



## Ditec QIK80EH

IP2085EN  
Technical Manual

## Electromechanical barrier

(Translation of the original instructions)

# Contents

Subject		Page
1.	<b>General safety precautions</b>	29
	<b>General safety precautions for the user</b>	30
2.	<b>EC Declaration of Conformity</b>	31
2.1	Machinery Directive	31
3.	<b>Technical specifications</b>	32
3.1	Operating instructions	32
4.	<b>Standard installation</b>	33
5.	<b>Dimensions</b>	34
6.	<b>Main components</b>	35
7.	<b>Mechanical installation</b>	36
8.	<b>Installation of bar</b>	37
9.	<b>Bar balancing</b>	38
10.	<b>Selecting opening direction</b>	39
11.	<b>Limit switch adjustment</b>	40
12.	<b>Access to control panel</b>	40
13.	<b>Electrical connections</b>	41
14.	<b>Routine maintenance plan</b>	42
	<b>Operating instructions</b>	43
	Manual release instructions	45
	Instructions for maintenance workers	46

## Key



This symbol indicates instructions or notes regarding safety, to which special attention must be paid.



This symbol indicates useful information for the correct functioning of the product.

All the rights concerning this material are the exclusive property of ASSA ABLOY ES AB.

Although the contents of this publication have been drawn up with the greatest care, ASSA ABLOY ES AB cannot be held responsible in any way for any damage caused by mistakes or omissions. We reserve the right to make changes without prior notice.

Copying, scanning and changing in any way are expressly forbidden unless authorised in writing by ASSA ABLOY ES AB.

# 1. General safety precautions



**Failure to respect the information given in this manual  
may cause personal injury or damage to the device.**

**Keep these instructions for future reference**

This installation manual is intended for qualified personnel only.

Installation, electrical connections and adjustments must be performed by qualified personnel, in accordance with Good Working Methods and in compliance with the current regulations. Read the instructions carefully before installing the product.

Bad installation could be dangerous.



The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as they are a potential source of danger.

Before installing the product, make sure it is in perfect condition.

Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard.

Before installing the motorisation device, make all the necessary structural modifications to create safety clearance and to guard or isolate all the crushing, shearing, trapping and general hazardous areas.

Make sure the existing structure is up to standard in terms of strength and stability. The motorisation device manufacturer is not responsible for failure to observe Good Working Methods when building the frames to be motorised, or for any deformation during use.

The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorised door or gate.

The safety devices must protect against crushing, cutting, trapping and general danger areas of the motorised door or gate.

Display the signs required by law to identify hazardous areas.

Each installation must bear a visible indication of the data identifying the motorised door or gate.

When necessary, connect the motorised door or gate to an effective earthing system that complies with the current safety standards.



During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.

The automation protection casing must be removed by qualified personnel only.

The electronic parts must be handled using earthed antistatic conductive arms. The manufacturer of the motorisation declines all responsibility if component parts not compatible with safe and correct operation are fitted.

Only use original spare parts for repairing or replacing products.



The installer must supply all information concerning the automatic, manual and emergency operation of the motorised door or gate, and must provide the user with the operating instructions.

## General safety precautions for the user



These precautions are an integral and essential part of the product and must be supplied to the user.

Read them carefully since they contain important information on safe installation, use and maintenance.

These instructions must be kept and forwarded to all possible future users of the system.

This product must only be used for the specific purpose for which it was designed.

Any other use is to be considered improper and therefore dangerous. The manufacturer cannot be held responsible for any damage caused by improper, incorrect or unreasonable use.

Avoid operating in the proximity of the hinges or moving mechanical parts. Do not enter within the operating range of the motorised door or gate while it is moving.

Do not obstruct the motion of the motorised door or gate, as this may cause a dangerous situation.

The motorised door or gate may be used by children over the age of 8 and by people with reduced physical, sensorial or mental abilities, or lack of experience or knowledge, as long as they are properly supervised or have been instructed in the safe use of the device and the relative hazards.

Children must be supervised to make sure they do not play with the device, nor play/remain in the sphere of action of the motorised door or gate.

Keep remote controls and/or any other command devices out of the reach of children, to avoid any accidental activation of the motorised door or gate.

In the event of a product fault or malfunction, turn off the power supply switch. Do not attempt to repair or intervene directly, and contact only qualified personnel.

Failure to comply with the above may cause a dangerous situation.

Any repair or technical intervention must be carried out by qualified personnel.

Cleaning and maintenance work must not be carried out by children unless they are supervised.


To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and only qualified personnel must perform routine maintenance on the motorised door or gate. In particular, regular checks are recommended in order to verify that the safety devices are operating correctly.

All installation, maintenance and repair work must be documented and

made available to the user.

Only lock and release the door wings when the motor is switched off.

Do not enter within the operating range of the wing.

 To dispose of electrical and electronic equipment correctly, users must take the product to special "recycling centres" provided by the municipal authorities.

