

## Ultrasonic coating thickness measurement **QuintSonic T**

### Mobile measuring system

for measurement of paint,  
lacquer and plastic coatings  
on plastic, metal, wood,  
ceramic or glass substrates



## QuintSonic T

# Precision through Innovative Technology

### Application

QuintSonic T is an ultrasonic system for coating thickness measurement of paint, lacquer and plastic layers applied on:

- plastic
- metal
- wood
- glass
- ceramic
- GRP and CRP

Up to eight layers can be measured non-destructively in one operation.

QuintSonic T offers a wide range of possible applications, for example in the automotive industry, in aircraft construction and many other branches of industry: wherever precision is the top priority in quality assurance.

### Measuring principle

QuintSonic T is composed of an intelligent ultrasonic sensor for coating thickness measurement, which is connected to an industrial tablet as evaluation unit. The sensor acts both as a transmitter and a receiver in which an ultrasonic pulse is transmitted into the coating system by means of a coupling medium and the signals reflected at the interfaces of the individual layers are received. The transit times of these ultrasonic pulses are evaluated and converted into the corresponding layer thicknesses.

Special feature of QuintSonic T: the gauge combines state-of-the-art sensor technology and innovation software to provide a high-precision measuring system and the reliability of measurements for applications that couldn't be solved so far. Measuring values are created within the sensor itself and only after complete processing transferred to the gauge hence unaffected by interference during signal transmission.



Ultrasonic transducer



## Evaluation

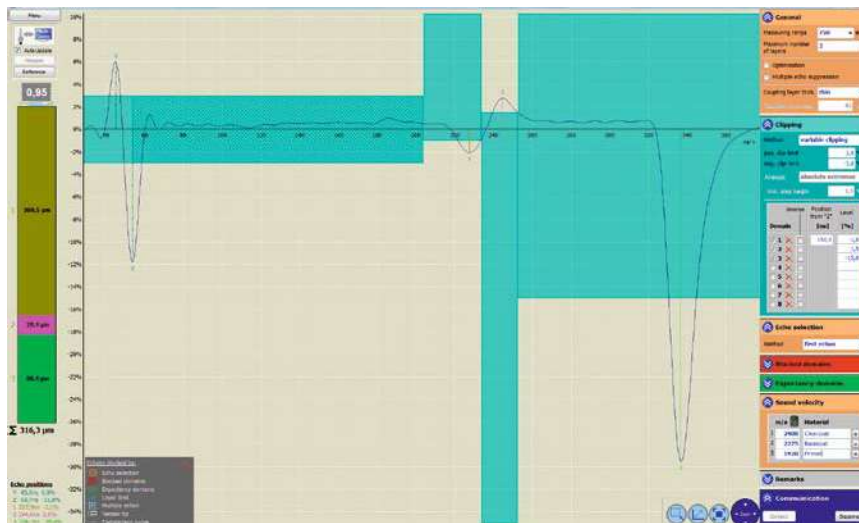
The convenient evaluation and data management software not only offers direct display of A-scans for analysis of the echo signals on the tablet display. Furthermore, all available parameters can be edited and set comfortably and easily by the user.

In addition, the software allows storage of the individual A-scans for subsequent adjustment of e.g. clipping domains or blocked domains.

The comprehensive data management of measuring values features data output in Excel format as well as creation of complete measurement reports in pdf format. The integration of descriptive texts and photos supports the documentation of measurement data.

- Convenient creation of projects through a defined project structure
- Clear main menu with all functions
- User-friendly operation
- Data transfer to Microsoft Excel® and creation of reports version in Adobe® PDF formation for documentation

Another challenge in ultrasonic coating thickness measurements are layers exhibiting very similar material properties. Their impedance values do not vary significantly enough in order to provide clear echo signals. The innovation clipping functions “global clipping”, “variable



Parametrization software “QSOF 7”

clipping” and “divisional clipping” of QuintSonic T are offering a solution to this problem so that also very weak echoes can be clearly distinguished. Thus even very difficult setting of task of this kind can be solved with utmost reliability and precision.

## Data management

Additional comfort is added by the possibility to determine the sound velocity by means of reference samples. Once the sound velocity of a given material has been determined, it can be stored in the data base to be available for further measurements. This helps to cut the time expense for the set-up of your measuring tasks to a minimum.



Multilayer coating on cover of a rear-view mirror

### Project structure

- New project1
  - Picture
  - Group1
    - Point1
  - Parameter

### Main Menu

- New project
- Open project
- Import project
- Export project
- Report
- Close project
- File explorer
- Information
- Manual
- Exit

QuintSonic Software:  
Main Menu and  
project structure for  
user-friendly operation:

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### Technical data

<b>Measuring principle</b>	Run-time measurement of ultrasonic waves
<b>Measuring range</b>	maximum 7900 µm (adjustable in ranges of 400 µm, 900 µm 1900 µm, 3900 µm for a velocity of 2375 m/s for all layers in order to achieve most precise scanning)
<b>Min. thickness of individual layers</b>	Approx. 10 µm (depending on the sound velocity of the material to be measured)
<b>Resolution</b>	0.1 µm
<b>Number of layers</b>	Max. 8 layers in one measurement
<b>Time of measurement and evaluation</b>	Approx. 3 seconds
<b>Measuring spot</b>	5 mm Ø / 0.2"Ø
<b>Contact area</b>	11 mm Ø
<b>Minimum radius of curvature</b>	Convex : 50 mm      concave : –
<b>Number of measuring series</b>	300 (max.)
<b>Data memory</b>	Approx. 250.000 measuring values (in total)
<b>Measuring units</b>	µm, mm, mils
<b>Calibration</b>	Calibration of sound velocity for up to 8 layers
<b>Statistical functions (per batch)</b>	Number of readings, minimum, maximum, mean value, standard deviation, variation coefficient, block statistics, group statistics, point statistics
<b>International norms</b>	DIN EN ISO 2808
<b>Operating temperature</b>	+5...+50 °C
<b>Storage temperature</b>	–10...+50 °C
<b>Power supply</b>	12000 mAh
<b>Dimensions</b>	LCD 10,1 inch
<b>Weight</b>	1,1 kg

### Other products

For further information on our complete range of products, please do not hesitate to contact us for:

- Coating thickness gauges
- Wall thickness gauges
- Pinhole detectors
- Cross cut testers
- Thickness gauges in road construction

### Standard supply

- QuintSonic SIDSP® sensor
- SIDSP® sensor cable
- Industrial tablet equipped with evaluation software
- Tablet stand
- Operating instructions
- Control standard (one layer)
- Plastic carrying case
- 1 bottle aqua dest (couplant), 3.38 oz
- 1 bottle ElektroPhysik coupling gel, 7.05 oz



## ElektroPhysik

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