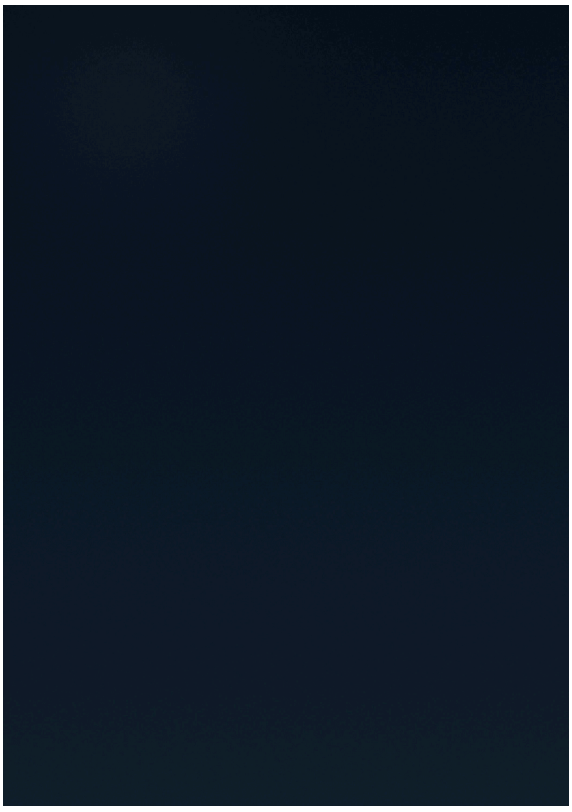
Automatic Check Weigher



Powered Roller Series

In-line weight verification for cartons, bags and individual products

Product Manual · Description, Features & Specifications



ABSTRACT

The powered roller check weigher verifies the weight of whole cartons, bags or individual products as they pass along the production line. Conveying, weighing, alarming, rejection and weight-signal output are integrated in one compact stainless-steel frame, so the unit is installed directly between existing workstations. A Sigma-Delta converter sampling 120 times per second delivers a maximum display resolution of 1:15000, while the SUS304 roller bed, PLC-controlled dual display and three-colour signal tower keep the line running without supervision. Every unit carries a 24-month manufacturer warranty.

Definition · www.definitionscale.com

1. Product Overview

Powered roller check weighing, engineered for the production line.

The automatic check weigher verifies the weight of whole cartons, bags or individual products as they pass along the powered roller conveyor. Conveying, weighing, alarming, rejection and weight-signal output are integrated in one compact stainless-steel frame, so the unit is installed directly between upstream and downstream workstations · no line redesign and no separate control cabinet. Weighing runs on a DC motor belt drive at a line speed of up to 10 m/min . Weight is acquired by a Sigma-Delta converter samp ling 120 times per second, which gives a maximum display resolution of 1:15000 , non-linearity of 0.01 % F.S. and gain drift of only 10 ppm/°C . Rollers, load frame and enclosure are SUS304 stainless steel . Each reading is compared with the upper and lower t olerance limits entered on the touch screen or on the indicator keypad . The result drives a three-colour signal tower and, where fitted, an automatic reject device ; accepted articles continue to the next station. Weight data leaves the machine over RS-485 using the Modbus RTU protocol, under PLC program control . | Automatic check weigher · powered roller bed, indicator head and three-colour signal tower.



1:15000 Max. display resolution | 120 /s A/D conversions | 10 m/min Line speed | 0.01 % Non-linearity F.S. | 24 mo Warranty cover

