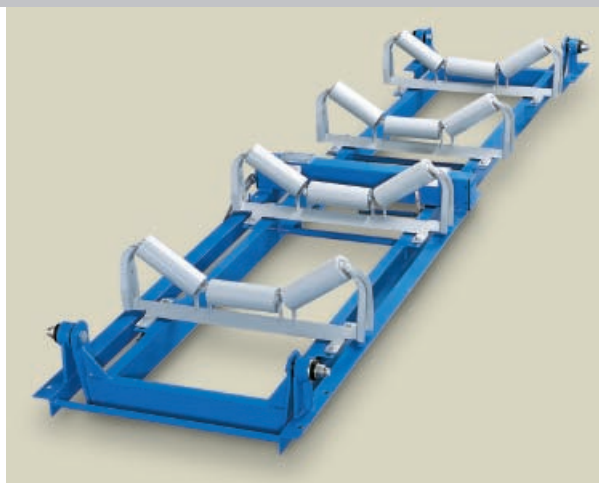


## Thermo Scientific Ramsey™ Series 17

Belt Scale System for Conveyor Weighing of Bulk Materials

The Thermo Scientific Ramsey Series 17 belt scale system is specifically designed for plant and process operations that run at high rates of speed or require the better-than-normal accuracy of  $\pm 0.25\%$ . The Ramsey Series 17 provides vital information that allows you to effectively manage and efficiently operate your business by monitoring production output and inventory or regulating product loadout.



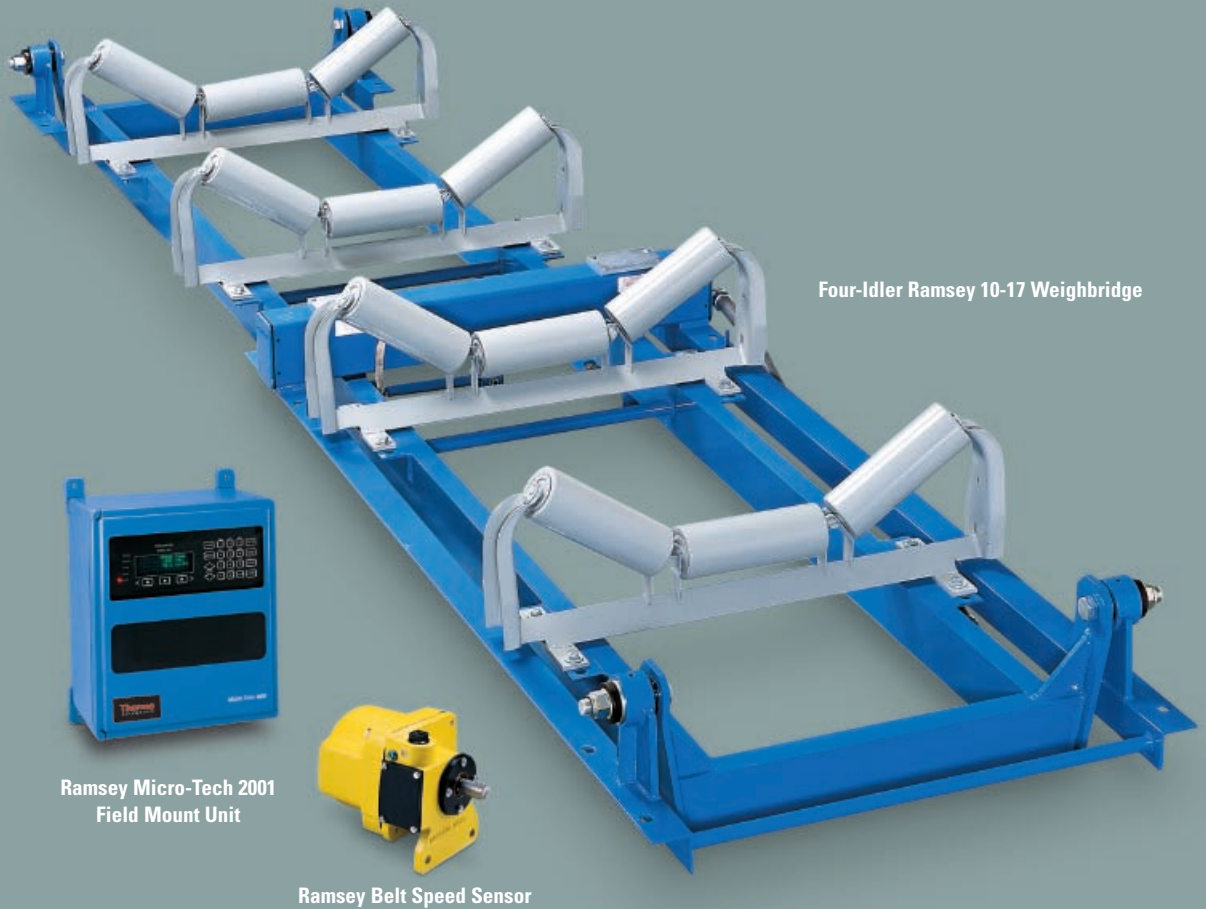
The Thermo Scientific Ramsey Series 17 belt scale system combines the time-proven reliability of the Thermo Scientific Ramsey 10-17 weighbridge and Ramsey 60-12 belt speed sensor with the powerful and versatile advanced electronics of the Thermo Scientific Ramsey Micro-Tech 2000 or 3000 series of electronic integrators.

