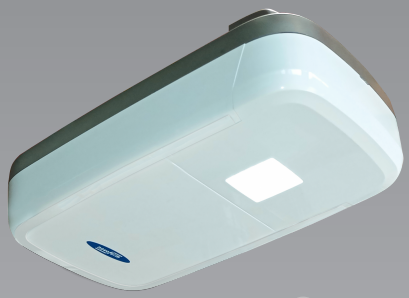
Translation of the original assembly and operating instructions

novoferm

Intelligent Door Solutions

926006-04-6-50



Novomatic

N-443 Accu

04.2026 Door drive

Contents

1 General information ... 3
1.1 Contents and intended audience ... 3
1.2 Pictograms and signal words ... 3
1.3 Hazard symbols ... 3
1.4 Further notice and information symbols ... 3

2 Safety ... 3
2.1 Safety information for door drives with accumulator ... 4
2.2 Intended use ... 4
2.3 Foreseeable misuse ... 4
2.4 Personnel qualifications ... 5
2.5 Potential hazards associated with the product ... 5

3 Product description ... 6
3.1 General product overview ... 6
3.2 Technical data ... 7

4 Assembly and installation ... 8
4.1 Preparing for installation ... 8
4.2 Mounting the garage door drive ... 8
4.3 Mounting the accumulator pack ... 9
4.4 Mounting the photovoltaic module (accessory) ... 9
4.5 Electrical connection of further components (accessory) ... 10

5 Programming the drive ... 12
5.1 Preparation ... 12
5.2 Basic programming ... 12
5.3 Program the hand-held transmitter ... 12
5.4 Menu 3 + Menu 4: Setting the end positions ... 13
5.5 Force learning cycle ... 13
5.6 Checking the force limits ... 14
5.7 Special settings ... 14
5.8 Restoring the factory settings ... 15
5.9 Cycle counter ... 15

6 Initial operation ... 16

7 Operation ... 16
7.1 Safety instructions for operation ... 16
7.2 Charging the accumulator pack ... 16
7.3 Checking the accumulator pack's state of charge ... 17
7.4 Opening or closing the garage door (in normal operation mode) ... 17
7.5 Manually opening or closing the garage door ... 17

8 Errors and faults ... 18
8.1 Troubleshooting ... 18
8.2 Diagnostic display ... 19

9 Maintenance / checks ... 20
9.1 Notes on maintenance / checks ... 20
9.2 Monthly monitoring the force limits ... 20
9.3 Check lists ... 21

10 Cleaning / care ... 24

11 Disassembly / disposal ... 24
11.1 Disassembly ... 24
11.2 Disposal ... 24

12 Warranty terms ... 24

13 Declaration of conformity and incorporation ... 25
13.1 Declaration of Incorporation in accordance with the EC Machinery Directive 2006/42/EC ... 25
13.2 Declaration of Conformity according to Directive 2014/53/EU ... 25

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1 General information

1.1 Contents and intended audience

These assembly and operating instructions describe the garage door drive of the N-443 Accu series (hereinafter referred to as "product"). The assembly and operating instructions are intended for technicians that install and maintain the product, and for consumers that use the product on a daily base.

These assembly and operating instructions only refer to the control via hand-held transmitter. Other devices work in the same way.

1.1.1 Illustrations

The illustrations in these assembly and operating instructions help you to better understand the descriptions and procedures. The illustrations only serve as examples and may deviate slightly from your product's actual appearance.

1.2 Pictograms and signal words

Important information in these assembly and operating instructions is marked with the following pictograms.

⚠ DANGER

DANGER

... indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

WARNING

... indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION

CAUTION

... indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

1.3 Hazard symbols

Danger!

This sign indicates an immediate risk of the death or injury of persons

Warning of electrical voltage!

This symbol indicates dangers to the life and health of persons due to electrical voltage when handling the system.

Crush hazard to limbs !

This sign indicates hazardous situations with a limb crush hazard.

Crush hazard to the whole body!

This sign indicates hazardous situations with a crush hazard to the whole body.

1.4 Further notice and information symbols

NOTICE

NOTICE

... indicates important information (e.g. material damage), but does not indicate dangers.

Info!

Information marked with this symbol helps you to carry out your tasks quickly and safely.

Follow the manual

These symbols indicate that the assembly and operating instructions, especially the "Safety" chapter and the "Safety information for door drives with accumulator", must be observed.

This symbol indicates that the garage door drive is designed for a cycle sequence of 2 cycles per hour.

1 Refers to a graphic of the corresponding assembly step on the A3 Instruction poster and to the "Connection diagram overview" chapter.

2 Safety

Observe the following safety information:

⚠ WARNING

Risk of injury when disregarding the safety information and instructions!

Failure to observe the safety information and instructions can cause an electric shock, fire and / or severe injuries.

- Following the safety information and directives given in these assembly and operating instructions helps to avoid personal injuries and material damage while working on and with the product.
- Read and comply with all safety information and instructions.

- All guidelines and instructions for the garage door drive (installation, operation and maintenance, etc.) must be followed.
- Only use the product for the intended use as mentioned in these instructions.
- Keep all safety information and instructions for future reference.
- Installation work may only be carried out by qualified technicians.
- Observe all applicable national regulations.
- Never make any modifications or changes to the product that have not been expressly approved by the manufacturer.
- Only use genuine spare parts of the manufacturer. Incorrect or faulty spare parts can cause damage, malfunctions or even a total failure of the product.

- This product can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance. Cleaning and maintenance shall not be made by children without supervision.
- Failure to comply with the safety information and directives given in these instructions or with the accident prevention regulations and general safety regulations relevant to the field of application shall exempt the manufacturer or its representative from all liability and shall render any damage claims null and void.

2.1 Safety information for door drives with accumulator

- Read the operating instructions before charging the accumulator.
- This supplied appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance.
- Only charge the accumulator with the charger supplied by the manufacturer. There is a fire hazard when a charging device suited for a certain type of accumulators is used with other accumulators.
- Never use the supplied charger to charge non-rechargeable batteries.
- Only use accumulators of the manufacturer. Using other types of accumulators can cause injuries and fire hazard.
- When used incorrectly, liquids may leak from the accumulator. Avoid contact with the liquid. In case of accidental contact rinse with water. If the liquid gets in contact with your eyes, additionally seek medical assistance. Leaking accumulator fluid can cause skin irritations or burns.
- Do not use damaged or modified accumulators. Damages to or modifications on accumulators can cause unpredictable events and lead to fire, explosion or risk of injuries.
- Never expose an accumulator to fire or high temperatures. Fire or temperatures above 130 °C can cause an explosion.
- Follow all instructions for the charging process and never charge the accumulator beyond the temperature range as indicated in the operating instructions. Charging incorrectly or beyond the permitted temperature range can damage the accumulator and increase the risk of fire.
- Never charge the accumulator at ambient temperatures below 15 °C or above 45 °C.
- Only charge the accumulator in dry rooms, on well-ventilated surfaces and protected from direct sunlight.
- Regularly check the charger for damage, especially the cable, plug and housing. If the battery charger is damaged, it must not be used again until it has been repaired.
- Only use the supplied charger to charge the supplied 12 V accumulator pack with a capacity of 14 Ah (6 cells). The accumulator voltage must match the accumulator charging voltage of the charger.

2.2 Intended use

The product is designed exclusively for opening and closing spring-balanced or weight-balanced garage doors. It may not be used for garage doors without spring-balancing or weight-balancing mechanisms.

The product is compatible with Novoferm products only.

Never make any modifications or changes to the product that have not been expressly approved by the manufacturer.

2.3 Foreseeable misuse

Any use other than described in chapter Intended use is regarded as reasonably foreseeable misuse. This includes but is not limited to:

- using the product as a drive for sliding door constructions
- using the product for garage doors without spring-balancing or weight-balancing mechanisms

Any damage or injury as a result of reasonably foreseeable misuse or of not following the assembly and operating instructions will render the manufacturer's liability null and void.

2.4 Personnel qualifications

Only personnel who are familiar with these assembly and operating instructions and the dangers associated with handling this product may use this product. The individual activities require different personnel qualifications listed in the following table.

Activities	Operating personnel	Skilled workers[a] with relevant training, e.g. industrial mechanic	Skilled electrician[b]
Installation, assembly, commissioning		X	X
Electrical installation			X
Operation	X		
Cleaning	X		
Maintenance	X	X	X
Work on the electrical system (troubleshooting, repair & deinstallation)			X
Work on the mechanical system (troubleshooting & repair)		X	
Disposal	X	X	X

a. A skilled worker is a person who, due to his/her professional training, his knowledge and experience as well as due to his/her knowledge of the relevant regulations, is able to judge the work assigned to him/her as well as to identify possible hazards.

b. Electrically skilled personnel must be able to read and understand electric circuit diagrams, to put electrical systems into service and to maintain them, to wire control cabinets, to ensure the functionality of electrical components and to identify possible hazards from electrical and electronic systems.

2.5 Potential hazards associated with the product

The product has undergone a risk assessment. The product's design and construction, which are based on this risk assessment, correspond to the current state-of-the-art.
The product is safe to operate when used as intended. Nevertheless, residual risks remain.

⚠ WARNING

Warning of electrical voltage

Prior to starting working on the product, detach the connection cable from the accumulator!

⚠ WARNING

Warning of electrical voltage

There is a short circuit hazard caused by liquids entering the casing! Make sure no water or other liquids ingress into the casing.

⚠ WARNING

Warning of dangerous explosive material

Never expose the accumulator to temperatures above 45 °C! Never let the battery contact with water or fire! Avoid direct sunlight or humidity. There is an explosion hazard!

⚠ WARNING

Crush and impact hazard at the garage door!

During the force learning cycle, the drive automatically learns the normal mechanical force required to open and close the garage door. Force limits are deactivated until the conclusion of the learning cycle.

The door movement will not be stopped by an obstruction!

- Keep a sufficient distance from the entire path of motion of the garage door!
- Only interrupt the procedure in case of danger.

3 Product description

3.1 General product overview

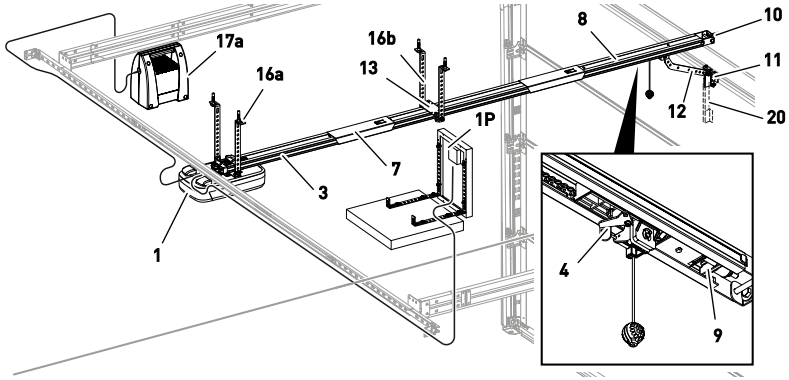


Fig. 1: Product overview – assembled

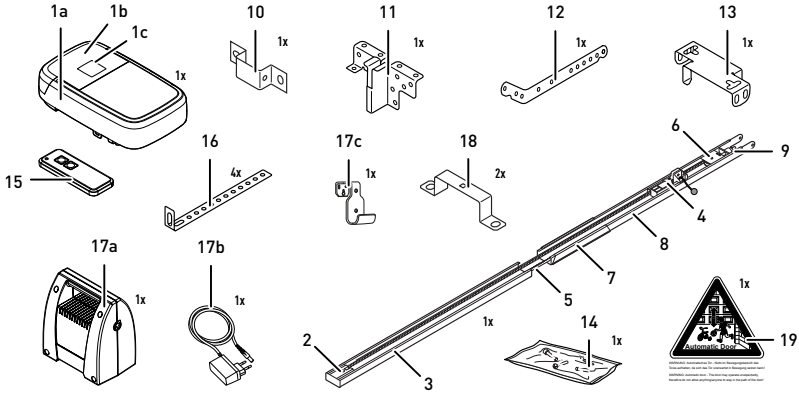


Fig. 2: Product overview – individual parts

1a. Drive head
1b. Service flap
1c. Rating plate
2. Pinion*
3. Rail (model example) drive side
4. Carriage*
5. Toothed belt or chain*
6. Deflection roller*
7. Rail connector (model example)*
8. Rail (model example) door side*
9. Tensioner*
10. Wall bracket
11. Door connector attachment
12. Linking bar
13. Central support
14. Bag of screws
15. Handheld transmitter (depending on the model)*
16a. Ceiling mountings on drive head
16b. Support straps track
17a. Accumulator pack
17b. Charger adapter (accumulator pack)
17c. Holder (accumulator pack)
18. Mounting bracket
19. Warning label
20. Telescopic fitting for sectional doors*
1P. Photovoltaic module*

*Optional

In the factory setting, the service flap of the drive is not pre-assembled. The scope of delivery is determined by the product configuration.

3.2 Technical data

General	
Control unit:	N-443 Accu
Operating mode:	Pulsed operation, remote-controlled
Max. door size:	8 m^2
Max. door weight:	130 kg
Rated load capacity:	120 N
Max. load capacity:	400 N
Electrical data	
Rated voltage:	12 V DC ⎓
Power consumption standby:	3.5 mA / <50 mW
Power consumption max. operation:	150 W
Max. time until standby:	240 seconds
Cycles	
Max. cycles / hour:	2
Max. cycles / day:	4
Max. cycles total:	12000
Surroundings	
Type of protection:	IP20, for dry rooms only
Sound level:	< 70 dBA
Temperature range:	-20 °C +60 °C
Safety according to EN 13849-1	
Input STOP-A:	Cat. 2 / PL = C

Radio receiver

f = 433.92 MHz, RX Cat. = 1.5

Supported protocols: AES

Accumulator pack (standard)	
Type	Lead-acid accumulator (Pb)
Temperature range for accumulator pack:	-15 °C +45 °C
Rated voltage	12 V DC ⎓
Nominal capacity	14 Ah
Capacity	168 Wh
Charging current	max. 1 A
Charging time	12–18 hours
Fuse	20 A

Charger	
Input:	
Nominal voltage	100 – 240 V / 50 Hz
Output:	
Rated DC output:	1 A
Nominal voltage	15 V DC ⎓
Protection class	II (double insulation) / ⧈
Optional solar panel	
Max. open-circuit voltage:	25 V DC ⎓
Max. output current:	1 A
Manufacturer	
Company:	Novoferm tormatic GmbH
Address:	Eisenhüttenweg 6 44145 Dortmund Germany www.tormatic.de

4 Assembly and installation

4.1 Preparing for installation

⚠ CAUTION

Impact or falling hazard!

Persons can be hit or knocked over by the garage door.

- Ensure that the door does not project into public footpaths or roads during installation.

⚠ CAUTION

Crush hazard!

Some parts of the latching devices on the existing garage door can form pinch or shear points.

- When you convert the garage door to an automatic drive for the first time, the existing locking mechanisms have to be dismounted prior to the assembly.

NOTICE

Check the supplied screws and wall plugs to make sure that they are suitable for the structural condition on the installation site.

- Check the door for stability. If necessary, tighten the screws and nuts at the door.
- Check the door for correct movement. Lubricate shafts and bearings. Additionally, also check the pretension of the springs, and adjust if necessary.
- Dismantle any door latches (bolt plate and catches).
- For garages without a second entrance, an emergency release (accessory) is required.
- For garages with a wicket door, install the wicket door contact.
- Stationary control devices must be installed at a height of at least 1.5 m and within sight of the door, but away from moving parts.
- After installation, make sure that no parts of the door protrude into public footpaths or roads.

4.2 Mounting the garage door drive

Follow the instructions as shown on the A3 Instruction poster.

1. **Inserting the rail**

   Fold out the rail (3 and 8) to its full length. Push the rail connector (7) centrally over the joints. Re-tension the chain or the toothed belt if necessary (fig. 1a).

   Fix the rail connector by bending the two tabs upwards (fig. 1b).

2. **Installing the mounting brackets**

   Mount the drive head (1) to the rail (3, fig. 2) using the mounting brackets (18).

3. **Installing the centre suspension**

   Mount the centre suspension (13) to the rail (fig. 3).

4. **Mounting the connector attachment**

   Mount the connector attachment (11) to the garage door (fig. 4).

5. **Mounting the wall bracket**

   Establish the clearance at opening or closing of the garage door. Install the wall bracket 25 mm above the highest point of the door (10, fig. 5).

6. **Mounting the rail and ceiling mountings**

   Mount the rail (3 and 8) to the wall bracket (10, fig. 6a). Mount the ceiling mountings (16) to the centre bracket (13) and to the drive head (1, fig. 6c and fig. 6d). Then, mount the ceiling mountings (16) to the ceiling.

7. **Connecting the linking bar**

   Connect the linking bar (12) between the carriage (4) and the garage door connector attachment (11, fig. 7).

8. **Routing the antenna**

   Take the antenna out of the holder and feed it outwards through the feed-through. If necessary, punch through the feed-through with a suitable tool (e.g. a pointed / sharp pencil) beforehand (fig. 8).

9. **Mounting the service flap**

   Place the service flap (1b) on the opening on the drive head and press the service flap down on both sides until it engages (fig. 9).

10. Warning sticker

Attach the warning sticker (19) to the inside of the garage door so that it is easily visible (fig. 10).

WARNING: Automatic door – Do not stand in the movement area of the door, because it may start unexpectedly!

11. Programming

For programming, fold down the service flap (1b) on the drive head (fig. 11).

4.3 Mounting the accumulator pack

Follow the instructions as shown on the Instruction poster in the "Accumulator pack" section.

1. Installation position

Ensure that the distance between drive head and accumulator pack (17a) does not exceed 2 m (fig. 1).

2. Option: Hanging up the accumulator pack (17a) on the lateral rail (fig. 2a).

Mount the accumulator pack holder (17c) behind the lateral rail. Ensure that the screw head (31) points to the inside (towards the running surface of the rail) (fig. 2b).

3. Option: Hanging up the accumulator pack on the side wall (fig. 3a).

Mount the accumulator pack holder (17c) to the wall with appropriate plugs (23) and screws (21) (fig. 3b).

4. Charging the accumulator pack (17a).

If necessary, charge the accumulator pack (17a) according to the chapter "Charging the accumulator pack) (fig. 4).

5. Hanging up the accumulator pack.

Place the accumulator pack (17a) on the holder (17c) and connect it to the drive head (fig. 5).

4.4 Mounting the photovoltaic module (accessory)

Observe the following information for mounting the photovoltaic module:

- Only use genuine photovoltaic modules of the manufacturer.
- When choosing the mounting location, make sure that no shadowing is caused by plans, trees or buildings and ensure the photovoltaic module pointing towards the southern direction.
- Use a cable suitable for outdoor installations or install a cold-resistant PVC cable in a protective tube.
- Follow the instructions as shown on the Instruction poster.

Follow the instructions as shown on the Instruction poster in the section "Photovoltaic Module (optional)".

1. Preinstallation of the photovoltaic module

Mount two angle brackets (2P, fig. 1) on the rear of the photovoltaic module (1P).

2. Option: Wall mounting (fig. 2)

Take the remaining angle brackets (2P) for marking the drilling positions on the wall. Observe the correct distance dimension between the drill holes (fig. 2a).

Drill the drill holes and mount two angle brackets (2P) to the respective wall (fig. 2b).

Mount the photovoltaic module (1P) by screwing the angle brackets (2P) of the photovoltaic module together with the angle brackets on the wall (fig. 2c).

3. Option: Roof mounting (flat roof, fig. 3)

Transfer the positions of the angle brackets (2P) to a support plate. Paving slabs are ideally suited for this purpose. Observe the correct distance dimension between the drill holes. Drill the corresponding holes into the support plate (fig. 3a). **Note: On no account should you drill holes into the garage roof. This can cause leakages.**

Screw the two remaining angle drills (2P) with the two angle drills (2P) of the photovoltaic module (1P, fig. 3b) as shown.

Mount the preinstalled photovoltaic module (1P) to the support plate (fig. 3c).

4. Electrical connection

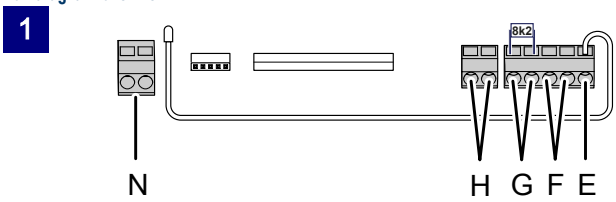
Install the connection cable to the drive head.

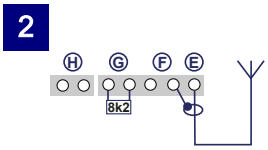
Connect the connection line on terminal (N). Ensure the correct polarity. Please also see chapter "Connecting the garage door drive to electrical power and controls".

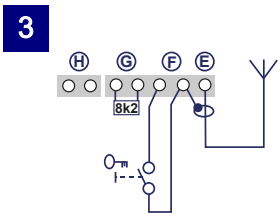
4.5 Electrical connection of further components (accessory)

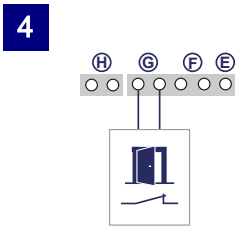
If necessary, open the service flap (1b) to access the connection terminals on the drive head (1a).

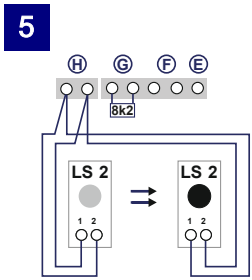
4.5.1 Connection diagram overview

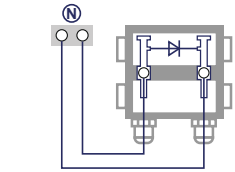












No.	Terminal	Description
1		Overview of terminal assignment at the drive head.
2	E	Connector for antenna. When using an external antenna, the shield must be placed on the terminal that is adjacent on the left (F).
3	F	Connector for external pulse generator (accessories, e.g. key switch or code keypad).
4	G	Connection for wicket door contact (accessory) or emergency stop. The drive is stopped or the start-up is suppressed via this input. Only supports wicket door contacts with 8k2 resistor (e.g. ENSS 8200 or Extra 412)
5	H	Input for photoelectric sensor LS2.
6	N	Connection for photovoltaic module (optional)

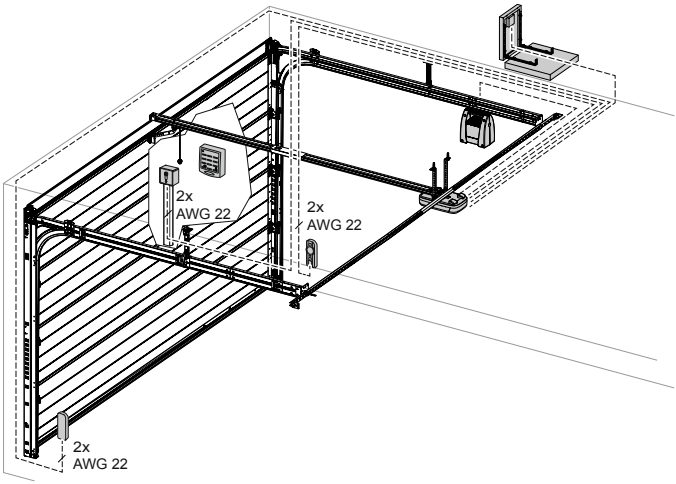


Fig. 3: Example installation of accessories

4.5.2 Pulse generator and external safety devices

In situations of increased requirements in terms of personal protection, we recommend, in addition to the internal power limitation of the drive, the installation of a 2-wire photoelectric sensor. For further information on our range of accessories, please refer to our sales literature or consult your specialist dealer.

NOTICE

Before using the drive for the first time, test it to make sure that it is working properly and safely (see chapter Maintenance / Checks)

5 Programming the drive

5.1 Preparation

1. Make sure that the garage door is securely engaged in the carriage.
2. Make sure that the antenna is correctly positioned (see chapter "Mounting the garage door drive").
3. Make sure that you have all hand-held transmitters for this garage door at hand.
4. Make sure that the accumulator pack is charged.
5. Connect the cable between the drive head and the accumulator pack.
6. Open the cover at the drive head.

5.2 Basic programming

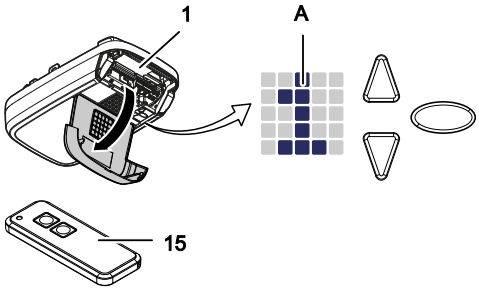


Fig. 4: Control elements

A LED matrix
1 Drive
15 Hand-held transmitter
Programming navigation button
Programming navigation button
Start button door OPEN/door CLOSE
Programming button

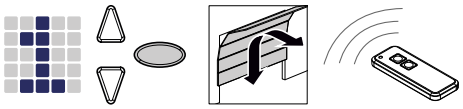
Programming the control unit is menu-driven.

- Pressing the programming button opens the menu. The LED matrix indicates the menu step.
- After approx. 2 seconds, the LED matrix display starts flashing and the setting can be changed using buttons and .
- By pressing the programming button , the set value is stored.
- Outside the menu (no LED matrix display), the button can be used to generate a start pulse.

5.3 Program the hand-held transmitter

A maximum of 30 button commands can be taught via various hand-held transmitters.

5.3.1 Menu 1: Start function via the hand-held transmitter



1. Press the programming button briefly once.

⇨ Menu 1 is displayed.

2. When the LED matrix display flashes, press the hand-held transmitter button with which you will later start the drive and keep the button pressed until the LED matrix display stops flashing.

NOTICE

Up to 30 codes can be learned.
(Example: 15x start and 15x light).

5.3.2 Menu 2: Light function via the hand-held transmitter

You can program a button of the hand-held transmitter for the light function. When pressing this button, the work light (internal LED lighting) is switched on or off. The duration of lighting corresponds to the setting in menu 7. Then the work light goes out.

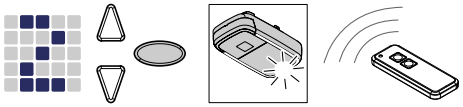


Fig. 5: Programming the light function for the hand-held transmitter

1. Press the programming button briefly twice.

⇨ Menu 2 is displayed.

2. Press the button on the hand-held transmitter to control the light and keep it pressed until the LED matrix display stops flashing.

NOTICE

Up to 30 codes can be learned.
(Example: 15x start and 15x light).

5.3.3 Deleting all hand transmitters programmed for the drive

All hand-held transmitters that have been programmed on the control unit can be deleted at once from the control unit.

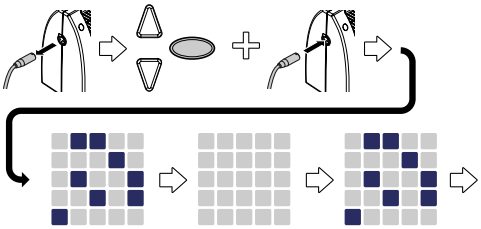


Fig. 6: Deleting all hand-held transmitters programmed for the drive

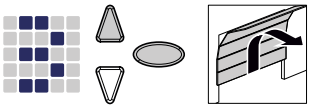
1. Disconnect the power supply by removing the cable between accumulator pack and drive head.

If a solar panel is connected, it may take a few seconds for the drive to switch off. Please wait for this to happen.

2. Press and hold the programming button .
3. Reinsert the cable between the accumulator pack and the drive head whilst continuing to hold down the programming button .

⇨ All hand-held transmitters programmed for the drive are deleted.

5.4 Menu 3 + Menu 4: Setting the end positions



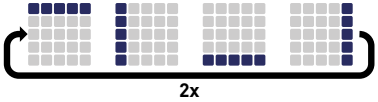
1. Keep the programming button pressed for approx. 3 seconds.

⇨ Menu is displayed.

2. As soon as the LED matrix display flashes, press the button and check if the garage door moves to the OPEN position.

NOTICE

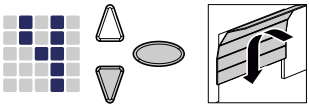
If the garage door moves in the wrong direction, initiate a change of direction by keeping the programming button pressed in for approximately 5 seconds until a chaser light appears.



3. Keep the button pressed until the garage door has reached the desired end position OPEN. If necessary, press the button to correct the position.
4. Once the garage door is in the desired end position OPEN, press the programming button .

⇨ Menu is displayed.

5. When the LED matrix display flashes, press and hold the button until the garage door has reached the desired end position CLOSE. If necessary, press the button to correct the position.



6. Once the garage door is in the desired end position CLOSE, press the programming button .

⇨ The number for the force learning cycle is displayed.

7. Continue with the force learning cycle.

5.5 Force learning cycle

⚠ WARNING

Crush and impact hazard at the garage door!

During the force learning cycle, the drive automatically learns the normal mechanical force required to open and close the garage door. Force limits are deactivated until the conclusion of the learning cycle. The door movement will not be stopped by an obstruction!

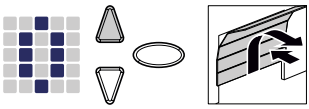
- Keep a sufficient distance from the entire path of motion of the garage door!

NOTICE

- During the force learning cycle the LED matrix display shows the number . Do not interrupt this procedure. After completing the force learning cycle, the number on the LED matrix must disappear.
- Should the number not disappear, repeat the procedure.
- The force learning cycle always starts from the end position CLOSE.
- During the force learning cycle, the LED lighting pulsates.
- If the learning cycle has not been completed after 5 force learning cycles, readjust the upper and lower position and check the door mechanics.

NOTICE

- Every time the garage door springs are replaced, the force learning cycle must be carried out again.



1. Press the ▲ button or use the set hand-held transmitter. The garage door moves from the end position CLOSE to the end position OPEN.
2. Press the ▲ button again or use the set hand-held transmitter. The garage door moves from the end position OPEN to the end position CLOSE. After approximately 2 seconds, the 0 on the LED matrix disappears.

5.6 Checking the force limits

NOTICE

- After completing the force learning cycles, the force limits need to be checked.
- The force limits must be checked once a month.

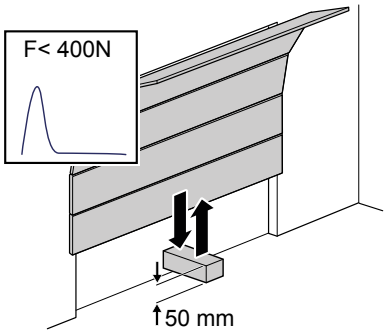


Fig. 7: Checking the force limits

1. Place a force gauge or a suitable obstruction (e.g. the drive's cardboard box) in the closing area of the door.
2. Close the garage door. The garage door moves to the end position CLOSE. When the garage door reaches the obstruction, it must stop and move back to the end position OPEN.
3. If the door can lift persons (e.g. openings greater than 50 mm or treads), the force limiting unit must also be checked in the opening direction: For additional load of the door with 20 kg of mass, the drive has to stop.

NOTICE

If the obstruction is not detected or if the force values are not complied with, the force limit needs to be set according to chapter Menu 5 + Menu 6: Force limits for opening and closing / delete force learning cycle.

5.7 Special settings

5.7.1 Opening the "Special settings" menu

1. To open the menu for special settings, keep the programming button ⬭ pressed for approximately 3 seconds.

⇨ The number 3 is displayed.

2. Press the programming button ⬭ again.

⇨ The number 4 is displayed.

3. Keep the programming button ⬭ pressed again for approximately 3 seconds.

⇨ The first menu 5 of the special settings is displayed.

5.7.2 Menu 5 + Menu 6: Force limits for opening and closing / repeating the force learning cycle

Changing the force limit

⚠ WARNING

Crush hazard at the door!

If the force limits are set too high, there is a risk of personal injury.

- The force on the main closing edge must not exceed 400 N for a maximum of 750 ms!

We recommend selecting the according door type in menu 8 before carrying out the force learning cycle.

The force limit settings for the opening and closing cycle can be adapted in the menu 5 and 6. Values from 0 to 9 can be set. Carry out the following steps to change the force limit:

1. Select menu 5.

⇨ After approximately 2 seconds, the display flashes and the set value for the force limit for opening appears.

2. Adjust the setting using the buttons ▲ and ▽.

⇨ A high value reduces the sensitivity of the force limit.

⇨ A low value increases the sensitivity of the force limit.

3. Press the programming button ⬭. Menu 8 is displayed. After approximately 2 seconds, the display flashes and the set value for the force limit for closure appears.
4. Adjust the setting using the ▲ and ▽ buttons.
5. Press the programming button ⬭.

⇨ Menu 7 is displayed.

Repeating the force learning cycle

You can additionally repeat the present force learning cycle in menu 5. The end positions are maintained in this process and do not have to be set again. Follow the steps below to delete the present force learning cycle:

1. Select menu 5.

⇨ After approximately 2 seconds, the display flashes and the set value for the force limit for opening appears.

2. Press the programming button for 3 seconds.

⇨ A chaser light appears and the force learning cycle is can be re-started.

⇨ To indicate that the drive is in force learning cycle mode, the 0 is shown on the display

3. Carry out a force learning cycle in accordance with the instructions given in the "Force learning cycle" chapter.

5.7.3 Menu 7: Adjusting the light phases

1. Select menu 7.

⇨ After approximately 2 seconds, the display flashes and the set value for light time appears.

2. Adjust the setting using the buttons.

Value	Light time
0*	30 s
1	60 s
2	90 s
*default setting	

3. Press the programming button.

⇨ Menu is displayed.

5.7.4 Menu 8: Adapting the soft run mode

NOTICE

After the setting was changed, the force learning cycle must be repeated.

1. Select menu 8.

⇨ After approximately 2 seconds, the display flashes and the set value appears. The factory setting is "0".

2. Adjust the setting using the buttons.

Menu value	Closing speed
0*	100 %
1	90 %
2	80 %
*default setting	

3. Press the programming button.

⇨ Menu is displayed.

5.7.5 Menu 9: Accumulator type settings

1. Select menu 9.

⇨ After approximately 2 seconds, the display flashes and the set value for light time appears.

2. Adjust the setting using the buttons.

Value	Accumulator type settings
0*	Standard
1	Type 2
2	Type 3
3	Type 4
*default setting	

3. Press the programming button.

⇨ Menu 0 is displayed.

5.8 Restoring the factory settings

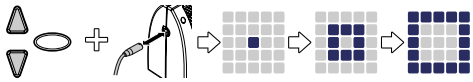


Fig. 8: Factory settings

1. Press the and buttons at the same time.
2. Press both buttons for approximately 3 seconds while removing the cable between accumulator pack and drive head and while re-inserting the cable again.

⇨ Press the two buttons until the animation has finished.

If a solar panel is connected, it may take a few seconds for the drive to switch off. Please wait for this to happen.

5.9 Cycle counter

The cycle counter stores the number of OPEN/CLOSE actions powered by the drive. To read the meter, hold the button at the drive head pressed for 3 seconds until you see a figure.

The digital display shows the numbers starting from the highest to the lowest decimal place consecutively. At the end of the digit sequence, a horizontal line appears on the display, for example: 3456 movements, 3 4 5 6 –.

This function is not available in stand by mode.

6 Initial operation

In order to ensure safe and trouble-free functioning of the door drive it is essential that all parts have been mounted in accordance with the assembly instructions. After having completed the assembly and programming check the garage door drive as well as the garage door for safe and proper functioning by executing all operating functions. If it was possible to execute all operating functions perfectly and all safety devices are working properly, the garage door drive is ready for operation.

Proceed as follows to check a possibly available wicket door contact:

Open the wicket door when the drive is switched on. The LED matrix display shows the number **1**.

Furthermore, observe the following commissioning instructions:

- The installer must fill out the commissioning report (see "Check lists" chapter) completely and give it to the operating company / owner before the operating company / owner puts the system into service. This recommendation includes manually operated doors.
- The operating company / owner is obliged to store the commissioning report as well as the proof of inspection and maintenance of the door system (see "Check lists" chapter) together with the documentation for the garage door drive for the entire service life of the system.
- Modifications or changes to the garage door drive must be permitted by the manufacturer. Alterations to the garage door drive (in as far as permitted) must also be documented.

7 Operation

7.1 Safety instructions for operation

Observe the following safety information for operation:

- All operators must be instructed on the handling and be familiar with the applicable safety regulations.
- Comply with the accident prevention regulations and general safety regulations relevant to the field of application.
- Keep hand-held transmitters out of reach of children.

⚠ WARNING

Impact and crush hazard due to the door movement!

The opening and closing processes must be monitored.

- The garage door must be visible from the place of operation.
- Make sure that no persons or objects are in the travel path of the garage door.

7.2 Charging the accumulator pack

NOTICE

The accumulator can be damaged when charging improperly.

Never charge the accumulator at ambient temperatures below 15 °C or above 45 °C.

The accumulator is partially charged upon delivery to prevent damaging the accumulator by deep discharge.

Before using the accumulator for the first time and after long idle periods, the accumulator pack must be recharged. Only charge the accumulator pack with the provided charger adapter. For charging, proceed as follows:

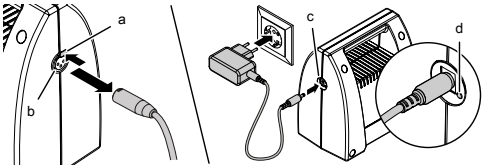


Fig. 9: Charging the accumulator pack

1. Disconnect the cable from the accumulator pack to the drive head by pressing and holding the unlock key (a) on the connector socket (b) of the accumulator pack and by pulling out the plug.
2. Set the garage door to hand operation as described in chapter "Manually opening or closing the garage door" if you like to close the garage door for the duration of the charging process.
3. Take the accumulator pack down from the holder.
4. Connect the charger adapter to the accumulator pack by inserting the plug of the charger adapter into the charging socket (c) on the accumulator pack.
5. Insert the charger adapter into a properly secured mains socket.

⇨ The LED (d) is illuminated in red: the accumulator is being charged

⇨ The LED (d) is illuminated in blue: The end-of-charge voltage has been reached and the accumulator is in trickle charge mode. It is advisable to leave the accumulator connected for a few more hours.

6. Pull out the charger adapter from the mains socket by holding the adapter on the mains plug and by disconnecting it from the charging socket (c).

⇨ The accumulator pack and the charger adapter may have been heated up during charging. Allow the accumulator pack to cool down to room temperature.

7. Place the charged accumulator pack on the holder and reconnect it with the drive head cable.
8. Reset the garage door operation back to motor operation in case you had it in hand operation before.

⇨ The accumulator pack is charged and again ready for operation.

7.3 Checking the accumulator pack's state of charge

NOTICE

Deep discharges result in premature failure of the accumulator.

Avoid long idle periods of more than 6 months. Long idle periods result in self-discharge.

The operation time of the accumulator pack is 30 days (4 openings a day). However, the operation time decreases at extreme temperatures. Example: at -10 °C, the operation time decreases to 50 %.

For a convenient recharge and for maintaining the operating life of the accumulator, we recommend to install a photovoltaic module (accessory).

Observe the accumulator pack's state of charge on a regular basis and recharge the accumulator early. The state of charge is shown on the drive display at every start.

Display	Acoustic signal	State of charge
	Sustained sound	Charging voltage too high*
8, 9	–	Accumulator fully charged
4 - 7	–	Medium state of charge
3	1x briefly	30 %, recharge
2	2x briefly	20 %, recharge urgently**
1	3x briefly	10 %, drive may stop**
0	Xx briefly	< 5 %, drive no longer operating

* Have the system checked by an expert!

** Lighting flashing

7.4 Opening or closing the garage door (in normal operation mode)

The garage door can be operated by different devices (hand-held transmitter, key switch etc.). These assembly and operating instructions only refer to the control via hand-held transmitter. Other devices work in the same way.

1. Briefly press the button on the hand-held transmitter once. Depending on the current position, the garage door moves to the OPEN or CLOSE position.
2. If needed, briefly press the button on the hand-held transmitter to stop the movement of the garage door.
3. If needed, press the button on the hand-held transmitter once again to make the garage door move in the other direction.

A button on the hand-held transmitter can be set with the light function. By using the hand-held transmitter the light will be turned on, independently from the drive unit.

7.5 Manually opening or closing the garage door

⚠ WARNING

Impact and crush hazard due to uncontrolled door movement!

When moving the door by hand (with the drive decoupled), it can move in an uncontrolled fashion, especially when the setting is incorrect or the door springs are defective.

- Contact the responsible supplier/manufacturer if you see that the door is not balanced correctly.

NOTICE

In the process of installing the system, locking elements of the garage door have been dismantled. They should be reinstalled if the garage door is to be operated manually over a longer period of time. This way the garage door can be locked when closed.

NOTICE

The ball handle must be located 1.80 m max. above the floor.

During adjustments to the garage door, or during power failure, the garage door can be manually opened or closed.

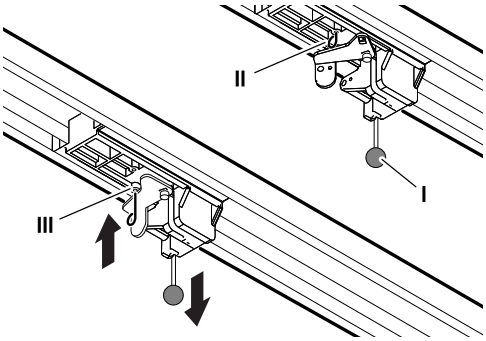


Fig. 10: Disengaging and engaging the drive

To move the garage door, manually pull on the pull cord (I) on the carriage and detach the carriage from the toothed belt or chain. The garage door can now be moved manually.

To operate the gate manually for a longer period of time, you can insert the locking pin (II) into the carriage (III) in the bore provided for this purpose. To restore normal operation, loosen the locking pin (II).

8 Errors and faults

8.1 Troubleshooting

⚠ WARNING

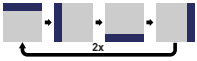
Impact and crush hazard due to uncontrolled door movement!

During troubleshooting, when the drive is decoupled or if the door springs are damaged, the door can carry out uncontrolled movements.

- Before carrying out any work on the drive, disconnect the cable connecting the drive to the accumulator pack! (see also chapter 7.2, fig. 9)
- Secure the door against uncontrolled movements.

Malfunction	Possible causes	Remedy
Door does not fully open / close.	Door mechanics have changed.	Have the door checked.
	Closing / opening force is set too low.	Correct the force settings, see chapter "Menu 5 + 6".
	End position is set incorrectly.	Have the end position reset.
After closing, the door opens again slightly.	Door blocks just before reaching the closed position.	Remove the obstruction.
	End position is set incorrectly.	Have the end position CLOSE reset.
Drive does not move although the motor is running.	Drive is disengaged.	Re-engage the drive, see chapter "Manually opening or closing the garage door".
Door does not respond to hand-held transmitter pulses, but to pulses from push buttons or other pulse generators.	Hand-held transmitter battery is empty.	Replace the hand-held transmitter battery.
	Antenna is missing or misaligned.	Plug in / align the antenna.
	No hand-held transmitter programmed.	Program the hand-held transmitter, see "menu 1".
Door responds neither to hand-held transmitter pulses nor to other pulse generators.	See diagnostic display.	See diagnostic display.
Insufficient range of hand-held transmitter.	Hand-held transmitter battery is empty.	Replace the hand-held transmitter battery.
	Antenna is missing or misaligned.	Plug in / align the antenna.
	On-site shielding of reception signal.	Connect the external antenna (accessory).
Toothed belt or drive are noisy.	Toothed belt is dirty.	Clean the toothed belt. Spray with silicone spray (Do not use oil-containing substances).
	Toothed belt is tensioned too tightly.	Relieve the toothed belt of tension.

8.2 Diagnostic display

Value	State	Diagnosis / remedy
	All hand-held transmitters have been deleted.	–
	A factory reset has been performed.	–
	The menu has been exited.	–
	The rotation direction of the motor has been changed.	–
	Display shows a "0" during the next opening and closing cycle and then goes out.	The drive is carrying out a learning cycle for the force limit. Caution: During this travel cycle the drive does not monitor the force.
	Display continues to show a "0".	The force learning cycle has not been completed and must be repeated. Possibly, the resistance in one of the end positions is too high. Reset the end positions.
	Door does not open or close.	Interruption at STOP-A or activation of an external safety device (e.g. wicket door).
	Door does not close.	Activation of the external safety device (e.g. photoelectric sensor).
	Door setting and learning cycle have not been completed correctly.	You must use menu stages 3 and 4 to complete the door settings correctly and then complete the force learning cycle.
	Permanent signal at the input of connection terminal F.	Start signal is not detected, or continuous pulse (e.g. button jammed).
	The distance set is too long.	Set a new distance in menus 3 and 4.
	The drive path set is too short.	Set the drive path in menus 3 and 4 again.
	An error occurred during the self-test. Door does not open or close.	Unplug the cable connecting the drive to the accumulator pack (see chapter 7.2, fig. 9) and plug it back in after approx. 10 seconds.
	System error	Call a specialist company and charge them with the repair work.
	Motor standstill.	The motor does not rotate. Call a specialist company to repair the motor.
	The wicket door contact test failed.	Check the cables and clamping connections of the wicket door contact.

9 Maintenance / checks

9.1 Notes on maintenance / checks

NOTICE

For your safety, we recommend that the door system be checked as needed – however, at least once a year – in accordance with the check list of the door system in the "Check lists" chapter. The check can be carried out by a person with the corresponding qualification certificate or by a specialist company.

NOTICE

After an inspection, the user must do any necessary maintenance.

- All inspection and maintenance activities are to be documented in the supplied proof of inspection and maintenance of the door system (see "Check lists" chapter).
- The manufacturer's specified inspection and maintenance intervals must be observed.
- The manufacturer's guarantee becomes null and void in the event that the specified inspection/maintenance activities have not been carried out properly.
- Modifications or changes to the garage door drive must be permitted by the manufacturer. Alterations to the garage door drive (in as far as permitted) must also be documented.

9.2 Monthly monitoring the force limits

In an end position or after restarting, the integrated power disconnection is tested automatically.

⚠ WARNING

Crush hazard at the door!

If the force limits are set too high, there is a risk of personal injury.

- The force on the main closing edge must not exceed 400 N for a maximum of 750 ms!

Check the force limits every month as described in chapter "Checking the force limits" and document them in accordance with Proof of inspection and maintenance of the door system.

9.3 Check lists

9.3.1 Commissioning report

Owner / operating company of the system:	
Location of door system:	
Drive data	
Manufacturer:	
Drive type:	
Operating mode:	
Manufacture date:	
Door data	
Type:	
Serial no.:	
Year of construction:	
Door dimensions:	
Door leaf weight:	
Installation and initial operation	
Company, installer:	
Name, installer:	
Initial operation on:	
Signature:	
Other:	
Changes:	

9.3.2 Check list for door system

Confirm features/checks at start-up with a check mark.

