



Performance Data

48x24 AJ Criti-Clean: Sound

Exp 700 TST 0429
LTO 2012-1211 Rev. 2

5/21/2013

AJ 48x24 fan filter

Note: Data collected @ 120V.

Mic location: 30" perpendicular distance from center of perforated face

Velocity	L _{Aeq}	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz
70	48.3	48	48	49	50	49	46	46	43	44	44	45	42	41	31	28	27	28	27	26	23	19	17	14	13
80	50.1	50	50	51	52	52	49	48	45	45	46	47	44	43	34	30	29	30	29	29	25	21	19	16	15
90	51.4	51	52	53	55	53	51	50	47	47	47	48	45	43	36	32	31	31	30	30	27	23	21	18	16
100	53.0	53	53	55	58	55	52	52	49	49	49	49	47	44	38	35	33	33	32	32	29	25	23	20	18
110	54.6	54	55	58	60	57	55	55	51	50	50	51	48	45	40	36	35	35	33	33	31	27	25	22	20
		53.478			53.7746			49.0467			48.8354			41.543			32.0811			28.5893			19.7502		
		55.4182			55.9067			51.0439			50.5107			43.3247			34.0267			30.7573			21.8123		
		56.8375			58.0593			52.7984			51.64			44.1233			35.2279			32.257			23.3835		
		58.9297			60.3515			55.1			53.1505			45.4448			37.3685			34.3824			25.6893		
		60.8379			62.4207			57.1401			54.46			46.5436			39.2638			35.9734			27.5216		

Calc'd Velocity [fpm]	Sound [dBA]	Octave Band Frequency							
		1	2	3	4	5	6	7	8
70	48.3	53	54	49	49	42	32	29	20
80	50.1	55	56	51	51	43	34	31	22
90	51.4	57	58	53	52	44	35	32	23
100	53.0	59	60	55	53	45	37	34	26
110	54.6	61	62	57	54	47	39	36	28

Energistics Laboratory

*for information on 240V and 277V, please consult factory

April 2013



Performance Data

Observer
BN

Date
5/3/2013

Psychrometric Data					
Dry Bulb	%RH	Pb	W	v	V/v
67	51	30.2	50.3	13.30176786	1.003

8" ADC Nozzle	
A	B
458.5	0.4907

48x24 AJ Criti-Clean: 120V Electrical

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LTO 2012-1211 Rev. 1

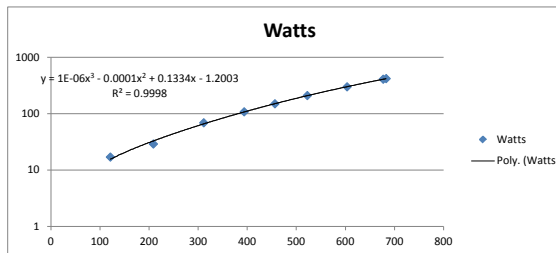
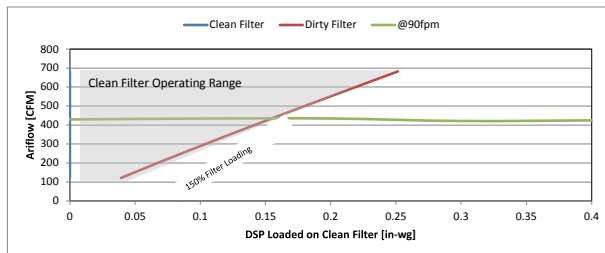
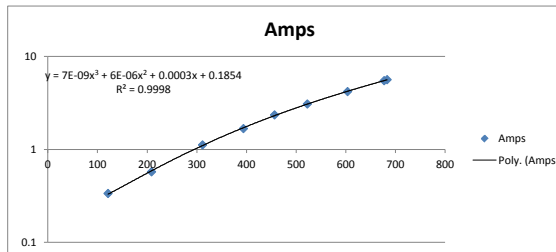
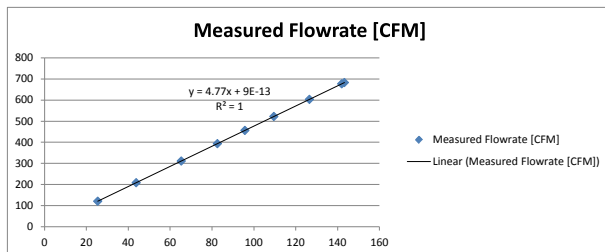
Filter Area
4.77

