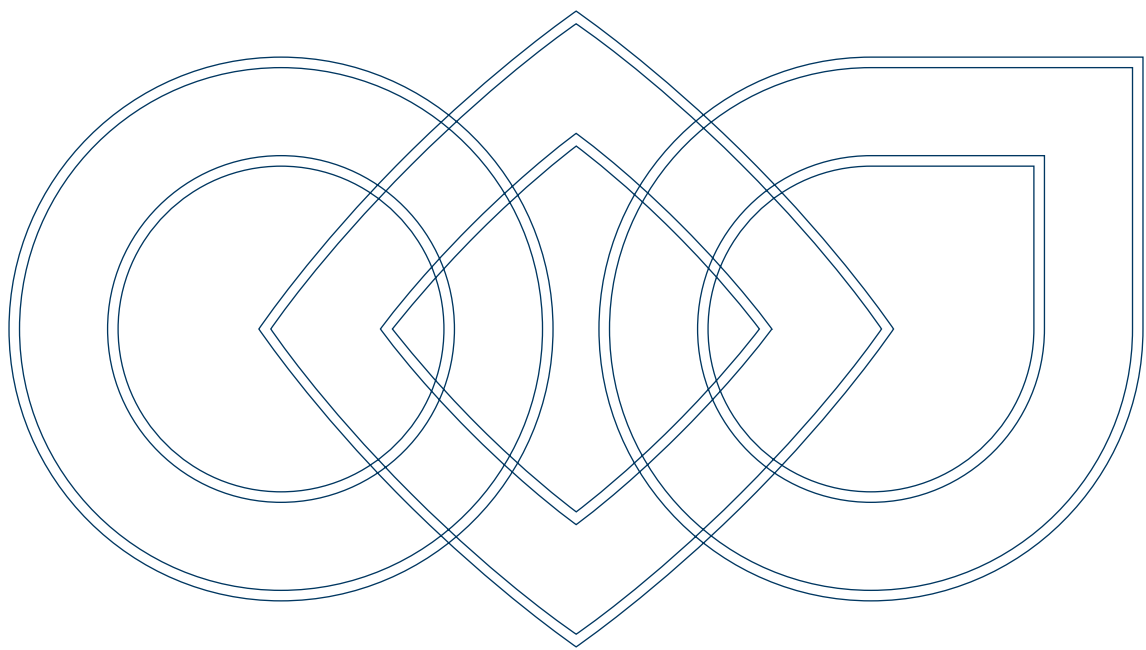


Solutions for
**Food & Beverage
Processing**



SECTOR



THE WIDEST RANGE OF SOLUTIONS FOR FOOD & BEVERAGE PROCESSING AND MACHINERY

Within the Food & Beverage industry, Bonfiglioli offers a diverse range of solutions for all types of applications. We have decades of experience in developing customized solutions for the most challenging applications around the world and incomparable expertise in typical Food & Beverage processing applications.

Some of the biggest product lines and most advanced applications in the world are powered by at least one Bonfiglioli solution, final drive, gearbox, gearmotor or inverter.

Bonfiglioli also offers special products for hygienic, explosion-proof and enhanced protection, developed to deliver the reliability and durability typically demanded by the Food & Beverage sector.

BONFIGLIOLI HAS ALL THE EXPERIENCE NEEDED TO SUPPORT PLANTS FOR:



Grain Handling and Milling

Pag. 4 to 7



Food Baking

Pag. 8 to 11



Fruit and Beverage Processing

Pag. 12 to 15

BONFIGLIOLI ALSO PROVIDES SOLUTIONS FOR:



Fish & Meat Processing



Poultry Processing



Dairy Processing



Packaging

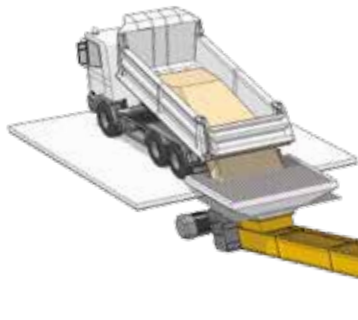


BONFIGLIOLI SOLUTIONS SERVE ALL THE FOLLOWING TYPES OF FOOD PROCESSING EQUIPMENT

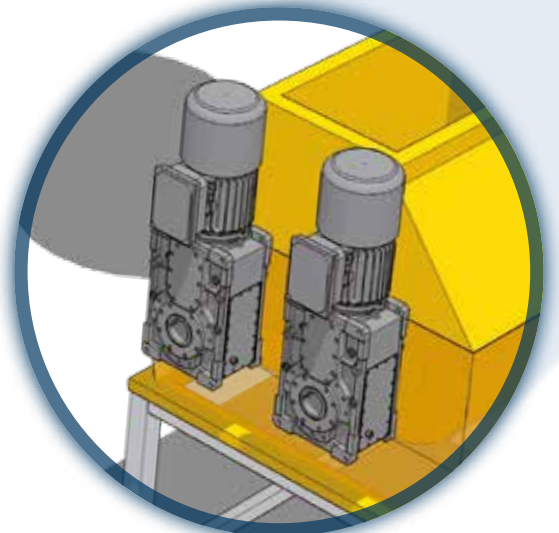
- Drying and cooking machines
- Extrusion machines (Food and Pet Food)
- Freezing and chilling lines
(spiral freezers, tunnel freezers, carton freezers, ...)
- Grading and sorting machines
- Grain logistic systems
- Grinding and flaking machines
- Homogenizing machines
- Milling machines
- Mixing / Stirring machines
- Presses
- Rendering systems
- Conveyors

