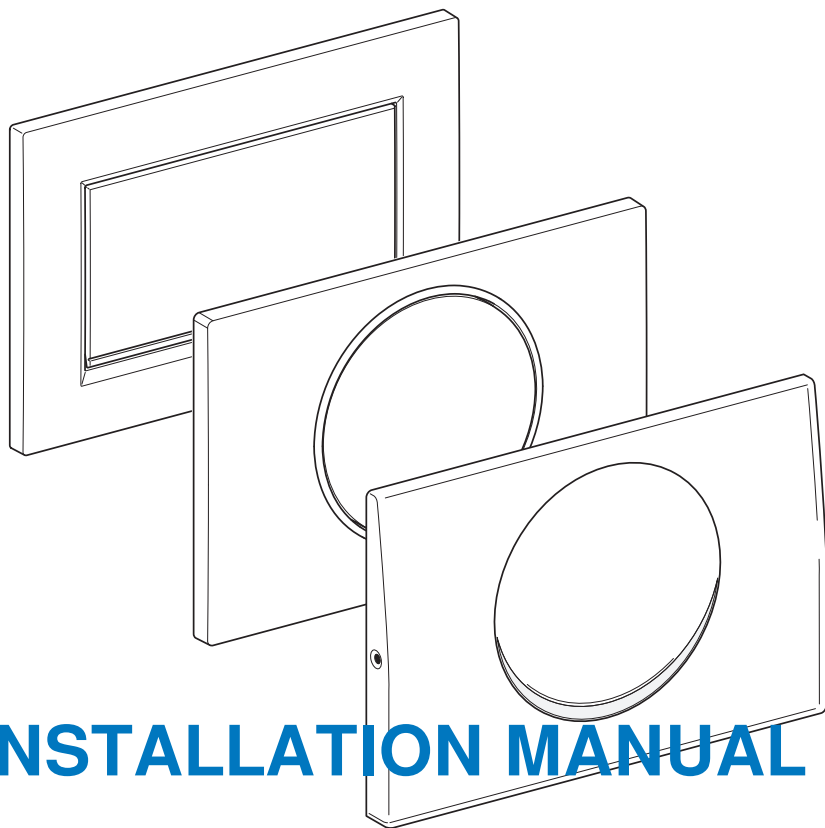


GEBERIT SIGMA10
GEBERIT MAMBO

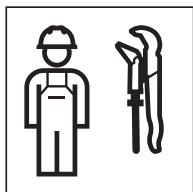
 **GEBERIT**



INSTALLATION MANUAL

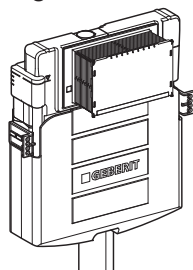
MONTAGEANLEITUNG
INSTRUCTIONS DE MONTAGE
ISTRUZIONI PER IL MONTAGGIO

**KNOW
HOW**
INSTALLED



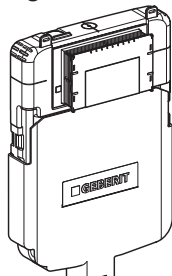


Sigma 12 cm



→ **1 A**  2

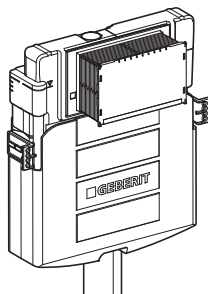
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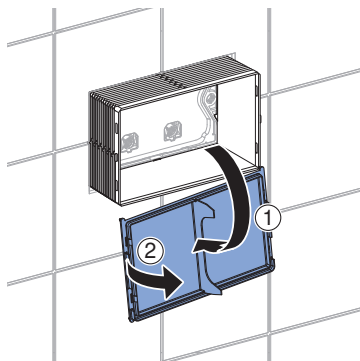
→ **1 B**  4



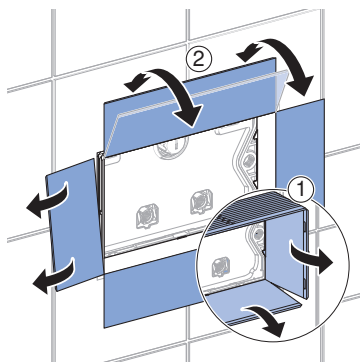
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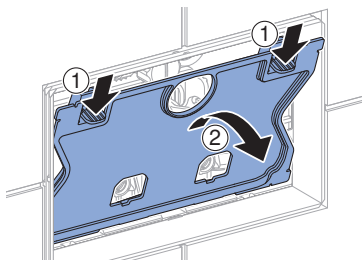
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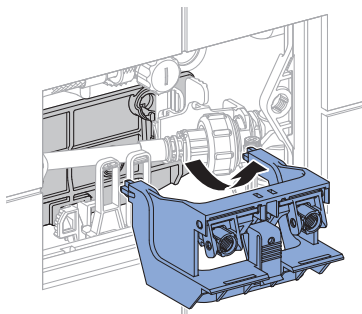
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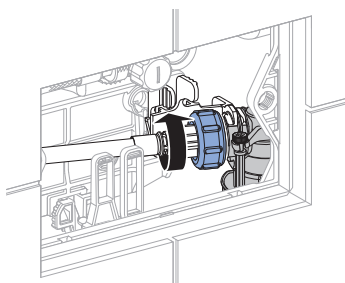
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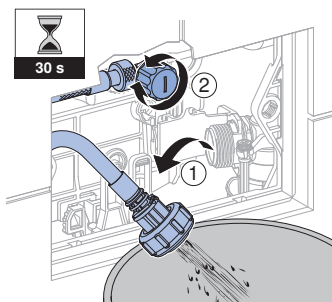
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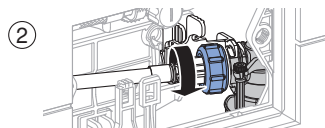
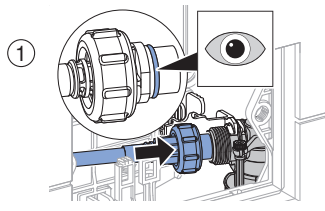
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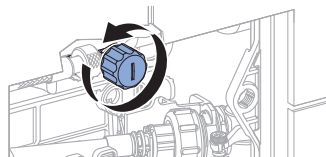
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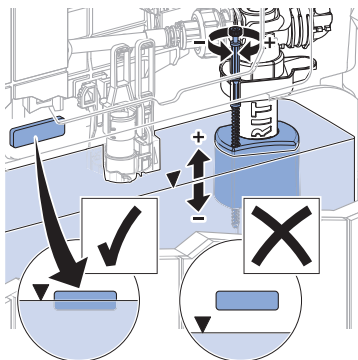
7



8



9

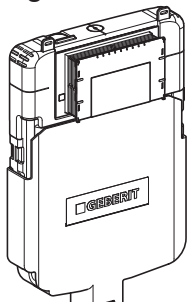
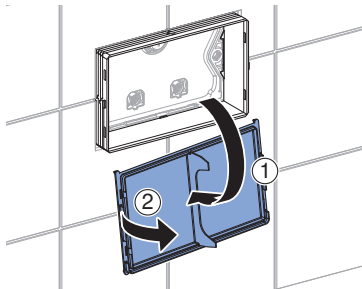
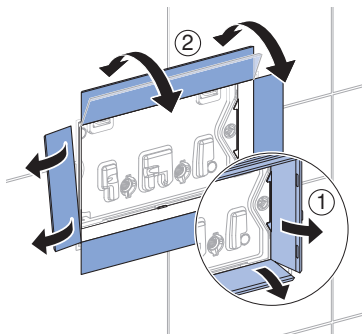
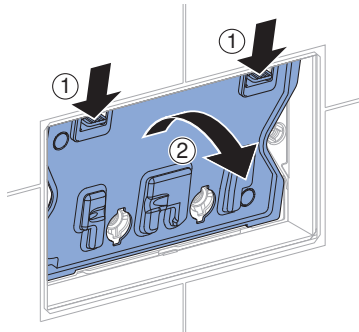
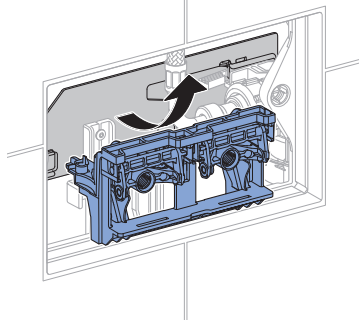
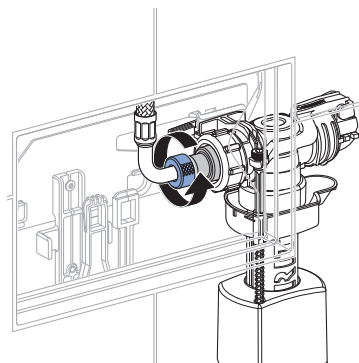


