

# GALILEO 140

## AUTOMATION SYSTEM FOR ROLLING SHUTTER

### INSTALLATION, USE AND MAINTENANCE INSTRUCTIONS



#### WARNING

Before installation, please read the instructions carefully and follow the given directions. Failure to follow the directions below could result in serious personal, livestock or property damages. The instructions detail important safety information, installation, operation, and maintenance, and must be kept for future reference.

This product is designed exclusively for the rolling shutters as detailed below. Any other use could impair the operation of the product or be a source of danger.

Installation and maintenance operations must be performed by trained personnel in accordance with current regulations. **NOTE TO THE USER: Unqualified personnel is prohibited from performing installation and maintenance of the GALILEO 140.**

#### GENERAL DESCRIPTION

The GALILEO 140 is an automation system for rolling shutter consisting of a gearmotor and a spring balancing mechanism intended to be placed in a  $\varnothing 139.7 \times 3.6$ mm tube. The gearmotor is equipped with a mechanical brake that can be released using a steel cable. Therefore, the brake release operation is identical to that of central gearmotors for rolling shutters in case of an emergency. The limit switch is manual type, easily accessible and simple to adjust using the supplied accessory. The spring balancing mechanism consists of a counterbalancing torsion spring, an anti-fall safety device, and a sensor that signals spring breakage.

#### TECHNICAL DATA

MOTOR	Torque	Max weight lifted*		Turns	Max travel	Voltage	Frequency	Power	Intensity	Operation tin	Weight	Operat. T°	Dimensions
	Nm	$\varnothing 140$ - Kg	$\varnothing 180$ - Kg	Rpm	Mt	V	Hz	W	A	Minutes	Kg	°C	Mm
<b>Motor H.50</b> Art. 030MV00002	160	190	160	10	6	230 V	50-60 Hz	450	1,95	20	10,5	-5°+ 50°	Pag.2
<b>Motor H.80</b> Art. 030MV00007	250	220	190	10	6	230 V	50-60 Hz	600	2,60	20	11,0	-5°+ 50°	Pag.2
Spring	Torque	Max weight lifted*		Max turns	$\varnothing$	Lenght	Anti-fall device	Spring breakage	Weight	Operat. T°	Dimensions		
	Nm	$\varnothing 140$ - Kg	$\varnothing 180$ - Kg	n.	mm	mm	Nominal moment - Nm	signaling	Kg	°C	Mm		
<b>Spring <math>\varnothing 7,5</math> - L.600</b> Art. 030MV00003	85	120	90	8	7,5	600	150	Contatto NA/NC	16,0	-5°+ 50°	Pag.2		
<b>Spring <math>\varnothing 8,0</math> - L.600</b> Art. 030MV00004	105	155	120	8	8	600	150	Contatto NA/NC	17,0	-5°+ 50°	Pag.2		
<b>Spring <math>\varnothing 8,5</math> - L.600</b> Art. 030MV00005	140	190	160	8	8,5	600	150	Contatto NA/NC	18,0	-5°+ 50°	Pag.2		
<b>Spring <math>\varnothing 10,0</math> - L.1.000</b> Art. 030MV00008	180	220	190	8	10	1000	150	Contatto NA/NC	28,0	-5°+ 50°	Pag.2		

\* Theoretical weight without friction. The calculation of the real weight must be increased by the effect of friction (from 10% to 30% depending on the conditions of the shutte

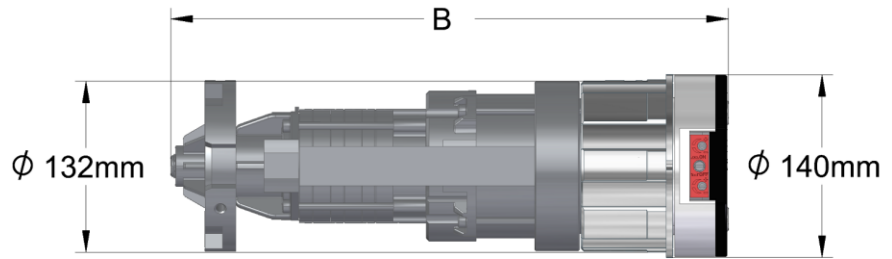
#### LIMITS OF USE

Before installing the GALILEO 140 it is necessary to check that the characteristics of the rolling shutter are compatible with the technical data and the maximum weight shown here in relation to the diameter of the pipe 139,7x3,6mm.

Rolling shutter TUBE WIDTH	MM	4000	4500	5000	5500	6000	6500	7000	7500
Rolling shutter MAX. WEIGHT + FRICTION	KG	220	220	220	220	220	180	135	100
Tube deflection (Max 1/500)	MM	3	5	7	10	12	13	14	15

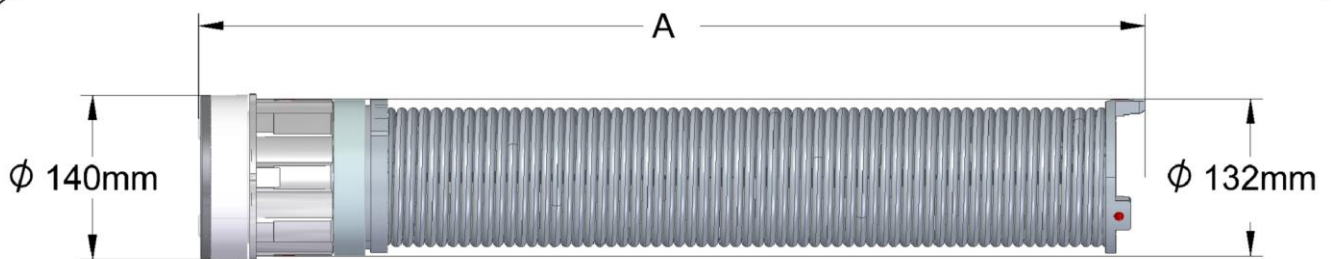
GALILEO 140 COMPONENTS

Motor



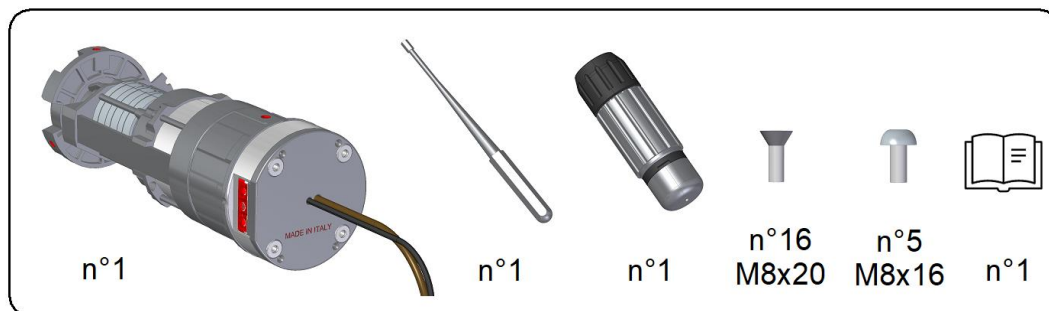
MOTORE	B (mm)
H50 160Nm	427
H80 250Nm	457

Spring

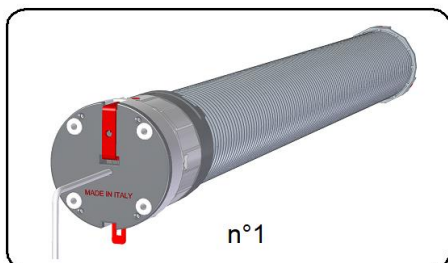


Ø Molla - Spring - Ressort	A (mm)
Ø 7,5 - 8 - 8,5 - L600 mm	795
Ø 10 - L1000 mm	1195

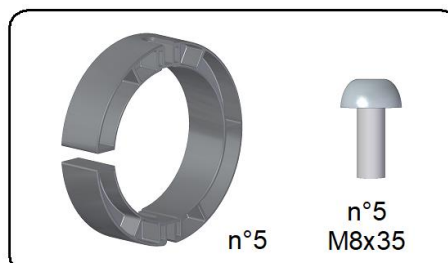
Motor package



Spring package



Adaptor diam.180 package



**INSTALLATION**

The motor must be mounted on the right and the spring on the left side of the tube.

