

/ Checkweighers

Healthcare



Solutions for inline weighing processes In **pharmaceutical production**

/ Innovative weighing solutions for maximum throughput rates

Wipotec

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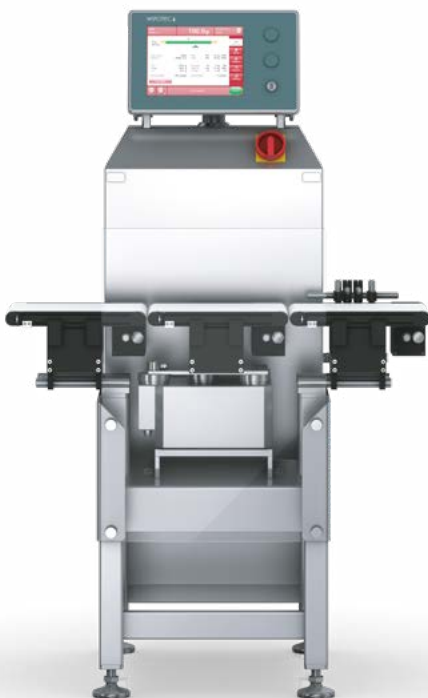
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HC-A with side grip conveyors

/ Optimally equipped checkweighers for pharmaceutical production

Checkweighers are high-precision instruments that weigh and document each product you produce in order to secure your process quality. Wipotec manages to combine maximum accuracy and throughput rates with process reliability. Pharmaceutical checkweighers facilitate completeness checking of pharmaceutical packs in the packaging process. The precisely determined weight, for example, makes it possible to determine the number of blister packs in a folding box that has already been sealed. This package weight check ensures that all the customary packaging types have been correctly filled.

Quality assurance on many levels

Completeness checks by means of exact weight determination do not end at blister level; by checking the weight, it is also possible to detect the presence of a patient information leaflet in the sealed folding box. Checkweighers identify deviations in the milligram range which also allows them to check the number of tablets in special application cases. Wipotec checkweighers are distinguished by the ability to carry out quality checks at top speed on products that are already packaged. The faulty products are ejected into

separate containers – sorted according to attributes – without interrupting the product flow. Quality assurance is not limited only to folding boxes. Thanks to safe positioning and handling technology, it is also possible to weigh synthetic containers, bottles and boxes accurate to within a milligram at equally high speeds in order to carry out a completeness check.

Optimally adapted to the production environment

Pharmaceutical checkweighers from Wipotec impress by virtue of their outstanding technology, incorporated in a hygienic design and the use of high-class materials such as full stainless steel. This material is corrosion-resistant, durable and hygienic at the same time; the hard, homogeneous nature of its surface enables compliance with the highest standards in the pharmaceutical field. The passive surface layer cannot be attacked by acids or alkaline solutions. Due to the abrasion-resistant surfaces of Wipotec checkweighers, paper dust deposits do not create surfaces that permanently attract dirt even on frequently touched components.

Options & Throughput



E Essential

EC-E for simple applications, optimal price-performance ratio



M Medium

HC-M high performance in midrange application areas



A Avantgarde

HC-A innovative solution for the broadest spectrum of applications



Wipotec Headquarters

/ **Combined Expertise Under One Roof:** Cutting-edge Technology Made in Germany

Wipotec is a sales and service company for dynamic, high-precision weighing and inspection solutions. All machine solutions are developed and manufactured at our headquarters in Kaiserslautern, and we have been setting global standards in the production lines of leading manufacturers for more than 30 years. Throughout the world, customers in the pharmaceutical, food and chemical industries and in the mail and logistics sectors highly appreciate the solutions provided by Wipotec.

Excellent solutions for your application

Wipotec stands for sophisticated high-tech systems with maximum ease of use. The impressive product portfolio provides solutions for nearly all customer applications. If necessary, we take special requirements and conditions into account in supplying customized equipment.



Extraordinary manufacturing depth, all side by side

Wipotec contributes great importance to the in-house development of all necessary technologies as well as the in-house manufacturing of all core components. Consequently, we develop a depth of manufacturing that differentiates us from other vendors and makes us largely independent of suppliers, while forming the basis for our delivery reliability.

At Wipotec, the entire value chain from basic research, to planning, design, and manufacture to sales and service is all under one roof. The benefit of short channels of communication is the guarantee of maximum flexibility in the implementation of every individual product configuration. No matter how unusual your application may be, we will show you a possible solution that is sure to convince you. That's what makes the difference.



A company must contribute to the well-being and advancement of society – not just short term but long term.

Theo Düppre

Founder and CEO Wipotec Group



/ Globally Respected, Independent, Flexible, and Innovative: That is Wipotec.

Wipotec weighing technology is used worldwide

About 20,000 checkweighers from Wipotec have been successfully deployed worldwide. This figure is a confirmation of the outstanding expertise from the company. An unbeatable product range and exceptional service are reason enough for a number of well-known firms in all industries around the world to choose our reliable weighing and inspection systems.

- Globally respected partner in industry for more than 30 years
- Worldwide presence thanks to numerous subsidiaries and partners
- Founder managed company
- Company with high innovation power through large R&D effort, incl. basic research
- All expertise combined under one roof
- In-house production of all key components
- Broad product range for almost every application
- Broad experience in implementing customer-specific systems
- Use of high precision Wipotec weighing systems for optimum product quality
- Partner of GS1 and member of the Open SCS Working Group
- Outstanding service capabilities

Come and visit us!

Interested in the high-tech solutions from Wipotec? Perhaps you would like to visit our ultra-modern plant. Our prominent market position is no accident, but rather the logical consequence of the creative and competent efforts made by our staff on behalf of our customers. Come and see for yourself. Just schedule an appointment for a tour with us!

Make an appointment:

✉ info@wipotec.com

/ **Comscale4:** Web-based network enabled software for the capture and analysis of relevant production data

A key factor in increasing production efficiency is the regular and accurate analysis of all available production data. This is especially true in large plants or for crosssite production processes where you rely on a flexible, web-based quality data management solution. Comscale4 offers the ideal solution in this case.

The user-friendly Comscale4 software components, customised for your needs, connect any number of checkweighers and other inspection machines (X-ray scanner, metal detectors) to separate selectable sites. At any time, you can retrieve all available data, generate statistics, take important actions, and share data with partners throughout the enterprise. Comscale4 provides the ideal overview of your entire production in real time. Your quality assurance starts here!



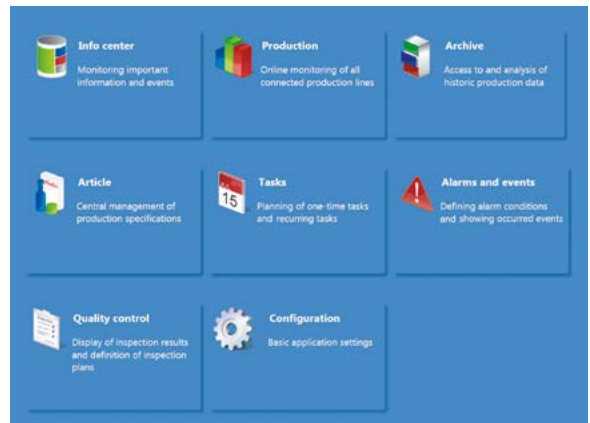
Comscale4 Basis functions

| | |
|---------------------|--|
| Safety | Loss-free data transfer in real time |
| Transparency | Full data view from any site for all integrated machines and lines |
| Control | Operate/parameter changes via PC and mobile phones |
| Review | Data analysis, storage, and raphical evaluation for further higher-level use |
| Flexibility | Integration of various inspection devices (checkweighers, metal detectors, X-ray scanners, etc.) |

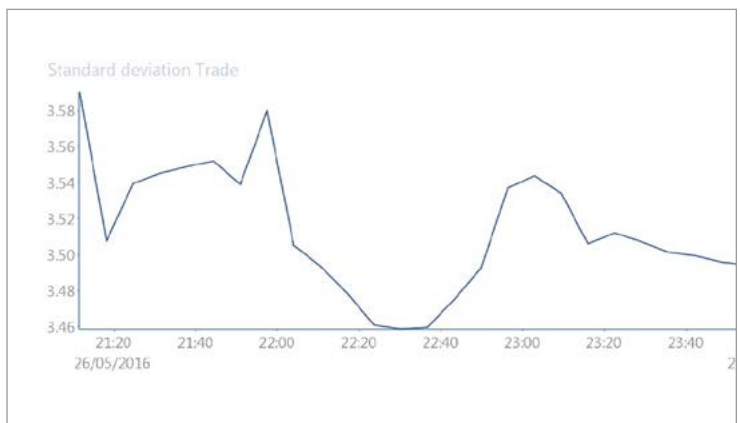
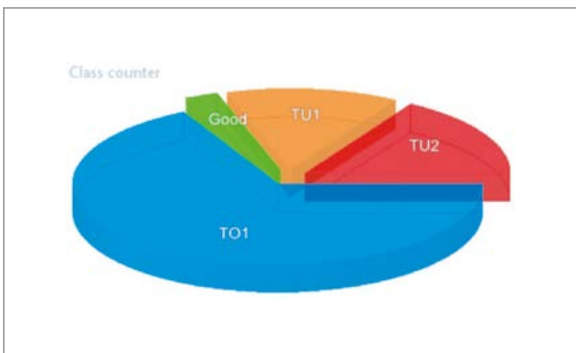
Comscale4

Quality Data Management for the entire company

- Production** Central production records and data collection, prepackage regulations documentation and online monitoring all linked to the production lines
- QA** Targeted analysis of QA features, random attribute and calibration check
- Administration** Tracking metrics and documentation of operating performance
- Management** Decisions of the highest priority



Comscale4 main menu



Comscale4: Powerful web-based software for perfect quality and production control

