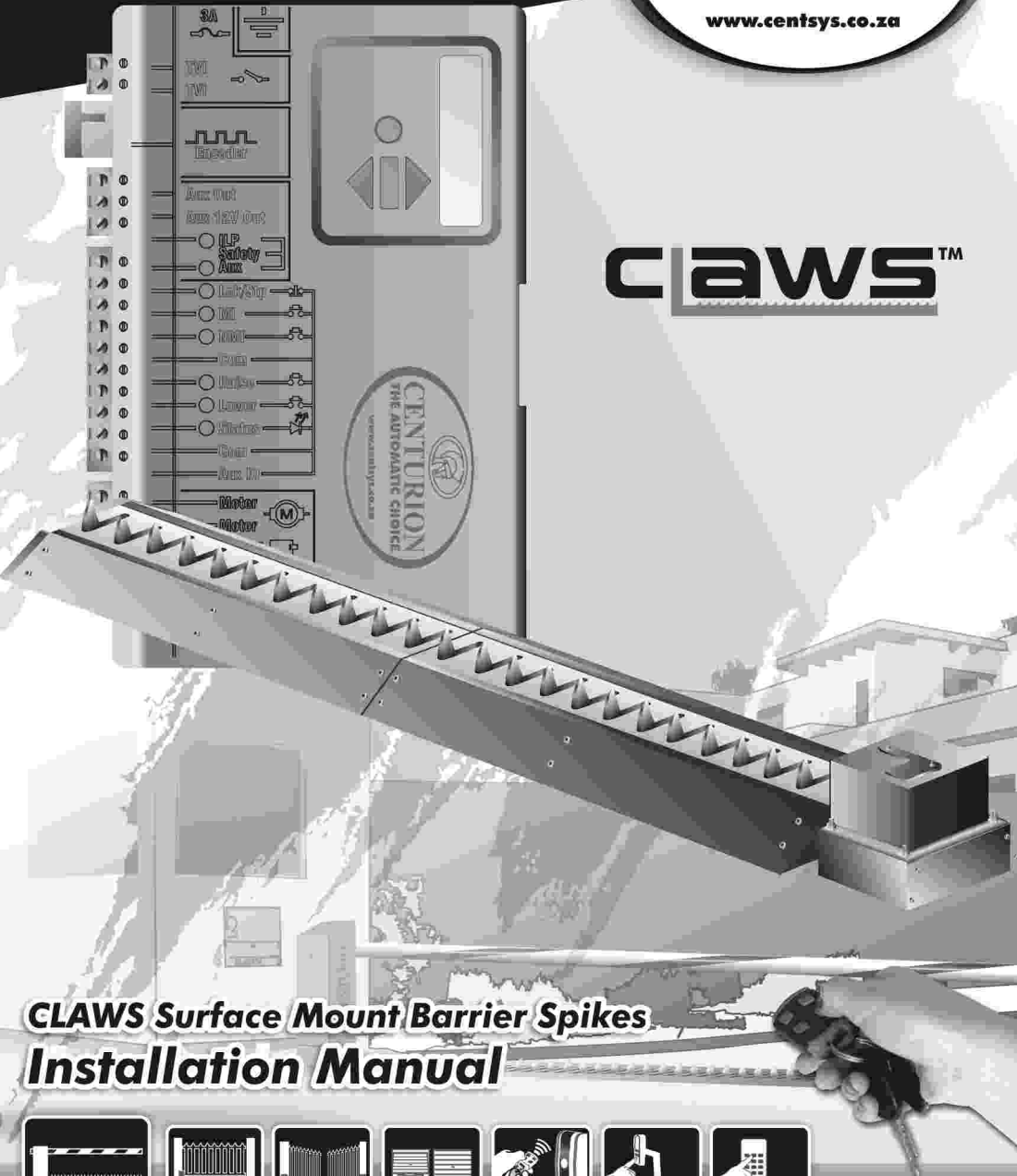




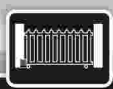
**CLAWS™**



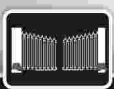
# CLAWS Surface Mount Barrier Spikes Installation Manual



**BARRIER SPIKES**



**SLIDING GATE OPERATORS**



**SWING GATE OPERATORS**



**GARAGE DOOR OPERATORS**



**REMOTE CONTROLS**



**INTERCOMS**



**KEYPADS**

# Company Profile



1986



1990



1995



1999



Centurion Systems  
Today

**In-house  
R & D  
development  
team**



**Manufacture to  
international  
quality standard  
ISO 9001:2008**



**100%  
testing of  
products**



**Competent  
after-sales  
technical support**



**Sales and support throughout  
Southern Africa and over  
50 countries worldwide**



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## Mechanical setup

These abbreviated instructions are for the experienced installer who needs a checklist to get a standard installation up and running in the minimum amount of time.

Detailed installation features and functions are referred to later in this manual.



Read, understand and comply with all Safety Instructions page 3



Determine the type of drive (Independent or Direct) and orientation of the **CLAWS** unit page 7



Assembly and preparation of the spike modules page 11



Fit the spike shafts and limit switches page 18



Fit the drive page 20



Fit the trench cover page 27



Adjust spike travel adjustment page 28



Fitting and configuring the controllers page 33

Mount the SECTOR barrier (Direct Drive models) page 33

**CLAWS** controller (Independent Drive models) page 33

## Electrical setup



Connect all wiring

page 34

## Commissioning and handover



Carry out professional  
handover to client

page 36




fast  
TRACK





# IMPORTANT Safety Instructions

## ATTENTION

To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people. 

The installer, being either professional or DIY, is the last person on the site who can ensure that the operator is safely installed, and that the whole system can be operated safely.

## Warnings for the installer

**CAREFULLY READ AND FOLLOW ALL INSTRUCTIONS** before beginning to install the product.

- All installation, repair, and service work to this product must be done by a suitably qualified person.
- Do not activate the **CLAWS** unless you can see them and can determine that the **CLAWS** are clear of people, pets, vehicles or any obstructions.
- Nothing must be placed, and nobody must be near the trench covers at any time. Always keep people and objects away from the spikes' area of travel.
- Children should be supervised to ensure that they do not play with or around the spikes and trench cover.
- This device is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Secure all easily accessed **CLAWS** controls in order to prevent unauthorised use of the gate.
- Do not in any way modify the components of the automated system.
- Do not install the equipment in an explosive atmosphere. The presence of flammable gas or fumes is a serious danger to safety.
- Before attempting any work on the system, cut electrical power and disconnect the batteries.
- The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3mm or greater. Use of a 5A thermal breaker with all-pole circuit break is recommended.

- Make sure that an earth leakage circuit breaker with a threshold of 30mA is fitted upstream of the system.
- Never short circuit the battery and do not try to recharge the batteries with power supply units other than that supplied with the product, or by **Centurion Systems**.
- Make sure that the earthing system is correctly constructed, and that all metal parts of the system are suitably earthed.
- Safety devices must be fitted to the installation to guard against mechanical movement risks such as crushing, dragging and shearing.
- It is recommended that at least one warning indicator light be fitted to every system.
- Always fit a warning sign visibly to the inside and outside of the entrance and exit.
- The installer must explain and demonstrate the manual operation of the system in case of an emergency, and must hand the User Guide and Safety Instructions over to the end user.
- Explain these safety instructions to all persons authorised to use the system, and be sure that they understand the hazards associated with the system.
- Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.
- Dispose of all waste products like packaging materials, worn out batteries, etc. according to local regulations.
- Always check the obstruction detection system, and safety devices for correct operation.
- **Centurion Systems** does not accept any liability caused by improper installation or use of the product, or for use other than that for which the automated system was intended.
- This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the service life/operation of the product and/or be a source of danger.
- Everything not expressly specified in these instructions is not permitted.

**WARNING! WARNING! WARNING! WARNING! WARNING!**



**MOVING PARTS CAN CAUSE SERIOUS INJURY, AMPUTATION OR DEATH.  
KEEP CLEAR! CLAWS SPIKES MAY MOVE AT ANY TIME. DO NOT ALLOW  
CHILDREN TO PLAY IN AREA OR OPERATE THE SYSTEM.**

**Safety  
FIRST**



## **1. Section left intentionally blank**

## 2. General description

**CLAWS** surface mounted barrier spikes are design to enhance the security at the entrance to high-volume application. They provide a formidable deterrent to would be criminals and due to their robust construction they are very difficult to defeat. Their design creates a traffic calming roadway bump, which effectively also slows traffic providing for safer and more secure access control.

Clever modular design allows the **CLAWS** to be ordered ex stock and can be configured into a variety of different lengths. The orientation of the spikes can also be easily changed depending on the direction of the traffic flow. Their external limit switches allow for safe operation of the system.

**CLAWS** are easy to install and use a standard SECTOR controller and a standard SECTOR gearbox, saving you time and reducing your spares inventory. They boast all-weather construction and have been designed to allow for all moving parts to be removed easily for quick and easy maintenance.

**CLAWS** also provide onboard support for a traffic light interface, and the Independent Drive **CLAWS** models have variable speed control and multiple modes of operation.

## 3. Specifications

### 4.1 Physical dimensions

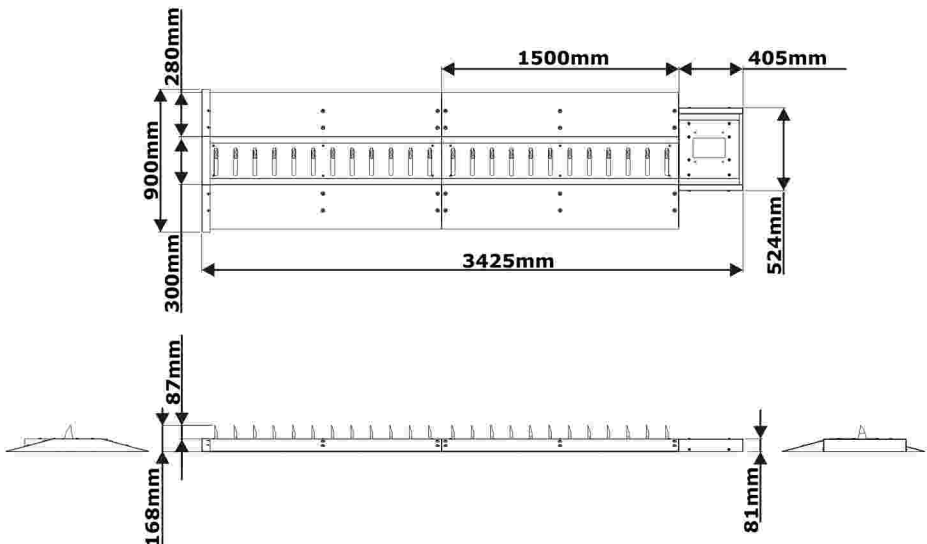


FIGURE 1. DIRECT DRIVE SURFACE MOUNT CLAWS OVERALL DIMENSIONS

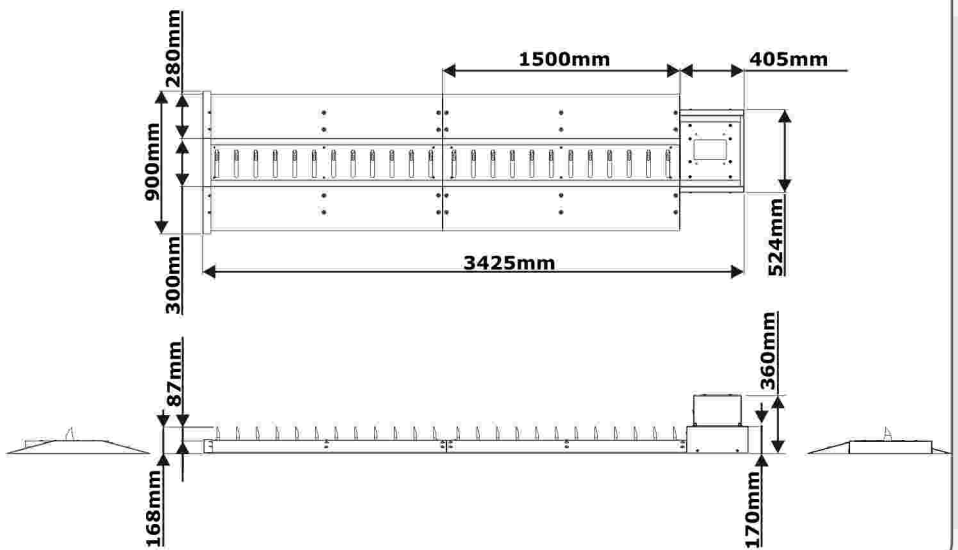


FIGURE 2. INDEPENDENT DRIVE SURFACE MOUNT CLAWS OVERALL DIMENSIONS

## 4. Icons used in this user guide



This icon indicates tips and other information that could be useful during the installation.

