Avery Weigh-Tronix

Checkpoint M-SL

WIPOTEC ● POWERED

DYNAMIC CHECKWEIGHING

LASER PRINTER

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WIPOTEC ● POWERED

Optimum performance with high precision for heavy capacities

The standard model may be equipped with a built-in printer, as shown above, or a Smartfile Data System

Throughput speeds up to 230 pieces/minute

The **Checkpoint M-SL** is designed for high capacity, heavy-duty dynamic checkweighing. Whether you need to check current nominal weight, perform completeness checks on bundles or sort and classify, the Checkpoint M-SL provides the means to do the job with greater speed and efficiency.

A heavy, solid stainless steel base frame provides the stability needed for high weighing precision at medium and high belt speeds.
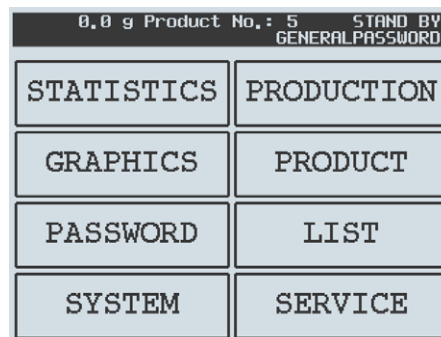
A heavy-duty conveyor belt and finely-tuned drive system ensure smooth operation as well as fast and safe transport of products. Individually modified solutions for varying product shapes are easily accommodated. Quick-change clamps on conveyors allow easy belt exchange.

The Checkpoint M-SL may also incorporate an optional reject mechanism to reliably discharge products that have incorrect weights, without disturbing the ongoing production. The pusher device is mounted on a separate free-standing frame.

Touch screen operation

A menu-guided touch screen with alphanumeric input facilitates fast, easy setup and adjustment of the scale for different products and requirements.

0.0 g Product No.: 5 STAND BY GENERALPASSWORD	
STATISTICS	PRODUCTION
GRAPHICS	PRODUCT
PASSWORD	LIST
SYSTEM	SERVICE

Display and modify master data with a simple touch

Password protection prevents unauthorized access to the individual functions and parameter settings.

Factory default settings are also permanently stored and may be loaded at any time. This feature provides the assurance of a well-defined operating condition when needed.

The desired units for operation and machine management are user selectable from the menu: grams (g) or kilograms (kg); ounces (oz) or pounds (lb).

WIPOTEC
Weigh Cell Technology
with Electromagnetic Force Restoration (EMFR)

To achieve the speed and accuracy required for dynamic checkweighing, Wipotec Weigh Cells are used in all Avery Weigh-Tronix Checkpoint models.
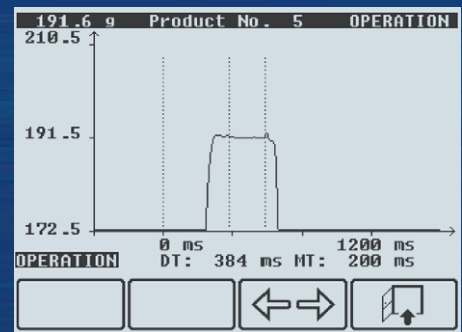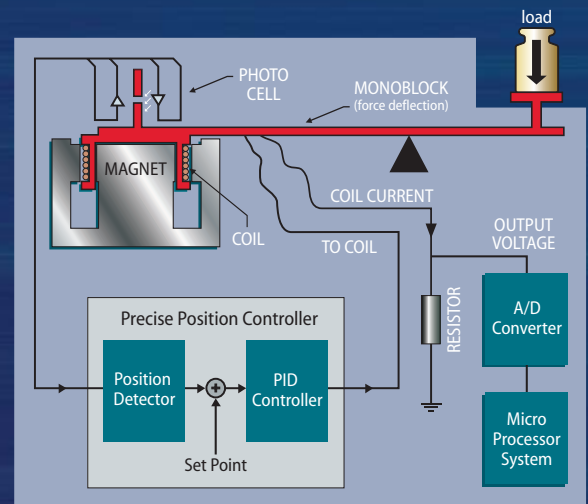
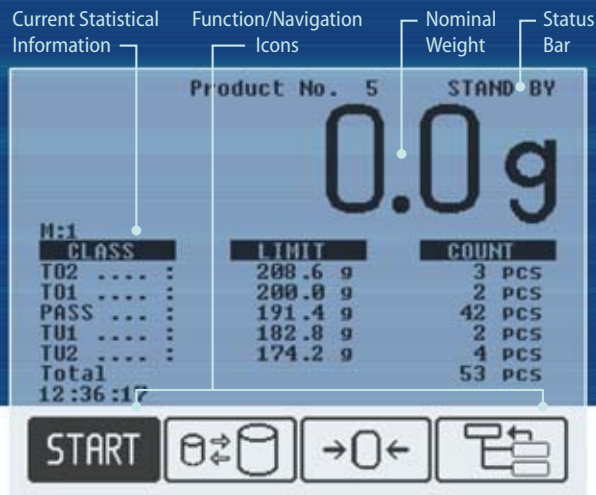### EMFR Operating Principle and Weigh Cell Design

Weigh Cells are an electronic version of the simple beam scale. A coil is attached to one end of the beam and load applied to the other. The amount of electrical current required to hold the coil at a neutral position within a magnetic field is proportional to the applied load. Since the Weigh Cell calculates weight based on changing current rather than physical motion, it is able to provide an extremely fast response time (typically 60 ms to reach 99.9% of the final value).

