

We measure it.



New: now with App and Bluetooth.

# Measurement Solutions for Refrigeration Technology.

Complete solution for the commissioning and maintenance of refrigeration systems and heat pumps.

# The refrigeration technology expertise from Testo. **Now with a new generation.**

Complete solution for the commissioning and maintenance of refrigeration systems and heat pumps.

There are many different tasks involved in refrigeration system construction. These range from project planning and installation, through to the maintenance of refrigeration and air conditioning systems or heat pumps.

For a system to function as planned, pressure, temperatures and any system superheating or subcooling need to be checked. Analog manifolds are just not sufficient to gain reliable information about a system's safety and efficiency from these parameters. These only measure a refrigeration system's high and low pressure. An additional measuring instrument is required for any other kind of measurement. Cumbersome procedures, time-consuming measurements and too much room for interpretation when recording measurement results all lead to systems being configured inefficiently and extra costs for your customers.

You can avoid these problems by using digital manifolds from Testo. One instrument records a wide range of parameters: they can measure pressure and temperature values quickly and easily, or carry out temperature-compensated tightness testing. Data can be stored and evaluated on the PC and measurement protocol can be printed out directly on site. Virtually all standard refrigerants are stored in the relevant instruments.

## Digital manifolds with App and Bluetooth

The App integration via Bluetooth for the testo 550 and the testo 557 is the highlight of the new manifolds. It gives users new possibilities for working faster and more comfortably, and therefore more efficiently, with digital refrigeration technology measuring instruments. For example, using the App, the measurement data can be read off directly on a Smartphone or tablet, and the measurement report finalized and sent directly on site. The list of stored refrigerants can also be updated via the App.

## A new, better-performance generation

The newest members testo 549, testo 550 and testo 557 stand out thanks to their increased performance. The pressure range has been increased to 60 bar, the battery life extended to 250 hours, and there are 60 common refrigerants stored in the instruments. A metal frame around the display makes the instruments robuster than ever.





## App and Bluetooth

Work more conveniently and efficiently.





# Measure digitally, work **efficiently.**

Test refrigeration systems quickly and safely using digital manifolds.



These days, many spheres of life would be unthinkable without digital technology. The refrigeration industry is no exception. Yet analog manifolds are still widely in use in refrigeration technology. According to numerous studies, among others conducted by the US government organisation “Energy Star”, up to 74% of all refrigeration systems are incorrectly configured using analog measuring technology.\* It is inaccurate, inconvenient to handle, and requires the user to interpret the measurement results.

With digital manifolds from Testo, you are equipped for all day-to-day challenges in refrigeration contracting. You can measure various operating parameters with only one instrument. Get a comprehensive overview of the condition of a refrigeration system or heat pump in real time, whenever you need it. In total, reliable measurement results, leading to efficiently-configured refrigeration systems, can actually save up to 12.5% of energy costs\* – and you need considerably less work time.

\*Source: [www.energystar.gov](http://www.energystar.gov)



Highly precise vacuum measurement:  
testo 557 with external probe

## Including efficiency App: testo 550 and testo 557.

With App and Bluetooth, you simply measure more conveniently and efficiently.

With their App integration via Bluetooth, testo 550 and testo 557 open up new possibilities for efficient analysis and documentation. The App allows you to comfortably read out the measurement data on your Smartphone or tablet. In addition to this, you can finalize and send the measurement report directly on site. The list of refrigerants stored can be updated in the App. In addition to this, you can select the most important refrigerants for quick access in your favourites.

With the digital manifold testo 557, many of the refrigeration contractor's tools become obsolete, and are replaced by only one – and a very precise one at that. In comparison to the new testo 550, this digital manifold offers a 4-way valve block for fast, safe and efficient work in commissioning, service and maintenance. A further special feature is the new highly precise external probe for the testo 557, for even more reliable performance.



### App and Bluetooth

Convenient analysis and documentation as well as refrigerant update directly on site.



