

# 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 14001 standards.

## Frequency Converters covered:

**VLT® AutomationDrive**

**VLT® HVAC Drive**

**VLT® AQUA Drive**

**VLT® Refrigeration Drive**

# 1. PRODUCT INFORMATION BUILD UP AND IDENTIFICATION

|                |    |                  |
|----------------|----|------------------|
| Frame size     | A1 | FC-301<br>FC-302 |
| Voltage rating | T2 | 0,25 – 1,5<br>kW |
|                | T4 | 0,37 – 1,5<br>kW |
|                |    |                  |
|                |    |                  |
|                |    |                  |

**VLT® AutomationDrive**  
www.danfoss.com

1 T/C: FC-302P1K1T5XXXXXXXXXXXXXXXXXXXXXXXXXXXX

2 P/N: 131Bxxxx S/N: 000000G123

3

4 1.1kW(400V) 1.5HP(460V)

5 IN: 3x380-500V 50/60Hz 9.0/7.4A

6 OUT: 3x0-Vin 0-1000Hz 10/8.2A

7 CHASSIS/IP20 Tamb. 50°C/122°F

8

9 US LISTED Listed 76X1 E134261 IND. CONT. EQ  
Danfoss A/S  
6430 Nordborg  
Denmark


10 **CAUTION:**  
See manual for special condition/prefuse  
Voir manuel de conditions spéciales/fusibles

**WARNING:**  
Stored charge, wait 4 min.  
Charge résiduelle, attendez 4 min.

|    |                                                              |
|----|--------------------------------------------------------------|
| 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)                                     |



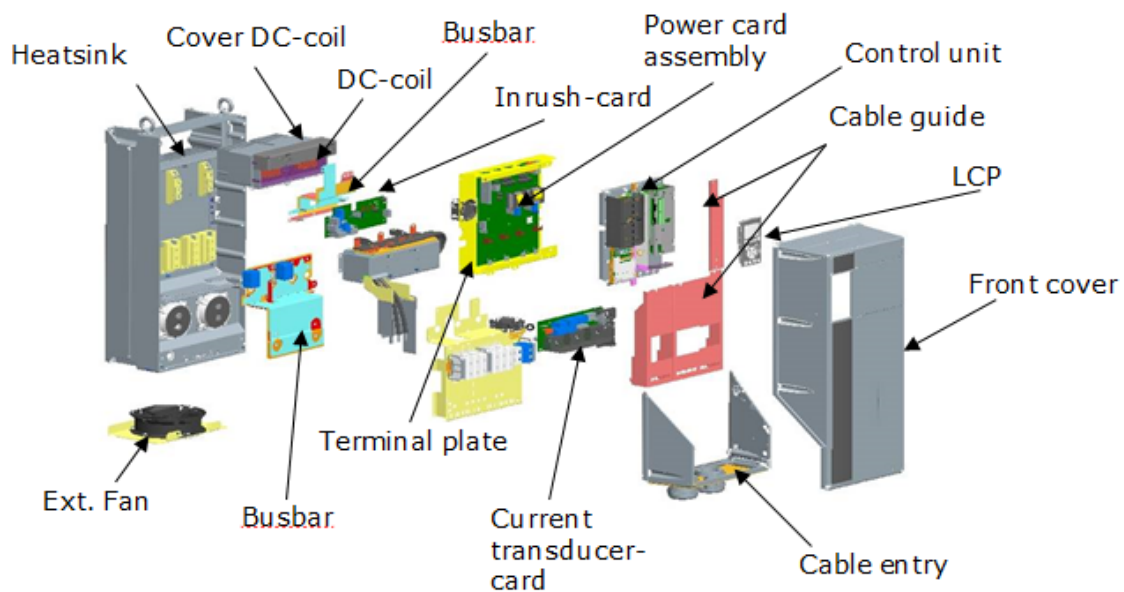
## 2. MAIN MATERIAL CONTENT FOR C1

| 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                                  |                            |


|                                                                |          |
|----------------------------------------------------------------|----------|
| Nr of Printed Circuit Assemblies<br>(With LCP, Without option) | <b>6</b> |
| Number of LCD's (Maximum)                                      | <b>1</b> |

