Report By:

Chetu Development
Test add 11
Test add 22
Noida, AL 44444

Report: Test

Function: Test, Adjust, & Balance

Date: 11/13/2023

PROJECT

CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

Test main street1

Noida, CA 28972

Client

Vipul Company

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ggfhghgfhfgdh, AZ 45545

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

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Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: AHU-DUAL FAN

Asset: RTU-1 AREA:

UNIT DATA - SUPPLY		
	Design	**Actual**
Manufacturer	NA	TRANE
Model Number	NA	SFHLF554M
Serial Number	-	C21L08590
No. Pre-Filters / Size (1)	-	9/24”x24”x2”
No. Pre-Filters / Size (2)	3/12”x24”x2”	3/12”x24”x2”
No. Final Filters / Size (1)	-	9/24”x24”x12”
No. Final Filters / Size (2)	-	3/12”x24”x12”

MOTOR DATA - SUPPLY		
	Design	**Actual**
Motor MFG / Frame	-	
Horsepower / RPM	-	20 /
Rated Volts / Phase	-	460 / 3
Rated Amperage / SF	-	27.00

TEST DATA - SUPPLY		
	Design	**Actual**
Total CFM	13200	
OA CFM	4700	
Fan RPM	1420	
VFD Speed	460	
RL Voltage	460	
RL Amperage	27.00	
Motor B.H.P.	16.74	

PERFORMANCE DATA - SUPPLY		
	Design	**Actual**
Static Pressure Stpt	-	
Suction S.P.	-	
Discharge S.P.	-	
Total S.P.	4.980	
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	-	TRANE
Model Number	-	SFHLF554M
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		
	Design	**Actual**
Motor MFG / FRAME	-	BALDOR / 215
Horsepower / RPM	-	10 / 1770
Rated Volts / Phase	-	460 / 3
Rated Amperage / SF	-	12.5

DRIVE DATA - EXHAUST/RETURN		
	Design	**Actual**
Motor Sheave Size / Bore	-	1B5V54 x 1-3/8”
Fan Sheave Size / Bore	-	12.5 x 1-15/16
Belt CL Distance	-	35”
No. Belts / Size	-	1 Bx89

TEST DATA - EXHAUST/RETURN		
	Design	**Actual**
Total CFM	8770	
Fan RPM	779	
VFD Speed	-	
RL Voltage	460	
RL Amperage	12.60	
Motor B.H.P.	6.28	

PERFORMANCE DATA - EXHAUST/RETURN		
	Design	**Actual**
Static Pressure Stpt	-	
Suction S.P.	-	
Discharge S.P.	-	
Total S.P.	1.5	
Heat Wheel P.D.	-	
Pre-Filters P.D.	-	
Total ESP	-	

VAV - Single Duct

RTU-1/

Asset							
VAV 1-24	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCCF06				COOL ONLY	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	200		200		0		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-1	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	426	130		210	216	1.13
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-2	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF10				HEAT	10
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	990	988	330		419	410	1.00
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-3	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF10				HEAT	10
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	990	998	370		489	501	0.98
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-4	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8

	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	545	557	200		200	205	0.99
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-5	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	700	678	120		210		0.78
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-7	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	250	257	120		210	204	0.78
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-8	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	450	425	230		230	232	0.91
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-9	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	700	678	160		419	425	0.87
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-10	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	450	418	105		245	252	0.77
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**

	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 1-11	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF08				HEAT	8
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	230	216	105		157	145	0.93
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 1-12	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF10				HEAT	10
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	840	838	630		630	620	0.99
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 1-13	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF14				HEAT	14
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	1740		630		978		0.98
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 1-14	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF14				HEAT	14
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	1575		1570		1570		0.99
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 1-15	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF06				HEAT	6
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	165		130		166		
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 1-16	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size

	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	230		94		124		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-17	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	220		80		124		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-18	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF12				HEAT	12
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350		240		540		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-19	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	300		140		187		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-20	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	200		60		124		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-21	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	210		100		124		

	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-22	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF10				HEAT	10
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	925		300		489		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 1-23	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	600		200		200		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			

Diffuser Ret/Exh (GRD)

RTU-1/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
R1-1	NA	NA	R1	8	23	7						-
R1-2	NA	NA	R1	8	58	77						-
R1-3	NA	NA	R1	6	7	7						-
R1-4	NA	NA	R1	12	7	7						-
R1-5	NA	NA	R1	12	7	7						-
R1-6	NA	NA	R1	8	7	7						-
R1-7	NA	NA	R2	6	7	8						-
R1-8	NA	NA	R1	6	7	8						-
R1-9	NA	NA	R1	8	7	8						-
R1-10	NA	NA	R2	6	8	8						-
R1-11	NA	NA	R2	6	8	8						-
R1-12	NA	NA	R2	6	8	8						-
R1-13	NA	NA	R2	6	7	8						-
R1-14	NA	NA	R1	12	8	8						-
R1-15	NA	NA	R1	8	78	8						-
R1-16	NA	NA	R4	8	8	8						-
R1-17	NA	NA	R4	8	7	8						-
R1-18	NA	NA	R4	8	8	8						-
R1-19	NA	NA	R4	8	778	8						-
R1-20	NA	NA	R4	8	45	8						-
R1-21	NA	NA	R1	12	54	8						-
R1-22	NA	NA	R1	8	54	8						-
R1-23	NA	NA	R1	14	45	8						-
R1-24	NA	NA	R1	6	9	8						-
R1-25	NA	NA	R1	12	89	8						-
R1-26	NA	NA	R1	12	9	8						-
R1-27	NA	NA	R1	10	8	8						-
R1-28	NA	NA	R1	6	7	8						-
R1-29	NA	NA	R1	10	6	8						-
R1-30	NA	NA	R1	6	6	8						-
R1-31	NA	NA	R1	8	4	8						-
R1-32	NA	NA	R2	10	34	8						-
R1-33	NA	NA	R1	8	23	8						-
R1-34	NA	NA	R1	32	2	8						-
R1-35	NA	NA	R1	33	23	8						-
R1-36	NA	NA	R1	2	6	8						-
R1-37	NA	NA	R1	3	35	8						-
R1-38	NA	NA	R3	4	5	8						-
R1-39	NA	NA	R1	5	6	8						-
Total					1518			0		0	0	0%

Diffuser Supply (GRD)

VRH 1-1/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
1-01-1	1AM008		206	-
1-01-2	1AM008		220	-
Total			426	

VRH 1-2/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
1-02-1	1AM009		318	-
1-02-2	1AM010		322	-
1-02-3	1AM011		348	-
Total			988	

VRH 1-3/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-03-1	1AM012		345	-
1-03-2	1AM013		330	-
1-03-3	1AM014		322	-
Total			997	

VRH 1-4/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-04-1	1AM003		193	-
1-04-2	1AM016		132	-
1-04-3	1AM016		232	-
Total			557	

