

Refrigerators



Brief Introduction to

Recycling of Refrigerators



Eldan Recycling A/S

- at the leading edge of recycling

- * more than 50 years of experience
- * More than 740 turnkey systems and 7000 single machines delivered world-wide
- * Design, engineering, manufacturing, installation and After-Sales-Service of equipment



The Company

Recycling equipment for:

- * Refrigerators
- * Scrap cables & wires
- * Underground cables
- * Jelly filled cables
- * WEEE scrap
- * Complex scrap
- * Aluminium scrap
- * Magnesium
- * Waste tyres
- * Municipal solid waste (MSW)
- * Shredder light fraction (SLF)
- * End of life vehicle (ELV)
- * Industrial scrap



- * The Recycling Industry is a heavy industry, therefore Eldan's machine equipment is extra powerfull dimensioned and at the leading edge with regard to technology and performance
- * Strong world-wide network of authorised Agents and Representatives
- * Eldan Recycling A/S offers all customers first-class After-Sales-Service with very high availability, including technical back-up and on-line service for any delivered machine or system.

The Plant is constructed for crushing of refrigerators up to a max. size of 2000 x 1200 x 1000 mm (height x width x depth). Bigger fridges must be size reduced to this measurement prior to processing



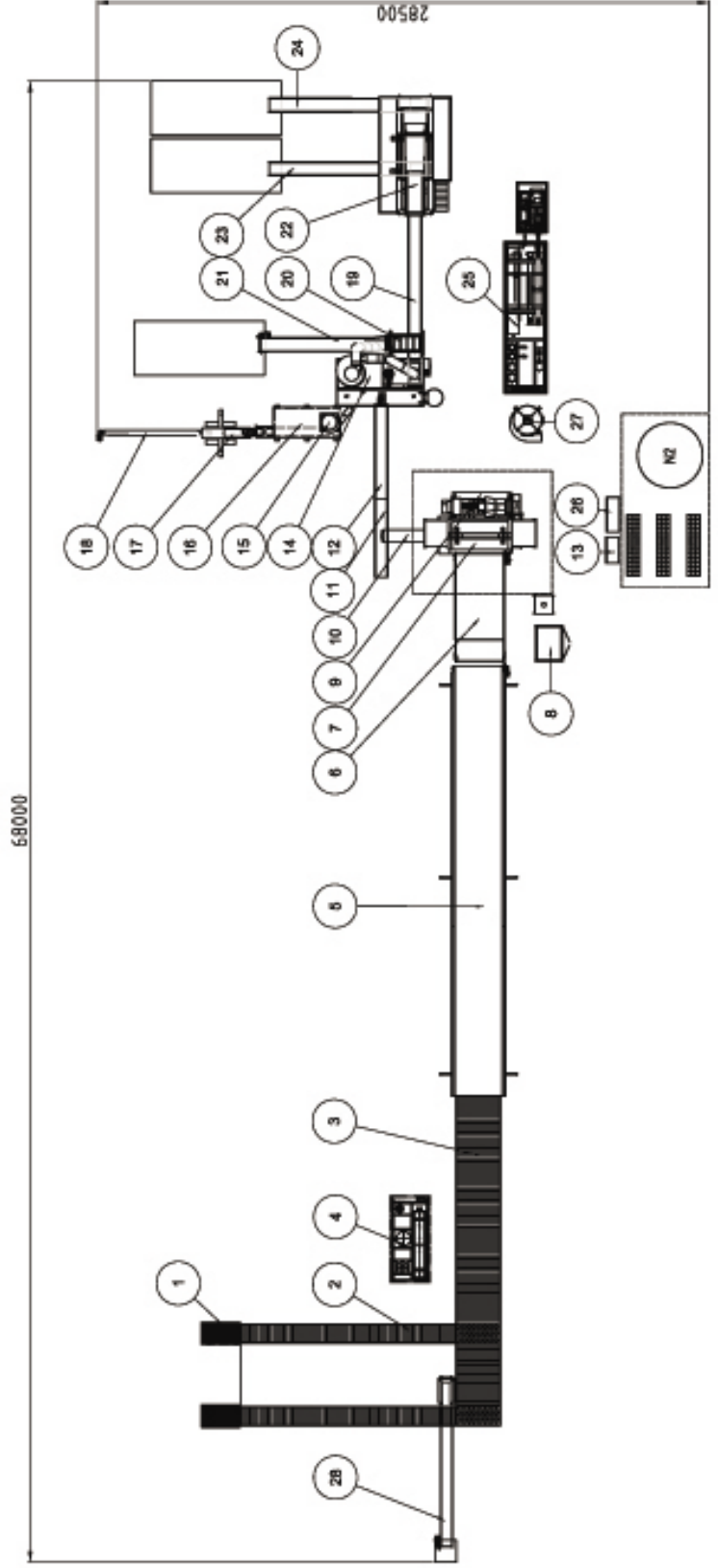
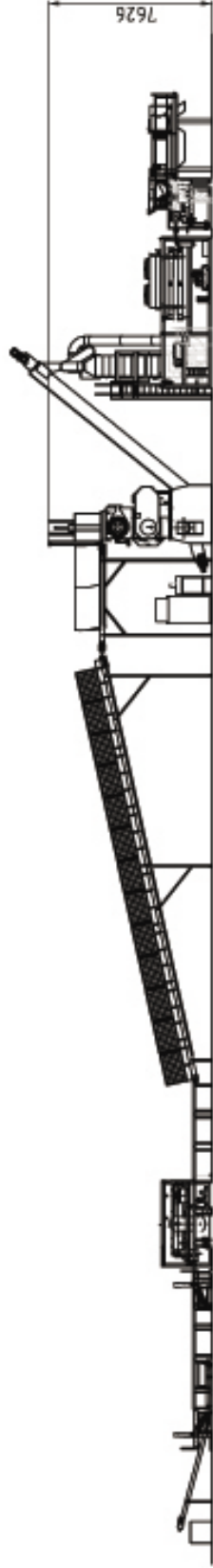
A complete Eldan fridge recycling system - including everything from pre-chopping to separation - can be divided into the following stages:

- **Pre-handling**
- **Shredding**
- **Separation**
- * **Degasification**



The Input Material

The System



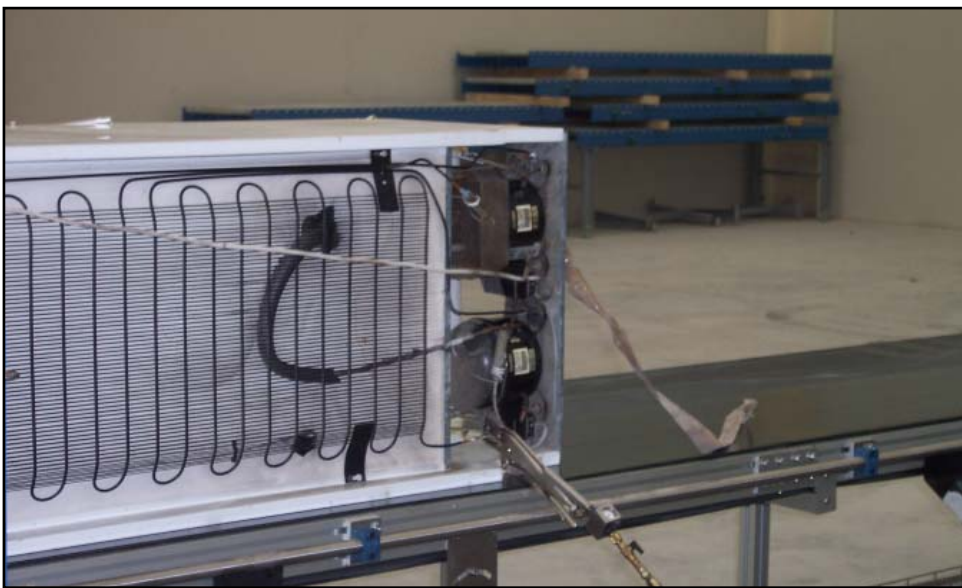
The fridges are unloaded and pre-classified.

