Continental weighfeeders are self-contained belt feeders with a controlled drive system, belt scale, speed sensor and integrator. They are designed to operate in either the shearing or wild flow modes of weighing.

In a shearing application the weighfeeder is designed to meter a specific bed depth of material from a hopper opening. In this case the weighfeeder drive and mechanical components must be designed for the forces encountered in “shearing” the material from the hopper opening.

In a wild flow application the weighfeeder is designed to have material fed into its inlet by another device such as a screw feeder, vibratory feeder or rotary airlock. In this case the weighfeeder must be carefully designed to have sufficient material loading for the accuracy requirements of the application.

In both weighing modes, Continental takes into consideration: material properties, accuracy requirements, hopper or pre-feed device characteristics and the physical and electrical application requirements and then recommends a weighfeeder for the application. Please request that we send you our Weighfeeder Application Form so that we may evaluate your application and propose one of the weighfeeders presented below.

### Mechanical
1. Drive Pulley; Continental oversized diameter pulley with rubber lagging provides positive traction and lower belt tension for improved weighing accuracy.
2. Pillowblock Bearings; pillow blocks using ball or spherical roller bearings with labyrinth seals give long service life.
3. Take-up and Tail Shafts; machined from SAE 1045 material assure long pulley life.
4. Belt Feed Frames; with constant width andheave feeders presented below.
5. Drive; In line foot mounted speed reducer selected according to AGMA guidelines.
6. Chain drive; over-designed to provide long life also gives flexibility in fine tuning belt speed through sprocket changes.
7. Electric Motor; AC or DC type, C flange or foot mounted.
8. Weighbridge; Milltronics model MSI fitted as standard, for increased accuracy models MBR and MHC available as options.
9. Speed Sensor; Milltronics model MD-2000A, MD-256 or MD-36.

### Weighing
1. Frame; heavy channel sections with cross bracing gives support and stability.
2. Shear Gate; adjustable for control of material bed depth, abrasion resistant flp provided where required.
3. Legs; standard “H” leg for greatest stability.
4. Legs; (optional) “C” leg, open one side to allow belt removal with minimum mechanical disassembly.
5. Calibration Weight Rack; for convenient storage of calibration weights.
6. Head Chute; fabricated of heavy plate with dust tight inspection doors. Door, has connection flange making it easily removable for access to drive pulley.
7. Tail Pulley Guard; encloses 4 sides of tail pulley terminal eliminating pinch points, has openings to access screw take-up frame.
8. Enclosure Panels; for dust tight requirements, heavy gauge removable panels enclose top and 4 sides of weighfeeder, panels are held in place by mechanical disassembly.
9. Legs; standard “H” leg for greatest stability.
10. Legs; (optional) “C” leg, open one side to allow belt removal with minimum mechanical disassembly.

### Structural
1. Weighbridge; Milltronics model MSI fitted as standard, for increased accuracy models MBR and MHC available as options.
2. Drive Pulley; Continental oversized diameter pulley with rubber lagging provides positive traction and lower belt tension for improved weighing accuracy.
3. Pillowblock Bearings; pillow blocks using ball or spherical roller bearings with labyrinth seals give long service life.
4. Drive; In line foot mounted speed reducer selected according to AGMA guidelines.
5. Chain drive; over-designed to provide long life also gives flexibility in fine tuning belt speed through sprocket changes.
6. Electric Motor; AC or DC type, C flange or foot mounted.
7. Weighbridge; Milltronics model MSI fitted as standard, for increased accuracy models MBR and MHC available as options.
8. Speed Sensor; Milltronics model MD-2000A, MD-256 or MD-36.

### Electrical
1. Belt Misalignment Switch; signals mistracking of weighfeeder belt preventing damage caused by material binding between the belt and tail pulley.
2. Belt Scraper; single blade with adjustable torsional limiters.
3. Belt Deflection; set to allow belt removal with minimum mechanical disassembly.
4. Zero Feed Detector; signals plugged infeed chute or bridged hopper.

