

/ **Maximum weighing accuracy** and professional explosion protection in accordance with ATEX Zone 2

“It all depends.” That’s precisely it. It depends on what the risk assessment has revealed. Various national rules and regulations define principles that operating companies and manufacturers have to follow when handling hazardous substances. In Europe, the ATEX directives specifically regulate requirements for

equipment and safe operation of equipment in potentially explosive environments.

The potential danger to life and limb increases, for example due to explosions, if appropriate precautions are not taken. Reducing possible risk factors must therefore have absolute priority.



Features

- Pressurized enclosure as ignition protection type
- Fully comprehensive grounding concept
- Carefully selected components
- Antistatic plastic elements
- Nickel coated belts
- EMFR Weigh Cells for maximum precision
- Modular system design
- If the specifications are complied with, safe operation is guaranteed in potentially explosive atmospheres.
- Easy to use
- Secure data exchange using fiber-optic cables

/ The importance of ATEX

Every country has specific standards. In Germany, for example, the Industrial Safety Ordinance (BetrSichV) and the Hazardous Substances Ordinance (GefStoffV), together with other technical regulations, define the extensive responsibilities of companies regarding the explosion protection to be guaranteed.

However, the European Community ATEX Directive 2014/34/EU remains crucial for the safety of machinery used in the production of goods.

The requirements are stringent. Manufacturers must prove the quality of all installed components and must ensure that the components are used correctly in compliance with the regulations. Our HC-A-EX checkweigher guarantees the high level of protection in accordance with ATEX Zone 2.



ATEX-Logo



Precise weighing of aerosol products

/ ATEX Zone 2 definition

Zone 2 is an area classified as an atmosphere where a mixture of air and flammable substances in the form of gas, vapor or mist is not likely to occur in normal operation, but if it does occur, will persist for a short period only.

By intervening directly, primary explosion prevention attempts to ensure that this mixture of flammable materials does not reach a critical level. Otherwise, secondary measures are taken that eliminate the ignition source as the specific trigger. Only in extreme cases should tertiary explosion protection be necessary, as this merely mitigates the consequences of ignition.

The HC-A-EX meets the prerequisite for safely using our checkweighers in accordance with the specific requirements of ATEX Zone 2.

Stable product handling of the most diverse containers and spray cans full of aerosols makes it possible to achieve a throughput of over 300 pieces per minute. Field-tested and protected in the best possible way – place your trust in an experienced partner.



*We have
taken on
the challenge
of ensuring
fast and
highly accurate,
reproducible
weighing even
in potentially
explosive
areas.*

Theo Düppre

CEO and Founder of Wipotec

HC-A-EX – Accurate weighing in ATEX Zone 2

Like all our checkweigher solutions, the HC-A-EX is customized and configured for your specific application. As a result of this, your production requirements are met in an ideal way. Our modular system is equipped with a wide range of features. In addition to options such as lateral side grip conveyors or separating rotary star wheels and separating screws, it also includes numerous separating ejection and control technology options.

For example, all conveyors belts of the HC-A-EX are nickel-coated throughout. This serves the required conductivity and creates, in compliance with ATEX Zone 2, a uniform potential throughout the entire system.

In summary: Your application requirements determine the individual machine configuration. Filling sprays in cylindrical containers (for example, cans), with different and sometimes very small footprints, has many facets and is a challenge for safe and consistent product transport.

With its protected production environment, the HC-A-EX provides reproducible and accurate weighing results. It supports aerosol industry quality standards even at a throughput in excess of 300 pieces/min. and with increasingly lighter packaging and propellants.



Checkweigher HC-A-EX for explosion-proof area

/ Safety and ignition protection due to pressurized enclosure

The goal is prevention to ensure that a dangerous, explosive mixture of air and flammable gases absolutely does not come into contact with an ignition source.

That is why we use a pressurized enclosure for the checkweigher control cabinet. A certified flushing device takes over control and monitoring of the required overpressure situation.

