

**Report By:**

**National TAB  
1329 E. KEMPER ROAD  
SUITE 4210  
CINCINNATI, OH 45246**



**Report: Prelim Report  
Function: Test, Adjust, & Balance  
Date: 09/10/2024**

**PROJECT**  
**David's Bridal #32 (West Chester, OH)**

7676 Voice of American Centre Dr

West Chester, OH 45069

**Client**

Design Comfort Heating and Air LLC  
8063 Production Dr.  
Florence, KY 41042

# National TAB

Project: David's Bridal #32 (West Chester, OH)

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# National TAB

Project: David's Bridal #32 (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Serial Num	-	4721P03852
Model Num	NA	48TCED16H2M5
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23.5"X27"
Num PreFilter 1	-	6
PreFilter Size 1	-	16"X25"X2"

Test Data		
	Design	Actual
SF CFM	5005	3087
SF RPM	-	604
RA CFM	3865	2116
OA CFM	1140	982
RL Voltage	-	205.4/205.1/205.3
RL Amperage	-	9.89/9.81/9.65
OA Damper Position	-	4.35 VDC

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Motor Rpm	-	1750
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	10.8
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-1.27"
Fan Suction SP	-	-1.52"
Fan Discharge SP	-	0.64"
Total ESP	-	1.91"
Fan Total SP	-	2.16"

Drive Data	
	Actual
Motor Sheave Size	4.5"
Motor Bore Size	0.875"
Motor Sheave SetPt	1 TURN OUT
Fan Sheave Size	BK80X1 3/16
Fan Sheave Bore	BK80X1 3/16
Belt CL Distance	21"
Num of Belts	1
Belt Size	BX56

Completed By: Jordan Best on 09/10/2024

Notes:

- . AMPS READ WITH FAN DOOR OPEN
- . HIGH SPEED DOES NOT ENABLE WHEN CALLED FOR, UNABLE TO GET UNIT INTO HIGHEST SPEED

Written By: Jordan Best on 09/10/2024

# National TAB

Project: David's Bridal #32 (West Chester, OH)

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU-1/**

Asset						
Asset Name	Location	Type	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	SALES FLOOR	S1	450	156	179	39.8
1-2	SALES FLOOR	S1	500	182	209	41.8
1-3	SALES FLOOR	S1	270	145	166	61.5
1-4	SALES FLOOR	S1	450	188	216	48.0
1-5	SALES FLOOR	S1	265	187	215	81.1
1-6	SALES FLOOR	S1	400	169	194	48.5
1-7	SALES FLOOR	S1	400	204	234	58.5
1-8	SALES FLOOR	S1	270	141	162	60.0
1-9	SALES FLOOR	S1	450	262	301	66.9
1-10	SALES FLOOR	S1	450	243	279	62.0
1-11	SALES FLOOR	S1	450	335	385	85.6
1-12	SALES FLOOR	S1	100	67	77	77.0
1-13	SALES FLOOR	S1	100	66	76	76.0
1-14	SALES FLOOR	S1	100	120	138	138.0
1-16	SALES FLOOR	S1	350	223	256	73.1
<b>Total</b>			<b>5005</b>	<b>2688</b>	<b>3087</b>	<b>61.68%</b>

Completed By: Jordan Best on 09/10/2024

# National TAB

Project: David's Bridal #32 (West Chester, OH)

## System/Unit: AHU/RTU



Asset: RTU-2

AREA:

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Serial Num	-	4721P91417
Model Num	NA	48TCED12H2M5
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36"X21"
Num PreFilter 1	-	4
PreFilter Size 1	-	20"X20"X2"

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Motor Rpm	-	1750
Phase	-	3
Rated Voltage	-	230
Rated Amperage	-	9.2
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	4.5"
Motor Bore Size	0.875"
Motor Sheave SetPt	2 TURNS OUT
Fan Sheave Size	AK74-1
Fan Sheave Bore	AK74-1
Belt CL Distance	16.5"
Num of Belts	1
Belt Size	A49

Test Data		
	Design	Actual
SF CFM	3500	3339
SF RPM	-	837
RA CFM	2960	2747
OA CFM	540	592
RL Voltage	-	203.7/204.2/204.8
RL Amperage	-	9.25/9.85/9.53
OA Damper Position	-	3 VDC

Performance Data		
	Design	Actual
MA Plenum SP	-	-1.22"
Fan Suction SP	-	1.57"
Fan Discharge SP	-	0.51"
Total ESP	-	1.73"
Fan Total SP	-	2.08"

Completed By: Jordan Best on 09/10/2024

Notes:

. AMPS READ WITH FAN DOOR OPEN

Written By: Jordan Best on 09/10/2024

# National TAB

Project: David's Bridal #32 (West Chester, OH)

