

**Environmental
Product
Declaration**

According to ISO14025+EN15804 A2 (+indicators A1)

This declaration is for:
XENTRY 3TP Speedgate

Provided by:
HTC Parking & Security



MRPI® registration
1.1.00792.2025

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COMPANY INFORMATION

HTC Parking & Security
 Tweede Bloksweg 72
 2742 KL
 Waddinxveen
 Netherlands
 +31880277088
 Stefan Morssink
<https://htc-ps.com/en/>

MRPI® REGISTRATION

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SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by Jeannette Levels-Vermeer, LBP SIGHT. The LCA study has been done by Vince Evers, Dispersed. The certificate is based on an LCA-dossier according to ISO14025+EN15804 A2 (+indicators A1). It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2. Declaration of SVHC that are listed on the 'Candidate list of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PROGRAM OPERATOR

Stichting MRPI®
 Kingsfordweg 151
 1043 GR
 Amsterdam

PRODUCT

XENTRY 3TP Speedgate

DECLARED UNIT / FUNCTIONAL UNIT

1 Piece

DESCRIPTION OF PRODUCT

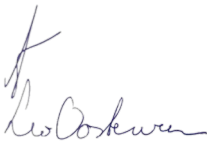

The XENTRY 3TP is a Speedgate or bi-folding gate system, designed to secure and automate the vehicle entrance to a building. It protects an area from unwanted access by unauthorized persons and regulates traffic. Each side of the gate folds into two segments, allowing for fast opening and closing. The space-saving design, high speed and robust construction make it suitable for situations with limited space and high traffic.

VISUAL PRODUCT



MORE INFORMATION

<https://htc-ps.com/en/producten/speedgates-en/xentry-3/>

<p>Ing. L. L. Oosterveen MSc. MBA Managing Director MRPI</p>	<p>DEMONSTRATION OF VERIFICATION</p>
	<p>CEN standard EN15804 serves as the core PCR [1]</p>
	<p>Independent verification of the declaration an data according to ISO14025+EN15804 A2 (+indicators A1) internal: _____ external: X</p>
	<p>Third party verifier: Jeannette Levels-Vermeer, LBP SIGHT  [1] PCR = Product Category Rules</p>

DETAILED PRODUCT DESCRIPTION (PART 1)

DECLARED UNIT

1 HTC XENTRY 3TP Speedgate with a reference size of 4.5 meters (width) by 2.75 meters (height), totaling 12.38 m² of functional surface, and a mass of 811 kg.

PRODUCT DESCRIPTION

The Xentry 3TP is part of HTC Parking & Security's advanced Speedgate product line, specifically designed for secure vehicle access control at buildings and perimeters. This model is a top-driven Speedgate equipped with a single motor and an integrated guiding system, which ensures smooth and reliable operation. The gate opens at approximately 1.2 meters per second, facilitating swift entry and exit. The Speedgate is certified by TÜV according to EN13241, affirming its compliance with stringent safety and quality requirements. For enhanced security, the XENTRY 3TP can be manufactured with burglar- and bulletproof certifications, including RC4, RC5, or FB6, in accordance with EN1627:2011 and DIN EN 1522 standards. The product is configurable in various sizes. The functional surface of the XENTRY 3TP may range between 6.3 and 32.3 m².

CONDITION OF DELIVERY

The Xentry 3TP is delivered pre-assembled and ready for installation. The gate system is transported by road from Waddinxveen to the customer location. No additional packaging is applied at delivery beyond what was used during component transportation.

REFERENCE SERVICE LIFE

The reference service life (RSL) for the Xentry 3TP is 20 years, based on:

- Usage frequency: 25,000 open/close cycles per year.
- Total cycles: 500,000 over its lifetime.
- The service life is aligned with real-world performance data and maintenance practices.

PRODUCT COMPONENTS

The XENTRY 3TP consists primarily of steel components (columns and gate panels), electronics (PWBs, electromotors), rubbers, plastics, and aluminum.

