



BBULL[®]
TECHNOLOGY

EB *Teknik*
Borup A/S

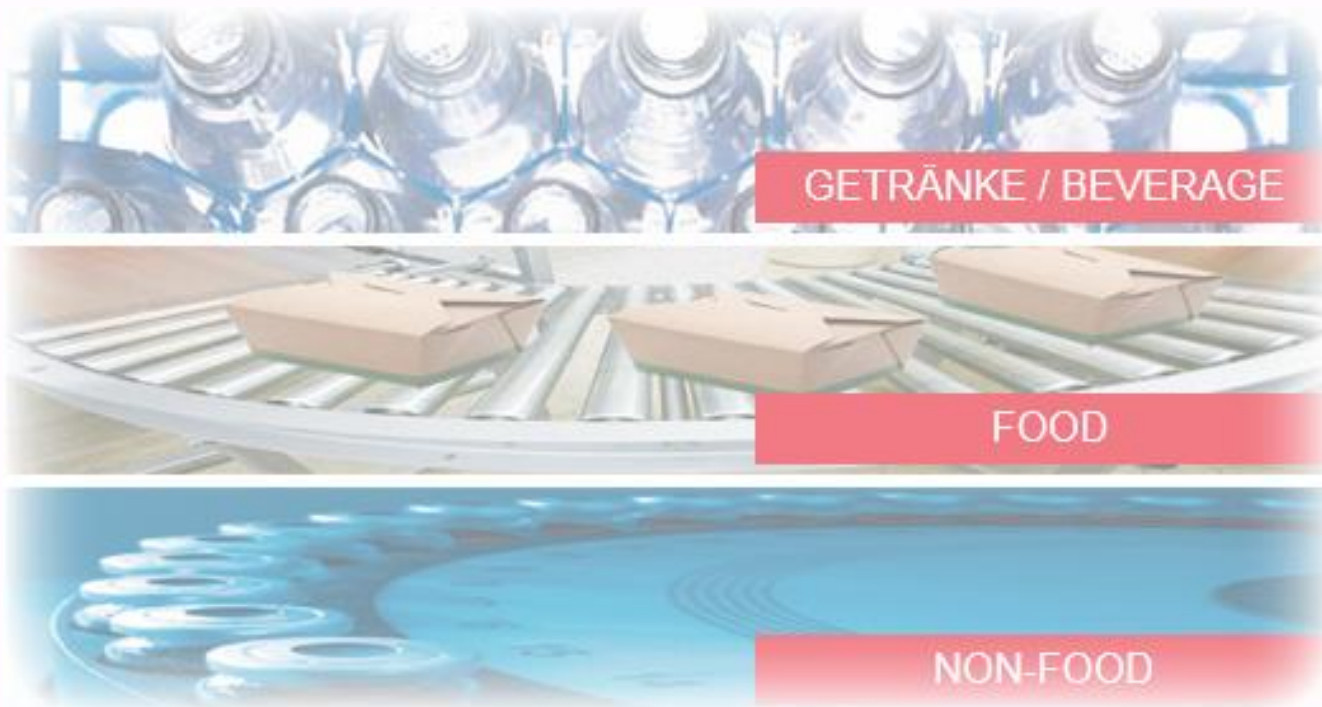
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Managing Your World of Automation

