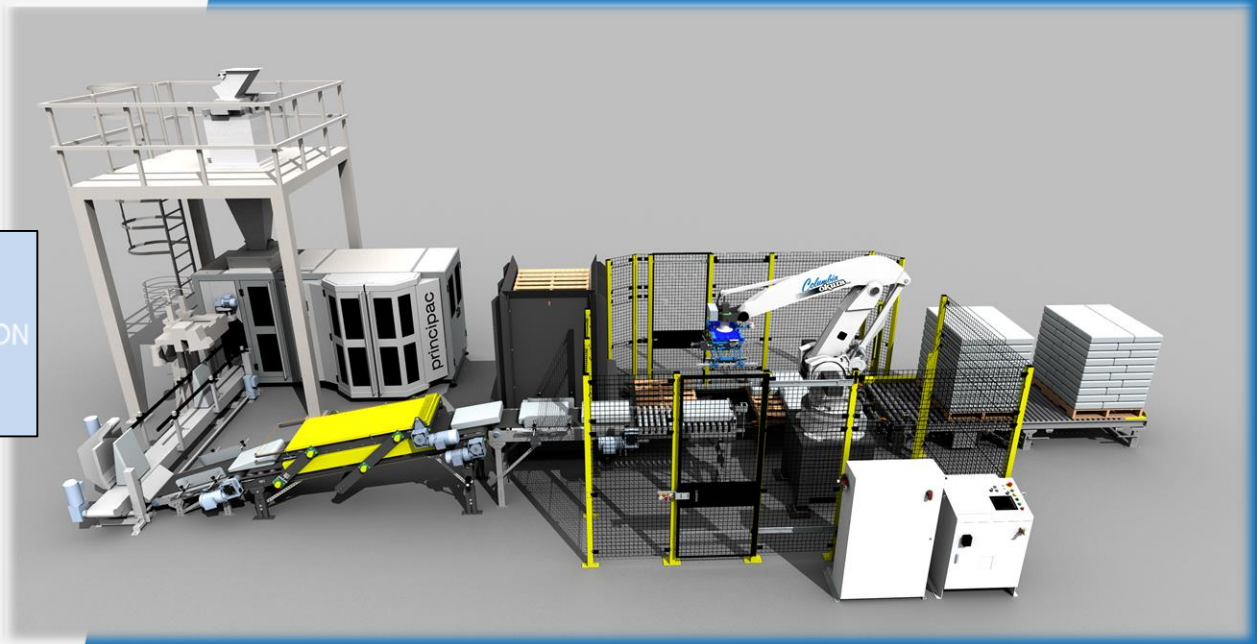
Bagging & Robotic Palletizing Technology

