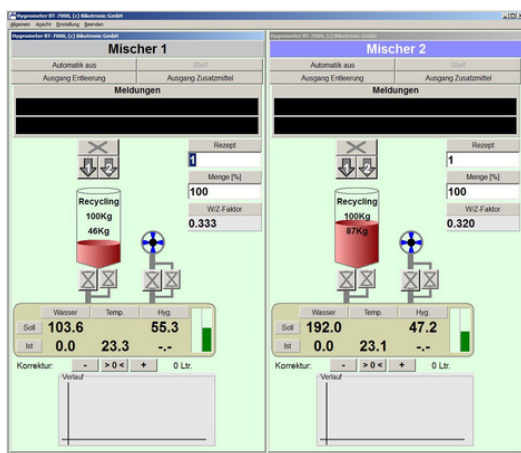


## BT-7000 water dosing computer

### Moisture measurement in the concrete mixer



Today, concrete quality is crucial for the industrial production process.

To meet increasing quality requirements, controlling and regulating moisture content is essential.

The BT-7000 water dosing computer determines the concrete moisture content in the mixer quickly and accurately.

It calculates and doses the added water with high reproducibility accuracy and thus forms the basis for consistently optimal concrete quality.

### The advantages

**The BT-7000's high reproducibility** is achieved through its multi-stage data processing. The software adapts to each mixer and its specific mixing behavior.

Measurement outliers in mixers with very high amplitude fluctuations are suppressed, providing a constant measured value for calculating the amount of water added. This is particularly beneficial in the production of precast elements or self-compacting concrete.

**The individual tuning curve** is a particular advantage of the BT-7000, as it is created and saved for each recipe. This ensures the highest possible accuracy of the individual concrete mixes and the operator does not have to edit or change the measurement curves using complex calculation formulas.

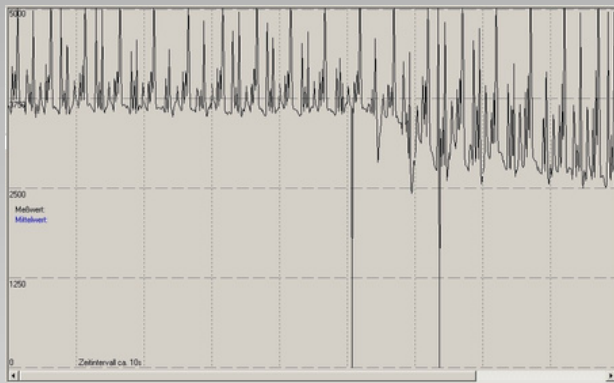
**Temperature measurement** is essential in the mixer, as the behavior of the dry mix can change due to large temperature fluctuations, such as the outside temperature or the delivery of raw materials. Therefore, a temperature measurement is integrated that detects significant fluctuations and compensates for them using a stored temperature curve. This ensures that the moisture content of the concrete always remains constant.

**Remote maintenance** is carried out via the Internet in order to provide customers with quick assistance and easily transfer program updates.

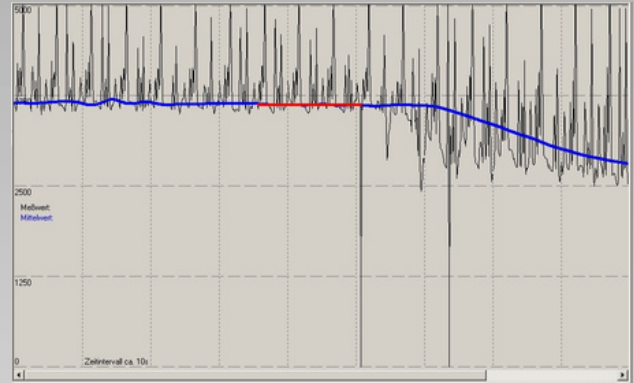
**The control connection** is possible with any mixing plant control system. It can be used with up to 4 mixers producing simultaneously.

