knall
quality & style

Assembly instructions for **external roller shutters**

SK, SK+MKT

knall
quality & style

General recommendations

The roller shutter may only be installed by a trained assembly team. The applicable health and safety regulations, in particular those relating to the safety of working with electrical equipment and working at heights, must be observed.

For assembly should be used

A) If the assembly takes place to a reinforced concrete lintel or solid brick - we use expansion bolts Ø 6 / 8mm

B) If the assembly is carried out to walls made of hole materials - we use appropriate assembly systems intended for this type of walls.

C) If the assembly is carried out to walls made of cavity bricks or aerated concrete, etc. - then we use appropriate bricks intended for this type of walls

Installation conditions

A) In the case of walls - we install them to even surfaces with adequate strength, made in accordance with the applicable provisions of the construction law.

B) In the case of metal structures - assembly is made to materials with appropriate wall thickness, connected to each other in accordance with the applicable rules for metal processing.

NOTE: The methods of installing roller shutters presented in the manual are considered examples

1. Assembly tools

2. Unpacking of the external roller shutters

Before assembly, the goods should be unpacked and checked in terms of quantity and quality.

A) Roller shutter box [2], guides [3], plugs for masking the screws in the guides [4]

B) Types of manual drives used (options):

Coiler for a tape (belt), tape guide (belt), holder for a tape (belt) [5]

Cable retractor, cable guide, cable holder [6]

Cassette with a transmission for a tape (belt), plate for mounting the cassette, tape (belt) guide, crank [7]

Cassette with cable transmission, cassette mounting plate, cable guide, crank [8]

Crank, Cardana 45 ° or 90 ° joint with bell hook [9]

Crank, Cardana joint 45 ° or 90 ° with eye [10]

I. ADAPTIVE SK ROLLER SHUTTER SYSTEM - INSTALLATION IN A RECESS

order of assembly

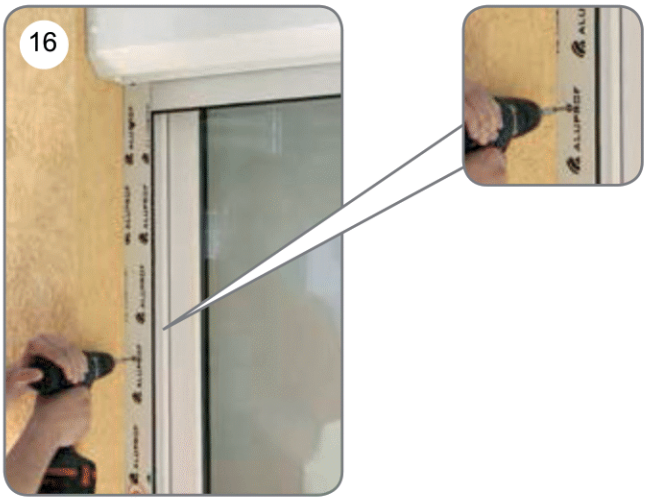
a) Check the dimensions of the construction hole [11], [12]

b) Mark the place of drilling the hole for the tape or cable of the manual drive (approx. 17mm above the guide edge) [13], then drill the hole [14].

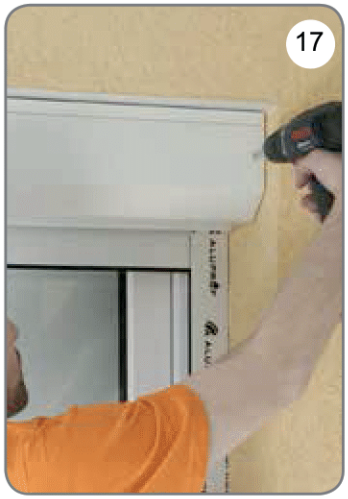
- under the tape, with a Ø 20 / 22 mm drill (insert the installation pipe into the made hole Ø 20 - 22 mm and cut the pipe with the window frame, both inside and outside the room).
- under the cable, with a Ø 10/13 mm drill (insert the spring - cable guide into the made hole and adjust its length to the thickness of the window frame).

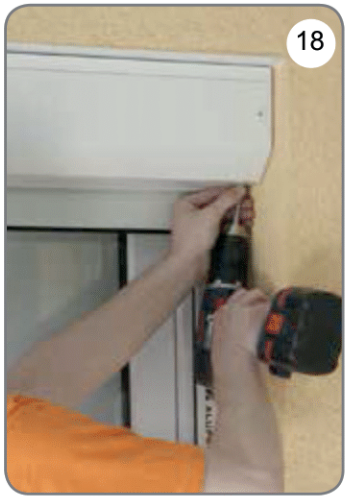
In the case of electric drive, the hole for the actuator cable is drilled in the place where the electrical installation is to be led.

c) Put the roller shutter to the ground [15], set the guides vertically and screw them to the window frame [16]

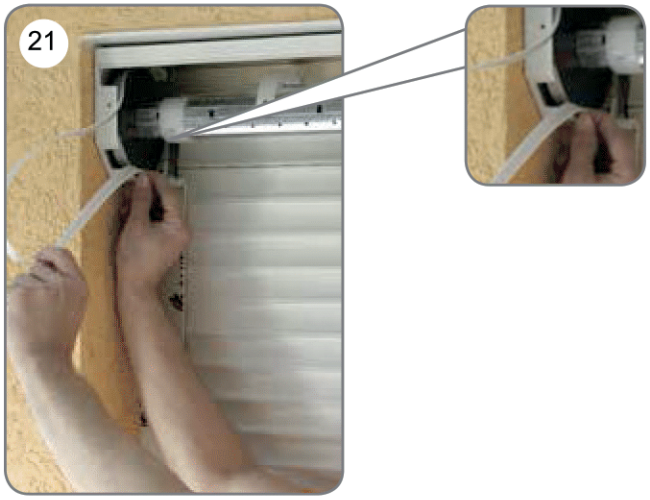


d) Loosen the screws [17], [18] and open the roller shutter box (bottom) [19]

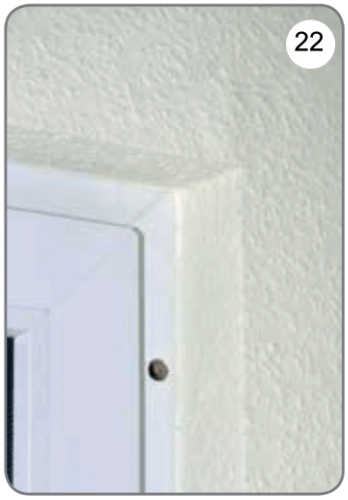


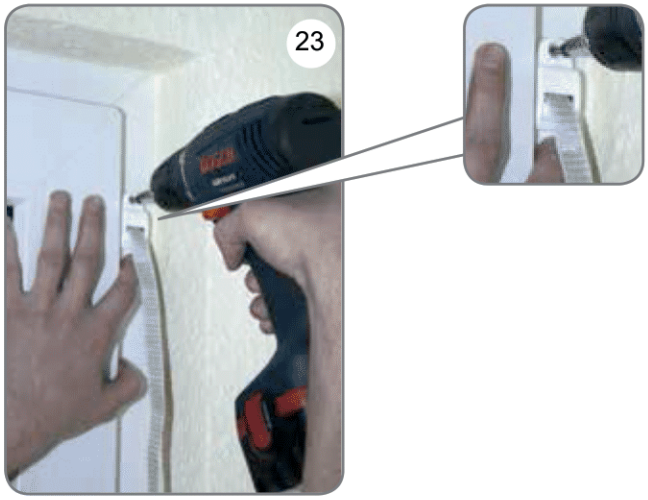


e) Lower the roller shutter curtain to the window sill and screw the box to the ground (on both sides) [20]. Lead the strap (rope) through the opening to the inside of the room [21]. In the case of a roller shutter with an electric drive, it is necessary to additionally adjust the end stops (using the assembly cable), then connect the control elements in accordance with the assembly instructions (drive, central, control, etc.). Lead out the power cord in accordance with the electrical installation plans



