



ROLLAC

Rolling Shutter Installation Manual

Complete Technical Guide

Please read before installing rolling shutters



Complete Technical Guide for Rolling Shutter Installation

Please familiarize yourself with the installation instructions before starting the installation. For immediate Questions – please call Rollac Tech Support: 1-888-276-5522

Installation instructions require experience in construction and mounting techniques and are written for the professional installer and authorized Rollac dealer.

Have all electrical work performed by a qualified electrician.

COPYRIGHT NOTICE:

This installation guide is for the authorized and professional Rollac dealer. All content is copyrighted by Rollac. Distribution or unauthorized use of this content without the written consent of Rollac is prohibited. Rollac Shutter of Texas, Inc. will actively pursue its legal rights.

© Rollac Shutter of Texas, Inc. 2017

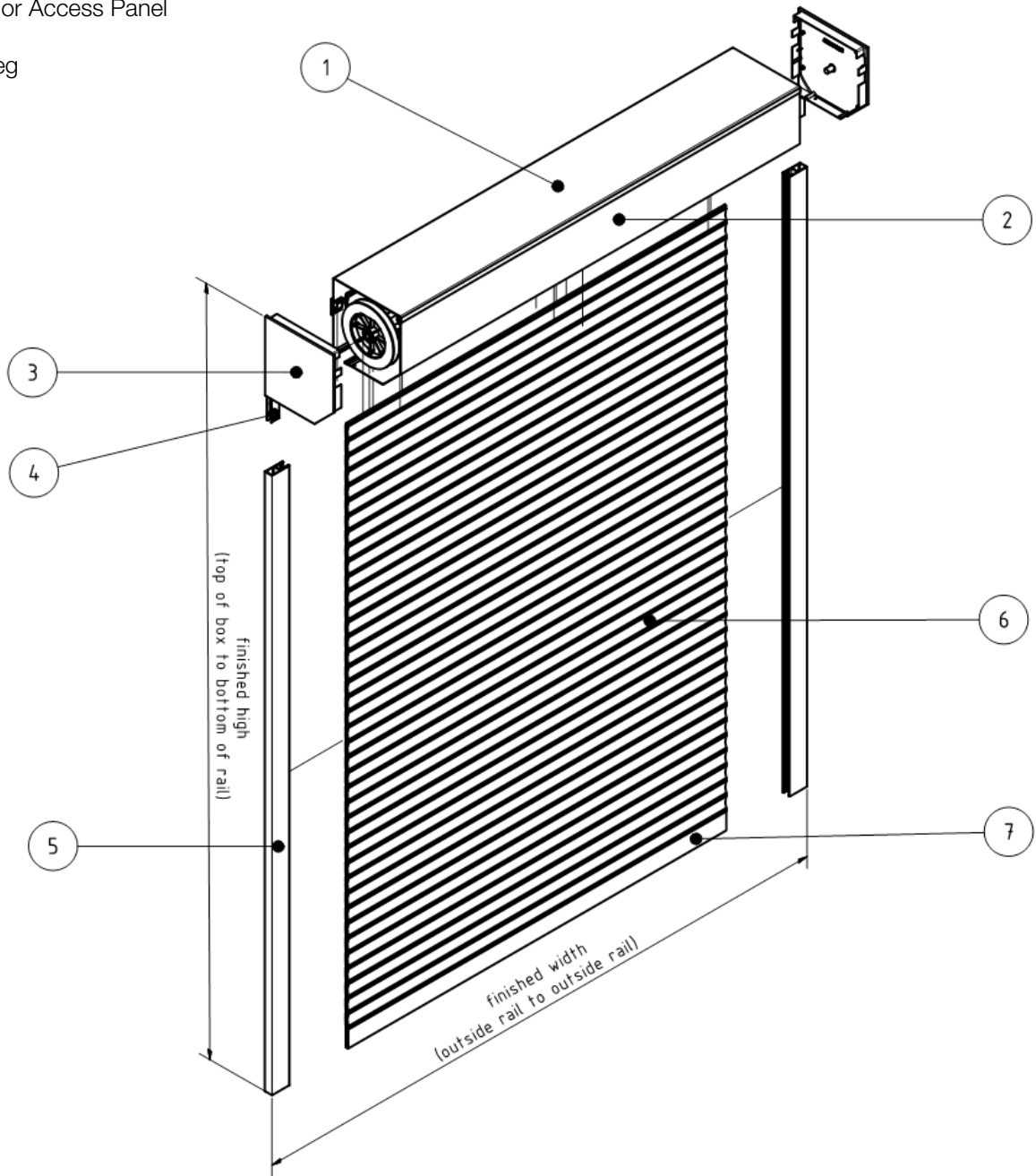


Table of Contents

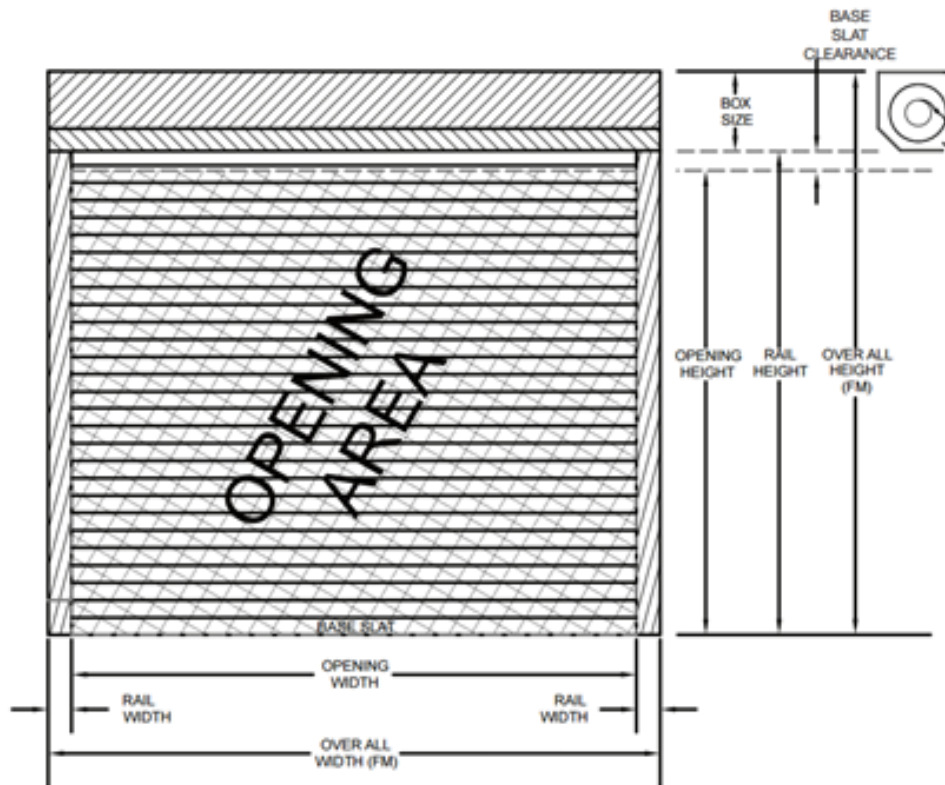
Important Rolling Shutter Terminology	4
Important Dimensional Terminology	5
Installation Condition covered in Technical Guide	6
Special Installation Conditions (Not Covered):	6
Key Symbols and Meanings	7
General Information and Safety Advice	8
Rollac Technical Support Line – 281-485-1911	9
More Installation Instructions and Training Videos	9
Tools Required	10
Additional Required Installation Items	12
Packaging and Labeling	13
• Parts List for Rolling Shutter Systems	14
• Parts List for Tape Drive Rolling Shutter Systems	14
• Parts List for Gear Operated Rolling Shutter Systems	15
• Parts List for Motorized Operated Rolling Shutter Systems	16
Rolling Shutter Installation	17
• Surface Preparation	17
• Fix Rolling Shutter Method - A (Install Housing First * Recommended)	18
• Step 2 – Install Operator and Insert Curtain	22
• Step 2 A – Tape Drive Rolling Shutter	22
• Step 2 B – Gear Operated Rolling Shutters	24
• Step 2 C – Motorized Rolling Shutter Systems	26
• Step 3: Finishing Installation and Check Function	34
Alternative Installation Method: Lift Up Shutter	36
Sub Frames and Build Out	37
• A-Frame	37
• B-Frame	38
• U-Frame	39
• Reverse U – Frame	40
• Double I-Frame	41
• O – Frame	42
• Single I-Frame	43
• Double I-Frame Attached with Clips	44
Rail Mounting Options Standard Rail	45
Rail Mounting Options End Retention Rail	46
Exploded Drawings	47
• Tape Operated Rolling Shutter	47
• Gear Operated Exploded Drawing	48
• Motorized Rolling Shutter	49
Split Unit Example	50
Electronics Information	51
• Wiring Diagram Smart Motor Control with Remote Control and Photo Eyes	51
• Wiring Diagram Smart Motor Control with Remote Control and Wireless Safety Edge	52
• Star Wiring Diagram Multiple Shutters (IGC)	53
• Wireless SIMU Keypad Programming Instructions	54

Important Rolling Shutter Terminology

- 1. Shutter Housing Back
- 2. Front Cover or Access Panel
- 3. Sidecaps
- 4. Sidecap - Leg
- 5. Guide Rails
- 6. Curtain
- 7. Base Slat



Important Dimensional Terminology



Width Dimension

Overall Width / Finished Width

Overall width or finished width of the shutter (end to end measurement).

Opening Width

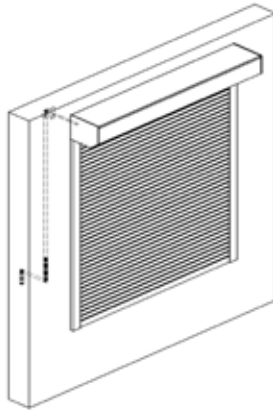
The opening of the shutter and thus actual dimension of unobstructed or dimension through which an object can clear.

Rail Width

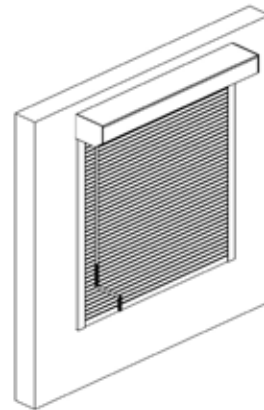
Size of the guide rails on each side

Installation Condition covered in Technical Guide

Exterior Mount



Interior Mount



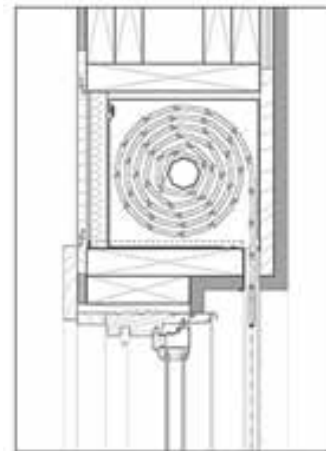
Special Installation Conditions (Not Covered):

The following Shutter installations are less common and not covered in this technical guide. However, the installation is similar. If you want to perform one of the following installations and have questions, please call Rollac's Technical Support Line at 281-485-1911 for further information.

Soffit Mount








In-Wall Mount



Key Symbols and Meanings

Below are the symbols and their meaning that are used throughout the installation instructions.

	<p>WARNING! Risk of Personal Injury. This is important safety information, which must be observed. Indicates a potentially hazardous situation which, if not avoided, could result in severe or fatal injury.</p>
	<p>ATTENTION Indicates a potentially hazardous situation which, if not avoided could result in damage to the product or building.</p>
	<p>Operational Check At this point of installation an operational check can be performed. Operational checks are very important as they can identify potential errors that could take intensive time to fix later.</p>
	<p>Advice / Tip Information that can save time and enhance safety factors during an installation.</p>
	<p>Reference or Important Note During this step, a reference or important note is made. This might be a reference to another source or a reference that this step only applies to certain installation types.</p>
<p>Special Instructions</p>	<p>Special Installation Step Steps that only apply to a special installation method or operators are in red. This step only applies to a special operator or installation condition. If this step does not apply to your installation, continue to the next step.</p> <p>Example: For Motors with Emergency Override – Install Special Crank Handle</p>

General Information and Safety Advice

These installation instructions are written for the trained and professional installer who is authorized by Rollac. Please read these installation instructions carefully before attempting installation. These installation instructions shall not be given to the owner or operator of the Rollac Rolling Shutters but remains with the installer. Observe all safety advice and relevant instructions.



Installation, commissioning, operator training, servicing, and repairs shall only be performed by the trained and professional installer, who is authorized by Rollac.

When installing, servicing, or repairing electrically operated products, please make sure that the main power supply is disconnected.

After installation and commissioning of the rolling shutter, the owner and, or operator must be trained on how to use the rolling shutter. We refer to the Operating and Maintenance Instructions in the Owner's Manual. Please be familiar with the most important aspects regarding operator training and operation of a rolling shutter:



- The rolling shutter shall only be operated in view
- There should be no obstacles within the operating path of the rolling shutter
- No objects should pass through the rolling shutter while in operation
- The operator / owner shall read and be familiar with the Owner's manual, especially the Operating and Maintenance Instruction.
- In the event of a malfunction, the operator shall consult the Owner's Manual and contact the Rollac authorized dealer if necessary.
- Any repair or modifications by an unqualified technician that was not authorized by Rollac or a an authorized Rollac dealer will void the warranty.

Observe safe working practices and follow other guidelines during the installation. Contact OSHA, Occupational Safety and Health Administration if necessary.



Always check with your local authorities or building code official about any applicable legislation regarding the rolling shutter, i.e. permits.



If in question about any of the procedures, do not perform the work. Have a trained and qualified installer do the installation or repair or call Rollac for further advice.

Technical Support Information

Rollac Technical Support Line – 281-485-1911

Rollac also provides phone support for installation and servicing of its rolling shutters. Please call 281-485-1911 and ask for Technical Support

More Installation Instructions and Training Videos

These installation instructions are considered detail and for the rolling shutter professional or professional installer. There are also installation videos available at www.rollac.com or through your sales rep.

Tools Required

Tool	Description
Pair of Ladders	Typically 8' ladders are recommended for first floor installations.
Caulking Gun	Caulking Gun is needed to seal the edges around the rolling shutter.
Chop Saw for Aluminum	Useful in case parts such as rails need to be trimmed.
Set of Small Tools	For example, various size Phillips head screw, flat head screws, drivers, pliers, etc.
3 – 4' Level	To level the rolling shutter (rails and housing)
Tape Measure with imperial and metric units	Measure Shutter. Rollac uses the metric system, centimeters, to display sizes such as overall width and overall height.
Hammer Drill	To be used for buildings with masonry work, such as Stucco, Brick, Center Block, or concrete. The hammer drill is needed to drill a hole through the wall or pre-drill for anchors. The hammer drill should have a ½" chuck to house drill bits (see below)
Regular Drill with 1/2" chuck	To be used for drilling through a wall using material such as wood, fiber cement siding (hardie plank) or aluminum. The hammer drill should have a ½" chuck to house drill bits (see below)
Drill bit ¼" x 12"	Appropriate drill bit for Substrate. Use to mark drilling point and drill pilot hole
Drill bit ½" x 12"	Appropriate drill bit for substrate. Required to drill final hole for drive shaft of universal.
Drill Bit 5/8" x 12	Appropriate drill bit for substrate. Used to drill final hole for Tape Drive operated rolling shutters.
Impact Driver	Secure rails and housing
Carpenters Pencil / Chalk	To mark positions
Hack Saw	To cut drive shaft of Universal
Metal Files (round, half round, and flat)	To smooth out metal edges of guide rails.
Plastic Hammer	To smooth out edges without scratching the metal
Metal Cutting Snip	To cut back of housing (sheet metal)
Adjustable Drill Guide	To drill at an angle, i.e. if required for gear operated shutters
Optional: Jigsaw or Circular Saw	If the shutter housing is to be installed in the soffit, a circular saw or a jigsaw is required to cut the soffit board.

Title

This page intentionally left blank until document is done - update ToC afterwards

Additional Required Installation Items



The following installation items are not included with your rolling shutter and have to be provided separately:

Fasteners:

Adequate Fasteners are required to fix rails and housing, or attach an optional window sill. Rollac always recommends choosing fasteners that are adequate for fixing the shutter into a structural member, such as wood framing, steel frames, concrete walls etc.

Fasteners - Hurricane Shutters

For installations that have to meet a hurricane code such as Miami Dade require special fasteners depending on substrate. For more information, see Engineering, available from Rollac.

