

# THE EXPERTS FOR RADIOMETRY

Your measuring solution  
from the technology leader



**BERTHOLD**

# WE ARE THE EXPERTS FOR RADIOMETRY

Berthold's measuring systems provide the highest accuracy, quality, and reliability. With our expertise and 75 years of experience, we ensure that our customers receive a measuring solution that is tailored to their requirements. This guarantees the maximum added value from our wide range of our technical features.

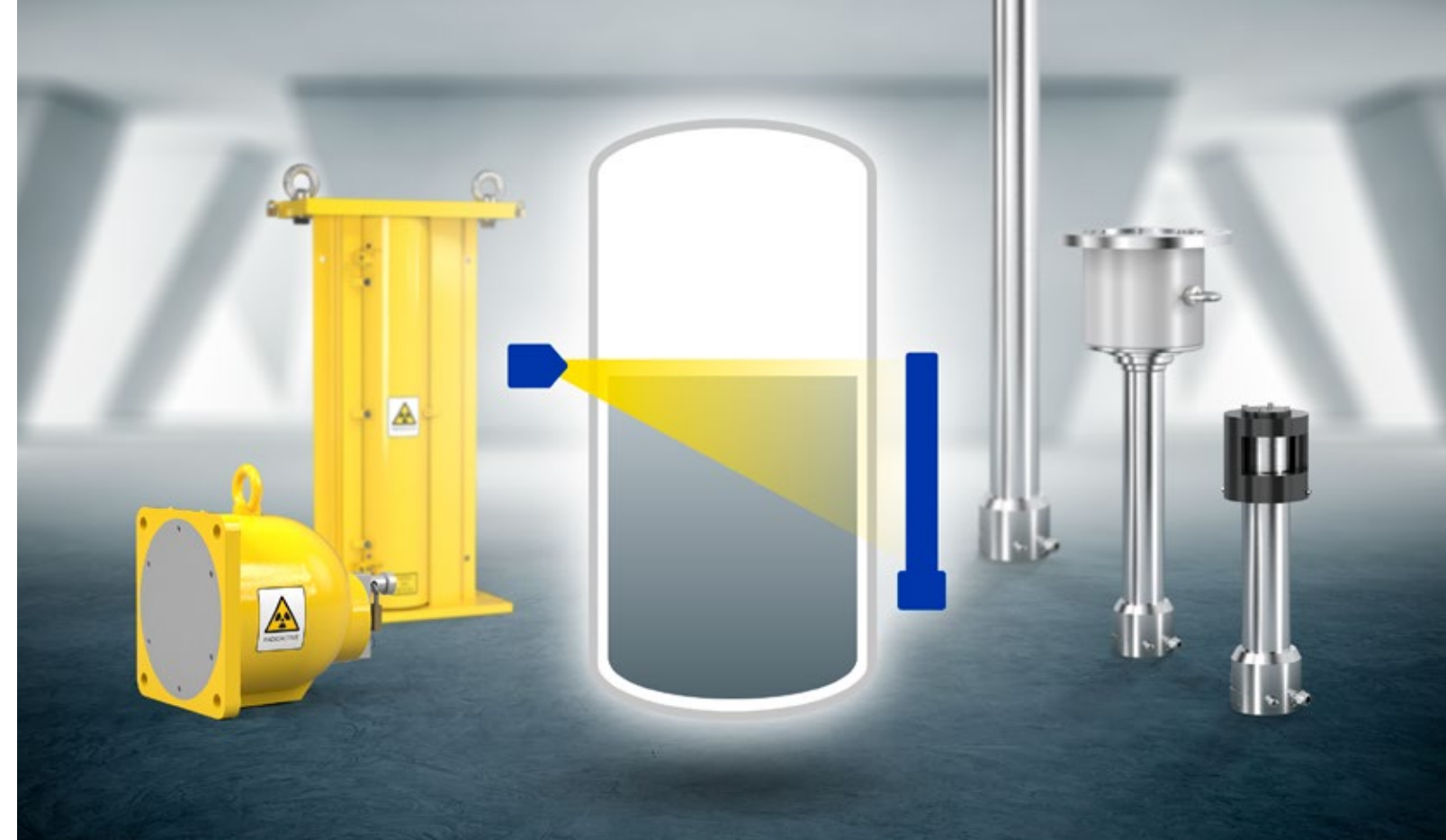
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## High sensitivity and efficiency

As experts in radiometry, we offer you the highest sensitivity of all detectors available on the market. This means that our measurements can be operated with significantly less activity – a great advantage in terms of radiation protection, occupational safety, and cost savings. Existing radiation sources can be used for much longer and/or the count rate and thus the accuracy of the measurement is significantly better than that of other suppliers. Whether it is a question of covering long measuring ranges or dealing with thick-walled containers and pipelines, we offer the perfect solution for every measuring task.

## Robust and long-term stability – leading in the sector

Thanks to the use of innovative silicon-based photo multiplier technology (SiPM), we offer detectors that are among the most robust on the market – the ideal solution under extreme operating conditions. Temperature fluctuations and ageing effects are continuously monitored and automatically compensated for by our patented cosmic radiation control. As a result, our detectors impress with outstanding measurement stability, robustness and accuracy – over the entire lifetime.

## Reliable – even in the event of interfering radiation

Our detectors have the features external radiation detection (XIP) and suppression (RID), which master the handling of interfering radiation and thus ensure stable reliable measurements and process control without additional hardware.

## Handles fast process changes

Berthold offers a Speedstar detector variant with 10 times the measuring speed. Sudden changes in the process or fast processes can now be reliably detected.

## Sources and shields - made by Berthold

Thanks to having our own manufacturing facility, we can produce the safest and highest quality radiation sources and shields on the market in a flexible, customer-specific manner and in the shortest time possible. The best measurement results and cost-optimized solutions are achieved through the wide range of point and rod sources, different radionuclides, and application-specific shields. Benefit from our expert support in the design, handling, and replacement of radiation sources.

## Expert solutions for challenging process conditions

When determining the process value using radiometry, changes in gas density, wall caking and natural radioactivity of the material to be measured can cause error in the output. To counteract these, we offer special solutions tailored to the customer's needs.

## Pulse pile-up correction

In the case of high radiation intensity, scintillation detectors can enter a non-linear measuring range due to pulse pile-up (i.e., several pulses at the same time). While conventional systems neglect these stacked pulses and therefore accept significant measurement errors, our unique compensation method provides a reliable correction. As a result, our detectors deliver accurate measurement results even with stronger radiation fields, in contrast to conventional measurement systems.





## 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 75 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.

**Berthold Technologies GmbH & Co. KG**

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