

SeceuroShield Shutter Installation Instructions

Always check on delivery that the order details are correct and the shutter is undamaged, especially **before removing any existing shutters**.

Sequence of Installation & Contents

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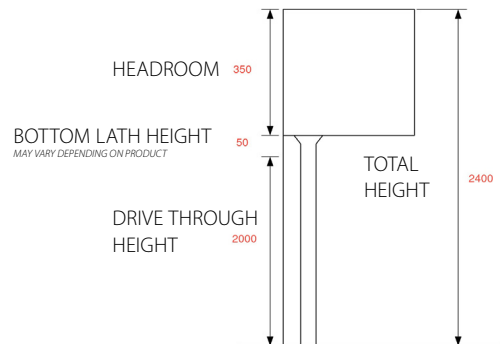
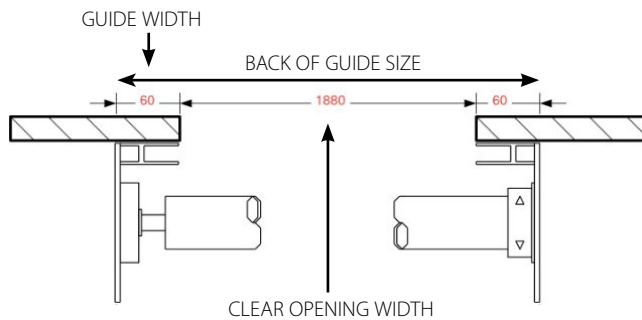
01. PRE-INSTALLATION & COMPONENT CHECK

Check:

- i. Delivery note and number of packages
- ii. Check for any damage to the guide rails or the outside of the curtain
- iii. Assembly drawing
- iv. Shutter dimensions/colour
- v. Opening dimensions/clearance
- vi. Components/accessories

Do not proceed further with the installation unless you are sure that the shutter is the correct size, and all components are present.

Example Assembly Drawing



Parts Common to Each Installation

- 01. Axle assembly
- 02. Guide rails
- 03. Curtain
- 04. Box assembly
- 05. Fittings kits*
- 06. Bearings*

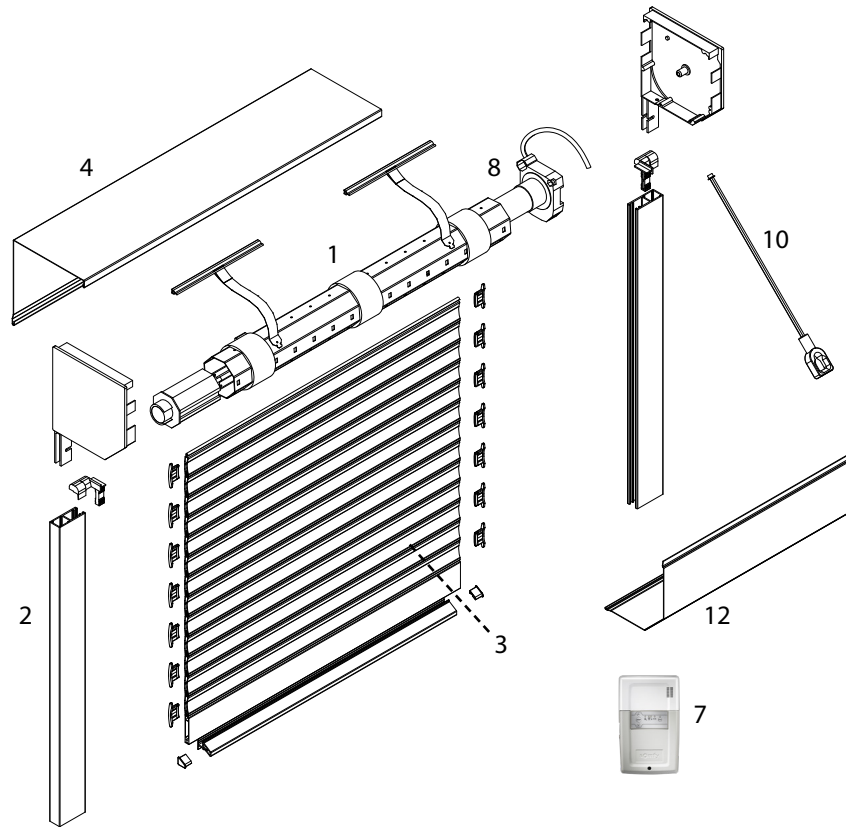
Parts Dependent on Configuration

- 07. Control unit and cables
- 08. Motor (only required for electrical operation)
- 09. Override kit
- 10. Switch

Parts Dependent on Optional Extras

- 11. Hood
- 12. Hood fitting kit

*Supplied in Accessory Pack



Recommended Fixings (not supplied)

Note: When installing the shutter, you must check the loading capacity of the fixings you are using.

Structural Material	Minimum Fixings	Recommended Fixings for Larger/High Usage Shutters
Timber Frame	M8 x 70 coach screws	M10 x 100 hex heads
Steelwork	Tec screws M8 x 10mm hex head or dome head bolts which must be tapped into the steelwork	M10 x 25

Recommended Tools for Assembly

- Drill with pneumatic/hammer action to take the drill bits used
- 7mm, 10mm & 22mm masonry bits up to 400mm long (or wall thickness)
- 3mm, 4.2mm, 10mm & 13mm metal drill bits
- Countersunk pozi-drive type fixings or similar with rawl plugs
- Screw drivers and wire strippers
- 4mm & 6mm Allen keys
- Pliers
- Tape measure
- Tin snips
- Spirit level
- 3 & 4 core plugs
- 3 amp plug
- Motor test lead
- Hacksaw
- Pop riveter (4mm brown or white rivets)
- Step ladders
- Silicone gun with brown, white or clear silicone
- Adjustable bevel

Safety Obligations

Your safety, your end user's safety and that of the general public are our primary concern. To that end, please read, understand and follow our advice. 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.

Site Installation Safety Guidance

This checklist is not exhaustive, but a guidance on the minimum amount of safety levels required. Your company needs to comply with relevant safety directives to ensure your and others' safety. Modern building sites are safe places to work and they will simply not allow an installation to proceed if they are not in agreement with your company's proposal for installation.

- Relevant work site induction procedures are complete. Permits to work have been obtained as required.
- Method statements and risk assessments have been read and understood.
- Appropriate Personal Protective Equipment (PPE) to be used.
- Site specific hazards are understood and mitigated.
- Work area cordoned as appropriate.
- Other trades or persons in area to be briefed as to ongoing installation.
- Where appropriate, use motorised work platforms for working at height (scissor lifter).
- Keep work area tidy and free from trip hazards, etc.

Risk Assessment

Prior to any installation, commencing a full and adequate risk assessment completed by sufficiently trained personnel must be completed. This should consider such aspects as:

- Foreseeable misuse of the shutter in situ.
- Structural failure in normal use.
- Structural failure due to misuse.
- Electrocution and fire from electrical faults.
- Control system and safety device failure.
- Crush at main closing edge (although the operating forces characteristic is declared within the CE/ UK CA mark and declaration of performance, the shutter should be force tested referencing EN 12445 & EN 12453 prior to leaving site).
- Shear and draw in at moving part interfaces.
- Vehicle impacting door.
- Shutter impacting vehicles.
- Trip hazards at guide rails / photocell posts.
- Corrosion and wear or tear causing failure.

This list is not full and should only serve as a guideline; every installation requires a risk assessment specific to that site/product.

Conformity and CE/UKCA Marking

To comply with the Machinery Directive the shutter used in the installation must have a Declaration of Performance from the manufacturer.

- On completion of the installation the installer must provide a Declaration of Conformity and apply a CE/UKCA mark giving details of the installations to the shutter/motor and controller combination, which is now classed as a machine.
- The installer must issue to the customer a Declaration of Conformity, operating and maintenance instructions on completion of the installation.
- The installer must hold copies of both the Declaration of Performance and the Declaration of Conformity on a technical file for inspection by the relevant authorities.
- If any of the above requirements are not fulfilled, the installation is illegal.

Please ensure for your own safety and peace of mind that whoever installs your electric motor and controller is both willing and able to fulfil these requirements; if they are not – do not use them. As a member of the DHF we CAN and WILL install your motor and controller safely and legally.

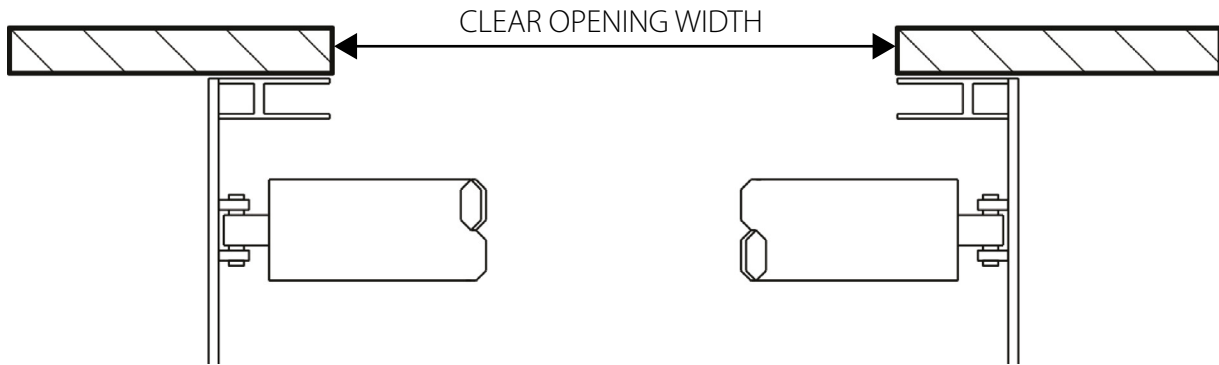
Installation Criteria

The structure of the opening must be adequate to take the weight of the shutter and suitable to take the appropriate fixings. The strength of the fixings must be enough to support a minimum weight of 25kg per square metre of the roller shutters. Be aware that this is a dynamic loading.

There are many configurations of the SeceuroShield available, but these two configurations represent the most common variants. Any other configurations will be a variation on the diagrams shown below.

