

Environmental Product Declaration



In accordance with ISO 14025, EN 15804:2012+A2:2019 and EN 17213:2020 for:

Steel doors S10/Y10 and S30/Y30 without sound reduction

EPD of multiple products based on the average results of the product group
(Average based on production volumes)

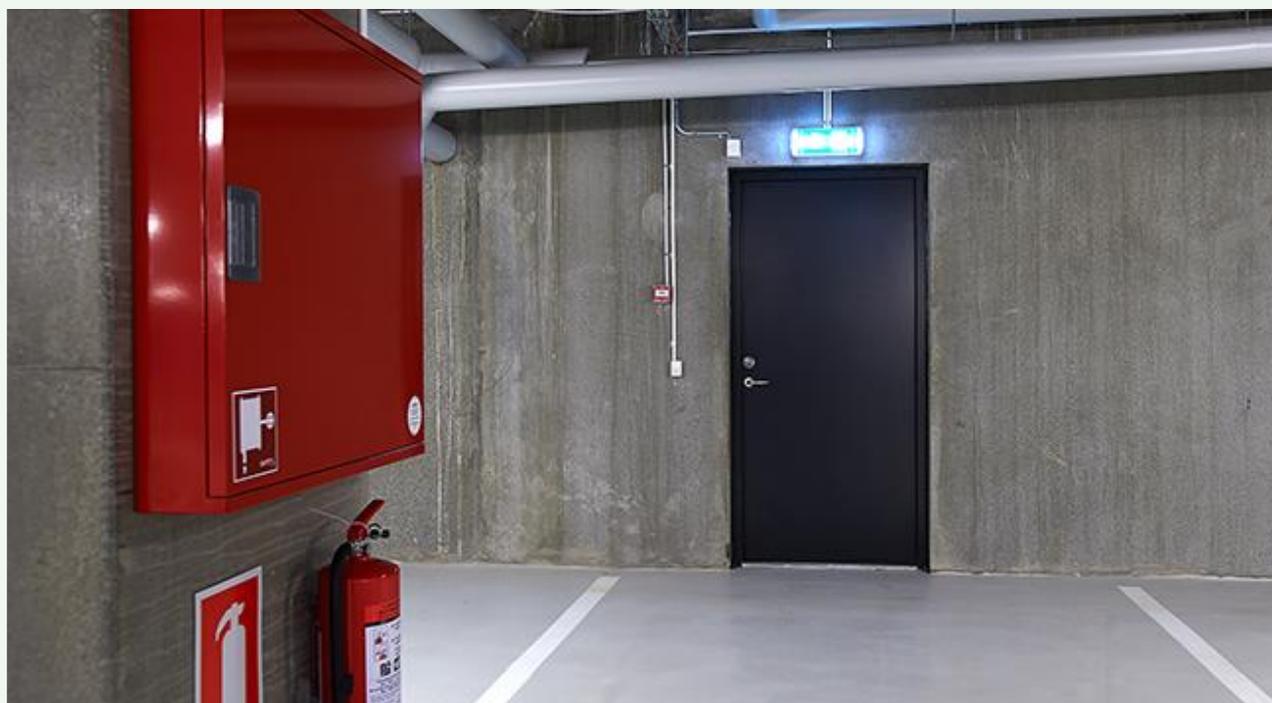
from

Daloc AB



Programme:	The International EPD® System, www.environdec.com
Programme operator:	EPD International AB
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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



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
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Accountabilities for PCR, LCA and independent, third-party verification
Product Category Rules (PCR)
CEN standard EN 15804 serves as the Core Product Category Rules (PCR)
Product Category Rules (PCR): <i>PCR 2019:14 Construction products. Version 1.3.2, date 2023-12-08. c-PCR-007 Windows and doors, version 2024-04-30.</i>
PCR review was conducted by: <i>The Technical Committee of the International EPD® System. Chair: Claudia A. Peña. Contact via info@environdec.com</i>
Life Cycle Assessment (LCA)
LCA accountability: <i>Stanislava Borisová, IVL Swedish Environmental Research Institute</i>
Third-party verification
Independent third-party verification of the declaration and data, according to ISO 14025:2006, via: <input checked="" type="checkbox"/> EPD verification by individual verifier Third-party verifier: <i>Martyna Mikusinska, Sweden, Sweco Sverige AB</i> Approved by: The International EPD® System
Procedure for follow-up of data during EPD validity involves third party verifier: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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; apply equivalent data quality requirements, methods of data collection, and allocation methods; apply identical cut-off rules and impact assessment methods (including the same version of characterisation factors); have equivalent content declarations; and be valid at the time of comparison. For further information about comparability, see EN 15804 and ISO 14025.

