

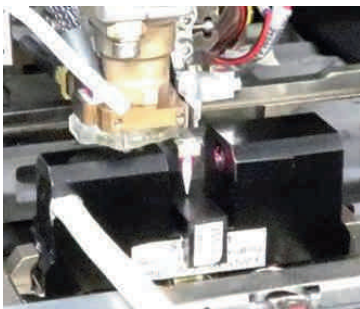
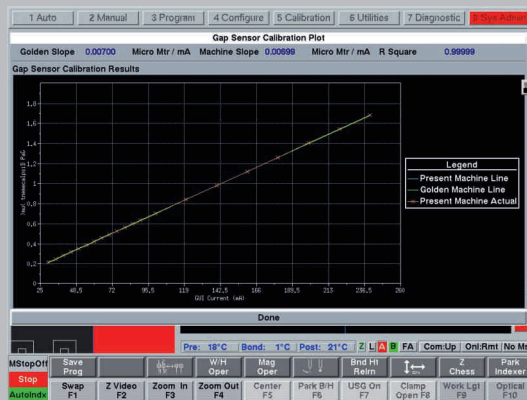
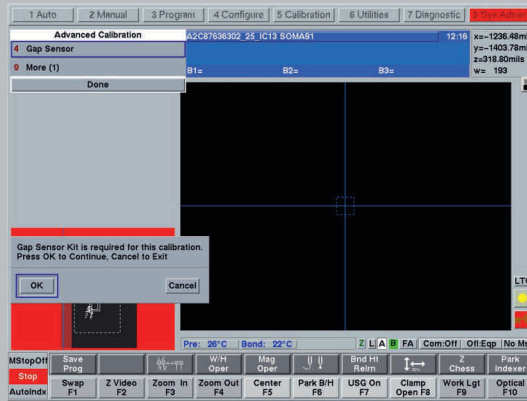
# ODS-21

The optical displacement measurement system **ODS-21** is the successor of the well proven **OPTOVIB** system, used in the **KnS** **USG Calibration Kit (Gap Sensor Kit)**.

The **ODS-21** is not only able to measure the vibration excursion of the capillary, but also to measure the bond force. An optional available sensor head equipped with a load cell is used for statically and dynamically bond force measurements.

With the **ODS-21** one can check and calibrate the output of the ultrasonic generator using the displacement values measured at the bonding tool.

Now it becomes easy also to evaluate the function of the bond force generating system of a KnS bonder.



## ODS-21

## Specification

**ODS-21** *Model name*

100315 *Order number*

Mechanical displacement (peak-peak) *Measured values*  
 Mechanical vibration frequency  
 Bond force <sup>1)</sup>

2 selectable ranges *Displacement measuring ranges* <sup>2) 3)</sup>  
 range 1: 0.1 to 1 µm @ 30..150 kHz  
 range 2: 0.1 to 2 µm @ 30..150 kHz

range 1: ± 0.02 µm *Displacement measuring accuracy*  
 range 2: ± 0.05 µm

range 1: ± 0.001 µm *Displacement measuring Resolution*  
 range 2: ± 0.001 µm

30 kHz .. 200 kHz with ± 20 Hz accuracy *Frequency measurement range and accuracy*

2 selectable ranges *Bond force measuring ranges* <sup>1)</sup>  
 range 1: 0 to 2 N  
 range 2: 0 to 20 N

range 1: ± 0.01 N (±1g) *Bond force measuring accuracy*  
 range 2: ± 0.5%, minimum ± 0.02 N (±2g)

± 0.5% *Bond force linearity*

Class II (eye safe) *Laser class*

## Power supply

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

## Dimensions, Weight

length / height / width (weight) *Laser sensor*  
 2.47" x 1.00" x 0.71" (approx. 46g)

length / height (w/o force sensor) / width (weight) *Force sensor*  
 2.47" x 0.52" x 0.71" (approx. 40g)

length / height / width (weight) *Electronic unit*  
 6.1" x 3.54" x 8.03" (approx. 1100g)

length / height / width (weight) *Power supply*  
 2.76" x 1.97" x 1.57" (approx. 150g)

## Communication

RS232 with OPTOVIB communication protocol

## Optional features

USB communication port and data sampling software  
 Internal data capturing (Min- and Max-values)

<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.