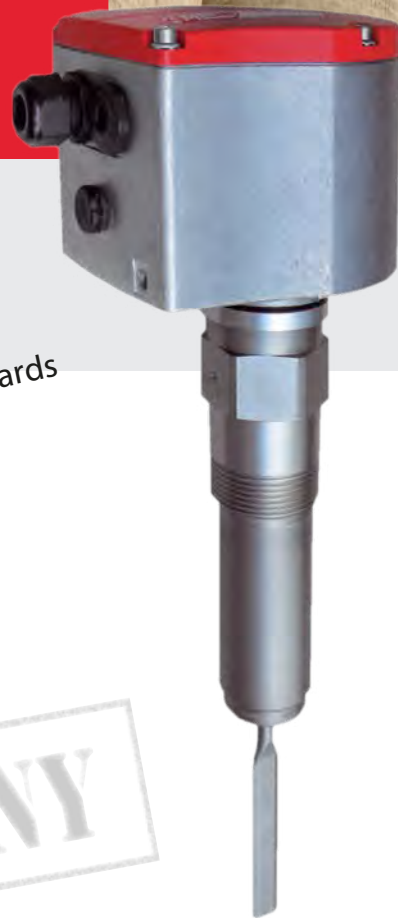




MBA700

Vibration Paddle
for Bulk Material



Tested and approved
according the ATEX standards
EN60079-0:2009,
EN60079-31:2009

MADE IN GERMANY



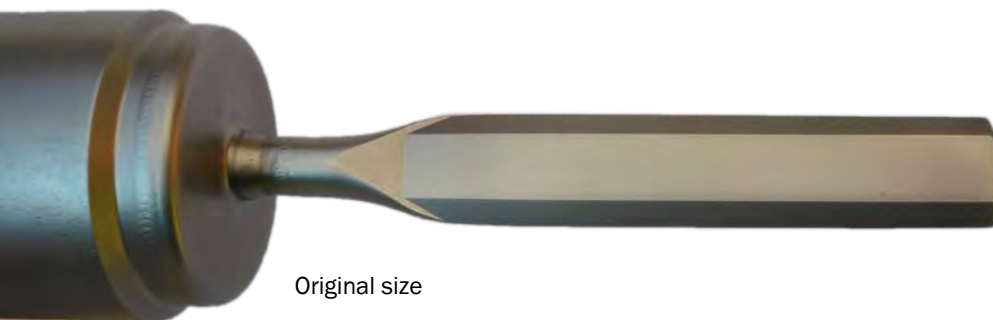
Multiple improvements to measure the level of bulk materials: MBA 700 vibration paddle

- Robust**
- Secure**
- Reliable**
- Energy-efficient**

– these are the parameters of the new MBA 700 vibration paddle. The MBA 700 vibration paddle, an original, patented, vibrating single rod, expands the range of bulk measurement devices of MBA Instruments GmbH.

The sword-shaped „single rod“ in the form of a paddle prevents the formation of deposits on the vibrating part. At 290 Hz, the modern vibration paddle MBA 700 vibrates with such low energy that it cannot „shovel itself free“ as may happen with other vibration rods and vibration forks. Incorrect measurements caused by cavitation are thus avoided. Furthermore, nothing can become wedged in gaps as is often the case with vibration forks in bulk material.

Relying on the vibration paddle method, the MBA 700 can virtually „feel“ the level of extremely light bulk material.



Original size

**A highly sensitive sensor packed in a robust housing:
this is the concept of the new MBA 700**

Application-specific installation of the MBA 700



Whether it be tea leaves or sand, wood, grain rasp or sugar: the MBA 700 can be used anywhere. Granulated or powdered bulk materials are typical materials that the MBA 700 can measure very well.

Its use is limited in the case of extremely sticky feed or bulk materials, since these are prone to strong caking. This is where our MBA 200 rotary paddle comes into use, for this measuring method can basically be used in any application.

Sensitivity

The MBA 700 has 3 sensitivity settings:

- Setting A: for extremely light bulk material up to 10 g/l
- Setting B: for almost all bulk materials (default setting)
- Setting C: for heavy bulk materials

Switching options

The MBA 700 has 2 alarm warning circuits:

Full alarm:

The output goes into alarm state once the vibration paddle is covered by the bulk material.

Fail-safe circuit: even in the case of a power failure, the output goes into the alarm state „full“.

Empty alarm:

The output goes into alarm state as soon as the vibration paddle is no longer covered by the bulk material. Fail-safe circuit: even in the case of a power failure, the output goes into the alarm state „empty“.

Specifications	
Housing	Die-cast aluminium, 230D alloy (EN AC/44300) with high chemical resistance, IP 65 protection One cable gland M20x1.5 (optionally two cable glands)
Electronics	Multi voltage: 20 ... 250V AC/DC 3 VA, one floating changeover (250V, 5A AC / 24V DC, 5A) Power supply 20 ... 30V DC with 8/16mA output
Sensitivity	Approx. 20 kg/m ³ , special design up to 10 kg/m ³
Switching speed	1 second, hysteresis 2 to 5 seconds
Product-contacting parts	Stainless steel 1.4301 / AISI 304
Ambient temperature	-40 ... +70 °C
Temperature in container	-40 ... + 80 °C / 150 °C
Pressure in container	Up to 10 bar

Measuring method:

The MBA 700 vibration paddle is excited by a piezoelectric element to vibrate at its resonant frequency. When the bulk material touches the paddle, the vibration is dampened and a binary signal is triggered. Once the vibration paddle is no longer surrounded by the bulk material, it starts to vibrate again and the signal reverses.

Different bulk materials dampen the vibrations to varying degrees. While in the case of sand it is sufficient if the tip of the paddle touches the material, extremely light materials require the paddle to be completely surrounded in order for a switch signal to be triggered.

PROCESS MEASUREMENT

GROUP

Due to years of experience in the field of automatization we offer together with the SMB group any kind of automatic systems like filling stations, palletizers, conveyors and compact storage systems. In combination with our level measuring technique it's possible to design and produce belt conveyors, turn tables and shiploading systems with telescopic belts tailored on customers request. And of course worldwide.



COMPETENCE

We offer our customers our comprehensive know how obtained over decades in different applications. Our strength is to combine standards and special solutions to meet customer specifications and to find the best solution for a turn key project.



WORLDWIDE

Where ever you are, our global network of representatives and subsidiaries is able to supply qualified support when you need it. We deliver the equipment for your measuring tasks, provide documentation and training. Fast and competent support, short delivery times and a high level of delivery reliability – that's MBA Instruments staff is known for.



COMPANY

MBA Instruments GmbH continues in developing, production and distribution of measuring technique "Type MAIHAK" and develops new ideas. Customers are our most important partners. If our partner is satisfied only than he is able to be successful. And we are also successful with him. Satisfaction of our customers is our success.

