



## ESSENTIA Checkweighers

In-line weighing solutions  
for any application

Weight accuracy control and  
completeness checking of packs

# Checkweighing

## Essentia C

➤➤ The most versatile in the range, flexible and compact, provides an outstanding weighing end-of-line quality control in small spaces at reduced costs. Accurate and cost-effective. From 15 g to 8 kg product range.

Best for fresh produce, pre-packaged meat and fish, bakery, dairy, convenience food, cylindrical products, metal and electrical parts.



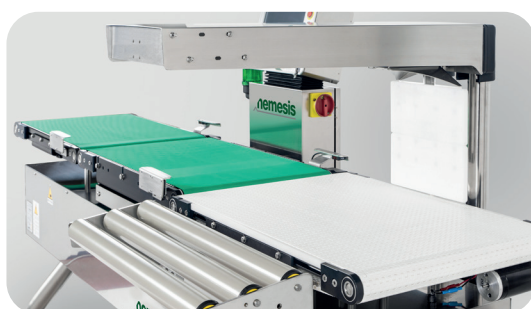
Pasta



## Essentia H

➤➤ Ideal for industrial goods and heavy products, from 8 to 80 kg. With its robust and heavy-duty architecture, Essentia H checkweigher is also suitable for harsh environments, still ensuring top accuracy with heavy loads.

Best for food secondary packaging, logistics, warehousing and chemicals.



Chemicals Tanks



# Checkweighing

## Essentia S

- The **lightweight specialist**. From **5 g** to **1.2 kg**. Featuring a weighing accuracy of **up to ±0.2 g (MID)**, while maintaining the highest speeds, it is the right series for lightweight, small products: **pre-packaged**, such as small boxes, pouches, flowpacks and bottles in food, pharma, cosmetics or **loose** as mechanical hardware.



Aerosol Cans

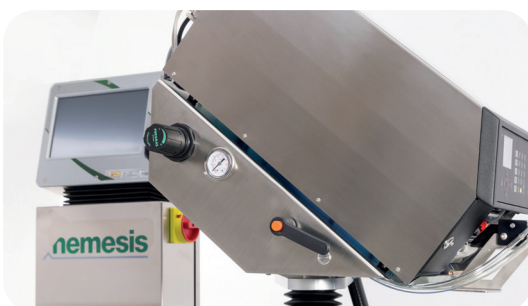


# Weigh-Price Labeling

## Essentia K

- Weighing and labeling in the same machine. For any pre-packaged product ranging from **15 g** to **30 kg** at an **output up to 90 labels per minute**.

Different **printer solutions** are available: with **top, bottom, C-type, side** or **front label application**, by means of pneumatic arms or compressed air jets.



Top Labeler for packaged meat



# Checkweighing + Metal inspection

## Combined Metal Detector Essentia MX

- The integration of a Metal Detection coil ensures **a complete quality control** on the product, not only as to weight but also regarding possible **metallic contaminants**.

A compact solution **to save space** and enhance **production efficiency**.

Best for fresh produce, convenience food, pharma and cosmetics.

### Packaged Bagels



- **Metal Detector controls can be integrated in Nemesis checkweigher HMI**, providing a single user-friendly interface for both functions. Feasibility depends on Metal Detector type.

- Not only Metal Detectors. Essentia checkweighers can be easily **combined with X-Ray systems, markers or coders**.

If completed with specific conveyors belts, rollers, dividers or pushers, they become extremely efficient and accurate **sorting systems** to automatically grade or classify products by weight.

Certified by:



### ➤ Highlights and Options

- Wide range of rejection systems: air jets, pushers, dividers, HeavyWeight, drop-down, lift/drop flap, progressive, flipper
- Polycarbonate or stainless steel protection tunnel on the conveyor belts to comply with the strictest retail and pharma standards
- Extra safety devices available: reject confirmation and full rejection bin photocells, light/sound alarm, pressure switch
- EasyWeigh® Algorithm for the highest weighing accuracy without autolearning
- 10" or 7" touchscreen display
- IP65 upgrade for wet environments
- Different infeed systems available: guide rails, screw, spacing or metering conveyor, sidegrip feeding belts, pacing photocell
- Key- or electro-lockable stainless steel or plastic rejection bins

# ➤➤ HMI and Software

## ➤ Touchscreen: Essentia User Interface

- Simple and intuitive
- Only 5 screen touches to set any of the checkweigher functions
- Up to 10,000 programs storage in its database for 6 months
- Inside Diagnostics and Guide for problem resolution
- USB key data download (PDF format)



## ➤ Data Manager

- Pre-set on each checkweigher, to be activated by a licence code
- For automatic download of reports for all batches
- Up to 10,000 programs storage in its database for 24 months
- Ethernet connection with SQL server database creation
- USB key data download (PDF and CSV format)

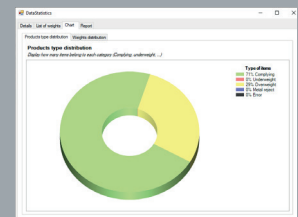
Day	Month	Year	Start date
26	August	2021	27/08/2022 09:37:44
27	September	2022	
28	October	2022	