**TUBE CUT**

- 1) **Tube size:** **139.7x3.6mm (5") welded and without internal welding bead.**  
Minimum tube length: 1,500mm (spring length 600mm) or 2,000mm (spring length 1000mm)
- 2) **Tube cut:** **L - 110mm** (L = inner distance between open type side plates)  
**L - 100mm** (L = inner distance between closed type side plates)

If **OPEN SIDE PLATES** are used, 110mm corresponds to the 50mm+50mm overall dimensions of the outer spring and motor supports plus the 5mm+5mm dimensions of the **PLATES** to be mounted on the shaft sides (FIG.1a).  
If **CLOSED SIDE PLATES** are used to which the shaft is directly attached without any plates, then you must subtract 100mm (50mm+50mm) from the inner distance between the side plates (FIG.1b)

*NOTE: It is important that the tube inner side must be without internal welding bead.*

FIG.1a

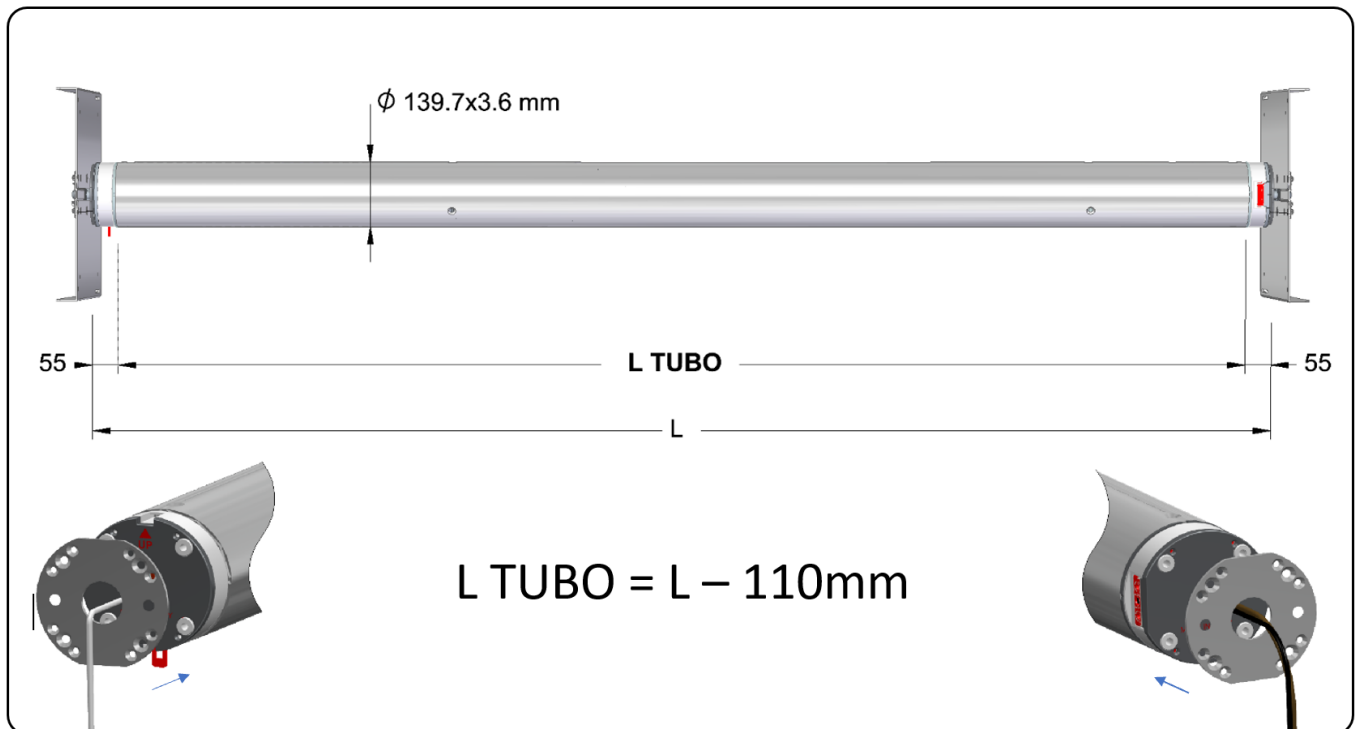
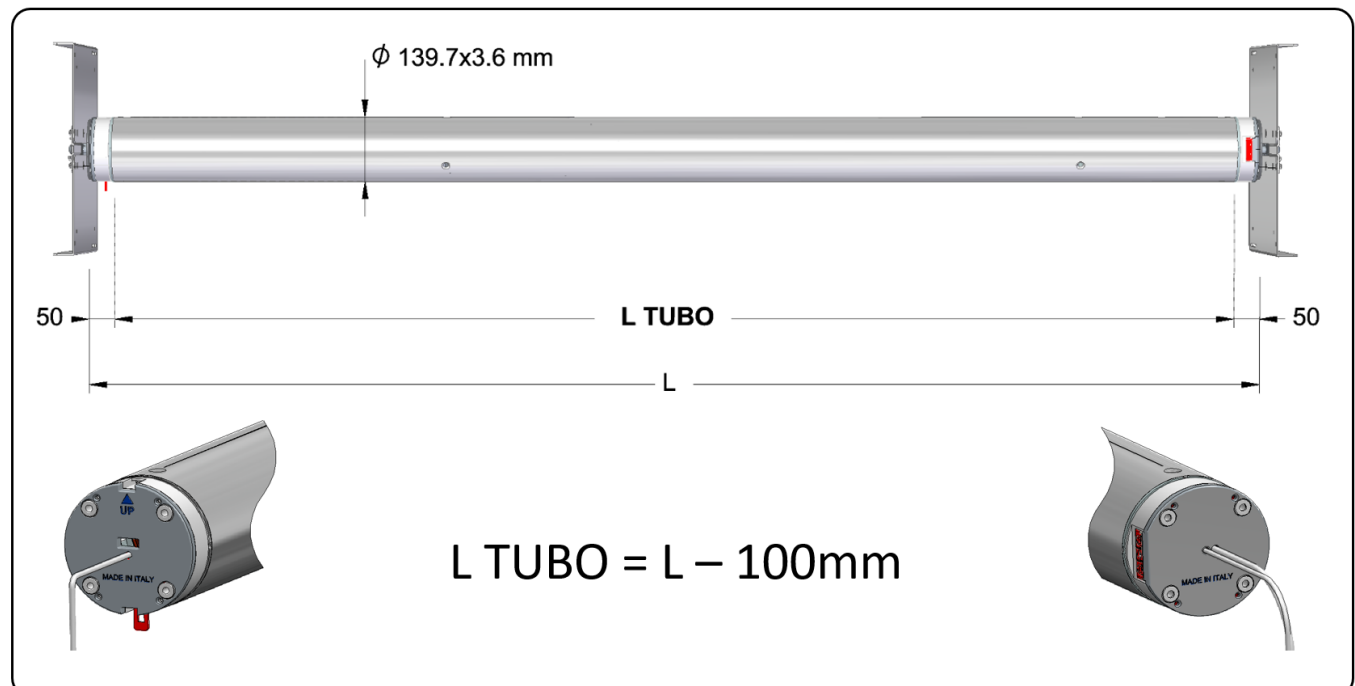


FIG.1b

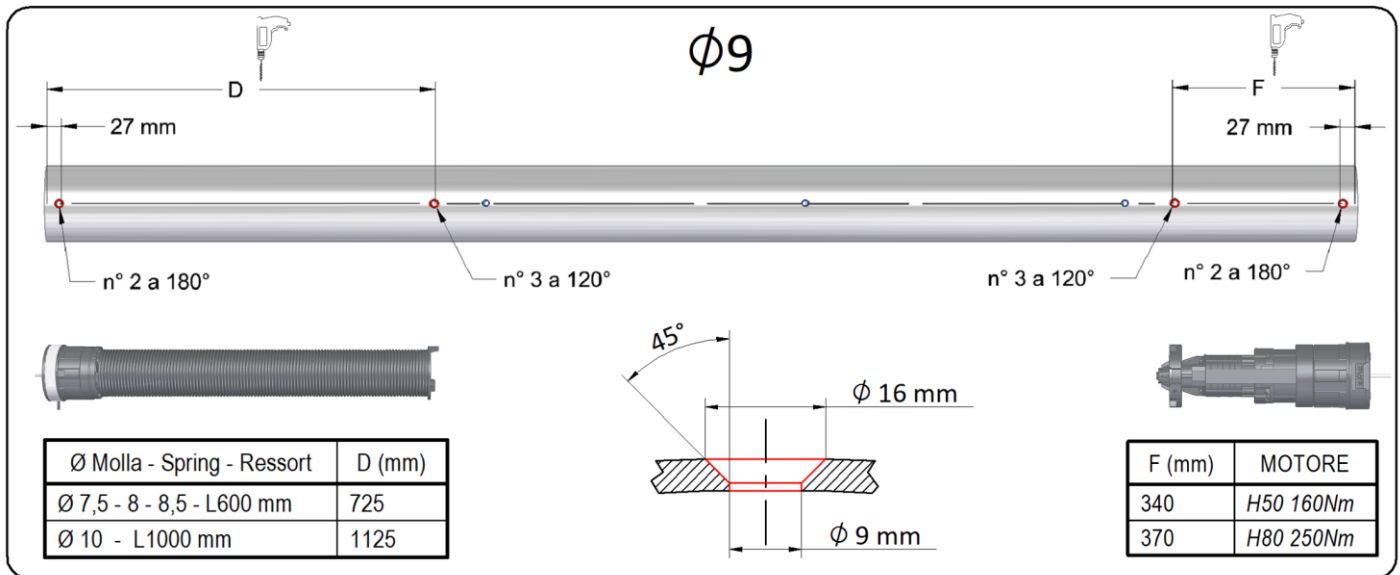


TUBE DRILLING

- 3) **Ø 9mm countersunk HOLES** for fixing the motor and spring on the inside of the tube (FIG.2)
- **2 Ø 9mm holes at 180°: at 27mm** from the left end of the tube;
  - **3 Ø 9mm holes at 120°: 725mm** (spring l.600mm) or 1,125mm (spring l.1000mm) from the left end of the tube;
  - **3 Ø 9mm holes at 120°: at 337mm** (motor h.50) or 367mm (motor h.80) from the right end of the tube;
  - **2 Ø 9mm holes at 180°: at 27mm** from the right end of the tube

Use the "tube welding line" as a reference to **align the holes**:  
 Use a template for the position of the holes at 180° and 120°.  
 Countersink the holes.

FIG.2



- 4) **Threaded M8 HOLES** (Ø 6,8) for fixing the rolling shutter curtain to the tube (FIG.3)
- Drill holes in the middle part of the tube where the spring and motor are not located:**
- **2 M8 holes at 180°: at min 50mm** to the tube center from the previously drilled Ø 9 holes at 120°;
  - **n M8 holes at 180°: every max.1000mm in the tube center** (the number of holes depends on the tube width).