2017 IAOM Western Canadian District

Columbia okura LLC

SB INTEGRATED BAGGING LINES



INTERNATIONAL ASSOCIATION OF OPERATIVE MILLERS

iaom

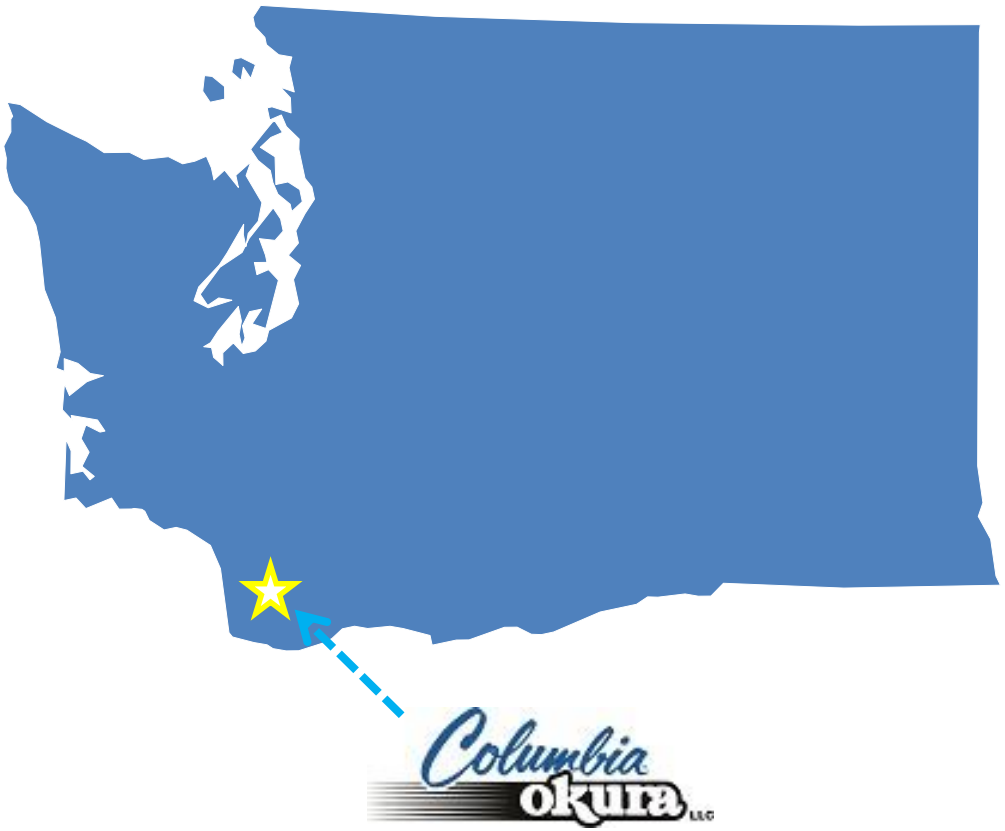
Presentation Overview

- Columbia Okura History & Update
- Strategic Partnership with Statec Binder
- Bagging Technology
  a. Types of Bags
  b. Machine Models and applications
  c. Net Weighers
  d. Bag Closing Equipment

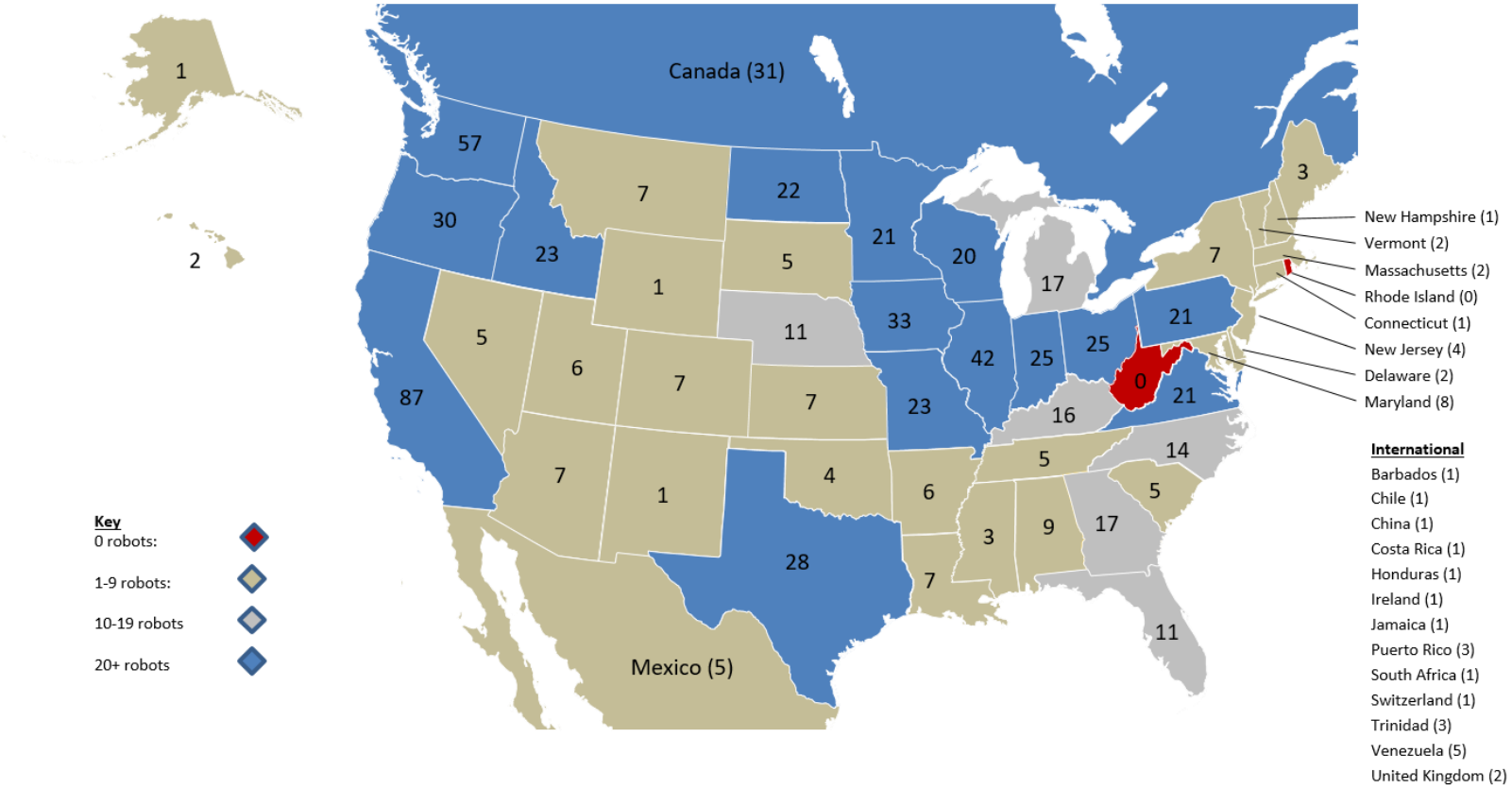
- Robotic Palletizing Technology/Capabilities
  a. Flour palletizing applications – Bags, bundles etc.
  b. Bag Accessories

