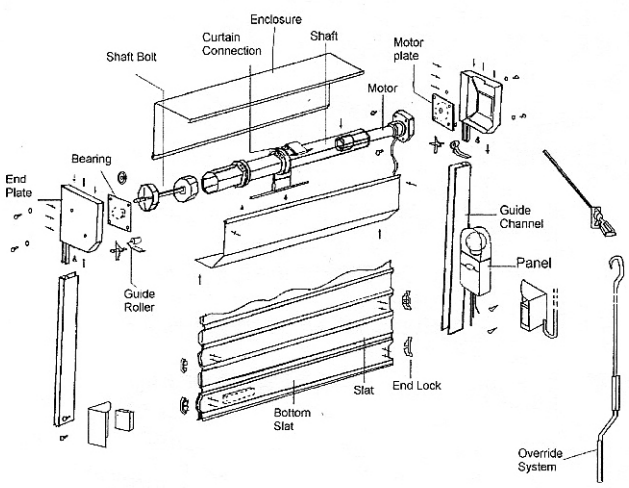
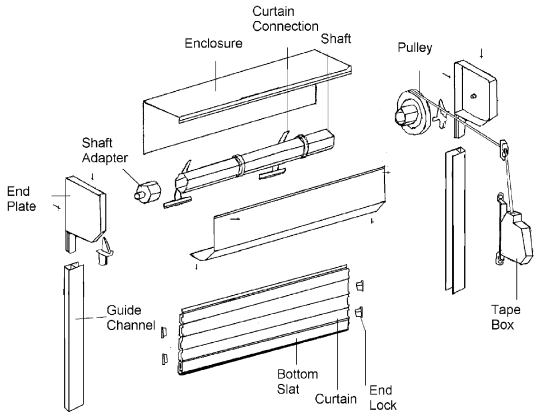
Aluroll Roller Shutter / Garage Door

Installation and Users Guide



This booklet must be given to the customer on completion of the installation

Please ensure that the CE mark is affixed to the inside of the endplate, or, to the bottom slat of the roller door


Curtain
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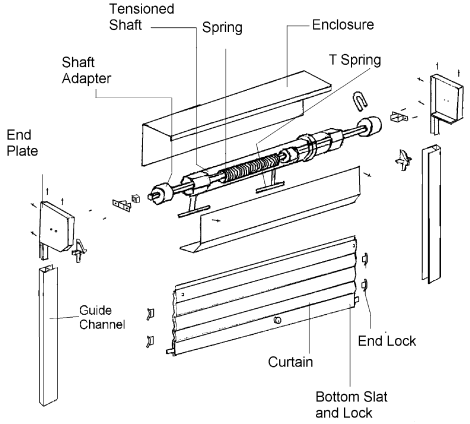
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Plate
Guide
Channel
End Lock
Curtain
Bottom Slat
and Lock

Aluroll

Operating, Maintenance and Installation Instructions

Contents

Warranty

This roller door/shutter comes with a 5 year guarantee on the motorisation, and a 2 year guarantee on the electronic switching. A 10 year guarantee is standard on the colour integrity of the curtain and enclosure. That is, the slats are guaranteed to retain their colour against UV light radiation, or fading, for ten years.

This door/shutter is not guaranteed against scratching or pressure marking post-installation. To ensure that such marking does not occur, an annual service check on the door/shutter is advised.

This warranty is void unless such a service is carried out at or around the cycle of the 12 month period.

Date of Installation:
Installation by:
Contact details:

Unique serial number:
Door location reference (if required):
This product is electrically*/manually operated (please delete as appropriate) * All electrically operated products are powered by a 240V AC motor.
Please circle the safety devices installed on this product listed below: Safety brake Safety edge Photo cell

To ensure compliance with the Machinery Directive this document must be given to the owner of the door and held for future reference.

1. General Instructions

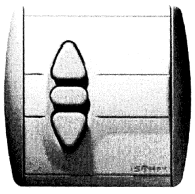
Your newly-installed product should give you many years of trouble-free service as it is designed to require minimal maintenance and servicing. In order to prolong the life of your door and to reduce the likelihood of problems, please adhere to the following instructions.

Please note all products should only be operated by trained users.

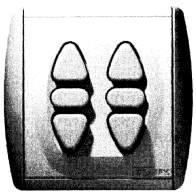
2. Operating Instructions

Only operate your shutter/garage door when it is in view, making sure it is not obstructed. Ensure, when the curtain is running, you and any other person stands clear of the curtain and keeps hands etc. away from moving parts.

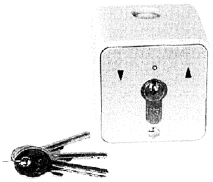
A) HOLD-TO-RUN SWITCHES



Hold-to-run single pole switch for operating one shutter



Hold-to-run dual pole switch for operating two shutters



Hold-to-run single pole keyswitch for operating one shutter

- Make sure all windows and doors are closed.
- If your electrically operated shutter contains any manually operated locks these must be disengaged before you operate the shutter. Failure to do so will damage the motor within the shutter.
- Turn/press switch in desired direction. These are momentary switches, therefore operator must be present when opening and closing, with all openings in view.
- It is very important that the motor completes its pre-set rotation, and that the motor stops. It is the motor that locks the shutter/garage door, so even through the curtain looks down it may not be locked.
- The motor must stop on its pre-set limits.

Troubleshooting		
Fault	**Cause**	**Solution**
The shutter/door fails to operate when the button is pressed/key is turned.	1. There has been a power failure. 2. The wrong direction has been selected on the control equipment 3. The thermal trip in the motor may have activated if the door has been operated several times recently.	1. Wait for the power to come back on or operate the shutter/door with the manual override if installed. 2. Select the correct direction. 3. Allow the motor to cool approximately 30 minutes before attempting to operate the shutter/door again.
The shutter/door stops before fully opening or closing, or fails to stop when reading 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

B (1)) REMOTE CONTROL

Aluroll supply two kinds of remote control unit: the Ansa control panel and handset, and, the PDT control panel and handset. You will have been supplied with either one or the other. Ansa handsets are jet black, with grey buttons. PDT handsets are either grey or purple, and have four buttons. The following information applies to PDT panels and handsets. Ansa remotes and panels are discussed as an additional section, below (B (2)).

Please note: The front of the control unit should only be removed by a trained engineer.