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Our competence

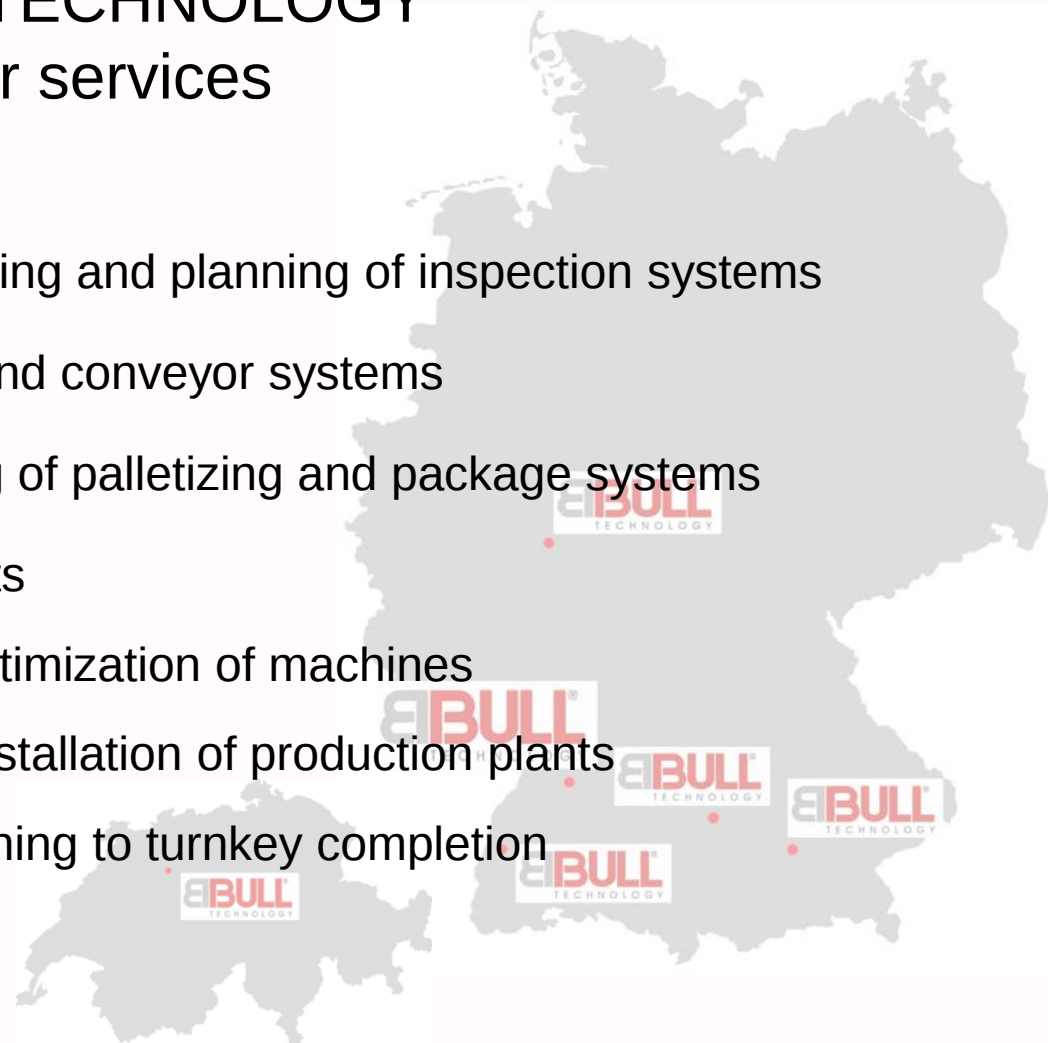
Process automation for the beverage, food, packaging and glass industry in the areas of detection, rejection, palletizing, packing and conveying systems



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Our services

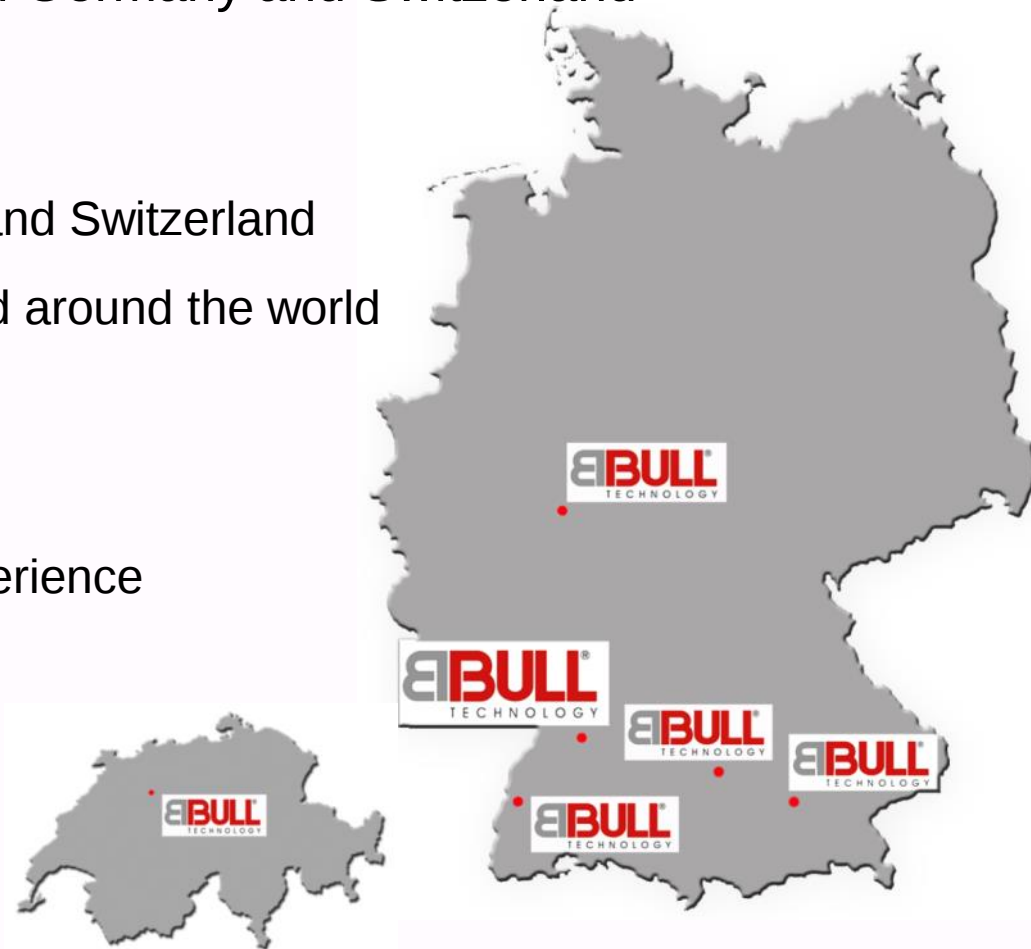
- Customer oriented manufacturing and planning of inspection systems
- Manufacturing of distribution and conveyor systems
- Conception and manufacturing of palletizing and package systems
- Conception of production plants
- Maintenance, repairing and optimization of machines
- Dismounting, transfer and reinstallation of production plants
- Project organization from planning to turnkey completion