VRH 1-5/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-05-1	1AM007-1			
Total			0	

VRH 1-7/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-07-1	1AM002		103	-
1-07-2	1AM001		154	-
Total			257	

VRH 1-8/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-08-1	1RH011		135	-
1-08-2	1RH009		138	-
1-08-3	1S000		72	-
1-08-4	1RH012		44	-
1-08-5	1RH010		36	-
Total			425	

VRH 1-9/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-09-1	1RH008-1		130	-
1-09-2	1RH008-1		141	-
1-09-3	1RH008-1		139	-
1-09-4	1RH008-1		137	-
1-09-5	1RH008-1		131	-
Total			678	

VRH 1-10/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-10-1	1RH006		214	-
1-10-2	1RH006		204	-
Total			418	

VRH 1-11/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-11-1	1RH005		135	-
1-11-2	1RH013		81	-
Total			216	

VRH 1-12/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-12-1	1RH003		108	-
1-12-2	1RH003		125	-
1-12-3	1RH003		129	-
1-12-4	1RH003		115	-
1-12-5	1RH004		112	-
1-12-6	1RH004		132	-
1-12-7	1RH004		117	-
Total			838	

VRH 1-13/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-13-1	1DI002			
1-13-2	1DI002			
1-13-3	1DI001-1			
1-13-4	1DI001-1			
1-13-5	1DI001-1			
Total			0	

VRH 1-14/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-14-1	1DI003			
1-14-2	1DI004			
1-14-3	1DI003			
1-14-4	1DI003			
Total			0	

VRH 1-15/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-15-1	1DI013			
1-15-2	1DI012			
Total			0	

VRH 1-16/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-16-1	1DI011			
1-16-2	1DI016			
1-16-3	1DI016			
Total			0	

VRH 1-17/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-17-1	1DI008			
1-17-2	1DI007			
1-17-3	1DI009			
1-17-4	1DI009			
Total			0	

VRH 1-18/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-18-1	1RH018			
1-18-2	1RH018			
Total			0	

VRH 1-19/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-19-1	1RH019			
1-19-2	1RH019			
Total			0	

VRH 1-20/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-20-1	1EG008			
1-20-2	1EG007			
Total			0	

VRH 1-21/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-21-1	1EG010			
Total			0	

VRH 1-22/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-22-1	1RH001			
1-22-2	1RH001			
1-22-3	1RH001			
1-22-4	1RH001			
1-22-5	1RH001			
1-22-6	1RH001			
1-22-7	1RH001			
Total			0	

VRH 1-23/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-23-1	1EG015			
1-23-2	1EG015			
Total			0	

VAV 1-24/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
1-24-1	1EG004			
Total			0	

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: AHU-DUAL FAN

Asset: RTU-2 AREA:

UNIT DATA - SUPPLY		
	Design	**Actual**
Manufacturer	NA	TRANE
Model Number	NA	SFHLF704M
Serial Number	-	C21L08591
No. Pre-Filters / Size (1)	-	
No. Pre-Filters / Size (2)	-	
No. Final Filters / Size (1)	-	
No. Final Filters / Size (2)	-	

MOTOR DATA - SUPPLY		
	Design	**Actual**
Motor MFG / Frame	-	
Horsepower / RPM	-	30 /
Rated Volts / Phase	-	460 / 3
Rated Amperage / SF	-	20.50 ea

TEST DATA - SUPPLY		
	Design	**Actual**
Total CFM	14900	
OA CFM	3800	
Fan RPM	1598	
VFD Speed	-	
RL Voltage	460	
RL Amperage	20.50	
Motor B.H.P.	25.31	

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	-	TRANE
Model Number	-	SFHLF704M

MOTOR DATA - EXHAUST/RETURN		
	Design	**Actual**
Motor MFG / FRAME	-	BALDOR / 254
Horsepower / RPM	-	15 / 1765
Rated Volts / Phase	-	460 / 3
Rated Amperage / SF	-	18.00

DRIVE DATA - EXHAUST/RETURN		
	Design	**Actual**
Motor Sheave Size / Bore	-	2B5V44 x 1-5/8
Fan Sheave Size / Bore	-	12” x 1-15/16”
Belt CL Distance	-	39”
No. Belts / Size	-	2 / Bx98

TEST DATA - EXHAUST/RETURN		
	Design	**Actual**
Total CFM	12800	
Fan RPM	717	
VFD Speed	460	
RL Voltage	460	
RL Amperage	18.00	
Motor B.H.P.	8.25	

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	-	

VAV - Single Duct

RTU-2/

Asset							
VRH 2-1	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF16				HEAT	16
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	2100		1200		1258		0.99
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-2	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF10				HEAT	10
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	920	938	440	447	489	510	1.03
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-3	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF08				HEAT	8
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	300		200		200		
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-4	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF06				HEAT	6
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	230	235	90	92	124	122	0.88
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-7	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF10				HEAT	10

	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	930	914	470	456	489	487	.98
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-8	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	351	180	186	210	208	1.03
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-9	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	353	180	181	210	213	0.99
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-10	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	348	180	178	210	216	1.15
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-11	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	358	180	189	210	216	1.04
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-12	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	322	180	185	210	215	0.95
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**

	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
	MFG	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	355	180	183	210	209	1.02
VRH 2-13	**Ak (min)**	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
	MFG	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	321	180	186	210	205	1.04
VRH 2-14	**Ak (min)**	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
	MFG	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	420	395	210	214	210	215	1.06
VRH 2-15	**Ak (min)**	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
	MFG	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	300	285	100	106	166	163	0.87
VRH 2-16	**Ak (min)**	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
	MFG	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	570		290		290		
VRH 2-17	**Ak (min)**	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-18	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**

	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	289	120	128	210	204	0.91
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-19	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	398	200	198	210	211	1.05
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-20	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	401	200	198	210	206	1.00
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-21	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	410	200	193	210	210	1.01
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-22	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	430		220		220		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-23	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF10				HEAT	10
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	740		380		380		

	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-24	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF12				HEAT	12
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	1260	1296	630	692	630	652	1.11
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-25	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF06				HEAT	6
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	350	341	180	172	210	212	0.98
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-26	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF06				HEAT	6
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	350	340	180	173	210	218	1.1
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-27	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF06				HEAT	6
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	350	318	180	174	210	215	0.93
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 2-28	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF06				HEAT	6
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	350	337	180	164	210	209	1.05
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			

VRH 2-29	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	337	180	175	210	201	1.03
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-30	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	320	180	182	210	215	1.04
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-31	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	350	320	180	190	210	216	1.32
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 2-32	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	200	186	100	102	100	103	0.95
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			

Diffuser Ret/Exh (GRD)

