

**WIRING INFORMATION FOR ELECTRICIAN**

A 240-220V power supply must be provided to one gatepost, the hinge end for single gates, please use minimum 2.5 sq mm 3 core armoured SWA cable. The gatepost end can be left bare or connected to a **rotary switch**. The supply end must be connected exclusively to the mains using a 16A MCB or 13A fuse. There must be a double pole switch for the cable. There must also be a 30 mA double pole RCD in the supply circuit. Please leave so that it is safe to saw through cable if gatepost end is left bare. **(Supply Must be signed off / checked by an electrician if cable is left bare).**

Example of a Rotary switch to be mounted on gate post / wall:



To operate gate from the house or permit a wired intercom it is best to hard wire, rather than rely on a radio link. This requires a 10 or 12 core (5 or 6 pair) jelly filled 0.5 sq mm phone cable from the same gate post as the power supply, to the control point in the house i.e. the front door or kitchen. For video use 20 core (10 pair) cable. This can be laid at the same time as the electrical supply. **Alternatively, GSM (mobile based) systems can be used negating the requirements for additional cabling.**

Additional wiring info:

All gate automation systems require a duct to be laid between the back of the gateposts. This should be 40 to 50mm diameter i.e. waste pipe or BT ducting, with a rope pull through, please use slow bends. We will quote for this work, if it has not been done already.

**SUPPLYING & INSTALLING NEW GATES**

Wooden Gates & Posts:

We typically subcontract the installation of **wooden gates & posts** to Markus Boon.

Here are the contact details for Marcus Boon: (Fences Gates & Posts)

You can reach him via email at [marcus.boon@btinternet.com](mailto:marcus.boon@btinternet.com)

Or phone: 07890526555

He installs gates from forest products, the catalogue is available online : <http://www.forest-products.co.uk/gates/single-gates/>

Steel Gates & Posts:

For bespoke **steel gates & sliding gates** we recommend contacting Wayne & Stokes Welding in Prestbury

Tel: 01242 528044 or 07766 257115 ask for Wayne. They can fabricate and install any steel gate to your specification. Recommend texting Wayne's mobile if he is not picking up.

## **ADDITIONAL INFORMATION**

### **OPENING DIRECTION:**

All automated gates must open inwards. If your current gates open outwards into a public road / path, they cannot be automated.

Rising hinges can be fitted to new gates to allow inward opening with a maximum 20 degrees rise.

### **STOPS**

Single gates must hit a physical stop when closed, usually the other gatepost, they do not need any latch, except perhaps an electric maglock for gates over 3.5m long. The motor will hold the gate closed when unpowered.

Double gates can have a stop in the middle of the driveway no more than 50mm high, the gates may be rebated so that the first gate hits the stop, and the second gate hits the first. Stops are sometimes required for the gates to hit when open. However, it is now possible to incorporate both open & close stops internally in some underground & ram motors, but not articulated arm motors. This will be discussed on our survey.

### **WOODEN GATES**

Wooden gates are prone to warping, bending, and general movement, while every effort will be taken to minimize the effect of this, it cannot be prevented. So electric latches are not recommended.

### **HINGES (New Gates)**

Single 5 bar type gates on 200 sq mm (minimum) wooden posts may have hinges in the opening, on the corner or laid on the back. (Layout Page 3)

If there is a wall next to the post or pillar, there must be a clearance of at least 200mm between the wall and the hinge

Gates on brick pillars with ram operators must have hinges laid on the back, or if in the opening, the hinge must not be more than 50mm forward from the back of the pillar, see fig 1.