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Production locations in Germany and Switzerland

- Production locations in Germany and Switzerland
- Systems and components installed around the world
- More than 200 employees
- Certified to ISO 9001
- More than 30 years of market experience



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Product Range

Inspection Systems

- Fill level inspection
- Cap Inspection
- Filling Valve Inspection
- Label Inspection
- Date / Code Inspection
- Leakage Inspection
- Empty Bottle Inspection
- Empty Can Inspection
- Full Bottle Inspection
- Bottle Sorting System
- Empty Crate Inspection
- Full Crate Inspection
- Empties Management
- KEG Fill Level Inspection
- KEG Leakage Inspection
- KEG Deformation Inspection
- New glass inspector

Sorting / Dividing / Rejector Systems

- Pusher for bottles/ cans / cartes
- Systems for standing rejection
- Single- group dividing system

Packaging Systems

- Packer-Unpacker and Repacking systems

Conveyor Systems

- Container transport
- Vacuum conveyor
- Crate- cask conveyor
- Buffer system
- Conveyor speed control system

Orientation System

- Container orientatation in the machine
- Label orientation inside the crate (Display)

Rinser System

- Hot- and cold water Rinser

Turning Devices

Crate Washer

New Glass Feeder / Off Loader

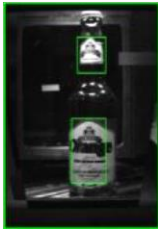
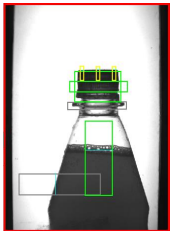
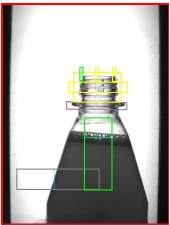
Palletizing systems

- Transport
- Magazine
- Quality Inspection

Service, Installation, Remote support , Engineering

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Fill Level / cap Inspection(Examples)



COMPACT LINE X-G-L

- Fill level inspection (UF/OF) with Sensor Technology
- Cap Inspection
- Label Inspection (at the conveyor or inside the labeller)
- Inputs for ext. Signals

PC 50 EK

- Label inspection with Sensor Technology inside the machine
- Inputs for ext. Signals



Pusher Module

- Cap Inspection
- Label Inspection (at the conveyor)
- Inputs for ext. Signals



COMPACT VISION

Camera based Inspection System

- Fill Level and Cap quality Inspection
- Option Filler and Closer Monitoring
- Inputs for ext. Signals

FM / FEM 500

"Small" Filler or labeller Management

- Fill level inspection (UF/OF) with Sensor or camera Technology
- Cap Inspection
- Label Inspection
- Inputs for ext. Signals



FM / FEM 5000

"Full" Filler or labeller Management

- Fill level inspection (UF/OF) with Sensor or camera Technology
- Cap Inspection
- Label Inspection
- Inputs for ext. Signals

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Label and Code Inspection (Examples)



Label Sensors

- Label sensors for label present inspection inside the machine



IMAGE IM

- Label & code inspection inside the machine



IMAGE DOM

- Code / print inspection
- Print quality inspection



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Label and Code Inspection (Examples)

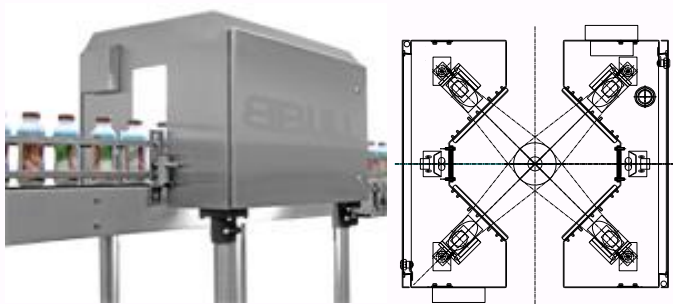


IMAGE 360°

- Label & code inspection at the conveyor



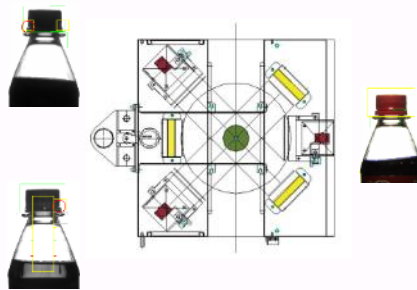
IMAGE 180°

- Label & code inspection at the conveyor



IMAGE 120°

- Fill Level Inspection
- Cap –position, -color,-smilie Inspection
- Label Inspection



