FOREMATIC

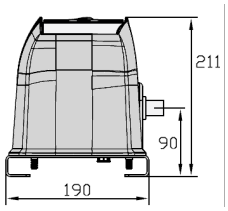
doc. E07
iss V1.1

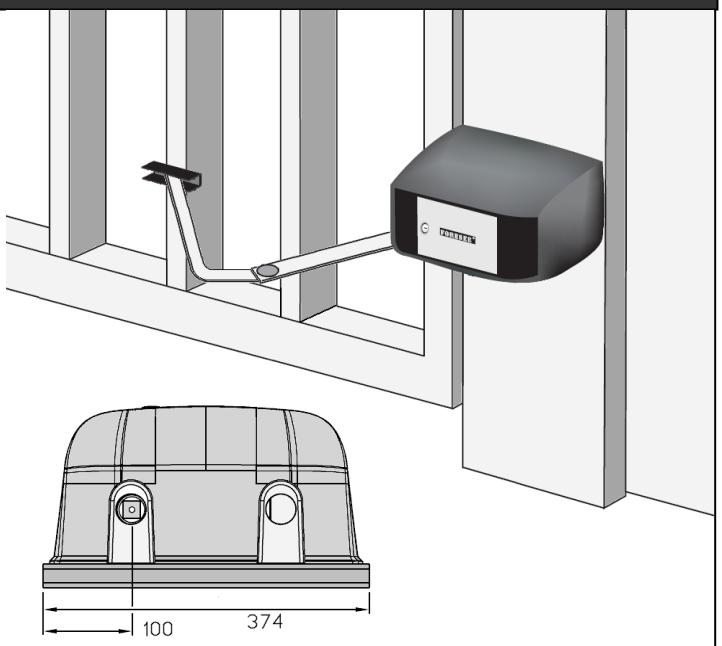
RETRO Installation manual

Specifications

Supply	230Vac 50/60Hz
Power	60W
Capacitor	6uF @ 450V
Stroke	90° - 120°
Speed	12-15 sec to 90°
Torque	300 N.m
Gate max	2.5m
IP rating	IP44
Temp'	-25°C to 50°C

Articulated arm motor for 2.5m gate leaves



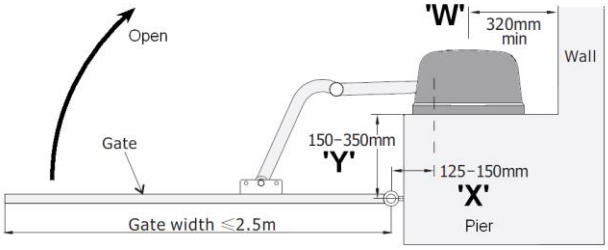


1.0 Installation

The RETRO is a simple to fit articulated arm motor for gate leaves up to 2.5m. RETRO is ideal for fitting to existing gates, or onto brick piers where ram geometry is not suitable.

Articulated arm motors have a geometric slow down in open and close positions that suits control of heavy gates. Read and observe the safety warnings before starting.

There is no need for gate centre or open stops because the RETRO is fitted with open and close limit switches. Motors can be fixed at any height, but it is good practice to fit the gate fixing bracket to a strong horizontal rail.



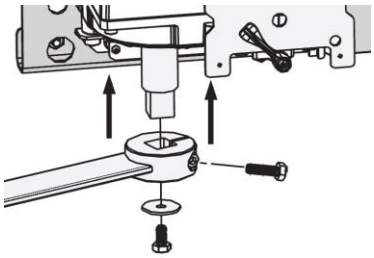
1.1 Gate geometry

Check that the RETRO is suitable for your application before unpacking the set. Geometry is not critical, but check first.

The back of the pier must be less than 350mm (Y) from the gate line. In the open position, the arms may also foul the wall, so allow for (W) space. If you have long hinges the motor plate may need to overlap the edge of the pier.