Caulking

Caulking in a matching or close matching color is needed to seal edges of the rolling shutter. Rollac also recommends caulking around screws (i.e. for Stucco facades to avoid capillary action)

Baker's Rod

A Baker's Rod might be required if large gaps have to be cover with caulking, typically gaps larger than ½ Inch. This prevents the caulking from breaking



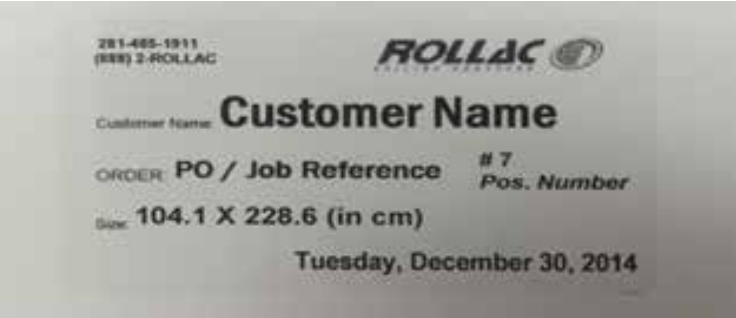
Dry Lubricant

A dry lubricant, such as a PTFE to lubricate the guide rails. **Do not use WD-40.**

Electrical Accessories

For Motorized Shutters: Electrical accessories such as cable or boxes are not included and need to be purchased separately.

Packaging and Labeling

Tool	Description
<p>General Parts and Packages A Rolling Shutter is typically packed in three packages:</p> <ul style="list-style-type: none"> • Housing + Small Parts • Curtain • Rails 	
<p>Labeling of Packaging All packages are labeled on the outside. They contain the Content and list Job Name and Position Number. Thus, they can be easily identified.</p>	 <p>Job _____</p> <p><input type="checkbox"/> Rails # _____</p> <p><input type="checkbox"/> Curtain # _____</p> <p><input type="checkbox"/> Shutter Box # _____</p> <p><input type="checkbox"/> Accessories # _____</p>
<p>Labeling of Boxes, Curtains, Rails Shutter Housing, Curtains, Rails, and Small parts are labeled.</p>	 <p>281-485-1911 (888) 2-ROLLAC</p> <p>Customer Name: Customer Name</p> <p>ORDER: PO / Job Reference # 7 Pos. Number</p> <p>Size: 104.1 X 228.6 (in cm)</p> <p>Tuesday, December 30, 2014</p>

Parts List for Rolling Shutter Systems

Parts List for Tape Drive Rolling Shutter Systems

General Parts

- Assembled Shutter Housing (Optional Box Support Angle, Standard for Heavy Duty Systems and Hurricane Shutters)
- Pair of Guide Rails and
- Plug Buttons to cover rail drilling holes
- Curtain
- Owner's Manual
- Installation Instructions (available electronically)

Operator Specific Parts

A.) Tape Drive with Recoil Box Exterior Mounted

- a. Recoil Box with Strap
- b. Diamond Shape Entry Guide

B.) Tape Drive with Recoil Box Interior Mounted

- a. Recoil Box with Strap
- b. Square Entry Guide for Housing

C.) Tape Drive with Crank Box Exterior Mounted

- a. Crank Box
- b. Crank Handle
- c. Diamond Shaped Entry Guide

D.) Tape Drive with Crank Box Interior Mounted

- a. Crank Box
- b. Crank Handle
- c. Square Entry Guide for Housing

NOT Included are any fasteners, caulking, baker's rod, etc. These items must be purchased separately. See above!

Parts List for Rolling Shutter Systems

Parts List for Gear Operated Rolling Shutter Systems

General Parts

- Assembled Shutter Housing (Optional Box Support Angle, Standard for Heavy Duty Systems and Hurricane Shutters)
- Pair of Guide Rails and Plug Buttons to cover rail drilling holes
- Curtain
- Owner's Manual
- Installation Instructions (available electronically)

Operator Specific Parts

A.) Gear Operated Shutter Exterior Mounted

- a. Universal joint with drive shaft
- b. Crank handle
- c. Crank handle holder

B.) Gear Operated Shutter Interior Mounted

- a. Universal joint with drive shaft (optionally pre-installed)
- b. Crank handle
- c. Crank handle holder

To be requested separately: Drive Shaft Hex or Square to lift curtain during installation

NOT Included are any fasteners, caulking, baker's rod, etc. These items must be purchased separately. See above!

Parts List for Rolling Shutter Systems

Parts List for Motorized Operated Rolling Shutter Systems

General Parts

- Assembled Shutter Housing (Optional Box Support Angle, Standard for Heavy Duty Systems and Hurricane Shutters)
- Pair of Guide Rails and Plug Buttons to cover rail drilling holes
- Curtain
- Owner's Manual
- Installation Instructions (available electronically)
- Wiring and Limit Switch Instructions (available electronically)

Operator Specific Parts



Motor specific cable

- Switch (hard wired) operated motors have 6' cable – 4 wires. Additional cable needs to be purchased separately
- Remote control operated motors have 6' cable – 3 wires. Additional cable needs to be purchased separately

A.) Switch Operated

- Switch (Toggle, Decorator, Rocker, either maintained or momentary).

B.) Remote Control Operated

- Remote Control (multi channel available for multiple units)

C.) Switch or Remote Operated with Emergency Override (Exterior Mounted)

- Switch (Toggle, Decorator, Rocker, either maintained or momentary)
- Alternative: Remote Control Operated
- Universal joint with drive shaft
- Crank handle and Crank handle holder

D.) Switch or Remote Operated with Emergency Override (Special Crank Handle)

- Switch (Toggle, Decorator, Rocker, either maintained or momentary)
- Alternative: Remote Control Operated
- Extra plug buttons to cover hole of Box Access Panel
- Special Crank Handle

NOT Included are any fasteners, caulking, baker's rod, etc. These items must be purchased separately. See above!

Rolling Shutter Installation

Surface Preparation

Mounting Surface:

The mounting surface must be suitable for the rolling shutters. It must be adequate to support the weight of the rolling shutter, take the appropriate fixings, and meet any structural requirements, such as for Hurricane Shutters. Mounting surfaces shall be flat and vertical to ensure a parallel alignment of the guide rails.

Do not attempt the installation or remove any building components unless the mounting surface is suitable for rolling shutter.

Check Dimensions:

Check the dimension and verify that the rolling shutter fits the actual window / opening and installation surface.

No Obstructions

Verify that there are no obstacles such as door handles or window flashing in the up and down path of the rolling shutter. (Fig. 1)

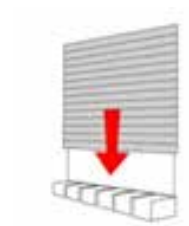


Fig. 1

Bottom Stop | Window Sill

In closed position, the rolling shutter needs a bottom stop such as a window sill or floor. This bottom stop must be suitable to support the entire weight of the rolling shutter curtain. If no bottom stop is available, an aluminum angle can be used and can be purchased from Rollac.

Sub Frame Required

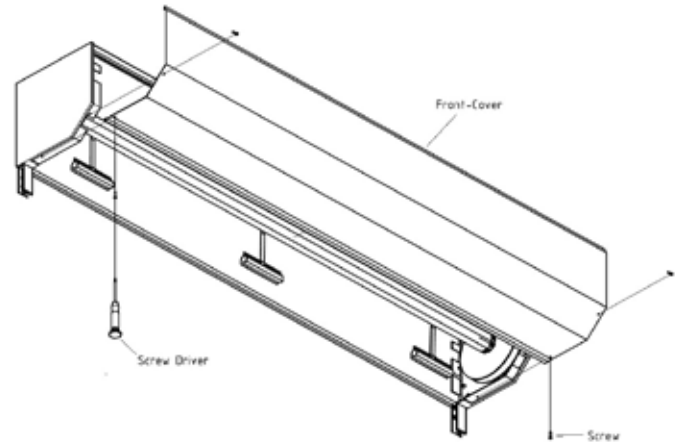
If obstacles cannot be removed or when in doubt, build out might be required to create a sub frame. See also SUB FRAMES for more information.

Fix Rolling Shutter Method - A

(Recommended - Install Housing First)

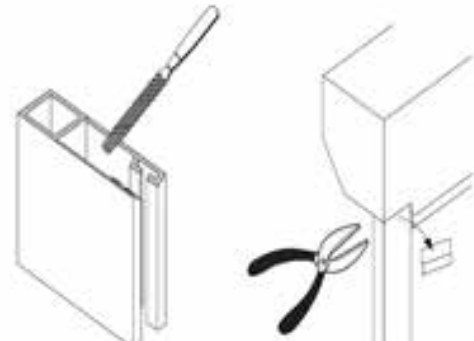
Remove Shutter Access Panel

**NEEDS DESCRIPTION OF WHAT TO DO HERE
REMOVE SCREWS? ADD BUTTER? :)**



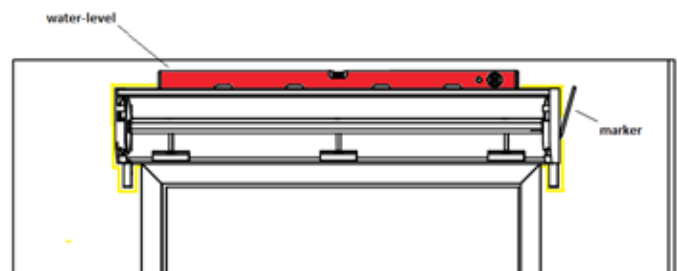
Prepare Each Connecting Surface

- 1.) File the top of the rails to create a smooth entry angle.
- 2.) Cut the folding edge which overlaps the guide rails of the Box Housing



Level Shutter Housing Against Wall

- 1.) Level shutter housing against the wall. Make sure it is level.
- 2.) Mark outer position of shutter housing with a carpenter pencil or chalk.



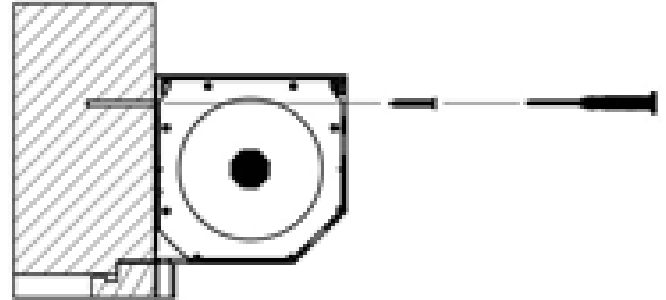
Fix Rolling Shutter Method - A

Exterior Mount Shutters: Transfer feed hole onto installation surface

Mark drilling hole.

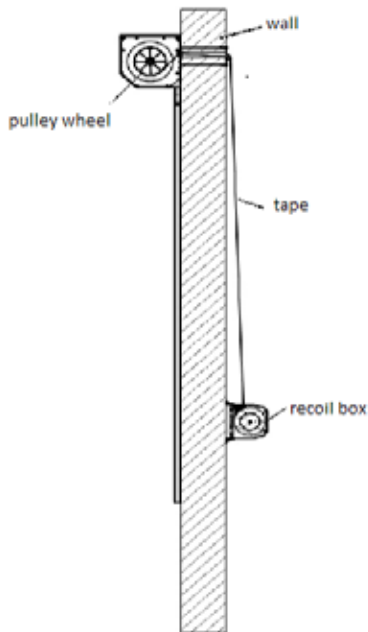


Use a long drill bit and mark the drilling hole by going through the side cap of the rolling shutter. When you use a gear, you can go through the eye for the gear.



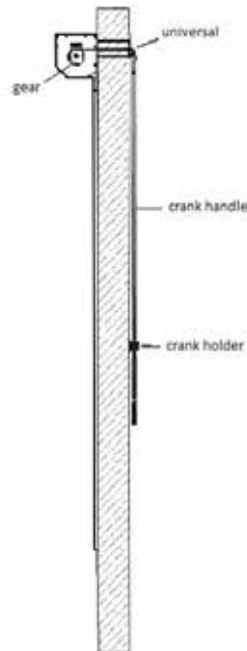
Exterior Mount Shutters: Drill Feed Hole

Tape Drive



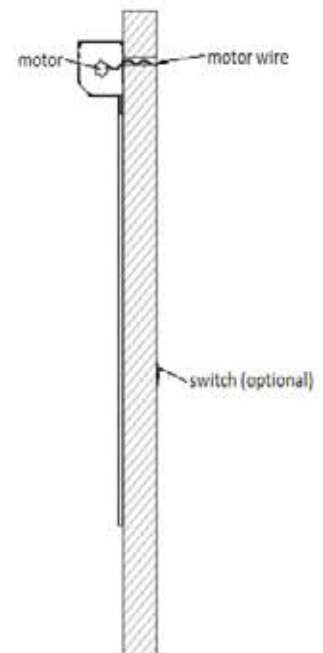
Drill hole diameter for tape drive operated shutters: $\text{\O} 5/8''$

Gear Operated



Drill hole diameter for gear operated shutters or motors with emergency override: $\text{\O} 1/2''$

Motor Operated



Drill hole diameter for electrical feed (consult your electrician for cable routing): $\text{\O} 1/2''$

Always drill a pilot hole before making final bore hole. Use appropriate drill bits and tools for various substrates such as brick or concrete.

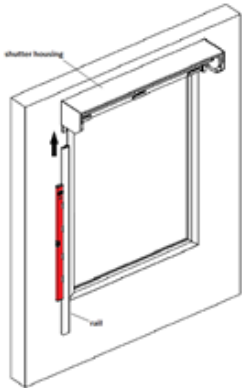
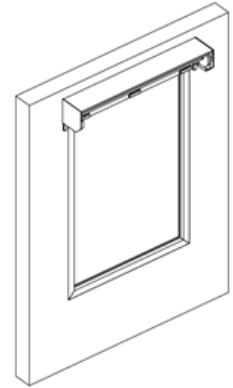
Fix Rolling Shutter Method - A

Fix Shutter Housing

- 1.) Fix Shutter Housing. Use previous marks to find exact position.
- 2.) Make sure that shutter housing is level
- 3.) Fix housing using appropriate screws



Rollac Heavy Duty Systems and Hurricane Shutters have a supporting box angle (typically 1" x 2" x 0.25"). This angle needs to be installed separately in the top corner of the rolling shutter housing.



Insert Rails into Sidecap legs – First Rail

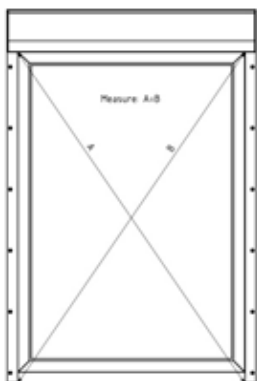
- 1.) Insert Rail into Side-Cap Leg
- 2.) Fix Top Screw
- 4.) Make sure rail is level.
- 5.) Fix bottom screw



Be careful not to put too much stress and force on the sidecap legs. They can break easily.

Insert Rails into Sidecap legs – Second Rail

- 1.) Insert second guide rails
- 2.) Install second guide rail away from first rail – use finished width as a measurement and fix the top screw
- 3.) Repeat this process for the bottom screw



Take Cross Measurement

As a quality check – measure the diagonals and make sure it is plumb, level and square. Adjust if necessary.

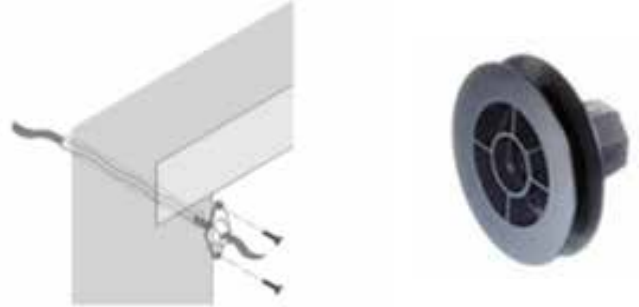


Tip: Do not fix all screws yet. Fix remaining screws, once operator is installed and curtain runs freely up and down in its tracks!

