



- NO EXCEPTIONS TAKEN
- MAKE CORRECTIONS NOTED
- AMEND & RE-SUBMIT

- SUBMIT SPECIFIED ITEM
- REJECTED-SEE REMARKS
- SEE COMMENTS BELOW

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF THE WORK WITH THAT OF OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

**Stephen P. Doel**  
SIGNATURE

**3/12/14**  
REVIEW DATE

**Project: Maine Wharf**

**Submittal: HVAC Equipment**

**Comments: NONE**



## **SUBMITTAL**

**Project**

ATLANTIC MAINE WHARF REVISED 04 06 14

**Date**

Thursday, March 06, 2014

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Prepared By:

03/06/2014  
10:48AM

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**5 TON**

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
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**5 TON**

**Tag Cover Sheet  
Unit Report  
Certified Drawing  
Performance Report  
Unit Feature Sheet  
Spec Sheet**

## Unit Report For 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

### Unit Parameters

Unit Model:.....**48HCEA06A2A5-0F0A0**  
 Unit Size:.....**06 (5 Tons)**  
 Volts-Phase-Hertz:.....**208-3-60**  
 Heating Type:.....**Gas**  
 Duct Cfg:.....**Vertical Supply / Vertical Return**  
 Medium Heat  
 Single stage cooling models

### Dimensions (ft. in.) & Weight (lb.) \*\*\*

Unit Length:.....**6' 2.375"**  
 Unit Width:.....**3' 10.75"**  
 Unit Height:.....**3' 5.375"**  
 \*\*\* Total Operating Weight:.....**784 lb**

\*\*\* Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

### Lines and Filters

Gas Line Size:.....**1/2**  
 Condensate Drain Line Size:.....**3/4**  
 Return Air Filter Type:.....**Throwaway**  
 Return Air Filter Quantity:.....**4**  
 Return Air Filter Size:.....**16 x 16 x 2**

### Unit Configuration

Medium Static Option - Belt Drive  
 Al/Cu - Al/Cu  
 Base Electromechanical Controls  
 Enthalpy Economizer w/ Barometric Relief  
 Standard Packaging

### Warranty Information

1-Year parts  
 5-Year compressor parts  
 10-Year heat exchanger - Aluminized

No optional warranties were selected.

**NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.**

### Ordering Information

Part Number	Description	Quantity
48HCEA06A2A5-0F0A0	Rooftop Unit	2
	Base Unit	
	Medium Static Option - Belt Drive	
	Electromechanical control, enthalpy economizer with barometric relief	
	None	
	<b>Accessories</b>	
CRRFCURB001A01	14-inch Tall Roof Curb	2

# Certified Drawing for 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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**NOTES:**

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW

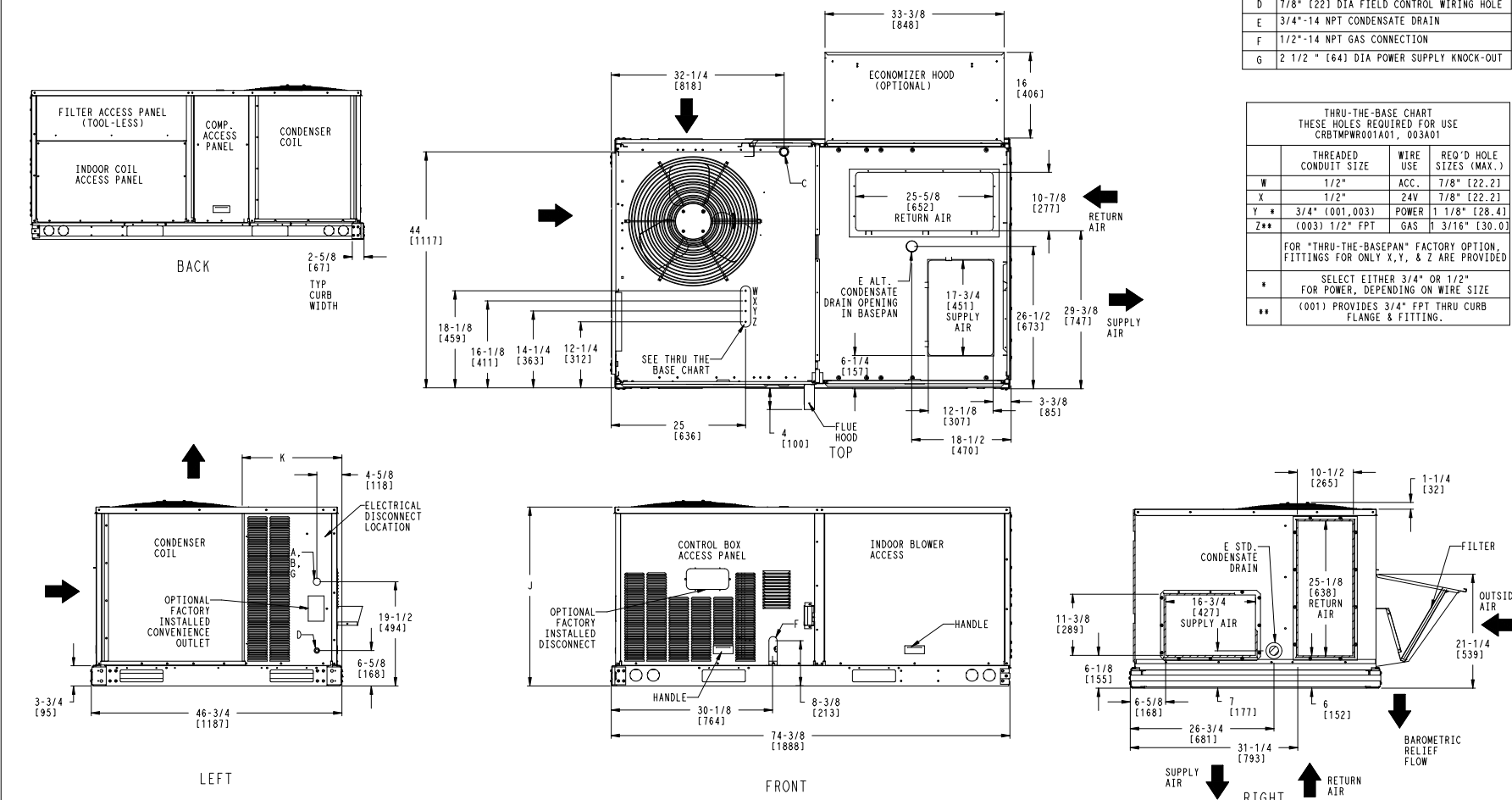
UNIT	J	K
48HC-A04	33 3/8 [847]	18 5/8 [472]
48HC-A05	41 3/8 [1051]	14 7/8 [377]
48HC-A06	41 3/8 [1051]	14 7/8 [377]



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CONNECTION SIZES	
A	1 3/8" [35] 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 CRBTMPW001A01_003A01			
	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y *	3/4" (001,003)	POWER	1 1/8" [28.4]
Z **	(003) 1/2" FPT	GAS	1 3/16" [30.0]

FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED

\* SELECT EITHER 3/4" OR 1/2" FOR POWER, DEPENDING ON WIRE SIZE

\*\* (001) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING.


SHEET	DATE	SUPERCEDES	DESCRIPTION	UNIT	REV
1 OF 2	01/14/10	10/12/09	48HC 04-06 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM502588	A

# Certified Drawing for 5 TON

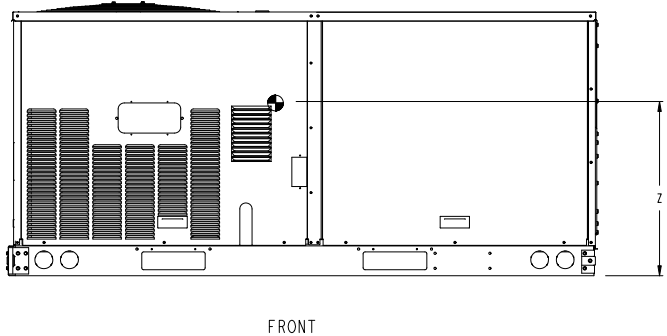
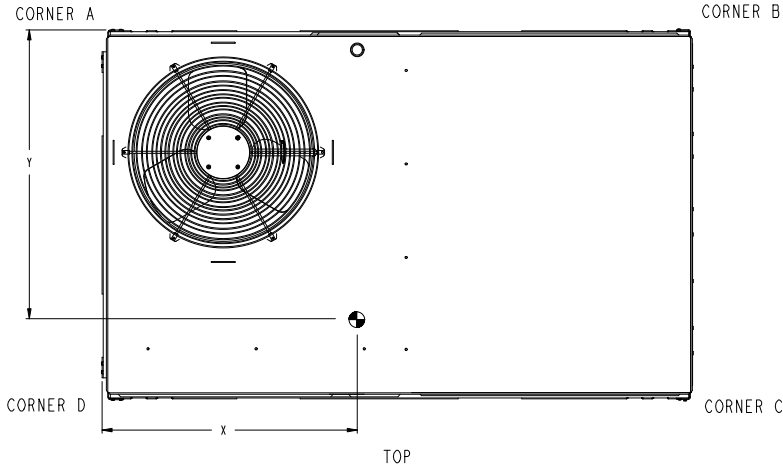
Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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UNIT	STD. UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		HEIGHT
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48HC-A04	505	229	124	56	117	53	128	58	136	62	36 1/8 [918]	24 3/8 [619]	19 [483]
48HC-A05	590	268	151	69	144	65	144	65	151	69	36 1/4 [921]	23 3/8 [594]	20 1/8 [511]
48HC-A06	600	271	156	71	145	66	144	65	155	70	35 7/8 [911]	23 1/4 [591]	19 1/2 [495]


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



SHEET 2 OF 2	DATE 01/14/10	SUPERCEDES 10/12/09	48HC 04-06 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM502588	REV A
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# Certified Drawing for 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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ROOF CURB ACCESSORY#	A	NOTES	CONNECTOR PKG ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRRFCURB001A01	14" [366]	1. ROOF CURB ACCESSORY SHIPPED DISASSEMBLED. 2. INSULATED PANELS 25/411 THK POLYURETHANE FOAM, 44.5/134# DENSITY. 3. DIMENSIONS IN PARENTHESIS IN MILLIMETERS. 4. ROOF CURB IS GAGE STEEL. 5. ATTACH DUCT WORK TO CURB (FLANGES OF DUCT REST ON CURB). 6. SERVICE CLEARANCE 4 FEET ON EACH SIDE. 7. DIRECTION OF AIR FLOW. 8. CONNECTOR PACKAGE CRRTMPWR001A01 IS FOR THROUGH THE CURB GASTYPE. 9. CONNECTOR PACKAGE CRRTMPWR003A01 IS FOR THROUGH THE BOTTOM TYPE GAS CONNECTIONS.	CRRTMPWR001A01	THRU THE CURB	3/4" [19] NPT	3/4" [19] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRRFCURB002A01	24" [610]		CRRTMPWR003A01	THRU THE BOTTOM	1/2" [12.7] NPT			

**VIEW "B" CORNER DETAIL**

**SECTION E-E SCALE 0.250**

**SEE VIEW "B"**

**CERTIFIED DRAWING**

DRAWING RELEASE LEVEL:	<b>PRODUCTION</b>	
THIS ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES	THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN IS PROPRIETARY TO CARRIER CORPORATION AND SHALL NOT BE USED OR DISCLOSED TO OTHERS IN WHOLE OR IN PART WITHOUT THE WRITTEN AUTHORIZATION OF CARRIER CORPORATION.
MATERIAL	1DEC ± - 2DEC ± - 3DEC ± - ANG ± -	
ENGINEERING REQUIREMENTS	T-005, Y-002	TITLE
WEIGHT	MMC 06/17/11	1041738
SURFACE FINISH	MFG PURCH. PURCH	ENGINEERING MANUFACTURING
		1041738
		SIZE
		D
		DRAWING NUMBER
		48TC400427
		SHEETS OF
		B
		NEXT DRAWING
		SCALE
		N/A
		DISTRIBUTION
		M/MC

A	OVERALL DIM 5738" WASS-778-18GA MATERIAL WA16GA, NAIL FIELDS SUPPLIED WAS WITH CURB	04/22/13	M/MC	-	-	1067898
REV	REVISION RECORD	DATE	BY	CHKD	APPD	EGNO.