➔ **2** 5

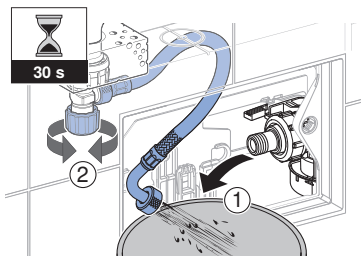
1**B**

✓

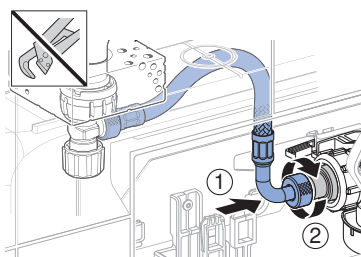
Sigma 8 cm

**1****2****3****4****5**

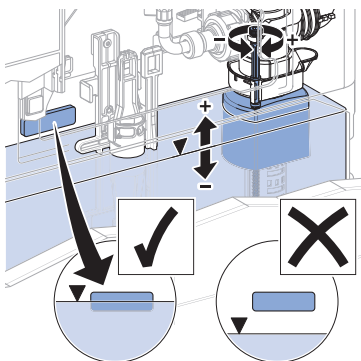
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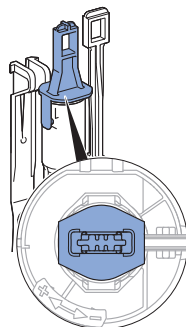
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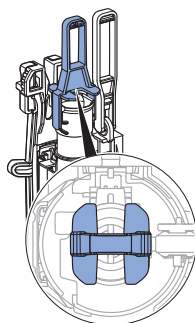
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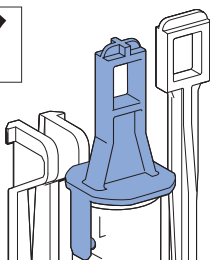
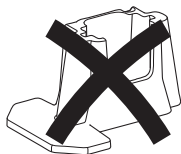
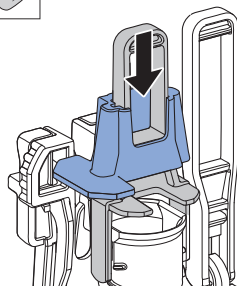
2



→ 2 A 6

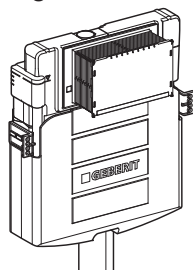


→ 2 B 6

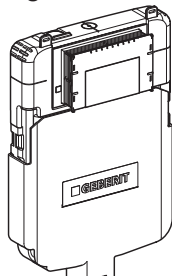
2**A****2****B**

3

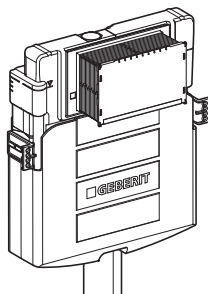
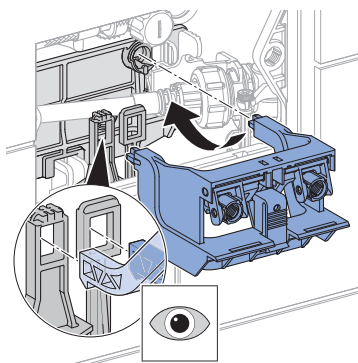
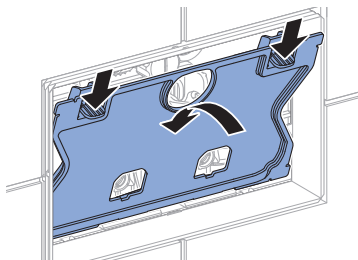
Sigma 12 cm

→ **3** **A** 7

Sigma 8 cm

→ **3** **B** 8**3****A**

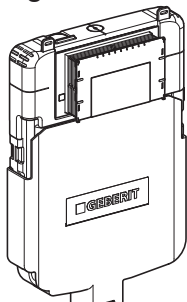
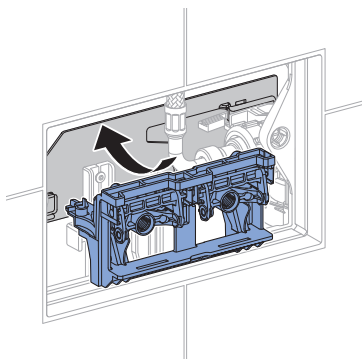
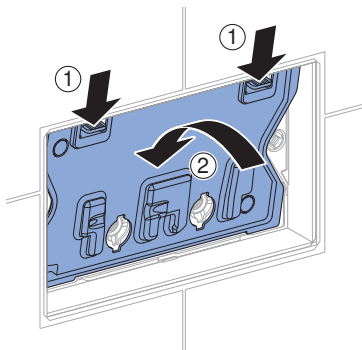
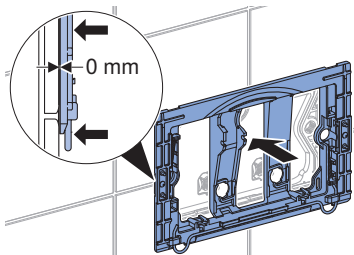
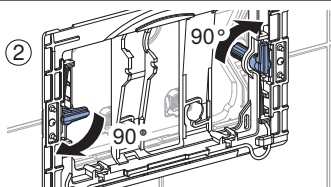
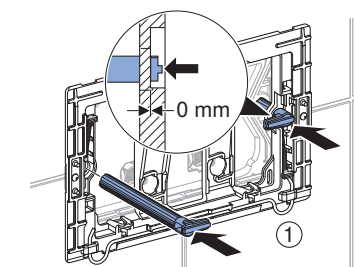
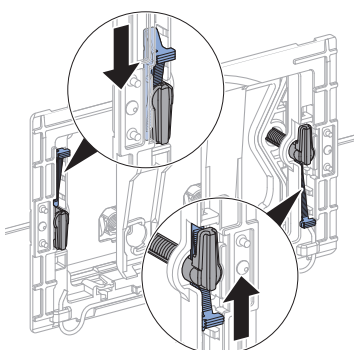
Sigma 12 cm

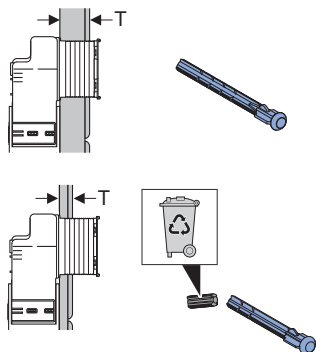
**1****2**

3**B**

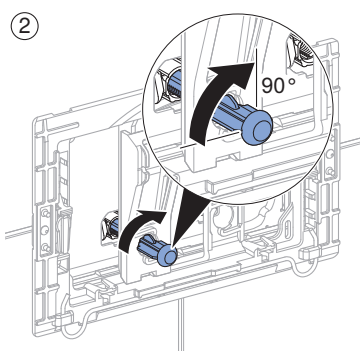
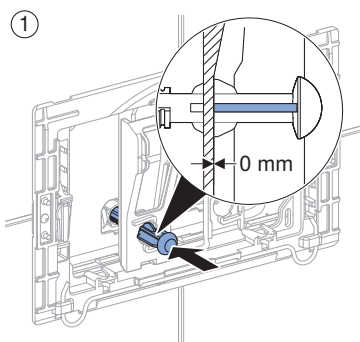
✓