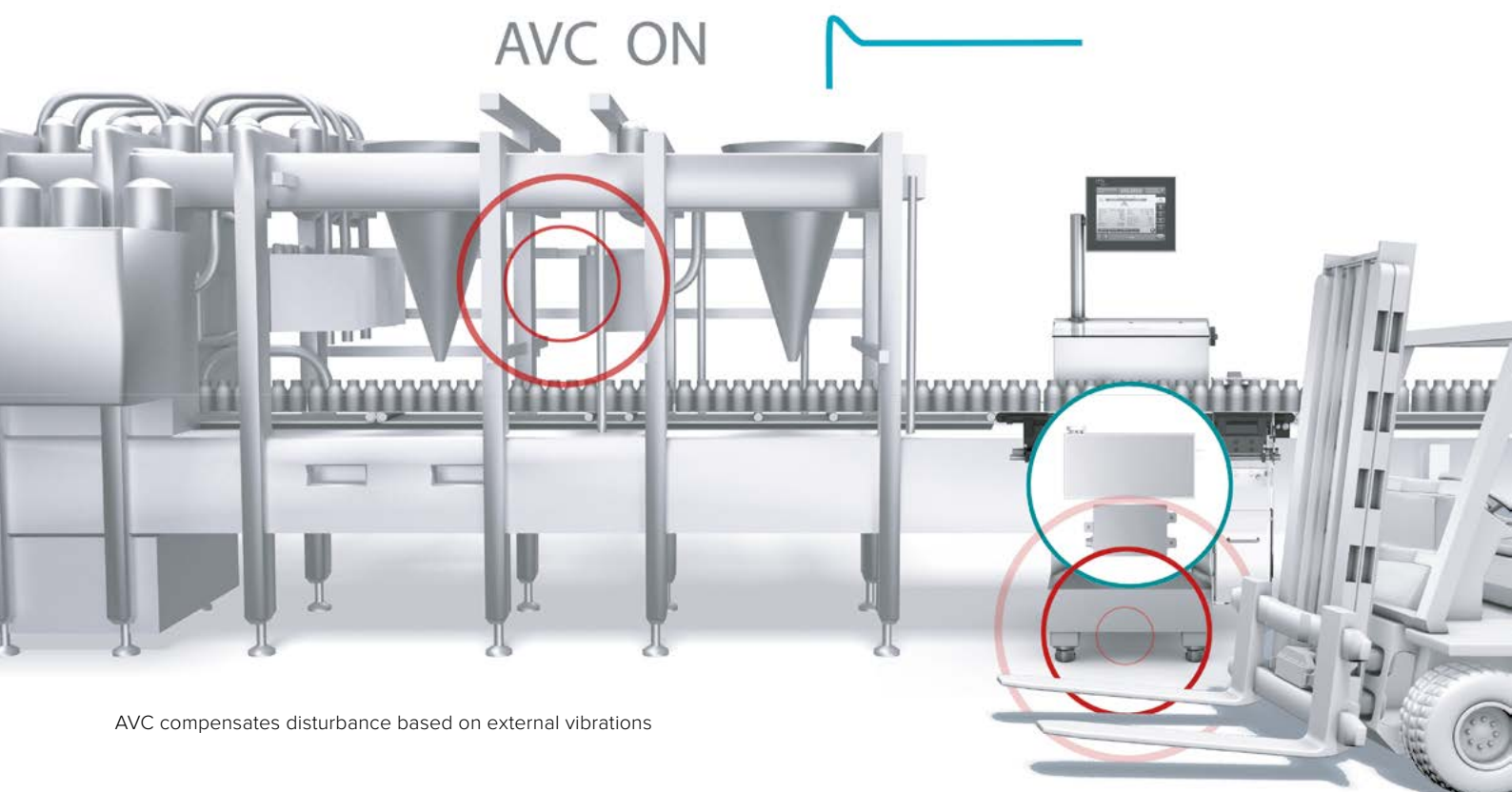
/ EMFR weigh cells with AVC technology supply fast and highly precise measured results

The decisive advantage of the Wipotec EMFR Weigh Cells is provided by their very short settling time. They are extremely fast and supply highly accurate weight values in comparison to other measuring methods that rely on strain gauges. Furthermore, they provide space and cost savings when integrated in existing systems.

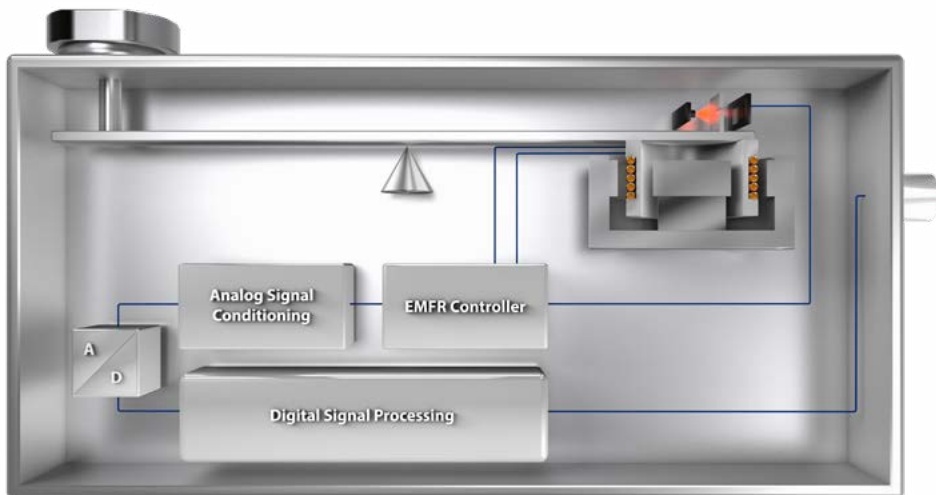
EMFR – The Principle of electro-magnetic force restoration

Wipotec weighing systems operate on the principle of electro-magnetic force restoration (EMFR). The weighing method can be compared in principle to a simple beam balance. The objective is to determine the force applied at one end of a lever arm. In this case, the weight forces the coil installed on the other side of the balance out of a magnetic field. An optical positioning

system senses the smallest displacement and reports this to a high precision control system that readjusts the compensation current and restores equilibrium to the balance. The compensation current is measured through a precision resistor and further processed by a micro-processor system for immediate output as a digital weight value. Checkweighers from Wipotec with EMFR weigh cells provide the winning edge. Depending on the series, the measurement range goes from 1 milligram to 120 kilograms.



AVC compensates disturbance based on external vibrations



EMFR weigh cells enable weighing results at lightning speed

AVC (Active Vibration Compensation):

Effectively compensating disturbance variables

EMFR weigh cells from Wipotec can be equipped with AVC technology as required. AVC (Active Vibration Compensation) filters existing operation-induced disturbances out of the measuring results and enables the weighing technology to be used even in environments that are not free of external vibration sources such as machine cycling, building vibrations, forklift trucks, etc.

Conformity marking of automatic checkweighers in compliance with MID

Wipotec is certified according to ISO 9001 and authorized to carry out a conformity evaluation according to module D of the “Measuring Instruments Directive” (MID, 2014/32/EU). The Directive bindingly regulates and harmonizes for all EU Member States, EFTA as well as Turkey the key requirements relating to measuring devices and their commissioning.

From product to certificate, everything from a single source.

Wipotec provides you with quality assurance certificates, e.g.:

- Factory calibration certificate for our weigh cells
- Manufacturer’s certificate for our scales, according to OIML R51 as a record of the first calibration

/ Compact design, big performance

Reliability and transparency of production data are the basis of all planning. The EC-E checkweigher from Wipotec guarantees 100% data capture in ongoing production.

Performing up to 150 weighing operations per minute, EC-E is the right purchase decision for entry-level applications. The easy and intuitive software interface ensures comfortable operation on an 8-inch, clearly laid out, colour touchscreen display. The EC-E checkweigher weighs every single product precisely, records the indi-

vidual weight and automatically ejects packs with the incorrect weight via a sorting device. In this way, your data is collected correctly and completely and in addition you have the certainty that only production-compliant products leave your factory premises.

The checkweigher's very easy operation virtually eliminates erroneous inputs. The EC-E is a proven machine with a very good price-performance ratio in the entry-level segment, particularly in the pharmaceutical sector.



Main Features

- Wipotec EMFR Weigh Cells
- Stainless steel frame
- Stainless steel cabinet with integrated control system
- Three NT30 conveyors (infeed, weighing and outfeed); Lightweight construction
- Maintenance-free servo drives
- One sorter attachment (air blast)
- User-friendly interface via 8" colour TFT touchscreen display
- Memory for 50 different product parameters (option to expand to 200)
- Line synchronisation with potential-free switching contacts/binary signals
- Extensive statistical functions/histograms

Your Benefits

- High throughput rate of up to 150 pcs/min
- Precise and reliable weighing results to increase plant efficiency
- Very good price-performance ratio
- Demand-oriented product options

| Technical data | EC-E | | |
|--------------------------------------|--|---------------|---------------|
| Working height ¹ | 650–800 ² / 750–900 / 850–1,000 / 950–1,100 ² mm | | |
| Conveyor width | 150 / 200 / 300 ² mm | | |
| Infeed conveyor length | 300 / 400 / 500 / 600 mm | | |
| Outfeed conveyor length | 300 / 400 / 500 / 600 mm | | |
| Weighing conveyor length | 200 / 300 / 400 / 500 ² mm | | |
| Weight range | EC-E-1 | EC-E-2 | EC-E-3 |
| GWR (Gross weight range) | 1,500 g | 3,000 g | 6,000 g |
| d (Displayed value) | ≥ 0.2 g | ≥ 0.5 g | ≥ 1.0 g |
| e (min. calibration value) | ≥ 0.5 g | ≥ 1.0 g | ≥ 2.0 g |
| Standard deviation ³ (1s) | From 150 mg | | |
| Max. output ³ | 150 pcs/min | | |
| Rated voltage | L1/N/PE; 100–240 VAC | | |
| Rated frequency | 50/60 Hz | | |
| Connect load (power capacity) | Approx. 0.8 kVA | | |
| Compressed air supply (option) | 8 bar approx. 10 NI/min quality class (according to ISO 8573-1) [5:3:3] | | |
| Machine weight | 100 kg (Standard application) | | |
| EU-type examination certificate | DE-18-MI006-PTB001 (MID) | | |