Step 2 – Install Operator and Insert Curtain* Step 2 A – Tape Drive Rolling Shutter

Exterior Mounted Shutters: Install Recoil Box

- About 2" away from the beginning of the tape – cut a ½" hole lengthwise
- Install recoil box.
- Feed tape through the diamond shape entry guide
- Feed tape through the wall and shutter (you may use a hacksaw blade as a guide to feed the tape through)
- Install tape onto pulley wheel. Pulley wheel has a diamond shape hook. Use ½" hole to connect with pulley



Interior Mount Shutters: Install Recoil Box

- About 2" away from the beginning of the tape – cut a ½" hole lengthwise
- Install recoil box.
- Feed tape through the entry guide and shutter housing
- Do not reconnect access panel
- Install tape onto pulley wheel. Pulley wheel has a diamond shape hook. Use ½ hole to connect with pulley

Charge Recoil Box For DuraComfort A150 and A150H

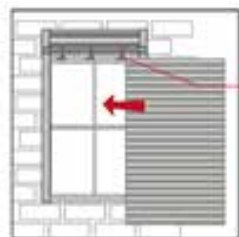
- Pull down curtain (if it is wound around axle)
- Disconnect curtain from springlock hangers
- Turn springlock hangers (T-Hangers) 90 degree's in order to scratch the curtain
- Pull Entire Tape out of the recoil box – but leave about 12" inside
- Fix tape with clamp to avoid tape being pulled back into recoil box
- Turn axle to wind extra tape onto pulley
- Turn axle until tape is slightly tensioned
- Reattach curtain onto springlock hangers
- Use Tape to lift shutter and make sure it runs smooth in its tracks

Charge Recoil Box – All Other Systems

- Pull Entire Tape out of the recoil box – but leave about 12" inside
- Fix tape with clamp to avoid tape being pulled back into recoil box
- Turn springlock hangers (T-hangers) by 90 degree
- Turn axle to wind extra tape onto pulley
- Turn axle until tape is slightly tensioned
- Bend 3 cm cut into an entry funnel (use a cloth and pliers)
- Attach curtain to springlock hangers
- Use tape to lift curtain and wind it around axle.



3 cm Cut



Attaching
Springlock Hangers



Make sure curtain does not scratch at the entry funnel

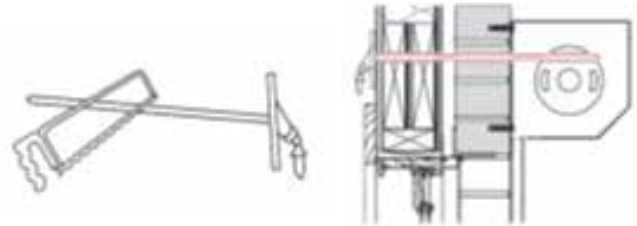
- Using the baselsat as starter - feed curtain into rails

* For Gear Operated Installation, see page 24
For Motorized Installation, see page 26

Step 2 B – Gear Operated Rolling Shutters

Exterior Mount Shutters: Install Universal

- Insert the Drive shaft of the universal into the gear
- Mark exit point from the Universal and deduct approximately three inches for the desired shaft length
- Cut the Universal to desired length
- Install Universal



Gear and Assist Spring: Charge Spring



This step only applies to rolling shutters that are gear operated with assist spring:

- Prior to installing the curtain, the spring needs to be charged
- For this: Crank shutter downwards to charge the spring until gear hits bottom stop
- **Interior Mount Shutters: use Hex or Square Shaft to charge the system!**
- Crank shutter until gear hits its bottom stop position. Make sure axle turns towards to down position!
- The spring should be charged to assist lifting up the curtain.

Bend 3 cm Cut (does not apply to A150 and A150H)

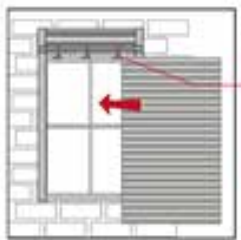
The guide rails have an entry funnel that needs to be bended roughly 45 degree. This allows the curtain to enter smoothly into the guide rails.



Take a cloth and a pair of pliers'. Put cloth over guide rail funnel and bend with pliers into desired position. Also – push in tri-angle towards the sidecaps (outside of shutter) to avoid jamming of curtain.



3 cm Cut



Attaching
Springlock Hangers

Attach Curtain

Attach Curtain as shown. (Does usually not apply to shutters A150 / A150H as the curtain is already winded around the axle)



- The gear has a one side stop. Factory side – this stop is installed as a bottom stop, meaning it will stop the gear from further rotation once the shutter curtain reached its down position.
- Some rolling shutters might have multiple curtain sections. This is for shipping purpose and ease of installation. Attach and lift curtain in sections, starting with the top section.

Interior Mount Shutters: Lift Curtain

- After attaching the curtain, use the Hex or Square bar to lift the curtain and wind it around the axle. Make sure not to scratch the curtain on the 3cm cut, if applicable.

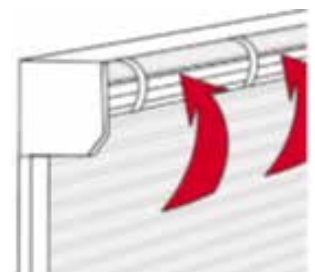
Wind Curtain Around Axle and Insert

- Use Gear Operator to lift curtain into axle.



Be careful not to scratch curtain when inserting, especially on the entry funnel that has been bent.

- Using the baseslat as starter - feed curtain back into its guide rails



Step 2 C – Motorized Rolling Shutter Systems



Always have a trained electrician make wiring connection. Also, follow local code requirements.

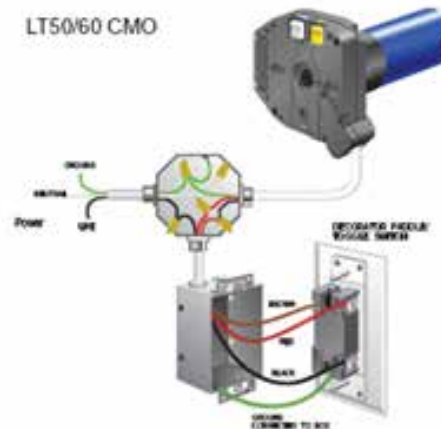
Supply Motor with Electricity

See wiring instructions below for various motors. Before making final connections, you can always use a tester switch.

SOMFY. Operator Wiring Instructions



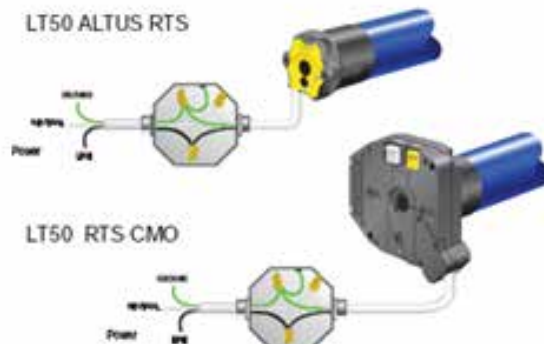
WARNING:
Do not wire two or more LT operators to one single pole switch. This will cause the motors to malfunction.



LT MOTOR WIRING COLOR CODE

120V AC	CODE
BLACK	WHITE PUSH-BUTTON
RED	YELLOW PUSH-BUTTON
WHITE	(C) COMMON
GREEN	(G) GROUND

Note: Only RTS and ILT motors can be wired in parallel.



LT50 ALTUS RTS AND LT50 RTS CMO MOTOR WIRING COLOR CODE

120V AC	CODE
BLACK	(H) HOT
WHITE	(N) NEUTRAL
GREEN	(G) GROUND

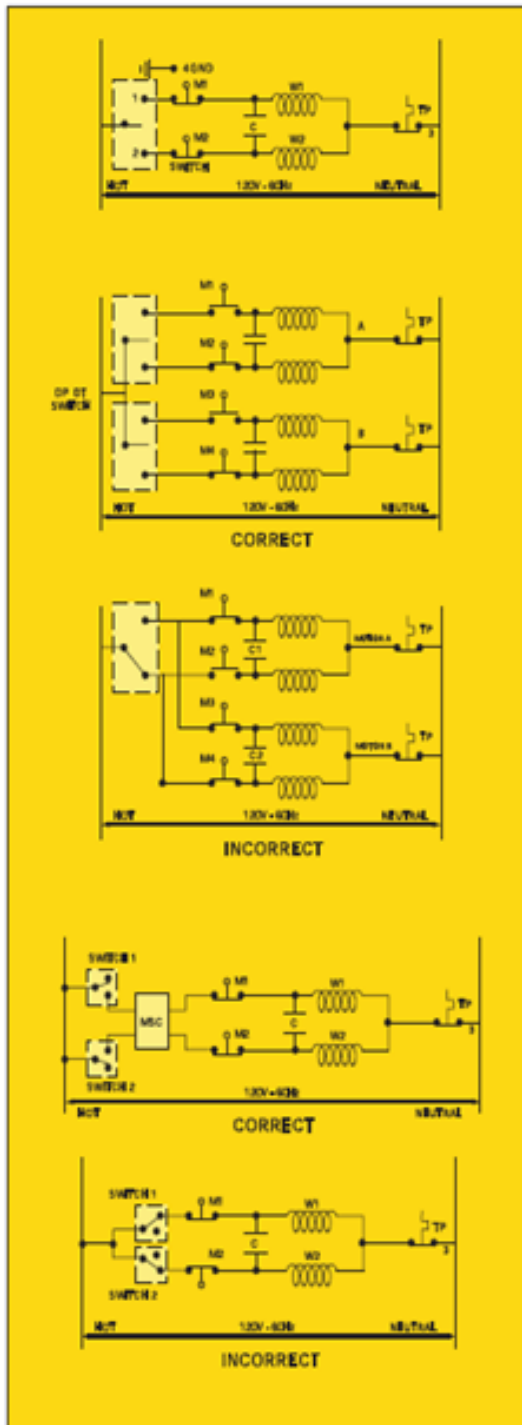
Step 2 C – Motorized Rolling Shutter Systems



Please observe the operator wiring considerations:



Operator Wiring Considerations



Because of the type of motor (Asynchronous with built-in capacitor) and the built-in limit switches, it is important to follow two important recommendations to assure proper operation of the motorized systems - SOMFY Operators are not universal motors.

SYMBOLS			
M1	Microswitch	W2	Motor Winding
M2	Microswitch	TP	Thermal Protector
C	Capacitor	GND	Ground
W1	Motor Wiring		

The operator is connected to a 120V-60HZ power source through a single pole (or double pole), double throw, center off switch.

1. Do Not Wire SOMFY Operators in Parallel (Does not apply to RTS or ILT motors). Parallel Wiring Means: Several Operators are Wired to Only One Electrical Contact Per Direction of Rotation.

There will be constant feedback from one motor to another, so stopping points will not be stable and there is a risk of motor burn out.

Correct:

Correct wiring solution is to use a double pole, double throw, center off switch which would isolate both motors.

Incorrect:

Motor A stops at its limit in direction 2 before Motor B. Current in Motor B feeds back to motor A through capacitor C2 and microswitches M3 and M1. Both operators keep rotating in opposite directions at reduced power.

2. Do Not Control One SOMFY Operator from Several Locations Without Using Proper Controller.

Correct:

Possible problem: When switch (1) is turned on, the motor will begin running in direction 1. As it reaches its limit, the microswitch M1 will open. If, at the same moment in time switch (2) is turned on, the motor will operate in the opposite direction. This is why we recommend the use of momentary switches with the Multi-Switch Command (MSC).

Incorrect:

The microswitch M1 closes, shortcircuiting the capacitor which is loaded at its maximum voltage (180V). As a result the microswitch M1 is damaged.

Solution: Use relays to build priorities between controls sending opposite signals. Do not use a standard "light" switch as a motor control.

NOTE: SOMFY Control Systems are designed to comply with these two basic criteria and assure reliable operation of motorized systems. Non-compliance to these two basic principles voids the SOMFY warranty.

Step 2 C – Motorized Rolling Shutter Systems

For RTS and RTS CMO MOTORS: Program Remote and Motor Directions

SOMFY.

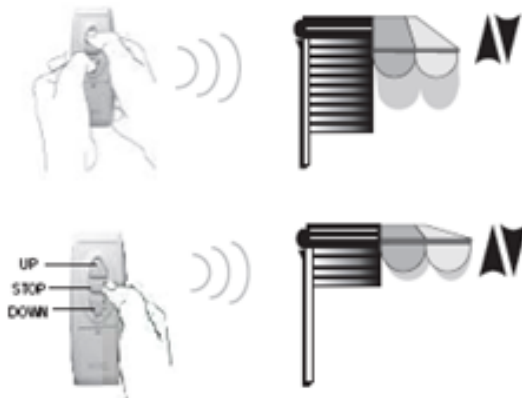
Altus RTS and Orea RTS Motor

Programming and Limit Setting Instructions

(Note: Orea RTS motor was designed for cassette awnings only)

1 Factory Mode

In this mode the transmitter has not been assigned to communicate with the motor and the limits have not been set



1) To assign the transmitter to communicate with the motor's receiver, push the UP and DOWN buttons on the transmitter SIMULTANEOUSLY and release the buttons after the end product jogs briefly UP and DOWN indicating the transmitter can now operate the motor for programming. The motor will now operate in a momentary fashion.

2) Check direction of operation. The DOWN button must correspond to DOWN on the motor. In the case of an awning, it will open or extend the awning. If the direction is wrong, press the STOP button on the transmitter until the motor jogs briefly UP and DOWN (approx. 5 seconds) and then release. Verify that the direction has changed and now corresponds to the transmitters UP and DOWN buttons.

 **Do not program limit switches yet. Just make sure that the motor responds to the commands of the rolling shutter.**

Bend 3 cm Cut (does not apply to A150 and A150H)

The guide rails have an entry funnel that needs to be bended roughly 45 degree. This allows the curtain to enter smoothly into the guide rails.



Take a cloth and a pair of pliers. Put cloth over guide rail funnel and bend with pliers into desired position. Also – push in triangle towards the sidecaps (outside of shutter) to avoid jamming of curtain.



Step 2 C – Motorized Rolling Shutter Systems

Attach Curtain

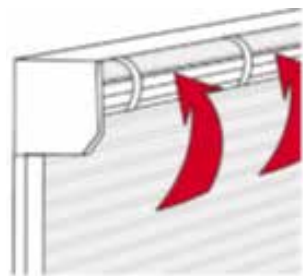
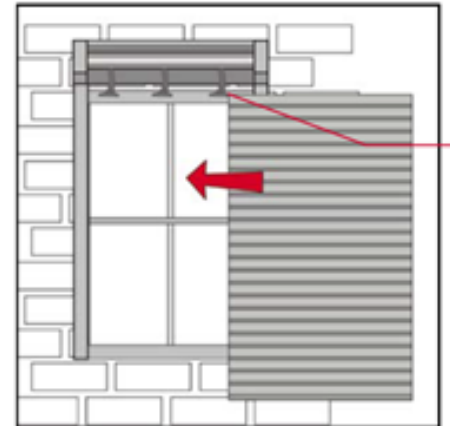
Once Power and an operator is installed - attach curtain as shown. (Does usually not apply to shutters A150 / A150H as the curtain is already installed inside housing)



Some rolling shutters might have multiple curtain sections. This is for shipping purpose and ease of installation. Attach and lift curtain in sections, starting with the top section.



Do Not Set Limit Switches Yet



Insert Curtain Into Rails

Wind Curtain Around Axle and Insert

- Use Gear Operator to lift curtain into axle.
- Be careful not to scratch curtain when inserting, especially on the bended entry funnel

Using the baselsat as starter - feed curtain back into its guide rails

Switch Operated Motor (Regular And Override): Adjust Limit Switches

See graphic below. Arrows indicate the turning direction of the motor. Based on the turning direction – it indicates the direction of movement of the rolling shutter.

Installation Instructions LS40, LT50/60, LT50 RH



Stop position 2

- Bring end product into stop position 2 (direction of rotation 2)
- Release the limit switch adjustment button that lies in the direction of rotation 2 by pressing it down again. Stop position is now set.

Always attach protective cap over limit switch adjustment buttons.

NOTE: It is important to note that SOMFY motors are weatherproof, but NOT WATERPROOF and therefore the motor head should not be exposed to direct rainfall.

Test Run 2

Allow the motor to run in both directions, until it shuts off in the stop positions. Because of the built-in thermal protection feature, the motor may shut off automatically after running without interruption for an extended period of time. Please wait until the motor has cooled off and is ready for operation again (approximately 10-15 minutes).

Changing a Set Stop Position...

- Press the limit switch adjustment button that lies in the direction of rotation.
- Bring the end product into the desired stop position.
- Release the limit switch adjustment button by pressing it down again.

