



Committing to the future

See more with the thermal imagers
testo 875 and testo 881

NEW



For the professional
building thermography

testo 875 and testo 881 for the professional building thermography

Thermal imager testo 881



Infrared radiation cannot be seen by the human eye. However, all objects with a temperature above absolute zero, approximately - 273 degrees Celsius, emit infrared thermal radiation. Thermal imagers can convert infrared radiation into electrical signals and thus render it visible.

The testo 875 and testo 881 thermal imagers discover anomalies and weak spots in buildings quickly and damage-free. Whereas with other methods you have to dismantle cable or pipeline systems, with a testo thermal imager, a single glance is enough.

With the testo 875 and testo 881, you are hot on the trail of energy losses in building thermography, helping your customers to avoid expensive heating costs.

Even the smallest temperature differences can be identified with the high temperature resolution of the testo thermal imagers. Highly flexible and application-oriented, exchangeable lenses ensure that the right image section is always visible in the imager display.

The additionally integrated digital camera considerably facilitates documentation. The presentation of surface humidity for fast localization of mould risk spots is unique in building thermography.

Testo thermal imagers provide security in building thermography and prevent damage!

Thermal imager testo 875



Outstanding Imager Features Include:

1. Professional analysis software

The clearly structured and powerful software provides for extensive analysis and has customizable report formats. Multiple image and visual picture pairs can be incorporated in a single report. The pro software is included with every imager.



Easy and precise analysis

2. Soft-Case for your thermal imager

You can carry your imager safely and securely with the over-the-shoulder fitted protective carrying case. The case leaves your hands free while moving between measurement sites.



Soft-Case for easy transport

3. Interchangeable lenses provide flexibility

The choice of wide-angle or telephoto lens allows you to adapt to the differing size and distance of measurement objects. The standard 32° lens provides a large image section, while the 9° telephoto gets you in for a close look at a detailed area. The lens interchangeability is a testo exclusive in this class of imager.



Easily change lenses

4. Intuitive operating menu

Single handed operation is easy with motorized focus and 5-way joystick navigation. It offers fast and convenient operation, and supports your setup preferences. File creation is quick and easy on-site, or the structure can be done ahead of time on your PC.



Easy operation

What makes the testo 875 special?

The 4 most important advantages of model 875 thermal imager:

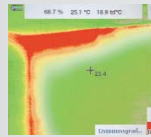
1. Exceptional image quality (meets BPI/RESNET standards for performance testing)

The testo 875 has a remarkable temperature resolution of 100mK and a large sensor (160 x 120 pixels) providing extraordinary image quality. Testo has utilized enhanced digital image processing to maximize overall image quality on the brilliant color display.



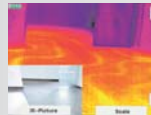
2. Ability to identify mold risk areas

The testo 875 thermal imager allows you to identify moisture concentrations in building materials and components that could become a breeding ground for mold. The evaporative cooling of damp areas can be spotted at a glance, whether it is created by condensation or water leaks.



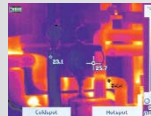
3. Integrated digital camera

The testo 875-2 includes an integrated digital camera that allows you to simultaneously photograph and capture thermal images of interest.



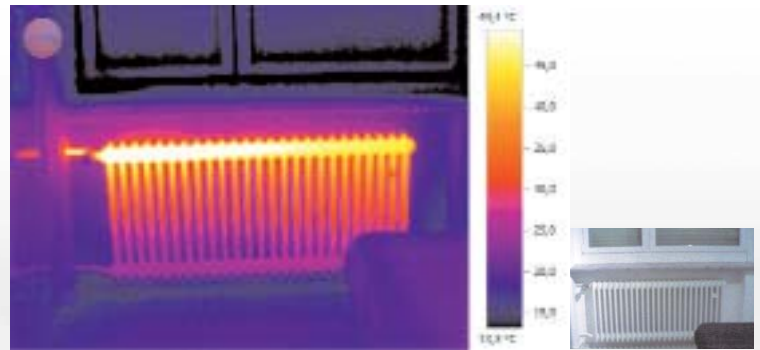
4. Automatic Hot/Cold Spot Indicators

Quickly identify the hottest and coldest spots with indicators highlighting the locations on the display. This user selectable feature is included to let you mark and comment on the temperature extremes on the display.



