

Gavo

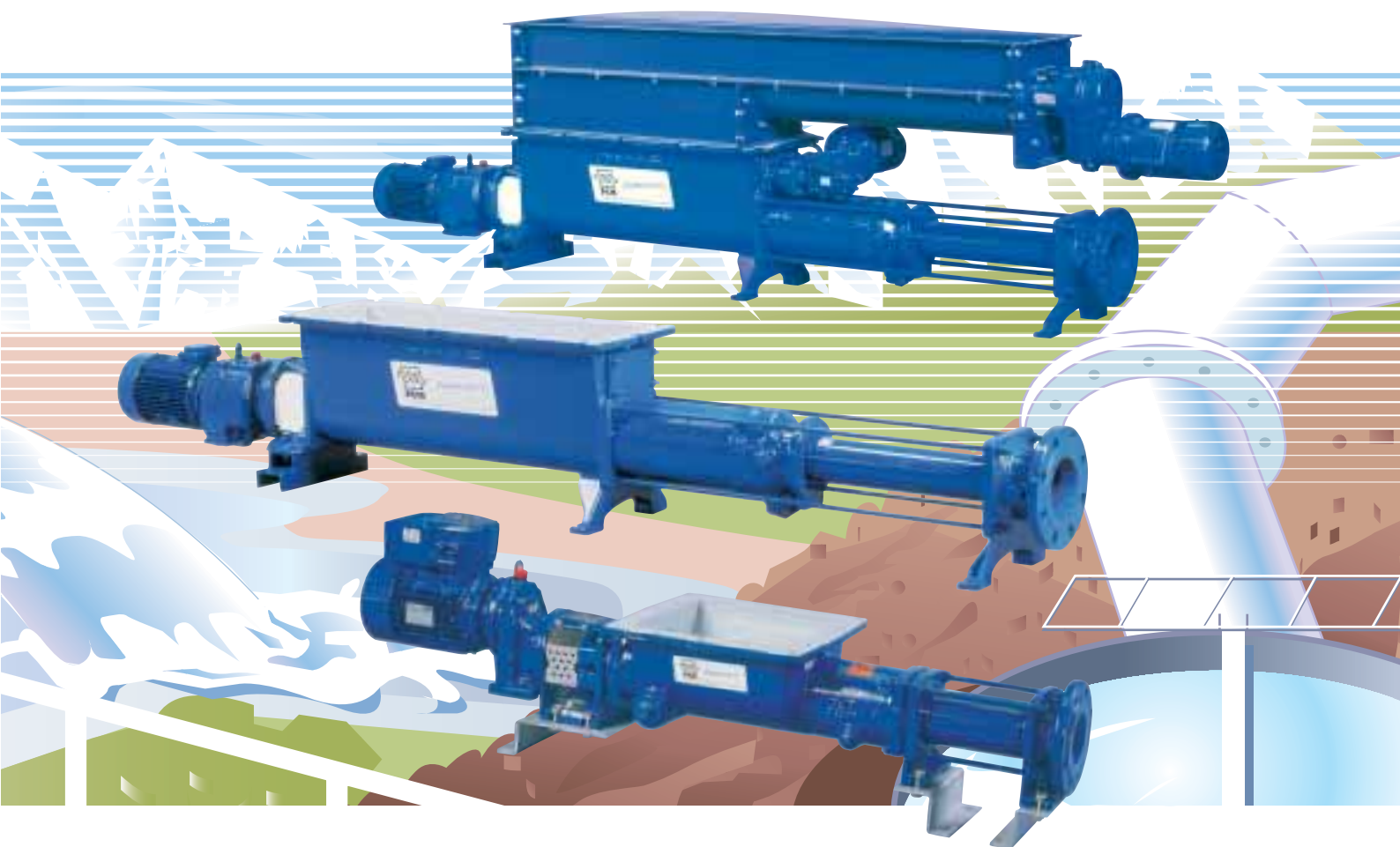
**Cake pumps for sludge treatment
and high viscosity products**

GTA

GCA

GVA

GBB



PCM Keep it moving



▶ Advantages

A full range of cake pumps for the recovery of dewatered sludge and high viscosity products

- Transports sludge with minimum odour
- Allows for mixing in lime treatment applications
- Suitable for all sludge dewatering equipment
- Economical compared to other means of transfer such as :
 - belt conveyor
 - screw conveyor
- Evolutionary depending on the installation service conditions
- An economical alternative to piston pumps for high discharge pressure

