

Ramsey Series 20 Belt Scale Systems



△ Series 20 Belt Scale shown with a Speed Sensor and a Micro-Tech 2000 Integrator

The Ramsey Series 20 Belt Scale System with Micro-Tech 2000 Series Integrators

Designed for general in-plant conveyor-belt weighing applications in the most demanding industrial environments, the Series 20 Belt Scale System lets you control feed rates to crushers, mills, screens and other processes with incredible accuracy.

It can monitor production output and inventory or control loadout of product, while providing vital information for the management and operation of your business.

The Series 20 combines the proven reliability of the Ramsey 10-20 Weighbridge and 60-12 Speed Sensor with the power and versatility of the advanced electronics of the Micro-Tech 2000 Series Integrators.

Easy Installation

Easy to install, indoors or out, on fixed or portable conveyors, the Series 20's rugged construction is designed for harsh applications including:

- Crushing plants
- Chemical plants
- Asphalt plants
- Mines
- Cement mills
- Coal preparation plants
- Paper mills
- Gypsum plants
- Sand and gravel operations
- Coal-fired power plants
- Ore beneficiation processes
- Rail loadout

Ramsey Series 20 Belt Scale Systems



Weighbridge

Rigid and rugged, the Ramsey 10-20 Weighbridge remains permanently aligned within the conveyor frame. The one-piece, drop-in style 10-20 is completely assembled at the factory and is quickly and easily installed and aligned in the conveyor. It is designed to provide additional stiffening and support to minimize conveyor deflection.

Both the single and the dual idler models offer three point suspension and employ trunnion-type, frictionless pivots. These sealed units are impervious to vibration, moisture and product build-up, eliminating the problems commonly associated with knife edges and bearings.

Belt Speed Sensor

The Ramsey 60-12 Digital Belt Speed Sensor is the most reliable and accurate speed-sensing device ever developed for belt scale service. Direct-coupling the sensor to the conveyor tail pulley, snubbing roll, or the large diameter lagged return roller assures an accurate belt-travel readout. No wheels ride on the belt, which eliminates problems related to material build-up and slippage.

Weighbridge Advantages

- No moving or wearing parts
- Precision, strain-gauge loadcell applied in tension to guarantee loadcell alignment and accuracy
- A total deflection on weight idler(s) of less than .004 inches
- Slim profile to minimize material build-up
- Optional counter-weighted carriages for light belt loading applications

Belt Speed Sensor Advantages

- Rugged, cast-aluminum housing suitable for outdoor installation
- A.C. pulse generator no brushes to adjust or replace

Service

When you invest in Ramsey products, you're not only buying our product, you're buying our commitment to service. Our pledge is to work with you, the customer, to continuously apply new technologies and offer real solutions to your specific needs.

We will work with you to answer your application requirement and service questions, to service your equipment, and to support and assist you every

step of the way. No matter where you are, no matter what you need, you can count on us!

Our service and fast parts turnaround time are just two of the things that set us apart from the rest.

Ramsey Micro-Tech Electronic Integrators

Integrator

The Micro-Tech 2001 and 2101 are designed for easy operation and calibration with a large, easy to read displays; straight-forward, tactile-touch keyboards; and software that prompts you, step by step, through the proper set-up and operational procedures.

All data and user instructions are displayed on a bright, 4x20-character alphanumeric, vacuum-fluorescent display. This display and keypad are used for all interfacing and data entry. Two model options allow you to choose the one that's right for your needs.

The Micro-Tech 2001 is designed for general belt scale applications with only basic external communication requirements. The Micro-Tech 2101 is UL approved and has greater digital I/O capabilities, which can be expanded as need arises.



△ Micro-Tech 2001 Field Mount (back) shown with Micro-Tech 2101 Panel Mount (front)

The 2001 contains two expansion slots and is available in field mount only. The 2101 contains five expansion slots for increased input/output and is available in panel or field mount.

