

HABEGGER

11413 Enterprise Park Drive, Cincinnati, Ohio, 45241
(513) 612-4700/4701(FAX)

SUBMITTAL INFORMATION

Job name:
TA Walton KFC
RTU 1

Mechanical Contractor
Design Comfort

Prepared By: Rob Lohbeck
Date : 12/22/2022

<u>TAG:</u>	<u>DESCRIPTION:</u>
RTU-1	Carrier 7.5 ton RTU 480/3

*Unit comes with a 14" flat roof curb, field installed economizer, RA smoke detector and prog thermostat.

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Prepared By:

12/22/2022
10:24AM

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7.5 Ton

Project: TA Walton
Prepared By:

12/22/2022
10:24AM

7.5 Ton

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

Unit Report For 7.5 Ton

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Prepared By:

12/22/2022
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Unit Parameters

Unit Model:.....**48TCEM08A2A6-0A0A0**
 Unit Size:.....**08 (7.5 Tons)**
 Volts-Phase-Hertz:.....**460-3-60**
 Heating Type:.....**Gas**
 Duct Cfg:.....**Vertical Supply / Vertical Return**
 Medium Heat
 Round Tube Plate Fin Coils

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

Unit Length:.....**7' 4.125"**
 Unit Width:.....**4' 11.5"**
 Unit Height:.....**3' 5.25"**
***** Total Operating Weight:.....1025 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:.....**4**
 Return Air Filter Size:.....**16 x 20 x 2**

Selection includes construction throwaway filter into the base fan curve. This filter is not MERV Rated.

Unit Configuration

Medium Static Option (Belt Drive)
 Al/Cu - Al/Cu
 Base Electromechanical Controls
 Standard Packaging

Warranty Information

1-Year parts(std.)
 5-Year compressor parts(std.)
 10-Year heat exchanger - Aluminized(std.)
 15-Year heat exchanger - Stainless Steel(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
48TCEM08A2A6-0A0A0	Rooftop Unit	1
	Base Unit	
	Medium Static Option (Belt Drive)	
	Electromechanical control, No intake or exhaust option.	
	No Electrical Option	
Field Installed Accessories		
CRRFCURB003A01	14-inch Tall Roof Curb	1
CRECOMZR021A03	Vertical EconoMiSer IV with solid-state controller	1

Certified Drawing for 7.5 Ton

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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	OUTDOOR COIL TYPE	J	K	H
48TC-A08	RTPF	41 1/4 [1048]	33 3/4 [857]	15 7/8 [403]
48TC-A09	RTPF	49 3/8 [1253]	36 3/8 [925]	27 7/8 [708]
48TC-A12	RTPF	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]
48TC-D08	RTPF	41 1/4 [1048]	33 3/4 [857]	15 7/8 [403]
48TC-D09	RTPF	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]
48TC-D12	RTPF	49 3/8 [1253]	36 3/8 [925]	15 7/8 [403]
48TC-D08	MCHX	41 1/4 [1048]	33 3/4 [857]	23 [584.2]
48TC-D12	MCHX	49 3/8 [1253]	36 3/8 [925]	11 [279.4]

