2017

INSPIRE PLANTATION SHUTTER SPECIFICATION MANUAL

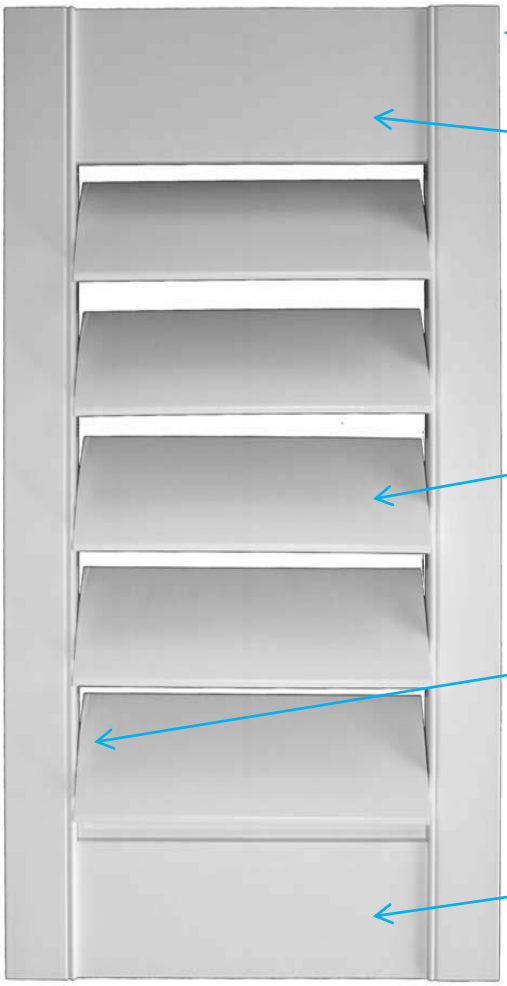
INSPIRE Installation Techniques

INSPIRE Shutter Specifications

Panel Specifications	
Colour Options	Bright White, Antique White
Stile Profile	Beaded
Louvre Type	Elliptical
Louvre Width	88.90mm
Louvre Thickness	11.6mm
Stile Width	50.8mm
Stile Thickness	28.58mm
Rail Thickness	19mm
Maximum Panel Height	2700mm
Divider Rail required @	1500mm
Tilt Rod	Clear tilt (Hidden tilt mech)
Hinged Panel Width (Max)	500mm (89 contour Louvre)
	750mm (89 Aluminium Reinforce Louvre)
Hinged Panel with Centre Stile	900mm
Hinged Bi-fold Panel Width (Max)	500mm
Hinged Bi-fold Panel Height (Max)	2700mm with bottom track
Fixed Panel with Centre Stile Panel Width	1200mm
Track Bi-fold Panel Width (Max)	500mm
Track Sliding Panel Width (Max)	900mm
Track Sliding Panel Width with Centre Stile Co Joined (Max)	1200mm

Framing Options Available	
Beaded L Frame	Inside/Outside mount
Beaded Z Frame	Inside mount
U Channel	Inside mount
Beaded Mounting Frame	Inside/Outside mount
Posts	T Post (L / Z)
	90o Corner Post (L / Z)
	135o Bay Post (L /Z)
Headboard/Sideboard Sizes	138, 185, 240
Pelmet Fascia Size	140

Panel Components



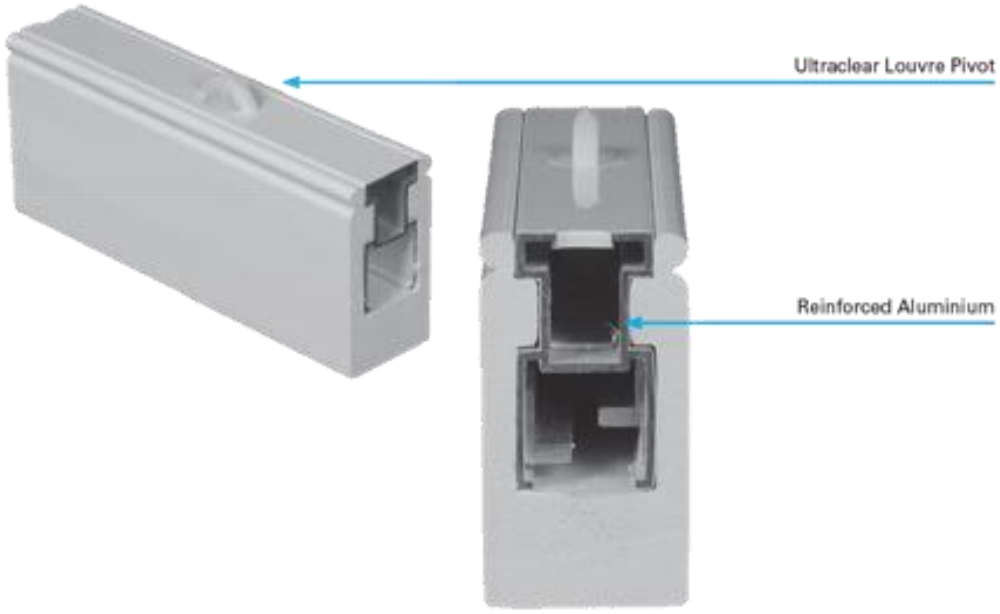
Stile. These make up the sides of every panel. They came as standard & Astragal stile for standard hinged panels

Top Rail. These make up the top of every panel to provide strength through the panel. These differ in size depending on the panel measurements.

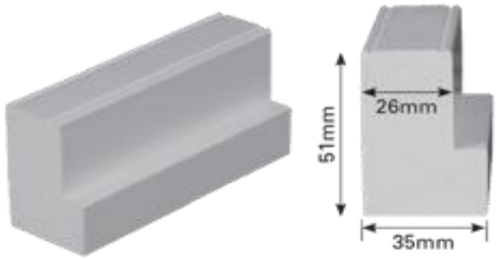
Louvre. The horizontal slates within the panel which are available in 89mm Contour Louvres and Aluminium Reinforced Louvres

Hidden Clear Tilt. This hidden reinforced Aluminium tilting system, allows effortless operation without annoying connector rods. Can also be split to allow for split operation of panels

Bottom Rail. These make up the bottom of every panel to provide strength through the panel. These differ in size depending on panel measurements.

