

Checkweigher Essentus® Performance L Combi

Advanced metal detection and checkweigher in one basic machine



NOW
available
with MID and
Stainless Steel
Conveyor



! Advantages

- Easy to combine with Vistus® metal detection technology
- Safety and reliability through strain gauge load cell technology
- Protection class IP54, IP65 optional
- Memory for up to 200 product types

Essentus® Performance L Combi from Minebea Intec combines the Essentus® Performance L checkweigher and the Vistus® metal detector in one frame and electrical cabinet and two HMIs. It is used for checking the weight, completeness checks, regulating upstream filling systems and simultaneously detecting both magnetic and non-magnetic metallic components.

Reliable indicator for weighing & process automation

- ! With Essentus® Combi you can check both product weight and metal contamination, including ferrous, non-ferrous and non-magnetic stainless steel, in a reliable way.
- ! Essentus® Combi integrates effortlessly in your production environment. Changing line configurations and fast product changes are handled with minimal effort.
- ! Easy inspection procedures in a reduced space to secure quality control in your facility.
- ! The strain gauge load cell and extremely stable construction guarantee precise weighing results.

The combi unit for basic applications

The Checkweigher Essentus® Performance L Combi combines the advantages of checkweighing and metal detection technology in one space-saving system. You get outstanding quality control in a reduced space

The Vistus® metal detector was developed to achieve an optimal detection sensitivity under any operating conditions. Thus allowing the detection of even the smallest metallic particles in products such as high-alloy steels and non-ferrous metals (copper, brass, aluminium, lead, etc.)

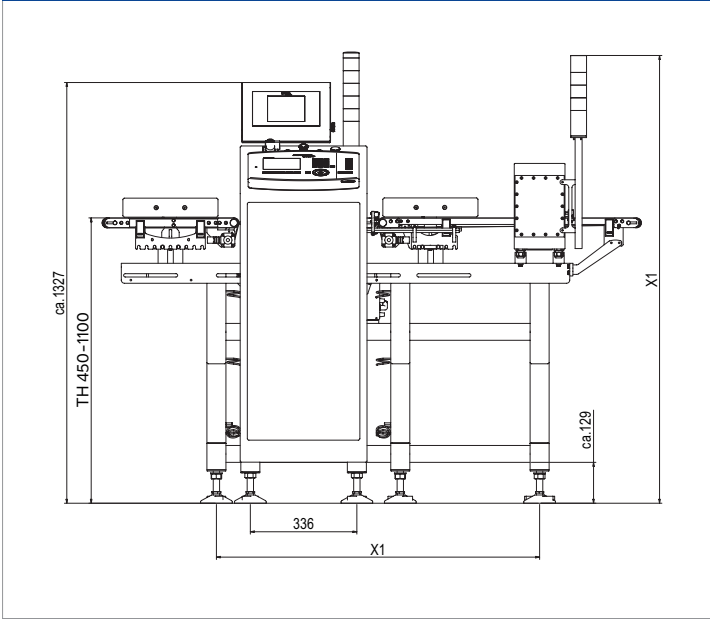
The Essentus® Performance L checkweigher is available in different configuration and has a wide variety of options to ensure proper integration into your production process. High-quality materials and in-house production process ensure as a result a superior product that complies with the higher standards.

