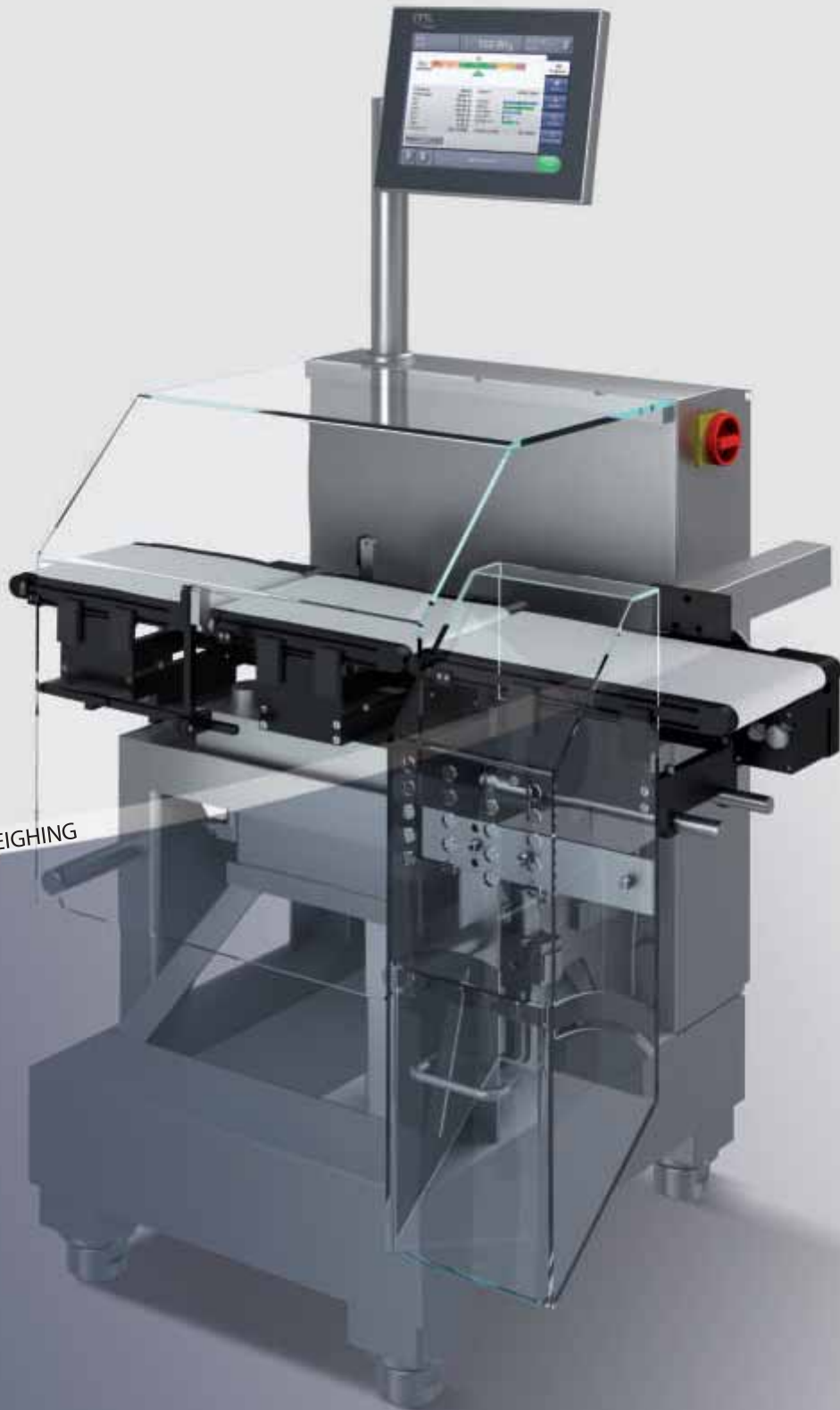


HC<sup>A</sup>

AVANTGARDE



THE ART OF WEIGHING



CHECKWEIGHERS



# HIGHEST PERFORMANCE FOR COMPREHENSIVE REQUIREMENTS

HC-A checkweighers have been designed to meet the highest requirements by using modern, dynamic weighing technology.

They offer an ideal mechanical platform for meeting the most sophisticated and demanding applications. Solutions fit to meet highest requirements.

The HC-A considerably widens the application possibilities and completes our versatile product range, especially for high-end applications.

The HC-A is a continuation of our product and operation philosophy. The improved sturdy, stainless steel base frame ensures extremely accurate weighing results at highest speeds.

Individually engineered solutions for varying product sizes and shapes can be accounted for.

