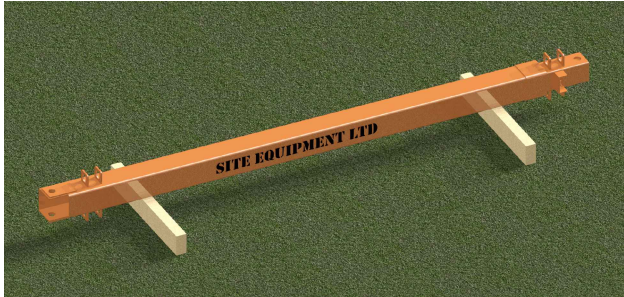
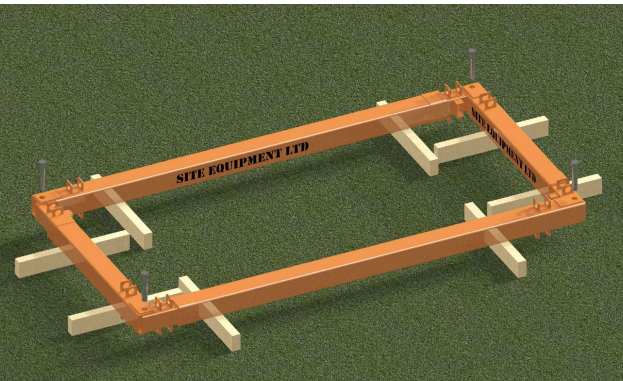


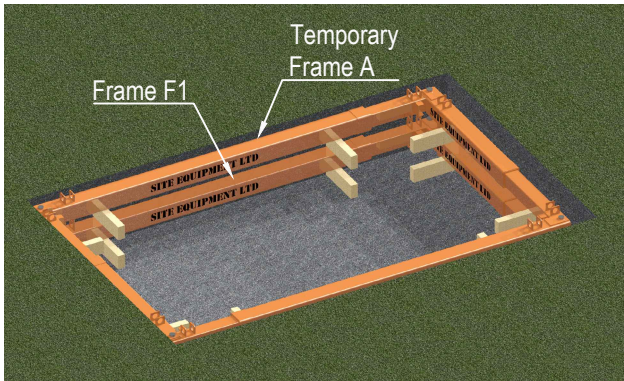
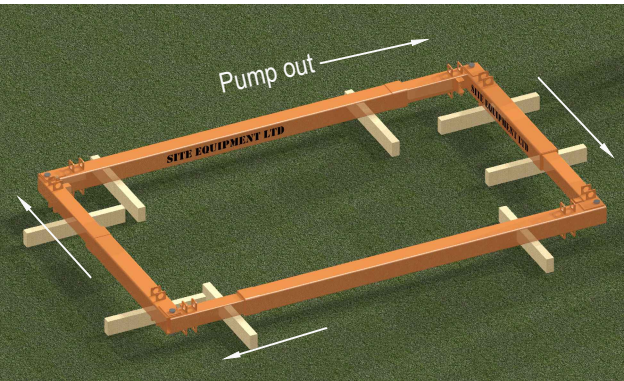
Installation Sequence - Dig & Push



1. Lay first Double Acting Brace leg down on level ground on suitable timber bearers. Connect lifting hooks through the lifting points on the outer body.
If preferred, the legs can be assembled within the excavation at the level specified in the Temporary Works Design. Follow steps 1-3 within the excavation.



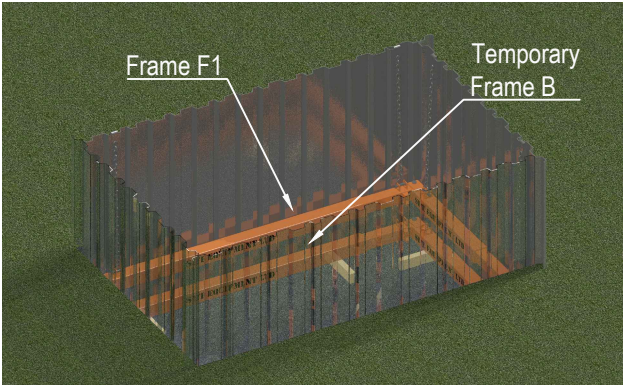
2. Lay remaining legs down as Stage 1 and insert a 40Ø Pin & R-Clip in each corner (Detail A). The frame legs should be fully retracted when delivered. Ensure that the pump is full of shoring fluid. Attach the two single hoses supplied to either side of the pump. Connect the hoses to the male connectors contained within the housing near the end of the frame inner. Open the lock off valves and pump out the frames to the required size. Close the lock off valves to maintain pressure. Please note that pumping out of all four legs may need to be undertaken incrementally, moving from leg to leg to ensure that the frame doesn't bind when out of square. Ensure that the shoring fluid level is maintained. Additional fluid is likely to be required during pumping out of 4 legs / one frame.



