

# SONO MIX

## The inline moisture determination for concrete mixers

Manage quality  
in the mixer in real time



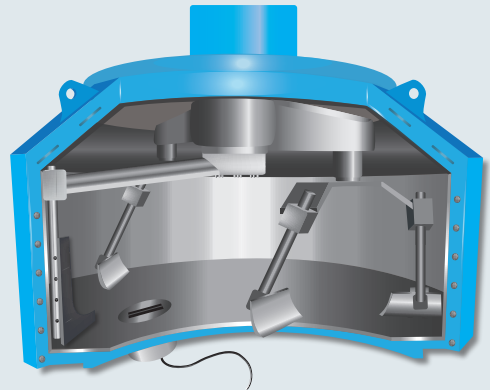
Based on the innovative TRIME® radar technology, the determination of water contents during the mixing of concrete is possible: Without value drift over lifespan and wear of the probes.

Moisture Sensor Experts

IMKO✓

# The new dimension of quality control in the mixer

- ➔ All common concretes can be reliably measured
- ➔ Suitable for all types of mixers, e.g. intensive or twin-shaft mixers
- ➔ Wear/abrasion have no influence on the measuring principle
- ➔ Regular recalibration is not necessary
- ➔ Specially hardened surfaces (optional) delay wear of the sensor and significantly extend the lifespan
- ➔ Compatible with all common control systems
- ➔ Simple commissioning and parameterization



## Long term stable online moisture measurement in your mixer

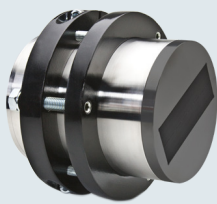
The application of a mixer probe in ready-mix plants is critical due to timing challenges. Ready mix plants are often in high output situations and the concrete is mixed to harmonization in the concrete truck. But the situation is different in precast plants and especially in the production of concrete products. Here, mixer probes are used very frequently due to longer mixing times and perfectly homogeneous concrete at the end of the process.

The mixer probe measures the moisture of the mixture at one central location and can replace the measurement of the aggregates. The correct installation spot is crucial for a stable and reliable measurement result. It is important to make sure, the mix permanently and evenly flows over the probe, installed in the mixer bottom or in the scraper. In the application of concrete products production such as pipes, channels or bricks. A  $\pm 1\text{-}2 \text{ l/m}^3$  are already critical for the quality and coloring of the products.

Mixer probes are generally subject to heavy wear - for this reason, our probes are exceptionally robust and made of specially hardened materials. This significantly extends the lifespan of the probes, which reduces your operating costs.

### The right products

#### Description



##### **SONO MIX**

Application: all common concretes (earth-moist to fluent), grain sizes up to 32 mm, also crushed materials

Measuring field: Special resistant ceramic

Probe: Hardened, resistant steel, wear part can be replaced, cost reduction

Mounting: flange on the mixer bottom



##### **SONO MIX Mini**

Application: all common concretes (earth-moist to fluent), grain sizes up to 32 mm, also crushed materials