### Simpler operation

Simplified operation for even faster measurement.



### Highly precise measurement

New external probe for highly precise vacuum measurements.



### Increased pressure range

Higher performance thanks to increased pressure range to 60 bar.



### Stored refrigerants

60 common refrigerants stored in the instrument, selection of favourites possible.



### Longer battery life

Battery life extended to 250 hours.



### More robust housing

New, more robust housing, and metal frame around display – for reliable protection from impact.

# Efficient and professional.

The right manifold for any job. Even more efficient with App and Bluetooth.

## Analog



## testo 549

The ideal measuring instrument for precise pressure and temperature measurement for all servicing tasks.



Integrated temperature measurement	–	✓ (Up to 2 temperature probes)
Pressure measurement accuracy	> 1% fs	0.5% fs
Identical pressure measuring range HP/LP	–	Up to 60 bar
4-way valve block	Product-dependent	–
Internal memory, documentation	–	–
Refrigerant update by customer	–	–
Automatic absolute pressure measurement	–	–
Heat pump mode	–	✓
Temperature-compensated leakage test	–	✓
Vacuum measurement	–	Indication
Optional "EasyKool" software	–	–
App and Bluetooth	–	–

## testo 550

Precise and convenient pressure and temperature measurement with App and Bluetooth.



## testo 557

With highly precise vacuum measurement and 4-way valve block for commissioning and general servicing work, with App and Bluetooth.



## testo 570

For all demanding tasks, e.g. error analysis.



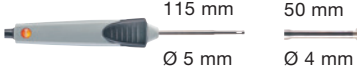




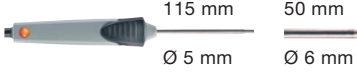
✓ (Up to 2 temperature probes)	✓ (Up to 2 temperature probes)	✓ (Up to 3 temperature probes)
0.5%fs	0.5%fs	0.5%fs
Up to 60 bar	Up to 60 bar	Up to 50 bar
✗	✓	✓
✗	✗	✓
Possible on site via App	Possible on site via App	✓
✗	✓	✓
✓	✓	✓
✓	✓	✓
Indication	Highly precise with external probe	Accurate and robust
✗	✗	✓
✓	✓	✗



# Design and technical data

	<b>testo 549</b>	<b>testo 550</b>	<b>testo 557</b>	<b>testo 570</b>
Operating temperature	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C	-20 to +50 °C
Storage temperature	-20 to +60 °C	-20 to +60 °C	-20 to +60 °C	-20 to +60 °C
Battery life	250 h (without illumination, without Bluetooth®)	250 h (without illumination, without Bluetooth®)	250 h (without illumination, without Bluetooth®, without vacuum probe)	approx. 40 h (without illumination)
Dimensions	200 x 109 x 63 mm	200 x 109 x 63 mm	220 x 125 x 70 mm	280 x 135 x 75 mm
Protection class	IP42	IP42	IP42	IP42
Weight	1060 g	1060 g	1200 g	1200 g
<b>Pressure</b>				
Measuring range	-1 to 60 bar	-1 to 60 bar	-1 to 60 bar	50 bar
Overload	65 bar	65 bar	65 bar	–
Accuracy (at 22 °C)	±0.5 % fs	±0.5 % fs	±0.5 % fs	±0.5 % fs
Resolution	0.01 bar	0.01 bar	0.01 bar	0.01 bar
Connections	3 x 7/16" – UNF	3 x 7/16" – UNF	3 x 7/16" – UNF + 1 x 5/8" – UNF	3 x 7/16" – UNF + 1 x 5/8" – UNF
Overload rel. (LP/HP)	–	–	–	52 bar / 52 bar
Low pressure rel. (LP) High pressure rel. (HP)	–	–	–	50 bar / 50 bar
<b>Temperature</b>				
Measuring range	-50 to +150 °C	-50 to +150 °C	-50 to +150 °C	-50 to +150 °C
Accuracy (at 22 °C)	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C
Resolution	0.1 °C	0.1 °C	0.1 °C	0.1 °C
Probe connections	2 x plug-in (NTC)	2 x plug-in (NTC)	2 x plug-in (NTC)	3 x plug-in (NTC)
<b>Vacuum</b>				
Measuring range	-1 bar to 0 bar	-1 bar to 0 bar	0 to 20000 micron	-1 bar to 0 bar
Accuracy (at 22 °C)	–	–	±(10 micron + 10 % of m.v.) (100 to 1000 micron)	1 % fs
Resolution	–	–	1 micron (0 to 1000 micron) 10 micron (1000 to 2000 micron) 100 micron (2000 to 5000 micron) 500 micron (5000 to 10000 micron) 5000 micron (10000 to 20000 micron)	1 hPa / 1 mbar / 500 micron
Probe connections	–	–	1 x plug-in (external vacuum probe)	–
Refrigerants in instrument	60 profiles: R11, R12, R123, R1234yf, R1234ze, R125, R13B1, R134a, R14, R142B, R152a, R161, R22, R227, R23, R290, R32, R401A, R401B, R401C, R402A, R402B, R404A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R411A, R412A, R413A, R414B, R416A, R417A, R420A, R421A, R421B, R422A, R422B, R422C, R422D, R424A, R426A, R427A, R434A, R437A, R438A, R502, R503, R507, R508A, R508B, R600, R600a, R744 (CO <sub>2</sub> ), R718 (H <sub>2</sub> O), update by Testo customer service	60 profiles: R11, R12, R123, R1234yf, R1234ze, R125, R13B1, R134a, R14, R142B, R152a, R161, R22, R227, R23, R290, R32, R401A, R401B, R401C, R402A, R402B, R404A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R411A, R412A, R413A, R414B, R416A, R417A, R420A, R421A, R421B, R422A, R422B, R422C, R422D, R424A, R426A, R427A, R434A, R437A, R438A, R502, R503, R507, R508A, R508B, R600, R600a, R744 (CO <sub>2</sub> ), R718 (H <sub>2</sub> O), update via App	60 profiles: R11, R12, R123, R1234yf, R1234ze, R125, R13B1, R134a, R14, R142B, R152a, R161, R22, R227, R23, R290, R32, R401A, R401B, R401C, R402A, R402B, R404A, R406A, R407A, R407B, R407C, R407D, R407F, R408A, R409A, R410A, R411A, R412A, R413A, R414B, R416A, R417A, R420A, R421A, R421B, R422A, R422B, R422C, R422D, R424A, R426A, R427A, R434A, R437A, R438A, R502, R503, R507, R508A, R508B, R600, R600a, R744 (CO <sub>2</sub> ), R718 (H <sub>2</sub> O), update via App	R12, R22, R123, R134a, R227, R290, R401A, R401B, R402A, R402B, R404A, R406A, R407A, R407C, R408A, R409A, R410A, R411A, R413A, R414B, R416A, R417A, R420A, R421A, R421B, R422A, R422B, R422D, R424A, R427A, R434A, R437A, R438A, R502, R503, R507, R600, R600a, R718 (H <sub>2</sub> O), R744 (only in permissible measurement range up to 50 bar), R1234yf Refrigerant update by the customer possible (via "EasyKool" software)



