

//DATASHEET

SALTO GEO Cylinder |

The next generation of electronic cylinder lock:

Fully integrated with the SALTO XS4 platform, SALTO GEO is a versatile, cost effective solution and its compact size and easy installation makes it the ideal electronic locking system for almost any type of door.

EUROPEAN CYLINDER
GxE1/2/3

SALTO
inspired**access**

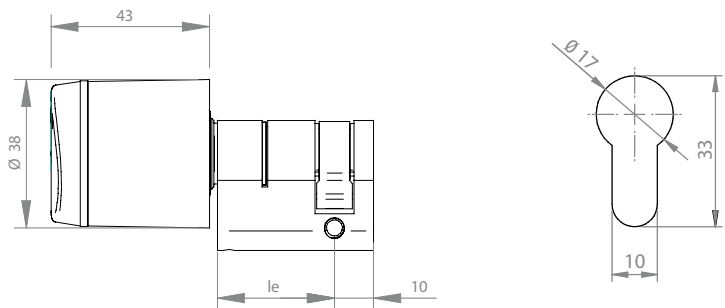


SALTO GEO
ELECTRONIC CYLINDER
REMOVABLE KNOB
EUROPEAN PROFILE
HALF CYLINDER

The SALTO GEO European profile half cylinder is specially designed to fit most Euro doors that are equipped with a European profile cylinder mortise lock.

SALTO GEO EUROPEAN PROFILE MODEL: HALF

EUROPEAN CYLINDER GxE1



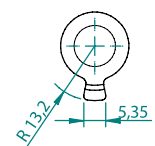
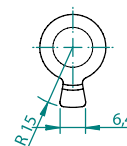
MAIN FEATURES:

- Fully integrated with the SALTO XS4 platform.
- Virtual network capable through SALTO Virtual Network technology.
- Choice of ID carriers: i-Button, HID iClass®, LEGIC Advant, Mifare, DESFire, Mifare Ultralight C.
- NFC compatible on contactless versions.
- All communications between the carrier and the SALTO GEO cylinder are encrypted and secure.
- Optical signalling through light ring. Dual colour green/red to indicate access authorisation. Acoustic signal optional.
- Available in 6 different finishes: satin chrome, polished chrome, polished brass, satin brass, black satin chromium and BioCote®.
- Different cam options: 15mm cam for Swiss profiles, 10 teeth cog wheel cam and 13 teeth cog wheel cam.
- High security via high resistance, hardened anti-drill protection.
- Concealed fixing screws for greater security and improved aesthetics.
- Optional, torx screw to tighten the knob and convert the cylinder on a fix knob cylinder.
- Emergency opening by means of portable programming device (PPD).
- Anti-Panic function available.
- Available from 40mm up to 195mm in thickness (special body length available for glass doors).
- Plus plug options (+5mm / +10mm) for doors where cylinders need additional length between the knob and the body.
- IP protection: model IP55 and model IP66 for outside use.
- SKG*** compliant and VDS BZ+ approval models available.

CAM MODELS:

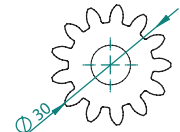
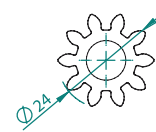
DIN 15mm (D)

SPAIN 13,2mm for metal doors (M)



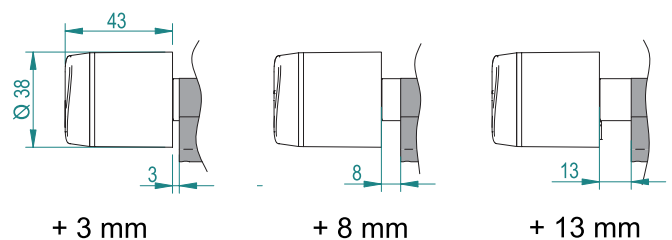
Cogwheel 10 teeth (G)

Cogwheel 13 teeth (Z)



PLUS PLUG OPTIONS:

Retrofits wide variety of European applications and adjustable cam. These new knobs plus plug 3 different options permit the installation and use of SALTO Geo cylinders in doors where the installation needs special additional length between the knob and the body.

