Smart weighing technology: empowering smart processes for enhanced efficiency

Modular and intelligent weighing components combining reliability, precision, and legal-for-trade compliance to maximize your efficiency.

Modular and intelligent complete weighing solutions

With HBK, you can rely on legal-for-trade compliance and the precision required to significantly improve financial and production viability. With a legacy of seven decades under its HBM brand, HBK is the unrivalled global reference for Legal-for-trade and industrial weighing processes.

Whether used in industrial, hygienic, static, or dynamic weighing applications, HBK components offer a flexible modular kit enabling you to design the optimal solution for your purpose. These include combined load cells, weighing modules, mounting aids, and other accessories with state-of-the art electronics and specialized software to form your dedicated measurement chain.

HBK solutions helps to optimize a wide variety of weighing applications:

- Industrial process control
- Process and level weighing
- Filling, dosing, checkweighing
- Sorting and batching
- Scale manufacturing
- Truck scales

Flexibility and modularity:

HBK components offer flexibility, enabling customization to specific process requirements,and ensuring a tailored solution that enhances overall efficiency.

Legal compliance and precision:

Benefit from guaranteed legal compliance and the necessary precision for your weighing processes.
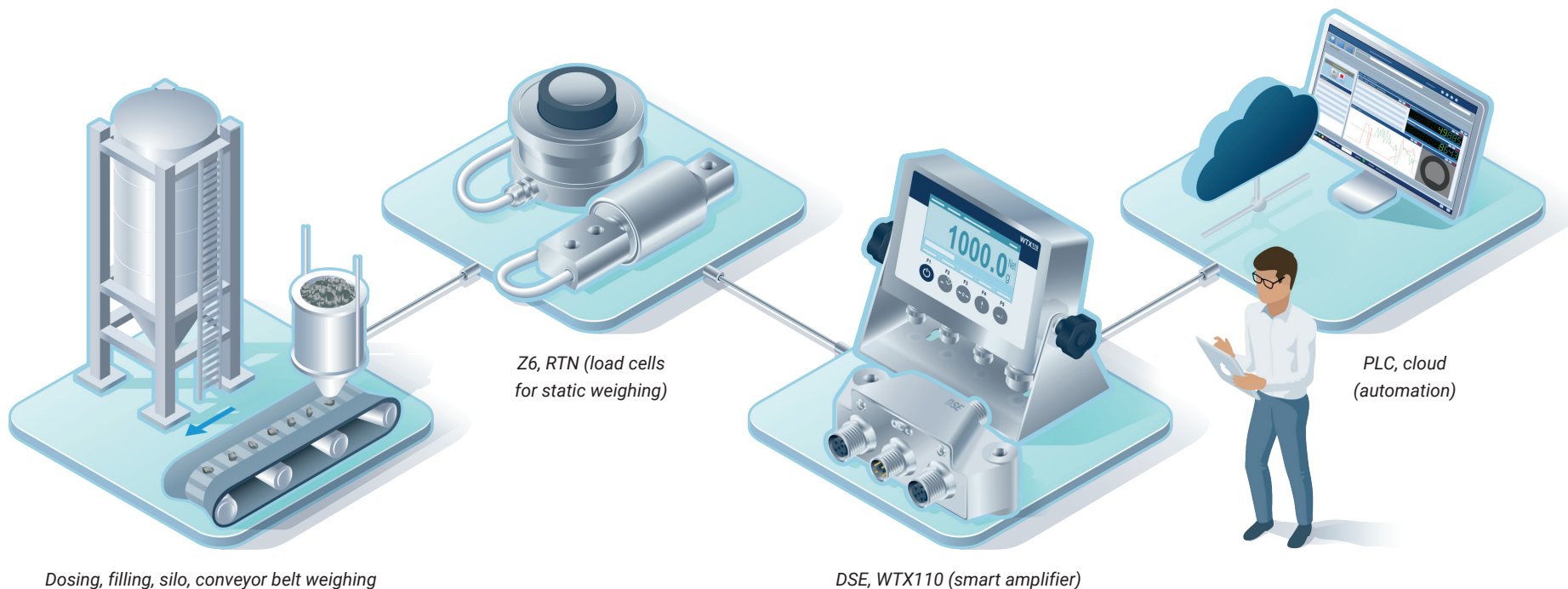
Product options and expert support:

HBK provides a range of specialized products, such as explosion-proof, hygienically designed, or EMC-tested solutions, catering to specific industry needs.

