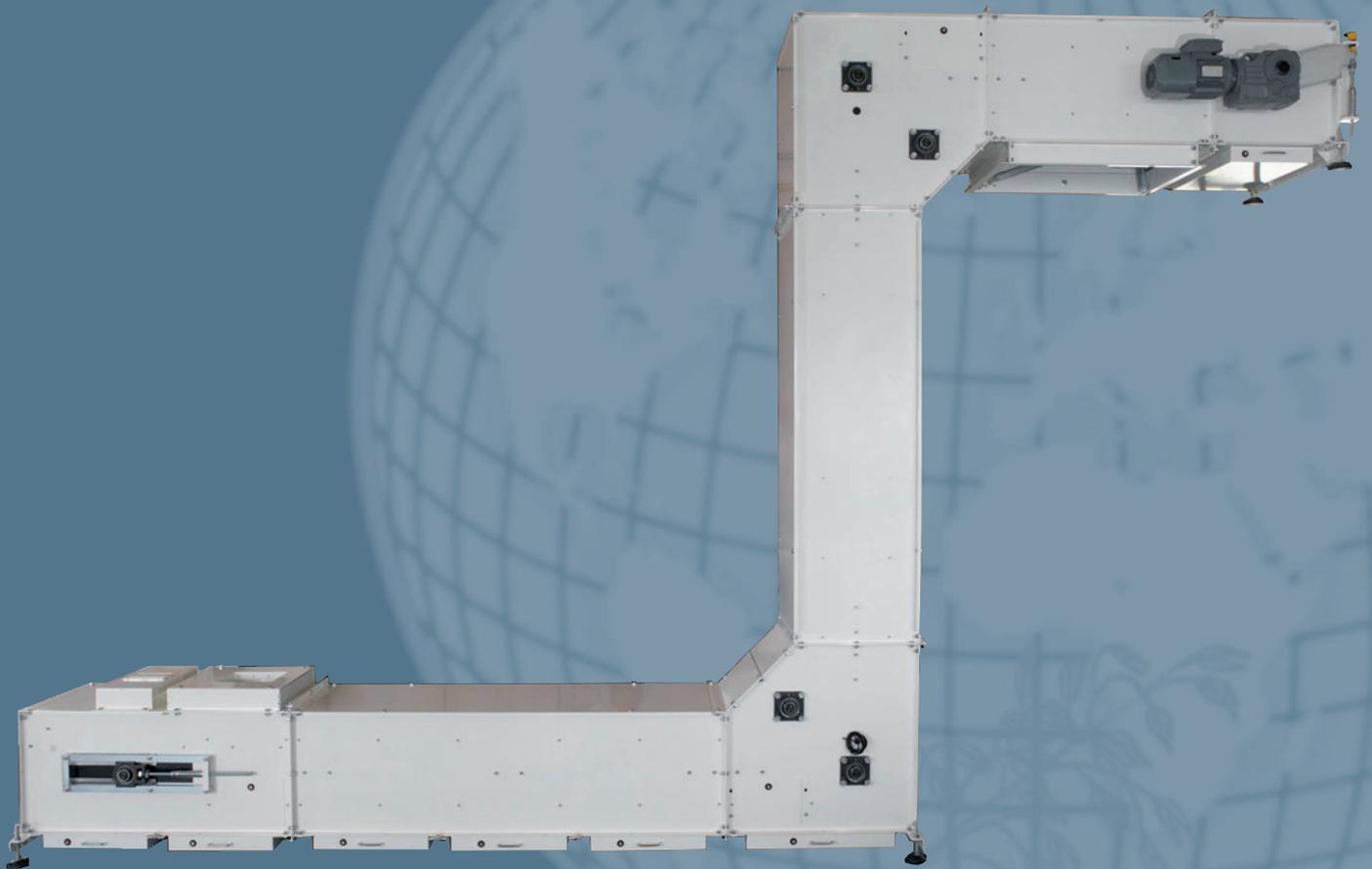




*P*BE Pendulum Bucket Elevators





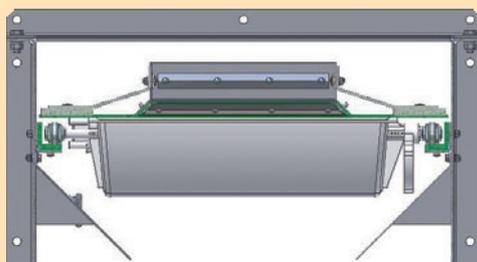
Advantages

- Gentle conveying
- Combination of horizontal and vertical transport
- low energy demand
- quiet running
- low maintenance demand
- flexibility in installation

