



## BIG SONIC-SKI<sup>®</sup> „MODULAR“

### AVERAGING THE SHORT AND THE LONG WAY

More than two decades ago the ultrasonic sensor Sonic-Ski<sup>®</sup> established itself on the market as a grade sensor for leveling control, so that today, modern road construction would be unthinkable without it. Its success based on one of its innovative measuring methods: the average calculation of several independent ultra-sonic measurements.

#### Averaging the short way

The Sonic-Ski<sup>®</sup> recognizes strongly deviant measurements caused by obstacles such as stones as errors and excludes these unreliable values from further calculations. This means that the determined height is an average value calculated from the corrected measurements. In consequence, all remaining unevenness of the reference within sensing range is smoothed out too. Now the Sonic-Ski<sup>®</sup> has a “big brother” that is based on the same principle and - in the truest sense of the word - extends the advantages presented by proven multi-spot ultrasonic measurement: the Big Sonic-Ski<sup>®</sup>.

#### Averaging the long way

By combining three Sonic-Ski<sup>®</sup> sensors it has become possible to sense a ground section at several, spatially separated spots. The MOBA-matic<sup>®</sup> leveling system calculates an additional average value from these measurements and deduces a virtual reference level. New advantage: Even an unevenness which covers a larger ground section (e.g. road waves) will be smoothed out without any difficulty. For this reason, the system works even more efficient than a single Sonic-Ski<sup>®</sup>.

Combining the two averaging systems enables you to sense nearly all surfaces, irrespective of their condition. In addition, you can choose per key-touch whether the reference is to be duplicated with one Sonic-Ski<sup>®</sup> only or whether the average value of all sensor measurements is to be used.

*The result: a completely even surface.*

The contact-free multi-spot grade measurement with a flexible mounting system enables creating a reliable height level even without an absolute reference.

- » no artificial reference required
- » smoothes out unevenness of the reference by calculating an average value
- » easy mounting by one person only
- » beam construction can be extended at will
- » improved paver manoeuvrability because of flexible sensor positioning
- » sensing in front of and behind the machine
- » creates smooth transitions
- » single use of each sensors for conventional grade control

- » measurements not taken into account
- » measurements used for averaging
- » virtual reference calculated from all relevant measurements



### A modular beam

The most supporting component of the Big Sonic-Ski® is a highly flexible mechanical system which makes the Big Sonic-Ski® suitable for many different applications.

The beam construction consists of handy, modular components which can be easily mounted by one person only. Irrespective of the road paver type used, the beam is easily adaptable thanks to tow arm clamp brackets.

Two swing arms enable the flexible positioning of the beam assembly.

Regardless whether the 9 m standard version or the 13 m version is being used, the basic beam is always composed of modules hitched to each other.

Thus can be extended anytime as long as you like.

Furthermore, the different sensors mounted to the beam are freely slidable and, thanks to their individual setting, they can be ideally positioned to all field conditions.

Another impressive feature of the mechanical system is the fact that the sensor brackets for the two outer sensors at the front and at the back can be swivelled sideways. This means that the system can be used along curves, too.

Moving the sensor over the newly paved surface behind the screed offers an additional advantage: the paving result is included into the measurement and is checked at the same time by this procedure.



### EXAMPLE OF ARRANGEMENT