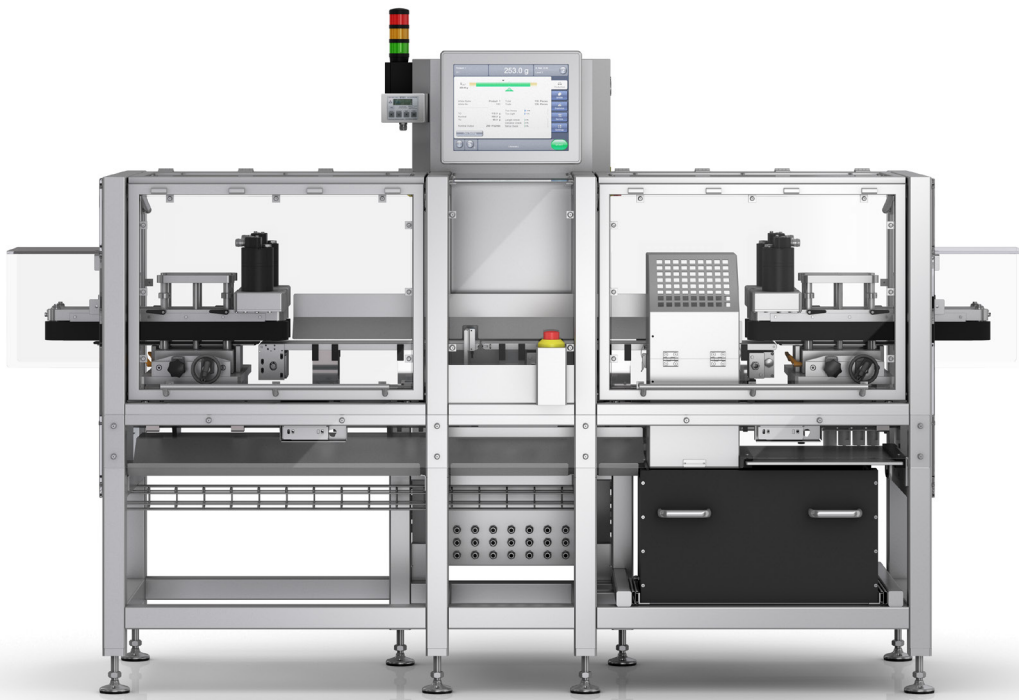
The overpressure inside the sealed housing in relation to the external environment is generated by means of purified compressed air. As a result, no gas can penetrate and thus no ignitable gas mixture can form or collect in the control cabinet. The HC-A-EX checkweigher cannot be used until the control cabinet has been completely flushed and the pressurized enclosure has been safely and permanently established. **Safety is the utmost priority.**



Current status information on the external display

A small external display continuously displays information about the current pressure and flow values. It also provides information about the remaining flushing time or possible malfunctions. In the event of a malfunction, the error code displayed there immediately displays initial and useful information for troubleshooting (possibly lack of compressed air supply).

Display shows pressure and flow rate values and remaining flushing time



Application example of
checkweigher HC-A-EX

/What are your requirements?

In practice, in many instances there are no or only very short gaps between spray cans. In this case, a separating star designed for zone 2 can help to establish the distances required for weighing reliably.

The illustration above shows an application example where the infeed and outfeed lateral side grip conveyors overlap the respective plate chain conveyor. This ensures a safe, guided and smooth product transfer. This means that backfilled liquids are less likely to “slosh around”.

After a short transport route, during which the contents settle further, the free-standing cans are accurately weighed one by one. In our example the speed is 300 cans/minute.

If the weight of the weighed product is outside the specification and tolerance, it is rejected with pinpoint accuracy. The products classified as “good” are transferred to the transport system further down the line (downstream machine).

Other advantages include excellent accessibility and cleanability. The HC-A-EX checkweigher is specifically designed for use in accordance with the ATEX Zone 2 directives.

We also design and manufacture checkweigher solutions in accordance with the more stringent ATEX Zone 1 specifications.

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