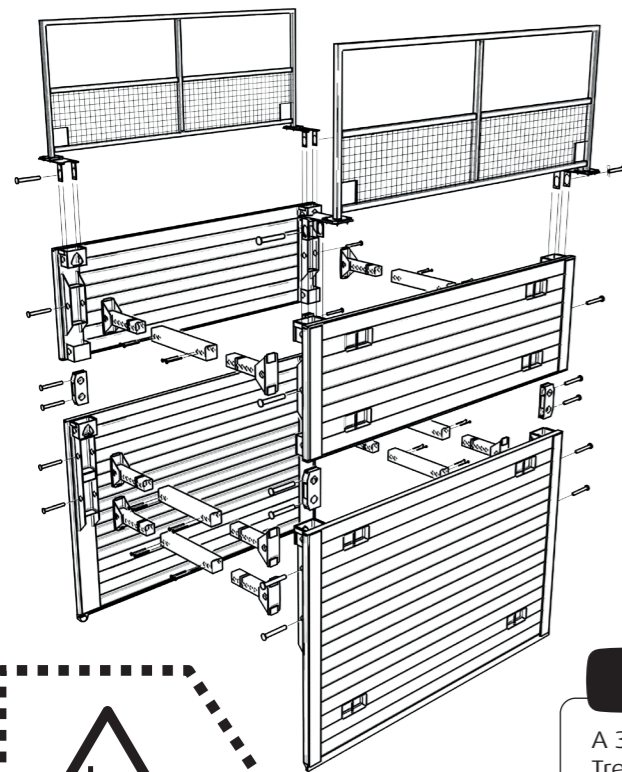


Trench Box: Quick Start User Guide

SPECIFICATION



Trench Box Strut Assemblies

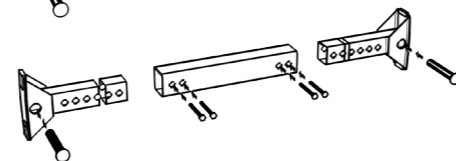
There are two basic types of box strut that are compatible with the Trench Box range:

- Incrementally adjustable struts
- Fully adjustable Spindle Struts (used for shorter spans)

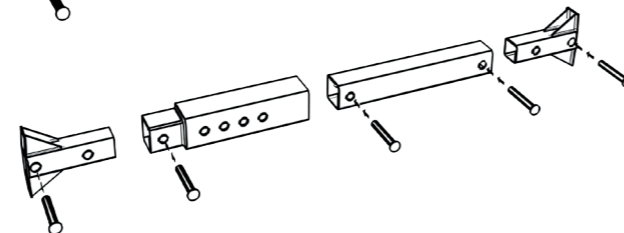
Spindle Type (Fully Adjustable)



Multi Box Struts (Incrementally Adjustable)



Premier Multi-Box (Fixed/Incrementally Adjustable)



A 3D animation showing the assembly and installation method for Trench and Manhole Boxes is available to view on the Groundforce YouTube channel. <https://www.youtube.com/watch?v=03bjzxULLGO>



TAKE CARE:

Take care to avoid the trapping of fingers throughout the entire assembly, installation and extraction process.

PLEASE NOTE:

The sequence shown here is intended to provide a general overview of the basic principals involved with installing proprietary shoring equipment in a correct and safe manner. It is not intended to replace the more detailed written equipment user guides which must be read and understood before using this equipment.

Note: It remains the contractor's responsibility to determine and implement a safe system of work for assembling and installing this equipment based on site specific circumstances and to complete an appropriate risk assessment and method statement.

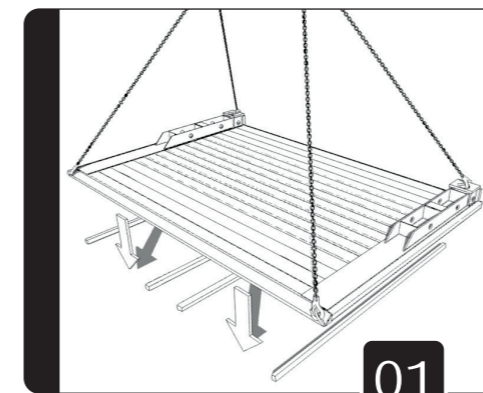
IF IN DOUBT – ASK

Specification	Trench Box Type			
	Mini Trench Box	Standard Trench Box	Mega Trench Box	Premier Trench Box
Typical Box Weight (kg)*	1340 (base) 762 (top)	2248 (base) 1370 (top)	3236 (base) 1850 (top)	3346 (base) 1270 (top)
Plate Length (m)	3.0	3.5	5.0	3.5
Plate Height (m)	2.0 (base) 1.0 (top)	2.6 (base) 1.35 (top)	2.6 (base) 1.35 (top)	3.9 (base) 1.35 (top)
Plate Thickness (mm)	60	107	127	105
Weight of Plate (kg)	580 (base) 316 (top)	1042 (base) 616 (top)	1545 (base) 920 (top)	1600 (base) 630 (top)
Maximum Trench Depth (m)**	4.0	5.3	5.3	6.6
Internal width (mm)	510 - 4310	510 - 4310	530 - 4644	560 - 4650
External width (mm)	650 - 4450	730 - 4530	790 - 4900	760 - 4860
Clearance below strut (mm)	1190	1440	1400	2455
Clearance between struts (mm)	2500	3000	4525	2930

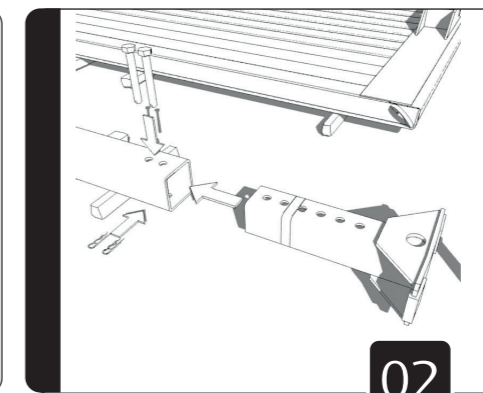
*Approximate assembled box weight will vary dependent on box width.

ASSEMBLY & INSTALLATION

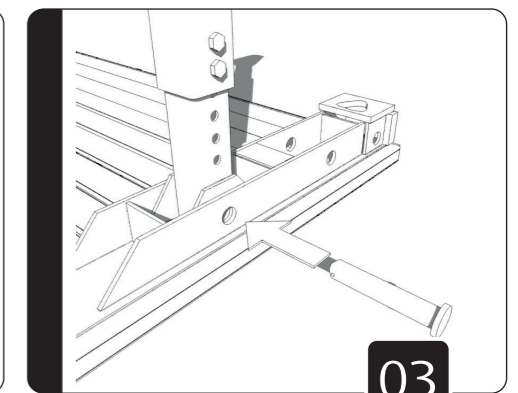
SAFETY NOTE: Only use using certified lifting slings and lifting equipment when fitting the struts. Do not remove the slings until the strut is securely fitted into the rocker housing.



Position the first plate on firm level ground using a suitable, certified chain and orientate with the strut sockets facing upwards.



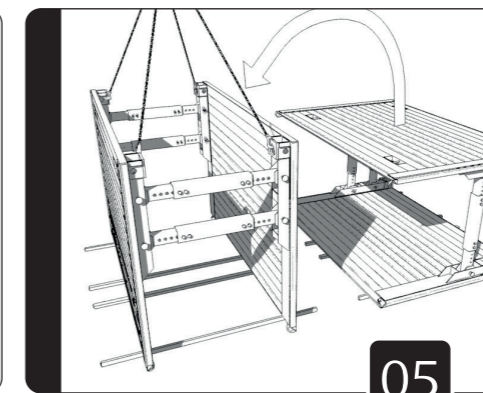
Adjust the assembled strut, if necessary, to suit the excavation width and secure using 2No. Pins and 'R' Clips per Rocker (4 per strut). Note: Struts must only be adjusted while horizontally orientated.