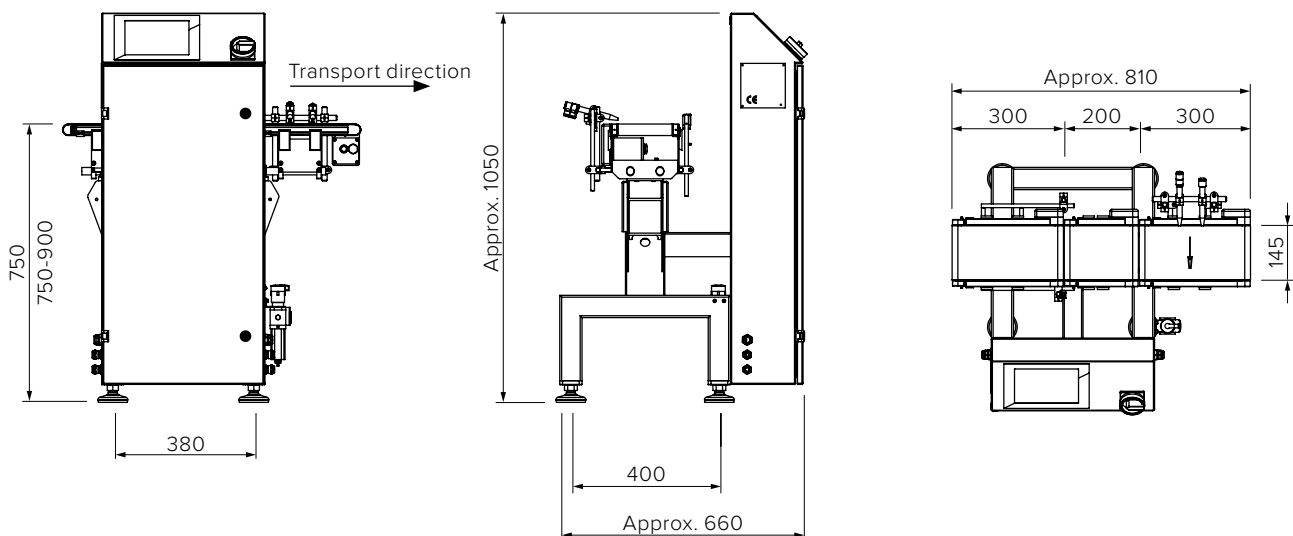
¹ Working height must be specified when ordering

² Optionally, surcharge

³ Depending on product shape, product behavior, transport speed and environmental condition



EC-E-VA checkweigher
in IP65 version



All entries in mm | Drawing shows design example

/ High precision weighing for medium speed applications

The dynamic HC-M checkweigher is the ideal medium speed weighing solution for a wide range of checking, regulation and control tasks. The HC-M checkweighers are the next step up on the performance curve from the entry level EC-E machines. HC-M machines are capable of 250 weighing operations per minute.

The HC-M checkweigher offers you operator-friendly solutions. It doesn't matter whether you want to check the current actual weight, carry out a completeness

check on your products or perform sorting or classification. The sturdy base frame made of stainless steel enables high weighing accuracy at medium belt speeds or throughput rates. Checkweighers from Wipotec are a byword for 100% product monitoring.

The lightweight, patented conveyor systems and the particularly carefully coordinated drive concept ensure optimum smoothness with quiet running and fast, safe product transport. Individually adapted solutions can be implemented in a modular fashion for a wide range of product shapes. A sophisticated and wide spectrum of sorting devices (e.g. pusher, air blast nozzles) is available to reject products with incorrect weight reliably and without disturbing production.

Main Features

- Entire machine in stainless steel housing with infeed, weighing, and outfeed conveyors (NT30)
- One sorter attachment (air blast)
- Maintenance-free servo drives
- Certified (MID)
- Wipotec EMFR Weigh Cells
- Simple, menu-directed operation on 10.4" colour TFT touchscreen
- Memory for 100 product parameters
- Easy, tool-free exchange of belts and conveyors
- Flexible integration in production lines
- Line synchronisation with potential-free I/O signals
- Extensive statistical functions/histograms for production documentation

Your Benefits

- Maximum throughput 250 pcs/min
- Exact fill results for higher productivity
- Efficiency improvement through simple and user-friendly controls
- Requirements-based modularity for the greatest flexibility



| Technical data | HC-M |
|---------------------------------|---|
| Working height ¹ | 700–850 / 800–950 / 900–1,050 mm |
| Conveyor width | 120 / 150 / 200 / 300 ² / 400 ² mm |
| Infeed conveyor length | 200 / 300 / 400 / 500 / 600 mm |
| Outfeed conveyor length | 200 / 300 / 400 / 500 / 600 mm |
| Weighing conveyor length | 200 / 250 ² / 300 / 400 / 500 mm |
| GWR (Gross weight range) | 750 g – 7,500 g |
| d (Displayed value) | From 0.1 g |
| e (min. calibration value) | ≥ 0.1 g – ≥ 1.0 g |
| Standard deviation (1s) | From 100 mg |
| Max. output ³ | 250 pcs/min |
| Rated voltage; Rated frequency | L1/N/PE; 100–240 VAC; 50/60 Hz |
| Connect load (power capacity) | Approx. 0.8 kVA |
| Compressed air supply (option) | 6 bar approx. 16 NI/min quality class (according to ISO 8573-1) [5:3:3] |
| Machine weight | 230 kg (Standard application) |
| EU-type examination certificate | DE-18-MI006-PTB001 (MID) |

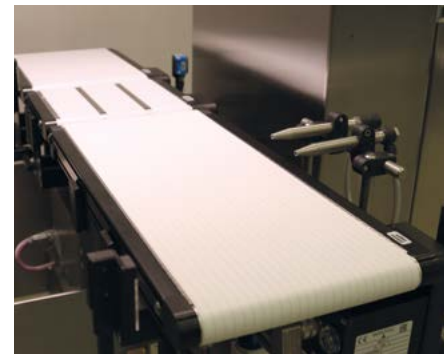
¹ Working height must be specified when ordering

² Optionally, surcharge

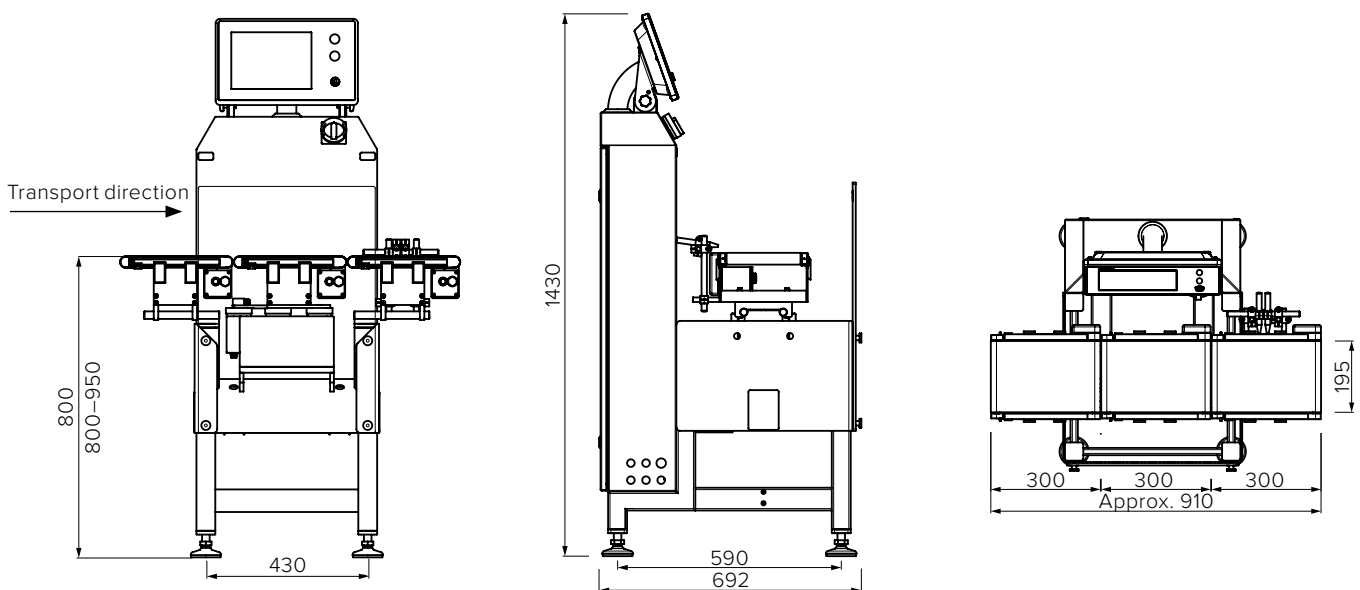
³ Depending on product shape, product behavior, transport speed and environmental condition



Easy operation: Touchscreen display with optional emergency stop



Air blast nozzle (on right) for secure ejection of under or overweight products



All entries in mm | Drawing shows design example

/HC-M: Diverse options for your custom application

Mechanical options

- Various belt lengths and widths
- Requirements-based transport system
- Free standing conveyor belt
- Combination frame (for metal detector)
- Metal detector belt
- Special working heights
- Supporting feet

Product handling

- Lateral guide rails
- Rolling knife edge
- Bridge plate between belts
- Fully adjustable settings for top belts, scooped belts, and lateral pressure belts
- Intralox linked chain belts

Statistics / Data export

- USB stick
- Configurable statistics transfer
- Comscale4
- XML and OPC interface
- Standard interfaces (profibus, Ethernet/IP)
- Connection to Freeweigh.Net
- Backup/restore program package

Monitoring functions

- Product flow control
- Serial fault detection
- Sensor control
- Additional product controls (flaps, inclined angles)
- Pressure switch
- Fill level check/collector box
- Emergency stop (various versions)
- Potential-free infeed

Weighing technology

- Fully covered weighing belt as protection against draughts
- Approved variant available
- Performance of MID conformity assessment (formerly initial verification)
- Weigh cell with preload adjusted noise compensation
- Multi-interval/multi-range scale

Electronic options

- Lamp tower (one or three step)
- Signal horn
- Expandable product parameter memory
- Control over max. 5 transport drive motors
- Interfaced frequency converter
- Numerical remote display
- Supplemental potential-free I/O
- Integrated metal detector

Sorting options

- Pusher
- Free standing hinged flap
- Flipper
- Second sorter
- Rejection bin, lockable
- Stainless steel drop shaft

Control functions

- Mean value regulation (for single filler head)
- Mean value regulation (for dual filler heads)
- Floating mean value control
- Minimised ejections

/ HC-A modules: High quality components for your success

The sure and correct choice of checkweigher components is the basis for efficient dynamic weighing. Many years of experience in the design and manufacture of dynamic weighing systems lets you profit from the perfectly matched interplay of high precision weighing and high transport speeds.

GMP compliant design

Consistent implementation of the GMP requirements (e.g. bevelled edges, concealed cable guides, easy-clean surfaces) qualify the HC-A as a perfect checkweigher for pharmaceutical production

Sturdy frame

An especially robust underframe made of stainless steel ensures in conjunction with the integration weight, a secure foundation that safely dampens any spurious vibrations (for example, fork lift traffic).