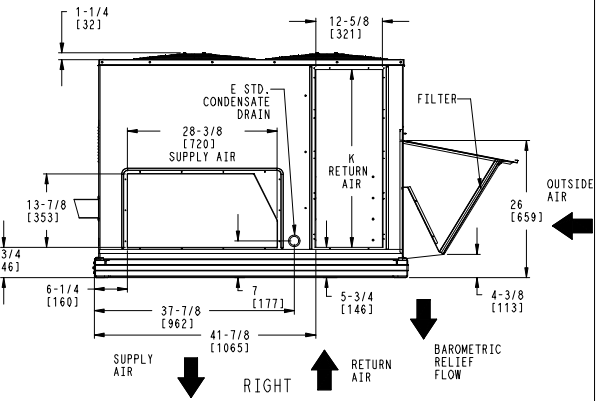
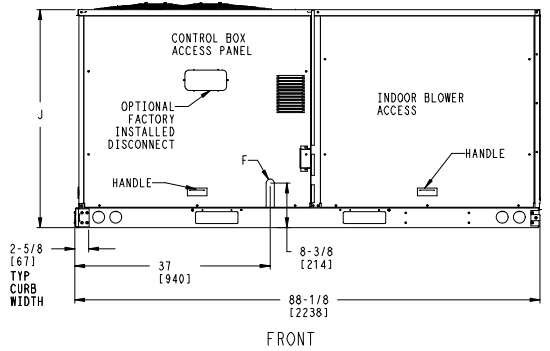
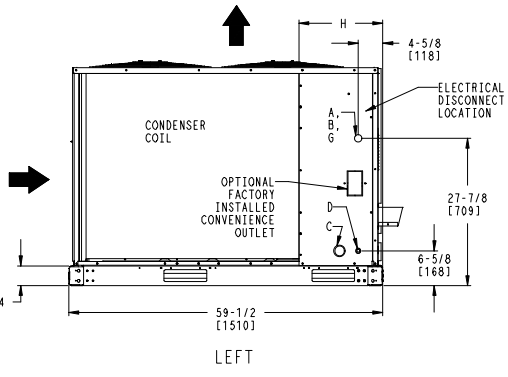
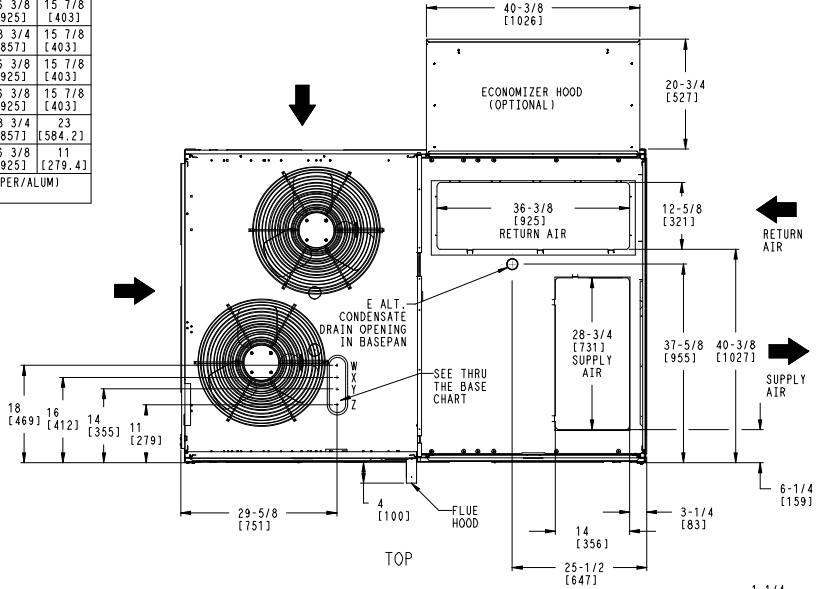
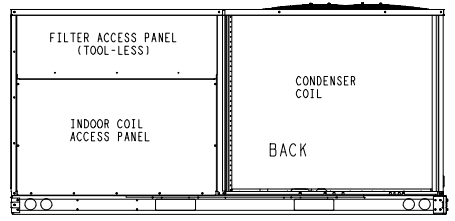
RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)
MCHX - NOVATION (ALUM/ALUM)

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CONNECTION SIZES	
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2 1/2" [64] 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 3/4"-14 NPT GAS CONNECTION
G	2" [51] DIA POWER SUPPLY KNOCK-OUT

THRU-THE-BASE CHART (FIELD INST)			
THESE HOLES REQUIRED FOR USE WITH ACCY KITS: CRBTMPWRO02A01: GAS THRU CURB CRBTMPWRO04A01: GAS THRU BASEPAN			
	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	1 1/4" (002,004)	POWER	1 3/4" [44.4]
Z *	(004) 3/4" FPT	GAS	1 3/4" [44.4]
* (002) PROVIDES 3/4" FPT THRU CURB FLANGE & FITTING. HOLE SIZE: 2" [50.8]			

THRU-THE-BASE CHART (FIOP)	
FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X, Y, & Z ARE PROVIDED. **	
** FOR BELOW LISTED MODELS, A FIELD SUPPLIED 1/2" ADAPTER IS REQUIRED BETWEEN BASE PAN FITTING AND GAS VALVE: 48TCD, S+08, 09	



SHEET 1 OF 2	DATE 10-01-10	SUPERCEDES 11-24-08	48TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM500985	REV F
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Certified Drawing for 7.5 Ton