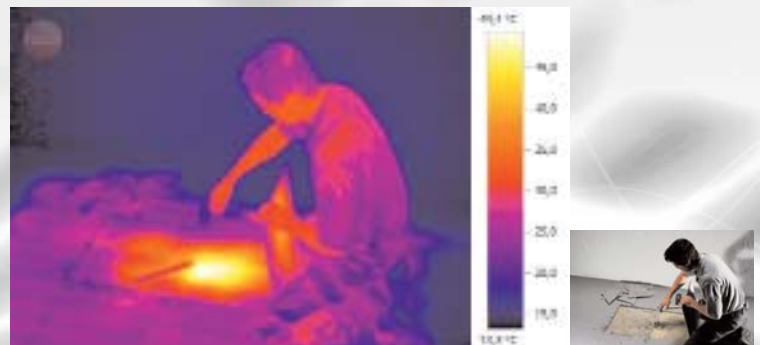
Use the testo 875 to test heating systems and installations

Check heating, ventilation, and air conditioning systems quickly and easily with the testo 875. Observe the heat distribution patterns of system components or pinpoint leaks in circulating systems. Perform system evaluations, often without the need to tear open wall or floor sections. Identify and document the problems in easy to understand reports.



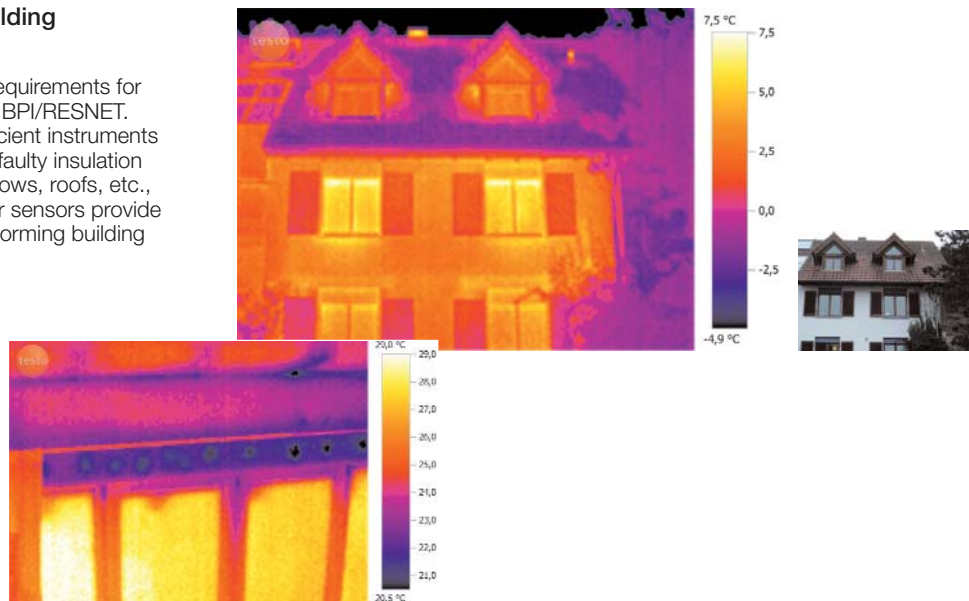
Hot on the trail of pipe rupture

If you suspect a pipe is ruptured, the only solution is often to break open whole walls and floors to pinpoint the leak. The testo 875 can highlight leakages of underfloor heating systems and other inaccessible pipe systems exactly with minimal cost of repair and without expensive dismantling.