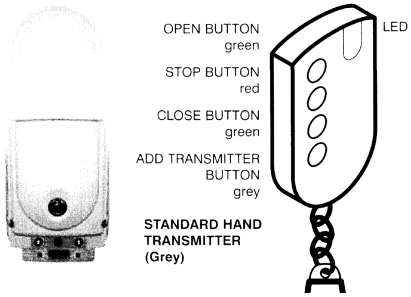
Your shutter/garage door can be activated, depending on the type of equipment installed, by pressing and releasing the buttons on the front of the

control unit, the buttons on your remote handset, or a separate hold-to-run switch (key, push or turn).

Please note: All products should be operated when in view; making sure they are not obstructed. When opening or closing the product you must monitor it until it has completed its operation. If the product is fitted with a safety device this could be activated during its operation which would cause the door to stop and re-open a short distance leaving the door partly open.

Hand Transmitters

The transmitters are fitted with four buttons (see diagram) and when any button is pressed the LED illuminates. The typical operating range is approx. 50 m (160ft). When the batteries in the transmitters need replacing the LED will flash constantly when any button is pressed. (Batteries are 2 x CR2016 Lithium Cells).



SAFETY DEVICES

The standard remote control receiver unit is supplied with a safety edge or a photocell, depending on the safety requirements of the user and situation.

Hold-to-run/deadman operation

Your remote control unit may have been supplied without a safety device in hold-to-run (deadman) mode. If this is the case to close the door you will need to press and hold the down button whilst the door is in view ensuring at all times that there are not obstacles in the doorway. To open the door you will need to press and hold the up button whilst the door is in view, ensuring at all times that there are no obstacles in the doorway. Please be aware, it is possible to set the remote control so that the door will travel in the up

direction in the standard automatic mode, in which case a single press of the up button will open the garage door.

Safety edge

The Safety Edge is fitted to the bottom of the door and is activated when the door starts to close. If it comes into contact with an object while the door is closing, it transmits a signal to the wall mounted control unit. The door will then stop and reopen a short distance.

The safety edge also works as a weather seal, designed to be pressed against the ground, to prevent false sensing and reopening it is disabled for the last 50mm of door travel.

If the safety edge hits an obstacle and the door stops, you will be unable to close the door in the normal way.

To close the door you can either:

1. Press the button on the transmitter or the control unit to raise the door to its fully open position. The safety device will automatically reset and the door can now be operated as normal with the safety device active.
2. Press and hold the down button on the transmitter or control unit to close the door fully. If you release the button the door will stop. Ensure the door has fully lowered and locked before releasing the button. Please note the safety device will not be active until the door returns to its fully open position.

PHOTO CELL

The PEC projects a pencil line beam across the door opening. If the beam is broken during the closing cycle, the shutter will stop and reopen a short distance.

A visual indication is given on the signal LED as detailed in the System Status Indication section.

If the photocell beam is broken during the closing cycle, the door will stop and reopen a short distance and a visual indication is given on the signal LED. You will now be unable to close the door in the normal way.

To close the door you can either:

1 Press the up button on the transmitter or the control unit to raise the door to its fully open position. The safety device will automatically

reset and the door can now be operated as normal with the safety device active.
2 Press and hold the down button on the transmitter or control unit to close the door fully. If you release the button the door will stop. Ensure the door has fully lowered and locked before releasing the button. Please note the safety device will not be active until the door returns to its fully open position.

Adding transmitters

- Press and hold down the Grey button on a transmitter that is already loaded onto the control unit.
  The lid mounted signal LED will flash YELLOW slowly, keep the button held down until it flashes YELLOW quickly.
- Release the Grey Button.
  The lid mounted signal LED will continue to flash YELLOW quickly.
- Press the top green button on the same transmitter once.
  The flashing LED will change from flashing YELLOW to flashing GREEN.
- Now press the top green button on the new transmitter once and release.
  The flashing LED will change to continuous for 1 second each time it accepts a new transmitter.
- Repeat step 4 for other transmitters to be added on to the system.

Thirty seconds after loading the last transmitter the LED changes to flashing yellow for ten seconds and then returns to normal running mode.
Alternatively you can press the top green button of a transmitter that has just been loaded, this will take it straight back to normal running mode.

Note the manufacturers code for the transmitters must match the manufacturers code for the receivers, if they do not match, you cannot add that particular transmitter on to the system, the LED will flash RED, GREEN then YELLOW once quickly if they are not compatible. Please contact your supplier for further details.

Remote Control Trouble Shooting Guide

N.B. Always isolate the power before attempting to make any adjustments or repairs. Untrained operators are advised to contact an approved installer.

System Status Indication

The status of the control unit and/or door is indicated by the lid mounted signal LED. This is a three-colour "RED, YELLOW & GREEN" lamp (LED) mounted on the front of the control unit, as detailed below:

Door Positions	
LED Signal	**Status**
GREEN solid	Open limit activated
GREEN flashing	Door opening
RED solid	Close limit activated
RED flashing	Door closing
YELLOW solid	Door stationary between the open and close limits

Programming mode (using a transmitter)	
LED Signal	**Status**
Slow flashing YELLOW then quick flashing YELLOW	Control unit in programming mode.

SYSTEM STATUS

LED signal/fault	**Cause**	**Solution**
RED rapid flashing	Photo Electric Cell (PEC) beam broken.	1. Remove any obstacles which may be in the doorway (once you have removed the obstacles the signal light will change to solid yellow). 2. Reset the safety device as described in the Photo Cell section. 3. Ensure the photocell and reflector are clean. 4. Re-align the photo cell and reflector (contact your installer)
RED flash then two YELLOW flashes	A motor stall has been detected.	1. Disengage manual locking device. 2. Remove any objects which may have jammed in the guide rails, curtains, or roll. 3. Ensure nobody is attempting to ride up on the curtain. 4. Ensure a non-approved item has not been attached to the curtain. 5. In extreme conditions the door may have frozen to the guide rails or floor. Try to operate the door again or defrost the frozen section.

RED flash then three YELLOW flashes	The thermal trip has activated on the motor or the motor is not connected.	1. Allow the motor to cool for approximately 30 minutes before attempting to operate the door again. 2. The motor may not be connected to the remote control unit contact you installer
RED flash then four YELLOW flashes	Door overrun time out; the door has been opening or closing for over 60 seconds without detecting a final end limit position.	Contact your installer
A rapid RED, GREEN then YELLOW single flash	Indicates that a signal has been received from either a transmitter that has not been loaded on to the system or the transmitters' manufacturers code does not match with the t control unit.	1. Load the transmitters on to the system as per the "Adding transmitters" section. 2. Contact your installer if the transmitter will not load on to the system.
Long YELLOW then two shorter RED flashes	PEC has failed Self Check test	Contact your installer.
Reduced operating range	Batteries in transmitter are flat or aerials may not be fitted to remote control unit or they may be touching.	1. Transmitters LED does not illuminate when flat and if batteries low it flashes when button pressed. Replace batteries. 2. Ensure aerials are not touching, if aerials are missing then contact your installer.

