

## Excellence in Bin Weighing.



Schenck Process Fill-level Measuring Devices and Bin Weighers.  
High precision and efficiency.



we make processes work

# Fill-level Measuring Devices. Bin Weighers.

Highly accurate maintenance-free systems that can be placed anywhere along the production line.



You will find Schenck Process fill-level measuring devices and bin weighers where the exact weight of material in silos, bins, mixers or reactors needs to be determined. These devices are used in the food industry with its stringent sanitary and protection requirements; in hazardous areas in the chemical industry and in industrial environments where bin weighers have to meet high standards for dust-explosive atmospheres. Maintenance-free in nearly every temperature range and for the widest variety of weight classes and bin sizes.

Whether it's a small feeding bin, a mixer, a reactor or a large storage silo, Schenck Process' weighing equipment weighs reliably and accurately in every weight class from a few hundred kilograms (pounds) to over a thousand tons.

Easy to integrate with highly accurate results  
The compact unit consists of a load cell and mount designed for simple integration into the bin support. The advantage is that the mount compensates for the forces created by internal stirring systems. Weighing is recorded outside the bin without product contact, thus eliminating any influence that product characteristics might have had on the result.

#### Function

The fill level data can be communicated to the customer's control system in various ways e.g. analog or digital.

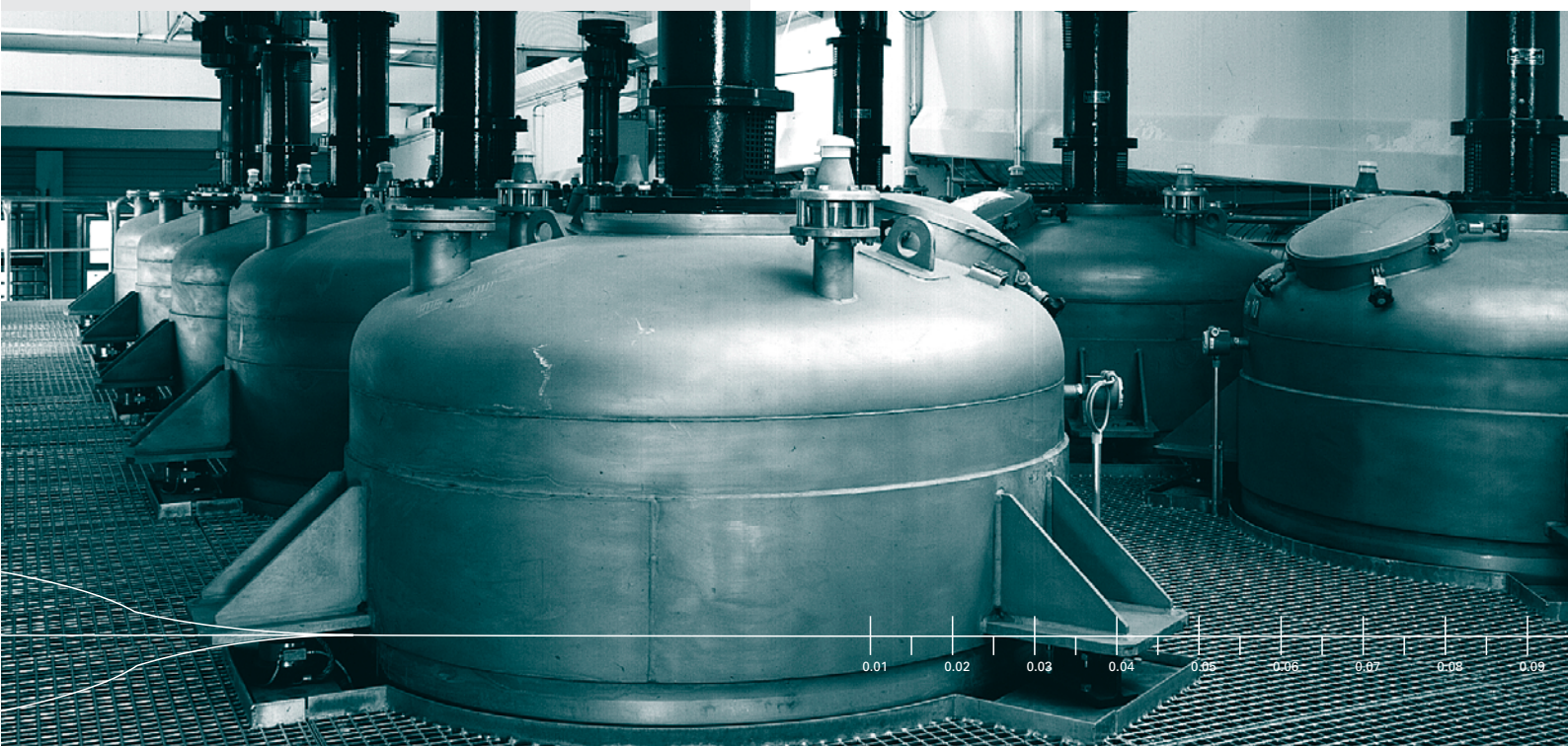
Extremely accurate – even at the extremes  
Reactor bins or mixers with high tare weights pose a special challenge. However, the relatively low product weight can still be fed and weighed with extreme accuracy – thanks to the Schenck Process ring-torsion load cell with its strong output signal.

