

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: RTU-1

AREA:109B

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	241610927D
Model Num	NA	YZJ180A3SAH02K2C0A1A
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	72"X18
Num PreFilter 1	-	8
PreFilter Size 1	-	20"X30"X2" / 20"X24"X2"

Test Data		
	Design	Actual
SF CFM	4500	4487
RA CFM	2500	2411
OA CFM	2000	2076
RL Voltage	208	209.5/-209.8/210.5
RL Amperage	-	5.15/7.38/8.84
OA Damper Position	-	25%
Brake Horse Power	-	2.42

Motor Data		
	Design	Actual
Horsepower	-	3
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.8

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.48"
Fan Suction SP	-	-0.67"
Fan Discharge SP	-	0.70"
Total ESP	1.66	1.18"
Fan Total SP	-	1.37"

Completed By: Jordan Best on 12/20/2024

Notes:

. Unit is equipped with 2 fan motors.

Written By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU-1/109B**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	109B	LSD-2	10	450	223	428	95.1
SGRD2	109B	LSD-2	10	450	454	421	93.6
SGRD3	109B	LSD-2	10	450	522	461	102.4
SGRD4	109B	LSD-2	10	450	372	409	90.9
SGRD5	109B	LSD-2	10	450	406	415	92.2
SGRD6	109B	LSD-2	10	450	401	411	91.3
SGRD7	109B	LSD-2	10	450	517	478	106.2
SGRD8	109B	LSD-2	10	450	599	489	108.7
SGRD9	109B	LSD-2	10	450	586	492	109.3
SGRD10	109B	LSD-2	10	450	531	483	107.3
Total				4500	4611	4487	99.71%

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: RTU-2

AREA:109B

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	241510959L
Model Num	NA	YHJ120A3SAH05KC2C0A1A
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38"x25"
Num PreFilter 1	-	6
PreFilter Size 1	-	16"X24"X2"

Test Data		
	Design	Actual
SF CFM	3500	3410
RA CFM	2450	2397
OA CFM	1050	1013
RL Voltage	208	209/210.3/209.8
RL Amperage	-	7.86/7.02/7.62
OA Damper Position	-	OA SET MANUALLY
Brake Horse Power	-	2.55

Motor Data		
	Design	Actual
Horsepower	-	3
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.8

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.48"
Fan Suction SP	-	-0.94"
Fan Discharge SP	-	0.62"
Total ESP	1.71	1.1"
Fan Total SP	-	1.56"

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU-2/109B**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	109B	LSD-1	10	350	336	322	92.0
SGRD2	109B	LSD-1	10	350	318	333	95.1
SGRD3	109B	LSD-1	10	350	240	317	90.6
SGRD4	109B	LSD-1	10	350	416	381	108.9
SGRD5	109B	LSD-1	10	350	363	354	101.1
SGRD6	109B	LSD-1	10	350	336	342	97.7
SGRD7	109B	LSD-1	10	350	316	321	91.7
SGRD8	109B	LSD-1	10	350	351	343	98.0
SGRD9	109B	LSD-1	10	350	322	336	96.0
SGRD10	109B	LSD-1	10	350	373	361	103.1
Total				3500	3371	3410	97.43%

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: AHU/RTU



Asset: RTU-3

AREA:109C

Unit Data		
	Design	Actual
MFG	NA	TRANE
Serial Num	-	240512448L
Model Num	NA	YZC060E3RZA2FK6C1A1A
Configuration	HORIZONTAL	HORIZONTAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38"X25"
Num PreFilter 1	-	4
PreFilter Size 1	-	16"X25"X2"

Motor Data		
	Design	Actual
Horsepower	-	1
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	3.3

Test Data		
	Design	Actual
SF CFM	1620	1171
RA CFM	920	458
OA CFM	700	713
RL Voltage	208	209.2/209.6/210.2
RL Amperage	-	1.13/1.17/1.15
OA Damper Position	-	5.079 VDC
Brake Horse Power	-	0.40

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.026"
Fan Suction SP	-	-0.096"
Fan Discharge SP	-	0.16"
Total ESP	1.00	0.186"
Fan Total SP	-	0.256"

Completed By: Jordan Best on 12/20/2024

Notes:

- . Unit VFD displays 0's while fan is running, unit read out in test mode. Suspect VFD has not been set up.
- . Unit below design @ highest speed (highest speed may increase after VFD set up)

Written By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU-3/109C**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	109C	SD-2	8	270	170	170	63.0
SGRD2	109C	SD-2	8	270	226	226	83.7
SGRD3	109C	SD-2	8	270	219	219	81.1
SGRD4	109C	SD-2	8	270	175	175	64.8
SGRD5	109C	SD-2	8	270	198	198	73.3
SGRD6	109C	SD-2	8	270	183	183	67.8
Total				1620	1171	1171	72.28%

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## System/Unit: AHU-DUAL FAN



Asset: DOAS-1

AREA:

UNIT DATA - SUPPLY		
	Design	Actual
Manufacturer	NA	TRANE
Model Number	NA	OABD108A3-C1B401KM
Serial Number	-	OA359283-1-1
No. Pre-Filters / Size (1)	-	2/20"X24"X2"
No. Pre-Filters / Size (2)	-	2/20"X24"X2"
No. Pre-Filters / Size (3)	-	2/20"X24"X2"

UNIT DATA - EXHAUST/RETURN		
	Design	Actual
Manufacturer	-	TRANE
Model Number	-	OABD108A3-C1B401KM
Serial Number	-	OA359283-1-1
No. Pre-Filters / Size (1)	-	2/20"X24"X2"
No. Pre-Filters / Size (2)	-	2/20"X24"X2"
No. Pre-Filters / Size (3)	-	2/20"X24"X2"

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	MARATHON/145T
Horsepower / RPM	3/3500
Rated Volts / Phase	208/3
Rated Amperage / SF	7.2/1.15

MOTOR DATA - EXHAUST/RETURN	
	Actual
Motor MFG / FRAME	MARATHON/145T
Horsepower / RPM	1-1/2/1750
Rated Volts / Phase	208/3
Rated Amperage / SF	4.8/1.15

TEST DATA - SUPPLY		
	Design	Actual
Total CFM	2150	1827
Fan RPM	-	2849
VFD Speed	-	48.85 HZ
RL Voltage	-	209.3/208.9/210.4
RL Amperage	-	7.2
Motor B.H.P.	-	3

TEST DATA - EXHAUST/RETURN		
	Design	Actual
Total CFM	2000	1995
Fan RPM	-	1516
VFD Speed	-	52 HZ
RL Voltage	-	210.7/209.3/211/3
RL Amperage	-	2.35
Motor B.H.P.	-	0.48

PERFORMANCE DATA - SUPPLY		
	Design	Actual
Suction S.P.	-	-1.24"
Discharge S.P.	-	0.40"
Total ESP	1.25	1.44"

PERFORMANCE DATA - EXHAUST/RETURN		
	Design	Actual
Suction S.P.	-	-0.60"
Total S.P.	-	0.60"
Heat Wheel P.D.	-	0.14"
Pre-Filters P.D.	-	0.16"

Completed By: Jordan Best on 12/20/2024

Notes:

- . Amps read from VFD
- . Unit was overramping when originally read, decreased set point to satisfy FLA, which left supply slightly under design.

Written By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## AHU-DUAL FAN



**Diffuser Supply (GRD)**

**DOAS-1/**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FC-100	100	DUCT	6	15	373	55	366.7
FC-101	101	DUCT	6	40		61	152.5
FC-102	102	DUCT	6	50		45	90.0
FC-103	103	DUCT	6	30		28	93.3
FC-104	104	DUCT	6	40		30	75.0
FC-105	105	DUCT	6	40		32	80.0
FC-106	106	DUCT	6	30		26	86.7
FC-113	113	DUCT	6	15		13	86.7
FC-114	114	DUCT	6	15		11	73.3
FC-115	115	DUCT	6	15		13	86.7
FC-116	116	DUCT	6	15		12	80.0
FC-117	117	DUCT	6	15		14	93.3
FC-119	119	DUCT	6	15		14	93.3
FC-201	201	DUCT	6	60	531		-
FC-204	204	DUCT	6	15		98	653.3
FC-205	205	DUCT	6	20		13	65.0
FC-206	206	DUCT	6	15		11	73.3
FC-207	207	DUCT	6	15		18	120.0
FC-208	208	DUCT	6	15		17	113.3
FC-209	209	DUCT	6	15		15	100.0
FC-210	210	DUCT	6	15		12	80.0
FC-212	212	DUCT	6	15		81	540.0
FC-214	214	DUCT	6	55		46	83.6
FC-215	215	DUCT	6	15		14	93.3
FC-216	216	DUCT	6	15		13	86.7
FC-218	218	DUCT	6	20		18	90.0
FC-219	219	DUCT	6	20		18	90.0
FC-221	220	DUCT	6	25		19	76.0
FC-224	224	DUCT	6	25		18	72.0
FC-225	225	DUCT	6	20		57	285.0
FC-300	300	DUCT	6	50	982	43	86.0
FC-301	301	DUCT	10	270		197	73.0
FC-302	302	DUCT	10	260		199	76.5
FC-303	303	DUCT	10	255		210	82.4
FC-304	304	DUCT	10	265		222	83.8
FC-306	300	DUCT	6	25			-
FC-222A 1	222A	DUCT	6	115		68	59.1
FC-222B 1	222B	DUCT	6	115		66	57.4
Total				2070	1886	1827	88.26%

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## System/Unit: Fan Coil



Asset: FC-101

AREA: LOBBY HALL

Unit Data		
	Design	Actual
MFG	NA	TRANE
Model Num	NA	TPEFY030MA144A
Serial Num	-	3ZR0216830P912
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.162
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.03

Test Data		
	Design	Actual
SFAN CFM	1020	771
Motor Speed SetPt	-	4/4
RL Voltage	208	209.7
RL Amperage	-	2.03
RA CFM	980	771
OA CFM	40	0

Performance Data		
	Design	Actual
Suction ESP	-	-0.32"
Discharge ESP	-	0.28"
Total ESP	-	0.60"

Completed By: Jordan Best on 12/19/2024

- Notes:
- . OA is not supplied directly to unit, diffuser supplied by DOAS installed near FCU.
  - . Unit below design, fan operating at highest speed. Diffusers balanced proportionately.