Sigma 8 cm

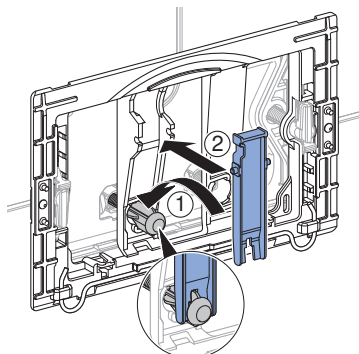
**1****2****4****1****2****3**



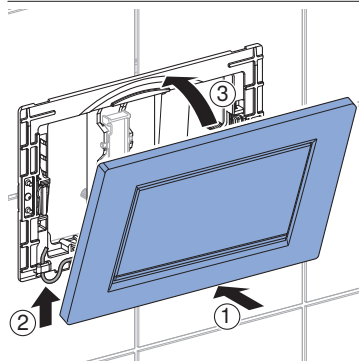
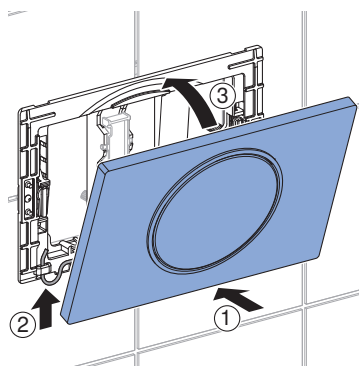
4



5

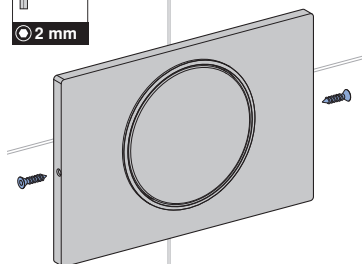


6

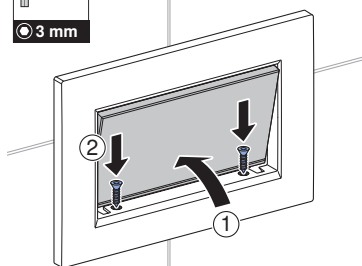




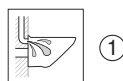
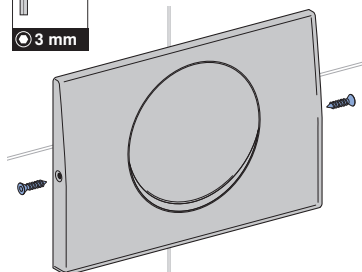
Sigma10



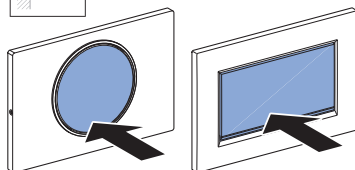
Sigma30



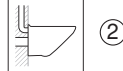
Mambo



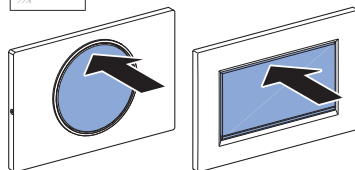
①



STOP



②



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www.geberit.com





DE

Anleitung zum Reinigen

Sie haben ein Geberit Produkt mit einer hochwertigen Oberfläche gewählt. Damit Sie lange Freude daran haben, beachten Sie bitte folgenden Reinigungshinweis.



VORSICHT

Chlor- oder säurehaltige sowie ätzende, schleifende oder scheuernde Reinigungsmittel können die Oberfläche beschädigen.

► Verwenden Sie nur milde Reinigungsmittel und Wasser.

- 1 Reinigen Sie das Produkt mit einem weichen, befeuchteten Lappen.
- 2 Trocknen Sie das Produkt mit einem weichen Tuch ab.

EN

Cleaning instructions

You have selected a Geberit product with a high-grade surface. Please comply with the following cleaning instructions so that your Geberit product will give you many years of pleasure.



CAUTION

Cleaning agents containing chlorine or acids, or ones that are corrosive, abradant or scouring, could damage the surface.

► Use only mild cleaning agents and water.

- 1 Clean the product with a soft cloth soaked in water.
- 2 Dry the product with a soft cloth.

FR

Instructions relatives au nettoyage

Vous avez choisi d'acheter un produit Geberit avec une surface de qualité supérieure. Pour pouvoir en profiter pendant longtemps, veuillez respecter les indications de nettoyage suivantes.



ATTENTION

Les nettoyants à base de chlore ou d'acide ou étant corrosifs, abrasifs ou grattants risquent d'endommager la surface.

- ▶ Utiliser uniquement des produits de nettoyage doux et de l'eau.

1 Nettoyer le produit avec un chiffon doux et humide.

2 Essuyer le produit avec un chiffon doux.

IT

Istruzioni per la pulizia

Avete scelto un prodotto Geberit dotato di una superficie di elevata qualità. Perché la vostra soddisfazione per l'acquisto duri nel tempo, vi invitiamo a osservare le seguenti indicazioni per la pulizia.



ATTENZIONE

I prodotti per la pulizia contenenti cloro o acidi e quelli corrosivi, aggressivi o abrasivi possono danneggiare la superficie.

- ▶ Utilizzare esclusivamente prodotti per la pulizia delicati e acqua.

1 Pulire il prodotto con un panno morbido e umido.

2 Asciugare il prodotto con un panno morbido.

NL

Handleiding voor het reinigen

U hebt gekozen voor een Geberit product met een hoogwaardig oppervlak. Om ervoor te zorgen dat u er lang plezier van hebt, verzoeken wij u de volgende reinigingsinstructies op te volgen.



VOORZICHTIG

Chloor- of zuurhoudende, bijtende, slijpende of schurende reinigingsmiddelen kunnen het oppervlak beschadigen.

- ▶ Gebruik alleen milde reinigingsmiddelen en water.

1 Reinig het product met een zachte, bevochtigde doek.

2 Droog het product met een zachte doek af.

ES

Instrucciones para la limpieza

Usted ha elegido un producto Geberit con una superficie de alta calidad. Para poder disfrutar de él durante mucho tiempo, por favor, observe las siguientes indicaciones para la limpieza.



ATENCIÓN

Los agentes limpiadores que contienen cloro o ácidos, así como los productos corrosivos, abrasivos o que rocen pueden dañar la superficie.

► Utilice únicamente agentes limpiadores suaves y agua.

1 Limpie el producto con un paño suave humedecido.

2 Seque el producto con un paño suave.

PT

Instrução de limpeza

Escolheu um produto Geberit com uma superfície de elevada qualidade. Para que usufrua dos seus benefícios, tenha em atenção as seguintes instruções de limpeza.



CUIDADO

Os produtos de limpeza com teor de cloro ou ácido, corrosivos, abrasivos ou agressivos podem danificar a superfície.

► Utilize apenas produtos de limpeza suaves e água.

1 Limpe o produto com um pano macio e húmido.

2 Seque o produto com um pano macio.

DA

Rengøringsvejledning

Du har valgt et Geberit-produkt med en førsteklasses overflade. Overhold nedenstående rengøringsanvisning, så du kan få glæde af produktet i lang tid.



FORSIGTIG

Klor- eller syreholdige såvel som ætsende, slibende eller skurende rengøringsmidler kan beskadige overfladen.

► Anvend kun milde rengøringsmidler og vand.

1 Rengør produktet med en blød, fugtig klud.

2 Tør produktet af med en blød klud.

NO

Rengjøringsveiledning

Du har valgt et Geberit-produkt med en overflate av høy kvalitet. Følg instruksene om rengjøring under, slik at du har glede av den i lang tid framover.



FORSIKTIG

Klor- eller syreholdige samt etsende, slipende eller skurende rengjøringsmidler kan skade overflaten.

- Bruk kun milde rengjøringsmidler og vann.

1 Rengjør produktet med en myk, fuktig klut.

2 Tørk produktet med en myk klut.

SV

Rengöringsanvisning

Du har valt en Geberit produkt med en yta av hög kvalitet. För att du skall kunna ha glädje av den över en lång tid skall du beakta följande rengöringsanvisningar.



OBSERVERA

Klor- eller syrehaltiga samt frätande, slipande eller polerande rengöringsmedel kan skada ytan.

- Använd endast milda rengöringsmedel och vatten.

1 Rengör produkten med en mjuk och fuktig trasa.

2 Torka av produkten med en mjuk trasa.

FI

Puhdistusohje

Olet valinnut Geberit'in tuotteen, jonka pinta on laadukas. Jotta voisit iloita siitä kauemmin, noudata seuraavia puhdistusohjeita.



HUOMIO

Kloori- tai happopitoiset ja syövyttävät, hiovat tai hankaavat puhdistusaineet voivat vahingoittaa pintaa.

- Käytä vain mietoja puhdistusaineita ja vettä.

1 Puhdista tuote pehmeällä, kostutetulla liinalla.

2 Kuivaa tuote pehmeällä liinalla.

IS

Leiðbeiningar um þrif

Yfirborð þessarar vöru frá Geberit er afar vandað. Til að tryggja góða endingu þess skal fylgja eftirfarandi leiðbeiningum um þrif.