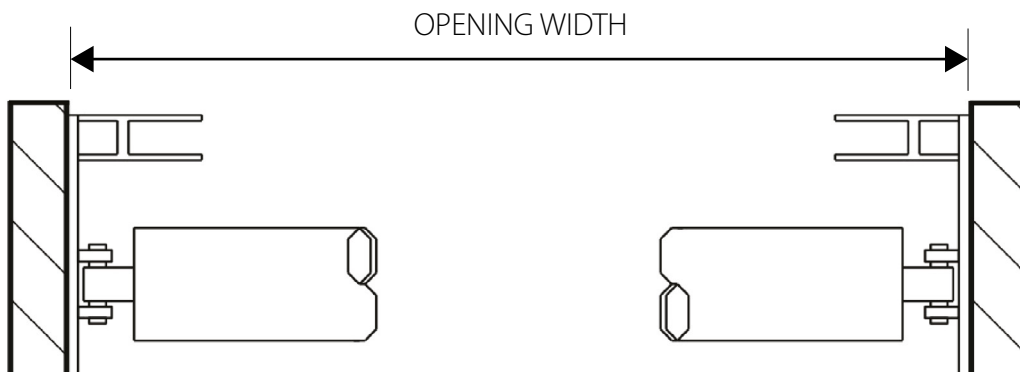
Installation Around an Opening

This installation arrangement tends to be the most common. You may be aware of it as ‘face fix’.



Installation Within an Opening

This installation arrangement tends to be less common than installations around an opening. You may be aware of it as a ‘reveal fix’.



COMPLIANCE WITH LPS 1175: ISSUE 5 - INSURANCE APPROVED SECEUROSHIELD 3801

- The shutter can be installed internally and externally both in the reveal and face fixed.
- **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 guides base.
- The first and last holes at the ends of the guide rails must be drilled at least 100mm from the end of the guide rails
- Structures and fixing as shown:
- All switches, key switches and remote control equipment must be installed on the inside of the building 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 shutter.

Structural Material	SeceuroShield 3801
Block or Brickwork	No.12 x 2" screws with appropriate plugs.
Steelwork	No.10 x 1" pozi pan head screws or M8 x 10mm hex head/dome head bolts. M8 bolts & nuts 5 x 25mm Tec screws (dependant on shutter size)

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

03. PREPARE THE OPENING

Check:

- i. Structure is sound/even & can carry the weight of the shutter and suitable to take the appropriate fixings. The strength of the fixings must be enough to support a minimum weight of 25kg per square metre of the roller shutter. Be aware that this is a dynamic loading.
- ii. No obstacles in fitting footprint e.g. no sharp objects, pipes, cables, bumps etc. sticking out from the pillars, lintel or header to twist the guides, distort the box or catch on the curtain
- iii. If necessary install a sub-frame to ensure secure, flush and level fixing. If the surface is not level, a sub-frame may be required. Painted timber can be used or as an alternative, 25/50 x 50mm aluminium packers can be used.
- iv. Floor or window sill is flat/level.

04. FITTING THE GUIDES AND BOX ASSEMBLY

All SeceuroShield shutters can be installed by fitting the guides and box assembly to the structure first. Once this has been completed, please go to the relevant page based on the shutter's operation.

- i. If a 45° box cover has been supplied, remove it from the box (A).
- ii. File the top of the guides at an angle to create the optimum lead in to the curtain. If the shutter is being face fitted, remove the lip from the box back which overlaps the guide rails (B).
- iii. Locate the guide rails. If the shutter has been supplied with a locking bottom slat, ensure that the locking slots on the guides are at the bottom and slide these onto the lugs protruding from the box assembly (C).

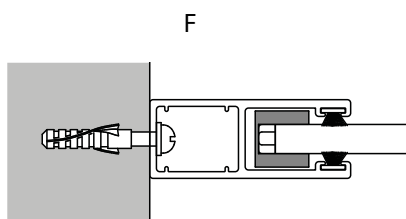
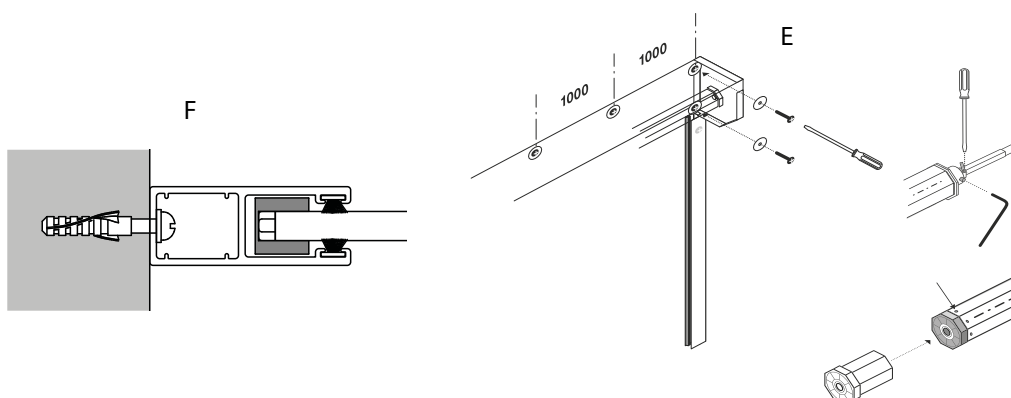
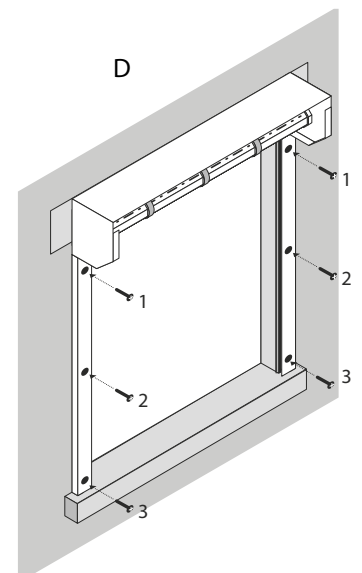
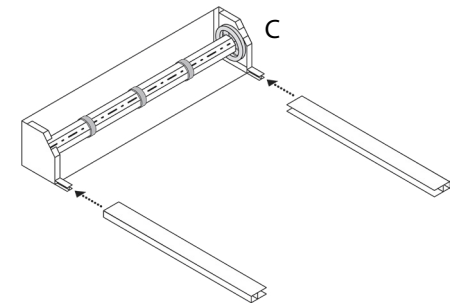
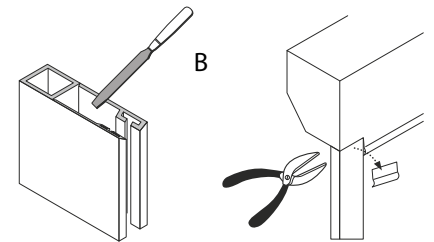
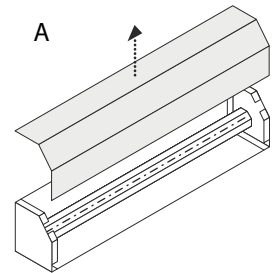
FITTERS' TIP: To help protect the lugs from snapping off, drill and rivet the guides to the back of the lugs, using a 4mm drill and rivet.

- iv. Carefully move the complete unit to the opening, ensuring that the lugs do not snap off the box ends.

NOTE: If the shutter is too large to be lifted up as one unit, offer one guide up at a time and fix to the structure, then fix the shutter box.

- v. Offer the shutter to the opening and centralise. use a spirit level to ensure the box is horizontally level and that both guides are vertical. When confident that everything is level, mark the guide locations and fixing points. Make sure to measure the opening to ensure the sizes correspond with shutter delivered.
- vi. Remove the film from the top of the box. Starting with the top holes, fix the guide rails ensuring that they are vertical. First, create a 7mm hole that penetrates through and then enlarge the front hole to 13mm (D).
- vii. To fix the box, please use the recommended fixings and space the fixings 1000mm apart. Once the box has been fixed, check the dummy end and ensure that it is securely located within the axle, making sure to tighten the grub screws (E).

NOTE: If the shutter is to be installed in the reveal, the guides should be fixed in the same way as Drawing F. The shutter assembly should then be fixed through the top of the box, directly into the lintel.



05. MOTORISED OPERATION INSTALLATION

For motorised commercial shutters, the following parts are needed to complete the installation:

General Parts

- i. Assembled shutter box
- ii. Pair of guide rails
- iii. Assembled curtain
- iv. Accessory box

Operation Specific Parts

- i. Override handle (1 per shutter if manual override)
- ii. Override handle clip
- iii. Control Unit
- iv. Switch/Remote

FITTING THE BOX & GUIDES

To fit the box and guides, please follow the instructions on **page 5, section 5** and then continue below.

INSTALLING THE CURTAIN & SETTING MOTOR LIMITS

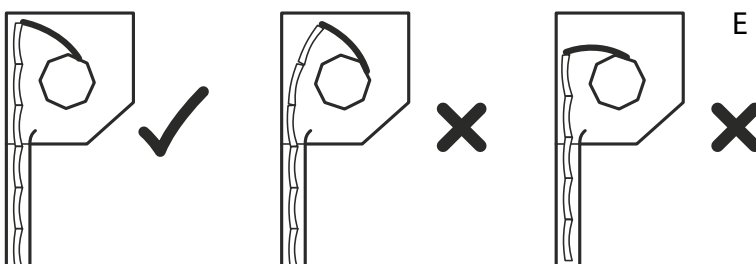
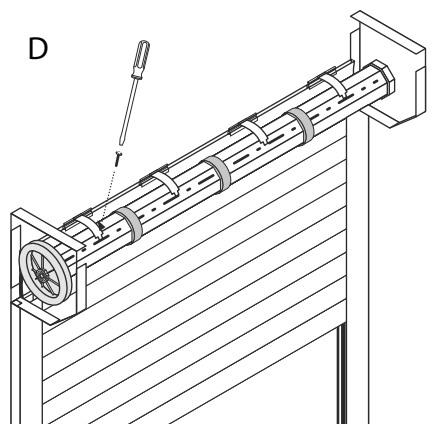
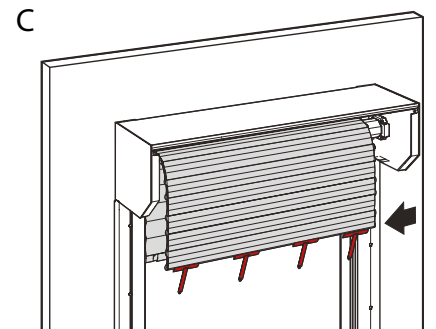
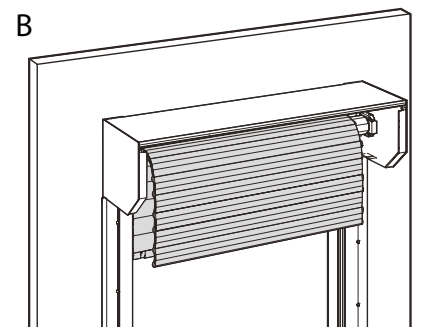
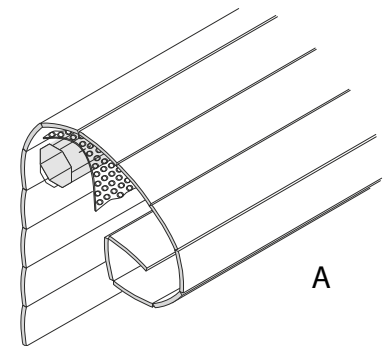
- i. To prevent the risk of material damage when loading the curtain, it is important to cover the axle with bubble wrap or a similar material (A).
- ii. With the axle covered, lift the curtain and start to slowly feed the bottom slat and half the curtain over the axle and slowly down into the guide mouths (B).
- iii. Slide all of the attachment straps supplied onto the top slat of the curtain and evenly distribute them over the full width of the curtain (C). If collar attachments have been supplied, one should be fitted each side on all attachment straps.
- iv. 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.
- v. Connect the attachment strips to the axle using the No.10 X 3/4 Pozzi Pan fixings supplied. If collars have been supplied, fix these using the No.8 X 1/4 Pozzi Flange fixings (D).