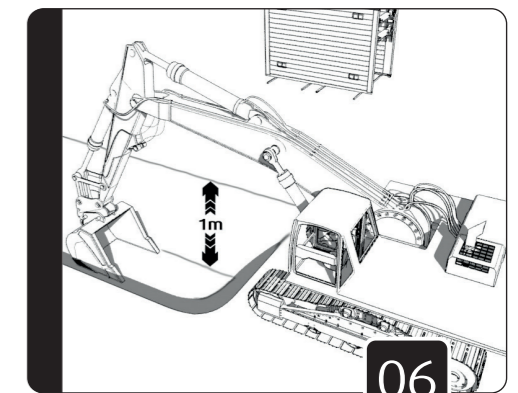
After adjusting the struts to the required width, Fit a strut into the strut rocker housing (See safety note above) Insert a pin and 'R' clip. Fit the pin from the outside as shown.



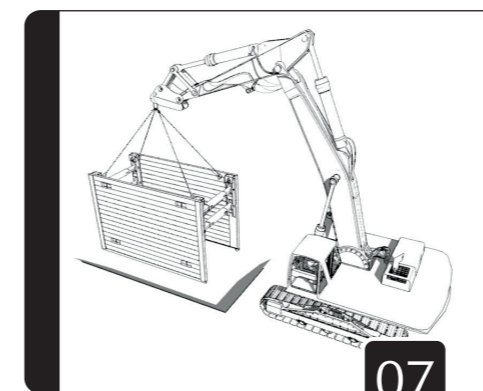
Using the four yellow handling points in the second panel, lift and lower the inverted panel onto the struts. Secure struts using Pin and 'R' clips.



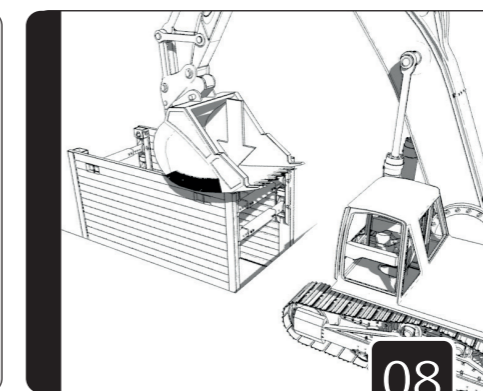
Using the red lifting points, carefully rotate the assembled box into the vertical position. Take care not to over-rotate.



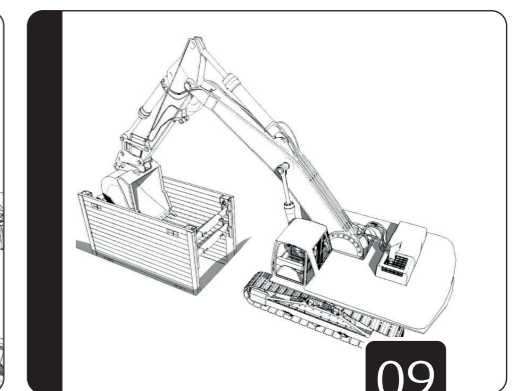
Excavate a nominal one metre deep guide trench to accommodate the full length of the box.



Using the red lifting points, lift and lower the assembled box into the guide trench.



In rotation, progressively push down on each corner with the excavator bucket, incrementally removing soil from within.



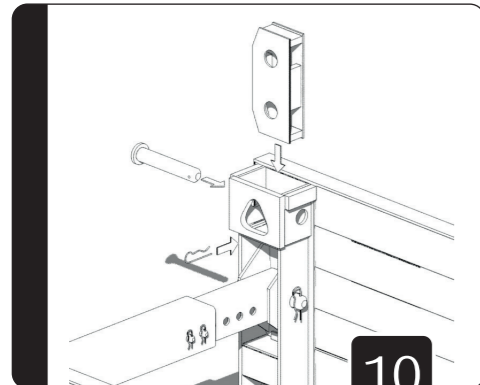
Do not exceed 150mm vertical movement on any one corner. Continue until fully installed.

Trench Box: Quick Start User Guide



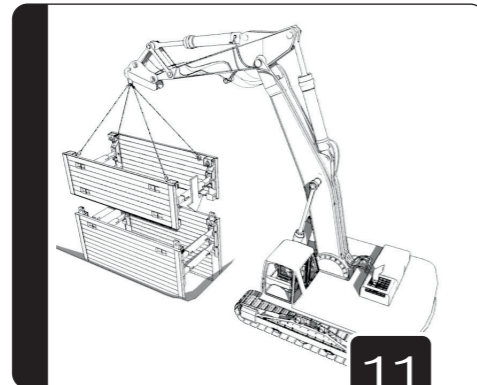
Groundforce Shorco
Excavation Support

ASSEMBLY & INSTALLATION CONTINUED



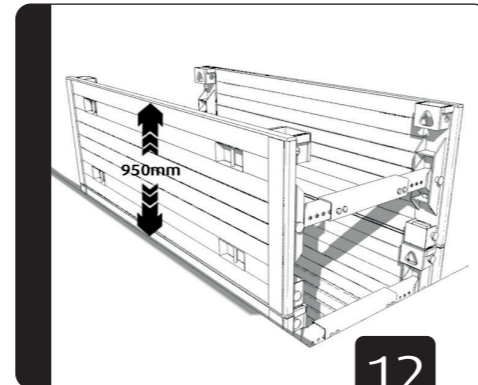
10

If using top boxes, assemble in the same manner as the base. Fit box connectors to the underside of all 4 corner posts using pins and 'R' clips.



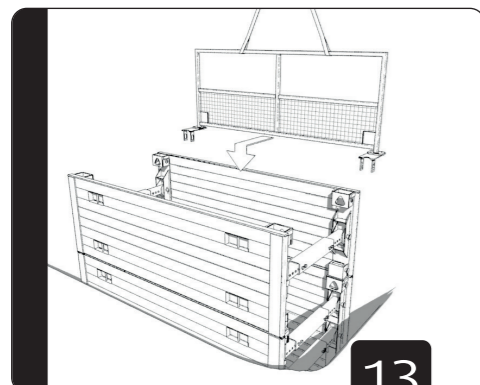
11

Using the red lifting points lower the top box onto the base box. Locate the box connectors into the pockets in the top of the corner posts using pin and clips.



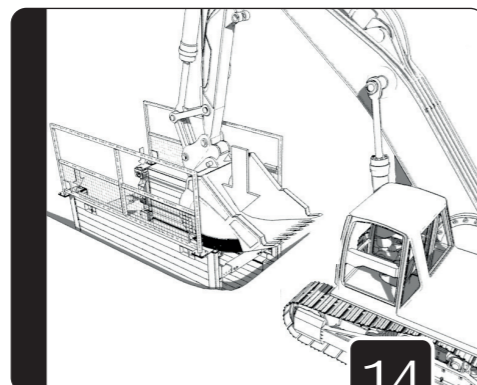
12

Continue to 'dig and push' (steps 8 and 9) maintaining a nominal 950mm upstand, or by introducing handrails.



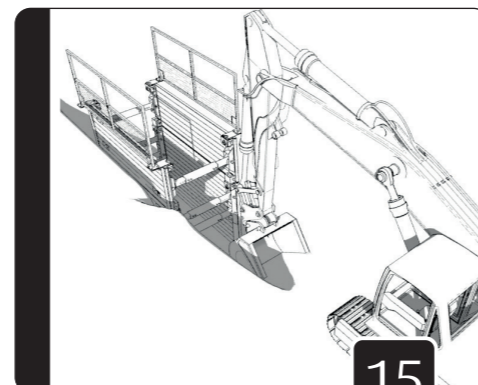
13

If required, rigid hand rails can be fitted by locating the fittings into the corner post sockets using pins and 'R' clips. Alternatively, the EdgeSafe panel system can be fitted.