The Series 17's long weighbridge design allows this model to be offered as a highly accurate  $\pm 0.25\%$  scale system. The longer weighbridge permits more scale-borne time, which minimizes alignment errors. This translates into better accuracy.

This belt scale system is available in a two- or four-idler version. For more information, refer to the separate product specification sheet on the Ramsey Micro-tech 2000 or 3000 series of electronic integrators.

### Applications

The Ramsey Series 17 belt scale system is designed for plant and process operations that run at higher rates of speed or require better-than-normal belt scale accuracy. The system can monitor production output, control product loadout, and keep track of inventory to help you effectively manage and efficiently operate your business. The Ramsey Series 17 belt scale is ISO-9001 certified.



Four-Idler Ramsey 10-17 Weighbridge

Ramsey Micro-Tech 2001  
Field Mount Unit

Ramsey Belt Speed Sensor

### The Weighbridge

The belt scale system incorporates the low deflection, firm and strong 10-17 weighbridge. It is available in a variety of belt widths and idler spacings.

### The 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 a large diameter return roller ensures an accurate belt-travel readout. No wheels ride on the belt, which eliminates problems related to material build-up and slippage.

### Weighbridge Advantages

- Frictionless, trunnion-type sealed pivots are completely impervious to vibration, moisture, and material accumulations
- Long weighspan minimizes belt effects (four-idler standard; two-idler optional)
- Rigid mechanical tube construction
- Two super-precision strain gauge load cells mounted in tension for stability and fewer misalignment errors
- Total deflection of idler(s) less than 0.127 mm (0.005 in)
- Slim profile to minimize material build-up problems
- Fits any standard conveyor with no space required above belt line

### Belt Speed Sensor Advantages

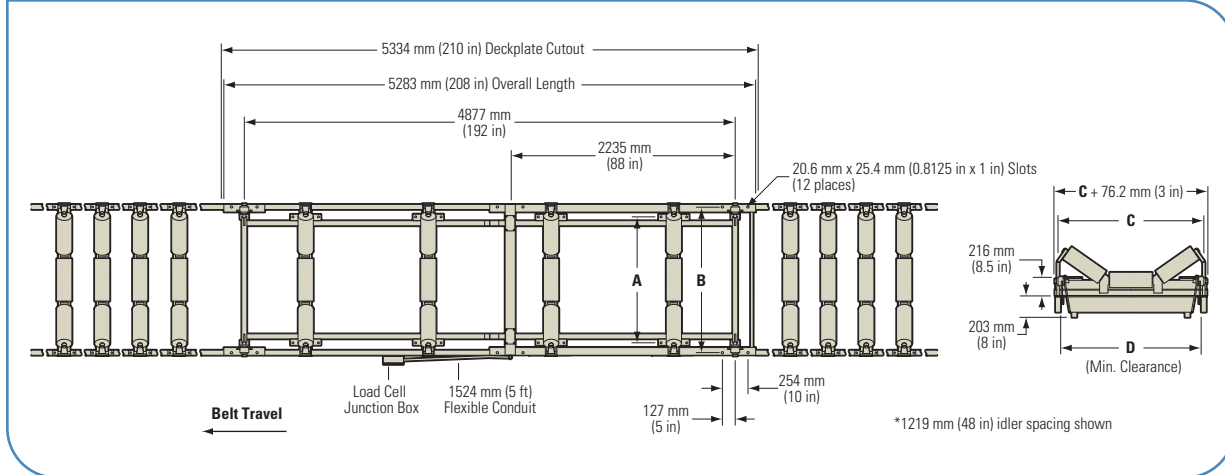
- Rugged, cast aluminum housing suitable for outdoor installations
- AC pulse generator means no brushes to adjust or replace

