TBC Services

Testing * Balancing * Commissioning * Services

AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	AHU # 1
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	York
Model #	CFNM23187D
Serial #	04-246938-0101
Fan Sheave	6.4x2B SDS
Bore Size	SDS 1 11/16"
Belts/Size/Make	2 BX57 Goodyear
Center Distance	20 1/4"

Motor Information

Make/Frame	Baldor 254T
Model #	EM3333T-8
Horsepower	15.0 HP
Volts / Ph / Hz	200 3PH 60HZ
Amperage	42.4
Motor sheave	6.4x2B SDS
Bore Size	SDS 1 5/8"

Operating Conditions

	Design	Actual
Total Cfm	9,500	9,921
RA Cfm	-	-
OA Cfm	9,500	9,921
Fan Rpm		2014
Motor Rpm	1765	1772
Motor Voltage	200	203
Motor Amperage	42.4	38.3 34.3 38.8
Service Factor	1.15	1.15
Corrected F.L.A.	-	41.77

Static Profile

	Design	Actual
External S.P.		1.125"
Fan total S.P.		4.715"
Fan suction S.P.		.875" neg.
Fan discharge S.P.		3.84" pos.
Cooling coil S.P.		note # 2
Pre filters / Bag		note # 2
Final filters		.74"
Outside air % open		100%
Sheave % of Max.		Fixed

Remarks:	1) System balanced with only (1) unit running which pull from a common outside air louver. 2) Static pressure drop across coils = 1.25" 3) Static pressure drop across furnace = .24" 4) Static pressure drop across final filters = 1.36" 5) All information above was taken with (1) unit running.		
Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 1
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
306	1	C	8"	1	180	180	195	195	108%
306	2	C	8"	1	180	180	189	189	105%
306	3	C	8"	1	180	180	185	185	103%
306	4	C	8"	1	180	180	188	188	104%
307	5	C	8"	1	290	290	296	296	102%
307	6	C	8"	1	290	290	283	283	98%
307	7	C	8"	1	180	180	165	165	92%
305	8	A	12"	1	440	440	464	464	105%
305	9	A	12"	1	440	440	468	468	106%
305	10	A	12"	1	435	435	498	498	114%
305	11	A	12"	1	435	435	467	467	107%
HP-7	12	-	6"	0.196	204	40	210	41	103%
301	13	-	8"	1	250	250	255	255	102%
HP-9	14	-	8"	0.349	487	170	498	174	102%
HP-8	15	-	6"	0.196	204	40	190	37	93%
301	16	-	6"	1	240	240	200	200	83%
312	17	G	6"	1	130	130	125	125	96%
315	18	G	6"	1	100	100	96	96	96%
313	19	D	10"	1	200	200	197	197	99%
313	20	D	10"	1	200	200	220	220	110%
					Design		Actual		
					Cfm	4,600	Cfm	4,743	103%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.
1) Register # 16 has a 8" neck with a 8" flex connected to a 6" duct.

Date:	revised 12/29/04	Tested By:	O'Brien / Shenton

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TBC Services

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 1
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
314	21	E	10"	1	300	300	321	321	107%
314	22	E	10"	1	300	300	321	321	107%
316	23	D	10"	1	250	250	257	257	103%
316	24	D	10"	1	600	600	590	590	98%
316	25	D	10"	1	350	350	340	340	97%
318	26	A	10"x16"	1.11	477	530	474	526	99%
317	27	A	10"	1	430	430	467	467	109%
317	28	A	10"	1	430	430	467	467	109%
317	29	A	10"	1	430	430	467	467	109%
321	30	-	8"	1	250	250	275	275	110%
HP-4	31	-	8"	0.349	115	40	126	44	110%
HP-15	32	-	6"	0.196	765	150	787	154	103%
321	33	-	8"	1	200	200	214	214	107%
HP-3	34	-	6"	0.196	204	40	198	39	97%
313	35	-	10"	1	600	600	540	540	90%
					Design		Actual		
					Cfm	4,900	Cfm	5,022	102%

Remarks:	* Where effective area is equal to 1 a flowhood was used for balancing. 1) Total to outlets # 21 & # 22. 12"x14" AK = 1.16 velocity = 554 FPM CFM = 643 2) Total to outlets # 27, # 28 & # 29. 12"x16" AK = 1.33 velocity = 1054 FPM CFM = 1402 3) Room # 316 total traverse to register # 2 & # 3 14"x12" AK = 1.17 velocity = 795 FPM CFM = 930. 930 CFM minus flowhood reading of 340 CFM on register # 3 leaves 590 CFM for register # 2. 4) Total traverse to registers # 19, 20 & 35. 15"x12" AK = 1.25 velocity = 766 FPM CFM = 957. 957 CFM minus flowhood readings of 197 & 220 leaves 540 for register # 35.		
Date:	revised 12/29/04	Tested By:	O'Brien / Shenton