- With articulated arm operators this dimension must not exceed 300mm.
- With underground operators the hinge is 70mm from the post. The drive shaft is normally used as the bottom hinge. (see Figure 1 on page 3)

### **SLIDING GATES**

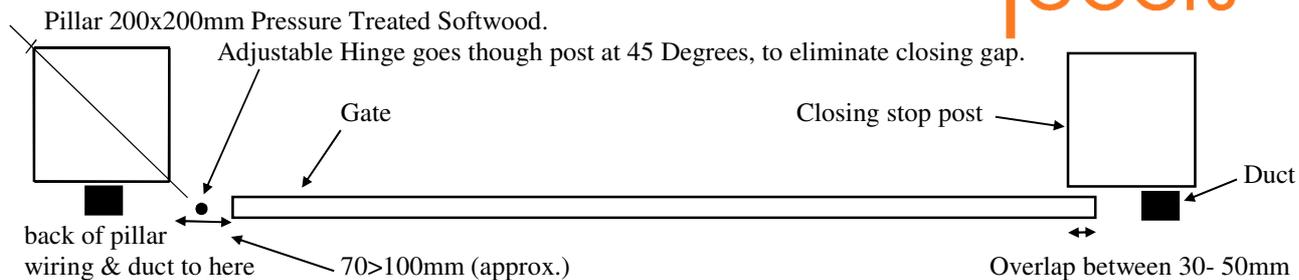
Generally, all sliding gates are bespoke designs that are custom made by a steel fabricator. (E.G. Stokes Welding)  
There are two key restrictions:

Sliding gates can only be installed on flat ground. No slopes are permitted. The ground can be made flat in some circumstances.

The gate needs an area equal to its length to retract into, with cantilevered gates needing 150% the amount.

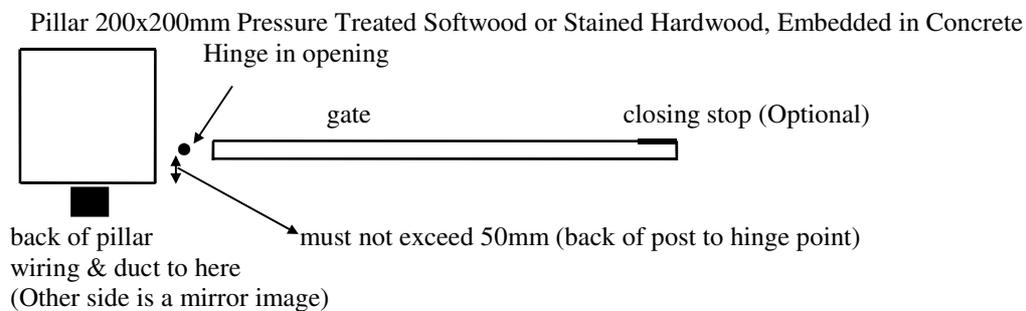
## Standard Ram Single Leaf Gate Layout

Fig 1.



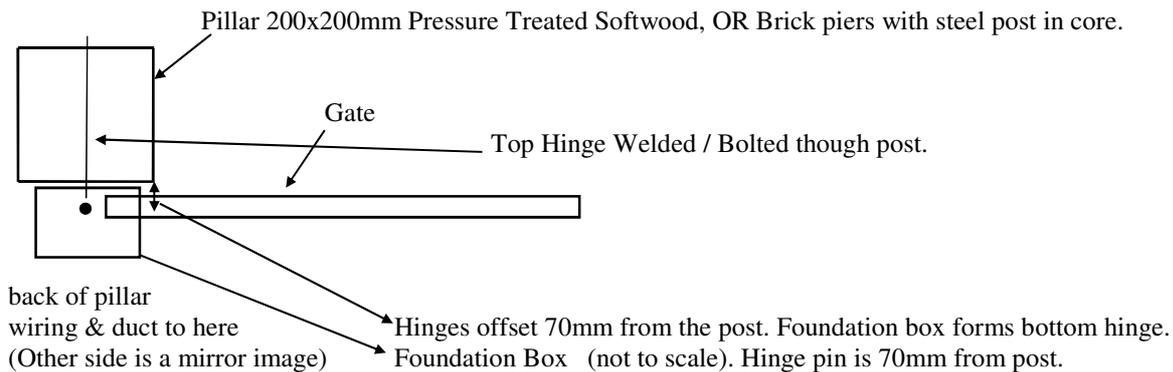
## Standard Ram Dual Leaf Gate Layout

Fig 2.



**Standard underground Dual Leaf Gate Layout, with optional 180 Degree swing.**

Fig 3.

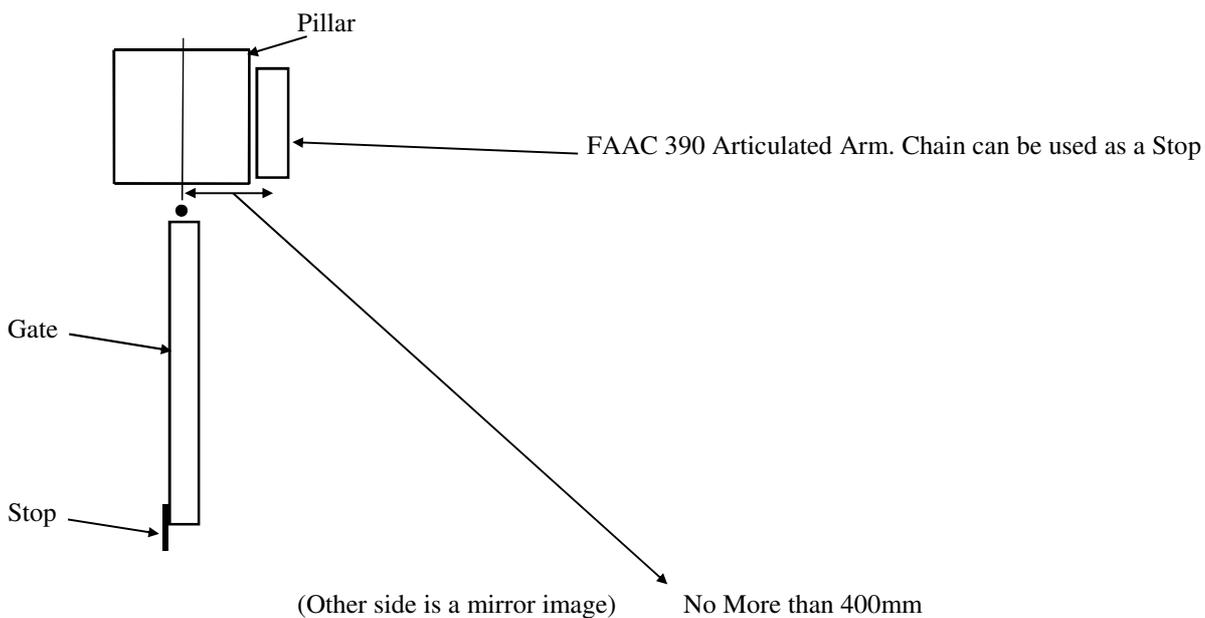


Underground motors we fit have open & close stops-built in. (Included in the prices we quote).



**Standard Stone Pillar Dual Leaf Gate Layout, 90 Degree swing.**

Fig 3.

