# TeachNSort – Convincing Results

## TeachNSort Smart+

The new software combines easy, automatic teach-in functionality with a manual re-adjustment or amendment function. It takes into account the fact that not only nature is multifaceted but also that users have different requirements. It makes operation easy where it is possible and accounts for complexity where it is unavoidable.

The software is especially adjusted to the enhanced multicore hardware to accelerate evaluation processes. Therefore, more complex analysis and/or more objects per time unit can be processed.

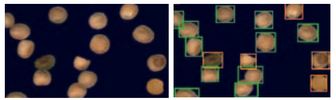
A self-learning algorithm detects the colour spectrum of the good material based on real images of your material. Full colour simulation sequences are displayed so that the effects of each and every sorting change can be reviewed before implementation.

Each kernel is recognized and processed individually and its properties assessed for colour, shape and irregularity. With TeachNSort Smart+ it is even possible to identify and define exactly when the ejectors should handle that stray piece of 'unknown' material that you and your customers didn't expect could be in there.

Advantages

+ Quicker teach-in
+ Better automatic classification
+ Improved object separation
+ Extended filter operation to reduce accept in reject
+ Additional features for object analysis
+ Arbitrary combination and sequence of features

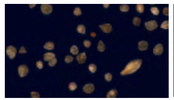
While the OS 901 is active in production, the next product can be prepared offline at the office PC.
Therefore, teach-in is more user-friendly and can be done more quickly.



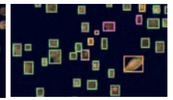
Soya



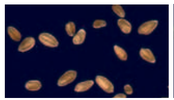
Soya classified



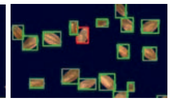
Spinach



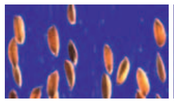
Spinach classified



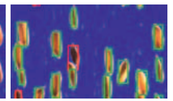
Wheat



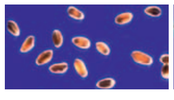
Wheat classified



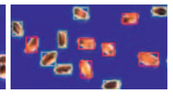
Red rice



Red rice transmission classified



Durum



Durum transmission classified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**Strong Seed.**
**Healthy Grain.**
**PETKUS.**

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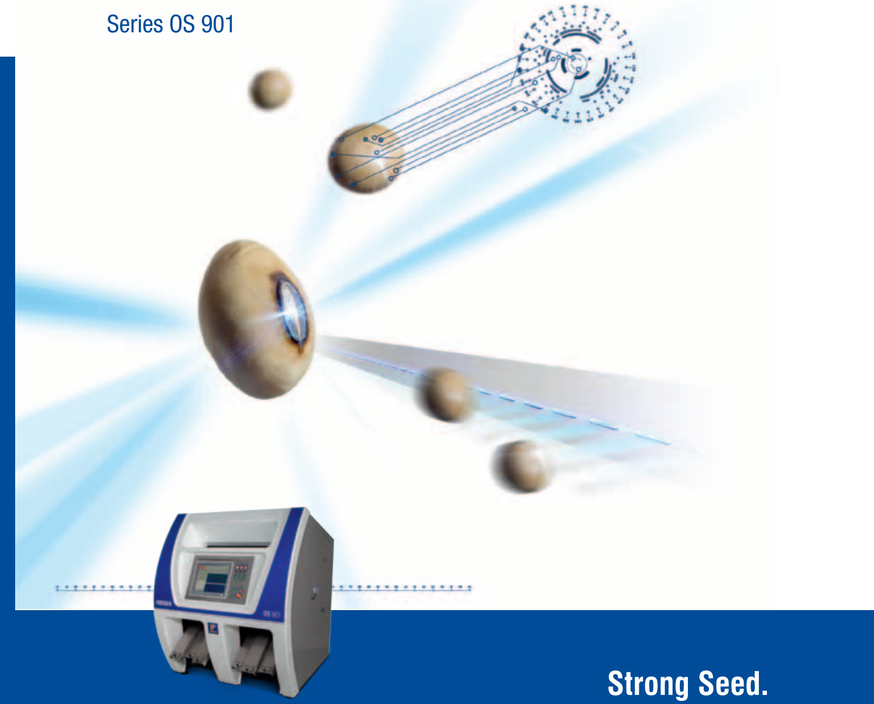
# Luminance.
# Detect the Contrast.

