



VEHICLE WEIGHING SOLUTION

YOUR PARTNER IN WEIGHING SOLUTIONS &
MATERIAL HANDLING EQUIPMENT

WHAT IS A WEIGHBRIDGE

Endel Weighbridges are new generation products that are designed for optimum weighing of different type of vehicles. We provide A-Z weighbridge solutions, from hardware to software, and installation to AMC services.

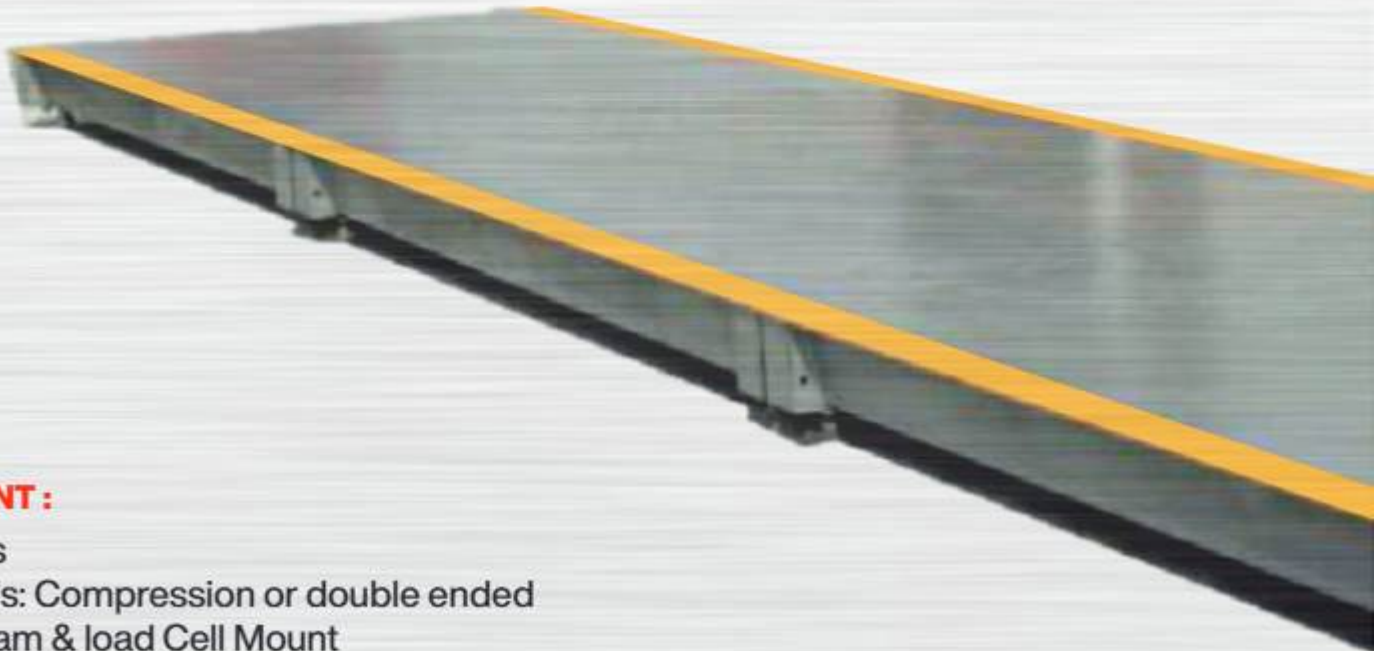
EWB MODULAR TYPE STEEL DECK WEIGHBRIDGES

EWB Series Weighbridges are state-of-the-art products, engineered to perform under the harshest of conditions. The products are applied and widely used in a variety of industrial settings.

BASIC KNOWLEDGE OF WEIGHBRIDGE & CONFIGURATIONS

1. PLATFORM:

Durable Weighing Module, Adaption of U-Shape construction, Ease of installation & Maintenance, Selection of PIT TYPE & PIT LESS TYPE. Selection of Check plate & Plain Plate.



COMPONENT:

- ✧ Platforms
- ✧ Load Cells: Compression or double ended shear beam & load Cell Mount
- ✧ Junction Box
- ✧ Weight Indicators
- ✧ Large Displays
- ✧ Instrumentation to meet customized requirement

FEATURES:

- ▣ Quick to install-simple and modular design
- ▣ Quality paint finish with shot blasting
- ▣ Non-Slip surface: to reduce accidents
- ▣ Wholly enclosed for better strength, rigidity and anti-corrosion
- ▣ Integrated load cell mount for convenient installation on site
- ▣ Easy connection of display indicator and integration of system with user friendly software.

