

Heavy load checkweigher EWK WS 10/20 kg

With weighing system 10 kg or 20 kg



! Advantages

- Designed for heavy weights
- Blue HMI for maximum efficiency in production
- Designed for large loads
- Integration into existing production lines
- Safety and reliability thanks to EMFR weigh cell technology

The heavy load checkweigher EWK WS 10/20 kg enables 100% and highly accurate completeness and weight control up to 20 kg. The new Blue HMI user interface increases efficiency, transparency and safety in production. All models and variants are optionally MID-approved and monitor verifiable in accordance with common packaging regulations.

Checkweigher EWK WS delivers precise results on heavy goods

- ! The new Blue HMI of Minebea Intec gives fast and valid insights into production and can improve efficiency of the line.
- ! With its large weighing ranges the EWK is fitting your application perfectly.
- ! Broad connectivity, e.g. OPC-UA, for integration into your processes and SPC@Enterprise Software.
- ! EMFR weighing technology is providing high precise results up to 20 kg.

A new checkweigher with Blue HMI



Operating a checkweigher can be so simple

Whether you're introducing a new product, fine-tuning line parameters or establishing a batch protocol, the user interface of the new checkweigher is designed to be fast and easy. Bid farewell to time-consuming tasks and extensive staff training. Say hello to streamlined control with the new Minebea Intec Blue HMI by your side.



Makes your production more safe and efficient

Positioned at the end of the production line a checkweigher can narrate the story of your production. The Blue HMI displays your equipment's efficiency and other statistics based on your recent weighing results. It assists you through audits with several onboard protocol functions. We aim for you to be fully prepared and compliant at every step of the way.



Keep an eye on your weight

Blue HMI is a web-based cross-platform user interface with multi-user security. With this you are able to see everything your checkweigher does from authorized users within your network while your data is stored locally and securely on the checkweigher.

You can sit down and browse comfortably through configurations, weighing statistics or efficiency protocols. Moreover, you may connect to Minebea Intec's SPC@Enterprise, OPC UA clients, ProfiNET or Ethernet/IP gateways.

Flat stainless steel housing

High performance BOX PC

Full HD 15" Touch-Display



Optional tiltable screen

Flexible interfaces prepared for the future

Proven weighing technology

The new interface of Minebea Intec

As a global leading weighing supplier, we strive to offer reliable and flexible solutions for your production needs. However, flexibility in technical machinery often brings complexity.

Blue HMI serves as a cross-platform Human Machine Interface for all future products of Minebea Intec. Once started to use it, your daily work becomes easier.