Component (> 1%)	(%)
Steel components	93,5
Electronics	1,4
Plastic components	1,2
Aluminium components	1
Rubber components	0,8
Other components	2

SCOPE AND TYPE

The scope of the EPD is defined as cradle-to-gate with options:

- Product stage (A1-A3): Material extraction, transport to production, and manufacturing.
- Construction stage (A4-A5): Distribution to site and installation.
- Use stage (B4): Replacement.
- End-of-life stage (C1-C4): Dismantling, transport, waste processing, and disposal.
- Benefits and loads beyond the system boundary (Module D): Includes recycling credits and recovered energy.

All major activities within the scope, from the extraction of natural resources to the final disposal of the product, are included in the environmental assessment of the product. This declaration covers a specific product from a single manufacturer (HTC Parking & Security), based on primary and verified data.

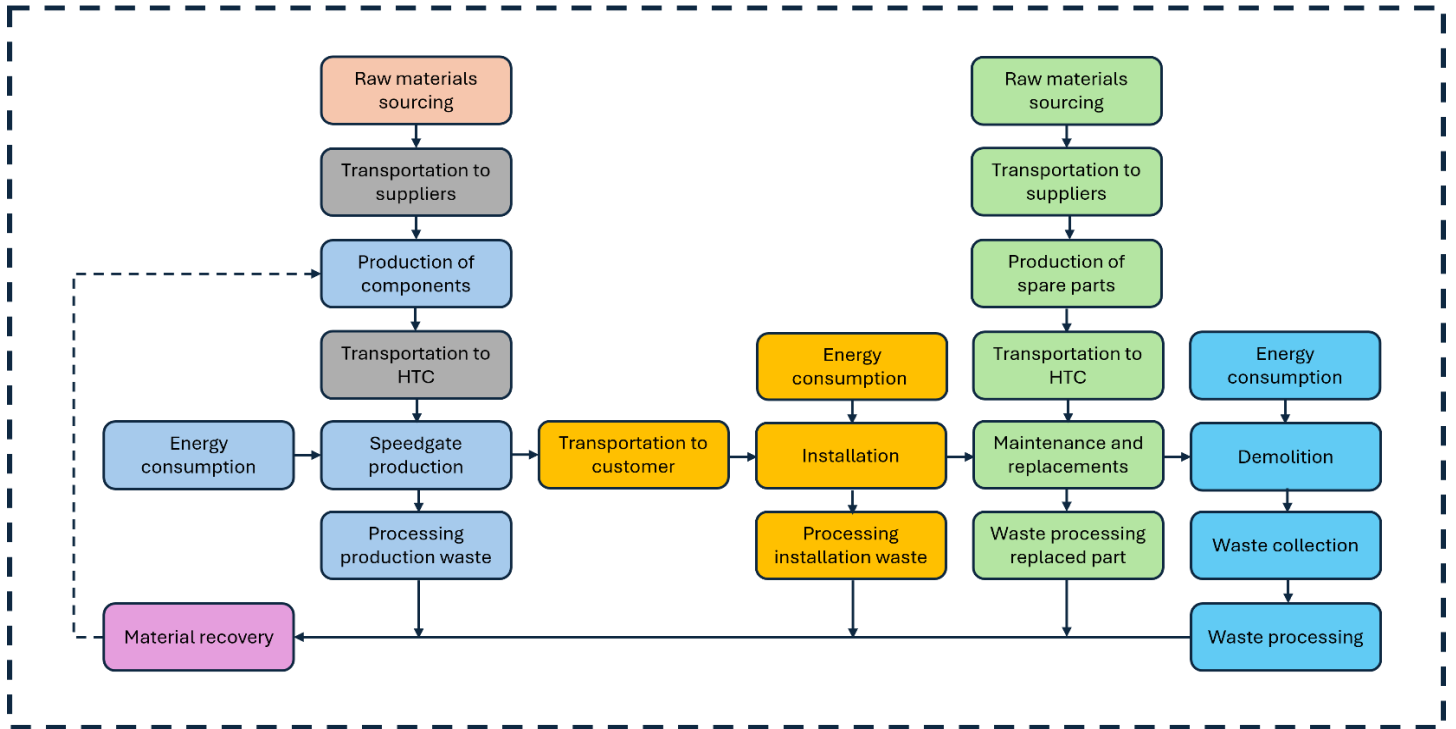
Production and assembly take place at HTC's facility in Waddinxveen, the Netherlands. The primary market is also the Netherlands, which accounts for 83% of sold installations. The end-of-life treatment is assumed to take place within the Netherlands, using national average waste treatment and recycling scenarios as defined in the NMD Bepalingsmethode. Modules A4-5 and C1-4 are therefore most representative for the Dutch market. Modules A1-3 and B4 are representative for the European market as well.