## 2. EC Declaration of Conformity

(Directive 2006/42/EC, Annex II-B)

The manufacturer ASSA ABLOY ES AB, with headquarters in Lodjursgatan 10, SE-261 44 Landskrona, Sweden, declares that the Ditec QIK80EH type motorised barrier complies with the essential requisites of the following EC directives:

- Electromagnetic Compatibility Directive 2004/108/EC
- Machinery Directive 2006/42/EC
- Construction Products Directive 89/106/EC

conforms to the following characteristics of the standard EN 13241-1 (Attachment ZA):

- Factory production control (Conforming)
- Release of hazardous substances (Conforming)
- Resistance to wind load (Class 5)
- Safe opening (Conforming)
- Mechanical strength and stability (Conforming)
- Manoeuvring forces (Conforming)

Notified body: Treviso Tecnologia - CERT

Registration number: 1600

Address: Via Pezza Alta, 34 31046 Rustignè di Oderzo (TV)

Landskrona, 12-02-2013

  
(Entrance Automation President)

### 2.1 Machinery Directive

Pursuant to Machinery Directive (2006/42/EC) the installer who motorises a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical data sheet which must contain the documents indicated in Annex V of the Machinery Directive;  
(The technical data sheet must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the motorised door);
- draw up the EC Declaration of Conformity in accordance with Annex II-A of the Machinery Directive and deliver it to the customer;
- affix the EC marking on the motorised door or gate, in accordance with point 1.7.3 of Annex I of the Machinery Directive;
- ensure compliance of the motorised door or gate with safety regulations, by installing the necessary safety devices;
- refer to the installation manual of the EL34 control panel for the operating force adjustments, in compliance with EN12453 and EN12445.

### 3. Technical specifications

	QIK80EH
Power supply	230 V~ 50/60 Hz
Absorption	1.2 A
Torque	200 Nm
Insulation class	Class 1
Opening time	6±12 s/90°
Closing time	6±12 s/90°
Bar length (max)	7950 mm
Service class	4 - INTENSE
Intermittence	S2 = 50 min S3 = 50%
Temperature	min -20° C max +55° C
Degree of protection	IP24D
Control panel	EL34

#### 3.1 Operating instructions

Service class: 4 (minimum 10-5 years of working life with 100-200 cycles per day).

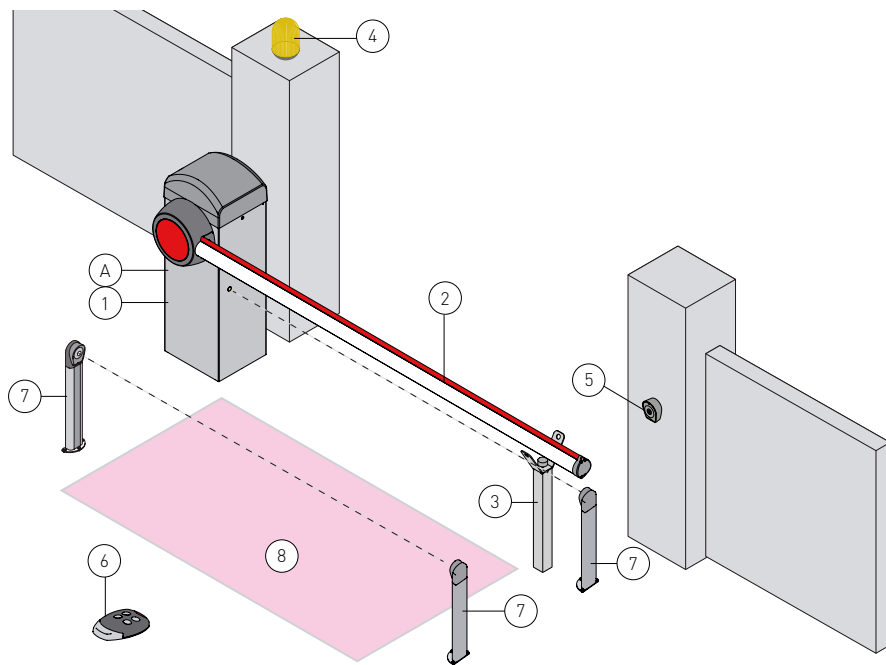
Applications: INTENSE (for apartment block, industrial and commercial entrances and car parks with vehicle access or access for intense pedestrian use).

- Performance characteristics are to be understood as referring to the recommended weight (approx. 2/3 of maximum permissible weight). When used with the maximum permissible weight a reduction in the above mentioned performance can be expected.
- Service class, running times, and the number of consecutive cycles are to be taken as merely indicative, having been statistically determined under average operating conditions, and are therefore not necessarily applicable to specific conditions of use.