Project: TA Walton
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12/22/2022
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UNIT	OUTDOOR COIL TYPE	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
48TC-A08	RTPF	780	354	178	81	158	72	209	95	236	107	41 1/2 [1054]	33 7/8 [860]	20 1/2 [521]
48TC-A09	RTPF	920	418	212	96	183	83	243	110	282	128	40 7/8 [1038]	34 [864]	23 1/8 [587]
48TC-A12	RTPF	930	422	216	98	196	89	247	112	272	123.5	42 [1067]	33 1/8 [841]	24 1/4 [616]
48TC-D08	RTPF	835	379	164	74.5	170	77.2	255	115.8	246	111.7	44 7/8 [1140]	35 5/8 [905]	19 3/8 [492]
48TC-D09	RTPF	930	422	228	103.5	187	85	232	105.3	283	128.5	39 3/4 [1010]	32 7/8 [835]	18 5/8 [473]
48TC-D12	RTPF	940	427	231	104.9	189	85.8	234	106.2	286	129.8	39 3/4 [1010]	33 [838]	18 1/2 [470]
48TC-D08	MCHX	805	365.5	160	72.6	153	69.5	240	109	260	118	43 [1092]	36 3/8 [924]	20 3/8 [517.7]
48TC-D12	MCHX	895	406.3	185	84	176	79.9	260	118	274	124.4	42 7/8 [1089]	35 1/2 [902]	22 7/8 [581]

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)
MCHX - NOVATION (ALUM/ALUM)



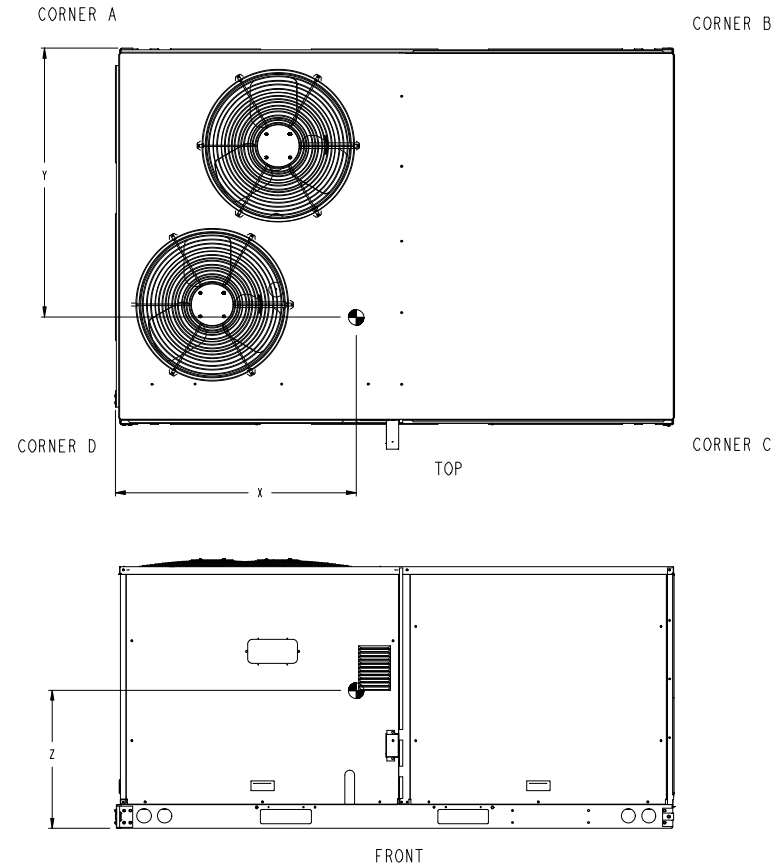
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*** STANDARD UNIT WEIGHT IS WITH LOW GAS HEAT AND WITHOUT PACKAGING. FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



SHEET 2 OF 2	DATE 10-01-10	SUPERCEDES 11-24-08	48TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	48TM500985	REV F
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12/22/2022
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Service Clearance

C11247

LOCATION	DIMENSION	CONDITION
A	48-in (1219 mm)	• Unit disconnect is mounted on panel
	36-in (914 mm)	• If dimension-B is 12-in (305 mm)
	18-in (457 mm)	• No disconnect, convenience outlet option • Recommended service clearance (use electric screwdriver)
	12-in (305 mm)	• Minimum clearance (use manual ratchet screwdriver)
B	36-in (914 mm)	• Unit has economizer
	12-in (305 mm)	• If dimension-A is 36-in (914 mm)
	Special	• Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in (914 mm)	• Side condensate drain is used
	18-in (457 mm)	• Minimum clearance
D	48-in (1219 mm)	• No flue discharge accessory installed, surface is combustible material
	42-in (1067 mm)	• Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in (914 mm)	• Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	• Check for adjacent units or building fresh air intakes within 10-ft of this unit's flue outlet

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.

