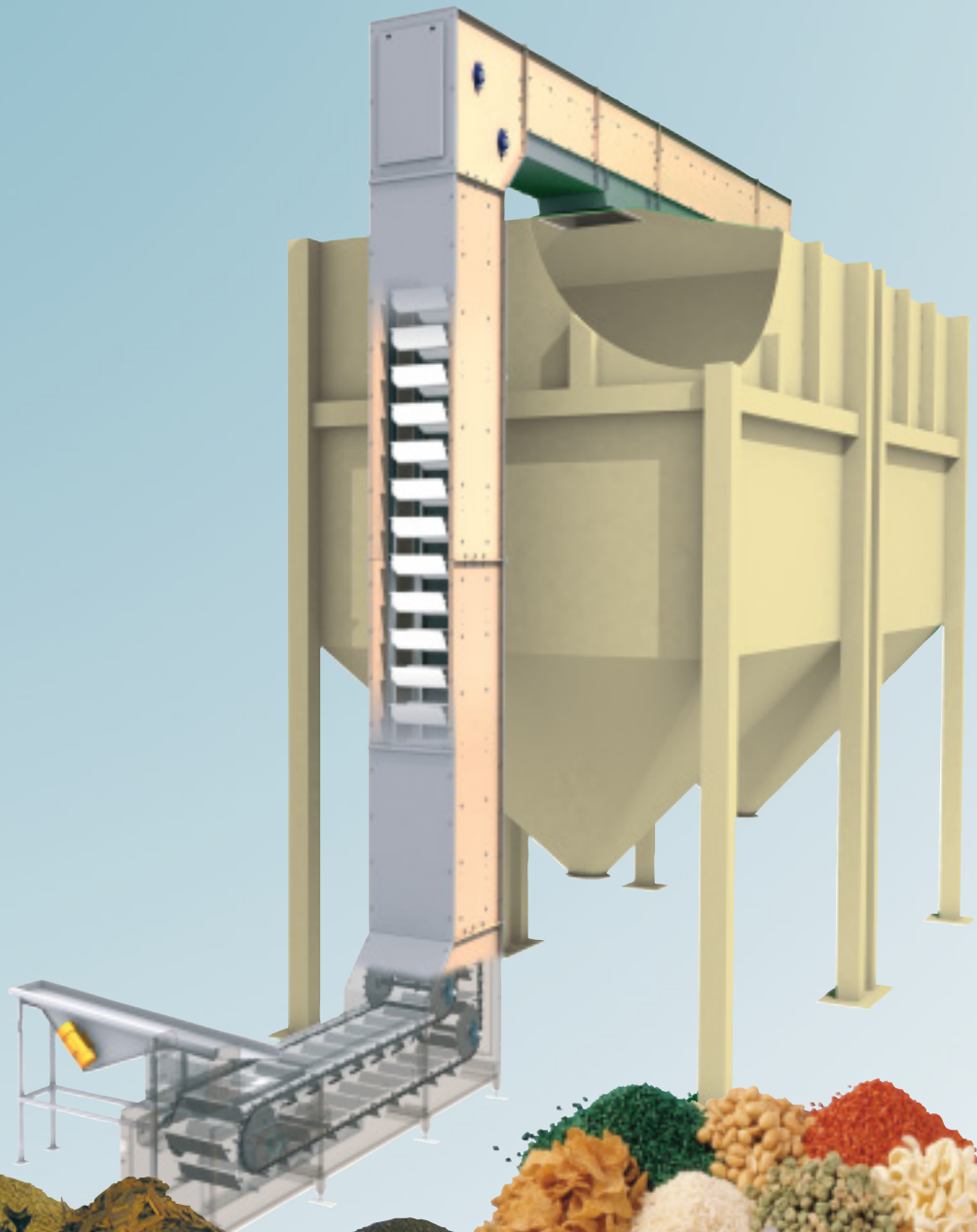


# **Simatek**<sup>TM</sup> Universal Elevator

**Gentle  
Quiet  
Reliable**



**Simatek**<sup>TM</sup>  
**BULK SYSTEMS A/S**

# System Design

Simatek Universal Elevators have been designed on the basis of a flexible and space-saving method combining horizontal and vertical conveying of bulk products.

