



CM3 Combination Systems

Checkweighers with Metal Detectors



The C-Series checkweighing and metal detector combination systems have been designed to provide the widest possible range of weighing and metal contamination detection solutions. The modular construction ensures that there is an optimal solution for all production needs – from simple to the most complex and challenging.

These compact and space saving systems fully support food safety frameworks based on a hazard analysis such as HACCP and HARPC, and they are ideal as Critical Control Points. Detailed statistical data and one of the largest ranges of product handling options make the C-Series checkweigher and metal detector combinations a key component in proving due diligence.

All of the combination systems offer more than ten data communication standards to provide the fullest suite of data collection tools available, enabling manufacturers to comply with quality assurance criteria in accordance with FSMA, BRC, IFS, retailer codes of practice, and legislation on pre-packaged goods.

Nine Combination Systems To Meet All Application Requirements

The CM range is based on the C31 StandardLine, C33 PlusLine and C35 AdvancedLine checkweighers – with each line offering from one to four different metal detector heads to provide the optimal combination system. High quality stainless steel construction components and specialized conveyors are available for optimal performance in wet, dry and harsh environmental production conditions. Central product data editing at the checkweigher terminal facilitates quick and easy product changeover.



CM31 StandardLine Dependable Accuracy

- Configurable with 80 performance and productivity enhancing options
- Up to 200 packs per minute throughput
- From 20 g to 6 kg weighing range, high accuracy
- 7" multilingual touchscreen



CM33 PlusLine Robust Performance

- Customizable with 180 performance and productivity enhancing options
- Up to 300 packs per minute throughput
- From 7 g to 7.5 kg weighing range, very high accuracy
- 12" multilingual touchscreen



CM35 AdvancedLine Precision and Versatility

- Fully customizable with 230 performance and productivity enhancing options
- Up to 600 packs per minute throughput
- From 3 g to 10 kg weighing range, extremely high accuracy
- 15" multilingual touchscreen

Profile LS Combi – Compact metal detector for use in simple applications where space is at a premium. Covers most common metal detection tasks

All Profile metal detectors feature:

- Stainless steel housing
- Auto Balance Control for changing ambient conditions
- Detects ferrous, non-ferrous, stainless steel, and aluminum particles

Profile – Multi-, Ultra-high and Tuned frequency operation for highest detection sensitivity on dry products

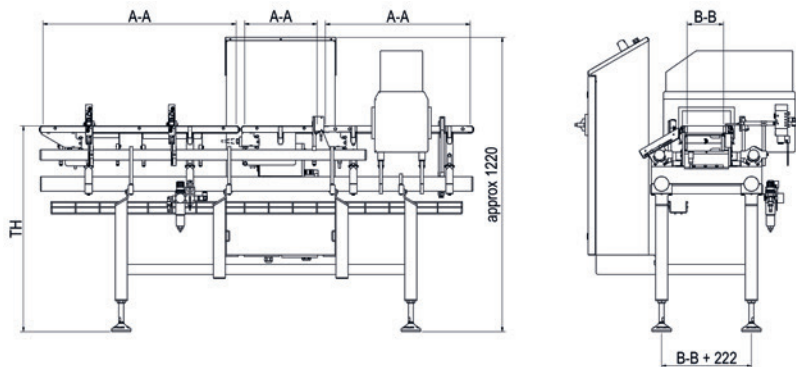
Profile RZ – Incorporates a zero metal free zone (ZMFZ) technology for a shorter overall length of the combination system and increased sensitivity

Profile Advantage – Multi-Simultaneous Frequency (MSF) technology for up to 50% improved sensitivity in challenging product effect applications

CM31 StandardLine

General Technical Data of CM31 StandardLine

Approval	Weights & Measures design approval for official verification (MID certifiable)
Weighing technology	Load cell, strain gauge principle
Weighing terminal	7" color touchscreen TFT display, with USB port and emergency stop button, individual user access profiles with password protection, more than 30 selectable languages for the dialog/prompts; display of all key up-to-date weight data, production and configuration screens; real-time data capture and distribution
Conveyor belt speed	Continuously variable
Safeline metal detector available	Profile LS Combi



CM31 StandardLine incorporating a Profile LS Combi – typical dimensions in mm (A-A, B-B vary depending on conveyor size)