Our Company

- Headquartered in Vancouver, WA
- Established 1996
- Joint Venture between Columbia Machine and Okura Yusoki
- 53 Employees
- Robotic Palletizing Experts



750+ Systems Sold



Strategic Partnership

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STATEC BINDER

highly efficient bagging and palletizing solutions

- Industry leading robotic bag palletizing expertise
- Designs, integrates, and commissions end of line robotic palletizing solutions
- Delivering custom engineered solutions meeting demanding customer requirements

- Worldwide market leader in high speed bagging
- High quality product range
- High reliability, innovation and precision
- 40 years of experience

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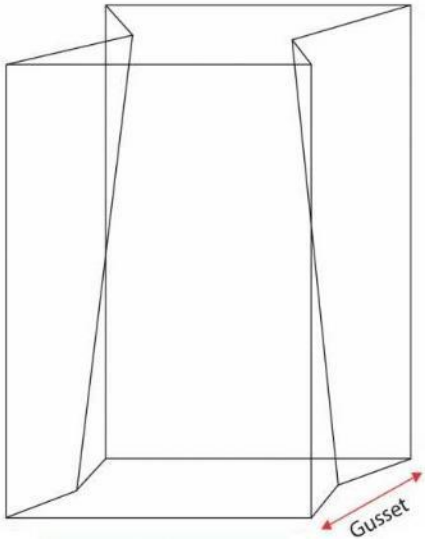
- Located in **Gleisdorf** Austria
- All machines are manufactured in Austria
- Approx. 50 employees

Types of bags



Gusseted bag

Pillow bag

PP - woven with inner layer

STATEC BINDER machines can handle different types of bags:

- Paper
- PE - bags
- PP - woven bags

Changing to other types or formats of bags need only short time!

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Open Mouth Bagging Machines

principac

up to **2000 bags** per hour
for open mouth bags

certopac

up to **1500 bags** per hour
for open mouth bags

acropac

up to **600 bags** per hour
fully automatic packaging machine
for open-mouth bags

circupac

up to **1200 bags** per hour
fully automatic packaging carousel
for open-mouth bags