The modular system provides for a wide selection of construction forms. The elevators are manufactured for capacities of up to 60 m<sup>3</sup>/h.



*Elevator, construction Form C in snacks production plant (Denmark)*



*Elevator, Construction Form C with intermediate outlet. Seed cleaning plant (Germany)*



*Crushed cinnamon*



*Grass seeds*



*Rape seeds*



*White pepper*

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# Gentle Conveying

The product is not exposed to external impacts from filling to emptying when using this extremely gentle conveying method.

Cornflakes and potato chips are examples of fragile products which can be conveyed without being damaged.

As a standard, the elevator buckets are manufactured in white, FDA food-approved polypropylene but are also available in other colours



*Production of snacks*



# Sanitary Design

Universal elevators for conveying of foodstuff are usually manufactured in stainless steel AISI 304 or AISI 316.



Simatek washing unit offers facilities for steeping, washing and drying of chains and buckets. One unit can be applied for several elevators.



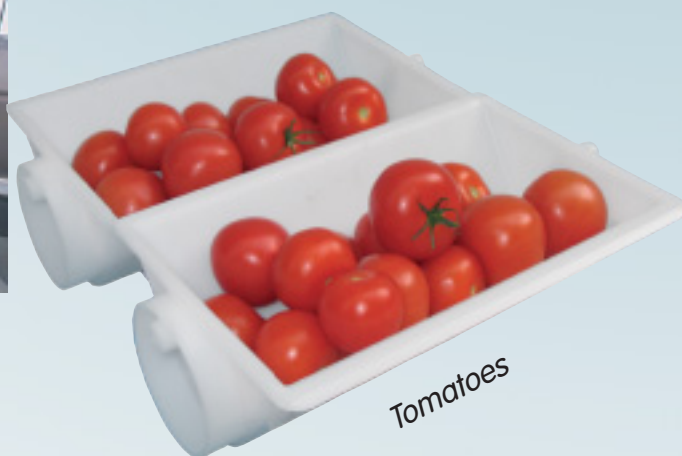
Beans



Meatballs and dumplings



Simatek elevators are available in a closed, dustproof design. For foodstuffs, open elevators equipped with safety covering are more common.



Tomatoes

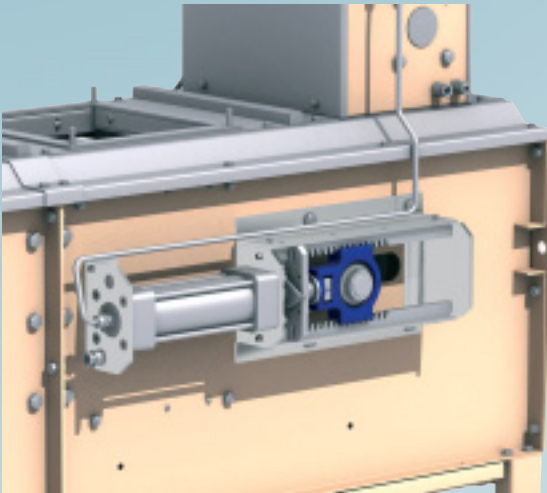
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# Technology



**Simatek Unipower HPL 431** constantly monitors the power consumption and switches off the power if the load exceeds the preset values.

The soft starter facility provides safety against overloading of vital parts.



## **Automatic chain tension**

A hydro-pneumatic chain tension adjuster ensures a uniform tension of the chains with a constant force.

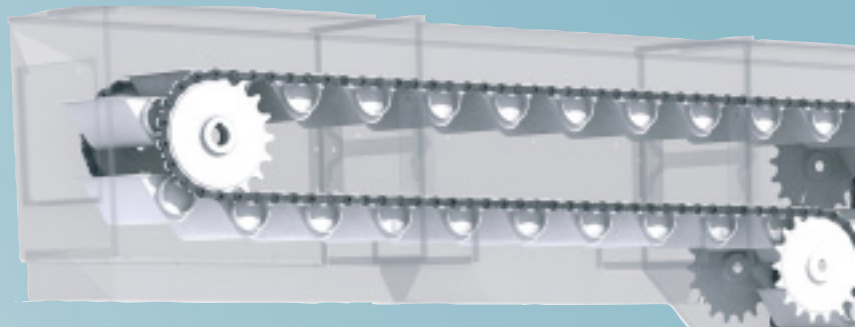


The buckets have been especially designed and are supplied in polypropylene, mild or stainless steel depending on the type of product to be conveyed. Temperatures from  $-25^{\circ}\text{C}$  ( $-13\text{ F}$ ) to  $+250^{\circ}\text{C}$  ( $482\text{ F}$ )