RTU-2/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
R2-1	NA	NA	R1	12	122			34				-
R2-2	NA	NA	R1	12	12			323				-
R2-3	NA	NA	R1	3	100			32				-
R2-4	NA	NA	R1	34	100			3				-
R2-5	NA	NA	R1	4	100			3				-
R2-6	NA	NA	R1	56	100			34				-
R2-7	NA	NA	R1	6	50			43				-
R2-8	NA	NA	R1	7	50			34				-
R2-9	NA	NA	R1	7	350			344				-
R2-10	NA	NA	R1	6	350			3				-
R2-11	NA	NA	R1	5	350			344				-
R2-12	NA	NA			350			34				-
R2-13	NA	NA	R1	3	350			443				-
R2-14	NA	NA	R1	4	350			34				-
R2-15	NA	NA	R1	10	410			43				-
R2-16	NA	NA	R1	10	100			434				-
R2-17	NA	NA	R1	10	100			43				-
R2-18	NA	NA	R1	10	100			43				-
R2-19	NA	NA	R1	10	100			434				-
R2-20	NA	NA	R1	10	100			4				-
R2-21	NA	NA	R1	10	100			34				-
R2-22	NA	NA	R1	10	200			43				-
R2-23	NA	NA	R1	10	200			44				-
R2-24	NA	NA	R1	10	200			3				-
R2-25	NA	NA	R1	10	200			43				-
R2-26	NA	NA	R1	10	200			45				-
R2-27	NA	NA			200			43				-
R2-28	NA	NA	R1	8	200			233				-
R2-29	NA	NA	R1	34	200			234				-
R2-30	NA	NA	R1	3	200			234				-
R2-31	NA	NA	R1	4	200			423				-
R2-32	NA	NA	R1	45	200			4				-
R2-33	NA	NA	R1	56	200			23				-
R2-34	NA	NA	R1	6	200			4				-
Total					6344			4119		0	0	0%

Diffuser Supply (GRD)

VRH 2-1/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-01-1	2TH001-2		150	-
2-01-2	2TH001-2		154	-
2-01-3	2TH001-2		165	-
2-01-4	2TH001-2		168	-
2-01-5	2TH001-2		148	-
2-01-6	2TH001-2		124	-
2-01-7	2TH001-2		106	-
2-01-8	2TH001-2		130	-
2-01-9	2TH001-2		123	-
2-01-10	2TH001-2		132	-
2-01-11	2TH001-2		122	-
2-01-12	2TH001-2		132	-
2-01-13	2TH001-2		119	-
2-01-14	2TH001-2		140	-
Total			1913	

VRH 2-2/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-02-1	2RH052			
2-02-2	2TH005			
2-02-3	2TH003-1			
2-02-4	2TH003-1			
2-02-5	2TH002			
2-02-6	2TH006-1			
Total			0	

VRH 2-3/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-03-1	2LB001			
Total			0	

VRH 2-4/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-04-1	2RH051		182	-
2-04-2	2EG004		53	-
Total			235	

VRH 2-7/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-07-1	2RH056		297	-
2-07-2	2RH056		322	-
2-07-3	2RH056		295	-
Total			914	

VRH 2-8/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-08-1	2RH001		151	-
2-08-2	2RH001		200	-
Total			351	

VRH 2-9/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-09-1	2RH003		153	-
2-09-2	2RH003		200	-
Total			353	

VRH 2-10/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-10-1	2RH005		155	-
2-10-2	2RH005		193	-
Total			348	

VRH 2-11/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-11-1	2RH007		176	-
2-11-2	2RH007		179	-
Total			355	

VRH 2-12/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-12-1	2RH009		138	-
2-12-2	2RH009		184	-
Total			322	

VRH 2-13/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-13-1	2RH011		149	-
2-13-2	2RH011		206	-
Total			355	

VRH 2-14/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-14-1	2RH013		137	-
2-14-2	2RH013		184	-
Total			321	

VRH 2-15/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-15-1	2RH046		395	-
Total			395	

VRH 2-16/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-16-1	2RH048		285	-
Total			285	

VRH 2-17/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-17-1	2RH041			
2-17-2	2RH039			
Total			0	

VRH 2-18/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-18-1	2RH137		97	-
2-18-2	2RH137		192	-
Total			289	

VRH 2-19/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-19-1	2RH035		125	-
2-19-2	2RH035		273	-
Total			398	

VRH 2-20/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-20-1	2RH033		132	-
2-20-2	2RH033			
Total			132	

VRH 2-21/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-21-1	2RH031		133	-
2-21-2	2RH031		277	-
Total			410	

VRH 2-22/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-22-1	2RH029			
2-22-2	2RH029			
Total			0	

VRH 2-23/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-23-1	2RH044		242	-
2-23-2	2RH043		140	-
2-23-3	2RH047		250	-
Total			632	

VRH 2-24/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-24-1	2RH058		329	-
2-24-2	2RH058		331	-
2-24-3	2RH057		308	-
2-24-4	2RH057		328	-
Total			1296	

VRH 2-25/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-25-1	2RH015		146	-
2-25-2	2RH015		195	-
Total			341	

VRH 2-26/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-26-1	2RH017		144	-
2-26-2	2RH017		196	-
Total			340	

VRH 2-27/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-27-1	2RH019		138	-
2-27-2	2RH019		180	-
Total			318	

VRH 2-28/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-28-1	2RH021		139	-
2-28-2	2RH021		198	-
Total			337	

VRH 2-29/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-29-1	2RH023		135	-
2-29-2	2RH023		202	-
Total			337	

VRH 2-30/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
2-30-1	2RH025		140	-
2-30-2	2RH025		180	-
Total			320	

VRH 2-31/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-31-1	2RH027		140	-
2-31-2	2RH027		180	-
Total			320	

VRH 2-32/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
2-32-1	2RH045		186	-
Total			186	

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: AHU-DUAL FAN

Asset: RTU-3 AREA:

UNIT DATA - SUPPLY		
	Design	**Actual**
Manufacturer	NA	TRANE
Model Number	NA	SFHLF604M
Serial Number	-	C21L08590
No. Pre-Filters / Size (1)	8	8/24”x24”x2
No. Pre-Filters / Size (2)	3/12”x24”x2”	6/12”x24”x2”
No. Final Filters / Size (1)	-	8/24”x24”x12”
No. Final Filters / Size (2)	-	6/24”x12”x12”

MOTOR DATA - SUPPLY		
	Design	**Actual**
Motor MFG / Frame	-	
Horsepower / RPM	-	30 /
Rated Volts / Phase	-	460 / 3
Rated Amperage / SF	-	14.3/ea

DRIVE DATA - SUPPLY		
	Design	**Actual**
Motor Sheave Size / Bore	-	

TEST DATA - SUPPLY		
	Design	**Actual**
Total CFM	15690	
OA CFM	3400	
Fan RPM	1590	
VFD Speed	-	
RL Voltage	460	
RL Amperage	20.50	
Motor B.H.P.	24.59	

PERFORMANCE DATA - SUPPLY		
	Design	**Actual**
Static Pressure Stpt	-	
Suction S.P.	-	
Discharge S.P.	-	
Total S.P.	4.980	
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	-	TRANE
Model Number	-	SFHLF554M