SPECIFICATION :

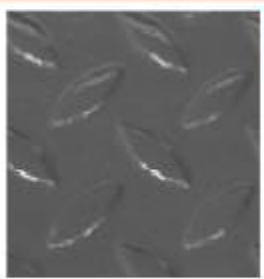
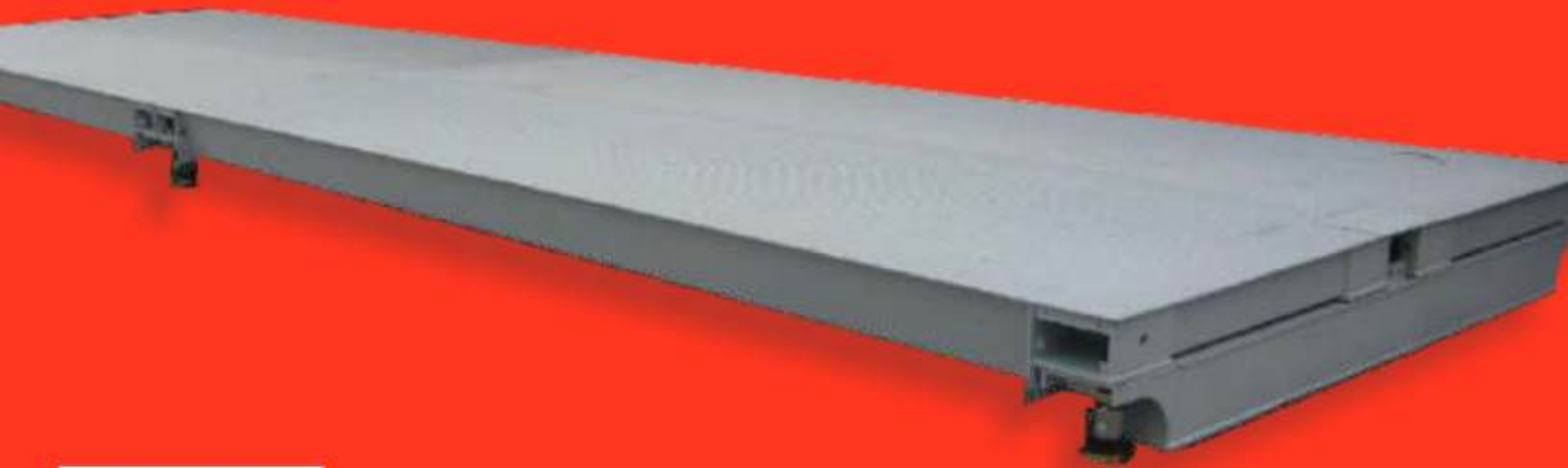
- ▣ Top plate thickness
- ▣ Check plate: 12 mm
- ▣ Smooth plate: 10 mm
- ▣ U-shape Main beams height 330 mm
290mm, 260mm, or 200mm
- ▣ U-shape main beam plate thickness
5mm to 6mm.

Dimension (m x m)	Modules	Load Cell	Capacity (in MT)
3X6	1	4	20 / 30 /50
3X7	1	4	20 / 30 / 50
	2	6	20 / 30 /50 /60
3X8	1	4	20 / 30 50
	2	6	20 / 30 /50 /60
3X9	2	6	30 /50 /60
3X1	2	6	30 / 50 /60
3X14	3	8	50 / 60 /80
3X16	3	8	60 / 80 /100
3X17.4	3	8 / 10	60 / 80 /100
3X18	3	8 / 10	60 /80 /100/120
3X21	4	10	80 /100 /120



SPECIAL FEATURES OF ENDEL WEIGHBRIDGES

The steel deck is made of multiple modules with a solid top. Absence of any removable top plates adds rigidity to the structure by ruling out any sagging or banding of the top plate.



Application of Check plate for
Slip protection (Optional)

All the limit bolts and fasteners are hot galvanized to prevent them from rusting over continuous exposure to the elements.



With main beams of U-SHAPE sections and enclosed construction by cold-bending and assemble welding the whole rigidity, anti-torque capacity and the part anti press stiffness of its platform plates are greatly strengthened.



U-shape beams

Shot Blasting

Epoxy Painting

Surface is sprayed twice with the quality epoxy and rich zinc anti-rust paint then anti-rust paint layer is sprayed with orange veins acrylic acid polyurethane that is usually used in ship building industry. High quality painting immensely improves the durability of the structure.

The scale bodies are designed with module, standard and serial, so various size specifications can be formed in order to solve the problem of high export cost and transportation trouble caused by the 3m or 3.5m wide scale-bodies. Additionally, it has abrasion resistance and anti-rust properties.

The system consists of high precision double ended shear beam Load cells or column-type compression load cell. The system also has a lightweight, high performance digital weight indicator configured to match various applications. The weather-proof junction box, conforming to IP68 and the shielded cables ensure minimal down time.

Efficiency of Container Load: Easy loading in Container, Multiple Loading & reduces the cost.



WHICH MODULAR WEIGHBRIDGE SHOULD YOU CHOOSE?

I-BEAM VERSUS U-BEAM

Weight of the vehicle is concentrated at the load points when tyres come in the contact of truck scale. To reduce the impact at those load points, the truck scale should be designed to distribute as much of the load as possible to the beams adjacent to each load point.

