

ASSEMBLY INSTRUCTIONS



MILFORD

BASE SIZE: 3.150m x 2.000m

BEFORE YOU BEGIN THE ASSEMBLY PLEASE NOTE SOME IMPORTANT POINTS

TOOLS REQUIRED

- Electric / Battery Drill
- 5/16" Hex Drive Screwdriver Bit (for screwing in the Tek Screws)
- 3.5mm Steel Screwdriver Bit
- 10mm Steel Screwdriver Bit
- (If anchoring to a concrete floor) 12mm Concrete Drill Bit And Concrete Drill
- · 'Square Drive' Screwdriver Bit
- Phillips Drill Bit
- Slotted Drill Bit
- Riveter
- Hammer
- Tape Measure
- Stepladder
- String Line
- Adjustable Spanner
- Spirit Level
- Hand Saw
- Caulking Gun
- Tin Snips (Left & Right Hand)
- · Flat file (For The Roller Door Lock slots)
- Pipe Wrench (For Roller Door)
- Circular Saw and Jigsaw (For fitting optional timber floor only)

BEFORE YOU START

- · Read all instructions right through so you understand the full process.
- · Identify all parts and check quantities against the checklist before starting.

SAFETY FIRST!

- Do not attempt to build your shed in high winds.
- · Wear rubber coated gloves -beware of sharp edges on steel cladding and flashings.
- Protect your eyes and ears.
- Use electric power tools with care. Use a Safety Trip Switch.
- It is easier and quicker if this shed is assembled by two people. Some understanding of building is recommended and there are some processes that require
 handyman experience.

SELECT YOUR SITE

- Your shed must be level. Achieve this by either levelling the ground or by using blocks.
- · If your shed is to be positioned on wet or damp ground, we recommend that your shed is raised up off the ground slightly.

WARRANTY REQUIREMENTS

The following maintenance process needs to be adhered to, to qualify for the steel warranty of your Duratuf Milford shed.

- Wash all surfaces annually using a hose and soft nylon brush.
- Within 2 km of coast wash every 3 months as above. After a storm, wash the cladding and the gutters as soon as possible to remove any highly corrosive salt deposits.
- · Volcanic Ash Fallout wash as soon as possible, removing fall-out from roof and gutters.
- Do not allow manures, chemicals or other corrosive materials to have direct contact with cladding.

PARTS LIST

TIMBER FRAMING

DESCRIPTION	LENGTH	QTY	DIAGRAM	CHECKED
Front/Back Base Plate 45 x 45 H4 (Green)	3.150m	2		
End Base Plate 45 x45 H4 (Green)	2.000m	2	THE REAL PROPERTY.	
Front/Back Top Plate 45 x 45 H1 (Red)	3.150m	2	The state of the s	
End Top Plate 45 x 45 H1 (Red)	2.000m	2		
Lintel 45 x 45 H1	2.490m	1		
Stud 45 x 45 H1 (Yellow)	2.250m	10		
Stud 45 x 45 H1 (Yellow)	0.243m	5		
Stud 45 x 45 H1 (Yellow)	1.962m	2		
Top Plate Packer 70 x 45 H1	3.150m	1		
Centre Ridge Plate 140 x 45 H1	3.150m	1		
Nog 45 x 45 H1	0.908m	2		
Nog 45 x 45 H1	0.933m	4	THE STATE OF THE S	
Nog 45 x 45 H1	1.155m	1		
Nog 45 x 45 H1	0.240	2		

CLADDING/FLASHINGS

DESCRIPTION	LENGTH	QTY	DIAGRAM	CHECKED
Back Wall Cladding Sheets	3.150m	3	**********	0
End Wall Cladding Sheets	2.000m	6		
Roof Sheets	2.330m	4	****	
Front Wall Sheet	0.375m	6	********	
Half Front Wall Sheet (390mm wide)	3.150m	1		
Roller Door	2.400m	1		0

DESCRIPTION	LENGTH	QTY	PART#	DIAGRAM	CHECKED
Front Corner Flashing	2.435m	2	1001		
Back Corner Flashing	2.365m	2	1002		
Door Top Flashing	2.595m	1	1003		
Door Head Flashing	2.400m	1	1004		
Door Jamb Flashing	2.032m	2	1005		
Barge Flashing	2.395m	2	1006	ו	
Spouting	3.275m	1	1007		
Downpipe Cover Flashing	2.260m	1	1008	Ц	
Front Roof Flashing	3.275m	1	1009		
Front Top Plate Flashing	3.150m	1	1010		
Spouting End Cap	0.040m	2	1011		

HARDWARE/ACCESSORIES

DESCRIPTION	LENGTH	QTY	DIAGRAM	CHECKED
		7		
Flathead Nails	75mm	140		
Clouts	30mm	110	The second second second	
Rivets	7.9mm	75		
Tek Screws	55mm	100		
Tek Screws	25mm	200	***************************************	
Screws	40mm	8	<====================================	
Purlin Cleat	86mm	2		
75mm DPC Waterproof Tape	30m Roll	1		
RTV Silicone		1		
Downpipe Dropper		1		
Downpipe Brackets		2		
Touch up paint and brush		1	9	
Downpipe	3.000m	1		

OPTIONAL EXTRAS

CLEAR ROOF

DESCRIPTION	LENGTH	QTY	DIAGRAM	CHECKED
Clear Roof Panel	2.330m	1		

PLY FLOOR

DESCRIPTION	LENGTH	QTY	DIAGRAM	CHECKED
Plywood 17mm treated	2.000m x 1.200m	2		
Plywood 17mm treated	2.000 x 0.750m	1		
Joists 70 x 45mm H4	3.060m	5	THE REAL PROPERTY.	
Joists 70 x 45mm H4	2.000m	2		
Joists 70 x 45mm H4	0.444m	8		
Aluminium Door Step Flashing	2.395m	1		
Floor Screws	75mm	60	<====================================	
Floor Screws	40mm	60	<====================================	
Tek Screws	100mm	12	**************************************	

SOLID TIMBER FLOOR KIT

DESCRIPTION	LENGTH	QTY	DIAGRAM	CHECKED
Timber Floor Boards 150 x 25mm	2.000m	21		
Joists 70 x 45 H4	3.150m	5		
Aluminium Door Step Flashing	2.395m	1		
Floor Nails	50mm	220	The second second second	
Tek Screws	100mm	12	**************************************	

DATE: / /	PACKED BY:	

FOUNDATIONS

- · No doubt by now you will have decided what sort of flooring base you are going to use.
- If you choose to pour a concrete floor, this is the best option as the cladding overlaps with the floor preventing the water from flowing inside the shed. Please see the details below for pouring your concrete floor.
- The second option is to install your shed on a Duratuf Timber Floor Kit. If you have one of these floor kits, please make sure that you read through the
 instructions fully first and proceed to build this floor prior to starting your shed. You will need to ensure that the ground is firm and flat and the the floor is
 anchored down securely

CONCRETE BASE

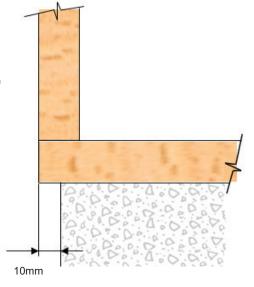
BUILDING A CONCRETE SLAB FLOOR

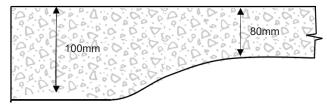
- Prior to setting up the boxing for your concrete floor you will need to mark out the area to 300mm bigger than the size of the shed. Remove any soft soil or dirt, fill with sand or crusher dust and compact firmly to about 40-50mm below ground level.
- The concrete base should be 100mm thick around the outside, 80mm in the middle and the top of the slab should be at least 50mm above the ground line to avoid water running into your shed.
- Set up timber boxing to 3130mm x 1980mm (inside measurement of the boxing) **This is 20mm** smaller than the external measurement of the shed frame which allows a 10mm gap between the overhanging cladding and the concrete slab on all four sides of the shed.
- If you wish, place some plastic sheeting underneath the concrete to stop moisture coming through the floor.
- · Now is the time to place any steel reinforcing or mesh.

IMPORTANT - SHAPING THE FLOOR AT THE DOORWAY

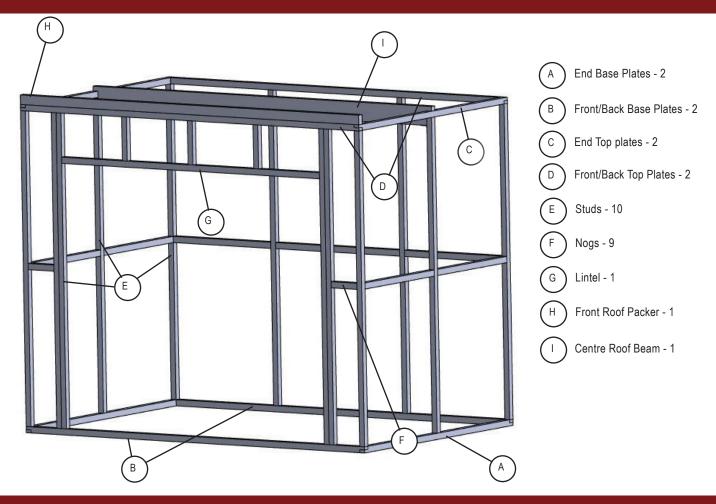
To allow the water to run away from the roller door seal at the front of the shed, find the centre of the front and measure 1200mm each way. This is the position of the 2400mm door and where you will slope the concrete for water runoff.