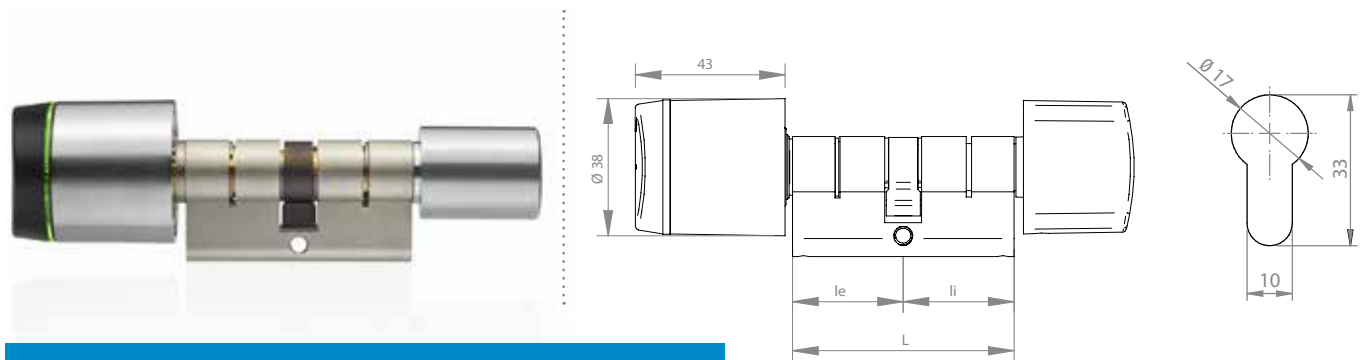


SALTO GEO
ELECTRONIC CYLINDER
REMOVABLE KNOB
EUROPEAN PROFILE
CYLINDER

The SALTO GEO European cylinder is specially designed to fit most Euro doors that are equipped with a European profile cylinder mortise lock and also need to be opened also from the inside.

SALTO GEO EUROPEAN PROFILE MODEL: STANDARD

EUROPEAN CYLINDER GxE2



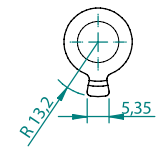
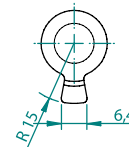
MAIN FEATURES:

- Fully integrated with the SALTO XS4 platform.
- Virtual network capable through SALTO Virtual Network technology.
- Choice of ID carriers: i-Button, HID iClass®, LEGIC Advant, Mifare, DESFire, Mifare Ultralight C.
- NFC compatible on contactless versions.
- All communications between the carrier and the SALTO GEO cylinder are encrypted and secure.
- Optical signalling through light ring. Dual colour green/red to indicate access authorisation. Acoustic signal optional.
- Available in 6 different finishes: satin chrome, polished chrome, polished brass, satin brass, black satin chromium and BioCote®.
- Different cam options: 15mm cam for Swiss profiles, 10 teeth cog wheel cam and 13 teeth cog wheel cam.
- Versions for glass door available
- Includes thumbturn on the inside to operate the cam.
- High security via high resistance, hardened anti-drill protection.
- Concealed fixing screws for greater security and improved aesthetics.
- Optional, torx screw to tighten the knob and convert the cylinder on a fix knob cylinder.
- Emergency opening by means of portable programming device (PPD).
- Anti-Panic function available.
- Available from 40mm up to 370mm in thickness (special body length available for glass doors).
- Plus plug options (+5mm / +10mm) for doors where cylinders need additional length between the knob and the body.
- IP protection: model IP55 and model IP66 for outside use.
- SKG*** compliant and VDS BZ+ approval models available.

CAM MODELS:

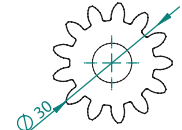
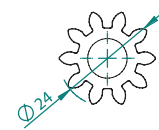
DIN 15mm (D)

SPAIN 13,2mm for metal doors (M)



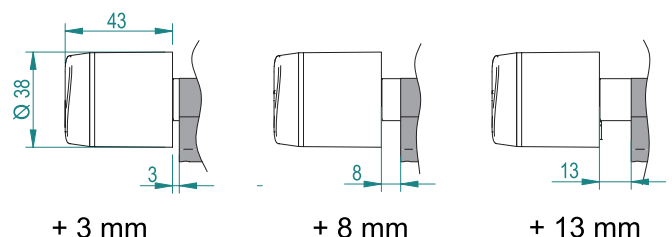
Cogwheel 10 teeth (G)

Cogwheel 13 teeth (Z)



PLUS PLUG OPTIONS:

Retrofits wide variety of European applications and adjustable cam. These new knobs plus plug 3 different options permit the installation and use of SALTO Geo cylinders in doors where the installation needs special additional length between the knob and the body.

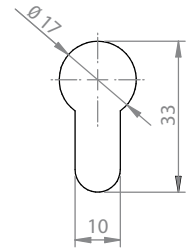
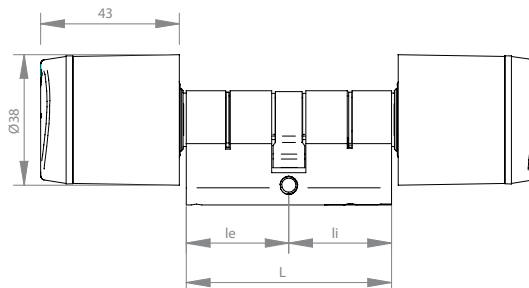


SALTO GEO
ELECTRONIC CYLINDER
REMOVABLE KNOB
EUROPEAN PROFILE
DOUBLE CYLINDER

The SALTO GEO European profile cylinder is specially designed to fit most Euro doors that are equipped with a European profile cylinder mortise lock and where a double control (entrance & exit) function is needed.

SALTO GEO EUROPEAN PROFILE MODEL: DOUBLE

EUROPEAN CYLINDER GxE3



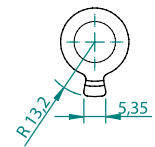
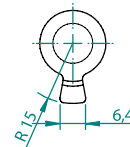
MAIN FEATURES:

- Fully integrated with the SALTO XS4 platform.
- Virtual network capable through SALTO Virtual Network technology.
- Choice of ID carriers: i-Button, HID iClass®, LEGIC Advant, Mifare, DESFire, Mifare Ultralight C.
- NFC compatible on contactless versions.
- All communications between the carrier and the SALTO GEO cylinder are encrypted and secure.
- Optical signalling through light ring. Dual colour green/red to indicate access authorisation. Acoustic signal optional.
- Available in 6 different finishes: satin chrome, polished chrome, polished brass, satin brass, black satin chromium and BioCote®.
- Different cam options: 15mm cam for Swiss profiles, 10 teeth cog wheel cam and 13 teeth cog wheel cam.
- High security via high resistance, hardened anti-drill protection.
- Concealed fixing screws for greater security and improved aesthetics.
- Optional, torx screw to tighten the knob and convert the cylinder on a fix knob cylinder.
- Emergency opening by means of portable programming device (PPD).
- Anti-Panic function available.
- Available from 60mm up to 200mm in thickness (special body length available for glass doors).
- Plus plug options (+5mm / +10mm) for doors where cylinders need additional length between the knob and the body.
- IP protection: model IP55 and model IP66 for outside use.
- SKG*** compliant and VDS BZ+ approval models available.

CAM MODELS:

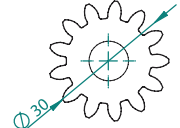
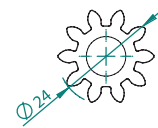
DIN 15mm (D)

SPAIN 13,2mm for metal doors (M)



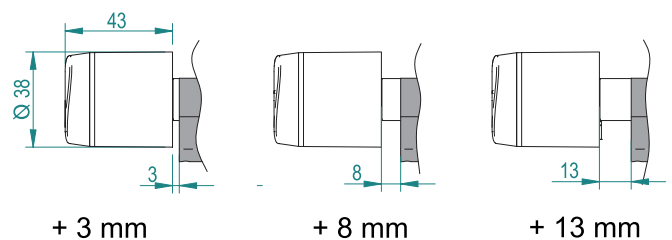
Cogwheel 10 teeth (G)

Cogwheel 13 teeth (Z)



PLUS PLUG OPTIONS:

Retrofits wide variety of European applications and adjustable cam. These new knobs plus plug 3 different options permit the installation and use of SALTO Geo cylinders in doors where the installation needs special additional length between the knob and the body.

