

# COMMERCIAL SHUTTER INSTALLATION INSTRUCTIONS

FEBRUARY 2019

Version 4





# 1 Contents

## **GENERAL**

<b>2</b>	<b>Key to Symbols/Meanings</b>	<b>4</b>
<b>3</b>	<b>Warranty / Life Cycles</b>	<b>5</b>
<b>4</b>	<b>General Safety Advice</b>	<b>5</b>
4.1	General information	5
4.2	Repairing / Dismantling	6
<b>5</b>	<b>Tools/Fixings required</b>	<b>7</b>
<b>6</b>	<b>Preparation for the Installation</b>	<b>8</b>

## **INSTALLATION INSTRUCTIONS**

<b>7</b>	<b>Continental Commercial Shutters</b>	<b>9</b>
7.1	Spring Loaded Operation	9–12
7.2	Electric Operation	13–17
<b>8</b>	<b>Traditional Commercial Shutters</b>	<b>18</b>
8.1	Spring Loaded Operation	18–22
8.2	Electric Operation	23–27

## **APPENDIX**

<b>9</b>	<b>Electric Control Options</b>	<b>28–29</b>
<b>10</b>	<b>Setting Motor Limits</b>	<b>30</b>
<b>11</b>	<b>Anti-fall Back Devices</b>	<b>31–35</b>
11.1	Anti-drop Brakes (Electric Operation)	31
11.2	Anti-Fall Back Springs (Electric Operation)	34
11.3	Anti-Fall Back Springs (Double Spring) Spring Loaded Operation	34

## 2 Key to Symbols/ Meanings:



### **WARNING!** **Risk of personal injury!**

This is an important piece of safety advice which must be observed to avoid a risk of personal injury!



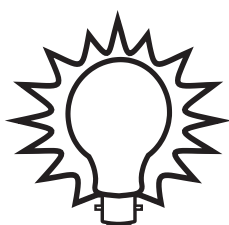
### **ATTENTION** **Risk of material damage!**

This is an important piece of safety advice to avoid damaging the product you are installing!

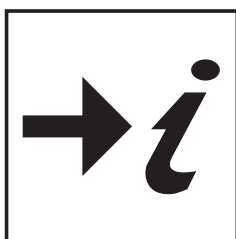


### **Operational check:**

At this stage of the installation a component of the door, the operation of the door or the operator can be tested. This is very important as it can immediately identify an error which could take time to discover at a later stage.



### **Advice / Tip**



### **Reference to further product information**

Here a reference is made to another set of instructions which need to be used for installation of a particular component.

# 3 Warranty / Life Cycles

The warranty for this product is only granted if:

- **The installation is carried out by a competent installation engineer following these instructions.**
- **Only original parts are used.**
- **No additional objects are attached to the door.**
- **Regular maintenance checks are performed.**

For further details on the products warranties please refer to the products price list and our terms and conditions which are available upon request.

To comply with the Construction Products Directive all products have been durability tested for a minimum of 11,000 cycles.

## 4 General Safety Advice

### 4.1 General Information



This document is intended for a qualified, trained installation engineer and should not be given to the owner of the door but should be kept by the installer.

To comply with the Construction Products Directive and the Machinery Directive the product must be installed in accordance with these instructions.

Please read all safety advice and relevant instructions carefully.

These installation instructions are intended for qualified and trained installation engineers. Installation, initial operation, servicing, repairs and dismantling of this product should only be carried out by a qualified and trained installation engineer.

When installing an electrically operated product ensure the mains power supply to the product is disconnected before any electrical connections are attempted.

Before operating a shutter you must always ensure that there are no persons or objects in the opening before and during the opening.

The shutter should only be operated when in view.

Upon completion of the installation the owner of the shutter must be trained how to operate the product safely paying special attention to the following points:

- **The shutter should only be operated when in view**
- **The operator should ensure there are no objects or persons in the opening before and during operation.**
- **The end user must read and follow the advice given in the operating and maintenance instructions.**
- **In the event of a malfunction the end user should follow the advice given in the operating and maintenance instructions and if applicable contact the installer.**

During the installation of the shutter you should follow safe working practices. Further advice is available from the Health and Safety Executive (HSE).

## 4.2 Repairing/ Dismantling / Maintenance

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Always isolate the mains power before attempting any maintenance, repairs or dismantling. If you need to use the optional remote control during any maintenance, repairs or dismantling procedure you must engage the commissioning mode.

Before attempting to repair or dismantle a shutter you should check for the presence of any safety devices, for example:

- **Anti-fall back spring**
- **Anti-drop brake**
- **Bottom slat safety edge**
- **Safety photo cell**

Before attempting to remove an axle assembly which contains a spring you must release the tension in the spring.

When repairing or dismantling a shutter you should keep the opening and the surrounding area clear to prevent risk of injury to yourself and others.

When repairing or dismantling a shutter you should follow safe working practices. Further advice is available from the Health and Safety Executive (HSE).

Maintenance check list:

- **Curtain free running and clean**
- **All end locks are correctly and securely located in the curtain**
- **No debris in the guide rails**
- **Guide rails and end plates are securely fastened to the wall (check also the fascia if fitted)**
- **If applicable all axle collars and locking springs are in the correct original position**
- **Check action of applicable locking devices to ensure they are engaging correctly**
- **If applicable motor cable is correctly retained, has not been damaged or in danger of being damaged**
- **If a remote control has been supplied check the functionality of the safety devices**
- **If required view the service counter on the remote control**
- **If an anti-fall back spring is fitted check that the spring is under tension when the curtain is in the fully closed position. You should not be able to turn the spring shaft located in the u-cup.**
- **Check the operation of the manual override.**

### Recommended service period

The recommended service period for a shutter which will operate on average two cycles per day is once every 12 months. If the shutter will perform a greater number of cycles per day the service period should be shortened accordingly. One cycle is a full open and close sequence.

# 5 Tools/ Fixings Required

This list of tools and fixings is a minimum guide, to be adapted for each installation.

- Drill with pneumatic/hammer action to take the drill bits used below
- 10mm & 22mm masonry bits up to 400mm long (or wall thickness)
- 3, 4.2, 5, 10 & 13mm metal drill bits
- Screw drivers and wire strippers
- 4mm & 6mm Allen keys
- Pliers
- Tin Snips
- Metal files - round, half round and flat
- Spirit level
- Straight edge (square)
- Plastic hammer
- Tape measure
- Marker pen
- 3 core and 4 core cable
- Junction box
- 3 amp plug
- Surface trunking
- Motor test lead (YEC38400)
- Hacksaw
- Pop riveter with 4mm brown or white rivets
- Dust sheets
- Step ladders
- Workmate bench (optional)
- Silicone gun with brown, white or clear silicone
- If the fitting surface is not flat or there is a projecting door handle, painted timber may be required to form a sub frame. Alternatively 20/50 x 50mm aluminium packers or pieces of guide rail may be used
- If the shutter box is to fit up into a soffit, a circular saw or jigsaw will be needed to cut the soffit board.

## INSTALLATION CRITERIA FOR COMPLIANCE WITH LPS 1175: ISSUE 5

### Minimum required fasteners:

#### Brick / Blockwork

No. 12x2" screw with suitable plastic plug

#### Timber frame

No. 12x2" screw

#### Steel fixing (any of the following)

- 5 x 25mm Tec screws
- No. 10x1" Pozi Pan head screws
- M8 x10mm hex head or dome head bolts tapped in to the steel work (minimum 5mm thick steel)
- M8 bolts and nuts

**All visible fixing heads must be spoiled for compliance with LPS 1175.**

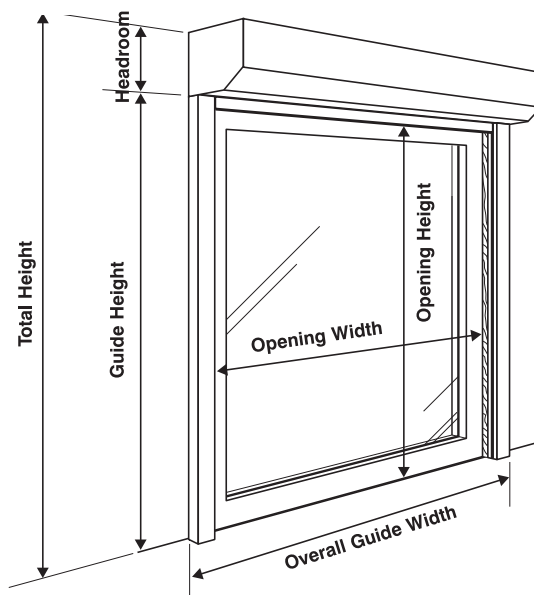
# 6 Preparation for the Installation

The structure of the opening must be adequate to take the weight of the door and suitable to take the appropriate fixings.



**RISK OF MATERIAL DAMAGE** Check that the opening is ready for installation. Surfaces should be flat and vertical to guarantee a parallel alignment of the guide rails. It is important that you check that the lintel does not bow inwards or have any projections that may catch on the curtain or could push the box back towards the curtain. If in doubt pack the guides and box out by at least 10mm.

Before you begin installing the shutter you should check that the shutter will not foul on any opening doors or windows or projecting door handles.



**RISK OF MATERIAL DAMAGE** Check the dimensions of the opening to ensure that the product supplied is the correct size to suit the opening. This must be done before removing any existing products and before you begin installation of the shutter.

To avoid damages to the box and the curtain unpack the components very carefully. We recommend using the packaging supplied as a protective mat.

Check the packages you have received to ensure you have received all the parts you require and they are in a satisfactory condition before you begin installation of the shutter.



# 7 Continental Commercial Shutters

## 7.1 Spring Loaded Operation Parts list

### General Parts

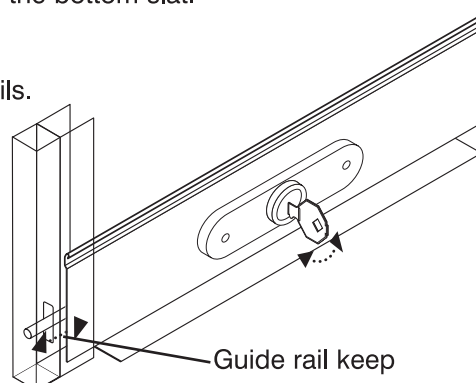
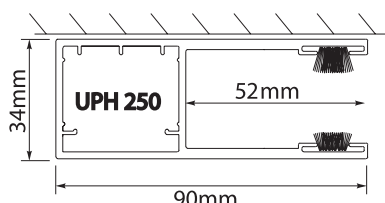
- Assembled shutter box (1 per shutter)
- Pair of guide rails (1 pair per shutter)
- Assembled curtain (1 per shutter)
- Installation instructions
- Operating & Maintenance instructions

Keys for bottom slat locks are packed in a bag which is taped to the bottom slat.

Accessories are packed in a separate box.

If applicable angle & packer are usually packed with the guide rails.

### Guide to correct guide rail orientation



Certain guide rails have an internal and external face, due to their extrusion profile. These guide rails must be installed the correct way round. Please check the guide rails you have been supplied before you begin installing the shutter.

If keeps have been prepared in the guide rails for the bottom slat lock bar you must ensure that the guide rails are orientated so that the keeps are at the base of the guide rails as shown below.

## INSTALLATION CRITERIA FOR COMPLIANCE WITH LPS 1175: ISSUE 5

### Internal installation only

The shutter must be installed internally and the end plates must be face fitted above the opening

### Face fit

If the guide rails are face fitted they must not protrude into the opening and they must be 90mm.

### Reveal fit

If the guide rails are reveal fitted they must be 90mm guide rails complete with steel reinforcement plates to protect the base of the guide rails.

### Minimum number of fixings per guide rail

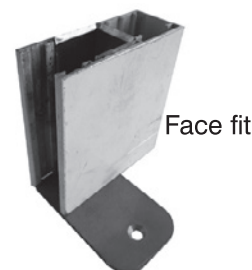
Height of guide rails	Minimum no. of fixings required
less than or equal to 1000mm	3
1001mm to 1500mm	4
1501mm to 2500mm	5
2501mm to 3500mm	6
3500mm +	7

### Proximity of holes to the end of the guide rails

The first and last holes at the ends of the guide rails must be drilled 100mm from the ends of the guide rails.

**The label supplied, stating the manufacturer, the product, the security rating and the certificate number must be attached to the door.**

Please note: The validity of the LPCB certification is contingent upon the shutter being installed in accordance with the requirements of LPS 1175