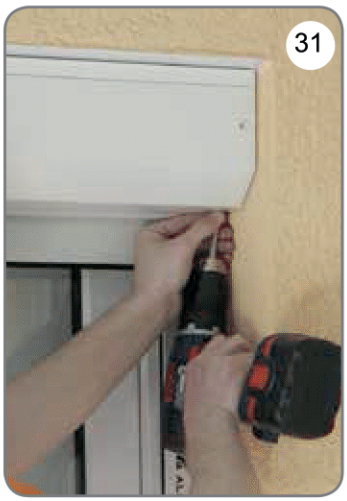
f) From the inside, on the opening [22], mount the tape guide (lines) to the window frame with screws

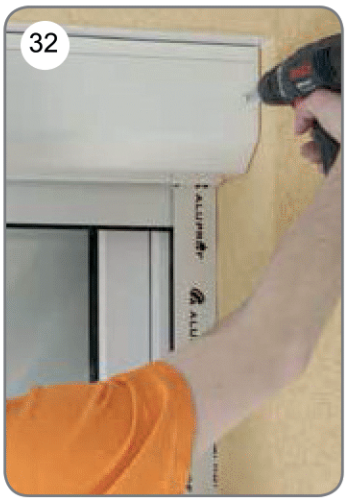




g) Pull out the cotter pins [24] and levering one side of the housing with a screwdriver - open the retractor [25]. Fix the coiler to the window frame with screws [26]. Attach the strap (rope) to the catch, firmly holding the spring housing, turn and release the lock [27]. With the reel installed and the curtain lowered, 2-3 turns of the tape / line [28] should be wound on the spring drum. Close the retractor housing [29].

h) Check that all connections are made correctly.
i) Test the shutter operation.
j) Close [30] and screw on the roller shutter box (bottom) [31], [32].





k) Remove the protective foil from the box [33] and guides [34] and the other elements. Plug the holes in the guides [35].

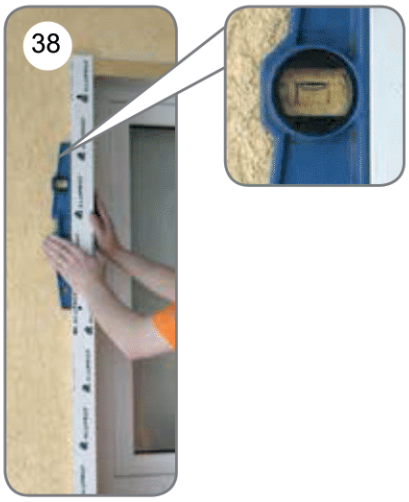
l) Train the user in the operation of the roller shutter.
m) Provide the user with the operation and maintenance manual, warranty and sign the acceptance report.

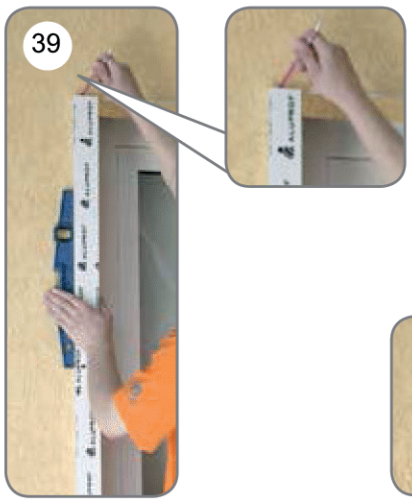
II. ADAPTIVE SK ROLLER SHUTTER SYSTEM - MOUNTING ON THE WALL OF THE BUILDING

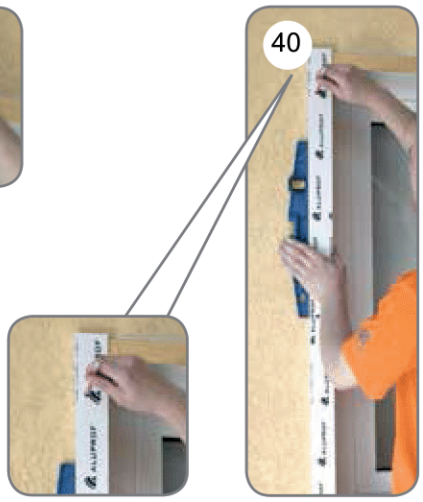
Sequence of assembly

a) Check the dimensions of the construction hole [36], [37].

b) Put the guide on the ground and set it vertically [38]. Mark the place of drilling the hole for the tape or cable of the manual drive (approx. 17mm above the edge of the guide) [39], then mark the place of drilling holes for screwing on the guide [40].





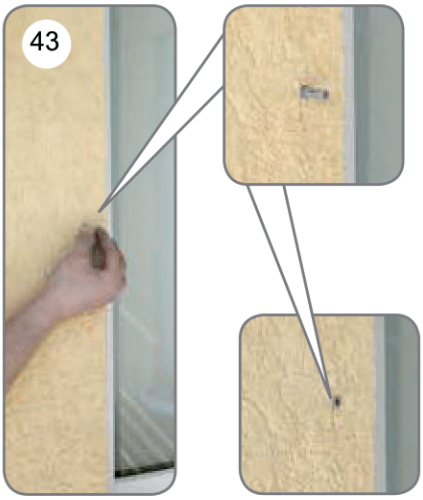


c) Drill holes for wall plugs in the marked places (length and type should be adjusted to the wall structure) [41] and a hole for the tape or cable of the manual drive [42].

- under the tape - using drill © 20 + 22 mm (the installation tube © 20 + 22 mm should be inserted into the hole made and cut flush with the wall, both from the inside and outside of the room)
- under the rope - using drill © 10 + 13 mm (insert the spring - rope guide into the hole made) and adjust its length to the thickness of the wall.

In the case of an electric drive, the hole for the actuator cable is drilled in the place where the electrical installation is to be led

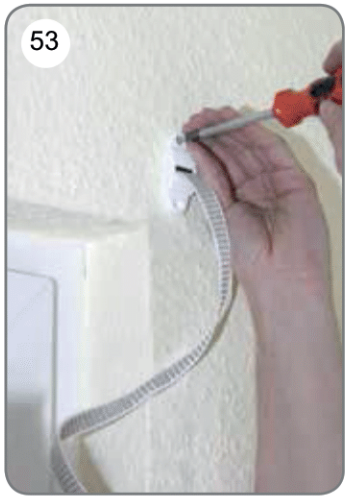
d) Put the wall plugs in the drilled holes [43], then put the guide [44] and screw it to the base [45]



e) Put the roller shutter box (together with the second guide) against the wall [46], position it as in the case of the first guide, mark the places of drilling, drill the holes, put the wall plugs in them and screw the whole thing to the base. Then unscrew the screws [47] and open the roller shutter box (bottom) [48]

f) Lower the roller shutter curtain to the window sill and screw the box to the ground (on both sides) [49]. Pass the strap (rope) through the hole into the room [50]. In the case of a roller shutter with an electric drive, it is necessary to additionally adjust the end stops (using an assembly cable), then connect the control elements in accordance with the assembly instructions (drive, control unit, controller, etc.). Lead out the power cord in accordance with the electrical installation plans

g) From the inside, at the exit of the hole [51], mount the tape guide (cable) [52] with the screws [53]



h) Pull out the cotter pins [54] and levering one side of the housing with a screwdriver - open the retractor [55]. Fix the reel to the wall with screws [56]. Attach the strap (rope) to the catch, firmly holding the spring housing, turn it and release the lock [57]. With the reel installed and the curtain lowered, 2-3 turns of the tape / line [58] should be wound on the spring drum. Close the retractor housing [59]

i) Check that all connections are made correctly
j) Test the shutter operation

k) Close [60] and screw on the roller shutter box (bottom) [61]t

l) Remove the protective foil from the box [62] and guides [63] and the rest of the elements. Plug the holes in the rails [64].t

m) Train the end user in the operation of the roller shutter
n) Provide the user with the operation and maintenance manual, warranty and sign the acceptance report

III. ADAPTIVE SK WITH MOSKITO ROLLING SHUTTER SYSTEM - INSTALLATION IN A RECESS

Sequence of assembly

a) Check the dimensions of the construction hole [65], [66]

b) Mark the place of drilling the hole for the tape or cable of the manual drive (approx. 17mm above the guide edge) [67], then drill the hole [68].

