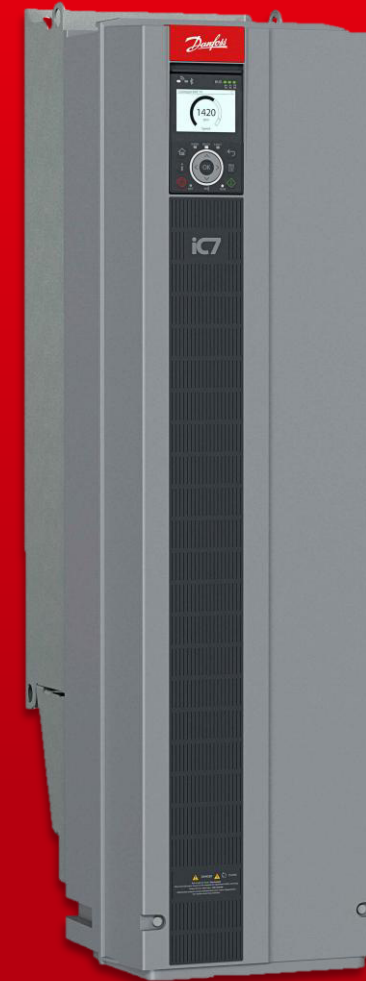


# Environmental Product Declaration

ENGINEERING  
TOMORROW



## iC7-Automation, Frame FA08



|                         |                                                                                           |
|-------------------------|-------------------------------------------------------------------------------------------|
| EPD owner               | Danfoss A/S                                                                               |
| EPD registration number | EPD-IES-0025739:001                                                                       |
| Programme               | The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a> |
| Programme operator      | EDP International AB                                                                      |
| Version date            | 2026-01-30                                                                                |
| Validity date           | 2031-01-30                                                                                |

Environmental Product Declaration in accordance with EN 15804:2012+A2:2019/AC:2021 and ISO 14025:2006

An EPD may be updated or depublished if conditions change. To find the latest version of the EPD and to confirm its validity, see [www.environdec.com](http://www.environdec.com)



# General information

|                         |                                                                                    |
|-------------------------|------------------------------------------------------------------------------------|
| EPD author              | Danfoss Power Electronics & Drives A/S                                             |
| EPD type                | Cradle-to-gate with options, EPD of multiple products, based on worst-case results |
| Declared unit           | One product over its Reference Service Life                                        |
| Product included        | IC7-60FA3N05-170AE20F1+ACBC+ALDC+BAMT+BDBA+BEF1+BF20+DAAU (137G1156)               |
| Products covered by EPD | All FA08 frames in the iC7-Automation range                                        |
| Manufacturing Location  | Gråsten, Denmark                                                                   |
| Use Location            | Europe                                                                             |
| Application             | Industrial e.g. F&B, Chemical, HVAC etc.                                           |
| Mass                    | 57 kg without packaging<br>66 kg with packaging                                    |
| Dimensions (H×W×D)      | 743 x 255 x 368 mm without packaging                                               |
| Rated power             | 90 kW                                                                              |
| Rated voltage           | 3 x 380-500 VAC                                                                    |
| Rated frequency         | 50 Hz                                                                              |
| Cooling method          | Air-cooled                                                                         |
| Verification            | [X] External [ ] Internal [ ] None                                                 |
| Produced to             | PCR 2019:14 version 2.0.1                                                          |
| External verifier       | Bureau Veritas Certification Sweden, accredited by SWEDAC<br>accr. No. 1236        |
| Programme information   |                                                                                    |
| Programme               | The International EPD® System                                                      |
| Address                 | EPD International AB<br>Box 210 60<br>SE-100 31 Stockholm<br>Sweden                |
| E-mail                  | support@environdec.com                                                             |



# General information

## Product Category Rules (PCR)

CEN standard EN 15804 serves as the Core Product Category Rules (PCR)

Product Category Rules (PCR): Construction products PCR 2019:14 v. 2.0.1, CPC code 46122

PCR review was conducted by: The Technical Committee of the International EPD® System.  
Chair: Kristian Jelse, Greendesk (on behalf of EPD International AB).  
Contact via Kristian@greendesk.se

## Verification

External and independent ('third-party') verification of the declaration and data, according to ISO 14025:2006, via:

✓ EPD verification through an EPD process certification without a pre-verified LCA/EPD too

Third-party verifier Odyssefs Papagiannidis, EPD Lead verifier under Bureau Veritas Certification Sweden

Accredited by SWEDAC with accreditation number 1236

\*EPD Process Certification involves an accredited certification body certifying and periodically auditing the EPD process and conducting external and independent verification of EPDs that are regularly published. More information can be found in the General Programme Instructions on [www.envrondec.com](http://www.envrondec.com). International EPD System

Procedure for follow-up of data during EPD validity involves third-party verifier: ☐ Yes ☒ No

## Ownership and limitations on use of the EPD

EPDs within the same product category but published in different EPD programmes, may not be comparable. For two EPDs to be comparable, they shall be based on the same PCR (including the same first-digit version number) or be based on fully aligned PCRs or versions of PCRs; cover products with identical functions, technical performances and use (e.g. identical declared/functional units); have identical scope in terms of included life-cycle stages (unless the excluded life-cycle stage is demonstrated to be insignificant); apply identical impact assessment methods (including the same version of characterisation factors); and be valid at the time of comparison

The EPD owner has the sole ownership, liability, and responsibility for the EPD.