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Replaces 1st Sheet of AHU #1 See Dates

TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 1
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
301	1	-	-	1	1,750	1,750	1,186	1,186	68%
302 & 302A	2	-	18"x10"	1.25	1,184	1,480	835	1,044	71%
306	3	G	6"	1	130	130	179	179	138%
306A	4	-	15"x12"	1.25	800	1,000	827	1,034	103%
306B	5	-	14"x12"	1.16	517	600	453	525	88%
306C	6	D	10"	1	250	250	288	288	115%
306C	7	-	14"x12"	1.16	819	950	1,087	1,261	133%
306D	8	-	10"x16"	1.11	477	530	661	734	138%
306E	9	-	16"x12"	1.33	970	1,290	1,656	2,202	171%
316F	10	G	6"	1	100	100	0	0	0%
391	11	-	8"	1	250	250	245	245	98%
391	12	-	6"	1	240	240	190	190	79%
395	13	-	8"	1	250	250	260	260	104%
395	14	-	8"	1	200	200	204	204	102%
HP-3	15	-	6"	0.196	204	40	188	37	92%
HP-4	16	-	8"	0.349	115	40	116	40	101%
HP-7	17	-	6"	0.196	204	40	198	39	97%
HP-8	18	-	6"	0.196	204	40	195	38	96%
HP-9	19	-	8"	0.349	487	170	465	162	95%
HP-15	20	-	6"	0.196	765	150	750	147	98%
					Design		Actual		
					Cfm	9,500	Cfm	9,816	103%

Remarks:	1) Readings above are room totals only. Individual diffusers were not necessarily balanced proportionally due to only having 1/2 hour to obtain proper room pressures so that the hood certification could take place. The UVM Professor's, Bob Howard & L.N. Consulting were aware that we were only adjusting dampers (without taking actual readings) on AHU # 1 in order to obtain proper room pressures. We then returned two days later to read and record the changes made to AHU # 1 along with room pressures.

Date:	1/5/2005	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	AHU # 2
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	York
Model #	CFNM23191D
Serial #	04-246938-0102
Fan Sheave	4.6x2B SDS
Bore Size	SDS 1 1/2"
Belts/Size/Make	2 BX46 Carlisle
Center Distance	17 1/4"

Motor Information

Make/Frame	Baldor 254T
Model #	EM2333T-8
Horsepower	15.0 HP
Volts / Ph / Hz	200 3PH 60HZ
Amperage	42.4
Motor sheave	2VP60
Bore Size	1 5/8"

Operating Conditions

	Design	Actual
Total Cfm	6,525	6,766
RA Cfm	-	-
OA Cfm	6,525	6,766
Fan Rpm		2099
Motor Rpm	1765	1783
Motor Voltage	200	203
Motor Amperage	42.4	28.0 25.0 23.5
Service Factor	1.15	1.15
Corrected F.L.A.	-	41.77

Static Profile

	Design	Actual
External S.P.		1.84"
Fan total S.P.		3.355"
Fan suction S.P.		.655" neg.
Fan discharge S.P.		2.70" pos.
Cooling coil S.P.		-
Pre filters / Bag		.645"
Final filters		.76"
Outside air % open		100%
Sheave % of Max.		100%

Remarks:

1) System balanced with only (1) unit running which pull from a common outside air louver.
2) All information above was taken with (1) unit running.
3) Total actual CFM is by addition of fume hoods.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 2
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
fume hood # 10	1	-	6"x10"	0.416	1,430	595	1,436	597	100%
fume hood # 11	2	-	10"	0.545	1,312	715	1,251	682	95%
fume hood # 12	3	-	12"	0.786	910	715	981	771	108%
fume hood # 13	4	-	12"	0.786	910	715	943	741	104%
fume hood # 14	5	-	12"	0.786	757	595	795	625	105%
fume hood # 15	6	-	10"	0.545	1,092	595	1,154	629	106%
fume hood # 16	7	-	10"	0.545	1,312	715	1,440	785	110%
fume hood # 17	8	-	10"	0.545	862	470	843	459	98%
fume hood # 17	9	-	10"	0.545	862	470	910	496	106%
fume hood # 18	10	-	10"	0.545	862	470	930	507	108%
fume hood # 18	11	-	10"	0.545	862	470	869	474	101%
					Design		Actual		
					Cfm	6,525	Cfm	6,766	104%

Remarks:

Date:	10/11/2004	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	AHU # 3
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	York
Model #	AP400FSAF30
Serial #	CGDM-008917
Fan Sheave	2B5V110
Bore Size	B 2 3/16"
Belts/Size/Make	2 BP84 Carlisle
Center Distance	28 1/2"