Form Fill Seal Machines

system-T

up to **2400 bags** per hour
Form, fill & seal from tubular PE

system-F

up to **900 bags** per hour
Form, fill & seal from flat film

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CERTOPAC

Fully automatic high-speed packaging machine

up to
1500 bags per hour

Filling system: Swivel spout
Design capacity: up to 1500 bags per hour

Capacity of magazine: up to 800 bags / magazine
Number of magazine: 2 / 4

Bag material: Paper, PE, woven PP
Filling weight: 5 - 80 kg

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CERTOPAC

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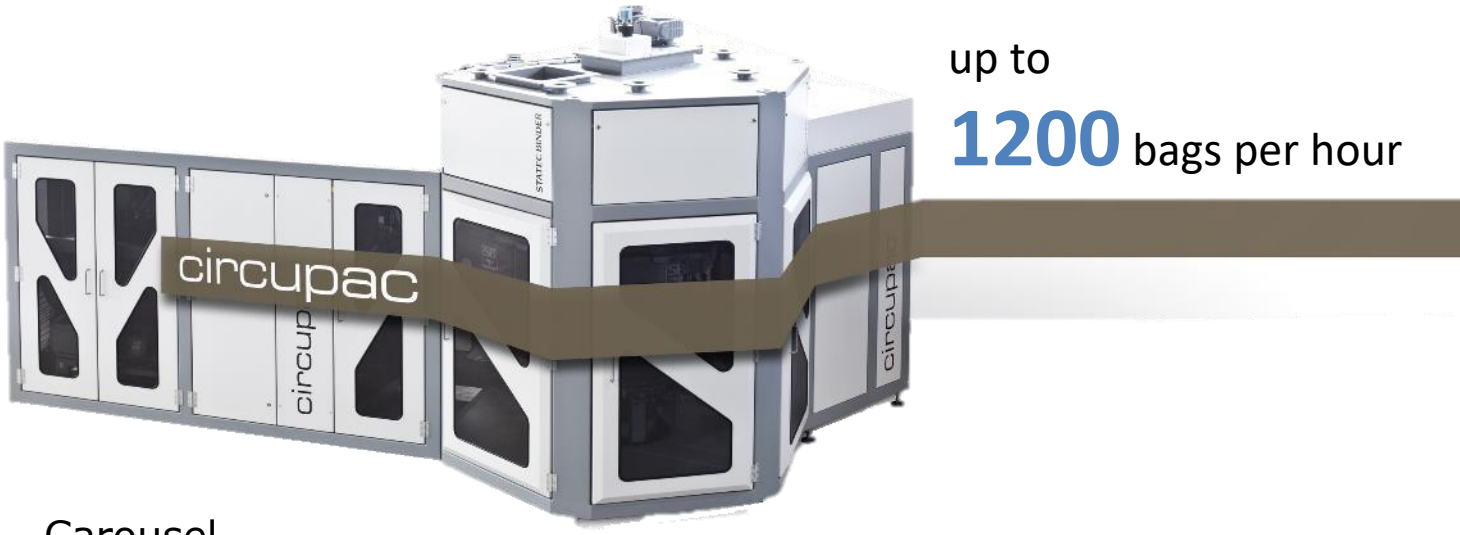
CIRCUPAC

Fully automatic high-speed packaging carousel



up to
1200 bags per hour

Filling System: Carousel

Design capacity: up to 1200 bags per hour

Capacity of magazine: up to 800 bags / magazine
Number of magazine: 1

Bag material: Paper, PE, woven PP
Filling weight: 10 - 50 kg

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CIRCUPAC

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SYSTEM-T

Form-Fill-Seal packaging machine

up to
2400 bags per hour

Filling system: FFS

Design capacity: up to 2400 bags per hour

Roll material: Thermoplastics and compound materials

Package types: Flat and gusseted

Filling weight: 5 - 50 kg

Max. diameter of roll: 1500 mm

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SYSTEM-T

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Net weighers

Belt fed net weigher
for moderately flowing products

Gravity fed net weigher
for free flowing products

Screw fed net weigher
for fine and powdery products

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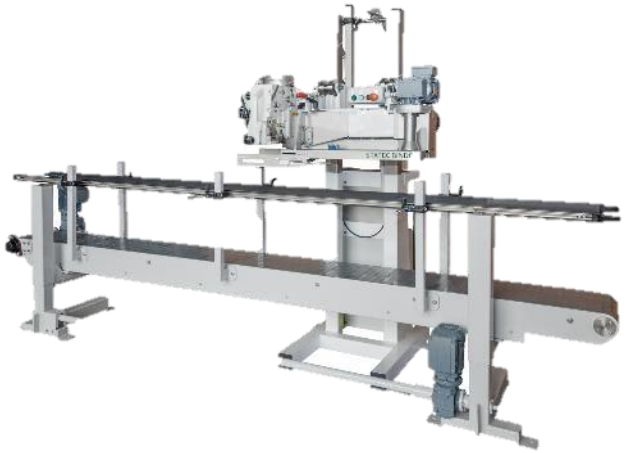
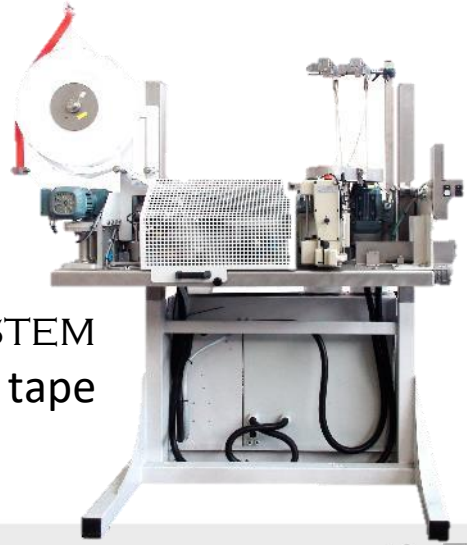
Bag closing systems