#### Applications

- ❖ Storage bins
- ❖ Reactors
- ❖ Mixers
- ❖ Silos
- ❖ Tanks

#### Industries

- ❖ Plastics
- ❖ Food and beverage
- ❖ Chemicals
- ❖ Cement
- ❖ Commodities
- ❖ Pharmaceuticals
- ❖ Steel



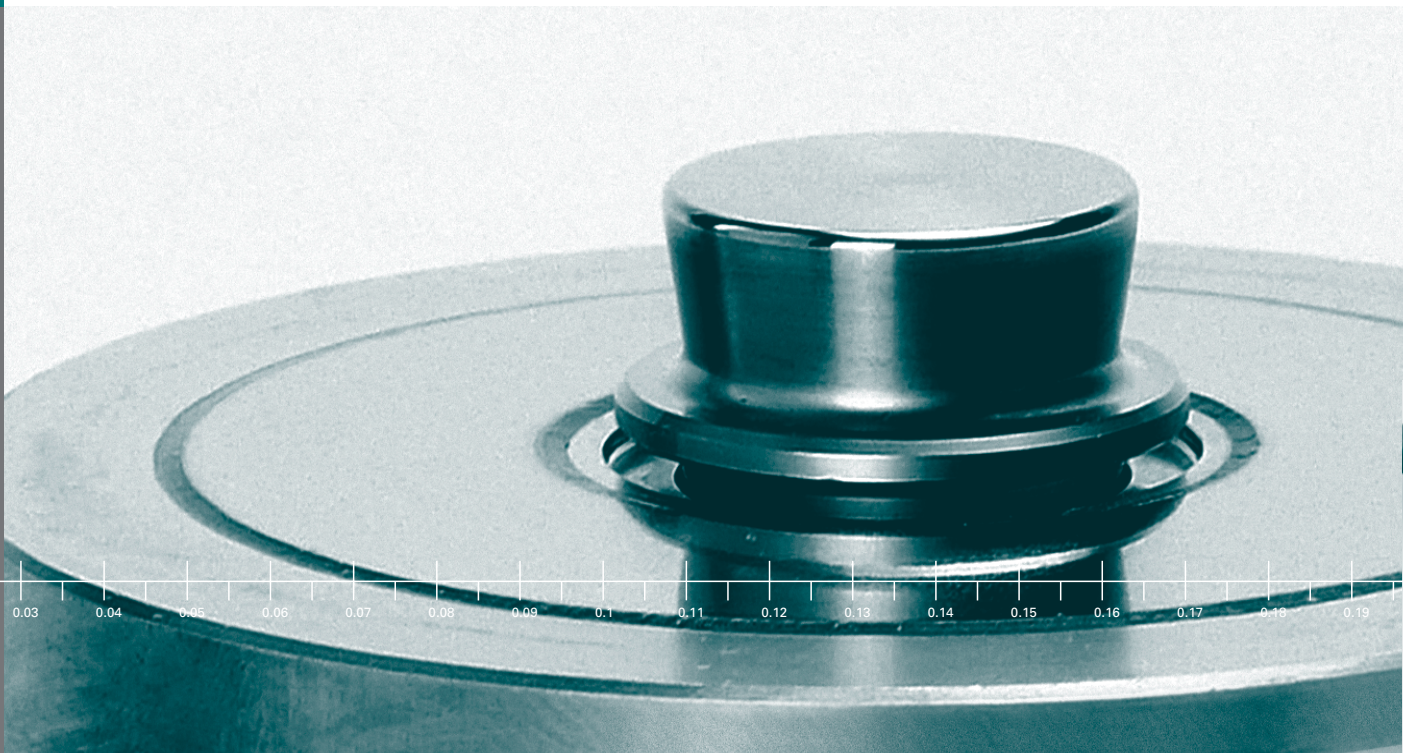
Precise results under aggravated conditions  
Schenck Process weighing technology goes far beyond standard fill-level measuring requirements, e.g. you may control the filling of product into the bin or discharge of product from the bin (batching operation). The process control system supplies the setpoint value and receives the quantity actually fed as feedback. This reduces the processing load for the control system and guarantees high accuracy. Product can be fed in a coarse or fine flow or using analog controls. The DISOMAT® electronic evaluation and weighing system handles the feeding control.

