

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
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Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 04/03/2025
Completed By: National TAB

PROJECT

Newport Central Catholic (Newport, KY)

13 Carothers Rd

Newport, KY 41071

Client

Mechanical Optimizers
2145 Patterson Street
Cincinnati, OH 45214

National TAB

Project: Newport Central Catholic (Newport, KY)

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Project: Newport Central Catholic (Newport, KY)

System/Unit: AHU-DUAL FAN



Asset: RTU-2

AREA:313

UNIT DATA - SUPPLY		
	Design	Actual
Manufacturer	NA	VALENT
Model Number	NA	VX-112-10I-G-G1
Serial Number	-	23857669
No. Pre-Filters / Size (1)	-	20x20x2" / 4
No. Final Filters / Size (1)	-	20x20x4" / 4

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	BALDOR
Horsepower / RPM	2.0
Rated Volts / Phase	230
Rated Amperage / SF	6.8

TEST DATA - SUPPLY		
	Design	Actual
Total CFM	3000	3127
OA CFM	1100	1026
VFD Speed	-	60 HZ
RL Voltage	-	212
RL Amperage	-	5.5

PERFORMANCE DATA - SUPPLY		
	Design	Actual
Suction S.P.	-	-0.48
Discharge S.P.	-	0.92
Total S.P.	-	1.4
Total ESP	-	1.05

National TAB
 Project: Newport Central Catholic (Newport, KY)
AHU-DUAL FAN



Diffuser Supply (GRD)

RTU-2/313

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
2-1	311	CD	9	275	1	301	333	286	104.0
2-2	311	CD	9	275	1	353	345	279	101.5
2-3	311	CD	9	275	1	291	381	301	109.5
2-4	311	CD	9	275	1	371	326	292	106.2
2-5	310	CD	9	270	1	164	270	285	105.6
2-6	310	CD	9	270	1	264	277	277	102.6
2-7	310	CD	9	270	1	333	350	290	107.4
2-8	311	CD	9	280	1	267	277	305	108.9
2-9	311	CD	9	280	1	268	244	294	105.0
2-10	312	CD	9	270	1	136	200	256	94.8
2-11	313	CD	9	270	1	288	210	262	97.0
Total				3010		3036	3213	3127	103.89%

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: AHU-DUAL FAN



Asset: RTU-1A1

AREA:EXISTING GYM DUCT (NOT SHOWN)

UNIT DATA - SUPPLY		
	Design	Actual
Manufacturer	NA	VALENT
Model Number	NA	VXE-312-74D-30I-O-G1
Serial Number	-	23854508
No. Pre-Filters / Size (1)	-	16X20" / 12
No. Final Filters / Size (1)	-	20X20X2" / 12

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	BALDOR
Horsepower / RPM	5.0
Rated Volts / Phase	230
Rated Amperage / SF	13.2

TEST DATA - SUPPLY		
	Design	Actual
Total CFM	12000	10993
OA CFM	4500	4566
VFD Speed	-	60 HZ
RL Voltage	-	210/210/211
RL Amperage	-	10.5/11.1/10.9

PERFORMANCE DATA - SUPPLY		
	Design	Actual
Suction S.P.	-	-1.1
Discharge S.P.	-	1.75
Total S.P.	2.976	2.85
Total ESP	1.00	2.08

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: AHU-DUAL FAN



Asset: RTU-1B 1

AREA:EXISTING GYM DUCT (NOT SHOWN)

UNIT DATA - SUPPLY		
	Design	Actual
Manufacturer	NA	VALENT
Model Number	NA	VXE-312-74D-30I-O-G1
Serial Number	-	23854552
No. Pre-Filters / Size (1)	-	16X20" / 12
No. Final Filters / Size (1)	20X20X2"	20X20X2" / 12

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	BALDOR
Horsepower / RPM	5.0
Rated Volts / Phase	230
Rated Amperage / SF	13.2

TEST DATA - SUPPLY		
	Design	Actual
Total CFM	12000	11126
OA CFM	4500	4555
VFD Speed	-	60HZ
RL Voltage	-	212/213/211
RL Amperage	-	12.5/12.0/12.1

PERFORMANCE DATA - SUPPLY		
	Design	Actual
Suction S.P.	-	-1.08
Discharge S.P.	-	1.62
Total S.P.	2.976	2.7
Total ESP	1.00	1.89