**Align the M8 holes with the Ø 9 holes**; using the " tube welding line" as a reference.

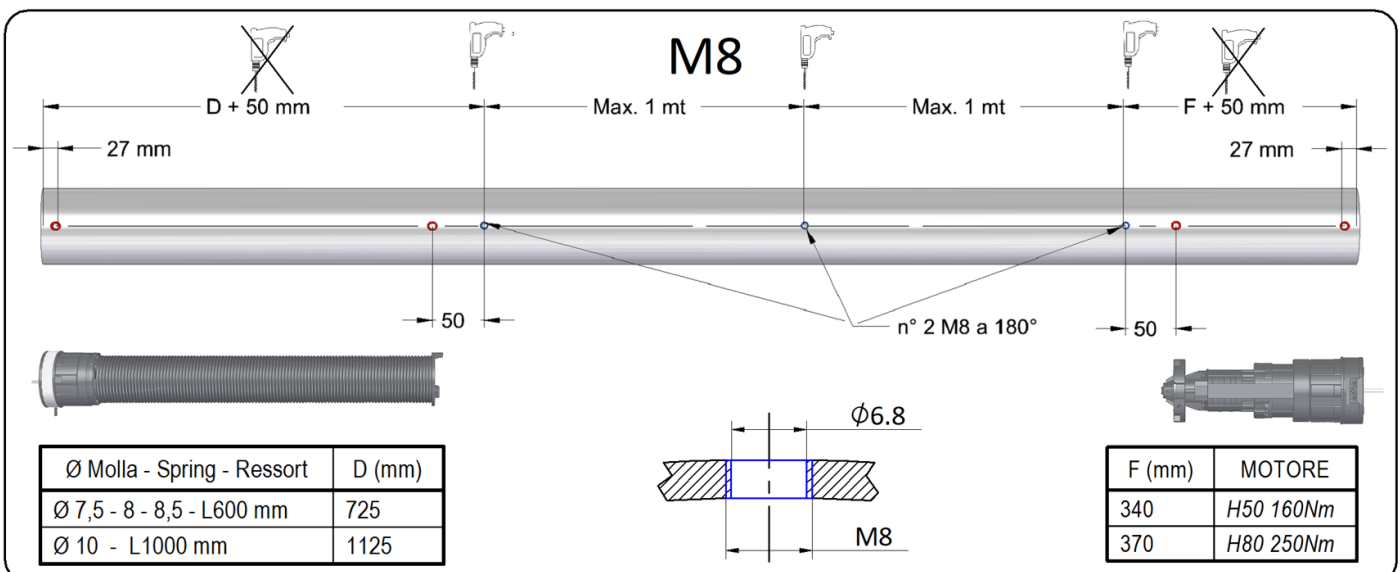
Use a template for the 180° position.

Thread the M8 holes

The n° of M8 holes is 2 at 180° in order to load the spring and fix the rolling shutter curtain by half a turn of the tube.

*NOTE: do not drill holes to fix the curtain in the parts of the tube where the spring and motor are positioned*

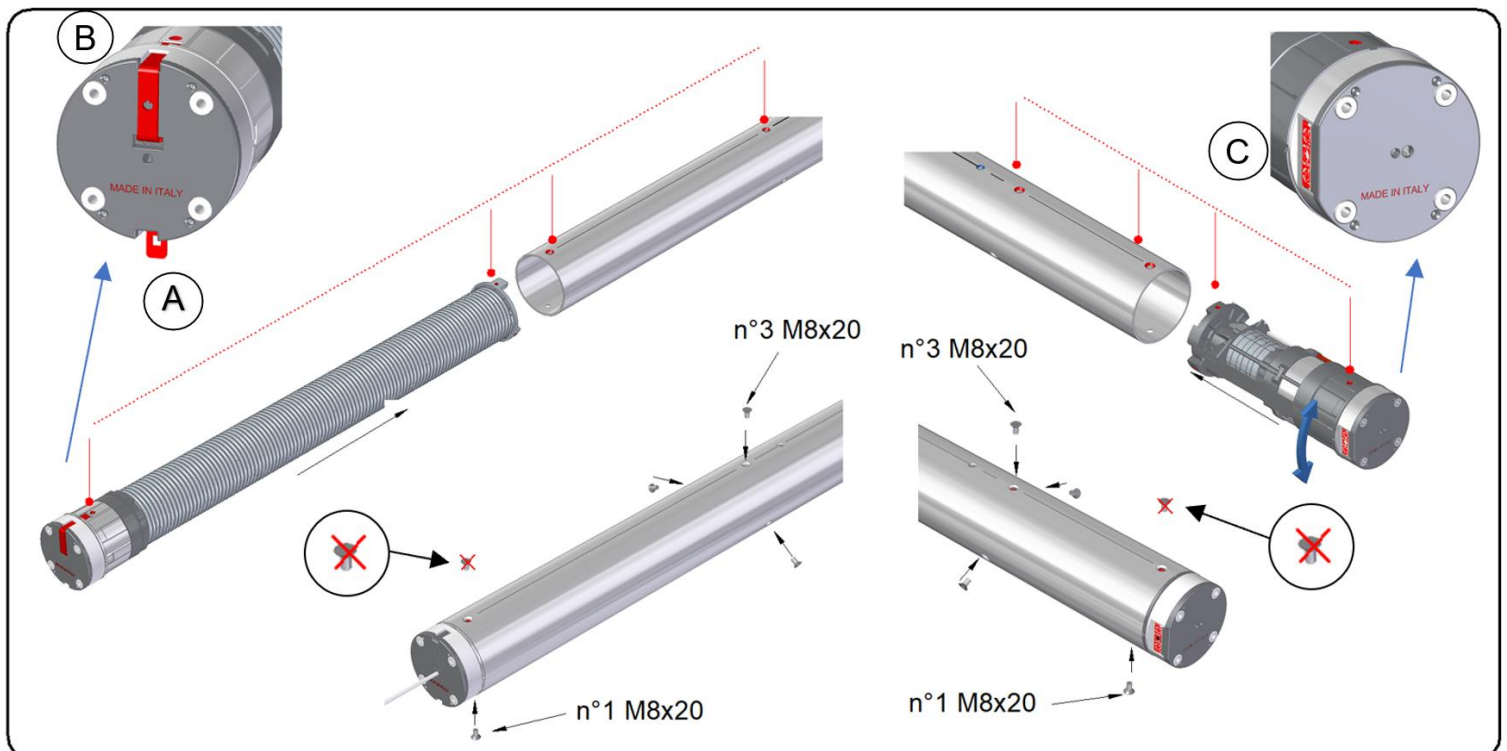
FIG.3



**ASSEMBLING THE MOTOR AND SPRING IN THE PIPE**

- 5) Insert the spring on the left side of the tube, **keeping the MADE IN ITALY inscription horizontally, the ANTI-DROP DEVICE SPOOL (A) downward** and the locking fork (B) upward (FIG.4).  
Align the spring holes with the  $\varnothing 9$  holes in the tube and screw in:
  - o the front flange with no.3 TSP CE M8x20 screws (supplied);
  - o the safety wheel with no.1 TSP CE M8x20 screw (supplied): **use the bottom  $\varnothing 9$  hole at 27mm** from the end of the tube and leave the top hole free for fixing the rolling shutter curtain.
  
- 6) Insert the motor on the right side of tube, **keeping the MADE IN ITALY inscription horizontally and the LIMIT SWITCH (C) in the frontal position** (FIG.4).  
Turn the limit switch wheel of the motor to align one hole with the top hole of the driving wheel.  
Align the motor holes with the  $\varnothing 9$  holes of the tube and screw in:
  - o the driving wheel with no.3 TSP CE M8x20 screws (supplied);
  - o the limit switch wheel with no.1 TSP CE M8x20 screw (supplied): **use the bottom  $\varnothing 9$  hole 27mm** from the end of the tube and leave the top hole free for fixing the rolling shutter curtain.

FIG.4



**SPRING RELEASE**

- 7) Pull out the locking fork from the rear spring support (FIG.5).

*NOTE: Check that the mounted shaft before installation as in FIG.6:*

- o the ANTI DROP DEVICE SPOOL faces downward,
- o the LIMIT SWITCH faces upward.

FIG.5

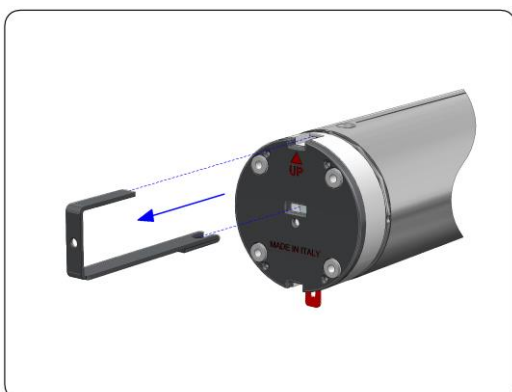
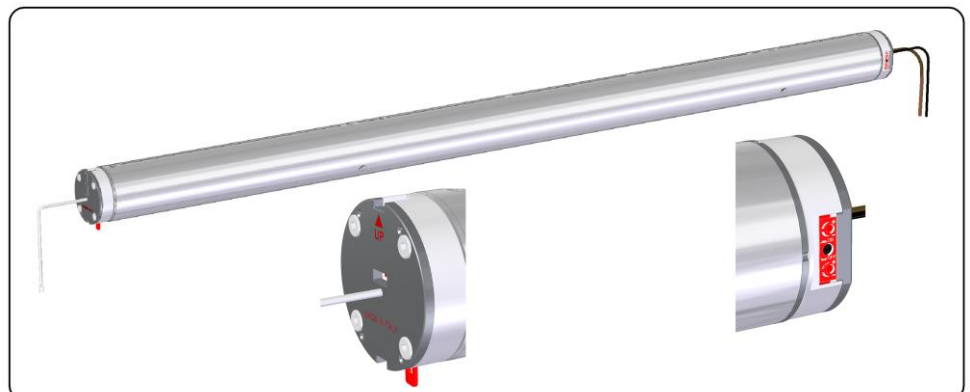