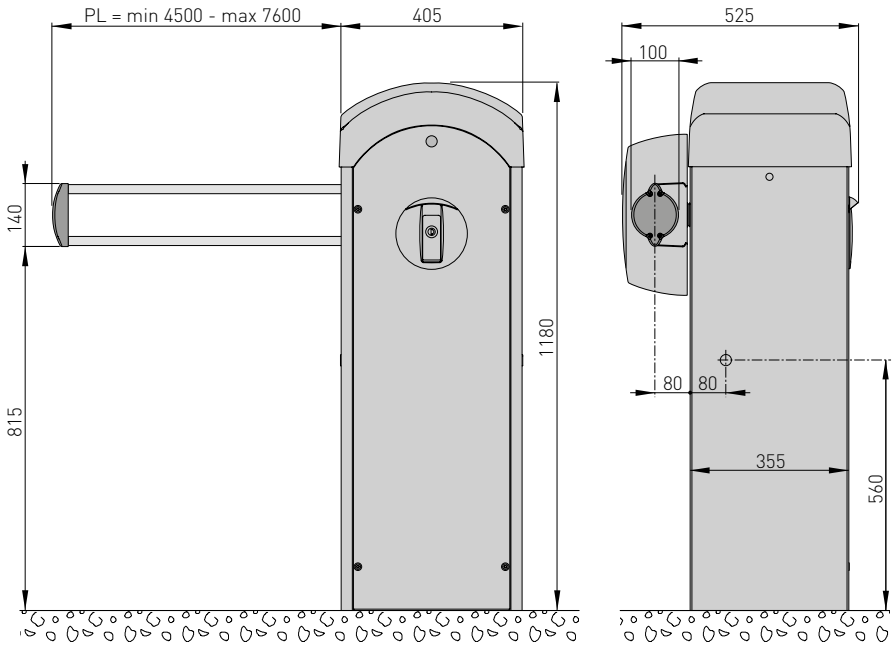
Every automatic system contains variable elements (friction, balancing and environmental factors) that may substantially alter both the lifespan and performance of the system or its components (including the spring). Tests have shown that the average spring lifespan is around 100,000 cycles, so you are advised to check its state of wear when this limit is reached. If there are clear signs of wear, or it is difficult to balance the bar correctly, replace the spring.

## 4. Standard installation



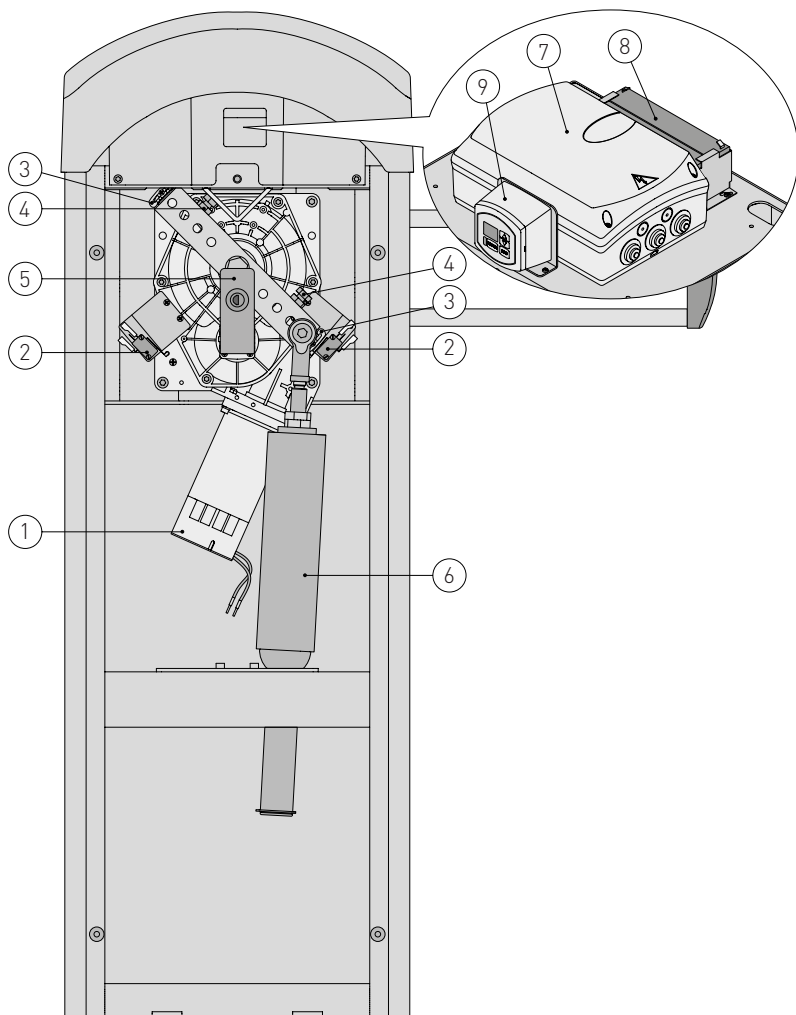
Ref.	Code	Description
1	QIK80EH	Barrier cabinet
	QIK80Z	Cabinet fastening base
2	QIKC40	Bar 3975 mm
	QIKCG	Joint for bar
	QIKLUX	Bar lighting kit
	QIKC	Box of 10 bar reflectors
	QIKAM	Mobile support
	QIKGR	Aluminium skirt 2000 mm
3	QIKAF	Fixed support
	QIKAFE	Fixed support with electromagnetic block
	QIKAFZ	Fixed support fastening base
4	LAMPH	Flashing light
5	XEL5	Key selector switch
	LAN4	Combination keyboard
	LAN7	Card decoder
	XELCA	Column for control accessories
6	GOL4	Remote control
7	XEL2	Photocells
	XELCB	Photocell column
8	LAB9	Magnetic loop detector for passage control
A		Connect the power supply to a type-approved omnipolar switch, with a contact opening distance of at least 3 mm (not supplied). Connection to the mains must be via an independent channel, separate from the connections to the control and safety devices.