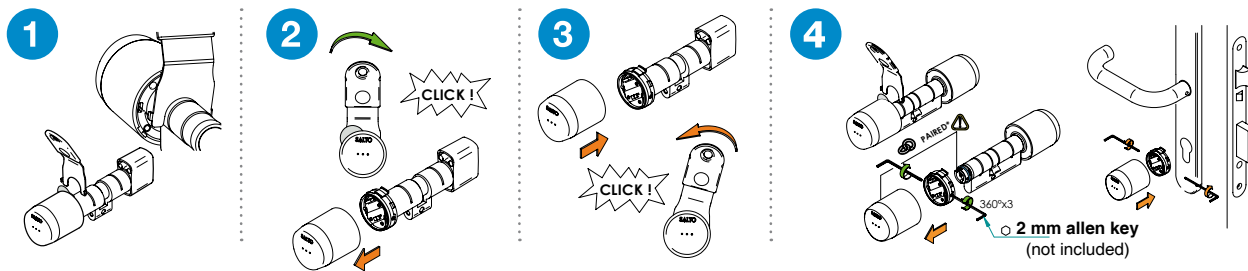


ELECTRONIC MAIN FEATURES AND BENEFITS:

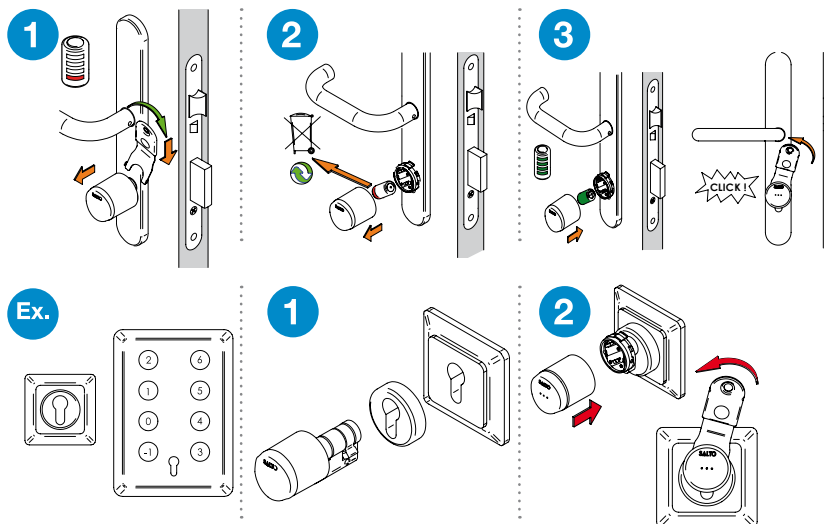
- Simple offline installation is possible for any type of door, including those with narrow frames.
- Virtual network capable through SALTO Virtual Network technology.
- Audit trail capability via the SALTO Virtual Network (SVN). Contactless versions compatible with ISO 14.443A, ISO 15693, ISO 14.443B and covering a wide range of mainstream RFID brands such as DESfire, DESfire EV1, Mifare, Mifare plus, Ultralight C, allowing multiapplication with third party systems using one card.
- SALTO GEO Electronic cylinder contactless range is compatible with NFC (Near Field Communication) technology which allows NFC enabled cell phones to act as contactless data carriers to open and control SALTO access controlled doors.
- All communications between the carrier and the electronic cylinder are encrypted and secured.
- Choice of different cam and cylinder profiles.
- Different finishes: BioCote®, Satin chrome, polished chrome, polished brass, satin brass.
- High security via high resistance, hardened anti-drill protection.
- Concealed fixing screws for greater security and improved aesthetics.
- Low battery power indication monitored through the SALTO Virtual Network (SVN) as low battery status information is written onto carriers and passed to the software. Also readings can be taken at the lock and passed to the software via PPD connection.
- Dual colour LED (green / red) to indicate access authorisation.
- Emergency opening by means of portable programming device (PPD).
- Firmware upgradable through PPD.

REMOVABLE KNOB:

REMOVABLE KNOB



BATTERY CHANGE



AVAILABLE LOCK MODES:

- **STANDARD:** locked at all times.
- **AUTOMATIC OPENING:** 8 pairs of "hands free" timed lock and unlocks per day with holidays.
- **TOGGLE:** present card to lock, present card to unlock.
- **TIME TOGGLE:** present card to lock, present card to unlock depending on schedules.

