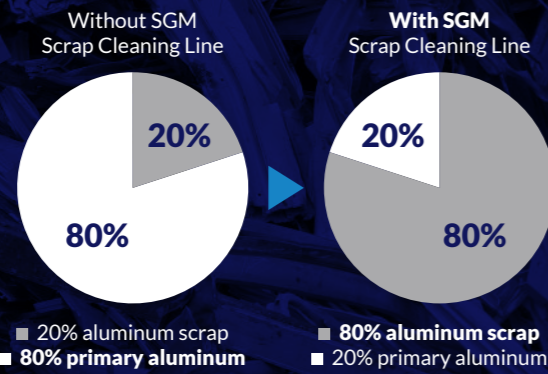


## SGM ALUMINUM SCRAP CLEANING SOLUTION FOR SECONDARY SMELTERS

Specifically for producers of 3000 and 6000 series aluminum billets and coils.

### CUSTOMERS' BENEFITS:

- Significant increase of the use of scrap versus primary aluminum as feed charge.
- Optimize yield furnace
- Reduce slag production



- 69 Years in business
- 8 Fully owned subsidiaries
- 2 Manufacturing and repair facilities

### SOME SGM REFERENCES FOR ALUMINUM SECONDARY SMELTERS AND ALUMINUM SCRAP RECYCLERS



### SGM WORLDWIDE

Always available, near you, in your language.

The SGM business model is based on providing technological expertise, staying close to its customers through a network of SGM Magnetics corporations located in Italy, Germany, UK, Belgium, USA, China, Mexico and India, as well as a few long standing agents with extensive experience in the SGM products and technologies.



Because the BEST SOLUTION is often a combination of different BEST TECHNOLOGIES!

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www.sgmmagnetics.com



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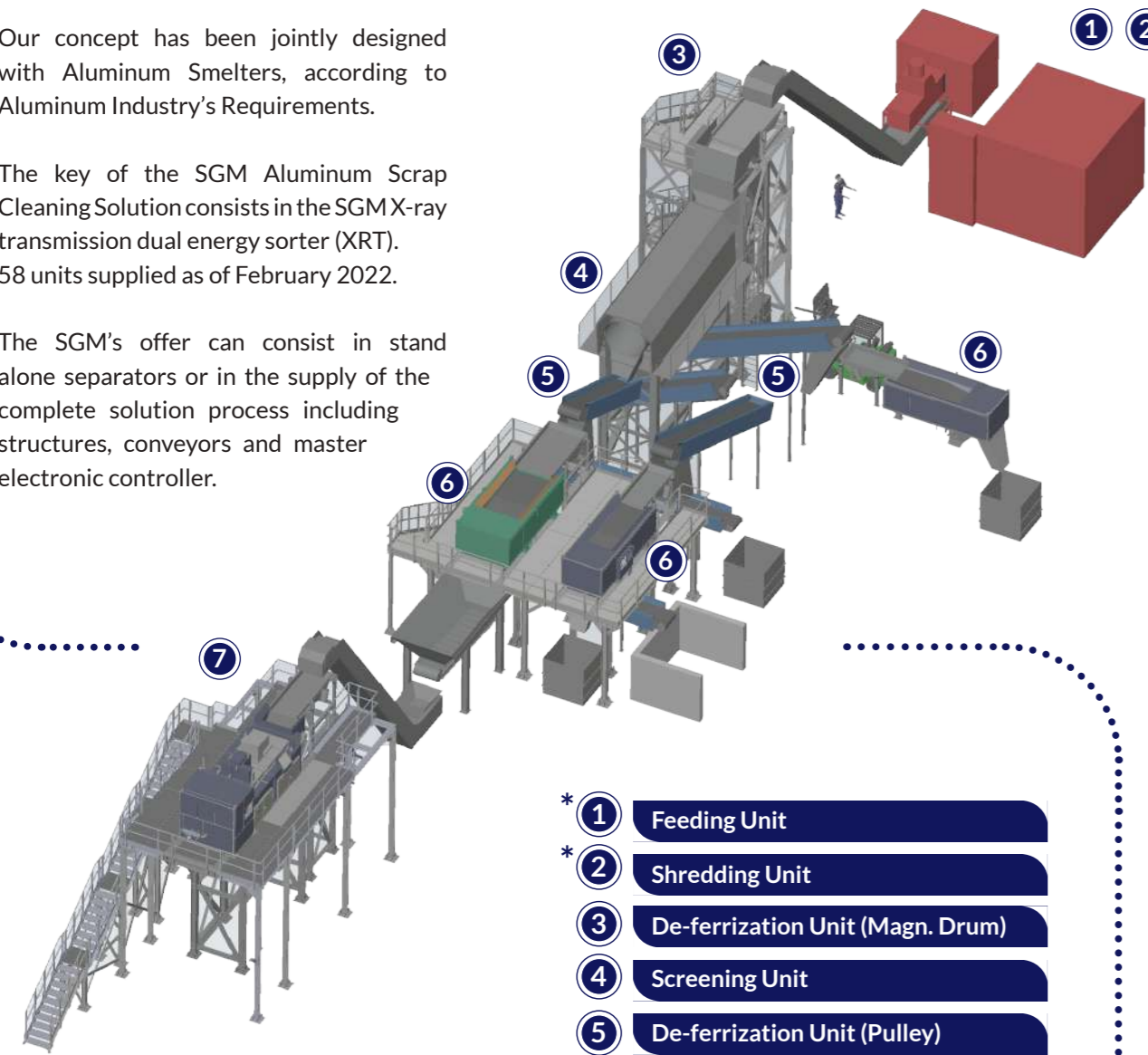
## The SGM Solution