# 5. Dimensions





## 6. Main components



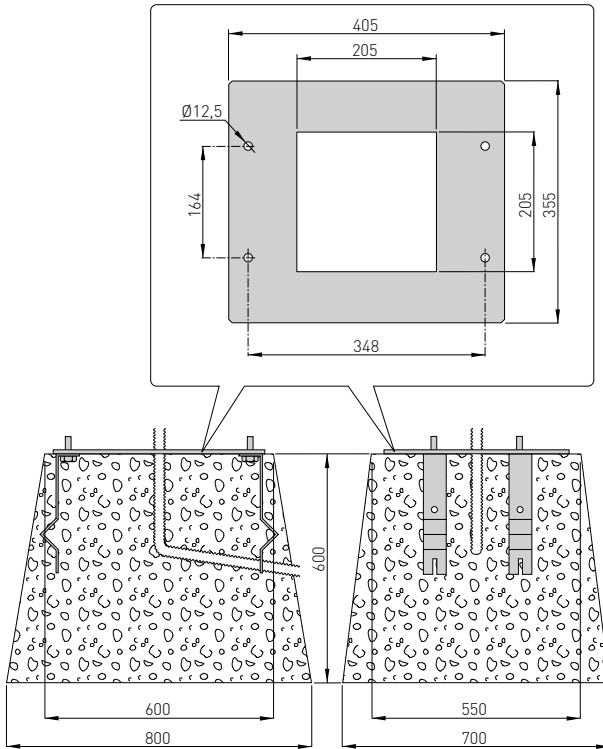
Ref.	Code	Description
1		24 V $\overline{\text{=}}$ motor with encoder
2		Opening/closing limit switches
3		Limit switch adjustment
4		Mechanical stop adjustment
5		Key release
6		Blue spring $\varnothing 63$ mm
7		Control panel
8	BATKH	Continuous mode battery kit
9	MD2	Display module for diagnostics and advanced control

# 7. Installation

The given operating and performance features can only be guaranteed with the use of DITEC accessories and safety devices.

Unless otherwise specified, all measurements are expressed in mm.