### Performance Guarantee

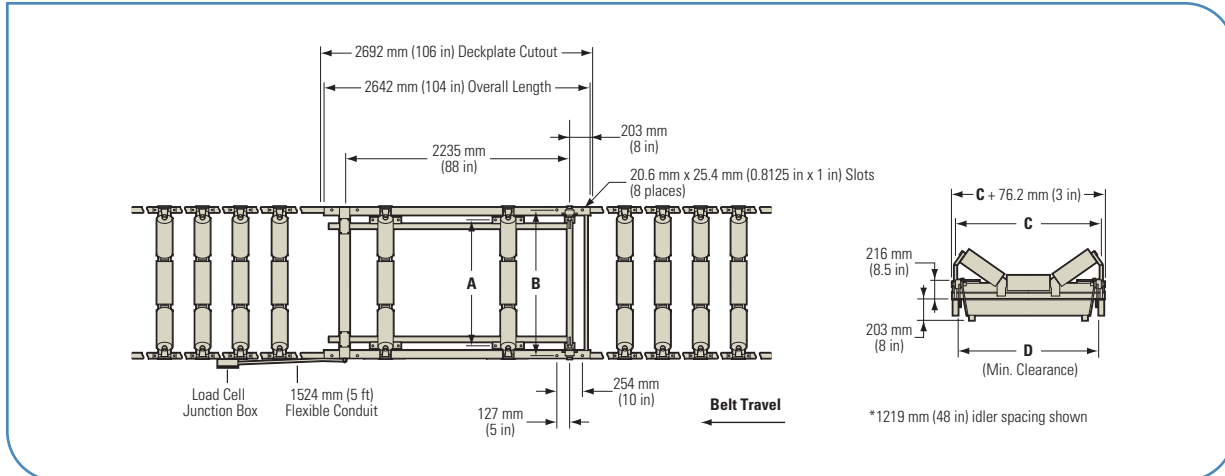
On factory-approved installations, we warrant that the Ramsey Series 17 belt scale system will weigh and totalize to a value within  $\pm 0.25\%$  of the test value when calibrated against a known test weight, chain, or the Thermo Scientific standard electronic calibration.

The test rate must be between 25% and 100% of the scale system's calibrated capacity. Test duration is defined as at least three circuits or revolutions of the belt, at least 800 counts on the master totalizer, and at least ten minutes running time. Its warranty is subject to the scale system being installed, operated and maintained in accordance with factory instructions.

