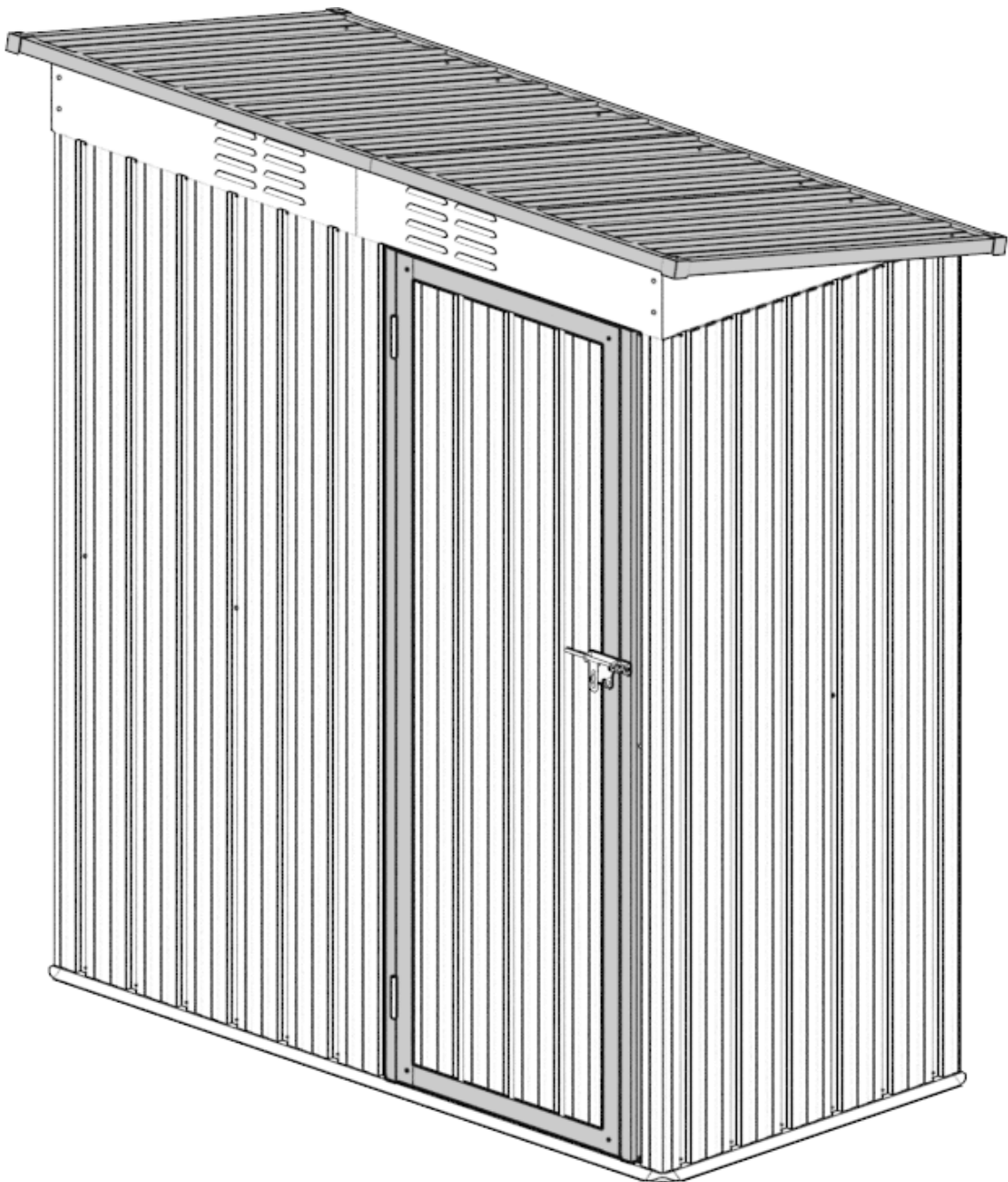


Pent Roof Garden Storage Shed

Assembly Guide

For OT0503 series



If you have trouble reading printed guide, you can always contact your seller and get a digital version.

A message from the author

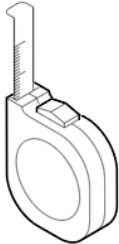
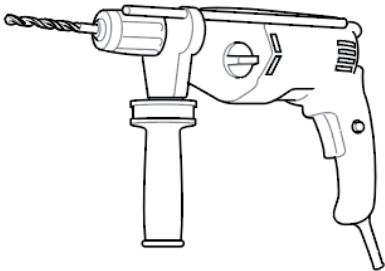
Thank you for buying this shed.

As a DIYer myself I understand that most people who are willing to buy a shed and assemble it personally are likely to be highly experienced in home projects. As a result, wordy manuals are not appreciated. Bearing that in mind, I finished the first version of the assembly guide in an IKEA way, that is, a guide with little or no word in it.

However, having received countless phone calls and emails complaining about the assembly, I decided to dump the IKEA way and flesh out the guide. This is the third version of this assembly guide, and it is considerably chattier and wordier than previous versions.

Please read this guide thoroughly and pay special attention to the COMMON MISTAKE sections scattered around this guide. Those mistakes were collected by our customer service department and are avoidable.

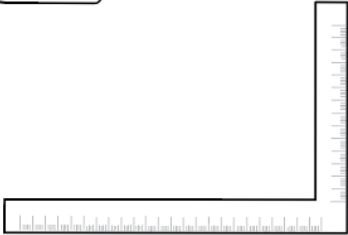
TOOLS



M4


















M6



PART LIST

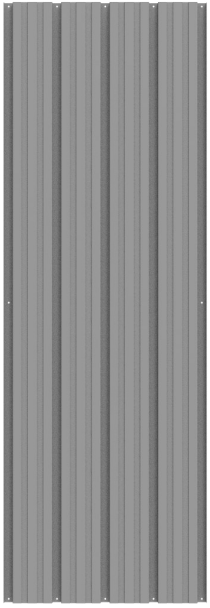
Some parts are stacked together for easier transportation. Occasionally two or more parts will stick together very firmly. As a result, you might think something is missing. But it is very likely that the missing part is just attached to another part.

				
[S1] x 22	[S2] x 28	[S3] x 170	[S4] x 181	[S6] x 4
				
[DL1] x 4	[BL1] x 4	[G4] x 4	[LATCH] x 1	[HG] x 2
				
[S5] x 30	[S10] X6			

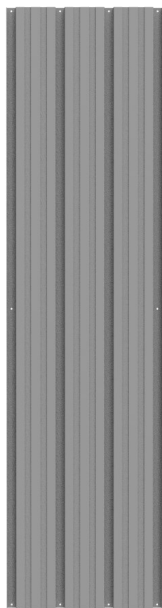
- [B1] x 1 
- [B2] x 1 
- [B3] x 1 
- [B4] x 1 
- [D1] x 2 
- [D2] x 2 
- [L1] x 2 
- [L2] x 2 
- [L3] x 2 
- [S8] x 2 
- [DBHG] x 1 
- [DBL] x 1 
- [DBT] x 2 
- [LL] x 1 
- [LR] x 1 

PART LIST

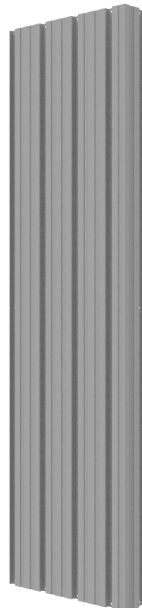
Some parts are stacked together for easier transportation. Occasionally two or more parts will stick together very firmly. As a result, you might think something is missing. But it is very likely that the missing part is just attached to another part.



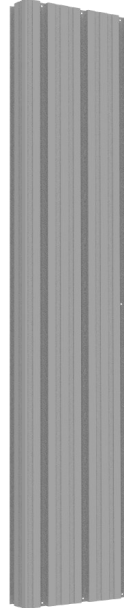
[Q1] x 2



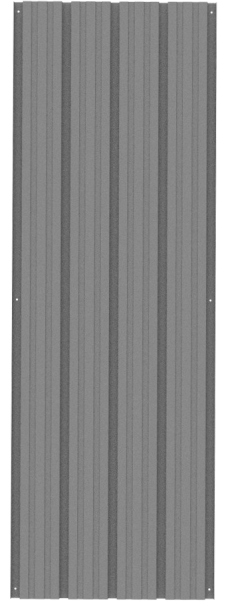
[Q2] x 3



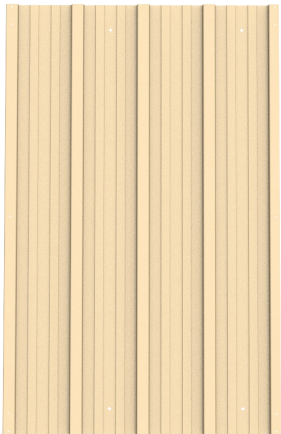
[Q3] x 2



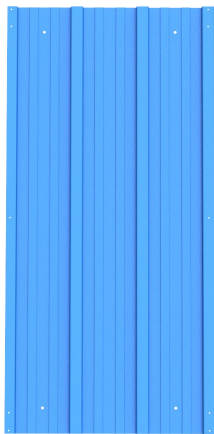
[Q4] x 2



[DA] x 1



[W1] x 1



[W2] x 3



[L4] x 2



[FL] x 1



[FR] x 1



[CL] x 1



[CR] x 1

WARNING

Keep this guide for future reference. Read carefully.

Safety

Make sure you have access to all sides of the shed during construction.

Ensure that all parts are present before starting assembly.

Remove all parts from the box and sort them by number. Ensure that you have all elements required to build your garden shed.

Always wear work gloves, long sleeves and safety goggles during assembly of the garden shed. Some components contain sharp edges and may cause damage.

Keep children and animals away from the assembly site.

When necessary to use a ladder, ensure ground stability is adequate. Never rest your entire weight on the roof or on any other part of the garden shed.

Do not attempt to assemble the garden shed in strong windy conditions due to the risk of making site conditions difficult and dangerous.

To maintain their original condition, ensure that nothing is placed on top of shed components.

Do not store pool chemicals in your garden shed.

Combustible and corrosive materials must be stored in watertight containers.

Set your drill's torque limit to prevent damage to the metal parts.

Remove snow from the roof after each snowfall. A thickness of over 10 cm of snow is hazardous.

Do not walk on the roof.

Weather









DO NOT attempt to assemble your shed in windy weather.

Misc.

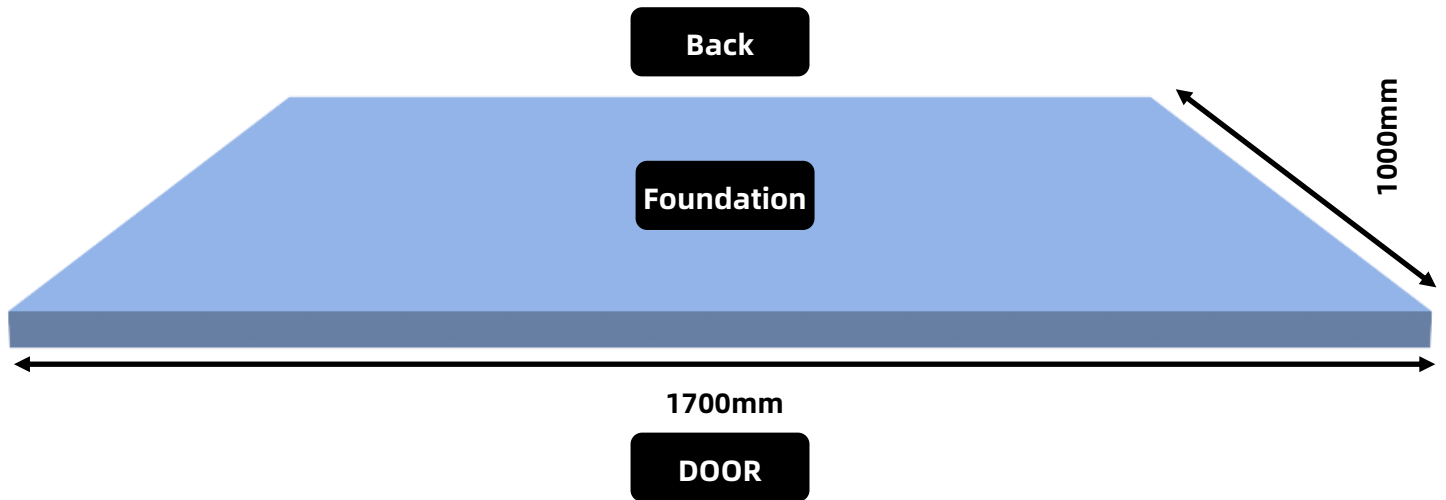
At least two adults are needed to finish the assembly.

Average assembly time is 12 man-hours.

LEGEND

	: marks a step. IMPORTANT: EXECUTE THESE STEPS IN NUMERICAL ORDER.
	: marks a sub-step and the alphabetical order of executing these sub-steps. IMPORTANT: EXECUTE THESE STEPS IN ALPHABETICAL ORDER.
	: marks the orientation of the shed.
	: marks a part.
	: marks a screw hole and the sequential order of fixing screws and panels. IMPORTANT: FIX SCREWS IN NUMERICAL ORDER.
	: marks a screw hole that SHOULD NOT be fixed.
	: marks an unacceptable layout.
	: marks an acceptable layout.

1.1 Foundation



The site must be prepared so that the base of the shed is level all round. Checking with a spirit level is required.

This shed must be secured onto a firm and leveled foundation, preferably concrete slabs.

The foundation must have a minimum thickness of 10 cm. Allow cement to dry for at least 48 hours.

The foundation can also be constructed using bricks or blocks.

The manufacturer is not liable for the damage caused by the choice and quality of the foundation.

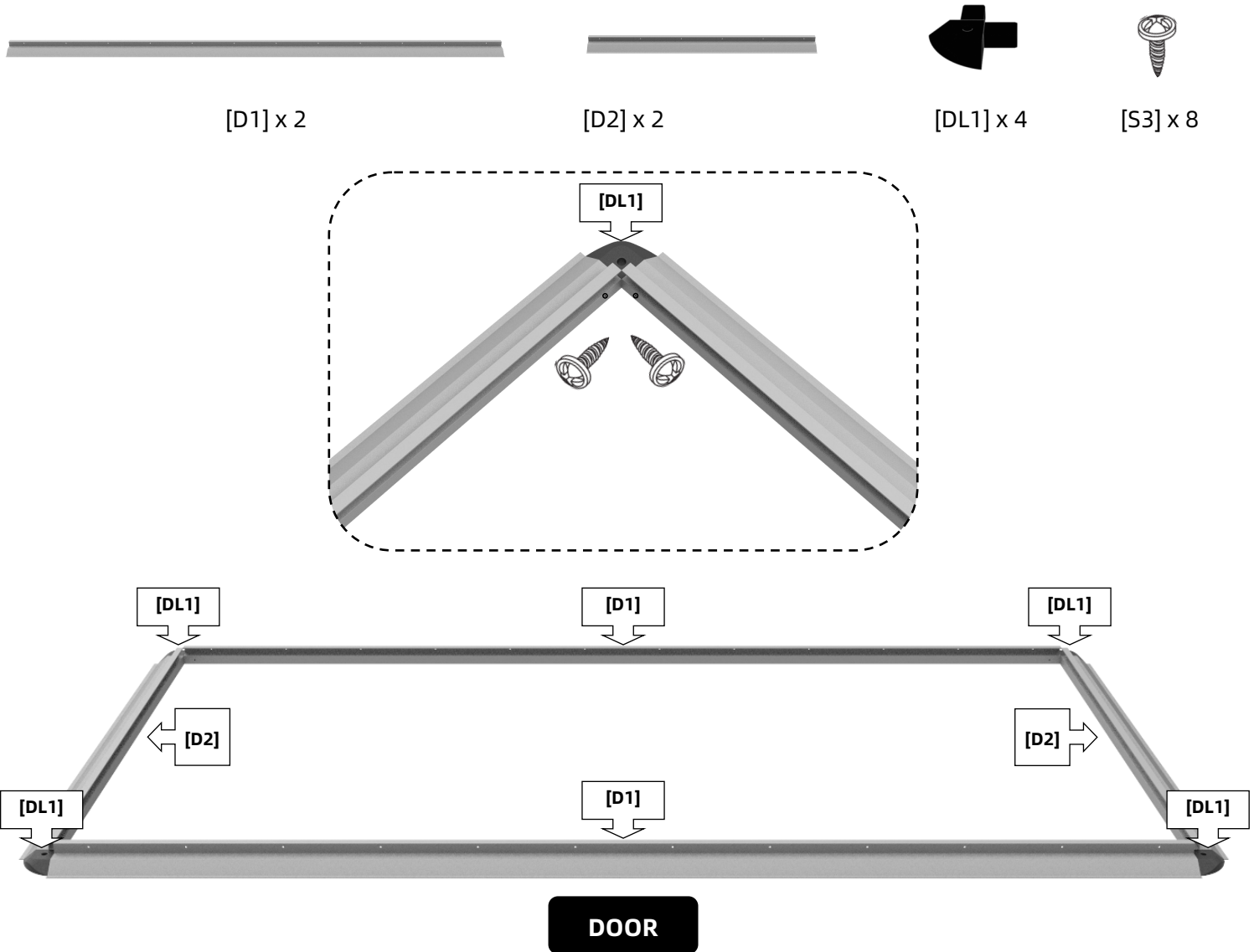
About the **DOOR** mark.

Starting from Step 1.1 and throughout this manual, you will see this **DOOR** mark constantly. It tells the location of the shed's door.

For a better visibility, the shed will be rotated multiple times in this manual. As a result, you might find it hard to keep track of where the shed is facing. If this happens, try to find the **DOOR** mark.

1.2 Outer Base

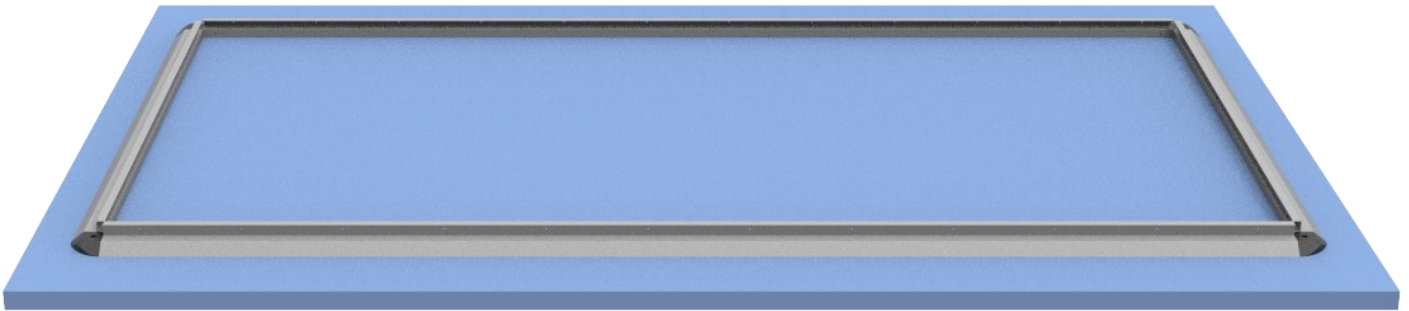
For better visibility, illustrations of screws and bolts like [S3] are enlarged greatly and the color of some parts keeps changing.



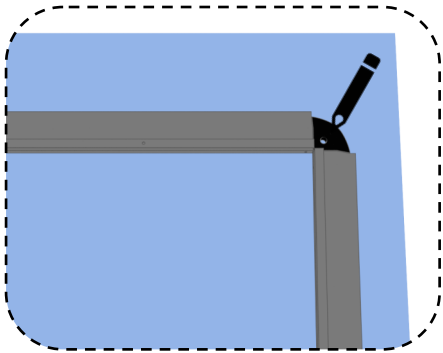
1.3 Securing The Base



[56] x 4



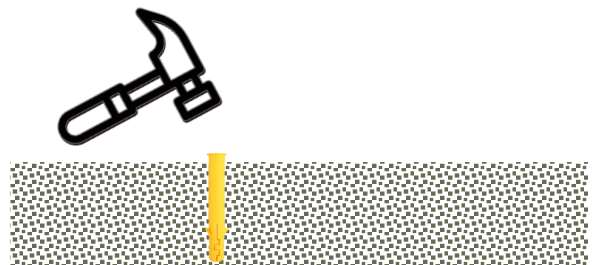
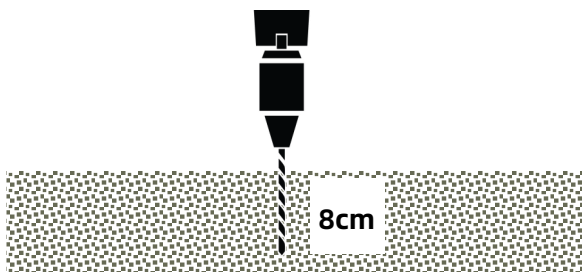
DOOR



Use a marker to mark [DL1]'s hole onto the Foundation.
THEN REMOVE THE BASE.