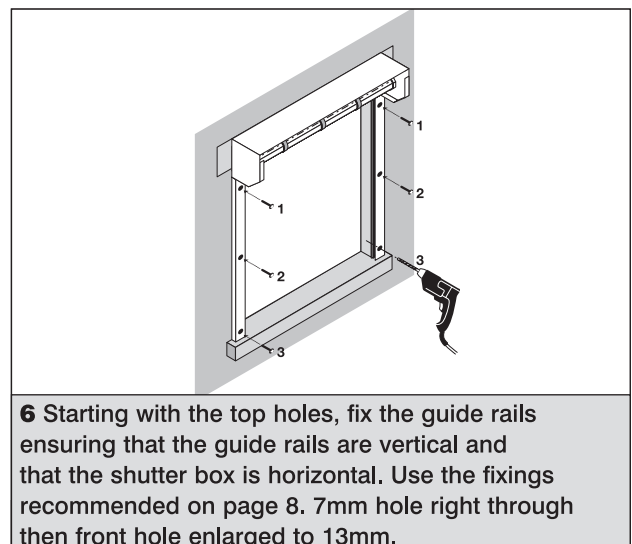
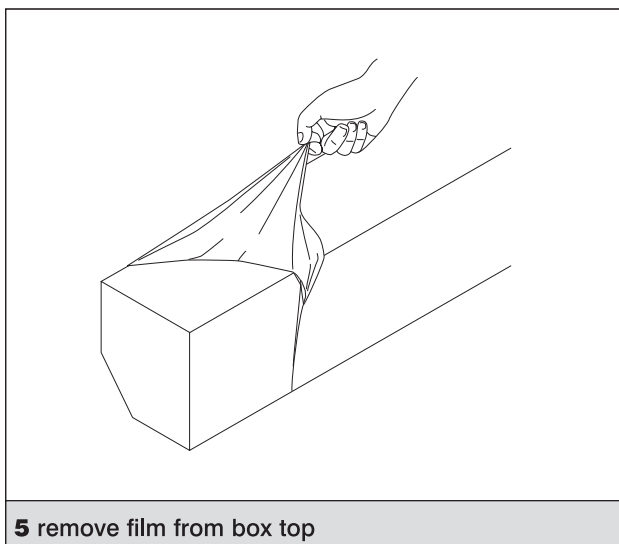
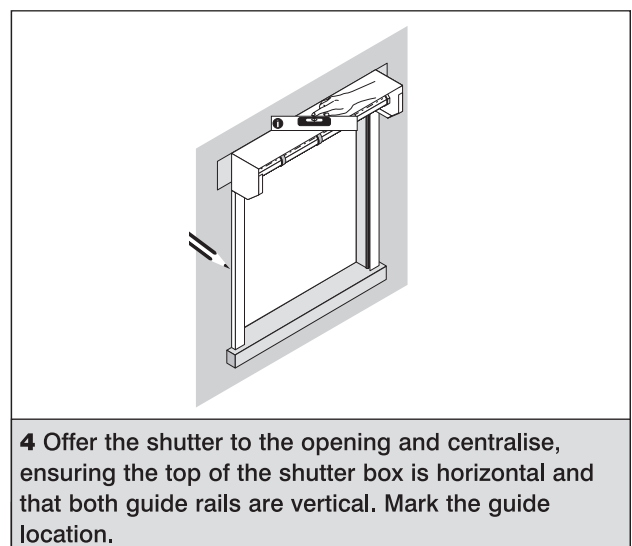
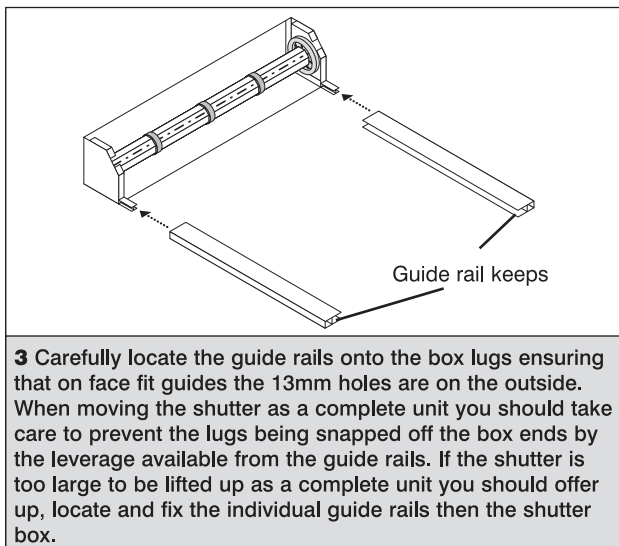
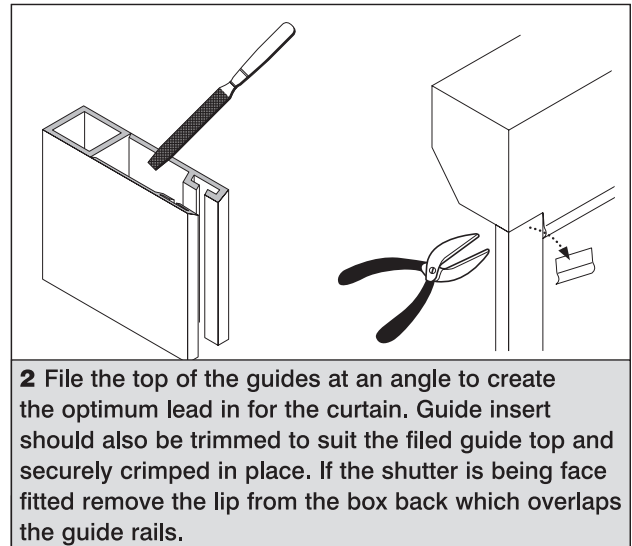
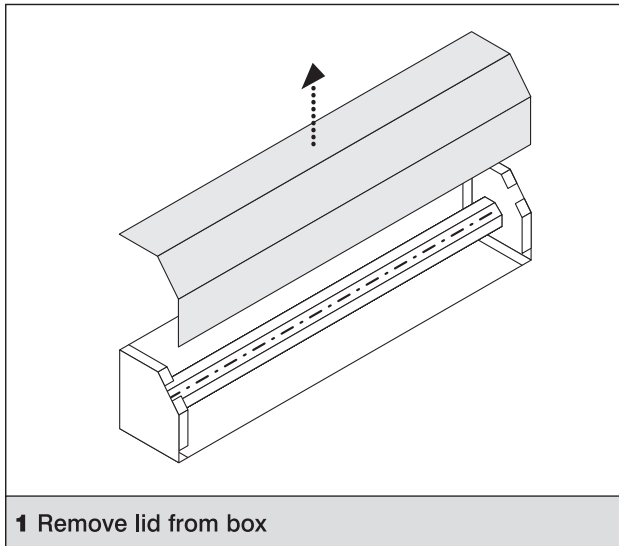
Face fit



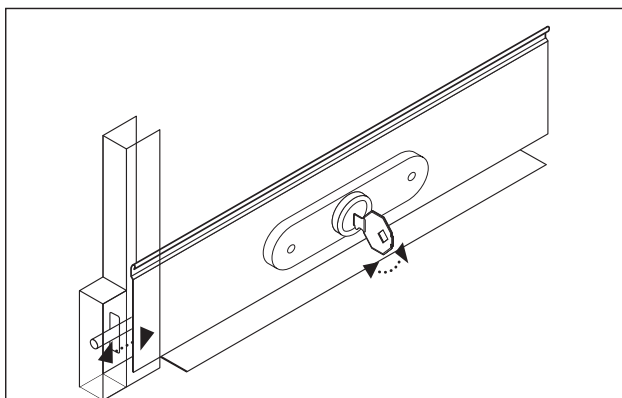
Reveal fit

## 7.1 Spring Loaded Operation Installation Instructions

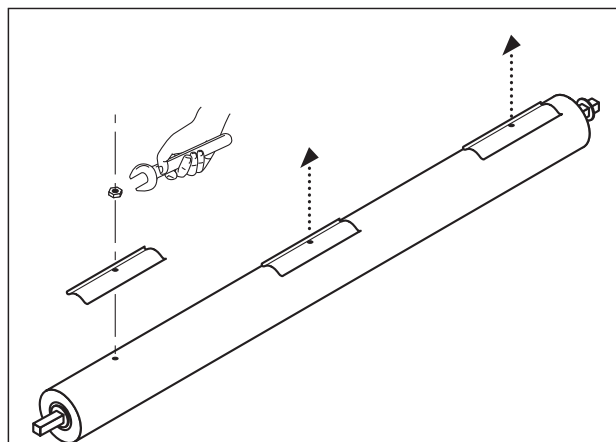
Before you begin installing the shutter please ensure you have read pages 4–9.



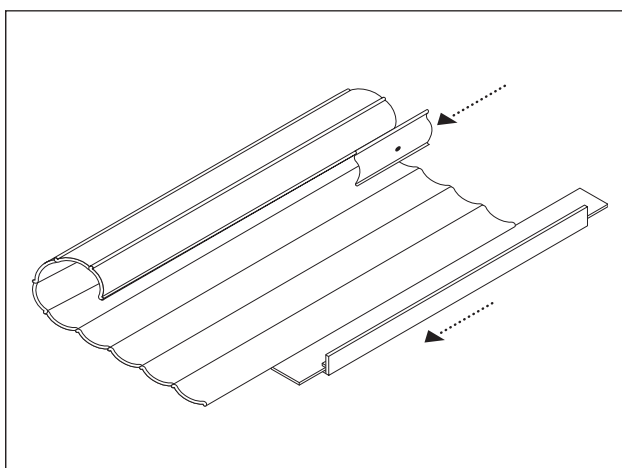
## 7.1 Spring Loaded Operation Installation Instructions (cont.)



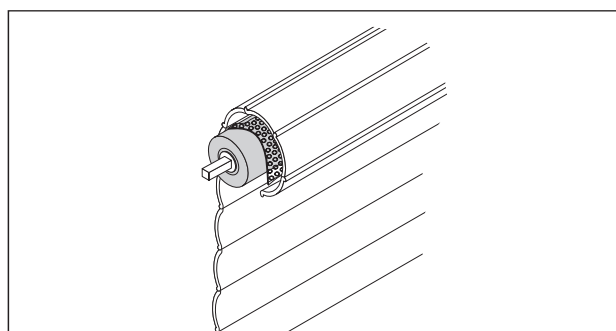
**7.** If a lock has been supplied in the bottom slat you should remove the bottom slat from the curtain. Slide the bottom slat down into the guide rails and check that the lock bars in the bottom slat will locate into the prepared guide rail keeps. Enlarge the keeps if necessary.



**5** Remove the attachment strips from the axle.



**9** Attach the bottom slat and the attachment strips to the curtain.

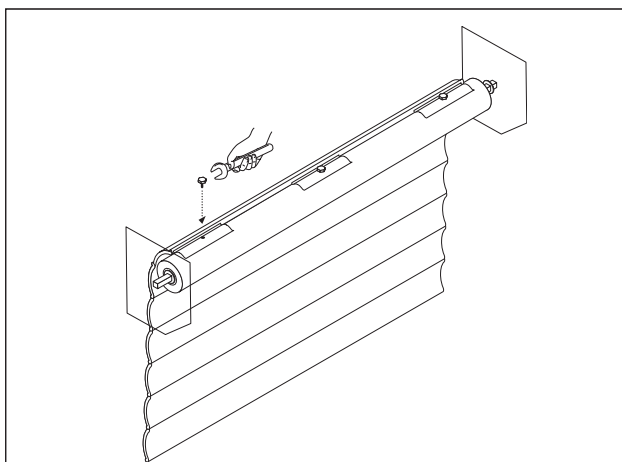


### **RISK OF MATERIAL DAMAGE!**

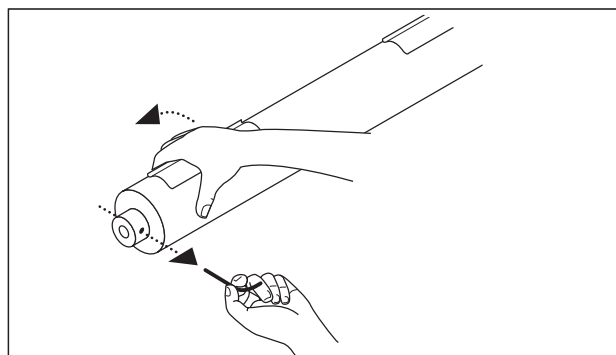
**10** Cover the axle with bubble wrap or a similar material to prevent the curtain from being damaged during the curtain loading process. Carefully load the curtain over the axle.



**TIP** – Place blocks on the floor under the bottom slat to raise the curtain off the ground. This will make it easier to attach the curtain to the axle in the next step.



**11** Attach the curtain to the axle using the attachment strips provided.



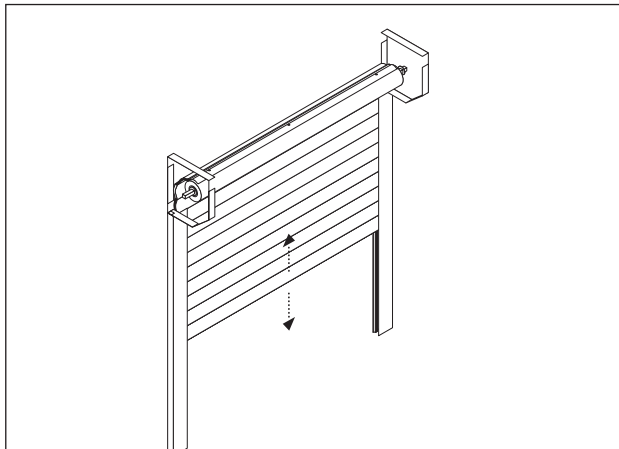
### **RISK OF PERSONAL INJURY!**

**12** Turn the axle in the down direction and carefully remove the pin. Please note there may be tension on the spring, which will cause the axle to turn.

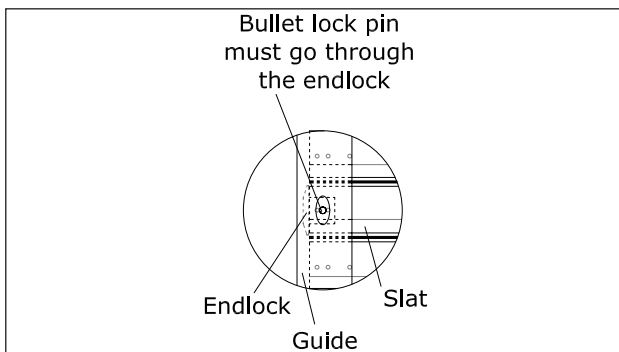


**TIP** - Lock the bottom slat to prevent the curtain from lifting and the axle from turning

## 7.1 Spring Loaded Operation Installation Instructions (cont.)

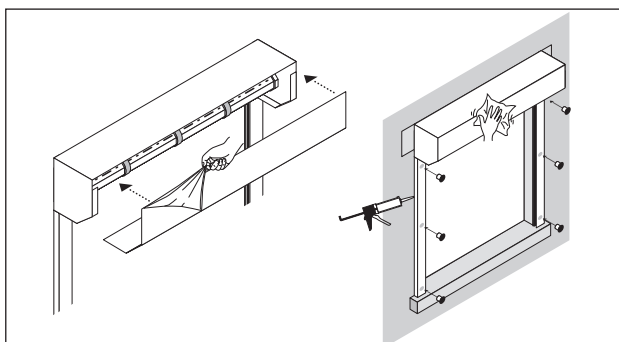


**! RISK OF MATERIAL DAMAGE!**  
**13** Test the operation keeping hold of the bottom slat at all times.

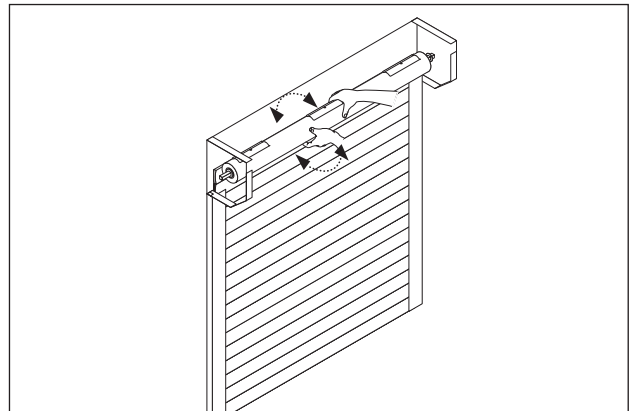


### 15 OPTIONAL BULLET LOCKS:

If optional bullet locks have been supplied you will need to mark the curtain through the bullet lock housing. Lift the curtain out of the guide rails then drill a 13mm hole where you marked the curtain, through the end lock. Lower the curtain back in to the guide rails and test to ensure that the pins can be easily located and removed.



**16** Remove the protective film from the box lid then fit the box lid to the shutter box. If the shutter is externally fitted the box lid should be fastened using appropriately coloured 4mm rivets. To complete the installation you should fit cover caps to the guide rails (if applicable), mastic around the edges of the shutter then give the shutter a final clean and tidy.



**14** If required adjust the tension in the spring.

### **STOP RISK OF PERSONAL INJURY!**

For safety reasons it is advisable for the tension to be adjusted by two people.

#### Method 1:

Lift the curtain to the top so that it coils around the axle. Place cardboard between the lock and the curtain to prevent the lock from damaging the curtain. Now allow the bottom slat to come out of the top of the guides so that you can rotate the coil to add to or release the tension in the spring. To add tension to the spring turn the axle in the down direction.

To release tension from the spring turn the axle in the up direction.

Once adjusted feed the curtain back into the guide rails and test the operation. Repeat this process until the spring contains the correct amount of tension.