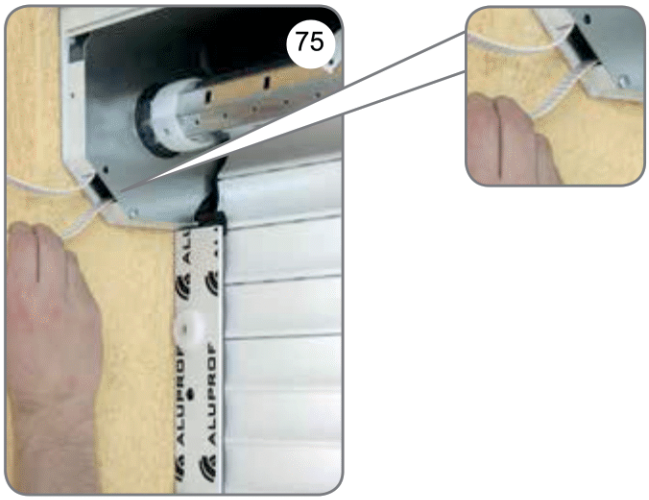
- under the tape - with a drill Ø 20 + 22 mm (a Ø 20 + 22 mm installation pipe should be inserted into the hole made and cut flush with the window frame, both inside and outside the room).
- for the cable - with a Ø 10 + 13 mm drill (insert the spring - the cable guide into the hole made) and adjust its length to the thickness of the window frame.

In the case of an electric drive, the hole for the actuator cable is drilled in the place where the cable exit is provided

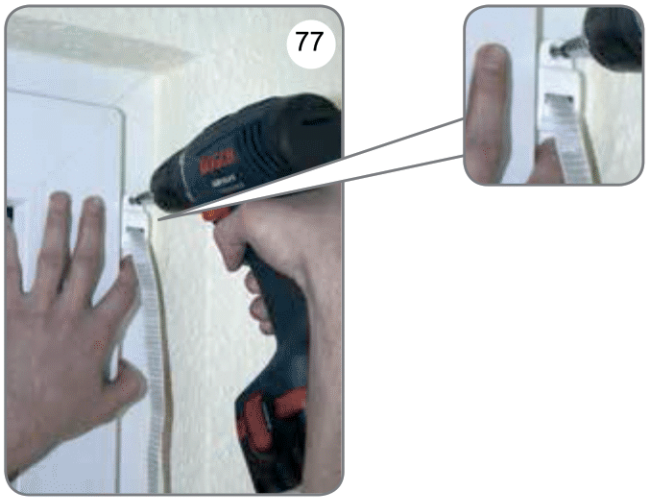
c) Put the roller shutter to the ground [69], set the guides vertically and screw them to the window frame [70]

d) Loosen the screws [71], [72] and open the roller shutter box (bottom) [73]

e) Lower the roller shutter curtain to the window sill and screw the box to the ground (on both sides) [74]. Pass the strap (rope) through the hole into the room [75]. In the case of a roller shutter with an electric drive, it is necessary to additionally adjust the end stops (using an assembly cable), then connect the control elements in accordance with the assembly instructions (drive, control unit, controller, etc.). Lead out the power cord in accordance with the electrical installation plans

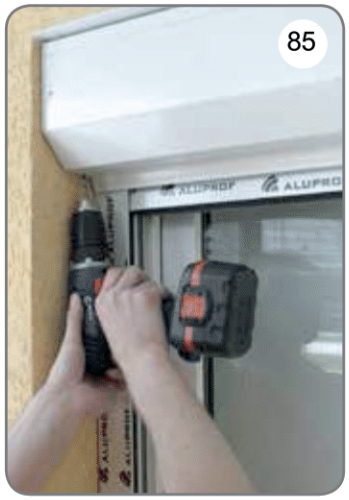


f) From the inside, at the exit of the opening [76], mount the tape guide [77] to the window frame with screws

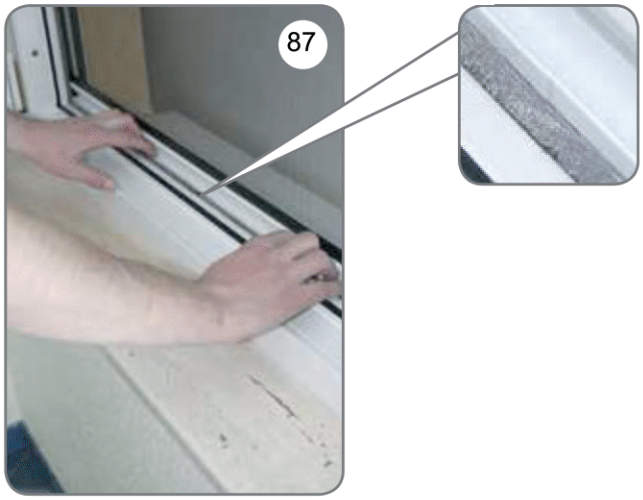


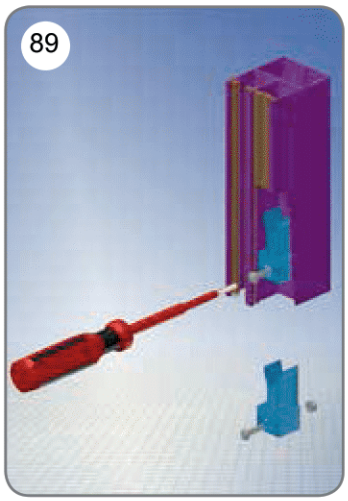
g) Pull out the cotter pins [78] and levering one side of the housing with a screwdriver - open the retractor [79]. Fix the coiler to the window frame with screws [80]. Attach the strap (rope) to the catch, firmly holding the spring housing, turn and release the lock [81]. With the reel installed and the curtain lowered, the spring drum should be wound on 2-3 turns of the tape / line [82]. Close the retractor housing [83]t

h) Check that all connections are made correctly.
i) Test the shutter operation.
j) Close [84] and screw the roller shutter box (bottom) [85], [86]



k) Close the mosquito net in such a position to obtain a seal between the bottom rail and the window frame through the brush seal (side) [87]. Then (on the opposite side of the window) mark the position of the position of the lower lath of the mosquito net [88]. Position the plug seat at a certain height (in each guide) and then tighten it with the appropriate force [89], [90]. Lower the mosquito net and check whether the surface between the bottom strip and the window frame is sealed with the brush seal [91]t





l) Remove the protective foil from the box [92] and guides [93] and the rest of the elements. Plug the holes in the rails [94]

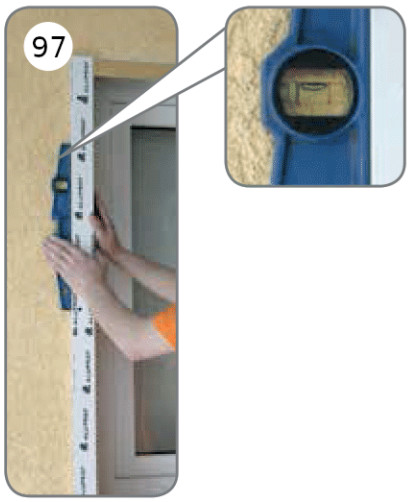
m) Train the user in the operation of the roller shutter.
n) Provide the user with the operation and maintenance manual, warranty and sign the acceptance report