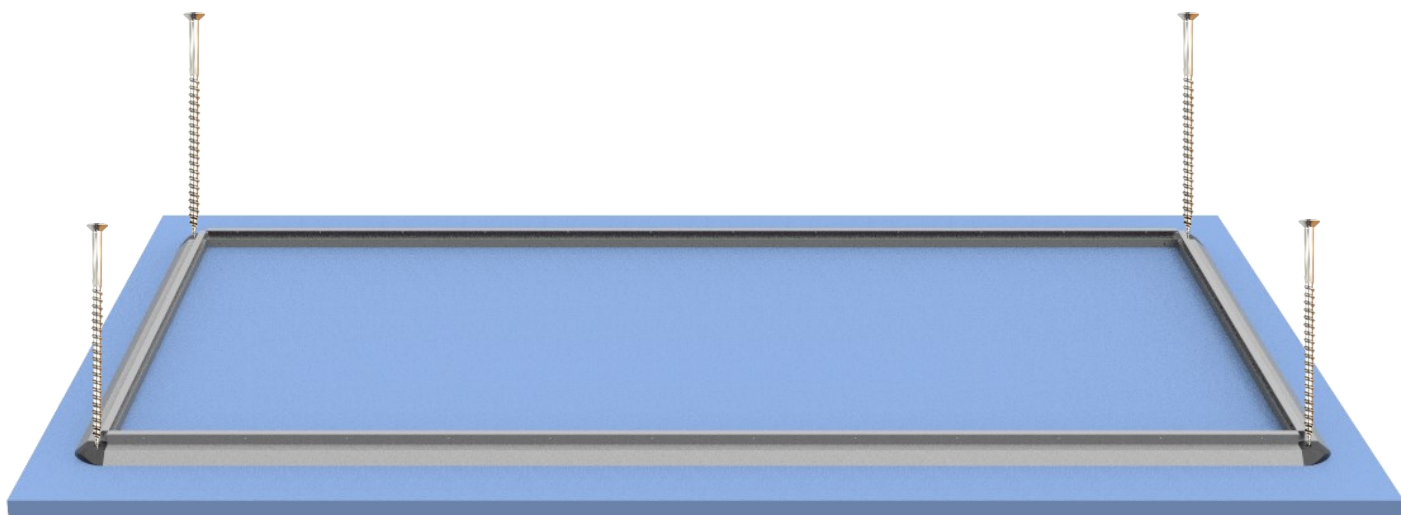
DOOR



1.3 Securing The Base



[S6] x 4

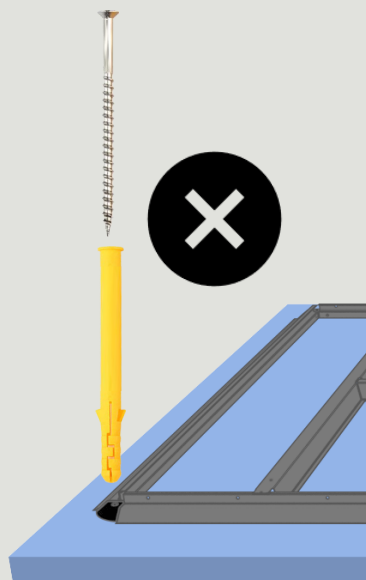


DOOR

COMMON MISTAKE: [S6]

[S6] consists of two parts, the yellow tube and the screw. As stated on the last page, you need to hammer the tube into the drilled foundation, put the base back and fasten the screw into the tube.

Sometimes a customer would hammer the whole thing through [DL1], and it is not correct.

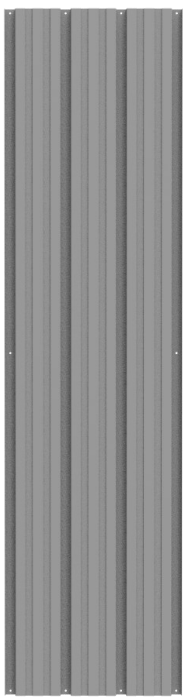


For better visibility, the Foundation will be hidden afterwards.

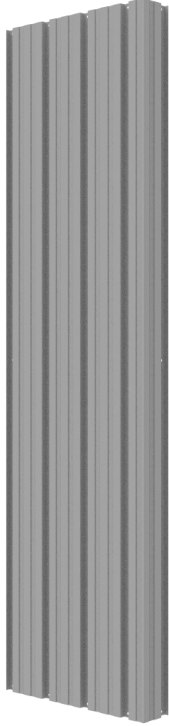
GENERAL RULES

Wall Panels

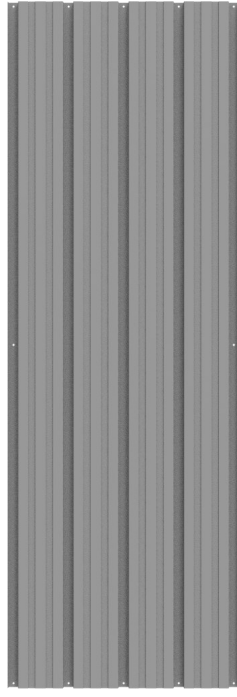
Remove the protective films first



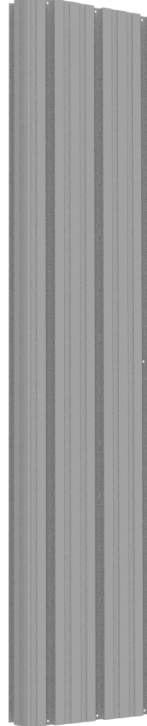
[Q2] x 3



[Q3] x 2



[Q1] x 2



[Q4] x 2

These are the wall panels you will be using.

Wall Panels, except for [Q3]/[Q4], are symmetrical, meaning they don't have assigned top/bottom, or left/right. But they do have exterior and interior, with the exterior's color being the color of the shed and the interior's color a universal light grey.

[Q3] and [Q4] do have a difference between its left and right, but no difference between its top and bottom.

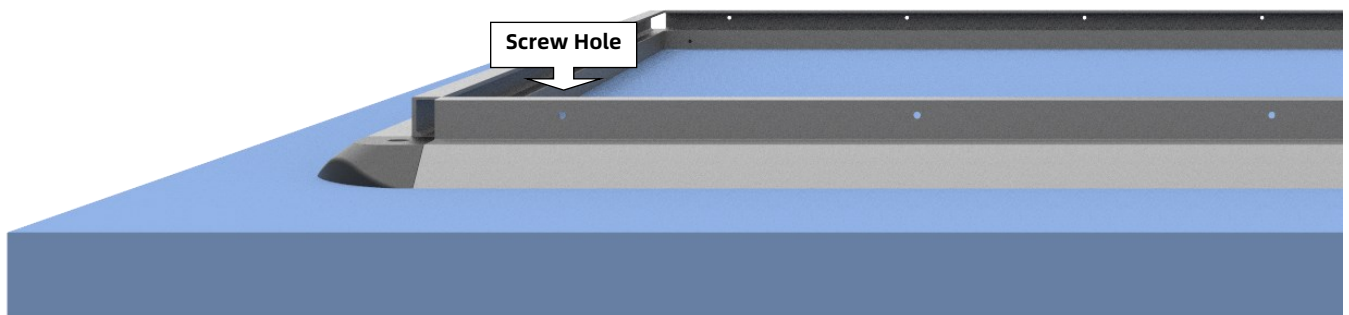


[S4]



[S3]

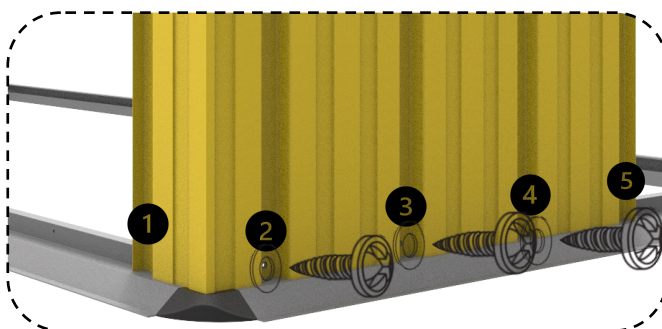
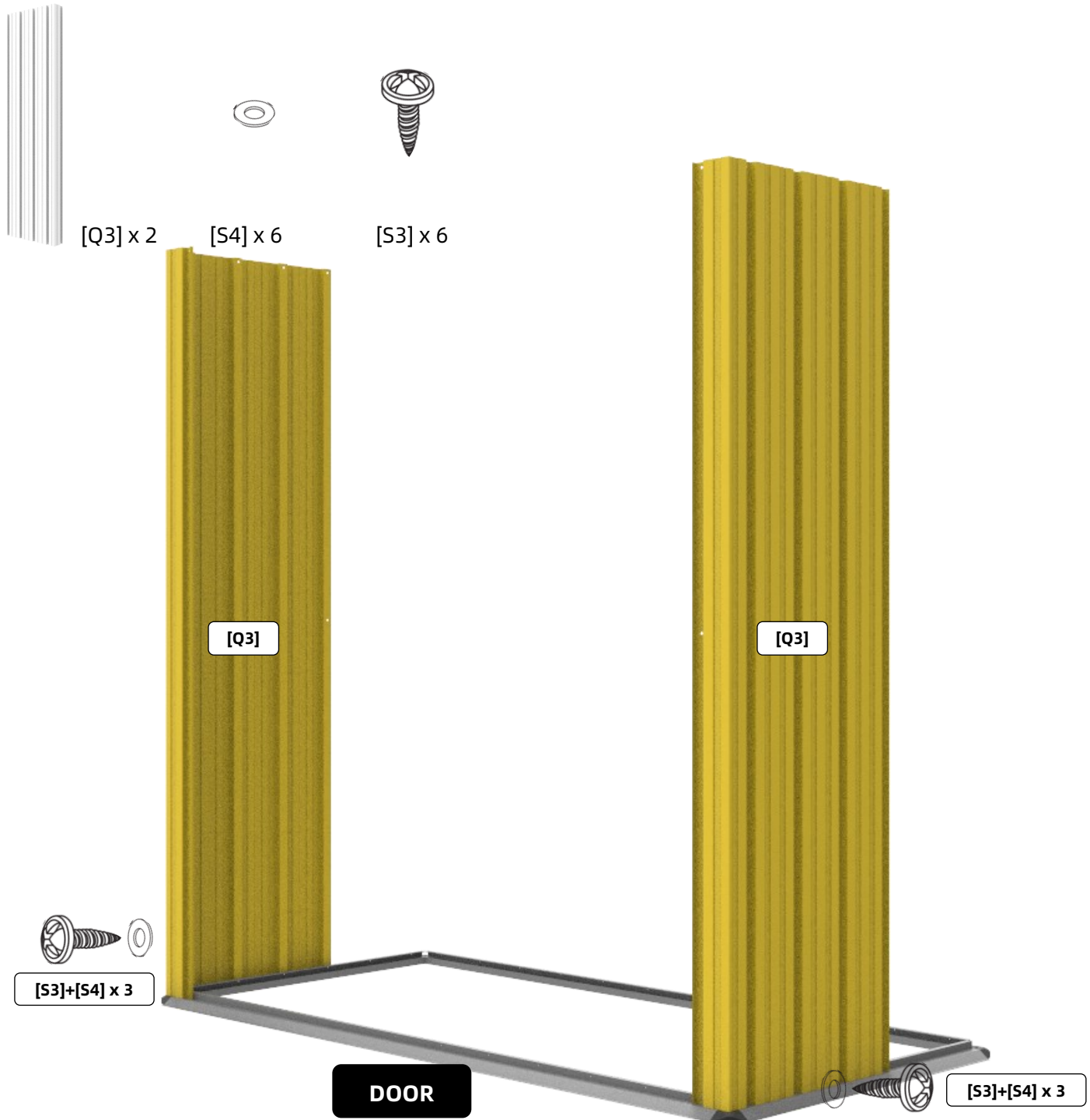
Starting from Step 2.1, you will be using [S3] together with [S4]. [S4] is useful for protecting the punched screw holes from getting rusty. So use them.



COMMON MISTAKE: Screw Holes on the Outer Base(D1+D2)

There are screw holes on both the base frames and the wall panels. It is self-explanatory that you need to nail the wall panels to the base frames using the screws ([S3]+[S4]). However, since the base frames are made of aluminum, a soft yet ductile metal, you can easily drill the screws into the base frames without the screws going into the correct screw holes. So, when assembling wall panels, bend the panels a little bit and see to it that the screw is going into the screw hole.

2.1 Side Wall 1



COMMON MISTAKE: [Q3]

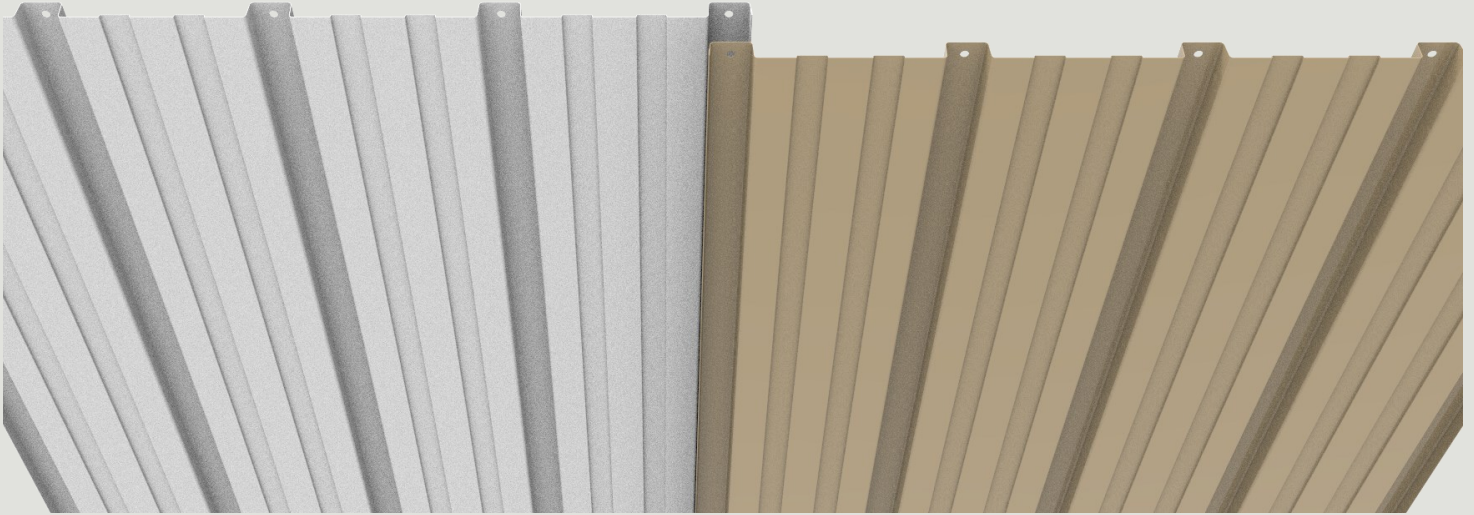
A [Q3] has five screw holes on each of its ends. In step [2.1], only screw holes No. 2, 3, 4 of each [Q3] are used. No. 1 and No. 5 will be used in following steps.

Also, pay special attention to the orientation of [Q3]. It is the side with one screw hole that is facing the door.

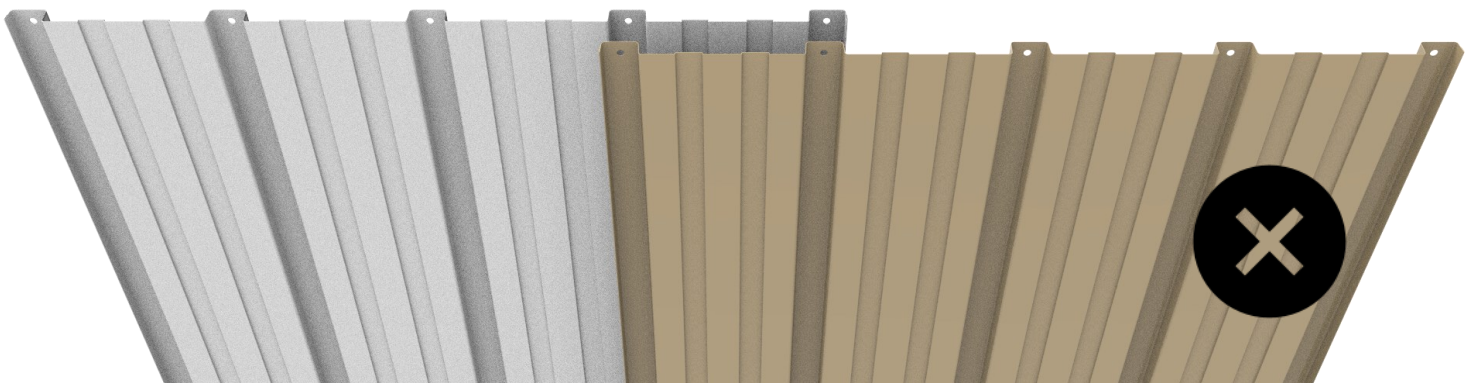
GENERAL RULES

Wall Panel Stacking

Starting from Step 2.2 you will be stacking panels. These general rules apply to wall panels only. Stacking of roof panels will be talked about later.



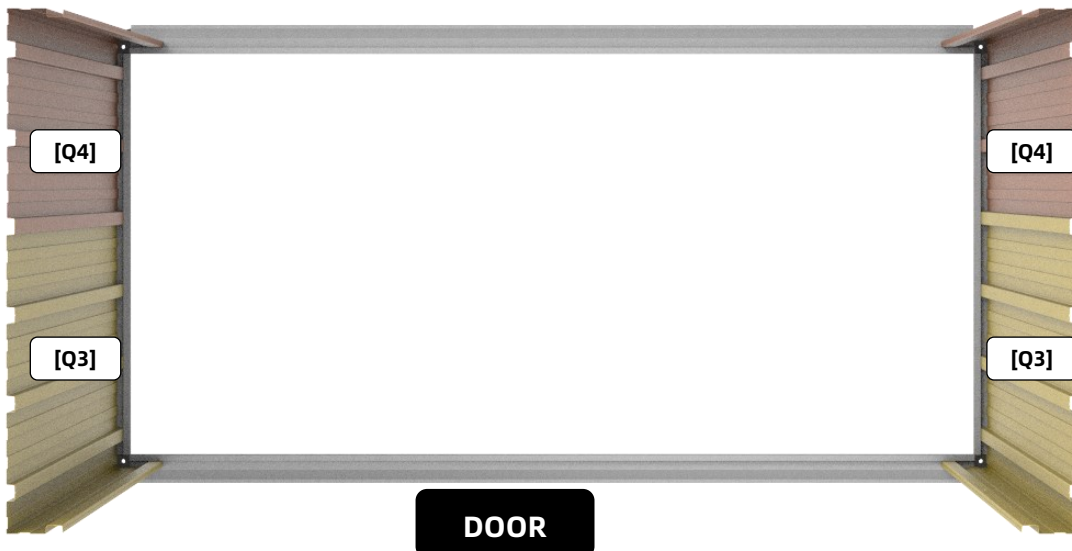
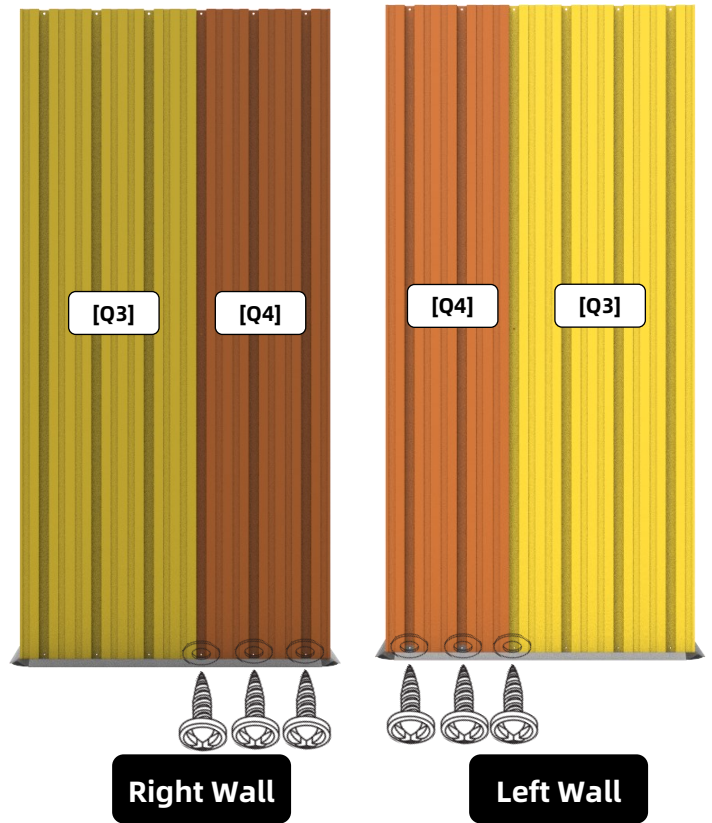
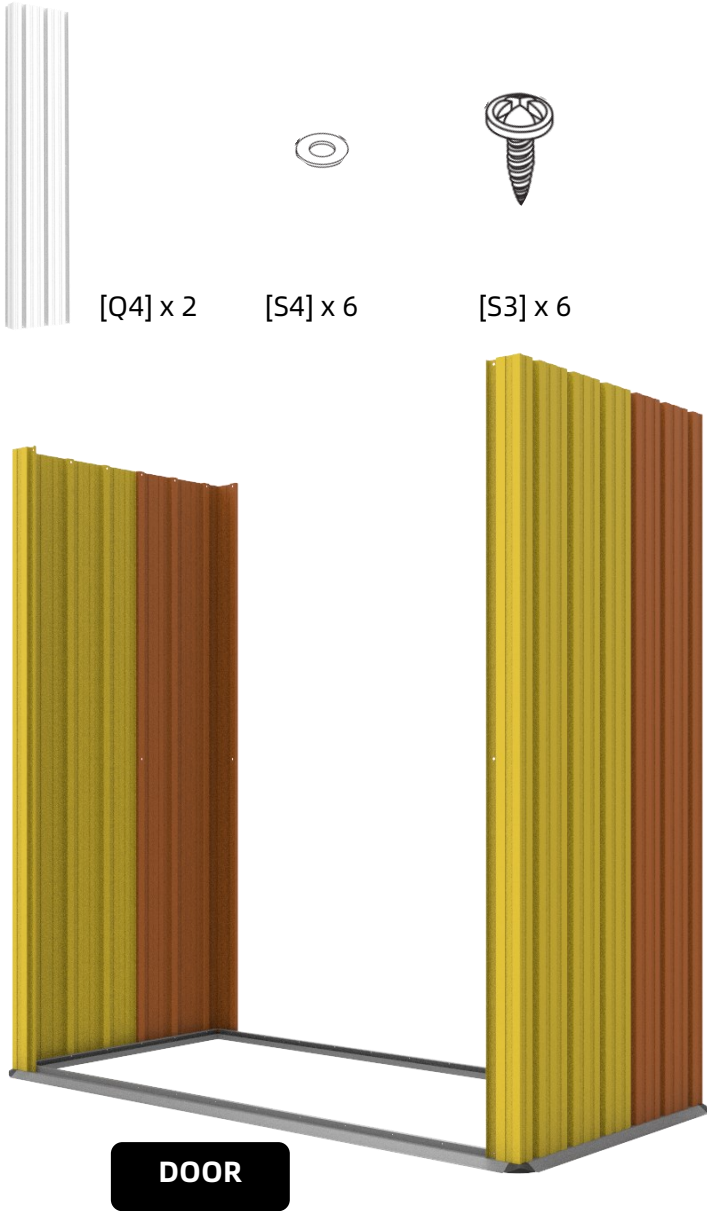
The picture above illustrate how two wall panels are stacked together, from a top to bottom perspective, outside the shed. As you can see, only one channel of each wall panel is stacked. It makes no difference which panel is on top.



