

**TUBULAR MOTOR INSTRUCTION
YYGL35 / YYGL45**

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Safety instructions maintenance and assembly manual.

Warning:

Non-compliance with this instruction can lead to severe injury.
Follow all manual installation instructions.

INSTALLATION WARNING:

- Before installing the driver remove all cords and disable all equipment unnecessary for powered operations.
- The power supply cables should not be exposed to direct sun or rain.
- If the driver is controlled manually the switch should be located within direct sight of the driven part but away from moving parts. It is to be installed at a minimum height of 1,5 m.
- It is advised to secure the moving parts of the driver located maximum 2,5 over the ground.
- It is advised to regularly examine the installation for signs of wear or damage to cables and springs.
- During installation the power supply cables should not be exposed directly to sunlight or rain.
- Fixed and remote controls should be kept away from children.

Warning:

For safety reasons it is advised to follow all the instructions and warnings contained in this manual.

Warning:

Incorrect installation can lead to severe injury. For safety reasons it is advised to follow all the instructions and warnings during installation.

1. Operation manual.

Note:

- a. Please read the instruction carefully before installation.
- b. Before operation assure that all accessories have been fixed and the motor works without any mechanical problems.
- c. The weight of the roller shutter should be matched with the nominal torque of the motor.
- d. The installation of the motor should be performed only by professional technicians.

1.1. Product features.

Tubular motors are used as the driving force for roller shutters, awnings and garage doors. The product is easy to conceal, compact in size and easy to install. The noise emitted during the operation was reduced to minimum.

The motor powered roller shutters, awnings, sun protection shades and garage doors are used in offices, houses, hotels, restaurants, exhibition halls and other public buildings.

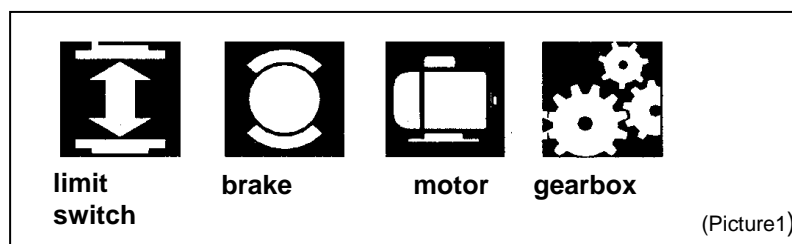
To prolong the usefulness of the motor the overheating protection device was mounted inside the device.

It will stop automatically the motor when the temperature during the operation rises too high and will resume operation when the temperature drops down.

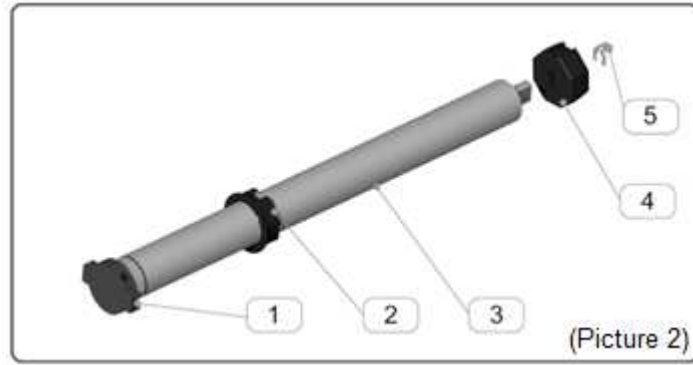
R- Series tubular motors with a radio control give us convenience and allows to assembly the tubular motor where you can not use the switches. M- Series tubular motors with emergency manual override (MO), which allows to raise the shutter even in the event of failure or interruption of electrical power.

1.2. Construction and functions.

The composition of each Tubular motor R,S or M, consist of four main elements: limit switch, brake, motor, gearbox (Picture 1). In addition to the composition, of the R – Series goes a built-in control unit and the M – Series goes emergency manual override (MO).