VARÚÐ

Hreinsiefni sem innihalda klór eða sýru sem og ætandi, gróf eða rispandi hreinsiefni geta valdið skemmdum á yfirborðinu.

► Notið eingöngu milt hreinsiefni og vatn.

1 Hreinsið með mjúkum, rökum klút.

2 Þurrkið af með mjúkum klút.

PL

Instrukcja czyszczenia

Wybraliście Państwo produkt firmy Geberit, posiadający powłokę o wysokiej jakości. Aby jak najdłużej utrzymać ją w idealnym stanie, proszę stosować się do poniższych wskazówek dotyczących czyszczenia.



UWAGA

Środki czyszczące zawierające chlor lub kwas oraz żrące, polerujące lub ściérne środki czyszczące mogą uszkodzić powierzchnię.

► Stosować wyłącznie łagodne środki czyszczące i wodę.

1 Do czyszczenia produktu używać miękkiej, wilgotnej ściereczki.

2 Wytrzeć produkt do sucha miękką ściereczką.

HU

Tisztítási útmutató

Ön kiváló minőségű felületű Geberit terméket választott. Annak érdekében, hogy hosszú ideig örömet lelje benne, kérjük, hogy a felület tisztítását az alábbi útmutató szerint végezze.



VIGYÁZAT

Klórtartalmú vagy savas, valamint maró, csiszoló vagy súroló hatású tisztítószeresek károsíthatják a felületet.

► Csak lágy tisztítószerrel és vizet használjon.

1 A terméket puha, nedves törlőkendővel tisztítsa.

2 Puha törlőkendővel törölje szárazra a terméket.

SK

Návod na čistenie

Vybrali ste si výrobok Geberit s kvalitnou povrchovou úpravou. Aby ste z neho mohli mať radosť po dlhú dobu, dodržiavajte prosím nasledujúce pokyny týkajúce sa čistenia.



UPOZORNENIE

Čistiace prostriedky s obsahom chlóru alebo kyseliny, leptavé čistiace prostriedky alebo abrazívne čistiace prostriedky môžu poškodiť povrch výrobku.

► Používajte len jemné čistiace prostriedky a vodu.

1 Výrobok čistíte mäkkou navlhčenou utierkou.

2 Výrobok osušte mäkkou utierkou.

CS

Návod k čištění

Vybrali jste si výrobek Geberit s povrchem vysoké kvality. Abyste z něj měli dlouho radost, dodržujte prosím následující pokyny pro čištění.



VAROVÁNÍ

Čisticí prostředky obsahující chlor, kyselinu nebo se žíravým, brusným nebo abrazivním účinkem mohou poškodit povrch.

► Používejte pouze jemné čisticí prostředky a vodu.

1 Výrobek čistíte měkkým navlhčeným hadříkem.

2 Výrobek osušte měkkým hadříkem.

SL

Navodilo za čiščenje

Izbrali ste izdelek Geberit z zelo kakovostno površino. Da boste z izdelkom dolgo časa zadovoljni, vas prosimo, da upoštevajte naslednje navodilo za čiščenje.



PREVIDNO

Čistilna sredstva, ki vsebujejo klor, in kislota, korozivna, ostrá ali groba čistilna sredstva lahko poškodujejo površino.

► Uporabljajte samo blaga čistilna sredstva in vodo.

1 Izdelek očistite z mehko, navlaženo krpo.

2 Izdelek osušite z mehko krpo.

HR

Upute za čišćenje

Odabrali ste proizvod tvrtke Geberit s visokokvalitetnom površinom. Kako biste svojim odabirom dugo bili zadovoljni pridržavajte se sljedećih uputa za čišćenje.



OPREZ

Sredstva za čišćenje koja sadrže klor ili kiselinu, kao i korozivna ili abrazivna sredstva za čišćenje mogu oštetiti površinu.

► Upotrebljavajte samo blaga sredstva za čišćenje i vodu.

1 Proizvod očistite mekanom, vlažnom krpom.

2 Zatim ga osušite mekanom krpom.

SR

Uputstvo za čišćenje

Izabrali ste Geberit proizvod sa kvalitetnom površinom. Kako biste dugo uživali u njegovoj upotrebi, molimo da pratite sledeće instrukcije za čišćenje.



PAŽNJA

Sredstva za čišćenje koja sadrže hlor ili kiselinu, ili imaju korozivno, strujuće ili habajuće dejstvo, mogu da oštete površinu.

► Koristite samo blaga sredstva za čišćenje i vodu.

1 Očistite proizvod mekom i vlažnom krpom.

2 Osušite proizvod mekom krpom.

ET

Puhastamisjuhend

Te valisite kvaliteetse pealispinnaga Geberit'i. Järgige palun järgmisi puhastusnõuandeid, et tootest kaua rõõmu tunda.



ETTEVAATUST

Kloorisisaldusega või happelised ja söövitavad, kleepuvad või abrasiivsed puhastusvahendid võivad pinda kahjustada.

► Kasutage ainult pehmet pesuvahendit ja vett.

1 Puhastage toodet pehme niiske lapiga.

2 Kuivatage toode pehme lapiga.

LV

Instrukcija tīrīšanai

Jūs esat iegādājušies Geberit izstrādājumu, kura virsma ir izgatavota no augstvērtīgā materiāla. Lai šis izstrādājums sagādātu Jums prieku ilgāku laiku, ievērojiet, lūdzu, sekojošus tīrīšanas norādījumus.



UZMANĪBU

Hloru vai skābi saturoši, kā arī kodīgi, pulējoši un abrazīvi tīrīšanas līdzekļi var radīt virsmas bojājumus.

► Lietojiet tikai maigus tīrīšanas līdzekļus un ūdeni.

1 Tīriet izstrādājumu ar mīkstu, samitrinātu drānu.

2 Nosusiniet izstrādājumu ar mīkstu drānu.

LT

Valymo instrukcija

Jūs pasirinkote bendrovės Geberit gaminį su aukštos kokybės paviršiaus danga. Kad įsigytas gaminy s ilgai tarnautų, laikykitės toliau pateiktų valymo nurodymų.



DĖMESIO

Naudojant valymo priemones, kurių sudėtyje yra chloro, rūgšties arba ėsdinančias, šlifuojančias ar šveitimui skirtas priemones gali būti pažeidžiamas paviršius.

► Naudokite tik švelnias valymo priemones ir vandenį.

1 Gaminį valykite minkšta drėgna šluoste.

2 Gaminį nusauskite minkšta šluoste.

BG

Инструкция за почистване

Избрали сте продукт на Geberit с висококачествена повърхност. За да му се радвате дълго, съблюдавайте следните инструкции за почистване.



ВНИМАНИЕ

Хлорни или киселинни, както и корозионни, изтъкващи или абразивни почистващи препарати могат да повредят повърхността.

► Използвайте само мек почистващ препарат и вода.

1 Почиствайте продукта с мека, влажна кърпа за попиване.

2 Подсушавайте продукта с мека кърпа за попиване.

RO

Instrucțiuni de curățare

Ați ales un produs Geberit prevăzut cu o suprafață de o calitate superioară. Pentru a vă putea bucura timp îndelungat de acest lucru, vă rugăm să respectați următoarele instrucțiuni de curățare.



ATENȚIE

Agenții de curățare care conțin clor sau acizi, precum și cei corosivi, agresivi sau abrazivi pot deteriora suprafața.

► Utilizați doar un agent de curățare moale în amestec cu apă.

1 Curățați obiectul cu o lavetă moale umezită.

2 Ștergeți obiectul cu o lavetă moale.

EL

Οδηγία καθαρισμού

Επιλέξατε ένα προϊόν Geberit με επιφάνεια άριστης ποιότητας. Για να το χαρείτε πολύ καιρό, παρακαλούμε να προσέξετε τις ακόλουθες υποδείξεις καθαρισμού.



ΠΡΟΣΟΧΗ

Τα χλωριούχα ή όξινα, καθώς και τα διαβρωτικά, λειαντικά ή αποξεστικά μέσα καθαρισμού μπορούν να προκαλέσουν ζημιά στην επιφάνεια.

► Χρησιμοποιείτε μόνο ήπια μέσα καθαρισμού και νερό.

1 Καθαρίζετε το προϊόν με μαλακό, υγρό ύφασμα.