MOTOR DATA - EXHAUST/RETURN		
	Design	**Actual**
Motor MFG / FRAME	-	BALDOR / 215
Horsepower / RPM	-	10 / 1770
Rated Volts / Phase	-	460 / 3
Rated Amperage / SF	-	12.50

DRIVE DATA - EXHAUST/RETURN		
	Design	**Actual**
Motor Sheave Size / Bore	-	6.5” x 1-3/8
Fan Sheave Size / Bore	-	13” x 1-15/16
Belt CL Distance	-	40.5”
No. Belts / Size	-	1 bx108

TEST DATA - EXHAUST/RETURN		
	Design	**Actual**
Total CFM	12300	
Fan RPM	714	
VFD Speed	-	
RL Voltage	460	
RL Amperage	24.70	
Motor B.H.P.	8.00	

PERFORMANCE DATA - EXHAUST/RETURN		
	Design	**Actual**
Static Pressure Stpt	-	
Suction S.P.	-	
Discharge S.P.	-	
Total S.P.	1.5	
Heat Wheel P.D.	-	
Pre-Filters P.D.	-	
Total ESP	-	

VAV - Single Duct

RTU-3/

Asset							
VRH 3-1	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF16				HEAT	16
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	2395	2508	1200	1150	1398	1400	0.84
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-2	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF10				HEAT	10
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	555	551	380	405	384	388	1.15
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-3	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF12				HEAT	12
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	1200	1182	390	435	559	550	1.09
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-4	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	280	280	80	75	166	170	0.94
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-6	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6

	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	200	196	60	65	166	164	0.93
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-7	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF12				HEAT	12
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	1000	1034	390	719	629	625	1.15
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-8	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	420	419	150	152	280	275	1.02
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-9	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400		120		210		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-10	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	389	120	113	210	214	0.99
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-11	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	387	120	132	210	213	1.0
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**

	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-12	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	392	120	130	210	212	1.08
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-13	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	398	120	130	210	209	1.01
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-14	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400		120		210		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-15	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	220	216	130	131	166	165	1.06
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-16	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	460	448	130	127	210	200	1.02
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-17	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**

	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400		120		210		
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-18	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	410	422	120	133	210	208	1.02
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-19	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	420	120		210		1.10
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-20	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	410	402	120	132	210	208	1.00
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-21	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	450	444	130	113	210	200	1.03
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-22	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	200		60		280		

	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 3-23	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF14				HEAT	14
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	1260	1256	600	636	685	680	0.99
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 3-24	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF08				HEAT	8
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	400	420	120		210	205	1.07
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 3-25	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF08				HEAT	8
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	400	422	120	121	210	198	1.03
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 3-26	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF08				HEAT	8
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	400	399	120	124	210	200	0.99
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			
VRH 3-27	MFG	Model Num	Serial Num	Design Service	Service	Type	Inlet Size
	TRANE	VCEF08				HEAT	8
	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)
	400	377	120	112	210	217	0.97
	Ak (min)	Ak (heat)	Damper SetPt	Diversity Test 1	Diversity Test 2	Design EAT (F - db/wb)	EAT (F - db/wb)
	Design LAT (F - db/wb)	LAT (F - db/wb)	Inlet SP	Discharge SP			

VRH 3-28	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400		120	419	210	170	
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-29	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	418	120	137	210	208	1.02
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-30	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF08				HEAT	8
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	400	402	120	121	210	200	0.98
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			
VRH 3-31	**MFG**	**Model Num**	**Serial Num**	**Design Service**	**Service**	**Type**	**Inlet Size**
	TRANE	VCEF06				HEAT	6
	Design Max CFM	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
	230	226	60	56	124	120	0.98
	Ak (min)	**Ak (heat)**	**Damper SetPt**	**Diversity Test 1**	**Diversity Test 2**	**Design EAT (F - db/wb)**	**EAT (F - db/wb)**
	Design LAT (F - db/wb)	**LAT (F - db/wb)**	**Inlet SP**	**Discharge SP**			

Diffuser Ret/Exh (GRD)

RTU-3/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
R3-1	NA	NA	R1	6	50			62				-
R3-2	NA	NA	R1	10	360			630				-
R3-3	NA	NA	R1	10	320			525				-
R3-4	NA	NA	R1	10	360			662				-
R3-5	NA	NA	R1	10	320			622				-
R3-6	NA	NA	R1	10	320			648				-
R3-7	NA	NA	R1	10	360			677				-
R3-8	NA	NA	R1	10	360			635				-
R3-9	NA	NA	R1	10	320			638				-
R3-10	NA	NA	R1	10	320			695				-
R3-11	NA	NA	R1	10	360			716				-
R3-12	NA	NA	R1	10	360			739				-
R3-13	NA	NA	R1	12	545			585				-
R3-14	NA	NA	R1	10	320			508				-
R3-15	NA	NA	R1	8	200			320				-
R3-16	NA	NA	R1	6	40			42				-
R3-17	NA	NA	R1	8	200			376				-
R3-18	NA	NA	R1		280			314				-
R3-19	NA	NA	R1	8	150			198				-
R3-20	NA	NA	R1	10	320			416				-
R3-21	NA	NA	R1	10	320			333				-
R3-22	NA	NA	R1	12	525			834				-
R3-23	NA	NA	R1	10	320			463				-
R3-24	NA	NA	R1	6	100			71				-
R3-25	NA	NA	R1	10	320			30				-
R3-26	NA	NA	R1	10	320			490				-
R3-27	NA	NA	R1	10	320			450				-
R3-28	NA	NA	R1	10	320			375				-
R3-29	NA	NA	R1	16	1025			560				-
R3-30	NA	NA	R1	6	50			130				-
R3-31	NA	NA	R1	8	200			118				-
R3-32	NA	NA	R1	12	500			760				-
R3-33	NA	NA	R1	6	70			99				-
R3-34	NA	NA	R1	12	500			382				-
R3-35	NA	NA	R1	12	525			435				-
R3-36	NA	NA	R1	6	50			59				-
R3-37	NA	NA	R1	16	1025			667				-
Total					12355			16264		0	0	0%

Diffuser Supply (GRD)

VRH 3-1/

Asset				
Asset Name	Location	a7	FINAL CFM	% to design
3-01-1	3TH001		175	-
3-01-2	3TH001		149	-
3-01-3	3TH001		181	-
3-01-4	3TH001		179	-
3-01-5	3TH001		180	-
3-01-6	3TH001		181	-
3-01-7	3TH001		172	-
3-01-8	3TH001B		179	-
3-01-9	3TH001B		164	-
3-01-10	3TH001B		180	-
3-01-11	3TH001B		180	-
3-01-12	3TH001B		171	-
3-01-13	3TH001B		165	-
3-01-14	3TH002		252	-
Total			2508	

VRH 3-2/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-02-1	3TH011		150	-
3-02-2	3TH003		211	-
3-02-3	3TH004		190	-
Total			551	

