ENGINEERING TOMORROW

Environmental Product Information I Danfoss Drives

# Disposal declaration

## Frequency Converters Frame Size: C1, C2, C3 and C4
## Production Place: Denmark and USA

At Danfoss, we take into account environmental considerations during the design and development of new products. We collect as much reliable data from suppliers as possible to generate lists of materials and disposal instructions.
Ways of dismantling the product depend on national and/or local legislation and the capabilities of the scrapping facilities.
This environmental information about the product is based on existing knowledge and available data.

That Danfoss facility complies with TS 16949 including ISO 9001 and ISO 14001standards.

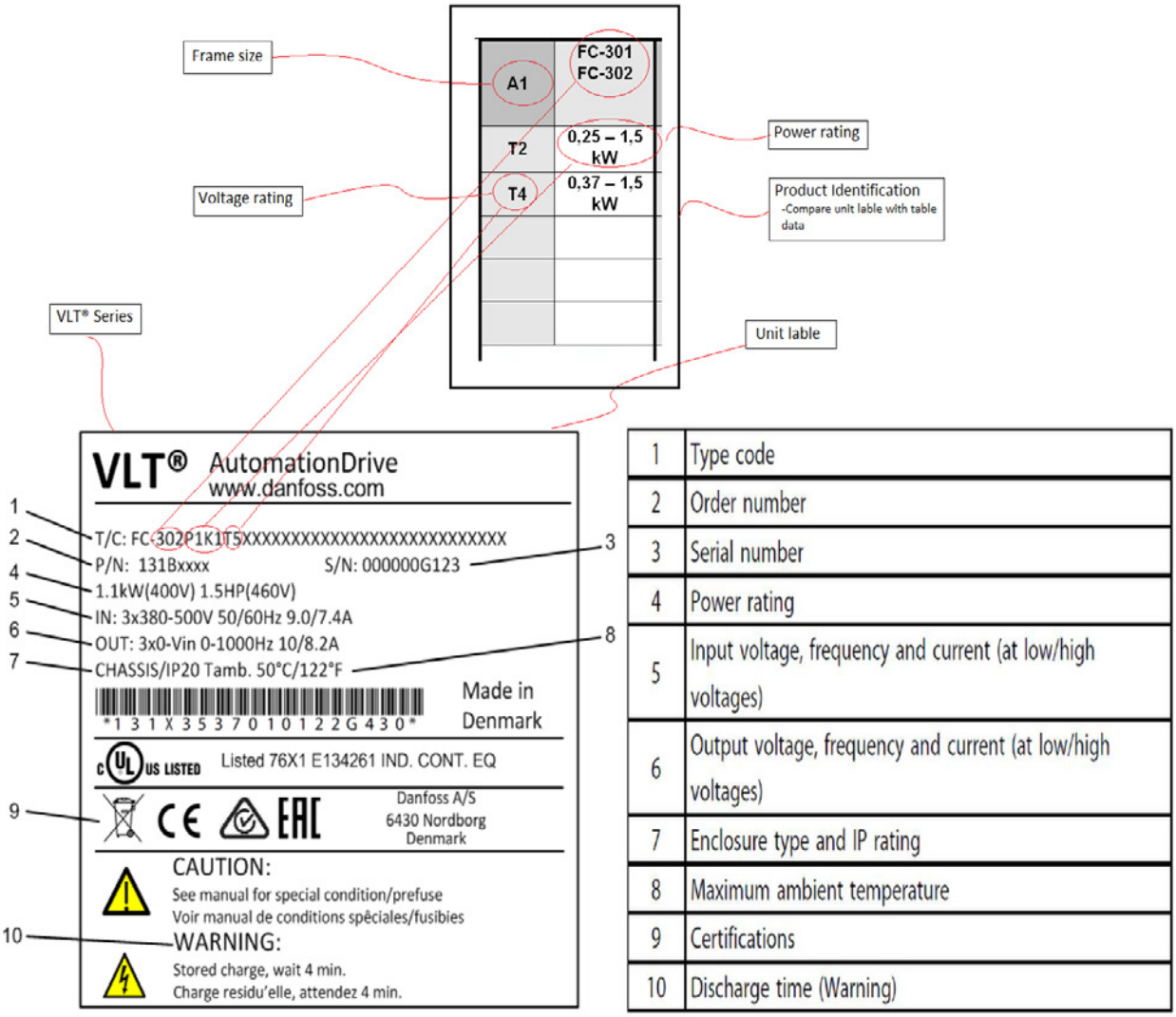
### Frequency Converters covered:

**VLT® AutomationDrive**
**VLT® HVAC Drive**
**VLT® AQUA Drive**
**VLT® Refrigeration Drive**

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Document ID: 00731407 Revision, Sequence: A,3
File Origin Date: 2016-05-30 File Last Modified: 2016-06-13

# 1. PRODUCT INFORMATION BUILD UP AND IDENTIFICATION




| | |
|---|---|
| 1 | Type code |
| 2 | Order number |
| 3 | Serial number |
| 4 | Power rating |
| 5 | Input voltage, frequency and current (at low/high voltages) |
| 6 | Output voltage, frequency and current (at low/high voltages) |
| 7 | Enclosure type and IP rating |
| 8 | Maximum ambient temperature |
| 9 | Certifications |
| 10 | Discharge time (Warning) |



VLT®

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# 2. MAIN MATERIAL CONTENT FOR C1

| **Type** | **C1** | **FC-301<br>FC-302<br>FC-311<br>FC-312** | **FC-102<br>FC-103<br>FC-202** |
|---|---|---|---|
| | **S2** | **15 kW** | **11–15 kW** |
| | **S4** | | **18 kW** |
| | **T2** | **15-22 kW** | **11–30 kW** |
| | **T4,T5,T6** | **30-45 kW** | **37–55 kW** |
| |  | | |

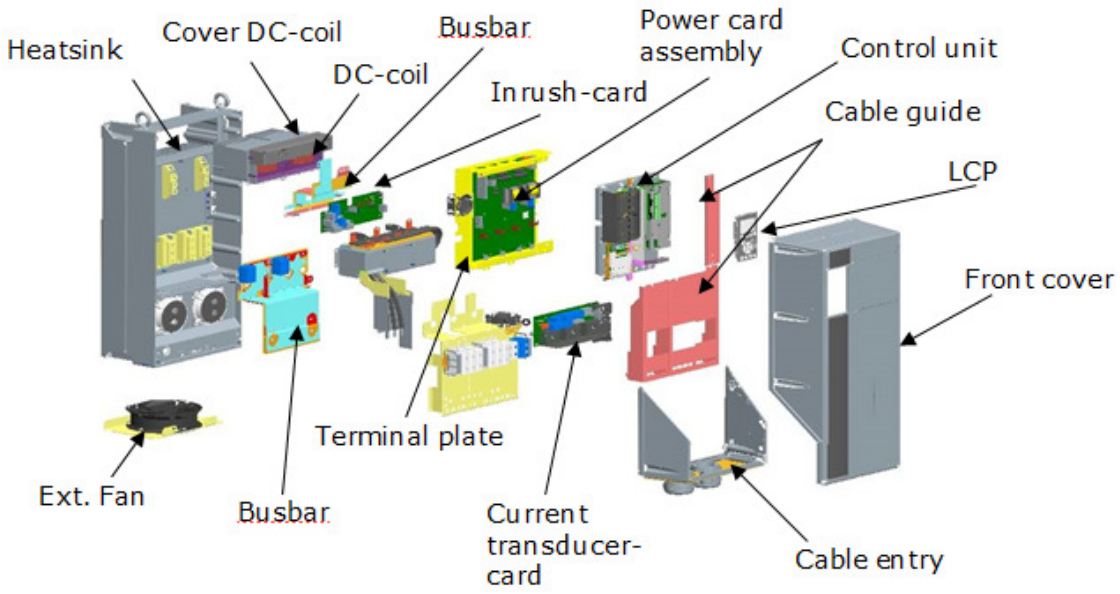
| **Material** | **Content [kg]** | **(%wt)** |
|---|---|---|
| Aluminium primary (Al): Heatsink,Control unit, Front cover, Cable entry | 17.93 | 40 |
| Iron/Steel primary (Fe): Terminal Plate, Side Cover, Coils/Transformers | 7.27 | 16 |
| Copper primary (Cu): Coils/Transformers, Busbar | 1.44 | 3 |
| Electronics: Printed Circuit Boards (PCB), Components: RFI,LCP,Terminal plate,Switchmode, Rectifier, Fan,Cables | 5.79 | 13 |
| PCFR10(10% glass) Cl and Br | 0.81 | 2 |
| Glass and glassfibres | 0.025 | 0 |
| Pottet parts (Aluminium,Steel, Cooper,Potting material) | 10.81 | 24 |
| Rubber gaskets | 0.10 | 0.2 |
| Other Materials: (For example Ferrit) | 0.71 | 2 |
| Weight of VLT® | 44.75 | 100 |