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: AHU-DUAL FAN



Asset: DOAS-1

AREA:29

UNIT DATA - SUPPLY		
	Design	Actual
Manufacturer	NA	MUNTERS
Model Number	NA	PV-W15P-WPR
Serial Number	-	56774
No. Pre-Filters / Size (1)	-	10/20"x20"x2"
No. Pre-Filters / Size (2)	-	10/20"x20"x12"
No. Pre-Filters / Size (3)	-	
No. Final Filters / Size (1)	-	
No. Final Filters / Size (2)	-	
No. Final Filters / Size (3)	-	

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	
Horsepower / RPM	2@15/
Rated Volts / Phase	208/3
Rated Amperage / SF	2@39.37

DRIVE DATA - SUPPLY		
	Design	Actual
Motor Sheave Size / Bore	-	
Fan Sheave Size / Bore	-	
Belt CL Distance	-	
No. Belts / Size	-	

TEST DATA - SUPPLY		
	Design	Actual
Total CFM	11555	
OA CFM	11555	
Fan RPM	-	
VFD Speed	-	
RL Voltage	-	
RL Amperage	-	
Motor B.H.P.	-	

PERFORMANCE DATA - SUPPLY		
	Design	Actual
Static Pressure Stpt	-	
Suction S.P.	-	
Discharge S.P.	-	
Total S.P.	-	
Reheat Coil P.D.	-	
DX Coil P.D.	-	
Condenser Coil P.D.	-	
Chilled Water Coil P.D.	-	
Pre Heat Coil P.D.	-	
Final Filters P.D.	-	
Heat Wheel P.D.	-	
Pre-Filters P.D.	-	
Air Blender P.D.	-	
Total ESP	-	

UNIT DATA - EXHAUST/RETURN		
	Design	Actual
Manufacturer	-	
Model Number	-	
Serial Number	-	
No. Pre-Filters / Size (1)	-	8/20"x20"x2"
No. Pre-Filters / Size (2)	-	
No. Pre-Filters / Size (3)	-	
No. Pre-Filters / Size (4)	-	
No. Pre-Filters / Size (5)	-	
No. Pre-Filters / Size (6)	-	

MOTOR DATA - EXHAUST/RETURN	
	Actual
Motor MFG / FRAME	TECO WESTINGHOUSE
Horsepower / RPM	2@5/1800
Rated Volts / Phase	208/3
Rated Amperage / SF	2@12.2ea/1.15

DRIVE DATA - EXHAUST/RETURN		
	Design	Actual
Motor Sheave Size / Bore	-	
Fan Sheave Size / Bore	-	
Belt CL Distance	-	
No. Belts / Size	-	

TEST DATA - EXHAUST/RETURN		
	Design	Actual
Total CFM	9320	
Fan RPM	-	
VFD Speed	-	
RL Voltage	-	
RL Amperage	-	
Motor B.H.P.	-	

PERFORMANCE DATA - EXHAUST/RETURN		
	Design	Actual
Static Pressure Stpt	-	
Suction S.P.	-	
Discharge S.P.	-	
Total S.P.	-	
Heat Wheel P.D.	-	
Pre-Filters P.D.	-	
Total ESP	-	

Notes:
We are only setting airflow per M304:
OA 14,000 CFM
EA 11,215 CFM

Written By: Michael Gabbert on 07/18/2024

National TAB
Project: Newport Central Catholic (Newport, KY)
AHU-DUAL FAN



Diffuser Supply (GRD)