#### Method 2:

Lower the curtain to the floor. Turn the axle forward and insert the pin in the end of the spring to lock the axle (reverse of step 14). Detach the curtain from the axle.

Carefully remove the pin then add or remove tension from the spring as appropriate.

To add tension to the spring turn the axle in the down direction. To release tension from the spring turn the axle in the up direction. Once adjusted replace the pin then continue as step 13.

Upon completion of the installation the owner of the shutter must be trained how to operate the product safely paying special attention to the following points:

- The shutter should only be operated when in view
- The operator should ensure there are no objects or persons in the opening before and during operation.
- The end user must read and follow the advice given in the operating and maintenance instructions.
- In the event of a malfunction the end user should follow the advice given in the operating and maintenance instructions and if applicable contact the installer.

## 7.2 Electric operation Parts List

### General Parts

- Assembled shutter box (1 per shutter)
- Pair of guide rails (1 pair per shutter)
- Assembled curtain (depending on the shutter size may be supplied in sections)
- Installation instructions
- Operating & Maintenance instructions

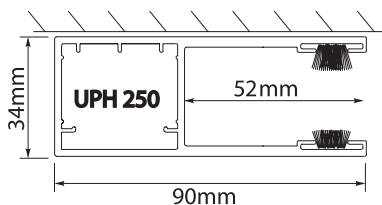
Accessories are packed in a separate box.

If applicable angle & packer are usually packed with the guide rails.

### Operation Specific Parts

- Override handle (1 per shutter if manual override)
- Override handle clip (1 per shutter if manual override)
- Electric control method (depends on method requested):
- Switch (with back box surface / flush)
- Key switch
- Remote control kit
- Group command
- Battery back up

### Guide to correct guide rail orientation



Certain guide rails have an internal and external face, due to their extrusion profile. These guide rails must be installed the correct way round. Please check the guide rails you have been supplied before you begin installing the shutter.

### Override Handles

Override Crook



Rigid Eye Joint



Drop Eye Joint



## INSTALLATION CRITERIA FOR COMPLIANCE WITH LPS 1175: ISSUE 5

### Internal installation only

The shutter must be installed internally and the end plates must be face fitted above the opening

### Face fit

If the guide rails are face fitted they must not protrude into the opening and they must be 90mm.

### Reveal fit

If the guide rails are reveal fitted they must be 90mm guide rails complete with steel reinforcement plates to protect the base of the guide rails.

### Minimum number of fixings per guide rail

Height of guide rails	Minimum no. of fixings required
less than or equal to 1000mm	3
1001mm to 1500mm	4
1501mm to 2500mm	5
2501mm to 3500mm	6
3500mm +	7

### Proximity of holes to the end of the guide rails

The first and last holes at the ends of the guide rails must be drilled 100mm from the ends of the guide rails.

**All visible fixing heads must be spoiled for compliance with LPS 1175.**

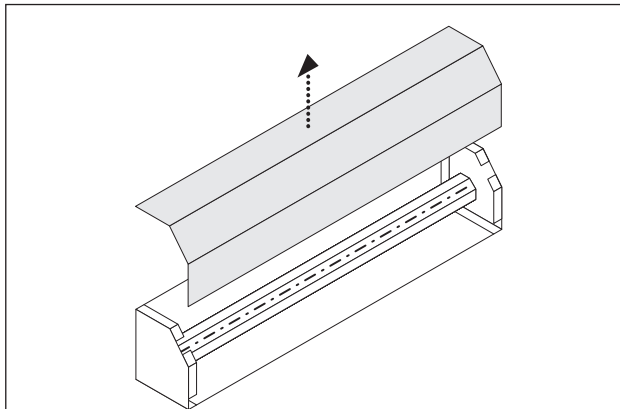
**All switches, key switches and remote control equipment must be installed on the inside for compliance with LPS 1175**

**The label supplied, stating the manufacturer, the product, the security rating and the certificate number must be attached to the door.**

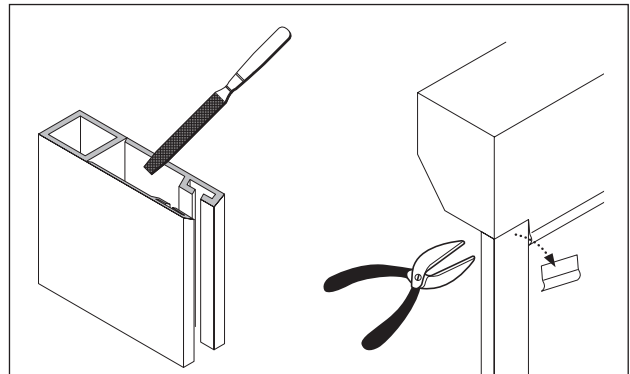
Please note: The validity of the LPCB certification is contingent upon the shutter being installed in accordance with the requirements of LPS 1175

## 7.2 Electric operation Installation Instructions

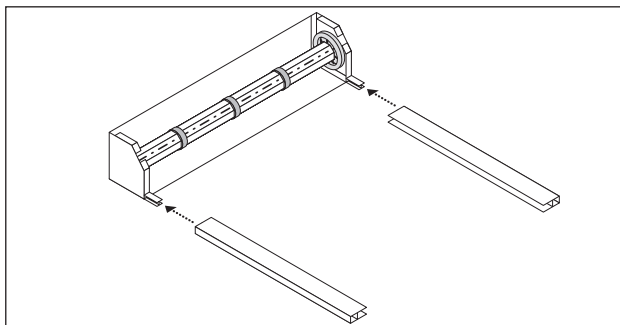
Before you begin installing the shutter please ensure you have read pages 4–9.



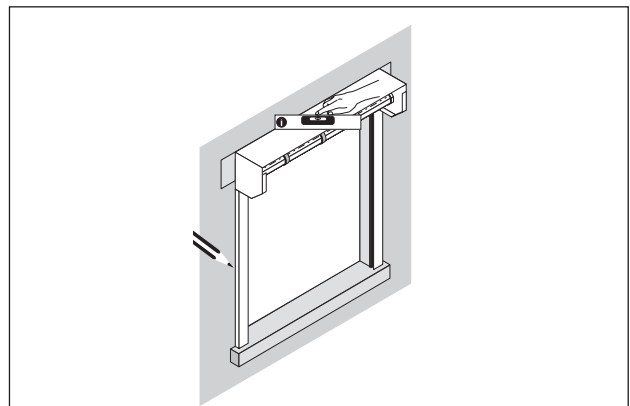
**1** Remove the lid from the shutter box. If attached remove locking springs / attachment straps from the axle and keep safe for step 12.



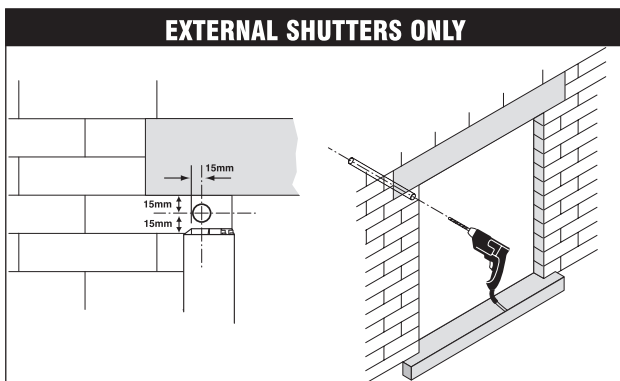
**2** File the top of the guides at an angle to create the optimum lead in for the curtain. Guide insert should also be trimmed to suit the filed guide tops. If the shutter is being face fitted remove the lip from the box back which overlaps the guide rails.



**3** Carefully locate the guide rails onto the box lugs ensuring that on face fit guides the 13mm holes are on the outside. When moving the shutter as a complete unit you should take care to prevent the lugs being snapped off the box ends by the leverage available from the guide rails. If the shutter is too large to be lifted up as a complete unit you should offer up, locate and fix the individual guide rails then the shutter box.



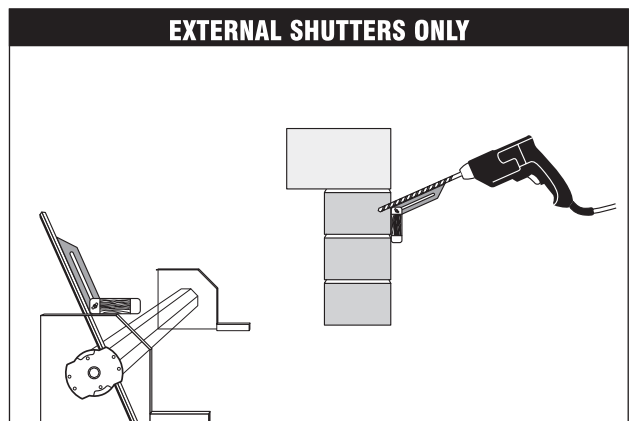
**4** Offer the shutter to the opening and centralise, ensuring the top of the shutter box is horizontal and that both guide rails are vertical. Mark the guide location.



**5** If applicable mark and drill the override hole ensuring the hole is drilled at the correct angle (see step 6). Drill a 10mm pilot hole followed by a 22mm hole



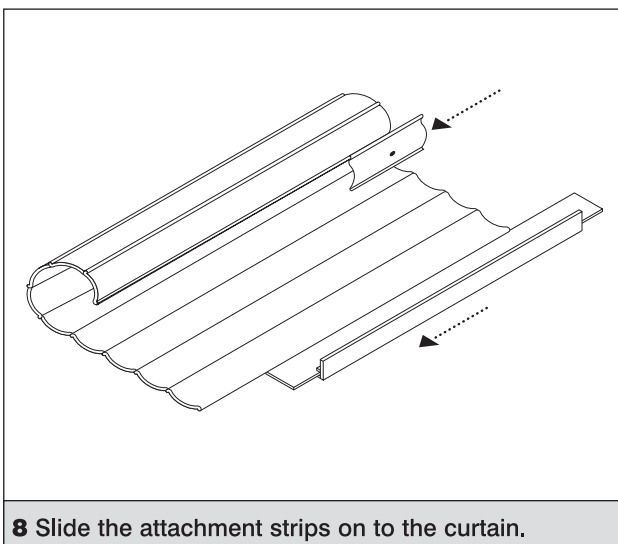
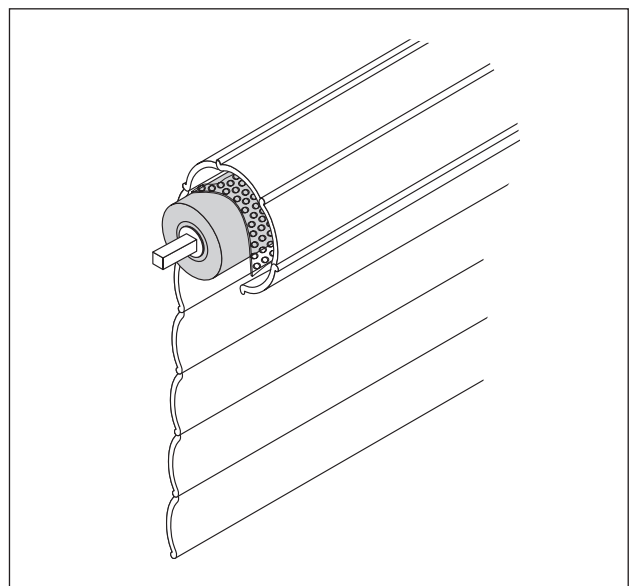
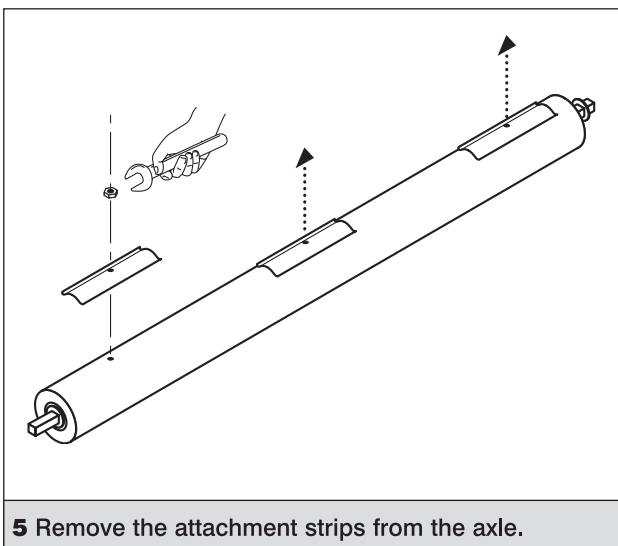
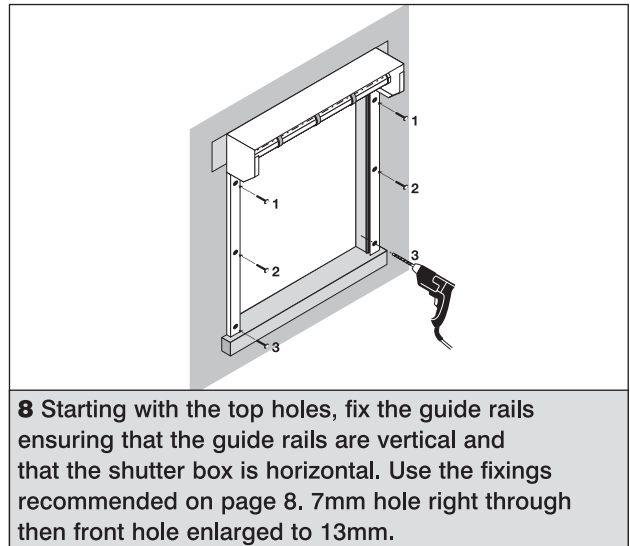
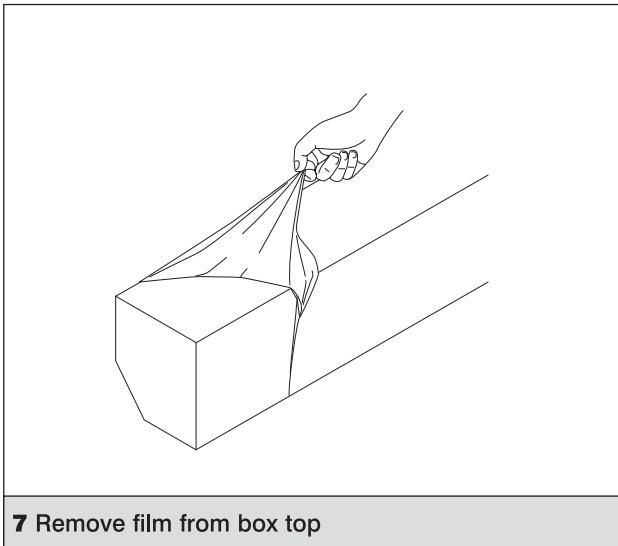
**Tip** – hold a block of wood against plaster to reduce damage caused by the drilling process



**6** If a manual override has been supplied and if applicable determine the angle of the override hole.

**PLEASE NOTE: SecuroShield 7500 installed externally will NOT comply with LPS 1175**

## 7.2 Electric operation Installation Instructions (cont.)



9 Large curtains will be supplied in two or more sections to enable them to be transported. There are two alternative methods for assembling the curtain:

### Method 1

**(If limited room, may require mechanical lifting assistance)**

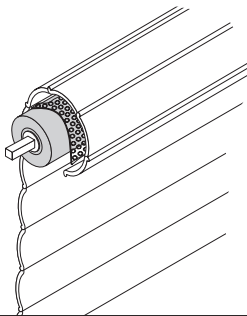
Slide the sections of curtain together before loading in the guide channels.

