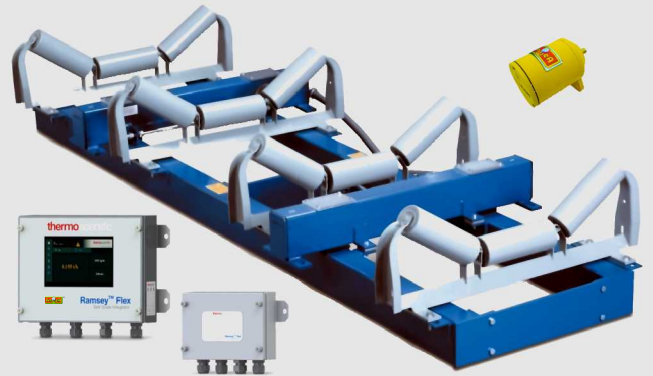


## Precision Beltscale Thermo Ramsey Series 14.

High-precision beltscale  
for industrial applications.

**Accuracy:  $\pm 0.125\%$ .**



### Rugged, high-precision Beltscale

The Thermo Ramsey Series 14 precision beltscale is specifically designed for highest accuracy or basis-of-payment applications requiring certification by government and regulatory agencies. This beltscale is extremely accurate to within  $\pm 0.125\%$  and is the most widely certified beltscale in the world.

The Series 14 precision beltscale lets you monitor production output and inventory, or regulate product loadout, while providing vital information for the effective management and efficient operation of your business.



The weighing assembly consists of the 10-14 low-deflection, full-floating unitized weighing frame and the speed sensor 60-12. It also utilizes the Ramsey™ Flex series electronic integrator.

The Series 14 precision beltscale represents the world standard of accuracy and performance for loadout, inventory monitoring and fee-holder type applications requiring certification.

## System Components

The Thermo Ramsey Series 14 precision belt scale consists of four major components: control unit (integrator), weighing frame, load cells and belt speed sensor.

### Control Unit (Integrator)

As control units, the modern Ramsey™ Flex series integrators are used. These devices are characterized by their high accuracy, their ruggedness and their easy handling. Various interfaces and expandabilities make it easy connecting the belt scale with process control systems.

### Weighing Frame

The 10-14 weighing frame is normally designed for four idler stations. For special applications, the weighing frame may be designed for two, three, six or more idler stations as well. All series 10-14 weighing frames are constructed of structural steel tubing and are factory pre-assembled with checkrods to facilitate fast and easy field installation. Only eight bolts are required to mount the unit to conveyor stringers. Four environmentally-sealed precision strain gauge load cell assemblies are applied in tension to support the weigh platform.

### 10-14 Weighing Frame Advantages:

- Rigid structural steel tubing construction with check rods maintains positive alignment.
- No moving or wearing parts lead to a longer life span and low maintenance costs.
- Factory pre-assembled and easily installed.
- Four strain gauge load cells applied in tension.
- Full-floating, pivotless weigh platform.