Measuring field: Special resistant ceramic

Probe: Stainless steel housing not in contact with the medium

Mounting: scraper



##### **SONO VIEW**

Application: Optional stand-alone display,

Up to 16 sensors can be connected

Additional function: Interface for PC parameterization incl. PC software

Power supply: +12 to +24 V DC

**A prerequisite to the process, regarding the determination of moisture in the mixer**

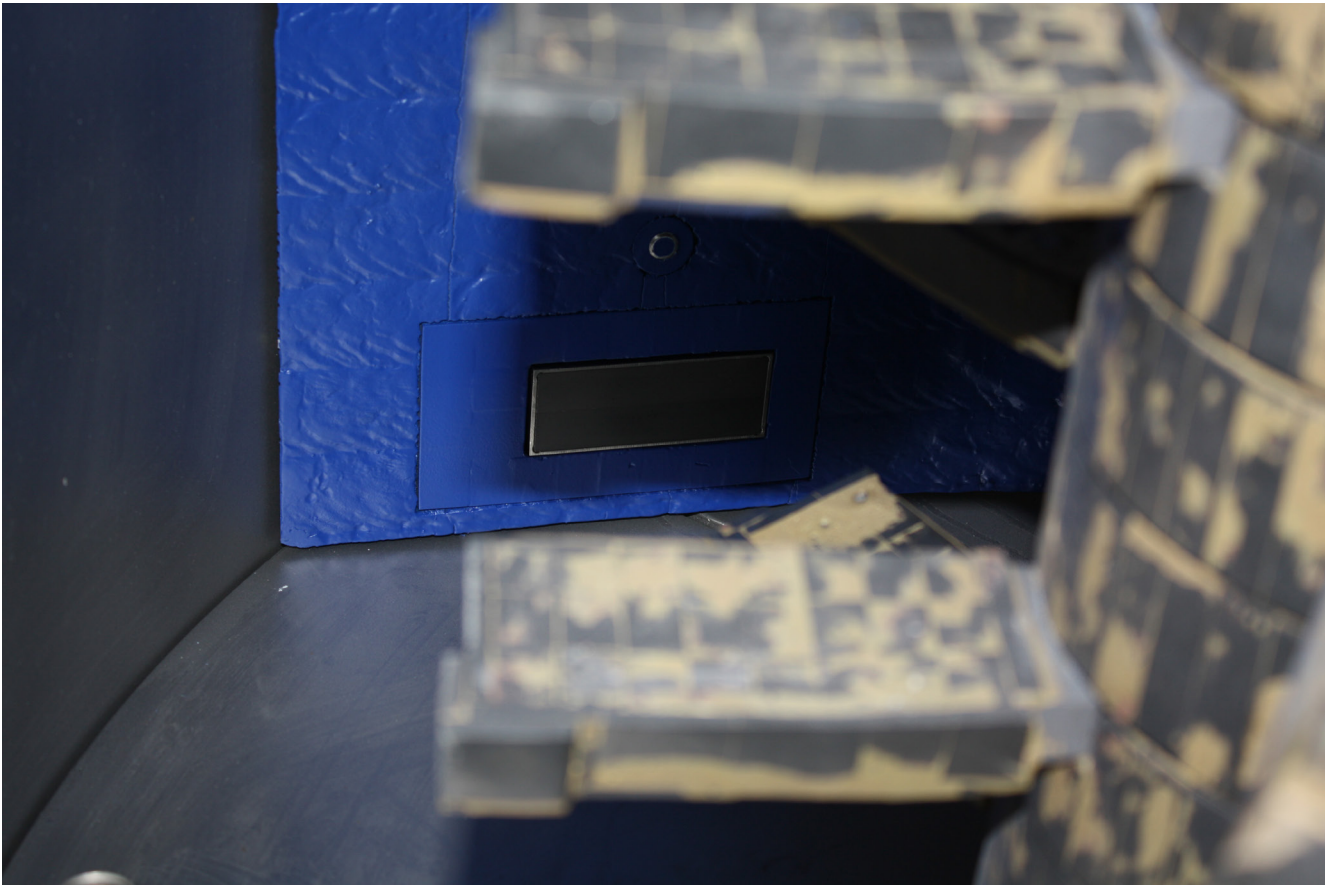
For technical reasons, an exact determination of the moisture content is only possible in entirely mixed (homogeneous) mixtures.

Mixer Type	Instrumentation	Application	Challenge	Solution
One Shaft Mixer	SONO MIX	Ready mix	time to homogenous concrete	moisture determination in aggregates
Twin Shaft Mixer	SONO MIX	Ready mix	time to homogenous concrete	moisture determination in aggregates
Planetary Mixer	SONO MIX	Precast	Quality and recipe control	Highly accurate moisture determination in (small) batches
Intensive Mixer	SONO MIX Mini HC	Precast / Brick	Small batches	Highly accurate moisture determination in (small) batches

**Recommendation of instrumentation in time-critical processes with very short mixing times**

If a homogeneous mix cannot be facilitated in the mixer for process-related reasons, we recommend the external determination of moisture contents in the supplied, preferably fine aggregates. This allows keeping up the speed of process and consistently guarantee high quality.

Very short mixing times are often required, producing ready-mixed concrete. In this case, the concrete is completely homogenized in the concrete truck. If so, a measurement in the mixer is not productive.





# Technical Data

Version	Probe dimensions
SONO MIX Probe housing: Stainless steel with ceramic window and carbide steel plate	SONO MIX Gehäuse: Ø 108 mm, height 135 mm
SONO MIX Mini HC Probe housing: Stainless steel with ceramic window	SONO MIX Mini HC housing: 60 x 40 x 135 mm
Measuring range water content	Measuring range conductivity
Measuring range: 0-100% vol. moisture content, accuracies up to 1-3 liters/m <sup>3</sup> are possible	Conductivity EC-TRIME: 0...20 mS/m
Power supply	Measuring field dimensions
+12V to +24V DC; 3W	approx 40-80 mm, depending on humidity and material
Calibration	Visualization
The SONO MIX probes are supplied with a universal calibration. Typical types of concrete can be measured (plug and play). It is possible to create and use your own user-specific calibrations.	Connection to a PLC: analog interface (0-20mA, 4-20mA). External display (SONO VIEW) or serial interface.

## Kontakt

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