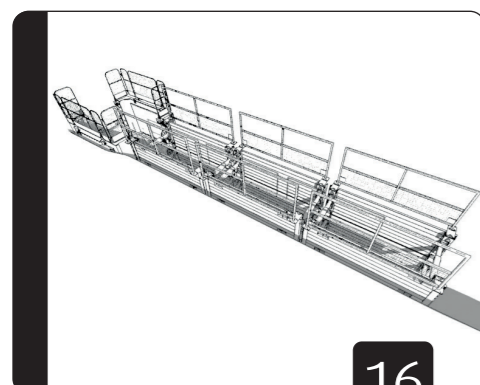
14

Continue to dig and push to the final depth, pushing on the green, in-bound brackets at each corner, taking care not to damage the hand rail.



15

The ends of the trench should be battered back to a safe angle of repose. Alternatively, support using an EndSafe plate and EdgeSafe panels.



16

For maximum output, three boxes should be installed, leap-frogging the rear box to the front each time as the excavation progresses.

Due to the size of Premier and Mega Trench Boxes, it is recommended that assembly is done by attaching the second plate from above with the struts facing 'downwards': this eliminates the need for ladders and working at height. See main user guide for details and view the video on our YouTube channel. <https://www.youtube.com/watch?v=bslu7Lx0Gfc>

EXCAVATION TRAINING CALL 0800 023 2663

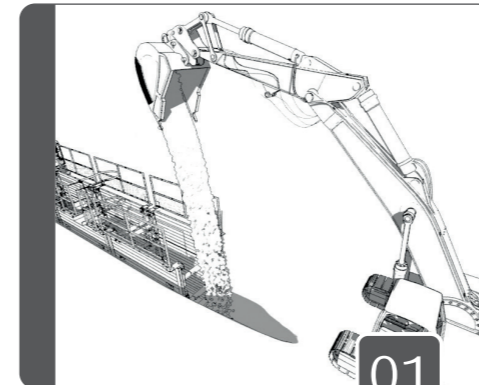
Train your team with **Groundforce Training Services**

• Nationwide training locations • EUSR accredited • Flexible courses

FULL USER GUIDE AVAILABLE

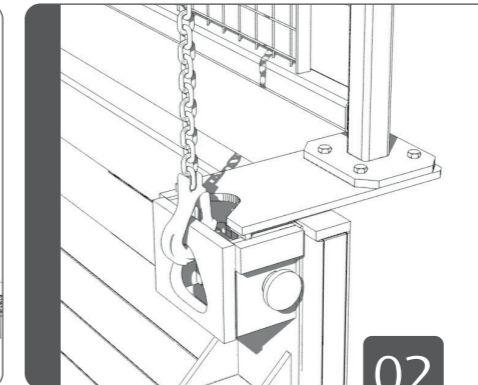
Visit www.vpgroundforce.com/technical-library

EXTRACTION



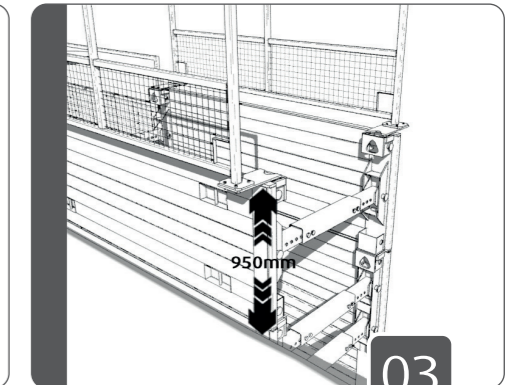
01

Extraction is generally the reverse of the installation process by incrementally backfilling and pulling up on the red lifting points.