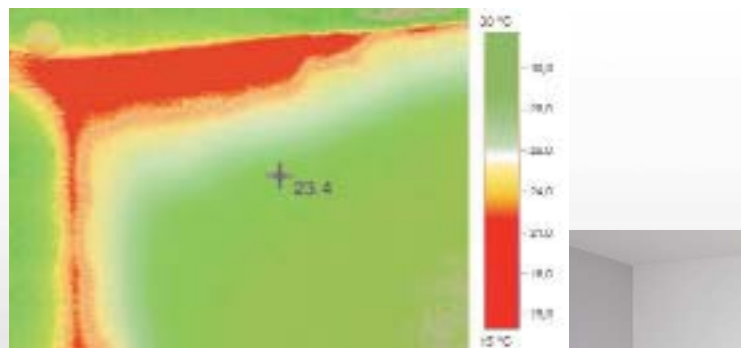
Assess problems and defects in building construction

Both the testo 875 & testo 881 meet the requirements for building performance testing as set out by BPI/RESNET. The testo 875 & testo 881 are fast and efficient instruments for the detection of construction flaws like faulty insulation installation, air infusion through walls, windows, roofs, etc., moisture damage and much more. Larger sensors provide you greater sensitivity and detail when performing building audits.



Locate high moisture areas that can become a breeding area for mold!

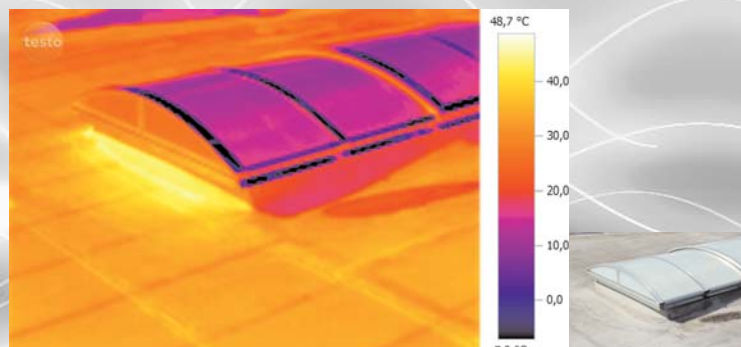
Quickly highlight thermal bridges that can sap heat away from the living space, cause condensation of the moisture in the warm air and then lead to dangerous mold growth. Detecting the cold areas can identify the problem zones and allow for corrective action. Easily identify hidden water leaks that seep into walls and carpets with the testo 875.



Pinpoint roof leaks

Inspect flat roofs for moisture penetration with model 875.

Roofing construction materials that have been compromised by moisture retain heat longer than other intact areas. During the evening these affected areas cool unevenly. As a result the 875 detects these temperature differences, and accurately shows the areas on the roof that have a potential for moisture damage.



What makes the testo 881 special?

The 5 most important features of the 881 thermal imager:

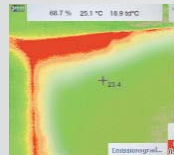
1. Exceptional image quality (exceeds BPI/RESNET standards for performance testing).

The testo 881 has the extraordinary temperature resolution of $<80\text{mK}$ and a large sensor array (160 x 120 pixels) providing outstanding image quality and brilliant display.



2. Ability to identify mold risk areas

The testo 881 thermal imager allows you to identify moisture concentrations in building materials and components that could become a breeding ground for mold. The evaporative cooling of damp areas can be spotted at a glance, whether it is created by condensation or water leaks.



3. Built-in digital camera with powerful illumination

All testo 881 models include powerful LED lighting to highlight your workspace and provide illumination for the integrated digital camera. The imager links the captured visual and thermal images in a single file so they are readily accessible for analysis and reporting.



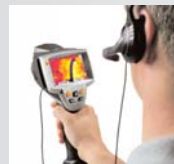
4. Isotherm function /Temperature highlights

The testo 881 features user defined optical alarm that highlights the targeted temperature on the display. This provides critical temperature differentiation of your measurement object.



5. Voice recorded notations

The integrated voice recording capability of the testo 881 lets you make verbal/audio notes to accompany any captured image. The recording facilitates your report writing as you bring up the saved images in the software.