# Company Information

| EPD owner information |                                            |
|-----------------------|--------------------------------------------|
| EPD owner             | Danfoss A/S                                |
| Address               | Nordborgvej 81<br>6430 Nordborg<br>Denmark |
| E-mail                | epd_danfoss@danfoss.com                    |

Danfoss is committed to being our customers’ preferred decarbonization partner, and empowering our customers to make decarbonization decisions is one way that we ensure this commitment.

By providing transparency in our products, Environmental Product Declarations support data driven decision-making for customers wishing to drive the green transition with us. Compliant with wide-reaching regulations, EPDs support the credibility of our products footprint through certification.

**Find more on our annual report:**

[Danfoss annual report 2024](#) | [Download the latest annual report](#) | [Danfoss](#)

# Product information

This EPD covers all configurations of the air-cooled iC7-Automation Frequency Converter products in frame size FA08. The product used for the representative calculations is 137G1156 (IC7-60FA3N05-170AE20F1+ACBC+ALDC+BAMT+BDBA+BEF1+BF20+DAAU). This product is representative of the whole range since it represents the biggest and most powerful version in the range, based on the weight, material composition, and power. The products in this range have weights between 47 kg and 57 kg and power ratings between 75 kW and 90 kW. The production location is the Danfoss plant in Gråsten, Denmark. See more information on [Danfoss Product Store](#).

| Product information |       |
|---------------------|-------|
| UNCPC code          | 46122 |

The product does not contain any substances from the Candidate List of Substances of Very High Concern for Authorisation of the European Union’s REACH Regulation (EC 1907/2006) above the threshold of 0.1% weight/weight.

This Environmental Product Declaration (EPD) follows the PCR 2.0.1 Construction products. These rules provide a consistent framework for calculating and reporting the environmental performance of Danfoss’ product and is aligned with relevant standards, particularly ISO 14025:2006, EN 15804+A2: 2019 and EN 50598-3:2015.

This document has been produced by Danfoss A/S and an external third-party verification is conducted.



Figure 1: The iC7-Automation Frequency Converter FA08 frame size

# Content declaration

Table 1: Product composition

| Material                     | Mass (kg)   | %            | Post-consumer scrap (%) |
|------------------------------|-------------|--------------|-------------------------|
| <b>Metals</b>                | <b>48</b>   | <b>84%</b>   | <b>0%</b>               |
| Aluminium and its alloys     | 13          | 22%          | 0%                      |
| Steel                        | 35          | 61%          | 0%                      |
| Copper and its alloys        | 0,20        | 0,3%         | 0%                      |
| Other metals                 | 0,45        | 0,8%         | 0%                      |
| <b>Plastics</b>              | <b>2,1</b>  | <b>3,6%</b>  | <b>0%</b>               |
| Polycarbonate                | 1,9         | 3,3%         | 0%                      |
| Other plastics               | 0,16        | 0,3%         | 0%                      |
| <b>Electrical/electronic</b> | <b>6,9</b>  | <b>12%</b>   | <b>0%</b>               |
| <b>Other</b>                 | <b>0,02</b> | <b>0,04%</b> | <b>0%</b>               |
| <b>Product Total</b>         | <b>57</b>   | <b>100%</b>  | <b>0%</b>               |

Table 2: Packaging composition

| Material                           | Mass (kg)  | Mass versus product (%) |
|------------------------------------|------------|-------------------------|
| Plastics                           | 0,16       | 0,28%                   |
| Paper (documentation)              | 0,05       | 0,088%                  |
| Wood                               | 4,6        | 8,1%                    |
| Cardboard                          | 3,6        | 6,3%                    |
| <b>Packaging Total</b>             | <b>8,4</b> | <b>15%</b>              |
| <b>Total (Product + Packaging)</b> | <b>66</b>  |                         |

Figure 2: Product material composition overview

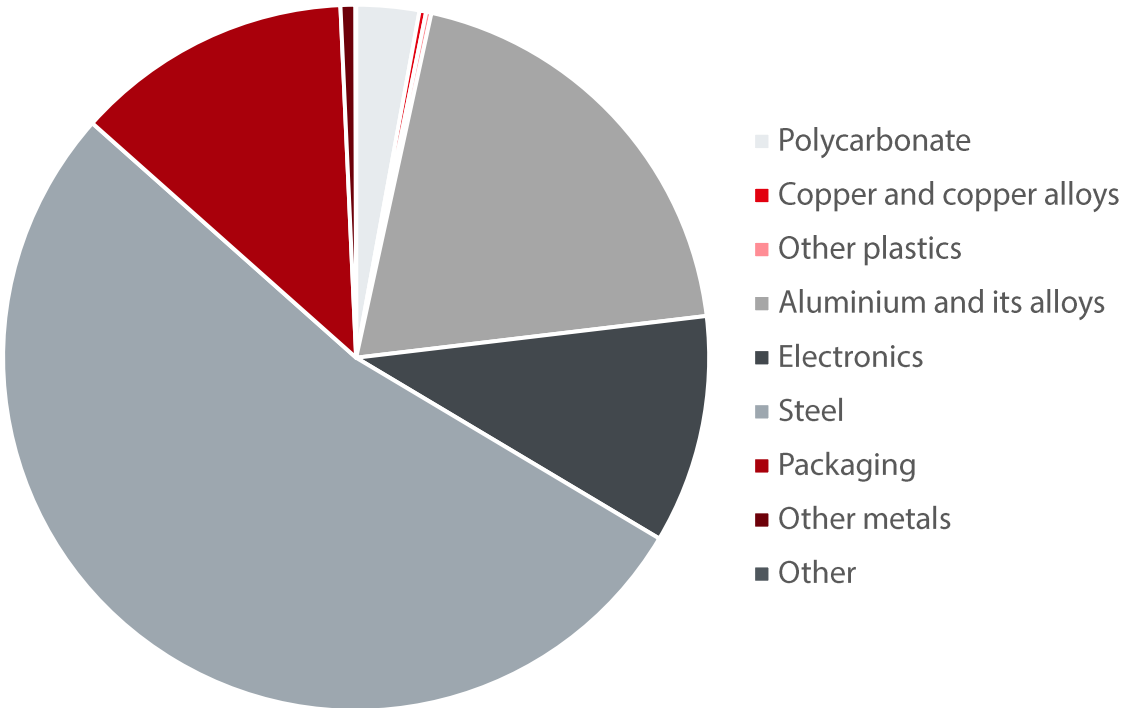


Table 2: Biogenic content overview

|                                        |     |
|----------------------------------------|-----|
| Biogenic content in the product [kg]   | -   |
| Biogenic content in the packaging [kg] | 2,5 |

# LCA Information

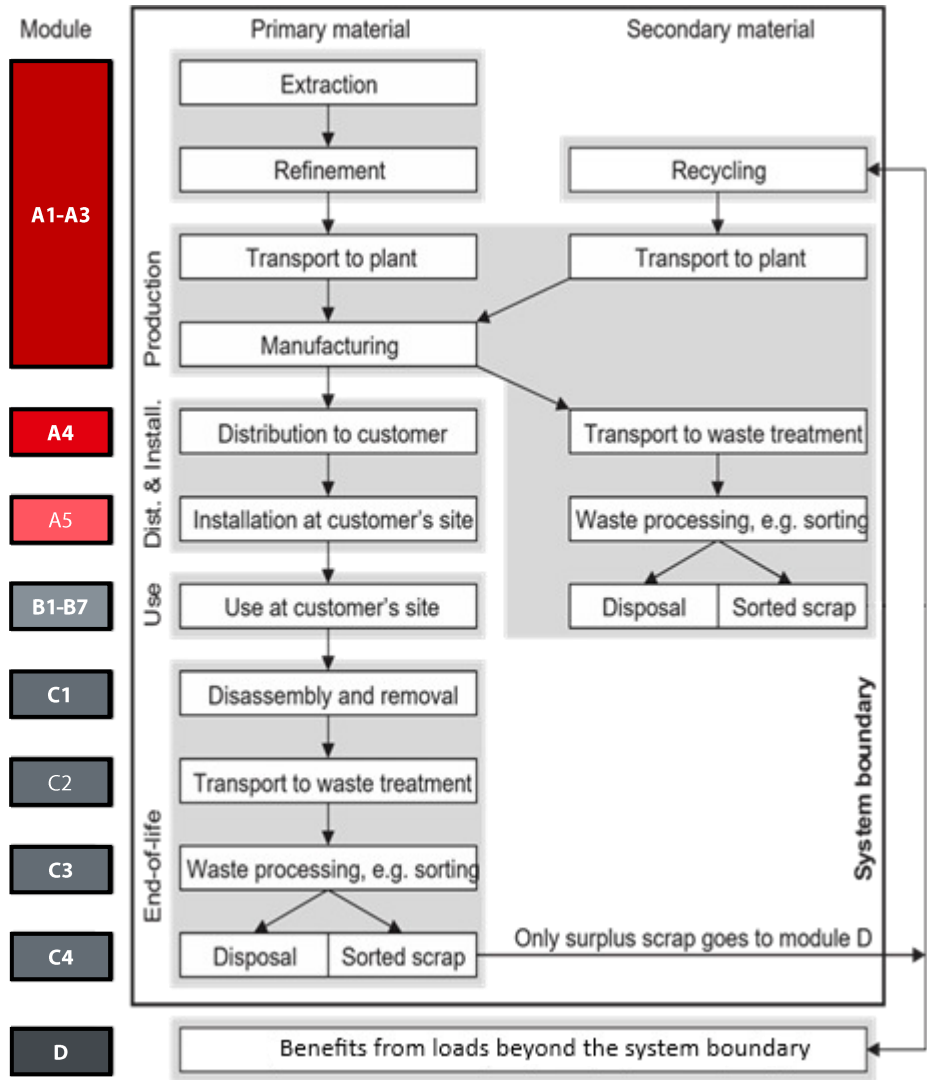
An EPD is a document used to communicate transparently, the quantified environmental impacts of a product over its lifecycle stages. This quantification is done by performing a Life Cycle Assessment (LCA) in line with a consistent set of rules known as a PCR (Product Category Rules).

This EPD is of the type 'cradle-to-gate with options' and includes all relevant modules: production (A1-A3), shipping (A4) and installation (A5); operational energy use (B6); deconstruction (C1), waste collection and transport (C2), treatment (C3) and disposal (C4). It also includes potential net benefits to future products from recycling or reusing post-consumer waste (D). The codes in brackets are the module labels from EN 15804+A2. Modules concerning use, maintenance, repair, replacement, refurbishment (B1-B5) and operational water use (B7) are excluded, following the cut-off rules from EN 15804.

