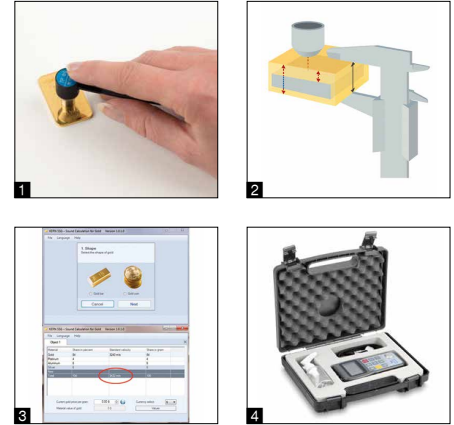


### Gold Tester SAUTER TN-GOLD



## Ultrasonic measuring instrument for checking the authenticity of gold bars and coins

### Features

- **1** You can use the TN-GOLD to determine whether gold or silver bars and coins are genuine or whether they contain a core of a different material
- The instrument measures the thickness of gold bars and gold coins using ultrasound
- **2** Process: Ultrasound waves are directed onto the test object using a sensor. The waves penetrate the test object, are then reflected from a surface opposite the object and then picked up again by the sensor. The measurement determined by this process will be compared with the material thickness as measured by a traditional calliper gauge. On the basis of the measurement given, false cores (Figure: grey) for example, those made of tungsten, lead, etc. can be easily identified, as the ultrasound reacts differently, compared with pure gold
- Selectable measuring units: mm, inch
- **3** SAUTER SSG software (included) can be used to calculate the sound velocity for various precious metal alloys. This makes it possible to determine whether coins or ingots contain false cores or whether they consist of one and the same material. Compatible with the following operating systems: Windows® 7/8/10

- Known additions in tested gold items – e.g. copper or silver – are compensated by the software
- In addition, the software determines the value of the gold item
- It is a test process which measures right through the whole bar or the whole coin without interference and thereby guarantees the highest level of certainty
- Internal memory for up to 20 files (with up to 100 values per file)
- Base plate for adjustment included
- Scope of delivery: Operating instructions, batteries, external measuring head (∅ 6 mm) and ultrasound contact gel
- **4** Delivered in a robust carrying case

### Technical data

- Measuring precision: 0,5 % of [Max] ± 0,04 mm
- Overall dimensions W×D×H 150×74×32 mm
- Battery operation, batteries standard (2×1.5 V AA), AUTO-OFF function to preserve the battery
- Net weight approx. 0,25 kg

### Accessories

- Data transfer software, interface cable included, SAUTER ATU-04
- USB/PC connection cable (USB-A/USB mini), SAUTER FL-A01
- External measuring head, 7 MHz, ∅ 6 mm, for thin test materials: Measuring range 0,75–80 mm (steel), SAUTER ATU-US02
- Ultrasound contact gel, refill pack, approx. 70 ml, SAUTER ATB-US03

#### STANDARD



#### OPTION



| Model             | Measuring range | Readout | Measuring head | Sound velocity | Option                          |
|-------------------|-----------------|---------|----------------|----------------|---------------------------------|
|                   |                 | [d]     |                |                | Factory Calibration Certificate |
|                   | mm              | mm      |                | m/sec          | KERN                            |
| SAUTER TN GOLD 80 | 0,75 – 80       | 0,01    | 7 MHz   ∅ 6 mm | 1000 – 9999    | 961-113                         |

