

ENVIRONMENTAL PRODUCT DECLARATION

as per ISO 14025 and EN 15804

Owner of the Declaration	ASSA ABLOY
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20150154-IBA1-EN
Issue date	10.06.2015
Valid to	09.06.2020

ASSA – Connect 2002-50 Single Point Lock ASSA ABLOY

www.bau-umwelt.com / <https://epd-online.com>



1. General Information

ASSA OEM AB

Programme holder

IBU - Institut Bauen und Umwelt e.V.
Panoramastr. 1
10178 Berlin
Germany

Declaration number

EPD-ASA-20150154-IBA1-EN

This Declaration is based on the Product Category Rules:

IBU: PCR Locks and fittings (mechanical & electromechanical locks & Fittings), 07-2014 (PCR tested and approved by the independent expert committee (SVA))

Issue date

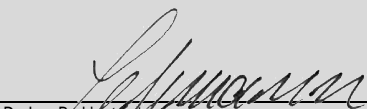
10.06.2015

Valid to

09.06.2020



Prof. Dr.-Ing. Horst J. Bossenmayer
(President of Institut Bauen und Umwelt e.V.)



Dr.-Ing. Burkhard Lehmann
(Managing Director IBU)

ASSA Connect 2002-50

Owner of the Declaration

ASSA OEM AB
Kungsgatan 71,
631 05 Eskilstuna
Sweden

Declared product / Declared unit

The declaration represents 1 piece of single point lock, with latch bolt and hook bolt, backset depth 50 mm

Scope:


This declaration and its LCA study are relevant to ASSA Connect 2002-50 single point locks.

The primary manufacturing processes are made by external suppliers and the final manufacturing processes and assembly for all lock components occur at the manufacturing factory in ASSA ABLOY (Zhongshan) Security Technology Company Ltd, China. The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The CEN Standard EN 15804 serves as the core PCR
Independent verification of the declaration and data according to ISO 14025

internally externally



Dr. Wolfram Trinius
(Independent verifier appointed by SVA)

2. Product

2.1 Product description

Product name: ASSA Connect 2002-50

Product characteristic: Single Point Locks

- With latch bolt and hook bolt.
- Blocking mechanism (lock back button) for thumb turn function in forend.
- Hardened and guided motion hook bolt.
- Provides a coupling connection between door and frame.
- Strengthened deadlocking.
- Reversible latch bolt for alternate door hanging.
- Latch bolt in hardened steel for fire classified doors.

2.2 Application

ASSA Connect 2002-50 single point locks are used as a lock case for entrance doors to villas and apartments etc.

2.3 Technical Data

The table presents the technical properties of ASSA Connect 2002-50:

Technical data

Name	Value	Unit
Dimensions 2002-50 backset (W x H x D)	22.5 x 6.4 x 1.9	cm

Weight	685	g
Temperature (operation)	-40 to +70	°C
Temperature (storage)	-40 to +70	°C

2.4 Placing on the market / Application rules

For the placing on the market in the EU/EFTA (with the exception of Switzerland) the Regulation (EU) No 305/2011 applies. The products need a Declaration of Performance taking into consideration /EN 12209:2003/AC:2005 Building hardware — Locks and latches — Mechanically operated locks, latches and locking plates — Requirements and test methods/ and the CE-marking.

For the application and use of the products the respective national provisions apply.

2.5 Delivery status

Single point locks are delivered as separate lock case in a box size - 230 mm x 85 mm x 23 mm

2.6 Base materials / Ancillary materials

The average composition for ASSA Connect 2002-50 is as following:

Component	Percentage in mass (%)
Zinc	7.54
Stainless Steel	4.83
Steel	87.11
Plastics	0.52
Total	100.0

2.7 Manufacture

The primary manufacturing processes are made by Tier 1 suppliers and the final manufacturing processes for lock cases occur at factory ASSA ABLOY (Zhongshan) Security Technology Company Ltd, China.

The components come from processes like stamped steel, turning, zinc and steel casting. Final assembly takes place in China.

The factory of ASSA ABLOY (Zhongshan) Security Technology Company Ltd has a certification of Quality Management system in accordance with /ISO 9001:2008/.

2.8 Environment and health during manufacturing

ASSA ABLOY is committed to producing and distributing door opening solutions with minimal environmental impact, where health & safety is the primary focus for all employees and associates.

- Environmental operations, GHG, energy, water, waste, VOC, surface treatment and H&S are being routinely monitored. Inspections, audits, and reviews are conducted periodically to ensure that applicable standards are met and environmental management program effectiveness is evaluated.
- Code of Conduct covers human rights, labor practices and decent work. Management of ASSA ABLOY is aware of their environmental roles and responsibilities, providing appropriate training, supporting accountability and recognizing outstanding performance.
- The factory in Zhongshan has certification of Environmental Management to /ISO 14001:2004/.
- Any waste metals during machining are separated and recycled. All manufacturing waste is minimized and appropriately treated to ensure minimal environmental impact.

2.9 Product processing/Installation

ASSA Connect 2002-50 single point locks are distributed through and installed by trained installation technicians, such as locksmiths, carpenters etc. adhering to local/national standards and requirements.

2.10 Packaging

ASSA Connect 2002-50 single point locks are packed in cardboard packaging. Packaging includes two paper sheets (installation instruction and drilling template) – all of which are fully recyclable. 80% of carton is made from recycled material 100% of paper documents are made from recycled material.

Material	Value (%)
Cardboard/paper	100.0
Total	100.0

All materials incurred during installation are directed to a recycling unit.

Waste codes according to European Waste Catalogue and Hazardous Waste List - Valid from 1 January 2002. EWC 15 01 01 paper and cardboard packaging.

2.11 Condition of use

Annual inspection is recommended in order to guarantee correct functionality of the product and the door leaf. The inspection includes: checking, fixing screws to ensure they are properly tight, correct adjustments (door gaps), compliance with local legal inspection standards and greasing all the moving parts.

2.12 Environment and health during use

There is no harmful emissive potential. No damage to health or impairment is expected under normal use corresponding to the intended use of the product.

2.13 Reference service life

The typical life time of ASSA Connect 2002-50 is 15-20 years, dependent on frequency of cycles.

2.14 Extraordinary effects

Fire

ASSA Connect 2002-50 are tested for usage in fire and smoke protection doors according to /EN 1634-1/.

Water

Contain no substances that have any impact on water in case of flood.

Mechanical destruction

No danger to the environment can be anticipated during mechanical destruction.

2.15 Re-use phase

The product is possible to re-use during the reference service life and be moved from one door to another. The majority, by weight, of components is steel which can be recycled. The plastic components can be used for energy recovery within a waste incineration process.

Waste codes according to European Waste Catalogue /EWC/ and Hazardous Waste List -Valid from 1 January 2002; /EWC/ 17 02 03 plastic /EWC/ 17 04 04 zinc /EWC/ 17 04 05 iron and steel.

2.16 Disposal

No disposal is foreseen for the product nor for the corresponding packaging.

2.17 Further information

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SE-63105 Eskilstuna
Sweden
www.assa.se
www.assaoem.se

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of single point lock ASSA Connect 2002-50 as specified in Part B requirements on the EPD for PCR Locks and fittings: (mechanical & electromechanical locks & fittings)

Declared unit

Name	Value	Unit
Declared unit	1	Piece of single point lock
Mass (without packaging)	0.75	kg
Conversion factor to 1 kg	1.333	-

3.2 System boundary

Type of the EPD: cradle to gate - with options
The following life cycle phases were considered:

Production stage:

- A1 – Raw material extraction and processing
- A2 – Transport to the manufacturer and
- A3 – Manufacturing

Construction stage:

- A4 - Transport from the gate to the site
- A5 – Packaging waste processing

End-of-life stage:

- C2 – Transport to waste processing
- C4 – Disposal (landfill)

This includes provision of all materials, products and energy, packaging processing and its transport, as well as waste processing up to the end-of waste state or disposal of final residues.

- D - Declaration of all benefits or recycling potential from EoL and A5.

3.3 Estimates and assumptions

EoL:

In the End-of-Life phase, for all the materials which can be recycled, a recycling scenario with 100% collection rate was assumed.

3.4 Cut-off criteria

In the assessment, all available data from the production process are considered, i.e. all raw materials used, auxiliary materials (e.g. lubricants), thermal energy consumption and electric power consumption - including material and energy flows contributing less than 1% of mass or energy (if available). In case a specific flow contributing less than 1% in mass or energy is not available, worst case assumption proxies are selected to represent the respective environmental impacts.