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU-2/**

Asset						
Asset Name	Location	Type	DESIGN CFM	CFM(1)	FINAL CFM	% to design
2-1	SALES FLOOR	S1	350	223	329	94.0
2-2	SALES FLOOR	S1	250	167	255	102.0
2-3	SALES FLOOR	S1	260	193	287	110.4
2-4	SALES FLOOR	S1	260	199	290	111.5
2-5	SALES FLOOR	S1	300	210	308	102.7
2-6	SALES FLOOR	S1	300	211	309	103.0
2-7	SALES FLOOR	S1	260	164	243	93.5
2-8	SALES FLOOR	S1	360	178	325	90.3
2-10	SALES FLOOR	S1	210	183	194	92.4
2-11	RESTROOM	S1	50	32	50	100.0
2-12	SALES FLOOR	S1	450	261	427	94.9
2-13	RESTROOM	S1	50	20	54	108.0
2-14	SALES FLOOR	S1	125	97	138	110.4
2-15	SALES FLOOR	S1	125	93	130	104.0
Total			3350	2231	3339	99.67%

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# National TAB

Project: David's Bridal #32 (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-3

AREA:

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Serial Num	-	4221C09097
Model Num	NA	48FCEA06H2M5
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	29.5"X15.5"
Num PreFilter 1	-	2
PreFilter Size 1	-	20"X25"X2"

Motor Data		
	Design	Actual
Phase	-	1
Rated Voltage	-	208
Rated Amperage	-	8.6

Test Data		
	Design	Actual
SF CFM	2000	1932
SF RPM	-	9.30 VDC
RA CFM	1755	1693
OA CFM	245	239
RL Voltage	-	206.3/207.3/206.1
RL Amperage	-	7.80/7.88/7.78
OA Damper Position	-	3.85 VDC

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.90"
Fan Suction SP	-	-1.19"
Fan Discharge SP	-	0.49"
Total ESP	-	1.39"
Fan Total SP	-	1.68"

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## AHU/RTU



**Diffuser Supply (GRD)**

**RTU-3/**

Asset						
Asset Name	Location	Type	DESIGN CFM	CFM(1)	FINAL CFM	% to design
3-1	BOH	S1	300	304	304	101.3
3-2	BOH	S1	300	302	302	100.7
3-3	BOH	S1	300	287	287	95.7
3-4	BOH	S1	350	335	335	95.7
3-5	BOH	S1	300	297	297	99.0
3-6	BOH	S1	300	262	262	87.3
3-7	BOH	S1	50	71	48	96.0
3-8	BOH	S1	100	74	97	97.0
Total			2000	1932	1932	96.6%

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Project: David's Bridal #32 (West Chester, OH)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Serial Num	-	4721P03852
Model Num	NA	48TCED16H2M5
Configuration	-	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	23.5"X27"
Num PreFilter 1	-	6
PreFilter Size 1	-	16"X25"X2"

Test Data		
	Design	Actual
SF CFM	5005	3087
SF RPM	-	604
RA CFM	3865	2116
OA CFM	1140	982
RL Voltage	-	205.4/205.1/205.3
RL Amperage	-	9.89/9.81/9.65
OA Damper Position	-	4.35 VDC

Motor Data		
	Design	Actual
Motor MFG	-	MARATHON
Frame	-	56HZ
Motor Rpm	-	1750
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	10.8
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-1.27"
Fan Suction SP	-	-1.52"
Fan Discharge SP	-	0.64"
Total ESP	-	1.91"
Fan Total SP	-	2.16"

Drive Data	
	Actual
Motor Sheave Size	4.5"
Motor Bore Size	0.875"
Motor Sheave SetPt	1 TURN OUT
Fan Sheave Size	BK80X1 3/16
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	Actual
Motor Sheave Size	4.5"
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Motor Sheave SetPt	2 TURNS OUT
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	Design	Actual
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System/Unit: AHU/RTU



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Num PreFilter 1	-	2
PreFilter Size 1	-	20"X25"X2"

Motor Data		
	Design	Actual
Phase	-	1
Rated Voltage	-	208
Rated Amperage	-	8.6

Test Data		
	Design	Actual
SF CFM	2000	1932
SF RPM	-	9.30 VDC
RA CFM	1755	1693
OA CFM	245	239
RL Voltage	-	206.3/207.3/206.1
RL Amperage	-	7.80/7.88/7.78
OA Damper Position	-	3.85 VDC

Performance Data		
	Design	Actual
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Fan Suction SP	-	-1.19"
Fan Discharge SP	-	0.49"
Total ESP	-	1.39"
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3-5	BOH	S1	300	297	297	99.0
3-6	BOH	S1	300	262	262	87.3
3-7	BOH	S1	50	71	48	96.0
3-8	BOH	S1	100	74	97	97.0
Total			2000	1932	1932	96.6%

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