

## CM3 Combination Systems Checkweighers with Metal Detectors



**The C-Series checkweighing and metal detection 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 dry, Waterprotected, washdown, and hygienic 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

**These metal detectors feature:**

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

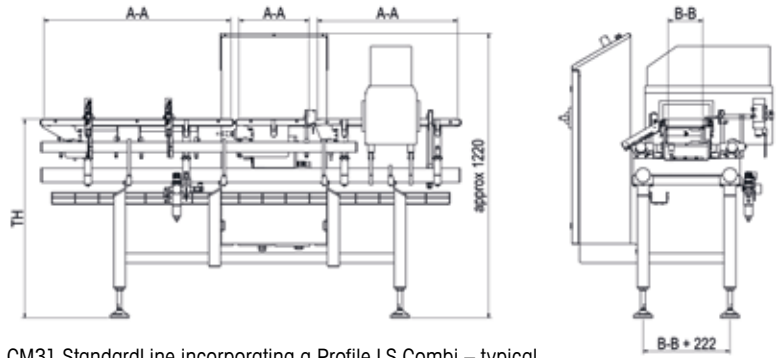
**PowerPhasePRO** – Multi-, Ultra-high and Tuned frequency operation for highest detection sensitivity on dry products

**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 no.	Weights & Measures design approval for official verification (MID certifiable)
Weighing technology	Strain gauge load cell
Weighing Terminal - HMI	7-inch color touchscreen TFT display, with emergency stop switch
Personnel Access	More than 30 selectable languages with individual access profiles and password protection
Data	Display of all key up-to-date weight data, production and configuration screens; real-time data capture and distribution
Conveyor belt speed	Variable with product position tracking
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 $\pm 0.5$ g (500 mg)
Throughput**	max. 200 ppm
Electrical (with lockable, interlocked disconnect)	110 VAC single phase, 230 VAC three phase, 50/60 Hz, 1 - 1.2 kVA
Ingress protection rating	Dry to IP 54, Waterprotected to IP 65
Infeed/detection conveyor dimensions	see metal detector table on next page
Distance between roller centers (A-A), weighing conveyor	250 to 600 mm
Belt width (B-B), weighing and outfeed conveyor	150, 200, 300, 400 mm
Distance between roller centers (A-A), outfeed conveyor	from 500 mm

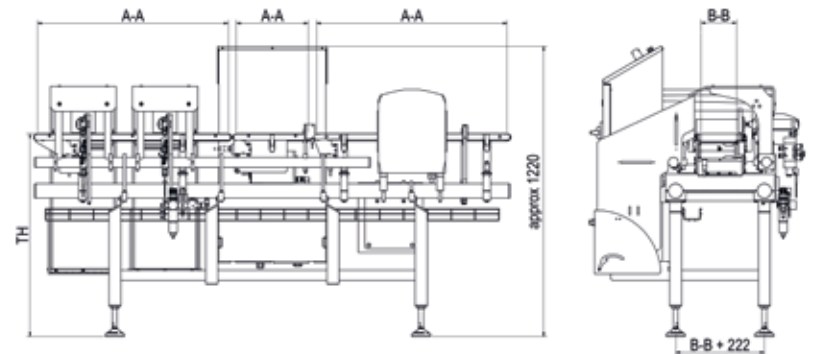
\* Dependent on product (article) weight and the design and dimensions of the weighing conveyor being used

\*\* 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 no.	Weights & Measures design approval for official verification (MID certifiable)
Weighing technology	Strain gauge principle or electromagnetic force restoration (EMFR) principle, digital, maintenance-free, with temperature compensation
Weighing Terminal - HMI	12-inch color touchscreen TFT display, with emergency stop switch
Personnel Access	More than 30 selectable languages with individual access profiles and password protection
Data	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 PowerPhasePRO Profile Advantage



CM33 PlusLine incorporating an R-Series Profile (other detector models listed on next page) – 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 $\pm 0.05$ g (50 mg)
Throughput**	max. 300 ppm
Electrical (with lockable, interlocked disconnect)	110 VAC single phase, 230 VAC three phase, 50/60 Hz, 1 - 1.2 kVA
Ingress protection rating	Dry to IP 54, Waterprotected to IP 65, Washdown up to IP 66
Infeed/detection conveyor dimensions	see metal detector table on next page
Distance between roller centers (A-A), weighing conveyor	200 to 600 mm
Belt width (B-B), weighing and outfeed conveyor	150, 200, 300, 400 mm
Distance between roller centers (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
- transport heights (TH)
- product setup memories, as well as options

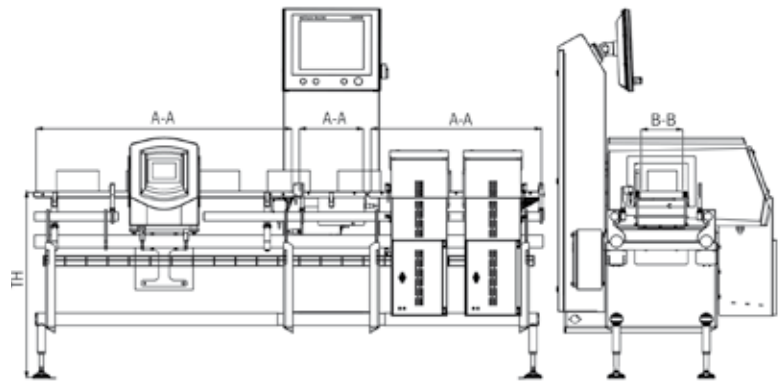
# CM35 AdvancedLine

## General Technical Data of CM35 AdvancedLine

Approval no.	Weights & Measures design approval for official verification (MID certifiable)
Weighing technology	Electromagnetic force restoration (EMFR) load cell, digital, maintenance-free, with temperature compensation, Swiss made
Weighing Terminal - HMI	15-inch color touchscreen TFT display, with emergency stop switch
Personnel Access	More than 30 selectable languages with individual access profiles and password protection
Data	Display of all key up-to-date weight data, production and configuration screens; real-time data capture and distribution
Conveyor belt speed	Variable with product position tracking
Safeline metal detectors available	Profile LS Combi PowerPhasePRO Profile Advantage

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

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



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 ppm
Electrical (with lockable, interlocked disconnect)	110 VAC single phase, 230 VAC three phase, 50/60 Hz, 1 - 1.2 kVA
Ingress protection rating	Dry to IP 54, Waterprotected to IP 65, Washdown to IP 66 and Hygienic up to IP 69
Infeed/detection conveyor dimensions	see metal detector table below
Distance between roller centers (A-A), weighing conveyor	250 to 600 mm
Belt width (B-B), weighing and outfeed conveyor	150, 200, 300, 400 mm
Distance between roller centers (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

## 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

### Profile LS Combi Model

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

### PowerPhasePRO Model

- Multi-, Ultra-high and Tuned frequency operation for highest detection sensitivity on dry products. Can be supplied with 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, Metal Detector Model Profile LS Combi

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

## Alternative for CM33 PlusLine and CM35 AdvancedLine: Metal Detector Models PowerPhasePRO, Profile Advantage

Aperture width (mm)	200		250		350		450	
	250	400	125	150	125	150	175	200
Usable aperture height (mm)*	200	300	75	100	75	100	125	150
A-A infeed/detection conveyor (mm)	1 200	1500-1700	1 200	1 200	1 000	1 200	1 500	1 500
B-B infeed/detection conveyor (mm)	150		200		300		400	

\* Usable aperture height is less than the overall aperture height to account for conveyor space. Users should consider extreme conditions of their packages (e.g., open flaps) when determining the appropriate aperture dimensions

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