VRH 3-3/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-03-1	3EG004		146	-
3-03-2	3PH002		482	-
3-03-3	3PH002		284	-
3-03-4	3PH002		270	-
Total			1182	

VRH 3-4/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-04-1	3RH047-1		280	-
Total			280	

VRH 3-6/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-06-1	PHARM HALL		71	-
3-06-2	3PH001		54	-
3-06-3	3PH003		72	-
Total			197	

VRH 3-7/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-07-1	3RH050		246	-
3-07-2	3RH050		244	-
3-07-3	3RH050		273	-
3-07-4	3RH050		271	-
Total			1034	

VRH 3-8/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-08-1	3RH001B		219	-
3-08-2	3RH001B		200	-
Total			419	

VRH 3-9/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-09-1	3RH003			
3-09-2	3RH003			
Total			0	

VRH 3-10/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-10-1	3RH005		198	-
3-10-2	3RH005		191	-
Total			389	

VRH 3-11/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-11-1	3RH007		206	-
3-11-2	3RH007		181	-
Total			387	

VRH 3-12/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-12-1	3RH009		196	-
3-12-2	3RH009		196	-
Total			392	

VRH 3-13/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-13-1	3RH011		195	-
3-13-2	3RH011		203	-
Total			398	

VRH 3-14/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-14-1	3RH013			
3-14-2	3RH013			
Total			0	

VRH 3-15/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-15-1	3RH046		165	-
3-15-2	3RH043		51	-
Total			216	

VRH 3-16/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-16-1	3RH041		216	-
3-16-2	3RH041		232	-
Total			448	

VRH 3-17/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-17-1	3RH039		253	-
3-17-2	3RH039		241	-
Total			494	

VRH 3-18/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-18-1	3RH037		216	-
3-18-2	3RH037		206	-
Total			422	

VRH 3-19/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-19-1	3RH035		219	-
3-19-2	3RH035		201	-
Total			420	

VRH 3-20/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-20-1	3RH033		211	-
3-20-2	3RH033		191	-
Total			402	

VRH 3-21/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-21-1	3RH031		207	-
3-21-2	3RH031		237	-
Total			444	

VRH 3-22/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-22-1	3RH048			
3-22-2				
Total			0	

VRH 3-23/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-23-1	3RH052		211	-
3-23-2	3RH052		224	-
3-23-3	3RH052		207	-
3-23-4	3RH042		193	-
3-23-5	3RH042		221	-
3-23-6	3RH042		200	-
Total			1256	

VRH 3-24/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-24-1	3RH015		214	-
3-24-2	3RH015		206	-
Total			420	

VRH 3-25/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-25-1	3RH017		214	-
3-25-2	3RH017		208	-
Total			422	

VRH 3-26/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-26-1	3RH019		210	-
3-26-2	3RH019		189	-
Total			399	

VRH 3-27/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-27-1	3RH021		192	-
3-27-2	3RH021		185	-
Total			377	

VRH 3-28/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-28-1	3RH023			
3-28-2	3RH023			
Total			0	

VRH 3-29/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-29-1	3RH025		202	-
3-29-2	3RH025		216	-
Total			418	

VRH 3-30/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-30-1	3RH027		205	-
3-30-2	3RH027		197	-
Total			402	

VRH 3-31/

Asset				
Asset Name	**Location**	**a7**	**FINAL CFM**	**% to design**
3-31-1	3RH048		226	-
Total			226	

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Supply

Asset: MAU-1 AREA:KITCHEN HOOD

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	RV-25-12.5I-J
Serial Num	-	19355387
Type	-	GAS FIRED
Series	-	
Configuration	-	VERTICAL
Num Filters Size 1	-	
Filter Size 1	-	
Num Filters Size 2	-	
Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	145T
Horsepower	-	2.00
Motor Rpm	-	1750
Phase	-	3
Voltage (rated)	-	460
Amperage (rated)	-	2.8
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	
Motor Sheave Size	-	
Motor Bore Size	-	
Motor Sheave SetPt	-	
Fan Sheave MFG	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt MFG	-	
Belt Size	-	
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	2600	
SF RPM	1625	
SF Rotation	-	
Motor RPM	-	
Motor Frequency	-	
SF System SetPt	-	
RL Voltage	-	460
RL Amperage	-	
Suction ESP	-	
Discharge ESP	-	
Total ESP	-	1.6
Fan Inlet SP	-	
Fan Discharge SP	-	
Freeze Stat Setpt	-	
Total Fan SP	-	
Brake Horse Power	-	
Compressor Lockout Setpt	-	

Combustion Fan Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	-	
Phase	-	
Voltage	-	
Amperage	-	

Combustion Gas Duct		
	Design	**Actual**
Duct Type	-	
Gauge & Material	-	
Size	-	
Minimum Rise:Run	-	
Room properly ventilated	-	
Space pres condition	-	
Flue backdrafts eliminated	-	
Flue Terminates Properly	-	

Gas Heat		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
Gas Type	-	
Burner Type	-	
Burner Construction	-	
Input BTUH (rated)	-	
Output BTUH (rated)	-	
Gas Inlet Pres	-	
Gas Low Fire Pres	-	
Gas High Fire Pres	-	
Gas Valve Low Fire CTRL Voltage	-	
Low Fire Temp Rise (F)	-	
Gas Valve High Fire CTRL Voltage	-	
High Fire Temp Rise (F)	-	
Pilot Ignition Status (pass/fail)	-	
Gas Valve Pilot Ignition CTRL Voltage	-	
Flame Proving Switch Type	-	
Flame proof CTRL Voltage	-	
Single or Dual Bank	-	
Staged or Modulating	-	
Heater Operates (y/n)	-	
Combustion Blower Operates (y/n)	-	
Flame Status (pass/fail)	-	
High Limit Temp Cut-off SetPt	-	
Inlet Air Temp SetPt	-	
Discharge Air Temp SetPt	-	
Temp Rise SetPt	-	
Air Flow Switch SP SetPt	-	
Air Flow Switch SP Actual	-	
Air Flow Switch CTRL Voltage	-	
Air Flow Switch Proved (Pass/Fail)	-	
Space Temp SetPt-ON	-	
Space Temp SetPt-OFF	-	
Flame Modulates Properly	-	

Chilled Water Coil		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
Coil Size (hxl)	-	
Coil Area	-	
Coil Face Velocity	-	
GPM CIRCUIT 1	-	
Water Inlet Temp (F)	-	
Water Discharge Temp (F)	-	
Water Coil Delta P	-	
GPM CIRCUIT 2	-	
Inlet SP	-	
Discharge SP	-	
Coil Delta SP	-	

