

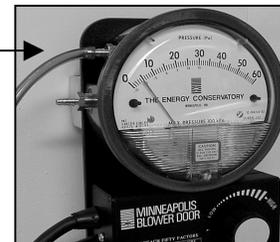
Quick Guide 2
One Point Depressurization Test
Using the Minneapolis Blower Door™ and Magnehelic® Gauges

1. Install the Blower Door system.

- a) Install the aluminum frame and nylon panel in an exterior doorway of a large open room.
- b) Attach the gauge mounting board containing the 3 Magnehelic gauges and fan speed controller to a door, or to the aluminum frame gauge hanger bar, using the C-clamp on the back of the mounting board.
- c) Connect hoses to the Magnehelic gauges as shown below.

d) Warm up the diaphragm inside the Magnehelic gauges. To warm-up the top 60 Pa building pressure gauge, gently blow on the remaining end of the **Green** building pressure tubing until the gauge reads 60 Pa and then release the pressure. Now warm-up the two fan pressure/flow gauges by gently sucking on the remaining end of the **Red** fan pressure tubing until the bottom gauge reads about 500 Pa. Release the pressure.

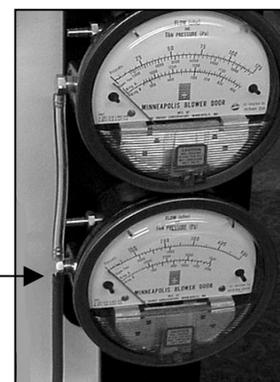
Connect the **Green** tubing to the top tap on 60 Pascal gauge. **The 60 Pascal gauge is used to measure building pressure with reference to outside.**



e) Run approximately 3 - 5 feet of the remaining end of the **Green** tubing outside through one of the patches in the bottom corners of the nylon panel. Be sure the outside end of the tubing is well away from the exhaust flow of the Blower Door fan.

f) Install the Blower Door fan, with the flow rings and no-flow plate installed, into the large hole in the nylon panel. The exhaust side of the fan should be outside, and the inlet side of the fan (the side with the flow rings) should be inside the building.

Connect the **Red** tubing to the bottom tap on bottom gauge. **Fan pressure and fan flow are read from the bottom gauges. Always use the middle fan pressure gauge to read fan flow when the fan pressure is less than 125 Pa.**



- g) Insert the female plug from the fan speed controller into the receptacle located on the fan electrical box. The remaining cord (power cord) should be plugged into a power outlet that is compatible with the voltage of the fan motor.
- h) Check that the fan direction switch is set to exhaust air out of the building.
- i) Adjust the bottom 2 gauges to read zero by turning the adjustment screw at the bottom of each faceplate with a small screwdriver. Tap the faceplate of the gauges with your finger as you adjust to read zero.
- j) The remaining end of the **Red** tubing should now be connected to the pressure tap on the Blower Door fan electrical box.

2. Prepare the building for the test.

- a) Close all exterior doors and windows, and open all interior doors. Because few house basements can be completely sealed from the house and usually some conditioning of the basement is desirable, they are typically included as conditioned space.
- b) Adjust all combustion appliances so that they do not turn on during the test.
- c) Be sure all fires are out in fireplaces and woodstoves. Close all fireplace and wood stove doors to prevent scattering of ashes.
- d) Turn off any exhaust fans, vented dryers, and room air conditioners.

3. Conducting the Test.

- a) With the No-Flow plate installed in the fan, adjust the top 60 Pa building pressure gauge to read zero by turning the adjustment screw at the bottom of the faceplate. Tap the faceplate of the gauge with your finger as you adjust to read zero.
- b) Remove the No-Flow Plate and install the Flow Ring which you think best matches the needed fan flow.
- c) Turn on the Blower Door fan by slowly turning the fan controller clockwise. As the fan speed increases, building pressure indicated on the top 60 Pa gauge should also increase. Increase fan speed until the top 60 Pa gauges indicates that the building is depressurized by 50 Pascals.
- d) While leaving the fan speed unchanged from **3c**) above, read the fan flow from one of the bottom two gauges using the flow scale corresponding to the current fan configuration. This flow reading is the CFM50 reading for the building. Always use the middle fan pressure gauge to read fan flow when the fan pressure is less than 125 Pascals.

Fan Configuration	Flow Range (cfm) for Model 3 Fan
Open (no Flow Ring)	6,300 - 2,400
Ring A	3,000 - 900
Ring B	1,000 - 300

Note: When determining flow through the fan, if the measured fan pressure is less than 25 Pascals you should install a Flow Ring (or the next smaller Ring) to improve measurement accuracy.