

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU03-1 (FCU-G1)

Area: 305

Unit Data	
MFG	WHALEN
Model Num	HPPR022
Serial Num	356318-1

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

Test Data		
	Design	Actual
SA CFM	2580	2135
Fan RPM		NA
OA CFM	0	0
RA CFM	2580	2179
RL Voltage		121.2
RL Amperage		6.8
Suction ESP		-0.53"
Discharge ESP		0.16"
Total ESP	0.4	0.69"
Brake HP		NA

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F31-1	BED 1	SR	10	380	303	303	0.80
F31-2	BED 2	SR	10	300	266	266	0.89
F31-3	BED 2	SR	10	300	254	254	0.85
F31-4	LIVING	SR	10	320	218	218	0.68
F31-5	LIVING	SR	10	320	324	324	1.01
F31-6	LIVING	SR	10	320	286	286	0.89
F31-7	LIVING	SR	10	320	264	264	0.83
F31-8	LIVING	SR	10	320	220	220	0.69
SA TOTAL				2580		2135	0.83
R31-1		RR	28X28	2580	2179	2179	
RA TOTAL				2580		2179	0.84

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU04-1 (FCU-G1)

Area: 405

Unit Data	
MFG	WHALEN
Model Num	HPPR022
Serial Num	356318-1

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

Test Data		
	Design	Actual
SA CFM	2580	2000
Fan RPM		NA
OA CFM	0	0
RA CFM	2580	2000
RL Voltage		121.5
RL Amperage		6.9
Suction ESP		-0.53"
Discharge ESP		0.18"
Total ESP	0.4	0.71"
Brake HP		NA

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F41-1	BED 1	SR	10	380	278	278	0.73
F41-2	BED 2	SR	10	300	222	222	0.74
F41-3	BED 2	SR	10	300	236	236	0.79
F41-4	LIVING	SR	10	320	252	252	0.79
F41-5	LIVING	SR	10	320	251	251	0.78
F41-6	LIVING	SR	10	320	252	252	0.79
F41-7	LIVING	SR	10	320	263	263	0.82
F41-8	LIVING	SR	10	320	246	246	0.77
SA TOTAL				2580	2000	2000	0.78
R41-1		RR	28X28	2580	2000	2000	
RA TOTAL				2580		2000	0.78

National TAB

Project: Formica Building (Cincinnati, OH)
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Asset: FCU04-5 (FCU-E)

Area: 408

Unit Data	
MFG	WHALEN
Model Num	HPPR006W4R211R000
Serial Num	356318-7

Motor Data	
Motor MFG	NL
Horsepower	0.33
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	5

Test Data		
	Design	Actual
SA CFM	370	395
Fan RPM		NA
OA CFM	0	0
RA CFM	370	384
RL Voltage		122
RL Amperage		1.45
Suction ESP		0.31"
Discharge ESP		0.19"
Total ESP	0.4	0.5"
Brake HP		0.095

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F45-1	LIVING	SR	10	310	288	288	0.93
F45-2	LIVING	SR	10	60	107	107	1.78
SA TOTAL				370	395	395	1.07
R45-1		RR	12X12	370	384	384	1.04
RA TOTAL				370	384	384	1.04

National TAB

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU05-1 (FCU-G1)

Area: 505

Unit Data	
MFG	WHALEN
Model Num	HPPR022
Serial Num	356318-1

Motor Data	
Motor MFG	NA
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY

2

Test Data		
	Design	Actual
SA CFM	2580	1833
Fan Speed		High
OA CFM	0	0
RA CFM	2580	1833
RL Voltage		NA
RL Amperage		NA
Suction ESP		NA
Discharge ESP		0.30"
Total ESP	0.4	
Brake HP		NA

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F51-1	BED 1	SR	10	380	261	261	0.686842
F51-2	BED 2	SR	10	300	203	203	0.676667
F51-3	BED 2	SR	10	300	202	202	0.673333
F51-4	LIVING	SR	10	320	229	229	0.715625
F51-5	LIVING	SR	10	320	236	236	0.7375
F51-6	LIVING	SR	10	320	234	234	0.73125
F51-7	LIVING	SR	10	320	232	232	0.725
F51-8	LIVING	SR	10	320	236	236	0.7375
SA TOTAL				2580	1833	1833	0.710465
R51-1		RR	28X28	2580	1833	1833	
RA TOTAL				2580	1833	1833	0.710465

National TAB

Project: Formica Building (Cincinnati, OH)
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Asset: FCU05-9 (FCU-A2)

Area: 504

Unit Data	
MFG	WHALEN
Model Num	HPPR022W4R411R
Serial Num	356318-2

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

Test Data		
	Design	Actual
SA CFM	2430	2244
Fan RPM		NA
OA CFM	0	0
RA CFM	2430	2244
RL Voltage		123.2
RL Amperage		12.56
Suction ESP		-0.29"
Discharge ESP		0.36"
Total ESP	0.4	0.65"
Brake HP		0.4