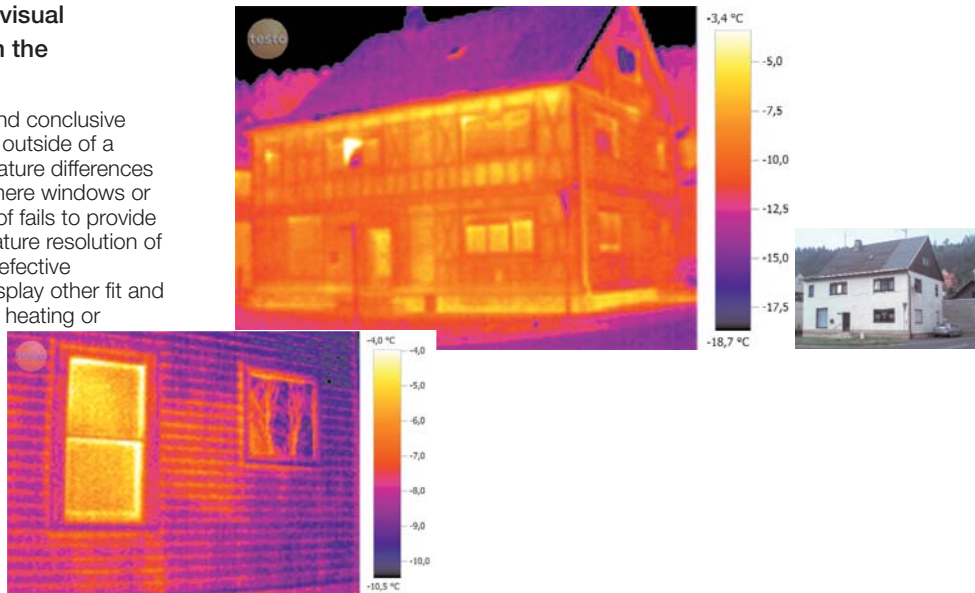
Locate high moisture areas that can become a breeding area for mold!

Quickly highlight thermal bridges that can sap heat away from the living space, cause condensation of the moisture in the warm air and then lead to dangerous mold growth. Detecting the cold areas can identify the problem zones and allow for corrective action. Easily identify hidden water leaks that seep into walls and carpets with the testo 881.



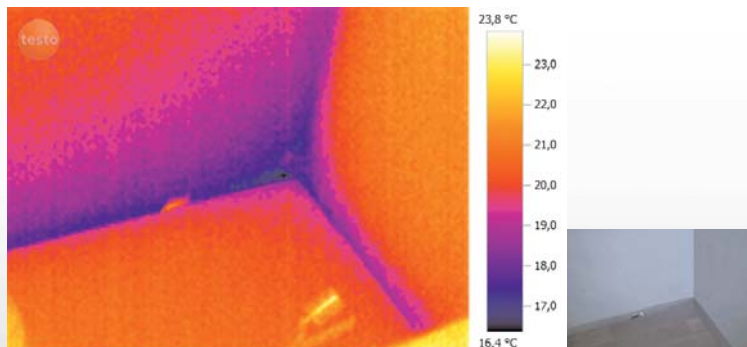
Scan the building shell and provide visual support of your energy analysis with the testo 875 & testo 881

Testo thermal imagers can provide quick and conclusive evidence of heat and cooling loss from the outside of a building or home. Vivid displays of temperature differences highlight where insulation is inadequate, where windows or doors don't provide protection, where a roof fails to provide proper coverage! The exceptional temperature resolution of the testo 881 of <80mK better highlights defective insulation, or thermal bridging. Use it to display other fit and finish issues that allow air leakage, causing heating or cooling of the surfaces along its path.



Inspect moisture damage

There are multiple causes of moisture damage in building envelopes from drainage problems to leaking pipes to underground water seepage. With the help of the 881's high thermal resolution of < 80 mK these types of moisture problems can be quickly and easily identified.



Check energy leaks in new construction

Energy loss through windows and doors due to poor installation often results in higher fuel bills. The combination of a thermal imager and a blower door is proven effective in diagnosing this problem. With this procedure, a building is depressurized so that cool outside air is drawn into the building interior through leaky joints and cracks. These leaky spots are quickly identified by an 875 or 881 so that the problem areas can be fixed.



