











- CUSTOM

REFRIGERATORS

TREATMENT PLANT

TURNKEY





REFRIGERATORS TREATMENT PLANT

The FOR REC plant ensures safe and environmentally friendly treatment of refrigerators, enhancing the value of each component. The process begins with reclamation, removing motor, oil, and refrigerant gas.

Subsequently, the refrigerator is shredded down to 30 mm and magnetic metals are separated using magnets. Polyurethane foam captured by an aeraulic system is then extracted from the remaining stream and sent to a compaction plant to make it inert. The next step involves separating the plastic from the nonmagnetic metals (copper and aluminum) using an eddy current system. Throughout the process, an advanced vacuum system recovers the gas that is released from the polyurethane foams and sends it to condensation or thermal destruction devices.



REFRIGERATOR RECLAMATION SYSTEM

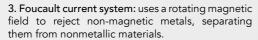
In the initial stage, the refrigerator is turned over and the refrigerant gas and oil are sucked out of the circuit and split. The motor is disassembled and stored for later treatment or sale.



EDDY CURRENT SEPARATION SYSTEM

The eddy current separation system allows nonmagnetic metals to be recovered from the flux. It consists of three main sections:

- 1. Vibrating conveyor: advances the material evenly to the next stages.
- 2. Magnetic drum: separates magnetic metals by a powerful magnet, which holds and removes them





PELLETIZER

transformed into inert pellets.

The pelletizer compacts recovered polyurethane

during the recycling process. During compaction,

the material is treated to remove the last residual

gas trapped within the foams, which are then

GRANULATOR

The granulators with rotating blades or with full rotor are characterized by: the use of special steels to treat the most difficult materials; a sturdy structure able to ensure great reliability; an exclusive cutting system to reduce energy consumption and dust generation; and easy access to the grinding chamber to allow rapid cleaning and maintenance.



OUTPUT







polyurethane

copper



DETECTION AND SEPARATION SYSTEM

The system is used to separate magnetic metals from other materials. It works through the use of powerful magnets and vibrating conveyors that allow the material to advance evenly and be attracted to the magnet while the rest of the material continues on its flow.

2 TREATMENT SOLUTIONS FOR EXPANDING GASES



The thermal oxidizer is essential for



The system traps the gas through an activated carbon filter, which is then automatically regenerated allowing the extracted gas to be condensed by cooling it with cryogenic technology that takes advantage of the low

1. DESTRUCTION WITH THERMAL OXIDIZER

treating volatile gases released in recycling. It captures gases such as pentane, which is then oxidized at high temperatures (800'C-1,100'C), decomposing VOCs into CO2 and H2O. After combustion, the gases are filtered to ensure clean and safe emissions.



2. RECOVERY WITH CONDENSATION SYSTEM

temperature of liquid nitrogen.



DOUBLE-SHAFT SHREDDER

volumetric reduction with partial control of the output particle size. carry out fast shaft extraction.



TQ

FOUR-SHAFT SHREDDER

TB double-shaft shredders (TB) are Four-shaft shredders (TQ) combine the ideally suited to treatments requiring reliability and strength of twin-shaft shredders with the ability to control the size of material output. In the refrigerator Working without a screen, they can treatment system, the TQ shredder has a handle high material flows. The cutting 30-mm grid to achieve enough reduction chamber has an innovative design to to perform a precise separation of

All systems made by FOR REC are modular and implementable according to specific customer needs.





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