



REDWAVE mineral sorting technology

REDWAVE®

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Applications



Industrial minerals

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



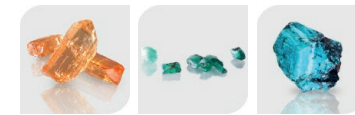
Base metal

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



Precious metal

- Gold
- Silver
- Platinum
- Palladium

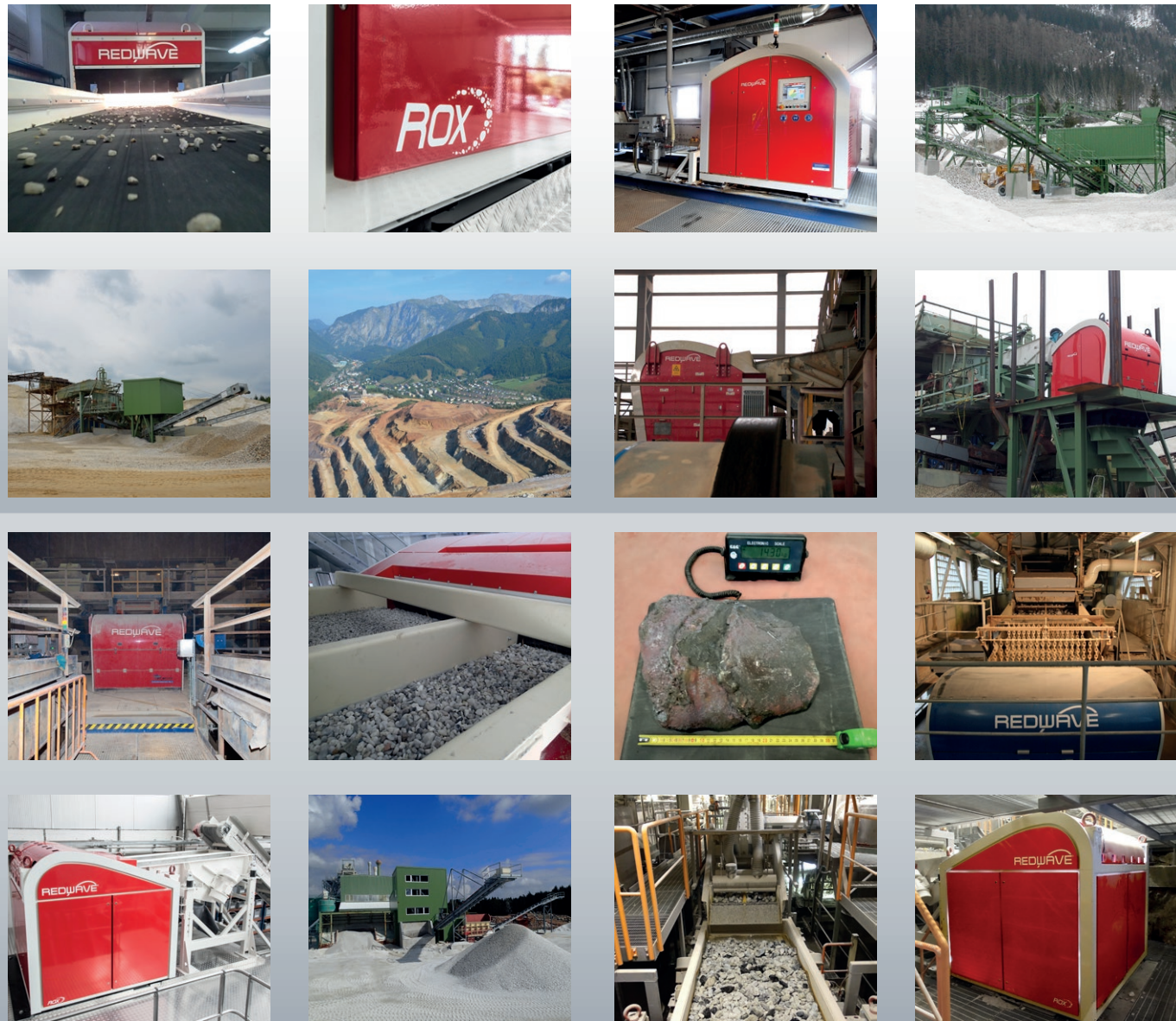


Gemstone

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

MINERAL SORTING

Plant solutions
Sensor based sorting machines⁺⁺



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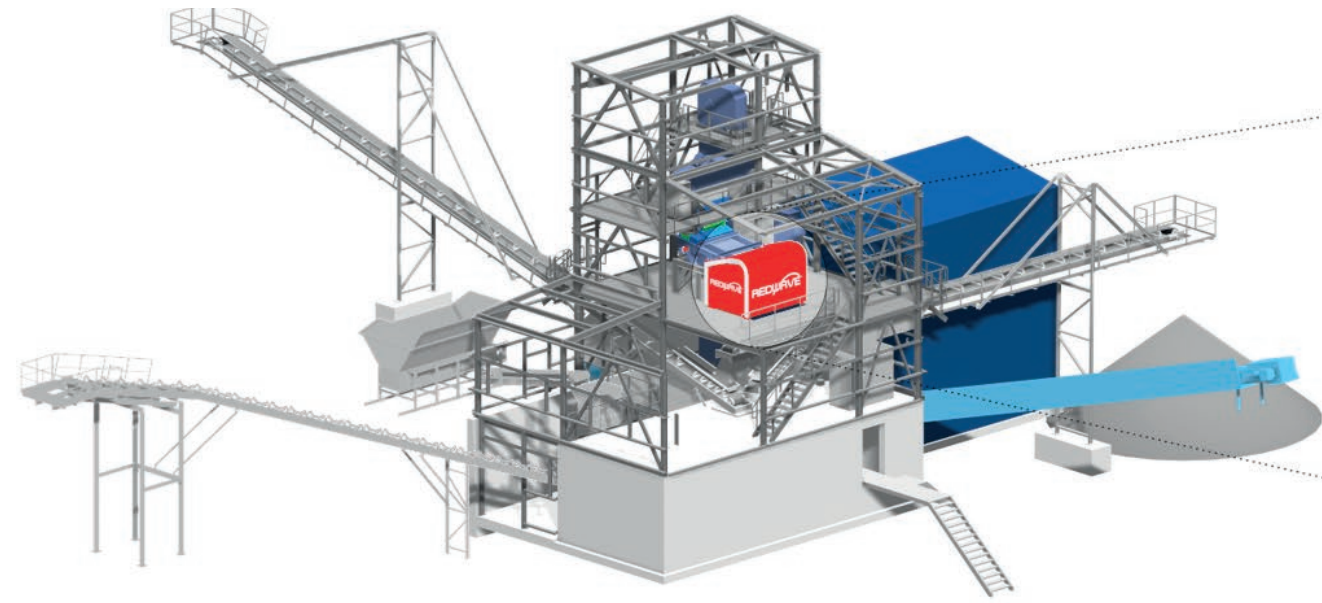


