Sartorius SYNUS® | CoSYNUS
The new equation for combined process reliability

turning science into solutions

Sartorius SYNUS® | CoSYNUS
Simply uniquely flexible

Seeing is believing, and once you have seen the new look in independent dynamic weighing and metal detection, you won't settle for less: Sartorius SYNUS®. The checkweighing system that adapts to your needs, and not the other way around!

Thanks to its unique design, you can tell at a glance that SYNUS® is different. Along with established Sartorius checkweighers of the EWK generation, SYNUS® sets new standards and when upgraded to CoSYNUS, sets new standards for metal detection as well.

Its future-oriented conceptual design gives you maximum flexibility for integration into your production line. For example, you can adjust the conveyor height without the need for any additional investments. Despite its flexible design, it maintains the high level of weighing accuracy, detection reliability and high throughput that you have come to rely on from Sartorius.

With SYNUS®, you can be sure that you will be able to meet the industry requirements of today as well as tomorrow. The system is completely modular and enables numerous application-specific configurations: for conveyor systems, weighing ranges | resolutions, evaluation electronics, dimensions plus a wide range of accessories.

Unique:
Turn your SYNUS® into a CoSYNUS:

– Replace the infeed belt

– Load new software

Done!

Sartorius SYNUS® | CoSYNUS
Your design for better cost-effectiveness

Maintenance-free
The sophistication of the basic design unites all SYNUS® models and ensures cost-effectiveness in more ways than one. In addition to the attractive purchase price, SYNUS® is economical thanks to its compatibility with each of the many available components.

Mechanical stability
Models are available with various combinations of mechatronic features and evaluation electronics. One thing they all have in common: the characteristic form, reminiscent of the sine curve for which the SYNUS® is named, permitting flexible yet form-fit and friction-locked connections to the weighing and conveyor system. This guarantees stability with maximum flexibility.

Rugged
All SYNUS® models are distinguished by the monolithic electromagnetic force compensation (EMC) weigh cell from Sartorius, specially developed for dynamic checkweighers. Its most impressive features include the exceptionally high precision combined with extremely short stabilization times, unbeatable stability and rugged, industrial grade construction (IP protection rating: IP54, IP65 optional).

Hygienic
The design engineering of the cantilevered SYNUS® weighing and conveyor system makes it easy to replace belt and weighing tables, thanks to the belt's quick-unlock mechanism and flip-up, removable transport system. The advantages are clear: the system is easy to clean, thus ensuring the best possible hygiene.

The conveyor is driven by maintenance-free 24 V electronically commutated drive motors. The force transmission is implemented by drive belts.

Modular
A range of optional features is available to round out any SYNUS® model in the series. A polycarbonate touch guard can be added, for example, to protect the weighing system from inadvertent contact and from drafts. The touch guard is particularly recommended for use in verifiable systems, or in other applications that require a low zone of indecision.
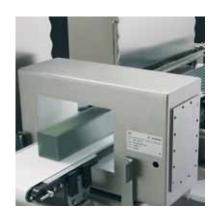
Air blast nozzle ejectors or pneumatic pushers can also be installed on the outfeed belt. Optional features for control of customer-specific ejection and sorting mechanisms are also possible.

Sartorius SYNUS® | CoSYNUS
Combined process reliability

For evaluation, too, the SYNUS® family of electronics systems includes a broad range of features. Even the "smallest" model, the SYNUS® 6, has a 6.4" TFT flat screen monitor with a color display and a generously proportioned keypad. The SYNUS® 10 offers even more convenience in operation with a 10.4" display. The top-of-the-line model, SYNUS® 15, has a 15" TFT color touch screen.

Twice as reliable
CoSYNUS, the latest model in the SYNUS® family, combines the electronics of a metal detector with our well-known check-weighing technology.

Operation of the metal detector is fully integrated into the familiar user interface of the field-tested SYNUS® checkweigher. A single interface can be used to configure and control two machines quickly and easily, saving time and effort.