1.3 Assemble to pier

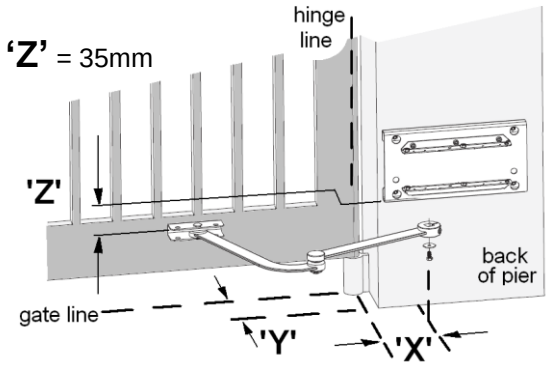
Fit the motor to the plate. Manual release it.
Then attach the arm with the vertical screw.



1.2 Motor plate fixing

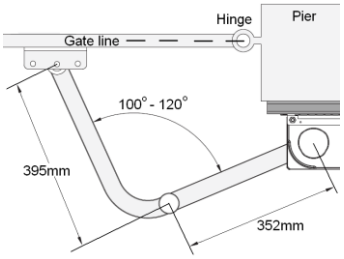
The motor has a detachable fixing plate which needs to be securely fixed to the pier. RETRO geometry is not critical so you can choose the pier position for fixing strength. Avoid mortar and soft bricks. Use the correct fixings for the pier material.

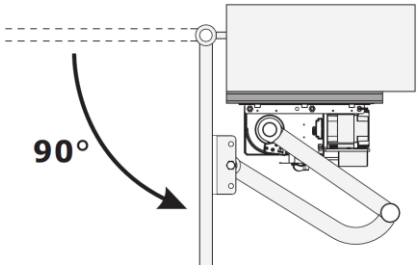
If the X dimension allows, set the motor plate to the edge of the pier. Fixing plate height is set (Z) above the gate fixing bracket centre line.



1.4 Gate fixing bracket

Clamp the gate bracket on. The angle should be 100°-120° in the closed position. Swing the gate open. Ensure the arm doesn't touch anything. The two arms should be no closer together than parallel in the open position. If all is correct, close the gate and bolt on the gate bracket.



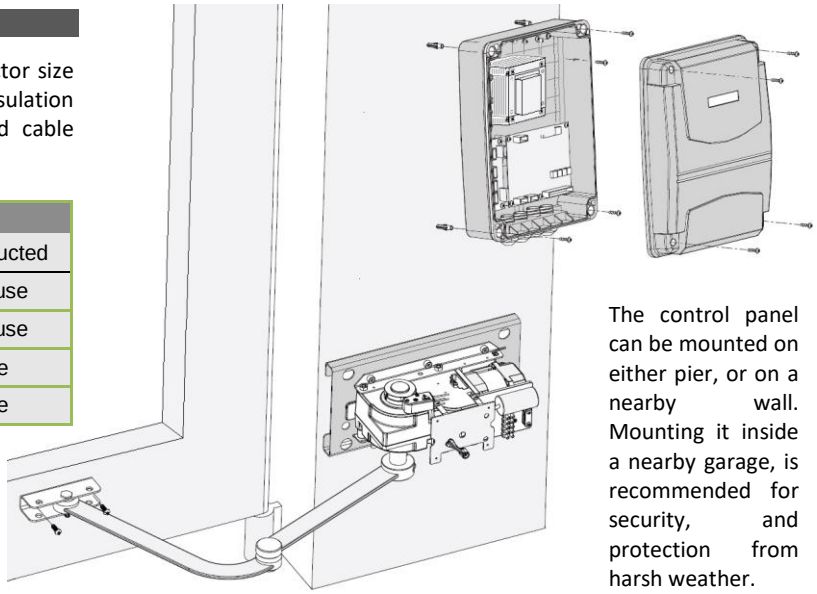


2.1 Cabling

A typical installation requires to following cables. Conductor size is the minimum recommended based on current. Cable insulation must be suitable for the run. Underground cables and cable exposed to UV light must be rated accordingly.

