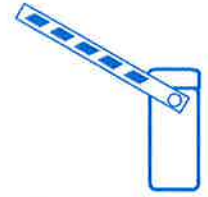


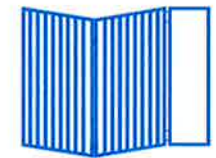
# Installation, Operation & Maintenance Manual



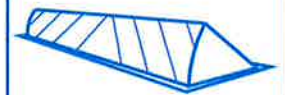
Manual Barriers



Auto Sliding barriers



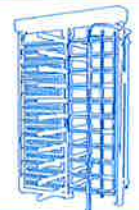
Auto Bi-Fold barriers



Auto Rising Kerbs









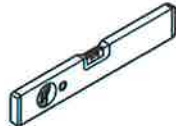


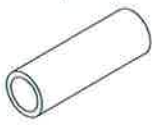



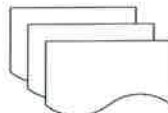
Auto Rising Bollards



Turnstiles



# Manual Raise Arm Barriers

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# Manual Raise Arm Barriers

## Health & Safety

### Important Safety Notice



Vehicle barriers are designed to Control the flow of vehicular traffic only. It can be dangerous to allow the passage of pedestrians and any other self-powered animal or device to utilise this method of access without appropriate warnings and or signage. It may be necessary for the end user of this product to provide an alternative, safe method of access to cater for the previously mentioned categories.

The end user should fit all necessary signage and warning notices to either side of the barrier, which should be visible and clear from all directions of approach.

The product that was shipped to you was designed to protect all categories from harm or affect this however is only a fail safe and should not be modified or tampered with by any unauthorised person not sanctioned by the manufacturer.

Please sign and date below to say that you have read and understood this notice before ANY installation work commences:

/ /20

The "Warnings" leaflet and "Instruction booklet" supplied with this product should be read carefully as they provide important information about safety, installation, use and maintenance.

Scrap packing materials (plastic, cardboard, polystyrene etc) according to the provisions set out by current standards. Keep nylon or polystyrene bags out of children's reach.

Keep the instructions together with the technical brochure for future reference.

This product was exclusively designed and manufactured for the use specified in the present documentation. Any other use not specified in this documentation could damage the product and be dangerous.

The Company declines all responsibility for any consequences resulting from improper use of the product, or use which is different from that expected and specified in the present documentation.

Do not install the product in explosive atmosphere.

The construction components of this product must comply with the European Directives noted in this manual and subsequent amendments. As for all non-EEC countries, the abovementioned standards as well as the current national standards should be respected in order to achieve a good safety level.

### Information on using this manual



- Read all information thoroughly
- Pay attention to all safety advice
- Be aware of the symbols (shown above right and above left) as they have different meanings. One is an information symbol, the other a warning.
- There are many artists impressions of the product in this manual you should refer to the images as a guide only. **Professional CAD** drawings should be used as a reference drawing and nothing else. As before every effort has been made to be 100% accurate in this manual but we cannot make any guarantees.
- As we constantly innovate our products we may change the quoted spec and any other details that have been documented in this manual so you should always refer to the supplier to see if the manual that was shipped with your product is the latest edition.
- As with all electrical installations you should use a qualified electrician and obey all of the latest laws and regulations.
- Be sure to fill out and complete **ALL** paperwork where instructed as this manual is the equipments log book and maintenance manual.

The Company declines all responsibility for any consequences resulting from failure to observe Good Technical Practice when constructing closing structures (door, gates etc.), as well as from any deformation which might occur during use.

The installation must comply with the provisions set out by the European Directives and subsequent amendments.

Disconnect the electrical power supply before carrying out any work on the installation. Also disconnect any buffer batteries, if fitted.

Fit an omnipolar or magnetothermal switch on the mains power supply, having a contact opening distance equal to or greater than 3mm.

Check that a differential switch with a 0.03A threshold is fitted just before the power supply mains.

