



# Digital, not analog: One manifold for all refrigeration systems.

Our refrigeration measurement technology –  
intuitive, efficient, reliable:  
Welcome to the Smart World of Testo.

# Why wait? Digital refrigeration measurement technology from Testo.

In addition to expert knowledge, it is above all precise and reliable measurement values which are needed for the comprehensive evaluation and correct regulation of a refrigeration or air conditioning system. And it is here that digital refrigeration technology from Testo has for years proven its worth:

- Ongoing updates with new refrigerants
- Automatic calculation of crucial system parameters
- Convenient operation via user-specific measurement menus, Bluetooth and Apps
- Far more precise measurement results with constant accuracy than with analog manifolds

In addition to the automatic calculation of evaporation/condensation temperature and of superheating/subcooling, the digital manifolds from Testo support you in the monitoring of the following applications faster and more reliably than with analog manifolds:

## Evaporator superheating

- Ensuring optimum evaporator filling
- Checking superheating at the expansion valve

## Suction steam superheating

- Optimization of compressor operation
- Avoiding oil coking in the compressor

## Effect of internal liquid/suction steam heat transfer

- Checking additional subcooling and superheating

## Acting temperature difference

- Improvement and
- Re-evaluation of the efficiency of the heat exchanger

- Adjust even the most complex plants, with intuitive measurement menus
- All common refrigerants stored, and new ones updated for free
- Results always reliable, thanks to constantly accurate measurement values



# Manifolds in comparison: Digital vs. analog.



## More precise values with constant accuracy.

### Digital:

- ✓ ±0.3 bar accuracy over a measuring range up to 60 bar
- ✓ Unambiguous and clear measurement value indication on large, illuminated display

### Analog:

- ✗ Typically ±0.7 bar accuracy over a measuring range up to 35 bar
- ✗ Readout error due to mechanical display and lack of light



## All refrigerants available.

### Digital:

- ✓ Minimum of 60 refrigerants available at all times
- ✓ New refrigerants available later, free of charge via the testo refrigeration App and testo Smart Probes App

### Analog:

- ✗ A maximum of only 4 refrigerants shown on the display
- ✗ Indication of new refrigerants only possible through new purchase



## Intuitive operation.

### Digital:

- ✓ Automatic calculation of evaporation and condensation temperature, as well as superheating and sub-cooling.
- ✓ Efficient and convenient work thanks to user-oriented menu guide

### Analog:

- ✗ Error-prone, manual calculation of superheating and subcooling necessary
- ✗ No user-oriented menu guide



## More efficient work.

### Digital:

- ✓ Display of measurement value progression in real time
- ✓ Convenient operation/display from up to 20 m distance by App
- ✓ Reliable, easy documentation

### Analog:

- ✗ Display of only the current reading
- ✗ Operation only possible at measurement site
- ✗ Error-prone, manual documentation

# Perfect for service: Digital manifolds.

## Digital manifold **testo 550**

- Automatic calculation of superheating/subcooling, evaporation and condensation temperature
- 60 refrigerants, user-optimized operation and testo refrigeration App, incl. documentation and refrigerant updates
- Measuring ranges: -50 to +150 °C; -1 to +60 bar



### **Digital manifold **testo 550** kit with 3-hose filling set**

For service and maintenance on refrigeration systems and heat pumps; incl. 2 clamp probes, 3-hose filling set, batteries, case and calibration protocol

Order no. 0563 2550



### **Digital manifold **testo 550** kit without 3-hose filling set**

Order no. 0563 1550

## Digital manifold **testo 557**

- Automatic calculation of superheating/subcooling, evaporation and condensation temperature
- Precise, external vacuum probe for secure evacuation
- 60 refrigerants, user-optimized operation and testo refrigeration App, incl. documentation and refrigerant updates
- Measuring ranges: -50 to +150 °C; -1 to +60 bar



### **Digital manifold **testo 557** kit with 4-hose filling set**

For commissioning, service and maintenance on refrigeration systems and heat pumps; incl. 2 clamp probes, 4-hose filling set, batteries, case and calibration protocol

Order no. 0563 2557



### **Digital manifold **testo 557** kit without 4-hose filling set**

Order no. 0563 1557

## The **testo refrigeration App**

- Work from up to 20 m distance with smartphone/tablet
- Save measurement results as a PDF or Excel (.csv), add photos and send directly by e-mail
- Automatic, free updates with new refrigerants



Download App for free.

