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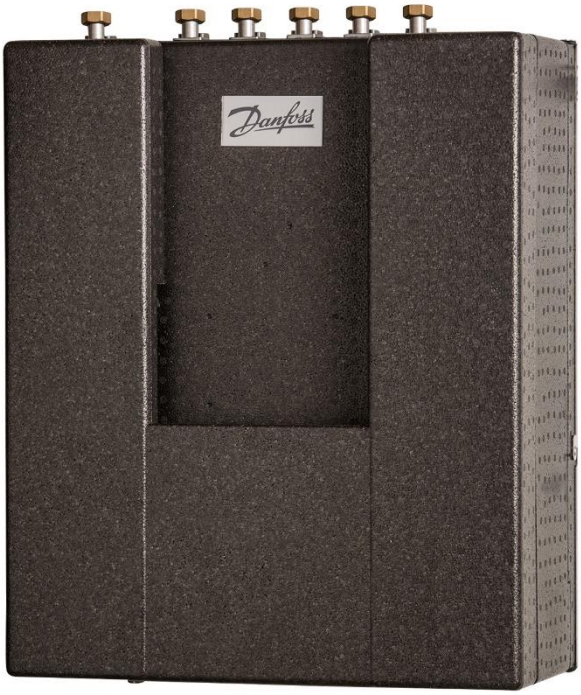
ECO PLATFORM EPD VERIFIED

Owner: Gemina Termix
No.: MD-22107-EN
Issued: 23-11-2022
Valid to: 23-11-2027

3rd PARTY **VERIFIED**

EPD

VERIFIED ENVIRONMENTAL PRODUCT DECLARATION | **ISO 14025 & EN 15804**



Owner of declaration
Gemina Termix A/S
Navervej 15-17
DK-7451 Sunds
VAT: DK-11169449

Programme
EPD Danmark
www.epddanmark.dk

☐ Industry EPD
☒ Product EPD

Declared product(s)
1 Termix VVX-I-R-FI district heating transfer unit

Number of declared datasets/product variations: 1

Production site
Navervej 15-17
7451 Sunds
Denmark

Product(s) use
Used for installations where pipes and radiators are not suited for direct contact with district heating, or situations where a heat exchanger is required. The unit ensure separation between district heating and the domestic heating system, and thereby prevent damage caused by leakage of water from the district heating system.

Declared/ functional unit
1 VVX-I-R-FI district heating transfer unit

Year of production site data (A3)
2021

EPD version
First version - Version 1.0

Issued: 23-11-2022
Valid to: 23-11-2027

Basis of calculation
This EPD is developed in accordance with the European standard EN 15804+A2.

Comparability
EPDs of construction products may not be comparable if they do not comply with the requirements in EN 15804. EPD data may not be comparable if the datasets used are not developed in accordance with EN 15804 and if the background systems are not based on the same database.

Validity
This EPD has been verified in accordance with ISO 14025 and is valid for 5 years from the date of issue.

Use
The intended use of an EPD is to communicate scientifically based environmental information for construction products, for the purpose of assessing the environmental performance of buildings.

EPD type
☐Cradle-to-gate with modules C1-C4 and D
☒Cradle-to-gate with options, modules C1-C4 and D
☐Cradle-to-grave and module D
☐Cradle-to-gate
☐Cradle-to-gate with options

CEN standard EN 15804 serves as the core PCR

Independent verification of the declaration and data, according to EN ISO 14025

☐ internal ☒ external

Third party verifier:

Guangli Du, Aalborg University, BUILD

Martha Katrine Sørensen
EPD Danmark

Life cycle stages and modules (MND = module not declared)																
Product			Construction process		Use							End of life				Beyond the system boundary
Raw material supply	Transport	Manufacturing	Transport	Installation process	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Re-use, recovery and recycling potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X

Product information

Product description

The main product components are shown in the table below.

Material	Amount (kg)	Weight %
Brass	7,2	29%
Steel, other	8,0	33%
Stainless Steel	4,0	16%
Pump	2,3	9%
EPP	1,5	6%
Copper	0,5	2%
Electric Motor	0,0	0%
ECL	0,0	0%
Cables	0,2	1%
Other	0,8	3%
Total	**24,4**	**100%**

Product packaging:

The composition of the sales- and transport packaging of the product is shown in the table below.