ON THE LINE

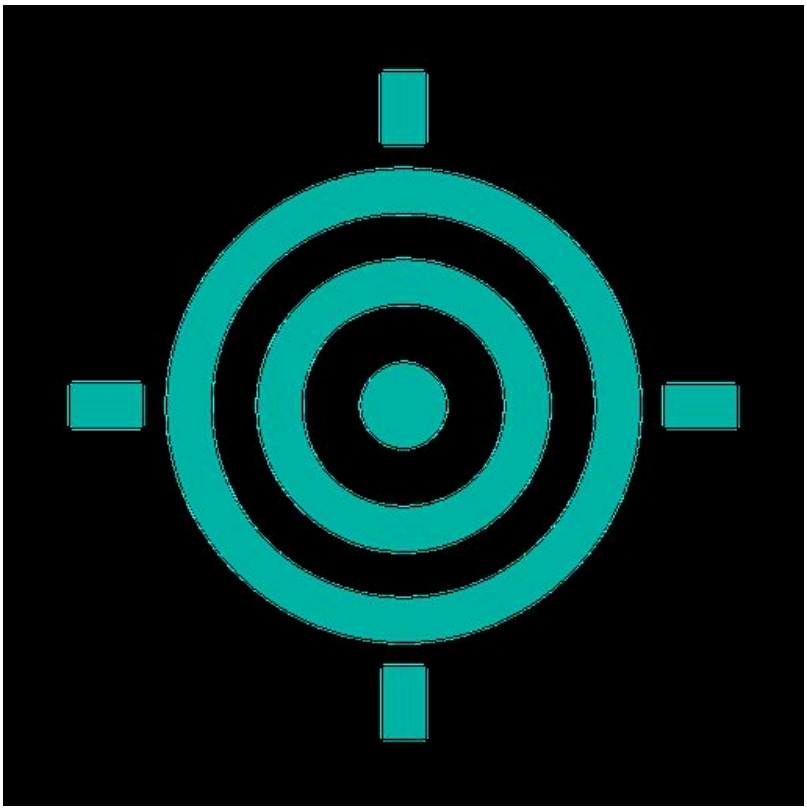
01 Conveying The powered roller bed carries every carton, bag or product across the weighing section at line speed · up to 10 m/min . | 02 Checking Weight is sampled 120 times per second and compared with the upper and lower tolerance limits set for the product. | 03 Sorting A green lamp passes the article on; red or amber stops the line or fires the optional reject device.

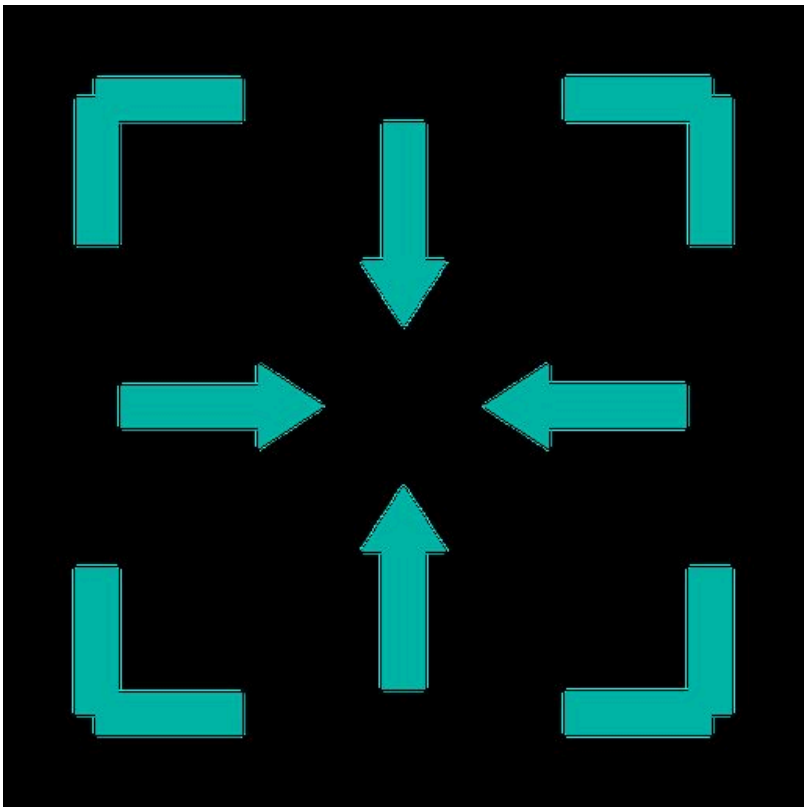
Conveying, weighing and signalling are one assembly, so the machine is installed in a single cut between two conveyor sections · typically within a few hours · and moved again with the line when the layout changes.