Motor Information

Make/Frame	Leeson 284T
Model #	N284T17FB5A
Horsepower	25.0 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	66.0 - 60.0 / 30.0
Motor sheave	2B5V86
Bore Size	B 1 7/8"

Operating Conditions

	Design	Actual
Total Cfm	16,255	15,809
RA Cfm	5,995	5,659
OA Cfm	10,260	10,150
Fan Rpm	-	1390
Motor Rpm	1770	1778
Motor Voltage	208	196
Motor Amperage	66.0	47.0
Service Factor	1.15	1.15
Corrected F.L.A.	-	70.0

Static Profile

	Design	Actual
External S.P.		.92"
Fan total S.P.		3.57"
Fan suction S.P.		2.32" neg.
Fan discharge S.P.		1.25" pos.
Cooling coil S.P.		1.07"
Heating Coil S.P.		.10"
final / Box filters		* .18"
Outside air % open		100%
Sheave % of Max.		fixed

Remarks:	* Prior to start of balancing we found the box filters to be extremely dirty. They were removed and new ones ordered. System balanced without box filters. 1) VFD set at 60.0 HZ 2) Static pressure drop across heat reclaim coil = .83" 3) Static pressure drop across air straightner = .28" 4) Static pressure drop across discharge air baffle / sound attenuator = .19" 5) Total actual outside air is a calculation of total supply air minus total return air.		
Date:	7/04 - 9/04	Tested By:	O'Brien / Shenton

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Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Supply Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
311	1	A	12"	1	650	650	806	806	124%
311	2	A	12"	1	650	650	517	517	80%
311	3	A	12"	1	650	650	465	465	72%
311	4	A	12"	1	650	650	788	788	121%
308	HP ?	galv	8"x8"	0.44	227	100	207	91	91%
330	HP43	galv	12"x8"	0.67	746	500	728	488	98%
336	HP10	galv	18"x10"	1.25	108	135	117	146	108%
335	HP44	galv	8"	0.349	430	150	487	170	113%
329	HP12	galv	8"	0.349	430	150	447	156	104%
327	HP14	galv	8"	0.349	716	250	771	269	108%
327	HP13	galv	10"	0.545	367	200	323	176	88%
325	HP2	galv	6"	0.196	510	100	464	91	91%
325	HP1	galv	8"	0.349	430	150	407	142	95%
205	5	-	6"	1	250	250	253	253	101%
206	6	-	8"	1	250	250	250	250	100%
202	HP22	galv	6"	0.196	204	40	235	46	115%
223	HP21	galv	8"	0.349	716	250	776	271	108%
231	HP19	galv	6"	0.196	204	40	255	50	125%
230	HP20	galv	6"	0.196	1,020	200	892	175	87%
207	7	A	14"	1	420	420	168	168	40%
					Design		Actual		
					Cfm	5,785	Cfm	5,518	95%

Remarks:	* Where effective area is equal to 1 a flowhood was used for balancing. 1) Room # 311 all diffusers were left full open to accomadate total airflow due to flex restrictions. 2) HP43 outside air derived by subtracting room 308 heat pump from traverse on main total. 3) Take - off that feeds room # 207 is placed in a bad spot and is smaller than indicated on the drawings. Due to configuration of take - off stratification may occur across the reheat coil. 4) HP19 outside air is closed as much as possible.		
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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Supply Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
207	8	A	14"	1	420	420	264	264	63%
207	9	A	14"	1	420	420	201	201	48%
213	10	K	10"	1	215	215	219	219	102%
213	11	K	10"	1	220	220	220	220	100%
213	12	K	10"	1	220	220	230	230	105%
213	13	K	10"	1	220	220	219	219	100%
214	14	F	8"	1	140	140	132	132	94%
214	15	F	8"	1	140	140	127	127	91%
214	16	F	8"	1	135	135	141	141	104%
214	17	F	8"	1	135	135	132	132	98%
209	18	F	8"	1	250	250	265	265	106%
209A	19	G	6"	1	50	50	50	50	100%
215	20	K	10"	1	250	250	228	228	91%
215	21	K	10"	1	250	250	245	245	98%
215	22	K	10"	1	250	250	269	269	108%
215	23	K	10"	1	250	250	255	255	102%
216	24	-	8"	1	200	200	196	196	98%
216	25	-	8"	1	200	200	194	194	97%
222	HP42	galv	10"	0.545	459	250	442	241	96%
217	HP24	galv	6"	0.196	204	40	219	43	107%
					Design		Actual		
					Cfm	4,255	Cfm	3,871	91%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.

1) Take - off that feeds room # 207 is placed in a bad spot and is smaller than indicated on the drawings. Due to configuration of take - off stratification may occur across the reheat coil.

