BRIDGEMONT BMS

The new force in
weighbridge design

Avery Weigh-Tronix

BridgeMont BMS

The Avery Weigh-Tronix *BridgeMont* series is a new generation in weighbridge design. As the market leader in the UK, US and Canada, *BridgeMont* delivers everything weighbridge users demand - strength, flexibility, economical ownership and easy installation.

- **Strong, safe, more cost-effective**
  BridgeMont offers quick and economical bolt-down installation, with simple foundations and no need for grouting. There are no mechanical movement restraints which means greater reliability. The full-width deck is easily accessible for vehicles and provides safer access for drivers. On top of all this, ***BridgeMont*** features the latest Weigh Bar® technology for new levels of performance and reliability.

- **Proven performance from a market leader**
  Every year, over 1500 Avery Weigh-Tronix weighbridges are successfully installed under some of the most arduous conditions on earth. The company has made substantial investment in new on-site facilities to manufacture ***BridgeMont*** to its renowned quality standards.

- **Strength by design**
  BridgeMont's innovative box construction results in lighter weight deck – with no compromise on strength. The platform typically comprises one four-Weigh Bar® base module with 'adder' units to provide platforms up to 24 m long and 100 tonnes in capacity. To aid safe access to the cab, the preferred standard width is 3.35 m with wider or traditional 3 m modules readily available. This modular design is easy and cost-effective to install, even in areas with restricted access.

- **Easy, bolt-down installation**
  BridgeMont offers bolt-down installation with no grouting and only simple foundations which means your weighbridge can be installed in a single day.

- **No mechanical restraints**
  The most common cause of load cell failure is a thing of the past. Unique Weigh Bar® technology absorbs braking/acceleration loads without the need for mechanical restraints – altogether simpler and more reliable.

- **Full width weighing for safer access**
  The width options offered by the ***BridgeMont*** range ensure a comfortable fit on the bridge for all vehicles and provides safe access to the cab without the need for steps.

- **Unrestricted platform**
  Side rails assist vehicle guidance without damaging wheels or creating dirt traps.

- **Heavy-duty options**
  BridgeMont is available in two options - ***BMS*** for standard loads or the premier ***XT*** range for specialist heavy-duty requirements.

- **Weigh Bar® technology**
  BridgeMont's Weigh Bar® technology offers a host of advantages over conventional load cells. Proven for 20 years in the field, Weigh Bars have a documented failure rate of just 0.3% - ten times the reliability of conventional load cells. In addition, Weigh Bars® are immune to end, side and torque load conditions that can affect the accuracy and life of conventional load cells. They also reduce foundation loads and absorb braking/acceleration loads without the need for mechanical restraints.

- **Ideal for restricted sites**
  The lightweight modular design is easy to manoeuvre and install - even under hoppers or inside buildings.

- **Outstanding protection**
  External surfaces are shot blasted and treated with a high performance paint system, providing excellent levels of corrosion protection and outstanding resistance to wear and site conditions. All internal box sections are continuously welded forming an effective seal to moisture ingress.

- **Indicating System**
  Any suitable Avery Weigh-Tronix indicator, PC or driver operated system may be fitted.
  See specification sheets for full details.

Specification

Platform Structure

The mild steel box section construction is the optimum design for strength. Close-spaced structural beams, full length top plates and lower stiffening plates, form a rigid monocoque style construction, minimising deflection and reducing stress. All steel components run in a longitudinal direction consistent with the flow of traffic ensuring that the weight is always applied directly on to the beams.

The unsupported span between beams is only 185 mm, compared to typically over 500 mm on high-sided single module designs. This gives a consistent well-drained weighing surface with reduced strain on the deck plates.

Modules are factory assembled with Weigh Bars ready installed for speedy installation and consistent quality. Full width end box fabrications house Weigh Bars and junction box. Both the Weigh Bars and junction box are mounted high in the installation, away from dirt and water with no trailing cables to damage.

Weigh Bars®

Braided stainless steel sheathed cables are provided as standard to prevent physical damage and rodent attack. The Weigh Bar cables terminate in an IP67 stainless steel junction box located in the weighbridge structure, with a single cable routed to the weighbridge office. Lightning protection is provided by surge arrestors in the junction box and earth rods located adjacent to each pair of Weigh Bars. Environmental protection standard of both Weigh Bar and junction box exceeds IP67.

Strength

Although the carrying capacity of the weighbridge is important, the most critical measure of strength and durability is its ability to withstand repeated high axle loads over many years. Avery Weigh-Tronix designs take account of both the weights of the axles and the punishing way the load is applied.

The ***BridgeMont*** range is designed in accordance with BS 5400 to carry any vehicle covered by the Motor Vehicle (Construction and Use) Regulations. ***BMS*** design for standard duty is 15 units of Highway class B (HB) loading which equates to 30 tonnes on dual tandem axles (DTA) spaced at 1.8 m. This is 50% more than the UK maximum authorised weight limit.

Although many vehicles not covered by the axle loading and spacing regulations may be carried by the weighbridge, it is important that confirmation be obtained.

Platform Height - 355 mm.

