

User Guide

Trench Box



Product Information

Overview

The Conquip 3.5m Trench Box is a simple to assemble, two sided trench lining support system designed to be installed by an excavator using the 'dig and push' technique, or by simply carrying out the excavation and then lowering each box into place.

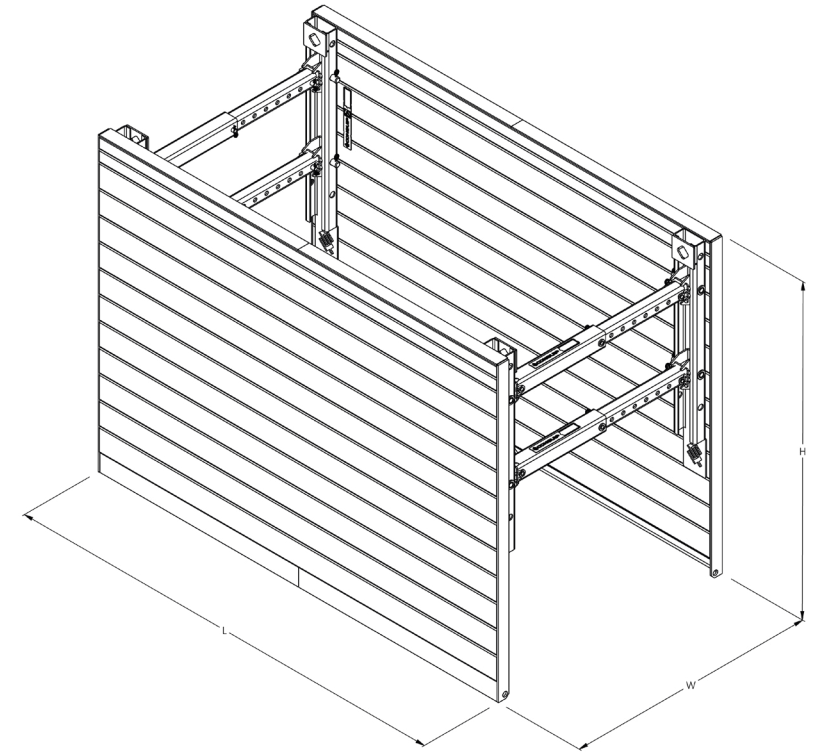
The Trench Box is normally selected for installing utility pipes where ground movement is not critical. The size of the system required depends on maximum trench depth requirements and the size of pipe sections. Extensions available for trench depths of up to 5.18 metres and widths of up to 4 metres.

Manufactured in the UK from quality British and EU steel.

Conquip also supply a full range of suitable lifting and extraction chains, edge protection and trench access accessories.

Product Information Specification

Item	Product Code
Trench Base Box	TL101-00003
Trench Extension Box	TL101-00004



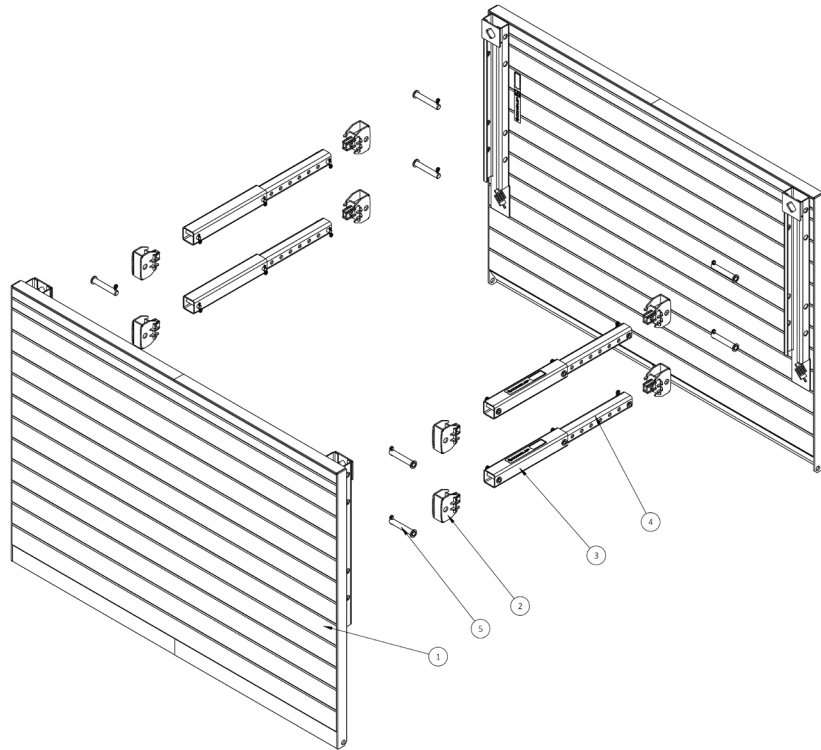
¹Weight will be equal to or less than the weight stated depending on your strut configuration.

Product Code	Height	External Length	Internal Length
TL101-00003	2560mm	3500mm	3100mm
TL101-00004	1310mm	3500mm	3100mm

Product Code	Working Width (Min- Max)	Maximum Weight ¹	Limit State Design Load
TL101-00003	565mm-2465mm	2498kg	54.86 kN/m ²
TL101-00004	565mm-2465mm	1388kg	54.86 kN/m ²

Product Information Parts Diagram

Trench Base Box

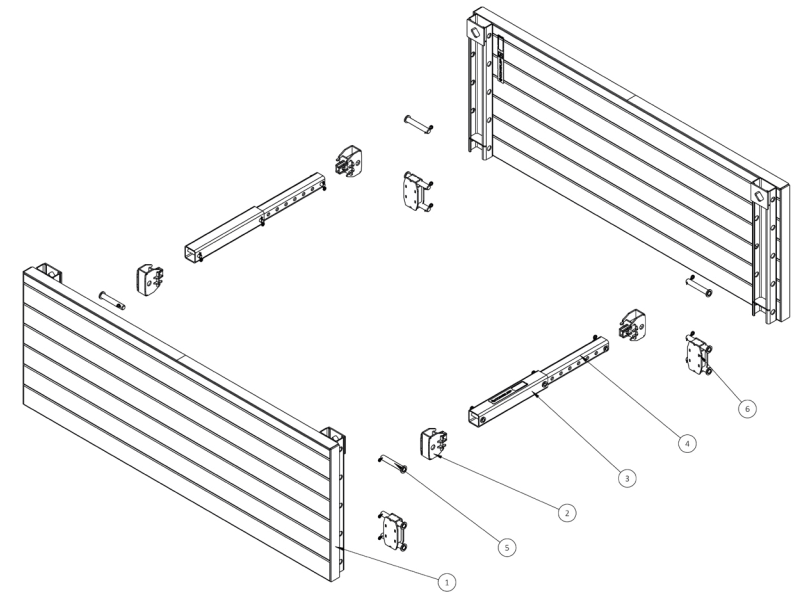


NOTE: These parts are for this model, they may differ for previous versions. Please contact Conquip with any queries.

Item Number	Description	Quantity
1	Trench Box Base Panel	2
2	Rocker Assembly	8
3	Incremental Strut Section	4
4	Incremental Strut Section	4
5	40mm Pin Assembly	8

Product Information Parts Diagram

Trench Extension Box



NOTE: These parts are for this model, they may differ for previous versions. Please contact Conquip with any queries.

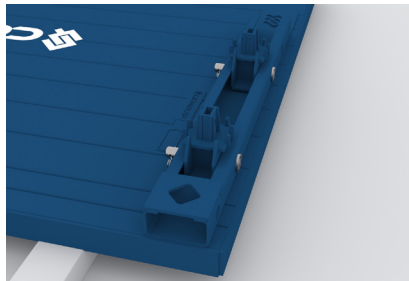
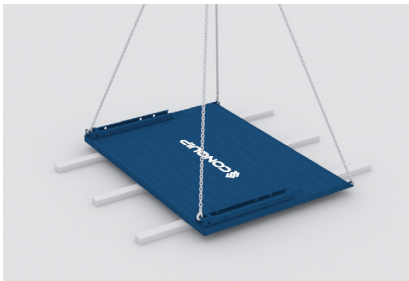
Item Number	Description	Quantity
1	Trench Box Extension Panel	2
2	Rocker Assembly	4
3	Incremental Strut Section	2
4	Incremental Strut Section	2
5	40mm Pin Assembly	12
6	Connecting Brackets	4

Original Working Instructions Usage Instructions

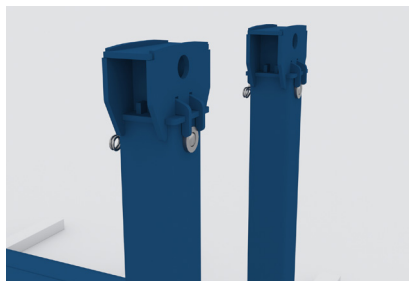
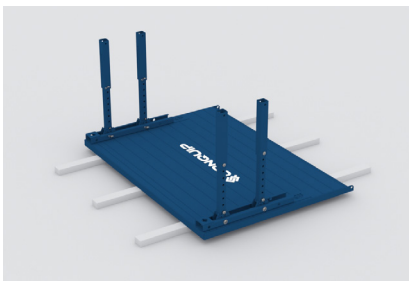
Important Assembly Notes

- Top extension boxes are to be assembled in the same way but only two struts should be fitted. Extension boxes are secured to the base boxes using connector brackets and pins.
- Keep hands clear of naked surfaces.

Assembly Instructions

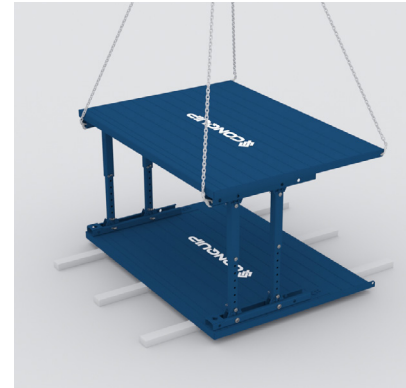


1. Before assembling Conquip base boxes and extension boxes, lay timber bearers on the ground.
2. Attach a certified 4 leg chain sling to the lifting points on one of the panels and lower onto the timber bearers.
3. Insert the rocker assemblies into the panel brackets and secure with 40mm pins and R-clips.

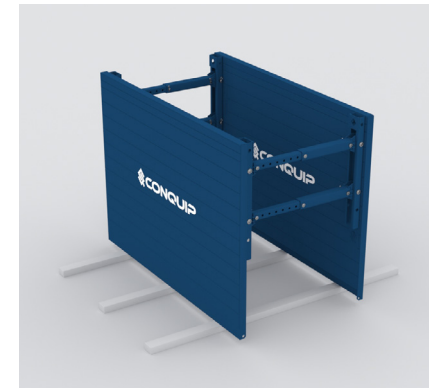


4. Lower the pre-assembled struts onto the rocker assemblies securing the struts to the panel brackets using pins and R-clips.
5. Connect the 4 remaining rocker assemblies to the struts using pins and R-clips.

Scan for video guide!



6. Connect the sling to the lifting points of the panel facing downwards and lift into position above the struts.
 7. Lower the plate carefully, guiding the runners onto the four upright strut assemblies.
- Do not detach the chains until the panel is secured to the strut assemblies.**
8. Secure the struts to the panel with the remaining four pins and R-clips.



9. Connect the lifting sling to the top lifting points on the Trench Box and lift the box to the upright working position
10. The box is assembled and ready to move into the trench.

Original Working Instructions

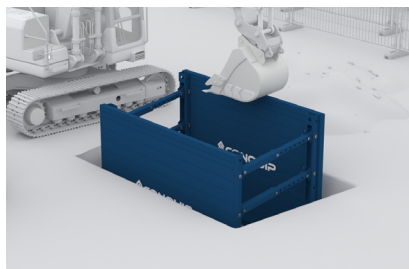
Usage Instructions

Important Installation Notes

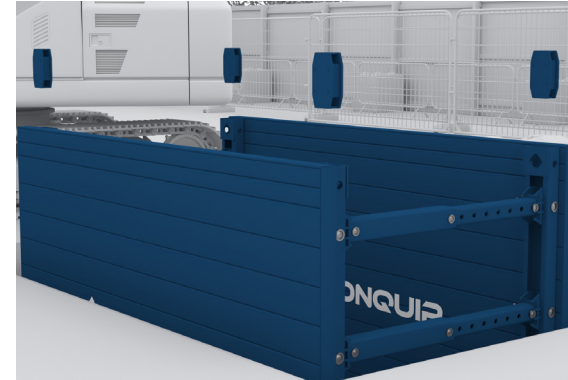
- All personnel involved in installation must wear relevant personal protective equipment.
- Never enter an unsupported excavation.
- Stage 6 should be carried out when the top of the base is approximately 1m above ground level.
- It is mandatory to use edge protection when carrying out trench support.

