

Retrotec's Model 440x & 450x Commercial DucTester System QuickGuide



1 Prepare the gauge, first time only
Home screen must show Model 450 on Range 47.

	250 Pa	Channel A
	125.7 m3/h	Channel B

If not, tap the device icon, then **Change Device**
 Tap until "Retrotec DucTester" appears.
 Tap then tap

If units on Channel A and B are NOT correct

- Tap **[Settings]** > **[Results to be displayed]**
- Tap **[Pressure:]** to change pressure
- Tap **[Flow:]** or **[Flow/Area]** to change flow units
- Tap to return **Home**

If time average is NOT "5 s avg"

- Tap **[Settings]** > **[Time Averaging]** "5 seconds"
- Tap to return **Home**

2 Prepare the ducts

Ensure sealing is complete
Blank off ductwork

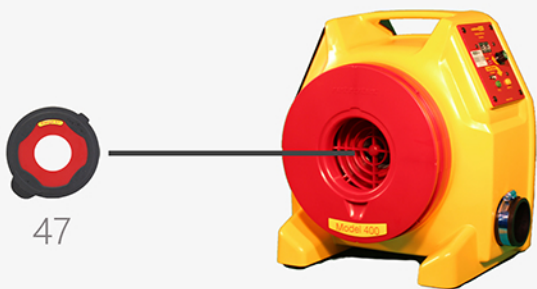


3 Connect Flex to ducts

Attach 4" (100mm) Flex to ductwork

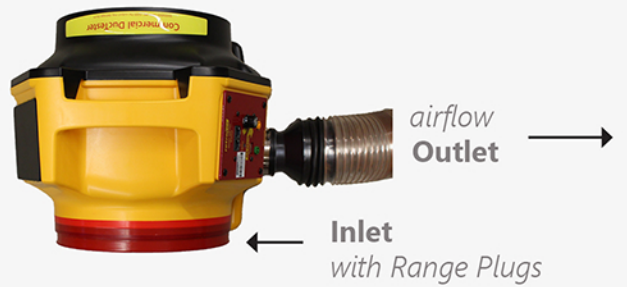


Install Range 47 Flow Plug



4 Connect Flex to Fan

Connect Flex Duct to fan **outlet** for **pressurization**



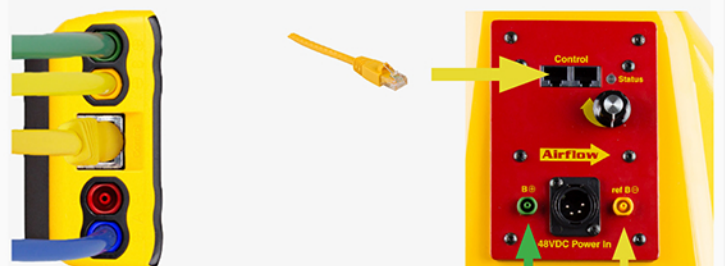
On Model 450 you can **depressurize** ducts by attaching the Adapter onto Fan inlet and attaching the Flex to it



5 Connect tubes & controls

Connect yellow and green tubes between DucTester and gauge

Plug in Speed Control Cable between DucTester and Gauge



5 Connect tubes & controls cont'd

Connect blue tube to gauge and to ducts using static probe or connection on flange



Plug in power source

6 Prepare Gauge for the test

Tap [Settings] > ⋮ > **[Default Pressure]** and enter Test Pressure. Tap  to return Home.

If your flow units include area, tap **[Area]**, then use number pad to enter and tap **[Set]**

7 Run the test

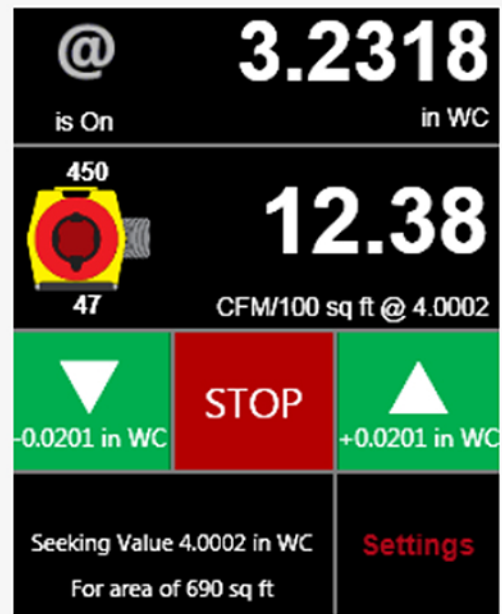
WARNING! Test pressures may exceed 20 in WC (5000 Pa). Start slowly!

[Set Speed] to 1% the Jog up to the Test Pressure

Tap "@" on the display and "Flow at Test" Pressure will appear

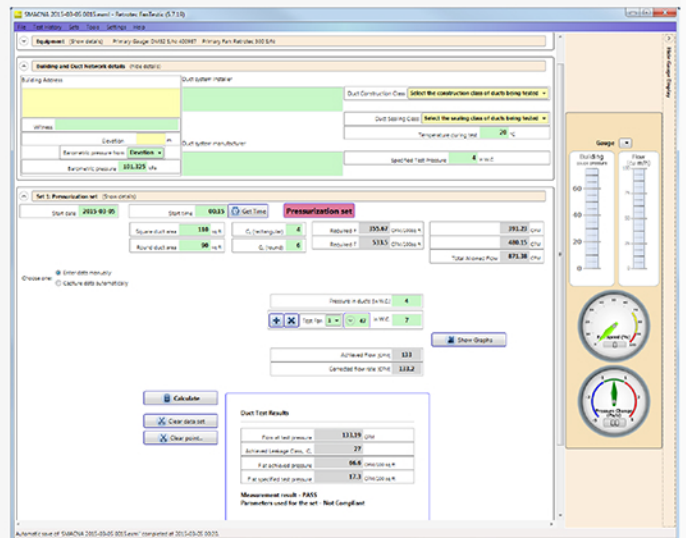
Jog fan speed up but do not exceed the Pressure Class

Read results from the Gauge



Connect Gauge to a laptop and have FanTestic run the test according to any Standard,

Visit retrotec.com/software.html to download



8 Test Passes

Complete test reports

Remove temporary seals

Desired results not achieved?

Flow in [Channel B] 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 test pressure:

- 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

Field check gauge weekly

Check gauge operation and check for blocked, leaking or pinched tubes weekly, and anytime results are in question. This will eliminate a common source of error



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.

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: CFM (m3/h) - Flow at the induced pressure is the simplest result

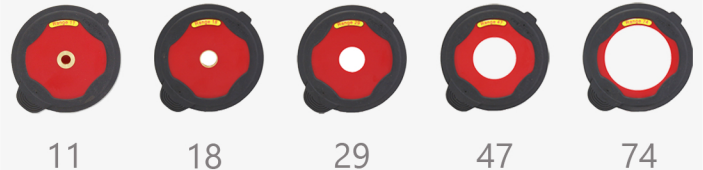
Flow/Area: CFM/100 sq ft (m3/(h*m2) or m3/(s*m2) or liters/(s*m2)) - Flow in CFM per 100 square feet (or m3/(h*m2) may be required. Requires an area to be entered.

When a Result is chosen that requires an area, **[Area]** will be shown on the **Home** screen. Tap it to enter the area.

The area can also be changed from the **[Settings]** menu.



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.



Additional troubleshooting

Visit www.retrotec.com/support for more support options such as FAQ, Webinars, Manuals, Tech Support, and Repairs.