

The optical displacement measurement system **ODS-20** is now able not only to measure the vibration excursion of bond tools for wire and die bonders, but also to measure the bond force dynamically.

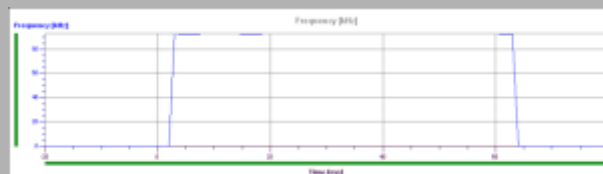
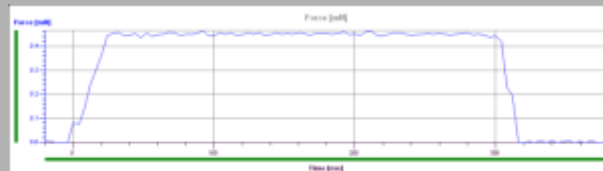
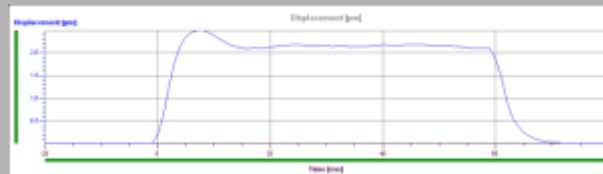
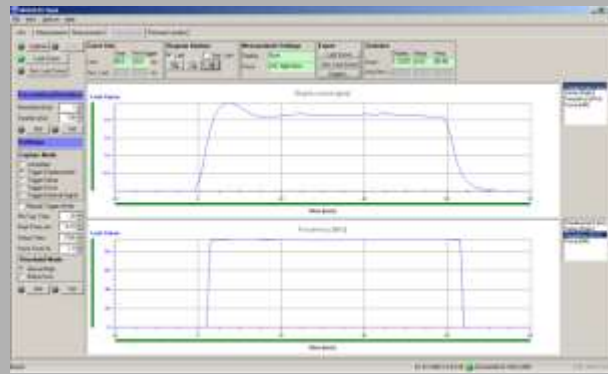
The **ODS-20** scans the mechanical oscillating tool using eye-safe visible red laser light.

An optional available load cell, integrated in the sensor head or as a separate sensor head, is used for bond force measurement.

With the **ODS-20** one can check and calibrate the output of the ultrasonic generator using the displacement values, measured at the tip of the bonding tool. Now it will become easy to evaluate also the function of the bond force generating system of a bonder.

The **ODS-20** can be used for all common bonding tools - wedges, capillaries and die collets.

# ODS-20



## DS-20

## Specification

Displacement evaluation of vibrating bond tool	<i>Measurement tasks</i>
Frequency evaluation of vibrating bond tool	
Bond force evaluation	
Mechanical displacement (peak-peak)	<i>Measured values</i>
Mechanical vibration frequency	
Bond force <sup>1)</sup>	
3 selectable ranges	<i>Displacement measuring ranges <sup>2) 3)</sup></i>
range 1: 0.1 to 2 µm @ 30..250 kHz	
range 2: 0.1 to 8 µm @ 30..200 kHz	
range 3: 0.1 to 20 µm @ 30..150 kHz	
range 1: ± 0.05 µm	<i>Displacement measuring accuracy</i>
range 2: ± 0.1 µm	
range 3: ± 0.2 µm	
range 1 + 2: 0.001 µm	<i>Displacement measuring resolution</i>
range 3: 0.01 µm	
30 .. 250 kHz with ± 10 Hz accuracy	<i>Frequency measurement range and accuracy</i>
2 selectable ranges	<i>Bond force measuring ranges <sup>1)</sup></i>
range 1: 0 to 2 N	
range 2: 0 to 20 N	
range 1: ± 0.01 N (±1g)	<i>Bond force measuring accuracy</i>
range 2: ± 0.5%, minimum ± 0.02 N (±2g)	
± 0.5%	<i>Bond force linearity</i>
Class II (eye safe)	<i>Laser class</i>

## Power supply

Plug-in power supply	<i>Type</i>
100 – 240 VAC, 50/60 Hz	<i>Input voltage</i>
15 VDC, stabilized	<i>Output voltage</i>
max. 1.0 A	<i>Output current</i>

## Dimensions, Weight

length / height / width (weight)	<i>Laser sensor</i>
2.56" x 0.83" x 0.6" (approx. 40g)	
length / height / width (weight)	<i>Electronic unit</i>
6.1" x 3.54" x 8.03" (approx. 1100g)	
length / height / width (weight)	<i>Power supply</i>
2.76" x 1.97" x 1.57" (approx. 150g)	

## Optional features

- USB communication port and data sampling software
- Internal data capturing (Min- and Max-values)
- External trigger input for data sampling

- <sup>1)</sup> Applicable, if bond force option ordered.
- <sup>2)</sup> Other measuring ranges are possible, please ask for special calibrations.
- <sup>3)</sup> All displacement values are peak-peak.