FIG.6



**MOUNTING THE SLIDING CARRIAGES**

If **OPEN SIDE PLATES** are used **WITH THE SLIDING CARRIAGES**, it is necessary to:

- 8) Mount the sliding carriage to the plate using no.2 M10X16 screws (supplied with the carriage) (FIG.7a).  
As an alternative to the sliding carriage, a fixed plate can be mounted to be used in open side plates (FIG.7b).
- 9) Mount the sliding carriage to the spring support and motor support using no. 4+4 M8x20 screws (supplied), running the cables through both the plate center hole and the carriage (FIG.8).
- 10) Check that the spring is in its correct position (the ANTI DROP DEVICE SPOOL downward) and that the motor is in its correct position (the LIMIT SWITCH upward).
- 11) Mount the shaft, placing the carriages on the rails mounted on the side plates and placing the stop (FIG.9).
- 12) Close the side plates using the stoppers

FIG.7a Sliding carriage

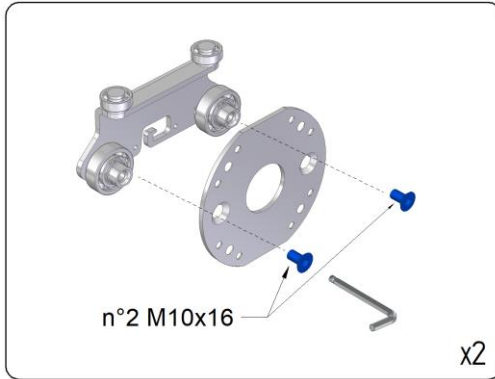


FIG.7b Fixed plate

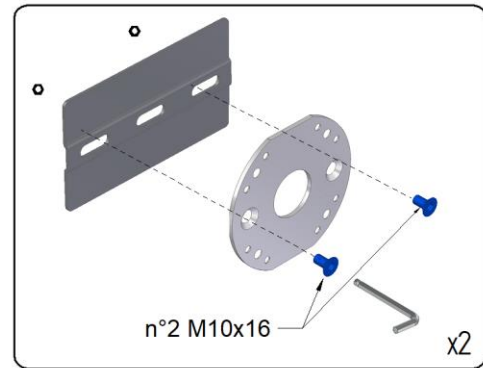


FIG.8

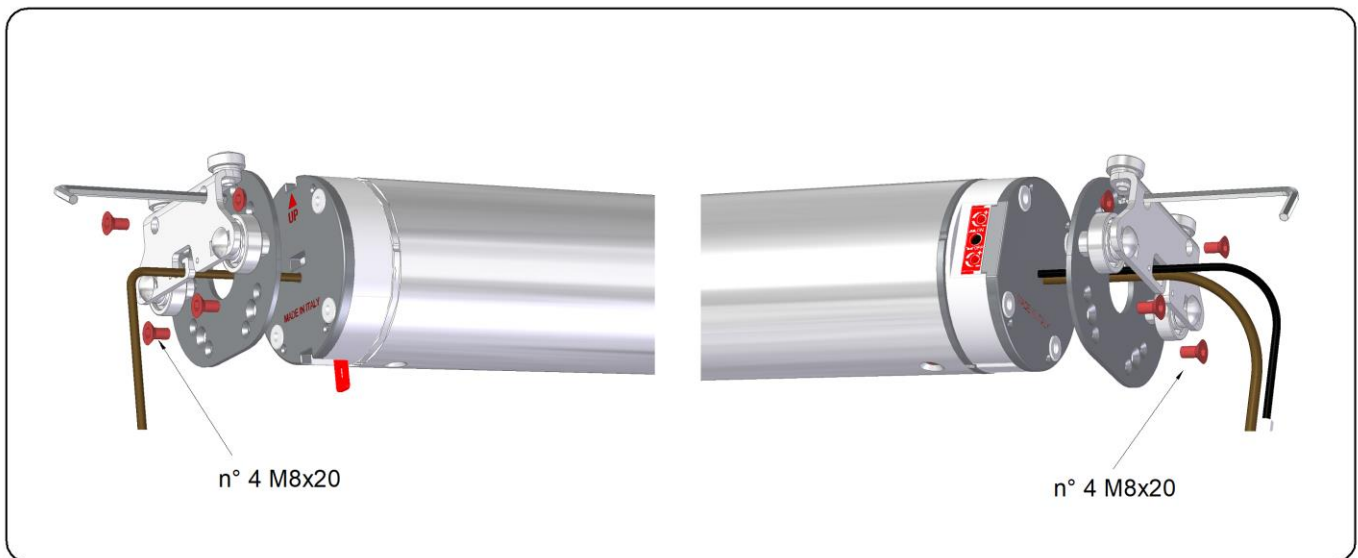
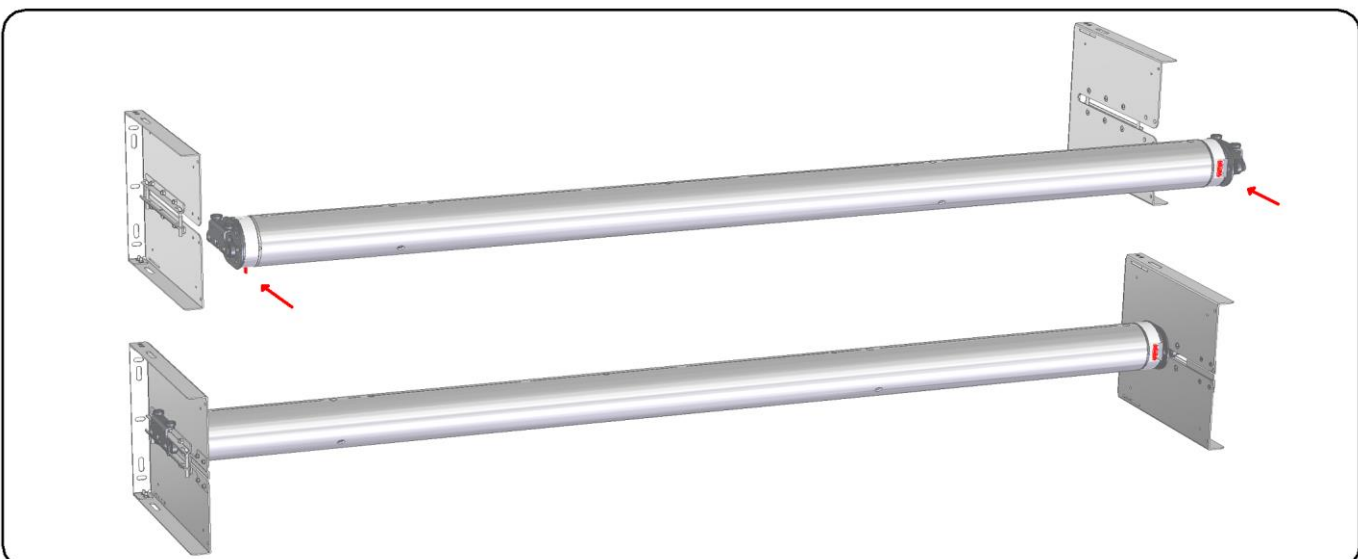


FIG.9



### ACTIVATION OF THE ANTI-FALL SAFETY DEVICE

The GALILEO 140 is equipped with an anti-fall device, located inside the spring support (FIG.10).

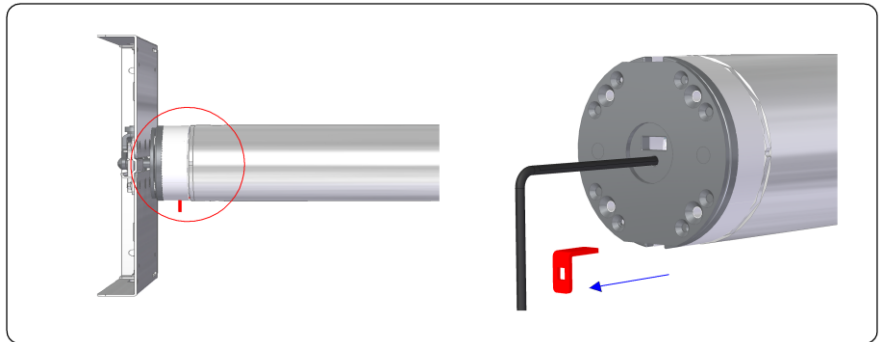
13) Remove the anti-fall device spool (FIG.10) only after installing the axis on the side plates.