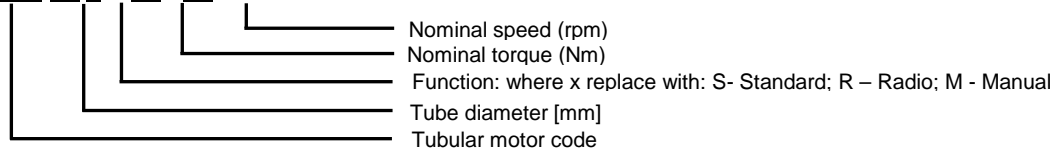
1.3. The outer elements of the motor (Picture 2)



- 1 – Limit switch
- 2 – Driving adapter
- 3 – Motor tube
- 4 – Coupling
- 5 – Coupling joint

1.4. Motor types description

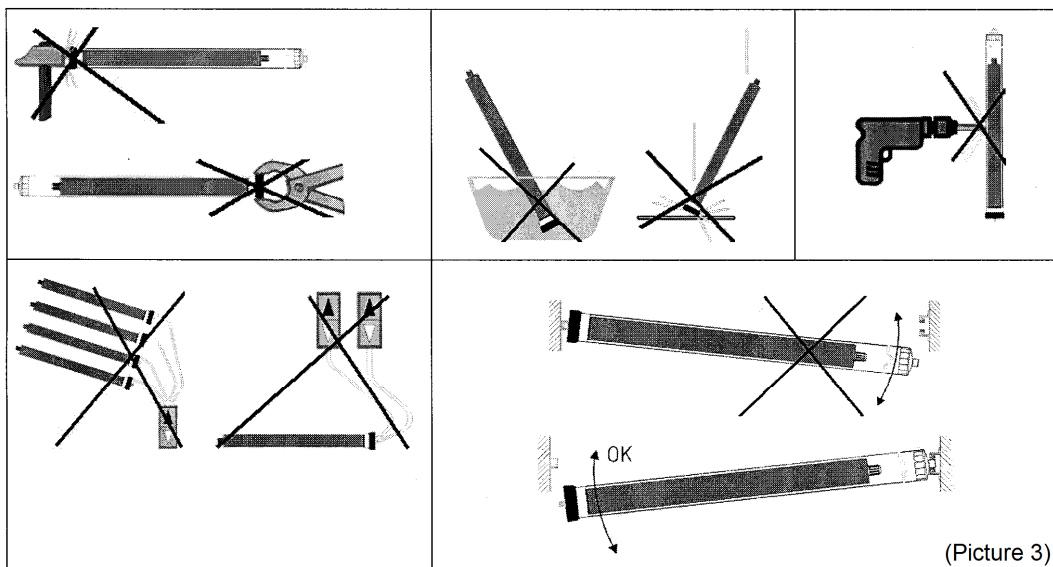
YYGL 45 x - 20 / 17



1.5. Main technical data

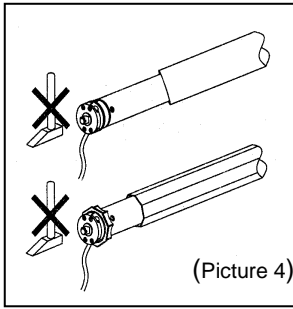
- a) Installation conditions: Temperature of surrounding: -10°+40°C; Humidity below 90%;
- b) Power supply: 230V/50Hz;
- c) Nominal torque [Nm];
- d) Nominal speed [rpm];
- e) Rated voltage [V];
- f) Power consumption [W];
- g) Current input [A];
- h) IP 44 protection class

1.6. Forbidden operations (Picture 3)

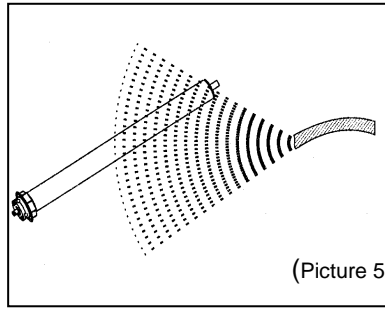


(Picture 3)