Checkweigher analysis tool

The links and levers that form the heart of the Weigh Cell are machined into a one-piece "monoblock" to ensure high precision, short settling time and reliable operation in an industrial environment. The electronics required to produce a useable digital signal, along with temperature and vibration compensation, are incorporated within the Weigh Cell.

Operational Features

100% production monitoring of products to ensure they meet the minimum weight or average weight requirements with production documentation

Production documentation shown by means of graphic screens for statistics histogram, trend and average value curves by pieces, hours or minutes.

2 different weighing ranges (30 kg and 60 kg)

5 weight classes for under, accept and over classification

50 PLUs (incorporates all relevant information required for the assigned product)

Touch screen simple, menu-guided operation

Multi-level password protection

3 different working height ranges

Right to left or left to right working directions

Compact design for easy integration into production lines

Line synchronization with isolated relay contacts
  Remote start (input)
  Weighing mode (output)
  Error (output)

20 automation channels available: eight input and 12 output channels

Main power switch located on electrical cabinet

Photo cell for product recognition mounted on supporting frame

Simple menu-driven calibration

AutoZero tracking capabilities

Tare weight input for checking net weights

Standard statistics including totals, over/under weights, standard deviation, average, etc.

Bubble level on frame for accurate machine leveling

Emergency by-pass for "worst-case scenario" resets the checkweigher to "product transport with the last selected speed" – Production can continue uninterrupted and the weight check can be performed at a later time

Product No. 5   STAND BY

0.0 g

```
M:1
CLASS        LIMIT       COUNT
T02 .... :   208.6 g        3 pcs
T01 .... :   200.0 g        2 pcs
PASS ... :   191.4 g       42 pcs
TU1 .... :   182.8 g        2 pcs
TU2 .... :   174.2 g        4 pcs
Total                      53 pcs
12:36:17
```

START | ⊟⇄⬭ | →0← | 🗠

Powerful standard software and user-friendly interface

The graphical interface simplifies training, allows quick access to operating parameters and clearly displays the desired checkweighing data.

Standard Configuration

- Welded stainless steel (AISI 316) tubular frame with stainless steel control cabinet/operating column and polycarbonate front cover
- Integrated display/control system with 5.7" graphical touch screen
- 1 set – operator/maintenance manual, electrical and pneumatic drawings, spare parts catalog

Avery Weigh-Tronix Checkpoint systems are certified in accordance with DIN ISO 9001-2000. Our checkweighers are distinguished by their precision and reliability. They were designed and manufactured for long-lasting, continuous operation.

Specifications

Type	Checkpoint M-SL-30		Checkpoint M-SL-60	
Weighing range	30 kg AVR 0 - 6 / 6 - 12 / 12 - 30 kg		60 kg AVR 0 - 12 / 12 - 30 / 30 - 60 kg	
Resolution[1]	1.0 g /2.0 g / 5.0 g		2.0 g / 5.0 g / 10.0 g	
Maximum possible throughput [1]	up to 230 ppm		up to 230 ppm	
	60 mm dia. roller Conveyor width		80 mm dia. roller Conveyor width	
	M-SL-1		M-SL-2	
Belt width	400 mm	600 mm	600 mm	800 mm
Belt length 600 mm	X	–	–	–
800 mm	X	X	X	X
1000 mm	X	X	X	X
1100 mm	–	–	X	X
1200 mm	–	–	X	X
1300 mm	–	–	X	X
1400 mm	–	–	X	X
1600 mm	–	–	X	X
Units of measure	lb/oz/kg/g			
Sorting device [2]	Pusher for products up to 30 kg			
Printer [2]	Built-in printer for production documentation / Smartfile / interface for external printer connection			
Temperature range	5 to 40° C (40 to 104° F) 80% non-condensing humidity			
Electrical supply	115 V / 230 V; 60 Hz / 50 Hz			
Maximum power consumption	800 VA			
Degree of protection	IP54/NEMA 12			
Pneumatic connection	87 psi			
Agency approvals	Certified for several countries; OIML R51 #NL-00.01, Measurement Canada #AM-5368			

(1) Depends on weight, dimensions and behavior of the product as well as conveyor speed and environmental conditions.
(2) Optional

smart*f*ile
system

Optional portable data
storage system

32K Bytes Data Card

PC Compatible Card Reader

Add-on capabilities for even greater application flexibility

The basic model of the Checkpoint M-SL covers an extraordinarily wide and versatile spectrum of applications. This versatility is supplemented by many selectable options.
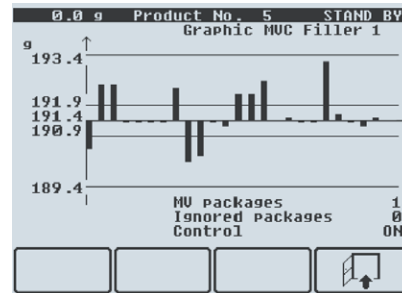
The Checkpoint M-SL can be equipped with a mean value control (MVR-1). This feature allows the control of automated filling machines. It is a valuable tool to reduce and/or eliminate inefficient overfilling. The production tendency can be graphically represented.