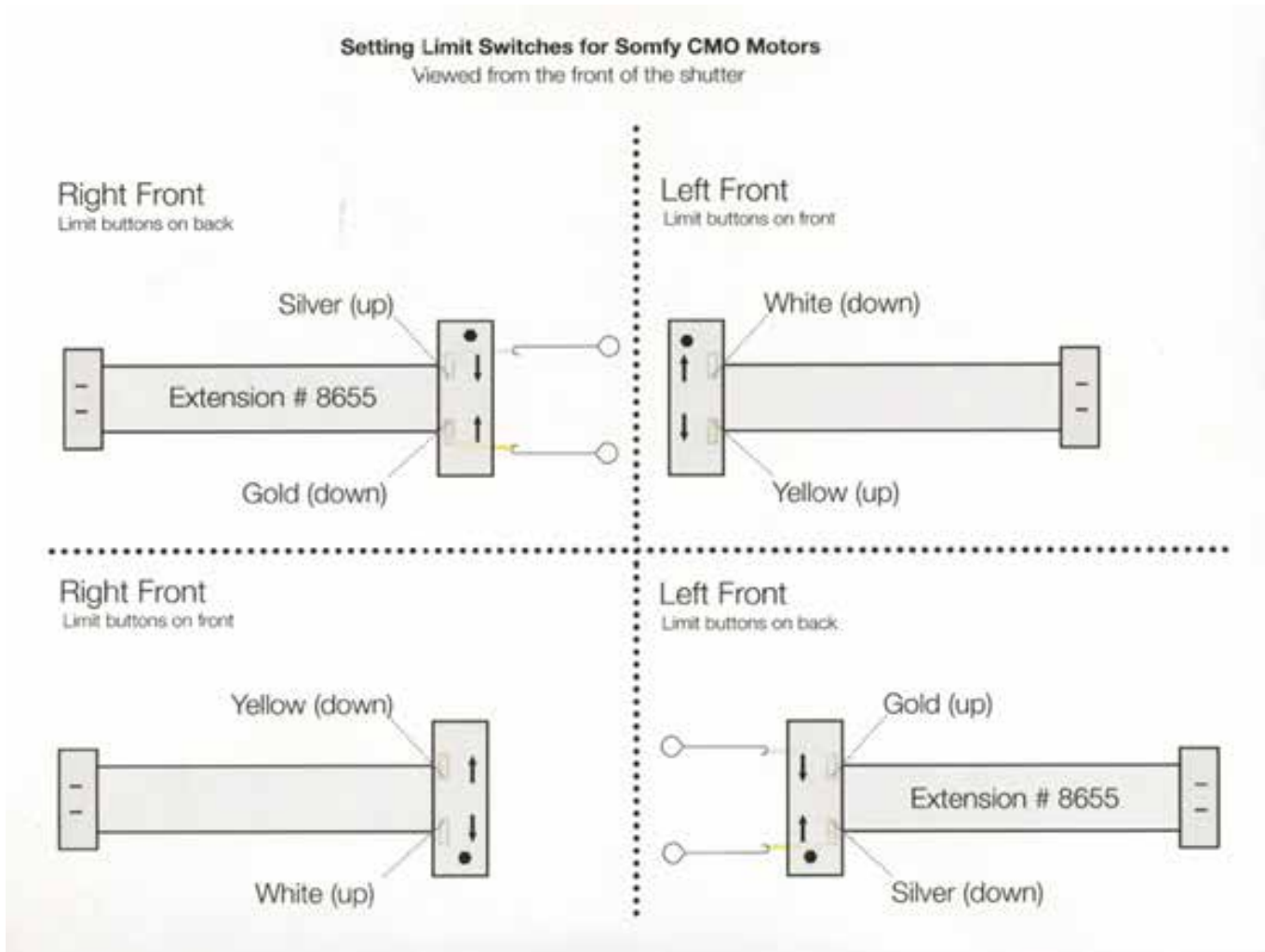
Adjustment of Upper and Lower Positions for the LS40 Motor

- Connect the motor tester cable (Cat. No. 6020086) to the motor cable, match the wire colors and connect to power.
- Identify the UP recessed limit screw by finding the arrow on the motor head which points in the direction that retracts (rolls up) the system.
- Turn the power on to ensure that the switch is operating properly (UP-raises, DOWN-lowers). If not, turn the power off and simply reverse the black and red motor leads.
- Flip the tester cable switch in the UP direction. If the system stops before its UP limit, turn the UP screw to "+" until necessary. If the system does not stop at its UP limit, flip the tester cable switch off and turn the UP screw to "-". Repeat this until correct setting is achieved.

- NOTE: 7 Turns of Hex Screws equals 1 turn of roller tube.
- Flip the tester cable switch in DOWN direction. If the system stops before its DOWN limit, turn the DOWN limit screw to "+". If not, flip the tester cable switch off and turn the DOWN limit screw to "-". Repeat this until correct setting is achieved.

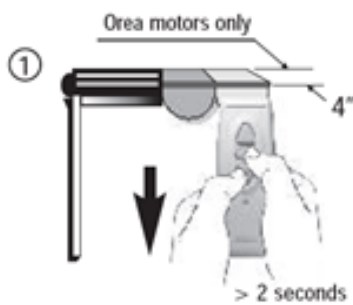
NOTE: Recessed thumbscrews can accommodate a flat head screwdriver, SOMFY's Allen wrench or Flexible limit switch adjuster.

Switch Operated Motors (Regular And Override): Alternative Illustration for Limit Switch Adjustments



Remote Controlled Motors (Regular And Override): Limit Switch Adjustment

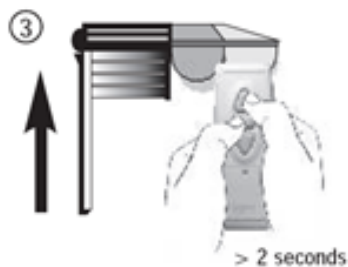
- 3) Adjust the end product to the up position. This is necessary to establish a reference starting point. Read the complete limit setting procedure before proceeding with setting the UP and DOWN limits.
- 4) Setting of the END LIMITS (always start at the upper reference point (UP limit).
Note: an extension of 4" is required as a starting point for the Orea RTS (cassette awning motor) only.



A. To set the DOWN limit, press the STOP and DOWN buttons for more than 2 seconds, until the product begins moving down (Fig. 1). Release the buttons once the product begins to move, and be prepared to stop it at its DOWN limit.

B. Press the STOP button to stop the motor when it reaches the desired down position (Fig. 2). The DOWN limit is now set.

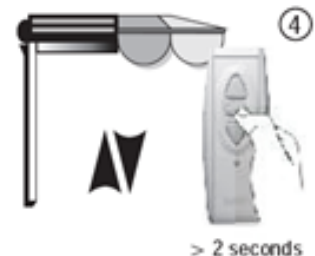
If necessary, adjust the correct down position using the UP and DOWN buttons. Remember at this point the motor moves for only as long as you keep your finger on the button (momentary operation).



C. To set the UP limit, press and hold the STOP and UP buttons for more than 2 seconds, until the product begins to move up (Fig. 3). Release the buttons once the product begins to move. It will stop at its upper limit automatically. Adjust if necessary using the UP or DOWN buttons.

NOTE: It is not necessary to adjust the UP limit on an OREA RTS motor since it is automatically set once the cassette awning is completely closed.

D. To confirm these limit positions, press and hold the STOP button for more than 2 seconds, until the application jogs briefly UP/DOWN (Fig. 4), indicating the limits have been memorized by the motor. The setting of the end limits is now complete.



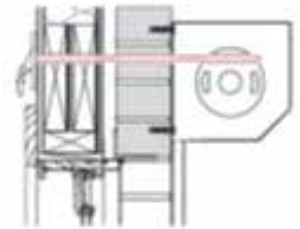
For a complete and more comprehensive motor programming instructions, please call Rollac at 281-485-1911 or see complete motor wiring instructions at the end of the reference.

Exterior Mounted Shutters With Emergency Override: Install Universal

Does not apply to SPECIAL CRANK HANDLE

Exterior Mount Shutters:

- Insert the Drive shaft of the universal into the motor's gear
- Mark exit point from the Universal and deduct approximately three inches for the desired shaft length
- Cut the Universal to Desired Length
- Install Universal




Motors With Emergency Override: Install Special Crank Handle


- 1.) Look for Cover Plug installed at the bottom of the shutter housing
- 2.) Remove Plug
- 3.) Insert special crank handle

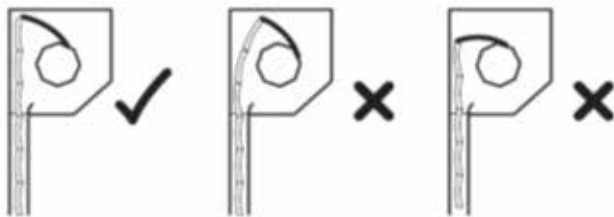
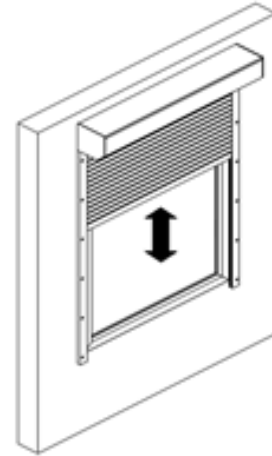


Step 3: Finishing Installation and Check Function

Test run shutter curtain

 Test run the shutter up and down 3 times. Make sure it runs free from obstructions. Adjust if necessary.

 Be extra careful if not all screws have been installed as the shutter might not support the entire weight of the curtain. After the operational test is performed successfully, install remaining screws.

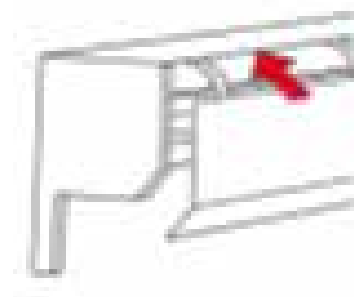


Adjust Curtain Height

Adjust the shutter curtain to the correct height. Remove or add slats if necessary.

Reattach Access Panel

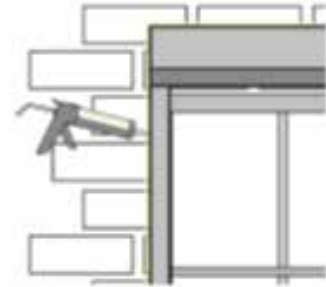
Reattach access panel. Remove protective foil



Step 3: Finishing Installation and Check Function

Caulk Rails and Boxes

Caulk around rails and boxes.



Insert Plug Buttons

Cover all screw holes with the included plug buttons



Insert Exterior Stops

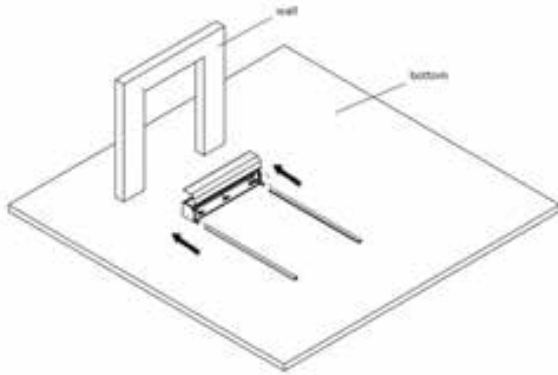
This step does not apply to A150, A150H since they have an interior stop. Also, this step does not apply to motorized shutters using a remote control or switch. It does apply to shutters with motor and manual override.

Install all exterior stops at the bottom bar. These prevent the shutter from rolling into the shutter housing.



Alternative Installation Method: Lift Up Shutter

The following installation method describes the lift up shutter installation method. It is typically used over doors or windows where the floor is used as a bottom stop. During this method, the entire shutter assembly is lifted up and placed against the wall. The method is shown as a short version.



Complete Shutter on bottom

1. Place blanket on floor to protect shutter from scratching.
2. Remove Shutter Access Panel
3. Insert Guide Rails into Sidecap-Legs.



4. Lift up Shutter Assembly

Lift shutter at shutter housing. Make sure it is properly supported. Make sure to not break the legs of the side cap.

Put shutter assembly against the wall | Drill for Operator if required

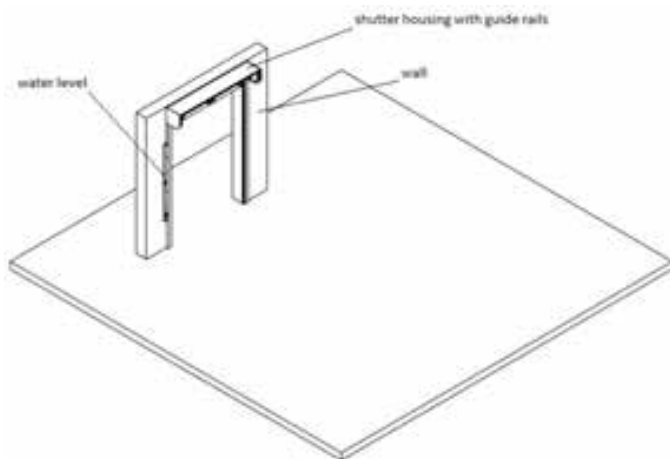
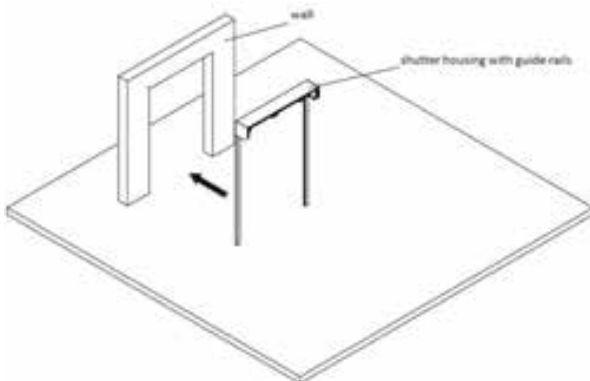
11. Put shutter assembly against the wall.
12. If necessary - mark and drill for operator. See Page 19 for more information

Fix Shutter Assembly

4. Make sure Box is level. Fix shutter box
5. Make sure shutter and rail is leveled
6. Fix the top screw of first guide rail.
7. Make sure guide rail is level and fix bottom screw.
8. Install second guide rail. Use the distance as a measure and fix top screw of second rail.
9. Use distance measure and install bottom screw.
10. Take Cross Measurement

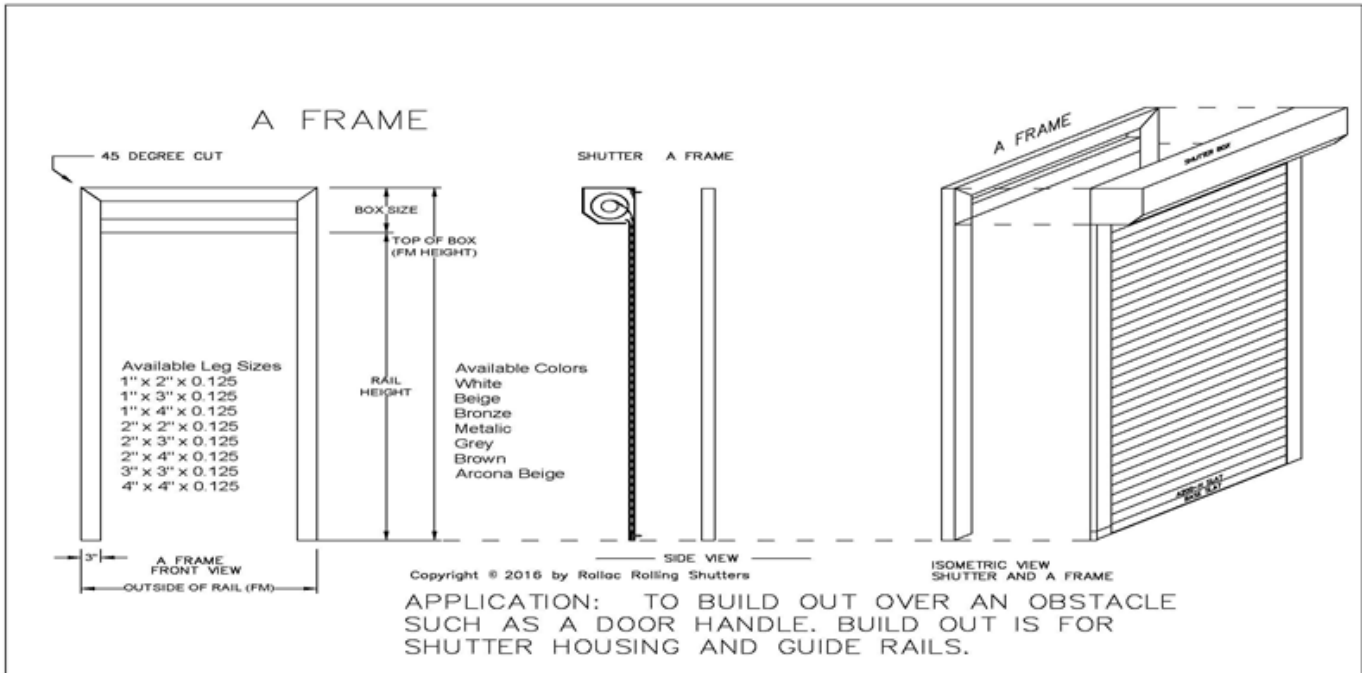


Proceed with Step 2: Install Operator and Insert Curtain as well as Step 3: Finish Installation and Check Function.

