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About this manual

Contents and intended audience

This manual gives information about the W-600 series garage door operator (hereinafter referred to as 'the product'). The manual is intended for technicians that install and maintain the product, and for consumers that use the product on a daily base.

Language

This manual was prepared in German. Any other language version is a translation of this original.

Symbols used in this manual



Warning:

This indicates a possibly dangerous situation that might lead to serious injury.



Warning high voltage:

This indicates work steps that may be carried out only by a trained and skilled electrician.



Caution:

This indicates a possibly dangerous situation that might lead to material damage to the product.

Use according to purpose

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

Safety

General safety precautions

**Warnung:**

Make sure that you read this manual and that you understand its contents before you start working with the product.

**Warnung:**

Keep this manual with the product for future reference.

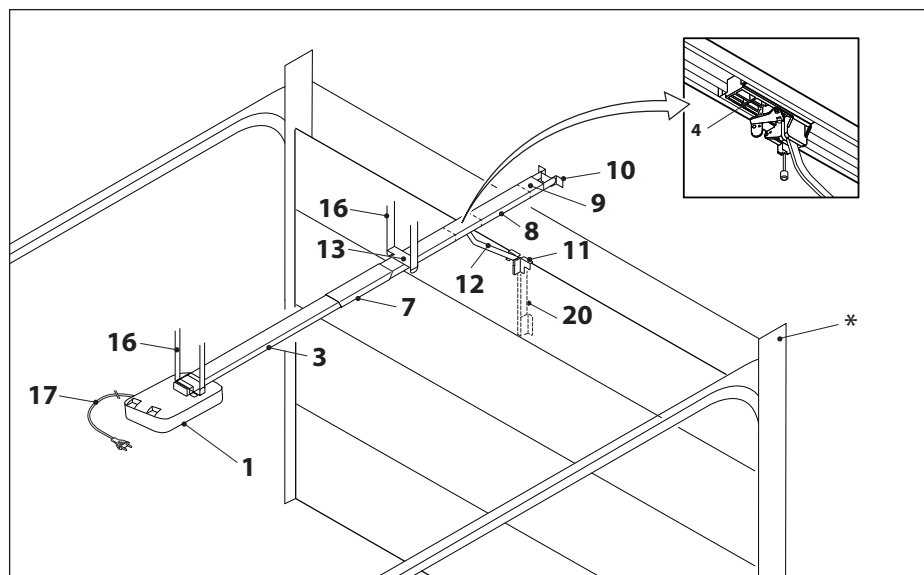
1. Obey the instructions in this manual. Incorrect installation or incorrect use can cause serious injury or damage to the product.
2. Any damage or injury as a result of not following the instructions in this manual will render the manufacturer's liability null and void.
3. Only use the product for the intended use as mentioned in this manual.
See CE declaration.
4. Please also see the safety instructions for operation (see Operation, page 48).
5. Installation must only be carried out about by qualified technicians.

Specific safety precautions

6. The product runs on high voltage. Before you start work on electrical systems, do the following:
 1. Make sure that the product is disconnected from the electrical power supply.
 2. Make sure that the power cannot be reconnected unintendedly during work on the electrical system.
7. Never make any modifications or changes to the product that have not been expressly approved by the manufacturer.
8. The design and execution of the product based on this corresponds to state-of-the-art technology.
9. Only use genuine spare parts of the manufacturer. Wrong or faulty spare parts can cause damage, malfunctions or even a total failure of the product.

Product description

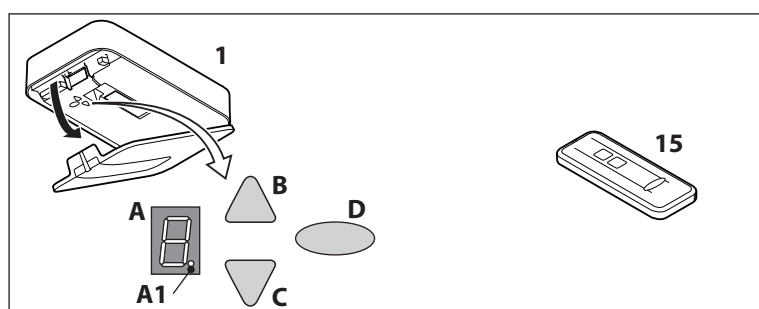
General product overview



* Example garage door illustration

- | | |
|------------------------------------|--|
| 1. Drive head including LED module | 11. Door connector attachment |
| 3. Rail (model example) drive side | 12. Linking bar |
| 4. Carriage | 13. Central support |
| 7. Rail connector (model example) | 16. Support straps drive head |
| 8. Rail (model example) door side | 16. Support straps track |
| 9. Tensioner | 17. Mains cable, 1.2 m |
| 10. Wall bracket | 20. Telescopic fitting for sectional doors (accessory) |

Control elements



- | |
|---|
| A. Numerical display (A1 digital point) |
| C. OPEN / Start button |
| B. CLOSE button |
| D. Program button (PROG button) |
| 1. Drive head |
| 15. Hand transmitter |

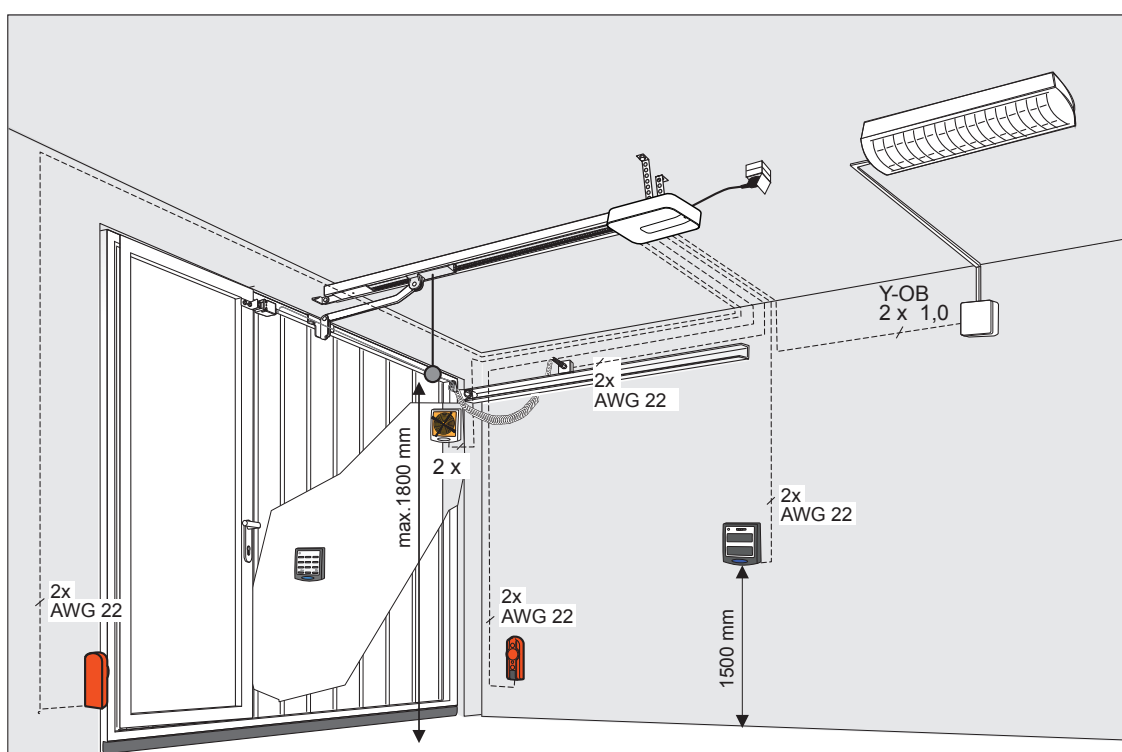
Functioning of integrated safety unit

If the closing garage door encounters an obstruction, the closing motion stops and the door opens a few centimetres again, or, depending on its position, completely.

If the opening garage door encounters an obstruction, the door stops and moves back for approximately 1 second.

Installation

Drive and accessories



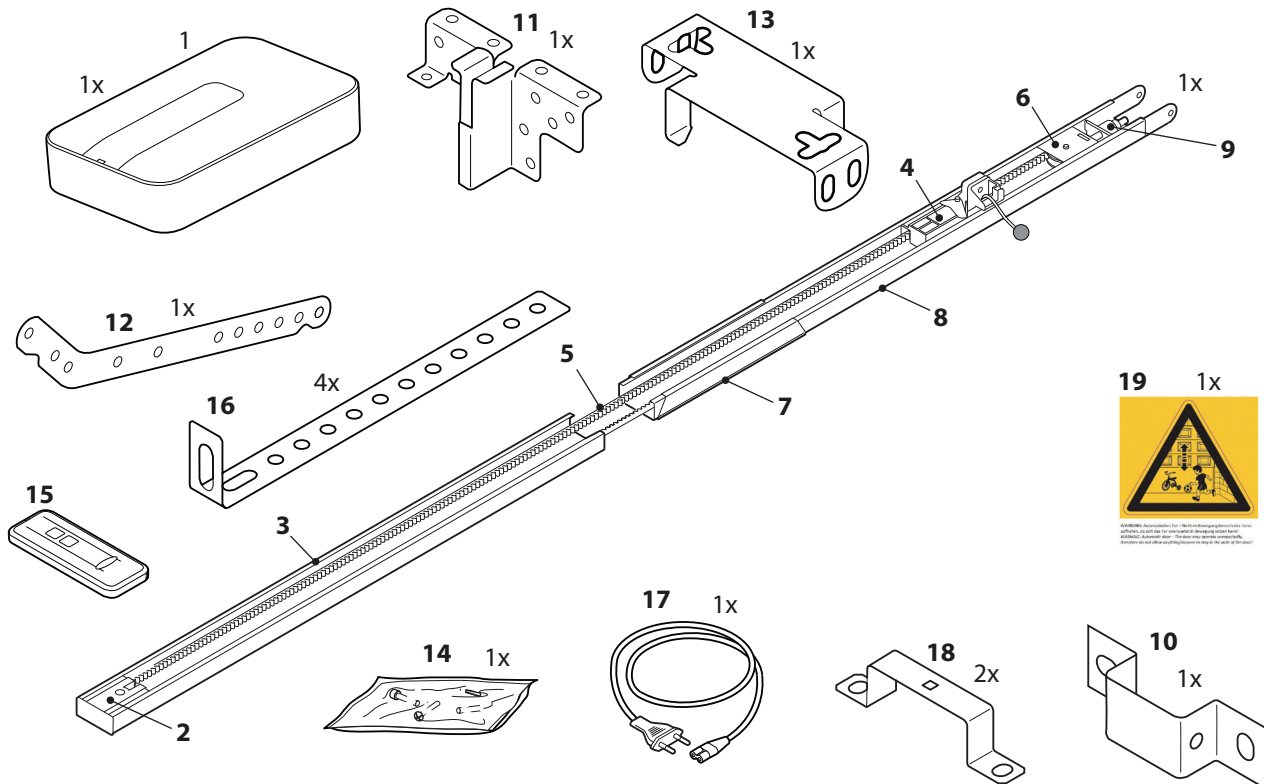
Safety instructions for installation

- Installation must only be carried out about by qualified technicians.
- Read these installation instructions before you start installing the product.

TTZ Directive - Burglar resistance for garage doors

In order to comply with the TTZ guideline, corresponding accessories are necessary for increased burglar protection. These accessories can be ordered separately. Please use our Secü Kit and follow the instructions WN 020690-45-5-32. Also follow the instructions WN 902004-21-6-50 as installation instructions for TTZ guideline burglary resistance for garage doors.

Scope of delivery



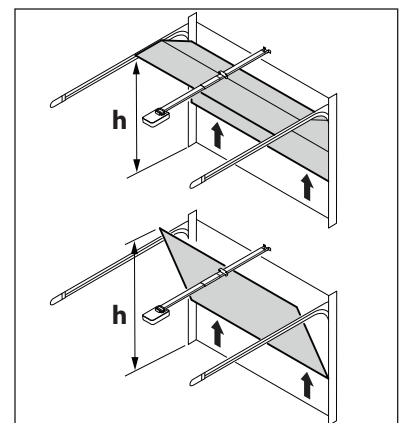
- | | |
|-------------------------------------|-------------------------------|
| 1. Drive head including LED module | 11. Door connector attachment |
| 2. Pinion* | 12. Linking bar |
| 3. Rail (model example) drive side* | 13. Central support |
| 4. Carriage* | 14. Bag of screws |
| 5. Toothed belt or chain* | 15. Hand transmitter* |
| 6. Deflection roller* | 16. Ceiling mounting |
| 7. Rail connector (model example)* | 17. Mains cable, 1.2 m length |
| 8. Rail (model example) door side* | 18. Mounting bracket |
| 9. Tensioner* | 19. Warning label |
| 10. Wall bracket* | |

*Optional

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

Prepare the site for installation

1. The maximal distance between the drive head and wall socket is 1.2 m.
2. Check the stability of the garage door. If necessary, tighten the screws and nuts of the garage door.
3. Make sure that the garage door runs smoothly.
 - Lubricate shafts and bearings.
 - Check the pretension of the springs and adjust if necessary.
4. Establish the clearance at opening and closing of the garage door (h).



- Close the garage door and disable any existing locks. Dismantle the locks if necessary.



Warning:

Some parts of the latching devices on the existing garage door can form pinch or shear points. If necessary, remove hazardous parts before installation.

- For garages without a second entrance, an emergency release is required (accessory).
- If the garage door is a wicket/pass door, install the wicket door contact first.



Warning:

Do not allow parts of the gate to enter public footpaths or roads.

Mount the garage door operator

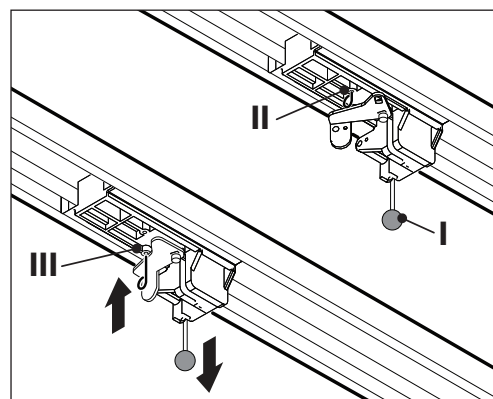
Follow instructions as shown in the A3 Instruction poster.

Step	Installation
1	Fold out the track to its full length (3&8). Push the track connector (7) centrally over the joints. The chain or the toothed belt may have to be re-stressed. See illustration.
2	Mount the center suspension (13) to the guide rail. Mount the mounting brackets (18) on the drive head (1).
3	Mount the connector attachment (11) to the garage door.
4	Mount the wall bracket (10).
5a 5c/d	Mount the guide rail (3&8) to the wall bracket (10). Mount the ceiling mountings (16) to the center bracket (13) and to the drive head (1). Then, mount the ceiling mountings (16) to the ceiling.
6	Connect the linking bar (12) between the carriage (4) and the garage door connector attachment (11).
7	For programming, open the cover of the drive head with a screwdriver or a similar tool.
8	Attach the warning sticker (19) to the inside of the garage door so that it is easily visible.

Disengage the carriage

During the proceeding work, it may be necessary to disengage the carriage from the connector attachment. This can be done without the need to disconnect the linking bar.

- To move the garage door, manually pull on the pull cord (I) on the carriage.
- Disconnect the carriage from the toothed belt or the 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).



Connect the garage door operator to electrical power and controls



Warning high voltage:

- Pull out the main plug from the mains socket before you open the cover of the drive head.
- Do not connect any live leads. Only connect potential-free buttons and potential-free relay outputs.
- After connecting all cables, connect the cover to the drive head again.



Warning:

Before using the operator for the first time, it must be tested to make sure that it is working properly and safely (see section on Maintenance/Checks).

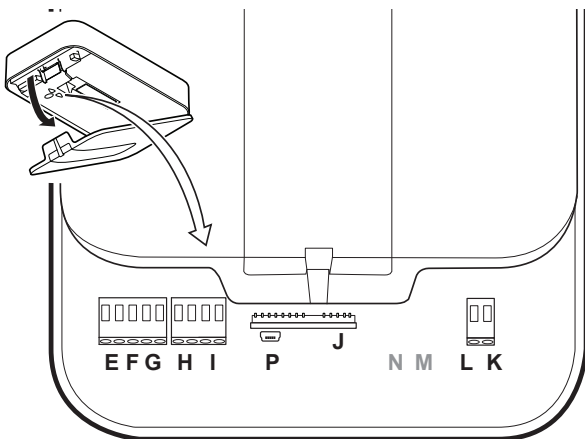


Warning:

Danger by optical radiation!

If you look at an LED for an extended period from a short distance, this can cause optical binding. Sight is then severely restricted for a short time. This can result in serious or fatal injuries.

You must not look directly at an LED.

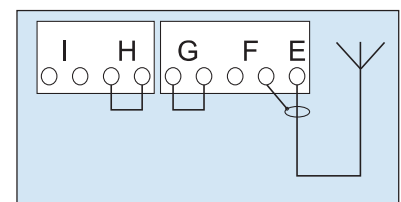


1. External antenna

Lead the antenna upward through the housing recess.

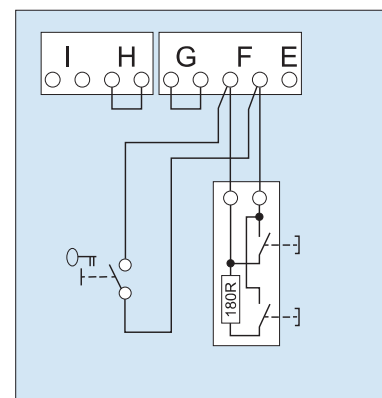
When using an external antenna, the shield must be placed on the right adjacent terminal (F).

E - Connector for antenna



2. External pulse generator

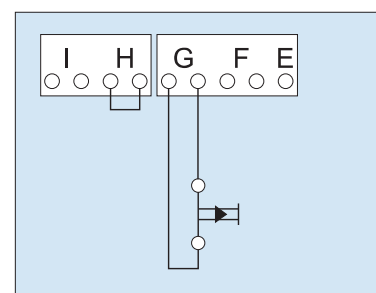
- F - Connector for external impulse generator (accessories, e.g. key switch or code keypad)



3. Input STOP A

The drive is stopped or the start-up is suppressed via this input.

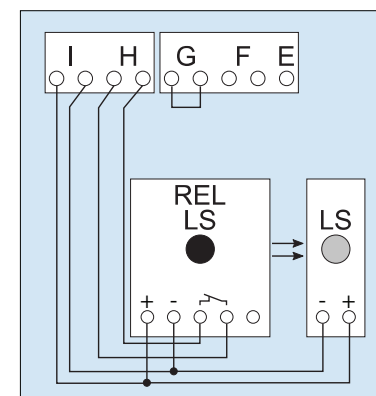
- G - Connection for slip contact (accessory) or emergency stop.



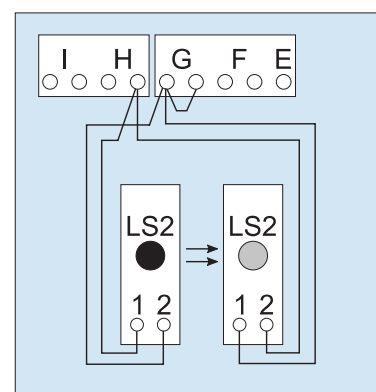
4. Input STOP B

This input activates the automatic reversal of the drive during closing.

- H - Connection 4-wire photoelectric sensor (e.g. LS5)

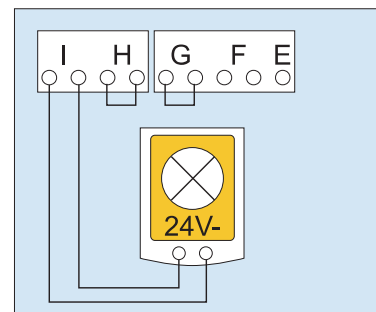


G // H - Connection of photoelectric sensor LS2 (please refer to the connection points of the photoelectric sensor manual for use of other photoelectric sensors)



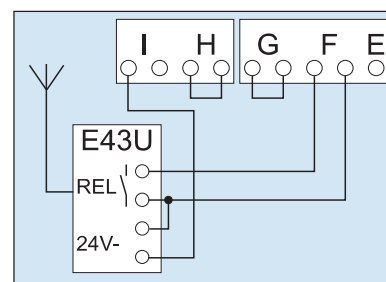
5. Power supply 24 V DC, max. 100 mA (switched)

I - Connection for e.g. 24V signal light (accessory)



6. Power supply 24 V DC, max. 100 mA (permanent)

I - Connection for e.g. external receiver (accessory)



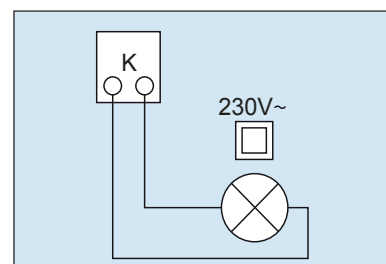
7. Lighting

K - Connection for external, protectively insulated lighting or signaling lamp (protection class II, max 500W) (accessory)



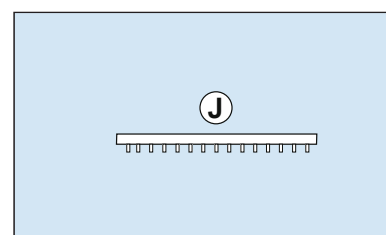
Caution!

Do not connect a push button.



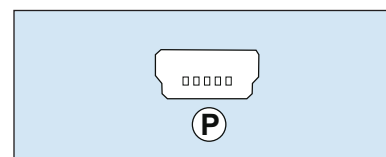
8. Radio receiver

J - Connection for radio receiver



9. Mobility

P - Connection for radio module (accessory)



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 photoelectric sensor. Further information on our range of accessories can be found in our sales literature. Consult your specialist dealer.

Warning label



Place the sticker clearly visible on the inner surface of the garage door.

Dismantling the operator

1. Pull out the mains plug and disconnect all existing terminals.
2. Disconnect garage door and operator. Fix garage door.
3. Proceed according to the Installation instruction poster, but in reverse sequence.

Program the drive head

This section describes the normal programming of the drive head during installation. For further adjustments, or for special adjustments, refer to the section 'Special settings'.

Preparation

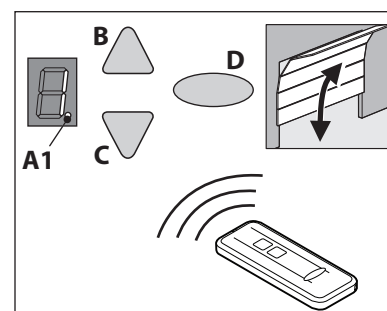
1. Make sure that the garage door is securely engaged in the carriage.
2. Make sure that the aerial is correctly positioned.
3. Make sure that you have all hand transmitters for this garage door at hand.
4. Open the cover of the drive head with a screwdriver.
5. Connect the mains plug to the mains socket. The point display lights up.

Menu 1:

Program the start signal of the hand transmitter

1. Briefly press the programming button (PROG button) (D).
The display shows "1".
2. When the display flashes, press the hand transmitter button with which you will later start the drive until the digital point (A1) on the display blinks 4 times.
3. As soon as the light goes out, you can set the next hand transmitter (see Step 1).

Note: Up to 30 codes can be learned.

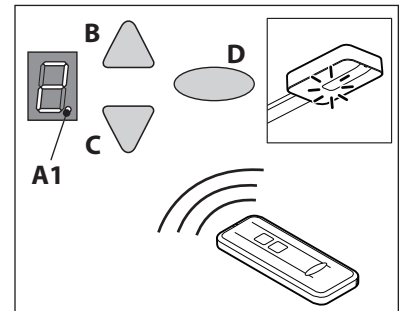


Menu 2: Programming the 4-minute light

1. Briefly press the programming button (PROG button) (D) twice.
The display shows "2".
2. Press the button on the hand-held transmitter to control the light until the digital point (A1) flashes 4 x.
3. As soon as the light goes out, you can set the next hand transmitter (see Step 1).

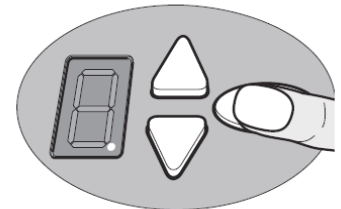
Note: Programming the ventilation position and partial opening:
see menu 9.

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



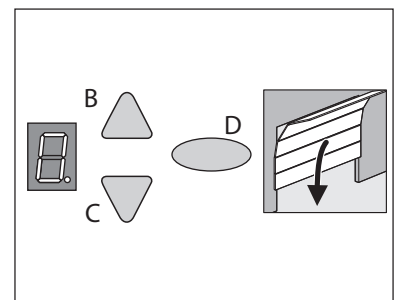
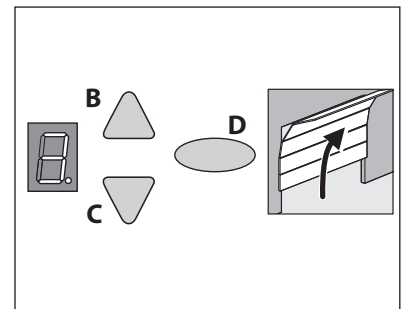
Delete all radio codes

1. Pull the main plug
2. Push and hold the oval PROG-Button (D).
3. Connect the mains plug to the mains socket and keep the PROG button (D) pressed until the digital point flashes quickly.



Menu 3 + Menu 4: Setting the end positions

1. Keep the programming button (PROG button) (D) pressed in for approximately 3 seconds. The display shows "3".
2. Press the OPEN button (B) and check if the garage door moves to the OPEN position.
3. If the garage door moves in the wrong direction, keep the programming button (PROG button) (D) pressed in for approximately 5 seconds until a chaser light appears.
4. Keep the OPEN button pressed until the garage door is at the desired end position OPEN. If needed, press the CLOSE button (C) to adjust the position.
5. Once the garage door is at the desired OPEN position, press the programming button (PROG button) (D). The display shows "4".
6. Press the CLOSE button (C) as soon as the display flashes.
7. Keep the CLOSE button pressed until the garage door is at the desired end position CLOSE. If needed, press the OPEN button (A) to adjust the position.
8. Once the garage door is at the desired end position CLOSE, press the programming button (PROG button) (D). The display shows "0".
9. Continue with the force learning cycle.



Force learning cycle


Warning:

During this procedure, the operator 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. Keep a sufficient distance from the entire path of motion of the garage door!

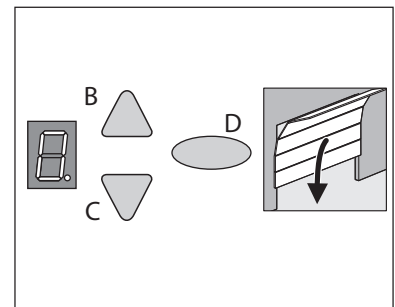
Do not interrupt this procedure.

Note:

During this procedure the display shows a "0".

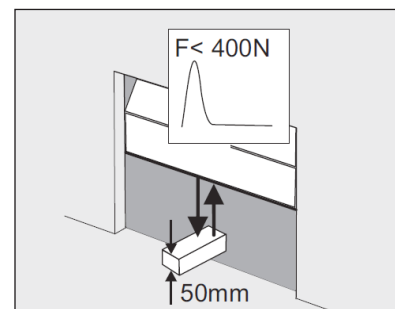
1. Press the OPEN button (B) or use the set hand transmitter. The garage door moves from the end position CLOSE and moves to the end position OPEN.
2. Press the OPEN button (B) again or use the set hand transmitter. The garage door moves from the end position OPEN to the end position CLOSE.
After about 2 seconds, the '0' on the display goes out.

Note: After completing the force learning cycle, the display '0' must go out.



Checking force limit

1. Place a force gauge or obstruction (e.g. the operator'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, the garage door must stop and then 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 be checked in the opening direction: For additional load of the door with 20 kg of mass, the drive has to stop.



Delete force learning cycle

Note: The force learning cycle always starts from the end position CLOSE.

The force learning cycle must be repeated after each replacement of the garage door springs:

Proceed to Menu 5 (see special settings) and keep the programming button (PROG button) (D) pressed for 3 seconds. The display shows "0".
Complete the process as described in the force learning cycle section on page 43.



For your safety, we recommend that the door system be checked before initial use and as needed - but at least once a month - by a specialist. We recommend consulting a specialist company.

Special settings

Open the special settings menu

1. Keep the programming button (PROG button) (D) pressed in for approximately 3 seconds. The display shows "3".
2. Press the programming button (PROG button) (D) again. The display shows "4".
3. Keep the programming button (PROG button) (D) pressed in again for approximately 3 seconds. The display shows "5".

Menu 5 + Menu 6:

Force limitation for Open and Close.



Warning:

If the setting is too high, persons may be placed at risk of injury.
In the delivery state, the set value is '6' on opening and '4' on closing.

1. Select menu item "5".
After about 2 seconds, the display blinks and the set value of the power limit for upward motion appears.
2. If desired, adjust the setting with the aid of the OPEN (B) and CLOSE (C) buttons.
3. Press the programming button (PROG button) (D).
The display shows "6". After about 2 seconds the display and the set value for the power limit for closure appears.
4. If desired, adjust the setting with the aid of the OPEN (B) and CLOSE (C) buttons.



Warning:

The force on the main closure side must not exceed 400 N / 750 ms!

5. Press the programming button (PROG button) (D).
The display shows "7".

Menu 7:

Adjust the light phases

1. Select menu item "7".
After about 2 seconds the display blinks and the set value for light time appears.
The factory setting is "0".
2. If desired, adjust the setting with the aid of the OPEN (B) and CLOSE (C) buttons.

Menu value	Light time	Warning time	24 V
0	60 s	0 s	60 s
1	120 s	0 s	120 s
2	240 s	0 s	240 s
3	0 s	0 s	0 s
4	0 s	3 s	0 s
5	60 s	3 s	0 s
6	120 s	3 s	0 s
7	60 s	0 s	TAM
8	120 s	0 s	TAM
9	240 s	0 s	TAM

Remarks:

- TAM (Door open message): 24 volts at door not closed.
- With set warning time light and 24V for drive of control goes on.

- Press the programming button (PROG button) (D).
The display shows "8".

Menu 8: Door adjustments

- Select menu item "8".
After about 2 seconds the display blinks and the set value time appears.
The factory setting is "4"
This setting should be maintained. A change in the soft run routes may be made only with the express permission of the door manufacturer.
- If desired, adjust the setting with the aid of the OPEN (B) and CLOSE (C) buttons.

Menu value	Start OPEN	Stop OPEN	Start CLOSE	Stop CLOSE
0	0	0	0	0
1	15	0	15	0
2	0	15	0	40
3	15	15	15	35
4	25	30	25	40
5	15	15	15	55
6	15	15	15	15
7	35	35	65	45
8	55	15	15	100
9	only soft run			
Remarks: - These valuescorrespond to the soft run courses measured on carriages.				

- Press the programming button (PROG button) (D).
The display shows "9".

Menu 9: Adjustment other operating modes

- Select menu item "9".
After approximately 2 seconds, the display flashes and shows the set value of the operating mode.
The factory setting is "0".

2. If desired, adjust the setting with the aid of the OPEN (B) and CLOSE (C) buttons.

Menu value	Description	Remarks
0	Normal operation	Factory settings
1	Normal operation with ventilation settings*	Allows the ventilation of the garage. In this mode, the garage door is approximately 10 cm wide open. To start up the ventilation setting, press the second button on the hand transmitter or use a DuoControl/Signal 111 (accessories) setting* that must be programmed in Menu 2. The garage door can be closed at any time using the hand transmitter. The garage door closes automatically after 60 minutes.
2	Partial opening of side sectional door*	In this mode, the garage door is approximately 1 m wide open. To start up the partial opening, press the second button on the hand transmitter or use a button of DuoControl/Signal 111 (accessories)* that must be programmed in Menu 2.
5	OPEN-CLOSE operation	After pulsing in CLOSE position, the drive starts and the door moves into end position OPEN. Another impulse entry during drive has no effect and the door continues to open. After impulse entry in OPEN position, the door closes. On impulse entry during closing, the door stops and starts again.
6	Automatic closing ('AR')**	Impulse always causes an opening of the door. After the hold-open time and warning time (setup menu A) the door closes automatically. An interruption of the photoelectric sensor during closing causes stop and reverse direction. Interruption during opening drive has no effect.
7	Automatic closing ('AR')**	Function as in point 6, however, an interruption of the photoelectric sensor during open time causes early termination of open time and the warning time starts.
8	Automatic closing ('AR')**	Function as in point 7, however, an impulse during open time causes early termination of open time and the warning time starts.
9	Automatic closing ('AR')**	Same function as 8, but without early warning phase.
Remarks: - *: The second button of the transmitter must be reset after changes in operating modes 1 or 2. - **: A photoelectric sensor must be installed.		

3. Press the programming button (PROG button) (D).
 In setting 0, 1, 2 and 5 value "0" is displayed. End of menu (if necessary, continue with power learning cycle).
 In setting 6, 7, 8 and 9 value "A" is displayed. Continue with menu "A"



Warning:

Automatic door - Do not stop in the movement area of the door, because it may start unexpectedly!

**Menu A:
Set open time**

Only in conjunction with function 'Automatic close'.

1. Select menu item "A".
After approximately 2 seconds, the display flashes and shows the set value of the operating mode.
2. If desired, adjust the setting with the aid of the OPEN (B) and CLOSE (C) buttons.

Menu value	Open time (without warning time 10 seconds)
0	0 s
1	10 s
2	30 s
3	60 s
4	90 s
5	120 s
6	150 s
7	180 s
8	210 s
9	240 s

3. Press the programming button (PROG button) (D).
The display shows "0".
4. Proceed with the force learning cycle.

Complete the installation procedure

1. Close the cover of the drive head.
2. Check if the garage door operates properly and safely. Refer to the section 'Maintenance / Checks'.

Operation

Safety instructions for operation



Warning:

Use only by trained persons. All users must be familiar with the applicable safety regulations.



Warning:

Keep the hand transmitters out of reach of children.



Warning:

When the drive is actuated, 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.

The stated safety and instructions as well as the accident prevention regulations and general safety regulations must be adhered to.

Open or close the garage door (in normal operation mode)

The garage door can be operated by many devices (hand transmitter, key switch etc.). This description only mentions the hand transmitter. But the other devices work in the same way.

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

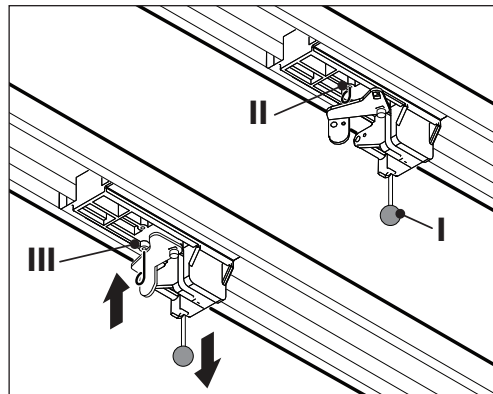
Note:

A button on the hand transmitter can be set with the function "4-minute light". By using the hand transmitter the light will be turned on, independently from the drive unit. After 4 minutes the light will be turned off.

Manually open or close the garage door

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

1. To move the garage door, manually pull on the pull cord (I) on the carriage.
2. Disconnect the carriage from the toothed belt or the chain.
3. The garage door can now be moved manually.
4. 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).



Warning:

By using the quick release uncontrolled movements of the garage door are possible. The garage door may be out of balance or the springs might be broken or worn. Please consult your dealer of manufacturer.

Note: When installing the system, locking elements of the garage door operator are dismantled. These should be reinstalled if the garage door has to be controlled manually over a longer period of time. This way the garage door can be locked when closed.

Open or close the garage door (other operation modes)

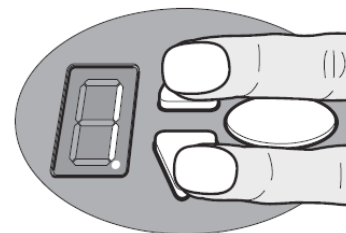
- Possible operating modes see section "Special settings".

Diagnostic display

Number	State	Diagnosis / Remedy
	The operator starts up.	In normal operation, drive receives start signal via START input or by drive unit.
	Garage door has reached end position OPEN.	
	Garage door has reached end position CLOSE.	
	End position has not been reached.	
	The display shows a "0" during the next opening and closing cycle and then goes out.	The operator is carrying out a learning cycle for the force limit. Caution: During this travel cycle the operator does not monitor the force. Make sure that no persons or objects are in the travel path of the garage door.
	The display continues to show a "0".	The force-learning cycle did not complete and must be repeated. The door's end-of-travel position may have too much pressure. Set the door's pressure to the correct level.
	The door does not open or close.	Interruption at STOP A or activation of an external safety device (such as a pass-door).
	The door does not close.	Interruption at STOP B or activation of an external safety device (such as a photoelectric sensor).
	The door setting and learning cycle did not complete correctly.	You must use menu stages 3 and 4 to complete the door settings correctly and then complete the force-learning cycle.
	There is a permanent impulse signal at the start input.	Start signal is not detected or pulse duration (eg button jammed).
	An error occurred in setting the operator.	The travel path is too long. Repeat setting procedure with menu stages 3 and 4.
	Error in learning cycle.	Repeat position learning cycle with menu stages 3 and 4. Reduce force when approaching the end-of travel positions.
	The door does not open or close.	An error occurred during the self-test. Disconnect the power supply.
	Motor standstill.	The motor does not rotate. Call a specialist company to repair the motor.
	Electronic brake activated. The garage light remains on.	The operator is pulled from upper end position. Check the door and the springs. Setting upper end lower.
	The vacation lock is activated. The door does not open.	The side switch for SafeControl/Signal 112 is active. A reset is required.

Restore the factory settings

1. Press the OPEN and CLOSE buttons at the same time.
2. Press the buttons for approximately 3 seconds after you put the power plug into the electrical socket.



Cycle counter

The cycle counter stores the number of OPEN/CLOSE actions powered by the drive.

To read the meter, hold the button ▼ in for 3 seconds until you see a number.

The digital display shows the numbers starting from the highest to the lowest decimal place consecutively.

At the end, a horizontal line appears on the display, for example: 3456 movements, 3 4 5 6 -

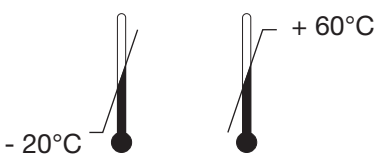
Technical data

The drives of the N-423 series are suitable for the following doors:

Door type:	Canopy/non-swinging doors, double wing doors, swing doors/tilting doors, sectional doors/side section doors
Max. door size:	10 m ²
Max. weight:	160 kg

Model Specifications

Operator type:	N-423
Rated load capacity:	180 N
Max. load:	600 N
Connection values:	230 V / 50 Hz
Power input:	
Standby:	<0.5 W
Max. operation:	160 W
Cycles:	3/h
Lighting LED:	1.6 W
Safety according to EN13849-1:	
Input STOP A:	Cat. 2 / PLC
Input STOP B:	Cat. 2 / PLC
internal force limit:	Cat. 2 / PLC

Temperature range:	
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Protection class:	IP20, only for dry rooms
Volume:	≤ 70 dB (A)

Manufacturer:	Novoform tormatic GmbH Eisenhüttenweg 6 44145 Dortmund Germany www.tormatic.de
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Disposal



Dispose of the product according to the laws and regulations of the respective country of use.

Inspection and test log book for the door system

Owner / operator _____

Location of door system: _____

Operator data

Operator type: _____ Manufacture date: _____

Manufacturer: _____ Operating mode: _____

Door data

Type: _____ Year of construction: _____

Serial no.: _____ Door leaf weight: _____

Door dimensions: _____

Installation and initial operation

Company, installer: _____ Name, installer: _____

Initial operation on: _____ Signature: _____

Miscellaneous

Changes

Testing of the garage door operator



Caution:

An inspection is not the same as maintenance! After an inspection, the user must do any necessary maintenance.

Drive-controlled garage doors are to be inspected and maintained periodically by qualified, trained and experienced personnel. The manufacturer's specified inspection and maintenance intervals must be observed. Observe all applicable national regulations (ASR 1.7 'Technical Regulations for Workplaces - doors and gates'). All inspection and maintenance work must be documented in the enclosed inspection and test report. The operator/owner is obliged to store the inspection and test report together with the documentation for the garage door operator for the entire service life of the system. The installer must fill out the log book completely and give it to the owner-operator before the owner puts the door into service. This recommendation includes manually operated doors. All guidelines and instructions for the garage door operator (installation, operation and maintenance, etc.) must be strictly followed. The manufacturer's guarantee becomes null and void in the event that inspection/maintenance has not been carried out. Alterations to the garage door operator (in as far as permitted) must also be documented.