Material	Weight-% of packaging
Return Pallet	46,5%
Single-use pallet	4,3%
Pallet Box	1,0%
Single-use pallet Box	1,0%
Plastic	1,4%
Masonite board	1,4%
Cardboard	44,3%
Total in-going packaging	**100%**

Representativity

This declaration, including data collection and the modeled foreground system including results, represents the production of one Termix VVX-I-R-FI district heating transfer unit on the production site located in Sunds in Denmark. Product specific data are based on average values collected in 2021. Background data are based on datasets from the GaBi 10.6 databases and are less than 10 years old. Generally, the used background datasets are of high quality, and the majority of the datasets are only a couple of years old.

Hazardous substances

The product contains brass parts in which lead is present (CAS No: 7439-92-1) at a concentration above 0.1% w/w. Furthermore, the products contain Gaskets containing the antioxidant 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (CAS No. 119-47-1) at a concentration above 0.1% w/w.

Both Lead (CAS no: 7439-92-1) and 6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (CAS No. 119-47-1) are found on REACH "Candidate List of Substances of Very High Concern for authorization".
(http://echa.europa.eu/candidate-list-table)

Substance	Weight % of declared product
6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol	<0,2%
Lead	<1,1%

Essential characteristics

The district heating transfer unit must comply with the following legislation and specifications:

1. Machinery Directive 2006/42/EF - EN ISO 12100:2011: Safety of machinery – General principles for design – Risk assessment and risk reduction

2. DS/EN 60204-1:2018 - 2014/35/EU: Safety of machinery – Electrical equipment of machines – Part 1: General requirements

3. RoHS Directive 2011/65/EU - including amendment Directive 2015/863 DS / EN IEC 63000: 2018

4. EMC Directive 2014/30 / EU:
   DS / EN 61000-6-1: 2007
   DS / EN 61000-6-2: 2005
   DS / EN 61000-6-3: 2007

Further technical information can be obtained by contacting the manufacturer or on the manufacturer's website:
https://termix.dk/produkter/vandvarmer-og-indirekte-varmevekslerunit-vvx/

Reference Service Life (RSL)

The reference service life of the product is 20 years.

The pump and the electrical control panels are however expected to have a shorter lifespan and may thus need to be replaced during the lifetime of the main unit itself. The Pump has an expected lifetime of 12 years, while the electrical control panels have an expected minimum lifetime of 10 years.

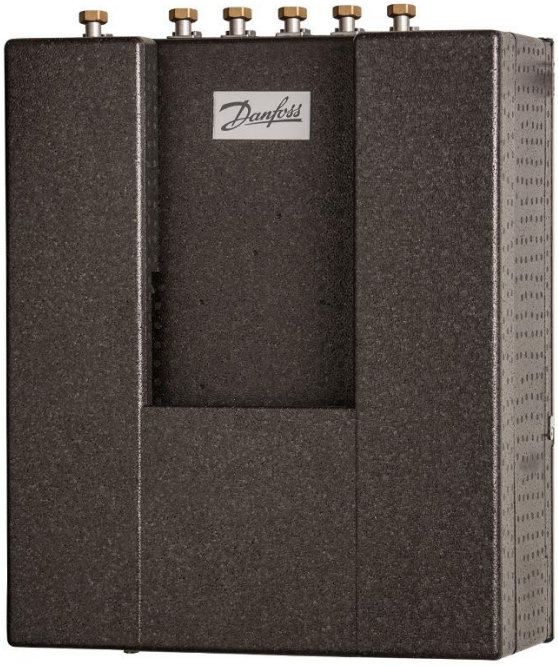
Key assumptions and estimates for interpretations

A lot of components consist of several materials, and in cases where separation of the parts is deemed impossible or impractical, the component has been modelled as consisting of one of the materials, based on a conservative approach, by using the material with the largest environmental impact as a proxy.

