

Coffee  
**Sorting Solutions.**

# Optical Sorting from Bühler Equipment and Solutions.

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# A leading supplier of optical sorting solutions. **An integral part of the coffee industry.**

Bühler is a leading global supplier of optical sorting solutions to the food and non-food processing industries and has been at the forefront of pioneering optical sorting technology for 70 years.

With a commitment to substantial investment in research and development, Bühler has developed state-of-the-art technology that empowers processors to meet stringent food safety and quality requirements to maximise their productivity and profitability.

Bühler's comprehensive know-how in the field of coffee production combined with its innovative solutions offer coffee processors the most advanced technology solutions.

Coffee processors can be confident of world-class performance when placing Bühler's optical sorters in their processing line - from initial handling, through from green bean to roasted whether it's for Arabica or Robusta.

## **Why Bühler?**

- Helps processors meet stringent safety standards
- Maximises product value and yield
- For superior taste and quality

# 1 Typical coffee sorting applications. Your most challenging sort, conquered.

■ Accept ■ Reject



## Arabica

Removing colour defects such as Sour, Vinegar, Immature and discoloured beans. Insect damaged and Broca beans can also be removed. SORTEX® optical sorters work brilliantly in ordinary, speciality and Arabica applications.

## Robusta

SORTEX® optical sorters can remove dark, light, discoloured and insect damaged beans.

## Roasted

SORTEX® optical sorters can efficiently remove under and over roasted beans as well as foreign material such as sticks, stones and glass.



Yellow



Black



Insect Damaged



Light or Dark



Sticks



Glass



## Foreign Material Sorting

SORTEX® optical sorters can efficiently remove foreign material that has been missed by the mechanical cleaning process such as sticks, stones, glass, shells, plastic and many other foreign materials.



## Full integration and extensive product range

Bühler incorporates digital technology capabilities to offer control and monitoring from goods receipt to the finished product.

A full range of equipment for any stage during processing is also available: cleaning, transport, optical sorting, roasting, pasturisation, grinding and automation.



Under-roasted



Over-roasted

## 2 Sophisticated sorters for challenging applications. **SORTEX® A Range.**

Available in three different frame sizes and technology variants including the SORTEX® A MultiVision™, SORTEX® A ColorVision™ InGaAs and Sortex® A MultiVision InGaAs. The SORTEX® A provides coffee processors with dedicated customised options to handle unique and challenging sorting requirements, regardless of processing size.



One module

Two/Three module

Four/Five module

### **Most advanced sorting solution for challenging coffee application - maximising overall profitability.**

Equipped with Bühler custom-built inspection and lighting systems, the SORTEX® A is designed for challenging applications. Efficiently removing a range of defects including discoloured beans, immature and insect damaged as well as various foreign materials such as glass, stones, plastic and foreign materials of the same colour, like sticks.

Featuring Bühler proprietary technologies including Product Tracking, Auto-Calibration, LED Lighting and the new SORTEX® ProSortX™ operating system. The SORTEX® A offers ease of use, removing the need for manual intervention whilst delivering consistent high sorting performance.

- MultiVision™ and ColorVision™ InGaAs
- High capacity feeding with up to 5 chutes
- Custom-built colour cameras
- Enhanced InGaAs technology
- PROfile™ (shape, size & colour) technology
- SmartEject™ technology
- Broadband LED lighting
- Re-sort capabilities
- ProSortX™ operating software

## 3 Optimised for mainstream sorting. **SORTEX® B Range.**

Ideal for coffee processors looking for a typical, mainstream sorting solution with proven technology and trusted performance. Available in three frame sizes in up to five modules featuring the SORTEX® B MultiVision™ technology.



### **Mainstream sorting solution with Bühler proprietary technologies for trusted performance.**

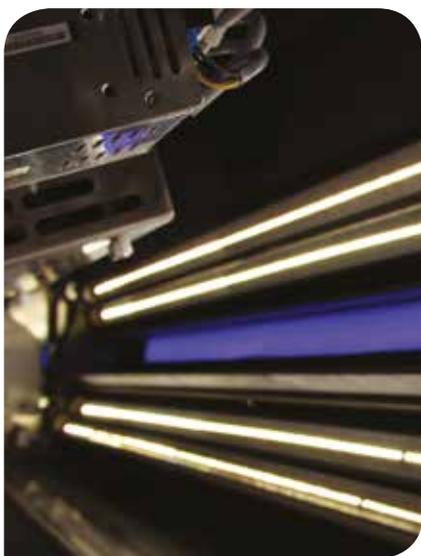
Equipped with Bühler's custom-built inspection and lighting systems, the SORTEX® B range removes a range of defects including discoloured, immature and insect damaged product, delivering high performance defect and foreign material removal in everyday mainstream sorting.