When you have poured your concrete, starting from 100mm back from the front, shape the concrete so that it slopes down 20mm below the boxing at the front.





TIMBER FRAME



TIMBER FRAME - BACK WALL

Select:

1 x 3150mm Base Plate

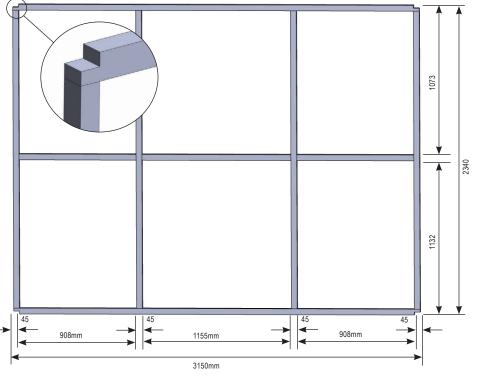
1 x 3150mm Top Plate

4 x 2250mm Studs

1 x 1155mm Nogs

2 x 908mm Nogs

- Select one 3150mm base plate (Green), one 3150mm top plate (Red) and four studs (Yellow).
- Lay out the framing on a flat surface as per the diagram
 with the top plate at the top. Ensure that the notches on
 the top and bottom plates face outwards. Nail together
 using two 75mm nails per join. You can use the nogs to
 position the studs in the right position. (see diagram).
- Position nogs 1132mm up from topside of the bottom plate to underside of the nog and nail in place with 2 nails in each end.



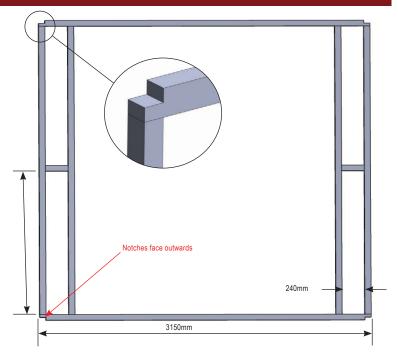
TIMBER FRAME - FRONT WALL

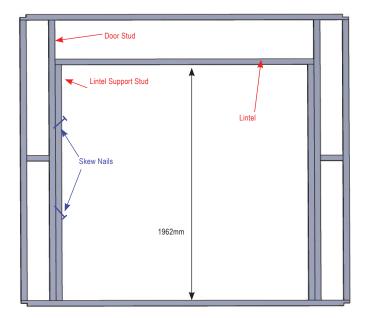
Select

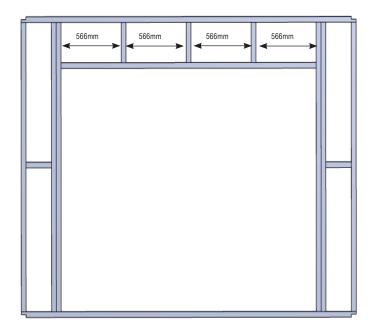
- 1 x 3150mm Base Plate
- 1 x 3150mm Top Plate
- 1 x 2490mm Lintel
- 4 x 2250mm Studs
- 2 x 1962mm Studs
- 5 x 243mm Jack Studs (short studs)
- 2 x 240mm Nogs
- Select 1 x 3150mm base plate (Green),
 - 1 x 3150mm top plate (Red) and
 - 4 x 2295mm studs (Yellow).
- Lay out the top and bottom plates and the two outside studs, ensuring that the notches face outwards as shown. Nail together at the corners using two 75mm nails per corner.

1132mm

- Next take the remaining 2 studs (these are door studs). Use the 240mm nogs as spacers to position them 240mm in from the corner studs and nail them in place using 2 x 75mm nails top and bottom.
- Now, position the 2 x 1962mm Lintel Support Studs to the inside
 of the door studs and down against the base plate. Secure with 2
 x 75mm nails at the base end and 2 x nails skewed into the door
 stud.
- Nail the lintel on the top of the Lintel Support Studs using 2 x 75mm nails in each end.
- Select 2 x 243mm Jack Studs. these will be fitted against the door studs above the lintel. Fix at either end with 2 x 75mm nails.
- Using the remaining 3 x 243mm Jack studs, position them 566mm apart from each other as per diagram and nail them in place with 2 x 75mm nails at either end.





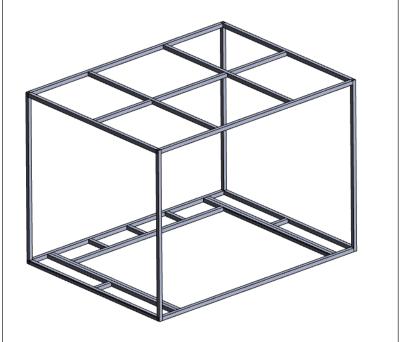


ASSEMBLING THE TIMBER FRAME

- Select 2 x 2000mm base plates (Green) and 2 x 2000mm top plates (Red). With the front wall lying on the ground, fit the notched out ends into the corresponding check outs in the front wall framing.
- Ensure Green joins to Green and Red joins to Red and nail with 2 x 75mm nails.



- Position the completed back wall frame on top of the 4 upright framing plates.
- While someone supports the frame to ensure that it doesn't move around, nail this back frame in place with 2 x 75mm nails at each corner.



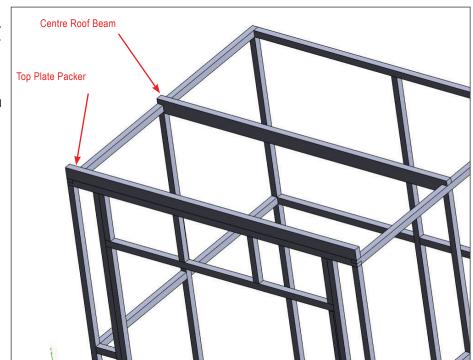
Carefully roll the frame over onto its base. (Pieces of timber from the packaging may be used to temporarily brace the frame before rolling it over).

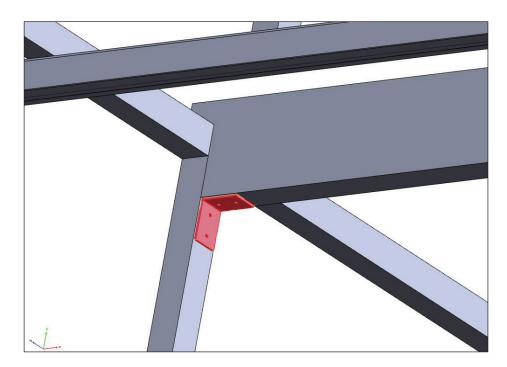
- Position the remaining 2 x studs in the centre of the end walls (using the end wall nogs to give the correct measurement)
- Take the 4 remaining end wall nogs and fit these into the end walls at the same height as the other nogs. Nail in place at either end.



ASSEMBLING THE TIMBER FRAME

- Position the Top Plate Packer on the top of the framing, flush with the front. This provides the slope for the roof.
- Nail to the top plate using 75mm nails 1 at each end and 4 evenly spaced.
- Take the centre Roof Beam and position over the 2 end wall studs and attach using 2 x 75mm nails at each end.
- Select the Roof Beam Angle Braces and screw them under the centre roof beam and onto the centre end wall stud as shown using 4 x 40mm screws.



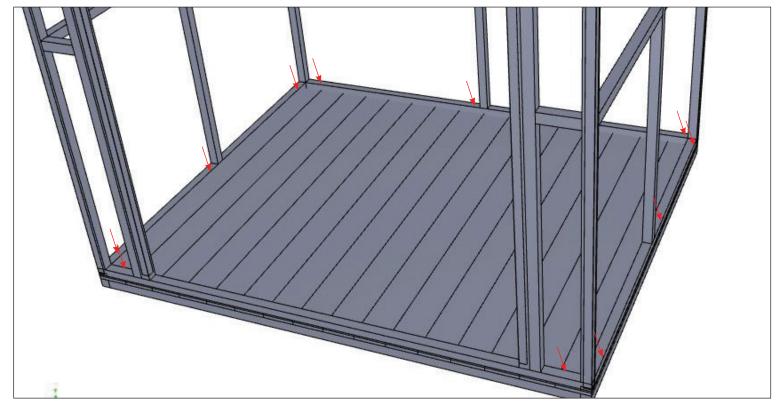


FLOORING - CONCTRETE SLAB

If your shed has a concrete slab floor, position the frame onto the base. Note: if the shed floor is against a house or fence, you can position the shed after it has been built (but before you install the roller door).

Please note that the design of the shed means that the wall cladding protrudes below the bottom timber plate. So that you are able to build the shed properly you will need to temporarily screw some timber blocks under the bottom plate to lift it up so that the wall cladding clears the ground while you build the shed. These will be removed when the shed is ready to position.

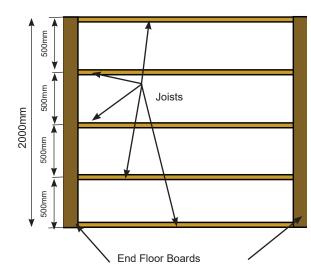
- · Ensure that the bottom wall frames are running straight and that the studs either side of the door are in the right place.
- Measure diagonally from one inside corner to the other, note the measurement and then meaure the opposite diagonal distance. These
 measurements must be the same for the shed to be square. Adjust if necessary. The frame will overhang the floor to allow the cladding to
 overlap. Ensure that this measurement is the same right around the shed.
- Screw the timber bottom base plate to the concrete floor using 11 x 100mm dyna bolts through the frame as shown. (Dyna bolts not supplied)
- Using a hand saw, Cut through the bottom plate flush with each door stud and discard the centre piece of the frame that lay across the doorway.



FLOORING - TIMBER FLOOR KIT

If your shed has an OPTIONAL TIMBER FLOOR KIT, fit this now.

- Take all 5 x 3150mm Floor Joists and place them parallel (with the narrow side of the joist on the ground) as per the diagram.
 The outside joists are 2000mm apart and the centre 3 joists are 500mm spaces (to the centres).
- Select 2 x 2000mm floorboards and lay them on the top of the joists, one at each end as per the diagram. Nail the floorboards to the joists, flush at the corners, with 2 x 50mm clouts at each end.
- When completed, Measure diagonally from one outside corner to the other, note the measurement and then measure the opposite diagonal distance. These measurements must be the same for the shed to be square. Adjust if necessary.

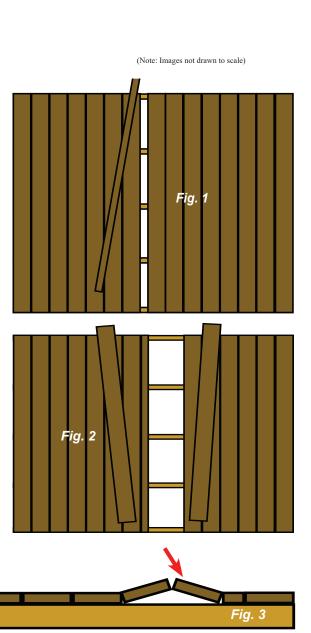


- Once the shed is square, check that the spacings of the remaining 3 x joists are 500mm apart to the centres and nail 2 x 50mm clouts through the end floorboards into each joist at each end.
- Check for square again nail another floor board at each end with 2 x nails into each joist.

FITTING THE REMAINING FLOORBOARDS

- Next lay all of the floorboards onto the joists. Note, you may need to cut down a floorboard lengthwise to fill the final gap (fig. 1).
- Starting from one end, lay the floorboards in place until you reach the middle of the floor.
 Then start fitting them from the other end until you have a gap near the middle of the floor that the last floor board won't fit into. If you don't need to cut one down, move to the final step on this page.
- When all of the floorboards are in place, measure the width of the remaining gap and add 3-4mm to ensure a tight fit. Cut the board lengthwise to this measurement (fig. 1).
- Remove 2 full floorboards and fit the cut down board (fig.2). Make sure that the ends of all
 the boards are straight and aligned with the joists at both ends.
- Place the final 2 boards in place inverted as per fig.3, and align the ends to the rest for the floor. Stand firmly on the inverted boards to push them into place and tighten all of the floorboards.
- Finally, nail all of the floor boards to the joists with 2 x nails per board into each joist.

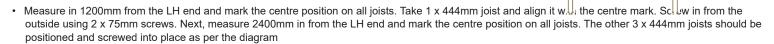
Your floor is now complete and ready for your shed!

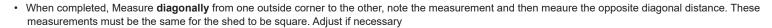


FLOORING - PLYWOOD FLOOR KIT

If your shed has an OPTIONAL PLYWOOD FLOOR KIT, fit this now.

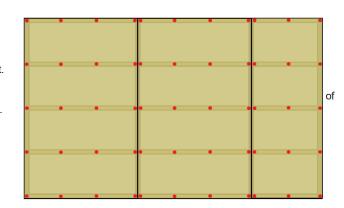
- Take the 5 x 3150mm long floor joists and lay them out parallel to each other on their short edges as shown (45mm face to the ground). Lay the 2 x 2000mm Joists across the ends.
- Using 8 x 75mm screws, screw the outside joists together at the corners using 2 screws per corner.
- Take 1 x 444mm Joist, and using it as a measuring packer, position the next internal joist at one end and fasten with 2 screws. Repeat at the other end.
- Position and attached the other remaining 2 x joists the same way.



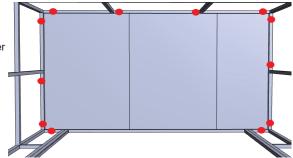




- Align the sheet with the edges of the floor frame, take 20 x 40mm screws and fasten the ply wood to the joists and base plates as shown (red dots). As the ply only overlaps half of the centre joist, angle the screws inwards to ensure that they don't miss the joist. Repeat with the other sheet.
- Lift the shed frame onto the floor and align the frame with all edges the floor. Once again check that the shed is square using the method described above.

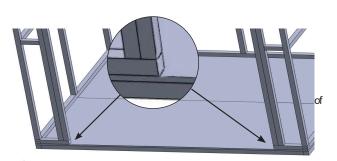


 Screw the shed frame to the floor using 12 x 100mm Tek screws through the bottom plate as per the red dots in this diagram.



Now we need to remove the bottom plate in the doorway at the front.

- With a handsaw, cut through the bottom plate flush with the door studs on either side and discard the centre piece.
- Attach door step flashing using 3 x 30mm screws, screwing through the top of the top the flashing.



ATTACHING DPC TO FRAME

Waterproofing is important to prevent leaks and keep the timber framing dry. Your shed has been supplied with a roll of DPC tape (Damp Proof Course)

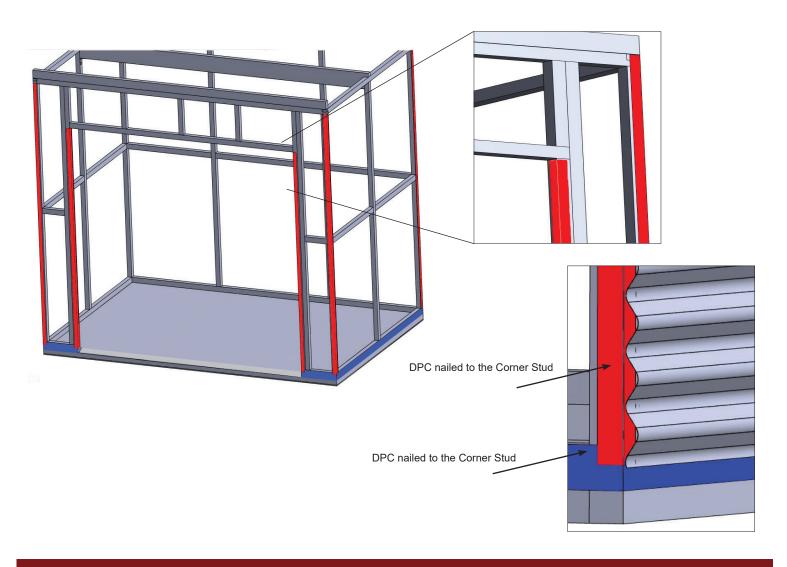
If your shed is positioned on a concrete or raised timber floor it is important that you install the DPC before attaching the cladding to prevent water flowing between the bottom plate and floor.

AROUND THE BASE

- Starting at one corner, run a length of DPC tape across the front of the shed from one corner to the other. Holding the top of the tape flush with the top of the bottom timber frame (overlapping the concrete floor) nail it to the base plate using 30mm clouts about 600mm apart. See the blue highlights in the diagrams below
- · Wrap the tape around the corner and nail it in the same position to the other 3 sides of the shed.

CORNERS AND DOOR STUDS

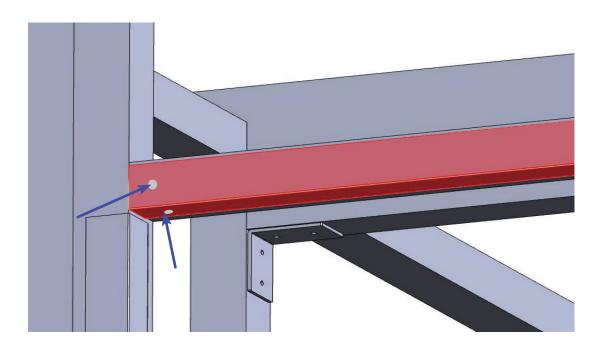
- On the front corner, start the DPC flush with the top of the top timber plate. Fold it around the corner of the stud and tack it on both faces of the stud a 30mm clout on each side. See red highlights on the diagrams.
- Run the tape down the stud to the bottom of the base plate and cut. Nail at the bottom the same as we did at the top and put 3 more 30mm clouts evenly spaced up the front and side faces of the stud. Repeat with the other 3 corners.
- Repeat with 2 x door studs from the bottom of the base plate up under the door lintel. Nail as with the corners.