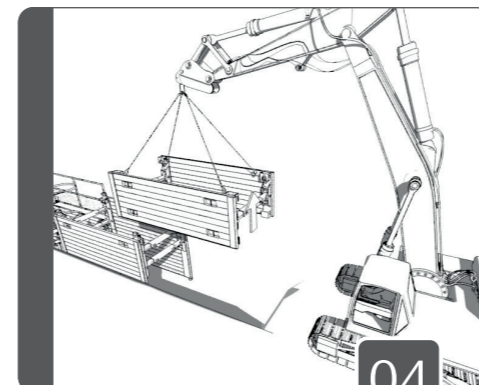
02

Attach a single heavy duty chain to each corner of the box in turn. Lift by no more than 150mm each time.



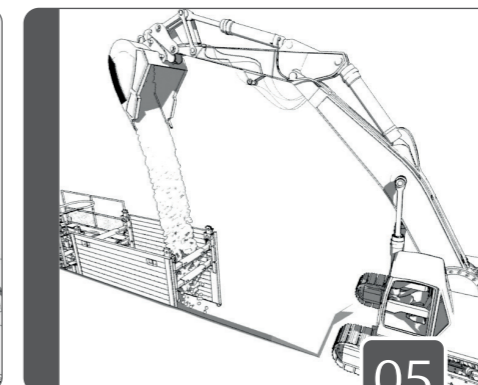
03

Once a 950mm up stand has been achieved, un-pin and remove the handrails from the box.



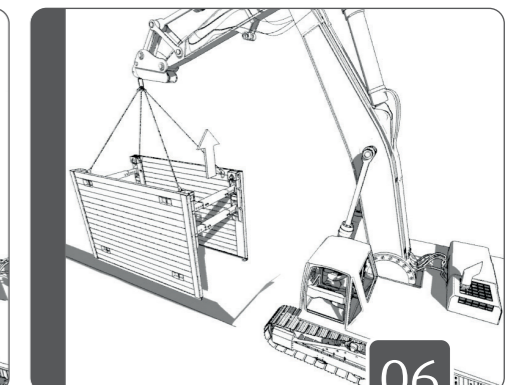
04

Re-attach single leg chain and continue to shuffle the box out of the trench in 150mm stages. Once the lower box is 950mm above ground level, the upper box can be removed.



05

Continue to backfill and compact in stages.



06

Using the red lifting points, remove the box from the excavation. Dismantle the component in reverse (see steps 1 to 5).

Do

- ✓ Inspect all components at start of every shift
- ✓ Assess weights correctly and use adequate and appropriately certified lifting equipment
- ✓ Ensure hooks engage fully into lifting points prior to lifting
- ✓ 'Toe-out' base boxes by 50mm
- ✓ Ensure all pins & clips are correctly fitted
- ✓ Use four panel connectors for upper box attachment
- ✓ Use only lifting or handling points for chain attachment
- ✓ Provide support over the full height and depth of the dig
- ✓ Push the plates at the corner positions only
- ✓ Keep personnel clear of excavator slewing zone
- ✓ Always use a banksman
- ✓ Locate underground services before excavating
- ✓ Store assembled boxes on firm, level ground only or lay flat on their sides

Do Not

- ✗ Exit the box into an unsupported area
- ✗ Use the struts to support trench sheets across the ends of the box
- ✗ Adjust the struts without laying the box down and removing the top plate
- ✗ Push plates down by more than 150mm at a time
- ✗ Snatch the chain whilst extracting the box
- ✗ Use handling points for lifting or pulling
- ✗ Climb on the struts
- ✗ Hang/store materials on the struts
- ✗ Excessively force the box into the ground
- ✗ Permit personnel in the box during installation or removal
- ✗ Accidentally stike the struts
- ✗ Drag the box by any means
- ✗ Attempt to temporarily or otherwise balance struts on the ground in an upright position unsupported