## Performance Summary For 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

### Part Number: 48HCEA06A2A5-0F0A0

ARI SEER: ..... 15.20

#### Base Unit Dimensions

Unit Length: ..... 74.4 in  
 Unit Width: ..... 46.8 in  
 Unit Height: ..... 41.4 in

#### Operating Weight

Base Unit Weight: ..... 600 lb  
 Medium Heat: ..... 9 lb  
 Medium Static Option - Belt Drive: ..... 10 lb  
 Enthalpy Economizer w/ Barometric Relief: ..... 50 lb

#### Accessories

14-inch Tall Roof Curb: ..... 115 lb  
 Total Operating Weight: ..... 784 lb

#### Unit

Unit Voltage-Phase-Hertz: ..... 208-3-60  
 Air Discharge: ..... Vertical  
 Fan Drive Type: ..... Belt  
 Actual Airflow: ..... 2000 CFM  
 Site Altitude: ..... 0 ft

#### Cooling Performance

Condenser Entering Air DB: ..... 95.0 F  
 Evaporator Entering Air DB: ..... 80.0 F  
 Evaporator Entering Air WB: ..... 67.0 F  
 Entering Air Enthalpy: ..... 31.44 BTU/lb  
 Evaporator Leaving Air DB: ..... 57.8 F  
 Evaporator Leaving Air WB: ..... 57.5 F  
 Evaporator Leaving Air Enthalpy: ..... 24.72 BTU/lb  
 Gross Cooling Capacity: ..... 60.42 MBH  
 Gross Sensible Capacity: ..... 47.99 MBH  
 Compressor Power Input: ..... 3.96 kW  
 Coil Bypass Factor: ..... 0.198

#### Heating Performance

Heating Airflow: ..... 2000 CFM  
 Entering Air Temp: ..... 70.0 F  
 Leaving Air Temp: ..... 113.1 F  
 Gas Input Capacity: ..... 82.0 / 115.0 MBH  
 Gas Heating Capacity: ..... 93.00 MBH  
 Temperature Rise: ..... 43.1 F  
 NOTE: ..... Second Stage

#### Supply Fan

External Static Pressure: ..... 0.70 in wg  
 Options / Accessories Static Pressure  
     EconoMiSerIV / EconoMiSer2: ..... 0.12 in wg  
 Total External Static: ..... 0.82 in wg  
 Fan RPM: ..... 1329  
 Fan Power: ..... 1.40 BHP  
 NOTE: ..... Selected IFM RPM Range: 1035 - 1466

#### Electrical Data (Before July 30, 2012)

Minimum Voltage: ..... 187  
 Maximum Voltage: ..... 253  
 Compressor #1 RLA: ..... 15.9

## Performance Summary For 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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Compressor #1 LRA:.....	110
Outdoor Fan Motor Qty:.....	1
Outdoor Fan FLA (ea):.....	1.4
Indoor Fan Motor Type:.....	MED
Indoor Fan Motor FLA:.....	5.2
Combustion Fan Motor FLA (ea):.....	0.48
Power Supply MCA:.....	26.5
Power Supply MOCP (Fuse or HACR):.....	40
Min. Unit Disconnect FLA:.....	26
Min. Unit Disconnect LRA:.....	143
Electrical Convenience Outlet:.....	None

**Electrical Data (July 30, 2012 and Beyond)**

Indoor Fan Motor FLA:.....	6.9
Power Supply MCA:.....	29
Power Supply MOCP:.....	40
Disconnect Size FLA:.....	28
Disconnect Size LRA:.....	170

**July 30th and beyond units can be identified by serial number 3112XXXXXXXXXX and higher**

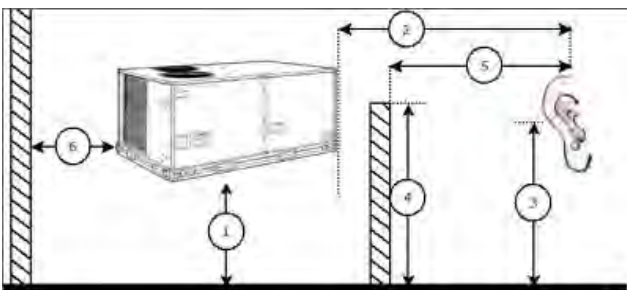
**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

**Acoustics**

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	88.3	87.7	87.5
125 Hz	83.5	80.5	82.5
250 Hz	76.6	67.7	76.1
500 Hz	72.3	64.7	73.6
1000 Hz	68.7	64.0	71.3
2000 Hz	63.2	58.2	67.1
4000 Hz	65.1	54.1	64.1
8000 Hz	60.7	47.0	60.0
A-Weighted	75.6	70.1	77.0

**Advanced Acoustics**



**Advanced Acoustics Parameters**

1. Unit height above ground:.....	30.0 ft
2. Horizontal distance from unit to receiver:.....	50.0 ft
3. Receiver height above ground:.....	5.7 ft
4. Height of obstruction:.....	0.0 ft
5. Horizontal distance from obstruction to receiver:.....	0.0 ft
6. Horizontal distance from unit to obstruction:.....	0.0 ft

## Performance Summary For 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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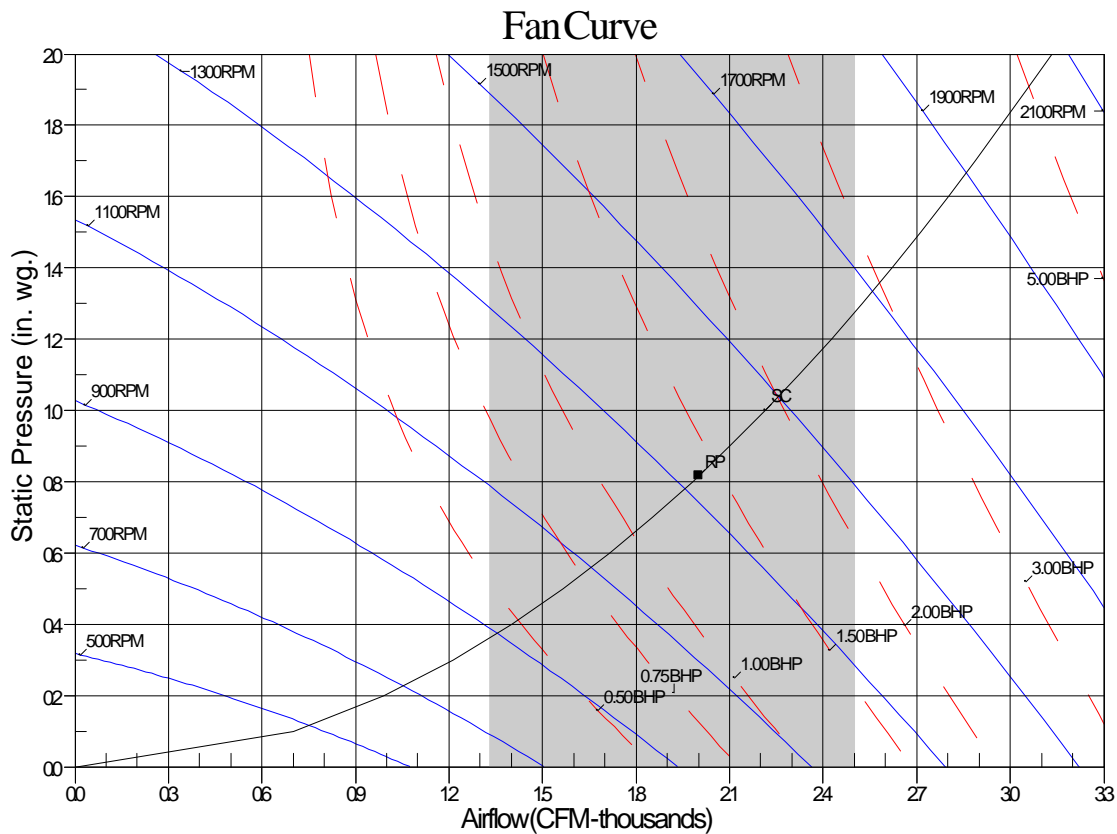
### Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	87.5	82.5	76.1	73.6	71.3	67.1	64.1	60.0	89.2 Lw
B	61.3	66.4	67.5	70.4	71.3	68.3	65.1	58.9	76.7 LwA
C	55.1	50.1	43.7	41.2	38.9	34.7	31.7	27.6	56.8 Lp
D	28.9	34.0	35.1	38.0	38.9	35.9	32.7	26.5	44.3 LpA

#### Legend

- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.



RPM=1329 BHP=1.40 Maximum RPM=1585 Maximum BHP=2.90  
 Note: Please contact application engineering for selections outside the shaded region.  
 SC-System Curve RP-Rated Point

# Unit Feature Sheet for 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

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10:48AM



## WeatherMaster® – 48HC

PACKAGED ROOFTOP GAS HEATING/ELECTRIC COOLING UNITS  
3, 4, 5, 6, 7.5, 8.5, 10 and 12.5 TONS



Optional Louvered Hail Guard Shown



### WEATHERMASTER SERIES

WeatherMaster (48HC) units are high efficiency, single packaged gas heating, electric cooling units that are pre-wired and charged with Puron® (R-410) refrigerant. They are factory tested in both heating and cooling modes, and rated in accordance with AHRI Standards 210/240 (04-06 sizes) and 340/360 (07-14 sizes). WeatherMaster units are designed in accordance with UL Standard 1995, and listed by UL or ETL.



- or -



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).

### Certified to ISO 9001

For a complete list of options and accessories refer to the product data catalog.

### STANDARD FEATURES INCLUDE:

- Puron®(R-410A) HFC refrigerant charged
- ASHRAE 90.1 compliant and Energy Star qualified
- Scroll compressors with internal line break and overload protection
- Single-stage cooling capacity control on all 04-07 models
- Two-stage cooling capacity control on 08-14 models
- SEERs up to 15.6 and EERs up to 13.0
- IEEERs up to 13.0 with single speed indoor fan motor
- IEEERs up to 13.9 with 2-speed/VFD indoor fan motor
- TXV metering device on each independent circuit
- 04-06 models use X-13 (5 Speed/Torque) Direct Drive Motor standard
- Belt drive fan and pulley combinations - all three phase models
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE Standard 62, sloping design, side or center drain
- Standard cooling operation to 125°F (52°C) to 35°F (2°C)
- Units use high performance copper tube / aluminum fin condenser and evaporator coils
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation burner control logic and energy saving indoor fan motor delay
- Low NOx models that meet California Air Quality Management
- Induced draft gas heat combustion design
- Redundant gas valves with up to two stages of heating
- Low pressure and high pressure switch protected

### MAINTENANCE FEATURES:

- Access panels with easy grip handles
- Innovative easy starting, no-strip screws on unit access panels
- Two-inch disposable return air filters and Tool-less filter access
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation, burner control logic and energy saving indoor fan motor delay

### INSTALLATION FEATURES:

- Thru-the-bottom power entry capability
- Single point gas and electric connections
- Full perimeter base rail with built-in rigging adapters and fork slots
- Convertible from vertical to horizontal airflow for slab mounting

### STANDARD PARTS WARRANTY:

- 10-year heat exchanger – 15-year stainless steel option
- 5-year compressor
- 1-year parts
- Many optional upgrades also available

### OPTIONS INCLUDE BUT ARE NOT LIMITED TO:

- PremierLink™ and Multi Protocol Direct Digital Controls (DDC)
- ComfortLink controls
- Supply and Return Air Smoke Detectors, high static motors
- Louvered condenser coil guards and coil coating options
- Economizer, disconnect and convenience outlet options
- Stainless Steel heat exchanger (standard with Low NOx)
- Hinged access panels
- Humidi-MiZer adaptive dehumidification system
- Foil faced insulation throughout entire cabinet
- Low ambient cooling operation controls
- HACR circuit breaker

## Spec Sheet for 5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

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## 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
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## 7.5 TON