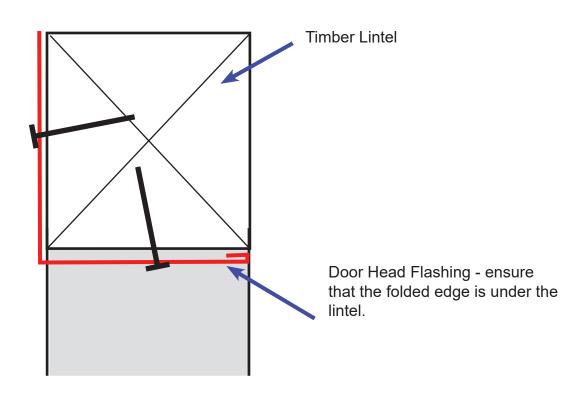


ATTACHING THE DOOR HEAD FLASHING

The door head flashing sits up underneath the lintel to cover the timber framing that would otherwise be exposed to the weather.

- 1
- Select the door head flashing and hold it up underneath the lintel. It should fit snugly between the door studs.
- · Holding the flashing in tight, nail it to the lintel using 6 x 30mm clouts, 3 x on the underside of the lintel and 3 on the front face of the flashing evenly spaced.





WALL CLADDING

TO AVOID CORROSION:

- Where at all possible try not to trap metal filings between two sheets. Remove all metal filings before riveting.
- Carbon in pencils reacts with the Zinc/Aluminium coating on steel.
 Use an ink pen to mark the steel as required.

CLADDING FIXING AND OVERLAP DETAIL

WALL CLADDING FIXING PATTERN



BASE PLATE

FLOOF

DPC

WALL CLADDING - BACK & ENDS

Note - When attaching wall cladding, always ensure that the top sheet is flush with the top of the top timber framing plate and that the ends of the cladding sheets are **flush and parallel** with studs. This will ensure that wall panels are square. Always screw wall sheets through the trough (inner rib closest to the frame) of the profile.

TOP WALL SHEET

- Take a 3150mm length rear wall sheet and hold it in position at the top of the back wall. It
 must be flush with the top of top timber plate and both ends must be flush with the outside of
 the studs at either end. (Fig. 1)
- Using 1 x 25mm Tek screw, attach one end of the sheet to the frame at the top left hand corner of the sheet (Fig.1)(a). Place the screw approx 25mm in from end of the sheet (the corner flashing will cover the screws).
- Repeat at the top of the sheet at the other end making sure that the cladding is flush with the top of the top plate. (Fig. 1) (b)

NOTE: The middle sheet will need to lap UNDER the top sheet, so don't screw right at the bottom of the sheet yet!The top sheet will finish 848mm below the top of the framing and the second sheet finisheds 1610mm down (see Wall Cladding Fixing Pattern on the previous page

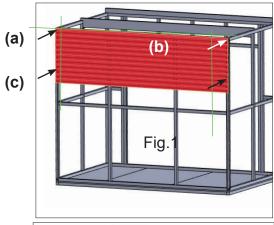
To fix the bottom of the sheet, hold the top sheet flat against the framing and align the edge of
the cladding and the corner stud. This ensures the back wall of the shed is square. Place 1 x
25mm Tek screw 2 ribs up from the bottom of the sheet (Fig. 3)(d). This will let the next sheet
slide underneath.

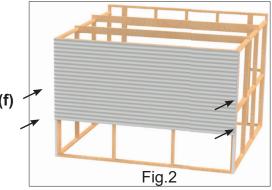
MIDDLE & LOWER WALL SHEETS

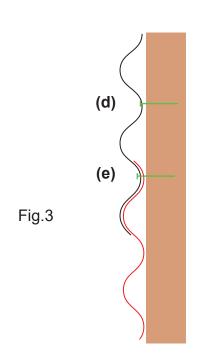
- Position the 2nd sheet underneath the first sheet so that it is overlapped correctly (Fig. 3).
 As per the first sheet, start in the top left hand corner, place a screw in the overlap of the 2 sheets (Fig. 3)(e) and (Fig. 2)(f).
- Repeat at the top at the other end. Once again square the framing up with the cladding and screw the bottom of the sheet using the same process as the top sheet (Fig. 2) Bottom wall sheet should finish approx 30mm below bottom of base plate.
- Using 25mm tek screws in the middle of the sheet, screw the three wall sheets off as per the plan on the previous page.
 - 5 x 25mm Tek screws per end of each sheet
 - 3 x 25mm Tek Screws in each stud of the top wall sheet
 - 2 x 25mm Tek Screws in each stud of the middle sheet
 - 3 x 25mm Tek Screws in each stud of the bottom sheet.

Repeat the above steps with each side wall until you have finished the back and two end walls.

--IMPORTANT -- Make sure you align the side wall corrugate sheets with the back wall so that the ribs line up.









FIXING WALL CLADDING - FRONT

The front wall cladding is attached the same way as the other side walls, except that the bottom cladding sheets either side of the roller door will overlap a lot more than the side and back walls. This will be explained in the step below "BOTTOM SHEET".

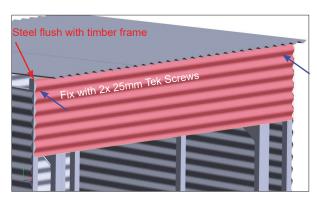
OVERDOOR CLADDING SHEET

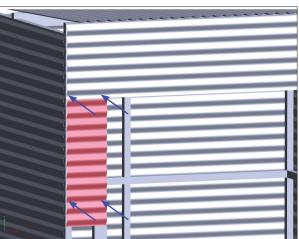
Fitting the top cladding sheet on the front wall will be a lot easier with 2 people and 2 ladders...

Select the 3150mm top front wall sheet (this is not a full width sheet). Position the sheet
making sure it is flush with the top of the front timber framing and flush with the corner
studs at both ends. Fix with 1 x 25mm Tek screw at each end. Fit the remaining screws
once all of the front wall cladding has been attached.

DOOR SIDE CLADDING - TOP SHEET

- Fit the wall sheets each side of the doorway using the same process as before. Select a 375mm cladding sheet and lap it underneath the overdoor sheet as per normal overlapping standards. Fix with 2 x 25mm Tek Screws through the overlap.
- Place 2 x more 25mm Tek screws 2 ribs up from the bottom of the sheet either side so the next sheet down can lap underneath.





DOOR SIDE CLADDING - MIDDLE SHEET

• Using another 375mm door side cladding sheet, lap it underneath the sheet above as per normal and place 2 x 25mm Tek screws into the overlap as normal. NOTE: do not place any screws in the bottom of this sheet at this stage!

DOOR SIDE CLADDING - BOTTOM SHEET

NOTE: Because of the Overdoor Cladding Sheet at the top of the front wall, the bottom sheet will lap up under the middle sheet by about 5 ribs. Providing that the sheets have been positioned correctly, the steel profile will match the side walls.

- Take another 375mm front wall cladding sheet and slide it up under the middle sheet until the bottom of the sheet is approx 30mm below the bottom of the shed framing (the same as the side wall).
- Press the sheets against the framing so that the steel overlaps nice and tight. Align the ends of the steel with the corner stud ad door stud. Now place 2 x 25mm Tek screws into the bottom of the middle sheet. This will hold both overlapped sheets in place.
- · Finally screw off all the sheets with 25mm Tek screws as previous (as per previous fixing details).

REPEAT WITH THE CLADDING ON THE OTHER SIDE OF THE DOOR.

· Finally finish fixing the Overdoor Cladding Sheet - using 25mm Tek screws at each end and into the centre of each of the jack studs above door.

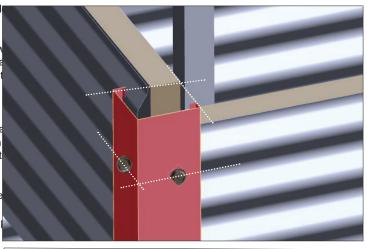
ATTACHING THE FLASHINGS

Now it is time to finish the corners by fitting the Corner Flashings. PLEASE

NOTE: Do NOT screw tek screws too tightly into the corner and door sid flashings as they will pull in and leave a dent.

We will screw the corner flashings onto each corner using six 55mm tek screw per corner, 3×10^{-2} x into each face of the flashing, 2×10^{-2} x at the top, 2×10^{-2} x in the middle. The top screws should be approx 250mm down from top of toplate.

