



# **SORTING WOOD MATERIALS**

How to recover and clean  
various types of wood

# PURE-GRADE WOOD PRODUCTS AND METAL RECOVERY

Wood is a highly demanded raw material. Due to its versatility, this renewable natural product is now used in particular by the processing industry, moving away from a primary use for waste to energy (WtE). The amount of waste wood is growing all the time.

In order to meet the needs of a volatile market and rising demand, waste wood can be recovered from sources such as construction and demolition waste and bulky waste. Valuable metals, pure-grade wood products and even high-quality fresh-wood fractions can be separated out in the process.

STEINERT provides customised sorting concepts and solutions covering the entire spectrum of separation and sorting requirements. These supply valuable products for the recycling industry and form the basis for products made from secondary raw materials.

This Solution Guide presents examples of procedures which can be combined to cover everything from cleaning metals and minerals from wood waste to pure-grade sorting of different types of wood.

**// Alongside mechanical magnetic separation, STEINERT provides unique sensor sorting machines for the recovery of pure-grade products for the secondary raw materials industry**

- + Magnets for separating ferrous parts
- + Non-ferrous metal separator
- + X-ray and induction sensor sorting machines
- + Near-infrared sorting machines with hyperspectral imaging technology

## // Special sorted products

- + Ferrous and non-ferrous metals (with and without stainless steel)
- + Fresh wood
- + Chipboard
- + Multiplex
- + OSB
- + MDF
- + Minerals & broken glass

Recovery of non-ferrous metals using STEINERT EddyC®



Density separation using STEINERT XSS® T EVO 5.0



Separating ferrous metals using STEINERT UME



Sorting wood products using UniSort PR EVO 5.0



Separation of mixed metal by STEINERT ISS®

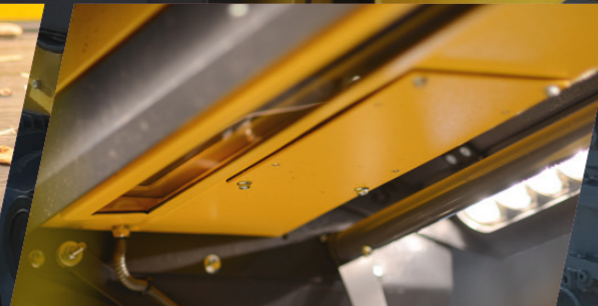
# FOR THE NEXT ERA OF WASTE SORTING TECHNOLOGY:

## UniSort PR EVO 5.0 near infrared sorting system

- + **Hyperspectral imaging for challenging sorting tasks:** Hyper Spectral Imaging technology allows various types of wood to be detected without using additional hardware.
- + **In-house software development for reliable detection:** STEINERT sorting programs for sorting wood enable very high throughputs and sort various types of wood, even those with a grain size of less than 30 mm.