## 7.1 Mechanical installation

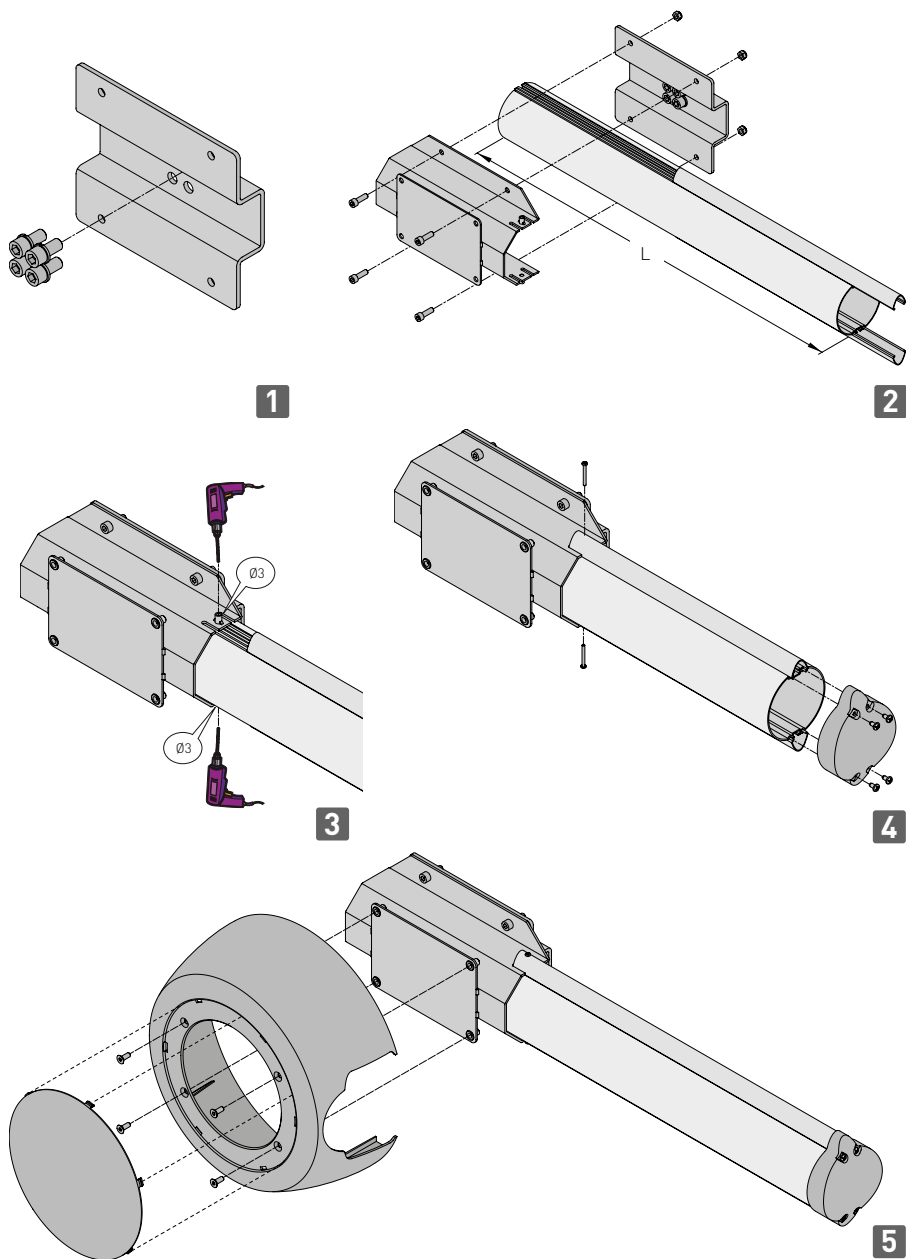


- If the surface does not allow cabinet to be fastened strongly and firmly, prepare a concrete base with embedded anchor ties and QIK80Z base plate which must be level and clean.
- Insert elements made of iron or another material in the anchor ties to attach the ties to the concrete reinforcement.
- Pass the cable ducts through the central hole of the plate.  
WARNING: make sure that the fastening is strong and firm.
- Secure the cabinet.



NB: to open the cabinet, release the automation as described on page 45 and unscrew the 4 screws on the front.

## 8. Installation of bar

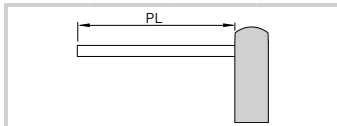


- Cut the length of the bar to  $L=PL+350$  mm.
- Install the bar as shown in the figure.

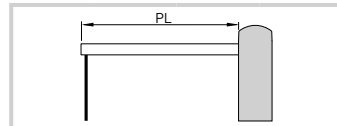
# 9. Bar balancing

- Release the automation as described on page 45 and place the bar in the vertical opening position.
- Place the spring in the correct position depending on the choice of opening direction as described on page 39.
- Using the nuts above the spring (see ref. [B] on page 39), compress the spring until the bar is balanced at an angle of 5°-30° to the floor (in this position, the bar must be stationary or point slightly upwards).  
WARNING: compression of the spring must comply with measurement A indicated on page 39.
- Make sure that the bar remains still when in the open or closed position.

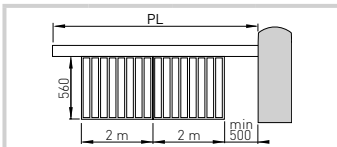
**!** WARNING: never use the force of the motor to support the weight of the bar. Always use the balancing spring.



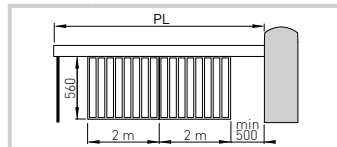
PL (mm)				
4500-5199	QIKM5	/	/	/
5200-5999	/	QIKM5	/	/
6000-6999	/	/	QIKM5	/
7000-7600	/	/	/	QIKM5



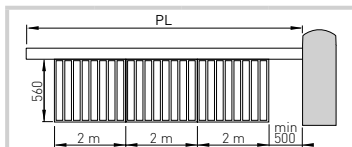
PL (mm)				
4500-4999	QIKM5	/	/	/
5000-5799	/	QIKM5	/	/
5800-6799	/	/	QIKM5	/
6800-7200	/	/	/	QIKM5



PL (mm)				
4600-4799	QIKM5	/	/	/
4800-5499	/	QIKM5	/	/
5500-6499	/	/	QIKM5	/
6500-6800	/	/	/	QIKM5



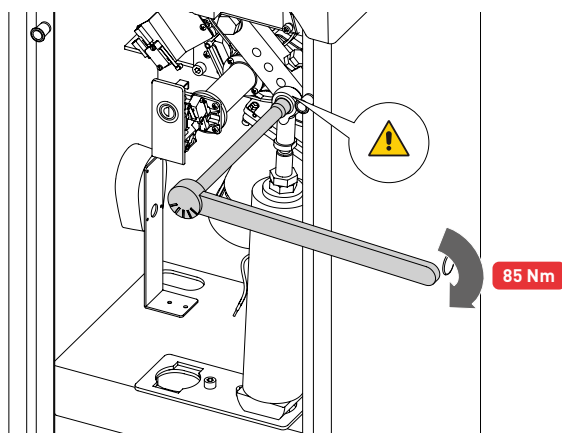
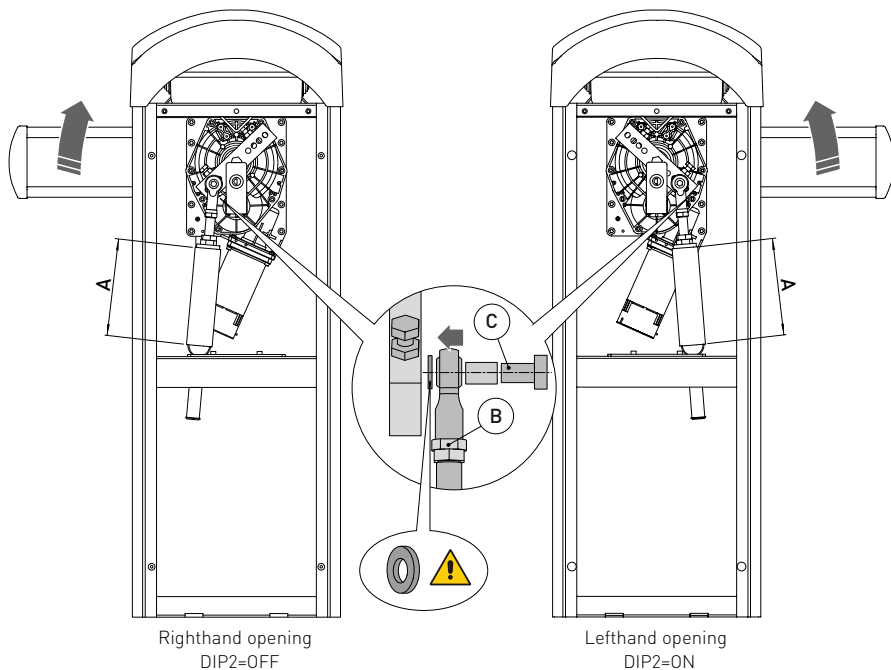
PL (mm)				
4800-5899	/	/	QIKM5	/
5900-6500	/	/	/	QIKM5