### Dimensions

<table>
<thead>
<tr>
<th>Width (A)</th>
<th>Length (B)</th>
<th>Height (C)</th>
<th>Depth (D)</th>
<th>Weight (E)</th>
</tr>
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<tr>
<td>42&quot;</td>
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<td>130.5</td>
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<td>335.5</td>
<td>251.5</td>
<td>47.5</td>
<td>2180</td>
</tr>
</tbody>
</table>

### Field Section
- Rectangular with sloped sidewalls to retain material.
- Panels are held in place by mechanical disassembly.
- Panels enclose top and 4 sides of frame.
- Has openings to access screw take-up frame.

### Infeed Section
- Heavy plate with dust tight inspection doors. Door, has connection flange making it easily removable for access to drive pulley.
- Encloses 4 sides of tail pulley terminal eliminating pinch points, has openings to access screw take-up frame.

### Calibration
- Weighbridge; Milltronics model MSI fitted as standard, for increased accuracy models MBR and MHC available as options.
- Speed Sensor; Milltronics model MD-2000A, MD-256 or MD-36.
Milltronics Weighing Components Featured on Continental Weighfeeders

MSI Belt Scale

The unique patented design of Milltronics MSI belt scale allows direct application of the weighfeeder loading on its dual load cells. There are no pivots, bearings, trunnions or flexures to hamper the weighing process. The load cells are electronically balanced to assure the weighing process is immune to changes in loading across the width of the belt. These features result in faster reaction time to variations in load, which allow greater weighing accuracy and feed rate control of the conveyed product. Feeding accuracy of +/−0.5% can easily be realized and maintained with the MSI belt scale system.

ACCUMASS BW100 and BW500 Integrators

Both of Milltronics low cost, microprocessor based integrators display flow rate, total, load, and speed, while providing isolated 0-20 or 4-20mA output proportional to rate and a dry contact closure for remote totalization. All programming and calibration functions can be carried out using the cover mounted keypad. The BW100 has a LCD display. The BW500 has an easy to read backlit display and both units have a programmable relay for low/high alarming of rate, speed or load.

MD Speed Sensors

Milltronics speed sensors, which are driven by the weighfeeder tail pulley or live shaft roller, are housed in a rugged weatherproof enclosure. Models MD-36, MD-256, and the higher resolution MD-2000A, all produce two high resolution quadrature square wave outputs, 90 degrees out of phase. This principle of operation guarantees reliability and accuracy making the speed sensors virtually immune to vibrations generated by plant equipment.

Continental Conveyor, established since 1963, specializes in the design, engineering and manufacture of mechanical bulk materials handling equipment and systems. Industries served include: cement, pulp and paper, mining, reconstituted wood products, smelting and reduction, quarrying, chemical, power plants, ports, and marine trans-shipping.

Production is rationalized between 2 modern plants located in Thetford Mines, Quebec and Napanee, Ontario. Production facilities include 40,000 square feet in Thetford Mines and 26,000 square feet in Napanee. Each plant is well equipped with the necessary fabrication equipment such as plate shears, press brakes, plate bending rolls, pantographs, and numerous welding stations and positions of a variety of types. Each plant has a machine shop that is able to perform most of the turning, milling and boring that is required for the equipment being manufactured. Both plants have their own indoor facilities for shot-blast cleaning and painting.

Our total staff includes: 80 plant employees, 16 mechanical designers using AutoCAD, 3 professional engineers (2 mechanical & 1 structural), 3 project managers, 10 sales and approximately 10 support and administrative staff. Of the design and project management staff, 6 have extensive experience in supervising the installation and starting-up/commissioning of all the types of equipment that we supply. Together they have a wide range of problem solving skills gained from projects in many different industries and locations.

Our product range includes:
- belt conveyors
- screw conveyors
- conveyor pulleys and idlers
- belt conveyor scrapers
- en-masse chain conveyors
- bucket elevators
- screw reclaimers
- stoker reclaimers
- vibrating feeders and conveyors
- conveyors and bin activators
- apron feeders

Locations

Continental Conveyor (Ontario) Ltd.
100 Richmond Blvd.
Napanee, Ontario
Canada K7R 3S3
Tel.: (613) 354-3318
Fax: (613) 354-5789

Continental Conveyor and Machine Works Ltd.
470 St-Armand Street South
Thetford Mines, Quebec
Canada G6G 3V8
Tel.: (418) 336-4682
Fax: (418) 336-4751

www.continentalconveyor.ca