

Lodestone



The Lodestone Belt weigher is designed to be simple & quick to install. It can be installed by local personell 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. Idler sets are 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 required 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 alter 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 and battery back ram.

Inputs:

- Speed Sensor - Digital - max 60Hz
- Load cells - Up to 4
- Load cell Sensitivity - 1.5 to 3 mV/V
- 210-280vac or 90-150vac (50 or 60 Hz)
- 12/24vdc operation available
- Keyboard / Function Key data entry

Outputs

Analogue

4-20mA Current output

Serial out

TTL level data - can be interfaced to line drivers to suit.

Tonnes pulse out

Relay - 1 x SPCO, 240VAC, 5A, 50mS



LodeMaster 4001 Series - 4 Idler Belt Weigher



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Display

32 Character x 2 line Backlit LCD, which can display the following data:

- Belt speed
- Rate
- Total (accumulated)
- Calibration data
- Printer output
- Printed reports
- Serial Computer Interface

Documentation

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

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

Accuracy

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
- Coal Processing Plants
- Plant Inventory
- Recrush Control
- Ship Unloading Conveyors
- Lorry Loadout
- Train Loadout

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

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.

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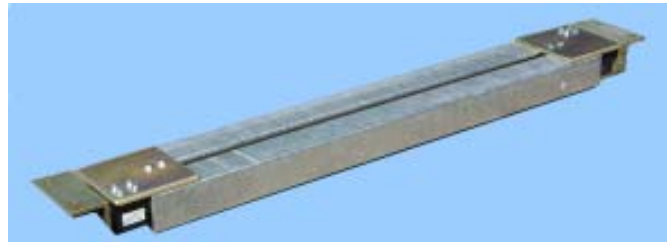
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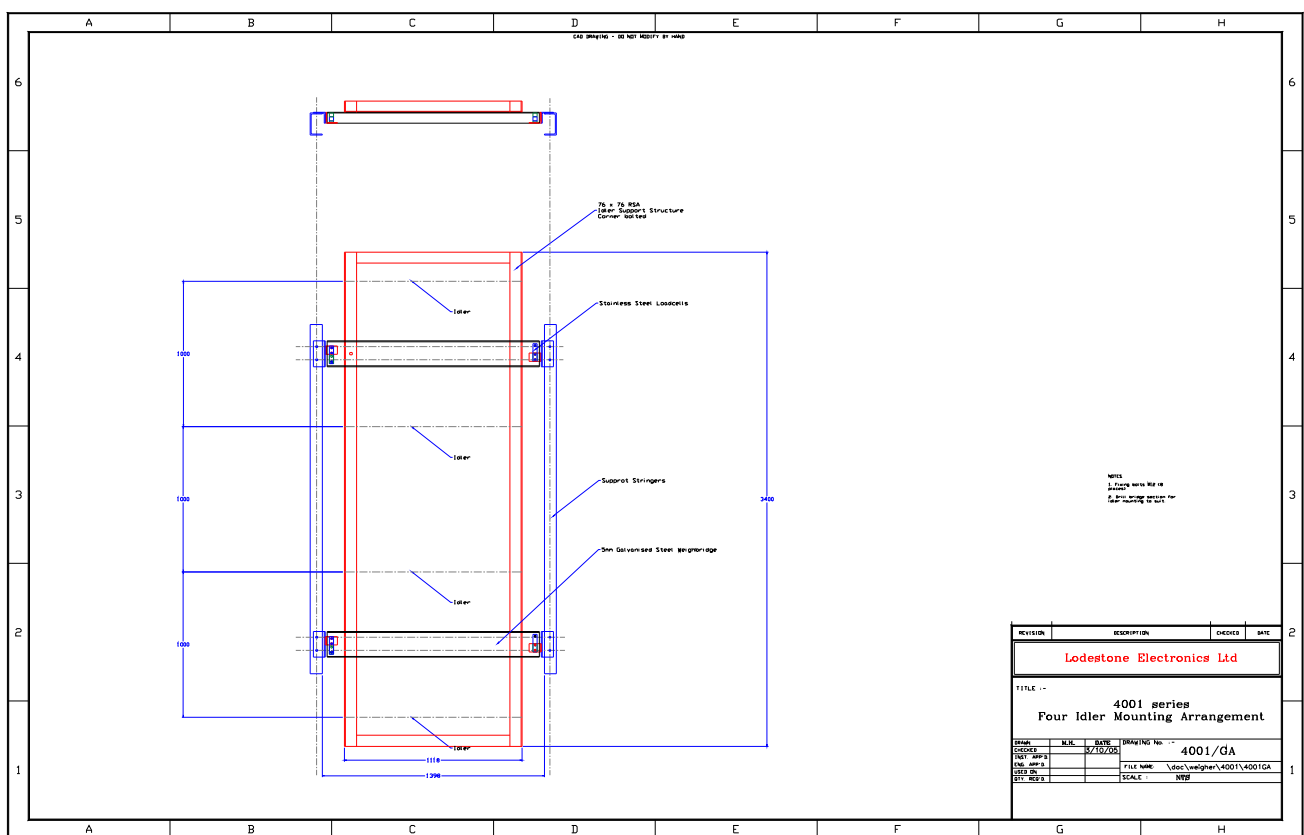




Under belt Tacho



Single Idler Weigher



Weighbridge General Arrangement

Other Products From Lodestone

Dual Idler Belt Weighers - Single Idler Belt Weighers - Special Printer Systems - Rotation Sensors - Zero Speed Detection - Loadout Control - Data Logging - Static Weighing Systems - Platform Weighers - Radio Control Systems - Radio Data Transmission - Level Control