Finish

A high performance water based anti-corrosive primer with a dry film thickness of 50 microns (dft) is used. This provides excellent levels of adhesion and corrosion protection. The weighbridge is finished to a minimum thickness of 75 microns (dft), with a gloss water based, modified alkyd resin giving outstanding resistance to wear and conditions expected in a weighbridge environment. After each application the modules are cured in a full size purpose designed oven.

Corrosion within the internal box sections is prevented by fully seam welding the lower stiffening plates, forming a sealed box section with no dirt traps.

Approvals

The basic construction, Weigh Bars and mounting components are in accordance with the requirements of O.I.M.L., N.T.E.P. and EU regulations.

Environment

Consistent with conditions pertaining to a well drained outdoor installation.

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Resistance to Electrical Disturbances
Complies with the requirements of EN 45501.

Operating Temperature Range
-20° C to +50° C depending on Weights & Measures Regulations applicable.

Installation and Access

Surface mounted foundations comprise a flat solid raft with concrete approach ramps. Service access to Weigh Bars and mountings is via removable covers in the top of the weighbridge. For some applications the optional steel ramps may be considered.

Options

1. ***BridgeMont XT*** heavy duty range. In accordance with BS 5400, Motor Vehicle (Construction & Use) Regulations, the ***XT*** will carry 18 units of Highway class B (HB) loading which equates to 36 tonnes DTA.
2. Widths up to 3.65 m
3. No guide rails
4. Manholes, one per module
5. Steel ramps
6. Suitable for hazardous areas using Avery Weigh-Tronix ATEX T302 load cells and indicators.

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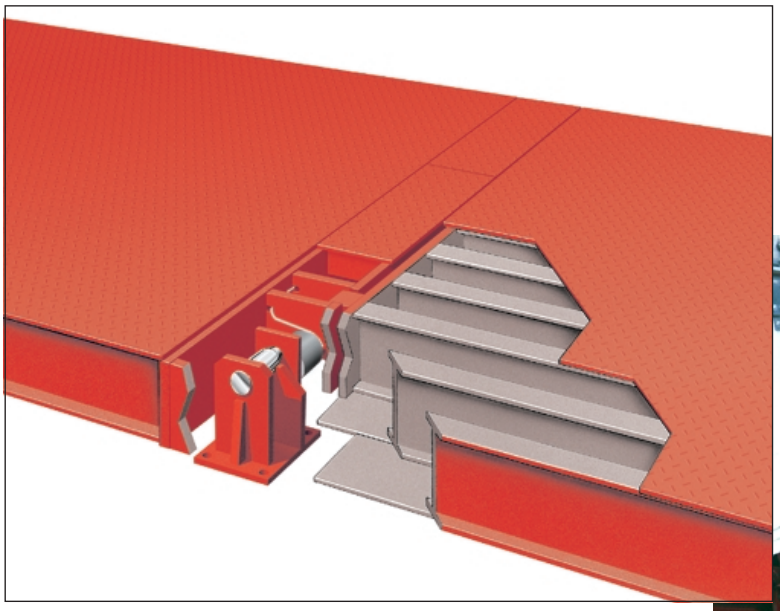
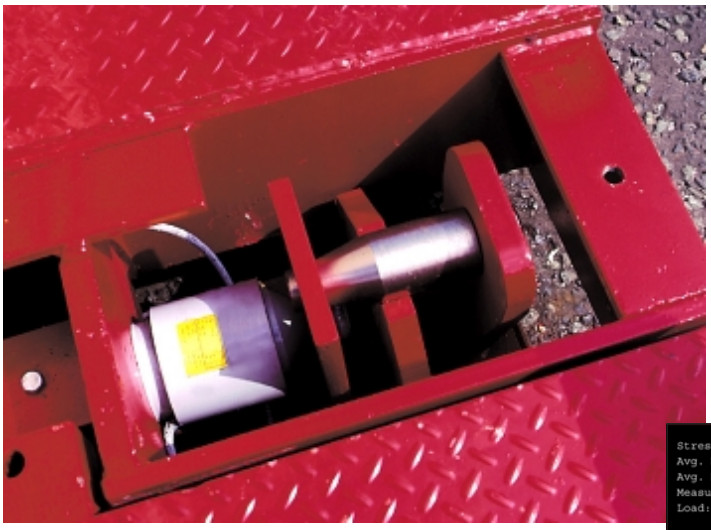
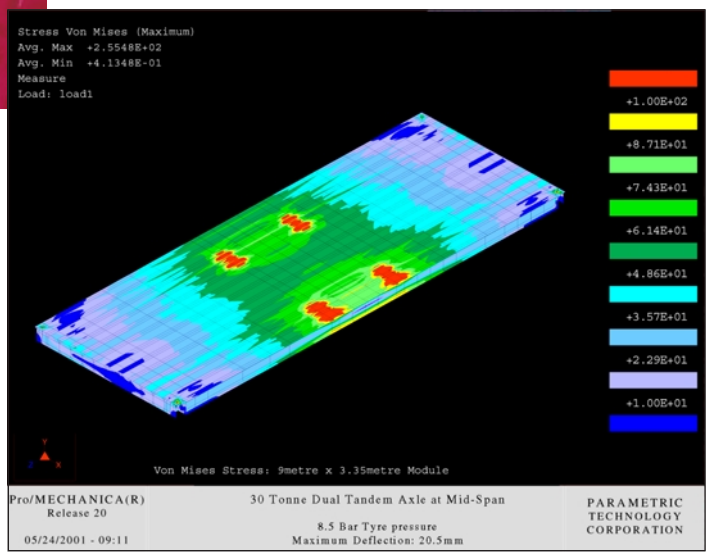