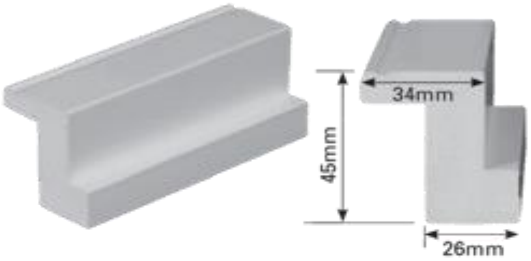


Framing and Applications



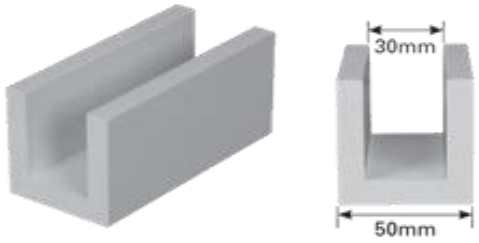
L- FRAME
The L-Frame can be used as a reveal mounting frame or placed onto a wall or architrave and used as a face mounting frame. For a reveal mount option, there is a very strong likelihood caulking will be required. This is due to the vast majority of windows not being square.

"Face or reveal – all options covered"



Z- FRAME
Perhaps our most popular framing option, this is a reveal only frame. Superb for that slightly out of square window, as the "Z Wings" cover any gaps up to 10mm. Therefore the shutter can be easily installed, your fitter needs no gap filling time and can move straight onto the next window or job.

"Keeps your fitting cost down"

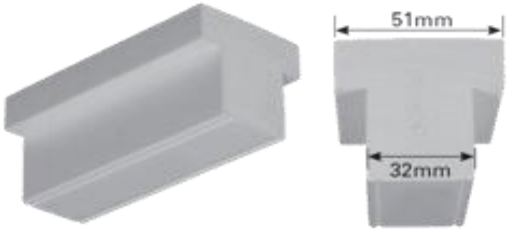


U- CHANNEL
The U-Channel is often used in wall cut-outs, between adjoining rooms, or also when an easy removing option is required. This is a simple operation of lifting the shutter into the top U-Channel and then dropping the bottom of the shutter into the bottom U-Channel (just like your normal glass sliding windows).

"Ease of access option"

MOUNTING FRAME
The mounting strip framing can be used for a number of applications. It is used in conjunction with bent leaf hinges, or as beading to act as alight block with no frame shutters, or even as packing in some instances.

"Multi purpose framing"



T-POST
The T-Post is used in multiple hinged panel situations. Ideally the T-Post is placed in front of any Window Mullion, providing a clear view through the shutter. The T-Post is screwed directly onto the frame and has the added effect of firming up the frame.

"Allows a single frame multi panel option"

INSPIRE Installation Techniques

Introduction

Fitting shutters to an opening is an exacting procedure. A high level of hand-eye coordination and dexterity is required, as well as a sharp eye for detail. Shutters are normally fitted by skilled professional installers and are not generally a product that can be fitted by the customer nor recommended.

Appropriate tools should be used for this process and high-quality tools will generally give you a better overall result.

Most window and door openings are rarely square or plumb and buildings can move and settle over time, making the job more difficult; however, the shutters and framing options make allowances for this, enabling the installation to appear neat and tidy.

As building material types and designs vary dramatically, the same installation technique cannot be used for every application. Several options are available as standard; however, a good install is able to plan for odd situations in advance (usually at the time of check measure) and sometimes may need to think 'on their feet' to get a good result when unexpected situation arise.

The following installation instructions should be used as a guide only and the actual application may need to be changed to suit the scenario at hand. It will, however, give you the basic techniques used to install a standard opening for the framing or option you have chosen.

Before beginning, there are a number of potential hazards involved in installation work, both to the installers health and the building and household items where the shutters will be installed. The famous doctor's adage 'first do no harm' should be applied to all attempts at installation. The branch and the installer should ensure that all appropriate insurances (both health and property) are current and the any qualifications required by law are obtained and current.

Health & Safety

The health and safety of the installers and others in the proximity of the install work is of utmost importance. Correct health and safety procedures should be followed at all times and for the installer, particular attention should be paid to ladder safety and usage of hand and power tools. Any work done at heights should be undertaken from a platform, to enable both hands to be used during the work and all local laws followed exactly.

Electricity

Electricity can be deadly. Correct procedures should always be followed in regard to using tools requiring electricity. Manufacturer's manuals/guides should be available and will contain correct method of use.

During the normal course of an install you may also come upon walls, ceilings or even floors that contain hidden cables. It is impossible to know where cables may be concealed, so the use of a commercially available ultrasonic senor is highly recommended. If you have any doubts as to the location of live wires, seek professional assistance before proceeding.

Utility Pipes

Although rarely dangerous, piercing or breaking water or other utility pipes can cause extensive damage to property and can be very costly to repair. Most commercially available ultrasonic sensors also can detect pipes and timber and metal studs, so are an invaluable tool.

Glass

As shutters are generally placed over windows or doors containing glass, special consideration should always be given. Placement of screws should always give plenty of clearance from the glass in the window and in the unfortunate situation where glass is cracked or broken it should only be replaced by a professional.

Ladders

Ladder falls are a constant potential hazard when fitting shutters. In many instances, scaffolding or portable work platforms will be safer and a better option, despite any associated costs. Aside from the possibility of severe injury and loss of income, laws regarding working on ladders are clearly defined in government OH&S regulations and standards and should always be strictly enforced. Ladders are generally only able to be used to gain access to a location and three points of contact must be made with the ladder at all times, making it impossible to do this and perform tasks as well.