Process and level weighing

We offer comprehensive solutions for process and level weighing in industrial applications, tailored to meet your unique industry and process requirements. Our specifically designed load cells and weighing electronics, integrated with advanced algorithms, ensure precise measurements for controlling complex sorting, weighing, and batching processes. Whether you need stand-alone systems or seamless integration into large industrial setups, our solutions, backed by HBK's open automation concept, elevate operations to unmatched levels of efficiency and precision.
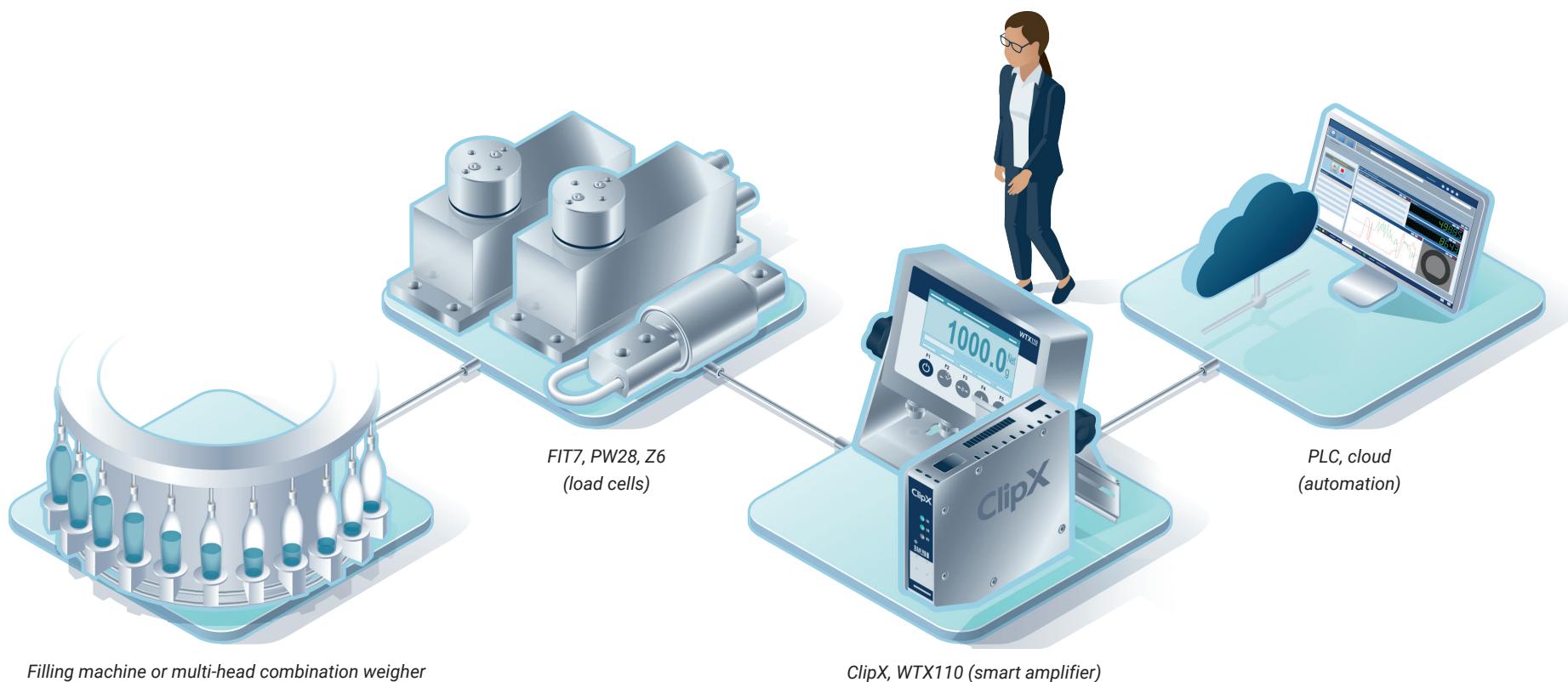
- Experience unmatched efficiency and accuracy for cost savings, regulatory compliance, streamlined processes, and consistent batch production

- Unlock precise control for sorting, weighing, and batching. Elevate product quality, consistency, and informed decision-making

- Embrace the future with open automation. Achieve integration flexibility, interoperability, and future-proof technology solutions

- Integrated algorithms, filters and smart functions allow for real-time control and predictive maintenance

Dosing, filling, silo, conveyor belt weighing

Z6, RTN (load cells for static weighing)

DSE, WTX110 (smart amplifier)

PLC, cloud (automation)

Filling, dosing and checkweighing

In the demanding landscape of the food industry, where freshness, quality, and regulatory compliance are paramount, HBK delivers robust weighing solutions designed specifically to meet these challenges. Our weighing amplifiers for the food industry and certified load cells for hygienic and aseptic applications have been meticulously developed to enable efficient production while adhering to national and international hygiene regulations, including EHEDG standards. Moreover, our digital load cells for checkweighing offer stand-alone evaluation of light barriers and precise control of ejectors, freeing up your PLC for other critical control tasks.