**Tag Cover Sheet  
Unit Report  
Certified Drawing  
Performance Report  
Unit Feature Sheet  
Spec Sheet**







# Certified Drawing for 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48HC-A07	765	347	165.3	75	152.7	69.3	214.7	97.4	232.3	105.4	42 3/8 [1076]	34 3/4 [882.6]	19 7/8 [505]
48HC-D08	925	419.5	204.1	92.6	190.9	86.6	256.1	116.2	273.9	124.2	42 5/8 [1082]	34 1/8 [867]	22 7/8 [581]
48HC-D09	925	419.5	204.1	92.6	190.9	86.6	256.1	116.2	273.9	124.2	42 5/8 [1082]	34 1/8 [867]	22 7/8 [581]

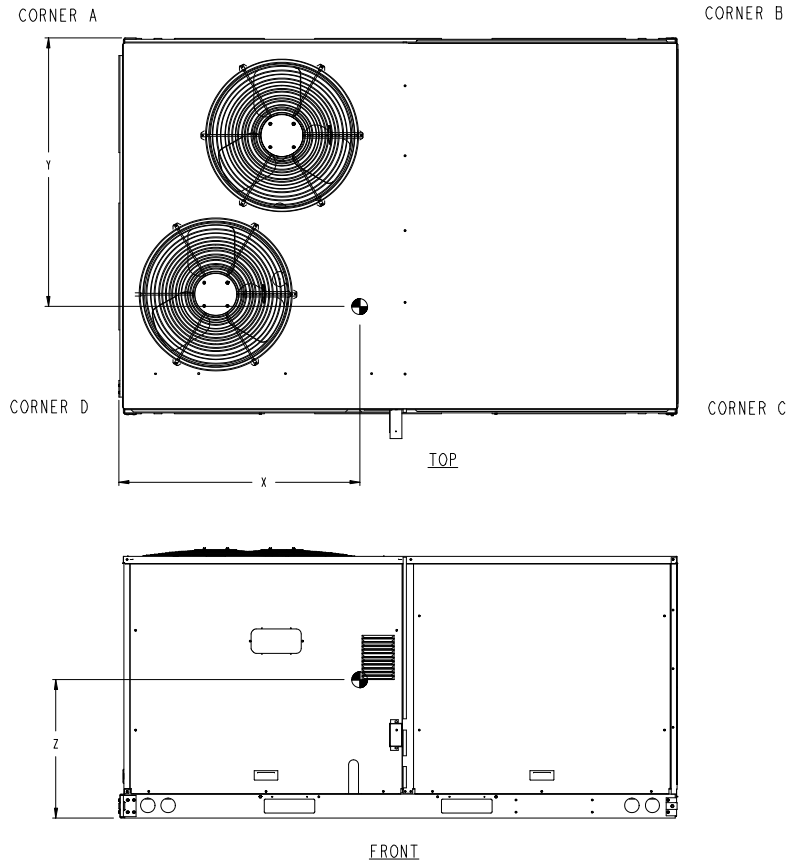


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SHEET 2 OF 2	DATE 10-05-10	SUPERCEDES 10-16-09	48HC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM502708	REV A
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# Certified Drawing for 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

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ROOF CURB ACCESSORY#	A	NOTES	CONNECTOR PKG. ACC.	GAS CONNECTION TYPE	GAS FITTING	POWER WIRING FITTING	CONTROL WIRING FITTING	ACCESSORY CONVENIENCE OUTLET WIRING CONNECTOR
CRRFCURB003A01	14" [356]	1. ROOF CURB ACCESSORY SHIPPED DISASSEMBLED. 2. INSULATED PANELS 25/4" THK POLYURETHANE FOAM, 44.5/1.34# DENSITY. 3. DIMENSIONS IN PARENTHESSES IN MILLIMETERS. 4. ROOF CURB IS GAGE STEEL. 5. ATTACH DUCT WORK TO CURB (FLANGES OF DUCT REST ON CURB). 6. SERVICE CLEARANCE 4 FEET ON EACH SIDE. 7. DUCT LOCATION OF AIR FLOW. 8. CONNECTOR PACKAGE CRRBTMPWR002A01 IS FOR THRU-THE-CURB GASTYPE PACKAGE CRRBTMPWR004A01 IS FOR THRU-THE-BOTTOM TYPE GAS CONNECTIONS.	CRRBTMPWR002A01	THRU-THE-CURB	3/4" [19] NPT	1 1/4" [31.7] NPT	1/2" [12.7] NPT	1/2" [12.7] NPT
CRRFCURB004A01	24" [610]		CRRBTMPWR004A01	THRU-THE-BOTTOM				

SECTION THRU SIDE

CERTIFIED DRAWING

VIEW 'B'  
CORNER DETAIL

C	6 6/14" WAS 6 7/16" 4 2" WAS 4 2 13/16" 18 GA WAS 16 GA 15 13/16" WAS 15 15/16" NAIL FIELDS SUPPLIED WAS WITH CURB	4/22/13	MVC	-	-	1067898
REV	REVISION RECORD	DATE	BY	CHKD	APPD	EGNO.

DRAWING RELEASE LEVEL:	PRODUCTION				
THRU ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES	1 DEC ± .	2 DEC ± .	3 DEC ± .	ANG ± .
MATERIAL	AUTHORIZATION NUMBER	TITLE			
-	1029120	CURB ASY, ROOF			
ENGINEERING REQUIREMENTS	ENGINEERING	MANUFACTURING	SIZE	DRAWING NUMBER	REV
T-005, Y-002	MVC	12/16/09	D	50-H406012	C
WEIGHT	DRAFTER	CHECKER	SHEETS OF	DISTRIBUTION	
-	-	-	5	-	
SURFACE FINISH	MFG PURCH.	MODEL (INTERNAL USE ONLY)	NEXT DRAWING	SCALE	DISTRIBUTION
-	PURCH	-	-	N/A	-

## Performance Summary For 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
10:48AM

### Part Number:48HCED08A2A5-0F0A0

ARI EER:.....12.00  
IEER:.....13.0

#### Base Unit Dimensions

Unit Length:.....88.1 in  
Unit Width:.....59.5 in  
Unit Height:.....49.4 in

#### Operating Weight

Base Unit Weight:.....925 lb  
Medium Heat:.....15 lb  
Medium Static Option - Belt Drive:.....15 lb  
Enthalpy Economizer w/ Barometric Relief:.....74 lb

#### Accessories

14-inch Tall Roof Curb:.....143 lb  
  
Total Operating Weight:.....1172 lb

#### Unit

Unit Voltage-Phase-Hertz:.....208-3-60  
Air Discharge:.....Vertical  
Fan Drive Type:.....Belt  
Actual Airflow:.....3000 CFM  
Site Altitude:.....0 ft

#### Cooling Performance

Condenser Entering Air DB:.....95.0 F  
Evaporator Entering Air DB:.....80.0 F  
Evaporator Entering Air WB:.....67.0 F  
Entering Air Enthalpy:.....31.44 BTU/lb  
Evaporator Leaving Air DB:.....57.7 F  
Evaporator Leaving Air WB:.....57.2 F  
Evaporator Leaving Air Enthalpy:.....24.53 BTU/lb  
Gross Cooling Capacity:.....93.30 MBH  
Gross Sensible Capacity:.....72.19 MBH  
Compressor Power Input:.....6.24 kW  
Coil Bypass Factor:.....0.198

#### Heating Performance

Heating Airflow:.....3000 CFM  
Entering Air Temp:.....70.0 F  
Leaving Air Temp:.....115.7 F  
Gas Input Capacity:.....120.0 / 180.0 MBH  
Gas Heating Capacity:.....148.00 MBH  
Temperature Rise:.....45.7 F  
NOTE:.....Second Stage

#### Supply Fan

External Static Pressure:.....0.70 in wg  
Options / Accessories Static Pressure  
EconoMiSerIV / EconoMiSer2:.....0.11 in wg  
Total External Static:.....0.81 in wg  
Fan RPM:.....823  
Fan Power:.....1.37 BHP  
NOTE:.....Selected IFM RPM Range: 690 - 936

#### Electrical Data (Before July 30, 2012)

Minimum Voltage:.....187  
Maximum Voltage:.....253

## Performance Summary For 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

Compressor #1 RLA:	13.6
Compressor #1 LRA:	83
Compressor #2 RLA:	13.6
Compressor #2 LRA:	83
Outdoor Fan Motor Qty:	2
Outdoor Fan FLA (ea):	1.5
Indoor Fan Motor Type:	MED
Indoor Fan Motor FLA:	5.2
Combustion Fan Motor FLA (ea):	0.48
Power Supply MCA:	38.8
Power Supply MOCP (Fuse or HACR):	50
Min. Unit Disconnect FLA:	41
Min. Unit Disconnect LRA:	202
Electrical Convenience Outlet:	None

**Electrical Data (July 30, 2012 and Beyond)**

Indoor Fan Motor FLA:	6.9
Power Supply MCA:	41
Power Supply MOCP:	50
Disconnect Size FLA:	43
Disconnect Size LRA:	229

July 30th and beyond units can be identified by serial number 3112XXXXXXXXXX and higher

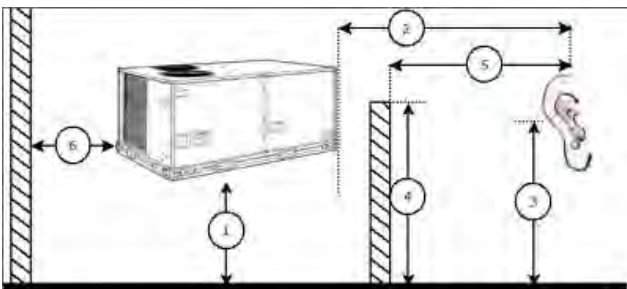
**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

**Acoustics**

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	97.0	94.2	90.6
125 Hz	91.1	84.7	84.3
250 Hz	75.9	69.2	80.2
500 Hz	69.5	64.5	79.3
1000 Hz	65.0	61.9	77.1
2000 Hz	63.2	57.1	72.2
4000 Hz	65.9	56.6	67.4
8000 Hz	66.8	55.9	63.7
A-Weighted	78.3	72.8	82.0

**Advanced Acoustics**



**Advanced Acoustics Parameters**

1. Unit height above ground:	30.0 ft
2. Horizontal distance from unit to receiver:	50.0 ft
3. Receiver height above ground:	5.7 ft
4. Height of obstruction:	0.0 ft

## Performance Summary For 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

- 5. Horizontal distance from obstruction to receiver:.....**0.0** ft
- 6. Horizontal distance from unit to obstruction:.....**0.0** ft

### Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	90.6	84.3	80.2	79.3	77.1	72.2	67.4	63.7	92.3 Lw
B	64.4	68.2	71.6	76.1	77.1	73.4	68.4	62.6	81.7 LwA
C	58.2	51.9	47.8	46.9	44.7	39.8	35.0	31.3	59.9 Lp
D	32.0	35.8	39.2	43.7	44.7	41.0	36.0	30.2	49.3 LpA