The total production mass in 2021 was calculated based on the number of heating units being manufactured.

Picture of product(s)

The following pictures show the district heating transfer unit from the inside and from the outside:



LCA background

Declared unit

The LCI and LCIA results in this EPD relates to one VVX-I-R-FI district heating transfer unit.

Name	Value	Unit
Declared unit	1	piece
Density	24,43	kg/piece
Conversion factor to 1 kg.	0,04	-

Functional unit

"Not defined"

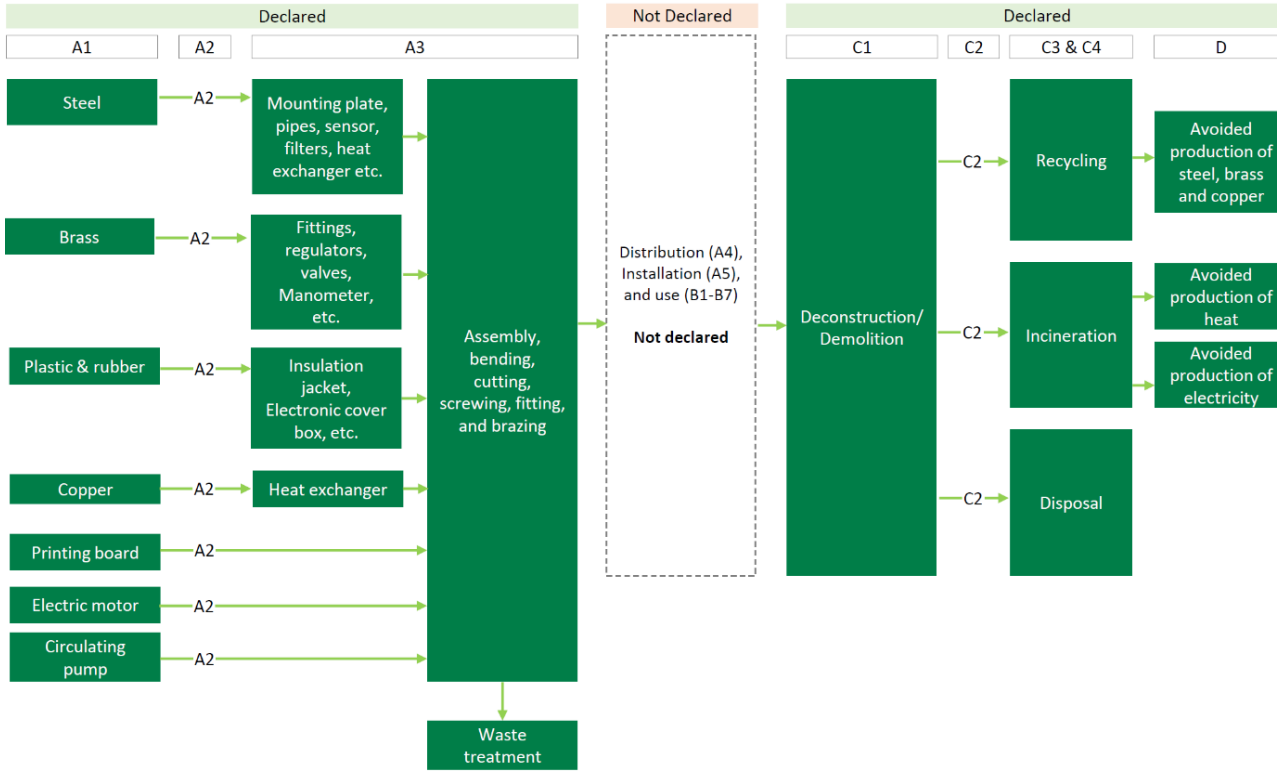
PCR

This EPD is developed according to the core rules for the product category of construction products in EN 15804.

Guarantee of Origin – certificates

No certificates are relevant in relation of this product.

Flowdiagram



System boundary

This EPD is based on a "Cradle to gate with options, modules C1–C4, and module D" LCA, in which 100 weight-% has been accounted for.