2. Six Key Advantages

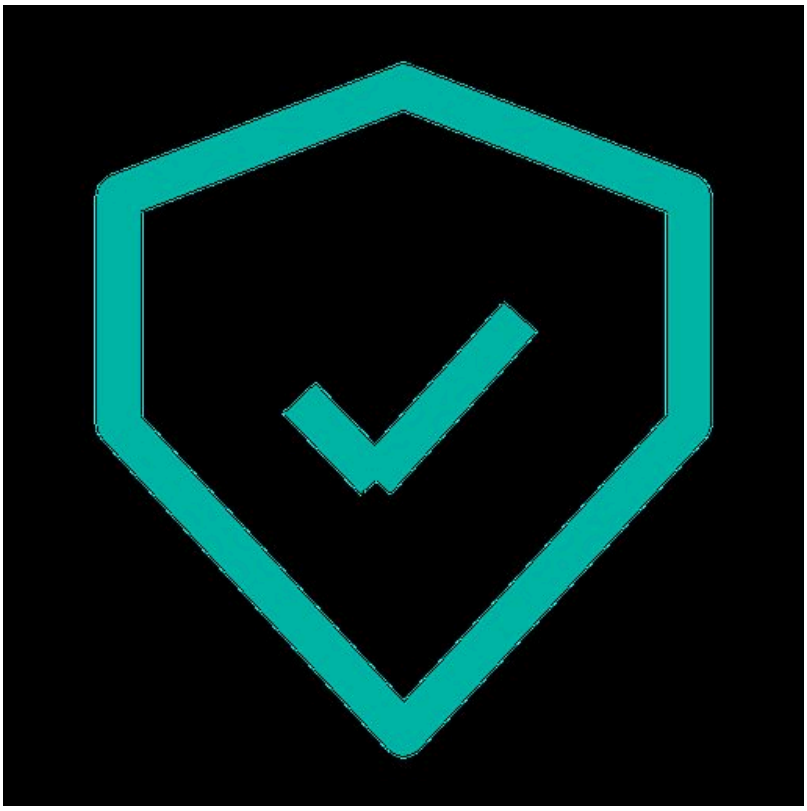
What the checker delivers on the line · and the figures behind each claim.