#### Legend

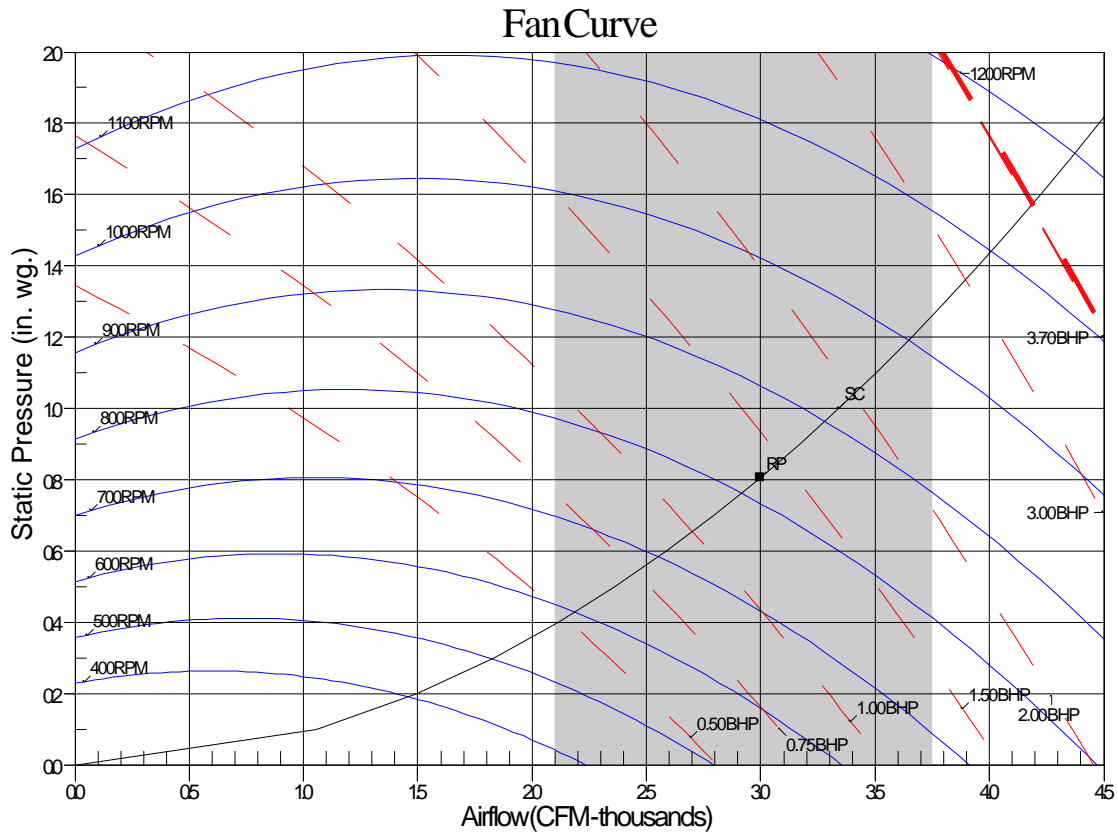
- A Sound Power Levels at Unit's Acoustic Center, Lw
- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

# Performance Summary For 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
10:48AM



RPM=823 BHP=1.37 Maximum RPM=1084 Maximum BHP=3.70  
Note: Please contact application engineering for selections outside the shaded region.  
SC-System Curve RP-Rated Point

# Unit Feature Sheet for 7.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM



## WeatherMaster® – 48HC

PACKAGED ROOFTOP GAS HEATING/ELECTRIC COOLING UNITS  
 3, 4, 5, 6, 7.5, 8.5, 10 and 12.5 TONS



Optional Louvered Hail Guard Shown



### WEATHERMASTER SERIES

WeatherMaster (48HC) units are high efficiency, single packaged gas heating, electric cooling units that are pre-wired and charged with Puron® (R-410) refrigerant. They are factory tested in both heating and cooling modes, and rated in accordance with AHRI Standards 210/240 (04-06 sizes) and 340/360 (07-14 sizes). WeatherMaster units are designed in accordance with UL Standard 1995, and listed by UL or ETL.



- or -



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).

### Certified to ISO 9001

For a complete list of options and accessories refer to the product data catalog.

### STANDARD FEATURES INCLUDE:

- Puron®(R-410A) HFC refrigerant charged
- ASHRAE 90.1 compliant and Energy Star qualified
- Scroll compressors with internal line break and overload protection
- Single-stage cooling capacity control on all 04-07 models
- Two-stage cooling capacity control on 08-14 models
- SEERs up to 15.6 and EERs up to 13.0
- IEEERs up to 13.0 with single speed indoor fan motor
- IEEERs up to 13.9 with 2-speed/VFD indoor fan motor
- TXV metering device on each independent circuit
- 04-06 models use X-13 (5 Speed/Torque) Direct Drive Motor standard
- Belt drive fan and pulley combinations - all three phase models
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE Standard 62, sloping design, side or center drain
- Standard cooling operation to 125°F (52°C) to 35°F (2°C)
- Units use high performance copper tube / aluminum fin condenser and evaporator coils
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation burner control logic and energy saving indoor fan motor delay
- Low NOx models that meet California Air Quality Management
- Induced draft gas heat combustion design
- Redundant gas valves with up to two stages of heating
- Low pressure and high pressure switch protected

### MAINTENANCE FEATURES:

- Access panels with easy grip handles
- Innovative easy starting, no-strip screws on unit access panels
- Two-inch disposable return air filters and Tool-less filter access
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation, burner control logic and energy saving indoor fan motor delay

### INSTALLATION FEATURES:

- Thru-the-bottom power entry capability
- Single point gas and electric connections
- Full perimeter base rail with built-in rigging adapters and fork slots
- Convertible from vertical to horizontal airflow for slab mounting

### STANDARD PARTS WARRANTY:

- 10-year heat exchanger – 15-year stainless steel option
- 5-year compressor
- 1-year parts
- Many optional upgrades also available

### OPTIONS INCLUDE BUT ARE NOT LIMITED TO:

- PremierLink™ and Multi Protocol Direct Digital Controls (DDC)
- ComfortLink controls
- Supply and Return Air Smoke Detectors, high static motors
- Louvered condenser coil guards and coil coating options
- Economizer, disconnect and convenience outlet options
- Stainless Steel heat exchanger (standard with Low NOx)
- Hinged access panels
- Humidi-MiZer adaptive dehumidification system
- Foil faced insulation throughout entire cabinet
- Low ambient cooling operation controls
- HACR circuit breaker

**Spec Sheet for 7.5 TON**

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
10:48AM



**12.5 TON**

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
10:48AM

**12.5 TON**

**Tag Cover Sheet  
Unit Report  
Certified Drawing  
Performance Report  
Unit Feature Sheet  
Spec Sheet**

## Unit Report For 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

### Unit Parameters

Unit Model:.....**48HCFD14ACA5-0F0A0**  
 Unit Size:.....**14 (12.5 Tons)**  
 Volts-Phase-Hertz:.....**208-3-60**  
 Heating Type:.....**Gas**  
 Duct Cfg:.....**Vertical Supply / Vertical Return**  
 High Heat  
 Two stage cooling models

### Dimensions (ft. in.) & Weight (lb.) \*\*\*

Unit Length:.....**9' 7.875"**  
 Unit Width:.....**5' 3.375"**  
 Unit Height:.....**4' 9.375"**  
 \*\*\* Total Operating Weight:.....**1800 lb**

\*\*\* Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

### Lines and Filters

Gas Line Size:.....**3/4**  
 Condensate Drain Line Size:.....**3/4**  
 Return Air Filter Type:.....**Throwaway**  
 Return Air Filter Quantity:.....**6**  
 Return Air Filter Size:.....**18 x 24 x 2**

### Unit Configuration

High Static Option with High Efficiency Motor  
 Al/Cu - Al/Cu  
 Base Electromechanical Controls  
 Enthalpy Economizer w/ Barometric Relief  
 Standard Packaging

### Warranty Information

1-Year parts  
 5-Year compressor parts  
 10-Year heat exchanger - Aluminized

No optional warranties were selected.

**NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.**

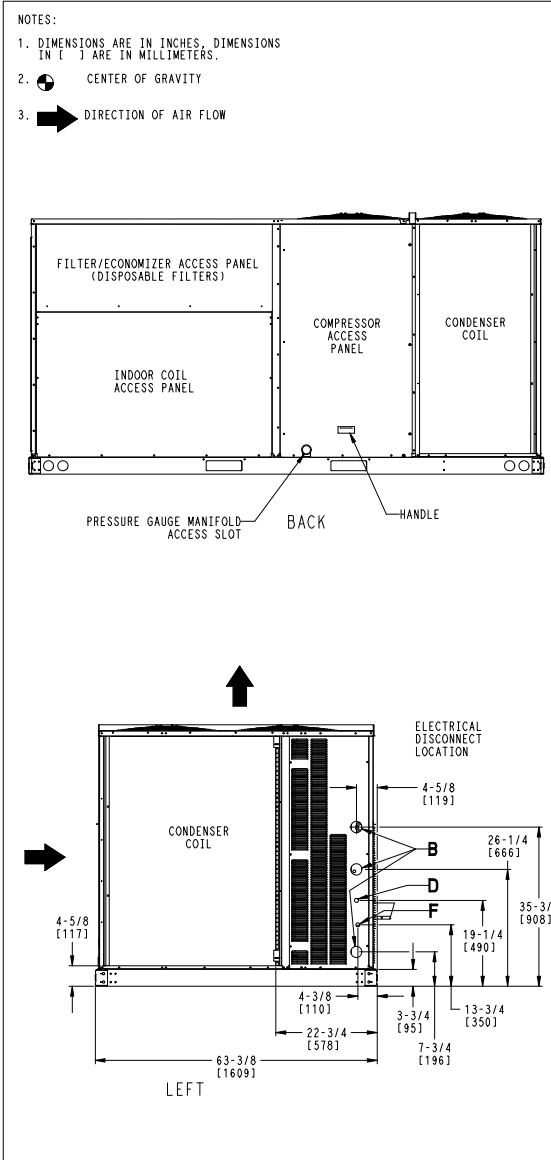
### Ordering Information

Part Number	Description	Quantity
48HCFD14ACA5-0F0A0	Rooftop Unit	2
	Base Unit	
	High Static Option with High Efficiency Motor	
	Electromechanical control, enthalpy economizer with barometric relief	
	None	
	<b>Accessories</b>	
CRRFCURB074A00	14-inch Roof Curb	2

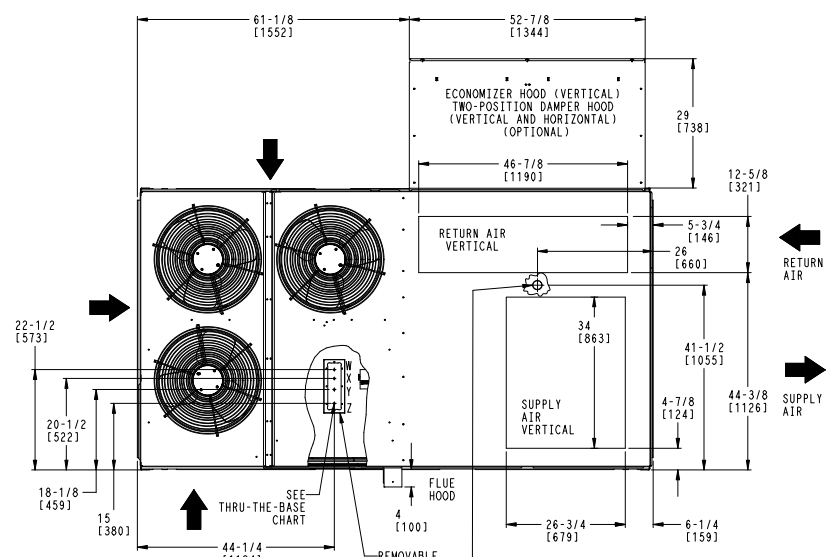
# Certified Drawing for 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM



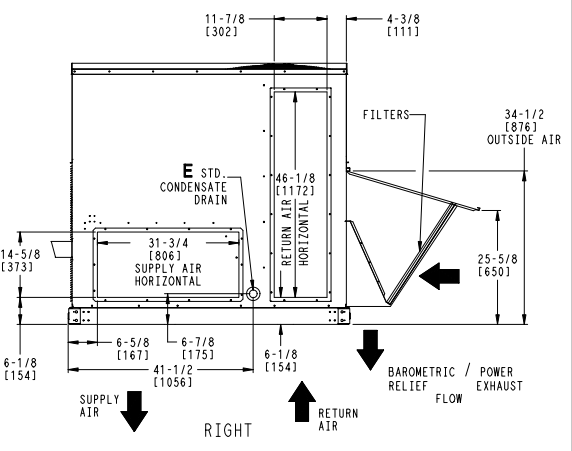
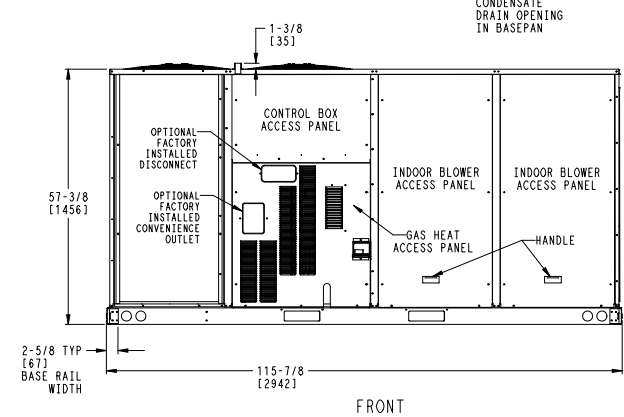
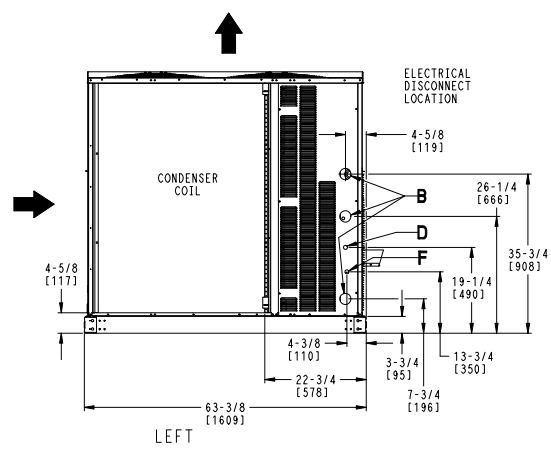
UNITED TECHNOLOGIES SYRACUSE, NY CARRIER P.O. BOX 4808 13221  
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CONNECTION SIZES	
B	2 1/2" [64] DIA POWER SUPPLY HOLE
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	7/8" [22] DIA FIELD CONVENIENCE OUTLET HOLE