Moineau technology

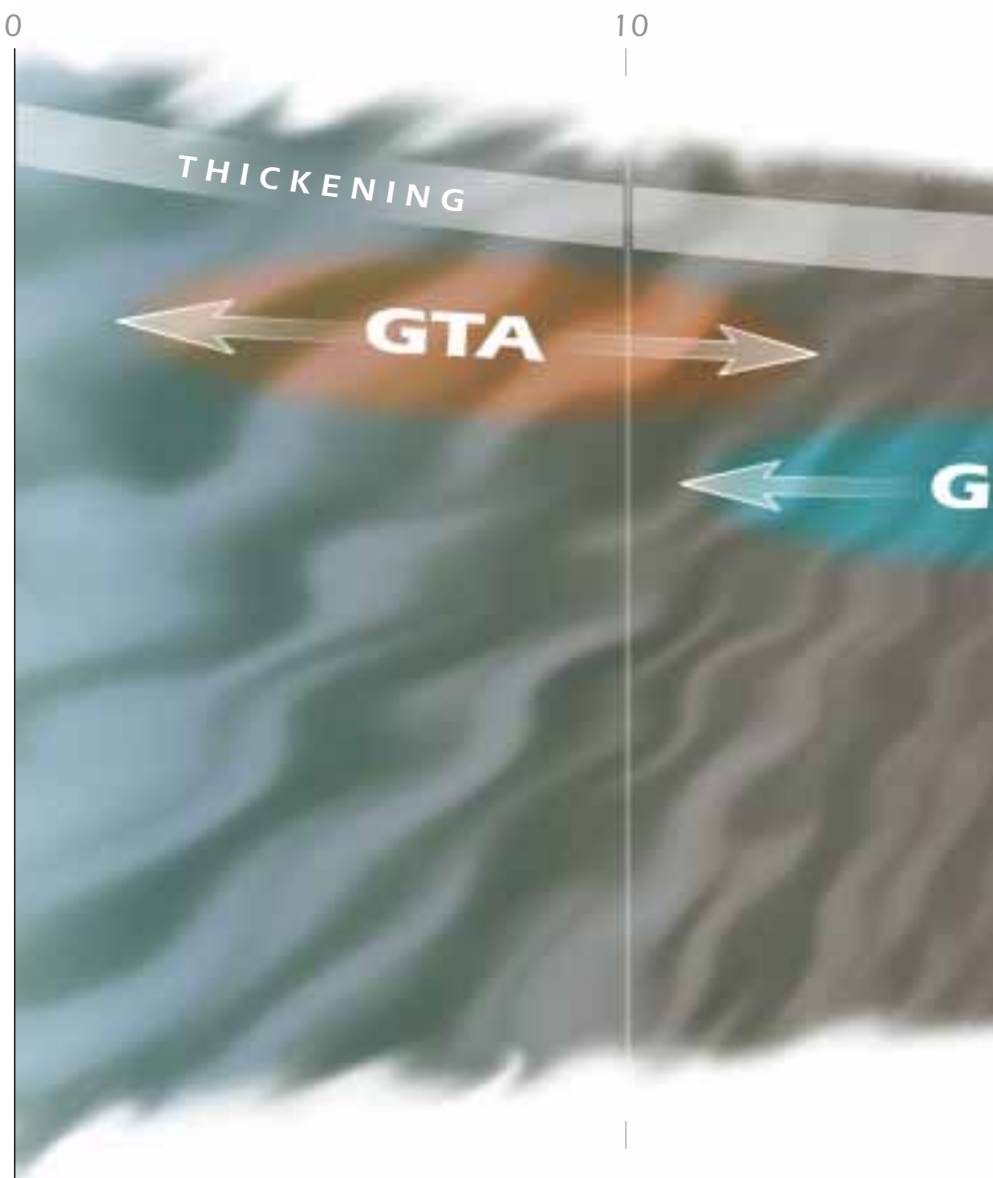
- Respects the product
- Constant, non-pulsating flow (important for feeding drying units, for example)
- Easy maintenance

Characteristics

- Maximum flow rate: up to 32 m³/h (50 m³/h for GCA)
- Maximum pressure: 12 bar – 18 bar – 24 bar
- Maximum temperature in continuous operation: 80 °C
- Standard hopper width: 275 mm
- Standard hopper length for dewatering equipment: 500, 1000 and 1500 mm for basic models
- Adaptation of a transfer system increasing lengths to 2000, 2500 and 3000 mm

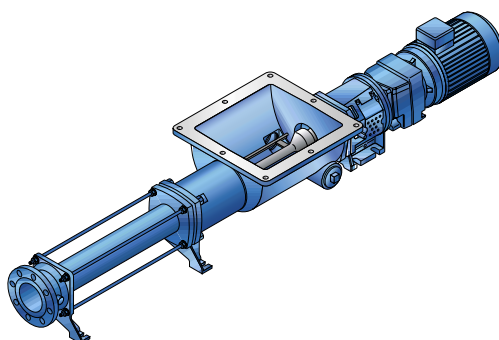
Sludge treatment in environmental applications

Other applications for pasty, hard-to-pump products in all industrial sectors.



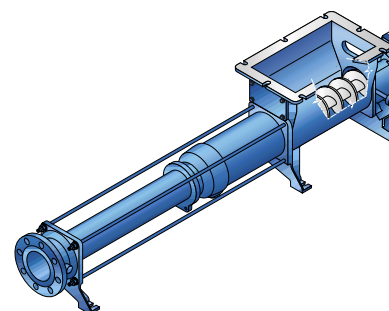
GTA Gavo for belt thickener applications

- ▶ - specifically for thickened sludge
- belt thickener or drum recovery
- low dryness content and variable viscosity

