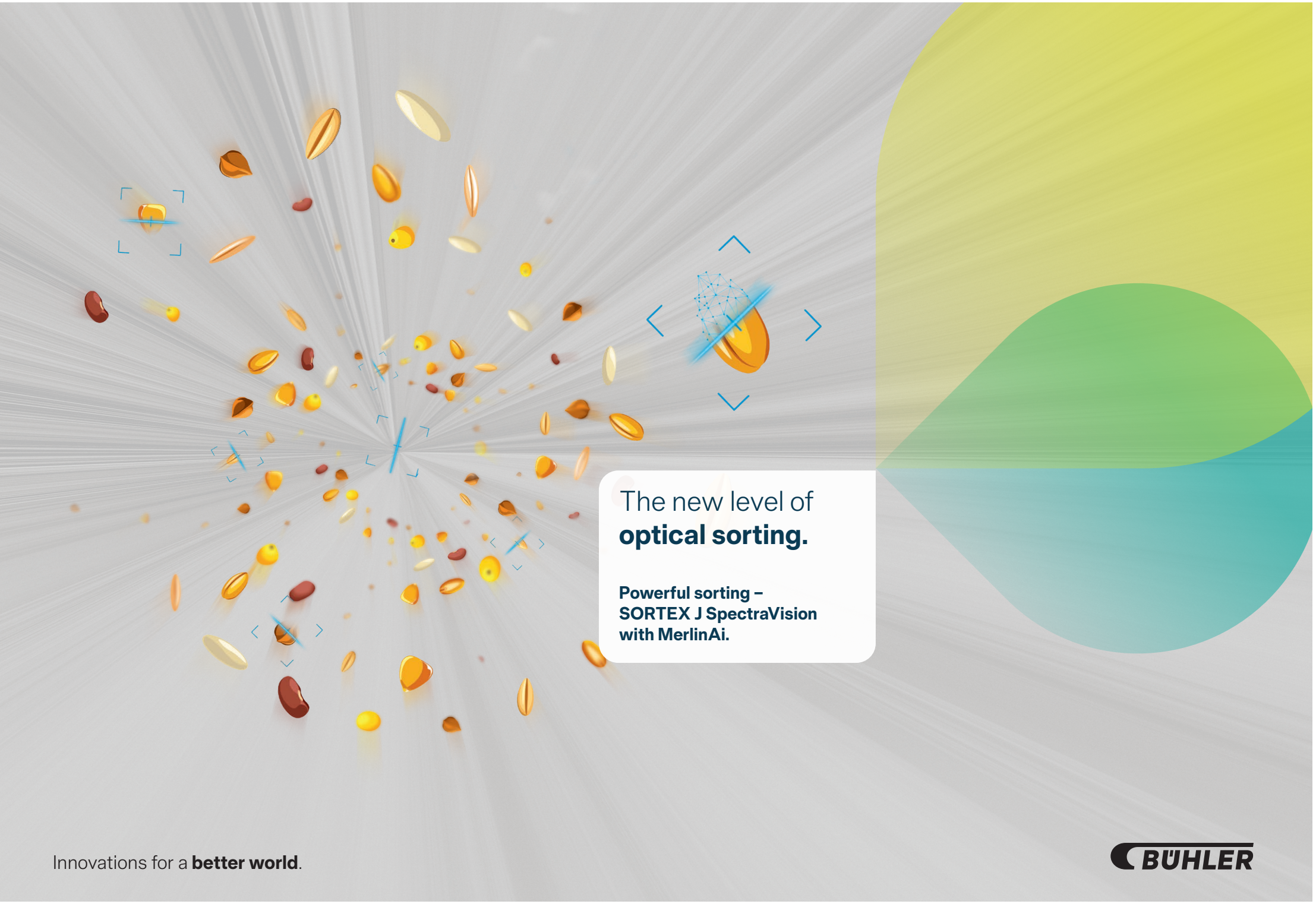

The new level of
optical sorting.
Powerful sorting –
SORTEX J SpectraVision
with MerlinAi.
Innovations for a better world.
BÜHLER



Aligning to the **need of the hour.**

Digitalization

In this digital age, people expect high levels of usability; Bühler's MerlinAi engine brings sorting machines up to speed. An engineer or skilled operator is not required for set-up or maintenance of the sorter, it is easy to set up and simple to use, no technical skills are needed. This attribute is even more important in the face of the current shortage of skilled workers across Europe and North America, MerlinAi provides a layer of assurance for processors.

