

## Building Green København – udvidet bæredygtighedsdokument

Dette skema henvender sig til udstillere med fysiske produkter og løsninger inden for den bæredygtige byggebranche.

<p>Dette dokument er inddelt i 2 kategorier der skal svares ind i.</p> <p><b>1. Virksomhedsniveau</b></p> <p><b>2. Produktniveau</b></p> <p>(for at svare på nedstående så kan det evt. være en fordel at involvere produktionschef, miljø/bæredygtighedschef, CSR/HR chef mv)</p> <p>Dokumentet vil blive brugt til at fremvise jeres virksomhed og produkt/service profil grafisk på konferencen og dokumentet, med jeres svar, vil blive tilgængeligt for konferencens deltagere via QR-kode og download.</p>	
<p><b>Generel information</b></p>	
Firmanavn	d line A/S
Kontaktperson	Leah Stace
Navnet på produktet/løsningen	d line sortiment af armaturer, beslag og sanitetsudstyr
Kort beskrivelse af produktet/løsningen	d line producerer løsninger i syrefast rustfrit stål AISI 316 med 20 års garanti, og med mulighed for service hvert 20. år (Re-handle®), hvor varerne får udskiftet sliddele og sættes i stand, samt returneres med fornyet 20 års garanti (forventet levetid: op til 100 års garanteret levetid ved 4 x Re-handle).
<p><b><u>1. Virksomhedsniveau</u></b></p>	
<p>Er i ISO14001 certificerede? Hvis ja – indsæt link til certifikat. Vis/vedhæft gerne jeres politikker indenfor: Miljø, CSR, Energi, Bæredygtighed, Indkøb</p> <p>Indsæt gerne link til: Code of conduct UN Global compact CSRD rapport (alternativ den frivillige, grønt regnskab, klimaregnskab efter GHG protokollen)</p>	<p>Ja. Begge vores produktionsfaciliteter i Litauen og Kina er ISO 14001 certificerede.</p> <p>Derudover, har vi 5 EPD'er der dækker 40% af vores portefølje (1.116 varer).</p> <p>Til sidst følger vi EFRAGs VSME standard for CSRD med en ESG rapport for året 2024. Den færdige rapport foreligger i midten af oktober.</p>

## 2. Produktniveau

### 2a. Produktion

Hvor i verden bliver jeres produkt/delkomponenter produceret?	Beslag og sanitetsudstyr: Litauen Armaturer: Kina
Er hele eller dele af jeres råvarer/komponenter genbrugt/overskudsmateriale fra andres produktion/aktiviteter?  Ved dele af: hvor stor en andel er genbrugs eller overskudsmaterialer	70 % af vores råmateriale brugt i vores beslags- og sanitetsudstyr er genbrugt stål.
Producere i med vedvarende energi? Har i selv produktion af VE eller køber I kreditter?	I 2024 havde d line et forbrug på 138 MWh gas og 190,53 MWh elektricitet. 157,65 MWh af disse var vedvarende energi.
Er der elektriske eller elektroniske komponenter i jeres produkt? Og hvor de produceret?	Ja, vi har få elektroniske dele i enkelte varer. De produceres i både EU og Kina.
Biodiversitet - hvordan håndtere i biodiversitet på og omkring jeres produktions site(s)?	Vi har ikke lokationer placeret i sensitive biodiversitetszoner jf. kriterierne i CSRD'en.
Emballage - hvilken type af emballage bliver jeres produkt pakket i? og hvilke mængder? Fx vægt emballage kontra produkt vægt	100% recyleret pap og plastik. 3500 kg pap og 4530 kg plastik i året 2024.
Hvor meget spild har I, i jeres produktion? Hvordan opgør i det? - % af produktion, mængde, ..	I året 2024 producerede vi 20.008 kg non-hazardous waste og 681 kg Hazardous waste. Opgjort i mængde og håndteret efter de lokale myndigheders anvisninger.  Litauen: <ul style="list-style-type: none"> <li>- <b>Non-hazardous waste (kg): 19.708 kg</b></li> <li>- <b>Diverted to recycling or reuse: 16.719 kg</b></li> <li>- <b>Hazardous waste (kg): 681 kg</b></li> </ul> Kina: <ul style="list-style-type: none"> <li>- <b>Non-hazardous waste (kg): 300</b></li> <li>- <b>Diverted to recycling or reuse: 214 kg</b></li> <li>- <b>Hazardous waste (kg): 0 kg</b></li> </ul>

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<p>Hvad gør i med spild eller overskudsmaterialer fra jeres produktion og aktiviteter? Fx overskudsvarme til fjernvarme, madspild fra kantine til biogas eller arbejdstøj til ny tekstil)</p>	<p>Alt bliver 100% sorteret og enten genbrugt eller sorteret efter myndighedernes anvisninger.</p>																																				
<p>Har i aftageraftaler om jeres spild? Hvem kommer og henter det og hvordan forarbejdes det?</p>	<p>Ja.</p>																																				
<p>Øvrig relevant input til besvarelse?</p>	<p>Vores totale forbrug af råmateriale i 2024:</p> <table border="1"> <thead> <tr> <th>Material type</th> <th>Total Material (kg)</th> <th>Recycled Material (kg)</th> <th>% of recycled material</th> </tr> </thead> <tbody> <tr> <td><b>Stainless steel</b> (Lithuania)</td> <td>65644</td> <td>45951</td> <td>70%</td> </tr> <tr> <td><b>Brass</b> (Lithuania)</td> <td>4396</td> <td>3077</td> <td>70%</td> </tr> <tr> <td><b>Aluminum</b> (Lithuania)</td> <td>1922</td> <td>1345</td> <td>70%</td> </tr> <tr> <td><b>Cardboard</b> (Lithuania)</td> <td>3500</td> <td>3500</td> <td>100%</td> </tr> <tr> <td><b>Plastic</b> (Lithuania)</td> <td>4530</td> <td>4530</td> <td>100%</td> </tr> <tr> <td><b>Gasoline</b></td> <td>3.07</td> <td>0</td> <td>0%</td> </tr> <tr> <td><b>Diesel</b></td> <td>1.46</td> <td>0</td> <td>0%</td> </tr> <tr> <td><b>Water</b></td> <td>570</td> <td>0</td> <td>0%</td> </tr> </tbody> </table>	Material type	Total Material (kg)	Recycled Material (kg)	% of recycled material	<b>Stainless steel</b> (Lithuania)	65644	45951	70%	<b>Brass</b> (Lithuania)	4396	3077	70%	<b>Aluminum</b> (Lithuania)	1922	1345	70%	<b>Cardboard</b> (Lithuania)	3500	3500	100%	<b>Plastic</b> (Lithuania)	4530	4530	100%	<b>Gasoline</b>	3.07	0	0%	<b>Diesel</b>	1.46	0	0%	<b>Water</b>	570	0	0%
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<p><b>2b. Ressourcer – Råvarer, affald, restfraktioner, rest emballage, intake – output, mv.</b> (I skal tænke i hele jeres værdikæde, både op og nedstrøms)</p>																																					
<p>Hvor scourcer i jeres råvarer, komponenter mv? DK/Norden/EU/BRICS/?</p>	<p>Vi sourcer i både Europa og Kina.</p>																																				
<p>Hvilke muligheder er der for jeres produkt ved endt levetid? Og hvordan håndtere I det? (fx take-back ordninger, leasingsmodeller, produkt som service eller ender produktet fx til nedknusning eller afbrænding?)</p>	<p>Vi tilbyder:</p> <ul style="list-style-type: none"> <li>- Re-handle service hvert 20. år, hvor varerne får udskiftet sliddele og sættes i stand, samt returneres med fornyet 20 års garanti (forventet levetid: 100 år).</li> <li>- 100% recyclerbare armaturer og sanitetsudstyr ved endt levetid.</li> </ul>																																				

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<p>Hvor ender jeres affald fra jeres produktion?</p> <p>(Det er den ultimative slut destination hvor affaldet håndteres der skal svares på – ikke hvor I overdrager til næste led i værdikæden, som i dette tilfælde er leverandøren af affaldshåndterings servicen, men hvor ender affaldet i sidste ende? Dvs. ledninger kan fx ende i Pakistan hvor PVC'en afbrændes og kobberet sendes retur som råvarer)</p>	<p>Vores kernemateriale er rustfrit stål. Spild fra produktionen af denne type sorteres 100% og sælges tilbage til vores underleverandør i Litauen, der sender det tilbage til deres moderselskab i Tyskland til genbrug. Resten (generelt affald) sorteres ligeledes 100% og håndteres af de litauiske myndigheder lokalt.</p>
<p>Er der risici for børnearbejde/slavearbejde/tvangsarbejde i jeres værdikæde (både op og nedstrøms), og hvordan identificere i det? – hvis ja, hvordan håndtere i dette?</p>	<p>Nej, vi har ingen policy herom. Vi har planer om at have policies herom.</p>
<p>Hvordan håndteres miljø og klima påvirkninger i værdikæden? Er der risiko for jord/luft/grundvand/ferskvands-påvirkninger i jeres værdikæde?</p>	<p>Vi er i tvivl om, hvordan dette spørgsmål skal besvares? Alle udledninger påvirker vel i en grad miljø og Klima? Ingen af vores rapporteringsmodeller melder om risiko for jord/luft/grundvand/ferskvands-påvirkninger i vores værdikæde.</p> <p>Vi håndterer det ved: ISO14001, EFRAGs VSME standard for CSRD &amp; improvement plans.</p>
<p>Hvordan styrer i underleverandører? Politikker, kontrol, audit mv?</p>	<p>Vi har ingen policies herom. Vi har planer om at have policies herom.</p>
<p>Øvrig relevant input til besvarelse?</p>	
<p><b>2c. Logistik og Transport</b></p>	
<p>Hvor langt transportere i jeres indkomne råvarer/komponenter?  Og hvordan? (Lastbil, tog, fly – fossil, brint eller el?)</p>	<p>Vores primære transport er tog og Lastbil.  Vores sekundære er fly.</p>

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<p>Hvor langt transporteres jeres produkter typisk?</p> <p>Og hvordan? (Lastbil, tog, fly – fossil, brint eller el?)</p>	<p>Vi handler med hele verden ud af Litauen.</p>
<p>Hvor langt transporteres affald/spild til slut destination?</p> <p>Og hvordan? (Lastbil, tog, fly – fossil, brint eller el?)</p>	<p>Med Lastbil: inden for kommunen (generel affald)/ eller hvor i Litauen affaldet kan håndteres (andet generel affald) / til genforarbejdning og genbrug i Tyskland (råmaterialer: stål, aluminium &amp; messing).</p>
<p>Hvordan håndterer I returneringer?</p> <p>Bliver de genbrugt hele eller dele</p>	<p>Alle returneringer lægges på lager igen og gensælges. Vores reklamationer skilles ad, sorteres og sendes til genbrug/affaldssortering. Vores armaturer og sanitetstilbehør kan skilles ad og 100% genbruges. Vores dørgreb er blandingsmateriale alu/stål og kan genbruges, men transformeres til en ringere kvalitet stål end den der var købt til formålet.</p>
<p>Øvrig relevant input til besvarelse?</p>	<p>Vi har 0.3 % produktionsfejl.</p>

## Dokumentation for miljø og klimapåvirkning

<p>Fremvis gerne link til:</p> <p>LCA efter ISO14040/14044 inkl. kritisk review/panel review</p>	
<h2>Produkt evaluering og information</h2>	
<p>Fremvis gerne link til:</p>	
<p>Ny CE-mærkning efter opdateret byggevareforordning</p>	

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Social LCA efter FNs guide	
Cradle To Cradle (C2C)	
Digital produkt pas (DPP)	
Environmental Product Declaration (EPD)	Haves 5 stk
Product Environmental Footprint (PEF)	
Forest Stewardship Council (FSC)	
Program for the Endorsement of Forest Certification (PEFC)	
Svanemærket	
EU Ecolabel (blomsten)	
Andet relevant	

## Fremtidsvision for jeres produkt/løsning:

Hvordan øger I bæredygtigheden? Reducerer udledningen? Støtter biodiversiteten bedre? Øger livskvalitet i jeres værdikæde?  Om 5 år? Om 10 år?	Vi rapporterer på vores påvirkninger (ISO14001, EFRAGs VSME standard for CSRD), laver improvement plans og producerer produkter der kan holdes i deres brugsfase og garanteres i op til 100 år (med et design og materialer der holder, samt Re-handle service og garantifornyelse hvert 20. år)
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## Kilder:

Skemaet her er udviklet i samarbejde med eksperter i byggebranchen, med afsæt i bl.a. Markedsføringsloven, Vejledning fra forbrugerombudsmanden, Green Claims direktivet, DDD – due diligence i værdikæden, Byggevareforordningen (CE mærket), FNs vejledning om social LCA, Jysk/IKEA sagen og EMF vol 1



# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

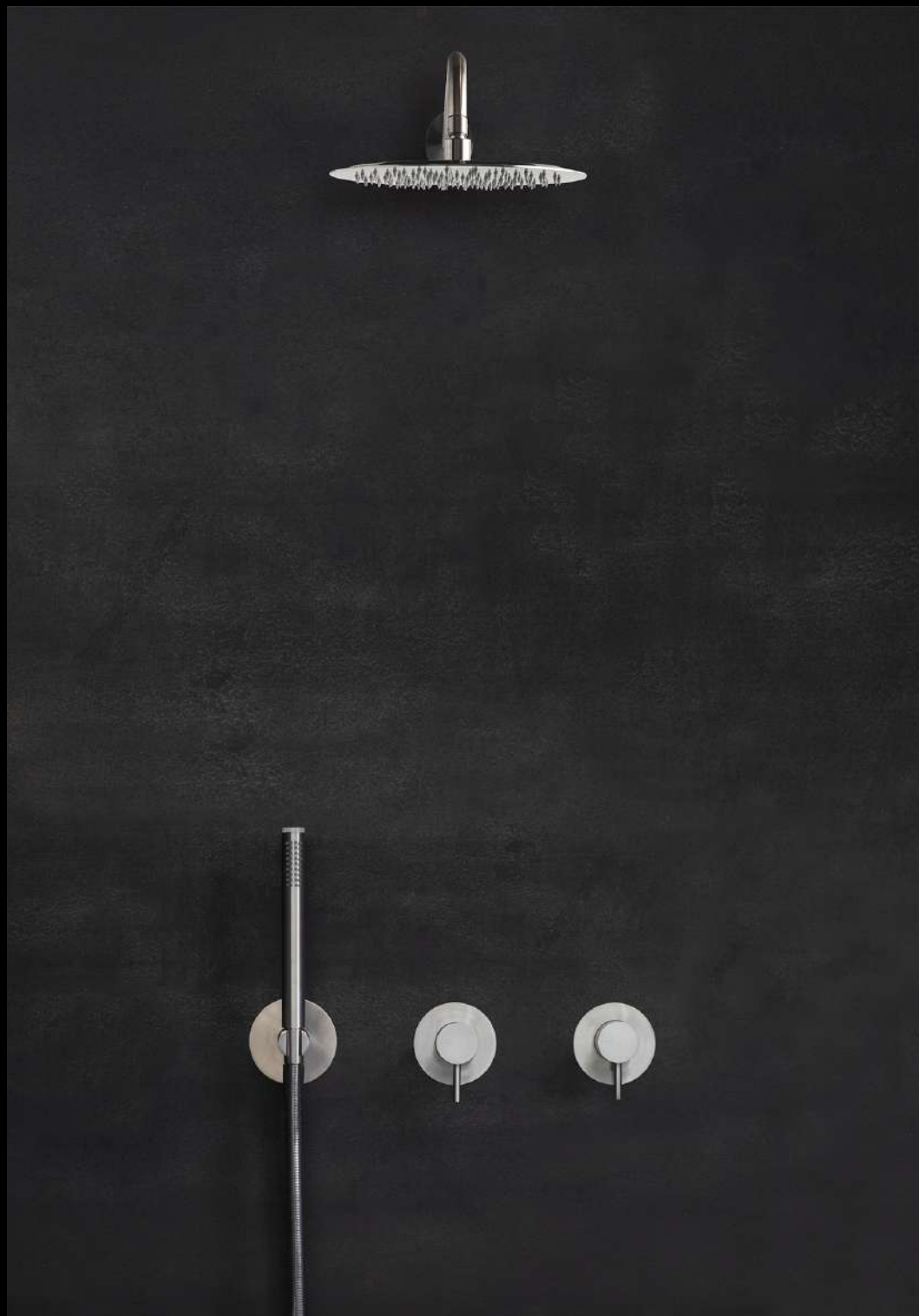
## Built-in tap, shower & bath sets

from

**d line**

<b>Programme:</b>	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
<b>Programme operator:</b>	EPD International AB
<b>EPD registration number:</b>	S-P-09171
<b>Publication date:</b>	2023-05-08
<b>Valid until:</b>	2028-05-07

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



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# General Information

## Programme information

**Programme:**

The International EPD® System

**Address:**

EPD International AB  
Box 210 60  
SE-100 31 Stockholm  
Sweden

**Website:**

[www.environdec.com](http://www.environdec.com)

**E-mail:**

[info@environdec.com](mailto:info@environdec.com)

## Accountabilities for PCR, LCA and independent, third-party verification

**Product Category Rules (PCR)**

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

Product Category Rules (PCR): Construction products 2019:14 Version  
1.2.5, 2022-11-20  
UN CPC code of 42911

PCR review was conducted by: IVL Swedish Environmental Research  
Institute, Secretariat of the International EPD System.