Automatic sewing machine
with plain infeed or bag top folder



Automatic bag closing system
with double sewing head



Automatic bag closing system
with a heat sealed woven PP over tape

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Flour Palletizing Applications

- Standard Bag Palletizing
- Controlled Bag Placement
- Stacking Bin
- Bundles
- Small Bags 10lb
- Small Bags 5lb High Speed

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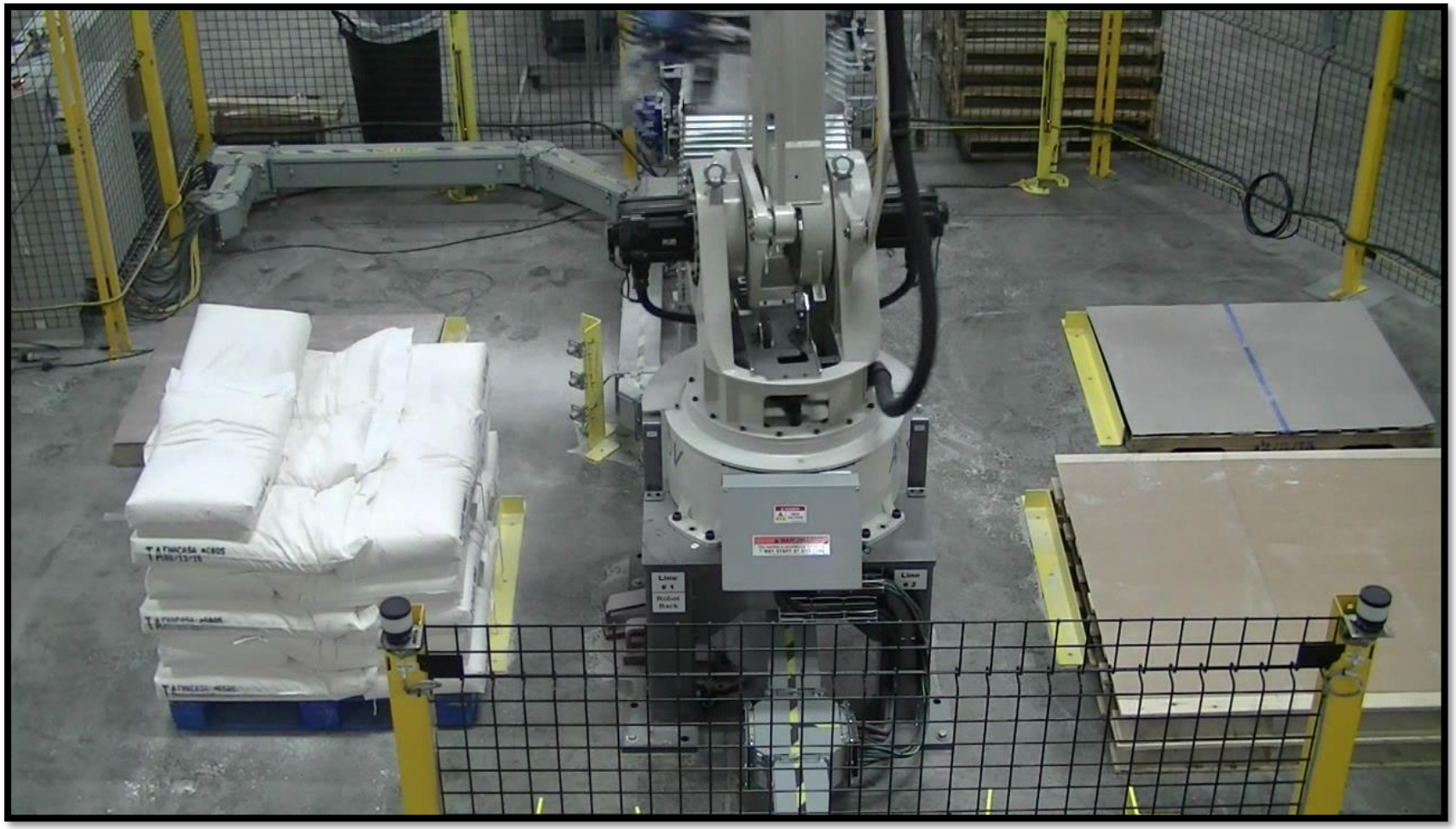
Standard Bag Palletizing