DOAS-1/29

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
D1-1	FLR 3 ROOM	EX-CD		450			-
D1-2	FLR 3 ROOM	EX-CD		450			-
D1-3	FLR 3 ROOM	SR-EX		325			-
D1-4	FLR 3 ROOM	DUCT (VRF-8)		35			-
D1-5	FLR 3 ROOM	DUCT (VRF-7)		20			-
D1-6	FLR 3 ROOM	SR-1		460			-
D1-7	FLR 3 ROOM	EX-CD		450			-
D1-8	FLR 3 ROOM	EX-CD		450			-
D1-9	FLR 3 HALL	SR-EX		445			-
D1-10	212			325			-
D1-11	213			425			-
D1-12	201			290			-
D1-13	215			425			-
D1-14	211			85			-
D1-15	214			325			-
D1-16	216			210			-
D1-17	217			460			-
D1-18	211			15			-
D1-19	LOBBY			95			-
D1-20	FLR 2 ROOM			25			-
D1-21	136			170			-
D1-22	ACADEMICS CLOSET			10			-
D1-23	ACADEMICS CLOSET			10			-
D1-24	ACADEMICS CLOSET			15			-
D1-25	121		4	10			-
D1-26	128			170			-
D1-27	127			325			-
D1-28	121			75			-
D1-29	126			325			-
D1-30	125			325			-
D1-31	123			35			-
D1-32	124			325			-
D1-33	49			50			-
D1-34	46			325			-
D1-35	MECH (WSHP-G-1)	DUCT		50			-
D1-36	CAFETERIA (EX-HP-13)	DUCT		965			-
D1-37	39			15			-
D1-38	KITCHEN CLOSET			15			-
D1-39	KITCHEN CLOSET			10			-
D1-40	CAFETERIA (EX-HP-14)	DUCT		965			-
D1-41	41			160			-
D1-42	41			160			-
D1-43	41			160			-
D1-44	CAFETERIA (EX-HP-15)	DUCT		965			-
D1-45	40			40			-
D1-46	40			20			-
D1-47	39			20			-
D1-48	38			30			-
D1-49	39			70			-
D1-50	38			15			-
D1-51	30			15			-
D1-52	39			30			-
D1-53	29			15			-
Total				11655	0	0	0%

Diffuser Ret/Exh (GRD)

Asset	
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Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
ED1-1	EG		150					-
ED1-2	EX-ER		760					-
ED1-3	EX-ER		760					-
ED1-4			2000					-
ED1-5	127		325					-
ED1-6			1000					-
ED1-7			1000					-
ED1-8			325					-
ED1-9			3000					-
Total			9320		0	0	0	0%

Asset	Notes	Date	Written By
ED1-4	BALANCE TO 2000 CFM PER M302	07/18/2024	Michael Gabbert
ED1-6	BALANCE RR TO 2000 CFM PER M301	07/18/2024	Michael Gabbert
ED1-7	BALANCE RR TO 2000 CFM PER M301	07/18/2024	Michael Gabbert

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: AHU-DUAL FAN



Asset: DOAS-2

AREA:GND FLR CLOSET

UNIT DATA - SUPPLY		
	Design	Actual
Manufacturer	NA	NA
Model Number	NA	NA
Serial Number	-	-
No. Pre-Filters / Size (1)	-	-
No. Pre-Filters / Size (2)	-	-
No. Pre-Filters / Size (3)	-	-
No. Final Filters / Size (1)	-	-
No. Final Filters / Size (2)	-	-
No. Final Filters / Size (3)	-	-

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	
Horsepower / RPM	
Rated Volts / Phase	
Rated Amperage / SF	

DRIVE DATA - SUPPLY		
	Design	Actual
Motor Sheave Size / Bore	-	-
Fan Sheave Size / Bore	-	-
Belt CL Distance	-	-
No. Belts / Size	-	-

TEST DATA - SUPPLY		
	Design	Actual
Total CFM	8000	
OA CFM	8000	
Fan RPM	-	-
VFD Speed	-	-
RL Voltage	-	-
RL Amperage	-	-
Motor B.H.P.	-	-

PERFORMANCE DATA - SUPPLY		
	Design	Actual
Static Pressure Stpt	-	-
Suction S.P.	-	-
Discharge S.P.	-	-
Total S.P.	-	-
Reheat Coil P.D.	-	-
DX Coil P.D.	-	-
Condenser Coil P.D.	-	-
Chilled Water Coil P.D.	-	-
Pre Heat Coil P.D.	-	-
Final Filters P.D.	-	-
Heat Wheel P.D.	-	-
Pre-Filters P.D.	-	-
Air Blender P.D.	-	-
Total ESP	-	-

UNIT DATA - EXHAUST/RETURN		
	Design	Actual
Manufacturer	-	-
Model Number	-	-
Serial Number	-	-
No. Pre-Filters / Size (1)	-	-
No. Pre-Filters / Size (2)	-	-
No. Pre-Filters / Size (3)	-	-
No. Pre-Filters / Size (4)	-	-
No. Pre-Filters / Size (5)	-	-
No. Pre-Filters / Size (6)	-	-

MOTOR DATA - EXHAUST/RETURN	
	Actual
Motor MFG / FRAME	
Horsepower / RPM	
Rated Volts / Phase	
Rated Amperage / SF	