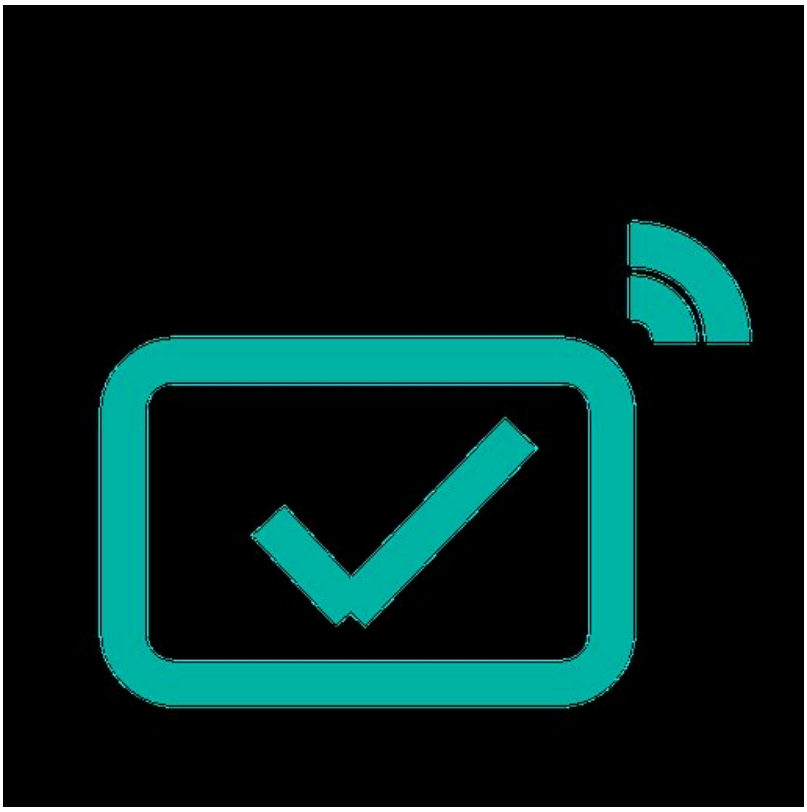
High Precision Maximum display resolution of 1:15000 with non-linearity of 0.01 % F.S. Input sensitivity of 0.01 µV/d and gain drift of 10 ppm/°C keep readings steady as the shop-floor temperature moves. Sigma-Delta conversion at 120 samples per second resolves every article before it leaves the weighing section. | Compact Structure Roller bed, load frame, indicator and signal tower sit on one rigid stainless table. The footprint fits between existing conveyor sections, four levelling feet position the machine in minutes, and no separate control cabinet is required · the check weigher is bolted straight into the line.



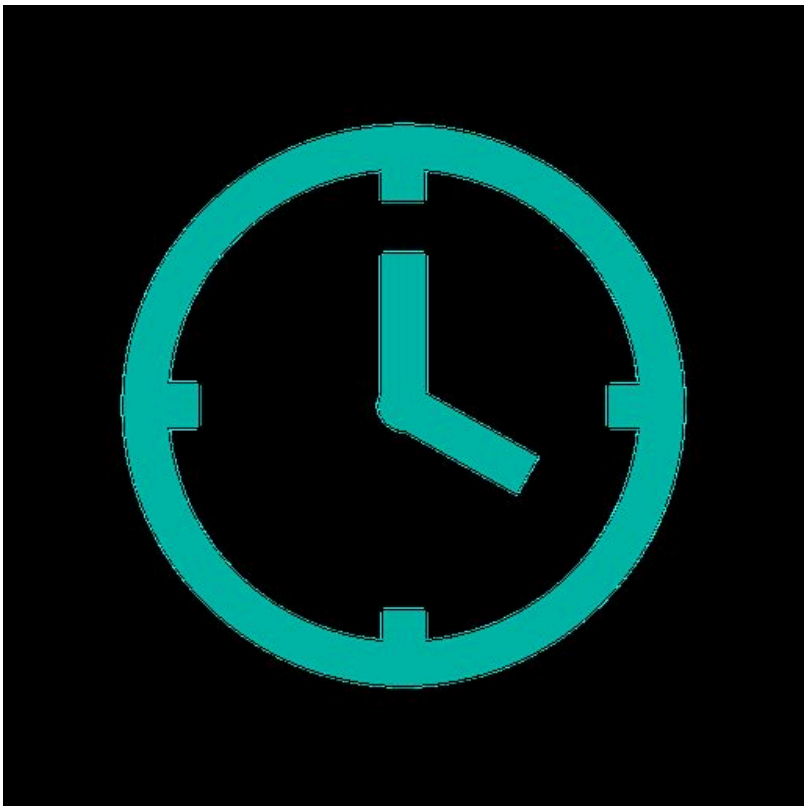


Rugged Stainless Steel Rollers, frame, enclosure and stand are SUS304 stainless steel · resistant to impact, moisture and cleaning agents. The load frame shields the sensor from side load and shock during case handling, and smooth surfaces wipe clean between product runs, which suits food and packaging areas. | Simple Operation A touch scr een and a digital indicator work together under PLC program control . Standard value and tolerances are typed straight from the numeric keypad, zeroing is automatic at power-on with automatic zero tracking, and the ZERO , TARE and PRINT keys cover routine ac tions in a single press.