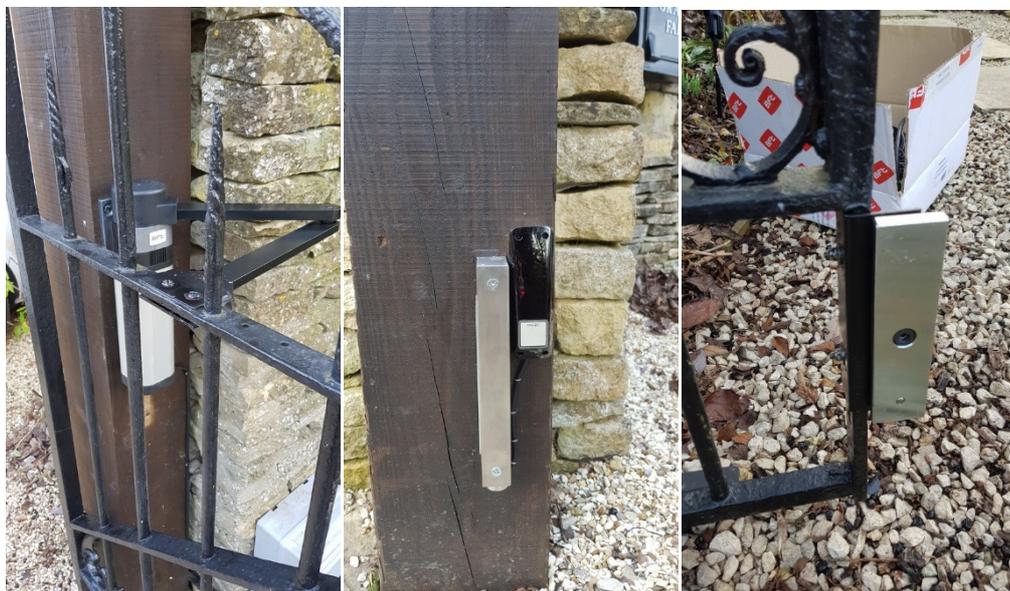


**Powered Pedestrian Gate**

These Systems use a special drive motor that has a clutch mechanism that allows the gate to open & close with a constant 50N force. Even when closing the gate can be pushed open.

A maglock holds the gate closed when the motor is unpowered.

If there is a power failure the gate can be opened by exerting a force over 50N. (Gentle push)



## **RISK ASSESMENT & STANDARDS**

All systems we install are subject to a risk assessment set out by the Door and Hardware Federation (DHF). Systems we construct are compliant to the following standards:

- 2006/42/EC - Machinery Directive (MD)
- 2014/30/EU - Electro-Magnetic Compatibility Directive (EMC)
- 2014/53/EU - Radio Equipment Directive (RED)



All work on site must also comply with Health and safety law set out by HSE. Further information can be found at:

<http://www.hse.gov.uk/work-equipment-machinery/power-gates/introduction.htm>

## **Intercoms**

**GSM Intercoms** require a SIM card with voice mail and text alerts disabled. If we provide the sim card it will be with O2, pay as you go. This will have £10 credit and can be topped up online as a guest. If you do not want the hassle of topping up as a guest, you will need to acquire a sim from a mobile provider (that has signal in the area) and ensure it is setup. If we need to return to remove the sim card for additional setup there will be a callout charge. (Please note the intercom SIM is a standard size & is not user accessible once installed).

**IP Intercoms** require an **armoured** cat 5e / 6 cable suitable for outdoor use be laid to the house, or network access point. Some house wiring schemes will allow for the use of powerline network adaptors to transmit data from the gate 230v supply into the house, but this will require testing. A large external waterproof housing is also required for IP intercoms to protect the networking equipment, and connections.

### **Wired intercoms:**

**Video: CDVI:** Require a shielded Belden 8471 cable suitable for outdoors use, be laid to the house.

**Audio: Videx Wired:** Require a 5 pair telephone cable suitable for outdoor use, be laid to the house.

Intercom communication cable must be as specified above, or we cannot guarantee intercom function.

## **Warranty**

All systems we supply & install are provided with a 2-year guarantee on parts and a 1-year guarantee on labour. This labour guarantee can be increased to 3 years provided the system has an annual service by Boyson Doors. Sadly we cannot warranty accident / vandal / flood / wind damage. We take photos of all our work as proof of correct fitting, and compliance to DHF rules.

We purchase our stock direct from FAAC-UK (manufacturer) to ensure we have the latest equipment. We do not use internet resellers as they often stock old equipment. (Which is cheaper, but prone to premature failure).

FAAC also manufacture the Genius Brand. (Same equipment different label).

We do not provide any warranty on parts / equipment that is not supplied by us.