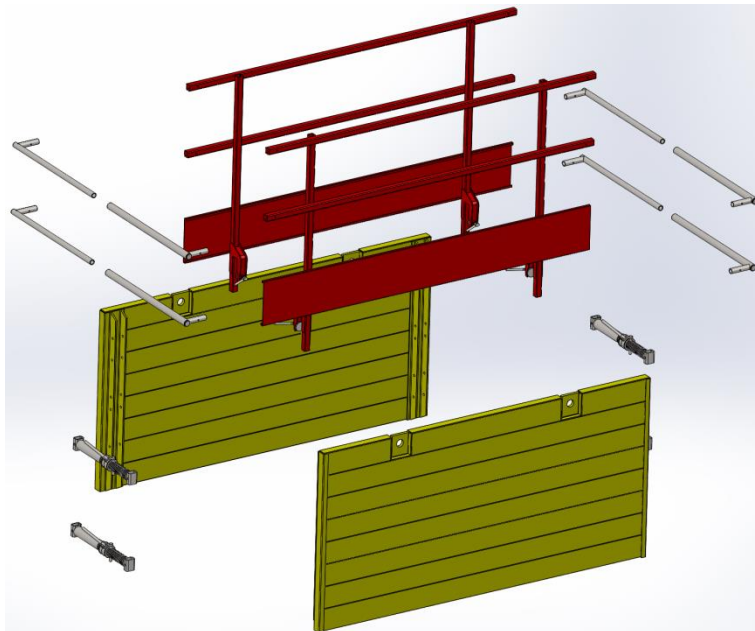


Alite-Box

1.0 General Information

1. The Alite-Box systems consist of modular aluminium and steel components.
2. A suitable excavator with 4 leg chains can also lift the system.
3. A fast, safe and economic method of providing trench safety. This system is ideal for utility workers in lightweight applications.
4. The material used for manufacture is 7 times stiffer and 8 times stronger than timber shoring planks.
5. Easily transported by van or pick-up.
6. The Alite-Box comes with 3 choices of struts that are available (Adjustable screw prop strut type, Telescopic square strut type and Turnbuckle strut type). Customers must determine which one is most suitable for their projects based on their specific site risk assessment.
7. **Marwood recommends lifting in and out of the trench using a suitable excavator with a suitable 4-leg 6.7t lifting chain.**

1.1 Exploded view and Specifications of the Alite-Box

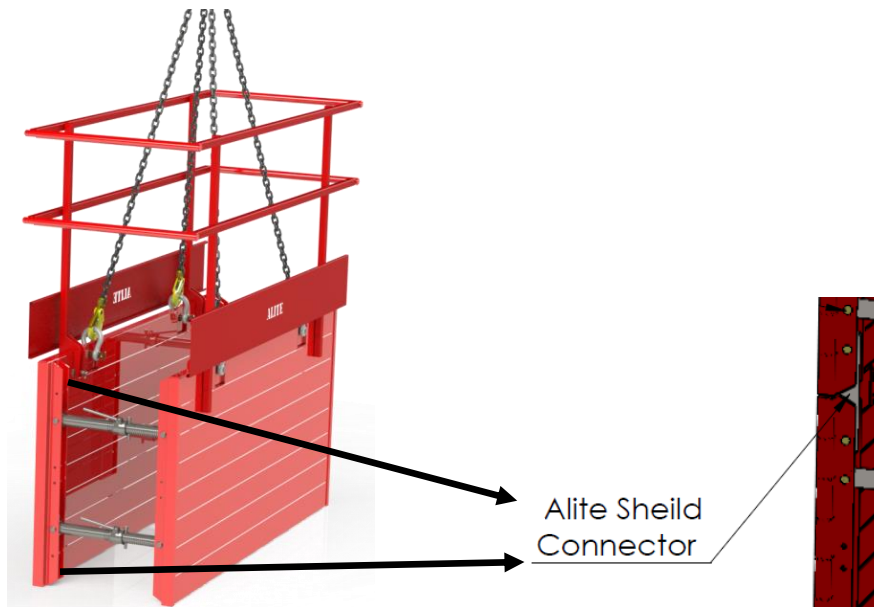


Overall length	2400mm
Overall Height	1209mm
Overall thickness of 'plank'	50mm
Overall Thickness panel	127mm
Assembled Weight (with rail, bars & prop struts)	≈313.2kg
Internal Box Width	Refer technical file strut measurements
Clearance under bottom strut	515mm
Single Panel Load Rating (working pressure) (Panel Resistance SWL)	30kPa (30kN/m ²)
1 x Panel weight	86.2kg
1 x Guard Rail weight	36kg
1 x Guard Rail dimension	2.4m x 1.45m
1 x Handrail End Bar weight	7.5kg
1 x Handrail End Bar length	0.9m

