



Comfort. Under control.

National TAB

Project: Connor Group Office
Address: 10510 Springboro Pike Miamisburg, OH

Asset: AHU2

Area: EXPANSION

Unit Data	
Manufacturer	TRANE
Model Number	CSAA050UA
Serial Number	H22D52662
Configuration	HORIZONTAL
No. Pre Filters / Size	1 / 16X20X2
No. Pre Filters / Size	4 / 16X25X2
No. Pre Filters / Size	12 / 20X25X2
No. Pre Filters / Size	1 / 16X20X4
No. Pre Filters / Size	4 / 16X25X4
No. Pre Filters / Size	12 / 20X25X4

Motor Data	
Horsepower	20
RPM	1800
Phase	3
Volts	460
Amps	24.5

OA Flow station k-factor = 1.098

Test Data		
	Design	Actual
SF CFM	22,000	23,642
RA CFM	20,700	22,251
OA CFM	1,300	1,391
RL VOLTAGE	460	464 VFD
RL AMPERAGE	48	32.8 VFD
Motor Speed		63hz
2/3 Pressure STPT		1.5"

Performance Data		
	Design	Actual
Mixed Air S.P.		1.54
Suction S.P.		3.13
Discharge S.P.		2.56
Total SP	5.57	5.69
CW Coil P.D.	0.877	0.53
HW Coil P.D.	0.060	* combined
Pre Filters P.D.	1.70	* 1.06
Total ESP	2.7	4.1



National TAB

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Asset: AHU2 Single Duct VAV's

Asset	Area Served	Type	Size	Design Max CFM	Actual Max CFM	Design Min CFM	Actual Min CFM	Design Heat CFM	Actual Heat CFM	Ak (max)
AHU2-0-1	A-001	VAV	8	300	305	0	0	300	301	892
AHU2-1-1	A-102	VAV	10	650	622	0	0	325	317	1677
AHU2-1-2	A-102	VAV	10	975	961	230	239	650	661	1257
AHU2-1-3	A-129	VAV	8	675	659	175	661	355	359	1041
AHU2-1-4	A-128	VAV	10	1010	1019	320	340	610	623	1905
AHU2-1-5	A-131	VAV	8	500	513	145	144	145	152	1020
AHU2-1-6	A-106	VAV	10	600	625	230	233	450	458	1711
AHU2-1-7	A-109	VAV	8	450	449	145	140	425	431	1077
AHU2-1-8	A-140	VAV	8	250	258	250	256	250	260	924
AHU2-1-9	A-124	VAV	10	880	859	230	239	250	252	1739
AHU2-1-10	A-139	VAV	8	500	499	175	174	175	181	1001
AHU2-1-11	A-136	VAV	8	550	576	225	231	225	241	1017
AHU2-1-12	A-113	VAV	8	450	462	145	144	225	221	977
AHU2-1-13	A-120	VAV	10	660	638	230	240	460	462	1616
AHU2-1-14	A-115	VAV	10	650	663	230	238	540	555	1592
AHU2-1-15	A-117	VAV	10	750	773	230	241	675	662	1546
AHU2-1-16	A-118	VAV	8	550	578	185	189	400	411	1188
AHU2-2-2	A-200	VAV	8	530	534	145	137	205	209	703
AHU2-2-3	A-231	VAV	10	780	817	180	189	420	416	1035
AHU2-2-4	A-230	VAV	8	360	367	145	152	265	172	1023
AHU2-2-5	A-228	VAV	10	1050	1058	290	294	440	429	1896
AHU2-2-6	A-244	VAV	8	450	453	170	177	170	174	952
AHU2-2-7	A-203	VAV	8	260	264	145	155	145	152	768
AHU2-2-8	A-207	VAV	10	700	721	145	149	420	428	1699
AHU2-2-9	A-209	VAV	8	345	354	145	142	225	221	1924
AHU2-2-10	A-210	VAV	6	150	156	85	88	110	114	614
AHU2-2-11	A-242	VAV	6	250	262	250	255	250	239	552
AHU2-2-12	A-240	VAV	6	200	212	100	104	100	104	517
AHU2-2-13	A-223	VAV	10	900	933	250	260	440	444	2185
AHU2-2-14	A-221	VAV	10	825	852	230	236	230	238	2209
AHU2-2-15	A-238	VAV	8	550	536	225	231	225	228	1039
AHU2-2-16	A-213	VAV	10	700	719	230	222	500	507	1831
AHU2-2-17	A-216	VAV	8	370	375	145	141	270	273	1132
AHU2-2-18	A-218	VAV	10	675	693	230	219	590	599	1886
AHU2-2-19	A-219	VAV	8	575	581	170	179	320	326	1931