*NOTE: If the spool is not removed the anti-fall device prevents the tube from rotating and the motor is blocked. In this case the motor brake must be released and the tube must be rotated manually to release the spool. In order to release the brake, the brake release handle must be mounted and then turned clockwise (FIG.15 and 16). Once the function is finished, the brake must be reset by turning the brake release handle counterclockwise.*

FIG.10



FIG.11



### TEMPORARY ELECTRICAL CONNECTION FOR SAFE SPRING LOADING AND UNLOADING

14) Establish the electrical connection following the layout in FIG.12 **before spring loading or unloading.**

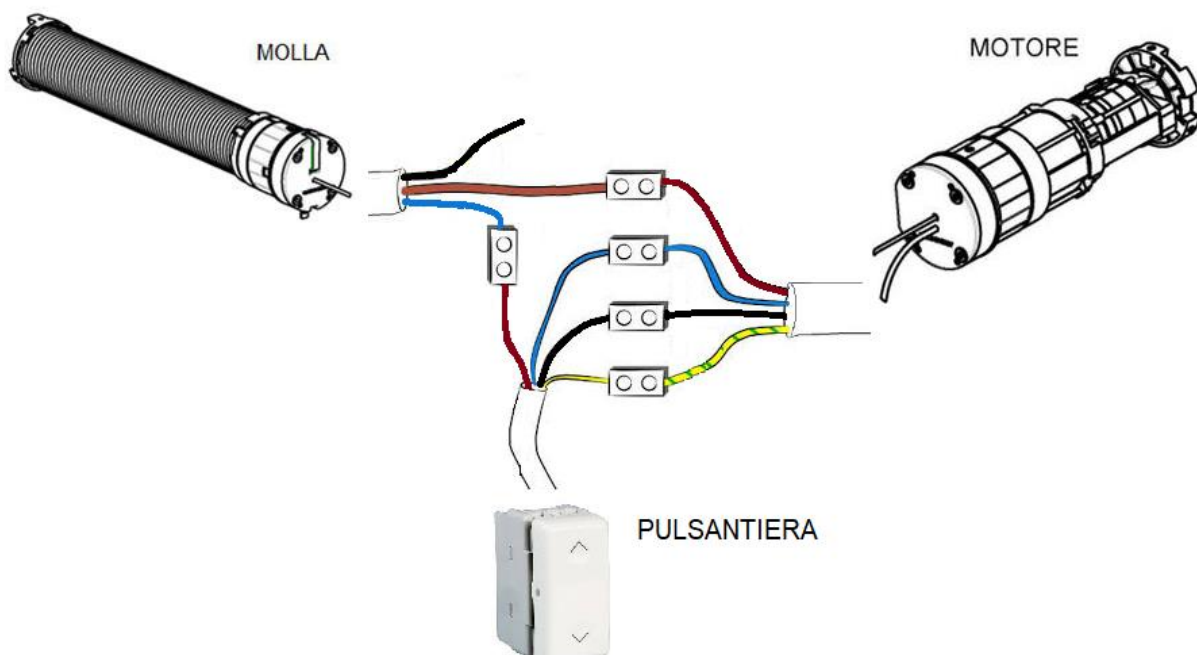
**The upward cable of the motor (brown wire) must be connected to the wires of the spring breakage signaling device (blue and brown wires) before they are inserted in the push button panel.**

This temporary connection allows the spring breakage signaling device to intervene during the upward motion when the spring is completely unloaded, and then disconnects the power supply and stops the upward motion.

The function of this connection is to:

- **prevent the torsion spring from being loaded in the wrong direction of rotation** (upward)  
If you load the spring upward beyond the initial point where it is unloaded, it could irreparably damage the torsion spring.
- **completely unload the torsion spring** by rotating the motor **in the upward direction** and then **returning to the starting point**  
In this way, if the number of charging turns made up to that moment is forgotten during the spring loading, the spring can be unloaded to the starting point and start loading again.

FIG.12



**SPRING LOADING**

- 15) Check that:
- the spool of the anti-fall device has been removed,
  - the limit switch is disengaged (red button pressed)
  - the motor brake has not been released (the tube must not rotate manually).
- 16) The number of spring loading turns required to balance the rolling shutter must be determined depending on its weight and height, based on the " Spring loading turns" table (FIG.13).  
Check that the number of turns to charge the spring must be equal to or more than the number of turns required to completely open the rolling shutter.
- 17) Connect a **dead man's switch** (keep the button pressed) to the motor.
- 18) Spring loading is performed by operating the **MOTOR DOWNWARD** (FIG.13).  
It is advisable to make a visible mark on the tube and take the center of the limit switch as a reference point for counting turns that are needed.

**NOTE:**

**Do not turn the motor upward to load the spring.**

**Do not release the motor brake:** it is extremely dangerous to release the motor brake while the spring is loaded and the rolling shutter curtain is not engaged; the tube would turn at high speed with the risk of causing damage.

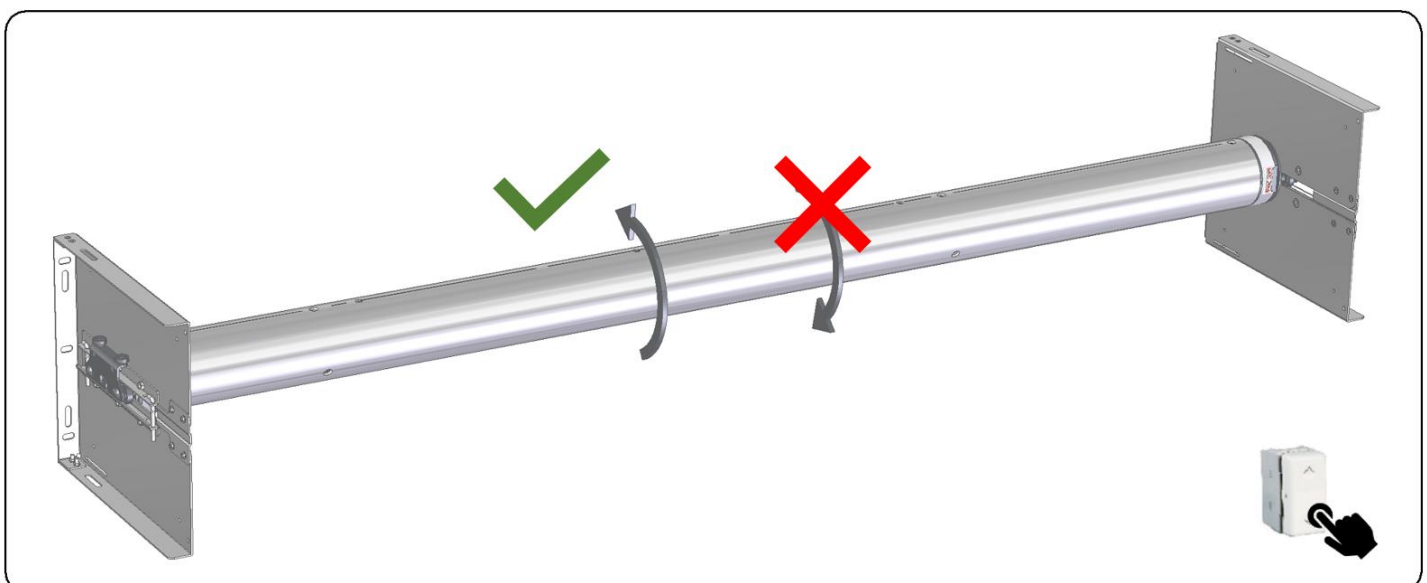
**If during the spring loading the motor might get blocked then make a ½ turn in ascent and then resume descent.**

**TABLE: SPRING LOADING TURNS**

Spring Turns n.	Spring Ø7,5 - L.600		Spring Ø8,0 - L.600		Spring Ø8,5 - L.600		Spring Ø10,0 - L.1000	
	Kg lifted Ø140	Kg lifted Ø180	Kg lifted Ø140	Kg lifted Ø180	Kg lifted Ø140	Kg lifted Ø180	Kg lifted Ø140	Kg lifted Ø180
5	55	45	75	60	100	80	120	90
5,5	65	55	85	65	120	90	135	100
6	75	60	95	75	130	100	150	115
6,5	80	65	105	85	140	110	160	125
7	90	70	115	95	150	120	170	140
7,5	100	75	125	100	160	130	180	150
8	110	80	135	110	170	140	190	160
8,5	115	85	145	115	180	150	200	175
9	125	90	155	120	190	160	220	190

**NOTE:** The calculation of spring charge turns may vary (multiples of ± 0.5 turn) based on the real weight to be lifted. The weight to be lifted must be increased by the effect of friction (from 10% to 30% depending on the conditions of the shutter).

FIG.13



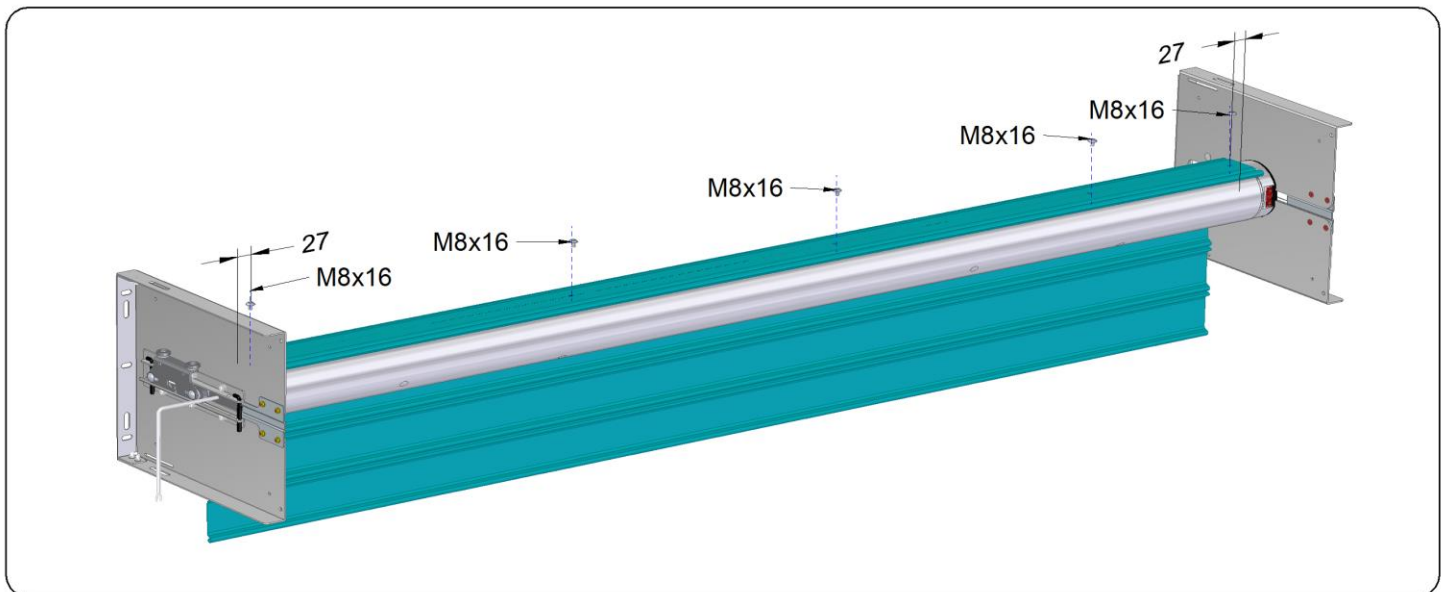
**FIXING THE CURTAIN TO THE SHAFT**

19) Once spring loading phase is completed, proceed with fixing the rolling shutter curtain to the tube (FIG.14):