- Unleash durability in any environment with versatile protection classes, conquering challenging conditions effortlessly

- Elevate compliance and efficiency with hygienic electropolished surfaces. Prevent contamination, enhance durability, exceed regulations

- Optimize costs, minimize waste with tailored automation solutions. Unlock efficiency amidst evolving processes

- Efficiency, safety, flexibility, compliance – integrated overload protection and interchangeable footprints, HBK delivers it all

FIT7, PW28, Z6
(load cells)

PLC, cloud
(automation)

Filling machine or multi-head combination weigher
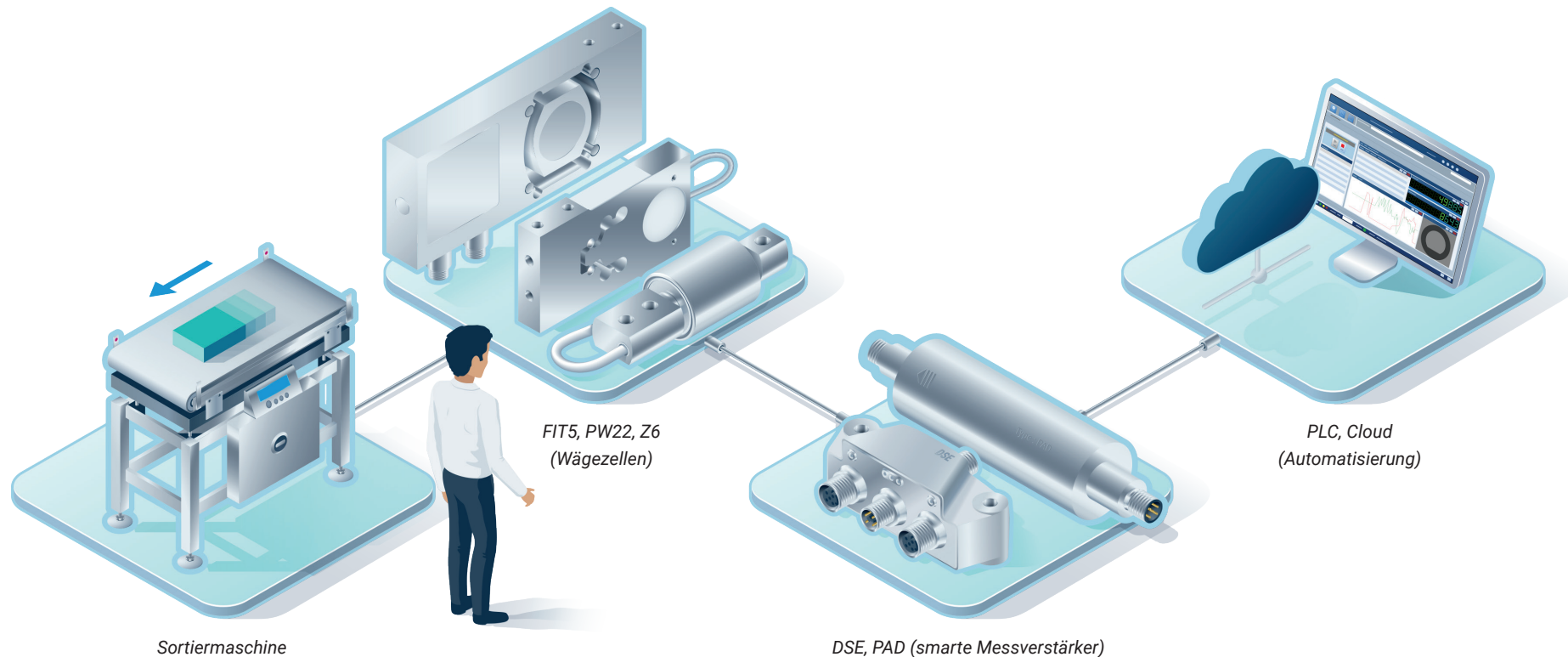
ClipX, WTX110 (smart amplifier)