A combination of proprietary technologies such as lighting, inspection and ejector systems offer processors a range of sorting solutions while superior feed systems deliver a high capacity performance and reliability in mainstream coffee sorting applications.

- MultiVision™ technology
- Custom-built colour cameras
- PROsize™ (sizing) technology
- Broadband LED lighting
- Re-sort capabilities
- ProSortX™ operating software
- Five module optical sorter for even higher capacity processing now available for Robusta applications

## 4 SORTEX® Innovative Technologies. Mastering the most complex sort.

From Competence Centres around the world and optical sorting headquarters in London, our researchers, engineers and product developers work in partnership with our customers to develop proprietary technologies that have been at the forefront of the optical sorting industry since 1947.



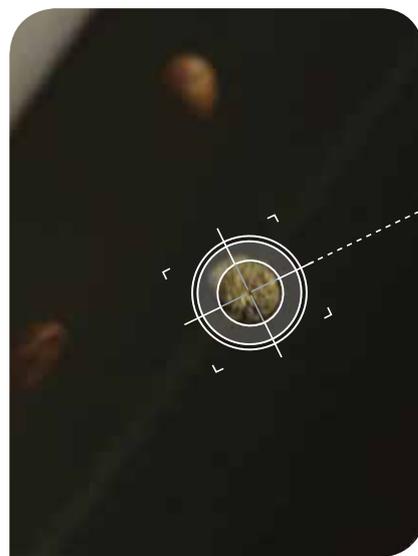
### Inspection system with Broadband LED Lighting

A combination of high-resolution customised cameras, designed and built in-house and Broadband LED Lighting, delivers the colour recognition needed to detect defects and foreign material, within the entire visible spectrum.



### SORTEX® ProSortX™ operating system

Fresh new interface that is modern, intuitive to use and responsive - simplified operating system with flexibility and better controls, no need for complex operator training.



### SORTEX® ejector Technology with SmartEject™

Ejectors are precision built for high speed ejection and consistent performance. Its easy serviceability and long lifespan lowers cost of ownership of SORTEX® optical sorters. SmartEject (only available on the SORTEX® A range) sorting algorithms and software fires precisely at the whole defect, efficiently removing unwanted product while minimising false rejects.



### **PROfile™\* (detection) Technology**

A combination of three dynamic technologies to perform the most complex sorting tasks.

#### **PROshape™**

Remove defects that are the same colour as good products; leaves, sticks, stones etc.

#### **PROsize™\*\***

Separates under, over sized and broken.

#### **PROcolor™**

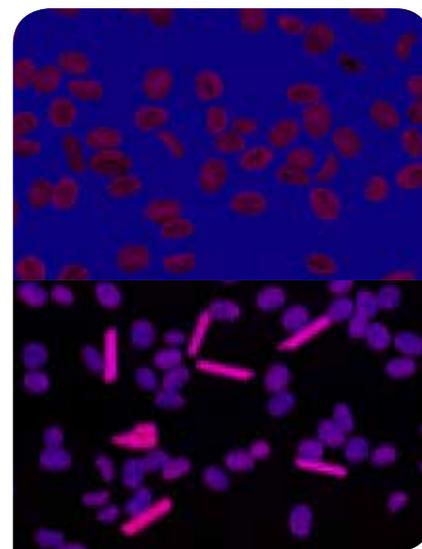
Analyses multiple colour variation as well as individual blemishes offering flexibility to set own product quality.



### **Balanced and stable sorting performance**

Maximise yield, capacity and reduce energy wastage during a secondary or tertiary sort. By optimising modules/chutes for a balanced and stable sorting performance, this helps to avoid unnecessary re-circulation of seeds.

Achieved through a combination of proprietary software including Auto-Calibration and Product Tracking ensuring consistent performance throughout whilst removing the need for laborious manual set-up.



### **InGaAs Technology\*\*\***

Originally designed for military satellite application, InGaAs technology can detect defects which cannot be seen in the visible spectrum. By utilising infrared technology, the system reads light reflection as well as colour registration to offer precise detection of unwanted materials, for example foreign materials which are of the same colour as your coffee product.

\* SORTEX A MultiVision™

\* SORTEX A ColorVision™

\*\* SORTEX B MultiVision™

\*\*\* SORTEX A ColorVision™ InGaAs

# 5 Model Variants and Specifications.

■ Standard ● Optional

## Product options

Contact your local representative for a full list of product features and specifications.

