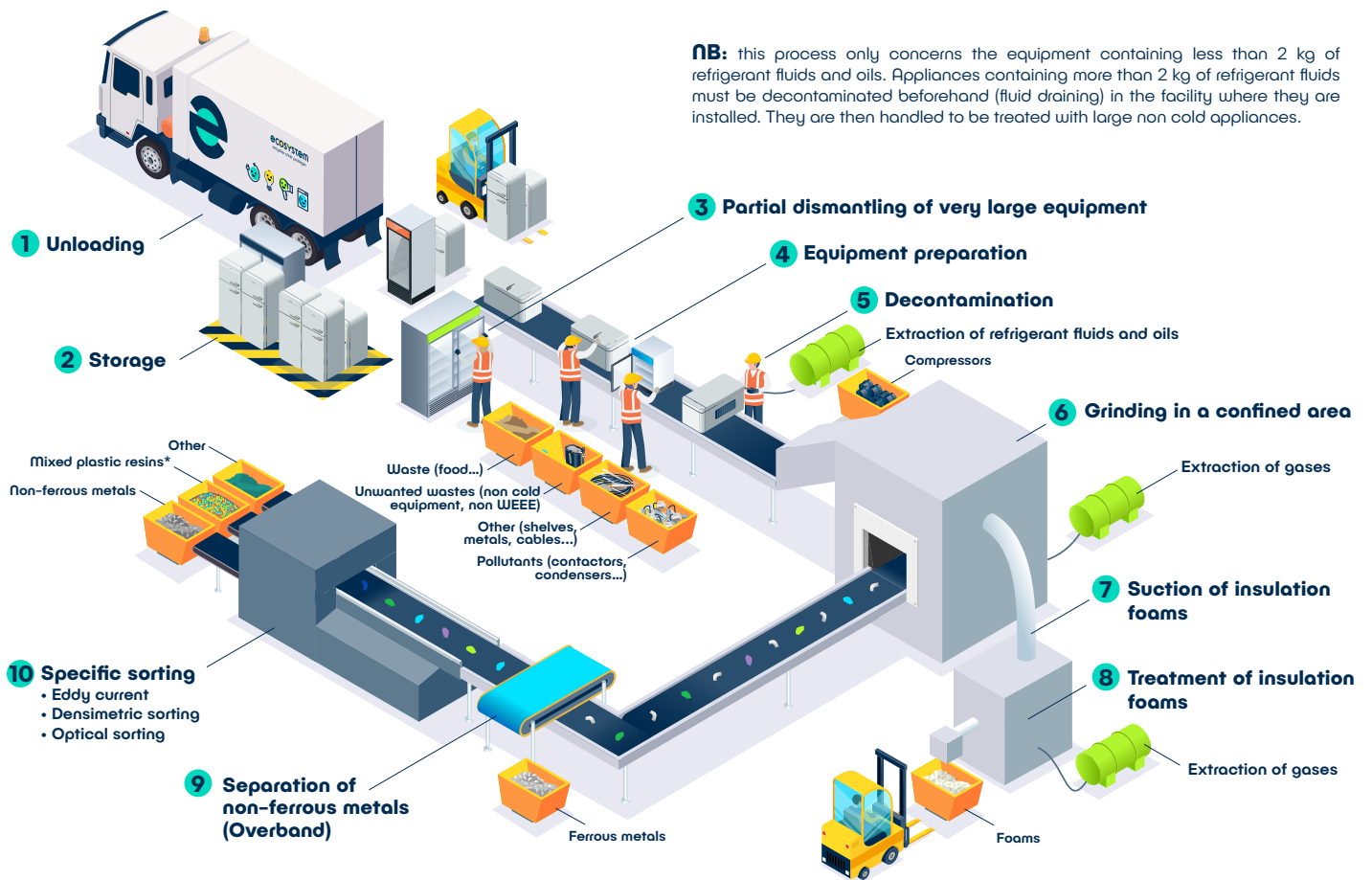


TREATMENT OF LARGE COLD APPLIANCES

NB: this process only concerns the equipment containing less than 2 kg of refrigerant fluids and oils. Appliances containing more than 2 kg of refrigerant fluids must be decontaminated beforehand (fluid draining) in the facility where they are installed. They are then handled to be treated with large non cold appliances.



* The following steps for processing and sorting plastic resins are available in the diagram "Specific treatment of mixed plastic resins"

1 Unloading

The equipment is carefully unloaded to prevent damage to the cooling circuits.

2 Storage

The equipment is stored pending treatment. Storage takes place in such a way as to ensure the line is regularly supplied, and to handle the volumes to be treated..

3 Partial dismantling of very large equipment

Very large equipment (including professional cold appliances such as refrigerating cabinets, drinks dispensers etc.) is partially dismantled to recover different materials and prevent damage to the grinding machine.

4 Equipment preparation

Hand sorting enables operators to remove different fractions (waste, shelves, cables, unwanted waste, etc.) that require further specific treatments, or mustn't go into the grinding machine.

5 Decontamination

Decontaminating equipment consists in extracting various regulated substances (contactors, condensers, oils and refrigerant fluids...). Before removing the compressors, the refrigerant fluids and oils are sucked into a sealed container so as to prevent their release into the atmosphere. These fluids and oils are then collected and disposed of.

6 Grinding in a confined area

The equipment passes through a grinding machine fitted with a specific system to contain and remove insulating gases. These gases are located inside insulation foams, and are partly released during this grinding stage.

7 Suction of insulation foams

The insulation foams that are part of the equipment are sucked up to be treated separately.

8 Treatment of insulation foams

The insulation foams require a specific grinding and heating treatment into a confined unit so as to remove any remaining insulating gases.

9 Separation of non-ferrous metals (Overband)

An overband magnetic separator attracts and removes magnetic fractions (ferrous metals).

10 Specific sorting

Different sorting procedures may be combined to separate the remaining fractions into more homogeneous categories:

- **Eddy current:** séparation des métaux non ferreux à l'aide de champs magnétiques.
- **Densimetric sorting:** for example, using a vibratory grid that separates light and heavy fractions, or the floating technique that selectively sorts fractions according to their density and ability to float.
- **Optical sorting:** different optical instruments (infra-red systems, x-rays...) are used to sort fractions including plastic, cards, wires.

All extracted fractions are then treated specifically in three different ways:

- Recycling in order to produce new materials (preferred solution),
- Energy or material recovery,
- Disposal in compliance with the relevant regulations.