Climate change

Every single day, climate change gains more and more prominence in every part of our lives, including its increasing impact on crops. Solutions for concerns aggravated by climate change, such as mycotoxins, are critical. The Digital Technologies business area of Bühler continues to focus on innovations for solutions to combat this ongoing global crisis.

Food safety and hygiene

As a knock-on effect of people around the world becoming more health-conscious, food safety and hygiene have gained immense importance. Consumers are now more aware and careful of the origin and processing of products. Bühler solutions have always been and will continue to prioritize food safety and hygienic processing.

Improve your **sorting process.**

The new SORTEX J SpectraVision has been developed using the best Swiss and British engineering know-how. As a result of our 75 years of extensive experience in optical sorting, it offers three key benefits to our customers.



Improved performance

An all-new optical sorter offering up to 50% higher tailings concentrations.

- In line with Bühler's goals of reducing energy, waste and water by 50% to feed the world's population of 10 billion by 2050, SORTEX J SpectraVision has been designed to ensure maximum productivity.
- Delivers higher sorting efficiency with significantly increased throughput in comparison to previous models.
- New LEDs with triple light power and color cameras combined with our new color detection and defect size processing algorithms ensure outstanding defect detection.
- Constant tracking and self-calibration routines improve the machine consistency by reducing the number of false ejections.



Ease-of-use

No advanced technical skills are required to operate the equipment.

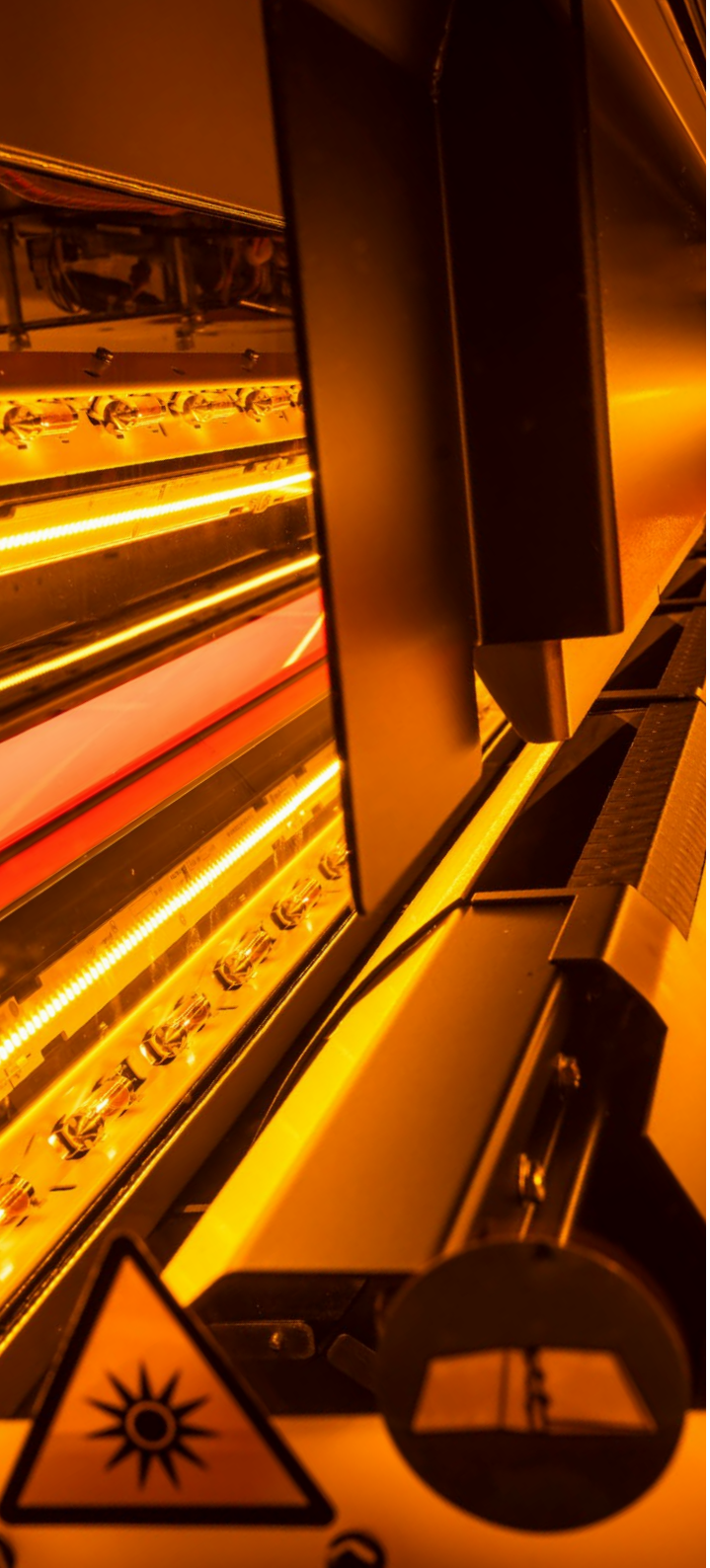
- Unparalleled friendly operation for the required sorting quality to be easily maintained.
- Individual defect removal control to combat the increasing number of defects that arise as a result of climate change and pesticide reduction.
- Unmatched removal of mycotoxins, allergens and foreign materials (FM) ensures absolute adherence to food safety regulations thanks to Full Color and InGaAs cameras.



