

Checkweigher Essentus®

The versatile checkweigher series with great savings potentials

Now
available
with MID and
Stainless Steel
Conveyor



ⓘ Essentus® Efficiency L/H

- Easy to operate
- Robust conveyor technology
- A wide range of belt lengths and widths

ⓘ Essentus® Performance L/H

Additional benefits to efficiency:

- Automatic learning function makes configuration easier
- A wide variety of options
- Automatic speed regulation

The Essentus® range of dynamic checkweighers offers four basic models for simple, precise weight and integrity checking of packaged foods and other products.

Proven Minebea Intec technology for a variety of applications

- ⓘ By choosing the right Essentus® model you can meet all your needs and **reduce your investments.**
- ⓘ The automatic learning function guarantees **simple commissioning and setting** of the weighing parameters without in-depth knowledge of the equipment.
- ⓘ A variety of mechanical and software options make the checkweighers suitable for **a variety of applications.**
- ⓘ Minebea Intec German quality ensures a **long machine life time** with **minimal downtime.**

Possible combinations of the Essentus®

Product weight up to 6 kg

Product weight up to 60 kg

Essentus® Efficiency

- Precise weight and integrity checking
- Easy to operate
- Supports various conveyor belts
- Robust conveyor technology
- High potential for savings

Essentus® Efficiency L

Product weight up to 6 kg



NOW
available with
Stainless Steel
Conveyor

Essentus® Efficiency H

Product weight up to 60 kg



Additional features of Essentus® Performance

- Optional trend control
- Automatic learning function for simple configuration
- Automatic speed control
- Detailed statistical analysis and various interfaces
- MID approval for various weighing systems

Essentus® Performance L

Product weight up to 6 kg



NOW
available
with MID and
Stainless Steel
Conveyor

Essentus® Performance H

Product weight up to 60 kg



Technical specifications

Checkweigher Essentus® L				
Parameters	WS 0.6 kg*	WS 1.5 kg	WS 3.0 kg	WS 6.0 kg
* The option Stainless Steel Conveyor (SSC) is not available for WS 0.6 kg				
Weighing system	WS 0.6 kg	WS 1.5 kg	WS 3.0 kg	WS 6.0 kg
Weighing range (g)	Up to 600	Up to 1,500	Up to 3,000	Up to 6,000
Weighing range MID (g) (Performance L)	–	–	175...3,000	350...6,000
Resolution (g)	0.1	0.2	0.5	1
Smallest permissible calibration value (g)	–	–	1	2
Load cells	1			
MID available?	no	no	yes	yes
Drive	24 V EC Motor Motor control, short circuit proof, with temperature monitoring			
Max. throughput (pcs/min.)	72 (Eff.); 180 (Perf.)		51 (Eff.); 120 (Perf.)	
Standard speed ranges Efficiency L (m/s)	0.2 – 0.6			
Standard speed ranges Performance L (m/s) * MID up to 1,2 m/s	0,2 – 1,5	0,2 – 1,0 0,5 – 1,5	0,2 – 1,0 0,5 – 1,4*	0,2 – 1,0 0,5 – 1,4*
Infeed belt width (mm)	150	150 / 200 / 250 / 300		
Infeed belt roller diameter (mm)	30			
Infeed belt transport medium	Standard white or special blue (as standard at Stainless Steel Conveyor), polyurethane			
Weighing belt centre-to-centre distance (mm)	310	300 / 350 / 400 / 450 / 500		
Weighing belt width (mm)	50 / 100 / 150	150 / 200 / 250 / 300		
Weighing belt roller diameter (mm)	21	30		
Weighing belt transport medium	Multiple flat belts or round belts	Standard white or special blue, polyurethane		
Outfeed belt centre-to-centre distance (mm)	300 / 350 / 400 / 450 / 500			
Outfeed belt width (mm)	150	150 / 200 / 250 / 300		
Outfeed belt roller diameter (mm)	30			
Outfeed belt transport medium	Standard white or special blue, polyurethane			
Conveyor heights (mm)	450–1,100 (50-mm increments)			
Feet adjustment range (mm)	± 25			
Cabinet and base frame material	Stainless steel			
Transportation system Option SSC	Belt body: stainless steel; Rollers: stainless steel; Bearing holder: POM; Metal detection belt: laminate No additional infeed and outfeed belt is possible			
Supply voltage	UAC = 115/230 V (+10% / -15%); 50/60 Hz (L1, N, PE)			
Power consumption (VA)	400			
Protection class	IP 54 (standard), IP 65 (optional)			
Permissible operating temperature range (°C)	0...+40 MID: +5...+40			

Option SSC: The rejection bin/collection container materials for the checkweigher is additional reinforced plastic or stainless steel with plastic door.



Essentus® Efficiency L



Essentus® Performance L

Checkweigher Essentus® H

Parameters	WS 40 kg	WS 40 kg	WS 60 kg	WS 60 kg
Weighing system	WS 40 kg	WS 40 kg	WS 60 kg	WS 60 kg
Weighing range (g)	2,500...40,000		2,500...60,000	
Weighing range MID (g) (Performance H)	3,330...40,000		6,670...60,000	
Resolution (g)	5		10	
Load cells	1	4	4	
MID available?	Yes (only Performance)	Yes (only Performance)	Yes (only Performance)	
Calibration value (g) (MID Performance)	10	10	20	
Drive	Three-phase current			
Max. throughput (pcs/min.) (Efficiency H)	53	53	53	53
Max. throughput (pcs/min.) (Performance H)	80	60	60	50
Standard speed ranges Efficiency H (m/s)	0,15 – 0,5 0,25 – 0,8		0,2 – 0,6 0,35 – 0,8	
Standard speed ranges Performance H (m/s) (*: MID approved for up to 1.2 m/s)	0,15-0,5 0,25-0,8 0,4-1,25 0,5-1,5*		0,2-0,6 0,35-1,0 0,5-1,5*	
Weighing belt centre-to-centre distance (mm)	600 / 800	1,000 / 1,300 / 1,500	1,030 / 1,230 / 1,430	1,430 / 1,630 / 1,830 / 2,030
Weighing belt total length (mm)	660 / 860	1,060 / 1,360 / 1,560	1,100 / 1,300 / 1,500	1,500 / 1,700 / 1,900 / 2,100
Weighing belt width (mm)	400	500	700	900
Weighing belt roller diameter (mm)	60		70	
Weighing belt transport medium	Standard (black, white)			
Conveyor heights (mm)	Performance: 450 ... 1100 (increments of 50) For control cabinet version mounted on checkweigher frame: 550 and higher, for a centre-to-centre distance of 1000: 600 and higher Efficiency: 450 ... 1100 (increments of 50)			
Feet adjustment range (mm)	± 25			
Weighing belt material (bearing holder/belt frame)	Standard: Aluminium/stainless steel Option: Stainless steel/stainless steel	AA = 1,000: Standard: Aluminium/stainless steel Option: Stainless steel/stainless steel AA > 1,000: Standard: Aluminium/aluminium Option: Stainless steel/aluminium	AA > 1,000: Standard: Aluminium/aluminium Option: Stainless steel/aluminium	
Roller material	Standard: Galvanised steel Option: Stainless steel			
Cabinet material and base frame material	Steel, powder coated (RAL7043) or stainless steel (optional)			
Optional infeed belt (mm)	AA × BB = 600 × 400 (combined base frame)			
Supply voltage	UAC = 230 V (+10% / -15%); 50/60 Hz (L1, N, PE)			
Power consumption (VA)	500		850	
Protection class	IP 54 (standard), IP 65 (optional)			
Permissible operating temperature range (°C)	0...+40 MID: +5...+40			



Essentus® Performance H



Essentus® Efficiency H

Equipment

Checkweigher Essentus® Efficiency

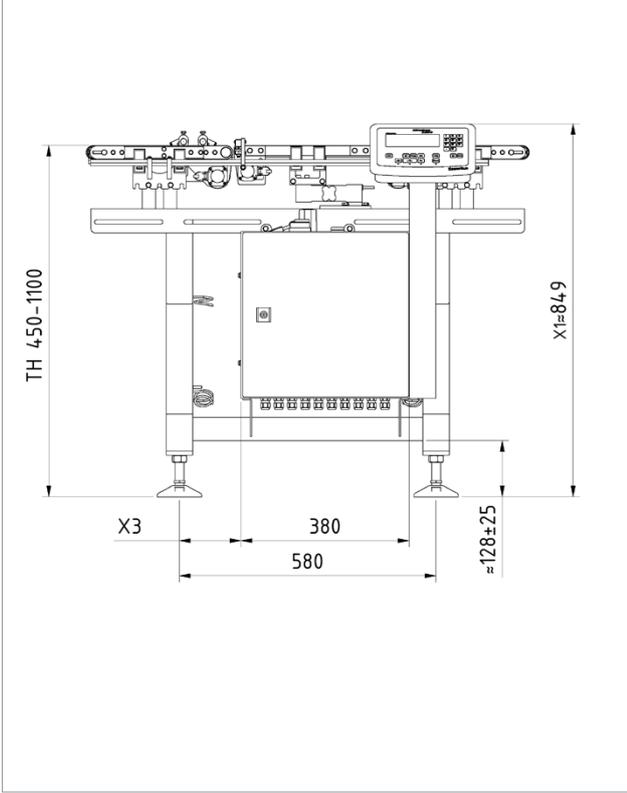
Standard functions/components	
Control electronics	Integrated into a stainless-steel cabinet
Display and operating unit	5" LCD display with key operation
Product memory	For 100 products
Data transfer of individual weight value	RS232
Optional functions/components	
Separated indicator	3 m or 5 m (customer assembly)
Separated cabinet and indicator	3 m or 5 m (customer assembly)
Signal tower	1 × LED red, 1 × LED red plus horn, 3 × LED red/green/orange plus horn
Data transfer of individual weight value	Serial interface RS422, RS485, RS232
Data transfer factory bus/fieldbus	ProfiNET-IO, ProfiBus-DP, EtherNET-TCP/IP, EtherNET/IP (Rockwell)