**Life Cycle Assessment (LCA)**

LCA accountability: *Sigita Židonienė and Silvija Serapinaitė, Vesta  
Consulting [www.vestaconsulting.lt](http://www.vestaconsulting.lt)*

**Third-party verification**

*Independent third-party verification of the declaration and data,  
-according to ISO 14025:2006, via:*

EPD verification by individual verifier

Third-party verifier: *Prof. Ing. Vladimír Kočí, PhD., [vladimir.koci@lca.cz](mailto:vladimir.koci@lca.cz)*

*Approved by: The International EPD® System*

Procedure for follow-up of data during EPD validity involves third party  
verifier:

Yes

No

**Additional info**

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

EPDs within the same product category but registered in different EPD  
programmes, or not compliant with EN 15804, may not be comparable.  
For two EPDs to be comparable, they must be based on the same PCR  
(including the same 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  
equivalent system boundaries and descriptions of data and etc. For  
further information about comparability, see EN 15804 and ISO 14025

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## Company Information

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**Owner of the EPD:**

d line A/S | Jyllingevej 59, kld., 2720 Copenhagen | Denmark  
T: +45 7212 0138 | E: info@dline.com

**Contact:**

Alius Jakušovas | Head of Products  
M: +370 687 50525 | E: alj@dline.com

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**Description of the organisation:**

d line is a heritage Danish design brand conceiving and hand crafting enduring architectural hardware, sanitary ware and solutions for barrier-free living.

Launched in 1971 with the coordinated line of stainless steel architectural products Knud Holscher created for St Catherine's College Oxford, d line has since collaborated with iconic Danish designers including Arne Jacobsen, Tom Dixon and Bjarke Ingels. The brand's ambition is to be universally known, coveted and admired for the uncompromising endurance of its design, craftsmanship and quality.

[dline.com](https://dline.com)

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**Product-related or management system-related certifications:**

Company is ISO certified with certification for ISO 9001:2015 (Quality Standard).

Company is ISO certified with certification for ISO 14001:2015 (Environmental Standard).

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**Name and location of production site(s):**

d line China, No. 200, Xingpu Road, Suzhou Industrial Park



EPD

d line



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## Product Information

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<b>Type of EPD:</b>	This EPD is single company, product group EPD that covers a group of products – bathroom accessories - built-in tap, shower and bath sets, with reference product built-in mixer set. Full range of products identified by items no. are presented at the end of this EPD. Products listed differs by finishing colour, powder coating or shape. Some products due to the thickness or some variations in metals composition exceeds 10% rule, therefore the worst-case scenario, with reference product - built-in mixer set (item no. QT3100-190SM) as "worst case product" is declared..
<b>Product name:</b>	Built-in mixer set
<b>Product identification:</b>	Item no. - QT3100-190SM
<b>Product description:</b>	Built-in mixer set, 190mm
<b>Product application:</b>	Bathrooms, plumbing indoors
<b>Product standards:</b>	Certified in accordance with Kiwa UK Regulation 4 (KUKreg4)
<b>Technical specification:</b>	Fixed spout 7 1/2" 190 mm projection Surface finish: satin finished Spout diameter 7/8" 22 mm Built in aerator Flange diameter 2 3/4" 70 mm 1/2" connections Water flow rate limited to max. 1.3 gpm 5.0 ltr. Lead free compliant
<b>UN CPC code:</b>	42911
<b>Geographical scope:</b>	Global

# LCA Information

<b>Functional unit / declared unit:</b>	The declared unit is 1 kg of the product. Declared product mass is 4,536 kg.
<b>Reference service life: [where applicable]</b>	The service life according to producer is 20 years.
<b>Time representativeness:</b>	Primary data was collected internally. The production data refers to the average for the year 2021.
<b>Database(s) and LCA software used:</b>	The Ecoinvent database v.3.6 provides the life cycle inventory data for the raw and process materials obtained from the background system. The LCA software used is One Click LCA.
<b>Description of system boundaries:</b>	Cradle to gate with options, modules A4-B7, modules C1–C4 and module D.

Modules declared, geographical scope, the share of specific data (in GWP-GHG results) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage			Resource recovery stage		
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential	
<b>Module</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>D</b>	
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	CHN	GLO	GLO	GLO	GLO	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	>10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; MND = Module Not declared; MNR = Module Not Relevant)

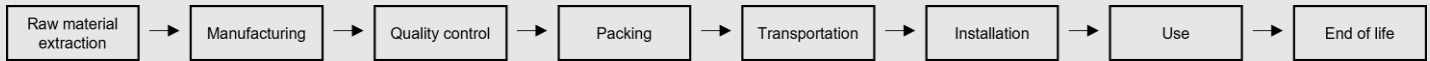
**Data quality:**

The foreground data collected internally is based on yearly production amounts and extrapolations of measurements on specific machines and plants. Overall, the data quality can be described as good. The primary data collection has been done thoroughly.

**Cut-off criteria:**

Life cycle inventory data for a minimum of 99% of total material and energy input flows have been included in the life cycle analysis. However, only materials having in summa less than 1% of the weight of the product were not used in calculations.

**System diagram:**



**More information:**

Product stage:

A1: This stage considers the extraction and processing of raw materials and energy consumption.

A2: The raw materials are transported to the manufacturing plant. In this case, the model includes road transportation of each raw material.

A3: This stage includes the manufacture of products and packaging. It also considers the energy consumption and waste generated at the production plant.

**Production process description:**

- Raw material extraction – Needed raw materials are supplied to be used like tubes, bars, metal sheets, etc.
- Manufacturing – In this stage, necessary production operations are made – turning, milling, cutting, stamping, grinding.
- Quality control – Manufactured parts are inspected by quality control manager visually and technically.
- Packing – Parts/products are securely packaged into the appropriate size boxes.

Construction process stage:

A4: This stage includes transport from the production gate to the construction site where the product shall be installed. Transportation is calculated based on data from manufacturer and a scenario with the parameters described in the following table. The transportation does not cause losses as products are packaged properly.

Parameter	Value/Description
Vehicle type used for transport	EURO 5 truck with a trailer with an average load of 16-32t Freight aircraft
Distance	59 % of production: Plane – 8783 km,  41 % of production: Plane – 6626 km, Truck – 1551 km.
Capacity utilization	100 % of the capacity in volume (truck, including empty return), 100 % of the capacity in volume (plane, including empty return)

A5: This module describes impacts related to installing the product to the building. Since this is a manual process, no energy or fuels is needed for installation. Product packaging waste are declared.

Use stage:

B1, B3, B4, B6, B7: These modules were considered, but evaluated as not relevant for the product and considered as zero.

B2: Maintenance - covers the combination of all planned technical and associated administrative actions during the service life to maintain the product installed in a building, as well as preserve the aesthetic qualities of the product. The product needs to be cleaned on regular basis with dry soft cloth.

B5: Refurbishment – product service life is set to 20 years. After or during this warranty period, the product is offered to be refurbished to extend its life with another 20 years. In this phase, materials needed to refurbish 1 kg of product is declared. Read more on page 16.

End of Life stage:

C1: This module describes impacts related to dismantling the product at the product end-of-life stage. Since this is a manual process, the environmental impacts are negligible.

C2: This module describes the transport of discarded product to final disposal. It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed that it has the same weight as the declared product. All the end-of-life product is assumed to be sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is lorry which is the most common.

C3: This module describes waste processing for reuse, recovery or recycling. It is assumed that 90% of steel, stainless steel and brass will be collected separately and transformed into secondary material in a recycling plant.

C4: The remaining 10% of metals and mounting plastic and rubber parts are assumed to be sent to the landfill.

Resource recovery stage (D):

D: The benefits of recyclable waste generated in the module C3 are considered in module D. The recycled steel, stainless steel and brass has been modelled to avoid use of primary materials. The scrap content in the studied product has been acknowledged and only the mass of primary materials in the product provides the benefit to avoid double counting.

EPD

d line



## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Stainless steel	0,580	0	0
Steel	0,333	0	0
Brass	0,026	0	0
Plastic	0,034	0	0
Rubber	0,027	0	0
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>0</b>
Packaging materials	Weight, kg	Weight-% (versus the product)	
Polyurethane, flexible foam	0,015	1,5	
Cardboard	0,255	25,5	
<b>TOTAL</b>	<b>0,269</b>	<b>26,9</b>	

Products do not contain any REACH SVHC substances in amounts greater than 0,1% (1000 ppm).

## Environmental Information

### Potential environmental impact – mandatory indicators according to EN 15804

#### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	6,09E0	3,9E0	5,26E-2	0E0	0E0	0E0	0E0	1,18E0	0E0	0E0	0E0	4,54E-3	2,41E-2	1,46E-1	-1,64E0
GWP-biogenic	kg CO <sub>2</sub> eq.	1,07E-2	1,26E-3	9,63E-3	0E0	0E0	0E0	0E0	3,92E-4	0E0	0E0	0E0	3,3E-6	-1,43E-3	1,12E-5	5,12E-4
GWP-luluc	kg CO <sub>2</sub> eq.	1,6E-2	2,31E-4	5,86E-6	0E0	0E0	0E0	0E0	8,26E-4	0E0	0E0	0E0	1,37E-6	2,83E-5	1,01E-6	-1,66E-3
GWP-total	kg CO <sub>2</sub> eq.	6,12E0	3,88E0	6,23E-2	0E0	0E0	0E0	0E0	1,18E0	0E0	0E0	0E0	4,55E-3	2,27E-2	1,46E-1	-1,64E+0
ODP	kg CFC 11 eq.	4,32E-2	2,05E-2	8,86E-5	0E0	0E0	0E0	0E0	6,13E-3	0E0	0E0	0E0	1,91E-5	2,67E-4	3,82E-5	-1,35E-2
AP	mol H <sup>+</sup> eq.	3,84E-4	8,36E-6	2,56E-7	0E0	0E0	0E0	0E0	6,21E-6	0E0	0E0	0E0	3,7E-8	1,4E-6	4,37E-8	-1,33E-4
EP-freshwater	kg P eq.	6,68E-3	7,49E-3	3,17E-5	0E0	0E0	0E0	0E0	2,12E-3	0E0	0E0	0E0	5,75E-6	5,93E-5	1,72E-5	-1,78E-3
EP-marine	kg N eq.	7,37E-2	8,21E-2	3,37E-4	0E0	0E0	0E0	0E0	2,33E-2	0E0	0E0	0E0	6,35E-5	6,83E-4	1,78E-4	-2,01E-2
EP-terrestrial	mol N eq.	2,44E-2	2,12E-2	1,14E-4	0E0	0E0	0E0	0E0	6,13E-3	0E0	0E0	0E0	2,04E-5	1,87E-4	4,41E-5	-8,37E-3
POCP	kg NMVOC eq.	8,5E-4	3,72E-6	4,87E-7	0E0	0E0	0E0	0E0	3,49E-6	0E0	0E0	0E0	7,75E-8	1,18E-6	5,57E-8	-4,20E-4
ADP-minerals & metals*	kg Sb eq.	7,03E1	5,49E1	1,65E-1	0E0	0E0	0E0	0E0	1,73E1	0E0	0E0	0E0	7,07E-2	2,96E-1	4,03E-2	-1,82E1
ADP-fossil*	MJ	4,4E0	4,48E-2	1,29E-3	0E0	0E0	0E0	0E0	4,35E-2	0E0	0E0	0E0	2,63E-4	4,68E-3	7,67E-3	-4,32E-1
WDP*	m <sup>3</sup>	4,32E-2	2,05E-2	8,86E-5	0E0	0E0	0E0	0E0	6,13E-3	0E0	0E0	0E0	1,91E-5	2,67E-4	3,82E-5	-1,35E-2

Acronyms  
 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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as to their limited experience with the indicator.

## Potential environmental impact – additional mandatory and voluntary indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	6,09E0	3,9E0	5,26E-2	0E0	0E0	0E0	0E0	1,18E0	0E0	0E0	0E0	4,54E-3	2,41E-2	1,46E-1	-1,64E0

## Use of resources

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1,14E1	1,74E-1	5,05E-3	0E0	0E0	0E0	0E0	6,66E-1	0E0	0E0	0E0	8,9E-4	4,09E-2	1,12E-3	-1,23E0
PERM	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PERT	MJ	1,14E1	1,74E-1	5,05E-3	0E0	0E0	0E0	0E0	6,66E-1	0E0	0E0	0E0	8,9E-4	4,09E-2	1,12E-3	-1,23E0
PENRE	MJ	6,91E1	5,49E1	1,65E-1	0E0	0E0	0E0	0E0	1,7E1	0E0	0E0	0E0	7,07E-2	2,96E-1	4,03E-2	-1,82E1
PENRM	MJ	1,21E0	0E0	0E0	0E0	0E0	0E0	0E0	2,28E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PENRT	MJ	7,03E1	5,49E1	1,65E-1	0E0	0E0	0E0	0E0	1,73E1	0E0	0E0	0E0	7,07E-2	2,96E-1	4,03E-2	-1,82E1
SM	kg	3,24E-1	0E0	0E0	0E0	0E0	0E0	0E0	1,21E-4	0E0	0E0	0E0	0E0	0E0	0E0	-7,16E-1
RSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
NRSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
FW	m <sup>3</sup>	0.0678	4,11E-3	4,3E-5	0E0	0E0	0E0	0E0	1,79E-3	0E0	0E0	0E0	1,47E-5	1,25E-4	2,57E-4	-1,28E-2

### Acronyms

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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste production

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,24E0	1,62E-2	9,09E-4	0E0	0E0	0E0	0E0	9,67E-3	0E0	0E0	0E0	6,87E-5	0E0	2,03E-3	-2,98E-1
Non-hazardous waste	kg	1,83E1	3,91E-1	3,23E-2	0E0	0E0	0E0	0E0	3,88E-1	0E0	0E0	0E0	7,6E-3	0E0	1,53E-1	-6,77E0
Radioactive waste	kg	1,56E-4	3,96E-4	9,46E-7	0E0	0E0	0E0	0E0	1,19E-4	0E0	0E0	0E0	4,85E-7	0E0	1,59E-7	-4,07E-5

## Output flows

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Material for recycling	kg	4E-2	0E0	2,55E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	8,45E-1	0E0	0E0
Materials for energy recovery	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Exported energy, electricity	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0

## Biogenic carbon content

### Results per declared unit

Biogenic carbon content	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

**Re-handle® your product:**  
**a disruptive refurbish system to reduce our carbon footprint between 54-91%**



d line means business when they establish a circular system to keep their products in use for up to 100 years. Their purpose: to challenge you to choose the enduring solution and reuse, rather than to produce new.

Essentially, d line's Re-handle® concept encourages customers to return, refinish and have d line products refitted in their buildings, to keep them in their life cycle for as long as possible. With each Re-handle the 20-year product warranty period is renewed, and d line want you to reuse the same product up to 4 times, so that it can live for up to 100 years.

**Sometimes good as new is better**

In this waste-aware environment, Architects and Specifiers look for solutions that are fully documented and thought within their built environment. Now more than ever, we see a movement towards data-driven and future-thinking decision making.

Whilst Environmental Product Declarations (EPDs) are a powerful tool for taking into account energy and resource consumption as well as environmental impacts over the entire life cycle of a product, it requires that a product is fully declared across the entire life cycle in order to make fully informed decisions. Today, it is only mandatory to declare the product is its production phase, thus losing out on vital information across the remaining life cycle, such as use, end of life and recycling.

d line has made it their mission to challenge the industry for undercutting decision makers with correct data and have for that reason decided to fully disclose the complete global warming potential (GWP) in their EPDs. This means full declaration across its entire product life cycle, from production, use, refurbishment and right through to recycling. That's how they can confidently state, that by Re-handling a d line product, you will dramatically reduce the carbon footprint between 54-91% depending on the product, compared to specifying new.

Look for the GWP values in section B5 Refurbishment for the carbon footprint of Re-handling the product, thus making it applicable to be reused in a building as if it were new. It is not possible to Re-handle powder- and PVD coated variants.