Connectivity

Control and view your machine performance from anywhere in the world, according to Industry 4.0 standards.

- Changes in the machine setup recorded and saved on Bühler Insights.
- Real-time tracking of sorting performance and emergency warnings with the SORTEX Monitoring System.
- Full visibility options and remote control automation integration options.
- Contribute process insights and multiply transparency across your entire line.
- Overview of your sorter operation.



Detect what **nobody else can**

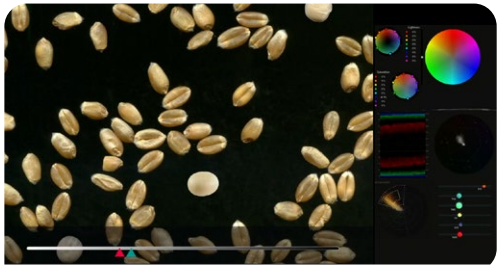
The new SORTEX J SpectraVision optical sorter brings together a set of new optical sensor technologies, Full Color RGB cameras, software with a friendly graphic interface, modern and compact design with up to 7 modules. Equipped with a 15.6" Touch Screen display and new hardware, the SORTEX J maintains optimal sorting performance throughout its operation.

MerlinAi



New cameras, designed for sorting

SORTEX optical sorting cameras have been specially designed in-house to deliver the industry's best in low signal noise. The new full color cameras with better spectral purity between colors offer the best differentiation for colors, detecting the most subtle defects. At the same time, the new InGaAs cameras take foreign material (FM) detection to whole new level.



The power of Artificial Intelligence

New programming and advanced learning techniques have been developed to increase the ability to recognize and remove foreign material (FM) and subtle defects, increasing product throughput, sorting performance and ease of use.
New product calibration and tracking algorithms ensure machine performance consistency, maximizing the quality of the final product.



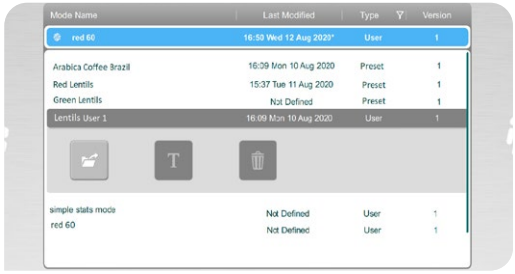
Merlin AI - the new Bühler sorting platform

With 75 years of experience in research and development of digital solutions, Bühler SORTEX in London has created a new optical sorting engineering platform composed of a new mechanical structure, new Full Color RGB cameras, new lighting system, exclusive electronic processing circuits and new multi-layer software with Artificial Intelligence, Machine learning and a simplified and friendly interface.



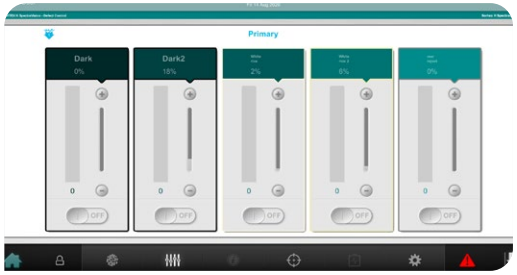
Simple and easy sorting.

The most simple to use optical sorter on the market. Time consuming performance optimizations and adjustments are a thing of the past. Now with preset modes any user, regardless of skill level, can change recipes and adapt them with our intuitive sliders. It is easy as optical sorting should be!



