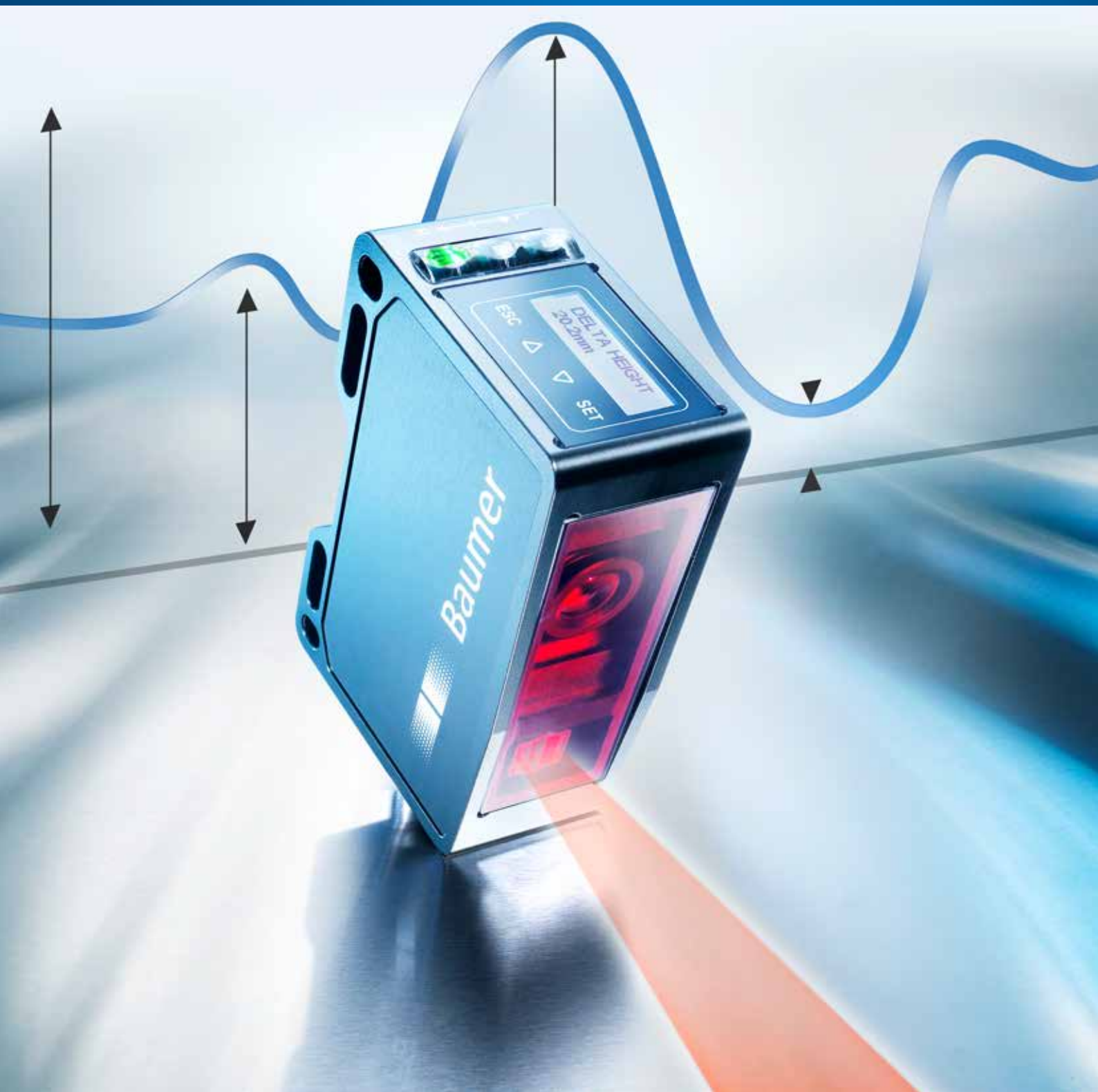
Baumer
Passion for Sensors

Another
Baumer
INNOVATION

PosCon HM

Clever height measurement with 3D light section sensors.



A new dimension

Measuring objects by means of statistical height data

PosCon HM is a unique, compact measuring unit for the intelligent height measurement of objects, with 5 key figures:

- The maximum, minimum and average height of objects
- The delta height value
- The standard deviation for all height information

By linking the key data intelligently, the *PosCon HM* provides direct evaluations for efficient check-and-sort applications in production. Critical applications in testing and measuring technology can also be implemented more easily with the *PosCon HM*.

PosCon HM – Calibrated, flexible, simple.