Material data is primarily based on HTC's 2024 bill-of-materials. Environmental impact data is sourced from the NMD Processendatabase 3.5 and, where necessary, supplemented with Ecolnvent v3.6 datasets. The life cycle assessment was modeled and calculated using EcoChain LCA software.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USER STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	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	ND	ND	ND	X	ND	ND	ND	X	X	X	X	X

X = Modules Assessed

ND = Not Declared



REPRESENTATIVENESS

This EPD is representative for one XENTRY 3TP with a surface area of 12.38 m² and a steel panel mass between 13-15 kg/m². For other gate sizes, a scaling formula can be applied to estimate environmental impacts proportionally, based on the surface area in square meters (m²), calculated as the product of gate width and height. This allows users to approximate impacts for customized gates using the EPD as a reference.

ENVIRONMENTAL IMPACT per functional unit or declared unit (indicators A1)

Eenheid	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
ADPE kg Sb eq.	ND	ND	ND	1,80E-01	1,98E-04	3,54E-03	ND	ND	ND	6,79E-02	ND	ND	ND	4,34E-05	0,00E+00	1,06E-03	1,96E-06	1,27E-02
ADPF MJ	ND	ND	ND	3,22E+04	1,18E+02	9,54E+02	ND	ND	ND	3,09E+03	ND	ND	ND	1,66E+02	0,00E+00	2,82E+02	5,96E+00	-9,65E+03
GWP kg CO2 eq.	ND	ND	ND	2,21E+03	7,74E+00	6,40E+01	ND	ND	ND	2,02E+02	ND	ND	ND	1,06E+01	4,45E+00	7,32E+01	2,79E-01	-7,32E+02
ODP kg CFC11 eq.	ND	ND	ND	1,39E-04	1,37E-06	7,37E-06	ND	ND	ND	1,64E-05	ND	ND	ND	5,25E-07	0,00E+00	3,09E-06	6,89E-08	-2,80E-05
POCP kg ethene eq.	ND	ND	ND	2,95E+00	4,67E-03	4,96E-02	ND	ND	ND	8,94E-02	ND	ND	ND	1,58E-03	6,63E-04	1,72E-02	2,35E-04	-1,40E+00
AP kg SO2 eq.	ND	ND	ND	9,91E+00	3,40E-02	2,68E-01	ND	ND	ND	1,06E+00	ND	ND	ND	1,99E-02	1,12E-02	1,93E-01	1,56E-03	-2,58E+00
EP kg (PO4) 3- eq.	ND	ND	ND	1,28E+00	6,68E-03	4,52E-02	ND	ND	ND	1,89E-01	ND	ND	ND	4,10E-03	2,95E-03	2,59E-02	3,64E-04	-2,85E-01

Toxicity indicators and ECI (Dutch market)

HTP kg DCB eq.	ND	ND	ND	1,92E+03	3,26E+00	3,69E+01	ND	ND	ND	8,76E+01	ND	ND	ND	1,20E+00	2,68E-02	5,08E+01	1,09E-01	-4,71E+02
FAETP kg DCB eq.	ND	ND	ND	4,11E+01	9,51E-02	7,62E-01	ND	ND	ND	7,86E+00	ND	ND	ND	3,30E-02	0,00E+00	6,35E-01	3,17E-03	5,38E+00
MAETP kg DCB eq.	ND	ND	ND	8,22E+04	3,42E+02	2,58E+03	ND	ND	ND	2,05E+04	ND	ND	ND	1,39E+02	0,00E+00	2,30E+03	9,03E+00	3,71E+01
TETP kg DCB eq.	ND	ND	ND	6,86E+00	1,15E-02	1,79E-01	ND	ND	ND	8,68E-01	ND	ND	ND	5,42E-02	0,00E+00	7,85E-02	2,62E-04	3,26E+01
ECI euro	ND	ND	ND	3,53E+02	9,32E-01	8,46E+00	ND	ND	ND	2,67E+01	ND	ND	ND	7,90E-01	2,98E-01	9,55E+00	3,52E-02	-9,33E+01
ADPF kg Sn eq.	ND	ND	ND	1,55E+01	5,69E-02	4,59E-01	ND	ND	ND	1,49E+00	ND	ND	ND	8,00E-02	0,00E+00	1,35E-01	2,87E-03	-4,64E+00

- ADPE = Abiotic Depletion Potential for non-fossil resources
- ADPF = Abiotic Depletion Potential for fossil resources
- GWP = Global Warming Potential
- ODP = Depletion potential of the stratospheric ozone layer
- POCP = Formation potential of tropospheric ozone photochemical oxidants
- AP = Acidification Potential of land and water
- EP = Eutrophication Potential
- HTP = Human Toxicity Potential
- FAETP = Fresh water aquatic ecotoxicity potential
- MAETP = Marine aquatic ecotoxicity potential
- TETP = Terrestrial ecotoxicity potential
- ECI = Environmental Cost Indicator
- ADPF = Abiotic Depletion Potential for fossil resources

ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-total	kg CO2 eq	ND	ND	ND	2,31E+03	7,81E+00	6,55E+01	ND	ND	ND	2,06E+02	ND	ND	ND	1,09E+01	4,47E+00	7,25E+01	2,95E-01	-7,79E+02
GWP-fossil	kg CO2 eq	ND	ND	ND	2,31E+03	7,80E+00	6,54E+01	ND	ND	ND	2,06E+02	ND	ND	ND	1,08E+01	4,47E+00	7,35E+01	2,95E-01	-7,80E+02
GWP-biogenic	kg CO2 eq	ND	ND	ND	9,08E-01	3,60E-03	7,54E-02	ND	ND	ND	-5,35E-02	ND	ND	ND	1,18E-01	0,00E+00	-1,05E+00	6,34E-04	5,97E-01
GWP-luluc	kg CO2 eq	ND	ND	ND	1,90E+00	2,86E-03	3,22E-02	ND	ND	ND	2,80E-01	ND	ND	ND	3,18E-03	0,00E+00	2,34E-02	7,29E-05	2,97E-01
ODP	kg CFC11 eq	ND	ND	ND	1,38E-04	1,72E-06	8,73E-06	ND	ND	ND	1,58E-05	ND	ND	ND	5,22E-07	0,00E+00	3,46E-06	8,68E-08	-2,33E-05
AP	mol H+ eq.	ND	ND	ND	1,22E+01	4,52E-02	3,44E-01	ND	ND	ND	1,30E+00	ND	ND	ND	2,52E-02	1,66E-02	2,42E-01	2,05E-03	-3,14E+00
EP-fresh water	kg PO4 eq.	ND	ND	ND	1,23E-01	7,87E-05	2,56E-03	ND	ND	ND	3,33E-02	ND	ND	ND	6,14E-04	0,00E+00	1,35E-03	2,80E-06	-2,53E-02
EP-marine	kg N eq.	ND	ND	ND	2,13E+00	1,59E-02	9,14E-02	ND	ND	ND	2,18E-01	ND	ND	ND	5,40E-03	8,69E-03	5,50E-02	8,47E-04	-5,60E-01
EP-terrestrial	mol N eq.	ND	ND	ND	2,61E+01	1,76E-01	1,04E+00	ND	ND	ND	2,53E+00	ND	ND	ND	6,61E-02	9,52E-02	6,34E-01	7,71E-03	-6,63E+00
POCP	kg NMVOC eq.	ND	ND	ND	1,07E+01	5,02E-02	3,25E-01	ND	ND	ND	6,91E-01	ND	ND	ND	1,64E-02	2,29E-02	1,72E-01	2,25E-03	-4,10E+00
ADP-minerals & metals	kg Sb eq.	ND	ND	ND	1,80E-01	1,98E-04	3,54E-03	ND	ND	ND	6,79E-02	ND	ND	ND	4,34E-05	0,00E+00	1,06E-03	1,96E-06	1,27E-02
ADP-fossil	MJ, net calorific value	ND	ND	ND	2,55E+04	1,18E+02	8,60E+02	ND	ND	ND	2,80E+03	ND	ND	ND	1,41E+02	0,00E+00	2,85E+02	5,98E+00	-5,99E+03
WDP	m3 world eq. Deprived	ND	ND	ND	8,95E+02	4,21E-01	9,58E+00	ND	ND	ND	4,86E+01	ND	ND	ND	1,09E+00	0,00E+00	4,29E+00	2,65E-01	-1,32E+02

- GWP-total = Global Warming Potential total
- GWP-fossil = Global Warming Potential fossil fuels
- GWP-biogenic = Global Warming Potential biogenictotal
- GWP-luluc = Global Warming Potential land use and land use change
- ODP = Depletion potential of the stratospheric ozone layer
- AP = Acidification Potential, Accumulated Exceedence
- 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 Exceedence
- POCP = Formation potential of tropospheric ozone photochemical oxidants
- ADP-minerals & metals = Abiotic Depletion Potential for non-fossil resources [1]
- ADP-fossil = Abiotic Depletion for fossil resources potential [1]
- WDP = Water (user) deprivation potential, deprivation-weighted water consumption [1]

Disclaimer [1]:

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

ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PM	Disease incidence	ND	ND	ND	1,81E-04	7,00E-07	4,69E-06	ND	ND	ND	8,33E-06	ND	ND	ND	8,26E-08	3,61E-08	2,94E-06	3,94E-08	-4,51E-05
IRP	kBq U235 eq.	ND	ND	ND	5,30E+01	4,93E-01	2,80E+00	ND	ND	ND	8,53E+00	ND	ND	ND	2,92E-01	0,00E+00	1,38E+00	2,44E-02	1,02E+01
ETP-fw	CTUe	ND	ND	ND	8,34E+04	1,05E+02	1,59E+03	ND	ND	ND	1,51E+04	ND	ND	ND	1,43E+02	4,70E-03	1,49E+03	1,63E+02	-2,45E+04
HTP-c	CTUh	ND	ND	ND	9,69E-06	3,40E-09	1,14E-07	ND	ND	ND	1,46E-07	ND	ND	ND	2,46E-09	0,00E+00	3,32E-08	1,01E-10	-2,19E-07
HTP-nc	CTUh	ND	ND	ND	8,53E-05	1,15E-07	1,60E-06	ND	ND	ND	7,20E-06	ND	ND	ND	8,03E-08	5,35E-11	1,63E-06	3,15E-09	1,27E-04
SQP	-	ND	ND	ND	9,02E+03	1,10E+02	5,68E+02	ND	ND	ND	1,37E+03	ND	ND	ND	3,27E+01	0,00E+00	7,05E+02	1,33E+01	-1,93E+03

- PM = Potential incidence of disease due to PM emissions
- IRP = Potential Human exposure efficiency relative to U235 [1]
- ETP-fw = Potential Comparative Toxic Unit for ecosystems [2]
- HTP-c = Potential Comparative Toxic Unit for humans [2]
- HTP-nc = Potential Comparative Toxic Unit for humans, non-cancer [2]
- SQP = Potential soil quality index [2]

Disclaimer [1]:

- This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste.