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F59-1	BED	SR	10	255	387	262	1.03
F59-2	BED	SR	10	255	392	254	1.00
F59-3	LIVING	SR	10	320	229	257	0.80
F59-4	LIVING	SR	10	320	256	271	0.85
F59-5	LIVING	SR	10	320	261	283	0.88
F59-6	LIVING	SR	10	320	272	293	0.92
F59-7	LIVING	SR	10	320	289	315	0.98
F59-8	LIVING	SR	10	320	271	309	0.97
SA TOTAL				2430		2244	0.92
R59-1		RR	30X30	2430			0.00
RA TOTAL				2430		0	0.00

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU06-1 (FCU-G1)

Area: 605

Unit Data	
MFG	WHALEN
Model Num	HPPR022
Serial Num	356318-1

Motor Data	
Motor MFG	NA
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY

2

Test Data		
	Design	Actual
SA CFM	2580	1971
Fan Speed		High
OA CFM	0	0
RA CFM	2580	1971
RL Voltage		123
RL Amperage		13.5
Suction ESP		-0.09"
Discharge ESP		0.14"
Total ESP	0.4	0.23"
Brake HP		0.876

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F61-1	BED 1	SR	10	380	305	305	0.802632
F61-2	BED 2	SR	10	300	236	236	0.786667
F61-3	BED 2	SR	10	300	228	228	0.76
F61-4	LIVING	SR	10	320	241	241	0.753125
F61-5	LIVING	SR	10	320	255	255	0.796875
F61-6	LIVING	SR	10	320	224	224	0.7
F61-7	LIVING	SR	10	320	232	232	0.725
F61-8	LIVING	SR	10	320	250	250	0.78125
SA TOTAL				2580	1971	1971	0.763953
R61-1		RR	28X28	2580	1971	1971	
RA TOTAL				2580	1971	1971	0.763

Project: Formica Building (Cincinnati, OH)
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Asset: FCU07-1 (FCU-G1)

Area: 705

Unit Data	
MFG	WHALEN
Model Num	HPPR022
Serial Num	356318-1

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY

2

Test Data		
	Design	Actual
SA CFM	2580	1848
Fan Speed		High
OA CFM	0	0
RA CFM	2580	1848
RL Voltage		121
RL Amperage		12.4
Suction ESP		-0.10"
Discharge ESP		0.13"
Total ESP	0.4	0.23"
Brake HP		0.805

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F71-1	BED 1	SR	10	380	230	279	0.73
F71-2	BED 2	SR	10	300	245	210	0.70
F71-3	BED 2	SR	10	300	234	223	0.74
F71-4	LIVING	SR	10	320	236	238	0.74
F71-5	LIVING	SR	10	320	210	227	0.71
F71-6	LIVING	SR	10	320	273	218	0.68
F71-7	LIVING	SR	10	320	224	241	0.75
F71-8	LIVING	SR	10	320	245	212	0.66
SA TOTAL				2580	1897	1848	0.72
R71-1		RR	28X28	2580	1848	1848	0.72
RA TOTAL				2580	1848	1848	0.72

National TAB

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU07-9 (FCU-A2)

Area: 704

Unit Data	
MFG	WHALEN
Model Num	HPPR022W4R411R
Serial Num	356318-2

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY

2

Test Data		
	Design	Actual
SA CFM	2430	2270
Fan RPM		NA
OA CFM	0	0
RA CFM	2430	2270
RL Voltage		122.8
RL Amperage		12.52
Suction ESP		-0.35"
Discharge ESP		0.17"
Total ESP	0.4	0.52"
Brake HP		0.4

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F89-1	BED	SR	10	255	316	258	1.01
F89-2	BED	SR	10	255	343	243	0.95
F89-3	LIVING	SR	10	320	261	249	0.78
F89-4	LIVING	SR	10	320	262	315	0.98
F89-5	LIVING	SR	10	320	233	274	0.86
F89-6	LIVING	SR	10	320	289	314	0.98
F89-7	LIVING	SR	10	320	298	322	1.01
F89-8	LIVING	SR	10	320	269	295	0.92
SA TOTAL				2430	2271	2270	0.93
R89-1		RR	30X30	2430			0.00
RA TOTAL				2430		0	0.00

Project: Formica Building (Cincinnati, OH)
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50

Area: 804

Unit Data	
MFG	WHALEN
Model Num	HPPR022W4R411R000
Serial Num	356318-2

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY 2

Test Data		
	Design	Actual
SA CFM	2430	1921
Fan Speed		High
OA CFM	0	0
RA CFM	2430	1921
RL Voltage		122
RL Amperage		12.5
Suction ESP		-0.45"
Discharge ESP		0.41"
Total ESP	0.4	0.86"
Brake HP		0.811