Outstanding functions

- Height measurements irrespective of the position of the objects
- Resolution up to 2 µm
- Factory-calibrated
- Measured values displayed in millimeter
- 5 integrated height measurement modes: Maximum, Minimum, Average, Delta, Standard deviation

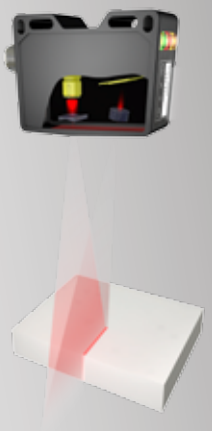
Benefits to you

- Reliable measuring without exact positioning of the objects to be measured
- High measuring accuracy even under varying ambient light conditions
- Fast installation and setup of the calibrated sensor
- Highly versatile, compact measuring device without the need for complex external software

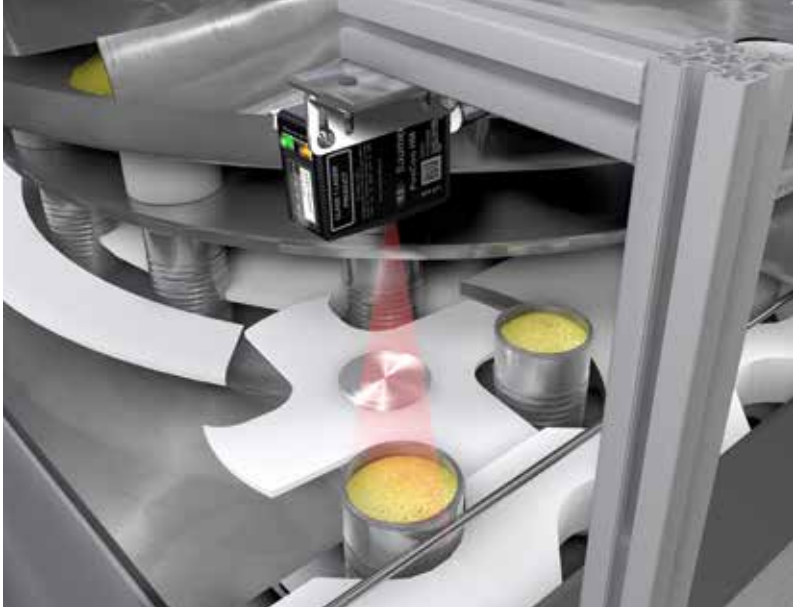
The operating principle

The *PosCon HM* is based on the 3D light section principle. According to this, the projected laser line is reflected by the surface and projected onto a two-dimensional optical receiver in a triangulation process. The specially developed multiple lens system ensures the required optical mapping quality.

Different height figures are thus reliably obtained with the help of clever algorithms and powerful coordinate transformation functions. In the measurement mode in question, the measured result can be compared with configurable limit values, and is available in binary form at the switching output. Or the measured value can be output directly in mm on the display or at the interface.



Example: Measurement of the maximum height of a rubber seal



Example: Precise measurement of the fullness level of solids

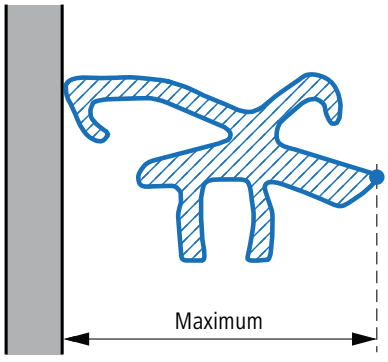
Clever height measurement for quality control in measuring and testing applications.

Quality control on the test bench – measurement of the maximum height of an object, regardless of its position

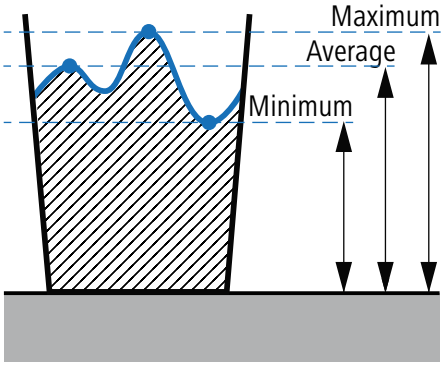
The *PosCon HM* is ideal for use in quality control on the basis of height measurements. An example of this is the control of rubber seals. In the sensor, powerful algorithms analyze up to 600 items of height information per measurement and determine the maximum height of the object, irrespective of its position. Only the *PosCon HM* light section sensor makes it possible to carry out this measurement, and it supplies precise, reliable measurement results with a measuring rate of up to 1540 Hz.