No.	Equipment	Present?	Features to be tested	Note
1.0	**Garage door**			
1.1	Manual opening and closing		Smooth running	
1.2	Fastenings / connections		State / seat	
1.3	Pivots / joints		State / lubrication	
1.4	Track rollers / track roller holders		State / lubrication	
1.5	Seals / sliding contact strips		State / seat	
1.6	Door frame / door guide		Alignment / fastening	
1.7	Door leaf		Alignment / state	
2.0	**Weight**			
2.1	Springs		State / seat / setting	
2.1.1	Spring strips		State	
2.1.2	Spring break device		State / rating plate	
2.1.3	Safety elements (spring connector,...)		State / seat	
2.2	Wire cables		State / seat	
2.2.1	Mounting		State / seat	
2.2.2	Cable drum			
2.3	Fall protection		State	
2.4	Concentricity of T-shaft		State	
3.0	**Drive / control**			
3.1	Drive / rail / bracket			
3.2	Electrical cables / connections			
3.3	Emergency release		Function / state	
3.4	Control devices, push buttons / hand-held transmitters		Function / state	
3.5	Limit stop		State / position	
4.0	**Safeguarding of crush and shearing zones**			
4.1	Force limit		Stops and reverses	
4.2	Protection against lifting of persons		Door leaf stops at 20 kg	
4.3	Site conditions		Safely distances	
5.0	**Other equipment**			
5.1	Latching / lock		Function / state	
5.2	Wicket door		Function / state	
5.2.1	Wicket door contact		Function / state	
5.2.2	Door closer		Function / state	
5.3	Traffic light control		Function / state	
5.4	Photoelectric sensors		Function / state	
5.5	Closing edge safety device		Function / state	
6.0	**Documentation of the operator / owner**			
6.1	Rating plate / CE marking		complete / readable	
6.2	Door system's Declaration of Conformity		complete / readable	
6.3	Installation, Operation and Maintenance Instructions		complete / readable	

9.3.3 Proof of inspection and maintenance of the door system

Date	Work performed / necessary measures	Test carried out	Defects rectified
		Signature / company address	Signature / company address

10 Cleaning / care

⚠ WARNING

Impact and crush hazard due to inadvertent door movement!

When cleaning the drive, inadvertent movement of the door may be activated.

- Before carrying out any work on the drive, unplug the cable connecting the drive to the accumulator pack (see chapter 7.2, fig. 9).

If necessary, wipe the drive with a dry cloth.

11 Disassembly / disposal

11.1 Disassembly

Disassembly is carried out in reverse order of the assembly instructions in the **Installation** chapter.

11.2 Disposal

For disposal, disassemble the door system and separate it into its individual material groups:

- plastics
- non-ferrous metals (e.g. copper scrap)
- electric scrap (motors)
- steel

Dispose of all materials according to the national legislation! Dispose of packaging material in an environmentally friendly way and in accordance with the applicable local disposal regulations.

The symbol with the crossed-out waste bin on waste electrical or electronic equipment stipulates that this equipment must not be disposed of with the household waste at the end of its life. You will find collection points for free return of waste electrical and electronic equipment in your vicinity. The addresses can be obtained from your municipality or local administration. The separate collection of waste electrical and electronic equipment aims to enable the re-use, recycling and other forms of recovery of waste equipment as well as to prevent negative effects for the environment and human health caused by the disposal of hazardous substances potentially contained in the equipment.

Pb In the European Union, batteries and accumulators must not be treated as domestic waste, but must be disposed of professionally in accordance with Regulation (EU) 2023/1542 of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries. Please dispose of batteries and accumulators according to the relevant legal requirements.

UK (The following applies for the United Kingdom)

According to Waste Electrical and Electronic Equipment Regulations 2013 (2013/3113) electronic devices that are no longer usable must be collected separately and disposed of in an environmentally friendly manner.

12 Warranty terms

Please note that the scope of the warranty is restricted to private use of the system. We define private use as a maximum of 4 cycles (OPEN/CLOSE) per day. The full text of the warranty terms can be found at:

https://www.novoferm.de/garantiebestimmungen

Docusign Envelope ID: 0D445181-7857-4016-B629-A3CFC558C5C2

13 Declaration of conformity and incorporation

13.1 Declaration of Incorporation in accordance with the EC Machinery Directive 2006/42/EC

Manufacturer's Declaration of Incorporation (Translation of the Original)

For the installation of partly completed machinery in terms of the EC Machinery Directive 2006/42/EC, Annex II Part 1 Section B We hereby declare that the following partly completed machinery – as far as possible with respect to the scope of supply – complies with the essential requirements of the EC Machinery Directive. The partly completed machinery is only intended to be incorporated into a door system to thus form a complete machine within the meaning of the EC Machinery Directive. The door system must not be put into service until the final machinery has been declared in conformity with the provisions of the EC Machinery Directive and the EC Declaration of Conformity according to Annex II A is available. We furthermore declare that the relevant technical documentation for this partly completed machinery has been compiled in accordance with Annex VII, Part B, and undertake to transmit it through our Documentation Department in response to a reasoned request by the competent national authorities.

Product model / product:	N-443 Accu
Product type:	Garage door drive
Year of manufacture from:	07/2025
Relevant EC/EU directives:	2014/30/EU 2011/65/EU RoHS Directive including Annex II according to (EU) 2015/863
Fulfilled requirements of the EC Machinery Directive 2006/42/EC, Annex I, Part 1:	1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.4, 1.2.5, 1.2.6, 1.3.2, 1.3.4, 1.5.1, 1.5.2, 1.5.4, 1.5.5; 1.5.6, 1.6.1, 1.6.2, 1.6.3; 1.7
Applied harmonised standards:	EN ISO 12100:2010; EN ISO 13849-1:2015, PL "C" Cat. 2; EN 60335-1:2012/A15:2021; EN 60335-2-95:2015/A1:2015; EN 61000-6-3:2007/A1:2011; EN 61000-6-2:2005/AC:2005; EN 12453:2017+A1:2021; EN 300 220-2 V3.1.1
Other applied technical standards and specifications:	EN 300220-1:2017; EN 301489-1 V2.1.1
Manufacturer and name of the authorised representative of the technical documentation:	Novoferm tormatic GmbH Eisenhüttenweg 6 44145 Dortmund
Place and date of issue:	Dortmund, 30.03.2026

Christian Hasenest, Managing Director

13.2 Declaration of Conformity according to Directive 2014/53/EU

The optional radio system complies with directive 2014/53/EU. The full text of the declaration of conformity can be found at:
https://www.tormatic.de/dokumentation/

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novoferm
Intelligent Door Solutions

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