

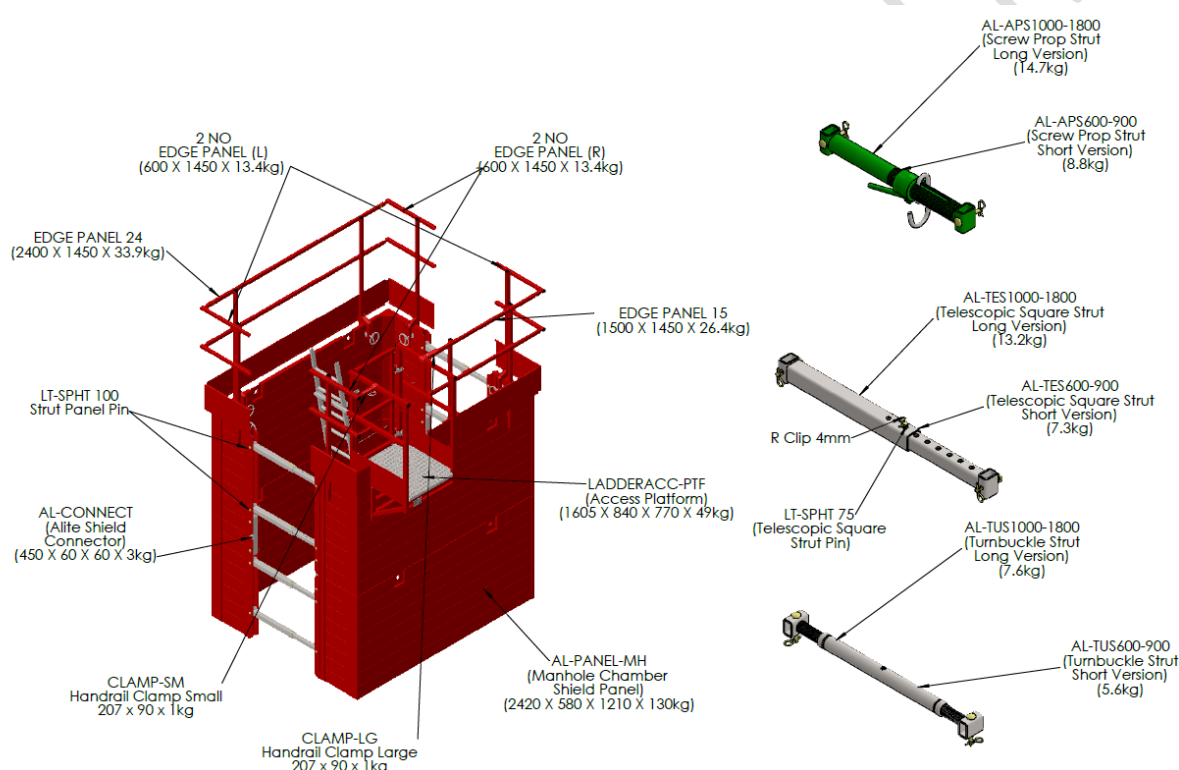
ALITE MANHOLE BOX INSTRUCTIONS

1.0 General Information

1. The Alite Manhole Box systems consist of modular aluminium and steel components designed to work in conjunction with Alite Trench Box systems.
2. A suitable excavator with 4 leg chains can be used to lift the system (See section 4).
3. A fast, safe and economic method of providing trench safety.
4. The material used for manufacture is 7 times stiffer and 8 times stronger than timber shoring.
5. Easily transported by pick-up.
6. There are 3 choices of struts available, (Adjustable screw prop strut type, Telescopic square strut type and Turnbuckle strut type). Customers may determine which one is most suitable for their projects based on their specific site risk assessment.

Marwood recommends lifting in and out of the trench using a suitable excavator with a suitable 4-leg 6.7t lifting chain.

1.1 View of the Alite Manhole Box system



2.0 Safety Instructions

1. Only authorised personnel should install the Alite Manhole Box system and its accessories.
2. A specific site risk assessment must be completed prior to the use of this equipment.
3. PPE should be worn as required according to project specific site 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, the condition of the ground and likely changes due to weather, flooding etc...
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 Manhole Box assembly & disassembly

1. First, make sure that appropriate panels, struts and edge protection parts are available with, adequate number of pins and clips. NOTE: All clamps for the edge protection parts must be fully open to ease assembly steps.
2. Place panel on the ground with the flanges of the strut channels facing upward.
3. Connect a minimum of 4 struts of all equal length to the panel using the pins and clips, leaving the top and bottom holes clear.
4. Lift the panel so that it leans onto the lower spreader struts or have one person hold the panel vertical.
5. Lift the second panel to face the first at a distance that the struts can be connected.
6. Connect the spreader struts to the second panel using the pins and clips.
7. With the box assembled, lower all the individual edge protection parts required onto the box, with the screw-clamp on the inside, including the end edge protection (L panel & R panel as per above diagram) leaving space for the access platform if required and secure with the spring clips. When all the components are in position, tighten the clamp screws.
8. To increase the working depth of the Alite Manhole Box system, a maximum of 2 no boxes can be connected to reach a depth of 2.4m. This is achieved by attaching 4 no connectors to the top of the first box, and secure using the pins and clips, carefully lower the next box into position and again secure the connector with pins and clips. Top and bottom holes in channels should have been left free from struts to allow for this.
9. Once assembled, lift the complete box and lower into position in the excavation.
10. Install the access platform as required including the handrail clamps supplied with it.
The Alite Manhole Box is dismantled, by reversing these assembly procedures.

3.1 Installing guideline for Ladder Access Platform

1. Follow the steps above. The platform can only be located at the end of the panels.
2. Loosen the edge protection 1500 clamps to give some movement.
3. Lift the Ladder Access into the space between the 1500 and end edge protection and adjust until the gaps either side are equal (approx. 40mm).
4. Secure the Ladder Access platform and edge protection using the screw clamps.
5. Refit the handrail clamps to clamp the edge protection to the access platform top rail. Note that there are two different sizes the smaller fitting the end protection top rail return.
6. Check and tighten all clamps, place ladder and secure in position.

4.0 Lifting and installing the Alite Manhole Box system

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 manhole box with guardrail system, position over the excavation and lower in gently. **DO NOT LIFT THE MANHOLE BOX WITH THE CHAINS ATTACHED TO THE SPREADER STRUTS.**
4. Once the Alite Manhole Box is in place, remove the chain.
5. Ensure the Alite Manhole Box is stable when located in the trench.
6. To extract the Alite Manhole Box from the excavation, attach the chain as for installation and lift the panel vertically out of the excavation. If the system consists of a ladder access platform, the latter must be removed whilst the manhole box is in the ground works.

The box should not be lifted with the Ladder Access Platform fitted. Do not drag or walk the box forward within the trench as this may result in damage to the manhole box.

5.0 Maintenance of Alite Manhole Box

- An inspection of the Alite Manhole 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 and check all components. Inspect for any damage or security issues with the boxes, paying particular attention to lifting eyes, the struts and edge protection system including clamps. 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 panels, 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