IMPORTANT: We always recommend using a test lead when setting the motor limits of any shutter. **Failure to do so may result in damage or injury to your person.** To use a test lead:

- vi. First, attach and connect the motor cable to the test lead.
- vii. Remove any blocks that may have been placed under the shutter when attaching the curtain to the axle.
- viii. Drive the axle to the fully closed position and set the limit.

NOTE: Depending on the motor that has been supplied, instructions to set the motor limits may vary. **Please ensure that you read the correct instructions for the motor you've been provided.**

- ix. At this stage, the height of the curtain needs to be checked. When the curtain is pushed towards the back of the box, the curtain should finish just before the top of the box (E). If not, add or remove slats until the height of the curtain is correct.
- x. Drive the axle to the fully open position and set the top limit. For reference, the bottom slat should remain fully in the guide.
- xi. Test the shutter by running the shutter both to the fully open and fully closed position and fine tune until you are happy with the limits. Finally, connect the motor lead to the control unit.

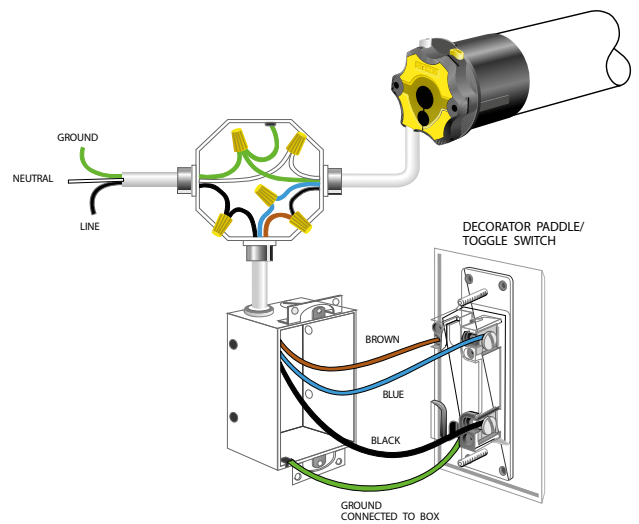


** This drawing is for illustrative purposes only, the locking straps should not be attached at this stage.*

SETTING UP THE ELECTRIC OPERATION

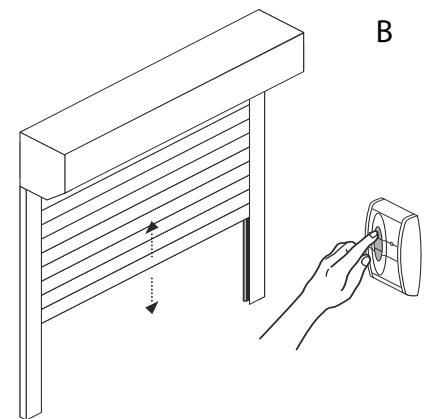
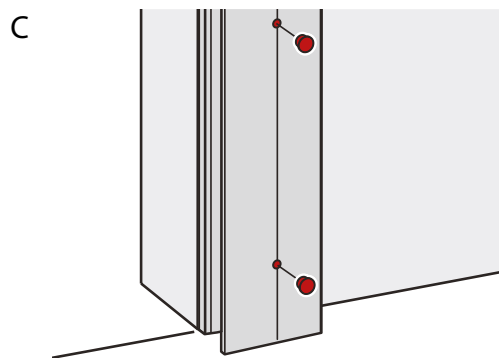
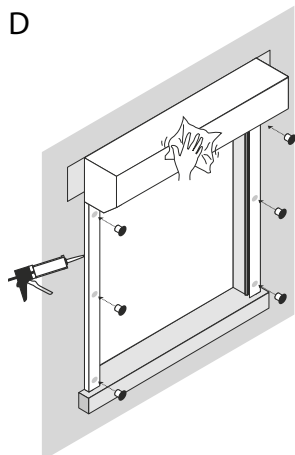
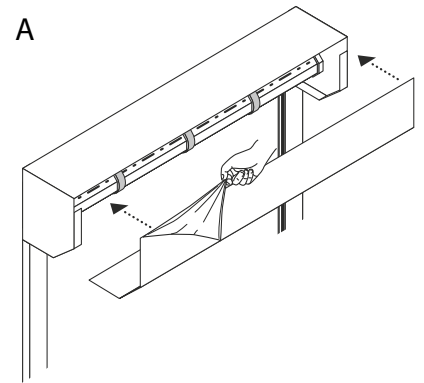
- i. It is recommended that a test lead is used to set the motor's limits. If a remote control is not being used or if no test lead is available, the motor should be wired into the switch supplied.
- ii. If applicable, see **page 19, section 11** to check the anti-fall back device.
- iv. Wire the control method to the shutter, following the instructions supplied. If an anti-fallback device has been supplied with a limit switch this will also require wiring in at this stage (C).

NOTE: Do not wire two or more motors to a single pole switch, as it may cause the motor to malfunction.



COMPLETING THE INSTALLTION

- i. Carefully remove any protective film that may remain on on the box and guides. If the shutter is externally fitted the box lid should be fastened using 4mm rivets which closely match in colour (A).
- ii. Test the operation of the shutter to ensure that the shutter moves freely up and down in the guide rails. At this stage, test whether the shutter stops at the fully open and fully closed presets. If a remote control has been supplied, this should also be tested at this point (B).
- iii. Fit cover caps over the fixing holes in the guide rails (if applicable), then mastic round the edges of the shutter and give it a final clean and wipe down (C & D).



06. SPRING LOADED OPERATION INSTALLATION

For spring loaded shutters, the following parts are needed to complete the installation:

- i. Assembled shutter box
- ii. Assembled curtain
- iii. Pair of guide rails
- iv. Accessory box

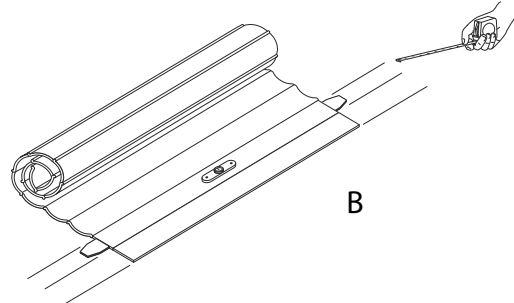
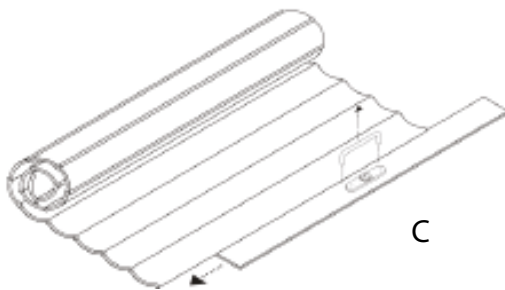
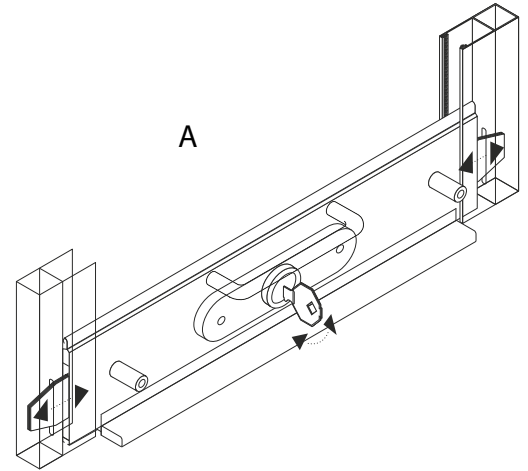
The keys for the bottom slat locks can be found attached to the bottom slat of the curtain. If applicable any angles and packer will be packed alongside the guide rails. In some instance, the bottom slat may be packed with the curtain but detached, this is to prevent damage.

FITTING THE BOX & GUIDES

To fit the box and guides, please follow the instructions on **page 5, section 5** and then continue with the instructions below

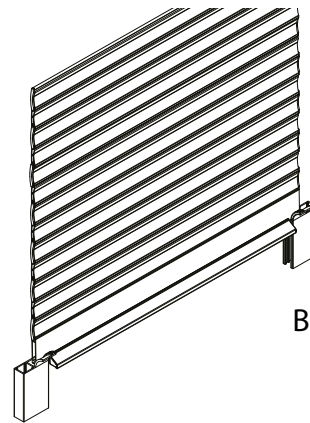
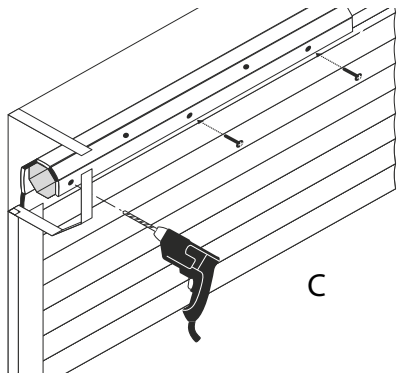
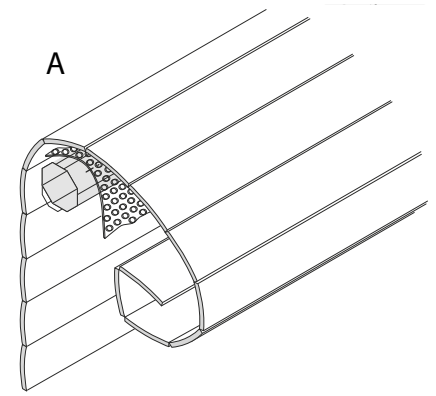
FITTING A LOCKING BOTTOM SLAT

- i. For all spring and lock shutters a locking bottom slat will be supplied as standard. First detach the bottom slat from the rest of the curtain.
- ii. Check that the lock bars will fit into the prepared guide rail keeps. Slide the bottom rail down into the guides and enlarge the keeps if needed (A).
- iii. **NOTE:** If the curtain contains a lock installed in a slat above the bottom slat, please prepare the guide rails accordingly. To do so, measure the distance from the bottom of the curtain to the lock bar then create a hole in each guide rail to suit the lock bar (B).
- iv. To prevent damage to the shutter and the surroundings, remove the handles and stops from the bottom slat and reattach the slat to the remaining curtain (C).