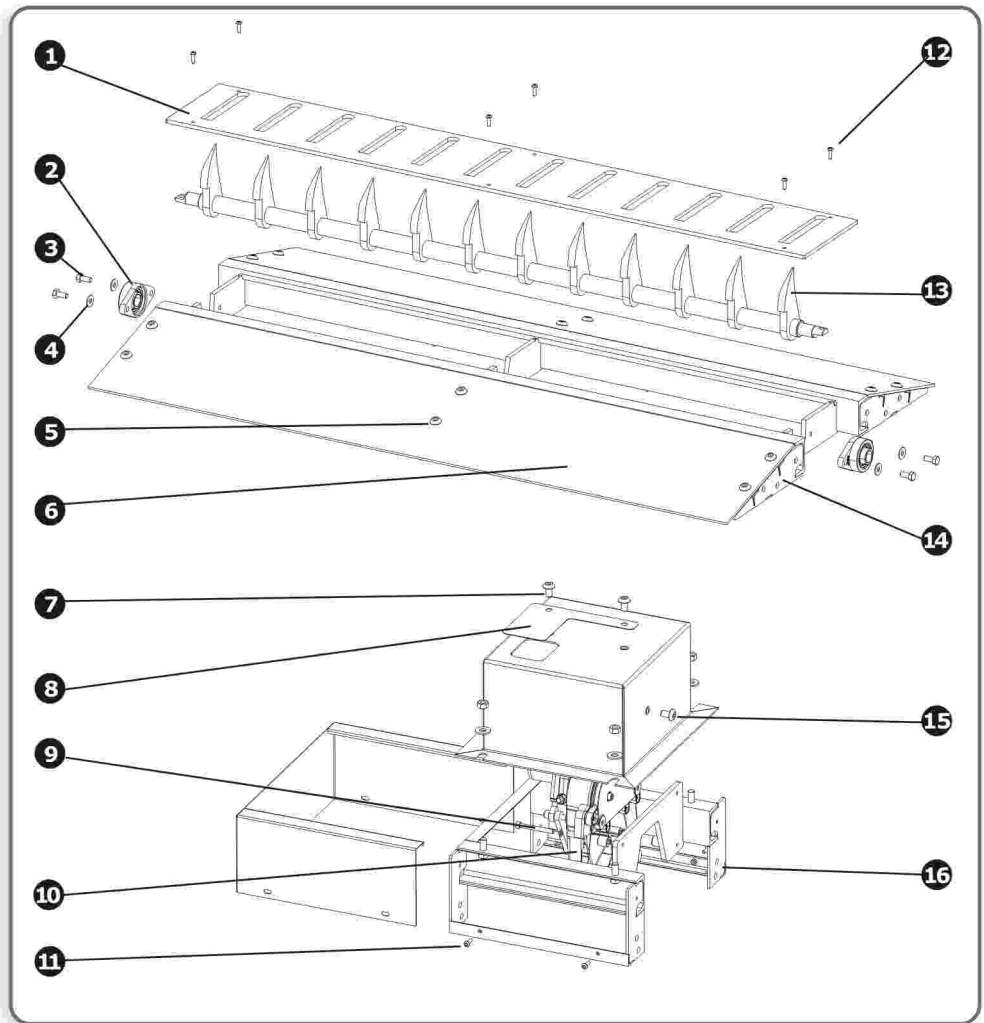


This icon denotes variations and other aspects that should be considered during installation.



This icon indicates warning, caution or attention! Please take special note of critical aspects that **MUST** be adhered to in order to prevent injury.

## 5. Product identification



**FIGURE 3. PRODUCT IDENTIFICATION**

- |   |  |
|---|--|
| 1. 1.5m Ali bar                           | 9. SS hex cap screw M8 x 70                |
| 2. Y-Bearing, flanged                     | 10. Gearbox assembly                       |
| 3. Set screw galvanised M10 x 22mm        | 11. Hex socket button head M6 x 20         |
| 4. Washer flat hd galvanised M10 X 25 X 2 | 12. SS Hex dome nut M5                     |
| 5. Hex socket button head M12 x 20        | 13. Spike shaft - Welded Assy (1.5m)       |
| 6. Ramp-up plate (1.5m)                   | 14. Washer flat hd galvanised M10 X 25 X 2 |
| 7. Hex socket button head M12 x 20        | 15. Hex socket button head M12 x 20        |
| 8. Gearbox cover blanking plate           | 16. Main frame - surface mount (1.5m)      |

## 6. Required tools and equipment

- Pull scale – 50kg
- Spanner – 17mm; 10mm
- Screwdriver – 3.5mm flat
- Allen key – 6mm; 4mm
- Crimping tool and pin lugs
- Side cutters
- Hacksaw
- Spirit level
- Measuring tape

### **If bolting foundation plate onto existing plinth:**

- Drilling equipment
- Masonry bits to suit rawlbolts being used

## 7. Introduction

This document describes the basic steps to follow when installing the surface mount **CLAWS**

The installation described in this document is a 3 metre installation. For wider installations, modules of 1.5 metres can be added to achieve a width of either 4.5 metres or 6 metres.



The installation of the **CLAWS** requires a minimum of two persons.

## 8. Installation considerations

The Surface Mount **CLAWS** can be installed in eight different configurations. The configuration is dependent on three factors:

- Direct Drive or Independent Drive **CLAWS** models
- Orientation of installation – either left hand or right hand orientation
- Direction of vehicle travel to spike impact

### 8.1. Type of drive

The **CLAWS** can either be driven by an Independent Drive gearbox or by a Direct Drive linkage system, which attaches to the SECTOR barrier.

### 8.2. Orientation of installation

The orientation of an installation is described as either a left or a right hand orientation. This is determined by looking at whether the drive gearbox or drive linkage is installed to the left hand side or to the right hand side of the **CLAWS** as viewed from the usual approach direction. In other words, when driving up to the **CLAWS** and the drive is installed on the right hand side of the vehicle, it's deemed a right hand installation. And when driving up to the **CLAWS** and the drive is installed on the left hand side of the vehicle, it's deemed a left hand installation.

### 8.3. Spike impact direction

The **CLAWS** are designed to take a much larger impact in one direction. Thus, the **CLAWS** can be installed to take larger or more frequent impact in one direction. In other words, the **CLAWS** can be installed to face either towards oncoming (planned) traffic or face towards traffic trying to enter from the wrong direction or lane.

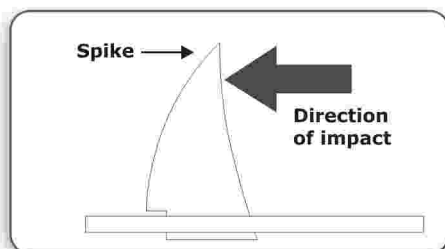


FIGURE 4. SPIKE IMPACT DIRECTION

# 8.4. Configurations

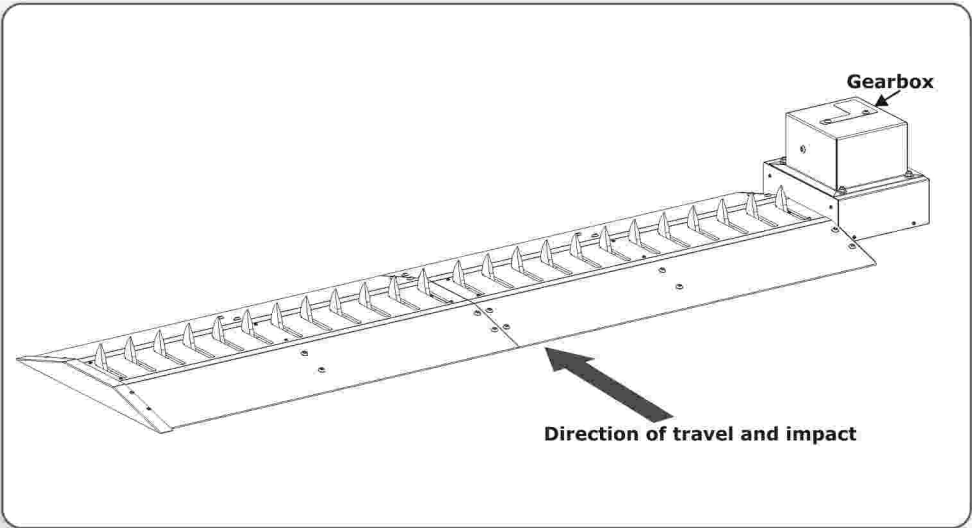


FIGURE 5. RIGHT HAND ORIENTATION INDEPENDENT DRIVE WITH COMMON TRAVEL AND IMPACT DIRECTIONS

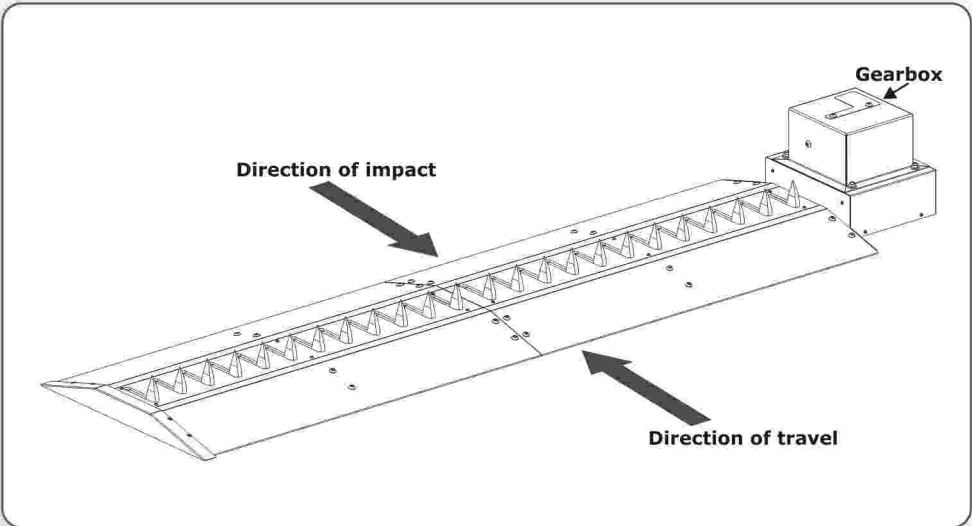
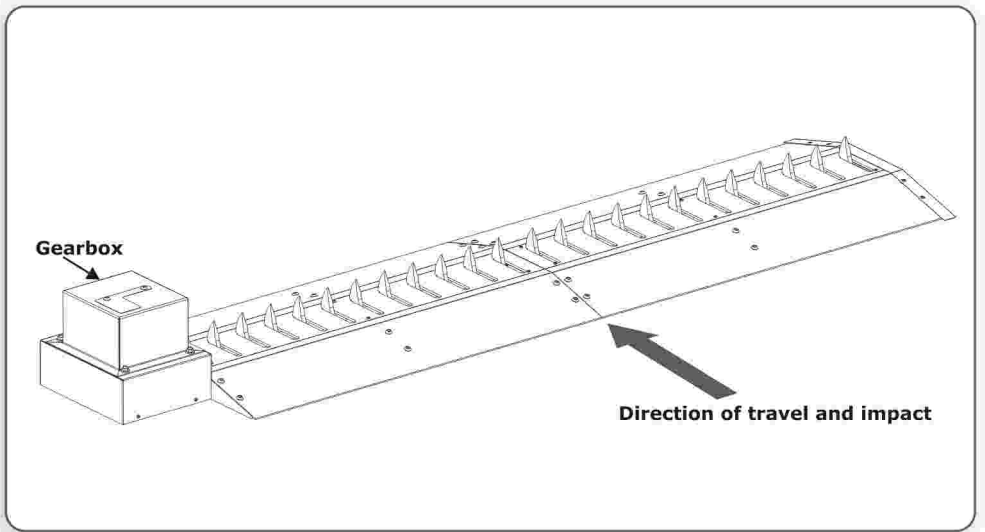
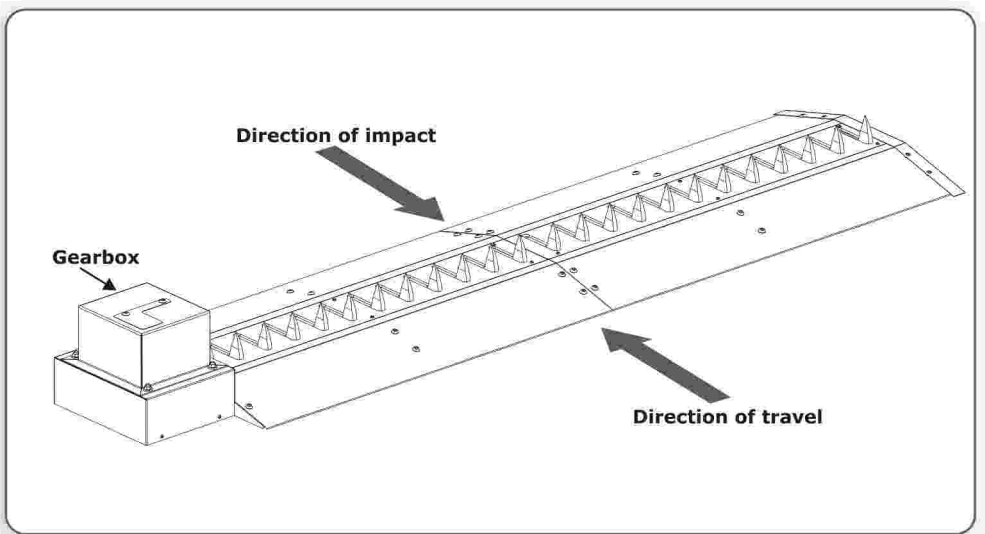


