

Ground breaking conveying technology for bulk materials
The NERAK Continuous Bucket Conveyor



Global Vertical Conveying

N | E | R | A | K
Fördertechnik

NERAK Continuous Bucket Conveyors **State of the art combined horizontal – vertical conveying for bulk materials.**

As experts in vertical conveying technology we offer the right solution for each individual application.

And right means: cost saving design as well as reliability and durability in operation.

Talking about vertical conveying today means NERAK. Innovation and reliability of our continuous bucket conveyors in all fields of the bulk materials handling have made us the market and technology leader world-wide.

If the job is elevating materials carefully with the lowest spillage, around the clock, it has to be NERAK – from food to heavy industry.

Careful design and material selection ensure low maintenance and long life for all components in the system, this together with in house production ensures constant high quality as well as fast and flexible reaction times. OEMs and end users alike focus on NERAK Continuous Bucket Conveyors when looking for an efficient solution to their conveying problems – whether for a single solutions or large project.

We can offer the complete package from initial layout through design, manufacture, assembly, installation to commissioning. A wide network of sales and service throughout the world allows for close contact with our customers.

The principle of the NERAK bucket elevator technology provides individual conveying solutions for wide range of various materials:

- ▶ Building industry
 - Dry mortar
 - Tile cement
 - Plaster
 - Quartz
 - Gypsum
 - Perlite
- ▶ Chemical industry
 - Detergents
 - Silica
 - Carbon black
 - Catalysts
 - Sulphur lozenges
 - Fertiliser
 - Resins
- ▶ Food
 - Coffee beans
 - Cacao beans
 - Cereals
 - Chocolate bars
 - Salt
 - Chrystal sugar
 - Sodium bicarbonate
 - Instant tea
 - Pet food
- ▶ Heavy industry
 - Ore
 - Limestone
 - Old foundry sand
 - Filter dust
 - Refractory
 - Silicon
- ▶ Others
 - Broken glass
 - Dried sludge
 - Electro scrap
 - Cork
 - Etc.



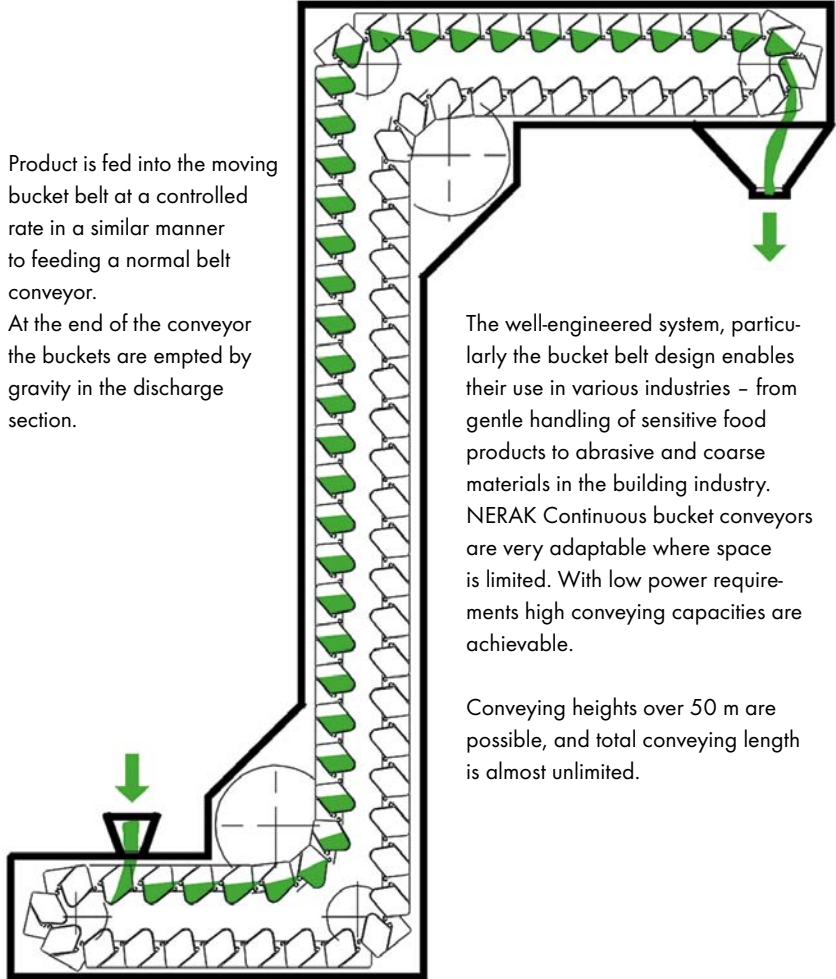
Principle ▼

Continuous bucket conveyors are specially designed to convey bulk materials from one or more feed points to a central discharge. Careful handling without product separation together with quiet running enable NERAK elevators to be used for all bulk materials. The conveying paths can be horizontal, vertical or inclining.