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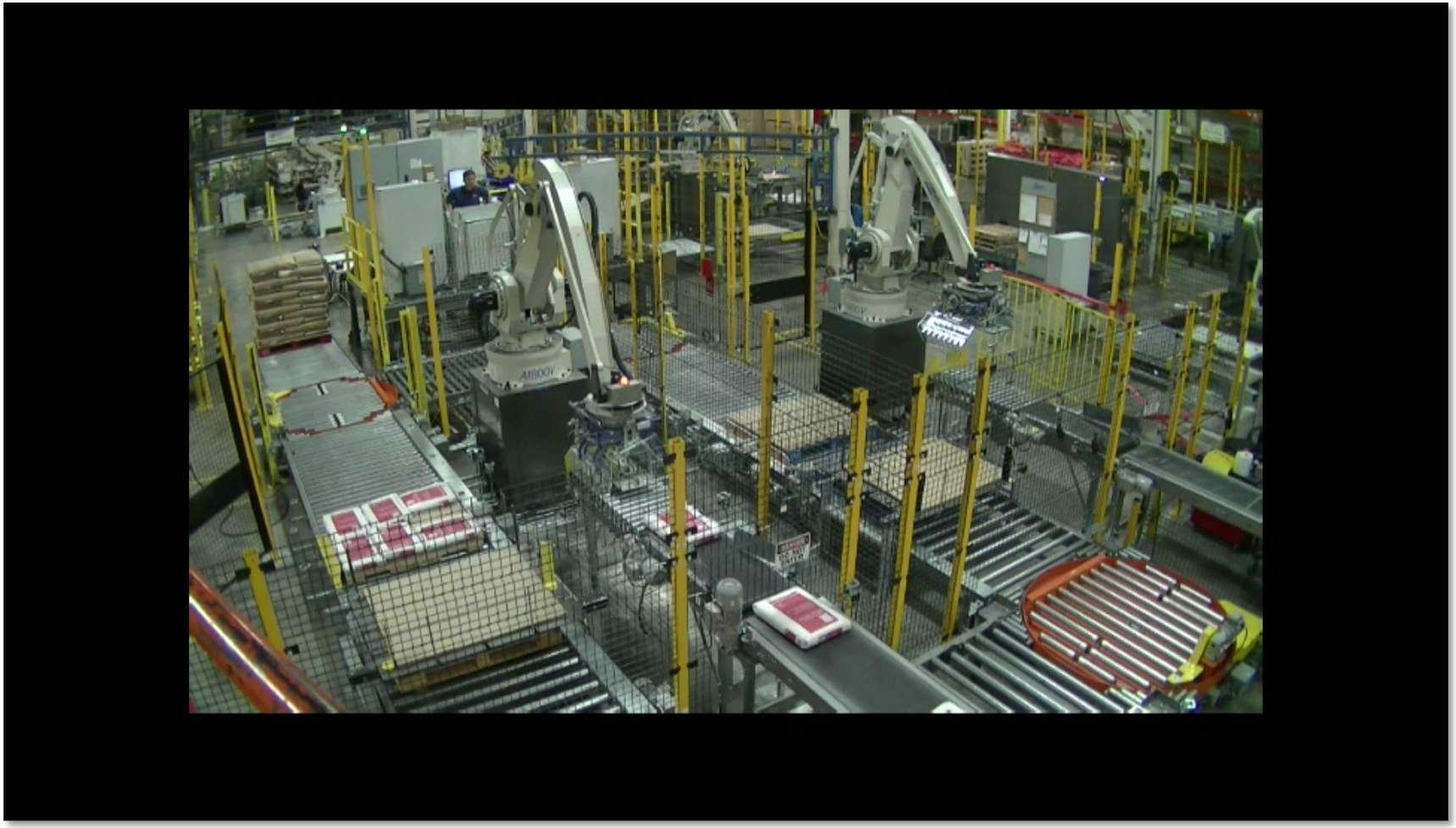
Controlled Bag Placement



