



# 351/352 DucTester QuickGuide



## Unpack, connect gauge

Check boxes for each step.

- Remove everything from the case.
- Press  on the gauge, then tap the screen, and check the battery state indicator at the top right: 
- If the battery display is not green, connect USB to power outlet to charge the gauge.
- Connect yellow, green and blue tubes to the gauge.



Gauge remains connected like this for all tests.

## Prepare the gauge

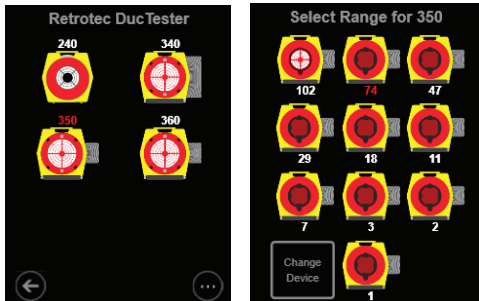


Make sure DucTester 350 is showing on the **Home** screen.

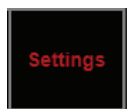
If not, tap the fan picture, then



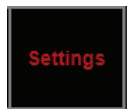
Tap , tap DucTester 350, then select the range that you have installed.



Tap on **[Channel B]** to change the type of result or units. Select based on "Get the results you need" on page 4.



Tap **[Settings]** then **[Time averaging]** and select 5 seconds.



Tap **[Settings]** then

Make sure the **[Default @ Pressure]** is 80, 160, or 250 Pa, depending on the test pressure you need. Make sure "n" value is set to 0.60 for Ducts.



Tap to return to the **Home** screen.

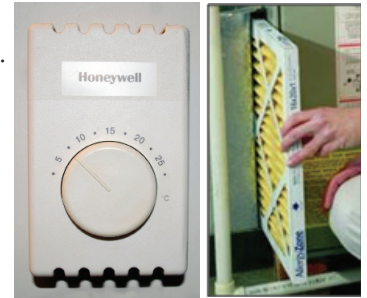
## Step 1: Prepare ducts and house

- Seal all supply and return grills/registers, including any exterior air inlets, with Grill Mask or tape.
- Open all interior doors leading to rooms containing a supply or return register, and open an exterior door or window.
- Shut off all HVAC (A/C, furnaces).



## Step 2: Connect to ducts

- Turn off air-handler and remove all filters.



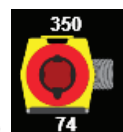
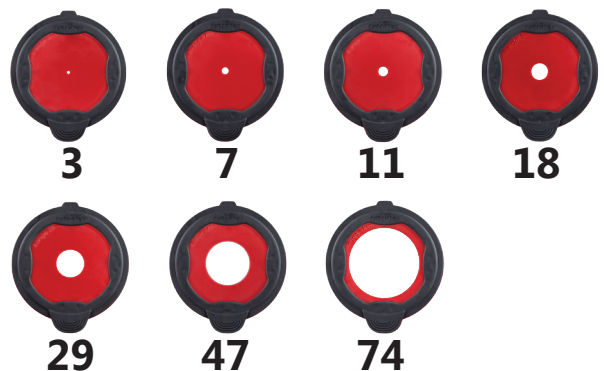
- Attach Flex Duct to register.



- Install Range Plug 74 to start, as most systems can be tested on this Range Configuration.



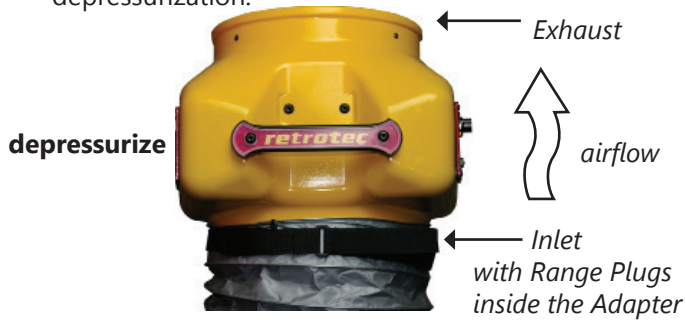
Use smaller Range number for tighter ducts, and larger number for leakier ducts.



- Tap on the gauge and select the range to match your fan, whenever a Range Plug is changed.

## Step 2: Connect to ducts (cont'd)

- Connect Flex Duct Adapter to fan **inlet** for depressurization.



To pressurize, connect the Flex Duct Adapter to fan **exhaust**. All other connections remain the same.

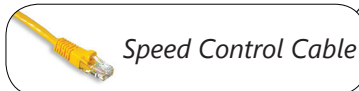


## Step 3: Connect gauge & fan

- Connect power cord.



- Connect yellow and green tubes to matching color ports on fan. Plugging in the Speed Control Cable will disable the knob. It is connected later in Step 4.