Evaporator DX Coil		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
Coil Size (hxl)	-	
Coil Area	-	
Coil Face Velocity	-	
Refrigeration Type	-	
Circuit 1 SetPt (F)	-	
Circuit 1 EAT (db/wb)	-	
Circuit 1 LAT (db/wb)	-	
Circuit 2 SetPt (F)	-	
Circuit 2 EAT (db/wb)	-	
Circuit 2 LAT (db/wb)	-	
Inlet SP	-	
Discharge SP	-	
Coil Delta SP	-	

Evaporative Cooler		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
EAT SetPt (F)	-	
Filter Media Size (hxl)	-	
Filter Media Area	-	
Filter Media Face Velocity	-	
EWT (F)	-	
LWT (F)	-	
Inlet SP	-	
Discharge SP	-	
Coil Delta SP	-	

Electric Coil		
	Design	Actual
KW	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
BTUH	-	
Coil Size (hxl)	-	
Coil Area	-	
Coil Face Velocity	-	
Voltage	-	
Heat Stage 1 RL (A)	-	
Heat Stage 2 RL (A)	-	
Heat Stage 3 RL (A)	-	
Heat Stage 4 RL (A)	-	
Heat Stage 5 RL (A)	-	
Heat Stage 6 RL (A)	-	
Inlet SP	-	
Discharge SP	-	
Coil Delta SP	-	
High Limit Temp Cut-off SetPt	-	
Temp Rise SetPt	-	
Discharge Temp SetPt	-	
Inlet Air Temp SetPt	-	
Air Flow Switch SP	-	
Air Flow Switch CTRL Voltage	-	
Space Temp SetPt-ON	-	
Space Temp SetPt-OFF	-	
Coil Staging Functional	-	

Hot Water Coil		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
Coil Size (hxl)	-	
Coil Area	-	
Coil Face Velocity	-	
GPM CIRCUIT 1	-	
EWT (F)	-	
LWT (F)	-	
Water Coil Delta P	-	
GPM CIRCUIT 2	-	
Inlet SP	-	
Discharge SP	-	
Coil Delta SP	-	

Steam Coil		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
Coil Size (hxl)	-	
Coil Area	-	
Coil Face Velocity	-	
Steam Coil-Circuit 1 Delta P	-	
Steam Inlet Temp (F)	-	
Steam Discharge Temp (F)	-	
Steam Coil-Circuit 2 Delta P	-	
Inlet SP	-	
Discharge SP	-	
Coil Delta SP	-	

Compressors		
	Design	Actual
Refrigerant Charge	-	
Refrigerant Type	-	
Comp 1 RLA	-	
Comp 2 RLA	-	
Comp 1 Suction Pres	-	
Comp 2 Suction Pres	-	
Comp 1 Discharge Pres	-	
Comp 2 Discharge Pres	-	
Circuit 1 Superheat	-	
Circuit 2 Superheat	-	
Comp 1 Liquid Line Temp	-	
Comp 2 Liquid Line Temp	-	
Circuit 1 SubCooling	-	
Circuit 2 SubCooling	-	

General		
	Design	Actual
Unit free of Damage	-	
Unit Completely Assembled	-	
Unit Leveled	-	
Curb & Unit Installed Air Tight	-	
Controls Complete	-	
Fan Rotation Correct	-	
Fan Belt Condition	-	
Unit Filters Clean	-	
Evap Coil Clean	-	
Evap Coil Free of Frost	-	
Condensor Coil Clean	-	
Condensor Fins Straight	-	
Refrigerant Sight Glass Dry	-	
Condensate Drain Installed	-	
Crankcase Heaters Operate	-	

Condensor DX Coil		
	Design	Actual
BTUH	-	
EAT (db/wb)	-	
LAT (db/wb)	-	
Coil Size (hxl)	-	
Coil Area	-	
Coil Face Velocity	-	
Refrigeration Type	-	
Circuit 1 SetPt (F)	-	
CIRCUIT 1 EAT (db/wb)	-	
CIRCUIT 1 LAT (db/wb)	-	
Circuit 2 SetPt (F)	-	
CIRCUIT 2 EAT (db/wb)	-	
CIRCUIT 2 LAT (db/wb)	-	

Condensor Fan		
	Design	Actual
Fan Alignment	-	
Fan Rotation	-	
Fan 1 Motor RLA	-	
Fan 1 Motor RLV	-	
Fan 2 Motor RLA	-	
Fan 2 Motor RLV	-	

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	FX24BH
Serial Num	-	D22GZ15897
Type	-	CRE UPBLAST
Series	-	
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	182
Horsepower	-	3.0
Motor Rpm	-	1765
Phase	-	3
Voltage (rated)	-	208
Amperage (rated)	-	8.4
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	VP65
Motor Sheave Size	-	VP65
Motor Bore Size	-	1-1/8”
Motor Sheave SetPt	-	2 open
Fan Sheave MFG	-	
Fan Sheave Size	-	8.75"
Fan Sheave Bore	-	1”
Belt CL Distance	-	8.3"
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	A36
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	3020	2988
Fan RPM	1223	780
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	211.9/212.2/212.1
RL Amperage	-	4.9/4.6/4.7
Suction ESP	-	-0.68”
Discharge ESP	-	ATM
Total ESP	2.2	0.68”
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	

Chetu Development

Project:CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
E2-1	NA	NA	E1	10X10	350	1		464			366	104.6
E2-2	NA	NA	E2	8X8	100	1		96			102	102.0
E2-3	NA	NA	E2	8X8	100	1		102			101	101.0
E2-4	NA	NA	E2	8X8	100	1		94			98	98.0
E2-5	NA	NA	E1	8X8	40	1		39			43	107.5
E2-6	NA	NA	E2	8X8	100	1		96			94	94.0
E2-7	NA	NA	E2	8X8	100	1		98			96	96.0
E2-8	NA	NA	E2	8X8	100	1		95			94	94.0
E2-9	NA	NA	E2	8X8	100	1		107			95	95.0
E2-10	NA	NA	E2	8X8	100	1		75			92	92.0
E2-11	NA	NA	E2	8X8	100	1		83			90	90.0
E2-12	NA	NA	E2	8X8	100	1		99			94	94.0
E2-13	NA	NA	E2	8X8	100	1		76			90	90.0
E2-14	NA	NA	E2	8X8	100	1		86			90	90.0
E2-15	NA	NA	E2	8X8	100	1		66			93	93.0
E2-16	NA	NA	E2	8X8	100	1		66			97	97.0
E2-17	NA	NA	E2	8X8	100	1		69			92	92.0
E2-18	NA	NA	E2	8X8	100	1		97			104	104.0
E2-19	NA	NA	E2	8X8	100	1		107			102	102.0
E2-20	NA	NA	E2	8X8	100	1		92			94	94.0
E2-21	NA	NA	E2	8X8	100	1		101			107	107.0
E2-22	NA	NA	E2	8X8	105	1		153			98	93.3
E2-23	NA	NA	E2	8X8	80	1		73			82	102.5
E2-24	NA	NA	E2	8X8	100	1		109			108	108.0
E2-25	NA	NA	E2	8X8	80	1		79			80	100.0
E2-26	NA	NA	E1	8X8	105	1		110			110	104.8
E2-27	NA	NA	E2	8X8	80	1		78			86	107.5
E2-28	NA	NA	E2	8X8	100	1		107			108	108.0
E2-29	NA	NA	E2	8X8	80	1		68			82	102.5
Total					3020			2985		0	2988	98.94%