The door stops automatically after the bottom edge of the door has passed the top magnet when the door is closing (this only applies when bottom slat safety edge is installed)	Fault detected in safety edge circuit	1. Contact your installer 2. To close the door press and hold the down button releasing the button once the door is fully down and locked (ensure the door is fully in view when operating).

B (1) Ansa panels and remotes

Adding transmitters

Press the operating button on the control panel for 5 seconds and release when the red LED indicator goes out. The LED will flash once to confirm Add Mode. Take the new transmitter to be added and press the button once. The red LED indicator should flash once. Repeat this for every new transmitter to be added to the system. After the last transmitter has been added either wait 30 seconds or press the operating push button once to reset to normal operation. The remote control system uses the latest 'rolling code' technology. Hand transmitters supplied are pre-programmed. The receiver can memorise the codes of 15 transmitters. Upgrade memory chips are available for 31 or 62 transmitters by special order.

Photo Cell

The Ansa panel will be connected to a photo cell safety system. This functions as described above with regard to the PDT photo cell (page 7).

System status indication

On the photocell a green LED indicates that the unit is functioning properly. The yellow LED indicates that the beam between the reflector and the cell is unbroken. The red LED on the control unit will flash quickly when the beam is broken. The red LED on the control unit should be on continuously when the unit is working.

On discovering a fault, inspect the condition of the red LED on the control panel:

Red LED is off: power supply failure.

Red LED is on, but faulty operation of door: the motor thermal trip may have operated. Wait 10 minutes and try again.

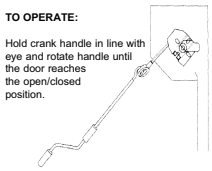
Red LED is flashing quickly: this indicates that the Photocell is activated. Reposition the infrared cell source, or the reflector.

Red LED is flashing on and off slowly: the self-test diagnostic has initiated. Try resetting the system by switching off the unit for 5 seconds.

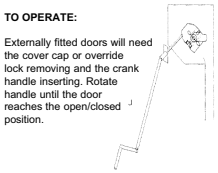
If these solutions do not resolve the problem, contact your installer.

C) POWER FAILURE/MANUAL OVERRIDE (IF FITTED)

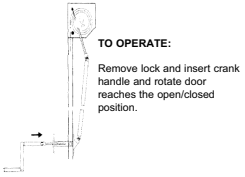
In the event of disruption to the power supply, or the motor temporarily over heating (the motor is protected by a thermal cut-out), the door can be operated manually. Isolate power supply to shutter before using the manual override.



Internally installed shutter with internal manual override



Externally installed shutter with external manual override



Internally installed shutter with external manual override

DO NOT OVERWIND

When the main power is reinstated, ensure that the power isolator is switched back on. If applicable secure the handle back onto the wall. Remember to keep the crank handle in a convenient place.

2.2 MANUALLY OPERATED PRODUCTS

Only operate your Shutter when it is in view, making sure it is not obstructed. Ensure, when the curtain is running, that any other person stands clear of the curtain and keep hands etc. away from moving parts.

A) SPRING OPERATED

A spring operated shutter may have a lock in the bottom slat or curtain, shoots bolts in the bottom slat, or pin locks in the guide rails.

Opening the shutter – Press slightly down on the bottom slat when the shutter is in the closed position: disengaged the locking mechanism(s). If applicable ensure the key is removed before opening the shutter.

Push the shutter curtain upwards, using the handles provided, to open the shutter. Do not let go of the shutter until it has reached its fully open position.

Closing the shutter – Pull the curtain down using the handles provided. When the curtain reaches the closed position, press down on the bottom handles and then engage the locking mechanism(s).

Troubleshooting **Fault**	**Cause**	**Solution**
Lock will not engage	The lock bar(s) is not correctly aligned with the lock hole.	Apply more pressure to the bottom of the curtain unitl the lock engages or moves the curtain around slightly until it is in the correct position for the lock(s) to engage.

B) ROD CRANK

Lower the curtain

Making sure all windows and doors are closed. To lower curtain, pull the crank handle out of the clip and hold the handle at an angle of 45 degrees. This will enable the user to wind the curtain up with ease and also minimise the wear on the crank knuckle. Turn the handles either clockwise or anti-clockwise. If the handle is turned the wrong way it will feel tight. On no account should this be forced as it will result in damage. If it does feel tight simply reverse the rotation of the crank handles. Once the direction has been identified continue until the curtain is fully down onto the cill or doorstep and continue the rotation until the crank handles feels tight.

This means the curtain is in the locked position.

RAISING THE CURTAIN

To raise the curtain, pull the crank handle out of the clip and hold the handle at an angle of 45 degrees. This will enable the user to wind the curtain up with ease and also minimise the wear on the crank knuckle. Turn the handle either clockwise or anticlockwise. If the handle is turned the wrong way it will feel tight. On no account should this be forced as it will result in

damage. If it does feel tight simply reverse the rotation of the crank handle. Once the direction has been identified, turn the handle. The locking mechanism will automatically be disengaged and the curtain will rise up. Do not wind up too fast as this will result in damage to the shutter lid. The buffers will stop on the lid.

3. Maintenance

CAREFUL USE OF YOUR SHUTTER/DOOR IS THE BEST WAY TO AVOID MAINTENANCE OR REMEDIAL WORK

Your Shutter/door is low maintenance. The curtain needs wiping with a damp cloth and a mild detergent to remove excessive dirt/grime to maintain its prime appearance and to reduce the risk of the surface being damaged. This must be done more frequently in a salt air environment.

Marks on the paint finish can be cleaned with many types of car polish. Chips in the paintwork should be touched up to prevent corrosion of the metal.

The power to the shutter should be isolated before washing or repairing the paintwork.

The motor and curtain have been designed to be lubrication free so you must not oil of grease the guide rails. Make sure no foreign items get collected in the guides i.e., stones, sticks, paper etc.

Additional information for electrically operated products.

Your door should run smoothly and easily as the motor is not designed to over-come problems of a badly running or damaged door. If necessary contact your approved installer for repair.

The motor should be stopping on the limits and not over-running (indicated by buzzing) when the door hits the floor or the open stops.

N.B. Always isolate the power before attempting to make any adjustments or repairs. Untrained operators are advised to contact an approved installer.

4. Service and Repair Record

Date work carried out:	
Work carried out:	
Work performed by – Sign:	
Print:	
Company Name:	

Date work carried out:	
Work carried out:	
Work performed by – Sign:	
Print:	
Company Name:	
Date work carried out:	
Work carried out:	
Work performed by – Sign:	
Print:	
Company Name:	

GARAGE DOOR INSTALLATION INSTRUCTIONS

STEP 1 – TAKING DELIVERY AND CHECKING ALL PARTS

Please check that the door is the correct size and all component parts are present. This garage door is heavy and awkward to handle, it is recommended that fitting this door is carried out by two people.

You should have:

Box containing door curtain
Two guide rails
Box containing electronic controls
Manual over-ride equipment
Motor barrel containing the motor

Ensure that the site is clear and that the fixing surfaces are free from loose plaster and masonry. Ensure that the opening has no irregularities that could damage the back box or curtain.

The door curtain will be fully packaged when delivered. The end plates will be factory fitted to the back box and the curtain will be rolled and packed inside. The two side channels (guide rails) should be unpacked and placed into either side of the opening. The guides are designed to slot into the end plates via the peg on the end plate.

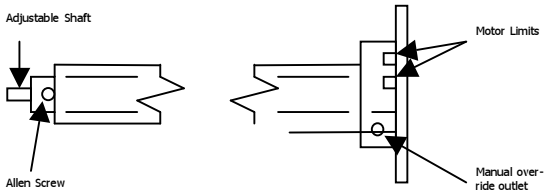
STEP 2 – PREPARING THE MOTOR AND BACK BOX

1 Carefully remove the box lid and place in a safe place; remove the curtain from the box and place on a suitable surface that will not damage the curtain.

2 The motor barrel is held in place by a captive bearing on the non-drive end and a mounting plate on the drive end. The non-drive end of the barrel has an adjustable shaft held in place with an Allen bolt. With a 6mm Allen key loosen the Allen bolt allowing the shaft to slide in and out of the motor barrel. (See Figure 3 Using the two countersunk nuts and bolts supplied fit the barrel into position, making sure that the manual over-ride position on the motor is at the required point.

FIGURE 1 - MOTOR BARREL SECTION

NON DRIVE END **DRIVEN END**

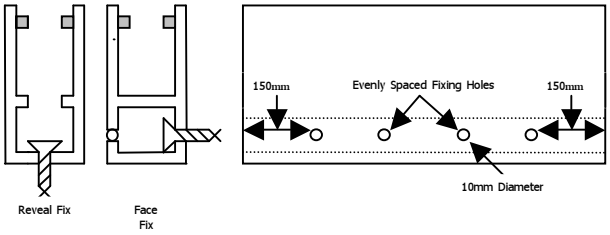


When you are happy that the motor barrel is installed in the correct way, tighten the motor plate and fully extend the sliding shaft into the free bearing at the non-drive end. Lock the shaft with an Allen key.

STEP 3 – PREPARING THE GUIDE RAILS

1. Determine whether you are using 70mm or 90mm guides. 90mm guides are fitted with an extra thick grey brush strip that must be fitted in the inside (internal fit-inside of garage). 70mm guides are offset slightly to ensure alignment with the box. Slide the guide onto the end plate peg and check that the back of the box lines up with the back of the guide, mark guide accordingly.
2. Determine method of fitting guides, face fix (onto back of the brickwork) or reveal fix (between the brickwork). Drill 7mm fixing holes as per diagram, enlarge inside holes to 10mm to accommodate plastic grommets. Aluroll recommend at least four good fixings per guide. (See Figure 2).
3. File the inside of the guide channels – (at the top), to create a chamfered lead in for the curtain.

FIGURE 2 – GUIDE RAILS DIAGRAM



STEP 4 – FIXING THE GUIDE RAILS AND BOX ASSEMBLY

1. Slot the guides onto the end plate pegs, position the box and guides where they are to be fitted. It is vital to level the box assembly and to make sure the guides are square.
2. Fix the guides to the walls making sure they are not distorted in anyway, pack the brickwork out where necessary. Ensure the fixings used are suitable for the wall properties.
3. Drill suitable holes in the end plates to get secure fixings. This can be through the back of the end plate or the end plate side ideally at the top (end of the box assembly). Secure to the walls making sure the box assembly is vertical and follows the line of the guides. **Extreme care should be taken while manoeuvring the door in to place to avoid the possibility of snapping the end plate pegs. It is imperative that fixings are put through the end plates into the wall as the aluminium pegs are not designed to carry the weight of the door.**
4. Drill and screw the back of the box at regular points along the width of the door. This is best done along the bottom edge or as close to the bottom edge as possible. Make sure all screw heads are flush and not proud as this may damage the surface of the curtain later**. IT IS IMPORTANT TO ENSURE THAT THE CURTAIN IS CLEAR OF THE BACK BOX AND FIXINGS WHEN RUNNING**.

STEP 5 – INSTALLING THE EMERGENCY OVERRIDE

The end plate will have to be drilled according to the desired motor position and associated exit point for the over-ride bar. If you are using a low-level over-ride please refer to separate instructions provided with this.

STANDARD INTERNAL OVER-RIDE

1. Align the manual over-ride bar and eyelet and mark in the end plate where the bar will exit the box. (See Figure 3)
2. Remove a section of endplate or drill a large hole in the required position. We recommend using a stepped drill bit, enlarge hole until the hexagonal bar clears
3. Shorten bar as necessary.

HIGH LEVEL EXTERNAL OVER-RIDE

1. The endplate will have to be drilled out as for an internal over-ride but this time you will have to exit the box on the outside.

2. For face fitted doors the wall will also have to be drilled. (See Figure 4)

LOW LEVEL EXTERNAL OVER-RIDE

See attached sheet for instructions.