2 Στεγνώνετε το προϊόν με μαλακό ύφασμα.

TR

Temizlik kılavuzu

Üstün kaliteli yüzeye sahip bir Geberit ürününü seçtiniz. Bu üründen uzun süre keyif alabilmeniz için lütfen aşağıdaki temizlik bilgilerini dikkate alın.



DİKKAT

Klor veya asit içeren, yakıcı veya aşındırıcı temizlik maddeleri yüzeye zarar verebilir.

► Sadece yumuşak temizlik maddesi ve su kullanın.

1 Ürünü yumuşak ve nemlendirilmiş bir bezle temizleyin.

2 Ürünü yumuşak bir bezle kurulayın.

RU

Инструкция по очистке

Вы выбрали изделие фирмы Geberit, поверхность которого изготовлена из высококачественного материала. Чтобы данное изделие радовало Вас как можно дольше, следуйте ниже приведенным указаниям по очистке.



ВНИМАНИЕ

Хлоро- или кислотосодержащие, а также едкие, шлифующие или абразивные чистящие средства могут повредить поверхность.

► Используйте только щадящие чистящие средства и воду.

1 Очистите изделие мягкой, влажной тканью.

2 Высушите изделие при помощи сухой мягкой ткани.

KZ

Тазалау жөніндегі нұсқаулар

Сіз жоғары сапалы бетке ие Geberit бұйымын таңдадыңыз. Бұйым барынша ұзақ қызмет етуі үшін келесі тазалау жөніндегі нұсқауларға назар аударыңыз.



НАЗАР АУДАРЫҢЫЗ

Хлор және қышқыл құрамдастары бар, сондай-ақ, ащы не абразивті тазалау құралдары бетке зақым келтіруі мүмкін.

► Тек жұмсақ жуғыш құралдар мен суды пайдаланыңыз.

1 Бұйымды дымқыл жұмсақ шүберекпен тазалаңыз.

2 Бұйымды жұмсақ шүберекпен кептіріңіз.

ZH

清洁说明

您选择了高品质表面的 Geberit 产品。为了能让您长期对产品满意，请满足以下清洁要求。



注意

含氯或酸性以及腐蚀性、磨蚀性或摩擦性的清洁剂可能损坏表面。

► 仅使用温和的清洁剂和水。

1 清洁时应使用一块柔软湿润的抹布。

2 随后用一块软布擦干本品。

تعليمات للتنظيف

لقد اخترت أحد منتجات Geberit مع سطح ممتاز الجودة. لكي تدوم فرحتك بهذا المنتج، الرجاء إتباع إرشادات التنظيف التالية.

احتراس



مواد التنظيف المحتوية على كلور و حمضيات أو تلك الحكاكية أو الكاوية يمكن أن تلحق أضرارًا بالسطح الخارجي.
◀ لا تستخدم إلا مواد التنظيف الخفيفة مع الماء.

1 نظف المنتج بخرقة قماش ناعمة ومبلولة.

2 نشف المنتج بقماش ناعم.

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ENVIRONMENTAL PRODUCT DECLARATION

IN ACCORDANCE WITH
EN 15804+A2+AC,
ISO 14025,
ISO 21930

GEBERIT SIGMA01/10/20/30 ACTUATOR PLATES Geberit International AG

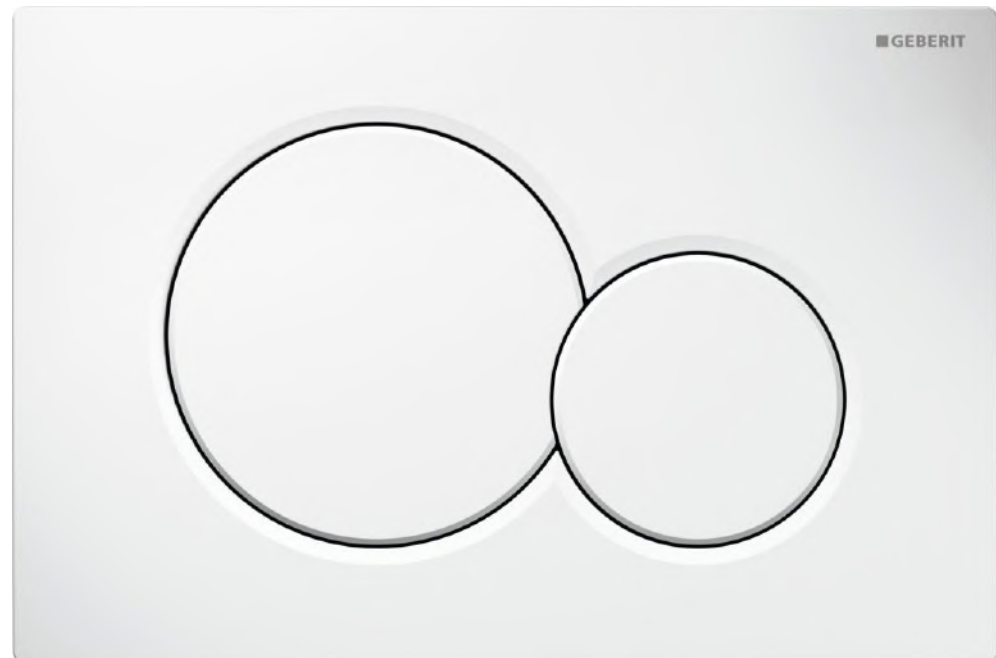
EPD HUB, HUB-0622

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GENERAL INFORMATION

MANUFACTURER

Manufacturer	Geberit International AG
Address	Schachenstrasse 77, CH-8645 Jona
Contact details	sustainability@geberit.com
Website	www.geberit.com

EPD STANDARDS, SCOPE AND VERIFICATION

Programme operator	EPD Hub, hub@epdhub.com
Reference standards	EN 15804+A2:2019+AC:2021 ISO 14025 ISO 21930
PCR	EPD Hub Core PCR version 1.0, 1 Feb 2022
Sector	Construction product
Category of EPD	Third-party-verified EPD
Scope of the EPD	Cradle to gate with options, A4-A5, and modules C1-C4 and D
EPD author	Georg Nauenburg
EPD verification	Independent verification of this EPD and data according to ISO 14025 ☐ Internal certification ☒ External verification
EPD verifier	Magaly González Vázquez, as an authorised verifier acting for EPD Hub Limited

The manufacturer retains the sole ownership of, liability and responsibility for the EPD. EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with EN 15804 and if they are not compared in a building context.

PRODUCT

Product name	Geberit Sigma01/10/20/30 actuator plates
Additional labels	-
Product reference	115.770.11.5
Place of production	Jona, Switzerland
Period for data	2022
Averaging in EPD	Multiple products
Variation in GWP-fossil for A1-A3	24 %

ENVIRONMENTAL DATA SUMMARY

Declared unit	1 piece Geberit Sigma01 actuator plate
Declared unit mass	0.31 kg
GWP-fossil, A1-A3 (kgCO ₂ e)	1.11
GWP-total, A1-A3 (kgCO ₂ e)	1.01
Secondary material, inputs (%)	37.4
Secondary material, outputs (%)	99.3
Total energy use, A1-A3 (kWh)	5.35
Total water use, A1-A3 (m ³ e)	0.04

PRODUCT AND MANUFACTURER

ABOUT THE MANUFACTURER

Geberit wants to play a leading role in the transition towards a sustainable sanitary industry. Sustainability has formed an integral component of the corporate strategy for more than 30 years. The Geberit Group has a group ISO certificate in accordance with ISO 9001 (quality), ISO 14001 (environment) and ISO 45001 (occupational health and safety). The company prepared life cycle assessments for key products from an early stage, and eco-design has been an integral part of the product development process since 2007. You can find comprehensive information on sustainability in the current annual report or at <https://www.geberit.com/company/sustainability>

PRODUCT DESCRIPTION

The Geberit Sigma actuator plate is used to trigger the toilet flush. It is used in combination with the Geberit Sigma concealed cistern, on which it is mounted with the aid of a mounting frame. The product is equipped with distance bolts and sound-insulating actuator rods.

The Geberit Sigma actuator plate features either one button for the stop-and-go flush or two buttons for the dual flush for water saving.

The assortment of Geberit Sigma actuator plates includes different functional and design variants. This EPD covers the Geberit Sigma01, Sigma10, Sigma20 and Sigma30 actuator plates made of plastic, white and black, and small components with partly chrome-plated surface finishes, as specified by the article numbers in the annex at the end of this EPD.

