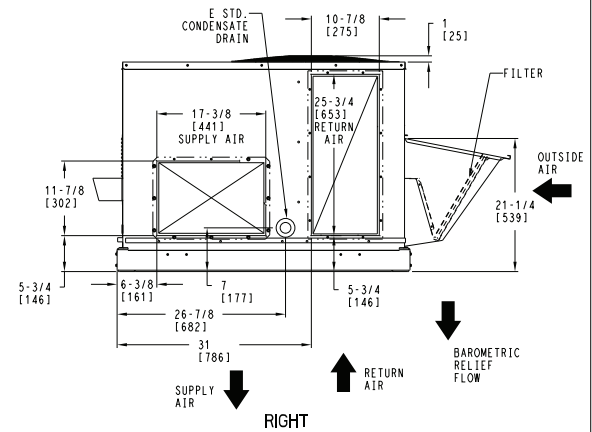
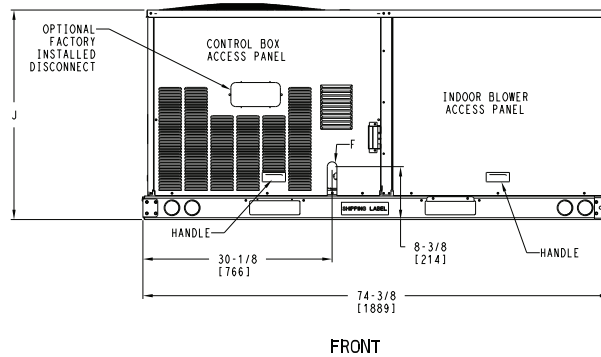
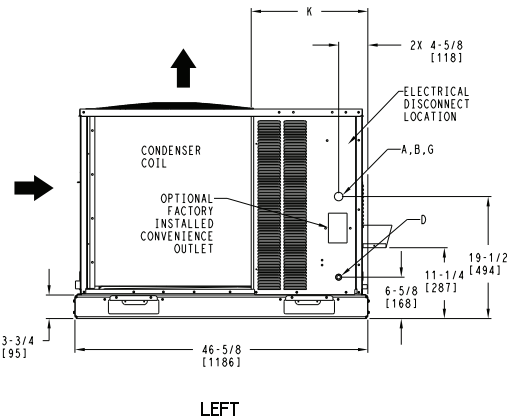
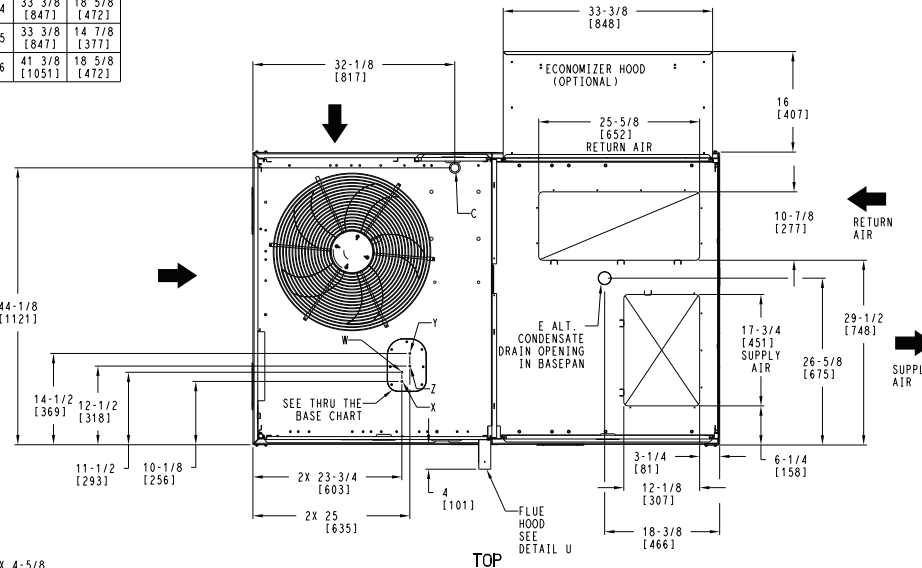
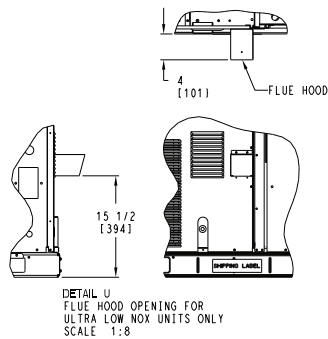


THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

CONNECTION SIZES		
A	1 3/8" [351] DIA	FIELD POWER SUPPLY HOLE
B	2" [50] DIA	POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA	GAUGE ACCESS PLUG
D	7/8" [22] DIA	FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
F	1/2"-14 NPT	GAS CONNECTION
G	2 1/2" [64] DIA	POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CHBTMPWRO08A00, 009A00			
W	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
X	1/2"	115V	7/8" [22.2]
Y	3/4"	24V	7/8" [22.2]
Z*	1/2" FPT	POWER	1-1/8" [28.6]
		GAS	1-1/8" [28.6]
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED			
* (008A00) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.			



ITC CLASSIFICATION U.S. ECCN:NSR	SHEET 1 OF 3	DATE 11/17/20	SUPERCEDES 04/02/19	48GC 04-06 SINGLE PACKAGE ELECTRICAL COOLING WITH GAS HEAT	48TC003099	REV E
-------------------------------------	-----------------	------------------	------------------------	---	------------	----------



48GC**04-06 Base Unit Dimensions (cont)

UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48GC**04	513	233	131	59	127	58	125	57	130	59	36 1/2 [927]	23 1/4 [591]	18 1/4 [464]
48GC**05	555	252	142	64	137	62	135	61	141	64	36 1/2 [927]	23 1/4 [591]	18 [457]
48GC**06	600	272	161	73	151	68	140	64	149	68	36 [914]	22 1/2 [572]	19 3/8 [492]

*- STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTINS AND ACCESSORIES REFER TO THE PRODUCT DATA CATALOG.

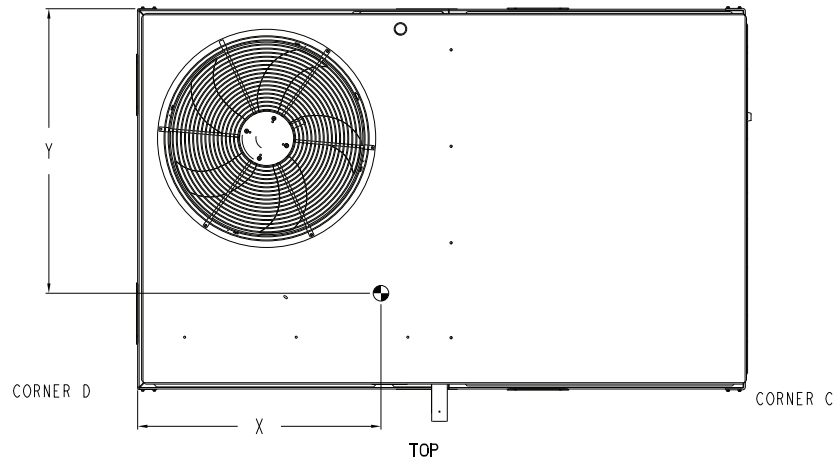
THIS TABLE IS FOR "ULTRA LOW NOX" UNITS ONLY

UNIT	STD. UNIT WEIGHT **		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48GC04-04	543	247	139	63	133	60	133	60	139	63	36 3/8 [924]	23 3/8 [594]	18 [457]
48GC04-05	585	266	149	68	143	65	143	65	149	68	36 3/8 [924]	23 3/8 [594]	18 [457]
48GC04-06	630	286	168	76	157	71	147	69	158	72	35 7/8 [911]	22 5/8 [575]	19 1/2 [489]