DRIVE DATA - EXHAUST/RETURN		
	Design	Actual
Motor Sheave Size / Bore	-	-
Fan Sheave Size / Bore	-	-
Belt CL Distance	-	-
No. Belts / Size	-	-

TEST DATA - EXHAUST/RETURN		
	Design	Actual
Total CFM	7100	
Fan RPM	-	-
VFD Speed	-	-
RL Voltage	-	-
RL Amperage	-	-
Motor B.H.P.	-	-

PERFORMANCE DATA - EXHAUST/RETURN		
	Design	Actual
Static Pressure Stpt	-	-
Suction S.P.	-	-
Discharge S.P.	-	-
Total S.P.	-	-
Heat Wheel P.D.	-	-
Pre-Filters P.D.	-	-
Total ESP	-	-

Notes:
We are only setting airflow per M302:
OA 8,000 CFM
EA 7,100 CFM

Written By: Michael Gabbert on 07/18/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

AHU-DUAL FAN



Diffuser Supply (GRD)

DOAS-2/GND FLR CLOSET

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
D2-1	MATH CLOSET	DUCT (HP-4)	10X10	450			-
D2-2	109A	DUCT (HP)	10X10	450			-
D2-3	111A	DUCT (HP)	10X10	250			-
D2-4	MECHANICAL	DUCT (HP-7)	6	50			-
D2-5	MECH	DUCT (HP-15)	16X14	1315			-
D2-6	112A	DUCT (HP)	10X10	300			-
D2-7	108A	DUCT (HP)	10X10	250			-
D2-8	110A	DUCT (HP)	10X10	525			-
D2-9	MATH CLOSET	DUCT (HP-3)	10X10	520			-
D2-10	WEIGHT RM	CD	8X8	240			-
D2-11	117B	DUCT (HP-1)	8X6	215			-
D2-12	BLACK BOX CLOSET	DUCT (HP-2)	28X12	2150			-
Total				6715	0	0	0%

Diffuser Ret/Exh (GRD)

DOAS-2/GND FLR CLOSET

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
ED2-1	ER	8X8	55					-
ED2-2	ER	18X12	520					-
ED2-3	ER	8X8	75					-
ED2-4	ER	16X12	450					-
ED2-5	ER	14X10	375					-
ED2-6	ER	14X10	375					-
ED2-7	ER	14X14	400					-
ED2-8	ER	14X14	400					-
ED2-9	ER	8X8	80					-
ED2-10	RR	16X10	525					-
ED2-11	RR	30X12	2150					-
ED2-12	RR	12X8	240					-
ED2-13	RR	12X10	325					-
ED2-14	RR	14X10	445					-
ED2-15	RR	12X10	330					-
ED2-16	RR	14X10	445					-
Total			7190		0	0	0	0%

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-1-1

AREA:128

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV060
Serial Num	-	PU240526772
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	30X24X1"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Frame	-	NA
Horsepower	-	1.0
Motor Rpm	-	NA
Phase	-	1
Voltage	-	207
Amperage	-	6.5
Service Factor	-	1

Test Data		
	Design	Actual
SA CFM	2200	2316
SFAN RPM	-	NA
RL Voltage	-	207
RL Amperage	-	6.5
RA CFM	1600	1630

Performance Data		
	Design	Actual
Suction ESP	-	-1.04"
Discharge ESP	-	0.06"
Total ESP	0.44	1.10"

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-1-1/128

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
11-1	121	SR-1	14"X12"	300	307	327	109.0
11-2	126	SG-1	13"X10	250	201	242	96.8
11-3	126	SG-1	13"X10	250	184	252	100.8
11-4	126	SG-1	13"X10	250	164	234	93.6
11-5	126	SG-1	13"X10	250	114	267	106.8
11-6	128	SG-1	13"X10	300	403	283	94.3
11-7	121	SR-1	14"X12"	300	292	322	107.3
11-8	128	SG-1	13"X10"	300	358	389	129.7
Total				2200	2023	2316	105.27%

Diffuser Ret/Exh (GRD)

WSHP-1-1/128

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R11-1	RG-1	26"X16"	1000	2.13	788	986	986	98.6
R11-2	RG-2	26"X14"	600	1.81	814	644	644	107.3
Total			1600		1602	1630	1630	101.88%