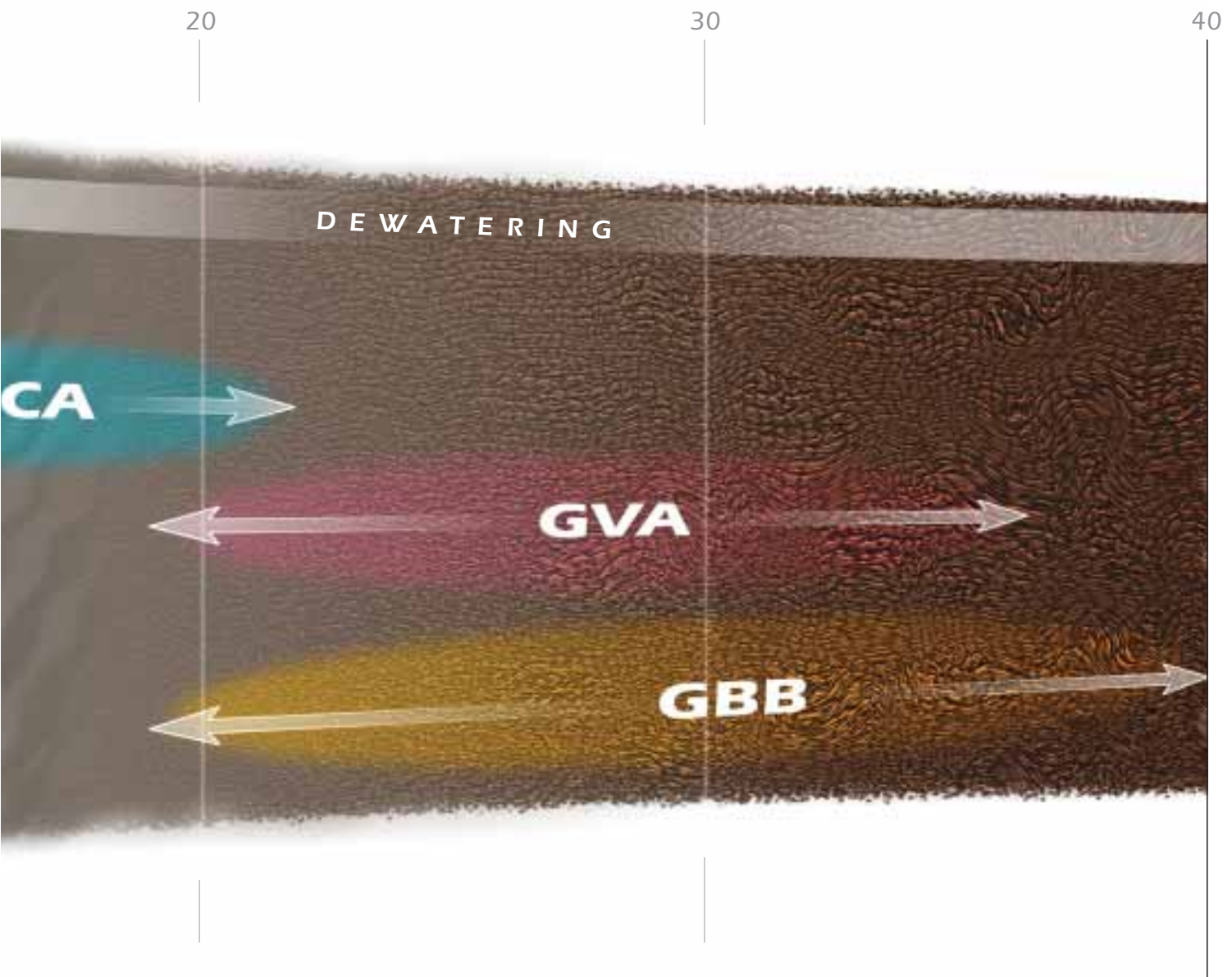


GCA Gavo for centrifuge applications

- ▶ - centrifuge thickening
- non-sticky, pasty products
- low dryness content and low viscosity



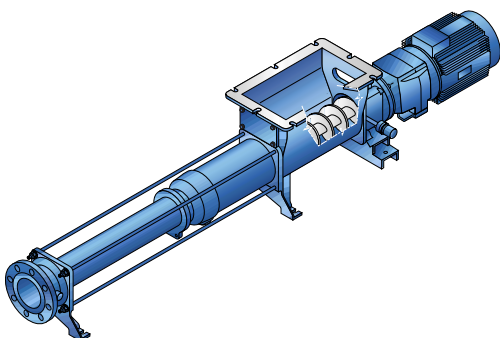
Product range and applications



GVA

Gavo for various applications

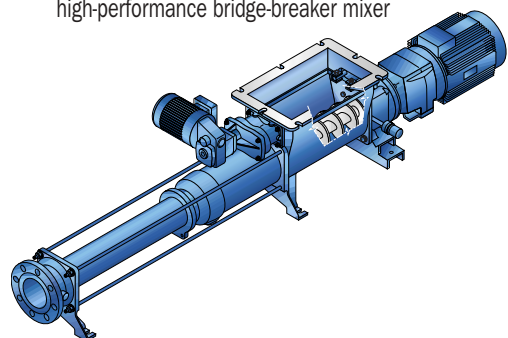
- non-sticky, pasty products
- high dryness content
- high viscosity



GBB

Gavo with bridge-breaker

- sticky, pasty products
- products with high dryness content and high viscosity
- lime treatment possible using a built-in, high-performance bridge-breaker mixer