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F89-1	BED	SR	10	255	346	263	1.03
F89-2	BED	SR	10	255	313	314	1.23
F89-3	LIVING	SR	10	320	221	232	0.73
F89-4	LIVING	SR	10	320	162	221	0.69
F89-5	LIVING	SR	10	320	204	215	0.67
F89-6	LIVING	SR	10	320	220	224	0.70
F89-7	LIVING	SR	10	320	196	227	0.71
F89-8	LIVING	SR	10	320	209	225	0.70
SA TOTAL				2430	1871	1921	0.79
R89-1		RR	30X30	2430	1871	1921	0.79
RA TOTAL				2430	1871	1921	0.79

Project: Formica Building (Cincinnati, OH)
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Asset: FCU10-1 (FCU-G1)

Area: 1005

Unit Data	
MFG	WHALEN
Model Num	HPPR022W4R411R000
Serial Num	356318-1

Motor Data	
Motor MFG	NL
Horsepower	0.50
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY 2

Test Data		
	Design	Actual
SA CFM	2580	1971
Fan RPM		NA
OA CFM	0	0
RA CFM	2580	1971
RL Voltage		121
RL Amperage		12.4
Suction ESP		-0.10"
Discharge ESP		.017"
Total ESP	0.4	0.27"
Brake HP		0.4

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F101-1	BED 1	SR	10	380	188	308	0.81
F101-2	BED 2	SR	10	300	193	213	0.71
F101-3	BED 2	SR	10	300	174	235	0.78
F101-4	LIVING	SR	10	320	173	224	0.70
F101-5	LIVING	SR	10	320	198	244	0.76
F101-6	LIVING	SR	10	320	170	234	0.73
F101-7	LIVING	SR	10	320	218	254	0.79
F101-8	LIVING	SR	10	320	198	259	0.81
SA TOTAL				2580	1512	1971	0.76
R101-1		RR	28X28	2580			
RA TOTAL				2580		0	0.00

National TAB

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU10-9 (FCU-A2)

Area: 1004

Unit Data	
MFG	WHALEN
Model Num	HPPR022W4R411R000
Serial Num	356318-2

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	NL
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY 2

Test Data		
	Design	Actual
SA CFM	2430	2079
Fan Speed		High
OA CFM	0	0
RA CFM	2430	2079
RL Voltage		121
RL Amperage		13
Suction ESP		-0.21"
Discharge ESP		0.31"
Total ESP	0.4	0.52"
Brake HP		0.844

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
F109-1	BED	SR	10	255	278	245	0.96
F109-2	BED	SR	10	255	333	259	1.02
F109-3	LIVING	SR	10	320	184	269	0.84
F109-4	LIVING	SR	10	320	215	253	0.79
F109-5	LIVING	SR	10	320	221	267	0.83
F109-6	LIVING	SR	10	320	195	257	0.80
F109-7	LIVING	SR	10	320	238	258	0.81
F109-8	LIVING	SR	10	320	271	271	0.85
SA TOTAL				2430	1935	2079	0.86
R109-1		RR	30X30	2430	1935	2079	0.86
RA TOTAL				2430	1935	2079	0.86



National TAB

Project: Formica Building (Cincinnati, OH)
Address: 120 E 4th Street Cincinnati, OH 45202

Asset: FCU11-10 (FCU-L)

Area: 1108

Unit Data	
MFG	WHALEN
Model Num	HPPE022W4R411R000
Serial Num	356687-8

Test Data		
	Design	Actual
SA CFM	2200	2012
Fan RPM		NA
OA CFM		0
RA CFM		1769
RL Voltage		122.4
RL Amperage		13.21
Suction ESP		-0.66"
Discharge ESP		0.26"
Total ESP	0.4	0.92"
Brake HP		0.42

Motor Data	
Motor MFG	NL
Horsepower	0.5
Motor Rpm	N
Phase	1
Voltage (rated)	120
Amperage (rated)	7.7

QTY

2

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
1110-1	1108 BED	SR	12X8	180	183	164	0.91
1110-2	1108 BED	SR	12X8	180	212	192	1.07
1110-3	1108 STUDY	SR	12X8	40	128	36	0.90
1110-4	1108 LIVING	SR	12X8	360	278	328	0.91
1110-5	1108 LIVING	SR	12X8	360	310	332	0.92
1110-6				360	322	317	0.88
1110-7				360	292	311	0.86
1110-8				360	302	332	0.92
SA TOTAL				2200		2012	0.91
RA TOTAL				2200			0.00
				2200	1769	1769	0.80