Sorting and batching

HBK provides advanced sorting and dosing solutions that combine precise load cells, powerful electronics, and software. Our cutting-edge technology surpasses industry standards in functionality, speed, and accuracy. With our filling-by-weight process, we guarantee high-precision results down to the gram, ensuring accurate packaging content. Our digital load cells simplify the complex filling algorithm setting process, drawing on decades of experience. Designed with maximum protection and hygiene certifications, our load cells are ideal for the food industry. Experience aseptic cold filling without compromising product integrity with HBK's innovative solutions. Our sorting and dosing applications cater to diverse industries like manufacturing, logistics, food processing, and pharmaceuticals, enabling efficient production, inventory management, and quality control.
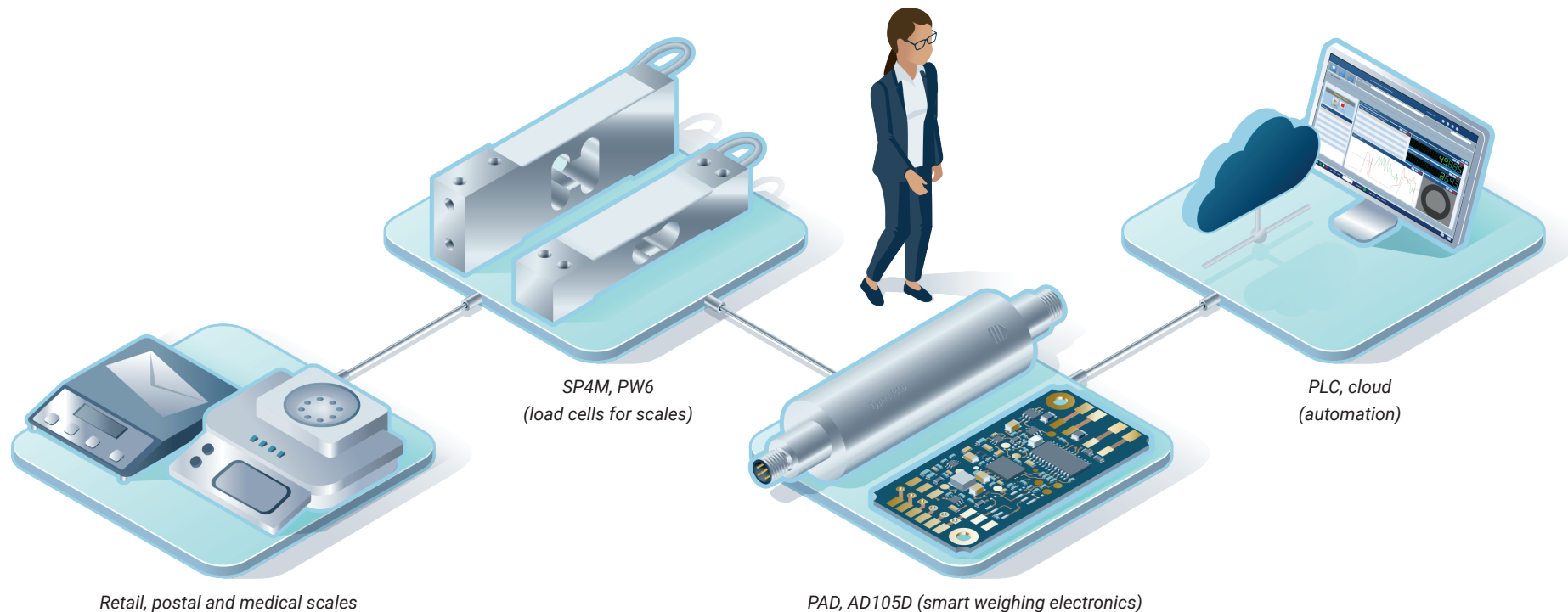
- Achieve precise dosing and filling with our filling-by-weight process. Ensure accurate measurements, enhance quality control, and minimize waste

- Hygienic, durable load cells with maximum protection. Ideal for the food industry's strict cleanliness standards

- Exceptional accuracy with HBK's precise load cells. High-precision results down to the gram for accurate packaging and product integrity

- Unleash the power of HBK's advanced electronics and software. Elevate your sorting and dosing processes with industry-leading functionality, speed, and accuracy

FIT5, PW22, Z6
(Wägezellen)

PLC, Cloud
(Automatisierung)

Sortiermaschine

DSE, PAD (smarte Messverstärker)