- Starting with the front RH flashing, hold it in place flush with the top of the
 front wall timber frame. Pre-drill a 3.5mm hole 250mm down, in the front fa
 Ensure that the flashing is square and parallel with the wall and fasten with
 a Tek screw. Repeat the process at the bottom of the flashing, taking care t
 keep the flashing vertically plumb.
- Back at the top, adjust the flashing so that it is perpendicular (vertically leve from the side, pre-drill the hole at the top parallel with the first screw and attach. Repeat at the bottom. Now find the centre of the flashing vertically, drill and fix the 2 middle screws.
- · Repeat with all corners



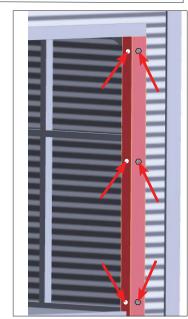


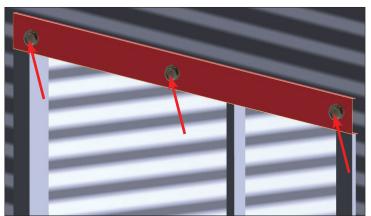
DOOR JAMB FLASHINGS

- Position the door jamb flashing so top is level with underside of lintel.
- Using tin snips, knotch bottom of flashing around concrete, ply or timber floor.
- Attach using three 30mm clouts, nailed to inside of stud (top, bottom and middle) and three 55mm tek screws on the outer face screwed through the front wall cladding into the stud.
- · Repeat with the Left Door Jamb flashing

OVER DOOR FLASHING

- Position the door top flashing onto the top of the door jambs and centred on the door.(Note flashing length will protrude approx 10mm past outside edge of each door jamb flashing to allow any water runoff to be away from the door).
- Using three 55mm tek screws,(one each end and one in middle) screw the flashing through the front 90mm wide face into the timber lintel.





FITTING THE SPOUTING

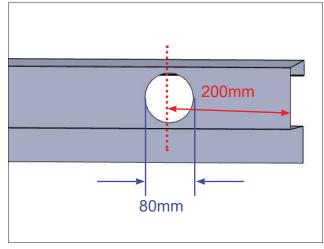
This shed comes with a built in spouting and downpipe system so that you can easily manage the water runoff.

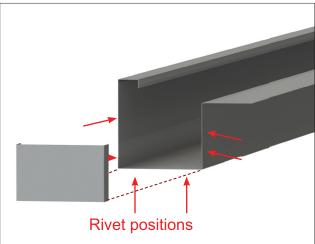
CUTTING THE DROPPER HOLE

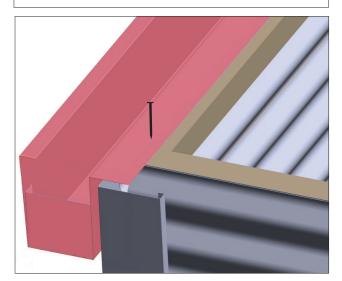
- Preparation for fitting the end caps, you will need to cut out the hole for the downpipe dropper.
- Determine which end you want the downpipe and mark a line 200mm in from the end of the spouting as per the diagram on the right. You will be cutting a 80mm hole in the centre of the base of the spouting.
- Place a mark in the centre of your 200mm line, and using this as the centre, scribe a mark with a diameter of 80mm.
- Cut out the hole by drilling a few small holes then using tin snips to enlarge to the correct size.

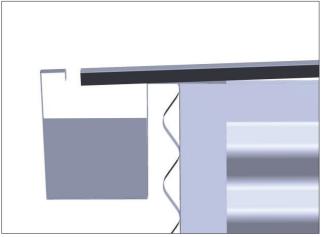
FITTING THE END CAPS

- The end caps need to be inserted into the inside of each end of the spouting and sealed up to stop the water from running out.
- Select the first end cap and dry fit it (no silicone) so that you are prepared and know where it will be sitting in the spouting for when you have wet silicone. Predrilling your first rivet hole is helpful for positioning when the silicone is applied.
- Open the RTV silicone and spread a bead around the 3 sides of the end cap that
 will be in contact with the inside of the spouting. Fit the first end cap to the end of
 the spouting and rivet in the predrilled hole. Insert all remaining 5 rivets as shown
 in the diagram.
- Wipe excess silicone off the outside of the spouting immediately and spread any
 extra around inside the spouting firmly into the join for a watertight seal. Repeat
 with the other end cap.
- Once the end caps are fitted, position the spouting centrally on the top plate at the back of the shed (it will overhang each side by approx. 20mm) Nail to the top plate using 4 x 30mm clouts, one at each end and two evenly spaced in the middle.





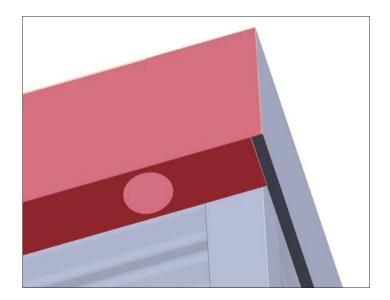


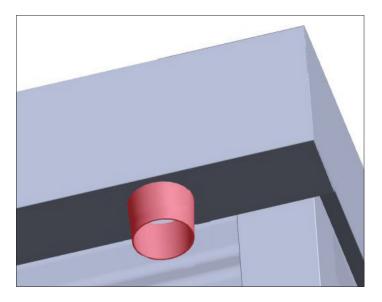


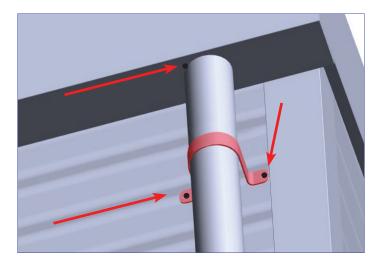
FITTING THE DOWNPIPE

FITTING THE DOWNPIPE

- Silicone the lip of the dropper that will be in contact with the spouting. Place it in the hole. Make sure it is straight. Add extra silicone as required for a watertight seal. Allow the silicone to dry.
- Measure and cut the downpipe to the right length, push it up tight and secure tightly by using one rivet through into the dropper and riveting the two brackets to rear wall cladding.
- Position the downpipe cover flashing over downpipe and rivet to wall cladding using 6 rivets.

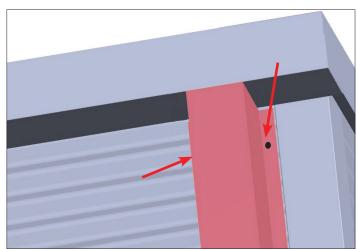


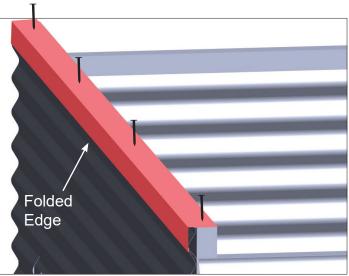






- The Front Top Plate Flashing sits on the top plate and comes down the front of the shed over the top of the front wall cladding. The folded edge of the flashing is on the front part of the flashing.
- Place the flashing on the top plate with the folded edge facing down.
 Ensure that it is flush with the timber at each end and nail it into the top plate place using 4 x 30mm clouts.

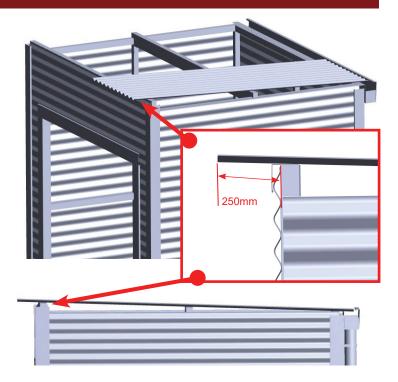


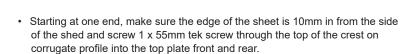


ROOF

If an optional clear roof sheet has been supplied, this can be fitted in any of the middle positions. (Note - both edges of clear roof sheet overlap the steel sheets at each side vs the steel sheets that are under on one edge and over on the other).

- Starting from one end of the shed, place the first roof sheet into position.
 The edge of the sheet should be 5mm in from outside edge of the timber top plate and overhang the front of the top plate by 250mm. (or 230mm from top plate flashing)
- Overlap the centre roof sheet with the first one and align the ends. Repeat
 with the remaining roof sheet(s). Make sure all the ends of the sheets are
 aligned.
- Reach in from the back of the shed and place 1x rivet in the overlap, 600mm in from the back. Repeat with another rivet 600mm in from the front of the sheet. Repeat with all of the overlap joins.
- Now that the sheets are joined together, adjust them so that they are square
 on with the shed and that the top plates are straight. At the front of the
 shed, create an overlap of 250mm past the front of the top plate.

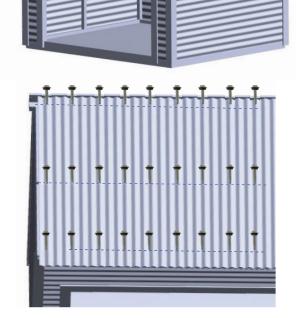


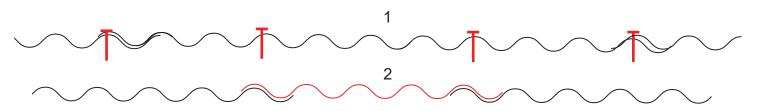


- · Repeat at the other end.
- Check that everything is aligned and fit the rest of the screws front and rear
 using the Roof Fixing Pattern below as a guide. Start with the overlaps in the
 sheets and then screw in the rest. You should use 4 screws front, middle and
 rear for each sheet. Ensure to screw through the overlap as per below diagram.