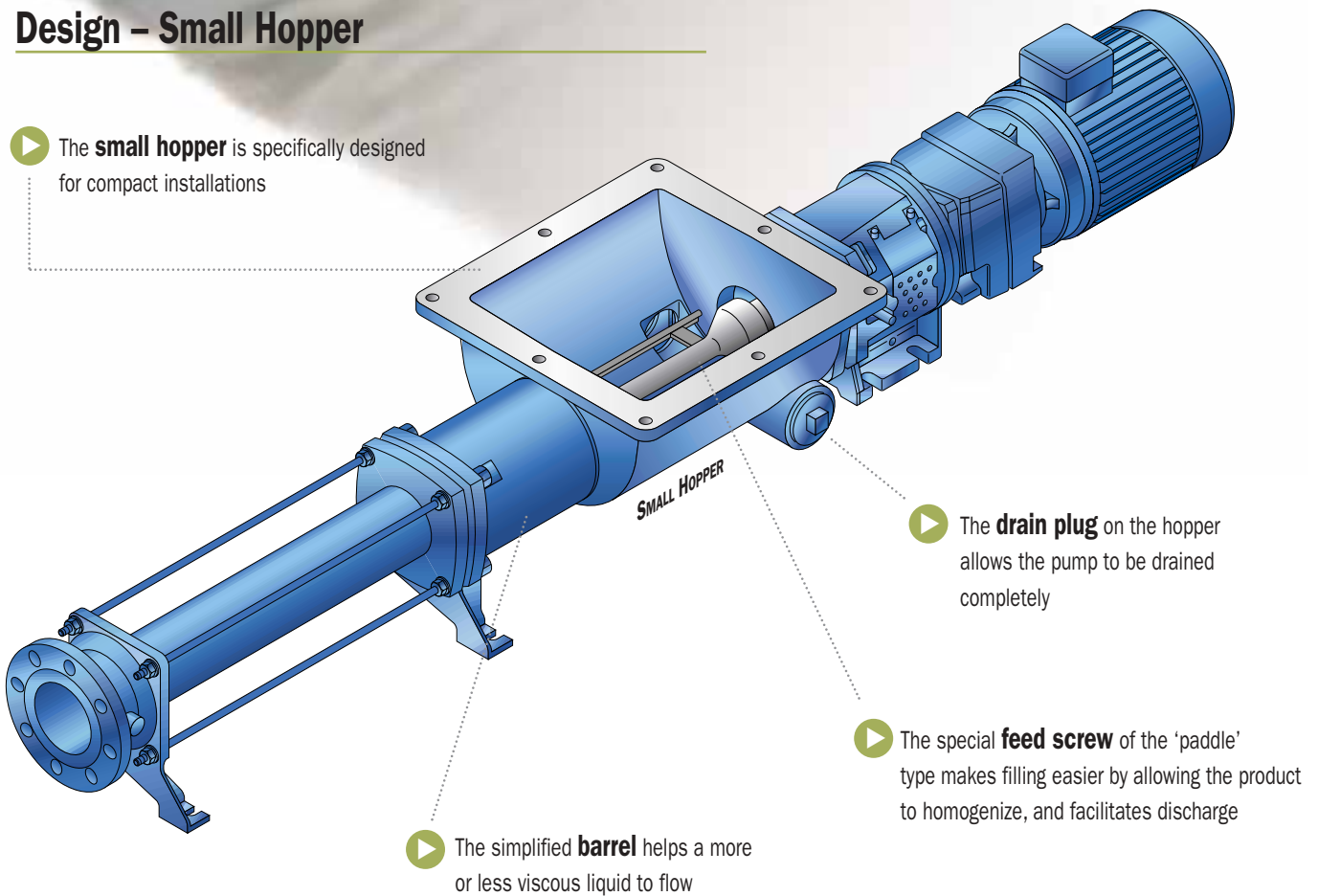
▶ Applications

- specifically for thickened sludge
- belt thickener or drum recovery
- low dryness content
- variable viscosity



Design – Small Hopper

- ▶ The **small hopper** is specifically designed for compact installations



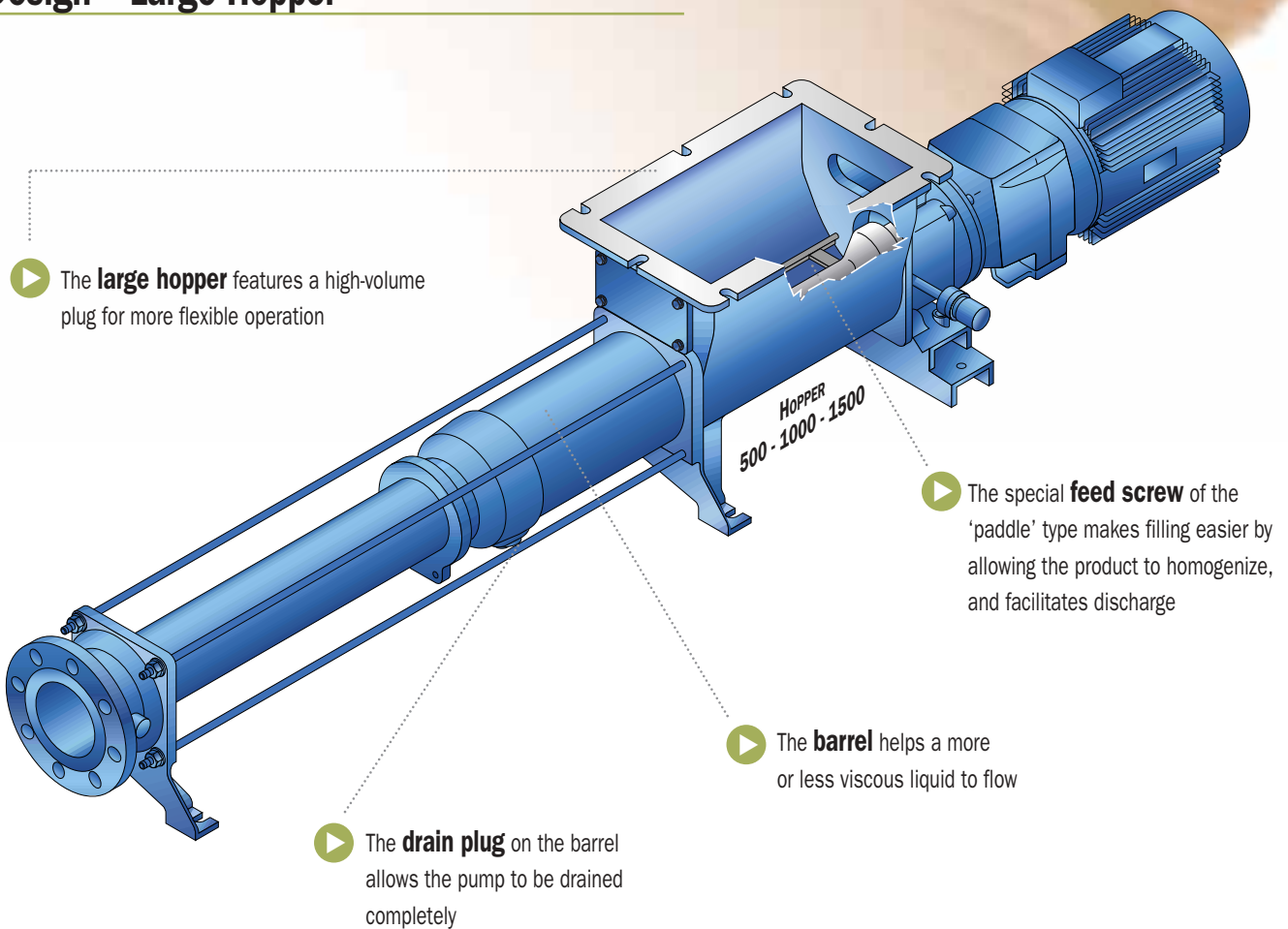
1 25GTA12 fitted with a built-in frequency variation device