SGM has desinged specific solutions for the aluminum scrap cleaning process.

Our concept has been jointly designed with Aluminum Smelters, according to Aluminum Industry's Requirements.

The key of the SGM Aluminum Scrap Cleaning Solution consists in the SGM X-ray transmission dual energy sorter (XRT). 58 units supplied as of February 2022.

The SGM's offer can consist in stand alone separators or in the supply of the complete solution process including structures, conveyors and master electronic controller.

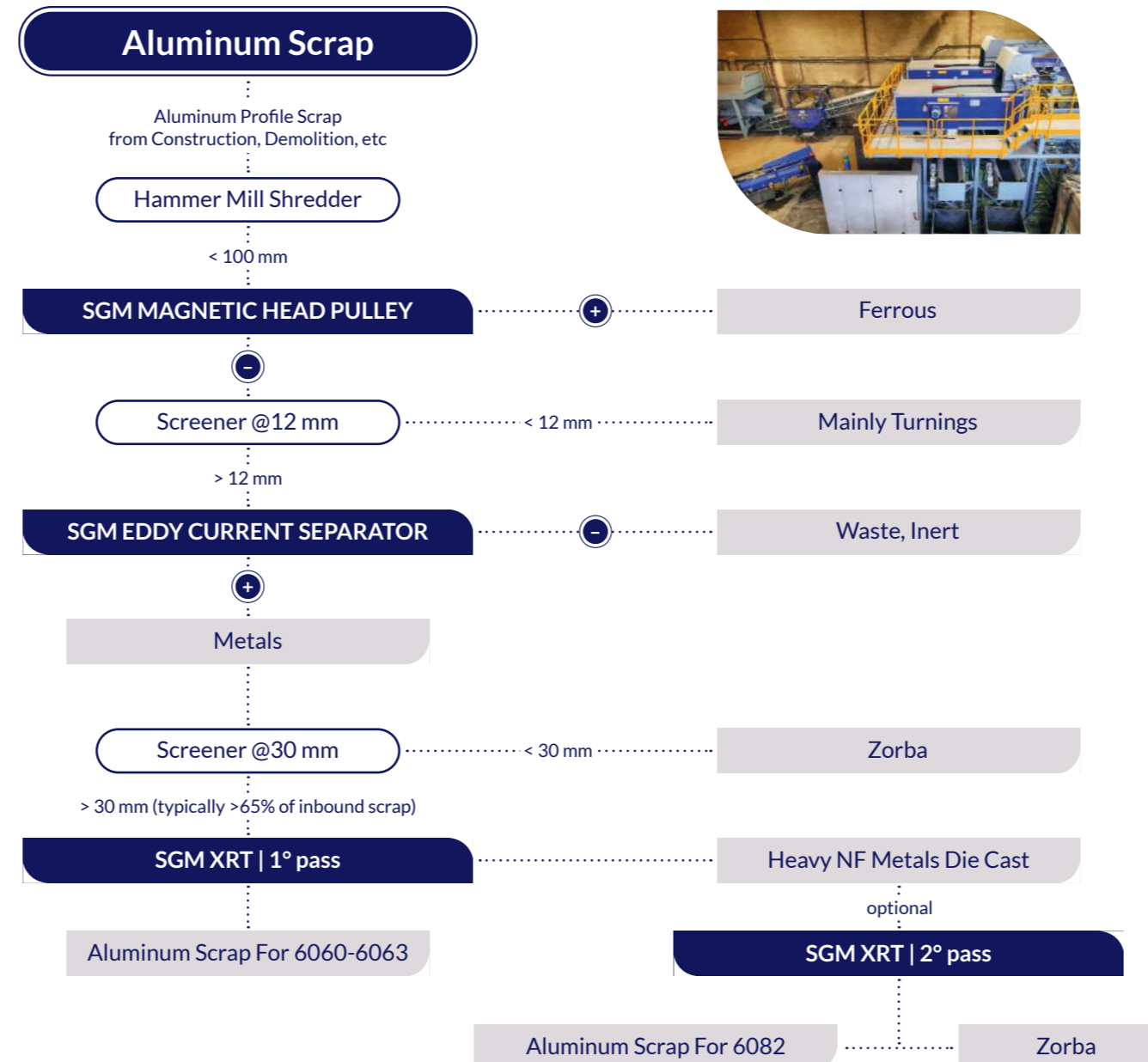


- \* ① Feeding Unit
- \* ② Shredding Unit
- ③ De-ferrization Unit (Magn. Drum)
- ④ Screening Unit
- ⑤ De-ferrization Unit (Pulley)
- ⑥ De-inertisation Unit (Eddy Current)
- ⑦ Heavy Metals Separation

\* no SGM production

The complete solution includes, hammer mill, screens, ferrous separators, ECS and XRT.

The goal is to reduce Fe content in the feed charge to the smelter to <0,2% and the Cu and Zn content respectively to 0,03% or less.



## Product highlights

- Self-learning software.
- Extremely robust to suit industrial use.
- Dedicated software according to customer specific application fully designed by SGM.

## Optional features

- Air Compressor



## X-RAY SORTER Model XRT

### TECHNICAL SPECIFICATIONS

The SGM X-Ray Transmission sorter is based on the latest X-Ray through beam technology using dual energy scintillators (XRT sensors) for metal separation and single low energy sensors for plastic separation.

The dual energy sensors allow for the identification of the density of the different light metal pieces regardless of their thickness.

The material to be processed and analyzed is evenly distributed onto the sorter conveyor belt and transported between the X-Ray emitter (source) and the XRT sensors. The energy (radiations) emitted by the X-Ray source passes through the material pieces under inspection and the residual energy is sensed by the dual low and high energy sensors which compute it into density