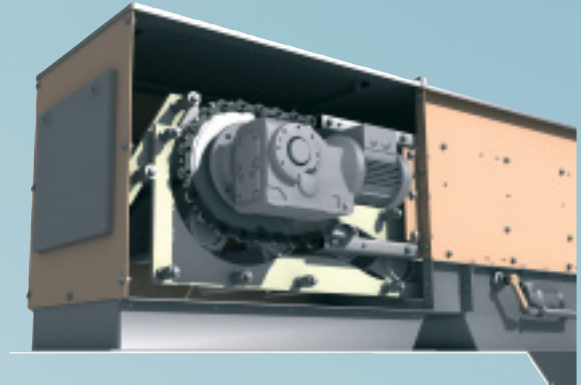
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# Technique



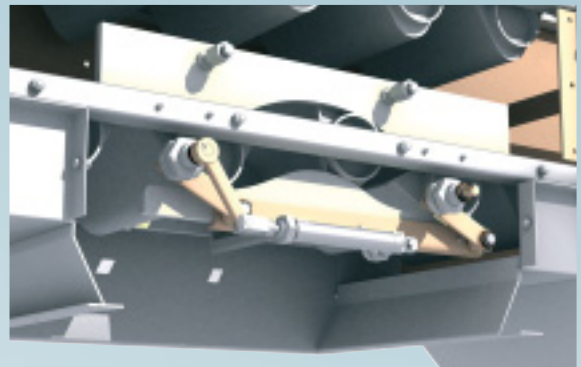
## Low Power Consumption

The drive section is equipped with a directly coupled helical-bevel gear and mechanical backstop.



## Intermediate Outlet

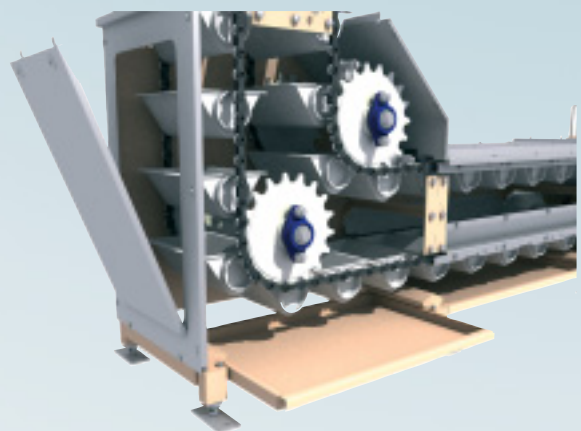
Electric pneumatic intermediate outlets can be positioned as required on horizontal sections. Computer-designed curve guides ensure low friction and minimum wear.