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## References

General Programme Instructions of the International EPD® System. Version 4.0.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

PCR 2019:14 Construction products (version 1.2.5)

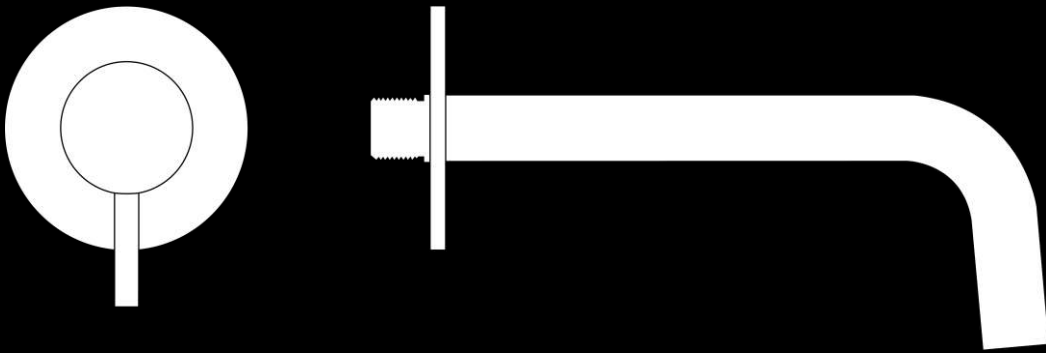
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This declaration applies to products mentioned in the list, along with their mirror polished, powder- and PVD coated versions and brass equivalents:

QS3100-340WM QS3200-190SM QS3200-340WM QS3300-225WM QS3300-250SM QS3300-340WM QT3100-190SM QT3100-250SM

EPD

d line





# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Taps, external fixtures & wastes

from

**d line**

<b>Programme:</b>	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
<b>Programme operator:</b>	EPD International AB
<b>EPD registration number:</b>	S-P-09170
<b>Publication date:</b>	2023-05-08
<b>Valid until:</b>	2028-05-07

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



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Content

P. 3	General information
P. 4	Company Information
P. 7	Product information
P. 8	LCA information
P. 12	Content information
P. 13	Environmental Information

# General Information

## Programme information

**Programme:**

The International EPD® System

**Address:**

EPD International AB  
Box 210 60  
SE-100 31 Stockholm  
Sweden

**Website:**

[www.environdec.com](http://www.environdec.com)

**E-mail:**

[info@environdec.com](mailto:info@environdec.com)

## Accountabilities for PCR, LCA and independent, third-party verification

**Product Category Rules (PCR)**

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

Product Category Rules (PCR): Construction products 2019:14 Version  
1.2.5, 2022-11-20  
UN CPC code of 42911

PCR review was conducted by: IVL Swedish Environmental Research  
Institute, Secretariat of the International EPD System.

**Life Cycle Assessment (LCA)**

LCA accountability: *Sigita Židonienė and Silvija Serapinaitė, Vesta  
Consulting [www.vestaconsulting.lt](http://www.vestaconsulting.lt)*

**Third-party verification**

*Independent third-party verification of the declaration and data,  
-according to ISO 14025:2006, via:*

EPD verification by individual verifier

Third-party verifier: *Prof. Ing. Vladimír Kočí, PhD., [vladimir.koci@lca.cz](mailto:vladimir.koci@lca.cz)*

*Approved by: The International EPD® System*

Procedure for follow-up of data during EPD validity involves third party  
verifier:

Yes  No

**Additional info**

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

EPDs within the same product category but registered in different EPD  
programmes, or not compliant with EN 15804, may not be comparable.  
For two EPDs to be comparable, they must be based on the same PCR  
(including the same 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  
equivalent system boundaries and descriptions of data and etc. For  
further information about comparability, see EN 15804 and ISO 14025

## Company Information

**Owner of the EPD:**

d line A/S | Jyllingevej 59, Kld., 2720 Copenhagen | Denmark  
T: +45 7212 0138 | E: info@dline.com

**Contact:**

Alius Jakušovas | Head of Products  
M: +370 687 50525 | E: alj@dline.com

**Description of the organisation:**

d line is a heritage Danish design brand conceiving and hand crafting enduring architectural hardware, sanitary ware and solutions for barrier-free living.

Launched in 1971 with the coordinated line of stainless steel architectural products Knud Holscher created for St Catherine's College Oxford, d line has since collaborated with iconic Danish designers including Arne Jacobsen, Tom Dixon and Bjarke Ingels. The brand's ambition is to be universally known, coveted and admired for the uncompromising endurance of its design, craftsmanship and quality.

[dline.com](https://dline.com)

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**Product-related or management system-related certifications:**

Company is ISO certified with certification for ISO 9001:2015 (Quality Standard).

Company is ISO certified with certification for ISO 14001:2015 (Environmental Standard).

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**Name and location of production site(s):**

d line China, No. 200, Xingpu Road, Suzhou Industrial Park



EPD

d line



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## Product Information

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<b>Type of EPD:</b>	This EPD is single company, product group EPD that covers a group of products – bathroom accessories - taps, external fixtures, and wastes. Full range of products identified by items no are presented at the end of this EPD. All items in this product group have similar production process, raw materials composition, and purpose. Some products due to the shape or size, or variations in metals ratio exceeds 10% rule, therefore the worst-case scenario, with representative product – control f/wall mount, diverter (as “worst case product”) is declared.
<b>Product name:</b>	Control f/wall mount, diverter
<b>Product identification:</b>	Item no. – QA2290M
<b>Product description:</b>	Control f/wall mount, diverter
<b>Product application:</b>	Bathrooms, plumbing indoors
<b>Product standards:</b>	Certified in accordance with Kiwa UK Regulation 4 (KUKreg4)
<b>Technical specification:</b>	Control Ø43mm Rose diameter Ø90mm – 3 ½” Spout diameter: Ø90mm – 3 ½” Material: Stainless steel AISI 316 Surface finish: satin finished
<b>UN CPC code:</b>	42911
<b>Geographical scope:</b>	Global

# LCA Information

<b>Functional unit / declared unit:</b>	The declared unit is 1 kg of the product. Declared product mass is 0,500 kg.
<b>Reference service life: [where applicable]</b>	The service life according to producer is 20 years.
<b>Time representativeness:</b>	Primary data was collected internally. The production data refers to the average for the year 2021.
<b>Database(s) and LCA software used:</b>	The Ecoinvent database v.3.6 provides the life cycle inventory data for the raw and process materials obtained from the background system. The LCA software used is One Click LCA.
<b>Description of system boundaries:</b>	Cradle to gate with options, modules A4-B7, modules C1–C4 and module D.

Modules declared, geographical scope, the share of specific data (in GWP-GHG results) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage			Resource recovery stage	
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
<b>Module</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>D</b>
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	CHN	GLO	GLO	GLO	GLO	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	>10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; MND = Module Not declared; MNR = Module Not Relevant)

**Data quality:**

The foreground data collected internally is based on yearly production amounts and extrapolations of measurements on specific machines and plants. Overall, the data quality can be described as good. The primary data collection has been done thoroughly.

**Cut-off criteria:**

Life cycle inventory data for a minimum of 99% of total material and energy input flows have been included in the life cycle analysis. However, only materials having in summa less than 1% of the weight of the product were not used in calculations.

**System diagram:**



**More information:**

Product stage:

A1: This stage considers the extraction and processing of raw materials and energy consumption.

A2: The raw materials are transported to the manufacturing plant. In this case, the model includes road transportation of each raw material.

A3: This stage includes the manufacture of products and packaging. It also considers the energy consumption and waste generated at the production plant.

**Production process description:**

- Raw material extraction – Needed raw materials are supplied to be used like tubes, bars, metal sheets, etc.
- Manufacturing – In this stage, necessary production operations are made – turning, milling, cutting, stamping, grinding.
- Quality control – Manufactured parts are inspected by quality control manager visually and technically.
- Packing – Parts/products are securely packaged into the appropriate size boxes.

Construction process stage:

A4: This stage includes transport from the production gate to the construction site where the product shall be installed. Transportation is calculated based on data from manufacturer and a scenario with the parameters described in the following table. The transportation does not cause losses as products are packaged properly.

Parameter	Value/Description
Vehicle type used for transport	EURO 5 truck with a trailer with an average load of 16-32t Freight aircraft Container ship
	96 % of production: Plane – 6626 km, Truck – 1397 km
Distance	2 % of production: Plane – 6626 km, Ship – 4053 km.
	3 % of production: Plane - 8714

Capacity utilization	100 % of the capacity in volume (truck, including empty return), 100 % of the capacity in volume (plain, including empty return) 100 % of the capacity in volume (container ship, including empty return)
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A5: This module describes impacts related to installing the product to the building. Since this is a manual process, no energy or fuels is needed for installation. Product packaging waste are declared.

Use stage:

B1, B3, B4, B6, B7: These modules were considered, but evaluated as not relevant for the product and considered as zero.

B2: Maintenance - covers the combination of all planned technical and associated administrative actions during the service life to maintain the product installed in a building, as well as preserve the aesthetic qualities of the product. The product needs to be cleaned on regular basis with dry soft cloth.

B5: Refurbishment – product service life is set to 20 years. After or during this warranty period, the product is offered to be refurbished to extend its life with another 20 years. In this phase, materials needed to refurbish 1 kg of product is declared. Read more on page 16.

End of Life stage:

C1: This module describes impacts related to dismantling the product at the product end-of-life stage. Since this is a manual process, the environmental impacts are negligible.

C2: This module describes the transport of discarded product to final disposal. It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed that it has the same weight as the declared product. All the end-of-life product is assumed to be sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is lorry which is the most common.

C3: This module describes waste processing for reuse, recovery or recycling. It is assumed that 90% of steel, stainless steel and brass will be collected separately and transformed into secondary material in a recycling plant.

C4: The remaining 10% of metals and mounting plastic and rubber parts are assumed to be sent to the landfill.

Resource recovery stage (D):

D: The benefits of recyclable waste generated in the module C3 are considered in module D. The recycled steel, stainless steel and brass has been modelled to avoid use of primary materials. The scrap content in the studied product has been acknowledged and only the mass of primary materials in the product provides the benefit to avoid double counting.

EPD

d line



## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Stainless steel	0,998	0	0
Rubber	0,001	0	0
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>0</b>
Packaging materials	Weight, kg	Weight-% (versus the product)	
Cardboard	0,099	9,9	
<b>TOTAL</b>	<b>0,099</b>	<b>9,9</b>	

No dangerous substances from the candidate list of SVHC for Authorisation are present in concentrations greater than 0.1% by weight in the product.

# Environmental Information

## Potential environmental impact – mandatory indicators according to EN 15804

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	6,98E0	2,94E0	5,56E-3	0E0	0E0	0E0	0E0	6,01E-1	0E0	0E0	0E0	4,54E-3	2,56E-2	3,24E-3	-8,23E-1
GWP-biogenic	kg CO <sub>2</sub> eq.	2,98E-2	9,85E-4	3,74E-3	0E0	0E0	0E0	0E0	1,15E-2	0E0	0E0	0E0	3,3E-6	-1,52E-3	1,23E-6	8,44E-3
GWP-luluc	kg CO <sub>2</sub> eq.	1,05E-2	1,94E-4	2,25E-6	0E0	0E0	0E0	0E0	2,69E-3	0E0	0E0	0E0	1,37E-6	3,01E-5	1,73E-7	9,35E-4
GWP-total	kg CO <sub>2</sub> eq.	7,02E0	2,92E0	9,3E-3	0E0	0E0	0E0	0E0	6,16E-1	0E0	0E0	0E0	4,55E-3	2,42E-2	3,24E-3	-8,13E-1
ODP	kg CFC 11 eq.	3,97E-7	6,68E-7	8,04E-10	0E0	0E0	0E0	0E0	1,23E-7	0E0	0E0	0E0	1,07E-9	3,13E-9	2,23E-10	-2,12E-8
AP	mol H <sup>+</sup> eq.	4,03E-2	1,54E-2	3,24E-5	0E0	0E0	0E0	0E0	3,03E-3	0E0	0E0	0E0	1,91E-5	2,84E-4	5,62E-6	-3,16E-3
EP-freshwater	kg P eq.	3,18E-4	6,79E-6	9,77E-8	0E0	0E0	0E0	0E0	1,15E-5	0E0	0E0	0E0	3,7E-8	1,49E-6	7,07E-9	-2,99E-5
EP-marine	kg N eq.	7,23E-3	5,61E-3	1,14E-5	0E0	0E0	0E0	0E0	7,4E-4	0E0	0E0	0E0	5,75E-6	6,31E-5	2,01E-6	-5,69E-4
EP-terrestrial	mol N eq.	7,91E-2	6,15E-2	1,21E-4	0E0	0E0	0E0	0E0	8,34E-3	0E0	0E0	0E0	6,35E-5	7,27E-4	2,2E-5	-6,85E-3
POCP	kg NMVOC eq.	2,56E-2	1,59E-2	4,19E-5	0E0	0E0	0E0	0E0	2,48E-3	0E0	0E0	0E0	2,04E-5	1,99E-4	6,23E-6	-4,84E-3
ADP-minerals & metals*	kg Sb eq.	2,09E-4	4,1E-6	1,87E-7	0E0	0E0	0E0	0E0	1,7E-5	0E0	0E0	0E0	7,75E-8	1,26E-6	5,77E-9	-4,25E-7
ADP-fossil*	MJ	7,72E1	4,15E1	6,28E-2	0E0	0E0	0E0	0E0	1,03E1	0E0	0E0	0E0	7,07E-2	3,15E-1	1,52E-2	-5,82E0
WDP*	m <sup>3</sup>	5,8E0	3,75E-2	4,9E-4	0E0	0E0	0E0	0E0	7,47E-2	0E0	0E0	0E0	2,63E-4	4,98E-3	8,12E-4	-2,27E-1

Acronyms  
 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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as there is limited experience with the indicator.

## Potential environmental impact – additional mandatory and voluntary indicators

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	6,98E0	2,94E0	5,56E-3	0E0	0E0	0E0	0E0	6,01E-1	0E0	0E0	0E0	4,54E-3	2,56E-2	3,24E-3	-8,23E-1

### Use of resources

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	1,52E1	1,44E-1	1,93E-3	0E0	0E0	0E0	0E0	2,19E0	0E0	0E0	0E0	8,9E-4	4,35E-2	1,38E-4	1,45E-1
PERM	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PERT	MJ	1,52E1	1,44E-1	1,93E-3	0E0	0E0	0E0	0E0	2,19E0	0E0	0E0	0E0	8,9E-4	4,35E-2	1,38E-4	1,45E-1
PENRE	MJ	7,72E1	4,15E1	6,28E-2	0E0	0E0	0E0	0E0	1,03E1	0E0	0E0	0E0	7,07E-2	3,15E-1	1,52E-2	-5,82E0
PENRM	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PENRT	MJ	7,72E1	4,15E1	6,28E-2	0E0	0E0	0E0	0E0	1,03E1	0E0	0E0	0E0	7,07E-2	3,15E-1	1,52E-2	-5,82E0
SM	kg	2,78E-1	0E0	0E0	0E0	0E0	0E0	0E0	4,88E-4	0E0	0E0	0E0	0E0	0E0	0E0	4,63E-1
RSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
NRSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
FW	m <sup>3</sup>	6,55E-2	3,27E-3	1,31E-5	0E0	0E0	0E0	0E0	2,05E-3	0E0	0E0	0E0	1,47E-5	1,33E-4	2,06E-5	-5,98E-3

#### Acronyms

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 = Use of net fresh water

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste production

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	4,87E0	1,31E-2	2,52E-4	0E0	0E0	0E0	0E0	1,34E-2	0E0	0E0	0E0	6,87E-5	0E0	5,15E-5	-1,09E-1
Non-hazardous waste	kg	1,44E1	4,21E-1	6,83E-3	0E0	0E0	0E0	0E0	8,05E-1	0E0	0E0	0E0	7,6E-3	0E0	1,01E-1	-1,04E0
Radioactive waste	kg	1,73E-4	2,99E-4	3,64E-7	0E0	0E0	0E0	0E0	6,64E-5	0E0	0E0	0E0	4,85E-7	0E0	9,87E-8	3,19E-7

## Output flows

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Material for recycling	kg	1,2E-2	0E0	9,9E-2	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	8,99E-1	0E0	0E0
Materials for energy recovery	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Exported energy, electricity	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0

## Biogenic carbon content

### Results per declared unit

Biogenic carbon content	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

## Re-handle® your product: a disruptive refurbish system to reduce our carbon footprint between 54-91%



d line means business when they establish a circular system to keep their products in use for up to 100 years. Their purpose: to challenge you to choose the enduring solution and reuse, rather than to produce new.

Essentially, d line's Re-handle® concept encourages customers to return, refinish and have d line products refitted in their buildings, to keep them in their life cycle for as long as possible. With each Re-handle the 20-year product warranty period is renewed, and d line want you to reuse the same product up to 4 times, so that it can live for up to 100 years.