Technical specifications

Heavy load checkweigher EWK WS 10/20 kg		
Weighing system	WS 10 kg	WS 20 kg
Gross weighing range (kg)	Up to 10	Up to 20
Smallest permissible calibration value (g)	1	2
Standard deviation of the measurement error (s) (mg)	From 100 Depending on product, throughput and ambient conditions	From 200
Max. throughput (item/min)	200 Depending on product, permitted imprecision and ambient conditions	
Speed range* Belt control for variable speed (m/s) *MID approval for all speed ranges	Motor control via frequency converter, emergency stop and ON/OFF switch Selectable adjustment range: 0.07–0.24, 0.12–0.41, 0.14–0.48, 0.175–0.595, 0.215–0.73, 0.31–1.05, 0.425–1.445, 1.1 – 2.0 Depending on package length and weighings per time unit	
Table length (mm)	545 / 660 / 760 / 860	
Centre-to-centre distance (mm)	485 (for table length 545) 600 (for table length 660) 700 (for table length 760) 800 (for table length 860)	
Belt width (mm)	250 / 300 / 400 / 500	
Transport system roller diameter (mm)	58	
Control cabinet with evaluation electronics	The control cabinet with evaluation electronics is installed separately from the weighing system, evaluation electronics on support arm (functional extension). Cable length: 3 m (standard), max. cable length: 15 m; specify when ordering.	
Transport medium	Belt	
Drive	Maintenance-free three-phase gear motor Motor control with temperature monitoring by 1 x thermal contact $U_{AC} = 3 \times 230 \text{ V (+10\%/-15\%)}$, 50 Hz; power: approx. 180 W/230 W	
Supply voltage	$U_{AC} = 230 \text{ V (+10\%/-15\%)}$; 50/60 Hz (L1, N, PE) Power incl. evaluation electronics and motor control: max. 600 VA	
Power consumption	Approx. 700 VA (depending on design up to 1800 VA)	
Feed direction	From right to left or left to right (state when ordering)	
Working height (mm)	600 ... 1,000 Adjustment range of the feet: $\pm 25 \text{ mm}$ Minimum working height 570 mm, not adjustable	
Ground clearance (mm)	125 (± 25)	
Permissible operating temperature range (°C)	+5 to +40	
Product temperature (°C)	-30 to +80 (belt)	
Protection class	IP 54 (standard), IP 65 (optional)	
Dimensions	See dimensional drawings	
Material	Weigher frame, control cabinet, evaluation electronics housing: stainless steel 1.4301 Belt structure, rollers: Aluminium, surface-finished	
Weight	150 kg, depending on design	
Airborne noise emitted	A-rated sound pressure level emitted < 70 dB(A)	
Inputs	14/22 (optional) digital inputs $24 V_{DC}$ (-15 %/+20 %) $I_{max} = 3 \text{ mA}$ (-3 ... +5 V: signal = +11 ... +30 V: signal = 1) Inputs galvanically isolated via relay or optocoupler depending on use	
Outputs	12/28 (optional) digital outputs, $24 V_{DC}$ (-15 %/+20 %) $I_{max} = 0.5 \text{ A}$; (short shot proof) Fault alarm output galvanically isolated via relay contact: $U_{AC} = 250 \text{ V/5 A}$ 2/6 analogue outputs (optional): 0 ... 20 mA or 0 ... 10 V Voltage output: load impedance $\geq 5 \text{ k}\Omega$ Current output: load impedance $\leq 500 \Omega$ Outputs galvanically isolated via relay or optocoupler depending on use	

Technical specifications – EWK WS 10/20 kg

Create your individual EWK WS 10/20 kg from a wide range of options and function enhancements.
We'd be happy to advise you!

EWK WS 10/20 kg – standard	
Dialogue PC	Full HD 15" Touch-Display
Operational display	Choice of distribution, yield, throughput, average value chart, large weight readout, tare weight
Operating modes	AWC weigher
	Classifying weigher, freely selectable classification limits, x 3/5 sorting
Digital input	Control package, external event or ignore checkweigher, event counter, external fault reset
Digital output	Feeder/batch, 3-way/5-way sorting, total counter, error message output, time-unit-controlled sorting
Separation system	Belt stop