2 3 4 recovery of thickened sludge using a belt thickener

▶ Advantages

- compact solution for easier integration
- low investment costs
- lower operating and maintenance costs
- simpler feed screw to prevent deposit forming in the pump
- optimal motorisation for better yield depending on the application

Design – Large Hopper



- ▶ **Maximum characteristics**
 - flow rate up to 30 m³ per hour
 - pressure up to 12 bar
 - hopper up to 1500 mm

Recommended accessories and options

- grease-sealing
- dry running protection
- safety-pressure switch

▶ Applications

- centrifuge thickening
- dewatering using belt filter, centrifuge and other equipment
- transfer of non-sticky, pasty products with no danger of bridging
- pumping of dewatered sludge with low or high dryness content and variable viscosity

GCA

Gavo for centrifuge applications

GVA

Gavo for various applications

Design - Small Hopper

▶ The shape of the **hopper** allows better feeding of the feed screw by limiting bridging risks

▶ The conical, high-yield hydraulic **barrel** guarantees better feeding by promoting the flow of pasty products towards the cavity

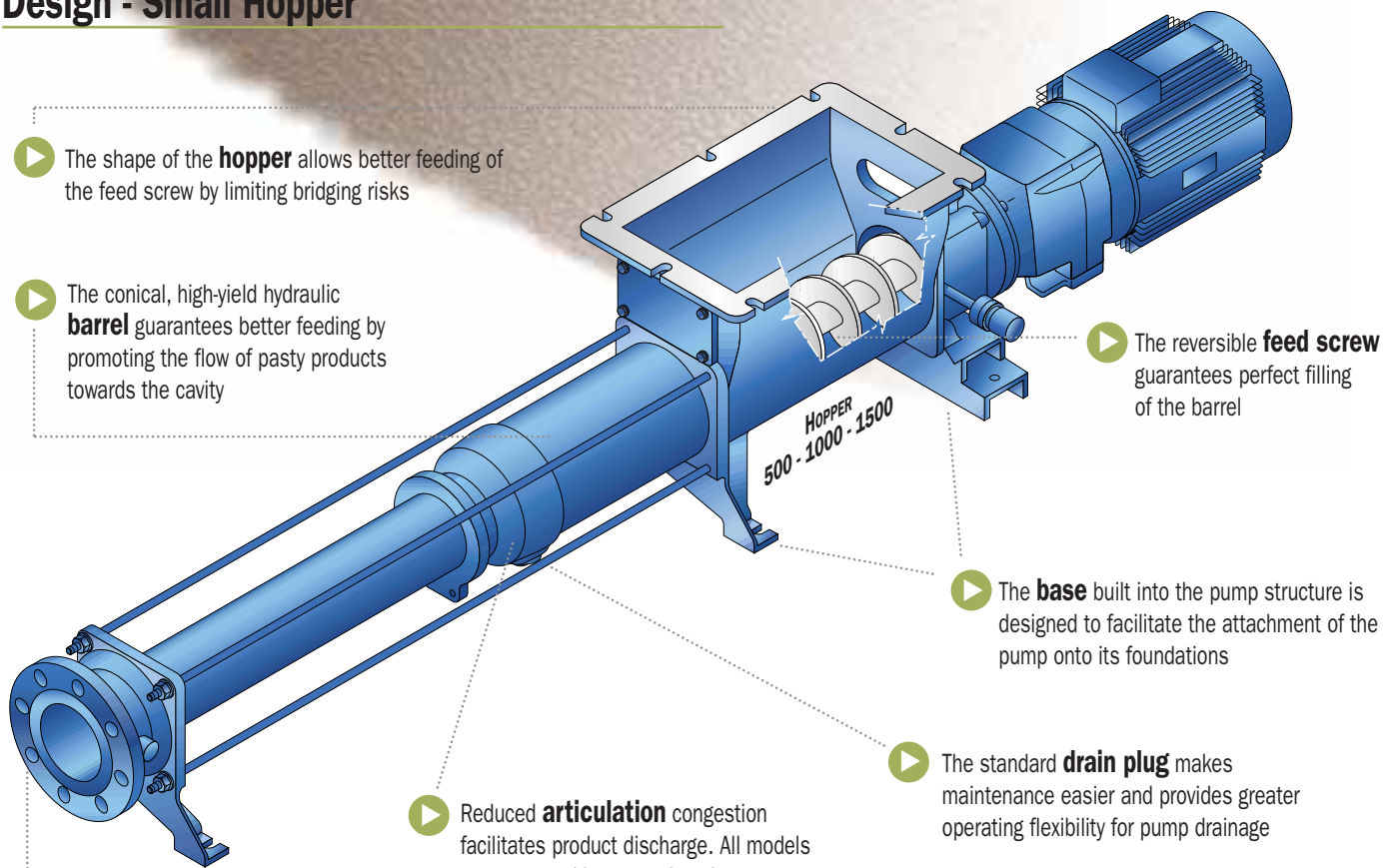
▶ The reversible **feed screw** guarantees perfect filling of the barrel