48x24 Criti-Clean Electrical and Airflow Data @ 120V

Evolution Command %	ADC Nozzle ΔP [in.-wg]	Measured Flowrate [CFM]	Calc'd Face Velocity [FPM]	Discharge Ps [in.-wg.]	Volts	Amps	VA	PF (meter)	Watts	Watts / VA	RPM	THD%	Phase Angle φ	Calc'd Motor Heat Gain	Watts/ CFM	AVG ΔP Across Filter	Dirty Filter ΔP [in.wg]	Dirty-AVG Resulting DSP
100	2.24	683	143	0	119	5.63	670	0.62	420	0.63	1439	77.3	2	1433.0	0.6149	0.5031	0.7546	0.2515
90	2.2	677	142	0	119	5.49	650	0.62	410	0.63	1436	77.2	2	1398.9	0.6056	0.4983	0.7474	0.2491
80	1.74	603	127	0	119	4.19	500	0.61	300	0.60	1293	78.5	0	1023.6	0.4972	0.4402	0.6604	0.2201
70	1.297	522	110	0	119	3.08	370	0.58	210	0.57	1158	81.2	-1	716.5	0.4020	0.3770	0.5655	0.1885
60	0.985	456	96	0	119	2.35	280	0.55	150	0.54	1045	83.1	-3	511.8	0.3286	0.3260	0.4890	0.1630
50	0.729	394	83	0	119	1.674	198	0.54	108	0.55	928	83.2	-2	368.5	0.2743	0.2781	0.4172	0.1391
40	0.452	311	65	0	119	1.116	134	0.52	69	0.51	713	85.5	-3	235.4	0.2216	0.2161	0.3241	0.1080
30	0.2	209	44	0	119	0.573	66	0.46	29	0.44	561	88	-4	98.9	0.1389	0.1405	0.2107	0.0702
20	0.066	121	25	0	119	0.335	40	0.41	17	0.43	398	88.4	-4	58.0	0.1403	0.0782	0.1174	0.0391

48x24 Criti-Clean Electrical and Airflow Data @ 90 FPM

Evolution Command %	ADC Nozzle ΔP [in.-wg]	Measured Flowrate [CFM]	Calc'd Face Velocity [FPM]	Discharge Ps [in.-wg.]	Volts	Amps	VA	PF (meter)	Watts	Watts / VA	RPM	THD%	Phase Angle φ	Calc'd Motor Heat Gain	Watts/ CFM	AVG ΔP Across Filter	Dirty Filter ΔP [in.wg]	Dirty-AVG Resulting DSP
58	0.87	429	90	0	120	1.78	209	0.57	119	0.57	943	81.5	-4	406.0	0.2771	0.3053	0.4580	0.1527
58	0.889	434	91	0.1	120	2.089	250	0.58	144	0.58	1048	81	-3	491.3	0.3318	0.4088		
58	0.89	434	91	0.2	120	2.456	292	0.58	169	0.58	1127	80.6	-3	576.6	0.3892	0.5090		
58	0.839	422	88	0.3	120	2.433	291	0.58	169	0.58	1124	80.4	-3	576.6	0.4006	0.5995		
58	0.851	425	89	0.4	120	2.74	330	0.59	200	0.61	1211	80.2	-3	682.4	0.4708	0.7018		



48x24 AJ Criti-Clean: Velocity

Observer
BN/JB

Date
4/29/2013

IEST 2.3 - Typically MAX 15% Relative Std Dev

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Filter Area
4.77

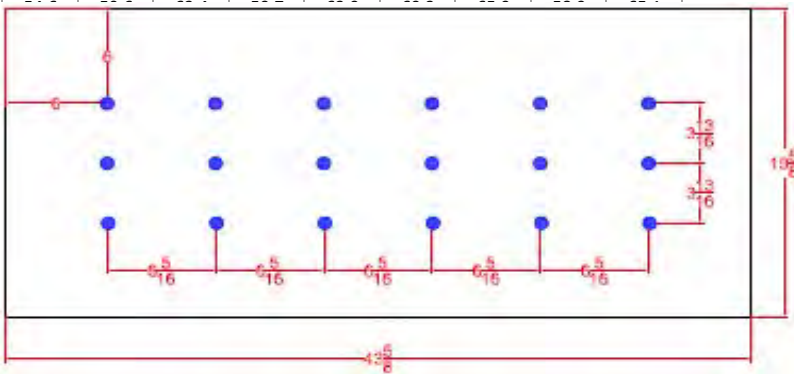
Note: Data collected @ 120V.