Disclaimer [2]:

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

OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 en A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
HWD	kg	ND	ND	ND	2,09E-01	2,98E-04	3,76E-03	ND	ND	ND	7,54E-03	ND	ND	ND	1,09E-04	0,00E+00	8,34E-04	8,87E-06	-4,26E-02
NHWD	kg	ND	ND	ND	4,44E+02	7,46E+00	3,47E+01	ND	ND	ND	1,54E+01	ND	ND	ND	4,16E-01	0,00E+00	8,73E+00	3,94E+01	-8,16E+01
RWD	kg	ND	ND	ND	5,37E-02	7,73E-04	3,90E-03	ND	ND	ND	6,56E-03	ND	ND	ND	2,92E-04	0,00E+00	1,61E-03	3,88E-05	2,54E-03
CRU	kg	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MFR	kg	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
MER	kg	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
EEE	kg	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
ETE	kg	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

- HWD = Hazardous Waste Disposed
 NHWD = Non Hazardous Waste Disposed
 RWD = Radioactive Waste Disposed
 CRU = Components for reuse
 MFR = Materials for recycling
 MER = Materials for energy recovery
 EEE = Exported Electrical Energy
 ETE = Exported Thermal Energy

RESOURCE USE per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	ND	ND	ND	1,42E+03	1,47E+00	3,67E+01	ND	ND	ND	2,24E+02	ND	ND	ND	1,52E+01	0,00E+00	4,27E+01	5,76E-02	-1,42E+02
PERM	MJ	ND	ND	ND	1,43E+02	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,09E+02
PERT	MJ	ND	ND	ND	1,56E+03	1,47E+00	3,67E+01	ND	ND	ND	2,24E+02	ND	ND	ND	1,52E+01	0,00E+00	4,27E+01	5,76E-02	-3,27E+01
PENRE	MJ	ND	ND	ND	2,66E+04	1,25E+02	9,10E+02	ND	ND	ND	2,69E+03	ND	ND	ND	1,51E+02	0,00E+00	3,02E+02	6,35E+00	-6,23E+03
PENRM	MJ	ND	ND	ND	4,81E+02	0,00E+00	4,51E+00	ND	ND	ND	2,97E+02	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-4,90E+01
PENRT	MJ	ND	ND	ND	2,71E+04	1,25E+02	9,14E+02	ND	ND	ND	2,99E+03	ND	ND	ND	1,51E+02	0,00E+00	3,02E+02	6,35E+00	-6,28E+03
SM	kg	ND	ND	ND	1,86E+02	0,00E+00	1,72E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	-1,45E+02
RSF	MJ	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
NSRF	MJ	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	ND	ND	ND	0,00E+00	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
FW	m3	ND	ND	ND	2,63E+01	1,43E-02	3,40E-01	ND	ND	ND	1,75E+00	ND	ND	ND	8,65E-02	0,00E+00	1,93E-01	6,34E-03	-2,71E+00

- PERE = Use of renewable energy excluding renewable primary energy resources
- PERM = Use of renewable energy resources used as raw materials
- PERT = Total use of renewable primary energy resources
- PENRE = Use of non-renewable primary energy resources excluding non-renewable 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 materials
- RSF = Use of renewable secondary fuels
- NSRF = Use of non-renewable secondary fuels
- FW = Use of net fresh water

BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 and A2)

	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
BBCpr	kg C	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
BCCpa	kg C	ND	ND	ND	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

- BCCpr = Biogenic carbon content in product
- BCCpa = Biogenic carbon content in packaging

CALCULATION RULES (PART 1)

DATA COLLECTION AND QUALITY

The data for the HTC Speedgates LCA was collected between February and October, 2024. Primary data, such as material lists and measured factory energy use, was collected for the year 2023 through an iterative process involving questionnaires, phone calls, and online meetings. Secondary environmental data was extracted from the NMD Processendatabase (version 3.5) and Ecolnvent (version 3.6). Data quality was ensured by validating material masses against actual product weights, using verified transport distances, and carefully selecting emission factors.

