ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	dormakaba International Holding GmbH
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-DOR-20250609-CBA1-EN
Issue date	12.11.2025
Valid to	11.11.2030

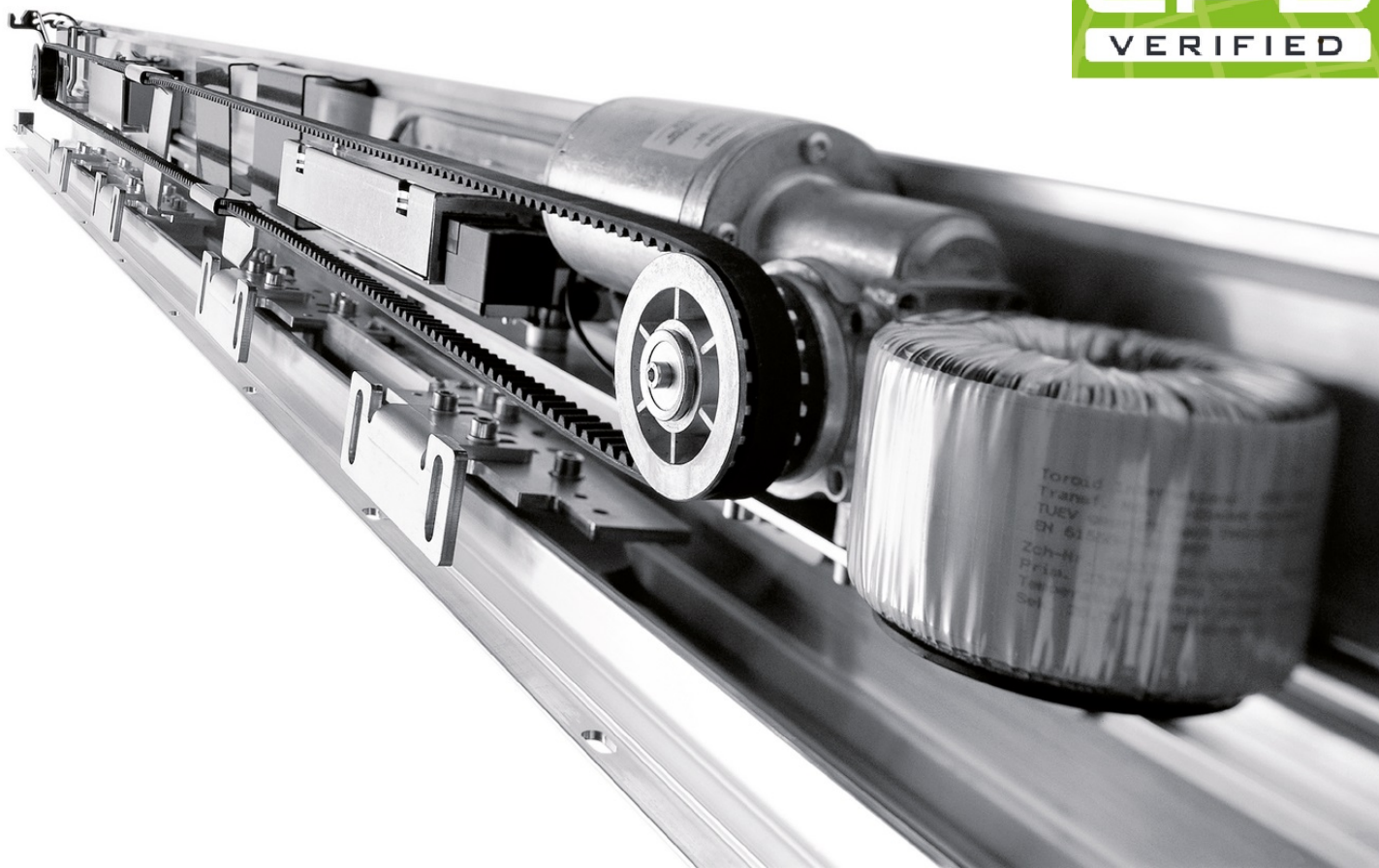
Sliding Door Operator ES 200

dormakaba

Institut Bauen und Umwelt e.V.

www.ibu-epd.com | https://epd-online.com

ECO PLATFORM EPD VERIFIED



General Information

dormakaba

Programme holder

IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number

EPD-DOR-20250609-CBA1-EN

This declaration is based on the product category rules:

Drive systems for automatic doors and gates, 01.08.2021
(PCR checked and approved by the SVR)

Issue date

12.11.2025

Valid to

11.11.2030



Dipl.-Ing. Hans Peters
(Chairman of Institut Bauen und Umwelt e.V.)