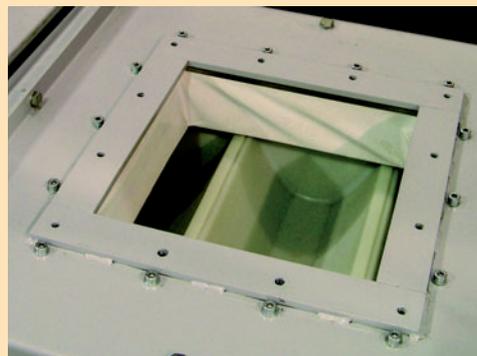
Features

Inlets

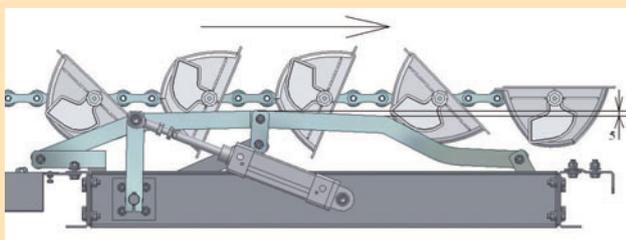
The pendulum bucket elevator is flexible in terms of the number of inlets. Equal and constant filling of the buckets is highly important for a good operation. This can either be ensured by a vibratory feeder (pic. 1) or by means of the foregoing machine which can for instance be a screening machine with adjustable feeding system, thus the product reaches the pendulum bucket elevator in a well dosed stream already. In such a case, a simple flange inlet (pic. 2) is sufficient. Due to the overlapping of buckets as well as cover-matting in the inlet section, product loss comparable to the foot section of a normal bucket elevator is prevented.



pic. 1



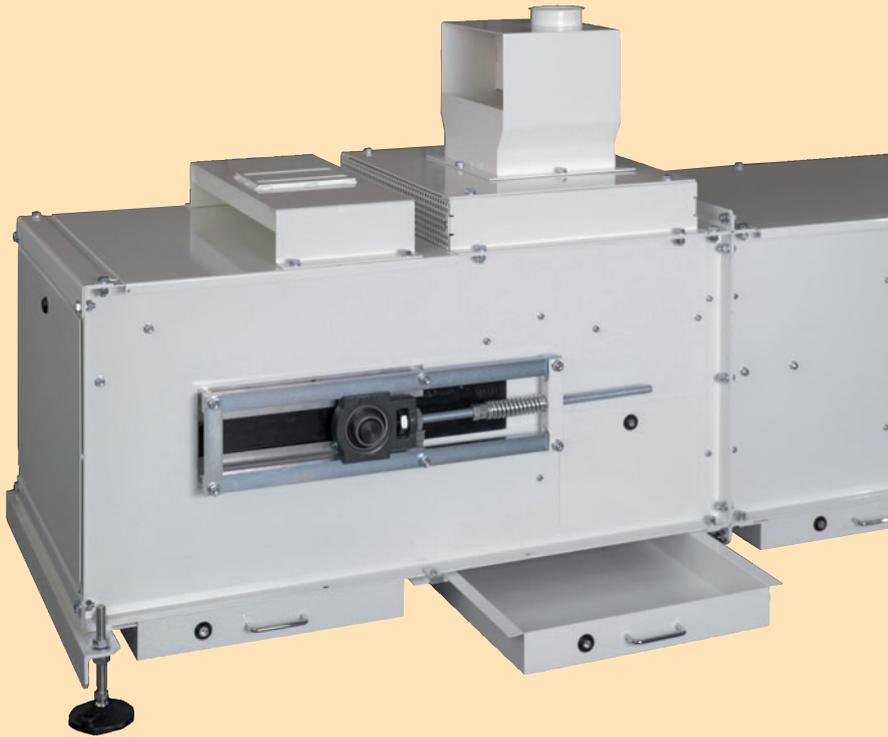
pic . 2



Outlets

Like on the inlets, also the number of outlets on a pendulum bucket elevator is flexible. One outlet is always fixed, while additional ones are either actuated by hand or pneumatically by the central plant control panel. No matter how the outlet is actuated, the function is always the same: The bucket reaches a crank which is mounted on the side wall of the outlet section. When the cam mounted on the side of each bucket runs over this crank, the bucket is tilted. This gentle way of tilting prevents the product from getting any hard knocks in the outlet zone, whereas a normal bucket elevator throws out the product into the outlet-parable at quite high speed.