THRU-THE-BASE CHART THESE HOLES REQUIRED FOR USE CRBTMPWR005A00, 006A00, 007A00				
ACCESSORY NO.	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)	
005	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
	Y 1 1/4"	POWER	1 1/2" [38.1]	
006	Z 3/4" PIPE	GAS	1 3/4" [44.5]	
	W 1/2"	ACC.	7/8" [22.2]	
	X 1/2"	24V	7/8" [22.2]	
007	Y 1 1/2"	POWER	2" [50.8]	
	Z 3/4" PIPE	GAS	1 3/4" [44.5]	
	W 1/2"	ACC.	7/8" [22.2]	
X 1/2"	24V	7/8" [22.2]		
Y 2"	POWER	2 1/2" [63.5]		
Z 3/4" PIPE	GAS	1 3/4" [44.5]		

FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR X & Y ARE PROVIDED AS SPECIFIED ON "006".



DATE 08/23/10	SUPERCEDES -	48HCD 14 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50TM501227	REV A
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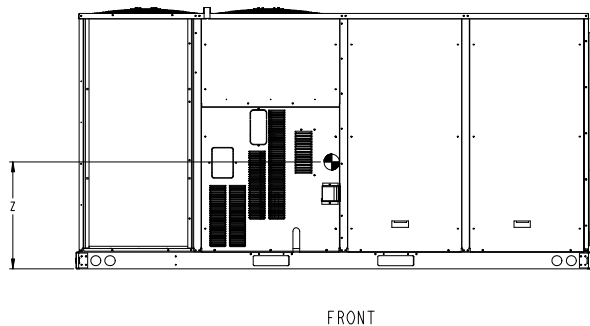
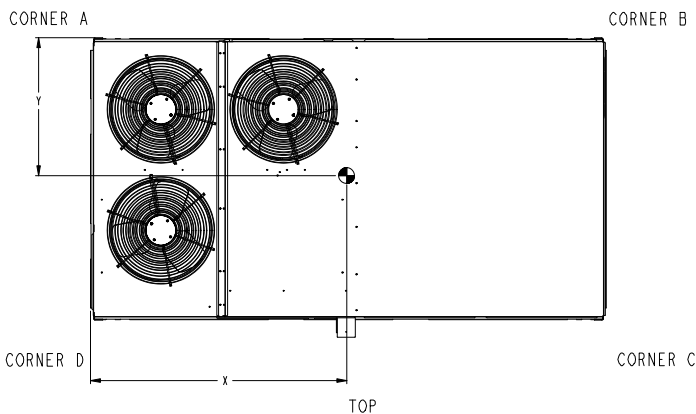
# Certified Drawing for 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.					
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z			
48HCD 14	1430	649	342	155	377	171	372	169	338	153	60 3/4	[1543]	31 1/2	[800]	20 5/8	[524]

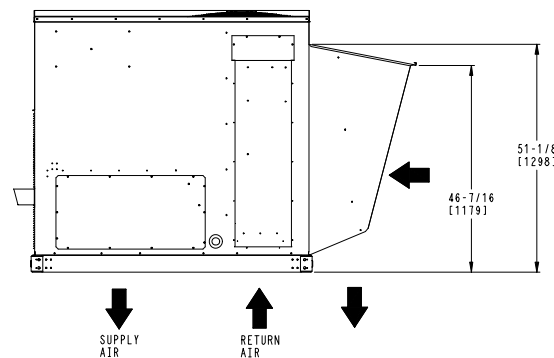
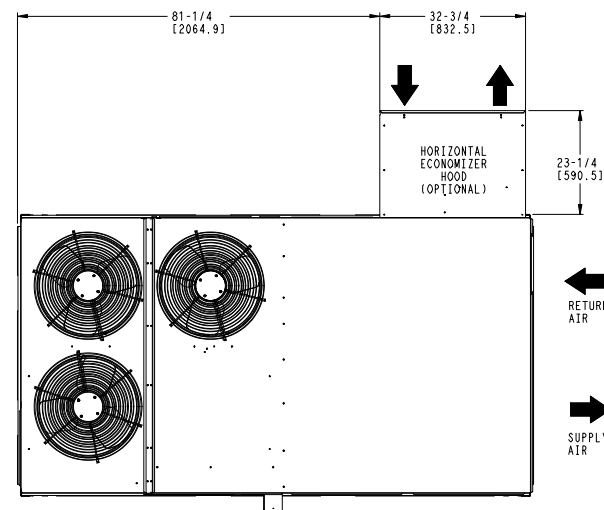
STANDARD UNIT WEIGHT IS WITH LOW HEAT & WITHOUT PACKAGING.  
 FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



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## HORIZONTAL ECONOMIZER

DATE	SUPERCEDES	DESCRIPTION	REV
06/15/11	-	48HCD 14 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	C
		50TM501227	

# Certified Drawing for 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

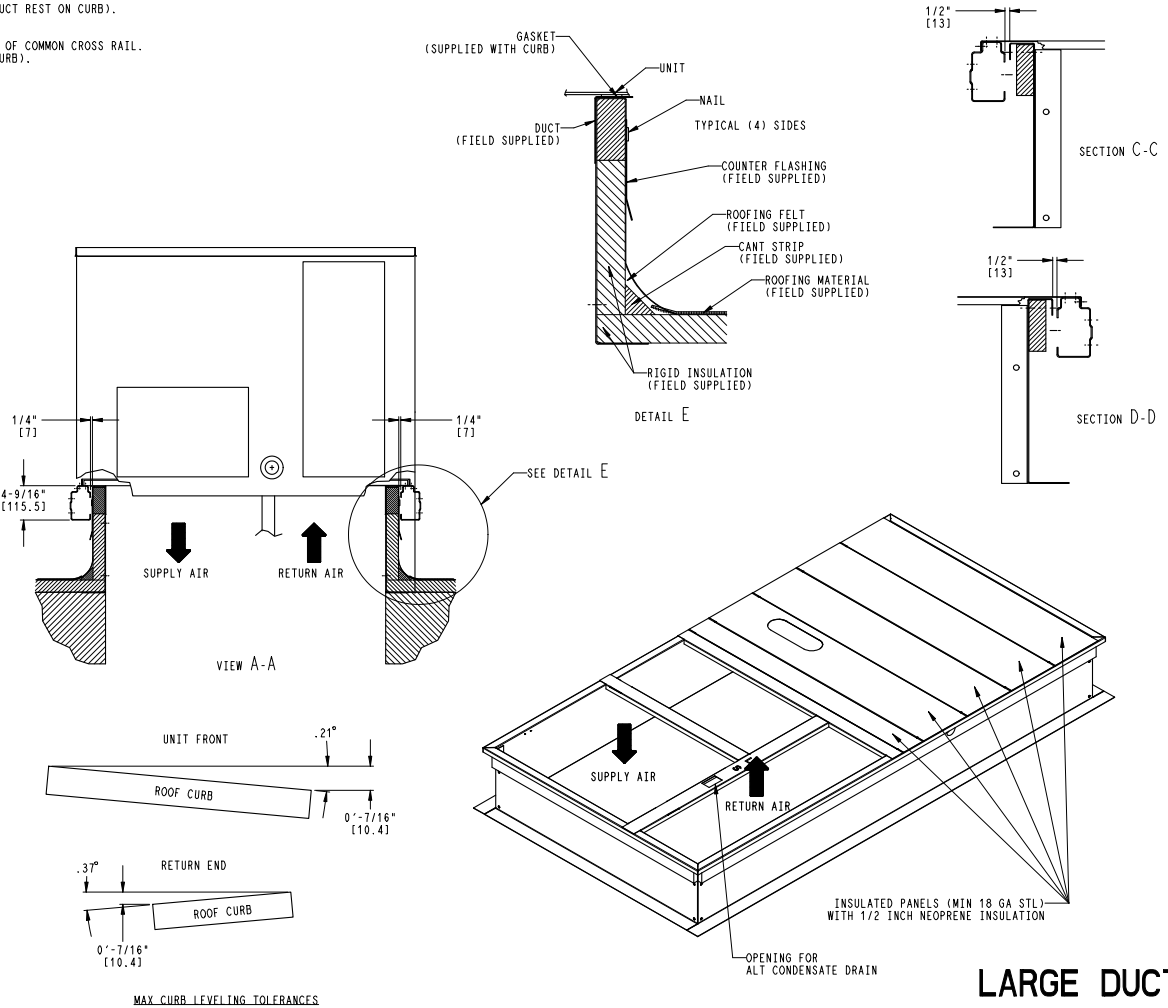
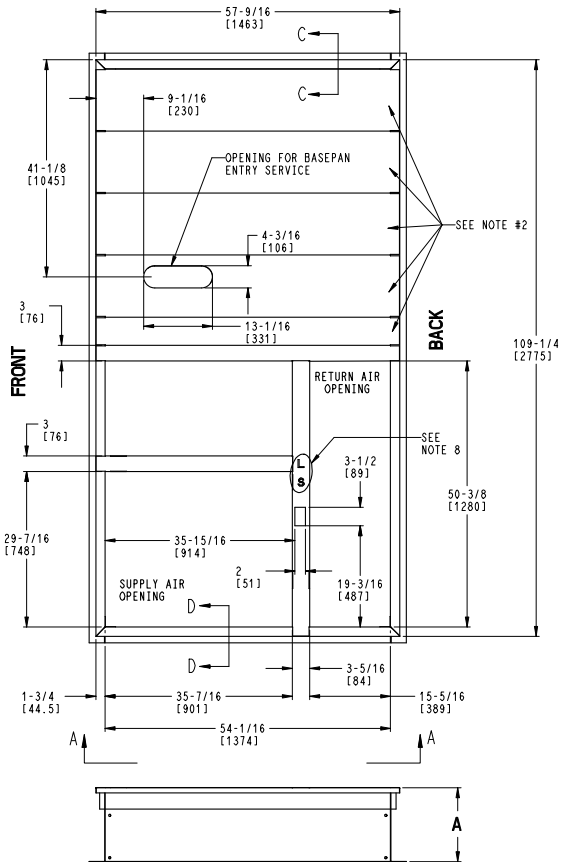
ROOF CURB ACCESSORY #	A
CRRFCURB074A00	14" [356]
CRRFCURB075A00	24" [610]

- NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
  2. INSULATED PANELS: 1/2" THK. NEOPRENE FOAM, 1.0# DENSITY.
  3. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
  4. ROOFCURB SIDEWALLS: 16 GAGE STEEL.
  5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB).
  6. SERVICE CLEARANCE 4 FT ON EACH SIDE.
  7. DIRECTION OF AIR FLOW.
  8. "L" & "S" DESIGNATIONS DENOTE LOCATION OF COMMON CROSS RAIL. (POSITION "L" FOR LARGE DUCT OPENING CURB).