Company information

Owner of the EPD:

Daloc AB
Nolgårdsgatan 15
545 21 Töreboda
Sweden

Contact:

Aida Bandic (aida.bandic@daloc.se)

Description of the organisation:

The Daloc Group comprises several companies whose products and services complement each other. The Group develops, manufactures and markets steel and wooden doors. Daloc AB, Daloc Trädörrar AB, Orresta Dörr AB and Secor AB, which are franchisors to the Secor chain, operate under the parent company Daloc Futura AB. All products are manufactured in our state-of-the-art facilities in Sweden. The doors are sold via our dealers and our own sales offices in the Nordic countries and established channels in other European countries.

Product-related or management system-related certifications:

ISO 9001 and ISO 14001

Location of production site:

Töreboda, Sweden

Product information

Product name:

S10/Y10
S30/Y30 without sound reduction

Product identification:

Size 924x2048 mm.

Given that the size is different than the standard size in the c-PCR, sketches of the products are provided in the appendix.

Product description:

S10/Y10 are primarily developed for environments where strength, stability and durability are prioritized. Therefore, it is suitable in industrial premises, parking garages, basements and other premises in tough environments.

S30/Y30 is a versatile door which, with its modern design, is common in stairwells, shopping centers, hotels, offices and other public premises. The doors are available in several designs and can be supplemented with, for example, a glass opening.

The lifespan of the door depends on the door model, operation, maintenance and surrounding environment. In proper condition, the life of the door is expected to be over 60 years (excluding wearing parts, such as seals, hinges and locks). Technical standards that are met and other product information can be found for each door model in the door guide on the Daloc's website <https://www.daloc.se/>, www.daloc.no, www.daloc.dk, www.daloc.nl, www.daloc.de

UN CPC code:

4212 – Doors, windows and their frames and thresholds for doors, of iron, steel or aluminium.

UNSPSC code:

30171505

Geographical scope:

The Nordic countries

LCA information

Declared unit:

1 m² of steel door (37.80 kg)

Grouping method:

The EPD represents two products, results of which are presented as a weighted average based on annual production volume.

Time representativeness:

The data used to model product manufacturing corresponds to year 2022. The majority of data from generic databases are from 2018 - 2022. A few datasets older than 10 years were used given their technological and geographical representativeness.

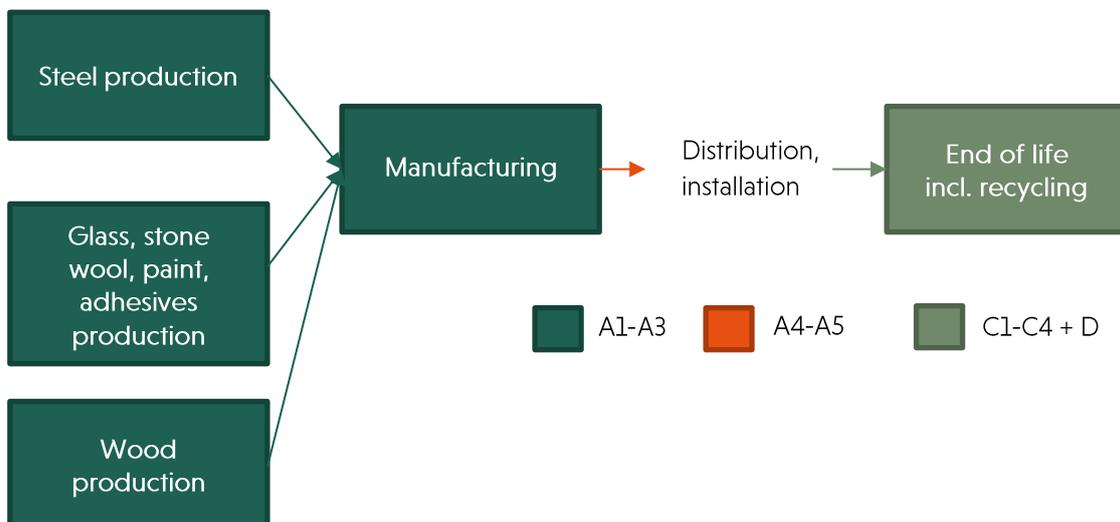
Database(s) and LCA software used:

Databases used are the Sphera's Managed LCA Content (version 2023.2). The LCA software used is LCA for Experts (version 10.7). The EN 15804 reference package is based on EF 3.0.

Description of system boundaries:

Cradle to gate with options, modules C1-C4, module D and with optional module A4. Module A5 used to manage packaging end of life.

System diagram:



Materials such as galvanized steel, coated galvanized steel, stone wool, paint, adhesives, silicon, and glass are transported to the manufacturing plant (Daloc AB), where the steel doors are manufactured. The wood used as threshold comes to Daloc AB from the wooden doors manufacturing site (Daloc Trädörrar AB). From the manufacturing site, the doors are transported to the customers. After use the product is transported to waste processing, is manually disassembled and different materials are treated in their respective way.

Modules declared, geographical scope, share of specific data (in GWP-GHG indicator) 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
Module	A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	ND	ND	ND	ND	ND	ND	X	X	X	X	X
Geography	SE	SE	SE	SE-NC	SE	-	-	-	-	-	-	-	SE	SE	SE	SE	SE
Specific data used	4.70 %			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – products	10.99%			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variation – sites	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-

X: Module declared, ND: Module not declared, SE: Sweden, NC: The Nordic countries

The results presented reflect the material composition of two variants.

Allocation:

The manufacturing data, delivered for the complete plant, was allocated to 1 m² of steel doors based on number of pieces and area. In other words, the annual production corresponding to the total number of doors produced was divided to obtain inputs per 1 door with a size of 1.89m² and then scaled down to 1 m².

Data quality:

Site-specific manufacturing data has been retrieved from the manufacturer. The upstream and downstream processes have been modelled based on generic data from databases. The collected data was reviewed according to EN 15804+A2:2019, based on UN Environmental Global Guidance on LCA database development, and is deemed of good quality.

Cut-off criteria:

The maximum cut-off criteria established by the PCR is 1% of all material and energy flows to a single unit process and 5% of total inflows (mass and energy) per module, e.g. per module A1-A3, A4-A5, C1-C4 and module D. No cut-offs exceeding this limit have been made.

Content information

Product components	Weight, kg	Post-consumer material, weight-%	Renewable material, weight-%
Galvanized steel	29.3	Unknown	0%
Coated galvanized steel	0.9	Unknown	0%
Stone wool	5.9	Unknown	0%
Paint	0.8	Unknown	0%
Adhesives	0.4	Unknown	0%
Wood	0.03	Unknown	100%
Glass	0.6	Unknown	0%
Stainless steel	0.02	Unknown	0%
TOTAL	37.80	Unknown	0%
Packaging materials	Weight, kg	Weight-% (versus the product)	
Cardboard	1.77	4.7%	
Wood	18.30	48.4%	
High density polyethylene	0.10	0.3%	
TOTAL	20.17	53.4%	

No substances that appear in the REACH candidate list of SVHC (Candidate List of Substances of Very High Concern) are present or used in the product.

Information on biogenic carbon content

Biogenic carbon content ⁽¹⁾	Unit per DU	Amount
Biogenic carbon content in product	kg C	0.011
Biogenic carbon content in packaging	kg C	8.63

(1) 1 kg biogenic carbon is equivalent to 44/12 kg CO₂.