48x24 Criti-Clean Velocity Profile

Evolution Command	V0	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	Velocity AVG	SDEV	RSDEV	Measured Flowrate [CFM]	Calc'd Face Velocity [FPM]
%										79.2	68	73	83.1	75.1	71.9	78.8	83.6	85.1	79.9	7.6	9.6	683	143
100	70.5	65.4	83.1	81.4	89.3	91.8	88.4	80.1	90.4	79.1	67.7	73.5	82.5	74.5	71.7	78.5	83.1	84.2	79.7	7.6	9.6	677	142
90	70.2	65.5	82.7	81.4	88.8	92.8	87.9	79.8	90	72.1	63.2	67.6	76.8	69.8	67	72.4	76.8	78	73.8	6.8	9.3	603	127
80	65.3	61.1	77.9	74.8	81.5	84.8	82	74.1	83.2	67.2	59.2	63.2	70.3	64	62	67	70	70.5	67.7	6	8.8	522	110
70	59.9	55.8	71.6	68.5	73.7	78.9	74.6	67.1	75.3	59.8	54.1	57.3	64.2	58.1	57.4	61.2	63.4	63.7	61.3	4.9	7.9	456	96
60	55.2	51.8	64.8	61.8	65.7	70.4	67.7	60.4	66.7	46.6	49.2	51.7	56.5	51.3	47.2	50.5	56.5	57.1	52.8	4.6	8.6	394	83
50	49.6	46.4	53.2	50.6	58.1	63.2	59	53.2	50.5	40.6	42.7	44.1	48.7	44.9	39.7	43	48.3	49	45.3	4	8.7	311	65
40	43.8	39.9	44.9	43.4	49.7	53.9	51.8	45.4	42.3	31.9	34.1	34.8	37.2	35.4	32.1	32.1	36.7	37.7	35.4	2.5	7	209	44
30	34.7	33.2	35.8	33.7	38.6	40.4	39.7	35.3	34.3	14.2	19.5	20	22.4	22.1	14.4	19.8	14.2	24.1	20.3	3.5	17.2	121	25
20	22.7	20.5	20.4	14.4	23.3	24.3	23.8	22.3	22.7														

48x24 Criti-Clean Velocity Profile @ 90 FPM

Evolution Command	V9	V10	V11	V12	V13	V14	V15	V16	V17	Velocity AVG	SDEV	RSDEV
%												
58	57.7	53.3	56.3	62.6	56.7	56.6	59.5	62.4	62.7	60	4.7	7.9





Performance Data

48x24 AJ Criti-Clean: Static Pressure

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Observer
BN/JB

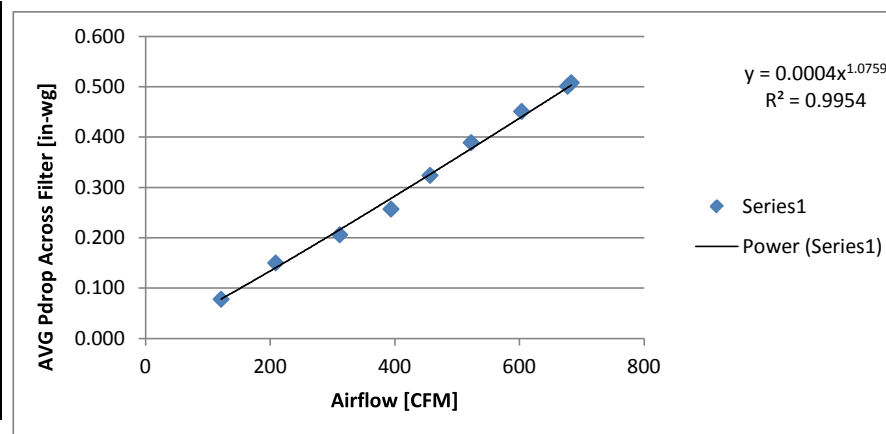
Date
4/29/2013

Filter Area
4.77

Note: Data collected @ 120V.

48x24 Criti-Clean Static Pressure

Evolution Command %	Upstream AVG Plenum Ps [in. wg.]	Dwnstream AVG Plenum Ps [in.-wg.]	AVG ΔP Across Filter	Measured Flowrate [CFM]	Calc'd Face Velocity [FPM]
100	0.518	0.01	0.508	683	143
90	0.511	0.010	0.501	677	142
80	0.46	0.009	0.451	603	127
70	0.399	0.010	0.389	522	110
60	0.333	0.009	0.324	456	96
50	0.266	0.009	0.257	394	83
40	0.216	0.010	0.206	311	65
30	0.159	0.009	0.150	209	44
20	0.087	0.009	0.078	121	25



48x24 Criti-Clean Electrical and Airflow Data @ 90 FPM

Evolution Command %	Upstream AVG Plenum Ps [in. wg.]	Dwnstream AVG Plenum Ps [in.-wg.]	AVG ΔP Across Filter
58	0.325	0.009	0.316

Airflow vs. ΔP

Power Fx'n
C: 0.0004487
b: 1.07592384

ΔP vs. Airflow

Power Fx'n
C: 1286.4458
b: 0.92517251

Dirty Filter is suggested @ 1.5 times clean filter initial resistance:

0.474

Equivalent to DSP of:

0.158