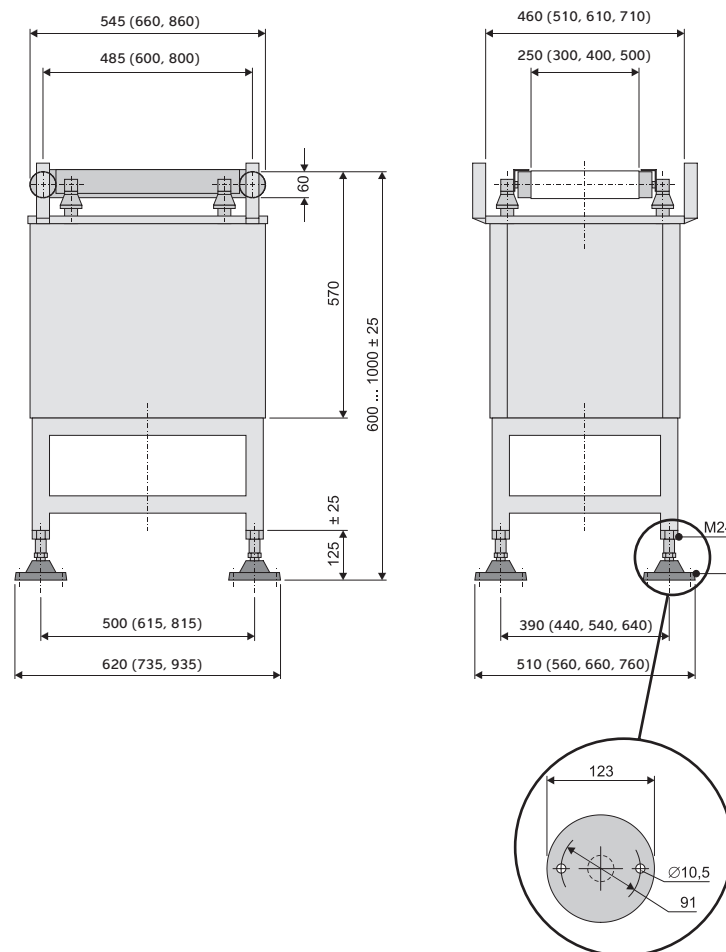
EWK WS 10/20 kg – optional for increased requirements		
Connectivity	Fieldbus	Profibus-DP, ProfiNET, Ethernet/IP
	Factory bus TCP/IP, Ethernet	SPC@Enterprise, OPC UA, PackML via OPC UA
	Individual weight value output for external evaluation and connection to customer systems	Serial interface RS 422, RS 232 or current loop (20 mA)
	All interfaces specified here are free from feedback and do not need to be secured	
	Browser remote view	Read-only access to the checkweigher conveniently via the company network
	USB print	Created reports can be downloaded on a USB device
Software/programs	FTP export	Created reports are uploaded to a webserver
	Filling spout evaluation	Statistics for each filling spout and overall statistics possible
	Calibration approval	Verifiable in accordance with OIML R 51 – MID
	Control functions	Integrity checking/with floating mean value
	Volume evaluation	Without air buoyancy correction, with air buoyancy correction
	Trend controller with display	3-point controller \pm control signal, 3-point controller with pulse packet, integral controller 0–20 mA/0–10 V
	3-way/5-way classifying display	3-way signal light, 5-way signal light, isolated outputs, isolated outputs with 3-way signal light, isolated outputs with 5-way signal light
	Separation system	Control of customer sorting/separating equipment
	Monitoring functions	
	Compressed air monitoring	Isolated output, belt stop
	Separation monitoring	Isolated output
	Goods flow	Isolated output with belt stop
	Package length/interval monitoring	Using additional light barrier
	Fill level monitoring* Collection container Incorrect weight	Isolated output with light
	Production monitoring	Monitoring of average value and repetitive rejections
	Sorting with path cycle/ displacement sensor	
Mechanical designs	Emergency stop button	Mounted on the cabinet or/and on the frame of the weighing belt

* as well as pro version available, with an additional watchdog for the monitoring sensor