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Supply Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
220	HP25	galv	6"	0.196	204	40	235	46	115%
228/229	HP41	galv	6"	0.196	510	100	520	102	102%
225	HP40	galv	10"x14"	0.97	103	100	115	112	112%
-	HP18	galv	10"x8"	0.55	273	150	269	148	99%
-	HP17	galv	8"	0.349	573	200	616	215	107%
-	HP16	galv	6"	0.196	510	100	515	101	101%
-	HP15	galv	8"	0.349	573	200	581	203	101%
106	26	F	8"	1	120	120	128	128	107%
107	27	F	8"	1	150	150	152	152	101%
105	28	F	8"	1	125	125	128	128	102%
105	29	F	8"	1	125	125	119	119	95%
105	30	F	8"	1	125	125	125	125	100%
105	31	F	8"	1	125	125	135	135	108%
105	32	F	8"	1	125	125	126	126	101%
105	33	F	8"	1	125	125	137	137	110%
105	34	F	8"	1	125	125	132	132	106%
105	35	F	8"	1	125	125	137	137	110%
101	HP32	galv	8"x4"	0.22	909	200	968	213	106%
-	HP33	galv	6"x8"	0.33	303	100	312	103	103%
124	HP34	galv	10"x8"	0.55	182	100	201	111	111%
					Design		Actual		
					Cfm	2,560	Cfm	2,672	104%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.

1) HP40 outside air derived by subtracting HP41 from traverse on main branch.

2) HP33 outside air not shown on drawings. Given practical design.

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Supply Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
110	36	F	8"	1	125	125	125	125	100%
110	37	F	8"	1	125	125	134	134	107%
112	38	F	8"	1	150	150	148	148	99%
112	39	F	8"	1	150	150	148	148	99%
112	40	F	8"	1	150	150	142	142	95%
112	41	F	8"	1	150	150	142	142	95%
113	42	F	8"	1	125	125	132	132	106%
-	43	F	8"	1	100	100	110	110	110%
115	44	F	8"	1	140	140	149	149	106%
115	45	F	8"	1	140	140	151	151	108%
116	46	F	8"	1	175	175	185	185	106%
116	47	F	8"	1	175	175	190	190	109%
117	48	-	8"	1	200	200	208	208	104%
118	HP37	galv	6"	0.196	204	40	214	42	105%
121	HP38	galv	6"	0.196	204	40	234	46	115%
-	HP27	galv	8"x4"	0.22	545	120	568	125	104%
-	HP26	galv	8"x4"	0.22	364	80	386	85	106%
-	HP28	galv	12'x6"	0.5	240	120	236	118	98%
-	HP29	galv	12"x12"	1	200	200	181	181	91%
-	HP31	galv	8"	0.349	573	200	590	206	103%
					Design		Actual		
					Cfm	2,705	Cfm	2,767	102%

Remarks:

* Where effective area is equal to 1 a flowhood was used for balancing.

1) HP27 outside air derived by subtracting HP26 from traverse on main branch total.

2) HP28 outside air derived by subtracting HP29 from traverse on main branch total.

3) HP30 was not possible to read. Taped off filter access and calculated outside air by subtracting return air from supply air.

4) HP36 outside air derived by subtracting HP35 from traverse on main branch total.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Supply Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
-	HP39	galv	12"x10"	0.83	602	500	648	538	108%
-	HP30	galv	-	-	-	250	235	235	94%
124	HP36	galv	12"x10"	0.83	120	100	131	109	109%
124	HP35	galv	12"x10"	0.83	120	100	120	100	100%
					Design		Actual		
					Cfm	950	Cfm	981	103%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Return Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
322	1	C	6"	1	100	100	70	70	70%
320	2	-	6"	1	40	40	35	35	88%
324	3	-	6"	1	40	40	45	45	113%
325	4	N	8"	1	250	250	127	127	51%
327	5	N	8"	1	200	200	182	182	91%
319	6	-	6"	1	45	45	45	45	100%
330	7	L	8"	1	250	250	210	210	84%
330	8	L	8"	1	250	250	176	176	70%
327	9	L	10"	1	250	250	67	67	27%
329	10	-	8"	1	150	150	165	165	110%
338	11	N	8"	1	170	170	177	177	104%
335	12	N	8"	1	150	150	148	148	99%
337	13	-	6"	1	40	40	44	44	110%
334	14	-	6"	1	40	40	55	55	138%
217	15	-	6"	1	40	40	44	44	110%
220	16	-	6"	1	40	40	40	40	100%
-	17	-	8"	1	200	200	151	151	76%
-	18	-	8"	1	100	100	101	101	101%
-	19	-	8"	1	200	200	221	221	111%
223	20	N	8"	1	250	250	268	268	107%
					Design		Actual		
					Cfm	2,805	Cfm	2,371	85%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.