The general rules for the exclusion of inputs and outputs follows the requirements in EN 15804, 6.3.5, where the total of neglected input flows per module shall be a maximum of 5 % of energy usage and mass and 1 % of energy usage and mass for unit processes.

Allocation of energy, water, auxiliary materials, and waste during production is done on a mass basis, per kg of product being manufactured at the site in Sunds.

Product stage (A1-A3) includes:

A1 – Extraction and processing of raw materials

A2 – Transport to the production site

A3 – Manufacturing processes

The product stage comprises the acquisition of all raw materials, products and energy, transport to the production site, packaging and waste processing up to the "end-of-waste" state or final disposal. The LCA results are declared in aggregated form for the product stage, which means, that the sub-modules A1, A2 and A3 are declared as one module A1-A3.

The manufacturing at Gemina Termix mainly consists of assembling the heat transfer unit, however it also includes bending, cutting, screwing, fitting, and brazing processes.

Several parts, such as the pump, pipes, and fittings are transported to Gemina Termix from different suppliers and delivered as prefabricated components. Other parts such as the heat exchanging unit are manufactured or brazed on site.

The components are mounted onto a solid steel back plate, and the actual assembly takes place manually at a table. After assembly, the district heating transfer unit is covered in an insulation jacket made from Expanded polypropylene (EPP). The final product ready for use is packed in cardboard and plastic packaging for transport.

Construction process stage (A4-A5) includes:
Not declared

Use stage (B1-B7) includes:
Not declared

End of Life (C1-C4) includes:
Module C1 covers the deconstruction and removal of the district heating transfer unit from the building where it is installed. This study does not include any environmental impacts occurring in C1, since the deconstruction/removal of district heating transfer units will typically be done manually, and the energy required for e.g. running a drill to loosen screws and brackets is considered below the cut-off limits.

Module C2 covers the transport to the nearest waste treatment facility that receives this type of waste for sorting. An average distance of 40 km between the deconstruction site and the treatment facility is assumed in this study, as treatment facilities are located many places throughout Denmark.

Module C3 covers the material sorting and shredding of the metals at the waste treatment facility as well as the incineration of the materials which are not recycled. Metals, electrical components, and the pump are separated and sent for recycling. The remaining materials including plastic parts are sorted as mixed waste, and sent for either incineration or disposal on a landfill. It is assumed that 96% of the waste which is not recycled is sent for incineration with energy recovery in Denmark, while the remaining 4% is sent for landfilling. These values are based on the average amount of industry waste sent for disposal in Denmark.

Module C4 covers the part of the waste which is sent to landfill, including treatment of waste and collection of gas, which is utilized on site resulting in exported electrical energy.

Re-use, recovery and recycling potential (D) includes:
Module D includes the potential environmental savings from substitution of virgin materials caused by recycling of materials as well as energy recovery arising from either incineration or landfilling.