Checkweigher Essentus® Performance

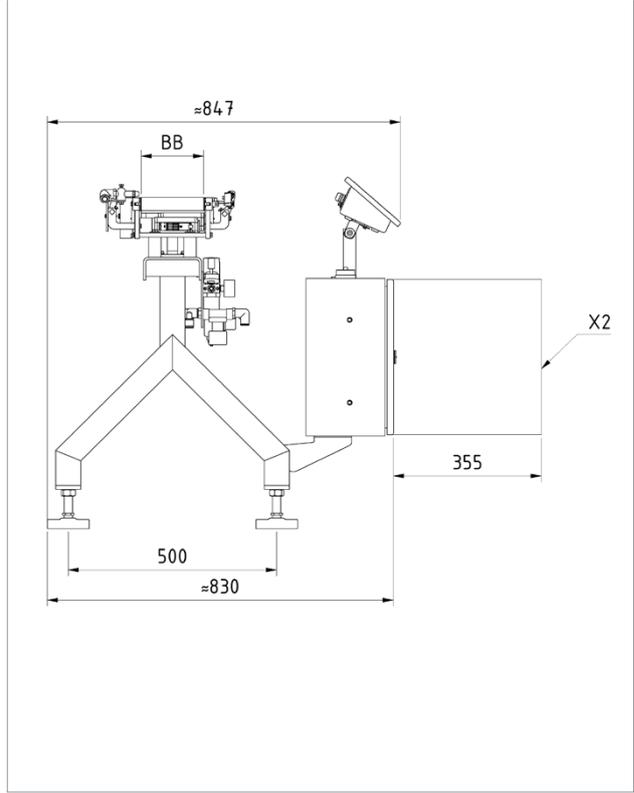
Standard functions/components	
Display and operating unit LCD graphic display	5.8" LCD colour graphic display, for displaying weight value, status, bar graphs and the dialogue/ menu text including detailed statistical analyses
Five context-dependent function keys (softkeys)	Operational keys for start, stop and zero, as well as alphanumeric keypad for text input
Product memory	For 100 products
Program-controlled belt speed	For optimal processing of individual products
Password protection	2 levels and 1 service
Zero setting	Automatic
Learning mode	For simple and reliable setting and optimisation of weighing parameters
Outputs	Checkweigher ready, belt running, fault (galvanically isolated via relay contact)
Operating mode	Classifying weigher with Packaged Goods Regulation evaluation/3-way sorting or four 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 (figures and diagram), average value, minimum weight, maximum weight, total weight, total quantity of products (high, OK, low), standard deviation, quantity of rejected products
Help functions	Diagnosis and repair dialogues, error protocols
Optional functions/components	
Separated cabinet	3 m or 5 m
Emergency stop button	
Classification display	3 × LED red/green/orange, 3 × LED red/green/orange plus horn, 5 × LED red/orange/green/blue/white, 5 × LED red/orange/green/blue/white plus horn
Data transfer of individual weight value	Serial interface RS232, RS485
Data transfer factory bus/fieldbus	ProfiNET-IO
Light barrier type	Laser reflection light barrier, reflection light barrier (transparent objects)
Fill level monitoring, reject bin, incorrect weight – belt stop	
Emergency conveyor operation mode	
Separate on/off button	
System ready signal	Output potential isolated, LED green
Error signal – belt stop	Output potential isolated, LED red, LED red and acoustic signal
Compressed air monitoring – belt stop	
Reject monitoring – belt stop	
Report system	External printer, RS232 interface, external printer, RS485 interface, not included
Trend controller	3-point controller with +/- control signal, 3-point controller with pulse package
USB printing	Protocol on USB stick
Ignore checkweigher	
Start/stop external	
Remote control via Ethernet	
Integrity check with floating average	

Technical diagrams

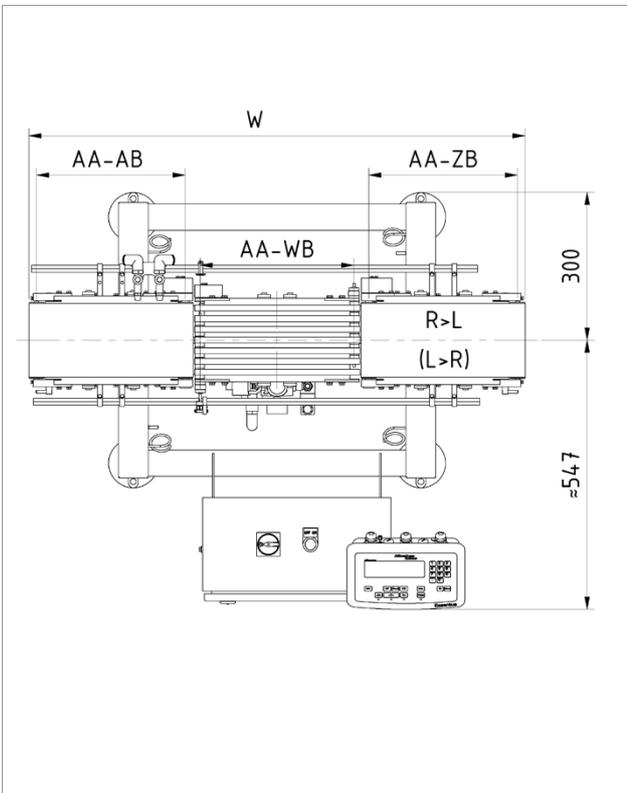
Checkweigher Essentus® Efficiency L



Front view



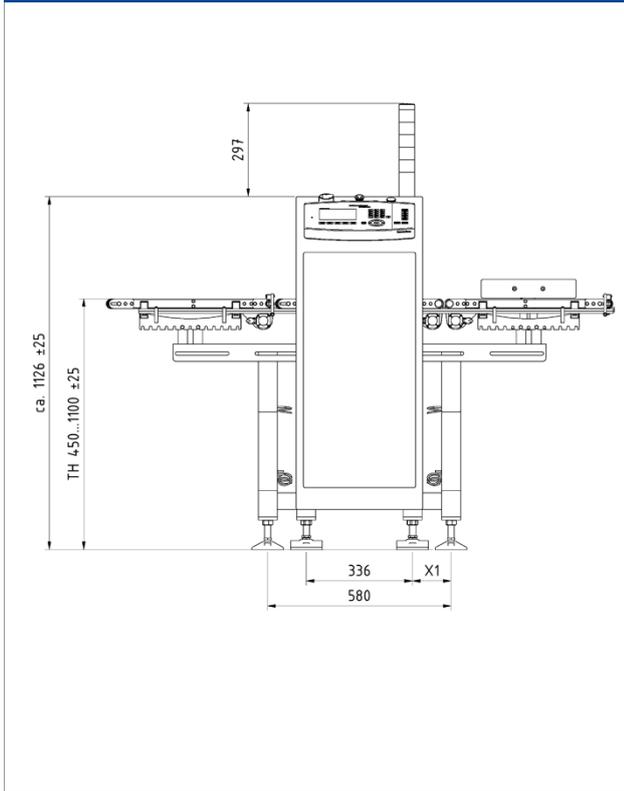
Side view



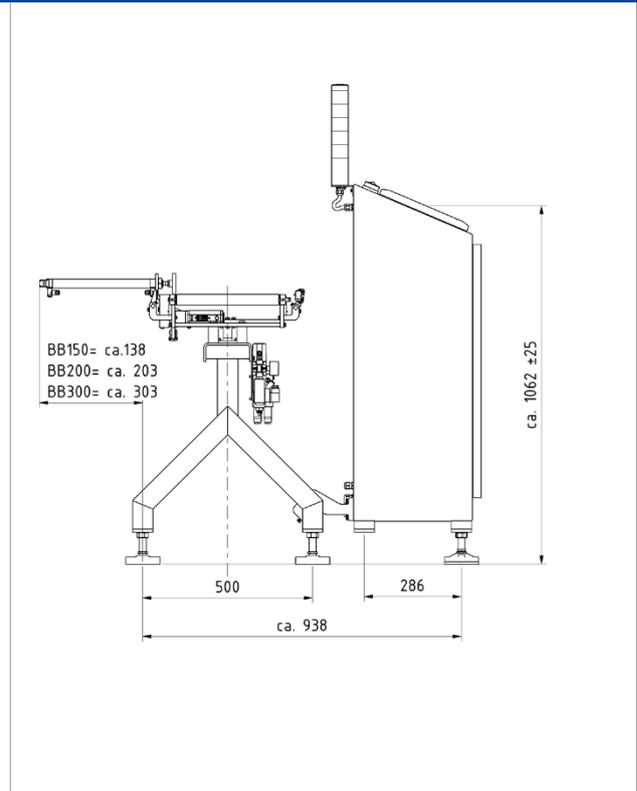
Top view

Pos.	Description
TH	Bench height (increments of 50) (mm)
X1	Variable
BB	Weighing belt width (mm)
X2	Pivot range of door
AA-ZB	Centre-to-centre distance of infeed belt (mm)
AA-WB	Centre-to-centre distance of weighing belt (mm)
AA-AB	Centre-to-centre distance of outfeed belt (mm)
W	Total length (mm)

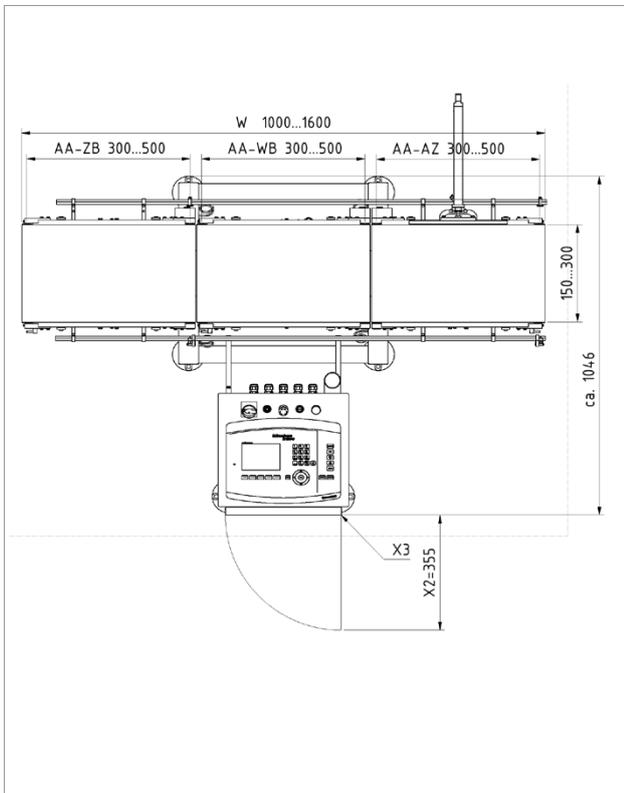
Checkweiger Essentus® Performance L



Front view



Side view



Top view

Pos.	Description
TH	Bench height (increments of 50) (mm)
X1	Variable
BB	Weighing belt width (mm)
AA-ZB	Centre-to-centre distance of infeed belt (mm)
AA-WB	Centre-to-centre distance of weighing belt (mm)
AA-AB	Centre-to-centre distance of outfeed belt (mm)
BB	Belt width (mm)
W	Total length (mm)
X2	Pivot range of door
X3	Hinge side