Check that earthing is carried out correctly: connect all metal parts for closure (doors, gates etc.) and all system components provided with an earth terminal.

Fit all the safety devices (photocells, electric edges etc.) which are needed to protect the area from any danger caused by squashing, conveying and shearing, according to and in compliance with the applicable directives and technical standards.

# Manual Raise Arm Barriers

## Technical Information

### Construction:

Body - 100% Grade Aluminium Extrusion  
 Arm - 100% Aluminium Extrusion  
 Fishtail - Steel (Zinc Coated & Powder Coated)  
 Weights- Steel weights  
 Finish Aluminium and Lid Powder Coated

### Span(s):

2m to 7m PF5100S - Up to 6m with skirting only  
 2m to 9m PF5100HD - Up to 8m with skirting only

### Operational Movement:

90° - (Horizontal to Vertical) Controlled by mechanical stops and rubber dampers

### Handing:

Right Handed or Left handed (optional) can be changed on site

### Weight:

Cabinet 240Kg - Standard Model  
 Arm 15Kg - Standard Model (per metre)

Cabinet 274Kg - Heavy Duty Model  
 Arm 19Kg - Heavy Duty Model (per metre)

### Dimensions:

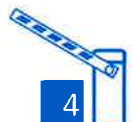
Boom Diameter - 86mm x 55mm Oval (PF5100S)  
 Boom Diameter - 115mm x 85mm Oval (PF5100HD)  
 Cabinet Dimensions - 275mm x 345mm x 930.5mm

### Finish:

Cabinet/Lid - Powder Coated (corporate colours available on request)  
 Pole Arm - Powder Coated with Vinyl Stripes (corporate colours available on request)

### Comes Complete With:

Fixings - M12 Anchor Shield Bolts Included  
 End Rest - Adjustable Lock-able End Rest  
 Padlock - External Rated 3 lever padlock



# Manual Raise Arm Barriers

## General Safety Rules

### GENERAL WARNING:

Before Installing the PF5100 Manual Barrier, you must read and understand this manual and guide. Competent and skilled persons should always carry out any work. Keep these instructions for future use.



### IMPORTANT NOTE:

The Traffic Barrier is essentially a barrier designed for entry/exit for motorised vehicles and is NOT DESIGNED for Pedestrian use. Any other usage will be deemed improper and dangerous. Therefore, it is recommended that suitable signage is erected warning pedestrians not to walk under the Traffic Barrier and separate access is provided for pedestrians.

The traffic barrier is fundamentally a manually driven arm, rising and falling across an access route, and whilst every precaution is taken to make the equipment as functionally as safe as possible, both operators and users should take sensible precautions not to abuse such a traffic control system. To this end, the barrier arm is fitted with a "Fracture Segment" to minimise any vehicular damage in the event of an accidental impact.

It is also strongly recommended that a Maintenance Contract be taken out to ensure that the hinge mechanism, mounted pins and barrier foundation bolts are operating correctly and secure.

Parking Facilities Ltd does not accept any responsibility for injury or damage if the Rising Arm Barrier has not been secured or is operated incorrectly.

