

Unit Report For 48TCED16A2A6-0A0G0_Submittal

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 Prepared By:

11/20/2019
 03:36PM

Unit Parameters

Unit Model:.....**48TCED16A2A6-0A0G0**
 Unit Size:.....**16 (15 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:.....**9' 7.875"**
 Unit Width:.....**5' 3.375"**
 Unit Height:.....**4' 9.375"**
 *** Total Operating Weight:.....**1473 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

Medium Static Option (Belt Drive)
 Al/Cu - Al/Cu
 Base Electromechanical Controls
 Standard Packaging
 2-Speed indoor fan motor controlled by VFD

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
48TCED16A2A6-0A0G0	Rooftop Unit	1
	Base Unit	
	Medium Static Option (Belt Drive)	
	Electromechanical control, No intake or exhaust option.	
	2 Speed Fan Controller (VFD)	

Certified Drawing for 48TCED16A2A6-0A0G0_Submittal

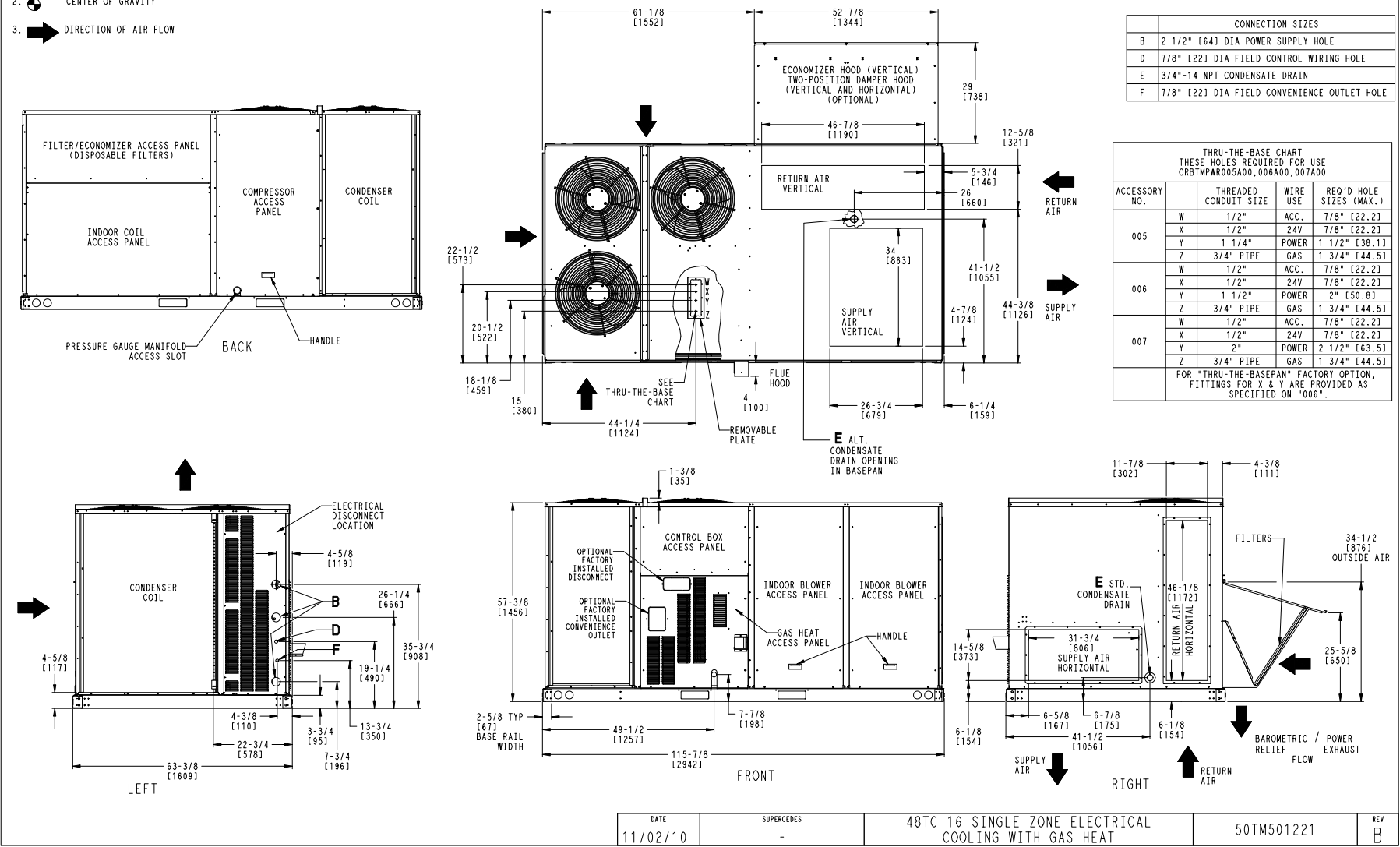
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NOTES:

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

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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 CRBTMPWRO05A00, 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	SUPERCEDES	48TC 16 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50TM501221	REV
11/02/10	-			B

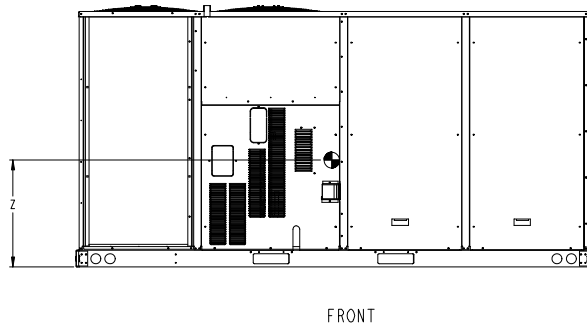
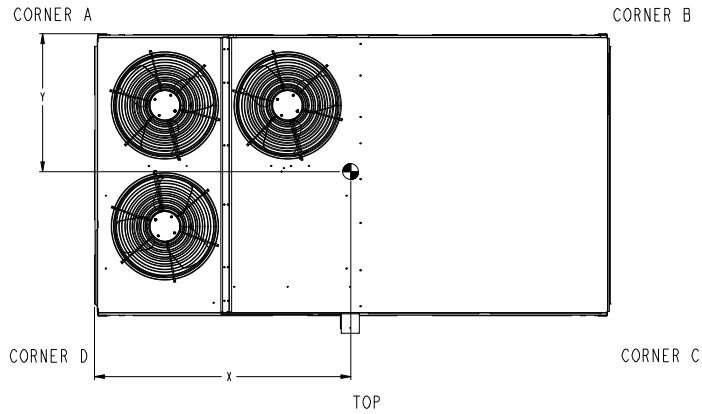
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UNIT	STD UNIT WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
48TC 16	1380	627	295	134	276	126	342	156	421	191	64 1/4 [1630]	35 [890]	21 1/8 [537]

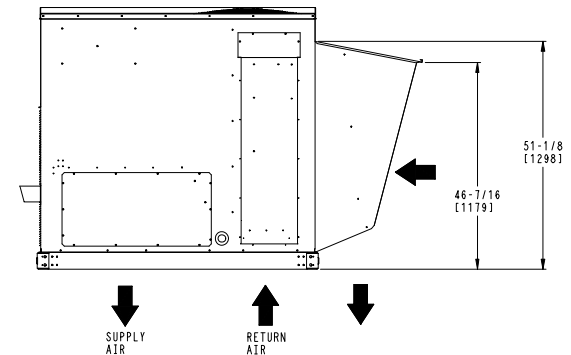
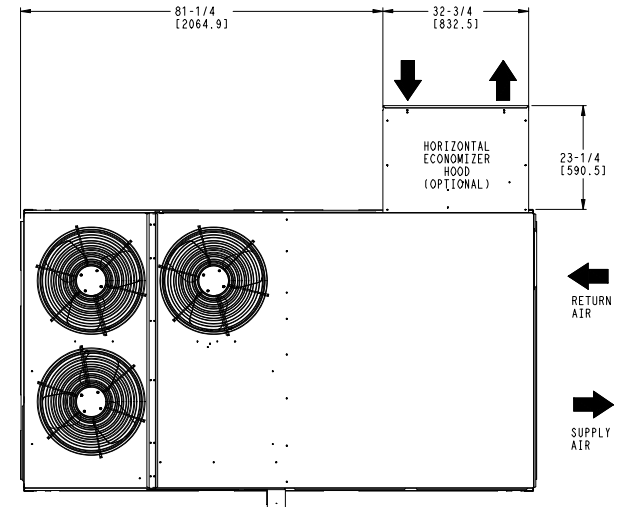
STANDARD UNIT WEIGHT IS WITH LOW HEAT & WITHOUT PACKAGING.
 FOR OPTIONS & ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.