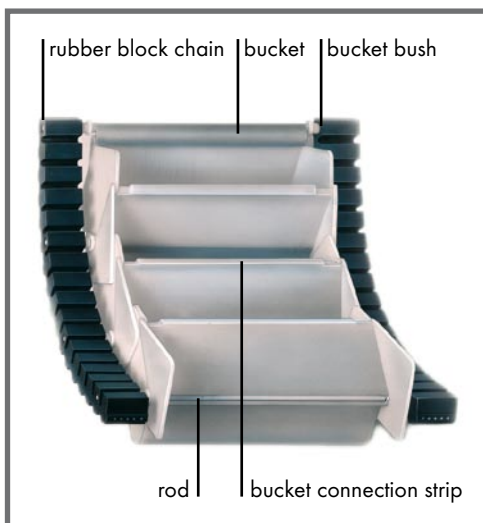
Product is fed into the moving bucket belt at a controlled rate in a similar manner to feeding a normal belt conveyor. At the end of the conveyor the buckets are emptied by gravity in the discharge section.

The well-engineered system, particularly the bucket belt design enables their use in various industries – from gentle handling of sensitive food products to abrasive and coarse materials in the building industry. NERAK Continuous bucket conveyors are very adaptable where space is limited. With low power requirements high conveying capacities are achievable.

Conveying heights over 50 m are possible, and total conveying length is almost unlimited.



Bucket belt ▼



Two endless rubber block chains reinforced with steel cables are the driving element. The robust thick-walled buckets running between the parallel rubber chains are joined with flexible bucket strips to create a closed, gap free and resilient conveying system.

The relation between bucket width and pitch provides the best possible conditions for feeding and discharge even with abrasive, humid or hot product at up to 220 °C.

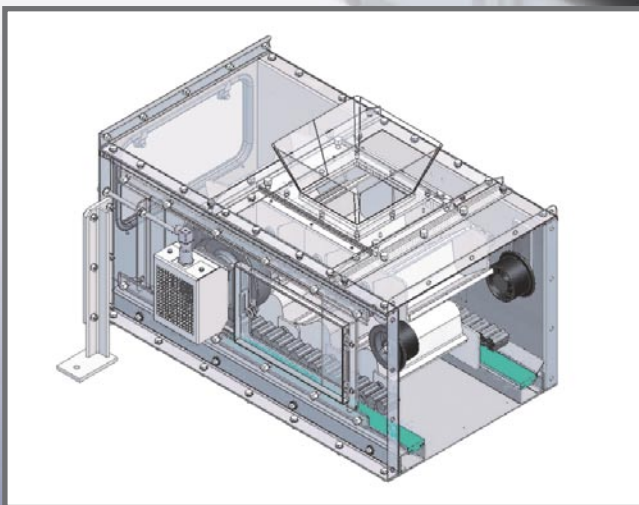
The materials of construction for all components make the NERAK bucket belt corrosion free and largely chemically resistant. Design and material selection ensure continuous quiet running (65 dB A).

Modular design of the continuous bucket conveyors allows for rapid and cost effective replacement of parts suitable for the particular application, whether it be food approved or any other requirement.

Not only is throughput important – at NERAK each element of the system should be integrated with the process.