# Perfect for testing: Testo Smart Probes:

## testo Smart Probes AC & refrigeration test kit

- Ideal for fast testing of heat pumps, air conditioning and refrigeration systems: 2 high-pressure measuring instruments (testo 549i) and 2 clamp thermometers (testo 115i) in testo HVAC softcase
- Everything close to hand, as the large new softcase includes spaces for more Testo Smart Probes in addition to the Testo measuring instruments already included in delivery
- Operation with the testo Smart Probes App and your smartphone/tablet
- Low refrigerant loss thanks to hoseless application
- Over 80 refrigerants stored
- Automatic determination of superheating and subcooling as well as evaporation and condensation temperature
- Measuring ranges: -40 to +150 °C; -1 to +60 bar



### Testo Smart Probes AC & refrigeration test kit

In the large testo Smart Probes HVAC softcase with spaces for all Testo Smart Probes



Order no. 0563 0002 02

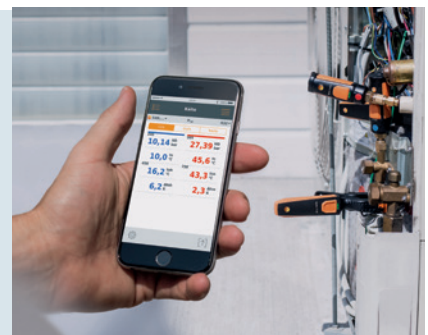


### Tip:

Complete the testo Smart Probes AC & refrigeration test kit with 2 x testo 605i (%RH and °C) and 1 x testo 405i (m/sec and °C) to determine cooling and heating performance. The corresponding measurement menu in the testo Smart Probes App calculates the performance in BTU/h or kW.

## The testo Smart Probes App







- Display of the measurement value progression as a graph or table
- Simultaneous display of up to 6 Testo Smart Probes
- Stored menus for, among others, automatic calculation of evaporation and condensation temperature, as well as superheating and sub-cooling
- Save measurement results as a PDF or Excel (.csv), add photos and send by e-mail while still at the measurement site



Download App for free.

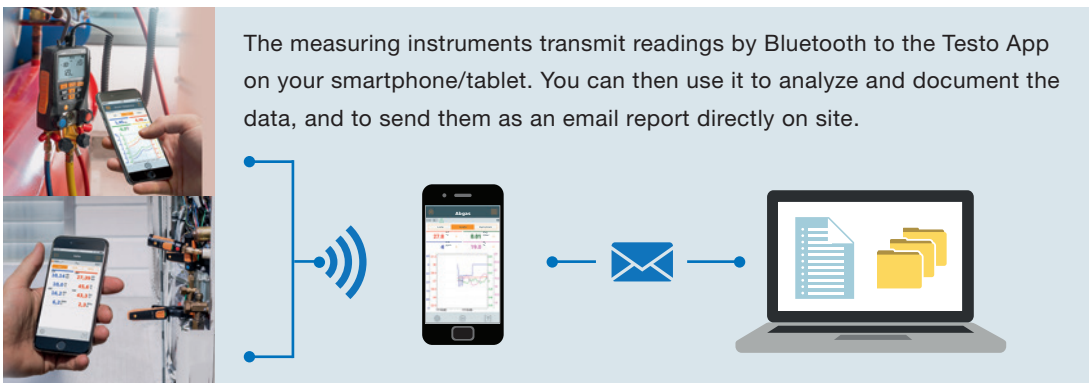
# Digital refrigeration measurement technology from Testo **in comparison.**

Spur-of-the-moment tests, repairs and maintenance, or more complex commissioning and service measurements? Whatever you need digital refrigeration instruments from testo for – you are certain to find what you are looking for in our extensive product range. Compare and decide better.

Products in comparison	 Analog	 testo AC & refrigeration test kit	 testo 549	 testo 550	 testo 557	 testo 570
Identical pressure measuring range HP/LP	–	up to 60 bar	up to 60 bar	up to 60 bar	up to 60 bar	up to 50 bar
Pressure measurement accuracy	> 1 % of f.v.	> 0.5 % of f.v.	> 0.5 % of f.v.	> 0.5 % of f.v.	> 0.5 % of f.v.	> 0.5 % of f.v.
Integrated temperature measurement	–	✓	✓ (up to 2 temperature probes)	✓ (up to 2 temperature probes)	✓ (up to 2 temperature probes)	✓ (up to 3 temperature probes)
Four-way valve manifold	Product-dependent	–	–	–	✓	✓
Internal memory, documentation	–	With the App	With the App	With the App	With the App	✓
Refrigerants stored	max. 4	> 80	60	60	60	40
Refrigerant update by customer	–	Possible on site via App	–	Possible on site via App	Possible on site via App	Via testo EasyKool software
Automatic absolute pressure measurement	–	–	–	–	✓	✓
Heat pump mode	–	–	✓	✓	✓	✓
Temperature-compensated leakage testing	–	–	✓	✓	✓	✓
Vacuum measurement	–	–	indication	indication	Highly precise, with external probe	accurate and robust
Via testo EasyKool software	–	–	–	–	–	✓
App and Bluetooth	–	✓	–	✓	✓	–

