Reducing Uncertainties

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Learn by experimentation
Field Check Gauge & Blower Door

Field Check Gauge Weekly

Check gauge operation and check for blocked, leaking or pinched tubes weekly, and anytime results are in question.

To perform the gauge check, you will need the gauge and Umbilical:

- Set (Time Average) to 5 seconds in (Settings).
- Tap [Channel B] and select "Pressure: Pa".
- Connect the red tube between the red and yellow ports.
- If readings on Channel A and Channel B are within 2%, and don’t drop rapidly, the tube is not blocked or leaking and the gauge is correct.
- Repeat between different ports with each of the tubes you use for testing.

Charging your gauge and tubes regularly will eliminate a common source of error in readings.

Gauge – Field Check
Gauge – Field Check

Blower Door Fan – Field Check

Perform a Blower Door test on the building and record the EqL A at 50 Pa.
Install cardboard in upper part of doorway with a 20 x 20 inch hole cut in it.
Perform a second Blower Door test on the building, record the EqL A at 50 Pa.
Subtract the first result from the second result and the value should be 400 sq. in. (+/-10%).
Use software to repeat a test on a box
Virtual Gauge – Remote control & monitoring using PC.

Use Virtual Gauge to have trainer view your test.
Online updates
DM32 Configurator - Manage settings
Firmware Updates online – via USB

Methods for improved accuracy
Widely spaced points

Test from 45 to 55 Pa. 
Baseline variation 0.2 Pa

Test from 15 to 55 Pa. 
Baseline variation 2 Pa

10 Pa bias, 3 Pa variation
10 vs 60 second data

Increase sample time
Typical accuracy

- Directions: 1
- Total Time to get Baseline: 60
- Gauge error: 1%
- Flow accuracy of test fan: 5%
- Time to take 1 Induced Point: 20
- Number of points: 5
- Min time for test, seconds: 220

Test in both directions

- Directions: 2
- Total Time to get Baseline: 60
- Gauge error: 1%
- Flow accuracy of test fan: 5%
- Time to take 1 Induced Point: 20
- Number of points: 5
- Min time for test, seconds: 440
**Best**

| Directions | 2 |
| Total Time to get Baseline | 120 |
| Gauge error | 1% |
| Flow accuracy of test fan | 5% |
| Time to take 1 Induced Point | 120 |
| number of points | 2 |
| Min time for test, seconds | 600 |

**Best results**

<table>
<thead>
<tr>
<th>Flow rate (CFM)</th>
<th>Induced Pressure (Pa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,225</td>
<td>2</td>
</tr>
<tr>
<td>1,383</td>
<td>3</td>
</tr>
<tr>
<td>1,551</td>
<td>4</td>
</tr>
<tr>
<td>2,152</td>
<td>1</td>
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<tr>
<td>2,325</td>
<td>5</td>
</tr>
<tr>
<td>2,501</td>
<td>6</td>
</tr>
</tbody>
</table>

**Thank you!**

Distributor of RETROTEC
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