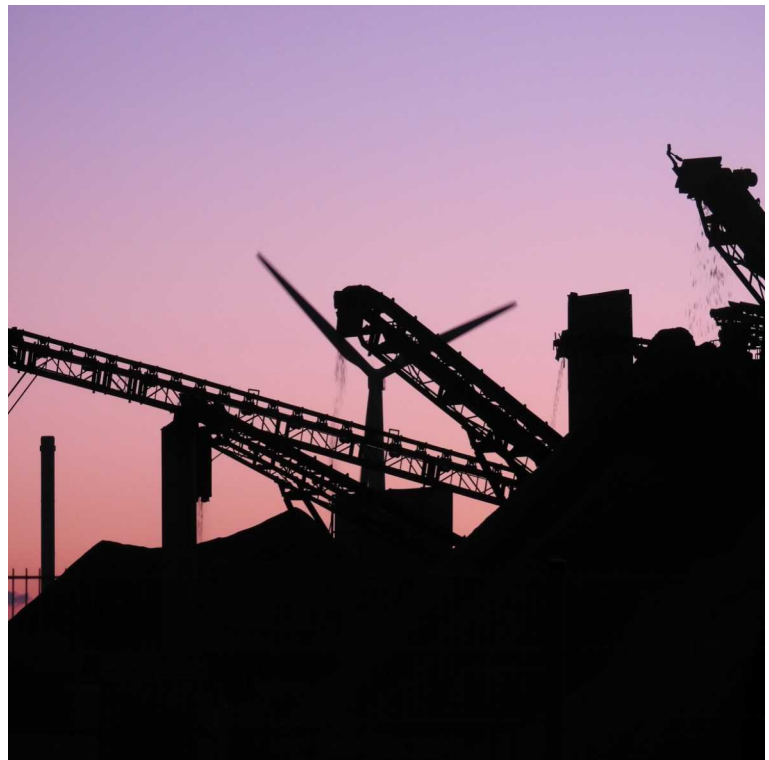


### Belt Speed Sensor

The Thermo Ramsey 60-12 digital belt speed sensor is one of the most reliable and accurate speed-sensing devices 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 read-out. No wheels ride on the belt, which eliminates problems related to material build-up and slippage.

### 60-12 Belt Speed Sensor Advantages:

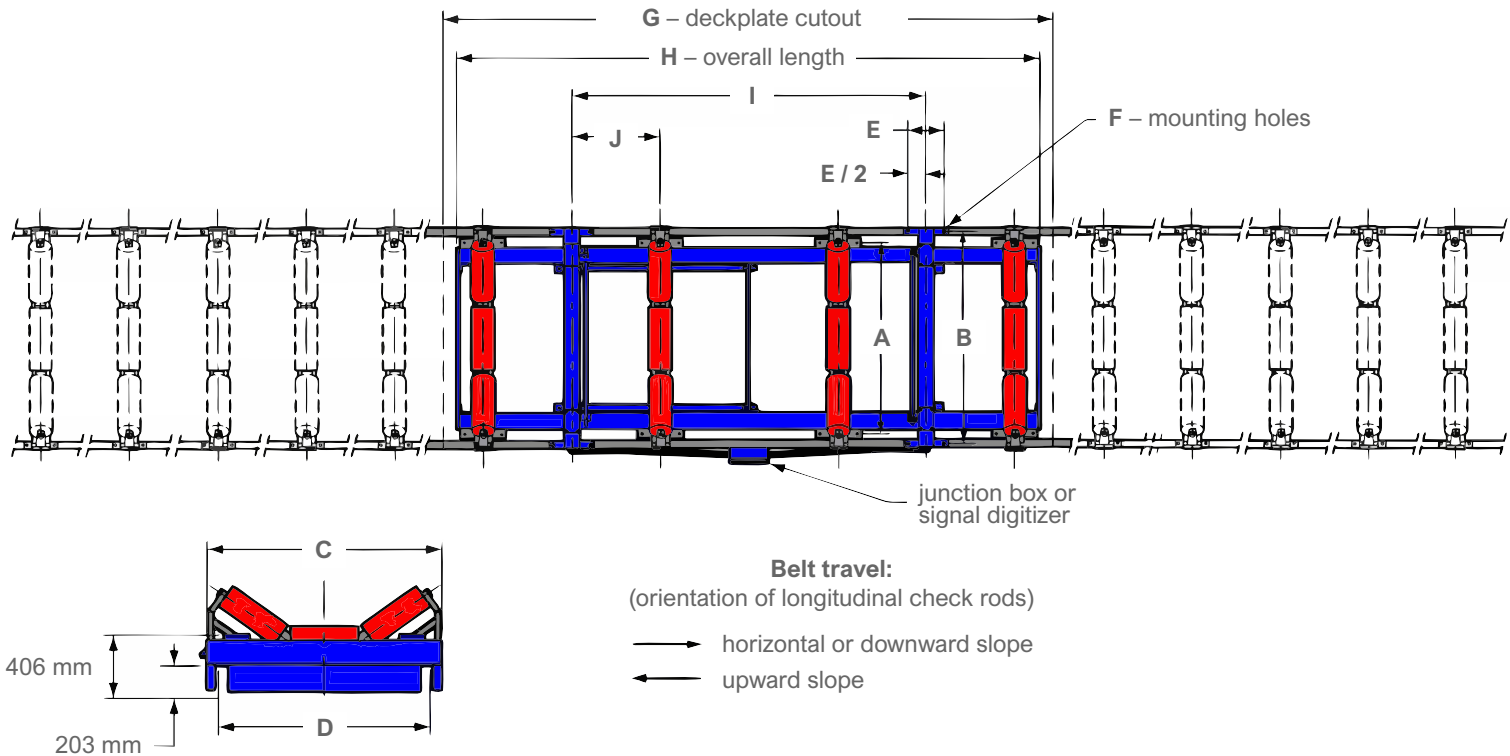
- Rugged housing, suitable for outdoor installations.
- A/C pulse generator means no brushes to adjust or replace.