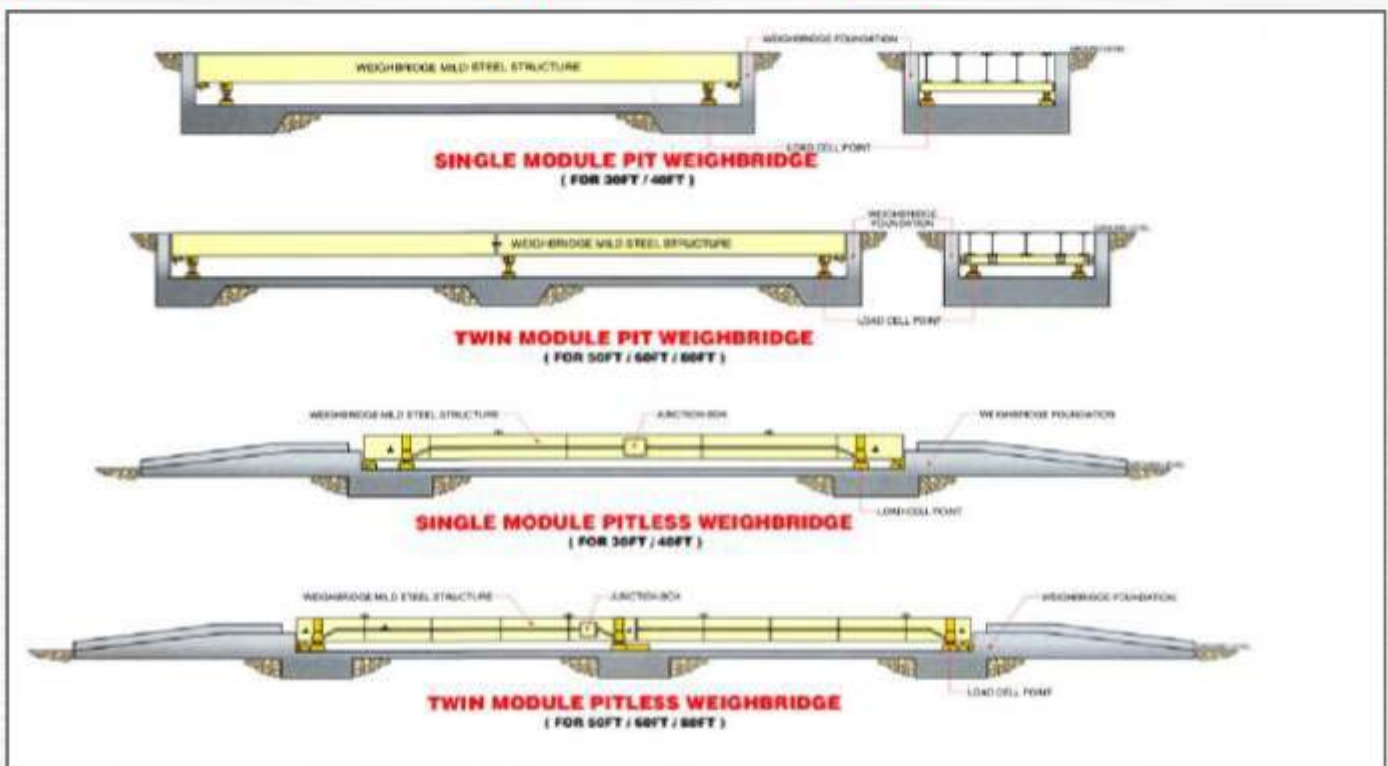
The U-Beam design is much better at distributing the load across the beams; it is much stronger and efficient. Please look in to the above pictures for the deflections when tyre comes in contact with the top surface of truck scale. The bent is clearly visible in I-Beam design which in long term reduces the age of the truck scale while in the U-Beam structures load is evenly distributed to the all load points and it provides durability to the scale.



I-BEAM STRUCTURE

U-BEAM STRUCTURE

Foundation Structure (Choice between Pit Type & Pit less Type)



PORTABLE AXEL WEIGHING SCALE

Road Vehicles Overload Detection Weighing System



Max Capability: Single axle 30 tons (Max 70 tons for customized)

Pad dimension: 700×430×30mm (Max 900×500mm for customized)

Precision: Static $\pm 0.1\%$, Dynamic $\pm 5\%$

Division: 10kg Speed: $\leq 10\text{km/h}$

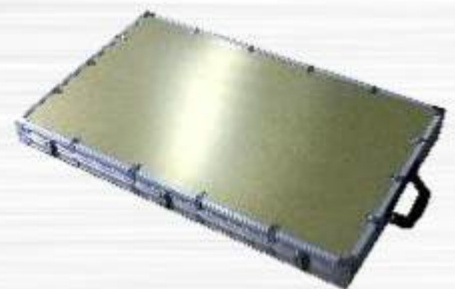
Working Temperature: $-45^{\circ}\text{C} \sim +70^{\circ}\text{C}$

Loading weight: 28kg (single pads + aluminum alloy case)

Cable length: 10m

Optional: Golden pad or other color

Multiple seal protection, water proof, so that it could be working in rain. It is light weight and convenient to carry with high precision. It is with high intension cable protection spring, which is acceptable for wheels to pass by. The handle is designed into hole which is stronger. The plug of cable is imported with high quality. The connector is designed to coattail type to avoid the disconnected with ramps. The pad is made of super high intension aluminum alloy for aviation. The surface is deal by high quality military project oxidation. It is Wear-corrosion resistance. The signal feedback is with high frequency by unitary design.



EWB MOBILE WEIGHBRIDGE

Minimum Increment Size : 10kg readability.

Specially designed all steel modular construction.

