# Ultrasonic thickness gauges SAUTER TN-EE







# Portable measuring device for ultrasonic material thickness testing in Echo-Echo principle

## Features

## • External sensor

- Data interface RS-232, standard
- 1 Delivered in a hard carrying case
- Scan mode (10 measurements per sec.) or single point measuring mode possible
- Internal memory for up to 20 files (with up to 100 values per file)
- · Selectable measuring units: mm, inch
- Two measuring modes to determine material thickness:
- Pulse-echo mode

Model

SAUTER

TN 30-0.01EE

TN 60-0.01EE

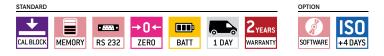
- Echo-echo mode
- · Determining the actual thickness of materials regardless of any coating which might be present. In this way, the wall thickness of pipes, for example can be determined in a non-destructive manner, i.e. without having to remove the coating
- Echo-echo measurements are only possible with the measuring head included as part of the delivery (ATU-US12, see accessory)

## Technical data

- Precision: 0,5 % of [Max] ± 0,04 mm
- Dimensions WxDxH 74x32x150 mm
- Battery operation, batteries standard 2 x 1.5 V AA, AUTO-OFF function to preserve the batteries
- Net weight approx. 245 g
- Maximum thickness of coating (paints, lacquers or similar coatings which shall be eliminated): 3 mm

#### Accessories

- Software, interface cable included, SAUTER ATU-04
- External sensor, 5 MHz, Ø 12 mm, for echo-echo measuring, SAUTER ATU-US12
- Ultrasound contact gel, standard, can be reordered, approx. 60 ml, SAUTER ATB-US03
- RS-232/USB adapter, SAUTER AFH 12
- · 5 steel calibration blocks without wooden box, SAUTER ATU-06
- 5 steel calibration blocks with wooden box, SAUTER ATU-09



Measuring range Measuring range

Pulse-echo

mm

0,65 - 600

0,65 - 600

Echo-echo

mm

3-30

3-60

				2016
Sensor	Sound velocity	Option ISO Calibration Certificate		
	m/sec	ISO KERN		SAUTER Catalogue
z   Ø 12 mm	1000 - 9999	961-113		lΨ
z   Ø 12 mm	1000 - 9999	961-113		SAL

GB

S

5 MHz

5 MHz

Readout

[d]

mm

0,01

0,01

# SAUTER Pictograms:



Adjusting program (CAL): For quick setting of the balance's accuracy. External adjusting weight required.



Calibration block: standard for adjusting or correcting the measuring device.



Peak hold function: capturing a peak value within a measuring process.



Scan mode: continuous capture and display of measurements.



Push and Pull: the measuring device can capture tension and compression forces.



Length measurement: captures the geometric dimensions of a test object or the movement during a test process.

Focus function: increases the measuring accuracy of a device within a defined measuring range.



FOCUS

Internal memory: to save measurements in the device memory.



Data interface RS-232: bidirectional, for connection of printer and PC.



Data interface USB: To connect the balance to a printer, PC or other peripheral devices.



Data interface Infrared: To transfer data from the balance to a printer, PC or other peripheral devices.



Control outputs (optocoupler, digital I/O): to connect relays, signal lamps, valves, etc.

analogue processing of the measurements.



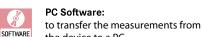
Analogue interface: to connect a suitable peripheral device for



STATISTIC

Statistics: using the saved values, the device calculates statistical data, such as average value, standard deviation etc.

the device to a PC.







Printer:

GLP/ISO record keeping: of measurements with date, time and PROTOCOL serial number. Only with SAUTER printers.

device to print out the measurements.

a printer can be connected to the



Measuring units: Weighing units can be switched to e.g. non-metric at the touch of a key. Please refer to website for more details.



Measuring with tolerance range: Upper and lower limiting can be programmed individually, e.g. for sorting and dosing.



ZERO: Resets the display to "0".



Battery operation: Ready for battery operation. The battery type is specified for each device.



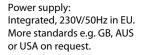
Rechargeable battery pack: rechargeable set.

Mains adapter:

230 V

230V/50Hz in standard version for EU. On request GB, AUS or USA version available.

\_£ 230 V



MOTOR

Motorised drive: The mechanical movement is carried out by a motorised drive.

3 FAST-MOVE

Fast-Move: the total length of travel can be covered



**ISO Calibration:** The time required for ISO calibration is shown in days in the pictogram.



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#### Package shipment:

The time required for internal shipping preparations is shown in days in the pictogram.

by a single lever movement.

# Pallet shipment:

The time required for internal shipping preparations is shown in days in the pictogram.



1 DAY

Warranty: The warranty period is shown in the pictogram.

Your SAUTER specialist dealer:



