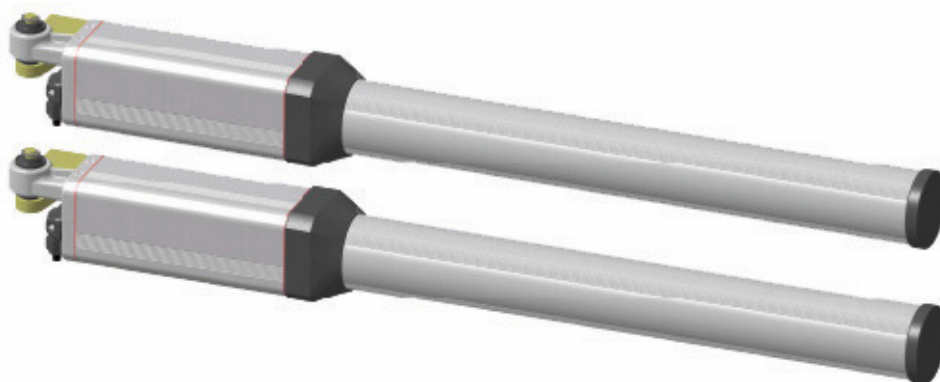




iS320 / iS320D

HYDRAULIC SWING GATE OPENER

USER MANUAL



Reuse
Reduce
Recycle



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1.1 GENERAL PRECAUTION

WARNING:

This user manual is only for qualified technicians who are specialized in installations and automations.

- 1) All installations, electrical connections, adjustments and testing must be performed only after reading and understanding of all instructions carefully.
- 2) Before carrying out any installation or maintenance operation, disconnect the electrical power supply by turning off the mains switch connected upstream and apply the hazard area notice required by applicable regulations.
- 3) Do not install this equipment in an easily flammable environment. The presence of inflammable gases or smoke are a serious threat to personal safety.
- 4) In addition to safety devices it is also necessary to install at least one light signal as well as a printed notice fixed to the gate.
- 5) Make sure the existing structure is up to standard in terms of strength and stability.
- 6) This equipment must be earthed with a yellow/ green cable, connected to the earth terminal in the junction box. The safety of this product is only guaranteed if the equipment is properly earthed.
- 7) Installation requires qualified personnel with mechanical and electrical skills.
- 8) Keep the automatic controls (remote, push buttons, key selectors etc.) placed properly and way from children.
- 9) For replace or repair of motorized system, only original parts must be used. Any damage caused by inadequate parts and methods will be not claimed to motor manufacturer.
- 10) Never operate the drive if you suspect that it might be faulty or will cause damage to the system.
- 11) The motors are exclusively designed for gate opening and closing application, any other usage is deem inappropriate. The manufacturer will not be liable for any damage resulting from the improper use. Improper usage should void all warranty, and the user accepts sole responsibility for any risks thereby may accrue.
- 12) The system may be operated in proper working order. Always follow the standard procedures by following the instructions in this installation and operating manual.
- 13) Only operate the remote when you have the full view of the gate.

ELSEMA PTY LTD shall not be liable for any injury, damage, or any claim to any person or property which may result from improper use or installation of this system.

Please keep this installation manual for future reference.

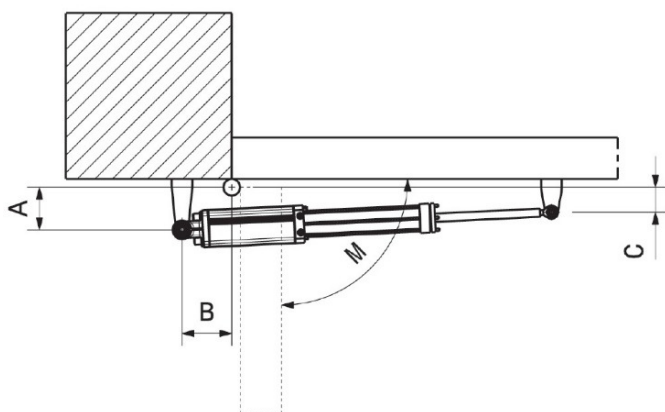
A. CHECKS BEFORE INSTALLATION

Before proceeding with the installation check the following:

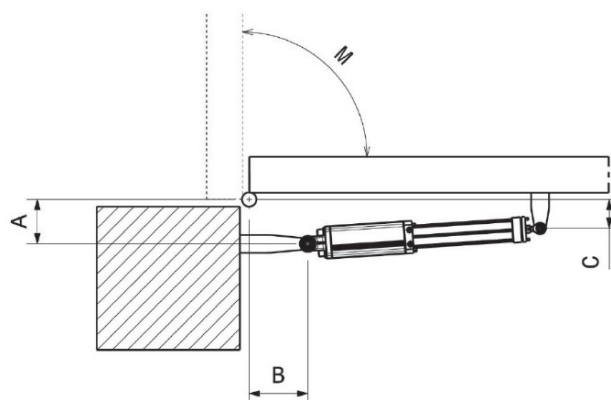
- 1) Make sure that the gate moves freely.
- 2) There are no obstacles in the moving gate area.
- 3) Hinges are properly positioned and greased.
- 4) There should be no friction between the two gate leafs.
- 5) There should be no friction with the ground while moving the gates.
- 6) Check that the gate structure is suitable to install automatic gate motors.

Gate length	Max. 2 Metre	Max. 4 Metre
<i>Light gate : 400Kg</i>	iS320 - 110°	iS320 - 95°
<i>Medium gate : 600Kg</i>	iS320 - 110°	iS320 - 95°
<i>Heavy gate : 800Kg</i>	iS320 - 110°	

Opening Inwards



Opening Outwards



B. A & B Dimensions

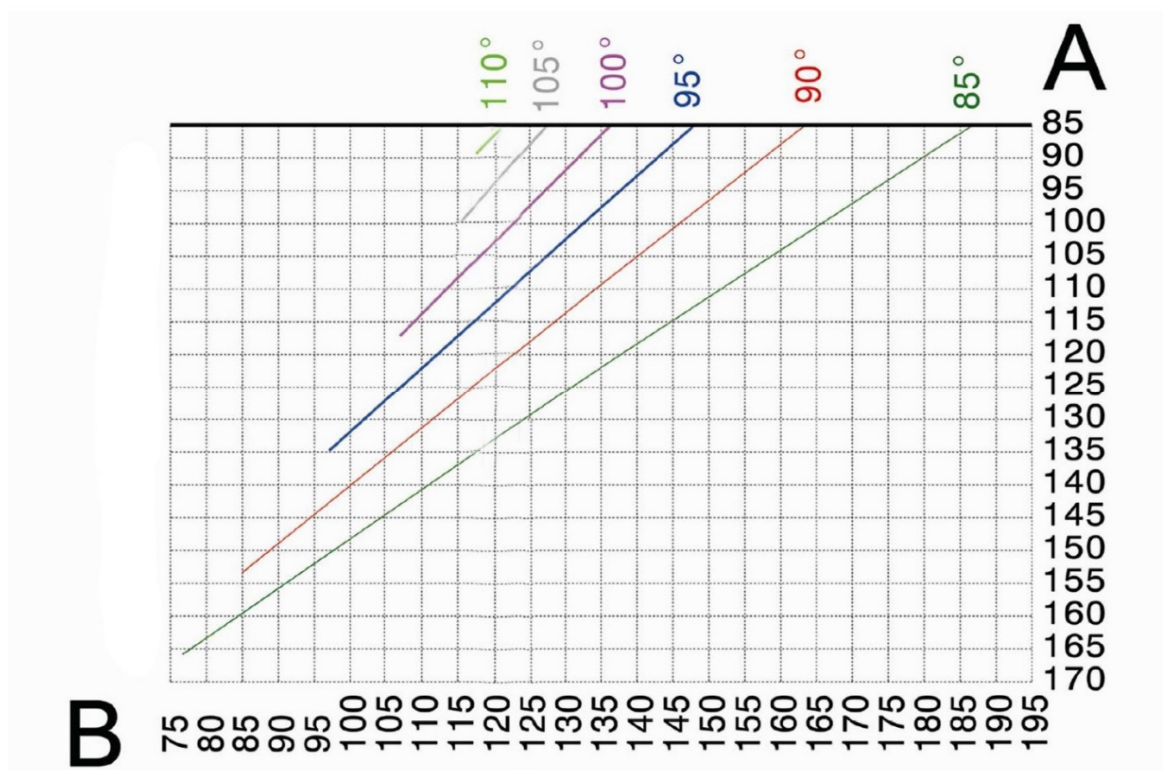
Table 1

Inward Opening			
M	A	B	C
85°	130	125	70
90°	120	120	70
95°	110	120	70
100°	100	120	70
105°	93	120	70
110°	85	120	70
115°	85	115	70
Outward Opening			
85°	130	120	80
90°	120	120	80
95°	110	120	80
100°	100	120	80

All measurements are from the center of the Hinge and are in millimetres (mm).