Table 3: Module of the product's life cycle included in the EPD

|                    | Production stage |           |             | Installation |              |     | Use stage   |        |             |               |                     |                    | End-of-life-stage |           |                  |          | Benefits                                     |
|--------------------|------------------|-----------|-------------|--------------|--------------|-----|-------------|--------|-------------|---------------|---------------------|--------------------|-------------------|-----------|------------------|----------|----------------------------------------------|
|                    | Raw materials    | Transport | Manufacture | Transport    | Installation | Use | Maintenance | Repair | Replacement | Refurbishment | Optional energy use | Optional water use | De-installation   | Transport | Waste processing | Disposal | Benefits and loads outside system boundaries |
| Module             | A1               | A2        | A3          | A4           | A5           | B1  | B2          | B3     | B4          | B5            | B6                  | B7                 | C1                | C2        | C3               | C4       | D                                            |
| Module declared    | X                | X         | X           | X            | X            | ND  | ND          | ND     | ND          | ND            | X                   | ND                 | X                 | X         | X                | X        | X                                            |
| Geography          | Global           | Global    | DK          | EU-27        | EU 27        | -   | -           | -      | -           | -             | EU 27               | -                  | EU 27             | EU 27     | EU 27            | EU 27    | EU 27                                        |
| Specific data used | <10%             | -         | -           | -            | -            | -   | -           | -      | -           | -             | -                   | -                  | -                 | -         | -                | -        | -                                            |
| Variation products | 18%              | -         | -           | -            | -            | -   | -           | -      | -           | -             | -                   | -                  | -                 | -         | -                | -        | -                                            |
| Variation sites    | -                | -         | -           | -            | -            | -   | -           | -      | -           | -             | -                   | -                  | -                 | -         | -                | -        | -                                            |

Figure 3: Modular structure used in this EPD (EN15804+A2)



# LCA Information

## Product and packaging (A1-A3)

Final manufacturing occurs in the Gråsten plant, Denmark. The facility is certified according to IATF 16949, ISO 14001, ISO 45001, and ISO 9001. Where waste generated on-site is recyclable, it is separated and recycled. For further information, see here. The product is shipped in the packaging. All packaging materials can be safely recycled or incinerated if appropriate local facilities are available. The on-site data was gathered for 2023. The site uses PPAs for its electricity consumption (wind), with a GWPT of 1,31E-02 kgCO2eq/kWh.

## Shipping and installation (A4-A5)

Distribution is assumed to occur to customers within Europe. Transportation at 2000 km distance by truck is assumed between the factory and the final customer. This assumption was made following EN 50598-3, section 7.11 on default distance assumptions.

Module A5 includes disposal of packaging materials only, the benefits from e.g., energy recovered after plastic incineration are allocated to module D. The product is assumed to be installed by hand. Energy use in handheld tools during installation is not included as it falls under the cut-off criteria.

Table 4: Overview of LCA study

| Assumptions                     |                                                                                                                                                                                                                                                                                                                      |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference service life          | 10 years                                                                                                                                                                                                                                                                                                             |
| Intended market                 | Europe -The baseline scenario involves the distribution, installation, and end-of-life in Europe                                                                                                                                                                                                                     |
| Use-phase                       | One average factor has been applied, representing a conservative scenario as the grid will decarbonize over time                                                                                                                                                                                                     |
|                                 |                                                                                                                                                                                                                                                                                                                      |
| Data                            | LCA for Experts (Sphera) database version 2025.1                                                                                                                                                                                                                                                                     |
| Data quality                    | Data quality of the selected datasets is generally assessed as good and very good in terms of geographical, time and technology representativeness and applicability                                                                                                                                                 |
| Allocation and cut-off criteria | The allocation is done in accordance with EN 15804+A2. All major raw materials and essential energy are included. All hazardous materials and substances are considered in the inventory. Data sets within the system boundary are complete and fulfil the criteria for the exclusion of inputs and output criteria. |

# LCA Information

## Use phase (B1-B7)

The electricity consumption by the product during the use phase (B6) can vary based on application. The use scenario considered here is an average scenario to represent a range of industrial applications, developed according to Danfoss Drives Segment global applications experts and internal sales data. The use phase results covered in this EPD are based on an iC7-Automation Frequency Converter, FA08 frame size and are therefore only valid for this specific product. The other products covered by this EPD have a similar or smaller energy consumption than this reference product.

The energy consumption is calculated considering an efficiency of 98,1%. Only the loss from the frequency converter is assigned as energy consumption of the frequency converter. The remaining energy is allocated to the motor and is out of the scope of this EPD. The product is in active mode on average for 6000 hours/year which results in 60.000 hours over 10 years lifetime or 16,44 hours per day. An average load of 80% is applied. For the remaining hours, the product is either in standby mode or turned off completely. Standby mode is 2500 hours per year and during the remaining 260 hours the product is turned off. This therefore results in 25.000 hours over 10 years or 6,85 hours per day, in standby mode.

For the purpose of this assessment, use within Europe is assumed and an average EU-27 CO2 factor from LCA for Experts database (2025.1) is applied. Sales also occur outside of Europe which is important to note considering the impact the electricity grid mix can have on the emissions in the use phase. This factor will differ, depending on the country and share of renewables and fossil energy sources in the corresponding local electricity grid.

For that reason, three other scenarios are additionally applied to demonstrate the impact of the results: Norway, Italy and Poland.

Table 5: CO2 emissions per use phase location

| Location of use                   | GWPT Use phase (B6), kgCO2eq |
|-----------------------------------|------------------------------|
| Europe, EU-27 (Baseline scenario) | 2,4E04                       |
| Norway                            | 0,20E04                      |
| Italy                             | 3,1E04                       |
| Poland                            | 6,5E04                       |

# LCA Information

## End-of-life (C1-C4)

The standard end-of-life procedure from EN 50598-3 has been applied. In line with EN 15804+A2, only the 'net scrap' (i.e., the leftover recyclable materials remaining after inputs of recycled content required in the manufacturing phase are first satisfied) is used to calculate the benefits and loads beyond the system boundary (Module D). For this EPD the 100% recycling scenario has been applied, due to being the most conservative in comparison to 100% landfill (based on sensitivity analysis). This is due to the composition of the product, that results in lower GWPT from landfill in comparison to recycling (processing of waste).

## Benefits and loads beyond the system boundary (D)

Module D considers the net benefit of recycling (including energy recovery) of materials in the product and packaging, taking account of losses in the recycling process and the recycled material used in the production of the product. Module D covers the two end-of-life scenarios, as described above. Module D covers the two end-of-life scenarios, as described above.

Table 6: Characterization methods of environmental performance

| Environmental impact indicators | Characterization methods                                                                                                             |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| GWPT                            | Carbon footprint-total, GWP100, EN 15804. Version: August 2021                                                                       |
| GWPF                            | Carbon footprint-fossil, GWP100, EN 15804. Version: August 2021                                                                      |
| GWPB                            | Carbon footprint-biogenic, GWP100, EN 15804. Version: August 2021                                                                    |
| GWPLULUC                        | Carbon footprint-land use and land use change, GWP100, EN 15804. Version: August 2021                                                |
| ODP                             | Depletion potential of the stratospheric ozone layer, ODP, EN 15804. Version: August 2021                                            |
| AP                              | Acidification potential, AP, CML 2001 non baseline (fate not included). Version: January 2016                                        |
| EPfw                            | Eutrophication potential- aquatic freshwater, Ep, aquatic marine, EUTREND model EN 15804. Version: August 2021                       |
| Epmar                           | Eutrophication potential- aquatic marine, EP, aquatic marine, EUTREND model EN 15804. Version: August 2021                           |
| Epter                           | Eutrophication potential- terrestrial, EP, aquatic marine, EUTREND model EN 15804. Version: August 2021                              |
| POCP                            | Photochemical ozone creation potential, POPCP, LOTOS-EUROS as applied in ReCiPe, EN15804. Version: August 2021                       |
| ADPE                            | Depletion of abiotic resources – minerals and metals, EPD minerals & metals, EN 15804, Version: August 2021.                         |
| ADPF                            | Depletion of abiotic resources – fossil fuels, EPD fossil resources, EN 15804, Version: August 2021.                                 |
| WDP                             | Water deprivation potential (deprivation-weighted water consumption), Water deprivation (Available water remaining (AWARE), EN 15804 |

# Environmental performance

This section presents the environmental performance of one iC7-Automation Frequency Converter, FA08 frame size. Figure 4 presents the environmental impact of the iC7 FA08 across a number of environmental impact categories (following EN 15804+A2:2019) per life cycle stage, over its full 10-year life cycle, including Global Warming Potential.

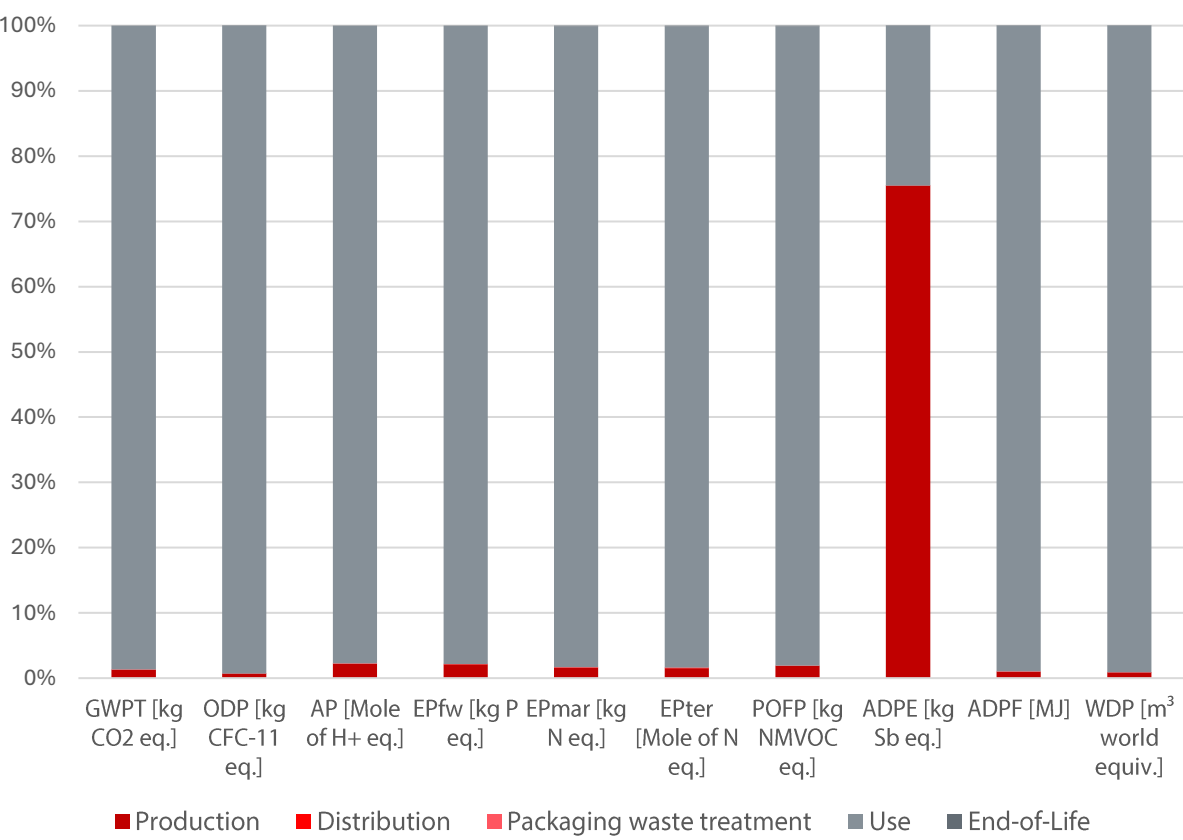
The environmental performance results are relative expressions and do not predict impacts on category endpoints, the exceeding of thresholds, safety margins or risks. The results of the end-of-life stage (module C) should be considered when using the results of the production stage (modules A1-A3).

Table 7: Environmental impact indicators results per declared unit

| Acronym | Indicator                                                            |
|---------|----------------------------------------------------------------------|
| GWPT    | Carbon footprint (Global Warming Potential) – total                  |
| ODP     | Depletion potential of the stratospheric ozone layer                 |
| AP      | Acidification potential                                              |
| EPfw    | Eutrophication potential – aquatic freshwater                        |
| EPmar   | Eutrophication potential – aquatic marine                            |
| EPter   | Eutrophication potential – terrestrial                               |
| POCP    | Photochemical ozone creation potential                               |
| ADPE*   | Depletion of abiotic resources – minerals and metals                 |
| ADPF*   | Depletion of abiotic resources – fossil fuels                        |
| WDP*    | Water deprivation potential (deprivation-weighted water consumption) |

**\*Disclaimer for ADPE, ADPF, WDP:** The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

Figure 4: Breakdown of environmental impacts by life cycle stages with Module D is not included. (See Table 6 for descriptions of environmental impact indicators)



# Environmental performance

Of one-unit iC7 FA08

| Production                                       | Distribution                             | Packaging waste treatment                                  | Use                                                | End-of-Life                                 |                                             |                                |                                                                               | Benefits & Loads                                                                                     |
|--------------------------------------------------|------------------------------------------|------------------------------------------------------------|----------------------------------------------------|---------------------------------------------|---------------------------------------------|--------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| A1-A3                                            | A4                                       | A5                                                         | B6                                                 | C1                                          | C2                                          | C3                             | C4                                                                            | D                                                                                                    |
| Manufacture of the product from 'cradle-to-gate' | Transport of the product to the customer | Installation of the product and disposal of used packaging | Use of the product over its lifetime e.g. 10 years | Deinstallation of the product from the site | Transport of the product to waste treatment | Processing waste for recycling | Disposal of waste that cannot be recycled (through landfill and incineration) | Potential benefits and loads beyond the system boundary due to reuse, recycling, and energy recovery |