EXTERNAL FIT WITH AN EXTERNAL OVERRIDE
(See figure 5)

FIGURE 3

INTERNAL OVER-RIDE

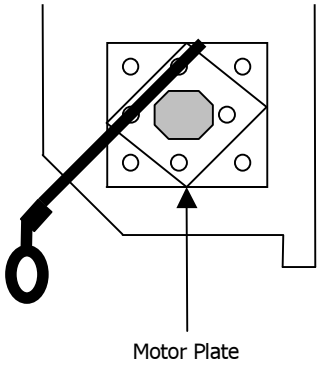


FIGURE 4

EXTERNAL OVER-RIDE

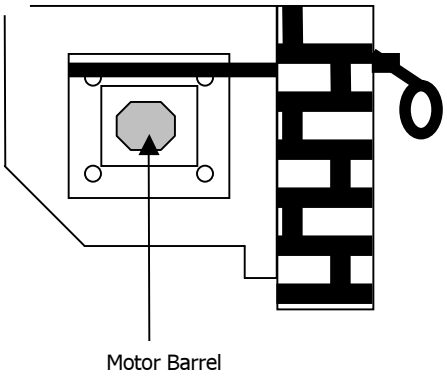
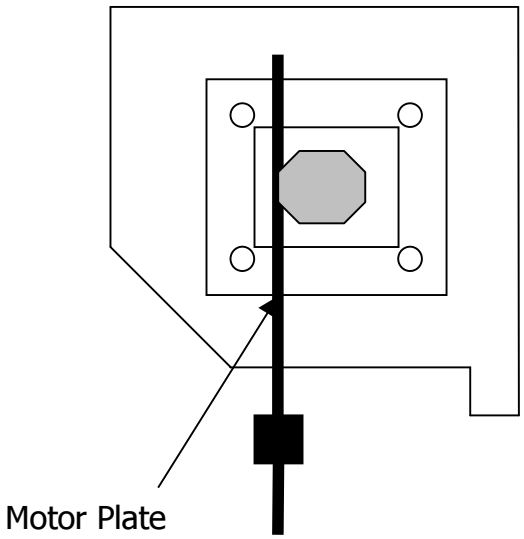


FIGURE 5

EXTERNAL FIT WITH EXTERNAL OVER-RIDE

(see over)



STEP 6 - FITTING THE REMOTE CONTROL UNIT

Your door will come with a suitable control unit. This will be packed separately, please follow the instructions, these will be found in the packaging for the control unit box.

STEP 7 – INSTALLING THE CURTAIN

If the door is less than 5m wide, the curtain can be attached to the barrel by "auto-locks" or "T springs". (See below for doors over 5m wide). Before you install the curtain, you must ensure that the motor barrel limit for the close position is set. See step 8.

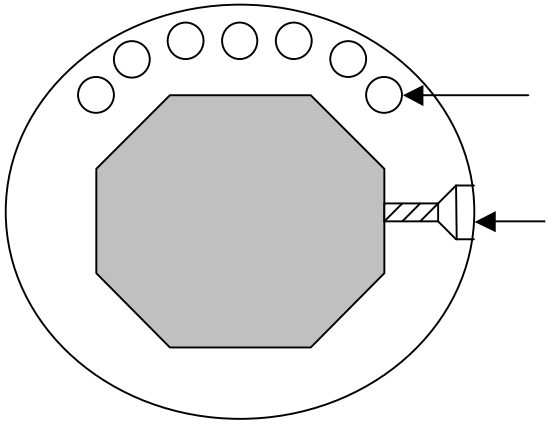
1. Power up the receiver unit, take a key-fob and press the button. The barrel will rotate in the close direction (approximately two rotations and stop). **NOTE:** If the barrel rotation is incorrect, please swap motor direction connections.
2. To ensure the curtain does not get damaged during fitting, the collars on the barrel must be covered with either cardboard or bubble wrap. This can be removed once the curtain is in position.
3. Carefully remove packaging from curtain.
4. Lift the curtain roll and feed the bottom rail over the barrel section into the guide rails. Feed the door into the guide rails approximately half way and unroll the remaining curtain so the curtain is hanging over the barrel.
5. Slide onto the top lathe of the door either the auto-locks or 'T' springs provided.
6. Carefully slide the curtain to the closed position.

NOTE: In some cases it may be necessary to rotate the barrel to enable fitting of the auto-locks or 'T' springs. Do this with the manual over-ride, at this stage do not run the motor.

AUTO-LOCKS

Slip the auto-lock rings onto the location pegs, ensuring that all pegs are in the same hole series. Secure in place with self tapping screws. (See Figure 6 and 7).

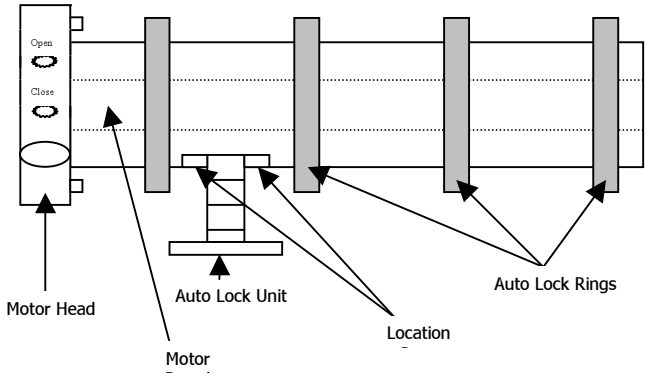
FIGURE 6 – AUTOLOCKING RING



Peg Location Holes
Ensure all pegs are located in the same hole series on each Auto Lock.

Self Tapping Screw
This should only form a resistance with the barrel wall.

FIGURE 7 – AUTOLOCKING UNIT



Connect the curtain to the barrel using pop rivets, enlarge the holes in the barrel to accommodate the pop rivets used. Never use the barrel hole directly adjacent to the barrel collars.

THE 125MM SHAFT

In the case of doors above 5m wide, a 125 shaft will have been supplied.
Follow the instructions for doors of any size. However, before releasing the curtain into the guides, put a block approx 400m under the curtain so that it sits above the ground. This will permit the curtain to hang forward toward the front of the box, curling over it to the front centre of the shaft. You will find the shaft adapter rail for 125mm doors with the parts of the door. This is a steel bracket 50mm wide and as long as the curtain. This should be slid on to the top slat of the curtain.

Once it is on, locate this bracket in one of the many 10mm grooves in the shaft. Drill through the rail and into the shaft at 300mm intervals all along the rail and shaft. Use screws to attach the rail to the shaft. Pop rivets can also be used. The shaft and curtain are now attached. This arrangement will carry curtains of up to 1000kg. As a rule, we use this arrangement, without modification, for curtains of a weight up to 250kg.

STEP 8 – SETTING THE MOTOR LIMITS

Before you operate the door electronically, Aluroll advise you to open and close the door manually to check operation of the door.

1. Remove the yellow limit cover if the limit switches are not exposed.

For a **left hand motor** (as you view the box). The **YELLOW** limit switch activates the **OPEN/UP** limit. The **WHITE** limit switch activates the **CLOSE/DOWN** limit. For a **right hand motor** these are reversed.