Smooth-running conveyor belts

Lightweight, smooth-running conveyor belts, together with a particularly carefully coordinated drive concept, ensure optimum smoothness with quiet running and reliable, safe transport. In addition, the transport system is supplemented with a large number of handling systems (separating feed screws).

Precision weigh cells

Designed especially for the requirements of dynamic high performance weighing, the weigh cells (1 ms sampling value) are optimally adjusted for each application. The highest accuracy, fastest speeds, and highest productivity are safely achieved.

15-Inch Colour TFT

The HC-A is equipped with a large high resolution colour TFT touchscreen. The display features a brilliant, high-contrast colour scheme.

Sequential drive*

The HC-A checkweighers employ a motor management system that continuously governs the individual drive motors. If the transport speed of an upstream machine changes, the HC-A simultaneously maintains the metrological accuracy and automatically adjusts the sorting time.

Product flow control*

The product flow control monitors the process line within the checkweigher in real time and triggers an alarm if:

- An additional product gets into the product flow by mistake
- Traced products are removed from the product flow
- A bad product is accidentally not rejected (ejector countercheck in the accepted channel)

In all these cases, triggering of the product flow control results in the machine coming to an immediate stop. This results in the maximum possible process safety.

Remote operation*

The scales of the HC-A series can be remotely operated via an Ethernet-connection from a second control panel.

Tab check*

The tab check verifies the proper closure of packs. The checkweigher detects incorrectly sealed packs and they are reliably ejected via a sorting device. Packs with tab faults are listed separately in the production statistics. Graduated dials are used to set the tab check to different pack sizes via easily adjustable format parts.

Sensor check*

Continuous monitoring of all connected sensors by the checkweigher. The failure of a sensor – for example due to a cable break – automatically triggers an alarm. The alarm message is displayed in plain text and with details of the corresponding sensor. Response of the sensor check prevents starting or stops the machine during operation.

Floating mean value control*

The floating mean value control option enables the self-adjustment of the sorter dead zone for long wave variations of the package weights. The sorter's dead zone and the accepted goods zone are adjusted by means of the calculated floating mean value to a predefined tolerance range set by the user for the current production. The floating mean value control allows a narrow choice of selection limits while taking into account the variations in package weight within the production run.

/ HC-A options: Modular components optimised for your application



The HMI of the HC-A offers simple and intuitive operation, convenience and easy of learning



User-friendly homescreen



Clear graphics of mean value indication

| Min | Max | Mean | Std Dev |
|--------|--------|--------|---------|
| 31.12g | 31.27g | 31.27g | 0.07g |

Integrated random sampling function

/HC-A: Various module options

Mechanics

1

- Various belt lengths and widths
- Multi-track unit with combined operation
- Application-based transport system
- Combination base frame (metal detector, laser coding, etc.)
- Metal detector conveyor
- Special working heights
- Supporting feet

Product handling

2

- Lateral guide rails
- Rolling knife edge
- Bridge plate between belts
- Fully adjustable settings for top belts, scooped belts and lateral pressure belts
- Metering screws
- Intralox linked chain belts

Statistics/Data export

3

- USB stick
- Configurable statistics transfer
- Comscale4
- XML and OPC interface
- Standard interfaces (profibus, Ethernet/IP)
- Connection to Freeweigh.Net
- Backup/restore program package

Monitoring functions

4

- Product flow control
- Serial fault detection
- Sensor control
- Additional product controls (tabs, inclined angles)
- Pressure switch
- Fill level check/collector box
- Emergency stop (various versions)
- Adjustment controls
- Traffic sensors

Weighing technology

5

- Preload adjusted noise compensation
- Active Vibration Compensation (AVC)
- Tare-gross weighing system
- ml-software program
- Fully covered weighing belt as protection against draughts
- Approved variant available
- Performance of MID conformity assessment
- Multi-interval/multi-range scale
- Multi-track weighing system
- Item "Teach-In"

Electronic options

6

- Lamp tower (one or three step)
- Signal horn
- Expandable product parameter memory
- Control over additional transport drive motors
- Mixed motor operation (IMOT or DC/AC motors)
- Interfaced frequency converter
- Numerical remote display
- Supplemental potential-free I/O
- Sequential drive
- Integrated metal detector

Sorting

7

- Multiple sorts
- Sorters (air blast, pusher, flaps, etc.)
- Supplemental sorter systems
- Rejection bin, lockable
- Stainless steel drop shaft and container
- High speed discharge system
- Servo-drive discharge system

Control functions

8

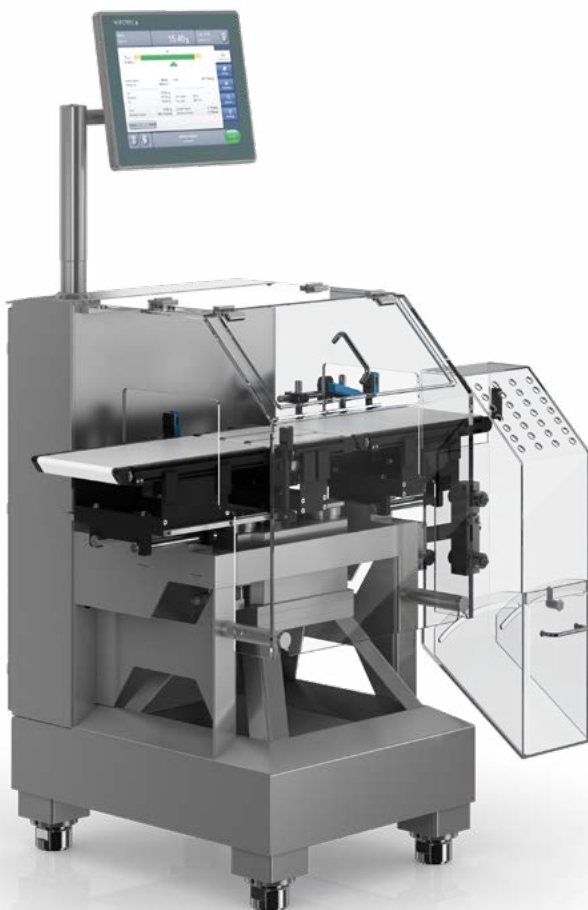
- Mean value regulation (for up to 30 filler heads)
- Remote maintenance control
- Filler head monitor with trend meter and individual statistics (for up to 30 filler heads)
- Floating mean value control
- Minimised ejections

/ **HC-A series:** Quality assurance for the highest requirements

Checkweighers of the HC-A series meet the highest demands in precision and throughput. The machines control system and mechanical design provide the optimal dynamic weighing solution for high-speed pharmaceutical production lines. These checkweighers enable 100% product monitoring with throughput rates up to 600 packs per minute.

The HC-A is the top model among the checkweighers of Wipotec and combines all the innovations currently used in inline weighing technology in the most compact space. These checkweighers offer the most progressive concepts and inline safety for high-speed production and packaging lines in the pharmaceutical industry.

An advanced, solid stainless steel frame ensures the highest weighing accuracy at very high belt speeds or throughput rates. Thanks to modularity, the HC-A can be optimally configured for the application. For example, the top runner belts safely perform acceptance and acceleration of folded cartons just as the metering screws and lateral pressure belts safely separate and accelerate HDPE plastic bottles. A sophisticated and wide spectrum of sorting devices (e.g. pushers, air blast nozzles, etc.) is available to reliably reject products with incorrect weight.



Main Features

- Sturdy, solid stainless steel frame
- One sorter (air blast or pusher)
- Maintenance-free servo-drive
- Certified (MID)
- Wipotec EMFR Weigh Cell
- Simple, menu-directed operation via a 15" colour TFT touchscreen
- Easy, tool-free exchange of belts and conveyors
- Flexible integration in production lines
- Line synchronisation with potential-free I/O signals (expandable option)
- Variable conveyor widths and lengths
- Extensive statistical functions/histograms

Your Benefits

- Maximum output 600 pcs/min
- Exact fill results for highest productivity
- Efficiency improvement through simple and user-friendly controls
- Requirements-based modularity for the greatest flexibility
- Greater unit efficiency means a positive contribution to reducing TCO

| Technical data | HC-A |
|--------------------------------------|---|
| Working height ¹ | 700–850 / 800–950 / 900–1,050 mm |
| Conveyor width | 120 / 150 / 200 / 300 / 400 ² mm |
| Infeed conveyor length | 200 / 300 / 400 / 500 / 600 mm |
| Outfeed conveyor length | 200 / 300 / 400 / 500 / 600 mm |
| Weighing conveyor length | 200 / 250 ² / 300 / 400 / 500 mm |
| GWR (Gross weight range) | 750 g – 7,500 g |
| d (Displayed value) | From 0.05 g |
| e (min. calibration value) | ≥ 0.1 g – ≥ 1.0 g |
| Standard deviation ³ (1s) | From 50 mg |
| Max. output ³ | 600 pcs/min |
| Rated voltage | L1/N/PE; 100–240 VAC |
| Rated frequency | 50/60 Hz |
| Connect load (power capacity) | Approx. 0.8 kVA |
| Compressed air supply (option) | 6 bar approx. 16 NI/min quality class (according to ISO 8573-1) [5:3:3] |
| Machine weight | 250 kg (Standard application) |
| EU-type examination certificate | DE-18-MI006-PTB001 (MID) |

