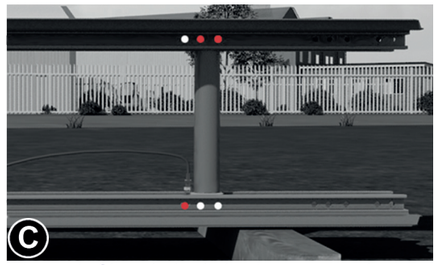


GRP Vertishore rails are available in lengths of 0.5m, 1.5m & 2.0m with the option of a 0.5m wide bonded backing board. Loose lagging boards are available 1.5m & 2.0m long to enable the operative to configure the shoring depending on site conditions.

ASSEMBLY



Place paired hydraulic struts inside the rail, with the male hydraulic coupling facing the top of the panel. Secure in place with pins and R-clips. Place the top panel over the struts and connect as previous.

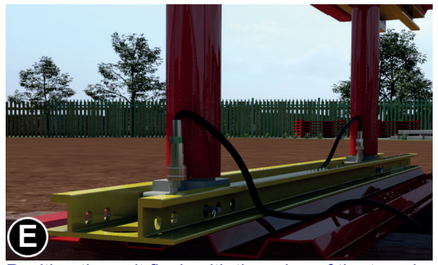


The end of the strut with the hose connector is secured with a single pin through the upper hole. The opposite end is pinned through two bottom holes, both panels will be flush and unit is now locked from scissoring.

INSTALLATION



Hand dig or excavate the trench to the required designed dimensions and batter the ends whenever possible. Inspect to ensure the faces are stable, do not stand directly over unprotected edges.



Position the unit flush with the edge of the trench with the handling hole facing away from the trench. Connect the bucket pump to the quick release valve on the hydraulic strut via the supplied hose.



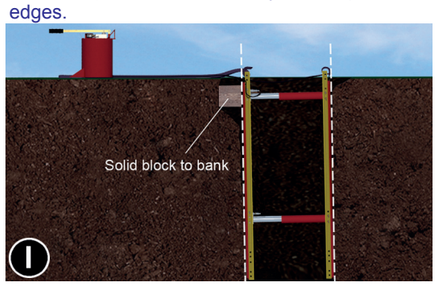
If installing with an excavator connect lifting chains and lower carefully in place. If installing by hand connect suitable lowering slings/chains through the handling hole, pull tight and ensure a stable footing.



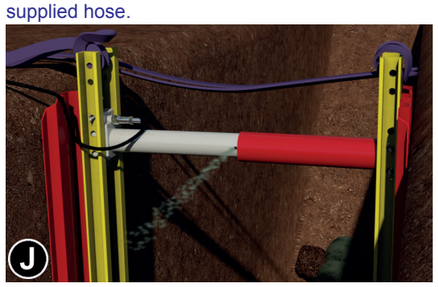
Carefully launch GRP vertishore until the weight of the unit is balanced on the edge of the trench. Take any slack from the straps, carefully begin to raise the unit such that it's self-weight will begin pulling the system into the excavation.



Pump out the hydraulic struts until the panels push tightly against the trench walls, continue to pressurise until the bucket pump registers between 400-750psi. The pressure gauge must hold and not indicate any loss in pressure.



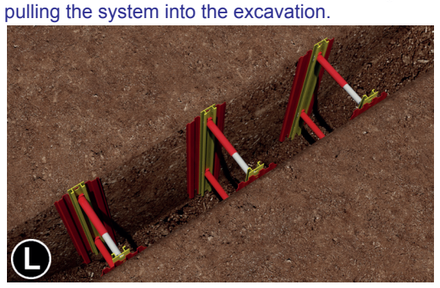
Panels should be in continuous contact with the trench wall, it is critical that any voids directly behind the hydraulic struts are packed out with timber or suitable fill material to ensure that the ground is fully pre-loaded.



Struts are fitted with a safety bleed off valve to prevent over extension. If hydraulic fluid is visible, either a longer strut is required or the width of the trench needs reducing. Hydraulic fluid is water soluble and biodegradable.



Ensure final position of the unit sits square and vertical with continuous contact against the trench wall. Remove the hydraulic hose by prying off with the release tool.



Continue to install GRP vertishore along the trench at max 2m centres for units with a backing board or 1.5m for units without a backing board (or as per design documents). Normally a min. of 3 are required to work safely within an open trench.



Inspect the full installation ensuring that there is no evidence of instability along the unsupported faces and edges. It is now safe to enter the excavation via a ladder placed between pressurised units.



When inside the trench, operatives should continually monitor the walls for change of conditions such as water seepage, excessive movement or cracks.

REMOVAL



During removal ensure that no operatives enter the trench unless they are within a zone protected by fully pumped out struts.
De-pressurise struts using an MGF release tool and prise panels until clear of the trench walls.



If extracting with an excavator connect lifting chains and carefully remove unit from trench. Alternatively units can be removed by hand in a continuous backfill and lifting sequence until the unit can be easily lifted out of the trench.

