

Production and supply of high-precision sorting equipment

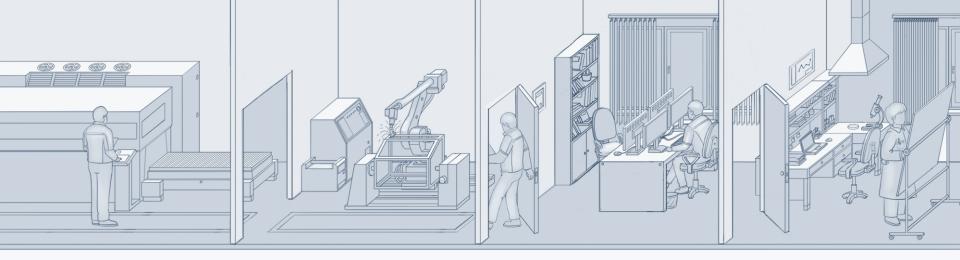
# CSort – manufacturer of color sorting machines

SMART SORT





CSort manufactures color sorting machines – highprecision equipment designed for cleaning bulk materials from off-colored impurities and contaminants.



Metal processing equipment from leading manufacturers — TRUMPF, LISSMAC, HAAS, MECAL.

esor:

Professional welding equipment from EWM and FANUC robots.

Over 100 employees experienced in scientific work and having scientific degrees. CSort employees are regularly trained and take international traineeship. We share our experience in creating innovative equipment with other manufacturing companies.



Each unit is carefully controlled for quality before it is installed into the sorter. Thus, we achieve the most reliable operation of the produced equipment.



We get our electrical, optical and pneumatic components from KODAK, TOSHIBA, and CAMOZZI.



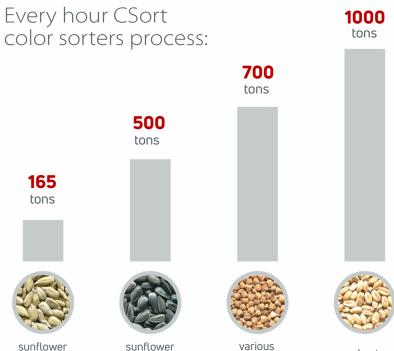
More than 1100 of our machines are used by production companies worldwide.

- Abkhazia
- Armenia
- Austria
- Azerbaijan
- Belarus
- Bulgaria
- the Czech Republic
- Estonia
- Finland
- France
- Germany
- India
- Iran
- Ireland
- Kazakhstan
- the Kyrgyz Republic
- Latvia
- Lithuania
- Moldova
- North Macedonia
- Poland
- the South African Republic
- Spain
- Ukraine
- Uzbekistan