Tensioning station

The simple way of chain tensioning via manual spindles ensures a steady tracking ability of the chain and therefore an even and steady transport of the buckets.

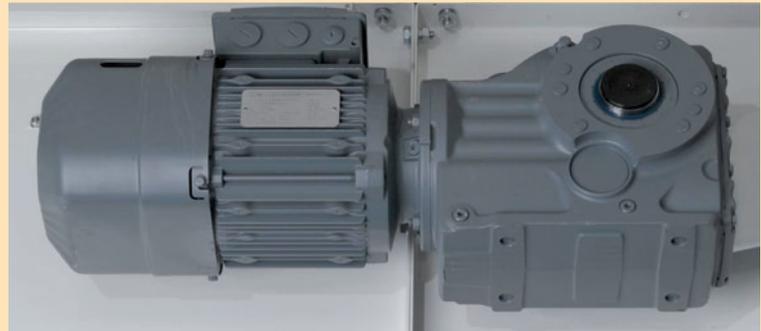


Drive

Cimbria is a producer of high quality machines. Therefore all geared motors used on our pendulum bucket elevators are supplied by SEW.

Especially the relatively low required drive power of the pendulum bucket elevator means energy saving and therefore reduction in operation costs for our treasured customers.

- PBE 10: 1,1 – 1,5 kW
- PBE 20: 1,5 – 2,2 kW



Safety devices

A speed guard in the lower corner station of the pendulum bucket elevator reliably detects and reports about an eventual chain breakage.

The overload switch on the drive station immediately stops the drive in case of abnormal torque on the geared motor, which is most likely caused by an internal mechanical blockage of the pendulum bucket elevators due to big foreign parts coming in by accident.

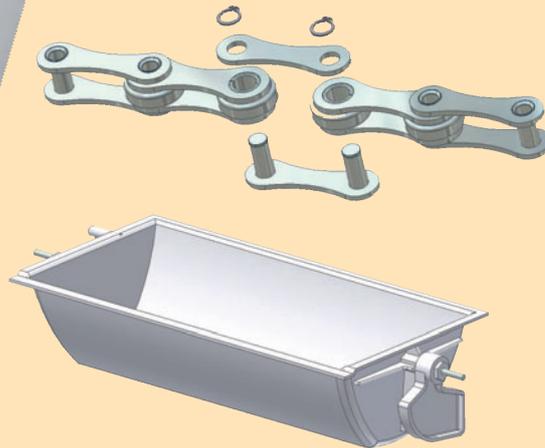




Chain and buckets

The high-tensile, chromated chain grants a long life-time.

Plastic buckets reduce the necessary drive power and at the same time treat the product to be conveyed very gently.



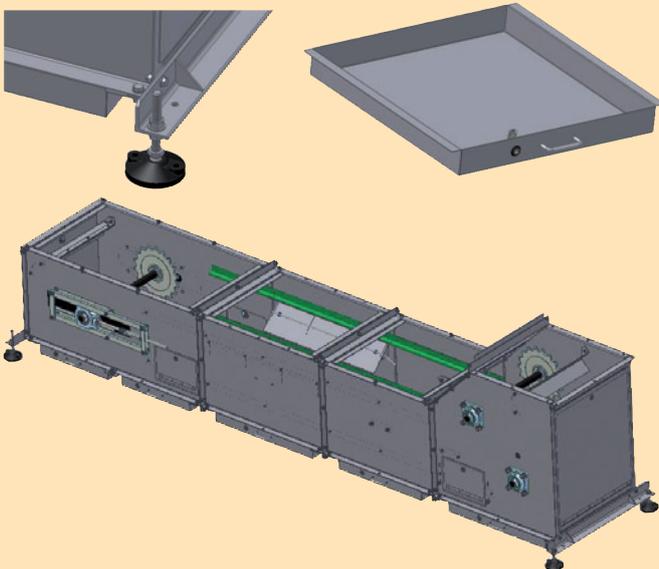
Assembly and maintenance

The single sections of the pendulum bucket elevators are delivered fully preassembled. Therefore, assembly on site is reduced to a minimum, meaning that only the sections have to be connected and chain plus buckets to be inserted.

Levelling feet ease the straightening on site.

