



Applications

Base metal:

- Bauxite
- Copper
- Iron ore
- Lead
- Manganese
- Nickel
- Zinc
- Aluminium
- Uranium
- Scheelite

Precious metal:

- Gold
- Silver
- Platinum
- Palladium

Metal slag:

- Copper
- Nickel
- Stainless steel

Industrial Minerals:

- Calcite
- Feldspar
- Limestone
- Magnesite
- Quartz
- Rock salt
- Silicium
- Talc
- Phosphate

Gemstone:

- Diamonds
- Tanzanite
- Emeralds
- Topaz
- Aquamarine
- Rubies
- Alexandrite

MINERAL SORTER

Sensor Based Sorting Solutions

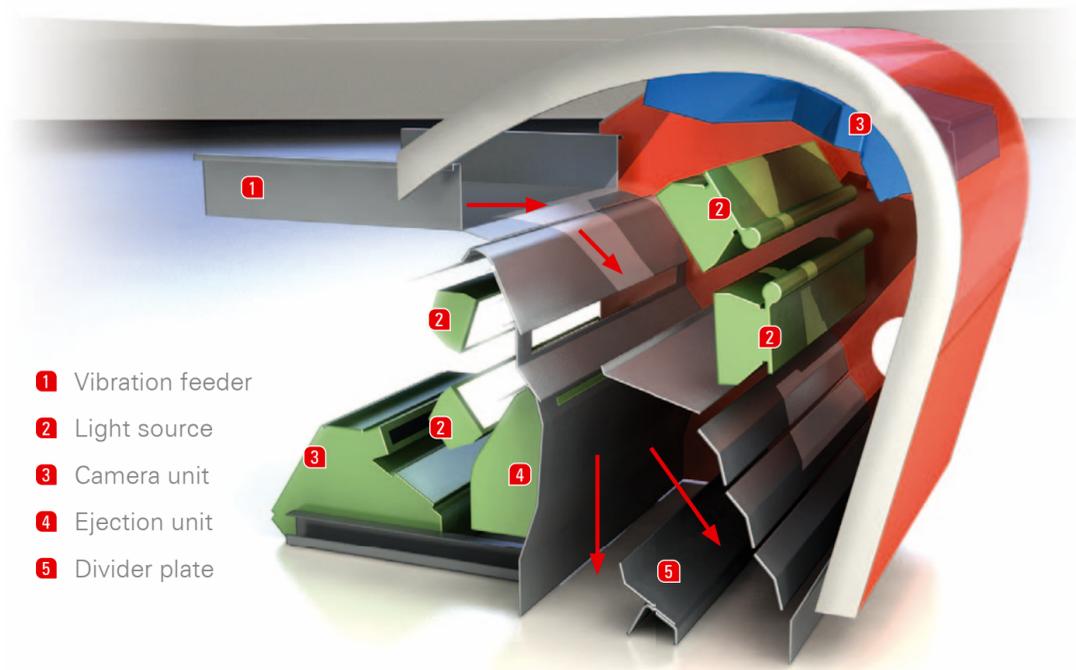


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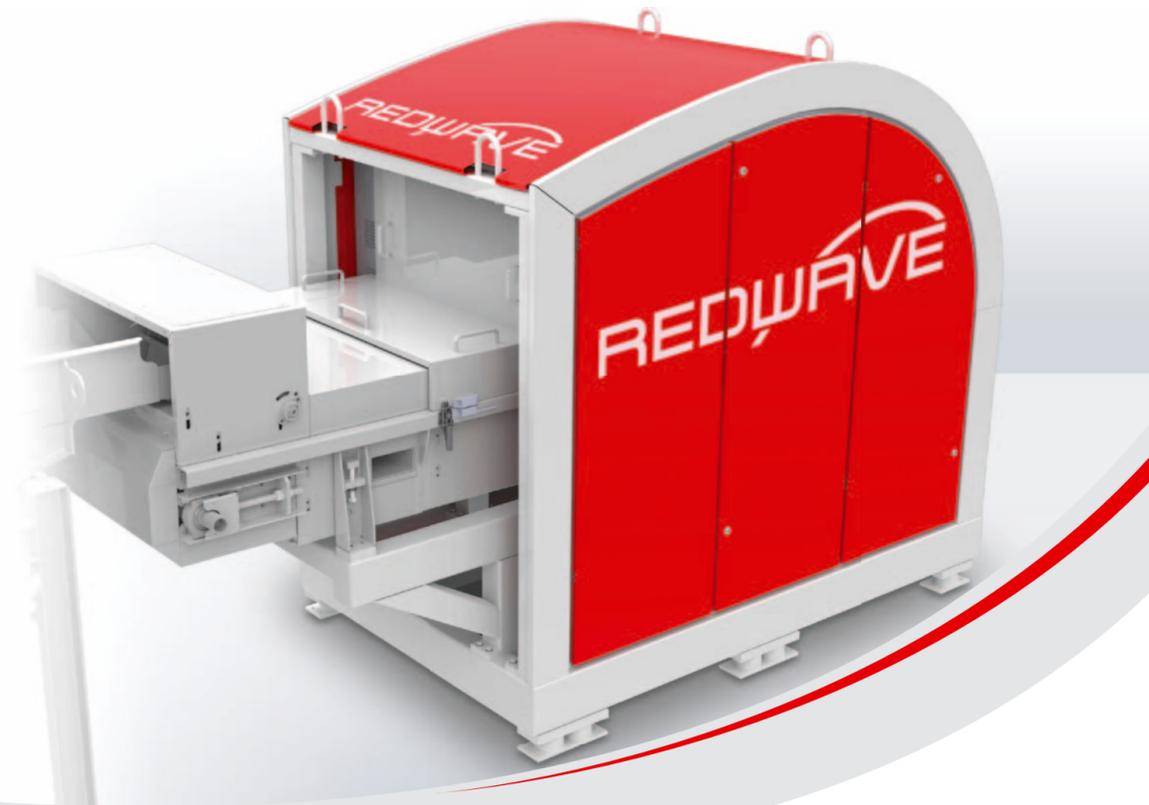


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- 1 Vibration feeder
- 2 Light source
- 3 Camera unit
- 4 Ejection unit
- 5 Divider plate



The REDWAVE Mineral Sorter has been developed for sorting and handling of different minerals to improve the quality. Identification and sorting of various Minerals, Ores and Gemstones such as Limestone, Quartz, Talc, Gold, Nickel, Willemite, Magnesite, Emeralds and Diamonds etc.

Functional principle of REDWAVE:

The material is fed over the entire sorting width by a vibration feeder or an acceleration belt. The material is then scanned and identified by the sensor system single or double sided while in free fall. If the identified minerals meets the set ejection parameters, a signal is sent to the ejection units. Single high speed air jets operated by compressed air, eject the identified mineral. The number of activated single solenoids depends on the size of the identified part.