FIGURE 6. RIGHT HAND ORIENTATION INDEPENDENT DRIVE WITH OPPOSED TRAVEL AND IMPACT DIRECTIONS

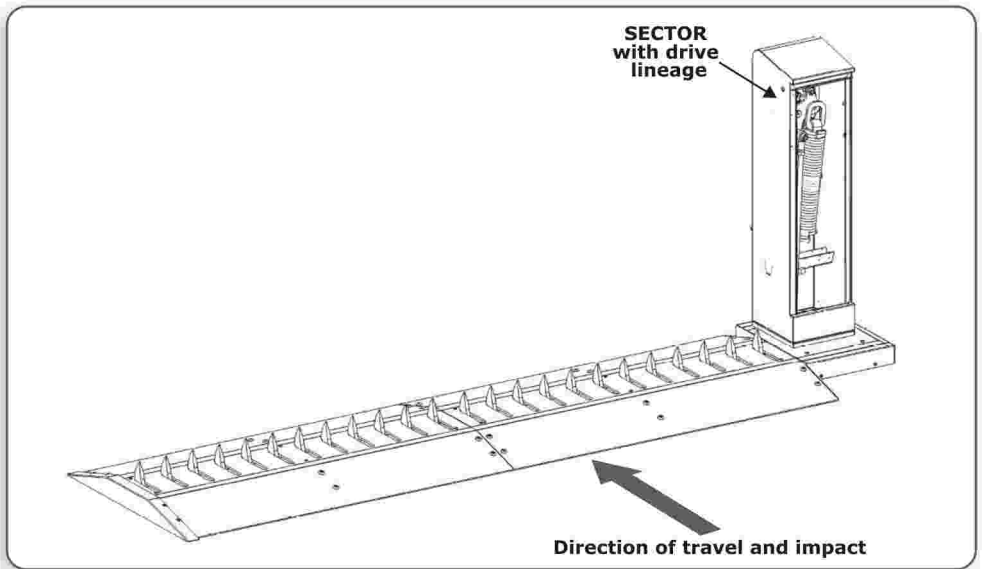




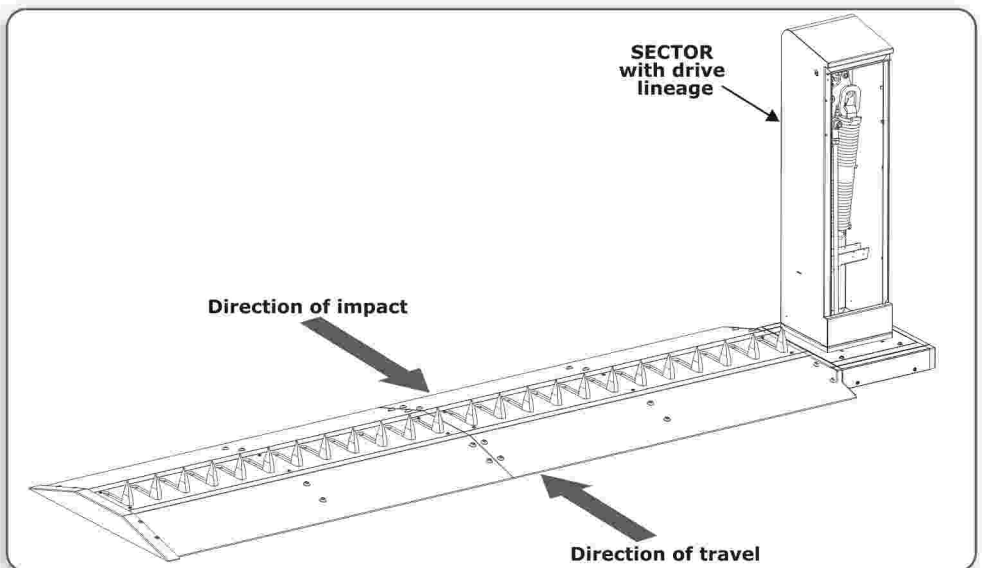
**FIGURE 7. LEFT HAND ORIENTATION INDEPENDENT DRIVE WITH COMMON TRAVEL AND IMPACT DIRECTIONS**



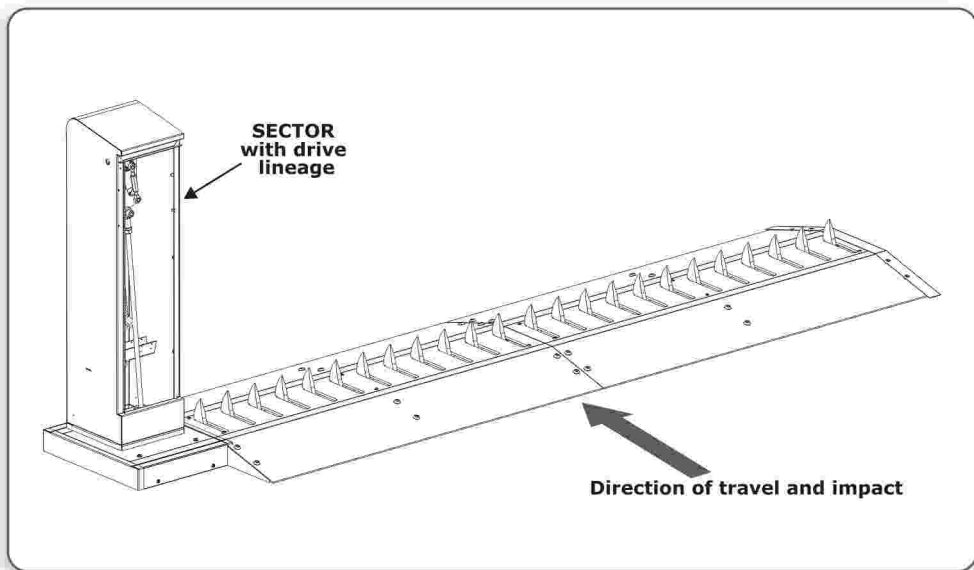
**FIGURE 8. LEFT HAND ORIENTATION INDEPENDENT DRIVE WITH OPPOSED TRAVEL AND IMPACT DIRECTIONS**



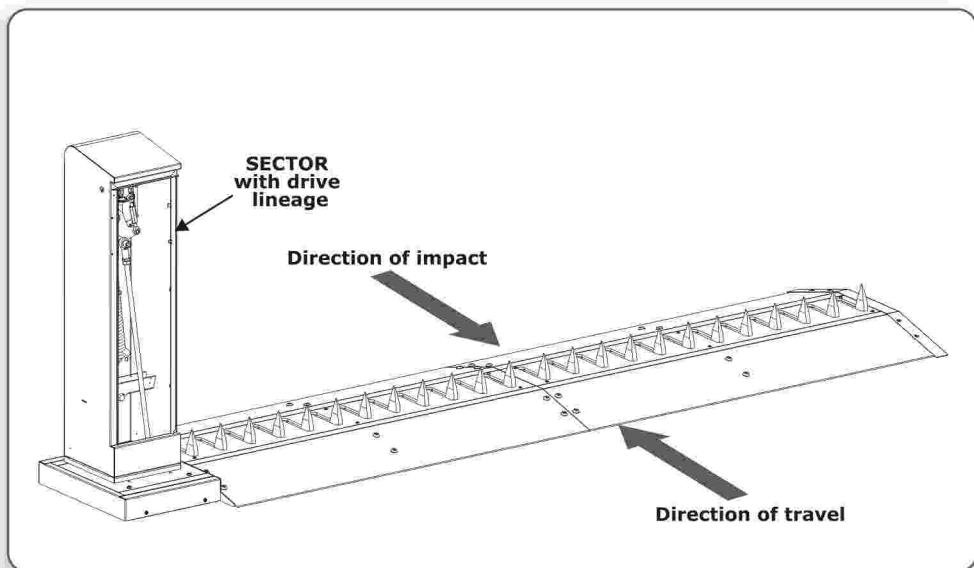
**FIGURE 9. RIGHT HAND ORIENTATION DIRECT DRIVE WITH COMMON TRAVEL AND IMPACT DIRECTION**



**FIGURE 10. RIGHT HAND ORIENTATION DIRECT DRIVE WITH OPPOSED TRAVEL AND IMPACT DIRECTIONS**



**FIGURE 11. LEFT HAND ORIENTATION DIRECT DRIVE WITH COMMON TRAVEL AND IMPACT DIRECTION**



**FIGURE 12. LEFT HAND ORIENTATION DIRECT DRIVE WITH OPPOSED TRAVEL AND IMPACT DIRECTIONS**

## 9. Spike structure preparation

### 9.1. Assemble the modular structures

1. Assemble the modular structures using six M12 bolts and nuts.

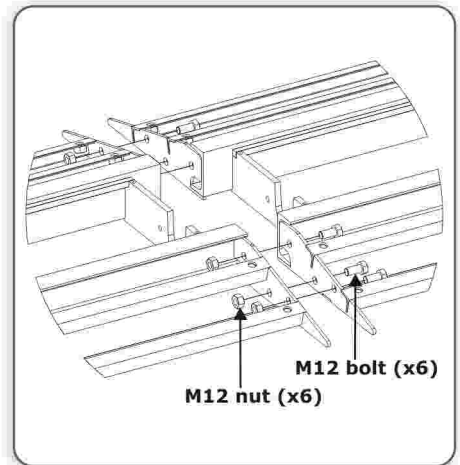


FIGURE 13. ASSEMBLE MODULAR STRUCTURES

### 9.2. Attach the main structure

#### Independent Drive

1. Attach the main structure onto the end of the modular structures using nine M12 bolts and nuts.



Be sure to assemble the Sandwich Plate between the two structures.

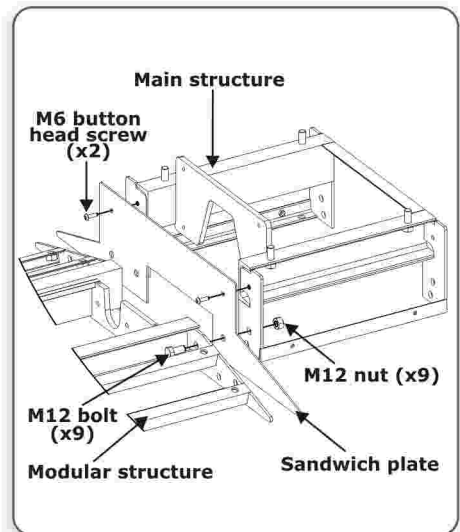


FIGURE 14. ATTACH MAIN STRUCTURE (INDEPENDENT DRIVE)

### Direct Drive

2. Attach the main structure onto the end of the modular structures using nine M12 bolts and nuts.



Be sure to assemble the Sandwich Plate between the two structures.