Scale manufacturing

Scales are everywhere. We see them in everyday life at the supermarket checkout or in the post office, but many more are used in industrial environments, for example, tank and container scales, medical scales, counting scales and platform scales. HBK is one of the leading suppliers of weighing technology for scale manufacture. Thanks to decades of experience in weighing technology, HBK load cells, accessories, amplifiers and software are designed to meet the highest demands for precision and reliability. In addition, HBK is a component supplier only – not a competitor. Complying with Legal-for-trade international standards, HBK's scale solutions guarantee reliability and consistency. HBK addresses manufacturers' challenges by offering scalable solutions, ensuring a stable supply chain, complying with regulations, driving innovation, and providing cost-effective options without compromising quality.
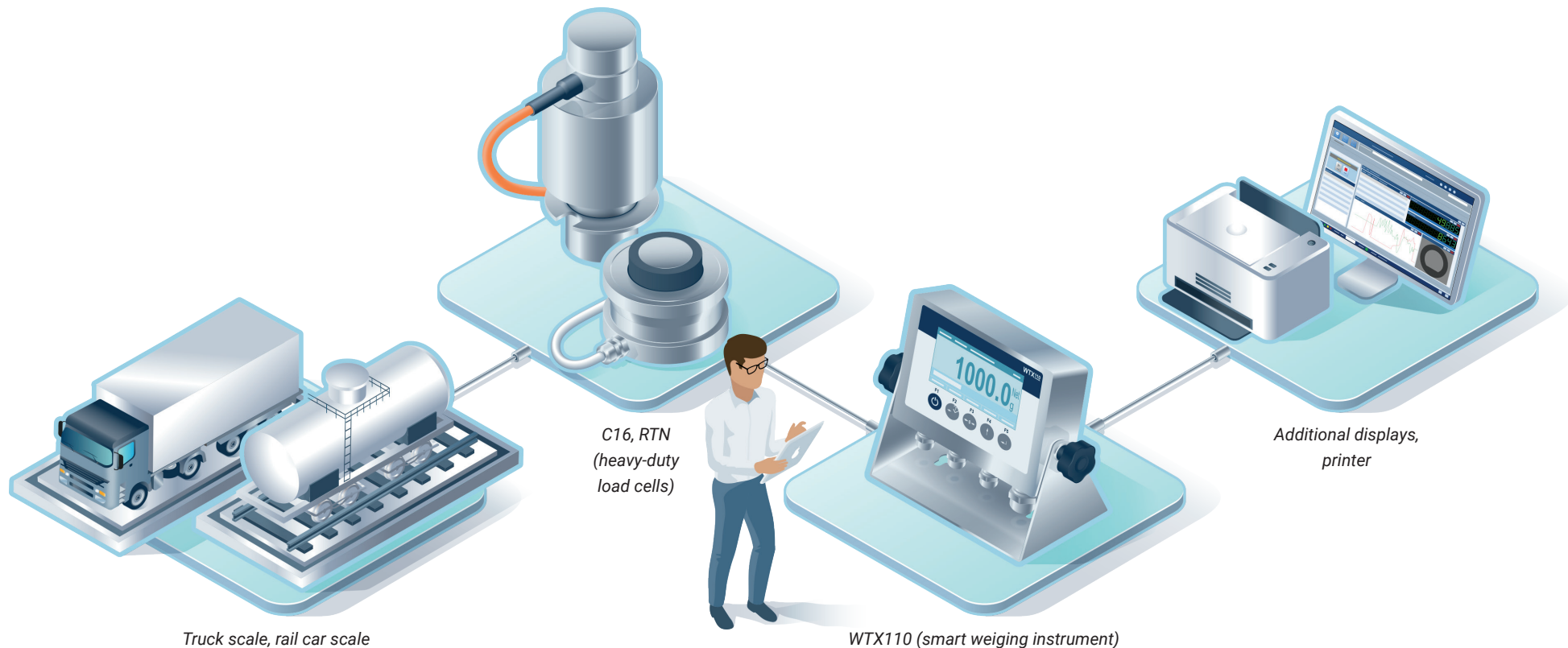
- Legal-for-trade weighing solutions: compliance, high standards, customer confidence, error prevention, fair trade support, enhanced reputation, and market access

- Choose from stainless steel, aluminium, or rugged plastic casings for unrivalled durability, corrosion resistance, and effortless cleaning

- Embrace versatility with load cells offering a wide capacity range to meet diverse customer needs, design scales for various applications, and tap into a broader market

- Achieve unparalleled precision with high-accuracy load cells. Essential for quality control and regulatory compliance, exceeding customer expectations and elevating scale performance and reliability

SP4M, PW6
(load cells for scales)

PLC, cloud
(automation)

Retail, postal and medical scales

PAD, AD105D (smart weighing electronics)

Truck scales

Vehicle scales have to meet very special requirements to ensure effective and economical weighing of large masses. In many cases, digital load cells are the ideal choice for this task. HBK offers a complete vehicle weighing solution including robust, digital load cells based on strain gauge technology, a matching weighing terminal with digital display and an extensive choice of interfaces. This means that truck scales can be easily connected to devices such as printers or a second display, or integrated in any process automation system.

- HBK's precise and adjustable components allow for the calibration of vehicle scales.

- Unleash convenience, safety, efficiency with remote control and display. Real-time monitoring, data management, integration, and flexibility. Optimize operations, boost productivity

- Ensure the durability of your vehicle scales with rugged load cells

Truck scale, rail car scale

C16, RTN (heavy-duty load cells)

WTX110 (smart weiging instrument)

Additional displays, printer

Load Cells

At HBK, we provide the perfect fit for your application, guaranteeing precision, robustness, and unmatched reliability in any environmental condition. Our load cells are meticulously designed to be tamper-proof and fully compliant with all necessary specifications.

- **A wide measuring range:** Nominal loads from 300 g to 470 t

- **Maximum flexibility:** Analog and digital load cell types, plug & measure solutions, various cable options, matching accessories, …

- **Adaptability to the measuring task:** IECEx-/ATEX-compliant and temperature-resistant variants, hygienically designed load cells

- **Certified value:** Legal-for-trade (OIML, NTEP), RoHS, EHEDG and availability 24/7 at the online shop

- **Accuracy:** Analog load cells fulfilling the C6 Accuracy Class requirements. Digital load cells and electronics with higher accuracy standards

- **Legal-for-trade:** Load cells that are certified and approved by metrological authorities, suitable for commercial transactions

