

# Lodestone



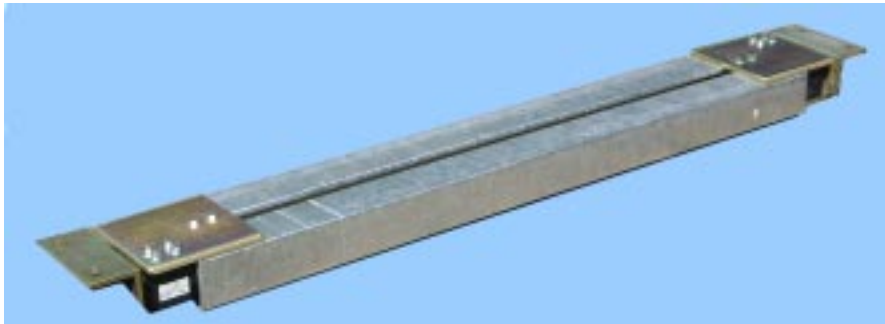
## LodeMaster 2 Low Profile Belt Weigher

# Lodestone



The Lodestone Belt weigher is designed to be simple & quick to install. It can be installed by local personnel or Lodestone technicians.

### Force collecting device



The force collecting device measures the downward forces generated by the material passing over the weighing area. It consists of a loadcell and steel weighbridge assembly. An Idler set is removed from the conveyor and remounted onto the weighbridge. As the material passes over the weighing section, the downward force of the material is measured by the load cell. The main supports are 75 x 75 angle, and can easily be replaced if the weigher is to be moved to another conveyor.

### Tachometer

The Belt displacement Monitor (tachometer), sometimes referred to as a speed sensor, measures belt travel. This information is sent to the electronics in digital format. Conveyors are usually assumed to be constant speed devices, however under different loading conditions, and power variations, the speed of the conveyor can change. These changes will affect the measurement of the belt weigher and so for the best weighing accuracy, the belt displacement must be measured. The Tachometer also compensates for any belt slip that may be present.

### Electronics

The electronics acts as an integrator. This means that it multiplies the belt displacement measurement with the loadcell input, and calculates the weight value per unit time. The electronics has a user friendly calibration system. It allows the system to be set up quickly and efficiently. The whole system meets IP65 standards of protection, and is suitable for harsh site conditions. The electronics is microprocessor based with its programme and calibration data stored in non-volatile memory. (No battery backup is required) The low voltage dc version suitable for mobile plant has a wide range input of 9-36vdc. The system has a unique dual display system with tonnes and rate data on one display, and diagnostic data be displayed continuously on the inner display. This makes fault analysis quick and simple.

#### Inputs:

- Speed Sensor - Digital - max 1.5kHz
- Load cells - Up to 4
- Load cell Sensitivity - 1.5 to 3 mV/V
- RS232/485 - Max 57,600 Baud
- 210-260vac or 90-130vac (50 or 60 Hz)
- 9-36vdc operation available (Specify with order)
- Simple 4 Function Key data entry

#### Outputs

- Analogue 4-20mA Current output
- Serial RS232 ascii data to printer / computer
- Digital Relay - 1 x SPCO, 240VAC, 5A, 50mS

### Display

32 Large Character x 2 line Back-lit LCD, which can display the following data:

- Belt speed Rate
- Total (accumulated)
- Calibration data
- Printed reports
- Blue Tooth (optional)
- Auto Zero Tracking

### Documentation

A comprehensive manual is supplied with each system. With a laminated "Quick Guide" and detailed assembly and commissioning

### Accuracy

With careful application of the weighers, accuracies of  $\pm\frac{1}{2}\%$  are possible.

In order to achieve these type of accuracies, the application engineering has to be considered carefully. If you are in doubt, please contact Lodestone for our **Belt Scale Applications Handbook**. This booklet details all of the do's and don't for Belt Scale weighing applications.

### Applications

The Lodestone Belt Weigher is designed for plant control, and indication. The output of the weigher can be interfaced into PLC or SCADA systems. The Belt Weigher is a very rugged device, and is suitable for the measurement of bulk solids in such environments as :

- Gravel Pits - Quarries
- Asphalt Plants - Cement Plants
- Refuse Recycling Plants
- Mobile Crushers - Plant Inventory
- Recrush Control
- Ship Unloading Conveyors
- Lorry Loadout - Train Loadout
- Food Production - Animal Feed
- Mining - Screen Feed Control

and any situation where bulk solids movement on conveyors need to be measured controlled and monitored.