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Leakage Inspection (Examples)



MAS

- Leakage inspection for crown corks



UIP

Ultrasound generator for PET containers



Pulse

- Leakage inspection for one way PET bottles



CCI

- Leakage inspection for cans
- Leakage inspection for Twist off closer



KEG

Keg leakage inspection
Keg deformation Inspection

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Empty Can Inspection (Cankon)

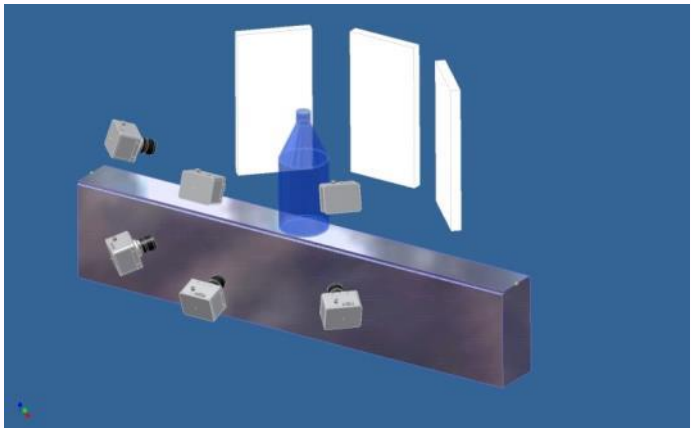


List of detectable defect types:

Angel Hair	Chip Out	Cracks	Wall Dent	Flange Dent	Deposits
Ovality	Puckers	Splits	Stains	V-crush	Waves

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Empty Bottle Inspector (EBI)

