

universal **ELEVATOR**

Powder and Granulate



# Conveying Powder and Granulate

Simatek Bulk Systems A/S is a company specialised in the mechanical conveying of fragile products. A long-running development process on the elevators has resulted in a broad variety of pendulum bucket elevators which have been customised according to the comprehensive demands of the industry to in-house transportation of powder and granulate. Simatek Universal Elevators are suited for continuous processes focusing on reliability and maintenance.

## Processing plant

Simatek Universal Elevators are unique for the conveying of fragile products, taking particular consideration to the quality and structure of the product.

The minimum mechanical impact on the product reduces the development of dust which in combination with the closed design secures a very clean conveying solution.

Dust aspiration is only necessary when filling and emptying the elevator.



### Production of enzymes

*Simatek Universal Elevators with 6 filling stations.*

## Execution

Simatek Universal Elevators may be delivered in an open or closed design and with a choice of materials according to customer requests.

The elevator parts touching the product are offered in food approved materials and finish.

To avoid product contamination the elevators are delivered in a design eliminating internal product sediments.

## Applications

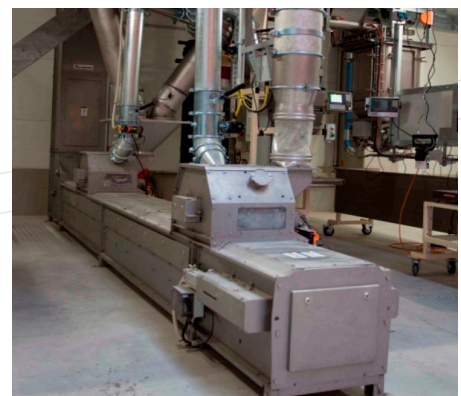
- Spray drying
- Freeze drying
- Fluid beds
- Granulation
- Coating
- Toasting

## Ingredients and foodstuffs

Aromatic products will maintain their volatile aromas during this gentle conveying, contrary to pneumatic handling.

## Controlled atmosphere

As an option, Simatek Universal Elevators may be delivered in a heated and isolated execution with internal damp control.



### Processing industry

*Simatek Universal Elevator with 2 drum feeders (CBFS) conveying pre-mix*

# Simatek Universal Elevator – Pendulum Bucket Elevator

The Simatek Bulk Systems series of modular pendulum bucket elevators offers space-saving and energy beneficial solutions for the conveying of bulk products.

Simatek Universal Elevators come in various forms and with two different pendulum bucket designs. The traditional design is with overlap and forced control of the buckets but an alternative design without bucket overlap and with reduced forced control is also available. The latter is primarily used for abrasive products.

## Intermediate outlet

Electric pneumatic intermediate outlets can be mounted on the horizontal sections as per request.

## Corner section

Corner section with shaft and sprockets. Double bearing construction of both shaft and free-running sprockets.

## Drive and emptying section

The drive section has an electric overload control to protect the elevator. An output control monitoring the elevator function is an option.

## Filling and tensioning section

Optimum operation requires a controlled filling of the elevator. For further information please see separate program on feeding and dosing systems.

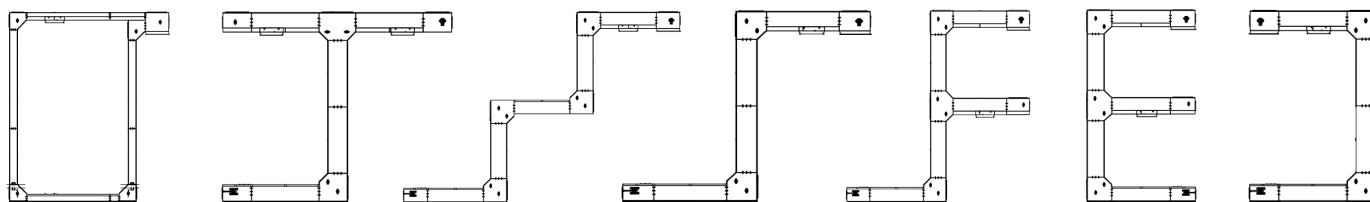
The tension section has a unique pneumatic chain tensioner ensuring correct, parallel tensioning.