2. Using the manual over-ride, adjust the curtain position so that it is vertical and fully closed.
3. Press the close limit button (it will stay semi depressed), then press it again (it will fully release). Turn the power back on and your bottom limit will now be set
4. To set the top limit, use the key-fob to open the door and stop it when there are approximately two slats showing beneath the box.
5. Turn the power off. Use the manual over-ride to adjust the door so that 1 slat is showing (or the desired height).
6. Press the up limit switch (it will stay semi depressed) then press it again (it will fully release). Turn the power back on and the top limit will now be set.
7. Replace yellow plastic limit switch cover.

NOTE: The motor unit has an in-built thermal trip that will activate once the motor unit reaches a predetermined temperature. Repetitive usage during the fine adjustment process can cause the motor to cut out. Please wait approximately fifteen minutes for the unit to return to normal operating mode.

STEP 9 – FITTING THE FRONT BOX/ENCLOSURE

The front box cover can only be fitted after the motor limits have been set.
Clip the internal cover into the back box top retaining lip at approximately 10 degrees. Once the cover is located over its entire length place the cover hand up against the endplates Drill and fix in place with self tapping screws or pop-rivets. Drill a hole in the cover to allow the manual over-ride to be installed. Fix into position with self tapping screws or pop rivets.

Shutter installation guide

Installation of spring loaded shutter

Installation of cord operated shutter

Installation of electric shutter

Recommended tool requirements

Installation of Spring Loaded Shutter

Spring loaded shutters are lowered by pulling down on the bottom slat, and are raised under the tension of a spring in the shaft. The locking method is a central lock in the bottom slat with key.

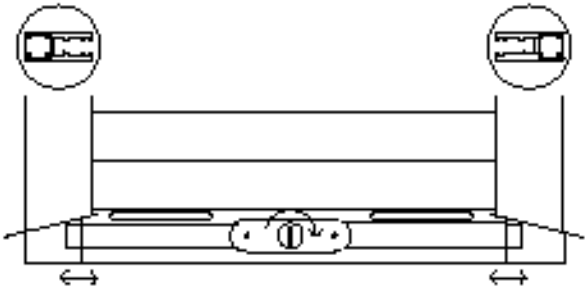
Shutters

On arrival on-site with your shutter, your first job is to double check the overall width of your shutter in relationship to the aperture. Determine whether the shutter will be packed off away from the wall enough to clear any protrusions ie. door handles. Box section should be ordered at the time of the initial survey if the shutter might be obstructed by window features. If everything is correct you can continue.

Note! You will need to notch out a section inside the guide channel to

receive the sliding section that will protrude out of the bottom slat....

Bottom slat key lock
Spring loaded shutters include a transverse lock fitted into the bottom slat. The central key throws out locking bars which locate into the box section of the guide rail at each side.



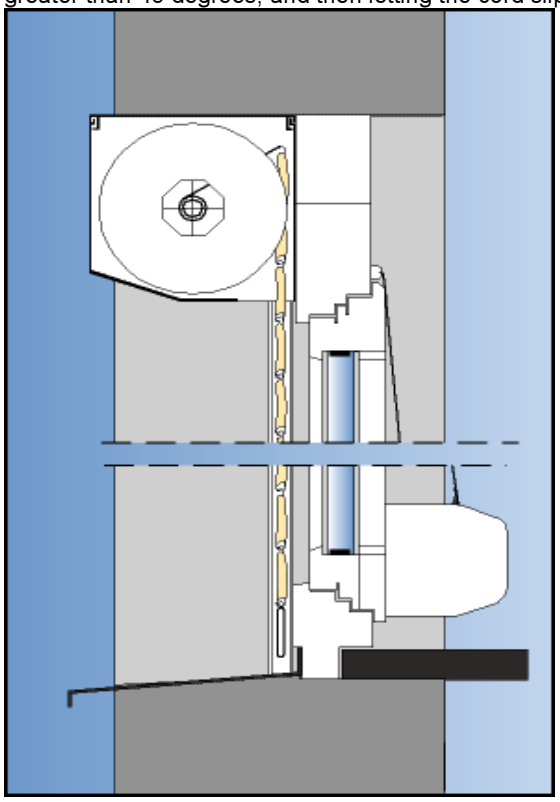
1. Centralise the shutter over the width of the window by first measuring the complete shutter box, and then, using a tape measure, equalise that width across the wall above the window. Mark either end of the intended location of the shutter on the wall with a pencil.
2. Determine which guide channel will be the left hand guide, and which the right hand guide, then mark accordingly. Hold the guides up to the wall next to the pencil mark made when first measuring the width, and level down your guide with a spirit level. Mark down the wall with a pencil where the guides will be placed.
This will give you the markings on the wall of the exact overall width measurement of your shutter (double check.)
3. Having determined the overall location of the shutter, you need to determine the height. Place the guides back on to the pencil lines to the point at which they require to sit on the cill, then mark on the wall the top of the guides. Removing the guides you now need to run a level line across these marks to check that the box will sit level. At this point you may need to cut one of the guides down to ensure that they are indeed so. It is essential that the box does sit level according to a spirit level. The action of the roller shaft will be inhibited if this is not the case.
4. Both width and height have now been marked correctly. The guides must now be drilled, ready for fitting. You will need a 6.5mm steel drill bit and a 10mm steel drill bit.
Put the guides back up to the pencil marks and mark on the guide where you require your fixings to be (recommended fixings approx 100mm from top and

bottom then fixings equalled out in between, minimum of 3 fixings; average of 300mm between fixings, maximum of 900mm between each.)
Your fixing hole should be drilled in the centre of the box section of the guide, drilling straight through both front and back of the guide with the 6.5mm bit, then drilling just the front of the guide with the 10mm bit so that the hole nearest the wall is the smaller one.
5. Put the guides back up to the pencil marks on the wall and mark through the holes you have drilled into the guides. This pencil mark will give you your fixing points on the wall itself. Remove the guides and drill the wall for your fixings (recommended drill bit 7mm masonry, screws 2inch 10s, and brown plugs.)
6. As long as there is headroom above the guides, you can now fix the guides to the wall, leaving the top screw loose to allow movement so that you can insert the pegs of the end plates in to the box section of the guide. Later, once the box, shaft and end-plate assembly has been located into the guide box section, you can tighten your top screw on the guide. If the box is in place you will need to put a fixing through the back of it, and in to the wall to secure it, using a 6.5mm steel bit through the aluminium and 7mm masonry bit through in to the wall. Guides, end-plates and box are now securely in place.
7. Lower the curtain into the guides by feeding the bottom of the curtain over the top of the shaft, then, when the curtain is half way, slide on your t-springs or autolocks. Once the curtain connections are on, carefully lower the curtain all the way down. You then need to rotate the shaft in the direction of the arrow to put tension on to the spring. Then connect the t-springs to the shaft by hooking them in to the slots. More tension may be required on the spring to assist the raising of the shutter; you can do this by disconnecting the top of the curtain from the shaft and manually rotating the shaft in the direction of the arrow. More turns on the shaft increases the amount of tension. It may take 2-3 attempts to achieve the right balance of raising and lowering the shutter. The locking fork supplied with the mechanism will hold it in place while the curtain is then attached to the shaft.
8. When you have achieved the right balance of tension, you can fit the pin-stops to the bottom rail. You will need a 5mm steel drill bit to drill straight through the bottom rail. Screw straight through these. The pins will stop the curtain from rolling up too far into the box when the it is raised.
NOTE! The holes that are drilled through the bottom rail should be no further down than 10mm from the top.
10. Fix the lid on using 4mm rivets drilling the holes with a 4.4mm steel drill bit. Aluroll recommends sealing all around the shutter with a silicone seal.