▶ The **base** built into the pump structure is designed to facilitate the attachment of the pump onto its foundations

▶ The standard **drain plug** makes maintenance easier and provides greater operating flexibility for pump drainage

▶ Reduced **articulation** congestion facilitates product discharge. All models are protected by a metal casing, specifically designed to work with abrasive products

▶ The **discharge pipe** includes a tube lubrication device for better management of discharge pressure during pumping of difficult products



1

1 detail of transfer zone on a 2000 mm GVA



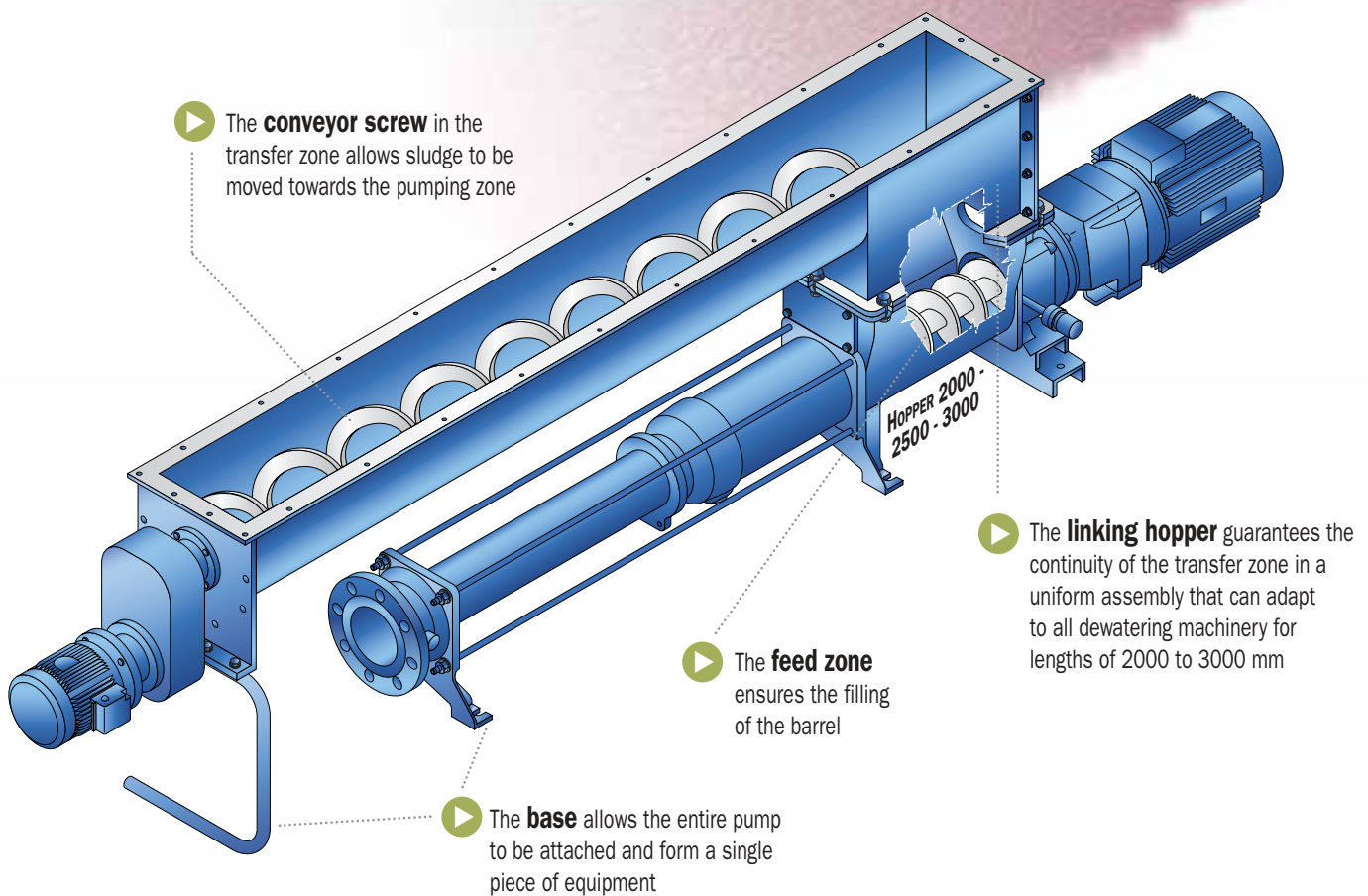
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2 GCA with centrifuge outlet

▶ Advantages

- improved fluid circulation owing to the shape of the hopper
- optimal discharge for the application and the site's service conditions
- evolutionary depending on the site's service conditions
- large hopper pump
 - up to 25% shorter than a conventional solution
 - simpler maintenance, faster and easier operation
 - lower-cost spare parts