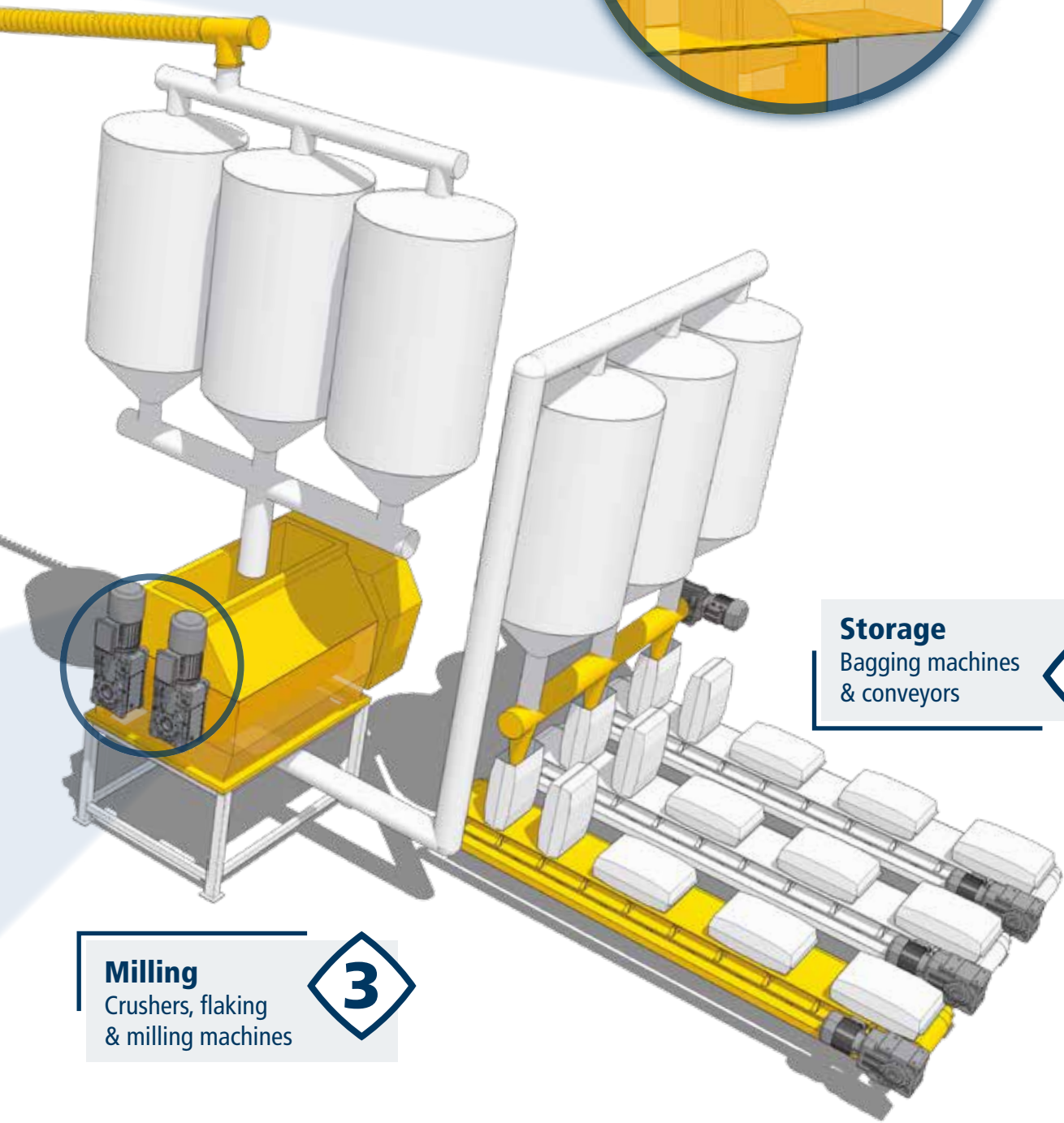
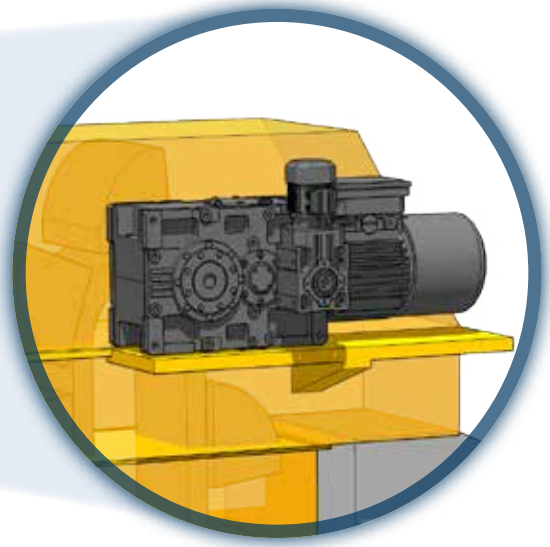
GRAIN HANDLING AND MILLING

1 **Screening**
Drag conveyor



2 **Handling**
Bucket elevator
& screw feeder





Storage

Bagging machines
& conveyors

4

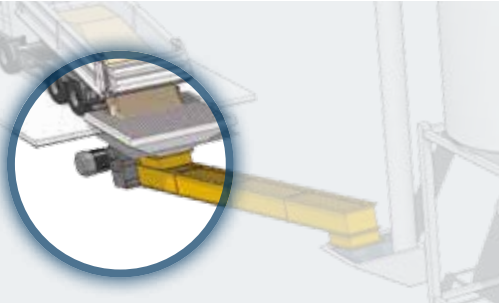
Milling

Crushers, flaking
& milling machines

3

GRAIN HANDLING AND MILLING

1



Screening

Solutions for drag conveyors

F - Shaft mounted gearmotors



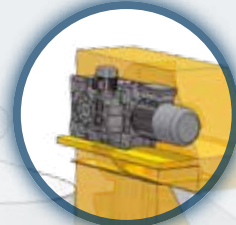
BENEFITS

- Easy installation
- Quiet operation
- High torque capabilities

FEATURES

- ATEX compliant product line (according to Directive 2014/34/EU)
- Keyed hollow shaft - two bore options per size, keyless shrink disc fitting (metric series)
- Keyed hollow shaft (inch series)
- Backstop device
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- High and premium efficiency motors (IE2, IE3)
- Heater and tropicalized wiring
- Anti-condensation drain
- Energy efficiency approval by DOE (USA Department of Energy) and NRCAN (Natural Resources Canada)