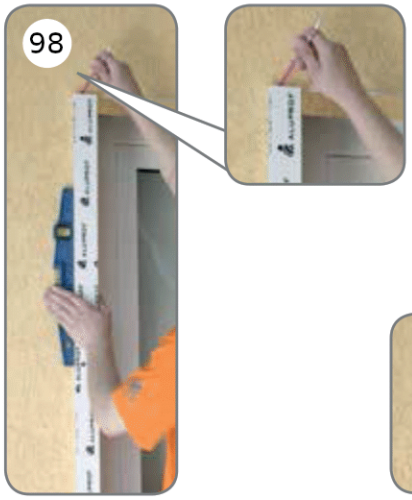
IV SYSTEM OF ROLLING SHUTTERS ADAPTIVE SK WITH MOSKITO - MOUNTING ON THE BUILDING WALL

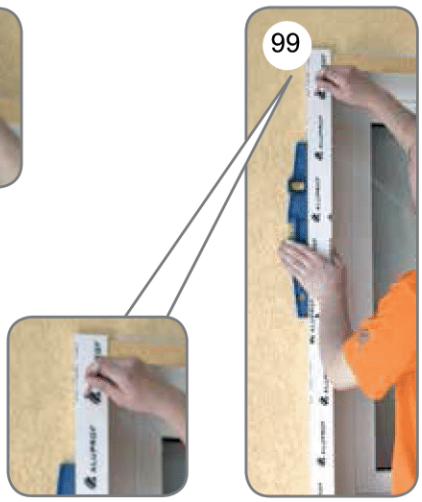
Sequence of assembly

a) Check the dimensions of the construction opening [95], [96]

b) Place the guide on the ground and place it vertically [97]. Mark the place of drilling the hole for the tape or cable of the manual drive (approx. 17mm above the guide edge) [98], then mark the place of drilling the holes to screw the guide [99]



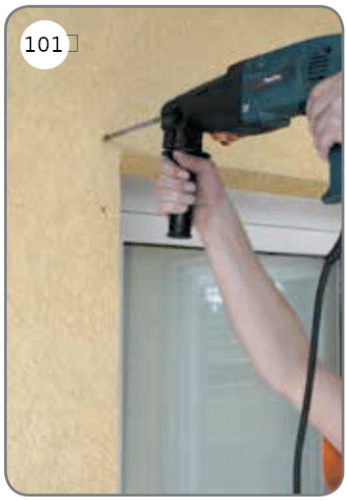




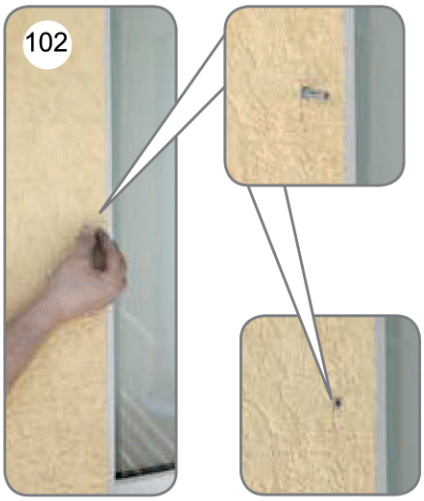
c) Drill holes for expansion plugs in the marked places (length and type should be adjusted to the wall structure) [100] and a hole for the tape or rope of the manual drive [101].

- under the tape - with a drill Ø 20 = 22 mm (in the hole made, insert an installation pipe Ø 20 - 22 mm and cut flush with the wall both inside and outside the room).
- for the rope - with a drill Ø 10 - 13 mm (insert the spring - the rope guide into the hole made) and adjust it length to the thickness of the window frame.

In the case of an electric drive, the hole for the actuator cable is drilled in the place where the cable exit is provided



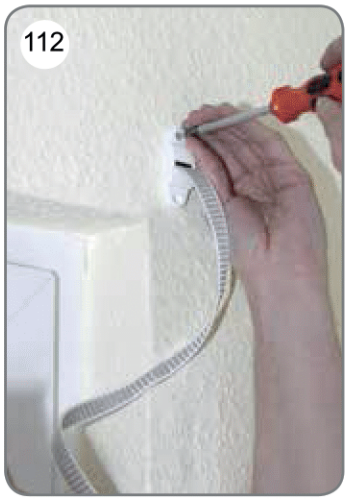
d) Put the wall plugs in the drilled holes [102], then put the guide [103] and screw it to the base [104]