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Asset: FLR 1 VAV SGRD's

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
1-1-1	A-102	LD4	10	650	544	622	0.96
AHU2-1-1				650		622	0.96
1-2-1	A-102	LD3	8	175	184	168	0.96
1-2-2	A-101	LD1	6	110	152	114	1.04
1-2-3	A-101	LD1	6	120	145	122	1.02
1-2-4	A-101	LD1	6	110	137	119	1.08
1-2-5	A-101	LD1	6	120	122	113	0.94
1-2-6	A-101	LD1	6	110	156	117	1.06
1-2-7	A-101	LD1	6	120	162	111	0.93
1-2-8	A-101	LD1	6	110	109	109	0.99
AHU2-1-2				975	1167	973	1.00
1-3-1	A-102	LD3	8	150	162	152	1.01
1-3-2	A-129	LD2	10	175	195	165	0.94
1-3-3	A-129	LD2	10	175	184	168	0.96
1-3-4	A-129	LD2	10	175	199	174	0.99
AHU2-1-3				675	740	659	0.98
1-4-1	A-128	LD2	8	150	162	152	1.01
1-4-2	A-128	LD2	8	150	174	155	1.03
1-4-3	A-128	LD2	8	150	185	160	1.07
1-4-4	A-127	LD2	8	140	192	142	1.01
1-4-5	A-127	LD2	8	140	145	148	1.06
1-4-6	A-126	LD2	8	140	133	145	1.04
1-4-7	A-126	LD2	8	140	157	133	0.95
AHU2-1-4				1010	1148	1035	1.02
1-5-1	A-130	D1	8	150	22	156	1.04
1-5-2	A-131	D1	10	250	273	248	0.99
1-5-3	A-141	D1	8	100	285	109	1.09
AHU2-1-5				500	580	513	1.03
1-6-1	A-108	LD1	8	150	33	158	1.05
1-6-2	A-107	LD1	8	150	197	152	1.01
1-6-3	A-106	LD1	8	150	215	155	1.03
1-6-4	A-105	LD1	8	150	222	160	1.07
AHU2-1-6				600	667	625	1.04



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Asset: FLR 1 VAV SGRD's

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
1-7-1	A-109	LD2	8	125	113	122	0.98
1-7-2	A-109	LD2	8	125	107	120	0.96
1-7-3	A-109	LD2	8	125	95	129	1.03
1-7-4	A-109	LD2	6	75	92	77	1.03
AHU2-1-7				450	407	448	1.00
1-8-1	A-140	D1	8	125	164	128	1.02
1-8-2	A-133	D1	8	125	144	130	1.04
AHU2-1-8				250	308	258	1.03
1-9-1	A-125	LD1	12	220	77	209	0.95
1-9-2	A-124	LD1	12	220	213	211	0.96
1-9-3	A-123	LD1	12	220	255	217	0.99
1-9-4	A-122	LD1	12	220	267	222	1.01
AHU2-1-9				880	812	859	0.98
1-10-1	A-138	D1	8	100	125	108	1.08
1-10-2	HALL	LD2	8	150	162	139	0.93
1-10-3	A-139	D1	8	100	116	104	1.04
1-10-4	HALL	LD2	8	150	145	148	0.99
AHU2-1-10				500	548	499	1.00
1-11-1	A-135	D1	8	150	186	155	1.03
1-11-2	A-136	D1	8	150	174	162	1.08
1-11-3	HALL	LD2	8	150	192	158	1.05
1-11-4	A-137	D1	6	100	184	101	1.01
AHU2-1-11				550	736	576	1.05
1-12-1	A-111	LD1	8	150	216	148	0.99
1-12-2	A-112	LD1	8	150	198	155	1.03
1-12-3	A-113	LD1	8	150	144	159	1.06
AHU2-1-12				450	558	462	1.03
1-13-1	A-121	LD1	12	220	239	217	0.99
1-13-2	A-120	LD1	12	220	246	209	0.95
1-13-3	A-119	LD1	12	220	208	212	0.96
AHU2-1-13				660	693	638	0.97