1) Grille # 9 damper does not operate.
2) Grille # 14 damper will not close anymore.
3) Grille # 20 has no volume damper.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Return Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
222	21	L	8"	1	250	250	274	274	110%
209	22	F	8"	1	250	250	205	205	82%
202	23	-	8"	1	40	40	62	62	155%
231	24	-	6"	1	40	40	51	51	128%
230	25	-	8"	1	20	20	44	44	220%
226	26	N	8"	1	200	200	207	207	104%
-	27	-	8"	1	150	150	165	165	110%
124	28	-	8"	1	100	100	109	109	109%
118	29	-	6"	1	40	40	39	39	98%
124	30	-	8"	1	40	40	50	50	125%
124	31	-	8"	1	100	100	110	110	110%
124	32	-	8"	1	80	80	77	77	96%
121	33	-	6"	1	40	40	37	37	93%
124	34	-	8"	1	20	20	44	44	220%
-	35	-	6"	1	120	120	120	120	100%
-	36	-	6"	1	40	40	note # 3	note # 3	note # 3
-	37	-	6"	1	40	40	42	42	105%
-	38	-	8"	1	120	120	121	121	101%
-	39	-	8"	1	200	200	198	198	99%
-	40	-	-	1	-	-	-	-	-
					Design		Actual		
					Cfm	1,890	Cfm	1,955	103%

Remarks:

* Where effective area is equal to 1 a flowhood was used for balancing.

1) Grille # 23, # 24 & # 25 dampers are closed.
2) Grille # 40, # 41 & # 46 were not installed volume dampers were closed.
3) Grille # 36 is inaccessible.
4) Grille # 30 is full closed.
5) MOD that feeds grilles # 47 & # 48 is to be left full open per L.N. Consulting.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	AHU # 3 Return Air
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
-	41	-	-	1	-	-	-	-	-
124	42	-	8"	1	200	200	198	198	99%
124	43	-	8"	1	200	200	210	210	105%
-	44	-	8"	1	200	200	210	210	105%
-	45	-	8"	1	100	100	108	108	108%
-	46	-	-	1	-	-	-	-	-
-	47	-	8"	1	250	250	251	251	100%
-	48	-	8"	1	250	250	246	246	98%
-	49	-	8"	1	100	100	110	110	110%
					Design		Actual		
					Cfm	1,300	Cfm	1,333	103%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.
1) Grille # 40, # 41 & # 46 were not installed volume dampers were closed.

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TBC Services

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 1
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
116	1	-	21"x1.5"	0.218	1,606	350	1,759	383	110%
116	2	-	21"x1.5"	0.218	1,606	350	1,671	364	104%
					Design		Actual		
					Cfm	700	Cfm	748	107%

Remarks:	* Where effective area is equal to 1 a flowhood was used for balancing. 1) Fantech Model FRD-24-14 2) Serial # 702572 3) Suction static = .97" neg. 4) Discharge static = .61" pos.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust Fan # 2
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	MK Plastics
Model #	DHK 3000
Serial #	-
Fan Sheave	4B8.0SK
Bore Size	SK 2 3/16"
Belts/Size/Make	4 BP62 Dayco
Center Distance	21 1/2"

Motor Information

Make/Frame	Weg 284T
Model #	02518EP3E284T
Horsepower	25.0 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	59.3 / 29.5
Motor sheave	4MVP50B64
Bore Size	1 7/8"

Operating Conditions

	Design	Actual
Total Cfm	12,821	12,176
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm		1249
Motor Rpm	1760	1776
Motor Voltage	208	203
Motor Amperage	59.3	38.2 36.9 36.8
Service Factor	1.25	1.25
Corrected F.L.A.	-	60.76

Static Profile

	Design	Actual
External S.P.		note # 1
Fan total S.P.		note # 1
Fan suction S.P.		4.27" neg.
Fan discharge S.P.		note # 1
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		25%

Remarks:	1) Discharge static pressure is turbulent.		
Date:	10/11/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 2
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
317	1	FH-18	12"	0.786	1,896	1,490	1,867	1,467	98%
317	2	canopy	4"	0.087	575	50	535	47	93%
317	3	FH-17	12"	0.786	1,896	1,490	1,895	1,489	100%
317	4	canopy	6"	0.196	255	50	274	54	107%
317	5	cabinet	2"	0.021	2,381	50	1,625	34	68%
312	6	I	10"	1	460	460	488	488	106%
315	7	N	8"	1	200	200	217	217	109%
314	8	cabinet	8"	0.349	716	250	282	98	39%
314	9	cabinet	2"	0.021	2,381	50	1,882	40	79%
316	10	FH-13	10"	-	-	1,105	1,175	1,175	106%
316	11	FH-14	10"	0.545	1,697	925	1,657	903	98%
306	12	cabinet	3"	0.049	1,020	50	320	16	31%
305	13	FH-8	62.5x17.2	7.48	117	875	108	808	92%
305	14	FH-7	62.5x17.2	7.48	117	875	105	785	90%
307	15	FH-9	8"	0.349	1,685	588	1,830	639	109%
307	16	FH-9	8"	0.349	1,685	588	1,766	616	105%
307	17	cabinet	3"	0.049	1,020	50	454	22	44%
307	18	cabinet	3"	0.049	1,020	50	333	16	33%
313	19	cabinet	2"	0.021	2,381	50	475	10	20%
313	20	canopy	4"	0.087	575	50	625	54	109%
					Design		Actual		
					Cfm	9,196	Cfm	8,915	97%