e) Put the roller shutter box (along with the second guide) to the ground [105], set it, as in the case of the first guide, mark the drilling places, drill the holes, put the wall plugs in them and screw the whole thing to the base. Then unscrew the screws [106] and open the roller shutter box (bottom) [107]

f) Lower the roller shutter curtain to the window sill and screw the box to the ground (on both sides) [108]. Pass the strap (rope) through the hole into the room [109]. In the case of a roller shutter with an electric drive, it is necessary to additionally adjust the end stops (using an assembly cable), then connect the control elements in accordance with the assembly instructions (drive, control unit, controller, etc.). Lead out the power cord in accordance with the electrical installation plans

g) From the inside, at the exit of the hole [110], mount the tape guide [111] using the screws [112]

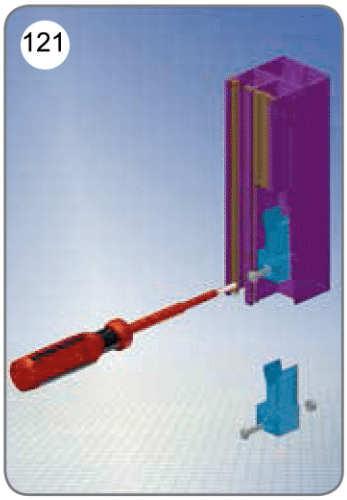


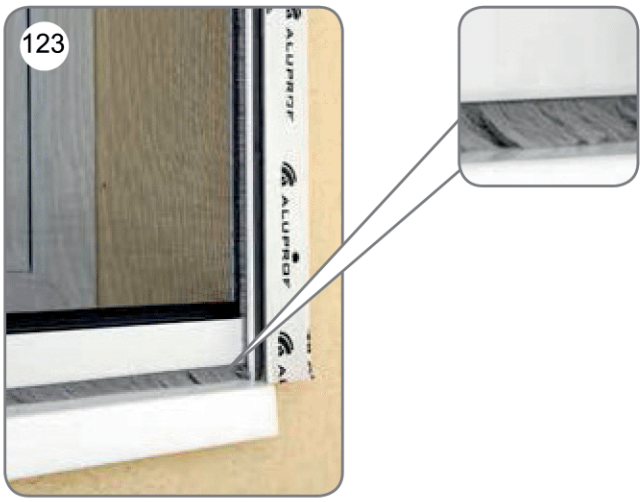
h) Pull out the cotter pins [113] and pry one side of the casing under a screwdriver - open the retractor [114]. Fix the reel to the wall with the screws [115]. Attach the strap (rope) to the catch, firmly holding the spring housing, turn and release the lock [116]. With the reel installed and the curtain lowered, 2-3 turns of the tape / line [117] should be wound on the spring drum. Close the retractor housing [118]

i) Check that all connections are made correctly.
j) Test the shutter operation

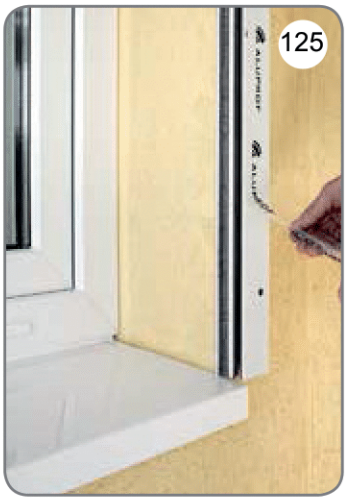
k) Close [119] and screw on the roller shutter box (bottom) [120]

l) Set the "position" of the mosquito net bottom strip by positioning the plug socket at a certain height (in each guide) and then tighten it with the appropriate force [121], [122]. Lower the mosquito net and check whether the surface between the bottom lath and the window sill is sealed through the brush seal (bottom) [123]





m) Remove the protective foil from the box [124] and the rails [125] and the rest. Plug the holes in the rails [126]



n) Train the user in how to operate the roller shutter.
o) Provide the user with the operation and maintenance manual, warranty and sign the acceptance report