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-1-3

AREA:124

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV030
Serial Num	-	ALPU240526782
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	20x20x1"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Frame	-	NA
Horsepower	-	1/3
Motor Rpm	-	NA
Phase	-	1
Voltage	-	208
Amperage	-	2.6
Service Factor	-	1

Test Data		
	Design	Actual
SA CFM	1000	956
SFAN RPM	-	NA
RL Voltage	-	208
RL Amperage	-	2.4
RA CFM	1000	905

Performance Data		
	Design	Actual
Suction ESP	-	-0.49
Discharge ESP	-	0.07
Total ESP	0.50	0.56

Completed By: Riley Frady on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-1-3/124

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
13-1	124	SG-1		250	310	233	93.2
13-2	124	SG-1		250	262	258	103.2
13-3	124	SG-1		250	201	226	90.4
13-4	124	SG-1		250	135	239	95.6
Total				1000	908	956	95.6%

Diffuser Ret/Exh (GRD)

WSHP-1-3/124

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R13-1	RG-1		1000		840	905	903	90.3
Total			1000		840	905	903	90.3%

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-1-4

AREA:127

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV030
Serial Num	-	SLPU240526775
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	20"X20"X1"

Motor Data		
	Design	Actual
Motor MFG	-	PABPST
Horsepower	-	1/3
Phase	-	1
Voltage	-	208
Amperage	-	2.6

Test Data		
	Design	Actual
SA CFM	1000	1047
SFAN RPM	-	SPEED TAP 1
RL Voltage	-	208
RL Amperage	-	1.6
RA CFM	1000	1047

Performance Data		
	Design	Actual
Suction ESP	-	-0.41"
Discharge ESP	-	0.11"
Total ESP	0.40	0.52"

Completed By: Gabe Merk on 08/07/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-1-4/127

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
14-1	127	SG-1		250	341	259	103.6
14-2	127	SG-1		250	349	273	109.2
14-3	127	SG-1		250	271	245	98.0
14-4	127	SG-1		250	213	270	108.0
Total				1000	1174	1047	104.7%

Diffuser Ret/Exh (GRD)

WSHP-1-4/127

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R14-1	RG-1		1000		1174	1174	1047	104.7
Total			1000		1174	1174	1047	104.7%

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-1-5

AREA:103

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV048
Serial Num	-	SLPU240526611
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	30x24x1"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	3/4
Phase	-	1
Voltage	-	208
Amperage	-	6.0

Test Data		
	Design	Actual
SA CFM	1650	2075
RL Voltage	-	207.9
RL Amperage	-	3.28
RA CFM	1650	1572

Performance Data		
	Design	Actual
Suction ESP	-	-0.38"
Discharge ESP	-	0.01"
Total ESP	0.50	0.39"

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-1-5/103

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
15-1	125	SR-1	12"X14"	250	437	325	130.0
15-2	125	SR-1	12"X14"	250	344	317	126.8
15-3	125	SR-1	12"X14"	250	258	328	131.2
15-4	125	SR-1	12"X14"	250	295	309	123.6
15-5	123	SG-1	13"X10"	225	218	285	126.7
15-6	123	SG-1	13"X10"	225	232	249	110.7
15-7	103	LAY IN	24"X24"	200	184	262	131.0
Total				1650	1968	2075	125.76%

Diffuser Ret/Exh (GRD)

WSHP-1-5/103

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R15-1	RG-1	26"X	1000	1	776		974	97.4
R15-2	RG-6	12"X14"	450	0.8	378		413	91.8
R15-3	RG-5	10"X10"	200	1	173		185	92.5
Total			1650		1327	0	1572	95.27%

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-2-1

AREA:211

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV060
Serial Num	-	SLPU240526675
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	1
Phase	-	1
Voltage	-	208
Amperage	-	7.6

Test Data		
	Design	Actual
SA CFM	2000	1995
RL Voltage	-	206.2
RL Amperage	-	7.43
RA CFM	2000	1887

Performance Data		
	Design	Actual
Suction ESP	-	-0.88"
Discharge ESP	-	0.20"
Total ESP	0.44	1.08"

Completed By: Jordan Best on 08/09/2024

Notes:
 . FAN SPEED SET TO TAP 1 ON MOTOR

Written By: Nick Payne on 11/13/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-2-1/211

