

testo 400: Overview of the measurement menus

Measurement menu

Function

1. Basic View

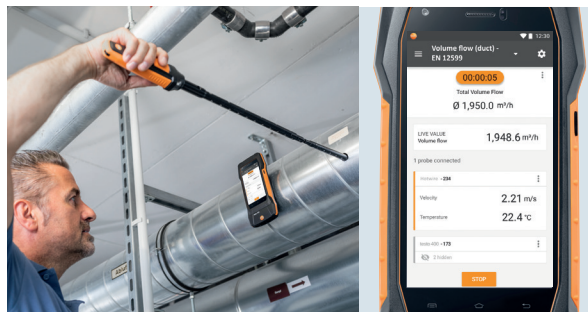
Individual display of the measurement values of each probe.



- For all probes
- Activation of the logger function
- Single-point or timed measurement
- Presentation of the measurement values as single values, table or graph

2. Volume flow – ducts

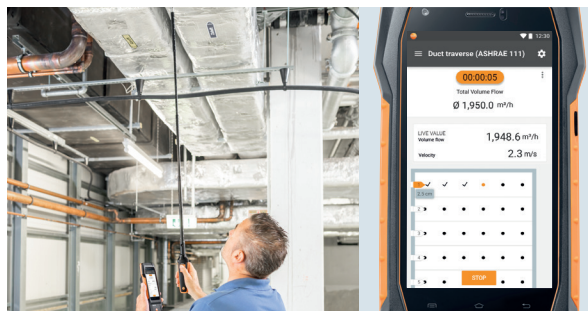
Determination of volume flow in a duct.



- For all flow velocity probes (hot wire, vane)
- Duct geometry input required
- Single-point or timed measurement
- Import of measurement site information from customer management

3. Volume flow – ducts (ASHRAE 111)

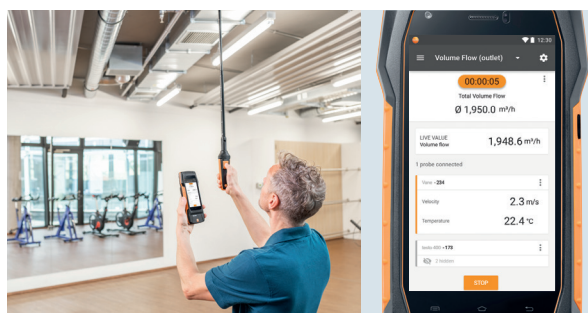
Determination of volume flow in ducts using grid measurement in accordance with ASHRAE 111.



- For all flow velocity probes (hot wire, vane) and Pitot tubes
- Input of duct geometry and duct apertures required
- Single-point or timed measurement
- Automatic display of insertion depths for traversing duct
- Duct distribution for rectangular ducts according to the log-tchebycheff method, and for circular ducts according to the log-linear method

4. Volume flow – outlets

Determination of volume flow at an outlet.



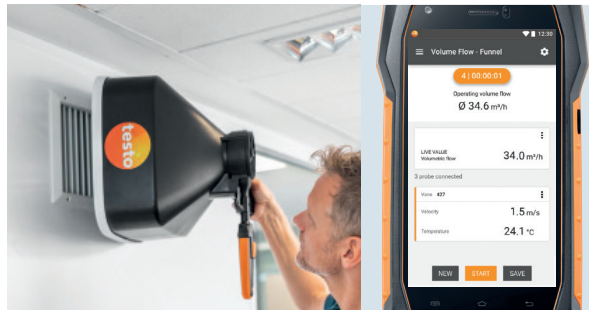
- For all flow velocity probes (hot wire, vane)
- Outlet area input necessary
- Automatic differentiation between input and output air when using the 4 inch vane probe
- Single-point or timed measurement
- Import of measurement site information from customer management

Measurement menu

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5. Volume flow – funnel

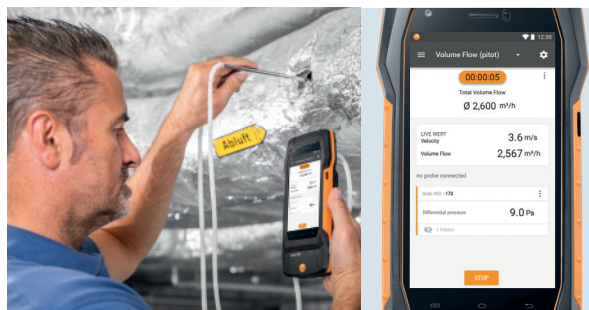
Simplified volume flow measurement at an air outlet with Testo measurement funnel.