Load cell overview

	Single point load cells	Digital load cells	Beam load cells	Ring torsion load cells	Canister load cells	Tension compression load cells	Strain transducer
Nominial loads max. capacities	300 g – 1 t	3 kg – 75 kg	5 kg – 10 t	1 t – 470 t	20 t – 400 t	50 kg – 50 t	50µm – 500µm
Accuracy class	C3/C6	C3/C6	D1/C3/C4/C6	0.05/C3	D1, C3, C4, C5	0.2/0.1/D1/C3/C4	0,5
Degree of protection	IP65, IP68, IP69K	IP66, IP68, IP69K	IP67/IP68/IP69K	IP68/IP69K	IP68/IP69K	IP67/IP68/IP69K	IP68
Materials	Aluminium Stainless steel	Stainless steel	Nickel plated/ stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Common applications	Letter scales, commercial scales, industrial scales, …	Checkweigher, filling/dosing machine	Dosing, filling, conveyor scales, industrial floor scales, tank weighing, …	Dosing, filling, Silo and container weighing, …	Truck scales, Silo and container weighing, …	Suspendend tanks, conveyors, platform scales, batching and hybrid scales	Silo weighing, press monitoring, force measurement in C-frames
Special features	M12 connector; hygienic versions; explosion proof variants, Legal-for-trade, …	Legal-for-trade, 10 × overload protection, internal filters, digital I/O, M12 connector	Config. options: cable lengths and types, built-in M12-plug, explosion-proof variants, accessories, weighing modules, …	Config. options: cable lengths, explosion-proof variants, accessories, weighing modules	Config. options: cable lengths, explosion-proof variants, accessories, weighing modules	Configurable options, such as cable lengths, explosion-proof variants.	Inexpensive and reliable simultaneously – ideal for measuring large forces, easy mounting via two screws (M6), available with integrated amplifier electronics
Certificates	OIML, NTEP, FM, EHEDG, NEPSI, ATEX/IECEx	OIML	OIML, NTEP, ATEX/ IECEx, FM, NEPSI	OIML, ATEX,/ IECEx, FM, NEPSI	OIML, ATEX/IECEx, FM, NEPSI	OIML, FM, NEPSI, ATEX/IECEx	

Terminals, modules and electronics

HBK weighing electronics are meticulously designed to meet the demanding requirements of both static and dynamic weighing applications in harsh production environments. With our extensive range of industrial interfaces, flexible software solutions for seamless integration, and specialized features enabling effortless on-site operation, you can rest assured that our solutions ensure strict compliance with legal requirements.

- **Maximum connectivity:** All relevant interfaces from analogue output to modern fieldbus or IoT connection

- **Adaptability to the measurement task:** Integration in the control cabinet or close to the sensor, helpful monitors and soft keys, robust and hygienic housings

- **Ease of use:** Easy setup, real-time data analysis, and simple process control

- **Legal compliance:** Legal-for-trade accuracy, tamper-proof signal digitalization, EHEDGcompliant solutions