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Stacking Bin

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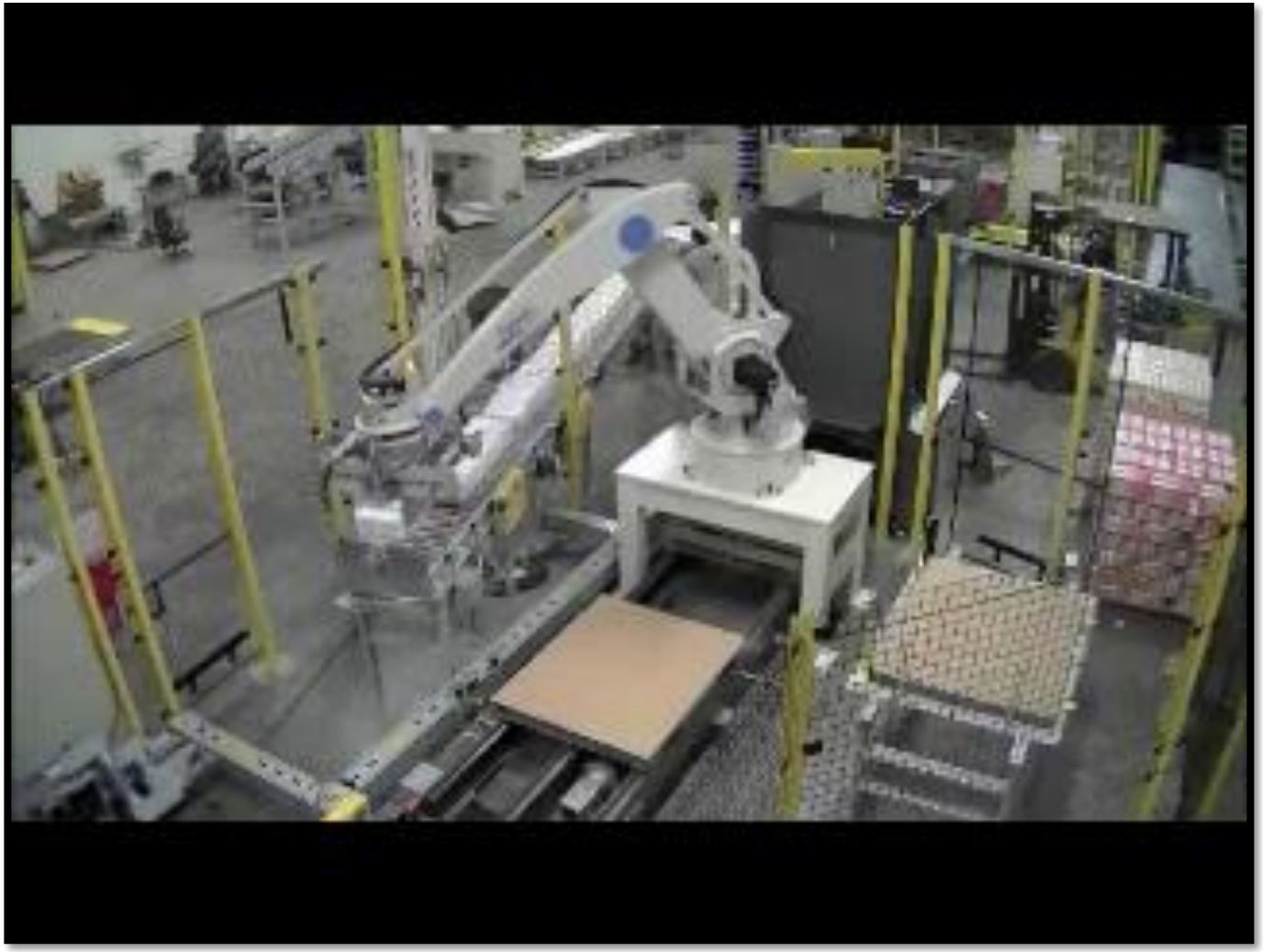
Bundles



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Small Bags 10Lb.

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5lb Bag High Speed

Accessories For the Milling Environment

1. Dusty Environments
   a. Class II Div. 1 Group G Classification
   b. Sealed control panel with positive pressure & AC
   c. Sealed cable trays Nema 12 (Dust Tight)
   d. Laser sensors in place of retro reflective because of dust
2. Height Sensing – for varying bulk densities
3. Bag Printing
4. Bag Flattening

