



Danfoss Drives A/S

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Environmental Declaration

Danfoss Drives A/S hereby declares that the below product(s) manufactured by us contain the materials listed and can be dismantled and recycled as described.

The products are manufactured under the environmental management systems: ISO 14001 and EMAS.

Danfoss is known as a very environmentally minded company. We have done, and continue to do a wide range of environmental improvement activities. Furthermore we intend to be able to provide guidance for dismantling frequency converters at the end of their useful life.

This document provides the location of the main materials in the product to aid in the dismantling of the product before further treatment. Depending upon national and/or local legislation and the capabilities of the scrapping facilities, there are various ways of dismantling the product. Therefore the instructions describe materials that may require special treatment. Methods of recycling are based on present day knowledge.

Product:	Type:	Amount of components
VLT 2800	All models	>500
Standards:	ECO-label	Signed ICC
Available upon request	No, no criteria's	Yes
Electronics	Certificates	Suppliers worldwide
Yes	Available upon request	Yes

Prepared by Kirsten Stentoft

Materials declaration

VLT 2800

<i>Materials</i>	<i>wt %</i>
Al primary (Aluminium)	35,357
Fe and FeO (Iron and Iron Oxide)	18,840
EPS Expanded Polystyrene (no CFC)	8,739
Cu primary (Copper)	8,023
Fe (AlZn, zink/alu plated iron))	7,451
Plastics various	4,324
Epoxy	2,037
Glass and glassfibres	1,972
PCGF10 (10% glass), - Cl and Br DIN0472 part 805	1,911
Polyester	1,791
Paper	1,495
CuSn (Copper Tin, Bronze)	1,492
Ethylene glycolethers/acetates	1,043
PVC various (Polyvinyl Chloride)	1,020
PE (Polyethylene)	0,937
RFe80 XX	0,400
PBT (Polybutylene Terephthalate)	0,393
Polybuten	0,357
Ag (Silver)	0,300
PBTP (Polybutylene Terephthalate)	0,280
Crastin XX	0,275
Silicon gel	0,191
Al2O3 (Aluminium oxide)	0,174
TBBPA (Bromide compound)	0,160
Zn (Zink)	0,141
Rubber	0,124
Brass (CuZn)	0,106
FeNi (Nickel plated iron)	0,102
Sn (Tin)	0,095
Polyphenylene Sulfide	0,070
Etronit XX	0,064
Ceramics/metals	0,053
ZnO (Zink Oxide)	0,049
Acrylic resin	0,049
AgNi (Silver/Nickel)	0,035
PA (Polyamide)	0,030
SnPb (Tin Lead)	0,025
Antimony/compounds (Sb)	0,020

<i>Materials</i>	<i>wt %</i>
Silicon rubber	0,012
Lead/compounds (Pb)	0,011
Ni (Nickel)	0,010
CrNi (Chrome/Nickel)	0,005
Bi (Bismuth/compounds)	0,004
Au (Gold)	0,004
Silicone	0,004
PUR (Polyurethane)	0,004
Enamels various	0,004
Cyanobiphenyl	0,003
CuNiZn (Copper/Nickel/Zink)	0,003
Oxides various	0,002
SiO ₂ (Silicon Oxide)	0,002
Si	0,001
Chemicals, various	0,001
Anorganic pigments	0,001
PbO (Lead Oxide)	0,001
Cobalt/compounds (Co)	0,000
Polyvinylalcohol	0,000
AgPd (Silver/Palladium)	0,000
Liquid crystal	0,000
RuO ₂ (Ruthenium Oxide)	0,000
GaAsP (Gallium Arsenic Phosphorus)	0,000

