Nice X-MetroKit

Solemyo 24V

XME2024

FLO2R-S

MC424

FK

SMXI

The kit contains:

XME2024 2 gear motors. **XMBOX** 2 foundation boxes. **FLO2R-S** 2 transmitters 433.92 MHz, 2 channels. **MC424** 1 control unit. **FK** 1 pair of photocells for outdoor use. **SMXI** 1 receiver up to 4 channels with 256-codes memory.

Code	Description	Pack/pallet	Price £
XMETROKIT	Kit for swing gates with leafs up to 2.3 m, 24 Vdc, underground installation	12	**1,025.00**

N.B. The content of the package may vary: consult the retailer.

For swing gates with leafs up to 2.3 m, underground installation, ultra compact.

New irreversible electromechanical 24 Vdc gear motor.

Compatible for operation with Solemyo system.

Tough and discreet: compact foundation box with a height of only 81 mm. Steel with cataphoresis paint finish guarantees optimal resistance to corrosion, and thickness of 2.5 mm guarantees strength. All this in a protrusion of just 52 mm from the ground.

Practical and quick installation thanks to the exit lever on the gear motor attached directly on the leaf.

Mechanical limit switches adjustable on opening and closing.

Standard opening up to 180° with no accessory.

Reliable and sturdy: the gear motor, in IP67 pressure die cast aluminium, suspended inside the housing to enable drainage of any deposits, ensures optimal water resistance.

Practical release from inside and outside, acting directly on the gear motor, easy to operate by means of the special key.

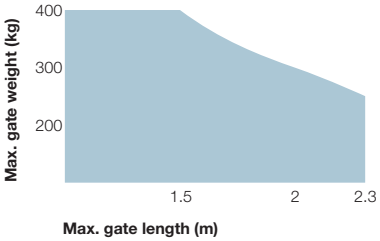
New Moonclever control unit MC424:

- easy programming by pressing a single button;
- clutch with anti-crush safety feature;
- automatic memorization of limit switches on opening and closing with self-learning function;
- programming of pause time;
- pedestrian pass door;
- deceleration on opening and closing;
- obstacle detection;
- provision for connection of latest generation resistive sensitive edges;
- continues to work even during power failures using optional (PS124) batteries that fit inside the control unit.

Technical specifications

Code	XME2024
Electrical data	
Power supply (Vdc)	24
Absorption (A)	5
Power (W)	120
Built-in capacitor (µF)	-
Performance data	
Speed (Rpm)	1.25
Torque (Nm)	250
Work cycle (cycles/hour)	60
Dimensional and general data	
Protection level (IP)	67
Working temp. (°C Min/Max)	-20° ÷ +50°
Dimensions (mm)	230x206x88 h
Weight (kg)	15

Utilisation limits



The shape, the height of the gate and the weather conditions can considerably reduce the values shown in the graph to the side.

XMETRO

XME2024
XME2124

CE

Swing gate opener

EN - Instructions and warnings for installation and use

IT - Istruzioni ed avvertenze per l'installazione e l'uso

FR - Instructions et avertissements pour l'installation et l'utilisation

ES - Instrucciones y advertencias para la instalación y el uso

DE - Installierungs-und Gebrauchsanleitungen und Hinweise

PL - Instrukcje i ostrzeżenia do instalacji i użytkowania

NL - Aanwijzingen en aanbevelingen voor installatie en gebruik

Nice

ENGLISH

Summary

1 GENERAL SAFETY WARNINGS AND PRECAUTIONS

Recommendations regarding safety

- **ATTENTION! – This manual contains important instructions and recommendations regarding the safety of persons.** Incorrect installation can cause serious injury. Read the manual completely before starting work. If in doubt, suspend the installation and request clarifications from the Nice After-sales Assistance.
- **ATTENTION! – Important instructions: keep this manual for any future maintenance interventions and product disposal.**
- **ATTENTION! – In compliance with the most recent European Legislation, the realisation of an automatic door or gate must respect the Standards envisioned by the 2006/42/CE Directive (ex 98/37/CE) (Machinery Directive) and in particular, the EN 12445; EN 12453; EN 12635 and EN 13241-1 Standards, which allow to declare conformity of the automation. Considering this, all product installation, connection, inspection and maintenance operations must only be performed by a qualified and skilled technician!**

Recommendations for installation

- Before starting installation, check whether this product is suitable to automate your gate or door (see chapter 3 and the “Product technical features”). If it is not suitable, DO NOT proceed with installation.
- **All installation and maintenance operations must take place with the automation disconnected from the electric power input.** If the power input disconnection device is not visible from the place where the automation is positioned, before starting work, affix a sign onto the disconnection device that states "ATTENTION! MAINTENANCE IN PROGRESS”.
- Handle the automation with care during installation, preventing crushing, blows, falls or contact with liquids of any nature. Do not place the product near to heat sources or expose it to naked flames. All of these actions can damage it and be cause of malfunctioning or dangerous situations. If this occurs, suspend installation immediately and contact the Nice After-sales Assistance.
- Do not modify any product parts. Unauthorised operations can only cause malfunctioning. The manufacturer declines liability for damage deriving from arbitrary modifications to the product.
- If the gate or door to be automated has a pedestrian door the plant must be set up with a control system that prevents functioning of the motor when the pedestrian door is open.
- The product packaging material must be disposed of in compliance with local legislation.

2 DESCRIPTION OF THE PRODUCT AND DESTINATION OF USE

This product is destined to be used to automate gates or doors with hinged panels, exclusively in the residential environment.

ATTENTION! – Any use different to that described and in environmental conditions different to those stated in this manual must be considered improper and prohibited!

The product is an electro-mechanical gear motor, with a 24 Vdc motor. The gear motor is powered by the external control unit, to which it must be connected.

If the electric energy is interrupted *(black-out)*, the gate panels can be moved by releasing the gear motor using the relevant wrench; to perform the manual manoeuvre, see chapter 3.6.

The product is available in two versions:

- XME2024 without encoder, suitable for MC424 control units.
- XME2124 with encoder, suitable for MC824H control units.

Do not use gear motors with incompatible control units.

3 INSTALLATION

3.1 - Preliminary checks on installation

Before performing installation, check the integrity of the product components, the adequacy of the model chosen and the suitability of the environment destined for installation.

IMPORTANT – The gear motor cannot automate a manual gate that does not have an efficient and safe mechanical structure. Moreover, it cannot solve defects caused by incorrect installation or bad maintenance of the gate itself.

EN

3.2 - Suitability of the gate to automate and the surrounding environment

• Check that the gate mechanical structure is suitable to be automated and complies with the Standards in force on the territory *(if necessary, refer to the data given on the gate label)*.

• Moving the gate panel manually in *Opening* and in *Closure*, check that the movement takes place with the same and constant friction in all points of the run *(there must not be moments of greater effort)*.

• Check that the gate panel stays in equilibrium, i.e. that is does not move if taken manually into any position and left.

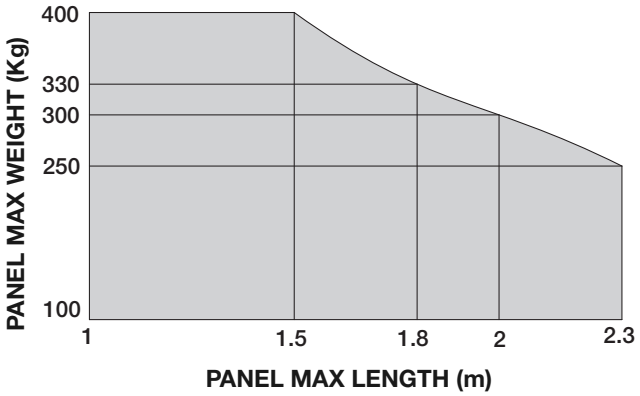
• Check that the space around the gear motor allows to manually release the gate panels easily and safely.

• Envision end run retainers on the ground both for opening and closure of the gate.

• Check that the gear motor fixing area is compatible with the clearance of the latter (**fig. 1**).

3.3 - Limits of use for the product

Before installing the product, check that the gate panel has dimensions and weight that lie within the limits given in **graph 1**; also evaluate the climatic conditions (e.g. strong wind) present in the place of installation. They can greatly reduce the values given in the graph.



3.4 - Set-up for installation

Fig. 2 shows an example of automated plant realised with Nice components. These components are positioned according to the typical and usual layout. With reference to **fig. 2**, establish the approximate position where each component envisioned in the plant will be installed and the most appropriate connection layout.

Components useful for realising a complete plant (fig. 2):

A - Electro-mechanical gear motors
B - Control unit
C - Pair of photocells
D - Columns for pairs of photocells (C)
E - Flashing signal with antenna incorporated
F - Digital keyboard
G - Pair of mechanical stops in opening and closure
H - Key selector switch

3.5 - Installation

01. Carry out large foundation excavations, for positioning the foundation case (**fig. 3**): envision a drain pipe for the water in order to prevent stagnation;
02. Place the foundation case in the excavated area, with the hole aligned with the axis of the upper hinge (**fig. 4**);
03. Envision a conduit for the passage of the power input cable and one for draining the water;
04. Sink the foundation case in the concrete, making sure that it is perfectly level (**fig. 5**);
05. At this point, make 3 threaded holes M10 on the lower part of the panel with minimum depth of 15 mm (**fig. 6**). *Note – As an alternative to the screws, it is possible to fix the panel hitching lever with strong welding*;
06. Fix the panel hitching lever using 3 screws (**fig. 6**);
07. **IMPORTANT! – Lubricate the foundation case bush** (**fig. 7**);
08. Insert the hitching lever already fixed to the panel into the foundation case bush (**fig. 8**);
09. If the gate has its own mechanical stops (**fig. 2 - G**) pass directly to point **10**. Otherwise, if the gate does not have its own mechanical stops or if at end run all of the motor thrust is not to be applied to the panel, it is possible to use the end runs inside the gear motor and proceed as follows:
a) Insert the regulation dowels (for the opening and closing end run) in the holes prepared on the foundation case:
- **Panel opening to 90°:** see **fig. 9** for the left and right panel.
- **Panel opening to 180°:** see **fig. 10**.

b) Regulation of the end run (opening and closure): activate the end runs until the desired stop point in opening and closure is reached. Finally, add the nuts and if the end run positions are correct, tighten the nuts well (**fig. 11**);
10. At this point, insert the motor inside the foundation case, pushing it to the end of the case aligning the fixing holes present on the gear motor with those of the case itself (**fig. 12**);
11. Insert the supplied screw fasteners into the holes (**fig. 13**) and tighten them slightly until the gear motor is slightly raised with respect to the bottom of the case;
12. Now move the panel slowly to allow engagement with the motor and then tighten the screw fasteners fully home (**fig. 14**);
13. Pass the power input cable through a previously prepared raceway (**fig. 15**): to make the electric connection to the control unit, see chapter 4 and refer to the control unit manual;
14. Position three lids “A, B, C” respecting the following circuit:
a) Place the upper lid “A” on the foundation case and run it to stop (**fig. 16 - 1**), Insert lid "B" into the slot at the same time (**fig. 16 - 2**)
b) Fix lid “A” using the 3 supplied screws (**fig. 16 - 3**)
c) Fix the lower lid “C” using the screws supplied (**fig. 16 - 4 and 5**).

3.6 - Manual release and block of the gear motor

To release and block the gear motor, use the supplied triangular spanner:

• Release:

01. Insert the wrench into one of the 2 lateral holes present on the upper lid and turn it 180°, indifferently in one of the two directions (**fig. 17**);
02. Move the panel manually and take it to the desired position.

• Block:

01. Insert the wrench into one of the 2 lateral holes and turn it 180° indifferently in one of the two directions (**fig. 17**);
02. The panel will block at the first manoeuvre commanded by the control unit.

4 ELECTRIC CONNECTIONS

Recommendations:

- The gear motor is supplied with an electric power input cable measuring 2 m. Therefore, if a greater distance must be covered to perform the electric connections, a diversion box must be used (not supplied). **IMPORTANT! – It is prohibited to join the electric cable inside the foundation case.**
- **Make the electric connections with the mains power input disconnected.**

To connect the power input cable to the control unit, see the manual regarding the latter and the following indications:

Blu wire	= 24 V motor power input
Brown wire	= 24 V motor power input
Black wire	= Encoder (XME2124 version only)
Grey wire	= Encoder (XME2124 version only)
Yellow/Green wire	= Earth

5 INSPECTION AND COMMISSIONING

ATTENTION! – The operations described in this chapter must only be performed by qualified and skilled staff, respecting the instructions in the manual, the laws and the Safety Standards in force on the territory.
This is the most important phase in the realisation of the automation, in order to guarantee maximum safety of the system. The inspection procedure described can also be used to periodically check the devices that make up the automation.
The inspection phases and commissioning of the automation must be performed by qualified and expert staff that must establish the tests necessary to check the solutions used regarding the risks present and to check respect with that envisioned by the Laws, Standards and Regulations: particularly, all requisites of the EN 12445 Standard, which establishes the test methods for checking the gate automations.

ATTENTION! – Before carrying out any check, disconnect any electrical power input source.

5.1 - Inspection

Each individual component of the automation, e.g. sensitive edges, photocells, emergency stop etc requires a specific inspection phase. For these devices the procedures given in the respective instruction manuals must be performed.
For the X-Metro inspection, proceed as follows:

1 Check that everything envisioned in chapter 1 - General safety warnings and precautions, is rigorously respected;
2 Close the gate;
3 Remove any electric power input source to the control unit;
4 Release the gear motor using the relative wrench, see paragraph 3.6;
5 Open the panel manually until the maximum opening position is reached and check that there is no friction during the movement;
6 Check that the panel, left in any position of its run, does not move;
7 Check that the safety systems and the mechanical stops are in good working order;
8 Check that the screw connections are well-fastened;
9 If necessary, clean the inside of the foundation case and check that the water drain functions correctly;
10 Block the gear motor using the relative wrench, see paragraph 3.6;
11 Apply the electric power input to the control unit;
12 Measure the force of impact according to that envisioned by the EN 12445 Standard. If the control of the "driving force" is used by the control unit as an auxiliary to the system for the reduction of the force of impact, try and adjust the functions that offer better parameters;
13 Permanently fix a label, which describes how to manually release the gear motor, in a zone adjacent to the automation.

5.2 - Commissioning

Commissioning can only be performed after all of the inspection phases of the gear motor and other devices present have been performed with positive results. For commissioning refer to the control unit instruction manual.

IMPORTANT – Partial commissioning or in "temporary" situations is prohibited.

6 PRODUCT MAINTENANCE

In general the automation requires periodical maintenance so that it can function as long as possible in complete safety. The maintenance of the automation must be programmed with periodic frequency. Maintenance programmed at maximum every 6 months is necessary.

To perform maintenance checks, repeat the procedure described in chapter 5.1 - Inspection.

Important! – Before carrying out any check, disconnect any electrical power input source.

DISPOSAL OF THE PRODUCT

This product is an integral part of the automation and therefore must be demolished with it.
As for installation, the plant must also be demolished by qualified staff at the end of its life span.
This product is made up of various types of materials: some can be re-cycled, others must be disposed of. Obtain information regarding recycling or disposal systems envisioned by the Standards in force on your territory for this category of product.

Attention! – some parts of the product can contain pollutant or dangerous substances which, if dispersed into the environment, could have damaging effects on the same and human health.

As indicated by the symbol at the side, it is prohibited to throw this product into domestic waste. "Separate collection" must be performed for disposal, according to the methods envisioned by the Regulations in force on your territory or take the product back to your dealer on the purchase of a new equivalent product.

Attention! – local regulations in force may envision heavy sanctions if this product is disposed of abusively.

PRODUCT TECHNICAL FEATURES

RECOMMENDATIONS: • All technical features stated make reference at a room temperature of 20°C (± 5°C). • Nice S.p.a. reserves the right to modify the product at any time it deems necessary, however maintaining the same functionality and destination of use.

■ **Type**	Electro-mechanical dear motors for gates and doors with hinged panels
■ **Power input**	24 V ⎓
■ **Peak absorption**	5 A
■ **Maximum absorption**	2 A
■ **Peak power**	120 W
■ **Maximum power**	50 W
■ **Protection rating**	IP 67
■ **Run**	from 0° to 90° (±10°) or from 0° to 180° (±10°) [intermediate openings between 90° and 180° are not possible]
■ **Idle speed**	1.25 rpm
■ **Speed at nominal torque**	1 rpm
■ **Maximum torque**	250 Nm
■ **Nominal torque**	120 Nm
■ **Functioning temperature**	from -20 °C to +50 °C
■ **Cycles/hour at the nominal torque**	60
■ **Duration**	Estimated between about 80,000 and 200,000 manoeuvre cycles, according to the conditions given in Table 1
■ **Dimensions**	230 mm x 206 mm x h 88 mm
■ **Weight**	15 Kg (gear motor with foundation space)

EN

Product duration

The duration and average economic life of the product. The value of duration is strongly affected by the fatigue index of the manoeuvres performed by the automation: i.e. the sum of all factors that contribute to wear of the product (see Table 1).

To establish the probable duration of your automation, proceed as follows:

01. Calculate the fatigue index by adding the percentage values of the items present in **Table 1**;

02. In **Graph A** of the value just found, trace a vertical line that crosses the curve; from this point trace a horizontal line until the "manoeuvre cycles" line is crossed. The value determined is the estimated duration of your product.

The estimation of duration is made on the basis of the design calculations and the test results performed on prototypes. In fact, as it is an estimate, it does not represent any guarantee regarding the effective duration of the product.