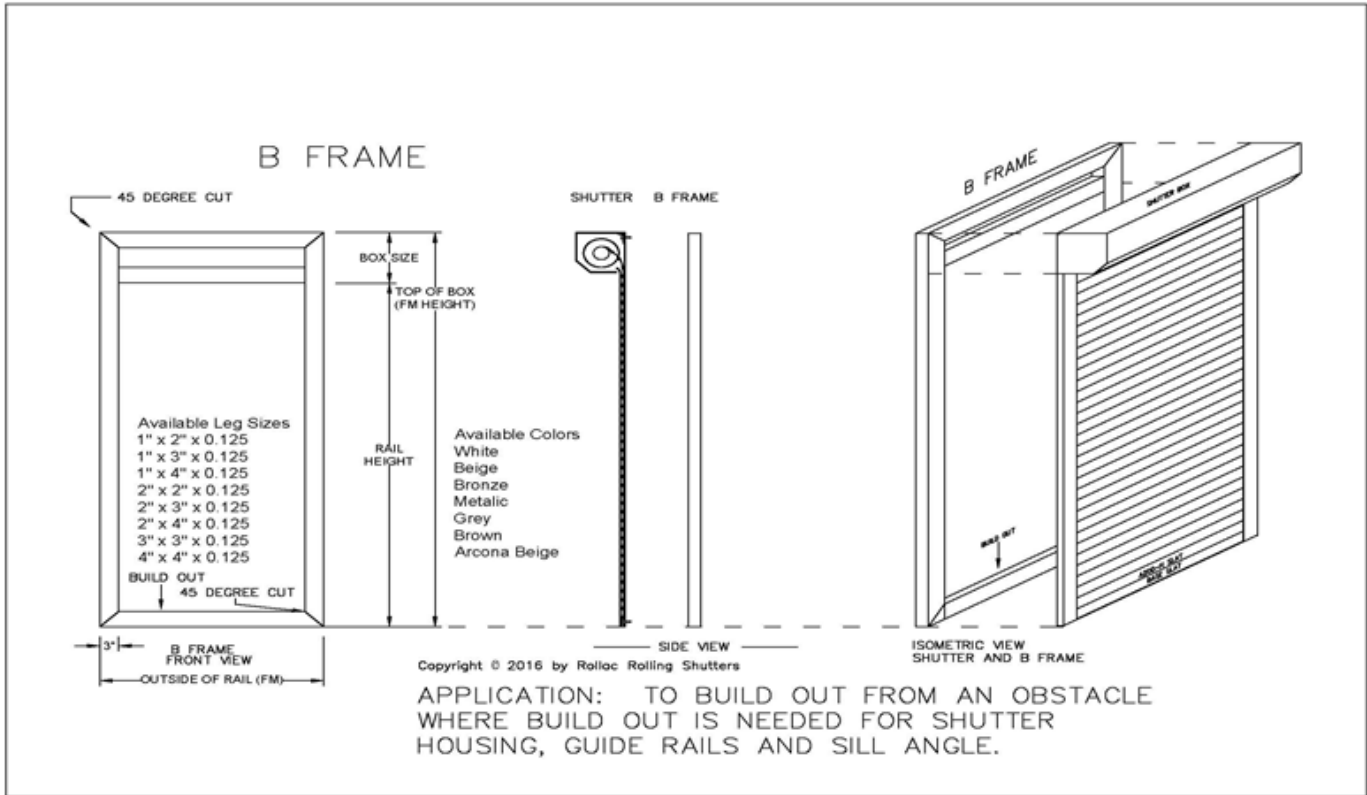


End of Installation Instructions

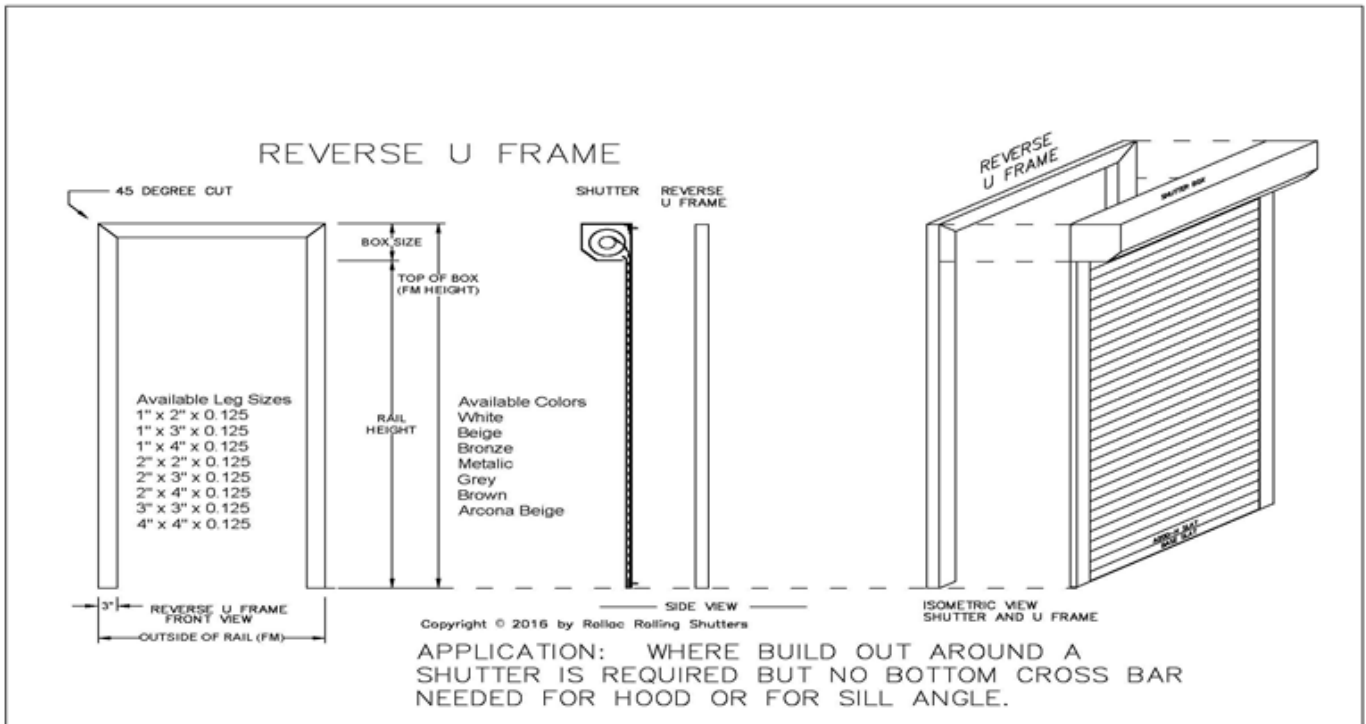
Subframes and Build Out - A Frame



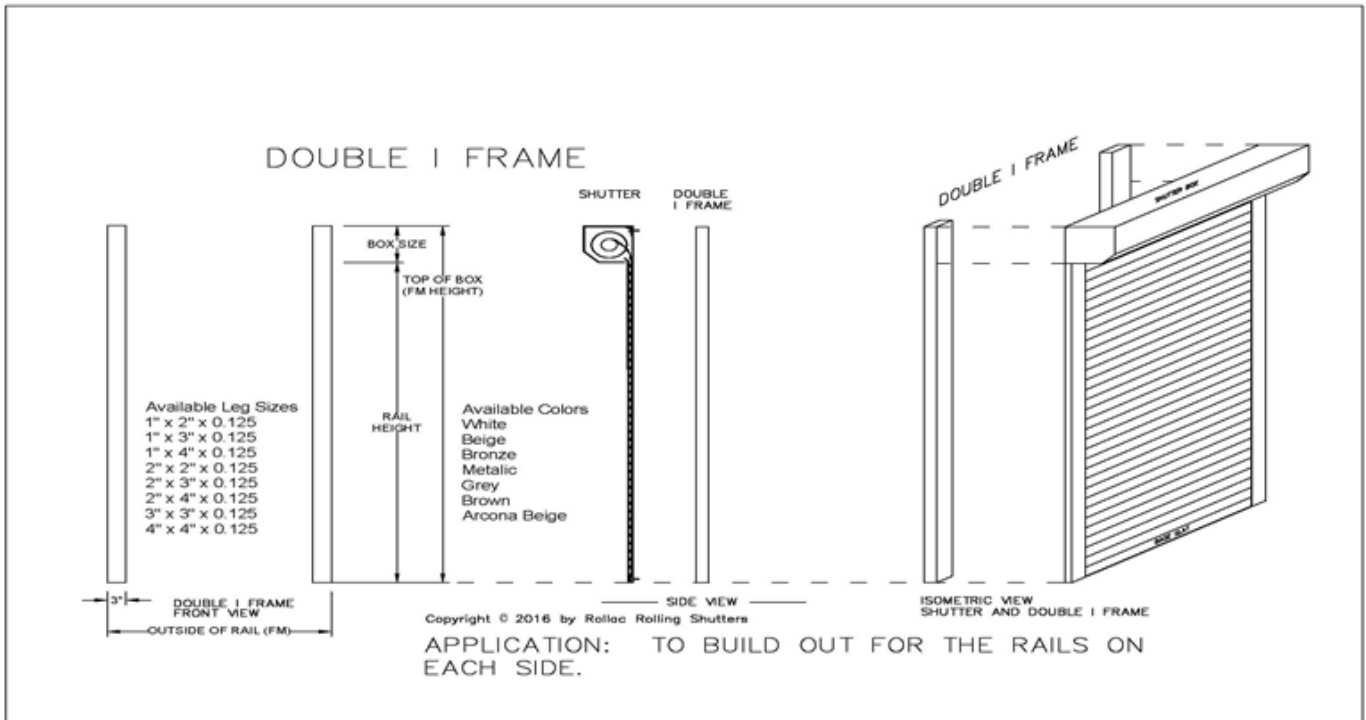
Subframes and Build Out - B Frame



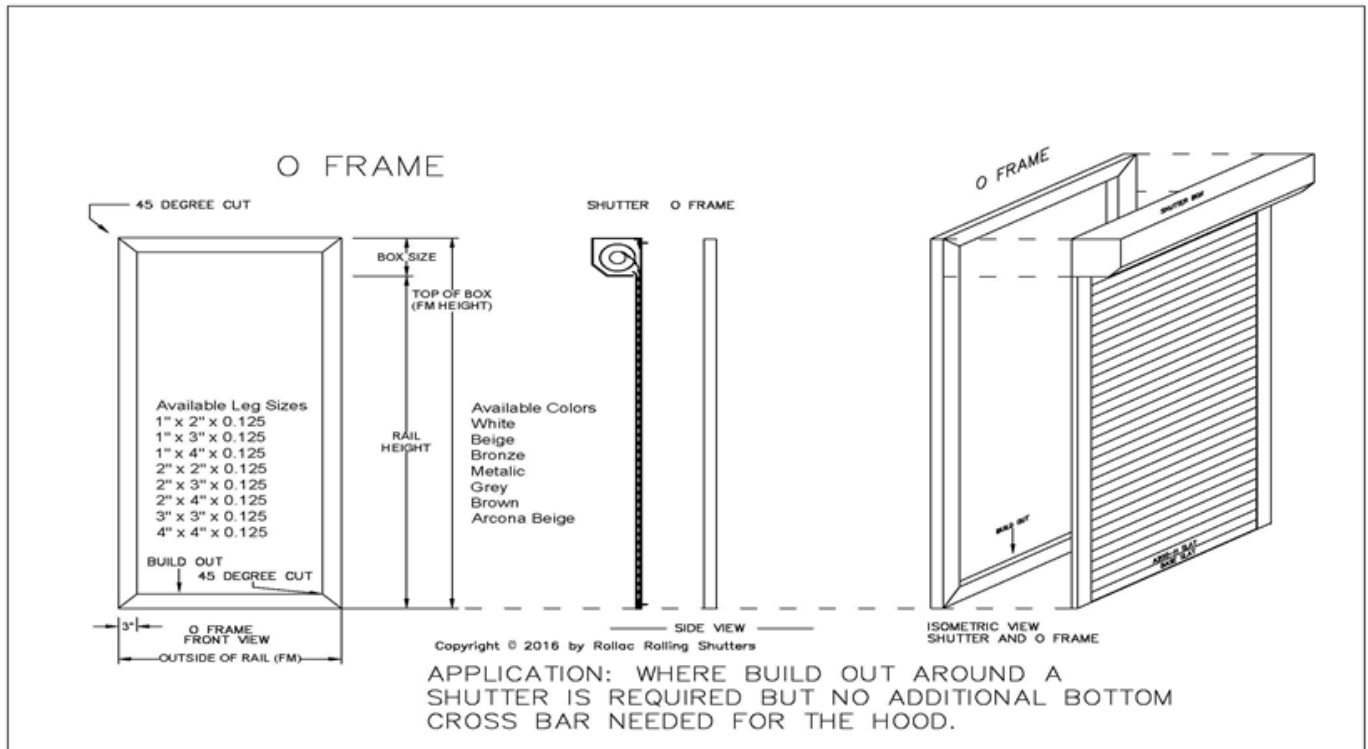
Subframes and Build Out - Reverse U Frame



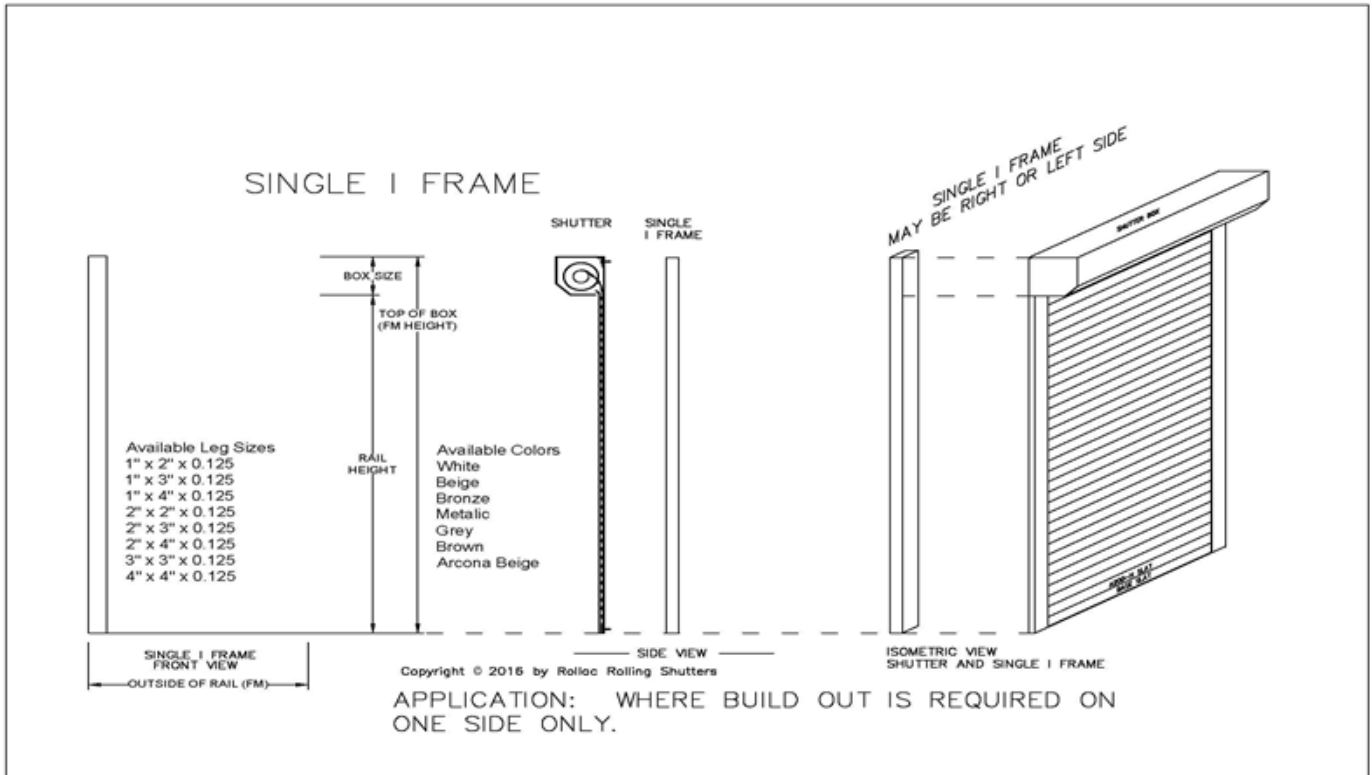
Subframes and Build Out - Double I Frame