Modular
The combination of checkweigher and metal detector has been achieved with the twin goals of flexibility and user-friend-liness in the foreground. Even after delivery, it is no problem to adjust the height or change the direction of the conveyance. The combined SYNUS® version offers another advantage as well: when there is no floor space to spare in production, a single CoSYNUS is the space-saving alternative to solutions with a separate checkweigher and metal detector. Moreover, customers who already have a SYNUS® scale can upgrade to the CoSYNUS easily and economically. A wide variety of options and accessories such as a USB flash memory drive, remote display and operating unit, statistics programs, catchment containers, trend controllers, printers and much more, round off this family of products.

Economical
CoSYNUS offers a clear price advantage as compared to two separate systems – not only are acquisition costs lower, but less equipment means fewer spare parts must be kept on hand. The innovative belt changing mechanism reduces costly downtime to just a few seconds. Incomparable value for the money!

CoSYNUS: simply install, detect and check.

Sartorius SYNUS® | CoSYNUS
Innovative in both documentation and process control

Sartorius ProControl@Inline and Sartorius ProControl@Remote
are new software packages that enable you to seamlessly control and manage any number of SYNUS® and | or CoSYNUS devices in network operation via a PC. The user interface and the ability to save and document data meet the highest specifications of both users and lawmakers. These software packages can be used individually or combined. Together, they represent a comprehensive solution for efficient time and cost-saving monitoring and control.

Data display directly from the process on your central screen

Sartorius ProControl@Remote user interface

**Sartorius ProControl@Inline –
Central monitoring and data storage**

Everything under control, at all times
Seamless quality control, secure production processes and above all shipping flawless products – processes must satisfy these requirements 100% every day. The Sartorius ProControl@Inline gives you access to all connected checkweighers and | or metal detectors and lets you view process-related data at any time, on any workstation in the network.

**Sartorius ProControl@Remote –
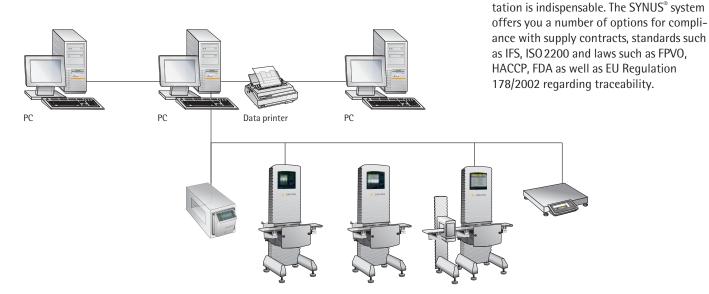Individual remote control of checkweighers**

A common language
Sartorius ProControl@Remote enables direct access to all checkweigher functions. The user interface of the selected checkweigher can be viewed on the PC screen or even operated via the PC depending on the authorization level. This allows remote and unlimited operation of any checkweigher in the network.

Sartorius USBPrint
All SYNUS® models can be equipped with an easy-to-access, IP65-protected USB interface for digital data storage and processing without a network connection. Used with a commercially-available flash drive, SYNUS® enables a fast, easy and paper-free transfer of the data record saved in its internal memory to any regular computer for processing in any standard web browser (e.g. Internet Explorer, Mozilla, Firefox, etc.) as well as in MS Excel version 2003 and higher.

Integration in ProControl for Windows, the QA management system from Sartorius

Today, 100% traceable process documentation is indispensable. The SYNUS® system offers you a number of options for compliance with supply contracts, standards such as IFS, ISO 2200 and laws such as FPVO, HACCP, FDA as well as EU Regulation 178/2002 regarding traceability.