Preparation

Before going to site, the installer is responsible to ensure that all tools, equipment and fastenings are on hand. They should also make certain that they carry equipment and products to leave the site in the same level of cleanliness to which they arrived.

Cleaning Up

Part of the clean-up process is preventing mess in the first place. Using a moving blanket or drop sheet is recommended, as it will catch the majority of the mess. Tools, screws and parts should not be placed on customer's furniture/timber floors etc., so the drop sheet will become your work surface.

Before beginning the clean-up process, hands should be washed to remove dust and dirt accumulated through the install process. If your hands are not clean you are going to add to the job at hand.

If caulking was used, part of the process of applying it is to have a bucket of water on hand with a clean white rag; this will ensure that all of the excess product is removed and will also help to keep hands clean.

All products should be spot cleaned where necessary. Once this is complete, the drop sheet should be removed, and the floors and windows reveal should be vacuumed where necessary.

Work Space

The majority of installation work is carried out in the customer's home. Limited access and placement of furniture will always be an issue but must be worked around. If placement of furniture or belongings is going to impede your install work or possibly be damaged, discuss with the customer at the time of check measure and request that the item/s are moved before you arrive (make a note on your paperwork and remind the office to confirm with the customer booking installation).

Assembly of framing should be done on a flat surface, usually the floor. Sometimes this will be done more easily in another room and then carried through. Occasionally there is just no floor area available and framing must be assembled standing up or can be assembled straight into the window opening.

Packaging-Transport

Shutters are relatively fragile and are packaged fairly substantially to prevent transport damage. Attention should always be paid to correct loading of vehicles to ensure no rubbing of hinges or part whilst in transport, use of foam or cardboard is recommended between panels and tie down belts. Getting the shutters and framing into the house is also transporting the goods, so the product should only be unpacked once on site or preferably once in the room in which it will be installed. This will prevent damaging the panels etc. on the walls and protect the customers home.

The packaging shouldn't be removed from the property until the shutters are installed and working properly. Reported missing components are generally found within the packaging, or in hardware boxes. In addition, in the unlikely event that the shutters need to be removed again from the house, the packaging can be used to prevent any further damage or issues.

A label will appear on each package that will provide all the information you will need to identify the parts inside, including room location and item numbers. This will allow you to move the correct components to the correct location without opening them first.

Fasteners

A range of the appropriate fasteners is essential to ensure you can finish the installation, regardless of the obstacles encountered. As wall and floor covering/sheeting prevents the installer from seeing the substrate, the installer must be prepared for any situation. An installer will be required to fit to timber, concrete, brick and/ or render, blocks, tiles, plasterboard, marble and other natural stone, aluminium or steel frame, or a combination of these. Specific fasteners are required for each of them, to ensure the fixing is permanent. Particularly for bathrooms and the moisture-rich areas, these fasteners may also need to be made from stainless steel.

Timber

Fixing to timber (or timber behind plasterboard) is generally done with screws. Air powered nail guns can be used, but this method does reduce adjusting ability. The most common type of screw used when installing shutters is an 8- gauge chipboard or plasterboard screw (10- gauge can be used for longer length screws).

Holes should be pre-drilled in the framing before the screw is driven, to ensure the frame doesn't split.

It is recommended that Phillips head or square drive screws and tips be used. These are more commercially available, with the square drive screw giving superior driving power and less slippage, reducing the chance of damage to frame. Screws length is subjective; it will depend on the depth of the framing being attached, the hardness of the timber being attached to and the total number of screws used. In general, the screw should penetrate the timber substrate by at least 20mm but may need more in some cases. Always check the length of the screw against the depth of the frame to be attached, to ensure correct penetration. Once the entire frame has been mounted, it should be tested by hand for firmness.

Concrete

Fixing to concrete can be done in a number of ways and the type of fastener chosen will be dependent on the quality of the concrete, the strength required, closeness of the fixing to the edge and the choice of top, floor or face mounting.

- Plastic expansion plugs – this is the most common fixing used into concrete (also known as 'spaghetti' when supplied in roll form). A hole is drilled into the concrete at the required depth and the expansion plug is inserted. A screw is mounted through the frame and into the plug, which expands in the hole. For standard 8 – 10-gauge chipboard screw, a green plug should be used,

which will require a 7mm hole to be drilled in the concrete. If a red plug is used, a 6mm hole would be drilled and a smaller gauge screw used. There are several ranges of expansion plugs available on the market, with different levels of quality and use.

- Concrete screws – specialist screws are available that hold directly into concrete without the use of plugs. These are generally more expensive but can be useful where greater strength is required, or additional screws need to be added to a frame that has already been fitted. A hole will still need to be drilled into the concrete, but this can generally be drilled straight through the frame and into the concrete
- Sleeve anchors – these are designed for heavy – duty applications. They can be useful for attaching bi-fold or slider headers into walls or reveals, where the shutters will be quite heavy and require extra strength to keep them there

Brick, Block and Render

Fixing to brick, block and /or render generally uses the same fasteners as used for concrete.

Make sure the anchor is a minimum of times the diameter away from the other concrete anchors and at least 5 times the diameter from all unsupported edges, to prevent cracking or breakaway of the brick or block. If the surface has been rendered, the fastener must pass through the render and into the substrate, as the render itself will provide no strength and may break away if put under stress.

For hollow bricks or blocks, the following fasteners may also be used.

- Spring Toggle – this fastener has a pair of 'wings' that expand using a built-in spring. A hole is drilled in the brick or block until it enters the hollow interior. The screw or bolt section is unscrewed from the wings, passed through the hole in the brick/block and it will automatically expand in the cavity on the other side. The screw can then be tightened until a firm grip is achieved.