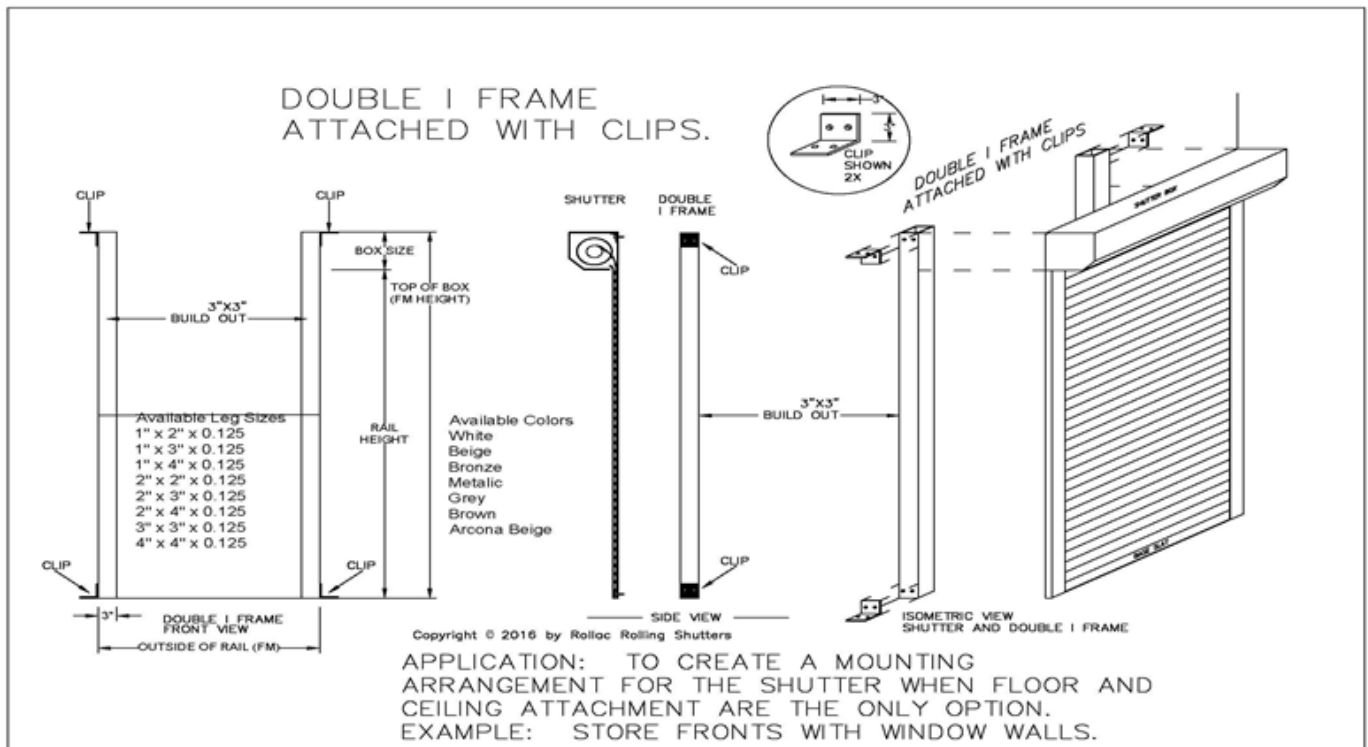
Subframes and Build Out - O Frame



Subframes and Build Out - Single I Frame

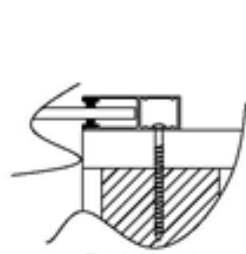


Double I-Frame Attached with Clips

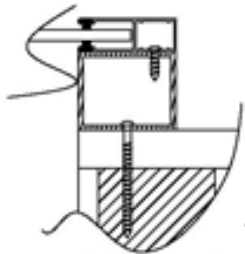


Rail Mounting Options Standard Rail

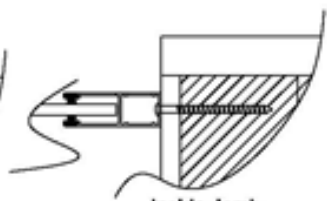
MOUNTING OPTIONS "A" TYPE RAILS



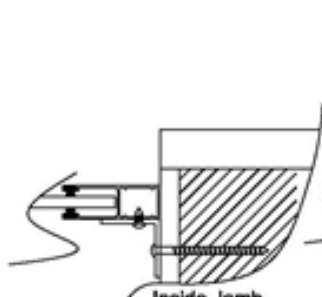
Flush Mount
"A" Type Rails



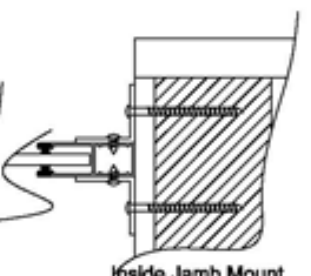
Build Out Mount
"A" Type Rails



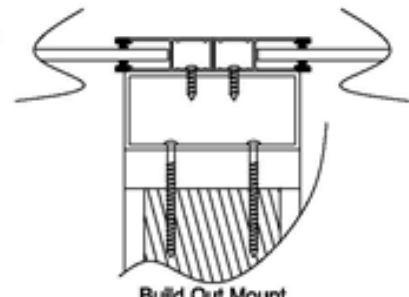
Inside Jamb
Throat Drill Mount
"A" Type Rails



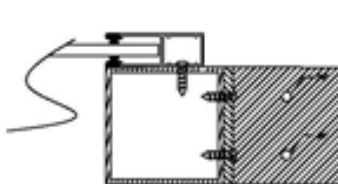
Inside Jamb
"A" Type Rails
Angle Attachment



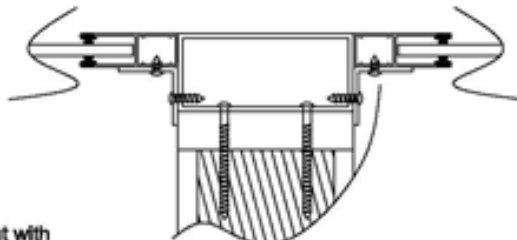
Inside Jamb Mount
"A" Type Rails
Dual Angle Attachment



Build Out Mount
Two "A" Type Rails

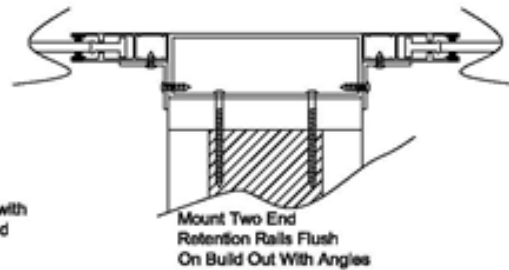
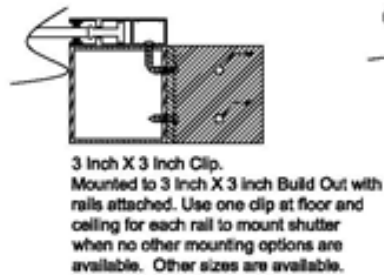
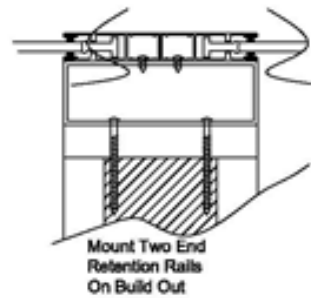
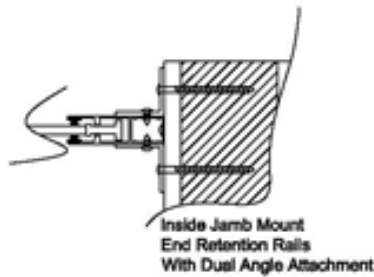
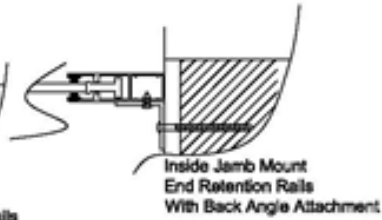
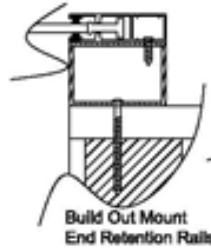
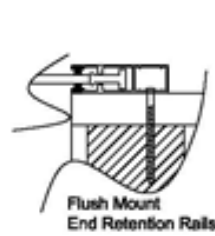


3 Inch X 3 Inch Clip.
Mounted to 3 Inch X 3 Inch Build Out with rails attached. Use one clip at floor and ceiling for each rail to mount shutter when no other mounting options are available. Other sizes are available.



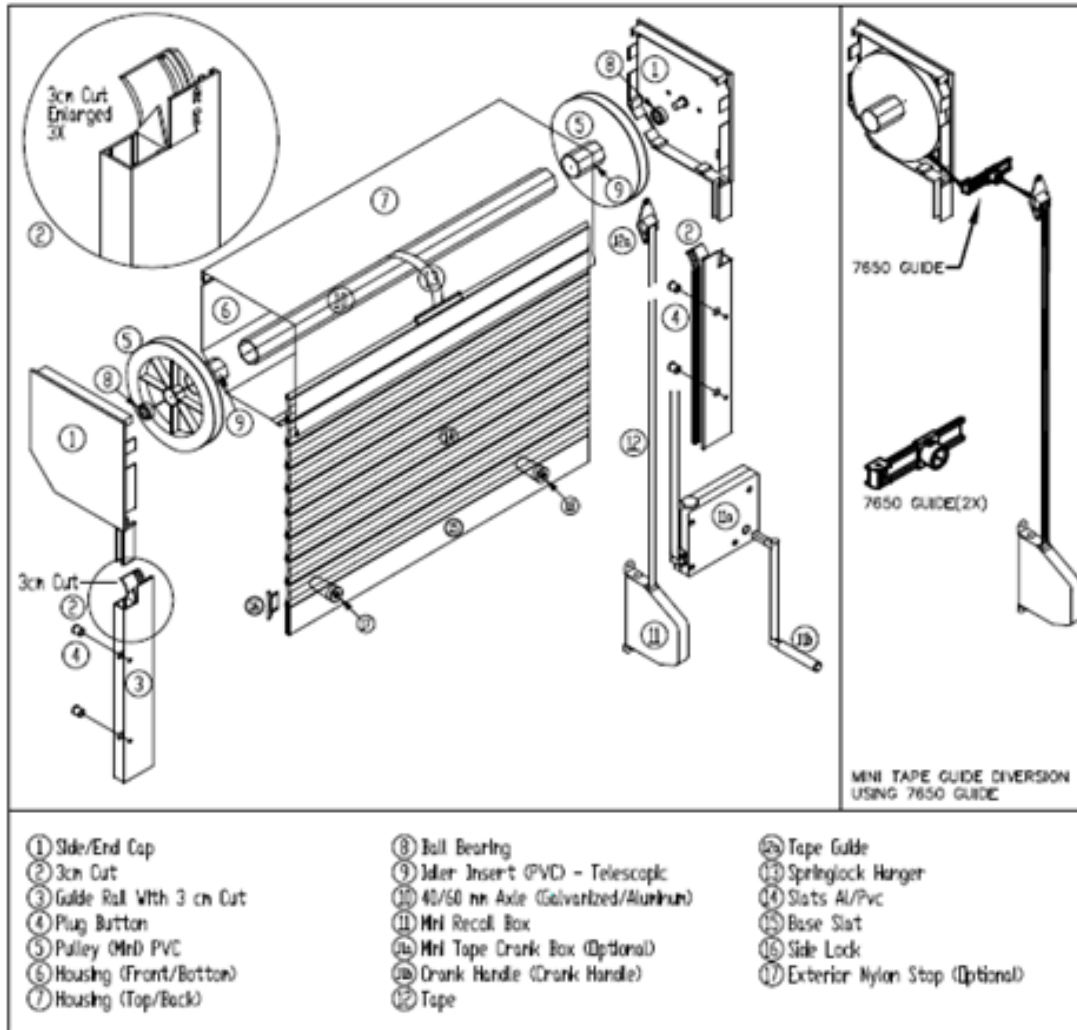
Mount Two "A" Type Rails
Flush On Build Out With Angles

Rail Mounting Options End Retention Rail

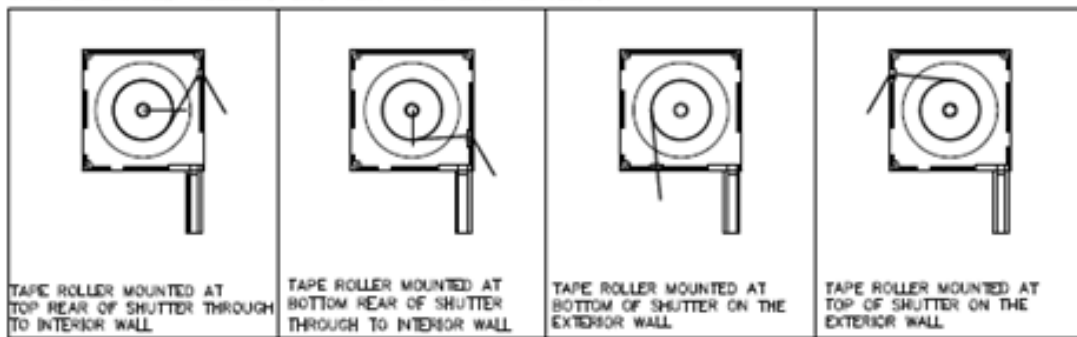


Exploded Drawings - Tape Operated Rolling Shutter

TAPE OPERATED MAXI ROLLING SHUTTER

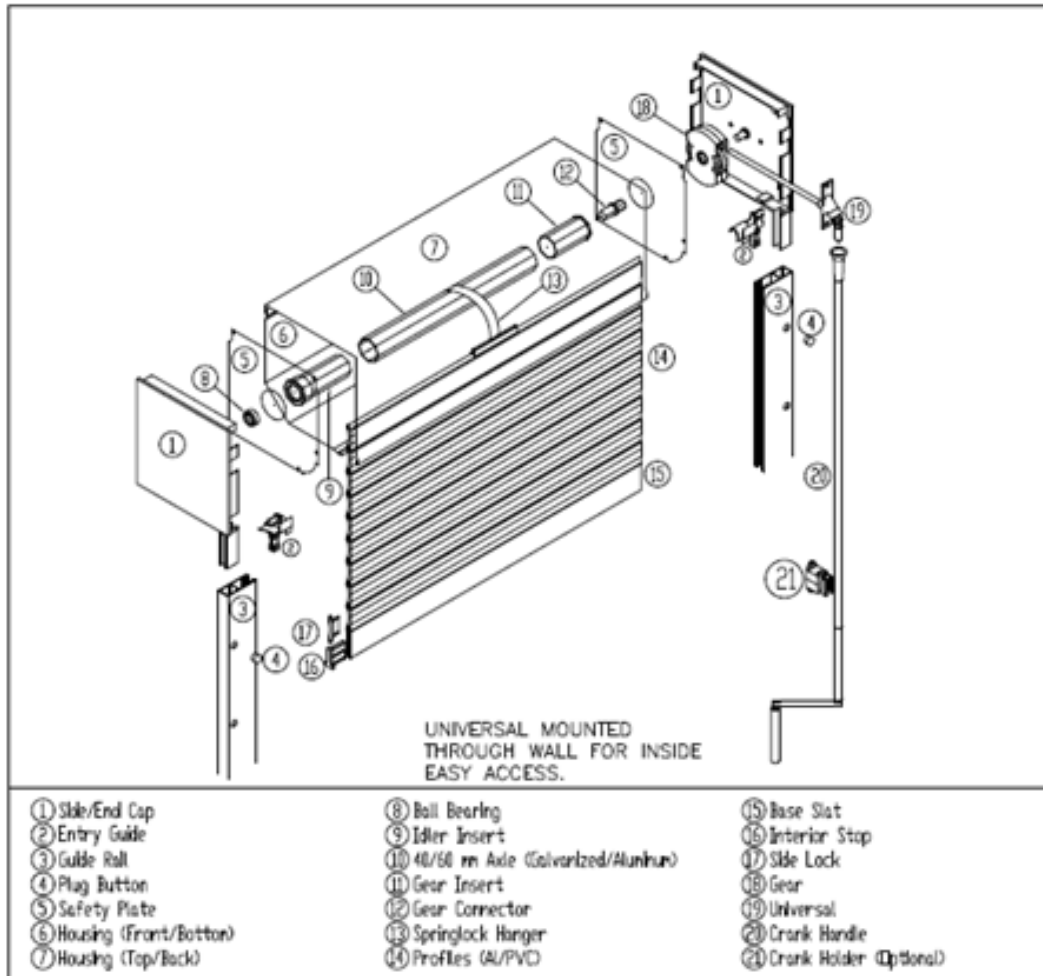


TAPE OPERATED ROLLING SHUTTER TAPE EXIT OPTIONS.