When integrated into a production line, the Checkpoint M-SL can be started by remote-control using the line synchronization of a higher line control.

By the integration of additional safety components, all drives as well as the pneumatics can be operated off circuit (optional feature). In order to ensure that products which are out of tolerance are rejected, a rejection verification is available. A photo sensor located downstream from the sorting device monitors the actual product flow and, if necessary, stops the belts immediately.

With the extensive range of optional equipment, the Checkpoint M-SL can be easily adapted for specific application requirements.

Track production with optional MVR-1

Options

- Memory expansion for 80 product PLUs
- Remote electronics cabinet including the touch screen
- Remote secondary weight-only display
- 3 or 5 zone lights, indicating classification status
- Error light indicating machine status
- Audible alarm signal
- One external error input: used in combination with other devices such as a metal detector
- Air pressure verification: monitors the performance of the reject device by

stopping the machine and displaying an error message in the event of pressure drops
- E-Stop: remote or machine mounted emergency push button immediately stops checkweigher
- Consecutive Reject Alarm: in the event of consecutive rejects. Target count is set by customer
- Pusher reject device
- Reject verification: monitors the performance of the reject device

- MVR-1: mean value regulator for one (1) filling head. Checkpoint sends two binary signals to the controls of the filling head (± adjustment).
- Statistics package providing comprehensive statistical data concerning all products produced
- Built-in printer, Smartfile System or Centronics printer to print statistics package for production documentation
- Interface to transmit individual weights via RS-232, RS-422, RS-485, TTY (current loop)

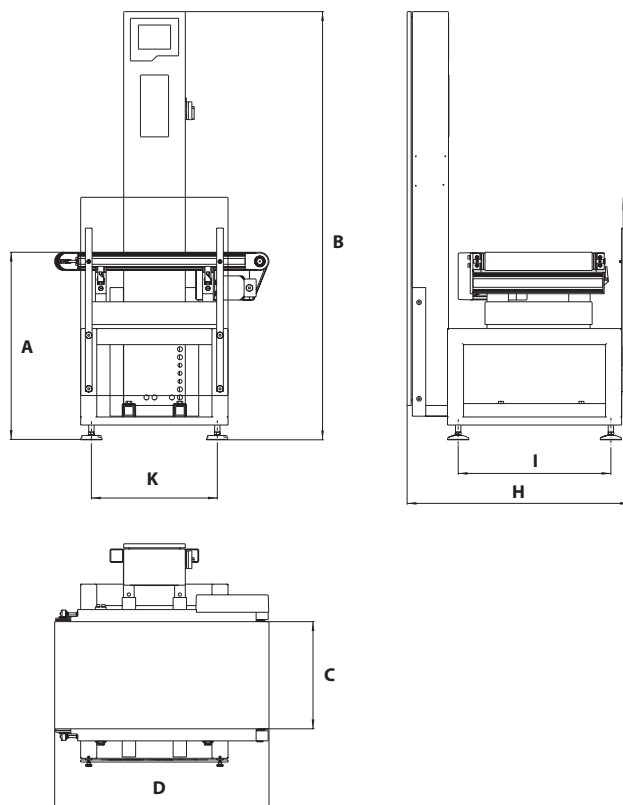| Checkpoint S	Checkpoint M	Checkpoint M-SL	Checkpoint M-VA	Checkpoint M-NH

Products shown above include some optional equipment.

Localized sales and service support

Your Avery Weigh-Tronix distributor has extensive application experience and can help determine whether the Checkpoint M-SL or one of the other efficient Checkpoint models is best suited for your needs. Avery Weigh-Tronix distributors are valuable resources that are readily available to you. They are complete support centers, providing needs assessment, technical information, product sales and service.

M-SL Series Dimensions

		mm		inches	
A	Working height	700 – 850 800 – 950 900 – 1050		27.55 – 33.46 31.49 – 37.4 35.43 – 41.33	
B	Total height	Approx. 1580 mm (+150 mm when using the maximum foot height		Approx. 62.20" (+5.91" when using the maximum foot height)	
		M-SL-1	M-SL-2	M-SL-1	M-SL-2
C	Conveyor width	400 600	600 800	15.75 23.62	23.62 31.49
D	Weighing conveyor length	600 800 1000	800 1000 1100 1200 1300 1400 1600	23.62 31.49 39.37	31.49 39.37 43.31 47.24 51.18 55.12 62.99

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for your nearest Avery Weigh-Tronix distributor.

Avery Weigh-Tronix

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Avery Weigh-Tronix reserves the right of technical modification.
Specifications are subject to change in accordance with any such modification.