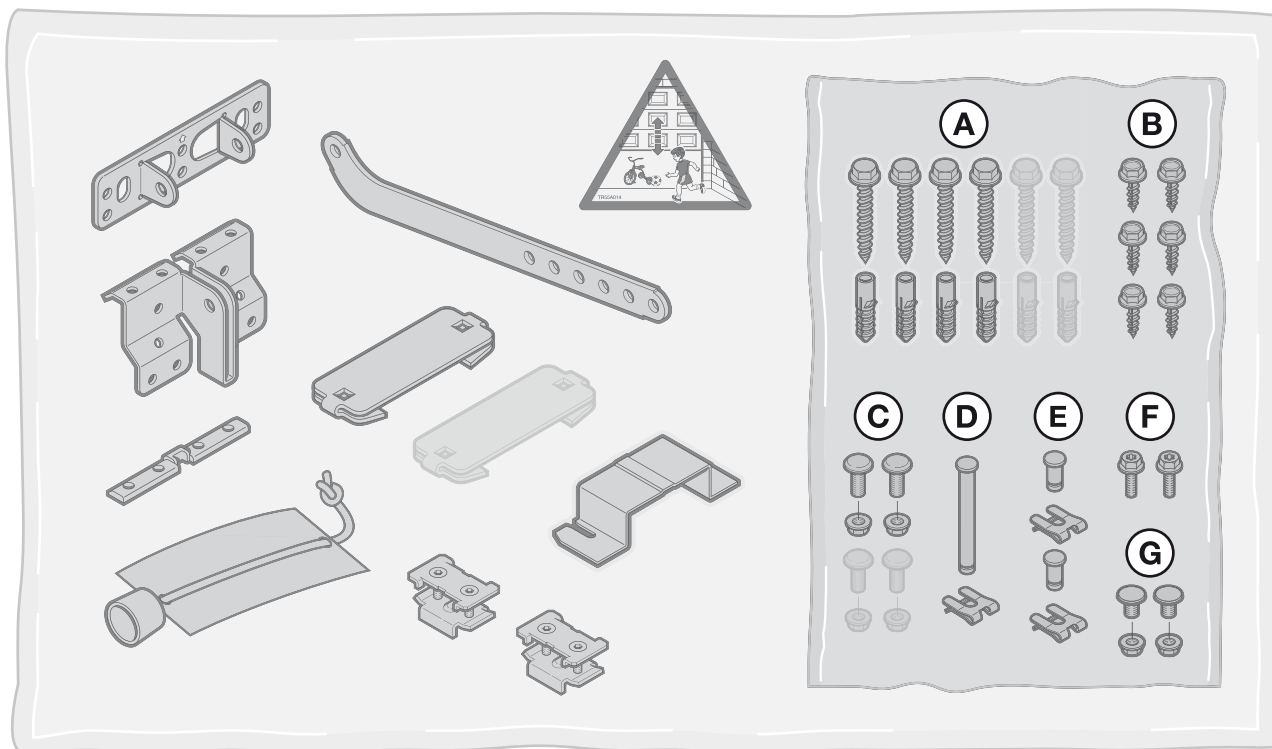
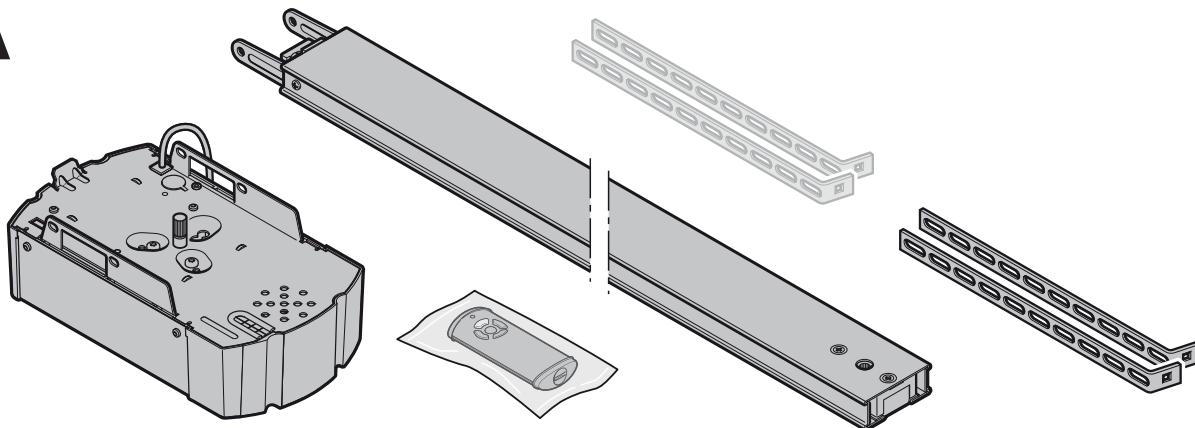


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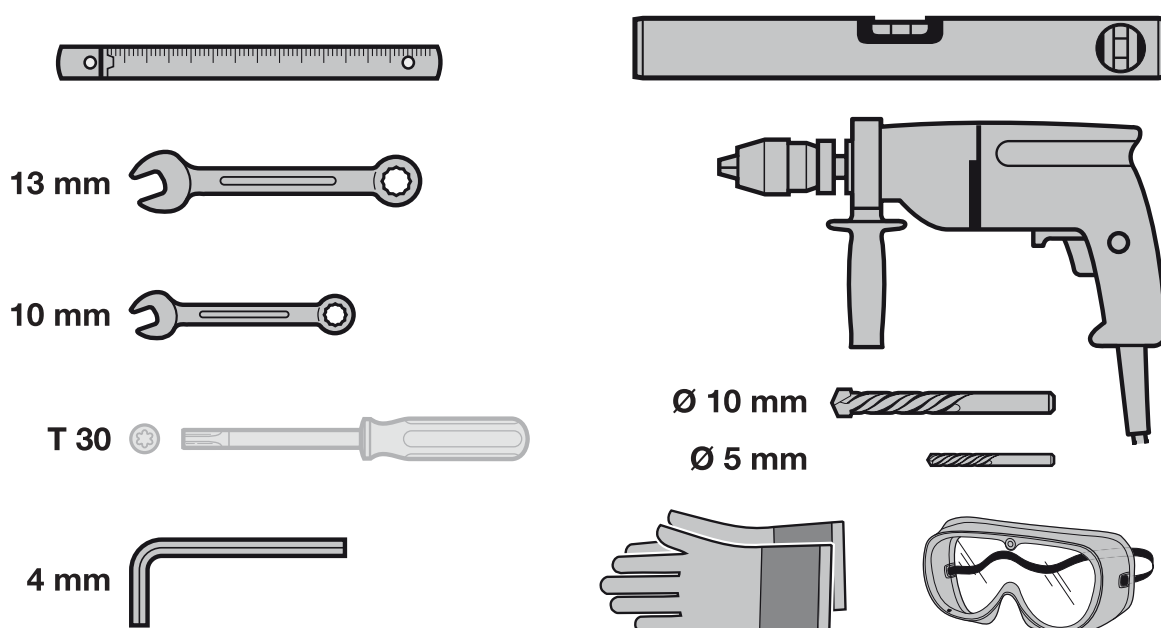
**EN**

## **Instructions for Fitting, Operating and Maintenance** Garage Door Operator


# A



# B



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Dear Customer,  
We are delighted that you have chosen a quality product from our company.

## 1 About These Instructions

These instructions are **original operating instructions** as outlined in the EC Directive 2006/42/EC. Read through all of the instructions carefully, as they contain important information about the product. Pay attention to and follow the instructions provided, particularly the safety instructions and warnings.





Please keep these instructions in a safe place and make sure that they are available to all users at all times.

### 1.1 Further applicable documents

The following documents for safe handling and maintenance of the door system must be placed at the disposal of the end user:

- These instructions
- The enclosed test manual
- The garage door operating instructions

### 1.2 Warnings used

	The general warning symbol indicates a danger that can lead to <b>injury</b> or <b>death</b> . In the text, the general warning symbol will be used in connection with the caution levels described below. In the illustrated section, an additional instruction refers back to the explanation in the text section.
 <b>DANGER</b>	
	Indicates a danger that can immediately lead to death or serious injuries.
 <b>WARNING</b>	
	Indicates a danger that can lead to death or serious injuries.
 <b>CAUTION</b>	
	Indicates a danger that can lead to minor or moderate injuries.
<b>ATTENTION</b>	
	Indicates a danger that can lead to <b>damage</b> or <b>destruction of the product</b> .

### 1.3 Definitions used

#### Automatic timer

Automatic closing of the door after a set time has elapsed and after reaching the *Open* end-of-travel position or partial opening.

#### Impulse sequence control

With each push of the button, the door is started against the previous direction of travel or the motion of the door is stopped.

#### Learning runs

Door runs in which the travel and the forces needed for moving the door are taught in.

#### Normal operation

Door travel with the taught-in travel distances and forces.

#### Safety reversal

Door travel in the opposite direction when the safety device or power limit is activated.

#### Reversal limit

If a safety device is activated, the door moves into the opposite direction (safety reversal) up to the reversal limit shortly before the *Close* end-of-travel position. If this limit is passed, no reversal occurs to ensure that the door reaches the end-of-travel position in one go.

#### Partial opening

Individually adjustable second opening height to ventilate the garage.

#### Timeout

A defined period in which an action is expected to take place (e.g. using the menu or activating a function). The operator automatically goes into operation mode if this period elapses without an action taking place.

#### Travel

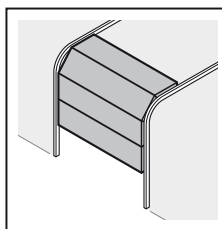
The distance the door takes to move from the *Open* end-of-travel position to the *Close* end-of-travel position.

#### Pre-warning time

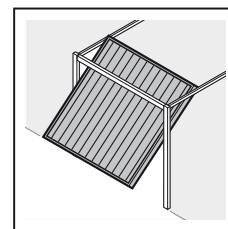
The time between the travel command (impulse) and the actual start of travel.

### 1.4 Symbols used

The illustrated section shows how to fit the operator on a sectional door. Deviations for fitting with an up-and-over door are also shown. For this purpose, the following letters are assigned to the figures:



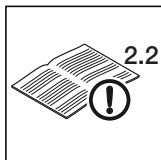
**a** = Sectional door



**b** = Up-and-over door

All specified dimensions in the illustrated section are in [mm].

#### Symbols:



See text section

In the example, **2.2** means:  
See text section, section 2.2



Important advice to prevent injury to persons and damage to property



High exertion of force



Check for smooth running



Use protective gloves



Factory setting

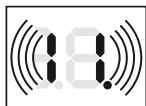
### 7-segment display



Display illuminated



Display flashes slowly.



Display flashes rapidly.



Dot flashes

### 1.5 Abbreviations used

#### Colour code for cables, single conductors and components

The abbreviations of the colours for identifying the cables, conductors and components comply with the international colour code according to IEC 757:

WH	White
BN	Brown
GN	Green
YE	Yellow

#### Article designations

HE 3 BiSecur	3-channel receiver
IT 1b	Internal push button with illuminated impulse button
IT 3b / PB 3	Internal push button with illuminated impulse button, additional buttons for light on/off and operator on/off
EL 101 / EL 301	One-way photocell
STK	Wicket door contact
SKS	Activating kit for closing edge safety device
VL	Activating kit for leading photocell
HS 5 BiSecur	Hand transmitter with status feedback
HOR 1	Option relay

UAP 1	Universal adapter print
HNA 18	Emergency battery
SLK	Yellow LED warning light

## 2 Safety Instructions

### ATTENTION:

IMPORTANT SAFETY INSTRUCTIONS. FOR THE SAFETY OF PERSONS, IT IS IMPORTANT TO COMPLY WITH THE FOLLOWING INSTRUCTIONS. THESE INSTRUCTIONS MUST BE KEPT.

#### 2.1 Intended use

The garage door operator is intended for impulse operation of spring compensated sectional and up-and-over doors, as well as counterbalanced retractable up-and-over doors. Depending on the type of operator, the operator can be used in private/non-commercial areas or in commercial areas (e.g. in underground and collective garages).

Note the manufacturer's specifications regarding the door and operator combination. Potential hazards as outlined in DIN EN 13241-1 are avoided by the construction and fitting according to our guidelines. Door systems that are located in a public area and which only have one protective device, such as a power limit, may only be operated under supervision.

The garage door operator is designed for operation in dry areas.

#### 2.2 Non-intended use

The operator must not be used with doors without a safety catch.

#### 2.3 Fitter qualification

Only correct fitting and maintenance in compliance with the instructions by a competent/specialist company or a competent/qualified person ensures safe and flawless operation of the system. According to EN 12635, a specialist is a person with suitable training, specialist knowledge and practical experience sufficient to correctly and safely fit, test and maintain a door system.

#### 2.4 Safety instructions for fitting, maintenance, repairs and disassembly of the door system

### DANGER

#### Compensating springs are under high tension

► See warning in section 3.1

### WARNING

#### Danger of injury due to unexpected door travel

► See warning in section 11

Fitting, maintenance, repairs and disassembly of the door system and garage door operator must be performed by a specialist.

► In the event of a failure of the garage door operator, a specialist must be commissioned immediately to perform an inspection or carry out repairs.

## 2.5 Safety instructions for fitting

The specialist carrying out the work must ensure that installation is conducted in compliance with the prevailing occupational safety rules and regulations and those governing the operation of electrical equipment. The relevant national guidelines must be observed. Potential hazards as outlined in DIN EN 13241-1 are avoided by the construction and fitting according to our guidelines.

The garage ceiling must guarantee secure fastening of the operator. For ceilings which are too high or too light, the operator must be fastened with additional struts.

### WARNING

#### Unsuitable fixing material

- See warning in section 3.3

#### Danger to life from the pull rope

- See warning in section 3.3

#### Danger of injury due to unwanted door travel

- See warning in section 3.3

## 2.6 Safety instructions for initial start-up and for operation



### DANGER

#### Mains voltage

Contact with the mains voltage presents the danger of a deadly electric shock.

For that reason, observe the following warnings under all circumstances:

- Electrical connections may only be made by a qualified electrician.
- The on-site electrical installation must conform to the applicable protective regulations (230/240 V AC, 50/60 Hz)!
- The mains plug must be disconnected before any work is performed on the operator.

### WARNING

#### Danger of injury during door travel

- See warning in section 5

### CAUTION

#### Danger of injury due to selection of the wrong door type

- See warning in section 7

### CAUTION

#### Danger of crushing in the boom

- See warning in section 10

#### Danger of injury from the cord knob

- See warning in section 10

#### Danger of injury due to the hot lamp

- See warning in section 11.2

#### Danger of injury resulting from uncontrolled door movement in the Close direction if one of the counterbalance springs breaks and the slide carriage is released.

- See warning in section 10

### ATTENTION

#### External voltage at the connecting terminals

External voltage on the connecting terminals of the control will destroy the electronics.

- Do not apply any mains voltage (230/240 V AC) to the connecting terminals of the control.

## 2.7 Safety instructions for using the hand transmitter

### WARNING

#### Danger of injury during door travel

- See warning in section 8

### CAUTION

#### Danger of injury due to unintended door travel

- See warning in section 8

## 2.8 Approved safety equipment

Safety relevant functions or components of the control from our company, such as the power limit, external photocells/ switching strips, have been designed and approved in accordance with category 2, PL "c" of EN ISO 13849-1:2008.

### WARNING

#### Danger of injury due to faulty safety equipment

- See warning in section 7



### 3 Fitting

#### ATTENTION:

IMPORTANT INSTRUCTIONS FOR SAFE FITTING.  
OBSERVE ALL INSTRUCTIONS, INCORRECT FITTING  
COULD RESULT IN SERIOUS INJURIES.

#### 3.1 Inspect door/door system

##### DANGER

##### Compensating springs are under high tension

Serious injuries may occur while adjusting or loosening the compensating springs!

- ▶ For your own safety, only have a specialist conduct work on the door compensating springs. The same applies to all maintenance and repair work!
- ▶ Never try to replace, adjust, repair or reposition the compensating springs for the counterbalance of the door or the spring mountings yourself.
- ▶ In addition, check the entire door system (joints, door bearings, cables, springs and fastenings) for wear and possible damage.
- ▶ Check for the presence of rust, corrosion and cracks.

A malfunction in the door system or an incorrectly aligned door can cause serious injuries!

- ▶ Do not use the door system if repair or adjustment work must be conducted!

The construction of the operator is not designed for operation with sluggish doors, i.e. doors that can hardly or not at all be opened or closed manually.

The door must be in a flawless mechanical condition, as well as correctly balanced, so that it can be easily operated by hand (EN 12604).

- ▶ Lift the door by approx. one metre and let it go. The door should stay in this position and **neither** move downward **nor** upward. If the door does move in either direction, there is a danger that the compensating springs/weights are not properly adjusted or are defective. In this case, increased wear and malfunctioning of the door system can be expected.
- ▶ Check whether the door can be opened and closed correctly.

#### 3.2 Clearance required

The clearance between the highest point of door travel and the ceiling (even when opening the door) must be **at least 30 mm**.

If the clearance is smaller, the operator can also be mounted behind the opened door if enough space is available. In this case, an extended fitting bracket (ordered separately) must be used.

The garage door operator can be arranged up to max. 500 mm off-centre. Exceptions to this include sectional doors with high-lift (high-lift track application H). Special fitting is required for this arrangement.

The electrical outlet should be fitted approx. 500 mm from the operator head.

- ▶ Check these dimensions!

#### 3.3 Fitting the garage door operator

##### WARNING

##### Unsuitable fixing material

Use of unsuitable fixing material may lead to unsafe fitting which may cause the operator to come loose.

- ▶ The fitter must check the suitability of the provided fixing material (plugs) for use in the intended fitting location; other fixing material must be used if the provided material is suitable for concrete ( $\geq$  B15), but is not officially approved (see Figures 1.6a / 1.8b / 2.4).

##### WARNING

##### Danger to life from the pull rope

A running rope may lead to strangulation.

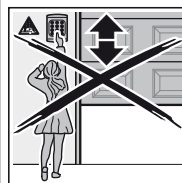
- ▶ Remove the rope while fitting the operator (see Figure 1.3a).

##### WARNING

##### Danger of injury due to unwanted door travel

Incorrect assembly or handling of the operator may trigger unwanted door travel that may result in persons or objects being jammed.

Follow all the instructions provided in this manual. Incorrectly fitted control devices (e.g. buttons) may trigger unwanted door travel. Persons or objects may be jammed as a result.



- ▶ Install control devices at a height of at least 1.5 m (out of the reach of children).
- ▶ Fit permanently installed control devices (such as buttons, etc.) within sight of the door, but away from moving parts.

##### ATTENTION

##### Damage caused by dirt

Drilling dust and chippings can lead to malfunctions.

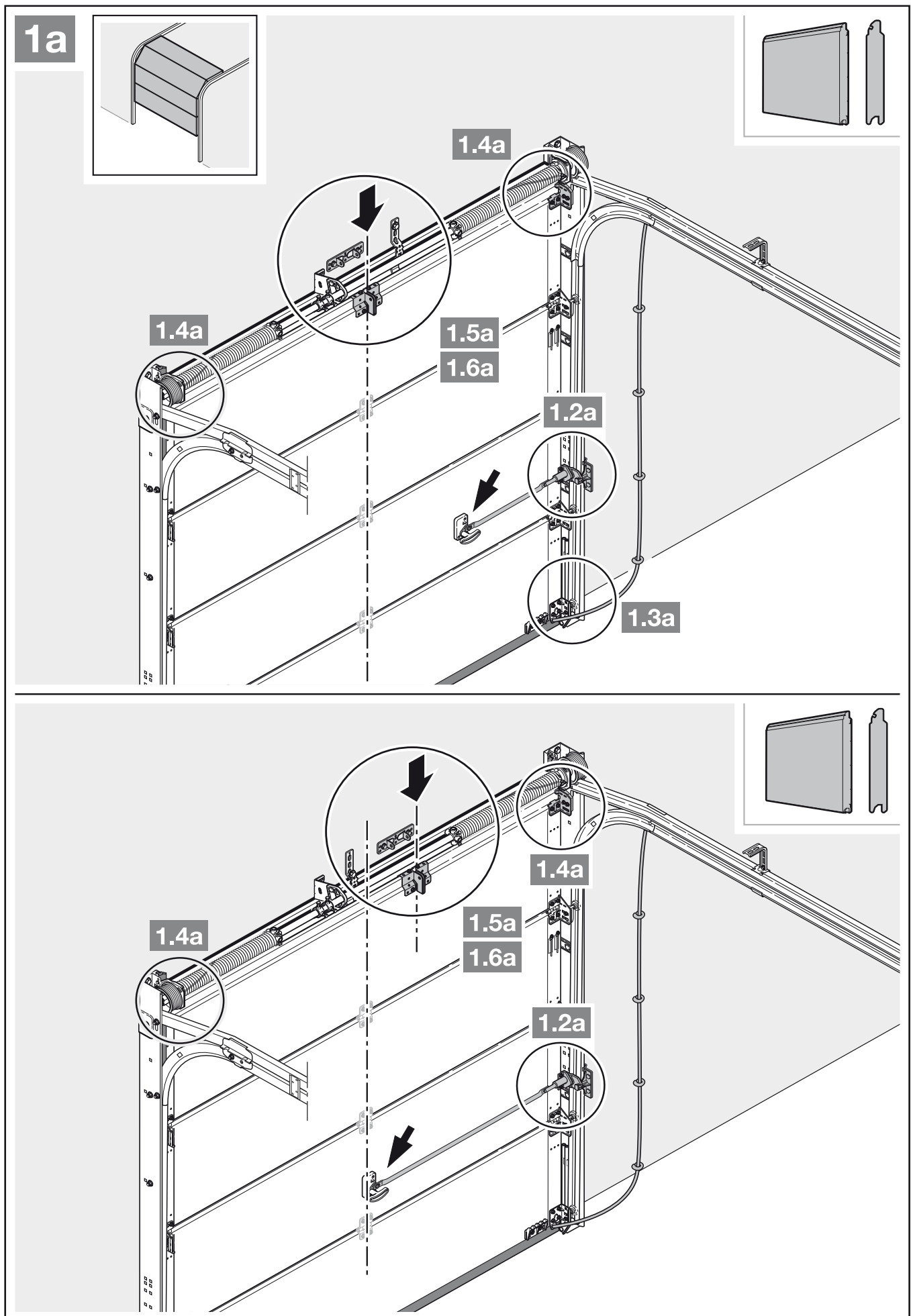
- ▶ Cover the operator during drilling work.

#### NOTES:

An emergency release is required for garages without a second entrance in order to prevent users from locking themselves during a power failure; this must be ordered separately.

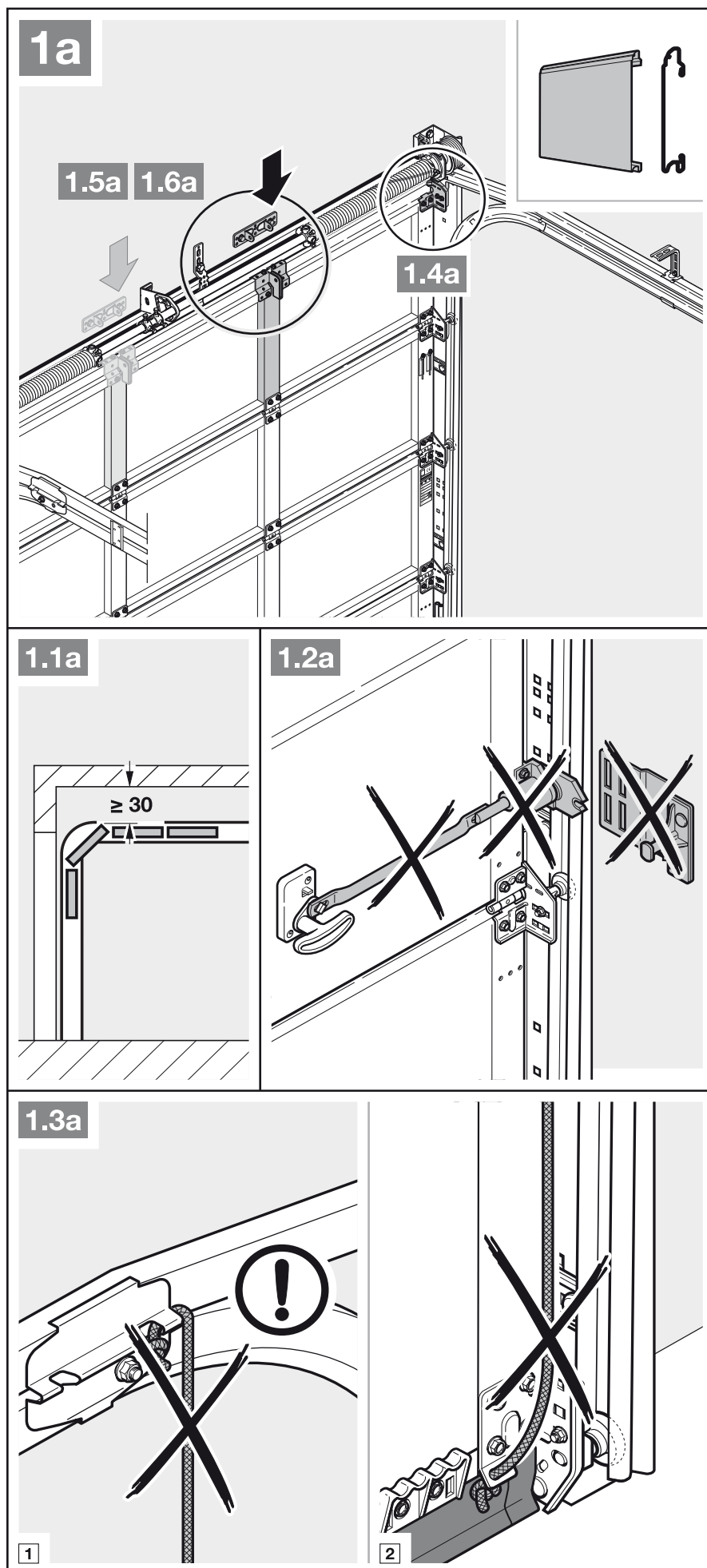
- ▶ Check the emergency release for proper function every month.

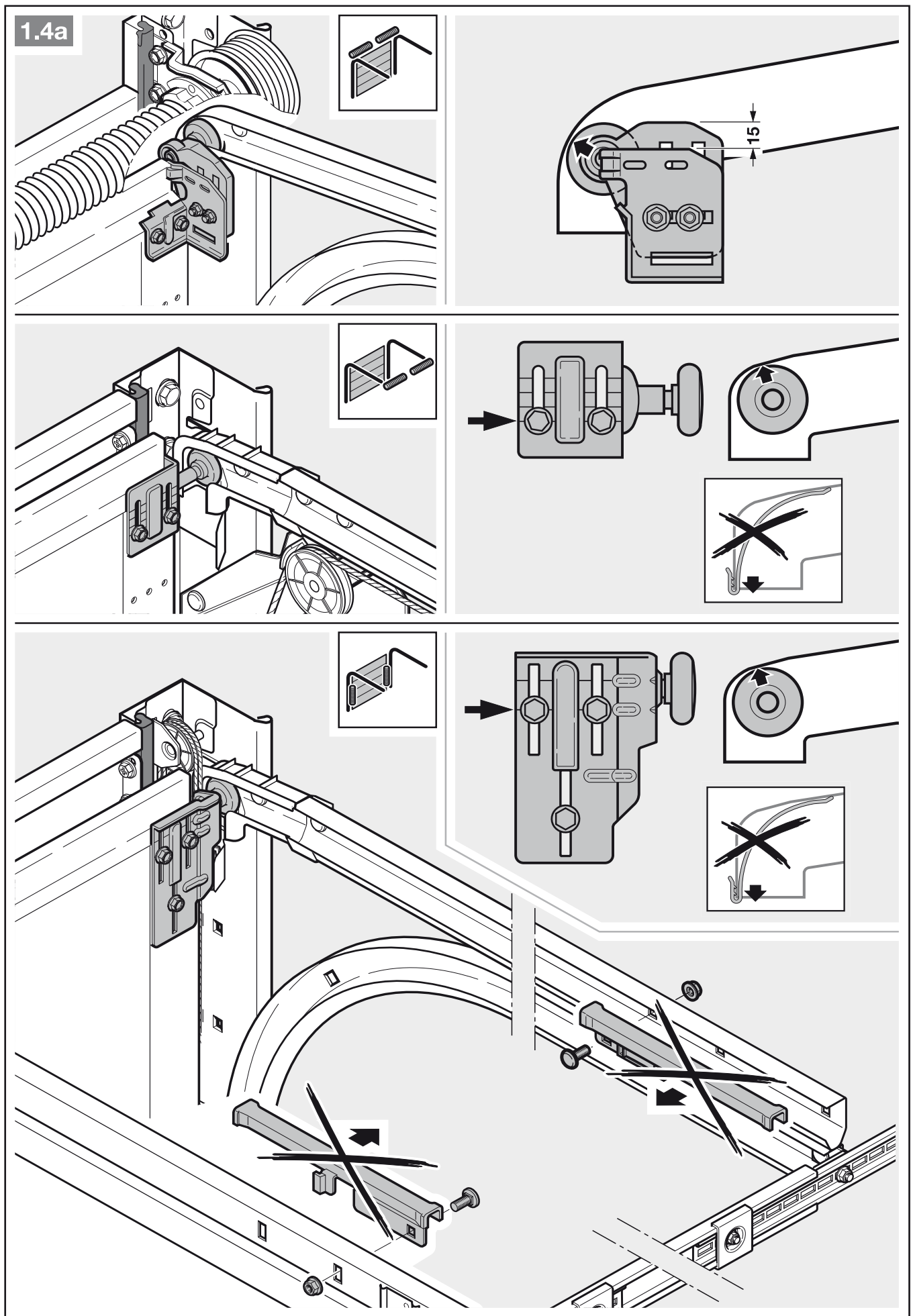
In order to fully comply with the **TTZ break-in resistance guideline for garage doors**, the cord knob on the slide carriage must be removed.





- Note section 3.2.  
– *Clearance required*
1. Completely disassemble the mechanical door locking. Disengage the mechanical lockings.
  2. With an off-centre reinforcement profile, fit the link bracket on the nearest reinforcement profile to the left or right (see Figure 1a).

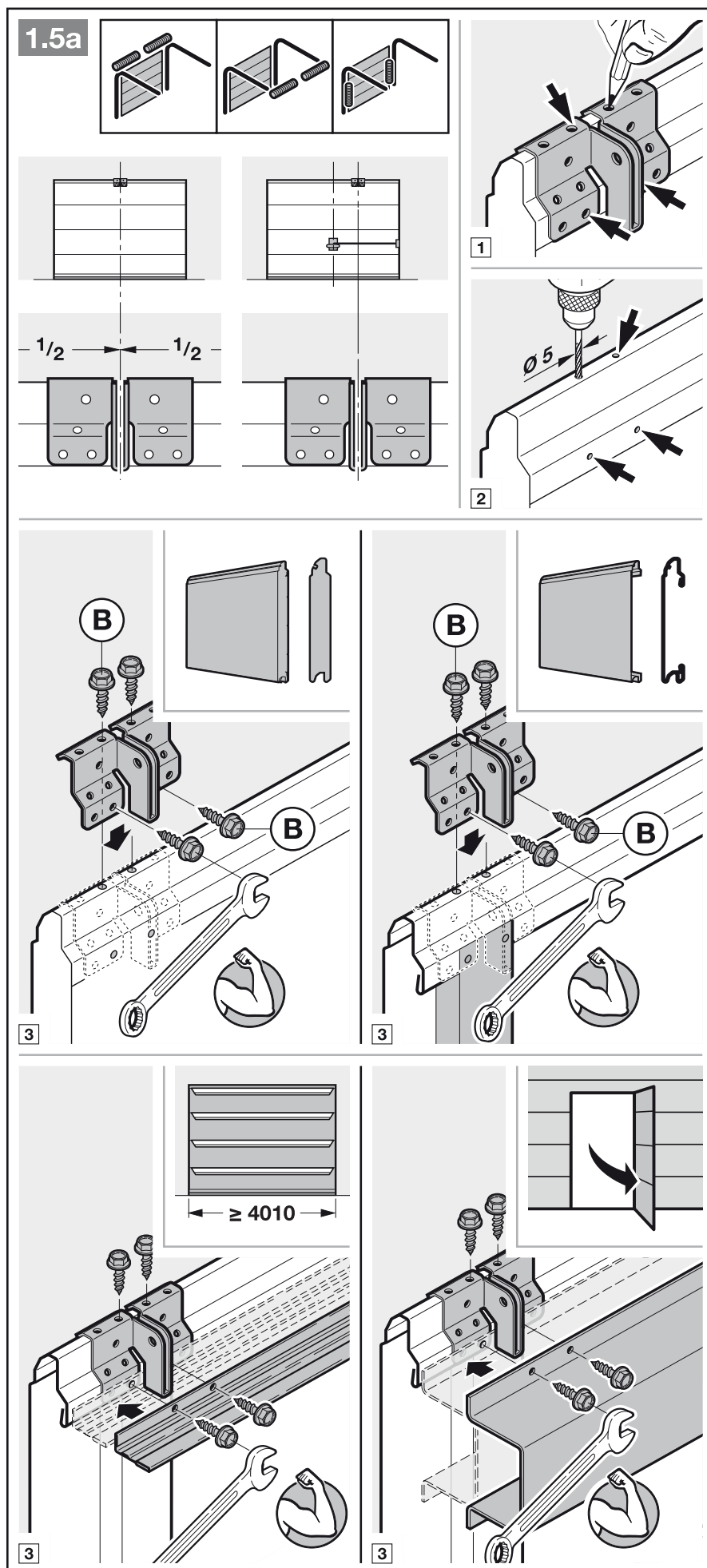


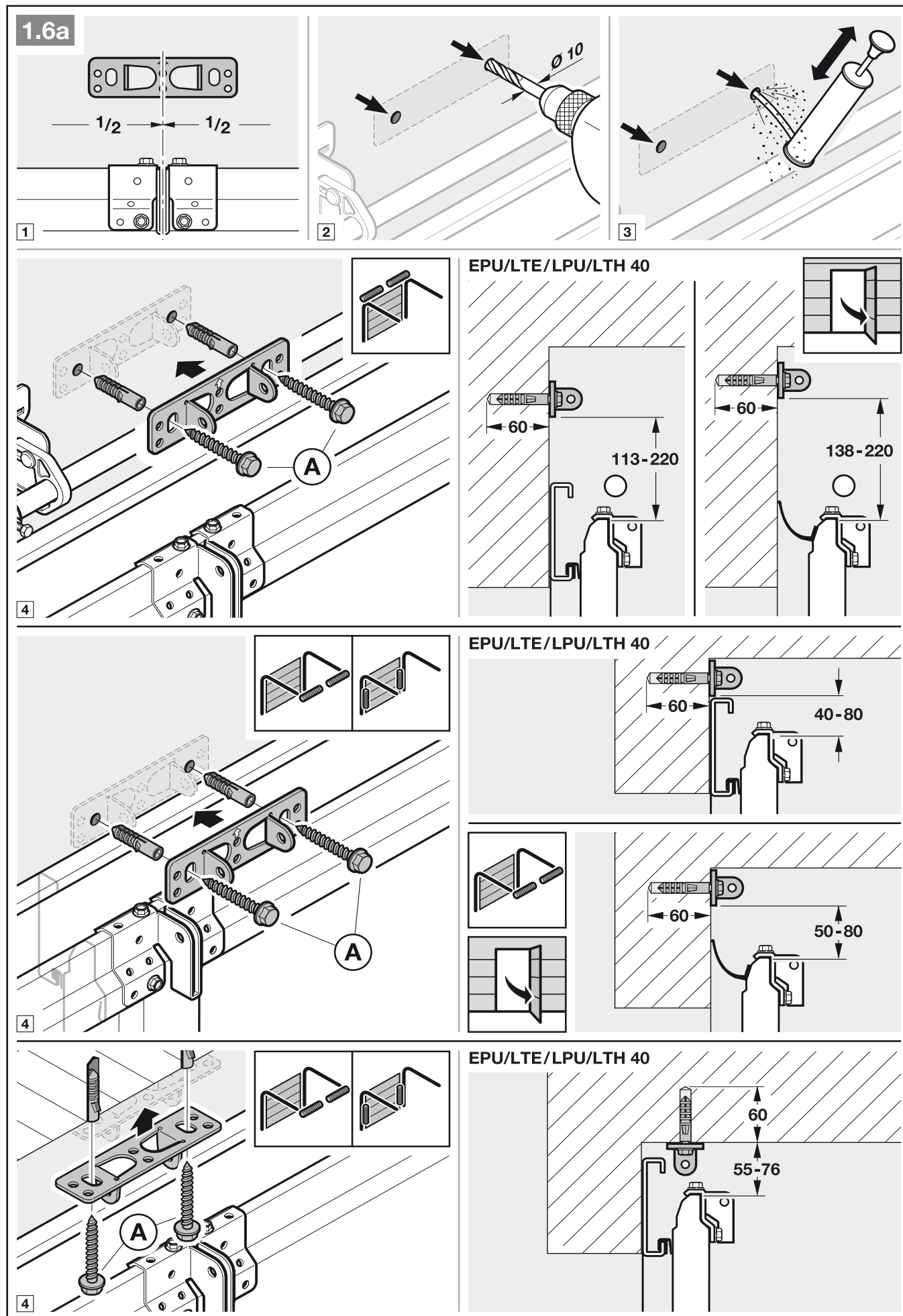


3. For sectional doors with central door locking, fit the lintel joint and link bracket off-centre (max. 500 mm).

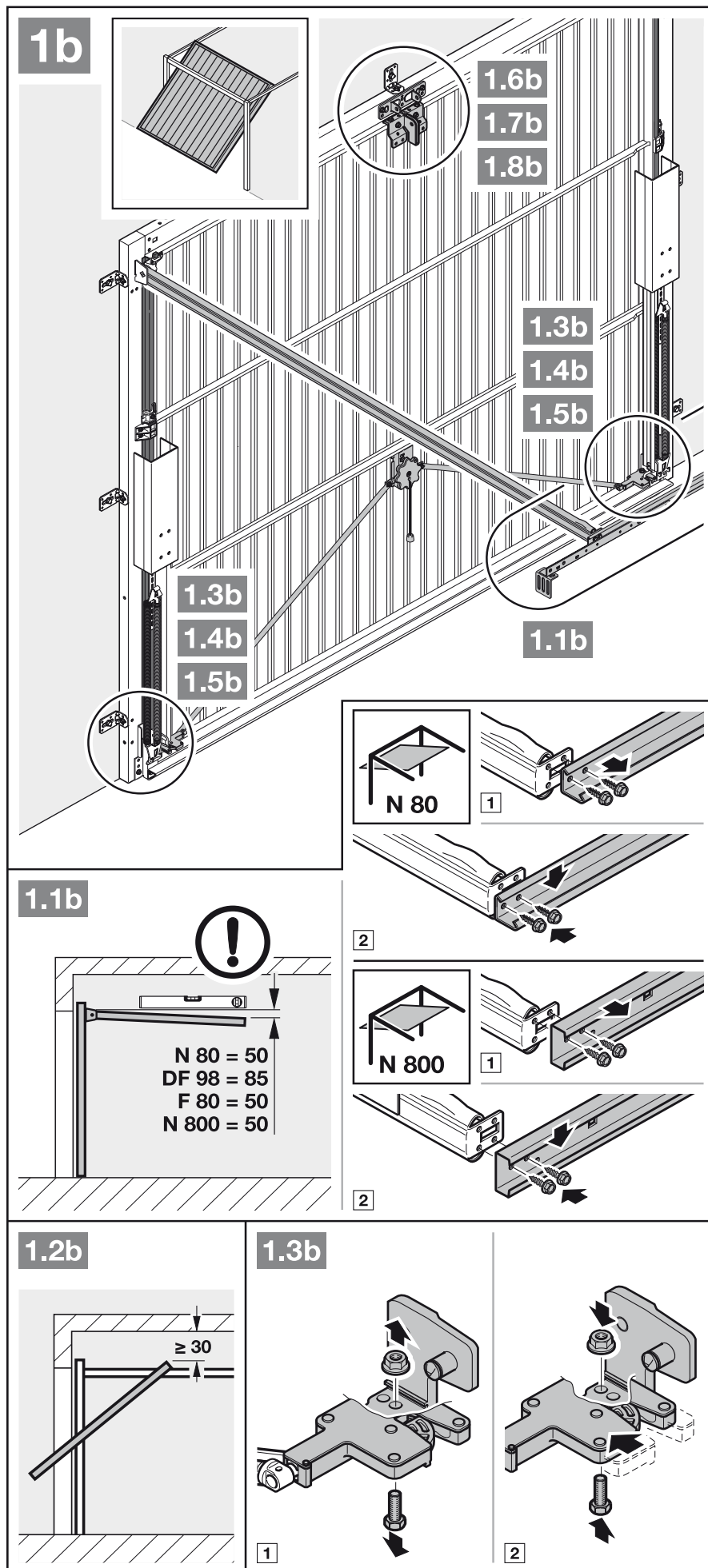
**NOTE:**

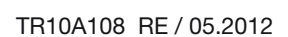
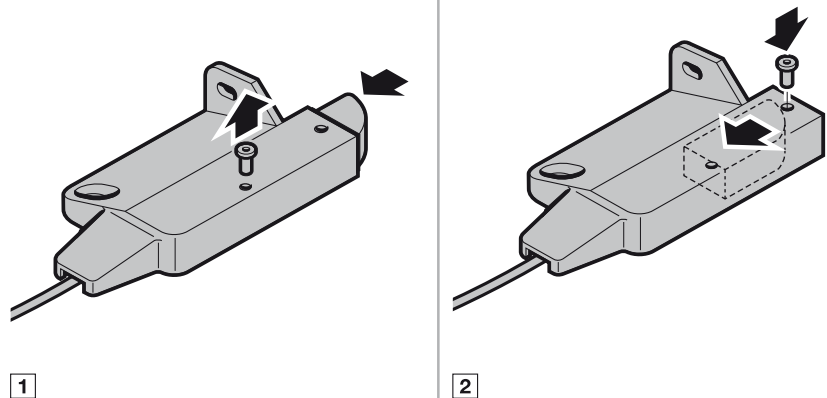
Not illustrated in figure 1.5a: use the 5 x 35 woodscrews from the door accessory pack (hole Ø 3 mm) for timber doors.





- Note section 3.2.  
– *Clearance required*
4. Render the mechanical door lockings inoperable (see Figure 1.3b).

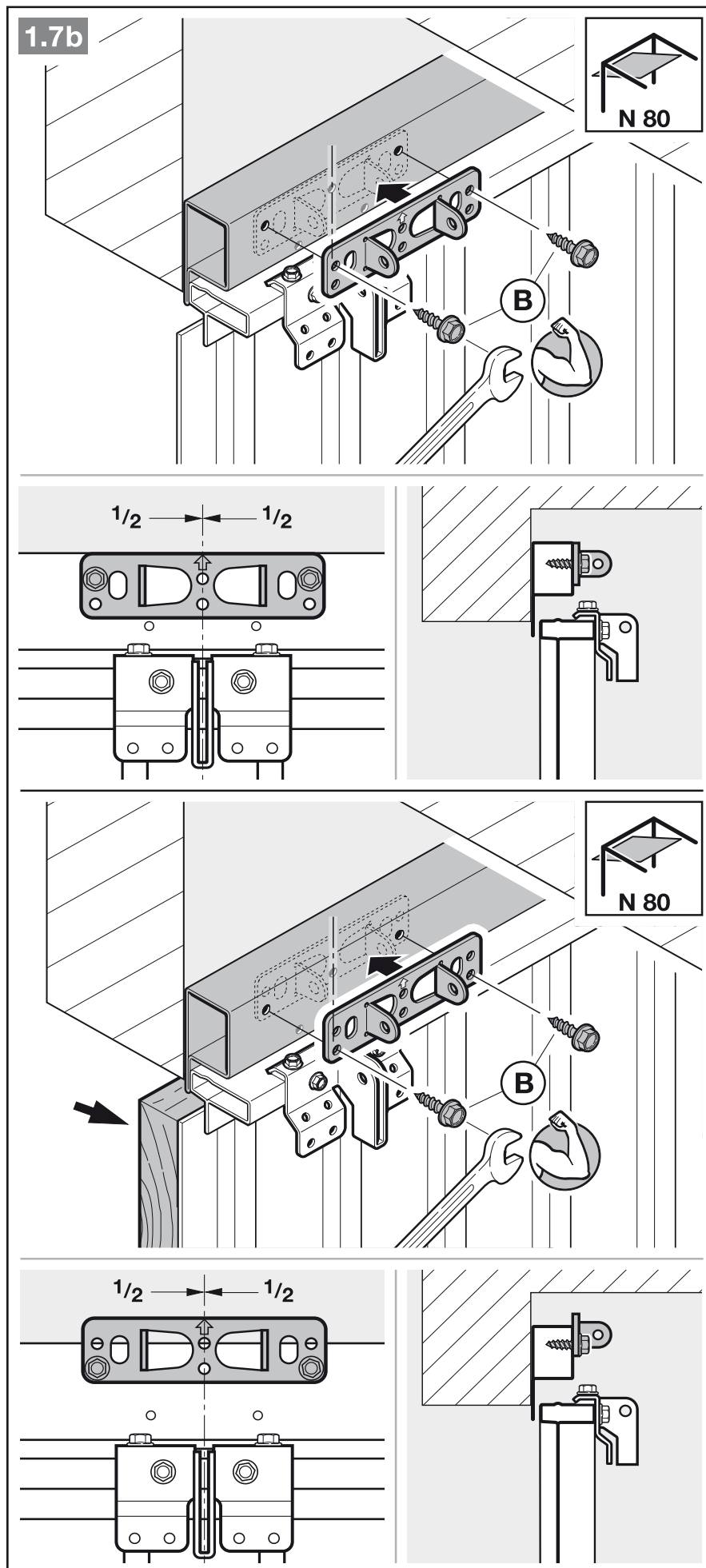






**NOTE:**

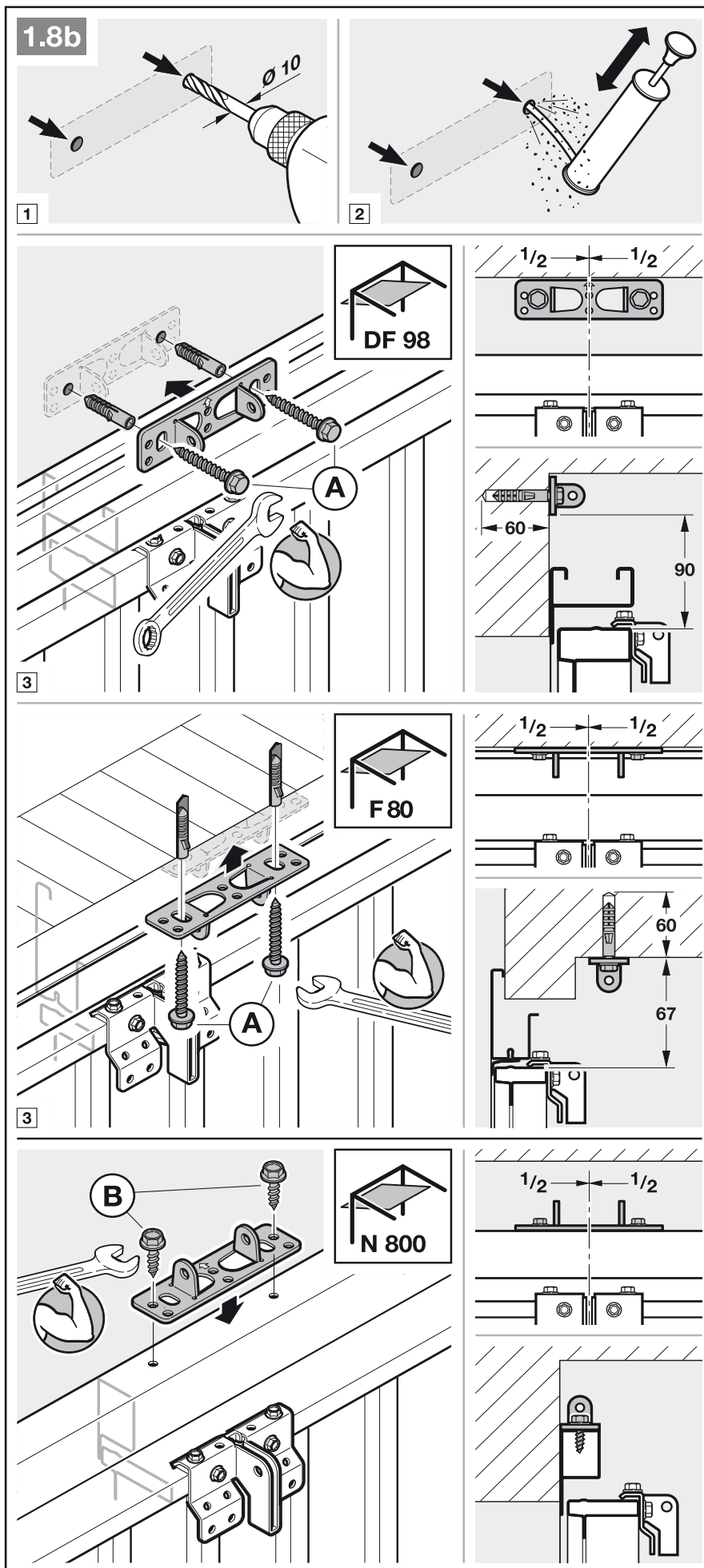
With N80 doors with timber infill, use the bottom holes on the lintel joint for fitting.



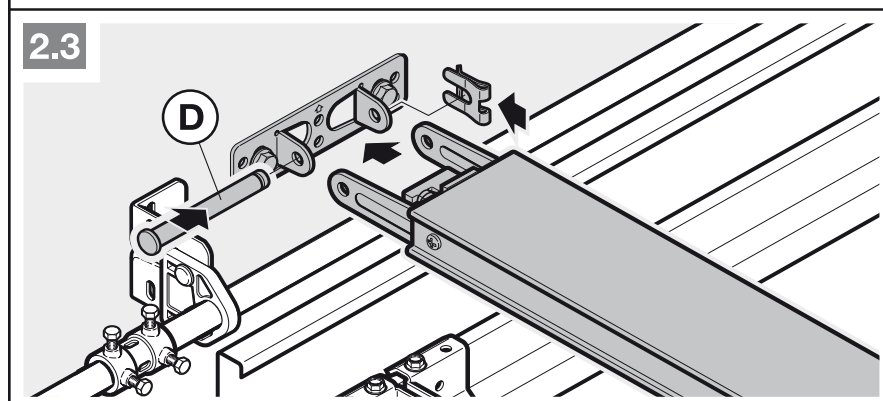
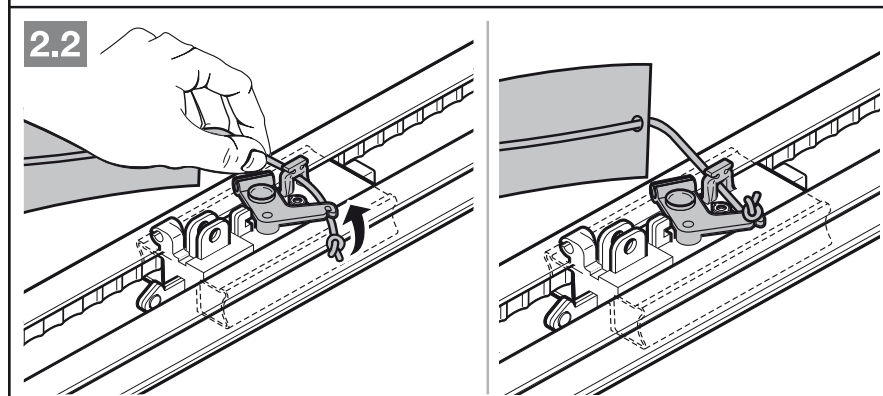
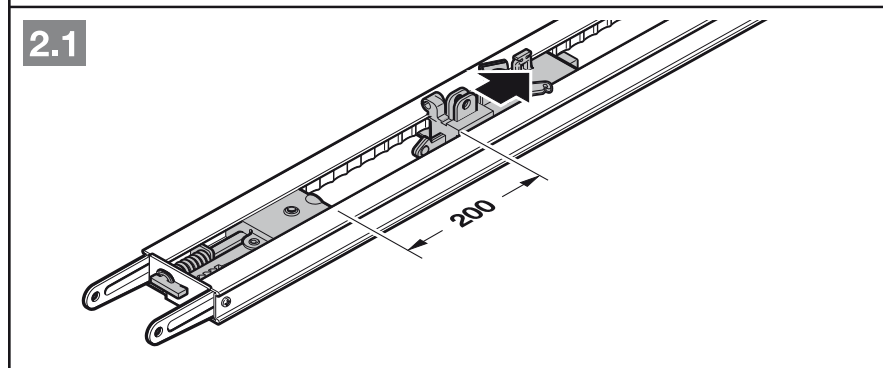
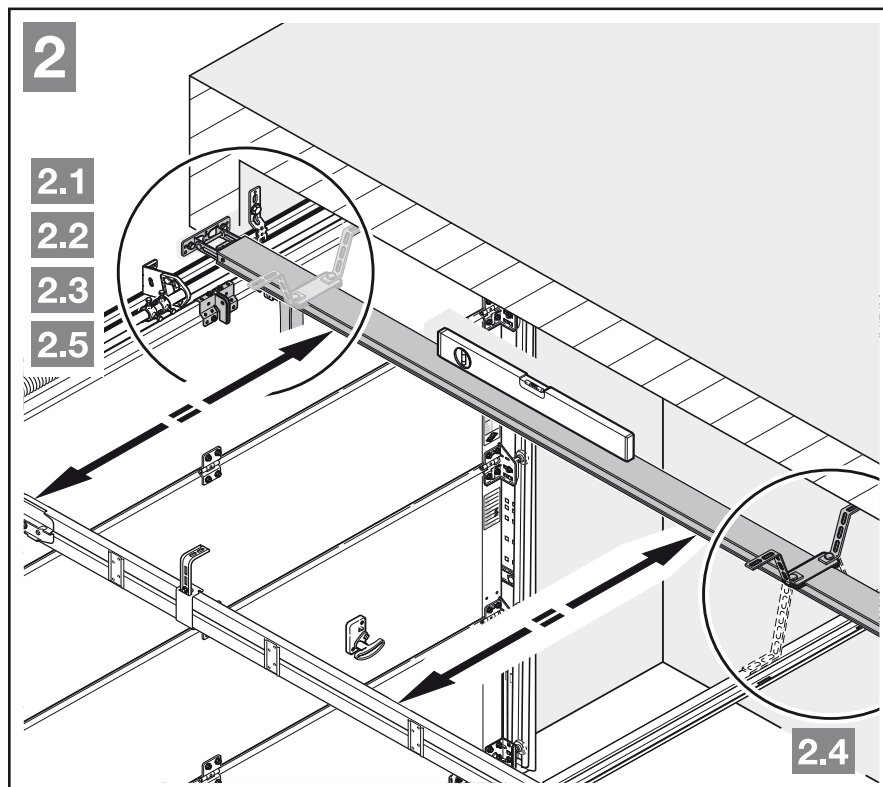
### 3.4 Fitting the boom

**NOTE:**

Only use the booms recommended by us for the garage door operators - depending on the respective application (see product information).



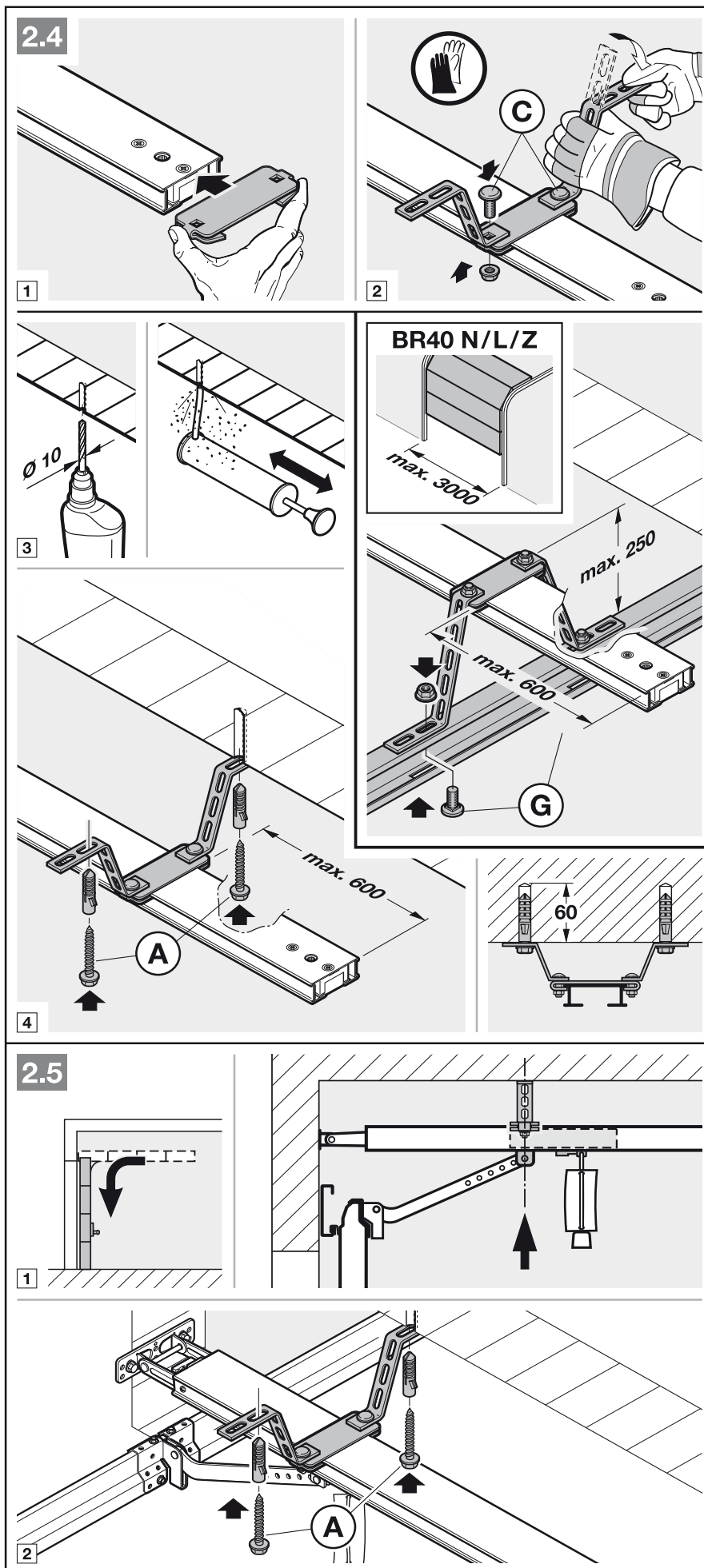
- Press the green button and move the slide carriage approx. 200 mm towards the centre of the rail (see figure 2.1). This is no longer possible once the end stops and operator have been fitted.



**NOTE:**

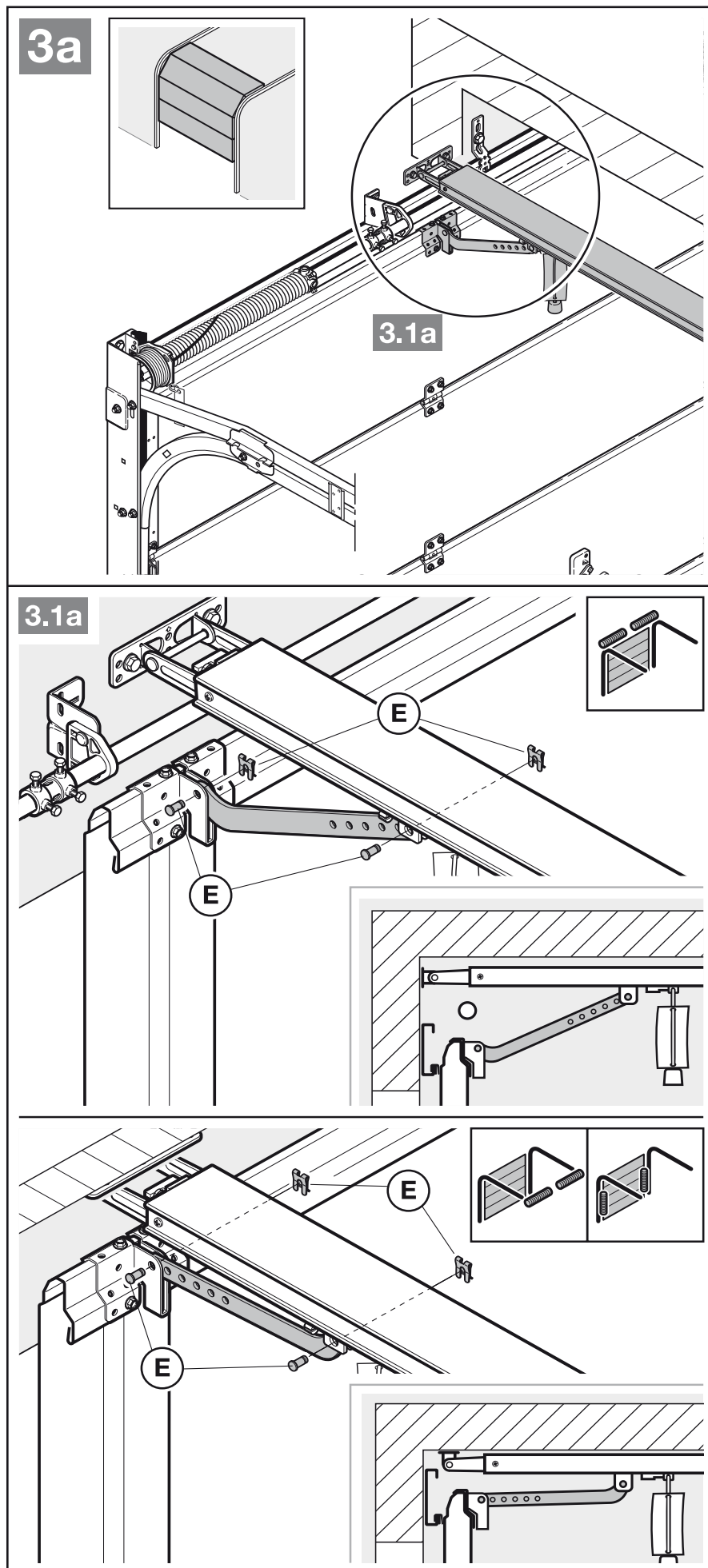
For operators used in underground and collective garages, it is necessary to fix the boom under the ceiling of the garage using a second suspension.

A second suspension is recommended with divided rails (available under accessories).



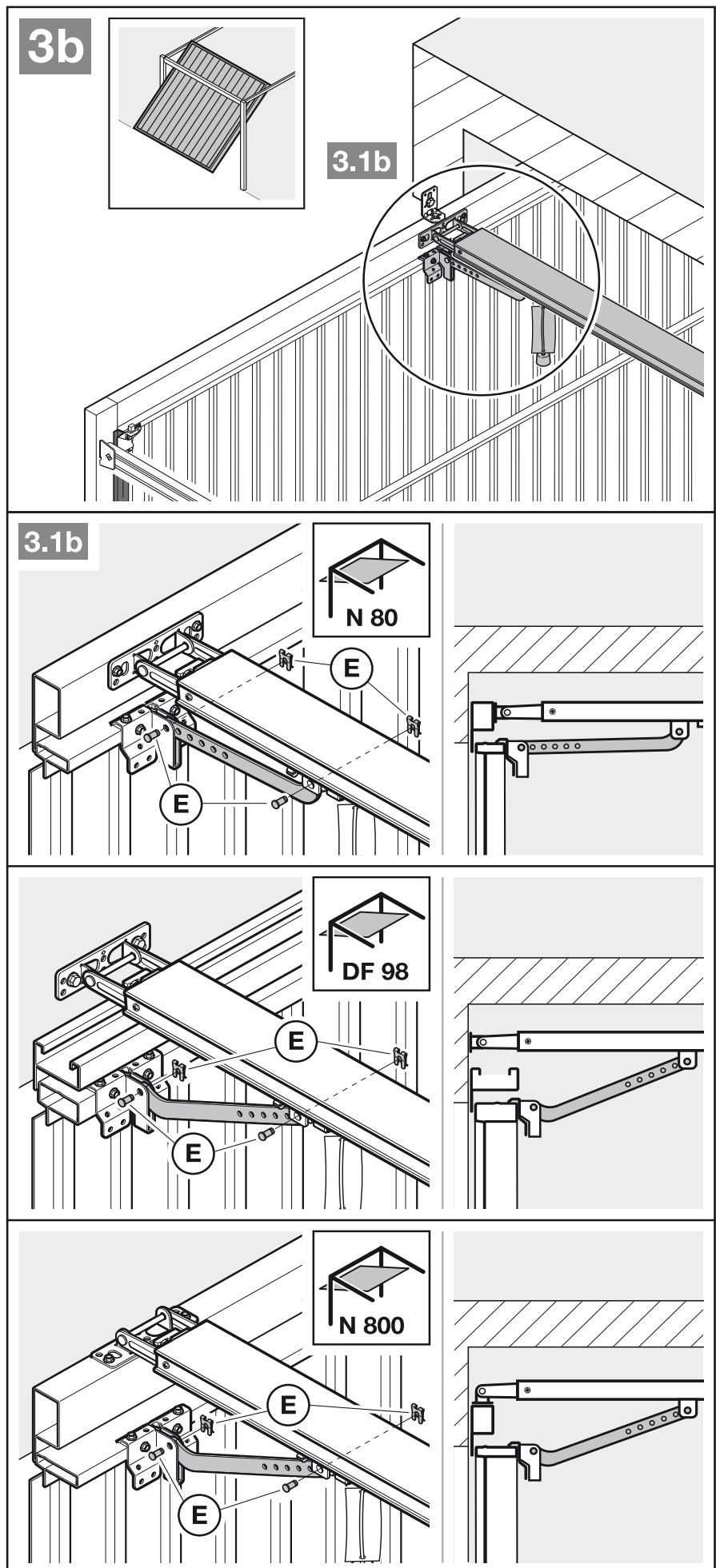
**NOTE:**

Depending on the **track application**, the installation direction of the fitting bracket must be taken into account.



**NOTE:**

Depending on the **door type**, the installation direction of the fitting bracket must be taken into account.





### To prepare for manual operation

- Pull on the cord of the mechanical release (Figure 4).

### 3.5 Determining the end-of-travel positions

If the door cannot be easily moved into the desired *Open* or *Closed* end-of-travel position.

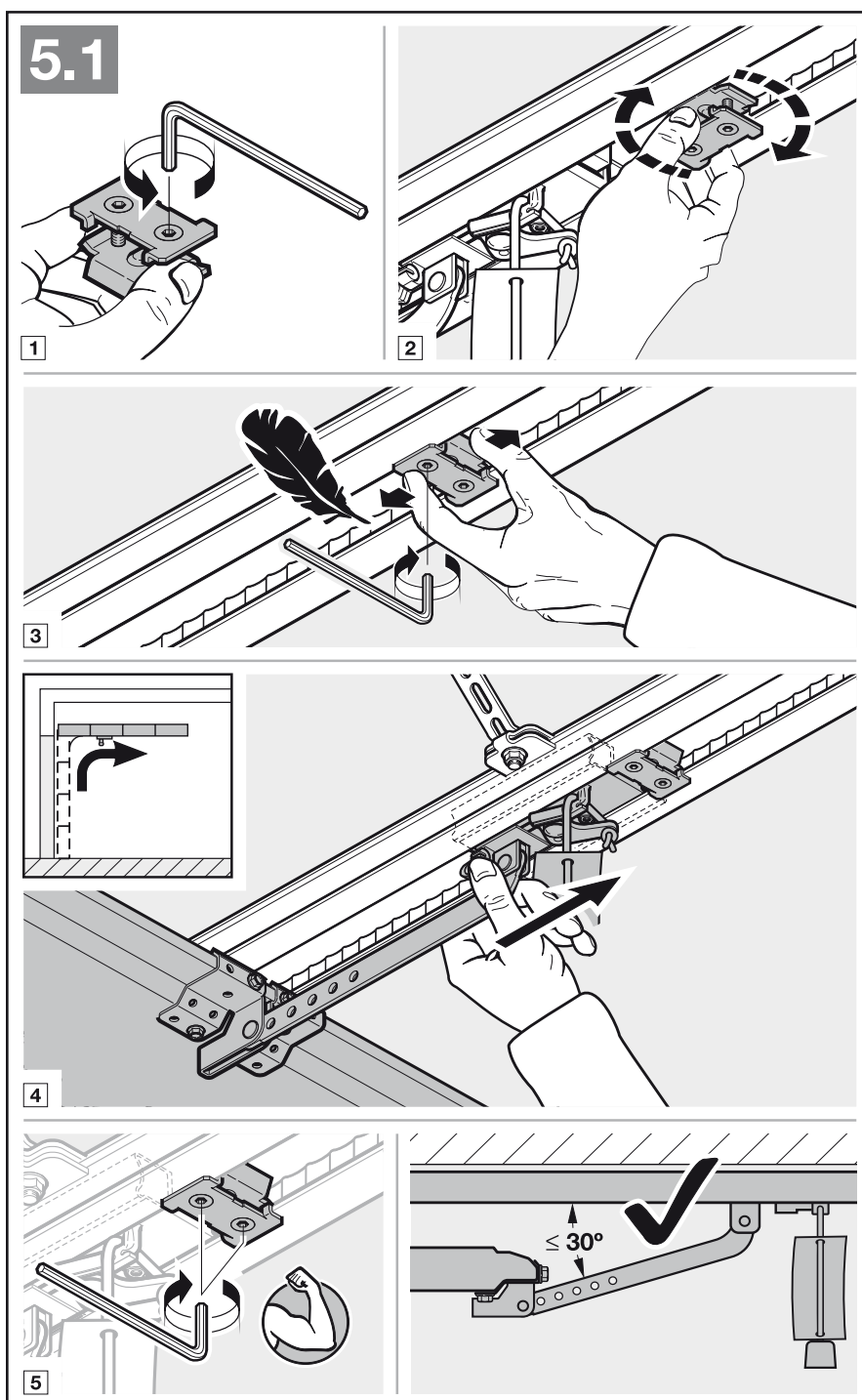
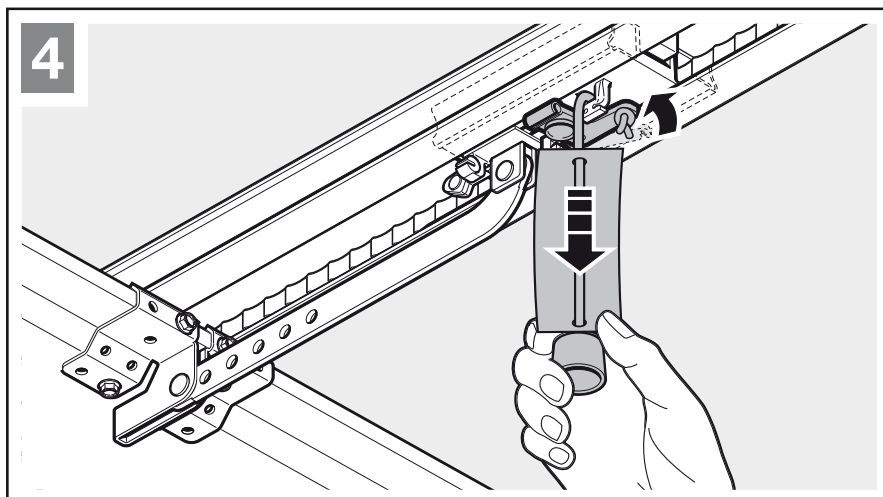
- Note section 3.1!

#### 3.5.1 Fitting the *Open* end stop

1. Loosely insert the end stop in the boom between the slide carriage and operator.
2. Push the door into the *Open* end-of-travel position by hand.
3. Fix the end stop.

#### NOTE:

In case the door does not reach the complete passage height in the end-of-travel position, the end stop can be removed so that the integrated end stop (on the operator head) is used.

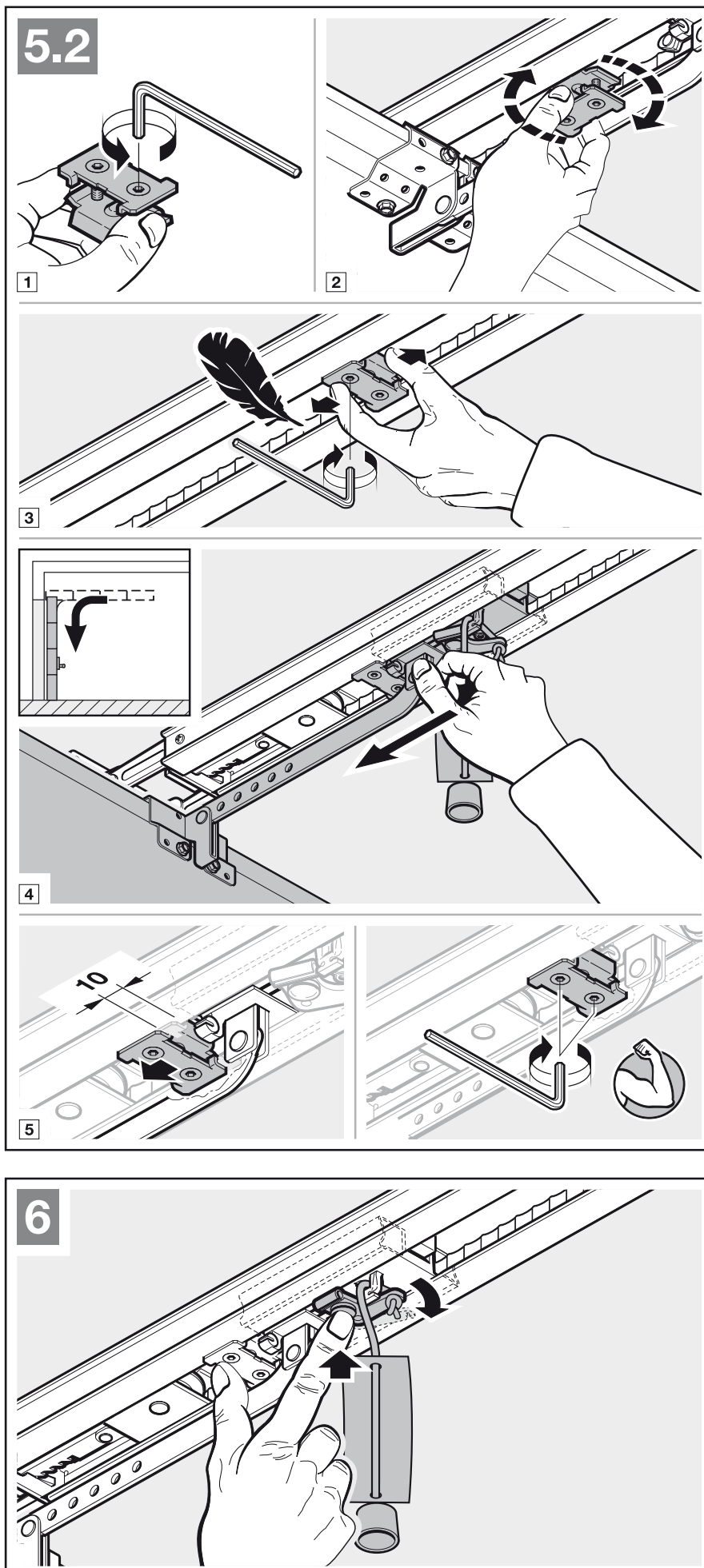


### 3.5.2 Fitting the *Close* end stop

1. Loosely insert the end stop in the boom between the slide carriage and door.
2. Push the door into the *Close* end-of-travel position by hand.
3. Move the end stop by approx. 10 mm in the *Close* direction and fix the end stop.

#### To prepare for automatic operation

- Push the green button on the slide carriage (Figure 6).
- Move the door by hand until the slide carriage snaps into the belt lock.
- Note the safety instructions in section 10  
– *Danger of crushing in the boom*

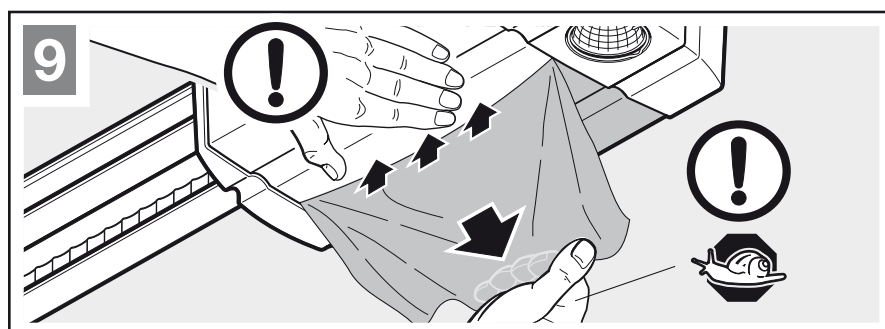
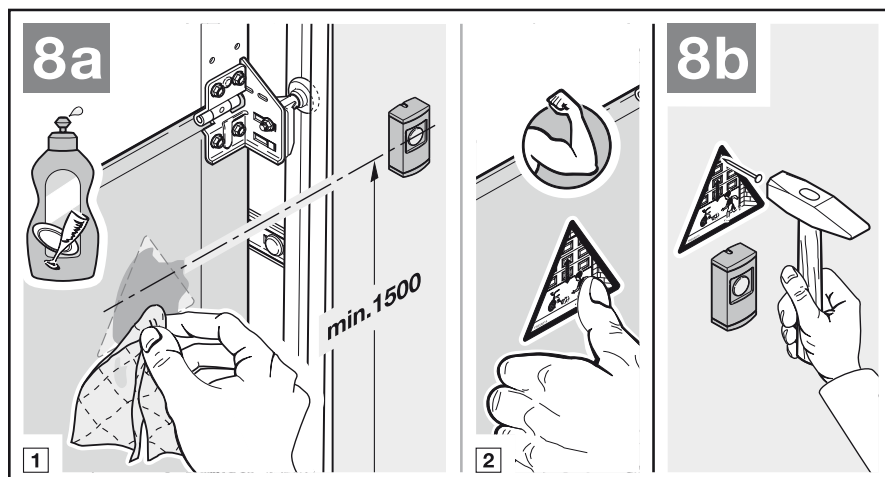
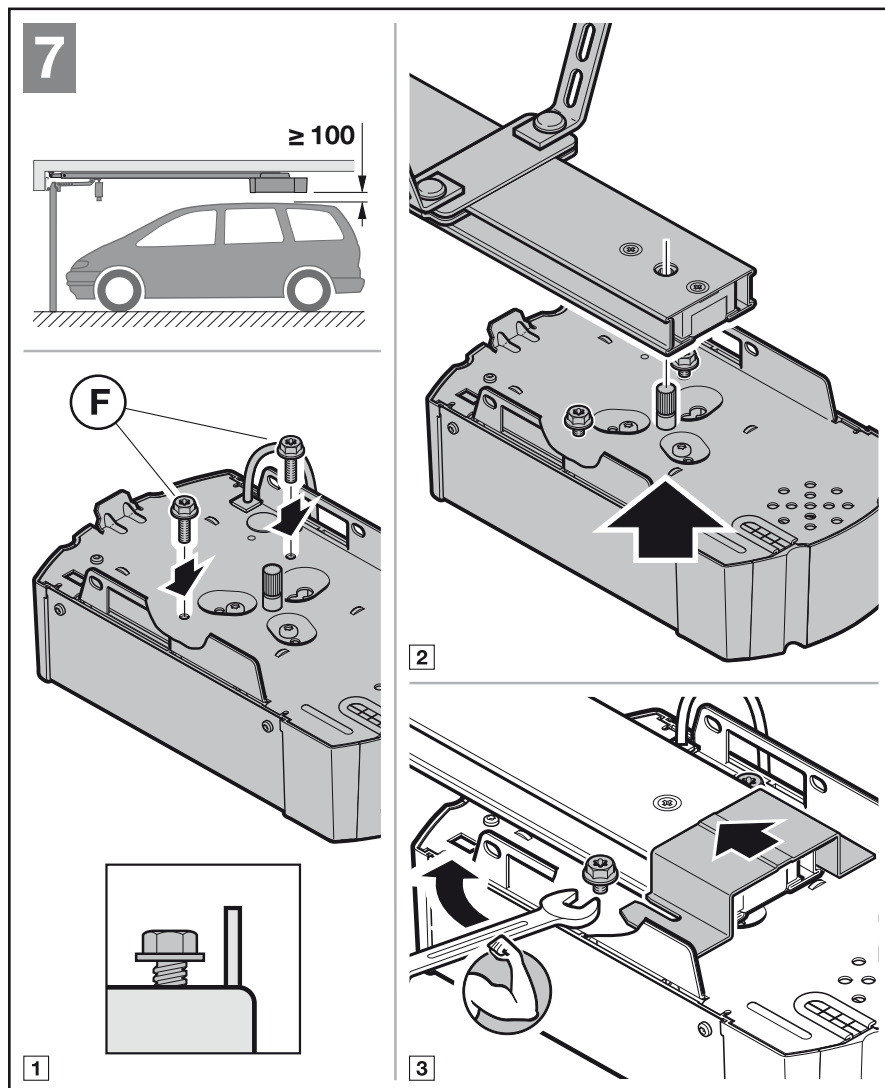


### 3.5.3 Fitting the operator head

- Fix the operator head with the display towards the door (Figure 7).
- Note the safety instructions in section 10  
– **ATTENTION**

### 3.6 Fixing the warning sign

- Fix the crushing warning sign in a prominent, cleaned and degreased place, for example near the permanently installed button for moving the operator.



## 4 Electrical connection

- Note the safety instructions in section 2.6
  - Mains voltage
  - External voltage at the connecting terminals

### To prevent malfunctions:

- Duct the operator's connection cables (24 V DC) in an installation system that is separate from other supply lines (230 V AC).

### 4.1 Connecting terminals

All connecting terminals can have multiple assignments (see figure 10):

- Minimum thickness: 1 x 0.5 mm<sup>2</sup>
- Maximum thickness: 1 x 2.5 mm<sup>2</sup>

Accessories with special functions can be connected to the BUS connecting terminal.

### 4.2 Connecting additional components/accessories

#### NOTE:

Maximum operator current rating by all accessories: **max. 250 mA**. See the figures for component power consumption.

#### 4.2.1 External radio receiver\*

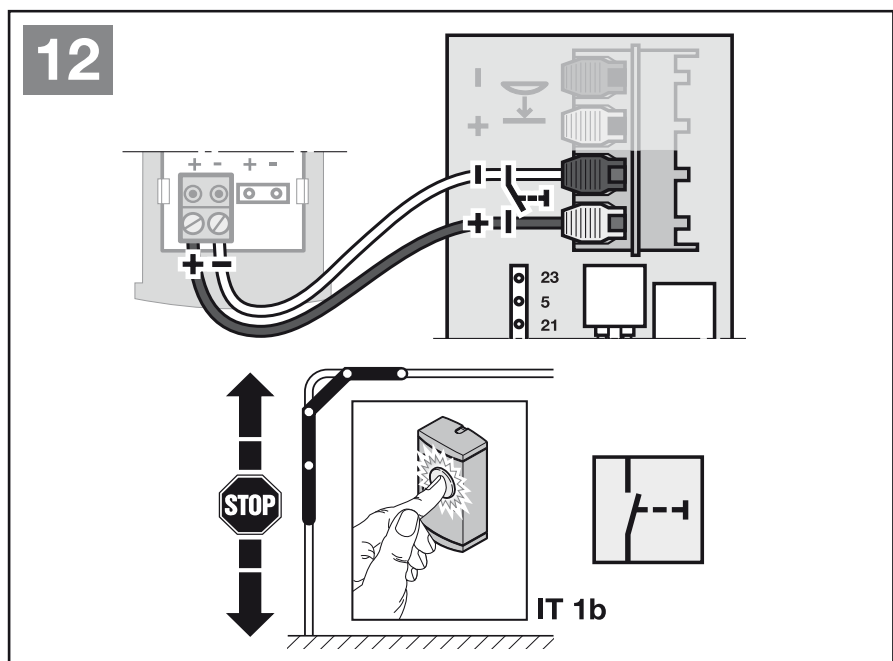
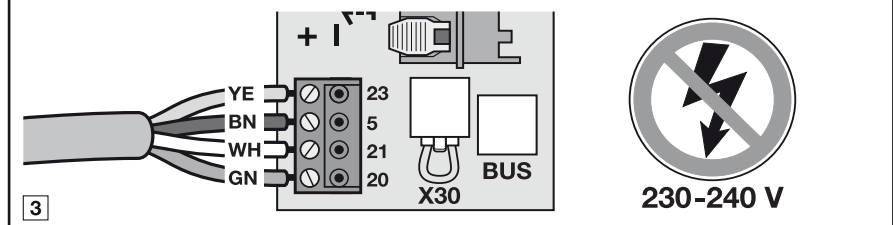
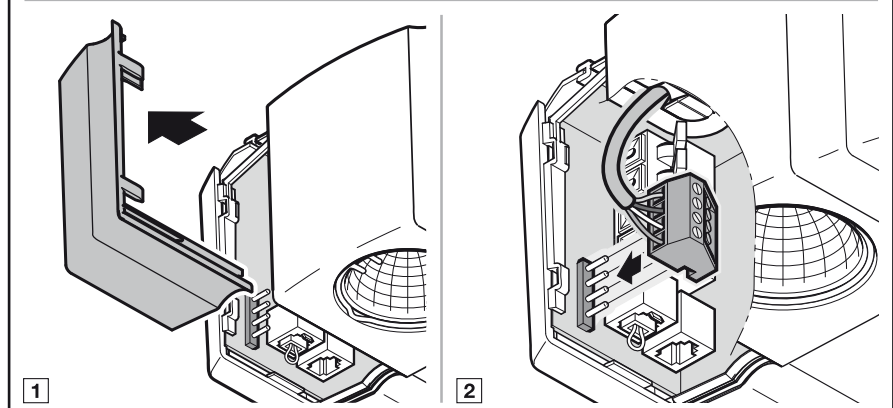
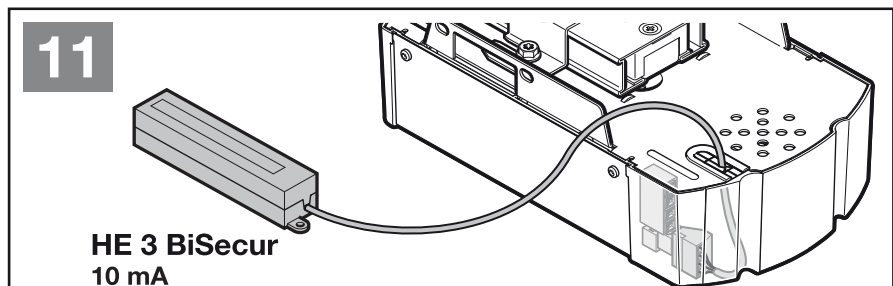
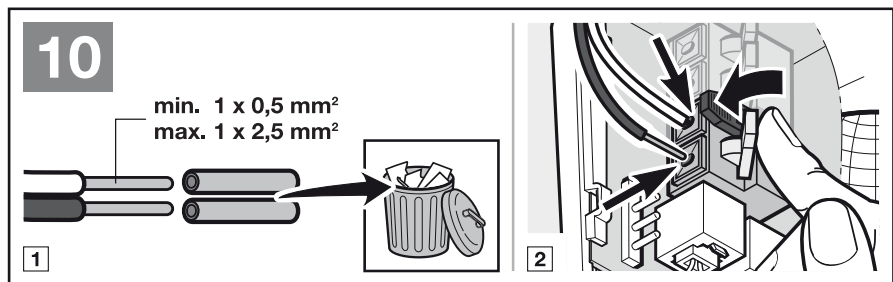
- See Figure 11 and section 9

Insert the plug of the receiver in the corresponding socket.

#### 4.2.2 External impulse button

- See Figure 12

One or more buttons with normally open contacts (volt-free), such as internal push buttons or key switches, can be connected in parallel.



\*Accessory, not included as standard equipment!

#### 4.2.3 Internal push button PB 3/IT 3b\*

- See Figure 13

**Impulse button to start or stop door runs**

- See Figure 13.1

**Light button to switch the operator light on and off**

- See Figure 13.2

**Button to switch all control elements on and off**

- See Figure 13.3

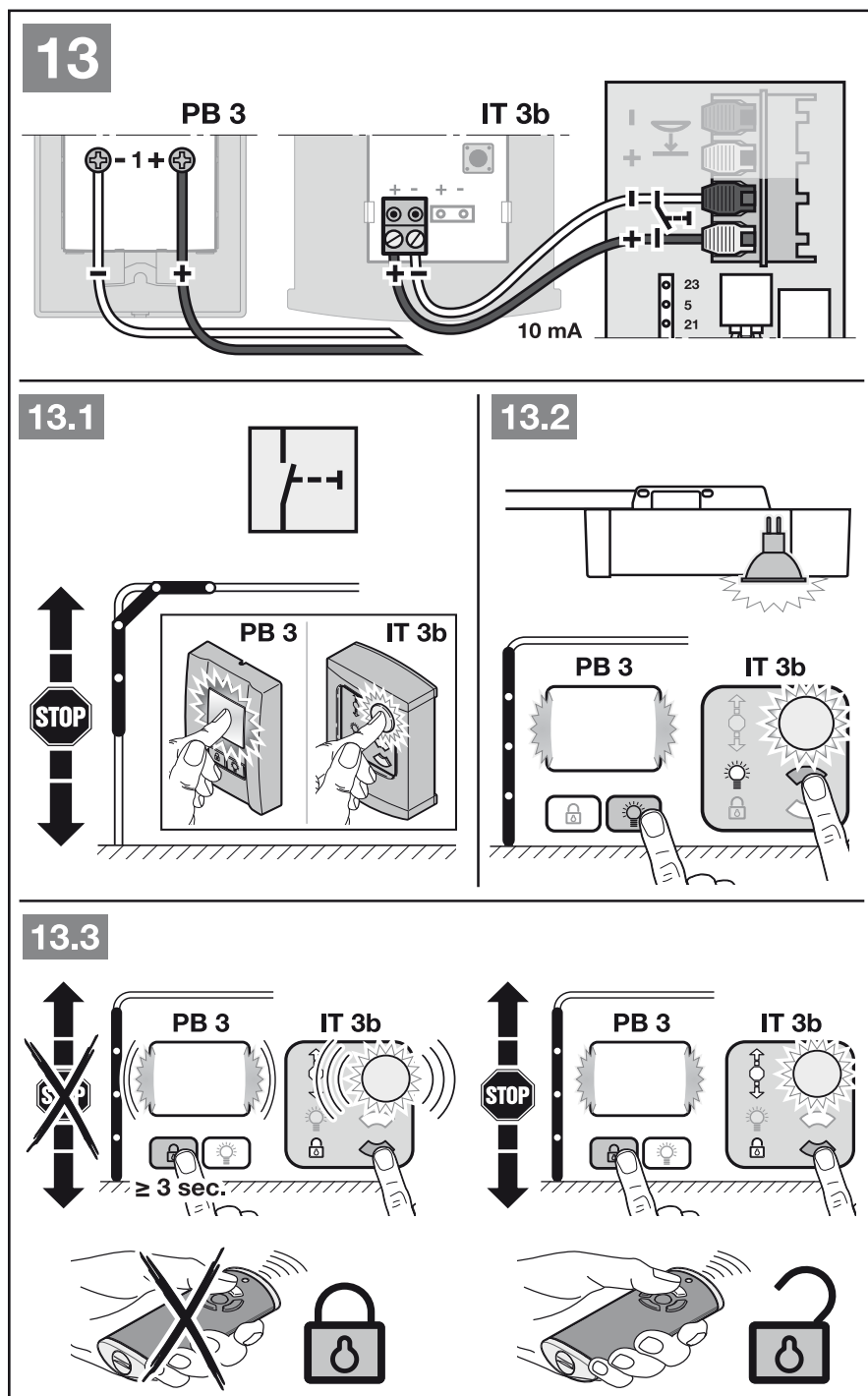
#### 4.2.4 2-wire photocell\* (dynamic)

- See Figure 14

##### NOTE:

Follow the fitting instructions when mounting photocells.

After the photocell has been triggered, the operator stops and a safety reversal of the door is performed to the *Open* end-of-travel position.



\*Accessory, not included as standard equipment!

#### 4.2.5 Tested wicket door contact\*

- Connect wicket door contacts that switch to ground (0 V) as shown in Figure 15.

Door cycles are immediately halted and permanently prevented when the wicket door contact is opened.

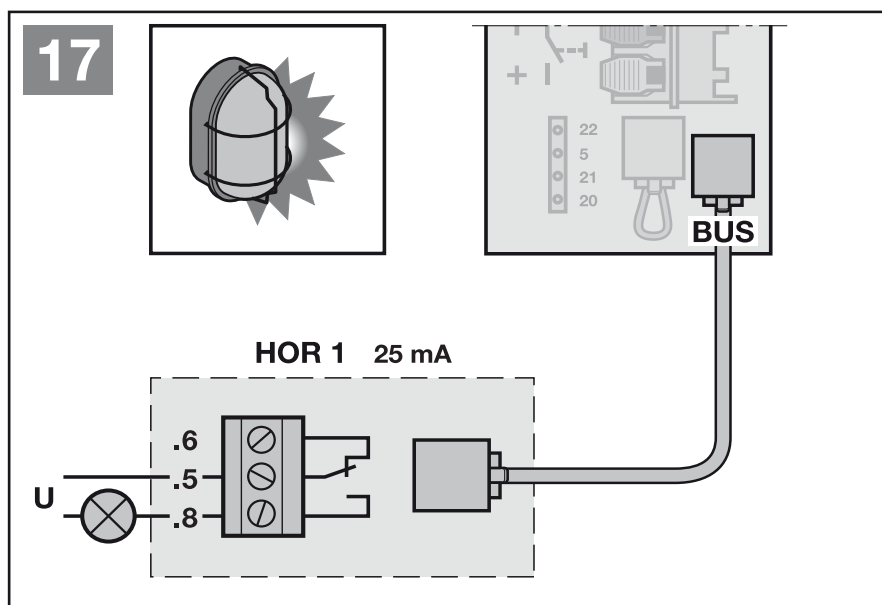
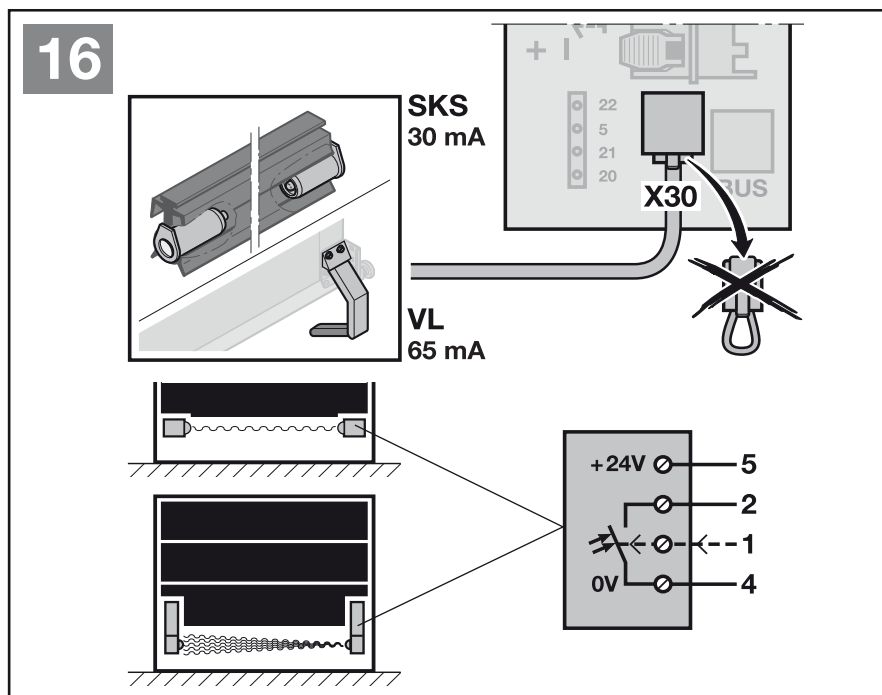
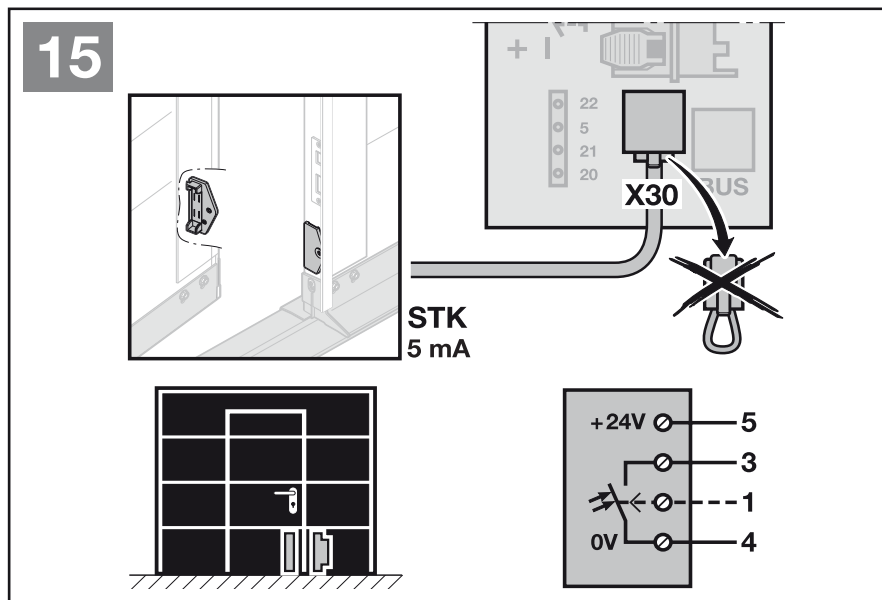
#### 4.2.6 Closing edge safety device\*

- Connect closing edge safety devices that switch to ground (0 V) as shown in Figure 16.

After the closing edge safety device has been triggered, the operator stops and the door reverses in the *Open* direction.

#### 4.2.7 Option relay HOR 1\*

- See Figure 17 and section 6.1.7
- Option relay HOR 1 is required to connect an external lamp or warning light.



\*Accessory, not included as standard equipment!



#### 4.2.8 Universal adapter print UAP 1\*

► See Figure 18 and section 6.1.7  
The universal adapter print UAP 1 can be used for other additional functions.

#### 4.2.9 Emergency battery HNA 18\*

► See Figure 19

To enable door movement in the event of a power failure, an optional emergency battery can be connected. The system automatically switches to battery operation. During battery operation, the operator light remains switched off.

#### WARNING

##### **Danger of injury due to unexpected door travel**

Unexpected door travel may occur when the emergency battery is still connected despite the mains plug being pulled out.

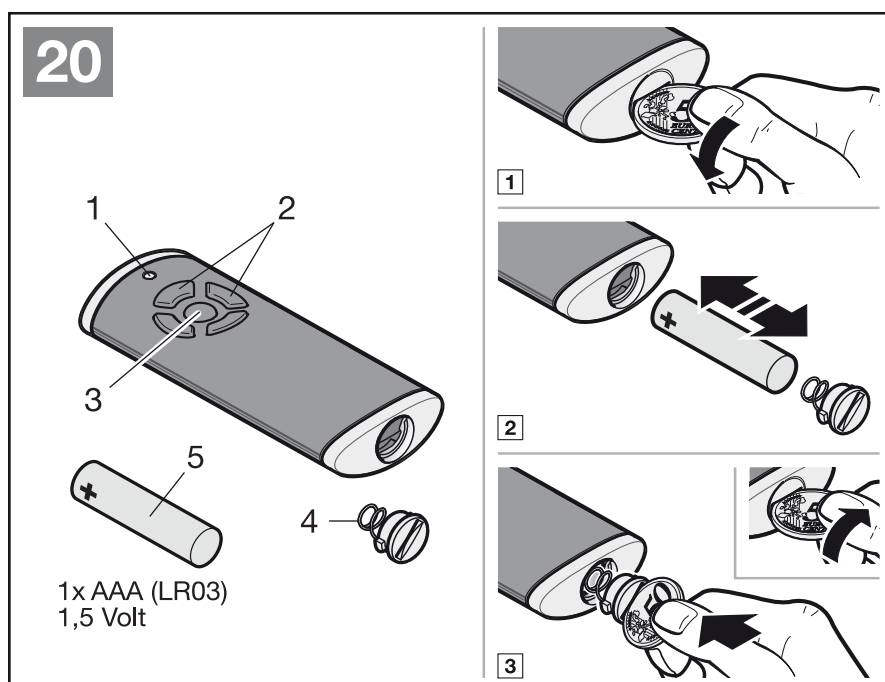
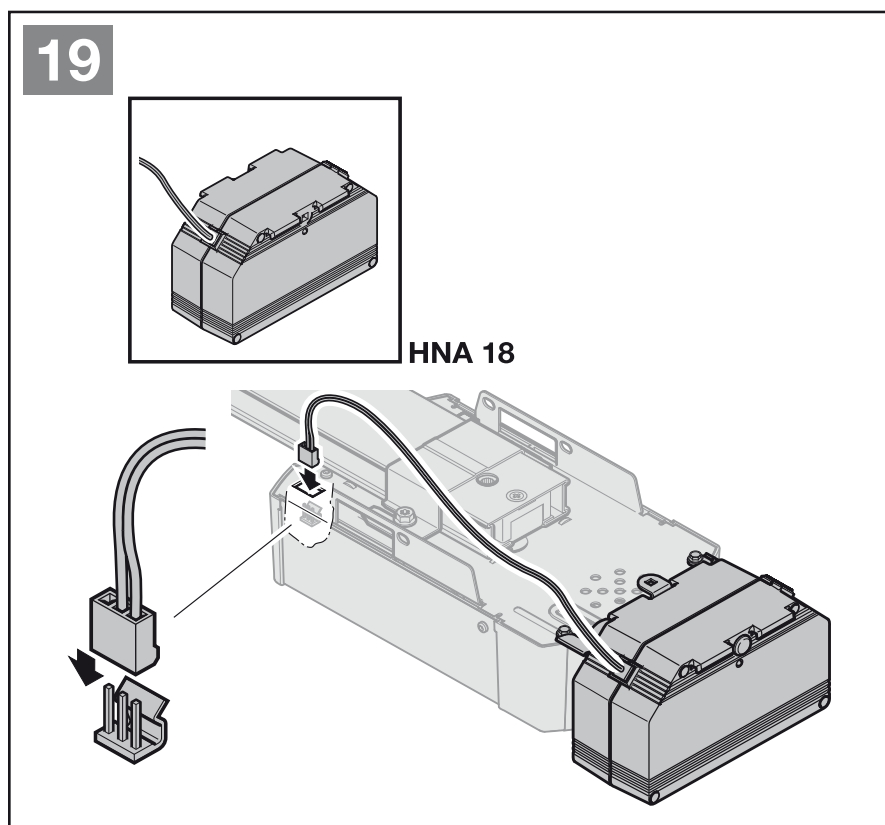
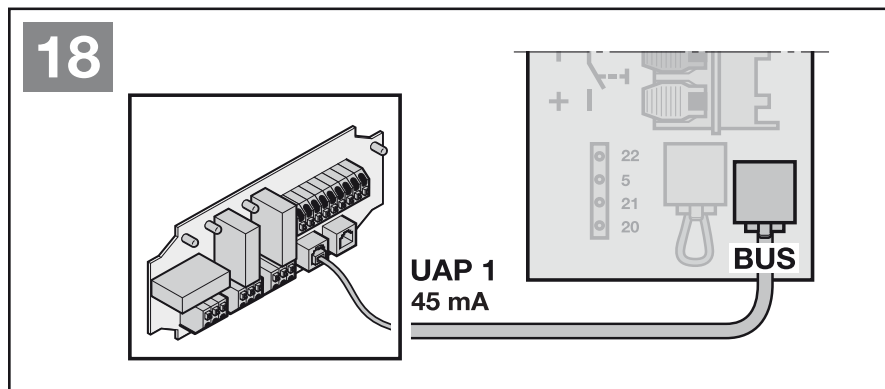
- Disconnect the mains plug **and** the plug of the emergency battery whenever performing work on the door system.

#### 4.2.10 Hand transmitter

► See Figure 20

- 1 LED, multicolour
- 2 Hand transmitter buttons
- 3 Status button
- 4 Battery lid
- 5 Battery

After inserting the battery, the hand transmitter is ready for operation.



\*Accessory, not included as standard equipment!

## 5 Initial start-up

- ▶ Before initial start-up, read and follow the safety instructions in sections 2.6 and 2.8.

### NOTES:

- The hand transmitter must be ready for operation (see section 4.2.10)
- The slide carriage must be engaged and there may not be any obstacles in the function range of the safety devices!
- Safety devices must be fitted and connected beforehand.
- If further safety devices are connected at a later point, a new learning run is required (menu **10**).
- When teaching in, the connected safety devices and power limit are not active.

- ▶ See Figure **21**

1. Plug in the mains plug.  
A **U** is illuminated in the display.
2. Select the existing door type.  
An **L** will then be illuminated in the display.

### Door types:

Menu	Door type
<b>01</b>	= Sectional door
<b>02</b>	= Up-and-over door <sup>1)</sup>
<b>03</b>	= Side sliding sectional door
<b>04</b>	= Non-protruding up-and-over door <sup>2)</sup> (e.g. ET 500) <sup>3)</sup>
<b>05</b>	= Sliding door <sup>4)</sup> (e.g. ST 500) <sup>3)</sup>

1) A door swinging outwards

2) A door tilting inwards

3) Dependent on the operator type


4) With this door type, an 8k2 resistance contact strip must be fitted to the secondary closing edge in the *Open* direction and connected to the operator via the 8k2-1T decoder unit.

### NOTE:

- ▶ Set menu **03** for hinged doors.

### Timeout



If the timeout (60 seconds) elapses before starting the learning run, the operator will automatically switch back to the delivery condition.

3. Press the button .
  - The door will open and briefly stop in the *Open* end-of-travel position.
  - The door will automatically go through 3 complete cycles (Open and Close). In the process the travel, required forces, and connected safety devices will be taught in.

The operator light and **L** in the display flash during the learning run.

  - The door will stop in the *Open* end-of-travel position.  
The operator light remains illuminated and goes out after 60 seconds.

### To abort a learning run:

- ▶ Press one of the buttons  or , the **PRG** button or an external control element with impulse function.  
A **U** in the display shows that the operator has not been taught in.

### Display of the taught-in forces

A number will be illuminated after the learning runs. This indicates the maximum detected force.

The numbers represent the following:





- 0-2** Optimum force conditions  
The door system is moving easily.
- 3-9** Poor force conditions  
The door system must be inspected or readjusted.

Once the taught-in forces have been displayed, the operator will automatically switch to the menu to register the hand transmitters for the impulse control function. An **11** will flash in the display.

### To register a hand transmitter (impulse):

4. Press the hand transmitter button whose radio code you want to transmit and keep it pressed. (Please see section 8.4 for more information on the hand transmitter). If a valid radio code is detected, the **11** flashes quickly in the display.
5. Release the hand transmitter button.  
**The hand transmitter has been registered and is ready for operation.**  
The **11** flashes in the display and you can register further hand transmitters.

### If you want to cancel hand transmitter registration or not register any further hand transmitters:

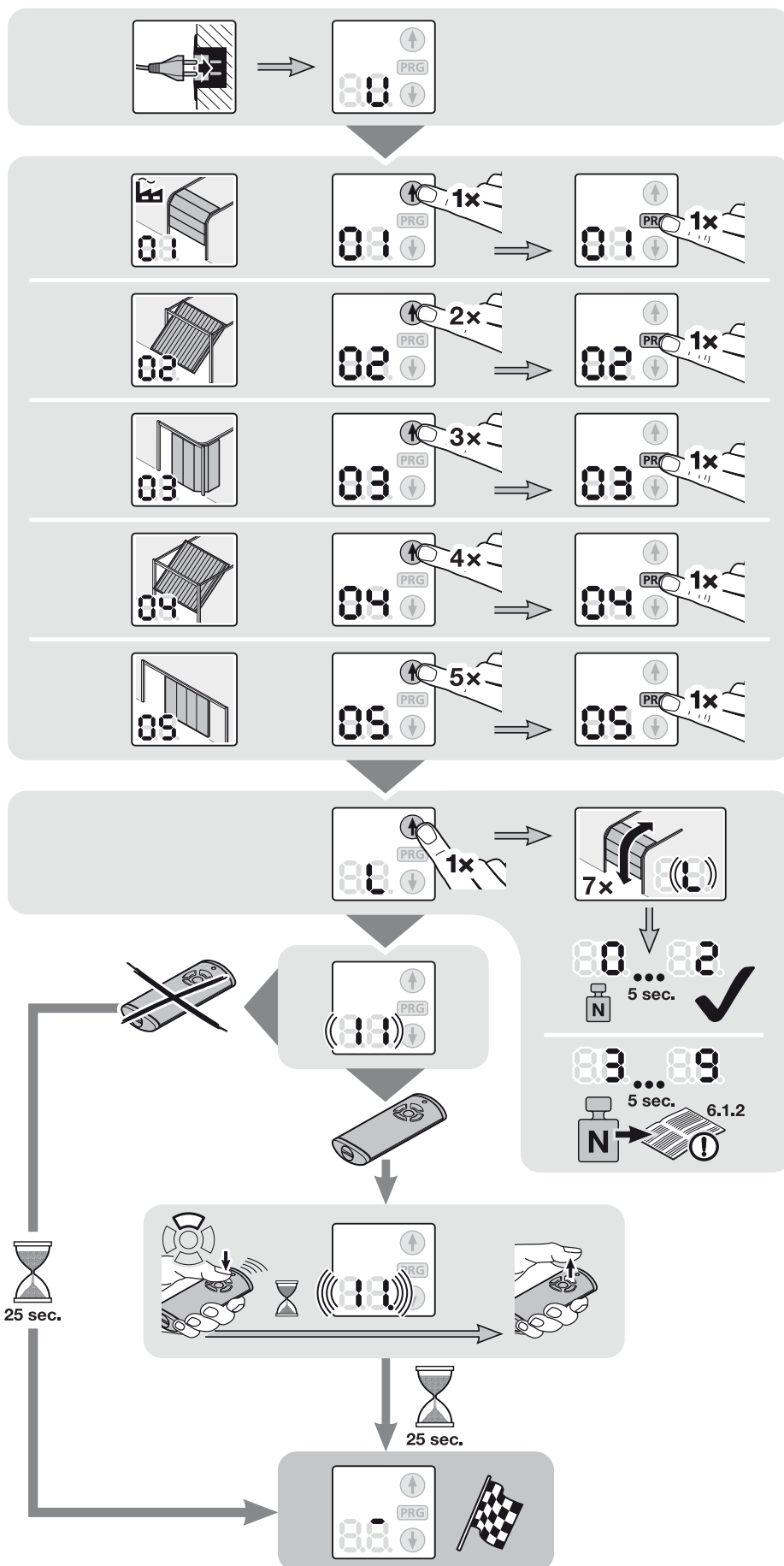
- ▶ Press the **PRG** button.
- 6. Press the buttons  or  to select menu **00** (exit programming mode) or wait for the timeout to elapse to switch to operation mode.  
**or**
- 6.1 Press the buttons  or , to select menu **12** (operator light) or menu **13** (partial opening).
- 7. Press the **PRG** button to change to programming mode.
- 8. In menus **12** and **13**, proceed exactly as described in steps 4 + 5.

### The operator is ready for operation.

### Timeout

If the timeout elapses (25 seconds) while registering the hand transmitter, the operator will automatically switch to operation mode. To register a hand transmitter, the corresponding menu must then be selected manually (see section 6.1.3).

21



## 6 Menus

### NOTES:

- The hand transmitter must be ready for operation (see section 4.2.10)
- With the function blocks that consist of several menus, only one menu may be selected per block.
- After the operator has been taught in, only the selectable menus **10–46** are shown. Menus **01–05** are only accessible during initial start-up. Menu **00** is used to exit programming mode.
- A decimal point next to the menu number indicates an active menu.

### To switch to programming mode:

#### Figure 22

- ▶ Press the **PRG** button until the **00** display is illuminated.

### To select a menu: Figure 22.1

- ▶ With the buttons  $\uparrow$  or  $\downarrow$  select the desired menu. Holding down the buttons  $\uparrow$  or  $\downarrow$  lets you go through the menus quickly.

### To activate a menu: Figure 22.2

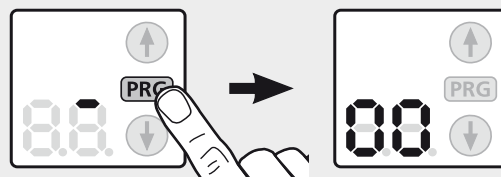
- ▶ Press the **PRG** button until the decimal point next to the menu number is illuminated. The menu is immediately activated.

### To exit programming mode:

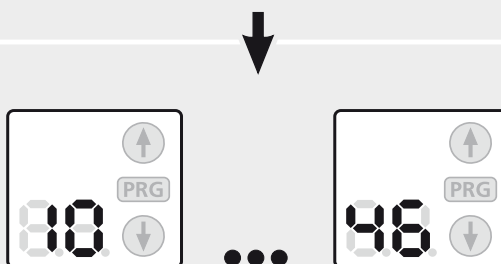
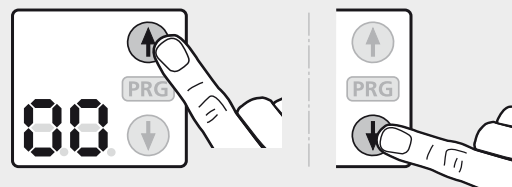
#### Figure 22.3

- ▶ With the buttons  $\uparrow$  or  $\downarrow$  select menu **00** and press the **PRG** button.  
or
- ▶ No entry for 60 seconds (timeout).

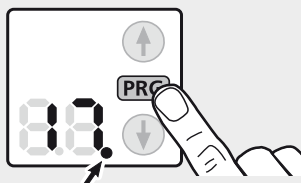
22



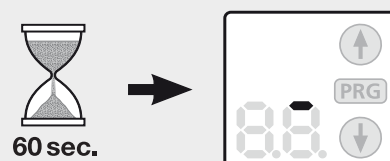
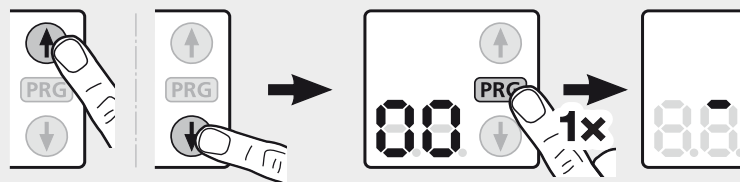
22.1



22.2





22.3



## 6.1 Menu description

A table containing all of the menus can be found in section 18, from page 44.

If you switch to programming mode, the operator light will be illuminated for 60 seconds. Pressing the buttons ,  or **PRG** extends the time the light is on.

### 6.1.1 Menu 01 - 05: Door types

Menus **01–05** are needed for initial start-up of the operator. They are only accessible during initial start-up or after a factory reset. Once the door type has been selected, all of the door-specific values, such as speed, soft stop, reversing behaviour of the safety devices, reversal limits, etc. will be pre-set automatically.

- For an overview of door types, see section 5

### 6.1.2 Menu 10: Learning runs

- Note the information in section 5.



#### Learning runs in the delivery condition:

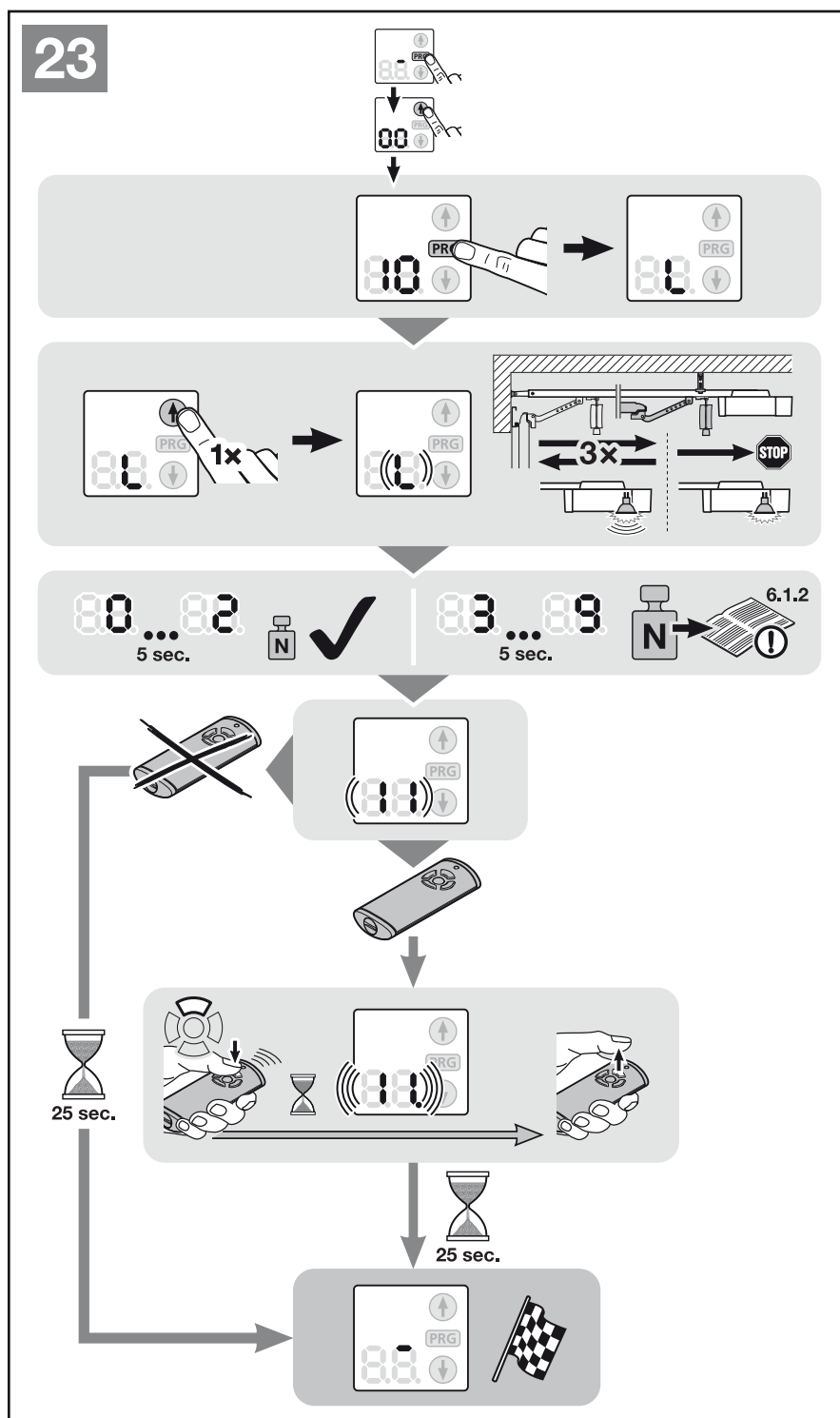
All of the learning runs are done automatically during initial start-up (section 5).

#### Learning runs after service or maintenance work:

Learning runs may be required due to service or maintenance work, retrofitting of safety devices such as photocells, wicket door contacts or safety contact strips, or changes to the door. When doing so, the existing door data (travel and forces) are deleted and taught in again.

#### To exit the menu before starting the learning runs:

- Press the **PRG** button.
1. Press the **PRG** button until the **00** display is illuminated.
  2. With the buttons  or  select the desired menu **10**.
  3. Press the **PRG** button until an **L** is illuminated in the display.
  4. Continue with step 3, in section 5.



### 6.1.3 Menu 11 – 13: Register hand transmitter

A maximum of 150 radio codes can be transferred and distributed to the available channels. If more than 150 radio codes are transferred, the first one will be deleted. If the radio code of a hand transmitter button is transferred for two different functions, the radio code for the first transferred function will be deleted.

The following prerequisites must be fulfilled in order to transfer a radio code to the integrated radio receiver:

- The operator is idling.
- The warning or hold-open phase is not active.

#### Menu 11: Transfer radio code for impulse control:

► See Figure 24

#### Menu 12: Transfer radio code for the operator light:

► See Figure 25

#### Menu 13: Transfer radio code for partial opening:

► See Figure 26

#### NOTE:

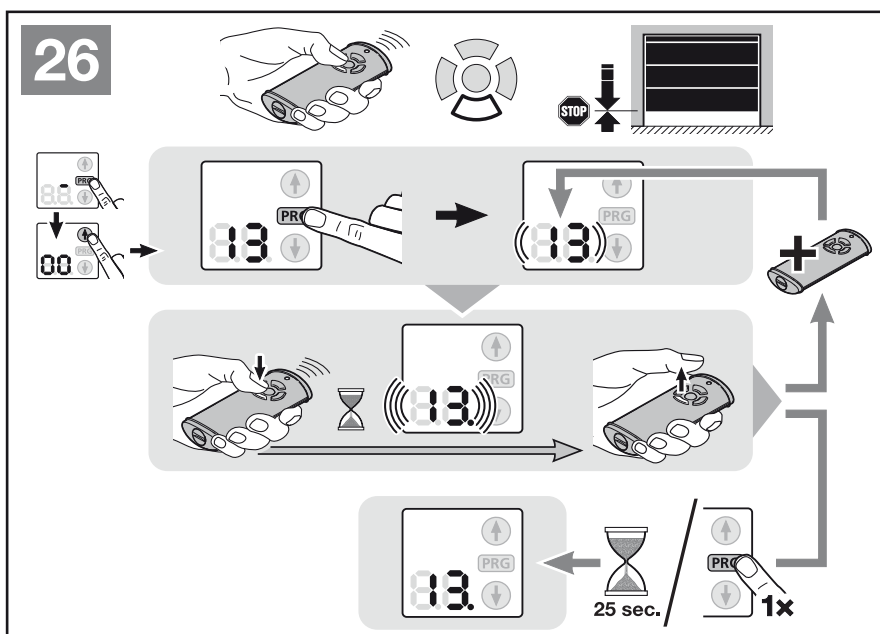
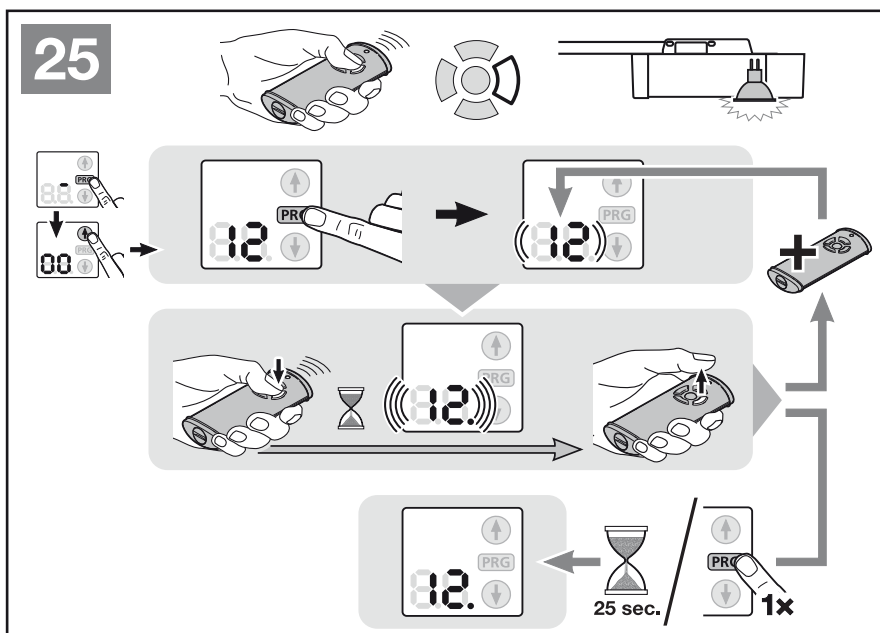
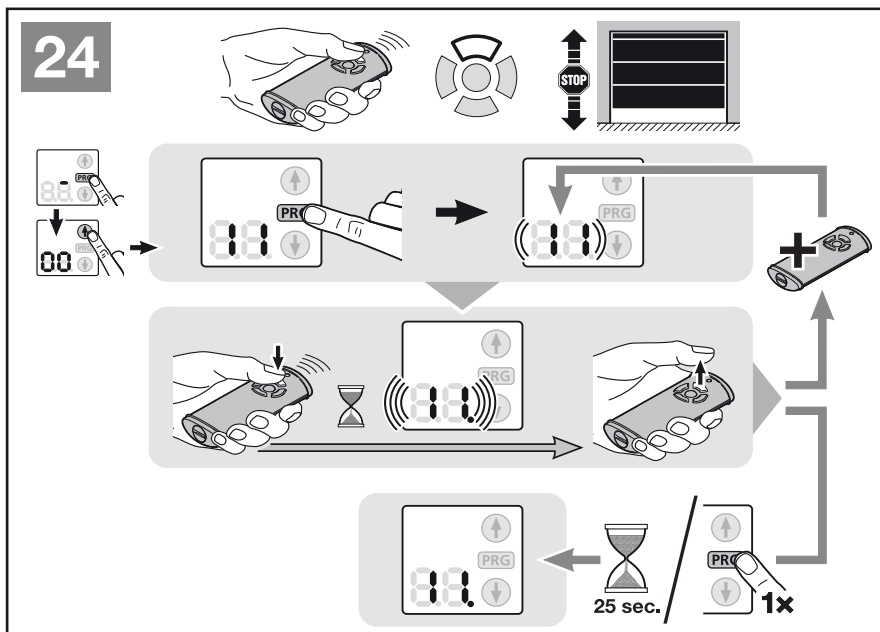
Please see section 8.4 for more information on the hand transmitter.

#### To cancel hand transmitter registration:

► Press the **PRG** button.

#### Timeout

If the timeout elapses (25 seconds) while registering the hand transmitter, the operator will automatically switch back to programming mode.





**About the menus described here:**

- See also the overview from page 44.

**6.1.4 Menu 14: Query door type**

During initial start-up or after a factory reset, you can query the set door type via menu **14**.

**To query the door type:**

1. Select menu **14** as described in section 6.
2. Press the **PRG** button.  
The set door type will be displayed as long as the **PRG** button is pressed.

**6.1.5 Menu 15–18: Operator light controlled by the operator**

The operator light is switched on as soon as the door starts moving. After the door has stopped moving, the operator light remains on for the set period (illumination period).

If menu **15** is activated, the operator light will not be switched on once the door starts moving.

The illumination period for the operator light can be set using menus **16–18**.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

**6.1.6 Menu 19–21: Operator light controlled by external control elements**

The operator light can be switched on with an external control element (e.g. hand transmitter or internal push button IT 3b, PB 3) and remains on for the set period (illumination period).

If menu **19** is activated, the operator light cannot be switched on with an external control element.

The illumination period for the operator light can be set using menus **20–21**. Menu **23** is also activated automatically.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

**6.1.7 Menu 22–29: Functions with additional print**

If menu **22** is activated, the external light can be turned on and off permanently. Not possible in combination with menu **23**. The operator light is always deactivated.

If menu **22** is activated, menu **19** is also automatically activated and menus **23–29** cannot be activated!

If menu **27** or **28** is activated and no pre-warning phase or hold-open phase has been activated (menu **31–35, 41**), the relay does **not** function despite the activated menu.

Option relay **HOR 1** is required to connect an external lamp or warning light.

The universal adapter print **UAP 1** can be used to control further functions such as *Open* and *Close* limit switch reporting, direction selection or operator light.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

**6.1.8 Menu 30–31: Pre-warning phase**

Menu **30** deactivates the pre-warning phase. The door starts moving immediately after a travel command.

If menu **31** is activated and a travel command is given, a warning light connected to the option relay is illuminated for 5 seconds before the door starts moving. The pre-warning phase is active in the *Open* and *Close* direction.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

**6.1.9 Menu 32–36: Automatic timer**

With an automatic timer, the door is only opened with a travel command. The door closes automatically after a set time and the pre-warning phase have elapsed. If the door receives a travel command while it is closing, the door will stop and open again.

**NOTES:**

- The automatic timer may/can only be activated within the scope of DIN EN 12453 if at least one **additional** safety device (photocell) is connected besides the standard power limit.
- If the automatic timer is set (menus **32–35**), the pre-warning phase (menu **31**) and the photocell (menu **61**) will automatically be activated.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

**6.1.10 Menu 37–38: Hold-open phase functions**

The time set for the automatic timer corresponds to the hold-open phase for the door before it automatically closes.

If menu **37** is activated, the hold-open time is extended by an *impulse* radio code, an external control element with impulse function, the button Ⓢ or a photocell.

If menu **38** is activated, the hold-open phase is cancelled by an *impulse* radio code, external control element with impulse function or the button Ⓣ and the door closes immediately after the pre-warning phase has elapsed.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

**6.1.11 Menu 41–42: Automatic timer from the partial opening position****Not suitable for side sliding sectional doors!****NOTES:**

- The automatic timer may/can only be activated within the scope of DIN EN 12453 if at least one **additional** safety device (photocell) is connected besides the standard power limit.
- If the automatic timer is set (menu **41**), the photocell (menu **61**) will automatically be activated as well. The pre-warning phase (menu **31**) will *not* be activated.

If menu **41** is activated, the door will automatically close after 1 hour.

Menu **42** deactivates the automatic timer from the partial opening position.

**To set the desired function:**

- Select the menu for the desired function as described in section 6.

### 6.1.12 Menu 40: Deleting radio - All functions

► See Figure 27


There is no option to delete the radio codes for individual hand transmitter buttons or individual functions.

### 6.1.13 Menu 43: Changing the ventilation position

► See Figure 28



The partial opening position (ventilation position) depends on the door type and is pre-set at the factory.

**Sectional door:**

	Approx. 260 mm slide travel before the <i>Close</i> end-of-travel position.
Minimum height	Approx. 120 mm slide travel before each end-of-travel position.

The partial opening position is triggered using the 3rd radio channel (menu 13), an external receiver, the additional print UAP 1 or an impulse at terminals 20 / 23.

**To change the partial opening position:**



1. Move the door into the desired position with the buttons  and , via the taught-in radio code *impulse* or an external control element with impulse function.
2. Select menu **43**.
3. Press the **PRG** button until the decimal point next to the menu number is illuminated.

**The changed partial opening position is saved.**

If the selected height is too low, a 2-digit number starting with **1** will appear with a flashing decimal point (see section 17).

### 6.1.14 Menu 44: Blocking the control buttons on the operator



► See Figure 29

When blocking, only the buttons  and  on the operator are blocked. External control elements and hand transmitters remain active.

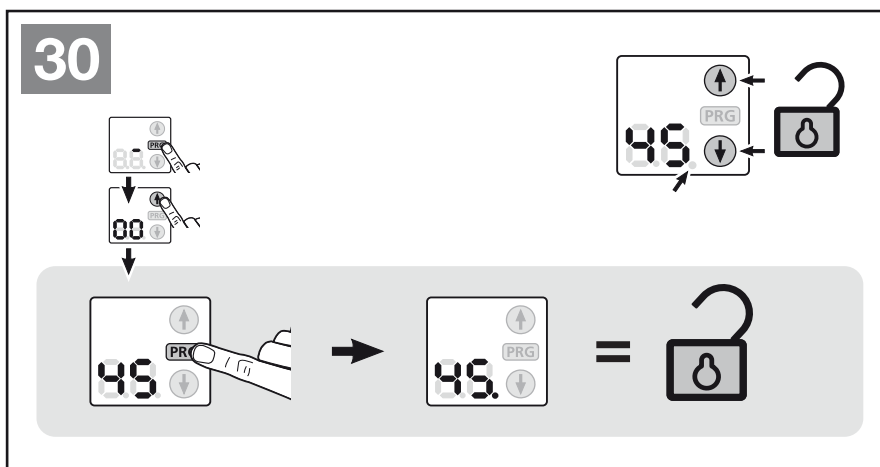
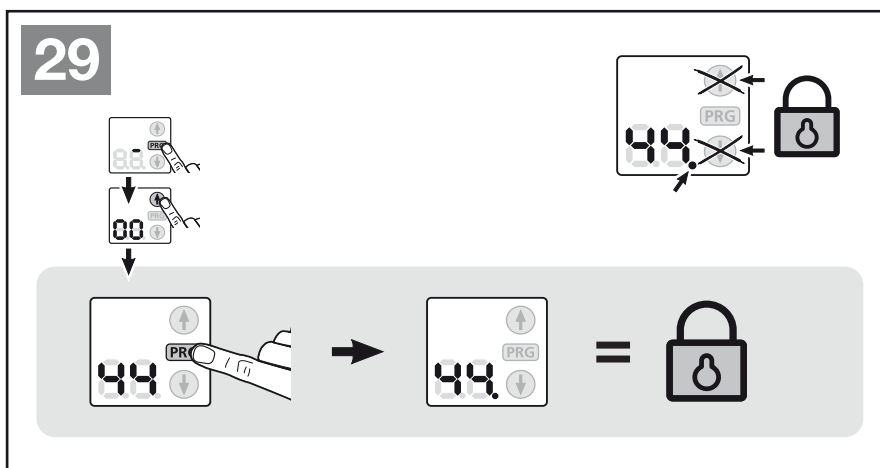
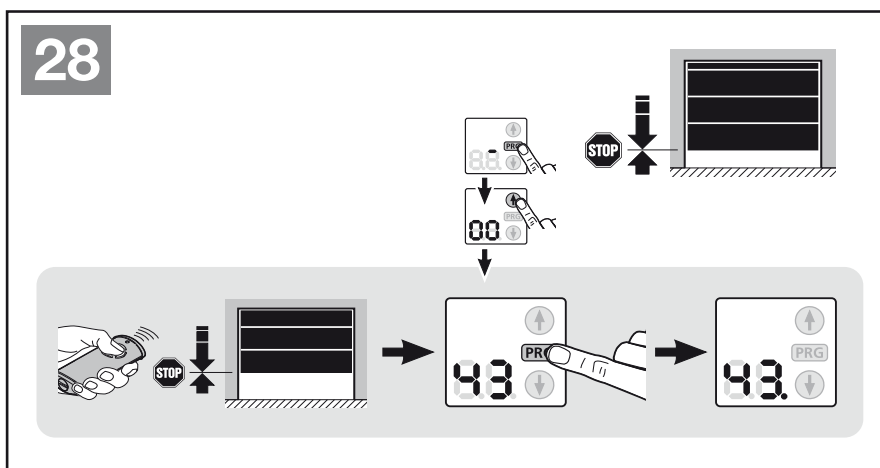
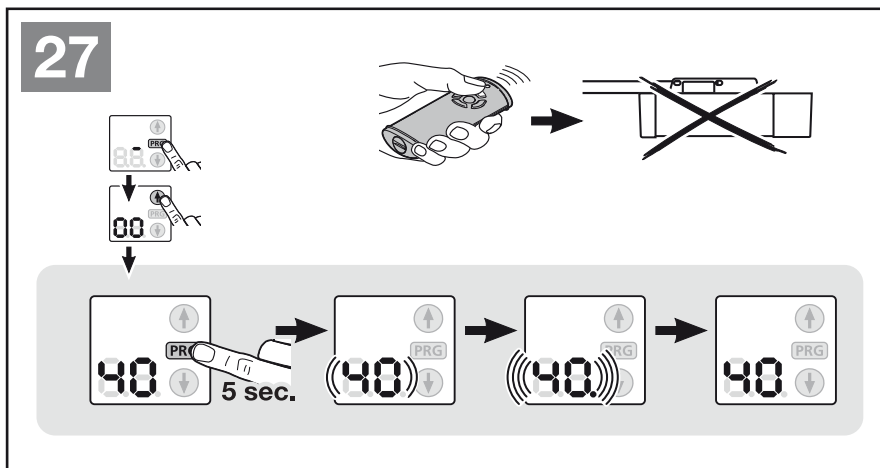
If the decimal point next to the menu number is illuminated, the control buttons are blocked.

### 6.1.15 Menu 45: Releasing the control buttons on the operator

► See Figure 30

When releasing, the buttons  and  on the operator become active again.



If only the menu number is illuminated, the control buttons are **not** blocked.



## 7 Teaching in the operator

When teaching in (Figure 21), the operator is adjusted to the door. The travel length, required force for opening and closing, and any connected safety devices are automatically taught in and saved in a power failure-proof manner. The data are only valid for this door.

### Operator light:

If the operator has not been taught in, the operator light will be illuminated for 60 seconds as soon as the mains plug is inserted in the socket. Pressing the buttons ,  or **PRG** extends the time the light is on.

The operator light flashes during the teach-in process. After the learning runs have been completed, the operator light is illuminated and switches off after 60 seconds (factory setting).

### CAUTION

#### **Danger of injury due to selection of the wrong door type**

If the wrong door type is selected, unspecific values will be pre-set. The resulting door malfunctions may cause injuries.

- ▶ Only select the menu that corresponds to the available door type.

### WARNING

#### **Danger of injury due to faulty safety equipment**

In the event of a malfunction, there is a danger of injury due to faulty safety equipment.

- ▶ After the learning runs, the person commissioning the system must check the function(s) of the safety equipment.

**The system is ready for operation only after this.**

## 8 Hand transmitter HS 5 BiSecur



### WARNING

#### **Danger of injury during door travel**

Persons may be injured by door travel if the hand transmitter is actuated.

- ▶ Make sure that the hand transmitters are kept away from children and can only be used by people who have been instructed on how the remote-control door functions!
- ▶ If the door has only one safety device, only operate the hand transmitter if you are within sight of the door!
- ▶ Only drive or pass through remote control door systems if the door is in the Open end-of-travel position!
- ▶ Never stay standing under the open door.
- ▶ Please note that unwanted door travel may occur if a hand transmitter button is accidentally pressed (e.g. if stored in a pocket/handbag).

### CAUTION

#### **Danger of injury due to unintended door travel**

Unintended door travel may occur while teaching in the radio system.

- ▶ Make sure no persons or objects are in the door's area of travel when teaching in the radio code.

### ATTENTION

#### **Functional impairment due to environmental influences**

Non-compliance with these instructions can impair the function!

Protect the hand transmitter from the following conditions:

- Direct sunlight (permissible ambient temperature: -20°C to +60°C)
- Moisture
- Dust

### NOTES:

- If there is no separate garage entrance, perform all programming changes and extensions of radio systems from inside the garage.
- After programming or extending the radio system, check the functions.
- Only use original components when putting the radio system into service or extending it.
- Local conditions may affect the range of the radio system.
- When used at the same time, GSM 900 mobile phones can affect the range.

### 8.1 Description of the hand transmitter

► See Figure 20

### 8.2 Inserting/changing the battery

► See Figure 20

#### ATTENTION

##### Destruction of the hand transmitter by leaking batteries

Batteries can leak and destroy the hand transmitter.

- Remove the battery from the hand transmitter if it is not used for a long period of time.

### 8.3 Hand transmitter operation

Each hand transmitter button is assigned to a radio code. Press the button of the hand transmitter whose radio code you want to transmit.

- The radio code is transmitted and the LED is illuminated blue for 2 seconds.

#### NOTE:

If the battery is almost empty, the LED flashes red twice

- a. before transmitting the radio code.
  - The battery **should be** replaced soon.
- b. and the radio code is not transmitted.
  - The battery **must be** replaced immediately.

### 8.4 Inheriting/transmitting a radio code

1. Press the button of the hand transmitter whose radio code you want to inherit/transmit and keep it pressed.
  - The radio code is transmitted and the LED is illuminated blue for 2 seconds then goes out.
  - After 5 seconds, the LED alternates flashing in red and blue; the radio code is transmitted.
2. If the radio code is transmitted and accepted, release the hand transmitter button.
  - The LED goes out.

#### NOTE:

You have 15 seconds to inherit / transmit the code. The process must be repeated if the radio code is not successfully inherited / transmitted within this time.

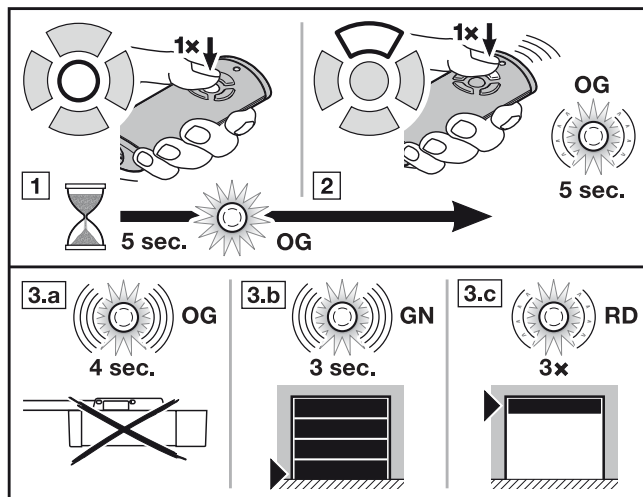
### 8.5 Querying the door position

#### 8.5.1 Manual door position query

A query of the current door position (Open / Close) is possible with this hand transmitter. For this purpose, the operator must be equipped with a bi-directional radio module and be within the range of the hand transmitter.

#### NOTE:

If a hand transmission button is pressed that does not actuate a bi-directional radio module, the door position query is aborted.

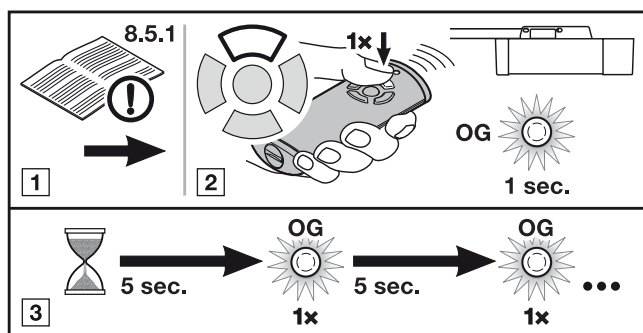


1. Press the door position query button.
  - The LED is illuminated orange for 5 seconds.
2. Within this period of time, press the hand transmitter button of the door system whose position you want to query.
  - The LED slowly flashes in orange for 5 seconds.
3. Depending on the position of the door, the respective feedback will be sent.
  - a. The LED flashes rapidly in orange for 4 seconds.
    - The operator is out of reach.
  - b. The LED flashes rapidly in green for 3 seconds.
    - Position: Door is closed
  - c. The LED flashes slowly 3 times in red.
    - Position: Door is not closed.

A new door position query is only possible after the LED stops flashing.

#### 8.5.2 Automatic feedback of the door position after manual query

If the same hand transmitter button is pressed again within 5 seconds after the manual door position query, you will receive automatic feedback on the door position as soon as the door has reached an end-of-travel position.



1. Perform a manual door position query, see section 8.5.1.
2. Press the hand transmitter button **again** as described in section 8.5.1, 2..
  - The radio code is transmitted and the LED is illuminated briefly in orange.
3. The position of the door will be queried every 5 seconds; the LED is illuminated briefly in orange.

#### NOTE:

Pressing the hand transmitter button again activates door travel if the door is not in motion.

4. If the position of the operator is known, it is automatically transmitted back.

### 8.6 Hand transmitter reset

Each hand transmitter button is assigned to a new radio code by means of the following steps.

1. Open the battery lid and remove the battery for 10 seconds.
2. Press a hand transmitter button and keep it pressed.
3. Insert the battery and close the battery lid.
  - The LED slowly flashes in blue for 4 seconds.
  - The LED flashes rapidly in blue for 2 seconds.
  - The LED is illuminated blue for a long time.
4. Release the hand transmitter button.

**All radio codes are newly assigned.**

#### NOTE:

If the hand transmitter button is released prematurely, no new radio codes are assigned.

### 8.7 LED display

#### Blue (BU)

Condition	Function
Illuminated for 2 seconds	A radio code is being transmitted
Flashes slowly	Hand transmitter is in the learn mode
Flashes quickly after slow flashing	A valid radio code was detected during the learning run
Flashes slowly for 4 seconds Flashes quickly for 2 seconds Illuminated long	Device reset is being performed or completed

#### Red (RD)

Condition	Function
Flashes 2x	The battery is almost empty
Flashes slowly 3x	Position: door is not closed

#### Blue (BU) and Red (RD)

Condition	Function
Flashing alternately	Hand transmitter is in inherit / transmit mode

#### Orange (OG)

Condition	Function
Is illuminated for 5 seconds	The door position query has been activated
Flashes slowly for 5 seconds	The position is queried
Flashes quickly for 4 seconds	The operator is out of reach
Illuminated briefly	The position is queried every 5 s

#### Green (GN)

Condition	Function
Flashes quickly for 3 seconds	Position: door is closed

### 8.8 Cleaning the hand transmitter

#### ATTENTION

##### Damaging the hand transmitter by faulty cleaning

Cleaning the hand transmitter with unsuitable cleaning agents can damage the hand transmitter housing as well as the hand transmitter buttons.

- Clean the hand transmitter with a clean, soft, damp cloth.

#### NOTE:

White hand transmitter buttons can change their colour when used regularly over an extended period of time, if they come in contact with cosmetic products (e.g. hand cream).

### 8.9 Disposal



Electrical and electronic devices as well as batteries may not be disposed of in household rubbish, but must be returned to the appropriate recycling facilities.



### 8.10 Technical data

Type	Hand transmitter HS 5 BiSecur
Frequency	868 MHz
Power supply	1 x 1.5 V battery, type: AAA (LR 03)
Perm. ambient temperature	-20 °C to +60 °C
Protection category	IP 20

### 8.11 Excerpt from the declaration of conformity for the hand transmitter

Conformity of the abovementioned product with the requirements of the directives according to article 3 of the R & TTE directives 1999/5/EC was verified by compliance with the following standards:

- EN 60950:2000
- EN 300 220-1
- EN 300 220-3
- EN 301 489-1
- EN 300 489-3

The original declaration of conformity can be requested from the manufacturer.

## 9 External radio receiver\*

If there is a limited range, the functions *impulse*, *operator light* or *partial opening* can be controlled with an external radio receiver.

If an external radio receiver is retrofitted, the data in the integrated radio module must be deleted (see section 6.1.12).

#### NOTE:

The antenna wire of external receivers should not come into contact with metal objects (nails, bracing, etc.). The best alignment to achieve an optimum range must be established by trial and error.

When used at the same time, GSM 900 mobile phones can affect the range.

\* Accessory, not included as standard equipment!



### 9.1 Teaching in hand transmitter buttons

- ▶ Follow the operating instructions for the external receiver to register the hand transmitter button for the desired function.

### 9.2 Excerpt from the declaration of conformity for the receiver

Conformity of the abovementioned product with the requirements of the directives according to article 3 of the R & TTE directives 1999/5/EC was verified by compliance with the following standards:

- EN 300 220-3
- EN 301 489-1
- EN 300 489-3

The original declaration of conformity can be requested from the manufacturer.

## 10 Operation

	<p style="text-align: center;"><b>⚠ WARNING</b></p> <p><b>Danger of injury during door travel</b> If people or objects are near the door while the door is in motion, this can lead to injuries or damage.</p> <ul style="list-style-type: none"> <li>▶ Children are not allowed to play near the door system.</li> <li>▶ Make sure that no persons or objects are in the door's area of travel.</li> <li>▶ If the door system has only one safety feature, only operate the garage door operator if you are within sight of the door's area of travel.</li> <li>▶ Monitor the door travel until the door has reached the end-of-travel position.</li> <li>▶ Only drive or pass through remote control door systems if the door is in the Open end-of-travel position!</li> <li>▶ Never stay standing under the open door.</li> </ul>

<b>⚠ CAUTION</b>
<p><b>Danger of crushing in the boom</b> Do not reach into the boom with your fingers during door travel, as this can cause crushing.</p> <ul style="list-style-type: none"> <li>▶ Do not reach into the boom during door travel</li> </ul>

<b>⚠ CAUTION</b>
<p><b>Danger of injury from the cord knob</b> If you hang on the cord knob, you may fall and injure yourself. The operator could break away and injure persons or damage objects that are located underneath, or the operator itself could be destroyed.</p> <ul style="list-style-type: none"> <li>▶ Do not hang on the cord knob with your body weight.</li> </ul>

### ⚠ CAUTION

**Danger of injury due to the hot lamp**

Touching the cold light reflector lamp during or immediately following operation can lead to burns.

- ▶ Do not touch the cold light reflector lamp if it is switched on or was recently switched on.

### ⚠ CAUTION

**Danger of injury resulting from uncontrolled door movement in the Close direction if one of the counterbalance springs breaks and the slide carriage is released.**

If a retrofit set is not installed, uncontrolled door movement in the Close direction may occur if the slide carriage is released while a counterbalance spring is broken, the door is improperly balanced or the door is not completely closed.

- ▶ The responsible fitter must install a retrofit set on the slide carriage if the following applies:
  - The standard DIN EN 13241-1 applies
  - The garage door operator is retrofitted to a Hörmann **sectional door without spring safety device (BR30)** by a technical expert.

This set includes a screw that secures the slide carriage against uncontrolled unlocking as well as a new cord knob sign with images showing how the set and the slide carriage should be handled for the two operation modes of the operator boom.

**NOTE:**

The use of an emergency release or an emergency release lock is **not possible** in conjunction with the retrofit set.

### ATTENTION

**Damage due to the cord of the mechanical release**

If the cord of the mechanical release becomes caught on a roof carrier system or other parts of the vehicle or door, this can lead to damage.

- ▶ Make sure that the cable cannot become caught.

**Heat generation due to the illumination**

As a result of heat being generated by the operator light, there is a risk of damage if the spacing is inadequate.

- ▶ The smallest distance to easily inflammable materials or heat-sensitive surfaces must be at least 0.1 m (see Figure 7).

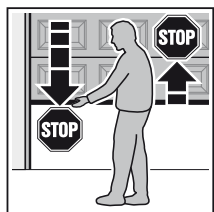
### 10.1 Instructing users

- ▶ All persons using the door system must be shown how to operate the garage door operator properly and safely.
- ▶ Demonstrate and test the mechanical release as well as the safety reversal.

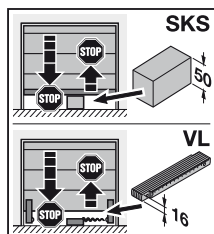


## 10.2 Function check

To check the safety reversal:



1. Stop the door with both hands while it is **closing**.  
The door system must stop and initiate the safety reversal.
2. Stop the door with both hands while it is **opening**.  
The door system must switch off.
3. In the centre of the opening, position a test object with a height of approx. 50 mm (SKS) or 16 mm (VL) and close the door.  
The door system must stop and initiate the safety reversal as soon as it reaches the obstacle.



- In the event of a failure of the safety reversal, a specialist must be commissioned immediately for the inspection and repair work.

### 10.3 Functions of various radio codes

A radio code is assigned to each hand transmitter button. In order to actuate the operator with the hand transmitter, the respective hand transmitter button must be registered in the operator for the desired function, i.e. the corresponding radio code must be transmitted to the integrated radio receiver.

#### NOTE:

If the radio code for the taught-in hand transmitter button was copied from another hand transmitter, the hand transmitter button must be pressed a second time during **initial** start-up.

#### 10.3.1 Channel 1/impulse

During normal operation, the garage door operator works with the impulse sequence control, which is triggered via an external button or the taught-in impulse radio code:

- 1st impulse: The door runs towards an end-of-travel position.
- 2nd impulse: The door stops.
- 3rd impulse: The door runs in the opposite direction.
- 4th impulse: The door stops.
- 5th impulse: The door runs in the direction of the end-of-travel position selected in the 1st impulse.

etc.

#### 10.3.2 Channel 2/light

The operator light can be switched on and off early using the taught-in *light* radio code.

#### 10.3.3 Channel 3/partial opening

If the door is **not in the partial opening** position, it is moved in the partial opening position using the *partial opening* radio code.

If the door is **in partial opening** position, it is moved to the *Close* end-of-travel position using the *partial opening* radio code and to the *Open* end-of-travel position using the *impulse* radio code.

## 10.4 Garage door operator behaviour after two consecutive high-speed Open runs

The garage door operator motor is equipped with thermal overload protection. If two fast *Open* cycles take place within two minutes, the overload protection reduces the travel speed, i.e. *Open* and *Close* runs are at the same speed. After a waiting period of two minutes, the next *Open* run will be fast again.

### 10.5 Behaviour during a power failure (without an emergency battery)

To be able to open or close the garage door by hand during a power failure, it must be disengaged from the slide carriage while the door is closed.

- See Figure 4 on page 21

### 10.6 Behaviour after the power returns (without emergency battery)

After the power returns, the slide carriage for automatic operation must be re-engaged.

- See Figure 6 on page 22

Due to safety reasons, if the power fails **during** operation, the first impulse command will always *open* the door.

### 10.7 Reference run

A reference run is done if the door position is not recognised after a power failure or if the power limit is activated 3 times in a row during travel in the *Close* direction.

The *Open* and *Close* end-of-travel positions are shown simultaneously in the display.

A reference run is always in the *Open* direction and the operator light flashes slowly.

#### NOTE:

A reference run is not done if the power limit is activated several times in the *Open* direction.

## 11 Inspection and Maintenance

The garage door operator is maintenance-free.

In the interest of your own safety, however, we recommend having the door system inspected and maintained by a qualified person in accordance with the manufacturer's specifications.

### ! WARNING

#### Danger of injury due to unexpected door travel

Unexpected door travel may occur during inspection and maintenance work if the door system is inadvertently actuated by other persons.

- Disconnect the mains plug **and** the plug of the emergency battery whenever performing work on the door system.
- Prevent the door system from being switched on again without authorisation.

Inspection and repairs may only be carried out by a qualified person. Contact your supplier for this purpose.

A visual inspection may be carried out by the operator.

- Check all safety devices without self-testing **every six months**.
- Any malfunctions and/or defects must be remedied **immediately**.

### 11.1 Tension of the toothed belt

The toothed belt of the operator boom is tensioned optimally ex-factory.

With large doors it is possible that the belt will briefly hang out of the boom profile during the start-up and slow-down phases. However, this does not constitute a technical malfunction and does not negatively affect the function and service life of the operator.

### 11.2 Replacement bulb

<b>Type</b>	Cold-light reflector lamp with safety glass and UV protection
<b>Socket</b>	GU 5.3
<b>Nominal power</b>	20 W
<b>Nominal voltage</b>	12 V
<b>Angle of reflected beam</b>	36° – 60°
<b>Diameter</b>	51 mm
<b>Lamp colour</b>	Clear

If the light is switched on, an alternating current of 12 V AC is present at the lamp socket.

- Exchange the cold-light reflector lamp only if the operator is voltage-free.

## 12 Factory reset

- See Figure 32

#### To reset to the factory settings:

1. Disconnect the mains plug and, if applicable, the plug of the emergency battery.
2. Press and hold the **PRG** button.
3. Reconnect the mains plug. The following is illuminated in the display
  - **8.8.** for one second
  - **C** for one second
  - then **U**
4. Release the **PRG** button. The operator light flashes once and then remains illuminated.
5. Adjust the operator and teach it in (see section 5).

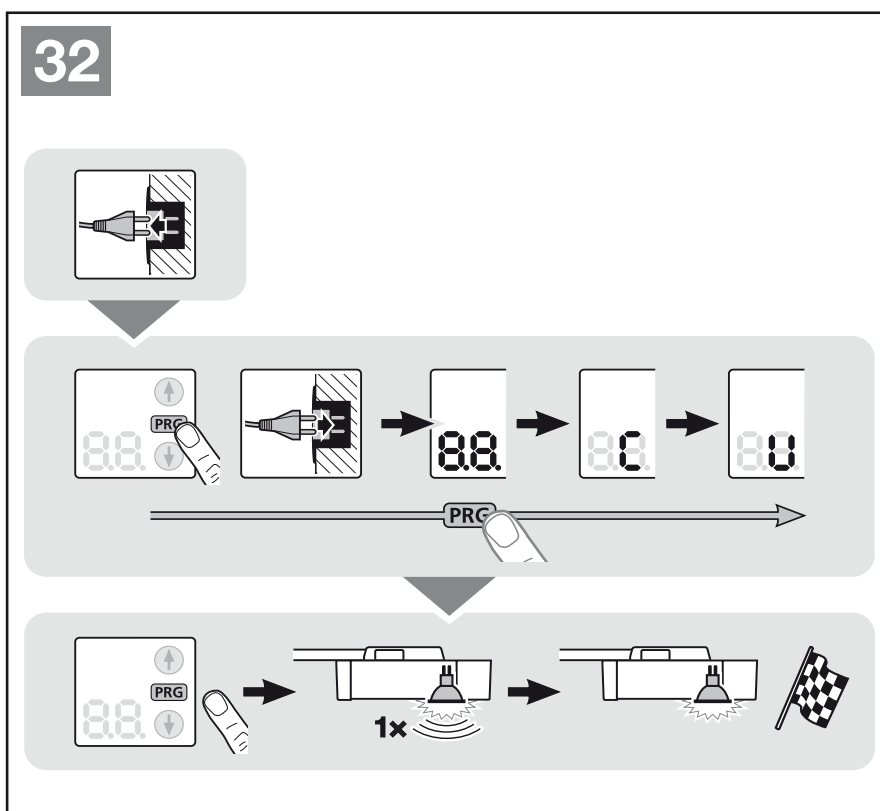
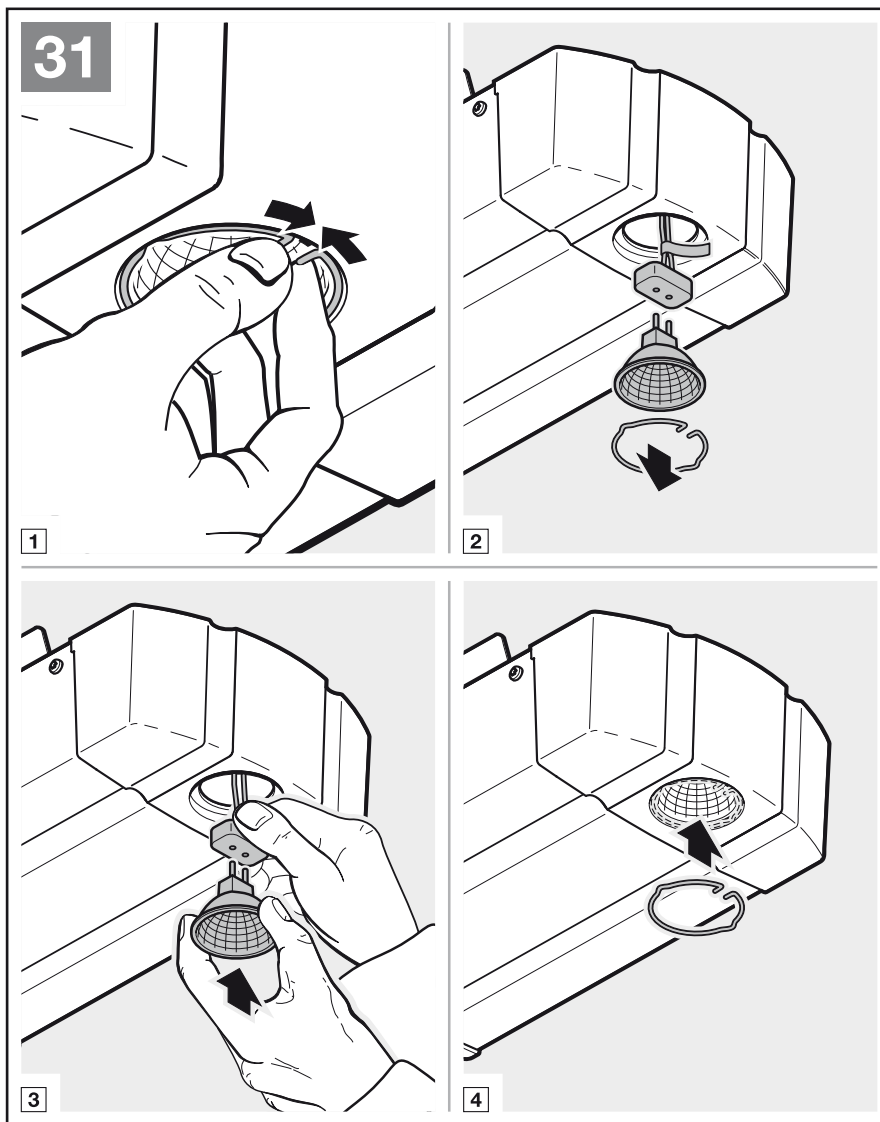
If the factory reset was not successful, the operator will automatically go back to operation mode.

#### NOTE:

The taught-in radio codes (*impulse/light/partial opening*) are not changed.

#### To delete all radio codes:

- See section 6.1.12



## 13 Dismantling and Disposal

### NOTE:

When disassembling, observe the applicable regulations regarding occupational safety.

Have a specialist dismantle the garage door operator in the reverse order of these instructions and dispose of it properly.

## 14 Warranty Conditions

### Warranty

We shall be exempt from our warranty obligations and product liability in the event that the customer carries out his own structural alterations or undertakes improper installation work or arranges for same to be carried out by others without our prior approval and contrary to the fitting guidelines we have provided. Moreover, we shall accept no responsibility for the inadvertent or negligent use of the operator and the accessories nor for improper maintenance of the door and its counterbalance. Batteries are also not covered by the warranty.

### Warranty period

In addition to the statutory warranty provided by the dealer in the sales contract, we grant the following warranty for parts from the date of purchase:

- 5 years for the operator mechanics, motor and motor control
- 2 years on radio equipment, accessories and special systems

There is no warranty on consumables (e.g. fuses, batteries, lamps). Claims made under the warranty do not extend the warranty period. For replacement parts and repairs the warranty period is six months or at least the remainder of the warranty period.

### Prerequisites

A claim under this warranty is only valid for the country in which the equipment was bought. The product must have been purchased through our authorised distribution channels. A claim under this warranty exists only for damage to the object of the contract itself. Reimbursement of expenditure for dismantling and fitting, testing of corresponding parts, as well as demands for lost profits and compensation for damages, are excluded from the warranty.

The receipt of purchase substantiates your right to claim under the warranty.

### Performance

For the duration of the warranty we shall eliminate any product defects that are proven to be attributable to a material or manufacturing fault. We pledge to replace free of charge and at our discretion the defective goods with non-defective goods, to carry out repairs, or to grant a price reduction.

Damages caused by the following are excluded:

- improper fitting and connection
- improper initial start-up and operation
- external factors such as fire, water, abnormal environmental conditions
- mechanical damage caused by accidents, falls, impacts
- negligent or intentional destruction
- normal wear or deficient maintenance
- repairs conducted by unqualified persons

- use of non-original parts
- removal or defacing of the data plate

Replaced parts become our property.

## 15 Excerpt from the Declaration of Incorporation

(as defined in EC Machinery Directive 2006/42/EC for incorporation of partly completed machinery according to annex II, part 1 B).

The product described on the reverse side has been developed, constructed and produced in accordance with the following directives:

- EC Machinery Directive 2006/42 EC
- EC Construction Products Directive 89/106/EEC
- EC Directive Low-Voltage 2006/95/EC
- EC Electromagnetic Compatibility Directive 2004/108/EC

Applied and consulted standards and specifications:

- EN ISO 13849-1, PL “c”, Cat. 2  
Safety of machinery – Safety-related parts of control systems – Part 1: General principles
- EN 60335-1/2, when applicable  
Safety of electrical appliances / Operators for doors
- EN 61000-6-3  
Electromagnetic Compatibility – Electromagnetic radiation
- EN 61000-6-2  
Electromagnetic Compatibility – Interference immunity

Partly completed machinery as defined in the EC Directive 2006/42/EC is only intended to be incorporated into or assembled with other machinery or other partly completed machinery or equipment, thereby forming machinery to which this Directive applies.

This is why this product must only be put into operation after it has been determined that the entire machine/system in which it will be installed corresponds with the guidelines of the EC Directive mentioned above.

Any modification made to this product without our express permission and approval shall render this declaration null and void.

## 16 Technical Data

<b>Mains voltage</b>	230/240 V, 50/60 Hz
<b>Stand-by</b>	Approx. 1 W
<b>Protection category</b>	Only for dry rooms
<b>Automatic safety cut-out</b>	Is automatically taught in for both directions separately
<b>End-of-travel position cut-out/force limit</b>	Self-learning, wear-free, as it is designed without mechanical switches, additionally integrated run time limitation to approx. 60 s. Automatic safety cut-out, readjusting at every door run
<b>Rated load</b>	See data label
<b>Pull and push force</b>	See data label
<b>Motor</b>	Direct current motor with hall sensor
<b>Transformer</b>	With thermal protection
<b>Connection</b>	No-screw connection technology for external equipment with 24 V DC low safety voltage, such as internal and external buttons with impulse operation
<b>Special functions</b>	<ul style="list-style-type: none"> <li>• Stop/off switch can be connected</li> <li>• Photocell or closing edge safety device can be connected</li> <li>• Option relay for warning lamp, additional external illumination can be connected via HCP bus adapter</li> </ul>
<b>Quick release</b>	Actuated from inside with pull cord in the event of a power failure
<b>Universal fittings</b>	For up-and-over doors and sectional doors
<b>Door travel speed</b>	<ul style="list-style-type: none"> <li>• In <i>CLOSE</i> direction max. 14 cm/s<sup>1)</sup></li> <li>• In <i>OPEN</i> direction max. 22 cm/s<sup>1)</sup></li> </ul>
<b>Garage door operator airborne sound emission</b>	≤ 70 dB (A)
<b>Operator boom</b>	Extremely flat at 30 mm, with integral door security kit and maintenance-free toothed belt








1) Depending on operator type, door type, door size and door leaf weight

## 17 Display of Errors/Warnings and Operating Conditions

### 17.1 Display of errors and warnings


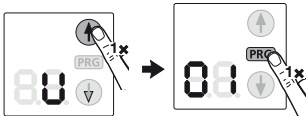


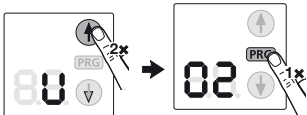

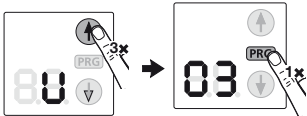

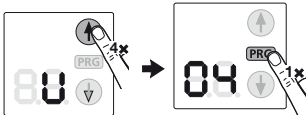

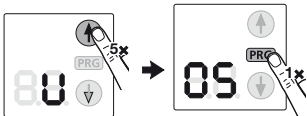
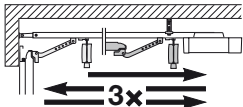
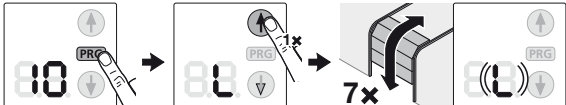

Display	Error/warning	Possible cause	Remedy
8.1 (●)	Reversal limit cannot be set	An obstacle was in the way when the SKS/VL reversal limit was set	Remove the obstacle
		The position of the reversal limit is > 200 mm before the <i>Close</i> end-of-travel position	Pressing the buttons (●) or (●) acknowledges the error. Select a position < 200 mm before the <i>Close</i> end-of-travel position
	Partial opening height cannot be set	The partial opening height is too close to the <i>Close</i> end-of-travel position ( $\leq 120$ mm slide travel)	The partial opening height must be higher
8.2 (●)	Safety equipment (photocells)	No photocell is connected	Connect a photocell or activate menu <b>60</b>
		The light beam is interrupted	Adjust the photocell
		The photocell is defective	Exchange the photocell
8.3 (●)	Power limit in <i>Close</i> direction	The door is too sluggish or does not move smoothly	Correct the door travel
		Obstacle in door area	Remove the obstacle and teach in the operator again, if necessary
8.4 (●)	Static current circuit open	The wicket door is open	Close the wicket door
		The magnet has been fitted the wrong way	Fit the magnet correctly (see the instructions for the wicket door contact)
		The testing result is not OK	Exchange the wicket door contact
		Stop UAP pressed	
8.5 (●)	Power limit in the <i>Open</i> direction	The door is too sluggish or does not move smoothly	Correct the door travel
		Obstacle in door area	Remove the obstacle and teach in the operator again, if necessary
8.6 (●)	System error	Internal error	Restore the factory setting (see section 12), teach in the operator again or exchange, if necessary
	Travel time limit	The belt is torn	Exchange the belt
		The operator is defective	Exchange the operator
8.7 (●)	Communication error	Communication with the additional print is faulty (e.g. UAP 1, ES 1, ES 2, EF 1)	Check the connecting leads and exchange, if necessary
			Check the additional print and exchange, if necessary
8.8 (●)	Travel command not possible	The operator has been blocked for the control elements and a travel command was given	Release the operator for the control elements
			Check the connection of the IT 3b
8.9 (●)	Closing edge safety device	The light beam is interrupted	Check the transmitter and receiver and exchange, if necessary, or exchange the complete closing edge safety device
		8k2 resistance contact strip is defective or not connected	Check the 8k2 resistance contact strip or connect to the operator via the 8k2-1T decoder unit
8.8 (●)	No reference point	Power failure	Move the door to the <i>Open</i> end-of-travel position
		Power limit has been triggered 3 x in a row in the <i>Close</i> direction	
8.0 (●)	The operator has not been taught in	The operator has not been taught in yet	Teach in the operator (see section 5)
8.1 (●)	Maintenance display flashes during each door run.	No error The maintenance interval set by the fitter has been exceeded.	Have the door system inspected and maintained by a qualified person in accordance with the manufacturer's specifications.

## 17.2 Display of Operating Conditions

	The operator is in the <i>Open</i> end-of-travel position		The operator is in an intermediate position
	1. The operator is currently in motion 2. The pre-warning phase is active		The operator is in the <i>Close</i> end-of-travel position
	The operator is in the partial opening position		
	Impulse input from a radio code (flashes 1 x)		Sending status feedback to the hand transmitter (flashes 1 x)

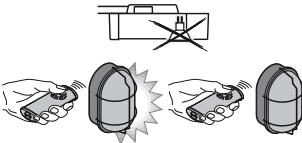
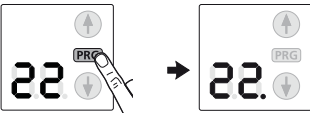
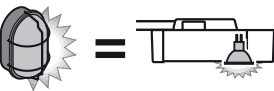


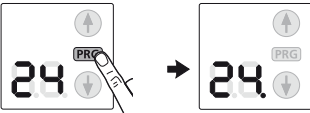
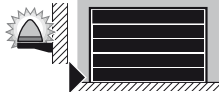
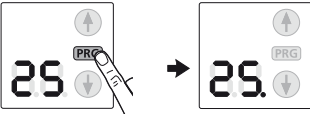
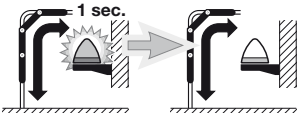
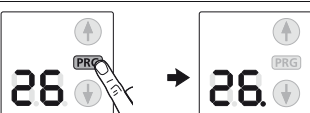
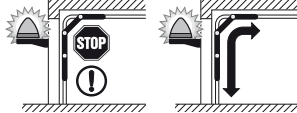
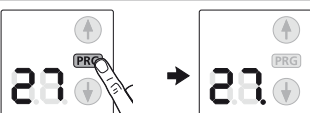

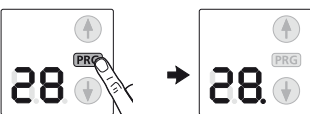
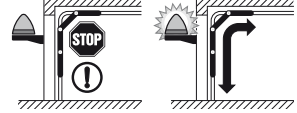
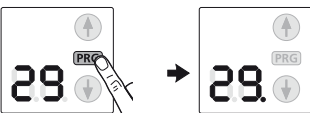
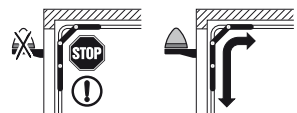

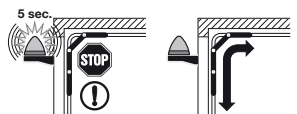
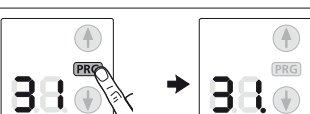

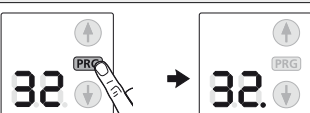

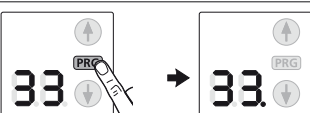

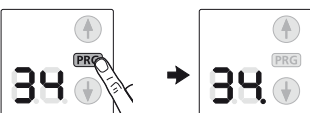
## 18 Menu and programming overview

The listed factory settings apply to sectional doors.

Symbol	Menu	Action		Note
	00			Exit programming mode
Selecting the door type				
	01			  Select door type – (all required standard settings, such as speed, soft stop, reversal behaviour of the safety devices, reversal limit, etc. are preset)
	02			
	03			
	04			
	05			
		ET 100 ET 500 only SupraMatic H		
		ST 500 only SupraMatic H		
Learning runs				
	10	 		Learning runs after service/maintenance or modifications



Symbol	Menu	Action	Note
Registering hand transmitter			
	88		Impulse 
	82		Light 
	83		Partial opening 
Querying door type			
	84		06 = door of other make
Illumination period by operator			
	85		
	86		
	87		
	88		
Illumination period by external control elements			
	89		
	20		
	28		

Symbol	Menu	Action	Note
Additional functions with relay			(HOR 1 or 3rd relay UAP 1)
	22		External light on/off
	23		Function same as operator light 
	24		Open end-of-travel position signal
	25		Close end-of-travel position signal
	26		Momentary signal on receiving the Open command
	27		Start / advance warning permanent signal
	28		Start / advance warning flashing
	29		Relay picks up during travel
Pre-warning time			
	30		
	31		
Hold-open phase for automatic timer			Photocell required
	32		
	33		
	34		

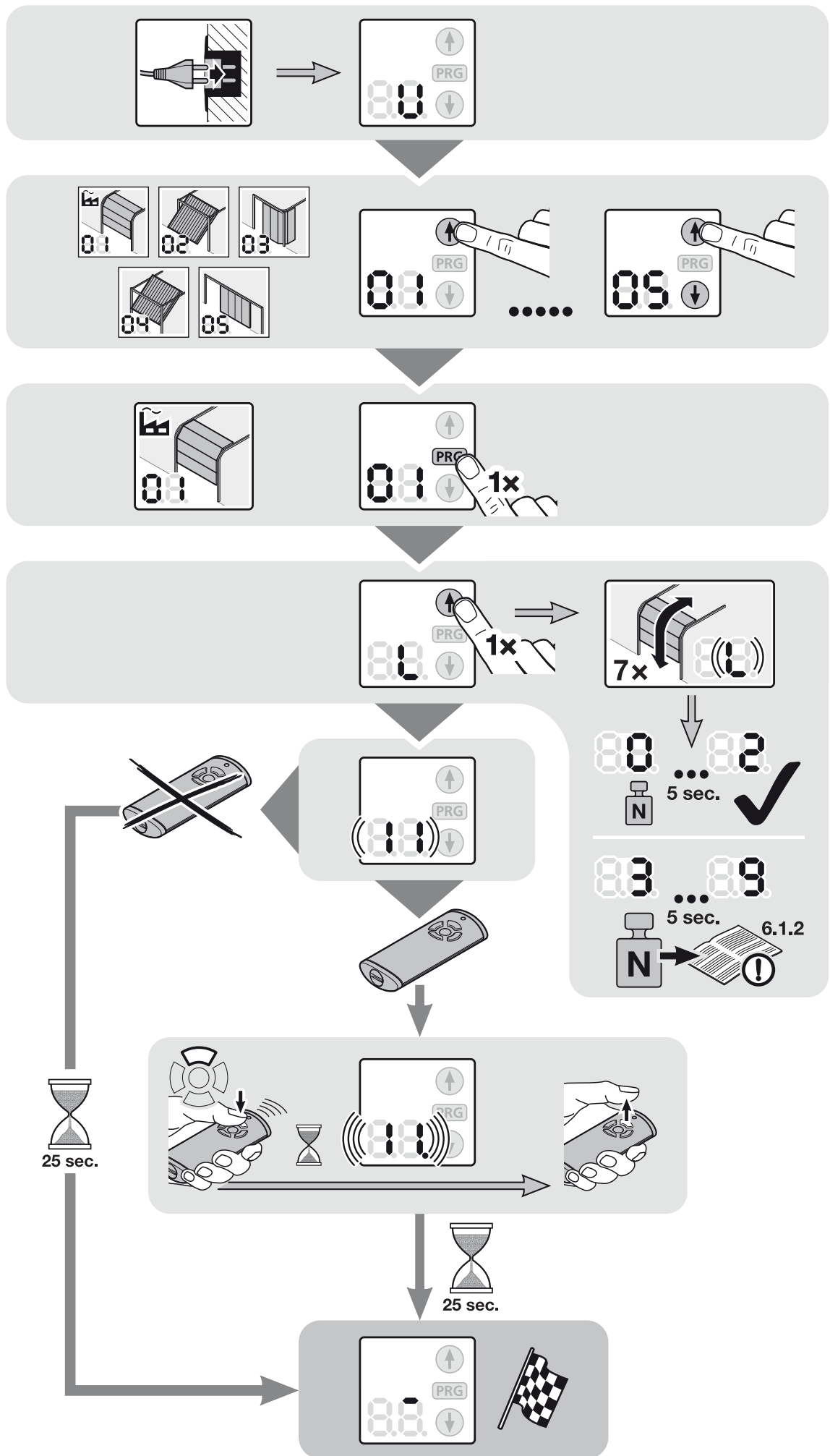
Symbol	Menu	Action	Note
	35		
	36		
Behaviour when button is pressed – hold-open phase for automatic timer			
	37		Pressing a button extends the hold-open phase 
	38		Pressing a button cancels the hold-open phase
Deleting all radio codes			
	40		All hand transmitters All functions
Automatic timer – Partial opening			
	41		
	42		
Changing the ventilation position			
	43		
Block/release control buttons			
	44		
	45		













TR10A108 RE / 05.2012

## GaraMatic 10 and 20

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