The integrated Wipotec high-tech Weigh Cell, which works according to the principle of Electro Magnetic Force Restoration (EMFR), is revolutionary.

EMFR Weigh Cells provide an unequalled level in terms of reliability, precision and repeatability and help to avoid over fills.

A sophisticated and wide spectrum of sorting devices (pusher, air blast, flap conveyor, sorting device, etc.) are available to reject products with incorrect weight reliably and without disturbing the production.

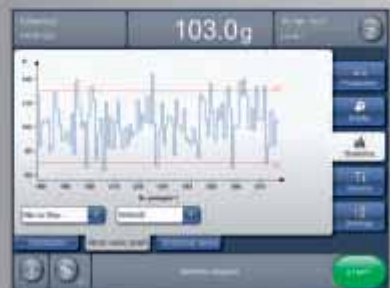
OCS Checkweighers GmbH has been certified according to DIN EN ISO 9001



Main screen



Enlarged weight indication



Graphic Mean Value signal course



Graphic OMAC status



Alphanumeric data input

# CLEAR OPERATION AND HIGH LEVEL FUNCTIONALITY

# HC<sup>A</sup>

Reliable checkweigher for the highest speeds:

- 100% production monitoring according to Net content i.e. E-mark
- Rejection of products with weight shortages at high selectivity

Robust stainless steel base frame with high mass weight, infeed, weighing and outfeed conveyors (NT30) and air blast reject unit

Maintenance-free drive units (servo technology)

Certified (MID)

Weigh Cell with EMFR technology (Electro Magnetic Force Restoration); automatic measuring time determination

Various weighing ranges

Various weight ranges for classing

Comprehensive, menu-driven operation by 15" colour TFT display with touch screen

Comprehensive service and diagnostics function

Selectable menu language DE, EN, ES, FR, IT (standard); additional languages according to availability

Large weight display available

Online help function

Memory for 200 product parameters (PPS)

4 password-protected user levels

Various working height ranges

Tool-less belt change

Output max. 600 pieces/min. (depends on application data)

Spot check function with single rejection

Flexible integration into existing production line

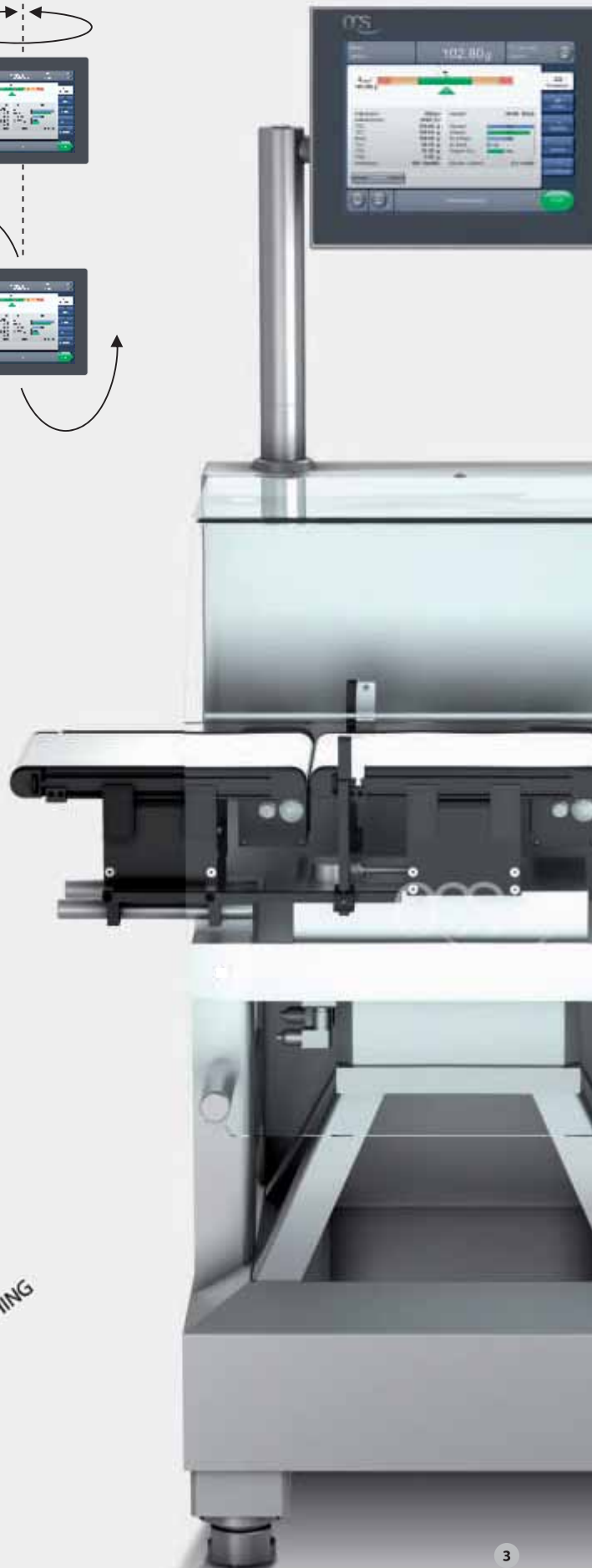
Line synchronisation with potential-free