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
21-1	211	SR-1	14"x12"	200	647	216	108.0
21-2	214	SG-1	13"X10"	250	97	253	101.2
21-3	214	SG-1	13"X10"	250	84	249	99.6
21-4	214	SG-1	13"X10"	250	67	233	93.2
21-5	214	SG-1	13"X10"	250	87	229	91.6
21-6	211	SR-1	14"x12"	200	463	217	108.5
21-7	216	SG-1	13"X10"	300	179	296	98.7
21-8	216	SG-1	13"X10"	300	201	302	100.7
Total				2000	1825	1995	99.75%

Diffuser Ret/Exh (GRD)

WSHP-2-1/211

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R21-1	RG-4	16"X16"	600	1.21	843	617	589	98.2
R21-2	RG-2	26"X14"	400	1.81	561	439	372	93.0
R21-3	RG-1	26"X16"	1000	1.81	672	895	926	92.6
Total			2000		2076	1951	1887	94.35%

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-2-3

AREA:212

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV036
Serial Num	-	SLPU240526621
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	0.5
Phase	-	1
Voltage	-	208
Amperage	-	4.1

Test Data		
	Design	Actual
SA CFM	1000	1070
RL Voltage	-	211.6
RL Amperage	-	2.11
RA CFM	1000	1001

Performance Data		
	Design	Actual
Suction ESP	-	-0.40"
Discharge ESP	-	0.10"
Total ESP	0.50	0.50"

Completed By: Jordan Best on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-2-3/212

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
23-1	212	SG-1	13"X10"	250	345	256	102.4
23-2	212	SG-1	13"X10"	250	309	269	107.6
23-3	212	SG-1	13"X10"	250	298	274	109.6
23-4	212	SG-1	13"X10"	250	287	271	108.4
Total				1000	1239	1070	107%

Diffuser Ret/Exh (GRD)

WSHP-2-3/212

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R23-1	RG-1	26"X16"	1000	2.13	1128	1098	1001	100.1
Total			1000		1128	1098	1001	100.1%

Completed By: Jordan Best on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-2-4

AREA:217

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV036
Serial Num	-	SLPU240526763
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	0.5
Phase	-	1
Voltage	-	208
Amperage	-	4.1

Test Data		
	Design	Actual
SA CFM	1000	1061
RL Voltage	-	207.5
RL Amperage	-	2.24
RA CFM	1000	991

Performance Data		
	Design	Actual
Suction ESP	-	-0.38"
Discharge ESP	-	0.23"
Total ESP	0.60	0.61"

Completed By: Jordan Best on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-2-4/217

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
24-1	217	SG-1	13"X10"	250	330	259	103.6
24-2	217	SG-1	13"X10"	250	337	271	108.4
24-3	217	SG-1	13"X10"	250	262	262	104.8
24-4	217	SG-1	13"X10"	250	224	269	107.6
Total				1000	1153	1061	106.1%

Diffuser Ret/Exh (GRD)

WSHP-2-4/217

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R24-1	RG-1	26"X16"	1000	2.13	1107	1107	991	99.1
Total			1000		1107	1107	991	99.1%

Completed By: Jordan Best on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-2-5

AREA:215

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV048
Serial Num	-	SLPU40526658
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Test Data		
	Design	Actual
SA CFM	1000	1378
RL Voltage	-	207.6
RL Amperage	-	3.88
RA CFM	1000	1313

Performance Data		
	Design	Actual
Suction ESP	-	-0.52"
Discharge ESP	-	0.47"
Total ESP	0.50	0.99"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	0.75
Phase	-	1
Voltage	-	208
Amperage	-	6.0

Completed By: Jordan Best on 08/09/2024

- Notes:
- . UNIT ABOVE DESIGN AT LOWEST FAN SPEED SETTING
 - . UNIT MOTOR LARGER THAN OTHERS WITH IDENTICAL DESIGN FLOW

Written By: Nick Payne on 11/13/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-2-5/215

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
25-1	215	SG-1	13"x10"	250	584	362	144.8
25-2	215	SG-1	13"x10"	250	321	338	135.2
25-3	215	SG-1	13"x10"	250	232	341	136.4
25-4	215	SG-1	13"x10"	250	243	337	134.8
Total				1000	1380	1378	137.8%

Diffuser Ret/Exh (GRD)

WSHP-2-5/215

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R25-1	RG-1	26"X16"	1000	2.13	1384		1313	131.3
Total			1000		1384	0	1313	131.3%