LCA results

ENVIRONMENTAL IMPACTS PER VVX-I-R-FI							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
GWP-total	[kg CO_2 eq.]	8,01E+01	0,00E+00	6,21E-02	4,23E+00	7,87E-01	-2,23E+01
GWP-fossil	[kg CO_2 eq.]	7,98E+01	0,00E+00	6,23E-02	4,22E+00	8,35E-02	-2,24E+01
GWP-biogenic	[kg CO_2 eq.]	1,74E-01	0,00E+00	-6,12E-04	9,75E-03	7,04E-01	4,76E-02
GWP-luluc	[kg CO_2 eq.]	9,33E-02	0,00E+00	4,22E-04	3,99E-04	1,77E-05	-2,49E-02
ODP	[kg CFC 11 eq.]	4,87E-10	0,00E+00	6,15E-15	2,10E-11	4,34E-14	-1,96E-10
AP	[mol H^+ eq.]	4,09E-01	0,00E+00	7,40E-05	3,44E-03	1,67E-04	-8,25E-02
EP-freshwater	[kg P eq.]	2,08E-04	0,00E+00	2,24E-07	5,46E-06	1,34E-05	-1,97E-05
EP-marine	[kg N eq.]	6,11E-02	0,00E+00	2,46E-05	1,27E-03	1,57E-04	-1,28E-02
EP-terrestrial	[mol N eq.]	6,50E-01	0,00E+00	2,93E-04	1,38E-02	6,13E-04	-1,30E-01
POCP	[kg NMVOC eq.]	2,30E-01	0,00E+00	6,43E-05	3,23E-03	3,86E-04	-4,37E-02
ADPm[1]	[kg Sb eq.]	7,51E-03	0,00E+00	6,31E-09	5,27E-07	2,08E-09	-2,49E-04
ADPf[1]	[MJ]	1,05E+03	0,00E+00	8,22E-01	1,59E+01	4,07E-01	-2,36E+02
WDP[1]	[m^3 world eq. deprived]	2,65E+01	0,00E+00	7,01E-04	4,29E-01	2,21E-03	-6,13E+00
Caption	GWP-total = Globale Warming Potential - total; GWP-fossil = Global Warming Potential - fossil fuels; GWP-biogenic = Global Warming Potential - biogenic; GWP-luluc = Global Warming Potential - land use and land use change; ODP = Ozone Depletion; AP = Acidifcation; EP-freshwater = Eutrophication – aquatic freshwater; EP-marine = Eutrophication – aquatic marine; EP-terrestrial = Eutrophication – terrestrial; POCP = Photochemical zone formation; ADPm = Abiotic Depletion Potential – minerals and metals; ADPf = Abiotic Depletion Potential – fossil fuels; WDP = water use						
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.						
Disclaimer	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						

ADDITIONAL ENVIRONMENTAL IMPACTS PER VVX-I-R-FI							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
PM	[Disease incidence]	4,88E-06	0,00E+00	4,93E-10	2,47E-08	1,65E-09	-1,50E-06
IRP[2]	[kBq U235 eq.]	5,23E+00	0,00E+00	2,31E-04	1,24E-01	7,43E-04	1,25E-01
ETP-fw[1]	[CTUe]	7,14E+02	0,00E+00	5,83E-01	5,69E+00	8,13E-01	-7,87E+01
HTP-c[1]	[CTUh]	8,49E-07	0,00E+00	1,20E-11	6,44E-10	2,31E-11	-1,05E-07
HTP-nc[1]	[CTUh]	1,62E-06	0,00E+00	6,51E-10	1,36E-08	2,55E-09	-4,18E-07
SQP[1]	-	6,13E+02	0,00E+00	3,48E-01	1,25E+01	3,62E-02	-1,95E+01
Caption	PM = Particulate Matter emissions; IRP = Ionizing radiation – human health; ETP-fw = Eco toxicity – freshwater; HTP-c = Human toxicity – cancer effects; HTP-nc = Human toxicity – non cancer effects; SQP = Soil Quality (dimensionless)						
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^2$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.						
Disclaimers	[1] The results of this environmental indicator shall be used with care as the uncertainties on these results are high or as there is limited experienced with the indicator.						
	[2] 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.						

RESSOURCE CONSUMPTION PER VVX-I-R-FI							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
PERE	[MJ]	2,72E+02	0,00E+00	5,70E-02	1,80E+01	3,69E-02	-2,25E+01
PERM	[MJ]	8,34E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	[MJ]	3,55E+02	0,00E+00	5,70E-02	1,80E+01	3,69E-02	-2,25E+01
PENRE	[MJ]	9,84E+02	0,00E+00	8,25E-01	1,59E+01	4,07E-01	-2,37E+02
PENRM	[MJ]	7,18E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	[MJ]	1,06E+03	0,00E+00	8,25E-01	1,59E+01	4,07E-01	-2,37E+02
SM	[kg]	1,12E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
RSF	[MJ]	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
NRSF	[MJ]	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FW	[m^3]	7,58E-01	0,00E+00	6,58E-05	1,53E-02	6,51E-05	-2,11E-01
Caption	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non renewable primary energy excluding non renewable primary energy resources used as raw materials; PENRM = Use of non renewable primary energy resources used as raw materials; PENRT = Total use of non renewable primary energy resources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non renewable secondary fuels; FW = Net use of fresh water						
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.						