- **Fast delivery times** and availability 24/7 at the online shop

Weighing electronics overview

	EMBEDDED OEM			INDUSTRIAL						SCALES
	AD105	**AD103**	**AD112**	**WTX120**	**AED**	**PAD**	**ClipX**	**DSE**	**digiBOX**	**WTX110**
Type	Digital amplifier board with WT functions	Digital amplifier board with WT functions	Digital amplifier board with WT functions	Digital weighing terminal with display and fieldbus	Base board and housing for Ad103C amplifier	Digital WT amplifier in a hygenic housing IP69K for food application	Signal conditioner with internal calculations for IPC and WT solutions, fieldbus and data logging options	Digital weighing electronics with fieldbus and hygienic housing	1 − 4 channel amplifier with fieldbus and internal calculations for IPC and WT applications	Digital weighing terminal with colour display and high protective mode IP69K
Interface	CANopen, RS485 (half-duplex)	RS232	CANopen, RS485 (full-duplex)	Profinet, Profibus, EtherCAT, Modbus-TCP, Ethernet (TCP/IP), RS284, RS232	CANopen, DeviceNET, Profibus, RS485	CANopen, RS485 (full-duplex)	Profinet, EtherCAT, Ethernet/IP, Modbus TCP, Ethernet (TCP/IP), OPC UA, REST	Profinet, EtherCAT, Modbus-TCP	Profinet, EtherCAT, Ethernet (TCP/IP), (more in preparation)	Ethernet (TCP/IP) or USB 2.0, RS485, RS232
Connects to x load cells sensor impedance (ohm)	1 sensor, 300−1200	1 − 8 sensors parallel, 40−4000	1 sensor, 300−1200	1 − 8 sensors parallel, 43−3300	1 − 8 sensors parallel, 40−4000	1 sensor, 300−1200	1 − 4 sensors, parallel 40−4000, all other inputs only 1 sensor	1 sensor, 200−4500	4 separate channels, 1 − 4 SG in parallel each 40−4000	1 − 8 analog sensors parallel, 43−3300, 32 digital sensors (RS485-bus)
Resolution accuracy bandwidth	24-bit, 0.01%, 6000d=e 20 Hz	24-bit, 0.01%, 10000d=e 200 Hz	24-bit, 0.01%, 6000d=e 120 Hz	24-bit, 0.01% 10000d=e, 30000=d, 20 Hz	AD103C: 24-bit, 0.01%, 10000d=e 200 Hz	24-bit, 0.01% 6000d=e 120 Hz	24-bit, 0.01% (SG), 3.8 Hz digital-out, 2 kHz analog-out	24-bit, 0.01% 10000d=e 200 Hz	24-bit, 0.01%, 10000d=e SG: 4 kHz, Pz: 20 kHz (per channel)	24-bit, 0.01% 10000d=e, 30000=d, 20 Hz
Special features	Peak-detection, limit-switches, 1× DI, 1 × DO	2 × DI/4 × DO, with AED-device	Peak-detection, limit-switches, 1 × DI, 1 × DO	Display solution for industrial scale- and filler- applications, external display optional, alibi-memory	Limit-switches, 2 × DI, 4 × DO IP65 field-housing	Hygienic solutions for the food industry, IP68/IP69K	Peak-detection, limit-switches, 2 × DI, 2 × DO, analog-output ±10 V or-20 mA, many internal calculated channels	Hygienic solutions for the food industry, IP68/IP69K	Peak-detection, limit-switches,4 × DIO, analog-output ±10V or −20 mA many internal calculated channels	Display solution for truck and vehicle scales, filler and counter applications, alibi-memory
	Digital filter, limit switches, checkweigher, filler			Digital filter, limit switches, 4 × DIO, AO (V/mA) filler, scales	Digital filter, limit switches, checkweigher, filler		Digital filter, limit switches, check-weigher	Digital filter, limit switches, checkweigher, filler	Digital filter, limit switches, check-weigher, filler	Digital filter, limit switches, 4 × DIO, AO (V/mA) filler, scales, counter, EASY-truck
Software	PanelX PC software, 3-byte command set (API)			PanelX, Scale-View, WT-API, Android app	PanelX, 3-byte command set	PanelX, 3-byte command set	Web server, ClipX-API Android app, data-logger software	Web server, WT-API, PWA, Android app	Web server, API	PanelX, Scale-View, WT-API, Android app
Legal for trade	No	OIML R76, with AED-device	No	OIML R76, R51, R61	OIML R76, with AD103C	OIML R76, R51	No	In preparation	In preparation	OIML R76, R51, R61

Beyond weighing: a complete measurement chain

At HBK, we understand the importance of minimizing installation time and cost while ensuring uncompromising measurement quality. That's why our weighing accessories are meticulously designed to meet these requirements.
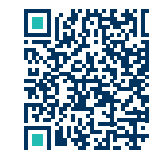
Our comprehensive range of weighing accessories covers every aspect of the measurement chain, allowing you to achieve accurate and reliable results. Whether you're in need of weighing modules, cables and plugs, junction boxes and converter sets, safety barriers, or loading feet, we have you covered.

When it comes to software solutions, HBK goes above and beyond. In addition to our intuitive and proven weighing software, PanelX, we offer a variety of flexible options that can be tailored to your specific needs. Our integrated web servers, APIs, PWAs, and mobile apps provide you with seamless connectivity and control over your weighing processes.

Weighing accessories overview

WEIGHING ACCESSORIES									
	Cables	**Junction boxes**	**Safety barriers**	**Weighing modules**	**Elastomeric bearing/ rubber-metal bearing**	**Loading foot/ loading feet**	**Rod end**	**Force feedback/ cone tip/cone socket**	**Base plate/ mounting kit**
Special features	Cables with M12 connector for LC connection and/or free leads, M12 cables for Fieldbus/ Ethernet connection, special hygienic cable for food applications	Box for parallel connection of LCs with corner-load-correction. For max 4 or 8 analog or digital LCs, protective mode IP65, in aluminium or stainless-steel, also available with EX-approval for use in hazardous areas	Safety-barriers for intrinsically safe applications ATEX/EExia	Integrated links and lift-off protection to compensate for lateral and lift-off forces as well as load application and mounting plates	Compensate lateral forces in case of horizontal deflection between container and load cell. Suitable for shock loads, oscillations and vibrations	Self-centering force application enables high accuracy despite large lateral forces	Suitable for quasi-static loading (suspended weighing)	Torque-free force application specially designed for the Z6 and Z6R	For fastening to the foundation or other support
References	1-KAB168, 1-KAB175, CABE, CABE, CABM, CABT	VKK1-4A, VKK1R-4, VKK2R-8 VKK2R-8IECEC	SB01A, SB02A	HLCM, Z6M, Z6AM, RTN/M, C16M	ZEL, ZDP easy top, VEN	ZPL, VPN PCX,ZKP, ZFP	ZGWR, ZGW, ZGUW	ZRR, ZK	ZPU

Your trusted partner for industry and customized solutions

Stay ahead of the curve with HBK's continuously evolving measurement chains that can meet tomorrow's requirements today. Benefit from our innovative portfolio of pioneering, high-quality solutions that are fully compliant with legal standards.