Comprise of selected high-quality steel prefabricated modules, bolted together to form complete Platform. Modules are made of closed orthotropic – rib bridge construction for heavy duty application. (150% overload protection)

Specification

Platform Size 18m x 3m

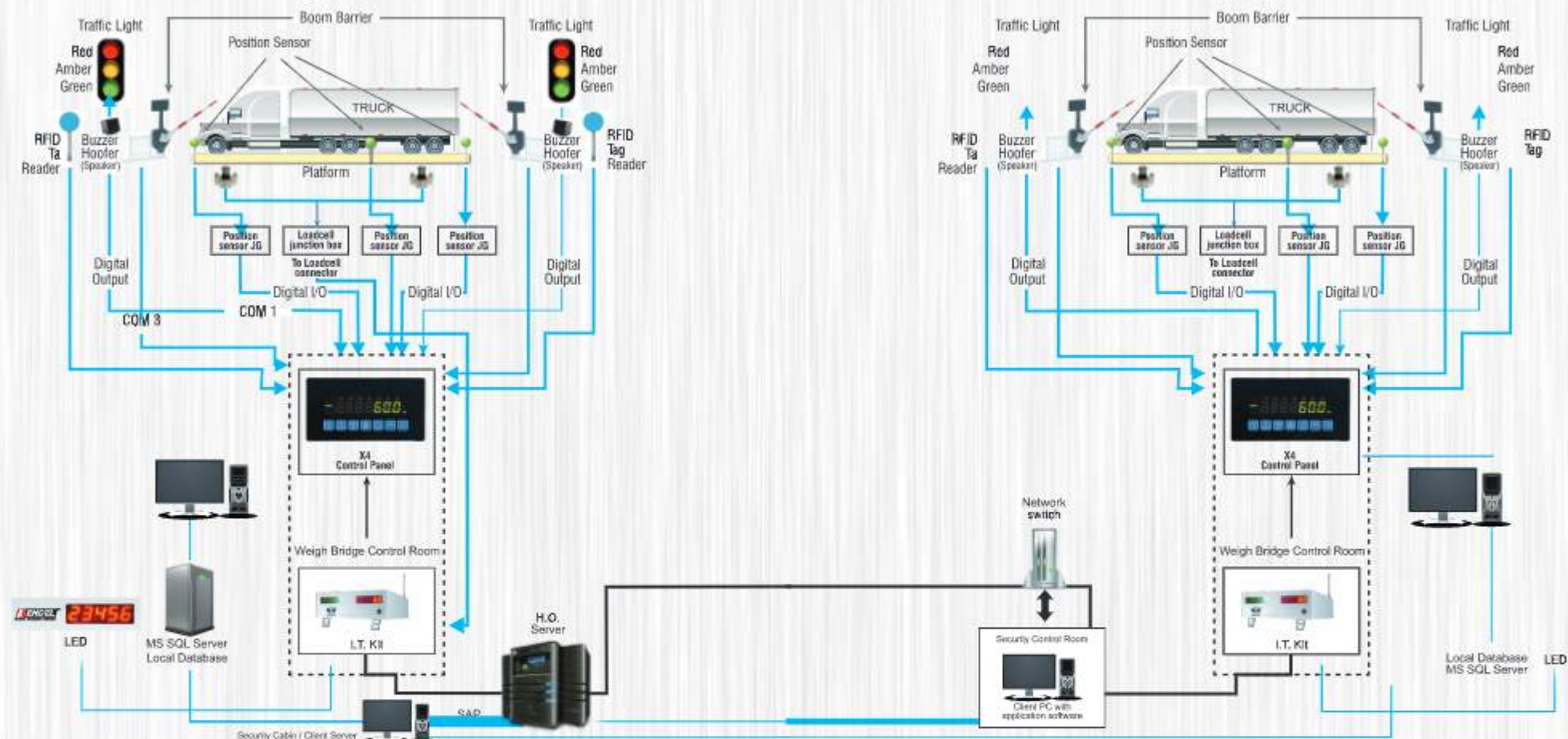
No. Of Modules 3 nos (app 6 each)

Sections per Module 2 (Total 6 sections)

Capacity 80 Ton



EWB UNMANNED WEIGHING SOLUTIONS



Software Features

- Live Details of Weighment Cycle
- Easy to use interface
- Monitor multiple weigh-bridges from a single UI
- Complete Audit Reports
- Capture Weight at any point
- Integrate into your back-office systems
- Completely customizable as per business requirements.
- Easily configure multiple business rules to set load limit, timeouts, etc.
- Managing receipts and dispatch of material.
- Automated SMS / Email system.
- ERP integration.
- DOS / Windows printing with photo support.
- Support for multi user with access rights.
- DB Backup and restore facility.
- Customizable Slip Fields.
- Manual Entry support via Access Rights with complete audit.
- Data Export in Excel / CSV

System Salient Features

- Fast throughput for busy weighbridge
- Two Way Weighment System (vehicle can enter from both sides)
- No operator required at weighbridge
- No scope for modification, changes, alterations, manipulations, wrong / double entries, malpractices or mistakes.
- Integrate more than one weighbridge with the system
- Use of RFID smart Card and UHF RFID Tag for Automatic identification of driver / truck.
- Cut operating cost, labor cost and increase productivity and efficiency.
- CCTV Camera for surveillance and photo capturing.
- Totally unmanned self-service weighing process.
- Robust and weather proof cabinets for all hardware.
- Archive facility provides to transfer old weighing records to provide effective memory tracing and reporting conditions.
- Weighing records can be exported automatically or manually as text/Excel file.
- Flexible user authorization
- Access & SQL database selectable. Direct connection to SQL server with Ethernet
- Automatic e-mail message can be created to transfer weighing records.

