

Attachment 1

The best of refrigerator recycling

High recovery rate of CFC, plastic, Fe and Al. Low processing costs.

Tailored to suit your requirements and facilities. Low power consumption.



Refrigerator recycling plants and machines

The complete ELDAN refrigerator recycling plant includes everything from pre-chopping to separation.

The refrigerator recycling system is designed for processing refrigerators operating with CFC/pentane gases to prevent harmful substances to evaporate into the atmosphere, and to achieve the most efficient recycling of the solid materials. 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 appliances can be processed, but must be size reduced prior to processing.

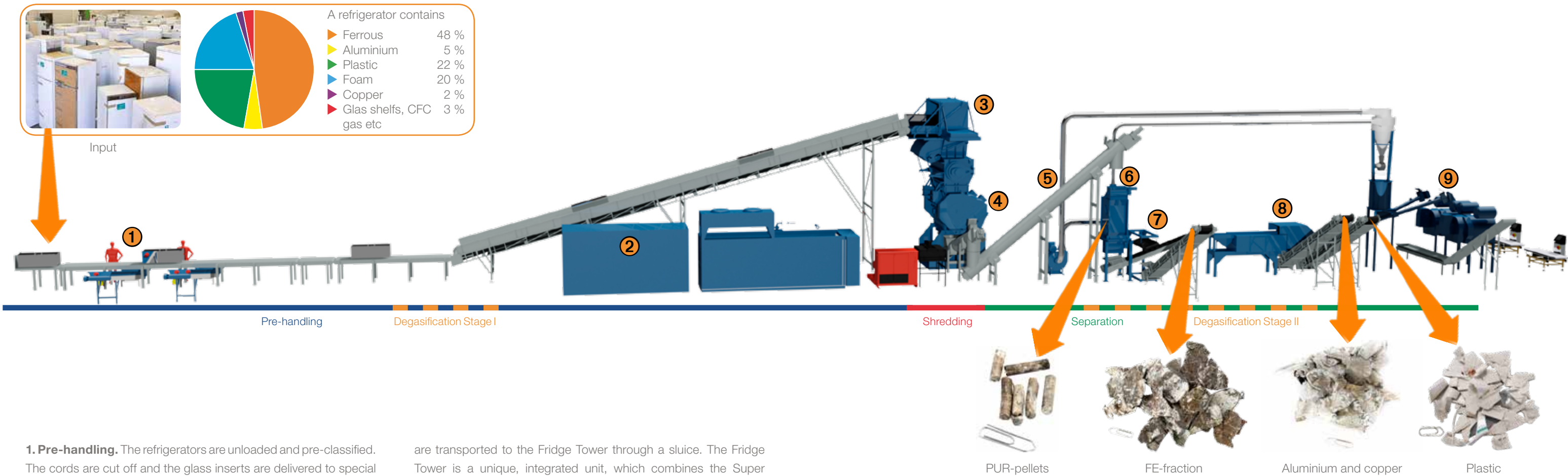
Proven technology

Eldan equipment is designed to meet market requirements, thus the individual machines can easily be adjusted to other fraction sizes, merely by changing the screen size in the machines.

Benefits

- ▶ Completely closed system
- ▶ High recovery rate of CFC, plastic, Fe and Al
- ▶ High performance
- ▶ Low processing costs
- ▶ Low power consumption
- ▶ Low maintenance costs
- ▶ Ambient mechanical technique for size reduction and separation
- ▶ ELDAN plants are tailored to suit your requirements and facilities
- ▶ The modular concept behind the ELDAN plants enables you to adapt your production output fraction to specific customer demands

We guarantee plant capacity and output product quality.



1. Pre-handling. The refrigerators are unloaded and pre-classified. The cords are cut off and the glass inserts are delivered to special containers. All CFC-gases, pentane gas and isobutan gas are extracted, and the compressors are dismantled.

2. CFC/Oil Suction Unit (Degasification stage I). Stage one of the degasification. Oil and CFC/pentane/butane gases are sucked to the CFC/Oil Suction Unit. The gases are separated from the oil and the gases are collected in closed gas vessels. The oil is pumped out into an open vessel.