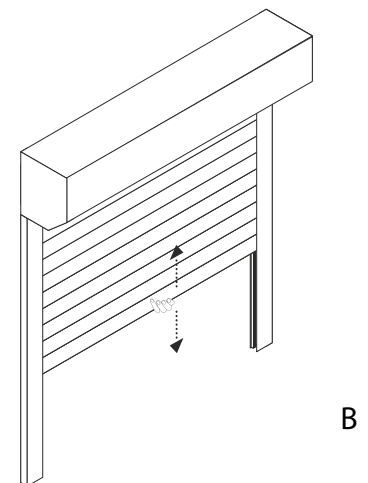
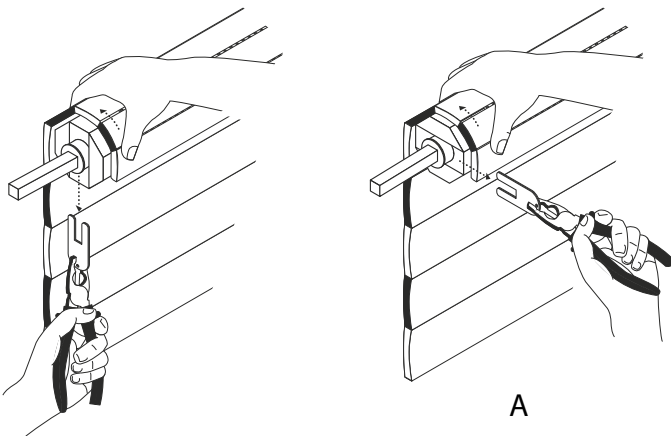
INSTALLING THE CURTAIN

- i. To prevent the risk of material damage when loading the curtain, it is important to cover the axle with bubble wrap or a similar material (A).
- ii. With the axle covered, lift the curtain and start to slowly feed the bottom slat and half the curtain over the axle and slowly down into the guide mouths (B).
- iii. 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.
- iv. Once the curtain is loaded, using the No.10 X 1/2 pozi pan fixings provided, screw the two top slats straight and directly into the axle (C).
- v. Keeping hold of the bottom slat, test the operation of the shutter ensuring that it runs smoothly up and down the guides.
- vi. After the curtain has been installed, we recommend activating the bottom slat lock. Be aware that depending on the specification of the shutter, there may be tension on the spring. Activating the lock will prevent the curtain from lifting or turning the axle.



RELEASING THE SPRING(S)

- i. To secure the axle, turn it in a downwards direction and carefully remove the pin (A).
- NOTE:** If there is tension on the spring, this will cause the axle to turn and may cause personal injury.
- ii. If the shutter contains a second spring (anti-fall back device), only one of the springs should be supplied with a pin. The shutter should be installed in the same way as a standard spring loaded shutter.
- NOTE:** Locking the bottom slat will prevent the curtain from lifting and the axle from turning.
- iii. Test the operation to ensure the shutter runs smoothly. Keep hold of the bottom rail at all times (B).



BALANCING THE SHUTTER

If required, adjust the tension in the spring using one of the two methods below:

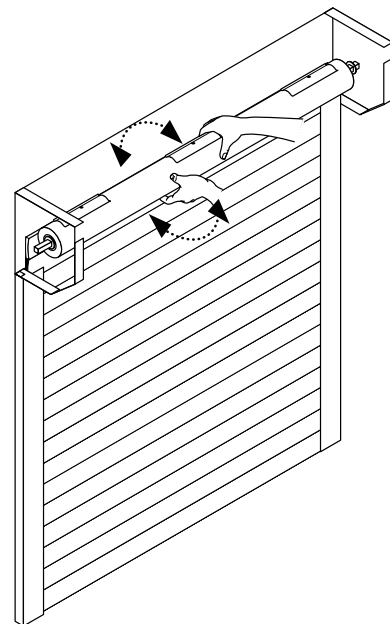
Method 1

- i. 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.
- ii. Allow the bottom slat to come out of the top of the guides so that you can rotate the coil to add or release the tension in the spring.
- iii. To add tension to the spring turn the axle in the down direction.
- iv. To release tension from the spring turn the axle in the up direction.
- v. Once adjusted, feed the curtain back into the guide rails and test the operation. Repeat this process until the spring has the correct amount of tension.

Method 2

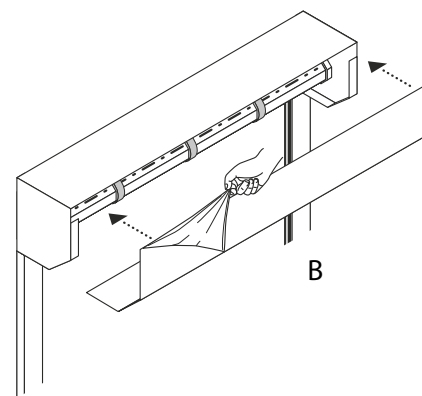
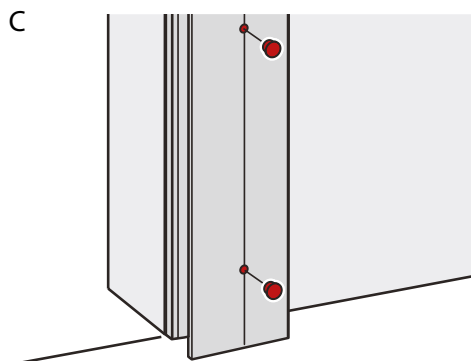
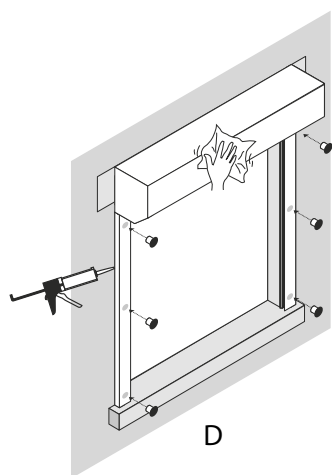
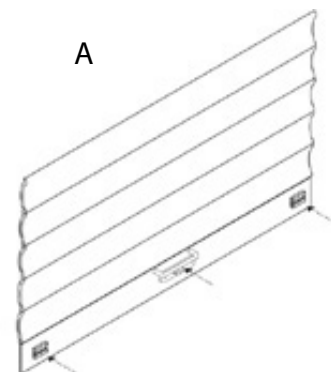
- i. Lower the curtain to the floor. Turn the axle forward and insert the pin in the end of the spring to lock the axle.
- ii. Detach the curtain from the axle.
- iii. Carefully remove the pin from the spring and then add or remove tension as appropriate.
- iv. To add tension to the spring, turn the axle in the down direction.
- v. To release tension from the spring, turn the axle in the up direction.
- vi. Once adjusted, reattach the curtain and replace the pin.

Test the operation of the shutter to ensure that the shutter moves freely up and down in the guide rails.



COMPLETING THE INSTALLTION

- i. Re-attach the stops, handles and bottom slat handles that were removed earlier in the process (A).
- ii. Carefully remove any protective film that may remain on on the box assembly and guides. If the shutter is externally fitted the box lid should be fastened using 4mm rivets which closely match in colour (B).
- iii. Fit cover caps over the fixing holes in the guide rails (if applicable), then mastic round the edges of the shutter and give it a final clean and wipe down (C & D).



07. ROD CRANK OPERATION INSTALLATION

General Parts

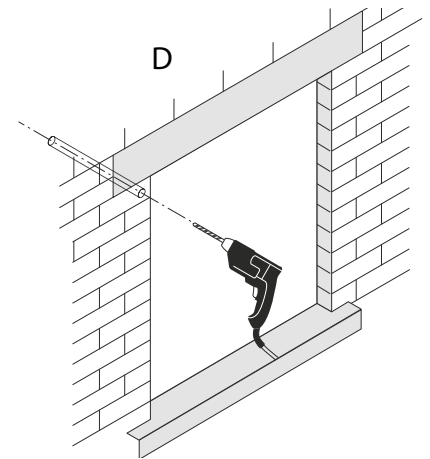
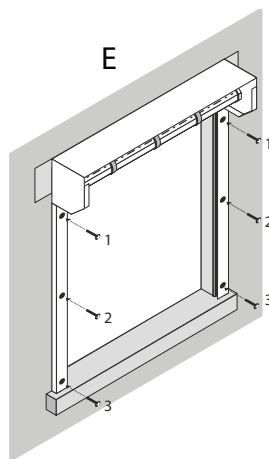
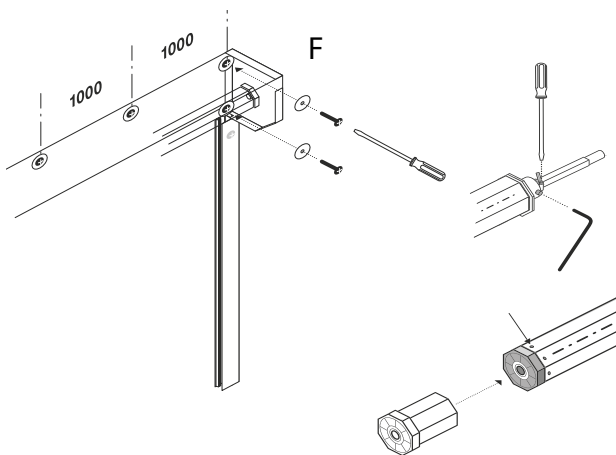
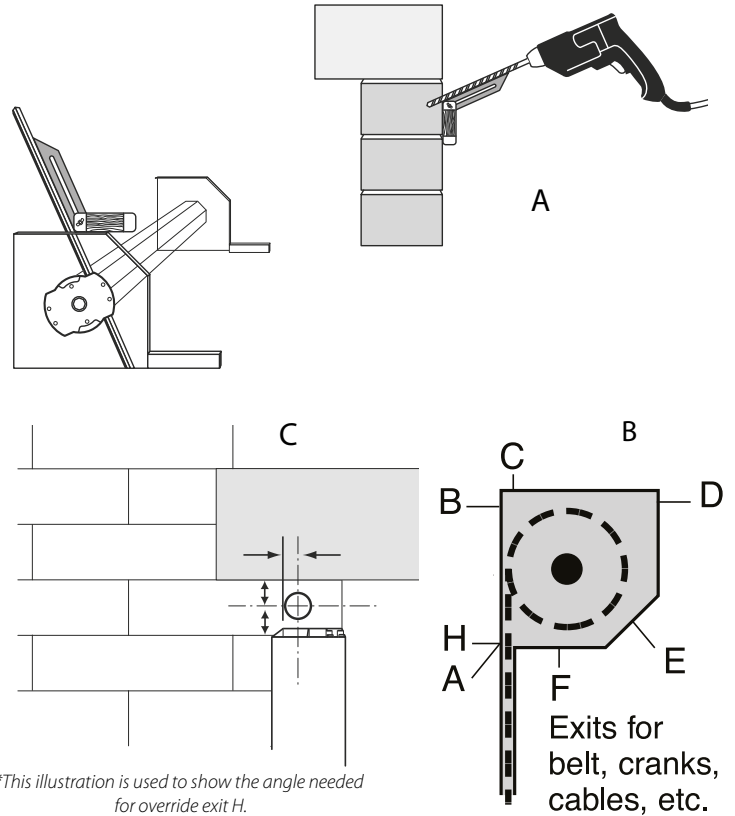
- i. Assembled shutter box
- ii. Pair of guide rails
- iii. Assembled curtain
- iv. Accessory box