### Sometimes good as new is better

In this waste-aware environment, Architects and Specifiers look for solutions that are fully documented and thought within their built environment. Now more than ever, we see a movement towards data-driven and future-thinking decision making.

Whilst Environmental Product Declarations (EPDs) are a powerful tool for taking into account energy and resource consumption as well as environmental impacts over the entire life cycle of a product, it requires that a product is fully declared across the entire life cycle in order to make fully informed decisions. Today, it is only mandatory to declare the product is its production phase, thus losing out on vital information across the remaining life cycle, such as use, end of life and recycling.

d line has made it their mission to challenge the industry for undercutting decision makers with correct data and have for that reason decided to fully disclose the complete global warming potential (GWP) in their EPDs. This means full declaration across its entire product life cycle, from production, use, refurbishment and right through to recycling. That's how they can confidently state, that by Re-handling a d line product, you will dramatically reduce the carbon footprint between 54-91% depending on the product, compared to specifying new.

Look for the GWP values in section B5 Refurbishment for the carbon footprint of Re-handling the product, thus making it applicable to be reused in a building as if it were new. It is not possible to Re-handle powder- and PVD coated variants.



## References

General Programme Instructions of the International EPD® System. Version 4.0.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

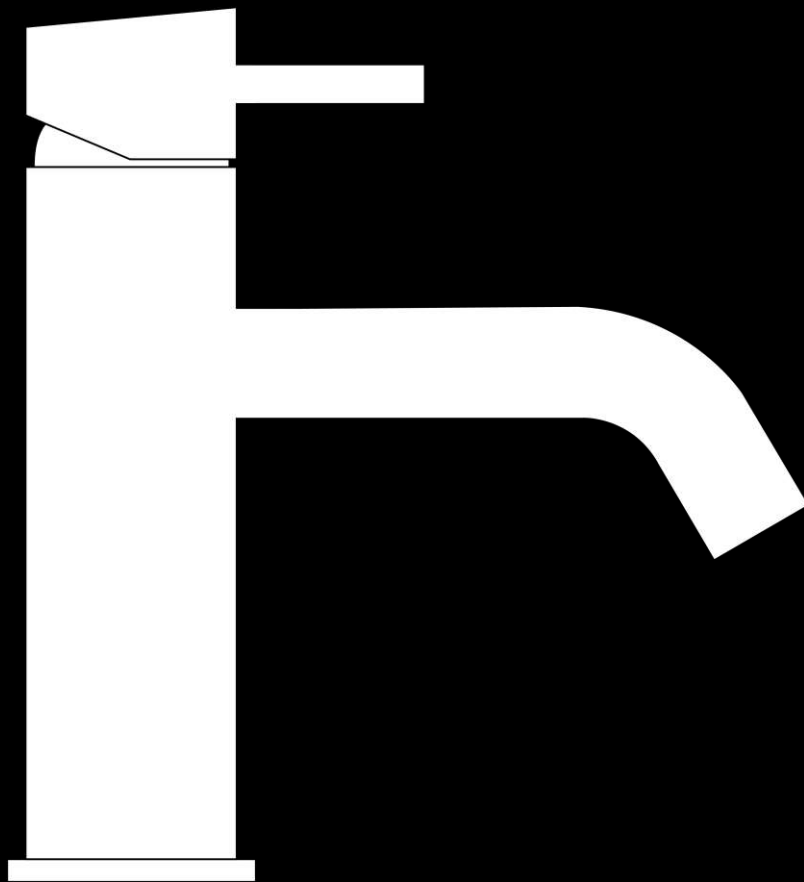
PCR 2019:14 Construction products (version 1.2.5)

This declaration applies to products mentioned in the list, along with their mirror polished, powder- and PVD coated versions and brass equivalents:

QA1100M	QA2290M	QA3180M	QAL3280M	QS5229M	QS5690M	QT1190M	QS3100
QA1150M	QA2291M	QA3190M	QAL3290M	QS5239M	QST1150M	QT1200M	QS3200
QA1200M	QA2390M	QA3280M	QS5100M	QS5279M	QST3190M	QT2100M	QS3300
QA1250M	QA2391M	QA3290M	QS5110M	QS5289M	QST3290M	QR2100M	QT2300M
QA1400M	QA3080M	QA3380M	QS5209M	QS5320M	QT1150M	QR2200M	QT3100
QA2180M	QA3090M	QA3390M	QS5219M	QS5590M	QT1151M	QR2300M	QF6000M
QA2181M	QA2190M	QA2191M					

EPD

d line





# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Escutcheons, toilet indicators & thumb turns

from

**d line**

<b>Programme:</b>	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
<b>Programme operator:</b>	EPD International AB
<b>EPD registration number:</b>	S-P-09167
<b>Publication date:</b>	2023-05-08
<b>Valid until:</b>	2028-05-07

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



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P. 7	Product information
P. 8	LCA information
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P. 13	Environmental Information

# General Information

## Programme information

**Programme:**

The International EPD® System

**Address:**

EPD International AB  
Box 210 60  
SE-100 31 Stockholm  
Sweden

**Website:**

[www.environdec.com](http://www.environdec.com)

**E-mail:**

[info@environdec.com](mailto:info@environdec.com)

## Accountabilities for PCR, LCA and independent, third-party verification

**Product Category Rules (PCR)**

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

Product Category Rules (PCR): Construction products 2019:14 Version  
1.2.5, 2022-11-20  
UN CPC code of 42911

PCR review was conducted by: IVL Swedish Environmental Research  
Institute, Secretariat of the International EPD System.

**Life Cycle Assessment (LCA)**

LCA accountability: *Sigita Židonienė and Silvija Serapinaitė, Vesta  
Consulting [www.vestaconsulting.lt](http://www.vestaconsulting.lt)*

**Third-party verification**

*Independent third-party verification of the declaration and data,  
-according to ISO 14025:2006, via:*

EPD verification by individual verifier

Third-party verifier: *Prof. Ing. Vladimír Kočí, PhD., [vladimir.koci@lca.cz](mailto:vladimir.koci@lca.cz)*

*Approved by: The International EPD® System*

Procedure for follow-up of data during EPD validity involves third party  
verifier:

Yes

No

**Additional info**

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

EPDs within the same product category but registered in different EPD  
programmes, or not compliant with EN 15804, may not be comparable.  
For two EPDs to be comparable, they must be based on the same PCR  
(including the same 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  
equivalent system boundaries and descriptions of data and etc. For further  
information about comparability, see EN 15804 and ISO 14025

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## Company Information

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**Owner of the EPD:**

d line A/S | Jyllingevej 59, kld., 2720 Copenhagen | Denmark  
T: +45 7212 0138 | E: info@dline.com

**Contact:**

Alius Jakušovas | Head of Products  
M: +370 687 50525 | E: alj@dline.com

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**Description of the organisation:**

d line is a heritage Danish design brand conceiving and hand crafting enduring architectural hardware, sanitary ware and solutions for barrier-free living.

Launched in 1971 with the coordinated line of stainless steel architectural products Knud Holscher created for St Catherine's College Oxford, d line has since collaborated with iconic Danish designers including Arne Jacobsen, Tom Dixon and Bjarke Ingels. The brand's ambition is to be universally known, coveted and admired for the uncompromising endurance of its design, craftsmanship and quality.

[dline.com](https://dline.com)



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**Product-related or management system-related certifications:**

Company is ISO certified with certification for ISO 14001:2015 (Environmental Standard).

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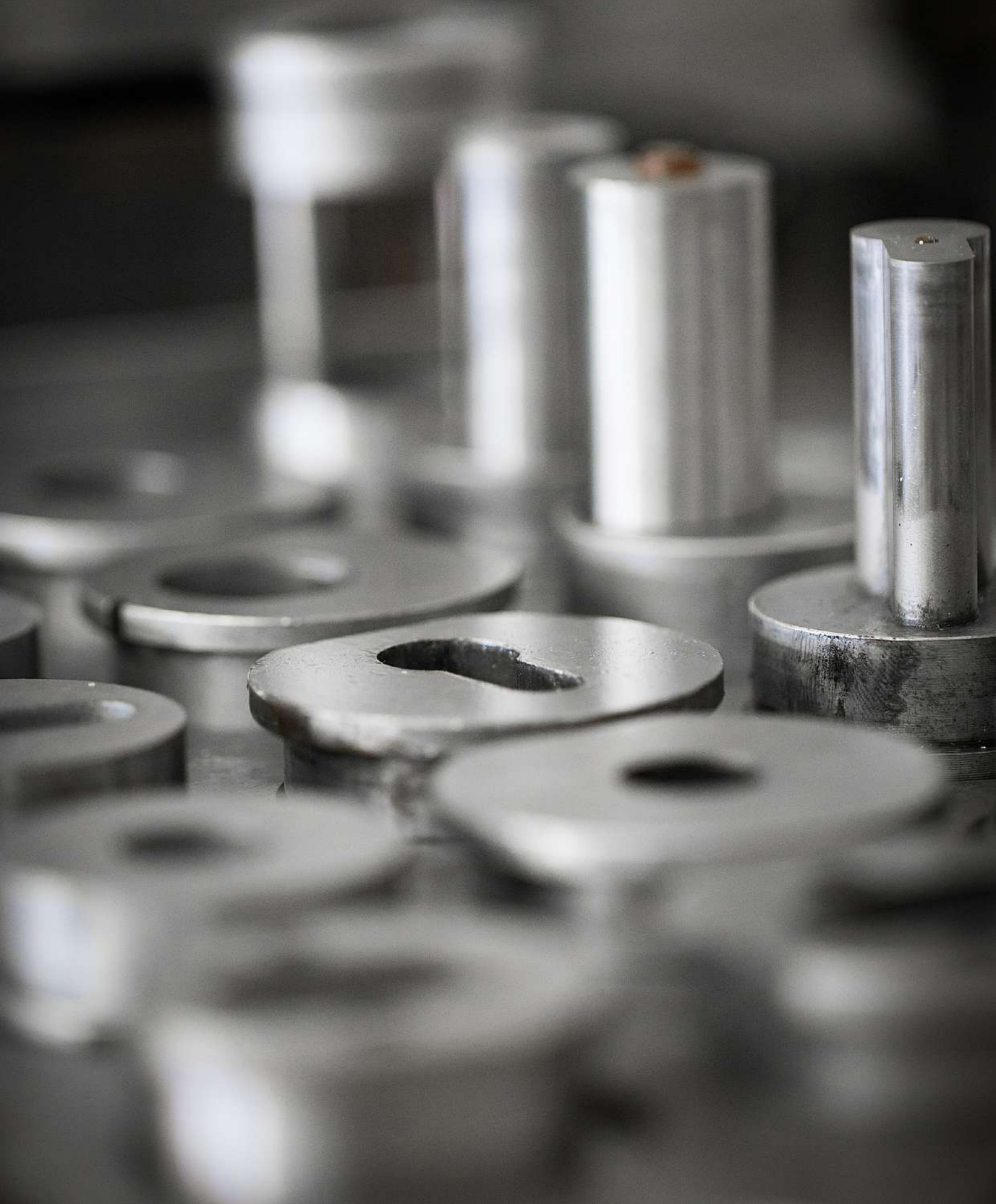
**Name and location of production site(s):**

UAB d line production, J. Basanaviciaus 44, Kaisiadorys, LT-56134, Lithuania



EPD

d line



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## Product Information

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<b>EPD type:</b>	This EPD is single company, product group EPD that covers a group of products – escutcheons, toilet indicators & thumb turns, with reference product toilet indicator. Full range of products identified by items no are presented at the end of this EPD. Products listed differs by finishing colour, powder coating or shape. Some products due to the variations in metals composition exceeds 10% rule, therefore the worst-case scenario, with reference product - toilet indicator (item no. 06203202300) as "worst case product" is declared.
<b>Product name:</b>	Toilet indicator
<b>Product identification:</b>	Item no. - 06203202300
<b>Product description:</b>	Toilet indicator 5V90 AJ
<b>Product application:</b>	Bathrooms, kitchens, living areas, public areas
<b>Technical specification:</b>	Snap on cover, cc 30mm, ASSA Surface finish: satin finished
<b>UN CPC code:</b>	42911
<b>Geographical scope:</b>	Global

# LCA Information

<b>Functional unit:</b>	The declared unit is 1 kg of the product. Declared product mass is 0,142 kg.
<b>Reference service life:</b>	The service life according to producer is 20 years.
<b>Time representativeness:</b>	Primary data was collected internally. The production data refers to the average for the year 2021.
<b>Database(s) and LCA software used:</b>	The Ecoinvent database v.3.6 provides the life cycle inventory data for the raw and process materials obtained from the background system. The LCA software used is One Click LCA.
<b>Description of system boundaries:</b>	Cradle to gate with options, modules A4-B7, modules C1–C4 and module D.

Modules declared, geographical scope, the share of specific data (in GWP-GHG results) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage			Resource recovery stage	
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
<b>Module</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>D</b>
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	>10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; MND = Module Not declared; MNR = Module Not Relevant)

**Data quality:**

The foreground data collected internally is based on yearly production amounts and extrapolations of measurements on specific machines and plants. Overall, the data quality can be described as good. The primary data collection has been done thoroughly.

**Cut-off criteria:**

Life cycle inventory data for a minimum of 99% of total material and energy input flows have been included in the life cycle analysis. However, only materials having in summa less than 1% of the weight of the product were not used in calculations.

**System diagram:**



**More information:**

Product stage:

A1: This stage considers the extraction and processing of raw materials and energy consumption.

A2: The raw materials are transported to the manufacturing plant. In this case, the model includes road transportation of each raw material.

A3: This stage includes the manufacture of products and packaging. It also considers the energy consumption and waste generated at the production plant.

**Production process description:**

- Raw material extraction – Needed raw materials are supplied to be used like tubes, bars, metal sheets, etc.
- Manufacturing – In this stage, necessary production operations are made – turning, milling, cutting, stamping, grinding.
- Quality control – Manufactured parts are inspected by quality control manager visually and technically.
- Packing – Parts/products are securely packaged into the appropriate size boxes.

Construction process stage:

A4: This stage includes transport from the production gate to the construction site where the product shall be installed. Transportation is calculated based on data from manufacturer and a scenario with the parameters described in the following table. The transportation does not cause losses as products are packaged properly.

Parameter	Value/Description
Vehicle type used for transport	EURO 5 truck with a trailer with an average load of 16-32t Freight aircraft
Distance	59 % of production: Plane – 2157 km,  41 % of production: Truck – 1551 km.
Capacity utilization	100 % of the capacity in volume (truck, including empty return), 100 % of the capacity in volume (plane, including empty return)

A5: This module describes impacts related to installing the product to the building. Since this is a manual process, no energy or fuels is needed for installation. Product packaging waste are declared.

Use stage:

B1, B3, B4, B6, B7: These modules were considered, but evaluated as not relevant for the product and considered as zero.

B2: Maintenance - covers the combination of all planned technical and associated administrative actions during the service life to maintain the product installed in a building, as well as preserve the aesthetic qualities of the product. The product needs to be cleaned on regular basis with dry soft cloth.

B5: Refurbishment – product service life is set to 20 years. After or during this warranty period, the product is offered to be refurbished to extend its life with another 20 years. In this phase, materials needed to refurbish 1 kg of product is declared. Read more on page 16.

End of Life stage:

C1: This module describes impacts related to dismantling the product at the product end-of-life stage. Since this is a manual process, the environmental impacts are negligible.

C2: This module describes the transport of discarded product to final disposal. It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed that it has the same weight as the declared product. All the end-of-life product is assumed to be sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is lorry which is the most common.

C3: This module describes waste processing for reuse, recovery, or recycling. It is assumed that 90% of stainless steel, steel, aluminium and brass will be collected separately and transformed into secondary material in a recycling plant.

C4: The remaining 10% of metals are assumed to be sent to the landfill.

Resource recovery stage (D):

D: The benefits of recyclable waste generated in the module C3 are considered in module D. The recycled stainless steel, steel, aluminium and brass has been modelled to avoid use of primary materials. The scrap content in the studied product has been acknowledged and only the mass of primary materials in the product provides the benefit to avoid double counting.

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## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Stainless steel	0,356	0	0
Steel	0,273	0	0
Aluminium	0,167	0	0
Brass	0,205	0	0
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>0</b>
Packaging materials	Weight, kg	Weight-% (versus the product)	
Plastic	0,038	3,8	
Cardboard	0,038	3,8	
<b>TOTAL</b>	<b>0,076</b>	<b>7,6</b>	

Products do not contain any REACH SVHC substances in amounts greater than 0,1% (1000 ppm).