Key assumptions

The generation of electricity used in A3 module is based on hydropower, in line with Daloc's actual electricity usage. The process used in modelling is Electricity from hydropower and leads to emissions of 14.2 g CO₂eq./kWh using GWP-GHG indicator. Additionally, a minor share of electricity generated originates from PV and is modelled using the process called Electricity from photovoltaic with impact of 33.8 g CO₂eq./kWh in terms of GWP-GHG.

An average transport distance to customer (A4) was assumed to be 440 km, based on actual transport distances of Daloc's products in 2017, which remains applicable. In cases of missing material transport distance (A2), a distance of 1 000 km was assumed. When it comes to end-of-life transport, 150 km was applied.

Manual disassembly was applied in the C1 module, in line with the product declarations. Given that the product is predominantly used in Sweden, the end-of-life treatment (C3-C4) reflects the most common treatment used in Sweden. More specifically, the materials with energy recovery or recycling potential are treated in C3, while materials that cannot be recycled and treatment of which consumes rather than generates energy, are treated in module C4.

Since module C is included in the EPD, the readers of this EPD are discouraged from using the results of modules A1-A3 without considering the results of module C.

Glass, aluminium, galvanized and stainless steel are recycled. Other types of materials are incinerated with heat and electricity generation, where most of the energy generated is in the form of heat. To avoid double crediting of materials with share of recycled material, net flows were calculated and used in module D.

The infrastructure and capital goods have not been included for upstream, core and downstream processes.

Environmental Information

Potential environmental impact – mandatory indicators according to EN 15804+A2

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

Results per functional or declared unit: 1 m ²									
Acronyms	Unit	A1-A3 Product stage	A4 Transport to customer	A5 Packaging EoL	C1 Deconstruction	C2 Transport to EoL	C3 Waste processing	C4 Disposal	D Benefits
GWP-GHG ⁽¹⁾	kg CO ₂ eq	1.12E+02	1.47E+00	7.39E-01	0.00E+00	3.27E-01	8.46E+00	8.88E-01	-5.62E+01
GWP-total	kg CO ₂ eq	8.42E+01	1.52E+00	3.19E+01	0.00E+00	3.38E-01	8.59E+00	9.42E-01	-5.79E+01
GWP-fossil	kg CO ₂ eq	1.15E+02	1.49E+00	7.59E-01	0.00E+00	3.31E-01	8.50E+00	9.39E-01	-5.79E+01
GWP-biogenic	kg CO ₂ eq	-3.10E+01	1.52E-02	3.19E+01	0.00E+00	3.39E-03	2.93E-01	2.79E-03	-4.42E-02
GWP-luluc	kg CO ₂ eq	4.05E-02	1.62E-02	1.49E-04	0.00E+00	3.59E-03	7.70E-04	7.02E-04	-1.24E-02
ODP	kg CFC-11 eq	2.40E-07	2.47E-16	1.48E-12	0.00E+00	5.49E-17	1.01E-10	3.59E-12	-1.63E-12
AP	mol H ⁺ eq	3.43E-01	1.88E-03	6.24E-03	0.00E+00	4.17E-04	1.26E-02	1.62E-03	-1.49E-01
EP-freshwater	kg P eq	3.29E-04	1.11E-05	1.00E-06	0.00E+00	2.47E-06	2.09E-05	3.94E-06	-3.38E-05
EP-marine	kg N eq	6.77E-02	5.67E-04	1.65E-03	0.00E+00	1.26E-04	3.26E-03	7.44E-04	-3.39E-02
EP-terrestrial	mol N eq	8.82E-01	7.58E-03	2.71E-02	0.00E+00	1.69E-03	3.47E-02	7.97E-03	-3.66E-01
POCP	kg NMVOC eq	2.33E-01	1.39E-03	4.40E-03	0.00E+00	3.08E-04	8.64E-03	1.94E-03	-1.12E-01
ADP-minerals & metals	kg Sb eq	4.22E-04	1.46E-07	2.83E-08	0.00E+00	3.24E-08	8.55E-07	5.20E-08	-2.17E-04
ADP-fossil	MJ	1.27E+03	1.94E+01	7.87E+00	0.00E+00	4.31E+00	1.21E+02	1.21E+01	-6.24E+02
WDP	m ³	7.35E+01	2.14E-02	3.57E+00	0.00E+00	4.75E-03	1.39E+00	1.33E+00	-3.69E+01
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								