In some installations it might not be possible to follow the exact dimensions in the above table due to a number of reasons. If this is the situation, please refer to the Graph 1 below for **INWARD** opening, A & B dimensions.

Graph 1



C. INSTALLATION

- 1) Check that the motor mounting position on the gate pillar can be done with the measurements in **Table 1** and **Graph 1**.
- 2) Fix the pillar support as shown in **(Fig.1 Page 5)** shortening or extending the support according to the dimensions A and B shown in the **(Table 1 Page 4)**. The support should be fixed at a height where the gate has a sufficiently rigid surface to fix the gate support, bearing in mind that the gate support will be fixed **15 mm lower** than the pillar support. **(Fig.1 Page 10)**.
- 3) Shorten or lengthen the gate support according to the dimensions for C shown in the table on page 3. Connect the iS320 opener to the gate support, with the rod completely extended **(Fig.2 Page 5)** and with the swivel joint nut fully tightened **(Fig.3 Page 5)**. Once this has been done use a spirit level **(Fig.4 Page 5)** to mark the position of the gate support on the gate. Dismantle the gate support and fix it to the gate using the markings previously made.
- 4) Mount the motor and unscrew the swivel joint nut three turns to ensure closure. Attach the security ring and the safety bolt supplied. **(Fig.6 Page 5)**.
- 5) Electrical connections: Unscrew the end cover and connect the terminals according to the following diagram
- 6) Open the door manually to the desired open position, slide the collar stopper along the arm **(Fig.9 Page 5)** up to the front cover plate, fixing its position with the Allen key. The hydraulic transmission can then be plugged in and started. Re-position the collar stopper to achieve the desired opening and closing positions.
- 7) Once the motor is working correctly the limit valves can be adjusted **(Fig.10 Page 5)**. The limit valves control the force and are independent in opening (blue limit valve) and closing (red limit valve) the gate. The screws can be adjusted by turning them a maximum of 45° and should be adjusted slightly above the minimum, in this way the force of the hydraulic system is reduced thus increasing safety.
- 8) The closing buffer can then be adjusted **(Fig.11 Page 5)**, thus avoiding the door banging closed. To adjust the closing buffer turn the screw a maximum of 10° (If the buffer valve is completely closed then 15mm of buffering will be lost) .
- 9) The aluminium arm cover can then be placed back into position **(Fig.12 Page 5)**, followed by its plastic cover and the end cover.

