

BS221DB

Easy-to-install belt scale weigh frame "BS221DB" series, for belt conveyors



The BS221DB MASTER belt scale weigh frame is suitable for medium to heavy capacity belt conveyors, for most belt widths and capacities, which makes it applicable in various market segments. It offers many advantages in terms of accuracy, simplicity of installation and maintenance. Easy to install to any conveyor belt, it can be easily adapted to the conveyor width. BS221DB MASTER consists of two arms that are mounted to the outside of the side supports of the conveyor belt. The idler or weighing roller will be mounted on top of both arms.

- > For belt width from 500 to 2400 mm
- > Up to 3.000 t/h
- > Up to 4 m/s
- > Up to 25 degrees of inclination
- > Accuracy from 0,5 %

Working in cooperation with:

WMS SCALES TECHNOLOGY SRL
FAGETU IERII, NR. 54 - 407321 - IARA - ROMANIA
Tel. 40745312637
office@centrul-de-cantare-si-balante.ro

**The best solution
for advanced industrial
applications**

MAIN ADVANTAGES

- EASY TO MOUNT: only 8 bolts are required.
- MINIMUM MODIFICATIONS to the conveyor are required.
- EASY TO ADAPT to any conveyor width, from 500 to 2400 mm.
- EASY TO INSTALL under an original conveyor idler, keeping the same belt shape in the weighing area, in order to have the best accuracies.
- EASY TO MAINTAIN: this system is simple to clean, easy to access and maintain and it is protected from dirt and powder.
- VERY ACCURATE: from 0,5 % of accuracy (*)
- SUITABLE FOR INCLINED BELTS up to 25 degrees(*), thanks to its special technology.

(*) these features are strongly influenced by the mechanical quality of the conveyor structure, typology of the conveyed material, installation environment etc.; contact us for more details or send us the data request sheet with the specifications of your system (see in "download" section of this page).

FOR MORE INFORMATION

- Contact us at:



beltweighing@diniargeo.com

WEIGH FRAME TECHNICAL FEATURES

- Structure made in heavy powder coated steel, for harsh industrial environments
- 2 Stainless steel load cell made according to OIML R60 standards, with protection against dust and water splashes according to IP65 standards (350 Ohm input resistance), capacity from 50 to 200kg. Load cells are protected against dust and shocks by a metallic enclosure.
- Load cell safety stops against overloads.
- Specific "friction free pivot system" which allows to obtain the best accuracies on inclined conveyors.
- IP66 junction box, with stainless steel enclosure.
- Up to 15 Vdc power supply.
- Grounding system for load cell protection.
- Standard flow rate capacity up to 3000 t/h, higher capacities upon request.
- Maximum supported belt speed up to 4 m/s, higher speeds upon request.
- Maximum belt inclination up to 25 degrees, higher inclinations upon request.
- ATEX approved version for 21 or 22 zones are available upon request.

MICROCONTROLLER UNIT FEATURES

- High performance digital microcontroller with programmable inputs and outputs, fitted with 3 serial ports, transmissions protocols for data communication, completely programmable printouts, graphic display.
The wide range of connectable fieldbus converters, accessories and printers guarantees the maximum interfaceability and versatility.

Mechanical Features:

- Waterproof 25-key numerical functional keyboard.
- Programmable function keys, for customising the keyboard functions according to the needs.
- Easy to consult backlit graphic LCD display, with a clear visualisation of the weight and wide range of information.
- Fitted with 3-way control light made up to synoptic bar-graph with 3 groups of 3 Leds each, to tolerance check and setpoint.
- IP68 stainless steel waterproof case, easy to clean and resistant in harsh and corrosive environments.
- Dimensions, including support bracket: 269x58,8x183mm.
- Suitable for use on the table, wall mounting or panel mounting.

Electrical Features:

- Real time clock and permanent data memory.
- Selection of the program language directly in the set-up.
- A/D 24 bit sigma-delta 4-channel conversion, up to 3200 conv./sec. with automatic selection. Filtering system through programmable software, adjustable according to the system.
- Calibration and Set-Up parameters, configurable from PC with Dinitools or with the keyboard; theoretical calibration with the entry of the characteristics of the load cells.
- Up to 1.000.000d displayable for internal factory use.
- Up to 10.000e or multirange 3 x 3000e @ 0,3 $\mu\text{V}/\text{d}$ in CE-M approved version for legal for trade use.
- Internal resolution of up to 3.000.000 points.
- 230 Vac or 24 Vdc power supply, 16 VA power.
- 2 RS232 serial ports configurable for connection to printers, PC or PLC, radio modules or other external units.
- 1 RS232 serial port (optional RS485) configurable for connection to repeater, bar code reader, or digital load cells.
- 4 optoisolated outputs, up to 16 on request.
- 2 optoisolated inputs, up to 8 on request.
- Fieldbus interface (optional).
- Bluetooth connection, for quick wireless programming through PC (optional).
- Keyboard emulation input.

CONSULTING SERVICE

- If you need an help to select the most suitable bar for your application and verify the feasibility of the system, fill in the data request form, which may be downloaded in the "Download" area of this datasheet.
- This data request form, correctly filled in, can be analyzed form our technical department in order to find the best solutions for your application.