Technical Details of CM31 StandardLine

Weighing range*	20 g - 6 000 g
Accuracy**	from ± 0.5 g (500 mg)
Throughput**	max. 200 weighings/minute
Electrical (with lockable mains disconnect)	110/230 V AC, single-phase, 50/60 Hz, 1 - 1.2 kVA
Ingress protection rating	IP 54, optional IP 65 (water protection design)
Infeed/detection conveyor dimensions	see the metal detector table overleaf
Distance between roller centres (A-A), weighing conveyor	200 to 600 mm
Belt width (B-B), weighing and outfeed conveyor	150, 200, 300, 400 mm
Distance between roller centres (A-A), outfeed conveyor	from 500 mm

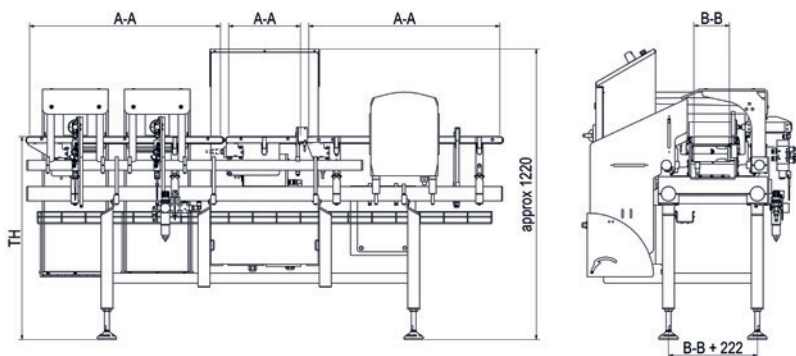
* Dependent on product (article) weight and the design and dimensions of the weighing conveyor being used

** Within official margins of error, depending on weight, dimensions and transport characteristics of the product being weighed

CM33 PlusLine

General Technical Data of CM33 PlusLine

Approval	Weights & Measures design approval for official verification (MID certifiable)
Weighing technology	Load cell, electromagnetic force restoration (EMFR) digital, maintenance-free, with temperature compensation, Swiss-made
Weighing terminal	12" color touchscreen TFT display, with USB port and emergency stop button, individual user access profiles with password protection, more than 30 selectable languages for the dialog/prompts; display of all key up-to-date weight data, production and configuration screens; real-time data capture and distribution
Conveyor belt speed	Continuously variable
Safeline metal detectors available	Profile LS Combi Profile Profile RZ Profile Advantage



CM33 PlusLine incorporating an R-Series Profile (other detector models as overleaf) – typical dimensions in mm (A-A, B-B vary depending on conveyor size)

Technical Details of CM33 PlusLine

Weighing range*	7 g - 7 500 g
Accuracy**	from ± 0.05 g (50 mg)
Throughput**	max. 300 weighings/minute
Electrical (with lockable mains disconnect)	110/230 V AC, single-phase, 50/60 Hz, 1 - 1.2 kVA
Ingress protection rating	IP 54, optional IP 65 (water protection design)
Infeed/detection conveyor dimensions	see metal detector table overleaf
Distance between roller centres (A-A), weighing conveyor	200 to 600 mm
Belt width (B-B), weighing and outfeed conveyor	150, 200, 250, 300, 400 mm
Distance between roller centres (A-A), outfeed conveyor	from 500 mm

* Dependent on product (article) weight and the design and dimensions of the weighing conveyor being used

** Within official margins of error, depending on weight, dimensions and transport characteristics of the product being weighed

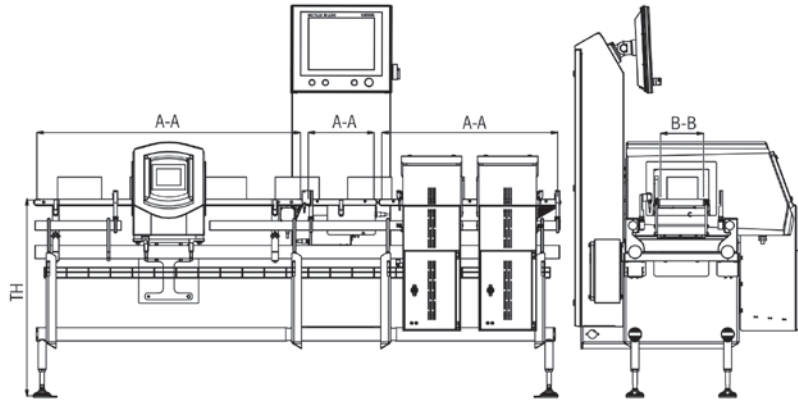
Please see the checkweigher data sheets of C31 StandardLine, C33 PlusLine and C35 AdvancedLine for:

- noise level
- compressed air supply
- line heights (TH)
- product setup memories, as well as options

CM35 AdvancedLine

General Technical Data of CM35 AdvancedLine

Approval	Weights & Measures design approval for official verification (MID certifiable)
Weighing technology	Load cell, electro-magnetic force restoration (EMFR) digital, maintenance-free, with temperature compensation, Swiss-made
Weighing terminal	15" color touchscreen TFT display, with USB port and emergency stop button, individual user access profiles with password protection, more than 30 selectable languages for the dialog/prompts; display of all key up-to-date weight data, production and configuration screens; real-time data capture and distribution
Conveyor belt speed	Continuously variable
Safeline metal detectors available	Profile LS Combi Profile Profile RZ Profile Advantage



CM35 AdvancedLine incorporating an R-Series Profile Advantage (other models as below) – typical dimensions in mm (A-A, B-B vary depending on conveyor size)

Technical Details of CM35 AdvancedLine

Weighing range*	3 g - 10 000 g
Accuracy**	from ± 0.01 g (10 mg)
Throughput**	max. 600 weighings/minute
Electrical (with lockable mains disconnect)	110/230 V AC, single-phase, 50/60 Hz, 1 - 1.2 kVA
Ingress protection rating	IP 54, optional IP 65 (water protection design)
Infeed/detection conveyor dimensions	see metal detector table below
Distance between roller centres (A-A), weighing conveyor	200 to 600 mm
Belt width (B-B), weighing and outfeed conveyor	150, 200, 250, 300, 400 mm
Distance between roller centres (A-A), outfeed conveyor	from 500 mm

* Dependent on product (article) weight and the design and dimensions of the weighing conveyor being used

** Within official margins of error, depending on weight, dimensions and transport characteristics of the product being weighed

Please see the checkweigher data sheets of C31 StandardLine, C33 PlusLine and C35 AdvancedLine for:

- noise level
- compressed air supply
- line heights (TH)
- product setup memories, as well as options

Metal Detectors

Profile LS Combi Model

- A compact contamination detection solution for use in in-line or end-of-line inspection, mainly in dry applications

Profile Model

- Multi-, Ultra-high and Tuned frequency operation for highest detection sensitivity on dry products

Profile RZ Model

- As per Profile, with the added benefit of a zero metal free zone (ZMFZ) for a shorter overall system length, mainly in dry applications

Profile Advantage Model

- Uses Multi-Simultaneous Frequency (MSF) technology to deliver up to 50% improved sensitivity on any challenging product effect application in dairy, meat and poultry, ready meal, bakery or metalized film packed product industries

- Product signal suppression virtually eliminates false triggering to ensure minimum waste, intuitive clustering allows single setting operation for ease of use and increased productivity

Technical Details of Profile Metal Detectors

- Stainless steel case, bead blasted finish
- Auto balance control for constant automatic adaptation to changing ambient conditions
- Capable of detecting all metal types including ferrous, non-ferrous, non-magnetic stainless steel and aluminium

Technical Details, Metal Detector Model Profile LS Combi

Pass width (mm)	200		250				350				450		
Aperture height (mm)	100	150	100	150	200	250	100	150	200	250	150	200	250
Usable height (mm)	60	110	60	110	160	210	60	110	160	210	110	160	210
A-A infeed/detection conveyor (mm)	600												
B-B infeed/detection conveyor (mm)	150		200				300				400		

Alternative for CM33 PlusLine and CM35 AdvancedLine: Metal Detector Models Profile, Profile RZ, Profile Advantage*

Pass width (mm)	200	200	250		350			450
Aperture height	250	400	125	150	125	150	175	200
Usable height (mm)	210	360	85	110	85	110	135	160
A-A infeed/detection conveyor (mm)	800 – 1800 depending on type and dimensions of metal detector model							
B-B infeed/detection conveyor (mm)	150		200		300			400

*Values are examples, many other dimensions available

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Dartronics, Inc.

150 William Street
Perth Amboy, NJ 08861 USA
Tel: (732) 324-0800
Fax: (732) 324-4488 Email:
sales@dartronics.com

For more information

www.dartronics.com/checkweigher-solutions/



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