

Report By:

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



**Report: test_1
Function: Test, Adjust, & Balance
Date: 06/07/2023**

PROJECT
Dayton Children's Hospital (Dayton, OH)
1 Childrens Plaza
Dayton, OH 45404

Client
Cinfab, LLC
5240 Lester Road
Cincinnati, OH 45213

National TAB

Project: Dayton Children's Hospital (Dayton, OH)

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: Boiler



Comfort. Under control.

Asset: BLR-26

AREA:PENTHOUSE

Unit Data		
	Design	Actual
MFG	NA	LOCHINVAR
Model Num	NA	FBN0751
Serial Num	-	2142 126561835

Test Data		
	Design	Actual
GPM	-	37.8

Completed By: Nick Payne on 12/23/2022

Notes: DESIGN GPM 35

Date: 01/13/2023

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: Boiler



Comfort. Under control.

Asset: BLR-27

AREA:PENTHOUSE

Unit Data

	Design	Actual
MFG	NA	LOCHINVAR
Model Num	NA	FBN1001
Serial Num	-	2142 126561833

Test Data

	Design	Actual
GPM	-	68.2

Completed By: Nick Payne on 12/23/2022

Notes: DESIGN GPM 70

Date: 01/13/2023

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: Boiler



Comfort. Under control.

Asset: BLR-28

AREA:PENTHOUSE

Unit Data		
	Design	Actual
MFG	NA	LOCHINVAR
Model Num	NA	FBN1001
Serial Num	-	2142 126561834

Test Data		
	Design	Actual
GPM	-	71.5

Completed By: Nick Payne on 12/23/2022

Notes: DESIGN GPM 70

Date: 01/13/2023

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: Chiller



Comfort. Under control.

Asset: CH-11

AREA:ROOF

Unit Data		
	Design	Actual
MFG	NA	YORK
Model Num	NA	YVAA0308EVB46BAVB
Serial Num	-	11552N13694871
Type	SCREW	CHILLER

Test Data-Evaporator		
	Design	Actual

Completed By: Nick Payne on 12/22/2022

Notes: No ports to sample pressure drop *

Date: 12/23/2022

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: Chiller



Comfort. Under control.

Asset: CH-12

AREA:ROOF

Unit Data

	Design	Actual
MFG	NA	YORK
Model Num	NA	YVAA0308EVV46BAVB
Serial Num	-	11552N13694870
Type	SCREW	SCREW

Test Data-Evaporator

	Design	Actual
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Completed By: Nick Payne on 12/23/2022

Notes: No ports to sample pressure drop *

Date: 12/23/2022

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Project: Dayton Children's Hospital (Dayton, OH)



Comfort. Under control.

Circuit Setter

HW CS/

Asset							
Asset Name	Size	Type	Design GPM	Setting	Delta P	Final GPM	% to Design
CS-1	4"	MANUAL	126.0	7.5	0.55	124.1	98.5
CS-2	4"	MANUAL	126.0	8.0	0.48	120.8	95.9

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Project: Dayton Children's Hospital (Dayton, OH)



Comfort. Under control.

Circuit Setter

CHW CS/

Asset							
Asset Name	Size	Type	Design GPM	Setting	Delta P	Final GPM	% to Design
CS1	3	MANUAL	82	8.0	0.313	77.71	94.8
CS2	3	MANUAL	83	8.0	0.327	79.39	95.7
CS3	3	MANUAL	82	8.0	0.317	78.14	95.2
CS4	3	MANUAL	83	8.0	0.346	81.66	98.4
CS5	3	MANUAL	82	8.0	0.366	83.98	102.4
CS6	3	MANUAL	83	8.0	0.404	88.23	106.3
CS7	3	MANUAL	82	8.0	0.372	84.72	103.3
CS8	3	MANUAL	83	8.0	0.375	85.04	102.4
CS9	3	MANUAL	82	8.0	0.399	87.81	107.1
CS10	3	MANUAL	83	8.0	0.349	82.1	98.9
CS11	3	MANUAL	82	8.0	0.391	86.81	105.9
CS12	3	MANUAL	83	8.0	0.376	85.10	102.5

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-169

AREA:6-4002

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	USF-24-5-B1-00-01-01
Serial Num	-	19420335
Type	-	UTILITY