I/O-signals (optional expandable)

- Input Automatic
- Output Bringer release
- Output Error

Various conveyor widths and lengths available

Comprehensive statistic functions/histograms for production documentation in various log files



THE ART OF WEIGHING

# OUTSTANDING PERFORMANCES WITH AN EYE FOR DETAIL

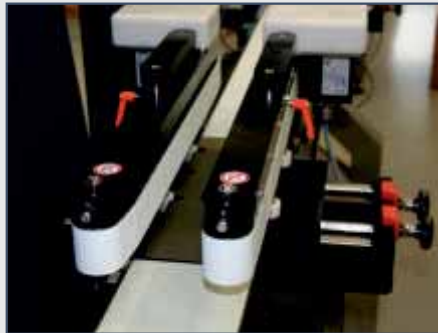
## Product handling that meets your requirements

Every product needs to be handled uniquely, owing to its individual characteristics, the throughput required and the desired accuracy. Here, apart from form and nature, throughput and the desired accuracy also play a part.

It is exactly for these reasons we have developed the right mechanical options based on many years experience. Thus, in the HC-A, top-bottom conveyor are used successfully for the secure transfer and acceleration of cartons, just as are infeed screws and lateral pressure bands for the safe singling out or acceleration of bottles.



Top-bottom conveyor



Lateral side grip conveyor

## Automatic feedback that helps to save money

The control and documentation of your own products is the key. Profitability lies in the control of the filling and packing process by using the data recorded by the checkweigher. The HC-A supports you in your continuous effort to minimise any kind of overfilling.

The functions at the disposal of this process are, for example, the tracking of the narrow sorting limits, the individual observation of the single filling heads, the automatic feedback at the control of the filling machine. With the servo drive, the checkweigher always runs in synchronisation with the packing machine.



Regulation/Course of Tendency

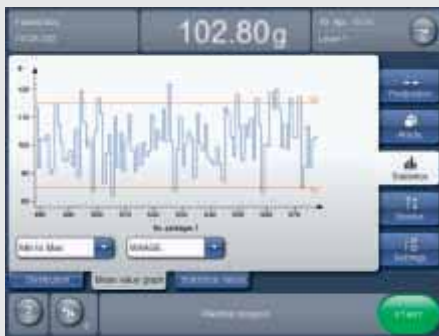


Trend meter for filling head monitoring

## ⬇ Weighing results ensure security

Time which we have less and less of at our disposal on account of the ever higher throughput of modern production lines. The precision of weighing results must not be lost.

But with the right technical approach, physical limits can be exploited. Thus the Weigh Cell of an HC-A can, if desired, be equipped with an Active Vibration Compensation (AVC) which filters out interfering vibrations, thus helping to guarantee short settling times even in difficult industrial surroundings. The HC-A has a scanning rate (single value measurement) of 1 ms. Thus a precise and reliable weight value can be measured in the shortest possible time.



Precise collection of the production process



## ⬇ Data transfer could not be easier

If it is not possible to establish a network connection permanently, the collected production data can be transferred via a USB stick. Take the USB stick of OCS, for example, for the backup/restore function (option) on the HC-A. Menu-driven and you can simply create secure copies of your machine configuration, your article data and your current production data (backup). Conversely, you easily restore your previously saved data via the user interface of your HC-A checkweigher (restore). Furthermore, you can export with the help of the USB statistical package (option) your statistics and prints for central analysis and storage using the USB interface. With the convenient print preview of the HC-A, you can see right at the checkweigher how your print will look.



Backup selection



Statistic selection and print preview



# FIRST CLASS COMPONENTS FOR IMPORTANT TASKS

The correct selection of components is an important factor for our reliable checkweighers. Our considerable experience in the development and production of dynamic weighing technology is fundamental in achieving precise weighing results/measurements at highest speeds.