#### A System with Advantages:

- ❖ High weighing accuracy, even for large dead loads
- ❖ High protection class of load cells
- ❖ Applications in hazardous areas (gas and dust)
- ❖ Maintenance-free
- ❖ Large overload range
- ❖ Wide temperature range
- ❖ Easy to plan and integrate
- ❖ Review of customer drawings ensures good planning

# For All Standards. For Every Task-No Matter How Special.

Weighing sensors. Developed by the scale experts.



Whether you need conventional solutions for regular tasks or want to weigh something in a difficult location, Schenck Process provides you with everything you need: from standard units to weighing sensors that can turn practically anything into a scale.

Accuracies range from  $\pm 0.05\%$  to the highest-precision legal-for-trade C5 and C4 Mi-7.5 ( $\pm 0.01\%$ ). We can provide the accuracy that meets your needs. For container silos from 30 kg small bins to 25 t mixing vessels and from 1 t to 1,000 t product containers.

Regardless of the environment where you intend to set up the weighing equipment, we have the right sensors for the most varied weighing forms and installation conditions: hazardous area applications, environmental conditions requiring protection types up to IP 68 or hot applications with temperatures of up to several hundred °C.

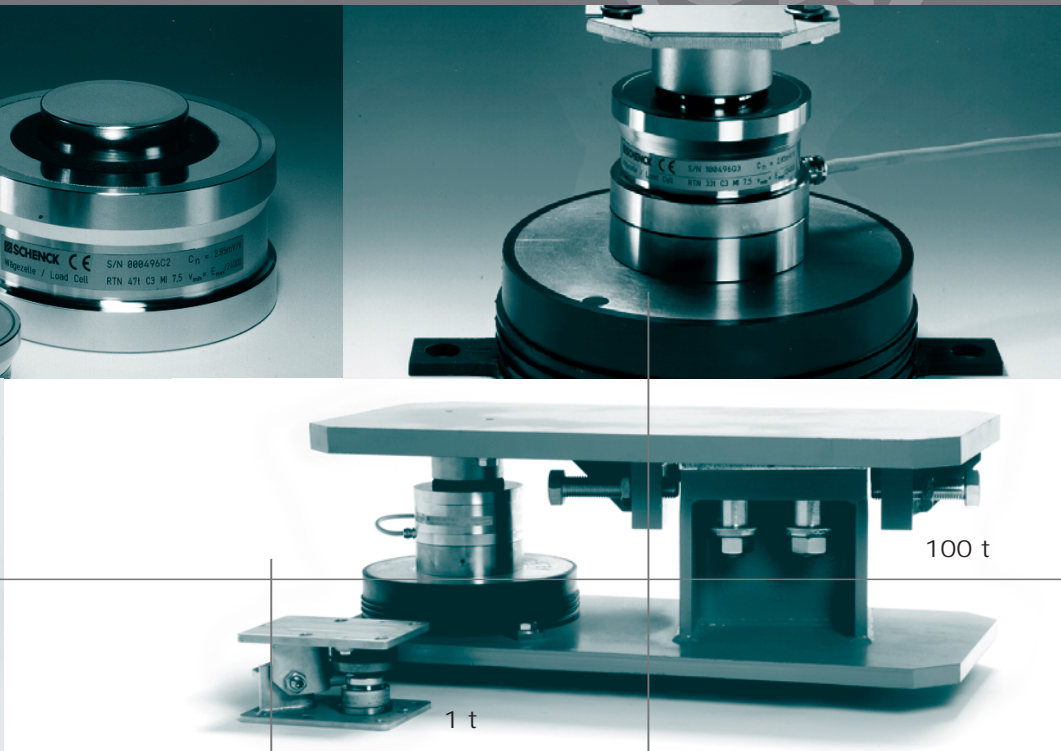
Entrust your weighing tasks to the people who invented RT load cells. Contact the scale experts – the Schenck Process experts. They know your applications and can work with you to engineer a successful solution exactly to your needs.