PC   PC   Data printer   PC

Specifications

Weighing systems: WS 1 | 2 | 5 | 7 kg WZGP with SYNUS® evaluation electronics 6 | 10 | 15

	WS 1 kg WZGP	WS 2 kg WZGP	WS 5 kg WZGP	WS 7 kg WZGP
Weighing capacity	1000 g	2000 g	5000 g	7000 g
Smallest permissible verification scale	0.1 g	0.2 g	0.5 g	1 g
Throughput capacity depends on product, permissible zone of indecision and ambient conditions	max. 300 units/min	max. 200 units/min	max. 180 units/min	max. 180 units/min
Center-to-center distance	310 mm	300 mm | 350 mm | 400 mm | 450 mm | 500 mm		
Center-to-center distance CoSYNUS Infeed belt	800 | 900 mm			
Belt width	40 mm | 80 mm | 120 mm | 160 mm (IB / OB 150 mm)*	150 mm | 200 mm | 300 mm		
Roller diameter	IB 30, WB 22, OB 30 mm*	30 mm		
Transport medium	Circular belt or belt	Belt		
Conveyor direction	Right to left or left to right (please indicate when ordering)			
Operating height	600 mm ... 1100 mm (in 50 mm increments) Leg adjusting range: ± 25 mm			
Floor clearance	100 mm (± 25 mm)			
IP protection	IP54 (standard), IP65 (optional upgrade)			
Equipment safety	Design meets the requirements of EC Directives 89/392/EEC (machinery), Manufacturer's declaration in accordance with Appendix II B			

Dimensions and other spec.: see Data Sheet

* IB = infeed belt, WB = weighing belt, OB = outfeed belt

Available coils for metal detection: MDP-S

Aperture width in mm	Aperture height in mm						
	50	90	125	150	200	275	375
200 (upright version)						•	•
225	•	•	•	•	•		
275	•	•	•	•	•		
375	•	•	•	•	•		

SYNUS® | CoSYNUS 6 | 10 | 15 Evaluation Electronics

Standard Equipment	6	10	15
Stainless steel housing 1.4301, IP65 protection (incl. weigh cell)	•	•	•
Flat screen, 6.4'' TFT color display and keypad	•		
Flat screen, 10.4'' TFT color display and keypad		•	
15'' TFT color touch screen display			•
Weight readout: choice of gross, net or differential weight	•	•	•
SYNUS® operational display: distribution, yield, throughput, average value chart, large weight readout	•	•	•
CoSYNUS operational display: distribution, yield, throughput, average value chart, large weight readout, low frequency bar display, metal counter	•	•	•
Operating modes: classifying weigher with AWC evaluation / 3-way sorting or 4 user-definable class delimiters / 3 or 5-way sorting	•	•	•
Batch operation	•	•	•
5-way classification	•	•	•
Pulse-controlled sorting	•	•	•
Automatic zero-setting	•	•	•
Statistics	•	•	•
Documentation	•	•	•
Product data memory for 200 products	•	•	•
Program-controlled belt speed	•	•	•
Inputs for "Hide weigher	detector" control signal, event counter	•	•	•
Self-monitoring function, error reports	•	•	•
Auxiliary functions: ext. zeroing prompt, test pack, dialogs for diagnostics and service	•	•	•
Data stored in battery-backed memory	•	•	•
Choice of languages for program dialogs, user-selected	•	•	•

Optional Upgrades	6	10	15
Documentation system with integrated printer (IP65-protected)	•	•	•
Documentation system for external printer	•	•	•
Trend controller with display	•	•	•
Approval for use in legal metrology	•	•	•
Multiple statistics		•	•
Multiple statistics with scanning unit		•	•
Interface for individual weight value output for external evaluation and connection to SQC system	•	•	•
Fieldbus interfaces: PROFIBUS, DeviceNet	•	•	•
Data communication: Ethernet, TCP/IP, SPCfWin client, XML client/server	•	•	•
FDA 21 CFR Part 11		•	•
USBPrint	•	•	•
Check the completeness of packages with floating checkweighing and reject tolerance limits		•	•
5 classifying outputs with pulse output or signal maintaining logic for control of LEDs or external counters	•	•	•
Monitoring of average weight and repetitive rejections (only with 3-way sorting)	•	•	•
Way-pulse controlled sorting	•	•	•
Package length and spacing monitoring	•	•	•
Rejection monitoring		•	•
Filling spout monitoring		•	•
Automatic sampling		•	•
Volume evaluation	•	•	•