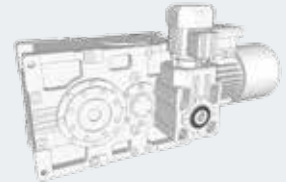
2



Handling

Solutions for bucket elevators

HDO - Heavy duty gearbox combined with **A** - Helical bevel gearmotors



BENEFITS

- Compact design
- High power capacity
- Modular concept

FEATURES

- Auxiliary drives (maintenance or load drives)
- Backstop and over-run clutch device
- Monitoring devices
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- Brake motors up to 30kW (4 poles)
- DC brake type
- Micro-switch (control of brake operation)
- Heater and tropicalized wiring
- Forced ventilation with independent cooling

Active Cube - Premium Inverter



BENEFITS

- IP54 option
- Smooth start
- Torque control
- Motor temperature monitoring

FEATURES

- Wide power range and parallel connection option to reach up to 1200 kW
- Integrated torque off safety function, external 24 Vdc control power supply
- IP 54
- Tropicalization option
- Main software features:
 - Integrated PLC function with graphic development environment
 - Torque limitation

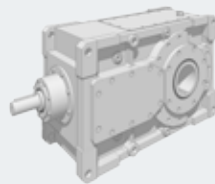
3



Milling

Solutions for flaking and milling machines

HDO - Heavy duty gearmotors (bevel-helical)



BENEFITS

- Superior torque performance
- Extensive customization
- Rigidity and stiffness for vibration-free operation

FEATURES

- Integrated forced lubrication
- Taconite seals
- Protective hollow shaft cover
- Monitoring devices
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- High and premium efficiency motors (IE2, IE3)
- Thermal protection (bi-Metallic, PTC or KTY)
- Protective canopy
- Rotor balancing class A (standard) or B (available on request)

Agile - Smart inverter



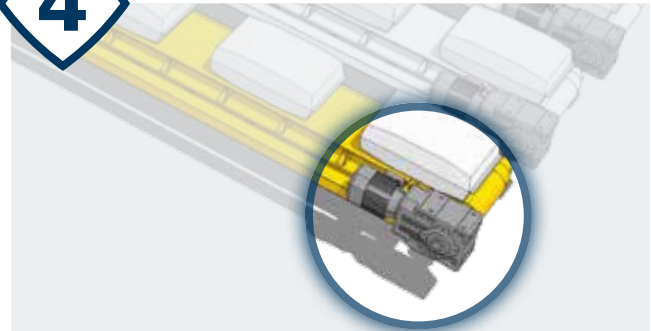
BENEFITS

- Smooth start
- Feed roll control
- Low energy consumption

FEATURES

- Sensor-less vector control for asynchronous and synchronous motors
- Integrated torque off safety function
- Integrated Modbus
- Optional communication card (Profibus, CanOpen.....)
- Tropicalization option
- Main software features:
 - Energy saving function
 - Integrated PLC function with graphic development environment
 - Torque limitation

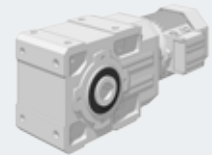
4



Storage

Solutions for bagging machines and conveyors

A - Bevel-helical gearmotors



BENEFITS

- Compact
- Universal mounting
- Modular design



FEATURES

- ATEX compliant product line (according to Directive 2014/34/EU)
- Keyed hollow shaft (metric and inch series)
- Taconite seals option for larger sizes
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- High and premium efficiency motors (IE2, IE3)
- Protection rating up to IP65
- Wide range of feedback devices (incremental and absolute encoders)
- Wide range of connectors