GRAPH A

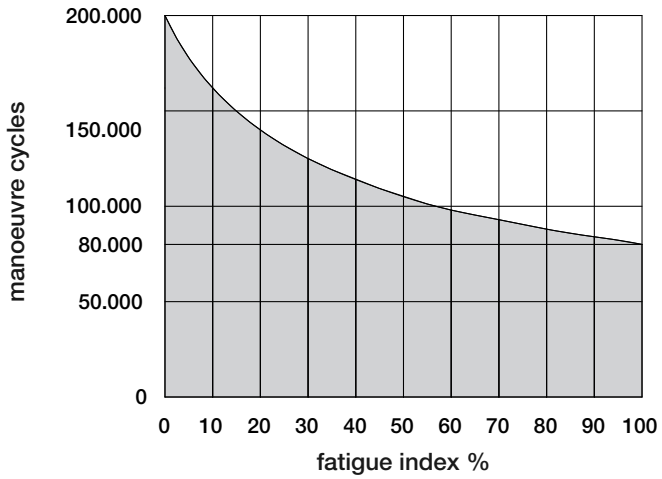


TABLE 1

Length of the panel	≥ 1.5 m	1.5 - 1.8 m	1.8 - 2 m	2 - 2.3 m
Weight of the panel	Fatigue index			
< 100 Kg	0 %	10 %	20 %	30 %
100 - 250 Kg	10 %	20 %	30 %	40 %
250 - 300 Kg	20 %	30 %	40 %	50 %
300 - 330 Kg	30 %	40 %	50 %	-
330 - 400 Kg	40 %	50 %	-	-
Environmental temperature exceeding 40°C or below 0°C or humidity exceeding 80%				15 %
Blind panel				15 %
Installation in windy area				15 %

Example of the duration calculation of an X-Metro gear motor (refer to Table 1 and Graph A):

- panel length: 1.7 m and panel weight: 200 Kg = fatigue index: 20%
- Installation in windy areas = fatigue index: 15%
- does not have other elements of fatigue
Total fatigue index = 35%
Estimated duration = 120.000 manoeuvre cycles

EC DECLARATION OF CONFORMITY

***Note** - The content of this declaration corresponds with that declared in the latest revision available, before printing this manual, of the official document deposited in the Nice Spa. head offices. This text has been re-adapted for editorial reasons.*

Number: 320/XME **Revision:** 0

The undersigned Luigi Paro in the quality of Managing Director, declares under his own liability that the product:

Manufacturer's name: NICE s.p.a.
Address: Via Pezza Alta 13, Z.I. Rustignè, 31046 Oderzo (TV) Italia
Type: Underground 24Vdc electro-mechanical gear motor
Models: XME2024, XME2124
Accessories: No accessory

Is in compliance with that envisioned by the following European Community Directives:

- 98/37/CE (89/392/EEC modified) 98/37/CE DIRECTIVE OF THE EUROPEAN PARLIAMENT AND COUNCIL dated 22 June 1998 concerning the harmonisation of legislations of the Member States relative to machinery

  As envisioned by the 98/37/CE Directive, it is warned that the above-indicated product cannot be started-up until the machine, in which the product is incorporated, has not been identified and declared in compliance with the 98/37/CE Directive.

Moreover, the product results in compliance with that envisioned by the following European Community Directives, as modified by the 93/68/EEC Council Directive dated 22 July 1993:

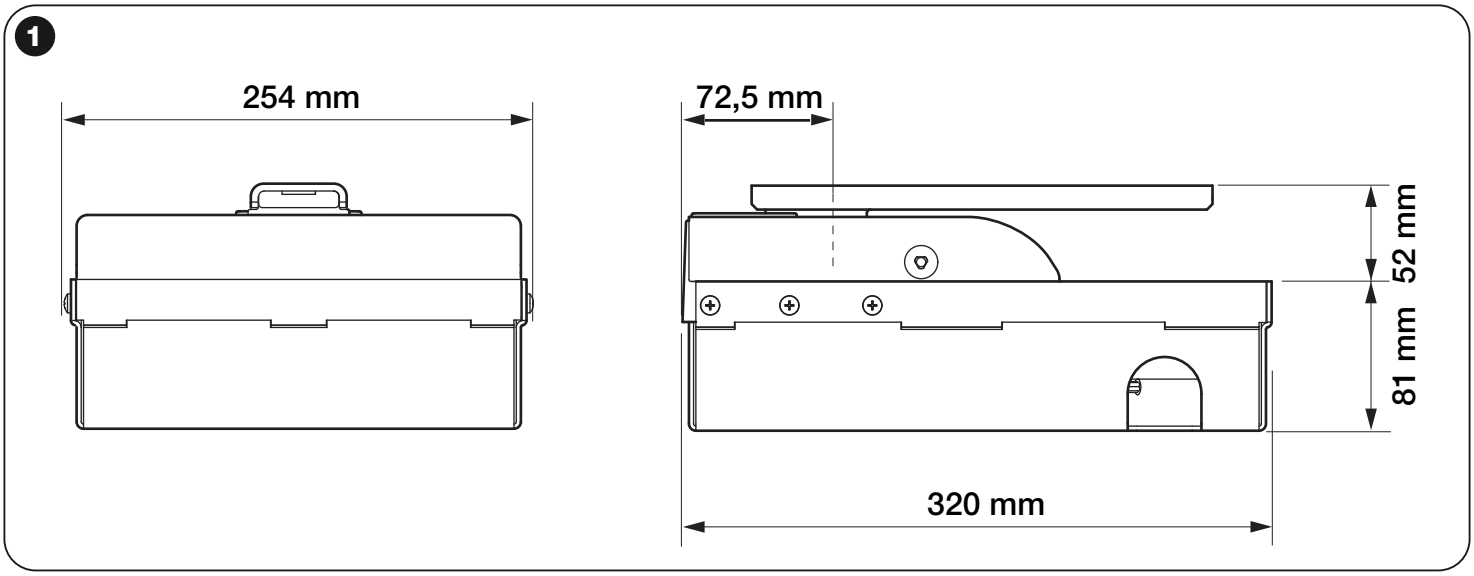
- 2006/95/EEC (ex 73/23/CE Directive) 2006/95/CE DIRECTIVE OF THE EUROPEAN PARLIAMENT AND COUNCIL dated 12 December 2006 concerning the harmonisation of the legislations of the Member States relative to electric material destined to be used within certain voltage limits According to the following harmonised Standards: EN 60335-1:1994+A11:1995+A1:1996+A12:1996+A13:1998+A14:1998+A15:2000+A2:2000+A16:2001

- 2004/108/EEC (ex 89/336/EEC Directive) 2004/108/CE DIRECTIVE OF THE EUROPEAN PARLIAMENT AND COUNCIL dated 15 December 2004 concerning the harmonisation of the legislations of the Member States relative to electromagnetic compatibility and which repeals the 89/336/EEC Directive. According to the following harmonised Standards: EN 61000-6-2:2005; EN 61000-6-3:2007

Moreover, it is in compliance, limitedly for the applicable arts, with the following Standards:
EN 60335-1:2002+A1:2004+A11:2004+A12:2006+ A2:2006, EN 60335-2-103:2003, EN 13241-1:2003; EN 12453:2002; EN 12445:2002; EN 12978:2003