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-2-6

AREA:208

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV042
Serial Num	-	SLPU240526766
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Frame	-	NA
Horsepower	-	0.5
Motor Rpm	-	NA
Phase	-	1
Voltage	-	208
Amperage	-	4.1

Test Data		
	Design	Actual
SA CFM	1440	1354
RL Voltage	-	206.2
RL Amperage	-	3.56
RA CFM	1440	1305

Performance Data		
	Design	Actual
Suction ESP	-	-0.51"
Discharge ESP	-	0.32"
Total ESP	0.47	0.83"

Completed By: Jordan Best on 08/07/2024

Notes:
Speed 5

Written By: Nick Payne on 11/13/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-2-6/208

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
26-1	213	SG-1	13"X10"	250	183	228	91.2
26-2	211	SR-1	14"X12"	200	463	185	92.5
26-3	213	SG-1	13"X10"	250	102	231	92.4
26-4	213	SG-1	13"X10"	250	103	237	94.8
26-5	213	SG-1	13"X10"	250	128	238	95.2
26-6	208	SR-1	14"X12"	240	387	235	97.9
Total				1440	1366	1354	94.03%

Diffuser Ret/Exh (GRD)

WSHP-2-6/208

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R26-1	RG-3	14"X12'	200	0.72	342	194	180	90.0
R26-2	RG-3	14"X12"	240	0.72	226	244	220	91.7
R26-3	RG-1	16"X26"	1000	2.11	738	905	905	90.5
Total			1440		1306	1343	1305	90.62%

Completed By: Jordan Best on 08/07/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-2-7

AREA:136 CLOSET

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV048
Serial Num	-	SLPU240526799
Type	WATER SOURCE	WATER SOURCE HEAT PUMP
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	1
Phase	-	1
Voltage	-	230
Amperage	-	7.6

Test Data		
	Design	Actual
SA CFM	1950	1882
RL Voltage	-	210.3
RL Amperage	-	7.6
RA CFM	1600	1705

Performance Data		
	Design	Actual
Suction ESP	-	-0.93"
Discharge ESP	-	NA
Total ESP	0.50	NA

Completed By: Jordan Best on 08/08/2024

Notes:
Speed 5

Written By: Nick Payne on 11/13/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-2-7/136 CLOSET

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
27-1	136 CLOSET	SG-1		100	132	94	94.0
27-2	136 CLOSET	SG-1		75	115	81	108.0
27-3	136 CLOSET	SG-1		75	127	68	90.7
27-4	224	SG-1		320	209	291	90.9
27-5	224	SG-1		320	358	314	98.1
27-6	224	SG-1		320	234	316	98.8
27-7	224	SG-1		320	398	303	94.7
27-8	224	SG-1		320	289	308	96.3
27-9	224	SG-2		100	17	107	107.0
Total				1950	1879	1882	96.51%

Diffuser Ret/Exh (GRD)

WSHP-2-7/136 CLOSET

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
R27-1	RG-1	26"X16"	1600	2.14	1829	1705	1705	106.6
Total			1600		1829	1705	1705	106.56%

Completed By: Jordan Best on 08/07/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-G-1

AREA:46

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV036
Serial Num	-	SLPU240526661
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	0.5
Phase	-	1
Voltage	-	208
Amperage	-	4.1

Test Data		
	Design	Actual
SA CFM	1100	1165
RL Voltage	-	210.5
RL Amperage	-	2.31
RA CFM	1000	1167

Performance Data		
	Design	Actual
Suction ESP	-	-0.48"
Discharge ESP	-	0.24"
Total ESP	0.50	0.72"

Completed By: Jordan Best on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-G-1/46

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
G1-1	46	SR-1	12"X8"	250	257	261	104.4
G1-2	46	SR-1	12"X8"	250	242	258	103.2
G1-3	46	SR-1	12"X8"	250	229	244	97.6
G1-4	49	SG-2	24"X24"	100	128	134	134.0
G1-5	46	SR-1	12"X8"	250	283	268	107.2
Total				1100	1139	1165	105.91%

Diffuser Ret/Exh (GRD)

WSHP-G-1/46

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RG1-1	RG-2	26"X14"	1000	1.81	1167	1167	1167	116.7
Total			1000		1167	1167	1167	116.7%

Completed By: Jordan Best on 08/08/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-G-2