¹ Working height must be specified when ordering

² Optionally, surcharge

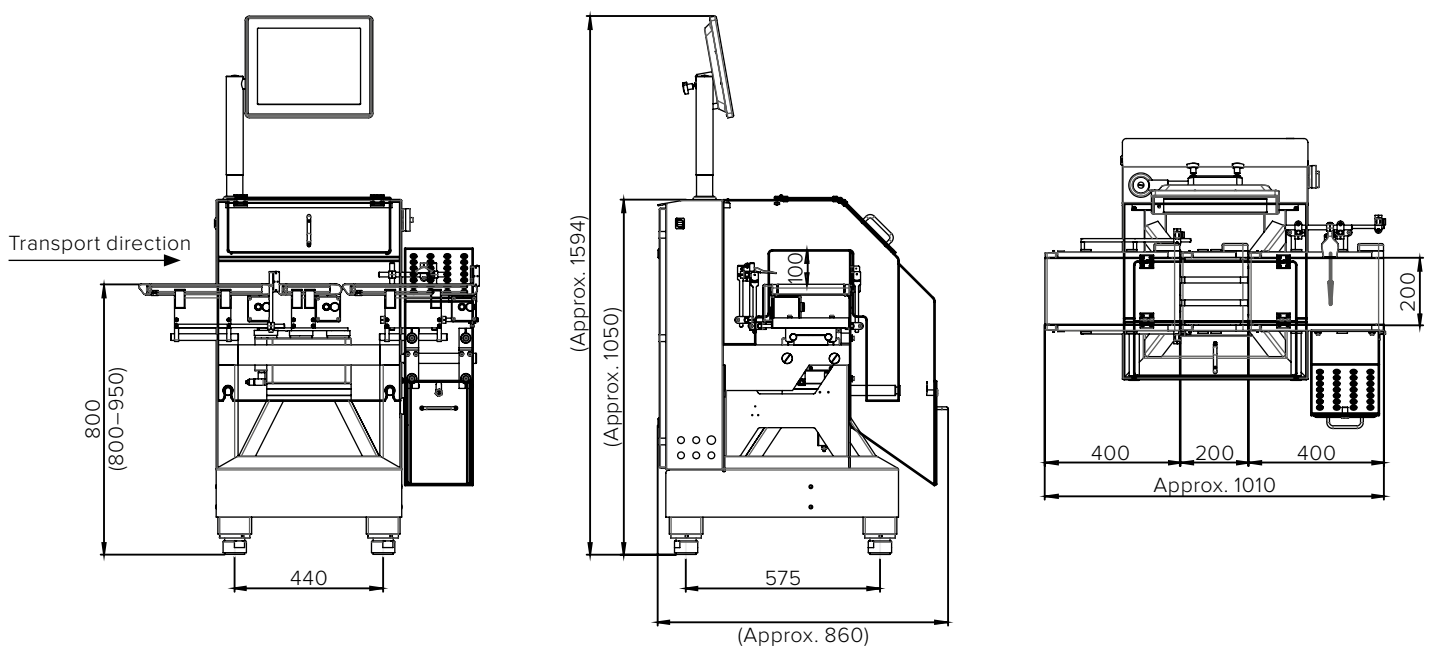
³ Depending on product shape, product behavior, transport speed and environmental condition



Easy to comprehend and operate: HC-A user interface



State-of-the-art HC-A weighing technology as multi-track option

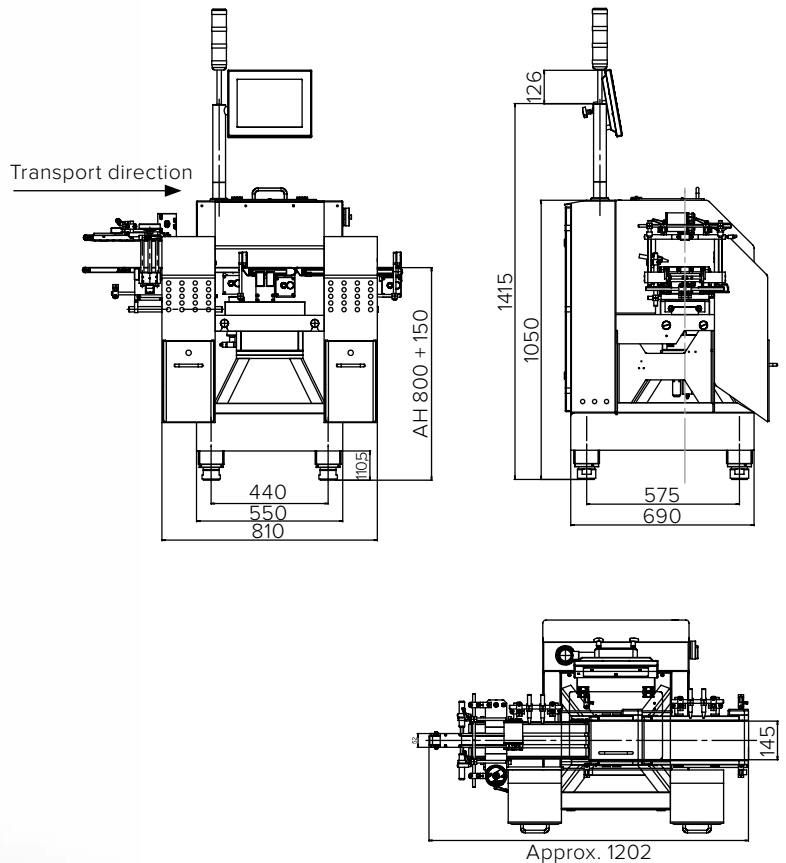


All entries in mm | Drawing shows design example

/ Blister pack, patient information leaflet: completeness checks at high throughput

An infinitely adjustable and optimally synchronised top-bottom conveyor accepts the folding boxes from the upstream cartoner in a stable position. This perfectly controlled combination of product acceptance and transport is the basis for a precise weighing process at throughputs of up to 600 folding boxes per minute. The accurate weighing results enable a completeness check with subsequent ejection system which safely disposes of folding boxes with incorrect weight in a lockable rejection bin.

HC-A pharmaceutical checkweighers in the version for folding boxes determine the product weight so precisely that a weight-based completeness check makes it possible to estimate the number of blister packs in an already sealed folding box. It is equally possible to check an already sealed product pack for the presence of a patient information leaflet. The Wipotec pharmaceutical checkweighers therefore make a significant contribution to the quality assurance of pharmaceutical products.



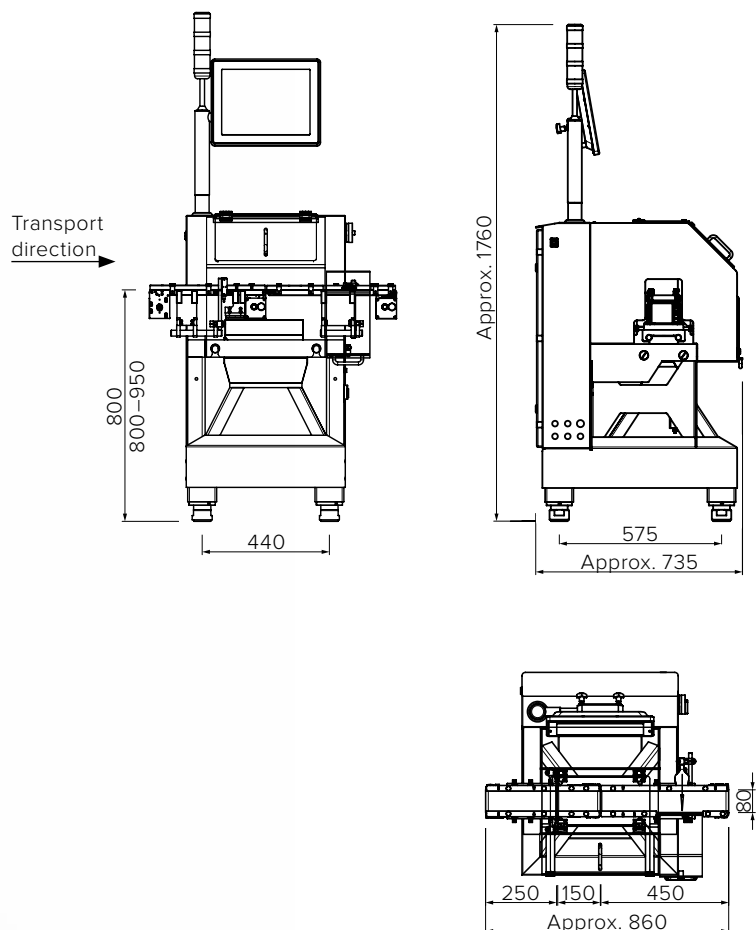
All entries in mm | Drawing shows design example

/ Stick packs, four-sided sealed bags: precision weighing in the milligram range

The HC-A-MI is the perfect solution for automated, continuous precision weighing of ultra-lightweight parts (e.g. stick packs) in the milligram range. In this case, the product feed is individual and product-specific. It is possible to achieve an output of 220 products per minute for a gross weight range of 100 g and a calibration value of > 0.01 g. Multi-lane versions are available for even higher throughput rates.

Process reliability is paramount for the primary and secondary packaging of free-flowing granules, powders, pellets and liquids on stick pack systems. Wipotec checkweighers consistently detect and document the

weight of every individual stick. This significantly reduces the quality assurance effort for the manufacturing companies. Individual stick packs weigh only a few grams; the checkweigher detects deviations in the milligram range and automatically rejects packs with incorrect weight. Furthermore, the HC-A-MI provides a control function for weight correction by means of feedback to upstream filling machines.

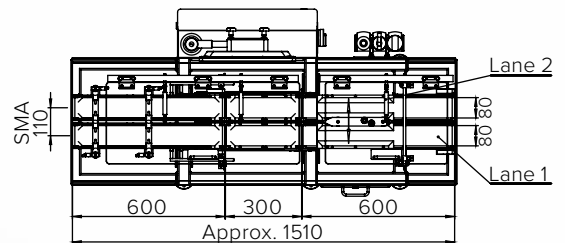
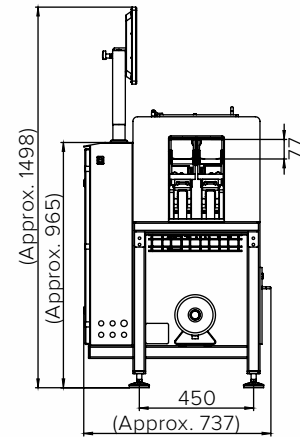
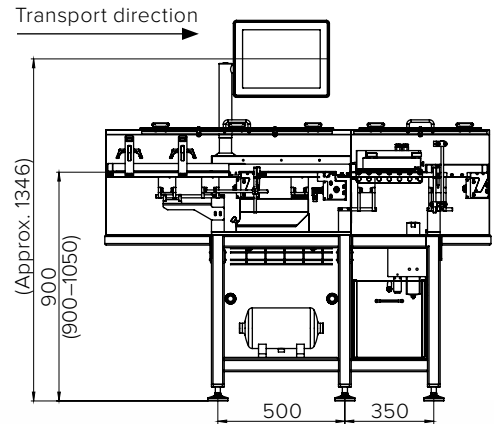


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/ Weighing of individual sticks – twice as fast on two lanes

The accuracy of the HC-A-MI checkweighers in the two-lane version and therefore double the throughput rate is facilitated by the SW-D-FS weigh cell integrated in the checkweigher. This series of weigh cells requires little space and is ideal for use in multi-lane applications with low lane centre-to-centre distance – perfect to meet the lane centre-to-centre requirements of the upstream filling machines.