Remarks:	* Where effective area is equal to 1 a flowhood was used for balancing. 1) 8" exhaust drop in room # 314 reduces to connect to tool. Drop is full open. 2) Total to FH-13 & FH-14. 14" AK = 1.069 velocity = 1981 FPM CFM = 2118 2118 CFM minus FH-14 traverse (903 CFM) and 2" drop room 314 (40 CFM) leaves 1175 CFM for FH-13. 3) All 2" & 3" drops that are low are full open. 4) Set all clean hoods by traverse per manufacturer. 5) Set all standard hoods to 100 FPM (+/- 10%) face velocity per UVM. 6) FH-9 face velocity = 115 FPM (hood size 84"x18" sash height)		
Date:	10/11/2004	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 2
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
313	21	Isotemp	3"	0.049	1,020	50	1,107	54	108%
313	22	FH-11	10"	0.545	2,028	1,105	2,023	1,103	100%
311	23	FH-19	62.5x17.2	7.48	148	1,105	110	823	74%
311	24	cabinet	6"	0.196	510	100	503	99	99%
311	25	FH-20	61.5x18	7.68	114	875	106	814	93%
311	26	canopy	8"	0.349	860	300	780	272	91%
314	27	-	3"	0.049	816	40	856	42	105%
318	28	-	4"	0.087	575	50	623	54	108%
					Design		Actual		
					Cfm	3,625	Cfm	3,261	90%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.

1) Set all clean hoods by traverse per manufacturer.

2) Set all standard hoods to 100 FPM (+/- 10%) face velocity per UVM.

Date:	10/11/2004	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust fan # 3
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	MK Plastics
Model #	CH 200
Serial #	-
Fan Sheave	2BK80
Bore Size	Q1 1 1/2"
Belts/Size/Make	2 B40 Jason
Center Distance	14 1/4"

Motor Information

Make/Frame	Weg 184T
Model #	HT005402P
Horsepower	5.0 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	11.8 / 5.9
Motor sheave	2VP42
Bore Size	1 1/8"

Operating Conditions

	Design	Actual
Total Cfm	800	note # 1
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	2514	1696
Motor Rpm	3480	3487
Motor Voltage	208	203
Motor Amperage	11.8	6.4 6.5 6.1
Service Factor	1.25	1.25
Corrected F.L.A.	-	12.09

Static Profile

	Design	Actual
External S.P.		4.9"
Fan total S.P.		4.9"
Fan suction S.P.		1.9" neg.
Fan discharge S.P.		3.0" pos.
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		30%

Remarks:
1) Set per Manufacturer's recommendation for CFM at face of hood.
2) Design CFM at face = 290 Actual CFM at face = 307

Date:	12/29/04	Tested By:	O'Brien / Shenton

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TBC Services

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AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust fan # 4
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	MK Plastics
Model #	CH 250
Serial #	-
Fan Sheave	2BK80
Bore Size	Q1 1 1/2"
Belts/Size/Make	2 A40 Jason
Center Distance	12 3/4"

Motor Information

Make/Frame	Weg 184T
Model #	HT007402PSI
Horsepower	7.5 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	17.5 / 8.76
Motor sheave	2VP42
Bore Size	1 1/8"

Operating Conditions

	Design	Actual
Total Cfm	1,105	note # 1
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	2343	1407
Motor Rpm	3460	3518
Motor Voltage	208	203
Motor Amperage	17.5	5.1 5.2 5.0
Service Factor	1.25	1.25
Corrected F.L.A.	-	17.93

Static Profile

	Design	Actual
External S.P.		3.56"
Fan total S.P.		3.56"
Fan suction S.P.		1.09" neg.
Fan discharge S.P.		2.47" pos.
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		10%

Remarks:
1) Set per Manufacturer's recommendation for CFM at face of hood.
2) Design CFM at face = 350 Actual CFM at face = 346

Date:	12/29/04	Tested By:	O'Brien / Shenton

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TBC Services

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AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust Fan # 5
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	TFI
Model #	-
Serial #	10012
Fan Sheave	1A3.8B4.2
Bore Size	H1
Belts/Size/Make	1 BX40 Dayco
Center Distance	14 1/2"

Motor Information

Make/Frame	Baldor 182T
Model #	M3611T
Horsepower	3.0 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	8.5 - 8.2 / 4.1
Motor sheave	1VP50
Bore Size	1 1/8"

