QuickGuide

Blower Door

Step 1: Prepare the building

- ☐ Close outside doors and windows.
- ☐ Open all interior doors leading to conditioned spaces.
- ☐ Turn gas, hot water, to Pilot.
- ☐ Fireplaces and stoves must be cold with doors closed (cover ashes).
- ☐ Shut off HVAC, combustion appliances, exhaust fans, dryers, A/C and furnaces.

See: *Manual-Residential Pressure & Air Leakage Testing* for additional information.

Remove or cover ashes.

Turn gas valve to Pilot.

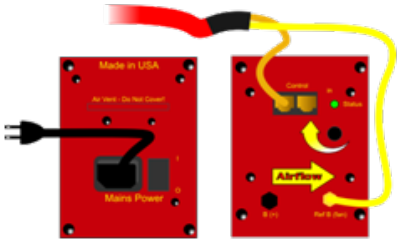
Close all windows and outside doors.

Step 2: Install the system

- ☐ Set up the door panel.
  See: *DoorPanel-Cloth* or *DoorPanel-Modular QuickGuide*
- ☐ Connect the yellow tube between yellow ports marked "Ref B" on fan and DM-2. If the fan has a green port ("Input B"), connect the green tube.
- ☐ Connect the Speed Control Cable from fan to gauge. Do not connect to the Internet.
- ☐ Pass long red tube through the Door Panel and toss the end at least 5 feet away from the fan's airstream.

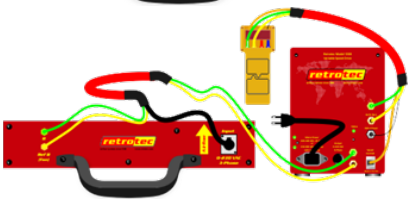
Note: Water in the tube will result in erroneous readings.

- ☐ Install the fan blowing outdoors. Cover fan.
- ☐ Connect the fan power plug to a wall outlet.



Model 1000
Device="Retrotec 1000"

Model Q46, Q56
Device= "Retrotec 2000"

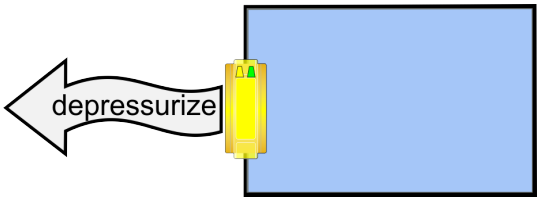


Model Q4E, Q5E, QMG
Device= "Retrotec 3000SR"

Place gauge case near fan, or attach gauge to Door Panel.

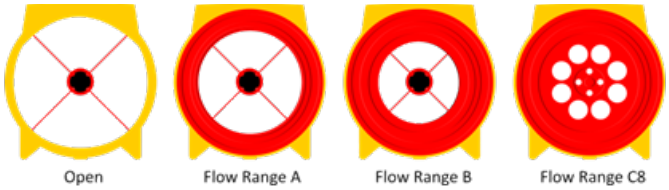
QuickGuide Blower Door

Step 3: Conduct depressurization test, (CFM@50)

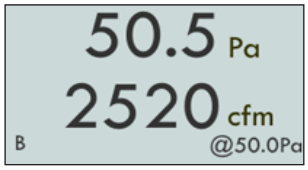


See: *QuickGuide DM-2 mark II Digital Gauge*

☐ Press **[On]** twice. Gauge will return to previous setup.
☐ Press **[Baseline]**. Press **[Enter]** after 20 seconds on a calm day and 60 seconds on a windy day.
☐ Uncover fan. Install Range Ring B.
☐ Press **[Range Config]** to show "B" on display.

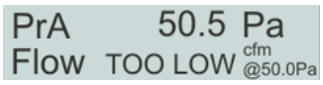


☐ Disconnect Speed Control Cable, then adjust Speed Control knob until pressure is about 50 Pa.
☐ Record results.



Step 4: No results displayed?

If the target pressure is reached, but "TOO LOW" appears, the fan is running too slowly to measure flow.



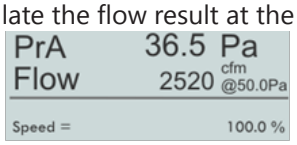
☐ Change to a smaller Range Configuration and adjust speed.
☐ Change **[Range Config]** to match.
☐ Repeat until a flow is displayed.

See: *QuickGuide-Blower Door RangeConfig*

If the fan reaches 100% speed, but does NOT reach the target pressure, check to see if a door or window is open. If not, more flow is needed.

☐ Remove a Range Plate or Ring and adjust speed.
☐ Repeat until pressure is reached.
☐ Change **[Range Config]** on the gauge to match the fan.

If the fan reaches 100% speed on the Open Range:
☐ Press **[@ Pressure]** to calculate the flow result at the specified target pressure.



Note: 2520 cfm is the flow rate that would occur at 50Pa, even though only 36.5 Pa was achieved.

Gauge set up

Auto Zero 6

Turn **[Auto Zero]** "On" to zero gauge (every 8 seconds). This is normally left on unless batteries are low.

Device 0

Press **[Device]** until "Retrotec 1000" is displayed for 1000 systems, "Retrotec 2000" for Q46 & Q56 systems, "Retrotec 3000SR" for QMG, Q4E & Q5E systems, or, "Retrotec DU200" for 200 Systems.

Other devices can be removed using the Setup Menu.