***BridgeMont**'s innovative box construction results in lighter weight deck – with no compromise on strength. The platform typically comprises one four-Weigh Bar® base module with 'adder' units to provide platforms up to 24 m long and 100 tonnes in capacity.*

*To aid safe access to the cab, the preferred standard width of the **BridgeMont BMS** is 3.35 metres with traditional three metre wide modules readily available.*



***BridgeMont**'s Weigh Bar® technology offers a host of advantages over conventional load cells and have been proven for 20 years in the field, Weigh Bars have a documented failure rate of just 0.3% - ten times the reliability of conventional load cells.*



*Computer model analysing stress loads and amount of structural deflection on a **BridgeMont BMS** weighbridge. Example shows the loading applied by a 30 tonne dual tandem axle, 8.5 bar tyre pressure, at mid span to a 9 m x 3.35 m module. The maximum deflection is 20.5 mm.*

Strength by design

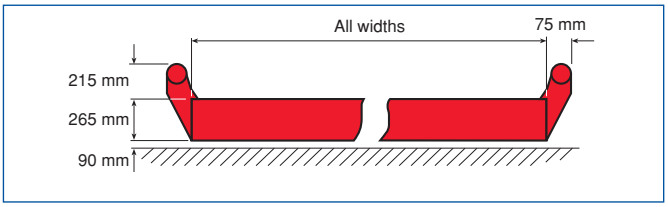
Shipping Specification (Approximate)

	Weight of Standard Modules with Guide Rails		
Platform Size	**Base (Length)**	**Adder 1 (Length)**	**Adder 2 (Length)**
6 m x 3 m	3230 kg		
9 m x 3 m	5050 kg		
12 m x 3 m	3230 kg (6 m)	3030 kg (6 m)	
15 m x 3 m	3940 kg (7.5 m)	3735 kg (7.5 m)	
18 m x 3 m	5050 kg (9 m)	4850 kg (9 m)	
21 m x 3 m	3715 kg (7 m)	3505 kg (7 m)	3505 kg (7 m)
22 m x 3 m	4180 kg (8 m)	3505 kg (7 m)	3505 kg (7 m)
24 m x 3 m	4180 kg (8 m)	3970 kg (8 m)	3970 kg (8 m)
6 m x 3.35 m	3660 kg		
9 m x 3.35 m	5730 kg		
12 m x 3.35 m	3660 kg (6 m)	3435 kg (6 m)	
15 m x 3.35 m	4465 kg (7.5 m)	4240 kg (7.5 m)	
18 m x 3.35 m	5730 kg (9 m)	5510 kg (9 m)	
21 m x 3.35 m	4205 kg (7 m)	3980 kg (7 m)	3980 kg (7 m)
22 m x 3.35 m	4735 kg (8 m)	3980 kg (7 m)	3980 kg (7 m)
24 m x 3.35 m	4735 kg (8 m)	4515 kg (8 m)	4516 kg (8 m)

Weighbridge Sizes & Capacities

Platform Size	Capacity	No. of Modules
6 m x 3.35 m	40 000 kg	1
9 m x 3.35 m	40 000 kg	1
12 m x 3.35 m	60 000 kg	2
15 m x 3.35 m	60 000 kg	2
18 m x 3.35 m	60 000 kg	2
21 m x 3.35 m	90 000 kg	3
22 m x 3.35 m	90 000 kg	3
24 m x 3.35 m	90 000 kg	3

Complies with requirements of EN 45501.



Foundation Drawings

Description	Width	Drawing Number
Surface Mount One Module	3.00 m	83211 – 251
	3.35 m	83211 – 252
	3.65 m	83211 – 253
Surface Mount Two Module	3.00 m	83211 – 254
	3.35 m	83211 – 255
	3.65 m	83211 – 256
Surface Mount Three Module	3.00 m	83211 – 257
	3.35 m	83211 – 258
	3.65 m	83211 – 259
Pit Mount One Module	3.00 m	83211 – 260
	3.35 m	83211 – 261
	3.65 m	83211 – 262
Pit Mount Two Module	3.00 m	83211 – 263
	3.35 m	83211 – 264
	3.65 m	83211 – 265
Pit Mount Three Module	3.00 m	83211 – 266
	3.35 m	83211 – 267
	3.65 m	83211 – 268

For further information, call 0870 90 50066

Foundry Lane, Smethwick,
West Midlands, England B66 2LP.
Tel: +44 (0)870 90 34343
Fax: +44 (0)121-224 8183

E mail: info@awtxglobal.com
Internet: http://www.averyweigh-tronix.com

Avery Weigh-Tronix