COMMON MISTAKE: Extra Overlap

If you had an unlimited supply of wall panels you could create large overlap as you see fit. But you don't. So, do not create extra overlap like this.

2.2 Side Wall 2



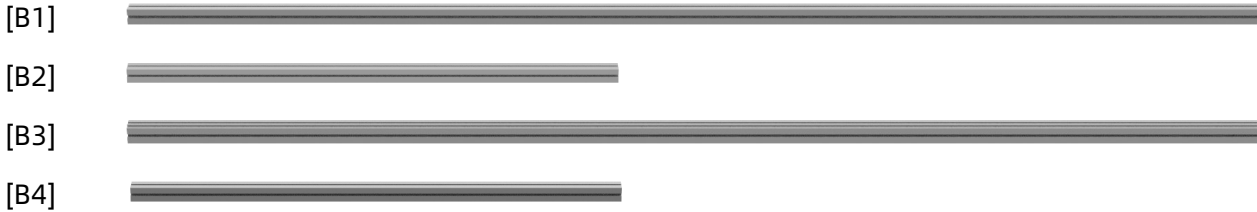
Notice that only the three screw holes on left/right side of the sheds are used.

After Step 2.2 is finished each [Q2]/[Q4] has an unused screw hole at the bottom end.

Finished Side Walls, top to bottom

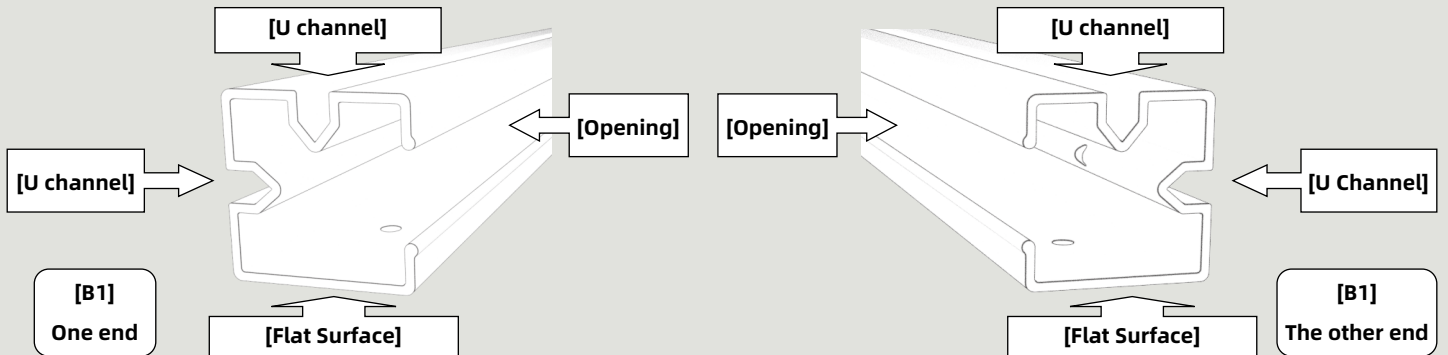
GENERAL RULES

Top Aluminum Frames: [B1][B2][B3][B4]



Take a close look at these four frames. They are not the same and thus not interchangeable. They are not symmetrical either, so there is only one correct layout. Here are some general rules:

1. Look for the [flat surface] first. There are screw holes on the [flat surface]. These screw holes are used for the connection between [BL1] and frames.
2. In Step 2.3 and 2.4, place the frames so that the [flat surface] points to the base of the shed, and the [opening] faces the inside of the shed.
3. There are screw holes inside the [U channels] as well. They are used for the connection between panels and frames.



2.3 Top Frames 1

[B2] x 1



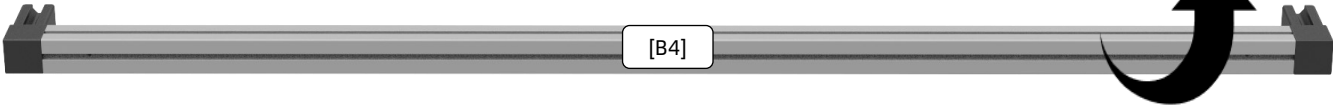
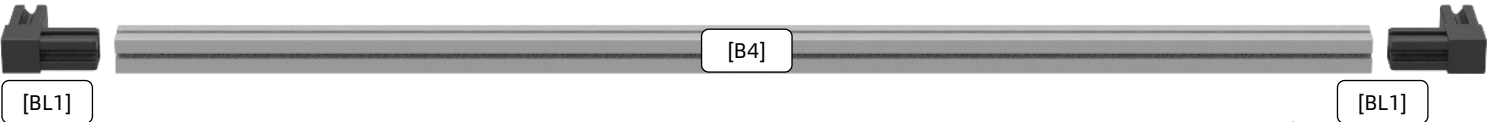
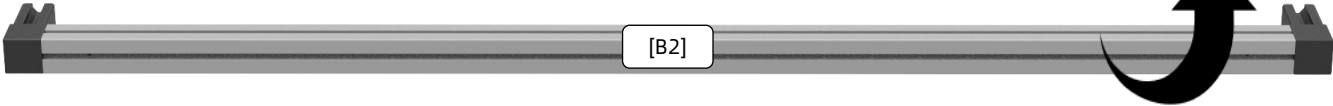
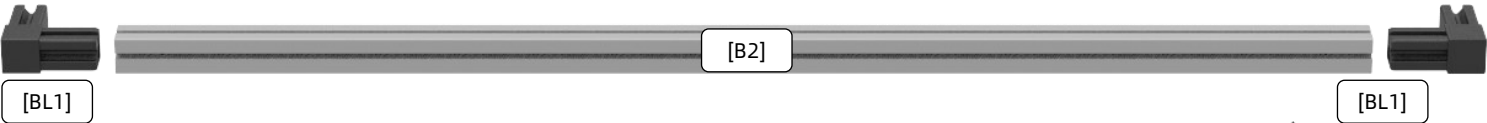
[B4] x 1



[BL1] x 4

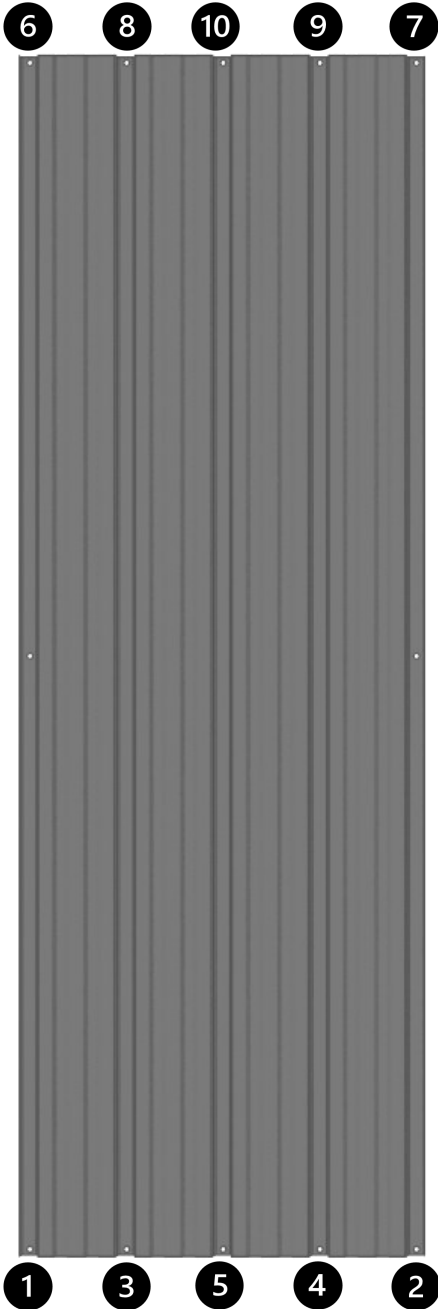


[S3] x 4



GENERAL RULES

GENERAL RULES: Single Wall Panel Nailing



Read **COMMON MISTAKE: Screw Holes on the Outer Base(D1+D2)** again.

As stated before, a wall panel has no assigned top/bottom end. It's up to you to decide which end is the top or bottom. Once you have made the decision, follow the rules below.

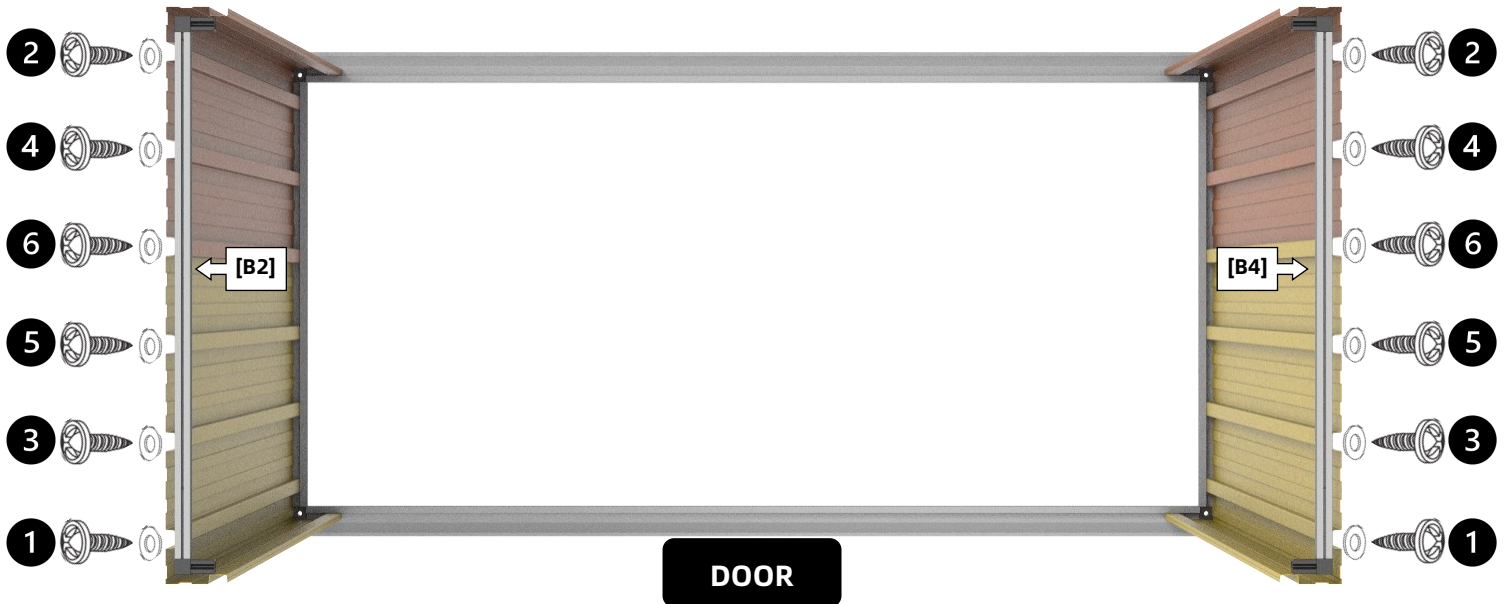
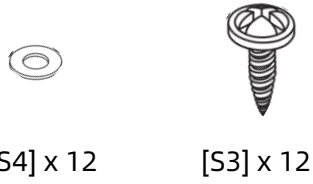
1. Start from the screw holes at the bottom end.
2. At each end, start from the peripheral screw holes and move to the screw hole in the middle.

Take the [Q1] on the left for example, ①~⑩ is the correct order of fixing screw holes.

These rules might sound arbitrary but they are necessary.

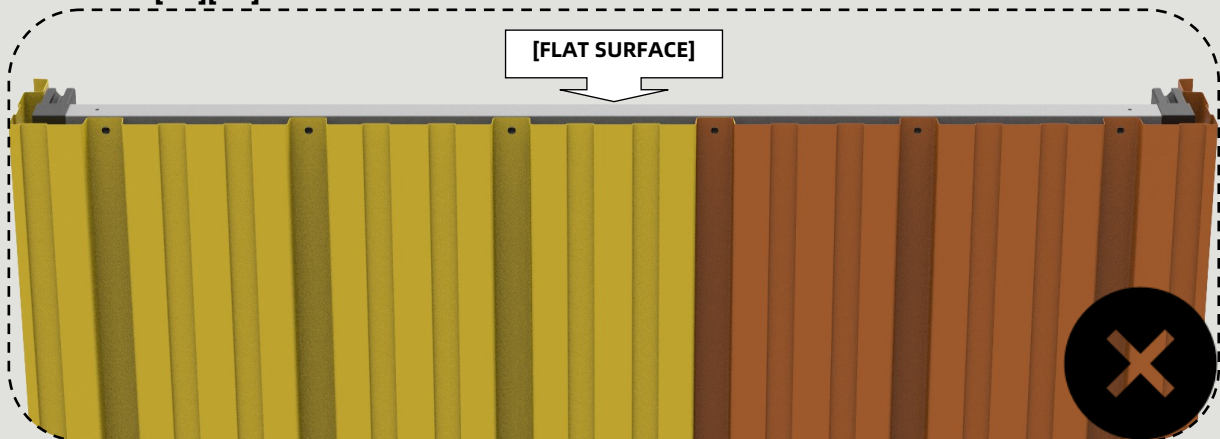
Step [2.4] is quite special because all the screw holes at the bottom end have already been fixed.

2.4 Top Frames 2

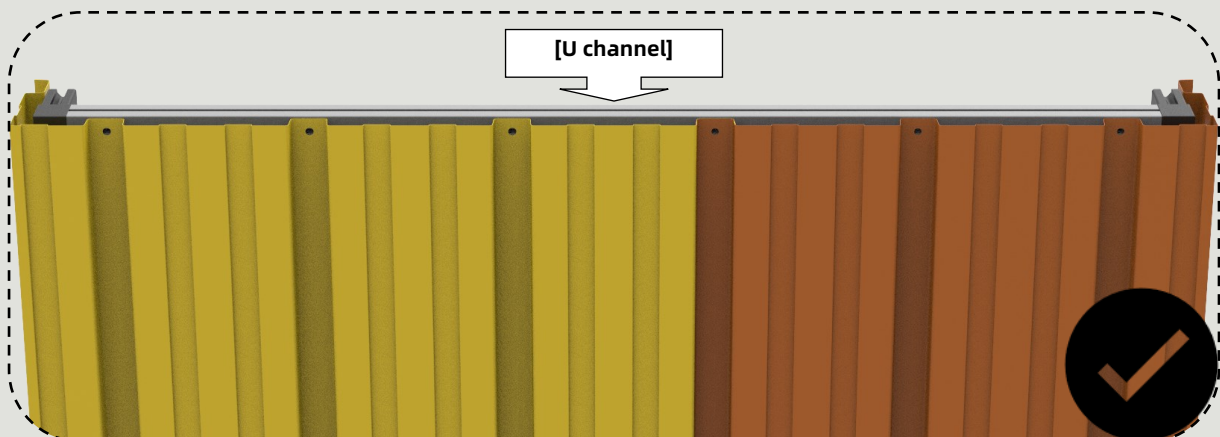


This is the only correct layout of [B2] and [B4], with [B2] on the left wall and [B4] on the right. ①~⑥ indicates the order of fixing [S3].

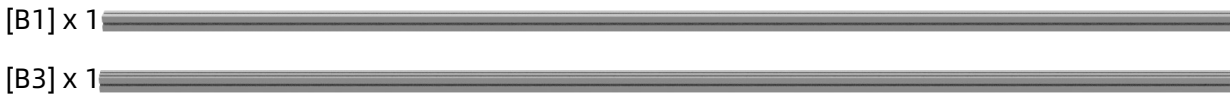
COMMON MISTAKE: [B2][B4]



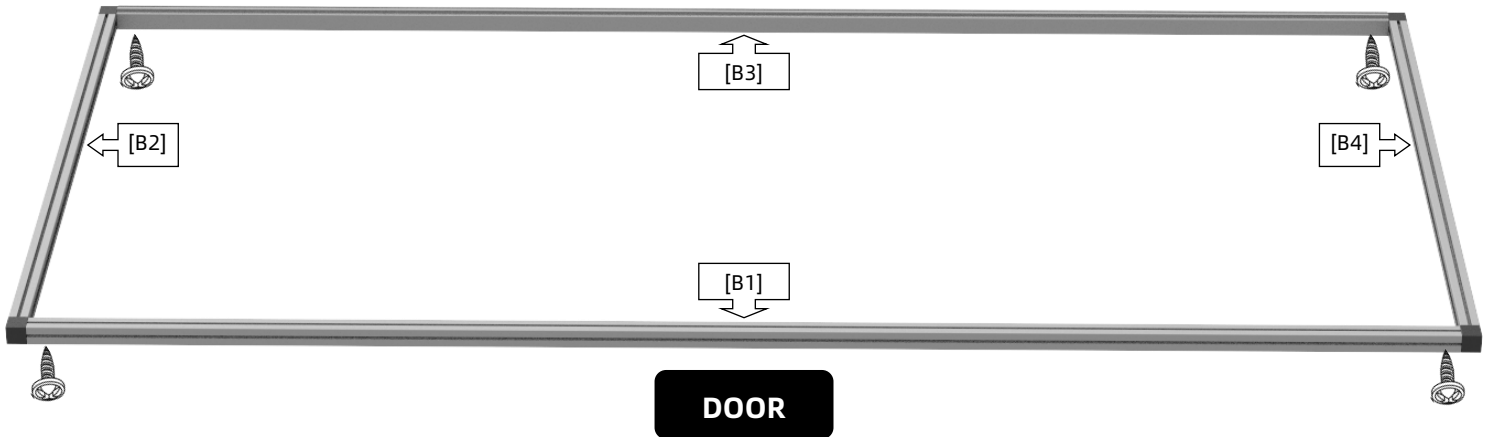
Mistake: The flat surface is on top.



2.5 Top Frames 3



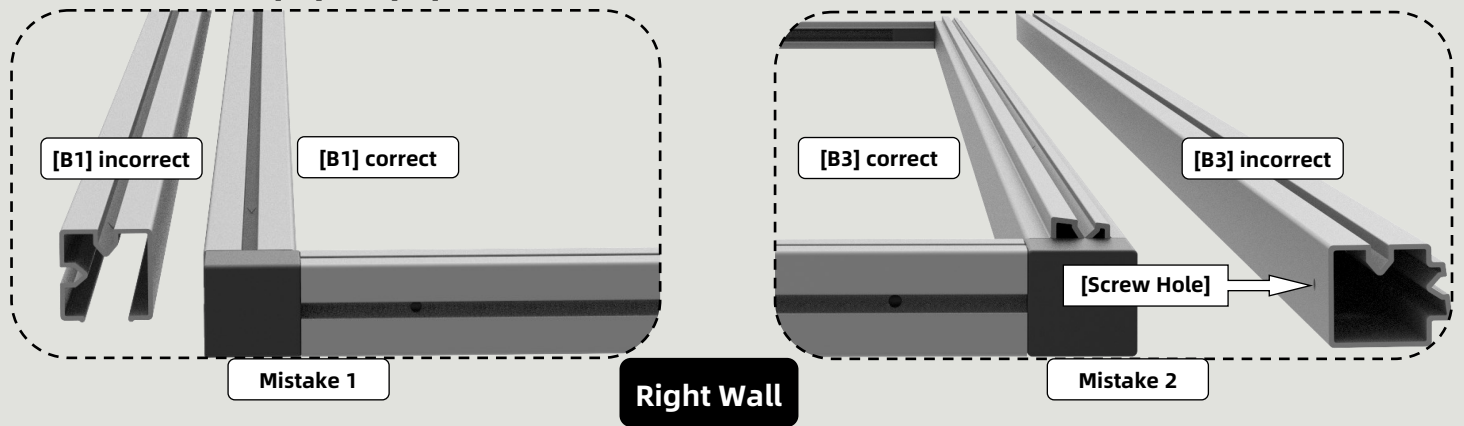
[S3] x 4



For better visibility, all other parts are hidden in this step.

This is the only correct layout of [B1][B2][B3][B4].

COMMON MISTAKE: [B1] and [B3]



The two pictures above illustrate correct and incorrect layout of [B1] and [B3].

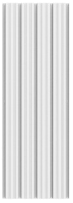
Mistake 1: The [Opening] of [B1] should point to the inside of the shed, not the base of the shed.

Mistake 2: The [Flat Surface] with screw holes should point to the base, not the inside of the shed.

[B3] is different from [B1][B2][B4] because it has no opening, but two [flat surfaces]. Still, the [flat surface] with screw holes should point to the base of the shed, while the other [flat surface] without anything should point to the inside of the shed. Also if you pay special attention to [B3]'s [U-channel], it is obvious that it has a strange [U-channel], a slope to be precise, which points to the top of the shed.

In step [2.5], your job is to connect [B1][B3] to other frames using [S3]. LEAVE THE [Q2] [Q4] ALONE.

