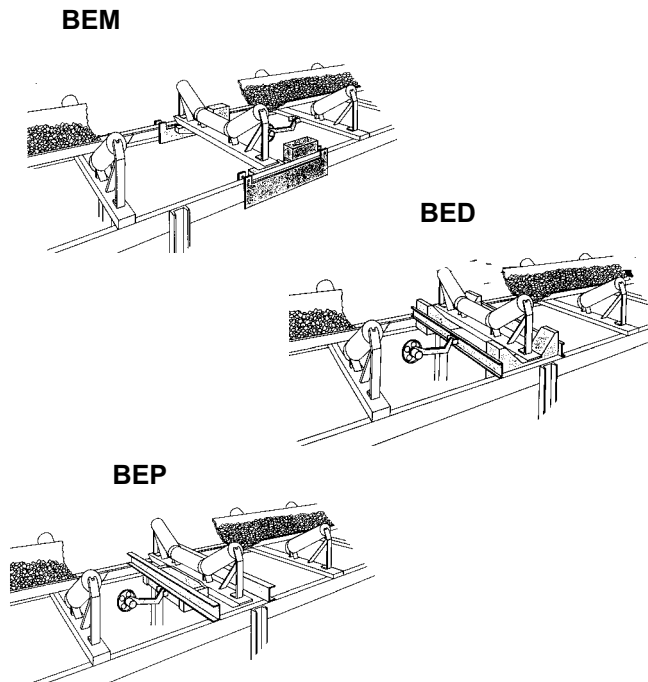


MULTIBELT® Single-Idler Belt Weighers



- Continuous bulk solids measurement in belt conveyor systems
- Suitable for flow rates up to 15,000 t/hr
- Accuracy up to $\pm 0.5\%$
- Also legal-for-trade-version
- Simple and quick installation
- Type BEM – designed modularly, suitable for any belt width
- Types BEP/BED – weighing platforms, suitable for IEC belt widths
- Suitable for use in ATEX explosion-zones

Application

Single-Idler Belt Weighers are used for continuous acquisition of flow rates and totalized amounts. They are especially designed for integration into continuously operating belt conveyors enabling accuracies of up to $\pm 0.5\%$ to be achieved. They can be employed for a whole variety of tasks:

- Throughput and consumption measurement in production plants
- Accountability of stored and retrieved amounts
- Load limit alarm
- Batching, in load-out stations
- Legal-for-trade weighing
- Prefeeder control.

Their rugged design ensures a high degree of reliability and availability.

We have the right Belt Weigher for every Belt Conveyor. For Multi-Idler Belt Weighers designed for higher accuracies, see separate Spec Sheet BV-D2050.

Construction

The standard single-idler belt weigher comprises:

- Weighing module or platform for accommodating user's idler set
- Overload-protected load cell(s) with high degree of protection
- Cable junction box for connection of sensors, and
- All fixing elements required for mounting.

For speed measurement, various speed transducers e.g. friction wheel tachometers, are available as options.

Operating Principle

Belt Weighers are used to measure continuous material flows of varying amounts.

Load cells acquire the weight of load on particular belt sections. A speed transducer measures the belt speed.

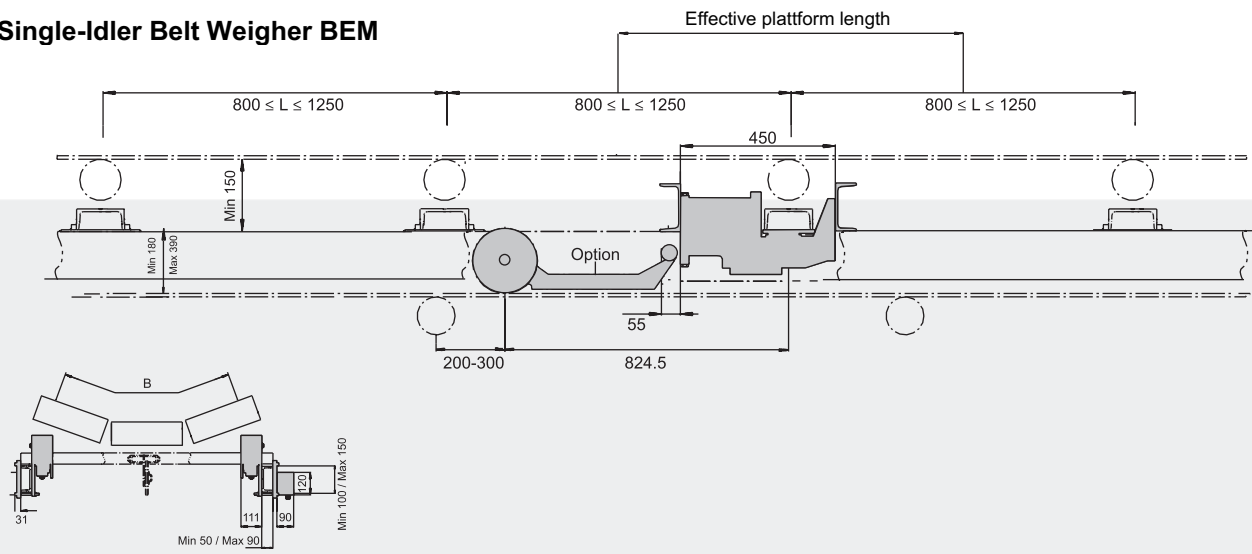
The product of these two variables is the current flow rate. Integration of flow rate determines the totalized amount of material.