Variants for checkweigher Essentus® L

Pos.	Description
AA	Centre-to-centre distance (mm)
BB	Belt width (mm)

Pos.	Description
•	Round belt or flat belt
■	Belt design

	BB×AA (mm)		
	Infeed belt	Weighing belt	Outfeed belt
WS 0.6 kg	150×300/350/400/450/500	50×310 •	150×300/350/400/450/500
	150×300/350/400/450/500	100×310 •	150×300/350/400/450/500
	150×300/350/400/450/500	150×310 •	150×300/350/400/450/500

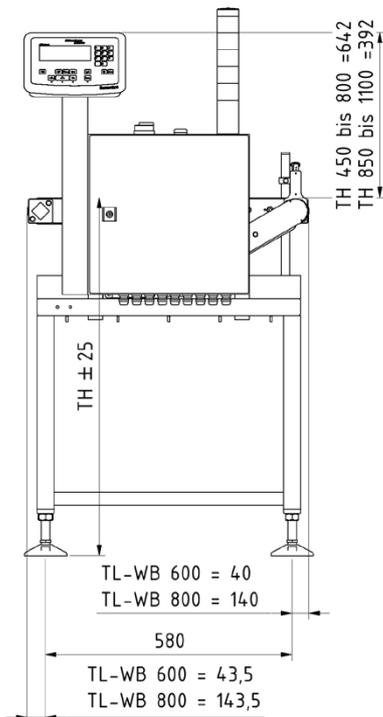
Total length W = AA-ZB + AA-WB + AA-AB + 90

	AA (mm)			
	BB	Infeed belt	Weighing belt	Outfeed belt w
WS 1.5/3 kg	150	300/350/400/450/500	300	300/350/400/450/500
		350/400/450/500	350	350/400/450/500
		400/450/500	400	400/450/500
		450/500	450	450/500
		500	500	500
	200*	300*/350/400/450/500	300*	300*/350/400/450/500
		350/400/450/500	350	350/400/450/500
		400*/450/500	400*	400*/450/500
		450/500	450	450/500
		500*	500*	500*
	250	300/350/400/450/500	300	300/350/400/450/500
		350/400/450/500	350	350/400/450/500
		400/450/500	400	400/450/500
		450/500	450	450/500
		500	500	500
	300*	350/400/450/500	350	300/350/400/450/500
		400*/450/500	400*	400*/450/500
		450/500	450	450/500
		500*	500*	500*
WS 6 kg	200*	300*/350/400/450/500	300*	300*/350/400/450/500
		350/400/450/500	350	350/400/450/500
		400*/450/500	400*	400*/450/500
		450/500	450	450/500
		500*	500*	500*
	250	300/350/400/450/500	300	300/350/400/450/500
		350/400/450/500	350	350/400/450/500
		400/450/500	400	400/450/500
		450/500	450	450/500
		500	500	500
	300*	350/400/450/500	350	350/400/450/500
		400*/450/500	400*	400*/450/500
		450/500	450	450/500
		500*	500*	500*

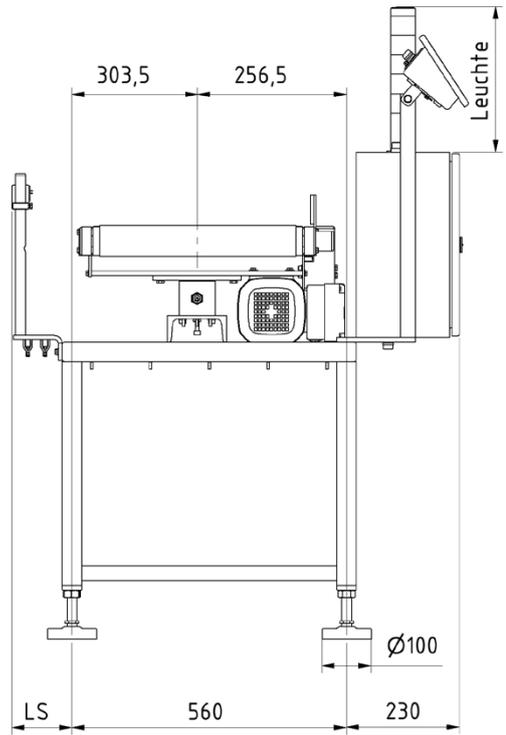
Total length W = AA-ZB + AA-WB + AA-AB + 100

* Dimensions are available for the Essentus® L Stainless Steel Conveyor (SSC) option.

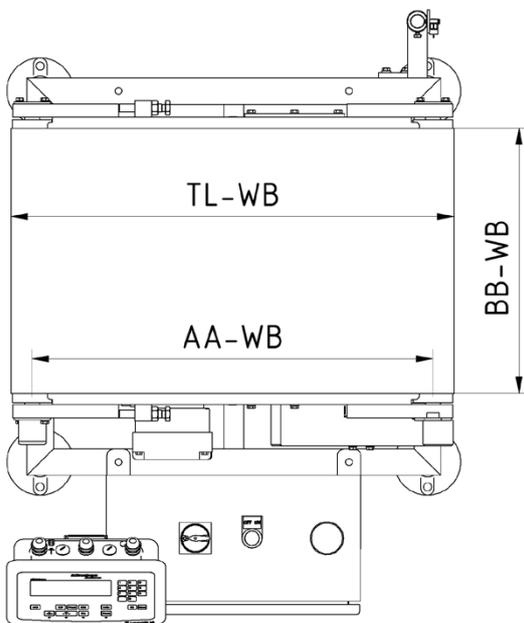
Checkweiger Essentus® Efficiency H WS 40 kg with one load cell, front operation