Operation Specific Parts

- i. Rod crank handle
- ii. Rod crank handle clip

FITTING THE BOX & GUIDES

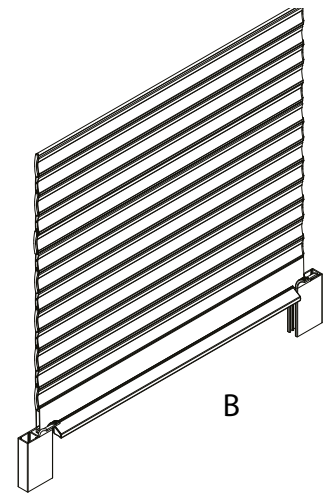
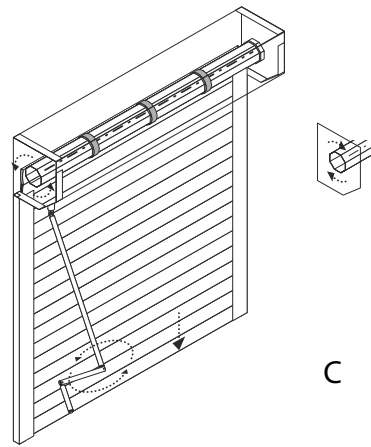
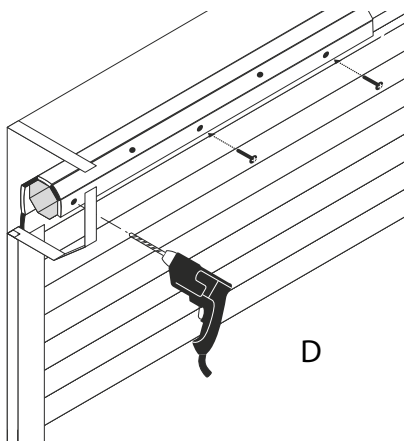
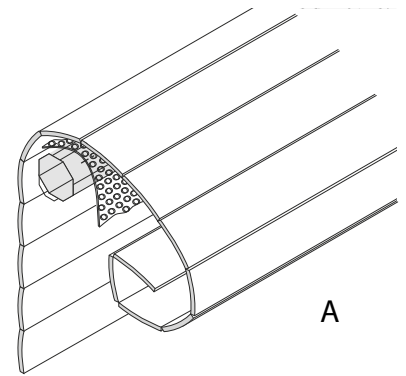
- i. When fitting the product externally, first determine the angle of the crank hole using an adjustable bevel guide (A). This angle will vary depending on the override exit selected (B).
- ii. Mark and drill the hole for the rod crank (C). The location of the hole is determined by the exit hole in the box. Begin by drilling a 10mm pilot hole followed by a 22mm for the tube (D).
*Drawing C does not show the box when drilling.
- iii. Remove the film from the top of the box. Starting with the top holes, use fixings to fix the guide rails, ensuring that they are vertical. First create a 7mm hole that penetrates through then enlarge the front hole to 13mm (E).
- iv. To fit the box, use the recommended fixings provided and check the spacings (F). Once the box has been fixed, check the dummy end and ensure that it is securely located within the axle, making sure to tighten the grub screws.



INSTALLING THE CURTAIN

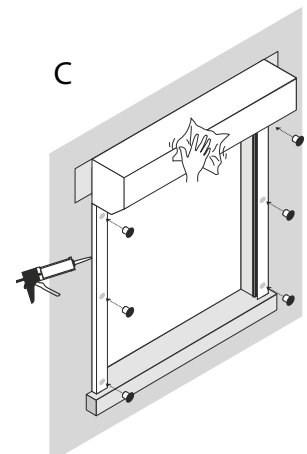
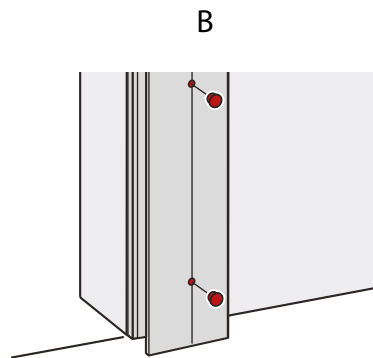
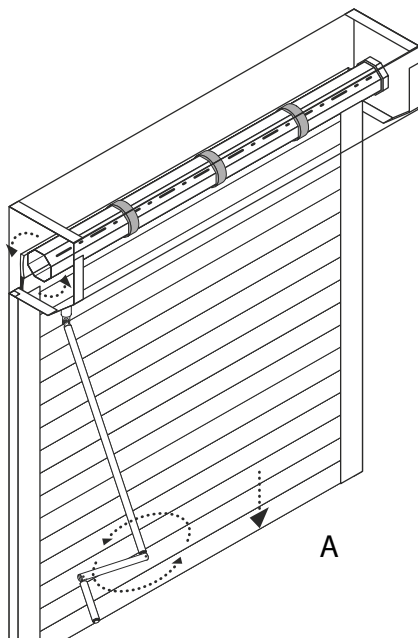
- i. To prevent the risk of material damage when loading the curtain, it is important to cover the axle with bubble wrap or a similar material (A).
- ii. With the axle covered, lift the curtain and start to slowly feed the bottom slat and curtain over the axle and slowly down into the guide mouths (B).
- iii. The crank gear contains a stop to prevent the shutter from being overwound when it reaches the bottom. Wind the crank gear to the bottom stop then wind back 1/2 a turn (C).
- iv. With curtain loaded, using the No.10 X 1/2 pozi pan fixings provided, screw the two top slats straight and directly into the axle (D).

NOTE: If the shutter has been supplied with attachment strips and collars these are needed to connect the curtain to the axle. Slide the attachment strips on to the axle, one collar should go on both sides of each attachment strap.



COMPLETING THE INSTALLTION

- i. Insert the crank handle temporarily and slowly wind the handle to test the operation of the shutter. Test the shutter to ensure that the curtain locks correctly when the curtain is fully closed. If confident the shutter operates smoothly up and down in the guide rails, permanently attach the crank handle (A).
- ii. If the shutter is externally fitted, the box lid should be fastened using appropriately coloured 4mm rivets.
- iii. To complete the installation you should fit the cover caps to the guides (if applicable), mastic around the edges of the shutter then give the shutter a final clean down (B & C).



08. MANUAL BELT WINDER OPERATION INSTALLATION

General Parts

- i. Assembled shutter box
- ii. Pair of guide rails
- iii. Assembled curtain
- iv. Accessory box

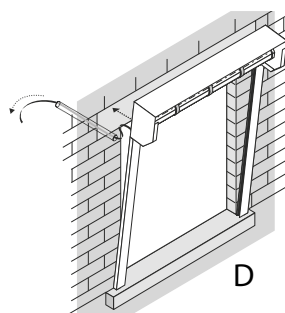
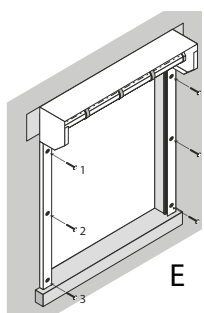
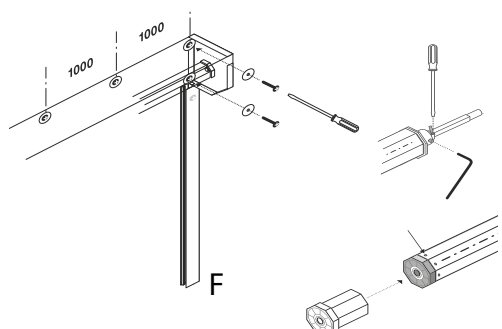
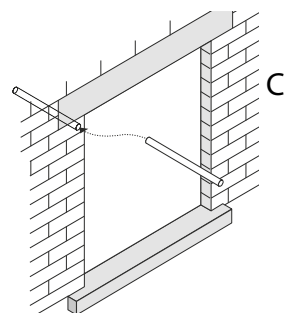
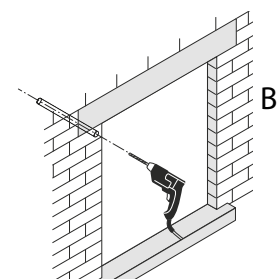
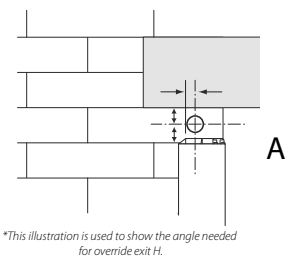
Operation Specific Parts

- i. Swivel belt winder / geared belt winder (1 per shutter)
- ii. Handle for geared belt winder (1 per shutter if geared belt winder required)
- iii. Large belt roller (1 per shutter if fitter externally)
- iv. Belt Tube (1 per shutter if externally fitted)

FITTING THE BOX & GUIDES

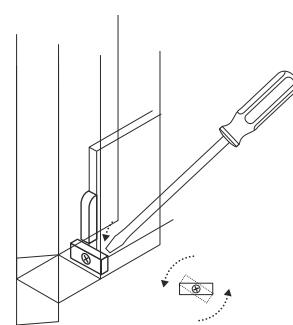
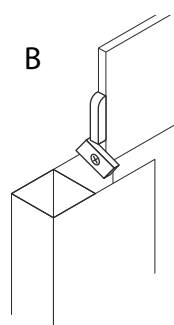
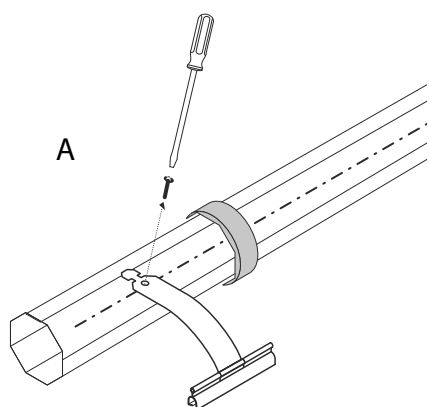
To fit the box and guides, please follow the instructions in **section 5**, up to **step 5** then continue with the instructions below.