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DATE	SUPERCEDES	48/50HCD14 / 48/50TCD16 / 48/50LC08,09,12	50TM500780	REV
02/15/13	-	ROOF CURB		A

# Performance Summary For 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
10:48AM

## Part Number:48HCFD14ACA5-0F0A0

ARI EER:.....12.20  
IEER:.....13.0

### Base Unit Dimensions

Unit Length:.....115.9 in  
Unit Width:.....63.4 in  
Unit Height:.....57.4 in

### Operating Weight

Base Unit Weight:.....1430 lb  
High Heat:.....42 lb  
High Static Option with High Efficiency Motor:.....45 lb  
Enthalpy Economizer w/ Barometric Relief:.....103 lb

### Accessories

14-inch Roof Curb:.....180 lb  
  
Total Operating Weight:.....1800 lb

### Unit

Unit Voltage-Phase-Hertz:.....208-3-60  
Air Discharge:.....Vertical  
Fan Drive Type:.....Belt  
Actual Airflow:.....5000 CFM  
Site Altitude:.....0 ft

### Cooling Performance

Condenser Entering Air DB:.....95.0 F  
Evaporator Entering Air DB:.....80.0 F  
Evaporator Entering Air WB:.....67.0 F  
Entering Air Enthalpy:.....31.44 BTU/lb  
Evaporator Leaving Air DB:.....58.1 F  
Evaporator Leaving Air WB:.....57.5 F  
Evaporator Leaving Air Enthalpy:.....24.70 BTU/lb  
Gross Cooling Capacity:.....151.51 MBH  
Gross Sensible Capacity:.....118.53 MBH  
Compressor Power Input:.....9.73 kW  
Coil Bypass Factor:.....0.198

### Heating Performance

Heating Airflow:.....5000 CFM  
Entering Air Temp:.....70.0 F  
Leaving Air Temp:.....106.1 F  
Gas Input Capacity:.....192.0 / 240.0 MBH  
Gas Heating Capacity:.....195.00 MBH  
Temperature Rise:.....36.1 F  
NOTE:.....Second Stage

### Supply Fan

External Static Pressure:.....1.10 in wg  
Options / Accessories Static Pressure  
EconoMiSerIV / EconoMiSer2:.....0.04 in wg  
Total External Static:.....1.14 in wg  
Fan RPM:.....800  
Fan Power:.....3.02 BHP  
NOTE:.....Selected IFM RPM Range: 776 - 955

### Electrical Data (Before July 30, 2012)

Minimum Voltage:.....187  
Maximum Voltage:.....253

## Performance Summary For 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

Compressor #1 RLA:	19
Compressor #1 LRA:	123
Compressor #2 RLA:	19
Compressor #2 LRA:	123
Outdoor Fan Motor Qty:	3
Outdoor Fan FLA (ea):	1.5
Indoor Fan Motor Type:	High Eff. High
Indoor Fan Motor FLA:	20.4
Combustion Fan Motor FLA (ea):	0.48
Power Supply MCA:	68
Power Supply MOCP (Fuse or HACR):	80
Min. Unit Disconnect FLA:	72
Min. Unit Disconnect LRA:	350
Electrical Convenience Outlet:	None

**Electrical Data (July 30, 2012 and Beyond)**

Indoor Fan Motor FLA:	20.4
Power Supply MCA:	68
Power Supply MOCP:	80
Disconnect Size FLA:	72
Disconnect Size LRA:	350

July 30th and beyond units can be identified by serial number 3112XXXXXXXXXX and higher

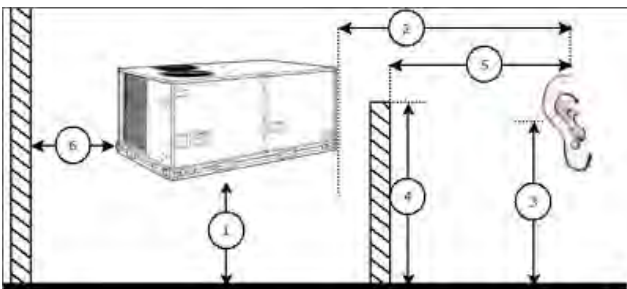
**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

**Acoustics**

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	97.0	93.6	89.3
125 Hz	95.8	87.5	86.0
250 Hz	81.6	69.5	82.9
500 Hz	76.9	67.7	80.7
1000 Hz	72.3	65.9	78.5
2000 Hz	68.6	62.2	73.6
4000 Hz	73.8	63.0	69.6
8000 Hz	73.9	60.4	64.5
A-Weighted	83.5	75.2	83.0

**Advanced Acoustics**



**Advanced Acoustics Parameters**

1. Unit height above ground:	30.0 ft
2. Horizontal distance from unit to receiver:	50.0 ft
3. Receiver height above ground:	5.7 ft
4. Height of obstruction:	0.0 ft

## Performance Summary For 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14

03/06/2014

Prepared By:

10:48AM

5. Horizontal distance from obstruction to receiver:.....**0.0** ft

6. Horizontal distance from unit to obstruction:.....**0.0** ft

### Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	89.3	86.0	82.9	80.7	78.5	73.6	69.6	64.5	92.2 Lw
B	63.1	69.9	74.3	77.5	78.5	74.8	70.6	63.4	83.2 LwA
C	56.9	53.6	50.5	48.3	46.1	41.2	37.2	32.1	59.8 Lp
D	30.7	37.5	41.9	45.1	46.1	42.4	38.2	31.0	50.8 LpA

#### Legend

A Sound Power Levels at Unit's Acoustic Center, Lw

B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA

C Sound Pressure Levels at Specific Distance from Unit, Lp

D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

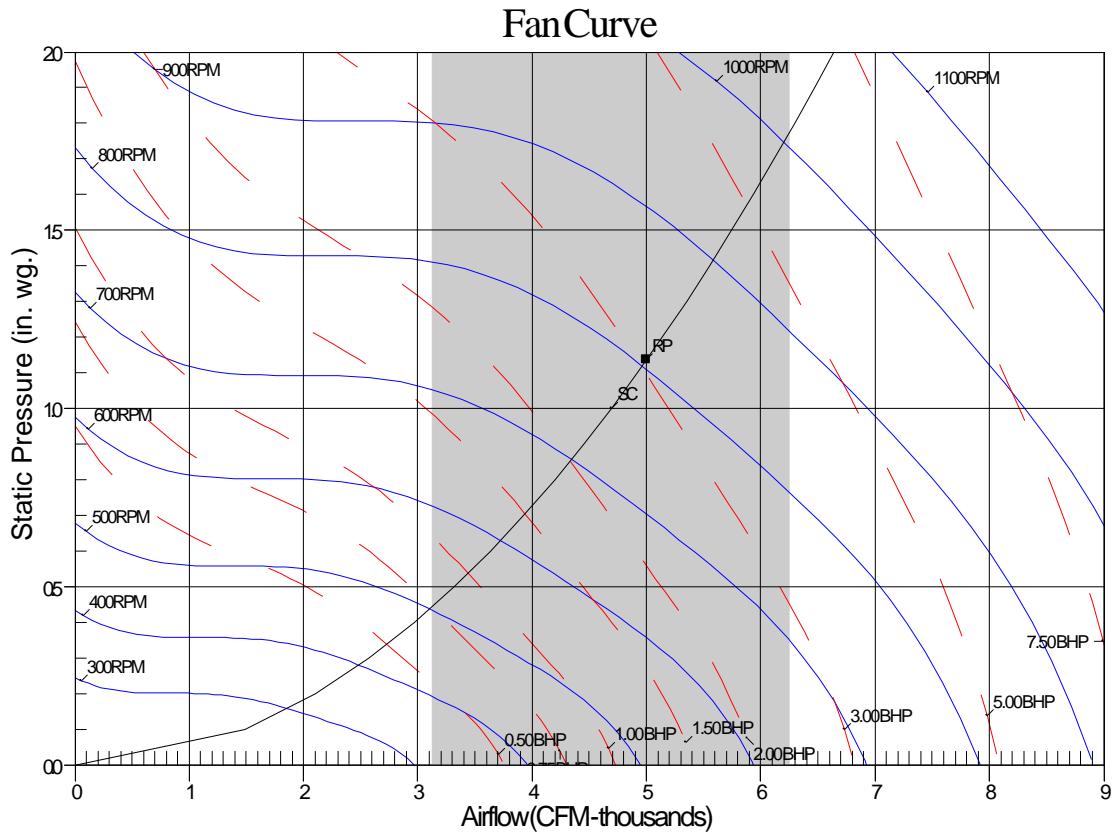
Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.



# Performance Summary For 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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RPM=800 BHP=3.02 Maximum RPM=1100 Maximum BHP=6.50  
Note: Please contact application engineering for selections outside the shaded region.  
SC-System Curve RP-Rated Point

# Unit Feature Sheet for 12.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
Prepared By:

03/06/2014  
10:48AM



## WeatherMaster® – 48HC

PACKAGED ROOFTOP GAS HEATING/ELECTRIC COOLING UNITS  
3, 4, 5, 6, 7.5, 8.5, 10 and 12.5 TONS



Optional Louvered Hail Guard Shown



### WEATHERMASTER SERIES

WeatherMaster (48HC) units are high efficiency, single packaged gas heating, electric cooling units that are pre-wired and charged with Puron® (R-410) refrigerant. They are factory tested in both heating and cooling modes, and rated in accordance with AHRI Standards 210/240 (04-06 sizes) and 340/360 (07-14 sizes). WeatherMaster units are designed in accordance with UL Standard 1995, and listed by UL or ETL.



- or -



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).

### Certified to ISO 9001

For a complete list of options and accessories refer to the product data catalog.

### STANDARD FEATURES INCLUDE:

- Puron® (R-410A) HFC refrigerant charged
- ASHRAE 90.1 compliant and Energy Star qualified
- Scroll compressors with internal line break and overload protection
- Single-stage cooling capacity control on all 04-07 models
- Two-stage cooling capacity control on 08-14 models
- SEERs up to 15.6 and EERs up to 13.0
- IEEERs up to 13.0 with single speed indoor fan motor
- IEEERs up to 13.9 with 2-speed/VFD indoor fan motor
- TXV metering device on each independent circuit
- 04-06 models use X-13 (5 Speed/Torque) Direct Drive Motor standard
- Belt drive fan and pulley combinations - all three phase models
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE Standard 62, sloping design, side or center drain
- Standard cooling operation to 125°F (52°C) to 35°F (2°C)
- Units use high performance copper tube / aluminum fin condenser and evaporator coils
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation burner control logic and energy saving indoor fan motor delay
- Low NOx models that meet California Air Quality Management
- Induced draft gas heat combustion design
- Redundant gas valves with up to two stages of heating
- Low pressure and high pressure switch protected

### MAINTENANCE FEATURES:

- Access panels with easy grip handles
- Innovative easy starting, no-strip screws on unit access panels
- Two-inch disposable return air filters and Tool-less filter access
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation, burner control logic and energy saving indoor fan motor delay

### INSTALLATION FEATURES:

- Thru-the-bottom power entry capability
- Single point gas and electric connections
- Full perimeter base rail with built-in rigging adapters and fork slots
- Convertible from vertical to horizontal airflow for slab mounting

### STANDARD PARTS WARRANTY:

- 10-year heat exchanger – 15-year stainless steel option
- 5-year compressor
- 1-year parts
- Many optional upgrades also available

### OPTIONS INCLUDE BUT ARE NOT LIMITED TO:

- PremierLink™ and Multi Protocol Direct Digital Controls (DDC)
- ComfortLink controls
- Supply and Return Air Smoke Detectors, high static motors
- Louvered condenser coil guards and coil coating options
- Economizer, disconnect and convenience outlet options
- Stainless Steel heat exchanger (standard with Low NOx)
- Hinged access panels
- Humidi-MiZer adaptive dehumidification system
- Foil faced insulation throughout entire cabinet
- Low ambient cooling operation controls
- HACR circuit breaker

## Spec Sheet for 12.5 TON

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**17.5 TON**

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10:48AM

**17.5 TON**

**Tag Cover Sheet  
Unit Report  
Certified Drawing  
Performance Report  
Unit Feature Sheet  
Spec Sheet**

## Unit Report For 17.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

### Unit Parameters

Unit Model:.....**48HCFD20ECA5-0F0A0**  
 Unit Size:.....**20 (17.5 Tons)**  
 Volts-Phase-Hertz:.....**208-3-60**  
 Heating Type:.....**Gas**  
 Duct Cfg:.....**Vertical Supply / Vertical Return**  
 High Heat  
 Two Stage Compressor Models

### Dimensions (ft. in.) & Weight (lb.) \*\*\*

Unit Length:.....**11' 9.5"**  
 Unit Width:.....**7' 2.375"**  
 Unit Height:.....**4' 1.375"**  
 \*\*\* Total Operating Weight:.....**2733 lb**

\*\*\* Weights and Dimensions are approximate. Weight does not include unit packaging. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

### Lines and Filters

Gas Line Size:.....**3/4**  
 Condensate Drain Line Size:.....**3/4**  
 Return Air Filter Type:.....**Throwaway**  
 Return Air Filter Quantity:.....**6**  
 Return Air Filter Size:.....**20 x 25 x 2**

### Unit Configuration

CO2 Sensor  
 High Static Option with High Efficiency Motor - Vertical Models  
 Al/Cu - Al/Cu  
 Base Electromechanical Controls  
 Enthalpy Economizer w/ Barometric Relief. Vertical and Horizontal Air Flow.  
 Standard Packaging

### Warranty Information

1-Year parts(std.)  
 5-Year compressor parts(std.)  
 10-Year heat exchanger - Aluminized(std.)