Front view



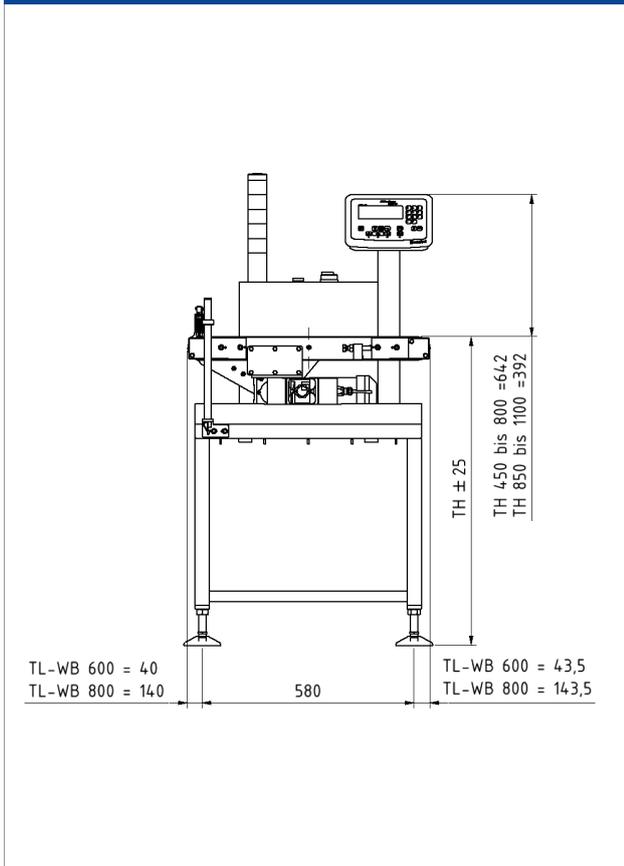
Side view



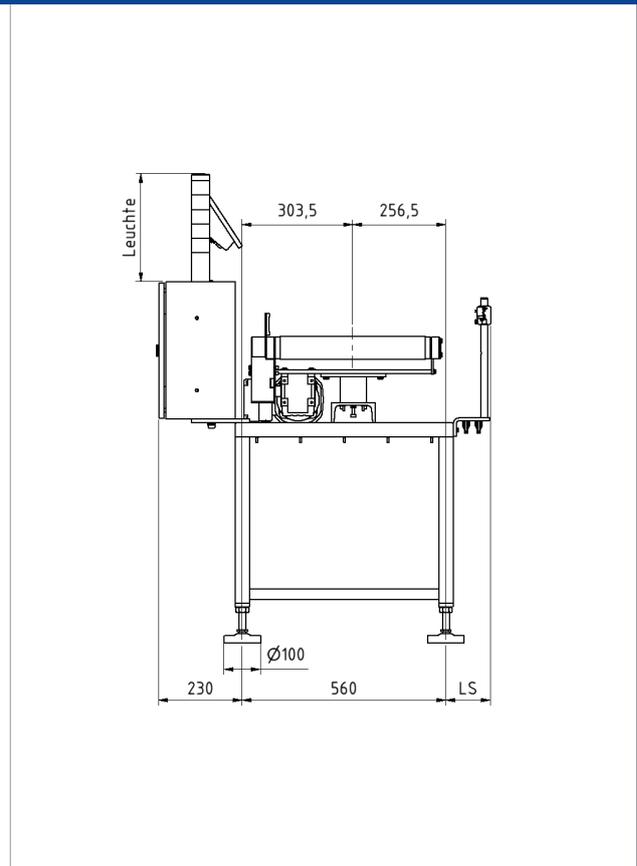
Top view

AA-WB	BB-WB	TL	LS	TH +/-25
600	400	AA + 60	123	450-1,100
800	400	AA + 60	123	450-1,100

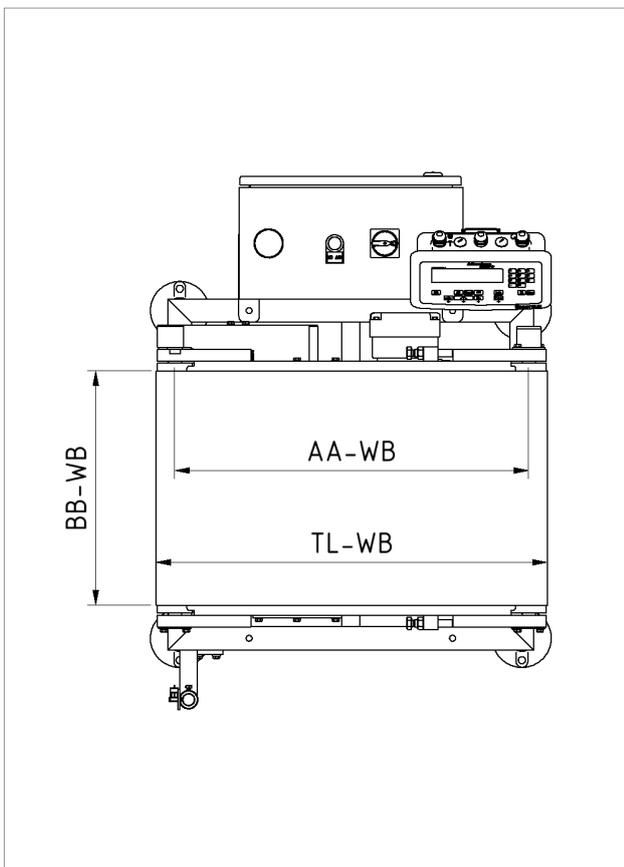
Checkweiger Essentus® Efficiency H WS 40 kg with one load cell, rear operation



Front view



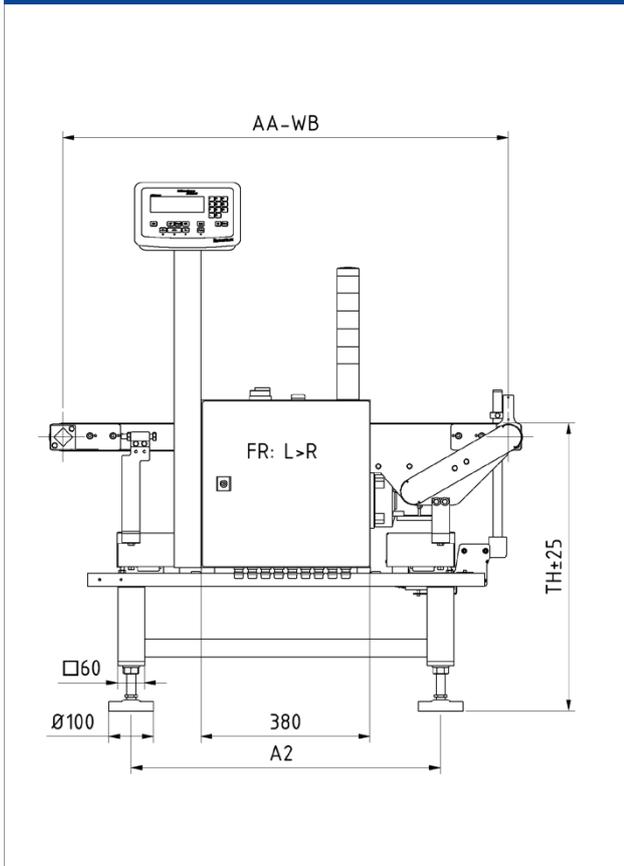
Side view



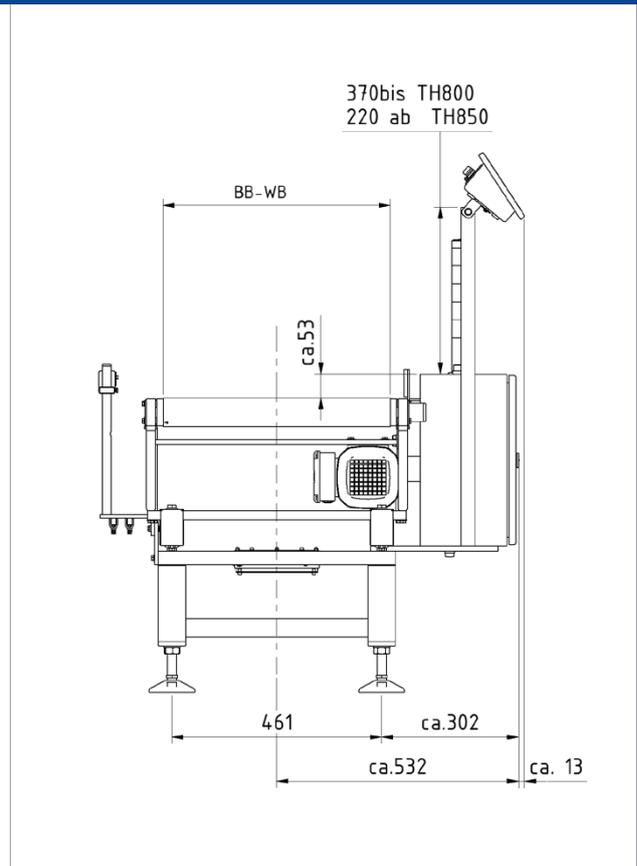
Top view

AA-WB	BB-WB	TL	LS	TH +/-25
600	400	AA + 60	123	450-1,100
800	400	AA + 60	123	450-1,100

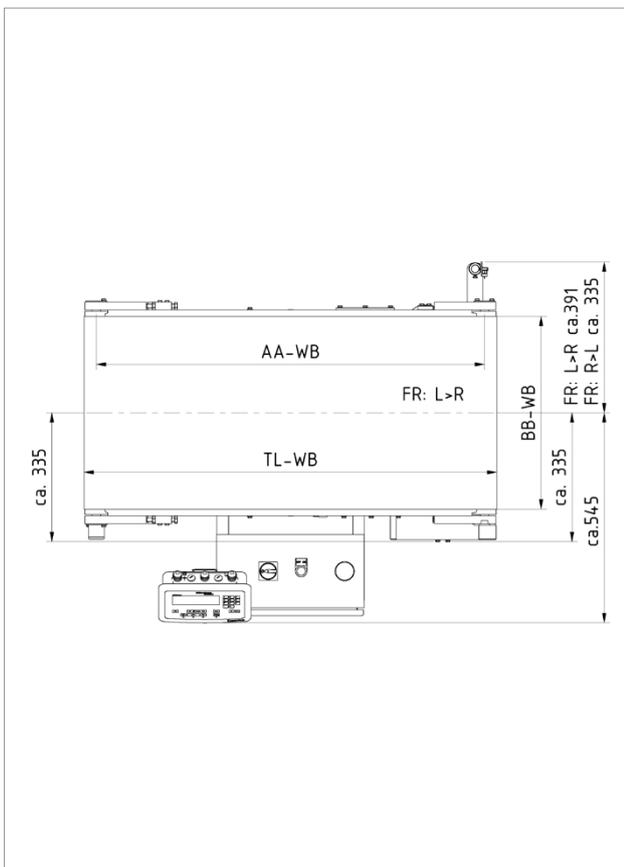
Checkweiger Essentus® Efficiency H WS 40 kg with four load cells 1,000, front operation



Front view



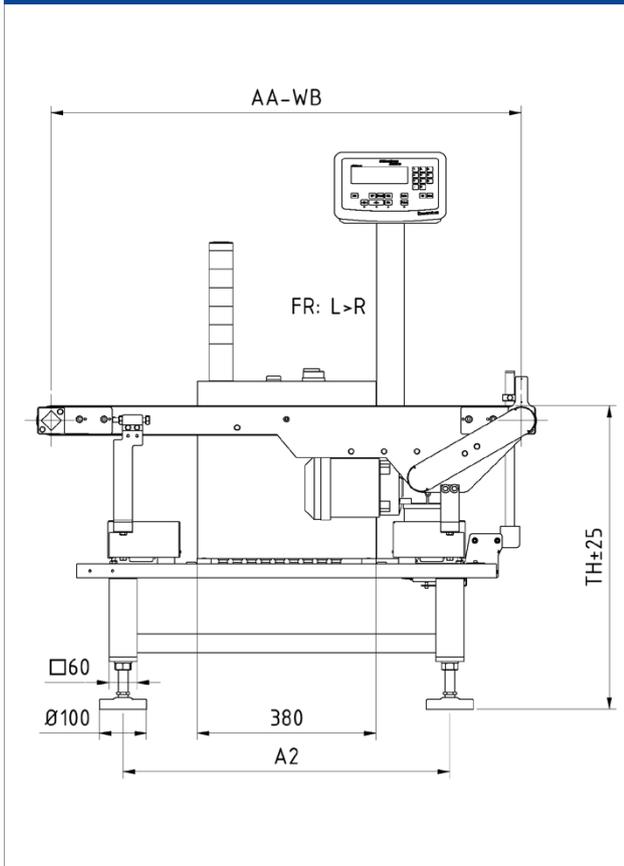
Side view



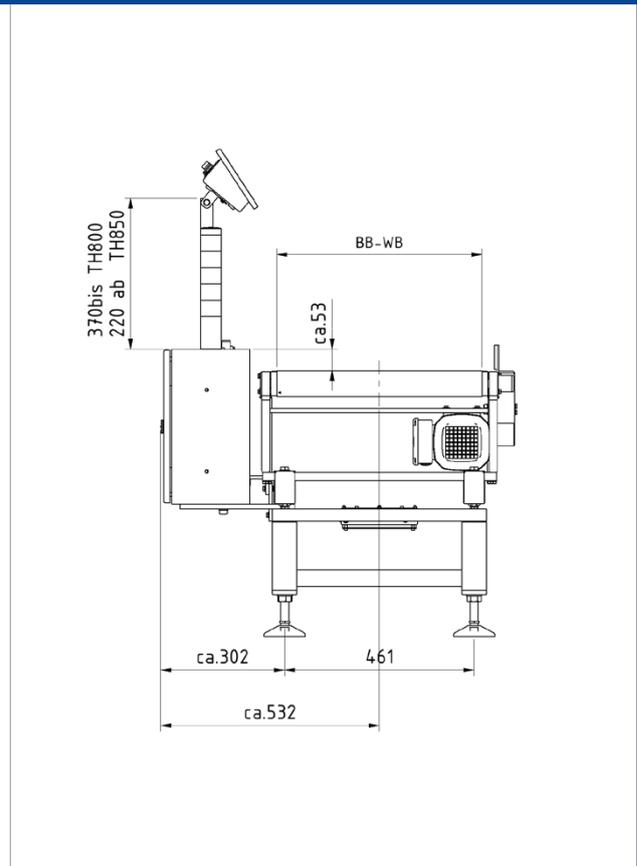
Top view

AA-WB	BB-WB	TL	TH +/-25	A2
1,000	500	AA+60	450-1,100	AA-305 (695)