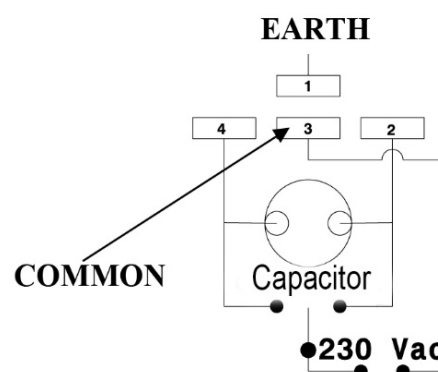


Fig.1

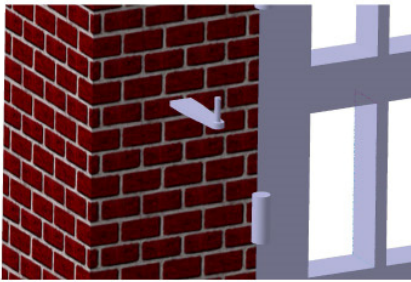


Fig.2

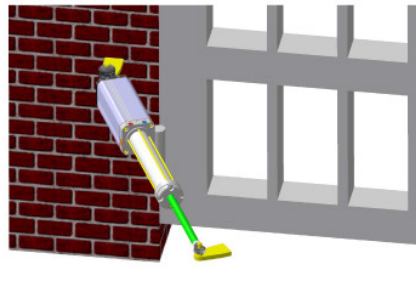


Fig.3

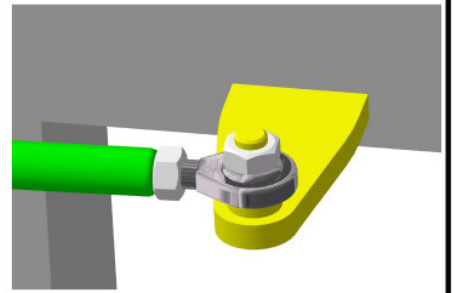


Fig.4

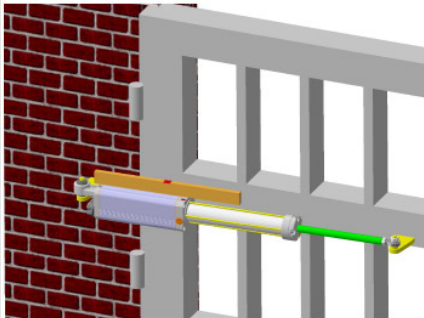


Fig.5

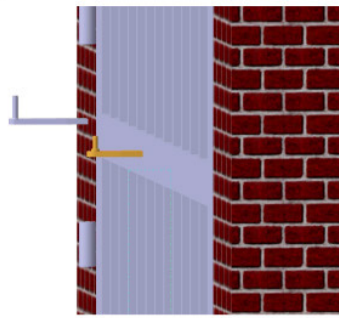


Fig.6

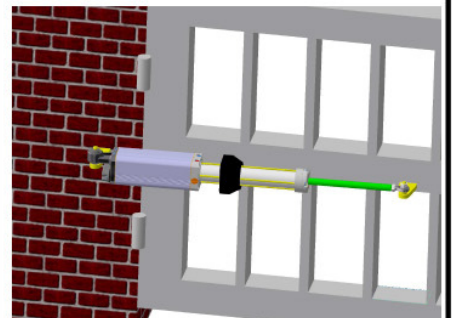


Fig.7

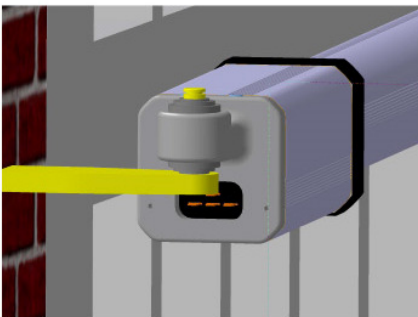


Fig.8

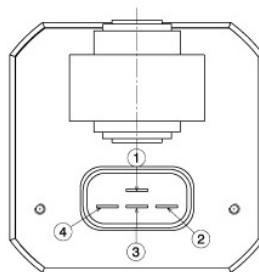


Fig.9

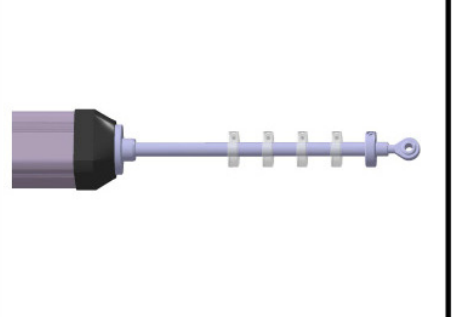


Fig.10

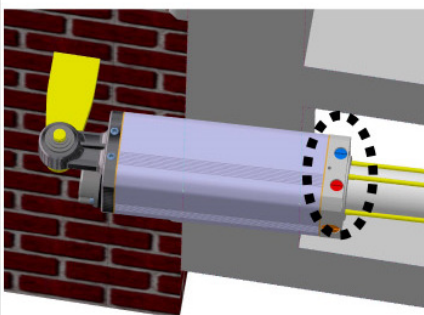


Fig.11

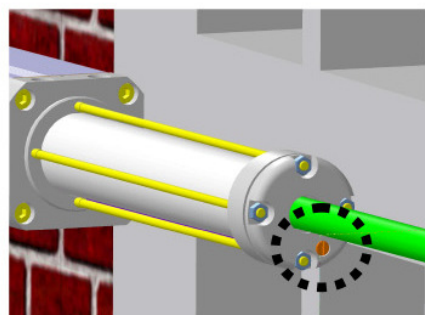
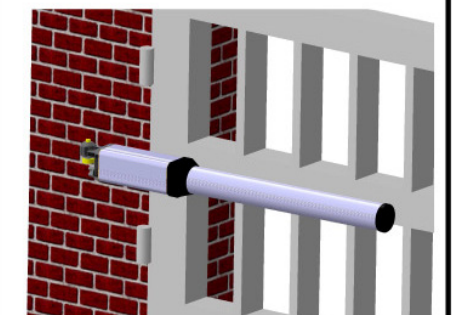


Fig.12

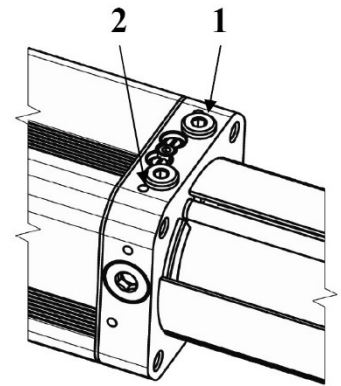


D. INSTALLING HYDRAULIC LOCK

When installing locks on hydraulic powered gates it is necessary to consider the type of opening. The iS320 has 2 different connections for locks which depends on the type of opening.

- **Inward opening** (Page 2) The lock should be connected to position 2 (see diagram).

- **Outward opening** (Page 2) The lock should be connected to position 1 (see diagram).

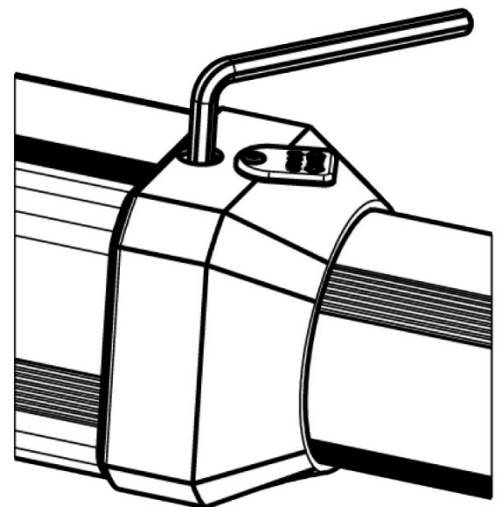
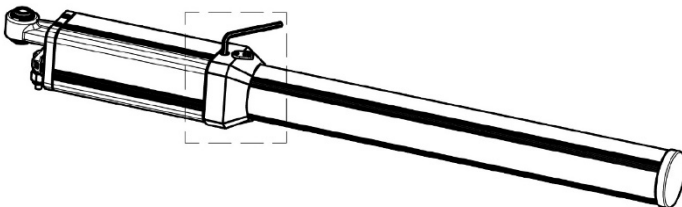


*An external lock is required for gates over 1.8m in length.

E. EMERGENCY RELEASE SYSTEM

In an event of power failure, the iS320 can be operated manually. For manual operation, open up the cover shown in the picture and turn the valve 360° anti clockwise. Now the gate can be moved manually. To reengage the motor, turn the valve 360° clockwise.

Note: If the valve is not fully open or fully closed, operator will not function properly.



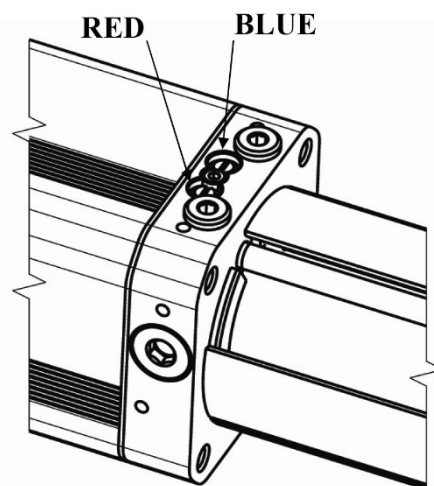
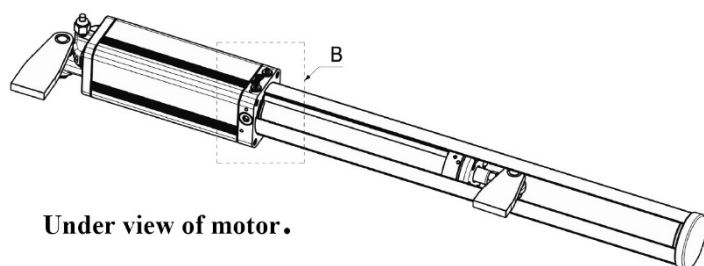
F. BAC & ANTI-WIND SYSTEM

The pressure of the gate can be adjusted by turning the Red and Blue valves located underneath the motors. The pressure can be adjusted while the motors are not running and is independent for opening cycle and closing cycling.

