

End Panel Safety and Operating Procedures

Preamble

End panels are designed for ground pressures up to a maximum of 40 kN/m². If in doubt about the generated ground pressure in the excavation consult a qualified soil engineer.

End panels are designed to close off the open ends of manhole boxes or trench boxes. These instructions should be read in conjunction with the Safety and Operating Procedures for Trench boxes and Manhole Boxes.

End panels must be installed central to the trench box or the manhole box and overlap the ends of the trench box by 100mm each side or the manhole box wings by a minimum of 25mm each side.

Unloading (Method to be determined by Risk Assessment on Site)

1) By forklift/telehandler

Ensure the forklift/telehandler has sufficient capacity and adequate fork length to lift the equipment safely. (See capacity table).

Ensure that each lift occurs at the centre of gravity. Lift only one item at a time.

2) By crane/excavator

Ensure the crane/excavator has sufficient capacity and adequate chains to lift the equipment safely. (See capacity table). Use good slinging practice at all times.

Ensure the chain(s) are connected to the four lifting points on the panel. Lift only one item at a time.

Storage/Stacking (To be determined by Risk Assessment on Site)

End panels should be stored on firm level ground by stacking with each panel separated by a suitable timber bearer

How to install an End Panel

The method of installation should be determined by Risk Assessment.

Dig and Push

Install the lower trench box or manhole box to panel depth. Then install the end panel by excavating a shallow trench (approx 1.0m) across the end of the trench box or manhole box. This trench should be wide enough and deep enough to accept the end panel plus 100mm.

The end panel is then placed into this trench ensuring the end rails face toward the trench box or manhole box.

Push the end panel until it is level with the top of the lower trench box or manhole box. This process must be observed to ensure the end panel is central and has the minimum overlap of 25mm per side. Using soil to fill any voids.

Care should be taken to ensure the end panel is vertical.

If adding a further end panel, excavate below the end panel and push it down by approximately 1.0m. Lift the second end panel (with the cutting edge uppermost) and secure the panel connectors in the lower handling points (so they are hanging down) using the pins provided secured with R Clips. Locate the second end panel on top of the first end panel such that the panel connectors locate in the uppermost handling points of the first end panel and insert the pins provided securing with R Clips.

The dig and push the end panel to the required depth. Using soil to fill any voids.

Compaction

Over time the walls of the excavation may close in on the end panel, it is therefore recommended to ease the end panel by slightly lifting it prior to compaction to prevent compaction causing the end panel becoming stuck.

Never compact more than one third up the face of the end panel then raise it before continuing.

Always be aware that compaction may damage the inner faces of the end panel.

How to extract an End Panel

The method of extraction should be determined by Risk Assessment.

Extracting the end panels is the reverse of installation.

Due to consolidation it may be more difficult to extract the end panel than installing it. Use only the extraction/lifting points located on the top panel. Ensure that the chain sling is strong enough to undertake this operation. Be aware that chains may snap if improperly used and cause severe injury, therefore never allow personnel in the vicinity of the lift.

Other Hazards

- 1.0) Never use bent or damaged end panels
- 2.0) Never remove an end panel with personnel inside.
- 3.0) Never enter an unsupported part of the trench.
- 4.0) Never apply side loads to struts
- 5.0) Never exceed the load capacity of the end panel.

Always practise good site safety practice