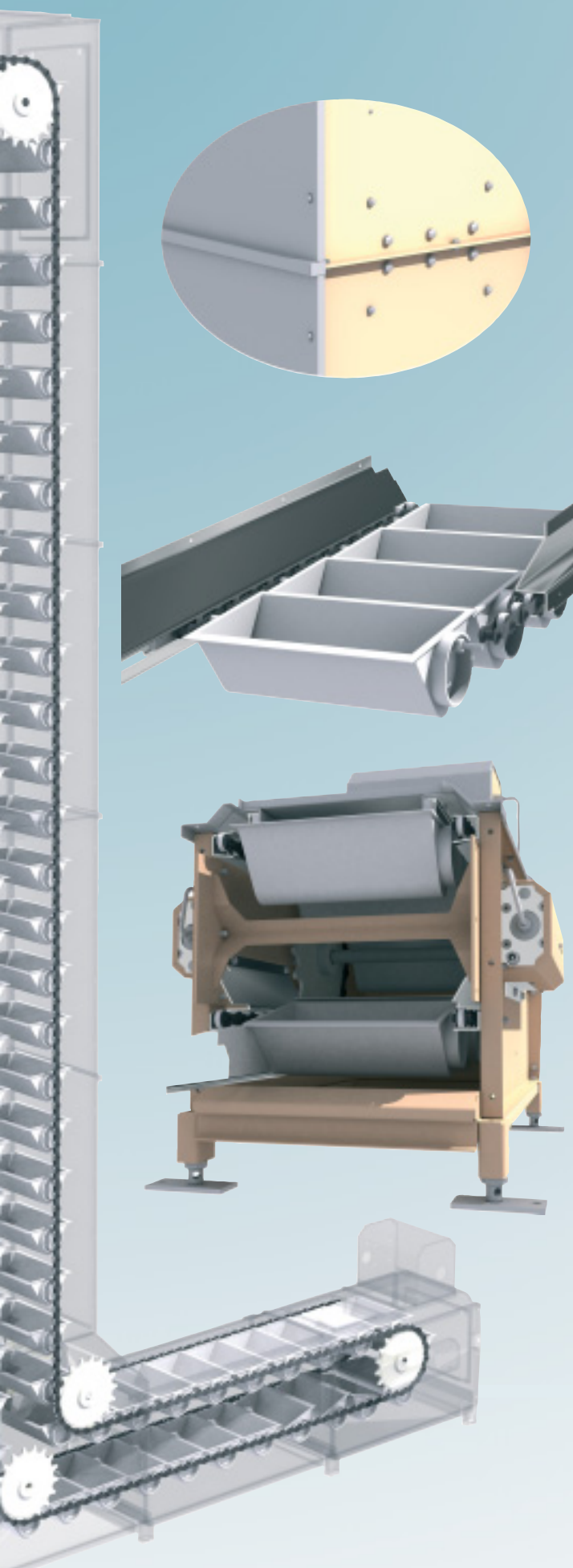
## Service

Where service and inspection are required, the universal elevator is equipped with inspection hatches.

The drawers under the lower horizontal section can be pulled out for cleaning.



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Flanged joints reinforce the elevator structure and can be equipped with seals if a dustproof execution is required.

## **ATEX**

Simatek universal elevator in a dustproof design can be placed in ATEX zones 21 and 22.

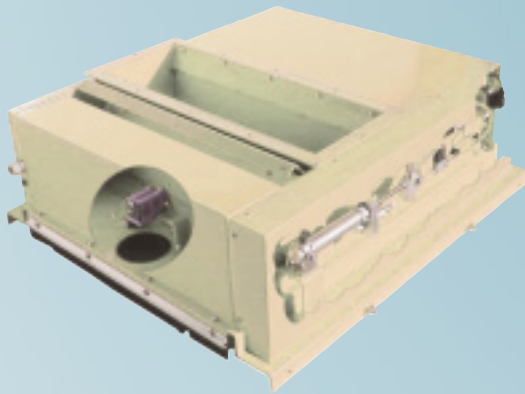
The buckets are suspended in pegs between two parallel running chains and are kept in a horizontal position from filling to emptying.

The high-quality chains have been equipped with nylon rollers ensuring long lifetime and quiet operation.

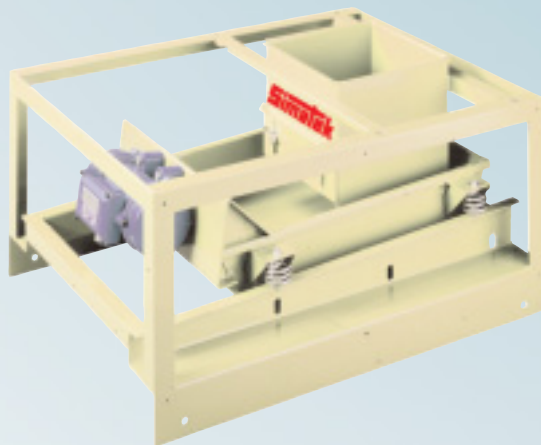
The lower horizontal section has been equipped with chain guides and brushes protecting the chains against dust.