Further information is available in the local online catalogue.

PRODUCT RAW MATERIAL MAIN COMPOSITION

Raw material category	Amount, mass %	Material origin
Metals	4	Europe
Minerals	0	-
Fossil materials	96	Europe
Bio-based materials	0	-

BIOGENIC CARBON CONTENT

Product's biogenic carbon content at the factory gate

Biogenic carbon content in product, kg C	0
Biogenic carbon content in packaging, kg C	0.030

FUNCTIONAL UNIT AND SERVICE LIFE

Declared unit	1 piece Geberit Sigma01 actuator plate
Mass per declared unit	0.31 kg
Functional unit	-
Reference service life	-

REACH – SUBSTANCES OF VERY HIGH CONCERN (SVHC)

The product does not contain any REACH SVHC substances in amounts greater than 0.1 % (1,000 ppm).

PRODUCT LIFE CYCLE

SYSTEM BOUNDARY

This EPD covers the life cycle modules listed in the following table.

Product stage			Construction stage		Use stage								End-of-life stage				Beyond system boundaries
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		x	x	x	x	x
Raw materials	Transport	Manufacturing	Transport	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use		Deconstr./demol.	Transport	Waste processing	Disposal	Reuse Recovery Recycling

MND = Modules not declared.

MANUFACTURING AND PACKAGING (A1-A3)

The environmental impacts considered for the product stage cover the manufacturing of raw materials used in the production as well as packaging materials and other ancillary materials. The energy used by machines, and handling of waste formed in the production processes at the manufacturing facilities are also included in this stage. Furthermore, the study considers the material losses occurring during the manufacturing processes as well as losses during electricity transmission.

The product consists of a mounting frame, the actuator plate and fastening components. The mounting frame is made of post-consumer recycled acrylonitrile-butadiene-styrene (ABS). The actuator plate is made of injection-moulded acrylonitrile styrene acrylate (ASA). The share of secondary materials in the product is about 30 %. For the supply of raw materials, the total input of raw materials was mapped with corresponding European data. Further information on purchasing can be found in Geberit Annual Reports.

The transports from suppliers to Geberit are modelled based on material class-specific transport distances. The individual transport distances of each supplier are averaged according to the corresponding sales volumes. All A2 transports are carried out by lorry. Transport by rail, air and sea freight is not considered due to lack of relevance. On average, the transport distance from suppliers of raw and semfinished materials is about 310 km.

The production, assembly and packaging of the actuator plate takes place at the production site in Jona (CH). The Geberit plant is certified according to ISO 9001, ISO 14001 and ISO 45001. The current Group ISO certificate can be downloaded from <https://www.geberit.com>. Nearly all production waste from plastic components manufacturing is recycled internally. Material and production-related external waste of < 1 % is included. Production waste is transported to a waste disposal facility by lorry, which is estimated to be 50 km away. The manufacturing process is modelled with the specific electricity consumption measured in the plant. 100 % of electricity consumed in the Jona plant comes from a renewable source (hydroelectric power plants). The consumption of additives and water is negligible, i.e. it falls under the cut-off rules.

The production and provision of packaging material are also modelled in A3. The finished product is packaged with 60g of cardboard, 3g of small foils and 12g of installation instructions and labels.

TRANSPORT AND INSTALLATION (A4-A5)

Transportation impacts resulting from final products delivery to construction site (A4) cover direct fuel exhaust emissions and environmental impacts of fuel production, as well as related infrastructure emissions.

Transport from Geberit to customers within Europe is carried out by logistics partners via the modern, efficient Logistics Centre in Pfullendorf (DE) which is certified according to ISO 9001, ISO 14001 and ISO 45001. Distribution to countries outside Europe is not taken into account due to lack of relevance.

The following information has been considered:

- The majority of transports within Europe are carried out by lorry. Therefore, intercontinental transport by sea and air is not considered.
- The majority of vehicles in use are > 32 t Euro 6 class (> 85 %).
- The average transport distance in Europe from the production site to the Logistics Centre and to the consumer is approximately 580 km.

Further information on logistics can be found in the Geberit Annual Report.

In A5, there are no relevant environmental impacts during installation. The installation of a Geberit actuator plate is simple and requires no relevant energy or additional auxiliary materials or tools. Therefore, only the preparation of the waste treatment of packaging materials is taken into account in A5. Paper and cardboard are assumed to be fully recycled. Plastic foils are assumed to be disposed of in the municipal waste incineration plant.

PRODUCT USE AND MAINTENANCE (B1-B7)

The product use and maintenance phases are not considered. Air, soil and water impacts during the use phase have not been studied.

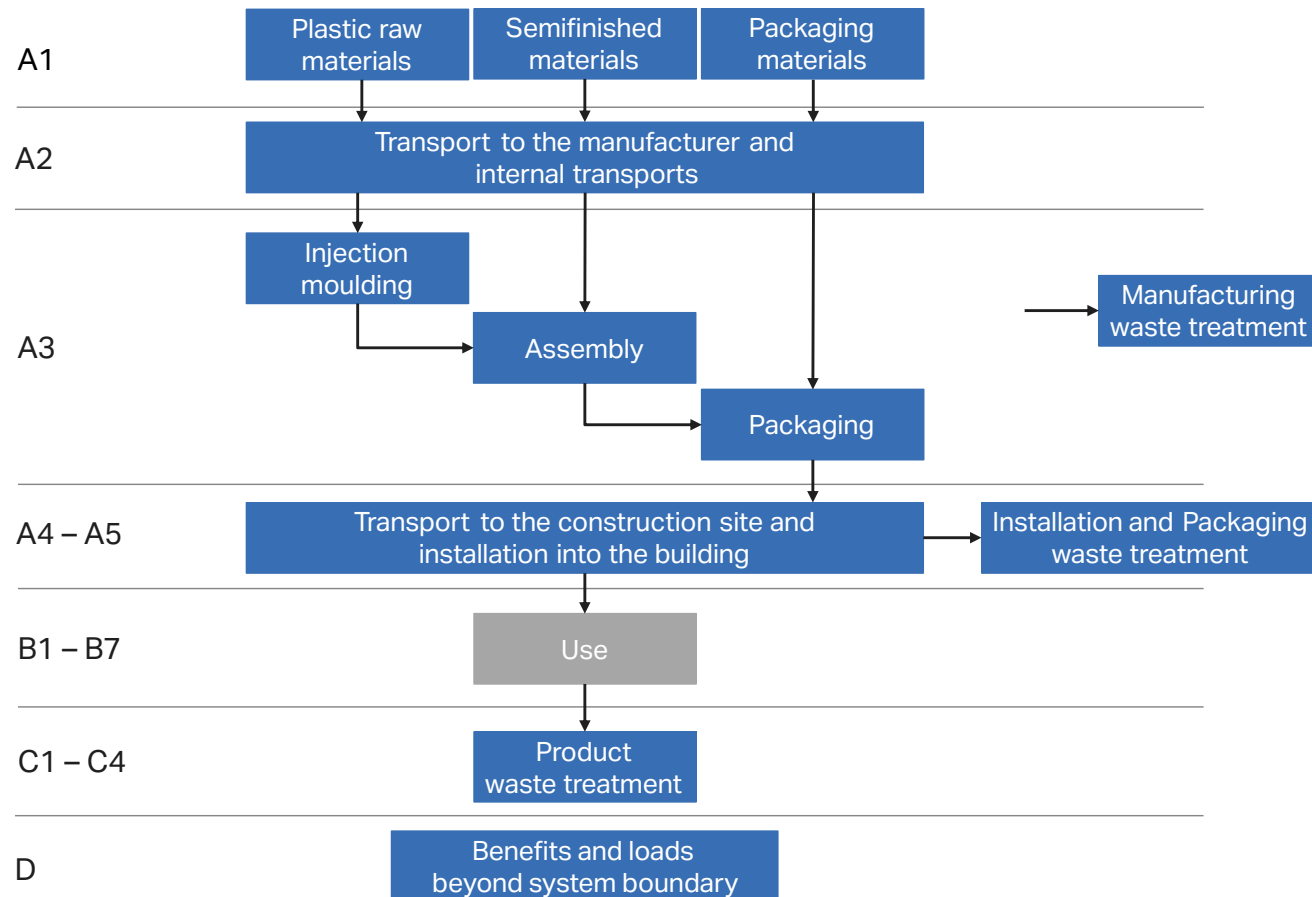
The product does not consume any electricity in use, all components work mechanically. Periodic maintenance is not necessary. The actuator plate makes it possible to choose between a large and a small flush volume. Thus, the product together with the connected flush valve and cistern can contribute to water saving. The actuator plate has been tested for 200 000 actuations. However, it might last even longer. The timeless design supports a long product use. The tool-free mounting allows for easy maintenance of the underlying cistern and valves. Actuator plates are backwards-compatible, thus a later replacement of the actuator plate to the existing frame is possible.

