



SHV 200
Height Control System –
Simple and Precise

R&W SHV200 Height Control System



The SHV200, produced by R&W, is a newly developed concrete height control system based on the proven SHV500, providing an economical entry-level machine for the precise measurement of concrete.

The measuring system was designed for measuring concrete blocks with a maximum height of 190 mm and is therefore ideal for the production of paving stones.

A key variable in the production of paving stones is the height of the products. The R&W SHV200 height control system enables the contact-free measurement of the products by laser distance sensors.

The system can be used with all manufacturers' concrete block machines. It is simple to integrate into the block machines's control system, but can also be operated as a stand-alone unit.

Precise Measurement

The SHV200 is located as closely as possible behind the block machine above the conveyor for the supporting boards. The concrete blocks passing underneath the unit are laser-scanned without contact by up to three lasers and are measured to an exactitude of ± 0.5 mm. The measuring range of the block height ranges from 20 mm to 190 mm.

The height of the blocks is determined by measuring the relative height between the top surface of the boards and the top surface of the blocks.

This measuring principle removes the uncertainty that can arise from varying heights and qualities of baseboards. The heights of one row of concrete blocks are recorded by up to 1500 measurements per second. The SHV200 can therefore make precise measurements at board conveyor speeds of up to 0.5 m/s.

Only the relevant features of the product surface are evaluated to determine the product height: obliques, burrs, indentations or rough surfaces therefore do not distort the measuring result with this special measuring process.



A multilingual web visualisation system is available to operate the SHV200 height control system. The individual heights of the concrete blocks are calculated from the values measured by the laser

sensors: a mean value for the entire row of blocks and a mean value for the entire layer of blocks. The quality of the concrete height is displayed in a web browser by the integral web visualisation system.

SHV-VISU

Windows visualisation is also available alongside web visualisation. The following additional functions are provided:

- Filing of measured results
- Graphic presentation of filed measured results
- Tabular display of filed measured results
- Filter functions for ease of data selection
- Statistical evaluation
- Printing of tables and graphics
- Data export

Intelligent concrete block measurement – the benefits at a glance

Flexible integration into existing production lines



- Communication with the concrete block machines' Simatic S7 controllers by means of R&W function blocks.
- Automatic optimisation of the pre-vibration system to maintain the required block height even with variable mixing conditions
- Automatic stop mechanism on the block machine and warning about production of rejected materials.
- Automatic activation of the dumping system when rejected material is detected (e.g. before/ after a change of mould or colour).

External height control system is more precise than conventional measurements with moulds and tamper heads

- The laser height control operates independently of the board thickness (only the relative height between the top surface of the board and the top surface of the blocks is taken into consideration.)
- The different block heights from the start of the board to the end of the board, as well as the individual heights of all the blocks measured, are displayed (only the mean height of the entire board is measured using moulds and tamper head).
- When the main vibration system is shut down by height stops on the tamper head, blocks that have too low a height cannot be reliably detected.

Quality improvement and lower costs by reducing rejects

- Improved quality of the heights of concrete blocks by automatic improvement of the production process.
- The quality of each board is controlled - not just by random sampling.
- Evaluation of filed measured results.

Quality management: DIN EN ISO 9001: 2000 certification



R&W INDUSTRIEAUTOMATION



Graf-Heinrich-Str. 20 · 57627 Hachenburg
Tel.: 02662 94 14 34 · Fax: 02662 94 14 41
info@r-u-w.de · www.r-u-w.de · Germany