⁽¹⁾ The GWP-GHG indicator includes all greenhouse gases included in GWP-total but excludes biogenic carbon dioxide uptake and emissions and biogenic carbon stored in the product. This indicator is thus almost equal to the GWP indicator originally defined in EN 15804:2012+A1:2013.

Use of resources

The table below presents the use of resources. Note that the energy resource use indicators were calculated in line with option B of PCR 2019:14.

Results per functional or declared unit: 1 m ²									
Acronyms	Unit	A1-A3 Product stage	A4 Transport to customer	A5 Packaging EoL	C1 Deconstruction	C2 Transport to EoL	C3 Waste processing	C4 Disposal	D Benefits
PERE	MJ	5.60E+02	2.04E+00	2.19E+00	0.00E+00	4.53E-01	6.88E+01	5.55E+00	-2.81E+01
PERM	MJ	2.77E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.95E-01	0.00E+00	0.00E+00
PERT	MJ	8.37E+02	2.04E+00	2.19E+00	0.00E+00	4.53E-01	6.84E+01	5.55E+00	-2.81E+01
PENRE	MJ	1.26E+03	1.94E+01	7.87E+00	0.00E+00	4.32E+00	1.21E+02	1.21E+01	-6.24E+02
PENRM	MJ	1.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.41E+01	0.00E+00	0.00E+00
PENRT	MJ	1.27E+03	1.94E+01	7.87E+00	0.00E+00	4.32E+00	1.07E+02	1.21E+01	-6.24E+02
SM	kg	1.16E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	MJ	1.48E-03	0.00E+00	3.20E-23	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	MJ	1.53E-03	0.00E+00	3.75E-22	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m ³	1.98E+00	2.62E-03	8.53E-02	0.00E+00	5.83E-04	6.00E-02	3.34E-02	-9.07E-01
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials, PEM = Use of renewable primary energy resources used as raw materials, PERT = Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials), 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 (primary energy and primary energy used as raw materials), SM = Use of secondary material, RSF = Use of renewable secondary fuels, NRSF = Use of non-renewable secondary fuels, FW = Net use of fresh water.								

Waste production and output flows

Waste production

Results per functional or declared unit: 1 m ²									
Acronyms	Unit	A1-A3 Product stage	A4 Transport to customer	A5 Packaging EoL	C1 Deconstruction	C2 Transport to EoL	C3 Waste processing	C4 Disposal	D Benefits
HWD	kg	3.15E-03	1.01E-09	2.45E-09	0.00E+00	2.24E-10	-8.63E-09	-8.05E-10	-1.59E-06
NHWD	kg	8.72E+00	4.45E-03	4.84E-01	0.00E+00	9.89E-04	2.16E-01	1.39E+00	-2.00E+00
RWD	kg	8.93E-03	2.92E-05	6.74E-04	0.00E+00	6.49E-06	1.81E-02	1.69E-03	-1.11E-03
Acronyms	HWD = Hazardous waste disposed, NHWD = Non-hazardous waste disposed, RWD = Radioactive waste disposed								

Output flows

Results per functional or declared unit: 1 m2									
Acronyms	Unit	A1-A3 Product stage	A4 Transport to customer	A5 Packaging EoL	C1 Deconstruc- tion	C2 Transport to EoL	C3 Waste processing	C4 Disposal	D Benefits
CRU	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MFR	kg	1.11E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E+01	0.00E+00	0.00E+00
MER	kg	7.41E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E+00	0.00E+00	0.00E+00
EET	MJ	9.54E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E+01	0.00E+00	0.00E+00
Acronyms	CRU = Components for re-use, MFR= Materials for recycling, MER = Materials for energy recovery, EEE = Exported electrical energy, EET = Exported thermal energy								

References

CEN European Committee for Standardisation (2019). EN 15804:2012+A2:2019 (CEN 2019), Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products.