Which thermal imager is right for you?

Feature	testo 875-1	testo 875-2	testo 881-1		testo 881-3	
High thermal sensitivity (NETD)	100 mK		< 80 mK		The NETD indicates the smallest possible temperature difference that can be resolved by the imager. A low NETD guarantees the resolution of the smallest temperature differences. The following rule of thumb applies: The smaller this value is, the better the measurement resolution of the imager and the better the image quality.	
Temperature range	-4 to 536°F (-20 to +280 °C)		-4 to 662°F (-20 to +350 °C)		The temperature range indicates up to which temperatures the imager is able to record and measure the heat radiation of objects.	
Image Refresh rate	9 Hz		33 Hz		The refresh rate indicates how often the thermal image is refreshed in per second.	
Standard lens 32° x 23°	✓	✓	✓		✓	The 32° lens quickly records a large image section and thereby supplies a good overview of the temperature distribution of the measurement object – at one glance, you have more in the picture.
Interchangeable telephoto lens 9° x 7°		✓			✓	The interchangeable telephoto lens assists in the measurement of smaller details and visualizes details in the thermal image, even at greater distances.
High temperature up to 10221°F (550 °C) (optional)					✓	With the high-temperature filter (optional), the measuring range can be extended up to 1022°F (550 °C).
Automatic Hot/Cold Spot Indicator	✓	✓	✓		✓	The coldest and warmest spot of the measurement object are automatically shown directly in the thermal image in the imager display – critical heat conditions can be detected at a glance.
MIN / MAX					✓	The minimum and maximum values of an image section can be provided at a glance live directly on site.
Isotherm function					✓	The optical colour alarm localizes critical areas easily and directly in the thermal image on site. All spots in the thermal image with a temperature value within a defined range are marked in colour and emphasized.
Voice recording					✓	Identified weak spots can be commented on by means of voice recording. Valuable additional information can thereby be documented on site.
Integrated digital camera		✓	✓		✓	Quick and simple object inspection thanks to the display of infrared and real image. The digital real image is automatically stored simultaneously with each infrared image.
Integrated LEDs					✓	The integrated power LEDs guarantee you optimum illumination of dark areas when recording real images.
Motor focus					✓	The dynamic motor focus allows you to focus the infrared image with just one hand.