Single stick weighing enables automatic feedback of the results into the upstream production. It is thus possible to identify trends in incorrect filling volumes at an early stage and to take appropriate measures to control filling heads. Due to the checkweigher's high accuracy and output, higher feed rates become possible; there is significantly less waste and manual follow-up checks with laboratory scales can be omitted, as well as time-consuming random sampling checks.



/ High-performance checkweighers for multiple lane operation

HC-A multi-lane systems (HC-A-Multi) are particularly suitable for small packaging formats (e.g. stick packs or four-sided sealed bags). Multi-lane systems are available both in traditional conveyor belt and also in push over technology. High-precision weight measurement with display takes place individually per lane (with the smallest lane centre-to-centre distances). Ejection is lane-related or holistic according to the customer's requirements.

Both conventional conveyor belt technology and push over solutions can be used for product transport in multi-lane systems. In the push over process, the EMFR weigh cell from Wipotec is completely separated mechanically from the product transport. A "finger" (guided and driven from above) pushes the products

across the weighing platform. All the lanes are driven centrally with just one servo motor. The push over technology achieves the smallest possible lane spacings and maximum possible accuracy. Multi-lane systems are individually designed, engineered and produced according to the filling system used and the relevant product geometry in line with your specific requirements.



HC-A-Multi



HC-A-Multi with push-over

/ Reliable weighing of cylindrical products

The HC-A-IS is a special machine version of the HC-A for weighing wobbly, cylindrical products (e.g. aerosol cans, etc.) with high throughput and accuracy. The checkweigher is placed at any point on the existing production line. The product handling rotary star wheel of the weighing system projects over the existing transport lane so integrating it does not require any disconnection of the production line.

A wide and coordinated range of sorting devices is available for the rejection of products with incorrect weight. The use of a high-tech weigh cell from Wipotec, which works on the principle of electro-magnetic force restoration (EMFR), guarantees the best technology for excellent weighing results.

The easily replaceable, positively-driven, two-part star wheel removes products from the main product flow. The products are sorted, separated, and weighed individually and then returned to the production line. Under- or overweight products are automatically sorted out.

Main Features

- High-precision weighing of wobbly and cylindrical products
- Available as single and double lane version
- Wipotec EMFR weigh cell
- Easy, menu-driven operation via 15" colour TFT display with touchscreen
- Small footprint
- Quick and easy format change
- Wide variety of sorting devices matched to your products
- Option to control the filling machine using fast feedback or trend

Your Benefits

- Output up to 400 pieces/minute
- Easy and user-friendly operation to increase efficiency
- Exact fill results for highest productivity
- Short set-up times thanks to easy format change
- ADD-on solution Line integration without separation
- Stable, positively driven product handling for increasing efficiency
- Easily integrated in existing lines without having to open them



| Technical data | HC-A-IS | | | |
|--------------------------------------|---|--------------------------|--------------------------|--------------------------|
| Working height ¹ | 700–850 / 800–950 / 900–1,050 mm | | | |
| d (Displayed value) | From 0.002 g | | | |
| GWR (Gross weight range) | 200 g – 1,000 g | | | |
| e (min. calibration value) | 0.02 g – 0.2 g | | | |
| Standard deviation ² (1s) | From 5 mg | | | |
| Max. output ² | HC-A-IS 100 pcs/min | HC-A-IS-D 180 pcs/min | HC-A-IS-T 300 pcs/min | HC-A-IS-Q 400 pcs/min |
| Rated voltage | L1/N/PE optionally 115 VAC or 230 VAC | | | |
| Rated frequency | 50/60 Hz | | | |
| Connect load (power capacity) | Approx. 0.8 kVA – 1.0 kVA | | | |
| Compressed air supply (option) | 6 bar approx. 16 NI/min quality class (according to ISO 8573-1) [5:3:3] | | | |
| Machine weight | 350 kg (Standard application) | | | |
| EU-type examination certificate | DE-18-MI006-PTB001 (MID) | | | |

¹ Working height must be specified when ordering

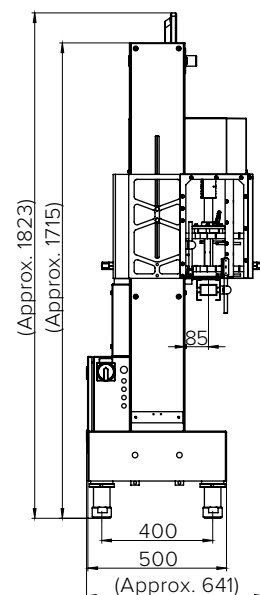
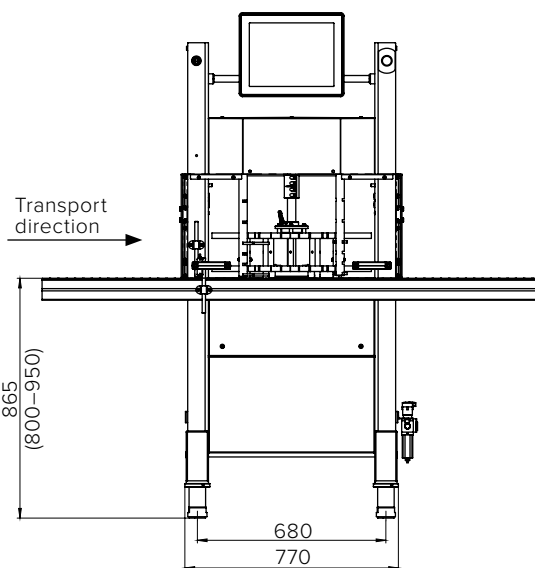
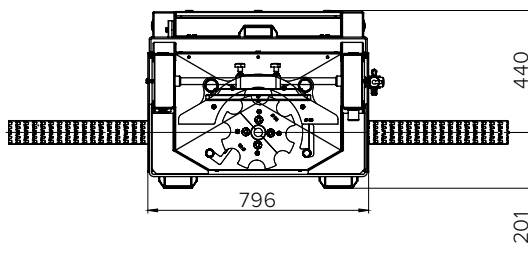
² Depending on product shape, product behavior, transport speed and environmental condition



Easy assembly and disassembly of therotary star wheel



Large variety of products and formats with HC-A-IS



/ High speed in tall cans: Stable weighing processes

The HC-A-IS-D is a dual-lane version of the HC-A-IS checkweigher with a higher throughput of cylindrical products with a high centre of gravity (such as aerosol cans, plastic or glass bottles). The rotary star wheel of the weighing system projects over the existing transport lane so integrating it does not require any disconnection of the production line. In the HC-A-IS-T and HC-A-IS-Q versions, the star wheel has three or four lanes.

The easily interchangeable two-part star wheel takes over sorting, transport within the scales and return of the products to the production line. Under- or overweight products are automatically sorted out. The dual-lane design permits a throughput rate of up to 180 product units per minute.

Ejection, which is possible due to individual sorting according to several criteria (for example overweight or underweight), can take place in the rotary star wheel or afterwards on the plastic chain conveyor system.



HC-A-IS-T as three-lane version



Star wheel as four-lane option (HC-A-IS-Q)

/ Tare-gross, liquids:

Solutions for every application

The checkweigher HC-A-IS-WD is specifically designed for applications in the wet area when filling bottles with liquids. It has protection class IP69K and thus expands the time-tested HC-A-IS series by a wash-down machine which can be used not only for quality assurance by means of inline weight checking but also for trend controlling of filling machines.

The tare-gross version of the HC-A-IS reliably takes the weight fluctuations of small tablet bottles or other containers for pharmaceutical contents into account.

Thanks to the open and easy-to-clean balcony design, the HC-A-IS-WD can be integrated very easily in existing lines without opening the existing transport route. The completely stainless steel model meets all the legal requirements of hygiene-critical

industries, such as HACCP-compliant product control, IFS-compliant design and therefore all cleaning criteria and strict hygiene requirements of filling lines for liquid medicines.

With the tare-gross version of the HC-A-IS, the weight of the container still to be filled (tare) is determined. The total weight is obtained by weighing after filling. The difference between both is the filling quantity. The checkweigher assesses the result within the tolerance and rejects products with incorrect weight. The actual content is thus determined accurate to the millimetre and therefore accurate to filling volume. As a result, filling-related weight fluctuations of the individual containers can be reliably identified.



HC-A-IS-WD

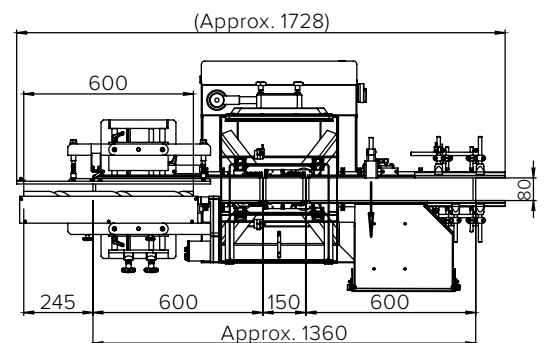
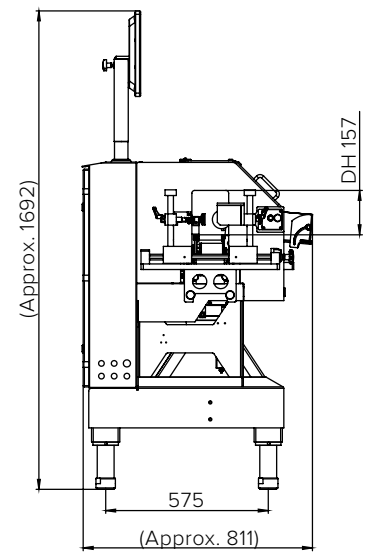
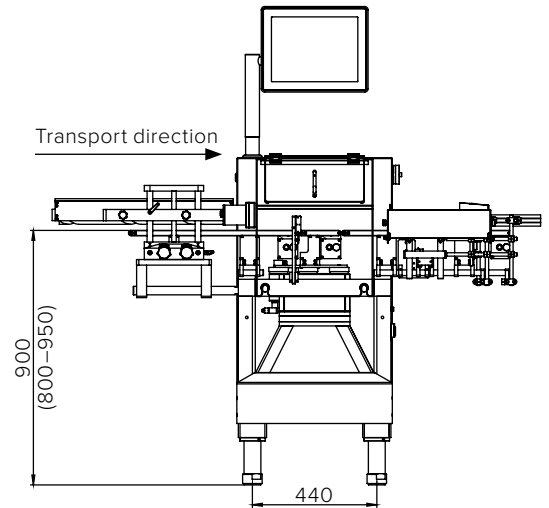
HC-A-IS with tare-gross

/ Bottles and cans: Perfect handling, optimum product gaps

There are cases where the cylindrical products to be weighed (aerosol cans, bottles, etc.) cannot be fed in with the necessary product gaps (due to the weighing belt's length). Configuration of the HC-A with a separating feed screw is the right solution here for spacing out the backed up products.