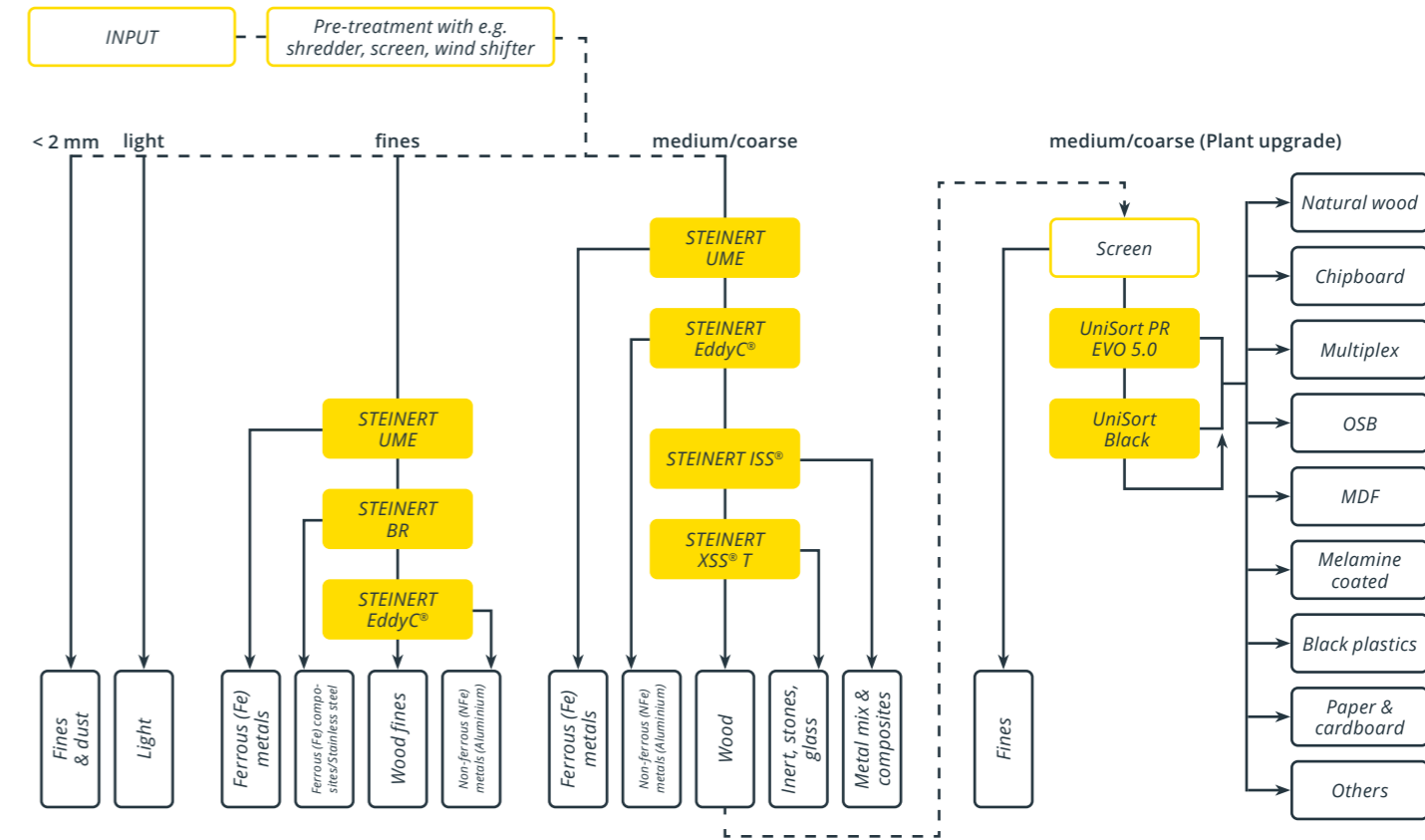
+ **Optimised design:** For optimum sorting performance, the material can be passed through a disc spreader and dust levels reduced by using a belt cover and extraction.

+ **Ready for the next generation of sorting systems:** The EVO 5.0 generation is synonymous with networked hardware and automation as well as AI-assisted sorting programs.