Technical data, testo 875 and testo 881

	testo 875-1	testo 875-2	testo 881-1	testo 881-3
Infrared image output				
Detector type	FPA 160 x 120 pixels, a-Si		FPA 160 x 120 pixels, a-Si	
Thermal sensitivity (NETD)	100 mK at +30 °C(86°F)		< 80 mK at +30 °C (86°F)	
Field of view/min. focus distance	32° x 23° / 4" (standard lens), 9° x 7° / 20" (telephoto lens)		32° x 23° / 4" (standard lens) 9° x 7° / 20" (telephoto lens)	
Geometric resolution (IFOV)	3.3 mrad (standard lens), 1.0 mrad (telephoto lens)		3.3 mrad (standard lens), 1.0 mrad (telephoto lens)	
Image refresh rate	9 Hz		33 Hz for EU, otherwise 9 Hz	
Focus	manual		manual	manual and motor focus
Spectral range	8 to 14 µm		8 to 14 µm	
Visual				
Optical field/min. focus distance	–	33° x 25° / 0.4 m	33° x 25° / 0.4 m	33° x 25° / 0.4 m
Image size	–	640 x 480 pixels	640 x 480 pixels	640 x 480 pixels
Image presentation				
Image display	3.5" LCD with 320 x 240 pixels		3.5" LCD with 320 x 240 pixels	
Display options	only IR image	only IR image/ only real image/ IR and real image	only IR image/ only real image/ IR and real image	only IR image/ only real image/ IR and real image
Video output	USB 2.0		USB 2.0	
Color palettes	4 options (ironbow, rainbow, blue/red, greyscale)		9 options (ironbow, rainbow, cold/hot, blue/red, grey, inverted grey, sepia, testo, ironbow HT)	
Measurement				
Temperature range	-4 to 232°F (-20 °C to +100 °C) 32 to 536°F (0 °C to +280 °C), (switchable)		-4 to 232°F (-20 °C to +100 °C/ 32 to 536°F (0 °C to +350 °C (switchable)	
High-temperature measurement (optional)	–		–	+662 °F to +1022 °F
Accuracy	±2 °C, ±2 % of rdg, (-4 °F to +536 °F)		±2 °C, ±2 % of rdg (-4 °F to +536 °F)	
Minimum diameter measurement point	0.4" at 3 ft. (standard lens), 0.12" at 3 ft. (telephoto lens)		0.4" at 3 ft. (standard lens), 0.12" at 3 ft. (telephoto lens)	
Setting emissivity	0.01 to 1		0.01 to 1	
Reflected temperature compensation	manual		manual	
Imager equipment				
Digital camera	–	Yes	Yes	Yes
Power LEDs	–	–	–	Yes
Motor focus	–	–	–	Yes
Standard lens (32° x 23°)	Yes		Yes	
Telephoto lens (9° x 7°)	–	optional	–	optional
Voice recording	–		yes (laser classification 635 nm, class 2) yes (with headset)	
Display of surface moisture distribution	–	yes (with manual data input)	–	yes (with manual data input)
Measuring functions	Center point	Standard measurement (1-point)	Standard measurement (1-point)	
	–	Hot/Cold Spot Indication	Hot/Cold Spot Indication	
	–	–	Two-point measurement	
	–	–	Isotherms	
	–	–	MIN / MAX	
Image storage				
File format	.bmt; export options in .bmp, .jpg, .csv		.bmt; export options in .bmp, .jpg, .csv	
Data storage device	2 GB SD card (approx. 1000 images)		2 GB SD card (approx. 1000 images)	
Power supply				
Battery type	Fast-charging, Li-ion battery can be changed on site		Fast-charging, Li-ion battery can be changed on site	
Operating time	4 hours		4 hours	
Power Supply	In instrument/in charging station (optional)		In instrument/in charging station (optional)	
Ambient conditions				
Operating temperature range	5 °F to +104 °F		5 °F to +104 °F	
Storage temperature range	-22 °F to +140 °F		-22 °F to +140 °F	
Air humidity	20 % to 80 % not condensing		20 % to 80 % not condensing	
Protection class of housing	IP54		IP54	
Vibration (IEC 68-2-6)	2G		2G	
Physical features				
Weight	approx. 2 lbs		approx. 2 lbs	
Dimensions (L x W x H)	6" x 4.2" x 10.3"		6" x 4.2" x 10.3"	
Tripod mounting	Yes		Yes	
Housing	ABS		ABS	
PC software				
System requirements	Windows XP (Service Pack 2), Windows Vista, USB 2.0 interface		Windows XP (Service Pack 2), Windows Vista, USB 2.0 interface	
Norms, tests, warranty				
EU guideline	2004/108/EC		2004/108/EC	
Warranty	2 years		2 years	

Model 875 thermal imagers

testo 875-2 Kit Deluxe

- NETD 100 mK
- High-quality standard lens 32° x 23°
- Integrated digital camera
- Display of surface moisture distribution
- Auto Hot/Cold Spot Indication
- Manual focus
- Temperature range -20 to +280 °C (-4 to 536°F)

The 875-2 Kit Deluxe also includes:

- Telephoto lens 9° x 7°
- Protective glass
- Additional battery
- Charger
- Sun Shield

testo 875-2 Kit Deluxe

Order no.: 0563 8752



Great Value Package!
875-2 Kit Deluxe

testo 875-1

- NETD 100 mK
- High-quality standard lens 32° x 23°
- Auto Hot/Cold Spot Indication
- Manual focus
- Temperature range
-20 to +280 °C/
(-4 to 536°F)

testo 875-1

Order no.: 0560 8751

testo 875-2

- NETD 100 mK
- High-quality standard lens 32° x 23°
- Integrated digital camera
- Display of surface moisture distribution
- Auto Hot/Cold Spot Indication
- Manual focus
- Temperature range
-20 to +280 °C/
(-4 to 536°F)
- Telephoto lens (optional)

testo 875-2

Order no.: 0560 8752

All imagers are delivered in a rugged case incl. professional software, SD card, USB cable, charger, Li-ion rechargeable battery and tripod adapter.