Florian Pronold
(Managing Director Institut Bauen und Umwelt e.V.)

Sliding Door Operator ES 200

Owner of the declaration

dormakaba International Holding GmbH
DORMA Platz 1
58256 Ennepetal
Germany

Declared product / declared unit

1 piece of the product: Sliding Door Operator ES 200, consisting of the following items:

- Sliding Door Operator
- Product packaging

Scope:

This Environmental Product Declaration refers to a specific Sliding Door Operator ES 200 Standard manufactured by dormakaba. The production site is located in Ennepetal (Germany).

The EPD is representative for 200-2D, ES 200 EASY and ES 200 EASYplus. The declared results are based on the ES 200 Standard, which represents the worst-case scenario.

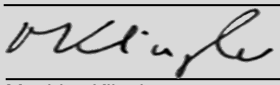
Green electricity is being used at this production site.

Data represents the year 2022.
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.

The EPD was created according to the specifications of EN 15804+A2. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard EN 15804 serves as the core PCR			
Independent verification of the declaration and data according to ISO 14025:2011			
☐	internally	☒	externally



Matthias Klingler,
(Independent verifier)

Product

Product description/Product definition

The Sliding Door Operator is a solution for any fields of application and scope of operation. The ES 200 allows dormakaba to supply a drive system that covers all applications due to its modular construction with a low number of components. The modular and flexible drive system is available in the following variants:

- ES 200 Standard
- ES 200 2D
- ES 200 EASY
- ES 200 EASYplus.

For the use and application of the product the respective national provisions at the place of use apply. For the Sliding Door Operator ES 200 the standards which can be applied are the following:

- *EN 18650*
- *EN 16005*
- *EN 60335*
- *EN 61000*
- *ISO 13849*
- *Machinery Directive 2006/42/EC*
- *2011/65/EU ROHS3 Directive*

The CE marking takes into account the proof of conformity with the respective harmonized standards based on the legal provisions above.

Application

The Sliding Door Operator ES 200 is used as a drive for automating sliding door systems as well as escape and rescue routes. Applications are available for single- and double leaf doors.

Technical Data

The Sliding Door Operator ES 200 has following technical properties:

Name	Value	Unit
Height maximum	150	mm
Installation depth	180	mm
Opening and closing force maximum	150	N
Opening speed maximum	70	cm/s
Closing speed maximum	50	cm/s
Hold open time maximum	180	s
Supply voltage, frequency maximum	60	Hz
Class of protection	20	IP

Performance data of the product with respect to its characteristics in accordance with the relevant technical provision which can be applied are mentioned above.

Base materials/Ancillary materials

The major material composition including the packaging of the product is listed below:

Name	Value	Unit
Aluminium	41	%
Steel	26	%
Electronics	14	%
Paper	12	%
Plastic	7	%

The product includes partial articles which contain substances listed in the Candidate List of REACH Regulation1907/2006/EC (date: 17.01.2023) exceeding 0.1 percentage by mass: yes

- Lead (Pb): 7439-92-1 (CAS-No) is included in the battery and some of the alloys used. The concentration in each individual alloy does not exceed 4.0% (by mass).

The Candidate List can be found on the ECHA websiteaddress: https:echa.europa.eu/de/home.

Reference service life

The reference service life of the Sliding Door Operator ES 200 is about 10 years, depending on the application and frequency of use. For repairs and renewals, suitable spare parts are available. The Sliding Door Operator is tested and certified *EN 16005*, meaning they are designed to withstand a minimum of 1.000.000 cycles.

LCA: Calculation rules

Declared Unit

The declared unit is 1 piece of the product: ES 200

Name	Value	Unit
Declared unit	1	pce.
Mass reference	40,41	kg/pce
Mass of declared product without packaging	36,15	kg
Mass of packaging	4,26	kg

System boundary

The type of EPD is: cradle to gate with options, modules C1–C4, and module D (A1–A3 + C + D and additional modules: A4 + A5 + B6)

Production - Module A1-A3

The product stage includes:
— A1, raw material extraction, processing and mechanical treatments, processing of secondary material input (e.g. recycling processes), — A2, transport to the manufacturer, — A3, manufacturing and assembly including provision of all materials, products and energy, as well as waste processing up to the end-of waste state.