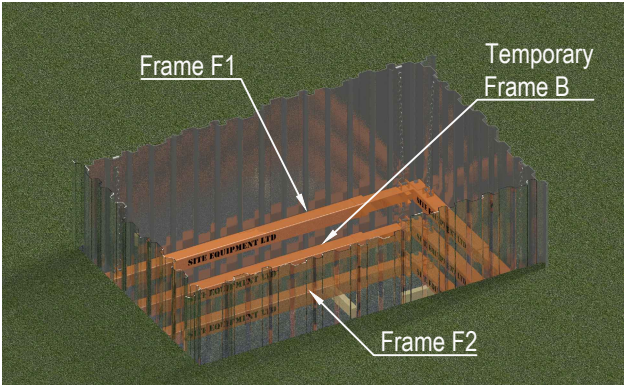
3. The following steps describe the 'Dig & Push' Installation method for an excavation with 2no. Frame levels (F1 & F2, upper and lower frames). Alternative methods below. Check for services and then excavate to the underside of Frame F1 (upper), using a stepped or battered edge if required. Using correctly rated lifting chains, lift two frame levels into the shallow pit and lay on timber bearers.



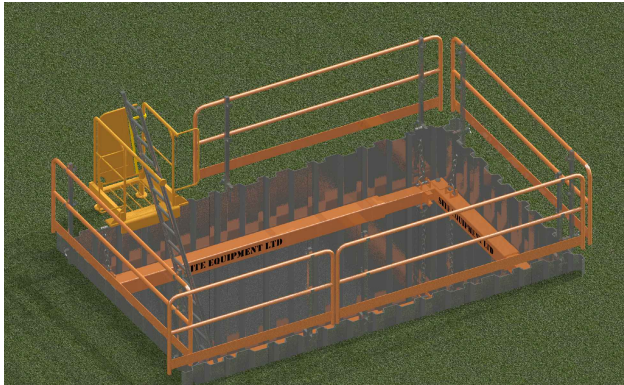
4. Using the correct Driving Cap for the sheet type, push sheets around the perimeter of the excavation until refusal, or about half the required dig depth. The Double Acting frames will act as a guide. Ensure that the restraint chains are hooked onto the sheet piles. Temporary use of shorter sheets can be used to provide a digging window if required.



5. Excavate to the midpoint between the upper and lower (F1 & F2) frames' final levels. Install the 'dummy' Temporary Frame B to restrain the bottom of the sheets. The frame can be installed partially retracted and then pumped out to the required size in the excavation. If this is not possible, the frame can be installed leg-by-leg. Remove the Temporary Frame (A) that was stacked above Frame F1 in Stage 3.



6. Progress the excavation to the underside of Frame F2 level by digging and pushing the sheets incrementally. Install the lower Frame F2 and attach restraint chains. Temporary Frame B can now be removed. Continue 'digging & pushing' the sheets until the final formation level is reached, installing additional frame levels where required.



7. Ensure that all the sheets are pushed to their final levels, normally the formation level. Install suitable access and edge protection system. The removal of the equipment is the reverse of this procedure, reinstalling the temporary frame levels where required as backfilling progresses.