## ↓ Designed in accordance with GMP

Systematic implementation of GMP-requirements, e. g. tapered edges, covered cable ducts, easily cleanable surfaces, etc. make the HC-A ideally suitable for pharmaceutical and food production.

## ↓ Solid base frame

The robust base frame together with the high mass weight, forms a firm platform integration weight, for a firm stand and absorbs any interfering vibrations (e. g. fork lift operation, and many more).

## ↓ Patented transport belts

The light-weight, patented transport belts and the carefully tuned drive concept ensure a smooth operation as well as a reliable and safe transport of the goods. Additionally, the transport system is complemented by a variety of handling systems (e. g. infeed screws, etc.).

## ↓ Precision Weigh Cells

The Weigh Cells (1ms sampling rate) were tailored for the special requirements of the dynamic high-performance weighing tasks and have been tuned for these applications. Highest speeds, performance as well as precision are achieved.

Revolving and tilting Touch Screen

Stainless steel housing

Weighing conveyor

Infeed/outfeed conveyor

Product recognition

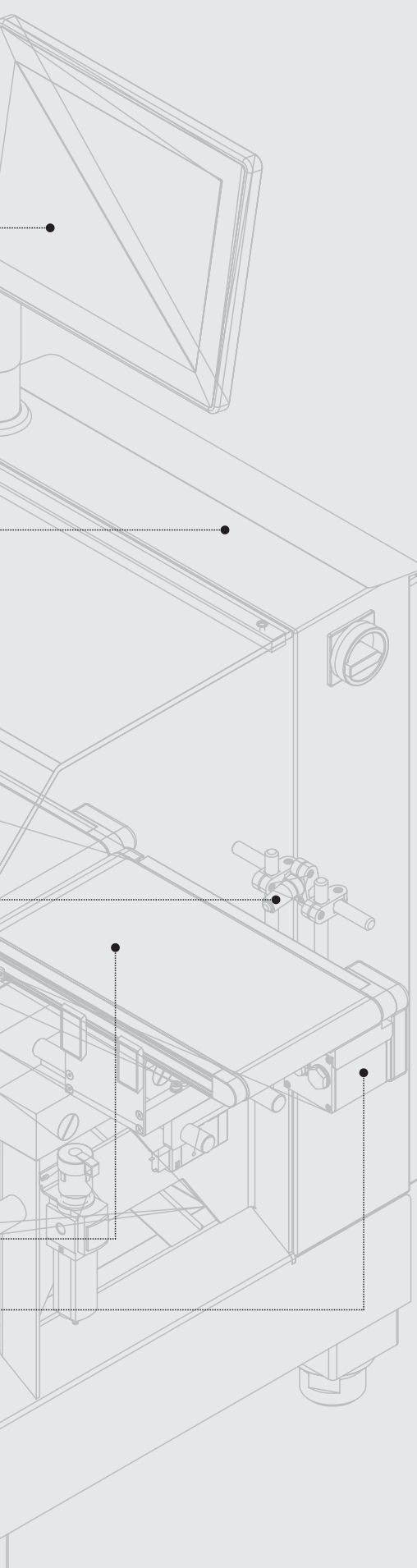
Rejection device

Precision Weigh Cell

Infeed/outfeed conveyor

Low maintenance servomotor/  
sequential drive

Massive base frame



## ↓ 15" Colour-TFT

The HC-A is equipped with a large, high resolution TFT display with touch screen. It's bright and rich in contrast colour.

## ↓ Remote-operation

HC-A checkweighers can be operated remotely via an Ethernet connection from a second operating terminal (Option).

## ↓ Product Flow Control (PFC)

The option product flow control monitors the product flow sequence and sounds an alarm when:

- wrongful entry of an additional product into the production line
- registered products were removed from the production line
- a product not legal for trade was not rejected (rejection counter control in pass-through channels)

## ↓ Sequential following drive

The HC-A motor management system offers the stepless control of the individual motors. Adjusting of transport speeds of adjoining machines are synchronised taking in to account weighing accuracies and varying reject times (Option).

## ↓ Open flap detection

The optional feature flap control checks for the correct closure of packages. Faulty packages are detected and rejected by means of a reject device. Packages which are not closed correctly are shown separately in the production statistics. The open flap sensors can be easily adjusted to fit individual package sizes by position indicators.

## ↓ Sensor monitoring

Continuous monitoring of all connected sensors by the checkweigher (Option). In case of a failure of a sensor (e.g. caused by a broken cable) an alarm is triggered automatically. The alarm is displayed on screen with the indication of the respective sensor.