Watch our videos



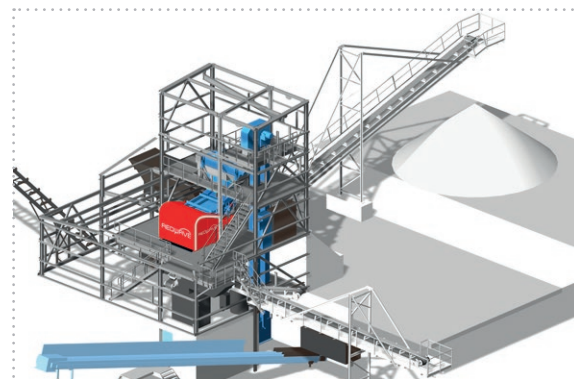
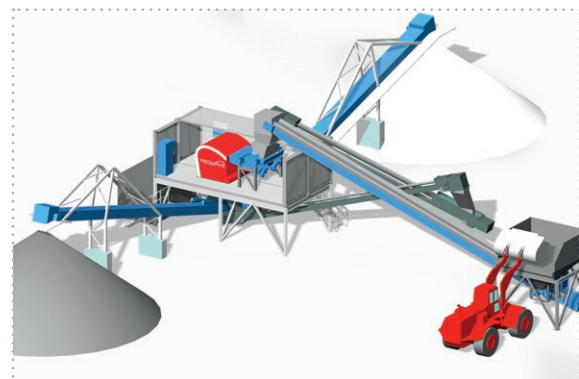
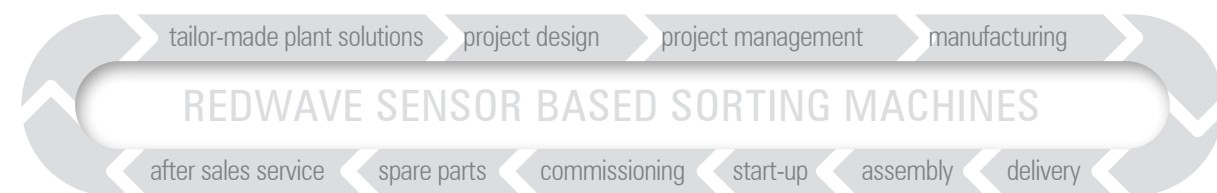
www.redwave.com

PLANT SOLUTIONS

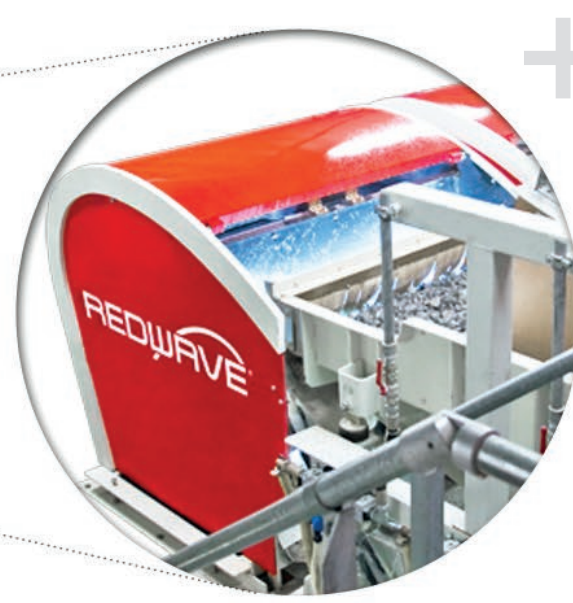


REDWAVE COMPETENCES AND TECHNOLOGIES:

- Feeding system
- Crushing
- Screening
- Conveying
- REDWAVE ROX sensor based sorting technology
- Turnkey plant solutions



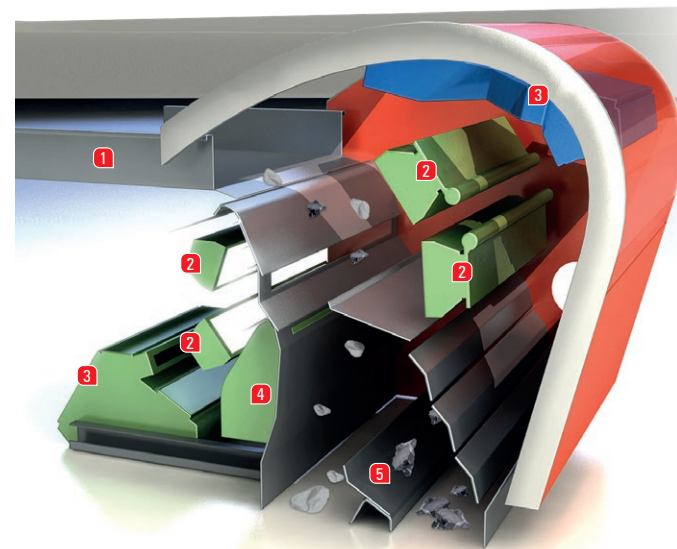
SENSOR BASED SORTING MACHINES



CUSTOMER BENEFIT:

- Single or double side scanning
- Up to 2.000 mm working width
- Identification and sorting of different materials according to colour, brightness and transparency
- Identification and sorting according to elemental composition
- High capacity
- High recovery rates and availability
- Fast payback period
- Proven economical sorting solution
- Dry and wet sorting technology
- Multi-sensor systems

The **REDWAVE ROX** sorting machine has been developed for improving the quality of various minerals, ores and gemstones such as calcite/dolomite, quartz, talc, gold, nickel, magnesite etc.

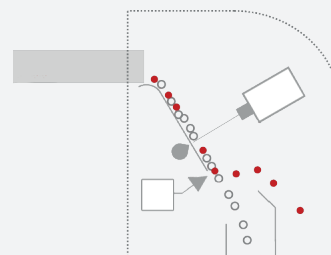


- 1 Vibration feeder
- 2 Light source
- 3 Camera unit
- 4 Ejection unit
- 5 Divider plate

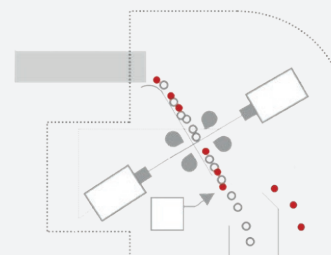
FUNCTIONAL PRINCIPLE OF REDWAVE ROX:

The material is fed over the entire sorting width by a vibration feeder. The material is then scanned and identified by the sensor system single or double sided while in free fall. If the identified minerals meet 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.

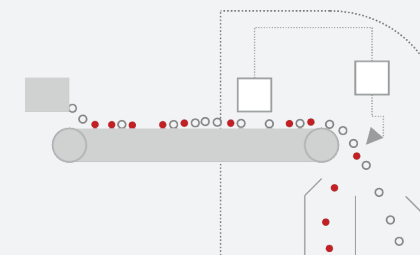
Chute system single-side detection



Chute system double-side detection



Belt system



Working width:
up to 2.000 mm

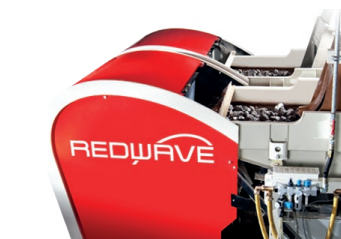
Size range:
from 2 mm to 300 mm

Sensor technologies:

- Line Scan Camera
- Near Infrared
- Multi-Sensor
- X-Ray Fluorescence
- Inductive Metal Detector

REDWAVE ROX for colour and material recognition:

for industrial minerals, base and precious metal ores or gemstones



REDWAVE ROX-C (single-side detection)
for colour recognition
working with a high-resolution RGB camera



REDWAVE ROX-CC (double-side detection)
for colour recognition
working with high-resolution RGB cameras



REDWAVE ROX-NIR
for material recognition
working with Near Infrared (NIR) spectroscopy



REDWAVE ROX-NIR/C
for material and colour recognition
working with Near Infrared (NIR) spectroscopy and a high-resolution RGB camera



REDWAVE ROX-XRF
for recognition of the chemical composition
working with EDXRF energy dispersive X-ray fluorescence spectrometer

- Separation of ores with unwanted inclusions / impurities
- Sorting of minerals according to the desired degree of purity
- Sorting of manganese ore in different quality classes on the basis of the manganese content and other existing elements (e.g.: Fe)
- Sorting according to ratio between different elements (e.g.: Mn/Fe)
- Etc.

ADVANTAGES of XRF:

- Even if the material is heavily contaminated, high quality separation is guaranteed
- Elemental analysis (qualitative and semi-quantitative analysis) of input material
- Accurate detection of elements in ore, therefore a targeted enrichment is possible