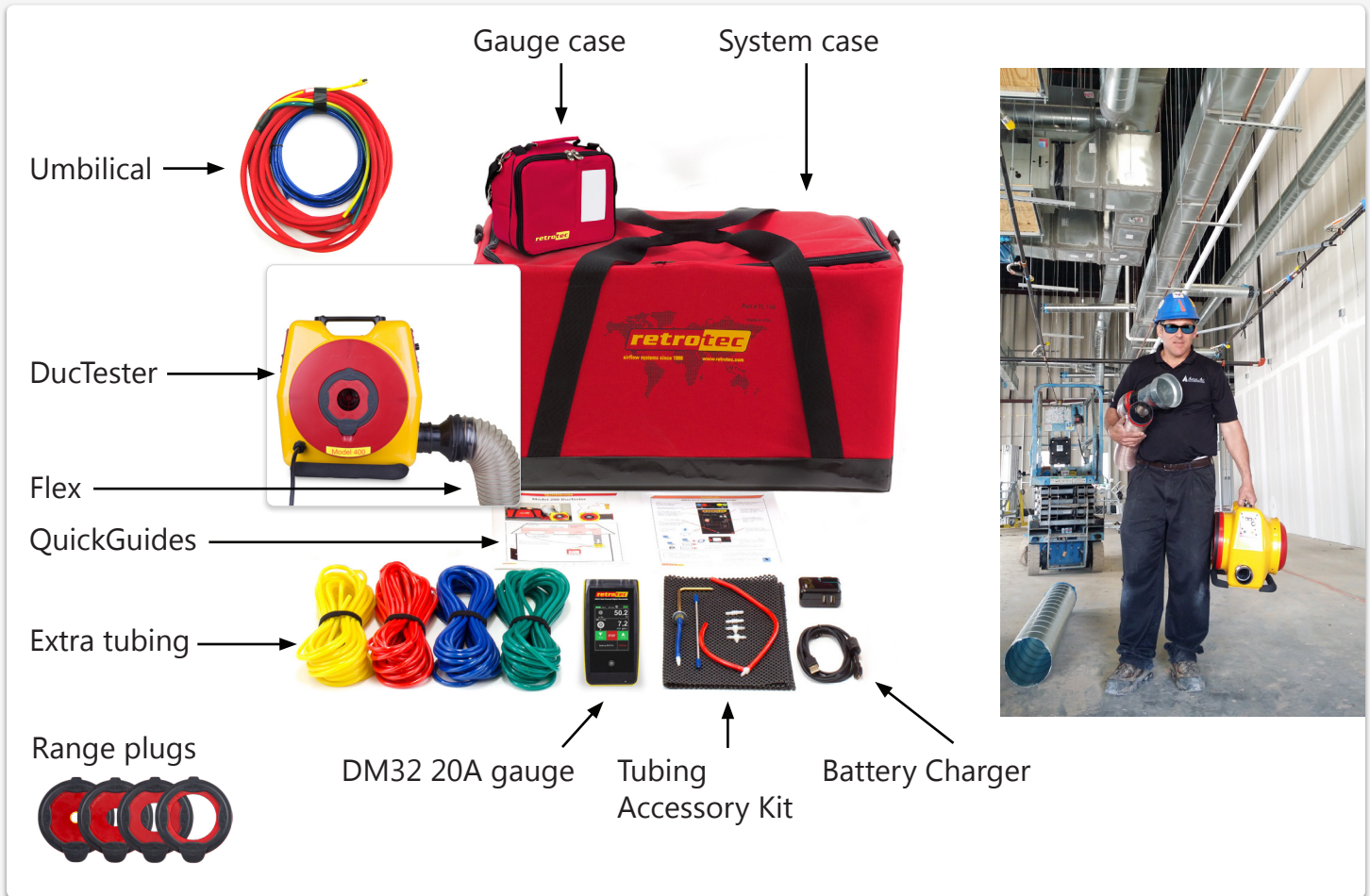


441/451 Commercial DucTester QuickGuide

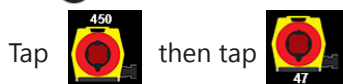


1 Prepare the gauge, first time only

- **Home** screen must show Model 450 on Range 47.