PL (mm)				
6700	/	/	/	QIKM5

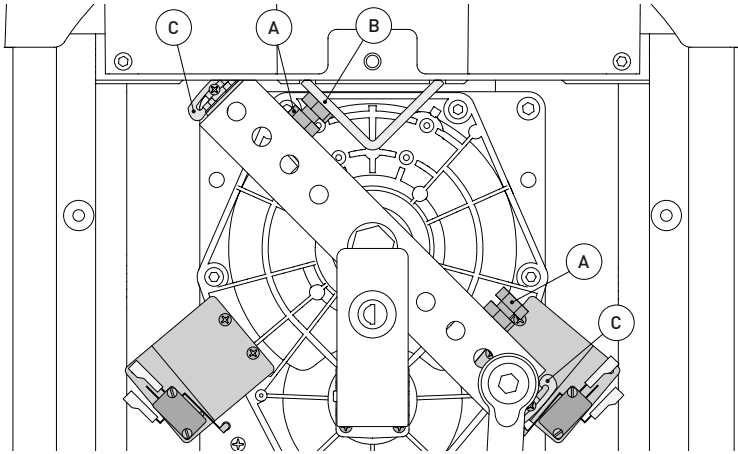
**!** WARNING: for PL > 4000 mm, you must use the fixed support QIKAF-QIKAFE or the mobile support QIKAM. With the fixed support with the electromagnetic block QIKAFE installed, use the configurations indicated for the mobile support QIKAM.

## 10. Selecting opening direction



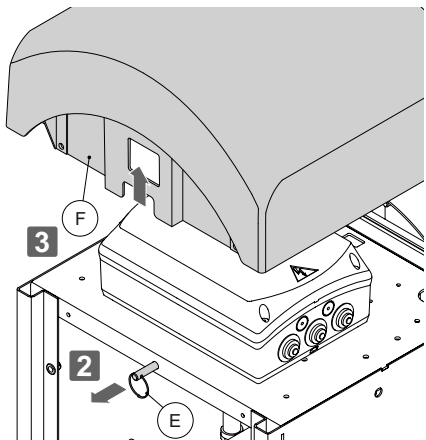
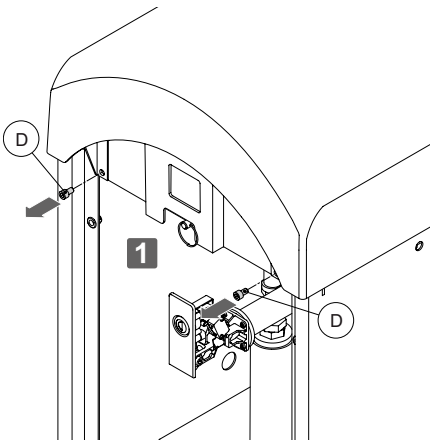
- Select the opening direction as shown in the figure.
- Mount the spring using the special screw M12x40 [C] with thread locking compound and tightly fasten as shown in the figure.
- Set the DIP2 on the control panel EL34 as shown in the figure.
- Once you have installed the bar, adjust the compression of spring Q1KM5 using the nuts [B] until measurement A $\geq$ 245 mm is obtained.

# 11. Limit switch adjustment



- Adjust the opening and closing position of the bar using the special screws [A].
- Adjust the opening and closing limit switches using the special cams [C] so that the switches are activated approx. 3 mm before the mechanical stop [B].

# 12. Access to control panel



- Unscrew and remove the front screws [D].
- Pull the ring [E] and lift the cabinet cover [F].

## 13. Electrical connections




NB: the electrical connections and start-up of the gearmotors are shown in the EL34 control panel installation manual.



Before connecting the power supply, make sure the plate data correspond to that of the mains power supply.

An omnipolar disconnection switch with a contact opening distance of at least 3mm must be fitted on the mains supply.

Check there is an adequate residual current circuit breaker and overcurrent cutout upstream of the electrical system.