SALTO WIRELESS SYSTEM: REAL-TIME ACCESS CONTROL

The SALTO GEO wireless online cylinder delivers real-time high level security with all the convenience of battery operated access control. The SALTO Wireless system is compatible with most common RFID technologies. This makes integration easy and in most cases users can continue using existing cards for their applications.

Extensive range of cylinders are easy to install and configure.

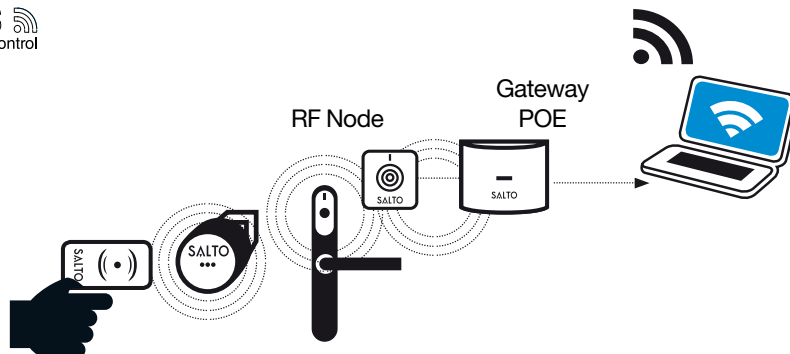
- Wireless Radio Frequency based on IEEE 802.15.4 at 2,4Ghz.
- AES 128 bits encryption.
- Stand-alone escutcheons can be upgraded to wireless system.
- Battery powered.
- Firmware updated via PPD or online real-time wirelessly through Pro Access SQL or HAMS SQL software.
- Completely integrated with SALTO platform. Works offline with SALTO Virtual Network (SVN) technology if network communication with the computer fails.
- 1000 event audit trail back up if contact with PC is lost.

MAIN FEATURES:

- **REAL TIME AUDIT TRAIL:** access granted, access denied, card expired.
- **REAL TIME BATTERY CONTROL:** Monitor battery maintenance by viewing the lock battery status in real time.
- **KEY MANAGEMENT:** Resolved in real time as the locks receive cancelled key updates as soon as they are generated.
- **BLACK LISTED KEYS CANCELLATION:** When a black listed credential is presented to an online electronic cylinder or escutcheon it will automatically disabled and wont allow the access even on offline standalone devices

SALTO WIRELESS SYSTEM: INFRASTRUCTURE

SALTO wireless
real-time access control



GATEWAY

The SALTO Gateway is the link between the PC and the wireless network, it collects all the information sent by the locks that belong to the gateway.

- Wireless radio frequency based on IEEE 802.15.4 at 2,4Ghz.
- AES 128bits encryption.
- Connection to the LAN Network 10 BASE-T/100 BASE-TX.
- PoE supported IEEE802.3af (12V power adapter optional)
- Can manage several repeaters and many locks.
- IP addressing through web explorer available.
- Firmware update via software through Ethernet connection.



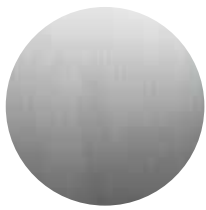
NODE

The SALTO Node is a bridge between the gateway and the wireless network.

- Wireless radio frequency based on IEEE 802.15.4 at 2,4Ghz.
- AES 128bits encryption.
- Connection to the GATEWAY BUS 485.
- Powered by the GATEWAY.
- Can manage several repeaters and many locks.
- Firmware update via software through Ethernet connection.



FINISHES:



Satin
Stainless Steel
CSB



Polished
Stainless Steel
CPB



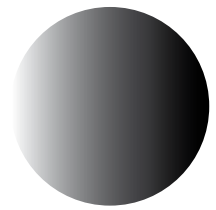
Satin
Brass
PMB



Polished
Brass
PPB



BioCote®
Antimicrobial
BCB



Black Satin
Chromium
NEB

ACCESS CONTROL FEATURES:

| | SELFPROGRAMMABLE | ROM | R&W SVN | Wireless System |
|------------------------------------|-----------------------------------|-------------------|---------------------------------------|---------------------------------------|
| Maximum number of users per door | 1000 | 1000 | 4,000,000 | 4,000,000 |
| Maximum number of doors per system | - | 16,000 | 64,000 | 64,000 |
| Maximum events on lock audit | - | 650 | 1000 | 1000 |
| Timezones | - | 30 | 256 | 256 |
| Timeperiods | - | 20 | 256 | 256 |
| Calendars in system | - | 42 | 256 | 256 |
| User groups | - | unlimited | unlimited | unlimited |
| Zones in System | - | unlimited | unlimited | unlimited |
| Management software | Programing key & user key sets | Pro Access ROM | Pro Access HAMS (available SQL) | Pro Access HAMS (available SQL) |