	Type	details
Supply	2+E x >1mm²	230Vac armoured or ducted
Motor	3+E x 0.75mm²	230Vac intermittent use
Flasher	2 x 0.5mm²	230Vac intermittent use
Photobeam	4 x 0.22mm²	Alarm or data cable
Safety edge	2 x 0.22mm²	Alarm or data cable

The motor cable enters through the fixing plate. It can be ducted up the pier, or neater still, run thru the pier. The RETRO is a useful housing to make connections to pier mounted devices such as photo-beams, safety edges & access controls, so it is good to run a low voltage cable. Wiring and programming is covered in another document.



The control panel can be mounted on either pier, or on a nearby wall. Mounting it inside a nearby garage, is recommended for security, and protection from harsh weather.

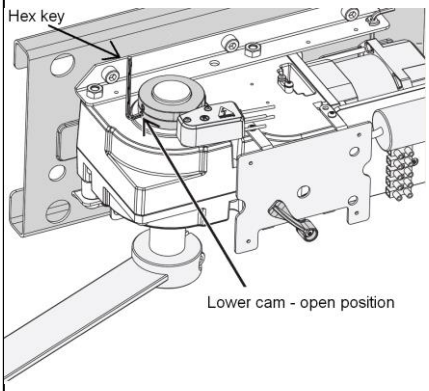
2.2 Setting limit switches

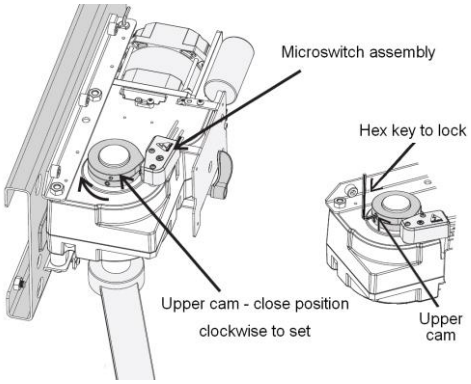
Manually release and set the gate in the fully open position. The right motor with the cams on top is the easiest to set. Release the lower cam with a hex key, then slowly rotate the lower cam anti-clockwise until you hear the micro switch click. Lock the cam by hex key on the easiest grub screw.

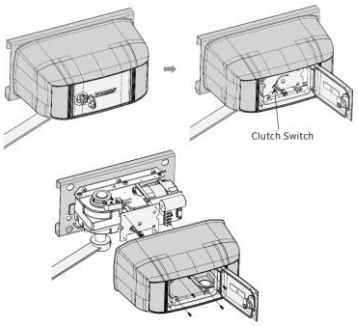
Move the gate to the closed position. Release the upper cam with a hex key. Slowly rotate the upper cam clockwise until the micro-switch clicks. Lock the upper cam with the hex key.

Repeat the cam setting on the other motor. You may need to adjust cams when the gates are under power. Finish the commissioning process, then come back again to tighten the grub screws. There are two grubs per cam. Access them by turning the arm and gate until the hole becomes accessible.

Finally screw the covers on with four screws thru the locking door.







Manual release

In the event of power failure, the RETRO motor can be manually released from the gate. Use the key to open the RETRO door. Turn the silver handle inside anti-clockwise to release.

Maintenance

Check the following every 6-9 months. Grease all arm joints. Ensure arm and motor mounting bolts are tight. Check cables are securely terminated. Operate each safety device in turn to check correct reversal.

Safety warnings

Automatic gates can be hazardous. It is the operators responsibility of an automatic gate to be aware of, and provide adequate warning of hazards. All users should be given a hazard awareness briefing and user training for the automatic gate.

This manual is written for automation engineers aware of the construction and accident prevention rules in force. Only qualified persons may do installation or maintenance work on this installation. Keep the gate in good working order with regular checks on the safety devices fitted.

Operators should ensure people are clear of the gate during operation. Children must not be allowed to play on or near the gate, or be allowed to operate the gate. We recommended signs both sides of the gate to warning of risk of injury to pedestrians. Do not permit public access to the gate area.

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WARRANTY

3 year return to base warranty covers defective manufacture and material. The warranty does not cover accidental damage, misuse, or abnormal wear. Warranty is conditional on good installation, maintenance and service recommended in this manual. Warranty is void if subject of unauthorised modification or repair, or abnormal input voltage. This does not affect your statutory rights

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