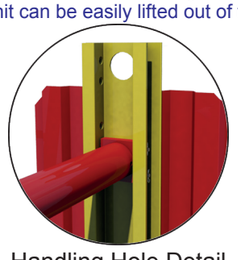


Alternatively, if the trench has battered ends and the ground is reasonably self-supporting, with a stable footing operatives can lift the system using suitable straps/chains and carry the units up the batter and out of the excavation.

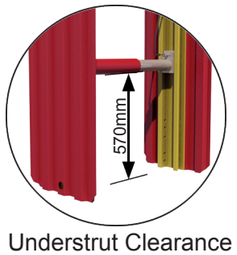
DISASSEMBLY



Never enter an unsupported trench, backfilling must be done from ground level. Reconnect hoses and empty hydraulic fluid back into the bucket pump. Disassemble in reverse order to B-C, remove loose dirt and return to MGF for inspection.



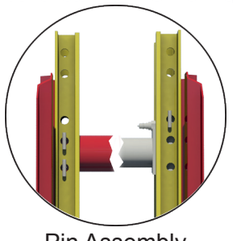
Handling Hole Detail



Understrut Clearance



Safe Working Load

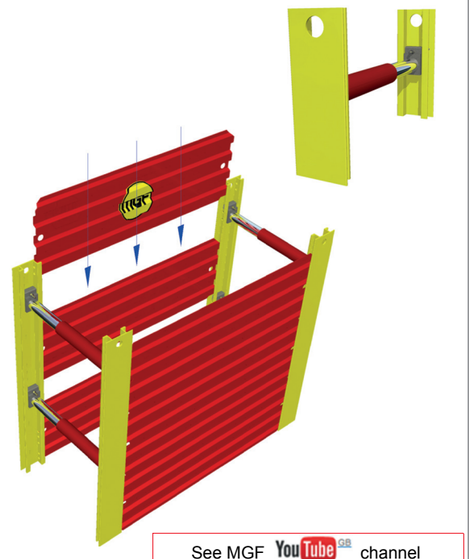


Pin Assembly

Multiple Configurations

The 0.5m long GRP Vertishore is intended to be used in shallow trenches where the layout of the excavation or obstructions such as services precludes the use of larger products. It can also be used to provide additional shoring support to the battered ends of trenches avoiding the need for Endsafe products or in conjunction with trench sheets and panels.
Horizontal spacing (max.) = 1.5m
Vertical spacing (max.) = 1.2m
In trenches greater than 1.5m deep a minimum of 4No. loaded jacks, 2 either side of the point of entry must be provided.

GRP Vertishore can also be installed as a hybrid system. If the trench is shored using Vertishore rails but the ground in-between the units is found to be unstable, the product allows you to retrospectively slot GRP panels into the side grooves of the walers to protect the operative from loose materials whilst carrying out a repair.



See MGF YouTube channel for installation guidance:
https://www.youtube.com/user/MGFLtd

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go to www.mgf.ltd.uk for latest version

GENERAL

Current health and safety legislation requires that construction equipment users formulate a site specific Safe System of Work (SSoW) to undertake the works they are proposing. This document is intended to provide sufficient product specific guidance on handling, installing, maintaining and removing MGF equipment to allow the SSoW to be compiled. It should always be read in conjunction with the product specific technical files and the site specific design information (including any residual risks to be managed on site) provided by MGF or others.

Users of this equipment should be both familiar with and competent in its use. MGF can provide toolbox talks and training material / advice on request.

MGF excavation systems can be supplied with a full range of site safety products and ancillaries. These products are designed to comply with current best practice and meet the requirements of the Lifting Operations & Lifting Equipment Regulations, Work at Height Regulations and the Confined Spaces Regulations.

⚠ SAFETY TIPS ⚠

1. MGF GRiPSHORE™ is a range of lightweight, GRP shoring products, ideal for manual handling and use in the utili ies sector when either hand digging or using a mini excavator, to form a trench in soils that do not collapse when using the dig and place install technique.

2. The GRP vertishore system provides shoring solutions for excavation depths from 1000 to 2000mm, incorpora ing single ac ing hydraulic struts to support trench widths ranging from 570mm to 1420mm.

3. Always inspect lifting points prior to every lifting operation and ensure all personnel are well clear of operation.

4. Beyond 1.0m depth, only access and work in the trench between pressurised units.
MGF recommend installing a minimum of three units if there is adequate space.
Never enter via ends/faces of an unsupported excavation at greater dep hs.

5. Always ensure all pins and retaining clips are correctly fitted prior to use.

6. Do not allow personnel within the trench whilst the excavator is digging.

7. Always work from a position of safety. Avoid working above on an unsupported edge, an unprotected edge or under a suspended load.

8. Do not pre-load/pump out hydraulics beyond 750 psi/50 bar using MGF bucket pump.

9. Always ensure operatives are safely out of the excava ion and hydraulics de-pressurised before removal of units.

10. Do not extend struts beyond their stated working range.

- ⚠ GRP is flame retardant - avoid hot working
- ⚠ GRP Robustness - take care
- ⚠ Lightweight - in wind strap down
- ⚠ Adhesion loads when extracting by hand (manual handling)

IF IN DOUBT ASK!

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Commitment • Innovation • Sustainability

Guidance for Safe Systems of Work:
GRiPSHORE™: GRP Vertishore

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