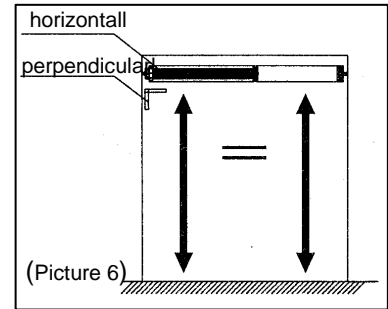
2. Installation steps



(Picture 4)



(Picture 5)

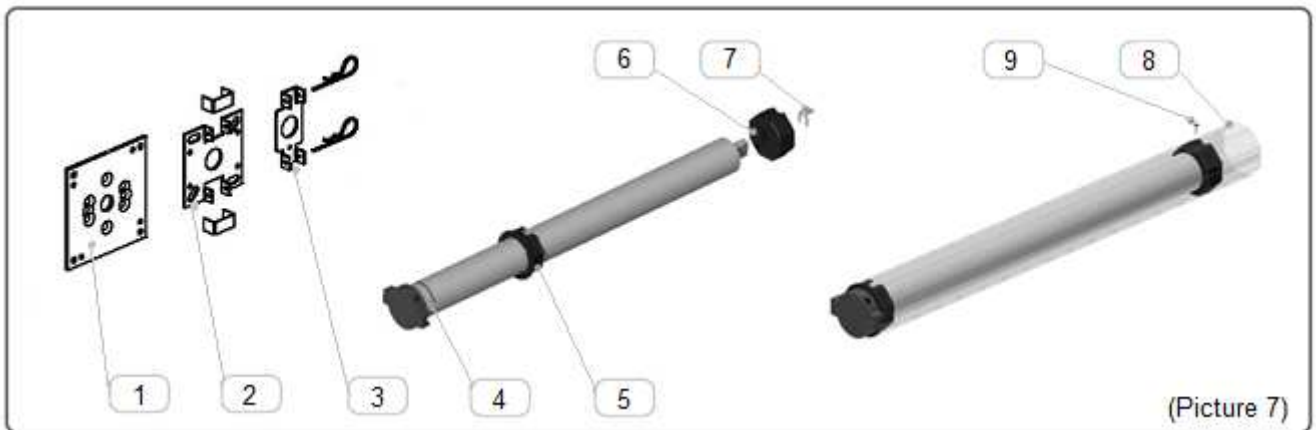


(Picture 6)

2.1. Notices before installation:

- a. The installation of the motor should be performed only by professional technicians.
- b. Connect the coupling with the driving adapter, avoid hammering the motor into the tube (Picture 4).
- c. Protect the motor from water (Picture 5).
- d. The fitting between the outer edge of the coupling and the internal tube diameter should not exceed 1 mm.
- e. During installation the motor and the tube should be parallel to each other. The door and windows should be perpendicular to the axis of the tube. (Picture 6).
- f. For security reasons, before the use of the motor it should be grounded with the use of green and yellow cables connected in series.
- g. Before the installation, make sure that all accessories are fixed properly and the guides are not an obstacle for the shutter moving in them.
- h. It should be checked if the nominal torque is matched properly. The proper torque should be the same or smaller than the nominal torque of the motor.
- i. The motor can be installed either in the left or right side of the door or window, depending on actual needs.

2.1. Installation steps (Picture 7)



(Picture 7)

- a) Mount the tubular motor bracket [2] to the side of the shutter.
- b) Insert the adapter [5] to the motor crown [4].
- c) Insert the coupling [6] on the motor axis and safe it with joint [7].
- d) Insert the motor in the tube [8].
- e) Connect the tube [8] with the coupling [6] with the use of screw or rivet.
- f) Install the motor and the tube in the bracket [2] and secure with joints.