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR RELIANCE
Frame	-	213T
Horsepower	7.5	7.5
Motor Rpm	1770	1770
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	9.5
Service Factor	-	1.15

Drive Data		
	Design	Actual

Test Data		
	Design	Actual
CFM	5290	5204
Fan RPM	1207	994
RL Voltage	-	452
RL Amperage	-	7.26
Suction ESP	-	-0.87"
Discharge ESP	-	0.12"
Total ESP	2.0"	0.99"
Brake Horse Power	-	2.55

Completed By: Tyler Youells on 12/14/2022

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Project: Dayton Children's Hospital (Dayton, OH)

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF-169/6-4002

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E169-1-1	K2	24"X12"	195	1	304		182	93.3
E169-1-2	K1	24"X12"	255	1	211		249	97.6
E169-1-3	K1	24"X12"	90	1	186		83	92.2
E169-1-4	K1	24"X12"	145	1	44		133	91.7
E169-1-5	K1	24"X12"	125	1	54		113	90.4
E169-1-6	K1	24"X12"	155	1	37		162	104.5
E169-1-7	K1	24"X12"	85	1	34		81	95.3
E169-1-8	K1	24"X12"	140	1	143		138	98.6
E169-1-9	K1	24"X12"	150	1	396		162	108.0
E169-2-1	K1	24"X12"	225	1	83		226	100.4
E169-2-2	K1	24"X12"	410	1	87		404	98.5
E169-2-3	K2	12"X24"	140	1	89		153	109.3
E169-2-4	K1	24"X12"	125	1	601		137	109.6
E169-2-5	K2	12"X12"	80	1	515		86	107.5
E169-2-6	K2	24"X24"	975	1	562		892	91.5
E169-2-7	K1	24"X12"	300	1	497		328	109.3
E169-3-1	K1	24"X12"	130	1	306		135	103.8
E169-3-2	K1	24"X12"	125	1	314		125	100.0
E169-3-3	K1	24"X12"	80	1	171		76	95.0
E169-3-4	K1	24"X12"	155	1	149		143	92.3
E169-3-5	K1	24"X12"	80	1	93		85	106.3
E169-3-6	K2	24"X12"	175	1	78		181	103.4
E169-3-7	K1	24"X12"	90	1	153		89	98.9
E169-4-1	K1	24"X12"	130	1	111		121	93.1
E169-4-2	K1	24"X12"	130	1	86		132	101.5
E169-4-3	K1	24"X12"	125	1	93		137	109.6
E169-4-4	K1	24"X12"	195	1	322		177	90.8
E169-4-5	K2	12"X12"	80	1	192		83	103.8
E169-4-6	K2	12"X12"	85	1	115		82	96.5
E169-4-7	K2	24"X12"	115	1	94		109	94.8

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-170

AREA:6-4400

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	USF-24-5-B1-00-01-01
Serial Num	-	19420342
Type	-	UTILITY

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR RELIANCE
Frame	-	215T
Horsepower	10.0	10
Motor Rpm	1770	1760
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	12.2
Service Factor	-	1.15

Drive Data		
	Design	Actual

Test Data		
	Design	Actual
CFM	7270	7162
Fan RPM	1440	1294
RL Voltage	-	278
RL Amperage	-	10.4
Suction ESP	-	-1.10"
Discharge ESP	-	0.28"
Total ESP	2.5"	1.38"
Brake Horse Power	-	5.63

Completed By: Tyler Youells on 11/28/2022

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Project: Dayton Children's Hospital (Dayton, OH)