Technical specifications

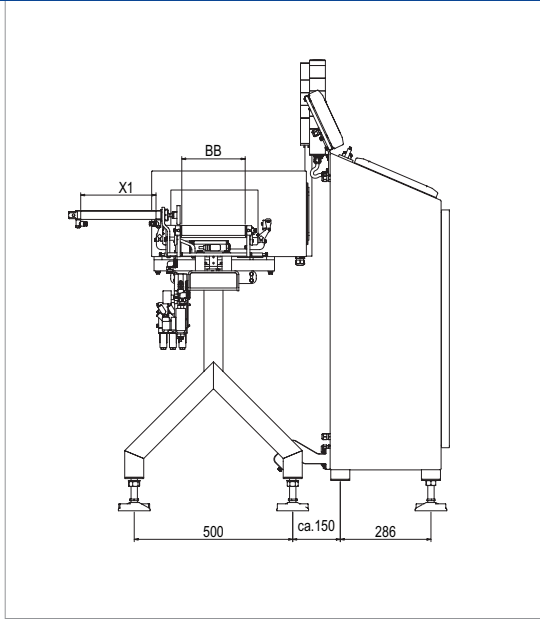
Essentus® Performance L Combi			
Weighing system	WS 1.5 kg	WS 3.0 kg	WS 6.0 kg
Weighing range (g)	Up to 1,500	Up to 3,000 MID: 175...3,000	Up to 6,000 MID: 350...6,000
Resolution (g)	0.2	0.5	1
Load cells	1		
Mid available?	No	Yes	Yes
Search coil (mm)	Coil opening 90: Product height <45 Coil opening 150: Product height <105 Coil opening 200: Product height <155		
Drives	24 V EC motors Motor control, short-circuit proof with temperature monitoring		
Supply voltage	U _{AC} = 115/230 V (+10% / -15%); 50/60 Hz (L1, N, PE)		
Power consumption	400 VA		
Operating Pressure (bar)	Default setting: Pusher: approx. 3 bar Blower: approx. 5 bar Compressed air supply hose pusher: Outer diameter: 8 mm, inner diameter: 5.7 mm Compressed air supply hose blower: Outer diameter: 12 mm, inner diameter: 8 mm		
Throughput capacity* (units/min) <small>* Depends on the product, permissible zone of imprecision, ambient conditions and area of application.</small>	180	120	120
Standard speed ranges (m/s) <small>* MID up to 1.2 m/s Option Stainless Steel Conveyor (SSC)</small>	0.2...1.0 0.5...1.5 for 1.5 kg is max 1.5	0.2...1.0 0.5...1.4* for 3.0 kg is max 1.4*	0.2...1.0 0.5...1.4*
Permissible operating temperature range (°C)	0 to +40 MID: +5...+40		
Protection class	IP 54 (standard), IP 65 (optional)		
Weight	150 kg to 250 kg depending on version		
Airborne noise emitted	A-weighted emission sound pressure level emitted < 70 dB(A)		
Feed direction	Right to left or left to right (please indicate when ordering)		
Belt roller diameter (mm) (Metal detector, Weighing and outfeed)	30		
Belt medium (infeed, weighing, outfeed)	Standard white or special blue (as standard at Stainless Steel Conveyor)		
Conveyor heights (mm)	450...1,100 (Adjustable foot range +/-25)		
Dimensions	See scale drawings		
Weigher frame, Switch cabinet, support plate material and search coil housing	Stainless steel		
Option Stainless Steel Conveyor (SSC)	Belt body: stainless steel; Rollers: stainless steel; Bearing holder: POM; Metal detection belt: laminate (the belt body is standard, but, the wet operation with grooves is optional)		
Metal detector			
Supply voltage	90 V...260 V		
Mains frequency	47 Hz...63 Hz		
Power consumption	28 VA (power supply up to max. 100 VA)		
Relay outputs	4 relays (Relay 1, 3 and 4: Freely programmable; Relay 2: "error": Fixed assignment)		

Technical diagrams

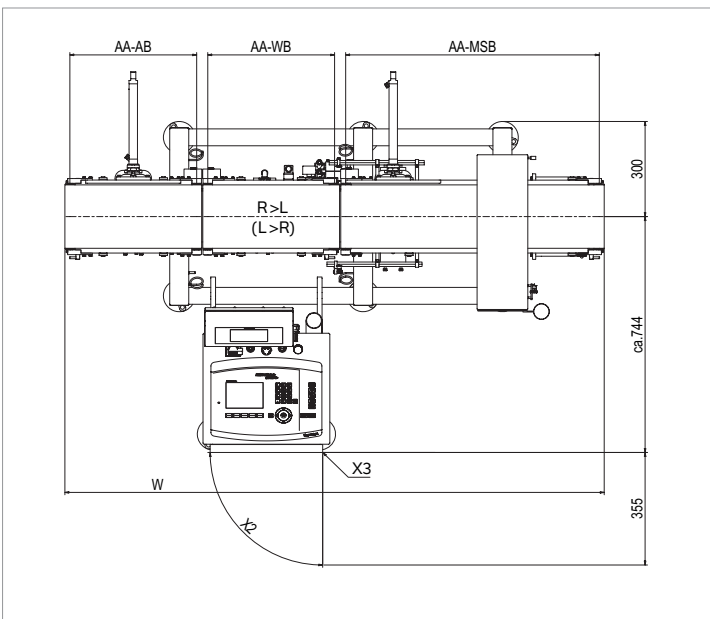
Essentus® Performance L Combi



Front view*



Side view*



Top view*

No.	Description
TH	Table height (increment of 50) (mm)
X1	Variable
BB	Weighing belt width (mm)
AA-MSB	Centre-to-centre distance metal detection belt (mm)
AA-WB	Centre-to-centre distance weighing belt (mm)
AA-AB	Centre-to-centre distance outfeed belt (mm)
W	Total length (mm)
X2	Pivoting range of the door
X3	Hinge side

For option SSC	Belt width 200 mm	Belt width 300 mm
product height<35	400 × 90	600 × 90
product height<95	400 × 150	600 × 150
product height<145	400 × 200	600 × 200

Search coil aperture (mm)	Centre-to-centre distance of weighing belt AA (mm)		Belt width BB (mm)	
	Standard	Stainless Steel Conveyor	Standard	Stainless Steel Conveyor
Coil opening 90 / 150 (Product height <45 / <105)	800 / 300 / 300	900 / 300 / 300	200	200
	800 / 350 / 350	900 / 400 / 400	200 / 300	200
	800 / 400 / 400	1,000 / 500 / 500	200 / 300	200
	900 / 500 / 500	900 / 400 / 400	200 / 300	300
Coil opening 200 (Product height <155)	1,000 / 300 / 300	1,100 / 300 / 300	200	200
	1,000 / 350 / 350	1,100 / 400 / 400	200 / 300	200
	1,000 / 400 / 400	1,200 / 500 / 500	200 / 300	200
	1,100 / 500 / 500	1,100 / 400 / 400	200 / 300	300
		1,200 / 500 / 500	200 / 300	300

Ground clearance and adjustable feet depend on the working height.