Probe type	Dimensions Probe shaft/probe shaft tip	Measuring range	Accuracy	Order no.
<b>Air probes</b>				
Precise, robust NTC air probe		-50 to +125 °C	±0.2 °C (-25 to +80 °C) ± 0.4 °C (remaining meas. range)	0613 1712
<b>Surface probe</b>				
Clamp probe for temperature measurements on pipes from 6 to 35 mm diameter, NTC		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5505
Clamp probe for temperature measurements on pipes from 6 to 35 mm diameter, NTC, with 5 m cable.		-40 to +125 °C	±1 °C (-20 to +85 °C)	0613 5506
The pipe wrap probe with Velcro tape for pipes with a diameter of up to 75 mm, Tmax. +75°C, NTC, fixed cable 1.5 m		-50 to +70 °C	±0.2 °C (-25 to +70 °C) ±0.4 °C (-50 to -25.1 °C)	0613 4611
Pipe clamp probe (NTC) for pipe diameters of 5 to 65 mm, fixed cable 1.2 m.		-50 to +120 °C	±0.2 °C (-25 to +80 °C)	0613 5605
Watertight NTC surface probe for flat surfaces, fixed cable 1.2 m		-50 to +150 °C Long-term measuring range to +125 °C, briefly to +150 °C (2 minutes)	±0.5% of m.v. (+100 to +150 °C) ±0.2 °C (-25 to +74.9 °C) ±0.4 °C (remaining meas. range)	0613 1912

**Accessories** **Order no.**

<b>Measuring instrument accessories</b>	
Transport case for extensive accessories	0516 0012

<b>Accessories for testo 570</b>	
Current probe for the measurement of current consumption on compressors with switchable measuring range	0554 5607
Oil pressure probe for checking the oil level in the compressor	0638 1742
Mains adapter, 5VDC 500mA with Euro plug, 100-250 VAC, 50-60 Hz	0554 0447
USB data transmission cable, instrument – PC	0449 0047
“EasyKool” software with measurement data management, incl. USB data cable	0554 5604
Testo fast printer with wireless IRDA and infrared interface, 1 roll of thermal paper and 4 AA batteries	0554 0549
Connecting cable for testo 552	0554 5520

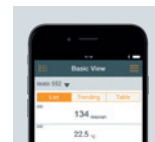
# Service **refrigeration systems.** Not the measuring instrument.

testo 552 with App and Bluetooth: Vacuum measurement for efficient evacuation.

testo 552 is a digital vacuum gauge for the evacuation of refrigeration systems and heat pumps. It measures even the smallest absolute pressures, and delivers highly accurate information about a system's status of dehumidification (removal of foreign matter, incl. oils, foreign gases, etc.).

Via a Bluetooth interface, the testo 552 connects with the testo Smart Probes App on your smartphone or tablet. This allows you to monitor the absolute pressure reached during the evacuation conveniently and wirelessly. In addition to this, the measurement results can be quickly documented in the App and sent by e-mail.

Its robust construction makes it ideal for everyday use, protected against dirt and water.



#### App and Bluetooth

Measurement value monitoring via testo Smart Probes App.



#### Suspension device

Fold-out robust hook, making it easy to attach the testo 552 to pipelines, for example.



#### MiniDin connector

MiniDin connector for connection to the testo 570 digital manifold via connecting cable (0554 5520).



#### Battery level display

testo 552 is supplied with two standard AA batteries with a life of up to 2,400 hours (100 days' continuous operation).



#### Temperatures

Evaporation temperature of water (H<sub>2</sub>O), ambient temperature and the temperature difference DeltaT are displayed.