Construction stage - Modules A4-A5

The construction process stage includes:

— A4, transport to the building site;
— A5, installation into the building;
including provision of all materials, products and energy, as well as waste processing up to the end-of waste state or disposal of final residues during the construction process stage.

Use stage - Module B6
The use stage related to the operation of the building includes:
— B6, operational energy use

End-of-life stage– Modules C1-C4 and D
The end-of-life stage includes:
— C1, de-construction, demolition:
— C2, transport to waste processing;
— C3, waste processing for reuse, recovery and/or recycling;
— C4, disposal;
including provision and all transport, provision of all materials, products and related energy and water use.
Module D (Benefits and loads beyond the system boundary) includes:
— D, recycling potentials, expressed as net impacts and benefits.

Geographic Representativeness
Land or region, in which the declared product system is manufactured, used or handled at the end of the product´s lifespan: Germany

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. Background database: GaBi, SP40

LCA: Scenarios and additional technical information

Characteristic product properties of biogenic carbon

Name	Value	Unit
Biogenic carbon content in product	0.276	kg C
Biogenic carbon content in accompanying packaging	1.569	kg C

Note: 1 kg of biogenic carbon is equivalent to 44/12 kg of CO_2.

Transport to the building site (A4)

Name	Value	Unit
Litres of fuel (per 1 kg)	0.00276	l/100km
Capacity utilisation (including empty runs)	55	%
Transport distance via medium truck	100	km

The product is transported via truck and ship. The product is stored in the dormakaba logistic center in Germany. The main distribution region is Europe.
In order to allow scaling to a specific point of installation 100 km are declared as well.

Installation into the building (A5)

Name	Value	Unit
Waste packaging (paper and plastic)	4,26	kg

Reference service life

Name	Value	Unit
Life Span according to the manufacturer	10	a

Operational energy use (B6)

Name	Value	Unit
Electricity consumption for 1 year	201.65	kWh
Days per year in use	365	days
Active state (hours/day)	1.8	h
Idle state (hours/day)	22.2	h
Electrical power active state	33.12	W
Electrical power idle state	22.2	W

End of life (C1-C4)
C1: The product dismantling from the building is done manually without environmental burden.

Name	Value	Unit
Collected separately waste type	36.2	kg
Recycling	32.2	kg
Energy recovery	2.75	kg
Landfilling	1.17	kg
Transport to waste management	50	km

The product is disassembled in a recycling process. Material recycling is then assumed for the metals and electronics. The plastic components are assumed to be incinerated with energy recovery. Electromechanics and minor proportions of residues arising from the recycling process are landfilled. Region for the End of Life is: Global.

Reuse, recovery and/or recycling potentials (D), relevant scenario information
The collection rate is 100%.

LCA: Results

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

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	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	MND	MND	MNR	MNR	MNR	X	MND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 piece Sliding Door Operator ES 200