ROOF FIXING PATTERN

- 1. Steel roof cladding start from one end and overlap each sheet
- 2. Clear Panel The Clear Panel overlaps both steel sheets on either side (shown in red)

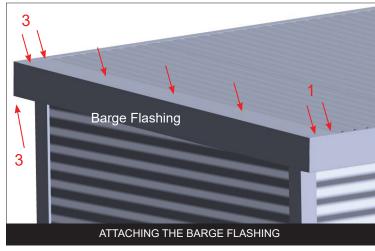


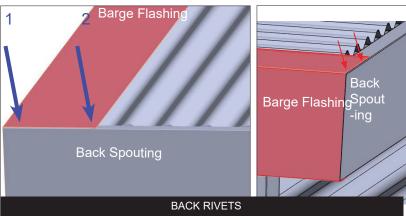


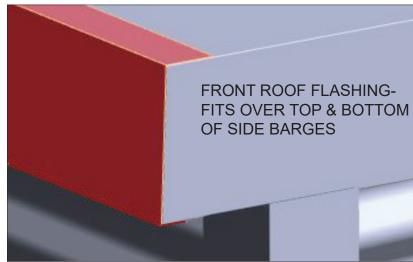
SPOUTING & BARGE

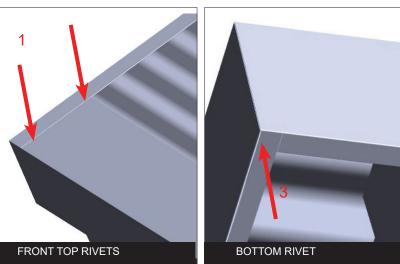
FITTING THE BARGES

- Select the left hand barge flashing. This will fit in between the front roof flashing and the back gutter. We will be attaching the barges to the spouting at the back first and fitting the front flashing last.
- Hold the flashing in firmly against the side of the shed spanning over the roof corrugate and down the side of the shed.
- Line the end of the barge up with the back of the spouting. The
 barge should fit over the top and bottom of the spouting. Drill
 a 3.5mm hole into the top of the spouting in the corner and fix 2 x
 rivets (see arrows 1 & 2).
- · Repeat the process with the barge on the other side.
- Once both barges are riveted to the top of the spouting with 2 x rivets, it is time to fit the front barge.
- Place the Front Roof flashing over the front of the corrugated roofing. The front barge will also fit over the top and bottom of the side barges.
- We are going to hold the corner together so the corner fits snug and place 2 x rivets into the top overlap of the front and barge flashings.
- Hold the corner together firmly and place another rivet in the underneath overlap of the 2 barges (3).
- · Repeat with the barge at the other end of the shed.
- Place 3 x rivets evenly spaced down the top of each side barge (see the top diagram). These rivets need to go into the crest of the corrugate profile so carefully measure where you drill the hole to make sure it is directly over the high point in the corrugate profile to avoid holes that may leak.
- Place 5 x more rivets into the top of the front roof flashing evenly spaced along the width of the shed.









BEFORE YOU BEGIN

- This Roll-A-Door is designed and tested to provide security, attractive appearance and smooth, low effort operation provided it is installed and operated
 in strict accordance with the following safety warnings. Failure to comply with the following instructions may result in death, serious personal injury or
 property damage.
- NOTE: Do not unwrap packaging around roller door until requested, as this will untension the door.

SERIES 1 ROLL-A-DOOR

DESCRIPTION	ITEM	QTY	PACKED	CHECKED
Rolled plastic wrapped door	А	1	0	0
"A" Style brackets, left & right hand side	В	2	0	0
Door guides, left & right hand side	С	2	0	0
Steel locking bars	D	2	0	0
SMALL PARTS BAG CONTAINING:	*			
Guide clips (door size dependent)	E	4-10	0	0
Door handle and fixing to suit	F	1	0	0
Bottom rail stops and 6mm screws	G	2	0	0
Faceplate and lock assembly (2 keys)	Н	1	0	0
Locking bar retainer	ı	2	0	0
Locking bar covers	J	2	0	0
"U"Bolts	К	2	0	0
Axel / bracket saddles	L	2	0	0
8mm nuts for "U" bolts	М	4	0	0
Counter sunk screws for lock and fascia	N	2	0	0
7mm x 4mm mushroom head screws for locking bar	0	2	0	0
4mm x 6mm screws for handle	Р	2	0	0
10mm washers	Q	4	0	0
8mm washers (door size dependent)	R	8-12	0	0

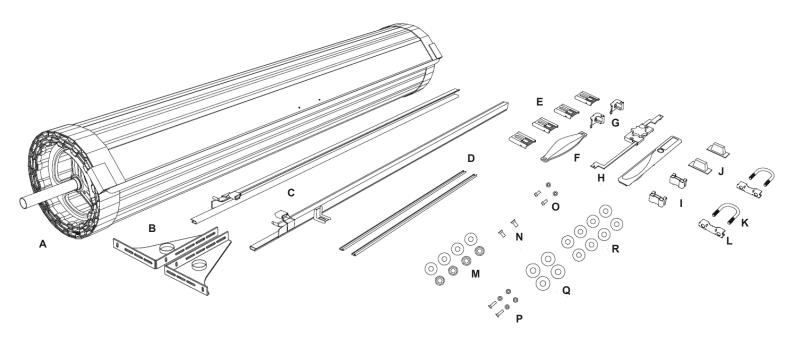
TOOLS

A professional installers tool kit is required to install the door. You will need assistance
to help you lift the door up safely and carry out some other steps. A Soft Wood Chock
will help hold the door until the guides and stops are fitted. Prepare a 400mm long Wood
Chock as per diagram.



Wood chock

PARTS CHECKLIST

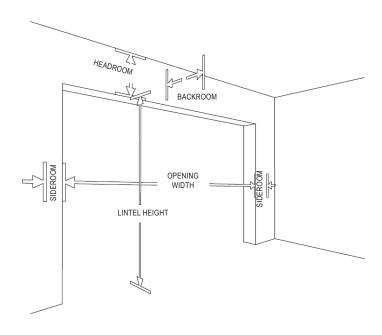


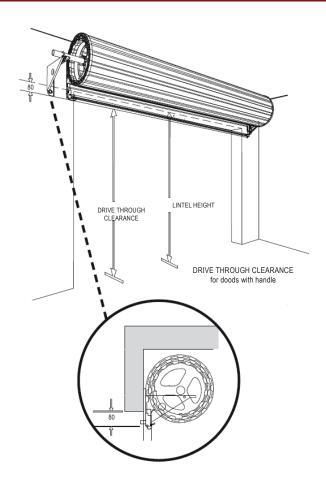
REQUIREMENTS BEFORE INSTALLATION

• Level and plumb - The door must be installed in an absolutely level position, if opening is not level and square, appearance and/or sideroom requirements will be affected. The floor should be level or recessed across the opening to avoid gaps.

MEASUREMENTS

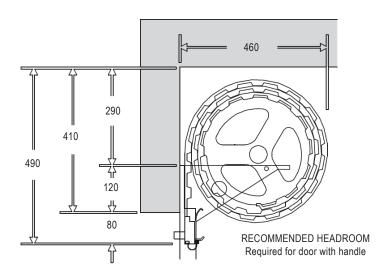
- Opening width As the standard door overlaps each side by 30mm or more, the door should be 60mm wider than the 1800mm opening.
- Opening height The door opening height (or drive through clearance) indicates the distance between the ground and rubber seal at the bottom of the door, with door fully open. For doors with a handle, the bottom rail is recommended to hang a minimum of 80mm below the lintel.





HEADROOM REQUIREMENTS FOR DOORS

• **Headroom** - A minimum of 410mm of headroom is required. If the door is installed lower into the opening than shown below, additional loss of door opening height will result.



INSTALL FIRST BRACKET

- Measure the door curtain width and mark where edge of curtain will be, allowing for over lap on each side of the opening.
- Add clearance of 20-30mm from edge of curtain to inside edge of bracket to determine positioning of the bracket.
- · Headroom. Measure up 120mm from underside of the lintel.
- · Mark two hole positions using top and bottom slots on the bracket.
- Drill both holes, then attach bracket using the 50mm x 10mm coach screws and washers supplied.

B 120mm Line for edge of door

INSTALL SECOND BRACKET

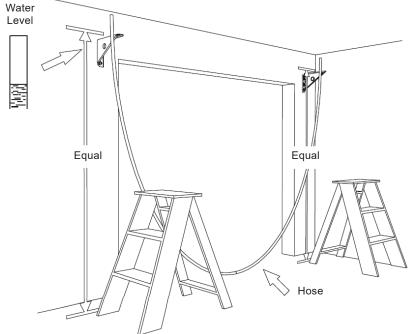
- Using a water level or level /straight edge, mark the position for the second bracket
- Re-check levels then drill and fix as with first bracket.

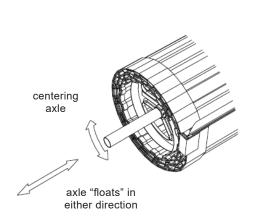


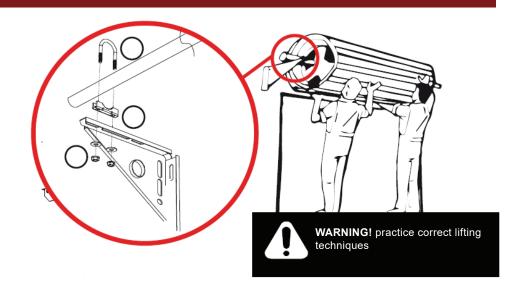
The brackets must be perfectly level for the door to operate.