The distance between the products is adjusted by the separating feed screw as they advance in such a manner that the products to be weighed are optimally separated on the weighing belt, enabling precise inline weight checking. This is achieved by a longitudinally adapted incline of the separating feed screw.

The separating feed screw made of plastic is easier to clean, has a longer service life and higher surface quality compared to metal structures. This also protects products to be inspected.



All entries in mm | Drawing shows design example

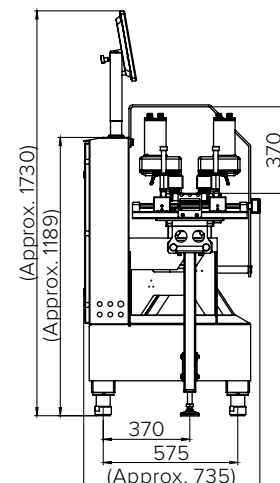
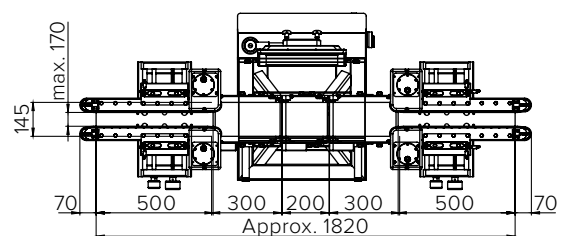
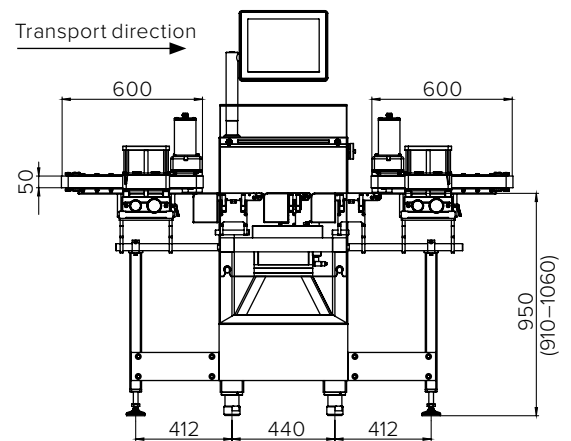
/ Safer Transport due to lateral side grip conveyors

The HC-A with lateral side grip conveyors is distinguished by especially safe product handling. The transport and processing of both angular and round products, and specifically product acceptance from upstream or product transfer to downstream machines, are optimised by driven lateral side grip conveyors. Depending on the intended type of application, a version in stainless steel (IP65) is also available.

Lateral side grip conveyors permit particularly safe product acceptance because they accept the products in the end region of the plastic chain conveyor systems of upstream or downstream machines. Each product is accepted by bilateral conveyors, extending beyond a portion of the plastic chain conveyor system delivering them, on the outfeed belt of the transferring machine and is carried forward in a controlled manner.

The same happens on product transfer at the end of the checkweigher; in this way, the products can be routed safely, particularly during the transfer processes be-

tween the conveyor systems involved. The lateral side grip conveyors can be adjusted in height as well as in transport width so that a wide range of products and product shapes can be processed.



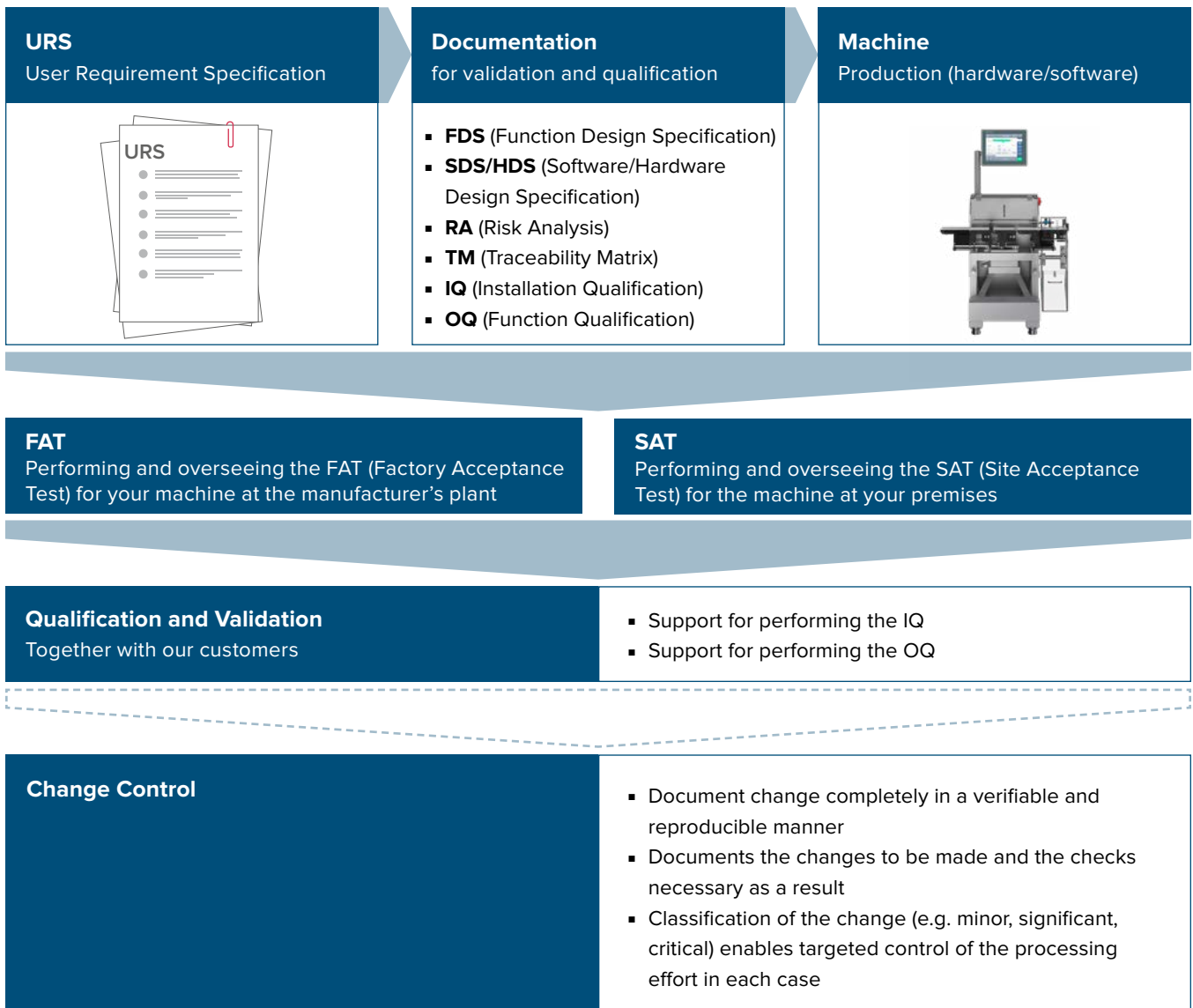
All entries in mm | Drawing shows design example

/ Safety for pharmaceutical production

Pharmaceutical checkweighers and all other Wipotec inspection systems for inline monitoring of the production of pharmaceuticals meet all the legal requirements at all times. This is extremely important for manufacturers of medicines who are responsible for ensuring the safety of their pharmaceutical products.

This compliance is demonstrated with qualification, validation, verification and routine performance monitoring processes. These processes ensure that tests on

product inspection systems comply with legal requirements. At the customer's request, Wipotec supports the processes of validation, verification and routine performance monitoring of checkweighers in many sectors.



/Our range of services

Qualification

The qualification is the proof of suitability that systems and plants work perfectly and actually lead to the expected results. This is generally a multi-stage process, consisting of installation qualification (IQ) and function qualification (OQ).

The validation takes place when the checkweighers are first installed or if significant changes have been carried out on the system. From a product viewpoint, according to DIN EN ISO 13485, “the organisation must validate all production processes whose result cannot be verified by subsequent monitoring and measurement.”

The verification is a regularly recurring examination during which objective evidence is provided as verification that the pharmaceutical checkweigher is currently fulfilling its specified performance. Verifications are repeated at regular intervals – usually annually or every six months – over the device’s entire lifetime. They are evidence that specified quality requirements have been met.

In routine performance monitoring, a series of performance verification tests determines whether the specified processes are being followed. In particular, the aim is to check compliance with the specified limit values and to ensure that the system operates as described.

Validation procedures

The validation procedures are carried out at Wipotec’s production location in Kaiserslautern, at the customer’s location or at both locations.

For this, Wipotec provides the IQ/OQ documents optionally available. These machine-specific documents serve as the basis for performance. The IQ/OQ documents contain pre-processed, machine-related test and examination schedules and the corresponding records for documenting the tests and inspections carried out. They also regulate the responsibilities and procedures for conducting the IQ/OQ examinations. All the tests required are summarised in an overview matrix in the IQ/OQ record. All persons involved in creating, reviewing, approving and performing the IQ/OQ examination are listed on an identification log sheet. The IQ record, performed and signed, forms the requirement for performance of the OQ examinations.

The factory acceptance test (FAT) is carried out between the customer and Wipotec according to the FAT record based on the supplier’s methods or based on the customer’s criteria – performed by Wipotec employees. The customer can carry out performance tests on the checkweigher’s accuracy and the function of the rejection process on site and with the support of Wipotec.

Verification procedures

These are designed to ensure that the checkweigher operates as expected. In this case, to ensure that the weight of each individual pack is tested correctly and that the accuracy of the weight values is within the specified tolerance thresholds. Furthermore, non-compliant products must be reliably rejected. Test processes ensure that weight information, warning and signalling devices as well as sorting devices operate reliably.

Procedures for routine performance monitoring

To ensure that the checkweigher detects and rejects non-compliant folding boxes or vials, this procedure is used to confirm or verify that there has been no significant change in the checkweigher’s performance level since the last successful test. Deviations may have resulted due to machine settings, changed product characteristics or the checkweigher itself.

Software support

Comscale4 (optionally available) networks and provides cross-site access to all Wipotec checkweighers in real time. Comscale4 can also record and save the results of routine performance monitoring tests online. Comscale4 can therefore also support the evidence to be provided as part of the validation that the operators are exercising due care when using the system.