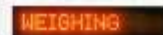
Support Following Hardware

- RFID based identification system
 - IR Sensors for vehicle positioning
 - Barrier Gates for additional security
 - IP-CAM for surveillance and photo capture
 - Traffic lights • LED Displays
 - Hoovers / Loud Speakers
- During automatic Weighing operations, the following accessories can be connected to Endel UnManned Weighbridge
- Software directly:

Optic sensors
(For truck positioning)



Remote Displays



IP Cameras
(Up to 3 pcs)



Load Barriers



Traffic lights



Instant transaction with Camera photo capturing is possible for Single/Double/Multi Transaction

Company Name
Address
Email: SupportID@Company.com
Support Call: 1234567890

Transaction

Data Setup

Reports

Settings

Admin User
Logout

Transaction Mode: ☐ Single ☐ Double ☒ Multi

Transaction Datetime: 6/4/2018 4:58:30 PM

Vehicle: Q01482234

Delivery Type

Transporter: ABQ SHIPYARD

PO No.

Account: E-GANESHI TRANSPORT

Invoice Quantity

Driver: RAJU KUMAR

Product: WOODEN STICK

Gate: MATERIAL GATE

Charges: 34

61097 KG

Capture

View All

☐ Automatic
 ☒ Manual

Capture Weight (if R)

Price/Ton: 45000 KG

Price/Buyer: 61097 KG

16-Aug-2018 12:34 PM

16-Aug-2018 04:58 PM

Net Weight: 31097 KG

Receipt Details

Captured Images

Ticket No: 5

Vehicle No: Q01482234

Account: E-GANESHI TRANSPORT

Transporter: ABQ SHIPYARD

Driver: RAJU KUMAR

Charges: 34

Delivery Type

PO No.

Invoice Quantity

#	Scale Name	Gross Wt	Gross Time	Net Wt	Net Time	Net Wt	Product	Gate	#
2	Scale1	30000 Kg	06-Aug-2018 12:34 PM	30000 Kg	06-Aug-2018 12:32 PM	5000 kg	METAL SC		4
3	Scale1	40000 Kg	06-Aug-2018 12:35 PM	35000 Kg	06-Aug-2018 12:34 PM	5000 kg	ELECTRON		4

Cancel (Esc)

End Transaction (Enter)