- Use **the top holes at 27mm** from the ends of the tube for fixing with M8x16 screws. If the top two holes are not loosened, they must be freed by unscrewing the M8x16 screws and screwing them back into the opposite holes.
- Use **the M8 threaded holes previously drilled in the central part of the tube** to screw the curtain with supplied M8X16 flanged domed screws or M8x35 flanged domed screws if 180 adapters have been fitted.

20) Once the curtain is hooked up, proceed with a brief check of the directions of rotation, ascent and descent, of the rolling shutter. During this brief operation, do not forget that the limit switch has not yet been engaged.

FIG.14



**MOUNTING AND OPERATION OF THE BRAKE RELEASE HANDLE**

21) Complete the mounting of the brake release handle (FIG.15).

The brake is released by turning the handle clockwise and is reset by turning the handle counterclockwise (FIG.16).

FIG.15

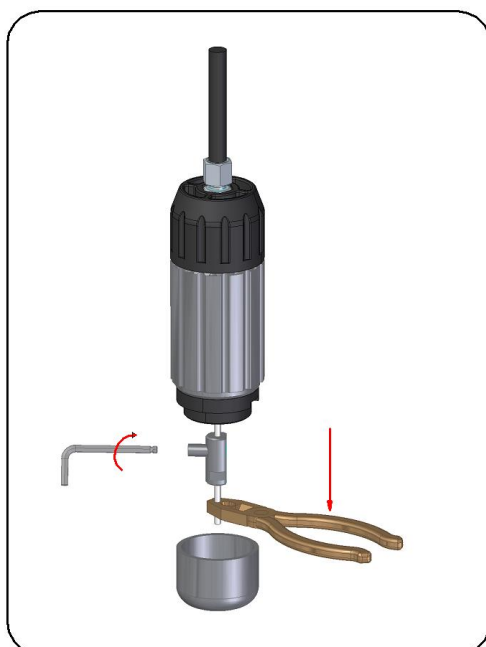
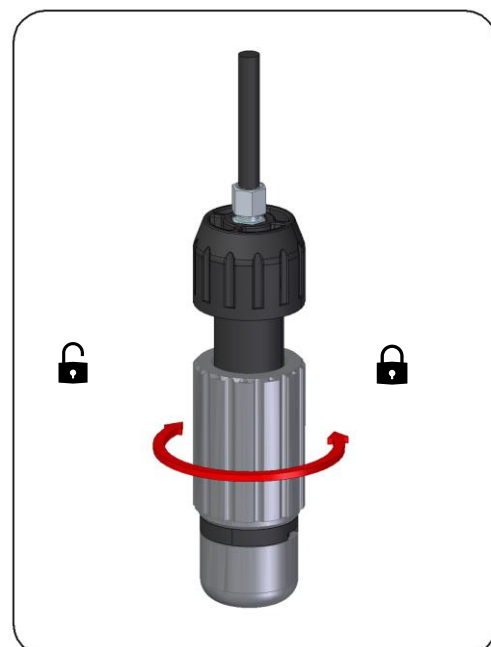


FIG.16



## ROLLING SHUTTER BALANCING CHECK

22) With the rolling shutter fully closed, release the brake by turning the release handle clockwise (FIG.16).

If the rolling shutter balance is found to be incorrect due to friction or other reasons, it is necessary to:

- reset the brake by turning the brake release handle counterclockwise
- a small ascending and descending movement must be performed, in order to check that the brake is working.
- turn down the roller shutter completely and release the curtain from the tube.
- **if the spring is underloaded** (the rolling shutter tends to descend) it is necessary **to operate the motor downward by ½ turn** in order to further load the spring.
- **if the spring is overloaded** (the rolling shutter tends to ascend) it is necessary **to operate the motor upward by ½ turn** in order to unload the spring.
- Reattach the rolling shutter curtain to the tube and check again if the balance is correct.
- If not, proceed again as above until the right balance is obtained.

*NOTE: If, when reattaching the curtain, the two holes located at the top of the outer supports at 27mm are occupied by the screws, unscrew and retighten them in the opposite holes located at the bottom at 180°.*

*NOTE: When spring loading, it is important to make checks on the correct compensation only when the rolling shutter is completely closed with appropriate clearance: the rolling shutter could drop down quickly and uncontrollably with low compensation, and the rolling shutter could go up quickly and uncontrollably with high compensation.*

## VERIFICATION OF THE ANTI-FALL DEVICE OPERATION

23) After reaching the balance of the rolling shutter unlock the brake and close manually the curtain with great force (FIG.18). Check that the speed of the shutter downward activates the parachute blocking the descent. The parachute can be unlocked by slightly lifting the shutter and resuming manual closure with moderate speed.

FIG.17

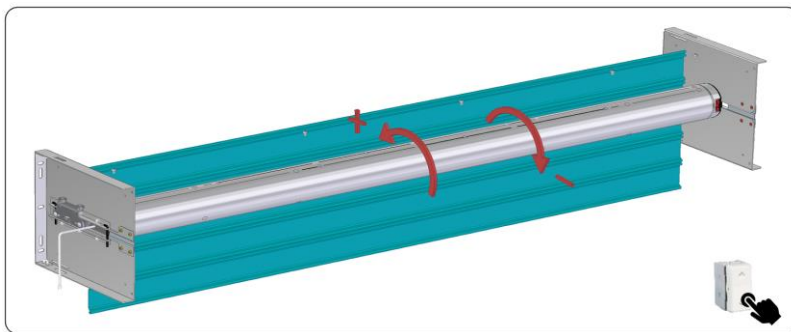
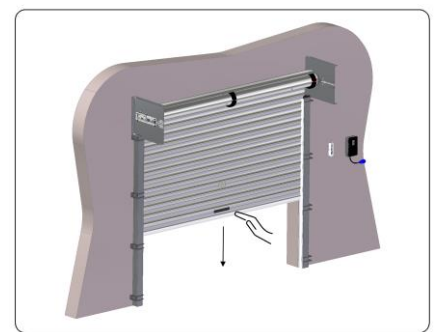


FIG.18



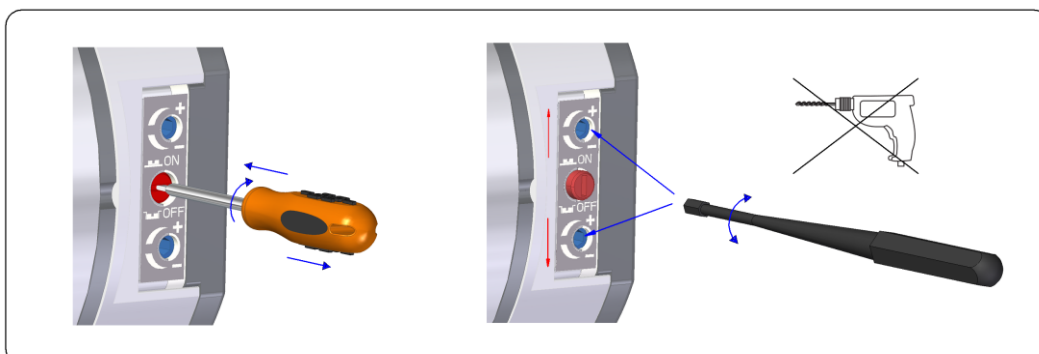
## LIMIT SWITCH ADJUSTMENT

23) Once the rolling shutter balancing has been checked, proceed with the limit switch adjustment (FIG.19):

- Close the rolling shutter completely
- Enable the limit switch: at the same time, press and rotate the red push-button so that it comes out of its seat.
- **Adjusting the down-limit switch:** when enabling the limit switch, the downward limit is partially adjusted. The descent adjustment can be optimized using **the adjustment knob located UNDER the red push-button** which must turn it clockwise (toward +) to increase the downstroke and turn it counterclockwise (toward -) to decrease the downstroke.
- **Adjust the up-limit switch:** when enabling the limit switch, the upward limit is adjusted for a height of about 1.0m. The ascent adjustment can be optimized using **the adjustment knob located ABOVE the red push-button** which must turn it clockwise (toward +) to increase the upstroke and turn it counterclockwise (toward -) to decrease the upstroke.