Red is for the **opening cycle** and **Blue** is for the **closing cycle**. Opening these valve will increase the pressure and closing will decrease the pressure.

If these valves are slightly opened, they serve as an excellent anti-wind system.

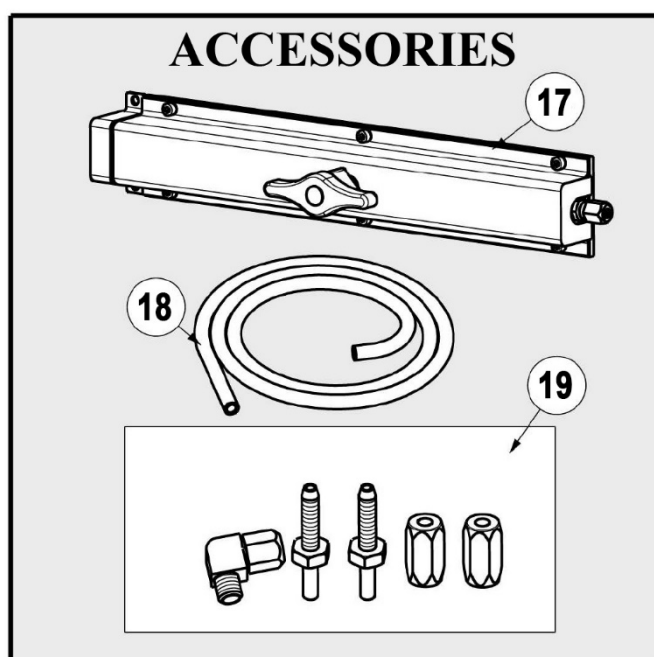
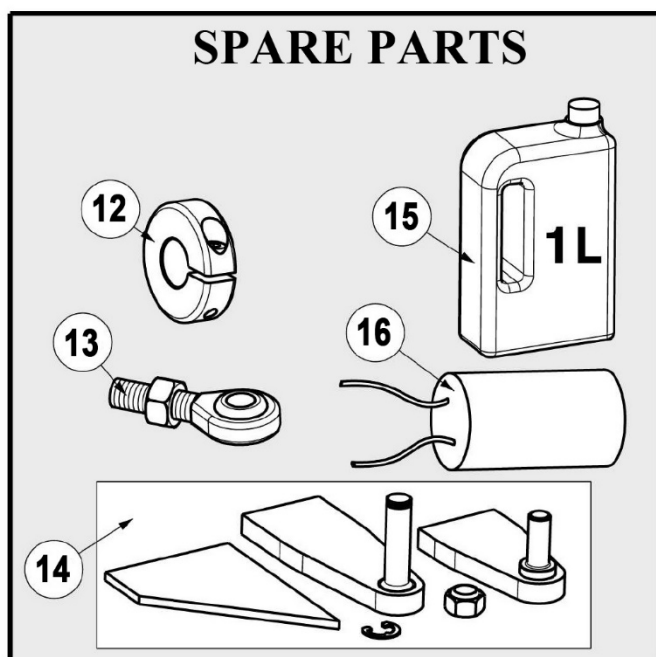
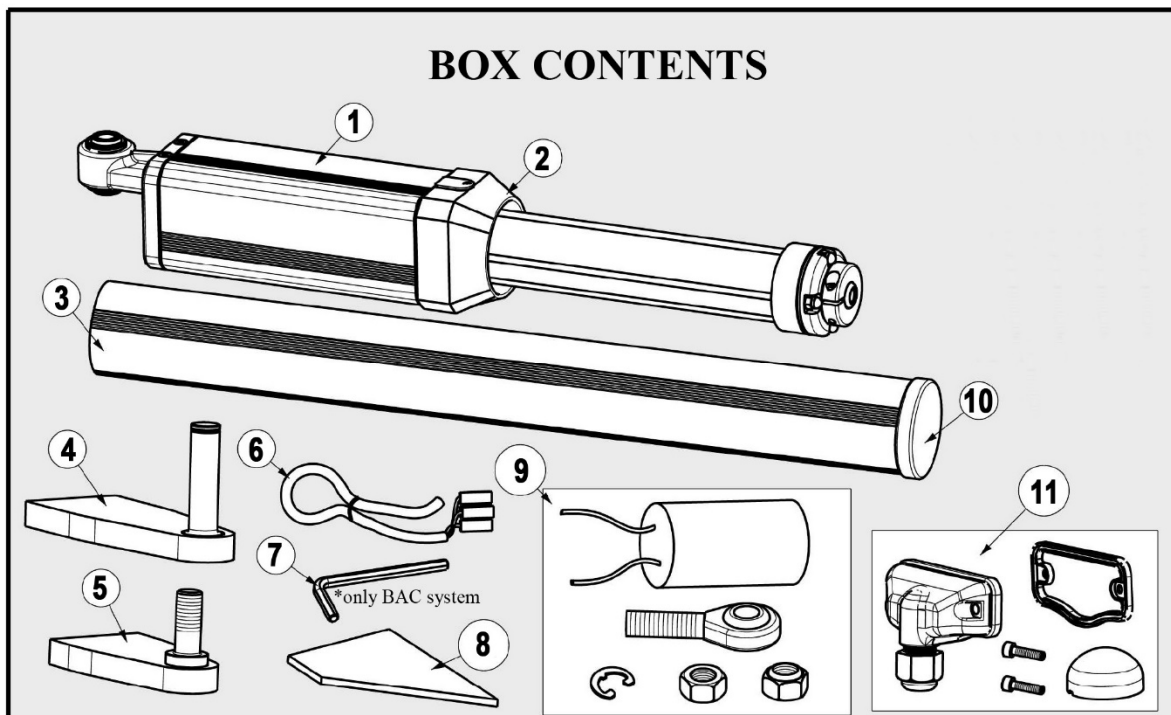
An external lock is required for gates over 1.8m in length.