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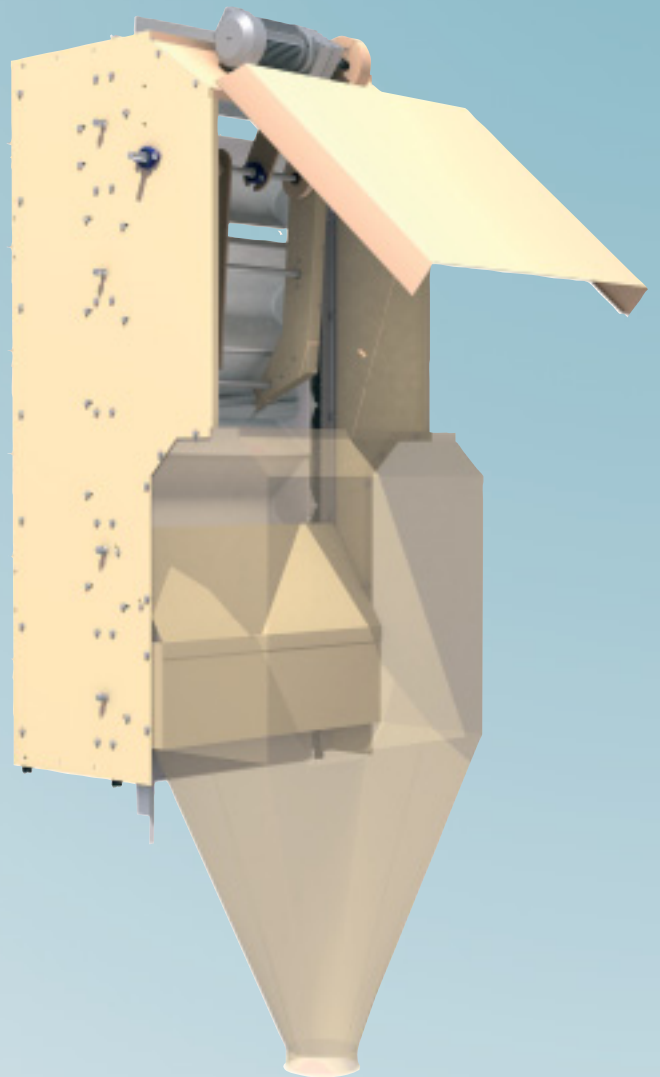
# Accessories



The Simatek batch inlet has been designed for optimum capacity and continuous product flow. The inlet fills up the buckets individually after which the filling degree is monitored by ultrasound. Variations in relation to the desired filling degree are subsequently adjusted automatically.



The vibrating feeder ensures continuous filling of buckets and is designed to minimize waste. The vibrating feeder can be connected to an aspiration branch and the capacity is controlled via a variable motor control.



Washing section for mechanical cleaning of chains and buckets

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# Reliable Conveying

Reliable, non-stop conveying is a must in the pet food and fish feed industries where Simatek has supplied more than 300 Simatek universal elevators over the years.

Thanks to a continuous development and a close collaboration with our customers, we have succeeded in developing an extremely reliable elevator.

Our service department with its specially trained staff offers regular maintenance and inspection.



*Dog Feed*



*Dog Biscuits*



*Fish Feed*



*Fish feed production (Norway)*



*At the fish feed plant of Alitec in Chile, the product is conveyed by a Simatek universal elevator, type 160 Construction Form F.*

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# Cooling and Conveying



*Simatek universal elevator, Construction Form T applied for cooling and conveying of dog biscuits from oven to packing department.*



*Simatek universal elevator, Construction Form A, mounted in connection with a weighing system for chocolate and liquorice.*



# Abrasive Products

The universal elevators are also suitable for conveying of very abrasive products such as fly ash, gravel, stone, crushed marble, etc.

Due to the absence of mechanical strain on the product, no dust or friction develops causing abrasion on the equipment.

An aspiration branch must be established at inlet and outlets.