Installation guide for cord operated shutters

Cord operated shutters are raised and lowered via a tape pulley system.
The shutter is raised by pulling a cord which is attached to the shaft. The cord box clamps the tape cord at whatever point the operator chooses to let release the

cord. The curtain is lowered by pulling the cord away from the box at an angle greater than 45 degrees, and then letting the cord slip through the fingers.



Shutters

On arrival on-site with your shutter, your first job is to double check the overall width of your shutter in relationship to the aperture. Determine whether the shutter will be packed off away from the wall enough to clear any protrusions ie. door handles. Box section should be ordered at the time of the initial survey if the shutter might be obstructed by window features. If everything is correct you can continue.

1. Centralise the shutter over the width of the window by first measuring the complete shutter box, and then, using a tape measure, equalise that width across the wall above the window. Mark either end of the intended location of the shutter on the wall with a pencil.
2. Determine which guide channel will be the left hand guide, and which the right hand guide, then mark accordingly. Hold the guides up to the wall next to the pencil mark made when first measuring the width, and level down your guide with a spirit level. Mark down the wall with a pencil where the guides will be placed.

This will give you the markings on the wall of the exact overall width measurement of your shutter (double check.)

3. Having determined the overall location of the shutter, you need to determine the height. Place the guides back on to the pencil lines to the point at which they require to sit on the cill, then mark on the wall the top of the guides. Removing the guides you now need to run a level line across these marks to check that the box will sit level. At this point you may need to cut one of the guides down to ensure that they are indeed so. It is essential that the box does sit level according to a spirit level. The action of the roller shaft will be inhibited if this is not the case. If the cord box is being fitted on the other side of a wall, you must bear in mind that you will need a hole drilled from the shaft to the other side of the masonry. This channel will be between the top of your guide and the underside of the lintel. The hole will be 20mm.

4. Both width and height have now been marked correctly. The guides must now be drilled, ready for fitting. You will need a 6.5mm steel drill bit and a 10mm steel drill bit.

Put the guides back up to the pencil marks and mark on the guide where you require your fixings to be (recommended fixings approx 100mm from top and bottom then fixings equalled out in between, minimum of 3 fixings; average of 300mm between fixings, maximum of 900mm between each.)

Your fixing hole should be drilled in the centre of the box section of the guide, drilling straight through both front and back of the guide with the 6.5mm bit, then drilling just the front of the guide with the 10mm bit so that the hole nearest the wall is the smaller one.

5. Put the guides back up to the pencil marks on the wall and mark through the holes you have drilled into the guides. This pencil mark will give you your fixing points on the wall itself. Remove the guides and drill the wall for your fixings (recommended drill bit 7mm masonry, screws 2inch 10s, and brown plugs.)

6. Now the wall is drilled for your guide fixings you can drill the cord hole. This will need to be a 20mm hole starting at the top of your guide centrally in the box section. Starting with a 10mm sds bit, drill through the wall angled slightly downwards and away from the internal reveal, as you get close to the inside you need to come off hammer and drill gently through. Once you have got your first hole through you need to move up to your 15mm sds bit repeating the process and again with the 20mm sds bit. Once the hole is complete you can insert through the hole a length of plastic conduit, this will ensure that the cord will run smooth through the wall once fitted.

7. Now the conduit is through the wall and blown free of any dirt or dust you need to fit the cord box and cord roller. Fit the cord roller first. This will fit directly over the hole you have drilled, fitted with the roller to the bottom and the brush to the top.The cord box will fit on the wall at about waist height and in line with the roller. This is fitted with 2 screws, once fitted pull all the cord from the box and put a plug in to the brake area to stop the cord retracting, make sure that the cord is not twisted, and feed through the roller and through the wall slightly protruding through to the outside.

8. As long as there is headroom above the guides, you can now fix the guides to the wall, leaving the top screw loose to allow movement. Later, once the box, shaft and end-plate assembly has been located into the guide box section, you

can tighten your top screw on the guide. If the box is in place you will need to put a fixing through the back of it, and in to the wall to secure it, using a 6.5mm steel bit through the aluminium and 7mm masonry bit through in to the wall. Guides, end-plates and box are now securely in place. Once you have the box in place you can connect the cord to your spool, you will see on the spool a little hook to which you fit the end of your cord which already
has a pre-drilled hole in it, your cord will come to the underside of the spool to which you then connect. Once connected tighten your top screw on the guides.
9. Lower the curtain into the guides by feeding the bottom of the curtain over the top of the shaft, then, when the curtain is half way, slide on your t-springs or autolocks. Once the curtain connections are on, carefully lower the curtain all the way down. You then need to rotate the shaft in the direction of the arrow to put tension on to the spring. Then connect the t-springs to the shaft by hooking them in to the slots.
10. you can fit the pin-stops to the bottom rail. You will need a 5mm steel drill bit to drill straight through the bottom rail. Screw straight through these. The pins will stop the curtain from rolling up too far into the box when the it is raised.
NOTE! The holes that are drilled through the bottom rail should be no further down than 10mm from the top.
10. Fix the lid on using 4mm rivets drilling the holes with a 4.4mm steel drill bit. Aluroll recommends sealing all around the shutter with a silicone seal.

Installation guide for electric shutter

Standard electric shutters are raised and lowered via either a 2-way mommentry switch for internal use or a 2-way mommentry key switch for external use. On arrival on-site with your shutter; your first job is to double-check the overall width of your shutter in relationship to your aperture. If everything is correct you can then continue.