| Impact category                  | Environmental Impact indicators | Unit                          |         |         |         |         |        |         |         |        |          |
|----------------------------------|---------------------------------|-------------------------------|---------|---------|---------|---------|--------|---------|---------|--------|----------|
| Global Warming Potential         | Total (GWPT)                    | kg CO <sub>2</sub> eq.        | 3,3E02  | 1,1E01  | 5,7E00  | 2,6E04  | 0,0E00 | 5,8E-01 | 1,1E01  | 0,0E00 | -2,3E02  |
|                                  | Fossil (GWPF)                   | kg CO <sub>2</sub> eq.        | 3,5E02  | 1,1E01  | 8,3E-01 | 2,5E04  | 0,0E00 | 5,8E-01 | 1,1E01  | 0,0E00 | -2,2E02  |
|                                  | Biogenic (GWPB)                 | kg CO <sub>2</sub> eq.        | -9,2E00 | 0,0E00  | 9,2E00  | 2,6E02  | 0,0E00 | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00   |
|                                  | Land use & change (GWPLULUC)    | kg CO <sub>2</sub> eq.        | 6,4E-01 | 1,2E-01 | 5,4E-04 | 8,3E01  | 0,0E00 | 1,4E-05 | 6,6E-02 | 0,0E00 | -9,4E-02 |
|                                  | Greenhouse gases (GWP-GHG)*     | kg CO <sub>2</sub> eq.        | 3,5E02  | 1,1E01  | 8,3E-01 | 2,5E04  | 0,0E00 | 5,8E-01 | 1,1E01  | 0,0E00 | -2,3E-02 |
| Ozone Depletion Potential        | ODP                             | kg CFC-11 eq.                 | 3,9E-09 | 1,9E-12 | 4,1E-13 | 5,7E-07 | 0,0E00 | 6,8E-17 | 1,4E-11 | 0,0E00 | -1,9E-09 |
| Acidification of soils and water | AP                              | Mole of H+ eq.]               | 1,3E00  | 2,2E-02 | 4,8E-03 | 5,5E01  | 0,0E00 | 8,2E-04 | 4,4E-02 | 0,0E00 | -3,0E00  |
| Eutrophication                   | Freshwater (EPfw)               | kg P eq.]                     | 1,2E-03 | 3,1E-05 | 1,7E-05 | 5,4E-02 | 0,0E00 | 1,3E-07 | 1,8E-05 | 0,0E00 | -9,5E-05 |
|                                  | Marine (EPmar)                  | kg N eq.]                     | 2,2E-01 | 9,4E-03 | 2,5E-03 | 1,3E01  | 0,0E00 | 3,2E-04 | 2,1E-02 | 0,0E00 | -1,9E-01 |
|                                  | Terrestrial (EPter)             | Mole of N eq.]                | 2,3E00  | 1,0E-01 | 2,5E-02 | 1,5E02  | 0,0E00 | 3,6E-03 | 2,3E-01 | 0,0E00 | -2,0E00  |
| Photochemical ozone formation    | POCP                            | kg NMVOC eq.]                 | 6,2E-01 | 2,0E-02 | 5,2E-03 | 3,3E01  | 0,0E00 | 7,6E-04 | 4,1E-02 | 0,0E00 | -6,9E-01 |
| Depletion of abiotic resources   | Minerals, metals (ADPE)         | kg Sb eq.                     | 1,6E-02 | 7,6E-07 | 1,2E-07 | 5,2E-03 | 0,0E00 | 2,1E-08 | 5,4E-07 | 0,0E00 | -1,3E-02 |
|                                  | Fossil fuels (ADPF)             | MJ                            | 5,1E03  | 1,5E02  | 1,1E01  | 5,1E05  | 0,0E00 | 8,5E00  | 9,5E01  | 0,0E00 | -2,7E03  |
| Water deprivation                | WDP                             | [m <sup>3</sup> world equiv.] | 5,6E01  | 5,2E-02 | 1,9E-02 | 6,2E03  | 0,0E00 | 9,9E-04 | 1,1E00  | 0,0E00 | -2,0E01  |

Table 8: Environmental impact indicators results per declared unit

\*GWP-GHG environmental indicator is calculated without the biogenic global warming potential (GWPB), the formula is GWP-GHG=GWPF+GWPLULUC

# Environmental performance

Of one-unit iC7 FA08

|                                                                                                                                 |    | Production | Distribution | Packaging waste treatment | Use     | End-of-Life |         |         |        | Benefits & Loads |
|---------------------------------------------------------------------------------------------------------------------------------|----|------------|--------------|---------------------------|---------|-------------|---------|---------|--------|------------------|
|                                                                                                                                 |    | A1-A3      | A4           | A5                        | B6      | C1          | C2      | C3      | C4     | D                |
| Resource Use indicator                                                                                                          |    | Unit       |              |                           |         |             |         |         |        |                  |
| Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE)                       | MJ | 2,3E03     | 1,1E01       | 5,8E-01                   | 3,5E05  | 0,0E00      | 2,8E-02 | 1,5E01  | 0,0E00 | -5,6E02          |
| Use of renewable primary energy resources used as raw materials (PERM)                                                          | MJ | 1,1E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,00E00 | 0,0E00 | 0,0E00           |
| Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials) (PERT)      | MJ | 2,3E03     | 1,1E01       | 5,8E-01                   | 3,5E05  | 0,0E00      | 2,8E-02 | 1,5E01  | 0,0E00 | -5,6E02          |
| Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE)              | MJ | 5,0E03     | 1,5E02       | 1,1E01                    | 5,1E05  | 0,0E00      | 8,5E00  | 9,5E01  | 0,0E00 | -2,7E03          |
| Use of non-renewable primary energy resources used as raw materials (PENRM)                                                     | MJ | 7,6E01     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials) (PENRT) | MJ | 5,1E03     | 1,5E02       | 1,1E01                    | 5,1E05  | 0,0E00      | 8,5E00  | 9,5E01  | 0,0E00 | -2,7E03          |
| Use of secondary material (SM)                                                                                                  | kg | 4,9E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Use of renewable secondary fuels (RSF)                                                                                          | MJ | 0,0E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Use of non-renewable secondary fuels (NRSF)                                                                                     | MJ | 0,0E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Net use of fresh water (FW)                                                                                                     | m³ | 2,1E00     | 5,5E-03      | 6,8E-04                   | 2,7E02  | 0,0E00      | 4,5E-05 | 3,0E-02 | 0,0E00 | -1,4E00          |
| Waste categories and output flows indicators                                                                                    |    | Unit       |              |                           |         |             |         |         |        |                  |
| Hazardous waste disposed (HWD)                                                                                                  | kg | 7,4E-06    | 5,9E-09      | 1,9E-09                   | 6,7E-04 | 0,0E00      | 5,8E-11 | 2,0E-08 | 0,0E00 | 3,3E-07          |
| Non-hazardous waste disposed (NHWD)                                                                                             | kg | 1,6E01     | 2,0E-02      | 1,4E00                    | 4,0E02  | 0,0E00      | 8,5E-04 | 2,8E00  | 0,0E00 | -3,6E01          |
| Radioactive waste disposed (RWD)                                                                                                | kg | 3,8E-01    | 2,8E-04      | 5,2E-05                   | 8,1E01  | 0,0E00      | 9,0E-06 | 2,1E-03 | 0,0E00 | -1,2E-01         |
| Components for reuse (CRU)                                                                                                      | kg | 0,0E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Materials for recycling (MFR)                                                                                                   | kg | 0,0E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 5,3E01  | 0,0E00 | 0,0E00           |
| Materials for energy recovery (MER)                                                                                             | kg | 0,0E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Exported energy (electrical) (EEE)                                                                                              | MJ | 1,9E-02    | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |
| Exported energy (thermal) (EET)                                                                                                 | MJ | 0,0E00     | 0,0E00       | 0,0E00                    | 0,0E00  | 0,0E00      | 0,0E00  | 0,0E00  | 0,0E00 | 0,0E00           |

Table 9: Resource use, waste categories, and output flows result per declared unit.