# Environmental Information

## Potential environmental impact – mandatory indicators according to EN 15804

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	6,59E0	4,52E-1	1,22E-2	0E0	0E0	0E0	0E0	3E0	0E0	0E0	0E0	4,54E-3	2,22E-2	5,27E-4	-1,05E0
GWP-biogenic	kg CO <sub>2</sub> eq.	8,39E-2	1,8E-4	1,94E-2	0E0	0E0	0E0	0E0	6,56E-2	0E0	0E0	0E0	3,3E-6	-1,27E-3	1,04E-6	1,82E-4
GWP-luluc	kg CO <sub>2</sub> eq.	3,19E-2	4,69E-5	1,06E-5	0E0	0E0	0E0	0E0	1,52E-2	0E0	0E0	0E0	1,37E-6	2,52E-5	1,56E-7	-1,37E-2
GWP-total	kg CO <sub>2</sub> eq.	6,7E0	4,49E-1	3,17E-2	0E0	0E0	0E0	0E0	3,08E0	0E0	0E0	0E0	4,55E-3	2,1E-2	5,28E-4	-1,06E+0
ODP	kg CFC 11 eq.	6,44E-7	1,03E-7	1,45E-9	0E0	0E0	0E0	0E0	5,05E-7	0E0	0E0	0E0	1,07E-9	3,19E-9	2,17E-10	-8,27E-8
AP	mol H <sup>+</sup> eq.	1,2E-1	2,28E-3	6,28E-5	0E0	0E0	0E0	0E0	6,55E-2	0E0	0E0	0E0	1,91E-5	2,69E-4	5E-6	-5,59E-3
EP-freshwater	kg P eq.	9,6E-4	1,47E-6	2,61E-7	0E0	0E0	0E0	0E0	4,72E-4	0E0	0E0	0E0	3,7E-8	1,53E-6	6,36E-9	-4,99E-5
EP-marine	kg N eq.	1,11E-2	8,14E-4	2,21E-5	0E0	0E0	0E0	0E0	5,97E-3	0E0	0E0	0E0	5,75E-6	5,94E-5	1,72E-6	-7,72E-4
EP-terrestrial	mol N eq.	1,42E-1	8,93E-3	2,03E-4	0E0	0E0	0E0	0E0	7,64E-2	0E0	0E0	0E0	6,35E-5	6,89E-4	1,9E-5	-8,35E-3
POCP	kg NMVOC eq.	4E-2	2,38E-3	6,78E-5	0E0	0E0	0E0	0E0	2,04E-2	0E0	0E0	0E0	2,04E-5	1,88E-4	5,51E-6	-4,28E-3
ADP-minerals & metals*	kg Sb eq.	6,18E-3	1,77E-6	2,11E-7	0E0	0E0	0E0	0E0	3,34E-3	0E0	0E0	0E0	7,75E-8	1,23E-6	4,81E-9	-2,89E-6
ADP-fossil*	MJ	8,75E1	6,49E0	1,71E-1	0E0	0E0	0E0	0E0	4,69E1	0E0	0E0	0E0	7,07E-2	3,08E-1	1,47E-2	-1,2E1
WDP*	m <sup>3</sup>	4,38E0	9,06E-3	3,16E-3	0E0	0E0	0E0	0E0	1,27E0	0E0	0E0	0E0	2,63E-4	4,37E-3	6,81E-4	-1,1E-1
Acronyms	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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as the limited experience with the indicator.

## Potential environmental impact – additional mandatory and voluntary indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	6,59E0	4,52E-1	1,22E-2	0E0	0E0	0E0	0E0	3E0	0E0	0E0	0E0	4,54E-3	2,22E-2	5,27E-4	-1,05E0

## Use of resources

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2,07E1	3,28E-2	6,83E-3	0E0	0E0	0E0	0E0	1,34E1	0E0	0E0	0E0	8,9E-4	4,83E-2	1,19E-4	-3,5E0
PERM	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PERT	MJ	2,07E1	3,28E-2	6,83E-3	0E0	0E0	0E0	0E0	1,34E1	0E0	0E0	0E0	8,9E-4	4,83E-2	1,19E-4	-3,5E0
PENRE	MJ	8,56E1	6,49E0	1,71E-1	0E0	0E0	0E0	0E0	4,65E1	0E0	0E0	0E0	7,07E-2	3,08E-1	1,47E-2	-1,2E1
PENRM	MJ	1,82E0	0E0	0E0	0E0	0E0	0E0	0E0	4,14E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PENRT	MJ	8,75E1	6,49E0	1,71E-1	0E0	0E0	0E0	0E0	4,69E1	0E0	0E0	0E0	7,07E-2	3,08E-1	1,47E-2	-1,2E1
SM	kg	3,49E-1	0E0	0E0	0E0	0E0	0E0	0E0	5,04E-2	0E0	0E0	0E0	0E0	0E0	0E0	3,09E-1
RSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
NRSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
FW	m <sup>3</sup>	0.0833	6,58E-4	4,24E-5	0E0	0E0	0E0	0E0	3,89E-2	0E0	0E0	0E0	1,47E-5	1,26E-4	1,61E-5	-6,75E-3

### Acronyms

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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste production

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	2,33E0	2,79E-3	8,04E-4	0E0	0E0	0E0	0E0	2,39E-1	0E0	0E0	0E0	6,87E-5	0E0	1,37E-5	-2,01E-1
Non-hazardous waste	kg	6,05E1	1,76E-1	2,71E-2	0E0	0E0	0E0	0E0	3,15E1	0E0	0E0	0E0	7,6E-3	0E0	1E-1	-2,05E0
Radioactive waste	kg	3,5E-4	4,63E-5	6,69E-7	0E0	0E0	0E0	0E0	2,8E-4	0E0	0E0	0E0	4,85E-7	0E0	9,74E-8	-4,62E-5

## Output flows

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Material for recycling	kg	1E-1	0E0	1,52E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	9E-1	0E0	0E0
Materials for energy recovery	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Exported energy, electricity	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0

## Biogenic carbon content

### Results per declared unit

Biogenic carbon content	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

## Re-handle® your product: a disruptive refurbish system to reduce our carbon footprint between 54-91%



d line means business when they establish a circular system to keep their products in use for up to 100 years. Their purpose: to challenge you to choose the enduring solution and reuse, rather than to produce new.

Essentially, d line's Re-handle® concept encourages customers to return, refinish and have d line products refitted in their buildings, to keep them in their life cycle for as long as possible. With each Re-handle the 20-year product warranty period is renewed, and d line want you to reuse the same product up to 4 times, so that it can live for up to 100 years.

### Sometimes good as new is better

In this waste-aware environment, Architects and Specifiers look for solutions that are fully documented and thought within their built environment. Now more than ever, we see a movement towards data-driven and future-thinking decision making.

Whilst Environmental Product Declarations (EPDs) are a powerful tool for taking into account energy and resource consumption as well as environmental impacts over the entire life cycle of a product, it requires that a product is fully declared across the entire life cycle in order to make fully informed decisions. Today, it is only mandatory to declare the product is its production phase, thus losing out on vital information across the remaining life cycle, such as use, end of life and recycling.

d line has made it their mission to challenge the industry for undercutting decision makers with correct data and have for that reason decided to fully disclose the complete global warming potential (GWP) in their EPDs. This means full declaration across its entire product life cycle, from production, use, refurbishment and right through to recycling. That's how they can confidently state, that by Re-handling a d line product, you will dramatically reduce the carbon footprint between 54-91% depending on the product, compared to specifying new.

Look for the GWP values in section B5 Refurbishment for the carbon footprint of Re-handling the product, thus making it applicable to be reused in a building as if it were new. It is not possible to Re-handle powder- and PVD coated variants.



## References

General Programme Instructions of the International EPD® System. Version 4.0.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

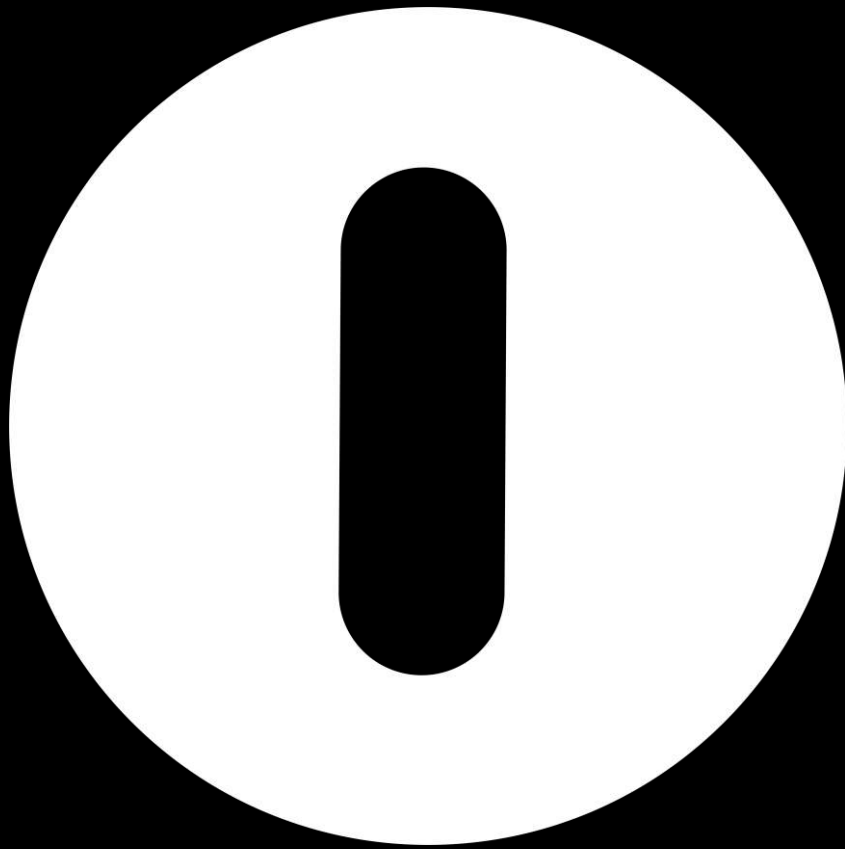
PCR 2019:14 Construction products (version 1.2.5)

This declaration applies to products mentioned in the list, along with their mirror polished, powder- and PVD coated versions and brass equivalents:

06191701130	06203202370	14343802130	14341002509	14343502215	14344402168	14345402081	14347502309
06191702138	06203202381	14344102073	14341102163	14343602139	14344402184	14346002108	14347502311
06203202038	06203202382	14344402117	14341102171	14343702419	14345102061	14346502100	14347502457
06203202180	06203202390	14345102117	14341102287	14343702440	14345102073	14346902150	14347502503
06203202300	06203301038	14345102184	14341202541	14343702450	14345102087	14346902151	14347502506
06203202380	06203301039	14347602028	14341302460	14344102067	14345102133	14347002055	14347502609
06203302380	06203301090	14972002047	14341602160	14344102083	14345102168	14347002101	14347602110
06191702130	06203301180	14323002208	14341602280	14344102113	14345102214	14347002152	14347602120
06191801131	06203301207	14323002551	14341602500	14344102130	14345202090	14347002306	14347802102
06191801138	06203301208	14323502804	14341702460	14344102164	14345202138	14347002454	14347802150
06191801140	06203301209	14323702401	14341802150	14344102181	14345302060	14347002501	14347802154
06191802131	06203301380	14324002104	14341802160	14344102201	14345302073	14347102103	14347802300
06203201202	06203301390	14324002201	14341802280	14344102211	14345302086	14347102157	14347802450
06203201301	06203301391	14324102300	14341802500	14344202037	14345302116	14347102165	14347802500
06203201380	06203302038	14324102350	14343002212	14344202053	14345302132	14347102335	14347902021
06203201390	06203302039	14324502808	14343002221	14344202096	14345302167	14347102500	14347902030
06203201391	06203302091	14324702300	14343002255	14344202134	14345302183	14347502104	14972502030
06203201392	06203302169	14324702408	14343002410	14344402061	14345302201	14347502124	14972574041
06203202030	06203302207	14341002169	14343002417	14344402087	14345302213	14347502154	14972574050
06203202202	14343502223	14341002260	14343002440	14344402133	14345402064	14347502155	14972574051
06203202368	14343502258	14341002282	14343202149				

**EPD**

**d line**





# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Lever handles

from

**d line**

<b>Programme:</b>	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
<b>Programme operator:</b>	EPD International AB
<b>EPD registration number:</b>	S-P-09168
<b>Publication date:</b>	2023-05-08
<b>Valid until:</b>	2028-05-07

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



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Content

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P. 8	LCA information
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P. 13	Environmental Information

# General Information

## Programme information

**Programme:**

The International EPD® System

**Address:**

EPD International AB  
Box 210 60  
SE-100 31 Stockholm  
Sweden

**Website:**

[www.environdec.com](http://www.environdec.com)

**E-mail:**

[info@environdec.com](mailto:info@environdec.com)

## Accountabilities for PCR, LCA and independent, third-party verification

**Product Category Rules (PCR)**

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

Product Category Rules (PCR): Construction products 2019:14 Version  
1.2.5, 2022-11-20  
UN CPC code of 42911

PCR review was conducted by: IVL Swedish Environmental Research  
Institute, Secretariat of the International EPD System.

**Life Cycle Assessment (LCA)**

LCA accountability: *Sigita Židonienė and Silvija Serapinaitė, Vesta  
Consulting [www.vestaconsulting.lt](http://www.vestaconsulting.lt)*

**Third-party verification**

*Independent third-party verification of the declaration and data,  
-according to ISO 14025:2006, via:*

EPD verification by individual verifier

Third-party verifier: *Prof. Ing. Vladimír Kočí, PhD., [vladimir.koci@lca.cz](mailto:vladimir.koci@lca.cz)*

*Approved by: The International EPD® System*

Procedure for follow-up of data during EPD validity involves third party  
verifier:

Yes

No

**Additional info**

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

EPDs within the same product category but registered in different EPD  
programmes, or not compliant with EN 15804, may not be comparable.  
For two EPDs to be comparable, they must be based on the same PCR  
(including the same 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  
equivalent system boundaries and descriptions of data and etc. For  
further information about comparability, see EN 15804 and ISO 14025

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## Company Information

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**Owner of the EPD:**

d line A/S | Jyllingevej 59, kld., 2720 Copenhagen | Denmark  
T: +45 7212 0138 | E: info@dline.com

**Contact:**

Alius Jakušovas | Head of Products  
M: +370 687 50525 | E: alj@dline.com

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**Description of the organisation:**

d line is a heritage Danish design brand conceiving and hand crafting enduring architectural hardware, sanitary ware and solutions for barrier-free living.

Launched in 1971 with the coordinated line of stainless steel architectural products Knud Holscher created for St Catherine's College Oxford, d line has since collaborated with iconic Danish designers including Arne Jacobsen, Tom Dixon and Bjarke Ingels. The brand's ambition is to be universally known, coveted and admired for the uncompromising endurance of its design, craftsmanship and quality.

[dline.com](https://dline.com)



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**Product-related or management system-related certifications:**

Company is ISO certified with certification for ISO 14001:2015 (Environmental Standard).

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**Name and location of production site(s):**

UAB d line production, J. Basanaviciaus 44, Kaisiadorys, LT-56134, Lithuania



EPD

d line



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## Product Information

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<b>Type of EPD:</b>	This EPD is single company, product specific EPD that covers a group of products – lever handles, with reference product Lever handle AJ. Full range of products identified by items no are presented at the end of this EPD. Products listed differs by finishing colour, powder coating or shape. Some products due to the thickness or some variations in metals composition exceeds 10% rule, therefore the worst-case scenario, with reference product - lever handle (item no. 12404374001) as “worst case product” is declared.
<b>Product name:</b>	Lever handle AJ
<b>Product identification:</b>	Item no. - 12404374001
<b>Product description:</b>	Lever handle AJ small, SS
<b>Product application:</b>	Bathrooms, kitchens, living areas, public areas
<b>Product standards:</b>	Certified in accordance with EN1906 (class 4) Certified in accordance with EN1634
<b>Technical specification:</b>	Dimensions: 124x50x80mm Surface finish: satin finished
<b>UN CPC code:</b>	42911
<b>Geographical scope:</b>	Global

# LCA Information

<b>Functional unit / declared unit:</b>	The declared unit is 1 kg of the product. Declared product mass is 0,498 kg.
<b>Reference service life: [where applicable]</b>	The service life according to producer is 20 years.
<b>Time representativeness:</b>	Primary data was collected internally. The production data refers to the average for the year 2021.
<b>Database(s) and LCA software used:</b>	The Ecoinvent database v.3.6 provides the life cycle inventory data for the raw and process materials obtained from the background system. The LCA software used is One Click LCA.
<b>Description of system boundaries:</b>	Cradle to gate with options, modules A4-B7, modules C1–C4 and module D.