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HORIZONTAL ECONOMIZER

DATE	SUPERCEDES	DESCRIPTION	REVISION
06/15/11	-	48TC 16 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50TM501221 C

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Service Clearance

C1057B

LOCATION	DIMENSION	CONDITION
A	48-in (1219 mm)	• Unit disconnect is mounted on panel
	18-in (457 mm)	• No disconnect, convenience outlet option • Recommended service clearance
	12-in (305 mm)	• Minimum clearance
B	42-in (1067 mm)	• Surface behind servicer is grounded (e.g., metal, masonry wall)
	36-in (914 mm)	• Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	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 5

Performance Summary For 48TCED16A2A6-0A0G0_Submittal

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Part Number:48TCED16A2A6-0A0G0

ARI EER:.....**10.80**
IEER:.....**12.4**

Base Unit Dimensions

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

Operating Weight

Base Unit Weight:.....**1380** lb
Medium Heat:.....**28** lb
Medium Static Option (Belt Drive):.....**45** lb
2 Speed Fan Controller (VFD):.....**20** lb

Total Operating Weight:.....**1473** lb

Unit

Unit Voltage-Phase-Hertz:.....**460-3-60**
Air Discharge:.....**Vertical**
Fan Drive Type:.....**Belt**
Actual Airflow:.....**6000** 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:.....**57.3** F
Evaporator Leaving Air Enthalpy:.....**24.59** BTU/lb
Gross Cooling Capacity:.....**184.78** MBH
Gross Sensible Capacity:.....**137.04** MBH
Compressor Power Input:.....**13.64** kW
Coil Bypass Factor:.....**0.198**

Heating Performance

Heating Airflow:.....**6000** CFM
Entering Air Temp:.....**70.0** F
Leaving Air Temp:.....**100.1** F
Gas Heating Input Capacity:.....**192.0 / 240.0** MBH
Gas Heating Output Capacity:.....**156.0 / 195.0** MBH
Temperature Rise:.....**30.1** F
Thermal Efficiency (%):.....**81.0**

Supply Fan

External Static Pressure:.....**0.50** in wg
Fan RPM:.....**682**
Fan Power:.....**2.56** BHP
NOTE:.....**Selected IFM RPM Range: 627 - 851**

Electrical Data

Voltage Range:.....**414 - 506**
Compressor #1 RLA:.....**12.2**
Compressor #1 LRA:.....**100**
Compressor #2 RLA:.....**12.8**
Compressor #2 LRA:.....**100**
Indoor Fan Motor Type:.....**MED**
Indoor Fan Motor FLA:.....**5.3**

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Combustion Fan Motor FLA (ea):.....	0.25
Power Supply MCA:.....	36
Power Supply MOCP (Fuse or HACR):.....	45
Disconnect Size FLA:.....	37
Disconnect Size LRA:.....	245
Electrical Convenience Outlet:.....	None
Outdoor Fan [Qty / FLA (ea)]:.....	3 / 0.8

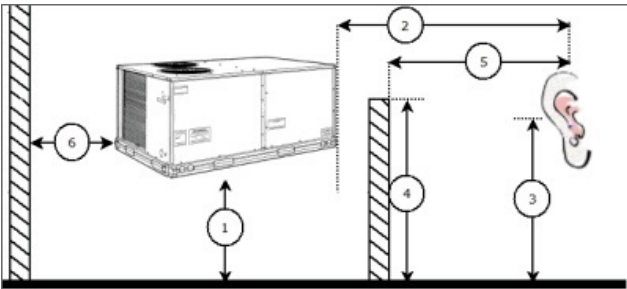
Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	96.0	92.6	87.0
125 Hz	96.2	86.3	85.2
250 Hz	81.6	66.0	84.6
500 Hz	77.9	66.9	84.9
1000 Hz	72.3	64.8	82.2
2000 Hz	67.4	61.5	78.4
4000 Hz	73.5	61.9	75.3
8000 Hz	71.9	59.4	72.9
A-Weighted	83.5	74.0	87.0

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	87.0	85.2	84.6	84.9	82.2	78.4	75.3	72.9	92.4 Lw
B	60.8	69.1	76.0	81.7	82.2	79.6	76.3	71.8	87.1 LwA
C	54.6	52.8	52.2	52.5	49.8	46.0	42.9	40.5	60.0 Lp
D	28.4	36.7	43.6	49.3	49.8	47.2	43.9	39.4	54.7 LpA

Legend

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- 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.