Accessories

Order no.

Aluminum tripod

Professional, extremely light and stable aluminum tripod with quick-release legs and a 3-way tripod head

0554 8804

Lens protection glass

Special germanium lens protection against dust and scratches

0554 8805

Additional battery

Additional lithium-ion battery for extended operation

0554 8802

Two bay charger

Desktop charger quickly charges two batteries at a time

0554 8801

Sun Shield

Protects the display against harmful sun rays or extremely bright environments

0554 8806

Soft-Case

Practical carrying case with shoulder strap

0554 8814

Retrofit telephoto lens

(only with models 881-2, 881-3 and 875-2); please contact our customer service.

Retrofit high-temperature measurement

(only with testo 881-3); please contact our customer service.

Emissivity adhesive tape

Adhesive tape, i.e for reflective surfaces (roll, L.: 32 ft., W.: 1"), E=0.95 heatproof up to +572 °F

0554 0051

ISO calibration certificates for testo 880

Calibration points at 32 °F, 77 °F, 122 °F in measuring range -4 °F to 212 °F

0520 0489

Calibration points at 32 °F, 212 °F, 312 °F in measuring range 32 °F to 662 °F

0520 0490

Freely selectable calibration points in the range between -0.4 °F to 482 °F

0520 0495

Model 881 thermal imagers

testo 881-3 Kit Deluxe

- NETD < 80 mK
- High-quality standard lens 32° x 23°
- Integrated digital camera with power LEDs
- Display of surface moisture distribution
- Auto Hot/Cold Spot Indication
- Dynamic motor focus
- Temperature range -20 to +350 °C, (-4 to 662°F)
- 33 Hz refresh rate
- Headset for voice recording
- Isotherm display in instrument
- MIN / MAX
- High-temperature measurement (optional)

The 881-3 Kit Deluxe also includes:

- Telephoto lens 9° x 7°
- Protective glass
- Additional battery
- Charger
- Soft-Case

testo 881-3 Kit Deluxe

Order no.: 0563 0881 V4



		881-1	881-3	881-3 Kit Deluxe
	Order no.:	0563 0881 71	0563 0881 73	0563 0881 74
Also included in delivery:				
Protective lens	0554 8805	●	●	●
Telephoto lens	on request	–	●	●
Additional battery	0554 8802	●	●	●
Two bay charger	0554 8801	●	●	●
Soft-Case with shoulder strap	0554 8814	●	●	●
Display sun shield	0554 8806	–	●	●

All imagers are delivered in a rugged case incl. professional software, SD card, USB cable, charger, Li-ion rechargeable battery and tripod adapter.

● Standard ● Optional – Not available

testo 881-1

- NETD < 80 mK
- High-quality standard lens 32° x 23°
- Integrated digital camera
- Auto Hot/Cold Spot Indication
- Manual focus
- Temperature range -20 to +350 °C, (-4 to 662°F)
- 33 Hz image refresh rate

testo 881-1

Order no.: 0563 0881 71

testo 881-3

- NETD < 80 mK
- High-quality standard lens 32° x 23°
- Telephoto lens (optional)
- Integrated digital camera with power LEDs
- Display of surface moisture distribution
- Auto Hot/Cold Spot Indication
- Dynamic motor focus
- Temperature range -20 to +350 °C, -4 to 662°F
- 33 Hz refresh rate
- Headset for voice recording
- Isotherm display in instrument
- MIN / MAX
- High-temperature measurement (optional)

testo 881-3

Order no.: 0563 0881 73

All imagers are delivered in a rugged case incl. professional software, SD card, USB cable, charger, Li-ion rechargeable battery and tripod adapter.