2.6 Back Wall 1



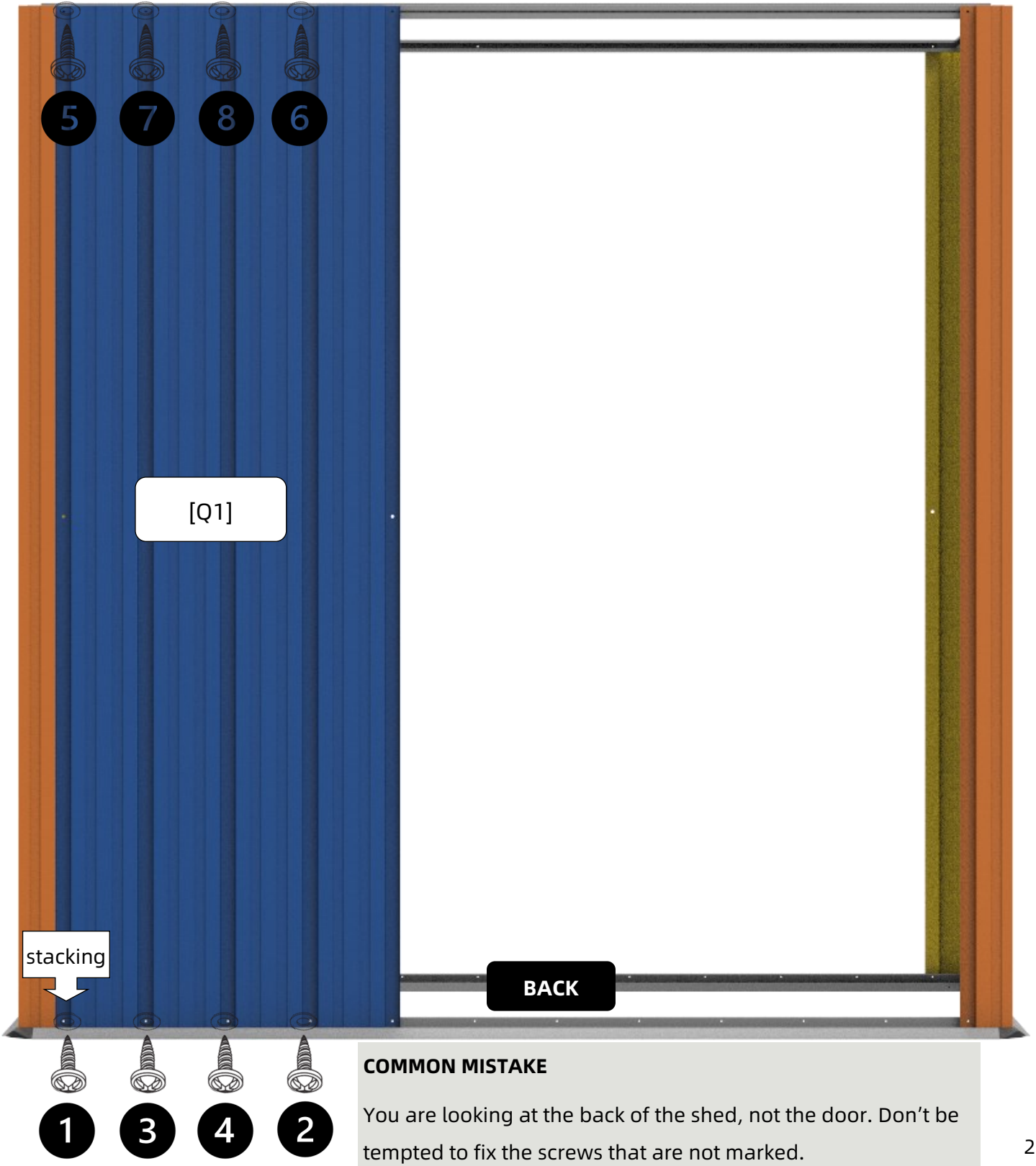
[Q1] x 1



[S4] x 8



[S3] x 8



stacking

[Q1]

BACK

1

3

4

2

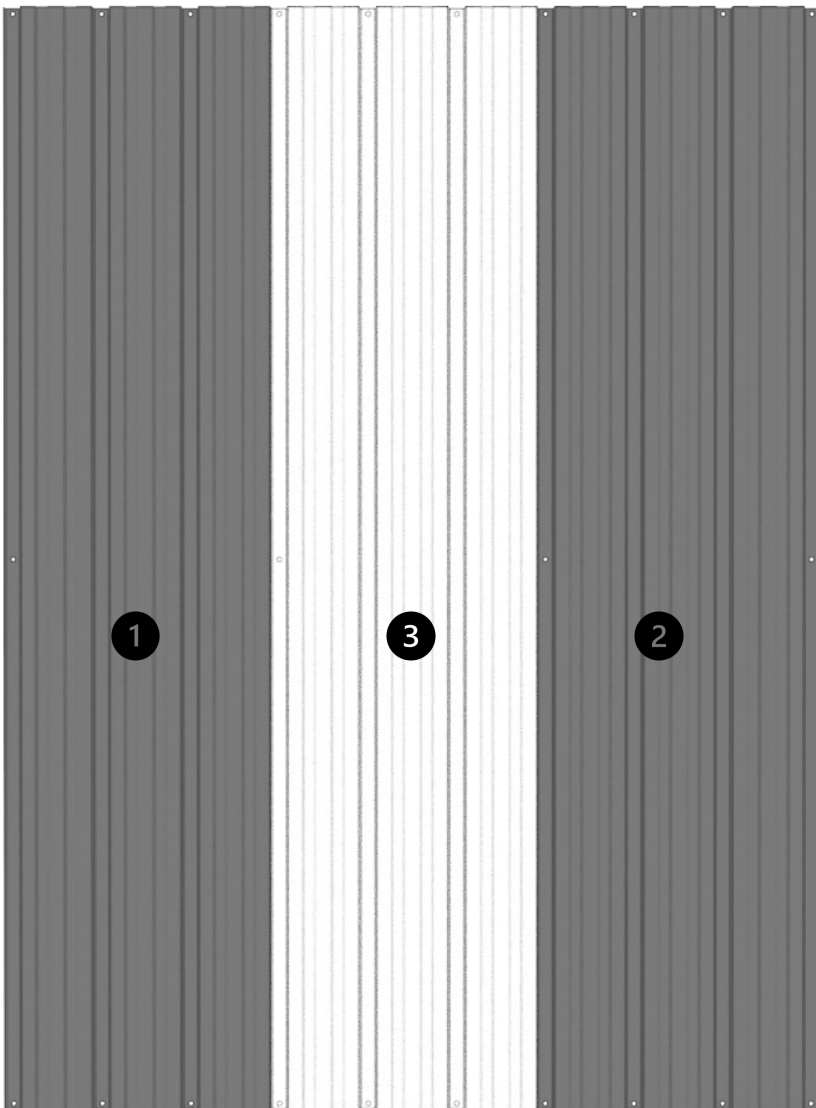
COMMON MISTAKE

You are looking at the back of the shed, not the door. Don't be tempted to fix the screws that are not marked.

GENERAL RULES

GENERAL RULES: Multiple Wall Panel Stacking and Nailing

In most cases you are required to stack multiple wall panels. Here are the rules:



1. The rules of single wall panel nailing apply to multiple wall panel nailing as well, i.e., start from the screw holes at the bottom end, and start from the peripheral screw holes and move to the holes in the middle.
2. The "peripheral-to-the-middle" rule applies to wall panel stacking as well. Take the three panels on the left as an example, do not simply nail the wall panels from left to right or right to left. Follow the order of ①②③. This is strictly necessary.

Detailed wall panel stacking layout will be illustrated in the following steps.