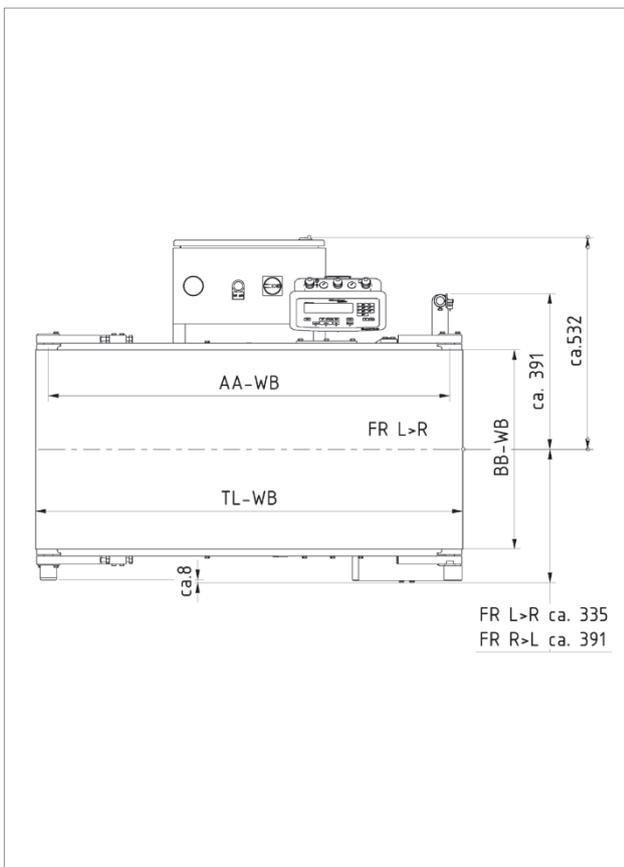
Checkweiger Essentus® Efficiency H WS 40 kg with four load cells 1,000, rear operation



Front view



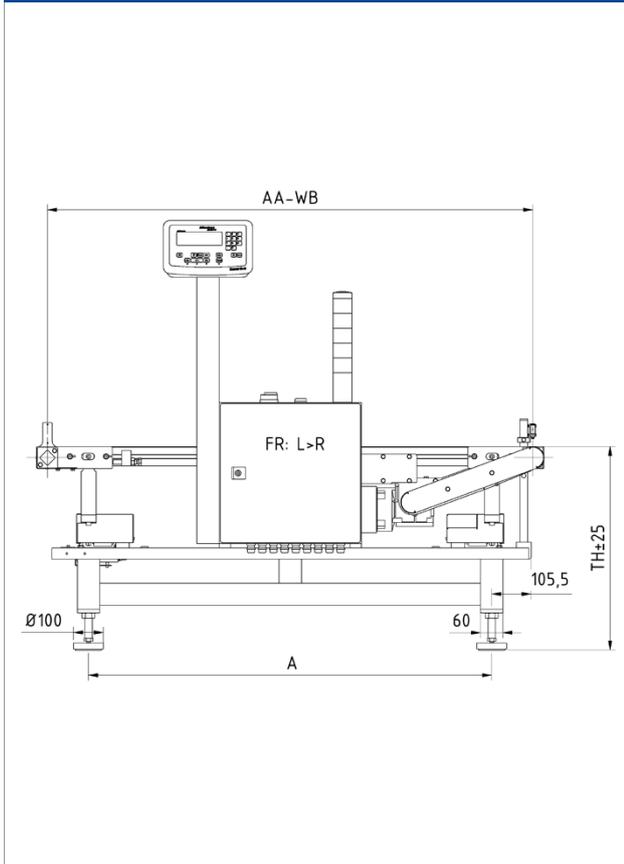
Side view



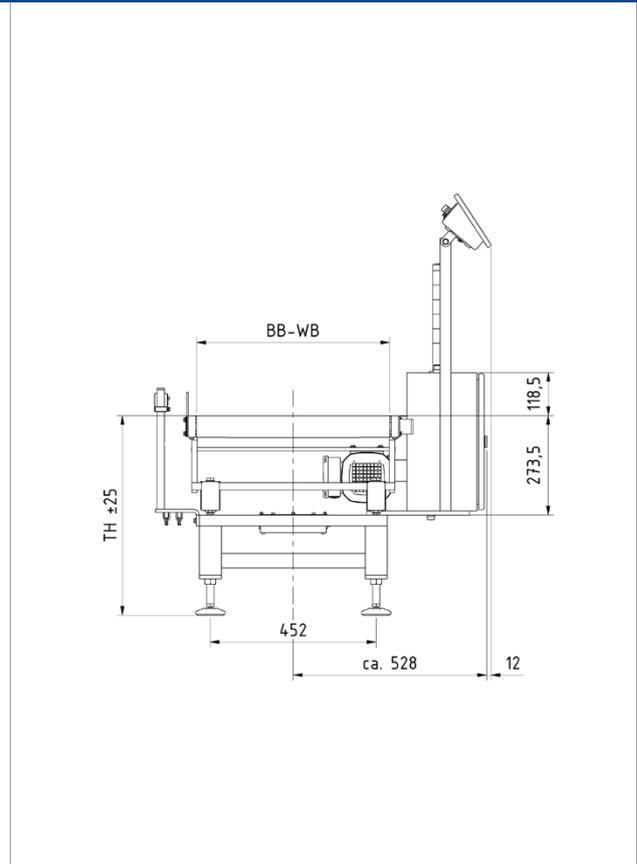
Top view

AA-WB	BB-WB	TL	TH +/-25	A2
1,000	500	AA+60	450-1,100	AA-305 (695)

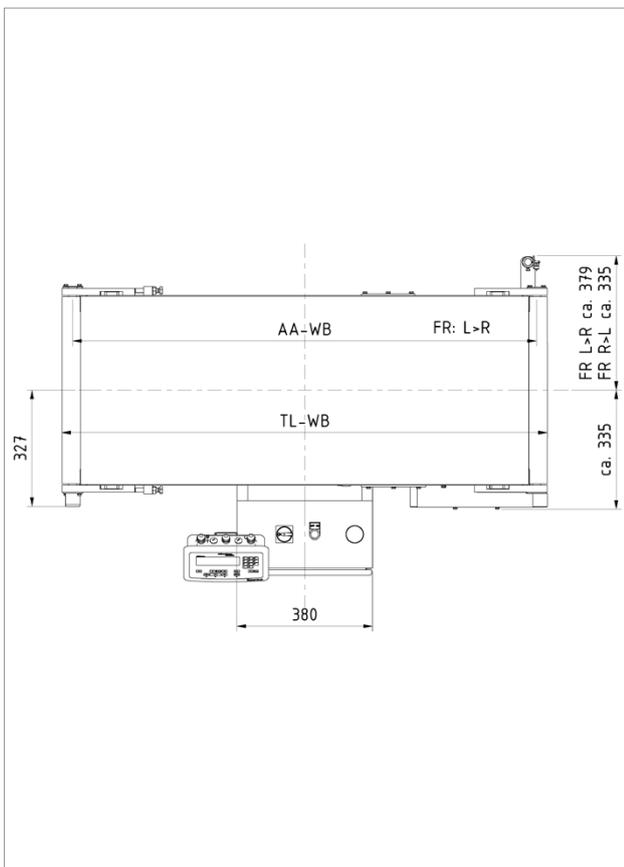
Checkweigher Essentus® Efficiency H WS 40 kg with four load cells 1,300/1,500, front operation