Parameter	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
GWP-total	kg CO_2 eq	2.17E+02	3.53E-01	6.04E+00	8.16E+02	0	1.57E-01	8.36E+00	6.4E-02	-1.19E+02
GWP-fossil	kg CO_2 eq	2.24E+02	3.38E-01	1.51E-01	8.12E+02	0	1.5E-01	7.01E+00	6.3E-02	-1.18E+02
GWP-biogenic	kg CO_2 eq	-7.59E+00	1.6E-02	5.89E+00	2.71E+00	0	7E-03	1.34E+00	2.17E-04	-3.48E-01
GWP-luluc	kg CO_2 eq	1.4E-01	8.04E-06	9.94E-05	1.18E+00	0	3.58E-06	4.08E-04	1.83E-04	-2E-02
ODP	kg CFC11 eq	4.11E-09	3.57E-17	1.09E-15	1.79E-11	0	1.59E-17	3.69E-15	2.35E-16	-8.15E-10
AP	mol H^+ eq	1.01E+00	3.38E-04	2E-03	1.79E+00	0	1.51E-04	1E-03	4.55E-04	-4.59E-01
EP-freshwater	kg P eq	4.13E-04	7.23E-08	2.13E-07	2E-03	0	3.22E-08	5.87E-07	1.09E-07	-6.35E-05
EP-marine	kg N eq	1.44E-01	1.08E-04	6.11E-04	3.98E-01	0	4.79E-05	3.44E-04	1.17E-04	-5.8E-02
EP-terrestrial	mol N eq	1.55E+00	1E-03	8E-03	4.18E+00	0	5.32E-04	7E-03	1E-03	-6.23E-01
POCP	kg NMVOC eq	4.51E-01	3.04E-04	2E-03	1.09E+00	0	1.35E-04	9.49E-04	3.55E-04	-1.89E-01
ADPE	kg Sb eq	6.4E-03	1.01E-08	1.72E-08	2.35E-04	0	4.51E-09	5.1E-08	5.7E-09	-3E-03
ADPF	MJ	2.9E+03	4.79E+00	1.91E+00	1.43E+04	0	2.13E+00	3.53E+00	8.32E-01	-1.64E+03
WDP	m^3 world eq deprived	3.61E+01	6.62E-04	7.49E-01	1.77E+02	0	2.95E-04	8.56E-01	7E-03	-6.45E+00

GWP = Global warming potential; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential of land and water; EP = Eutrophication potential; POCP = Formation potential of tropospheric ozone photochemical oxidants; ADPE = Abiotic depletion potential for non-fossil resources; ADPF = Abiotic depletion potential for fossil resources; WDP = Water (user) deprivation potential)

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 piece Sliding Door Operator ES 200

Parameter	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
PERE	MJ	1.06E+03	1.5E-02	5.15E+01	6.33E+03	0	7E-03	9.9E+00	1.09E-01	-7.04E+02
PERM	MJ	6.01E+01	0	-5.11E+01	0	0	0	-9E+00	0	0
PERT	MJ	1.12E+03	1.5E-02	3.47E-01	6.33E+03	0	7E-03	8.97E-01	1.09E-01	-7.04E+02
PENRE	MJ	2.83E+03	4.8E+00	1.91E+00	1.43E+04	0	2.13E+00	7.69E+01	8.32E-01	-1.64E+03
PENRM	MJ	7.34E+01	0	0	0	0	0	-7.34E+01	0	0
PENRT	MJ	2.91E+03	4.8E+00	1.91E+00	1.43E+04	0	2.13E+00	3.53E+00	8.32E-01	-1.64E+03
SM	kg	3.26E+00	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m^3	2.5E+00	2.71E-05	1.8E-02	7.31E+00	0	1.21E-05	2E-02	2.1E-04	-1.27E+00

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

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 piece Sliding Door Operator ES 200

Parameter	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
HWD	kg	3.01E-05	4.65E-10	2.81E-09	5.91E-06	0	2.07E-10	1.26E-08	1.27E-08	-1.53E-05
NHWD	kg	4.41E+01	4.9E-04	1.89E-01	1.01E+01	0	2.18E-04	7.36E-01	4.18E+00	-2.64E+01
RWD	kg	1.44E-01	5.15E-06	1E-04	2.17E+00	0	2.29E-06	1.37E-04	9.47E-06	-1.7E-01
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	2.83E+01	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	9.14E+00	0	0	0	1.5E+01	0	0
EET	MJ	0	0	1.66E+01	0	0	0	3.34E+01	0	0

HWD = Hazardous waste disposed; NHWD = Non-hazardous waste disposed; RWD = Radioactive waste disposed; CRU = Components for re-use; MFR = Materials for recycling; MER = Materials for energy recovery; EEE = Exported electrical energy; EET = Exported thermal energy

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 piece Sliding Door Operator ES 200

Parameter	Unit	A1-A3	A4	A5	B6	C1	C2	C3	C4	D
PM	Disease incidence	1.05E-05	1.78E-09	9.37E-09	1.5E-05	0	7.91E-10	1.69E-08	5.63E-09	-6.96E-06
IR	kBq U235 eq	2.71E+01	7.36E-04	1.6E-02	3.55E+02	0	3.27E-04	1.3E-02	9.75E-04	-3.4E+01
ETP-fw	CTUe	1.06E+03	3.4E+00	9.05E-01	6.1E+03	0	1.51E+00	1.34E+00	4.75E-01	-5.7E+02
HTP-c	CTUh	2.76E-07	6.39E-11	4.79E-11	1.69E-07	0	2.84E-11	1.14E-10	7.04E-11	-2.45E-08
HTP-nc	CTUh	2.94E-06	2.73E-09	2.07E-09	6.21E-06	0	1.22E-09	1.1E-08	7.76E-09	-9.43E-07
SQP	SQP	1.23E+03	1.2E-02	5.06E-01	4.55E+03	0	5E-03	1.05E+00	1.73E-01	-5.8E+01