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	FX24BH
Serial Num	-	D22GZ15898
Type	-	CRE UPBLAST
Series	-	
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	Baldor
Frame	-	145
Horsepower	-	1.50
Motor Rpm	-	1755
Phase	-	3
Voltage (rated)	-	208
Amperage (rated)	-	4.4
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	
Motor Sheave Size	-	VP60
Motor Bore Size	-	7/8"
Motor Sheave SetPt	-	2 open
Fan Sheave MFG	-	
Fan Sheave Size	-	8"
Fan Sheave Bore	-	1”
Belt CL Distance	-	6.25”
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	A31
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	4845	4215
Fan RPM	926	960
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	211.2/211.3/210.3
RL Amperage	-	4.2/4.0/4.0
Suction ESP	-	-0.71”
Discharge ESP	-	ATM
Total ESP	1.7	0.71”
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	

Chetu Development

Project:CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-2/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
E1-1	NA	NA	E2	8X8	100	1		256				-
E1-2	NA	NA	E2	8X8	100	1		174				-
E1-3	NA	NA	E2	8X8	80	1		138				-
E1-4	NA	NA	E2	8X8	130	1		148				-
E1-5	NA	NA	E1	8X8	250	1		387				-
E1-6	NA	NA	E1	8X8	250	1		288				-
E1-7	NA	NA	E2	8X8	130	1		138				-
E1-8	NA	NA	E2	8X8	80	1		120				-
E1-9	NA	NA	DUCT	16X4	200	1		185				-
E1-10	NA	NA	DUCT	16X4	400	1		371				-
E1-11	NA	NA	E2	8X8	140	1		105				-
E1-12	NA	NA	E2	8X8	90	1		139				-
E1-13	NA	NA	E2	8X8	90	1		96				-
E1-14	NA	NA	E1	14X14	1000	1		691				-
E1-15	NA	NA	E2	8X8	130	1		94				-
E1-16	NA	NA	E2	8X8	75	1		76				-
E1-17	NA	NA	E1	8X8	150	1		139				-
E1-18	NA	NA	E1	8X8	260	1		166				-
E1-19	NA	NA	E2	8X8	110	1		42				-
E1-20	NA	NA	E1	14X14	1000	1		442				-
E1-21	NA	NA	E3	8X8	80	1		20				-
Total					4845			4215		0	0	0%

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-3 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	FX24BH
Serial Num	-	D22GZ15899
Type	-	CRE UPBLAST
Series	-	
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	145
Horsepower	-	1.50
Motor Rpm	-	1755
Phase	-	3
Voltage (rated)	-	208
Amperage (rated)	-	4.4
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	
Motor Sheave Size	-	VP44
Motor Bore Size	-	7/8”
Motor Sheave SetPt	-	5 open
Fan Sheave MFG	-	
Fan Sheave Size	-	8”
Fan Sheave Bore	-	1”
Belt CL Distance	-	7.25"
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	A30
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	2655	2688
Fan RPM	961	697
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	212.2/212.6/211.3
RL Amperage	-	2.87/2.68/2.76
Suction ESP	-	-0.49”
Discharge ESP	-	ATM
Total ESP	1.8	0.49”
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	0.944

Chetu Development

Project:CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-3/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
E3-1	NA	NA	E2	8X8	100			188		116	105	105.0
E3-2	NA	NA	E2	8X8	100			173		103	103	103.0
E3-3	NA	NA	E2	8X8	100			145		105	105	105.0
E3-4	NA	NA	E2	8X8	100			170		112	102	102.0
E3-5	NA	NA	E2	8X8	100			146		108	108	108.0
E3-6	NA	NA	E2	8X8	100			144		112	112	112.0
E3-7	NA	NA	E2	8X8	100			155		107	107	107.0
E3-8	NA	NA	E2	8X8	100			158		110	110	110.0
E3-9	NA	NA	E2	8X8	100			157		111	109	109.0
E3-10	NA	NA	E2	8X8	100			142		105	105	105.0
E3-11	NA	NA	E2	8X8	100			145		113	107	107.0
E3-12	NA	NA	E2	8X8	100			124		115	108	108.0
E3-13	NA	NA	E2	8X8	100			119		101	101	101.0
E3-14	NA	NA	E2	8X8	100			135		102	102	102.0
E3-15	NA	NA	E2	8X8	100			199		105	105	105.0
E3-16	NA	NA	E2	8X8	100			145		93	97	97.0
E3-17	NA	NA	E2	8X8	100			145		95	95	95.0
E3-18	NA	NA	E2	8X8	100			134		93	99	99.0
E3-19	NA	NA	E2	8X8	100			127		98	98	98.0
E3-20	NA	NA	E2	8X8	110			123		104	104	94.5
E3-21	NA	NA	E2	8X8	125			129		118	118	94.4
E3-22	NA	NA	E2	8X8	120			72		102	102	85.0
E3-23	NA	NA	E1	8X8	200			163		187	187	93.5
E3-24	NA	NA	E2	8X8	10			78		97	97	970.0
E3-25	NA	NA	E2	8X8	100			110		102	102	102.0
Total					2565			3526		2714	2688	104.8%

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-4 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	FX18BH
Serial Num	-	D22GZ15900
Type	-	CRE UPBLAST
Series	-	
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	Baldor
Frame	-	145
Horsepower	-	2.0
Motor Rpm	-	1760
Phase	-	3
Voltage (rated)	-	460
Amperage (rated)	-	2.8
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	
Motor Sheave Size	-	VL44
Motor Bore Size	-	7/8”
Motor Sheave SetPt	-	1 open
Fan Sheave MFG	-	
Fan Sheave Size	-	Ak54
Fan Sheave Bore	-	3/4”
Belt CL Distance	-	6.25”
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	A25
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	3250	3269
Fan RPM	1283	1385
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	489.6/490.1/491.7
RL Amperage	-	2.7/2.7/2.6
Suction ESP	-	-1.22
Discharge ESP	-	ATM
Total ESP	1.7	1.22
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	1.85

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-5 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	FX12BH
Serial Num	-	D22GZ15901
Type	-	CRE UPBLAST
Series	-	D22GZ15901
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	Baldor
Frame	-	56
Horsepower	-	0.75
Motor Rpm	-	1750
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	7
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	
Motor Sheave Size	-	VP400
Motor Bore Size	-	5/8”
Motor Sheave SetPt	-	7 open
Fan Sheave MFG	-	
Fan Sheave Size	-	Ak44
Fan Sheave Bore	-	3/4”
Belt CL Distance	-	5"
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	4L210T
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	760	777
Fan RPM	1476	1248
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	119.9
RL Amperage	-	5.28/5.30
Suction ESP	-	-0.81”
Discharge ESP	-	ATM
Total ESP	1.7	0.81”
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	0.56

