

CLEAN-GEARTECH

Conveyors

Belt, chain, screw conveyors; bucket elevator

- Conveyor for transport
- Sorting machines
- Cleaning, washing machines
- Filling, discharging machines
- Ensilange, Gutting machines
- Milling, breaker machines
- Dicers
- Drying machines
- Heating, freezing machines
- Weighing machines
- Packaging machines
- Checking machines
- Palletizing machines

VFZ Series
Aluminium
Worm
Gearboxes



BVI Series
Stainless Steel
Helical Bevel

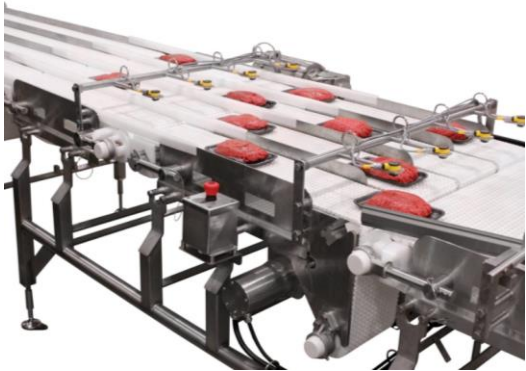


VFI Series
Stainless Steel
Worm
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Industries: conveyors application examples



Fish



Meat



Fruit and vegetables



Food



Packing



Bakery



Dairy



Beverage

Pumps

Pump types:

- Diaphragm metering pumps
- Rotary lobe pumps
- Screw spindle pumps
- Progressing cavity Pumps
- Centrifugal pumps
- Peristaltic and tube pumps
- Flexible impeller pumps

Sectors/Industries:

- Beverage (brewery, winery, bottling)
- Food: meat, fish, poultry
- Dairy
- Fruit & Vegetables
- Sweets & Bakery: confectionary, chocolate, bakery
- Chemical and Pharmaceutical

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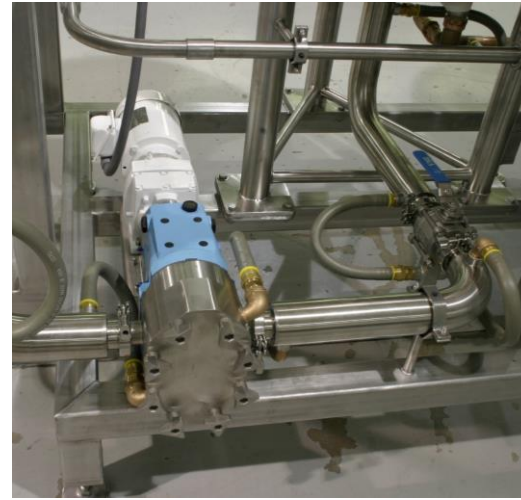




Dairy



Winery



Food



Beverage



Pump cartridge



Chemical



Pharmaceutical



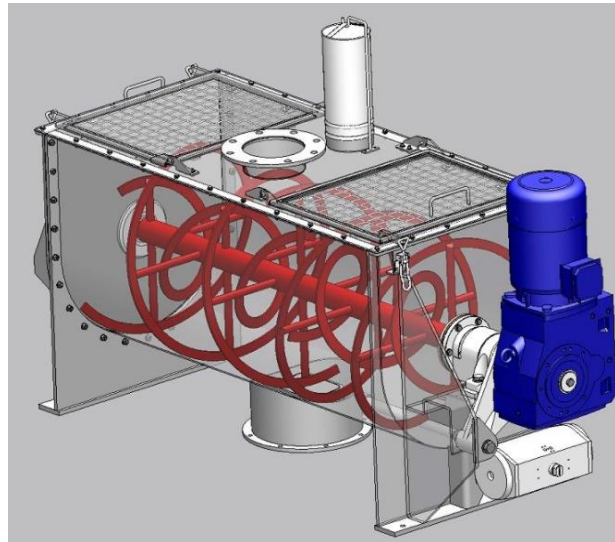
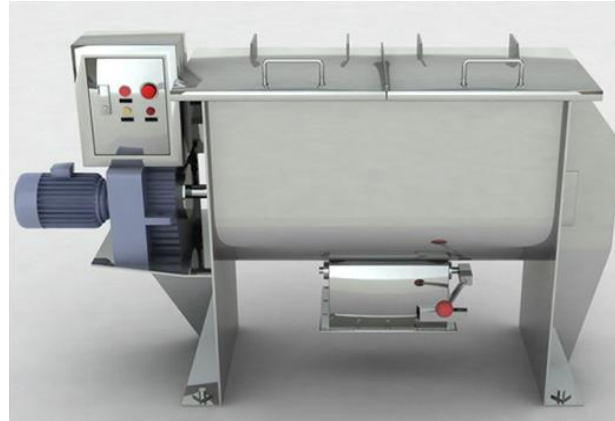
Batch wash machines

