MASTER

Belt Scales

RICE LAKE®
WEIGHING SYSTEMS • Europe
To be the best by every measure®

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Belt Scales

Rice Lake Weighing Systems offers a broad delivery program of Master belt scales. Six different models guarantee the possibility of one or more alternatives for every application. Within different markets, there are many ways to use a belt scale to measure the actual flow on a conveyer belt which can also be used for dosing your product. Examples of markets in which belt scales are frequently used are the food, recycling, chemical, and tobacco industries, steel, animal feed, and compost production, sand and gravel quarries and harbor logistics.

BS143

The BS143 model weighs three idlers on an inner frame that is supported by four load cells. This makes it the most accurate belt scale and is particularly qualified for higher capacities and high belt speeds. It is often used in OIML certified applications at harbors for loading ships and trucks, and to offload bulk cargo. The frame is custom made using the specifications of the conveyor belt, making it suitable for most models of belt conveyors.

BS221DB

The BS221DB model consists of two arms, each equipped with a pivot and a load cell, that are mounted to the outside of the side supports of the conveyer belt. The idler or weighing roller will be mounted on top of both arms. This model provides easy assembly and good accessibility for service. The BS221DB is suitable for most belt widths and capacities, which makes it applicable in various market segments.

BS211

The BS211 model consists of an inner frame that is mounted in two friction-free pivots on one end and at a load cell on the other end. An idler is mounted on the inner frame. The pivots absorb the tensile stress in horizontal direction, creating a very solid weighing frame that is also suited for heavy-duty applications.

BS311

The BS311 model consists of an idler or roller placed on a simple load cell beam, which makes it a very cost effective solution. Suitable for belt widths up to 1000 mm and belt speeds up to 1,5 m/s. This frame is often used in dosing belts that can regulate the capacity of a bulk flow using the measured value and a controlled belt speed.

BS421

The BS421 model is made for low-load applications, and is often used in the food and chemical industry. A plane roller is supported on both sides by a load cell construction. This increases tare precision, making it possible to measure the slightest bulk flows. Applicable to horizontal belt widths up to 1600 mm and belt speeds up to 1,0 m/s. Because of the open design of this model, the belt can be cleaned easily.

BS611

The BS611 model differentiates itself from other models because the frame rests upon two traverse beams. Two models are available, which are easily built in a conveyor belt. The basic model is suitable for belt widths up to 800 mm. For belt widths up to 1200 mm, there is a second model. This belt scale is meant for mid-range bulk flow applications.

Belt Scales

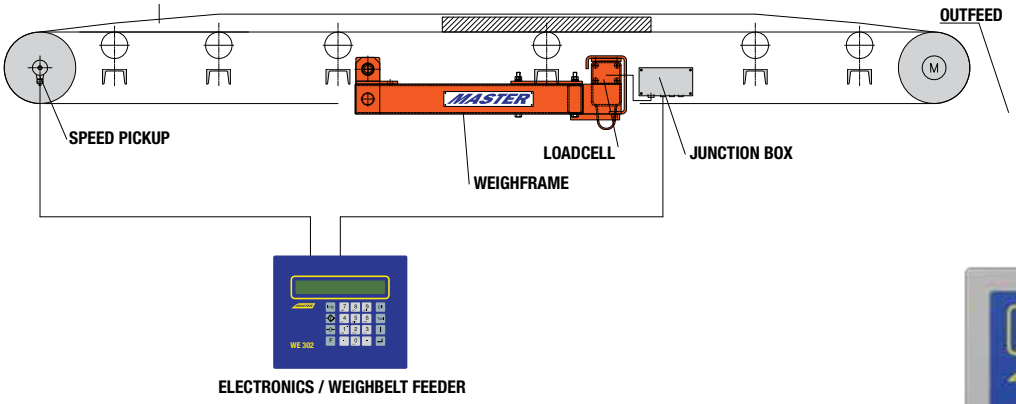
Operation of Belt Scales

A belt scale consists of a weigh frame with one or more load cells, a speed pick up and a weigh processor, which integrates the two signals (kg/m and m/s) into a value of kg or tons per hour.

The selection of the weigh frame and speed pick up is determined by the requested accuracy, variables like belt speed and inclination of the belt, the structure of the transport belt, and external circumstances like moisture and aggressive environment.

The execution of the weigh electronics is determined by the requested functionality (only measurement of the product quantity or the need to control the dosing of the product) and the way of communication with a PLC/PC (or other).

Furthermore, the wish of an approval (MID), Atex classification, the use of test weights and external circumstances can influence the selection of optimal weigh electronics.



Weigh Electronics

Model WE302D

The model WE302D is an approved weigh processor, which can be used in most applications with only the need for measurement of the actual flow.

It provides a readout of the actual flow in kg per hour (or ton/hour) or the total in kg (or tons).

The device has three totalizers. Possible outputs are analog (4-20 mA and counting pulse); RS-232/RS-485, Modbus RTU, digital I/O and Profibus DP. Batch functionality is also available.

Model WE303D

In addition to the basic functions of belt scales, the WE303D also has a PID control function in the software, which can be used to control the capacity in function of a setpoint.

Possible outputs are analog (4-20 mA and counting pulse), RS-232/RS-485, digital I/O, Profibus DP and DeviceNet. Batch functionality is also available.

Model WE403D

In addition to the basic functions of belt scales, the WE303D has standard Ethernet TCP/IP, Modbus TCP of RTU, USB port, PID control function and batch functionality. Possible options are the analog outputs (4-20 mA and counting pulse), RS-232/RS-485 and digital I/O. Model WE404D also integrates with Profinet.

Your Rice Lake Weighing Systems distributor is:

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