Disposal instruction



Figure 1

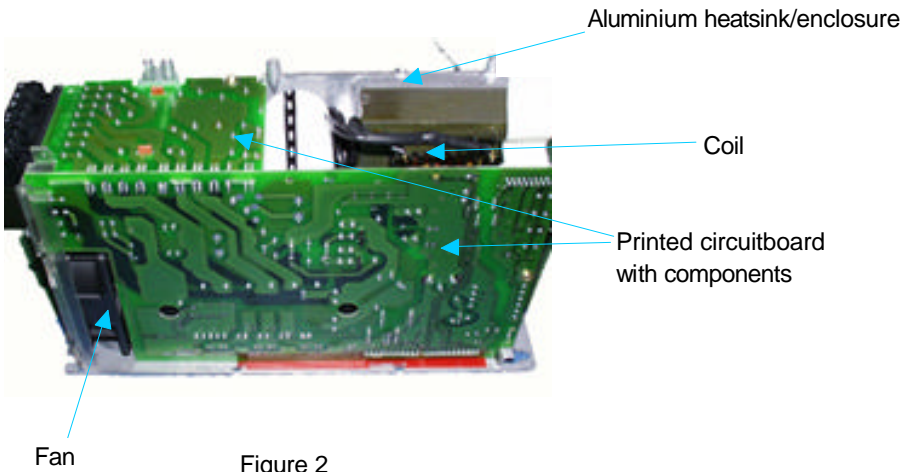


Figure 2

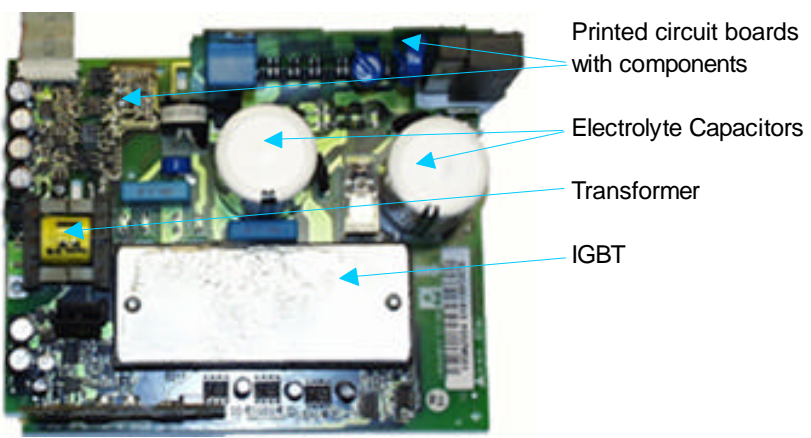


Figure 3

Opt. (option): LCP Local Control Panel contains a LCD display

Disposal instruction

Fig.	Component/ Fraction	Environmental conditions	Dismantling/Scrapping	Characteristics
1	Polycarbonate PC	Problems	Controlled incineration or recycling.	Contains glass and flame retardant.
1	LED display	No problems	Incinerate	Low content of metals
1, 2	Aluminum	No problems	Remelt	Separate from the rest to secure high grade of recovery
2	Fan	No problems	Separate the copper, aluminum and steel and remelt. The remainder plastics may be recovered or incinerated.	The plastics contains flame retardant and may contain glass.
2,3	Printed circuit board with components	Problems	Copper recycling facilities, where all precious metals are recovered and heavy metals and other hazardous substances are bounded in the remainder part and deposited.	All printed circuit boards and components with plastics contain flame retardant. The tin solder contains lead.
2,3	Coil and transformer	No problems	Separate copper and steel; remelt in copper and steel works.	Separate from the rest to secure high grade of recovery as copper is a short resource.
3	IGBT	No problems	Copper recycling facilities, and deposit of ceramic materials.	High content of copper.
3	Electrolyte capacitors	No problems	Controlled incineration or shred- ding followed by separating the liquids and remelting the aluminum.	Aluminum content is approx. 60%. Due to the high burning rate of the remainder impurities, only a limited amount of capa- citors should be remelted per hour.
EPS	Expanded Polystyrene	Packaging material, not shown	Incineration, re-granulate for re- cycling or deposit.	Depending on the facilities, there are several ways to handle the packaging material.
Opt.	LCD-display	Problems	Controlled incineration	N/A

1. 'Problems' indicates that special handling is required.
2. 'No problems' means that most recyclers can accomplish this today.