1. Centralise the shutter over the width of the window by first measuring the complete shutter box, and then, using a tape measure, equalise that width across the wall above the window. Mark either end of the intended location of the shutter on the wall with a pencil.
2. Determine which guide channel will be the left hand guide, and which the right hand guide, then mark accordingly. Hold the guides up to the wall next to the pencil mark made when first measuring the width, and level down your guide with a spirit level. Mark down the wall with a pencil where the guides will be placed.
This will give you the markings on the wall of the exact overall width measurement of your shutter (double check.)
3. Having determined the overall location of the shutter, you need to determine the height. Place the guides back on to the pencil lines to the point at which they require to sit on the cill, then mark on the wall the top of the guides. Removing the guides you now need to run a level line across these marks to check that the box will sit level. At this point you may need to cut one of the guides down to ensure

that they are indeed so. It is essential that the box does sit level according to a spirit level. The action of the roller shaft will be inhibited if this is not the case.

4. Both width and height have now been marked correctly. The guides must now be drilled, ready for fitting. You will need a 6.5mm steel drill bit and a 10mm steel drill bit.

Put the guides back up to the pencil marks and mark on the guide where you require your fixings to be (recommended fixings approx 100mm from top and bottom then fixings equalled out in between, minimum of 3 fixings; average of 300mm between fixings, maximum of 900mm between each.)

Your fixing hole should be drilled in the centre of the box section of the guide, drilling straight through both front and back of the guide with the 6.5mm bit, then drilling just the front of the guide with the 10mm bit so that the hole nearest the wall is the smaller one.

5. Put the guides back up to the pencil marks on the wall and mark through the holes you have drilled into the guides. This pencil mark will give you your fixing points on the wall itself. Remove the guides and drill the wall for your fixings (recommended drill bit 7mm masonry, screws 2inch 10s, and brown plugs.)

6. As long as there is headroom above the guides, you can now fix the guides to the wall, leaving the top screw loose to allow movement so that you can insert the pegs of the end plates in to the box section of the guide. Later, once the box, shaft and end-plate assembly has been located into the guide box section, you can tighten your top screw on the guide. If the box is in place you will need to put a fixing through the back of it, and in to the wall to secure it, using a 6.5mm steel bit through the aluminium and 7mm masonry bit through in to the wall. Guides, end-plates and box are now securely in place.

7. Running your motor cable. To get your motor cable from inside the box to inside the building can be done by drilling a 10mm hole through the peg of your end plate (inside the recess) the cable can be fed through this and then down the box section of the guide channel. Mark at what height you wish to have your switch on the outer wall and then transfer that mark to the back of your guide channel. Once you have that mark on the back of the guide you need to drill just the back of the guide with a hole big enough to feed the cable through. You then need to fit the guide channel to the peg of the end plate before fitting this to the wall, whilst doing this you need to feed the cable down the guide channel and out of the hole on the back of the guide that you have drilled.

8. You will need to drill through the wall with a 10mm sds bit at the point of which your cable is coming out of the guide channel, and in to the inside of the building at the point to where you want your switch fixing.

9. Next, fix both guides to the wall, or fit them to the box and put the shutter on the wall in one unit. It is recommended 2 people do this method. While raising the shutter in position you need to feed the cable through the wall at the same time. Once in position you can screw all your guide fixings up, taking care not to damage the cable when fixing screws through where this is. Now your box is in place you will need to put a fixing through the back of this and in to the wall to secure, again using a 6.5mm steel bit through the aluminium and 7mm masonry bit through in to the wall.

10. Connecting your switch. There are sufficient holes in the back of your switch box for your cable to come through, so site this on the wall to suit the cable and

mark through the fixing holes. Drill the marks and insert your plugs and fix the switch back to the wall. (It is probably easier to strip your outer sleeve of the cable before doing this.) Once the switch box is fitted you need to get power to this you need to be coming from a socket ring main via a plug top. If the power derives from a fuse spur or is wired direct to the mains, the switch should always have its own isolation point and be wired by a qualified electrician.

Once there is power to the switch you need to connect, you will have a 3-core cable from your mains and a 4-core cable from your motor. The neutrals or blue from your motor and mains connect together in a terminal block separated from the switch; the earth, or green and yellow from the motor and mains connect together in a terminal block separate from the switch; the live or brown from the mains connects in to your terminal on your switch marked L. The brown and black cables from the motor are now remaining; these are the motor directions. One connects in to terminal 1 of the switch, white the other connects in to terminal 2. Connecting them will determine which way the motor turns when the up or down switch is pressed. If the up on the switch is not co-ordinated with the upward motion of the curtain, the black and brown can be reversed.

11. Now that the shutter is fitted to the wall and the switching is connected, the curtain can be lowered into place and connected. To do this, feed the bottom of the curtain over the top of the shaft, then, carefully lower this half-way down. While the curtain is in this position you need to slide the t-springs on to the top of the curtain. Finally, lower the curtain all the way down. The top of the curtain should finish approx. 50mm from the top of the box. If the curtain is too high for individual fitting needs, a slat can be removed. Once you are satisfied with the height of the curtain relative to the shaft, they can be connected together with the supplied t-springs to the shaft with approx. 20mm self-tapping screws.

12. The limit switches on the motor enforce a restriction on the number of turns the motor can make upward and downward. The switches are 2 buttons on your motor covered by a yellow cap. Remove the cap and push both of the buttons in: this puts the limits on constant run. Push both the buttons in again; this will zero the limits. Now put your switch in the up position and press one button in to determine which is your up limit and which is your down. Once you know this, pushing in your up limit keeps it running constant until you push in again and release, where your shutter stops is where the limit is set to. Repeat this process going down.

Recommended tool requirements

Recommended tool requirements for the installation of roller shutters.

1) TAPE MEASURE
2) PHILIPS SCREW DRIVER
3) FLAT HEAD SCREW DRIVER
4) ELECTRICAL SCREW DRIVER
5) CLAW HAMMER
6) HACK-SAW
7) SPIRIT LEVEL
8) RIVETERS
9) PLIERS
10) WIRE CUTTERS
11) STANLEY KNIFE
12) ALLEN KEYS

Recommended power tools and accessories

BATTERY DRILL
110V SDS DRILL
110V TRANSFORMER
110V EXTENSION LEAD
HIGH POWER SDS BATTERY DRILL

Drill Bits

1) 3.5MM STEEL BIT (PILOT IN TIMBER)
2) 4.4MM STEEL BIT (DRILLING FOR RIVETS)
3) 6.5MM STEEL BIT
4) 10MM STEEL BIT
5) 7MM SDS BIT (TO SUIT BROWN PLUGS)
6) 10MM X 450MM SDS BIT
7) 15MM X 450MM SDS BIT
8) 20MM X 450MM SDS BIT

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