Use a H05RN-F 3G1.5 type electric cable and connect it to the terminals L (brown), N (blue),  (yellow/green) in the automation.

Secure the cable using a special cable clamp and remove the sheath only where the clamp is.

Connection to the mains power supply (in the section outside the automation) is made on an independent channel separated from that containing the connections to the control and safety devices.

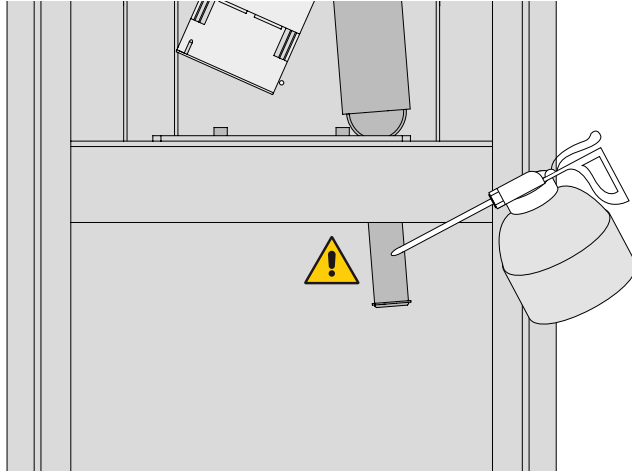
The channel must penetrate the automation by at least 50mm via the holes on the base plate.

Make sure there are no sharp edges that may damage the power supply cable.

Make sure the mains power wires (230V) and the accessory wires (24V) are separated.

The cables must be double insulated. Remove their sheaths near the relative connecting terminals, and secure them with cable fasteners (not supplied).

# 14. Routine maintenance plan



Perform the following operations and checks every 6 months, according to the intensity of use of the automation.

Disconnect the 230 V~ power supply and batteries (if present):

- Clean and oil the levers and check the nuts and screws are all well tightened.
- Clean and grease the spring-post as shown in the figure.
- Check the electrical connections.
- Check that the manual release is operating correctly.
- Check that the bar is balanced correctly as shown on page 38.
- Check the state of wear of the mechanical parts, in particular the spring after about 100,000 work cycles.

Reconnect the 230V~ power supply and batteries (if present):

- Check that obstacle detection is operating correctly.
- Check that all control and safety functions are working correctly.



NB: For spare parts, see the spares price list.



Only use original spare parts for repairing or replacing products.


The installer must supply all information concerning the automatic, manual and emergency operation of the motorised door or gate, and must provide the user with the operating instructions.

The installer must prepare and keep a maintenance record showing all the routine and extraordinary maintenance work carried out.



# Operating instructions

## General safety precautions for the user

 These precautions are an integral and essential part of the product and must be supplied to the user.

Read them carefully since they contain important information on safe installation, use and maintenance.

These instructions must be kept and forwarded to all possible future users of the system.

This product must only be used for the specific purpose for which it was designed. Any other use is to be considered improper and therefore dangerous.

The manufacturer cannot be held responsible for any damage caused by improper, incorrect or unreasonable use.

Avoid operating in the proximity of the hinges or moving mechanical parts. Do not enter within the operating range of the motorised door or gate while it is moving.

Do not obstruct the motion of the motorised door or gate, as this may cause a dangerous situation.

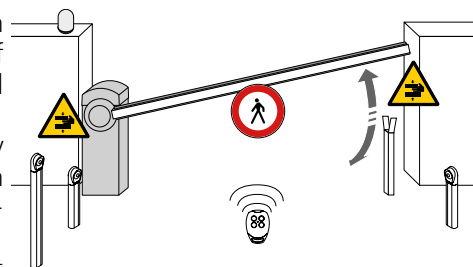
The motorised door or gate may be used by children over the age of 8 and by people with reduced physical, sensorial or mental abilities, or lack of experience or knowledge, as long as they are properly supervised or have been instructed in the safe use of the device and the relative hazards.

Do not allow children to play or stay within the operating range of the motorised door or gate.

Keep remote controls and/or any other command devices out of the reach of children, to avoid any accidental activation of the motorised door or gate.

In the event of a product fault or malfunction, turn off the power supply switch. Do not attempt to repair or intervene directly, and contact only qualified personnel.

Failure to comply with the above may cause a dangerous situation.



Any repair or technical intervention must be carried out by qualified personnel.


Cleaning and maintenance work must not be carried out by children unless they are supervised.

To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and only qualified personnel must perform routine maintenance on the motorised door or gate. In particular, regular checks are recommended in order to verify that the safety devices are operating correctly.

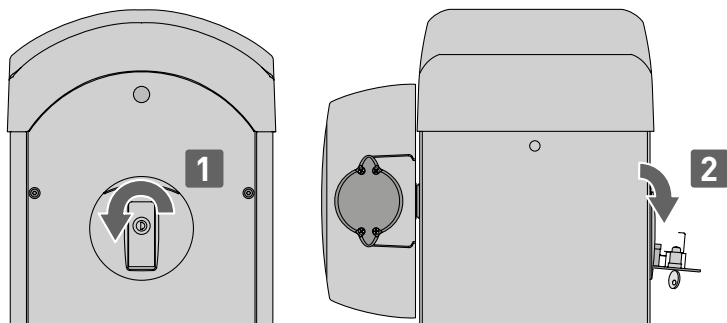
All installation, maintenance and repair work must be documented and made available to the user.