AREA:39

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV019
Serial Num	-	SLPU240526696
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	0.66
Phase	-	1
Voltage	-	208
Amperage	-	2.6

Test Data		
	Design	Actual
SA CFM	650	679
RL Voltage	-	205.2
RL Amperage	-	0.8
RA CFM	500	464

Performance Data		
	Design	Actual
Suction ESP	-	-0.34"
Discharge ESP	-	0.05"
Total ESP	0.50	0.39"

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-G-2/39

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
G2-1	36	SR-2	10"X10"	100	124	102	102.0
G2-2	50	SG-1	8"X8"	50	62	55	110.0
G2-3	39	SR-1	14"X12"	200	259	216	108.0
G2-4	38	SG-2	13"X8"	100	83	97	97.0
G2-5	39	SR-1	14"X12"	200	232	209	104.5
Total				650	760	679	104.46%

Diffuser Ret/Exh (GRD)

WSHP-G-2/39

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RG2-1	RR-1	14"X14"	400	0.87	287	365	365	91.3
RG2-2	RR-1	10"X10"	100	0.36	158	99	99	99.0
Total			500		445	464	464	92.8%

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Heat Pump



Asset: WSHP-G-3

AREA:39

Unit Data		
	Design	Actual
Unit MFG	NA	DAIKIN
Model Num	NA	WGCV036
Serial Num	-	SLPU240526797
Type	WATER SOURCE	WATER SOURCE
Configuration	VERTICAL	VERTICAL
Num Filters Size 1	-	1
Filter Size 1	-	29.625"X23.4375X.75"

Test Data		
	Design	Actual
SA CFM	900	958
RL Voltage	-	207
RL Amperage	-	2.76
RA CFM	750	755

Performance Data		
	Design	Actual
Suction ESP	-	-0.43"
Discharge ESP	-	0.52"
Total ESP	0.50	0.95"

Motor Data		
	Design	Actual
Motor MFG	-	ENDURA
Horsepower	-	0.5
Phase	-	1
Voltage	-	208
Amperage	-	4.1

Completed By: Jordan Best on 08/09/2024

Notes:

- . UNIT ABOVE DESIGN, OPERATING AT LOWEST FAN SPEED
- . UNIT BALANCED PROPORTIONATELY HIGH

Written By: Nick Payne on 11/13/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

Heat Pump



Diffuser Supply (GRD)

WSHP-G-3/39

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
G3-1	30	LAY IN	24"X24"	200	125	243	121.5
G3-2	29	EX-SG	10"X10"	100	199	115	115.0
G3-3	27	LAY IN	24"X24"	100	115	125	125.0
G3-4	39	SR-1	14"X12"	400	652	475	118.8
Total				800	1091	958	119.75%

Diffuser Ret/Exh (GRD)

WSHP-G-3/39

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RG3-1	RR-1	14"X12"	200	0.72	570	570	218	109.0
RG3-2	RR-2	10"X10"	100	0.36	111	111	101	101.0
RG3-3	RR-1	14"X12"	400	0.72	222	222	436	109.0
Total			700		903	903	755	107.86%

Completed By: Jordan Best on 08/09/2024

National TAB

Project: Newport Central Catholic (Newport, KY)

System/Unit: Water Tower



Asset: CT-1

AREA:FLR 2 ROOF

Unit Data		
	Design	Actual
MFG	NA	BALTIMORE AIRCOIL CO
Model Num	NA	VTL-245-P
Serial Num	-	

Test Data		
	Design	Actual
CW GPM	750	
EWT (F)	-	
LWT (F)	-	
Tower Water Pres Delta P	-	

National TAB

Project: Newport Central Catholic (Newport, KY)



Circuit Setter

HW CS/

Asset							
Asset Name	Size	Type	Design GPM	Setting	Delta P	Final GPM	% to Design
CS-1	0.75		9.0				-
CS-2	0.75		9.0				-
CS-3	0.50		4.5				-
CS-4	1.00		1.0				-
CS-5	0.75		7.5				-
CS-6	1.0		12.0				-
CS-7	0.75		7.5				-
CS-8	0.50		4.7				-
CS-9	1.0		12.0				-
CS-10	1.0		15.0				-
CS-11	0.75		9.0				-
CS-12	1.0		12.0				-
CS-13	0.75		9.0				-
CS-14	0.75		10.5				-
Total			122.7			0	0%