

## Bühler in seeds

# Performance at every step of the way

#### Seed the future.

Bühler is a leading global supplier of optical sorters for the agricultural seed industry. Whether for field crops or vegetable seeds, the Bühler SORTEX portfolio brings you the highest quality product to enable you to reach optimal levels of germination.

With our ability to provide complete solutions combined with in-depth industry experience gained over multiple decades, we provide leading solutions to each and every customer.

#### **Untreated seeds**

Before mechanical grading

SORTEX optical sorters can be used on certain seed applications before or instead of mechanical graders to remove foreign materials and seed defects, minimizing the loss of good seeds - common during the mechanical grading process.

#### **Untreated seeds**

After mechanical grading

SORTEX optical sorting can also be used after mechanical grading to remove defects which have been missed in the process, achieving a consistent, homogeneous appearance for better germination.

#### **Treated seeds**

After coating

Subject to treatment type and seed condition, SORTEX optical sorting can also be used after the coating process to remove non or partially coated seeds for better germination.

#### **Batch processing**

Small capacities

SORTEX optical sorting can also sort smaller capacities as low as 100 kg per hour and only requires a short time for mode change and clean down between seed types.

# Aligning ourselves to the need of the hour

# You get more than just a solution provider

#### Performance that sets you apart

In line with Bühler's goal to reduce energy, waste and water by 50% to feed the world population of 10 billion by 2050, the latest generation of optical sorters from Bühler are designed to supply maximum yield. Our innovative ejection algorithms significantly minimize false rejects, while new collaboration and tracking algorithms improve machine performance, such as final purity as well as concentrated rejects.

## Stay flexible, stay agile, stay open

Stay flexible, especially when market requirements change. The seed industry has to deal with a range of factors that make producing the right product challenging – like local droughts followed by heavy rain, country-specific regulations relating to pesticides and GMO, and decisions to follow trends such as organic seeds or superfoods. By having a sophisticated color sorter in the cleaning process, you not only stay agile but also stay open for new economic opportunities.

## **Customer proximity for fast support**

Bühler is in the region, for the region. We have a physical presence around the world thanks to our dense network of Bühler service stations and committed channel partners. We understand local requirements and support you in no time in case of an emergency.

## Data insights to keep uptime high

Our sorting machines are Industry 4.0 ready and allow you to gather valuable data for better and faster decisions. SORTEX Monitoring System dashboards can be accessed remotely to provide full transparency of your operations and insights in real-time.

## Easy operation to reduce human error

Unmatched ease of use without requiring operators to have in-depth technical knowledge. Sorting performance is easily maintained and adjusted with individual defect removal control to meet your needs in the best possible way.

## **Quality to thrive**

With 75 years of experience as innovators of optical sorting, quality and reliability are what we are known for. We enable you to achieve a maximum yield, eliminate impurities, and have peace of mind knowing that your product consistently surpasses regulation standards.

# Sorting applications

# Your most challenging sort, conquered

"Our seeds must be free from everything, that's why we went with SORTEX: to get the highest quality seeds."



Phillip Ayers
 Seed Treatment Technical Manager,
 Elsoms Seeds

## 1. Corn seed sorting

SORTEX optical sorters can sort a wide range of corn varieties. Our technology improves germination by removing broken kernels, diseased grain, cross contamination and foreign material while maintaining high capacity and reject concentration.

Input



**Accept** 



Reject



#### Defects to be removed:

- Discolored and diseased kernel
- Broken kernel
- Soy

## 2. Soya seed sorting

In soya sorting, corn, other bean varieties, foreign materials and odd shaped (oblong) soya seeds have to be successfully removed to deliver a consistent homogeneous appearance. This delivers better germination levels and promotes a consistent growth rate for seeds.

Input



Accept



Reject



#### Defects to be removed:

- Immature grain (green)
- Discoloration
- Oblong soy
- Sticks

# Specialist sorting applications

# Mastering the most complex sort

## 3. Sunflower seed sorting

We provide sorting for different varieties of sunflower seeds, including black, striped or white, and for varying defect and processing requirements. To ensure the successful removal of broken kernels, sclerotia and infected seeds, we use a combination of proprietary technologies, including Enhanced InGaAs cameras and PROfile shape sorting.

Input



Accept



Reject



#### Defects to be removed:

- Broken and damaged kernel
- Sclerotia
- Sticks
- Sunflower head particles
- Xanthium

### 4. Carrot seed sorting

SORTEX optical sorters can also sort smaller vegetable seeds including carrot, tomato, lettuce, onion, and more. The technology is equipped to detect the subtlest defects, such as same color foreign seeds and materials including sticks with our advanced detection algorithms.

Input



Accept



Reject



#### Defects to be removed:

- Discoloration
- Foreign seeds and weeds
- Knotweed
- Cuscuta
- Sticks

# Optical sorting product solutions

# A portfolio designed to surpass your needs

#### **Flexible Solutions**

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

#### **SORTEX H SpectraVision**

# SORTEX H Spectravision

#### **SORTEX J SpectraVision**



#### **SPARK Pro+**



Chutes / widths	1 - 7 (300mm)	1 - 7 (300mm)	1 - 10 (300mm)
Inspection system	RGB, Enhanced InGaAs, LED & Xenon lighting, Shape	RGB, Standard InGaAs, LED & Xenon lighting	RGB(I), LED lighting, HSV
Recommended application	All applications including foreign material	All applications including foreign material	Color sorting only (discolored)
Certification	CE, NRTL*, ATEX*, HAZLOC*	CE, NRTL*, NR-12*	CE
Digital solutions**	SORTEX Monitoring System, OPC-Connect	SORTEX Monitoring System, OPC-Connect	-

<sup>\*</sup>All sizes in 5 chute frame

<sup>\*\*</sup>Optional

## By your side

## for success

With service stations and personnel in over 140 countries, we are there for you, wherever your facility is located. Our Total Care solution is designed to address your every need. From machine maintenance and parts supply to weekly reports and expert consultations, you can be confident that your sorting machines are kept running efficiently, at optimal capacity, and delivering maximum return on investment.

With a global network, and over 25,000 color sorters installed worldwide, we understand the competitive environment of food processing and the importance of minimizing downtime and safeguarding profit margins. That's why our solutions are designed to operate in production plants of all sizes, helping our customers achieve higher productivity and profitability.

We take partnership seriously. Our local and global teams provide expert advice, consultation, and machine maintenance, helping you stay ahead of future challenges. We also perform testing and trials to ensure your solutions are tailored to your specific needs.

Our advanced digital solutions bring visibility and peace of mind to your process. With Bühler Insights, you can access the data that creates change. Respond quickly to downtime with alerts, analyze the quality of your supplier's material, and receive real-time data to maintain your highest product quality. If you are looking for a solution for human handling and error, our sorters are easy to use (requiring less training) and automated, to ensure reliable performance. Like a perfectly fitting puzzle piece, our solutions integrate seamlessly into your process line, enabling the consistent quality your business needs to thrive.