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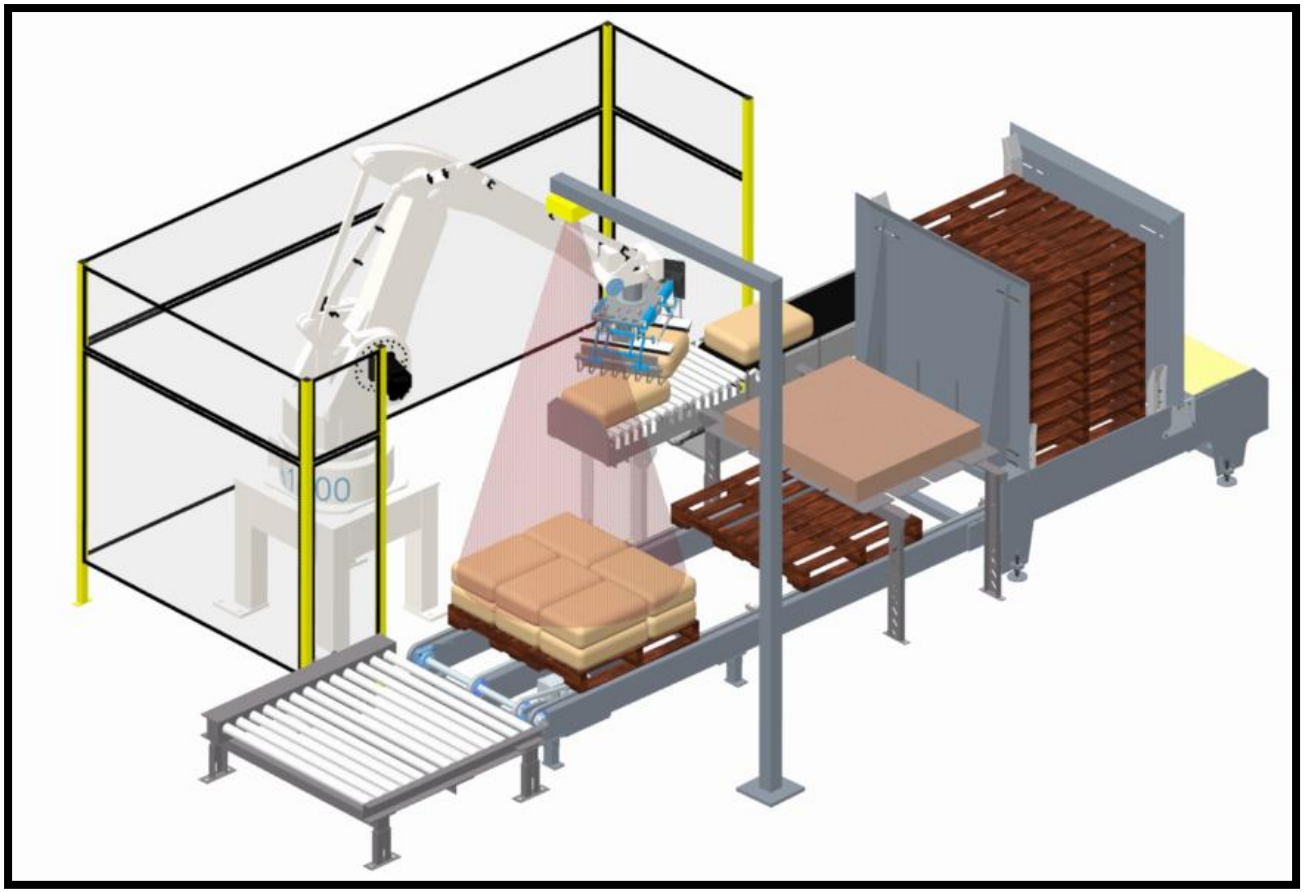
Automatic Height Adjustment



Bag Printing

- Ability to print on the butt of the bag just prior to being picked up for palletizing.
- Able to print multiple lines of information.

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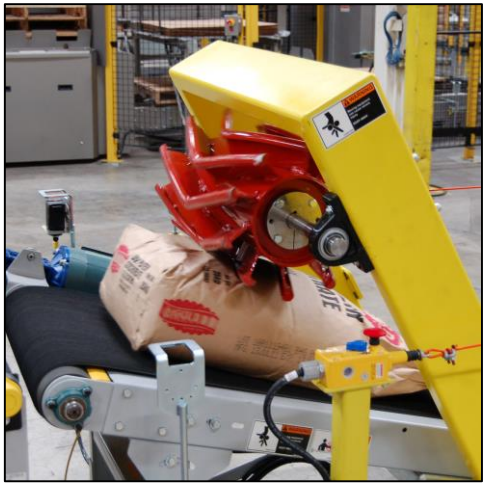
Bag Flatteners



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Key Reasons to chose Robotic Palletizers

- Flexibility – Able to handle multiple product weights and sizes with little to no change over
- Reliability – 99% plus available uptime for palletizing
- Low Maintenance – Fewer moving parts
- Safety – Eliminates back & repetitive motion injuries
- Easy to Program –
- Capable of overlap stacking bags –
- Low Utility Requirements –

Thank you!