Continue

Data management is very easy through Data Setup

Company Name
Address
Email: SupportID@Company.com
Support Call: 1234567890

Transaction

Data Setup

Reports

Settings

Admin User
Logout

User Role Management

User Management

Unit Management

WeightBridge Management

Ticket Management

Account Management

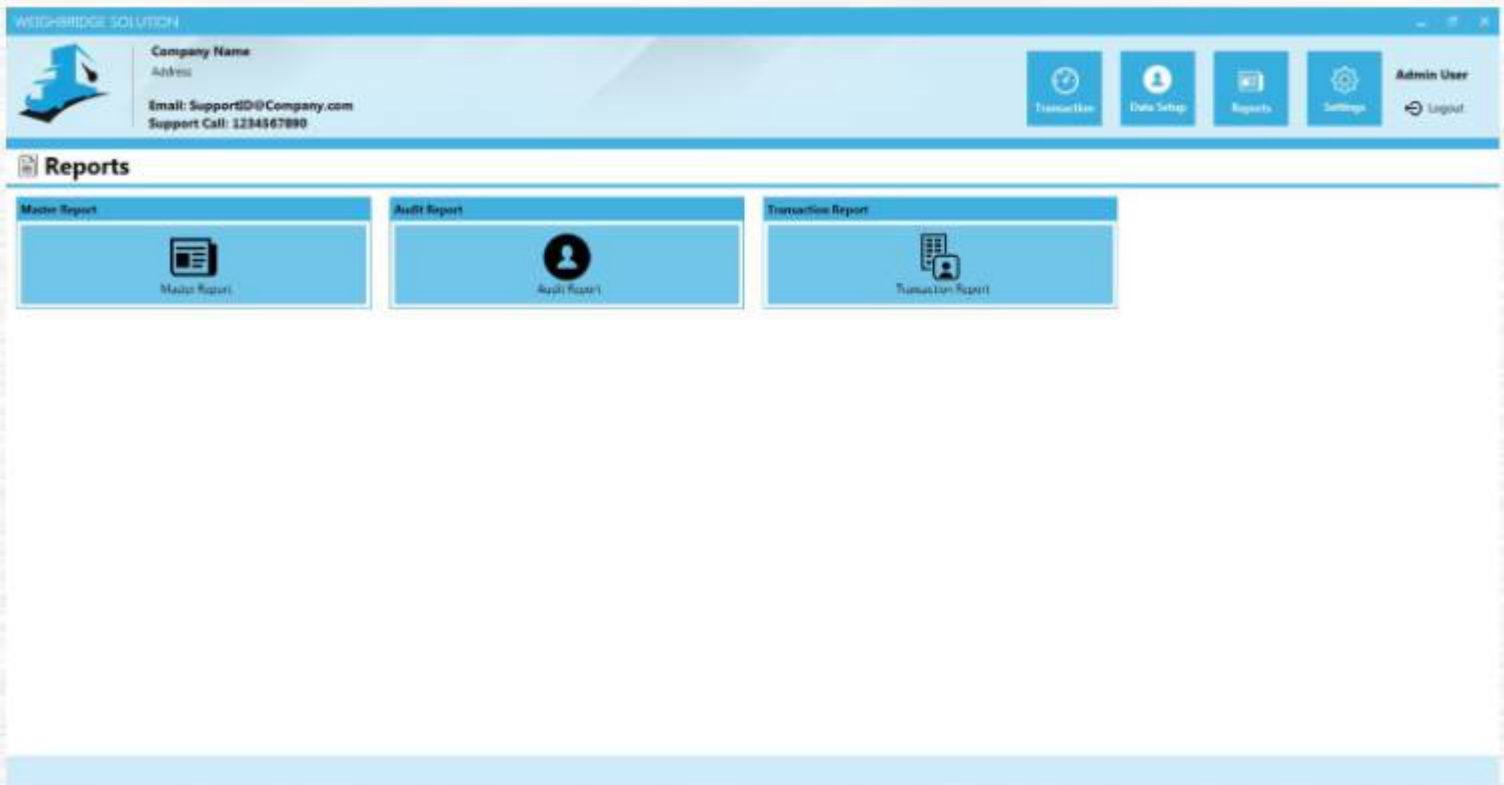
Vehicle Management

Driver Management

Product Management

Gate Management

Customer configurable detailed reporting



User can independently configure the software as per their requirements



Endel Weighbridge Accessories

WeighMAST

WeighMAST is an enterprise focused weighbridge management software. It is suitable for any size of enterprise from any industry vertical where weighment accuracy, visibility and traceability is most important. WeighMAST allows companies to automate weighbridge operation to achieve the same.

Why WeighMAST?

Spend protection, shorter training time, easy implementation, 100% interoperability with most of the industry standard weighbridges, secure platform, high visibility, and multi-level access are some of the key reason to choose SmartWB.

Data is at the heart of this software. Simple interfaces to allows you to configure data you want to capture for better visibility.

Apart from standard weighbridge configuration, single window to configure.

Overview of features

Transaction Management

- Active Transaction visibility
- Completed transaction
- Flexibility to void transaction

Data Setup

- Flexibility to configure unit (Kg, Ton, Lbs)
- Product management
- Flexibility to void transaction

Security

- Role based access management
- Option to configure roles

Reports

- Master reports
- Audit reports

Receipt Design

- Inbuilt receipt designing software
- Option to include predefined logos, text
- Predefined foot note for receipt
- Option to go green – email receipt directly

Lucrative user interface

- Easy to use
- Customize theme as per company branding

Centralized deployment

- Integration with SAP or ERP systems
- Support for multi weighbridge
- Centralized web reporting

Flexibility

- 3 different model to choose from
- Plug-in based software, upgrade anytime
- Can be connected with any weighbridge

EL-D Series Digital Load Cell (Weighbridge & Industrial applications)

Feature:

Capacity: 30t

Steel ball loading, strong restoration ability

Easy complete installation, high weighing accuracy

OIML C3 certificate

Alloy Steel

Specification:

Model	EL-D
Rated capacity	5ton to 50ton
Operating temperature range	-30 to +70
Maximum safe overload	150% OF R.C
Combined error	±0.03% F.S
Ultimate safe overload	200% OF R.C
Non-repeatability	±0.02% F.S
Recommended Excitation	10 to 12V DC
Non-linearity	±0.02% F.S
Maximum Excitation	15V DC
Hysteresis error	±0.02% F.S
Environment protection	Ip68
Zero balance	±1% F.S
Input impedance	750+10Ω
Creep error(30minutes)	±0.02% F.S
Output impedance	702+30Ω; 703±5Ω cable≥15m)
Temperature effect on zero	±0.02% F.S
Insulation resistance at 50V DC	≥5000MΩ
Temperature effect on output	±0.02% FS
Material	nickel-plated alloy steel
Compensated temperature range	-10 to +40°C
Cable length:15m. Diameter	6mm



Applications:

Weighbridge

all kind of weighing applications of heavy load.

END-HM9B Series (Ball in cup type)