Chassis 3-4a

Certified Drawing for 7.5 Ton

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ROOFCURB 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. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED. 2. INSULATED PANELS: 25.4 [1"] THK. POLYURETHANE FOAM, 44.5 [1-3/4] # DENSITY. 3. DIMENSIONS IN [] ARE IN MILLIMETERS. 4. ROOFCURB: 18 GA G/STEEL. 5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB). 6. SERVICE CLEARANCE 4 FEET ON EACH SIDE. 7. DIRECTION OF AIR FLOW. 8. CONNECTOR PACKAGE CRBTMPWR002A01 IS FOR THRU-THE-CURB GAS TYPE PACKAGE CRBTMPWR004A01 IS FOR THRU-THE-BOTTOM TYPE GAS CONNECTIONS.	CRBTMPWR002A01	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]		CRBTMPWR004A01	THRU THE BOTTOM				

C	6' 61/4" WAS 6' 7 1/6", 4' 2" WAS 4' 2 13/16". 18 GA WAS 16 GA.; 15 13/16" WAS 15 15/16"; NAIL FIELD SUPPLIED WAS WITH CURB	4/22/13	MMC	-	-	1067898
REV	REVISION RECORD	DATE	BY	CHKD	APPD	EQ. NO.

DRAWING RELEASE LEVEL:	PRODUCTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES:	1 DEC ± .125	2 DEC ± .062	3 DEC ± .031	ANG ± .006
THIRD ANGLE PROJECTION	MATERIAL	AUTHORIZATION NUMBER	1029120			
		ENGINEERING	MANUFACTURING			
	ENGINEERING REQUIREMENTS	DRAFTER	CHECKER			
	T-005, Y-002	MMCC	12/16/09			
	WEIGHT	MODEL (INTERNAL USE ONLY)				
	SURFACE FINISH	MEG PURCH	PURCH			
		NEXT DRAWING	SCALE		DISTRIBUTION	
			N/A			

Performance Summary For 7.5 Ton

Project: TA Walton
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12/22/2022
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Part Number: 48TCEM08A2A6-0A0A0

ARI EER: **11.00**
IEER: **12.7**

Base Unit Dimensions

Unit Length: **88.1** in
Unit Width: **59.5** in
Unit Height: **41.3** in

Operating Weight

Base Unit Weight: **777** lb
Medium Heat: **15** lb
Medium Static Option (Belt Drive): **15** lb

Accessories

14-inch Tall Roof Curb: **143** lb
Vertical EconoMi\$er IV with solid-state controller: **75** lb

Total Operating Weight: **1025** lb

Unit

Unit Voltage-Phase-Hertz: **460-3-60**
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: **58.9** F
Evaporator Leaving Air WB: **57.0** F
Evaporator Leaving Air Enthalpy: **24.41** BTU/lb
Gross Cooling Capacity: **94.90** MBH
Gross Sensible Capacity: **68.42** MBH
Compressor Power Input: **6.73** kW
Coil Bypass Factor: **0.161**

Heating Performance

Heating Airflow: **3000** CFM
Entering Air Temp: **70.0** F
Leaving Air Temp: **115.7** F
Gas Heating Input Capacity: **120.0 / 180.0** MBH
Gas Heating Output Capacity: **98.0 / 148.0** MBH
Temperature Rise: **45.7** F
Thermal Efficiency (%): **82.0**

Supply Fan

External Static Pressure: **1.00** in wg
Options / Accessories Static Pressure
Economizer: **0.11** in wg
Total Application Static (ESP + Unit Opts/Acc.): **1.11** in wg
Fan RPM: **897**
Fan Power: **2.46** BHP

NOTE: **Selected IFM RPM Range: 733 - 949**

Selection includes construction throwaway filter into the base fan curve. This filter is not MERV Rated.