### Environment

The system has been designed so that it can be installed on external conveyors and in all weathers.

### Batching

An optional Batching system can be supplied to interface into Lorry or train loading systems.

### Printing

An optional tally roll printer can be attached to the system, which will give time and date, and Total Tonnes delivered since the last printout.

### Development

Lodestones' policy is one of continuous development. If you have requirements other than those listed here, please inform us and if it practical to do so, we will include this in our system. This will normally be at no extra charge.



# Lodestone

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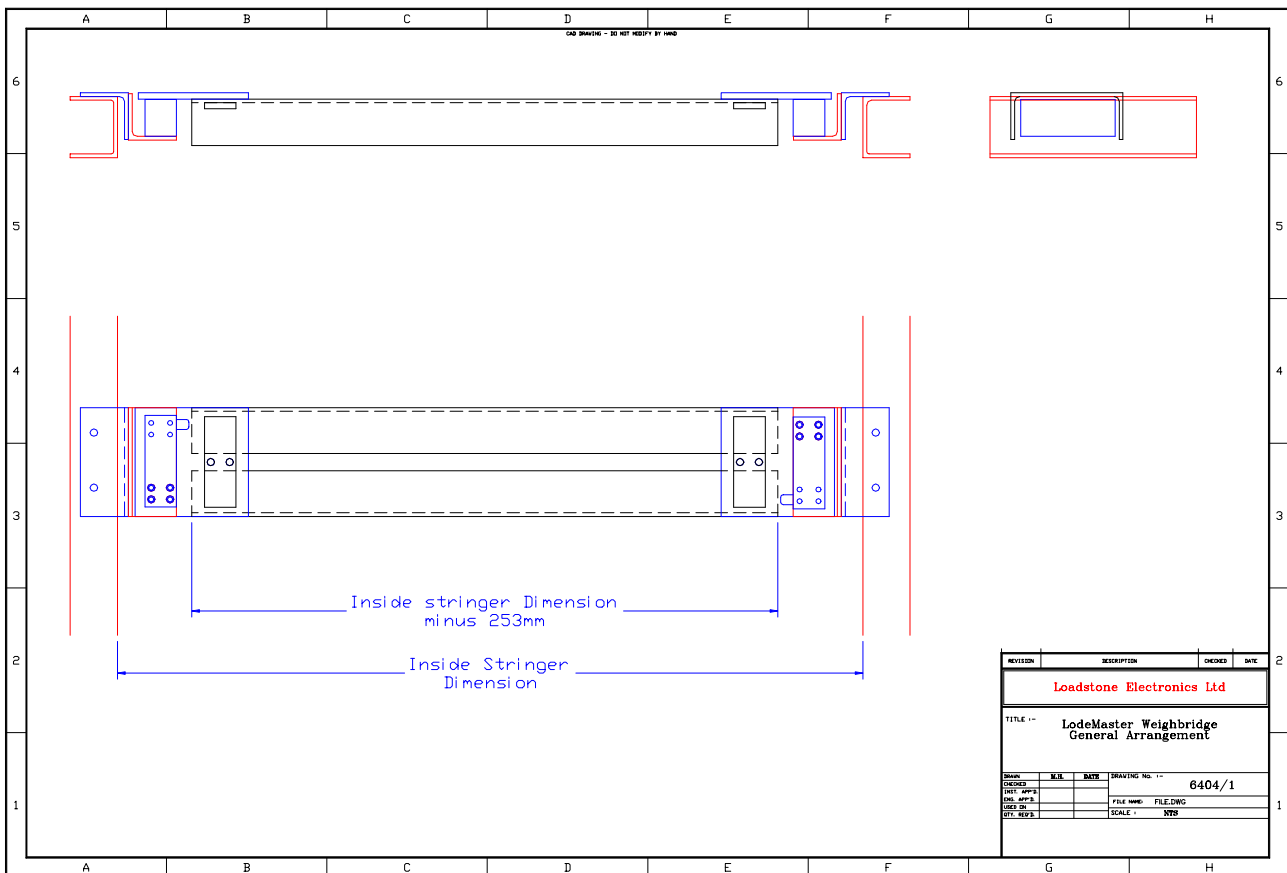




Under belt Tacho



IP65 Integrator



Weighbridge General Arrangement



## Other Products From Lodestone



Dual Idler Belt Weighers - Four Idler Belt Weighers - Special Printer Systems - Belt Slip Monitoring - Rotation Sensors - Zero Speed Detection - Loadout Control - Data Logging - Static Weighing Systems - Platform Weighers - Weighing Consultancy - Process Control Systems