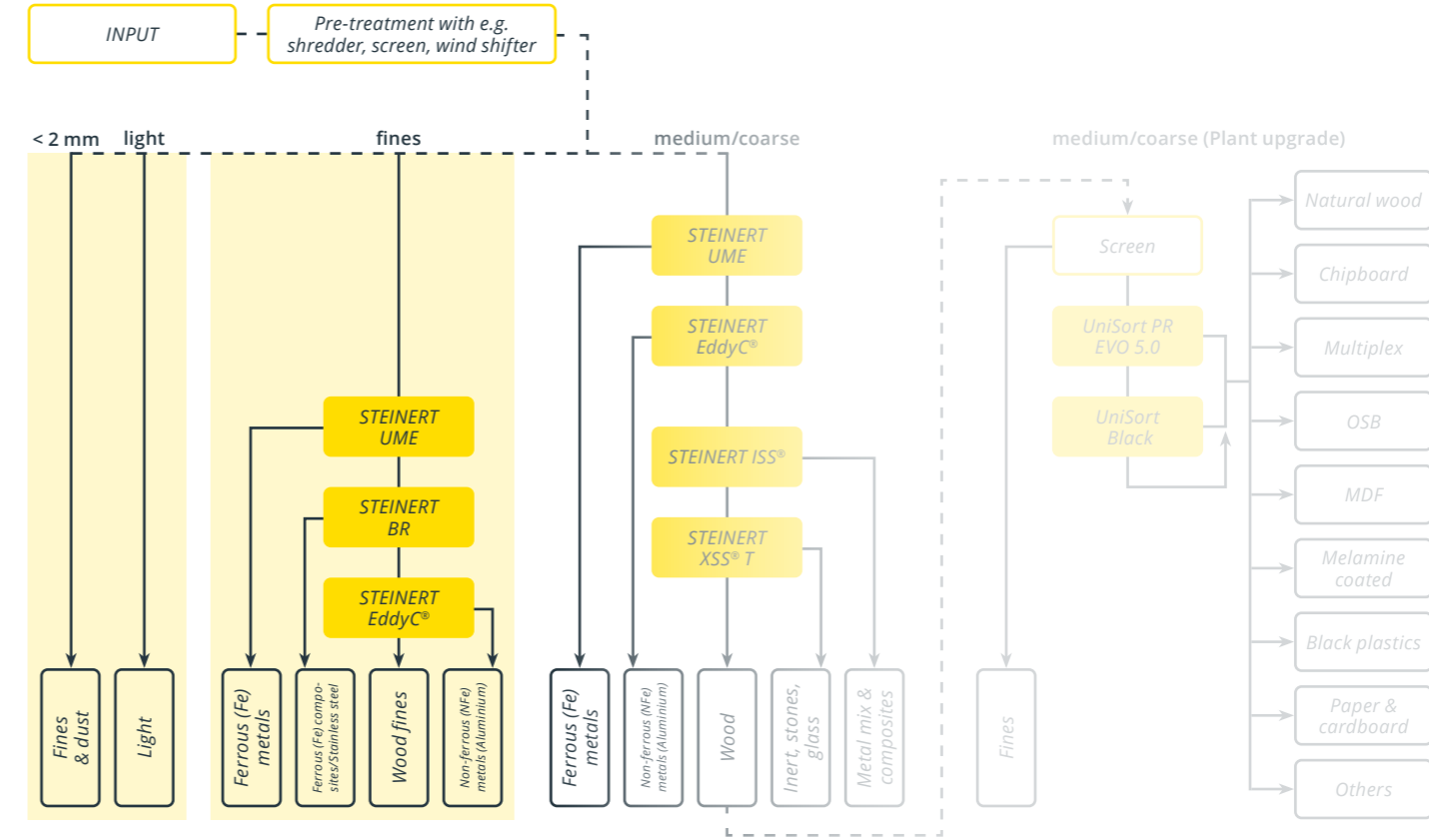
# SORTING RECYCLABLE MATERIALS FROM WOOD WASTE

