

Report By:

National TAB



**Report: PRELIM**

**Function: Test, Adjust, & Balance**

**Date: 02/23/2026**

**Completed By: National TAB**

# PROJECT

## Queen City Sportsplex (Cincinnati, OH)

10765 Reading Road

Cincinnati, OH 45241

### Client

BACHMAN'S HVAC SOLUTIONS

4058 CLOUGH WOODS DR.

BATAVIA, OH

# National TAB

Project: Queen City Sportsplex (Cincinnati, OH)

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Project: Queen City Sportsplex (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:ROOF

Unit Data	
	Actual
MFG	VALENT
Serial Num	27537787
Model Num	VX-112-10I
Configuration	VERTICAL
Num OA Filters 1	4
OA Filter Size 1	20"X20"X2"
Num OA Filters 2	4
Num PreFilter 1	4
PreFilter Size 1	20" 24"X2"

Test Data		
	Design	Actual
SF CFM	3430	3212
SF RPM	-	NA
RA CFM	2371	2110
OA CFM	1059	1102
RL Voltage	480	474 VFD
RL Amperage	-	2.5 VFD
SF Motor Freq(HZ)	-	80.15
SF System SetPt	-	87%
OA Damper Position	-	33%

Motor Data	
	Actual
Phase	3
Rated Voltage	460
Rated Amperage	4.5

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.82"
Fan Discharge SP	-	1.31"
Fan Total SP	-	2.13"

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Project: Queen City Sportsplex (Cincinnati, OH)

## AHU/RTU



### Diffuser Supply (GRD)

#### RTU-1/ROOF

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	CORRIDOR 155	SR-4	12X4	170	184	161	94.7
1-2	CORRIDOR 155	SR-4	12X4	170	171	160	94.1
1-3	NEW VIEW DECK 202	SR-4	12X4	160	176	148	92.5
1-4	NEW VIEW DECK 202	SR-4	12X4	160	149	149	93.1
1-5	NEW VIEW DECK 202	SR-4	12X4	170	166	166	97.6
1-6	NEW VIEW DECK 202	SR-4	12X4	170	161	161	94.7
1-7	NEW VIEW DECK 202	SR-4	12X4	170	157	157	92.4
1-8	NEW VIEW DECK 202	SR-4	12X4	170	164	164	96.5
1-9	EX. VIEW DECK 202	SR-8	18X4	300	282	282	94.0
1-10	EX. VIEW DECK 202	SR-8	18X4	300	279	270	90.0
1-11	EX. VIEW DECK 202	SR-2	6X6	140	133	133	95.0
1-12	EX. VIEW DECK 202	SR-1	4X4	150	148	138	92.0
1-13	EX. VIEW DECK 202	SR-2	6X6	140	142	132	94.3
1-14	CORRIDOR 155	SR-8	18X4	250	237	233	93.2
1-15	CORRIDOR 155	SR-4	12X4	155	143	143	92.3
1-16	CORRIDOR 155	SR-8	18X4	250	238	238	95.2
1-17	CORRIDOR 155	SR-4	12X4	155	144	144	92.9
1-18	CORRIDOR 155	SR-8	18X4	250	233	233	93.2
Total				3430	3307	3212	93.64%

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Project: Queen City Sportsplex (Cincinnati, OH)

## System/Unit: Energy Recovery Unit



Asset: ERV-1

AREA:

Supply Unit Data	
	Actual
Manufacturer	VALENT
Model Number	VXE-312-74D
Serial Number	27537136
Configuration	VERTICAL
No. Pre Filters/Size	8/20"X24X2" & 4/16"X24"X2"

Exhaust Motor Data	
	Actual
Horsepower	3.0
Motor Rpm	1195
Phase	3
Voltage (rated)	480
Amperage (rated)	4.5

Supply Motor Data	
	Actual
Horsepower	5
Motor Rpm	1687
Phase	3
Voltage (rated)	480
Amperage (rated)	6.6

Exhaust Test Data		
	Design	Actual
Total CFM	6895	6302
Fan RPM	-	NA
VFD Speed	-	100%
RL Voltage	-	481 VFD
RL Amperage	-	3.15 VFD

