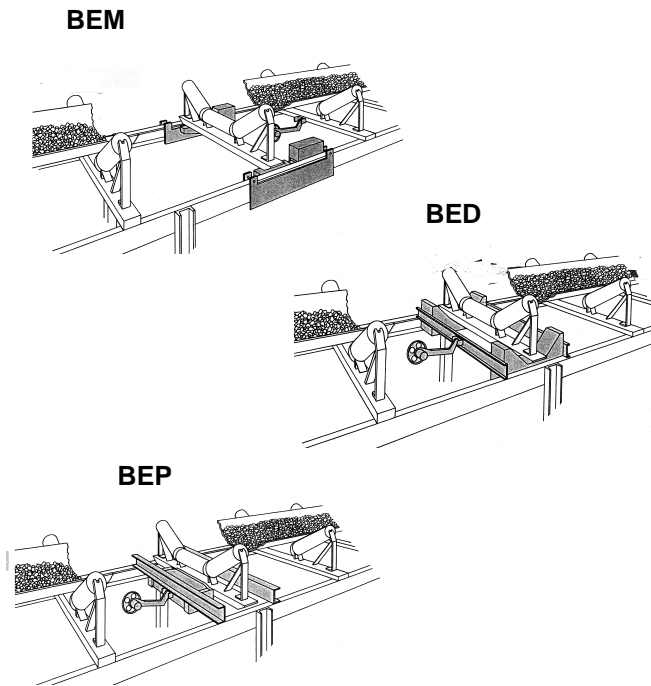


## MULTIBELT® Single-Idler Belt Weighers



- Continuous bulk solids measurement in belt conveyor systems
- Suitable for flow rates up to 15,000 t/h
- 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.

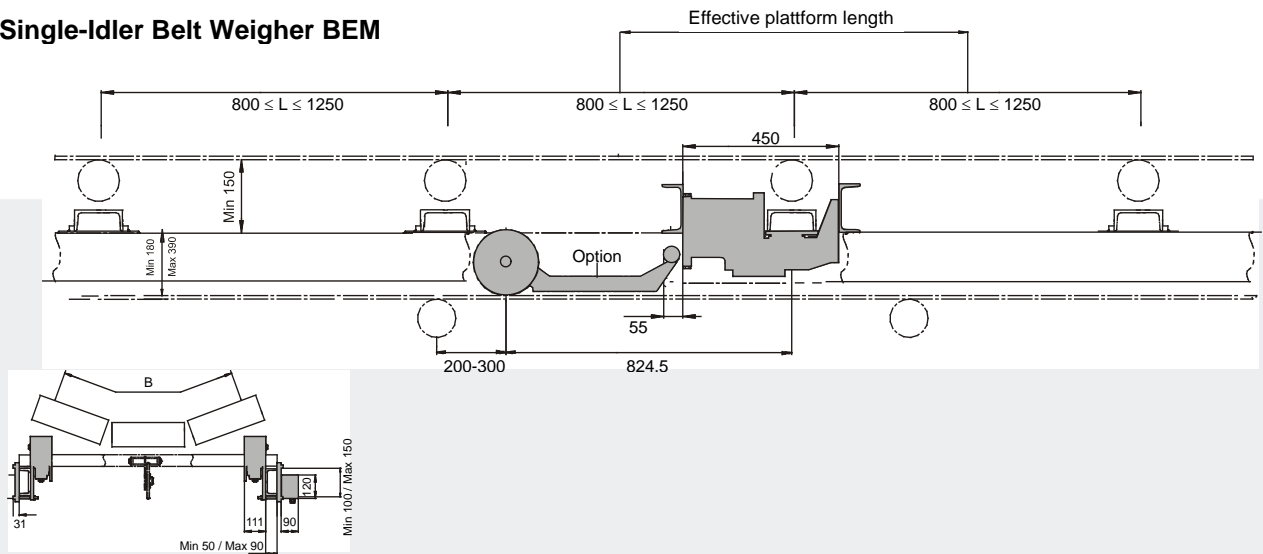
The product of these two variables is the current flow rate. Integration of flow rate determines the totalized amount of material.

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.