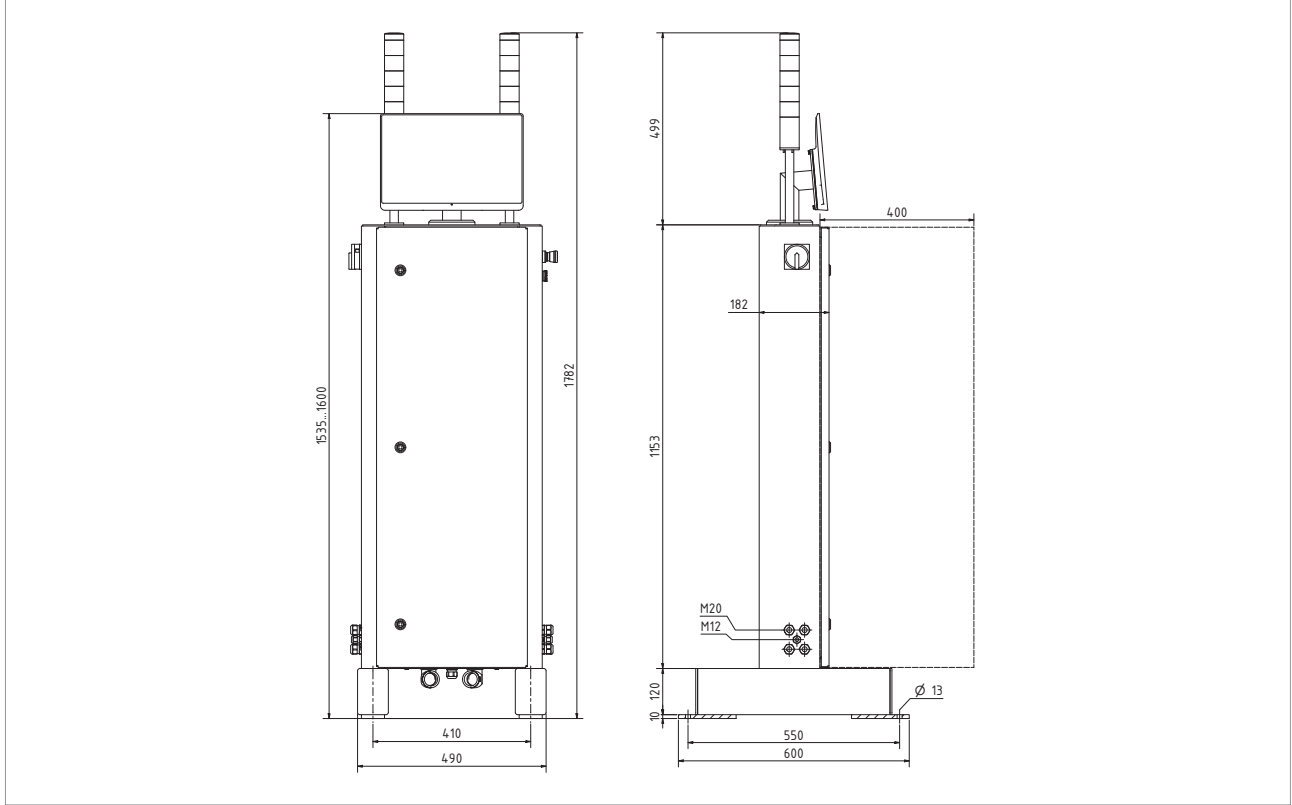
- The results that can be achieved in practice, e.g. for the standard deviation of the measurement error or the throughput, depend on the respective application and must therefore not be understood as absolute values. The precise design of the supplied machine is defined in the order confirmation.
- The monolithic EMFC load cells used, which were developed specifically for dynamic checkweighers, are characterised by ultimate precision and extremely short weighing time, optimum stability, robustness and overload protection.
- State-of-the-art electronics with the latest signal processor technology allow for particularly effective filtering thanks to the extraordinarily high scanning rate of 2 kHz (0.5 ms).
- The product is taken to the weighing system via an infeed belt provided on site. An outfeed belt provided on site takes the products onwards for further transport and, if necessary, for separation/sorting.
- Outlet nozzles, pushers or gates can optionally be installed as separation/sorting devices behind the checkweigher on the on-site outfeed belt.
- All EWK models offer a range of options to make production monitoring and data assessment easier.