If belt weighers are not equipped with speed measurement system, belt speed is not acquired. In the secases, weighing electronics use the constant speed value set by parameter.

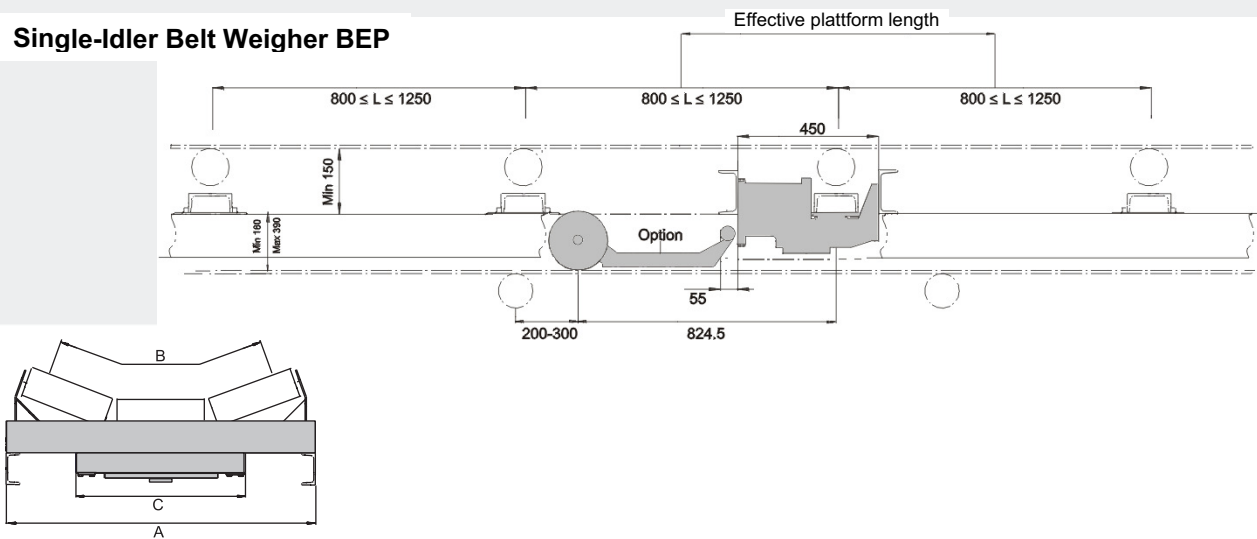
However, this method can adversely affect the accuracy.

Dimensions [mm]