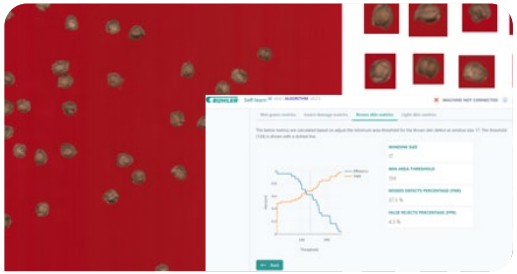
Default modes

Default modes for each product optimized by SORTEX experts allowing for quick and easy product changeovers.



Simple user interface

The simple design, formulation and bigger UI screen of the SORTEX J ensure easy navigation of the machine. Individual sensitivity control over each defect makes it easy for operators to achieve the optimum machine performance.



SORTEX Smart ModeAssist

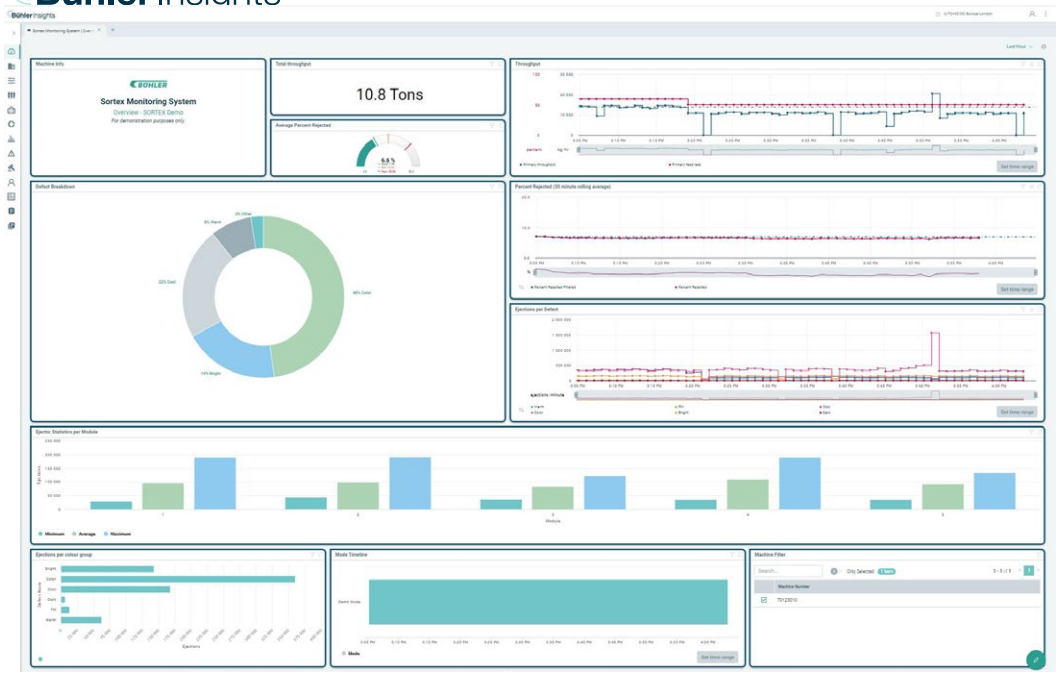
Smart ModeAssist analyzes hundreds of frames of data to optimize color, defect sizing and rejection algorithms. The ModeOptimizer tool allows the user to visualize the product that will be accepted and rejected for easy machine adjustment.



Connect to **the future.**

The SORTEX J transforms your plant digitally. In line with Industry 4.0 standards, you can control and view your machine performance from anywhere. Furthermore, SORTEX Monitoring System provides you with vital information about your machine and plant – giving you complete transparency.

Bühler Insights



Make an informed decision from anywhere
Remote operation monitoring & reporting powered by Bühler Insights