#### Absolute pressure

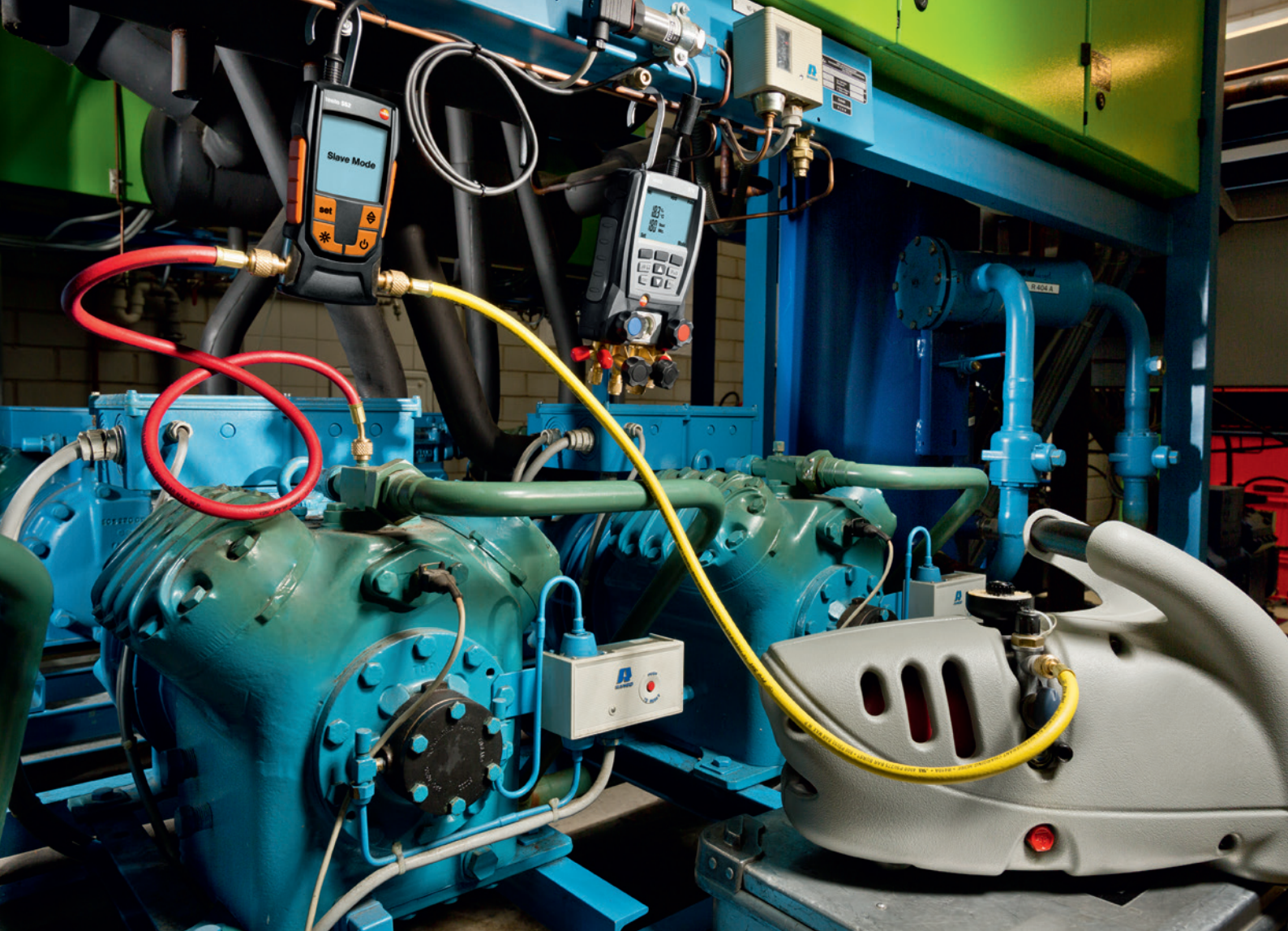
Clear display of the absolute pressure value measured.



#### Display illumination

Makes it easy to read off the data, even in dark surroundings.





To save, print out or document measurement data electronically, the testo 552 can be connected to the testo 570 with a connecting cable. Long-term measurements can even be processed over several days without a problem.

### Technical data testo 552

Vacuum measuring range	0 to +26.66 mbar / 0 to 20 000 microns
Accuracy vacuum ±1 digit (at +22 °C)	±10 microns + 10 % of m.v. (100 to 1 000 microns)
Vacuum resolution	1 micron (0 to 1 000 microns) 10 microns (1 000 to 2 000 microns) 100 microns (2 000 to 5 000 microns) 500 microns (5 000 to 10 000 microns) 5 000 microns (10 000 to 20 000 microns)
Overload vacuum	absolute: 6 bar / 87 psi relative: 5 bar / 72 psi
Operating temperature	-10 ... +50 °C
Battery life	50 hrs (without Bluetooth/backlighting)
Protection class	IP 42
Parameters	mmHg, Torr, mbar, hPa, micron, inH <sub>2</sub> O, inHg, Pa
Measurement rate	0.5 s
Measurement value sensor	Pirani sensor
Connection	2 x 1/4" SAE (7/16" UNF) 1 x mini - DIN (connection to testo 570)



## Find **any leak** easily.

testo 316-3 and testo 316-4: the leak detectors for all common refrigerants.