## Benefits Galore:

- ❖ Compact, robust design for secure and fast installation
- ❖ Insensitive to dynamic loads
- ❖ Maintenance-free compact mounts without tie-rods
- ❖ Highly accurate and legal-for-trade weighing in any environment
- ❖ 24/7 service
- ❖ RTN load cells: Test certificate for legal-for-trade use in the EU, Switzerland, Czech Republic, USA, South Africa, Australia and China. Other countries available upon request.

## Options and Additional Peripherals:

- ❖ Varying cable lengths
- ❖ Explosion-proof versions with ATEX registration for hazardous areas (gas/dust)
- ❖ Specially adapted corrosion protection
- ❖ Heat insulation plates to protect the load cells
- ❖ Weld-on plates for simpler installation or height levelling



### RTB / RTN Ring Torsion Load Cells

Extremely wide range of applications. For example, used to reliably and very accurately check the filling of valuable bulk material on hopper scales.

RTN rated load: 1 t - 470 t [metric]

Accuracy classification:  $\pm 0.05\%$  to C5-C4 Mi-7.5

RTB rated load: 0.13 t C3, 0.25 t C3, 0.5 t C3 Mi 7.5, C6 [metric]

### DMA Measuring Eye

This sensor for recording forces can be easily pressed into silo supporting structures without holding up production or requiring mechanical design alterations. Equip your silos with DMA Measuring Eye and you will benefit from fully maintenance-free fill-level data acquisition.

Also suitable for high-temperature environments, up to IP 68.

### DKM / VKN Compact Mount

Maintenance-free complete solution with integrated hold-down and pendulum limit. (no tie-bar)  
Rated load: 0.25 t - 470 t [metric]