## ↓ Floating Mean Value Control (FMVC)

The optional feature FMVC enables you to automatically adjust sorting limits in case of long-wave weight deviations of packages. The sorting limits and the tolerance zones are adjusted according to the calculated floating mean value which has been defined by the user in the current production. The FMVC allows you to set tight sorting limits taking in to consideration the weight variance of packages within the production process.

# OPTIONS FOR THE COMPREHENSIVE USE

## ↓ Mechanical options

- Various conveyor lengths and widths
- Centralised operation for Multi-track systems
- Various, application-related transport systems (e.g. NT17, NT46, VA30WA, SL60/SL80)
- Free standing transport conveyor
- Combination base frame for e.g. metal detector, laser coding, etc.
- Metal detector conveyor
- Special working heights
- Supporting leg

## ↓ Statistic options

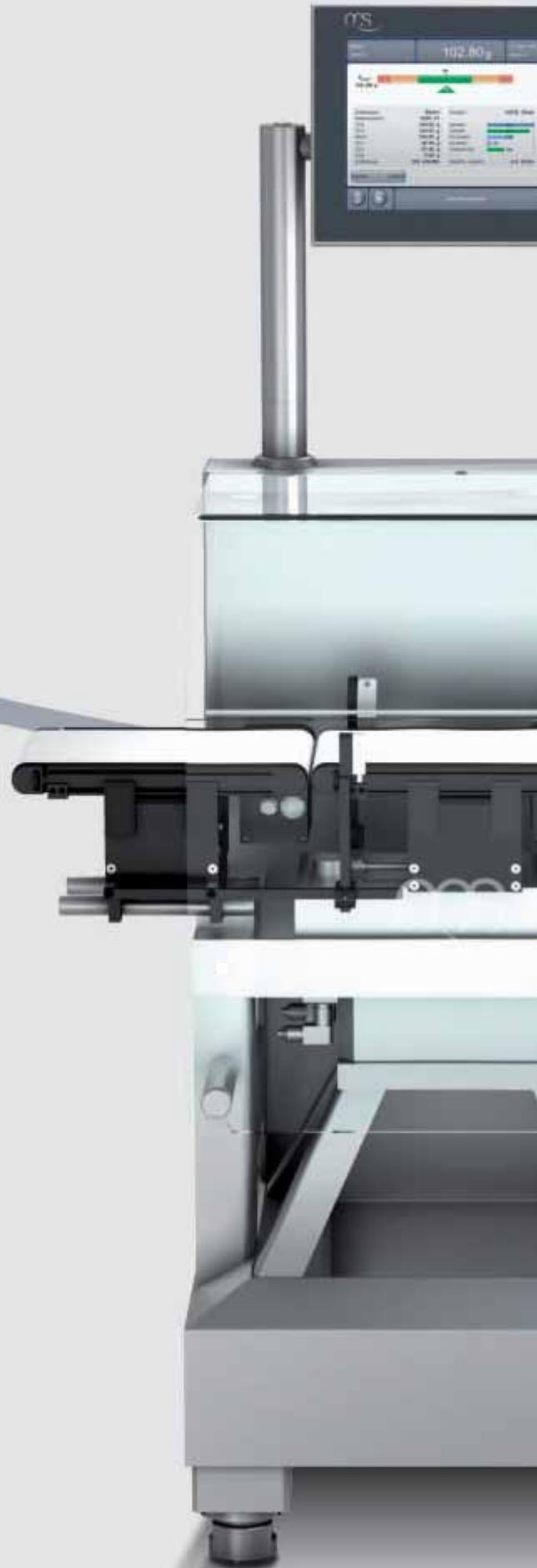
- USB stick
- Individual weight data transmission, configurable (Variable sending of statistic data)
- ComScale NT
- Thermal paper printer
- Available electrical data interfaces (Ethernet, RS 232, RS 422, RS 485, TTY)
- XML data interface
- OPC data interface
- Profibus DP
- Ethernet/IP
- Connection to FreeWeigh.Net

## ↓ Sorting options

- Multiple sorting
- Various sorting devices (air blast, pneumatic pusher, flap, guide, etc.)
- Rejection bin, lockable
- Rejection chute made of stainless steel (V2A/AISI 304)
- High-speed rejection system

## ↓ Product handling options

- Lateral side guides
- Transition plates between conveyors
- Knife edges (with rollers)
- Product change via barcode reading equipment
- Acceleration conveyor (top-bottom), vertical and horizontal clearance adjustable
- Lateral side grip conveyors, vertical and horizontal clearance adjustable
- Infeed screw for singling and feeding of products







