

---

# SHUTTER INSTALLATION INSTRUCTIONS

OCTOBER 2016

---



All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the written permission of SWS UK.

# 1 Contents

<b>GENERAL</b>		
<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>6</b>
	4.1 General information	6
	4.2 Repairing / Dismantling	7
<b>5</b>	<b>Tools/Fixings required</b>	<b>8</b>
<b>6</b>	<b>Preparation for the Installation</b>	<b>9</b>
<b>INSTALLATION INSTRUCTIONS</b>		
<b>7</b>	<b>Built-On Shutters</b>	<b>10</b>
	7.1 Manual Belt Operation	10–15
	7.2 Rod Crank Operation	16–19
	7.3 Spring Loaded Operation	20–24
	7.4 Electric Operation	25–29
<b>8</b>	<b>Built-In Shutters</b>	<b>30</b>
	8.1 Rod Crank Operation	32–33
	8.2 Spring Loaded Operation	34–36
	8.3 Electric Operation	37–39
<b>9</b>	<b>Insurance/Police Approved Built-On Security Shutter</b>	<b>40–44</b>
<b>10</b>	<b>Traditional Commercial Shutters</b>	<b>45</b>
	10.1 Spring Loaded Operation	46–49
	10.2 Electric Operation	50–54
<b>APPENDIX</b>		
<b>11</b>	<b>Electric Control Options</b>	<b>55–66</b>
	11.1 Connecting hold to run switches	55–56
	11.2 Connecting the remote control	57–65
	11.3 Alternative control methods	66
<b>12</b>	<b>Setting Motor Limits</b>	<b>67</b>
<b>13</b>	<b>Anti-fall Back Devices</b>	<b>68–71</b>
	13.1 Anti-drop Brakes	68–69
	13.2 Anti-fall Back Springs (Electric Operation)	70
	13.3 Anti-fall Back Springs (Spring Loaded Operation)	70–71
<b>14</b>	<b>Sloping Bottom Slats</b>	<b>72</b>
<b>15</b>	<b>Removable Guide Rails</b>	<b>73</b>
<b>16</b>	<b>Technical Details</b>	<b>75</b>

## 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!



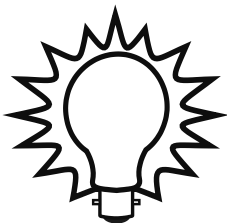
**ATTENTION**  
Risk of material damage!

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

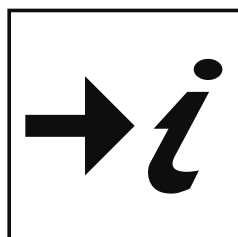


**Operational check:**

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 on 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

---

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**
- **Countersunk posidrive type fixings or similar, with appropriate masonry drill bits and rawl plugs for guide rails and shutter box**
- **Guide rails and end plates require at least 2 1/2 inch 10s or 12s twin threaded screws with brown rawl plugs**
- **To secure the shutter box to the wall use at least 1 1/2 inch 8s screws with red plugs. A 250mm long masonry drill bit will be required**
- **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.**



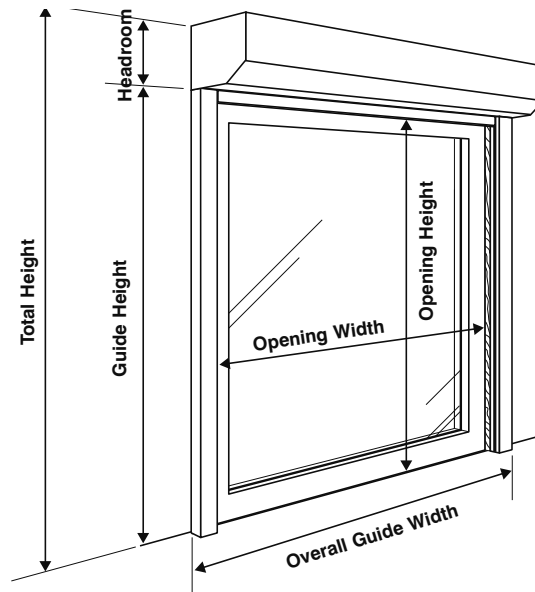
# 6 Preparation for the Installation

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.