Equipment Details		
Leg Type	Sheet to Sheet Range	Leg Weight
	mm	kg
A	2000 - 3000	260
B	3000 - 4000	305
C	4000 - 5000	390
D	5000 - 6000	445
E	6000 - 7000	627

Residual Risks		
The following residual risks must be addressed in the Contractors RAMS:		
1. Locate all potential services prior to excavation in accordance with NRSWA Regulations.		
2. 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.		
3. The Contractor should always adequately consider the surrounding environment and account for adjacent structures, slopes, roads etc.		
4. Additional or independent edge protection may be required during the installation.		

Useful Links



Technical Library

This drawing is the property of Site Equipment Ltd. and must not be reproduced without their permission.

0	First Issue	SRB	18/05/23
Rev.	Revision Details.	DR	Date.

Status:
APPROVED



St. Andrews Road
Avonmouth
Bristol
BS11 9HS

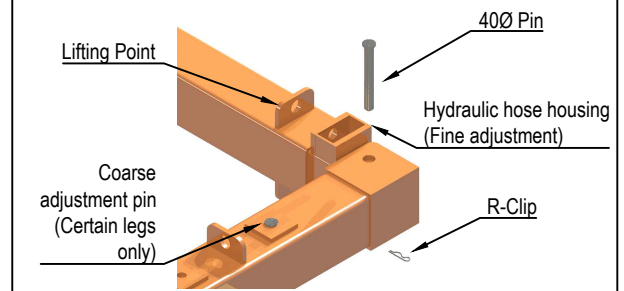
www.siteequipment.co.uk santiago@siteequipment.co.uk

BRISTOL CARDIFF LONDON
0117 982 8236 01443 844 713 020 7127 8002

Double Acting Brace User Guide
Version V1.1

Drawing Scale: Varies	Paper Size: A3
Drawn By: SRB	Date: 18/05/23
Checked By: PJ	Date: 18/05/23
Drawing Number: SEL-UG-DA_001	Revision: V 1.1

Detail A



Edge Protection & Access



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

Do's and Don'ts

- ✓

Ensure an adequate Lift Plan is incorporated into the method statement (By Contractor) and pay close attention to the weights of individual legs (shown above) and whole frame levels.
- ✓

Carefully inspect all components and hydraulics prior to use. Contact SEL for advice where damaged components are found.
- ✓

Ensure all operatives are Trained & Competent and have been briefed on the requirements of the Temporary Works Design where necessary.
- ✓

Install suitable edge protection, access system and Davit system where required.
- ✓

Ensure appropriate vertical support is provided to the legs during installation and removal.
- ✓

Allow a minimum of 100mm extension on the rams to enable retraction when removing the equipment.
- ✗

Don't enter an excavation before adequate shoring is in place.
- ✗

Don't use hanging chains for lifting.
- ✗

Don't use faulty or damaged equipment.

Alternative Installation Methods & Removal

- Alternative Installation: Pre-driving

 - Pre-drive all sheets to the final toe level as identified in the Temporary Works Design using suitable plant.
 - Excavate to the underside of the upper Frame F1
 - Install Frame F1 to the level specified in the TWD
 - Excavate to the underside of the lower Frame F2
 - Install Frame F2 to the level specified in the TWD
 - Excavate to formation level.
 - Unless a slab is poured (see adjacent), the excavation must be backfilled to the underside of each frame prior to its' removal.

Dig & Push Installation with three or more frame levels
In situations where three or more frames are required, Stage 6 (Installing Frame F2) is repeated with further temporary frame levels installed to ensure the bottom of the sheets are always secured.

Excessive sheet cantilever below the lowest frame must be avoided.
- Two Stage Construction - Casting of concrete base slab

 - Prepare the formation adequately to enable a concrete slab to be poured
 - Cast a suitable concrete base slab ensuring contact with the sheet piles around the entire perimeter. Use plywood or other suitable separation membrane to enable extraction of the sheets.
 - Once the slab can sustain the load identified in the Temporary Works Design, remove the lowest frame level. Ensure that the weight of the equipment is adequately considered in the Lift Plan (by Contractor). The frame must be fully supported by suitable plant whilst the hydraulics are retracted and adequate access provided.
 - Backfill the excavation in adequately compacted layers to the underside of the next frame level.
 - Remove the next frame level and continue this process until ground level.
 - Extract the trench sheets and reinstate accordingly.

Please ensure all legs are fully retracted prior to collection.