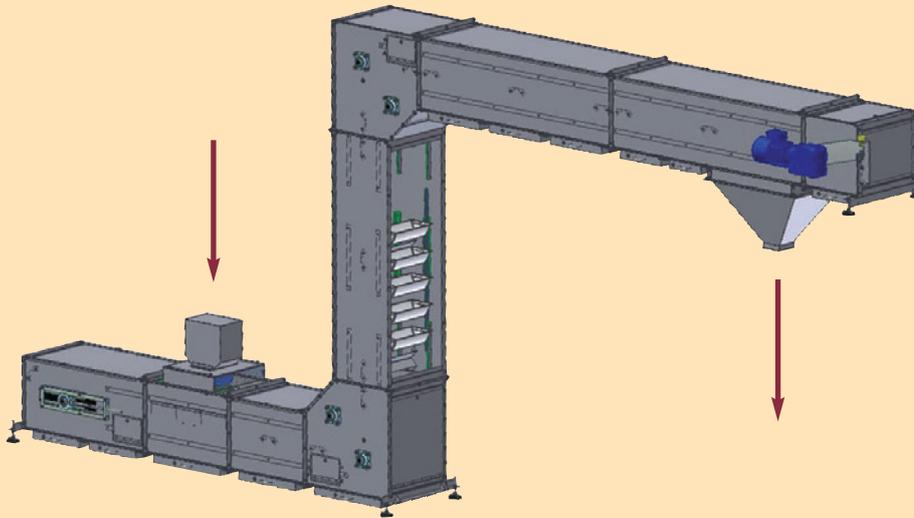
Generous maintenance doors and sight windows grant a good view and access to the inside of the machine for control and maintenance purposes.

Single spilling kernels can quickly be removed out of collecting drawers mounted in the bottom of horizontal sections.





Application and function



Pendulum bucket elevators are used for very gentle vertical conveying of all kinds of granular product. Especially on the seed sector, they are the most suitable conveyors. They can also manage big horizontal distances, thus being able to replace the combination of belt conveyor and normal bucket elevator.

The incoming product is fed to the pendulum bucket elevator continuously and very gently by means of a vibratory feeder. The edges of the buckets overlap each other in the inlet section and therefore prevent spillage of kernels. Due to the pivoted mounting of buckets in the chain, buckets keep their horizontal position all through the way around in the conveyor until they finally reach the outlet. There, each bucket is tilted and the product falling out is gently led into the outlet hopper.

The pendulum bucket elevator can be equipped with a number of several inlets and outlets. Inlets can work at the same time, while outlets are used singular, meaning only one outlet being active momentarily.

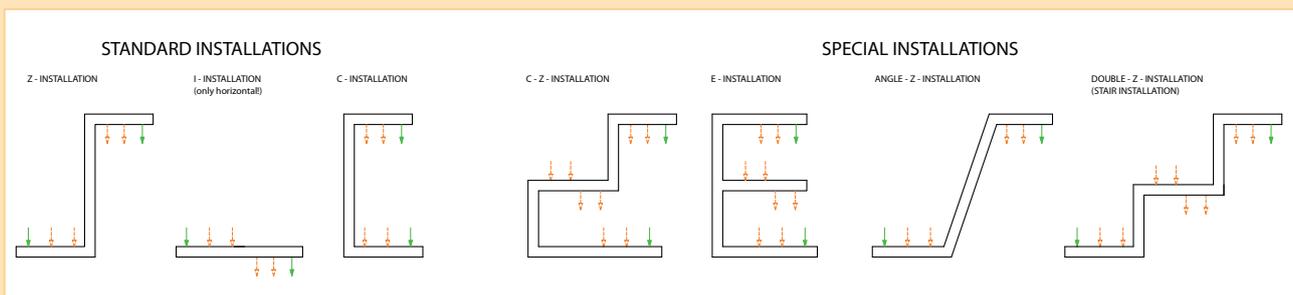


Types and possibilities of installation

The pendulum bucket elevator is available in 2 different types:

- PBE 10 for max. 10,5 m³/h
- PBE 20 for max. 23 m³/h

based on a bucket filling degree of 75% and a chain speed of 0,35 m/s



 Our pendulum bucket elevators operate worldwide.



A large number of worldwide patents justify high research and development expenditure and indicate the high technological standards of our equipment and machines. All over the world the products of CIMBRIA HEID are installed and operated successfully: some 98% of our production is exported. As a member of the CIMBRIA Group, CIMBRIA HEID has access to a global network of highly-qualified partners offering permanent support to customers and their plants.



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