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| | |
|---|---|
| Nr of Printed Circuit Assemblies (With LCP, Without option) | **6** |
| Number of LCD's (Maximum) | **1** |

# 3. DRAWINGS

## 3D drawing representing Frame Size C1:



# 4. MAIN MATERIAL CONTENT FOR C2:

| **Type** | **C2** | **FC-301<br>FC-302<br>FC-311<br>FC-312** | **FC-102 FC-103<br>FC-202** |
|---|---|---|---|
| | **S2** | | **18–22kW** |
| | **S4** | | **37 kW** |
| | **T2** | **30-37 kW** | **37–45 kW** |
| | **T4,T5<br>T6** | **55–75kW** | **75–90 kW** |
| | **T7** | **30–75kW** | **37–90 kW** |
| |  | | |

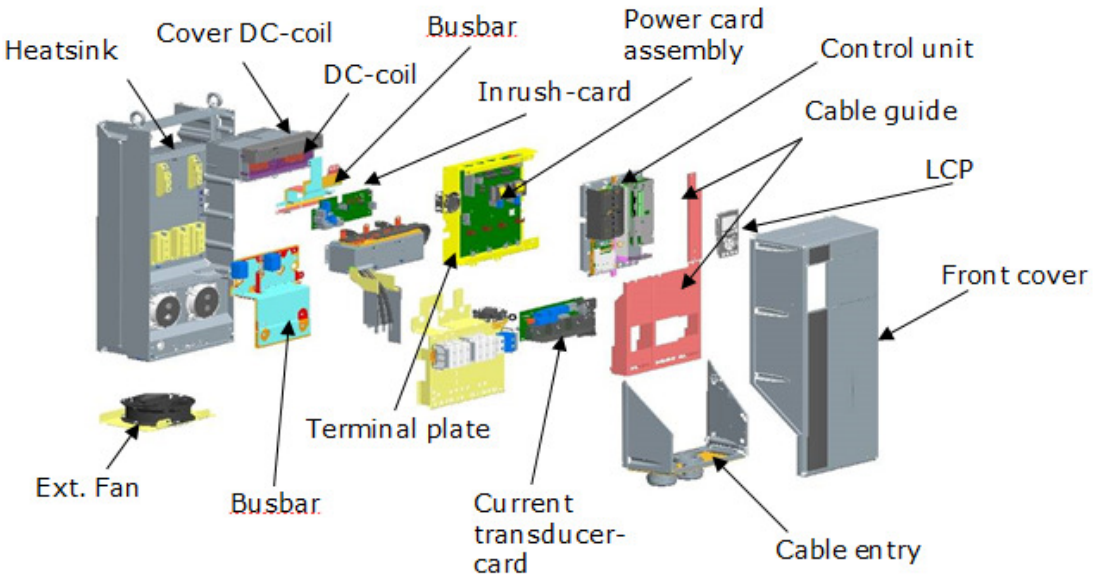
| **Material** | **Content [Kg]** | **(%wt)** |
|---|---|---|
| Aluminium primary (Al): Heatsink,Control unit, Front cover, Cable entry | 27.24 | 50.1 |
| Iron/Steel primary (Fe): Terminal Plate, Side Cover, Coils/Transformers | 8.01 | 14.8 |
| Copper primary (Cu): Coils/Transformers, Busbar | 2.32 | 4.3 |
| Electronics: Printed Circuit Boards (PCB), Components: RFI,LCP,Terminal plate,Switchmode, Rectifier, Fan,Cables | 8.11 | 14.9 |
| PCFR10(10% glass) Cl and Br | 0.91 | 1.7 |
| Glass and glassfibres | 0.025 | 0 |
| Pottet parts (Aluminium,Steel, Cooper,Potting material) | 14.00 | 25.8 |
| Rubber gaskets | 0.10 | 0.2 |