Mixers, stirrers, agitators

Machines for dosing, mixing powder, granules, liquids.

Industries:

- Food: fruit dessert, fruit drink, milk, cheese, chocolate, candies, coffee, snacks
- Cosmetics & Pharmaceutical: cream, soap, band aid, silicon implant
- Chemical: wax, oil, polymer, detergent, glue
- Water treatment: flocculant, sludge dewatering, paper



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Mixers, stirrers, agitators



Horizontal mixer



Vertical mixer



Cosmetics



Bulk material mixer



Dairy



Drum mixer



Chocolate



Stirrer

Marine



Anchor winch for boat



Capstan



Capstan



Winch

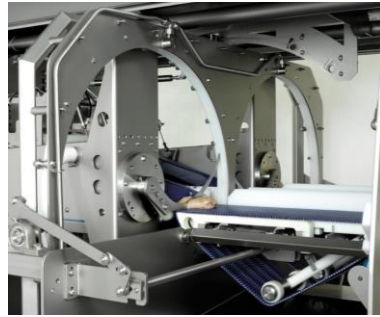


Bellmarine winch

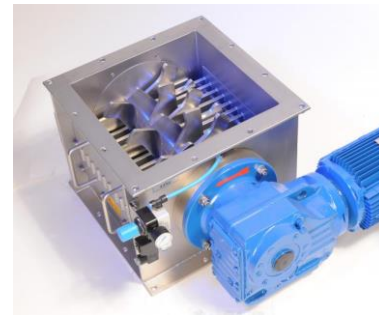
Various



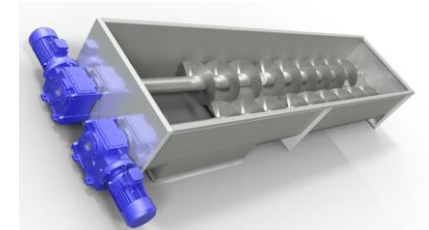
Rotary valve



Portioning



Lump breaker



Screw conveyor



Washing machine



Screw press extruder



Car/jar filling & closing



Screen belt press

Various



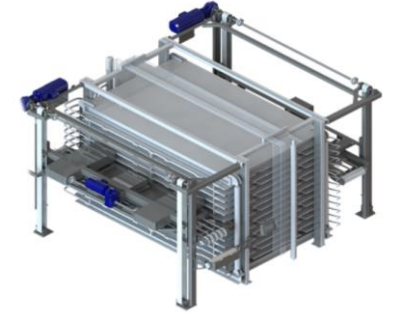
Dry powder dosing



Freezing tunnels



Shrimps cooker



Horizontal freezer



Bakery ovens



Candies machines



Animal feed extruder

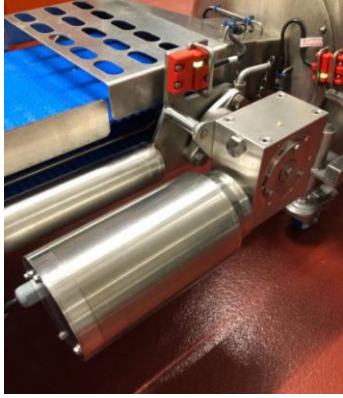


Discharger

CGT examples of applications



Jib crane boom



Pasta conveyor



Washing machine

Focus on plant



Cleaning in place (CIP):