Act fast & save money
Alarms & notifications on customized thresholds

Increase productivity
Track shift performances & downtime

Reduce waste
Access an overview of input contamination and ejections

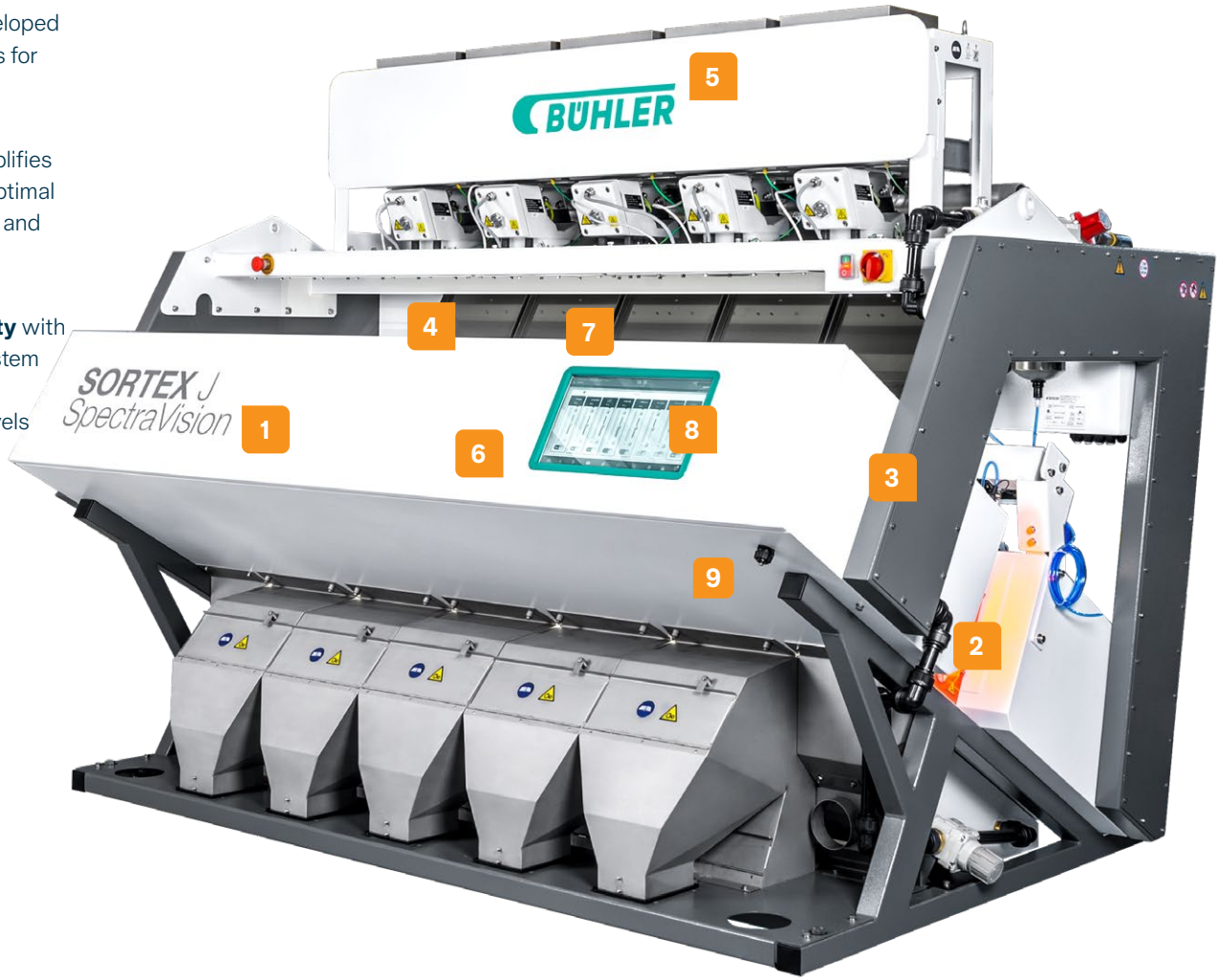
No technical skills required
Suitable for anyone in the factory to use and gain insights from the sorter

Improve the sorting level
Evolve your process
Be part of future



SORTEX J SpectraVision
at a glance.

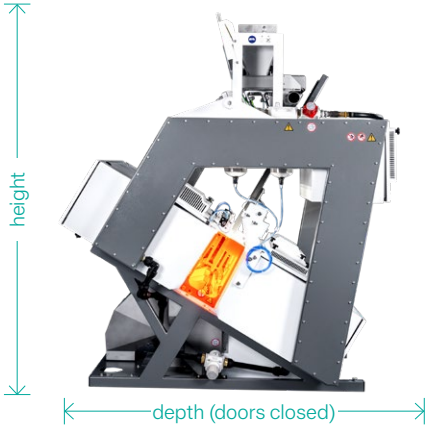
1. **MerlinAi** sorting software with Artificial Intelligence for better product detection
2. **High-intensity** LED lighting delivers three times the light of previous generation machines
3. **SpectraVision Cameras** developed by SORTEX exclusively for optical sorting with better detection of different color shades
4. **Intelligent detection of individual defects** Control over each defect, allowing the user to adjust the amount of defect removal at the slide of a button
5. **Design and validation** at Bühler's facilities in London **guarantee top construction quality**
6. **Automatic product tracking** to maintain machine performance. **One calibration for recipe adjustment**
7. **Default sorting modes** developed and tested by Sortex experts for immediate operation
8. **Friendly user interface** simplifies machine operation so that optimal performance can be verified and maintained
9. **Bühler Insights Connectivity** with the SORTEX Monitoring System takes efficiency, quality and traceability to whole new levels