Front view



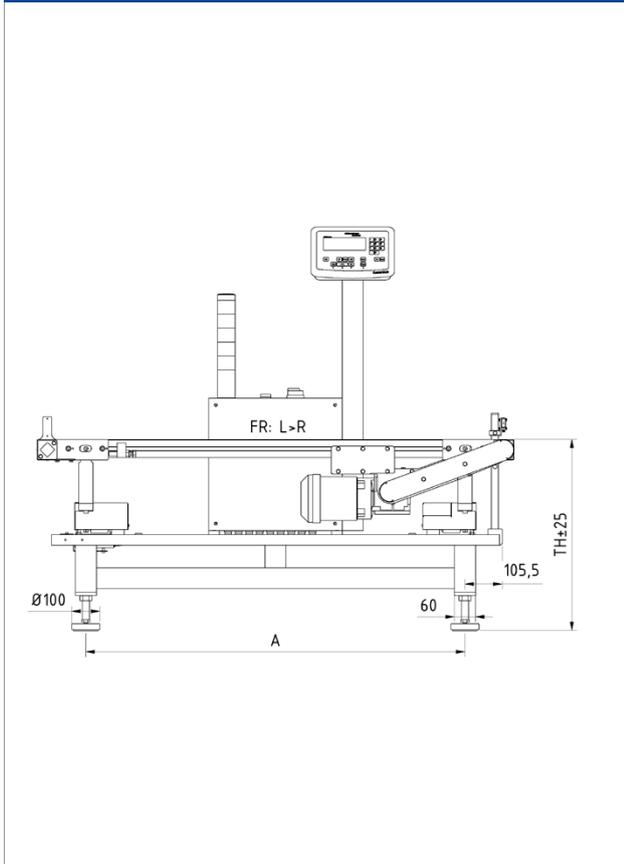
Side view



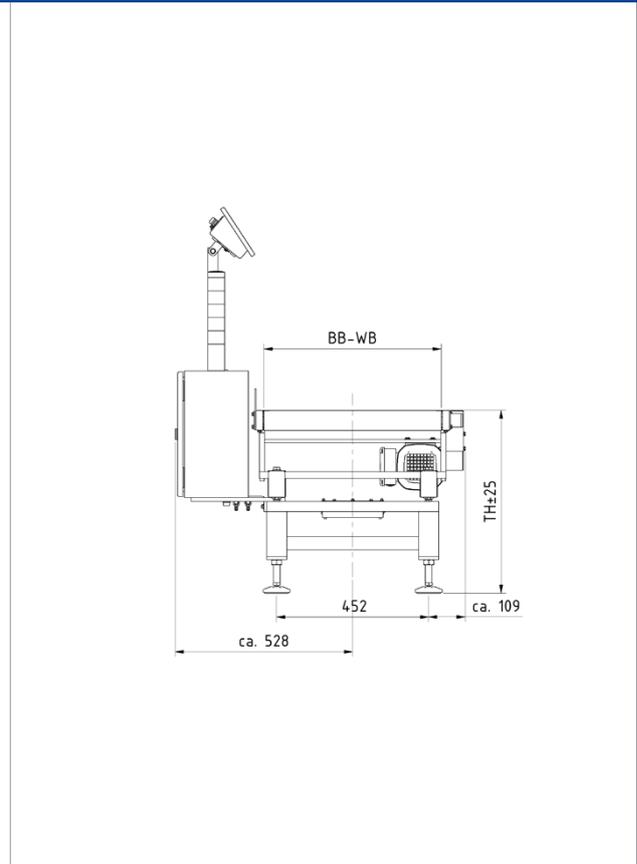
Top view

AA-WB	BB-WB	TL	TH +/-25	A
1,300	500	AA+60	450-1,100	1,080
1,500	500	AA+60	450-1,100	1,280

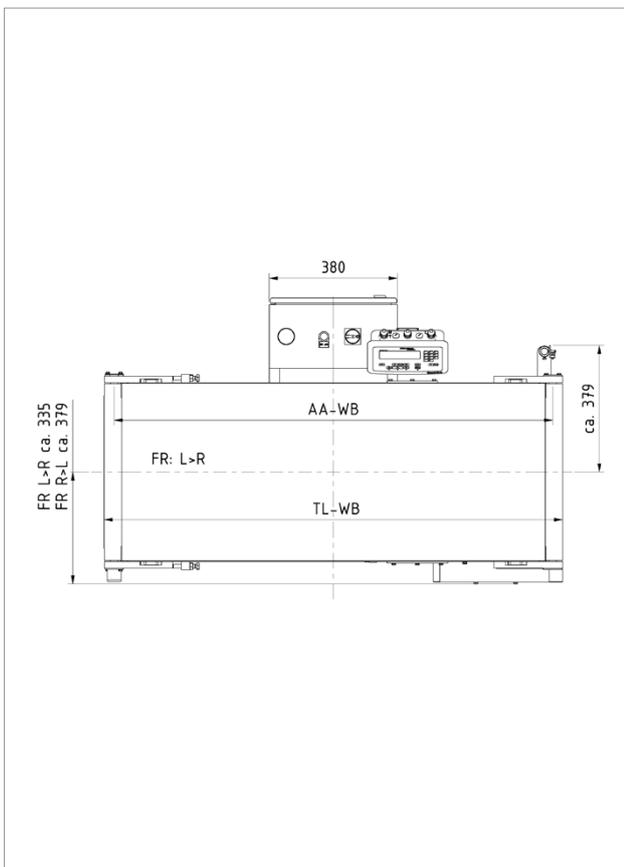
Checkweiger Essentus® Efficiency H WS 40 kg with four load cells 1,300/1,500, rear operation



Front view



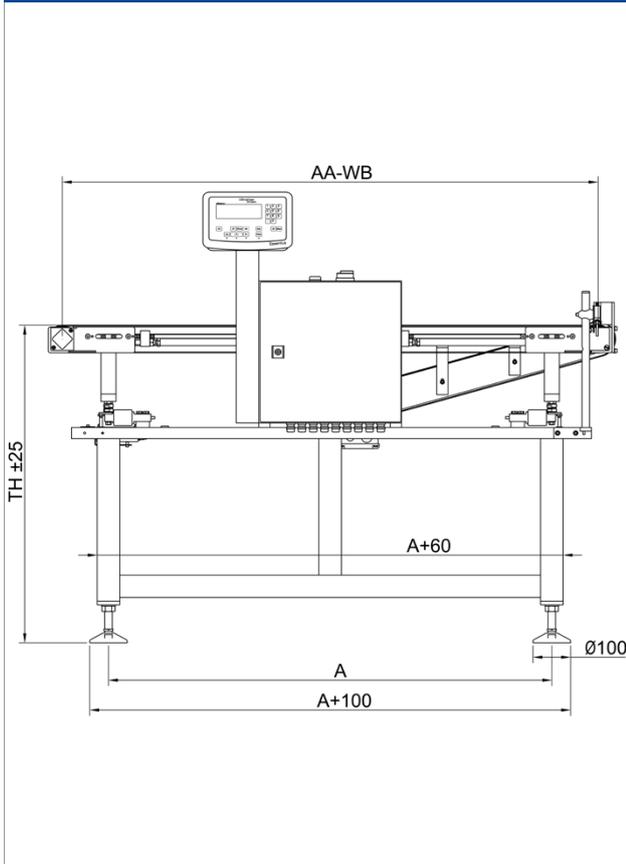
Side view



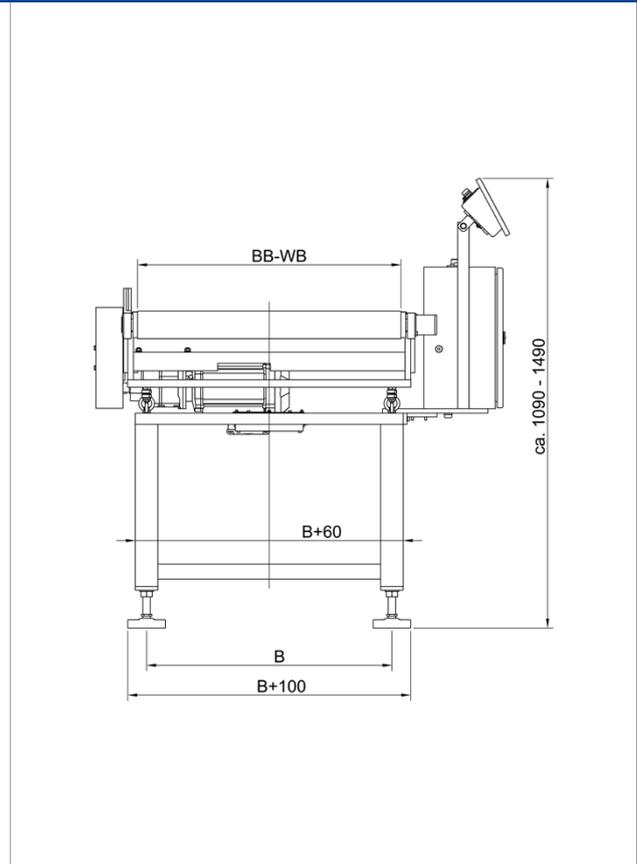
Top view

AA-WB	BB-WB	TL	TH +/-25	A
1,300	500	AA+60	450-1,100	1,080
1,500	500	AA+60	450-1,100	1,280

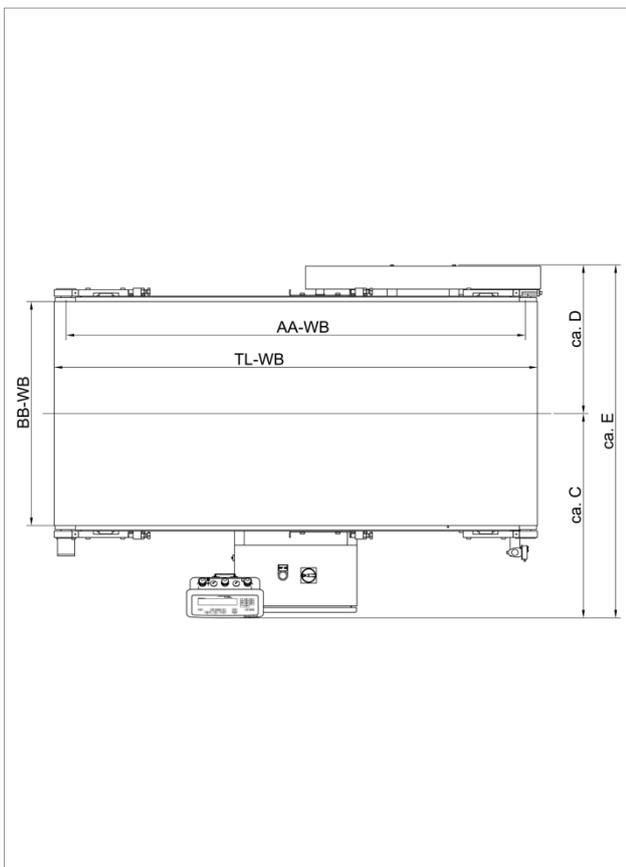
Checkweigher Essentus® Efficiency H WS 60 kg with four load cells