## COLOR SORTERS FOR CLEAN FOODS



Within 10 years we launched over 1100 machines

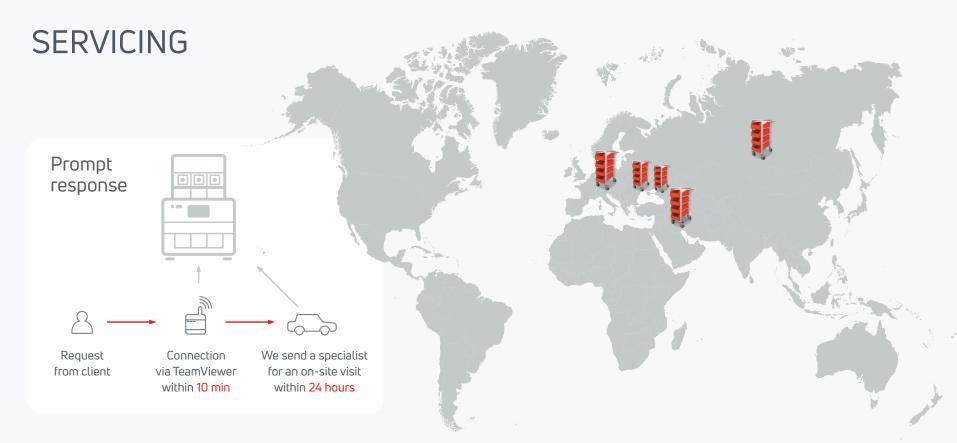


cereals

sunflower kernel

seeds

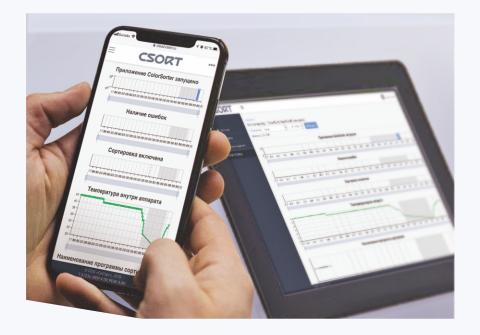
wheat



e

Csort uses Internet to communicate with clients all over the world. We can arrange visits of our technicians not only from Russia, but from Germany, Ukraine, Iran, and the Czech Republic as well.

## **CSort Cloud** — NEW OPERATIONAL CAPABILITIES

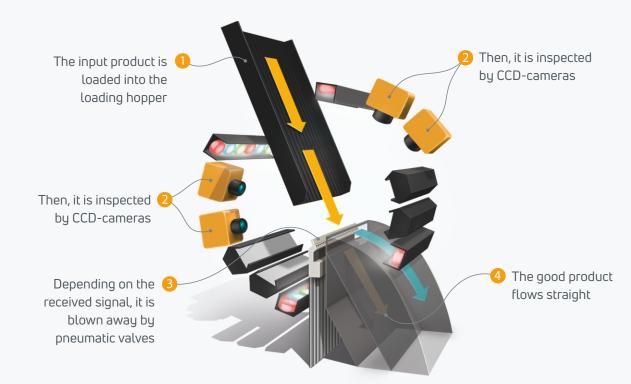


**CSort Cloud** is a global online platform integrating system for color sorter monitoring by the CSort experts. The system controls the productivity of the production line, raw material quality, equipment downtime, and in-time software update. It allows to provide remote equipment maintenance anywhere.

Statistics of different parameters is always available in the personal account of the online service to help the operator to control the machine and the whole production line where it is integrated.

CSort Cloud – less downtimes, more benefits for the user.

## TECHNOLOGY



There are a lot of automated methods to clean bulk materials, however, color sorting is the gentlest procedure of all. Grain does not undergo any of the processes which may damage the product (mechanical treatment, washing or calibration). Color sorters ensure homogeneous quality of the product achieving high consumer appeal and 99.99 % purity. Moreover, an increasing number of agricultural producers prefer color sorting to any other treatment method, as it can remove impurities and reduce production costs.



#### SMART SORT B series 1 to 3 chutes

### PINPOINT ACCURACY OF SORTING

**SmartSort**<sup>B</sup> is a top-of-the-line model of the color sorter that incorporates the latest developments of the company. It was designed for the clients looking for the "pinpoint" accuracy of sorting even if the initial content of impurities is high and greater productivity without resorting is required.

**SmartSort**<sup>B</sup> color sorters achieved a strong position in the highly competitive European market.

**SmartSort<sup>B</sup>** is suited for sorting food and non-food bulk products as well as for difficult color sorting applications. Thanks to the new **CSort Cloud** platform, the operator is now able to monitor and control the technological process of sorting.

## KEY FEATURES OF NEW SmartSort<sup>B</sup>



## Excellent sorting accuracy

#### High resolution camera

**5400 pixels** allows **0.05 mm** optical resolution to detect the smallest defects. It has 2,6 times higher sorting accuracy than was before. High resolution provides color sorters with an ability to detect and reject grains having similar color but with different textures. Moreover, now it is possible to sort by shape removing malformed or split grains.

#### Advanced inspection and ejection systems

New inspection and ejection systems ensure greater productivity for more concentrated waste even if the content of impurities is high. This aspect is crucially important in seeds production where quality standards are highly demanding.

# Powerful lightning

Powerful LED lighting and low signal-to-noise ratio allow to distinguish the smallest shade differences of the products that was previously impossible.