Quality control in the production process – measuring fullness with statistical data

Especially the checking of fullness levels with solids is expected to meet stricter and stricter requirements. Thanks to its measuring principle, the *PosCon HM* light section sensor is the ideal solution. It not only provides the maximum fullness level, it also calculates further statistical data in the sensor, such as the minimum value, average value, differential value and the standard deviation of up to 600 items of height information. On the basis of this data, it is possible to make a more precise statement about the fullness level of solids and thus to optimize the production process.



Object position may slightly vary



Example: Controlling product quality in the production of yogurt

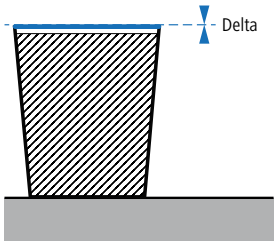
Example: Controlling product quality in the production of toothpaste

Easy solutions for critical check-and-sort applications.

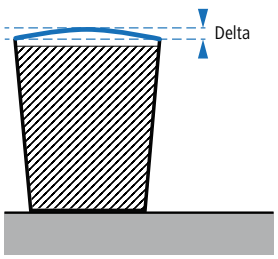
Thanks to the evaluation algorithms integrated in the sensor, *PosCon HM* sensors are a low-cost alternative for a large number of check-and-sort applications. In the Delta mode, the sensor identifies faulty products on account of their variance in form and discards these.

Delta measurement for quality control

The mode is selected quickly and easily using the integrated touch display. After the digital output has been configured, the *PosCon HM* light section sensor immediately provides the test result (OK/Not OK).



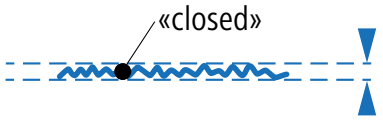
OK



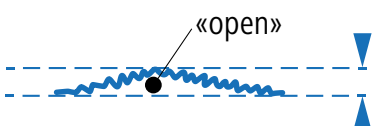
Not OK

Controlling an ultrasonic weld

The *PosCon HM* is ideal for controlling ultrasonic welding in the production of toothpaste tubes. Thanks to the color-independent measurement, the height information is analyzed in the *PosCon HM* and the measured result is evaluated in the form of a delta value. In this way, open welded seams can be detected and faulty products discarded. With the statistical height data, the production process can be optimized simply, efficiently and sustainably.