# 10 Traditional Commercial Shutters

## 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

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

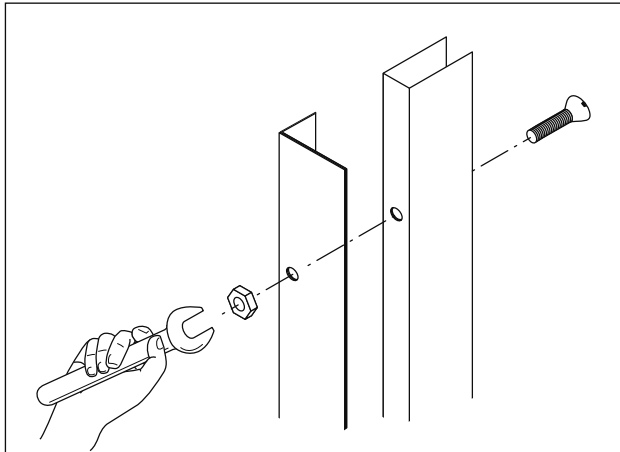
Keys for bottom slat locks are packed in a bag which is taped to the bottom slat.

Accessories are packed in a separate box.

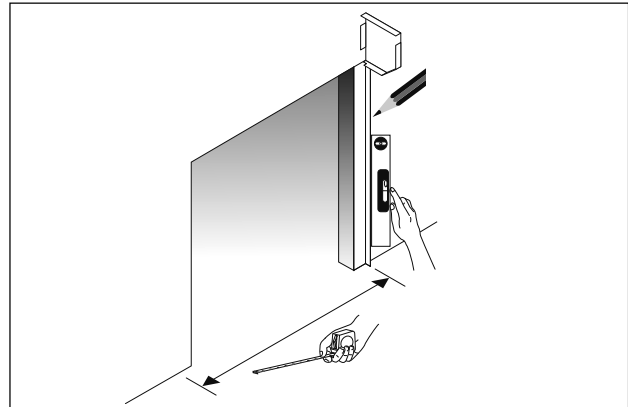
If applicable angle & packer are usually packed with the guide rails.

## 10.1 Spring Loaded Operation Installation Instructions

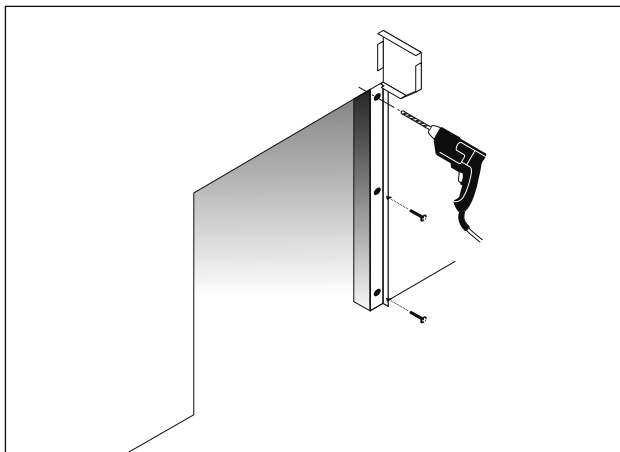
Before you begin installing the shutter please ensure you have read pages 4–9.



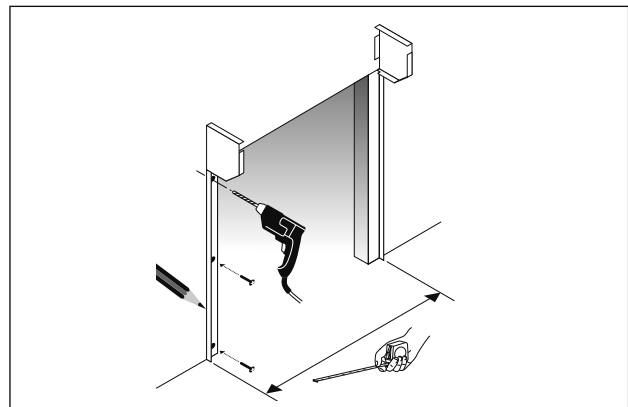
**1** The channels are supplied with the angles attached these must be removed.



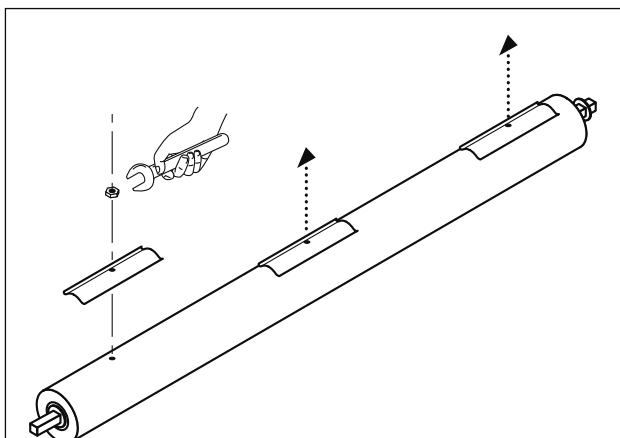
**2** Measure the opening to determine the location of the first length of angle. If the floor is sloping you must fit the higher side first. Fix the angle to the wall.



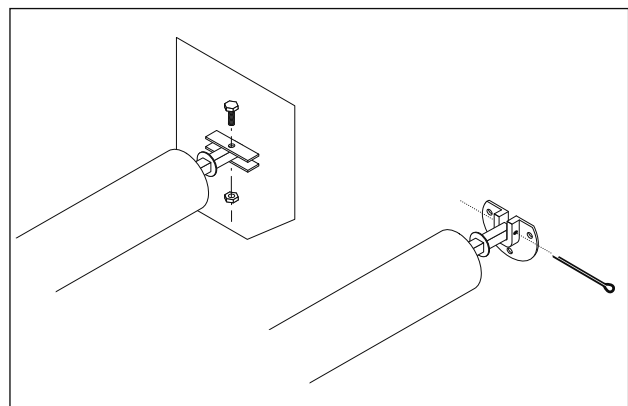
**3** Offer angle up and fix to wall ensuring vertical (use all fixing holes provided)



**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.

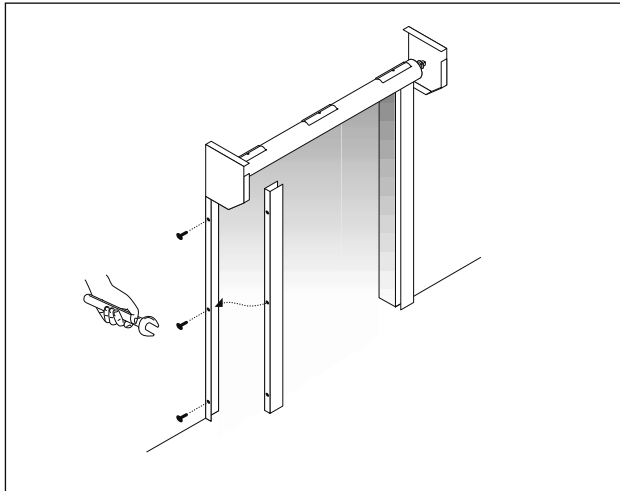


**5** Remove the attachment strips from the axle.

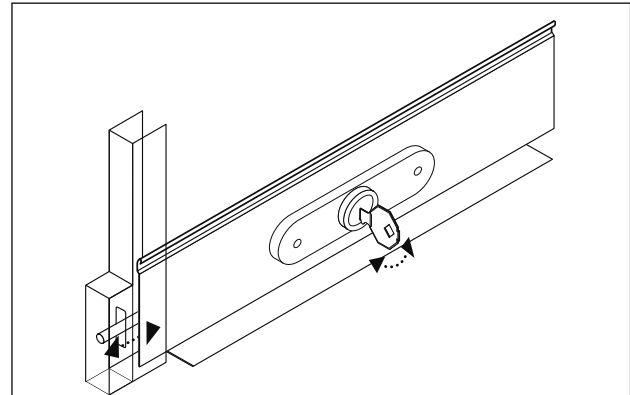


**6** Attach the axle to the end plates using the fixings provided. You must ensure that the bolts located along the length of the axle for curtain attachment will be available for step 11.

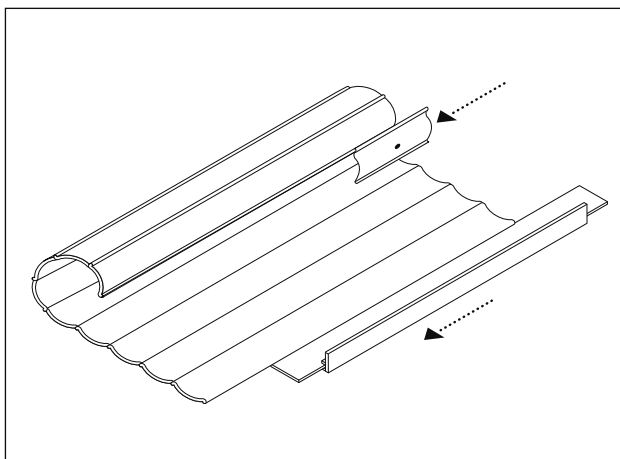
## 10.1 Spring Loaded Operation Installation Instructions (cont.)



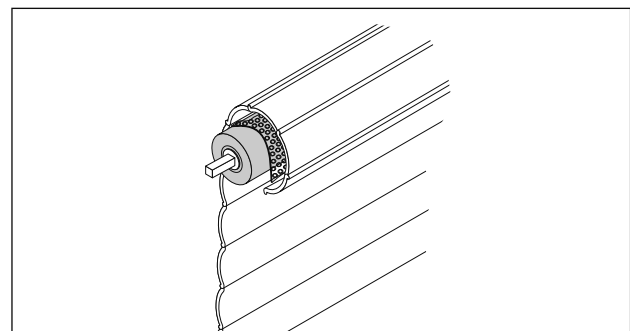
**7** Attach the channels to the angles.



**8.** 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.



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

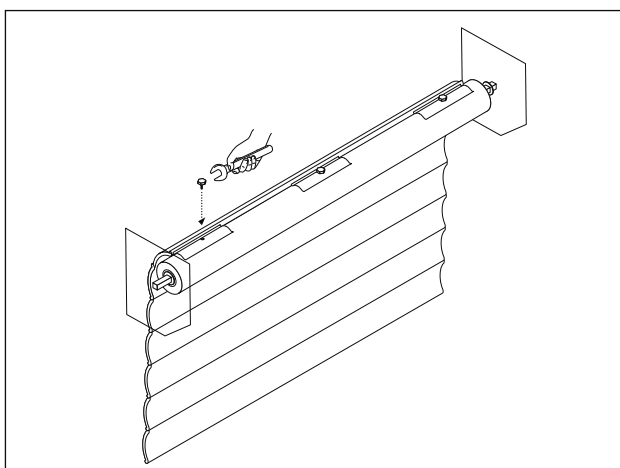


**⚠ RISK OF MATERIAL DAMAGE!**

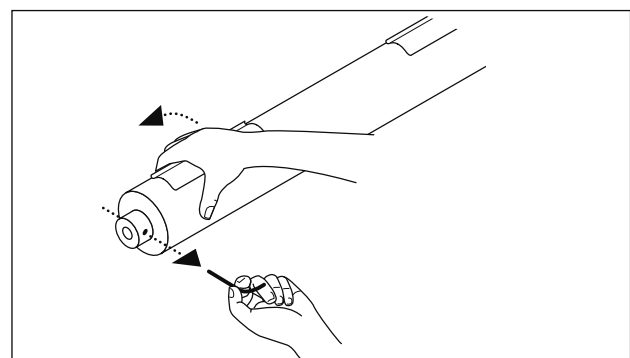
**10** Cover the axle with bubble wrap or a similar material to prevent the curtain from being damaged during the curtain loading process. Carefully load the curtain over the axle.



**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.



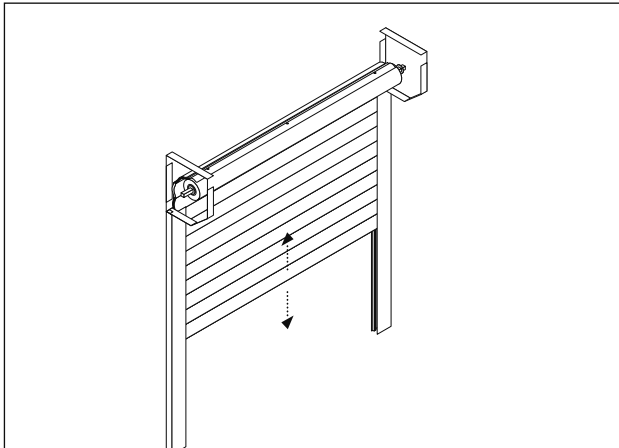
**RISK OF PERSONAL INJURY!**

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

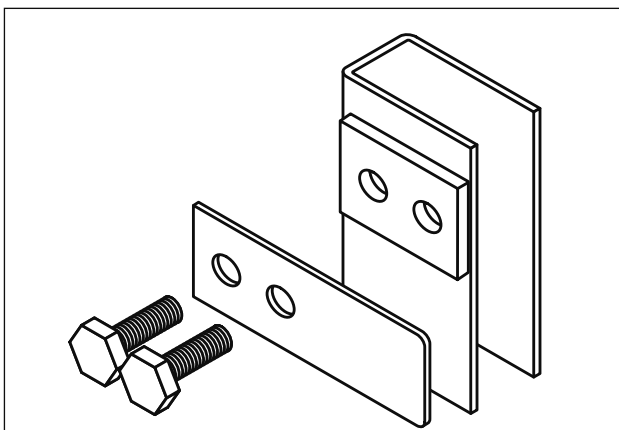


**TIP** - Lock the bottom slat to prevent the curtain from lifting and the axle from turning

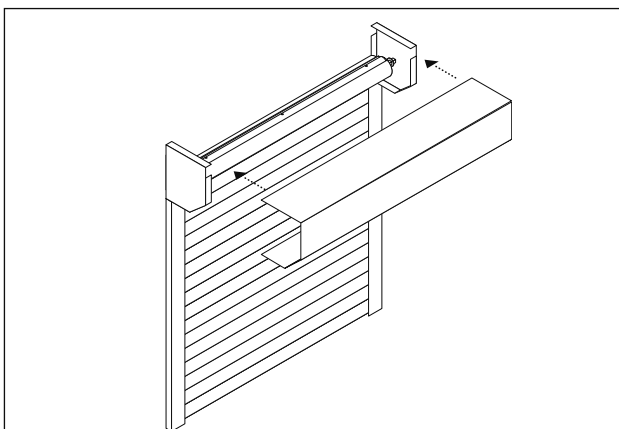
## 10.1 Spring Loaded Operation Installation Instructions (cont.)



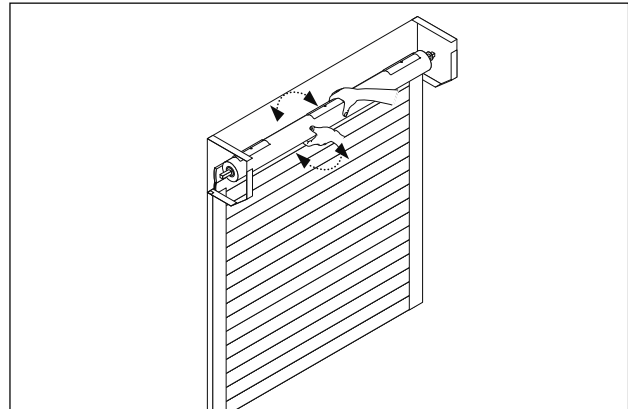
**⚠ RISK OF MATERIAL DAMAGE!**  
**13** Test the operation keeping hold of the bottom slat at all times.



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



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



**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.

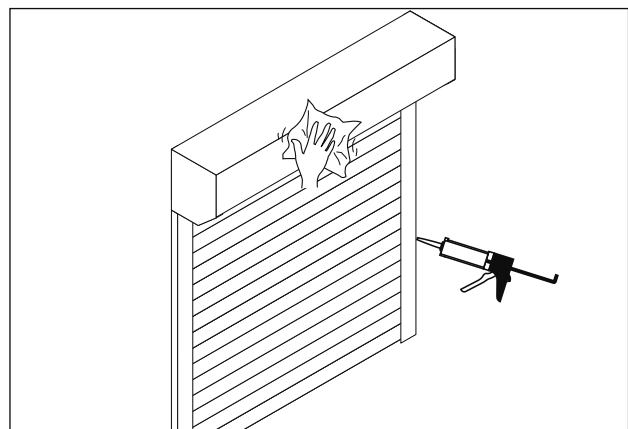
Once adjusted feed the curtain back into the guide rails and test the operation. Repeat this process until the spring contains the correct amount of tension.

**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.



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

## **10.1 Spring Loaded Operation** Installation Instructions (cont.)

---

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.**