Installation Instructions

1. Excavate the ground to approximately 90cm or deeper, as ground conditions permit. Ensuring the spoil is discharged away from the edge of the trench.
2. Attach a certified 4 leg chain sling of the correct volume and lower the box into the Trench.
3. The excavator operator digs progressively between the two faces of the box panels.
4. The rocker assemblies allow vertical and horizontal movement when the force from the bucket is applied. This ensures the box panels are not damaged during installation.
5. Continue to perform the 'dig and push' installation technique until the box is at the required depth.
6. We recommend the base box protrudes 1m above ground level before adding an extension box to act as a safety barrier.



Scan for video guide!



7. To add an extension box, attach the connectors to each corner inside the base box and secure with pins and R-clips.
8. Attach a certified 4 leg chain of the correct volume to the extension box and lower it on top of the base box.

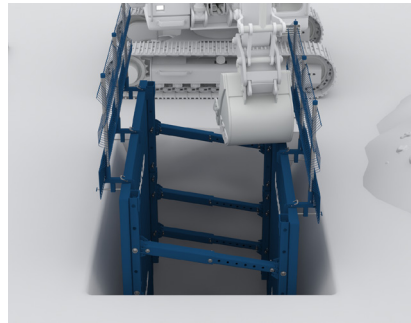


9. Attach using pins and R-clips. **Only once the extension box is secured can the lifting chains be removed.**

Scan for video guide!

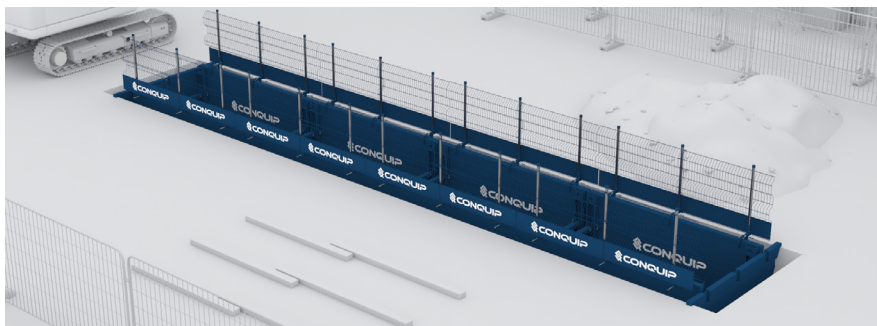


10. Use the 'dig and push' technique until the desired depth is achieved.



11. Attach Conquip Edge Protection panels to the Trench Box.

12. Complete the final 'dig and push' until the top of the Trench Box is at ground level. Ensure the force is applied to the edge of the box panels, not the Edge Protection panels.

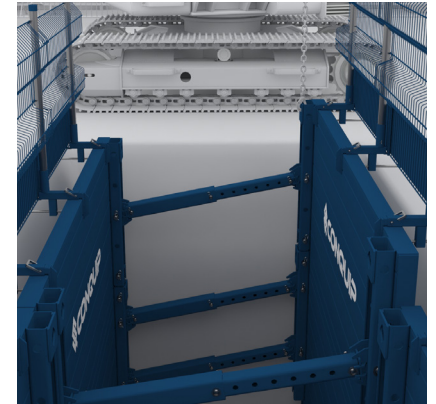


13. Backfill against the sides of the panels to secure the Trench Box.

14. Repeat this process until the trench has been fully excavated.

Extraction Instructions

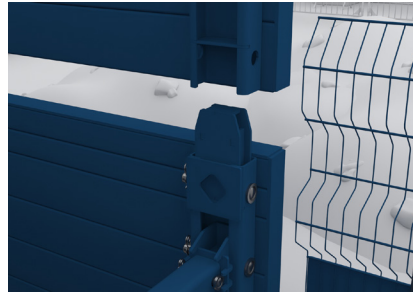
1. Backfill the excavation around the extension box.
2. Attach a certified lifting chain to one of the top lifting points on the extension box.
3. Slowly lift the corner of the extension box.
4. Repeat this process for each lifting point in turn until the extension box is 90cm above the ground.
5. Loosen the telescopic clamps and remove the Edge Protection panels.