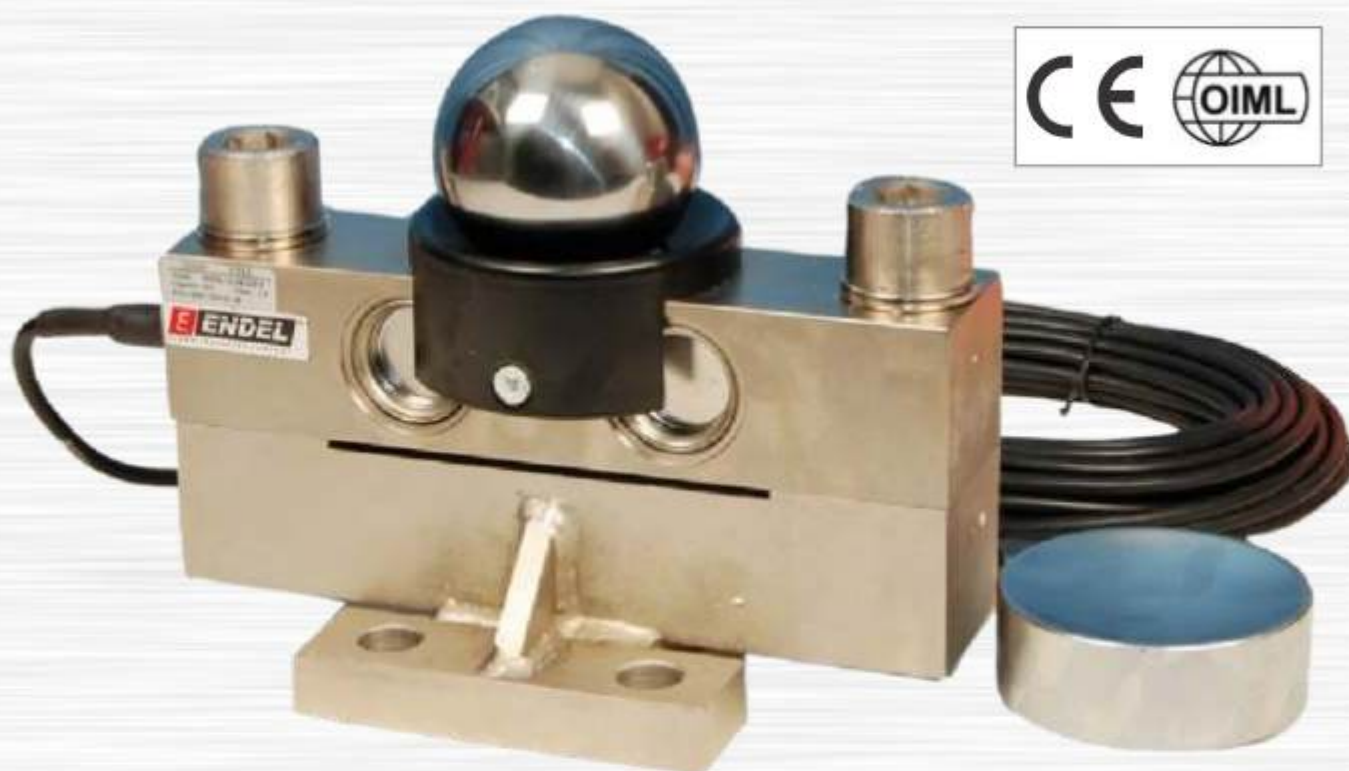
Features:

Alloy Steel, Nickel Plated, welding –sealed
4-wire shielded cable with 12 meter length
OIML, RoHS Certified

Capacity 30T

Accuracy C3

Part Number HM9B-C3-30T-12B



Specifications :

Accuracy Class	C3
Rated Output (mV/V)	2.0±0.002
Combined Error (%FS)	0.02
Non-Linearity (%FS)	0.017
Non-Repeatability (%FS)	0.02
Creep (%FS/30min)	0.02
Input Resistance (?)	700±7
Output Resistance (?)	700±7
Insulation Resistance (M?)	≥5000(50VDC)
Zero Balance (%FS)	1.5
Temperature Effect on Span (%FS 10°C)	0.014

Temperature effect on Zero (%FS/10°C)	0.017
Temperature, Compensated (°C)	-10 ~ +40
Temperature Operating (°C)	-35 ~ 65
Excitation, Max (V)	5-12 (DC)
Excitation, Permission (V)	18 (DC)
Safe Overload (%FS)	150
Ultimate Overload (%FS)	300
Protection Class	IP68
Cable Length (m)	12

END-HM14C Series (Compression Type)

Features:

Alloy Steel, Nickel Plated, welding –sealed
6-wire shielded cable with 13 meter length
RoHS Certified

Capacity 30T

Accuracy C3

Part Number C3HM14C-C3-30T-13B6



Specifications :

Accuracy Class	C3
Rated Output (mV/V)	2.0±0.002
Combined Error (%FS)	0.02
Non-Linearity (%FS)	0.017
Non-Repeatability (%FS)	0.02
Creep (%FS/30min)	0.02
Input Resistance (?)	700±7
Output Resistance (?)	700±7
Insulation Resistance (M?)	≥5000(50VDC)
Zero Balance (%FS)	1.5
Temperature Effect on Span (%FS 10°C)	0.014

Temperature effect on Zero (%FS/10°C)	0.017
Temperature, Compensated (°C)	-10 ~ +40
Temperature Operating (°C)	-35 ~ 65
Excitation, Max (V)	5-12 (DC)
Excitation, Permission (V)	18 (DC)
Safe Overload (%FS)	150
Ultimate Overload (%FS)	300
Protection Class	IP68
Cable Length (m)	12

END2020 Weighbridge Indicator

DIGITAL INDICATOR

FEATURES:

- High end protection against lightning and surge
- Multi step calibration procedure to achieve perfect and error free calibration.
- Automatic Fault diagnosis.
- Dual range system for achieving better accuracy.
- Auto zero tracking to track zero position.
- Customization for RS 232 communication string baud rate, parity & format.
- Pendrive dumping to get data records in softcopy.
- 10 entries in tickets for 30 character each
- Net Weight printing in Word.
- Multiple reports Option.
- Dynamic Preprinted setting
- Customization for plain or preprinted weighment slip formats.
- Multiple SMS features for ease of weighbridge owners & clients. (OPTIONAL)
- Auto Email facility for sending weighment slip or Day report. (OPTIONAL)
- Grain Market application features of Rate, Amount & Binding material deduction. (OPTIONAL)
- Vehicle type codification for standard weighment charges.
- GST Taxation feature.
- Confidential weighments to trap unweighed passing vehicle.