3. Super Chopper and 4. Heavy Pre-Granulator. 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.

5. Zig-Zag Wind Separator. The PUR foam is separated out and transported to the Pelletizer/Pellet Press (PUR).

6. Pelletizer and Pellet Press (PUR). The PUR foam is pressed into pellets. At the same time the remaining CFC gas is sucked out into the CFC/Pentane Liquefaction System.

7. Overband magnet. The Fe-particles are separated out by the Overband Magnet.

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

9. CFC/Pentane Liquefaction System (Degasification stage II). 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.

Optional modules for specific customer requirements

REDOMA Thunderhawk A

Separating the Cu from the Al or cleaning the plastic fraction

Combi plant

Combi plant for processing of white goods, refrigerators, brown goods and WEEE (Waste Electrical and Electronic Equipment). In the plant, it is possible to add on an upgrading system for the metal fraction.

Super Chopper

If it is necessary to process refrigerators larger than 2000 x 1200 x 1000, it is possible to add a dual-shaft Super Chopper II for further size reduction.



ELDAN Super Chopper

Ensure reduced downtime!

- ▶ The ELDAN After Sales Division offer ad hoc service on existing as well as new equipment through our trained and experienced service engineers and supervisors
- ▶ ELDAN constantly holds an extensive stock of spare and wear parts
- ▶ The flexible service contracts ensure planned, preventive maintenance of your production line
- ▶ Tailored contracts ensure that parts are available for immediate call off
- ▶ Contact one of our spare and wear part coordinators, and we will supply the best possible solution for your company

The ELDAN After Sales Division is your reliable partner!