Check list for the garage door operator

Confirm features at start-up with a check mark.

No.	Equipment	present	Features to be tested	Remarks
1.0	Garage door			
1.1	Manual operation of the door		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/Data 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 Safety windings	
2.3	Fall protection		State	
2.4	Concentricity of T-shaft		State	
3.0	Operator/controls			
3.1	Operator/sliding rail/bracket		State/Fastening	
3.2	Electrical cables/connections		State	
3.3	Emergency release		Function/State	
3.4	Control devices, push-button/hand transmitter		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 devices			
5.1	Latching/lock		Function/State	
5.2	Wicket		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	Data plate/CE marking		complete/readable	
6.2	Door system's declaration of conformity		complete/readable	
6.3	Installation, Operation and Maintenance Instructions		complete/readable	

Term of the Guarantee

Dear Customer,

During production, the product you have purchased has undergone various checks by the manufacturer to ensure that it is of impeccable quality and function.

If the product has nevertheless been rendered wholly or partially useless during the warranty period due to defects of material or manufacture, we commit to, at our discretion, improve or replace the defective goods or to reimburse an appropriate reduction price.

This guarantee shall not include any defects caused by

- defective installation or connection work
- defective commissioning and operation
- improper stress or defective maintenance
- repair by persons who are not technically qualified
- normal wear or independent changes
- use of third-party parts or removal of the rating plates
- mechanical damage (falls or impacts)
- force majeure and extraordinary environmental conditions (lightning strike, flooding, etc.)
- negligent or deliberate destruction

The warranty claim also shall not apply in case of wear parts and consumables (e.g. light bulbs, batteries, fuses).

Prerequisites for warranty services

The warranty claim shall apply in addition to your claims from the purchasing contract you have concluded with the vendor. It shall not affect your claims from the purchasing contract.

The warranty claim shall only apply to defects at the contractual product as such. We do not cover any subsequent costs from installation and removal, review of parts, freight and postage costs, as well as claims for damages and lost profit.

The corresponding parts must be sent to us free of charge upon request and shall become our property when we deliver a replacement.

We grant the following warranty if the warranty claim is proven by submission of the purchasing receipt:

- 5 years for mechanical parts of the drive, motor and motor control
- 2 years for the remote control and accessory parts.

The warranty period shall commence on the day of delivery.

Use of the warranty shall not extend the warranty time.

We grant a warranty of 6 months, but at least the original warranty period, for any improvements or exchanged parts.

Maintenance / Checks



For your safety, we recommend that the door system be checked before initial use and as needed - but at least once a month - by a specialist. We recommend consulting a specialist company.

Monitoring the force limit

The operator control unit features a 2-processor safety system to monitor the force limit. In an end position or after restarting, the integrated power disconnection is tested automatically. Prior to commissioning and once a month, the door system must be checked. The examination of the force limiting device must be carried out according!



Caution:

Closing force set too high can lead to personal injury.

The force for the OPEN drive can be adjusted in menu step 5 and the force for the CLOSE drive in step 6.

Cleaning / Care



Always pull the mains plug before working on the door or on the drive! If necessary, wipe the drive with a dry cloth.

Declaration of conformity and Installation

Declaration

for the installation of an incomplete machine
in accordance with the Machinery Directive 2006/42/EC, annex II part 1B

Novoform tormatic GmbH
Eisenhüttenweg 6
44145 Dortmund

hereby declares that the garage door operators

N-423

In accordance with the:

- Machinery Directive 2006/42 / EC
 - Low voltage directive 2014/35 / EU
 - Directive on electromagnetic compatibility 2014/30 / EU
 - RoHS Directive 2011/65 / EU
- developed, constructed and manufactured.

The following standards were applied:

- EN ISO 13849-1, PL "C" Cat. 2 Safety of machinery - Safety-related parts of control systems
- Part 1: General principles for design.
- EN 60335-1, as applicable Safety of electrical devices / drives for gates.
- EN 61000-6-3 Electromagnetic compatibility (EMC) - Interference emission
- EN 61000-6-2 Electromagnetic compatibility (EMC) - Immunity
- EN 60335-2-95 Household and similar electrical appliances - Safety – Part 2-95:
Particular requirements for drives for vertically moving garage
doors for residential use.
- EN 60335-2-103 Household and similar electrical appliances - Safety - Part 2 103:
Particular requirements for drives for gates, doors and windows.

The following requirements of Annex 1 to the Machinery Directive 2006/42 / EC shall be complied with:
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, 1.3.1, 1.3.2, 1.3.4, 1.3.7, 1.5.1, 1.5.4, 1.5.6,
1.5.14, 1.6.1, 1.6.2, 1.6.3, 1.7.1, 1.7.3, 1.7.4

The specific technical documentation has been prepared in accordance with Annex VII, Part B, and will
be transmitted electronically to the authorities upon request.

Conformity is in accordance with the provisions of the EC Construction Products Directive 89/106/EC.
For the part "Operating Forces" the corresponding initial tests in cooperation with the recognized testing
bodies were performed. In doing so, the harmonized standards EN13241, EN 12978, EN12453 and
EN12445 were applied. For detailed information on the tested combinations, see attached table
"System Audit tormatic-operators" or www.tormatic.de.

The incomplete machine is only intended for installation in a gateway in order to form a complete machine
as defined in the Machinery Directive 2006/42 / EC. The gateway must not be put into operation until it
has been ascertained that the entire system complies with the provisions of the EC Directives.

The integrated radio system complies with the Directive 2014/53 /EU.

The full text of the Declaration of Conformity is available at the following Internet address
www.tormatic.de/nc/downloads.html

Dortmund, 25.08.2017



Dirk Gößling
-Managing Director-

Only use genuine spare parts of the manufacturer.

Wrong or faulty spare parts can cause damage, malfunctions or even a total failure of the product.