No optional warranties were selected.

**NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.**

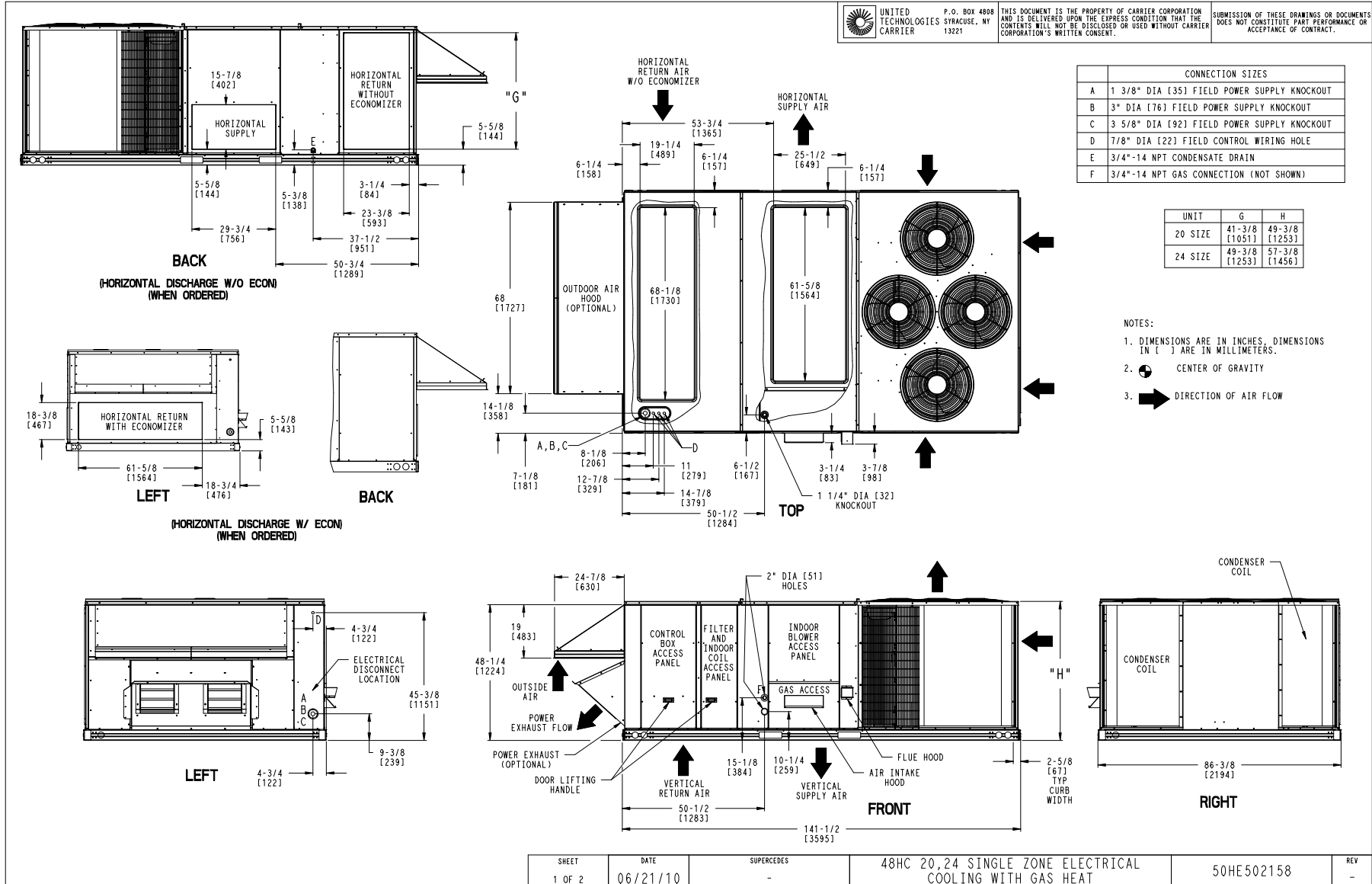
### Ordering Information

Part Number	Description	Quantity
48HCFD20ECA5-0F0A0	Rooftop Unit	1
	Base Unit	
	CO2 Sensor	
	High Static Option with High Efficiency Motor - Vertical Models	
	Electromechanical control, enthalpy economizer with barometric relief	
	None	
<b>Accessories</b>		
CRRFCURB047A00	14-inch Tall Roof Curb	1

# Certified Drawing for 17.5 TON

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# Certified Drawing for 17.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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UNIT	STD. UNIT WEIGHT *		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48HC20	2102	956	474	215	390	177	593	269	582	265	47 1/2 [1207]	71 1/4 [1810]	16 1/2 [419]
48HC24	2247	1021	540	246	556	253	598	272	581	264	44 5/8 [1133]	71 5/8 [1819]	19 [483]

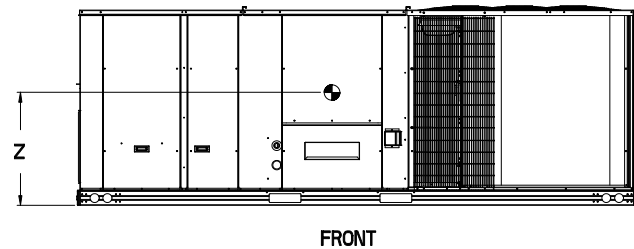
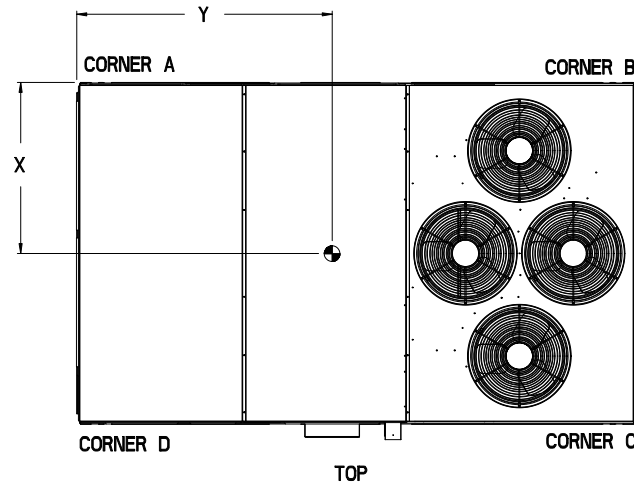


P.O. BOX 4808  
 SYRACUSE, NY  
 13221

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

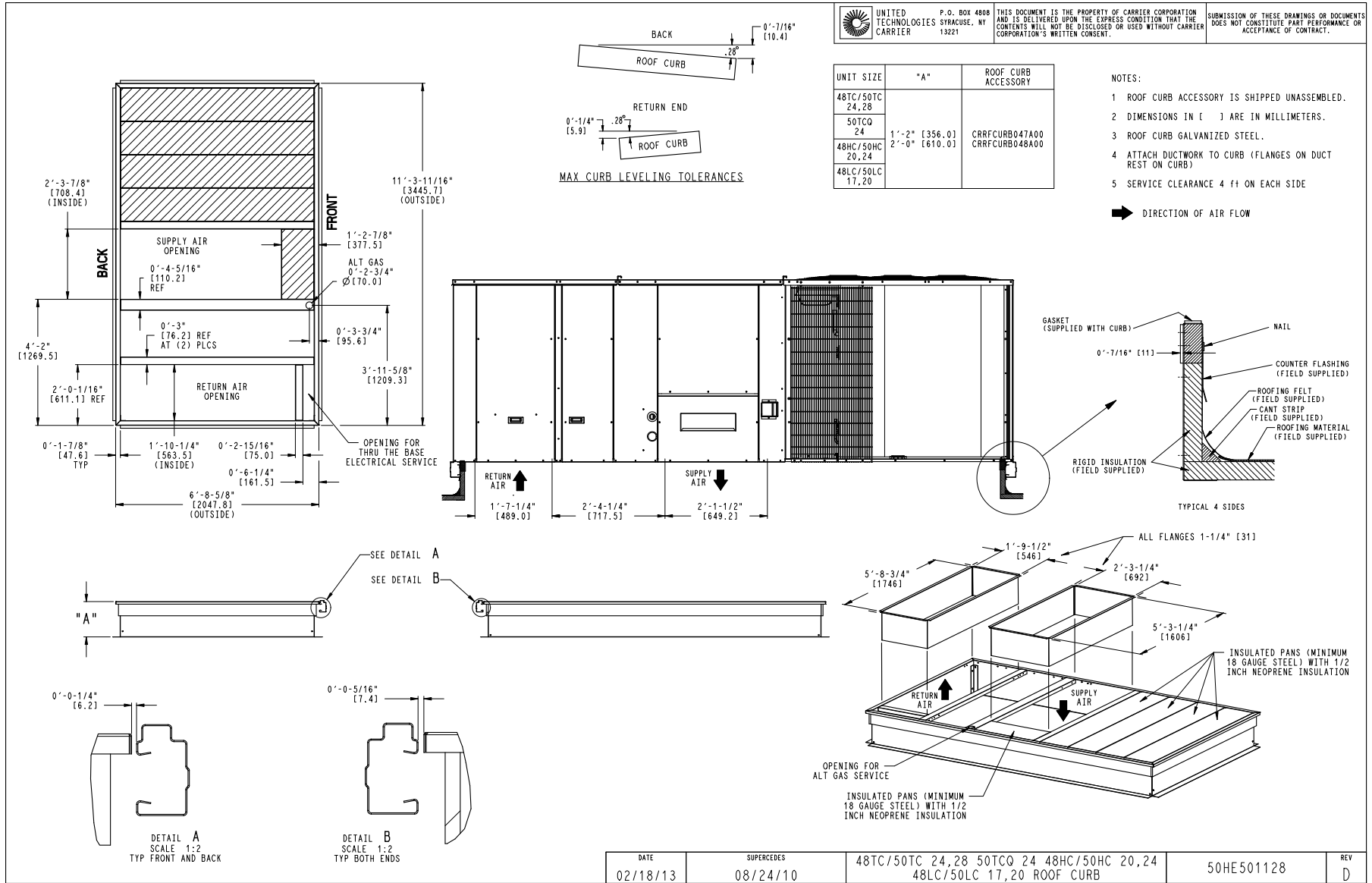


SHEET	DATE	SUPERCEDES	DESCRIPTION	MODEL NUMBER	REV
2 OF 2	06/21/10	-	48HC 20,24 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50HE502158	-

# Certified Drawing for 17.5 TON

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## Performance Summary For 17.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
 Prepared By:

03/06/2014  
 10:48AM

### Part Number:48HCFD20ECA5-0F0A0

ARI EER:.....**12.00**  
 IEER:.....**13.0**

#### Base Unit Dimensions

Unit Length:.....**141.5** in  
 Unit Width:.....**86.4** in  
 Unit Height:.....**49.4** in

#### Operating Weight

Base Unit Weight:.....**2102** lb  
 High Heat:.....**113** lb  
 CO2 Sensor:.....**5** lb  
 High Static Option with High Efficiency Motor - Vertical Models:.....**12** lb  
 Enthalpy Economizer w/ Barometric Relief. Vertical and Horizontal Air Flow.:.....**246** lb