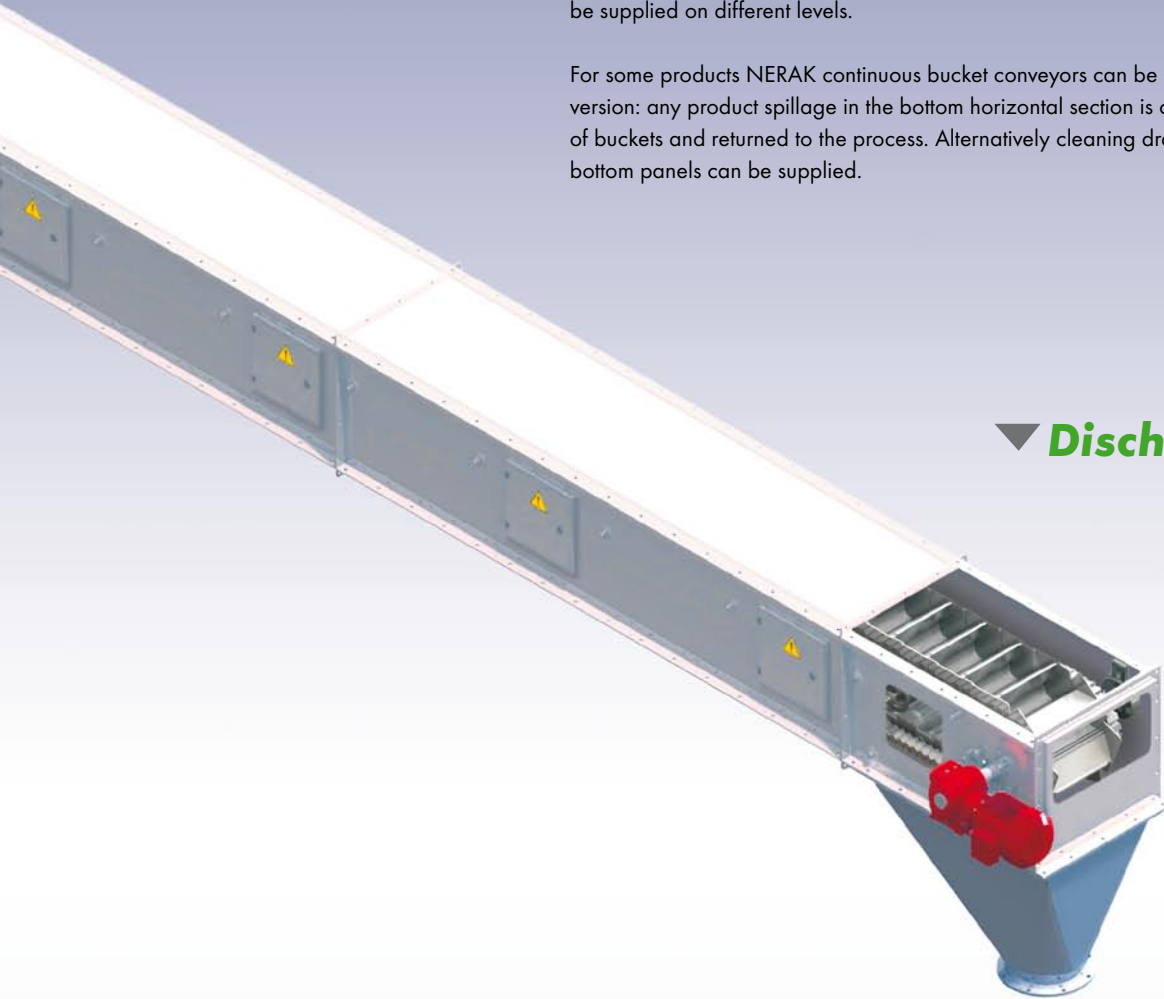
Feed section ▼

Depending on the application the NERAK CONTINUOUS BUCKET CONVEYOR is equipped with one or more infeeds. The length of feed opening is variable to suit the application although the width is related to bucket size. At the infeed product is fed into the buckets at a controlled rate, suitable equipment can be supplied to provide a controlled rate of feed. The feed opening is sealed to the bucket belt by brushes or silicon strips.

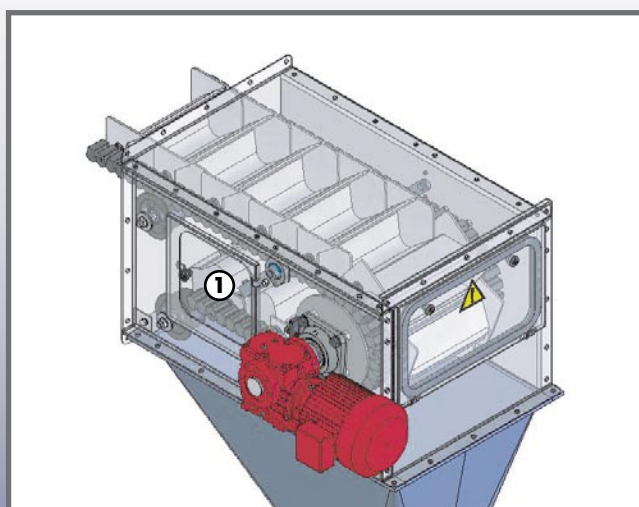


Different areas of application, production processes and building constraints require differing positions for feed and discharge sections. For more complex processes the feed section can be supplied on different levels.

For some products NERAK continuous bucket conveyors can be supplied in a self cleaning version: any product spillage in the bottom horizontal section is collected by the return strand of buckets and returned to the process. Alternatively cleaning drawers, mesh or hinged bottom panels can be supplied.



▼ Discharge section



NERAK continuous bucket conveyors have just one discharge section, the length of discharge will be determined by the discharge characteristics of the product. A pendulum bucket knocker ① can assist product discharge from the buckets. Discharge chutes complete the connection to silos, packaging machines or other equipment in the production line.

The drive is mounted in the discharge section, a geared motor is either directly connected to the drive shaft or via transmission chain. On the opposite side of the drive shaft a backstop bearing prevents the bucket belt running back.

▼ Design

NERAK offers design solutions specific to customer requirements.