Simplified flow chart for sorting recyclable materials from wood waste



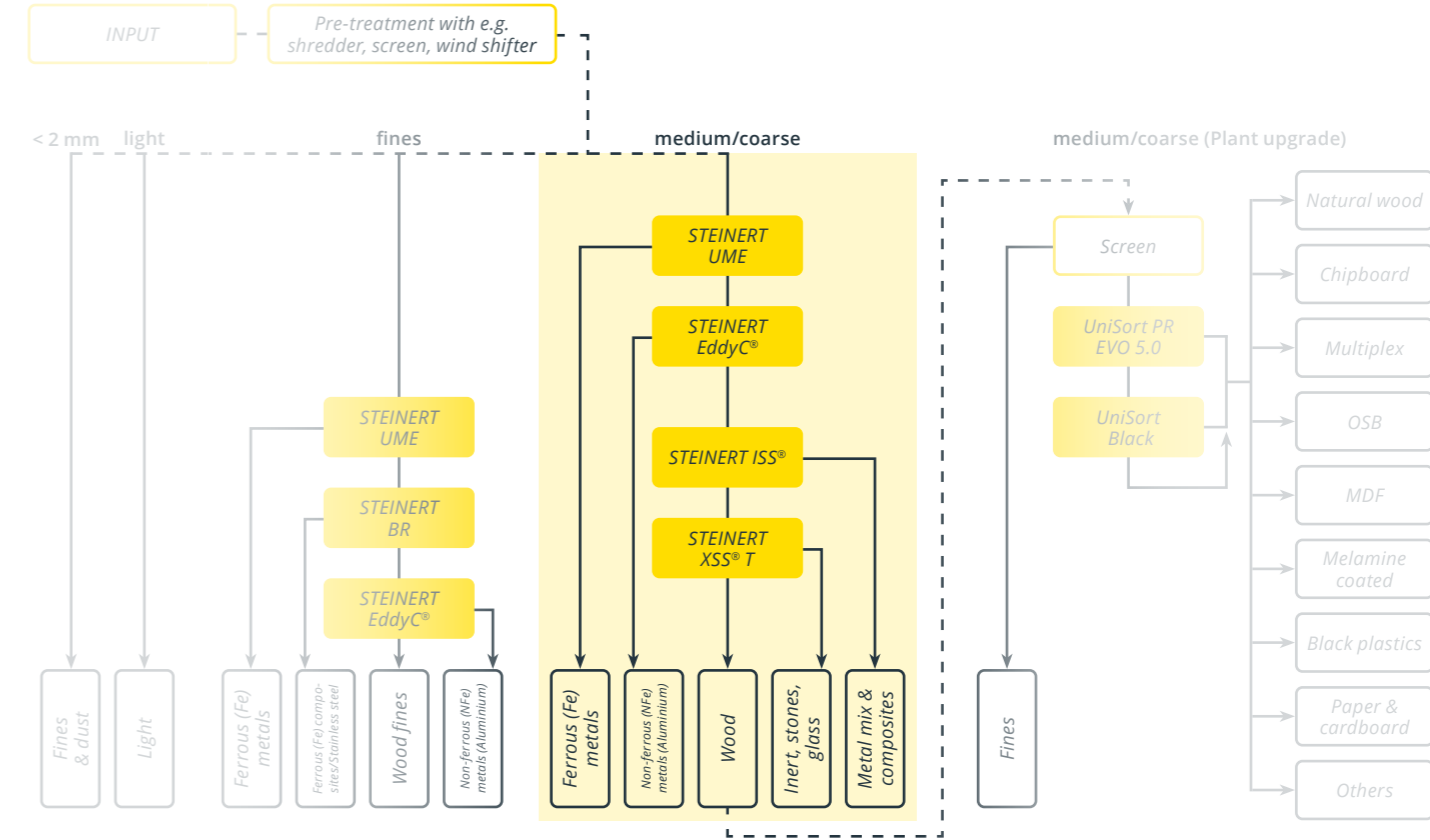
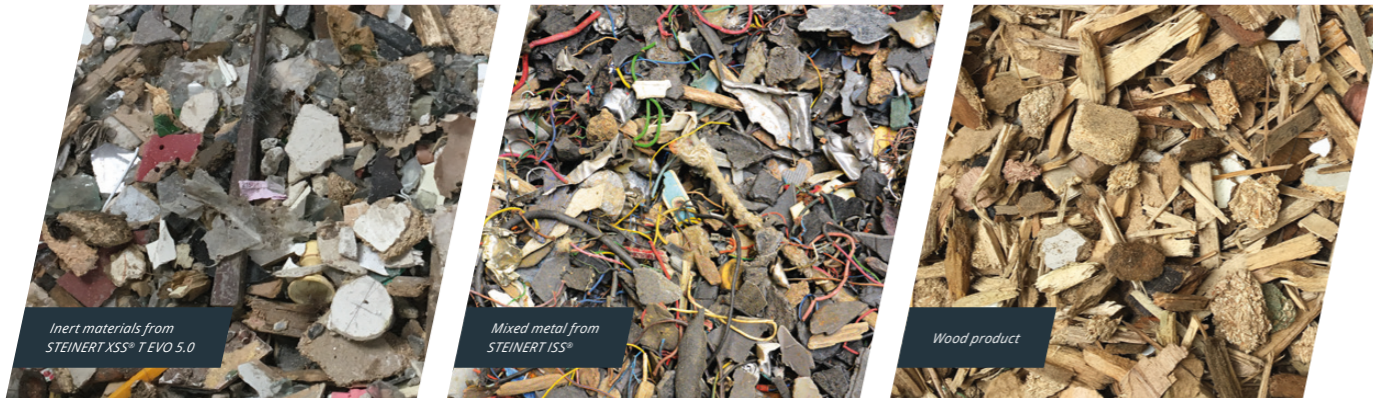
# SORTING CONCEPT FOR SEPARATING METALS FROM WOOD WASTE

