



# More Precision

capaNCDT TFG6220 // Capacitive film thickness gauge



# Offline measuring system for stationary measurement of thin film capaNCDT TFG6220

Thickness measurement of very thin, electrically conductive film <1 mm, e.g. battery films

Automatic smoothing of the film with vacuum ensures highly precise results

Immediately ready for use without installation effort

Freely accessible sensorTOOL software for easy operation/visualization



## Precise testing for reliable quality

The TFG6220 capacitive system measures the thickness of electrically conductive films, e.g. battery films, with maximum precision. A vacuum device sucks in the object to be measured, smooths it and thus ensures that it is optimally positioned without wrinkles. In this way, the measurement can be performed with the greatest possible precision.

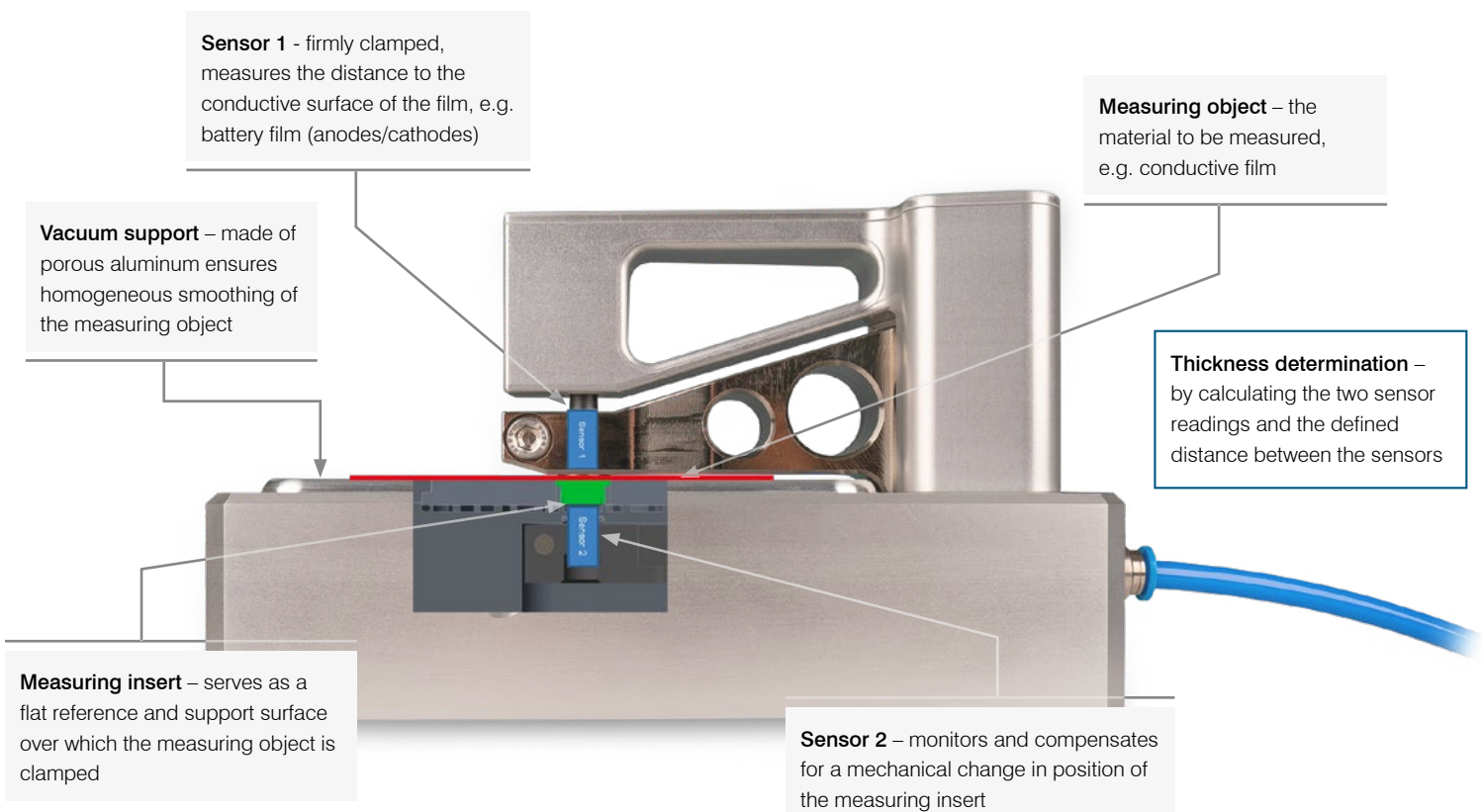
The TFG6220 consists of a measuring bracket including capacitive sensors and an external controller unit. In quality inspection, it is used offline for thickness measurements of random samples. Pre-assembled and ready for use, this capacitive measuring system can be started quickly.

## Precision at the touch of a button

The sensorTOOL software offers a user-friendly interface for the operation of the capaNCDT TFG. In addition, the user can carry out the measurements as well as display and output the measured data. The software is freely available at [www.micro-epsilon.com/download](http://www.micro-epsilon.com/download).

The system calculates the thickness by evaluating the readings of two high resolution capacitive sensors located opposite each other. Unlike tactile measuring principles, the thickness measurement is always highly reproducible at the same position. The inspected film being smoothed automatically by a vacuum device ensures highly precise results. The measured object remains undamaged in the process.

The system measures from two sides onto the measuring insert, which acts as a reference surface. This allows the system to be adjusted to zero before the thickness measurement.



Model		TFG6220
Resolution		10 nm <sup>[1]</sup>
Max. measuring object/film thickness		< 1 mm
Measuring rate		100 Hz with median filter width 7
System accuracy <sup>[2]</sup>		up to 0.2 μm
Warm-up time		60 min
Compressed-air connection		Ø 6 mm
Power consumption		6.3 W (24 V)
Supply voltage		12 ... 36 VDC (nominal value 24 VDC)
Protection class (DIN EN 60529)		IP40
Temperature range	Storage	-10 ... 60 °C
	Operation	18 ... 25 °C
Measuring object		Electrically conductive material <sup>[3]</sup>
Recommended target size (flat)		110 mm x 110 mm
Special features		Throttle valve and short connection hose are included in the scope of delivery. Vacuum pump and hose between throttle valve and vacuum pump are not included. Recommended data: Vacuum 50 ... 100 mbar, pump speed max. 2 m <sup>3</sup> /h (at 50 Hz)

<sup>[1]</sup> 10 nm at 100 Hz

<sup>[2]</sup> Depending on the target object to be measured; maximum accuracy can be achieved by means of a positioning frame and zeroing of the system.

<sup>[3]</sup> Electrical conductivity > 10<sup>6</sup> S/m

### Scope of supply

- Controller DT6220+2x DL6230
- Measuring bracket with sensors
- Power supply unit
- Ethernet cable
- Power supply cable
- Throttle valve + short piece of hose
- Case
- Dust cover
- Assembly instructions
- Protocol

### Not supplied:

- Vacuum pump with a maximum final vacuum of 50 – 100 mbar
- Compressed air hose (6 mm) for connecting the vacuum pump and thickness-measuring plate