## ↓ Pharmaceutical options

- Comprehensive qualification documentation (FDS, RA, TM, IQ)
- Extended event log (audit trail, electronic records)
- Manual re-check
- User access administration in compliance with 21 CFR Part 11
- Batch program package
- Preparation for Mark & Verify

## ↓ Electrical options

- Single light stack
- Triple light stack
- Signal horn
- Expansion product parameter memory (PPS) up to 400/600
- Control of additional transport drives
- Control of various motors (IMOT or DC/AC drives)
- Alphanumerical remote display
- Potential-free input "Disable Touch Screen"
- Additional potential-free inputs and/or outputs
- Sequential following drive
- Data backup/restore

THE ART OF WEIGHING

## ↓ Check and safety options

- Consecutive error recognition
- Product flow control
- Air pressure monitoring
- Various emergency stop circuits
- Potential-free input "Fast stop"
- Fill level sensor for rejection bin
- Potential-free input "External error"
- Additional product inspections, e.g. product open flap detection, sloping position monitoring, optical control via camera
- Sensor monitoring
- Product jam sensors

## ↓ Control functions

- Mean Value Regulation (MVR for several filling heads)
- Remote Control for remote maintenance
- Filling head monitoring with trend meter and individual statistics
- Floating Mean Value Regulation (FMVR)
- Rejection minimisation for Floating Mean Value (ASMIN)

## ↓ Weighing/application options

- Dead load adjusted interference compensation
- Active Vibration Compensation (AVC)
- Tare-gross weighing system
- ml program package
- Full cover for weighing section
- Legal for trade design
- Initial MID verification

# WEIGHING OF CYLINDRICAL PRODUCTS

# HC-A-IS HC-A-IS-D

Two system solutions, one concept: The HC-IS (single track) and the HC-IS-D (double track) have an ingenious Revolving Weighing system. It facilitates optimal product handling for high, slim containers (e. g. aerosol cans, plastic and glass bottles, etc.) and ensures fast, precise 100% in-line weight control. The checkweigher is „employed“ in the existing production line at any desired point. The very easy, exchangeable, two-part star wheel (short set-up times) projects over the existing conveyor system. This ensures product stability within the weighing system and return to the production belt in a single work step. Products with a shortage in weight are automatically sorted out. Menu-driven operation of the checkweigher is carried out via the touch screen. The specially designed cover guard and the integrated safety interlocks ensure a high degree of safety.

## ↓ Machine features HC-A-IS, HC-A-IS-D

- Extremely high accuracy especially for unstable cylindrical products
- Automatic zero tracking as standard
- Simple economical installation on existing lines without line major alteration (add on solution)
- Sorting within the star wheel possible
- Complete line integration (mechanical and control-wise)
- Short change over time by simple change of format sets
- High throughput (160 weighings per minute/double-track)
- Wide range of accessories



# WEIGHING IN THE MILLIGRAM RANGE WITH HIGHEST RESOLUTION

## HC-A-MI

The HC-A-MI is the ideal checkweigher solution for the ultra-precise, automated and continuous weight recording of extremely small products, such as stickpacks, blisters, coins, ball bearings etc. The feeding-in of the product takes place individually and specific to the product. Vibrations in the surroundings of the production are suppressed by deadload adjusted interference compensation. Weighing in the milligram range takes place within fractions of a second. Classification in good and bad products (as well as possible sorting out) is effected directly by the checkweigher control. By means of its automated 100% checking, the HC-A-MI offers new possibilities in the quality safeguarding of sensitive products and production processes

### Machine features HC-A-MI

- Automated 100% in-line control of lightweight parts
- Precision weighing in the mg range
- Gross weighing range 100 g
- Full cover for weighing section to protect from air draughts
- Compact design
- Easy integration into production lines
- Active Vibration Compensation (AVC) Option
- High throughput up to 200 ppm



# WEIGHING IN COMBINATION WITH MARK & VERIFY

## HC-A-TQCC

The constant transport speed of the HC-A is the ideal prerequisite for integrating mechanically and electrically into the weigher a combination of coding station (inkjet printer or laser system) and OCR camera. After the carton has been taken over safely from the cartoner (by means of the HC-A top-bottom conveyor), the application-relevant data (e.g. plain text and, if applicable, 2D datamatrix code) are encoded and inspected and verified by the camera arranged following. The camera sends the appropriate signal to the weigher, at which the HC-A rejects the faulty packet into a special collecting container. A 'mark and verify' solution like this serves the system integrator as a basis for "Track & Trace" applications which may be integrated.