The picture shows the VKN 100 t and VKN 1-4.7 t compact mounts

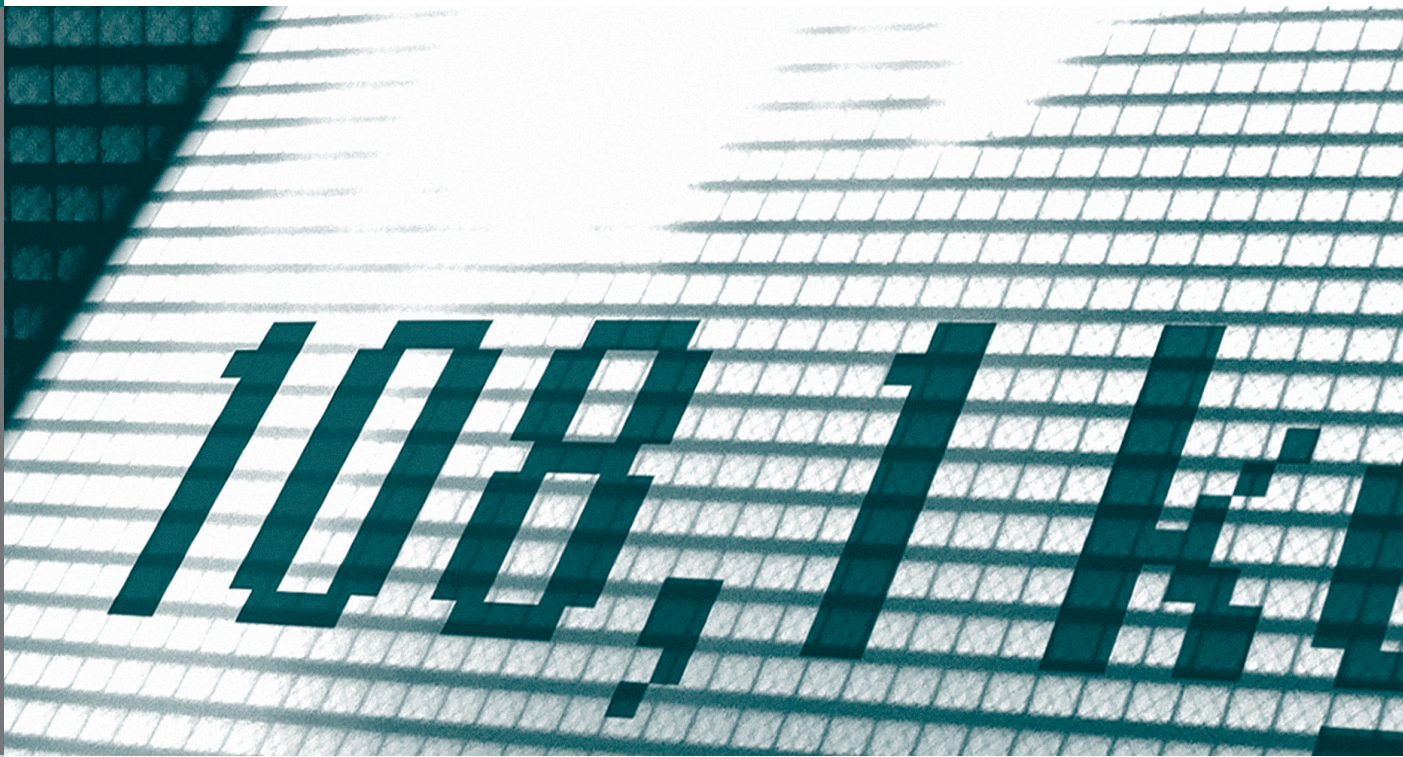
### DEM / VEN Elastomer Mounts

Universal load cell mounts for various industrial scales.

Self-centering, minimal reaction to side forces.  
Insensitive to tilts in the connecting structure of up to  $0.6^\circ = 10 \text{ mm/m}$   
Rated load: 0.25 t - 470 t [metric]

# DISOMAT® Opus. Made to Measure.

Great value at the cutting edge of technology.



The latest member of the acclaimed DISOMAT® family proves that legal-for-trade logistics solutions do not have to be expensive. It's compact, legal-for-trade and equipped with state-of-the-art processor and fieldbus technology. At the same time, this surprisingly powerful component is an ideal solution for all simple logistics applications.

The cost-effective solution for legal-for-trade applications: DISOMAT® Opus

The basic solution that pays off in legal-for-trade and standard applications. It captures weight values, displays them, prints them out and forwards them to a higher-level system, if desired. The solution comes in three different housing options: a stainless steel tabletop variant, wall-mounted variant and a special DIN rail design for control cabinet installation. It interacts easily with other components thanks to its optimal hardware and software technology. Ideal for platform scales, container scales, truck scales, crane scales, filling level measurements or single-component dosing. The selection of different interfaces enables a wide range of simple process applications.



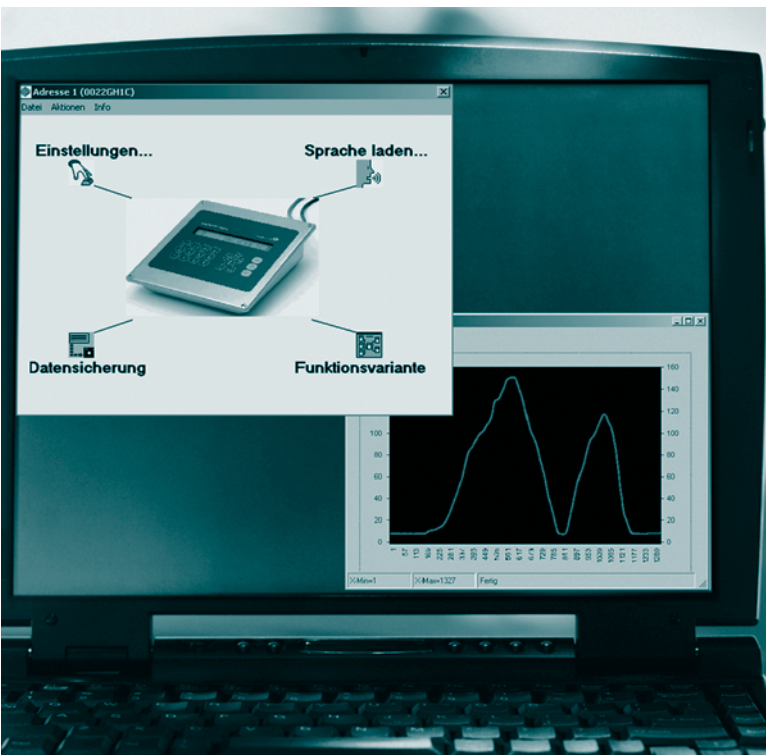
**Convenient**  
(operation from a PC)  
With the DISOPLAN Opus configuration software, you can conveniently parameterise and adjust the devices from a PC with a serial or Ethernet interface.