Active - Standard AC drive



BENEFITS

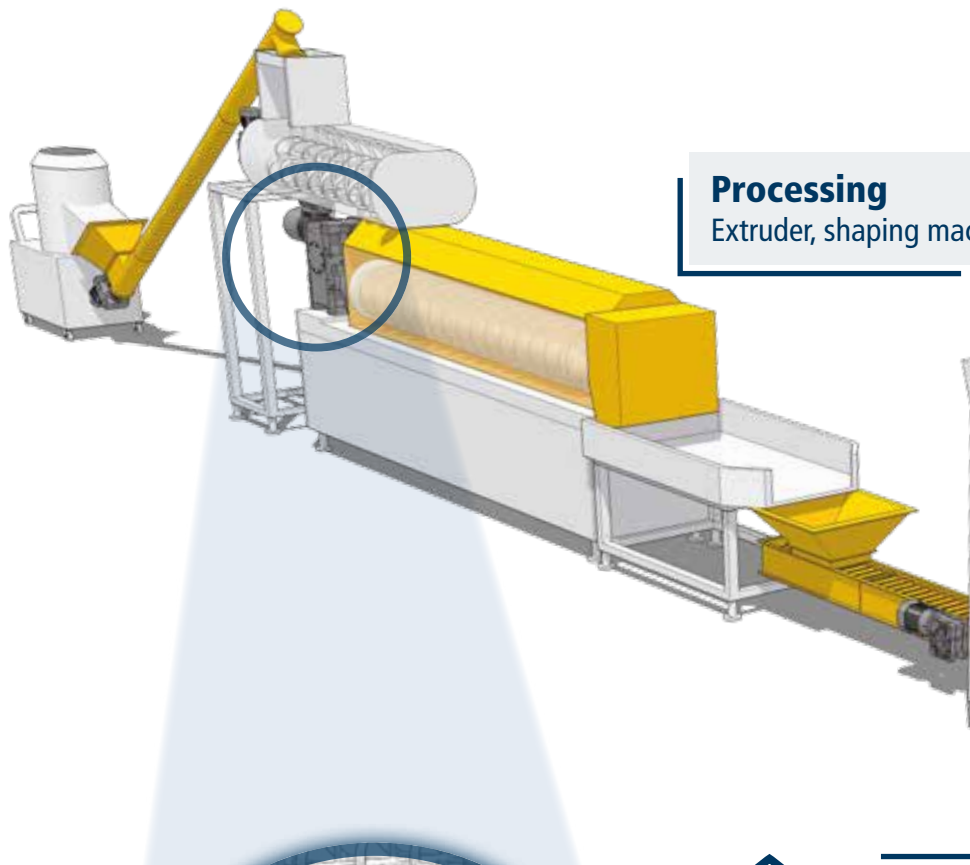
- Speed control
- Smooth start

FEATURES

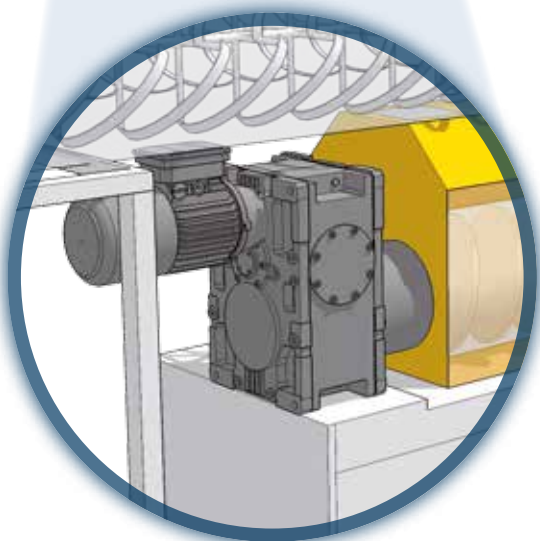
- Motor temperature monitoring
- Main software features:
 - Auto start-up and commissioning
 - Auto start after power failure

FOOD BAKING

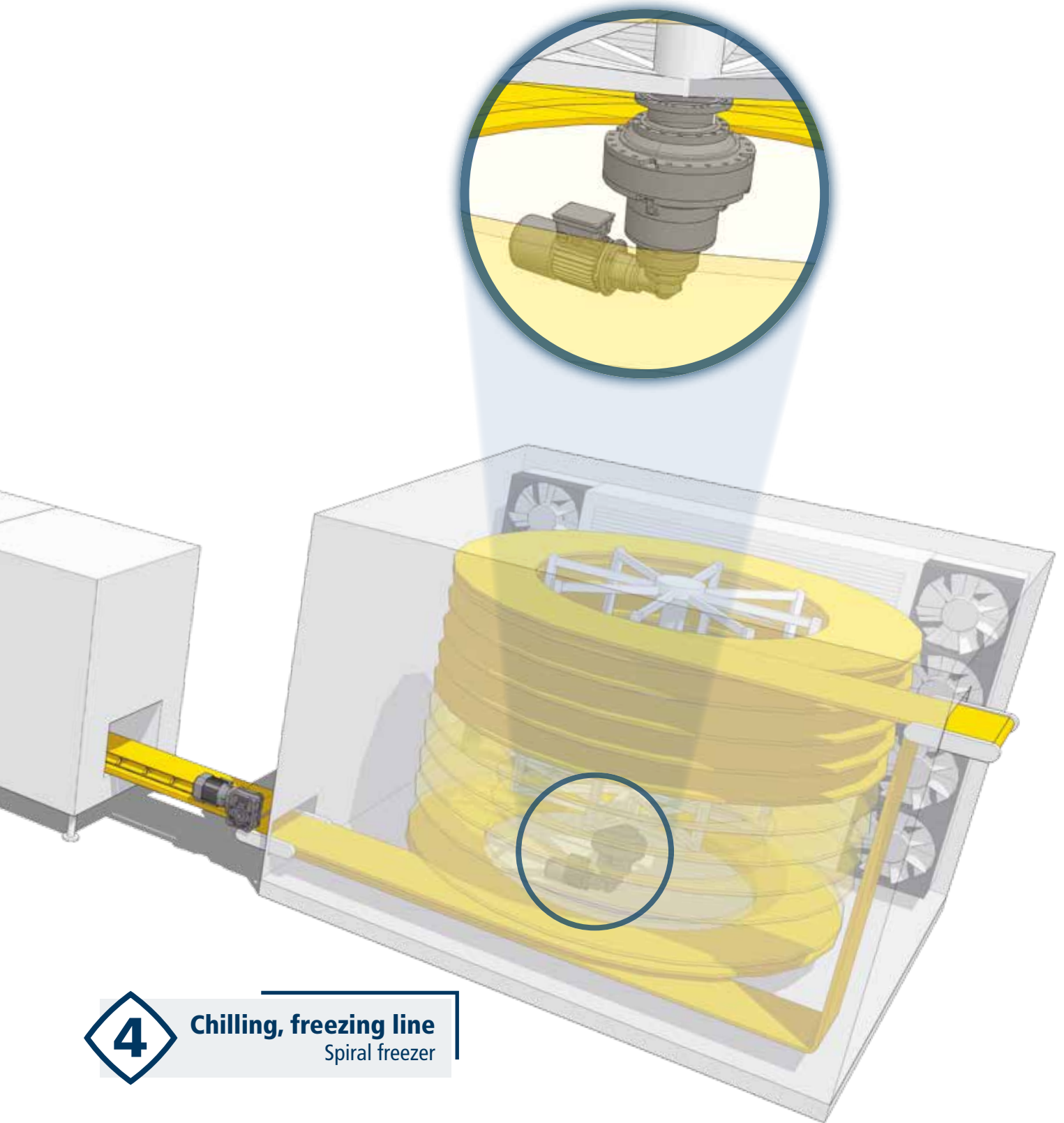
Raw material handling
Feed system, conveyor, mixer



Processing
Extruder, shaping machine



Drying & cooking line
Oven, dryer, frying machine



4

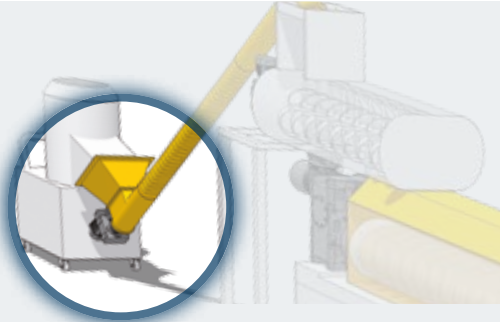
Chilling, freezing line
Spiral freezer

PACKAGING PROCESS SOLUTIONS ►

Visit www.bonfiglioli.com for more information.