■\* Standard when fitted with Enhanced InGaAs

SORTEX A Range	MultiVision™	ColorVision™ InGaAs	MultiVision™ InGaAs	SORTEX B Range	MultiVision™
Enhanced InGaAs		■	■	Enhanced InGaAs	
PROfile™ Technology	■	■	■	ProSize™ Technology	■
LED Lighting	■	■	■	LED Lighting	■
IR Lighting		■	■	IR Lighting	
Climate Control	●	■*	■*	Climate Control	
Remote Access	●	●	●	Remote Access	●
SORTEX ProSortX™	■	■	■	SORTEX ProSortX™	■
Product Tracking	■	■	■	Product Tracking	■
Auto-Calibration	■	■	■	Auto-Calibration	■
CE Certification	■	■	■	CE Certification	■

## Dimensions

Machine	Width mm	Depth (Doors Open) mm	Depth (Doors Shut) mm	Height mm	Weight* kg	Typical air requirements (l/s)** 72-102 psi (5-7 bar)	Typical Power consumption (kW)*** (200-240 V; 50/60 Hz single phase)
A1 (B1)	1000	2333	1708	2088	500	8	1.5 (0.9)
A2 (B2)	1788	2333	1708	2088	927	16	2.3 (1.2)
A3 (B3)	1788	2333	1708	2088	970	24	3.1 (1.5)
A4 (B4)	2387	2333	1708	2088	1107	32	3.4 (2.1)
A5 (B5)	2387	2333	1708	2088	1150	40	4.5 (2.9)

\* Unpacked weight. Figures will vary based on machine product options.

\*\* Figures will vary based on contamination levels.

\*\*\* Figures will vary based on machine product options.

## 6 SORTEX® Customer Care. Secure tomorrow's profits today.

Bühler customers have access to a network of over 140 Sales and Service offices worldwide offering customisable service packages, stock on spares and upgrade kits, to ensure your optical sorters perform at maximum possible efficiency. Training courses and Competence Centres offering application and product trials are also available at regional sites and local offices around the world.

### **TotalCare™**

Create a customised service package, composed of individual service features from the list below. From maintenance visits, downtime cover to refurbishments and preventative - basic to fully comprehensive. Designed to ensure your optical sorters perform at its maximum performance.

#### **TotalCare Protect**

##### Minimise Downtime

Based on an agreed number of annual visits, Bühler engineers will replace key wear parts, provide consultation and advise on future maintenance requirements.

#### **TotalCare Perform**

##### Performance Optimisation

Aspiring to keep downtime to under 24 hours, sorters will be safeguarded against any failed components. Bühler engineers will ensure first-rate performance once the repair is carried out.

#### **TotalCare PerformPLUS**

##### Ejector Refurbishment

Making certain that sorters are running at peak performance, ejectors are replaced when the stipulated life-cycle is reached. Performance is maintained for the future.

#### **TotalCare Anyware**

##### Supervised Functionality

Provides a working record of operational information as well as reports that enable machine health to be monitored and preventative maintenance scheduled.

#### **TotalCare AnywarePRO**

##### Remote Access and Assistance

Sorter performance can be viewed remotely by customers and Bühler engineers. Faults can be diagnosed and performance optimised in any location using a laptop, tablet or smart phone.

**All contract options are available for variable durations.**

### **SORTEX® Spare Parts Promise**

Customer satisfaction is our priority. This is why we strive to deliver both spare and wear parts within 48 hours - maximising your profitability.

### **SORTEX® Upgrade Kits**

Bühler have designed various upgrade kits, for existing customers who are seeking to upgrade sorters with an additional module, new technology features or processing software.

### **SORTEX® Spare Parts**

Various kits to suit different optical sorters are available for customers who wish to have spare parts available on site.

### **Optical Sorting Training Courses**

Available from various regional Bühler locations. From operator to management, basic to advance, speak to your local representative for course selection and availability.



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## **Bühler AG**

Gupfenstrasse 5  
9240 Uzwil  
Switzerland  
T +41 (0)71 955 11 11  
F +41 (0)71 955 33 79

## **Business Unit SORTEX®**

20 Atlantis Avenue  
London E16 2BF  
United Kingdom  
T +44 (0)20 7055 7777  
F +44 (0)20 7055 7700  
sortexsales@buhlergroup.com  
[www.buhlergroup.com/coffee-sorting](http://www.buhlergroup.com/coffee-sorting)

SO 31640 en 0518 Z&B 182022