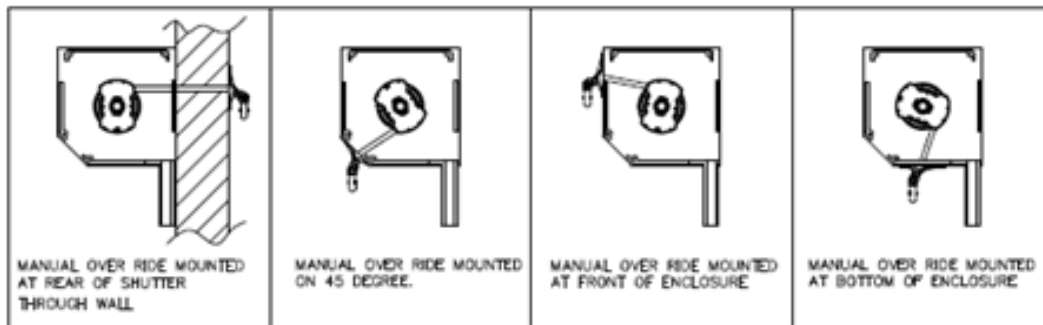


Exploded Drawings - Gear Operated Rolling Shutter

GEAR OPERATED MINI ROLLING SHUTTER

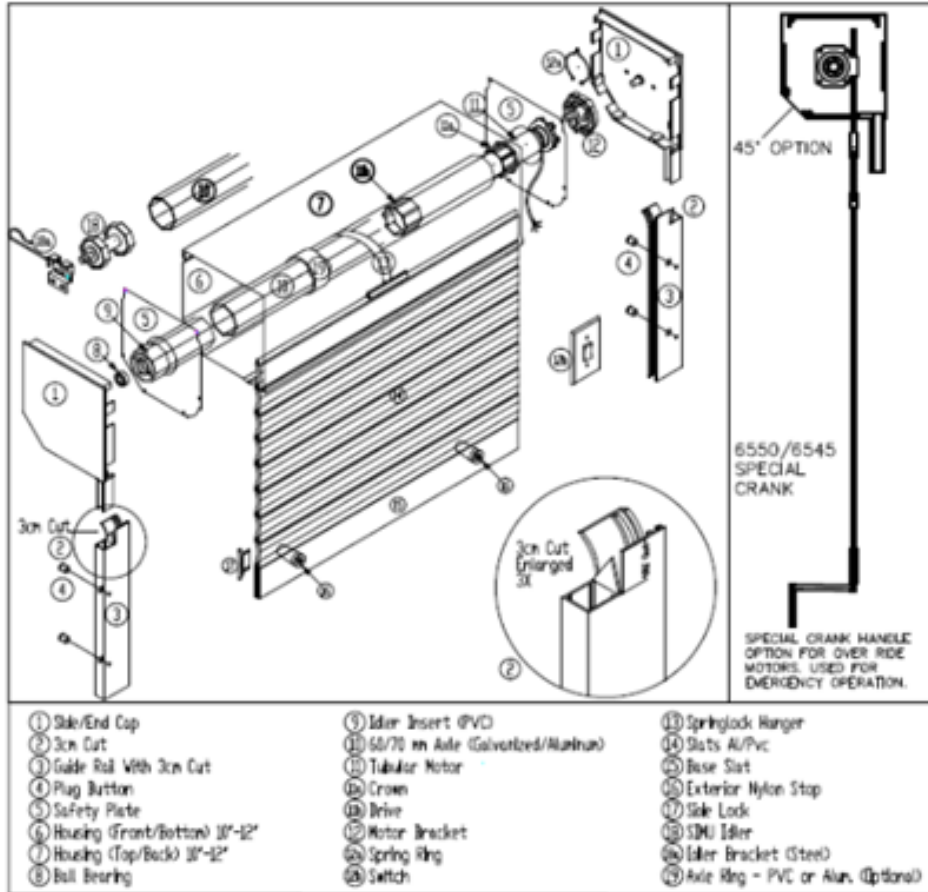


GEAR OPERATED ROLLING SHUTTER UNIVERSAL EXIT OPTIONS.

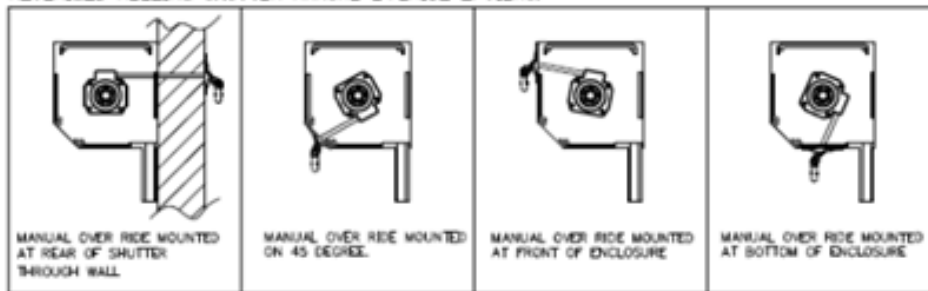


Exploded Drawings - Motorized Rolling Shutter

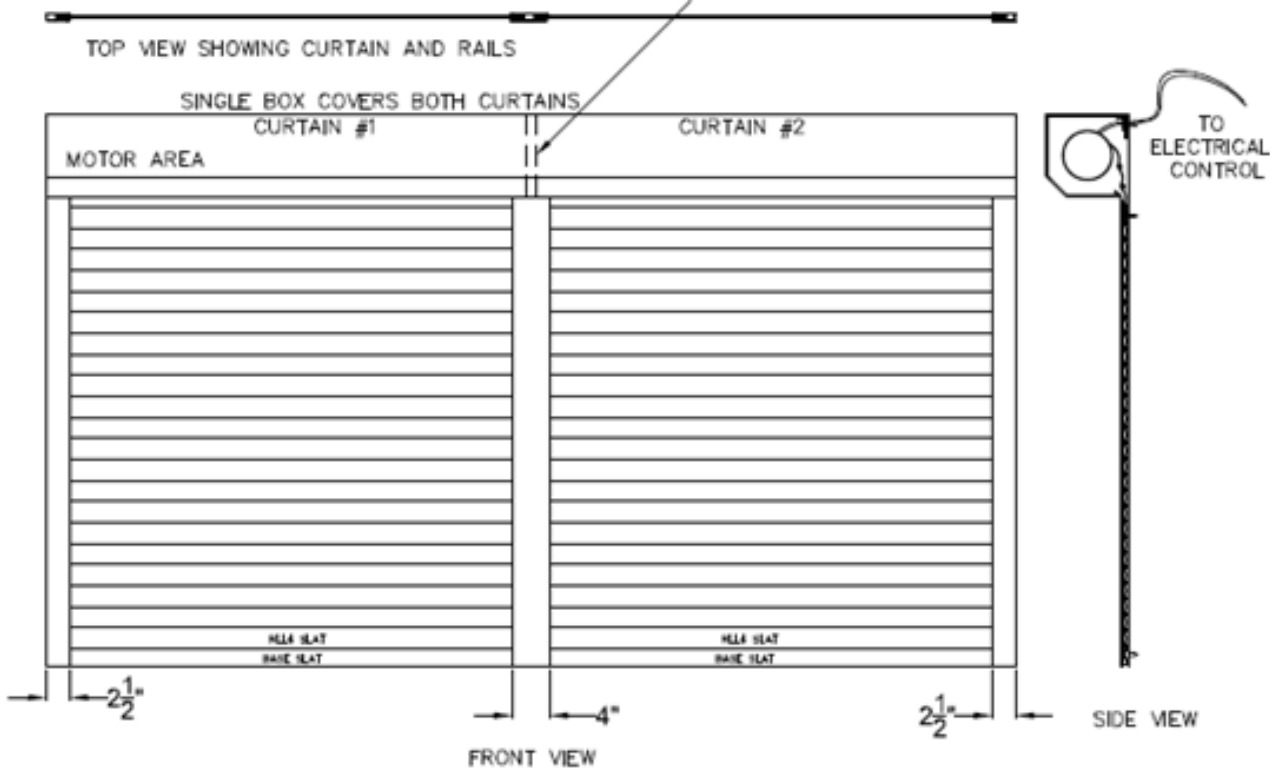
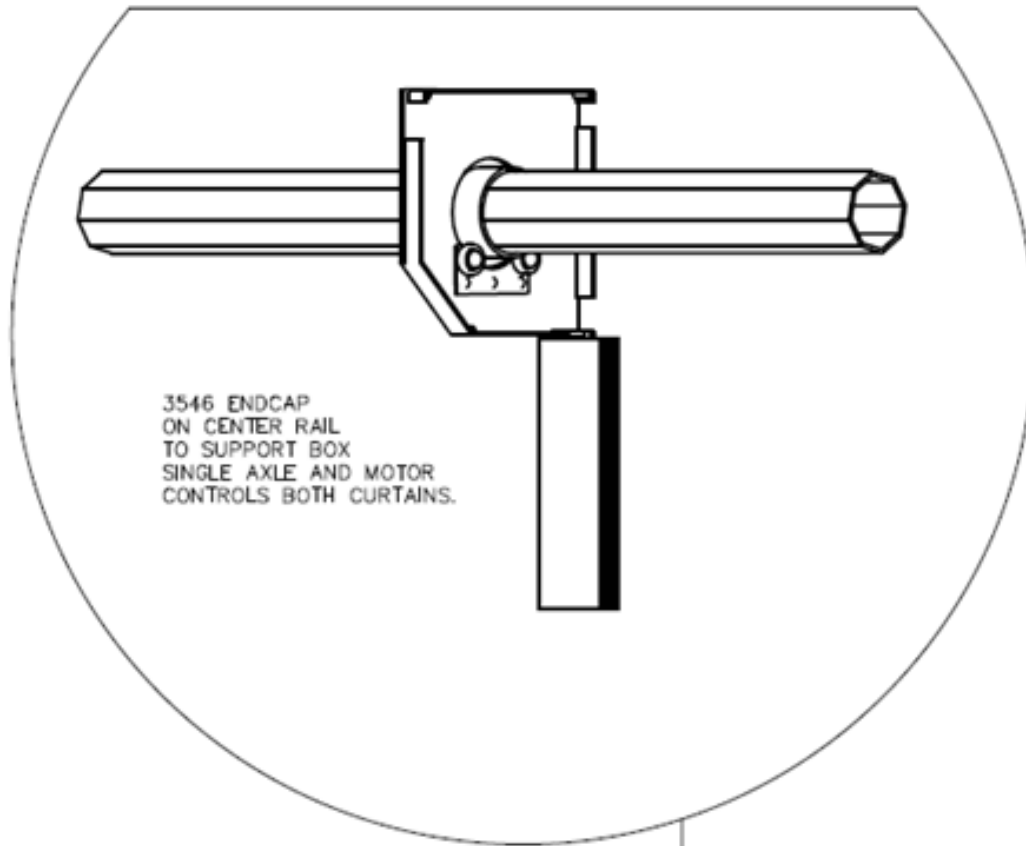
MOTOR OPERATED MAXI 10' - 12' ROLLING SHUTTER



MOTORIZED ROLLING SHUTTER MANUAL OVERRIDE OPTIONS.

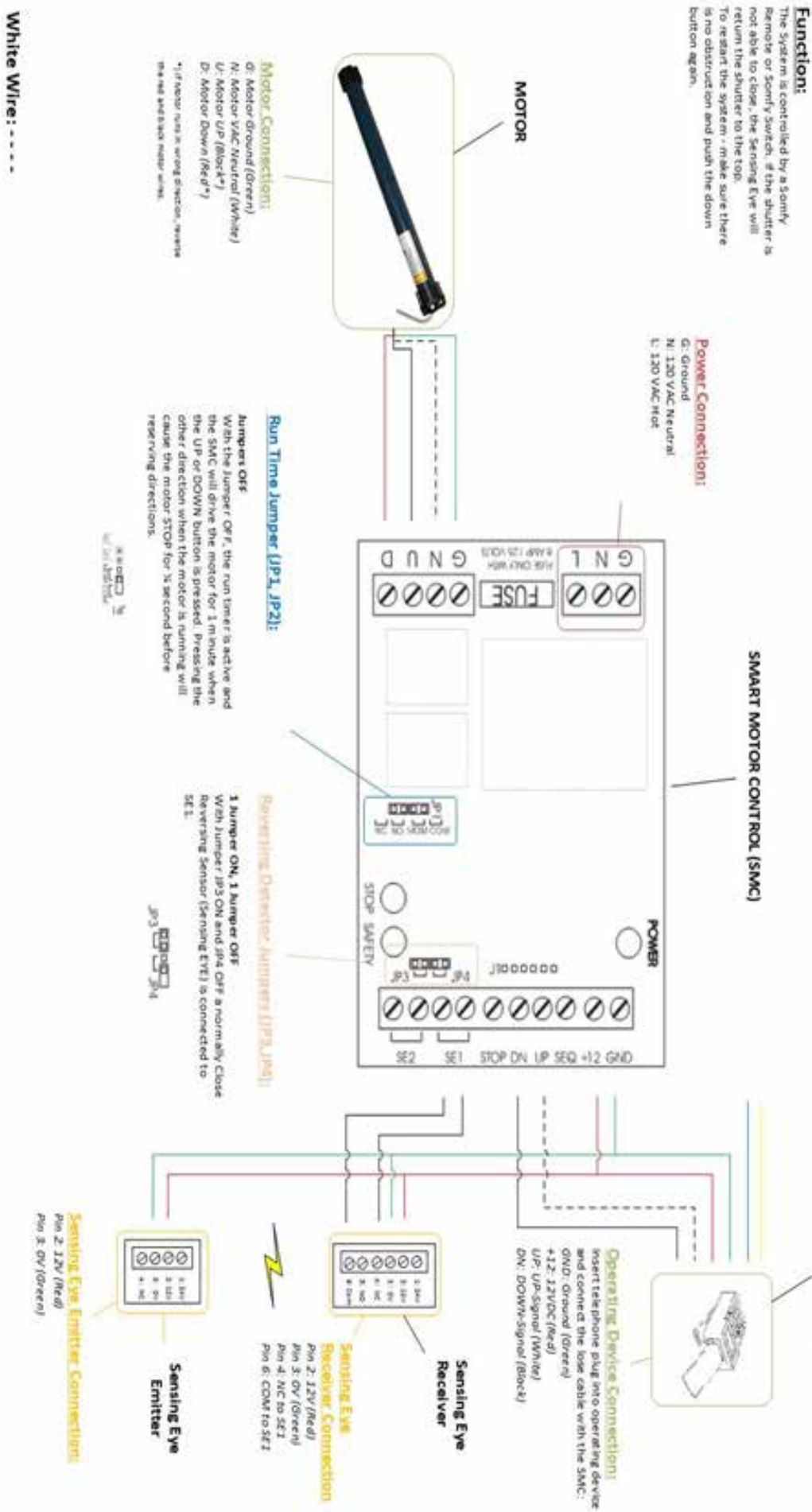


Split Units - Two Curtains on a Single Axle



Electronics Information Wiring Diagram Smart Motor Control with Remote Control and Photo Eyes

Wiring Diagram Sensing Eye

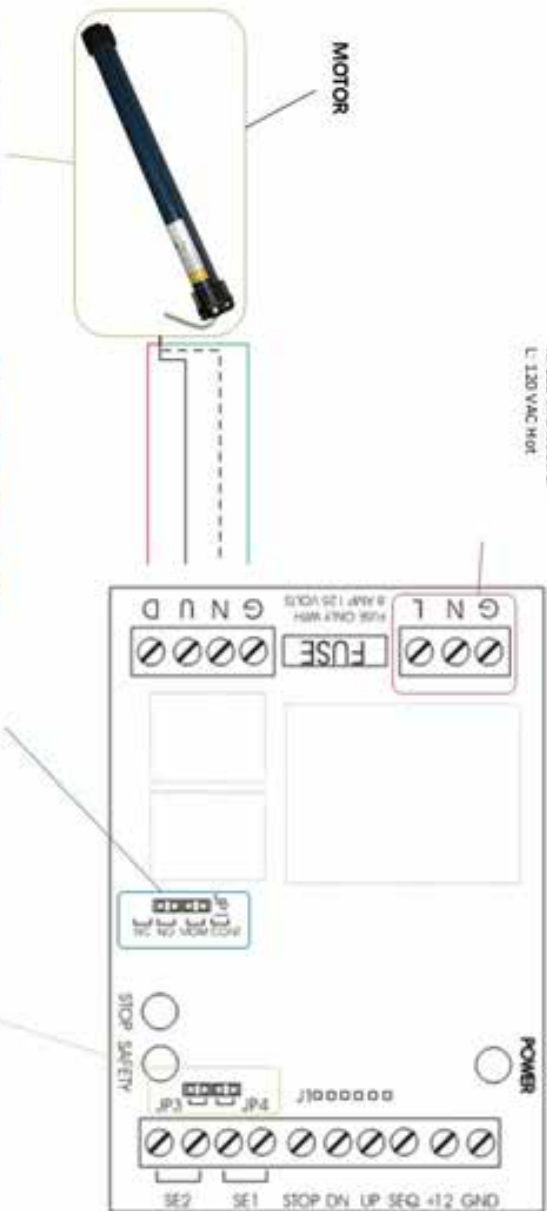


Wiring Diagram Smart Motor Control with Remote Control and Wireless Safety Edge

Wiring Diagram Wireless Miller Safety Edge

Function:
The System is controlled by a Somfy Remote or Somfy Switch, if the shutter is not able to close, the Safety Edge will return the shutter to the top. To restart the system - make sure there is no obstruction and push the down button again.