Modules declared, geographical scope, the share of specific data (in GWP-GHG results) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage			Resource recovery stage	
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
<b>Module</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>D</b>
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	>10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; MND = Module Not declared; MNR = Module Not Relevant)

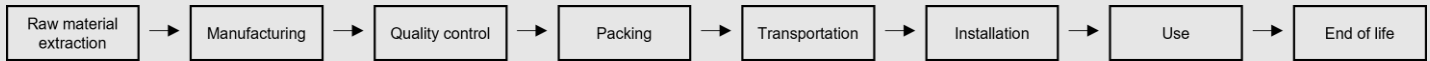
**Data quality:**

The foreground data collected internally is based on yearly production amounts and extrapolations of measurements on specific machines and plants. Overall, the data quality can be described as good. The primary data collection has been done thoroughly.

**Cut-off criteria:**

Life cycle inventory data for a minimum of 99% of total material and energy input flows have been included in the life cycle analysis. However, only materials having in summa less than 1% of the weight of the product were not used in calculations.

**System diagram:**



**More information:**

Product stage:

A1: This stage considers the extraction and processing of raw materials and energy consumption.

A2: The raw materials are transported to the manufacturing plant. In this case, the model includes road transportation of each raw material.

A3: This stage includes the manufacture of products and packaging. It also considers the energy consumption and waste generated at the production plant.

**Production process description:**

- Raw material extraction – Needed raw materials are supplied to be used like tubes, bars, metal sheets, etc.
- Manufacturing – In this stage, necessary production operations are made – turning, milling, cutting, stamping, grinding.
- Quality control – Manufactured parts are inspected by quality control manager visually and technically.
- Packing – Parts/products are securely packaged into the appropriate size boxes.

Construction process stage:

A4: This stage includes transport from the production gate to the construction site where the product shall be installed. Transportation is calculated based on data from manufacturer and a scenario with the parameters described in the following table. The transportation does not cause losses as products are packaged properly.

Parameter	Value/Description
Vehicle type used for transport	EURO 5 truck with a trailer with an average load of 16-32t Freight aircraft
Distance	59 % of production: Plane – 2157 km,  41 % of production: Truck – 1551 km.
Capacity utilization	100 % of the capacity in volume (truck, including empty return), 100 % of the capacity in volume (plane, including empty return)

A5: This module describes impacts related to installing the product to the building. Since this is a manual process, no energy or fuels is needed for installation. Product packaging waste are declared.

Use stage:

B1, B3, B4, B6, B7: These modules were considered, but evaluated as not relevant for the product and considered as zero.

B2: Maintenance - covers the combination of all planned technical and associated administrative actions during the service life to maintain the product installed in a building, as well as preserve the aesthetic qualities of the product. The product needs to be cleaned on regular basis with dry soft cloth.

B5: Refurbishment – product service life is set to 20 years. After or during this warranty period, the product is offered to be refurbished to extend its life with another 20 years. In this phase, materials needed to refurbish 1 kg of product is declared. Read more on page 16.

End of Life stage:

C1: This module describes impacts related to dismantling the product at the product end-of-life stage. Since this is a manual process, the environmental impacts are negligible.

C2: This module describes the transport of discarded product to final disposal. It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed that it has the same weight as the declared product. All the end-of-life product is assumed to be sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is lorry which is the most common.

C3: This module describes waste processing for reuse, recovery, or recycling. It is assumed that 90% of stainless steel, steel, aluminium and brass will be collected separately and transformed into secondary material in a recycling plant.

C4: The remaining 10% of metals and mounting plastic parts are assumed to be sent to the landfill.

Resource recovery stage (D):

D: The benefits of recyclable waste generated in the module C3 are considered in module D. The recycled stainless steel, steel, aluminium and brass has been modelled to avoid use of primary materials. The scrap content in the studied product has been acknowledged and only the mass of primary materials in the product provides the benefit to avoid double counting.

EPD

d line



## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Stainless steel	0,815	24,4	0
Steel	0,097	56	0
Aluminium	0,036	45	0
Brass	0,040	31	0
PVC	0,012	0	0
<b>TOTAL</b>	<b>1</b>	<b>28,2</b>	<b>0</b>
Packaging materials	Weight, kg	Weight-% (versus the product)	
Plastic	0,006	0,6	
Cardboard	0,066	6,6	
<b>TOTAL</b>	<b>0,072</b>	<b>7,2</b>	

Products do not contain any REACH SVHC substances in amounts greater than 0,1% (1000 ppm).

# Environmental Information

## Potential environmental impact – mandatory indicators according to EN 15804

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	7,84E0	5,88E-1	5,2E-3	0E0	0E0	0E0	0E0	2,96E0	0E0	0E0	0E0	4,54E-3	2,19E-2	2,91E-2	-1,07E0
GWP-biogenic	kg CO <sub>2</sub> eq.	9,57E-2	2,12E-4	3,28E-2	0E0	0E0	0E0	0E0	2,78E-2	0E0	0E0	0E0	3,3E-6	-1,26E-3	3,04E-6	5,66E-3
GWP-luluc	kg CO <sub>2</sub> eq.	1,97E-2	4,74E-5	3,73E-6	0E0	0E0	0E0	0E0	1,29E-2	0E0	0E0	0E0	1,37E-6	2,49E-5	3,25E-7	-3,12E-3
GWP-total	kg CO <sub>2</sub> eq.	7,95E0	5,85E-1	3,8E-2	0E0	0E0	0E0	0E0	3E0	0E0	0E0	0E0	4,55E-3	2,07E-2	2,91E-2	-1,07E+0
ODP	kg CFC 11 eq.	8,96E-7	1,34E-7	8,72E-10	0E0	0E0	0E0	0E0	4,28E-7	0E0	0E0	0E0	1,07E-9	3,15E-9	2,82E-10	-4,35E-8
AP	mol H <sup>+</sup> eq.	6,07E-2	3,03E-3	3,84E-5	0E0	0E0	0E0	0E0	3,01E-2	0E0	0E0	0E0	1,91E-5	2,66E-4	1,15E-5	-1,41E-2
EP-freshwater	kg P eq.	3,74E-4	1,57E-6	8,82E-8	0E0	0E0	0E0	0E0	2,15E-4	0E0	0E0	0E0	3,7E-8	1,51E-6	1,37E-8	-1,21E-4
EP-marine	kg N eq.	1,04E-2	1,1E-3	1,79E-5	0E0	0E0	0E0	0E0	4,69E-3	0E0	0E0	0E0	5,75E-6	5,87E-5	4,78E-6	-1,23E-3
EP-terrestrial	mol N eq.	1,2E-1	1,2E-2	1,39E-4	0E0	0E0	0E0	0E0	5,52E-2	0E0	0E0	0E0	6,35E-5	6,81E-4	5,04E-5	-1,51E-2
POCP	kg NMVOC eq.	3,5E-2	3,15E-3	4,8E-5	0E0	0E0	0E0	0E0	1,53E-2	0E0	0E0	0E0	2,04E-5	1,86E-4	1,31E-5	-6,78E-3
ADP-minerals & metals*	kg Sb eq.	1,35E-3	1,4E-6	9,13E-8	0E0	0E0	0E0	0E0	1,16E-3	0E0	0E0	0E0	7,75E-8	1,22E-6	1,48E-8	-6,42E-4
ADP-fossil*	MJ	1,01E2	8,36E0	7,36E-2	0E0	0E0	0E0	0E0	4,11E1	0E0	0E0	0E0	7,07E-2	3,04E-1	1,98E-2	-9,19E0
WDP*	m <sup>3</sup>	5,09E0	9,17E-3	8,04E-4	0E0	0E0	0E0	0E0	1,06E0	0E0	0E0	0E0	2,63E-4	4,31E-3	2,06E-3	-3,03E-1

Acronyms  
 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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as the limited experience with the indicator.

## Potential environmental impact – additional mandatory and voluntary indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	7,84E0	5,88E-1	5,2E-3	0E0	0E0	0E0	0E0	2,96E0	0E0	0E0	0E0	4,54E-3	2,19E-2	2,91E-2	-1,07E0

## Use of resources

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2,03E1	3,41E-2	2,15E-3	0E0	0E0	0E0	0E0	7,67E0	0E0	0E0	0E0	8,9E-4	4,77E-2	3,15E-4	-9,84E-1
PERM	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PERT	MJ	2,03E1	3,41E-2	2,15E-3	0E0	0E0	0E0	0E0	7,67E0	0E0	0E0	0E0	8,9E-4	4,77E-2	3,15E-4	-9,84E-1
PENRE	MJ	1E2	8,36E0	7,36E-2	0E0	0E0	0E0	0E0	4,08E1	0E0	0E0	0E0	7,07E-2	3,04E-1	1,98E-2	-9,19E0
PENRM	MJ	5,35E-1	0E0	0E0	0E0	0E0	0E0	0E0	2,07E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PENRT	MJ	1,01E2	8,36E0	7,36E-2	0E0	0E0	0E0	0E0	4,11E1	0E0	0E0	0E0	7,07E-2	3,04E-1	1,98E-2	-9,19E0
SM	kg	2,11E-1	0E0	0E0	0E0	0E0	0E0	0E0	1,21E-1	0E0	0E0	0E0	0E0	0E0	0E0	4,31E-1
RSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
NRSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
FW	m <sup>3</sup>	0.0476	7,34E-4	1,89E-5	0E0	0E0	0E0	0E0	1,91E-2	0E0	0E0	0E0	1,47E-5	1,24E-4	6,34E-5	-1,24E-2

### Acronyms

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 = Use of net fresh water

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste production

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,94E0	3,02E-3	2,41E-4	0E0	0E0	0E0	0E0	6,18E-1	0E0	0E0	0E0	6,87E-5	0E0	4,11E-4	-1,59E-1
Non-hazardous waste	kg	2,1E1	1,41E-1	1,8E-2	0E0	0E0	0E0	0E0	1,25E1	0E0	0E0	0E0	7,6E-3	0E0	1,11E-1	-7,07E0
Radioactive waste	kg	4,19E-4	6E-5	4E-7	0E0	0E0	0E0	0E0	2,16E-4	0E0	0E0	0E0	4,85E-7	0E0	1,1E-7	-8,95E-6

## Output flows

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Material for recycling	kg	1E-1	0E0	1,44E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	8,89E-1	0E0	0E0
Materials for energy recovery	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Exported energy, electricity	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0

## Biogenic carbon content

### Results per declared unit

Biogenic carbon content	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

## Re-handle® your product: a disruptive refurbish system to reduce our carbon footprint between 54-91%



d line means business when they establish a circular system to keep their products in use for up to 100 years. Their purpose: to challenge you to choose the enduring solution and reuse, rather than to produce new.

Essentially, d line's Re-handle® concept encourages customers to return, refinish and have d line products refitted in their buildings, to keep them in their life cycle for as long as possible. With each Re-handle the 20-year product warranty period is renewed, and d line want you to reuse the same product up to 4 times, so that it can live for up to 100 years.

### Sometimes good as new is better

In this waste-aware environment, Architects and Specifiers look for solutions that are fully documented and thought within their built environment. Now more than ever, we see a movement towards data-driven and future-thinking decision making.

Whilst Environmental Product Declarations (EPDs) are a powerful tool for taking into account energy and resource consumption as well as environmental impacts over the entire life cycle of a product, it requires that a product is fully declared across the entire life cycle in order to make fully informed decisions. Today, it is only mandatory to declare the product is its production phase, thus losing out on vital information across the remaining life cycle, such as use, end of life and recycling.

d line has made it their mission to challenge the industry for undercutting decision makers with correct data and have for that reason decided to fully disclose the complete global warming potential (GWP) in their EPDs. This means full declaration across its entire product life cycle, from production, use, refurbishment and right through to recycling. That's how they can confidently state, that by Re-handling a d line product, you will dramatically reduce the carbon footprint between 54-91% depending on the product, compared to specifying new.

Look for the GWP values in section B5 Refurbishment for the carbon footprint of Re-handling the product, thus making it applicable to be reused in a building as if it were new. It is not possible to Re-handle powder- and PVD coated variants.



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## References

General Programme Instructions of the International EPD® System. Version 4.0.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

PCR 2019:14 Construction products (version 1.2.5)

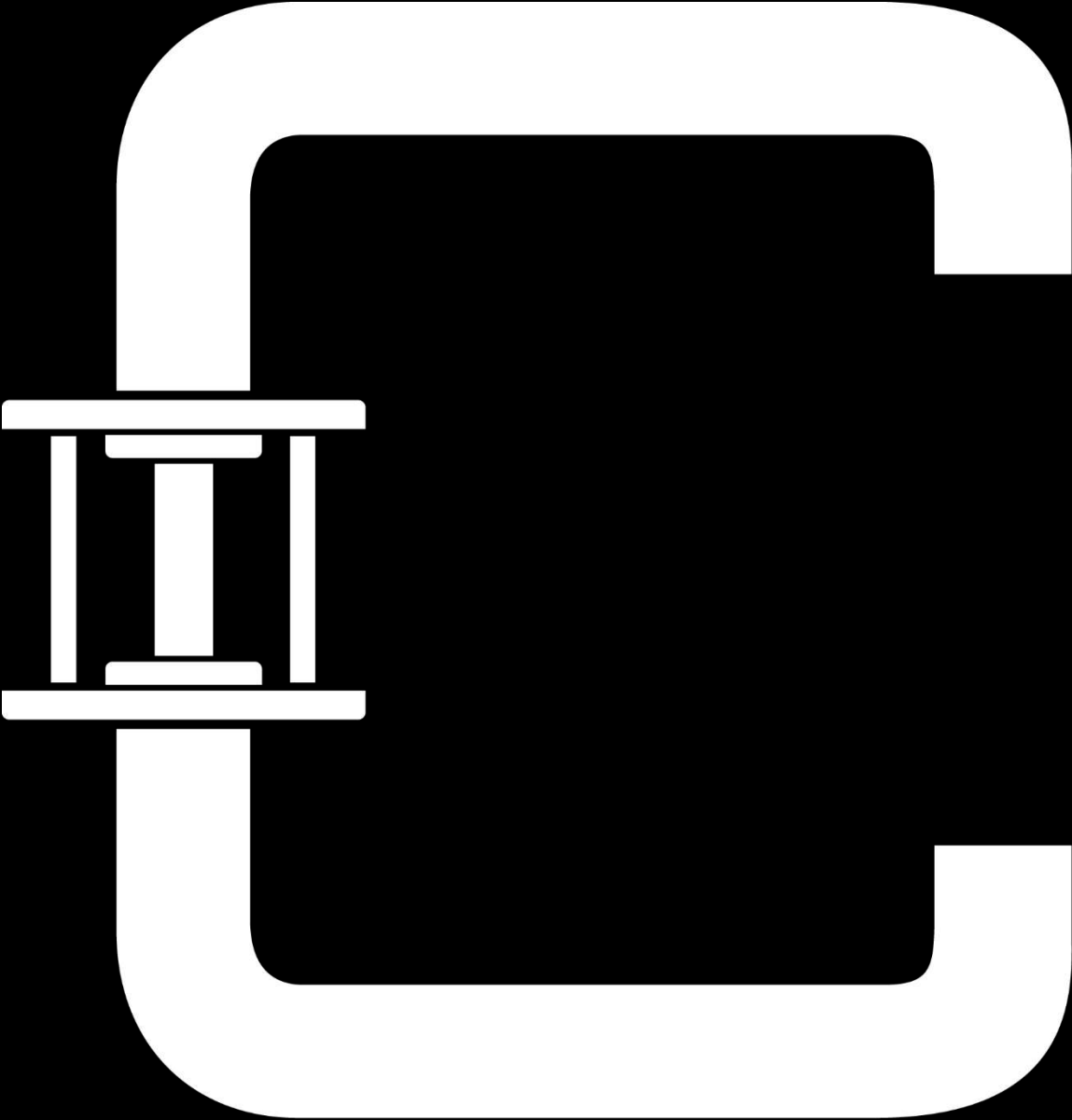
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This declaration applies to products mentioned in the list, along with their mirror polished, powder- and PVD coated versions and brass equivalents:

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12404002011	14023602010	14041202900	14121802050	14161602028	14191602014	14241002920	14172002800
12404074011	14033902902	14041602007	14121902010	14161602036	14191602022	14241002930	14172002900
12404074911	14101002901	14041602011	14121902901	14161602702	14191602900	14241102010	14173002700
12404074921	14101102018	14041602029	14121902902	14161602703	14191902901	14241602010	14173002908
12404074923	14101202012	14041602908	14125602010	14161602907	14191902902	14241602020	14301002800
12404074931	14121802010	14041902010	14131002905	14161702010	14201002908	14241602920	14301002900
12404074933	14141002903	14041902901	14131102012	14161702020	14201102010	14241902932	14301102020
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12404102900	14151302010	14042002011	14131602015	14161902010	14201402020	14243002930	14301602010
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12404201038	14183902902	14042102900	14131602902	14161902901	14201602010	14243602930	14301602905
12404201901	14203002900	14045602010	14135602010	14161902902	14201702012	14245602010	14305002908
12404202030	14203602030	14045602900	14135602900	14163002907	14201702021	14251002900	14305602010
12404202038	14243602920	14051002900	14141102020	14163602017	14201702047	14251102010	14311002700
12404374001	14251702900	14051102010	14141402010	14163602025	14201702900	14251102020	14311002800
12404374010	14253002900	14051202010	14141402900	14163602904	14203602010	14251102900	14311002900
12404374901	14253602010	14051602017	14141602030	14163702020	14203602900	14251602010	14311102010
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12405201030	14021202900	14101602011	14151102010	14181602024	14211602010	14261902901	14313002700
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12405202038	14021702010	14101602908	14151402010	14181602900	14211702010	14271102920	14315602900
12405301003	14021902010	14101802030	14151402900	14181602903	14211702020	14271202010	14001602020
12405374003	14021902901	14101802040	14151602010	14181702035	14211702040	14271602902	14041202010
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12405401038	14023602900	14101902010	14151702010	14181902901	14213602020	14171102020	14191102020
12405474030	14023702900	14101902050	14151702020	14181902902	14213702010	14304002019	14233602010
12405474038	14023902902	14101902901	14151702030	14183002903	14213702020	14305002910	14171802010
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12405474902	14031002900	14105002900	14151702900	14183602021	14213702900	14171002800	14041102900
12405474903	14031102900	14105602010	14151902010	14183602030	14231002900	14171002908	14121602017
12405474904	14031602010	14121002907	14155702010	14183602901	14231102010	14171102010	14161202020
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12405502011	14031602140	14121102020	14161102017	14185002120	14231602010	14171202900	14231902902
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12405674003	14041102010	14121202900	14161202010	14191002900	14231902901	14171602034	

EPD

d line





# Environmental Product Declaration



In accordance with ISO 14025:2006 and EN 15804:2012+A2:2019/AC:2021 for:

## Pull handles

from

**d line**

<b>Programme:</b>	The International EPD® System, <a href="http://www.environdec.com">www.environdec.com</a>
<b>Programme operator:</b>	EPD International AB
<b>EPD registration number:</b>	S-P-09169
<b>Publication date:</b>	2023-05-08
<b>Valid until:</b>	2028-05-07

An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at [www.environdec.com](http://www.environdec.com)



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## Content

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# General Information

## Programme information

**Programme:**  
The International EPD® System

**Address:**  
EPD International AB  
Box 210 60  
SE-100 31 Stockholm  
Sweden

**Website:**  
[www.environdec.com](http://www.environdec.com)

**E-mail:**  
info@environdec.com

## Accountabilities for PCR, LCA and independent, third-party verification

### Product Category Rules (PCR)

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

Product Category Rules (PCR): Construction products 2019:14 Version  
1.2.5, 2022-11-20  
UN CPC code of 42911

PCR review was conducted by: IVL Swedish Environmental Research  
Institute, Secretariat of the International EPD System.

### Life Cycle Assessment (LCA)

LCA accountability: *Sigita Židonienė and Silvija Serapinaitė, Vesta  
Consulting [www.vestaconsulting.lt](http://www.vestaconsulting.lt)*

### Third-party verification

*Independent third-party verification of the declaration and data,  
-according to ISO 14025:2006, via:*

EPD verification by individual verifier

Third-party verifier: *Prof. Ing. Vladimír Kočí, PhD., [vladimir.koci@lca.cz](mailto:vladimir.koci@lca.cz)*

*Approved by: The International EPD® System*

Procedure for follow-up of data during EPD validity involves third party  
verifier:

Yes                       No

### Additional info

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

EPDs within the same product category but registered in different EPD  
programmes, or not compliant with EN 15804, may not be comparable.  
For two EPDs to be comparable, they must be based on the same PCR  
(including the same 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  
equivalent system boundaries and descriptions of data and etc. For  
further information about comparability, see EN 15804 and ISO 14025

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## Company Information

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**Owner of the EPD:**

d line A/S | Jyllingevej 59, kld., 2720 Copenhagen | Denmark  
T: +45 7212 0138 | E: info@dline.com

**Contact:**

Alius Jakušovas | Head of Products  
M: +370 687 50525 | E: alj@dline.com

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**Description of the organisation:**

d line is a heritage Danish design brand conceiving and hand crafting enduring architectural hardware, sanitary ware and solutions for barrier-free living.

Launched in 1971 with the coordinated line of stainless steel architectural products Knud Holscher created for St Catherine's College Oxford, d line has since collaborated with iconic Danish designers including Arne Jacobsen, Tom Dixon and Bjarke Ingels. The brand's ambition is to be universally known, coveted and admired for the uncompromising endurance of its design, craftsmanship and quality.

[dline.com](https://dline.com)

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**Product-related or management system-related certifications:**

Company is ISO certified with certification for ISO 14001:2015 (Environmental Standard).

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**Name and location of production site(s):**

UAB d line production, J. Basanaviciaus 44, Kaisiadorys, LT-56134, Lithuania



EPD

d line



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## Product Information

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<b>Type of EPD:</b>	This EPD is single company, product specific EPD that covers a group of products – pull handles, with reference product pull handle straight. Full range of products identified by items no are presented at the end of this EPD. Products listed differs by finishing colour, powder coating or shape. Some of the declared products due to the size of handle or some variations in metals composition exceeds 10% rule, therefore the worst-case scenario is declared. The reference product – pull handle straight - was chosen as “worst case product”.
<b>Product name:</b>	Pull handle straight
<b>Product identification:</b>	Item no. - 14421402125
<b>Product description:</b>	Pull handle 19 straight 125 mm
<b>Product application:</b>	Living areas, public areas
<b>Product standards:</b>	Certified in accordance with EN1906 Certified in accordance with EN1634
<b>Technical specification:</b>	Dimensions: 139x14x50mm Diameter: Ø14mm Surface finish: satin finished
<b>UN CPC code:</b>	42911
<b>Geographical scope:</b>	Global

# LCA Information

<b>Functional unit / declared unit:</b>	The declared unit is 1 kg of the product. Declared product mass is 0,252 kg.
<b>Reference service life: [where applicable]</b>	The service life according to producer is 20 years.
<b>Time representativeness:</b>	Primary data was collected internally. The production data refers to the average for the year 2021.
<b>Database(s) and LCA software used:</b>	The Ecoinvent database v.3.6 provides the life cycle inventory data for the raw and process materials obtained from the background system. The LCA software used is One Click LCA.
<b>Description of system boundaries:</b>	Cradle to gate with options, modules A4-B7, modules C1–C4 and module D.

Modules declared, geographical scope, the share of specific data (in GWP-GHG results) and data variation:

	Product stage			Construction process stage		Use stage							End of life stage			Resource recovery stage		
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential	
<b>Module</b>	<b>A1</b>	<b>A2</b>	<b>A3</b>	<b>A4</b>	<b>A5</b>	<b>B1</b>	<b>B2</b>	<b>B3</b>	<b>B4</b>	<b>B5</b>	<b>B6</b>	<b>B7</b>	<b>C1</b>	<b>C2</b>	<b>C3</b>	<b>C4</b>	<b>D</b>	
Modules declared	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Geography	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	LT	GLO	GLO	GLO	GLO	GLO	GLO	GLO	GLO
Specific data used	>90%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	>10%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Description of the system boundary (X = Included in LCA; MND = Module Not declared; MNR = Module Not Relevant)

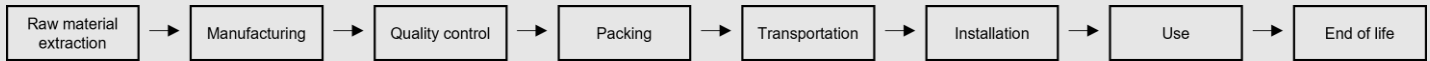
**Data quality:**

The foreground data collected internally is based on yearly production amounts and extrapolations of measurements on specific machines and plants. Overall, the data quality can be described as good. The primary data collection has been done thoroughly.

**Cut-off criteria:**

Life cycle inventory data for a minimum of 99% of total material and energy input flows have been included in the life cycle analysis. However, only materials having in summa less than 1% of the weight of the product were not used in calculations.

**System diagram:**



**More information:**

Product stage:

A1: This stage considers the extraction and processing of raw materials and energy consumption.

A2: The raw materials are transported to the manufacturing plant. In this case, the model includes road transportation of each raw material.

A3: This stage includes the manufacture of products and packaging. It also considers the energy consumption and waste generated at the production plant.

**Production process description:**

- Raw material extraction – Needed raw materials are supplied to be used like tubes, bars, metal sheets, etc.
- Manufacturing – In this stage, necessary production operations are made – turning, milling, cutting, stamping, grinding.
- Quality control – Manufactured parts are inspected by quality control manager visually and technically.
- Packing – Parts/products are securely packaged into the appropriate size boxes.

Construction process stage:

A4: This stage includes transport from the production gate to the construction site where the product shall be installed. Transportation is calculated based on data from manufacturer and a scenario with the parameters described in the following table. The transportation does not cause losses as products are packaged properly.

Parameter	Value/Description
Vehicle type used for transport	EURO 5 truck with a trailer with an average load of 16-32t Freight aircraft
Distance	59 % of production: Plane – 2157 km,  41 % of production: Truck – 1551 km.
Capacity utilization	100 % of the capacity in volume (truck, including empty return), 100 % of the capacity in volume (plane, including empty return)

A5: This module describes impacts related to installing the product to the building. Since this is a manual process, no energy or fuels is needed for installation. Product packaging waste are declared.

Use stage:

B1, B3, B4, B6, B7: These modules were considered, but evaluated as not relevant for the product and considered as zero.

B2: Maintenance - covers the combination of all planned technical and associated administrative actions during the service life to maintain the product installed in a building, as well as preserve the aesthetic qualities of the product. The product needs to be cleaned on regular basis with dry soft cloth.

B5: Refurbishment – product service life is set to 20 years. After or during this warranty period, the product is offered to be refurbished to extend its life with another 20 years. In this phase, materials needed to refurbish 1 kg of product is declared. Read more on page 16.

End of Life stage:

C1: This module describes impacts related to dismantling the product at the product end-of-life stage. Since this is a manual process, the environmental impacts are negligible.

C2: This module describes the transport of discarded product to final disposal. It is estimated that there is no mass loss during the use of the product, therefore the end-of-life product is assumed that it has the same weight as the declared product. All the end-of-life product is assumed to be sent to the closest facilities such as recycling and landfill. Transportation distance to the closest disposal area is estimated as 50 km and the transportation method is lorry which is the most common.

C3: This module describes waste processing for reuse, recovery, or recycling. It is assumed that 90% of stainless steel and aluminum will be collected separately and transformed into secondary material in a recycling plant.

C4: The remaining 10% of metals and mounting plastic parts are assumed to be sent to the landfill.

Resource recovery stage (D):

D: The benefits of recyclable waste generated in the module C3 are considered in module D. The recycled stainless steel and aluminum has been modelled to avoid use of primary materials. The scrap content in the studied product has been acknowledged and only the mass of primary materials in the product provides the benefit to avoid double counting.

EPD

d line



## Content information

Product components	Weight, kg	Post-consumer material, weight-%	Biogenic material, weight-% and kg C/kg
Stainless steel	0,615	0	0
Aluminium	0,385	0	0
<b>TOTAL</b>	<b>1</b>	<b>0</b>	<b>0</b>
Packaging materials	Weight, kg	Weight-% (versus the product)	
Plastic	0,013	1,3	
Cardboard	0,029	2,9	
<b>TOTAL</b>	<b>0,042</b>	<b>4,2</b>	

Products do not contain any REACH SVHC substances in amounts greater than 0,1% (1000 ppm).

## Environmental Information

### Potential environmental impact – mandatory indicators according to EN 15804

#### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-fossil	kg CO <sub>2</sub> eq.	7,82E0	5,69E-1	5,06E-3	0E0	0E0	0E0	0E0	1,24E0	0E0	0E0	0E0	4,54E-3	2,22E-2	5,27E-4	-1,76E0
GWP-biogenic	kg CO <sub>2</sub> eq.	7,95E-2	2,04E-4	1,46E-2	0E0	0E0	0E0	0E0	3,92E-4	0E0	0E0	0E0	3,3E-6	-1,27E-3	1,04E-6	-4,51E-3
GWP-luluc	kg CO <sub>2</sub> eq.	5,44E-2	4,57E-5	4,18E-6	0E0	0E0	0E0	0E0	7,8E-4	0E0	0E0	0E0	1,37E-6	2,52E-5	1,56E-7	-3,16E-2
GWP-total	kg CO <sub>2</sub> eq.	7,96E0	5,66E-1	1,96E-2	0E0	0E0	0E0	0E0	1,24E0	0E0	0E0	0E0	4,55E-3	2,1E-2	5,28E-4	-1,79E+0
ODP	kg CFC 11 eq.	6,25E-7	1,3E-7	6,67E-10	0E0	0E0	0E0	0E0	2,76E-7	0E0	0E0	0E0	1,07E-9	3,19E-9	2,17E-10	-1,73E-7
AP	mol H <sup>+</sup> eq.	5,82E-2	2,93E-3	2,91E-5	0E0	0E0	0E0	0E0	6,52E-3	0E0	0E0	0E0	1,91E-5	2,69E-4	5E-6	-1,03E-2
EP-freshwater	kg P eq.	5,45E-4	1,52E-6	1,02E-7	0E0	0E0	0E0	0E0	9,02E-6	0E0	0E0	0E0	3,7E-8	1,53E-6	6,36E-9	-8,81E-5
EP-marine	kg N eq.	9,11E-3	1,06E-3	1,14E-5	0E0	0E0	0E0	0E0	2,18E-3	0E0	0E0	0E0	5,75E-6	5,94E-5	1,72E-6	-1,27E-3
EP-terrestrial	mol N eq.	1,08E-1	1,16E-2	9,8E-5	0E0	0E0	0E0	0E0	2,4E-2	0E0	0E0	0E0	6,35E-5	6,89E-4	1,9E-5	-1,39E-2
POCP	kg NMVOC eq.	3,11E-2	3,05E-3	3,31E-5	0E0	0E0	0E0	0E0	6,37E-3	0E0	0E0	0E0	2,04E-5	1,88E-4	5,51E-6	-6,37E-3
ADP-minerals & metals*	kg Sb eq.	2,15E-3	1,34E-6	8,78E-8	0E0	0E0	0E0	0E0	5,98E-6	0E0	0E0	0E0	7,75E-8	1,23E-6	4,81E-9	-6,00E-6
ADP-fossil*	MJ	1,02E2	8,08E0	7,1E-2	0E0	0E0	0E0	0E0	1,8E1	0E0	0E0	0E0	7,07E-2	3,08E-1	1,47E-2	-2,28E1
WDP*	m <sup>3</sup>	4,59E0	8,83E-3	1,16E-3	0E0	0E0	0E0	0E0	1,5E-1	0E0	0E0	0E0	2,63E-4	4,37E-3	6,81E-4	-1,58E-1

Acronyms  
 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 = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals & metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption

\* Disclaimer: The results of this environmental impact indicator shall be used with care as the uncertainties of these results are high or as to their limited experience with the indicator.

## Potential environmental impact – additional mandatory and voluntary indicators

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG <sup>1</sup>	kg CO <sub>2</sub> eq.	7,82E0	5,69E-1	5,06E-3	0E0	0E0	0E0	0E0	1,24E0	0E0	0E0	0E0	4,54E-3	2,22E-2	5,27E-4	-1,76E0

## Use of resources

Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	2,76E1	3,29E-2	2,62E-3	0E0	0E0	0E0	0E0	8,07E-1	0E0	0E0	0E0	8,9E-4	4,83E-2	1,19E-4	-8,11E0
PERM	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PERT	MJ	2,76E1	3,29E-2	2,62E-3	0E0	0E0	0E0	0E0	8,07E-1	0E0	0E0	0E0	8,9E-4	4,83E-2	1,19E-4	-8,11E0
PENRE	MJ	1,01E2	8,08E0	7,1E-2	0E0	0E0	0E0	0E0	1,77E1	0E0	0E0	0E0	7,07E-2	3,08E-1	1,47E-2	-2,28E1
PENRM	MJ	6,21E-1	0E0	0E0	0E0	0E0	0E0	0E0	2,69E-1	0E0	0E0	0E0	0E0	0E0	0E0	0E0
PENRT	MJ	1,02E2	8,08E0	7,1E-2	0E0	0E0	0E0	0E0	1,8E1	0E0	0E0	0E0	7,07E-2	3,08E-1	1,47E-2	-2,28E1
SM	kg	3,32E-1	0E0	0E0	0E0	0E0	0E0	0E0	4,27E-3	0E0	0E0	0E0	0E0	0E0	0E0	4,00E-1
RSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
NRSF	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
FW	m <sup>3</sup>	0.0493	7,08E-4	1,78E-5	0E0	0E0	0E0	0E0	2,14E-3	0E0	0E0	0E0	1,47E-5	1,26E-4	1,61E-5	-1,11E-2

### Acronyms

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 re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water

<sup>1</sup> This indicator accounts for all greenhouse gases except biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. As such, the indicator is identical to GWP-total except that the CF for biogenic CO<sub>2</sub> is set to zero.