Operating Conditions

	Design	Actual
Total Cfm	925	note # 1
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	1821	
Motor Rpm	1725	1764
Motor Voltage	208	203
Motor Amperage	8.5	4.1 4.3 3.9
Service Factor	1.15	1.15
Corrected F.L.A.	-	8.7

Static Profile

	Design	Actual
External S.P.		note # 3
Fan total S.P.		note # 3
Fan suction S.P.		2.33" neg.
Fan discharge S.P.		note # 3
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		0%

Remarks:	1) Set per Manufacturer's recommendation for CFM at face of hood. 2) Design CFM at face = 290 Actual CFM at face = 296 3) Discharge static is turbulent.

Date:	12/29/04	Tested By:	O'Brien / Shenton

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Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 5
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
318	FH-15	-	12"	0.786	1,177	925	1,374	1,080	117%
					Design		Actual		
					Cfm	925	Cfm	1,080	117%

Remarks:	* Where effective area is equal to 1 a flowhood was used for balancing. 1) Set by duct traverse as face velocities were very erratic. Also most hoods had side panels apart.		
Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

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AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust Fan # 6
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	MK Plastics
Model #	CNW 250
Serial #	-
Fan Sheave	2B4.0
Bore Size	HS 15/16"
Belts/Size/Make	2 B31 Jason
Center Distance	10 1/2"

Motor Information

Make/Frame	Weg 182T
Model #	HT003404P
Horsepower	3.0 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	7.8 / 3.9
Motor sheave	2VP56
Bore Size	1 1/8"

Operating Conditions

	Design	Actual
Total Cfm	1,105	1,216
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	2448	2062
Motor Rpm	1765	1765
Motor Voltage	208	203
Motor Amperage	7.8	6.1 6.2 5.8
Service Factor	1.25	1.25
Corrected F.L.A.	-	7.99

Static Profile

	Design	Actual
External S.P.		note # 1
Fan total S.P.		note # 1
Fan suction S.P.		5.45" neg.
Fan discharge S.P.		note # 1
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		60%

Remarks: 1) Discharge static pressure is turbulent.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 6
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
317	FH-16	-	12"	0.786	1,406	1,105	1,547	1,216	110%
					Design		Actual		
					Cfm	1,105	Cfm	1,216	110%

Remarks:	* Where effective area is equal to 1 a flowhood was used for balancing. 1) Set by duct traverse as face velocities were very erratic. Also most hoods had side panels apart.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

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AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust Fan # 7
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	Greenheck
Model #	CUBE-141-5-X
Serial #	04D10919
Fan Sheave	AK41
Bore Size	3/4"
Belts/Size/Make	1 4L220 Dayco
Center Distance	5 1/4"

Motor Information

Make/Frame	Marathon 56
Model #	BVA56T17D2094K P
Horsepower	1/2 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	2.1 - 2.2 / 1.1
Motor sheave	1VP34S
Bore Size	5/8"

Operating Conditions

	Design	Actual
Total Cfm	1,200	1,206
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	-	1388
Motor Rpm	1725	1754
Motor Voltage	208	203
Motor Amperage	2.1	1.6 1.5 1.6
Service Factor	1.25	1.25
Corrected F.L.A.	-	2.15

Static Profile

	Design	Actual
External S.P.		
Fan total S.P.		
Fan suction S.P.		
Fan discharge S.P.		atmospheric
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		0%

Remarks:			
Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 7
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
309	1	U	8"	1	200	200	238	238	119%
210	2	U	8"	1	200	200	227	227	114%
212	3	U	6"	1	75	75	84	84	112%
232	4	-	6"	1	100	100	not connected		
114	5	R	6"	1	100	100	108	108	108%
janitor	6	U	6"	1	75	75	73	73	97%
womens	7	U	8"	1	100	100	112	112	112%
elevator Rm.	8	-	10"x10"	0.69	145	100	161	111	111%
125	9	-	6"	0.196	765	150	735	144	96%
mens	10	-	8"	1	100	100	109	109	109%
					Design		Actual		
					Cfm	1,200	Cfm	1,206	101%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.
1) Motor sheave is in minimum position.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

Testing * Balancing * Commissioning * Services

AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Exhaust Fan # 8
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	Greenheck
Model #	CUC-101-AX-QD
Serial #	03K08570
Fan Sheave	direct drive
Bore Size	direct drive
Belts/Size/Make	direct drive
Center Distance	direct drive

Motor Information

Make/Frame	Marathon 48Y
Model #	AVK48A170286B P
Horsepower	1/4 HP
Volts / Ph / Hz	115 1PH 60HZ
Amperage	3.4
Motor sheave	direct drive
Bore Size	direct drive

Operating Conditions

	Design	Actual
Total Cfm	100	294
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	1725	1725
Motor Rpm	1725	1725
Motor Voltage	115	116
Motor Amperage	3.4	3.1
Service Factor	1.0	1.0
Corrected F.L.A.	-	3.37

Static Profile

	Design	Actual
External S.P.		note # 1
Fan total S.P.		note # 1
Fan suction S.P.		note # 1
Fan discharge S.P.		atmospheric
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		single speed

Remarks:	1) Suction static is non accessible.		
Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Exhaust Fan # 8
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
334	1	-	10"x10"	0.69	145	100	426	294	294%
					Design		Actual		
					Cfm	100	Cfm	294	294%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.
1) EF # 8 has a direct drive single speed motor.
2) No access to ductwork.