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF-170/6-4400

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E170-1-1	K1	24"X12"	125	1	316		135	108.0
E170-1-2	K1	24"X12"	190	1	301		200	105.3
E170-1-3	K2	12"X12"	80	1	189		78	97.5
E170-1-4	K1	24"X12"	90	1	356		90	100.0
E170-1-5	K1	24"X12"	190	1	274		180	94.7
E170-1-6	K1	24"X12"	200	1	0		206	103.0
E170-1-7	K2	24"X12"	125	1	29		113	90.4
E170-1-8	K1	24"X12"	225	1	220		213	94.7
E170-1-9	K1	24"X12"	110	1	10		118	107.3
E170-2-1	K1	24"X12"	125	1	210		122	97.6
E170-2-2	K2	12"X12"	80	1	75		87	108.8
E170-2-3	K2	12"X12"	80	1	20		83	103.8
E170-2-4	K2	24"X12"	195	1	363		203	104.1
E170-2-5	K1	24"X12"	200	1	26		190	95.0
E170-2-6	K1	24"X12"	125	1	179		115	92.0
E170-2-7	K1	24"X12"	200	1	289		210	105.0
E170-2-8	K1	24"X12"	125	1	226		134	107.2
E170-2-9	K1	24"X12"	125	1	163		119	95.2
E170-2-10	K1	24"X12"	125	1	129		137	109.6
E170-2-11	K1	24"X12"	125	1	23		132	105.6
E170-2-12	K1	24"X12"	180	1	145		181	100.6
E170-3-1	K1	24"X12"	125	1	253		114	91.2
E170-3-2	K2	12"X12"	100	1	232		110	110.0
E170-3-3	K1	24"X12"	125	1	393		117	93.6
E170-3-4	K2	12"X24"	140	1	356		134	95.7
E170-3-5	K1	24"X12"	200	1	216		211	105.5
E170-3-6	K1	24"X12"	125	1	163		128	102.4
E170-3-7	G1	30"X12"	515	1	130		483	93.8
E170-3-8	K2	24"X12"	225	1	111		223	99.1
E170-3-9	K1	12"X24"	180	1	152		171	95.0
E170-3-10	K1	24"X24"	715	1	733		631	88.3
E170-3-11	K2	24"X12"	175	1	301		163	93.1
E170-4-1	K1	24"X12"	125	1	239		114	91.2
E170-4-2	K2	12"X12"	80	1	180		83	103.8
E170-4-3	K2	12"X12"	80	1	270		88	110.0
E170-4-4	K1	24"X12"	190	1	64		185	97.4
E170-4-5	K1	12"X24"	140	1	117		127	90.7
E170-4-6	K1	24"X12"	125	1	150		125	100.0
E170-4-7	K1	24"X12"	200	1	0		203	101.5
E170-4-8	K1	24"X12"	125	1	170		127	101.6
E170-4-9	K2	12"X12"	80	1	66		82	102.5
E170-4-10	K1	12"X24"	165	1	110		171	103.6
E170-4-11	K1	24"X12"	100	1	113		110	110.0
E170-4-12	K1	24"X12"	135	1	188		133	98.5
E170-4-13	K1	24"X12"	80	1	233		83	103.8

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-171

AREA:6-2403

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	CUE-130-7-VG-1-19-X
Serial Num	-	19235605
Type	-	UPBLAST CRE

Test Data		
	Design	Actual
CFM	1200	1288
RL Voltage	-	279.5
RL Amperage	-	3.55
Total ESP	1.0"	0.67"

Motor Data		
	Design	Actual
Motor MFG	-	VERI-GREEN
Frame	-	NL
Horsepower	0.75	0.75"
Motor Rpm	1725	1750
Phase	1	1
Voltage (rated)	277	277
Amperage (rated)	-	3.65
Service Factor	-	NL

Completed By: Tyler Youells on 01/05/2023

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Project: Dayton Children's Hospital (Dayton, OH)

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF-171/6-2403

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E171-2-1	K1	24"X24"	1200	1	1288		1288	107.3

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-172

AREA:6-4324

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	FJI-24-BI-X
Serial Num	-	19420346
Type	-	FUME

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	256T
Horsepower	20.0	20
Motor Rpm	1725	1765
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	24
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	6.5"
Motor Bore Size	-	1 5/8"
Motor Sheave SetPt	-	FIXED
Fan Sheave Size	-	6"
Fan Sheave Bore	-	1 15/16"
Belt CL Distance	-	19.5"
Num of Belts	-	4
Belt Size	-	BP56

Test Data		
	Design	Actual
CFM	7830	7732
Fan RPM	1807	1060
RL Voltage	-	219V
RL Amperage	-	10.1A
Suction ESP	-	-1.81
Discharge ESP	-	0.10"
Total ESP	6.0"	1.91"
Brake Horse Power	-	3.75

Completed By: Tyler Youells on 01/05/2023

National TAB

Project: Dayton Children's Hospital (Dayton, OH)