ID TECHNOLOGIES:

- **MIFARE:** Mifare, Mifare plus, Ultralight C, DESfire, DESfire EV1 and Vicinity cards.
- **LEGIC:** Legic Advant.
- **HID:** HID iClass®
- **i-BUTTON:** ROM - RW
- **NFC:** SALTO GEO Electronic cylinder contactless range is compatible with NFC (Near Field Communication) technology which allows NFC enabled cell phones to act as contactless data carriers to open and control SALTO access controlled doors.

RANGE OF RFID CREDENTIAL / KEYS AVAILABLE:



Contactless RFID Key
Cards



Contactless RFID
Fobs



Contactless RFID
Silicone Bracelet



Contactless RFID
Fobs Bracelet



i-Button Key



i-Button Key Bracelet

MIFARE:

Mifare RFID contactless technology reads & writes information to contactless smart cards (RFID) compatible with ISO 14.443A, ISO 14.443B and ISO 15.693 standards, and as Mifare, Mifare plus, DESFire, DESFireEV1 technologies. They also allow for updating of the carriers via SALTO Virtual Net (SVN) technology.

- Fully integrated with the SALTO XS4 platform.
- 13.56MHz contactless RFID identification.
- ISO 14.443A - Mifare, DESFire Compatible.
- ISO 15.693 - Tag it, Icode, Flex Space (SKIDATA) Compatible.
- Near Field Communication (NFC) compatible.
- Key card available: 1Kbyte, 4Kbytes and 8 Kbytes depending on technology.
- Key shape available: ISO 7810 Cards, fobs, bracelets, stickers, watches...
- Reusable key cards.
- SALTO Virtual Network (SVN) compatible*.
- RFID technology permits contactless exchange of information between the card and the reader*.
- High security encrypted Proximity cards.
- Multiapplication with other systems using the same card with different sectors.
- Customized issuing card through the SALTO Authorization Media software (SAM).
- Waterproof cards which can be customized.
- Upgradable: selfprogrammable, ROM, R&W systems available using the same hardware.

LEGIC Advant:

LEGIC Ident systems includes highly integrated LEGIC RF Standard and ISO 15693 and ISO 14443 compliant read/write Chip Sets, Security Modules and Transponder Chips for integration into third party products. A very good option if you already use a Legic transponder system.

- 13.56MHz contact less RFID identification.
- Key card available: 2 kbytes.
- Key shape available: ISO 15693, ISO 14443 and LEGIC RF Cards.
- Reusable key cards.
- SALTO Virtual Network (SVN) compatible.
- Read & Write technology permits contactless exchange of information between the card and the reader.
- High security, by using password and encrypted 3DES, DES and Legic encryption.
- Multiplication with other systems using the same card with different segments..
- Customized issuing card memory through the Legic protocol.
- Waterproof cards which can be customized.

HID iCLASS®:

HID iCLASS® contactless technology from HID is R&W identification technology based on 13.56 MHz read/write contactless smart card technology. HID iCLASS® offers enhanced security through encryption. This single-card, contactless solution permits multiapplication with others systems, and with the SVN capabilities, you will acquire a lot of interesting new features for your property access control.

- 13.56MHz contact less RFID identification.
- ISO 14.443B2 standard compliant. ISO 15.693 standard compliant.
- Reusable key cards.
- SALTO Virtual Network (SVN) compatible.
- Read & Write technology permits contactless exchange of information between the card and the reader.
- High security, by using password and encrypted Proximity cards.
- Multiapplication with other systems using the same card through shared pages.
- Customized issuing card through the SALTO Authorization Media software (SAM).
- Waterproof cards which can be customized.
- Upgradable: ROM, R&W systems available using the same hardware.

i-BUTTON:

The i-Button technology is a robust and ergonomic technology due to the design of the fob and the lock. The SALTO GEO i-Button electronic cylinders need no hard wiring and provide a modern solution to the problem of lost keys or masterkeys. Compatible with data on card technology SALTO Virtual Network (SVN) system that allows you to control all the doors in an entire building or group of buildings from a single PC.

