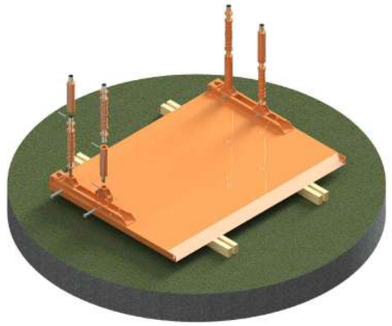
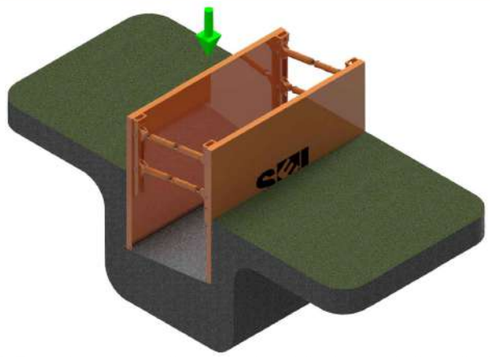
Installation Sequence



1. Lay the Trench Box panel down on a level surface on suitable timber bearers using the 4-Leg chain provided. Connect the Spring Spindle Holders using a **40Ø Pin & R-Clip.** Connect the Adjustable spindle and appropriate extension pipes using **20Ø Pins & R-Clips**.
Ensure that the lower Spindles are extended by 30-50mm more than the top Spindles.

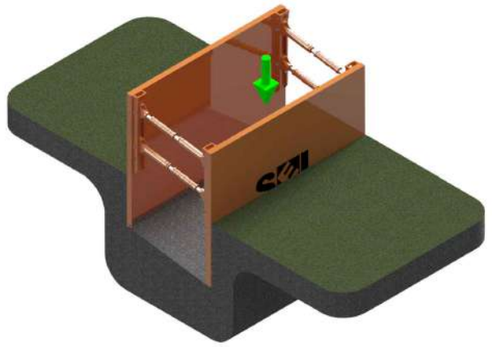


5. Repeat stage 4 on the other side of the box and alternatively Dig & Push the box to the required depth.
Smaller incremental steps are better for the shoring.

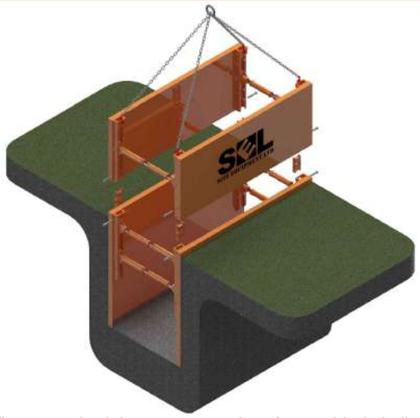
Potential Working at Height

2. Lower the opposite panel onto the spindles using the 4-Leg chain. Chain hooks to be secured to the handling points at the upper and lower ends of each side.
Secure to spindles using **20Ø Pins & R-Clips**. Do not remove slack in the chains until all the spindles are secured.

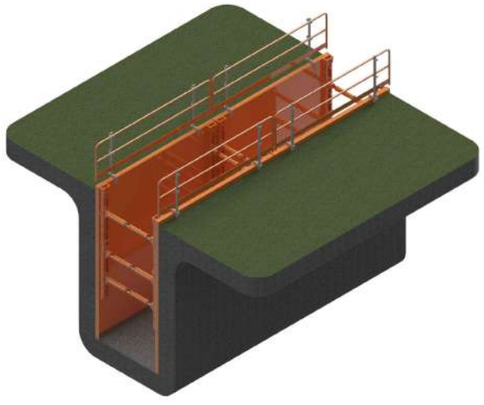
3. Lift the box into an upright position using the 4-Leg chain secured through the upper handling points. Lower the box into a pre-excavated trench (max. 1.25m - soil stability assessed by the Contractor).
Fill and compact any gaps outside the box.



4. Excavate within the box up to 500mm deeper. Using the excavator bucket, push the top of the panel down.
Do not batter the box or push the spindles.
Note that the spindles must not exceed +/-8° rotation.
Do not enter the trench until the box is fully installed.



6. Where required, lower on a top box (assembled similar to stage 1) and connect using the Box Connection Unit and **40Ø Pins & Clips** in each corner (see Detail A).
Continue the Dig & Push sequence as before.



7. Install suitable edge protection and access where required. Ensure that the open end of the excavation is battered to a safe angle as determined by the Contractor or closed with suitable end closure (see below).

Box Details

Box Length	Panel Height	Box Weight Range
m	m	kg
2.50	2.6 Base	1680-2216
	1.4 Top	990-1258
3.00	2.6 Base	1935-2471
	1.4 Top	1134-1403
3.50	2.6 Base	2180-2716
	1.4 Top	1280-1548
4.00	2.6 Base	2420-2956
	1.4 Top	1425-1693
4.50	2.6 Base	2950-3486
	1.4 Top	1810-2058

Useful Links

Trench Box Installation Animation

Site Equipment Technical Library

Rev.	Revision Details.	DR	Date.
0	First Issue	SRB	11/03/20

Status:

APPROVED

Removal

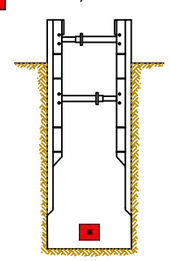
The removal of the boxes should be performed sequentially. Once the permanent works are installed, the contractor should backfill inside the box in layers not exceeding 500mm.