### Method 2

Attach the top section of the curtain to the axle then rotate the axle in the up direction to roll the curtain around the axle. Then attach the next section of the curtain to the bottom of the first section. Repeat this process if applicable. Once all the curtain is coiled around the axle it can be lowered down into the guide channels.



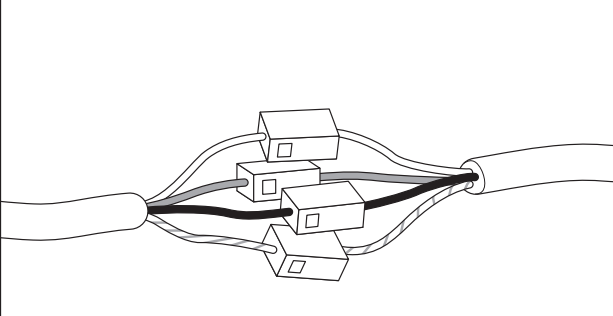
## 7.2 Electric operation Installation Instructions (cont.)



**⚠ RISK OF MATERIAL DAMAGE!**

**10** Cover the axle with bubble wrap or a similar material to prevent the curtain from being damaged during the curtain loading process. Carefully load the curtain over the axle.

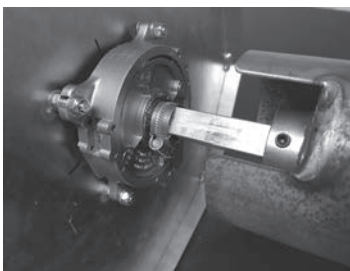
**💡 TIP – Place blocks on the floor under the bottom slat to raise the curtain of the ground. This will aid you to attach the curtain to the axle in the next step.**



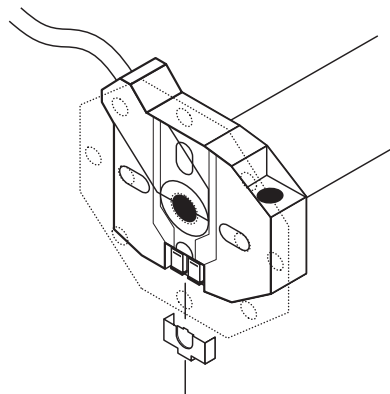
**14** It is recommended that you use a test lead to set the motor limits or if a remote control is being supplied set the remote control into commissioning mode (see section 11.2). If a remote control is not being used or if you do not have a motor test lead the motor should now be wired to the switch supplied (see section 11).

**⚠**

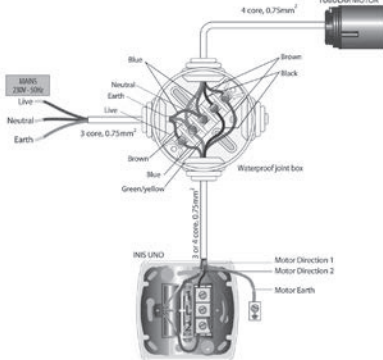
- Failure to fix the shutter vertically or squarely can result in safety brake activation.
- The safety brake can also be activated if the shutter box is not fitted with sufficient fixings at sufficient intervals.



**15** If anti-fall back device is supplied, see section 11.1 for installation

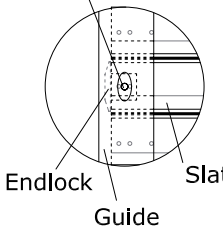


**16** Set the motor limits (see section 12)



**17** Wire the control method supplied to the shutter (see section 11 for further details). If an anti-drop brake has been supplied with a micro limit switch (wire attached to the anti-drop brake) this will also require wiring in at this stage (see section 13.1).

Bullet lock pin must go through the endlock



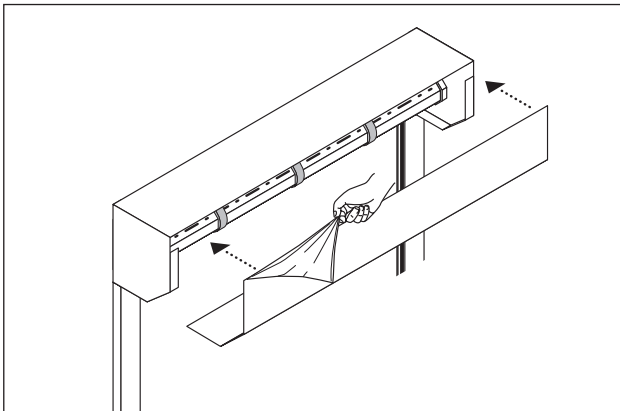
Endlock      Guide      Slat

**18 OPTIONAL BULLET LOCKS:**

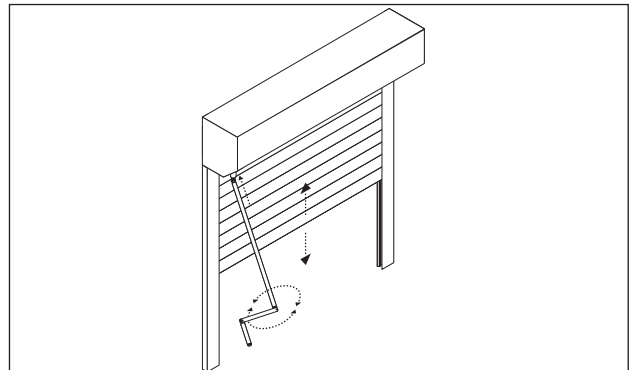
If optional bullet locks have been supplied you will need to mark the curtain through the bullet lock housing. Lift the curtain out of the guide rails then drill a 13mm hole where you marked the curtain, through the end lock. Lower the curtain back in to the guide rails and test to ensure that the pins can be easily located and removed.



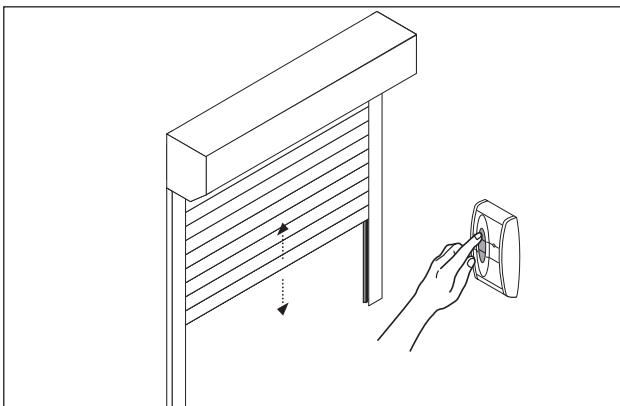
## 7.2 Electric operation Installation Instructions (cont.)



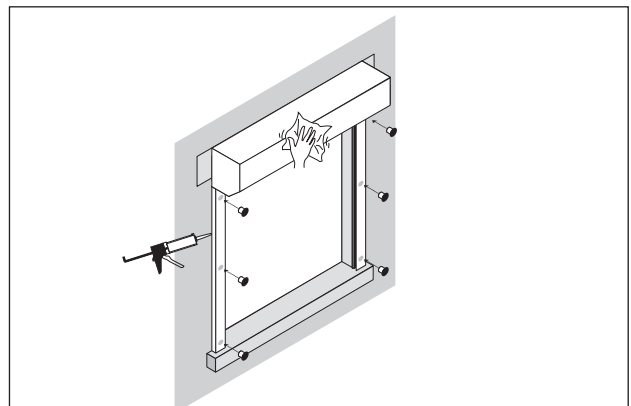
**19** Remove the protective film from the box lid then fit the box lid to the shutter box. If the shutter is externally fitted the box lid should be fastened using appropriately coloured 4mm rivets.



**20** If applicable attach the override handle / rigid eye / drop eye to the shutter and test the manual override facility. Once you have identified which direction will open the shutter attach the label supplied to the override handle showing the end user which direction to wind the manual override to operate the shutter.



**21** Test the operation of the shutter to ensure that the shutter moves freely up and down in the guide rails and that the shutter stops at its preset fully open and fully closed limits. If a remote control has been supplied with safety devices these should also be checked at this stage.



**22** To complete the installation you should fit cover caps to the guide rails (if applicable), mastic around the edges of the shutter then give the shutter a final clean and tidy.

Upon completion of the installation the owner of the shutter must be trained how to operate the product safely paying special attention to the following points:

- **The shutter should only be operated when in view**
- **The operator should ensure there are no objects or persons in the opening before and during operation.**
- **The end user must read and follow the advice given in the operating and maintenance instructions.**
- **In the event of a malfunction the end user should follow the advice given in the operating and maintenance instructions and if applicable contact the installer.**

If applicable complete CE documentation and label the product to comply with the Machinery Directive.

Once the shutter has been installed you must carry out force testing, this is to comply with the product standard EN13241.

# 8 Traditional Commercial Shutters

## Parts List

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### General Parts

- Assembled axle assembly (1 per shutter)
- Pair of flag assemblies (angle, guides, and endplates)
- Assembled curtain (depending on the shutter size may be supplied in sections)
- Steel hood
- Installation Instructions
- Operating and maintenance instructions

### Operation specific parts

- Steel stops and bolts (4 per shutter, attached to guide)

Keys for bottom slat locks or bullet locks are packed in a bag which is taped to the bottom slat.

Accessories are packed in a separate box.

If applicable angle & packer are usually packed with the guide rails.

## INSTALLATION CRITERIA FOR COMPLIANCE WITH LPS 1175: ISSUE 5

### Internal installation only

The shutter must be installed internally and the end plates must be face fitted above the opening

### Face fit

If the guide rails are face fitted they must not protrude into the opening.

### Reveal fit

The shutter box and axle assembly must not protrude into the opening or be visible from the outside.

### Minimum number of fixings per guide rail

Height of guide rails	Minimum no. of fixings required
less than or equal to 1000mm	3
1001mm to 1500mm	4
1501mm to 2500mm	5
2501mm to 3500mm	6
3500mm +	7

### Proximity of holes to the end of the guide rails

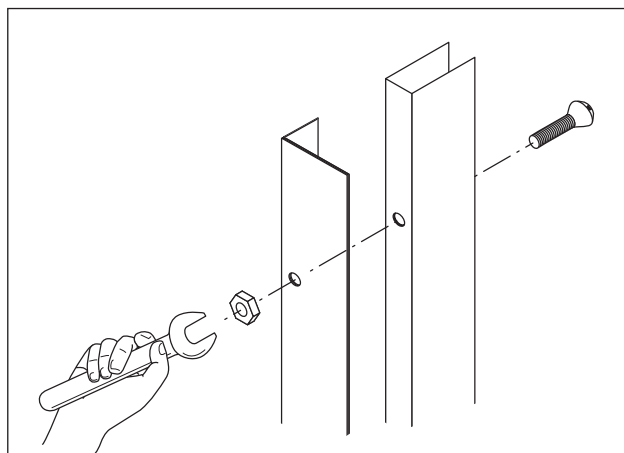
The first and last holes at the ends of the guide rails must be drilled 100mm from the ends of the guide rails.

**The label supplied, stating the manufacturer, the product, the security rating and the certificate number must be attached to the door.**

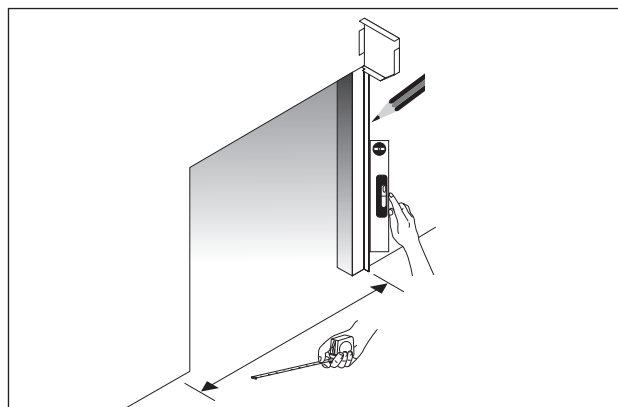
Please note: The validity of the LPCB certification is contingent upon the shutter being installed in accordance with the requirements of LPS 1175

## 8.1 Spring Loaded Operation Installation Instructions

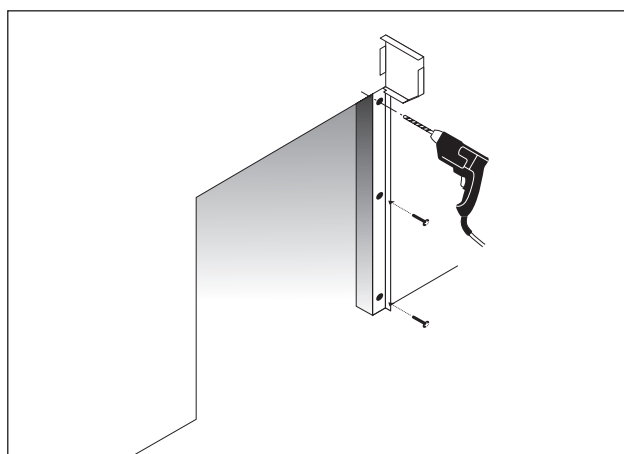
Before you begin installing the shutter please ensure you have read pages 4–9.



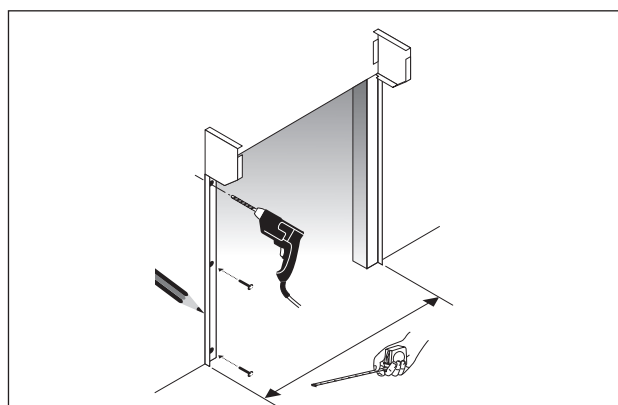
**1** The channels are supplied with the angles attached these must be removed.



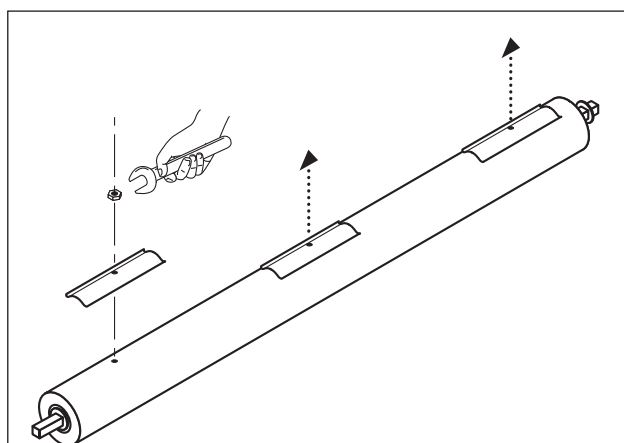
**2** Measure the opening to determine the location of the first length of angle. If the floor is sloping you must fit the higher side first. Fix the angle to the wall.



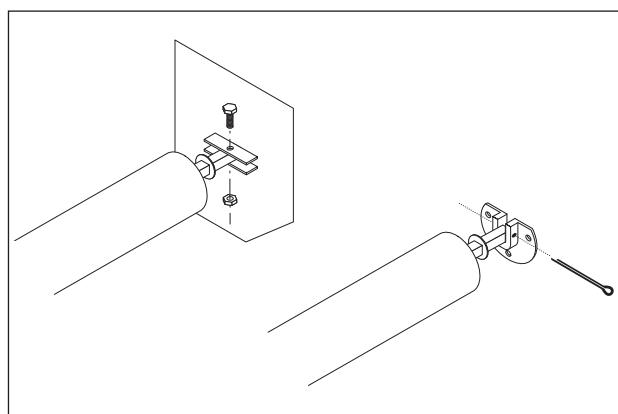
**3** Offer angle up and fix to wall ensuring vertical (use all fixing holes provided)



**4** Measure from the first angle to determine the position of the second angle ensuring that the angles are vertical and also that the tops of the end plates are level. Fix the angle to the wall.

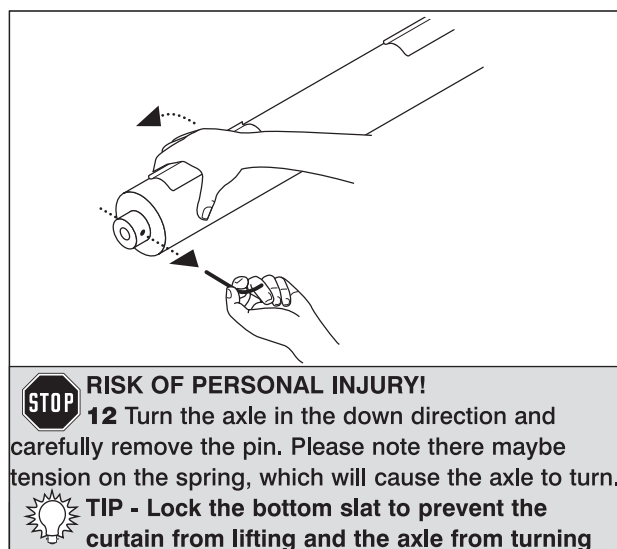
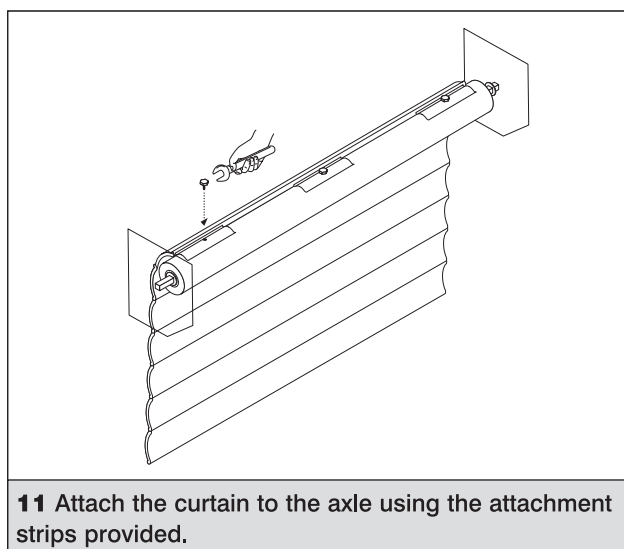
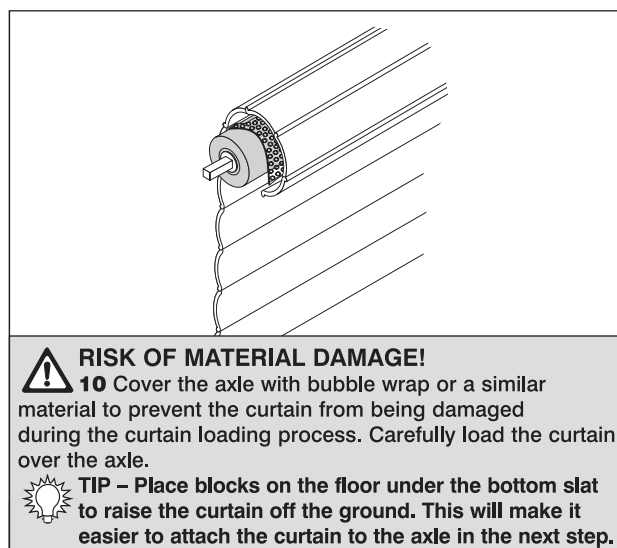
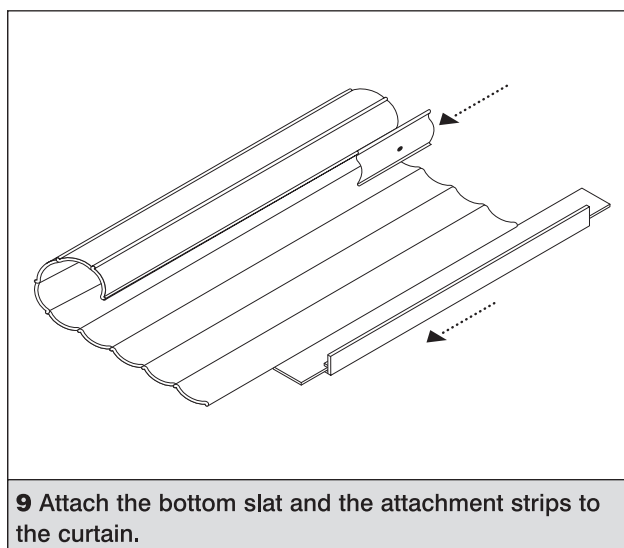
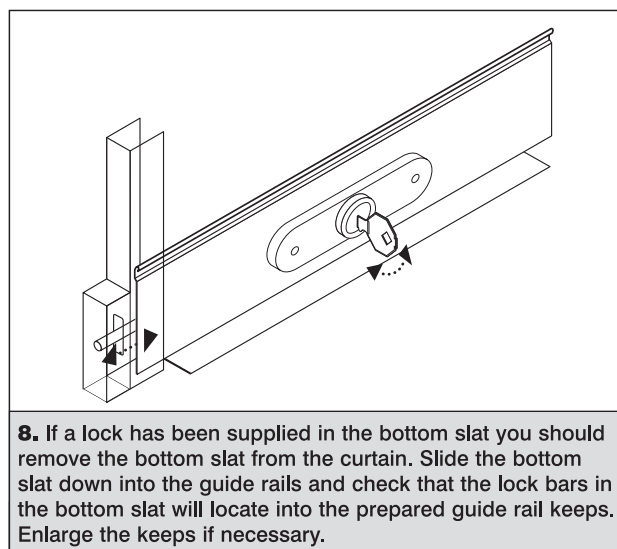
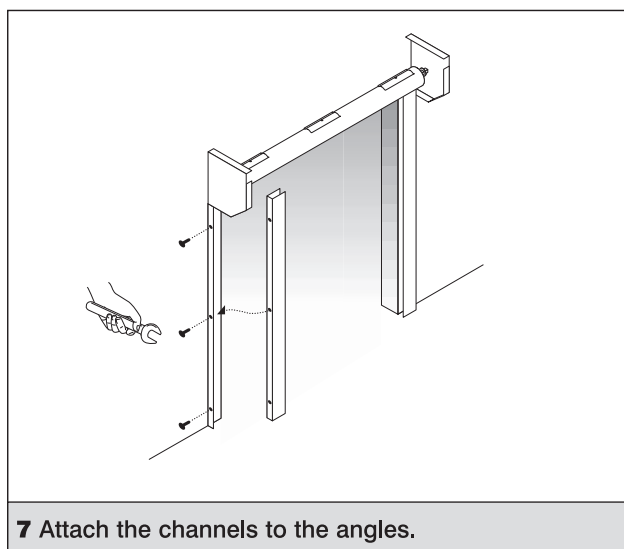


**5** Remove the attachment strips from the axle.

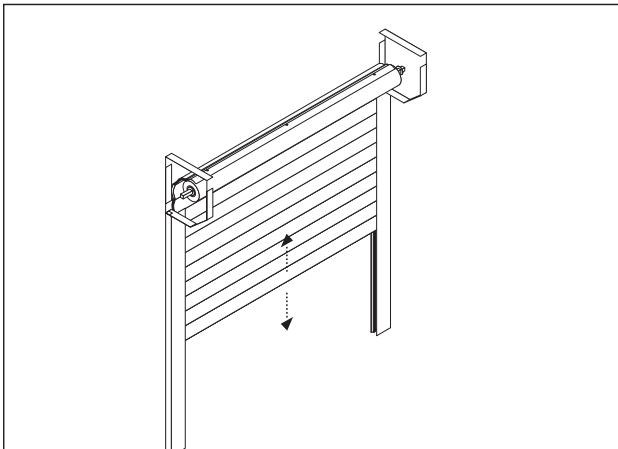


**6** Attach the axle to the end plates using the fixings provided. You must ensure that the bolts located along the length of the axle for curtain attachment will be available for step 11.

## 8.1 Spring Loaded Operation Installation Instructions (cont.)

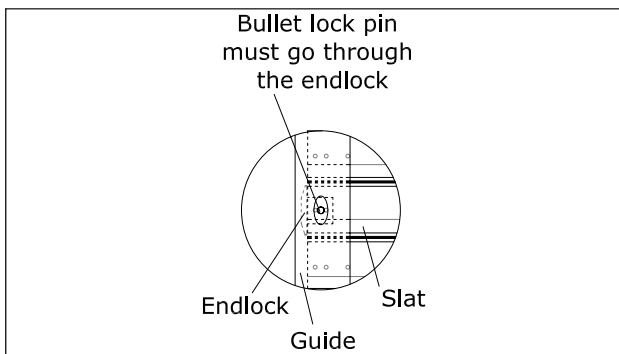


## 8.1 Spring Loaded Operation Installation Instructions (cont.)



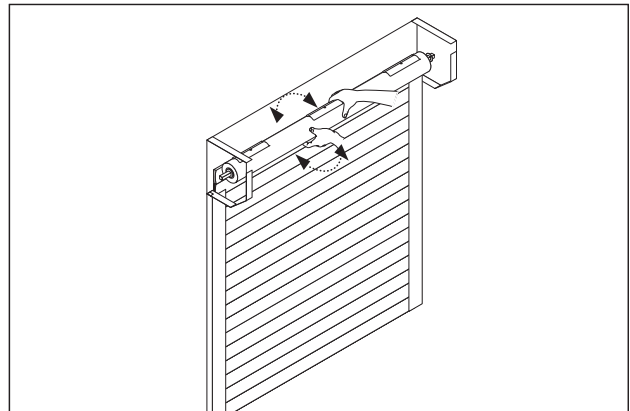
### **RISK OF MATERIAL DAMAGE!**

**13** Test the operation keeping hold of the bottom slat at all times.



### **15 OPTIONAL BULLET LOCKS:**

If optional bullet locks have been supplied you will need to mark the curtain through the bullet lock housing. Lift the curtain out of the guide rails then drill a 13mm hole where you marked the curtain, through the end lock. Lower the curtain back in to the guide rails and test to ensure that the pins can be easily located and removed.



**14** If required adjust the tension in the spring.



### **RISK OF PERSONAL INJURY!**

For safety reasons it is advisable for the tension to be adjusted by two people.

#### **Method 1:**

Lift the curtain to the top so that it coils around the axle. Place cardboard between the lock and the curtain to prevent the lock from damaging the curtain. Now allow the bottom slat to come out of the top of the guides so that you can rotate the coil to add to or release the tension in the spring. To add tension to the spring turn the axle in the down direction.

To release tension from the spring turn the axle in the up direction.

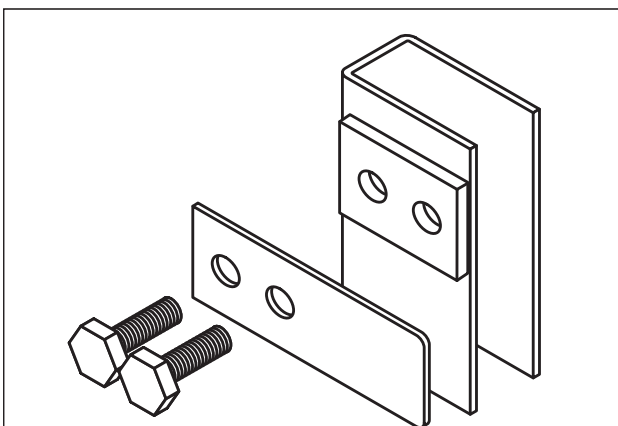
Once adjusted feed the curtain back into the guide rails and test the operation. Repeat this process until the spring contains the correct amount of tension.

#### **Method 2:**

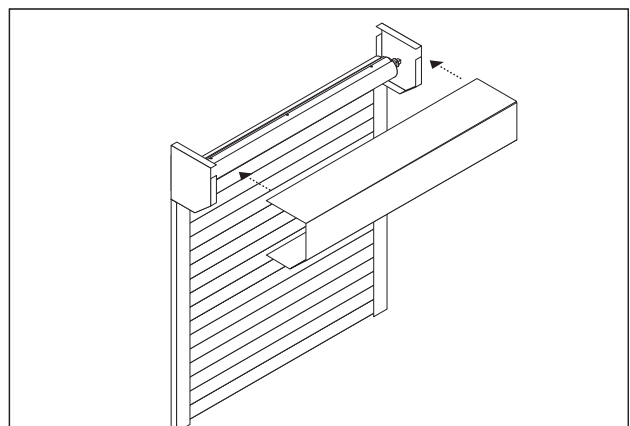
Lower the curtain to the floor. Turn the axle forward and insert the pin in the end of the spring to lock the axle (reverse of step 14). Detach the curtain from the axle.

Carefully remove the pin then add or remove tension from the spring as appropriate.

To add tension to the spring turn the axle in the down direction. To release tension from the spring turn the axle in the up direction. Once adjusted replace the pin then continue as step 13.



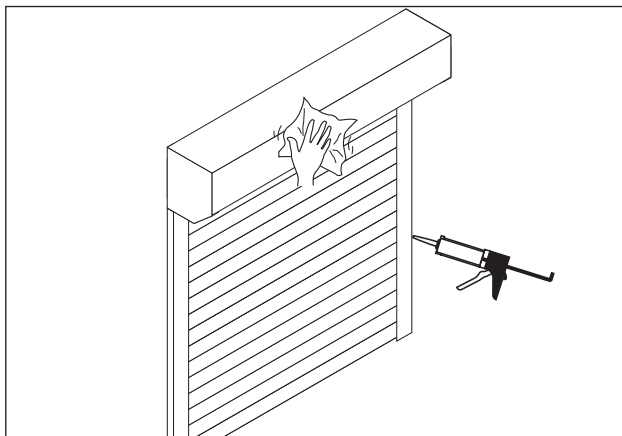
**16** Attach the stops to the guide channels (as shown above) and if applicable attach handles to the bottom slat.



**17** If required fit the hood / fascia. If the shutter is externally fitted the hood / fascia should be fastened using appropriately coloured 4mm rivets.

## 8.1 Spring Loaded Operation Installation Instructions (cont.)

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**18** To complete the installation you should mastic around the edges of the shutter then give the shutter a final clean and tidy.

Upon completion of the installation the owner of the shutter must be trained how to operate the product safely paying special attention to the following points:

- **The shutter should only be operated when in view**
- **The operator should ensure there are no objects or persons in the opening before and during operation.**
- **The end user must read and follow the advice given in the operating and maintenance instructions.**
- **In the event of a malfunction the end user should follow the advice given in the operating and maintenance instructions and if applicable contact the installer.**

## 8.2 Electric Operation Parts List

### General Parts

- Assembled axle assembly (1 per shutter)
- Pair of flag assemblies (angle, guides, and endplates)
- Assembled curtain (depending on the shutter size may be supplied in sections)
- Steel hood
- Installation Instructions
- Operating and maintenance instructions

### Operation specific parts

- Override handle (1 per shutter if manual override)
- Override handle clip (1 per shutter if manual override)

### Electric control method (depends on method requested):

- Switch (with back box surface/flush)
- Key switch
- Remote control kit
- Group command
- Battery back up

Accessories are packed in a separate box.

If applicable angle & packer are usually packed with the guide rails.

### Override handles



## INSTALLATION CRITERIA FOR COMPLIANCE WITH LPS 1175: ISSUE 5

### Internal installation only

The shutter must be installed internally and the end plates must be face fitted above the opening

### Face fit

If the guide rails are face fitted they must not protrude into the opening and they must be 90mm.

### Reveal fit

If the guide rails are reveal fitted they must be 90mm guide rails complete with steel reinforcement plates to protect the base of the guide rails.

### Minimum number of fixings per guide rail

Height of guide rails	Minimum no. of fixings required
less than or equal to 1000mm	3
1001mm to 1500mm	4
1501mm to 2500mm	5
2501mm to 3500mm	6
3500mm +	7

### Proximity of holes to the end of the guide rails

The first and last holes at the ends of the guide rails must be drilled 100mm from the ends of the guide rails.

**All visible fixing heads must be spoiled for compliance with LPS 1175.**

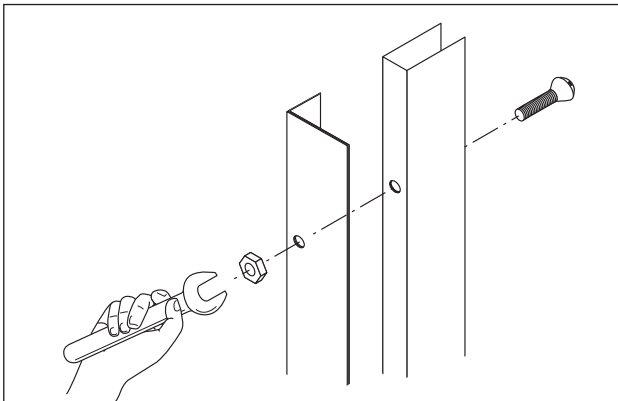
**All switches, key switches and remote control equipment must be installed on the inside for compliance with LPS 1175**

**The label supplied, stating the manufacturer, the product, the security rating and the certificate number must be attached to the door.**

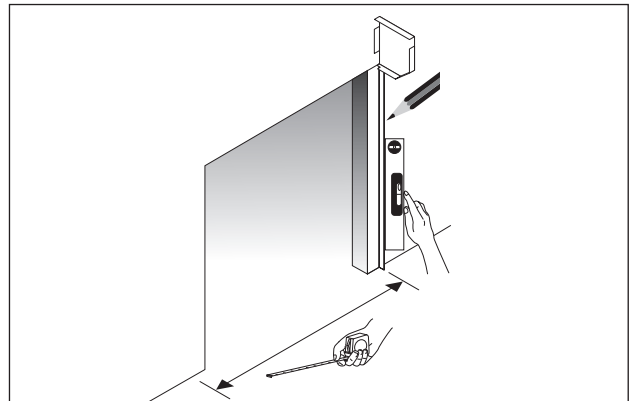
Please note: The validity of the LPCB certification is contingent upon the shutter being installed in accordance with the requirements of LPS 1175

## 8.2 Electric Operation Installation Instructions

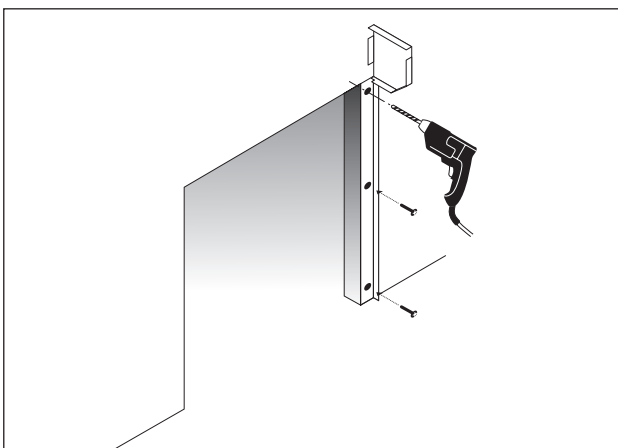
Before you begin installing the shutter please ensure you have read pages 4–9.



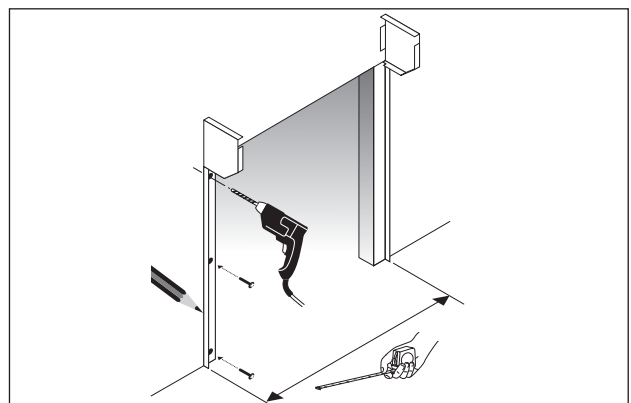
**1** The channels are supplied with the angles attached these must be removed. If 30mm x 30mm packer box has also been attached this should also be removed. Please make a note of which sides the 30x30 box section was attached to as you will need to reattach it to the correct side in step 7.



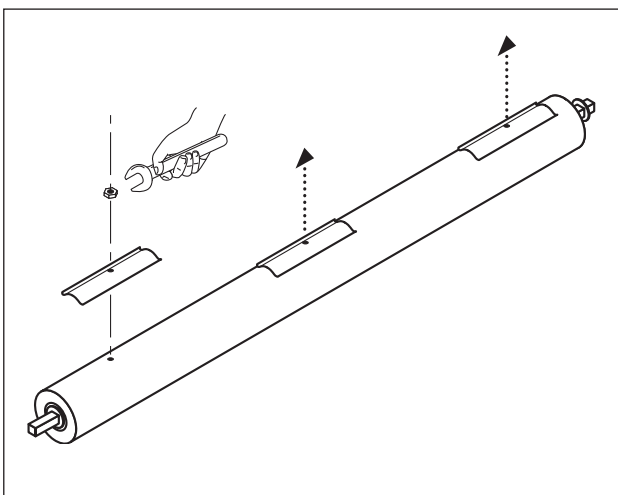
**2** Measure the opening to determine the location of the first length of angle. If the floor is sloping you must fit the higher side first. Fix the angle to the wall.



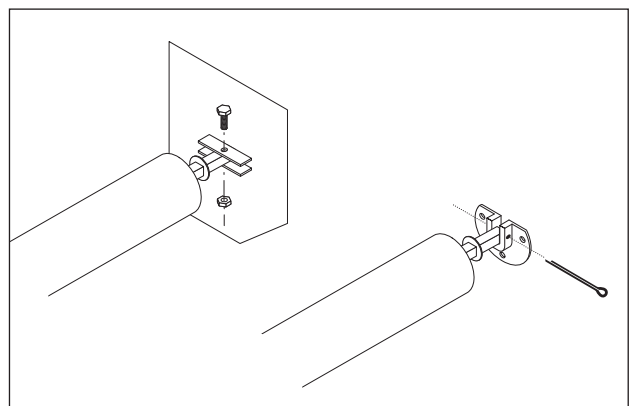
**3** Offer angle up and fix to wall ensuring vertical (use all fixing holes provided)



**4** Measure from the first angle to determine the position of the second angle ensuring that the angles are vertical and also that the tops of the end plates are level. Fix the angle to the wall.



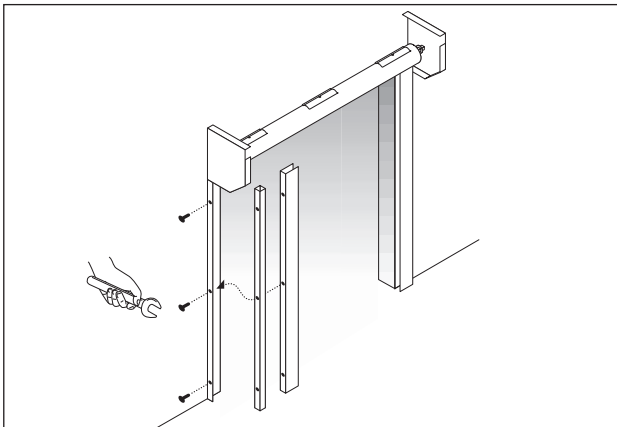
**5** Remove the attachment strips from the axle.



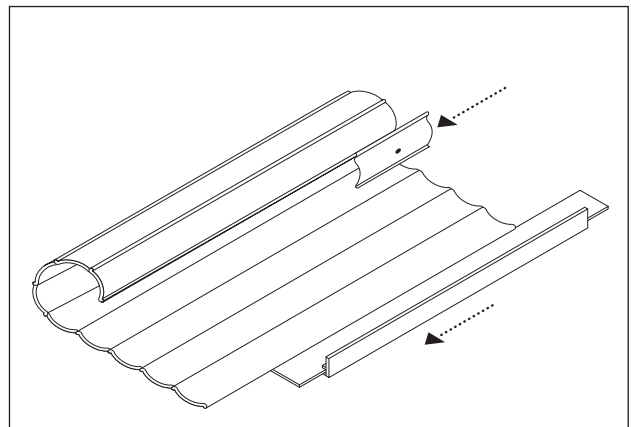
**6** Attach the axle to the end plates using the fixings provided. You must ensure that the bolts located along the length of the axle for curtain attachment will be available for step 11.



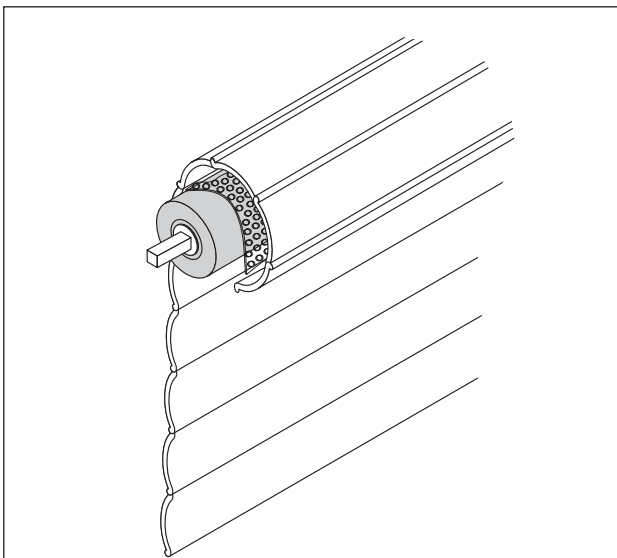
## 8.2 Electric Operation Installation Instructions (cont.)



**7** Attach the channels and the 30 x 30 box section to the angles if applicable. On UPH77 guide channels you may need to drill out the spline in the packer section to allow the bolts to pass through.



**8** Slide the attachment strips on to the curtain.



**9** Large curtains will be supplied in two or more sections to enable them to be transported. There are two alternative methods for assembling the curtain:

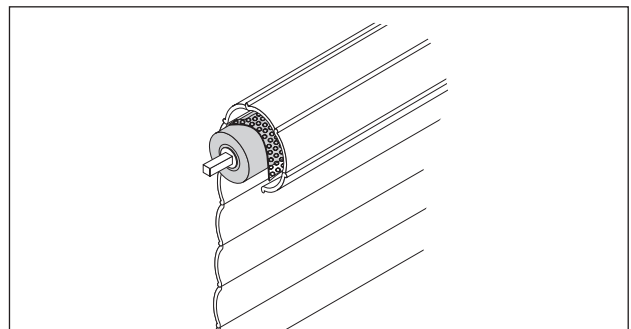
### Method 1

**(If limited room, may require mechanical lifting assistance)**

Slide the sections of curtain together before loading in the guide channels.

### Method 2

Attach the top section of the curtain to the axle then rotate the axle in the up direction to roll the curtain around the axle. Then attach the next section of the curtain to the bottom of the first section. Repeat this process if applicable. Once all the curtain is coiled around the axle it can be lowered down into the guide channels.

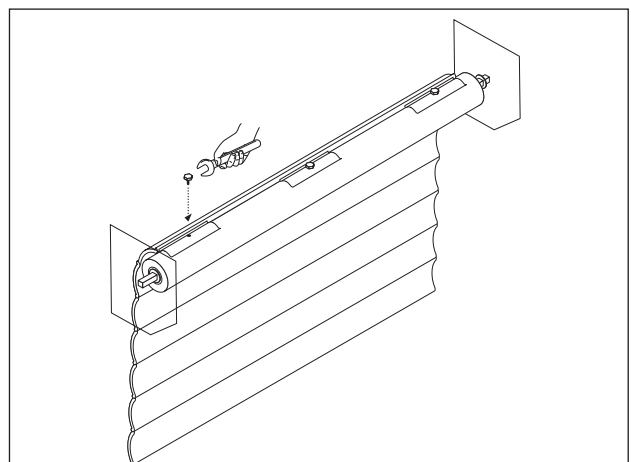


### RISK OF MATERIAL DAMAGE!

**10** Cover the axle with bubble wrap or a similar material to prevent the curtain from being damaged during the curtain loading process. Carefully load the curtain over the axle.

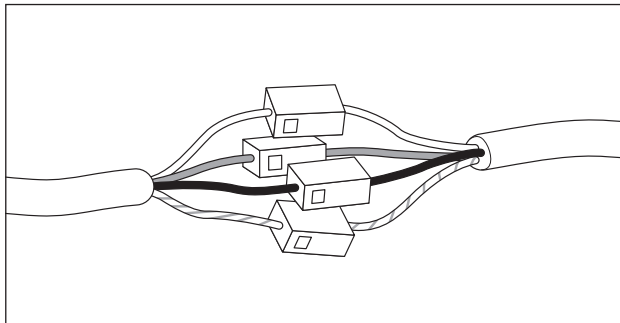


**TIP** – Place blocks on the floor under the bottom slat to raise the curtain off the ground. This will aid you to attach the curtain to the axle in the next step.



**11** Attach the curtain to the axle using the attachment strips provided.

## 8.2 Electric Operation Installation Instructions (cont.)

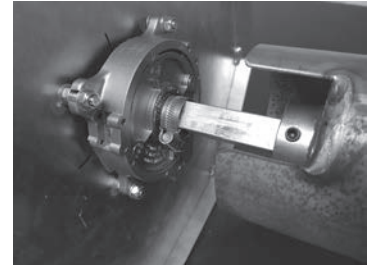


**12** It is recommended that you use a test lead to set the motor limits or if a remote control is being supplied set the remote control into commissioning mode (see section 11.2). If a remote control is not being used or if you do not have a motor test lead the motor should now be wired to the switch supplied (see section 11).

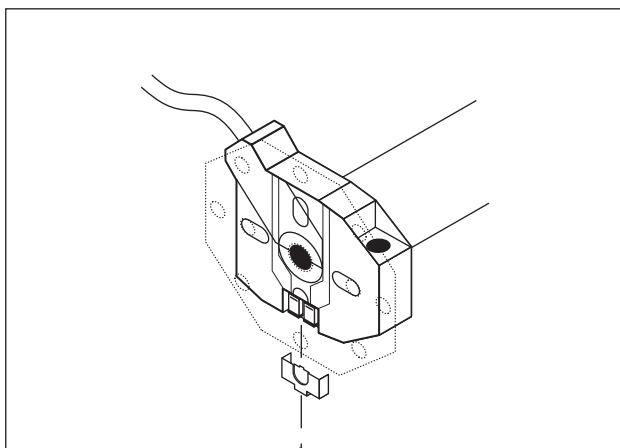


• Failure to fix the shutter vertically or squarely can result in safety brake activation.

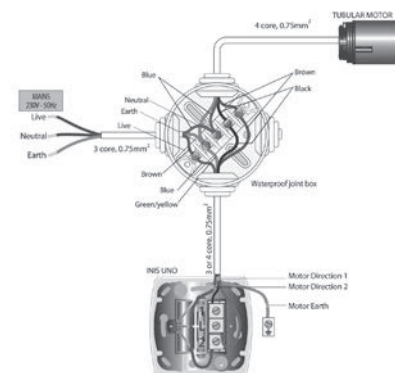
• The safety brake can also be activated if the shutter box is not fitted with sufficient fixings at sufficient intervals.



**13** If anti-fall back device is supplied, see section 11.1 for installation.

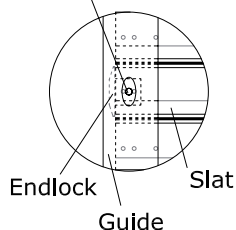


**14** Set the motor limits (see section 12).



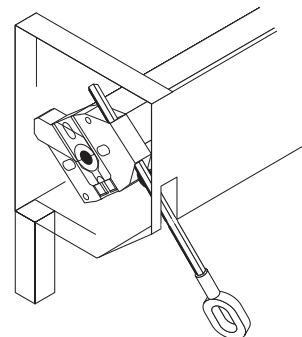
**17** Wire the control method supplied to the shutter (see section 11 for further details). If an anti-drop brake has been supplied with a limit switch (wire attached to the anti-drop brake) this will also require wiring in at this stage (see section 13.1).

Bullet lock pin must go through the endlock



### 15 OPTIONAL BULLET LOCKS:

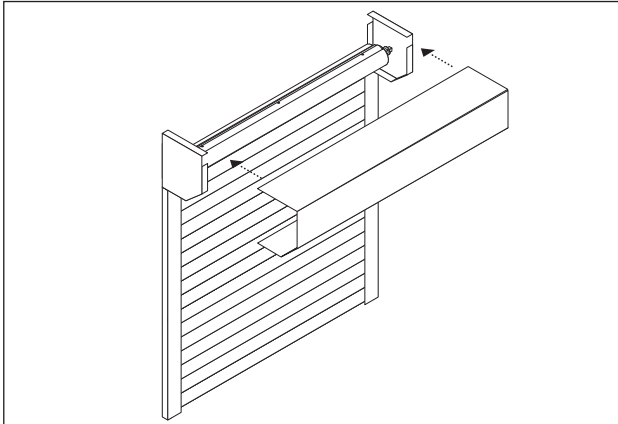
If optional bullet locks have been supplied you will need to mark the curtain through the bullet lock housing. Lift the curtain out of the guide rails then drill a 13mm hole where you marked the curtain, through the end lock. Lower the curtain back in to the guide rails and test to ensure that the pins can be easily located and removed.



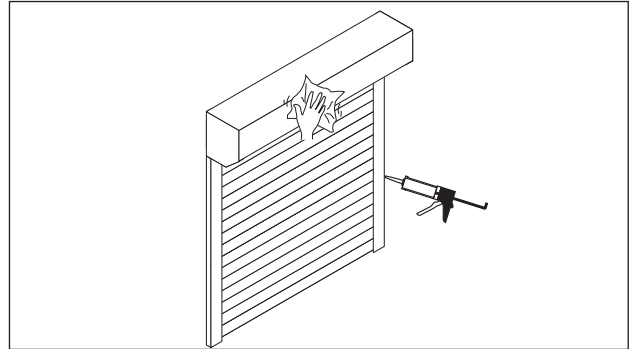
**16** If applicable attach the override handle / rigid eye / drop eye to the shutter and test the manual override facility. Once you have identified which direction will open the shutter attach the label supplied to the override handle showing the end user which direction to wind the manual override to operate the shutter.

## 8.2 Electric Operation Installation Instructions (cont.)

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**15** If required fit the hood / fascia. If the shutter is externally fitted the hood / fascia should be fastened using appropriately coloured 4mm rivets.



**18** Test the operation of the shutter to ensure that the shutter moves freely up and down in the guide rails and that the shutter stops at its preset fully open and fully closed limits. If a remote control has been supplied with safety devices these should also be checked at this stage. To complete the installation you should mastic around the edges of the shutter then give the shutter a final clean and tidy.

Upon completion of the installation the owner of the shutter must be trained how to operate the product safely paying special attention to the following points:

- **The shutter should only be operated when in view**
- **The operator should ensure there are no objects or persons in the opening before and during operation.**
- **The end user must read and follow the advice given in the operating and maintenance instructions.**
- **In the event of a malfunction the end user should follow the advice given in the operating and maintenance instructions and if applicable contact the installer.**

If applicable complete CE documentation and label the product to comply with the Machinery Directive.

Once the shutter has been installed you must carry out force testing, this is to comply with the product standard EN13241.

# 9 Electric Control Options

## 9.1 Connecting Hold To Run Switches

- 1 Mount switch box, in sight of the shutter
- 2 Connect to motor/mains
- 3 You must ensure you incorporate drip loops in your wiring before any control device and the motor to prevent water from running down the cables and into the control device or motor. Failure to do this will invalidate the products warranty.

For further details refer to separate wiring instructions.

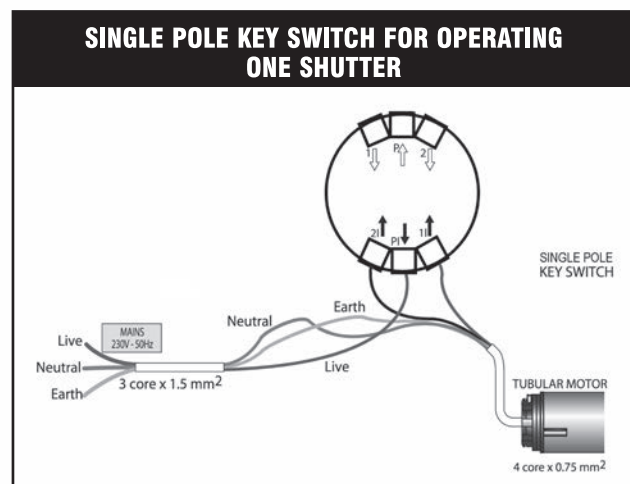
N.B. If fitting two or more switches to the same door a Group Command control box will be required to prevent accidental damage to the motor. Only the keyswitch is suitable for external fitment.

### Electrical Requirements

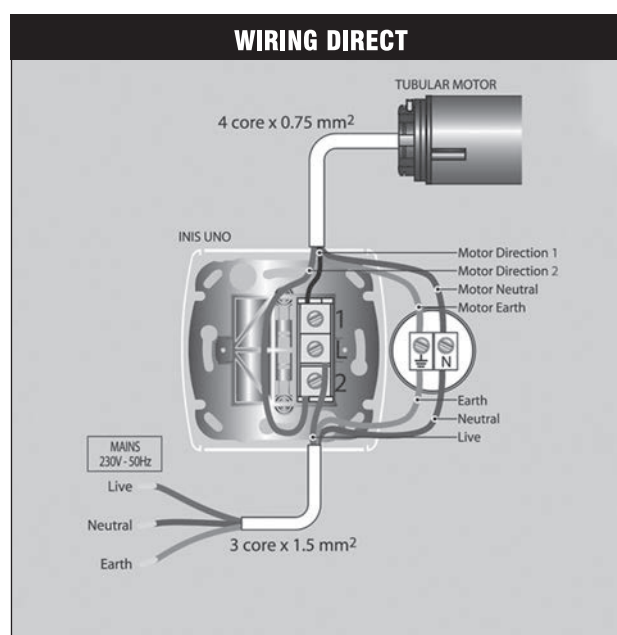
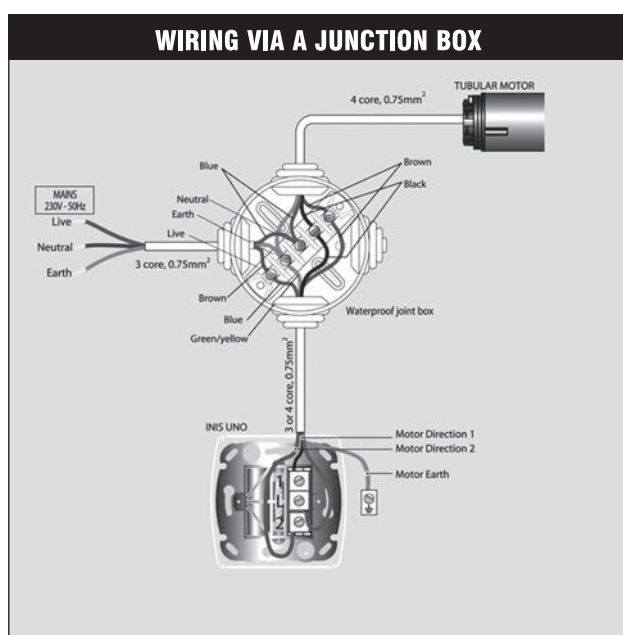
- All connections should be made in accordance with the 16th edition IEE Regulations.
- 5 Amp fuse recommended for fused mains supply for door
- Cable requirements  
Mains supply cable; 3 core 1.5 sq mm  
Motor cable; 4 core 1.5 sq mm
- There is a surge of current each time the door is operated, therefore, switches used in conjunction with any of the above motors should have contacts rated at a minimum of 16 amps to ensure trouble free operation.

### Switching Requirements

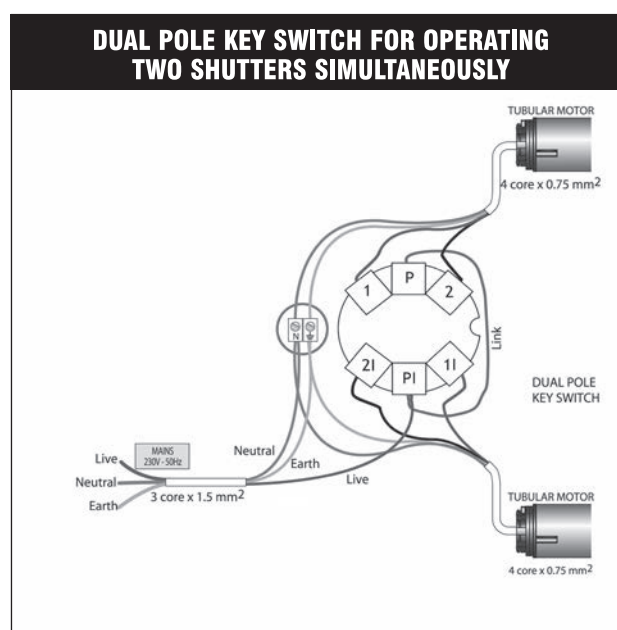
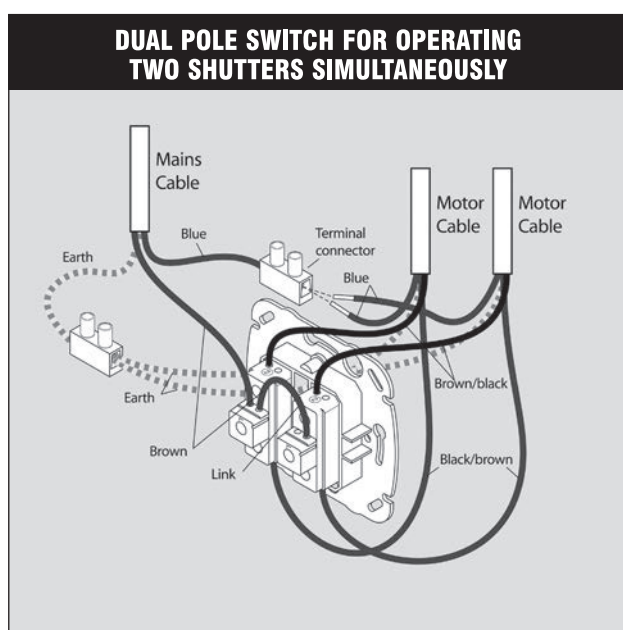
- 1 Disconnect power to motor before undertaking any work.
- 2 Only one motor to be attached to a single pole switch.
- 3 A sequencing relay / group controller is required when operating one door by more than one switch.
- 4 Safety measures must be provided when doors are operated from out of sight of the main switch.
- 5 Group commands must be used where multiple motors are to be operated from one switch
- 6 Only approved momentary switches may be used on door installations. Otherwise all guarantees will be made null and void. Surface mounted switches are supplied as standard for all installations.
- 7 Warranty period on switches five year.



## 9.1 Connecting Hold To Run Switches (cont.)



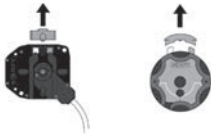
Either method of wiring is acceptable however the junction box method is recommended



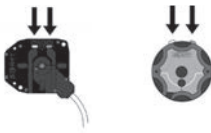
TROUBLESHOOTING		
FAULT	CAUSE	SOLUTION
The shutter/door fails to operate when the button is pressed/key is turned.	<ol style="list-style-type: none"> <li>There has been a power failure.</li> <li>The wrong direction is been selected on the control equipment.</li> <li>The thermal trip in the motor may have activated if the door has been operated several times recently.</li> </ol>	<ol style="list-style-type: none"> <li>Wait for power to come back on or operate the shutter/door with the manual override if installed.</li> <li>Select the correct direction.</li> <li>Allow the motor to cool for approximately 30minutes before attempting to operate the shutter/ door again.</li> </ol>
The shutter/door stops before fully opening or closing, or fails to stop when reaching its final open or closed position.	The limits in the motor have failed to operate or may not have been set correctly.	Contact your installer.

# 10 Setting Motor Limits

1. Ensure the control switch is in the OFF position.



2. Remove the protective cap from the head of the motor.

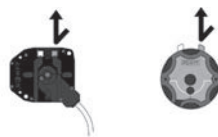


3. Fully depress both limit switch push buttons. They will automatically lock in the down position. Operate the control switch and check the direction of rotation. If it is incorrect, turn the switch OFF, reverse the black and brown motor direction wires and try again.

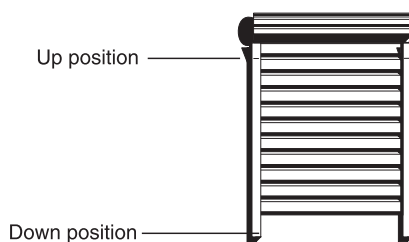


4. Identify the UP limit switch push button. Press the control switch to the UP direction until the required position is reached then turn the switch OFF.

Unlock the UP limit switch push button by depressing and releasing it to set the limit.

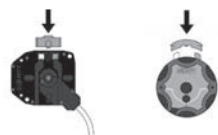


5. Repeat the above operation to set the lower limit.



*Two positions have to be set :  
the UP and DOWN positions, this is where the motor will stop automatically.*

6. Check with the control switch that the motor stops at the UP and DOWN positions just set.



7. Refit the protective cap (take care not to depress the push buttons).

**When checking the operation of manual override turn off the power prior to operating crank handle.**



# 11 Anti-fall Back Devices

## Introduction

If required the shutter you have received will have been supplied with an anti-fall back device. This anti-fall back device could either be an anti-fall back spring or an anti-drop brake depending on the type of shutter and the method of operation. If a safety device has been supplied there will be labels located inside the shutter box indicating which safety device has been installed.

Please find following information on the anti-drop brake and anti-fall back springs to assist you with the installation of the shutter.

## 11.1 Anti-drop Brakes Electric Operation

### General information

The anti-drop brake supplied is essentially a bearing which allows the axle to rotate freely until the axle reaches a speed of approximately 22 revolutions per minute. When the axle speed reaches 22RPM the anti-drop brake will lock preventing the axle from rotating. If the brake is also fitted with a micro switch this will cut the power to the motor at the same time as the brake locks.

Please note this device will only function correctly when the shutter box is in the standard upright position.

### Installation

If an anti-drop brake is required it will be supplied attached to the axle.

The anti-drop brake may have a micro switch fitted. If this is the case it will need wiring as per the wiring diagram.

If there is no micro switch fitted there is no requirement for any further set up and the shutter can be installed as normal.

### Resetting after activation

In the event of an anti-drop brake activation you must follow the procedure below to reset the brake:

For safety reasons please ensure there are no people or objects in the shutter opening before and during the process of resetting the anti-drop brake.

Check the fixings which hold the shutter box in place to ensure the activation process has not weakened any of the fixings.

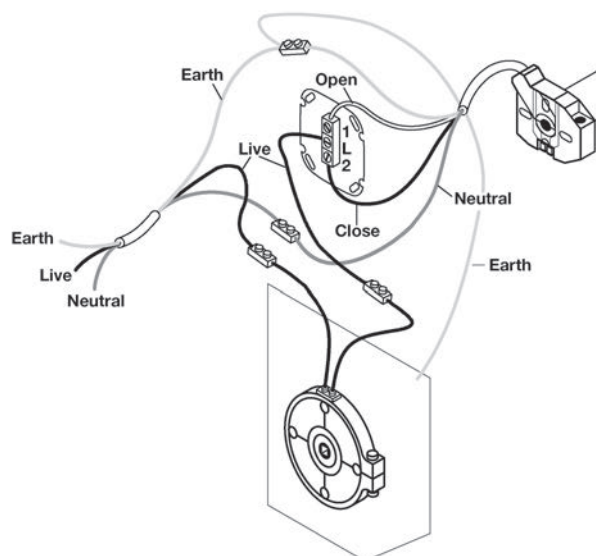
Make sure there are no objects trapped in the shutter guide rails or shutter box which could be preventing the shutter from moving.

If the anti-drop brake has a micro switch fitted you will need to isolate the mains power supply to the shutter. Unwire the anti-drop brake from the wiring circuit and link the neutral from the motor to the neutral from the power supply.

Once this is complete, or if the anti-drop brake does not have a micro switch fitted, you can attempt to operate the shutter in the up direction.

When you attempt to operate the shutter in the up direction there are three possible outcomes:

Wiring a safety brake into a circuit with a motor and a standard switch



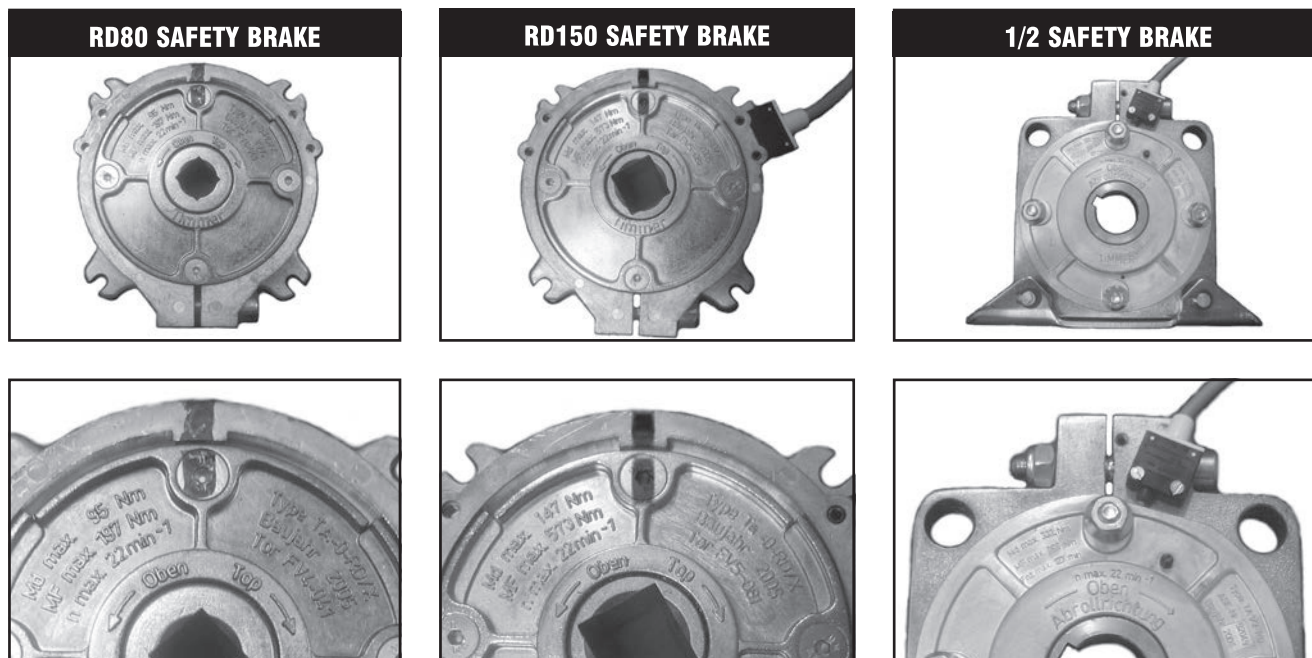
## 11 Anti-fall Back Devices (cont.)

CURTAIN ACTION	CAUSE	SOLUTION
Curtain goes up and stays up	The shutter is OK.	Lower the curtain to its fully closed position then reset the anti-drop brake as described below.
The curtain will not go up	1) The wiring has been damaged or a wire has been disconnected.  2) If you can hear the motor turning but the axle is not rotating the motor gear box may have failed or the drive wheel has detached from the axle	1 Check the wiring to ensure there are no damaged cables and every wire is connected correctly.  2 Carefully release the collar on the anti-drop brake using a 6mm allen key. As you release the collar the curtain will begin to lower to the ground. Once the curtain has reached the ground you will be able to remove the axle assembly, repair / replace the faulty item then reset the anti-fall back device.
The curtain goes up but when you stop the shutter it begins to fall again	The brakes in the motor may have failed	Press the up button to raise the curtain then quickly press the down button to lower the curtain to the ground in a controlled manner. Once the curtain has reached the ground you will be able to remove the axle assembly, repair / replace the faulty item then reset the anti-fall back device.

To reset the anti-drop brake you must rotate the inner section of the brake until the black lines on the inner and outer sections of the anti-drop brake are in line with each other. If you are unable to rotate the inner section release the collar using a 6mm Allen key. Once realigned the collar should be tightened using the appropriate amount of torque as stated right. If the collar is not tightened to the correct amount it will prevent the safety device from working correctly.

	TORQUE
RD80 Anti-drop brake without micro switch	15 Nm
RD150 Anti-drop brake with micro switch	8 Nm
1/2 Anti-drop brake with micro switch	20 Nm

### Correct Alignment Of Safety Brakes



If after activation you are unable to reset the brake as shown above you will need to reorder a replacement brake, which will be chargeable. Once you have swapped the brakes over the activated brake should be returned to your supplier for inspection. As long as the safety brake has not been damaged the brake will be reset and returned to you for use as a spare.



## 11 Anti-fall Back Devices (cont.)

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### Safety Brake Critical Checks



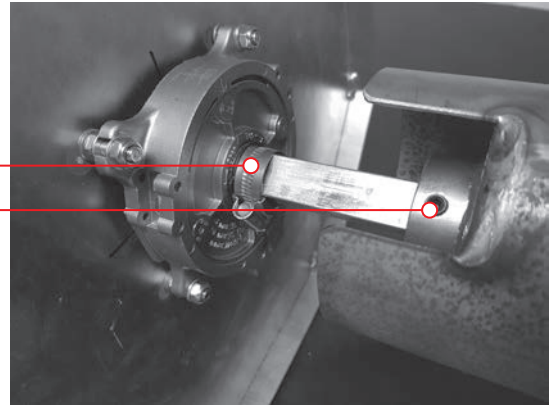
First check is to make sure the safety brake is positioned so the clamp is at the bottom.

You must check the following components are secured;

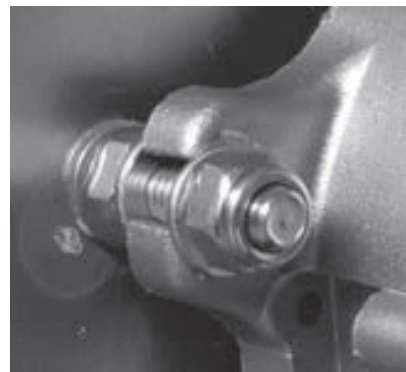
Jubilee clip

Grub screw

Set screw and washer (located through the back of the safety brake into the shaft)



The endplates should come preassembled with 4 x M6 bolts, each one should have 3 x M6 washers, 1 x M6 half nut & 1 x M6 half locking nut. It is critical that the safety brake is packed off from the endplate



**Not completing the above checks could lead to serious injury & harm.**



# 11 Anti-fall Back Devices (cont.)

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## 11.2 Anti-Fall Back Springs Electric Operation

### General information

The anti-fall back spring is supplied in addition to the standard motor and will be supplied fitted in the opposite end of the axle to the motor. The spring supplied will prevent the curtain from falling in the event of a motor failure.

### Installation

If an anti-fall back spring is required it will be supplied inside the pre-assembled shutter box.

If an anti-fall back spring has been supplied fitted in the axle you must tension the spring as follows before you can attach the curtain to the axle:

- 1 Connect the motor to either a test lead or the remote control. The remote control must be in commissioning mode see separate instructions.
- 2 Remove and retain the limit cover cap from the motor. Fully press in the limit switches on the motor. Using either the test lead or remote control rotate the axle in the close direction (see drawing A and label on axle).
- 3 The number of turns required will be clearly stated on a label.
- 4 When complete the axle will be fully tensioned and will be ready for installation and attachment of the curtain in the fully closed position.

### Replacing the motor or anti-fall back spring

- 1 Lower the curtain to the fully closed position.
- 2 Disconnect the curtain from the axle.
- 3 As the axle contains an anti-fall back spring the tension must be removed from the spring before attempting to remove the axle. To remove the tension you must rotate the axle in the direction which would open the door the number of turns stated on the label provided.
- 4 Isolate the mains power then disconnect the motor leads from the control unit.
- 5 Remove screws securing motor octagonal fixing plate and lever out retaining tabs with a screwdriver
- 6 Remove split pin from the spring shaft and slide shaft free of fixing plate.
- 7 Lift axle out
- 8 If you need to replace or remove the motor, unbolt the octagonal fixing plate and drill out rivets in the axle securing the motor, make sure that any loose drilled out rivet 'slugs' are removed from inside the axle to prevent them making an unnecessary rattling noise.
- 9 The anti-fall back spring are also held in place by rivets and should be removed in a similar manner.
- 10 Replace the motor / anti-fall back spring, re-rivet and refit the octagonal fixing plate to the motor end.
- 11 Install the axle assembly remembering to tension the anti-fall back spring as per the instructions above.
- 12 Re-connect motor lead to the control unit.
- 13 Reset motor limits.
- 14 If a remote control has been supplied you will need to follow the set up procedure outlined in section 11.2.

## 11.3 Anti-Fall Back Springs (Double Spring) Spring Loaded Operation

### General information

The anti-fall back spring is supplied in addition to the standard spring so a spring will be supplied fitted in

## 11 Anti-fall Back Devices (cont.)

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both ends of the axle. The second spring supplied will prevent the curtain from falling in the event of a spring failure.

### **Installation**

If an anti-fall back spring is required it will be supplied inside the pre-assembled shutter box.

If an anti-fall back spring has been supplied fitted in the axle you must follow the standard instructions.

### **Replacing a spring**

In the event of a spring failure the curtain will be lowered to the ground.

If there is only one spring in the axle the curtain can be detached from the axle and the axle assembly removed to enable the spring to be replaced.

If there are two springs in the axle and one of the springs fails the second spring will still be under tension and so care must be taken whilst removing the axle assembly using the procedure below:

If possible lock the spring which is still under tension using a spring retaining pin (supplied with every spring loaded shutter, removed during installation). The curtain can be detached from the axle and the axle assembly removed.

If you are unable to lock the tensioned spring you must hold the axle whilst detaching the curtain then carefully release the axle which will rotate until the tension in the spring has been released. The axle assembly can now be removed.

## Notes

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