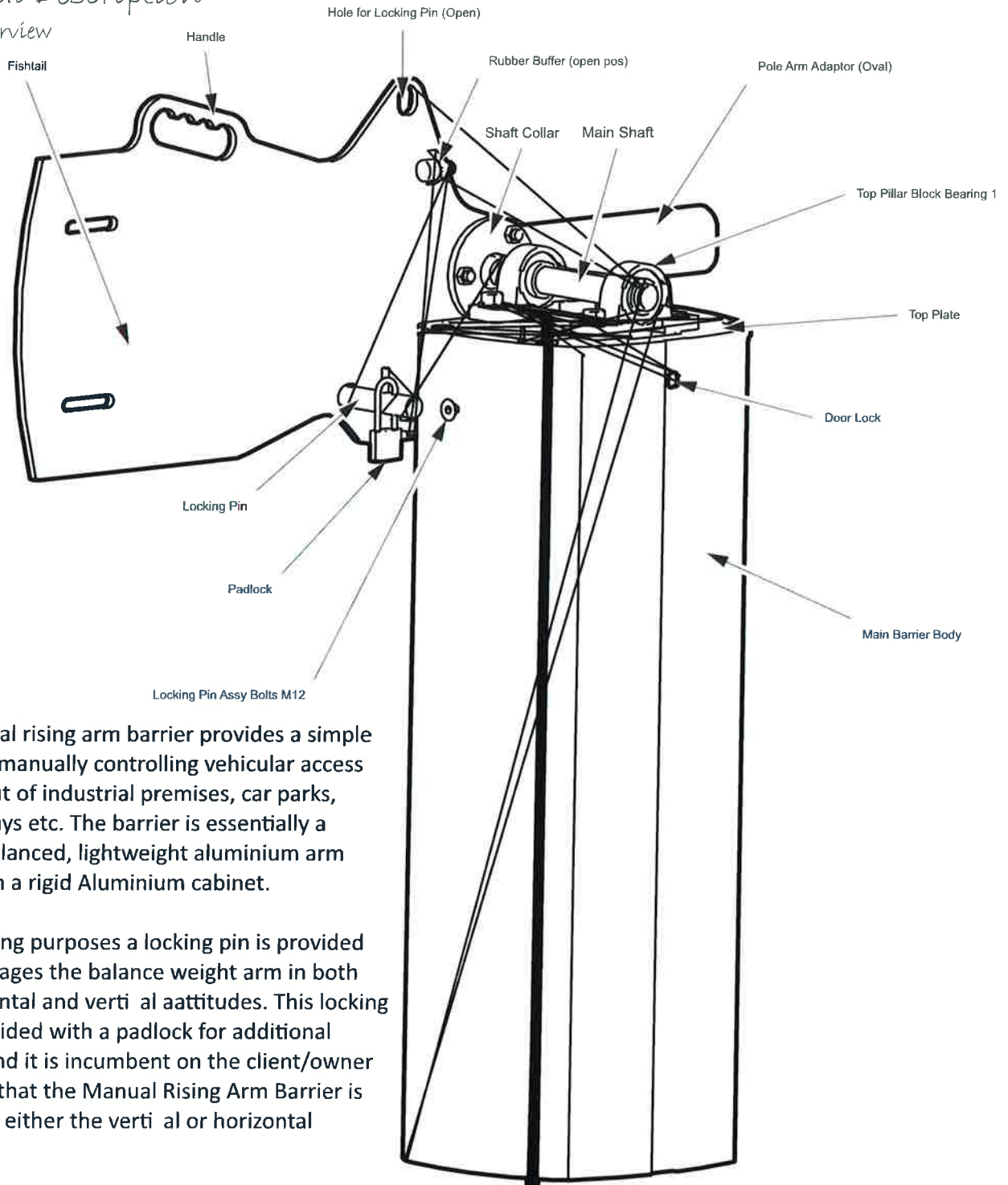
*Employers have a responsibility under Sect 2 of the Health and Safety at Work Act 1974 to ensure as is reasonably practicable the health and safety of employees and other persons who may be affected by work activities. The Management of Health and Safety at Work Regulations 1999 further imposes a specific duty upon employers to carry out suitable and sufficient Risk Assessment of all risks to health and safety of employees and others. Therefore it is recommended a Risk Assessment be carried out by a competent person in accordance with Regulation 3 (1) Management of Health and Safety at Work Regulations 1999.*



# Manual Raise Arm Barriers

## General Description

### Basic overview



The manual rising arm barrier provides a simple means of manually controlling vehicular access into, or out of industrial premises, car parks, loading bays etc. The barrier is essentially a counterbalanced, lightweight aluminium arm pivoted on a rigid Aluminium cabinet.

For retaining purposes a locking pin is provided which engages the balance weight arm in both the horizontal and vertical attitudes. This locking pin is provided with a padlock for additional security and it is incumbent on the client/owner to ensure that the Manual Rising Arm Barrier is secured in either the vertical or horizontal position.