WASTE CATEGORIES AND OUTPUT FLOWS PER VVX-I-R-FI							
Parameter	**Unit**	**A1-A3**	**C1**	**C2**	**C3**	**C4**	**D**
HWD	[kg]	2,39E-03	0,00E+00	4,37E-12	2,27E-09	5,40E-11	-8,08E-04
NHWD	[kg]	6,48E+00	0,00E+00	1,34E-04	4,28E-01	4,62E-01	1,45E+00
RWD	[kg]	3,27E-02	0,00E+00	1,53E-06	1,16E-03	5,07E-06	-1,22E-03
CRU	[kg]	2,74E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	[kg]	2,64E+00	0,00E+00	0,00E+00	2,09E+01	0,00E+00	0,00E+00
MER	[kg]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,22E+00
EET	[MJ]	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,68E+00
Caption	HWD = Hazardous waste disposed; NHWD = Non hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Eksporteret elektrisk energi; EET = Eksporteret termisk energi						
	The numbers are declared in scientific notation, fx 1,95E+02. This number can also be written as: $1,95*10^{2}$ or 195, while 1,12E-11 is the same as $1,12*10^{-11}$ or 0,0000000000112.						

BIOGENIC CARBON CONTENT PER VVX-I-R-FI		
Parameter	**Unit**	**At the factory gate**
Biogenic carbon content in product	[kg C]	0.00E+00
Biogenic carbon centent in accompanying packagaing	[kg C]	1,14E+00
Note	1 kg biogenic carbon is equivalent to 44/12 kg of CO2	

Additional information

LCA interpretation

The contributions (in %) are relative to the total impacts, which is a result of both the impacts (positive numbers) and the savings from recycling and energy recovery (negative values). In some cases, the total impacts from the system can thus be lower than the impacts from a specific process, since the total impacts also include the savings (negative values) from e.g., recycling. In cases where the impact from a specific process is larger than the net impact from whole the system, the contribution will be larger than 100%.

Table 1 – Results from the process contribution analysis for the core environmental impact indicators for VVX-I-R-FI

ENVIRONMENTAL IMPACTS				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Climate Change - total	[kg CO_2 eq.]	1,29E+01	A1: Steel Galvanised	23%
Climate Change, fossil	[kg CO_2 eq.]	1,29E+01	A1: Steel 316	22%
Climate Change, biogenic	[kg CO_2 eq.]	-3,49E+00	Packaging, outgoing	-80%
Climate Change, land use and land use change	[kg CO_2 eq.]	2,55E-02	A1: Steel 316	38%
Ozone depletion	[kg CFC 11 eq.]	-1,91E-10	D: Electronics	-66%
Acidification	[mol H^+ eq.]	8,88E-02	A1: Steel 316	27%
Eutrophication, freshwater	[kg P eq.]	4,05E-05	Packaging, outgoing	22%
Eutrophication, marine	[kg N eq.]	1,43E-02	A1: Steel 316	30%
Eutrophication, terrestrial	[mol N eq.]	1,55E-01	A1: Steel 316	30%
Photochemical ozone formation, human health	[kg NMVOC eq.]	4,71E-02	A1: EPS	25%
Resource use, mineral and metals	[kg Sb eq.]	3,26E-03	A1: Brass	45%
Resource use, fossils	[MJ]	1,69E+02	A1: Steel 316	21%
Water use	[m^3]	8,56E+00	A1: Steel 316	42%

Table 2 - Results from the process contribution analysis for the additional environmental impact indicators for VVX-I-R-FI

ADDITIONAL ENVIRONMENTAL IMPACTS				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Particulate matter	[Disease incidence]	1,44E-06	A1: Steel 316	44%
Ionising radiation, human health	[kBq U235 eq.]	1,53E+00	A1: Brass	28%
Ecotoxicity, freshwater	[CTUe]	2,96E+02	A1: EPS	47%
Human toxicity, cancer	[CTUh]	4,61E-07	A1: Steel 304	63%
Human toxicity, non-cancer	[CTUh]	3,25E-07	A1: Brass	27%
Soil Quality	-	4,54E+02	Packaging, outgoing	77%

Table 3 - Results from the process contribution analysis for the resource consumption indicators for VVX-I-R-FI.