**Ramsey Series 17 Belt Scale System — Four-Idler Weighbridge Dimensions**



**Ramsey Series 17 Belt Scale System — Two-Idler Weighbridge Dimensions**



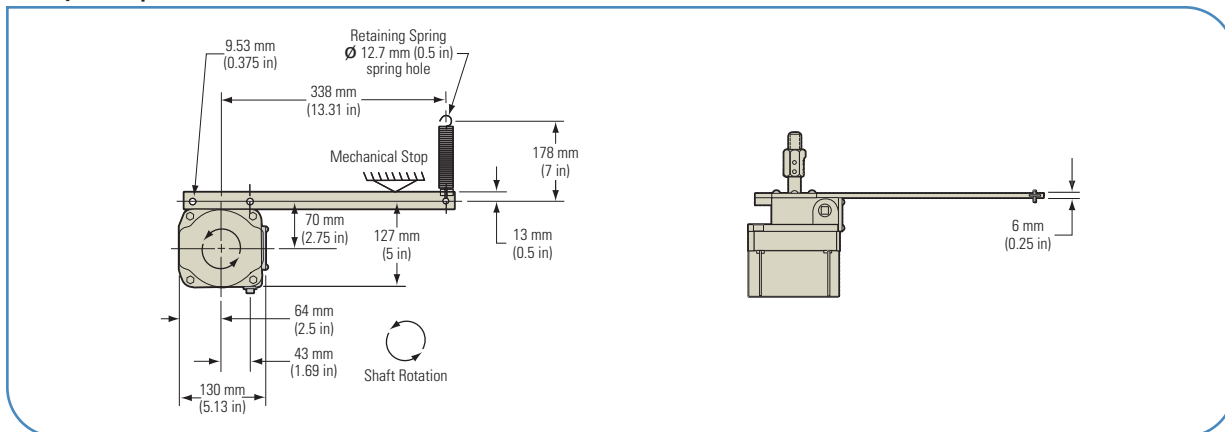
**Ramsey Series 17 Belt Scale System — Variable Belt Width Dimensions**

BELT WIDTH	LENGTH (mm)				WEIGHT* (kg)	
	A	B	C	D	TWO-IDLER	FOUR-IDLER
610 mm	641	838	902	756	197	288
762 mm	794	991	1054	908	204	295
914 mm	946	1143	1207	1060	210	301
1067 mm	1099	1295	1359	1213	216	307
1219 mm	1251	1448	1511	1365	223	313
1372 mm	1403	1600	1664	1518	229	320
1524 mm	1556	1753	1816	1670	235	326
1829 mm	1861	2057	2121	1975	248	339
2134 mm	2165	2362	2426	2280	261	352

BELT WIDTH	LENGTH (in)				WEIGHT* (lb)	
	A	B	C	D	TWO-IDLER	FOUR-IDLER
24 in	25.25	33	35.5	29.75	435	635
30 in	31.25	39	41.5	35.75	450	650
36 in	37.25	45	47.5	41.75	463	663
42 in	43.25	51	53.5	47.75	477	677
48 in	49.25	57	59.5	53.75	491	691
54 in	55.25	63	65.5	59.75	505	705
60 in	61.25	69	71.5	65.75	518	718
72 in	73.25	81	83.5	77.75	547	747
84 in	85.25	93	95.5	89.75	575	775

\*approximate weight without idlers

**Ramsey 60-12 Speed Sensor Dimensions**



## Thermo Scientific Ramsey Series 17

<b>Ramsey 10-17 Weighbridges</b>	
Weighspan	Four-idler standard minimizes belt effects; Two-idler version optional for $\pm 0.5\%$ accuracy
Frictionless Pivots	Trunnion-type; Sealed units are completely impervious to vibration, moisture and material build-up
Weighbridge Construction	Rigid mechanical tube construction
Load Cells	Two super-precision strain gauge load cells mounted in tension for stability and reduction of misalignment errors
Total Deflection	Less than 0.127 mm (0.005 in)
Clearance Requirements	Fits any standard conveyor; No space required above belt line
<b>Load Cells</b>	
Quantity	Two in parallel
Enclosure	Environmentally-protected "S" type cell
Mounting	Tension
Excitation	10 VDC $\pm 5\%$
Output	3 mV/V $\pm 0.1\%$
Non-Linearity	< 0.03% FS
Non-Repeatability	0.01% FS
Hysteresis	< 0.02% FS
Operating Temperature	-54°C to +93°C (-65°F to +200°F)
Temperature Sensitivity	Span 0.0014% FS/°C (0.0008% FS/°F) Zero 0.0027% FS/°C (0.0015% FS/°F)
Overload	Safe to 150% of load cell capacity; Ultimate to 300% FS; Sideload 50% FS
Rating	FM approved for Class II, Div 1 & 2, Groups E, F & G; NTEP Type III, 5000 Divisions; OIML R60
<b>Ramsey 60-12 Digital Speed Sensor</b>	
Type	Digital, brushless
Mounting	Direct to 15.88 mm (0.625 in) diameter stub shaft on tail pulley, bend pulley or return roll
Housing	Weather-tight, epoxy finish, cast aluminum
Mounting Hardware	Supplied with coupling, restraint arm and restraint spring
Shipping Weight	3.6 kg (8 lb)

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