SIEMENS

Solutions for **accurate belt weighing**

Reliable, high performance beltscales for all industries
siemens.com/weighing

High performance for all industries

Weighing and controlling the rate of materials on a conveyor belt is one of the most common procedures in process automation. Siemens has more than 40 years of experience weighing bulk materials on conveyors. You will find our reliable equipment in almost any industry.

Milltronics belt scales from Siemens combine simple drop-in installation and low maintenance (no moving parts) with repeatable high accuracy for productive operation. With various hazardous area and legal for trade approvals, Milltronics belt scales can be used in almost any industrial environment or application.

Milltronics MSI/MMI

If high accuracy matters to you, and your application is rough and rugged, then the Milltronics MSI, single idler scale is your solution for process and load-out control. For even greater accuracy choose Milltronics MMI, a two or three idler scale for custody transfer, and use on applications with fast-moving belts, short idler spacing, and light or uneven belt loading.

Milltronics MSI and MMI outperform many four or six-idler scales on accuracy and durability. On your behalf, we don't consider continuous weighing a light matter.

Outstanding accuracy and repeatability

- Unique parallelogram style strain gauge loadcell for instant response to vertical loading. The stainless steel triple beam design makes it suited for the harshest conditions, with high moisture and corrosion resistance.
- Integrated 300% overload protection, set up at factory, eliminates effort at installation and ensures safe operation
- Drop-in installation makes alignment easy, saving time at installation
- Horizontal force compensation allows direct force injection without any pivot points or springs
- Wide temperature range, for applications in cold climates as well as in tropical

Modular beltscales

MCS and MUS beltscales are installed without a cross bridge, these versatile units will fit most conveyor widths and standard idlers, and product build-up is reduced.

Milltronics MCS

Is a modular beltscale with low height enabling installations in very compact conveyors with low space between the belt. Based on unique parallelogram style strain gauge stainless steel loadcells, horizontal forces by belt tracking are compensated by the loadcell design.

Milltronics MUS

This modular designed, medium to heavy-duty belt scale for process indication in the aggregate industries. As the MUS is mounted on the stringers, it allows constructions where no beltscale can be placed inside the conveyor.

Light-Load beltscales

MLC beltscale and weighdeck Milltronics WD600 are used for light to medium-duty applications with flat belts, used for process and load-out control mainly in food, petfood, tobacco and recycling industries.

Milltronics MLC

The MLC is based on unique parallelogram style strain gauge stainless steel loadcells with integrated overload protection and includes a roller for conveyors with flat roller design.
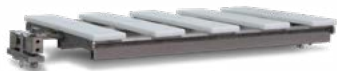
Weighdeck WD600

Milltronics WD600 is a light to medium-duty slider bed beltscale for flat belts. The large weighdeck increases the retention time and allows high accuracy.

	Milltronics MMI	Milltronics MSI	Milltronics MUS	Milltronics MCS	Milltronics MLC	Milltronics WD600
Part number	7MH7122	7MH7122	7MH7123	7MH7125	7MH7126	7MH7185
Type	High accuracy and demanding applications		Modular belt scales for general purpose non-critical applications		Chemical, recycling, and food applications with light loading	
Key features	• ±0.25% accuracy over a 5:1 rate range (MMI-2) • ±0.125% accuracy over a 5:1 rate range (MMI-3) • Industry leading performance	• ±0.5% accuracy over a 5:1 rate range • Triple beam load cell	• ±0.5% to 1% accuracy over a 4:1 rate range • Modular design • Standard and heavy duty option	• ±0.5% to 1% accuracy over a 4:1 rate range • Triple beam load cells for optimum performance • Low profile for easy conveyor integration	• ±0.5% to 1% accuracy over a 4:1 rate range • Precision idler for maximum resolution • Triple beam load cells	• ±0.5% to 1% accuracy over a 4:1 rate range • Compact load cell design

Speed sensors and accessories

Siemens offers a wide range of speed sensors and calibration equipment to complete your belt scale system.

Belt speed measurement

Correct belt speed measurement is directly proportional to accuracy and repeatability of the entire beltscale system. Siemens offers both return belt wheels as well as a shaft driven encoder options.