Leakages in a refrigerant system have serious consequences. The system no longer provides the required cooling capacity and, in the worst case scenario, system components can be damaged. Not to mention the environmental damage and the costs incurred by your customers.

Customers rely on fast and reliable measuring instruments that can detect even the smallest leaks. testo 316-3 is your multi-purpose leak detector. The instrument's high sensitivity of 4 g/a will enable you to detect even the smallest of leaks, and it can even be operated easily using only one hand. Its visual and audible alarm guarantees that nothing is overlooked.

For more demanding applications, we recommend the testo 316-4. This leak detector also features high sensitivity (3 g/a) and a trend display function as well, enabling you to detect maximum system leakages. The permanent sensor check ensures that your work will be both fast and safe. The special sensor head means that you can also use the testo 316-4 to work on refrigeration systems that operate with ammonia.



### testo 316-3

Your multi-purpose leak detector.



### testo 316-4

Your professional leak detector.



Detectable refrigerants	R-22, R134a, R-404A, R-410A, R-507, R438A and all HFC, HCFC and CFC	R134, R22, R404a, H2 and all common refrigerants such as HFC, HCFC and CFC
Sensitivity (general)	4 g/a	3 g/a
Sensitivity (EN 14624:2012)	1 g/a	1.5 g/a
Legal compliance	EN14624:2012, SAE J1627, Directive 2004/108/EC	EN14624:2012, E35-422, Directive 2004/108/EC
Operating temperature	-20 to +50 °C	-20 to +50 °C
Power supply	Batteries 2 x D	Rechargeable battery pack (NiMh)
Battery life	16 h continuous operation	6 h continuous operation
Sensor	Heated diode	Gas-sensitive semi-conductor
Sensor life	80 - 100 h (equates to one year)	Up to 2 years
Easy sensor replacement by the user	✓	✓
Visual alarm	✓	✓
Acoustic alarm	✓	✓
Dirt protection filter	✓	✗
Earphone connection (for loud environments)	✗	✓
Trailing pointer (maximum leaks)	✗	✓

# Instruments for refrigeration system professionals.

A selection of measuring instruments for all refrigeration technology requirements.

**Digital manifold testo 549**  
for all servicing work

The testo 549's robust 2-way valve block is made of metal and has three connections and three hose holders, enabling you to work quickly and easily. The robust housing and the metal frame around the display protect the instrument reliably from impact.

- bar
- psi
- °C/°F
- kPa
- MPa



**Digital manifold testo 557**  
for commissioning and service work, with App and Bluetooth.

A robust tool for all measurements on a refrigeration system or heat pump with 4-way valve block and additional connection options as well as an external probe for highly precise vacuum measurements. App and Bluetooth allow fast and easy monitoring and reporting on site.

- inch Hg
- psi
- MPa
- kPa
- bar
- °C
- °F
- hPa
- micron



**Vacuum gauge testo 552 with Bluetooth**  
for evacuating heat pumps and refrigeration systems

The digital vacuum gauge testo 552 with Bluetooth delivers highly accurate information about a system's degree of dehumidification and the removal of foreign matter (oils, foreign gases, etc.).

- hPa
- micron



**Digital manifold testo 550**  
for all service work, with App and Bluetooth.

Robust 2-way metal valve block with three connections and three hose parkers. App and Bluetooth allow fast and easy monitoring and reporting on site. The robust housing and the metal frame around the display protect the instrument reliably from impact.

