Inspections Division
Date: 07/28/17

AIRTEMP INC.
MECHANICAL CONTRACTORS
20 THOMAS DRIVE
WESTBROOK, MAINE 04092
_207-774-2300_
207-874-2383 FAX

A COMFORT SYSTEMS USA COMPANY
QUALITY PEOPLE – BUILDING SOLUTIONS

SUBMITTAL

JOB: PORTLAND ELKS CLUB
DATE: 7/14/2017
LOCATION: 1945 CONGRESS STREET
MECHANICAL CONTRACTOR: AIRTEMP INC.
AIRTEMP JOB NUMBER: 896
****
AIRTEMP IS PLEASED TO SUBMIT THE FOLLOWING ITEM(S) FOR APPROVAL:

PAD MOUNTED RTU FOR BANQUET FACILITY

PLEASE RETURN .PDF OF REVIEWED SUBMITTAL TO US

Inspections Division
Date: 07/28/17

SUBMITTAL

Project

Elks Lodge

Date

Thursday, July 06, 2017

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Prepared By:

07/1
01:28PM

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Inspections Division

17.5 Ton Side Discharge

Tag Cover Sheet
Unit Report
Certified Drawing
Performance Report

Unit Report For 17.5 Ton Side Discharge

Project: Elks Lodge
Prepared By:

07/1 Date: 07/28/17
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Inspections Division

Unit Parameters

Unit Model: **580JP21D400A6L0AC**
Unit Size: **21 (17.5 Tons)**
Volts-Phase-Hertz: **208-3-60**
Heating Type: **Gas**
Duct Cfg: **Horizontal Supply / Horizontal Return**
400,000
Two Stage Compressor Models

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

Unit Length: **11' 9.5"**
Unit Width: **7' 2.375"**
Unit Height: **4' 1.375"**

*** Weights and Dimensions are approximate. Weight does not include roof curbs, unit packaging, field installed accessories or factory installed options. Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

Total Operating Weight: **2102** lb

Unit Configuration

Medium Static Option - Horizontal Models
Al/Cu - Al/Cu
Std Leak Enty Econo w/ bar relief & CO2.
Standard Packaging, electro mech. controls that require W7220 EconoMi$er X
Controls for economizer with W7220

Warranty Information

1-Year parts (std.)
5-Year on parts (std.)
10-Year aluminized heat exchanger (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
580JP21D400A6L0AC	Rooftop Unit	1
	Base Unit	
	Medium Static Option - Horizontal Models	
	Std Leak Enty Econo w/ bar relief & CO2.	

Certified Drawing for 17.5 Ton Side Discharge

Project: Elks Lodge
Prepared By:

UNITED TECHNOLOGIES CARRIER
P.O. BOX 4808
SYRACUSE, NY
13221

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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
580J-24	MCHX	1989	904	383	174	540	245	623	283	442	201	46 1/8 [1172]	82 7/8 [2105]	16 1/2 [419]
580J-28	MCHX	2118	963	408	186	575	261	664	302	471	214	46 1/8 [1172]	82 7/8 [2105]	19 [483]
580J-21	RTPF	2102	956	474	215	390	177	593	269	582	265	47 1/2 [1207]	71 1/4 [1810]	16 1/2 [419]
580J-24	RTPF	2072	942	558	254	548	249	479	217	487	221	40 5/32 [1020]	70 [1778]	16 1/2 [419]
580J-25	RTPF	2247	1021	540	246	556	253	598	272	581	264	44 5/8 [1133]	71 5/8 [1819]	19 [483]
580J-28	RTPF	2197	999	571	259	564	256	528	240	534	243	41 21/32 [1058]	70 1/4 [1784]	19 [483]

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

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

TOP

FRONT

SHEET	DATE	SUPERCEDES			REV
3 OF 3	10/16/13	10/26/10	580J 21-28 SINGLE ZONE ELECTRICAL COOLING WITH GAS HEAT	50HE501160	D

Performance Summary For 17.5 Ton Side Discharge

Project: Elks Lodge 07/1
Prepared By: 01:28PM

Part Number:580JP21D400A6L0AC

ARI EER:	**10.80**	
IEER:	**11.0**	
Base Unit Weight:	**2102**	lb
Base Unit Dimensions		
Unit Length:	**141.5**	in
Unit Width:	**86.4**	in
Unit Height:	**49.4**	in
Unit		
Unit Voltage-Phase-Hertz:	**208-3-60**	
Air Discharge:	**Horizontal**	
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 Heating Input Capacity:	**320.0 / 400.0**	MBH
Gas Heating Output Capacity:	**260.0 / 324.0**	MBH
Temperature Rise:	**42.9**	F
Thermal Efficiency (%):	**81.0**	
Supply Fan		
External Static Pressure:	**0.50**	in wg
Options / Accessories Static Pressure		
Economizer:	**0.07**	in wg
Power Exhaust:	**(Fan Data Includes Drop)**	
Total Application Static (ESP + Unit Opts/Acc.):	**0.57**	in wg
Fan RPM:	**835**	
Fan Power:	**4.53**	BHP
NOTE:	**Selected IFM RPM Range: 713 - 879**	
Power Exhaust		
Return Duct Static:	**0.20**	in wg
Max. Air to Exhaust:	**4650**	CFM
Electrical Data		
Voltage Range:	**187 - 253**	
Compressor #1 RLA:	**27.6**	
Compressor #1 LRA:	**191**	
Compressor #2 RLA:	**25**	
Compressor #2 LRA:	**164**	

Performance Summary For 17.5 Ton Side Discharge

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Indoor Fan Motor Type: **MED**
Indoor Fan Motor FLA: **13.6**
Combustion Fan Motor FLA (ea): **0.52**
Power Supply MCA: **90.9**
Power Supply MOCP (Fuse or HACR): **100**
Disconnect Size FLA: **97**
Disconnect Size LRA: **475**
Electrical Convenience Outlet: **None**
Power Exhaust [Motor Qty / FLA(ea motor)]: **2 / 5.9**
Outdoor Fan [Qty / FLA (ea)]: **4 / 1.5**

Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Rating: **84.0** db

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	90.6	90.1	92.2
125 Hz	83.5	73.4	83.9
250 Hz	76.4	68.4	80.4
500 Hz	76.3	61.6	81.8
1000 Hz	70.0	55.4	78.7
2000 Hz	68.6	50.8	76.5
4000 Hz	68.8	45.1	72.2
8000 Hz	59.4	33.1	65.4
A-Weighted	78.1	67.1	84.1

Advanced Acoustics

Advanced Accoustics 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	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

Performance Summary For 17.5 Ton Side Discharge

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D	33.6	35.4	39.4	46.2	46.3	45.3	40.8	31.9	51.7 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 = 835 BHP = 4.53 Maximum RPM = 1290 Maximum HP = 8.30
SC - System Curve RP - Rated Point