Electrical Data

Performance Summary For 7.5 Ton

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Voltage Range:	414 - 506
Compressor #1 RLA:	12
Compressor #1 LRA:	94
Indoor Fan Motor Type:	MED
Indoor Fan Motor FLA (Total):	4.2
Combustion Fan Motor FLA (ea):	0.25
Power Supply MCA:	21
Power Supply MOCP (Fuse or HACR):	30
Disconnect Size FLA:	20
Disconnect Size LRA:	134
Electrical Convenience Outlet:	None
Outdoor Fan [Qty / FLA (ea)]:	2 / 0.8

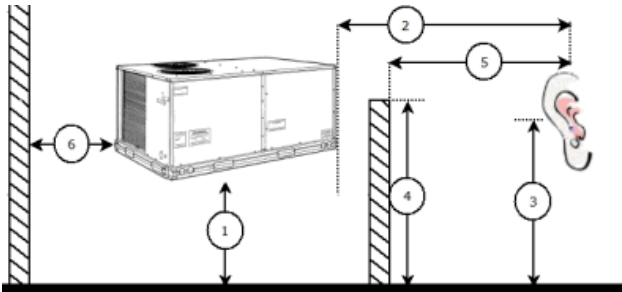
Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	99.3	96.6	90.1
125 Hz	92.4	88.1	82.6
250 Hz	80.3	77.0	81.0
500 Hz	72.4	68.5	79.4
1000 Hz	69.9	65.9	77.0
2000 Hz	68.9	60.9	73.0
4000 Hz	69.9	60.7	70.4
8000 Hz	73.7	59.9	66.7
A-Weighted	81.4	76.5	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
- 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	90.1	82.6	81.0	79.4	77.0	73.0	70.4	66.7	91.8 Lw
B	63.9	66.5	72.4	76.2	77.0	74.2	71.4	65.6	82.0 LwA

Performance Summary For 7.5 Ton

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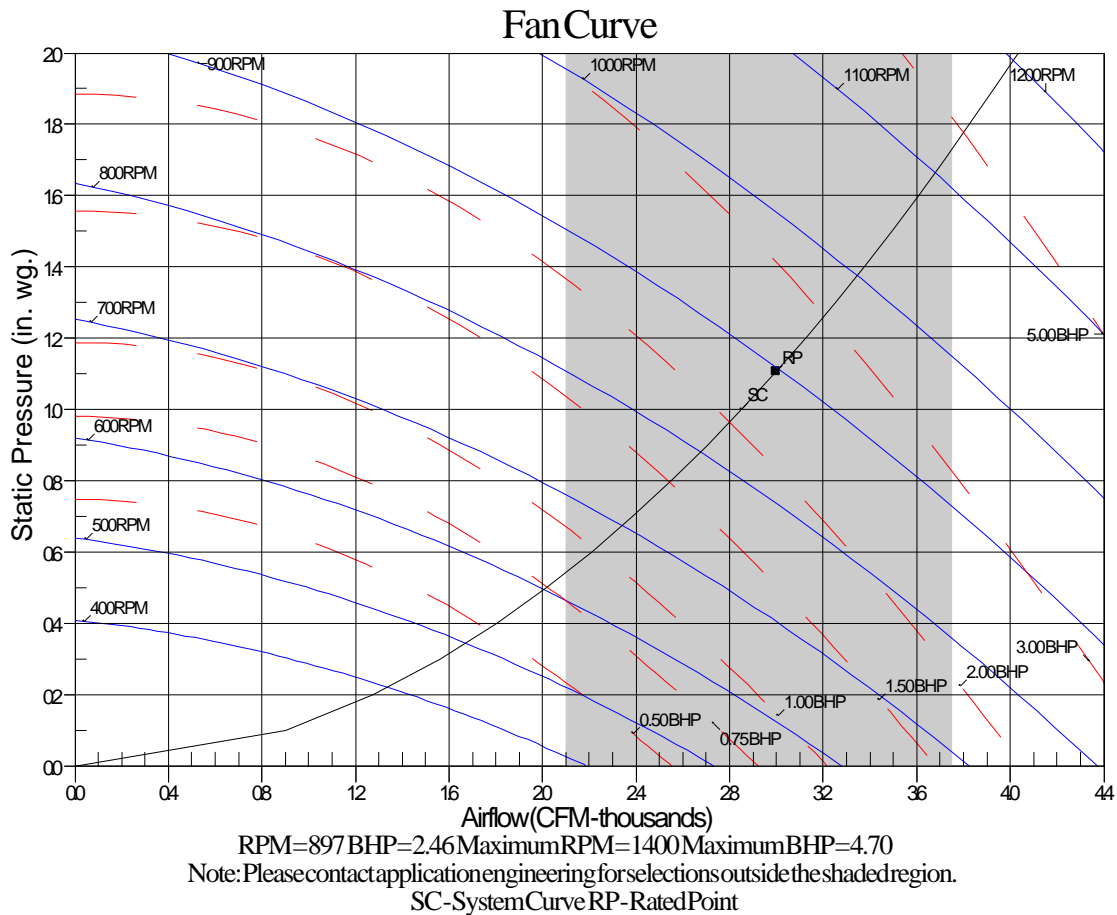
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C	57.7	50.2	48.6	47.0	44.6	40.6	38.0	34.3	59.4 Lp
D	31.5	34.1	40.0	43.8	44.6	41.8	39.0	33.2	49.6 LpA