Once the limit switch has been adjusted, **the installation is completed.**

FIG.19

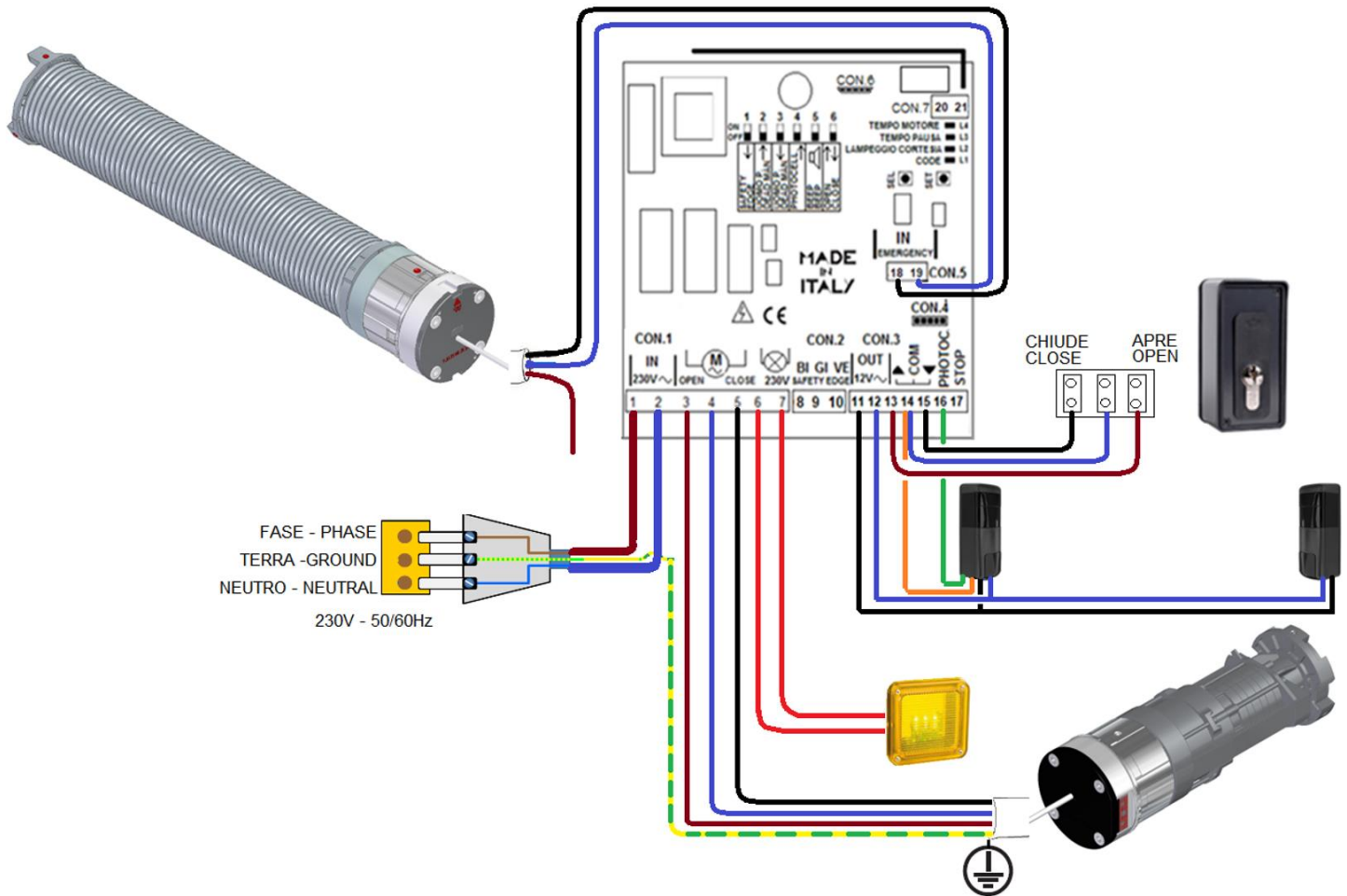




26) AUTOMATIC OPERATION Installation (M-PLUS Control Unit)

Connect the blue and black wires to the IN EMERGENCY terminal located in the M-PLUS control unit (FIG.21).

FIG.21



When spring breakage occurs, the M-PLUS control unit changes from automatic operation to DEAD MAN operation both during opening and closing.  
 When an impulse is sent via the remote control or push-button, the control unit emits a continuous beep of 5 seconds and also activates the M-FLASH lamp connected to the control unit in steady light mode.  
 The red LED, located on the cover of the control unit near the M-TOUCH pushbutton panel, also lights up with a steady light. This operating mode setting remains permanently active until the spring is replaced.

**NOTE: if the spring breakage signal is activated, NEVER UNLOCK THE MOTOR BRAKE, otherwise the rolling shutter could drop down and activate intervention of the anti-fall device.**

REPLACEMENT OF THE ANTI DROP DEVICE AND SPRING ASSEMBLY

When spring breakage is reported, it is necessary to contact service for replacement.

**NOTE: Both opening and closing maneuvers can be performed as the motor keeps running.**

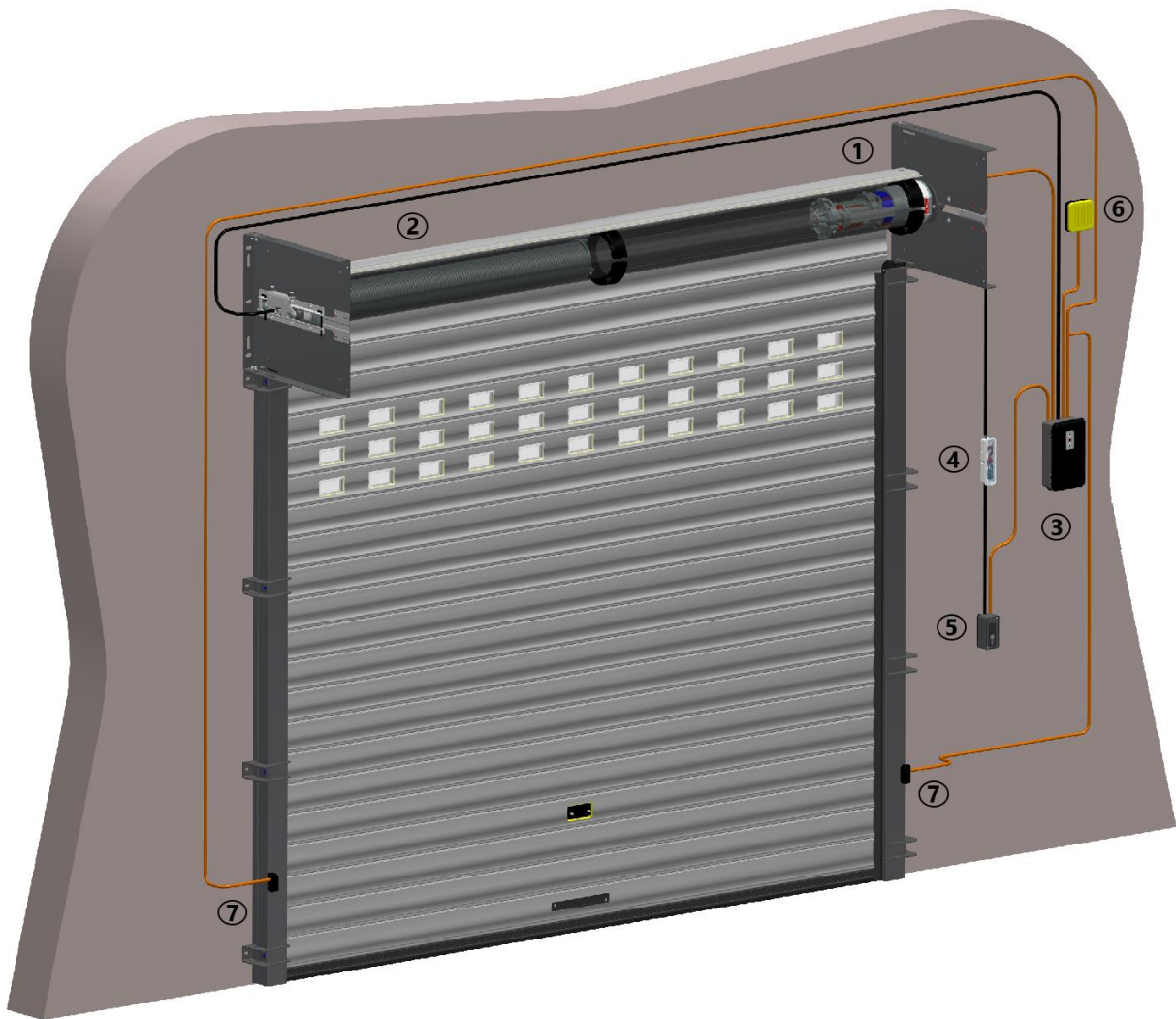
BUILT-IN ANTI-FALL DEVICE

The GALILEO 140 is equipped with an anti-fall device, contained within the spring support, which intervenes in the event that the rolling shutter drops fast, i.e. in the following cases:

- if the motor brake is released when the spring is broken and the rolling shutter is open; the anti-fall device can be released by resetting the brake to the locked position and carrying out an ascent movement. This enables exit from the premises and closing the rolling shutter.
- if the motor brake goes to failure when the spring is broken and the rolling shutter is open; The anti-fall device does not have to be released in this case.

When the anti-fall device intervenes, please contact the service department immediately.

