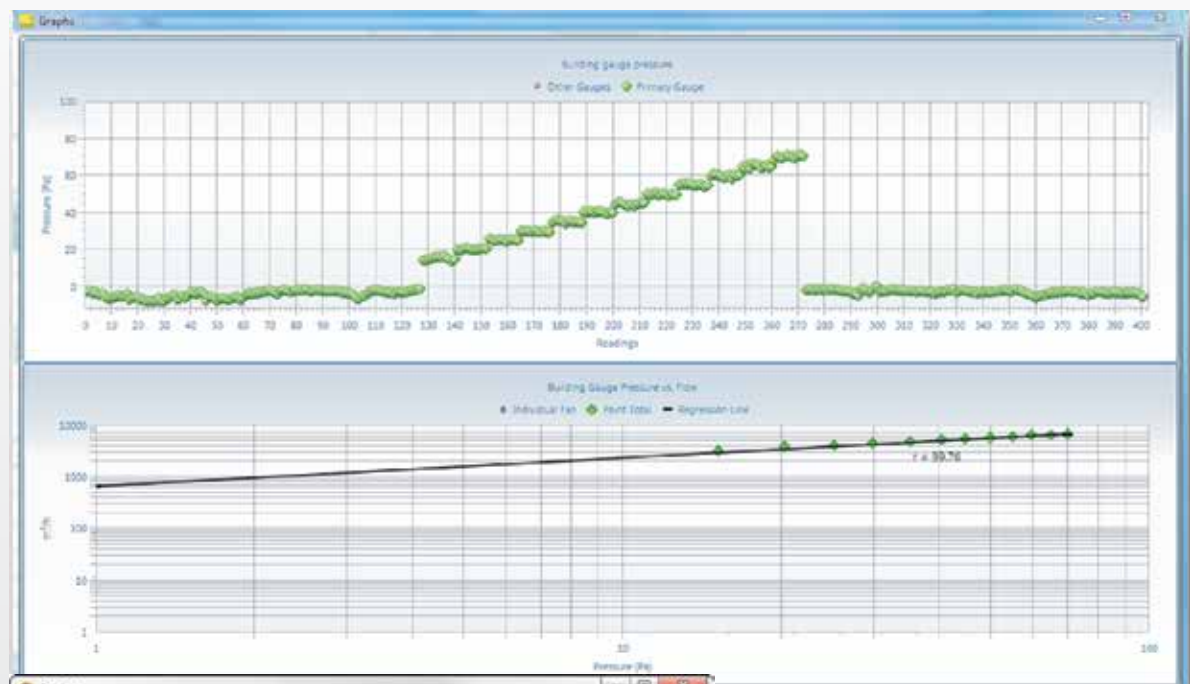


Test Results



Real-time graphing displays data points as they are taken.

Settings

Cover fans before taking bias readings? ☒ Yes ☐ No
Show calculation warnings? ☒ Yes ☐ No
On graphs: ☒ include all readings ☐ show averaged points only
☒ Individual Control?

Reset to Protocol Defaults

Pressure reference for ASTM
Air flow reference pressure #1 (50 Pa for Air Changes per Hour) **50**
Air flow reference pressure #2 **N/A**
Air flow reference pressure #3 **50**
Air flow reference pressure #4 **50**
Effective Leakage Area reference pressure **4**
Equivalent Leakage Area reference pressure **10**

Test **12** Size pressures for **30** sec each
Test **12** building pressure from **50** to **75** Pa for **20** sec each
Subtest timeout (seconds) **250** sec
Pressure target error criteria Allowed error **5** % (imp less than **2** Pa)
Bias stability required before testing maximum change of **1** Pa/sec tested over **5** sec

OK Cancel

Export Data to Excel, or as a Word Report
All data readings can be viewed by exporting to excel. Reports can be customized and tailored to your company's needs.

Customized settings allow for more flexible testing and specific adjustments for many test scenarios

File View Sets Tools Help

New Ctrl+N
Open Ctrl+O
Save Ctrl+S
Save As Ctrl+Shift+S

Auto save? ☒

Report Tests

Print Ctrl+P
Generate Report (Word) Ctrl+R
Export Data (Excel) Ctrl+E

Check for Updates
Exit

Test	Pressure	Flow	Leakage Area	Leakage Rate	Leakage Coefficient	Leakage Coefficient Error	Leakage Coefficient Error Error	Leakage Coefficient Error Error Error
1	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
33	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
34	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
35	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
37	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
39	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
41	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
42	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
43	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
44	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
46	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
47	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
48	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
49	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
52	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
54	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
56	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
57	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
58	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
59	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
61	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
62	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
63	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
64	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
66	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
68	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
69	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
72	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
74	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
76	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
77	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
78	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
79	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
81	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
82	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
83	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
88	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
89	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
92	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
93	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
94	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
96	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
98	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100	50.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FanTastic Air Leakage Software



Completely automated test-fan operation and data collection

ASTM 2011-02-15 1024 ANSI - Retrotec FanTastic (5.2.27)

Building Air Leakage Test
In compliance with ASTM E-779-03 and ASTM 1827
Multi FanTastic Pro, Version 5.2.2.3, Licensed to James D.