Date:	7/04 - 8/04	Tested By:	O'Brien / Shenton

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TBC Services

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AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Hazard EXH Fan # 1
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	Tag is N/A
Model #	Tag is N/A
Serial #	Tag is N/A
Fan Sheave	OD 6.25"
Bore Size	1 7/16"
Belts/Size/Make	2 AP50 Dayco
Center Distance	17 1/4"

Motor Information

Make/Frame	US Electric 213T
Model #	A915A
Horsepower	7.5 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	22.4 - 20.6 / 10.3
Motor sheave	OD 6.0"
Bore Size	1 3/8"

Operating Conditions

	Design	Actual
Total Cfm	6,475	note # 1
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	-	
Motor Rpm	1745	
Motor Voltage	208	
Motor Amperage	22.4	
Service Factor	1.25	1.25
Corrected F.L.A.	-	

Static Profile

	Design	Actual
External S.P.		-
Fan total S.P.		-
Fan suction S.P.		-
Fan discharge S.P.		-
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		60%

Remarks:	1) Fan does not need to be used hazard exhaust fan # 2 takes care of total exhaust load. 2) Fan has a VFD

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AIR MOVING EQUIPMENT TEST REPORT

Job Name	Delehanty Hall	System	Hazard EXH Fan # 2
Job Address	University Of Vermont	TBC #	21404

Unit Information

Make	Tag is N/A
Model #	Tag is N/A
Serial #	Tag is N/A
Fan Sheave	OD 6.25"
Bore Size	1 7/16"
Belts/Size/Make	2 AP50 Carlisle
Center Distance	17 1/4"

Motor Information

Make/Frame	US Electric 213T
Model #	A915A
Horsepower	7.5 HP
Volts / Ph / Hz	208-230/460 3PH 60HZ
Amperage	22.4 - 20.6 / 10.3
Motor sheave	OD 6.0"
Bore Size	1 3/8"

Operating Conditions

	Design	Actual
Total Cfm	6,475	6,319
RA Cfm	-	-
OA Cfm	-	-
Fan Rpm	-	1295
Motor Rpm	1745	1766
Motor Voltage	208	203
Motor Amperage	22.4	12.4 12.7 12.6
Service Factor	1.25	22.95
Corrected F.L.A.	-	-

Static Profile

	Design	Actual
External S.P.		2.95"
Fan total S.P.		2.95"
Fan suction S.P.		1.8" neg.
Fan discharge S.P.		1.15" pos.
Cooling coil S.P.		-
Pre filters / Bag		-
Final filters		-
Outside air % open		-
Sheave % of Max.		20%

Remarks:			
Date:	10/11/04	Tested By:	O'Brien / Shenton

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TBC Services

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REGISTER , GRILLE & DIFFUSER TEST REPORT

Job Name	Delehanty Hall	System No.	Hazard Exh. Fan # 1 & # 2
Job Address	University Of Vermont	TBC #	21404

Room Served	Outlet Number	Outlet Code	Outlet Size	Effective Area	Design		Actual		% OF DES.
					FPM	CFM	FPM	CFM	
207	1	furnace	4"	0.087	862	75	904	79	105%
207	2	canopy	10"	0.545	550	300	582	317	106%
207	3	FH-3	60"x18"	7.5	117	875	116	870	99%
213	5	FH-4	62.5x17	7.38	119	875	107	790	90%
214	6	FH-5	36"x18"	4.5	128	575	101	455	79%
215	7	FH-6	60"x18"	7.5	117	875	106	795	91%
215	9	J	10"	1	125	125	133	133	106%
105	11	FH-1	60"x18"	7.5	117	875	107	803	92%
105	12	L	10"	1	125	125	136	136	109%
110	13	L	10"	1	300	300	330	330	110%
112	14	I	14"	1	600	600	660	660	110%
113	15	FH-2	60"x18"	7.5	-	875	106	953	109%
					Design		Actual		
					Cfm	6,475	Cfm	6,319	98%

Remarks: * Where effective area is equal to 1 a flowhood was used for balancing.
1) Fume hoods balanced to 100 FPM (+/- 10%) face velocity per UVM.

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