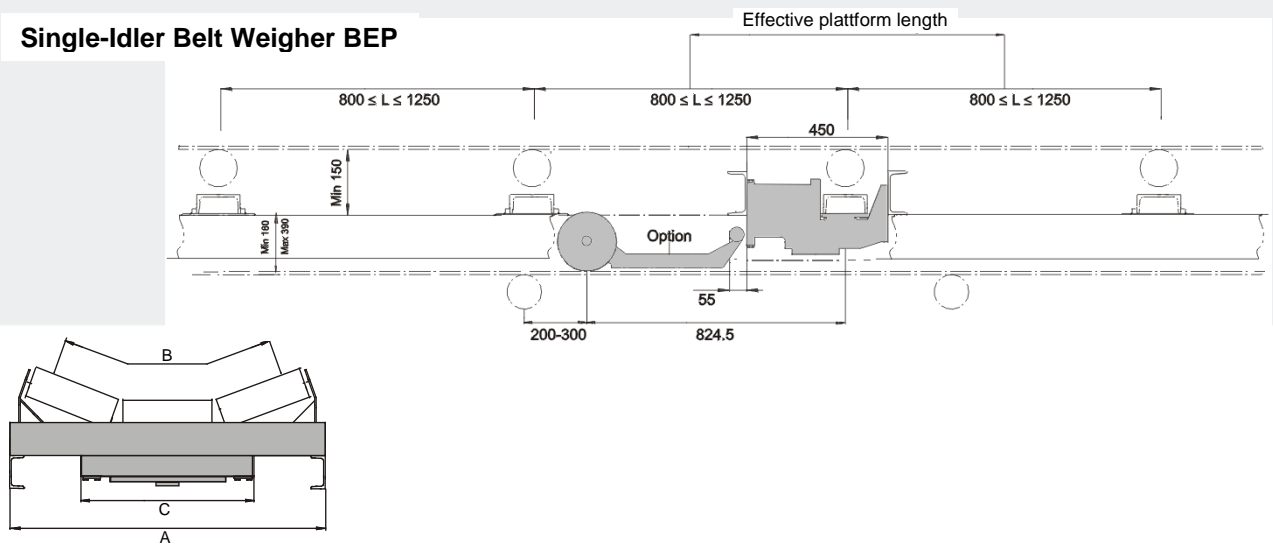
However, this method can adversely affect the accuracy.

Dimensions [mm]

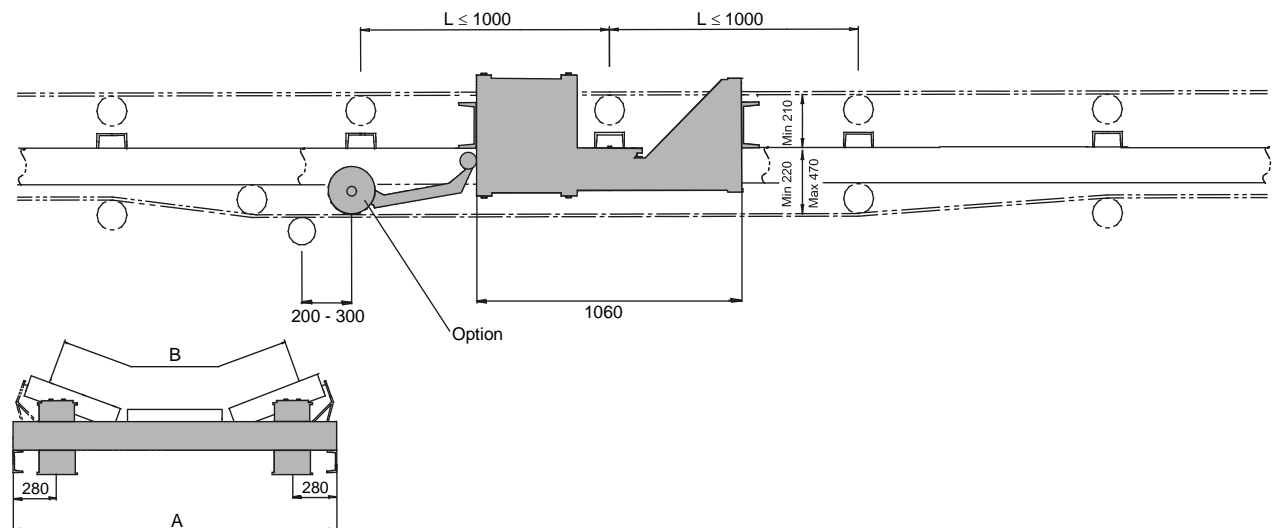
Single-Idler Belt Weigher BEM



Single-Idler Belt Weigher BEP



Single-Idler Belt Weigher BED



## Dimensions [mm]

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

## Technical Data

MULTIBELT Single-Idler Belt Weighers	Accuracy <small>without speed measurement system only achievable at constant speed</small>	Flow rate	Weight	Belt Speed	Belt Rise
<b>BEM</b>	±1,0 % of nominal flow rate	to ca. 4.000 t/h	≈ 60 kg	to ca. 6 m/s	~ 20° (No relative material movement)
<b>BEP</b>	±0,5 % of nominal flow rate	to ca. 6.000 t/h	≈ 100 kg		
	±1,0 % of actual flow rate				
<b>BED</b>	±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 BVR2220 '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/h
- 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
<b>BEM 400 - 1400</b> Belt weigher of modular design, belt widths from 400 - 1400 mm
<b>BEP 400 - 1400</b> Belt weigher with weighing platform, IEC-belt widths from 400 - 1400 mm
<b>BED 1600 - 2000</b> Belt weigher with weighing platform, IEC-belt widths from 1600 - 2000 mm

Options
<b>FGA 24 A</b> – Speed measurement system, Namur switch with perforated disc
<b>FGA 20 RSLE</b> - Speed measurement system for belt speeds up to 3.5 m/s; friction wheel with rocker and support
<b>FGA 30 R2</b> - Speed measurement system for belt speeds up to 3.5 m/s; friction wheel, enclosed casing, rocker and support
<b>FGA 30 R2 K</b> - Speed measurement system for belt speeds from 3.5 m/s onward, with coupling for connection to shaft end
<b>FGA 53 K</b> - Speed measurement system for belt speeds from 0.1 m/s onward, with coupling for connection to shaft end