### IMPORTANT NOTE:

For manual installation the balance weights are pre-set to allow the arm to move gently, without undue effort.

### SAFETY WARNING:

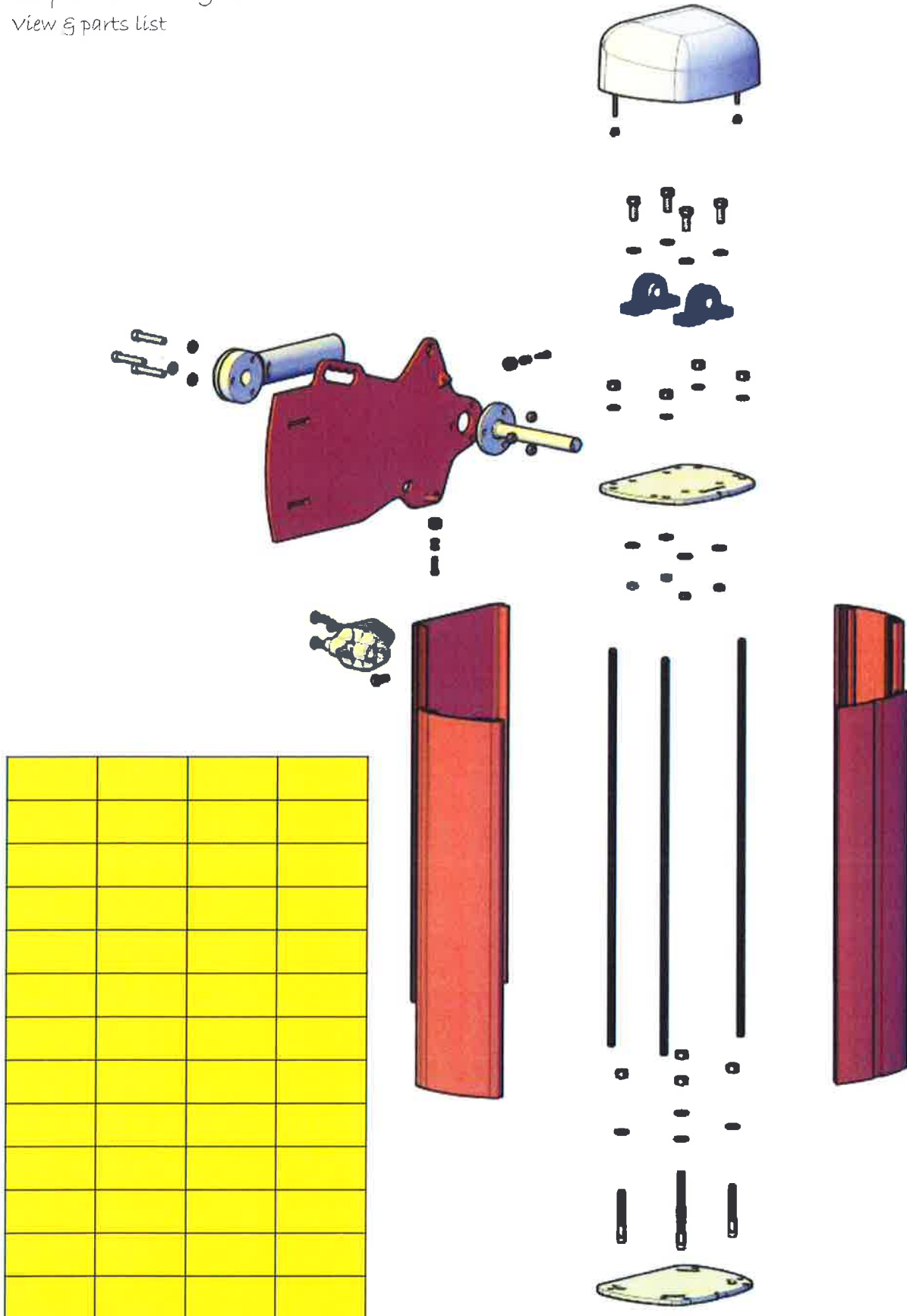
Failure to secure the Rising Arm Barrier could result in a serious injury to personnel, or damage to property. It is possible in adverse weather; especially windy weather, that the Rising Arm Barrier will move if the Barrier is not secured.