for every material piece regardless of its thickness. Absorption depends on the chemical density and thickness of each part, making XRT suitable for light metals and not heavy ones because, for them, the absorption is too high for the receptors to detect enough residual energy. The information read by the XRT sensors is processed by a computer that decides whether or not to trigger a pneumatic sorting device. The software allows the operator to choose from a variety of sorting recipes and an interactive display interface allows for simple intuitive setups.

- Operating conditions: Indoor or Outdoor if roof covered and temperatures from 5°C to 35°C/41°F to 95°F.
- X-ray radiation level: < 1 µGy/h at 5cm/2".
- Capacity (\*): Based on application, percentage of material pieces to sort out, their average size and weight.
- Air compressor: Specifications based on quantity and characteristics of material to sort out.

MODEL	VALVES	SOURCES	BELT WIDTH	BELT SPEED	CAPACITY (*)
XRT 24-R	64	1	610 mm	2-2.8 m/s	2 t/h
XRT 48-R	128	1	1320 mm	2-2.8 m/s	5 t/h
XRT 72-R	192	1	2000 mm	2-2.8 m/s	8 t/h
XRT 96-R	256	2	2286 mm	2-2.8 m/s	10 t/h

\* Depending on application, material specific weight and metal content material.

MODEL	LENGTH	WIDTH	HEIGHT	WEIGHT
XRT 24-R	6460 mm	1690 mm	2555 mm	5.380 Kg
XRT 48-R	6460 mm	2305 mm	2555 mm	6.640 Kg
XRT 72-R	6460 mm	2920 mm	2703 mm	9.500 Kg
XRT 96-R	6460 mm	3540 mm	2703 mm	14.000 Kg

## TYPICAL APPLICATIONS

Aluminum Scrap: Upgrade of aluminum scrap by reducing Zn, Cu, and Fe achieving premium scrap price.

Car Shredder Zorba: Separation of heavy metals (copper, brass, zinc, lead) from aluminum and magnesium.

Car Shredder Fluff: Removal of chlorinated and brominated plastics to achieve over 70% of total fluff residue with less than 1% of PVC.

WEEE: Separation of PVS from lighter plastics (PP, PE, PS, HIPS, ABS).



## TYPICAL IMPURITIES

- Ironies
- Inert Material
- Aluminum breakages
- Copper Wires
- Stainless Steel
- Al Impurities in Al (Castings)