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| | | |
|---|---|---|
| Other Materials:<br>(For example Ferrit) | 1.11 | 2.1 |
| Weight of VLT® | 61.9 | 100 |
| Nr of Printed Circuit Assemblies<br>(With LCP, Without option) | **6** | |
| Number of LCD's (Maximum) | **1** | |

# 5. DRAWINGS

## 3D drawing representing Frame Size C2:



# 6. MAIN MATERIAL CONTENT FOR C3:

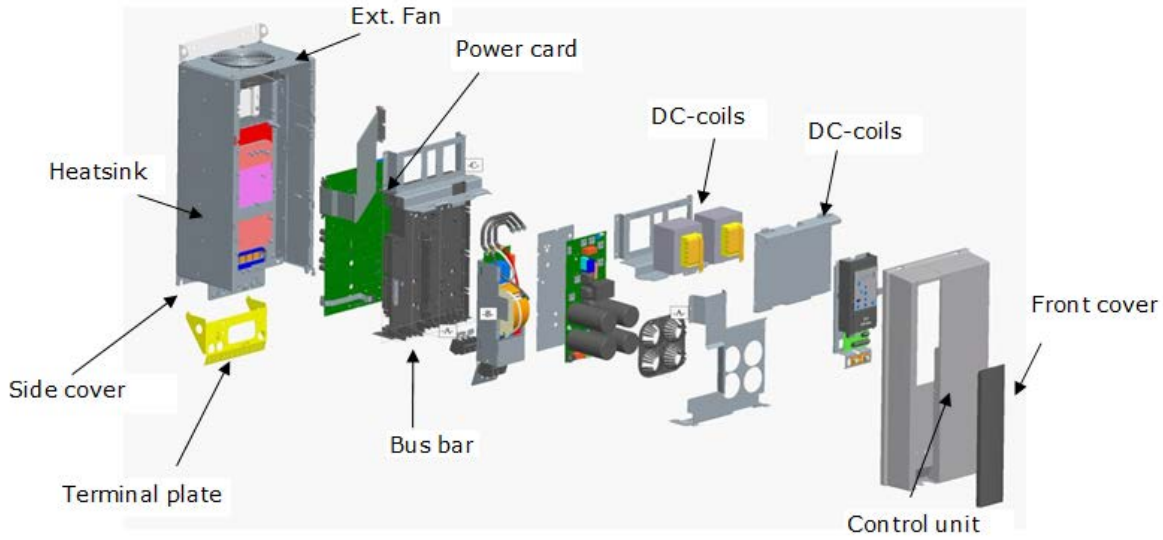
| Type | C3 | FC-301<br>FC-302<br>FC-311<br>FC-312 | FC-102 FC-103<br>FC-202 |
|---|---|---|---|
| | T2 | 18-22 kW | 22-30 kW |
| | T4,T5, T6 | 37-45 kW | 45-55 kW |
| | T7 | 37-45 kW | 45-55 kW |
| |  | | |

| Material | Content [Kg] | (%wt) |
|---|---|---|
| Aluminium primary (Al): Heatsink,Control unit, Front cover, Cable entry | 4.30 | 11.8 |
| Iron/Steel<br>primary (Fe): Terminal Plate, Side Cover, Coils/Transformers | 12.70 | 35.1 |
| Electronics: Printed Circuit Boards (PCB), Components: RFI,LCP,Terminal plate,Switchmode, Rectifier, Fan,Cables | 4.49 | 12.1 |
| PCFR10(10% glass)<br>Cl and Br | 1.78 | 6.2 |
| Pottet parts (Aluminium,Steel, Cooper,Potting material) | 12.42 | 34.3 |
| Rubber gaskets | 0.006 | 0 |
| Other Materials:<br>(For example Ferrit) | 0.27 | 0,5 |
| Weight of VLT® | 36 | 100 |
| Nr of Printed Circuit Assemblies<br>(With LCP, Without option) | **5** | |

