

Electronic Road Weigh Bridge



Maxim, the Organisation, with vast experience in the field of Weighing and Engineering Automation Solutions has the core competence to deliver total Engineering Solutions in **Electronic Weighing and Industrial Processes.**

Maxim, the Brand, is understood by our customers and business associates as a name that spells Quality, Value and Commitment.

Maxim, the Product, is the comprehensive solution by brilliant use of Innovative and Cutting edge Technologies.



WHAT IS AN ELECTRONIC ROAD WEIGHBRIDGE

An Electronic Road Weighbridge is a large weighing system which can weigh road vehicles and their contents or is simply the Truck Scale. A Road Weighbridge can be Surface Mounted (Pit-less) with a ramp leading up a short distance and the weighing equipment underneath, or it can be Pit Mounted with the weighing equipment and platform in a pit so that the weighing surface is in level with the road. They are invariably built from steel or sometimes from concrete and by nature are extremely robust.

PARTICULARS	PIT MOUNTED WEIGHBRIDGE	SURFACE MOUNTED (PITLESS) WEIGHBRIDGE
SPACE REQUIREMENTS INSTALLATION COST OF CIVIL WORKS RAMPS REPAIR & MAINTENANCE WATER DRAINAGE PROBLEM PIT LIGHT	Suitable if there is space limitation Flushed to the Ground Level Higher cost due to the construction of Pit No ramp required Cleaning, Inspection and Repair are to be carried inside the pit; making it difficult. Requirement of Sump Pump for Drainage of Water Light is required in the Pit for Cleaning, Inspection and Repair	Higher space requirement for ramps Very economical to install, as it is surface mounted Lower cost of Civil Works Approach by low angle ramps. Easy maintenance as surface is completely above the ground level No High Water Table or Drainage Problems No such requirement
DIAGRAMS		RCC. RMAP PDCALAGE PILLAR RRCMIN LEVEL RCC. PILLAR LDAD CELL CENTER PIT LESS TYPE WEIGHBRIDGE
Photographs		

APPLICATIONS OF ELECTRONIC WEIGHBRIDGE

TYPICAL APPLICATION

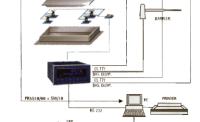
- **Essential Components**
- \geq Platform Structure
- Load Cells \triangleright
- Junction Box >
- ≻ Inter connection Cable
- ≻ Weight Indicator
- Parallel (large) Display \geq
- > **Civil Structure**



UNMANNED (AUTOMATED) APPLICATION

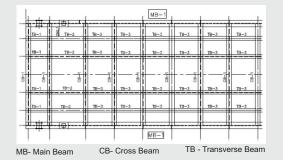
Optional Components MH-YA 30

- PC \geq
- Printer
- Software
- Camera
- Barrier
- Traffic Light
- Card Reader



Platform Structure:

We advocate the use of Steel Platform Structures over Concrete Structures due to the inherent advantages of the former. Our Steel Platform Structures are fully welded and consists of Main Beams, Cross Beams, Transverse Beams, Deck Plate and other accessories as per IS 2062 Standards. These designs have been developed and tested on STAAD 2004 Software and are much stronger than the conventional designs, which are without adequate number of Cross Beams. We use SAIL & Jindal Beams and TATA & SAIL Plates for the manufacture of these platform structures.





LOAD CELLS

Load cell is the electronic device which converts the weight into electrical signal. We offer a wide choice of load cells to our customers. They can be classified broadly as Stainless Steel and Tool Steel/Alloy Steel Load cells.

STAINLESS STEEL LOAD CELLS

Sr	Particulars*	Minibea	Flintec	Zemic	Thameside	Thameside	Revere
No.		Pr6221	RC 3	BM14G	T34	T34D	DSC2
1	Country of Manufacture	Germany	Sri Lanka	China	UK/Spain	UK/Spain	Israel/India
2	Physical Nature	Compression	Compression	Compression	Compression	Compression	Compression
3	Туре	Analogue	Analogue	Analogue	Analogue	Digital	Digital
4	Capacities (MT)	20/30/50/75	20/30/40/50	20/30/40/50	15/20/30/40/60	15/30/40/60	20/25/30/35/40/50
5	Material	Stainless Steel					
6	Wire System	4 or 6	4	4	6	6	4
7	Temperature	✓	x	x	X	x	✓
	Compensation						
8	Electro Plasma/Laser welded	✓	x	x	X	x	X
9	Anti Rotation Fixture	Anti Rotation	x	x	Self Centring	Self Centring	Self Aligning
		Rocker Pin			Cloumn design	Cloumn design	single coloumn
10	IP 68 Protection	✓	✓	\checkmark	✓	✓	✓
11	IP 69K Protection	✓	✓	x	✓	✓	✓
12	Hermetical Sealing	✓	✓	\checkmark	✓	✓	✓
13	OIML R-60 C 3 Approval	✓	✓	\checkmark	✓	✓	✓
14	NTEP Class IIIL Approval	✓	✓	x	✓	✓	✓
15	Inert Gas Filled	✓	x	x	X	x	X
16	Inbuilt Lightening Protection	\checkmark	X	\checkmark	✓	\checkmark	\checkmark
17	High Voltage Surge Arrestor	✓	x	x	✓	✓	✓
18	Output Matching	✓	x	x	x	✓	✓
19	Rated Output	1 mV/V	2 mV/V	2 mV/V	2 mV/V	x	x
20	Safe Overload	200 %	200 %	150 %	150 %	150 %	150 %
21	Ultimate Overload	500 %	300 %	300 %	300 %	300 %	300 %



Double Ended Shear Beam Load Cell with Unilink Float Assembly TOOL STEEL/ALLOY STEEL LOAD CELLS



Double Ended Shear Beam Load Cell (Ball Type)



Compression Load Cell & its Assembly

Sr.	Particulars*	Sensortronics	Sensortronics	ADI Artech	ADI Artech	Zemic	Keli
No.		65058	97003	70310	90210	HM9B	QS
1	Country of Manufacture	India	India	India	India	China	China
2	Physical Nature	Double Ended	Compression	Double Ended	Compression	Double Ended	Double Ended
		Shear Beam		Shear Beam		Shear Beam(Ball)	Shear Beam(Ball)
3	Туре	Analogue	Analogue	Analogue	Analogue	Analogue	Analogue
4	Capacities (MT)	22.5/34/45/90	23/30/45	20/30/50/100	30/45/75/100	20/30/40/50	10/20/30/40/50
5	Wire System	4	4	4	4	4	4
6	Material	Nickel Plated	Tool Steel with	Nickel Plated	Epoxy Enamel	Nickel Plated	Nickel Plated
		Tool Steel	SS Housing	Tool Steel	finish	Alloy Steel	Alloy Steel
7	Protection	IP 68	IP 68	IP 68	IP 68	1P 68	1P 68
8	Rated Output	3mV/V	1.75 mv/V	3 mV/V	2 mV/V	2mV/V	2mV/V
9	Safe Overload	150 %	150 %	150 %	150 %	150 %	150 %
10	Ultimate Overload	300 %	300 %	300 %	300 %	300 %	300 %
11	Operating Temp.	-20° to 70°	-20° to 70°	0° to 60°	0° to 60°	-35° to 65°	-30° to 70°
	Range (°C)						
12	Hermetical Sealing	x	✓	X	×	X	X

*The above data is as provided by the respective manufacturers MAXIM MECHATRONICS (P) LTD. has no responsibility towards the accuracy of the data.

INDICATORS (DIGITIZER)

1. Intelligent Weighbridge Terminal

2. Pro-X4 Process Controller

1. Maxim Intelligent Weighbridge Terminal:

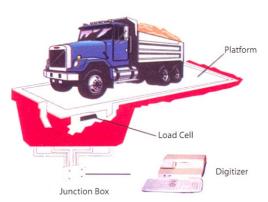
- Self-diagnosis routine
- Taring facility upto rated capacity
- Auto latching; Auto zero tracking
- Real time clock with battery back-up for automatic recording of date, time-in and time-out
- No disk drives, yet non-volatile memory capacity of 1000 transactions
- Standard ASCII computer keyboard attached to the Terminal for data entry
- One parallel display to show weight on a 50 mm height of seven segment Red LED type display
- 16 characters alpha-numeric single line backlit LCD Display; character height 13 mm
- Provision for a direct interface with the printer through a key board
- RS-232 Port for computer interface
- Working temperature : up to 60° C
- Humidity
- : 95% non-condensing
- Main Supply : Single-phase, 230 V (+/-15%), 50 Hz
- Power Consumption : 20 Watts

2. PRO-X4 Process Controller

- Programmable Process Controller (acc to IEC 61131) designed and developed by Sartorius AG, Gottingen Germany.
- EC Type Approval as Indicator for Non-Automatic Scales, Class III, 6000e
- Easy Integration to Automation Concepts
- Display: 7-Digit plus status symbols text: 2 lines, 20 characters
- Load Cell Input: 6 or 4 wire, Supply: 12 V DC, Impedance: min 75 Ω. E.g. 12 load cells with 1080 Ω
- Computer Interface: Bi-directional serial RS 232; User Selectable Protocols: remote display, printer, keyboard Ps2
- Accuracy 6000e OIML; minimum verification interval 0.5 μV/e
- Linearity < 0.002 %
- Resolution: 2.5 Mio. Counts for 1mV/V
- Temperature Range: Operation: -10°C to +50°C: Storage: -40°C to +70°C
- Measuring Time: 10......1280 ms, adjustable

MODEL WISE DETAILS

Model	Weighing Capacity	Least Count	Platform Size	Number of Load Cells Steel	Minimum Structure Weight
MWB205/73	20 MT	5 kg	7 m x 3 m	4	4.25 MT
MWB255/73	25 MT	5 Kg	7 m x 3 m	4	4.25 MT
MWB305/93	30 MT	5 kg	9 m x 3 m	4	5.50 MT
MWB405/93	40 MT	5 Kg	9 m x 3 m	4	5.80 MT
MWB505/93	50 MT	5 Kg	9 m x 3 m	4	6.20 MT
MWB5010/123	50 MT	10 Kg	12 m x 3 m	6	8.20 MT
MWB6010/123	60 MT	10 kg	12m x 3 m	6	8.80 MT
MWB6010/163	60 MT	10 Kg	16 x 3 m	6	12.30 MT
MWB 6010/163	60 MT	10 Kg	16 x 3 m	8	10.60 MT
MWB 8010/163	80 MT	10 Kg	16 x 3 m	8	11.00 MT
MWB 8010/183	80 MT	10 Kg	18 x 3 m	8	12.30 MT
MWB 8010/203	80 MT	10 Kg	20 x 3 m	8	13.80 MT
MWB 10010/163	100 MT	10 Kg	16 x 3 m	8	11.40 MT
MWB 10010/183	100 MT	10 Kg	18 x 3 m	8	12.80 MT
MWB 10010/203	100 MT	10 Kg	20 x 3 m	8	14.00 MT



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