- Detergents
- Rinsing with hot & high pressure water jet



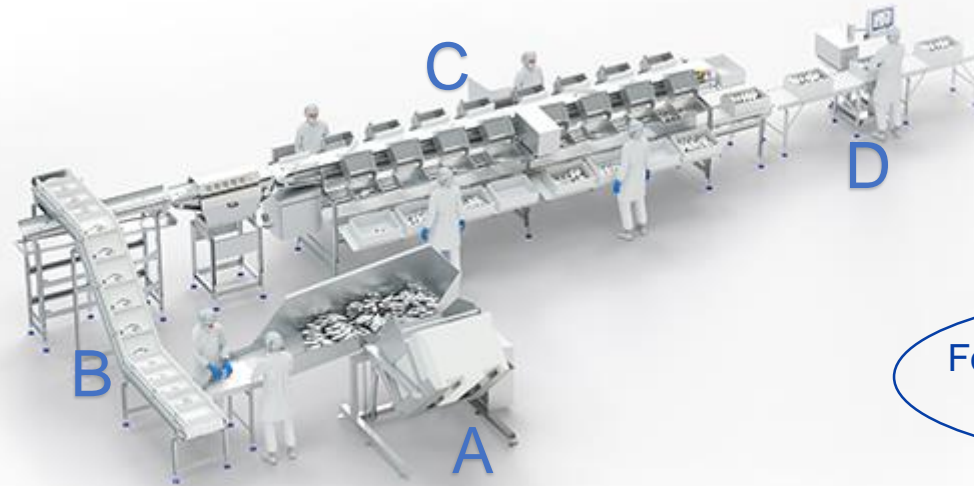
- IP69K
- Smooth surfaces

Resistance to corrosion
(stainless steel or Z)

Hygienic design:
NSF component

Applications:

- A: discharging
- B: belt conveyor
- C: sorting
- D: weighing



For zone with accidental contact
with food

High humidity ambient

Annex: gearboxes life in food ambients

A power transmission component has a **tough life** in food plant, it has to face:

- high pressure and temperature washdown
- high-pH detergents and/or acid rinses
- temperature drops: cold/hot/cold...
- often run faster than it was designed
- not proper maintenance ways

Food industry end users needs by a transmission component:

- Hygienic/easy to clean
- Long life
- Easy maintenance and replacement
- Energy saving

Cleaning

One of the main problem is the wear and tear on the equipment during the cleaning process. A poorly trained cleaning crew can do more damage to equipment than the lack of attention from the maintenance department.

A good hygien design enables cleaning to be done in a shorter time, at lower temperatures and with less aggressive detergents, thus saving time and expenses.

Maintenance

Some processors do a great job monitoring performance and working with good maintenance schedules, but sometimes there is a difference between what is documented and what is practiced.

Common problems are:

- over-lubrication
- improper re-lubrication
- inadequate rinsing and overzealous washdown.

A long life lubricated gearbox avoids mistakes on replacing oils operations.

Painted gearboxes cases



Effects on painted gearboxes



Complicated mounting position
to protect the gearbox

Improper use:

- In order to increase production sometimes food processors run their equipment faster, at higher capacities or longer than the OEM specification (these actions can lead to rapid wear, elongation, noise and, in the end, the premature failure of power transmission drives).
- On a pulleys system, the belt may be over-tightened, which can put excessive loads on the gearbox shafts. This causes overheating and, in some cases, bearing or shaft breakage.
- failing to reinstall the critical sealing gaskets or O-rings in a heavy washdown environment, allows water to seep in
- Wrong oil type

In order to avoid problem concerning chains or belts, it's better to mount a gear reducer directly on the drive shaft with a flanged motor attached

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THANK YOU FOR YOUR ATTENTION