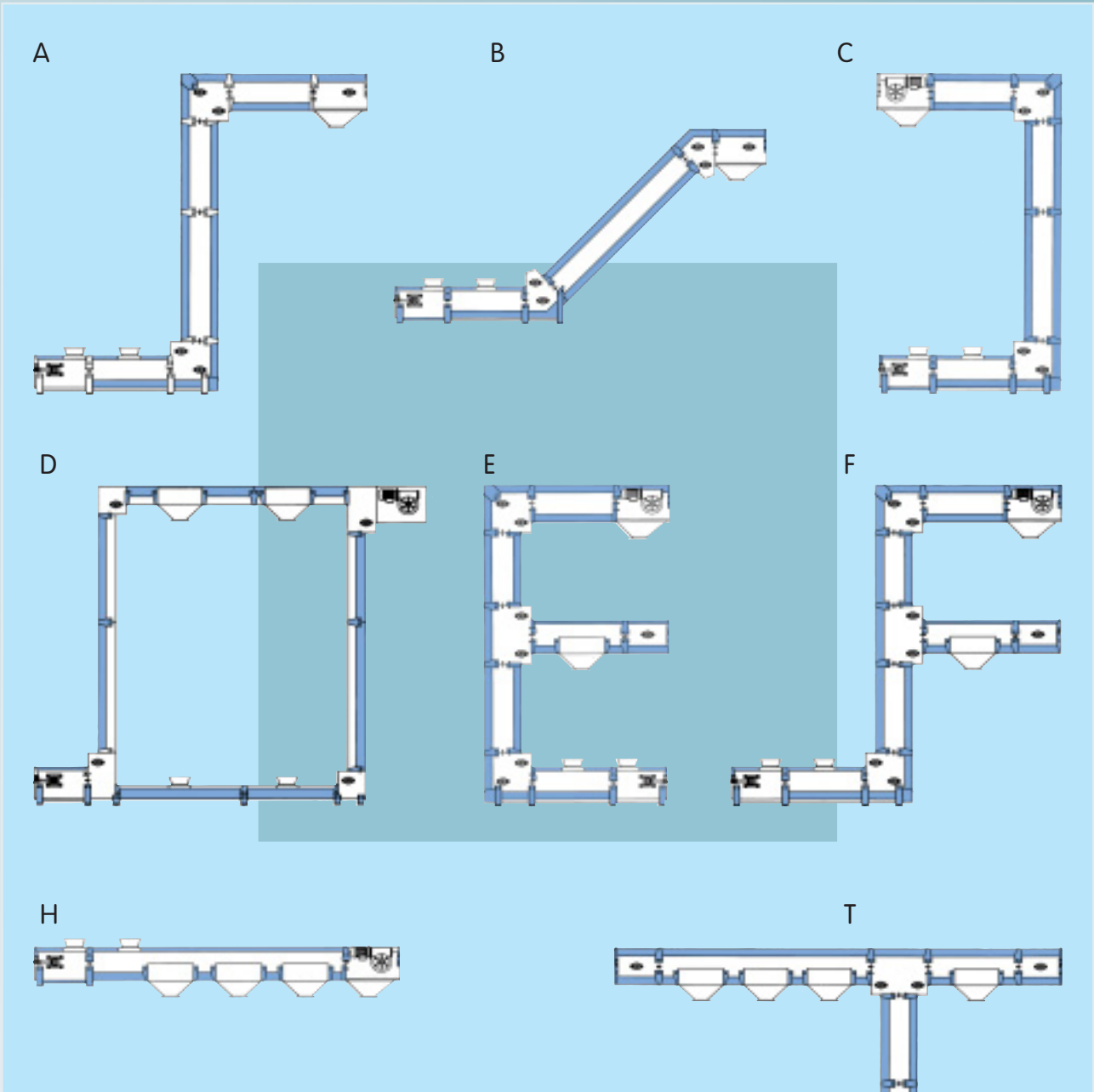
*Conveying of steel balls in connection with boiler cleaning (waste incineration plant, Norway)*



*Conveying of crushed marble (France)*



# Construction Forms



Simatek Bulk Systems A/S was founded in 1995 as a company within the Simatek Group. Simatek bucket elevators, which have been marketed since 1983, still form the basis of the company's product line.

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