Front view



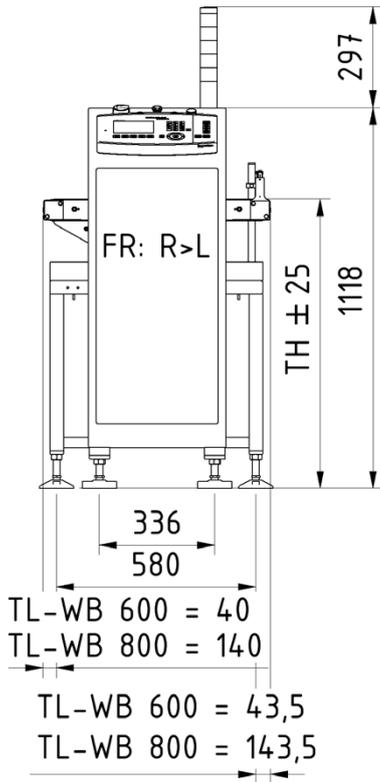
Side view



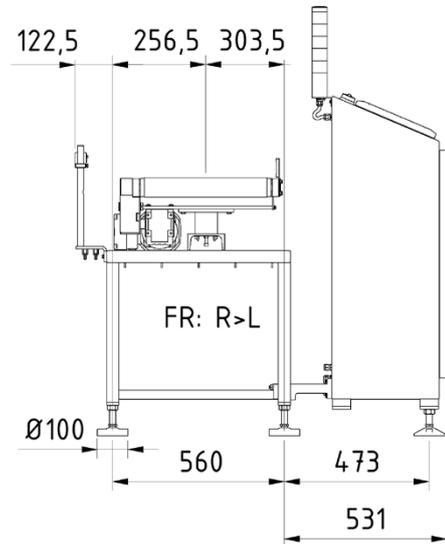
Top view

AA-WB	BB-WB	TL	TH +/-25	A
1,300	500	AA+60	450-1,100	1,080
1,500	500	AA+60	450-1,100	1,280

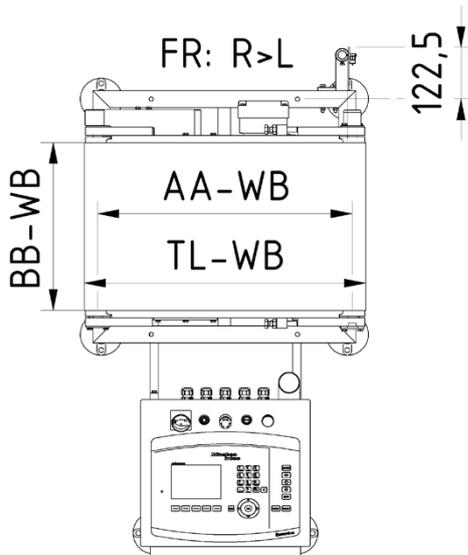
Checkweiger Essentus® Performance H WS 40 kg with one load cell



Front view



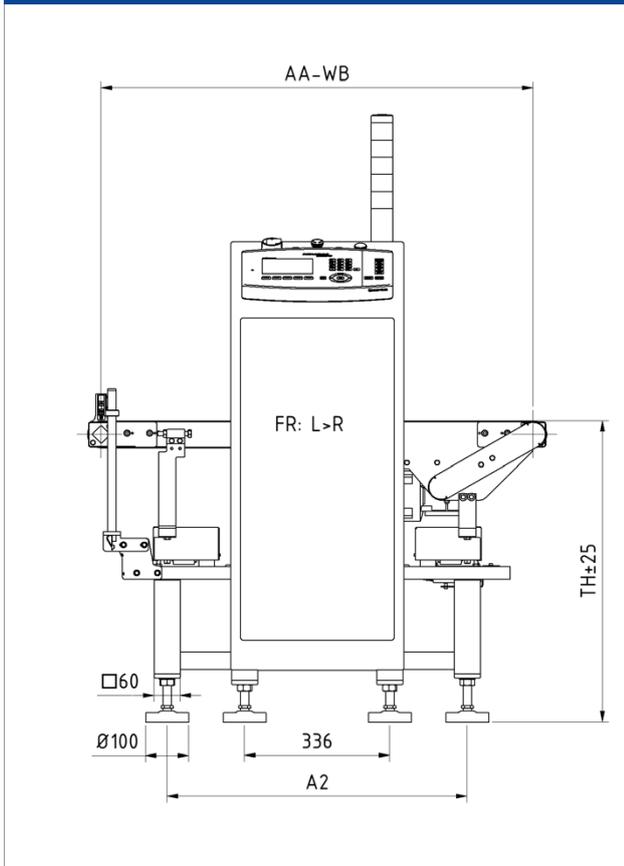
Side view



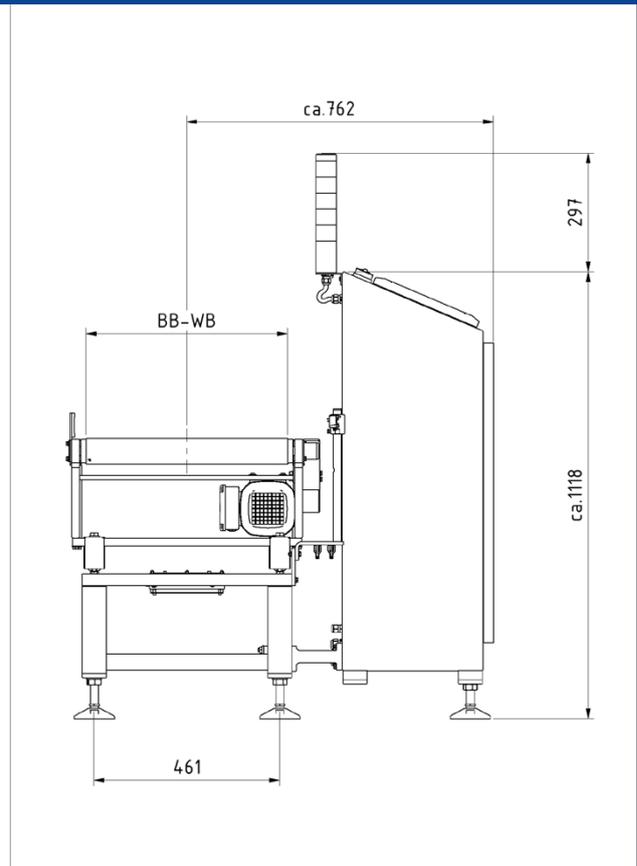
Top view

AA-WB	BB-WB	TL	TH +/-25
600	400	AA+63	450 – 1100
800	400	AA+63	450 – 1100

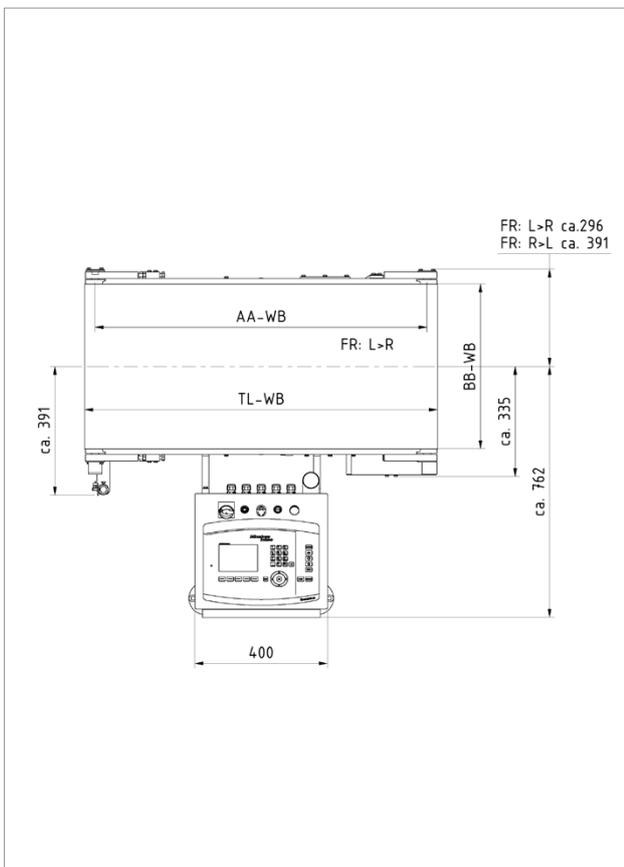
Checkweigher Essentus® Performance H WS 40 kg with four load cells 1,000



Front view



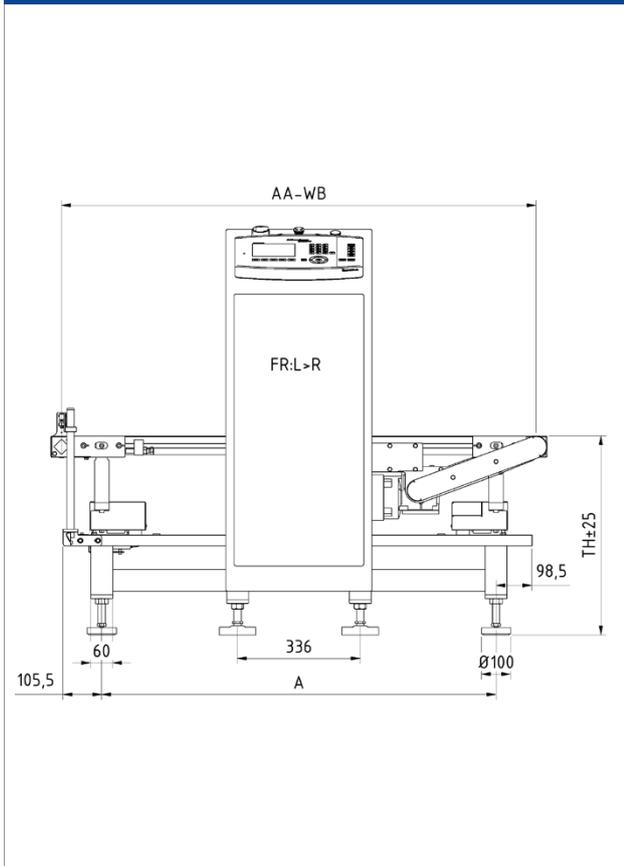
Side view



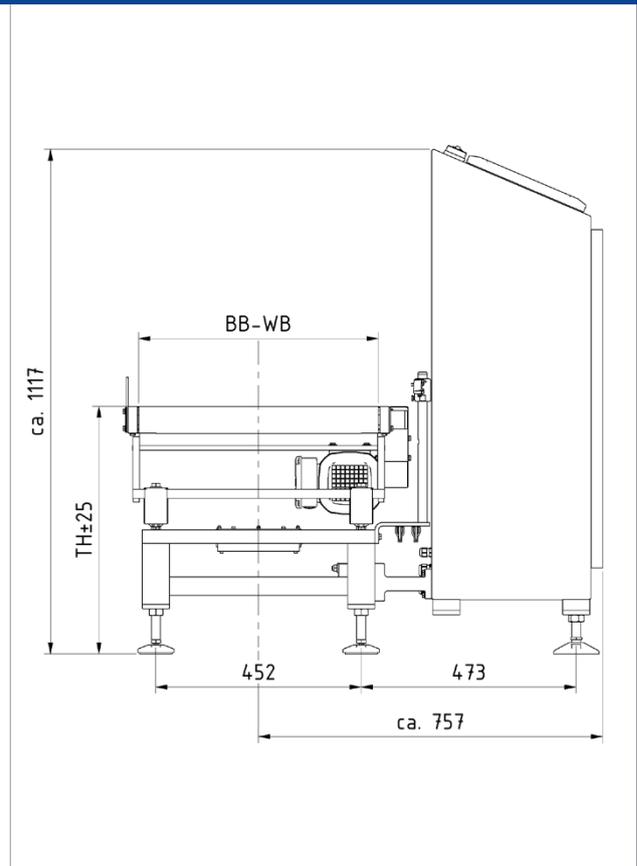
Top view

AA-WB	BB-WB	TL	TH +/-25	A2
1,000	500	AA+60	450-1,100	AA-305 (695)

