

Smart Weighing Boosts Bayer's Production Automation



The new supply centre of the agricultural chemical and pharmaceutical company Bayer in Hangzhou integrates weighing technology of Minebea Intec for precise mixing and homogenisation in Zone 2 hazardous areas. Features like smart calibration save time and labor, while seamless system integration ensures scalability.

Key facts

A customized tank weighing solution supports Bayer's Hangzhou supply center, enabling mixing, stirring, and homogenization in Zone 2 hazardous areas. It ensures compliance, integrates with control systems, and enhances automation, advancing Bayer's automation.

Application and products

The weight indicator X2 transmits load cell signals for centralized control and features smart calibration to reduce downtime time, and labor costs during setup and calibration.

- Load cell MP 79T
- Mounting Kit PR 95T
- Junction Box PR 6130
- Weighing Indicator X2

Customer benefits

- Smart calibration reduces manpower and downtime.
- Seamless integration into automated systems.
- Mounting kit ensures stable weighing by minimizing lateral forces.
- Complies with international and national standards.



The customer

Bayer, with over 150 years of innovation in health care and nutrition, focuses on shaping agriculture's future through its Crop Science division. It develops solutions for producing quality food, feed, and raw materials despite limited arable land. Bayer's Hangzhou site supplies products domestically and for farmers across Asia, North, and Latin America.

Minebea
intec
The true measure

Project goal and implementation

As a division of the Bayer Group, Bayer Crop Science holds a leading position in the global agricultural technology sector. Recently, Bayer Crop Science established a new supply center in Hangzhou, aimed at expanding the production of products such as fungicides, insecticides, herbicides.

The solution consists of load cells MP 79T, mounting kits, junction box, and weighing indicator, enabling precise execution such as solid-liquid mixing, high-speed agitation and homogenization in Zone 2 hazardous area. Notably, the mounting kit with a built-in horizontal rod to effectively reduce the impact of lateral forces caused by stirring. And the junction box employs a one-way breathable membrane technology, ensuring no condensation inside the box. These designs have enhanced the reliability under challenging environmental.

The load cells and junction boxes included in Minebea Intec solution are certified with international regulations such as ATEX and OIML, and the weight indicator X2 also hold domestic certifications in China, including the PCEC Explosion-Proof Certificate and the CENX National Explosion-Proof Certificate. It proves that Minebea Intec's solutions can comply with regulations worldwide, providing customers with the highest level of safety assurance.

"We have experienced the smart calibration function before. It's a great technology — precise and labor-saving."

Guo Biao, Project Manager, Zhong Shi Chemical Engineering Construction

Bayer's new supply center aims to implement an integrated management system by utilizing advanced digital technologies while aligning with German standards. As a leading innovator in the field of weighing, Minebea Intec's solutions cater to Bayer's requirements. For instance, the indicator X2, which features both Profibus-DP bus communication and 4-20 mA analog output, integrates easily into original systems and provides room for future upgrades and expansions at the same time.

Among Bayer's 11 sets of tanks, the measurement range varies from a maximum of 9 tons to a minimum of 4 tons. If traditional calibration methods were used, each tank would need to be loaded to 80%–100% of its capacity—a process that is time-

consuming, labor-intensive, and often hindered by the structural limitations. By contrast, the smart calibration allows for weightless calibration. Once the operator enters each load cell's unique sensitivity coefficient (Cn), indicator will automatically calculate the loading data required for calibration. This feature alone can save at least 3 days during the installation and commissioning phase. During subsequent periodic calibrations, the smart calibration function continues to simplify operations and minimize downtime.

Minebea Intec offers more than just solutions. The professional team has more than 150 years of experience and expertise. From planning to commissioning and maintenance, Minebea Intec offers its customers support every step of the way to ensure a smooth process.



Thanks to the Smart Calibration function, Bayer saves at least three days during commissioning.



The weight indicator X2 process and transmit load cell signals to higher-level control system.



Interested?
We would be happy to provide you with a quotation!
If you're interested, please email:
sales.hh@minebea-intec.com

Minebea
intec
The true measure



www.minebea-intec.com