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



- 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 inch (100 mm) Flex to ductwork

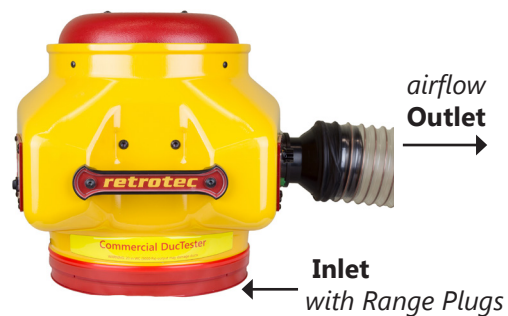


- Install Range 47 Flow Plug

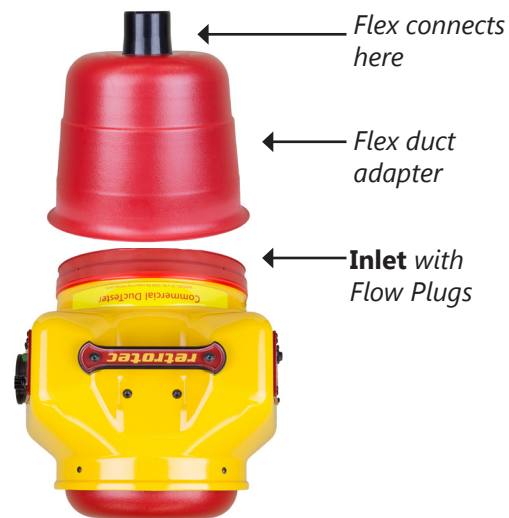


4 Connect Flex to Fan

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



- On Model 451 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 the 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 to power source



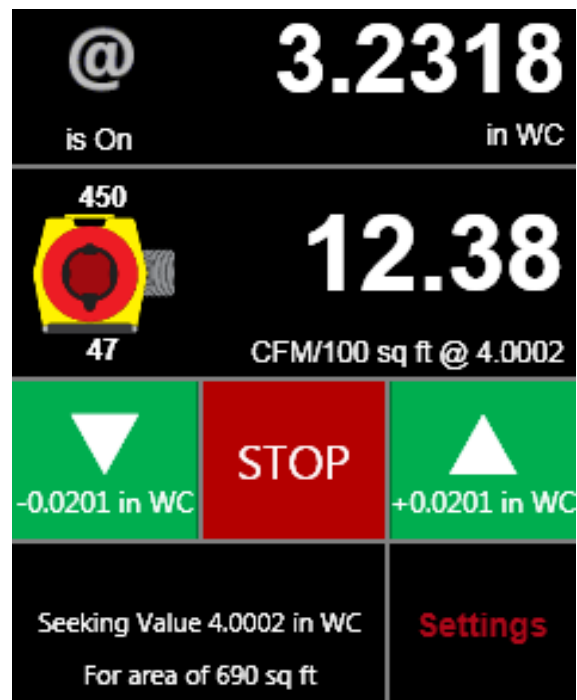
6 Prepare Gauge for the test

- Tap **[Settings]** > **...** > **[Default@Pressure]** and enter Test Pressure. Tap **[Power]** to return Home.
- If your flow units include area, tap **[Area]**, then use number pad to enter the area and tap **[Set]**

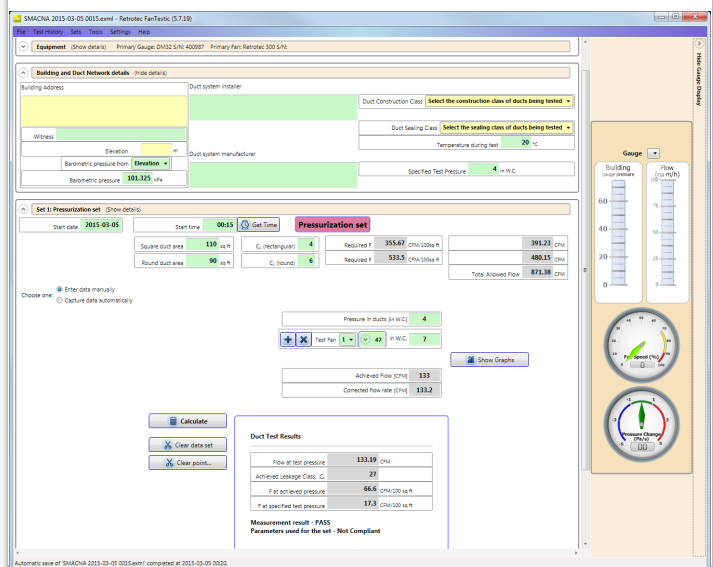
7 Run the test

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

- **[Set Speed]** to 1% then Jog up to the Test Pressure
- Tap "@" on the display and "Flow at Test Pressure" or "Flow/Area 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 www.retrotec.com/products/fantestic 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.

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.



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.

Additional troubleshooting

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