PLACE DOOR ON BRACKET

- Do not cut plastic or packaging yet.
- Using two persons and correct lifting techniques, lift door onto opening).
- Immediately loosely fit the "U" bolts (K), saddles (L), washers and nuts (M) to the brackets in position shown. Fitting the 'U' bolts eliminates the door falling from the brackets. (Do not tighten yet)

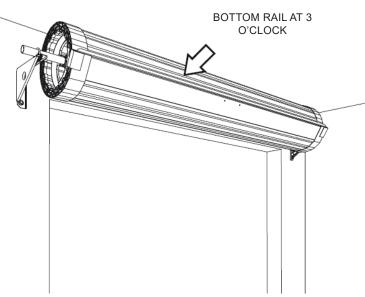






POSITION DOOR

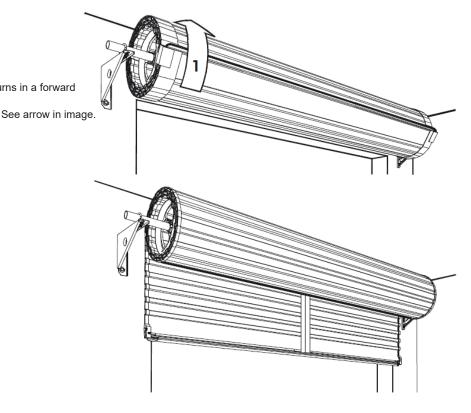
- Centre the door with the opening, while ensuring the floating axle is also centred with the door. Do this by lining up previous marks with the hub,then lift both the axle and the door together until it is centred with the opening.
- Rotate the curtain and axle so that the bottom rail of the door is positioned as shown (3 o'clock).
- Push the axle forward in the slots (toward the opening) and tighten the nuts firmly without overtightening.



TENSION THE SPRINGS

- Ensure that the bottom rail is at the 3 o'clock position as shown.
- Ensure both "U" bolts are tightened, then rotate door 1½ turns in a forward direction to apply tension.
- Do not let go as the springs are now tensioned.
- Hold the door firmly, NOW cut the plastic wrap along the bottom rail (taking care not to damage door surface or weatherseal).
- Pull the curtain down slowly and carefully position the wooden chock (or other appropriate stop) as shown. Take care not to damage door surface.

Chock will hold the door until the guides and stops are fitted.



roll-a-guide

bottom

rail

ATTACHING STOP

To attach bottom rail stops to bottom rail of door.

- Hook stop behind lip in rail, as shown.
- Secure from underneath the rail with screws supplied.
 Trim the weatherseal flush with the end of the bottom rail.

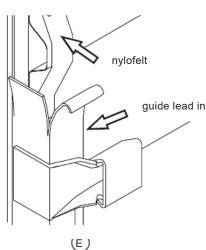
GUIDES

- Check that curtain overlaps equally on both sides, and cut the guides (C) so that top of guide is the same height as the top of the brackets (B)
- Slide four guide clips (E) into each guide (C). Position the bottom clip 200mm from the floor with the
 rest evenly spaced along the guide.

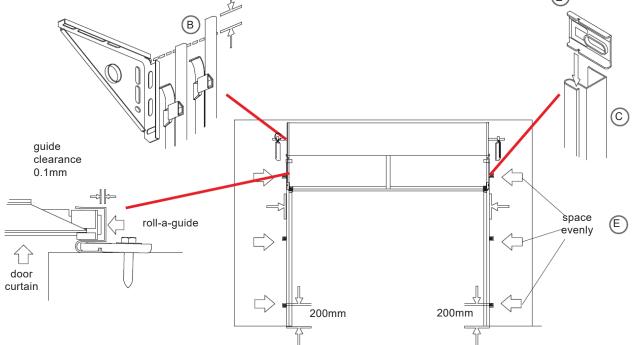


To prevent clips from sliding down the guide, temporarily secure them with adhesive tape.

- Position one guide over the edge of the door curtain. Mark and drill the top fixed guide clip and secure
 using 40mm x 8mm coach screw and washer, allowing 3mm clearance between inside of guide and
 plastic Roll-A-Guide. Ensuring guide is plumb, fix remaining clips. Repeat with 2nd guide.
- Remove the wooden chock and slowly lower the door removing plastic wrap as you pull door down, reposition the guides as necessary to allow smooth and even operation with 0>1mm clearancet.
- Ensure door curtain enters guides smoothly. It will be necessary to adjust the guide lead in to achieve
 this.



bottom rail lip



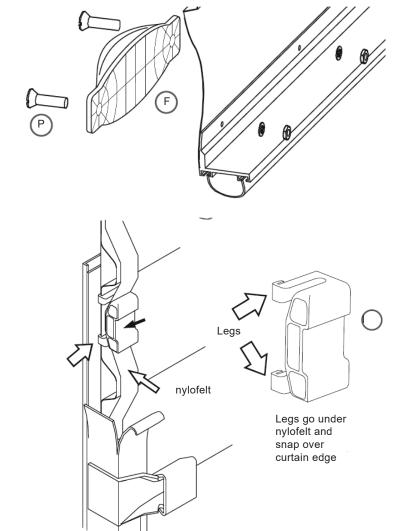
FITTING HANDLE

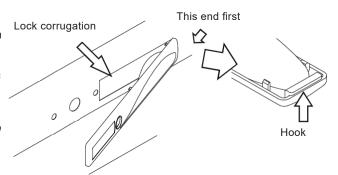
 Fit the handle (F) to the outside of the door using the screws (P), nuts and washers provided

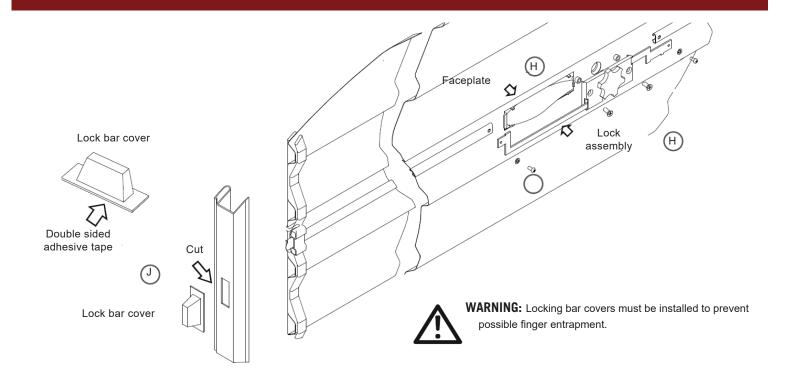
CENTRE LIFT LOCK

Wear appropriate gloves as some edges of the door are very sharp.

- Kaise the curtain until the lock corrugation is visible above the door guides.
- Install locking bar retainer (I) in line with lock corrugation by pushing retainer towards door edge, sliding the legs under the Nylofelt® and hooking them over the curtain edge. Ensure lock bar retainers sit squarely on door curtain
- Fit faceplate (H) to outside of door where the hook will latch onto curtain edge, then slide faceplate for to the right as possible. Use adhesive tape
- Attacn the lock body (H) to the faceplate from the inside, using the mounting screws and washers.
 Do not over tighten the screws.
- With the door in the closed position slide the end of the locking bars through the lockin retainers, and while holding the bars level mark the side of the guides.
- Drill and file out a rectangular slot no longer than 25mm and no wider than 10mm. Enremains in line with top of locking bar.
- Slide bars through the guide slot, then back onto lock arms. Screw on securely using screws (O). Ensure that locking bars do not protrude more than 20mm beyond guide is locked position. It may be necessary to adjust the length of the bars.
- Ensure a clean and dry guide surface. Wipe guide with clean rag.
- · Peel lining from lock bar cover (J) and position over hole. Check the movement of locking bar is free.







CLEAN UP

- Remove all swarf (drill filings) with a soft brush or rag.
- Hose down roof and walls thoroughly.
- For Coloursteel sheds use touch-up paint provided on all nail heads, rivets and exposed cuts.

TROUBLESHOOTING

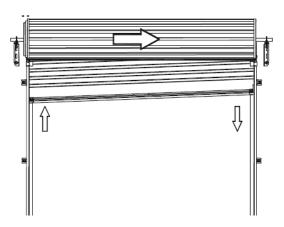
SYMPTOM	POSSIBLE CAUSE	REMEDY
Door is hard to operate in ANY DIRECTION	Door jamming in the guides	Check: a) the guide clearances b) the guides are plumb c) that the guide surfaces are clean and free from oil d) that the locking bars are the correct length e) that the weatherseal is correct length
The door is hard to operate in ONE DIRECTION	The spring tension requires adjustment	a) If the door is hard to lift, but tends to drop, refer to section "centralise the axel when door is mounted" to increase the spring tension b) If the door is hard to close, but tends to rise, refer to section "centralise the axel when door is mounted" to decrease the spring tension
If the door rolls up crooked	Brackets are not level Guides are not plumb Axle is not centred	Make sure brackets are level, refer to section "install second bracket". Make sure the guides are plumb, refer to section "guides". Centralise the axle, refer to section "centralise the axel when door is mounted"
	Axie is not centred	Centralise the axie, refer to section. Centralise the axer when door is mounted

CENTRALISE THE AXEL WHEN DOOR IS MOUNTED



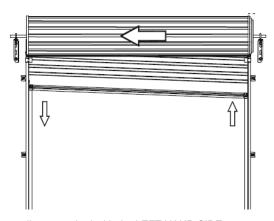
WARNING: Ensure that pipe wrench is fitted correctly to the axle and if it is gripped onto the axle do not underestimate the tension in the spring when undoing the clamps.