Oderzo, 15 April 2009

Luigi Paro *(Managing Director)*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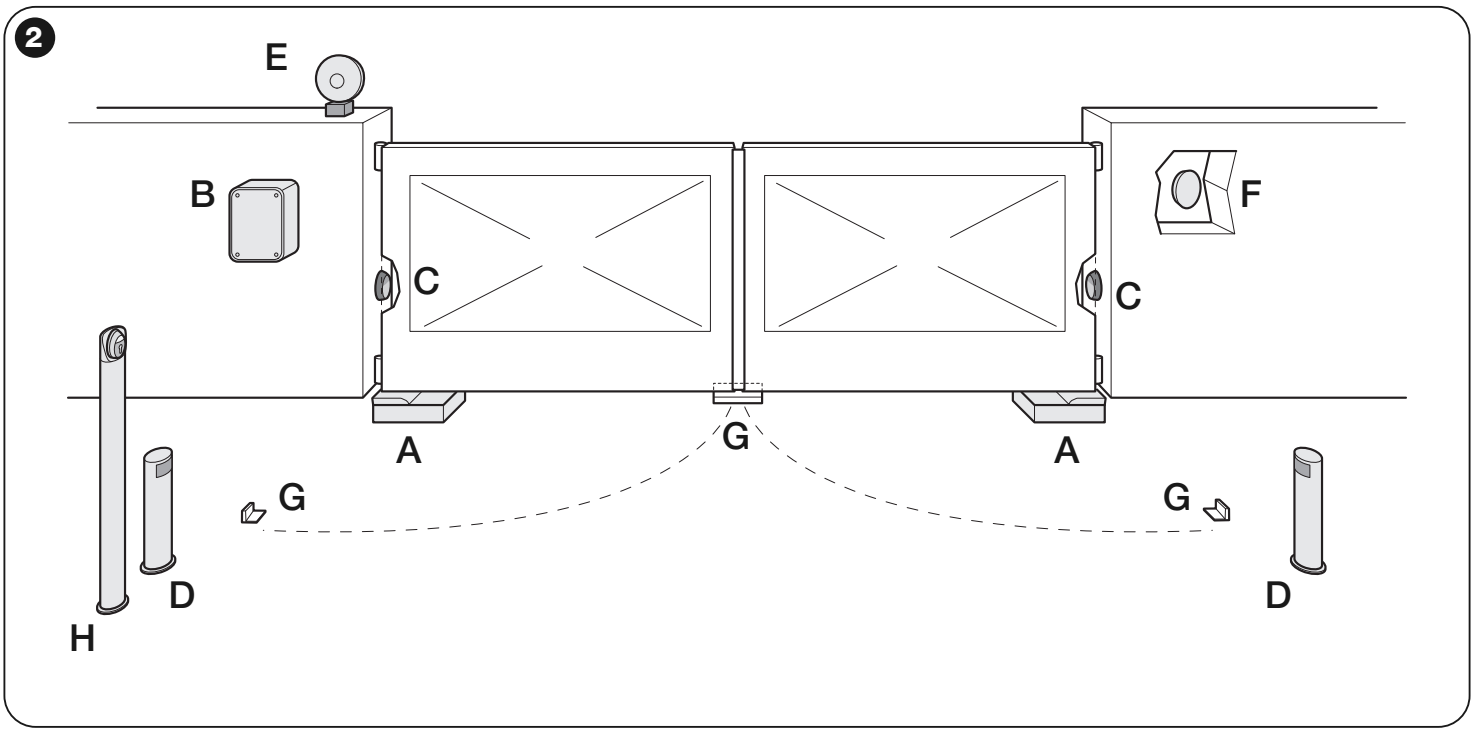
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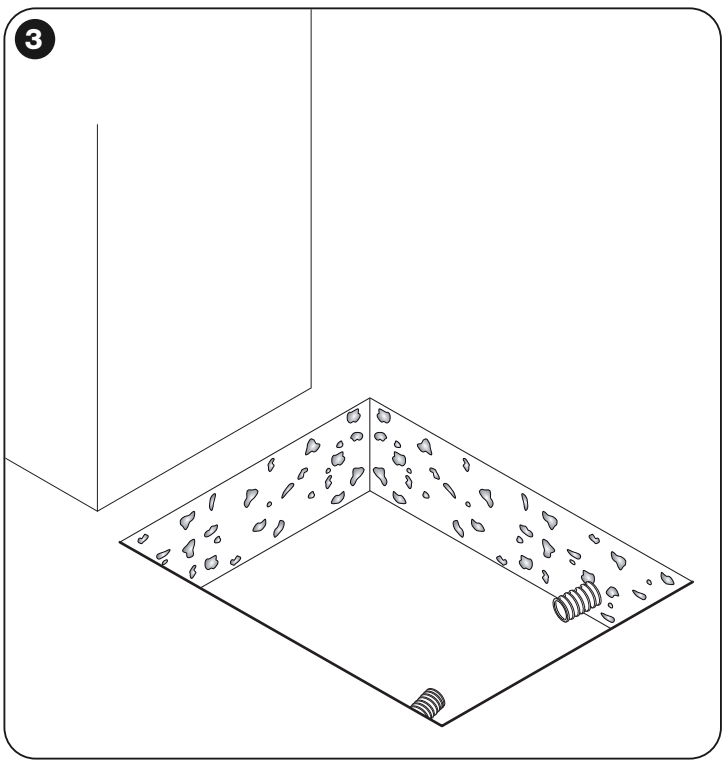
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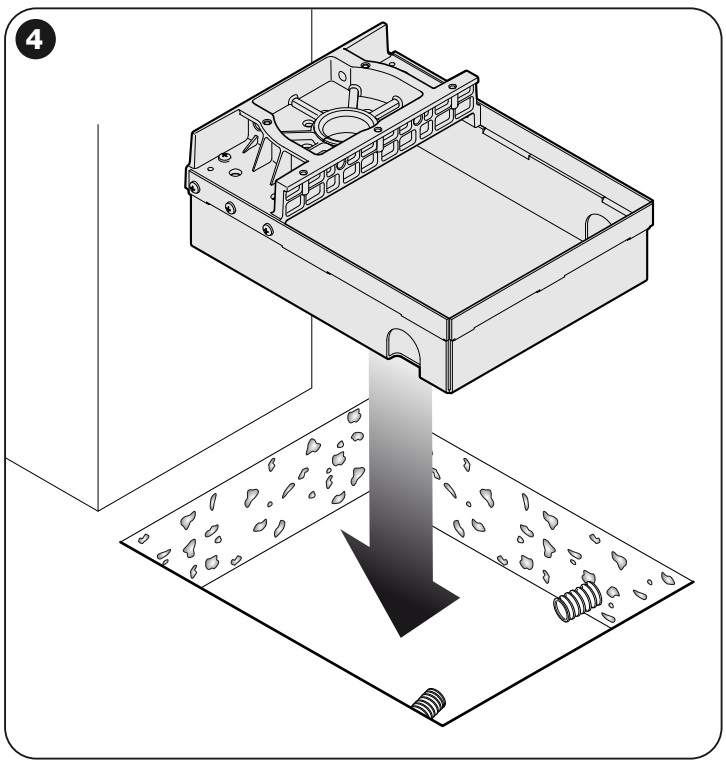
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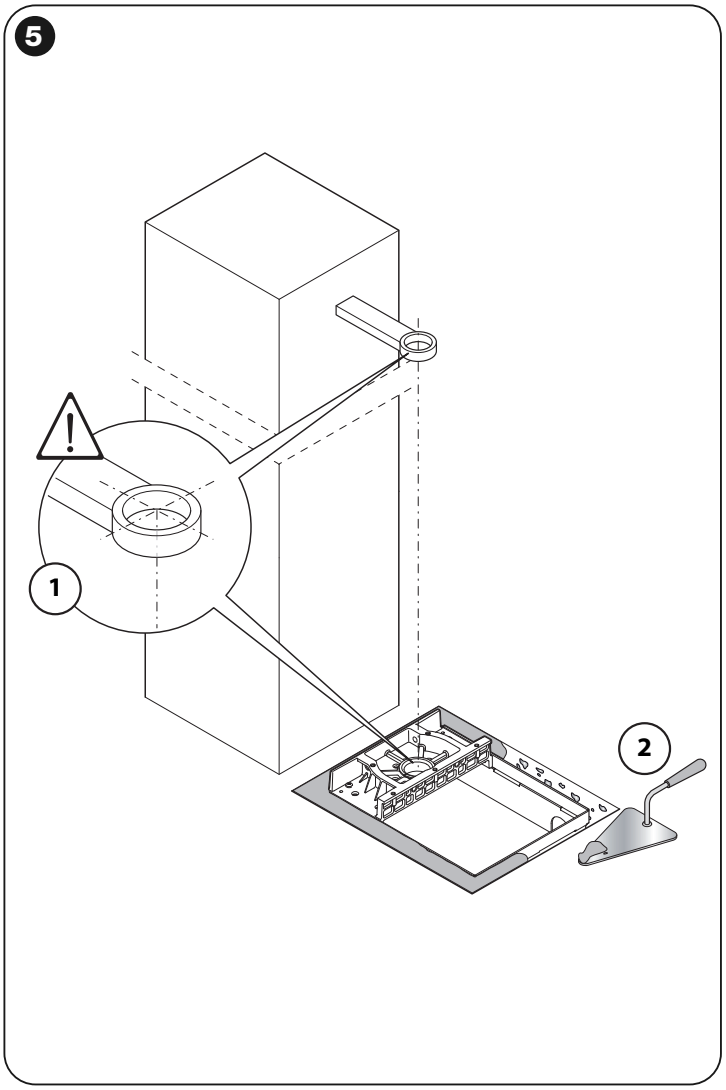
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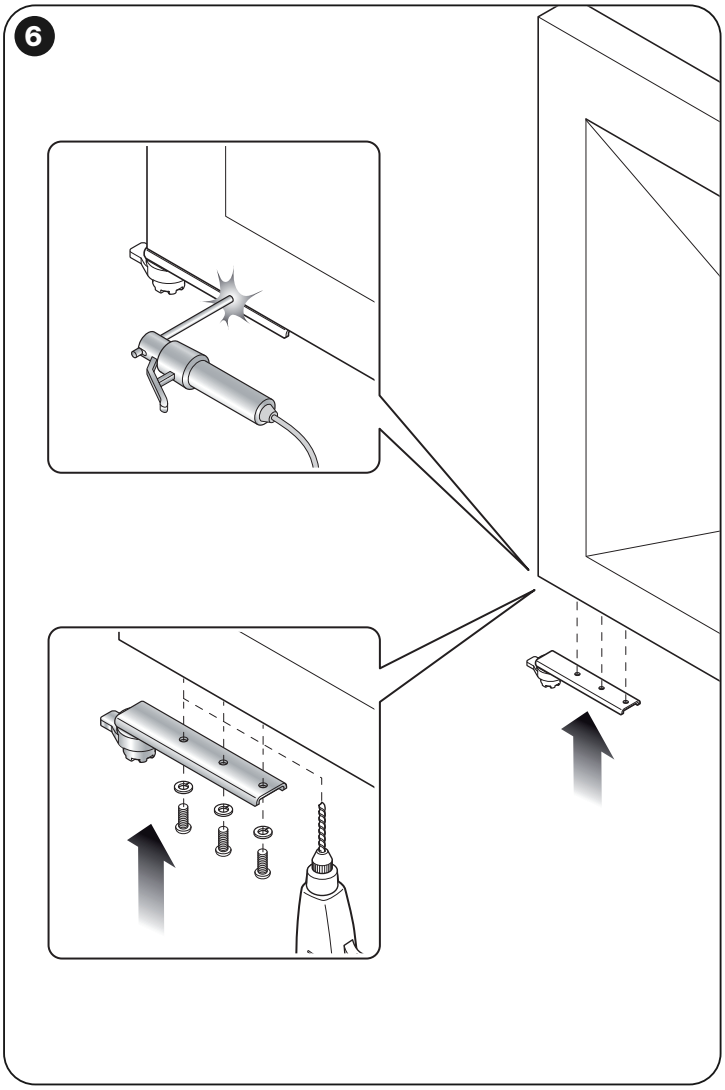
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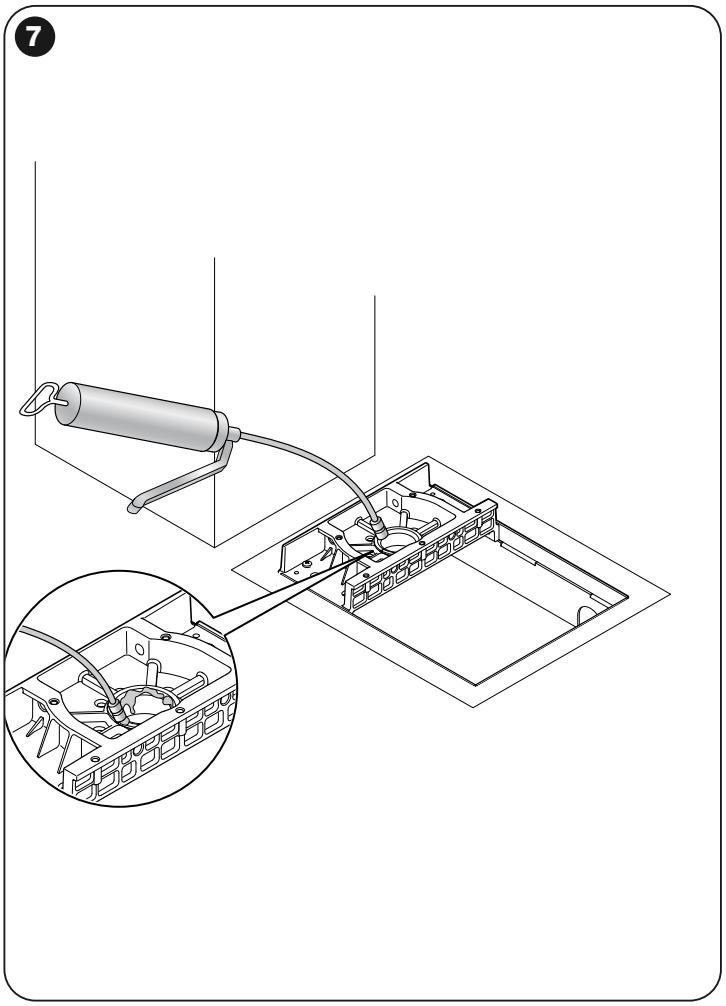
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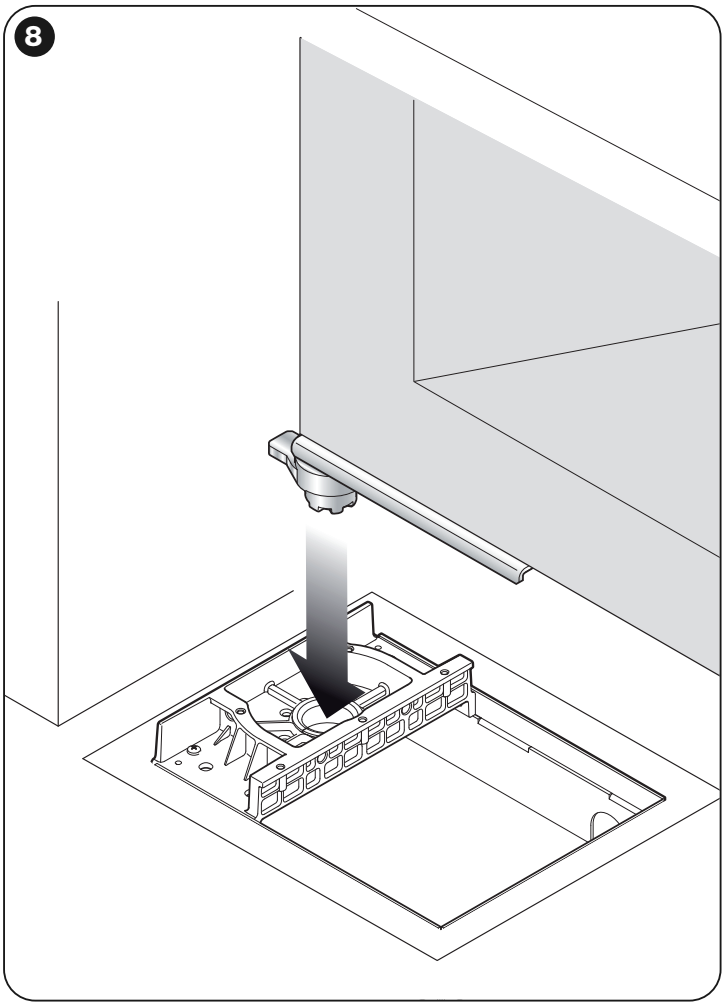
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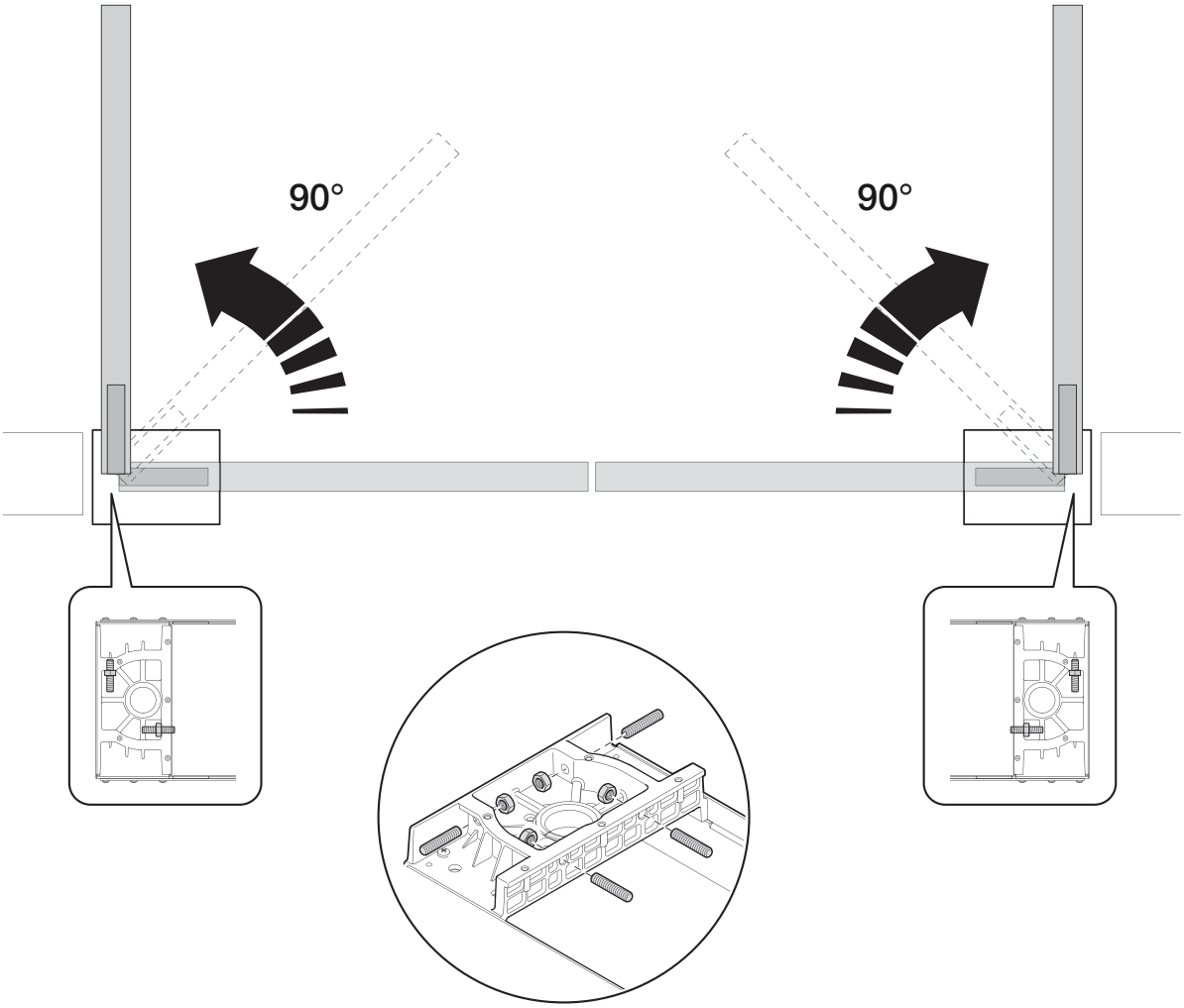

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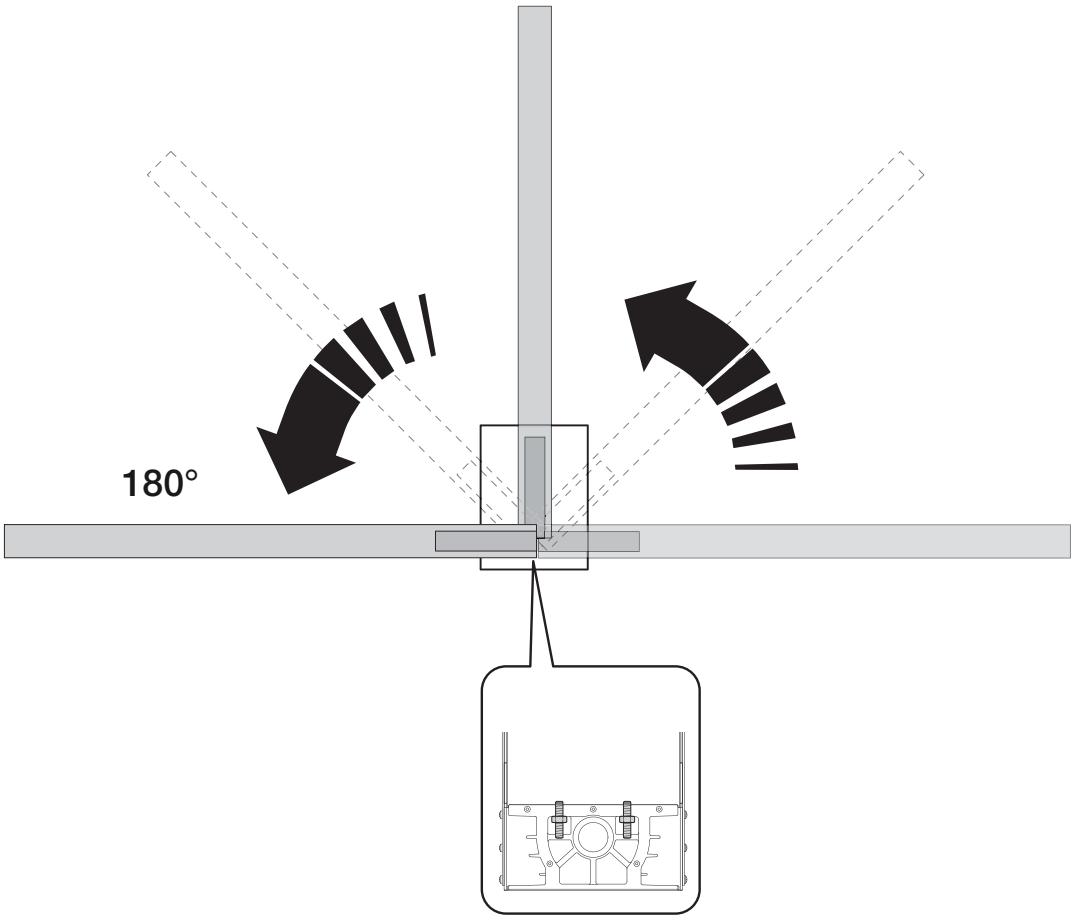

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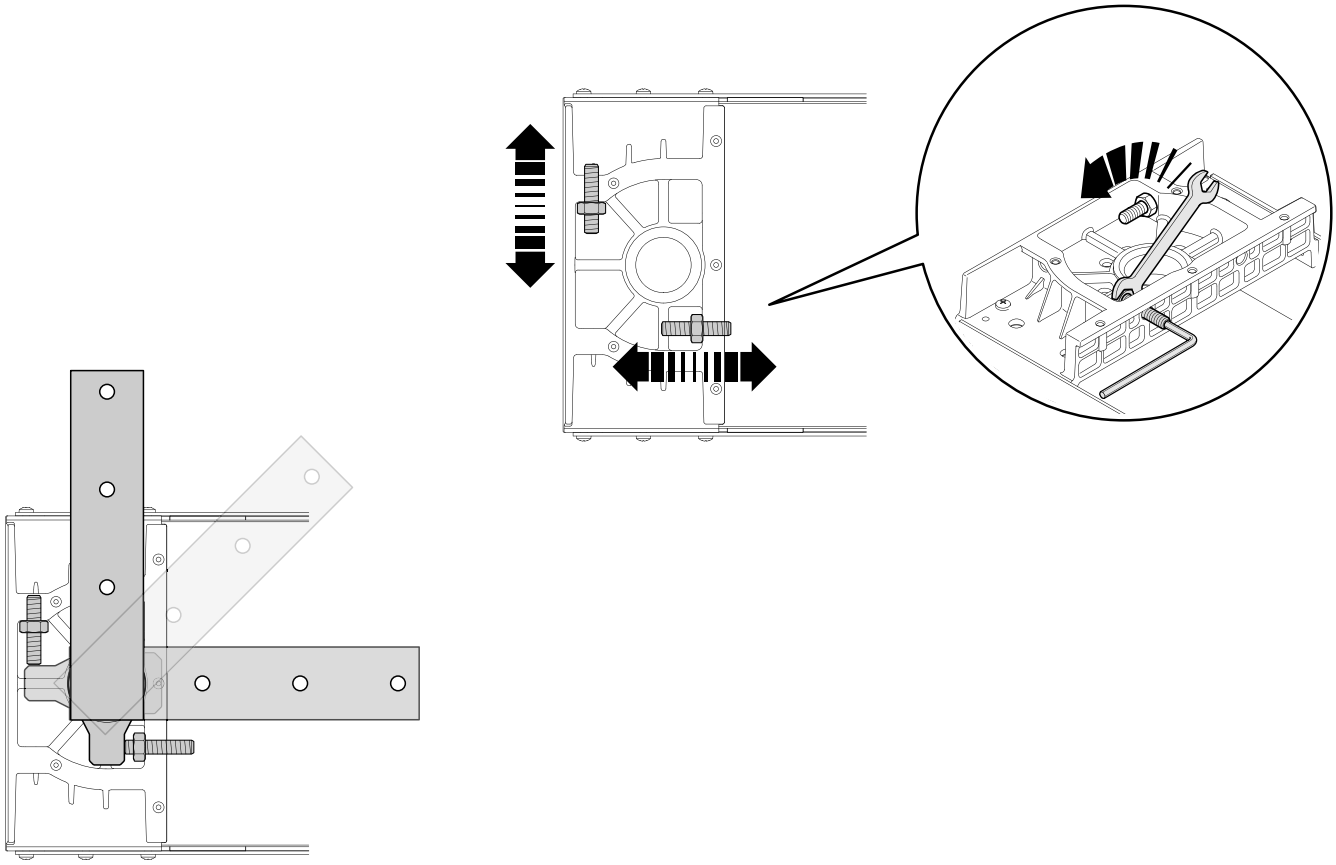

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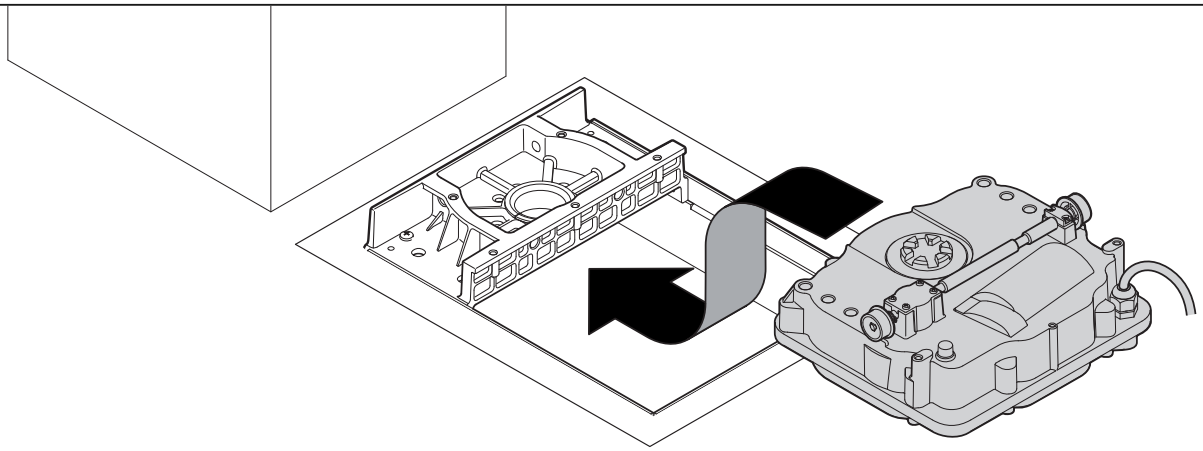

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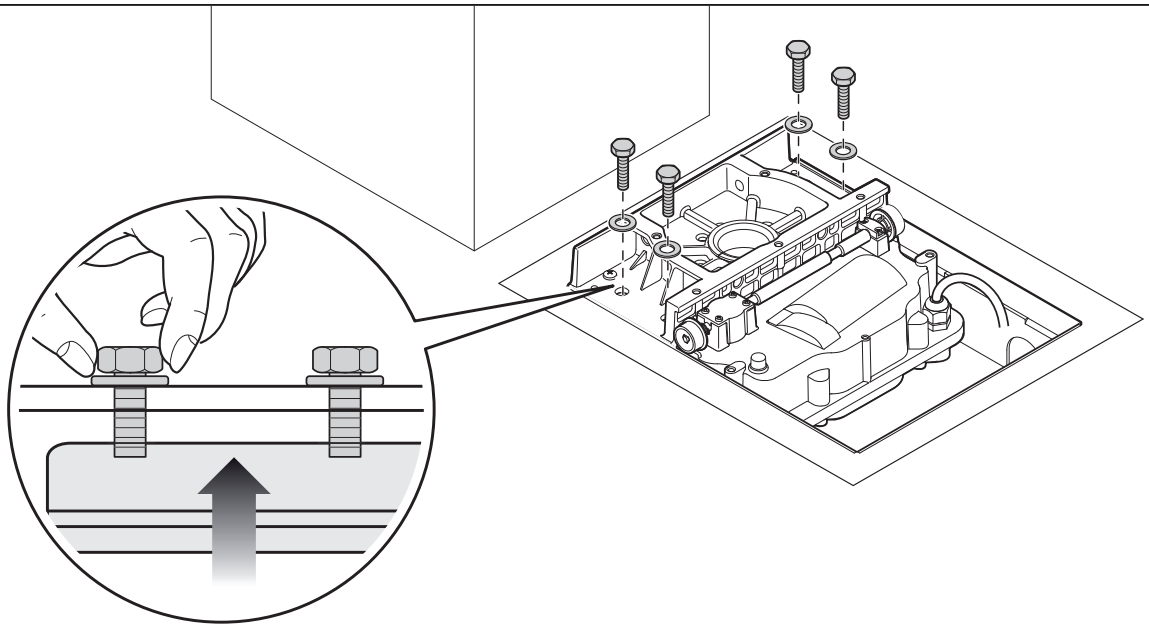

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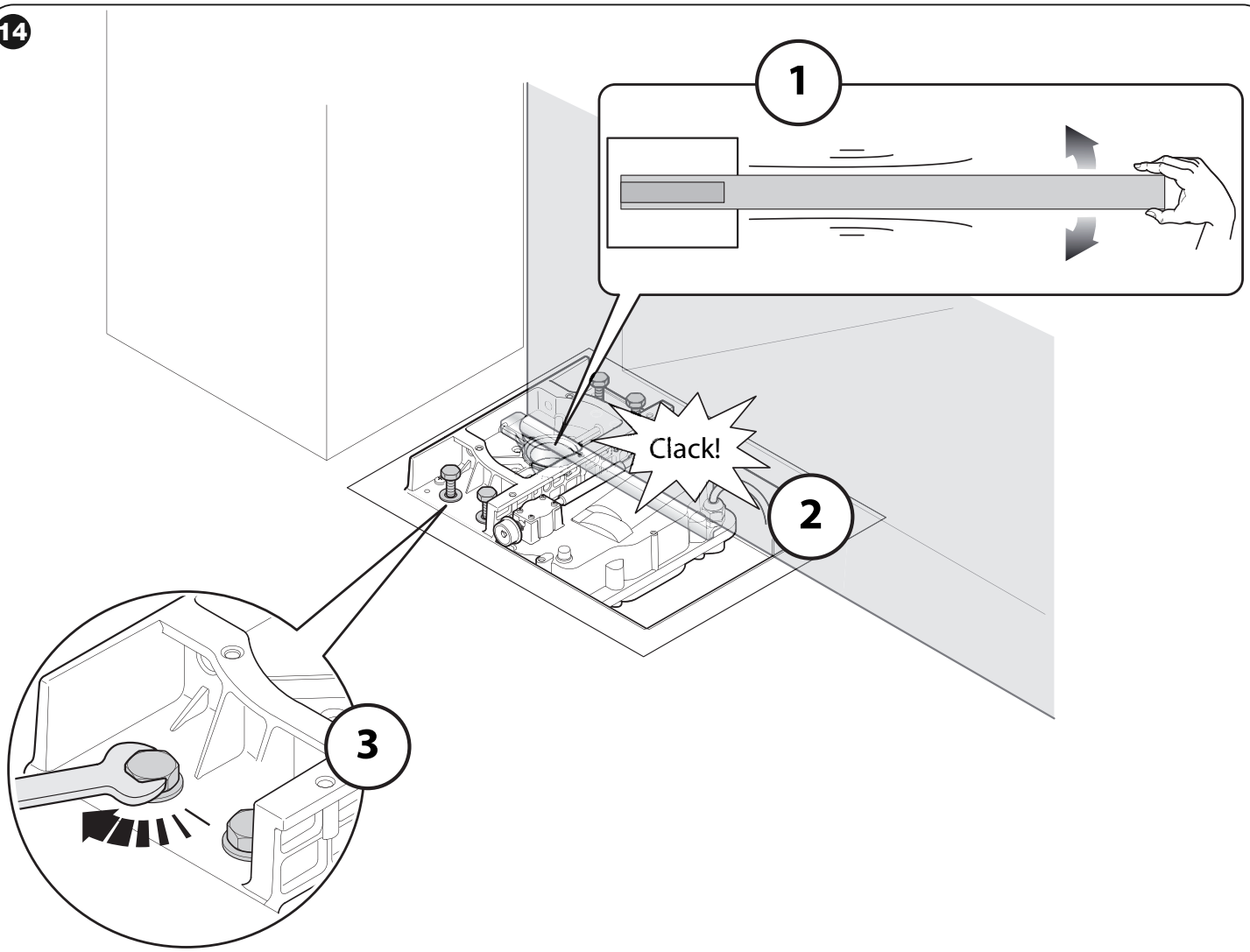

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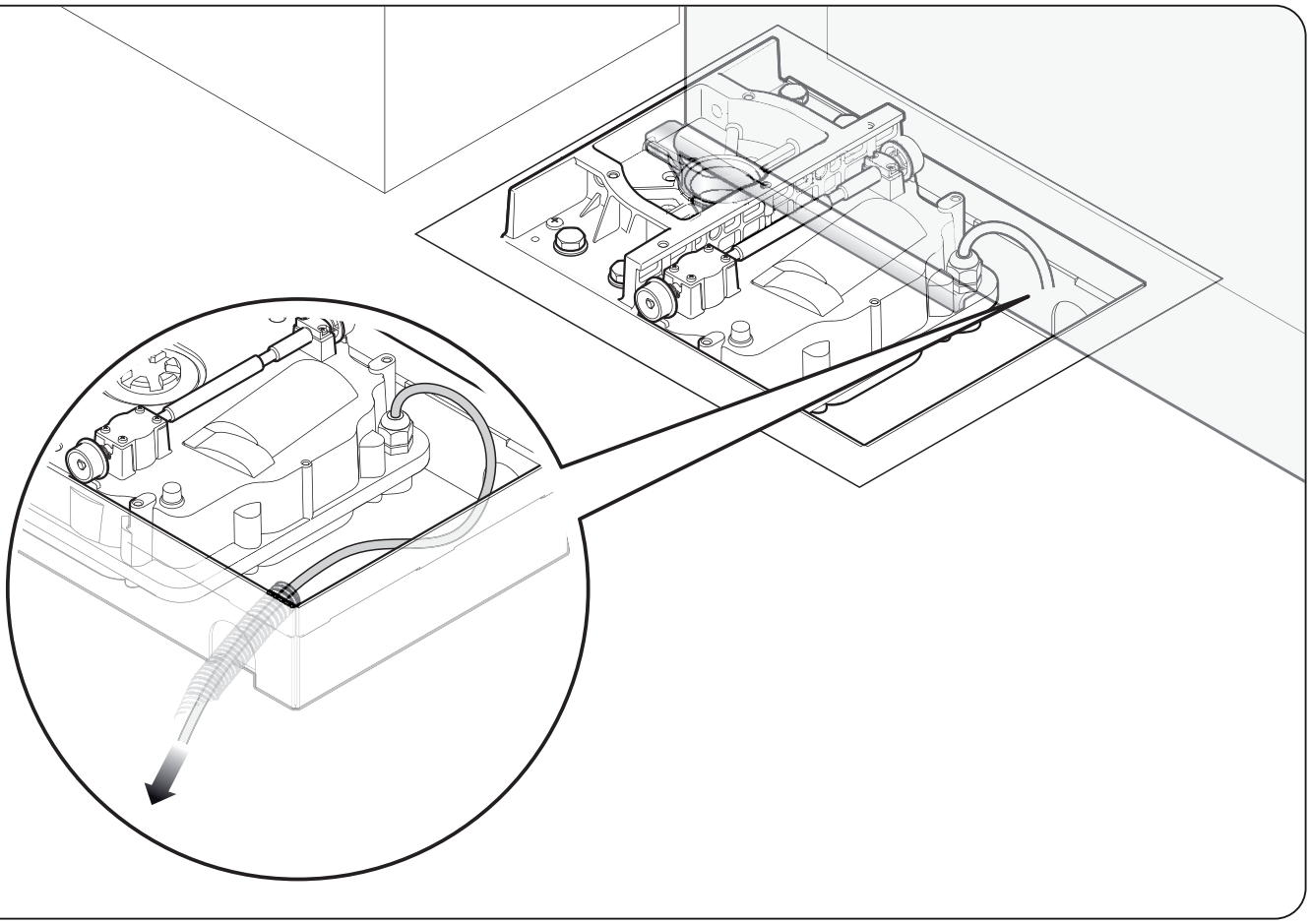

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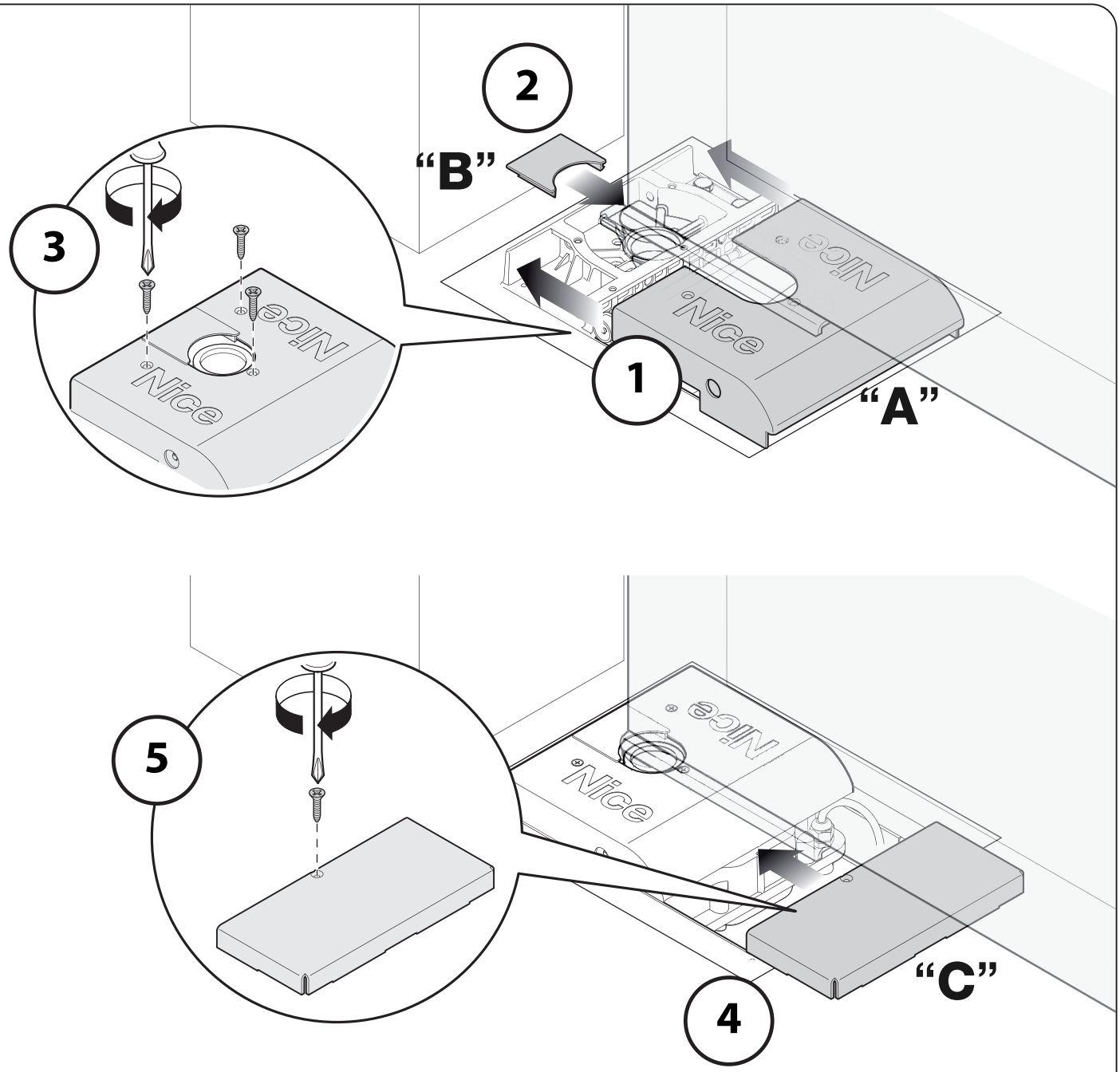

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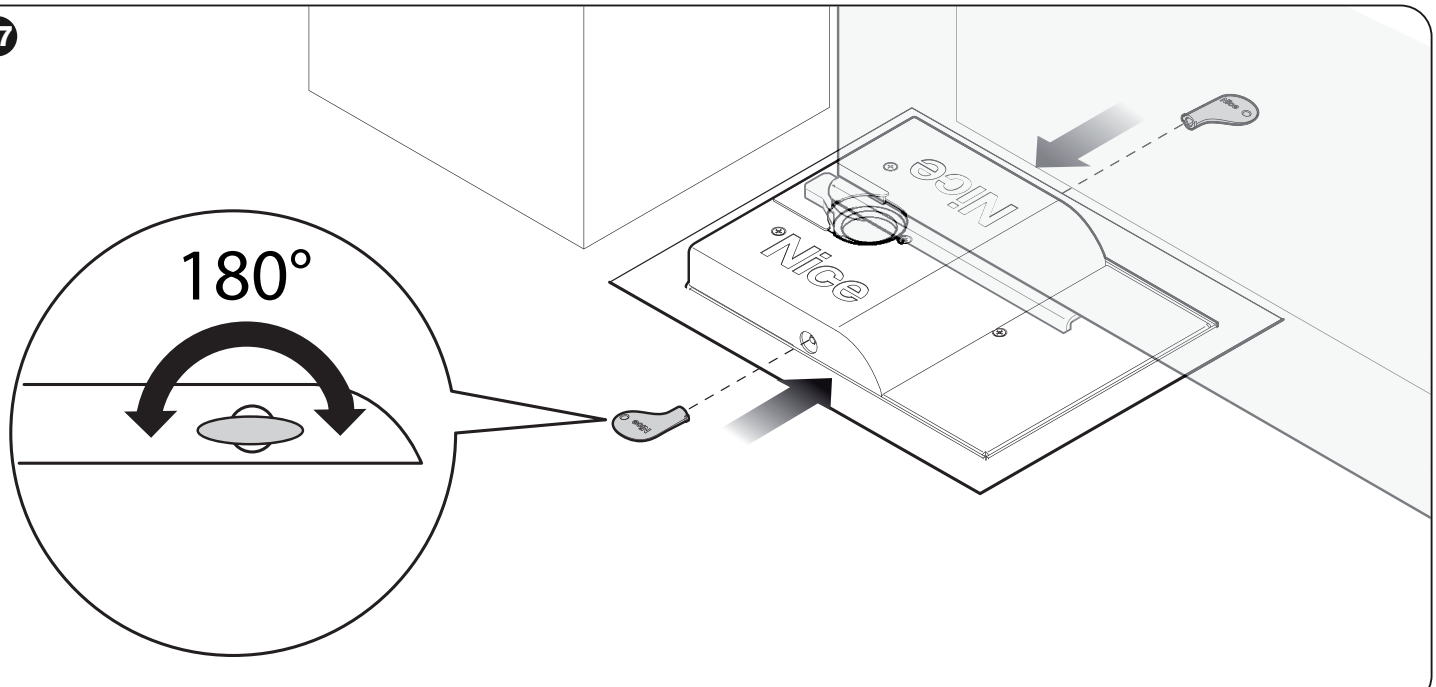

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