- i. For **externally fitted shutters only**, mark and drill the belt tube hole. First, drill a 10mm pilot hole followed by a 22mm hole (A & B). Once drilled, cut the belt tube to the correct length and insert (C).
- ii. Remove the film from the top of the box and unwind the belt supplied, feed it through the tube whilst offering the shutter to the opening (D).
- iii. Continue to fix the guides to the structure, starting with the top fixings, please ensure the guide rails are vertical and the box is horizontally level (E).
- iv. To fix the box, please use the recommended fixings and space the fixings 1000mm apart. Once the box has been fixed, check the dummy end and ensure that it is securely located within the axle, making sure to tighten the grub screws (F).

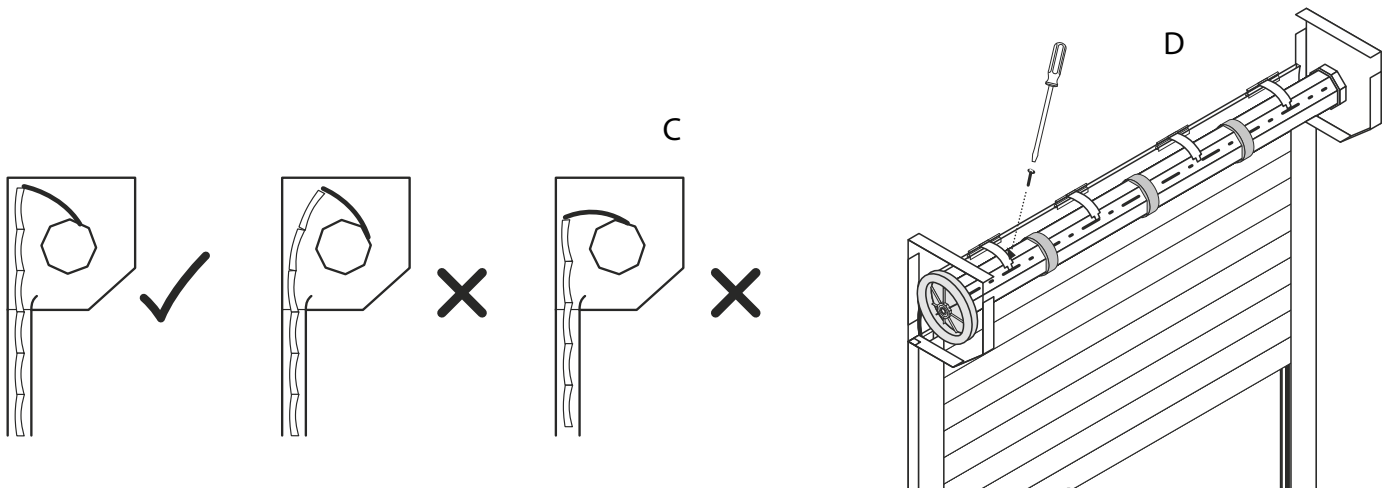


INSTALLING THE CURTAIN

- i. If locking straps have been supplied, remove these from the axle and store safely for installation later (A).
- ii. At this stage, if you have ordered a **CD150/T** shutter, adjust the 'T-stops' fitted on the ends of the bottom slat. The stops should be adjusted to a 45 degree angle to enable the bottom slat to enter the top of the guide rail. Once within the guide channels the T-stops should be reverted to the horizontal position to prevent the curtain from being accidentally lifted out of the guide rails (B).
- iii. Prior to attaching the curtain to the axle, you should determine where you will mount the winder. Once determined, pull the belt that's wrapped around drive wheel so that the belt will pass the winder by at least 400mm.



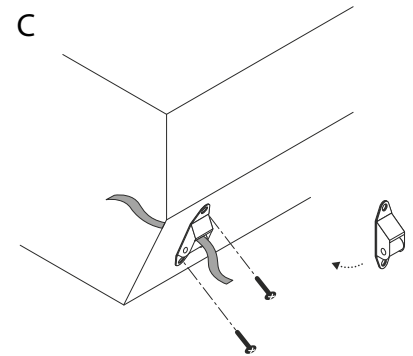
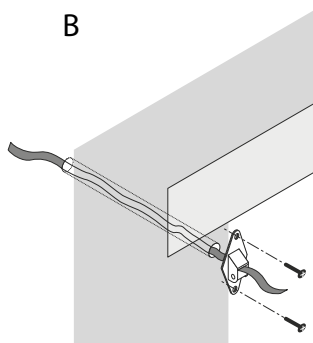
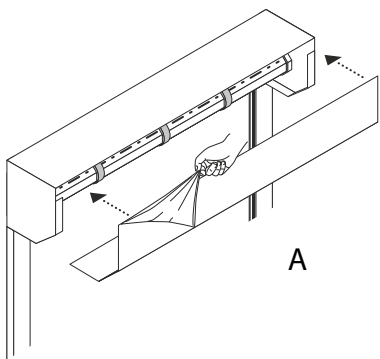
- iv. Check the curtain height, when pushed towards the back of the shutter box the curtain should finish at the top of box. If too tall or short, add or remove laths until correct (C).
- v. Load the locking springs back onto the curtain. Spacing them out evenly, fix them into the axle using the No. 8 X 1/4 pozi flange fixings. If collars have been supplied, these should be placed on both sides of the locking straps (D).



FITTING THE MANUAL BELT WINDER OPERATION

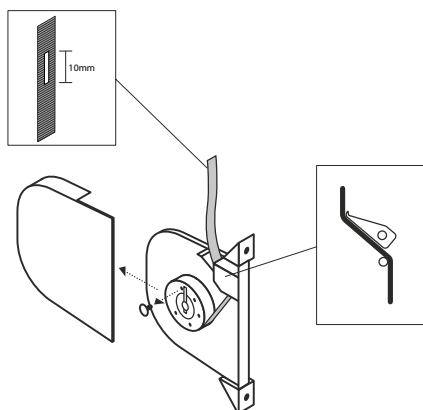
- i. To fit and activate the manual belt winder to the shutter, you'll first need to fix the 45° box to the shutter (A).
- ii. If **externally fitting** the shutter, slide the roller onto the belt, then mount and fix to the internal wall (B).
- iii. If **internally fitting** the shutter, slide the roller onto the belt and mount this to the box, as seen in Drawing C.

The instructions to set-up and configure the belt winder, vary depending on type of belt winder that has been supplied. Please follow the set of instructions below which are applicable.



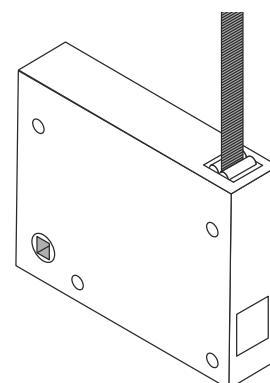
SWIVEL BELT WINDER ONLY

Load the belt into the winder. The belt will be supplied to the correct length. Pass the belt under the metal ridge and between the chrome rollers. At 500mm from the end of the belt cut a 10mm slit, lengthways along the centre. Hook the slit onto the pre-tensioned spring casing and then release.



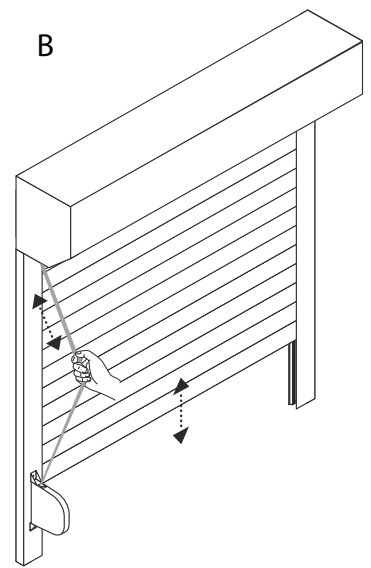
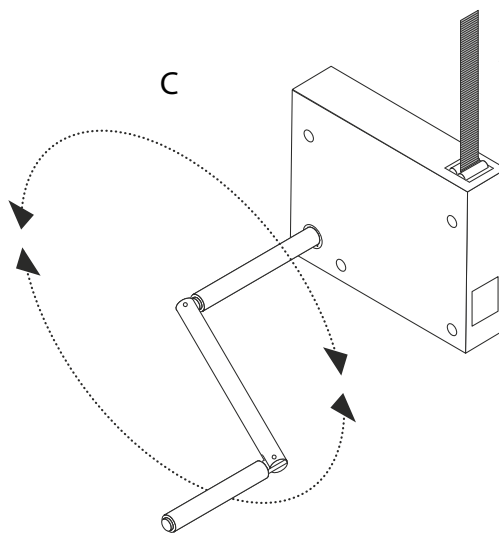
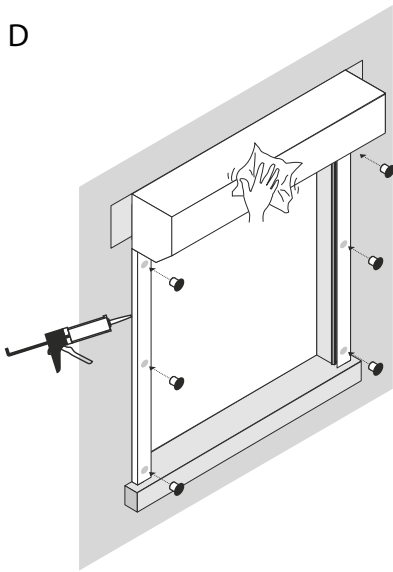
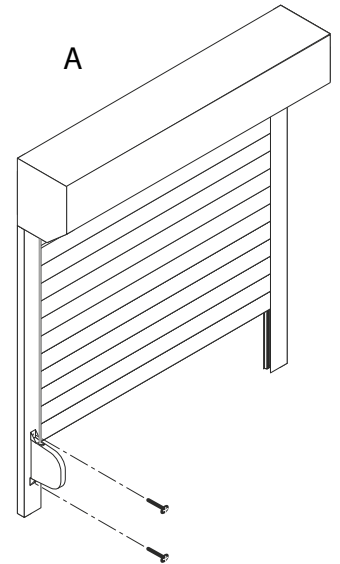
GEARED BELT WINDER ONLY

Load the belt into the winder. The belt will be supplied to the correct length. Take off the front of the winder, pass the belt between the rollers and fasten by making a secure knot in the centre of the large cog. Finally, reassemble the winder before fastening to the shutter or structure.



COMPLETING THE INSTALLATION

- i. Mount the winder at a convenient height for operation, either to the wall or to the guide rail, whichever is preferred (A).
- ii. To test the operation of the swivel belt winder, ensure that the belt feeds into and out of the winder correctly and that the shutter moves freely up and down the guide rails (B).
- iii. To test the operation of the geared belt winder, ensure that the belt feeds into and out of the winder correctly and also that the shutter moves freely up and down in the guide rails (B & C).
- iv. To complete the installation you should fit cover caps to the guide rails, where applicable. Finally mastic around the edges of the shutter and then give the shutter a last clean (D).

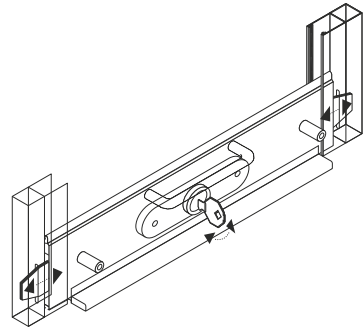


09. FITTING INSTRUCTIONS FOR OPTIONAL EXTRAS

Depending on the type of shutter operation, a number of optional extras may also need to be installed. Please follow the corresponding instructions below.

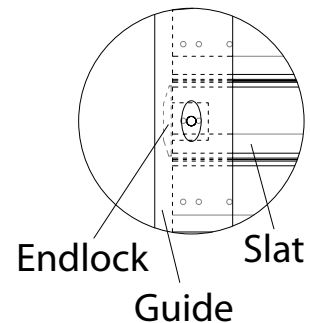
LOCKING BOTTOM SLAT INSTALLATION

- If a lock has been supplied, remove the bottom slat from the curtain.
- Slide the bottom slat down into the guide rails and check that the lock bars will slot into the guide keeps. If not, enlarge the keeps where necessary.
- When complete, reattach the bottom slat to the rest of the curtain.



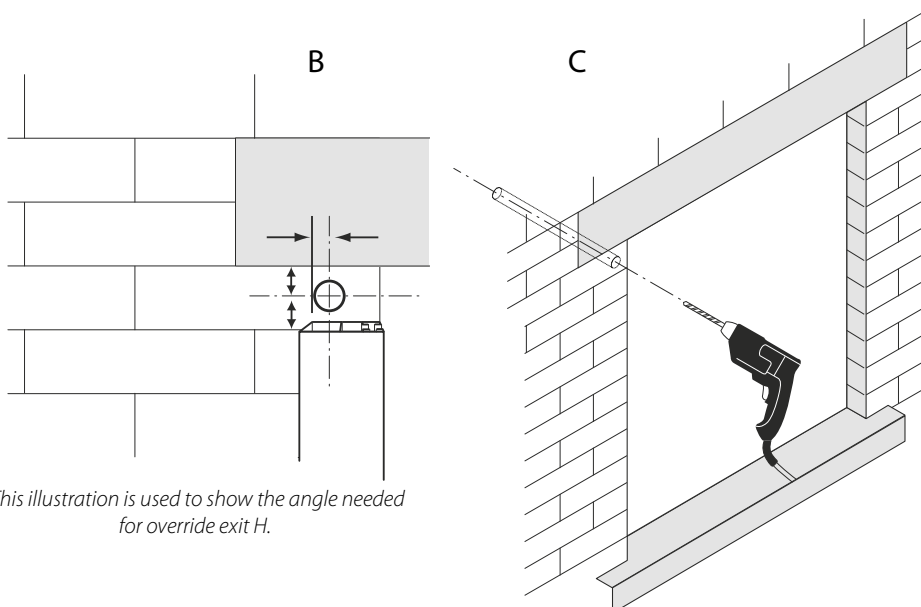
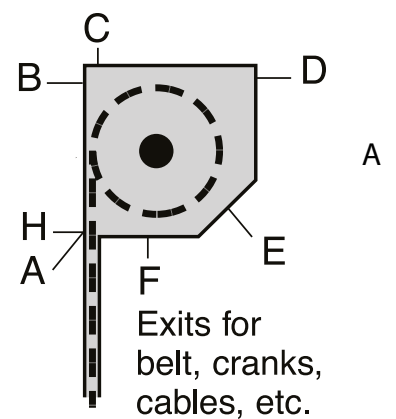
FITTING BULLET LOCKS

- If 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 the curtain is marked, through the endlock.
- Lower the curtain back into the guide rails and test to ensure that the pins can easily be located and removed.

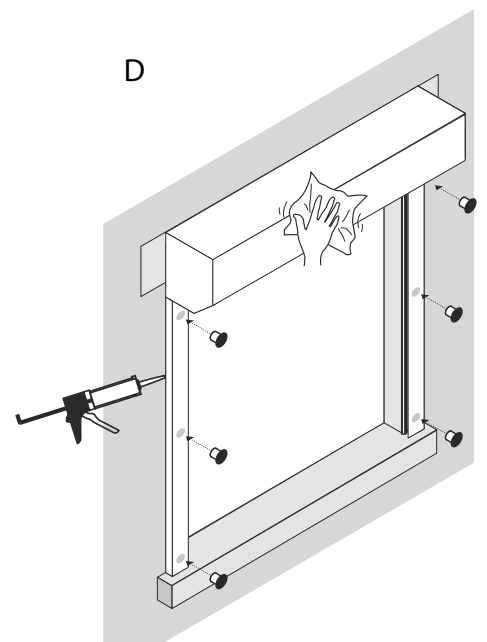


FITTING AN EXTERNAL MANUAL OVERRIDE

- If a manual override has been supplied, first determine the angle of the override hole. The angle is dependant on the motor handing and the override exit selected when placing the order (A).
- The angle may differ from (B).
- Drill the hole using a 10mm pilot hole followed by a 22mm hole (C). To avoid damaging the structure, hold a block of wood against the plaster.
- Offer the shutter to the opening and centralise. Use a spirit level to ensure the box is horizontally level and that both guides are vertical. When confident that everything is level, mark the guide locations and fixing points (D).

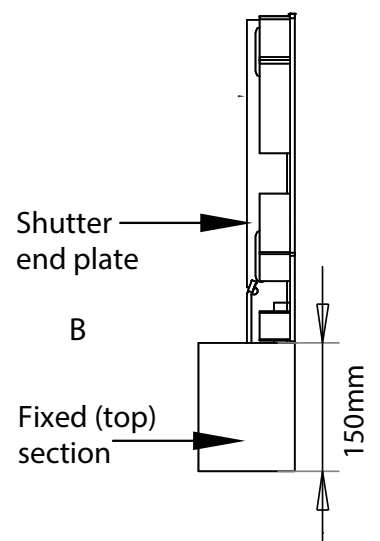
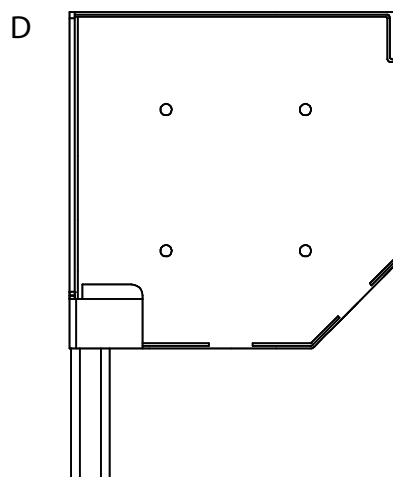
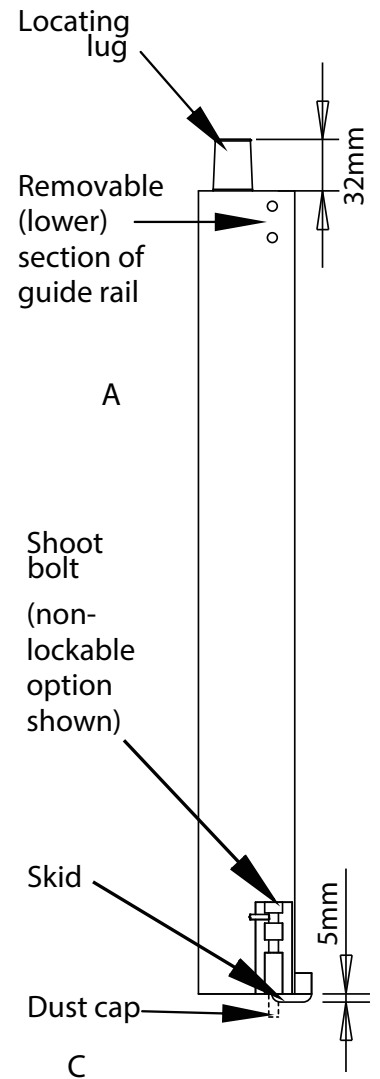
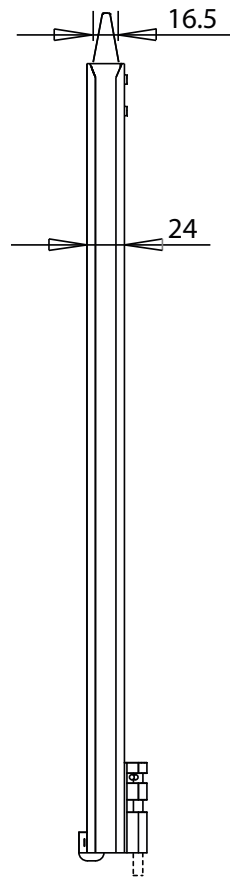


**This illustration is used to show the angle needed for override exit H.*



REMOVABLE GUIDE RAILS

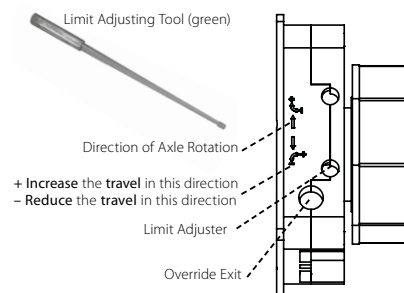
- i. Removable (lower) section of the guide rail will be supplied with the locating lug, skid and bolt attached to the guide (A).
- ii. The fixed (top) section of guide rail will be supplied loose with the fixings required to attach it to the end plate (B). When attaching this section of guide rail ensure that the chamfered end of the guide rail is at the bottom.
- iii. The dust caps (bar top recess) will be supplied with the top section of guide rail. Removable guide rails which meet at either 90° or 180° will be fastened together by SWS UK (C). Both guide rails will be supplied with skids but only one locating lug and only one shoot bolt per pair of guide rails.
- iv. It is imperative that the shutter's end plates are securely fixed as the full weight of the shutter will be taken by these fixings (D). End plates require at least 2 ½ inch 10s or 12s, twin threaded screws with brown wall plugs.



10. SETTING MOTOR LIMITS

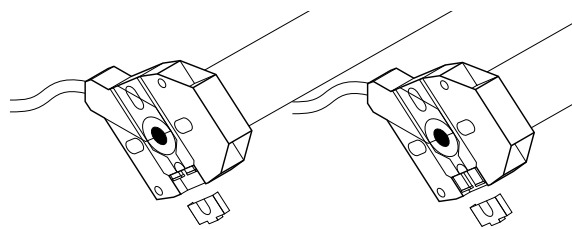
SETTING THE LIMITS ON A SECEURODRIVE MOTOR

- Using the limit adjusting tool found in the accessory box, establish the direction of the axle rotation and drive the axle to the full closed position.
- If the axle contains an anti-fallback spring then you must count the number of turns.
- Look at the number of turns required, which can be found on a sticker on the axle. Then, add this amount of turns to the downward action.
- If no anti-fallback spring is present, set the down limit when the axle stops.
- To set the up limits, follow the instructions above but change to the other limit adjuster hole.