PRODUCT END-OF-LIFE (C1-C4, D)

As the consumption of energy and natural resources is negligible for disassembling the end-of-life product, the impacts of demolition are assumed to be zero (C1). The end-of-life product is assumed to be sent to the closest waste disposal facilities by lorry, which is estimated to be 50 km away (C2). It is generally assumed that all waste is collected and professionally separated after demolition on the construction site. The type of waste treatment is determined on the basis of the material class. Metals are assumed to be recycled. A recycling efficiency of 95 % is assumed, meaning that for every 1 kg of recycled material, 5 % loss going to landfill (C4) is considered. Plastics are disposed of in the municipal waste incineration plant. Although the plastic components of the product are basically suitable for recycling due to their material properties, they are conservatively modelled with thermal energy recovery. The product is not biodegradable.

In module D, materials that are recycled generate benefits. The secondary material content of the recycled material is considered in order to avoid overcounting benefits in module D. Plastics and elastomers are thermally recycled in a waste incineration plant, with energy and heat produced from their incineration (D). Waste of packaging and installation materials in A5 have benefits and loads that are also considered.

MANUFACTURING PROCESS



LIFE CYCLE ASSESSMENT

CUT-OFF CRITERIA

The study does not exclude any modules or processes that are stated as mandatory in the reference standard and the applied PCR. The study does not exclude any hazardous materials or substances. The study includes all major raw material and energy consumption. All inputs and outputs of the unit processes for which data is available are included in the calculation. There is no neglected unit process with more than 1 % of total mass or energy flows. The module-specific total neglected input and output flows also do not exceed 5 % of energy use or mass.

ALLOCATION, ESTIMATES AND ASSUMPTIONS

Allocation is required if some material, energy, and waste data cannot be measured separately for the product under investigation. All allocations are made as per the reference standards and the applied PCR. In this study, allocations have been made in the following ways:

Data type	Allocation
Raw materials	No allocation
Packaging materials	No allocation
Ancillary materials	No allocation
Manufacturing energy and waste	Allocated by mass or volume

AVERAGES AND VARIABILITY

Type of average	Multiple products
Averaging method	Not applicable
Variation in GWP-fossil for A1-A3	24 %

Primary data refers to the manufacturing site in Jona (CH). The data of a Geberit Sigma01 actuator plate (art. no. 115.770.11.5) was chosen as a reference product. Products with an identical function and highly similar material composition are covered. The different articles are listed in Annex. The variability of the primary data or the emissions between the different articles did not amount to more than 50 % in GWP-fossil. Variation in GWP-fossil for modules A1-A3 for the article that is most different to the reference product is + 24 % (+ 0.27 kg CO₂e).

LCA SOFTWARE AND BIBLIOGRAPHY

This EPD has been created using the One Click LCA EPD Generator. The LCA and EPD have been prepared according to the reference standards, ISO 14040 and ISO 14044. Ecoinvent 3.8 and One Click LCA databases were used as sources of environmental data.

ENVIRONMENTAL IMPACT DATA

CORE ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP ¹⁾ -total	kg CO ₂ e	9,88E-1	1,35E-2	6,39E-3	1,01E0	1,93E-2	1,21E-1	MND	MND	MND	MND	MND	MND	MND	0E0	1,46E-3	7,41E-1	2,76E-6	-3,41E-1
GWP-fossil	kg CO ₂ e	9,82E-1	1,35E-2	1,14E-1	1,11E0	1,95E-2	1,24E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,45E-3	7,46E-1	2,76E-6	-3,41E-1
GWP-biogenic	kg CO ₂ e	5,47E-3	0E0	-1,09E-1	-1,03E-1	0E0	1,09E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-5,44E-3	0E0	0E0
GWP-luluc ²⁾	kg CO ₂ e	2,71E-4	5,06E-6	6,06E-4	8,82E-4	7,32E-6	1,78E-6	MND	MND	MND	MND	MND	MND	MND	0E0	5,37E-7	3,58E-5	6,2E-10	1,04E-4
Ozone depletion pot.	kg CFC-11e	6,92E-7	3,37E-9	9,82E-9	7,05E-7	4,87E-9	1,76E-10	MND	MND	MND	MND	MND	MND	MND	0E0	3,35E-10	2,59E-9	1,37E-12	-1,78E-8
Acidification potential	mol H ⁺ e	3,61E-3	4,3E-5	6E-4	4,25E-3	6,22E-5	1,08E-5	MND	MND	MND	MND	MND	MND	MND	0E0	6,16E-6	2,45E-4	2,71E-8	-2,69E-3
EP ³⁾ -freshwater	kg Pe	1,99E-5	9,64E-8	7,16E-6	2,72E-5	1,39E-7	6,73E-8	MND	MND	MND	MND	MND	MND	MND	0E0	1,19E-8	8,18E-7	1,76E-11	-1,97E-5
EP-marine	kg Ne	6,3E-4	9,49E-6	2,12E-4	8,52E-4	1,37E-5	3,33E-6	MND	MND	MND	MND	MND	MND	MND	0E0	1,83E-6	1,01E-4	1,02E-8	-3,12E-4
EP-terrestrial	mol Ne	6,21E-3	1,05E-4	1,52E-3	7,84E-3	1,52E-4	3,17E-5	MND	MND	MND	MND	MND	MND	MND	0E0	2,02E-5	1,04E-3	1,12E-7	-3,64E-3
POCP ⁴⁾ ('smog')	kg NMVOCe	2,63E-3	4,14E-5	3,84E-4	3,06E-3	6E-5	9,14E-6	MND	MND	MND	MND	MND	MND	MND	0E0	6,46E-6	2,69E-4	3,21E-8	-1E-3
ADP-minerals & metals	kg Sbe	4,84E-6	3,31E-8	6,34E-7	5,51E-6	4,78E-8	3,12E-8	MND	MND	MND	MND	MND	MND	MND	0E0	3,41E-9	3,49E-7	5,41E-12	3,22E-7
ADP ⁵⁾ -fossil resources	MJ	1,86E1	2,16E-1	1,81E0	2,07E1	3,12E-1	2,15E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,18E-2	2,81E-1	8,76E-5	-4,22E0
Water use	m ³ e depr.	5,01E-1	9,95E-4	1,35E0	1,85E0	1,44E-3	8,79E-4	MND	MND	MND	MND	MND	MND	MND	0E0	9,78E-5	3,32E-2	3,4E-7	-5,91E-2

1) GWP = Global warming potential; 2) luluc = land use and land use change; 3) EP = Eutrophication potential; 4) POCP = Photochemical ozone creation potential; 5) ADP = Abiotic depletion potential

ADDITIONAL (OPTIONAL) ENVIRONMENTAL IMPACT INDICATORS – EN 15804+A2, PEF

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Particulate matter	Incidence	4,75E-8	1,57E-9	7,93E-9	5,7E-8	2,27E-9	1,73E-10	MND	MND	MND	MND	MND	MND	MND	0E0	1,68E-10	3,19E-9	5,99E-13	-2,25E-8
Ionizing radiation	kBq U235e	3,47E-2	1,11E-3	1,55E-2	5,13E-2	1,61E-3	2,34E-4	MND	MND	MND	MND	MND	MND	MND	0E0	1,04E-4	2E-3	4,3E-7	-5,68E-2
Ecotoxicity, freshwater	CTUe	1,16E1	1,79E-1	2,72E0	1,45E1	2,59E-1	9,52E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,97E-2	1,74E0	5E-5	-7,07E0
Human toxicity, cancer	CTUh	2,07E-9	4,66E-12	7,69E-11	2,16E-9	6,74E-12	5,65E-12	MND	MND	MND	MND	MND	MND	MND	0E0	4,83E-13	1,24E-10	1,12E-15	3,69E-10
Human tox. non-cancer	CTUh	6,3E-9	1,82E-10	1,58E-9	8,07E-9	2,64E-10	8,51E-11	MND	MND	MND	MND	MND	MND	MND	0E0	1,95E-11	2,84E-9	2,37E-14	-3,11E-9
SQP ⁶⁾	-	1,18E0	2,51E-1	4,43E0	5,86E0	3,63E-1	1,95E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,52E-2	3,27E-1	1,99E-4	-4,97E0

