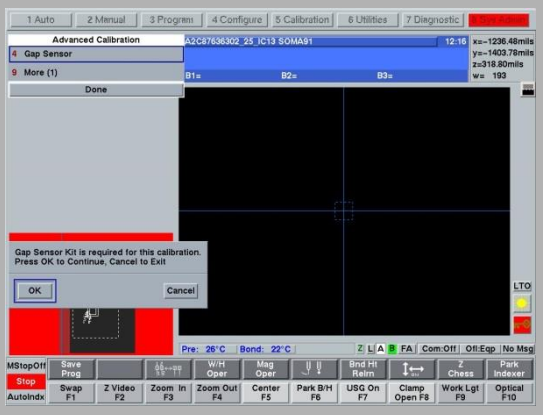
ODS-21

Optical Displacement Measurement System

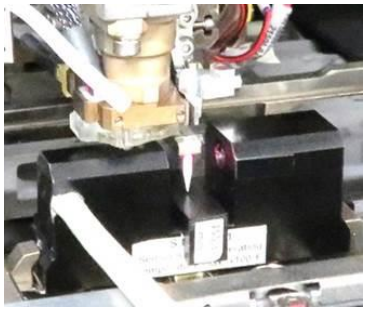


The optical displacement measurement system **ODS-21** is the successor of the well proven ***OPTOVIB*** system, used in the ***KnS USG Kalibration Kit (Gap Sensor Kit)***.

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.



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Optical Displacement Measurement System

ODS-21

Specification

Displacement evaluation of vibrating bond tool Frequency evaluation of vibrating bond tool Bond force evaluation	*Measurement tasks*
Mechanical displacement (peak-peak) Mechanical vibration frequency Bond force [1]	*Measured values*
2 selectable ranges range 1: 0.1 to 1 µm @ 30..150 kHz range 2: 0.1 to 2 µm @ 30..150 kHz	*Displacement measuring ranges* [2] [3]
range 1: ± 0.02 µm range 2: ± 0.05 µm	*Displacement measuring accuracy*
range 1: 0.001 µm range 2: 0.001 µm	*Displacement measuring resolution*
30 .. 200 kHz with ± 20 Hz accuracy	*Frequency measurement range and accuracy*
2 selectable ranges range 1: 0 to 2 N range 2: 0 to 20 N	*Bond force measuring ranges* [1]
range 1: ± 0.01 N (±1g) range 2: ± 0.5%, minimum ± 0.02 N (±2g)	*Bond force measuring accuracy*
± 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) 2.47” x 1.00” x 0.71” (approx. 46g)	*Laser sensor*
length / height (wo force sensor) / width (weight) 2.47” x 0.52” x 0.71” (approx. 40g)	*Force sensor*
length / height / width (weight) 6.1” x 3.54” x 8.03” (approx. 1100g)	*Electronic unit*
length / height / width (weight) 2.76” x 1.97” x 1.57” (approx. 150g)	*Power supply*

Communication

RS232 with OPTOVIB communication protocol

Optional features

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

[1] Applicable, if bond force option ordered.

[2] Other measuring ranges are possible, please ask for special calibrations.

[3] All displacement values are peak-peak.

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