TECHNICAL SPECIFICATION

Processor	32 bit ARM Processor
Real time clock	On board battery backed RTC
Memory	On board memory to save 1lakh records
Power supply	SMPS Power supply
Input voltage	90V TO 270V AC@ 50 MHZ
Protection	750mA FUSE FOR INPUT
	Input line filter for EMI or RFI Supression
	Spike supression for input transients
	Opto-isolation of signal and i/o's for high immunity from electrical noise
Power consumption	10 VA(approx)
Display	Graphical LCD Display with Blue Backlight
Key Board port	USB connector compitable key board of any brand
USB port	USB port configured for Pen drive
Serial port	Isolated RS-232 serial port (D type 9pin) for continuous weight transfer
Printer port	Isolated Centronics port/ USB port compitable to Dot metrix printer/Laser printer
Remote Display port	To conect external jumbo display 1" to 4"
Indicator Housing	SS Body indicator, arrangements of wall Mounted cum Table Mounted
	Anti corrosive, roughed material

3590EQ Weighbridge indicator

3590EQ Weighbridge indicator with Integrated QWERTY Keyboard



High performance digital weight indicator with integrated QWERTY keyboard that simplifies texts and archives compilation, Fitted with 3 serial ports, transmission protocols for data communication, completely configurable printouts, integrated alibi memory and port for connection to barcode/badge reader. The wide range of connectable accessories and printers guarantees the maximum interfaceability and versatility. CE-M approvable (OIML R-76 / EN 45501).

MAIN FEATURES

59-key QWERTY and functional alphanumerical waterproof keyboard.

Highly efficient BLU LED display with digits 15mm high. Configurable screens.

Blue backlit LCD graphic 25x100mm display.

Easy to clean ABS waterproof IP65 enclosure; resistant to harsh and corrosive environments. • Dimensions: 279x124x187mm.

Suitable for use on the table, column, or wall.

Real time clock and permanent data storage.

Fitted alibi memory, integrated on the motherboard.

Functions available with DINITOOLS utility

- Configuration, calibration, data entry and print formatting.
- Recording and filing of all the information on PC.
- Complete retrieval of the data saved for quick substitution.
- Instrument calibration with numeric values.

Selection of the programme language directly in the set-up

24-bit A/D converter, 4 channels, up to 3200 conv./sec. and up to 8 signal linearisation points.

2 independent analogue channels for reading of the weight.

Connection with up to 16 analogue load cells of 350 Ohm (45 load cells of 1000 Ohm) and with the main on the market.

Up to 10.000e OIML or 3 x 3000e @ 0,3 pV/d CE-M legal for trade.

Up to 1.000.000 displayable divisions for internal factory use, with internal resolution up to 3.000.000 points.

Connectable to printers and labellers with the command drivers.

110-240 Vac power supply; built-in rechargeable battery for use in prolonged absence of the power mains.

MAIN CERTIFICATIONS

- EC Type Approval (En45501).
- OIML R76

I/O SECTION

2 RS232 serial ports, for connection to printer, PC or PLC, radio module and optinal interfaces.

- 1 RS232 serial port (optional RS485), for connection to weight repeater, remote scale, badge reader or digital load cells.
- Fitted keyboard emulation input, for barcode/badge readers or external PC keyboard, through cable with mini DIN connector (optional).
- 4 optoisolated outputs (optional).
- 2 optoisolated inputs (optional).
- External Profibus interface (optional), for automation management.
- Modbus RTU protocol.
- Optional Bluetooth connection, for quick wireless programming of the activities and the formulas, through PC or tablet.

DETAIL 1



DETAIL 2



Stainless Steel Housing for Industrial use

Display

7 digits of LED 7 digits of status symbols

Printing interface

With standard parallel printing interface, which can be connected with the wide line printers, such as ESPON LQ-300K, ESPON LQ-300K, EPSON LQ-680K, EPSON LQ-730K

Operating Environment

Power input: AC110~220V 50~60HZ DC 12V

Operating temperature: 0 ~ 55

Storage temperature: -25 ~ 55

Relative humidity: ≤85%RH

Digital load cell interface

Communication mode	Rs485
Signal transmission distance	≤1000m Transmission baud rate 9600, 19200bps
Excitation power	DC12V
Digital interface ability	≤16 digital load cells or digital modules (EL-D load cells)

Keyboard

Number Keys	0 ~ 9
Function keys	30 pcs 10 of 30 are combined with Number keys

Serial communication interface

Transmission mode:	RS232/RS485
Transmission baud rate	Options of 600/1200/2400/4800/9600/19200

Scoreboard display interface

Transmission mode:	Serial transmission mode, current loop and Rs232
Baud rate:	600bps

Scoreboard display interface

Transmission mode:	Serial transmission mode, current loop and Rs232
Baud rate:	600bps





ENDEL WEIGH SYSTEMS LLC

OFFICE : W/H no 1, Al Mashoor, Ras Al Khor Industrial Area-II

PO Box:45588, Dubai, UAE

+971-4-5645722 | +971 -55-1906306

sales@dubaiweighing.com

www.dubaiweighing.com