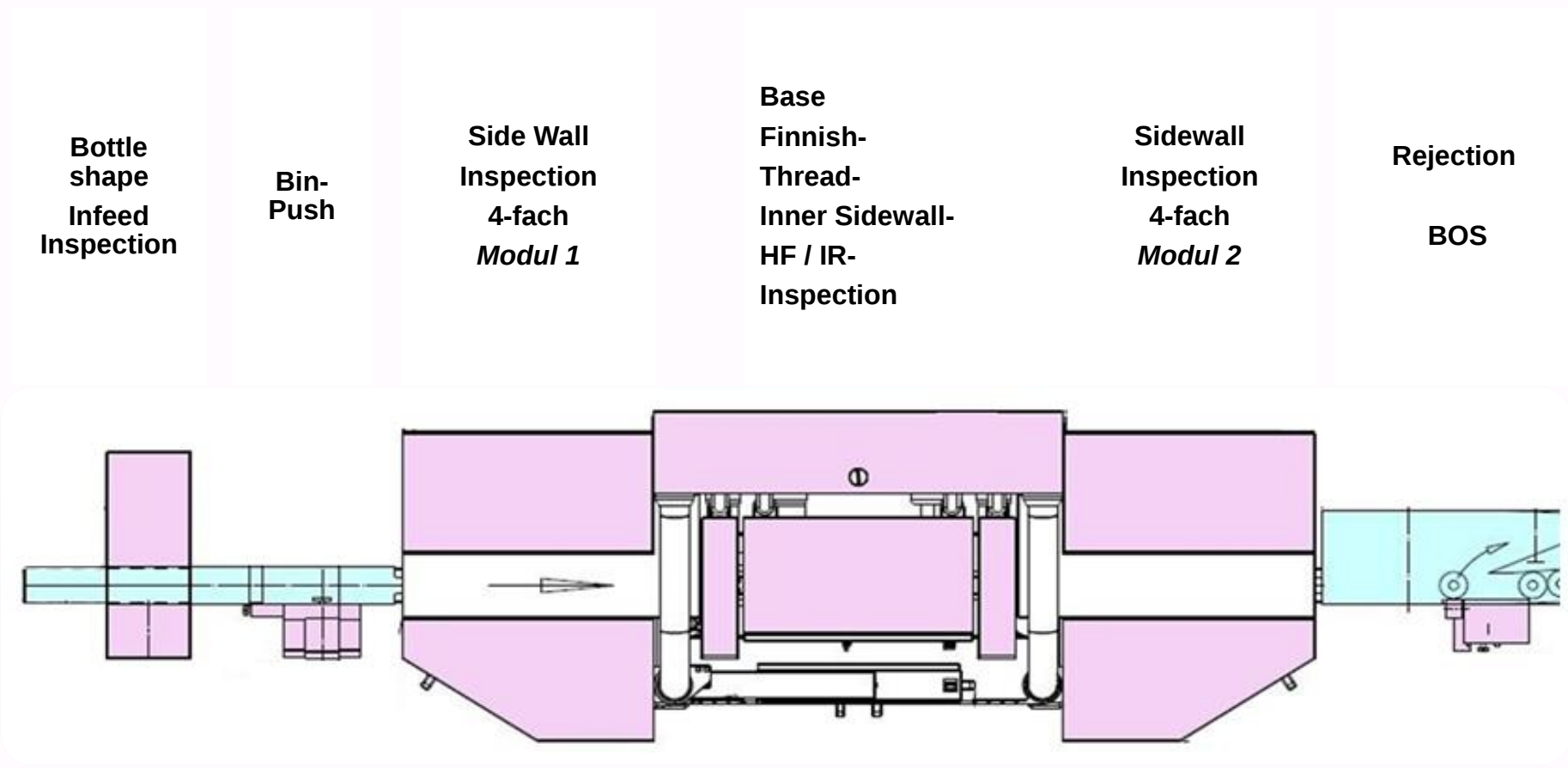


Multikon EBI



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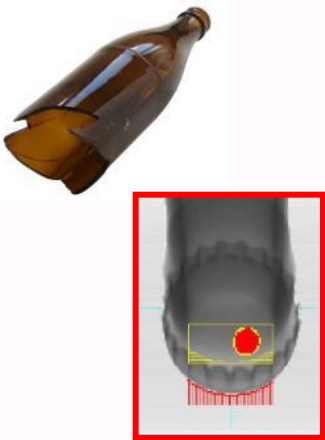
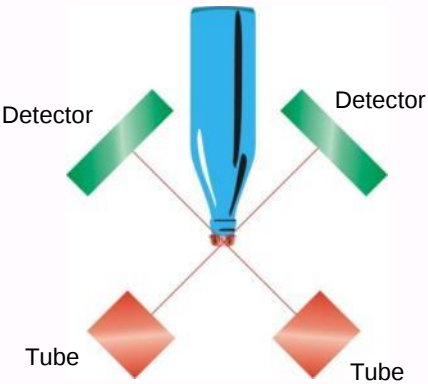
Empty Bottle Inspector (EBI))



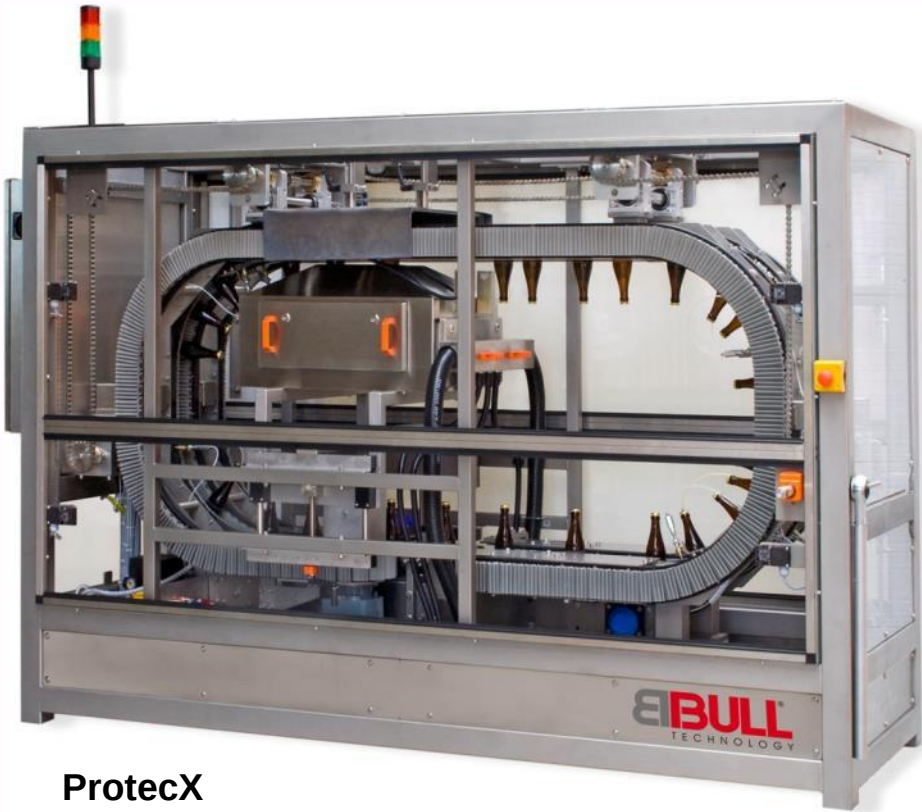
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Full Bottle Inspector (FBI)

X-ray for Sinkers



Cameras for Floter



ProtecX

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Bottle Orientation / Blow Mold Inspection / Bottle Sorting Systems