- ❖ **Format print forms:**  
Configure print forms easily and quickly on the PC
- ❖ **Diagnostics / weight recording:**  
Select any time scale  
Triggerable  
Autoscaling  
Evaluate the signals in Excel

**Compact**  
Thanks to the built-in calibration memory, you do not have to create and file legal-for-trade references on paper.

**Smart**  
The parameters of the scale, including the adjustment data, are stored in the connector plug of the load cell cable (device dongle). With all parameters stored in the dongle, in the unlikely event of failure, a replacement unit can be installed and the system can immediately get back to work still fully calibrated and legal-for-trade.

**Compatible**  
A broad spectrum of serial interfaces and fieldbuses makes it easy to integrate the DISOMAT® Opus into your process control system. Apart from these powerful interfaces to automation systems, you can continue to use conventional interfaces for communication.



### The System That Pays for Itself:

- ❖ Clear text command menu on the LCD display
- ❖ Legal-for-trade weight indicator for many different applications
- ❖ Fully system-ready with analog, serial, binary and fieldbus interfaces
- ❖ Intelligent load cell plug (dongle)
- ❖ On-board Ethernet interface
- ❖ On-board USB connector for alphanumeric keyboards

Picture: Functions in the DISOPLAN menu and Diagnostics/weight recording

Smart, Clever and Cost-effective.

DISOBOX®

The key to digital weighing.



When a successful product with new features takes the market by surprise, you are bound to benefit from it. Schenck Process' DISOBOX® takes the mechatronic scale to a whole new level and integrates easily into the scale. At the same time, it sets new standards for convenience, compatibility and versatility.

DISOBOX® transforms a conventional analog scale into a digital scale for process applications and legal-for-trade solutions. When combined with DISOMAT® evaluation devices or the DISOVIEW-E software, it can produce high-precision, multi-talented weighing systems.

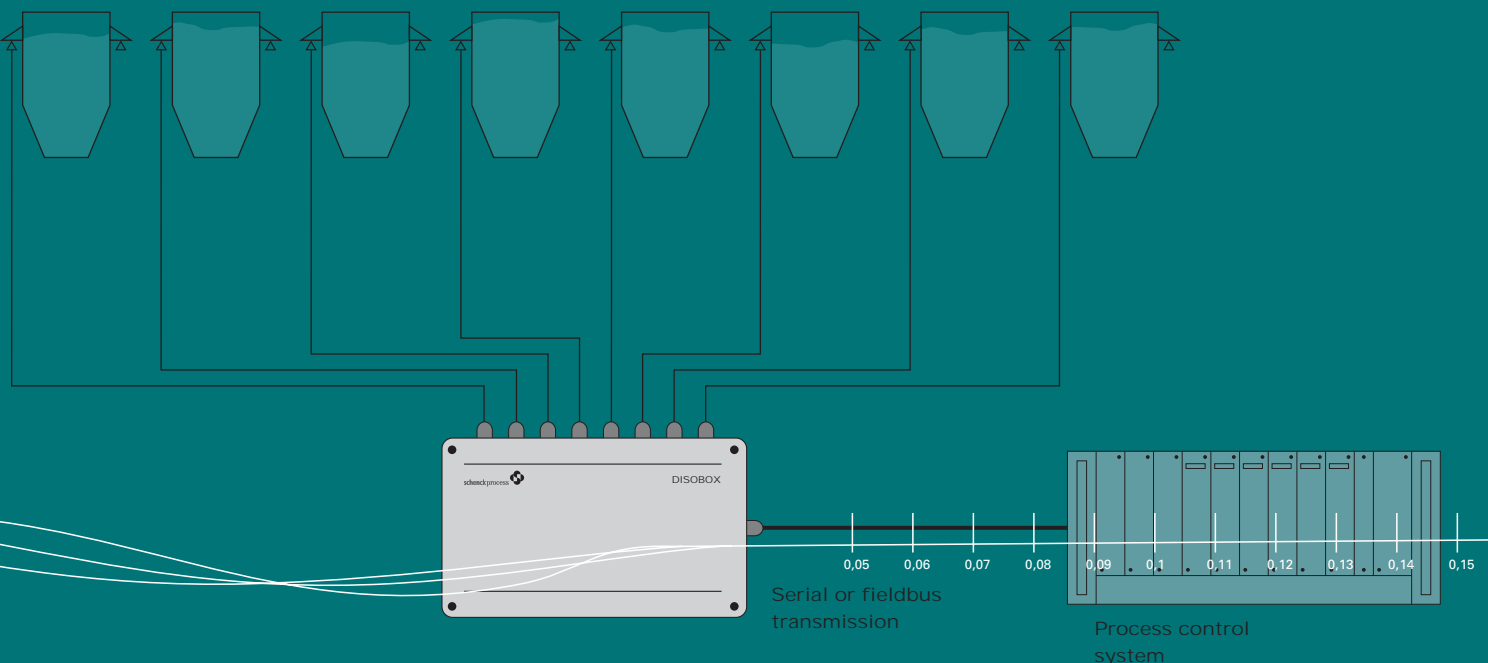
Load cells with different rated loads can be assembled into scales for asymmetrically designed systems – even in legal-for-trade applications.