Tiles

Plastic expansion plug are generally used when attaching to tiles. Where possible, it is better to fix these into the grout lines, to reduce the risk of cracking tiles. Where this can't be done, extreme care should be taken when drilling the hole and for vitreous tiles or tiles with a high glaze it would be preferable to use a glass-cutting spade bit (or other bits specifically made for this purpose) to drill through the tile. Placing masking tape over the area to be drilled can also help to prevent cracking and the drill bit wandering.

If attaching tracks to a tile or polished concrete floor, it is not always necessary to use a mechanical fastener. Specialised doubled sided tapes are available that will permanently attach it to the surface. VHB tape is the preferred product, as it sets almost immediately, is temperature proof, moisture and chemical resistant (for mopping floors) and has high shear strength. Don't use light duty tapes, as they will not hold.

We recommend a 3M product. Foam Tape, 3M VHB Double/Sided, VHB clear 1mm x 33m x 12mm.

If buying from Lincoln Sentry the product code is: 4M491012

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Plasterboard

Where possible, screws should be attached where the plasterboard fixes to the timber/metal studs behind it. This will give the best strength but is not always possible. Where attaching to plasterboard with a hollow recess behind, the following products may be useful.

- Spring Toggle – as explained above for bricks. The length of the screw required is less than for bricks, but a range of lengths is available to choose and can be selected based on the frame thickness
- Plasterboard Screw - made of either zinc plated steel, aluminium or plastic, this screw has a very course thread and each screw will hold up to 10kgs in sheer weight. It screws directly into plasterboard and any 8-gauge screw can be driven into the hole in the middle of it. If using these screws, it should not be the only type of fixing, particularly if used for holding up headers/pelmets. They should be used in conjunction with other fasteners, or if this is not possible, with a construction adhesive running the length of the framing to be attached.
- Hollow Wall Anchors – a large range of hollow wall anchors are available for almost every application. Most of these are made from metal or plastic and expand on the other side of the plasterboard when screw is inserted.

Marble and Stone

Attaching to marble or natural stone is notoriously difficult. Plastic expansion plugs can be used, but extreme care must be taken not to crack the brittle stone. Where possible, grout lines should be used, or even the exclusive use of a construction adhesive (this must be given plenty of time to set and should be held in place with tape until completely dry).

Sleeve anchors or mechanical expansion bolts should not be used, as they are likely to expand the stone until it cracks before it gains a suitable grip.

Aluminium or Steel Frame

On occasion, it is necessary to attach directly to an aluminium window or door frame. This is relatively simple to do, but the right screws must be used to ensure a quality fixing. A chipboard screw is not suitable, as the thread design is not appropriate for this purpose and it is likely to lose its grip over time.

Metal thread screws are the best choice, as the screw thread is designed specifically for holding into metal. They are generally self-drilling, making them easy to fix straight through the frame and into the metal. (Care must always be taken to make sure the screw doesn't penetrate through to any glass surface.) These screws can also be used when attaching through a plasterboard surface and into steel framing in the substrate.

Screw Caps and Covers

The final finish of the installation comes down to details. Shutters are a high-priced item and therefore more detail is expected. Although screws are necessary to perform the installation, screw heads should not be visible upon completion. A range of screw cap types are available to cover most screw heads.

- Sticker Caps- the most widely used form of cap, they come in a very wide range of colours and timber grain types, are quick to fit, low profile and are reliable. We recommend Fastcap, Self-Adhesive Cap BX in White and Antique White PVC 14mm.

If buying from Lincoln Sentry the product code is: 2281000B White and 2281007B Antique White.

- Push in caps – these have a small stub underneath the cap and push into the end of the screw. They are not recommended has they can fall out of the screw, so need to be glued before insertion, making them a costly on time.

- Snap- on caps = a plastic cup section is fed on to the screw before it is inserted and once driven in a separate cap section clips over the top. These are generally only used when a heavy-duty fixing is required.

A minimum quantity of commonly used fasteners should always be carried, and a variety of specialist fasteners will be accumulated over a period of time. These should also be carried, as they can come in handy for creative installations from time to time. The following list would be the absolute minimum a shutter installer would carry.

ITEM	SIZE	QTY	COMMENTS
Chipboard Screw	30mm x 8 gauge	500	countersunk
Chipboard Screw	40mm x 8 gauge	500	countersunk
Chipboard Screw	50mm x 8 gauge	5000	countersunk
Chipboard Screw	60mm x 8 gauge	500	countersunk
Chipboard Screw	75mm x 8 gauge	500	countersunk
Chipboard Screw	100mm x 8 gauge	1000	countersunk
Plastic expansion plugs	6mm	100	Grey
Plastic expansion plugs	7mm	100	Green
Self-Tapping Screw	19mm x 10 gauge	100	Pan head
Metal Thread Screw	75mm x 8 gauge	500	countersunk
Various Concrete Screws			countersunk
Various Hollow Wall Anchors			
Various Expansion Bolts			
Constructions Adhesive			tube + nozzles
VHB Tape 3M 4910F	12mm x 1mm	2	double sided tape, 3m brand
Fastcap PVC White	14mm	1060	Part#FC.SP.916.WH
Fastcap PVC Antique White	14mm	1060	Part#FC.SP.916.AW

Tool Kit

A well-supplied tool kit will ensure you will always have the right tool for the job. Attention should be paid to keeping the tools in a clean and well-maintained state, so that they are always serviceable. The following list shows the type of tools that would be required to do install work efficiently and shows other tools that although not entirely necessary, can be of much benefit and speed up the process.

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TOOLS & EQUIPMENT REQUIRED FOR EACH INSTALL TEAM

Items marked with ** are useful to carry; all other items are required.

ELECTRICAL

ITEM	QTY	COMMENTS/SIZE
Cordless Drill	2	Good quality, with spare batteries
Electric Drill	1	With Hammer drill function, good quality
Jigsaw**		
Power cord	1	30m minimum
Sliding Compound Drop Saw	1	Must be able to cut fascia 150mm wide
Table Rip Saw**	1	For ripping headboards etc to width.
Vacuum Cleaner	1	

HAND TOOLS

ITEM	QTY	COMMENTS/SIZE
11mm Drill Bit	1	For bottom pivot & guide holes
Allen/Hex Key Set**	2	Metric and Imperial
Bevel	1	
Caulking Gun	2	
Chalkline**	1	
Chisel Set	1	25,18,12
Combination Sliding Sq	1	
Contour Gauge**	1	
Coping Saw	1	250mm – 300mm +spare blade
Countersink bit	1	15mm
Drill Bit set	1	13pc
File	1	300mm
Hacksaw	1	+spare blades
Claw Hammer	1	20oz
Hand screwdriver set	1	Various sizes both Phillips and Flat head
Handplane**	1	Small
Handsaw	1	
Hole Punch	1	10mm diameter
Level**	1	1 metre
Magnetised Screw tips (P2)	5	100mm round shaft
Metal Snips	1	Straight cutting
Nail Punch	1	
Pliers	1	200mm
Longnose Pliers	1	200mm
Putty Knife	1	Sharpened tip
Quickgrip Clamp	2	
Rubber Mallet	1	Preferably white head
Sanding block**	1	+ Sanding paper
Scissors	1	
Shifting Spanner	2	Small and medium sizes**
Speedbor Spade Bit Set**	1	
Tape Measure	1	8m, Must be excellent quality
Laser Distance Measure**	1	30m
Trimming Knife	2	+ spare blades

MISCELLANEOUS

ITEM	QTY	COMMENTS/SIZE
Broom	1	
Cleaning Products		Non- abrasives – magic eraser
Drop Cloth/ Moving Blanket	2	
Dustpan and Brush	1	
Folding saw Stool**	2	
Ladder	1	3 steps – used for access only
Ladder	1	6 steps – used for access only
Portable work platform	1	
Masking Tape	2	50mm wide
Pens and Pencils	4	
Permanent marker pen	2	Black
Plastic Bucket and Rags	1	
Rotary Hammer Drill Bit	2	7mm- quick release type, to suit drill
Rubbish Bags		
Tool Belt**	1	With holster for cordless drill
Tool Boxes		
Touch up Brush	1	Small brush
Softwax Kit, Wax filler	1	Various colours

SAFETY EQUIPMENT

ITEM	QTY	COMMENT/SIZE
Dusk Masks	5	Full box of disposable
Ear Muffs	2	
First Aid Kit	1	Small-medium appropriate to number of installers
Safety Glasses	2	

Customer Relations

The satisfaction of the customer is the goal of this process. Regardless of the quality of work carried out, if the customer is unhappy with the service provided then their purchasing experience will be clouded. Conversely, if the customer is put at ease right from the start and they see that you continue to act in a courteous and professional manner, they will be confident to allow you to do your work without constant supervision and interruption and will be more likely to give a positive report to family and friends. This is important, as large portion of product sales is attributed to word of mouth; therefore, your future is reliant on it.

Appearance and Presentation

It is important to make sure that you present yourself in a neat and tidy manner. This will also go a long way to putting the customer at ease. Hair should be brushed, and tidy and long hair held back. Personal hygiene should be observed (deodorant, clean teeth, etc.) and hands should be clean. Clothes must be clean (at least at the start of the day) and Polo shirts with company logo to be worn at all times

Final Steps

Once you have finished the installation and cleaned up, your last process is to make sure that all openings work correctly. Test each opening, with attention to:

- Make sure that each set of louvres work correctly in both directions, on every panel.
- Each hinged panel should be moved through the full range of motion and checked that catches are holding
- Run each sliding panel along the full length of track to ensure there is no binding
- Run bi-fold sets through their full range of movement, ensuring there is no binding

Make any adjustments at this stage, to prevent coming back for a service call.

Once you are happy, show the customer how each type of opening, explain the cleaning and maintenance process and answer any questions or concerns they may have.

The installation process will now be complete.

Once the customer is satisfied with the installation processed to collect any outstanding monies and have the customer sign the satisfaction slip via the iPad so a warranty card can the emailed straight to the customer.

INSPIRE Installation Techniques

Standard installation of a L or Z Frame

Inside Mount, 4 sides

Tools and Materials required

- Cordless Drill
- Tape Measure / Laser Measurer
- Box Knife
- P2 Phillips screw tip, 100mm long
- #6 countersink drill bit
- Caulking Gun (L frame only)

Before Beginning

- Check the order form to ensure you have all the part required for the type of installation you are undertaking. This should be checked off before leaving the factory and whilst loading
- Place all required tools and hardware within easy ranch, this is where the tool belt option is handy
- Make sure the 'item #packing labels match, if multiple panels will be used. This application will have the frames wrapped separately and each panel wrapped with Item#.

Process

1. Using the box knife, carefully open the wrapped parts, remove the panels and frames requested and from the parts box get the hardware required
2. Stand the panels in the correct order, making sure they are the right way up and all match up correctly.
3. The framing pieces will be assembled first, they will be marked Top, Bottom, Left and Right. Position all the frame on the floor, face up
4. The mitres are joined using Hoffman keys. Place the Hoffman key onto a hard surface (a piece of ply or timber kept specifically for the purpose is recommended, to prevent damage to the floor and to make sure the keys finishes flush with the back of the frame) with the rounded end of the key facing up. Push each half of the mitre onto the key, until the mitre joins neatly and flush. Repeat this for each corner
5. If the opening requires a T-Post, identify the top of the post and position loosely within. Place all the panels within the frame in their correct order and insert the hinge pins
6. Square up the frame so that all hinge and clearance gaps are even and adjust the position of the T-Post using the screws provided. Your frame should now be fully assembled.
7. Remove the hinge pins and panels from the frame. (For small openings, they can be left in if it can be handled easily.)
8. Place the frame into the window opening. Pre-drill a hole in the frame rebate behind the top left hinge and bottom right hinge. Line up the face of the frame with the front of the reveal and drive screws into holes but leave the screw heads out at this stage. This will temporarily hold your frame in the correct place in the window.
9. Place the left-hand panel into the opening, lining up the hinge sections in the left L/Z Frame and then insert the hinge pins. Repeat for all other panels, working from the left to right across the opening.
10. Assess the panels for squareness to the frame and each other. If gaps are not even or the panels do not line up to each other at top and bottom, adjustments need to now be made.
11. The frame can be adjusted in four directions to square the panels to each other and the frame – left side up/down, right side up/down, top left/right and bottom left/right. It may be necessary to adjust in more than one direction to square the panels up in an out-of-square opening.
12. If up/down adjustments need to be made, undo the temporary screw until it no longer is attached to the reveal (but do not remove) and place a packer/spacer between the frame and the bottom

reveal, on the side you require movement. Insert another screw in the frame (in line with a different hinge on that side) to keep the frame at the new height.

13. If the left/right adjustments need to be made, undo the temporary screw until it no longer is attached to the reveal (but do not remove), place a packer/spacer between the frame and the left or right reveal. Insert a screw into the frame, at the exact position of the packer.
14. Further minor adjustments may need to be made to ensure the squareness of the panels to the frame. Use methods in steps 12 and 13 to achieve this, until the panels are square to the frame and the tops/bottoms of the adjacent panels line up. The hinge spacers provided can also be used to adjust gaps where necessary.
15. The remainder of the screws can now be inserted. As a general rule, a screw should be used wherever there is a hinge on the frame and for the top and bottom frame a screw should be used wherever there is a sticker plate (or the closing side of any panel). Additional screws should be placed where necessary, but consideration should be given to the spacing between screws for appearance reasons.
16. When inserting the screws, if there is a gap between the frame and the reveal at that point, a packer will need to be inserted to ensure the screw doesn't pull the frame out of square.
17. Re-check squareness of the frames and panels and make sure panels operate freely.
18. Applies to L frame only. Apply caulking around outside of frame. Caulking should be the same or similar colour as the reveal, as it will make the window opening appear to be square. Where not possible, the caulking should be the same or similar colour to the L frame.
19. Fit (Fastcaps) self-adhesive stickers to all visible screws in same colour as frame. Test the function of the panels and give a final clean.

The installation of this opening is now complete.

INSPIRE Installation Techniques

Standard installation L Frame

Outside Mount, 4 sides (this method can also be used for Hang Strip outside mount)

Tools and Materials required

- Cordless Drill
- Tape Measure / Laser Measurer
- Box Knife
- P2 Phillips screw tip, 100mm long
- #6 countersink drill bit
- Spirit Level

Before Beginning

- Check the order form to ensure you have all the part required for the type of installation you are undertaking. This should be checked off before leaving the factory and whilst loading
- Place all required tools and hardware within easy ranch, this is where the tool belt option is handy
- Make sure the 'item #packing labels match, if multiple panels will be used. This application will have the frames wrapped separately and each panel wrapped with Item#.

Process

1. Using the box knife, carefully open the wrapped parts, remove the panels and frames requested and from the parts box get the hardware required
2. Stand the panels in the correct order, making sure they are the right way up and all match up correctly.
3. The framing pieces will be assembled first, they will be marked Top, Bottom, Left and Right. Position all the frame on the floor, face up
4. The mitres are joined using Hoffman keys. Place the Hoffman key onto a hard surface (a piece of ply or timber kept specifically for the purpose is recommended, to prevent damage to the floor and to make sure the keys finishes flush with the back of the frame) with the rounded end of the key facing up. Push each half of the mitre onto the key, until the mitre joins neatly and flush. Repeat this for each corner
5. Pre- drill holes into the frame at the tops/bottom of each side frame and at the centre of the top and bottom frame. (if more than 2 panels predrill at the closing points of each panel)
6. If the opening requires a T-Post, identify the top of the post and position loosely within. Place all the panels within the frame in their correct order and insert the hinge pins
7. Square up the frame so that all hinge and clearance gaps are even and adjust the position of the T-Post using the screws provided. Your frame should now be fully assembled.
8. Remove the hinge pins and panels from the frame. (For small openings, they can be left in if it can be handled easily.)
9. Position the frame evenly around the window opening. Insert a screw into the pre-drilled hole at the top of the left-hand frame. Keeping the top frame level, insert a screw into the pre-drilled at the top right-hand frame. A spirit level can be used to level the top frame if required, but if the architraves are present the frame will usually run flash with the top of the architrave. This will temporarily hold your frame in the correct place on the window. The rest of the frame will be secured in later steps. For wider frames, a screw may also need to be inserted into the top frame, to prevent it from sagging.
10. Place the left-hand panel into the opening, lining up the hinge sections in the left L- Frame and then insert the hinge pins. Repeat for all other panels, working from the left to right across the opening.
11. Assess the panels for squareness to the frame and each other. If gaps are not even or the panels do not line up to each other at top and bottom, adjustments need to now be made.
12. Adjust (rack) the bottom frame to the left or right, until the gaps are even, and the top/bottoms of adjacent panels line up. Insert a screw into the bottom of the left frame.

13. Re-check that the panels and frame are still square, and the gaps are even. Stand back and check that the whole opening is still sitting square on the window.
14. Insert the rest of the screws into the pre-drilled holes on all sides of the frame. Additional holes can be drilled in the frame, to line up specific locations if required
15. Fit (Fastcaps) self-adhesive stickers to all visible screws in same colour as frame. Test the function of the panels and give a final clean.

The installation of this opening is now complete.

INSPIRE Installation Techniques

Standard installation Bi Fold

Outside Mount, 3 sides

Tools and Materials required

- Cordless Drill
- Tape Measure / Laser Measurer
- Box Knife
- P2 Phillips screw tip, 100mm long
- #6 countersink drill bit
- Caulking Gun
- Spirit Level

Before Beginning

- Check the order form to ensure you have all the part required for the type of installation you are undertaking. This should be checked off before leaving the factory and whilst loading
- Place all required tools and hardware within easy ranch, this is where the tool belt option is handy
- Make sure the 'item #packing labels match, if multiple panels will be used. This application will have the frames wrapped separately and each panel wrapped with Item#.