2.7 Back Wall 2



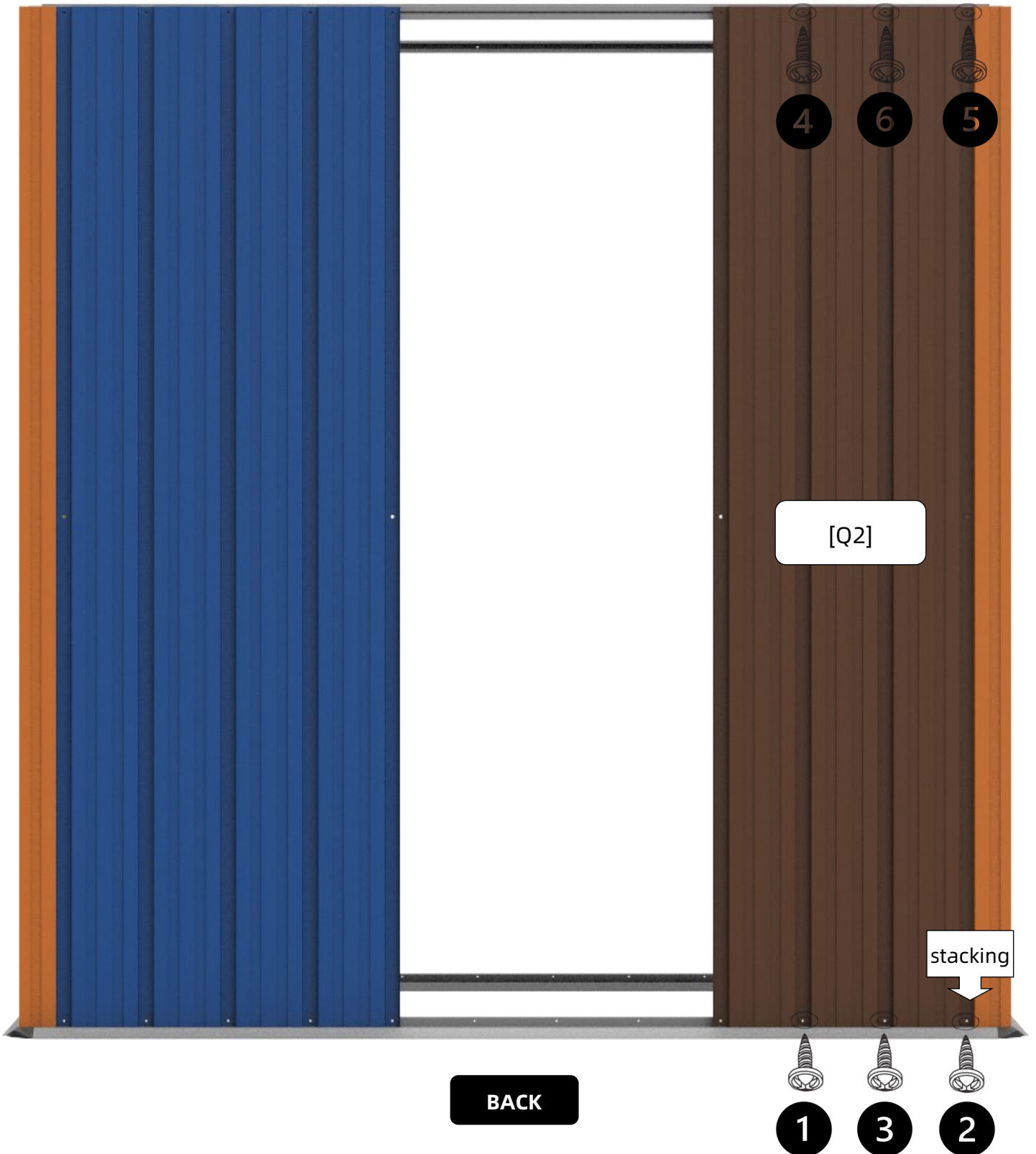
[Q2] x 1



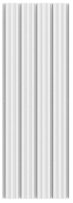
[S4] x 6



[S3] x 6



2.8 Back Wall 3



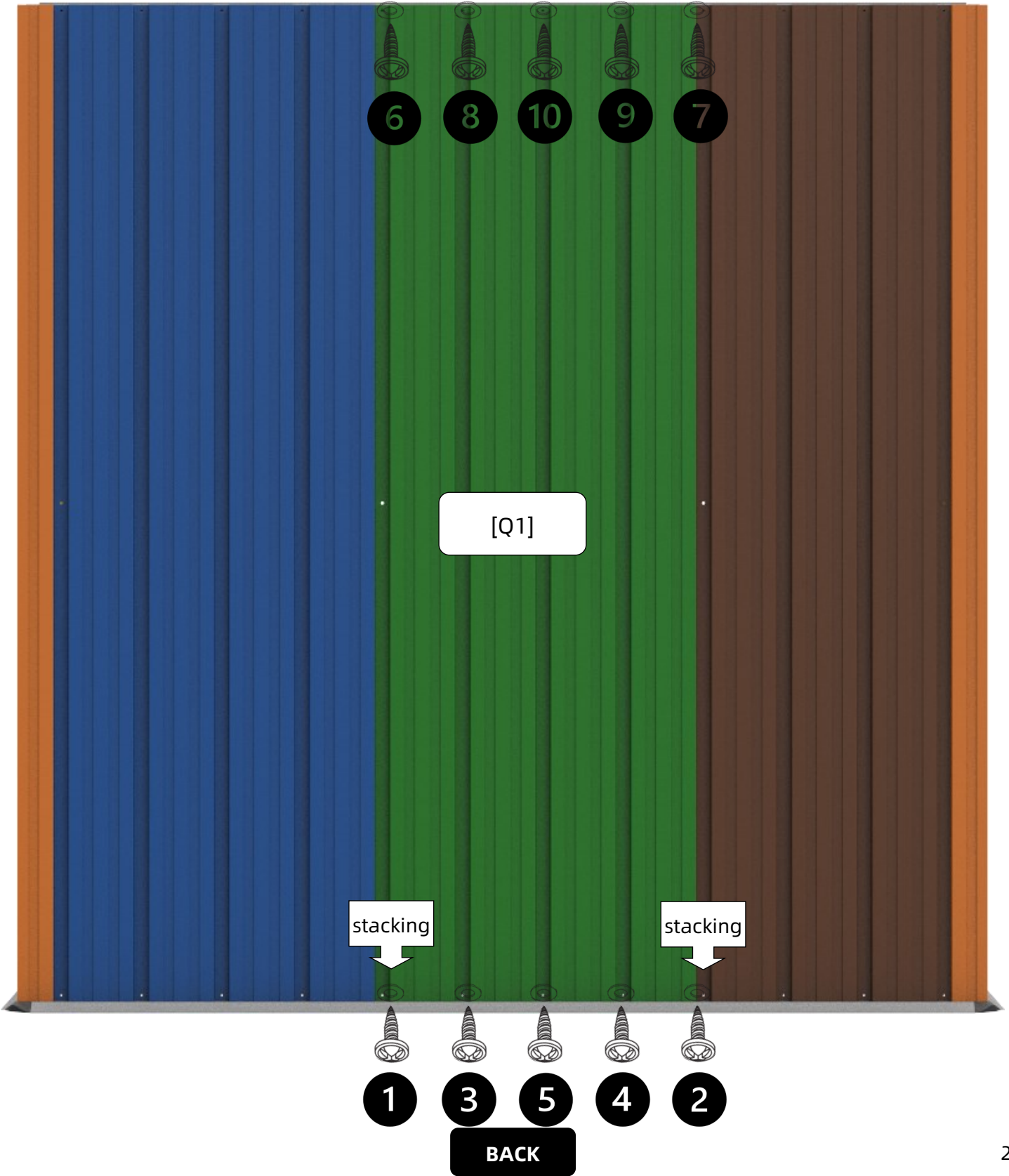
[Q1] x 1



[S4] x 10



[S3] x 10



2.9 Front Wall 1



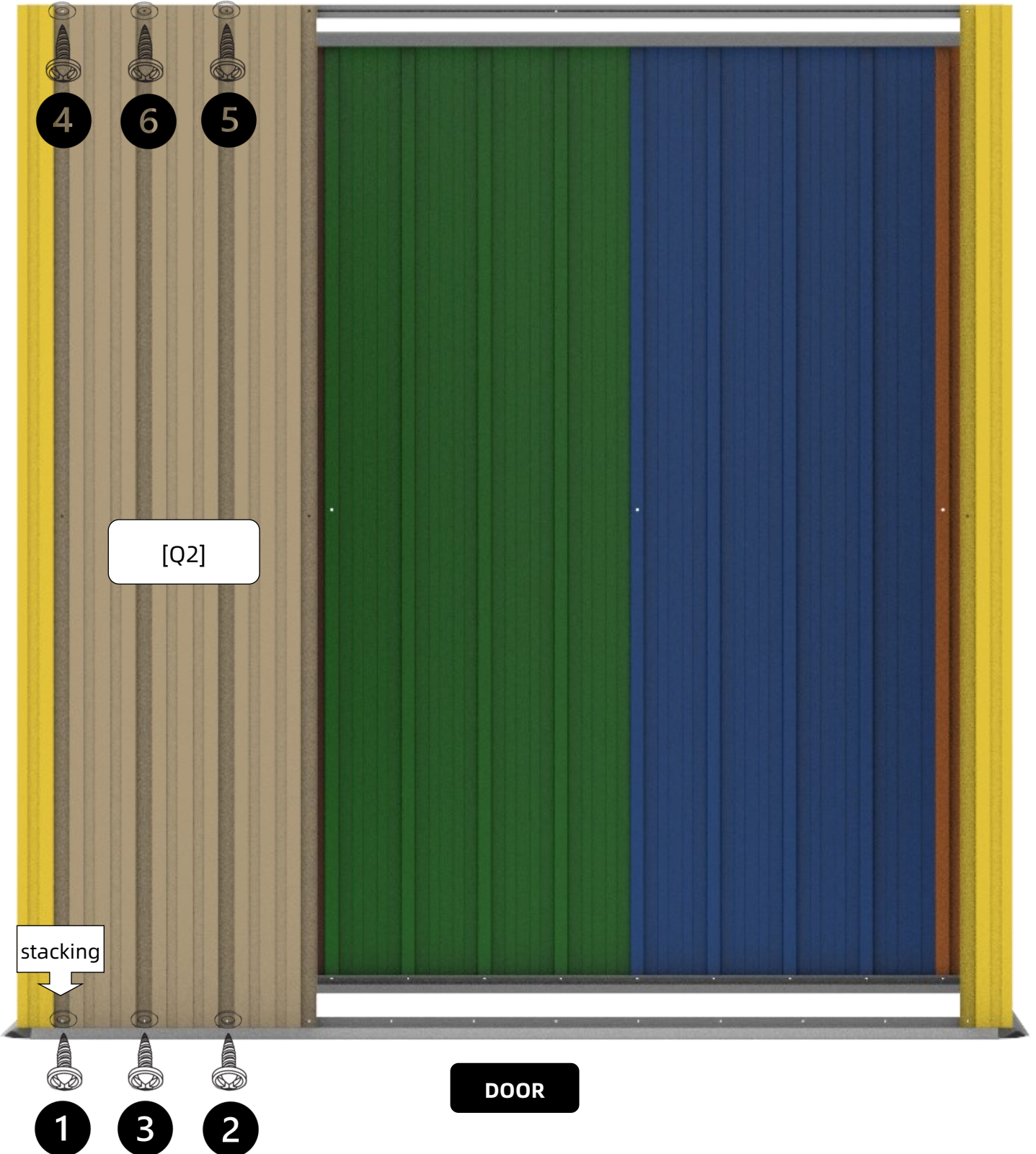
[Q2] x 1



[S4] x 6



[S3] x 6



2.10 Front Wall 2



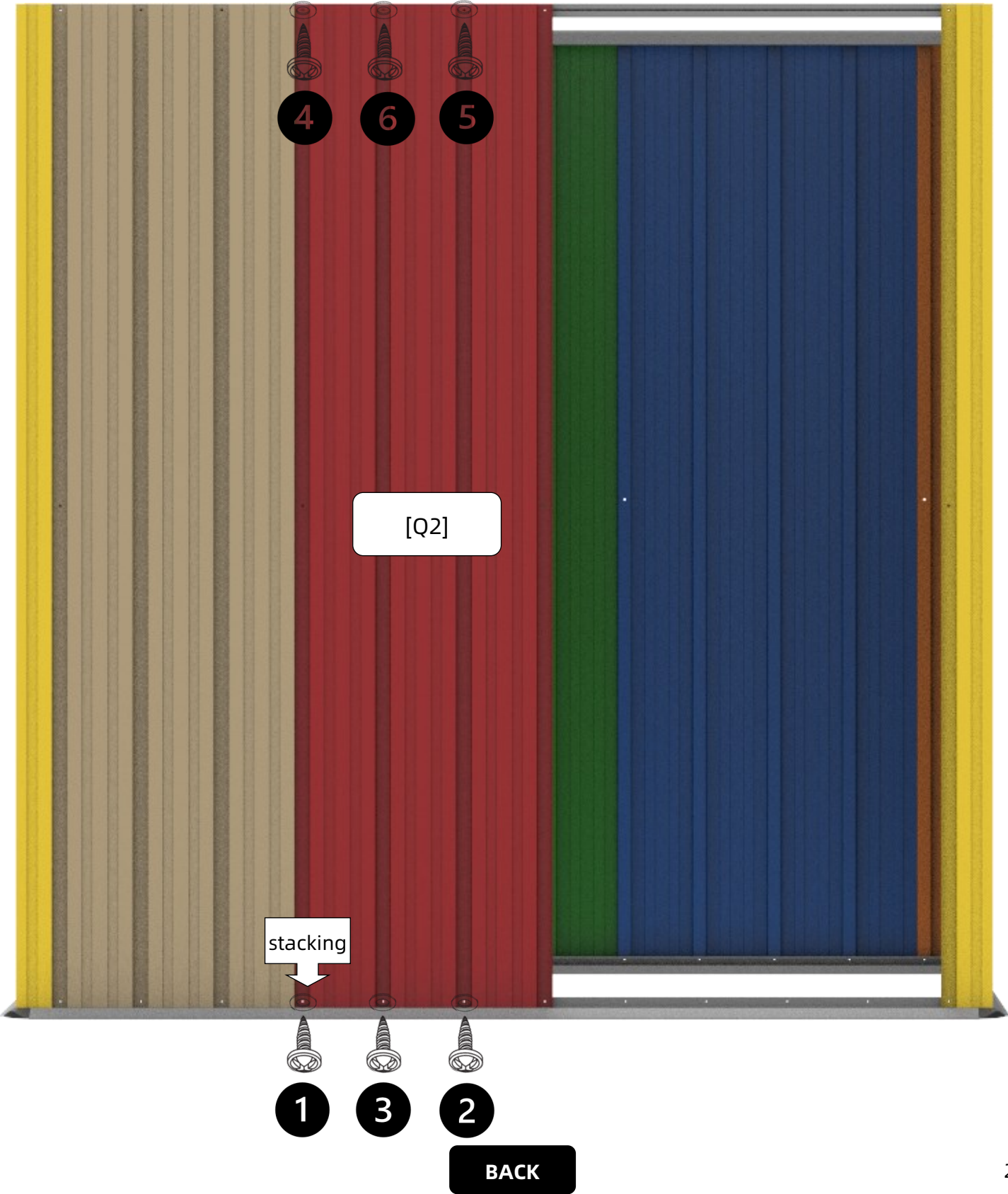
[Q2] x 1



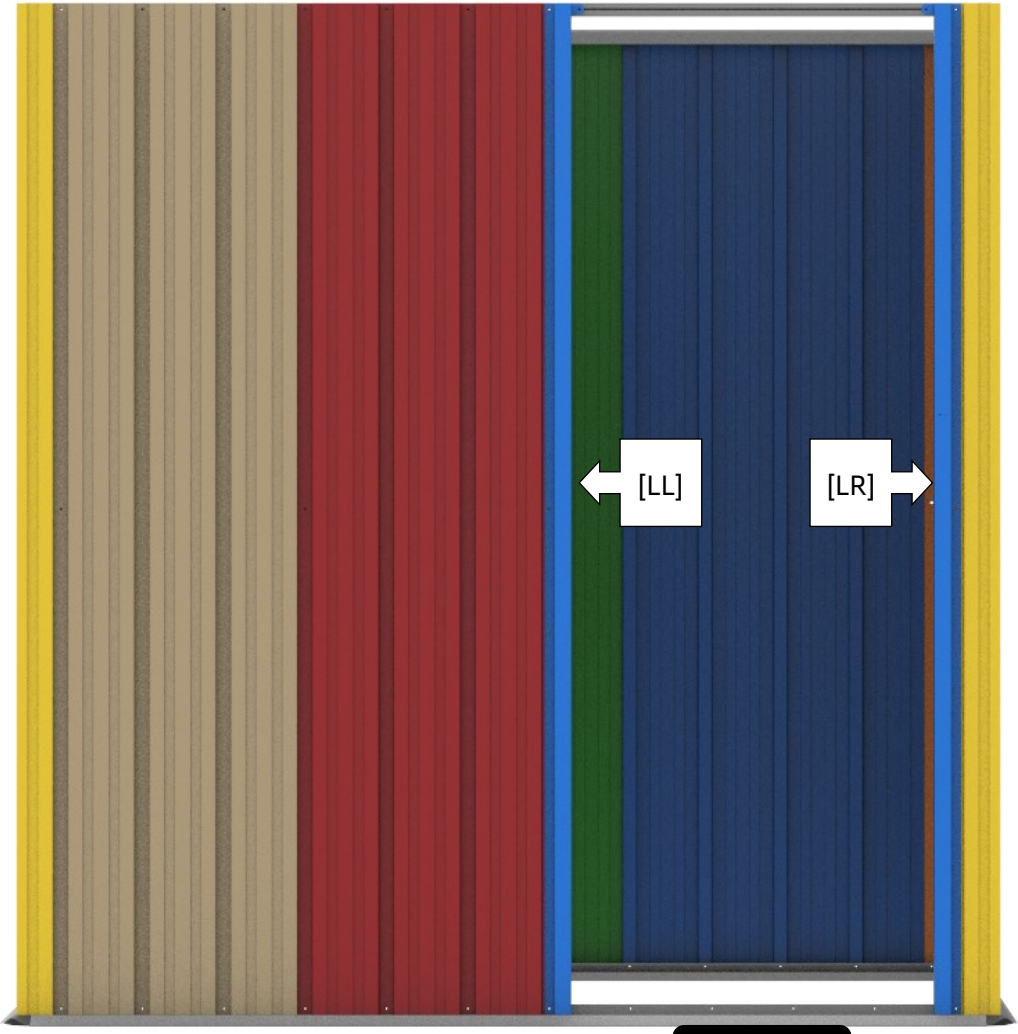
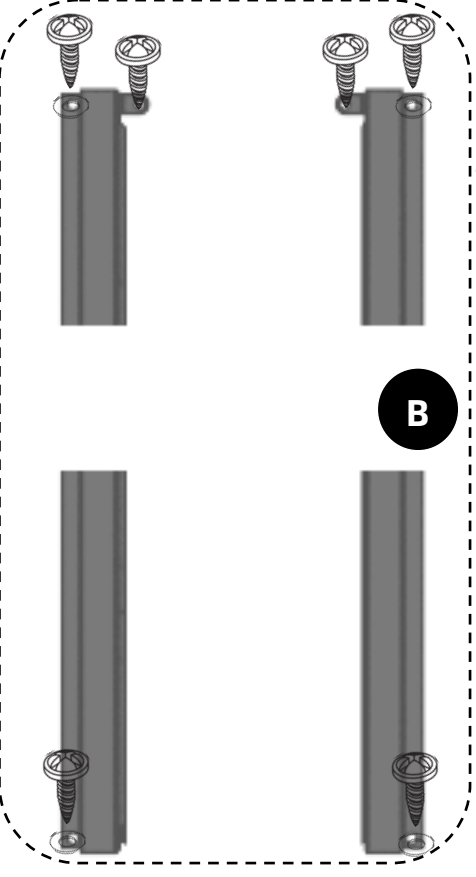
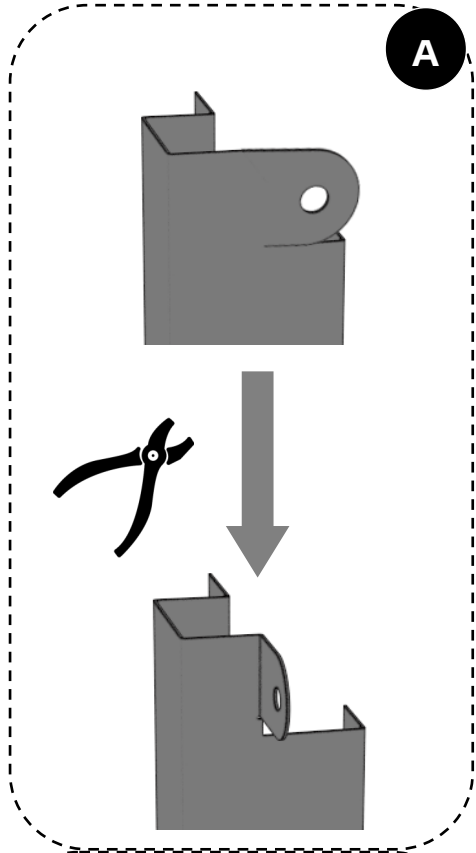
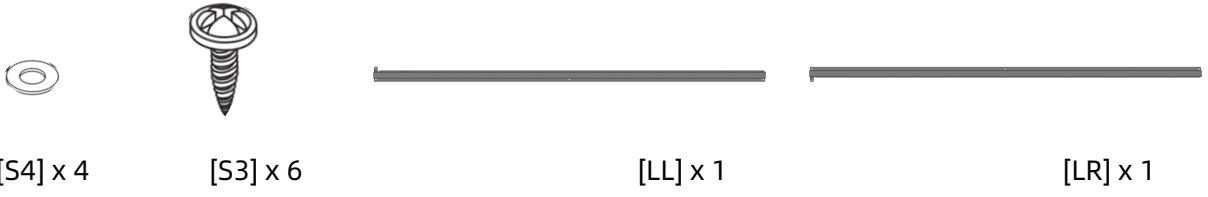
[S4] x 6



[S3] x 6



2.11 Door Support



DOOR

Use a plier to bend [LL] and [LR] following step A.
 Notice that in Step B, the top end of [LL] or [LR] has two screw holes. But only one needs a [S4].

2.12 [S1][S2][S4]



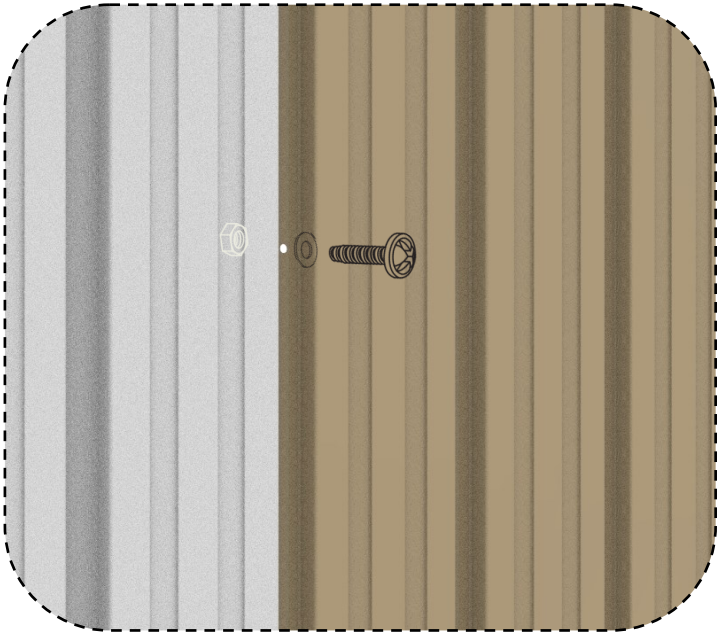
[S4] x 12

[S2] x 10

[S1] x 10

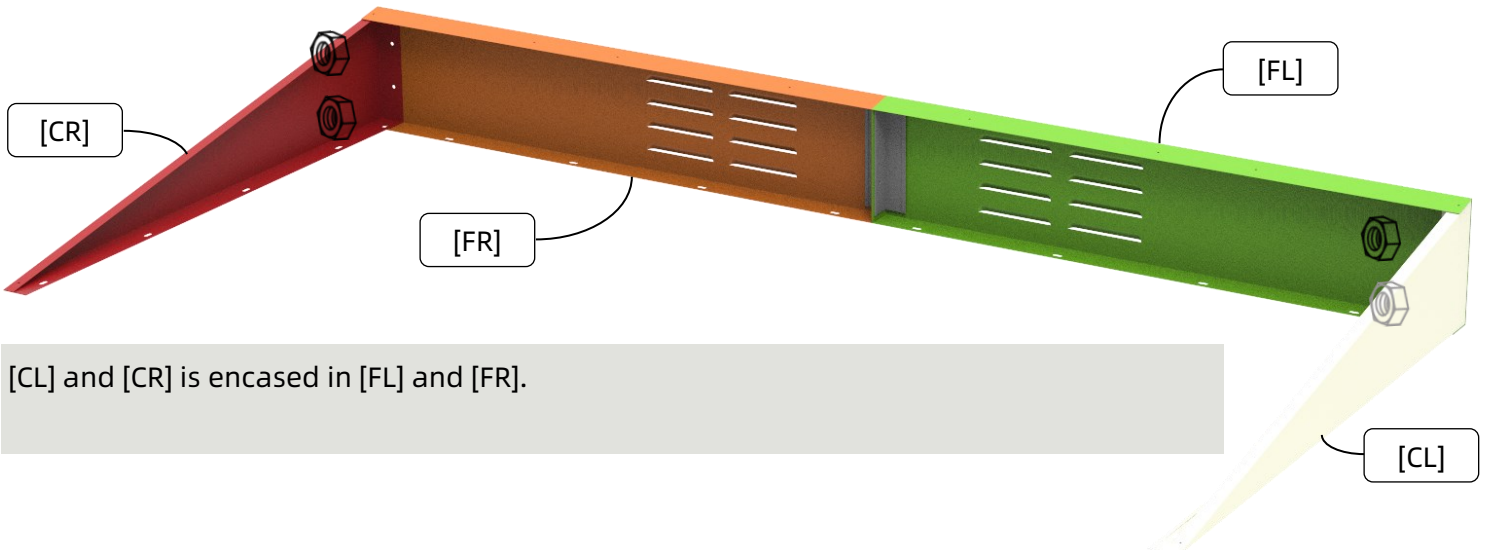
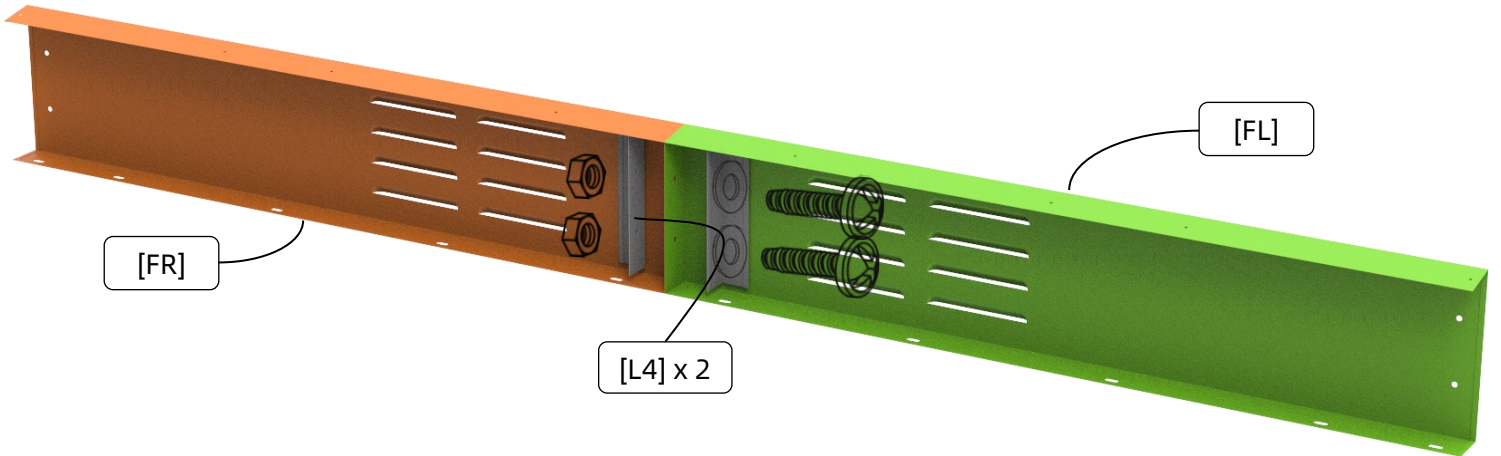


DOOR



After all wall panels (including [LL] and [LR]) are done nailing, find the screw holes in the middle of the wall panels and use [S1] [S2][S4] to enhance the overall steadiness of the shed.

3.1 Roof Supports 1



[CL] and [CR] is encased in [FL] and [FR].



Rare MISTAKE

There is a rare mistake where a customer would mistake the upper edge with the lower edge of [FL] and [FR]. This mistake is easily avoidable if you make sure that [CR] is connected to [FR].

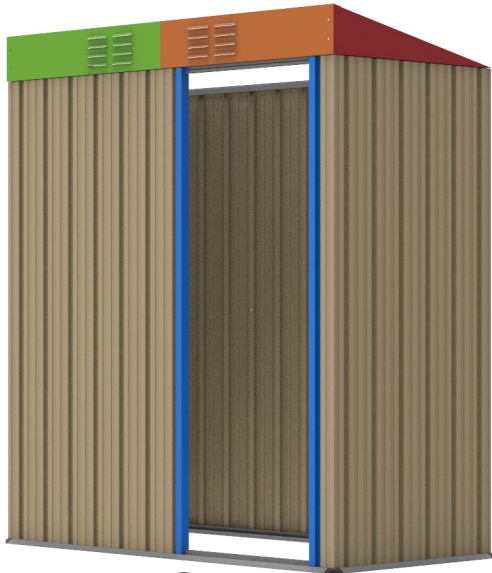
3.2 Roof Supports 2



[S3] x 18

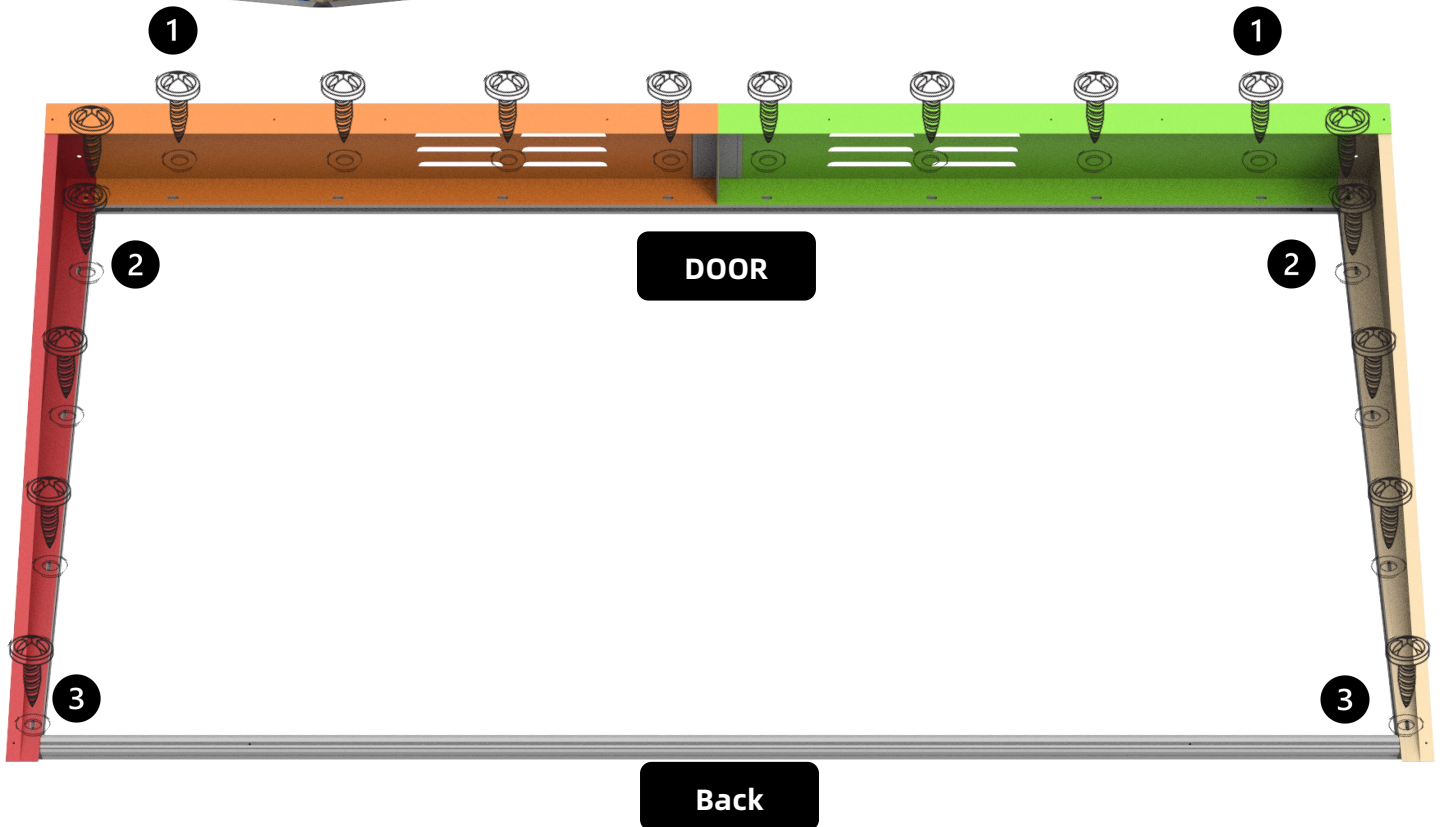


[S4] x 18



18 sets of [S3]+[S4] will be used in this step. Pay special attention to the six screw holes marked ①②③ in the illustration below. Lift the [Roof Support] ([CL]+[FL]+[FR]+[CR]) a little bit, you will find ①②③ are the only six corresponding screw holes on the top frames.

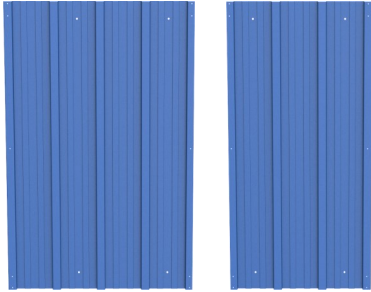
While nailing the [Roof Support] to the top frames, make sure that you fix ①②③ first, and that the screws are indeed going into the holes on the top frames. The fixing order of the 12 sets of [S3] is not important.



GENERAL RULES

GENERAL RULES: Roof Panels

Remove the protective films first



These are the roof panels you will be using.

[W1] x 1

[W2] x 3

GENERAL RULES: Single Roof Panel Nailing

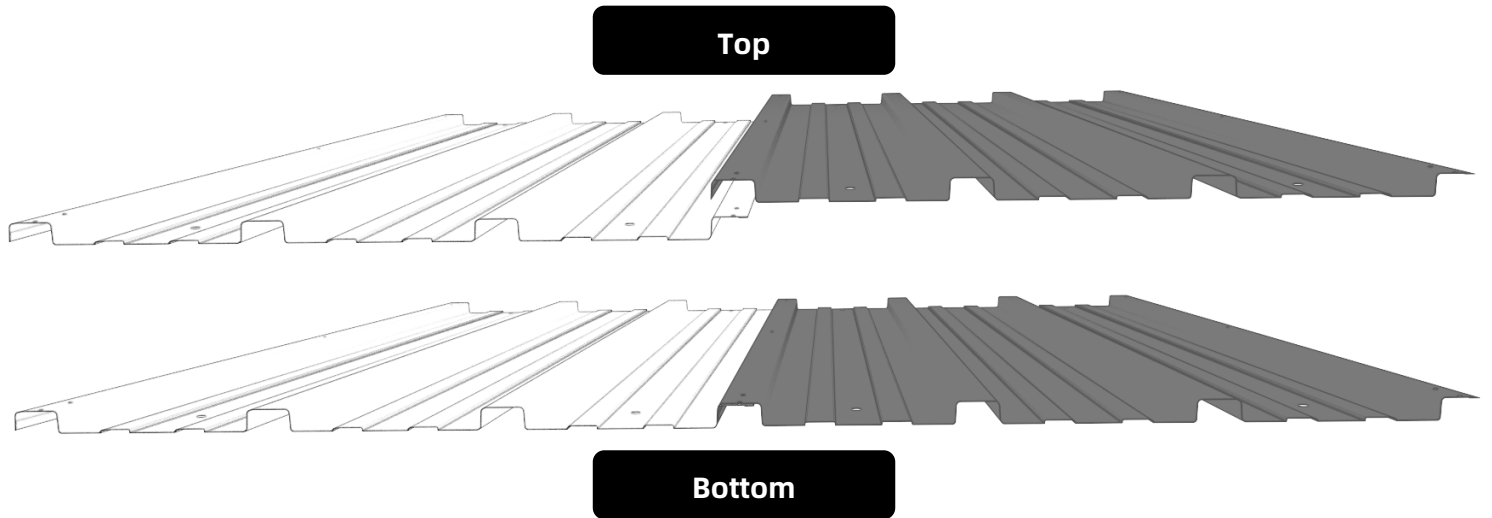


(Notice: The following rules apply to garden shed with pent roof only. We also have apex roof line, but the roof panels are quite different.)

Take a look at the [W2] above. It is obvious that the left and right edge of the roof panel are quite different. The left edge has what we call an L-channel and the right edge a U-channel. The L-channel is mainly used for attaching eaves to the roof.

GENERAL RULES

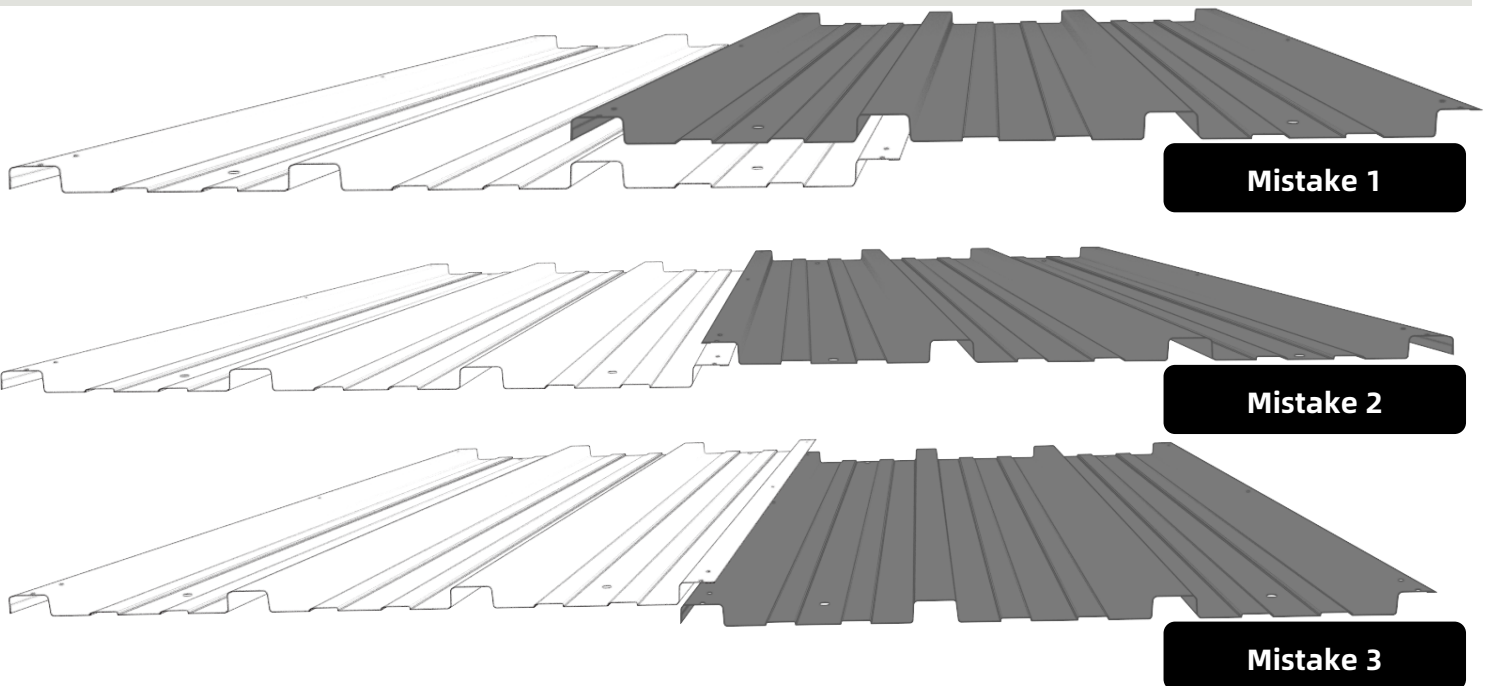
GENERAL RULES: Roof Panel Stacking



Starting from Step 3.3 you will be stacking roof panels.

The two pictures above illustrate how two roof panels are stacked together, from a top eaves to bottom eaves perspective outside the shed. As you can see, only one channel of each panel is stacked.

Notice that the roof panel on the right has a U-channel while the one on the left has an L channel. It is always the roof panels with a U channel that is on top. There are cases where two U channels are stacked together.



COMMON MISTAKE: ROOF PANEL STACKING

The three pictures above illustrate three common mistakes when stacking roof panels.

Mistake 1: Two channels of each panel are stacked.

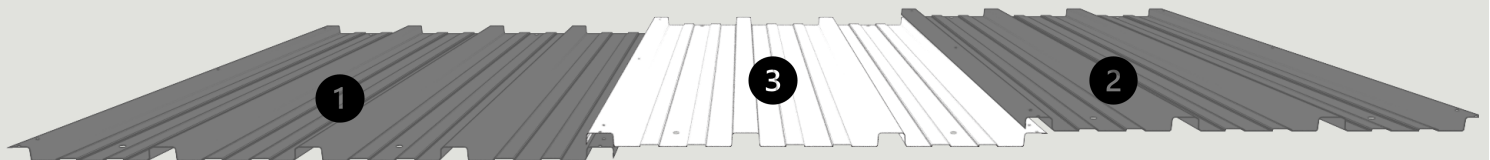
Mistake 2: Two L channels are stacked. It is the result of mistaking the top and bottom of a roof panel.

Mistake 3: It is always the roof panels with a U channel that is on top.

GENERAL RULES

GENERAL RULES: Multiple Roof Panel Stacking and Nailing

In most cases you are required to stack multiple roof panels. Here are the rules:

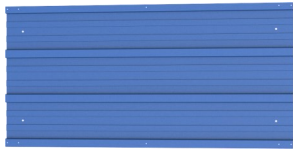


1. The rules of single roof panel nailing apply to multiple roof panel nailing as well, i.e., start from the screw holes at the bottom end.
2. The "peripheral-to-the-middle" rule applies to roof panel stacking as well.

Take the three roof panels on the top as an example, do not simply nail the wall panels from left to right or right to left. Follow the order of ①②③. This is strictly necessary.

Detailed layout will be illustrated in the following steps.

3.3 ROOF PANELS 1



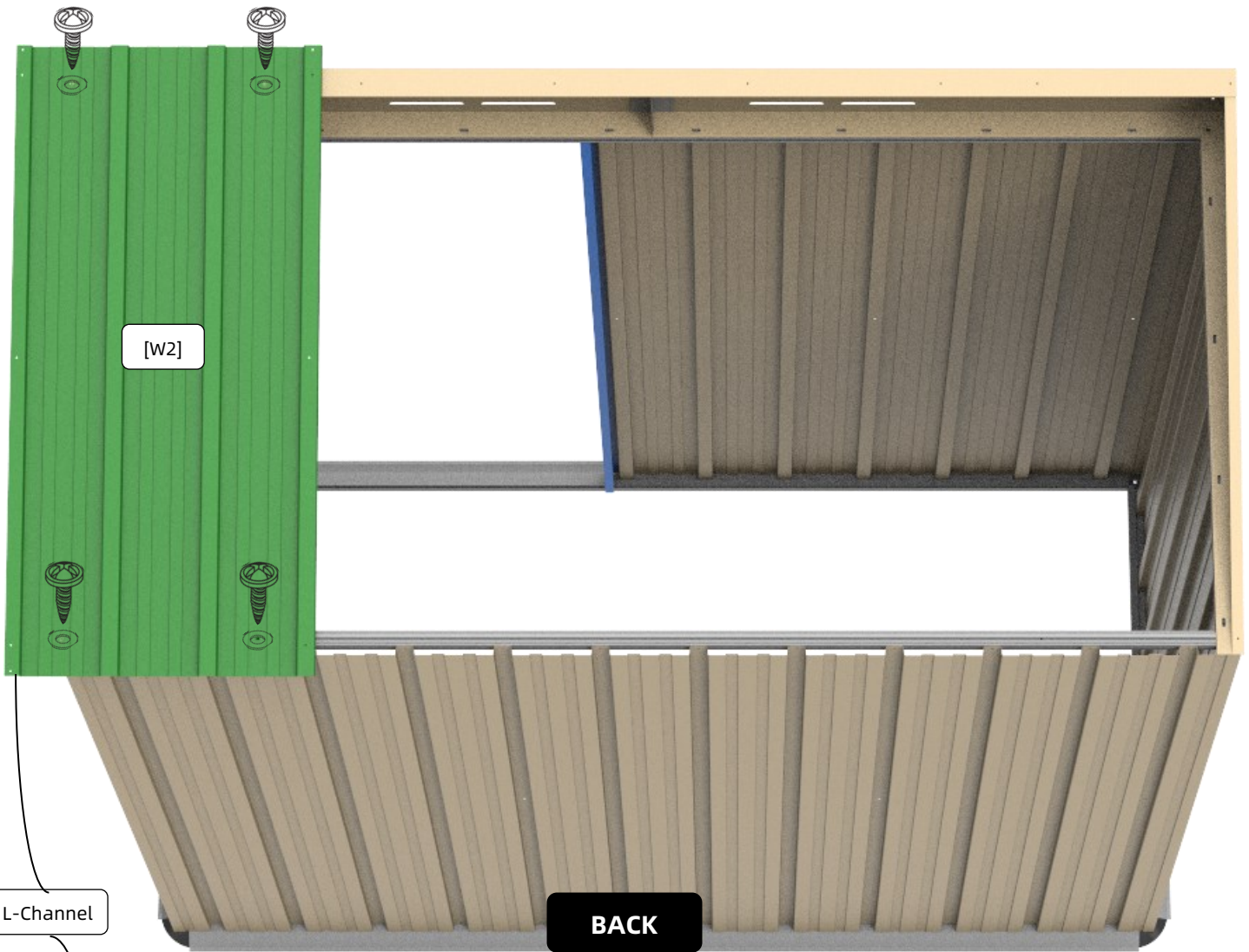
[W2] x 1



[S3] x 4

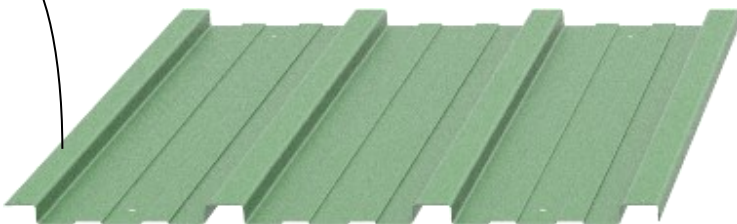


[S4] x 4



L-Channel

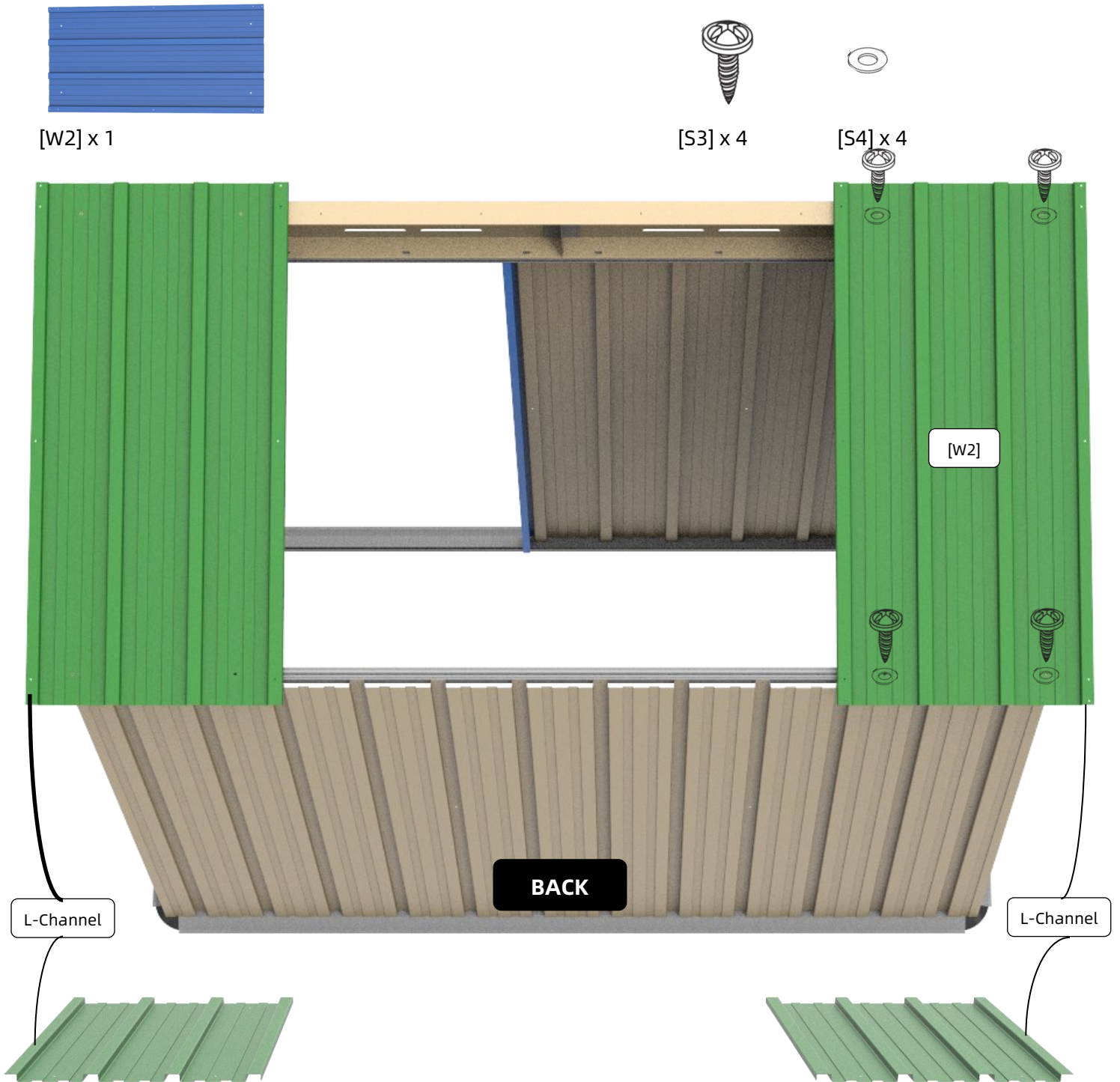
BACK



Start from this [W2] first. Some key points:

1. Place the [W2] so that the L-channel points to the outside of the shed, not inside. This is important.
2. Only four sets of [S3]+[S4] are used. The order of fixing these four sets are irrelevant, but you need to make sure that the [S3] are indeed going into the screw holes on the triangular panel or top frames.
3. The ten Screw holes on the ribs are not used in this step.

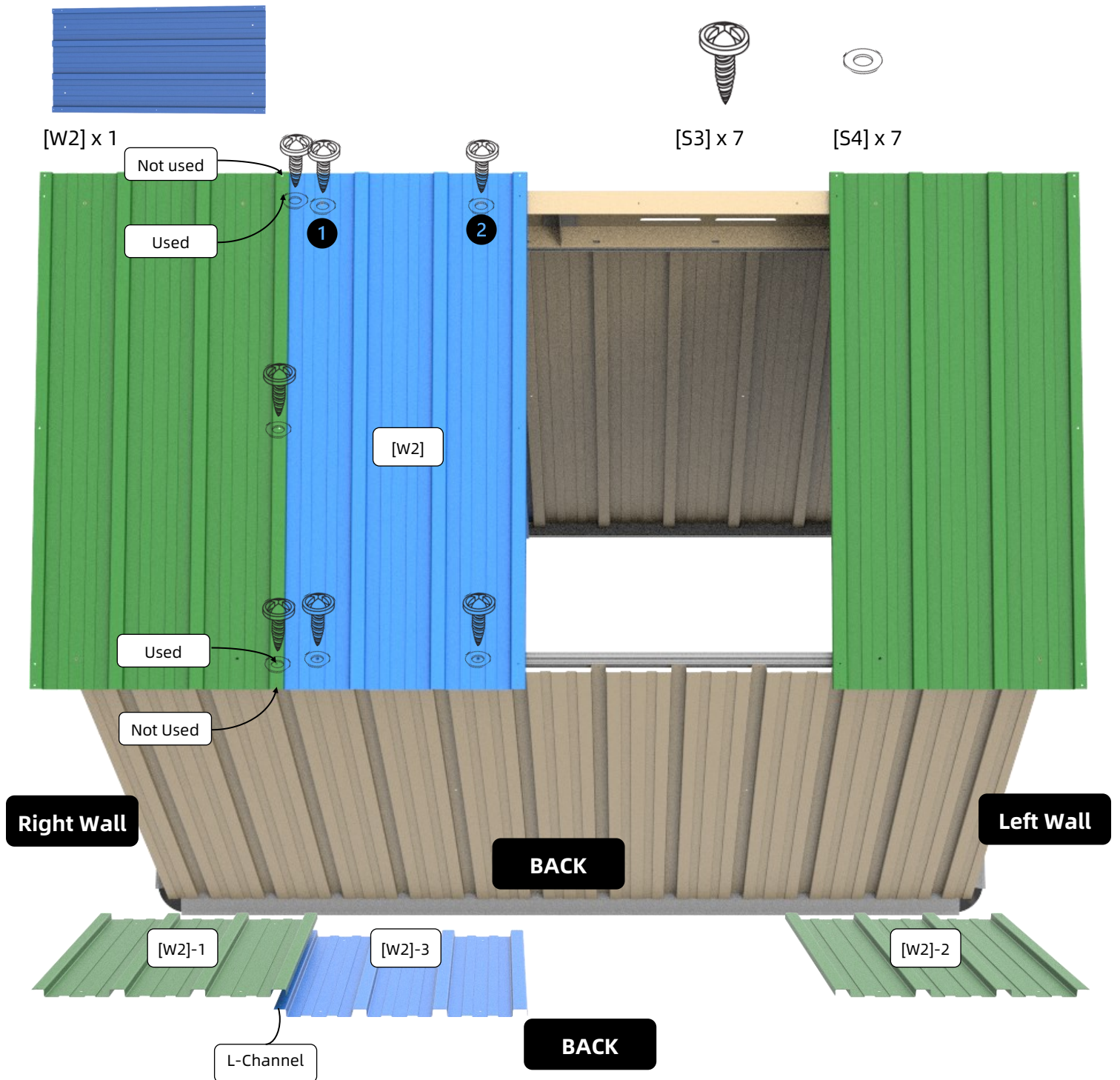
3.4 ROOF PANELS 2



This step is similar to last step. Some key points:

1. Place the [W2] so that the L-channel points to the outside of the shed, not inside. This is important.
2. Only four sets of [S3]+[S4] are used. The order of fixing these four sets are irrelevant, but you need to make sure that the [S3] are indeed going into the screw holes on the triangular panel or top frames.
3. The ten Screw holes on the ribs are not used in this step.