CAUTION: THIS ADJUSTMENT REQUIRES 2 PERSONS TO COMPLETE.



If the door rolls up crooked with the RIGHT HAND SIDE higher than the left proceed as follows:

- a) Roll the door up as high as possible and tie two ropes around the door roll approximately 300mm from each end, as a safety precaution.
- b) With a person at each end of the door, hold the axle firmly with a large pip wrench (Stillson) at least 450mm long.
- c) Loosen the "U" bolt nuts at both ends and KEEP A FIRM GRIP ON WRENCH.
- d) Move the axle to the RIGHT between 20 40mm.
- e) Re-tighten "U" bolts before releasing pipe wrench.
- f) Test and repeat if further adjustment in needed.
- g) If the door is stiff to work or rattles over lead-in on top of guide, then refer to Section "Position door"



If the door rolls up crooked with the LEFT HAND SIDE higher than the left proceed as follows:

- a) Roll the door up as high as possible and tie two ropes around the door roll approximately 300mm from each end, as a safety precaution.
- b) With a person at each end of the door, hold the axle firmly with a large pip wrench (Stillson) at least 450mm long.
- c) Loosen the "U" bolt nuts at both ends and KEEP A FIRM GRIP ON WRENCH.
- d) Move the axle to the LEFT between 20 40mm.
- e) Re-tighten "U" bolts before releasing pipe wrench.
- f) Test and repeat if further adjustment in needed.
- g) If the door is stiff to work or rattles over lead-in on top of guide, then refer to Section "Position door"

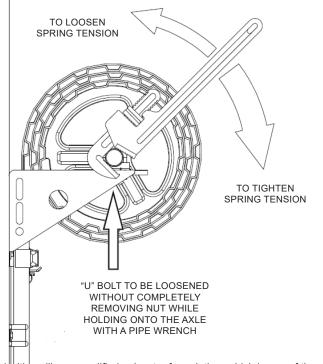
ADJUST TO SPRING TENSION

WARNING: Ensure that pipe wrench is fitted correctly to the axle and if it is gripped onto the axle do not underestimate the tension in the spring when undoing the clamps.

CAUTION: THIS ADJUSTMENT REQUIRES 2 PERSONS TO COMPLETE. door rolled up tie two ropes around the

door roll approximately 300mm from each end, as a safety precaution.

- b) With a person at each end of the door, hold the axle firmly with a large pipe wrench (Stillson) at least 450mm long.
- c) Loosen the "U" bolt nuts at both ends and KEEP A FIRM GRIP ON WRENCH.
- d) Rotate the axle in the required direction (see diagram).
- e) Re-tighten the "U" bolts BEFORE releasing pipe wrench
- f) Test and repeat if further adjustment is necessary.



AFTER INSTALLATION CARE

General care of your Roll-A-Door

Cleaning

BLUESCOPE COLORBOND® FINISH Your B&D Roll-A-Door® door has been pre-painted with a silicone modified polyester formulation, which is one of the best paint films commercially available today. However, all exposed surfaces require some attention to guard against the premature onset of corrosion and any other harmful atmospheric effects. In our atmosphere there are harmful deposits that gather on the door surface and if not removed regularly, will seriously affect the appearance and life of the door.

Washing of the door with clean water and a cloth every 14 days is recommended – particular care should be taken to clean areas of the door not normally washed by rain, including the top of the door roll inside the garage.

NOTE: In locations where there is likely to be salt in the air or industrial fallout is severe, more frequent washing is advisable and additional protection of the surface maybe required.

Touch-up paint, if required, is available from your B&D dealer.

Lock

Your lock does not require special maintenance, however, if the keyway becomes stiff, the application of powdered graphite is recommended – do not grease or oil the lock. The faceplate should be washed with soapy water and rinsed well. Strong solvents, such as acetone, should not be used – these will damage the surface. WARNING! Do not disassemble the lock mechanism.

When opening the door, always make sure the key is with drawn from the lock – if this is not done, the lock mechanism could be damaged and the key bent or broken.

We suggest you record your full Key letter and Number on the front of this manual and if replacement keys are required they can be obtained from your nearest B&D office, simply by quoting this number. If the keys have been lost and the number not recorded, it can be found stamped into the locking arm at the back of the mechanism

NYLOFELT® On no account should you use grease or oil in the door guides or on the Nylofelt® running strips – the grease or oil will clog the Nylofelt® and spoil the operation of the door. An occasional wipe with a cloth dampened with mineral turps or methylated spirits, down the inside of each guide, is very beneficial in removing any trace of grease or dirt.

After the guides have been cleaned, a silicon spray may be used in the guides.

NOTE: WD40 or similar oil based sprays are not silicon and should not be used.

Care should be taken not to damage the Nylofelt®, however, if Nylofelt® is cut or damaged, a lighted match should be used to quickly seal the ends of the nylon braiding, so as to stop any further deterioration.

Regular maintenance required

B&D recommends that you check the operation of your Roll-A-Door® at least every six months (more regularly in extreme environments or frequent use). The effort required to manually open and to manually close the door should be about the same (if door has an automatic opener, put into manual mode before testing door). If the door is difficult to operate in either direction (up or down) then check:

- 1) that the Nylofelt® running strips on each side of the door have not slipped from the edge and are jamming the door:
- 2) that the door is running correctly in the guides and the guides are straight and perpendicular; and
- that the inside surfaces of the guides are clean and free of obstructions. (see paragraph on care of Nylofelt®)

If you have checked these (and corrected where necessary) and the door is still difficult to operate, then your door will need a service to adjust the spring tension and possibly other operational parts of the door. This service should only be carried out by an experienced door technician, using the correct tools.

If you have an automatic opener fitted to your door, it is particularly important that you ensure the optimum operation of the door, otherwise you may reduce the effective life of the opener.

To keep your door running well, it is recommended that your door be serviced, by an experienced door technician, every 12 months (more regularly in extreme environments or frequent use), or earlier if required.

Spring tension

It is natural for springs to lose tension over time. When spring tension is adjusted or when your door is first installed it is usual to apply a little more tension than is required for balanced operation, to allow for the normal "settling in" of the springs.



DURATUF PREMIUM SHED WARRANTY

GUARANTEE TO CUSTOMER

Congratulations on purchasing a Duratuf Storage Shed. With proper care and attention, this product will last any years.

For your benefit PLEASE READ THE FOLLOWING INFORMATION CAREFULLY.

WARRANTY ON METAL CLADDING

Riverlea Group Ltd guarantee that the metal roofing and wall cladding on Kiwi and Fortress Garden Sheds may be used in moderate and inland corrosion zones or areas where the first year mild steel corrosion rate is less than 200g/m2, and that in these conditions, they will not perforate due to corrosion within 18 years of date of manufacture.

TERMS AND CONDITIONS

- 1. Damage or corrosion due to the following circumstances is not covered by this warranty.
 - Mechanical, chemical or other damage sustained during or after installation.

NOTE: Clean swarf off shed IMMEDIATELY after assembly Do NOT mark cladding with pencil

- Do **NOT** allow manures, chemicals or other corrosive materials to have direct contact with cladding
- Force majeure or other causes beyond the control of Riverlea Group Ltd.
- 2. This warranty does not cover material installed in severe and very severe environmental situations, or in any area where the mild steel corrosion rate (as published by BRANZ) exceeds 200g/m2.
- . Minimum maintenance must be carried out in accordance with instructions below.

Should the cladding fail to perform as specified above, the liability of Riverlea Group Ltd shall in all cases be limited to replacing or repairing the defective product. The balance of the original warranty will cover any repaired or replaced material. Riverlea Group Ltd will not be liable for any consequential loss or damage, labour or transport charges. All claims made in writing within 21 days of discovery, quoting the reference number at the top right hand corner of this page.

MAINTENANCE

Following are the minimum maintenance requirements for cladding used in Kiwi Garden Sheds and Fortress Sheds.

- Washing all surfaces by rain, and annual hosing of sheltered areas using a hose and soft nylon brush.
- Within 2km of coast—wash every 3 months as above. After a storm, wash the cladding and the gutters as soon as possible to remove any highly corrosive salt deposits.
- Volcanic Ash Fallout—wash as soon as possible, removing fallout from roof and gutters.
- Gutters to be kept clean of leaves and dirt.

Should you require additional technical information please contact us at the details below.

WARRANTY REGISTRATION

Please visit http://www.riverleagroup.co.nz/warranty-garden-sheds to validate the Warranty on your shed.

Click on the Warranty Registration Link and complete all details.

If you are unable to access the computer, please phone us on 0800 438 274 and one of the customer services team will help you to acti-vate the warranty on your garden shed.

Many thanks, from the Team at Riverlea Group.