Note:

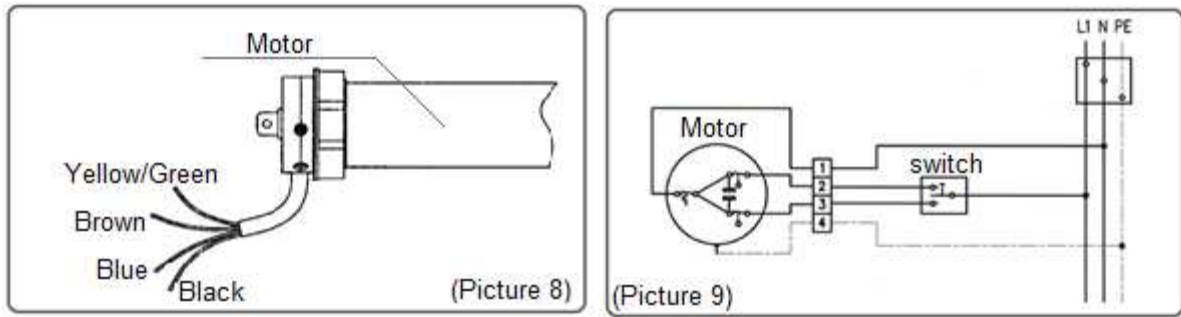
In case of YYGL35S motor screw the plate [3] to the head of the motor and mount it to the bracket [1].

Note:

In case of M- Series (MO) , to the tubular motor head use the bracket [1].

2.2. Power supply

2.2.1. S – Standard and M- Manual (MO) series.



The basic system of electric connections should be executed according to the picture 8,9
The isolation colours of the wires have the following meaning:

- Yellow/green– guard wire
- Blue – neutral wire
- Brown – phase wire to (without “the”) control the motor rotation in one direction
- Black – phase wire to (without “the”) control the motor rotation in the opposite direction than the brown wire

When the blue and the brown wire are connected, the coupling rotates clockwise. When the blue and black wires are connected the coupling rotates anti-clockwise.

The green-yellow wire is the earthing wire.

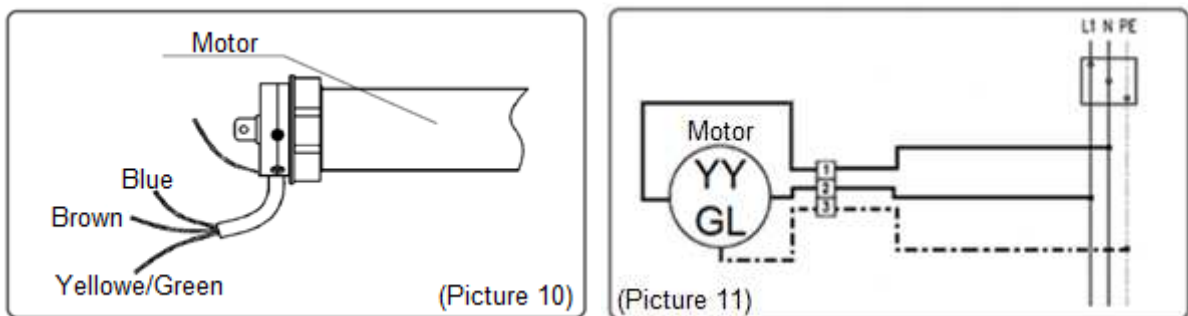
The rotating direction should be set in relation with the installation manner (right/left) in the shutter box.

In case there is a need to change the rotating direction the direction wires should be changed up/down, i.e., brown and black.

Note:

- It is forbidden to connect more than one motor to the same power-control circuit. Group connections and control can be executed only by using special devices available on request.
- **The motors are designed for interrupted work.** In case of overheating as a result of too long continuous work (over 4 minutes) the protection device will stop the motor automatically and it will resume operation when the temperature drops down what may take several minutes. In such situation the motor may work inefficiently. When it cools completely it will return to normal working mode.

2.2.2. R - Radio series.



The basic system of electric connections should be executed according to the picture 8,9
The isolation colours of the wires have the following meaning:

- Yellow/green– guard wire
- Blue – neutral wire
- Brown – phase wire

The rotating direction should be set in relation with the installation manner (right/left) in the shutter box.

In case there is a need to change the rotating direction the direction wires should be changed up/down, i.e., brown and black.