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Asset: FLR 1 VAV SGRD's

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
1-14-1	A-114	LD1	8	150	184	146	0.97
1-14-2	A-115	LD1	8	125	22	129	1.03
1-14-3	A-115	LD1	8	125	16	132	1.06
1-14-4	A-116	LD1	8	125	192	122	0.98
1-14-5	A-116	LD1	8	125	174	134	1.07
AHU2-1-14				650	588	663	1.02
1-15-1	A-117	LD2	8	175	199	177	1.01
1-15-2	A-117	LD2	8	135	182	139	1.03
1-15-3	A-117	LD2	8	135	154	142	1.05
1-15-4	A-117	LD2	8	175	162	189	1.08
1-15-5	A-117	LD2	8	130	116	126	0.97
AHU2-1-15				750	813	773	1.03
1-16-1	A-118	LD2	8	150	216	159	1.06
1-16-2	A-118	LD2	6	100	99	107	1.07
1-16-3	A-118	LD2	8	150	208	152	1.01
1-16-4	A-118	LD2	8	150	229	160	1.07
AHU2-1-16				550	752	578	1.05



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Asset: FLR 2 VAV SGRD's

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
2-2-1	A-200	LD1	8	165	216	159	0.96
2-2-2	A-202	LD5	8	200	222	198	0.99
2-2-3	A-200	LD1	8	165	208	177	1.07
AHU2-2-2				530		534	1.01
2-3-1	A-231	LD1	8	150	185	155	1.03
2-3-2	A-231	LD1	8	150	174	162	1.08
2-3-3	A-231	LD1	8	140	156	148	1.06
2-3-4	A-231	LD1	8	140	125	141	1.01
2-3-5	A-202	LD5	7	200	184	211	1.06
AHU2-2-3				780		817	1.05
2-4-1	A-230	LD2	8	120	152	126	1.05
2-4-2	A-230	LD2	8	120	111	122	1.02
2-4-3	A-230	LD2	8	120	133	120	1.00
AHU2-2-4				360		368	1.02
2-5-1	A-229	LD1	12	225	263	227	1.01
2-5-2	A-228	LD1	12	225	279	238	1.06
2-5-3	HALL	LD1	8	150	202	142	0.95
2-5-4	A227	LD1	12	225	311	222	0.99
2-5-5	A-226	LD1	12	225	333	229	1.02
AHU2-2-5				1050		1058	1.01
2-6-1	A-232	D1	8	100	148	104	1.04
2-6-2	HALL	LD1	8	150	132	139	0.93
2-6-3	A-244	D1	8	100	163	108	1.08
2-6-4	A-243	D1	8	100	177	102	1.02
AHU2-2-6				450		453	1.01
2-7-1	A-203	LD3	8	130	167	139	1.07
2-7-2	A-203	LD3	8	130	154	125	0.96
AHU2-2-7				260		264	1.02
2-8-1	A-208	LD1	10	175	148	187	1.07
2-8-2	A-207	LD1	10	175	152	178	1.02
2-8-3	A-206	LD1	10	175	162	181	1.03
2-8-4	A-205	LD1	10	175	133	175	1.00
AHU2-2-8				700		721	1.03