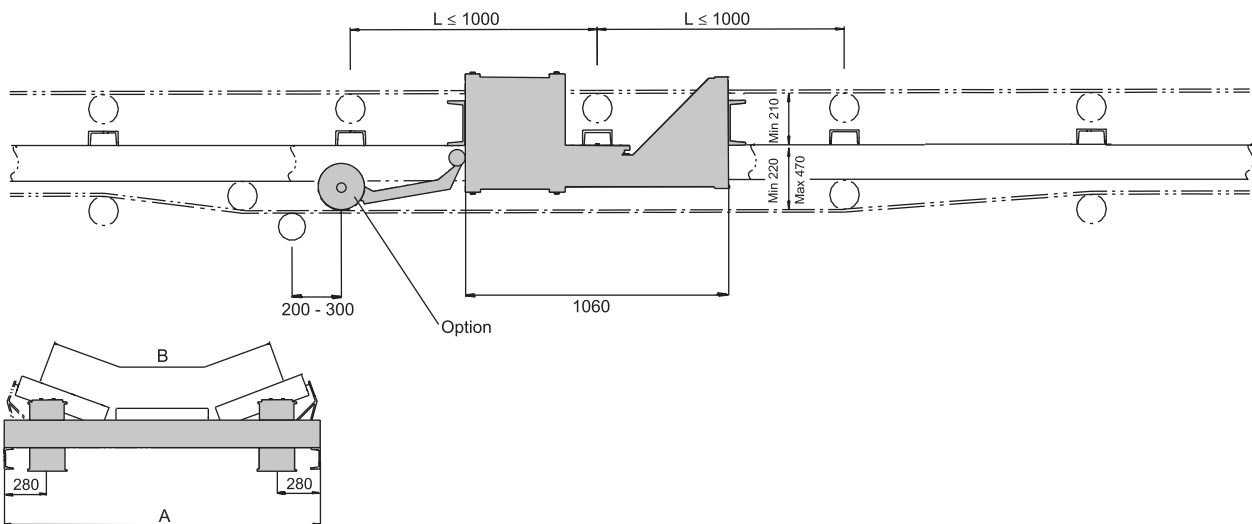
Single-Idler Belt Weigher BEM



Single-Idler Belt Weigher BEP



Single-Idler Belt Weigher BED



Dimensions [mm]

| MULTIBELT® | Dimensions [mm] | | | | | | | | | | |
|------------|-------------------------|-----|-----|-----|------|------|------|------|------|------|------|
| BEM | Measure B Belt width | 400 | 500 | 650 | 800 | 1000 | 1200 | 1400 | | | |
| | Measure A | 700 | 800 | 950 | 1150 | 1350 | 1600 | 1800 | | | |
| BEP | Measure B Belt width | 400 | 500 | 650 | 800 | 1000 | 1200 | 1400 | | | |
| | Measure C | 440 | 440 | 440 | 740 | 740 | 740 | 740 | | | |
| BED | Measure A | | | | | | | | 2050 | 2250 | 2500 |
| | Measure B Belt width | | | | | | | | 1600 | 1800 | 2000 |

Technical Data

| MULTIBELT® Single-IdlerBelt Weighers | Accuracy without speed measurement system only achievable at constant speed | Flow rate | Weight | Belt Speedt | Belt Rise |
|--|--|----------------------|----------|-----------------|---|
| BEM | ± 1,0 % of nominal flow rate | to ca. 4.000 t/h | ≈ 60 kg | to ca. 6 m/s | ~ 20° (No relative material movement) |
| BEP | ± 0,5 % of nominal flow rate | to ca. 6.000 t/h | ≈ 100 kg | | |
| | ± 1,0 % of actual flow rate | | | | |
| BED | ± 0,5 % of nominal flow rate | to ca. 15.000 t/h | ≈ 300 kg | | |
| | ± 1,0 % of actual flow rate | | | | |

Accuracy

Specified accuracies refer either to nominal (maximum) flow rate or to the corresponding actual flow rate in the range of 20 to - 100 %.

Specified accuracies assume that the variant is installed in a suitable belt conveyor and that the measuring station is installed and calibrated in accordance with our installation and calibration instructions.

For optimum planning-in of your belt weigher(s), see Spec Sheet F9151e 'Recommendations for ensure proper functioning and high accuracy'.

Special Requirements

Should you have special requirements, e.g.

- Legal-for-trade variants
- Belt speed out of specified range
- Meter for varying belt angle
- Prefeeder control
- Flow rates exceeding 15,000 t/hr
- Higher accuracies
- Special belt widths
- Special belt conveyors, please let us know.

Ordering Data

For us to be able to handle your order smoothly and quickly, please let us have the data below in addition to the ordering number:

- Belt width [mm]
- Flow rate [t/h]
- Belt rise [°]
- Belt speed [m/s]
- Accuracy [%]
- Nominal flow rate ()
- Actual flow rate ()

| Single-Idler Belt Weigher Variants |
|--|
| <p>BEM 400 - 1400 Belt weigher of modular design, belt widths from 400 - 1400 mm</p> |
| <p>BEP 400 - 1400 Belt weigher with weighing platform, IEC-belt widths from 400 - 1400 mm</p> |
| <p>BED 1600 - 2000 Belt weigher with weighing platform, IEC-belt widths from 1600 - 2000 mm</p> |

| Options |
|--|
| <p>FGA 24 A – Speed measurement system, Namur switch with perforated disc</p> |
| <p>FGA 20 RSE - Speed measurement system; friction wheel with rocker and support</p> |
| <p>FGA 20 RSE-VA - Speed measurement system for belt speeds up to 3.5 m/s; friction wheel with rocker and support in stainless steel design</p> |
| <p>FGA 30 R - Speed measurement system for belt speeds up to 3.5 m/s; friction wheel, enclosed casing, rocker and support</p> |
| <p>FGA 53 K - Speed measurement system for belt speeds from 3.5 m/s onward, with coupling for connection to shaft end</p> |