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF-172/6-4324

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E172-1-1	K1	24"X24"	400	1	588	410	410	102.5
E172-1-2	K1	24"X24"	400	1	414	387	387	96.8
E172-2-1	K1	24"X24"	400	1	26	379	379	94.8
E172-2-2	K1	24"X24"	400	1	303	401	401	100.3
E172-3-1	K1	24"X24"	400	1	450	423	423	105.8
E172-3-2	K1	24"X24"	400	1	539	415	415	103.8
E172-4-1	K1	24"X24"	400	1	483	405	382	95.5
E172-4-2	K1	24"X24"	400	1	365	378	392	98.0
E172-4-3	K1	24"X24"	400	1	492	408	428	107.0
E172-4-4	K1	24"X24"	275	1	394	288	258	93.8
E172-4-5	K1	12"X24"	150	1	306	144	141	94.0
E172-4-6	K1	24"X24"	275	1	273	251	259	94.2
E172-4-7	K1	24"X24"	545	1	642	596	537	98.5
E172-4-8	K1	24"X24"	450	1	542	455	465	103.3
E172-4-9	K1	24"X24"	275	1	553	284	265	96.4
E172-4-10	K1	24"X24"	420	1	961	443	419	99.8
E172-4-11	K1	24"X24"	220	1	428	237	202	91.8
E172-4-12	K1	24"X24"	320	1	603	342	304	95.0
E172-4-13	K1	24"X24"	220	1	469	206	234	106.4
E172-4-14	K1	24"X24"	320	1	341	343	305	95.3
E172-4-15	K1	24"X24"	320	1	241	324	299	93.4
E172-4-16	K1	24"X24"	440	1	399	465	427	97.0

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-174

AREA:6-6500

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SQ-130HP-VG-7-6
Serial Num	-	19235232
Type	-	INLINE

Test Data		
	Design	Actual
CFM	800	818
RL Voltage	-	278.1
RL Amperage	-	1.27
Total ESP	1.0"	0.32"

Motor Data		
	Design	Actual
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	0.75	0.75
Motor Rpm	1950	2200
Phase	1	1
Voltage (rated)	277	277
Amperage (rated)	-	4.35
Service Factor	-	NL

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Project: Dayton Children's Hospital (Dayton, OH)

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

EF-174/6-6500

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
E174-6-1	G1	10"X10"	400	1	561		412	103.0
E174-6-2	G1	10"X10"	400	1	534		406	101.5

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Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Supply



Comfort. Under control.

Asset: SAF-1

AREA:EAST STAIRWELL

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	BSQ-300HP-50
Serial Num	-	NOT ACCESSIBLE

Motor Data		
	Design	Actual
Motor MFG	-	NOT ACCESSIBLE
Frame	-	NOT ACCESSIBLE
Horsepower	5.0	5.0
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	7.6
Service Factor	-	NA

Drive Data		
	Design	Actual
Motor Sheave Size	-	NOT ACCESSIBLE
Motor Bore Size	-	NOT ACCESSIBLE
Fan Sheave Size	-	NOT ACCESSIBLE
Fan Sheave Bore	-	NOT ACCESSIBLE
Belt CL Distance	-	NOT ACCESSIBLE
Num of Belts	-	NOT ACCESSIBLE
Belt Size	-	NOT ACCESSIBLE

Test Data		
	Design	Actual
CFM	7000	6716
SF RPM	-	44.3HZ
RL Voltage	-	280 AVG
RL Amperage	-	3.31AVG
Suction ESP	-	-0.04"
Discharge ESP	-	0.13"
Total ESP	1.5"	0.17"
Brake Horse Power	-	2.18

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National TAB

Project: Dayton Children's Hospital (Dayton, OH)

System/Unit: FAN - Supply



Comfort. Under control.

Asset: SAF-2

AREA:WEST STAIRWELL

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SAF-118-30
Serial Num	-	19298383

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	182T
Horsepower	3.0	3.0
Motor Rpm	1725	1765
Phase	3	3
Voltage (rated)	460	460
Amperage (rated)	-	4.2
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP50
Motor Bore Size	-	1.25"
Fan Sheave Size	-	10"
Fan Sheave Bore	-	1"
Belt CL Distance	-	18"
Num of Belts	-	1
Belt Size	-	AX66

Test Data		
	Design	Actual
CFM	5000	4369
SF RPM	-	35.5HZ
RL Voltage	-	224AVG
RL Amperage	-	2.4AVG
Suction ESP	-	ATM
Discharge ESP	-	0.21"
Total ESP	1.00"	0.21"
Brake Horse Power	-	1.71

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