# Measurement by App – more efficient than ever before.

- Simplified operation of the measuring instruments – either completely by App (Testo Smart Probes) or for monitoring and documenting the measurement (testo 550, testo 557)
- Free refrigerant updates
- Measurement data are always to hand right where they are needed
- Simplified documentation – completely digital and without bothersome paperwork
- User-optimized measurement menus make measurement tasks more efficient and convenient



Which App does what?	testo Smart Probes App	testo refrigeration App:
Compatible measuring instruments	all testo Smart Probes, testo 552 and testo 770-3	testo 550, testo 557
iOS/Android	✓	✓
Over 60 common refrigerants with free updates	✓	✓
Control of the measuring instrument	✓	✗
Graphical representation of the readings	✓	✓
Calculation of superheating/subcooling, target superheating, temperature-compensated tightness test	✓	✓
Calculation of heating and cooling performance	✓	✗
Send PDF protocols with photos and comments in e-mails	✓	✓

# Other manifolds and vacuum measuring instruments for AC and refrigeration professionals.

## Digital manifold **testo 549**

- Automatic calculation of superheating/subcooling, evaporation and condensation temperature
- 60 refrigerants, user-optimized operation, 2 inputs for temperature probes
- Measuring ranges: -50 to +150 °C; -1 to +60 bar Order no. 0560 0550



## Digital manifold **testo 570-1 kit**

- Automatic calculation of superheating/subcooling, evaporation and condensation temperature
- 40 refrigerants, 999 h measurement value recording, user-optimized operation incl. evacuation
- Measuring ranges: -50 to +150 °C; -1 to +60 bar Order no. 0563 5701



## Digital manifold **testo 570-2 kit**

- Automatic calculation of superheating/subcooling, evaporation and condensation temperature
- 40 refrigerants, 999 h measurement value recording, user-optimized operation incl. evacuation
- Measuring ranges: -50 to +150 °C; -1 to +60 bar
- With demo version PC software testo EasyKool

Order no. 0563 5702



## Vacuum measuring instrument **testo 552**

- Robust and precise, for evacuation
- Absolute pressure measurement up to 26.6 mbar/20,000 micron
- Monitoring/measurement data dispatch via testo Smart Probes App

Order no. 0560 5522



## **testo 316-3**

### Leakage detector for refrigerants

- Detects all common refrigerants: HFC, HCFC, CFC
- Sensitivity: < 4 g
- Fulfils F-gases regulation

Order no. 0563 3163



## **testo 316-4**

### Leakage detector

- Detects the smallest leaks
- Optical and audible alarm
- Sensitivity: 3 g/a
- Permanent sensor check, ensuring that your work is both safe and fast

Order no. 0563 3164





# Testo Smart Probes: Compact all-rounders operated by smartphone.

## Clamp thermometer **testo 115i**

- Temperature measurement, also for calculating superheating/subcooling
- -40 to +150 °C

Order no. 0560 1115



## High pressure measuring instrument **testo 549i**

- Hoseless high and low pressure measurement
- Low refrigerant loss when testing refrigeration systems
- -1 to +60 bar

Order no. 0560 1549



## Humidity measuring instrument **testo 605i**

- Air humidity/temperature measurement, also for calculating cooling/heating performance
- -20 to +60 °C; 0 to 100 %RH

Order no. 0560 1605



## Thermal anemometer **testo 405i**

- Air flow velocity/temperature, volume flow measurement, also for calculating cooling/heating performance
- -20 to +60 °C; 0 to 30 m/s

Order no. 0560 1405



## Vane anemometer **testo 410i**

- Air flow velocity/temperature, volume flow measurement, also for calculating cooling/heating performance
- -20 to +60 °C; 0.4 to 30 m/s

Order no. 0560 1410



## **testo 510i** Differential pressure measuring instrument

- Easy measurement of flow velocity, volume flow and pressure drops with a Pitot tube
- -150 to +150 hPa