Design - Large Hopper



3



4

3 recovery of sludge with silo outlet

4 recovery of sludge for furnace feeding

- ▶ **Maximum characteristics**
- flow rate up to 50 or 30 m³ per hour
 - pressure up to 24 bar
 - hopper up to 3000 mm

Recommended accessories and options

- grease-sealing
- dry running protection
- safety-pressure switch
- flow rate managed by level control
- polymer lubrication

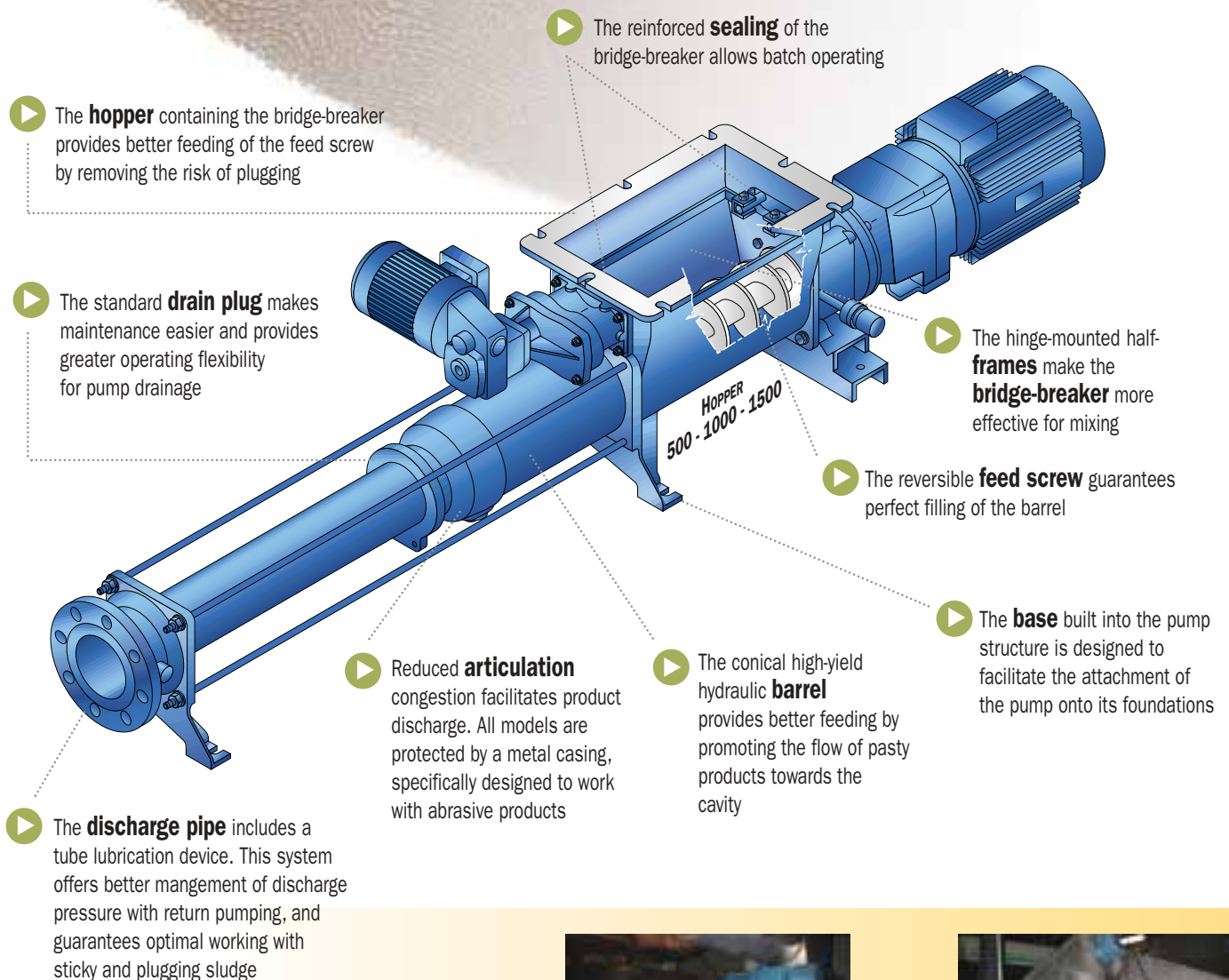
▶ Applications

- transfer of sticky, pasty products that tend to bridge
- pumping of products with high dryness content and high viscosity
- specifically designed for lime treatment applications