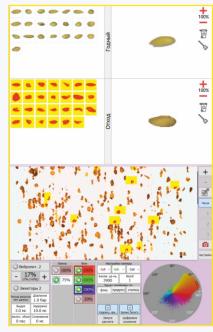
**x4** 

Due to upgraded lighting it is now possible to "penetrate" inside the product and reflect its content and defects hidden from the human eye. It opens new opportunities in sorting hulled and unhulled grains, dried fruits with and without stones, mealy and vitreous wheat, and plastic by its transparency.

New lighting has stable parameters. It ensures faster adjustment of the machine by transferring parameters set to one chute to the whole machine.

# Extended recognition capabilities

Simultaneous 4 sides shooting with RGB and IR cameras ensures analyzing and sorting products by color, shape, texture, and inner properties. For instance, soring nuts from shells, removing rancid sunflower kernels or separation of mineral admixtures from grains.



# Fast and smart program setting

**SmartSort**<sup>®</sup> creates a sorting program according to the images of your product made by the inspection system after inserting samples of the products to be accepted and rejected. Several images are enough for the machine self-setting.





#### SmartSort is the right choice for those striving for the best

SmartSort is designed to clean a wide range of bulk materials — by color, by shape, by texture. Innovative developments and state-of-the-art components along with the long-standing record of designing color sorters allowed us to create a new model distinguished by maximum capacity and ability to solve the most challenging tasks for sorting bulk materials.



## **ZORKIY**

Reliable and efficient Zorkiy meets all up-to-date requirements to the color sorters. Modern electronics, know-hows in the algorithms of processing video images, next-generation pneumatics, stateof-the-art metal processing technologies — all that is Zorkiy machine.

Our own production site allows us to implement the full production cycle. In our machines we promptly employ new ideas for adjusting the functions, operability and for increasing sorting efficiency.

Sharp-sighted Careful Fast





OPTIMA color sorter has proved itself to be reliable and stable. State-of-the-art developments provide high production capacity and space-saving features, while system of analysis based on CCD cameras and new sorting algorithms increase the sorting precision. OPTIMA color sorter is completely ready for processing your product right after the purchase.

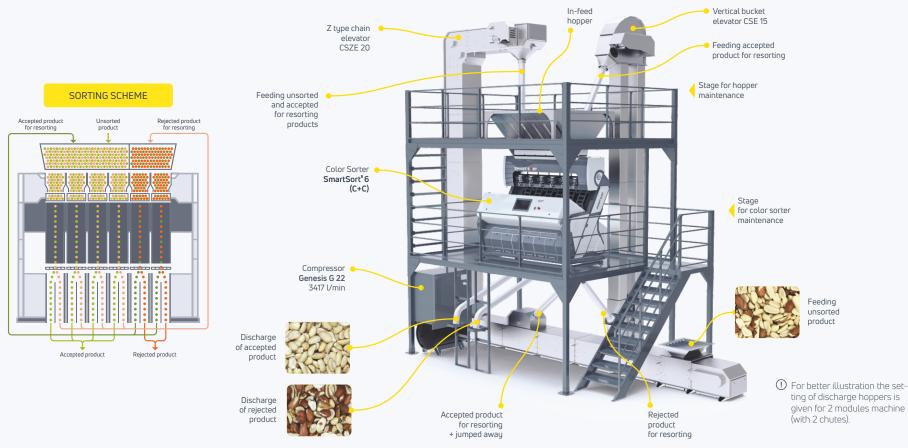


# HXRIZONT

#### Belt sorter

Optical sorters "Horizont" are designed for extracting visually different impurities from nuts, chips and flakes, vegetables, seafood, berries and other fresh, dried or frozen fruits, but also non-food products such as metals, minerals and plastics.

## INTEGRATED SOLUTION





# Food industry

#### Plastic and glass sorting



Household wastes sorting



Color sorter separates food as well as nonfood products

Broken glass

> Simple software allows to readjust the colorsorterinaminute



## Clean to the last grain

CSort invites you to visit our showrooms or to send us sample product for free test sorting and result analysis.

Specialists of our company will test sort your product, engineers will analyze the product before and after sorting and provide you with results.

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