Program	Description
2	Single conveyer
TD	18 g
Priset tare	0 g
T+=	25 g
T=-	15 g

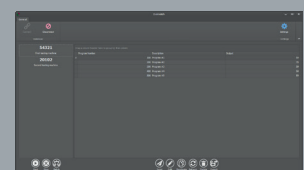
## ➤ Analytics

- Windows® program for a complete batch reporting
- Statistical batch analysis from the Data Manager SQL database
- Real-time line efficiency monitoring (up to 32 machines)
- A dedicated IT Manager to improve quality and efficiency
- Data report extraction (PDF, CSV and XML format)



## ➤ Overwatch

- A PC software to remotely control up to 32 machines
- The command console to start and stop the machines, set up existing programs, create new ones, launch system backup and restore when needed.
- It's Industry 4.0 technology



## ➤ Proactive Feedback

- Real-time control of the filling station, installed upstream the checkweigher
- Immediate signal to the filling machine for filling correction in case of significant variation of average product weights
- High efficiency, considerable product savings and waste reduction

Checkweigher	Speed	Feedback	Queue control
0002: Single conveyer			
Feedback correction	Proportionally constant time (0.04s) that determines the duration of correction signal	Samples	Queue control
1	10	10	Number of packages not considered for calculating the median weight. The correction comes during the queue is distributed (The number of packages)
Preselction E+	Preselction I+	Preselction I-	Preselction E-
0 g	0 g	0 g	0 g

# Technical Specifications

	Essentia C	Essentia S	Essentia H
<b>Checkweighers</b>			
Capacity	From 15 g to 8 kg	From 5 g to 1200 g	From 8kg to 60kg (MID) / 80kg (i.u.)*
Scale Interval "e"	≥ 0.5 g (MID) - ≥ 0.2 g (i.u.)*	≥ 0.2 g (MID) - ≥ 0.05 g (i.u.)*	≥ 2 g (MID) - ≥ 1 g (i.u.)*
Display Resolution "d"	≥ 0.01 g	≥ 0.01 g	≥ 1 g
Accuracy (3σ)	≥ ± 0.36 g (MID) ≥ ± 0.1 g (i.u.)*	≥ ± 0.07 g (MID) ≥ ± 0.02 g (i.u.)*	≥ ± 19.2 g (MID)
Throughput	≤ 250 ppm*	≤ 400 ppm*	≤ 60 ppm*
Belt Speed	≤ 100 m/min (MID)	≤ 100 m/min (MID)	≤ 40 m/min (MID)
Display Control Panel	7" Touchscreen / 10" optional		
Connectivity	Ethernet, Ethernet/IP; EthernetCAT, RS-232, OPC UA, Profinet, Profibus, Modbus and many more		
Power consumption (low-energy)	≤ 0.3 kW		
Configuration	from 1 to 6 conveyors		
Height	from 460 mm to 1200 mm with adjustable feet		
IP rating - Hygienic Design	IP54 standard / IP65 optional		
Conveyor width	from 45 mm to 820 mm		
Conveyor length	from 125 mm to 2050 mm		
Conveyor type	Polyurethane or modular plastic		
Machine Structure	100% Stainless steel		
Industries of application	Fresh produce / Packed Meat and Fish / Bakery / Convenience Food	Chemicals / Pharma / Cosmetics	Fresh produce / Packed Meat and Fish / Bakery / Convenience Food / Chemistry / Metal and Electrical
<b>Essentia K</b>			
<b>Weigh Price Labeler</b>			
Capacity	From 15 g to 30 kg		
Scale Interval "e"	≥ 0.5 g (MID)*		
Display resolution "d"	≥ 0.1 g		
Accuracy (3σ)	≥ ± 0.36 g		
Throughput	≤ 90 ppm*		
Belt Speed	≤ 40 m/min		
Printing Output	90 labels per minute*		
Printing Resolution	203 dpi / 300 dpi / 406 dpi		
Max Printing Speed	203/300dpi: 100-300 mm/sec (4-12 ips) 406dpi: 100-250 mm/sec (4-10 ips)		
	Essentia MC	Essentia MS	Essentia MH
<b>Combined Metal Detector</b>			
Capacity	From 15 g to 8 kg	From 5 g to 1200 g	From 8kg to 60kg (MID) / 80kg (i.u.)*
Scale Interval "e"	≥ 0.5 g (MID) - ≥ 0.2 g (i.u.)*	≥ 0.2 g (MID) - ≥ 0.05 g (i.u.)*	≥ 2 g (MID) - ≥ 1 g (i.u.)*
Display resolution "d"	≥ 0.01 g	≥ 0.01 g	≥ 1 g
Accuracy (3σ)	≥ ± 0.36 g (MID) ≥ ± 0.1 g (i.u.)*	≥ ± 0.07 g (MID) ≥ ± 0.02 g (i.u.)*	≥ ± 19.2 g (MID)
Throughput	≤ 250 ppm*	≤ 400 ppm*	≤ 60 ppm*
Belt Speed	≤ 100 m/min (MID)	≤ 100 m/min (MID)	≤ 40 m/min (MID)

\*final performance data depend on the shape, size and weight of the inspected item.