

# Model N-61 Belt Scale System



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**The Bulk Pro Systems Model N-61 Belt Scale System is suitable for applications where price and ease of installation are key factors. It is used on applications with low cost or non-critical materials where a flow rate and totalized load are still required. This economical belt scale system provides crucial information for the successful management and efficient operation of your plant.**

## Industries Served:

- Aggregate
- Asphalt
- Coal Mining
- Cement
- Power
- Paper
- Wood Products
- Chemical
- Mineral Mining
- Sand
- Precious Metals

The Bulk Pro Systems Model N-61 Belt Scale System is designed for all purpose weighing applications in harsh industrial environments. The Model N-61 allows you to control feed rates to crushers, screens, stockpiles and other processes with a guaranteed accuracy of  $\pm 1\%$ . The heavy duty all in one design is easily installed. It is suitable for your non-critical and lower valued applications when you still require an instantaneous flow rate and totalization for your process control and productivity needs.

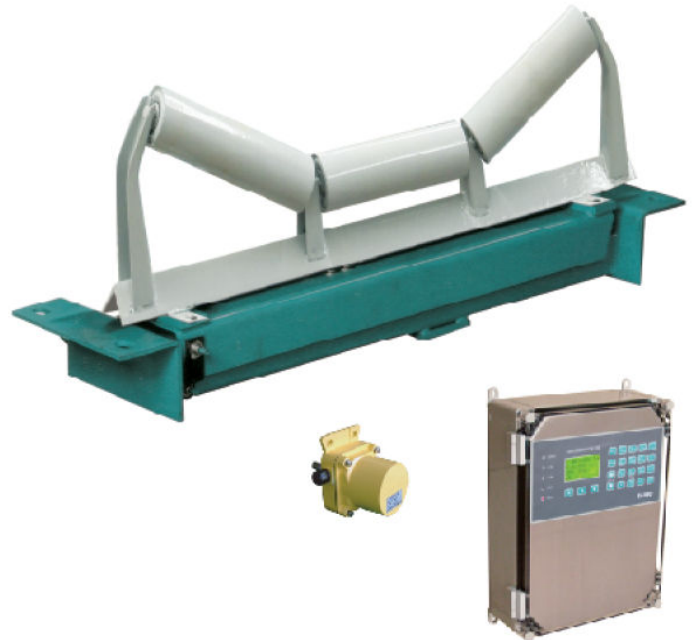
The Bulk Pro Systems Model N-61 incorporates a single idler(N-61) weighbridge assembly and the Model N60 Belt Speed Sensor with the powerful microprocessor based electronics of the Bulk Pro Systems Model 6801 Integrator. The single-idler weighbridge can be applied in conveyors with belt widths from 18"(460mm) to 54"(1,375mm).

The Bulk Pro Systems Model N-61 Belt Scale System is easy to install. The heavy duty construction allows for installation in extreme industrial environments. The N-61 single idler belt scale system utilizes a full suspension weighbridge design. The strain gauge load cell mounted in compression and the unitized weighbridge design allows for near zero material build-up ensuring reliable and precise performance.

# SPECIFICATIONS

## Load Cell

- Single Point Strain Gauge
- Housing: Anodized aluminum
- Excitation: 10VDC  $\pm$  5%
- Load cell output: 2.0 mV/V
- Nonlinearity: <0.03% FS
- Repeatability: <0.01% FS
- Hysteresis: <0.02% FS
- Operation temperature: -30°C~ +70°C
- Temperature Sensitivity:
  - Span 0.002% FS/°C
  - Zero 0.002% FS/°C
- Safe Overload: 200% of load cell capacity



## 6000 Series Integrator

- Enclosure, Field mount:
  - Outline dimensions: 296×399×132mm
  - Mounting hole dimensions: 280×247mm
- Enclosure, Field mount:
  - Panel dimensions: 140×284mm
  - Outline dimensions: 295×154×203mm
- Temperature Rating:
  - Operating: -10 to 50 °C
  - Storage: -40 to 70 °C
- Power Requirements:
  - 120/220 VAC Switch Selectable
- Display Resolution:
  - LCD 320×240 pixels, English/Chinese language with graphs displayed on-screen: histogram, curve graph, etc.
- Keypad:
  - 25 operating keys. All keys provide tactile feed back
- Measurement Unit:
  - Tons, Kg
- Memory;
  - FRAM memory, data retention when power is interrupted or disconnected.
- Accuracy / Non-Linearity;
  - Less than 0.01% of net for load ranging from 0% to 105% of full scale.
- Circuit Construction;
  - 32-bit RAM Microprocessor, with built-in watchdog preventing system halt, 24-bit A/D converter, real-time clock system.
- Expansion Slots, 6
- Shipping weight:
  - Field Mount, 12Kg
  - Panel Mount, 8 Kg

## Digital Inputs/Outputs

- Eight (8) programmable digital inputs allow the integrator to accept switching value inputs and/or instructions from various equipment.
- Twelve (12) programmable digital outputs (relay, dry) allow the integrator to provide various data indication and/or activate ancillary equipment
- Speed Input:
  - Two (2) speed pulse inputs from individual speed sensor.
- Analog Inputs/Outputs:
  - Input: Two (2) Millivolt weight signals from load cell(s) and two (2) 0-20mA or 4-20mA current inputs.
  - Outputs: One (1) standard current output 0-20 or 4-20mA for flowrate signal
- Optional Communications:
  - RS232 or RS485, Profibus or Fieldbus
- Control:
  - PID regulated control output
- Report:
  - Shift report, daily or monthly data report.

## Model N60 Speed Sensor

The model N60 speed sensor is used for series N64, N63, N62 and N61 belt scales. Sensor is directly coupled to the conveyor tail pulley or any other pulley with a minimum of 15-30 degrees of wrap.

The speed sensor is a brushless pulse generator. Each pulse represents one unit of belt travel, the pulse frequency is proportional to belt speed.

- Die cast aluminum housing, weather proof.
- Brushless AC pulse generator requires no adjusting or replacement of brush.