Technical diagrams

Heavy load checkweigher EWK WS 10/20 kg

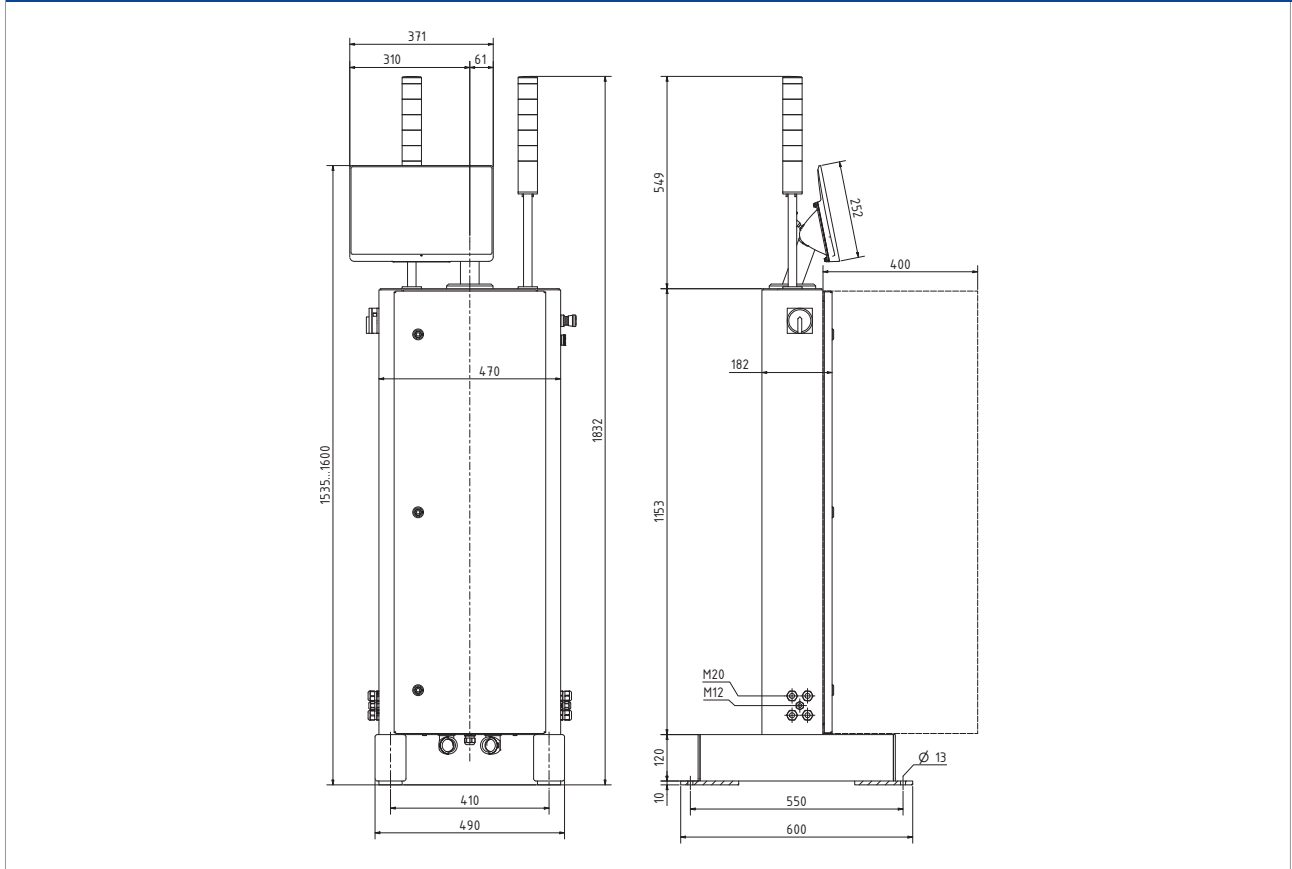


Heavy load checkweigher EWK WS 10/20 kg



The dimensional drawing shows the control cabinet with evaluation electronics.

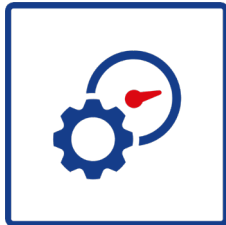
Heavy load checkweigher EWK WS 10/20 kg - Tilting display



All dimensions in mm

Overall Equipment Effectiveness (OEE)

The OEE helps you to optimize your manufacturing efficiency by providing a simple, comprehensive metric that measures the performance, availability and quality of the end of line. OEE helps to identify areas for improvement, reduce downtime, increase productivity and ultimately boost profitability.



Overall Equipment Effectiveness

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Availability

It measures operational time as a fraction of planned production time, accounting for scheduled breaks like lunch, maintenance and cleaning.