Supply Test Data		
	Design	Actual
Total CFM	7950	8056
Fan RPM	-	NA
VFD Speed	-	39.87 HZ
RL Voltage	-	484 VFD
RL Amperage	-	4.5 VFD

Exhaust Performance Data		
	Design	Actual
Heat Wheel P.D.	-	0.74"

Supply Performance Data		
	Design	Actual
Suction S.P.	-	-1.26"
Discharge S.P.	-	0.78"
Total ESP	2.5	2.04"

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Project: Queen City Sportsplex (Cincinnati, OH)

## Energy Recovery Unit



### Diffuser Supply (GRD)

#### ERV-1/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
OA1-1	CORRIDOR	SR-3	8X6	100	92	92	92.0
OA1-2	CORRIDOR	SR-3	8X6	150	155	155	103.3
OA1-3	MENS RR 109	SR-9	18X8	580	562	562	96.9
OA1-4	WOMEN RR 111	SR-9	18X8	580	570	570	98.3
OA1-5	LOCKER RM 112	SR-6	12X10	450	422	422	93.8
OA1-6	RR 112A	SR-5	12X6	270	267	267	98.9
OA1-7	RR 113A	SR-5	12X6	270	258	258	95.6
OA1-8	LOCKER RM 113	SR-6	12X10	450	434	434	96.4
OA1-9	ZAMBONI 106	SR-7	14X8	300	287	287	95.7
OA1-10	CORR 102C	SR-10	27X8	815	798	798	97.9
OA1-11	ELEC RM 106	SR-13	12X6	300	288	288	96.0
OA1-12	LOCKER RM 112	CD-1	10	300	309	309	103.0
OA1-13	LOCKER RM 111	CD-1	10	300	304	304	101.3
OA1-14	HALL	SR-13	12X6	285	291	291	102.1
OA1-15	HALL	SR-3	8X6	150	157	157	104.7
OA1-16	JAN CLST 108	SR-3	8X6	150	164	164	109.3
OA1-17	CORR 155	SR-12	36X18	2500	2698	2698	107.9
Total				7950	8056	8056	101.33%

### Diffuser Ret/Exh (GRD)

#### ERV-1/

Asset								
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	FINAL CFM	% to design
E1-1	RR 203	ER-7	10	240	1		222	92.5
E1-2	RR 204	ER-7	10	240	1		227	94.6
E1-3	LOCKER RM 112	ER-4	10X10	225	1		203	90.2
E1-4	LOCKER RM 111	ER-4	10X10	225	1		205	91.1
E1-5	RR 157	ER-4	10X10	350	1		323	92.3
E1-6	JAN CLST 108	ER-2	8X8	250	1		228	91.2
E1-7	JAN CLST 107	ER-2	8X8	40	1		38	95.0
E1-8	ELEC RM 106	ER-3	10X8	375	1		347	92.5
E1-9	LOCKER RM 104	ER-8	8X10	255	1		230	90.2
E1-10	RR 104A	ER-3	10X10	320	1		289	90.3
E1-11	LOCKER RM 104	ER-8	8X10	255	1		239	93.7
E1-12	LOCKER RM 103	ER-8	8X10	255	1		232	91.0
E1-13	RR 103A	ER-3	10X10	320	1		289	90.3
E1-14	LOCKER RM 103	ER-8	8X10	255	1		233	91.4
E1-15	MENS RR 109	ER-5	18X10	690	1		632	91.6
E1-16	RR 110	ER-1	6X6	100	1		104	104.0
E1-17	WOMEN RR 111	ER-5	18X10	690	1		622	90.1
E1-18	LOCKER RM 112	ER-10	12X10	510	1		460	90.2
E1-19	RR 112A	ER-9	12X8	320	1		289	90.3
E1-20	RR 113A	ER-9	12X8	320	1		291	90.9
E1-21	LOCKER RM 113	ER-10	12X10	510	1		461	90.4
E1-22	ZAMBONI 106	ER-6	16X12	150	1		138	92.0
Total				6895		0	6302	91.4%