- * cords are cut off
- * glass inserts are delivered to special containers

Extraction of the gasses.

- * oil, all CFC-gasses, Pentane gas and Isobutan gas are extracted.

Dismantling of compressors.



The Pre-handling

The Shredding

The fridges are transported to the Fridge Tower through a sluice. The Fridge Tower is a unique, integrated unit, which combines the Super Chopper and the Heavy Pre-Granulator. This makes possible ONE inert cutting chamber eliminating the risk of fire and explosion.

The output size from the Fridge Tower is approx. 30 mm.



PUR Foam

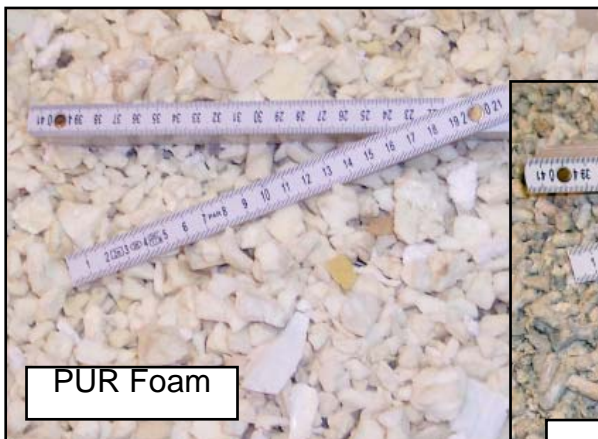
Next step is our Zig-Zag Wind-Separator, where the PUR foam is separated out and transported to the Pelletizer. In the Pelletizer the PUR foam is pressed into pellets. At the same time the remaining CFC gas is sucked out into the CFC/Pentane Liquefaction System.



Zig Zag Separator



Pelletizer



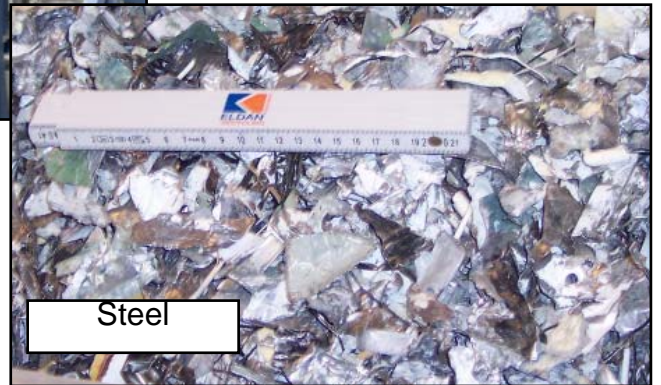
PUR Foam



Pellets

Fe-particles

The Fe-particles are separated out by the overband magnet.



Aluminium and plastic

The remaining fraction is passed over the Eddy Current Separator, where it is separated into plastic and aluminium/Cu fractions.



Aluminium & Cu



Plastic



Stage I - CFC/Oil Suction Unit

Oil and CFC/Pentane/Butane gasses are sucked to the CFC/Oil Suction Unit. The gas is separated from the oil and the gas is collected in closed gas vessels. The oil is pumped out into an open vessel.



Stage II - CFC/Pentane Liquefaction System

The nitrogen used to reduce the oxygen level in the cutting chamber of the Fridge Tower is recovered and recycled in a closed circuit system to minimize the consumption. The gasses are collected in closed gas vessels.



Information important for our recommendation of equipment for processing of fridges

1. How many fridges are you planning to process per hour?
2. Are you going to work in shifts? If yes, how many hours is a shift and how many shifts are you planning per day?
3. How many working days do you plan to operate per year?
4. What is the required voltage?



A NAME TO REMEMBER

Call us for an informal talk about a plant solution which fulfils your specific requirements!

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