PM = Potential incidence of disease due to PM emissions; IR = Potential Human exposure efficiency relative to U235; ETP-fw = Potential comparative Toxic Unit for ecosystems; HTP-c = Potential comparative Toxic Unit for humans (cancerogenic); HTP-nc = Potential comparative Toxic Unit for humans (not cancerogenic); SQP = Potential soil quality index

Disclaimer 1 – for the indicator 'Potential Human exposure efficiency relative to U235'. 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 or radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, radon and from some construction materials is also not measured by this indicator.

Disclaimer 2 – for the indicators 'abiotic depletion potential for non-fossil resources', 'abiotic depletion potential for fossil resources', 'water (user) deprivation potential, deprivation-weighted water consumption', 'potential comparative toxic unit for ecosystems', 'potential comparative toxic unit for humans –
cancerogenic', 'Potential comparative toxic unit for humans - not cancerogenic', 'potential soil quality index'. The results of this environmental impact indicator shall be used with care as the uncertainties on these results are high as there is limited experience with the indicator.
This EPD was created using a software tool.

References

EN 18650
EN 186501: 2010, Powered pedestrian doors Part 1: Product requirements and test methods

EN 18650
EN 186502: 2010, Powered pedestrian doors Part 2: Safety at powered pedestrian doors

EN 16005
EN 16005: 2013-01, Power operated pedestrian doorsets Safety in use - Requirements and test methods

EN 60335
EN 60335-1, -2-103:2020 08, Household and similar electrical appliances - Safety - Part 1: General requirements

EN 61000
EN 61000 -1-2: 2017-07, Electromagnetic compatibility (EMC) - Part 1-2: General Methodology for the achievement of functional safety of electrical and electronic systems including equipment with regard to electromagnetic phenomena

ISO 13849
ISO 138491: 2021-08, Safety of machinery Safety-related parts of control systems - Part 1:
General principles for design

Machinery Directive
Directive 2006/42/EC of the European Parliament and of the Council on machinery, and amending Directive 95/16/EC

REACH
Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

ROHS Directive
Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

Further References

IBU 2021
General Instructions for the EPD programme of Institut Bauen und Umwelt e.V. Version 2.0, Berlin: Institut Bauen und Umwelt e.V., 2021. www.ibu-epd.com

GaBi
Sphera Solutions GmbH Gabi Software System and Database for Life Cycle Engineering 1992-2020 Version 10.0.0.71 University of Stuttgart Leinfelden-Echterdingen

GaBi ts documentation
GaBi life cycle inventory data documentation (https://www.gabisoftware.
com/support/gabi/gabidatabase- 2020-lci-documentation/).

LCA-tool dormakaba
LCA tool, ENS (drive system) LCA-Tool No.: IBU-DOR-202108-LT1-EN Developed by Sphera Solutions GmbH.

PCR Part A
PCR – Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Re-port according to EN 15804+A2:2019, Version 1.4, Institut Bauen und Umwelt e.V., www.ibu-epd.com.

PCR Part B
PCR – Part B: Requirements on the EPD for Drive systems for automatic doors and gates, version 01.08.2021, Institut Bauen und Umwelt e.V., www.ibu-epd.com, 2020.

Publisher

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Programme holder

Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

+49 (0)30 3087748- 0
info@ibu-epd.com
www.ibu-epd.com

Author of the Life Cycle Assessment

dormakaba International Holding GmbH
DORMA Platz 1
58256 Ennepetal
Germany

+49 2333 793-0
info.de@dormakaba.com
www.dormakaba.com

Owner of the Declaration

dormakaba International Holding GmbH
DORMA Platz 1
58256 Ennepetal
Germany

+49 2333 793-0
info.de@dormakaba.com
www.dormakaba.com