Order no. 0560 1510



## **testo 805i** Infrared thermometer

- Non-contact surface temperature measurement
- Measuring spot marking:
- -50 to +150 °C

Order no. 0560 1805



## **testo 905i** Thermometers

- Reliable measurement of air temperatures
- -50 to +150 °C

Order no. 0560 1905



## **testo Smart Probes HVAC softcase**

- For up to 11 Testo Smart Probes and accessories
- Secure storage and transport

Order no. 0516 0283



# Indispensable for AC and refrigeration plants: **Electrical measurement technology.**

## TRMS clamp meter **testo 770-3**

- Unique gripping mechanism for tight measurement locations
- Auto AC/DC and large two-line display
- Current, voltage, performance, resistance, capacity, continuity and much more
- User-optimized operation with testo Smart Probes App



Order no. 0560 1905

## Digital multimeter **testo 760-2**

- Automatic recognition of measurement parameter/range
- True root mean square measurement TRMS
- Current measurement in the  $\mu\text{A}$  range
- Current, voltage, frequency, resistance, capacity, temperature and much more



Order no. 0590 7602

## Current/voltage tester **testo 755-2**

- Measurement result without switching on or selection
- Automatic measurement parameter recognition
- Current and voltage testing all in one
- Voltage, current, resistance, continuity and much more



Order no. 0590 7552

## Voltage tester **testo 750-2**

- Clear, patented 360° all-round display is legible from all sides
- Ergonomic handle shape
- Checks residual current circuit breakers
- AC/DC voltage measuring range: 12 to 690 V
- Continuity testing measuring range:  $< 500 \text{ k}\Omega$



Order no. 0590 7502

## Non-contact voltage tester **testo 745**

- Optical and audible signal
- 2 sensitivities (12 to 50 V / 50 to 1000 V)
- Measurement point illumination
- Filter (LPF) for high-frequency interference signals
- Waterproof and dustproof according to IP 67



Order no. 0590 7450

# Testo bestsellers: VAC, differential pressure, thermal imagers.

## Temperature measuring instrument **testo 110** with robust air temperature probe

- Especially precise, also in low temperature ranges
- Fast reaction air probe (measuring range: -50 to +125 °C and high accuracy up to  $\pm 0.2$  °C)
- Audible alarm, limit values can be set by the user

testo 110: Order no. 0560 1108  
Air probe: Order no. 0613 1712



## Mini data logger for temperature **testo 174 T**

- Measurement data store for 16,000 temperature values
- High data integrity, even with an empty battery
- Waterproof according to IP 65
- Free Basic software available as a download
- Measuring range from -30 to +70 °C with an accuracy of  $\pm 0.5$  °C

Order no. 0572 1560



## Thermohygrometer **testo 610**

- Easy temperature and air humidity measurement
- Calculation of dew point and wet bulb temperature
- Capacitive humidity sensor with long-term stability
- Illuminated display

Order no. 0560 0610



## **testo 410-1** Vane anemometer

- 40 mm vane
- Air flow velocity and temperature measurement
- Includes time averaging, max/min and Hold function



Order no. 0560 4101

## **testo 510 set** Differential pressure measuring instrument

- Easy measurement of flow velocity, volume flow and pressure drops with a Pitot tube
- Measuring range: 0 to 100 hPa
- Including silicone connection hose and belt pouch



Order no. 0563 0510

## **testo 865** Thermal imager

- With testo SuperResolution technology 320 x 240 pixels
- Automatic detection of hot and cold spots
- Measuring range: -20 to +280 °C



Order no. 0560 8650

## **testo 868** Thermal imager

- With testo SuperResolution technology 320 x 240 pixels
- Integrated digital camera
- With testo Thermography App
- Measuring range: -30 to +100 °C; 0 to +650 °C



Order no. 0560 8681

# Digital manifold kits: Ordering information.



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Subject to change, including technical modifications, without notice

**Digital manifold **testo 550** kit with 3-hose filling set**  
 For service and maintenance on refrigeration systems and heat pumps; incl. 2 clamp probes, 3-hose filling set, batteries, case and calibration protocol

Order no. 0563 2550 

**Digital manifold **testo 557** kit with 4-hose filling set**  
 For commissioning, service and maintenance on refrigeration systems and heat pumps; incl. 2 clamp probes, 4-hose filling set, batteries, case and calibration protocol

Order no. 0563 2557 

**Digital manifold **testo 550** kit without 3-hose filling set**

Order no. 0563 1550 

**Digital manifold **testo 557** kit without 4-hose filling set**

Order no. 0563 1557 