Series OS 901



**Strong Seed.**
**Healthy Grain.**
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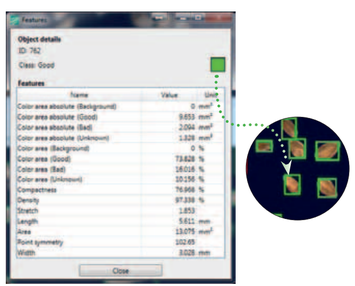
# OptoSelector OS 901 – Request the Best

## Full Colour, Size & Shape Recognition

The OptoSelector 901 is a full colour sorter for achieving products of the highest quality level. The advanced software processes individual kernel images and includes size and shape recognition technology as a standard feature. Defects having the same colour as the good material can now be removed by recognizing differing shape characteristics. Similarly, broken or deformed pieces of otherwise good material can also be rejected.

Detailed information about colour content and geometric characteristics of objects is easily accessible and is displayed quickly and clearly.






## Long Life LEDs & Sealed Optical Cabinets

Illumination for both product and background lighting is provided by long life, energy efficient LEDs. This removes the recurring need for mechanical background adjustments caused by raw material variations and product changeovers as is common in many other machines.
The dense arrangement of LEDs in the product lighting bars in combination with precision optics provides a bright, highly uniform and well-focused product illumination. The front and rear optical cabinets are completely sealed to prevent the infiltration of dust and dirt. All components which require regular inspection are housed separately, keeping the optical cabinets closed during installation and common service tasks.
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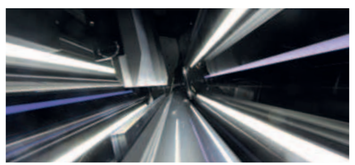

## Clean

Oversized access doors on both sides of the OptoSelector provide quick entry to the viewing areas for inspection and cleaning. The complete ejector bar assembly and connecting pipework can be easily and thoroughly cleaned by simply detaching it with the air piping in place and withdrawing it from the machine while still connected to the sliding rail mounted rear cabinet.

## Automatic Cleaning

The automatic wiper system has been changed such that the inspection area and surrounding can be cleaned more efficiently. The time interval and the number of runs per cleaning can be defined according to the product.

## Gentle Material Handling

From inlet to outlet the OptoSelector has been designed to minimize the risk of damage to the material being processed. Factory tuned feeders supply the material to the chutes where a new advanced coating technology has been used to ensure optimal acceleration. Easy to access sampling points are provided in both the good and rejected material outlets at the front of the machine

## Reliable Software and Remote Support

The OptoSelector software was developed and engineered in Germany, guaranteeing the highest level of ongoing dependability. The machine's Windows based software platform makes connection to corporate networks easy. Furthermore, ROEBER can offer clients remote support via internet as a further tool to aid reliability, machine set-up and development.

## Higher precision, increased capacity, more functions

### The OS 901

+ Improved material calming using new materials
+ Influence of material level is decoupled from feeder
+ Specially formed chutes for elongated objects
+ Changes to the efficient aspiration system help settle down material in outlet region
+ Automatic wiper system cleans inspection area and its surroundings more efficiently
+ Software TeachNSort Smart+ provides many new functions

### t - Option

A new individually available option serves to inspect seeds based on translucent effects. High power LEDs which are additionally focused are combined with excellent optical components with high light transmission. They allow for detection of defects in the inner part of translucent seeds which are not visible from the outside. Examples of this are the detection of red rice vs. rice or durum vs. wheat.

### i - Option

Despite the fact that it is sufficient for many applications to detect the light in the visible range with utmost accuracy the OptoSelector is also available with an NIR/SWIR option for special applications. This option provides additional NIR/SWIR camera technology based on InGaAs sensors. It is therefore possible to expand the ability of the OS 901 in recognizing even the slightest shades of colour deviations even more by taking into account additional information from the near infrared spectral range.

### Examples of Application

| | 901 | t - Option | i - Option |
|---|---|---|---|
| Corn | up to 17 t/h* | — | — |
| Wheat | up to 15 t/h* | — | — |
| Wheat with Durum | — | ca. 3,5 t/h** | — |
| Rice with red rice | — | up to 1,5 t/h* | — |
| Sunflower | — | — | up to 9,5 t/h* |

* Measurements depend on product quality and on contamination level.
** Contamination ca. 10 % Durum, measurements depend on product quality.


# OptoSelector 901 *i* / 901 *t*

### Technical Data

| | | |
|---|---|---|
| Length | mm | 1 854 |
| Width | mm | 1 627 |
| Height | mm | 2 290 |
| Weight | kg | 1 250 |
| Power Supply | | 230 V ~, 50 Hz, single phase |
| Required Air Flow | | min. 2.5 m³ per min. * at 6 bar |
| Exhaust Air | | min. 35 m³ per min. * |
| Internet Access | | LAN-Ethernet-Cable |

* Estimate – depends on contamination levels