



General presentation

This infrastructure comprises a fully weighed conveyor and is connected to the chassis by two articulations placed along the feed centreline, and at the opposite end is supported on one or two strain gauge cells.

The infrastructure is composed of :

- A chassis made of sections supporting and fixing the assembly.
- A feed plate fixed to the chassis, with belt sealing skirts.
- A fully weighed belt conveyor comprising :
 - A braced frame with load bearing bucket type stations at 30° (sections are laid out so as to avoid accumulations of dust deposits),
 - A set of "mines" type load bearing rollers,
 - A set of "mines" type return rollers,
 - A smooth belt with a synthetic textile body and anti-abrasion coating (fast replacement of the belt through the side of the equipment). The belt characteristics (endless vulcanised) are determined by our technical services as a function of the materials to be conveyed,
 - A control drum with shaft mounted on bearings; this drum is solid for large c/c distances, contributing to balancing,
 - A return drum with shaft mounted on bearings,
 - A screw type belt tensioning device placed at the bottom of the equipment,
 - A belt external scraping device installed at the head of the conveyor,
 - A belt internal scraping device placed on the belt return strand,
 - A constant speed geared motor unit with hollow shaft reduction gear and asynchronous motor (protection IP 55 - Class F). This unit is installed at the end of the control shaft (float mounting),
 - A speed sensor device composed of a proximity detector mounted either on the driven drum of the conveyor or on the second end of the motor shaft,
 - An articulation system arranged on each side of the conveyor and along the feed centreline,
 - A conveyor suspension system transmitting forces to one or two strain gauge cells,
 - A calibration device for the placement of test weights, for simulation of the load during calibration,
 - A set of counter beams for fixing the weighing infrastructure in the horizontal plane (for the 4500 mm c/c distance),
 - A safety device (protections of re-entrant angles on drums),
 - A blocking device for transport,
 - Two emergency stop buttons.
- Made of painted or hot galvanised steel.

Applications

- These instruments* perform the same functions as integrating belt scales.
 - All applications.
 - When it is impossible to install an integrating belt scale on the conveyor (c/c distance too small).
 - When the available space is very small.
 - For trade use - Class 1 (only with 4500 mm c/c distance).

Advantages

- Despite the short length of the equipment, weighing of the complete conveyor and the use of buckets on the belt can increase the value of the product weight, on the weighing length (compared with a traditional conveyor fitted with an integrating belt scale), and therefore assure better precision.
- The location of the geared motor unit at the back of the conveyor can compensate for part of the tare.
- Weighing the conveyor assembly prevents belt tension variations from affecting the measurements.

Options

- Rubber coating for the control drum.
- Belt offset detector.
- Belt sliding detector.
- Cover plate on the product flow.
- Discharge platemwork with dust collector.
- Built-in cover plates.

* These instruments have limited flow (maximum 500 m³/h) and size grading (0/40 mm). Furthermore, they are operated in "real time rather than in extraction".

Food BT series :

Type	Belt width	c/c distance	Flow
BTA 4	400 mm	1800/3000 mm	35 m ³ /h
BTA 5	500 mm	1800/3000/4500 mm	60 m ³ /h
BTA 6	650 mm	1800/3000/4500 mm	90 m ³ /h
BTA 8	800 mm	3000/4500 mm	130 m ³ /h
BTA 10	1000 mm	4500 mm	180 m ³ /h

Heavy BT series :

Type	Belt width	c/c distance	Flow
BTL 6	650 mm	3000/4500 mm	110 m ³ /h
BTL 8	800 mm	3000/4500 mm	170 m ³ /h
BTL 10	1000 mm	3000/4500 mm	250 m ³ /h
BTL 12	1200 mm	3000/4500 mm	325 m ³ /h
BTL 14	1400 mm	3000/4500 mm	410 m ³ /h
BTL 16	1600 mm	4500 mm	460 m ³ /h

- Flows were calculated with product spread angles of 14° (most frequent case).
- The belt velocity shall be < 0.8 m/s.
- Flows are given in m³/h and must be multiplied by the density to obtain t/h.

Precisions

The maximum possible precision is :

- ± 1 to 2% for c/c distance 1800 mm.
- ± 0.5% for c/c distance 4500 mm

- ± 0.5 to 1% for c/c distance 3000 mm.

Your weighing specialist

Illustrations are not contractual. Precia-Molen reserves the right to modify at any time, without prior notice, the information contained in this leaflet.

Product line YERNAUX
 Zone Industrielle de Beauregard
 BP 552 - 19107 Brive - FRANCE
 Tel. 33 (0) 555 863 000
 Fax 33 (0) 555 860 563
 E-MAIL jacques.thebaud@preciamolen.fr
 RCS: 386 620 165 001 94 - NAF 292 J