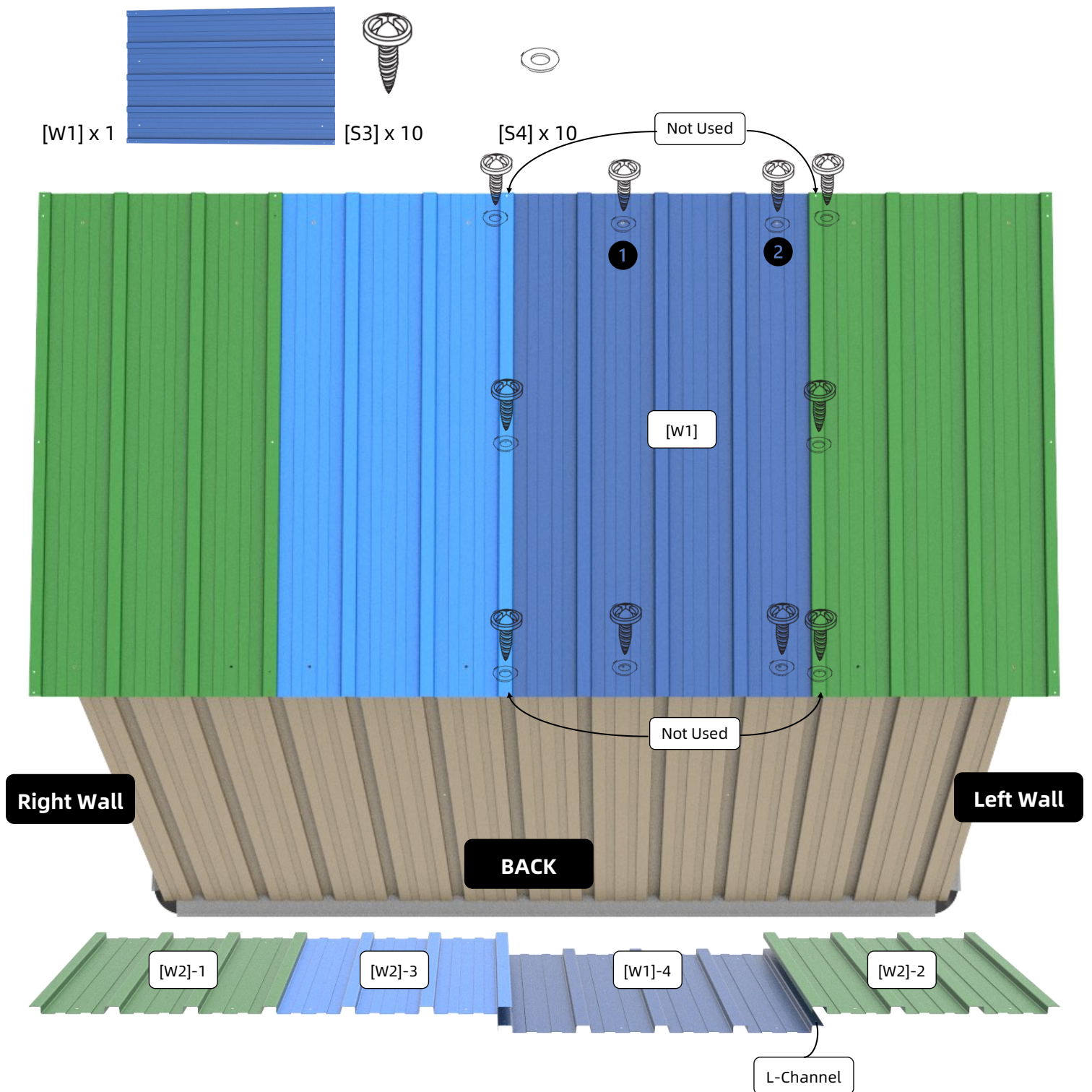
3.5 ROOF PANELS 3



Some key points:

1. Place the [W2]-3 so that the L-channel points to the right wall (not your right hand) of the shed. This [W2]-3 is placed under the [W2]-1. -1, -2, -3 indicates the order of roof panel.
2. Seven sets of [S3]+[S4] are used, four sets for nailing [W1] and three for roof panel stacking. The top two sets are the most important and should be fixed first. The five screws holes left can be fixed in whatever order.
3. The screw holes on the very edge of the ribs are not used in this step.

3.6 ROOF PANELS 4



Some key points:

1. Place [W1]-4 so that the L-channel points to the Left wall (not your left hand) of the shed. [W1]-4 is placed under [W2]-2. [W1]-4 can be placed under or above [W2]-3, because two U-channels are stacked together.
2. Ten sets of [S3]+[S4] are used, four sets for nailing [W1] and six for roof panel stacking. The top two sets are the most important and should be fixed first. The eight screws holes left can be fixed in whatever order.
3. The screw holes on the very edge of the ribs are not used in this step.

3.7 EAVES 1

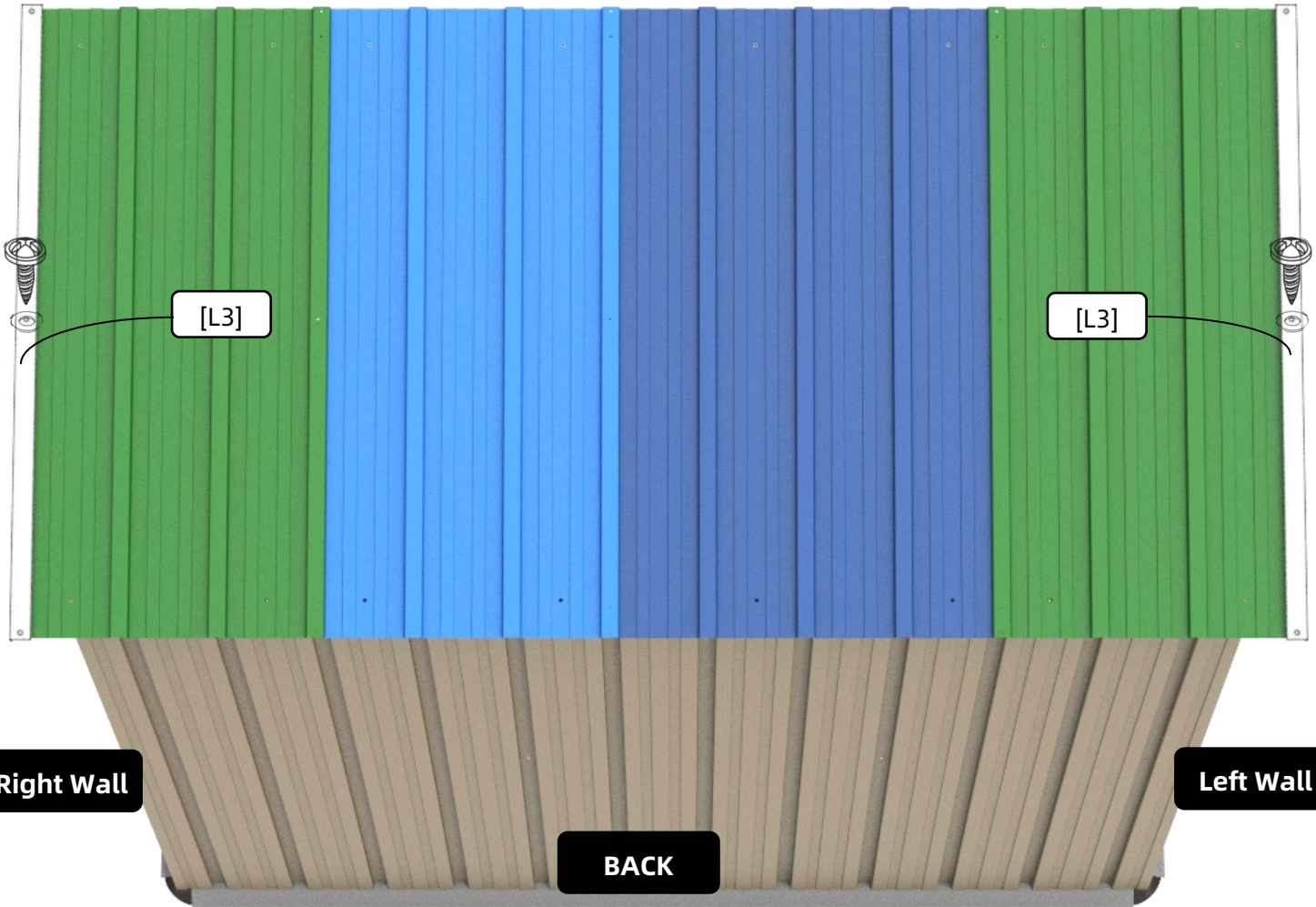


[S3] x 2



[S4] x 2

[L3] x 2



Right Wall

Left Wall

BACK

3.8 EAVES 2

[L1] x 1



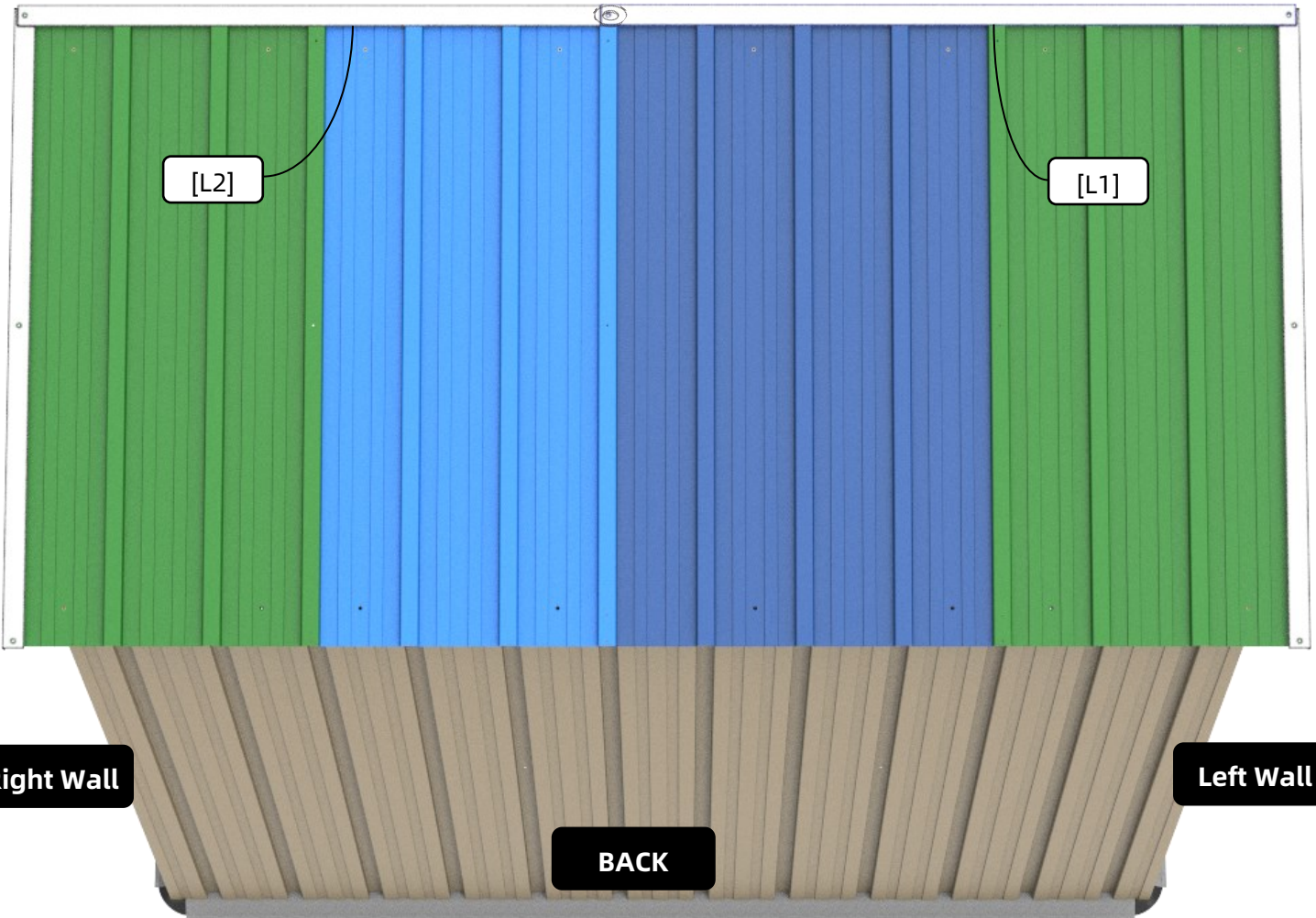
[L2] x 1



[S3] x 1

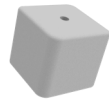


[S4] x 1



[L3] could be stacked under or above [L1]/[L2].

3.9 EAVES 3



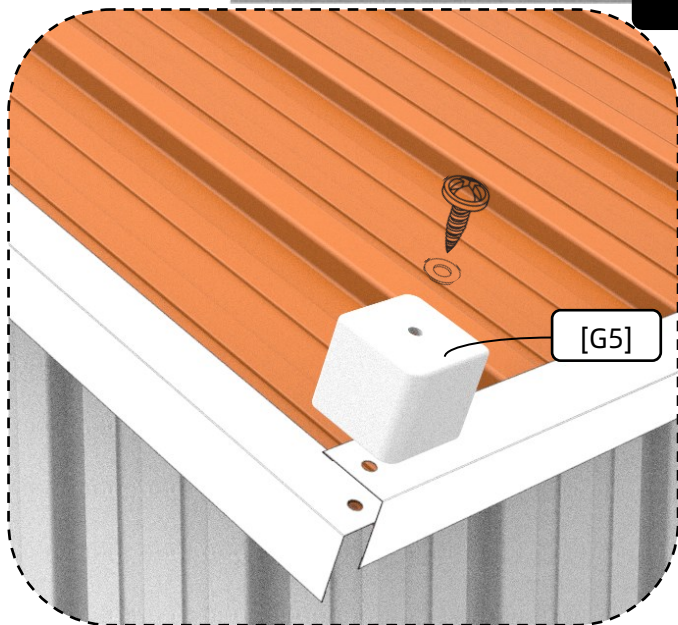
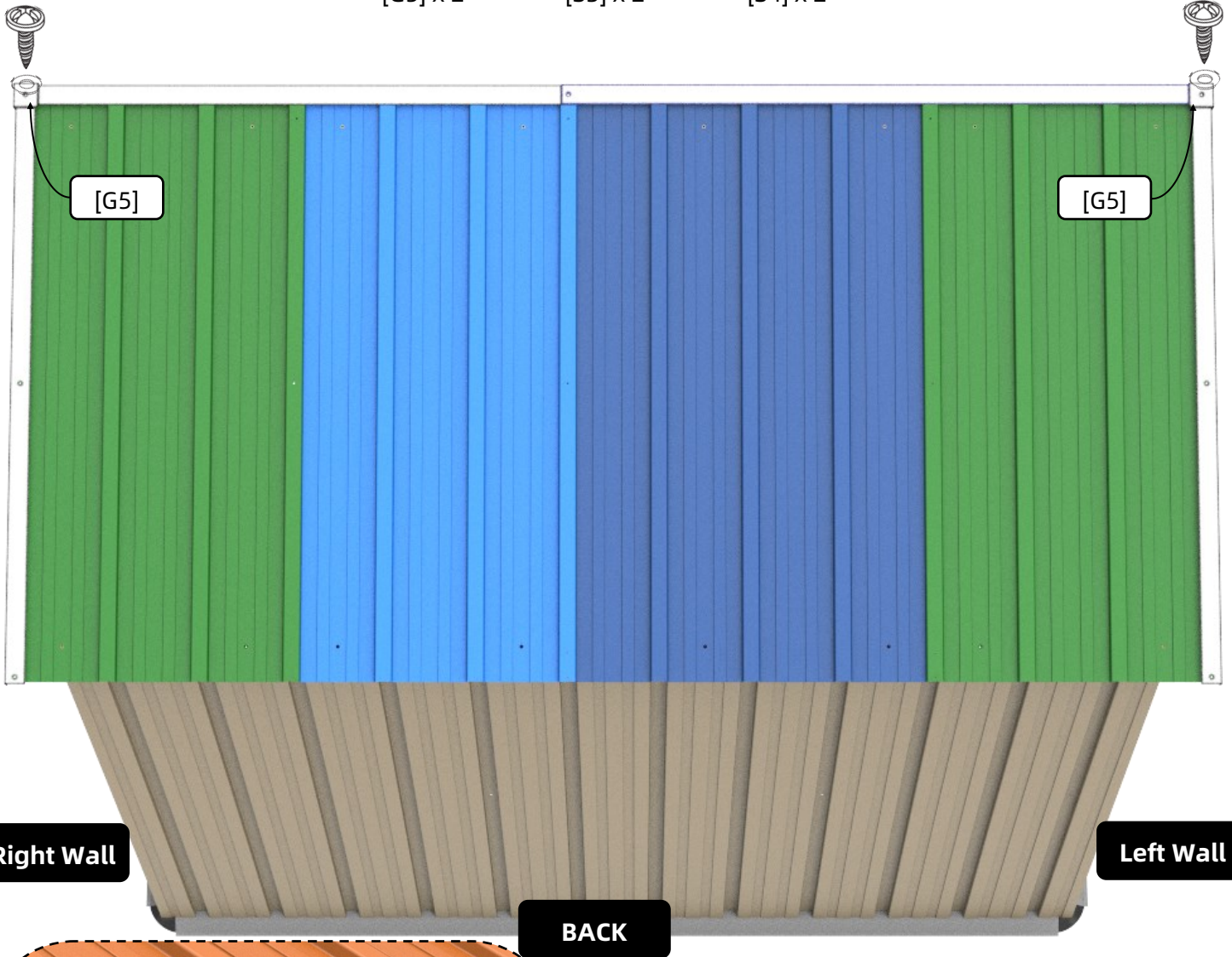
[G5] x 2



[S3] x 2



[S4] x 2



3.10 EAVES 4



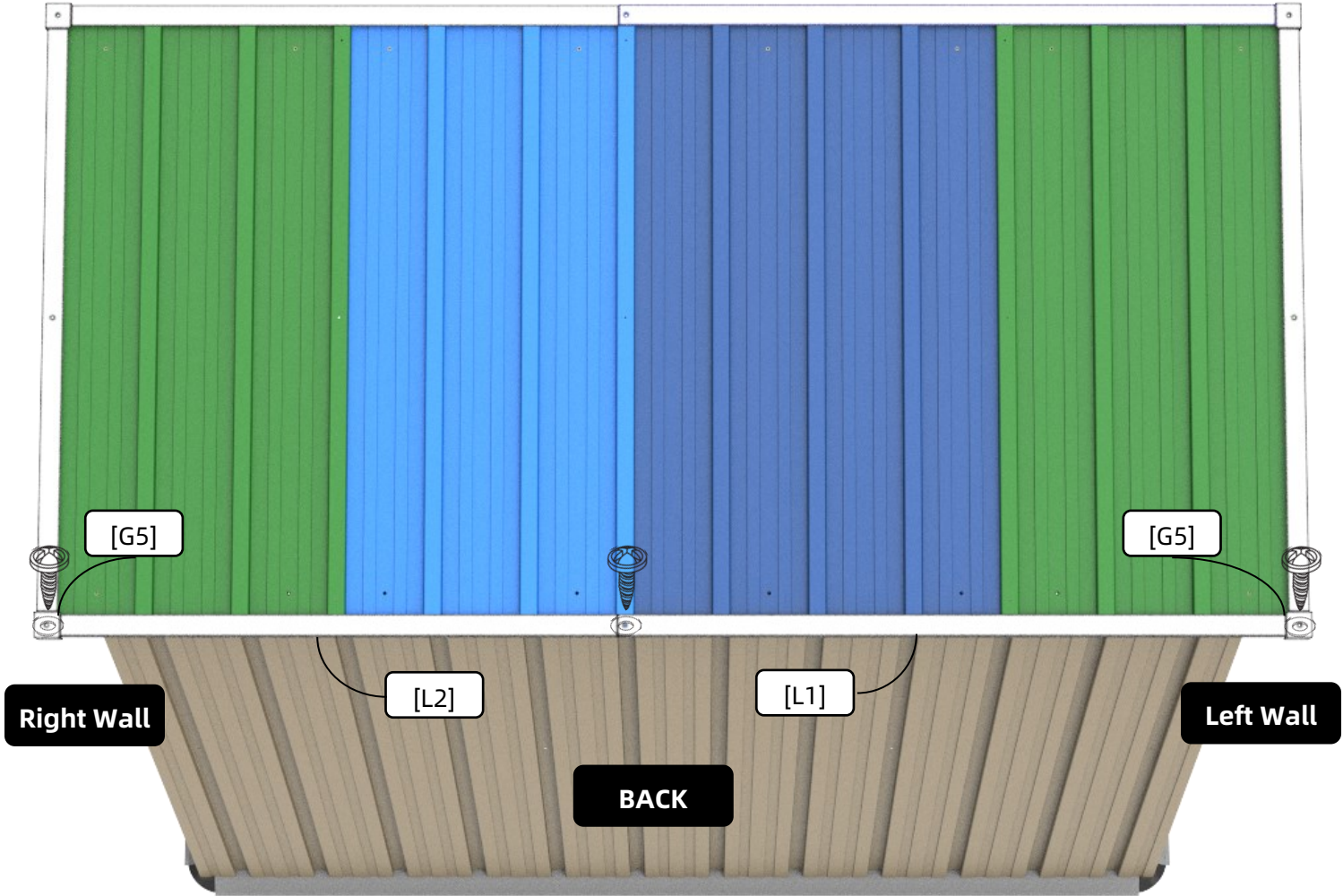
[G5] x 2



[S3] x 3

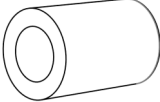


[S4] x 3



Repeat Step 3.8 to 3.9 and finish step 3.10

3.11 SCREW CAPS

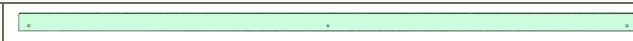
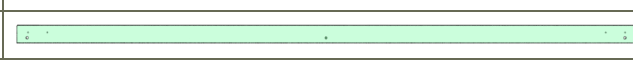


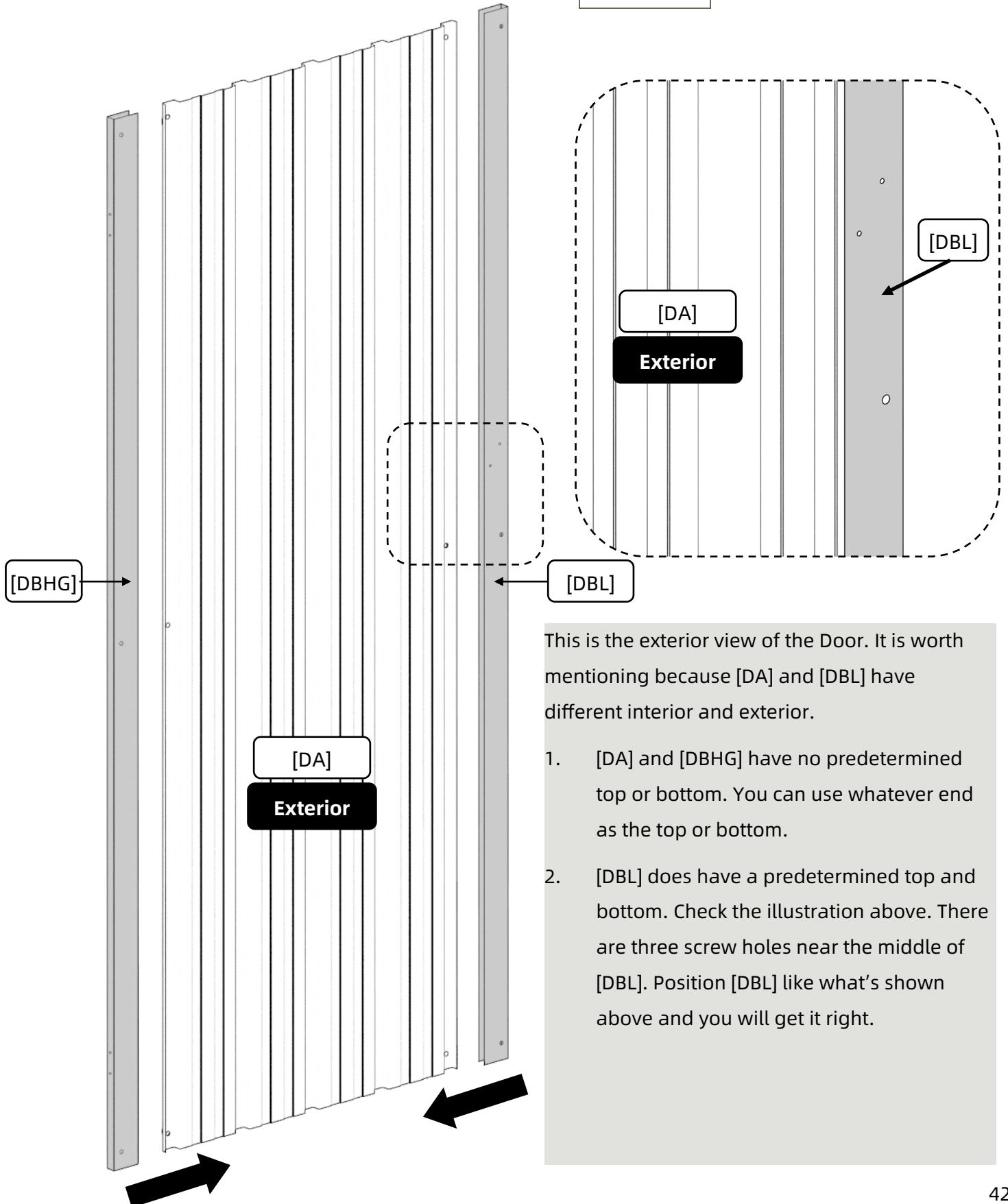
[S5]

After all of the roof panels are nailed, go inside the shed and take a look at the roof panels. You will find dozens of [S3] with their pointed tips. They are dangerous and it is necessary to seal the tips with [S5].