SORTEX J SpectraVision
technical specifications.



	Machine width (mm)	Depth-doors open (mm)	Depth- doors shut (mm)	Height (mm)	Height (kg)	Typical air requirements L/s 0.6 - 0.8 Mpa	Max power consumption (kW)* (200-240V; 50/60 Hz monofásica) TXTX	TITI
J1	1062	2347	1665	1908 to 1920	668	8,6	1,95	1,65
J2	1800	2347	1665	1908 to 1920	913	17,2	2,85	2,55
J3	1800	2347	1665	1908 to 1920	958	25,8	3,10	2,90
J4	2400	2347	1665	1908 to 1920	1335	39,4	3,95	3,90
J5	2400	2347	1665	1908 to 1920	1380	43	4,80	4,70
J6	3040	2347	1665	1908 to 1920	1599	51,6	5,45	5,60
J7	3040	2347	1665	1908 to 1920	1644	60,2	5,70	6,10



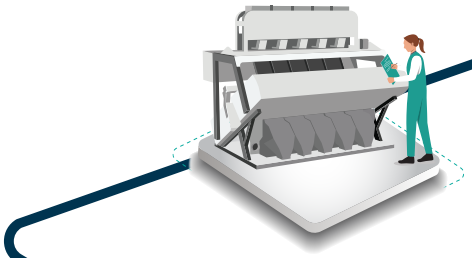
	J SpectraVision	J SpectraVision
Full color cameras	●	●
InGaAs technology		●
High intensity LED lighting	●	●
Xenon IR lighting		●
Intelligent default modes	●	●
Climate control		●

	J SpectraVision	J SpectraVision InGaAs
Remote access	○	○
Bühler Insights connectivity	○	○
SortControl	○	○
SORTEX TotalCare™	○	○
Available modules	1 to 7	1 to 7

● standard ○ optional

With you
at every step.

We at Bühler believe in nurturing lifelong partnerships with our customers. We are here to help you 24/7, providing customer service that you can depend on. From maintenance and product testing, to training and digital services, our aim is to boost your production performance and ensure an unmatched quality of final product for your customers.



Discovery

You discover Bühler via our experienced Sales Managers, through marketing collateral, at an event, or from our website. Together we discuss your problem areas and sorting needs.