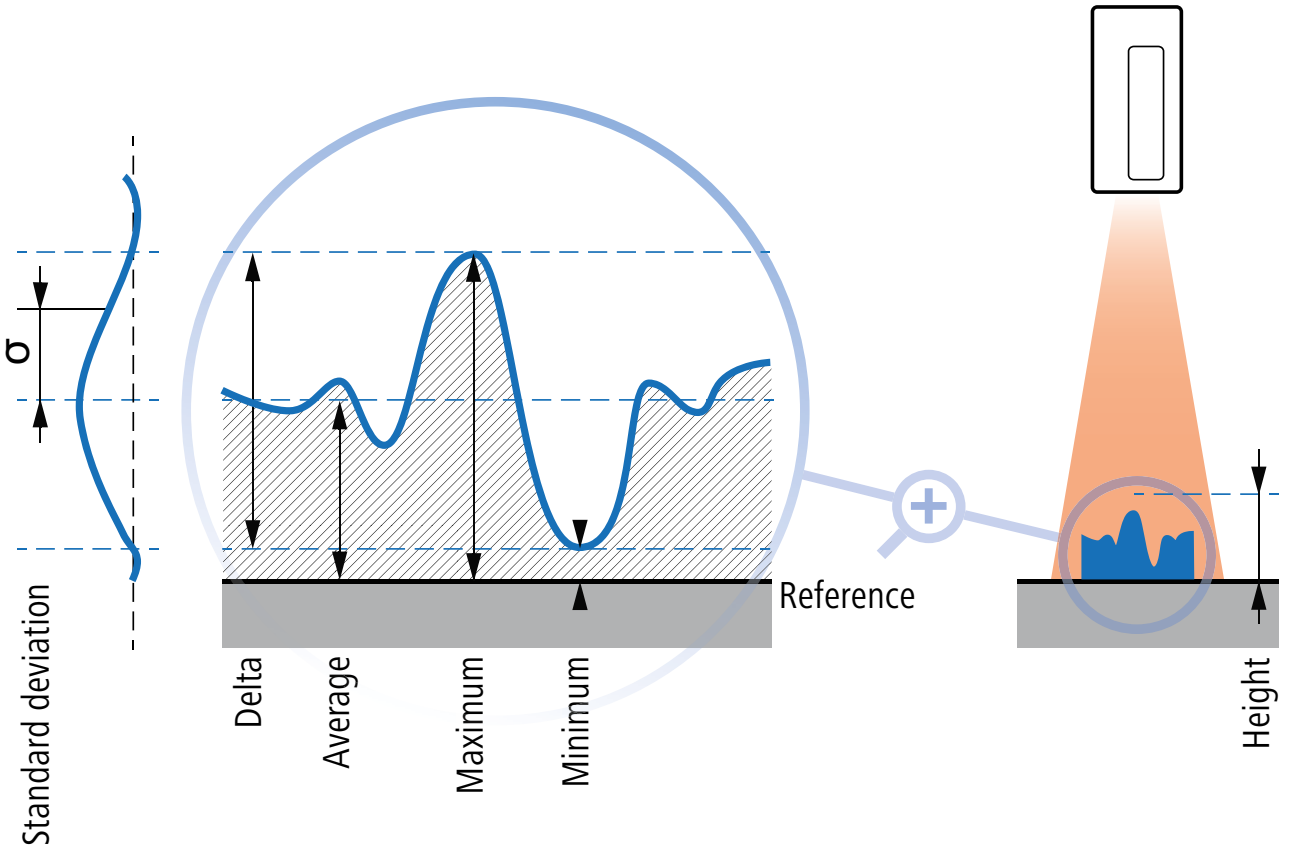
OK



Not OK

The all-in-one sensor for precise height measurement.

The compact *PosCon HM* light section sensor reliably determines statistical height data such as minimum, maximum, average, delta and standard deviation. Depending on the preset measuring mode, the *PosCon HM* automatically calculates the required measurement result and directly outputs the values in millimeters on the display or the digital interface.



Measuring modes

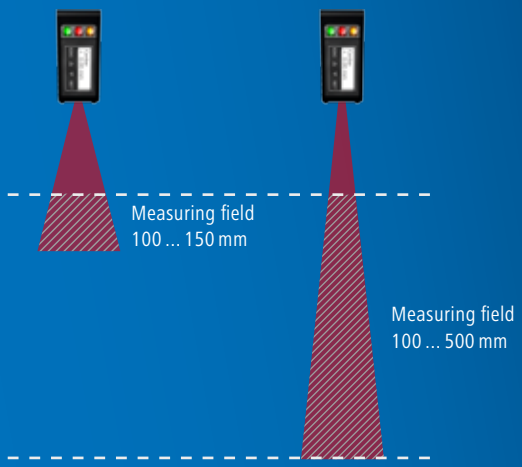
The *PosCon HM* offers five different measuring modes for height measurement.

Minimum height	Maximum height	Average height	Delta height	Standard deviation
Minimum height of the object from the reference surface	Maximum height of the object from the reference surface	Average height of the object from the reference surface	Maximum height minus minimum height	Measure of the spread of height values around the average value

PosCon HM product data

General data

	OXH7-Z0150	OXH7-Z0500
Measuring range (z-axis)	100 mm ... 150 mm	100 mm ... 500 mm
Measuring field (x-axis)	48 mm ... 72 mm	13 mm ... 66 mm
Housing size	26 × 74 × 55 mm	26 × 74 × 55 mm
Resolution (with filtering) Mode MIN, MAX, AVG height	2 µm ... 4 µm 6 µm ... 12 µm	4 µm ... 25 µm 25 µm ... 45 µm
Measuring rate	≤ 500 Hz	≤ 1540 Hz
Ambient light immunity	≤ 35 kLux	≤ 35 kLux
Laser class	Laser class 1	Laser class 2
Interface	Analog und RS485	Analog und RS485
Order code	OXH7-11159406	OXH7-11161809



PosCon – Light section sensors by Baumer.

Light section sensors by Baumer offer complex functions integrated in an easy-to-operate, compact sensor. Thanks to their intelligent evaluation, their standardized operating concept and robust housing, *PosCon* light section sensors are the ideal solution for applications in the fields of assembling and handling, packaging, wood processing, glass and ceramics processing, the special machine construction sector or measuring and testing technology.

An overview of the sensors from the *PosCon* family

	Edge position	Width	Gap	Maximum height	Minimum height	Delta height	Average height	Standard deviation
PosCon 3D – edge position sensor	■	■	■					
PosCon HM – height sensor				■	■	■	■	■

For more information on the *PosCon HM* go to
www.baumer.com/posconhm

Find your local partner: www.baumer.com/worldwide

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