4.1 DOOR 1

[DBHG] X 1	
[DBL] X 1	





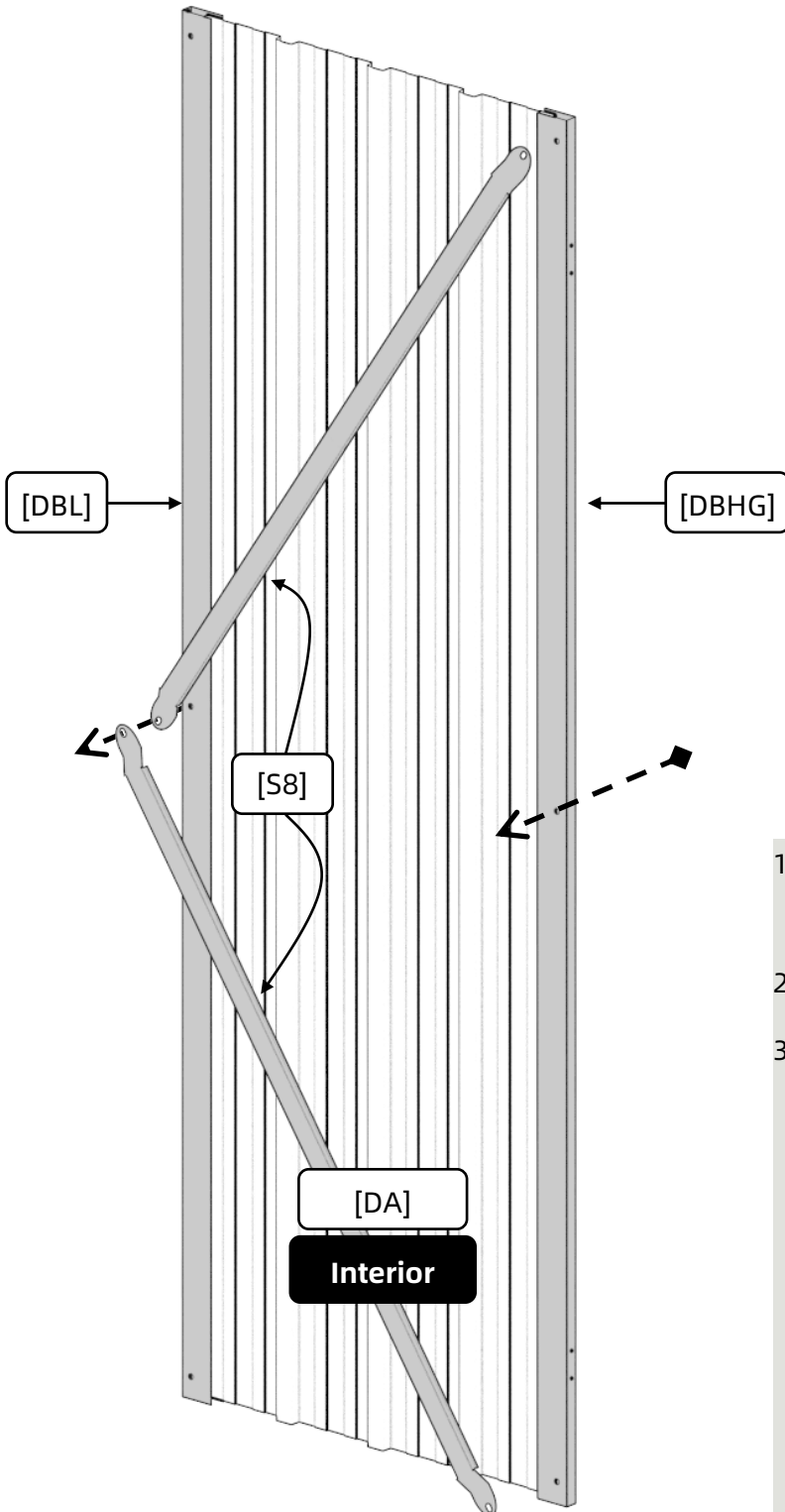
This is the exterior view of the Door. It is worth mentioning because [DA] and [DBL] have different interior and exterior.

1. [DA] and [DBHG] have no predetermined top or bottom. You can use whatever end as the top or bottom.
2. [DBL] does have a predetermined top and bottom. Check the illustration above. There are three screw holes near the middle of [DBL]. Position [DBL] like what's shown above and you will get it right.

4.2 DOOR 2

[S8] X 2 



	
[S10]+[S4] x 2	[S2] x 2
M4 x 25	

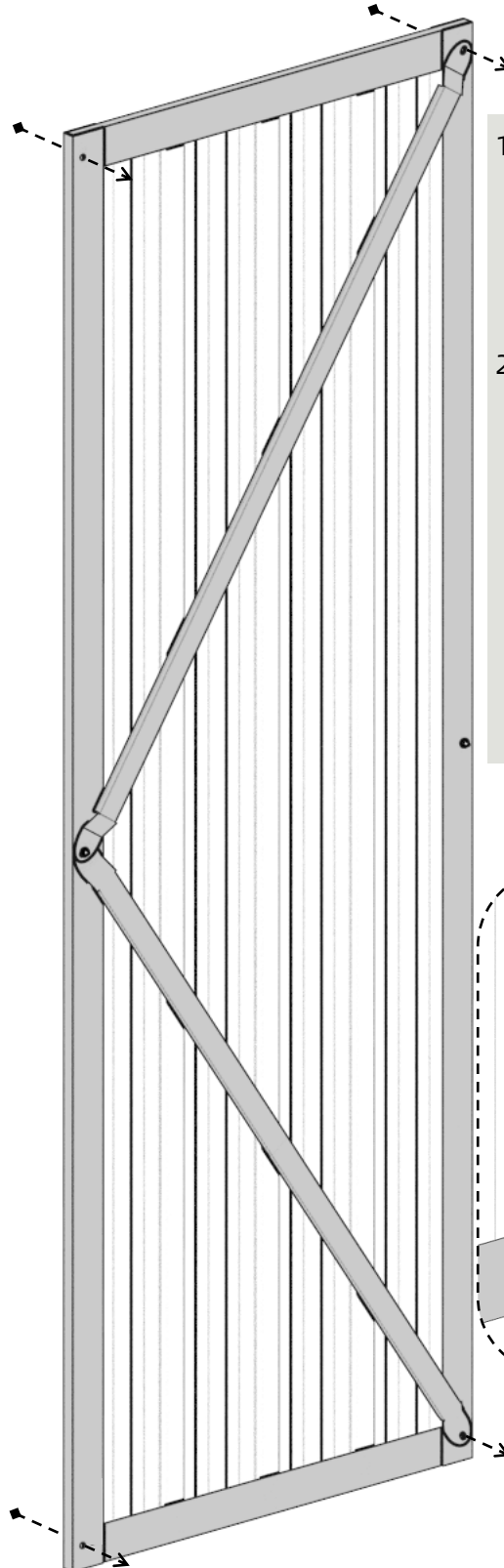
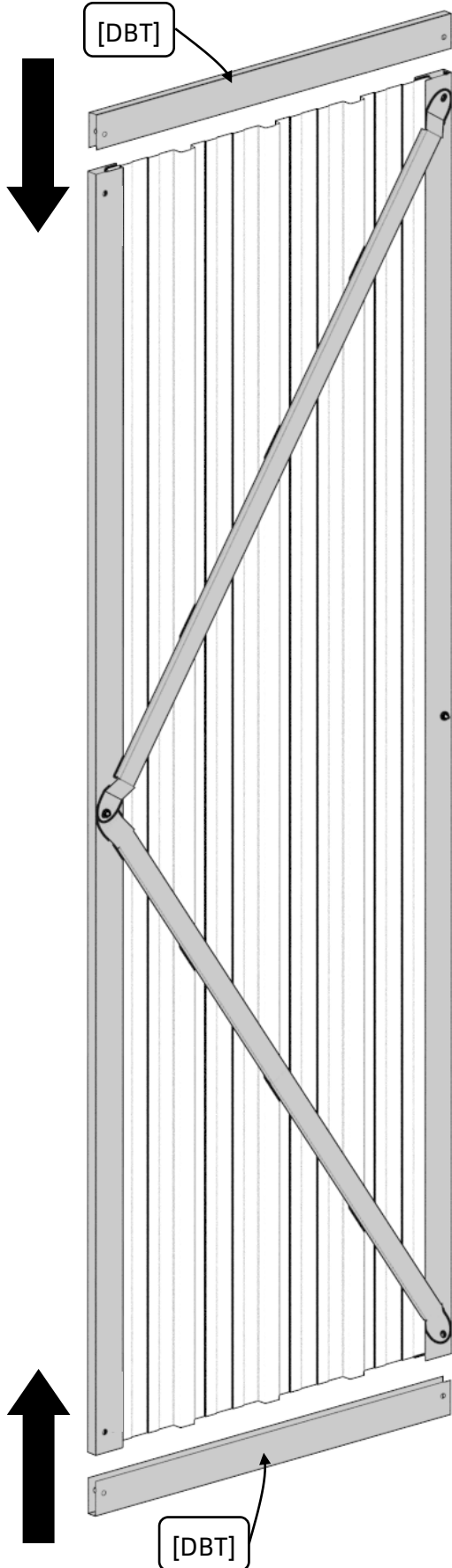


1. Use [S10] with [S2] and [S4], [S10] and [S4] being on the outside and [S2] inside.
2. Use [S10]+[S4]+[S2] to connect two [S8].
3. It doesn't matter which [S8] is on top.

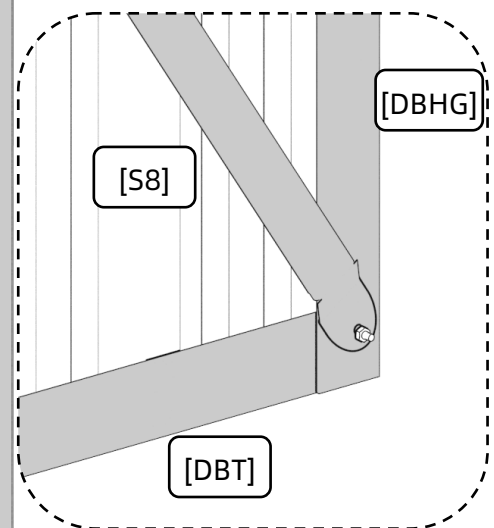
4.3 DOOR 3

[DBT] X 2

	
[S10]+[S4] x 4	[S2] x 4
M4 x 25	



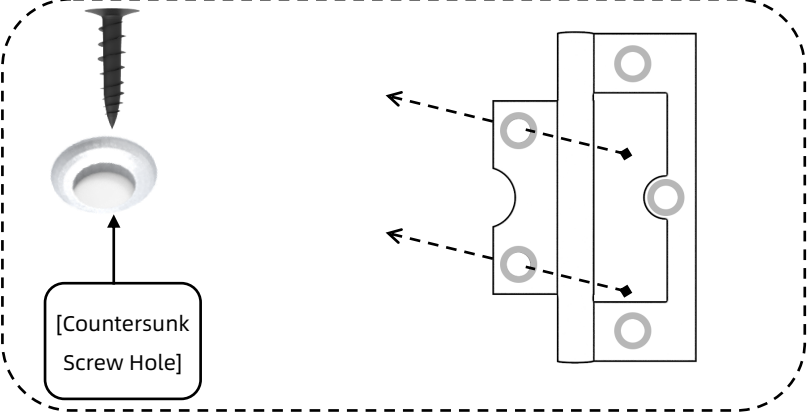
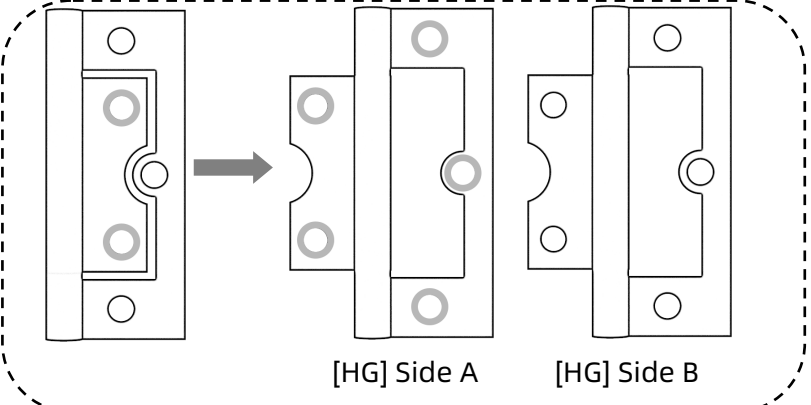
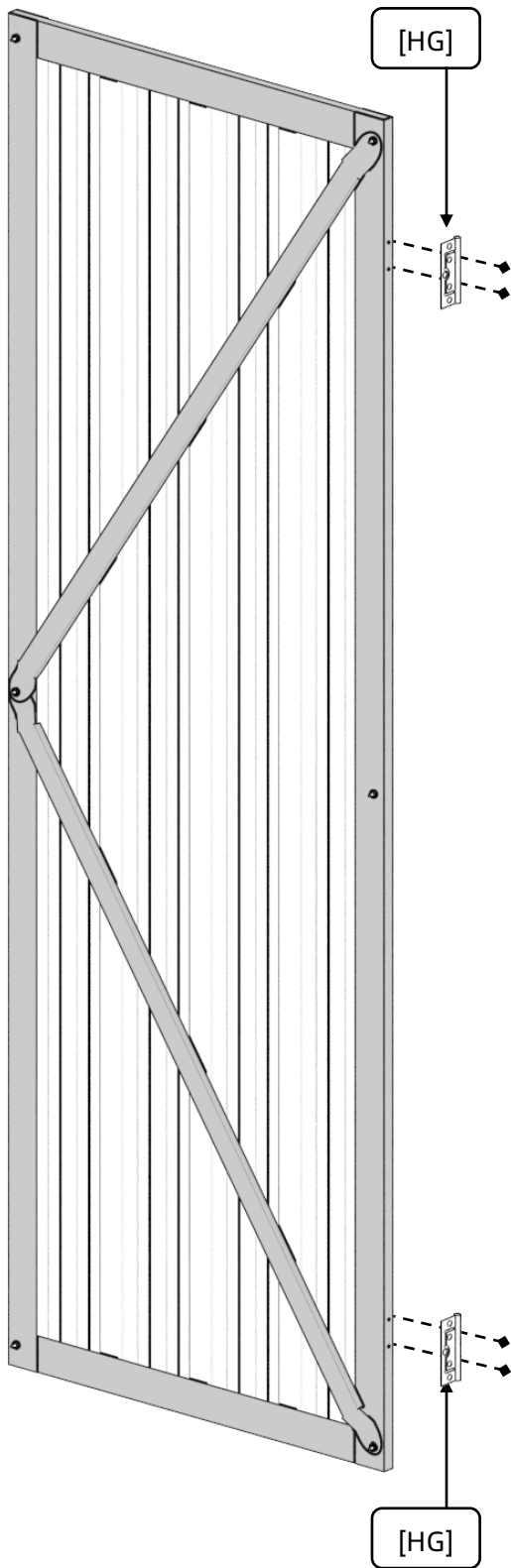
1. [DBT] has no predetermined top or bottom. You can use whatever end as the top or bottom.
2. Notice the stacking order of [DBT], [DBHG]/[DBL], and [S8]. [DBHG]/[DBL] is above [DBT] and under [S8], i.e., [DBT] is covered by [DBHG]/[DBL]. See the illustration below.



4.4 DOOR 4

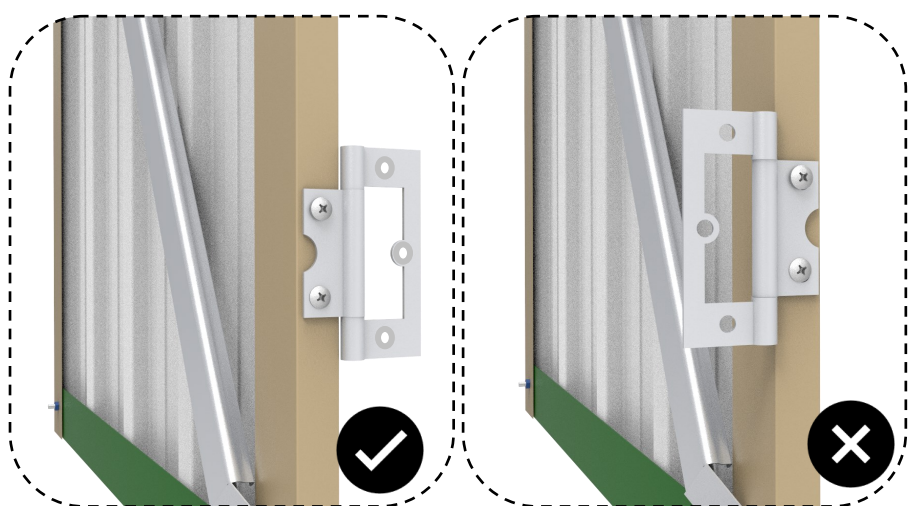
[HG] x 2	[S3] x 4

1. Bend the [HG] hinge before nailing it to the door. No tool is required.
2. Take a closer look at [HG], which has two sides. The difference is that there are five countersunk screw holes on Side A. While nailing [HG] to the door, make sure that [S3] goes into the countersunk screw holes. No [S4] is required.



COMMON MISTAKE: [HG]

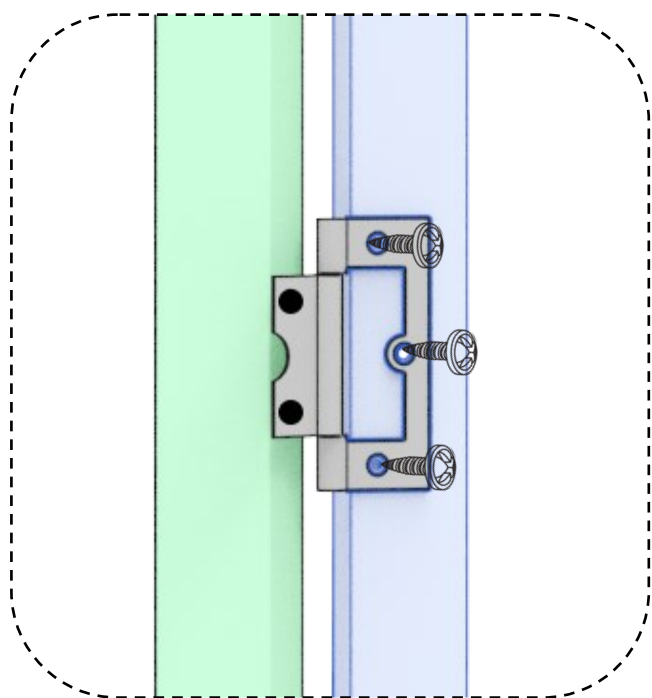
Aside from the countersunk screw holes, there is another catch about [HG]. After this step is done, the wing of [HG] should stick out to the exterior of the door. Another indicator is the crescent opening on [HG]. If done correctly, the opening points to the interior of the door, like the picture on the left below.



4.5 HINGES



[S3] x 6



Bend the [HG] again so the wing part will touch the [LL]. There are screw holes on [LL] that match the countersunk screw holes on [HG].

No [S4] is needed.

4.6 LATCHES



[LATCH] x 1



[S3] x 5



[S4] x 5