G. TECHNICAL DATA

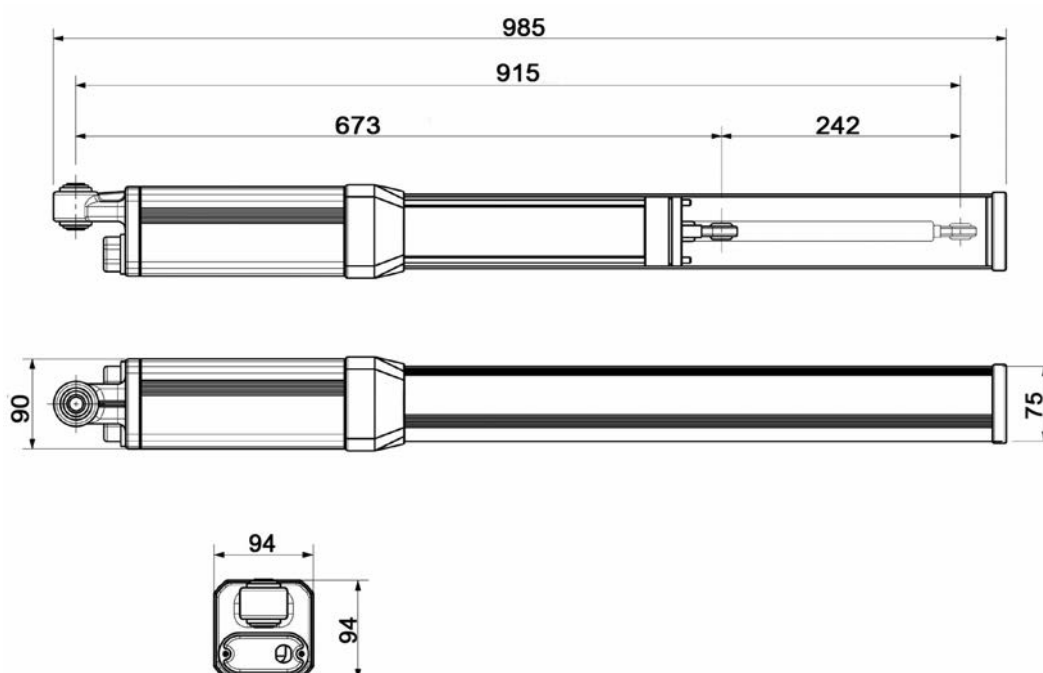
Motor Voltage	240 Volts AC
Power	276 Watts
Running Current	1.3 Amps
Capacitor	16uF
Type	Hydraulic
Max Pressure	50 bar
Opening Cycle	23 sec
Closing Cycle	28 sec
Compression	0 - 795Kg
Traction	0 – 638Kg
Maximum Gate Leaf Length	4 metres
Operating Temperature	-20 °c ~ +50 °c
Dimension	985mm x 94mm x 88mm
Weight	11 kg