FOOD BAKING

1



Raw material handling

Solutions for feeding systems

F - Shaft mounted gearmotors



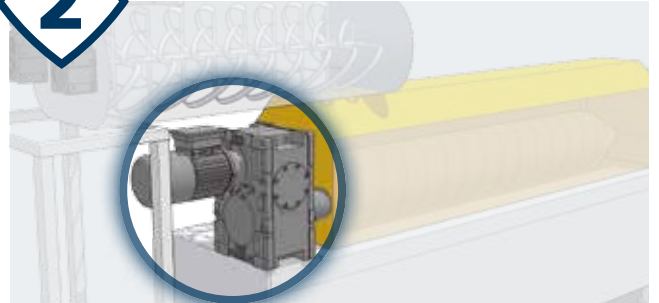
BENEFITS

- Easy installation
- Quiet operation
- High torque capabilities

FEATURES

- Keyed hollow shaft - two bore options per size, keyless shrink disc fitting (metric series)
- Keyed hollow shaft (inch series)
- Backstop device
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- High and premium efficiency motors (IE2, IE3)
- Protection rating up to IP65
- Thermal protection (bi-metallic, PTC or KTY)
- Heater and tropicalized wiring

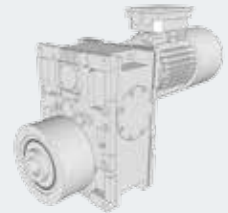
2



Processing

Solutions for extruders

HDPE - Extruder gearmotors



BENEFITS

- Specially developed for single-screw extrusion machines
- Sturdy gearbox casing
- Customized extruder screw/cylinder interface dimensions

FEATURES

- Application-specific thrust bearing design
- Radial roller bearings on output shaft
- External cooling and forced lubrication
- Lubrication shared between gearbox casing and screw box
- High and premium efficiency motors (IE2, IE3)
- Protection rating up to IP65
- Thermal protection (bi-metallic, PTC or KTY)
- Heater and tropicalized wiring

Active Cube - Premium inverter



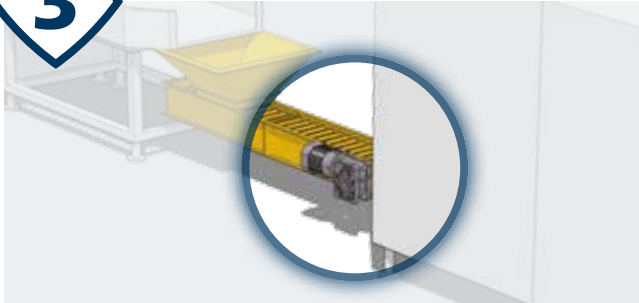
BENEFITS

- Soft start
- Positioning mode

FEATURES

- Wide power range and parallel connection option to reach up to 1200 kW
- Integrated torque off safety function, external 24 Vdc control power supply
- IP 54
- Tropicalization option
- Main software features:
 - Integrated PLC function with graphic development environment
 - Torque limitation

3



Drying and cooking line

Solutions for ovens, dryers and frying machines

W/EP - Worm gearmotors with enhanced protection



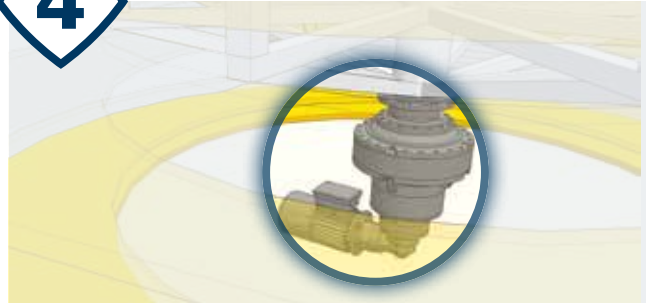
BENEFITS

- Price effective
- Uncompromising quality
- Specially designed for food & beverage industries

FEATURES

- Epoxy coating (USDA approved for incidental food contact)
- AISI 316 stainless steel output shaft and stainless steel fasteners
- Food grade UH1 synthetic lubricant
- High and premium efficiency motors (IE2, IE3)
- Protection rating up to IP65
- Thermal protection (bi-metallic, PTC or KTY)
- Heater and tropicalized wiring
- Insulation class F (standard) or H (available on request)

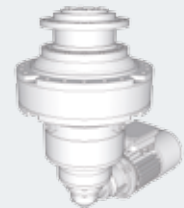
4



Chilling, freezing line

Solutions for spiral freezers

300 - Planetary gearmotors



BENEFITS

- High shock load resistance
- Compact design
- Highly versatile configuration

FEATURES

- 5-stage planetary bevel gearmotors
- Special lubricant and seals for low temperature applications
- Water defender system
- High and premium efficiency motors (IE2, IE3)
- Protection rating up to IP65
- Thermal protection (bi-metallic, PTC or KTY)
- Anti-condensation heaters
- Total Quality inspection certificate