Impacts relating to the production of machines and facilities required during production are out of the scope of this assessment.

3.5 Background data

For life cycle modeling of the considered products, the GaBi 6 Software System for Life Cycle Engineering,

developed by PE INTERNATIONAL AG, is used /GaBi 6 2013/. The GaBi-database contains consistent and documented datasets which are documented in the online

GaBi-documentation /GaBi 6 2013D/.

To ensure comparability of results in the LCA, the basic data of GaBi database were used for energy, transportation and auxiliary materials.

3.6 Data quality

The requirements for data quality and background data correspond to the specifications of the /IBU PCR Part A/.

PE INTERNATIONAL performed a variety of tests and checks during the entire project to ensure high quality of the completed project. This obviously includes an extensive review of project-specific LCA models as well as the background data used.

The technological background of the collected data reflects the physical reality of the declared products. The datasets are complete and conform to the system boundaries and the criteria for the exclusion of inputs and outputs.

All relevant background datasets are taken from the GaBi 6 software database. The last revision of the used background data has taken place not longer than 10 years ago.

3.7 Period under review

The period under review is 2013/14 (12 month average).

3.8 Allocation

Regarding incineration, the software model for the waste incineration plant (WIP) is adapted according to the material composition and heating value of the combusted material. In this EPD, the following specific life cycle inventories for the WIP are considered for:

- Waste incineration of plastic
- Waste incineration of paper

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status. Thus, these materials are considered in module D. Specific information on allocation within the background data is given in the GaBi dataset documentation.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

4. LCA: Scenarios and additional technical information

The following technical information is a basis for the declared modules or can be used for developing specific scenarios in the context of a building assessment if modules are not declared (MND).

Transport to the building site (A4)

Name	Value	Unit
Truck transport		
Litres of fuel diesel with maximum load (27 t payload)	39.4	l/100 km
Transport distance truck	500	km
Capacity utilization (incl. empty runs) of truck	85	%
Ship transport		
Volume of heavy fuel oil with maximum load (27500 DWT)	5.3	m ³ /100 km
Transport distance ship	20314	km
Gross density of products transported	-	
Capacity utilization volume factor	-	

Installation into the building (A5)

Name	Value	Unit
Output substances following waste treatment on site (Paper packaging)	0.09	kg

Reference service life

Name	Value	Unit
Reference service life	15	a

End of life (C1-C4)

Name	Value	Unit
Collected separately Zinc, steel, stainless steel, plastics	0.750	kg
Collected as mixed construction waste – construction waste for landfilling	0.00	kg
Reuse Plastics	0.004	kg
Recycling Zinc, steel, stainless steel	0.746	kg
Landfilling - Construction waste for landfilling	0.00	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Name	Value	Unit
Collected separately waste type (including packaging)	0.841	kg
Recycling Zinc	6.72	%
Recycling Steel	77.72	%
Recycling Stainless steel	4.31	%
Reuse Plastics	0.47	%
Reuse Paper packaging (from A5)	10.78	%
Loss Construction waste for landfilling (no recycling potential)	0.00	%

5. LCA: Results

Results shown below were calculated using CML 2000 – Apr. 2013 Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE								END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement ⁽¹⁾	Refurbishment ⁽¹⁾	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential	
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of single point lock ASSA Connect 2002-50

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
GWP	Global warming potential	[kg CO ₂ -Eq.]	2.14E+00	2.66E-01	1.28E-01	3.13E-01	9.79E-03	-1.29E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	1.11E-10	2.34E-12	5.87E-13	2.51E-12	2.95E-14	-6.55E-11
AP	Acidification potential of land and water	[kg SO ₂ -Eq.]	9.08E-03	7.51E-03	2.93E-05	8.91E-03	2.49E-06	-4.74E-03
EP	Eutrophication potential	[kg (PO ₄) ³⁻ -Eq.]	7.90E-04	7.69E-04	5.11E-06	9.11E-04	1.89E-07	-3.77E-04
POCP	Formation potential of tropospheric ozone photochemical oxidants	[kg Ethen Eq.]	1.04E-03	4.10E-04	2.08E-06	4.94E-04	1.21E-07	-6.60E-04
ADPE	Abiotic depletion potential for non fossil resources	[kg Sb Eq.]	4.48E-04	7.30E-09	2.32E-09	8.48E-09	6.47E-10	-2.91E-04
ADPF	Abiotic depletion potential for fossil resources	[MJ]	2.82E+01	3.30E+00	3.59E-02	3.86E+00	4.14E-03	-1.29E+01