# Environmental performance

Of one-unit iC7 FA08

|                                                                         |                    | Production | Distribution | Packaging waste treatment | Use     | End-of-Life |         |         |        | Benefits & Loads |
|-------------------------------------------------------------------------|--------------------|------------|--------------|---------------------------|---------|-------------|---------|---------|--------|------------------|
|                                                                         |                    | A1-A3      | A4           | A5                        | B6      | C1          | C2      | C3      | C4     | D                |
| Additional indicators                                                   | Unit               |            |              |                           |         |             |         |         |        |                  |
| Potential incidence of disease due to particulate matter emissions (PM) | Disease incidences | 1,4E-05    | 1,9E-07      | 3,1E-08                   | 4,6E-04 | 0,0E00      | 4,9E-09 | 3,1E-07 | 0,0E00 | -2,9E-05         |
| Potential human exposure efficiency relative to U235 (IRP)**            | kBq U235 eq.       | 5,8E01     | 4,0E-02      | 5,9E-03                   | 1,3E04  | 0,0E00      | 1,3E-03 | 3,4E-01 | 0,0E00 | -2,5E01          |
| Potential Comparative Toxic Unit for ecosystems (fresh water) (ETPfw)*  | [CTUe]             | 2,0E03     | 1,9E02       | 8,2E00                    | 8,7E04  | 0,0E00      | 6,2E00  | 1,1E02  | 0,0E00 | -9,1E02          |
| Potential Comparative Toxic Unit for humans (cancer) (HTPc)*            | CTUh               | 9,5E-08    | 2,6E-09      | 1,4E-10                   | 8,2E-06 | 0,0E00      | 1,1E-10 | 1,8E-09 | 0,0E00 | -1,8E-07         |
| Potential Comparative Toxic Unit for humans (non-cancer) (HTPnc)*       | CTUh               | 3,1E-06    | 1,4E-07      | 6,6E-09                   | 1,7E-04 | 0,0E00      | 3,7E-09 | 9,6E-08 | 0,0E00 | -1,4E-06         |
| Potential soil quality index (SQP)*                                     | Dimensionless      | 3,3E03     | 6,5E01       | 1,5E00                    | 2,1E05  | 0,0E00      | 2,2E-02 | 4,1E01  | 0,0E00 | -1,3E02          |

Table 10: Additional indicators\* results per declared unit.

**\*Disclaimer for ADPE, ADPF, WDP, ETPfw, HTPc, HTPnc, SQP:** The results of these environmental impact indicators shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.

**\*\*Disclaimer for ionizing radiation:** This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator

Disclaimer: The estimated impact results are only relative statements, which do not indicate the endpoints of the impact categories, exceeding threshold values, safety margins and/or risks.

We have **clear** targets, **ownership**,  
and **roadmaps** for ESG

## 3 key areas we want to step-change:



### Decarbonization

We pioneer solutions for customers to enable decarbonization in an intelligent, cost-optimal manner and ensure carbon neutrality in our own operations.



### Circularity

We innovate best-in-class circular products as the default when - developing, producing, sourcing, and selling to deliver new value propositions.



### Diversity, Equity & Inclusion

We offer a leading employee experience that attracts and retains diverse top talent and fosters an inclusive culture.

**Find more on our sustainability page:**

[Danfoss | Sustainability](#)

## Scope 1

Carbon emissions produced as a direct result of our activities at our sites, such as fuel combustion and the use of our vehicles.



Combustion of fuels



Company cars



Leakage of cooling agents in factories

## Scope 2

Carbon emissions from the use of purchased electricity and heating and cooling



Purchased electricity



Purchased heating

## Scope 3

Other emissions within our supply chain e.g. from raw materials, business travel and transport of goods to customers.



Purchased goods



Business travel

Transmission of electricity



Upstream transport



Downstream transport



Waste



Use of sold products



Employee commuting



End-of-life treatment of sold products

# Science-based targets

Approved science-based targets to limit global warming to 1.5 °C

**46.2%** reduction of Danfoss operation emissions  
(scope 1 & 2) by 2030

**15%** reduction of value-chain emissions  
(scope 3) by 2030



SUMMARY



INTRO



PRODUCT



LCA



RESULTS



ADDITIONAL INFORMATION



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# Abbreviations

| Abbreviation | Definition                                     |
|--------------|------------------------------------------------|
| EPD          | Environmental Product Declaration              |
| LCA          | Life Cycle Assessment                          |
| EoL          | End-of-Life                                    |
| GHG          | Greenhouse Gas                                 |
| GWP          | Global Warming Potential                       |
| ISO          | International Organization for Standardization |
| PCR          | Product Category Rule                          |



# Version history

**Original version of the EPD, 2026-01-30**