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Performance

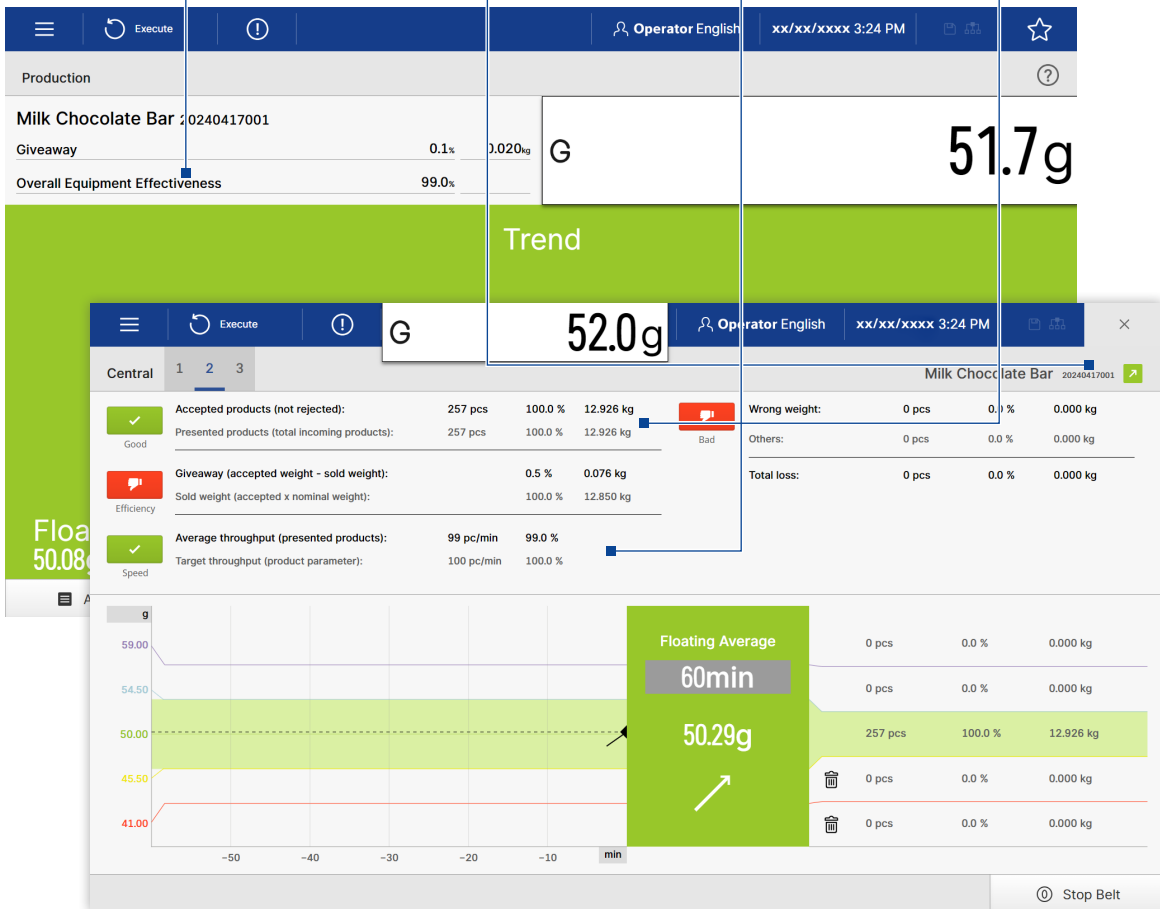
It measures the actual line speed as a fraction of the optimal line speed.

×



Quality

It measures the number of saleable pieces produced as a fraction of the total produced pieces.




OPC UA option



Experience seamless connectivity with OPC UA, based on the Companion Specification for scales. Our smart scales offer precise data integration and simplify your processes. Connect your production effortlessly and maximize efficiency with OPC UA!

Display option



Ergonomic working with Blue HMI

Ergonomic adjustment
Tilting display enables optimum positioning for every operator.

Environmental flexibility
Adaptation to different lighting conditions and environments.

Customised comfort
Improved user-friendliness and working comfort for efficient processes.

	Tiltable display	Rigid display
Synus®	Optional	Standard
Flexus®	Standard	Optional
EWK (mounted on frame)*	Standard	Optional
EWK (terminal standalone)*	Standard	Optional

* Additionally limited swivelling and lockable around the vertical axis

The products and solutions presented in this data sheet make major contributions in the following sectors:



The technical data given serves as a product description only and should not be understood as guaranteed properties in the legal sense.

Specifications subject to change without notice.
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