ROLLING SHUTTER ELECTRICAL LAYOUT under AUTOMATIC OPERATION (M-PLUS Control Unit) (FIG.21)



Components		4	Easybox break release from inside
1	Galileo 140 motor	5	Minisel key switch with brake release from outside
2	Galileo 140 spring	6	M-Flash led flashing light
3	M-Plus Control Unit	7	Photocells

**CONTROL AND BRAKE RELEASE DEVICES**

The GALILEO 140 motor brake can be released:

- from the inside, using the supplied brake release handle or the EASYBOX device.
- from the outside, using the control devices a SLIMBOX, SMALLBOX, MINISEL or MINISEL-IN equipped with brake release system

SMALLBOX

SLIMBOX

EASYBOX

MINISEL

MINISEL-IN



## INFORMATION FOR THE INSTALLER

### PRECAUTIONS TO AVOID ACCIDENTS DURING INSTALLATION AND MAINTENANCE

- 1) Comply with the tube measurements and check that the inner weld is unbeaded.
- 2) Align the motor, spring and rolling shutter curtain fixing holes (FIG.2-3)
- 3) Do not drill holes to fix the curtain in the parts of the tube where the spring and motor are positioned (FIG.3)
- 4) Check the spring is inserted in the correct position, keeping the MADE IN ITALY inscription horizontally, the ANTI-DROP DEVICE SPOOL downward, and, the locking fork removed, the UP inscription upward (FIG.4)
- 5) Check the motor is inserted in the correct position by keeping the MADE IN ITALY inscription horizontally and the LIMIT SWITCH in the frontal position (FIG.4).
- 6) Pull out the locking fork from the rear spring support (FIG.5)
- 7) Remove the anti-fall device spool (FIG.10).  
If the spool is not removed the anti-fall device prevents the tube from rotating downward, and the motor is blocked. The motor brake release handle (FIG.13-14) must be mounted in this case, release the brake by turning the handle clockwise, and turn the tube manually to release the spool. Once the function is finished, the brake must be reset.
- 8) The electrical connection shown in FIG.12 must be performed to ensure that the spring is not loaded in the wrong direction of rotation (ascent).
- 9) Before the spring is loaded, check that the anti-fall device spool is removed, the limit switch is off (red push button pressed) and the brake release handle is not installed, in order to avoid the risk of motor brake release.
- 10) The spring must be loaded by operating the MOTOR DOWNWARD in DEAD MAN operation mode (FIG.13).
- 11) Do not turn the motor upward to load the spring.
- 12) Never release the motor brake while the spring is loaded and the rolling shutter curtain is not engaged; the tube would turn at high speed with the risk of causing damage.
- 13) If during the loading of the spring the motor might get stuck, then make a ½ turn in ascent and then resume descent.
- 14) When during spring loading, if you forget the number of spring loading turns so far, it is only possible through the connection shown in FIG.12 to completely unload the spring and return to the starting point.
- 15) Check the correct spring compensation only when the rolling shutter is closed and with appropriate distance.
- 16) When replacement, please make sure that the spring is completely unloaded before removing the shaft:
  - When the motor is functioning upward: close the rolling shutter, check that the motor brake is engaged, release the curtain, make the electrical connection shown in FIG.12 and fully release the spring by rotating the motor UPWARD.
  - When the motor does not operate electrically but it remains reversible: release the motor brake when the rolling shutter is open, then manually close the rolling shutter and reinsert the brake.  
Disengage the limit switch to check that the electric problem does not come from the limit switch.  
Release the curtain from the shaft.  
Check that no equipment is secured loosely to the tube and the tube is secured firmly to the side plates.  
Maintaining a proper distance from the tube, release the motor brake: the spring will rotate the tube upward quickly until it is completely unloaded.
  - When the motor does not operate electrically and it is not reversible  
When the motor brake is released, the rolling shutter remains locked and cannot be operated manually.  
The motor is stopped due to brake/gearbox failure.  
If the rolling shutter is open, remove the rolling shutter curtain and disengage it from the tube.  
Carefully loosen the no. 3 M8x20 screws that secure the spring to the tube at the wheelbase 725/1.125mm (FIG.2).  
The spring will quickly rotate inside the tube until it is completely discharged. The spring may not have completely unloaded due to friction inside the tube. Carefully unscrew the 3 M8x20 screws that secure the motor to the tube at 340/370mm centre distance: the unloaded spring will quickly rotate the tube until it is completely unloaded.  
Pay close attention when loosening the last M8x20 screw: the tube will immediately start to rotate at high speed.
- 17) After a long life cycle of the rolling shutter, it is necessary to pay special attention to release the curtain from the tube. In case the brake does not work properly due to excessive wear, it is possible that when the last hook that holds the curtain coupled to the tube is loosened, the tube may rotate quickly upward.

**GENERAL SAFETY**

This product is exclusively designed and manufactured for the use indicated in this documentation.

- Machine construction components and installation must be in accordance with the following European Directives, as applicable: 2014/30/EU, 2014/35/EU, 2006/42/EC, 305/2011, and their subsequent amendments.
- Any responsibility is disclaimed by the manufacturer of this product, originating from improper use or use other than that for which it is intended and stated in this documentation, as well as from non-compliance with Good Engineering Practice in the construction of its technical closures (doors, shutters, gates, etc.).
- Installation must be performed by qualified personnel (EN12635).
- Prior to installing the product, please ensure that all structural modifications are made to ensure protection from crushing, shearing, conveying and general hazards in accordance with EN 12604 and 12453.
- Check that the existing structure has the necessary robustness and stability requirements.
- Check the product's integrity.
- No liability is accepted by the manufacturer for non-compliance with Good Engineering Practice in the construction and maintenance of the rolling shutter to be powered, as well as any deformations that may occur during operation.
- Please do not install this product in an explosive atmosphere.
- Turn off the power supply, prior to any work on the system.
- Prior to connecting the power supply, please ensure that the nameplate data comply with those of the electrical distribution grid and that there is an adequate earth leakage circuit breaker and overcurrent protection installed upstream of the electrical system. Provide an omnipolar circuit breaker or magnetothermic circuit breaker on the automation power supply, which allows complete disconnection under the conditions of overvoltage category III.
- Check that there is a residual current circuit breaker with threshold not exceeding 0.03A upstream of the power supply network.
- Check that the grounding system has been properly installed: connect all metal components of the closure and all system components equipped with ground terminals to ground.
- Installation must be done using safety and control devices in accordance with EN 12978 and EN12453.
- Install all safety devices (photocells, safety edges, etc.), necessary to protect the area from impact, crushing, conveying and shearing hazards.
- Adhere to the warning signs required by current regulations to identify hazardous areas (the residual risks). Any installation must be visibly identified according to EN13241-1. After completion of the installation, please place a door identification plate.
- When the automation is installed at a height of less than 2.5 m or if it is accessible, it is necessary to ensure adequate protection level of electrical and mechanical parts.
- Running motor parts must be installed at a height of over 2.5m above the floor or above another level, which could be accessible.
- Install any fixed controls at a location that prevents danger and keeps them away from running parts. Specifically, deadman controls must be placed clearly visible to the driven area, and, except when keyed, they must be installed at a minimum height of 1.5 m and not accessible to the public.
- Mount at least one warning light device in a visible position and affix a "Caution" sign.
- Stick a label permanently, referring to the manual release operation of the driving system, and place it near the operating device.
- Please ensure that the mechanical hazards are prevented or protected during manoeuvring and in particular from impact, crushing, conveying, shearing between the driven section and surrounding parts.
- After completing the installation, please ensure that the motor automation setting is correctly configured and that the protection and release systems are working properly.
- Please use only genuine parts for any maintenance or repair. The Company accepts no liability for the safety and proper operation of the automated system if other manufacturers' components are used.
- Non eseguire alcuna modifica ai componenti dell'automazione se non espressamente autorizzata dalla Ditta.
- Train the system user concerning any residual hazards, the control systems that have been implemented, and the performance of the manual opening manoeuvre in case of emergency: hand over the user manual to the end user.
- All packaging materials (plastic, cardboard, etc.) must be disposed of in accordance with current regulations.

**AUTOMATION AND MAINTENANCE CHECK**

Please carefully check the following before making the automation fully operational, and during maintenance work:

- Check that all components are securely fastened.
- Check the opening and closing operation with the control devices installed.
- Check the operational logic.
- Check the proper operation of all safety devices (photocells, sensitive edges, optical barriers).
- Check the emergency maneuver functionality.
- Check the integrity of electrical connections and wiring.
- During maintenance, please perform cleaning of the photocell and barrier optics.

Maintenance must be repeated every 1,000 operating cycles or at least annually.

**WARRANTY PERIOD**

Company guarantees the equipment against any manufacturing defect for 2 years from the date of purchase.

This warranty does not cover installations in the following cases:

- the overall equipment selection malfunctioned given the characteristics of the door,
- the mounting and connection instructions were not followed,
- no payment has been made for the equipment

FORM AN INTEGRAL PART OF THIS MANUAL:

**DECLARATION OF CONFORMITY:**

MASINARA S.P.A. hereby declares, in its capacity as manufacturer, that this Galileo 140 product, is intended to be used as indicated in these instructions and complies with the following European Directives: 2006/42/EC Machinery, CEM2014/30/EU Electromagnetic Compatibility, 2014/35/EU Low Voltage

The following reference standards have been applied to assess compliance:

EN 60335-1, EN 60335-2-95, EN 13241, EN 12453, EN 12445, EN 61000-6-3, EN 61000-6-2, EN 55014-1

**DECLARATION OF INCORPORATION:**

MASINARA S.P.A. also hereby declares, in its capacity as manufacturer, that the commissioning of this Galileo 140 product is prohibited until the complete machine in which it shall be incorporated, or of which it shall be a component, has been identified, and its conformity has been declared in accordance with Directive 2006/42/EC.

This Galileo 140 product is to be considered a quasi-machine in accordance with EC Directive 2006/42/EC, which is intended only for assembly into other machines (or other quasi-machines/incomplete installations) to construct a complete machine pursuant to that Directive.

Affixation year of the CE mark: 2023

MASINARA S.P.A.  
The Chief Executive Officer  
Antonio Isola

Valsamoggia, 02-01-2023