Chetu Development

Project:CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-5/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
E5-1	NA	NA	E1	8X8	170	1		342			173	101.8
E5-2	NA	NA	E2	8X8	100	1		53			96	96.0
E5-3	NA	NA	E3	10X12	490	1		566			508	103.7
Total					760			961		0	777	102.24%

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-6 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	FX12BH
Serial Num	-	D22GZ15902
Type	-	CRE UPBLAST
Series	-	
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	Us Motor
Frame	-	56
Horsepower	-	0.50
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	4.0
Service Factor	-	1.15
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	VP350
Motor Sheave Size	-	VP350
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	7 Open
Fan Sheave MFG	-	
Fan Sheave Size	-	AL54
Fan Sheave Bore	-	0.75”
Belt CL Distance	-	5.875”
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	4L230
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	600	600
Fan RPM	1259	845
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	120
RL Amperage	-	2.52/2.48
Suction ESP	-	-0.42”
Discharge ESP	-	ATM
Total ESP	1.25	0.42”
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	0.312

Chetu Development

Project:CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-6/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
E6-1	NA	NA	E3	12X12	500	1		724		496	492	98.4
E6-2	NA	NA	E2	8X8	100	1		274		191	97	97.0
Total					600			998		687	589	98.17%

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Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: FAN - Exhaust

Asset: EF-7 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	PENNBARRY
Model Num	NA	SX100BC
Serial Num	-	E22MZ56057
Type	-	INLINE
Series	-	
Configuration	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56
Horsepower	-	0.33
Motor Rpm	-	1740
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.4
Service Factor	-	1
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	**Actual**
Motor Sheave MFG	-	
Belt Size	-	
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	**Actual**
CFM	300	312
Fan Rotation	-	
Motor RPM	-	
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	121
RL Amperage	-	2.8
Suction ESP	-	-0.87
Discharge ESP	-	0.44
Total ESP	1.5	1.31
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	0.252

Chetu Development

Project:CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-7/

Asset												
Asset Name	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design
E6-1	NA	NA	E3	10X10								
Total					0			0		0	0	0%

Chetu Development

Project: CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:1DI003

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	6030 ND-2
Job / Serial Num	-	4893978
Type	1	
Hood length	-	192"
Hood Width	-	60"
Hood Height	-	
Num of EXH Risers	-	
EXH Riser size 1	-	
EXH Riser Size 2	-	
Num of Supply Risers	-	
Supply Riser Size	-	
Supply Plenum Type	-	ASP
Supply Plenum Width	-	16"
Supply Plenum Length	-	192"

Test Data Exhaust		
	Design	**Actual**
Filter Type	X-TRACTOR SS	BAFFLE SS
Filter Size 1	20X16	20”x16”
Filter Qty 1	12	12
Filter AK factor size 1	2.25	2.08
Filter Total AK Area	23.7	24.96
Kv factor (Vel)	-	
Plenum SP	-	
Riser SP	-	
Filter1 FPM	-	130
Filter2 FPM	-	129
Filter3 FPM	-	134
Filter4 FPM	-	133
Filter5 FPM	-	125
Filter6 FPM	-	126
Filter7 FPM	-	136
Filter8 FPM	-	138
Filter9 FPM	-	132
Filter10 FPM	-	136
Filter11 FPM	-	133
Filter12 FPM	-	134
Filter High FPM(corr)	-	131
Filter Low FPM (corr)	-	
Filter Ave FPM(corr)	-	
CFM	3250	3269

Test Data Supply		
	Design	**Actual**
Plenum SP	21.33	
AK factor	0.91	
Total AK Area	-	
Kv factor (Vel)	-	
Num of Readings	-	
Reading1 FPM	-	
Reading2 FPM	-	
Reading3 FPM	-	
Reading4 FPM	-	
Reading5 FPM	-	
Reading6 FPM	-	
Reading7 FPM	-	
Reading8 FPM	-	
Reading9 FPM	-	
Reading10 FPM	-	
Reading11 FPM	-	
Reading12 FPM	-	
Reading13 FPM	-	
Reading14 FPM	-	
High FPM(corr)	-	
Low FPM(corr)	-	
Ave FPM(corr)	-	
CFM	-	

Cooking Equipment		
	Design	Actual
Item 1	-	MICROWAVE
Item 2	-	STEAMER
Item 3	-	CONVECTION OVEN
Item 4	-	GAS STOVE/FLAT TOP
Item 5	-	FRYER
Item 6	-	
Item 7	-	
Item 8	-	
Item 9	-	
Item 10	-	

Performance Data		
	Design	Actual
Exh-Supply Net CFM	-	
Smoke Generation Type	-	
Cooking Equip Heat On	-	
Hood Capture %	-	
Smoke Capture @ Equip Surface %	-	
Smoke Capture @ Perim of Hood %	-	
Heat Loss (Box Shadow) %	-	
Rated Heat of Equip	-	
Supply Re-Entrainment %	-	
Exh Riser1 Pos (Left End)	-	
Exh Riser2 Pos (Right End)	-	
End Panels Installed (Y/N)	-	
Space Offset Temp Riser 1	-	
Heat Sensor High SetPt Riser 1	-	
Space Offset Temp Riser 2	-	
Heat Sensor High SetPt Riser 2	-	
Space Offset Temp Riser 3	-	
Heat Sensor High SetPt Riser 3	-	
Space Offset Temp Riser 4	-	
Heat Sensor High SetPt Riser 4	-	
Riser Temp F (idle) Riser 1	-	
Riser Temp F (idle) Riser 2	-	
Riser Temp F (idle) Riser 3	-	
Riser Temp F (idle) Riser 4	-	
Ambient Room Temp	-	
100% override functional	-	
electronic Gas Valve shut- off f(x)	-	

General		
	Design	Actual
Third Party Witness	-	
Third Party Company	-	
Tech Witness	-	
Tech Company	-	
Code Official Witness	-	
Jurisdiction	-	
Service/Startup Performed By	-	

Issue List

- aaa
- tst

CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

Project Issue Information

Issue Name :	aaa		
Description :	aa		
Created By :	Chetu Development	**Assigned To :**	Chetu Development - gourav1 Kumar
Status :	Open		
Priority :	Urgent	**Asset Tag :**	
Originated Date :	11/14/2023 - Gulshan Kumar - Chetu Development		

CINCINNATI REHAB HOSPITAL (BLUE ASH, OH)

Project Issue Information

Issue Name :	tst		
Description :	tdt		
Created By :	Chetu Development	**Assigned To :**	Chetu Development - gourav1 Kumar
Status :	Open		
Priority :	Urgent	**Asset Tag :**	
Originated Date :	11/14/2023 - Gulshan Kumar - Chetu Development		