



Precision in Motion

A close-up photograph of industrial machinery, likely a weighfeeder system. It features a blue metal frame, a green conveyor belt with a wavy edge, and a large blue motor housing. The machinery is mounted on a wooden pallet. The background is a plain, light-colored wall.

WEIGHFEEDER SYSTEMS

Accurate Flowrate Control of
Bulk Material on Belt Conveyors



EMC Weighfeeder Systems

Our Weighfeeder Systems provide a simple and accurate way to control and measure the flowrate of bulk material passing along a conveyor belt. They transport bulk material from a hopper on a driven belt across a weigh section. The weight on the weigh section is measured by a high resolution loadcell.

Our ModWeigh processor computes the flowrate based on the weight and measured belt speed. The flowrate is then regulated to the desired value by varying the speed of the belt.

Our standard systems include:

- 3 idler weigh section, with integrated loadcell
- Direct drive sealed gearmotor
- Belt speed via tail drum encoder
- ModWeigh MW96A Processor to calculate and control the flowrate

Weighfeeder Applications

If your industry is mining, quarrying, cement, fertiliser, chemical, steel, timber or food processing, then weighfeeders may be used somewhere in your production or blending processes.

Some of the diverse products that we have accurately measured with our weighfeeders include fertiliser, coal, sand, iron sand, aggregates, wood fibre/chips, wool, cereals, vegetables, tobacco and powder.

Weighfeeder applications are wide and diverse:

- Maintaining bulk material flowrates
- Continuous blending of materials to a desired recipe
- Production rate measurement
- Batching material where bin weighing is not practical

EMC Industrial Weighing Ltd is the only company in New Zealand that design and manufacture weighing products in-house.

We manufactured our first weighfeeder in 1973 and have since supplied hundreds throughout New Zealand and worldwide. This wealth of practical experience provides you with a mechanical design and rugged construction that has been proven in many industries and applications.

An essential component of any weighing system is a reliable and economic processor. We have designed and manufactured weighing processors in New Zealand for almost 50 years and our ModWeigh Series is recognised internationally for its quality and ease of operation.

Our experienced staff and fully equipped workshops ensure that full local back-up and service is provided throughout New Zealand. Additionally, by working together with reputable international weighing companies, we extend this high standard of support and service globally, ensuring consistent reliability and excellence both locally and worldwide.



Installation, Commissioning and Service

We can arrange installation and commissioning of your new weighfeeder system to ensure optimum performance.

Our Service Engineers regularly travel throughout New Zealand and can provide service reports, maintenance checks and calibration on all our weighing equipment.



Design

Our standard weighfeeders are precision engineered units designed to maintain or monitor flowrates with an accuracy of better than 0.5%.

The weigh section incorporates three precision machined idler rollers, with the weigh roller mounted on a flexure suspension system which transfers the belt weight to a high resolution loadcell. The loadcell is completely protected from accidental overloads by precision stops.

Drive is via a sealed gearmotor and is direct; no messy chains or belts. The belt speed is taken from the tail drum encoder to ensure belt slip does not result in flowrate errors.

On WF 600 and smaller weighfeeders, belt steering is handled by crowning of the drive and tail drums. On larger models, belt steering is via a pneumatic actuator.

In most cases both rollers and drums are hard chrome plated. Bearings are sealed for life type. Side guards (if required), inner and outer belt scrapers, a junction box and calibration weights are all standard items.



Rugged Industrial Construction

Our weighfeeders are built to withstand harsh and aggressive industrial environments and we offer a variety of construction options to suit the conditions.

Standard models are constructed from steel and are acid-etched before being electrostatically powder coated.

Options include galvanised and stainless steel construction. Fully enclosed versions (for dust control requirements) are also an option as are hermetically sealed stainless steel loadcells.

Standard Weighfeeder Models

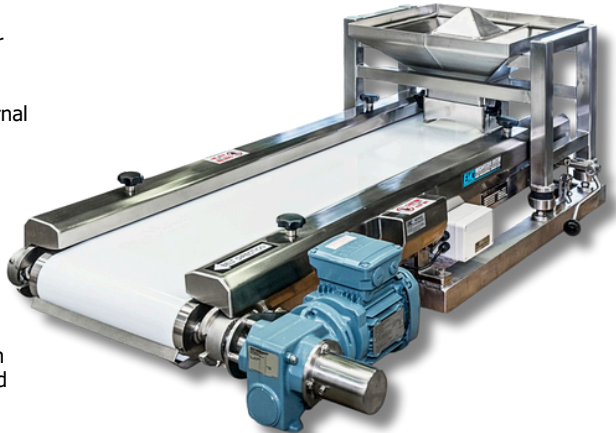
Our standard range of weighfeeders are available in four sizes. These are designed to fulfil a wide variety of different applications but, if they are not exactly right for your purpose, we can custom build a system to suit.

Model	Belt Width	Drum Centres	Maximum flow rate*
WF 400	400mm	1300mm	7 t/h
WF 600	600mm	2200mm	30 t/h
WF 900	900mm	2650mm	60 t/h
WF 1200	1200mm	2850mm	110 t/h

*Maximum flow rate is calculated using a theoretical material bulk density of 600kg/m³ and a belt speed of 15m/min. Sizing of your weighfeeder will depend on your actual product.