It can act as a weight transducer for measuring fill levels in bins and silos or as a standalone station for monitoring limit values: No matter what the application, DISOBOX® replaces conventional analog transmitters and PLC components and makes life easier for system engineers and electricians.



## A Smart Solution:

- ❖ Local evaluation electronics protected to IP 65
- ❖ Separate measurements from up to 8 load cells or weighing systems
- ❖ Synchronous data acquisition (no multiplexer)
- ❖ Digital corner balancing
- ❖ Flexible use of various load cell types and makes
- ❖ Monitoring of individual load cells or load cell groups = early failure detection
- ❖ State-of-the-art communication modules (Profibus, Devicenet, Ethernet)
- ❖ Active components can be replaced without loss of calibration or gauging



Eliminate up to seven electronic weighing devices. Being an 8-channel converter, it can acquire data locally from up to eight bin scales and forward the signals to the control system over a Profibus or Ethernet line.

In an Ethernet-based solution, you can also access the individual scales and even individual load cells over your own intranet. Remotely diagnosing and maintaining your equipment is fast and easy, at any time, from any place.

The output signal is digitalised separately for every attached load cell. That way, you can precisely analyse the dead load distribution and conveniently perform digital corner balancing during the start-up process.

While in operation, the system analyses how the load is distributed on the scale and individually monitors each load cell.

Malfunctioning components are identified quickly. That means you save time, cut material costs and get far more reliable processes.

## Our Service.

Count on Us. Worldwide.



## Engineering

Let Schenck Process put its expertise to work for you with both individual components and entire systems.

In addition to our field-proven off-the-shelf products, we can custom-design solutions just for you.

Count on us for assistance with planning your weighing system application from the start of the project. We can even review and validate your mechanical drawings to make sure they meet accepted engineering standards.

Supply us with your 3D system design and we can advise you on force shunts and accuracy issues.

We offer project management, customer-specific training and individual assistance.

Contact the Schenck Process specialist near you. We are everywhere you are. Worldwide.

### After-Sales Service

Quality and reliability are the cornerstones of our philosophy all over the world. That is why we offer a wide-ranging service plan from strict quality control, installation and commissioning through to continuous support.

Do you want to ensure your systems run smoothly? Count on our know-how. Our specialists will service and repair your equipment. We will deliver spare parts just in time. Wherever you are. Offering you the best in worldwide, personal, hassle-free service.

Find out more about our new, comprehensive Process Advanced Service System.

It will deliver the best after-sales service for your needs.