RESULTS OF THE LCA - RESOURCE USE: One piece of single point lock ASSA Connect 2002-50

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	4.71E+00	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	4.71E+00	2.32E-02	3.35E-03	2.42E-02	3.03E-04	-8.20E-01
PENRE	Non renewable primary energy as energy carrier	[MJ]	3.07E+01	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	3.07E+01	3.32E+00	4.21E-02	3.89E+00	4.60E-03	-1.33E+01
SM	Use of secondary material	[kg]	1.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of non renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	[m ³]	1.12E-02	4.23E-05	3.73E-04	4.57E-05	2.39E-05	-3.91E-03

RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of single point lock ASSA Connect 2002-50

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
HWD	Hazardous waste disposed	[kg]	1.63E-03	9.00E-06	2.90E-06	9.64E-06	3.22E-07	2.80E-04
NHWD	Non hazardous waste disposed	[kg]	9.50E-02	5.82E-05	3.22E-03	6.03E-05	9.12E-04	8.08E-03
RWD	Radioactive waste disposed	[kg]	9.82E-04	9.23E-06	2.46E-06	9.93E-06	1.83E-07	-1.91E-04
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	9.06E-02	0.00E+00	0.00E+00	-
MER	Materials for energy recovery	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	1.62E-01	0.00E+00	1.87E-02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	4.58E-01	0.00E+00	5.14E-02	-

6. LCA: Interpretation

This chapter contains an interpretation of the Life Cycle Impact Assessment categories. Stated percentages in the whole interpretation are related to the overall life cycle, excluding credits (module D).

The production phase (modules A1-A3) contributes between 32% and 100% to the overall results for all the environmental impact assessment categories hereby considered. Within the production phase, the main contribution for all the impact categories is the production of steel, with app. 98%, mainly due to the energy consumption on this process. Steel and

stainless steel account in total with app. 91% to the overall mass of the product, therefore, the impacts are in line with the mass composition of the product. The environmental impacts for the transport (A2) have a negligible impact within this stage.

In the end-of-life phase, there are loads and benefits (module D, negative values) considered. The benefits are considered beyond the system boundaries and are declared for the recycling potential of the metals and for the credits from the incineration process (energy substitution).

7. Requisite evidence

Not applicable in this EPD.

8. References

Institut Bauen und Umwelt

Institut Bauen und Umwelt e.V., Berlin (pub.):
Generation of Environmental Product Declarations
(EPDs);

General principles

for the EPD range of Institut Bauen und Umwelt e.V.
(IBU), 2013-04
www.bau-umwelt.de

PCR Part A

Institut Bauen und Umwelt e.V., Berlin (pub.): Product
Category Rules for Construction Products from the
range of Environmental Product Declarations of Institut
Bauen und Umwelt (IBU), Part A: Calculation Rules for
the Life Cycle Assessment and Requirements on the
Background Report. April 2013
www.bau-umwelt.de

IBU PCR Part B

IBU PCR Part B: PCR Guidance-Texts for Building-
Related Products and Services. From the range of
Environmental Product Declarations of Institute
Construction and Environment e.V. (IBU). Part B:
Requirements on the EPD for Locks and fittings.
www.bau-umwelt.com

EN 15804

EN 15804:2012+A1:2014: Sustainability of construction
works — Environmental Product Declarations — Core
rules for the product category of construction products

GaBi 6 2013

GaBi 6 2013: Software-System and Database for Life
Cycle Engineering. Copyright, TM. Stuttgart, PE
INTERNATIONAL AG, Leinfelden-Echterdingen, 1992-
2013.