### Performance Guarantee

On installations approved by EmWeA, we warrant that the Thermo Ramsey Series 14 precision belt scale will weigh and totalize to a value within  $\pm 0.125\%$  of the test load when calibrated to our specifications.

## 10-14-4 Weighing Frame:



## Dimensions (Examples):

Belt Width	Dimensions (ca.)					
	A	B	C	D	E	F
500 mm	600 mm	750 mm	800 mm	650 mm	190 mm	14 mm
650 mm	750 mm	900 mm	950 mm	800 mm	190 mm	14 mm
750 mm	850 mm	1,000 mm	1,050 mm	900 mm	190 mm	14 mm
850 mm	950 mm	1,100 mm	1,150 mm	1,000 mm	190 mm	14 mm
1,000 mm	1,100 mm	1,250 mm	1,300 mm	1,150 mm	250 mm	18 mm
1,200 mm	1,300 mm	1,450 mm	1,500 mm	1,350 mm	250 mm	18 mm
1,400 mm	1,500 mm	1,650 mm	1,700 mm	1,550 mm	250 mm	18 mm
1,600 mm	1,700 mm	1,850 mm	1,900 mm	1,750 mm	250 mm	18 mm
1,800 mm	1,900 mm	2,050 mm	2,100 mm	1,950 mm	250 mm	18 mm
2,000 mm	2,100 mm	2,250 mm	2,300 mm	2,150 mm	250 mm	18 mm

Idler Spacing	Dimensions (ca.)			
	G	H	I	J
900 mm	3,250 mm	3,050 mm	1,800 mm	450 mm
1,000 mm	3,550 mm	3,350 mm	2,000 mm	500 mm
1,200 mm	4,250 mm	4,050 mm	2,400 mm	600 mm

## Technical Specifications:

### 10-14 Weighing Frame:



No. of weighing idlers:	4 (standard)
Clearance requirements:	fits any standard conveyor; no space required above belt line
Belt width:	from 400 mm (no upper limit)
Construction:	mechanical steel tubing (option: stainless steel)
Mounting:	8 bolts to conveyor stringers

### Load Cells:



Quantity:	4
Enclosure:	environmentally-protected „S“ type cell, stainless steel, IP 67
Mounting:	tension type
Excitation:	5 V DC
Output:	3 mV/V
Accuracy:	±0.02 % / 3000 d
Operating temperature:	-40°C ... +80°C
Nominal temperature:	-10°C ... +40°C
Safe load:	150 % full span
Ultimate load:	300 % full span
Sideload:	50 % full span
Certificates (standard):	CE
Certificates (optional):	ATEX, FM, OIML, MID

### 60-12 / 61-12 Belt Speed Sensor:



Type:	digital, brushless
Mounting:	direct to stub shaft with M16 thread hole or 16 mm trunnion, on tail pulley or bend pulley
Housing:	weatherproof, IP 65
Mounting hardware:	supplied with coupling, restraint arm and restraint spring
Certificates (standard):	CE
Certificates (optional):	ATEX, cCSAus, PTB, OIML, MID

### Control and Display Unit (Integrator) Ramsey™ Flex:



Different variants are available for different requirements. Choose from weatherproof stainless steel housing (with or without display and control options) or panel mount. Various interfaces such as binary and analogue inputs and outputs, RS 232 / RS 485, PROFIBUS, PROFINET, EtherNet/IP, Modbus TCP/IP and Modbus RTU enable connection to process control systems and controllers. A web interface for remote control and maintenance is also integrated. We would be happy to make you an individual offer!



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