Long-Term Reliability Built for continuous in-line duty: 120 conversions per second over a -10 ·40 °C operating range, overload and low-voltage signalling on the panel, and a tower and buzzer that report every out-of-limit article without interrupting the line. No recalibration routine is needed between product runs. | Two-Year Warranty Every unit carries a 2 4-month manufacturer warranty on parts and workmanship from the date of delivery. Defective components are repaired or replaced free of charge during the period, and technical support remains available for the service life of the instrument.





3. The Check Weigher at a Glance

Roller bed, indicator head and signal tower · four views on a clean white background.

Three-quarter view · powered roller bed, indicator head and signal tower. | Front view · weighing rollers, display panel and levelling feet.





Operator side · keypad, roller infeed and emergency-stop switch. | Rear view · drive cover, cable entry and indicator housing.





4. Display Panel & Controls

Every lamp, unit and key on the operator panel, translated from the machine plate.

The operator panel carries four status lamps, a red LED weight window, five unit lamps, four function lamps and a twenty-key keypad. Markings on the machine are Chinese; the English equivalent of every marking is listed in the two tables below and is used throughout this manual.



Operator panel · status lamps, weight display, unit lamps, function lamps and keypad.

4.1 Lamps and display symbols

Group | Marking | Meaning

Status lamps | Low voltage | Supply or internal battery voltage low · the display reports LOW.BAT and weighing stops.

Upper limit | Weight above the upper tolerance limit · HI condition.

Pass | Weight inside the set limits · accepted, the article continues.

Lower limit | Weight below the lower tolerance limit · LO condition.

Unit lamps | kg · g · lb · oz | Weighing unit of the displayed value.

pcs | Piece count · result of the counting function.

Function lamps | Accumulate | The reading has been added to the running total.

Stable | The weight reading has settled and may be recorded.

Tare | A tare (container or packaging) weight has been subtracted.

Zero | The platform is at the zero reference point.

Display symbols | Net / Gross | Net weight with tare deducted, or gross weight.

Charge | Internal battery is charging (where fitted).

4.2 Keypad legend

Key | Function

1 · 9 · 0 | Numeric entry · Standard value, tolerance limits, sample count and calibration weight.

Count set / Upper · | Sample count & upper limit · Enters the sample quantity and the upper tolerance limit.

Unit weight set / Lower · | Unit weight & lower limit · Enters the single-piece weight and the lower tolerance limit.

Accumulate print · | Accumulate & print · Adds the current reading to the total; scrolls up through stored entries.

Accumulate / Clear · | Accumulation list · Shows accumulated entries; scrolls down or clears the total when held.

Send | Manual send · Transmits the current weight over the serial port on demand.

Print | Print · Sends the current reading to the printer output.

Enter | Confirm · Saves the value e ntered and returns to weighing.

Clear | Clear · Cancels the value being entered, or clears a selected entry.

Zero (green key) | Zero · Manual zeroing of the platform within the permitted zero range.

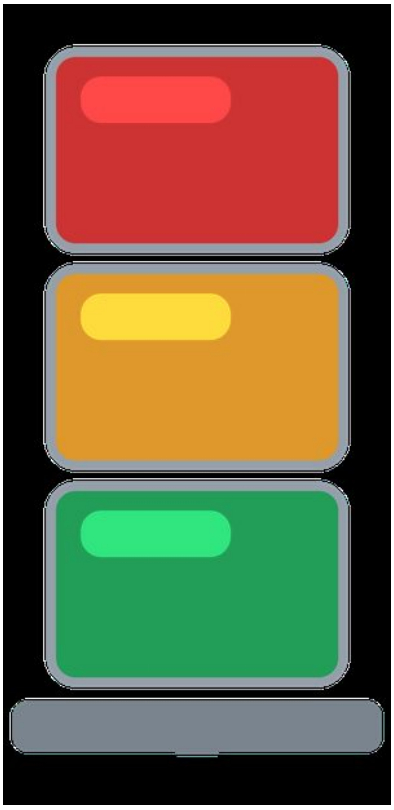
Tare | Tare · Pre-set tare · subtracts a container or packaging weight.