CAS

- Bottle orientation in the labeller



BMI

- Preform Finish Inspection
- Bottle Finish Inspection
- Offcenter Inspection



FORMAT

- Inline bottle sorting system

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Crate Inspection (Examples)



VK - X / -G / -L

- Full case Inspection
- (X-Ray, Gamma or Sensor Technology)



VK - C

- Full KEG Inspection (Cesium)



LG/LK IMAGE

- Empty crate inspection
- Empties Management

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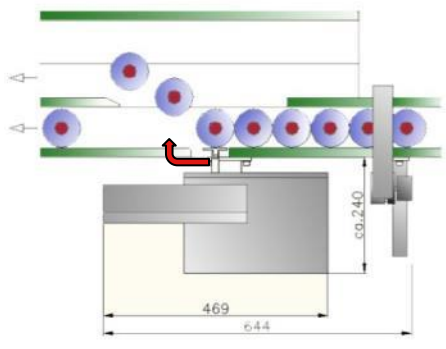
Rejecter and Sorting Systems (Examples)

http://www.bbull.de/binetnet/englisch/d1Frames_ohne_e/lfo.Pro.Details_e/lfo.Pushertechno_e/a1fo.Pushertechno_e.htm



BINPUSH SOFT Push

- Pneumatic pusher



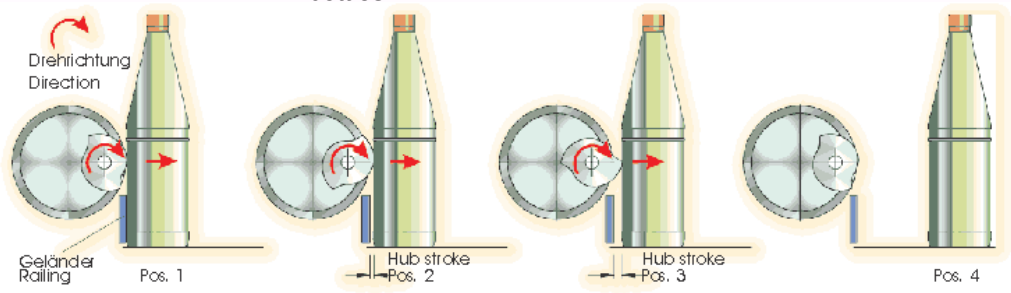
TLP

- Standing Rejection of glass bottles and half filled PET bottles



BOS

- Standing rejection of glass bottles with servo technology



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Rejector and Sorting Systems (Examples)

http://www.bbull.de/binternet/englisch/d1frames_ohne_e/lfo.Pro.Details_e/lgafo.Flextechno_e/a1fo.Flextechno_e.htm



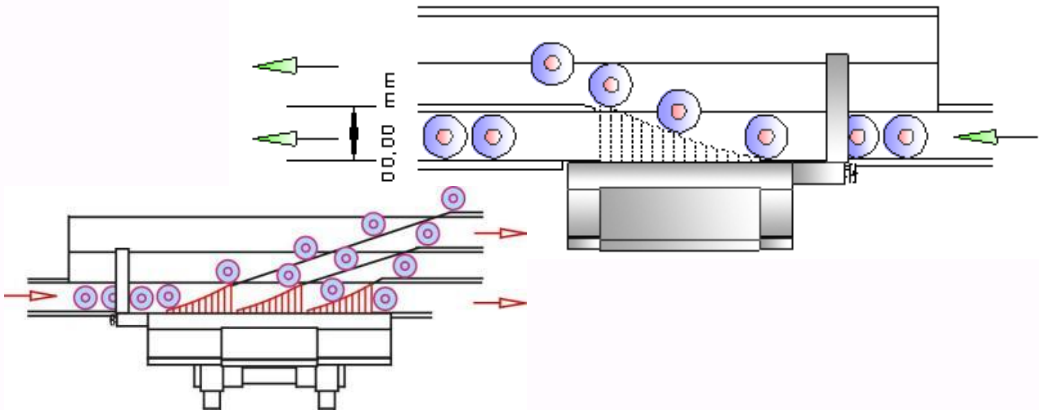
FLEX

- Sorting & distribution of flexible containers



FLEX-Liner

- Sorting & distribution of flexible containers



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Rejecter and Sorting Systems (Examples)

http://www.bbull.de/binternet/englisch/d1Frames_ohne_e/lfo.Pro.Details_e/lgbfo.Snaketechno._e/a1fo.Snaketechno._e.htm



SNAKE

- Dynamic multi-segment distribution



SYNCHRO LANER

- Multilane distribution system

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Rejecter and Sorting Systems (Examples)

<http://www.federspiel-maschinenbau.de/en/default.htm>



**Pack- / Crate
Turning System**

http://www.bbull.de/binternet/englisch/d1Frames_ohne_e/lfo.Pro.Details_e/ljbfm.FlexSortertechno_e/a1fo.FlexSortertechno_e.htm