Change Control

Necessary changes and inspections are documented in a verifiable and reproducible manner. Classification of the change (e.g. minor, significant, critical) enables targeted control of the processing effort in each case.

/ Pharmaceutical Features*

Active Directory (LDAP) – User authentication

Expansion of local user management by the Lightweight Directory Access Protocol (LDAP) program package. The users are managed centrally in an existing customer LDAP server (e.g. Windows Active Directory). This LDAP server is used as a login server including central user access management. All user data and the group memberships of the users are managed by the customer's system administration in the LDAP server.

Audit Trail – Expanded event list – Program package

When this request is implemented, all system-relevant actions and events in the expanded event list are logged chronologically in the log file with their time stamp. These include changes to the operating status, login and log off of a user, parameter changes, as well as all error and warning messages. Every entry always contains a specific entry identifier for its identification. With adjustable filters, user-defined lists can be created using the entry identifier.

User management (21 CFR, Part 11)

Access authorisation of the machine via user ID and password in accordance with 21 CFR Part 11 (FDA). User management guarantees the documented access of single users with individual access code to the machine's various password levels. Each user receives an individual password. Passwords can be time-limited (validity period). The user account is deactivated after exceeding the time limit. Access by a user and changes in the user management are documented in a logbook.

Backup/Restore

Backup/Restore program package for menu-driven backup and restore of all article, system and program data of the machine.

Batch program package (Batches)

In some production processes, it is desirable to assign the production data obtained to the individual production lots (batches). If this option is installed, entry of a valid batch number is automatically and compulsorily expected at the start of production. The management of batch numbers in the machine allows automated logging of production according to different batches. The batch number is shown as additional information in the production statistics.

Compressed air pressure controller

The compressed air pressure controller function monitors that the preset operating pressure is continuously present at the compressed air conditioning unit and thus the function of the sorting device is assured. If the preset operating pressure is not reached, the checkweigher fails to start or, in the event of a failure during operation, the machine stops. In both cases, a message is sent to the operator terminal and an entry is made in the system's log.

In-process check – per one piece or as a series of products

This very useful function enables immediate checking of weight acquisition during current production. Menu-driven random sampling can be initiated at the operator terminal. For quality control, a required check on the measuring equipment can, therefore, be carried out in a system-supported, safe and uninterrupted manner. For this purpose, a product is taken from the current production process and the weight displayed is checked using a separate set of scales. With the same functionality, the user specifies the extent of the sample using the sample size.

At the operator's request, the "Single sample" withdraws one article from the current production using the separating device. The determined weight of the withdrawn article is saved and printed out on a connected printer (optional) depending on the configuration.

For the "Series sample", no more than 100 consecutive articles are withdrawn. Their individual weights, measured in the checkweigher, are saved. In addition, the random sample size is used to calculate the mean value and standard deviation.

Saved sample data can be displayed and also exported or printed depending on the machine's equipment and configuration.

Full enclosure of the machine

In some cases, it is important to ensure that no intervention can be made in the current product flow during ongoing operation. In these cases, a suitable intervention guard (full enclosure with hinged cover and safety switch) is created by means of hoods.

* Optional functionality

/ X-ray inspection: Inline quality assurance at top speed

In the industrial manufacturing of products, quality must be given the highest priority in all production processes. Against the backdrop of utmost concern for customer safety, supplying defective products can quickly result in fatal consequences. Recall actions are extremely costly and may irreparably damage your image as a reliable producer. Even worse are the health risks passed on to the consumer because defective products were shipped.

Wipotec inspection technology for maximum consumer protection

If you want to ensure that your folding boxes and vials contain exactly what they are supposed to contain according to specification, X-ray inspection using Wipotec

X-ray scanners is advisable. These systems inspect the content of already sealed product packs in the as-delivered condition such that subsequent changes are no longer possible.

You get the certainty of freedom from foreign bodies; at the same time, a completeness and shape check is performed, so for example, a check for the presence of a patient information leaflet or the products are examined for breakage and perfect shape. Wipotec X-ray scanners reliably protect you against recall campaigns without compromising your throughput rate by carrying out a 100% product inspection.

Wipotec portfolio: X-ray and optical inspection systems



Functionality & performance 

SC

Scanning – Premium X-ray inspection for high performance applications

E

Essential – X-ray inspection for basic applications, best price-performance ratio

/ TQS – the perfect modular Track & Trace solution for global serialisation requirements

What is Track & Trace?

High health risks and enormous economic damage are the consequences of ruthless product piracy in the pharmaceutical industry. The absolute product safety demanded by the end user requires a completely controllable product flow from the manufacturer to the retailer and patient. Track & Trace is the solution for implementing legal requirements for more drug safety. Machine-readable codes, which ensure unique product assignment worldwide in the form of a product code and a serial number, form the basis for counterfeit-proof drugs in pharmacies. Serialisation and end-to-end aggregation ensure transparency in the origin of goods as well as in retail, thereby creating trust and security.

Reliable Track & Trace for maximum flexibility

Track & Trace is an individual identifying feature in the pharmaceutical sector and the key to guaranteeing the authenticity of medicines. The identification and complete traceability of originator medicines combined

with the tamper-proof sealing of folding boxes form the basis for unconditional trust on the part of consumers. The special challenge of Track & Trace is taking into account all the internationally applicable requirements regarding counterfeit protection for drugs.

With the Traceable Quality System (TQS), Wipotec supplies the unique solution that combines all the requirements for future, global Track & Trace in one system. Intuitive and very easy to use, TQS proves to be the benchmark for universal system compatibility at the highest level.

TQS offers maximum flexibility with the easiest implementation and commissioning. Whether serialisation, sealing of folding boxes with tamper-evident labels, end-to-end aggregation or reliable integration in packaging machines: TQS applications from Wipotec represent first-class, high-tech solutions with unrestricted compatibility in relation to existing machine and system components.



TQS-SP

Single Pack Serialisation



TQS-HC-A

Tamper-Evident/
Serialisation/Weighing



TQS-BP

Bundle Pack Aggregation



TQS-CP

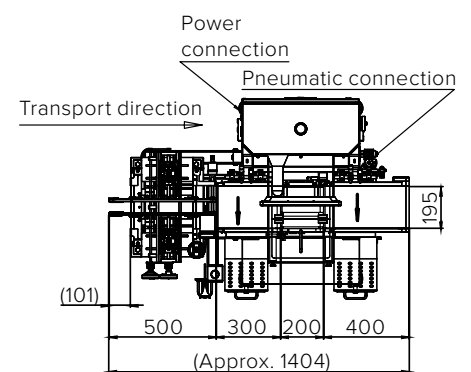
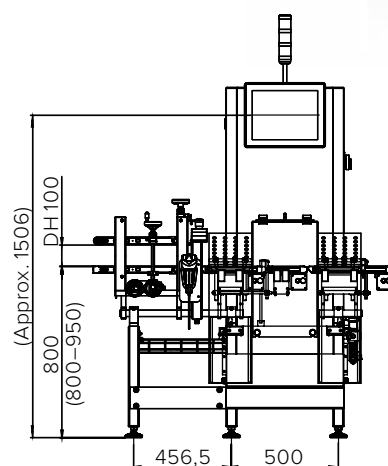
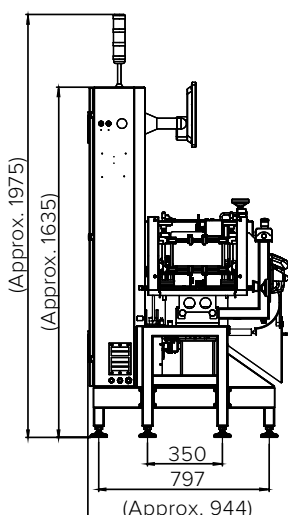
Case Aggregation

/ Serialisation and weight inspection tailored to your requirements

The TQS-HC-A is a serialisation solution with integrated weight acquisition. The weight of the folding boxes is checked precisely by a high-tech weigh cell installed in the TQS-HC-A so that a 100% completeness check (e.g. check for the presence of a package insert) is possible. The capabilities are further enhanced by modules such as compact tamper-evident and country-specific vignette labelers.

An infinitely adjustable top-bottom conveyor accepts the folding boxes from the upstream cartoner. The top-bottom conveyor can be adapted quickly, easily, infinitely variably and three-dimensionally to various folding box formats. Printing is done either on the side tabs or the top of the folding box.

This high-precision product transport is the basis for well-managed coding with final verification. Faulty codes are ejected into their own lockable rejection bin upstream of the weighing belt. A second ejection system immediately downstream of the weighing belt takes care of packs with incorrect weight which are ejected into a second rejection bin.



/ Heavy load checkweigher for precise weight acquisition

Are you looking for a reliable checkweigher for precise, dynamic weight acquisition in the palletising of drugs, in the logistics and storage section, or for hygienically demanding environments? Your investment in a heavy duty model from the comprehensive line of checkweighers from Wipotec is surely the right decision. The scales determine precise weight values while controlling goods

and material flows and providing remarkable throughput rates facilitated by high speed operations. Simple to use and easy to integrate in your existing conveyor systems, these machines guarantee the highest precision and service life.

Wipotec portfolio of heavy load checkweighers:

EC-E-SL – the entry machine

HC-M-SL – base model with a gross weighing range up to 60 kg

HC-M-WD-SL – for heavy loads in wash-down applications (IP69K)



EC-E-SL



HC-M-WD-SL



HC-M-SL

/ **Reliable Expert Service,** Customized to Your Needs

When you choose Wipotec as your system supplier, you have the benefit of top quality service modules that incorporate the vast experience of our weighing and inspection system experts. Whether a pure consulting service or specific line and product support throughout the product life cycle, we are your reliable partner.

Turn to us with your requirements. We would be pleased to discuss the scope and effort of individual services in more detail with you. Trust in our experience and reliability. ▲



Benefit from our **outstanding range of services**

- 24/7* – Hotline availability
- Global service network with certified technicians for on site support
- Professional installation and optimization based on customer needs ensures smooth start-up
- Europe-wide conformity assessment and complete overhaul with the exchange of verification relevant parts
- Preventive maintenance, setup, and optimization of your systems
- Fast on site repairs using original parts
- Calibration checks and readjustment of the entire system, if required
- General product and target objective training to improve efficiency
- Remote maintenance first hand (with appropriate hardware) for urgent jobs

* On conclusion of a corresponding service agreement

Raise your production to the next level:

fast, cost-saving,
and profitable!

Contact us!



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