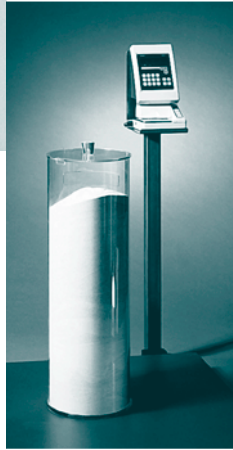
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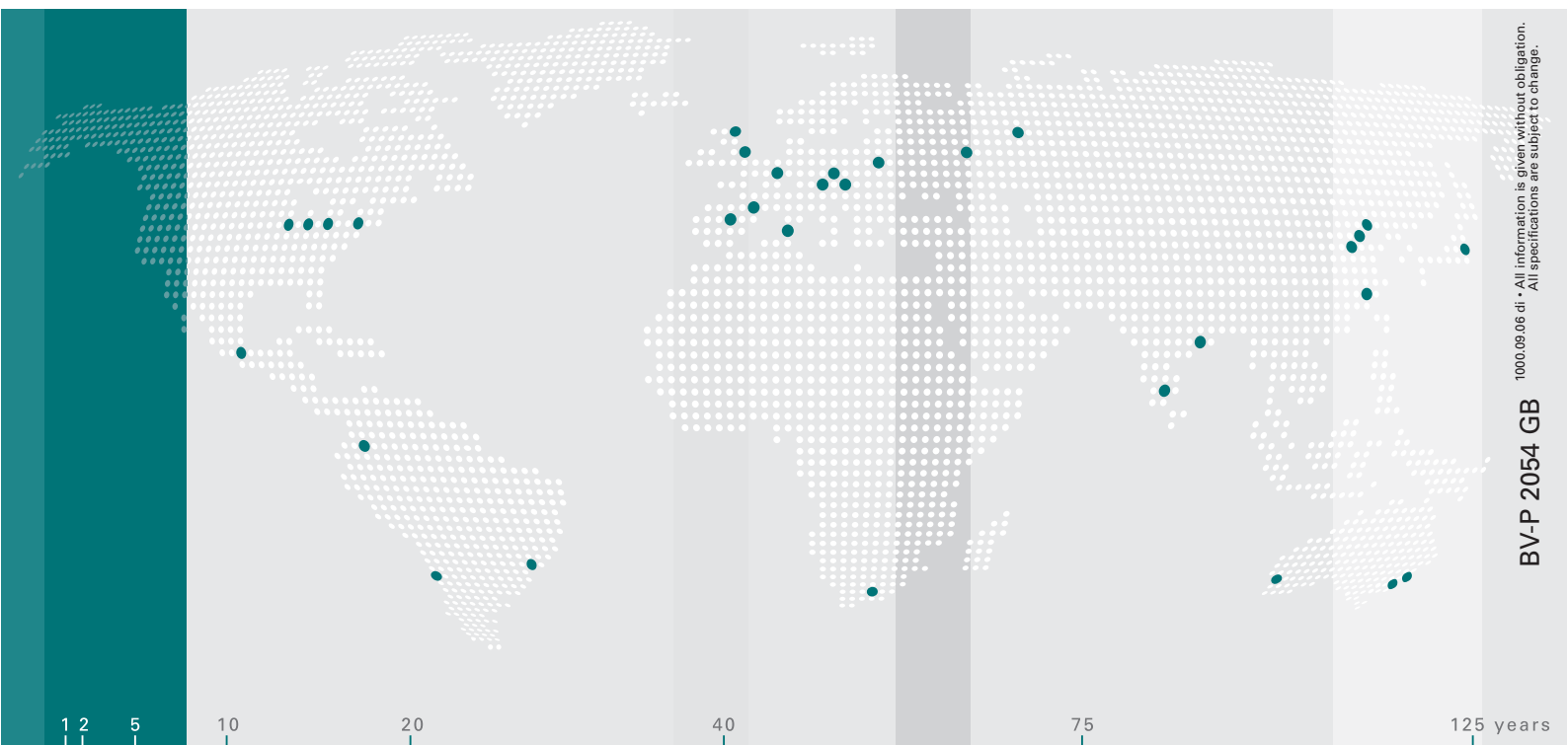


weighing

feeding

screening

automation



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Schenck Process is the global market leader of solutions in measuring and process technologies in industrial weighing, feeding, screening and automation.

Schenck Process develops, manufactures and markets a full range of solutions, products and turnkey systems on the basis of combining process engineering expertise, reliable components and field-proven technology.

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