First step in a simplified flow chart for sorting recyclable materials from wood waste



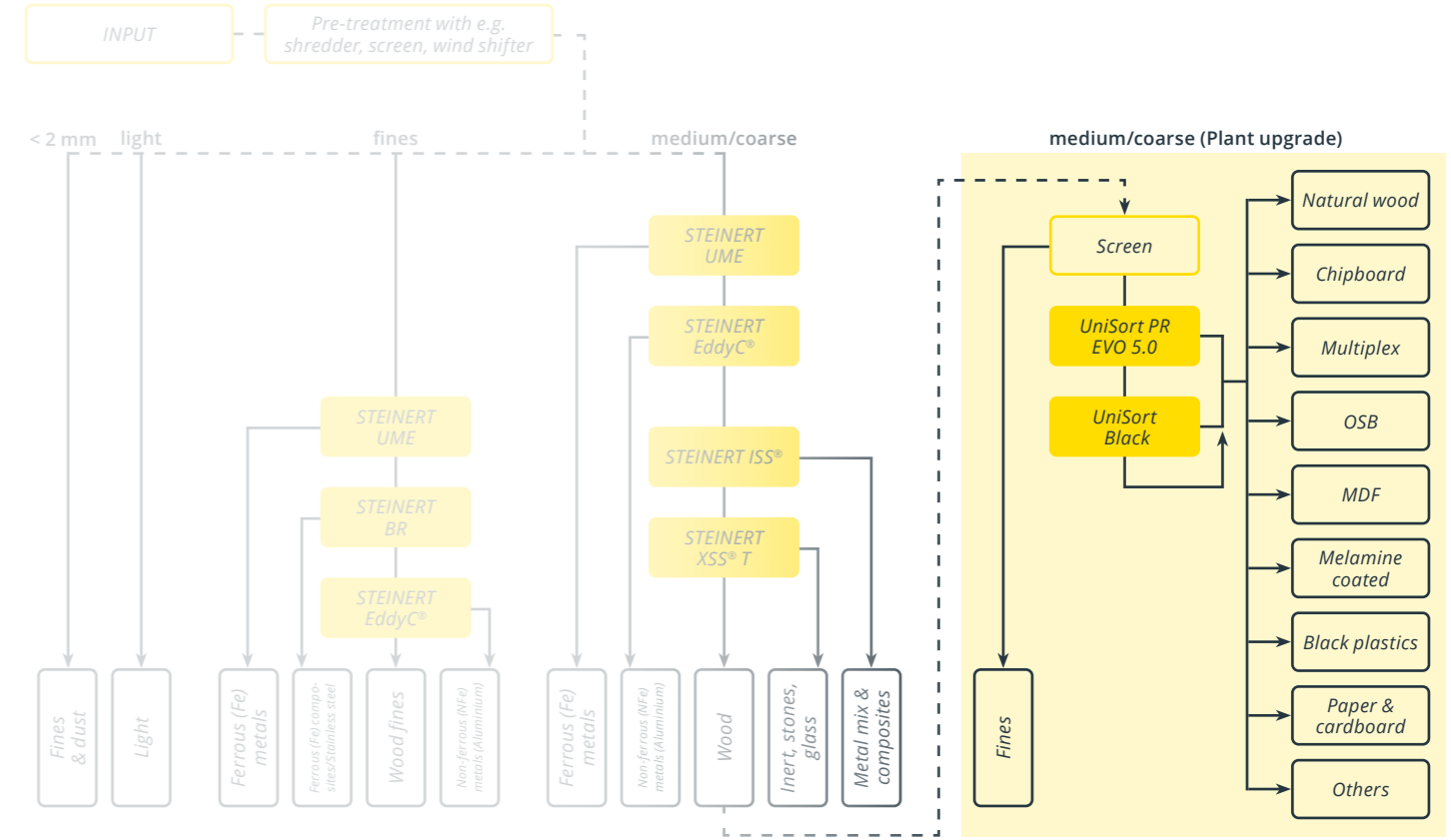
# SORTING CONCEPT FOR CLEANING WOOD PRODUCTS