CEN European Committee for Standardisation (2020). EN 17213:2020 (CEN 2020), Windows and doors – Environmental Product Declarations – Product category rules for windows and pedestrian doorsets.

EPD International (2019) PCR 2019:14 Construction products. Version 1.3.2, date 2023-12-08.

LCA for Experts software. The software and corresponding database are provided by Sphera in Leinfelden-Echterdingen, Germany.

Sphera database. The Managed LCA Content version 2023.2 was used.

ISO (2006a). ISO 14025:2006, Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

ISO (2006b). ISO 14040:2006, Environmental management – Life cycle assessment – Principles and framework.

ISO (2006c). ISO 14044: 2006, Environmental management – Life cycle assessment – Requirements and guidelines.

Borisová, S. (2024) LCA methodology report, Daloc doors.

Appendix – Sketches of the doors with specific dimensions

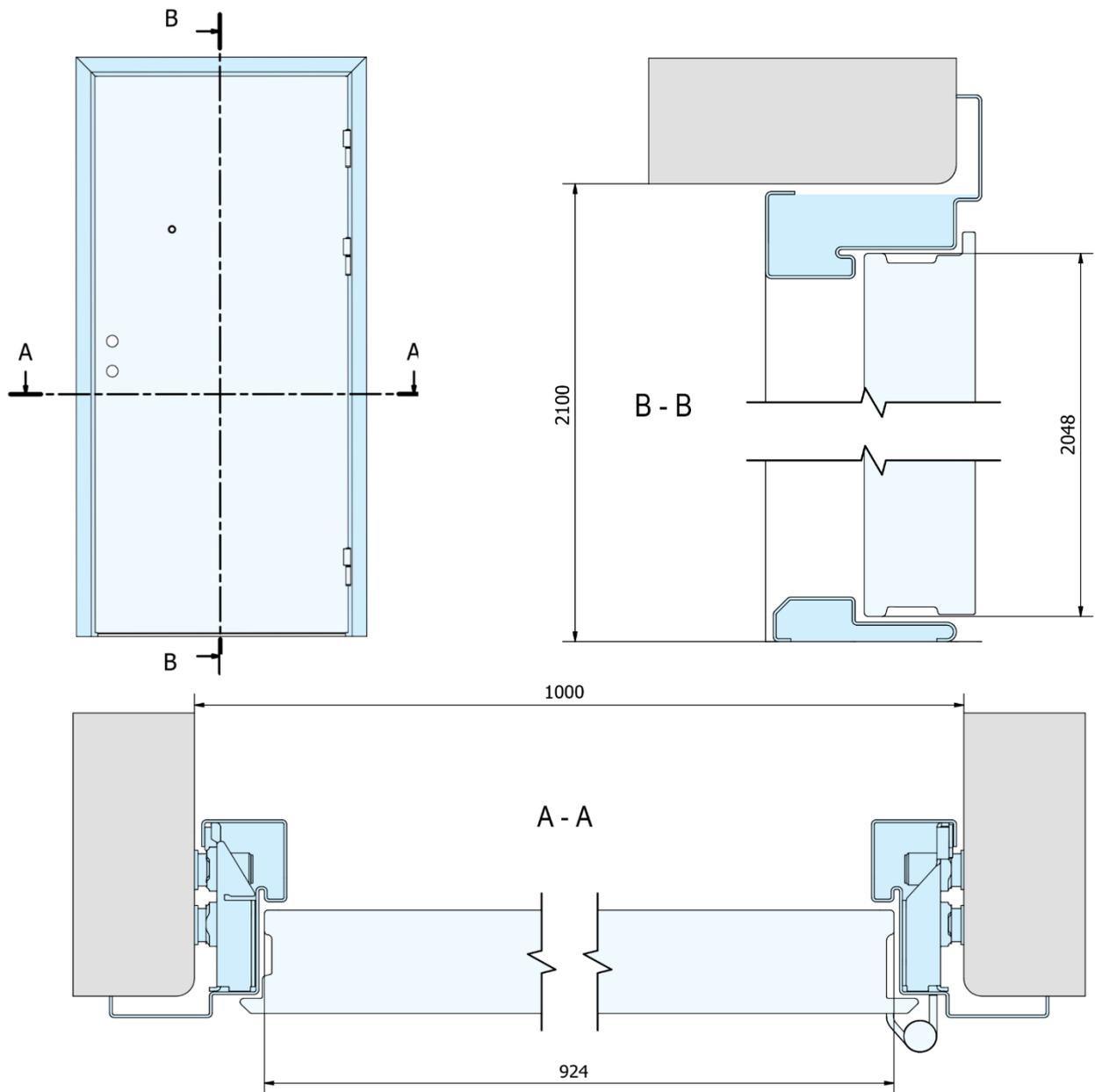


Figure A1: Wall and door dimensions

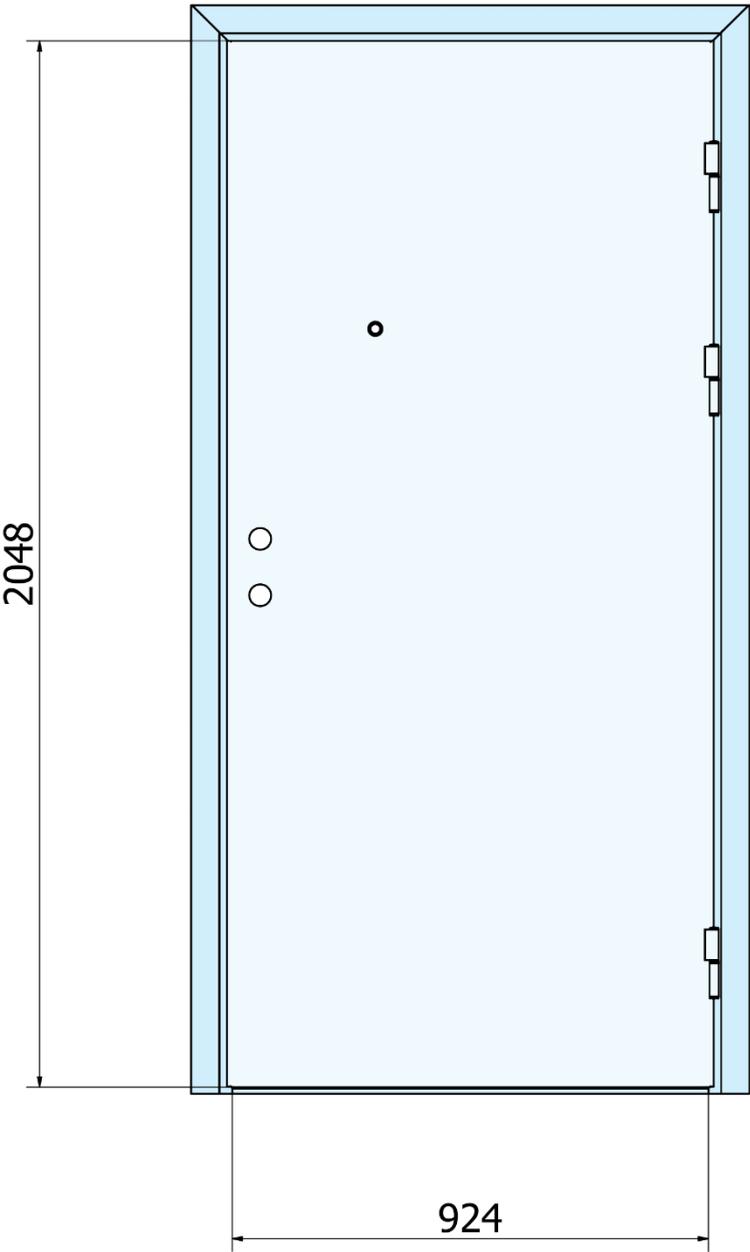


Figure A2: Door dimensions, simplified.