### ↓ Machine features HC-A-TQCC

- Multi-functional, modular combination of checkweigher, coding and OCR inspection system
- Variable marking- and verification position (single side, duplex and top-side possible)
- Compact design
- Space-saving solution
- Modular layout
- Central production statistic
- Flexible adaption to various carton dimensions via scale disc



# WEIGHING ON SEVERAL TRACKS SIMULTANEOUSLY

# HC-A-MULTI-TRACK

HC-A multi-track systems are especially suitable for small package forms (e.g. stickpacks and four-sided sealed bags). Multi-track systems are available both in the traditional transport conveyor technique and in the push over technique. In the push over process, the Weigh Cell is mechanically entirely unconnected to the product transport. The products are pushed over the weighing platform by a "finger" directed and propelled from above. Propulsion is central via only one servo motor for the entire checkweigher (all tracks). With the push over technique, the smallest possible centerline distances and the greatest possible accuracies are achieved. Multi-track systems are individually planned, designed and manufactured in accordance with the filling system in use, the geometry of each product and your specific demands.

## Machine features HC-A-MULTI-TRACK

- Precise weight measurement and display per track
- Track-related (individual) or collective rejection
- Compact design
- Track-related control (Option)
- Smallest centerline distances





# VARIOUS INTERFACES FOR MODERN COMMUNICATION

Effective data management is an important topic in modern industrial production. It is crucial to have production data available punctually and reliably and to be able to retrieve them flexibly via various data links. The HC-A checkweigher offers various services in data communication.



## USB (Universal Serial Bus)

The USB interface in the HC-A checkweigher provides the following services/functions:

- Storing print-outs (statistics, parameters, spot checks, log files etc.)
- Carrying out backup/restore via USB



## ComScale NT

ComScale NT is the central, database supported networking system for OCS products.

Further information can be obtained from our detailed → [ComScale NT brochure](#)

## XML (Extensible Markup Language)

XML is an event-oriented, bi-directional data interface on the basis of XML-telegrams.

It is suitable for the exchange of information/data between various applications.

The XML interface in the HC-A checkweigher provides the following services/functions:

- Sending spontaneous messages (status changes, parameter changes, article changes, error messages, warnings)
- General services: reading machine status/change user language/reading error status/reset errors/access control (Access Grant/Request Access)
- Statistic services: reading current statistics/reset statistics/transfer of single values
- Article services: perform article changeover/read article parameters/set article parameters

## OPC (OLE for Process Control)

OPC is a standardised interface for access to process data. OPC is used where data and controls of different manufacturers form a common network.

The OPC data interface of the HC-A checkweigher is configured specific to each machine order and provides the following services/functions:

- Binary I/O functions for reading in/output of binary machine signals
- General services: reading machine status/error status/reset errors/access control
- Statistical services: reading current statistics/reset statistics
- Article services: perform article changeover/read article parameters/set article parameters

## Ethernet/IP (Ethernet Industrial Protocol)

Ethernet/IP is a field bus based on Ethernet. Data exchange is effected via an Ethernet interface.