CUT-OFF CRITERIA AND ALLOCATION PROCEDURES

Cut-off criteria were set in line with EN15804, ensuring that all material and energy flows contributing more than 1% to the total mass or environmental impact were included, with the total excluded impact remaining below 5%. Allocation procedures followed standard attributional LCA practice, based on physical properties such as mass, and in the case of waste processing and recycling, environmental credits and burdens were assigned according to the modular approach and system expansion as defined in the EN15804 and NMD guidelines. Factory electricity consumption was allocated proportionally to product mass, and since solar energy generation exceeded usage, no net electricity impact was assigned. These procedures ensured the data was accurate, complete, and representative.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 1)

Module A1-3: The Speedgates are made from materials like steel, aluminum, plastics, electronics, and copper, with data based on detailed material lists. Materials are transported from key suppliers to HTC's Waddinxveen factory using either specific or average transport distances depending on supplier type. At the factory, components are cut and welded. Surface-treatment has already been performed by the suppliers and is taken into account within the scope of the assessment. Pproduction process in Waddinxveen uses solar power with no net electricity from the grid. Production waste mainly consists of steel and aluminum off-cuts.

Module A4: Assembled Speedgates are delivered by truck to customer locations based on average transport distances, without additional packaging.

Module A5: Installation involves mounting, electronic configuration, and energy use by tools like forklifts and drills; minor material losses are included.

Module B4: Over the 20-year use phase, certain parts (e.g. electronics, rubber) are replaced based on historical data, with full life cycle impacts included.

Module C1: At end-of-life, the Speedgates are dismantled on-site using the same energy assumptions as during installation.

Module C2: Dismantled materials are transported to waste processing facilities using standard transport assumptions.

Module C3-4: Waste is processed through recycling, incineration, or landfill depending on material type, following averages supplied by the NMD-Bepalingsmethode.

D: Recycled materials and recovered energy from waste incineration are credited, reducing the total environmental impact.

Waste treatment scenarios (A3, A5, B4, C3, C4)	Landfil %	Incineration %	Recycling %	Reuse %
Treated and/ore mixed steel	5	0	95	0
Construction steel	1	0	94	5
Aluminium	3	3	94	0
Copper	5	0	95	0
Other metals	5	5	90	0
Polyolefins	10	85	5	0
PVC	10	20	70	0
Rubber	0	100	0	0
Other plastics	0	90	10	0
Electronics	5	35	60	0
Glass	30	0	70	0

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION (PART 2)

This EPD is representative for one XENTRY 3TP with a surface area of 12.38 m². A scaling formula for the X3TP mass was determined based is: $y = 33.7x + 399.6$, where y represents the total mass of the speedgate, and x the area, calculated as the product of gate width and height. Specific impacts categories may be scaled by deviding the values in this formula by the impact results in this EPD.

XENTRY 3TP variants	Width (m)	Height (m)	Surface area (m ²)	Mass (kg)
Smallest model	2,94	2,15	6,321	600
Smaller model	3,44	2,65	9,116	726
Reference model	4,5	2,75	12,375	810,6
Larger model	7,94	3,65	28,981	1385
Largest model	6,94	4,65	32,271	1481

DECLARATION OF SVHC

The product does not contain any substance of very high concern.

REFERENCES

- ISO 14040 – Environmental management – Life cycle assessment – Principles and framework
- ISO 14044 – Environmental management – Life cycle assessment – Requirements and guidelines
- EN 15804:2012+A2:2019 – Sustainability of construction works – Environmental product declarations – Core rules for the product category of construction products
- SBK Bepalingsmethode voor Milieuprestatie van Bouwwerken, versie 1.1 (maart 2022)

REMARKS