Active Cube and/or Agile - Smart Inverter



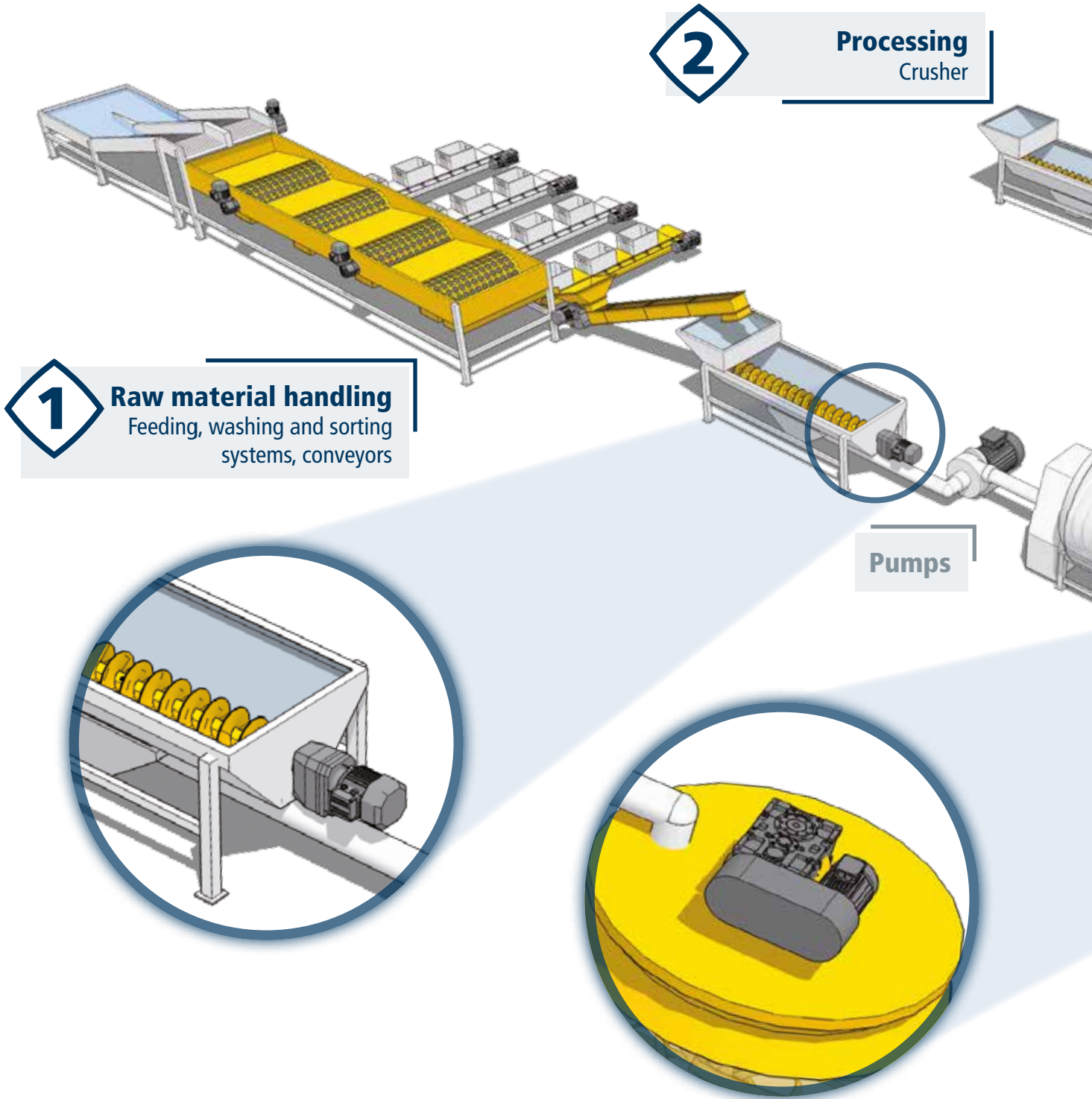
BENEFITS

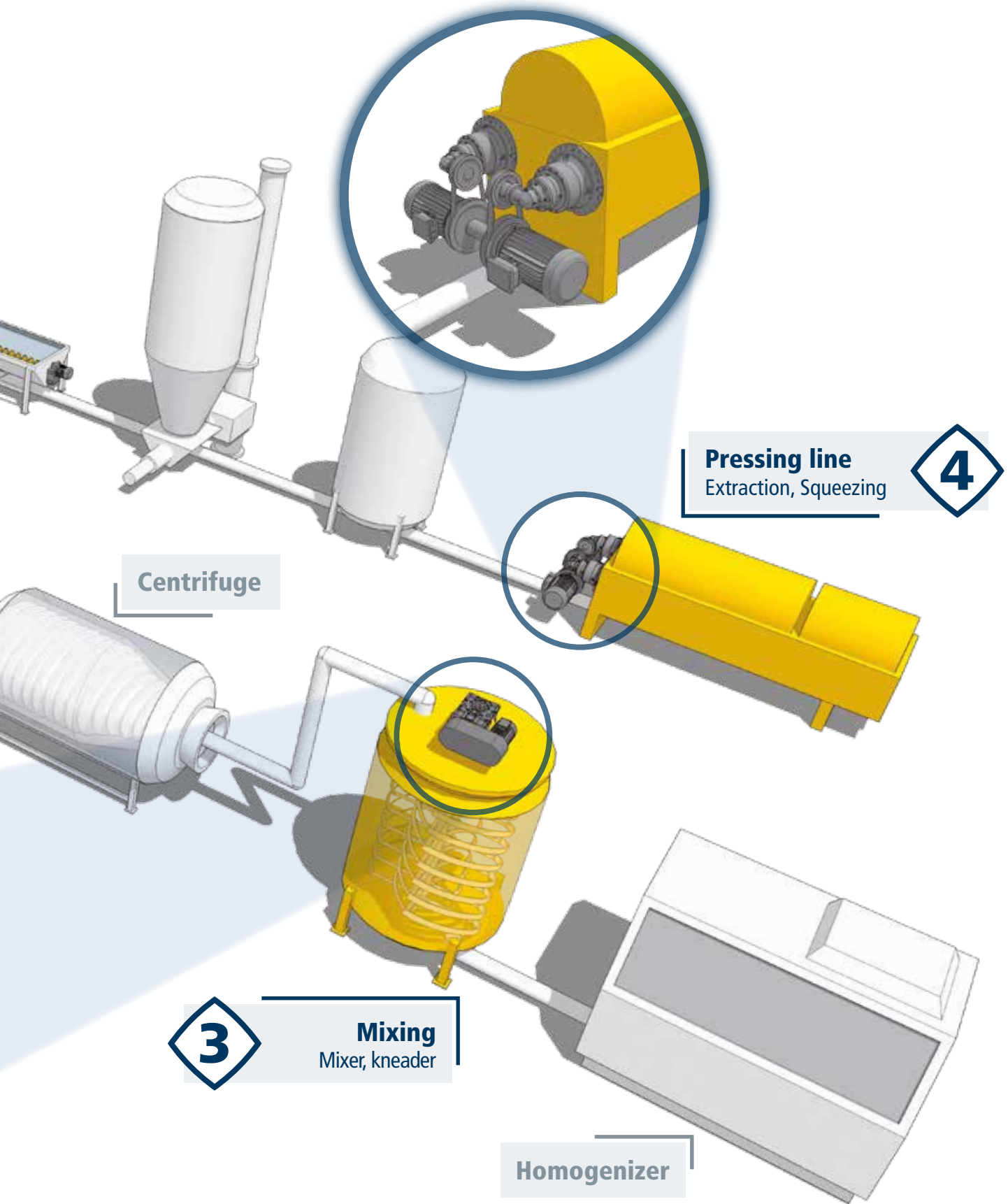
- Better control of air cooling system
- Energy efficiency