Written By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FC-101/LOBBY HALL**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	100	SG-1	12	510	514	397	77.8
SGRD2	100	SG-1	12	510	315	374	73.3
Total				1020	829	771	75.59%

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## System/Unit: Fan Coil



Asset: FC-108

AREA:108

Unit Data		
	Design	Actual
MFG	NA	TRANE
Model Num	NA	TPEFYP012MA144A
Serial Num	-	3ZR0617530P90W
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.114
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	0.89

Test Data		
	Design	Actual
SFAN CFM	370	396
Motor Speed SetPt	-	4/4
RL Voltage	208	209.7
RL Amperage	-	0.81
RA CFM	370	396
OA CFM	0	0

Performance Data		
	Design	Actual
Suction ESP	-	-0.14"
Discharge ESP	-	0.20"
Total ESP	-	0.34"

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FC-108/108**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	110	SG-2	6	50	77	52	104.0
SGRD2	108	SG-2	6	120	93	125	104.2
SGRD3	107	SG-3	8	200	188	219	109.5
Total				370	358	396	107.03%

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## System/Unit: Fan Coil



Asset: FC-120

AREA:120

Unit Data		
	Design	Actual
MFG	NA	TRANE
Model Num	NA	TPEFYP012MA144A
Serial Num	-	3ZR0617730P90W
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.114
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	0.89

Test Data		
	Design	Actual
SFAN CFM	305	321
Motor Speed SetPt	-	4/4
RL Voltage	208	209.2
RL Amperage	-	0.48
RA CFM	305	321
OA CFM	0	0

Performance Data		
	Design	Actual
Suction ESP	-	-0.072"
Discharge ESP	-	0.18"
Total ESP	-	0.25"

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FC-120/120**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	120	SD-1	6	155	117	141	91.0
SGRD2	121	SD-1	6	25	138	62	248.0
SGRD3	122	SD-1	6	125	112	118	94.4
Total				305	367	321	105.25%

Completed By: Jordan Best on 12/20/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## System/Unit: FAN - Exhaust



Asset: EF-1

AREA:

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Serial Num	-	173888399-0064
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	50	46
RL Voltage	115	115
RL Amperage	-	0.19

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Motor Rpm	688	700
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.19

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-2

AREA:

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SQ-120-X
Serial Num	-	23578449
Type	INLINE	INLINE

Test Data		
	Design	Actual
CFM	960	798
RL Voltage	115	115
RL Amperage	-	1.83
Total ESP	0.40	0.21"

Completed By: Jordan Best on 12/19/2024

Notes:

. Unit below design, not equipped with speed controller.

Written By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## FAN - Exhaust



### Diffuser Ret/Exh (GRD)

#### EF-2/

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF-2-EGRD1			60	1	450	63	63	105.0
EF-2-EGRD2			450	1	279	373	373	82.9
EF-2-EGRD3			450	1	76	362	362	80.4
Total			960		805	798	798	83.12%

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-3

AREA:

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Serial Num	-	
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	50	75
RL Voltage	115	115
RL Amperage	-	0.19

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Motor Rpm	688	700
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.19

Completed By: Jordan Best on 12/19/2024

Notes:

. Unit above design, not equipped with speed controller, unable to reduce fan speed.

Written By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-4

AREA:

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-B90-QD
Serial Num	-	173888399-0069
Type	CEILING	CEILING

Test Data		
	Design	Actual
CFM	50	55
RL Voltage	115	115
RL Amperage	-	0.17

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Motor Rpm	688	700
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.19

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-5

AREA:

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	G-090-VG
Serial Num	-	23578481
Type	CRE DNBLAST	CRE DNBLAST

Test Data		
	Design	Actual
CFM	560	607
RL Voltage	115	121
RL Amperage	-	1.28
Total ESP	0.40	-0.19"

Motor Data		
	Design	Actual
Motor MFG	-	VARI-GREEN
Motor Rpm	1529	1529
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.45

Completed By: Jordan Best on 12/19/2024

# National TAB

Project: Springer School Addition (Cincinnati, OH)

## FAN - Exhaust



**Diffuser Ret/Exh (GRD)**

**EF-5/**

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF-5-EGRD1			280	1	347	305	305	108.9
EF-5-EGRD2			280	1	351	302	302	107.9
Total			560		698	607	607	108.39%

Completed By: Jordan Best on 12/19/2024