Micro-Tech Advantages

- **Part of Micro-Tech 2000 Series**
Common operation, set-up and calibration reduces operator training
- **Digital electronics**
Provide accurate, drift-free performance
- **Auto zero**
With a simple keystroke, the integrator can automatically compute and install a new zero.
- **Auto zero tracking**
This feature initiates the auto zero function whenever the conveyor belt runs empty.
- **Auto span**
Lets you use our electronic calibration (standard on all units), or an applied test load such as a chain, test weight, or material load
- **Calibration interval reminder**
Operator selectable. Automatically reminds you when it's time to recalibrate.
- **Linearization**
Provides linear output over the operating range. Improves the accuracy of the belt scale over full operating range, producing the same accuracy at 25% or at 100% of capacity.
- **Numerous programmable features**
Lets the user customize the integrator to fit their individual requirements
- **Selectable analog outputs**
For rate, load or speed display
- **Selectable analog output delay**
The delay can be programmed in either time or length of belt travel, providing you with greater flexibility and control.
- **Programmable digital inputs**
Lets operator custom program the integrator to accept inputs and/or instructions from various equipment such as alarms, printers, etc.
- **Programmable digital outputs**
Lets operator program up to three outputs to provide various information and/or activate ancillary equipment
- **Fieldbus Capabilities**
We have licensed technology from Allen Bradley permitting direct "Blue Hose" connection to the Allen Bradley I/O network. The Micro-Tech 2000 can interface with Modbus, Allen Bradley DF1 or Siemens 3964 protocols.
- **Independent adjustments of analog output and display damping**
Lets you adjust display without affecting sensitivity of output signal used for control purposes
- **Multi-level password protection**
Provides varying levels of security for operator access
- **CE Approval**
Meets or exceeds January 1996 European market standards. Extraordinary protection from RFI, EMI and ESD. Prevents downtime and maintains operating integrity.
- **Incline compensation**
Can be used in conjunction with a slope sensor to automatically compensate the belt scale output for changes in conveyor angle
- **Moisture compensation**
Can be used in conjunction with a moisture meter to automatically compensate the belt scale output
- **Loadout (Optional)**
Controls the weight of material delivered to trucks, rail cars, barges or ships
- **Retrofittable**
Easy to upgrade all types of older Ramsey integrators and most competitive brands
- **Dual speed sensor inputs**
For belt slippage detection (Model 2101)

Performance Guarantee

On factory approved installations, we warrant that the Series 20 Belt Scale System will weigh and totalize to a value within $\pm 1/2\%$ of the test value when calibrated against a known test weight, chain, or our standard electronic calibration.

Ramsey Micro-Tech 2000 Series

The Total Solution

We introduced the first microprocessor-based belt scale in 1974. Since then, it has been our mission to create the most advanced, versatile and easy-to-use belt scales in the world.

The Micro-Tech 2000 Series represents more than just the next generation of belt scale electronics. It signifies a new approach to scale instrumentation, which gives you more flexibility and vastly increases upgrade capabilities.

Advanced

Each electronics model in the series is designed for a specific weighing application: belt scales, weigh feeders, impact flow meters, static weighing systems, batch weighing systems, or loss of weight systems.

Because the Micro-Tech 2000 Series use a common platform, you only need to become familiar with one basic interface.

Versatile

Operational flexibility is provided by numerous programmable features. These features let you customize the electronics to your specific application needs.

Philosophy

Modern weighing equipment must be capable of interfacing with a variety of peripheral equipment for monitoring, supervisory control and data acquisition purposes. To accommodate these needs, we have designed extraordinary communication capabilities into the Micro-Tech 2000 Series.

These communication capabilities let the Micro-Tech 2000 Series link to intelligent peripheral equipment such as computers, programmable logic controllers, printers, or network systems. The inputs and outputs can be used to drive relays, motor starters, lights, switches, or accept inputs from magnetic card readers, micro-switches, flow/no flow switches, or pushbuttons.

PC Master

We also provide our custom designed software package, called PC Master, for supervisory control, data acquisition and monitoring. The PC Master is a PC-based system that provides graphic displays of plant operation for the automation of continuous or discrete processes. PC Master can be used with all Ramsey equipment.