- Funnels suitable for outlets up to 8 x 8 inch or 13 x 13 inch
- Automatic funnel recognition
- Automatic differentiation between input and output air when using the 4 inch vane probe

7. Volume flow – Pitot tube

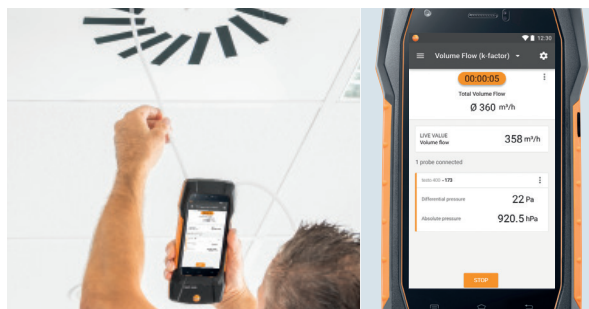
Determination of volume flow in a duct using a Pitot tube.



- Determination of dynamic pressure in ducts with a Pitot tube
- Recommended for flow velocities less than 590 ft/min and/or very contaminated flow
- Input of manufacturer-specific Pitot tube factor necessary
- Input of ambient temperature and ambient pressure necessary for density compensation

8. Volume flow – k-factor

Determination of volume flow on individual components through measurement of the reference pressure and input of the manufacturer-specific factor.



- Input of a manufacturer-specific factor necessary (k-factor or c-factor)
- Measurement in the position prescribed by the manufacturer
- The specific factors are given in the manufacturer's product documentation
- Calculation of volume flow based on this formula: $k \cdot \sqrt{\Delta P}$

10. Comfort – PMV/PPD (ASHRAE 55)

Determination of the comfort parameters PMV and PPD.



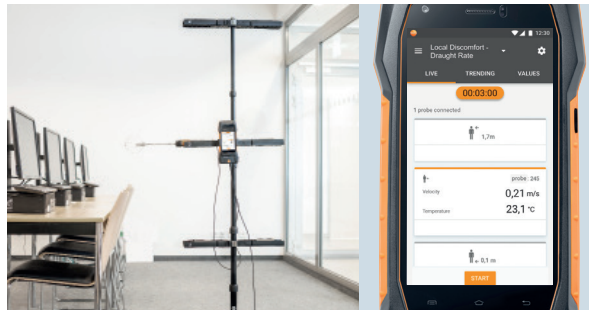
- PMV/PPD: For indoor rooms (e.g. workplaces, public buildings)
- Necessary parameters: Globe temperature, ambient temperature and humidity, air flow velocity
- PMV value: Index which predicts the average climate assessment value of a large group of people
- PPD index: Quantitative prediction of the number of dissatisfied persons in a specific ambient climate

Measurement menu

Function

11. Discomfort – Draft rate

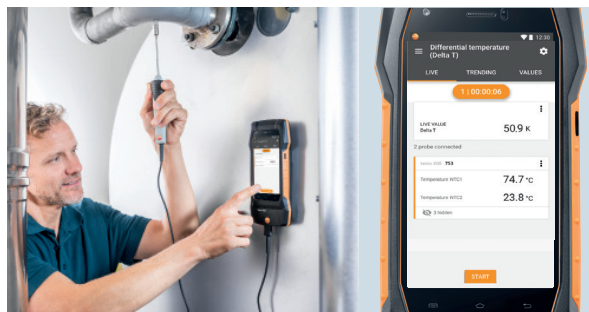
Determination of the comfort parameters air draught and degree of turbulence.



- Draft rate: Percentage of persons who feel discomfort due to air flows
- Degree of turbulence: Expresses fluctuations in air flow velocity and intensity of air flow
- For measurements at up to 3 sites simultaneously
- Differentiation between standing and sitting workplaces possible

14. Differential temperature – ΔT

Measurement of differential temperatures with two temperature probes.



- Two temperature probes required
- Input of a surface temperature correction factor possible

15. Differential pressure – ΔP

Measurement of the difference between two pressures.



- Use of the integrated pressure connections of the testo 400
- Suitable for monitoring filter pressures
- Highest accuracy in the lower measuring range for cleanroom applications (e.g. measurement of differential pressures between rooms)