Speed Control Cable

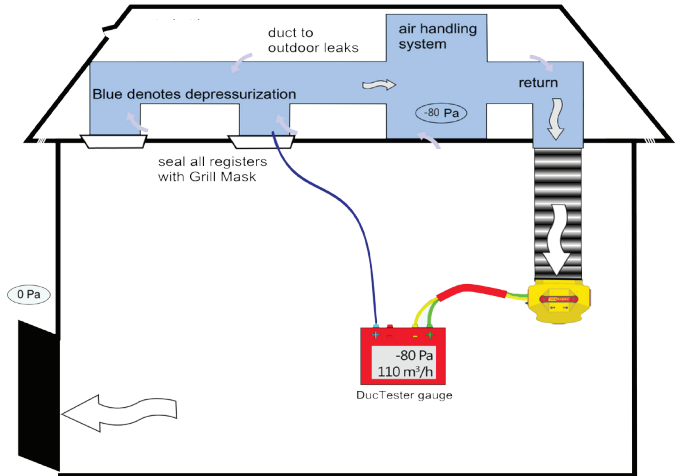


- Insert blue tube into the duct



## Total Duct Leakage Test: Depressurize

Ready to conduct the test by depressurizing the ducts:



## Step 4: Conduct test

- Go to **Home** screen on the gauge.



- Adjust fan speed knob clockwise until **[Channel A]** reaches test pressure.



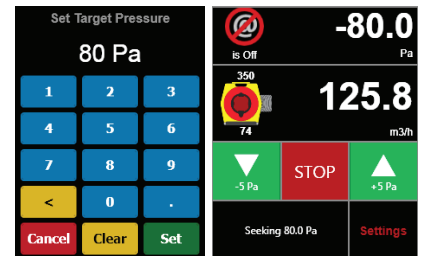
- If you cannot achieve the test pressure, go to Step 5.

- Connect Speed Control Cable to your fan.



Solid green Status light indicates gauge is ready to control the speed.

- For a test pressure of 80 Pa, tap



- Enter 80, tap **[Set]**



- Tap **[is Off]** to display what the result would be at exactly 80 Pa.



- Read results directly from the gauge.

## Get the results you need

- Tap the **[Channel B]** key to select a different Result, or tap the **[Result to be displayed]** key on the **[Settings]** menu.

**Flow: m3/h**

Flow at the induced pressure is the simplest result.

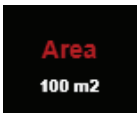
**Flow/Area: m3/(h·m<sup>2</sup>)**  
Flow normalized by area

Flow in cubic meters per hour per square meter (m<sup>3</sup>/(h·m<sup>2</sup>)) may be required.  
(Enter an area)

**Flow/Area: m3/(s·m<sup>2</sup>)**  
Flow normalized by area

Flow in cubic meters per second per square meter (m<sup>3</sup>/(s·m<sup>2</sup>)) may also be required.  
(Enter an area)

When a Result is chosen that requires an area or volume,



or




will be shown on the **Home** screen. Tap to change.

The area and volume can also be changed from the

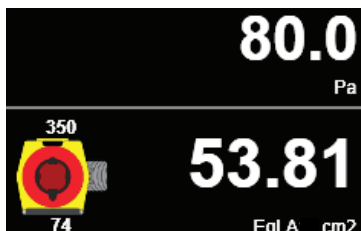
**Settings** menu.

## Show leakage area Result

Equivalent Leakage Area (EqLA) describes the leakage area in terms of one large hole in a flat surface.

Tap the **[Channel B]** key, then , and select "EqLA: cm"

**[Channel A]** shows the duct pressure and **[Channel B]** "EqLA" shows the combined size of all the holes in the ducts.



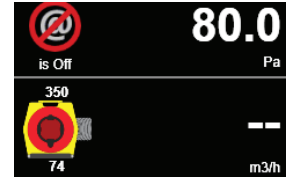
Leakage area is not a required result, but is a nice way to visualize the size of the hole in the ducts.

## Step 5: Desired results not achieved?

### Flow reads "--" at test pressure?

If the test pressure has been reached, but "--" appears, the fan is running too slowly to accurately measure flow.

- Switch to a lower Range Plug
- Change **[Range]** to match

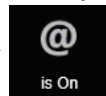
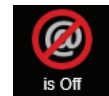


- Re-adjust fan speed.

### Cannot achieve test pressure at full speed?

If fan reaches 100% speed before reaching 80 Pa:

- Change to a higher Range Plug and try again.
- Change **[Range]** on the gauge to match.
- Check seals on all registers. Look for disconnected ducts or ducts open to outdoors.
- Tap **[@ Pressure]** to get the gauge to calculate what the flow would be at exactly 80 Pa.



## 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 yellow 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.

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