Limit setting, calibration and configuration menus are covered by the operating instructions supplied with the machine and are outside the scope of this product manual.

5. Signal Tower & Alarms

Line-of-sight status for every package that passes the checker.

Lamp | Condition | Machine response



· Red | Overweight | Alarm, automatic stop, or automatic rejection of the non-conforming article (optional).

· Green | Within limits | Accepted · the article continues to the next station.

· Amber | Underweight | Alarm, automatic stop, or automatic rejection of the non-conforming article (optional).

Where automatic rejection is not fitted, the line stops on a non-conforming article and restarts as soon as it has been removed. Tower and buzzer outputs switch independently of the weighing function, so the audible alarm can be silenced without interrupting in-line checking.

6. Technical Specifications

Electrical, metrological and environmental data of the standard configuration.

WEIGHING PERFORMANCE

Maximum display resolution | 1:15000

Non-linearity | 0.01 % F.S.

Input sensitivity | 0.01 µV/d

Gain drift | 10 ppm/°C

A/D conversion | Sigma-Delta, 120 conversions per second

Zero adjustment range | 0.2 · 8 mV (2 mV/V cell) · 0.2 · 12 mV (3 mV/V cell)

Input range | 0.2 · 10 mV (2 mV/V cell) · 0.2 · 15 mV (3 mV/V cell)

CONVEYING

Drive | DC motor, belt drive

Line speed | Up to 10 m/min, set at commissioning

Weighing element | Powered stainless roller bed on a rigid load frame

Rejection | Alarm and line stop as standard · automatic reject device optional

ELECTRICAL

Power supply | AC 220 V ± 10 % , 50 Hz, 1 A

Power consumption | Approx. 85 W

Sensor supply | DC 5 V, 300 mA max.

Input impedance | 10 M·

Control | PLC program control

Display | Touch screen plus digital indicator with red LED weight window

CONSTRUCTION & ENVIRONMENT

Materials | SUS 304 stainless steel · rollers, frame, enclosure and stand

Levelling | Four adjustable feet

Safety | Emergency-stop push button

Operating temperature | 0 · 40 °C

Maximum humidity | 65 % R.H., non-condensing

INTERFACES

Data output | RS- 485 , Modbus RTU weight signal

Signal output | Three-colour tower (red / amber / green) with buzzer

Optional | Automatic reject device, printer output

Specifications are typical and subject to change without notice. Line speed, tolerance limits and the reject configuration are set at commissioning against the application.

7. Two-Year Warranty

Twenty-four months of cover on parts and workmanship, with support for the life of the machine.

24 MONTHS pa rts & workmanship | Every automatic check weigher is supplied with a 24-month manufacturer warranty covering parts and workmanship from the date of delivery. Defective components are repaired or replaced free of charge during this period, and technical support remains available for the service life of the instrument. The warranty d oes not cover damage caused by overload, water ingress, unauthorised modification of the electrical or pneumatic circuits, or use outside the specified operating conditions.

Manufacturer

Company | Shenzhen Definition Electric Co., Ltd

Website | www.definitionscale.com

Supplied with the machine

Operating instructions (Chinese / English) | Setting of limits, zeroing, calibration, parameter menu and battery care.

Product certificate and warranty card | Conformity statement, serial number and the warranty registration card.

This product manual | Description, features, display panel and technical specifications.

This manual covers the product description, features, display panel and technical specifications only. Operating procedures, the product certificate and the warranty card are supplied separately and are not reproduced here.

SHENZHEN DEFINITION ELECTRIC CO., LTD Automatic Check Weigher · Powered Roller Series 24-MONTH WARRANTY ·


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Definition