#### Accessories

14-inch Tall Roof Curb:.....**255** lb

Total Operating Weight:.....**2733** lb

#### Unit

Unit Voltage-Phase-Hertz:.....**208-3-60**  
 Air Discharge:.....**Vertical**  
 Fan Drive Type:.....**Belt**  
 Actual Airflow:.....**7000** CFM  
 Site Altitude:.....**0** ft

#### Cooling Performance

Condenser Entering Air DB:.....**95.0** F  
 Evaporator Entering Air DB:.....**80.0** F  
 Evaporator Entering Air WB:.....**67.0** F  
 Entering Air Enthalpy:.....**31.44** BTU/lb  
 Evaporator Leaving Air DB:.....**58.3** F  
 Evaporator Leaving Air WB:.....**57.5** F  
 Evaporator Leaving Air Enthalpy:.....**24.68** BTU/lb  
 Gross Cooling Capacity:.....**212.79** MBH  
 Gross Sensible Capacity:.....**164.33** MBH  
 Compressor Power Input:.....**14.32** kW  
 Coil Bypass Factor:.....**0.198**

#### Heating Performance

Heating Airflow:.....**7000** CFM  
 Entering Air Temp:.....**70.0** F  
 Leaving Air Temp:.....**112.9** F  
 Gas Input Capacity:.....**320.0 / 400.0** MBH  
 Gas Heating Capacity:.....**324.00** MBH  
 Temperature Rise:.....**42.9** F  
 NOTE:.....**Second Stage**

#### Supply Fan

External Static Pressure:.....**1.00** in wg  
 Options / Accessories Static Pressure  
     EconoMi\$erIV / EconoMi\$er2:.....**0.07** in wg  
 Total External Static:.....**1.07** in wg  
 Fan RPM:.....**918**  
 Fan Power:.....**4.27** BHP  
 NOTE:.....**Selected IFM RPM Range: 882 - 1078**

#### Electrical Data (Before July 30, 2012)

Minimum Voltage:.....**187**

## Performance Summary For 17.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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Maximum Voltage:.....	<b>253</b>
Compressor #1 RLA:.....	<b>27.6</b>
Compressor #1 LRA:.....	<b>191</b>
Compressor #2 RLA:.....	<b>25</b>
Compressor #2 LRA:.....	<b>164</b>
Outdoor Fan Motor Qty:.....	<b>4</b>
Outdoor Fan FLA (ea):.....	<b>1.5</b>
Indoor Fan Motor Type:.....	<b>High Eff. High</b>
Indoor Fan Motor FLA:.....	<b>17.1</b>
Combustion Fan Motor FLA (ea):.....	<b>0.52</b>
Power Supply MCA:.....	<b>82.6</b>
Power Supply MOCP (Fuse or HACR):.....	<b>100</b>
Min. Unit Disconnect FLA:.....	<b>87</b>
Min. Unit Disconnect LRA:.....	<b>451</b>
Electrical Convenience Outlet:.....	<b>None</b>

**Electrical Data (July 30, 2012 and Beyond)**

Indoor Fan Motor FLA:.....	<b>17.1</b>
Power Supply MCA:.....	<b>82.6</b>
Power Supply MOCP:.....	<b>100</b>
Disconnect Size FLA:.....	<b>87</b>
Disconnect Size LRA:.....	<b>451</b>

**July 30th and beyond units can be identified by serial number 3112XXXXXXXXXX and higher**

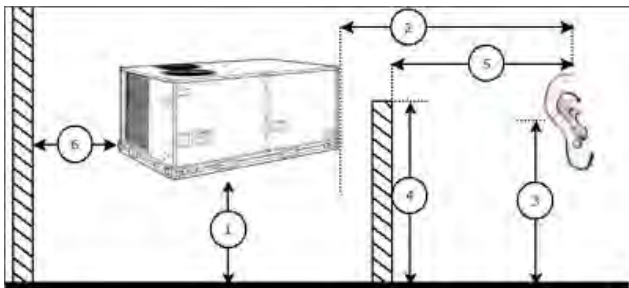
**Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage**

**Acoustics**

Sound Rating:.....	<b>84.0</b> db
Sound Power Levels, db re 10E-12 Watts	

	<b>Discharge</b>	<b>Inlet</b>	<b>Outdoor</b>
63 Hz	92.1	91.6	92.2
125 Hz	86.3	76.1	83.9
250 Hz	78.7	70.6	80.4
500 Hz	77.9	63.3	81.8
1000 Hz	72.4	57.7	78.7
2000 Hz	70.7	53.0	76.5
4000 Hz	70.7	47.0	72.2
8000 Hz	61.9	35.5	65.4
A-Weighted	80.1	69.0	84.1

**Advanced Acoustics**



**Advanced Acoustics Parameters**

- 1. Unit height above ground:..... **30.0** ft
- 2. Horizontal distance from unit to receiver:..... **50.0** ft

## Performance Summary For 17.5 TON

Project: ATLANTIC MAINE WHARF REVISED 04 06 14  
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- 3. Receiver height above ground:.....**5.7** ft
- 4. Height of obstruction:.....**0.0** ft
- 5. Horizontal distance from obstruction to receiver:.....**0.0** ft
- 6. Horizontal distance from unit to obstruction:.....**0.0** ft

### Detailed Acoustics Information

Octave Band Center Freq. Hz	63	125	250	500	1k	2k	4k	8k	Overall
A	92.2	83.9	80.4	81.8	78.7	76.5	72.2	65.4	93.6 Lw
B	66.0	67.8	71.8	78.6	78.7	77.7	73.2	64.3	84.1 LwA
C	59.8	51.5	48.0	49.4	46.3	44.1	39.8	33.0	61.2 Lp
D	33.6	35.4	39.4	46.2	46.3	45.3	40.8	31.9	51.7 LpA

#### Legend

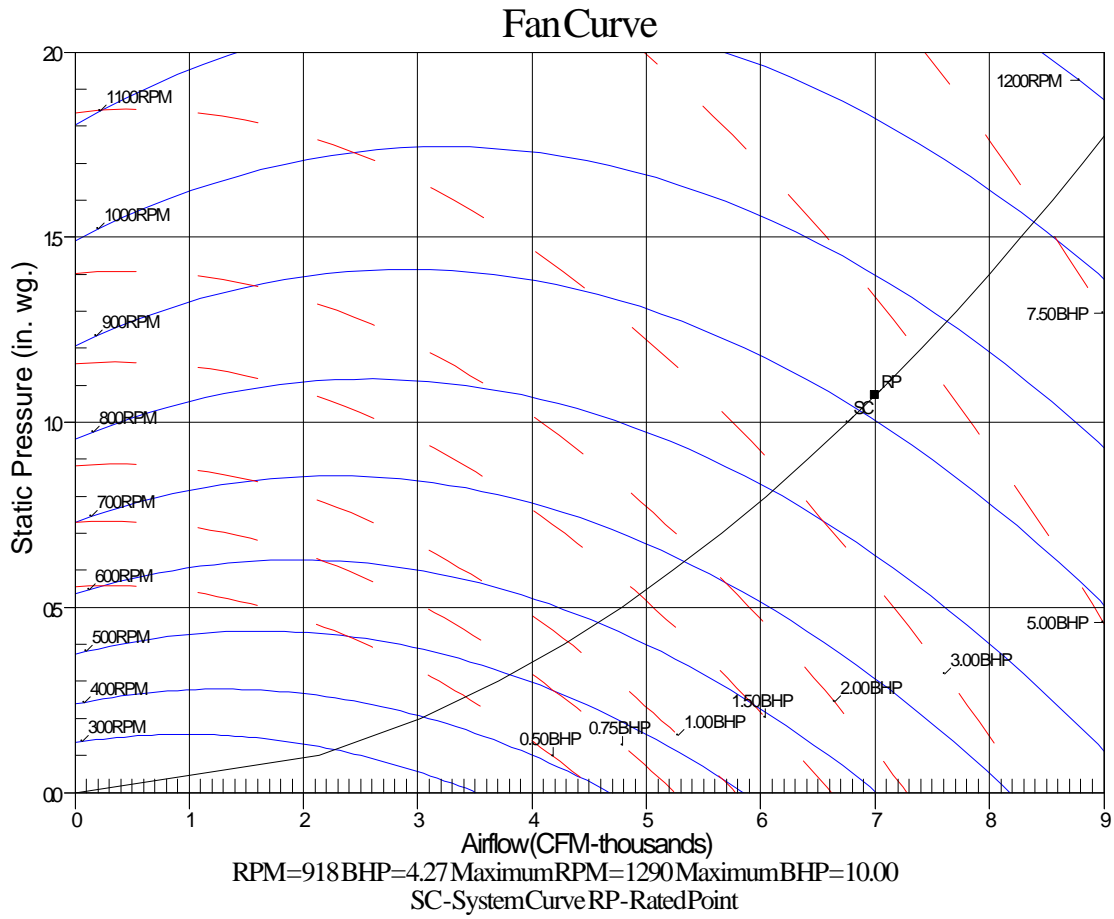
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- B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
- C Sound Pressure Levels at Specific Distance from Unit, Lp
- D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

# Performance Summary For 17.5 TON

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# Unit Feature Sheet for 17.5 TON

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## WeatherMaster® – 48HC

PACKAGED ROOFTOP GAS HEATING/ELECTRIC COOLING UNITS  
15, 17.5, 20, 25 TONS



Optional Economizer and Power Exhaust Shown



### WEATHERMASTER SERIES

WeatherMaster (48HC) units are high efficient one-piece gas heating, electric cooling units that are pre-wired and charged with Puron (R-410) refrigerant. They are factory tested in both heating and cooling modes, and rated in accordance with ARI Standard 340/360. WeatherMaster units are designed in accordance with UL Standard 1995, and listed by ETL.



Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to [www.ahridirectory.org](http://www.ahridirectory.org).

Certified to ISO 9001

For a complete list of options and accessories refer to the product data catalog.

### STANDARD FEATURES INCLUDE:

- Puron (R-410A) HFC refrigerant
- ASHRAE 90.1 compliant and Energy Star certified
- Scroll compressors with internal line break and overload protection
- Two-stage cooling capacity control on all models
- Units use high performance copper tube / aluminum fin condenser and evaporator coils
- EERs up to 12.0
- IEERs up to 13.2 with single speed indoor fan motor
- IEERs up to 13.8 with 2-speed/VFD indoor fan motor
- TXV refrigerant metering device on each circuit
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE Standard 62, sloping design
- Standard cooling operation up to 125°F (52°C) and down to 35°F (2°C) ambient temperatures
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Fully insulated cabinet
- Induced draft gas heat combustion design
- Redundant gas valves with up to two stages of heating
- Low pressure and high pressure switch protected

### MAINTENANCE FEATURES:

- Major access panels with easy grip handles
- Innovative easy starting, no-strip screws on unit access panels
- Two-inch disposable return air filters with integral easy opening access flange and slide out filter track
- Belt drive evaporator-fan motor and pulley combinations
- New terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation, burner control logic and indoor fan delay

### INSTALLATION FEATURES:

- Thru-the-bottom power entry capability
- Single point gas and electric connections
- Full perimeter base rail with built-in rigging adapters and fork slots
- Dedicated vertical and horizontal airflow models available and ordered as a factory option only. No special kits required

### STANDARD WARRANTY:

- 10-year heat exchanger parts – 15-year parts stainless steel option
- 5-year compressor parts
- 1-year parts
- Many optional upgrades also available

### OPTIONS INCLUDE BUT ARE NOT LIMITED TO:

- PremierLink™ and Multi Protocol Direct Digital Controls (DDC)
- ComfortLink controls
- Supply and Return Air Smoke Detectors
- Medium and High static motors
- Louvered condenser coil guards, Manual Damper, CO2 sensor
- Economizer, disconnect and convenience outlet options
- Stainless Steel heat exchanger option
- Corrosion resistant coil coating, 4" field filter track
- Hinged access panels
- Humidi-Mizer® adaptive dehumidification system
- Foil faced insulation throughout entire cabinet
- Low ambient cooling operation controls
- HACR circuit breaker

## Spec Sheet for 17.5 TON

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