Second step in a simplified flow chart for sorting recyclable materials from wood waste



# CONCEPT FOR PURE-GRADE SORTING OF WOOD MATERIALS

Third step in a simplified flow chart for sorting recyclable materials from wood waste



# OUR PRODUCTS

for recovering and cleaning wood



## STEINERT UME

Self-cleaning overhead suspension magnets reliably extract coarse iron. The overhead suspension magnet is arranged above a feeding conveyor belt and extracts the ferromagnetic materials from the supply flow against the force of gravity.



## STEINERT BR

The STEINERT BR is a magnetic head pulley that can be integrated into an existing conveyor belt as a machine component. Working alongside the self-cleaning overhead suspension magnets, this allows materials with low levels of magnetism to be sorted out of the flow of material.



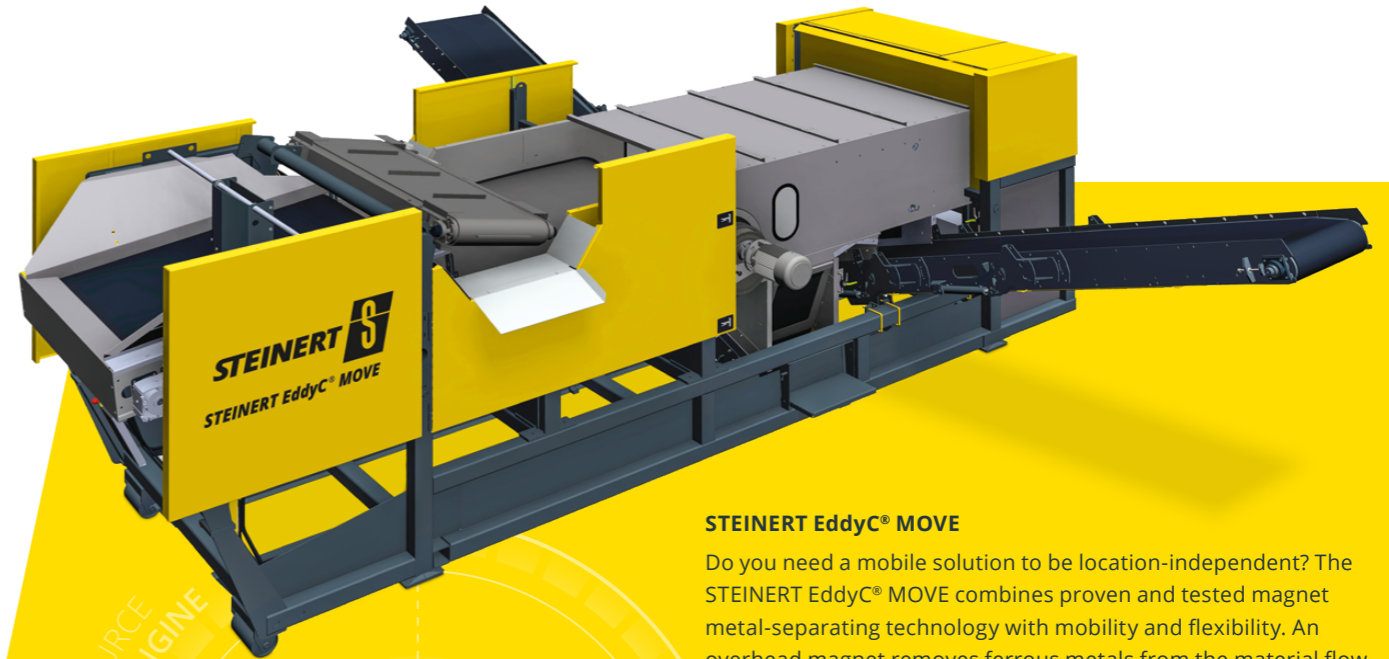
## STEINERT MTE/MTP

Magnetic drums are usually used in the line to separate free iron and ferrous compounds before the next sorting stages. Magnetic components of various grain size ranges are thereby specifically separated and can be fed back into the process if necessary.



## STEINERT EddyC®

The eddy current separator can be used wherever non-ferrous metals can be recovered or separated. Using eddy current technology, it produces marketable non-ferrous metal mixes containing aluminium, copper, zinc or brass.



## STEINERT EddyC® MOVE

Do you need a mobile solution to be location-independent? The STEINERT EddyC® MOVE combines proven and tested magnet metal-separating technology with mobility and flexibility. An overhead magnet removes ferrous metals from the material flow before the integrated eddy current separator with an eccentric pole system separates the remaining metals. This sorting machine therefore allows the first steps of wood sorting to be carried out all together in a flexible way at different locations.

THE RESOURCE  
SEARCH ENGINE



# OUR PRODUCTS

for recovering and cleaning wood