GaBi 6 2013D

GaBi 6 2013D: Documentation of GaBi 6: Software-
System and Database for Life Cycle Engineering.
Copyright, TM. Stuttgart, PE INTERNATIONAL AG,
Leinfelden-Echterdingen, 1992-2013.
<http://documentation.gabi-software.com/>

ISO 14025

DIN EN ISO 14025:2011-10: Environmental labels and
declarations — Type III environmental declarations —
Principles and procedures

EN 12209:2004

Schlösser und Baubeschläge - Schlösser -
Mechanisch betätigte Schlösser und Schließbleche -
Anforderungen und Prüfverfahren; Deutsche Fassung

ISO 9001:2008

Quality management systems – Requirements

ISO 14001:2004

Environmental management systems - Requirements
with guidance for use

DIN EN1634-1

Feuerwiderstandsprüfungen und
Rauchschutzprüfungen für Türen, Tore, Abschlüsse,
Fenster und Baubeschläge - Teil 1:
Feuerwiderstandsprüfungen für Türen, Tore,
Abschlüsse und Fenster; Deutsche Fassung EN 1634-
1:2008

EWC

European Waste Catalog

9. Annex

Results shown below were calculated using TRACI Methodology.

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)																
PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement ⁽¹⁾	Refurbishment ⁽¹⁾	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	MND	X	X

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; MND = MODULE NOT DECLARED)																
PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement ⁽¹⁾	Refurbishment ⁽¹⁾	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	X	MND	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT: One piece of single point lock ASSA Connect 2002-50

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
GWP	Global warming potential	[kg CO ₂ -Eq.]	2.14E+00	2.66E-01	1.28E-01	3.13E-01	9.79E-03	-1.29E+00
ODP	Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	1.18E-10	2.49E-12	6.24E-13	2.66E-12	3.13E-14	-6.97E-11
AP	Acidification potential of land and water	[kg SO ₂ -Eq.]	9.12E-03	7.92E-03	3.54E-05	9.40E-03	2.92E-06	-4.76E-03
EP	Eutrophication potential	[kg N-eq.]	6.31E-04	2.65E-04	2.04E-06	3.14E-04	8.91E-08	-2.76E-04
Smog	Ground-level smog formation potential	[kg O ₃ -eq.]	1.25E-01	1.45E-01	8.27E-04	1.72E-01	2.30E-05	-6.63E-02
Resources	Resources – fossil resources	[MJ]	1.54E+00	4.73E-01	4.22E-03	5.54E-01	4.26E-04	-1.84E-01

RESULTS OF THE LCA - RESOURCE USE: One piece of single point lock ASSA Connect 2002-50

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
PERE	Renewable primary energy as energy carrier	[MJ]	4.71E+00	-	-	-	-	-
PERM	Renewable primary energy resources as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PERT	Total use of renewable primary energy resources	[MJ]	4.71E+00	2.32E-02	3.35E-03	2.42E-02	3.03E-04	-8.20E-01
PENRE	Non renewable primary energy as energy carrier	[MJ]	3.07E+01	-	-	-	-	-
PENRM	Non renewable primary energy as material utilization	[MJ]	0.00E+00	-	-	-	-	-
PENRT	Total use of non renewable primary energy resources	[MJ]	3.07E+01	3.32E+00	4.21E-02	3.89E+00	4.60E-03	-1.33E+01
SM	Use of secondary material	[kg]	1.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RSF	Use of renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NRSF	Use of non renewable secondary fuels	[MJ]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	Use of net fresh water	[m ³]	1.12E-02	4.23E-05	3.73E-04	4.57E-05	2.39E-05	-3.91E-03

**RESULTS OF THE LCA – OUTPUT FLOWS AND WASTE CATEGORIES: One piece of single point lock
ASSA Connect 2002-50**

Parameter	Parameter	Unit	A1-3	A4	A5	C2	C4	D
HWD	Hazardous waste disposed	[kg]	1.63E-03	9.00E-06	2.90E-06	9.64E-06	3.22E-07	2.80E-04
NHWD	Non hazardous waste disposed	[kg]	9.50E-02	5.82E-05	3.22E-03	6.03E-05	9.12E-04	8.08E-03
RWD	Radioactive waste disposed	[kg]	9.82E-04	9.23E-06	2.46E-06	9.93E-06	1.83E-07	-1.91E-04
CRU	Components for re-use	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
MFR	Materials for recycling	[kg]	0.00E+00	0.00E+00	9.06E-02	0.00E+00	0.00E+00	-
MER	Materials for energy recovery	[kg]	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-
EEE	Exported electrical energy	[MJ]	0.00E+00	0.00E+00	1.62E-01	0.00E+00	1.87E-02	-
EET	Exported thermal energy	[MJ]	0.00E+00	0.00E+00	4.58E-01	0.00E+00	5.14E-02	-



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