GBB

**Gavo with
bridge-breaker**

Design - Small Hopper



1

1 feeding of a GBB with silo outlet



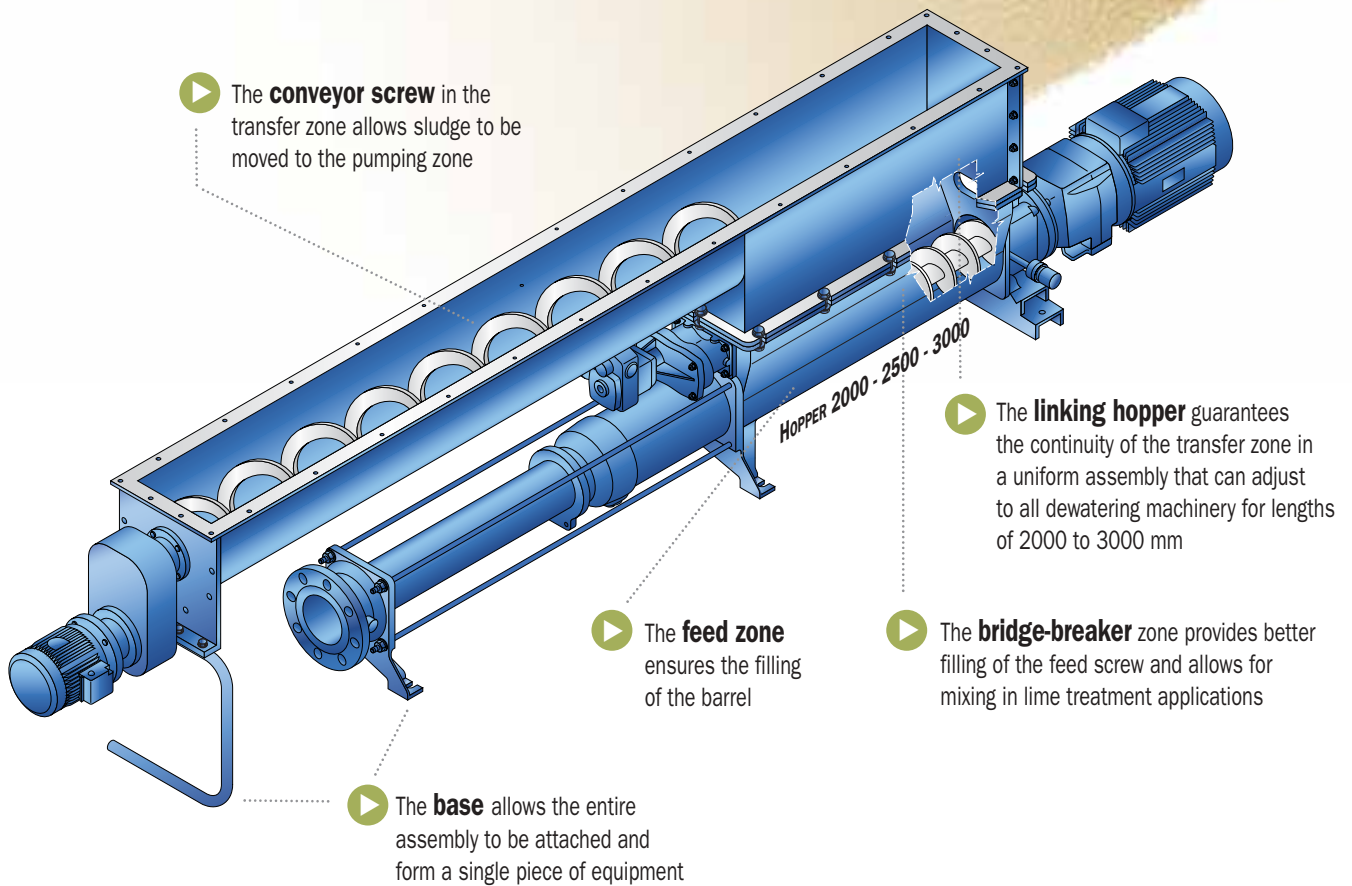
2

2 transfer of sludge with 2 centrifuges for lime treatment applications

▶ Advantages

- half-frame bridge-breaker specifically for mixing
- high-yield barrel
- control of sludge level under the bridge-breaker
- optimal discharge for different applications and the site's service conditions
- evolutionary depending on the site's service conditions
- large hopper pump
 - up to 25% shorter than a conventional solution
 - simpler maintenance, faster and easier operation
 - far less strain on mechanical parts
 - lower-cost spare parts

Design - Large Hopper



3



4

3 recovery of sticky sludge with belt filter and lubrication

4 centrifuge recovery of sludge

- ▶ **Maximum characteristics**
- flow rate up to 32 m³ per hour
 - pressure up to 24 bar
 - hopper up to 1500 mm

Recommended accessories and options

- grease-sealing
- dry running protection
- safety-pressure switch
- flow rate managed by level control
- polymer lubrication

Process fun

All ranges have been developed by optimizing all the LCC (Life Cycle Costs) components.

Polymer lubrication

▶ Advantages

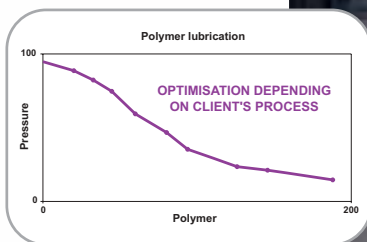
- injection in the form of a lubricating film guaranteeing better yield
- less strain on wearing parts
- reduced operating costs
- evolutionary equipment which can be built into all Gavo pumps

▶ Applications

- transfer over long distances
- reduction of discharge pressure

▶ PCM Offer

- all equipment for operation is provided
- installation safety gear included
- choice of injection pumps adapted to the configuration of the client's process



- reduction of discharge pressure
- lubrication incorporated in **Gavo** pumps

- optimises operation of **Gavo** pumps
- compatible with level control



1



2



3

Functions for Gavo

The use of Process Functions reduces costs even further.

Level management

▶ Advantages

- control of sludge level under the bridge-breaker
- optimal functioning of Gavo
- secured installation
- more homogenous mix of sludge and lime
- no overflow problems

▶ Applications

- variable flow rate functioning
- flow rate controlled by a process function
- built in high and low safety devices
- automatic control of lime injection

▶ PCM Offer

- equipment built into client's control panel
- control box installed locally
- turnkey control panel and installation



- measuring device adapted to equipment's configuration
- adaptation of receptor for difficult environments
- mounted receptor allows better integration
- compatible with lime treatment applications
- locally installed or distant control box



4



5



6

4 level control built into a control box

5 6 level control in lime treatment applications



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