- Access given through contact by electronic i-Button.
- Simple and intuitive use due to the smart design of the i-Button and the electronic lock reader.
- Extremely resistant system, suitable for all kind of environments.
- 512bytes or 2Kbytes i-Button fobs or bracelets available.
- Reusable keys
- SALTO Virtual Network (SVN) compatible.
- Different sort of i-Button fobs or bracelets available.
- High security, by using password and encrypted i-Button fobs.
- i-Buttons can be customized by numeration.
- i-Buttons are waterproof.
- Compatible with SMILE technology and/ or ROM system that allows you to control all the doors. No software or computer is required

OPTIONAL ACCESSORIES / GRIPS:

SALTO GEO cylinder grips have been designed to improve the operation of SALTO GEO electronic cylinders. Suitable for use with gloves or by the disabled, the new SALTO Cylinders Grips provide an additional surface making the knob easier to operate.

- Disability Discrimination Act (DDA) compliant.
- BioCote® antimicrobial protection, silver ion technology.
- SALTO GEO Cylinders Grip H and A models are available in:
 - Red,
 - Blue,
 - Yellow,
 - Green,
 - White
 - Black.



GRIP H



GRIP A (DDA)

TECHNICAL DATA:

CURRENT REQUIRED:

- 1 Lithium standard battery CR2.
- Number of openings:
 - i-Button version: Up to 60,000 on 1 battery.
 - Contactless versions: Up to 40,000 on 1 battery, depending on the RFID technology.

ENVIRONMENTAL CONDITIONS:

- -20° / 60° C.

CERTIFICATIONS:

- Declaration of Comity CE

Use of radio frequency spectrum

- ETSI EN 302 291-1 V1.1.1 (2005-07)
- ETSI EN 302 291-2 V1.1.1 (2005-07)

Electromagnetic Compatibility

- ETSI EN 301 489-1 (2011-09)
- ETSI EN 301 489-3 (2002-08)

Security requirements

- EN 60950-1 (2007)
- Following the provisions of the directive

Mechanical certifications against vandalism & fire

- SKG*** certified.
- VDS BZ+ compliant.
- EN 1634 - 1 90 min. EI90 fire resistant.



IP CERTIFICATIONS: Outdoor Protection Standard

- IP55* MODEL (SALTO GEO standard model)

| SOLID PARTICLE RESISTANT | LIQUID INGRESS RESISTANT |
|---|---|
| Quantity of dust ingress is not sufficient to interfere normal operation. | Water projected by a nozzle (6.3mm) against enclosure from any direction at least 3 minutes, 12.5 litres per minute, 30 kN/m ² at distance of 3m, shall have no harmful effects. |

- IP66* MODEL (SALTO GEO water resistant model [GxxxxR])

| SOLID PARTICLE RESISTANT | LIQUID INGRESS RESISTANT |
|--------------------------|--|
| No ingress of dust. | Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction at least 3 minutes, 100 litres per minute, 100 kN/m ² at distance of 3m, shall have no harmful effects. |

* IP66 refers only to electronic knob. Water entrance through the cam is not protected.

SALTO ACCESS CONTROL PLATFORM FEATURES:

The SALTO range of electronic cylinders is fully integrated with the XS4 platform and their versatile, compact size makes them an ideal solution for almost any type of door where fitting a conventional electronic handle set is not possible or required.

The XS4 thumb turn SALTO GEO models offer virtual network capability thanks to their SALTO Virtual Network (SVN) technology as well as a choice of ID carriers including i-Button, Mifare, DESfire, Mifare and Ultralight C.

Whatever your access control needs, SALTO electronic cylinders provide an ultra modern solution that will compliment any type of door wherever they are used.

- Completely integrated in the SALTO Systems platform.
- Enables users to have standalone electronic cylinders, standalone electronic locks, standalone electronic glass door locks (SALTO wireless compatible), emergency exit devices (SALTO wireless compatible), locker locks and IP based online readers, all in the same system with SALTO Virtual Network capabilities, making it possible to update user card access plans easily.

SALTO GEO ELECTRONIC CYLINDERS FEATURES:



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