6) SQP = Potential soil quality index

USE OF NATURAL RESOURCES

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Renew. PER ⁷⁾ as energy	MJ	5,13E-1	2,79E-3	4,73E0	5,25E0	4,04E-3	1,93E-3	MND	MND	MND	MND	MND	MND	MND	0E0	2,46E-4	2,24E-2	1,82E-6	-8,02E-1
Renew. PER as material	MJ	0E0	0E0	1,09E0	1,09E0	0E0	-1,09E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	9,33E-3
Total use of renew. PER	MJ	5,13E-1	2,79E-3	5,83E0	6,34E0	4,04E-3	-1,09E0	MND	MND	MND	MND	MND	MND	MND	0E0	2,46E-4	2,24E-2	1,82E-6	-7,92E-1
Non-ren. PER as energy	MJ	1,22E1	2,16E-1	1,61E0	1,4E1	3,12E-1	2,15E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,19E-2	2,82E-1	8,76E-5	-4,22E0
Non-ren. PER as material	MJ	1,07E1	0E0	2,01E-1	1,09E1	0E0	-2,01E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	-1,07E1	0E0	5,84E-3
Total use of non-ren. PER	MJ	2,29E1	2,16E-1	1,81E0	2,49E1	3,12E-1	-1,8E-1	MND	MND	MND	MND	MND	MND	MND	0E0	2,19E-2	-1,05E1	8,76E-5	-4,22E0
Secondary materials	kg	1,16E-1	6,08E-5	6,87E-2	1,85E-1	8,79E-5	5,42E-5	MND	MND	MND	MND	MND	MND	MND	0E0	6,07E-6	1,1E-3	1,8E-8	2,42E-2
Renew. secondary fuels	MJ	1,33E-4	5,36E-7	4,44E-3	4,58E-3	7,75E-7	3,41E-7	MND	MND	MND	MND	MND	MND	MND	0E0	6,12E-8	1,16E-5	5,66E-10	2,14E-6
Non-ren. secondary fuels	MJ	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Use of net fresh water	m ³	1,22E-2	2,86E-5	3,16E-2	4,38E-2	4,14E-5	2,74E-5	MND	MND	MND	MND	MND	MND	MND	0E0	2,83E-6	1,05E-3	1,08E-7	-3,25E-3

7) PER = Primary energy resources

END-OF-LIFE – WASTE

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste	kg	1,47E-1	2,31E-4	8,51E-3	1,56E-1	3,34E-4	2,32E-4	MND	MND	MND	MND	MND	MND	MND	0E0	2,9E-5	3,22E-3	0E0	-5,57E-3
Non-hazardous waste	kg	4,69E-1	4,02E-3	2,03E-1	6,76E-1	5,82E-3	8,58E-3	MND	MND	MND	MND	MND	MND	MND	0E0	4,76E-4	3,43E-1	6,5E-4	-1,35E0
Radioactive waste	kg	1,42E-5	1,49E-6	5,32E-6	2,1E-5	2,15E-6	1,06E-7	MND	MND	MND	MND	MND	MND	MND	0E0	1,46E-7	7,43E-7	0E0	-2,02E-5

END-OF-LIFE – OUTPUT FLOWS

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for reuse	kg	0E0	0E0	0E0	0E0	0E0	0E0	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	0E0	0E0	0E0
Materials for recycling	kg	0E0	0E0	0E0	0E0	0E0	7,25E-2	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	1,17E-2	0E0	0E0
Materials for energy rec.	kg	0E0	0E0	1,77E-3	1,77E-3	0E0	4E-3	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	2,97E-1	0E0	0E0
Exported energy	MJ	0E0	0E0	0E0	0E0	0E0	1,24E-1	MND	MND	MND	MND	MND	MND	MND	0E0	0E0	7,22E0	0E0	0E0

ENVIRONMENTAL IMPACTS – EN 15804+A1, CML / ISO 21930

Impact category	Unit	A1	A2	A3	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Global warming pot.	kg CO ₂ e	9,38E-1	1,34E-2	1,16E-1	1,07E0	1,93E-2	1,3E-2	MND	MND	MND	MND	MND	MND	MND	0E0	1,44E-3	7,44E-1	2,71E-6	-3,35E-1
Ozone depletion pot.	kg CFC-11e	4,67E-7	2,67E-9	8,41E-9	4,78E-7	3,86E-9	1,47E-10	MND	MND	MND	MND	MND	MND	MND	0E0	2,65E-10	2,28E-9	1,08E-12	-1,45E-8
Acidification	kg SO ₂ e	3,04E-3	3,49E-5	4,59E-4	3,53E-3	5,05E-5	8,42E-6	MND	MND	MND	MND	MND	MND	MND	0E0	4,79E-6	1,8E-4	2,01E-8	-2,3E-3
Eutrophication	kg PO ₄ ³ e	7,32E-4	7,39E-6	2,85E-4	1,02E-3	1,07E-5	1,14E-5	MND	MND	MND	MND	MND	MND	MND	0E0	1,09E-6	2,5E-4	4,45E-9	-6,87E-4
POCP ('smog')	kg C ₂ H ₄ e	1,72E-4	1,63E-6	2,99E-5	2,03E-4	2,35E-6	8,36E-7	MND	MND	MND	MND	MND	MND	MND	0E0	1,87E-7	7,56E-6	6,94E-10	-9,69E-5
ADP-elements	kg Sbe	4,69E-6	3,21E-8	5,55E-7	5,28E-6	4,65E-8	3,08E-8	MND	MND	MND	MND	MND	MND	MND	0E0	3,3E-9	3,35E-7	5,34E-12	3,17E-7
ADP-fossil	MJ	1,86E1	2,16E-1	1,8E0	2,06E1	3,12E-1	2,15E-2	MND	MND	MND	MND	MND	MND	MND	0E0	2,18E-2	2,81E-1	8,76E-5	-4,22E0

ANNEX: ARTICLES COVERED BY THIS EPD

	Article number	GWP-fossil, A1-A3 [kg CO ₂ e/item]
Sigma01	115.770.11.5	1.11
	115.770.DW.5	1.11
	115.773.11.5	1.11
	115.775.11.5	1.11
	115.790.11.5	1.11
Sigma10	115.758.KJ.5	1.38
	115.758.KM.5	1.38
Sigma20	115.882.KJ.1	1.25
	115.882.KM.1	1.25
Sigma30	115.883.KJ.1	1.23
	115.883.KM.1	1.23

VERIFICATION STATEMENT

VERIFICATION PROCESS FOR THIS EPD

This EPD has been verified in accordance with ISO 14025 by an independent, third-party verifier. The process involved reviewing results, documents and compliance with the reference standards, ISO 14025, ISO 14040 and ISO 14044 following the process and checklists of the programme operator for:

- This Environmental Product Declaration
- The Life Cycle Assessment used in this EPD
- The digital background data for this EPD

Why does verification transparency matter? Read more online.

This EPD has been generated by the One Click LCA EPD generator, which has been verified and approved by the EPD Hub.

THIRD-PARTY VERIFICATION STATEMENT

I hereby confirm that, following detailed examination, I have not established any relevant deviations by the studied Environmental Product Declaration (EPD), its LCA and project report, in terms of the data collected and used in the LCA calculations, the way the LCA-based calculations have been carried out, the presentation of environmental data in the EPD, and other additional environmental information, as present with respect to the procedural and methodological requirements in ISO 14025:2010 and reference standard.

I confirm that the company-specific data has been examined as regards plausibility and consistency; the declaration owner is responsible for its factual integrity and legal compliance.

I confirm that I have sufficient knowledge and experience of construction products, this specific product category, the construction industry, relevant standards, and the geographical area of the EPD to carry out this verification.

I confirm my independence in my role as verifier; I have not been involved in the execution of the LCA or in the development of the declaration and have no conflicts of interest regarding this verification.

Magaly González Vázquez, as an authorized verifier acting for EPD Hub Limited

07.08.2023