FEATURES

- Wide power range from 0.25 to 400 kW
- Coated PCBs
- Integrated PLC function with graphic development environment
- Torque limitation

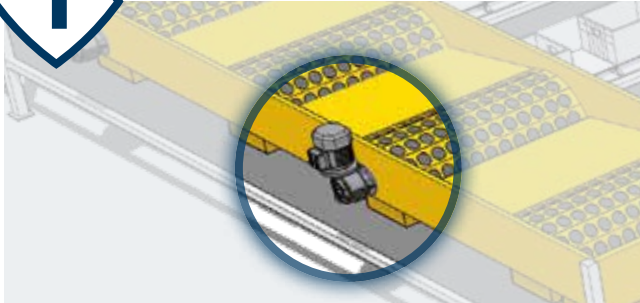
FRUIT AND BEVERAGE PROCESSING





FRUIT AND BEVERAGE PROCESSING

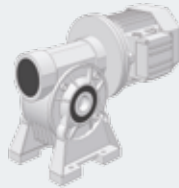
1



Raw material handling

Solutions for washing and sorting machines

VF/EP - Worm gearmotors with enhanced protection



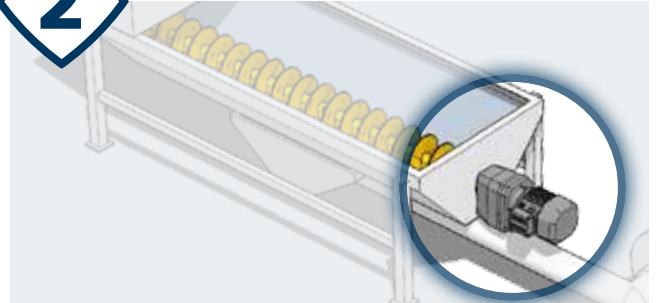
BENEFITS

- Price effective
- Uncompromising quality
- Various mounting options, shaft configurations and motor interfaces

FEATURES

- Epoxy coating (USDA approved for incidental food contact)
- AISI 316 stainless steel output shaft and stainless steel fasteners
- Food grade UH1 synthetic lubricant
- High and premium efficiency motors (IE2, IE3)
- Rain canopy to protect motor from water
- Tropicalized wiring
- Anti-condensation drain

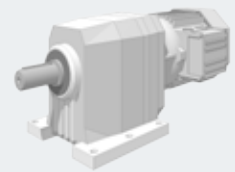
2



Processing

Solutions for crushers

C - Helical inline gearmotors



BENEFITS

- Excellent torque density
- Ultra-compact design
- Very wide speed range

FEATURES

- Extensive choice of bolt-on output flanges
- Special seals set for applications in harsh environments
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- High and premium efficiency motors (IE2, IE3)
- Motor shaft extension
- Tropicalized wiring
- Anti-condensation drain

Agile - Smart Inverter

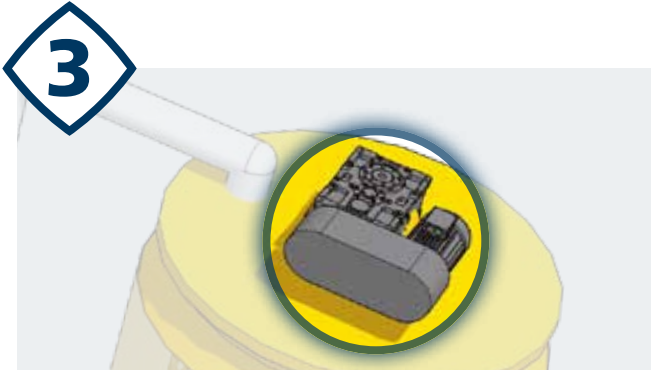


BENEFITS

- Smooth start
- Variable "cut position" for smaller particles
- Energy saving function: current consumption redirection during start phase

FEATURES

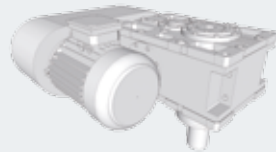
- Sensor-less vector control for asynchronous motors
- Integrated braking module
- Integrated torque off safety function
- Integrated Modbus
- Tropicalization option
- Main software features:
 - Energy saving function
 - Integrated PLC function with graphic development environment
 - Torque limitation



Mixing

Solutions for mixers and kneaders

HD - Heavy duty gearmotors with reinforced shaft



BENEFITS

- Solution co-engineered with customer
- Quiet operation
- High torque capabilities

FEATURES

- Elongated bearings
- Reinforced output shaft
- Drywell solution (available on request)
- High and premium efficiency motors (IE2, IE3)
- Insulation class F (standard) or H (available on request)
- Thermal protection (bi-metallic, PTC or KTY)
- Anti-condensation drain