FLEX Sorter

- Dynamic multi-segment distribution

http://www.bbull.de/binternet/englisch/d1Frames_ohne_e/lfo.Pro.Details_e/liafo.Dualsortertechno_e/a1fo.DualSortertechno_e.htm



Dual Sorter

- distribution

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Automation & Line Control

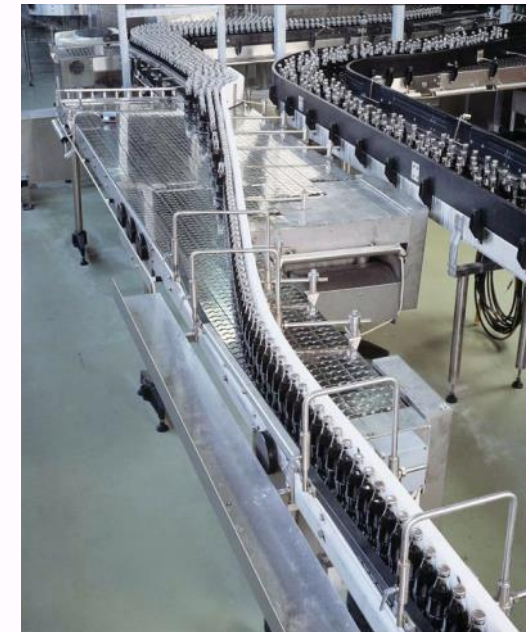


ACU 4000

Conveyor regulation system



Conveying Systems



Pressureless Inliner

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Product (Examples)

Bulk Depaletizer:

- Bottom fixed trays
- Finnish fixed trays
- Loose Carton
- Up to 180 Layer/h
- High- or deepoutled



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Product (Examples)

Packer & Depacker

- H- or T- direction
- Glas- PET- bottles
- Cans, jars
- Up to 500 Stroke/h
- Carton, Crate, Tray
- Steel / Stainless steel V2A



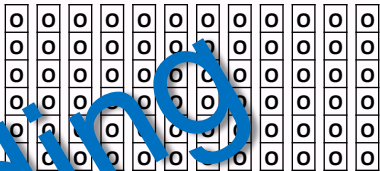
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Product (Examples)

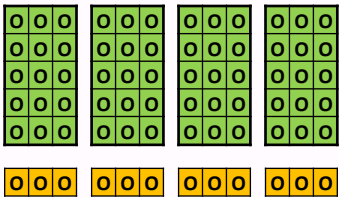
Multi Grabber Head:

One Head for:

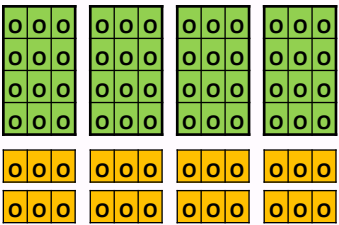
- 6er 8er 10er 12er 15er
- 20er 24er 30er
- Carton, Crate, Tray
- Ø 60 bis Ø 90
- 16 controlled axes



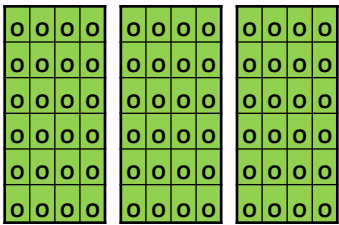
15er



12er



24er



Patent pending

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Product (Examples)

Re-Packer:

- 500 Crates/h
- Example 20er into 11er packs
- Sort packer:
- Single grabber:



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Product (Examples)

Palletizer- Depalletizer:

- 300 Layer/h
- Clamp – grabber head
- Shared loading palatte
- Kuka Robot



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Product (Examples)

Retunable New Glass- : Depalletizing System

- 285 layer/h
- crates / New glas
- Clamp – grabber head
- Vakuum head
- Empty pallete handling



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Product (Examples)

Palletizer:

- 300 Layer/h
- Shared layer table
- Double infeed



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Product (Examples)

Robot applications:

- Depalletizing - palletizing
- Out- In- Replacer
- Up to 450 stroke/h

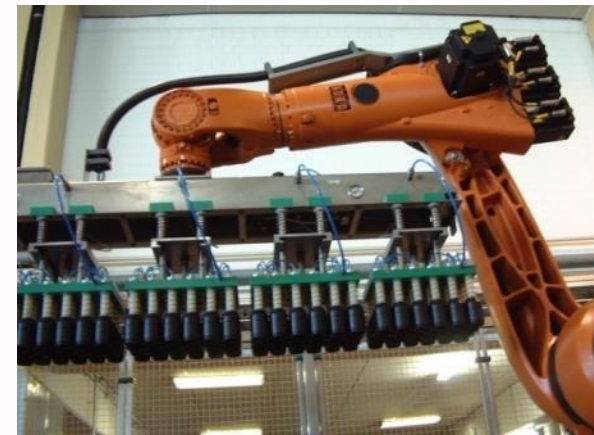


For:

Bottles, crates

Sack, bucket

Interlayer palletts



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Product (Examples)

KEG Palettizing:

- Palletizing – Depalletizing
- Servo clamp head
- Capper station
- Cap pulling station



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Product (Examples)

KEG Palletizing:

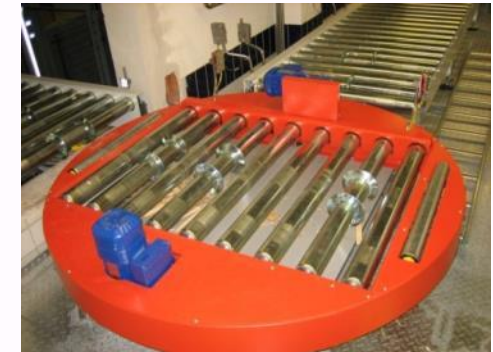


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Product (Examples)

Pallet Conveyance:

- Elevator
- Zincked /or stainless steel V2A
- Half- Euro- Industry pallet up to 1200 Kg



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Produc

Pallet Inspection:

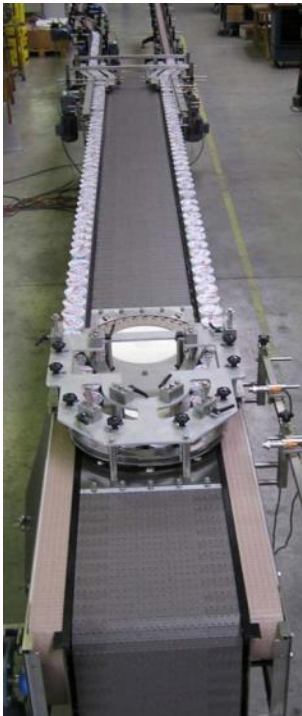
- Up to 260 Pal/h
- Euro- Halb- Industry- Pallet
- Format- Freeboard- Pressure Inspection
- Cleaning station
- Adjustable parameters



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Product (Examples)

Buffer Systems



FIFOMAT

Pneumatic buffer

Bottle Rinser



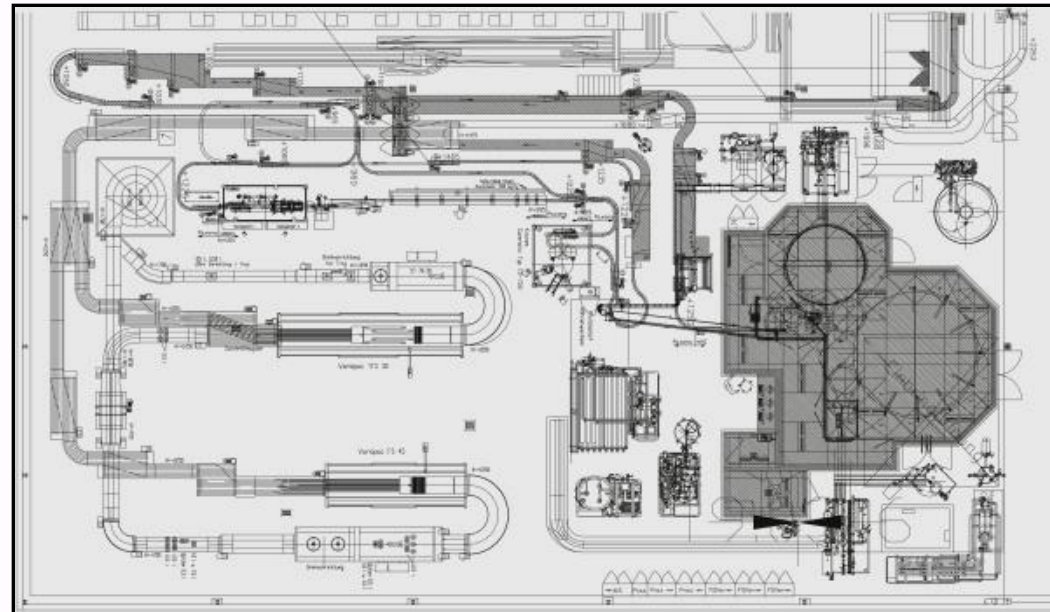
Crate Washer



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Product (Examples)

Services, Installation & Engineering



BBULL TECHNOLOGY

Some of Our customers





Sales & Service Scandinavia

EB Teknik Borup A/S . Bækgårdsvej 47 . DK-4140 Borup .
T. +45 57 52 70 70 . info@ebtechnik.dk . www.ebtechnik.dk

STRATEC CONTROL - SYSTEMS GmbH • Ankerstrasse 73 • 75203 Königsbach-Stein
Telefon (+49) 72 32- 40 06- 0 • Telefax (+49) 72 32- 40 06- 25
www.bbull.com