- bar
- psi
- °C/°F
- kPa
- MPa

**Digital manifold testo 570**  
for extensive error analysis

The testo 570 offers you all you need for your work on refrigeration systems and heat pumps. The data memory replaces manual work steps and its ease of use enables you to carry out long-term measurements without any problems.

- inch Hg
- psi
- MPa
- kPa
- bar
- °C
- °F
- hPa
- micron





**Leak detector  
testo 316-3**

the multi-purpose leak detector

No set of professional refrigeration equipment would be complete without the testo 316-3, a reliable leak detector for refrigerants. Its high sensitivity of 4 g/a means that it can detect even the smallest of leakages, thus fulfilling the requirements of the F gases regulation and the common standard SAE J1627 and EN14624:2012.

g/a



**Temperature measuring instruments  
(e.g. testo 922)**

with various temperature probes for measuring surface, air and core temperatures.

Whether you need to ascertain a refrigeration system's hot gas line temperature, the ambient air in a cold room or the core temperature of goods stored in a cold room – Testo's temperature measuring instruments can measure all of this and more, with the utmost accuracy.

°C



**Infrared temperature measuring instruments  
(e.g. testo 835-1)**

for non-contact measurement of surface temperatures.

Ideal for checking temperatures quickly and efficiently, for example on cold room walls, as well as for carrying out troubleshooting on air conditioning systems, e.g. plate heat exchangers, compressor casings or filter driers.

°C %RH



**Leak detector  
testo 316-4**

the professional leak detector.

The testo 316-4 is a fast and reliable leak detector for all common refrigerants. The sensor is permanently monitored and displays malfunctions or contaminations on the screen. The trend display allows you to also detect maximum leakages.

g/a

**Thermal imager  
(e.g. testo 870)**

for fast and reliable identification of thermal anomalies and weak spots on walls, heat exchangers, compressors etc..

The non-contact imaging procedure enables you to quickly detect thermal bridges in cold room walls, check the filling level of refrigerant collectors or check compressor housing temperatures, for example.

°C %RH

**Data loggers  
(e.g. testo 175 T3)**

for easy temperature documentation at several measuring points.


Flow, return or ambient temperatures need to be measured and documented in order to check that refrigeration systems are functioning correctly. With a data logger, you can quickly determine whether the doors of a cold room are opened for a disproportionately long time, for example, resulting in insufficient cooling.


°C


# Order sets.

Put together for you.

**testo 549**  
 testo 549, digital manifold for refrigeration systems and heat pumps; incl. batteries and calibration certificate  
 Order no. 0560 0550



**testo 552**   
 testo 552, digital vacuum gauge with Bluetooth connection for wireless monitoring of measurement results  
 Order no. 0560 5522



**testo 550 set**   
 testo 550 set, digital manifold with Bluetooth for refrigeration systems and heat pumps; incl. 2 x clamp probes, batteries, case and calibration certificate  
 Order no. 0563 1550



**testo 557 set**   
 testo 557 set, digital manifold with Bluetooth for commissioning, service and maintenance; incl. 2 x clamp probes, external vacuum probe, batteries, case and calibration certificate  
 Order no. 0563 1557



**testo 570-1 set**  
 The digital manifold testo 570 incl. batteries, calibration protocol and clamp probe.  
 Order no. 0563 5701




**testo 570-2 set**  
 Digital manifold testo 570 incl. 2x clamp probes, transport case, software, USB data cable, mains unit, calibration protocol and batteries.  
 Order no. 0563 5702



**testo 316-3**  
 testo 316-3, leak detector for HFC, HCFC, CFC incl. sensor head, transport case, calibration protocol, batteries and filter.  
 Order no. 0563 3163



**testo 316-4**  
 testo 316-4 set, leak detector for HFC, HCFC, CFC, H2, incl. sensor head R, case, mains unit and earphone.  
 Order no. 0563 3164



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Subject to change, including technical changes, without notice.