### 3. DRAWINGS

#### 3D drawing representing Frame Size C1:



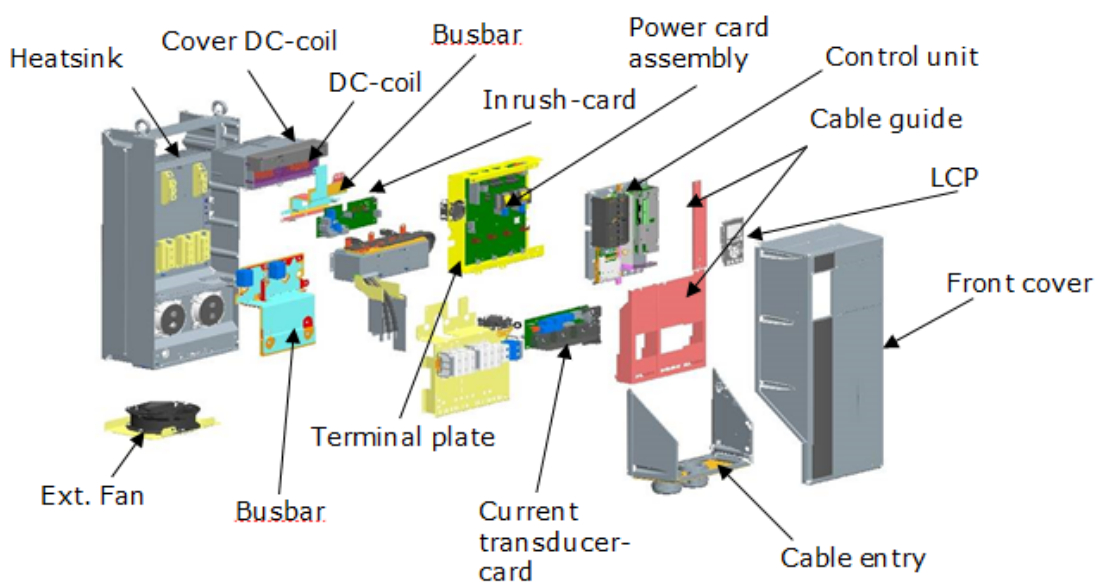
#### 4. MAIN MATERIAL CONTENT FOR C2:

| 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                                                                                 | 55-75kW                              | 75-90 kW                |
|                                                                                                                 | T6                                                                                    |                                      |                         |
|                                                                                                                 | 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                                  |                         |


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

## 5. DRAWINGS

### 3D drawing representing Frame Size C2:

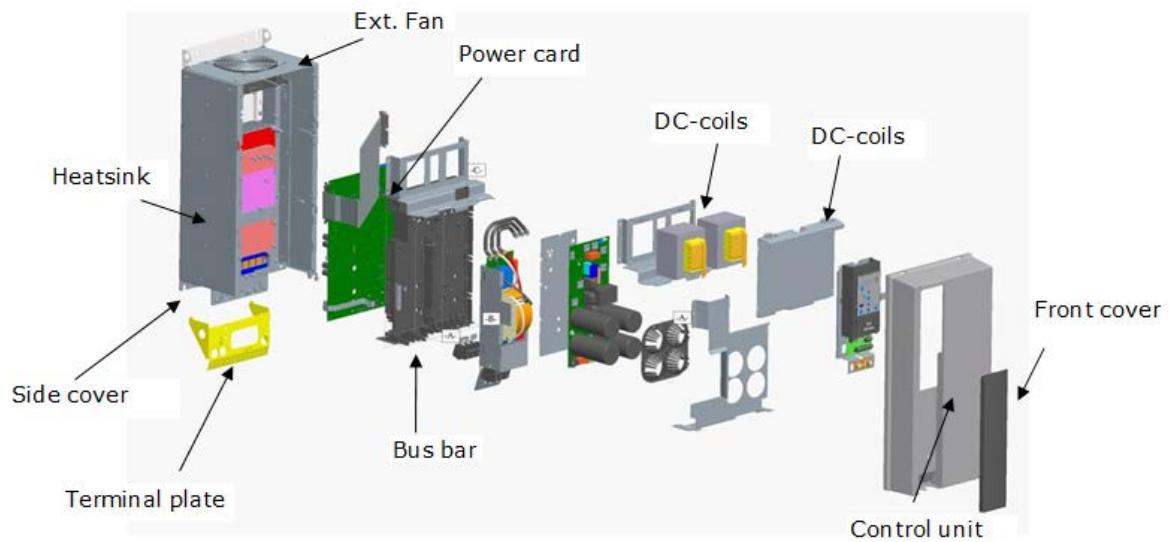


## 6. MAIN MATERIAL CONTENT FOR C3:


| 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 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) CI and Br                                                                                     | 1.78                                                                                 | 6.2                                  |                         |
| Pottet parts (Aluminium,Steel, Cooper,Potting material)                                                         | 12.42                                                                                | 34.3                                 |                         |
| Rubber gaskets                                                                                                  | 0.006                                                                                | 0                                    |                         |
| Other Materials: (For example Ferrit)                                                                           | 0.27                                                                                 | 0,5                                  |                         |
| Weight of VLT®                                                                                                  | 36                                                                                   | 100                                  |                         |
| Nr of Printed Circuit Assemblies (With LCP, Without option)                                                     | <b>5</b>                                                                             |                                      |                         |

## 7. DRAWINGS

### 3D drawing representing Frame Size C3:





| Type                                                                                                            | C4                                                                                   | FC-301<br>FC-302<br>FC-311<br>FC-312 | FC-102 FC-103<br>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)                                                     | <b>5</b>                                                                             |                                      |                         |

## 8. DRAWINGS

### 3D drawing representing Frame Size C4:

