



# Operating and Installation Instructions



## **Roller gate BR-100**

cat. no. AW.05.50; AW.05.51

Operating and Maintenance Manual

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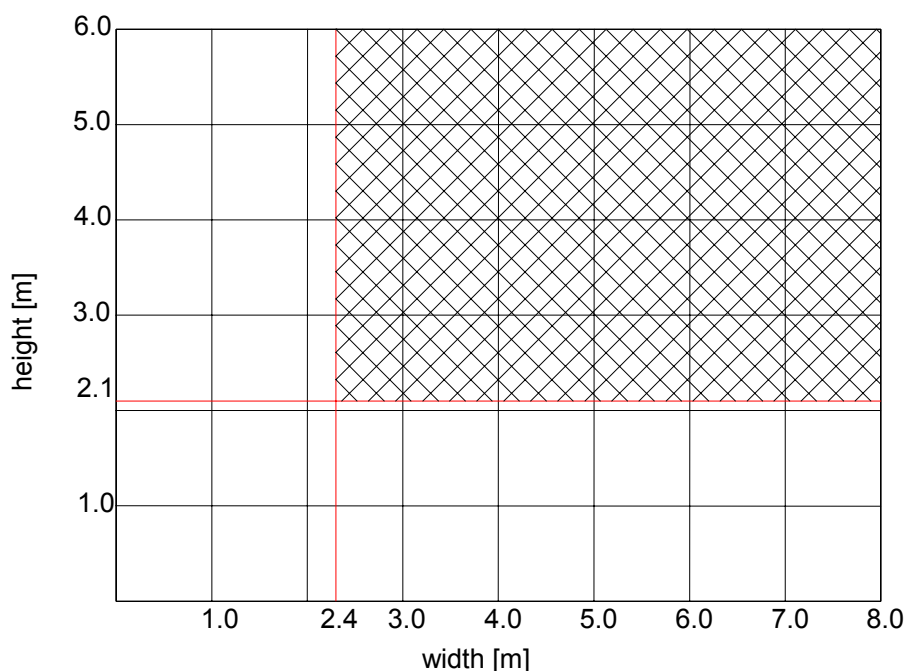
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**Design and specification are subject to change (resulting from technological progress) without notice.**

Please read these instructions carefully and follow the guidelines. You will find here essential information, which guarantees safe installation and use as well as proper maintenance of the roller gate BR -100. Please protect these instructions from damage and store them carefully.

## 1. DESIGN CHARACTERISTICS & TECHNICAL SPECIFICATION

We offer as a standard BR-100 series roller gates designed for mounting in door-way dimensions as indicated by the hatched area on fig 1. Gates outside of the dimensional range specified below can be made after prior arrangement made with WIŚNIOWSKI.



*Fig. 1. Dimensional range of gates BR-100.*

BR-100 series roller gate is made from AW100 aluminum sections filled with polyurethane foam, which after assembling form the gate curtain. Additionally, at the customer's order the gate can be supplied with built-in glazed profiles AW100P (cold profiles). The gate curtain slides over the vertical side guides made of aluminum alloy, equipped with slides and plastic brushes. The curtain is wound onto a bearing shaft in two side consoles. The roller gate is driven by a compact three-phase servomotor. The servomotor is sized according to the curtain weight. Each drive unit is equipped with a crank operated emergency opening mechanism. In each case a ladder fixed to the wall should be installed from the side of the servomotor driving the gate, or free space should be left to allow setting up a ladder, since adjusting the crank length to the gate height is not possible.

The electrical drive can be additionally equipped with a remote control unit operated by transmitters, and automatic gate closing. In each case of using remote control or automatic closing the gate as a standard is equipped with photocells protecting the gate from being closed, if there is

obstruction in the door-way, additionally at the customer's order the gate can be equipped with optical safety strip. Design diagram of gate BR-100 is shown on fig. 2.

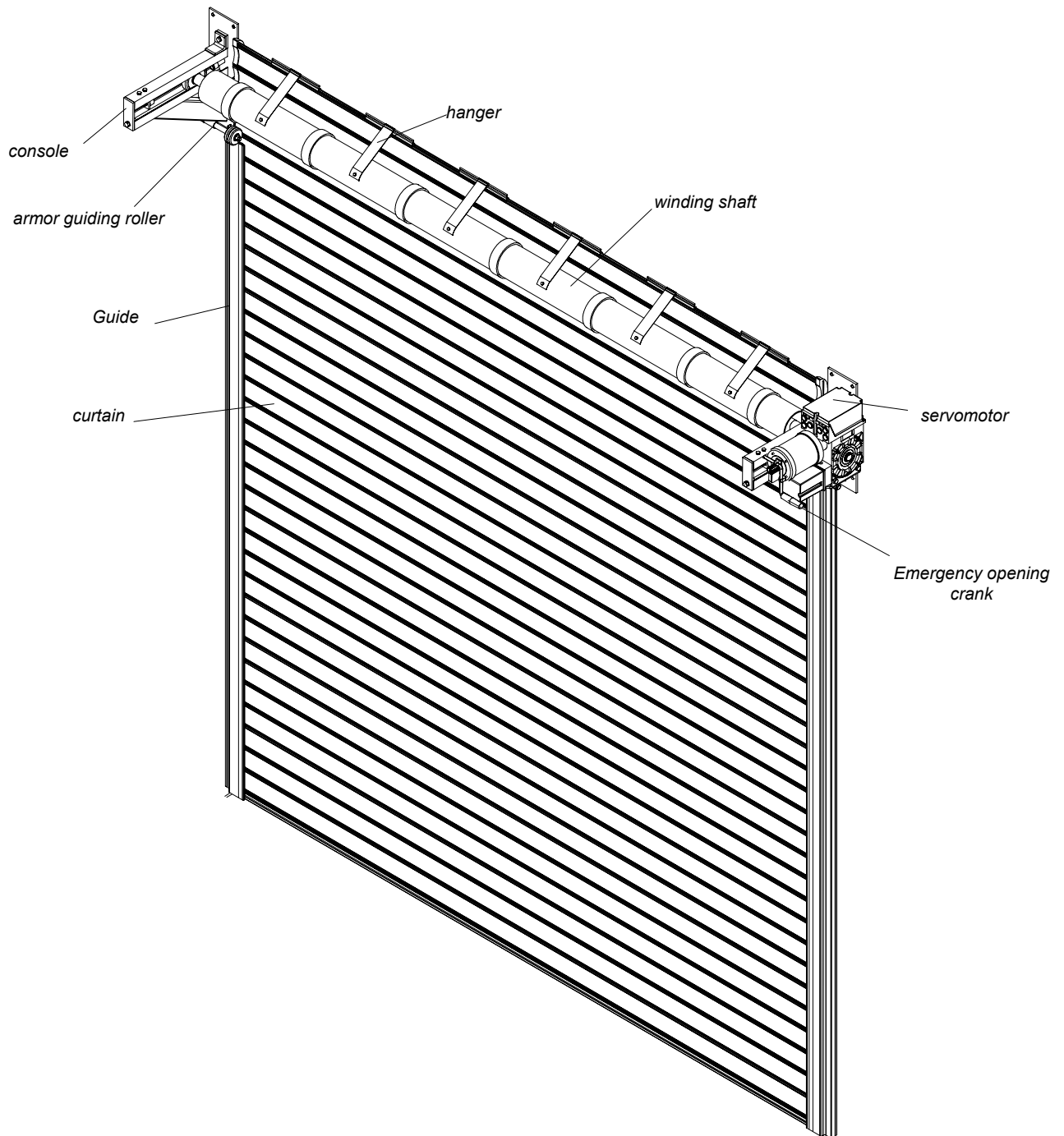


Fig. 2. Design diagram of gate BR-100.

## 2. APPLICATION AND FUNCTION

Roller gate BR-100 is thermally insulated product designed both for industrial building, and individual housing applications. Roller gate BR-100 is designed for indoor installation.

## 2.1 Limited scope of using the gate

The gate is not designed for use:

- in explosive atmosphere,
- as fire wall,
- in wet rooms,
- in rooms where chemical substances harmful to protective and varnish coating are stored,
- as a load-bearing structure of the building.

## 3. SAFETY RECOMMENDATIONS

Before attempting to install and operate the door you must carefully read and understand the guidelines provided in these instructions. Following the door installation and operation guidelines will ensure its correct installation and provide long and trouble-free service. All operations connected with installation of the gate should be carried out following the steps described.

## 4. REQUIRED INSTALLATION CONDITIONS

The gate should be used and operated according to its design purpose. Selection and use of gates in building applications should be based on the technical documentation of the building, drawn according to the Building Law, binding standards and other provisions - in particular according with the decree of the Minister of Infrastructure dated 12th of April 2002 regarding technical criteria for buildings and building locations (Journal of Law, No. 75, pos. 690 with later amendments).

WIŚNIEWSKI BR-100 series roller gates can be installed only in the room provided with additional entry door. Roller gates can be mounted into reinforced concrete walls, walls made of bricks or steel frameworks. The room used for door installation should be fully finished (plastered walls, finished flooring), the walls must not show flaws in completion of the job (fig. 3).

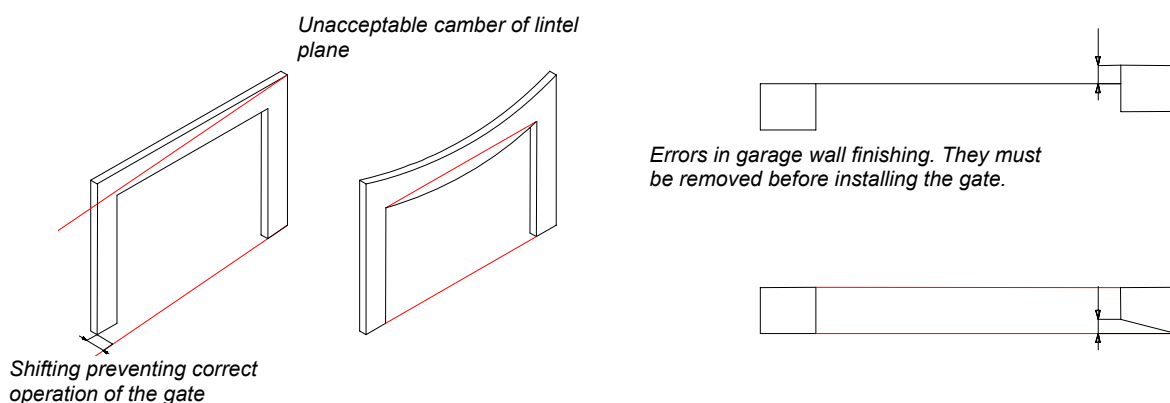
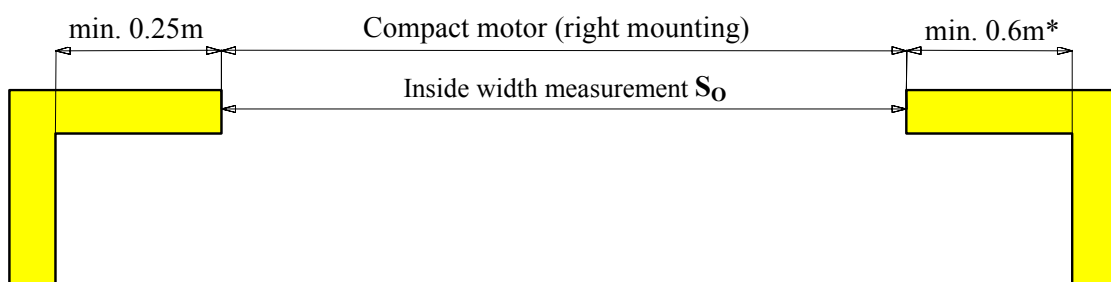


Fig. 3. Errors in wall finishing preventing correct installation and operation of the gate.

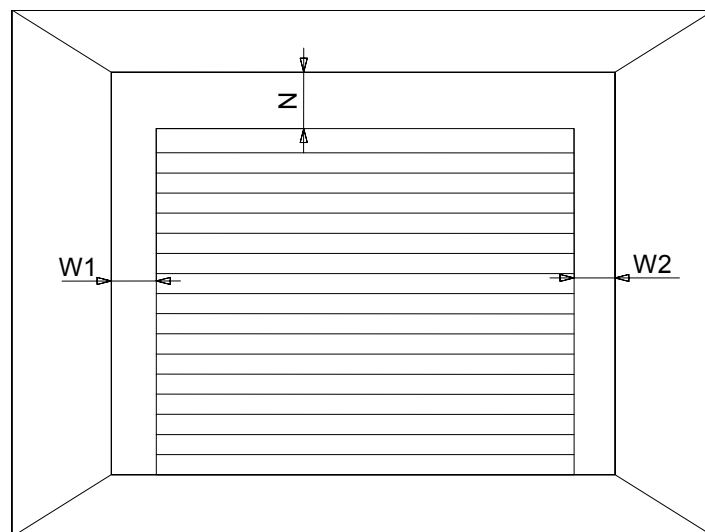
The room should be dry and free from any chemical substances harmful to varnish coating. **Installing the gate in the room, in which walls and flooring are not fully dry is not allowed - due to the possibility of curtain drizzle which eventually in the winter time may damage the curtain (frost and ice depositing in areas of profiles connections may lead to profile damage, and in consequence damage to the gate).** The floor around the bottom washer should be leveled and made in such a way to ensure free water draining.

For proper installation of the gate you need lintel N to mount the drive (minimum lintel heights are given in Table 1), and side space W1; W2, with the minimal width required to install the gate shown on Fig. 4. The method of correct measurement of lintel height and width of side space is shown on Fig. 5.



„\*“ – dimension relates to the minimum required side space from the drive side.

*Fig. 4. Minimal side space required to install the gate.*



*Fig. 5. Method of correct measurement of lintel height and width of side space.*

Table 1.

Door-way height $H_o$	Minimal required lintel height $N_{min}$
to 3000 [mm]	540 [mm]
3010 ÷ 4000	560 [mm]
4010 ÷ 5000	580 [mm]
more than 5000	600 [mm]

Generally, when the gate is fully open there are two curtain sections left in the path of the door-way, thereby the height of the entrance inside measurement is decreased by approx. 0,2 m - fig. 6.

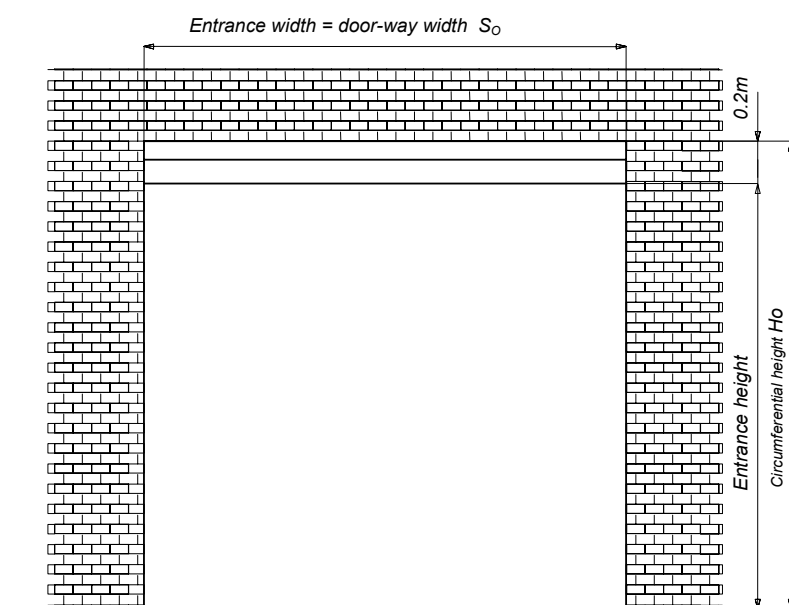


Fig. 6. View of gate BR-100 when opened.

At the customer's order, the gate can be raised, so that the entrance inside measurement is equal to the door-way height. In this case the minimum required lintel height is as follows:

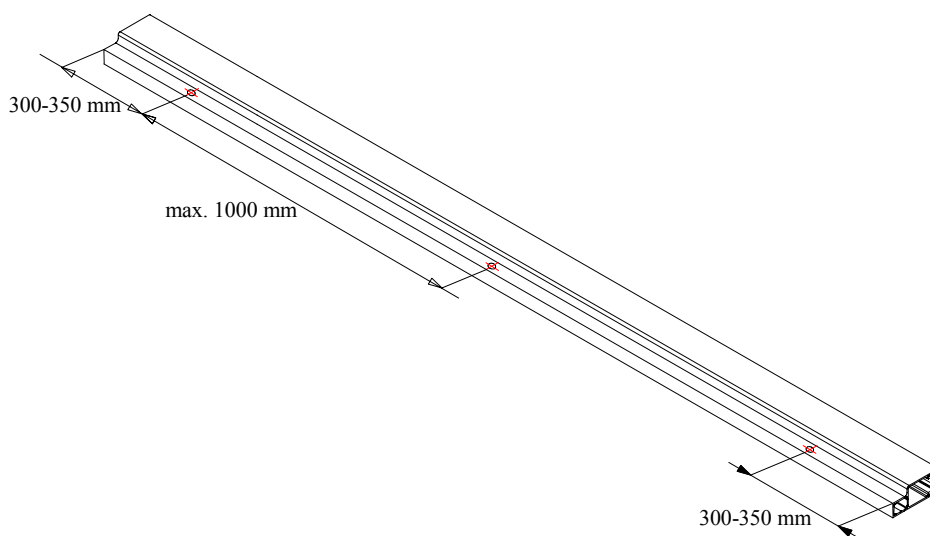
Door-way height $H_o$	Minimal required lintel height $N_{min}$
to 3000 [mm]	740 [mm]
3010 ÷ 4000 [mm]	760 [mm]
4010 ÷ 5000 [mm]	780 [mm]
more than 5000 [mm]	800 [mm]

## 5. INSTALLATION

Correct functioning of the gate depends to a great extent on its proper installation. The manufacturer may, if optionally ordered by the Client, install the gate or recommends authorized installation performers. Should the user choose to install the gate by himself, he must ensure that the guidelines contained in this manual are observed, to avoid incorrect functioning of the gate, its premature wear and voiding guarantee claims. Installation must be performed in accordance with binding standards and provisions (including Health and Safety Regulations), and relevant design documentation.

### 5.1. Installation of guides

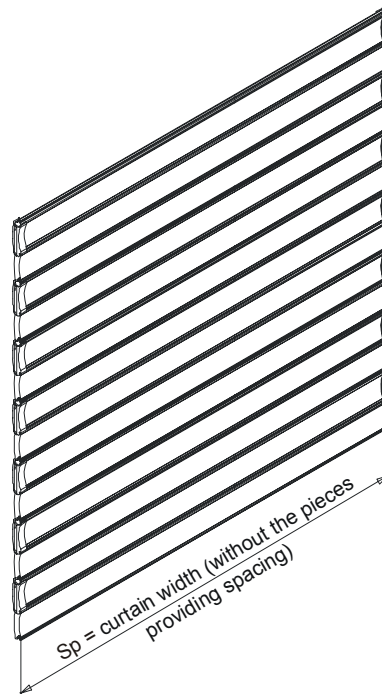
The first step is to make  $\varnothing 10$  mounting holes in vertical guides. The number of mounting holes depends on the height of the guides. Drill one hole at the end of each guide with the dimensions as shown on the drawing and additionally one hole per 1 running meter of the guide - fig. 7.



*Fig. 7. Preparing the guides for installation.*

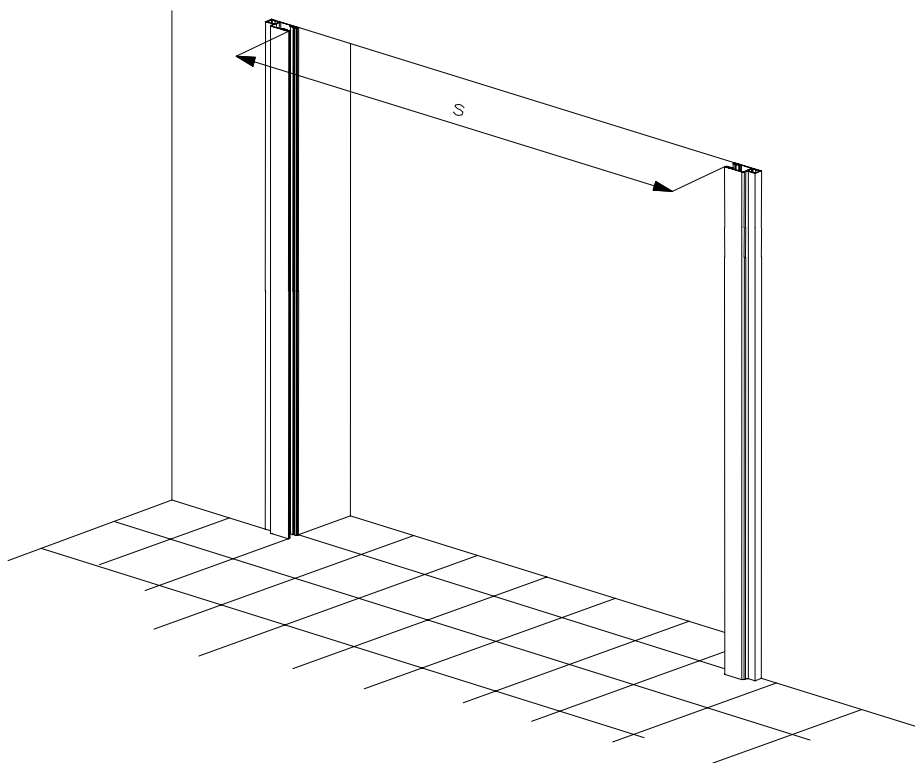
Start the installation by positioning the vertical guides on the room wall. Guides should be spaced based on the following relation:  $S = S_p - 110$  [mm] ( $S$  - guide spacing = door-way width;  $S_p$  - length of curtain profile without attachments) fig. 8.





*Fig. 8. Method of curtain width measurement.*

Vertical guides should be fitted symmetrically on both sides of the door-way from inside. The guides should touch with their bottom part the surface of the finished garage floor. The distance between them should be equal to door-way width (S). The admissible guide spacing tolerance is  $\pm 5$  mm - fig. 9.



*Fig. 9. Laying out the guides.*

Set out the vertical line and parallel layout of the guides, mark on the room wall - through the holes in the guides - points for drilling wall plug holes. Put the guides aside, drill  $\varnothing 12$  holes for wall plugs in the points marked on the wall and insert the plugs in the drilled  $\varnothing 12$  holes. Fit the vertical guides to the walls using the screws fig. 10.

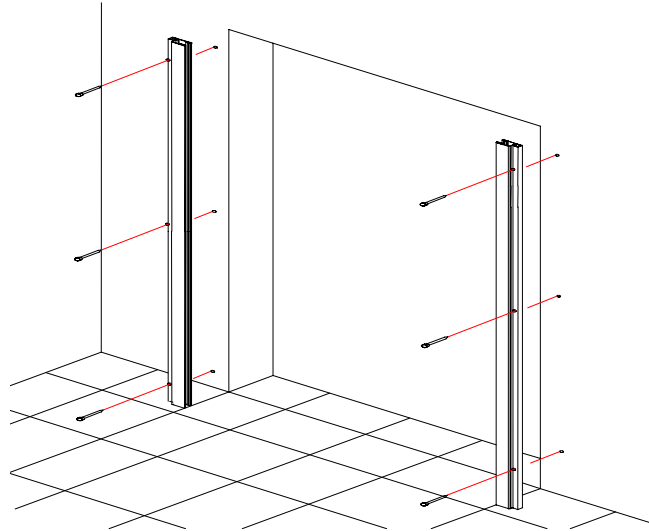


Fig. 10. Installing the guides.

## 5.2. Installation of consoles

The consoles should be fixed to the wall using threaded bars (pin bolts) M12 passing through the wall.

Remove first the top console and insert console ends into the guides from the top according to fig. 11. Make sure the consoles are positioned parallel and perpendicular, check the distance between the consoles (it should be identical in the extreme points).

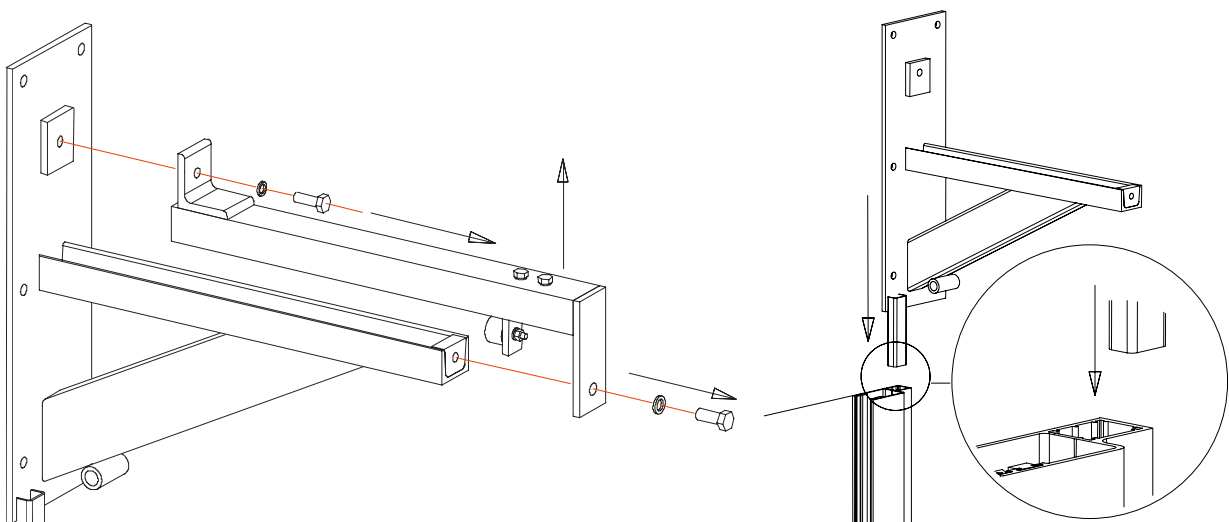


Fig. 11. Marking out the holes for console installation.

Next mark on the room wall - through the holes in the consoles - points for drilling mounting screw holes. Remove the consoles, drill  $\varnothing 12$  holes straight-way in the points marked on the wall and insert threaded bars M12 into them (for gates with a curtain area less than  $25\text{m}^2$  screws M10 can be used). Reinstall the consoles in the guides aligning the holes in the plate with the holes in the wall and mount the consoles to the walls - fig. 12. To secure the mounting screws from loosening we recommend using LOCTITE 243 glue. Mount the assembly washers from the outside to ensure stable fastening.

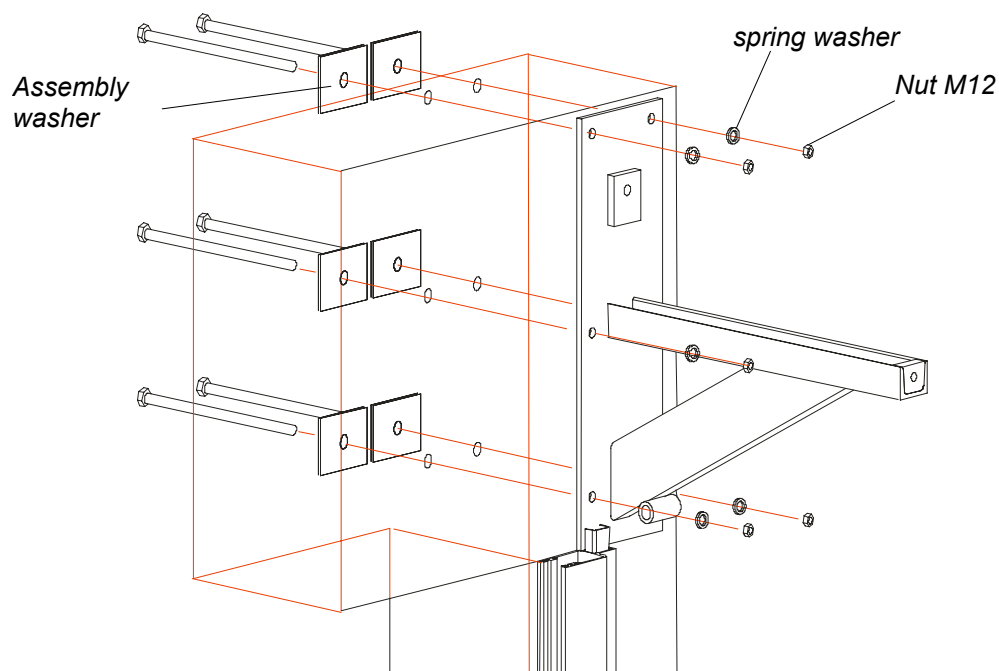


Fig. 12. Fixing the consoles.

### 5.3. Installation of curtain roller

After complete fitting the consoles to the wall, the next step is to mount the curtain roller. Insert the roller from inside of the console into the assembly sleeve. Put a washer on the protruding thread of the roller and screw down with nut M16 - fig. 13.

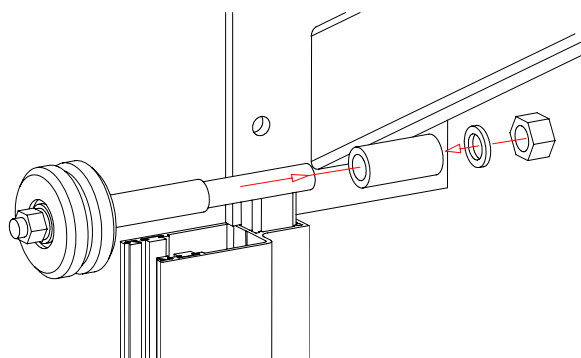


Fig. 13. Installation of the curtain roller.

The roller after installation should rotate freely without any resistance. To secure the nuts from loosening we recommend using LOCTITE 243 glue.

#### 5.4. Installation of slides

After installing the consoles proceed with installation of the slides on the wall. For this purpose put the slide against the wall so that it is parallel to the slide in the guide, and at the same time is on the shaft axis. With the slide properly positioned press it against the wall and drill two  $\varnothing 8$  mounting holes in the wall aligned with the slide. Next insert  $\varnothing 8$  wall plugs and fix the slides with screws to the wall fig. 15.

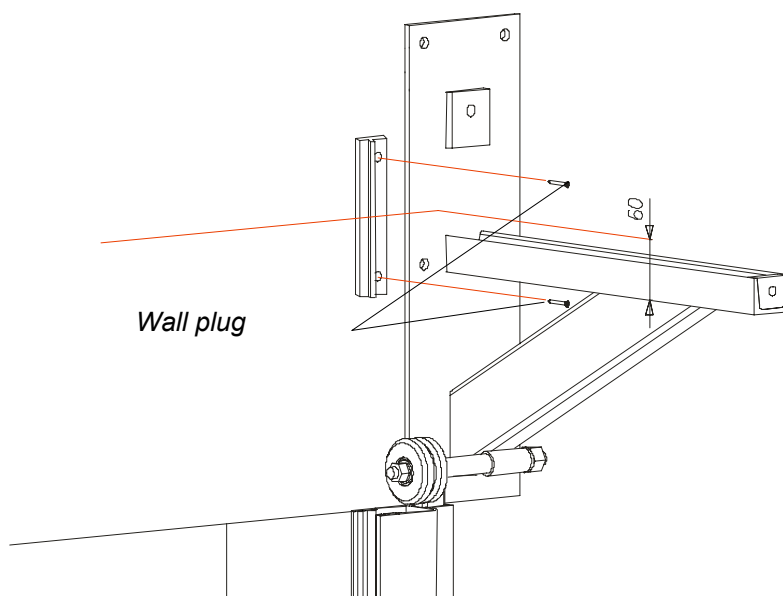


Fig. 15. Installing the slide.

#### 5.5. Installation of brush sealing under the lintel

Before starting installation of the brush sealing check (compare) the ferrule dimensions with door-way dimensions. Door-way width = brush length.

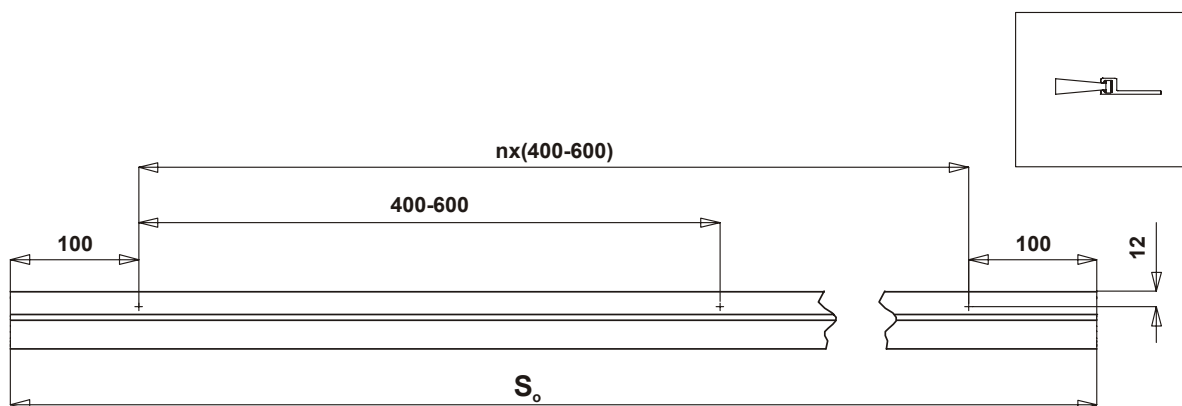


Fig. 16. Brush sealing.

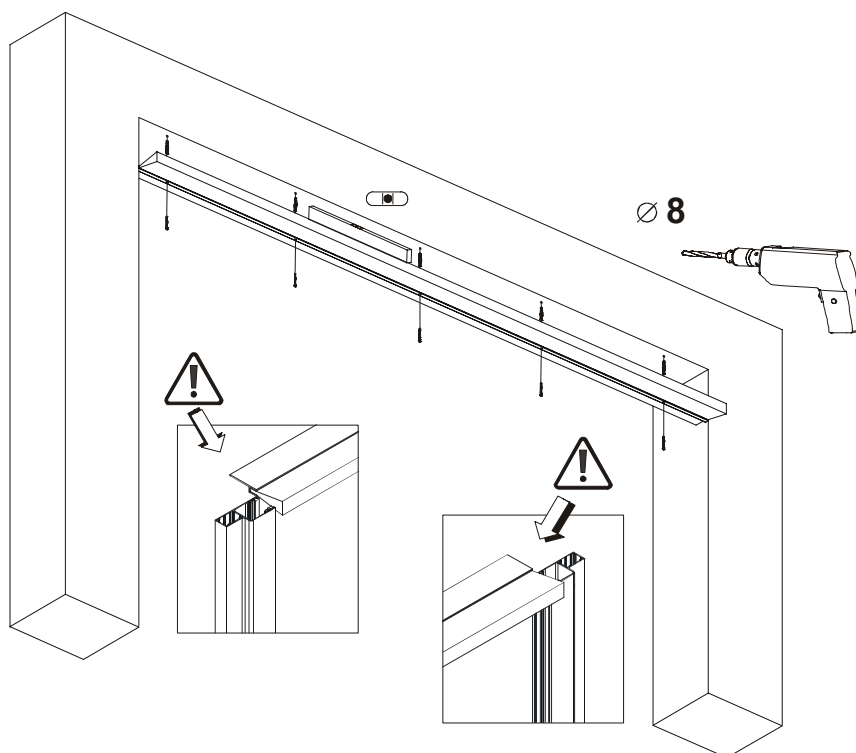


Fig. 17. Mark off the mounting holes.

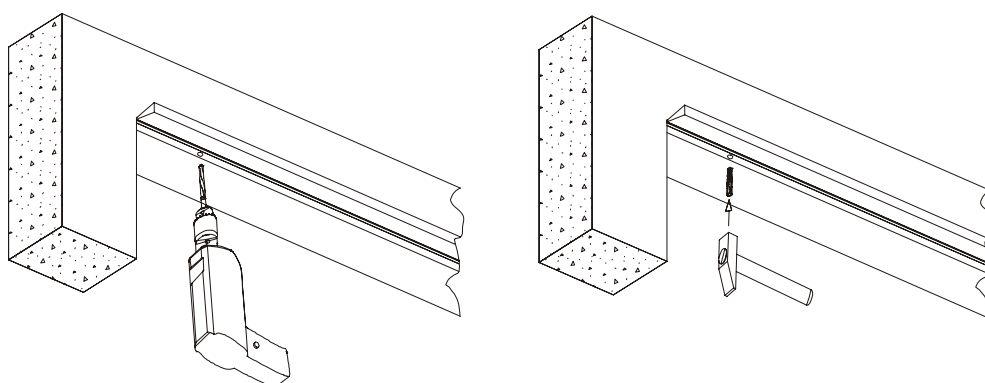


Fig. 18. Drill the mounting holes in the lintel and fit the wall plugs.

### Mount after drilling all holes

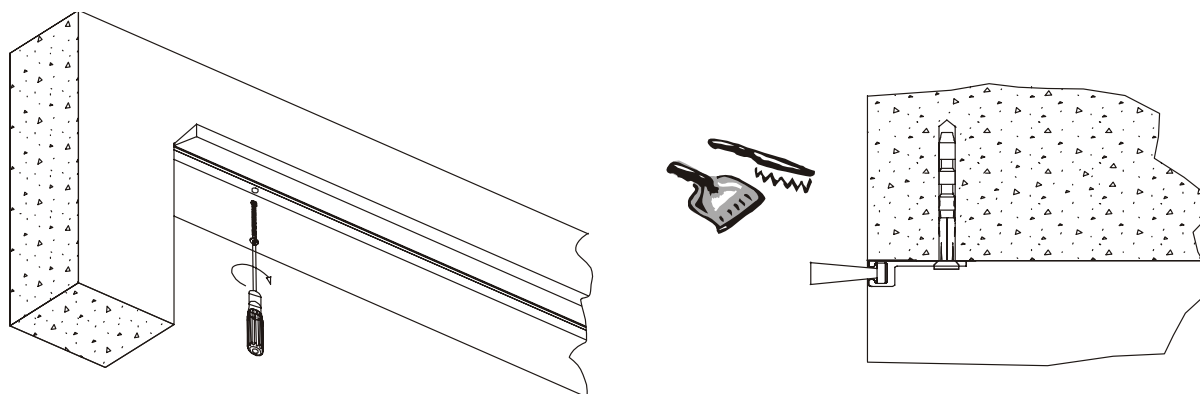
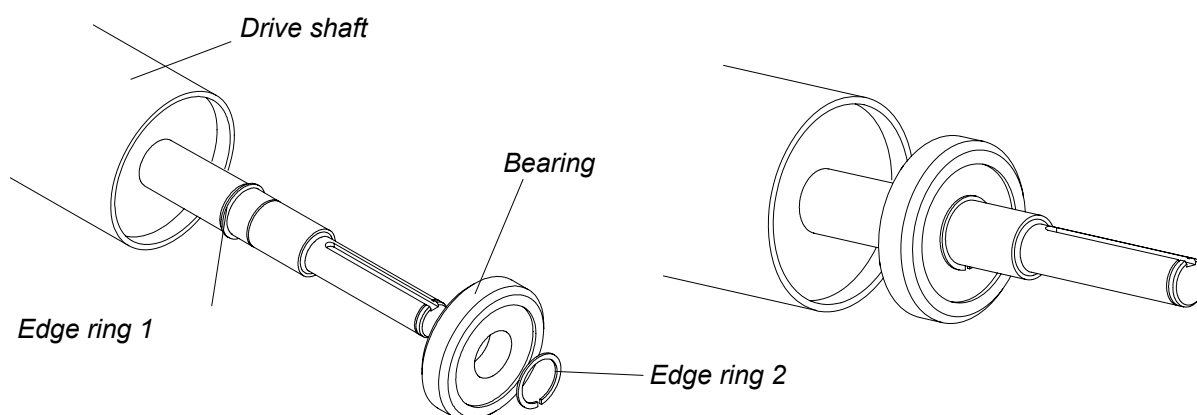


Fig. 19. Screw down the brush sealing to the lintel and clean it from drilling chips.

## 5.6. Installation of shaft bearings

### 5.6.1. Installation of drive shaft bearing (from drive side)

First, mount the edge ring 1 onto the drive shaft. Next put on the bearing. In order to lock the bearing in place put on the edge ring 2 from outside of the shaft - fig. 20.

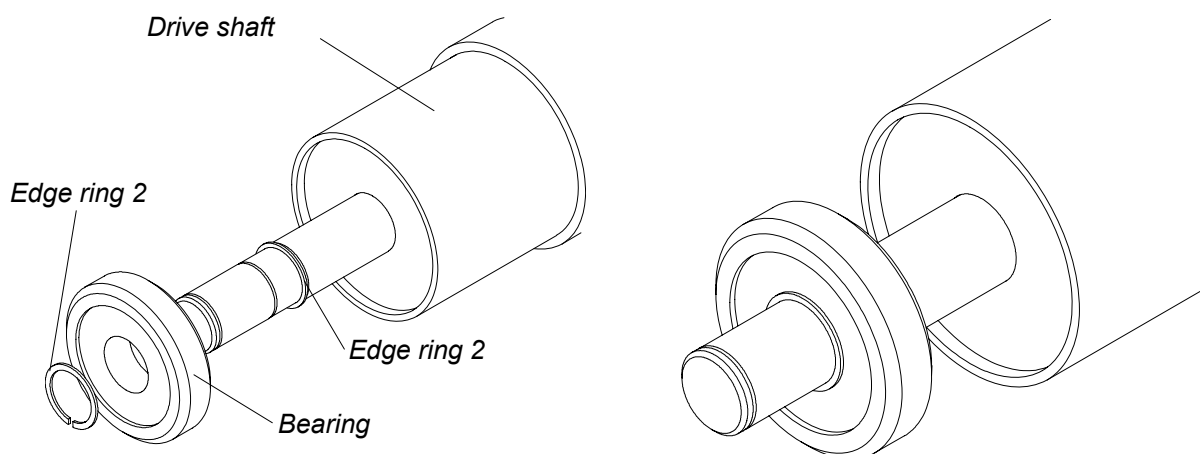


*Fig. 20. Installation of the bearing from the drive side*

The bearing should rotate freely without any resistance.

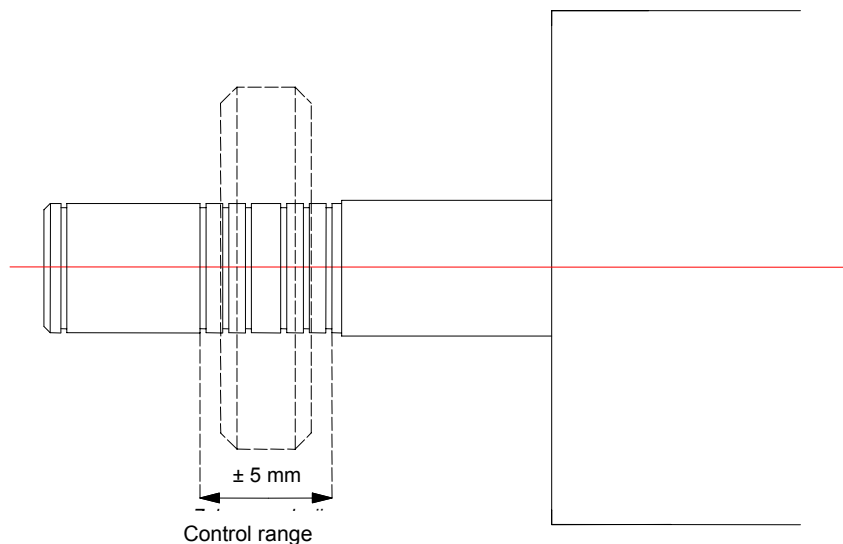
### 5.6.2. Installation of bearing shaft bearing (from free side)

Similarly as with the drive shaft, first put on edge ring 1 into extreme internal groove on the bearing shaft. Then install the bearing and lock it in place by putting on the edge ring 2 - fig. 21.



*Fig. 21. Installation of the bearing from the free side.*

Put on edge ring 2 into extreme external groove on the bearing shaft. After installing the second edge ring you can adjust the bearing position (approx. 10 mm) - fig. 22, this will enable to precisely match the bearing spacing with the console spacing.



*Fig. 22. Bearing adjustment.*

After setting the proper spacing of the bearings move one of the edge rings, which are put on, against the bearing walls to lock the bearing in place (when mounting the shaft onto consoles).

After locking the bearing should rotate freely without any resistance.

## 5.7. Fitting the securing plates to the motor

### 5.7.1. Installation of the plate securing the servomotor in GFA servomotor version

First, put the plastic stops in the motor holes - fig. 23. Next fit the plate on the servomotor, so that the holes in the plate and servomotor are aligned. Insert the spacer sleeve between the securing plate and the motor and screw whole assembly with screws and washers and tighten up home - fig. 24. Protect the mounting screws with LOCTITE 243 glue.

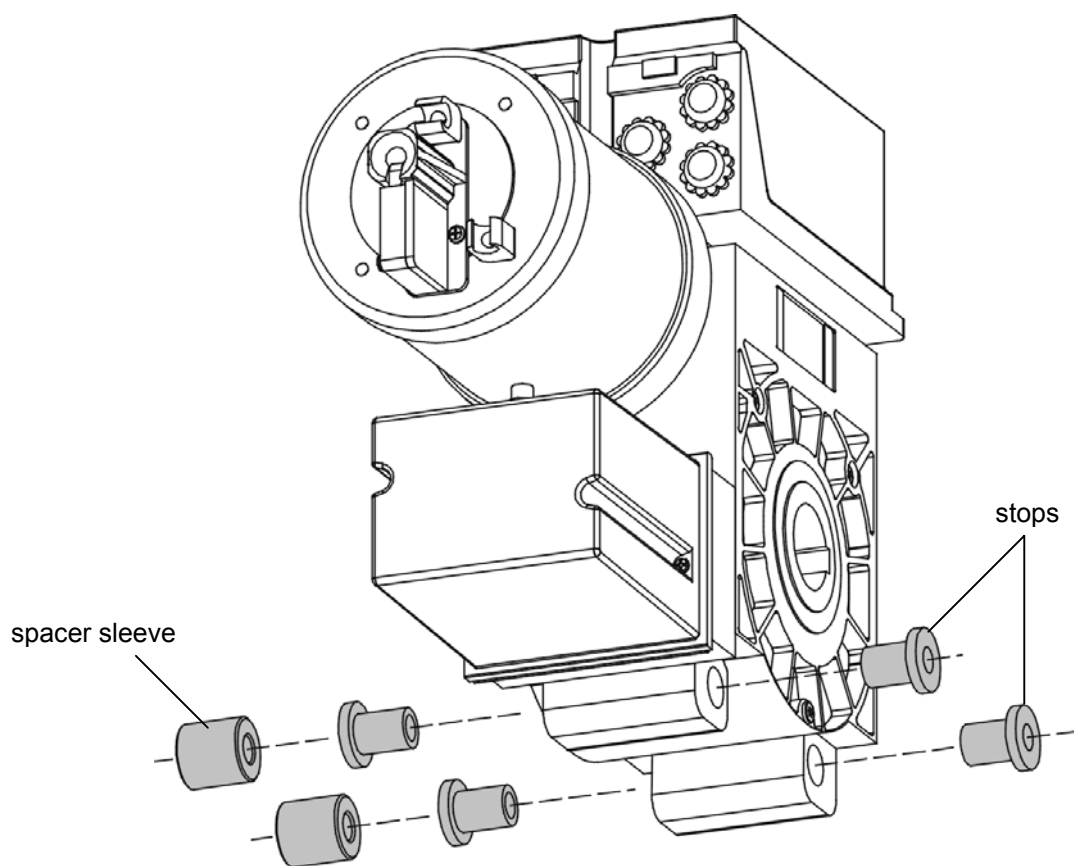


Fig. 23. Mounting the stops in the servomotor GFA.

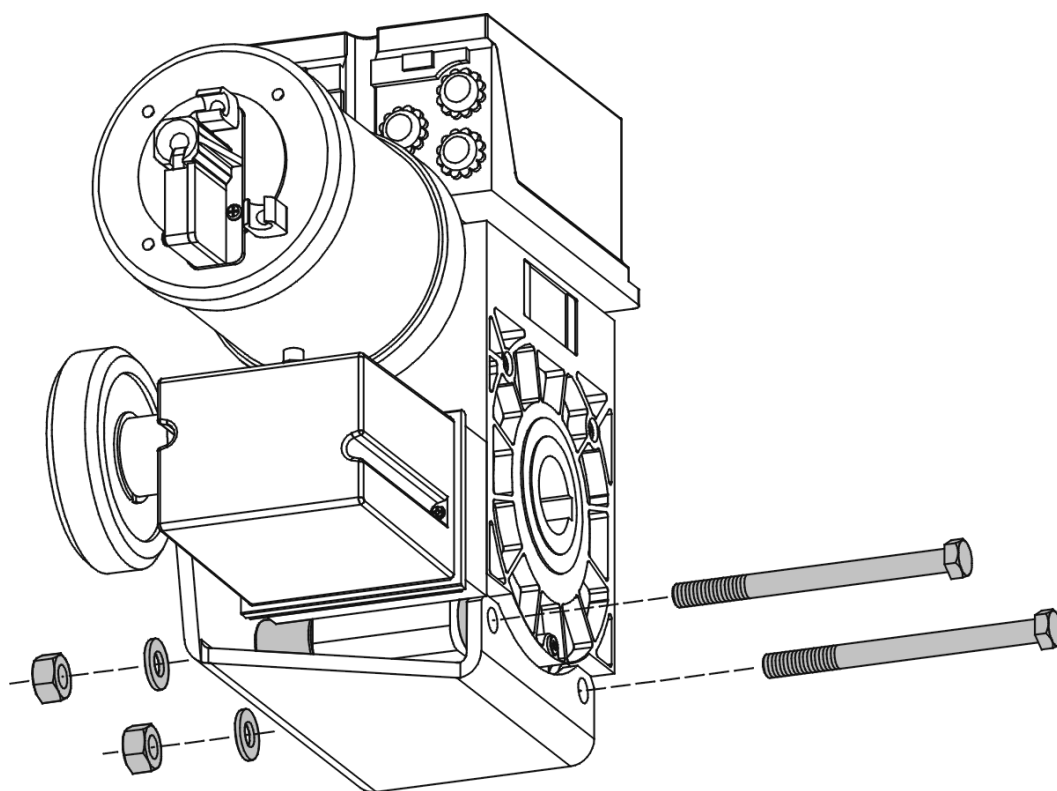


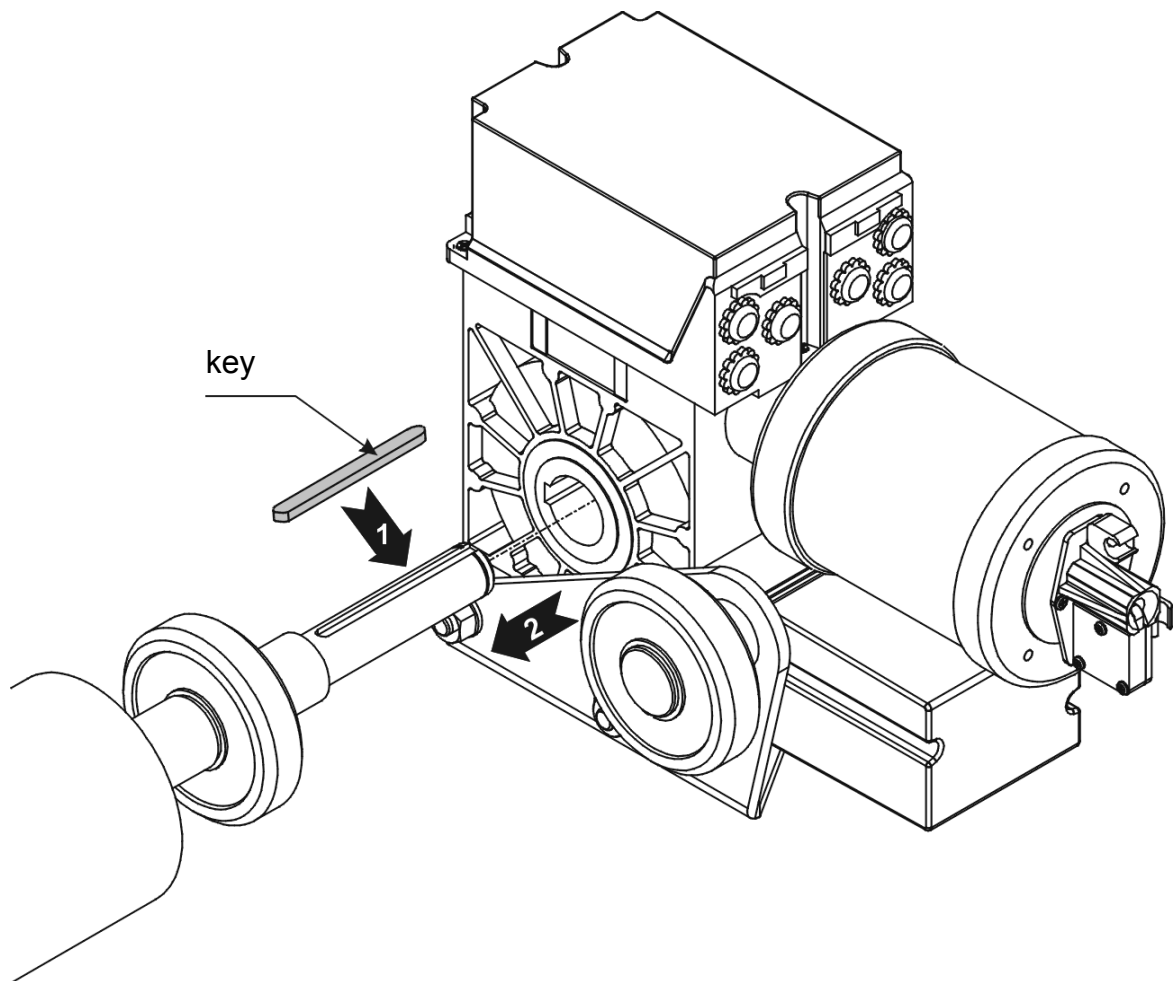
Fig. 24. Fitting the securing plate to the servomotor GFA.