## Waste production

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	3,55E0	2,91E-3	3,05E-4	0E0	0E0	0E0	0E0	8,19E-2	0E0	0E0	0E0	6,87E-5	0E0	1,37E-5	-3,83E-1
Non-hazardous waste	kg	2,63E1	1,35E-1	1,29E-2	0E0	0E0	0E0	0E0	5,44E-1	0E0	0E0	0E0	7,6E-3	0E0	1E-1	-3,81E0
Radioactive waste	kg	3,48E-4	5,8E-5	3,07E-7	0E0	0E0	0E0	0E0	1,21E-4	0E0	0E0	0E0	4,85E-7	0E0	9,74E-8	-1,1E-4

## Output flows

### Results per functional or declared unit

Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Material for recycling	kg	1E-1	0E0	8,4E-2	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	9E-1	0E0	0E0
Materials for energy recovery	kg	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0
Exported energy, electricity	MJ	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0	0E0

## Biogenic carbon content

### Results per declared unit

Biogenic carbon content	Unit	Quantity
Biogenic carbon content in product	kg C	0
Biogenic carbon content in packaging	kg C	0

## Re-handle® your product: a disruptive refurbish system to reduce our carbon footprint between 54-91%



d line means business when they establish a circular system to keep their products in use for up to 100 years. Their purpose: to challenge you to choose the enduring solution and reuse, rather than to produce new.

Essentially, d line's Re-handle® concept encourages customers to return, refinish and have d line products refitted in their buildings, to keep them in their life cycle for as long as possible. With each Re-handle the 20-year product warranty period is renewed, and d line want you to reuse the same product up to 4 times, so that it can live for up to 100 years.

### Sometimes good as new is better

In this waste-aware environment, Architects and Specifiers look for solutions that are fully documented and thought within their built environment. Now more than ever, we see a movement towards data-driven and future-thinking decision making.

Whilst Environmental Product Declarations (EPDs) are a powerful tool for taking into account energy and resource consumption as well as environmental impacts over the entire life cycle of a product, it requires that a product is fully declared across the entire life cycle in order to make fully informed decisions. Today, it is only mandatory to declare the product is its production phase, thus losing out on vital information across the remaining life cycle, such as use, end of life and recycling.

d line has made it their mission to challenge the industry for undercutting decision makers with correct data and have for that reason decided to fully disclose the complete global warming potential (GWP) in their EPDs. This means full declaration across its entire product life cycle, from production, use, refurbishment and right through to recycling. That's how they can confidently state, that by Re-handling a d line product, you will dramatically reduce the carbon footprint between 54-91% depending on the product, compared to specifying new.

Look for the GWP values in section B5 Refurbishment for the carbon footprint of Re-handling the product, thus making it applicable to be reused in a building as if it were new. It is not possible to Re-handle powder- and PVD coated variants.



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## References

General Programme Instructions of the International EPD® System. Version 4.0.

ISO 14025:2010 Environmental labels and declarations – Type III environmental declarations Principles and procedures.

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

EN 15804+A2 Sustainability in construction works – Environmental product declarations – Core rules for the product category of construction products.

PCR 2019:14 Construction products (version 1.2.5)

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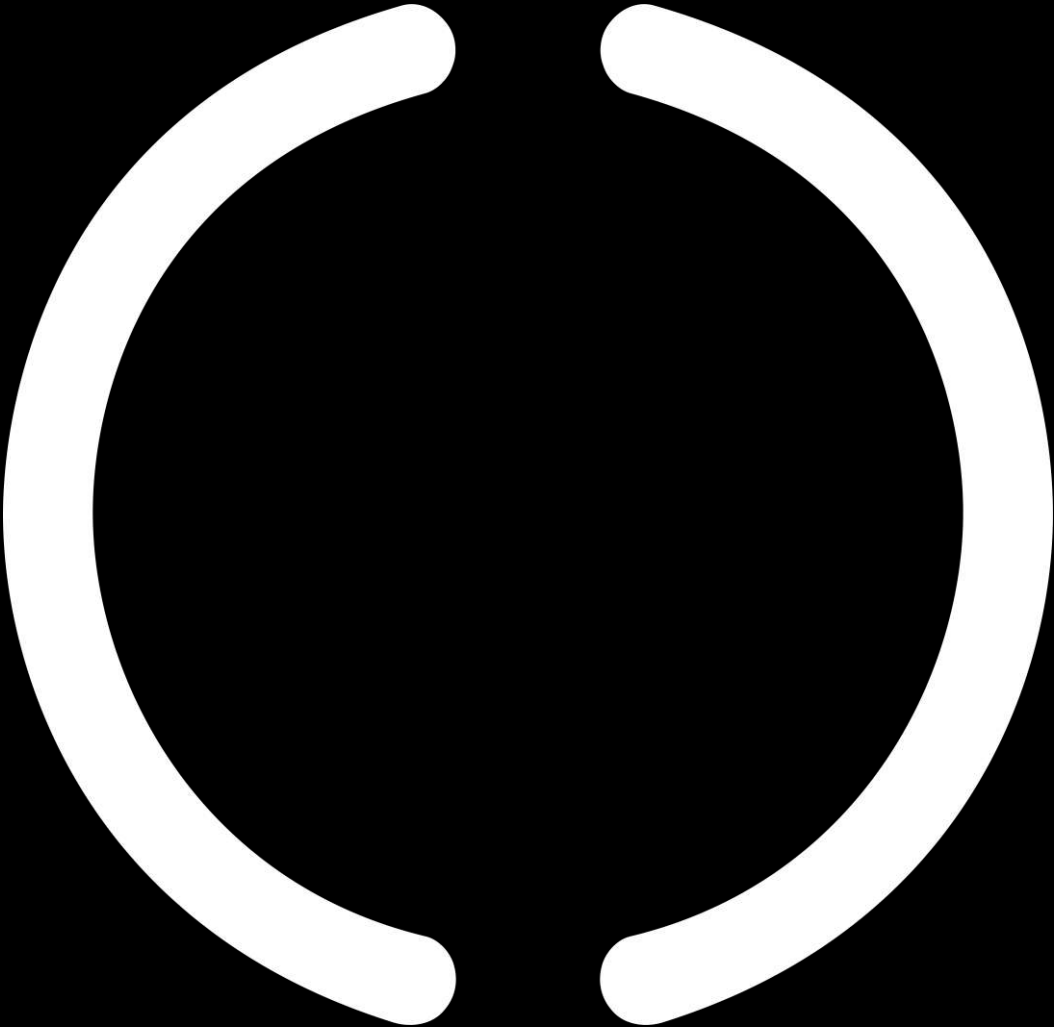
This declaration applies to products mentioned in the list, along with their mirror polished, powder- and PVD coated versions and brass equivalents:

14381602011	14401402307	14421202720	14422402730	14431202786	14442402300	14461202141	14461402190
14390002051	14401402650	14421202738	14422402770	14431202800	14442402650	14461202150	14461402200
14397402095	14401402706	14421202746	14422402800	14431402701	14443202308	14461202168	14461402306
14397402099	14401402714	14421202754	14422802600	14431402713	14443202651	14461202170	14461402659
14401002290	14401402722	14421202762	14423202123	14431402725	14443202715	14461202180	14461402705
14401102125	14401402731	14421202771	14423202301	14431402737	14443202723	14461202190	14461402721
14401202707	14401402757	14421202789	14423202405	14431402749	14443202731	14461202200	14461402730
14403202127	14401402765	14421202797	14423202654	14431402751	14443202740	14461202307	14461402756
14405202124	14401402773	14421202801	14423202701	14431402763	14443202758	14461202650	14461402764
14431202712	14401402781	14421202819	14423202719	14431402787	14443202766	14461202722	14461402772
14461202706	14401402790	14421202827	14423202727	14431402801	14443202774	14461202731	14461402781
14496202067	14401402803	14421202835	14423202735	14441202301	14443202787	14461202749	14461402799
14381202098	14401402811	14421202843	14423202743	14441202653	14443202799	14461202765	14461402811
14381202136	14401402838	14421202860	14423202751	14441202718	14443202801	14461202773	14461402829
14381202225	14401402846	14421302121	14423202760	14441202726	14443202813	14461202781	14461402837
14381202322	14401402854	14421402125	14423202778	14441202734	14443202825	14461202790	14461402853
14381202411	14401402871	14421402206	14423202781	14441202742	14443202849	14461202803	14461402861
14381202519	14402202125	14421402303	14423202791	14441202751	14443202851	14461202811	14461402870
14382202024	14402202300	14421402404	14423202803	14441202769	14443202863	14461202820	14461402888
14383202028	14402202650	14421402450	14423202815	14441202785	14443202875	14461202838	14461402896
14384202030	14402202700	14421402656	14423202827	14441202793	14443402307	14461202854	14461402900
14390002077	14402202710	14421402711	14423202839	14441202807	14443402650	14461202862	14461402918
14390002115	14402202730	14421402729	14423202841	14441202815	14443402714	14461202871	14461402926
14391002001	14402202770	14421402737	14423202853	14441202823	14443402722	14461202889	14461402934
14395002105	14402202790	14421402745	14423202865	14441202840	14443402731	14461202897	14461402942
14395002164	14402402125	14421402753	14423402122	14441202858	14443402749	14461202901	14461402950
14397402096	14402402300	14421402761	14423402301	14441202866	14443402757	14461202919	14461402968
14397402097	14402402650	14421402770	14423402404	14441202874	14443402765	14461202927	14461402976
14397402098	14402402730	14421402788	14423402653	14441402300	14443402773	14461202935	144614G3659
14401202049	14402402750	14421402796	14423402700	14441402652	14443402786	14461202943	144614G3756
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14401202651	14403202658	14421402826	14423402742	14441402768	14443402812	14461202977	14461902650
14401202715	14403202739	14421402834	14423402751	14441402784	14443402824	14461402019	14462202300
14401202723	14403202755	14421402842	14423402769	14441402792	14443402850	14461402027	14462202650
14401202731	14403402126	14421402869	14423402777	14441402806	14443402862	14461402035	14462202760
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14401202774	14403402754	14422202300	14423402825	14441402849	14461202036	14461402078	14463202711
14401202782	14403402792	14422202400	14423402837	14441402857	14461202044	14461402086	14463202720
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14401202847	14421202207	14422202800	14431202700	14441802651	14461202087	14461402124	14463202779
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14401202863	14421202405	14422402200	14431202736	14441902650	14461202109	14461402159	14463202795
14401202871	14421202450	14422402300	14431202748	14442202300	14461202117	14461402167	14463202801

14401302124	14421202657	14422402400	14431202750	14442202650	14461202125	14461402170	14463202813
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14463202837	14463402745	14463402886	14481202028	14481202150	14481402086	14481402210	14492202305
14463202849	14463402761	14463402898	14481202036	14481202168	14481402094	14491592584	14492202607
14463202851	14463402778	14463402900	14481202044	14481202170	14481402108	14491592991	14492202909
14463202863	14463402786	14463402912	14481202052	14481202180	14481402116	14491692104	14495592309
14463202875	14463402794	14463402924	14481202061	14481202190	14481402124	14491692309	14495592554
14463202887	14463402800	14463402936	14481202079	14481202200	14481402132	14491692601	14496002050
14463202899	14463402812	14463402948	14481202087	14481402019	14481402141	14491792109	14496102089
14463202901	14463402824	14463402950	14481202095	14481402027	14481402159	14491792303	14496102101
14463202913	14463402836	14463402962	14481202109	14481402035	14481402167	14491792605	14496102127
14463202925	14463402848	14463402974	14481202117	14481402043	14481402170	14492002608	14705002450
14463202937	14463402850	14465202301	14481202125	14481402051	14481402180	14492002900	14705202450
14463202949	14463402862	14465402301	14481202133	14481402060	14481402190	14492102106	14492102602
14463202951	14463402874	14481202010	14481202141	14481402078	14481402200	14492102301	14492202120
14463202963	14463202975	14463402303	14463402656	14463402711	14463402729	14463402737	

**EPD**

**d line**





# CERTIFICATE OF REGISTRATION

## 认证证书

证书编号: U22E2SZ8026547R0S

诺华仕精密机械工业（苏州）有限公司

统一社会信用代码: 91320594051828588T

中国（江苏）自由贸易试验区苏州片区苏州工业园区胜浦兴浦路 200 号 11 幢 301

环境管理体系已完成评审并符合

**GB/T24001-2016/ISO14001:2015**

认证范围:

卫浴设备五金件、塑料件的设计和生及所涉及场所的相关环境管理活动

颁证日期:

有效日期:

首次签发证书日:

2022 年 12 月 28 日

2025 年 12 月 27 日

2022 年 12 月 28 日



扫码查询证书有效性

获得本认证证书并不意味着证书持有者可以免除其应尽的其他法律义务，当本认证范围中的产品或活动有行政许可要求时，本证书仅在证书持有者的行政许可范围内有效。获证组织须定期接受 GICG 年度监督，并经审核合格方继续有效。请扫描左侧二维码查询证书信息。本证书信息可在国家认证认可监督管理委员会官方网站（[www.cnca.gov.cn](http://www.cnca.gov.cn)）或 GICG 网站（[www.gicg.com.cn](http://www.gicg.com.cn)）查询



GICG 微信公众号

证书签发:



**Guardian Independent Certification Ltd**  
Registered in England  
114 St Martin's Lane, Covent Garden, London WC2N 4BE  
Accredited by Member of IAF MLA



0045



# CERTIFICATE OF REGISTRATION

Certificate No.: U22E2SZ8026547R0S

The Environmental Management Systems of  
**Novus Precision (Suzhou) Co., Ltd**

Unified Social Credit Code:91320594051828588T

11A-301 No.200, Xingpu Road SIP, Suzhou, Suzhou Area of Jiangsu Pilot Free Trade Zone, China

has been assessed by GICG and complying with

**GB/T24001-2016/ISO14001:2015**

For the following activities

**Environmental management activities of places relating to design and production for sanitary ware, bathroom products, plastic parts and metal parts**

Date of Issue:

28 December 2022

Date of Expiry:

27 December 2025

Date of Initial Certification:

28 December 2022



Scan for certificate status

The granting of this certificate does not mean that the certificate holder can avoid any legal obligation. If the products or activities covered in the scope of certification require administrative license, the certificate shall be only valid within the scope of administrative licensing. The registered organization shall be subject to regular annual supervision by GICG, and the continual validity of the certificate is base upon conformity of audit. Please scan two-dimension code at left to find the certificate information. This certificate can be queried at Certification and Accreditation Administration of the People's Republic of China official website ([www.cnca.gov.cn](http://www.cnca.gov.cn)) & GICG website ([www.gicg.com.cn](http://www.gicg.com.cn))



GICG WeChat public number

Signature:



**Guardian Independent Certification Ltd**

Registered in England

114 St Martin's Lane, Covent Garden, London WC2N 4BE

Accredited by Member of IAF MLA



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GICG - ENABLING TRUST IN A CHANGING WORLD

# CERTIFICATE



for the management system according  
to ISO 9001:2015 and ISO 14001:2015

The proof of the conforming application with the regulation was furnished  
and in accordance with certification procedure it is certified for the  
company

## d line

UAB „d line Production“

J. Basanavičiaus st. 44  
LT-56134 Kaišiadorys  
Lithuania (Lietuva)

Scope

**Design and production of metal products**

Certificate Registration No.: 151002411711 Valid until: 2026-01-25  
15104232038 Valid from: 2024-01-23

Audit Report No.: 3330/3EUB/B0

This certification was conducted in accordance with the TIC auditing and certification procedures and  
is subject to regular surveillance audits.

TÜV Thüringen e.V.  
Certification body for  
systems and personnel



Jena, 2024-01-23



Deutsche  
Akkreditierungsstelle  
D-ZM-16006-05-01  
D-ZM-16006-05-02



Original certificates  
are branded with a hologram.

The current validity can be demanded at our homepage [www.tuev-thueringen.de](http://www.tuev-thueringen.de).

Zertifizierungsstelle des TÜV Thüringen e.V. • Ernst-Ruska-Ring 6 • D-07745 Jena • ☎ +49 3641 399740 • ✉ [zertifizierung@tuev-thueringen.de](mailto:zertifizierung@tuev-thueringen.de)