DETAIL 1



DETAIL 2



DETAIL 3





www.diniargeo.com

“YOUR WORLDWIDE PARTNER FOR WEIGHING,”

DINI ARGEO
FRANCE sarl
France

DINI ARGEO
GMBH
Germany

DINI ARGEO
UK Ltd
United Kingdom

DINI ARGEO WEIGHING
INSTRUMENTS Ltd
China

DINI ARGEO
OCEANIA
Australia



COMPANY HEADQUARTERS

Via Della Fisica, 20
41042 Spezzano di Fiorano - Modena - Italy
Tel. +39.0536 843418

WMS SCALES TECHNOLOGY SRL

FAGETU IERII, NR. 54 - 407321 - IARA - ROMANIA

Tel. 40745312637

office@centrul-de-cantare-si-balante.ro

SALES AND TECHNICAL ASSISTANCE SERVICE

All the specifications and images can be subject to variations and upgrades without prior notice.



BS221DB

MEDIUM TO HEAVY
CAPACITY BELT SCALE



RICE LAKE[®]
WEIGHING SYSTEMS

www.ricelake.eu

BS221DB

MEDIUM TO HEAVY CAPACITY BELT SCALE

Belt scale model BS221DB is suitable for most belt widths, applications and constructions (with both idler stations and flat rollers).

The weighframe is designed to be mounted on the outside of the conveyor, so that a minimum of modifications on the conveyor are required.

The idler or weighing roller will be mounted on top of both arms. This model provides easy assembly and good accessibility for service.

This model can be used for approved applications and is also available for ATEX categories II2D and II3D (zone 21 and 22).



Standard Features

- Weighframe is mounted on outside of conveyor
- Minimum modification to conveyor are required
- Service friendly
- Friction-free pivot supports
- Two support beams
- Fits standard conveyors - mounts with four bolts per assembly

Weighframe, model BS221DB

- Construction:** Weighframe, originally designed for closed constructions, with friction free pivot supports and two support beams, which are mounted on each side of the belt conveyor construction.
- Mounting:** The weighframe fits in any kind of standard conveyor and is assembled in our factory to one piece, so it can be mounted with only 8 bolts into the conveyor.
- Material:** Steel St.37 / SS304
- Finishing:** Powder coating, colour RAL 3020 / Shot blasting SA 2.5
According to procedure:
- Shot blasting SA 2.5
 - One layer epoxy powder coating, weather proof type
 - Thickness minimum 80 µm

Load cells, Single-Ended Beam

- Type load cell:** Single-ended beam force transducer
- Construction:** Hermetically sealed, IP68
- Material:** SS

Junctionbox, model JBW

- The Junctionbox is placed near the weighframe.
- Dimensions:** 180 x 110 x 90 mm (L x W x H)
- Material:** Reinforced polycarbonate, impact proof
- Protection:** IP66
- Load cells:** 2 pieces (4- of 6-wires)
- Speed pickup:** yes (2- or 3-wires)

Speed Pick-Up, model SPU 5020 / 5826

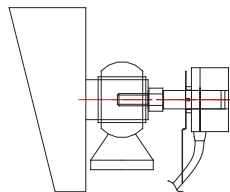
This digital speed pickup is mounted directly on the axle end of the none driven drum.

- Housing:** Aluminium / SS304, IP66

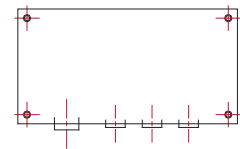
Electronics

See applicable datasheet.

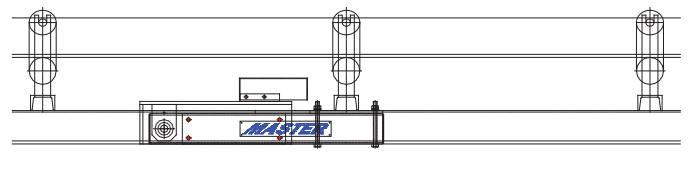
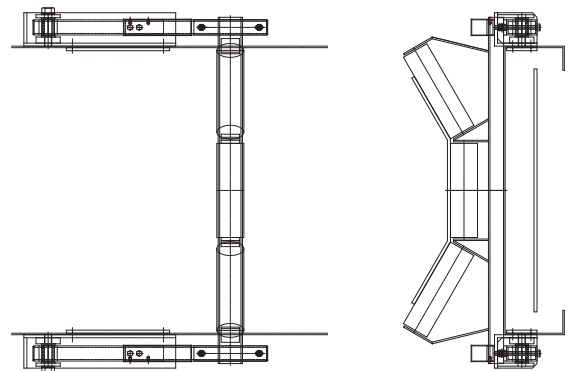
SPEED PICKUP



JUNCTION BOX



WEIGHFRAME WITH LOADCELL



Your Rice Lake Weighing Systems distributor is:

RICE LAKE
WEIGHING SYSTEMS

Rice Lake Weighing Systems Europe B.V.
Weiland 11 • NL-6666 MH Heteren • The Netherlands
TEL: +31 (0) 26 472 1319 • FAX: +31 (0) 88 234 9100 • www.ricelake.eu

An ISO 9001 registered company © 2014 Rice Lake Weighing Systems PN 165948 8/15
Specifications subject to change without notice.