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.



Unit Feature Sheet for 7.5 Ton

Project: TA Walton
Prepared By:

12/22/2022
10:24AM



WeatherMaker® – 48TC

PACKAGED ROOFTOP GAS HEATING/ELECTRIC COOLING UNITS
8, 7.5, 8.5, 10, 12.5, 16 TONS



Optional Louvered Hail Guard Shown



WEATHERMAKER SERIES

WeatherMaker (48TC) units are 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 AHRJ Standard 340/360 (07-16 sizes). WeatherMaker units are designed in accordance with UL Standard 1995, and listed by the Underwriters' Laboratories.

Approved and certified by:



Use of the AHRI Certified Tag Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahri-certified.org.

STANDARD FEATURES INCLUDE:

- Puron (R-410A) HFC refrigerant
- Single-stage/single-circuit cooling capacity control on 07 models
- Two-stage/two-circuit cooling capacity control on 08-16 models
- Two-stage/single circuit cooling capacity control on 08, 09, 12 models
- EER's up to 11.1
- ISEER's up to 12.8
- Energy Saving Staged Air Volume (SAV™) 2-speed indoor fan motor on two circuit (08-16) and 07 models. Required in U.S. installations. Not available or required to meet DOE on 48TC™ models 08, 09, 12.
- Scroll compressors with internal line break and overload protection
- Acculink™ and/or TXV refrigerant metering system
- Exclusive non-corrosive composite condensate pan in accordance with ASHRAE Standard 62, sloping design, side or center drain
- Standard cooling operation up to 115°F (46°C) and down to 40°F (4°C) - down to 25°F (-4°C) with winter start kit.
- Pre-painted exterior panels and primer-coated interior panels tested to 500 hours salt spray protection
- Exclusive IGC solid-state control for on-board diagnostics with LED error code designation burner control logic and energy saving indoor fan motor delay
- 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 door
- Central terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement

INSTALLATION FEATURES:

- Thru-the-bottom power entry capability
- Single point gas and electric connections
- Full perimeter base seal with built-in rigging adapters and fork slots
- Field convertible from vertical to horizontal airflow for slab mounting. (16 size models require field installed supply duct cover).

STANDARD WARRANTY:

- 10-year heat exchanger – 15-year stainless steel option
- 5-year compressor
- 1-year parts
- 3-year parts on Novation Condenser coils – where available
- Many optional upgrades also available

OPTIONS INCLUDE BUT ARE NOT LIMITED TO:

- PremierLink™ and RTU Open Multi-Protocol DDC Controls
- Supply and Return Air Smoke Detectors, high static motors
- Louvered condenser coil guards
- Economizer, disconnect and convenience outlet options
- Stainless Steel heat exchanger option
- Humidi-Mizer™ adaptive dehumidification system available on all models with RTPF condenser coils – Motor Master I controller included
- Hinged access panels
- Condensate overflow switch
- VFD field accessory display kit

For a complete list of options and accessories refer to the Product Data Catalog for this unit.