## 5.8. Installation of the shaft drive unit

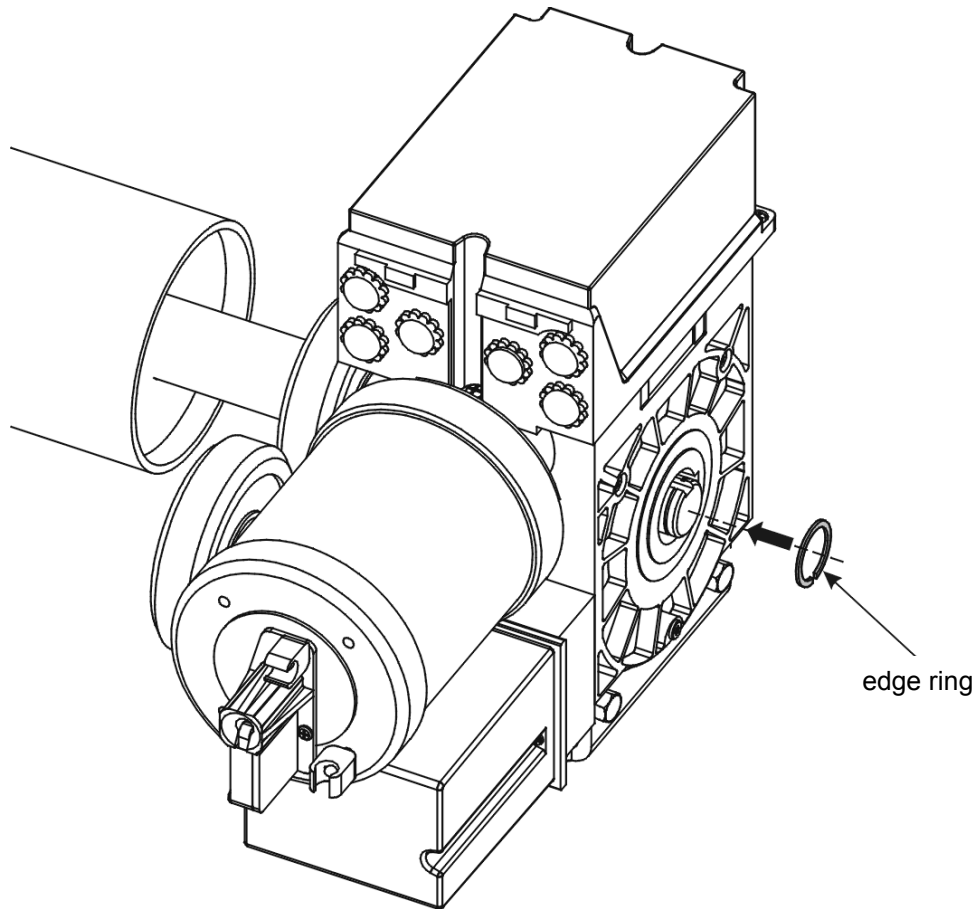
### 5.8.1. Installation of the shaft drive unit for the gate with GFA servomotor

Start installation of the drive unit on the shaft by placing the shaft in such position, so that the splineway is aligned with the key cut in the servomotor (parallel layout). Next fit the key in the splineway on the shaft and slide the drive unit on the shaft fig. 25.



*Fig. 25. Mounting the servomotor on the shaft.*

Slide the servomotor home. Next, put the edge ring on the projecting shaft end from outside of the servomotor, to lock the drive in place fig. 26.

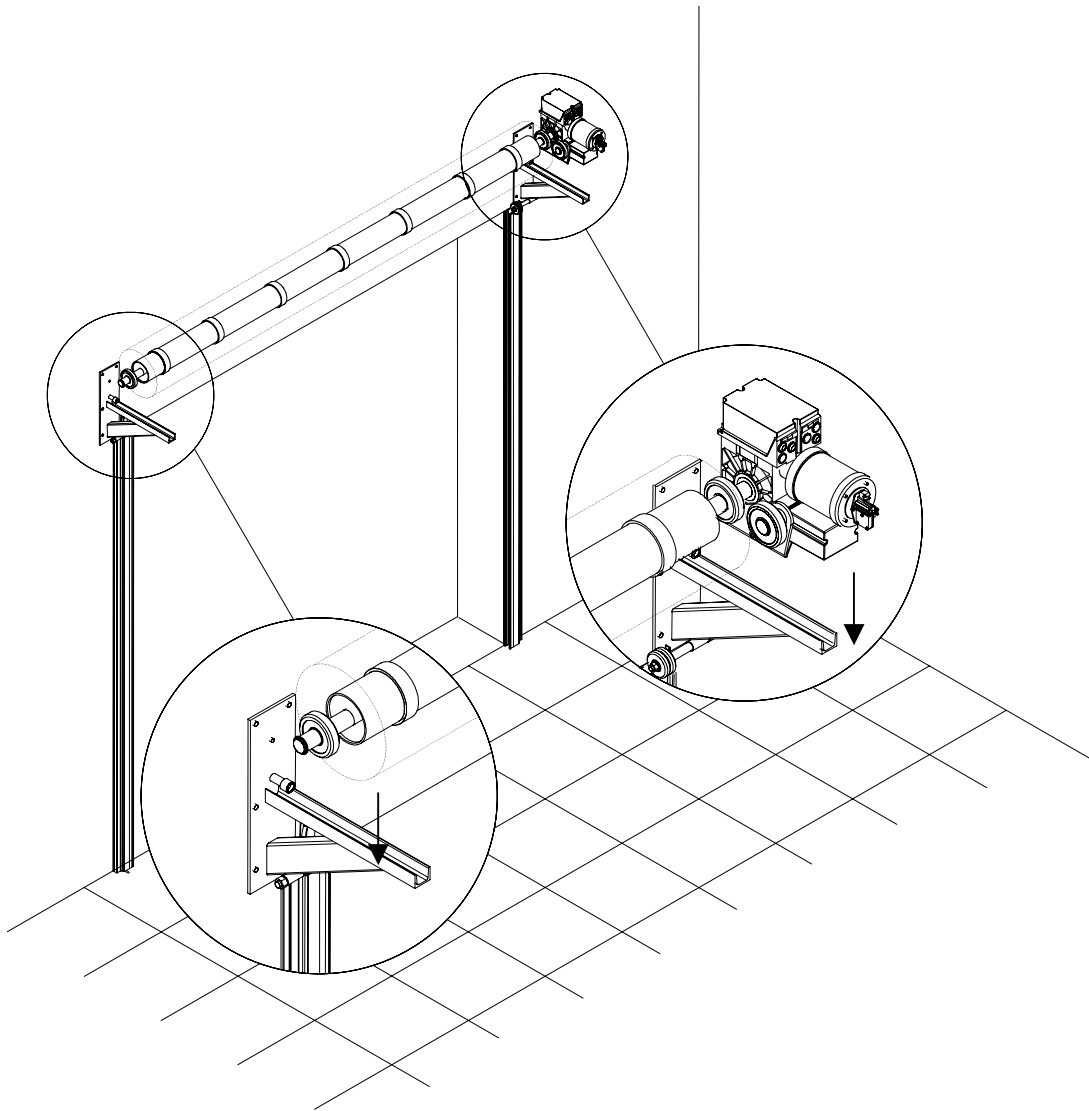


*Fig. 26. Mounting the edge ring.*

## 5.9. Installation of the console shaft

**Take particular caution when installing the shaft on the consoles, by following industrial safety and health regulations.**

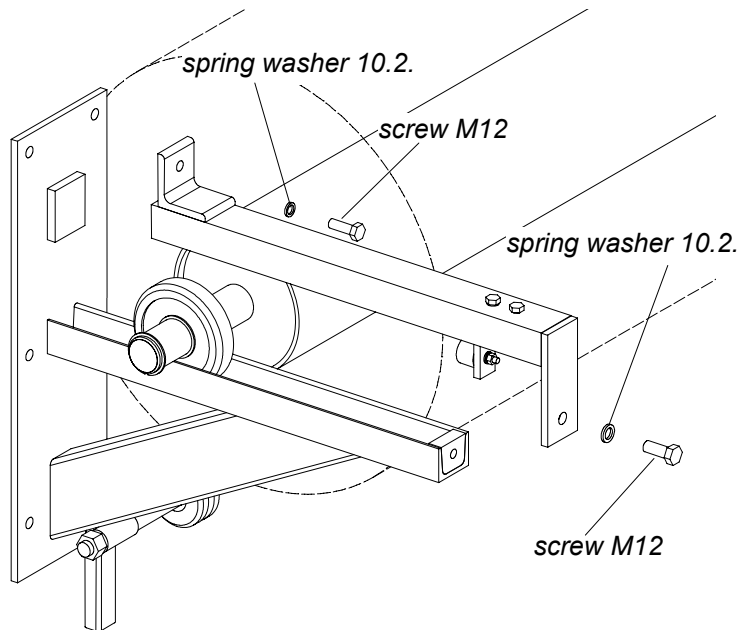
Before starting to mount the shaft in the consoles protect the shaft from possible mechanical damage which can occur when lifting the assembly at a certain height, and before unfolding the curtain (if not done so far). NOTE: protect the gate curtain wound onto the shaft during assembly works from uncontrolled unwinding (curtain wrapped with thermal insulation foil and protected with adhesive tape). Next lift the whole assembly above the consoles (for this purpose we recommend using chain winches, forklift trucks or cranes). After lifting the shaft set the spacing of the bearings and following 5.6.2 lock the bearing on the bearing shaft. Now you can slowly lower down the shaft onto the consoles fig. 27.



*Fig. 27. Installation of the shaft with servomotor GFA.*

### **5.10. Assembling the consoles**

After mounting the shaft onto the bottom part of the console assembly the consoles completely. For this purpose align the upper part of the console with the bottom one (so that the holes in the angle section and plate are aligned with the holes in the bottom part of the console). Next put the washers on the screws and screw in the whole assembly home - fig. 28. We recommend protecting the mounting screws from unlocking with LOCTITE 243 glue.



Locking the shaft in the consoles is inadmissible. After installation the shaft should be able to move in the console guides.

Fig. 28. Assembling the consoles.

### 5.11. Installation of the curtain

After assembling the consoles remove the protection before unwinding the curtain and introduce the curtain into gate guides. Unwind the curtain using a manual crank for emergency opening.

**NOTE:** Removing the curtain protection if the servomotor is not mounted on the shaft, supported by bearings and secured by a key and edge ring, is not allowed.

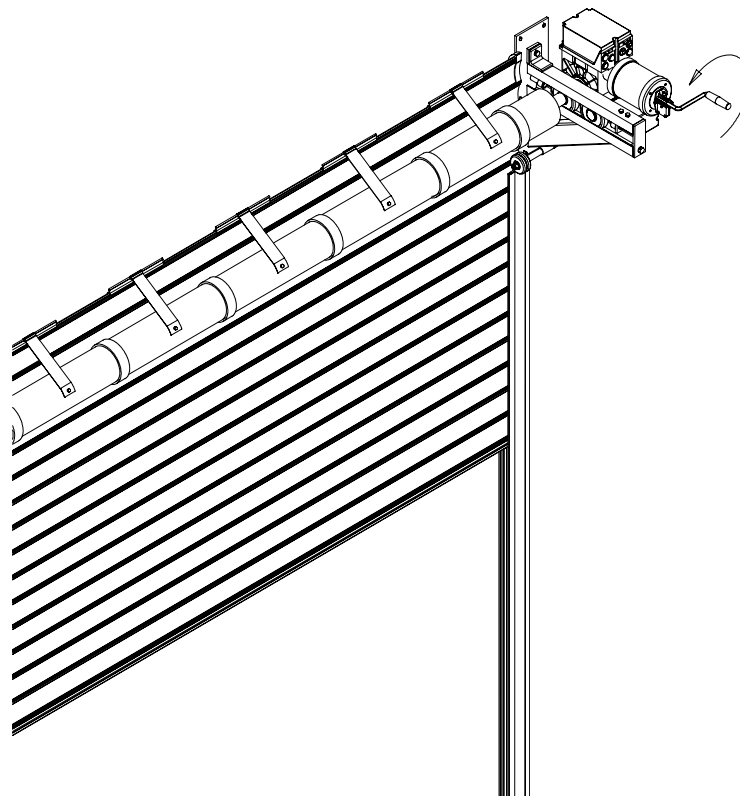


Fig. 29. Introducing the curtains into the guides.

After complete lowering down the curtain check if the vertical guides are parallel to each other, vertical, and if the curtains move properly, etc. After checking the above tighten the guide screws home.

## **5.12. Connecting the electrical devices for driving and operating the gate**

### **5.12.1. Manufacturer's instructions**

- methods of performing the electrical installation with electric shock protection are specified by applicable standards,
- drive power circuit should be equipped with voltage cut-out device,
- obligatory grounding of the drive should be completed as first,
- for electrical installation of the gate only wires supplied with the gate by the manufacturer should be used.