Hygienic solutions for the food industry

Explosion-proof components for the chemical industry

Consistent high quality for the pharmaceutical and cosmetic industries

Robustness for the steel industry

CUSTOM DESIGNS FOR AGRICULTURE, MEDICAL, ROBOTICS, AND MORE

Rely on our expertise and competent consultancy services to create customized sensors specifically for your industry. No matter the nature of your application or your budget, whether you require sensors for small or large specimens, or if your current equipment is highly flexible – simply get in touch with us.

HBK your weighing partner for more than 70 years

HBM *shop*

Bitte scannen

HBK is the union of market-leading organizations HBM (market leader in weighing technology, test, measurement, and analysis) and Brüel & Kjær (the world's leading supplier of advanced technology for measuring and managing the quality of sound and vibration). HBK are the product physics experts, providing integrated solutions and world-leading expertise across all test and measurement domains. This enables engineers to drive innovation throughout every stage of the product creation process, with streamlined development cycles and faster time-to-market.

For over seven decades, HBK's weighing solutions have enjoyed global recognition as benchmarks of precision, safety, reliability, and quality. Our dedicated R&D engineers continually pioneer innovative, adaptable, and cost efficient solutions that not only address current market needs but also anticipate the demands of Industry 4.0.
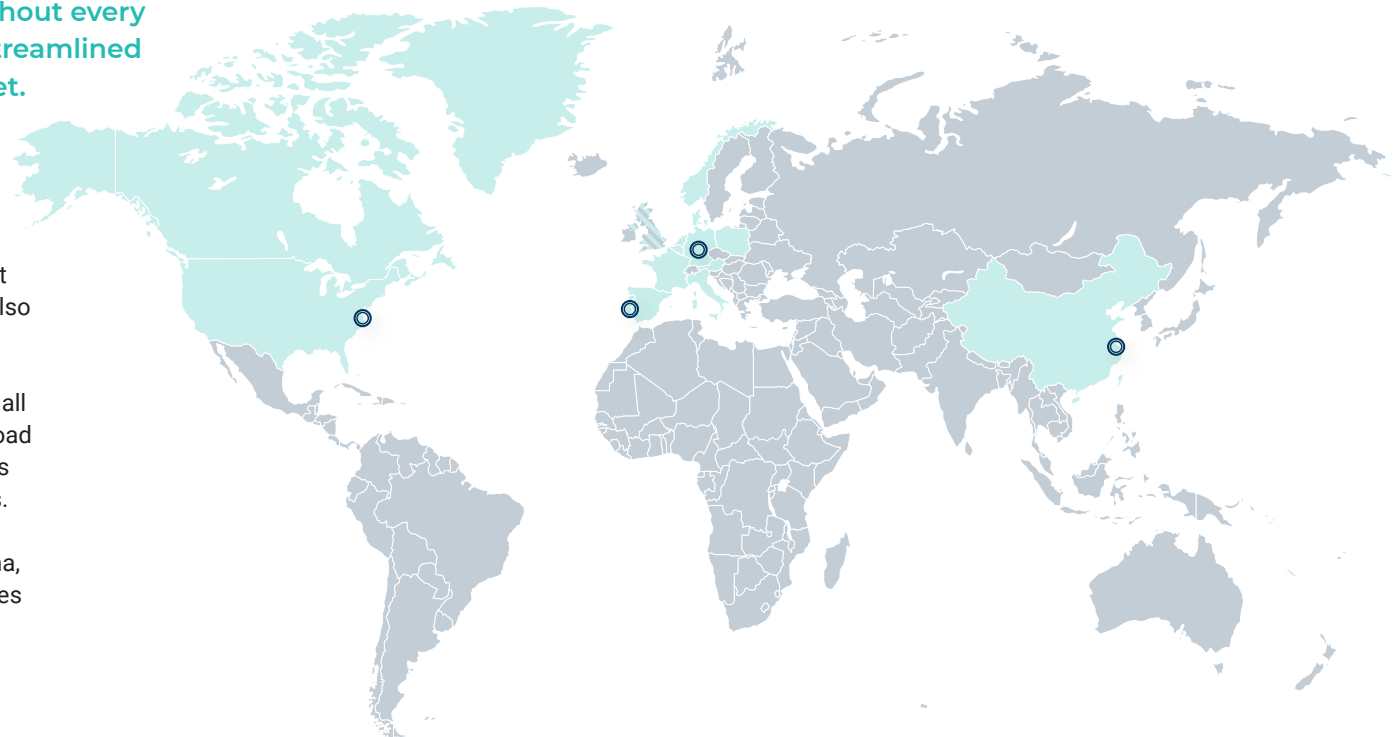
Our load cells have set industry standards for generations, all constructed with HBK strain gauges. To complement our load cell offerings, we provide the essential weighing electronics and all necessary accessories to support your applications.

With production facilities spanning Germany, the USA, China, and Portugal, HBK maintains a presence in over 80 countries worldwide.

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