# Manual Raise Arm Barriers

## Exploded Diagram

View & parts list



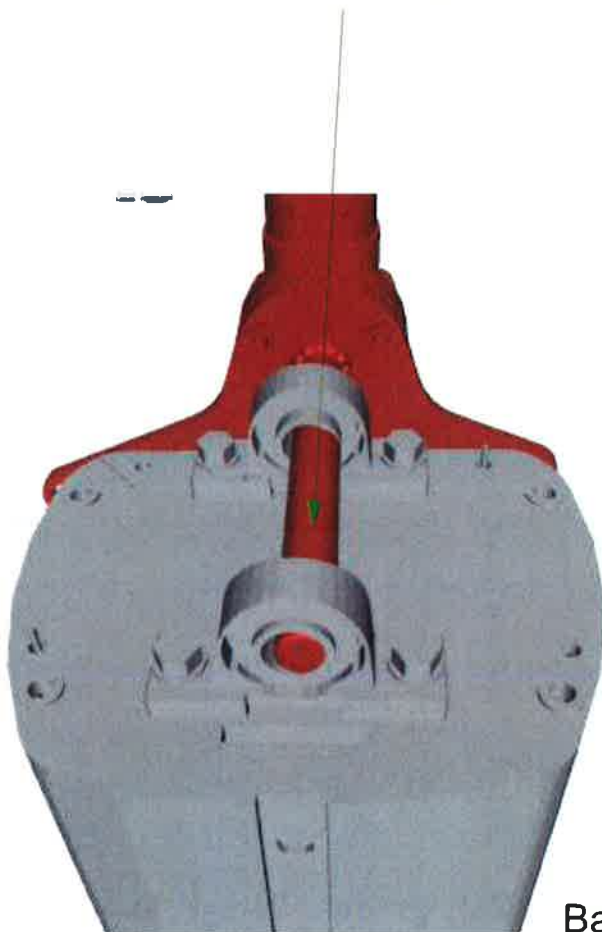
## Manual Raise Arm Barriers

### Barrier Movement & Transportation

For transportation purposes, manual barriers are always despatched with the pole removed and the pedestal supplied with its balance weight arms locked in the vertical position, for maximum stability.

No specialised equipment is necessary for the lifting and transportation of a barrier other than an overhead lifting device, i.e. small crane, block and tackle or forklift truck, and also a simple two wheel sack truck, or similar.

Use Strap Around This Lifting Point Only



Barrier Lifting Point



Barrier on Sack Truck



## Manual Raise Arm Barriers

### Technical Drawings

#### **FOUNDATIONS**

If details of the base have not been specified, we recommend a concrete mix to BS EN 206-1:2000 "Concrete specification, performance, Production and Conformity" to type C32/40, which is equally suitable for external and internal environments.

Alternative types of base construction may be acceptable, subject to discussions with our Contract Engineering Department. It is not necessary to pre-drill the base to receive the equipment; the drilling is carried out when the equipment is erected. We recommend a minimum of 7 to 10 days for the concrete to cure, depending on climate. This time can be reduced if additive agents are used.

#### **IMPORTANT NOTE:**

Where a tip support is required or if two barrier arms are to meet in the centre of the road, then both bases must be at the same level.

Drawings showing recommended positions of the equipment and foundation requirements can be supplied with the relevant data sheets.

Careful consideration should be made when deciding the location of the barrier to avoid overhead obstructions such as power cables, telephone cables, building canopies, trees and similar likely constructions, so as not to restrict the barrier arm in the vertical position.

Accessibility around the whole of the barrier pedestal should be maintained to a minimum of 1000mm to allow sufficient room for installation, subsequent maintenance.

## Manual Raise Arm Barriers

### *Barrier Quick Setup Guide*

It is preferable that installation takes place when expected through traffic is at a minimum. Position the barrier pedestal, still in its vertical position, onto its prepared concrete base. The locking pin should be at the rear and the stop bracket at the front (facing the road).

Approximately align the pedestal, so that its centre line is in the position across the road where it is anticipated the pole will be when in the down position. Using a 20mm heavy duty masonry bit in a suitable percussion drill, drill through one of the front (road side) holes in the base plate to a minimum depth of 180mm taking care to keep the holes free of excessive dust. A 20mm x 160mm long expansion bolt can now be hammered into the prepared hole, (keeping the nuts in the highest possible position). Tighten down the single nut so that the barrier is firmly fixed.

Remove the padlock and withdraw the locking pin and raise the balance weight assembly until it is horizontal and re-insert the locking pin. The pole can now be slid onto the pole adaptor and secured with the fixing bolts. With the pole now mounted, a check can be made regarding the alignment of the barrier across the road and adjustment made as required.

### **SAFETY WARNING:**

It is strongly recommended, particularly on longer span barriers, to seek assistance in this operation due to the weight been lifted. The balance weights weigh 16kg therefore, in some cases it is advisable to remove the counter balance weights before fitting the pole. Once the pole has been fitted the weights can be reassembled.

Complete the bolting down operation by drilling the three remaining foundation holes and bolting down as previously described.

Before tightening up the nuts, check that the barrier is vertical, packing as necessary.

Tighten down all four (4) foundation bolts. Cut or Grind off the surplus thread from the bolts for a neat finish and cap the nut. If levelling is necessary between the base and foundation ensure any gaps are grouted in using either Chemifix or Standard Cement.

If a tip support is being installed, this can now be positioned, using the pole as a positional reference, and bolted down in a similar manner using 12mm x 150mm expansion bolts.

If a strainer wire assembly kit is provided, this should now be bolted on and tensioned to remove any visible "sag" of the barrier arm.

# Manual Raise Arm Barriers

## Operating The Barrier

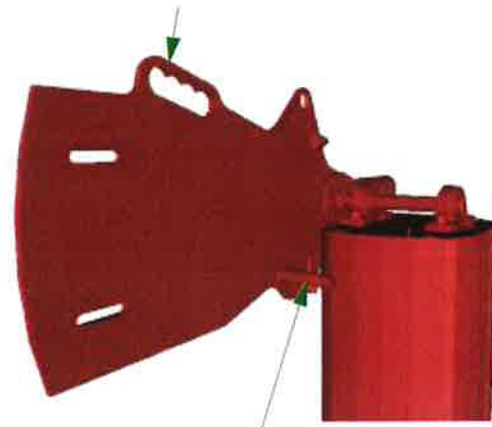
Correct operation of the PF5100 manual rising arm barrier should be as follows:

- a) Ensure barrier is clear of all obstructions.
- b) Remove padlock from the locking bar and slide outwards so it does not impede the barrier.
- c) Keeping your body behind the barrier and both hands firmly gripping the handle provided, push down the barrier until the pole arm is vertical.
- d) Keeping one hand on the barrier handle to ensure the pole arm does not drop, slide over the locking bar so that it inserts into the lug hole on the pole arm.
- e) Re-insert the padlock and lock to secure the barrier in place.
- f) To lower barrier; the procedure should be the same but take care to hold the handle whilst removing the locking bar as a knock could cause the barrier to drop freely; likely causing damage to the barrier and possibly harming its operator.

**LOCKED**



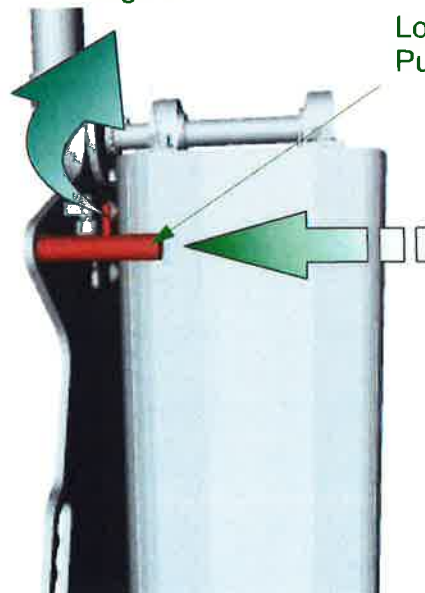
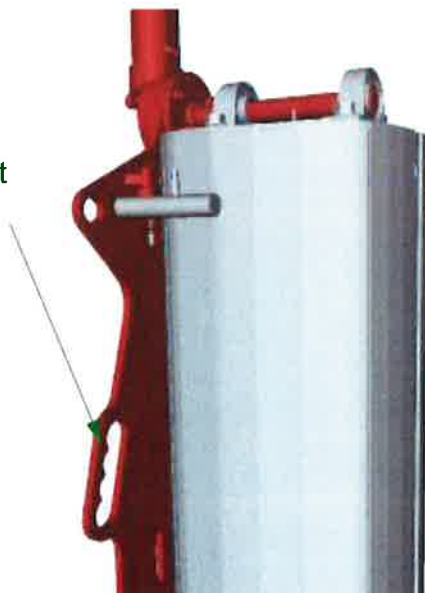
Operate Using This Handle



Remove Padlock before Sliding Locking Pin

Locking Pin now Pushed Home

Using Handle Lower to Upright Position



## Manual Raise Arm Barriers

### Replacing Barrier Poles

In the event that the barrier pole suffers damage due to inadvertent impact from a vehicle, it is relatively a simple to replace the pole, as follows: -

Once the pole arm has been fitted; the balance weights should be adjusted (if necessary), and the barrier then returned to normal operation.

## Manual Raise Arm Barriers

### Replacing Pole Arm Adaptors

In the event that vehicular impact damage is more severe, resulting in a broken pole adaptor casting, this will obviously have to be replaced. The procedure is as follows: -

- a) Lock barrier in horizontal position.
- b) Remove Strainer wire (if fitted).
- c) Carefully remove balance weights.
- d) Remove pole arm.
- e) Remove the three (standard model) M12 bolts clamping the pole adaptor to the end of the shaft four M16 clamping bolts (HD Model).
- f) Remove the broken adaptor.
- g) Re-fitting of a new pole adaptor is in reverse sequence to the above, and replacing the in position before tightening the three M12 clamping bolts (standard model) four M16 clamping bolts (HD Model).



## Manual Raise Arm Barriers

### Risk Assessment

#### **MAINTENANCE OF A MANUAL RISING ARM BARRIER**

##### *HAZARDS WHICH CAN BE FORESEEN:*

1. Tripping hazards eg cables, extension leads, stored materials on site
2. Injuries due to lifting heavy objects.
3. Contact with hazardous substances
4. Oncoming vehicular traffic
5. Other Contractors working nearby.
6. Pedestrians
7. Hand entrapment.

##### *CONTROLS IN PLACE TO MINIMISE THE RISK:*

1. Operators trained and conversant with the mechanics of the barrier operating system.
2. Correct Manual Handling Training techniques to be adhered to at all times.
3. Care is to be exercised to reduce tripping hazards, e.g. removing such hazards away from the working area.
4. Working area to be cordoned off prior to commencing work.
5. Operators to wear Hi Vis Coats/Waistcoats/Waterproofs.
6. PPE to be worn as and when required (Hard Hat, Safety Glasses, High Vis Jackets, Gloves, Safety Boots)
7. COSHH Regulations to be observed at all times.
8. Operatives are to be made aware of the clients Health and Safety Procedure and Emergency Action Plan.
9. Cuts. All vehicle carry First Aid kits.
10. Fire. All vehicles carry Fire Extinguishers

# Manual Raise Arm Barriers

## Barrier Maintenance

As stated at the beginning of this manual we recommend a bi-annual service, but at a bare minimum, it is imperative that you get a service done once every 12 months. This is not a sales tactic in disguise, there is a very serious health and safety issue/risk associated with not complying to this. Also in order for your barrier to keep complying with the appropriate legislation.

- Before carrying out any maintenance to the installation, isolate and secure the area you are working in. Display warning signage and diversion signs.
- Make sure that you have diverted traffic away from your area with a point of alternative entrance.
- A Maintenance Contract should be sought from a specialist company after 1 year from the install date.

The following must all be adhered to whilst carrying out maintenance of gate;

- i. The site Health & Safety Rules and Regulations are to be adhered to and observed at all times.
- ii. Personal Protective Equipment is to be worn at all times whilst on site (i.e. Hi-Vis clothing, safety boots, safety glasses, ear defenders, gloves etc.)

### MAINTENANCE JOB SHEET

No:

Date of Visit:	Postcode:
Customer:	Contact:
Site Address:	Contact Number:

BARRIER 1	
Check safety device and equipment	Check pole fixings
Ensure ground anchor is stable and secure	Check barrier skirt and fixings
Check pole arm adaptor and fixings	Check and lubricate as necessary
Check pole for damage and signs of stress	Check and grease all bearings
Check end rest is secure and functional	Check and level pole arm, if required
Check for visual damage	Check manual operation open and close
Check and tighten all nuts and bolts	Clean and wipe barrier
Fill out service log in manual	

### SAFETY WARNING:

By using non-genuine parts you are potentially compromising the machine, causing risk to all those using the barrier.



### METHOD STATEMENT - MAINTENANCE OF A MANUAL RISING ARM BARRIER

1. On arrive on site report Works Engineer/Security/Reception for Induction/Briefing.
2. Obtain a Work Permit.
3. Cordon off area off. (using Warning Signs)
4. Wear Personal Protective Equipment as and when required. ( Hard Hat, Safety Glasses, High Vis Jackets, Gloves , Safety Boots)
5. Check for damage.
6. Check Mounting bolts to the pedestal frame.
7. Check the Tip Support Frame for damage.
8. If Fitted check the strainer wire for tension
9. Check the Counter Balance Weights are secure.
10. Check the Pivot Shaft and bearings.
11. Check the Locking Mechanism
12. Wipe down and clean the Manual Barrier
13. Test
14. Remove cordoned off area
15. Inform client on completion, test and demonstrate if required.

# Manual Raise Arm Barriers

## Service & Repair Log

This Manual **must** be completed in accordance with the guidelines below, **at any point** service/repair work is carried out on the product. This is to achieve two things;

1. To keep a history of the product for yourself and your supplier/manufacturer.
2. To keep an accurate log of any historical or recent modifications, and/or problems, to help an engineer in the event of any future work required on the product.



Date	Reason for visit/Action taken	Engineers Signature
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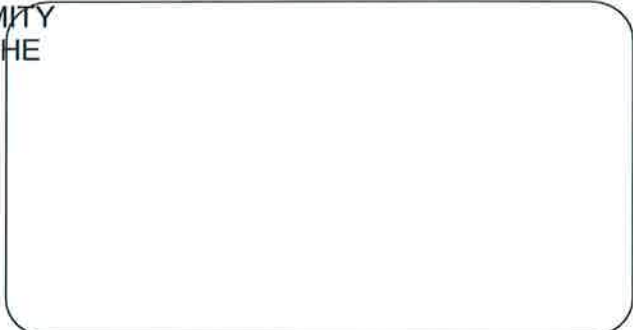
Parking and access control equipment manufactured in the 

# Manual Raise Arm Barriers



**CE** EUROPEAN MARK CERTIFYING CONFORMITY TO THE ESSENTIAL REQUIREMENTS OF THE STANDARDS 2006/42/EC

*Proudly Made in the UK*



The manufacturer reserves the right to make amendments to this manual without prior notice and declines all responsibility for any errors, personal injury or damage to property.