* All dimensions in mm



Weigh indicator



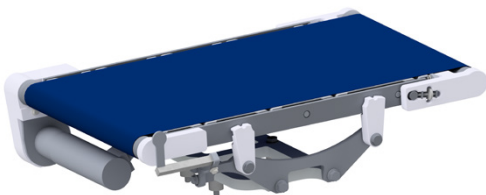
Metal detector indicator

Options, accessories, approvals ...

Essentus® Performance L Combi – standard functions / components

Dialog language	German, English, French, Italian, Spanish
Light barrier version	Reflex light barrier
Display and operating unit	Color-graphic LCD display to show the weight value, status, bar graph and dialog/menu text including detailed statistical analyses
Five context-dependent function keys (softkeys)	Operational keys for starting, stopping and zeroing, as well as alphanumeric keypad for text input
Product memory	Up to 100 product data profiles can be saved in the internal memory of the checkweigher. This memory can be upgraded to store up to 200 product data profiles.
Program-controlled belt speed	To optimize the handling for each product
Password protection	2 levels and 1 service
Zero setting	Automatic
Learning mode	For simple and reliable setting and optimisation of weighing parameters
Inputs	Light barrier (internal function)
Outputs	Checkweigher ready, belt running, fault (galvanically isolated via relay contact)
Operating mode	Classifying weigher with average weight control evaluation/3-way sorting or 4-user-definable class limit values, 3-way or 5-way sorting
Operational displays	Product code, name, nominal weight, date/time, last individual weight value, classification (3/5 classes) and allocation into classes (numbers and diagram), average value, minimum weight, maximum weight, total weight, total quantity of products (high, OK, low), standard deviation, number of rejected products
Help functions	Dialogs for diagnostics and service, error reports
Metal detector functions	Channel B, product effect minimization, test with pieces, check test piece, metal signal with separate acknowledgment (optical signalling only with orange lamp), metal detector way pulse, metal accumulation, negative metal detection, tracking, external test request, fill level monitoring run-off container

Stainless Steel Conveyor – Features and Benefits



- Resistant to chemical detergents
- Weighing range from 50 g to 7 kg
- Easy belt change and cleaning
- Temperature range MID approved version: 5 °C to 40 °C
- Temperature range non approved version: -10 °C to 40 °C
- IP65 water protection with AISI 304 Stainless Steel

Essentus® Performance L Combi – optional functions / components

Separated cabinet	3 or 5 m
Rejection system	Pusher, blower, belt stop, customer specific
Pusher plate, version	Brush (product height 1...155 mm), high (depends on form and dimension of product)
Transport medium metal detector, weighing and outfeed belt	Blue belt, blue flat belt, blue round belt
Transfer webs	Transfer plates (max. 500 g); transfer bars (max. 2,000 g)
Protective design	Wind protector: weighing belt Dust cover; Dust cover and switch: Metal detection-, weighing-, outfeed belt
Dust cover height	160 mm (product height <155 mm)
Run-off container incorrect weight	Plastic (max. 500 g), stainless steel with plastic door
Option Stainless Steel Conveyor (SSC)	Checkweigher: the container materials are either the additional reinforced plastic or the stainless steel with plastic door; Metal detector: the container materials is additional reinforced plastic
Emergency stop button	
Classification display	3 x LED red (underweight) / green (good) / orange (overweight) 3 x LED red (underweight) / green (good) / orange (overweight) plus horn 5 x LED red (underweight) / orange (-trend) / green (good) / blue (+trend) / white (overweight) 5 x LED red (underweight) / orange (-trend) / green (good) / blue (+trend) / white (overweight) plus horn
Data transfer of individual weight value	Serial interface RS232, RS485
Field bus data transmission	ProfiNET-IO
Light barrier version	Laser-light reflex barrier, reflex light barrier (transparent objects)
Monitoring functions	Fill level monitoring, reject bin, incorrect weight, belt stop; package length and interval monitoring
Emergency conveyor operation mode	
Separate on/off key	
System ready signal	Output isolated, LED green
Signalling error – belt stop	Output isolated, LED red, LED red and acoustic signal
Air pressure monitoring – belt stop	
Reject monitoring checkweigher – belt stop	In good lane
Logging system (Report)	External printer (not included in scope of delivery), RS232 or RS485 interface
Trend controller	3–point controller with +/- control signal, 3–point controller with pulse package
USB printing	Reports on USB stick
Hide (ignore) checkweigher	
Start/stop external	
Remote control via Ethernet	
Check of completeness with floating average	



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Specifications subject to change without notice.
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