RESSOURCE CONSUMPTION				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Use of renewable primary energy	[MJ]	1,17E+02	A3: Electricity	35%
Primary energy resources used as raw materials	[MJ]	1,69E+02	A1: Steel 316	21%
Total use of renewable primary energy resources	[MJ]	1,17E+02	A3: Electricity	35%
Use of non-renewable primary energy	[MJ]	1,69E+02	A1: Steel 316	21%
Non-renewable primary energy resources used as raw materials	[MJ]	6,44E+01	A1: EPP	41%
Total use of non-renewable primary energy resources	[MJ]	#N/A	#N/A	#N/A
Input of secondary material	[kg]	6,3E+00	A1: Brass	56%
Use of renewable secondary fuels	[MJ]	#N/A	#N/A	#N/A
Use of non renewable secondary fuels	[MJ]	#N/A	#N/A	#N/A
Use of net fresh water	[m^3]	2,65E-01	A1: Steel 316	49%

Table 4 - Results from the process contribution analysis for the End-of-life (waste categories and output flows) for VVX-I-R-FI

WASTE CATEGORIES AND OUTPUT FLOWS				
Impact Category	**Unit**	**Maximum contribution on category**	**Process**	**Percentage of category**
Hazardous waste disposed	[kg]	1,39E-03	A1: EPS	91%
Non-hazardous waste disposed	[kg]	2,12E+00	A1: Brass	25%
Radioactive waste disposed	[kg]	9,41E-03	A1: Brass	30%
Components for re-use	[kg]	2,74E+00	A3: Return Pallet	100%
Materials for Recycling	[kg]	7,20E+00	C3: Brass	49%
Material for Energy Recovery	[kg]	#N/A	#N/A	#N/A
Exported electrical energy	[MJ]	3,03E+00	D: Incineration, elec	69%
Exported thermal energy	[MJ]	5,68E+00	D: Incineration, thermal	70%

Technical information on scenarios

Reference service life

RSL information	Unit
Reference service Life	20 Years
Declared product properties	Information for all topics can be found on the company's website, by using the following link: https://termix.dk/
Design application parameters	
Assumed quality of work	
Outdoor environment	
Indoor environment	
Usage conditions	
Maintenance	

End of life (C1-C4)

The following table provides an overview of the total amount of material being collected for waste treatment, as well as how the material is subsequently treated. As described earlier the whole unit is collected at end of life, and most materials are sent for recycling, since the unit is mainly made from different types of metal.

Scenario information	Value	Unit
Collected separately	24,4	kg
Collected with mixed waste	0	kg
For reuse	0	kg
For recycling	20,9	kg
For energy recovery	2,16	kg
For final disposal	1,34	kg
Assumptions for scenario development		As appropriate

Re-use, recovery and recycling potential (D)

The following table provides an overview of the amount of each material fraction being sent for recycling, as well as the amount of material subsequently being credited when recycled. The amount of credited material is calculated based on the virgin content in the input materials.

Scenario information/Materiel	Amount sent for recycling	Amount being credited when sent for recycling	Unit
Brass recycling	6,8	0,68	kg
Steel recycling	11,3	8,3	kg
Copper Recycling	0,66	0,28	kg
Circulation Pump recycling	2,2	2,2	kg

Indoor air

The EPD does not give information on release of dangerous substances to indoor air because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.1.

Soil and water

The EPD does not give information on release of dangerous substances to soil and water because the horizontal standards on the relevant measurements are not available. Read more in EN15804+A1 chapter 7.4.2.

References

Publisher	epddanmark www.epddanmark.dk
Programme operator	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA-practitioner	Danish Technological Institute Buildings & Environment Gregersensvej DK-2630 Taastrup www.teknologisk.dk
LCA software /background data	Thinkstep GaBi version 10.6.1.35, 2022 including databases www.gabi-software.com
3rd party verifier	Guangli Du BUILD – The Department of the Built Environment, Aalborg University

General programme instructions
General Programme Instructions, version 2.0, spring 2020
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