Bucket conveyor casings are built from mild or stainless steel, either dust tight, water tight, or gas tight to varying pressures.



▶ Rigid, enclosed sheet steel design with reinforced profiles for large high capacity elevators.

▶ Open frame design with removable perforated sheet for quick cleaning.

▶ Elegant design with big access panels - mainly for the packing and weighing areas.

▼ Options

For every application a tailored solution – here are just six possibilities out of the extensive range from NERAK.



Elevators in accordance with ATEX



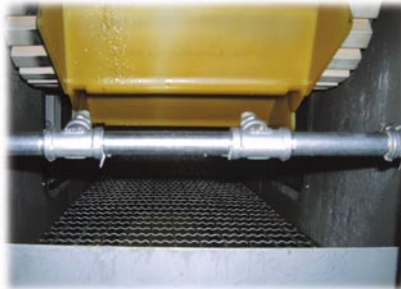
Gastight design



Integrated weighing



Cleaning systems with air

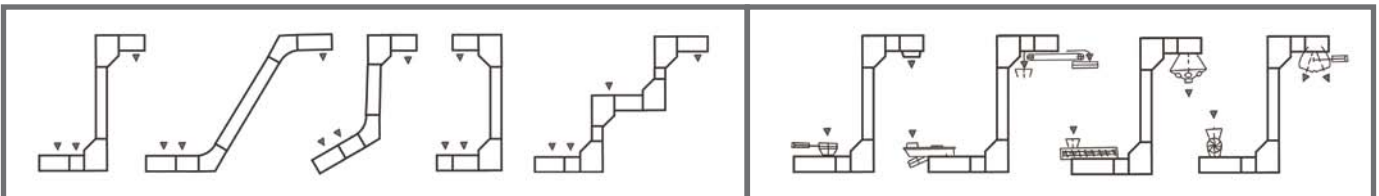


CIP



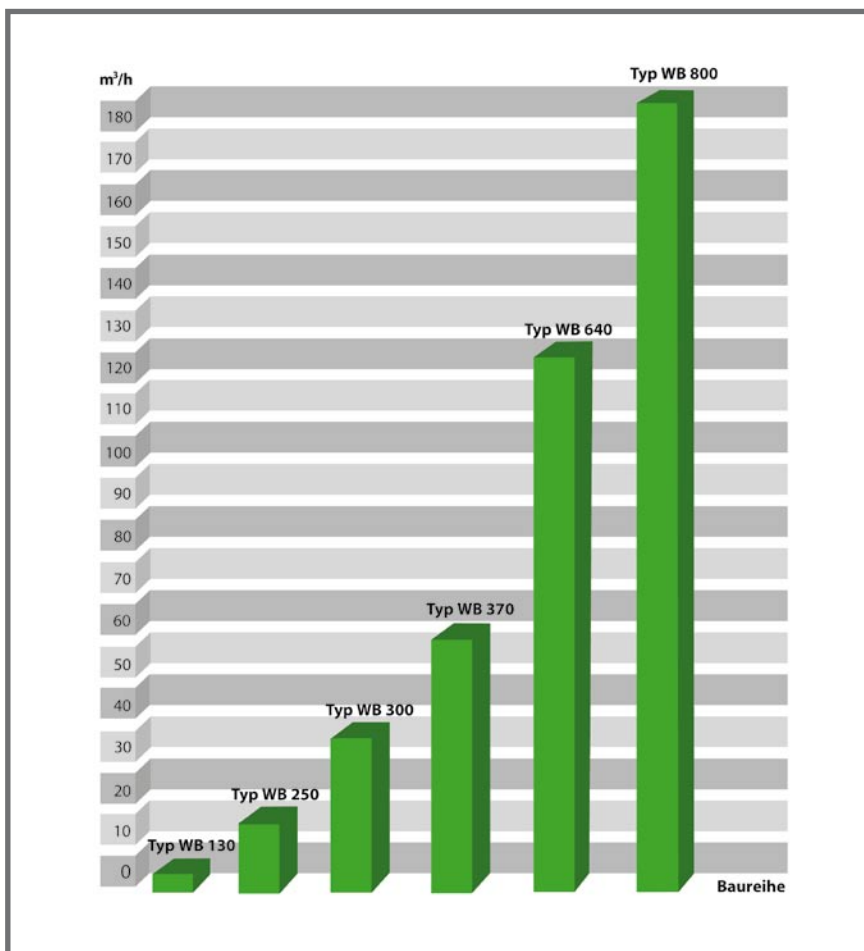
Buckets made of wear steel/stainless steel

▼ Configurations



Additional equipment ▲

▼ Range and conveying capacities



For further information, extensive CAD drawings and detailed data sheets of our standard elevators please see www.nerak.de

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