### **5.12.2. Gate accessories**

BR-100 gate is operated by "up-stop-down" switch installed inside the room. Additionally, at the customer's request the gate can be equipped with a key-switch, or remote control system (two transmitters, receiver, photocells) and optical safety strip. For gates BR-100 it is recommended to use light signaling to indicate opening and closing of the gate. The indicator lamp is lit in green when the gate is open, and when the gate is closed or is moving the lamp is lit in red.

### **5.12.3. Power Socket**

In Totmann version the power outlet should be located near the servomotor. In Automatik version the power outlet should be located near the manual control.

### **5.12.4. Connecting the "up-stop-down" control switch**

Manual "up-stop-down" control switch must be installed on the interior wall in such a place, to ensure that the driveway path can be seen when operating the gate. When using the key-activated switch, it can be installed on the external wall of the building, however still in a place, to ensure that the driveway path can be seen when operating the gate. This is a requirement to ensure the safety of third parties. The connection diagram of the switches mentioned above is included in the electrical instructions.

### 5.12.5. Totmann and Automatik control

The gate can be operated using two types of control systems - Totmann and Automatik version.  
Short functional description of Automatik control:

- **Control for ELEKTROMATEN drives** max. up to 3kW at 400V/ 3 AC with mechanical limit switches NES.
- **Functional status by 2-digit 7-section signaling for:**
  - control programming,
  - functional status/status information/fault signaling.
- **Power supply voltage:**
  - 400V / 3 AC with and without neutral wire N.
- **Gate operating modes:**
  - mode without self-support towards opening and closing direction,
  - mode with self-support towards opening direction and without self-support towards closing direction (without protection strip),
  - mode with self-support towards opening and closing direction (towards closing direction when connecting the protection strip).
- **Dynamic control of admissible operating time**
- **Integrated function of automatic recognition and processing of signals from three basic protection strips:**
  - electrical strip with a resistance 8K2,
  - pneumatic strip with a resistance 1K2,
  - optical strip (System Fraba) - used as a standard.
- **Automatic closing:**
  - with any preset time delay between 1 to max. 90 sec,
  - the time of automatic closing can be reduced by breaking the light flux of photocells.
- **Connection supplying the peripherals:**
  - 230V (with 400V/3 AC with N), current-loading capacity up to 1A,
  - 24V DC, current-loading capacity up to 150mA.
- **Plug-in connections for the motor (5-pole) and limit switches (6-pole),**
- **plug-in inlet for a spiral cable of the protection strip,**
- **integrated foiled push-button of the open / stop / close control housing,**
- **Possible connection of auxiliary units of disposable signals:**
  - emergency ratchet type switch Not - Aus,
  - additional safety switches,
  - peripheral open-stop-close switch,
  - photocells (stop + reopen),
  - single-channel pulse transmitter e.g. pull switch for open/close/stop-reopen radio transmitter,
  - key-switch to activate intermediate stopping,

- 1 voltage-free relay (changing) input, signal read from the additional switch transmitting the command or connecting of the flashing warning lamp.

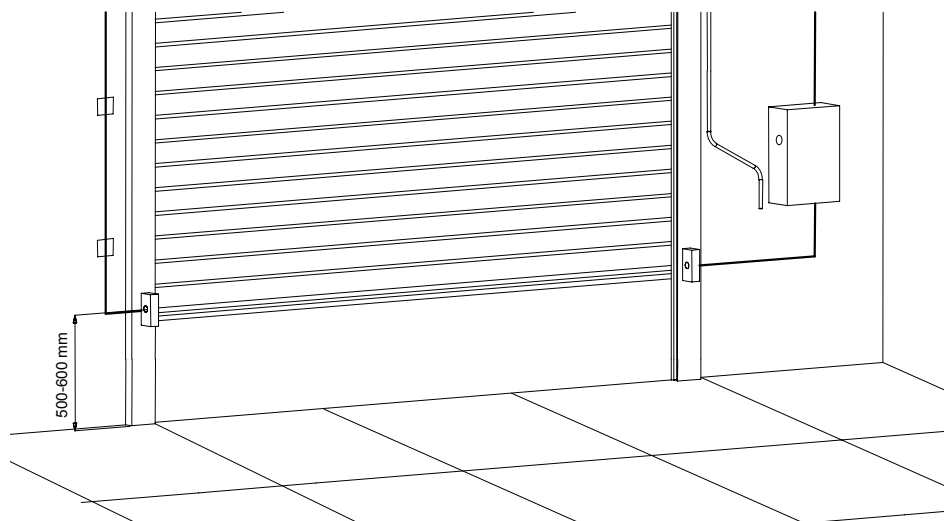
**Short functional description of Totmann control:**

- **Gate operating modes:**
  - mode without self-support towards opening and closing direction,
  - mode with self-support towards opening direction and without self-support towards closing direction (without protection strip),
- **Possible connection of:**
  - key-switch.

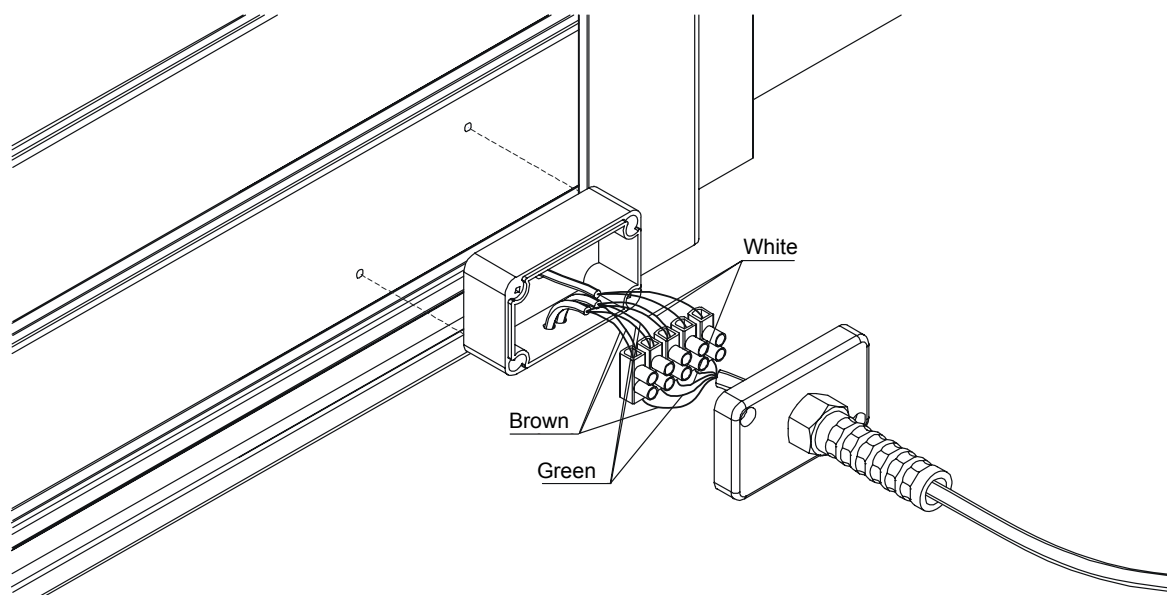
Connecting and programming of the above functions should be performed according to the manufacturer's operating instructions supplied with the control system.

### 5.12.6. Light barrier (photocells)

The photocell activates when infrared light beam is crossed, which results in immediate stopping of the gate. After activation of the safety photocells the gate stops and then returns to open position. As long as the obstacle stays in the driveway path control operation is not possible.



*Fig. 30. Assembling the photocells.*



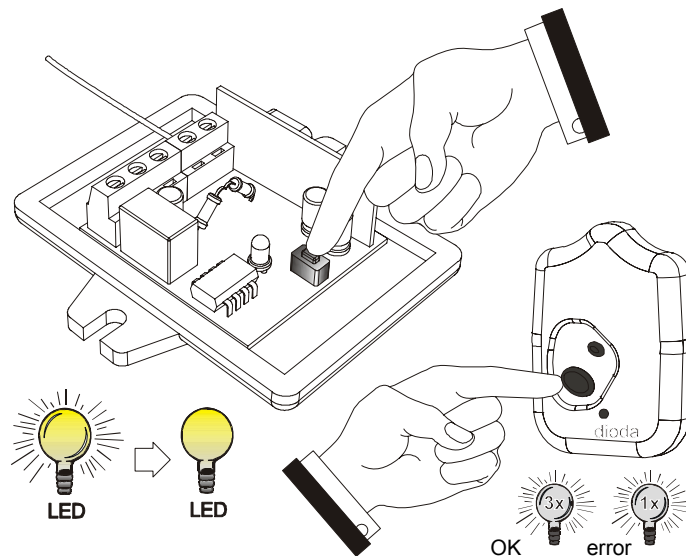
*Fig. 31. Installation and connection of the safety strip wires.*

### 5.12.7. Remote control programming eL3Q

Controller eL3Q is programmed using the button "UCZ" and LED installed at the controller board. Programming is possible, when the gate is not moving (with active auto-closing option, in the stop after closing).

1. **Making the remote controller to learn the code.** You can program maximum 62 remote controllers with a dynamic code by **Keeloq**. Each remote controller must be learnt individually. Press and hold the key "UCZ" until LED lights up and then goes off. Now you have about 10 seconds left to press the selected button on the remote controller, when LED lights up three times learning process is completed successfully, if you want to program more remote controllers at once, then after LED flashes 3 times you will have another 10s for programming the second remote controller, etc. Single lighting up of LED indicates that the learning process is complete. When 62 remote controllers have already been programmed the memory is full, LED will blink after learning only two times and will return to normal operation. If the number of remote controllers used is less than 62 reset the memory (point 2) and program all the remote controllers again. When you make a mistake during learning repeat programming, If this does not help use different functional remote controller. If you still fail to program the controller contact the authorized service.
2. **Resetting the controller memory.** Press and hold the key "UCZ" until LED starts blinking, this procedure will take approx. 8 sec. Release the button, the memory resetting procedure is complete - all codes of the remote control units stored in the memory of the controller have been reset. We recommend to perform this procedure as first just after the installation and before programming the remote controllers.

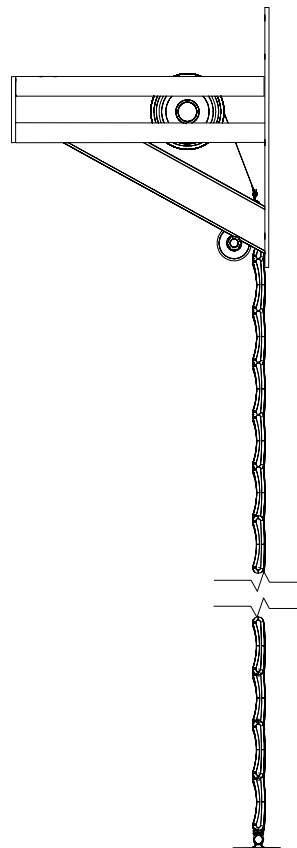




*Fig. 32. Remote control programming eL3Q.*

### 5.13 Setting and adjusting the limit switches

Setting / adjusting the limit switches should be performed following this section and operating instructions supplied with the motor. The limit switches should be set so that the gate curtain in closed position mounted on the winding shaft by means of hangers is slightly lifted above the floor level, and does not rest with its entire weight and only with the seal (fig. 33).