** - STANDARD UNIT WEIGHT IS WITHOUT PACKAGING.
FOR OTHER OPTINS AND ACCESSORIES REFER TO THE PRODUCT DATA CATALOG.

CORNER A

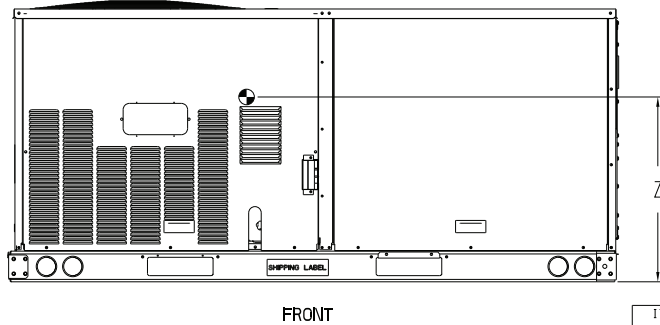
CORNER B



CORNER D

CORNER C

TOP

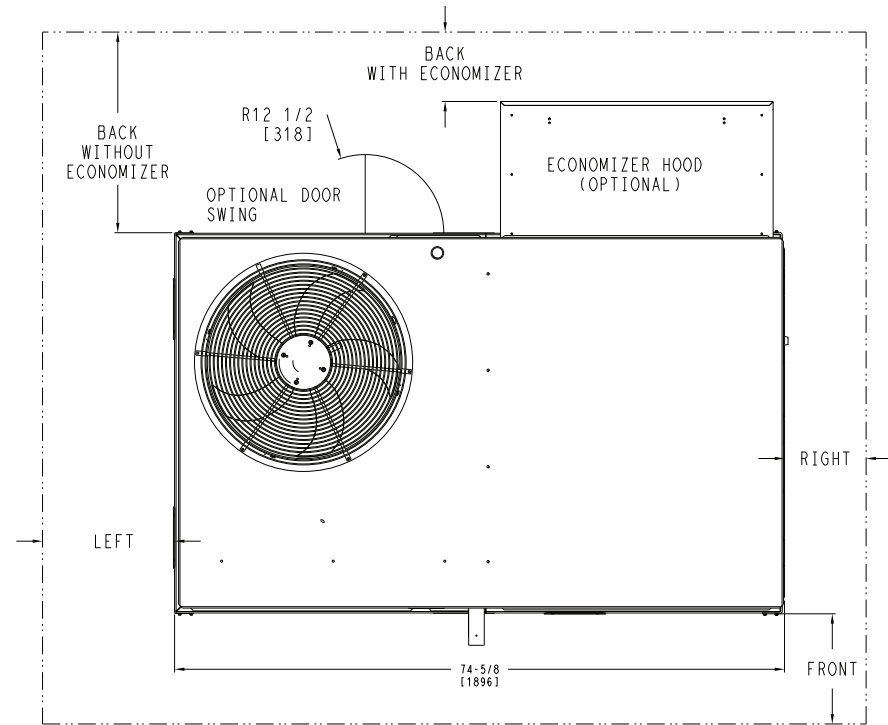


FRONT



THIS DOCUMENT IS THE PROPERTY OF CARRIER CORPORATION AND IS DELIVERED UPON THE EXPRESS CONDITION THAT THE CONTENTS WILL NOT BE DISCLOSED OR USED WITHOUT CARRIER CORPORATION'S WRITTEN CONSENT.

SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.



NOTES:

1. FOR ALL MINIMUM CLEARANCES LOCAL CODES OR JURISDICTIONS MAY PREVAIL.

SURFACE	CLEARANCE		OPERATING CLEARANCE
	SERVICE WITH: CONDUCTIVE BARRIER	SERVICE WITH: NONCONDUCTIVE BARRIER	
FRONT	48 [1219mm]	36 [914mm]	18 [457mm]
LEFT	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/O HOOD	48 [1219mm]	42 [1067mm]	18 [457mm]
BACK W/HOOD	36 [914mm]	36 [914mm]	18 [457mm]
RIGHT	36 [914mm]	36 [914mm]	18 [457mm]
TOP	72 [1829mm]	72 [1829mm]	72 [1829mm]

ITC CLASSIFICATION
U.S. ECCN:NSR

SHEET
2 OF 3

DATE
11/17/20

SUPERCEDES
04/02/19

48GC 04-06 SINGLE PACKAGE ELECTRICAL
COOLING WITH GAS HEAT

48TC003099

REV
E

48GC**04-06 Base Unit Dimensions (cont)