EMC Weighfeeder features

- Sealed, direct drive, AC gearmotor
- High resolution loadcell
- Loadcell overload protection
- 2 belt scrapers; 1 internal, 1 external
- Side guards (when required)
- Belt steering system
- Electrostatic powder coated finish
- Stainless steel impact plate
- Plated head and tail drums
- Belt run-off limit switches
- Calibration weights provided
- Sealed, labelled junction box
- Easy belt removal from one side
- ModWeigh control instrumentation
- Designed and built in New Zealand



Optional features

- DC drive motor
- Lagged drive drum
- High temperature belt (150°C)
- Extra conveyor length
- Galvanised steel frame, stainless steel guards
- All stainless steel construction
- Custom built feed hopper
- Full dust tight enclosure
- Impact rollers to replace impact plate
- Slotted construction for drive and tail drums to prevent build up of sticky materials

EMC ModWeigh MW96A Weighfeeder Processor

The ModWeigh MW96A Weighfeeder Processor offers comprehensive features and reliability, making it an ideal choice for industries requiring precise flowrate measurement and control in weighfeeder systems.



Product Flowrate Control

Ideal for industries requiring precise control over material flow rates in weighfeeder systems to ensure consistent production processes.



Ratio Blending of Products

Enables the blending of multiple materials in precise ratios, essential for applications requiring precise material mixing.



Output to Flow Control Variable Speed Drive

Provides seamless integration with variable speed drives for precise control of material flow.



Totalizing Capability

Allows for the accumulation of total material weight over time.

ModWeigh MW96A features

- Flowrate Control for weighfeeders
- Motor Speed Control Output signal
- Programmable 4-20mA flowrate output
- Material totalizer
- Setpoint input
- Programmable digital inputs and outputs
- Graphics LCD display with membrane keypad
- DIN rail mounting transmitter
- Modbus communications (independent RS232 & RS485 ports)
- Automatic zeroing
- Time and date clock for printouts
- Alarm function
- Batching feature
- Field software upgrades



ModWeigh Modular System

This modular system provides flexibility and scalability, allowing users to configure their weighing solution according to their specific requirements, with options for both standalone components and integrated solutions.

The ModWeigh modular system includes:

- MT1 Transmitter
 - 4 load cell terminals
 - 1 digital input/2 digital outputs
- MR1 Input/Output Module
 - 8 digital inputs/9 digital outputs
 - 2 analogue outputs (4-20mA)
 - 1 analogue input
- MD1 Large Display

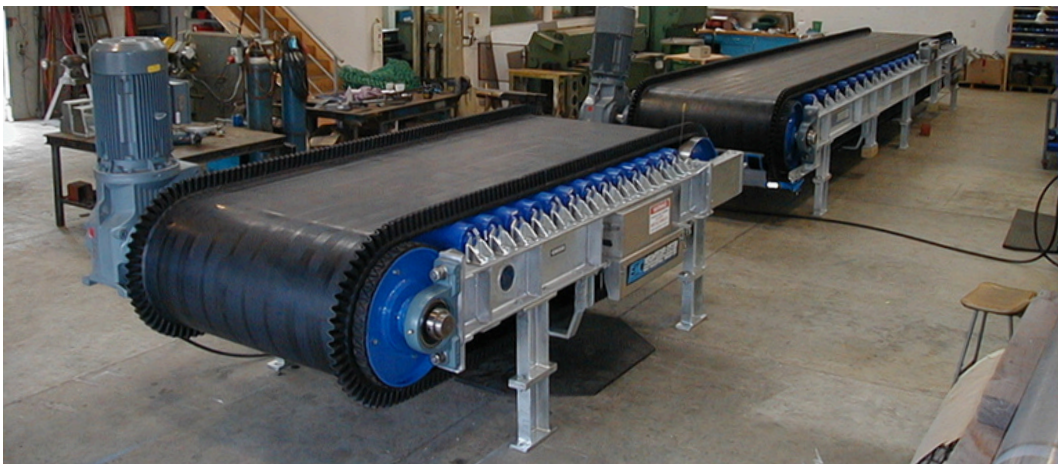
Alternatively, an MP1 Processor (combined display & transmitter) can be used instead of the MT1 & MD1.

ModWeigh All-in-One System

This comprehensive all-in-one solution provides users with a compact and integrated system for their weighing needs. With the option to expand functionality using the MO3 Expansion Module, users can customise the system to suit their specific requirements, making it an ideal solution for a wide range of applications.

The ModWeigh all-in-one system includes:

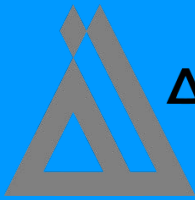
- MP2 Controller
 - 1 digital input/2 digital outputs
 - 1 analogue output (4 – 20mA)
- Optional MO3 Expansion Module for additional inputs/outputs
 - 4 digital inputs/4 digital outputs
 - 1 analogue input/1 analogue output





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