

DENSITY MEASUREMENT FOR DREDGING APPLICATIONS

Achieve maximum efficiency with
Berthold's nuclear density systems



 **BERTHOLD**

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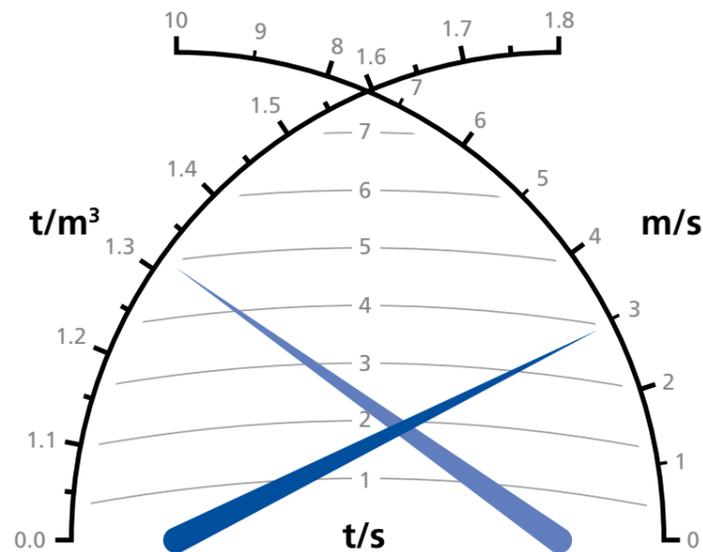
Radiometrics for density measurement is a well-established technology in the dredging industry. Berthold understands the challenges and harsh environments the industry faces, and that's why we developed nuclear density systems using state-of-the-art technology, offering the highest levels of accuracy and durability for non-contacting nuclear density and flow rate measurements vital to dredge operators.

Berthold's cutting-edge technology for density measurement offers precise monitoring of current production, enabling you to achieve the optimum ratio between material density and flow rate for maximum yields.

Our system is mounted on the outer wall of the pipeline, providing superior and stable readings even in harsh environmental conditions. And with its non-contacting method, the flow properties of your system remain unaffected during measurement, resulting in a wear and maintenance-free system. Berthold's density measurement system also helps reduce over-dredging and operational costs while minimizing damage to the environment by reducing ecological side-effects.

Efficient dredging

To achieve efficient dredging, it is essential to maintain the optimum ratio between the density and flow rate of the dredged material. To obtain information about the current production, the density measurement needs to be combined with a separate flow rate meter. With a cross-needle indicator displaying both density and flow rate signals, you'll have highly reliable information about your current production and net dredging result in real-time.



The cross-point value gives the net dredging result

Density Measurement System

Berthold's density systems are designed to withstand even the most extreme measuring conditions, from vibration to weather to varying particle size and composition. Our fully potted detectors ensure extreme ruggedness, allowing you to cope with extreme conditions, while preventing shutdowns due to failed radiation detectors. With our patented technologies and highest levels of accuracy and reliability in the industry, you can rest assured that your operations won't be shut down due to a faulty detector, ensuring maximum productivity and profitability.

Easy installation, outstanding robustness and sensitivity, no maintenance; you'll wonder how you ever managed without it.

Since the gamma radiation source (Co-60 or Cs-137) is sealed safely in a compact shield made from lead, tungsten, or stainless steel, the highest operational safety is given. As an option, the shield can be equipped with a pneumatic shutter mechanism, which automatically closes the radiation path when the dredge breaks down or the pipeline runs empty.

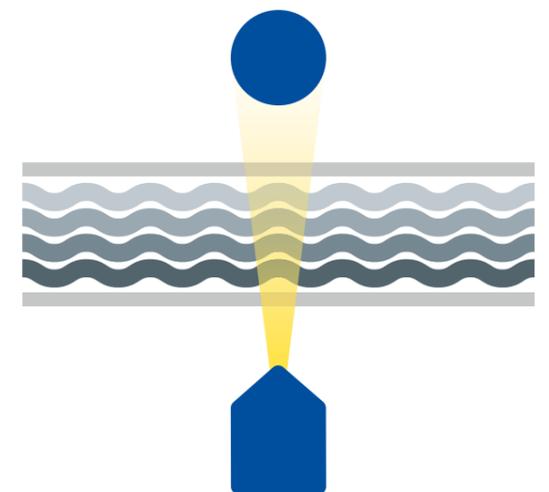


Advantages

- Easy installation without pipeline modification
- Outstanding robustness and sensitivity providing accurate and repeatable measurement
- Real-time measurement during running operation
- No wear as measurement is contactless
- No maintenance is required

Features

- Detectors come with up to 18-month warranty
- Both a compact standalone detector and a detached system with a separate control unit are available.



Typical arrangement of a radiometric system for contactless, nonintrusive density measurements.



THE EXPERTS IN MEASUREMENT TECHNOLOGY

Berthold Technologies stands for excellent know-how, high quality and reliability. The customer is always the focus of our solution. We know our business!

Using our varied product portfolio, our enormous specialized knowledge and extensive experience, we develop suitable solutions together with our customers for new, individual measurement tasks in a wide variety of industries and applications. Berthold Technologies is specialised in radiometric process measurements for over 70 years. This is our core competence with state-of-the-art and cutting edge products and solutions covering a vast range of industries and applications.

We are here for you – worldwide!

The engineers and service technicians from Berthold Technologies are wherever you need them. Our global network assures you fast and above all competent and skilled assistance in case of need. No matter where you are, our highly qualified experts and specialists are ready and waiting and will be with you in no time at all with the ideal solution for even the most difficult measurement task.

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