|   |   |  |   |
|---|---|--|---|
|  <p><b>Adjusting program (CAL)</b><br/>For quick setting of the instrument's accuracy. External adjusting weight required</p>  |  <p><b>Bluetooth* data interface</b><br/>To transfer data from the balance/measuring instrument to a printer, PC or other peripherals</p>  |  <p><b>Measuring units</b><br/>Weighing units can be switched to e.g. non-metric. Please refer to website for more details</p>  |  <p><b>Conformity assessment</b><br/>Models with type approval for construction of verifiable systems</p>                  |
|  <p><b>Calibration block</b><br/>Standard for adjusting or correcting the measuring device</p>   |  <p><b>WIFI data interface</b><br/>To transfer data from the balance/measuring instrument to a printer, PC or other peripherals</p>  |  <p><b>Measuring with tolerance range (limit-setting function)</b><br/>Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model</p> |  <p><b>DAkkS calibration possible</b><br/>The time required for DAkkS calibration is shown in days in the pictogram</p>    |
|  <p><b>Peak hold function</b><br/>Capturing a peak value within a measuring process</p>  |  <p><b>Data interface infrared</b><br/>To transfer data from the measuring instrument to a printer, PC or other peripheral devices</p>   |  <p><b>Protection against dust and water splashes IPxx</b><br/>The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989 +A1:1999+A2:2013</p>                                       |  <p><b>Factory calibration (ISO)</b><br/>The time required for factory calibration is specified in the pictogram</p>       |
|  <p><b>Scan mode</b><br/>Continuous capture and display of measurements</p>  |  <p><b>Control outputs (optocoupler, digital I/O)</b><br/>To connect relays, signal lamps, valves, etc.</p>  |  <p><b>ZERO</b><br/>Resets the display to "0"</p>   |  <p><b>Package shipment</b><br/>The time required for internal shipping preparations is shown in days in the pictogram</p> |
|  <p><b>Push and Pull</b><br/>The measuring device can capture tension and compression forces</p>   |  <p><b>Analogue interface</b><br/>To connect a suitable peripheral device for analogue processing of the measurements</p>  |  <p><b>Battery operation</b><br/>Ready for battery operation. The battery type is specified for each device</p>   |  <p><b>Pallet shipment</b><br/>The time required for internal shipping preparations is shown in days in the pictogram</p>  |
|  <p><b>Length measurement</b><br/>Captures the geometric dimensions of a test object or the movement during a test process</p>   |  <p><b>Analogue output</b><br/>For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)</p>  |  <p><b>Rechargeable battery pack</b><br/>Rechargeable set</p>   |   |
|  <p><b>Focus function</b><br/>Increases the measuring accuracy of a device within a defined measuring range</p>  |  <p><b>Statistics</b><br/>Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.</p>  |  <p><b>Plug-in power supply</b><br/>230V/50Hz in standard version for EU. On request GB, AUS or US version available</p>  |   |
|  <p><b>Internal memory</b><br/>To save measurements in the device memory</p>  |  <p><b>PC Software</b><br/>To transfer the measurement data from the device to a PC</p>  |  <p><b>Integrated power supply unit</b><br/>Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US on request</p>   |   |
|  <p><b>Data interface RS-232</b><br/>Bidirectional, for connection of printer and PC</p>   |  <p><b>Printer</b><br/>A printer can be connected to the device to print out the measurement data</p>  |  <p><b>Motorised drive</b><br/>The mechanical movement is carried out by an electric motor</p>  |   |
|  <p><b>Profibus</b><br/>For transmitting data, e.g. between scales, measuring cells, controllers and peripheral devices over long distances. Suitable for safe, fast, fault-tolerant data transmission. Less susceptible to magnetic interference</p>  |  <p><b>Network interface</b><br/>For connecting the scale/measuring instrument to an Ethernet network</p>  |  <p><b>Motorised drive</b><br/>The mechanical movement is carried out by a synchronous motor (stepper)</p>  |   |
|  <p><b>Profinet</b><br/>Enables efficient data exchange between decentralised peripheral devices (balances, measuring cells, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible</p> |  <p><b>KERN Communication Protocol (KCP)</b><br/>It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems</p> |  <p><b>Fast-Move</b><br/>The total length of travel can be covered by a single lever movement</p>   |   |
|  <p><b>Data interface USB</b><br/>To connect the measuring instrument to a printer, PC or other peripheral devices</p>   |  <p><b>GLP/ISO record keeping</b><br/>of measurement data with date, time and serial number. Only with SAUTER printers</p>   |  |   |