**A sand moisture measurement** can be integrated with up to eight measuring points.

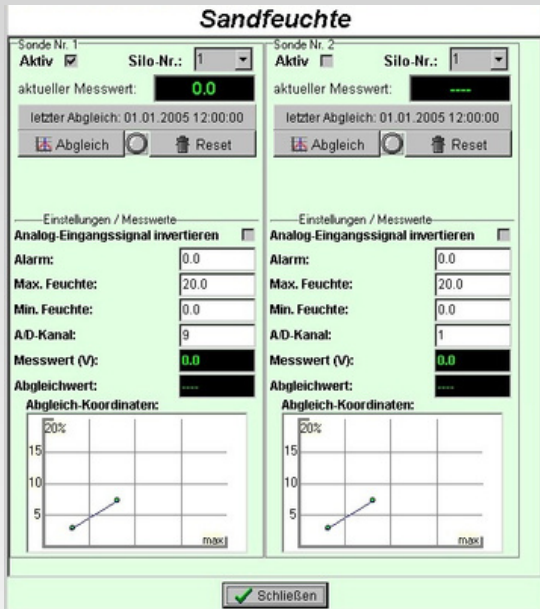
## BT-7000



Unfiltered input signal of the microwave probe



Filtering of the multi-stage measured value processing (blue line) and evaluation of the final filtering (red line)



The BT-7000 was deliberately designed to be user-friendly in order to make work as easy as possible for the operating personnel.

To mix a concrete, only the required amount of water is entered and confirmed during the dry mixing time.

The device then fine-tunes automatically.

The measurement curve created during the tuning process is automatically assigned to the adjusted recipe and saved.

The amount of water for the next concrete mix in the recipe is then automatically calculated and dosed.

## Recycling water scale

As we all know, wastewater contaminated with cement and chemicals should not be discharged into the sewer system. We have developed a concept that makes it possible to recycle both lightly and heavily contaminated wastewater.

To process wastewater with a density greater than 1.1, the solids content must be measured. For this purpose, we also install a turbidity sensor in the wastewater scale, which can determine the density of the recycled water. The recycling water scale features a coarse/fine discharge valve for more precise dosing.



# BT-7000

## Microwave probes



### General

The microwave probes were developed in cooperation with the Chair of High Frequency Engineering at the Faculty of Engineering at Kiel University. The measurement accuracy of the microwave probe under laboratory conditions is better than 0.1%.

**The linearity** of the microwave probe enables measurements in very dry concrete as well as in very wet concrete.

### Microwave probe type 6 for pan mixers, conical mixers, single and twin shaft mixers

Measuring range: All consistency ranges

Installation dimensions probe: Ø 105 mm, H 100 mm

Installation dimensions holder: Ø 50 mm, H 35 mm

### Mixer with rotating trough

For mixers with rotating troughs, we recommend our Type 18 microwave probe with wireless measurement transmission. The Type 18 probe, designed for installation in mixers with rotating troughs, features integrated temperature measurement in the microwave probe, eliminating the need for an external temperature probe.

### Microwave probe for mixer with rotating trough type 18

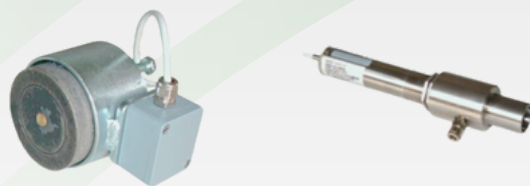
Measuring range: All consistency ranges

Installation dimensions probe: Ø 105 mm, H 22 mm

Installation dimensions holder: Ø 120 mm

## Temperature probes

To determine the current temperature of the mix and the cement



## Water dosing unit

For dosing the water into the mixer with coarse/fine valve and magnetic-inductive flow meter



# BT-7000

## **Constant moisture content of the concrete**

Who hasn't encountered these problems? If the core concrete is too dry, the surfaces will not be closed at the sides; if the core concrete is too wet, the blocks will "bulge" and they will inevitably collapse during packing. These problems can only be prevented by ensuring the concrete maintains a consistent moisture content.

### **Mass products**

Fast production, good filling behavior with core concrete with consistently consistent height results, and homogeneous and clean facings with a uniform appearance are particularly important here.

### **Precious products**

The number of premium products is constantly increasing. Special face concretes are enriched with granite, basalt, or granules. To ensure the effect remains consistent during subsequent finishing (washing, brushing etc.), the face concrete must always be produced with the same moisture content.

### **Pavers**

To avoid cracks, it is very important that the core concrete remains at a constant moisture level. In addition, the constant humidity has a positive effect on the filling of the mold, the filling behavior of the concrete in the mold and the demolding of the products.

### **Lightweight concrete**

The use of microwave probes has significantly improved the accuracy of moisture measurements in LECA sand lightweight concrete, pumice lightweight concrete and lava lightweight concrete.

### **Wet concrete**

The automation of precast production is constantly increasing. This makes it increasingly important to produce concrete of consistent quality to ensure flawless automated processing.

### **Self-compacting concrete (SCC)**

The exact addition of water plays a significant role in ensuring that the self-compacting concrete, under the effect of its own weight, fills any formwork shape without leaving any voids, fully envelops the reinforcement, and de-aerates and levels itself without segregating.