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# 7. DRAWINGS

## 3D drawing representing Frame Size C3:




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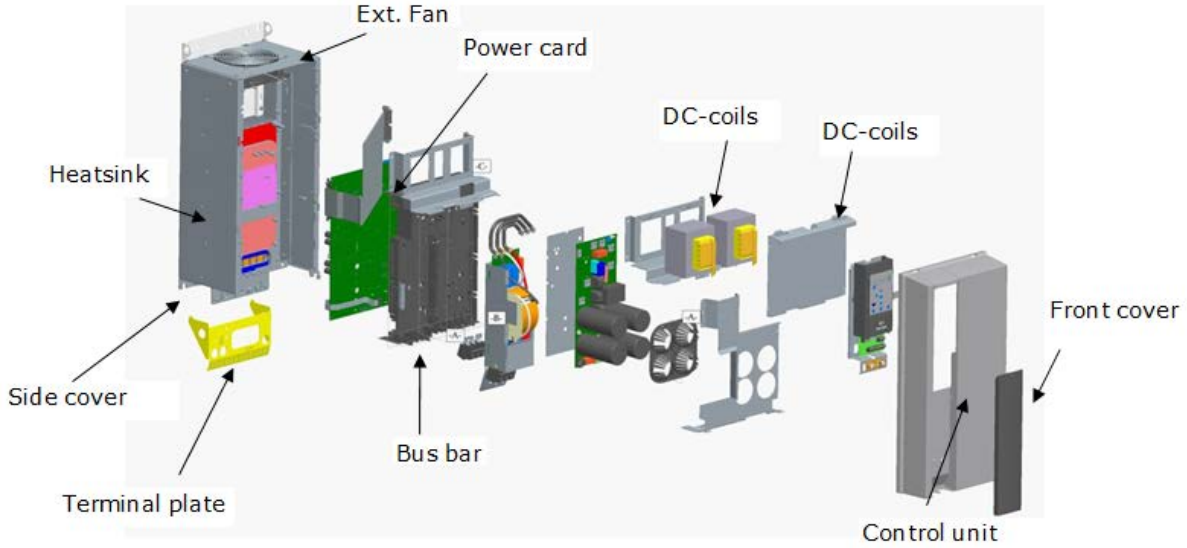
| **Type** | **C4** | **FC-301 FC-302 FC-311 FC-312** | **FC-102 FC-103 FC-202** |
|---|---|---|---|
| | **T2** | **30-37 kW** | **37-45 kW** |
| | **T4,T5** | **55-75 kW** | **75-90 kW** |
| | **T6** | **55-75 kW** | **75-90 kW** |
| |  | | |

| **Material** | **Content [Kg]** | **(%wt)** |
|---|---|---|
| Aluminium primary (Al): Heatsink,Control unit, Front cover, Cable entry | 6.94 | 14 |
| Iron/Steel primary (Fe): Terminal Plate, Side Cover, Coils/Transformers | 17.38 | 35 |
| Electronics: Printed Circuit Boards (PCB), Components: RFI,LCP,Terminal plate,Switchmode, Rectifier, Fan,Cables | 6.90 | 12.4 |
| PCFR10(10% glass) Cl and Br | 2.37 | 4.8 |
| Pottet parts (Aluminium,Steel, Cooper,Potting material) | 15.78 | 31.8 |
| Rubber gaskets | 0.006 | 0 |
| Other Materials: (For example Ferrit) | 0.27 | 0.5 |
| Weight of VLT® | 51 | 100 |
| Nr of Printed Circuit Assemblies (With LCP, Without option) | **5** | |

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# 8. DRAWINGS

## 3D drawing representing Frame Size C4:




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