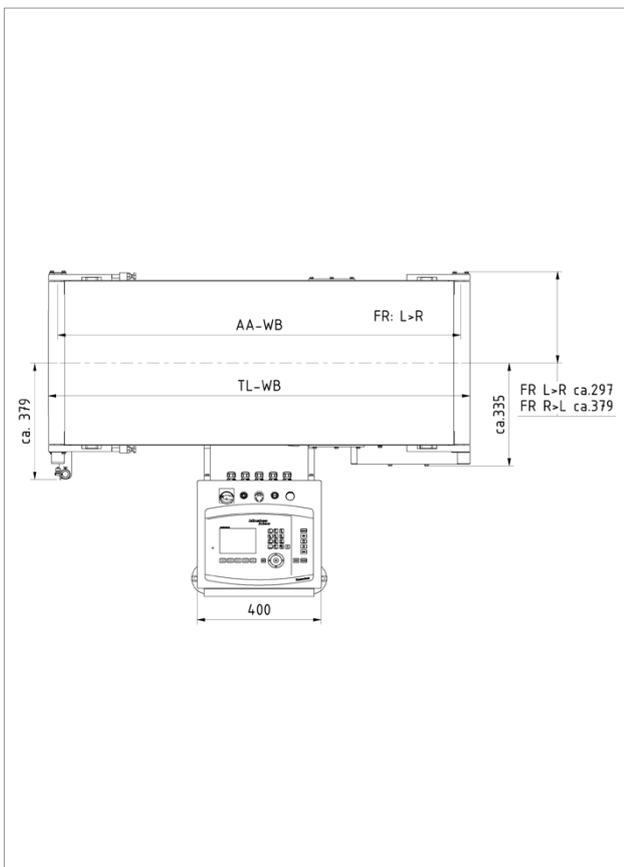
Checkweigher Essentus® Performance H WS 40 kg with four load cells 1,300/1,500



Front view



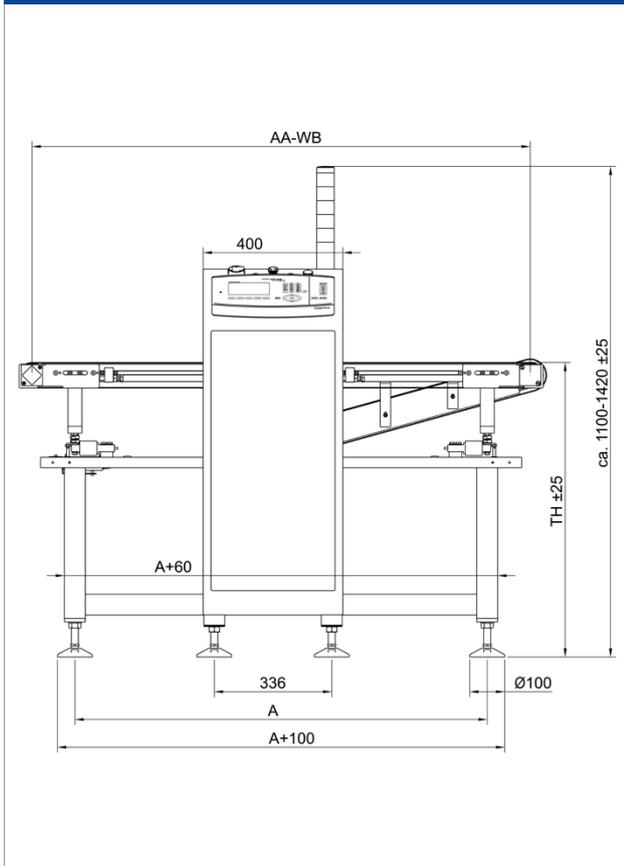
Side view



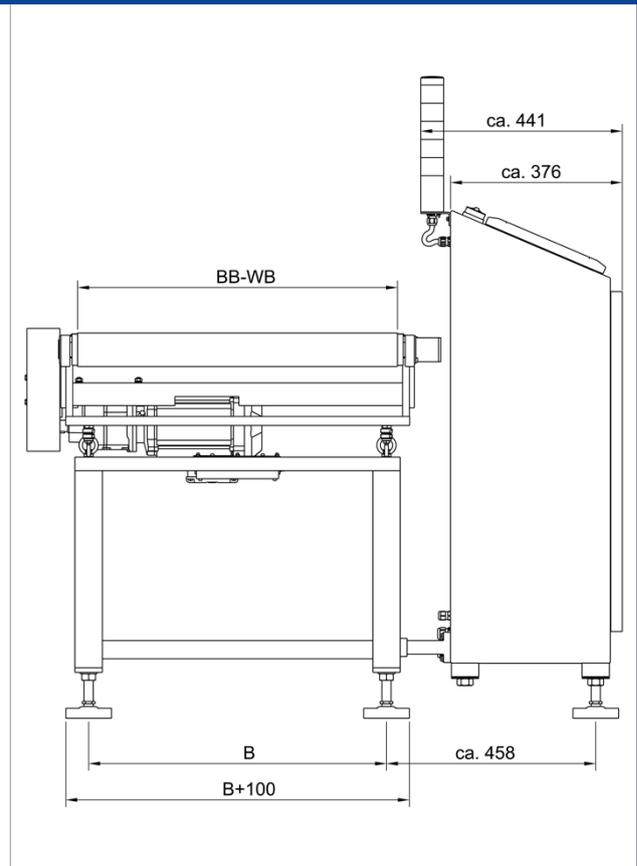
Top view

AA-WB	BB-WB	TL	TH +/-25	A
1,300	500	AA+60	450-1,100	1,080
1,500	500	AA+60	450-1,100	1,280

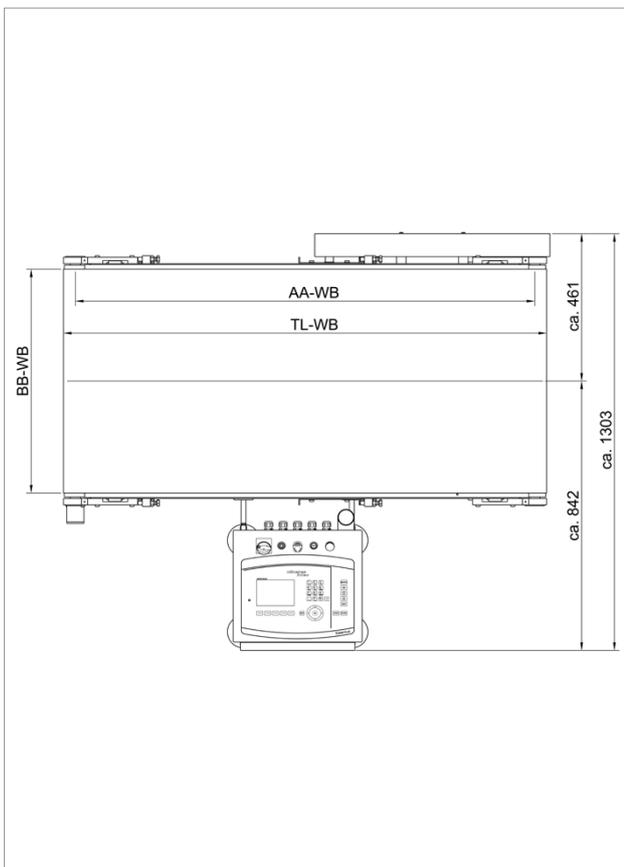
Checkweigher Essentus® Performance H WS 60 kg with four load cells



Front view



Side view



Top view

Pos.	Description
A	Feet distance (mm)
AA-WB	Centre-to-centre distance of weighing belt (mm)
TH	Bench height (increments of 25) (mm)

Dimensions: see following table of measurements

Variants for checkweigher Essentus® H

	Weighing belt	AA-WB	TL-WB	BB-WB
WS 40 kg with one load cell	600 x 400	600	660	400
	800 x 400	800	860	400

	Weighing belt	AA-WB	TL-WB	BB-WB
WS 40 kg with four load cells	1,000 x 500	1,000	1,060	500
	1,300 x 500	1,300	1,360	500
	1,500 x 500	1,500	1,560	500

	TL-WB	AA-WB	BB-WB	Rollers Diameter	A	B	C	D	E
WS 60 kg with four load cells	1,100	1,026	700	70	780	652	842	461	1,303
	1,300	1,226	700	70	980	652	842	461	1,303
	1,500	1,426	700	70	1,180	652	842	461	1,303
	1,500	1,426	900	70	1,180	852	942	561	1,703
	1,700	1,626	900	70	1,380	852	942	561	1,703
	1,900	1,826	900	70	1,580	852	942	561	1,703
	2,100	2,026	900	70	1,780	852	942	565	1,703

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



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



Food and beverages



Pharmaceutical



Chemistry



Agribusiness



Cosmetics



Building materials



Recycling



Machinery (OEM)

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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