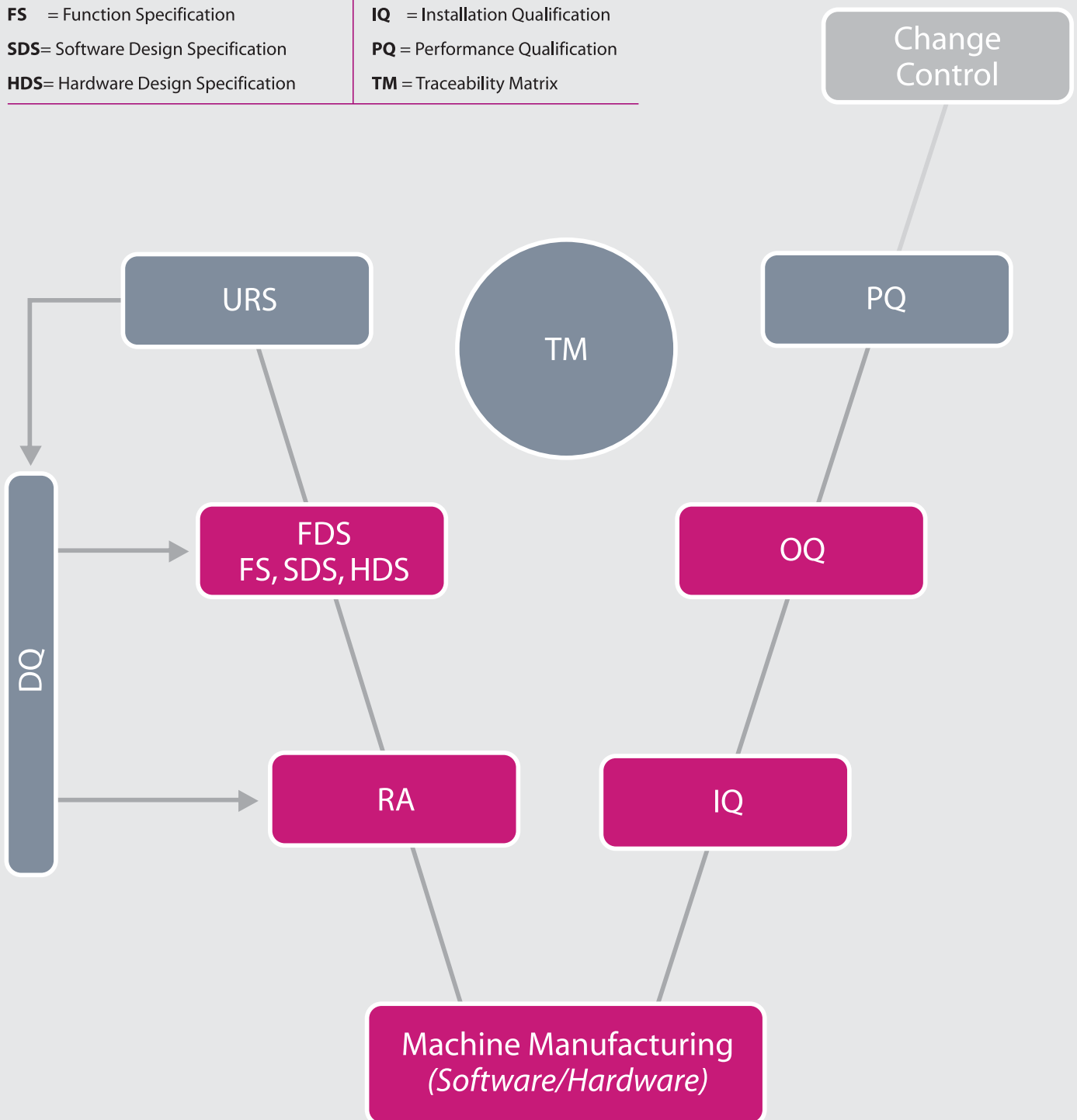
The Ethernet/IP interface of the HC-A checkweigher provides the following services/functions:

- Binary I/O functions for reading in/output of binary machine signals
- General services: reading machine status/error status/reset errors/access control
- Statistical services: reading current statistics/reset statistics/transferring single values
- Article services: perform article changeover/read article parameters/set article parameters

# VALIDATION DOCUMENTATION PROVIDES COMPREHENSIVE INFORMATION AND TRACABILITY

Processes must be stable and repeatable as often as required. The machines in use and their reliability are a key to success. The better the documentation, the better is our understanding and confidence in their use. For the HC-A, the right documents for all necessary steps are at your disposal in an well structured and clear form. We accompany you starting from the URS via the individual modules of the IQ/OQ, the FAT and SAT to the production process.

<b>URS</b> = User Requirements Specification	<b>RA</b> = Risk Analysis
<b>FDS</b> = Function Design Specification	<b>DQ</b> = Design Qualification
<b>FS</b> = Function Specification	<b>IQ</b> = Installation Qualification
<b>SDS</b> = Software Design Specification	<b>PQ</b> = Performance Qualification
<b>HDS</b> = Hardware Design Specification	<b>TM</b> = Traceability Matrix



HC-A Checkweigher system  
for comprehensive applications

A



HC-M Checkweigher family  
for advanced applications

M

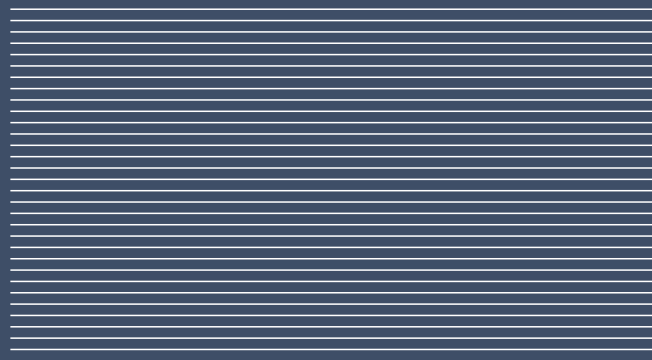


EC-E Checkweigher for  
basic applications

E



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C H E C K W E I G H E R S