Process

1. Using the box knife, carefully open the wrapped parts, remove the panels and frames requested and from the parts box get the hardware required
2. Stand the panels in the correct order, making sure they are the right way up and all match up correctly. Each of the panels should be numbered on the top of the rail to identify the correct order.
3. The framing pieces will be assembled first. For an outside mount opening, the headboard, fascia's and mounting strip will all be pre-assembled as one unit (unless ordered otherwise). Place this on the floor, face up. Slide the sideboards up into the headboard, also face up. (if skirting is present on the face on the wall, you may have to carefully scribe the sideboard to allow it to sit flat against the wall). Screw down through the headboard into the sideboards with screws provided, to attach the framing together. Your frame should now be fully assembled.
4. Standing the top of the headboard, lift the unit up and place against the wall.
5. Position the frame evenly around the window opening. If an architrave is present, this will usually be directly against the outside of the architrave.
6. Using a ladder for access, insert a screw through the header support strip and into the wall, ensuring there is a suitable fixing point within the wall. Check that the frame is still evenly positioned around the window and then insert additional screws to fix the header support strip to the wall. A normal number of fixings would be one screw at 100mm from either end and then evenly spaced at about 500mm-600mm intervals, but this will be entirely dependent on the fixing points in the wall. Ensure that the header is kept perfectly straight, as any sag may prevent the tracking system from operating properly. Additional mounting brackets may also be required if necessary when extra support is required.
7. The sideboards can now be fixed to the wall. Place the sideboard support strips inside the sideboard and against the wall or architrave (if side strips (light-block) are ordered only) Screw the support strips onto the sideboard, using 30-32mm screws. A normal number of fixings would be one screw at 100mm from top and bottom and then evenly at about 500mm – 600mm intervals (for a normal door-height, 4 -5 screws per side usual).
8. Ensure that the sideboards are perfectly vertical and straight. A spirit level can be used to check this, but if the architraves are present the sideboards will normally sit flush against them. Screw through the sideboard into the wall or architrave, keeping the screws at the same spacing as those into the sideboard.

9. The bottom pivot/s can now be fitted. Check the order for the correct folding sides and place the bottom pivot plate at the correct end/s. Measure the distance from the front of the sideboard to centre line of the top track and place the bottom pivot so that its centre line is the same distance in. This should ensure that the top and bottom pivots are plumb to each other. (Note this step isn't required when fitting FF/FF panels as they are free floating)
10. Screw the pivot onto the sideboard and floor. If the floor is tiled or concrete, mark the fixing holes first, remove the pivot and inset a nylon plug into the floor. If the floor is carpet over concrete, use the method escribed in the Attaching to Carpet Concrete Floors section.
11. The bottom track can now be fitted. If pivots are located at both ends, the track can be fitted directly between them, ensuring the centre line of the track lines up with the centre line of the pivots. If there is a pivot at only one end, the opposite end will need to be measured and marked for the same centre line as the pivot. If the floor is timber, tiled or polished concrete, the bottom track can be fixed with VHB double-sided tape (the tape must run the full length of the track), or can be fixed with screws using the appropriate method. The track will need to be pre-drilled and countersunk to use screws. If the floor is carpet over concrete, use the method described in the 'Attaching to carpeted concrete floors' section.
12. The panels can now be fitted. Ensure that all componentry has been fitted to the top track and panels. When fitting bi-fold panels it easiest to work from the pivot sides in towards the middle. Install the first pair containing the pivot panel onto the bottom pivot bracket.
13. Spring load the top pivot (attached to the panel) into the top pivot bracket in the track.
14. Attach the panel with the wheel carrier bracket to the wheel carrier in the track. Make sure to lock the wheel carrier bracket to the wheel carrier by adjusting the lock lever. Compress the spring-loaded guide and click into the bottom track.
15. If more than two panels fold in the same direction, bring the next pair to the first pair, line up the hinges and insert the hinge pins. Attach the panel with the wheel carrier bracket to the wheel carrier in the track and compress the spring-loaded guide and click into the bottom track. Repeat as necessary.
16. Assess the panels for squareness to the frame and each other. If gaps are not even or the panels do not line up to each other at the top & bottom, adjustments need to be made.
17. Side to side adjustments can be made at the top pivot bracket and the bottom pivot brackets and height adjustments can be made at the wheel carriers and the bottom pivot brackets.
18. Once panels are square to each other and the frame, check for proper function by running the panels through the full range of motion.
19. If necessary, adjust the sideboards to the panels.
20. Cover all visible screws the Fastcaps (screw caps), caulk where necessary and give a final clean.

The installation of this opening is now complete.

INSPIRE Installation Techniques

Standard installation Slider

Inside Mount, 3 sides

Tools and Materials required

- Cordless Drill
- Tape Measure / Laser Measurer
- Box Knife
- P2 Phillips screw tip, 100mm long
- #6 countersink drill bit
- Caulking Gun
- Spirit Level

Before Beginning

- Check the order form to ensure you have all the part required for the type of installation you are undertaking. This should be checked off before leaving the factory and whilst loading
- Place all required tools and hardware within easy ranch, this is where the tool belt option is handy
- Make sure the 'item #packing labels match, if multiple panels will be used. This application will have the frames wrapped separately and each panel wrapped with Item#.