## STEINERT ISS®

The STEINERT ISS® induction sorting machine is an addition to magnetic sorting and eddy-current separation for recovering residual metals from a mix of materials. It can be deployed where the focus is on producing recoverable metal concentrates or producing a metal-free residual fraction.



## STEINERT XSS® T EVO 5.0

The STEINERT XSS® T EVO 5.0 is used for density-based sorting – for example, to separate stone and glass from wood.



## UniSort PR EVO 5.0

The UniSort PR EVO 5.0 is used wherever NIR technology is needed to sort recyclable material. The UniSort PR EVO 5.0 is a sorting machine that uses hyperspectral imaging camera technology to sort various types of plastic, paper & cardboard as well as wood products.



## UniSort Black

The UniSort Black is used wherever NIR technology is needed to sort recyclable material and where black and dark-coloured plastics are also to be detected alongside the plastics which can traditionally be detected with NIR. It is designed, in particular, for producing a black plastic product or generating plastic-free mineral fractions.

# SAFEGUARD YOUR INVESTMENT:

## Test your sortable material in the Test and Development Centre

Benefit from skilled engineers and a combination of cutting-edge magnets, non-ferrous metal separators and sensor sorting machines in a recycling experience space.

Realistic testing can be undertaken in the Test and Development Centre on an industrial scale to reproduce the demands, feasibility and ROI of the planned investment and create investment security on the basis of data and facts.

- + Check the feasibility, planning and layout of the system
- + Carry out sorting trials
- + Verify sorting performance in terms of quality, yield and throughput

Our application specialists from the test centre and our sales team will help you solve your sorting tasks. If desired, we can directly demonstrate the potential for recovering material with STEINERT sorting technology using your own test material.

**Want to try out the STEINERT test centre for yourself? Simply get in touch with your personal STEINERT contact.**



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MAGNETIC + SENSOR SORTING SOLUTIONS