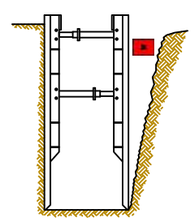
Once the backfill is compacted to the Permanent Works design standard, the box can be lifted by a maximum of 500mm or +/-8° Spindle angle.

Continue the removal of the box sequentially in the reverse of the installation procedure until the boxes can be removed completely.

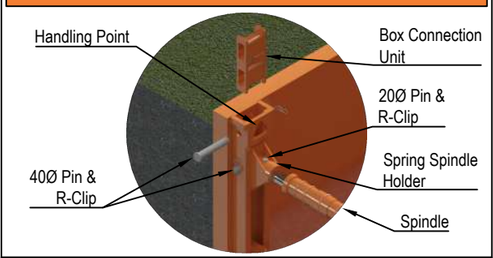
Do's and Don'ts

- ✓ Contact Site Equipment if unsure about any element of this document.
- ✓ Inspect **all** components to ensure that there are no signs of damage and that they are installed correctly.
- ✓ Ensure that the limitations of the box and this safe use guide is fully briefed to all operatives undertaking the work.
- ✓ Ensure suitable edge protection and access are provided as required.
- ✓ Ensure suitable lifting equipment is employed and suitable checks are carried out regularly.
- ✓ Ensure that the full height of adjacent soil is considered where a local ground reduction has been undertaken.
- ✗ **Do not** enter an excavation unless it has appropriate shoring in place.
- ✗ **Do not** have vertical earth faces at ends of boxes (see end closure options).
- ✗ **Do not** allow overdigging of the excavation.
- ✗ **Do not** allow storing of spoil or construction materials within 4m of the proposed excavation.
- ✗ **Do not** fly the boxes.
- ✗ **Do not** have out of balance digs.





Detail A



Edge Protection & Access

Please contact Site Equipment for info on our full range of Access & Edge Protection accessories.

Site Specific Considerations

A **Trained and Competent** person must assess both the site and ground conditions.

The boxes must be installed using the Dig & Push method in temporarily unstable ground. In stable and self supporting ground the boxes can simply be lifted into a pre-excavated trench. If any of the following ground conditions are anticipated / encountered, please contact SEL for advice as this box system may be limited in depth or suitability.

- ? Unknown Ground
- ? Very Loose SAND
- ? Very Loose GRAVEL
- ? Soft / Very Soft CLAY
- ? Silt
- ? Peat
- ? **Careful consideration must be given to employing boxes in water bearing soils or in the vicinity of watercourses.**

If anything beyond the following site conditions are anticipated / encountered **please contact SEL for advice**.

- ✓ Maximum excavation depth of 5.3m
- ✓ Plant and machinery <30T operating near dig.
- ✓ Adjacent slopes not in excess of +/- 1 in 10.
- ✓ Deflection sensitive services **not** located within 4.0m of the dig.
- ✓ Public Highway **not** located within 7m of the edge of the excavation.
- ✓ Maximum excavation duration <12 weeks
- ✓ No Structures located within 5.3m of dig.
- ✓ No Services cross the path of the boxes.
- ✓ A live railway is **not** located within 7m of the edge of the excavation.
- ✓ Suitable plant is available to lift and manoeuvre the selected box.

Residual Risks

The following residual risks must be addressed in the Contractors RAMS:

1. When lowering the opposite panel onto the spindles, ensure operatives hands are low down on the spindle (Stage 2).
2. Ensure operatives hands are kept clear of pinch points when lowering the top box onto the base box (Stage 6).
3. When removing the chains from the opposite panel, consider potential working at height risks (Stage 2).
4. Locate all potential services prior to excavation in accordance with NRSWA Regulations.
5. The excavation may be classified as a confined space. The Contractor must assess this risk and provide suitable gas detection and rescue equipment where appropriate.
6. If a spindle is struck accidentally by an excavator, inspect immediately. If damage is visible, remove the box from the trench and replace the spindle following the steps identified above.

End Closure Panels

Both ends of the boxes must be either connected to an adjacent box, suitably battered back, or closed off using suitable end closures (End Closure Panels or suitably supported sheets).

Do not use the spindles for support.

Please contact SEL for further information on our full range of end closure options.

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Standard Trench Box User Guide
Version V1.1

Drawing Scale:	Paper Size:
Varies	A3
Drawn By:	Date:
SRB	11/03/20
Checked By:	Date:
PJ	11/03/20
Drawing Number:	Revision:
SEL-UG-STD_T_001	V 1.1