6. Backfill the trench.

7. Reattach a certified lifting chain to one of the top lifting points on the extension box.

8. Lift the corner of the extension box. Repeat this process for each lifting point in turn until the base box is 1m above ground level.



9. Attach a suitably rated 4 leg chain sling to the top lifting points on the extension box.
10. Remove the R-clips and pins to disconnect the extension box from the base box.
11. Slowly lift and move the extension box away from the excavation.



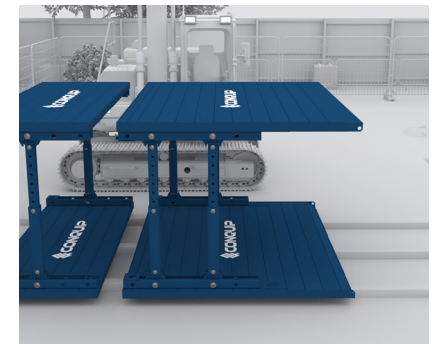
12. Wind loading can cause instability if boxes are left upright. Conquip recommend connecting a lifting sling to the top lifting points of the extension box and lowering it on its side.



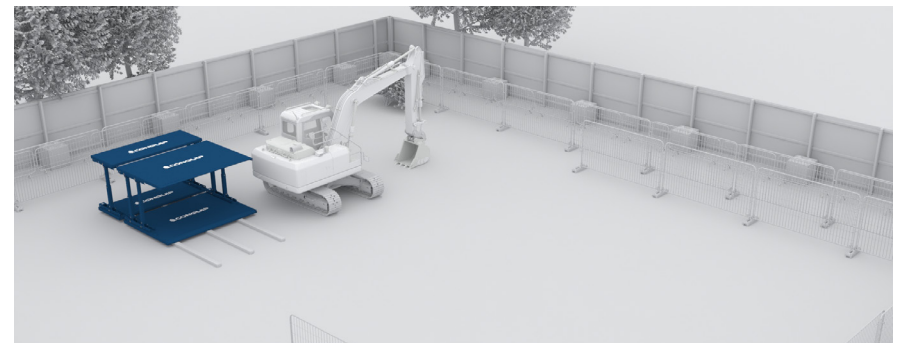
13. Remove the R-clips, pins and the connectors from the base box.
14. Backfill the trench and extract the base box using the same method.



15. Attach a suitably rated 4 leg chain sling to the top lifting points on the base box and move away from the excavation.



16. Connect a lifting sling to the top lifting points of the base box and lower it on its side to prevent wind loading.



17. Once all Trench Boxes have been successfully extracted, fill in the remainder of the trench and remove all equipment from the area.

Original Working Instructions

Safety Instructions

Basic Safety

A site-specific Risk Assessment, and lift plan where applicable, must be completed by the responsible person before using this equipment to control risks, produce a safe system of work and ensure safety for you, your colleagues and others. Your risk assessment will determine the correct Personal Protective Equipment (PPE) for the task you are doing. You must use it. Conquip recommends that you should wear:

- Suitable clothing
- Gloves
- Hard hat
- Protective footwear (steel toecaps)
- Safety glasses



Important Safety Notes

- Read these instructions before using this equipment. If there is anything you do not understand or if you have any concerns do not use this equipment. Contact your supervisor or Conquip Engineering Group for advice.
- You must check that you have considered all the safety requirements for the task you are doing and that this equipment is suitable.
- You must protect bystanders and the general public by preventing access to the working area.
- Do not use this equipment if you are tired, unwell or under the influence of alcohol or drugs. If you are taking any medicine or undergoing treatment you should inform your supervisor.