Range Config 2

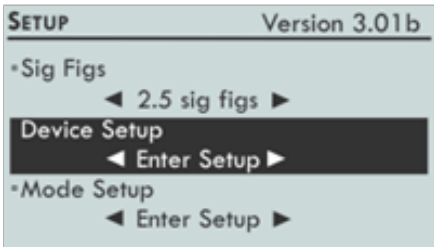
Use Range Ring B for most houses, try "C8" for tighter new houses, or "A" for looser older houses, if required.

Mode 1

Press **[Mode]** to cycle through results. Check the *Door Fan Operation Manual* to see the results required for your region.

Setup 3

Follow the *QuickGuide DM-2 mark II* to eliminate unused Devices, Range Configurations and Modes.

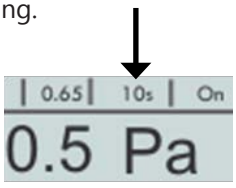


@ Pressure .

Press **[@ Pressure]** to display results exactly at (@) a test pressure. Use **[Set Pressure]**, or the menu in **[Setup]**, to change the pressure value displayed.

Time Avg 5

Set **[Time Avg]** to "10s". Increase if the test pressure fluctuates over 1 Pa. Wait for twice the Time Average length before taking a reading.
e.g. Set **[Time Avg]** to "10s", then wait for 20 seconds before taking a reading.



Tip: Use longer time averaging in windy conditions.

QuickGuide Blower Door

Different Results

Press **[Mode]** to access the available results, or use **[Setup]** to access even more results. Some popular options are shown below:

PrA 49.6 Pa Flow 1125 cfm @50.0Pa Speed = 50.0 % B Retrotec 1000	CFM 50 is required in the USA. The flow displayed is what it would be at exactly 50 Pa, eliminating the need for an exact test pressure.
PrA 49.6 Pa Flow /Area 6.2 $m^3/hr/m^2$ @50.0Pa area : 500.0 m^2 B Retrotec 1000	Normalized leakage area ($m^3/h/m^2$), required in Europe.
PrA 49.6 Pa Air Chg 2.12 /h @50.0Pa volume : 1000.0 ft^3 B Retrotec 1000	Air Changes shown directly on the gauge.
PrA 49.6 Pa EfLA/ area 0.00030 in^2/in^2 @50.0Pa area : 1000.0 ft^2 B Retrotec 1000	Display custom units. *e.g.* units specified by WA state.

Enter (Volume / Area) — Area and volume are input using the **[Enter]** key.

Results in leakage area

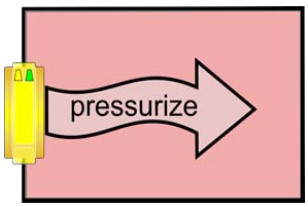
Press **[Mode]** until "EqLA" appears.
The DM-2 displays the pressure and the selected leakage area.

Note: Equivalent Leakage Area (EqLA) describes the leakage area in terms of one large hole in a flat surface. Unlike flow, EqLA is fairly consistent at different test pressures, but is usually referenced to 10Pa.

Note: Effective Leakage Area (EfLA) is a different measure of leakage area, and is never used for ducts. It is usually calculated at 4Pa.

Pressurization test

Turn the fan around to blow air into the house.



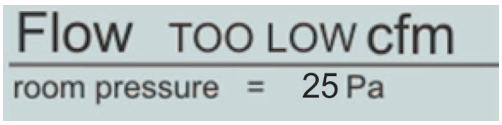
Note: Tubing configuration is the same for both directions.

Adjust fan speed with gauge

Connect Speed Control Cable to fan.
Solid green Status light indicates DM-2 is connected.

Press **[Set Pressure] [25] [Enter]** to get gauge to control to a pressure of 25 Pa.

Set Pressure 7



Any test pressure can be entered. High test pressures over 60 Pa are more likely to disturb building contents and cause damage.

Press **[Set Speed] [50] [Enter]** to set speed to 50%.

Set Speed 8 ▼

The fan will accept any Set Speed from 1 to 100%.

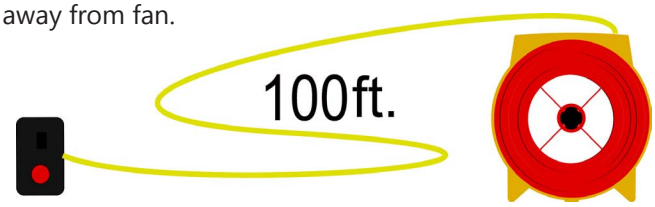
When speed or pressure is set, press **[Jog/Hold]** until "Jog" appears, then **[▲] [▼]** to adjust up or down. Click once to change by 1%, hold to increase by 5%.

Jog/ Hold 9

Press **[Exit]** to turn the fan off.

Adjust fan speed remotely

Use optional remote speed control from up to 300 feet away from fan.



QuickGuide Blower Door

Fan speed control with software

Speed control is handled automatically with FanTestic software, for complete automation.

Field check gauge weekly

Push tube onto red and yellow ports which will produce the same pressure on each channel.

Press **[Mode]** until "Pa" is displayed on both channels.

Both channels should have same reading within 1%.

AutoZero will cause pressures to drop and will allow comparisons at lower pressures.

Perform field check weekly or whenever readings seem questionable.

Field system check monthly

- ☐ Perform a Blower Door test on the building and record the EqLA 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 n test on the building, record the EqLA at 50 Pa.
- ☐ Subtract the first result from the second result and the value should be 400 sq. in. (+/-10%).

Alternatively, use a Calibration Plate in the optional second Fan Panel ,or, use the optional Flex Duct with a 400 sq. in. hole in a plate on the end.