REDWAVE Distinctive Features:

The separation occurs on the basis of colour, translucence, size, brightness or element distributions.

Sensor Technologies:	Tasks:
1. Line Scan Camera	Colour recognition for Industrial Minerals, Gemstones, base and precious Metal Ores
2. Near Infrared (NIR)	Mineral recognition by individual NIR spectrum
3. Multi-Sensor 1 + 2	NIR spectrum and colour recognition of the Minerals
4. X-Ray Fluorescence	Mineral and Ore recognition by element distributions and their own Fluorescence Spectrum
5. Inductive Metal Detector	Ores and Metals recognition through their conductivity

Sorting equipments by primary, secondary, tertiary and concentrate mining process flow technology:

Size ranges:	Working width:	Sorting systems:
from 0,5 mm to 300 mm	from 800 mm to 2.000 mm	belt and gravity sorter

Advantages:

- Single or double side scanning
- Up to 2.000 mm working width by CCD technology
- Identification and sorting of different materials according to colour, brightness, transparency
- Identification and sorting according to element composition
- High efficiency
- High throughput with maximum recovery of materials
- High recovery rates and availability
- Fast pay back period
- Economic sorting technology
- Dry and wet sorting technology
- Multi-Sensor Unit to sort minerals in same colours such as:
 - white Quartz – white Sandstone
 - white Talc – white Quartz
 - dark Magnesite – black Hematite
 - white Magnesite – white Talc
 - green Quartz – green iron pebbles