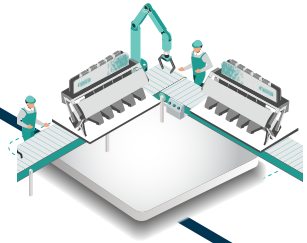




Validation and solution

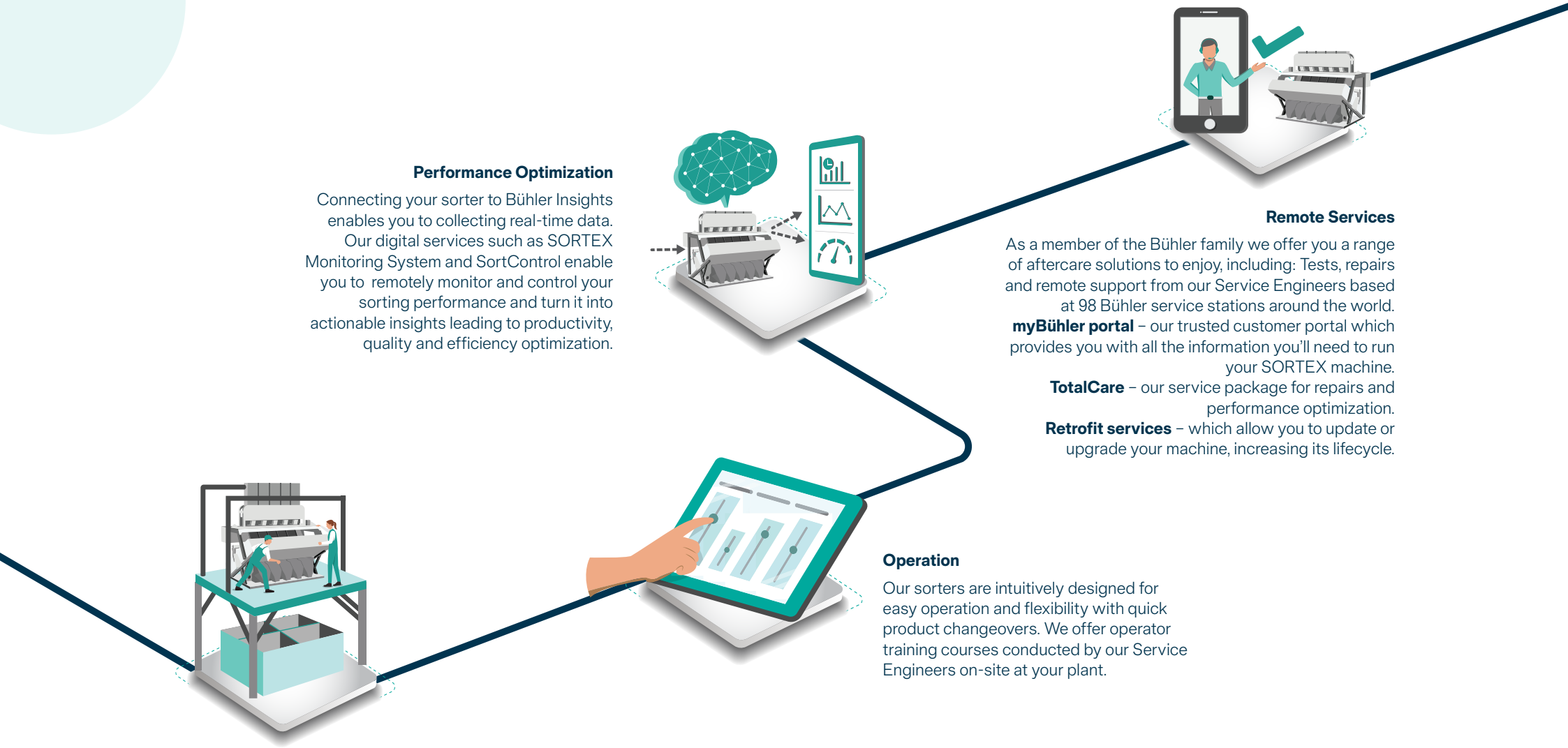
You send us your technical requirements and product photos, including any defects. If your application has been processed by our machinery before we can refer to our database of over 10,000 samples to propose one of our tried and tested solutions. If your commodity has not been tested by us before, we invite you virtualy via livestream to run a small-scale sample test. Alternatively, you can visit one of our 14 applications labs located all around the world.

Based on the test results, we collaborate with you to create a bespoke SORTEX solution that you are confident in, that will suit your unique processing requirements and increase your business performance.



Manufacturing

With 32 manufacturing sites around the world, we have a very high in-house production capacity, including development of intricate cameras and sensors. Our optical sorters are not built on stock, but rather based on your specific needs.



Performance Optimization

Connecting your sorter to Bühler Insights enables you to collecting real-time data. Our digital services such as SORTEX Monitoring System and SortControl enable you to remotely monitor and control your sorting performance and turn it into actionable insights leading to productivity, quality and efficiency optimization.

Remote Services

As a member of the Bühler family we offer you a range of aftercare solutions to enjoy, including: Tests, repairs and remote support from our Service Engineers based at 98 Bühler service stations around the world.
myBühler portal – our trusted customer portal which provides you with all the information you'll need to run your SORTEX machine.
TotalCare – our service package for repairs and performance optimization.
Retrofit services – which allow you to update or upgrade your machine, increasing its lifecycle.

Operation

Our sorters are intuitively designed for easy operation and flexibility with quick product changeovers. We offer operator training courses conducted by our Service Engineers on-site at your plant.

Installation

Using integration drawings, the machines are fitted and tested by our experienced and highly trained local language speaking Service Engineers. They connect the machine to your plant's automation system using PLC or other plant networks.

Bühler UK Ltd

20 Atlantis Avenue
London E16 2BF
United Kingdom
T +44 (0)20 7055 7777
sortex@buhlergroup.com

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