2.0 Safety Instructions

1. Only authorised personnel should be allowed to install the Alite-Box and its accessories.
2. A risk assessment must be completed prior to the use of this equipment.
3. PPE should be worn as required according to project specific risk assessment.
4. All operatives should be trained and be assessed as competent.
5. Safe means of access and egress must be maintained at all times.
6. A ground survey must also be completed to establish the location of any underground services.
7. Always comply with the operating instructions.
8. Boxes should not be used in very weak ground (especially very soft clays and peats) or where significant groundwater is present.
9. Boxes are not suitable for use in trenches with multiple service crossings.
10. Boxes are not normally suitable for use where ground movement is an issue and are therefore not recommended for use in live carriageway situations or adjacent to existing buildings / structures.
11. Boxes should not be left in-situ for extended periods within cohesive soil as adhesion on the panel surfaces will create friction and prevent safe removal.

3.0 Installation Guidelines for Alite-Box assembly & disassembly



1. First, make sure that appropriate panels, struts are available with, adequate number of pins and clips are present.
2. Place panel on the ground rib side up.
3. Connect a minimum, 4 struts to the panel using the pins and clips.
4. Lift the panel so it leans onto the spreader struts or have one person hold the panel vertical.
5. Lift the second panel to the distance of the spreader struts you are using. **(Tip: Set the bottom struts shorter than the top struts, to give the box a toe in appearance this will help removal from the trench.)**
6. Connect the spreader struts to the other panel using the pins and clips.
7. With the box assembled lower the individual guardrails onto the box, with the screw-lock on the inside. Tighten using the screw-locks, complete the guardrails by fitting all the end bars and secure with the R Clips.
8. To increase the working depth of the Alite-box system, a maximum of 2no boxes can be connected to reach a depth of 2.4m. This is achieved by attaching 4 support bracket connectors to the top of the box, and secure using the pins and clips, carefully lower the next box into position and again secure with pins and clips. Top and bottom holes in channels

should be left free and if required, the four connectors can be fitted in the channels with pins & r-clips as shown on diagram.

9. Assemble the other trench boxes to the depth required and lift one box with **guardrails and end bars** to the top of box on top of the base section. Lock panels with suitable bar.
10. **The trench box is dismantled, by reversing these assembly procedures.**

4.0 Lifting and installing the Alite-Box

1. Over digging the trench, will help with both the installation and the removal of the box from the trench.
2. Using a suitable four-leg chain sling, connect to LIFTING EYES provided.
3. On lifting the trench box with guardrail system, position over the excavation and lower in gently. **DO NOT LIFT THE TRENCH BOX WITH THE CHAINS ATTACHED TO THE SPREADER STRUTS.**
4. Once the trench box is in place, remove the chain.
5. Ensure the box is stable when located in the trench.
6. To extract the trench box from the excavation, attach the chain as for installation and lift the shield vertically out of the excavation.
7. Now the shield can be lifted out of the excavation.
8. **Do not drag or walk the box forward within the trench as this may result in excessive damage to the trench box.**

5.0 Maintenance of Alite-Box

- An inspection of the trench box system is required to be completed by a competent person at the start of the shift before work begins.
- Ensure the system is complete
- Any damage or security concerns about the boxes, paying particular attention to the struts and handrail system.
- Make sure that the connector pins and R-clips are fitted and in good condition
- Report any damage or concerns to your supervisor and local Marwood Group Ltd Depot
After use clean any concrete or mud on the boxes or between the struts and replace all pins and clips.

This equipment must not be modified or repaired. Contact your Local Marwood Group Ltd Depot for additional support if required