Test technician: **Colin Gange**
Find Gauges: **#1 Fan: Retrotec 3000SR**
Gauge: **DM-2**
Ser#: **123456**
Gauge: **DM-2**
Ser#: **203455**

Building description: **123 Sesame Street**
Elevation above sea level: **30** ft
Height of Building above ground: **5** ft
Enclosure Volume: **2,000** cu ft
Floor area: **900** sq ft
Enclosure Area: **1,500** sq ft

Start date: **2011-02-15** Start time: **10:24** Get Time: **10:24** Temperature, initial: indoors **65** °F outdoors **46** °F

Operator location: **Inside** Wind speed: **0** mph Direction: **0** °

Start Auto-Test: **Show Graphs**
Semi-Automatic Test: **Show Graphs**

Bias pressure, initial (Pa): **0.20 0.15 0.10 0.05 0.00**
Building gauge pressure (Pa): **25 30 35 40 45 50**
Time per Bias Pressure: **0** sec

Select Range: **1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100**

Automatic save of ASTM 2011-02-15 1024 ANSI completed at 2011-02-15 10:25:03

Fully automated tests, or semi-automatic mode for more personal control.



Control up to 24 fans.

Test Setup

One click automatic tests can be run at anytime. Click "Start Auto-Test" to run a multipoint test automatically. FanTastic will control the fan automatically and collect all the data without any user input at all.

Selects fan 18 to choose from, including all Retrotec, Minneapolis, and Infitec fans.

Automatically control 1 to 24 fans, takes up to 20,000 Baseline and test-fan readings, retakes bias at shutdown.

Manually collect data one point at a time. Stop & restart at will.

Semi-Automatic Testing

Set testing conditions with these controls or directly on DM2's. Press Collect Data Point to collect readings for the next data point. Data collection will stop when point is completed.

Multi-Fan Gauge Set-up
☐ Using splitter box
☒ Individual Control?

Fan Control
On fan(s) connected to gauge: **All gauges**
set fan speed or pressure target to:
Fan Speed: **100** %
Pressure Target: **100** Pa
Stop Fan(s) **Update Fan(s)**

Data to Collect
☐ Initial bias pressure
☒ Building pressurization (flow)
☐ Final bias pressure
Intro: **1**
Start Data Collection
Collect Data Point **Stop & Cancel**

Selects range automatically from setting on gauge, adjust manually if needed.

ASTM NEW TEST ANSI - Retrotec FanTastic (5.2.27)

File View Sets Tools Help

Building Air Leakage Test
In compliance with ASTM E-779-03 and ASTM 1827
Multi FanTastic Pro, Version 5.2.2.3, Licensed to Retrotec Energy Innovations Ltd.

Test technician: **Retrotec**
Find Gauges: **#1 Fan: Retrotec 2000**
Gauge: **DM-2**
Ser#: **203274**

Building description: **123 Sesame Street**
Elevation above sea level: **100** ft
Height of Building above ground: **15** ft
Enclosure Volume: **20,553** cu ft
Floor area: **2,088** sq ft
Enclosure Area: **4,757** sq ft

Start date: **2011-03-21** Start time: **10:06** Get Time: **10:06** Temperature, initial: indoors **75** °F outdoors **72** °F

Operator location: **Inside** Wind speed: **0** mph Direction: **0** °

Start Auto-Test: **Show Graphs**
Semi-Automatic Test: **Show Graphs**

Bias pressure, initial (Pa): **-0.93 -0.30 -0.20 -0.18 -0.33 -0.28 -0.22 -0.27 -0.16 -0.50**
Building gauge pressure (Pa): **-50.1 -42.3 -35.5 -27.5 -22.9 -15.9**
Door Fan: **1** **CR** **Pa** **55.1 47.4 38 27.3 20 12.3**
Time per Building Pressure: **20** sec

Bias pressure, final (Pa): **-0.66 -0.81 -0.66 -0.71 -0.98 -0.55 -0.54 -1.19 -0.78 -0.51**
Temperature, final: indoors **75** °F outdoors **70** °F

Total Corrected Flow [CFM]: **594.6 550.6 492.2 416.6 356.5 279.6**
Error [%]: **-2.5% 1.0% 1.6% 2.0% -1.2% -0.8%**

Height X temperature difference: **68** °F
Air leakage coefficient, C_g: **46.60 CFM/Pa** **+/- 21.8** %
Exponent, n₂: **0.6588** **+/- 8.8%** %
Correction coefficient, c₂: **0.9980**

Calculate: **Clear data** **Delete set** **New set**

Value	Units	Error
Air flow at STP	611.5 CFM at 50 Pa	+/- 0.03%
Air change rate	1.785 /h at 50 Pa	+/- 0.03%
Flow / unit floor area	0.29 CFM/sq ft at 50 Pa	+/- 0.03%