Active Cube - Premium Inverter

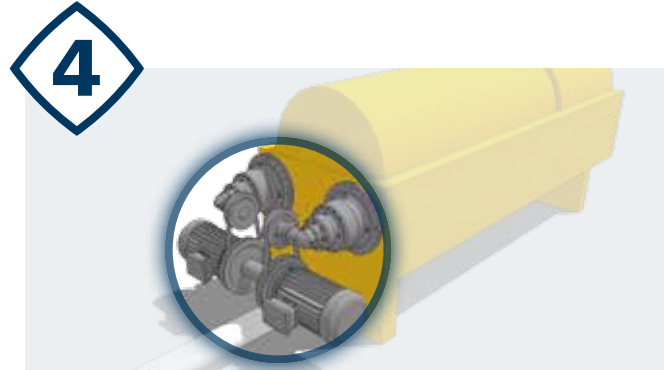


BENEFITS

- Smooth start
- Torque control
- Motor temperature monitoring

FEATURES

- Wide power range and parallel connection option to reach up to 1200 kW
- Integrated torque off safety function, external 24 Vdc control power supply
- IP 54
- Tropicalization option
- Main software features:
 - Integrated PLC function with graphic development environment
 - Torque limitation



Pressing line

Solutions for extraction and squeezing

300 - Planetary gearmotors



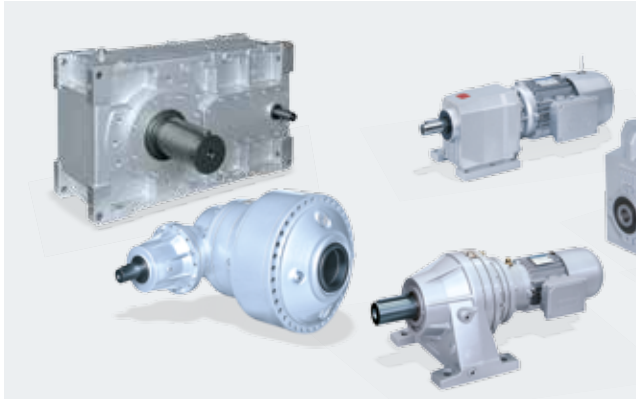
BENEFITS

- High shock load resistance
- Modular design
- Highly versatile configuration

FEATURES

- Planetary and bevel gear stages
- Special lubricant and seals for low temperature applications
- Surface protection class C3, C4 and C5 (according to standard UNI EN ISO 12944-2)
- High and premium efficiency motors (IE2, IE3)
- Protection rating up to IP65
- Thermal protection (bi-metallic, PTC or KTY)
- Tropicalized wiring
- Anti-condensation drain

COMPLETE SOLUTION FOR POWER TRANSMISSION AND AUTOMATION



Gearboxes and Gearmotors

Heavy Duty Parallel/Right angle shaft gearmotors - HDP/HDO Series

Torque range: 5 000 to 210 000 Nm

Gear ratios: 7.1 to 500

Planetary gearmotors – 300 Series

Torque range: 1 250 to 1 287 000 Nm

Gear ratios: 3.4 to 5 234



Motors

Asynchronous motors – BN, BE, BX, M, ME, MX Series

A complete range of AC motors, including IE2 and IE3 for the highest efficiency



Mechanical ratings (4 pole): 0.06 to 30 kW

Poles: from 2 to 4/8

Asynchronous motors – BN, BE, BX, M, ME, MX Series

A complete range of AC motors, including IE2 and IE3 for the highest efficiency



Mechanical ratings (4 pole): 0.06 to 30 kW

Poles: from 2 to 4/8

Synchronous motors - BMD Series

Stall Torque: 0.2 to 115 Nm

Rated speed: from 1 600 to 6 000 min⁻¹

Power supply: 230, 400 VAC

Synchronous motors – BMD, BTD, BCR Series

Stall Torque: 0.2 to 115 Nm

Rated speed: from 1 600 to 6 000 min⁻¹

Power supply: 230, 400 VAC

Synchronous motors with integrated drives - iBMD Series

Stall Torque: 2.7 to 36 Nm

Rated speed: 3 000 min⁻¹

Power supply: 560 VAC

HEAVY DUTY

LIGHT DUTY

SERVO



Inverters

Cabinet solution - Active Cube 8 IP 54

Power range: 200 up to 1 200 kW

Voltage: 400 V, 525V, 690V

Servo drives - Active Cube Series

200V: 0.25 up to 9.2 kW

400V: 0.25 up to 400 kW



HMI

Human Machine Interfaces – BMI Series

3 Display sizes – 3.5", 7" and 10"

True flat front panel in IP65

High resolution 480x272 up to 1024x600 pixels

Servo drives - Active Cube Series

200V: 0.25 up to 9.2 kW

400V: 0.25 up to 400 kW

Standard drives - Agile Series

200V: 1 phase 0.12 up to 3 kW / 3 phase 0.25 up to 7.5 kW

400V: 0.25 up to 11 kW

Compact drives - S2U Series

200V: 0.2 – 2.2 kW

Human Machine Interfaces – BMI Series

3 Display sizes – 3.5", 7" and 10"

True flat front panel in IP65

High resolution 480x272 up to 1024x600 pixels

Servo drives - Active Cube Series

200V: 0.25 up to 9.2 kW

400V: 0.25 up to 400 kW

Standard drives - Agile Series

200V: 1 phase 0.12 up to 3 kW / 3 phase 0.25 up to 7.5 kW

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Human Machine Interfaces – BMI Series

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True flat front panel in IP65

High resolution 480x272 up to 1024x600 pixels

HEAVY DUTY

LIGHT DUTY

SERVO

BONFIGLIOLI WORLDWIDE PRESENCE

Bonfiglioli is located in regions and countries around the world that enable us to provide faster sales and service to customers.

We are around the world, and around the corner.



LOCAL SUPPORT



SALES, CUSTOMER SERVICE, WARRANTY, TECH SUPPORT, SPARE PARTS

22 BRANCH OFFICES IN **16** COUNTRIES



WORLDWIDE DISTRIBUTION NETWORK



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