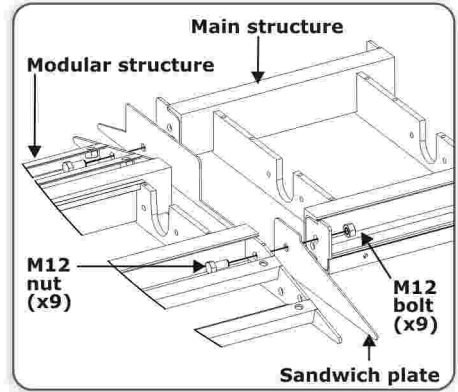


FIGURE 15. ATTACH MAIN STRUCTURE (DIRECT DRIVE)

## 9.3. Secure the structure to the surface

1. Bolt down the structure using expansion bolts or chemical anchor bolts via the mounting holes provided.



The surface has to be FLAT where the structure is secured to. A convex or concave surface would cause misalignment in the drive and spike shaft. Mounting the structure onto an uneven surface could invalidate the

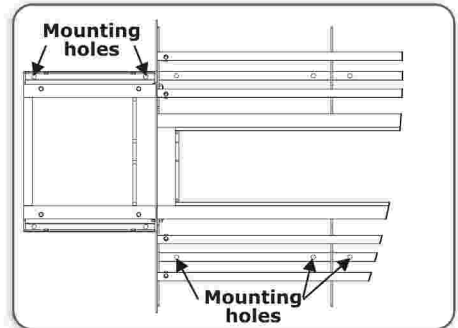


FIGURE 16. SECURE THE STRUCTURE ONTO THE SURFACE (INDEPENDENT DRIVE)

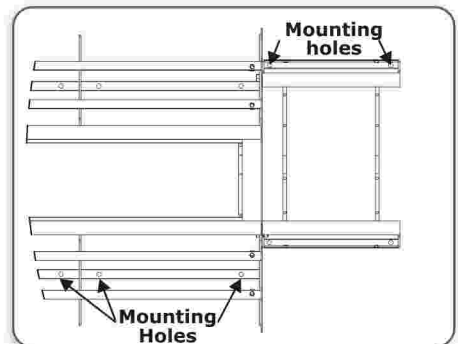


FIGURE 17. SECURE THE STRUCTURE ONTO THE SURFACE (INDEPENDENT DRIVE)

## 10. Fitting the spike modules

### 10.1. Fit the spike shafts

1. Assemble the spike shafts into the structure using the bearing blocks and the M10 bolts and washers.



Do not tighten the M10 bolts yet, only fit and tighten the bolts by hand.

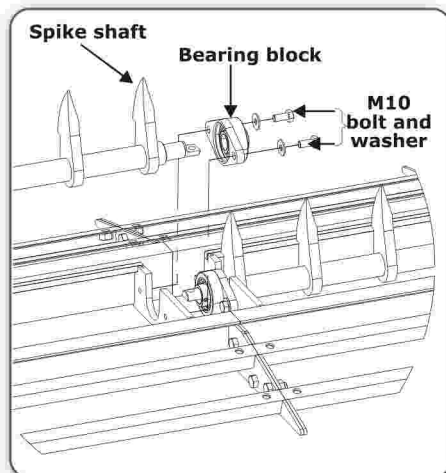


FIGURE 18. POSITION STRUCTURE IN TRENCH

### 10.2. Fit the limits cam (Independent Drive)

1. Fit the limits cam to the end of the spike shaft in the module that is the furthest away from the drive gearbox.
2. Fasten the cam with the M6 grub screw.

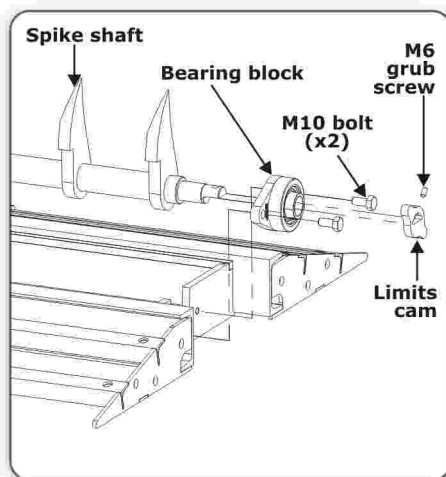
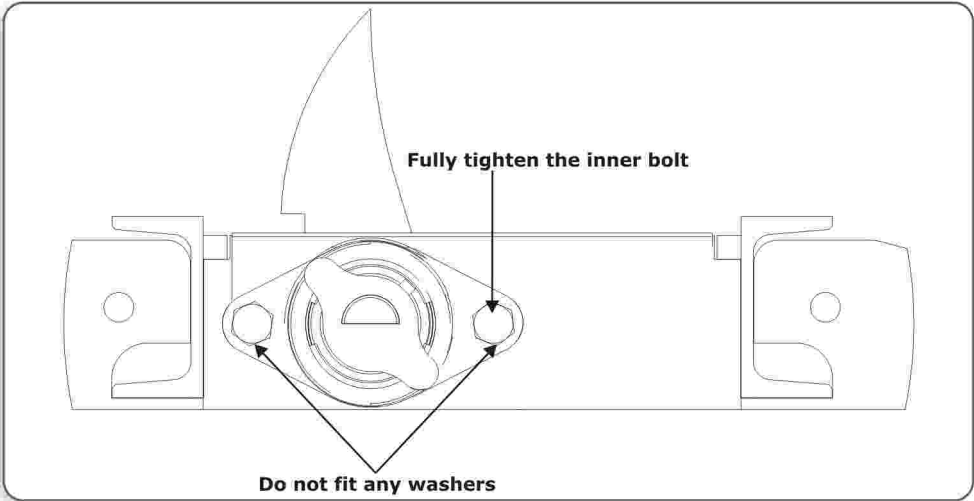


FIGURE 19. FIT THE LIMITS CAM

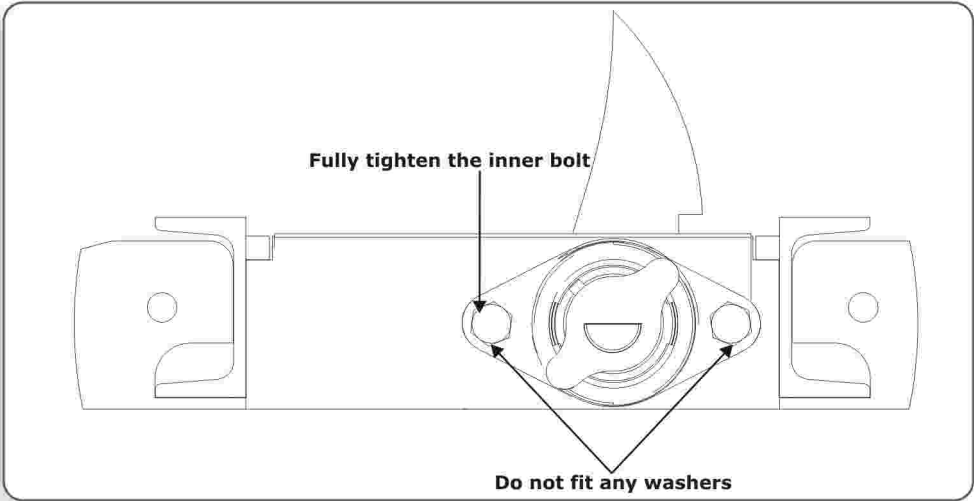
### 10.3. Limits cam (Independent Drive)



The limits cam must be fitted in a particular manner, which is dependent on the spike travel/impact configuration and the left or right hand orientation.



**FIGURE 20. LIMIT CAM (RIGHT HAND COMMON AND LEFT HAND OPPOSED)**



**FIGURE 21. LIMIT CAM (LEFT HAND COMMON AND RIGHT HAND OPPOSED)**

## 10.4. Fit the limit switches (Independent Drive)

1. Fit the limit switches onto the limit switch bracket using the M4 cap screws.
2. Lower the limit switches and bracket assembly into the spike module where the limits cam is installed.



Fit the limit switches and bracket assembly with the spikes in the raised position.

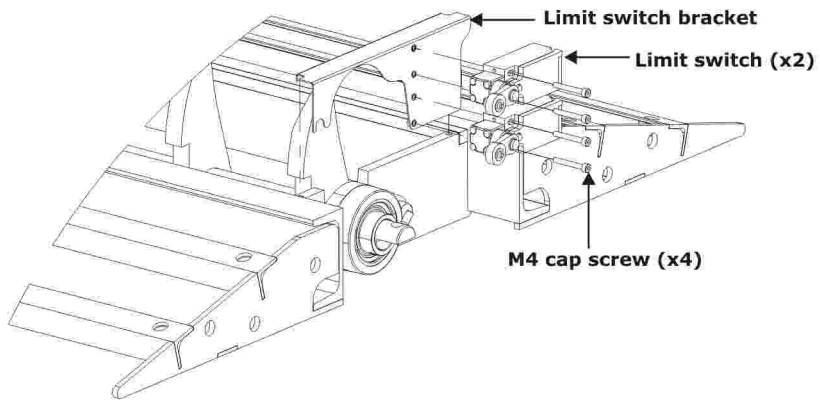


FIGURE 22. FITTING THE LIMIT SWITCHES

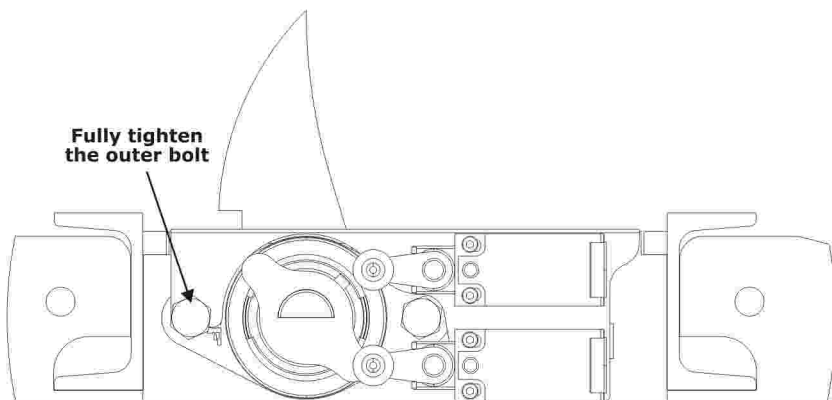
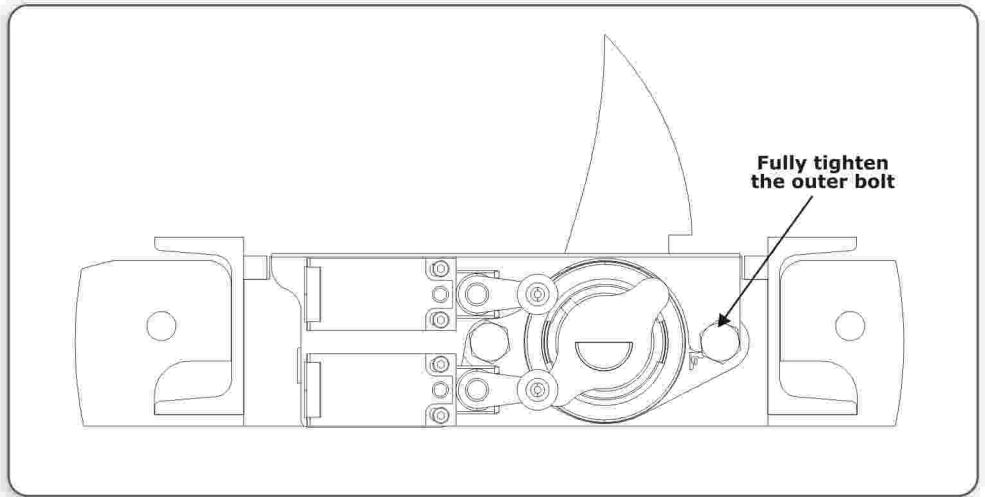


FIGURE 23. LIMIT SWITCHES (RIGHT HAND COMMON AND LEFT HAND OPPOSED)





**FIGURE 24. LIMIT SWITCHES (LEFT HAND COMMON AND RIGHT HAND OPPOSED)**

1. Wire in the limit switches whilst leaving the wires long.
2. Fit conduit or any other suitable wire protection all along the structure.

## 11. Fit the Drive

### 11.1. Independent Drive

1. Fit the Driven Link onto the end of the spike shaft using the M10 cap screw.



There are right handed and left handed Driven Links. Be sure to fit the correct link to the applicable installation.

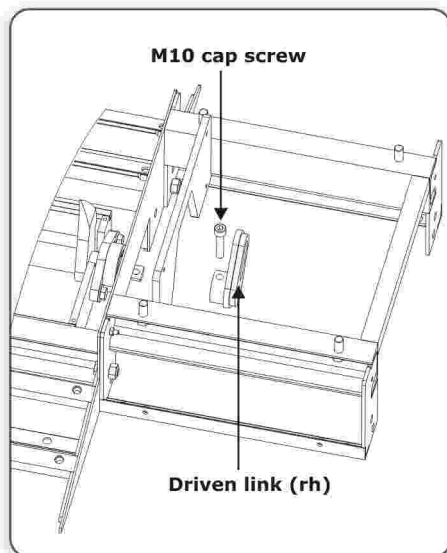


FIGURE 25. FIT THE DRIVEN LINK

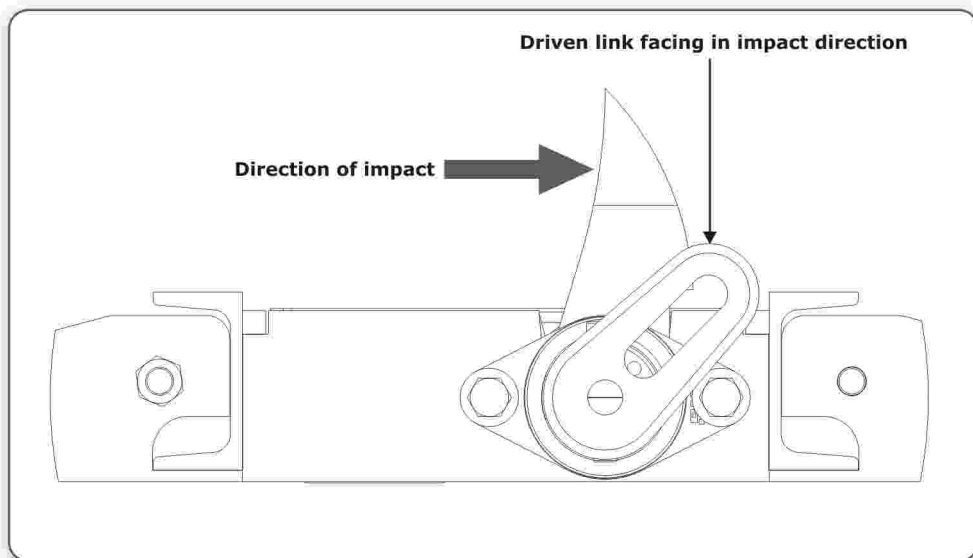
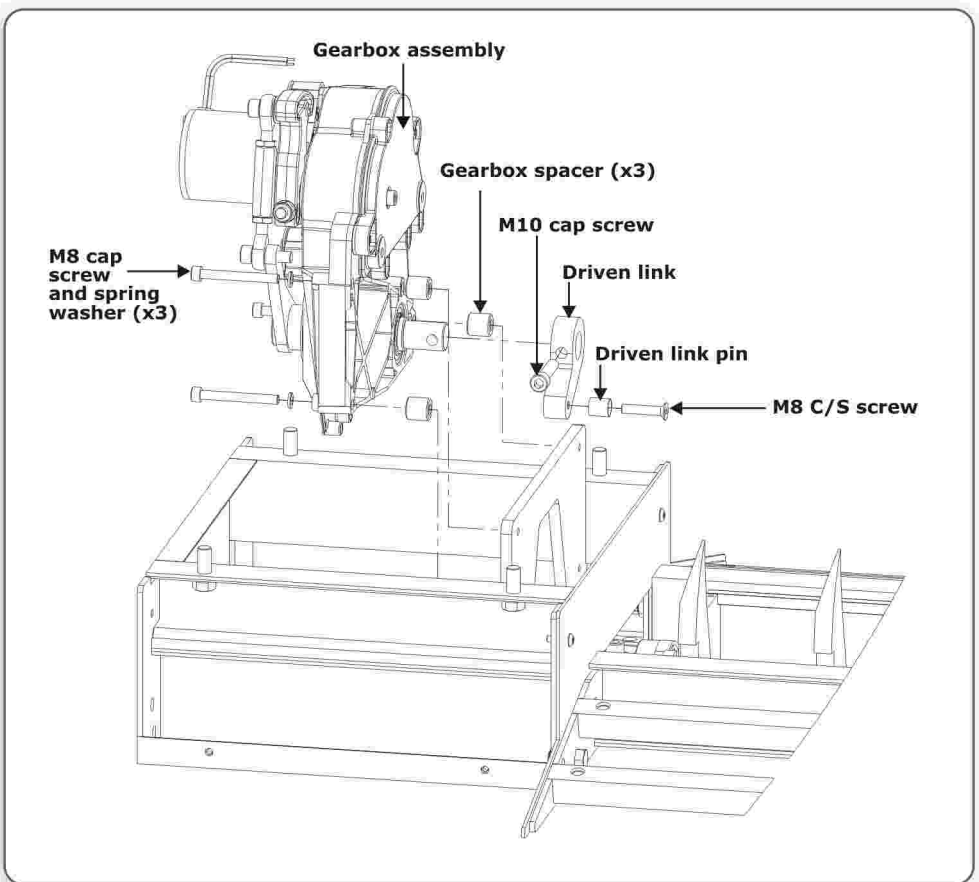


FIGURE 26. DRIVEN LINK INSTALLATION DIRECTION

1. Fit the gearbox coupler onto the gearbox output shaft with the M10 cap screw, washers and nylon nut.
2. Fit the gearbox assembly to the main structure using three M8 cap screws and spring washers.



Be sure to fit the gearbox spacers between the gearbox and the mounting plate.



**FIGURE 27. FITTING GEARBOX AND COUPLER**

## 11.2. Direct Drive

### Assemble the linkage

1. Attach the drive arm onto the drive shaft.
2. Fit the drive shaft onto the main structure with the two off bearing blocks and four M10 bolts and washers.



Fit the limit switches and bracket assembly with the spikes in the raised position.

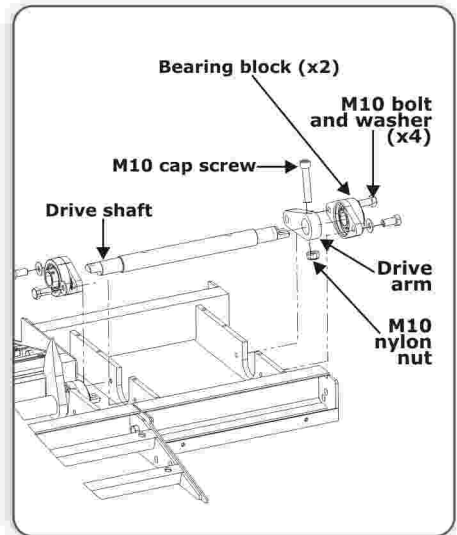


FIGURE 28. LINKAGE ASSEMBLY

### Drive arm configurations



There are two types of drive arms, a long and a short type.

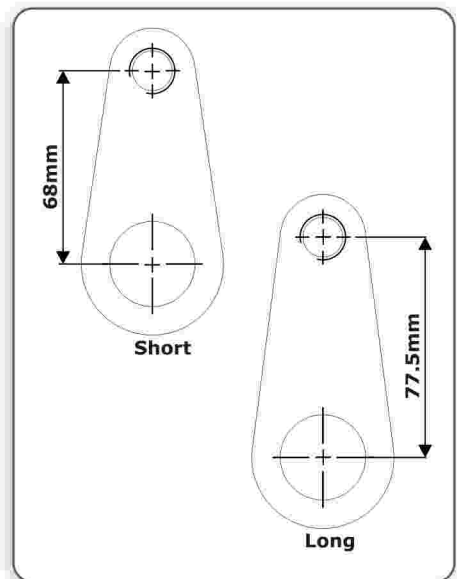
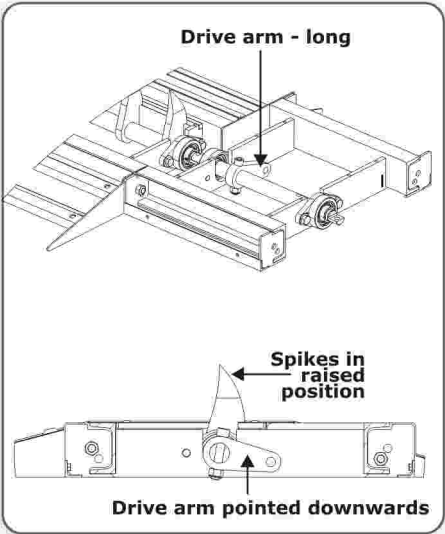


FIGURE 29. DRIVE ARMS

**Right hand orientation Direct Drive,  
with common travel and impact  
direction**



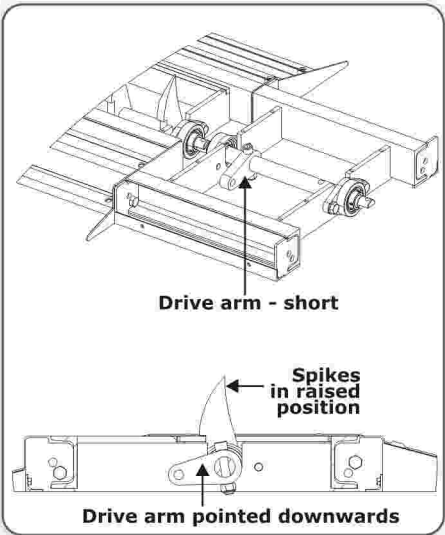
The drive arm(s) are fitted differently in each configuration.  
Configuration as per Figure 9



**FIGURE 30. DRIVE ARM CONFIGURATION  
(RIGHT HAND - COMMON)**

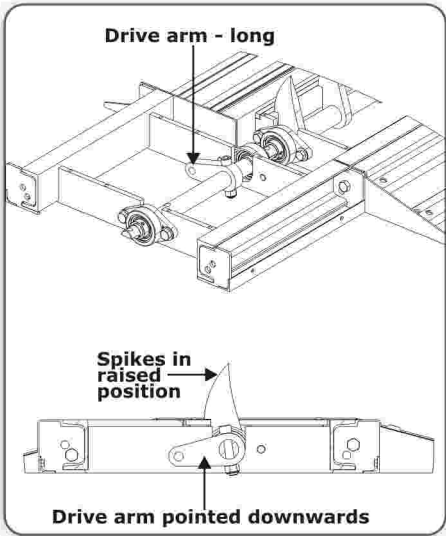
**Right hand orientation Direct Drive,  
with opposed travel and impact  
direction**

Configuration as per Figure 10



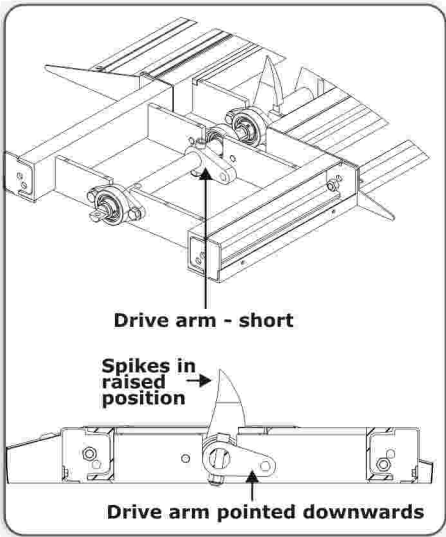
**FIGURE 31. DRIVE ARM CONFIGURATION  
(RIGHT HAND - OPPOSED)**

**Left hand orientation Direct Drive, with common travel and impact direction**  
Configuration as per Figure 11



**FIGURE 32. DRIVE ARM CONFIGURATION  
(LEFT HAND - SIMILAR)**

**Left hand orientation Direct Drive, with opposed travel and impact direction**  
Configuration as per Figure 12



**FIGURE 33. DRIVE ARM CONFIGURATION  
(LEFT HAND - OPPOSED)**

### 11.3. Fit the coupling bolts

1. Fit the drive shaft onto the main structure with the two bearing blocks and four M10 bolts and washers.
2. Once all the spike modules and drive modules have been coupled and the bolts and nuts fully tightened, then all the bearing block's bolts must also be fully tightened.

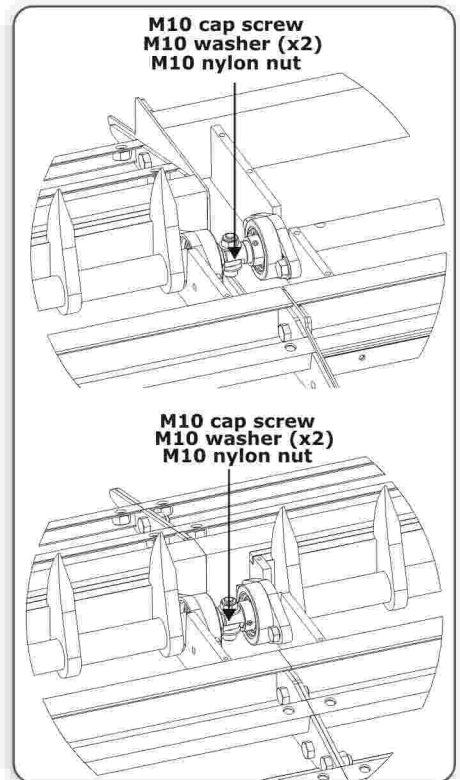


FIGURE 34. DRIVE ARM CONFIGURATION  
(LEFT HAND - SIMILAR)

### 11.4. Fit the linkage cover (Direct Drive)

1. Fit the linkage cover using the eight M8 button head screws.



Be sure to fit the linkage cover so that the drive arm is fully accessible through the aperture.

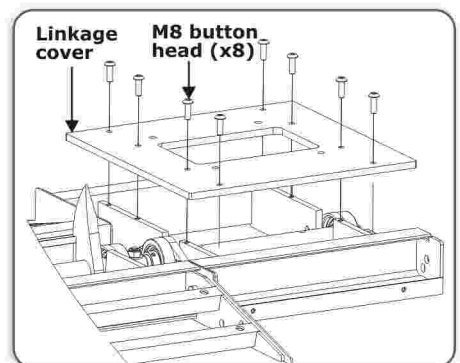


FIGURE 35. FIT THE LINKAGE COVER

2. Fit the SECTOR barrier on top of the linkage cover.
3. Be sure to mount the barrier either 103mm or 93mm from the edge of the main frame, depending on the installation configuration. See Figure 36 for clarity.

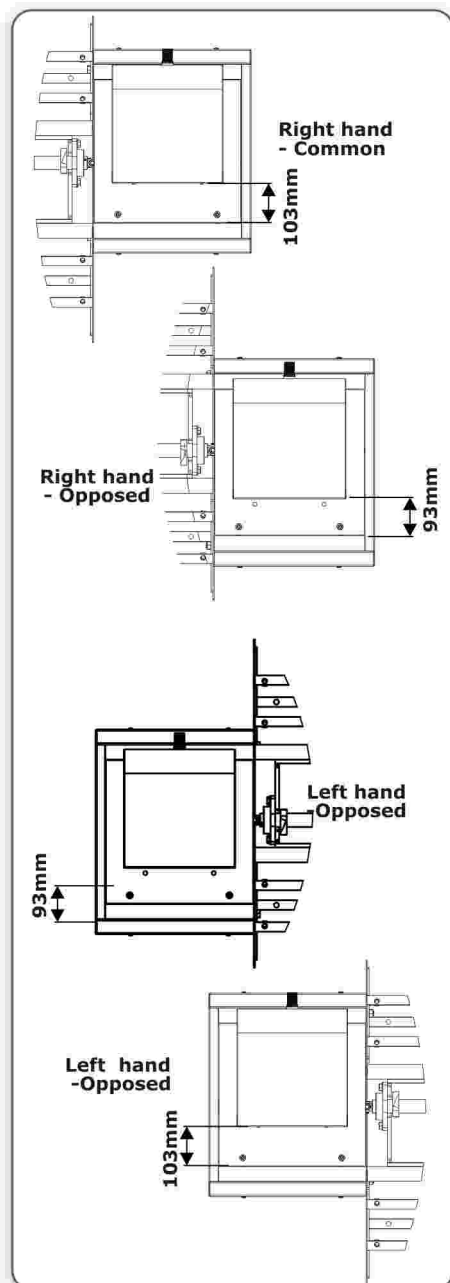
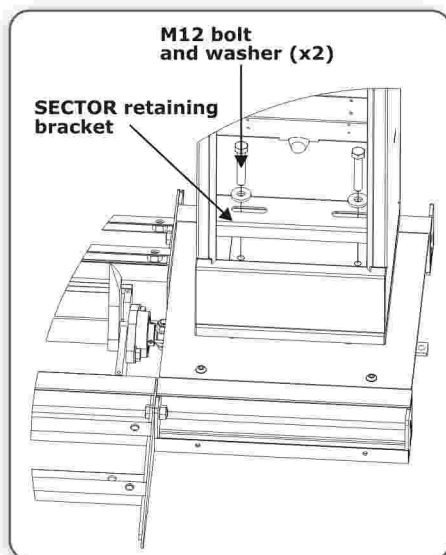


FIGURE 36. SECTOR MOUNTING POSITION



4. Secure the SECTOR barrier to the main structure using two M12 bolts and washers and the retaining bracket.

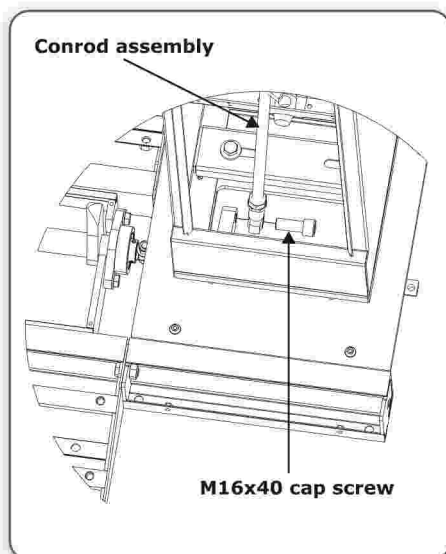


**FIGURE 37. DRIVE ARM CONFIGURATION (LEFT HAND - SIMILAR)**

5. Fit the Conrod assembly to the linkage's drive arm using the M16 cap screw.



It is recommended to put thread locking gel (such as Loctite) on the bolt threads.

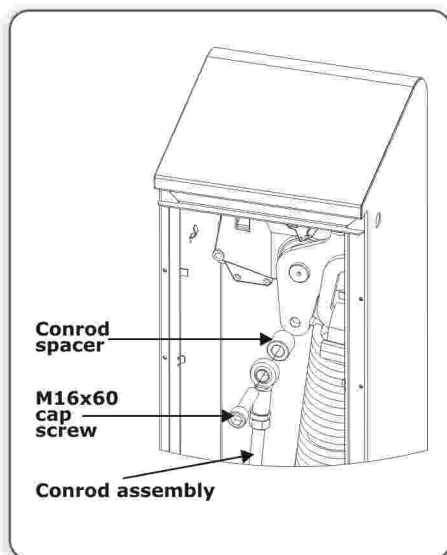


**FIGURE 38. FIT THE CONROD - BOTTOM**

6. Fit the Conrod assembly to the output plate next the counterbalance spring in the SECTOR barrier using the M16 cap screw.



It is recommended to put thread locking gel (such as Loctite) on the bolt threads.



**FIGURE 39. FIT CONROD - TOP**

## 12. Covers and setup

### 12.1. Fit the trench covers

1. Fit the Conrod assembly to the output plate next the counterbalance spring in the SECTOR barrier using the M16 cap screw.

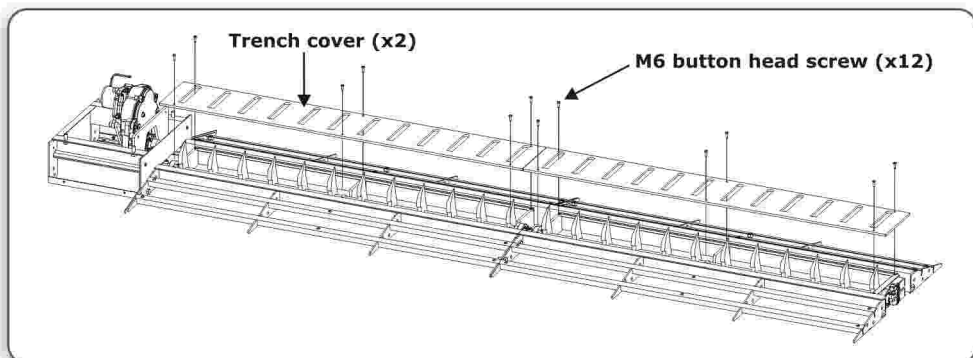


FIGURE 40. FIT THE TRENCH COVERS

2. Fit the four ramp plates and module end cover using the 24 M12 button head screws.

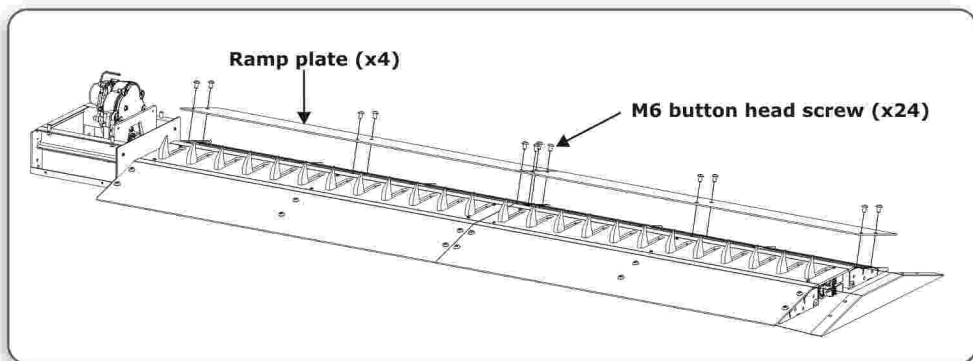


FIGURE 41. FIT THE RAMP PLATES AND MODULE END COVER

## 12.2. Adjust the spikes

### Independent Drive



The position of the drive arm when the spikes are in the "UP" position varies from right hand Common and left hand Opposed to left hand Common and right hand Opposed installations.

1. Using a 12V battery, drive the motor so that the drive arm rests up on the endstop when the spikes are in the "UP" position as shown in Figure 41.
2. Loosen the locknuts on the adjustment link.
3. Turn the adjustment link to rotate the spikes until they butt up against the trench cover.
4. Tighten the locknuts on the adjustment link.

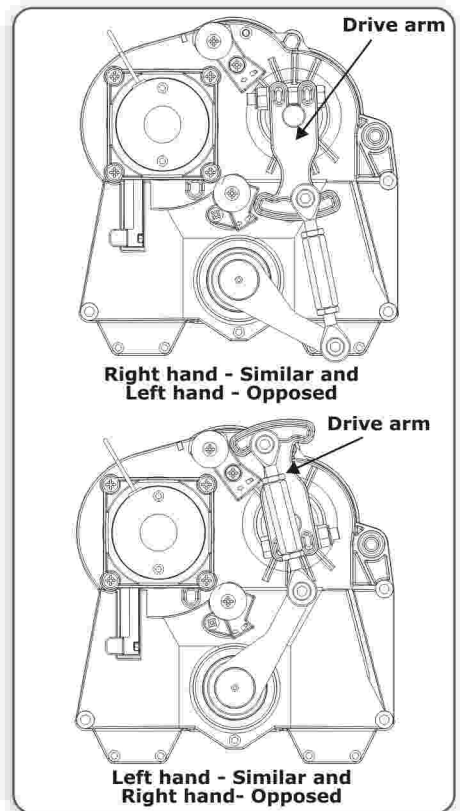


FIGURE 42. DRIVE ARM POSITION (SPIKES "UP")

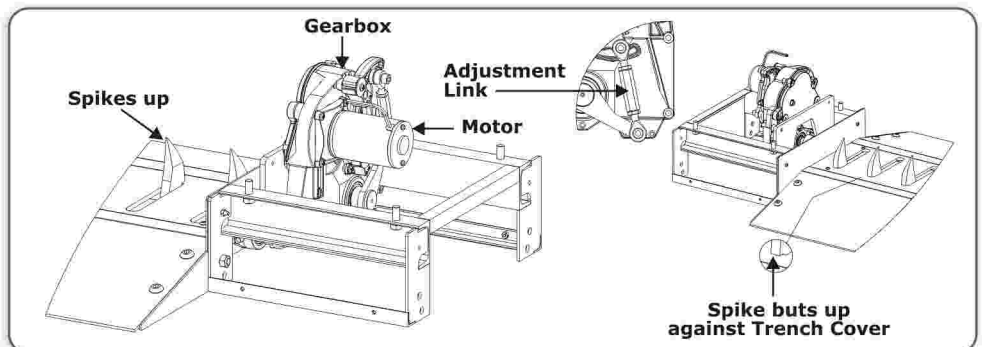


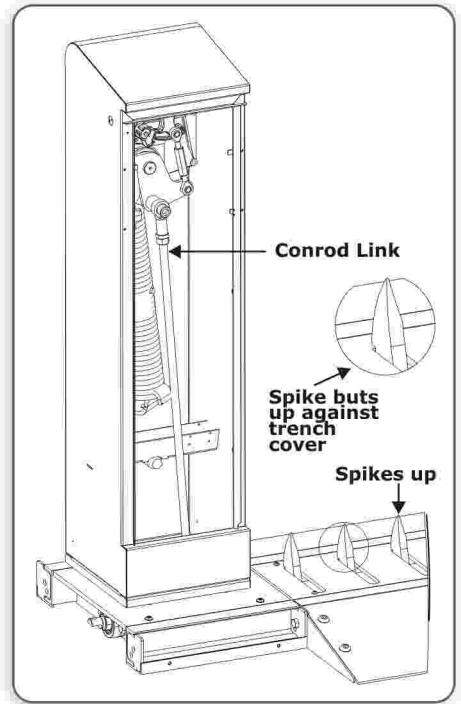
FIGURE 43. ADJUSTING THE SPIKES – INDEPENDENT DRIVE

## Direct Drive



Make sure the SECTOR barrier is in the lowered (horizontal) position with the drive arm resting up on the endstop when the spikes are in the **"UP"** position.

1. Loosen the locknuts on the Conrod Link.
2. Turn the Conrod Link to rotate the spikes until they butt up against the trench cover.
3. Tighten the locknuts on the Conrod Link.



**FIGURE 44. ADJUSTING THE SPIKES  
- DIRECT DRIVE**

## 12.3. Fit the main frame end cover

1. Fit the Conrod assembly to the output plate next the counterbalance spring in the SECTOR Barrier using the M16 cap screw.

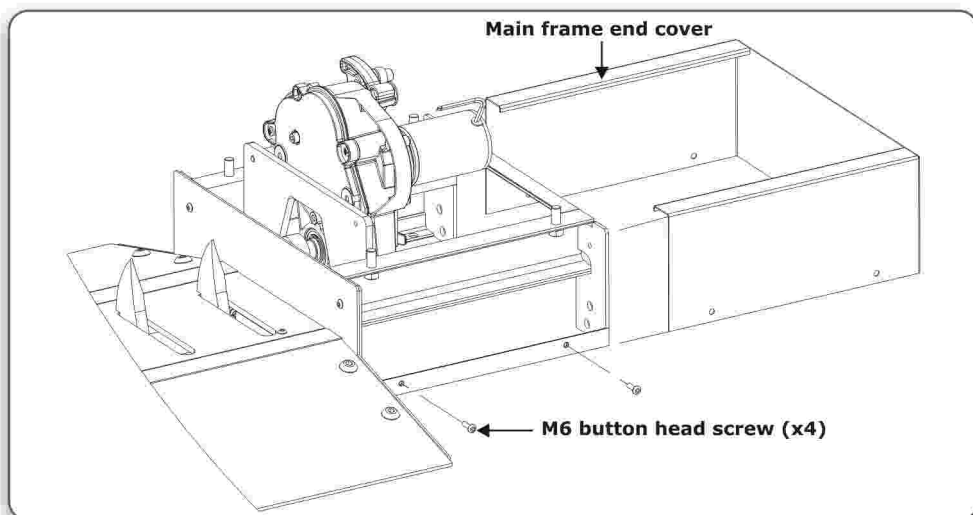


FIGURE 45. FIT THE MAIN FRAME END COVER – INDEPENDENT DRIVE

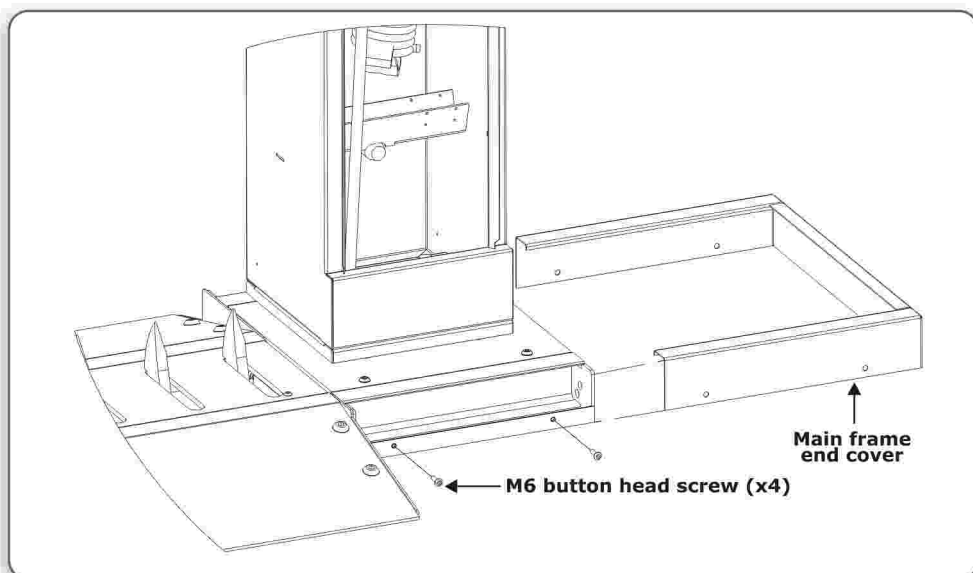


FIGURE 46. FIT THE MAIN FRAME END COVER – DIRECT DRIVE

## 12.4. Fit the main cover (Independent Drive)

1. Fit the main cover and fasten with four M12 bolts and washers.
2. Fit the M12 button head screw into the front of the cover.

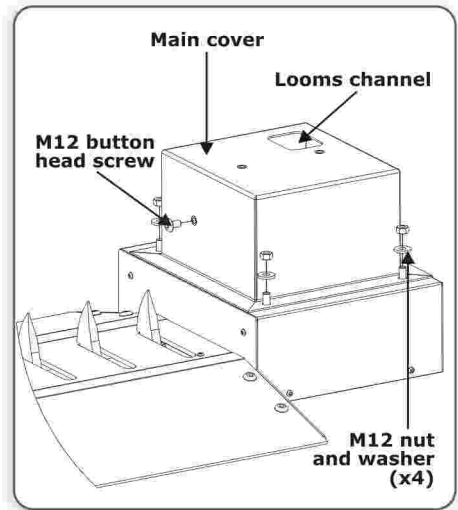


FIGURE 47. FIT THE MAIN COVER



When a SECTOR barrier is not installed with the CLAWS installation, then the Looms Cover has to be fitted on top of the main cover. The Looms Cover must be sealed with silicon sealant.

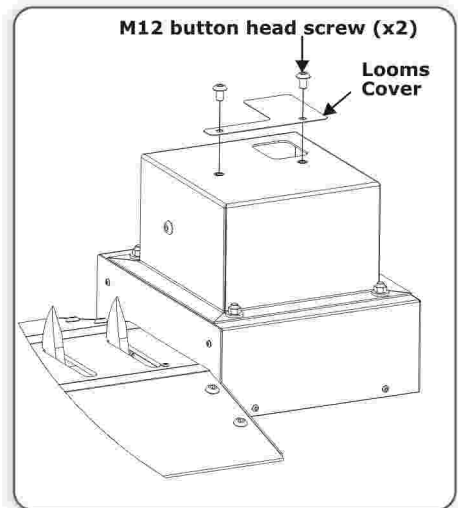


FIGURE 48. FIT THE LOOMS COVER

## 13. Fitting a SECTOR barrier (Independent Drive)

1. Fit the SECTOR Barrier on top of the main cover using two M12x65 bolts and washers.

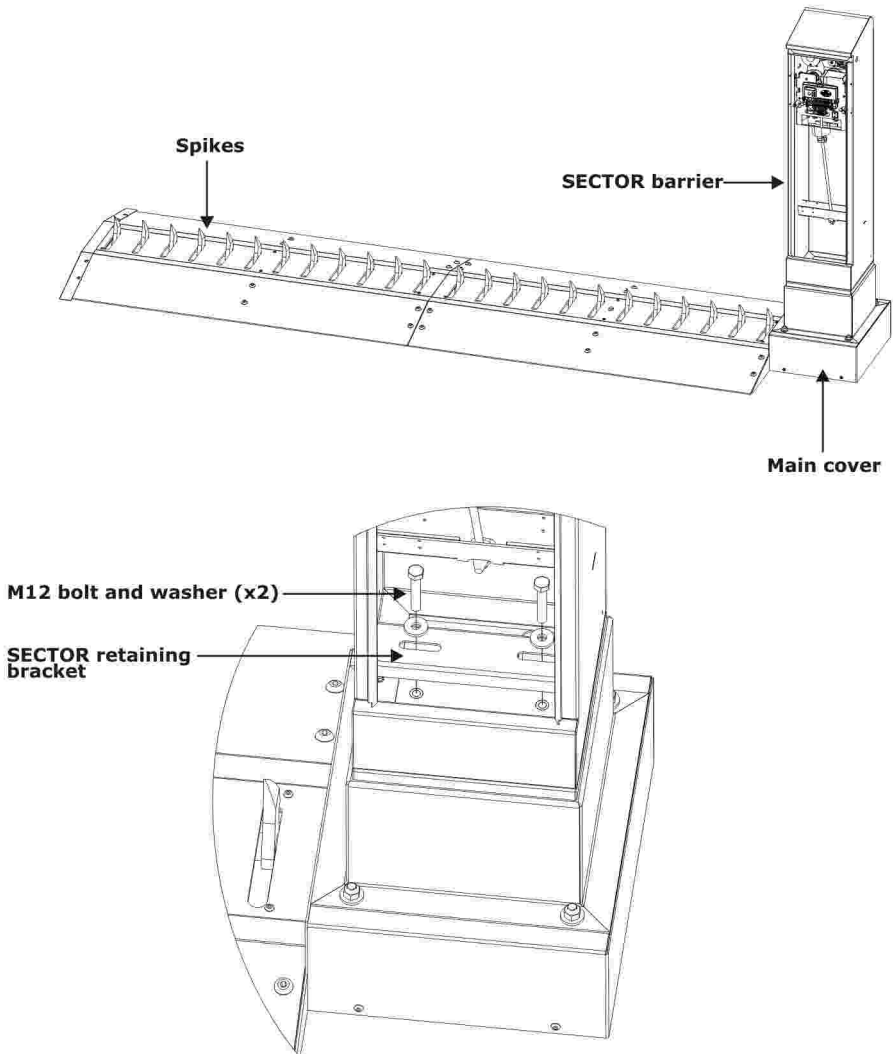


FIGURE 49. FIT SECTOR BARRIER



## 14. Electronics setup (Independent Drive)

### 14.1. Fit CLAWS controller

1. Clip the control card onto the control card carrier.

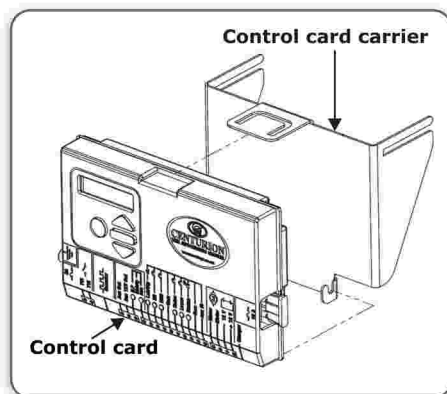


FIGURE 50. CONTROL CARD CARRIER ASSEMBLY

2. Clip the control card assembly onto the bottom beam in the SECTOR enclosure, where the spring's tension bar is attached.

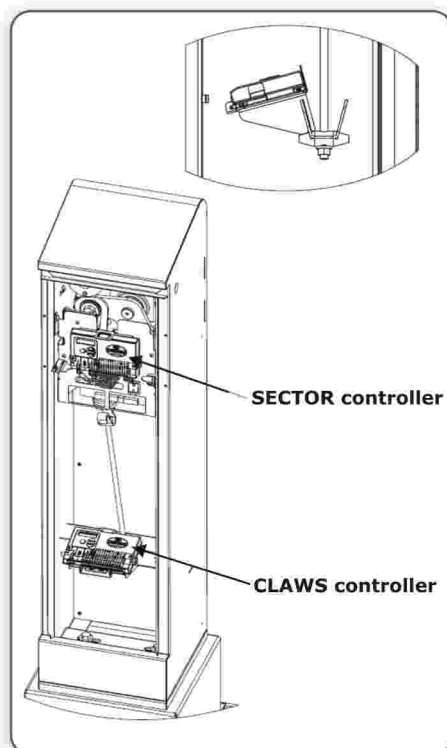


FIGURE 51. CONTROL CARD CARRIER ASSEMBLY

## 14.2. Menu settings (Independent Drive)

Make sure the following settings on the control cards are set

### SECTOR Controller

#### Menu 4. Modes of Operation

- 4.1. Operating Mode.....
  - 4.1.1. Simplex (SMX) Mode
  - 4.1.2. Complex (CMX) Mode
  - 4.1.3. Programmable Logic Controller (PLC) Mode

#### Menu 5. Run Profile

- 5.3. Spike interface (Set to ON)

### Spike controller

#### Menu 4 Modes of Operation

- 4.1. Operating Mode.....
  - 4.1.1. Spike (SPK) Mode

#### Menu 5. Run Profile

- 5.1. Spike Interface (Set to ON)

## 14.3. Optional menu settings – when fitting traffic light

When fitting a traffic light, make sure the following settings on the control cards are set.

### SECTOR Controller

#### Menu 2. Safety

- 2.5. External boom status indicator.....
  - 2.5.6. Raising indication (Set to ON)
  - 2.5.7. Raised indication (Set to ON)

#### Menu 7 TVI output

- 7.1. TVI output function (Set to TVI)

### SECTOR controller

#### Menu 2. Safety

- 2.5. External boom status indicator.....
  - 2.5.2. Lowered indication (Set to ON)

#### Menu 2. Safety

- 7. TVI output function (Set to ON)

# 14.4. Wiring connections

Other than the normal SECTOR barrier connections, the following wire connections also have to be made

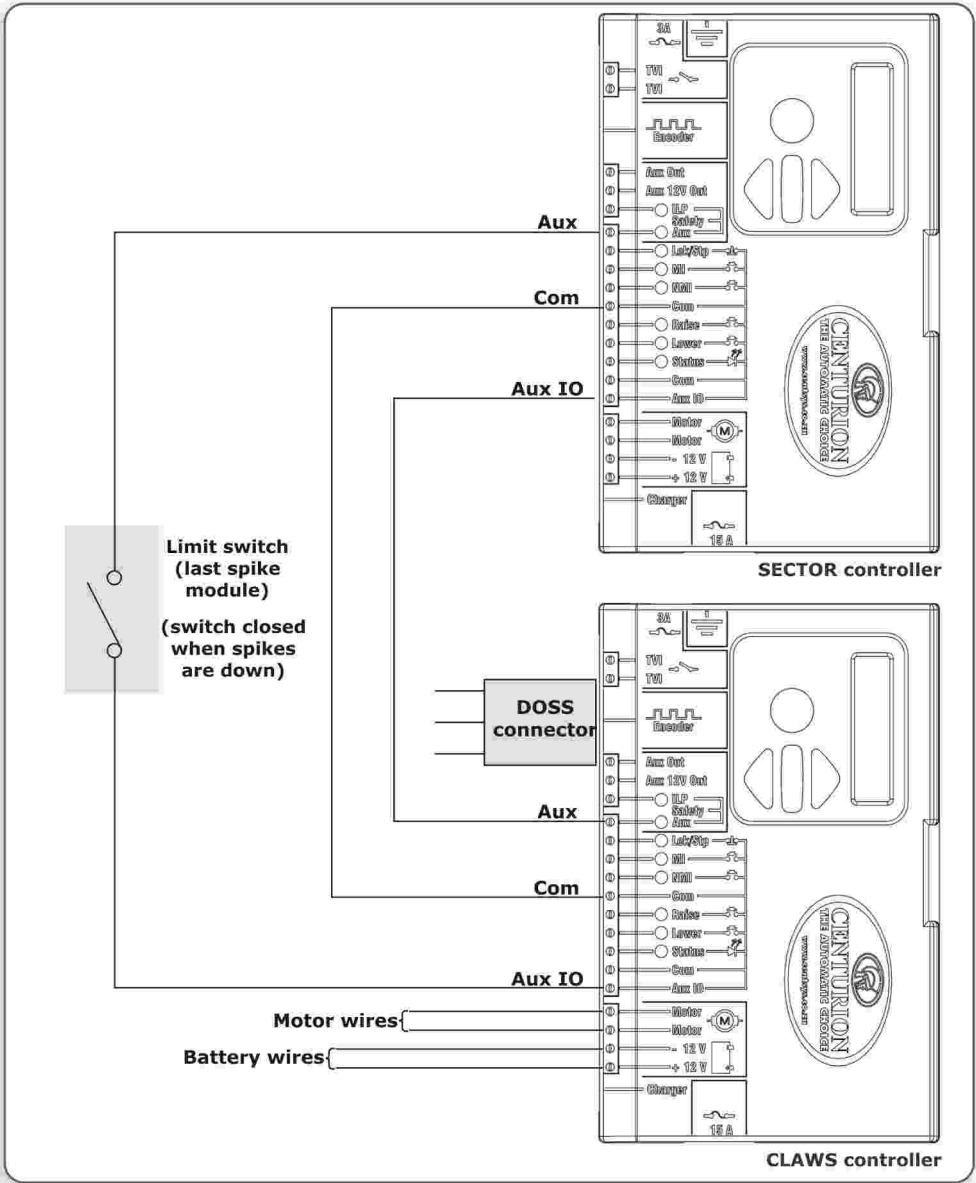


FIGURE 52. WIRE CONNECTIONS

# 14.5. Wire connections when fitting a traffic light

When fitting a traffic light to the system, the following connections have to be made:

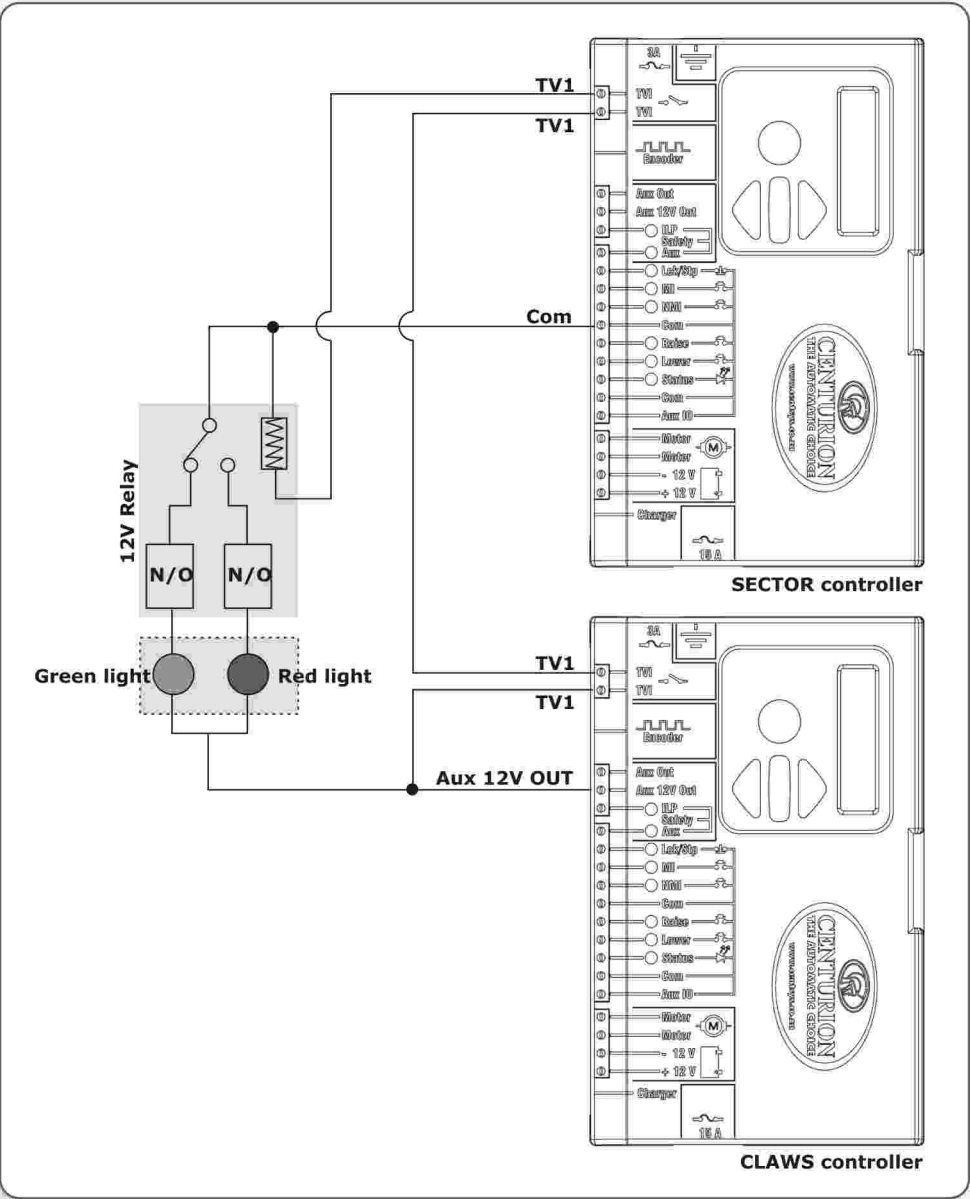


FIGURE 53. CLAWS WITH TRAFFIC LIGHTS

## 15. Installation handover

Once the installation has been successfully completed and tested, it is important for the installer to explain the operation and safety requirements of the system.

### **NEVER ASSUME THE USER KNOWS HOW TO SAFELY OPERATE THE AUTOMATED CLAWS**

Even if the user has used them before, it does not mean he knows how to SAFELY operate them. Make sure that the user fully understands the following safety requirements before finally handing over the site.

The following needs to be understood by the user:

- How the obstruction detection and all other safety features work. **(Show them how by demonstration)**
- All the features and benefits of the operator,
- **All the safety considerations associated with operating the system. The user should be able to pass this knowledge on to all other users of the automated system and must be made aware of this responsibility.**



- **Do not activate the operator unless you can see it and can determine that its area of travel is clear of people, pets, or other obstructions**
  - **NO ONE MAY CROSS THE PATH OF A MOVING AUTOMATED SYSTEM. Always keep people and objects away from the gate and its area of travel**
  - **NEVER LET CHILDREN OPERATE OR PLAY WITH THE CLAWS CONTROLS, and do not allow children or pets near the spikes area**
  - **Be careful with moving parts and avoid close proximity to areas where fingers or hands could be pinched**
  - **Secure all easily accessed CLAWS or barrier operator controls in order to prevent unauthorized use of the CLAWS**
  - **Keep the CLAWS system properly maintained, and ensure that all working areas are free of debris and other objects that could affect the spike operation and safety**
  - **On a monthly basis, check the obstruction detection system and safety devices for correct operation**
  - **All repair and service work to this product must be done by a suitably qualified person**
- This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger!**





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