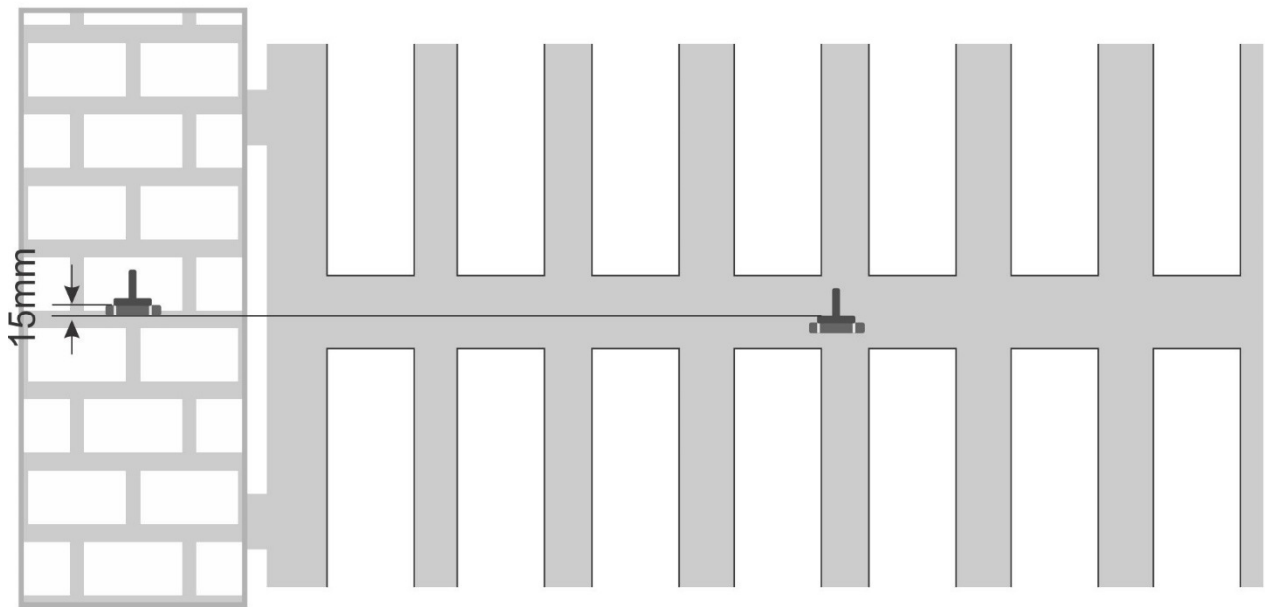
H. KIT CONTENTS



	Description
1	iS320
2	Plastic cover
3	Aluminium cover
4	Pillar motor support
5	Gate motor support
6	Motor cables
7	Allen key for pressure adjustment
8	Support plate
9	Setup nuts and bolts
10	End cover for the arm
11	Wire housing
12	Stopper bracket
13	Hinge set with nut
14	Motor support kit
15	Oil refill for iS330
16	16uF Motor start capacitor
17	Hydraulic lock
18	Hydraulic hose
19	Mounting & fittings for hydraulic hose

I. DIMENSIONS





J. ELECTRICAL CONNECTION

After successful motor installation, refer to the user manual of the control card for automatic operation setup.

1.3 MAINTENANCE:

Maintenance should be performed at least every six months. If it is used in high traffic area, a more regular maintenance should be performed.

Disconnect the power supply:

- (1) Clean and lubricate the screws, the pins and the hinge with grease.
- (2) Check the fastening points are properly tightened.
- (3) Check and make sure that the wire connections are in good condition.

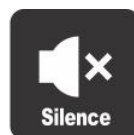
Connect the power supply:

- (1) Check the power adjustments.
- (2) Check the function of the manual release
- (3) Check the photocells or other safety device.

Service History

Date	Maintenance	Installer

- **Domestic/Industrial Sliding Gate Kits**
- **Domestic/Industrial Swing Gate Kits**
- **FOB Remotes**
- **Hydraulic Locks**
- **Magnetic Locks**
- **Wireless Keypads**
- **Pre formed Loop**



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