Usage & Transportation

- Never unevenly load this equipment.
- The weight of the equipment, together with its attachments, must be added to the weight of the load when calculating the total load that will be imposed on the lifting apparatus / operating machine.
- This equipment must be used in conjunction with the load ratings of the lifting apparatus / operating machine. (Refer to the manufacturers' load ratings and original working instructions).
- Make sure you know how to use this equipment and understand all aspects of its operation in case of emergency.
- This equipment weighs more than 25kg. Do not lift or manhandle without machine assistance.
- Do not operate this equipment near overhead power lines.
- Take care in confined spaces, near ceilings or similar hazards. This equipment was designed for vertical lifting. Do not drag, or swing.
- Before operating this equipment, check that you have enough space for you to work safely and make sure that the working area is clear of hazards, obstructions and personnel.
- Before lowering equipment make sure that the landing zone is clear and capable of accepting the size and weight of the load.
- Crush Risk. Keep hands and feet clear of the equipment at all times to avoid injury.
- Do not exceed the maximum Working Load Limit (WLL) shown on the serial plate. Ensure that the WLL on the individual lift points is not exceeded.
- Before lifting, check that the load is secured, balanced and stable. Allow space for the equipment to move if the load shifts.

Personnel

- All personnel must wear relevant personal protective equipment.
- Do not wear loose clothing or jewellery and tie back long hair to avoid becoming tangled or trapped in this equipment. You must make everyone in the work area aware of what you are doing.
- All personnel involved in the lifting operation must be competent to do so and must have been briefed in conjunction with this User Guide available from Conquip Engineering Group, the manufacturer.

Equipment Maintenance & Cleaning

- It is mandatory that the equipment is thoroughly examined regularly, by a qualified engineer, to ensure compliance with relevant regulation/s. (Conquip recommend to carry out thorough examination every six months).
- This product may incorporate various loose and detachable items of lifting gear. Refer to the separate requirements for the safe use of those items.
- When not being used, store the unit in a clean, upright condition and in a safe place where it will be protected from thieves and unauthorised users.
- This equipment must be inspected by the responsible person before each use and then regularly, as determined by your risk assessment or working practice. If you have any concerns about condition or suitability do not use.

Disclaimer

Warranty

The products supplied by Conquip Engineering Group are all guaranteed by a 12 month warranty.

Apart from where exceptions apply, Conquip Engineering Group promises to repair or replace any fault which the Company considers to be due to defective material or workmanship within 12 months of the date of sale, at no additional cost.

- Faults arising from unauthorised alterations (see modifications section below for full details).
- Damage caused by abuse, neglect, misuse or falling.
- Damage caused because of failure to follow transportation, storage, loading, cleaning or operating instructions.
- Replacement or repair of components due to fair wear and tear.
- Any consequential damage or wear arising from the use or fitting of additional or non-standard parts.

Modifications

If any third-party modifications or alterations, involving drilling, welding, cutting or distortion of materials in any form, are to be carried out on the product, Conquip Engineering Group must provide full written approval prior to the work being carried out.

Alterations, modifications, additions or repairs must be carried out by Conquip Engineering Group's recognised distributors, if they are not carrying out the work themselves.

Conquip Engineering Group operate a continuous improvement policy and therefore reserve the right to alter technical specifications and user guide details at any point without notice.

Conquip Engineering Group will not cover or reimburse any transportation and/or shipment costs to and from their premises or their recognised agents, or any material and/or labour costs for repair, replacement or assessment against a warranty claim.

Conquip Engineering Group and/or their directors, employees, insurers or recognised agents will not be held liable for consequential damages, losses or expenses relating to the inability to use the product correctly for its purpose.

Important Notes

- This User Guide is for this Conquip product only.
- Any movements of the product must be thoroughly planned before the work commences to identify potential hazards and assess risk.
- All personnel involved in lifting and transportation of this product must have read this User Guide and must be properly briefed.
- You must be competent, alert and medically fit when using this equipment. If you have a medical condition, a mental or physical disability, you must seek advice from a medical professional before using this equipment.

Talking to us is easy

We're here to help

Call us on 0800 116 076

Email us at sales@conquipgroup.co.nz

www.cqegroup.co.nz