Attachment 2

Properties	Symbol	Declaration/ Unit	Standard	Thickness mm	NEW	EVO 300 Standard	Plus 300 Standard		Plus 300 Gefiniert		KF 300 Standard		KF 300 Gefiniert		KF 500 Standard		KF 700 Standard			
					λ _D	R _D	λ _D	R _D	λ _D	R _D	λ _D	R _D	λ _D	R _D	λ _D	R _D	λ _D	R _D		
Density		kg/m³	EN 1602		> 30		> 33		> 33		> 30		> 30		> 35		> 38			
Thermal conductivity	λ _D	W/(m·K)	EN 13164	20	-	-	-	-	-	-	0,034	0,55	0,034	0,55	-	-	-	-		
				30	-	-	-	-	-	-	-	0,034	0,85	0,034	0,85	-	-	-	-	
				40	0,032	1,25	-	-	-	-	-	-	0,034	1,15	0,034	1,15	0,034	1,15	-	-
				50	0,032	1,55	0,027	1,85	0,027	1,85	0,034	1,45	0,034	1,45	0,034	1,45	0,034	1,45	0,034	1,45
				60	0,032	1,95	0,027	2,20	0,027	2,20	0,034	1,75	0,034	1,75	0,034	1,75	0,034	1,75	0,034	1,75
				80	0,032	2,50	0,027	2,95	0,027	2,95	0,035	2,25	0,035	2,25	0,035	2,25	0,035	2,25	0,035	2,25
				100	0,032	3,10	0,027	3,70	0,027	3,70	0,035	2,85	0,035	2,85	0,035	2,85	0,035	2,85	0,035	2,85
				120	0,032	3,75	0,027	4,40	0,027	4,40	0,035	3,40	0,035	3,40	0,035	3,40	0,035	3,40	0,035	3,40
				140	0,032	4,35	0,027	5,15	0,027	5,15	0,035	4,00	0,035	4,00	0,035	4,00	0,035	4,00	0,035	4,00
				160	0,032	5,00	0,027	5,90	0,027	5,90	0,035	4,55	0,035	4,55	0,035	4,55	0,035	4,55	0,035	4,55
				180	0,032	5,60	0,027	6,65	0,027	6,65	0,035	5,10	0,035	5,10	0,035	5,10	0,035	5,10	0,035	5,10
				200	0,032	6,25	0,027	7,40	0,027	7,40	0,036	5,55	0,036	5,55	0,035	5,70	0,035	5,70	0,035	5,70
				220	0,032	6,85	0,027	8,10	-	-	0,036	6,10	0,036	6,10	0,035	6,25	0,035	6,25	0,035	6,25
				240	0,032	7,50	0,027	8,85	-	-	0,036	6,65	0,036	6,65	0,035	6,85	0,035	6,85	0,035	6,85
				260	0,032	8,10	0,027	9,60	-	-	0,036	7,20	0,036	7,20	0,035	7,40	0,035	7,40	0,035	7,40
				280	0,032	8,75	0,027	10,35	-	-	0,036	7,75	0,036	7,75	0,035	8,00	0,035	8,00	0,035	8,00
				300	0,032	9,35	0,027	11,10	-	-	0,036	8,30	0,036	8,30	0,035	8,55	0,035	8,55	0,035	8,55
				320	0,032	10,00	0,027	11,85	-	-	0,036	8,85	0,036	8,85	0,035	9,10	0,035	9,10	0,035	9,10
				340	0,032	10,60	0,027	12,55	-	-	-	-	-	-	-	-	-	-	-	-
				360	0,032	11,25	0,027	13,30	-	-	-	-	-	-	-	-	-	-	-	-
				380	0,032	11,85	0,027	14,05	-	-	-	-	-	-	-	-	-	-	-	-
				400	0,032	12,50	0,027	14,80	-	-	-	-	-	-	-	-	-	-	-	-
Thickness tolerance	Ti	Class	EN 823		T1		T1		T1		T1		T1		T1		T1			
Dimensional stability at 70°C and 90% relative humidity	DS(70/90)	%	EN 1604		≤ 5		≤ 5		≤ 5		≤ 5		≤ 5		≤ 5		≤ 5			
Compressive stress at 10% deformation or compressive	CS(10\Y)i	Level i kPa ³	EN 826		300		300		300		300 ²		300 ²		500		700			
Reaction to fire	-	Class	EN 13501-1		Euroclass E															
Deformation under 40 kPa load and 70°C	DLT(2)5	%	EN 1605		≤ 5		≤ 5		≤ 5		≤ 5		≤ 5		≤ 5		≤ 5			
Tensile strength	TRi	Level i kPa ³	EN 1607		-		-		200		-		200		-		-			
Compressive creep (50 years, deformation < 2%)	CC(2/1,5/50)σ _c	σ _c kPa ³	EN 1606		-		-		-		130		-		180		250			
Long term water absorption by total immersion	WL(T)i	Level i %	EN 12087		0,7		0,7		-		0,7		-		0,7		0,7			
Long term water absorption by diffusion ¹	WD(V)i	Class	EN 12088		WD(V) 3		WD(V)1-3		-		WD(V)1-3		-		WD(V)1-3		WD(V)1-3			
Freeze-thaw resistance	FTCDi	Class	EN 12091		FTCD1		FTCD1		-		FTCD1		-		FTCD1		FTCD1			
Water vapour diffusion resistance factor ¹	μ	-	EN 12086		250-80		250-80		250-80		250-80		250-80		250-80		250-80			
Coefficient of linear thermal expansion	-	mm/(m·K)	-		0,07		0,07		0,07		0,07		0,07		0,07		0,07			
Maximum working temperature	-	°C	-		+75 °C		+75 °C		+75 °C		+75 °C		+75 °C		+75 °C		+75 °C			
Surface	-	-	-		skin		skin		structured		skin		structured		skin		skin			
Possible edge profiles	-	-	-		shiplap		shiplap		butt edge		butt edge, shiplap, tongue and groove		butt edge		shiplap		shiplap			

¹ depending on thickness

² at thickness 20 mm: 200 kPa

³ 100 kPa = 100 kN/m² = 0.10 N/mm²



JACKODUR® thermal insulation:

■ Free of HBCD flame retardants, chlorofluorocarbons (CFCs) and propellants containing HCFCs.

Important notes:

JACKODUR® products are suitable for continuous use at maximum temperatures of up to +75°C. On days with exposure to intense sunlight, care must be taken to ensure that the JACKODUR® products are not covered with dark layers (e.g. waterproofing elements, non-woven materials, mats). Any heat build-up can lead to deformation of the thermal insulation boards and therefore must be avoided.

JACKODUR® products cannot withstand continuous exposure to sunlight (UV radiation) and their surface must be protected from weathering.

Contact with volatile substances (e.g. Solvents) and solvent-containing adhesives must be avoided.

Because JACKODUR® products offer a wide range of application options, suppliers cannot always monitor them for proper compliance with processing instructions, handling and installation. As a result, JACKON Insulation GmbH is liable only for the data named here in accordance with licensing regulations.