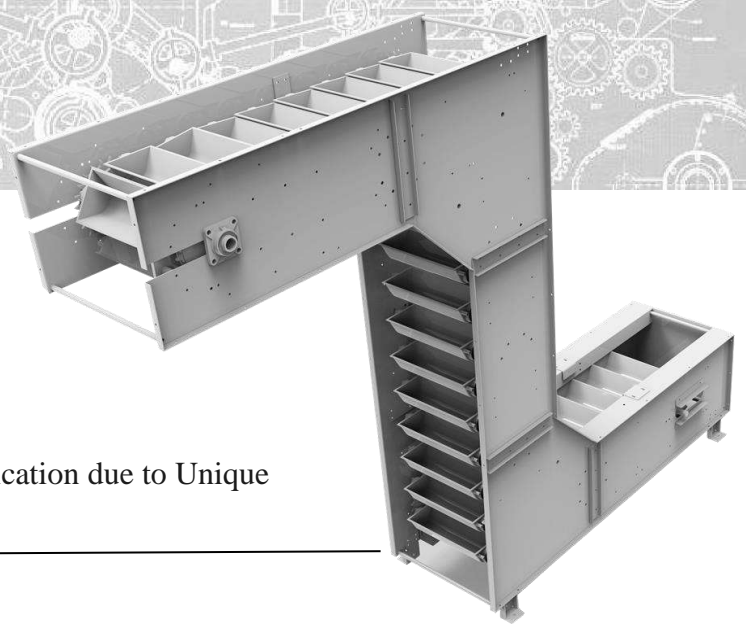


## Science of Seed Processing

### General

Brand	Saat Technologe
Designation	Pendulum Bucket Z Elevator
Model	PBE Series
Application	The Perfect Elevator for your specific application due to Unique Modular Design.



### 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.

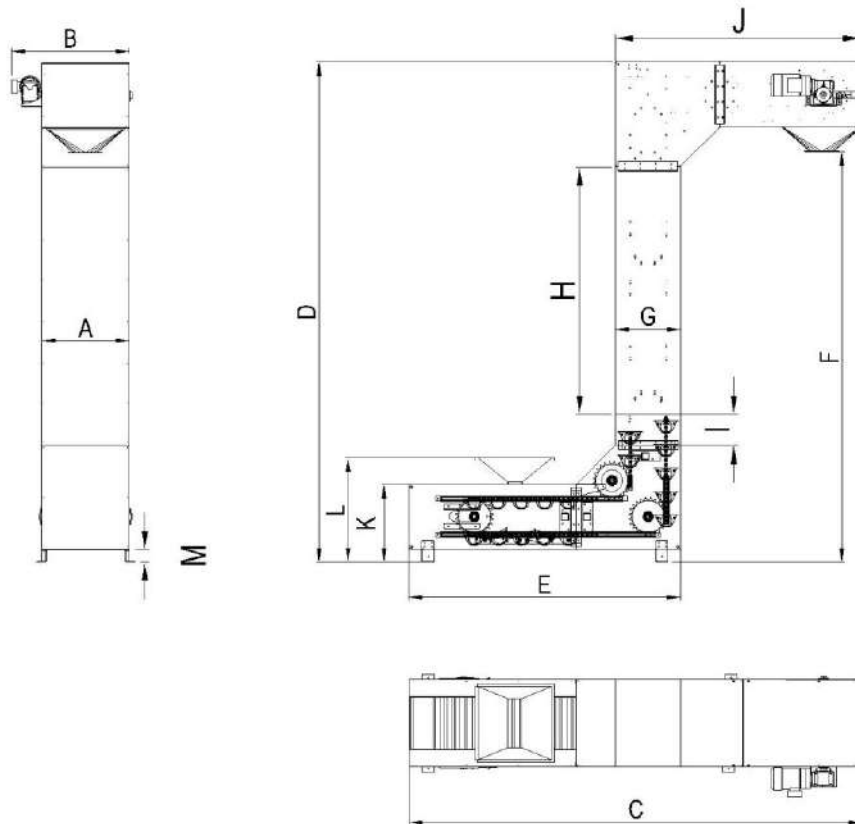
The incoming product is fed to the pendulum bucket elevator continuously and very gently by means of a vibratory feeder. The edges of the buckets overlap each other in the inlet section and therefore prevent spillage of kernels. Due to the pivoted mounting of buckets in the chain, buckets keep their 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.

The pendulum bucket elevators produced by Saat Technologe can be delivered in three types, depending on the amount of product to be transported. This conveyor has the big benefit of combining both horizontal and vertical transport in one machine. Adding the very gentle way of transporting, the pendulum bucket elevator is the perfect conveyor for seeds and other sensible products. By means of using different speeds, there's a wide range of different hourly capacities that can be reached. Saat Technologe pendulum bucket elevators are designed modularly and are normally painted. On request, galvanized or powder coated surfaces are also possible.

- 1. Tensioning station:** This station is situated in the foot section as the first part. By means of turning a spindle, the tension of the chain carrying the buckets is easily adjustable.
- 2. Inlet section:** The overlapping of the buckets in this section grants that all product inserted will go into the buckets passing by without any loss. Generally, a vibratory feeder should be used before the inlet to guarantee a harmonious filling of the buckets. The installation of several inlets is possible.
- 3. Intermediate sections:** The vertical and horizontal slots are delivered in a standard length. To reach the correct heights and lengths of the system, fitting pieces with specific lengths for each order are attached. The connection of the slots with each other and with the other stations is done by means of flanges that are screwed with each other.
- 4. Corner sections:** These corner sections can either form an "L" or a "T", thus being able to form various transport lines.
- 5. Outlet section:** During the whole way through the pendulum bucket elevator, the buckets are always in a horizontal position. Only in the outlet section, the buckets are tilted by a lever that can also be operated pneumatically if several outlet stations are installed. In this case, one of the outlets is activated, all the others are not in operation and the buckets pass them by in horizontal position. The total rotation of the bucket at the outlet guarantees a complete emptying.

6. **Drive section:** This is the last station in the system. The gear motors have torque control (=overload protection) and a brake. Speed guard and variable speed are available on request. It is necessary to use a soft starter. Braking must happen temporally delayed after stopping the feeder.
7. **Buckets:** The buckets are made of plastic that can be food safe and antistatic on request. Stainless steel buckets and automatic bucket- cleaning system are also available.
8. **Chain:** The metal chain grants long life and is easy to assemble by means of using simple master links. The buckets can be taken off the chain without any tools, therefore changing of buckets is very easy.



### Technical data

Type	Capacity		A	B	C	D	E	F	G	H	I	J	K	L	M
<b>PBZE 150</b>	10 m <sup>3</sup> /h	mm	766	1000	500	440	500	975	650	570	300	500	800	750	210
<b>PBZE 300</b>	20 m <sup>3</sup> /h	mm	937	1200	500	569	500	1232	844	870	350	630	1084	1100	355
<b>PBZE 500</b>	40 m <sup>3</sup> /h	mm	710	952	3672	4050	2200	3321	530	2000	250	1995	630	844	100