Note:

- Several motors can be connected to the same circuit. The motors do not work with all kinds of switches and control units.
- **The motors are designed for interrupted work.** In case of overheating as a result of too long continuous work (over 4 minutes) the protection device will stop the motor automatically and it will resume operation when the temperature drops down what may take several minutes. In such situation the motor may work inefficiently. When it cools completely it will return to normal working mode.

3. Limit switches regulation.

In order to check the motor:

R- Radio series:

It is possible to switch on the motor with a remote controller (the instruction of the controller is included to the motor). When you chose the UP or DOWN button, the adaptor will rotate clockwise (or anti-clockwise).

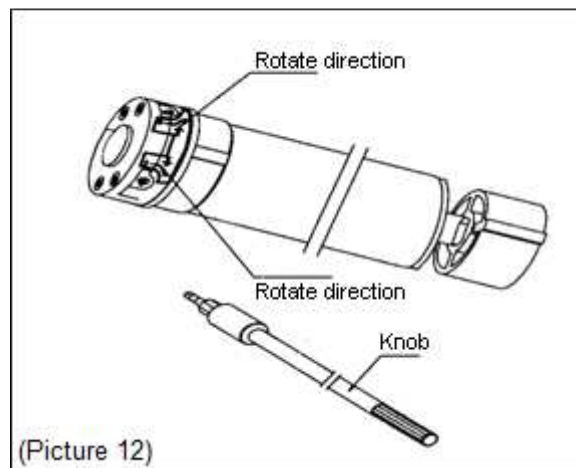
S- Standard and M – Manual (MO) series:

it is possible to switch on the motor manually with the use of installation cable. When the power is switched on through the blue and black (or brown) wire, the adaptor will rotate clockwise (or anti-clockwise).

The position of the limit switch screw has to be set during the installation. For this purpose it is necessary to compare the rotate direction of the tube for the roller shutter open and closed position with the direction of the arrows placed near the regulation knob.

The proper knobs regulate the upper and lower position of the shutter.

When the knob is turned in the "+" direction the path length in the given direction is increased. When the knob is turned in the "-" direction the path length is decreased.

**Regulation of the lower position:**

1. Start the closing mode of the shutter until it stops in the requested position.
2. Regulate the knob (marked \uparrow) in the (+) direction set the requested position of the shutter.
3. Raise the shutter and regulate the knob in the (-) direction and repeat the procedure if the requested position is crossed.

Regulation of the Upper position:

1. Start the opening mode of the shutter until it stops in the requested position.
2. Regulate the knob (marked \downarrow) in the (+) direction set the requested position of the shutter.
3. Raise the shutter and regulate the knob in the (-) direction and repeat the procedure if the requested position is crossed.

4. Additional notes and warnings.

- a) Do not store the motor and the remote controller with acids and alkali, dirty and eroding materials
- b) Keep the motor and the remote controller off the water and humid environment.
- c) Do not overload the motor as it might reduce its operations.
- d) Keep the product number and nominal plate.

5. Troubleshooting.

No	Trouble	Reason	Solutions and suggestions
1	When the controller down button is pressed the shutter moves upward instead downward	Faulty cable connection (S- Standard and M – Manual (MO) series)	Swap the brown and black cable. For version R – Radio, please reprogram the transmitter.
2	The driving adapter rotates only in one direction	The switch of the other direction is off	Rotate the crown toward the rotating direction of the driving adaptor.
3	The motor refuses to work or starts slowly when power is switched on.	A. Voltage is too low. B. Errors in line connection. C. Overload. D. Installation errors.	A. Voltage regulation B. Checking and Line correction C. Installation of the loaf relevant to the torque D. Motor re-installation
4	Sudden stop of the operating motor	The rated operating time was exceeded (4min)	When the motor cools down it will resume its work after approximately 20 minutes.
5	The motor stops operation. The length of switch limits cannot be increased.	The spacing adjusted to minimum	Remove the motor and rotate the crown toward the inverse direction several times. Place the motor inside the tube and regulate the limit switches.