	Milltronics TASS	Milltronics RBSS	SITRANS WS300	Bend pullies
Part number	7MH7131	7MH7134	7MH7177	7MH7170/1, 7MH7187/8
Type	Wheel driven speed sensors for return belt mounting		Shaft driven speed sensor for tail or bend pulley	Frame mounted bend pulley to take WS300 speed sensor
Key features	Compact low profile design	• Heavy duty design and wheel assembly for harsh conditions • Protected sensor and targets from falling debris • High resolution speed sensing	• Compact, rugged design for shaft mounting • Low to high resolution options • Aluminum and stainless steel construction options	• Pre-drilled mounting for SITRANS WS300 speed sensor • Creates installation room for beltscale

Calibration devices

Belt conveyor scales require periodic calibration and verification to assure that the accuracy and repeatability of the system are being maintained within acceptable tolerances.

From static test weights, to weight lifting devices and even roller test chains. Siemens offers the right calibration method to meet any calibration requirement.

	Static test weights	Milltronics MWL weight lifter	Milltronics test chains
Part number	7MH7724-1Ax, 7MH7127	7MH7218	7MH7161
Type	J-Weight and flat bar style calibration weights	Belt scales calibration devices	
Key features	• Calibration weights to attach on the beltscale • Simulate material load directly to the beltscale • Easy to handle	• Calibration weight lifter for use with belt scales. MWL safely applies and stores calibration test weights for belt loading simulation • Secured test weights for reliable verification • Safety lock for storage during conveying	• Calibration test chains for dynamic belt loading simulation for Milltronics belt scales • Precision machined for optimum accuracy over calibration • Dynamic loading simulation

Integrators and integration in SIMATIC

Siemens offers various integrators for the operation of the beltscales. Our stand-alone integrators display primary flowrate and speed values, as well as derived values of rates as analog mA output, alarm relay, or remote totalizer or through several industrial communications protocols:

- Milltronics BW500 – includes load-out control and various communication possibilities
- SIWAREX WP241 – add a HMI to create a comfortable stand-alone integrator for weighing and totalizing without rate control
- SIWAREX WT241 – combined solution based on SIWAREX WP241, HMI and power supply in a stainless steel enclosure

SIWAREX electronics for seamless integration into the SIMATIC S7, PCS 7 and PCS neo automation system. Flowrate, belt speed, load and status info are easily adapted into PLC system. Parametrization and calibration can be done by PLC, HMI, Webbrowser as well as SIWATOOL software for Notebooks.

- SIWAREX WP241 for SIMATIC S7-1200
- SIWAREX WP341HF for SIMATIC ET 200SP and ET 200SP HA

Feature	BW500 / BW500L	SIWAREX WT241	SIWAREX WP241	TM SIWAREX WP341 HF
Style	Stand-Alone integrator in IP65 plastic enclosure	Stand-Alone integrator in IP65 s. s. enclosure	Beltscale module for S7-1200 or Stand-Alone	Beltscale module for SIMATIC ET 200SP and ET 200SP HA
Part number	7MH7152...	7MH4965-4AA01	7MH4960-4AA01	7MH4138-6CA00-0CU
Visualization and prgramming	2 lines display in 7 languages and local keypad	HMI with buttons, program-mable languages	SIWATOOL software for Notebook, HMI	Webbrowser or HMI
Communication	2x RS232, 1x RS485 Modbus RTU, opt. Profinet, ProfiBus DP, Ethernet I/P, Devicenet, Modbus TCP/IP	Ethernet (Modbus TCP/IP) for HMI, Modbus RTU	Ethernet (Modbus TCP/IP), Modbus RTU SIMATIC Bus	Ethernet IP or Modbus TCP-based systems using ET 200SP multi-field bus IM
Special Features	4x (BW500L 2x) individual loadcell inputs, legal-for-trade	Comfortable programming, diagnostic functions	Fully integrated in SIMATIC S7, diagnostic functions, optionally 4x individual load-cell inputs by SIWAREX DB	Fully integrated in SIMATIC S7, PCS 7 and PCS neo, diagnostic functions, optionally 4x individual loadcell inputs by SIWAREX DB