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Asset: FLR 2 VAV SGRD's

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
2-9-1	A-209	LD2	6	110	124	109	0.99
2-9-2	A-209	LD2	6	110	138	119	1.08
2-9-3	A-209	LD2	8	125	144	126	1.01
AHU2-2-9				345		354	1.03
2-10-1	A-210	LD1	8	150	188	156	1.04
AHU2-2-10				150		156	1.04
2-11-1	A-242	D1	8	125	139	129	1.03
2-11-2	A-235	D1	8	125	144	133	1.06
AHU2-2-11				250		262	1.05
2-12-1	A-241	D1	8	100	126	103	1.03
2-12-2	A-240	D1	8	100	128	109	1.09
AHU2-2-12				200		212	1.06
2-13-1	A-225	LD1	12	225	264	234	1.04
2-13-2	A-224	LD1	12	225	241	222	0.99
2-13-3	A-223	LD1	12	225	255	238	1.06
2-13-4	A-222	LD1	12	225	258	239	1.06
AHU2-2-13				900		933	1.04
2-14-1	A-221	LD2	12	225	219	228	1.01
2-14-2	HALL	LD1	8	150	226	155	1.03
2-14-3	A-221	LD2	12	225	248	232	1.03
2-14-4	A-220	LD2	12	225	251	237	1.05
AHU2-2-14				825		852	1.03
2-15-1	A-237	D1	8	150	124	148	0.99
2-15-2	A-238	D1	8	150	120	142	0.95
2-15-3	HALL	LD1	8	150	136	138	0.92
2-15-4	A-239	D1	8	100	114	108	1.08
AHU2-2-15				550		536	0.97



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Asset: FLR 2 VAV SGRD's

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
2-16-1	A-212	LD1	8	150	189	152	1.01
2-16-2	A-213	LD1	8	150	145	160	1.07
2-16-3	A-214	LD2	8	150	162	158	1.05
2-16-4	A-215	LD2	8	125	188	132	1.06
2-16-5	A-215	LD2	8	125	117	117	0.94
AHU2-2-16				700		719	1.03
2-17-1	A-216	LD2	8	115	140	122	1.06
2-17-2	A-216	LD2	8	115	113	119	1.03
2-17-3	A-217	LD2	8	140	127	134	0.96
AHU2-2-17				370		375	1.01
2-18-1	A-218	LD2	8	135	142	138	1.02
2-18-2	A-218	LD2	8	135	155	149	1.10
2-18-3	A-218	LD2	8	135	160	142	1.05
2-18-4	A-218	LD2	8	135	154	130	0.96
2-18-5	A-218	LD2	8	135	117	134	0.99
AHU2-2-18				675		693	1.03
2-19-1	A-219	LD2	8	125	170	133	1.06
2-19-2	A-219	LD2	8	125	118	119	0.95
2-19-3	A-219	LD2	8	75	148	74	0.99
2-19-4	A-219	LD2	8	125	152	131	1.05
2-19-5	A-219	LD2	8	125	162	124	0.99
AHU2-2-19				575		581	1.01



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Project: Connor Group Office
Address: 10510 Springboro Pike Miamisburg, OH

Asset: RF2

Area: AHU2 RETURN

Unit Data	
MFG	COOK
Model Num	QMXD-HP
Serial Num	108SJ80286-00/0010701
Type	MIXED FLOW

Motor Data	
Horsepower	15
Phase	3
Voltage (rated)	480
Amperage (rated)	24.3
Service Factor	1.15

Test Data		
	Design	Actual
CFM	22,000	23,108
Motor Speed		50 hz
RL Voltage	480	455 vfd
RL Amperage		14.1 vfd
Suction SP		0.1
Discharge SP		1.25
Total ESP	1.5	1.35