SETTING THE LIMITS ON A SOMFY MOTOR

- Remove the yellow cap and press both buttons inwards simultaneously.
- Drive the shutter to the down position.
- If the motor is left-handed, depress the white button. On a right-handed motor, depress the yellow button.
- Drive the shutter to the up position.
- If the motor is left-handed, depress the yellow button. On a right-handed motor, depress the white button.
- Replace the yellow protective cap.

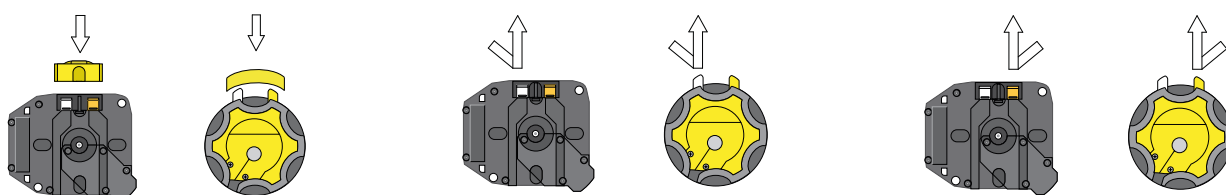
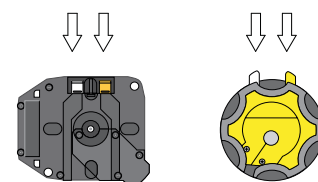
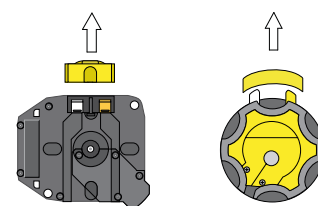
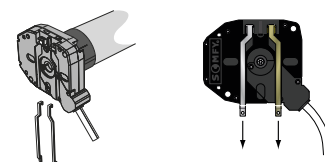


Fully press in to set limits. Release once the limit is set. N.B. Always replace the yellow cap once limits are set.

SETTING SOMFY MOTOR LIMITS - MOTOR HANDING

In some instances, due to the handing of the motor and the override position required, it may be necessary to supply the motor with limit setting tools fitted. If they are fitted as showing in the instructions below then the limit setting tools will need to be pulled rather than pushed.

- Ensure the control switch is in the off position.
- Remove the protective cap from the head of the motor.
- 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.
- 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.
- Repeat the steps above to also set the lower limit.
- Check with the control switch that the motor stops at the UP and DOWN limits that have just been set.
- Refit the yellow protective cap.



NOTE: Take care not to depress the push buttons when refitting the protective cap.

11. ANTI-FALL BACK DEVICES

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

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

ANTI-DROP BRAKES FOR ELECTRICALLY OPERATED SHUTTERS

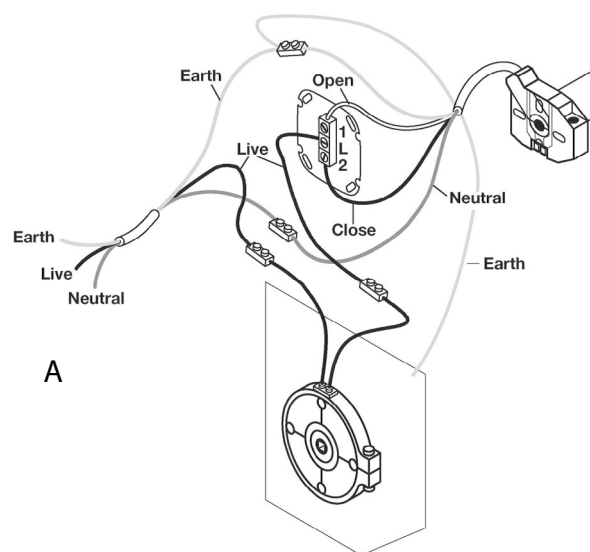
The anti-drop brake supplied is essentially a bearing which allows the axle to rotate freely until the axle reaches a speed approximately 22 revolutions per minute. When the axle speed reaches 22RPM the anti-drop brake will lock preventing the axle from rotating. If the brake is also fitted with a micro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

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

INSTALLATION OF ANTI-DROP BRAKE

If an anti-drop brake is required it will be supplied attached to the end plate inside the pre-assembled box. The anti-drop brake may have a micro switch fitted. If this is the case it will need wiring as per the wiring diagram (A).

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.

- i. Check the fixings which hold the box in place to ensure the activation process has not weakened any of the fixings.
- ii. Make sure there are no objects trapped in the shutter guide rails or shutter box which could be preventing the shutter from moving.
- iii. 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 wire from the motor to the neutral from the power supply.
- iv. 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 attempting to operate the shutter in the up-direction there are three possible outcomes:

Curtain Action	Cause	Solution
The curtain moves up and stays up.	The shutter is operating normally.	Lower the curtain to its full closed position then reset the anti-drop brake as described below.
The curtain will not go up.	<ol style="list-style-type: none"> The wiring has been damaged or a wire has been disconnected. 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. 	<ol style="list-style-type: none"> Check the wiring to ensure there are no damaged cables and every wire is connected correctly. 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 out 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 in the table on the right. **IMPORTANT** If the collar is not tightened to the correct amount it will prevent the safety device from working correctly.

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

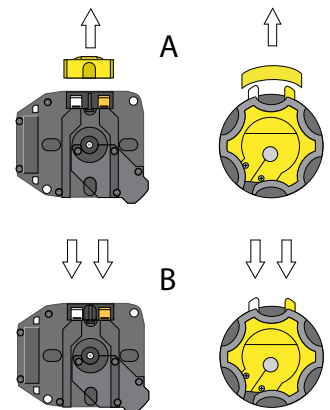
If after activation you are unable to reset the brake as shown above, you will need to order a replacement brake. Once you have swapped the brake over the activated brake should be returned to your supplier for inspection. As long as the safety brake has not been damaged the brake will be reset and returned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

INSTALLING ANTI-FALL BACK SPRINGS FOR ELECTRIC OPERATED SHUTTERS

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.

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:

- Connect the motor to a test lead.
- Remove and retain the limit cover cap from the motor. Fully press in the limit switches on the motor. Using the test lead, rotate the axle in the close direction (A & B).
- The number of turns required to tension the spring will clearly be stated on the axle label.
- 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

- i. Lower the curtain to the fully closed position and disconnect the curtain from the axle.
- ii. As the axle contains the 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 shutter, the number of turns required is clearly stated on the axle label. To see if the tension has been removed, grab the axle and rock it back and forth to see if it turns with little resistance.
- iii. Isolate the mains power then disconnect the motor leads from the control unit. For additional support, strap the axle wherever possible.
- iv. Remove the screws securing the motor's octagonal fixing plate and lever out the retaining tabs with a screwdriver.
- v. Remove the split pin from the spring shaft and slide the shaft free from the fixing plate. Lift out the axle.
- vi. If you need to replace or remove the motor, unbolt the octagonal fixing plate and drill out the rivets in the axle securing the motor, ensure that any loose drilled out rivet 'slugs' are removed from inside the axle to prevent them from making a rattling noise.
- vii. The anti-fall back spring is also held in place by rivets and these should be removed in a similar fashion.
- viii. Replace the motor/anti-fall back spring, re-rivet and refit the octagonal fixing plate to the motor end.
- ix. Install the axle assembly, remembering to tension the anti-fall back spring as per the instructions above.

ANTI-FALL BACK SPRINGS (DOUBLE SPRINGS) FOR SPRING LOADED OPERATED SHUTTERS

The anti-fall back spring is supplied in addition to the standard spring so a spring will be supplied fitted in both ends of the axle. The second spring supplied will prevent the curtain from failing in the event of a spring failure.

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 ANTI-FALL BACK SPRINGS FOR SPRING LOADED OPERATED SHUTTERS

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.

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

1. 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.
2. 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.

12. FINAL CHECKS

- i. Force test the shutter.
- ii. Ensure the shaft collars are secure and correctly fitted, and do not inhibit travel/rigid parts.
- iii. Check operation of safety edge.
- iv. Check operation of the transmitter.
- v. Lubricate bearings.
- vi. Check grub screws in the bearings are secure.
- vii. Check jubilee clips are fitted to the shaft and are secure.
- viii. Check end plates are secured to the building structure.
- ix. Check smooth operation of the shutter leaf.
- x. Check all mechanical fixings are secure.
- xi. Check the canopy hood/box/motor cover (if installed) is securely attached.
- xii. Check motor cable is securely attached away from any moving parts.
- xiii. Check operation of manual override mechanism.
- xiv. Check operation of manual override electrical interlock – hand chain only.
- xv. Check shutter travel limits.
- xvi. Check correct operation of control system.
- xvii. Check correct operation of safety systems fitted.

Handover Procedure

It is intended that the whole machine is provided by SWS UK. Alternate motors will not meet the criteria within the declaration of performance, declaration of conformity or CE or UKCA mark and are therefore not legal. SWS UK will not provide a declaration of incorporation for the shutter without a motor.

- The customer/user must be adequately trained in the use and operation of the shutter.
- The maintenance schedule should be agreed with the user, they should understand this to ensure the shutter is serviced correctly.
- The operation and maintenance manual must be handed to the customer/user.

13. OPERATING INFORMATION

Upon completion of the installation the end user/operator of the shutter must be trained how to operate the product safely paying particular attention to the following points:

- The shutter should only be operated when in view.
- The operator must ensure there are no objects or persons in the opening before and during operation.
- The end user must read and follow the instructions given in the operating and maintenance instructions.
- In the event of a malfunction the end user should follow the instructions given in the operating and maintenance instructions and if required contact the installer.
- Their responsibility in law to maintain a regular and appropriate service and maintenance schedule.

14. RECOMMENDED SERVICE PERIOD

The recommended service and maintenance period is dependant on the frequency of use and the environment in which the door is installed. It is recommended to have the shutter serviced once every 12 months or at 1,000 cycle, whichever arrives first. One cycle is a full open and close sequence.

15. WARRANTY INFORMATION

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 shutter.
- Regular and appropriate maintenance checks are performed.
- For further details on the product warranties please contact the supplier.
- To comply with the Construction Products Directive, all products have been durability tested for a minimum of 11,000 cycles.

16. TECHNICAL ASSISTANCE

If you require any on site technical assistance including repair or maintenance queries please call **01524 772400** or email **technical@swsuk.co.uk**.

Control unit set up instructions are provided in the control panel accessory box along with the control unit and you can also access them digitally using this QR code or link:

www.sws.co.uk/fitting-instructions