Process

1. Using the box knife, carefully open the wrapped parts, remove the panels and frames requested and from the parts box get the hardware required
2. Stand the panels in the correct order, making sure they are the right way up and all match up correctly. Each of the panels should be numbered on the top of the rail to identify the correct order.
3. The framing pieces will be assembled first. For an inside mount opening, the headboard, fascia will all be supplied as separate items (unless ordered otherwise). Place the headboard on the floor, face up. Slide the sideboards up into the headboard, also face up. (if skirting is present on the face on the wall, you may have to carefully scribe the sideboard to allow it to sit flat against the wall). Screw down through the headboard into the sideboards with screws provided, to attach the framing together. Your frame should now be fully assembled.
4. Standing at the top of the headboard, lift the unit up and place into the reveal.
5. Adjust the depth of the frame within the reveal, so that any window obstructions don't protrude past the back of the frame. This will ensure that the louvres don't contact any obstructions when opened. Make sure that the frame protrudes the same amount on all sides and is even.
6. Pre-drill fixing holes into the header, towards the back of the frame. Insert screws through the header and into the reveal, ensuring there is a suitable fixing point within the wall. Check that the frame is still evenly positioned around the window and then insert the remainder of the screws to fix the header to the wall. A normal number of fixings would be one screw at 100mm from either end and then evenly spaced at about 500mm-600mm intervals, but this will be entirely dependent on the fixing points in the wall. Ensure that the header is kept perfectly straight, as any sag may prevent the tracking system from operating properly.
7. The sideboards can now be fixed to the wall, using the same method as for the header. Ensure that the sideboards are perfectly vertical and straight. A spirit level can be used to check this.
8. The bottom tracks can now be fitted. Measure the distance from the front sideboard to the centre lines of the top tracks and place marks on the floor at either end so that the centre lines are the same distance in. This will ensure that the bottom tracks are plump to the top tracks.
9. If the is timber, tiled or polished concrete, the bottom tracks can be fixed with VHB double-sided tape (the tape must run the full length of the track), or can be fixed with screws using the appropriate method. The tracks will need to be predrilled and countersunk to use screws. If the floor is carpet over concrete, use the method described in the 'Attaching to carpeted concrete floors' section.

10. The panels can now be fitted. Ensure that all componentry has been fitted to the top track and to the panels. When fitting sliding panels, the panels on the back track must be fitted first. Attach the wheel carrier brackets to the wheel carriers in the track/ Make sure to lock the wheel carrier brackets to the wheel carriers by adjusting the lock lever. Compress the spring-loaded guides and click into the bottom track.
11. Assess the panels for squareness to the frame and each other. If overlapping stiles are not aligned, use the adjustment spanner on the wheel carrier to fine-tune the height on either side of the panels, until they are aligned.
12. Once panels are square to each other and the frame, check for proper function by running the panels through the full range of motion.
13. If necessary, adjust the sideboards to the panels by loosening the fixing screws and packing between the frame and the reveal.
14. Attach any light strips provided onto the panels, using screws. Pay attention to the size of each strip and ensure the correct ones are attached to the correct panels, as per the details in the specification manual. The light strip should be attached to the back panel/s first, as these will be easily seen when the panels slide and should be fixed parallel to the stile at the correct distance required (as per the tracking specification section).
15. Attach the front fascia using small panel pins. (Use spirit level if necessary to ensure it level)
16. Trim the fascia returns to the correct length, based on the amount of protrusion from the face of the wall. Attach using small panel pins, ensuring that the mitres line up. Punch the pins below the surface (for the front fascia and the returns) using a nail set and fill any holes using the soft-wax kit in matching colour to fascia.
17. Apply caulking where necessary, including the mitres on the fascia and the sideboards where they meet the reveal.
18. Cover all visible screws with Fastcaps (Self Adhesive PVC caps 14mm) and give a final clean.

The installation of this opening is now complete.

Attaching to Carpeted Concrete Floors

Carpeted floors can be challenging to attach frames, tracks or components to. If timber is the substrate, then screws can normally be driven straight through the carpet and underlay, as long as it done carefully and slowly. If the substrate is concrete, a nylon plug must be inserted, which requires drilling through the carpet. To do this without catching the carpet threads on the drill and causing a carpet run requires a special process.

1. Mark the hole position – affix a piece of wide masking tape(50mm) onto the floor in the position of the required hole/s. Place the item to be fixed in the correct location, use a black marker pen to mark the exact position.
2. Use a 10mm hole punch (or sharpened 10mm tube) and cut through the carpet and underlay. Clear the hole of debris and ensure that there are no loose threads protruding into the hole. **Leave the masking tape in place.**
3. Place a short piece of 10mm tube into the hole and hold with a pair of pliers or multigrips. Insert a 7mm hammer drill bit into the tube and drill to the required depth.
4. Remove the drill and tube and vacuum the area for concrete dust. Don't rub the dust into the carpet. (as the next time, it rains, the moisture in the air will cause the dust to set in the carpet, making a hard patch and possibly bleaching the carpet).
5. Hammer a 7mm plug (green) into the hole, flush with the surface of the concrete.
6. Reposition the item to be fixed in the correct location and insert screws into the plugs. For tracking ensure that the screws hold it firmly, but not over tightened so that it shows obvious humps from one screw to the next. Depending on the thickness and/or springiness of the carpet, it may be necessary to place small packing pieces under the track where the mounting screws are located, to ensure the track sits flat on the carpet. The thicker the carpet the more necessary it will become to use parkers.

We recommend the use of a bottom-board on most carpeted areas when doing bi-fold/slider wherever possible, this will help prevent movement and sagging of the bottom track/s.

Tight Louvres

If on completion of installation you/or customer find that some of the louvres are tight/stiff. If can normal be fixed by doing the following.

1. Put the louvres into the open position
2. Squeeze the Mech side of the stile together hard, along its full length to help free up any tight areas inside the tilt mech.
3. Using a can of Silicon spray with a nozzle, spray a small amount into the small opening around the tilt mechanism Louvre pivot.
4. Wipe away any excess spray from the stile and then open and close the louvres about 20 times to work the silicone spray into the Tilt mechanism
5. Check for freeness and ensure all spray has been clean off.

Can of Silicane Spray with nozzle. Step 2. Squeezing mech side of stile

Step 3. Spray around pivot point into mechanism