## Vertical and horizontal sections

As standard the intermediate sections come with a rail system for controlling the chains and buckets. The lower horizontal sections have an easily operated drawer system for easy cleaning.

## Service

The vital parts of the elevator have service doors for easy service and inspection access.



**A Gentle and Flexible Solution**

## Gentle filling of the buckets

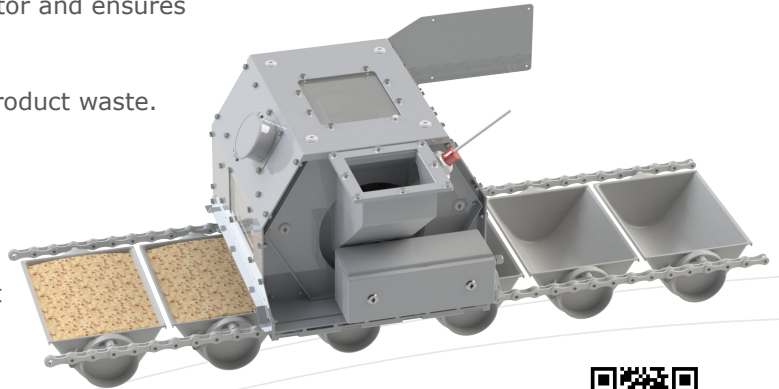
### Simatek Drum feeder – Continuous Batch Feeding System (CBFS)

CBFS is mechanically synchronised with the elevator and ensures a consistent and controlled filling of the buckets.

The buckets are filled separately with very little product waste.

The slow pace enables gentle and less abrasive conveyance and a high filling degree.

With CBFS there is no overlap nor mechanical contact between the buckets which is a significant advantage, especially when transporting abrasive products.

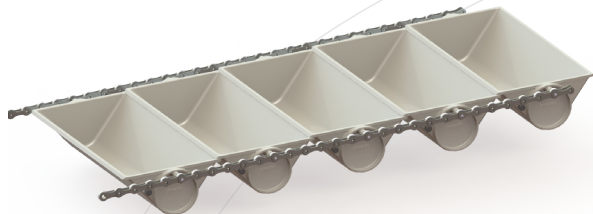


## Elevator buckets

Simatek Universal Elevators may be delivered with a variety of bucket qualities in consideration of:

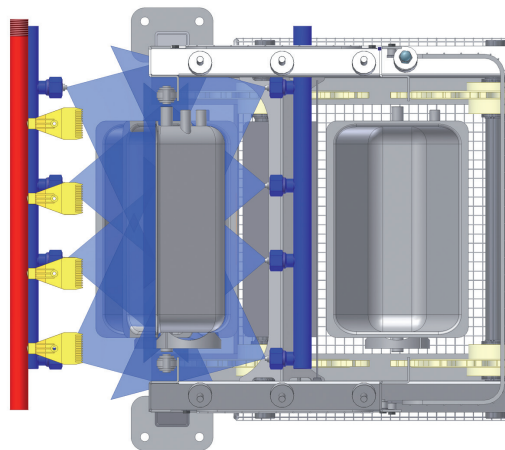
- Types of product
- Temperature
- Static electricity
- Detectability
- Foodstuff contact

When using buckets divided in two as well as CBFS the elevator may convey more product fractions at the same time.



## Cleaning In Place (CIP)

As an option the elevator may be delivered with an integrated washing system for the cleaning of chains and buckets.



## Powder and granulate (examples)

### Foodstuff

- Coffee, tea
- Cocoa powder
- Ingredients
- Sugar & salt
- Spices
- Flour
- Milk powder

### Fine Chemicals

- Enzymes
- Detergents
- Pigments
- Active coal

### Industrial

- Catalysts
- Fertilizer
- Minerals
- Metalloxid