Only lock and release the door wings when the motor is switched off.

Do not enter within the operating range of the wing.

 To dispose of electrical and electronic equipment correctly, users must take the product to special "recycling centres" provided by the municipal authorities.

## Manual release instructions



In the event of a fault or power failure, insert the key, turn it anticlockwise and completely open the hatch. Manually open the barrier.  
To block the barrier again, close the hatch, turn the key clockwise and remove the key.



**WARNING:** do not release with the springs under tension without bar. Perform bar locking and release with the motor switched off. Do not enter the operating range of the bar. When the barrier is released, the bar may move of its own accord.  
When the hatch is closed but the key is still horizontal, the release microswitch is open and all manoeuvres are prevented.  
To deactivate the barrier, the power supply must be removed and the batteries disconnected (if present).

















For any problems and/or information, contact the Technical Service.

# Instructions for maintenance workers

## Indication of alarms on MD2 module (if installed)

The MD2 display module shows the following alarms, that take priority over all other displayed messages.

Type Power supply	Display	Description	Operation
Accessories alarm	A3	Failed test on safety sensor installed on terminal 8.	Check the wiring and correct operation of the safety sensor.
	A7	Incorrect connection between terminal 9 and terminal 41.	Connect contact 1-9 as shown.
	A8	Short-circuiting of flashing light driver.	Contact Technical Support.
	A9	Current overload on flashing light output.	Check correct connection of the flashing light to terminals 0-14.
	AB	Detection of "gate open" indicator light	Check the gate indicator light is wired/working correctly.
Batteries alarm	B0	Batteries almost flat.	Restore the power supply or replace the battery kit.
	B1	Flat batteries.	Restore the power supply or replace the battery kit.
	B3	Batteries not connected or absent.	Check the battery kit is correctly connected to the control panel, or disable the advanced battery test (if there are no batteries).
Encoder alarm	E0	Encoder fault.	If the alarm persists, contact Technical Support.
	E2	Reversal of the motor leads.	Check the motor leads.
	E3	Encoder disconnected, false encoder contacts, encoder fault.	Check the encoder is connected correctly, clean the contacts by connecting and disconnecting the encoder plug on the contacts, or replace the encoder.
Functional alarm	F3	High internal temperature. When the internal temperature is high, the automation operates at low speed.	/

Type Power supply	Display	Description	Operation
Internal control panel error		Failed internal BUS communication.	Check the control panel is working properly.
		No Master/Slave presence with automations in simultaneous synchronism.	Check the correct power supply is reaching the automations.
		Factory initialisation incomplete.	Contact Technical Support.
		Operation time-out error.	If the alarm persists, contact Technical Support.
		Motor drive fault.	If the alarm persists, contact Technical Support.
Mechanical alarm		Motor current fault.	If the alarm persists, contact Technical Support.
		Automation blocked.	Check the blocking device is working properly. Check there are no obstacles near the end stops.
Mechanical alarm		Motor short circuit.	Check the motor is correctly connected. Check the motor is working properly.
		Absence of motor during an operation.	Check the motor is correctly connected.
		Irregular operation of the opening limit switch.	Check correct connection of the opening limit switch.
		Irregular operation of the closing limit switch.	Check correct connection of the closing limit switch.
Power supply alarm		Detection of the third consecutive obstacle.	Check for the presence of permanent obstacles along the stroke of the automation.
		No power supply.	Check the control panel is powered correctly.
		Mains voltage too low.	Check the automation power supply voltage.

Type Power supply	Display	Description	Operation
Radio operations alarm		Insertion of a storage module containing over 100 stored remote controls. WARNING: the    setting is made automatically.	To save the system configurations on the storage module, delete any stored remote controls and bring the total to less than 100. Set   .
		Storage module not detected.	Insert a storage module.
		Storage module not compatible with the control panel.	Insert a storage module that is compatible with the control panel.
Settings alarm		R1 trimmer not enabled.	Perform the trimmer enabling procedure. If the alarm persists, contact Technical Support.
		VA trimmer not enabled.	Perform the trimmer enabling procedure. If the alarm persists, contact Technical Support.
		VC trimmer not enabled.	Perform the trimmer enabling procedure. If the alarm persists, contact Technical Support.
Power supply Service		Request for maintenance intervention	Carry out the routine maintenance intervention.



Only use original spare parts for repairing or replacing products.  
The installer must supply all information concerning the automatic, manual and emergency operation of the motorised door or gate, and must provide the user with the operating instructions.  
The installer must prepare and keep a maintenance record showing all the routine and extraordinary maintenance work carried out.

Installer's stamp	Operator
	Date of intervention
	Technician's signature
	Customer's signature

Intervention performed \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Installer's stamp	Operator
	Date of intervention
	Technician's signature
	Customer's signature

Intervention performed \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



For any problems and/or information, contact the Technical Service.



ASSA ABLOY Entrance Systems AB  
Lodjursgatan 10  
SE-261 44, Landskrona  
Sweden  
© ASSA ABLOY