Power Connection:
G: Ground
N: 120 VAC Neutral
L: 120 VAC Hot

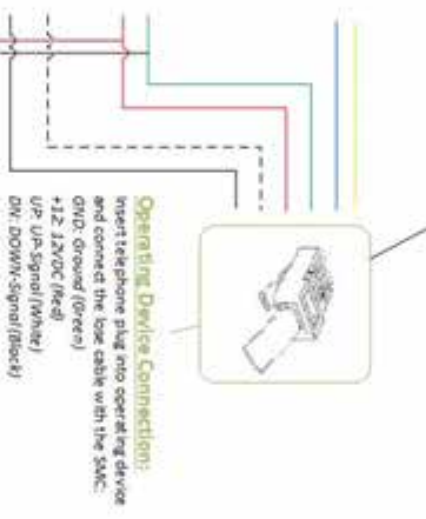


Motor Connection:
G: Motor Ground (Green)
N: Motor VAC Neutral (White)
L: Motor UP (Black*)
D: Motor Down (Red*)
* If Motor runs in wrong direction, reverse lead and black motor wires.

Run Time Jumper (JP1, JP2):
Jumper OFF
With the Jumper OFF, the run timer is active and the SHUT will drive the motor for 1 minute when the UP or DOWN button is pressed. Pressing the other direction when the motor is running will cause the motor STOP for 1 second before reversing directions.

Reversing Detector Jumper (JP3, JP4):
1 Jumper ON, 1 Jumper OFF
With Jumper JP3 ON and JP4 OFF a normally Close Reversing Sensor (Safety Edge) is connected to SEL.

Connection to Somfy Remote Receiver or Somfy Switch



Operating Device Connection:
Insert telephone plug into operating driver and connect the loop cable with the SMC:
GND: Ground (Green)
+12: 12VDC (Red)
UP: UP-Signal (White)
DN: DOWN-Signal (Black)



Miller Receiver
+12: Red Wire
GND: Black Wire
SEL: White Wire
SET: Orange Wire



Miller Transmitter
Connect the two cables from the Miller Safety Edge to the Transmitter.

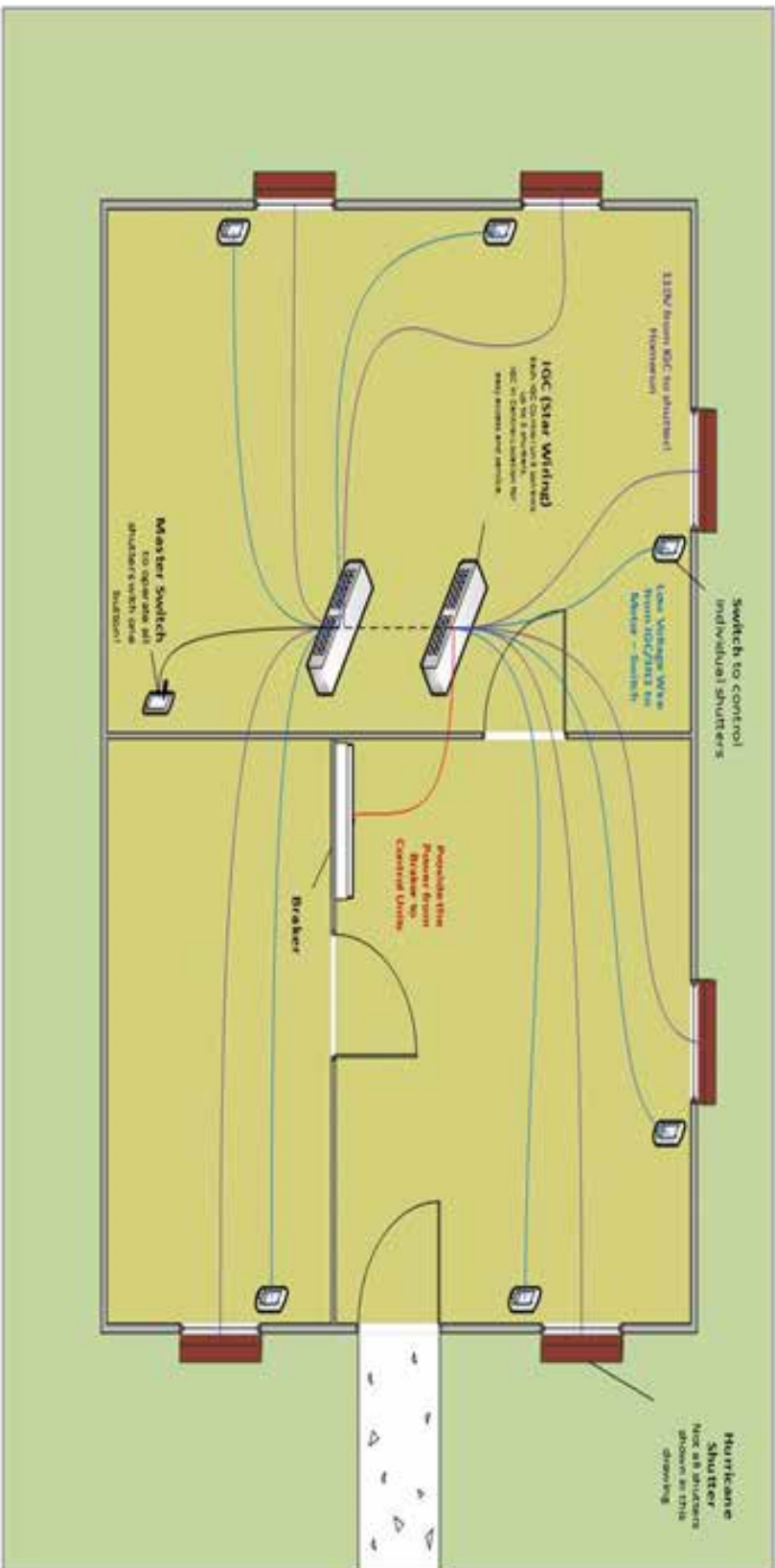


Miller Safety Edge
When the Safety Edge contact something the shutter drive back to the top.

White Wire:-----

Star Wiring Diagram Multiple Shutters (IGC)

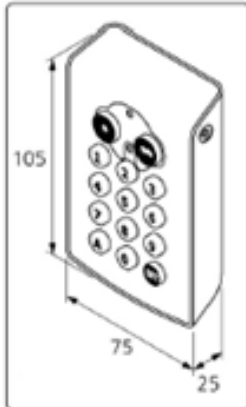
Wiring Concept IGC/3NI



Wireless Simu Keypad Programming Instructions

simu	Hz Digital Keypad Instructions <small>For use with SIMU Hz radio motors and receivers</small>	Hz Digital Keypad Ref # 2006029 <small>Read all instructions carefully before use</small>
-------------	---	---

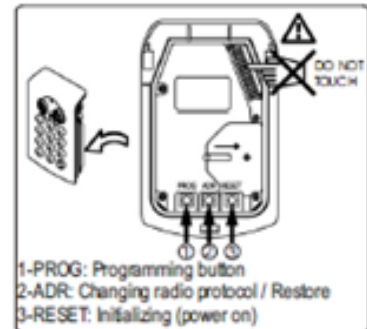
1 Technical Data



- Power supply: 3VDC lithium battery CR 2450
- Operational temperature: -5°/140° F (-20°/60° C)
- Enclosure: IP54 (outdoor rated)
- Frequency: 433.42 Mhz

WARNING: Do not allow children to play with the control system

To insure proper operation, do not install on a metal surface.



- 1-PROG: Programming button
- 2-ADR: Changing radio protocol / Restore
- 3-RESET: Initializing (power on)

Use finger or erasure to press PROG, ADR or RESET button. DO NOT USE a hard or sharp object

Product Description: The Hz Digital Keypad provides sequencing up/stop/down control of one or two Hz operators or Hz receivers. Control is limited to authorised users via user selected security codes of 4, 5 or 6 digits.

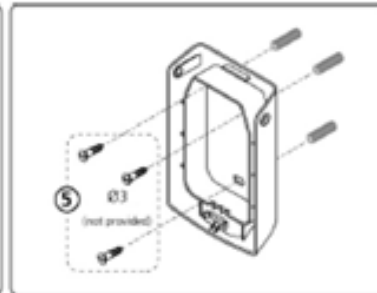
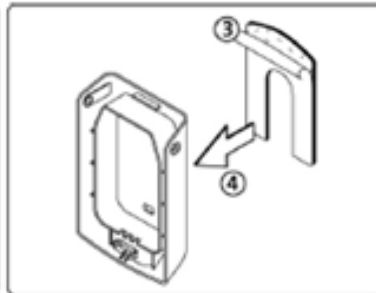
1 Master code (required): Valid to control both channel buttons and required for all programming operations.

4 Secondary codes (optional): 2 codes can be programmed for each channel button allowing partial access to be given to the property.

Backlighting: Pressing any button will activate back lighting in the event of low light conditions.

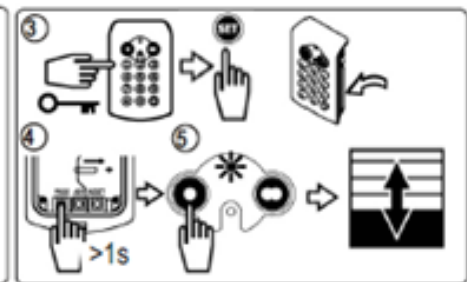
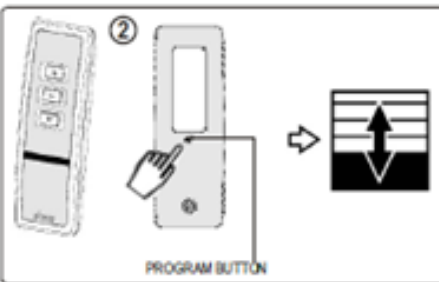
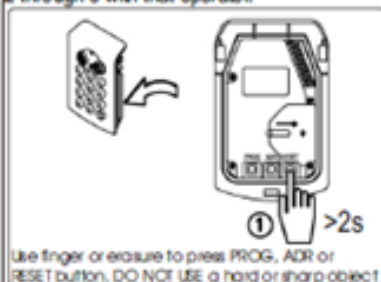
2 Installation/Mounting

1) Remove the two allen screws with the provided tool as shown. 2) Pull the top of the face away from the back. 3) Peel cover off foam. 4) Apply the foam to the back of the keypad case. 5) Mount the back of the case to a vertical wall in the orientation shown. Do not mount to a metal surface.



3 Programming

1) Initialize (power on) the Keypad by pressing the reset for over 2 seconds. This will only need to be done once on a given keypad. 2) Press the programming button on a transmitter already programmed to the operator for 3+ seconds until the operator jogs. 3) Input the master code (000000 until changed). Press **set** and release. 4) Flip the keypad over and press the programming button for over 1 second. The top LED will start blinking 5) Flip the keypad over and press the desired channel button (1 dot or 2) while the top LED is still blinking. The motor will jog. If a 2nd operator is to be programmed to button 2, repeat steps 2 through 5 with that operator.



Use finger or erasure to press PROG, ADR or RESET button. DO NOT USE a hard or sharp object

PROGRAM BUTTON



Wireless Simu Keypad Programming Instructions

4 Changing the Master Code

To change the master code: Enter the current master code (the master code is 000000 until changed). Press set and release. Press set again and hold it for over 7 seconds. The lower red LED will light and stay lit. Enter the desired new master code. Press set. Enter the new master code a 2nd time and press set. The master code has been changed. **Note: 9A621 is shown below as an example only. It is recommended you choose a different unique master code 4 to 6 digits in length. Copy the selected master code in a safe location as it is required for any programming or code change.**



5 Secondary Codes

To add a secondary code: Enter the master code. Press set and release. Press set a 2nd time and hold it for over 7 seconds. The lower red LED will light and stay lit. Press the desired channel button (1 or 2 dots). Enter the desired secondary code 4 to 6 digits in length. Press set. Enter the same code a 2nd time and press set. The new secondary code is now set. **Note: 2582 is shown below only as an example. Choose a unique 4 to 6 digit code.**



To delete a secondary code: Enter the master code. Press set and release. Press set a 2nd time and hold it for over 7 seconds. The lower red LED will light and stay lit. Press the desired channel button (1 or 2 dots). Enter the secondary code to be deleted. Press set for over 10 seconds.



To delete all secondary codes: Enter the master code. Press set and release. Press set a 2nd time and hold it for over 7 seconds. The lower red LED will light and stay lit. Press set for over 10 seconds until the LED goes out.



6 Daily Use

Pressing any button will activate the back lighting in the event of low light conditions. Enter the security code and press the transmit button. The top LED will blink while transmitting. The keypad will be active for 30 seconds after the code has been entered allowing the operator to be sequenced between up/stop/down/stop as desired by each press of the transmit button. **Note: the master code will grant control of both channel buttons (1 and 2 dots). The secondary codes will only grant control of the button they were programmed to.**



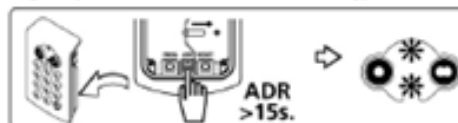
7 Trouble Shooting

If an Hz operator or control was produced before 2006 and will not accept programming, you may need to switch the keypad to the old protocol by: Entering the master code. Press set. Press the address button. Press the channel button that will be programmed to the older unit. Again attempt programming as per step 3 above. **5 successive incorrect codes will lock the keypad for 5 min.**

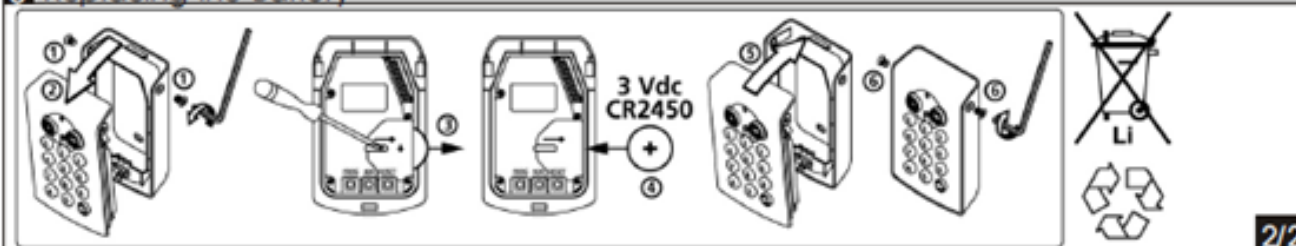
Hz operators and controls produced prior to 2006 may require you to change the radio protocol

If an error is made in the middle of a programming step, stop and wait 30 seconds and the keypad will reset.

If the master code is lost, the code can be reset by pressing the address button for over 15 seconds until both red LED's start to blink. The master code will be reset to 000000 and the secondary codes will be cleared



8 Replacing the Battery





Experience
Technology
Higher Standards

Since 1982, Rollac has operated with a vision of quality, service, and modern technology to produce the best possible product for our customers. Each product is custom manufactured for every single job to ensure the best fit and finish. Regardless if you are looking to enhance security, add comfort to a space, or seek protection from the elements, Rollac has the solution for your home or work environment.

ROLLAC 

5331 West Orange Street
Pearland, TX 77581

toll free 1.888.2-ROLLAC
phone 281.485.1911
fax 281.485.0839