*Fig. 33. Correct setting of the limit switches - gate curtain slightly resting on the seal.*

## 6. GATE OPERATING INSTRUCTIONS

**Do not block the area of the gate curtain movement. When opening and closing the gate curtain make sure that there are no people, especially children or objects in its way. Do not allow children to play with the equipment. Gate control transmitters should be kept out of the reach of children.**

Prior to first opening the gate check its correct installation. The gate is mounted correctly if its curtain moves smoothly and it can be operated with ease.

General proper maintenance conditions for the gate, assuring its long, trouble-free service:

### **I. Operating the gate under normal conditions (without power loss) without self-support (when closing or opening the gate must be within the operator's eye reach):**

1. Opening: press and hold the button ↑ until the gate is completely open.
2. Closing: press and hold the button ↓ until the gate is completely closed.
3. The gate is stopped in each intermediate position when the button is released.

### **II. Operating the gate under normal conditions (without power loss) with self-support (when closing or opening the gate it must be within the operator's eye reach):**

1. Opening: press the button ↑ once and wait until the gate completely opens.
2. Closing: press the button ↓ once and wait until the gate completely closes.
3. The gate is stopped in each intermediate position with the STOP button.

### **III. Operating the gate under normal conditions (without power loss) remotely controlled (when closing or opening the gate it must be within the operator's eye reach):**

1. Opening: press the control button once on the remote controller and wait until the gate completely opens.
2. Closing: press the control button once on the remote controller and wait until the gate completely closes.
3. The gate is stopped in each position with the control button on the remote controller.

### **IV. Emergency opening of the gate - (in case of supply voltage loss).**

#### **a) manual operation of the gates with a servomotor with emergency opening using a manual crank**

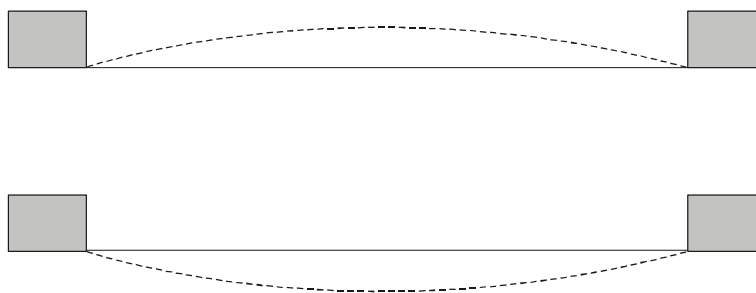
1. To open the door manually use only emergency opening crank, supplied with the door.
2. The crank is used only to open the gate in emergency situations - using it as a primary drive is not allowed.
3. During operation of the gate the emergency drive crank should be fitted on the motor.
4. Turning the emergency drive crank when the supply voltage is applied on the servomotor is not allowed.

**b) manual operation of the gates with servomotor with chain transmission**

1. Light pulling the catch chain engages the emergency manual activation and at the same time turns off the control voltage. Further even pulling of the catch chain allows to open or close the gate.
2. After releasing the catch chain the emergency manual activation is automatically disengaged, and the control voltage is turned on again.
3. To make sure that the transmission is disengaged gently pull the catch chain in both directions, setting the neutral position.

## **7. MAINTENANCE INFORMATION**

- should you find any malfunctioning or damage to the gate components stop using the gate and contact the authorized service,
- it is not allowed to operate the gate if there is visible damage to the hangers securing the gate curtain to the winding tube, if any malfunctioning of hangers is detected, in case the gate has been operated for more than 2 years or the work cycles of the gate is more than 10 000 times (number of cycles should be estimated or read from the control display - applies to gates with servomotors in Automatik version) the hangers must be absolutely replaced.
- do not pass, run or drive under the moving gate.
- do not use the gate curtain to lift objects or people.
- to open and close the gate during normal operation use only electrical control system, and in emergency cases - emergency drive crank,
- the floor around the bottom washer should ensure free water draining,
- protect the door from contact with any substances harmful to varnish coatings and metals, ex. caustic substances (acid, lye, salt,
- when finishing the room or when renovating it protect the gate from contact with plaster chips, paints and solvents,
- to open the gate manually use only emergency opening crank, supplied with the gate,
- the gate operated electrically should be opened following the instructions,
- after installing the gate clean the protective rings mounted on the shaft and avoid their excessive contamination during use,
- avoid excessive contamination of the gate curtain, particularly protect the curtain from harmful elements which could scratch the surface with sand,
- in case of sliding the curtain off the guides the curtain must be absolutely inserted manually into the guides. It is not allowed to start the electrical drive with the curtain fallen out of the guides,
- after installing and starting the gate changing the sequence of three-phase voltage is not allowed. This can damage the gate,
- admissible deflection of the gate curtain (fig. 34), is such that does not impede proper operation of the gate.



*Fig. 34. Admissible deflection of the gate curtain.*

***Running maintenance instructions:***

Operations that can be performed by the client after getting thoroughly acquainted with the Operating and Maintenance Instructions supplied with the gate:

- for cleaning the gate curtain and protective rings use mild cleansers, safe for varnish coatings ex. water and soft sponge or cleaning agents intended for use with varnish coatings available on the market,
- for cleaning glazed profiles do not use agents containing alcohol or solvents (may cause dulling of acrylic glass), you can use mild cleaning agents but we recommend to do some testing first on small glazing surface,
- minimum once per three months and in the case of industrial gates once a month perform by your own running inspections of the gate to check the following:
  - During inspection check the elements securing the gate to the wall, bolts (screws) fastening the hangers and hanger condition, curtain rollers, position of limit switches, - in case of any abnormalities they must be completely removed, using the gate without prior removing them is not allowed,
  - After gate opening at least one curtain section should be left in the guides. In the event of sliding the curtain off the guides the curtain must be immediately manually inserted into the guides - starting the electrical drive with the shield fallen out of the guides is not allowed,
  - in case of any faults they must be completely removed.
- grease the guides at least once every six months using aerosol silicon oil e.g. "OILSIL",
- replace the batteries supplying the remote control transmitters at least once every 12 months,
- in gates which use electric protection equipment once every month check correct operation of:
  - photocells by simulating operating conditions - after cutting the light flux the gate should stop and move back.
  - optical strip - the gate should stop and move back, when the gate curtain touches 40 mm high object, placed on the floor. If necessary, adjust and check again, since bad adjustment can result in accident.
- when using or repairing the gate secure the servomotor from falling down and from moisture.

- should you find any malfunctioning or damage to the gate components stop using the gate and contact the authorized service.
- during any maintenance work and inspections of the gate always disconnect the drive from power supply.

**Operations that can be performed by the authorized, trained personnel having proper qualifications:**

**a) for performing standard maintenance work:**

- gate servicing: inspect on your own the gate at least once per six months and in the case of industrial gates once every three months.
- replacement of the hangers,
- replacement of the profiles,
- replacement of sealing brushes,
- check hangers, replace if damaged.
- repairing and replacement of mechanical components having influence on the safety and correct operation of the gate.
- inspection and adjustment of electrical components.
- in case of any faults they must be completely removed.

**b) activities, which need to be consulted with the manufacturer:**

- any modifications of the gates,
- repairs of electrical components.

**Additional notes:**

- replacing the gate components without prior agreeing it with the manufacturer is not allowed.
- **Any modifications of the gates should be carried out so that after their completion the gates could meet the requirements of EN 13 241-1, and in particular of EN 12453 and EN 12604.**

**All activities should be carried out following the gate operating and maintenance instructions.**

**Any inspections and repairs of the gate should be conducted by strictly following the guidelines included in the operating and maintenance instructions, including in particular, industrial safety and health regulations.**

## 8. DISASSEMBLY OF THE GATE

Disassemble the gate in the reverse order as when assembling it:

1. Wind the curtain on the winding shaft (open the gate).
2. Put the protection before unwinding the curtain.
3. Unscrew the consoles and remove the upper part.
4. Remove the complete winding shaft (with the curtain and motor) paying particular attention.
5. Remove the motor from the winding shaft - remove the edge ring and remove the motor from the shaft.
6. Unscrew the brush sealing from the lintel.
7. Remove the consoles - unscrew them from the wall and take out from the guides.
8. Remove the gate guides.

### Technical specification of the motors:

Size		SI 25.15	SI 40.15	SI 55.15	SI 75.15
Driving moment	Nm	250	400	550	750
Shaft speed	min <sup>-1</sup>	15	15	15	15
Motor power	kW	0,40	1,10	1,10	1,10
Working voltage	V	3 x 230/400	3 x 230/400	3 x 230/400	3 x 230/400
Control voltage	V	230 or 24	230 or 24	230 or 24	230 or 24
Rated current of the motor	A	3,1 / 1,8	4,6/2,7	7,3/4,2	7,1 / 4,1
Relative working time of the motor	%	S3-60%	S3-60%	S3-60%	S3-60%
Power cord, protection		5x1,5 <sup>2</sup> / 10A inert	5x1,5 <sup>2</sup> / 10A inert	5x1,5 <sup>2</sup> / 10A inert	5x1,5 <sup>2</sup> / 10A inert
Admissible temp. range		-5°C/+40°C	-5°C/+40°C	-5°C / +40°C	-5°C / +40°C
Type of protection	IP	54	54	54	54

## 9. ASSEMBLY KIT

Assembly kit-fastening of roller gates BR-100

No.	Part name	Quantity [pcs]
1	Wall plug $\varnothing$ 12	*
2	Wall plug (quick-assembly) $\varnothing$ 8	*
3	Round washer 8	*
4	Electrical cable holder	4
5	Threaded bar	*

„\*“ –quantity dependent on overall dimensions of the gate

## 10. COMPLETE PACKAGE SHEET

Complete package sheet of roller gate BR-100

No.	Part name	Quantity [pcs]	Issued
1	Curtain	1	
2	Guide	2	
3	"Up-and-down" switch	1	
4	Emergency drive crank	1	
5	Key-operated switch		
6	Photocell		
7	Control (additional)		
8	Light indication		
9	Transmitter		
10	Wire (additional)		

## 11. SERVICE

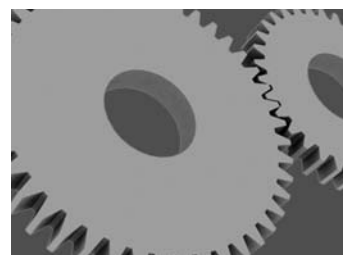
Applies only to the equipment of the service personnel.

List of assembly tools

No.	Name of the tool	Type	Quantity [pcs]
1	Hand hammer drilling machine	CELMA	1
2	Hand drilling machine	CELMA	1
3	30 m long extension cord		1
4	Set of keys		set
5	Set of drills with sintered carbide tips		set
6	Set of standard drills		set
7	Measuring tape		1
8	Multimeter		1
9	Driver		1
10	Level		1
11	Angle grinder		1

Spare Parts List

No.	Part name	Part no.	Quantity [pcs]
1	Control eL3Q	AW 77-550	set
2	Hangers	AW 100-050	10
3	Bearing	AW 100-150	1
4	Standard attachment	AW 100-160	30
5	Glazed section attachment	AW 100-170	10
6	Rings	AW 100-131,132	10
7	Interlock L+P	AW 100-070	1
8	Key-operated switch	AW 77-530	1
9	Standard (key-button) switch	AW 77-500	1
10	Reed switch	AW 77-510	1



Installer:

A large, empty rounded rectangular box for the installer's signature or stamp.

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