

product safe user guide



Title: Mabey Versa Shield Aluminum Shoring

Issue: 1

Date: Jul 2016

The following pages relate to the safe use of Mabey's Versa Shield Aluminum Shoring.

Mabey Versa Shield aluminium Shoring and Manhole Boxes meet the safety requirements of AS 4744.1-2000.

Panel Type	Panel Length (mm)	Panel Height (mm)	Panel Width (mm)	Clear Working Dimensions				Safe Working Load (kPa)	Weight (incl 1m strut) (kg)
				Clearance Length (mm, Strut to Strut)	Min Width (mm)	Max Width (mm)	Understrut Clearance (mm)		
Lower	3000	2000	84	2,600	600	4000	1100	34	740
Extension	3000	2000	84	2600	600	4000	1100	34	740
Lower	3000	2400	142	3600	600	4000	1400	50	1210
Extension	3000	2000	142	3600	600	4000	1100	50	1210
Lower	7200	2400	181	6600	600	6000	1400	36	3660
Extension	7200	2400	181	6600	600	6000	1400	36	3660

All Mabey Hire Shoring Shields come with the required pins and clips which are suitable for the type of shield in use. See table below for further detailed information of the clips and pins.

Pins	Diameter (mm)	Length (mm)	Clip Hole Diameter (mm)	Clip Type
Versa Shield 3m length pins	25	185	7	6mm D Clip
Versa Shield 7.2m length pins	45	254	11	10mm Protec Retaining

All shields come complete with one set (4) of suitable struts at the requested length and to handle the stated ground conditions.

Assembly

To assemble any of Mabey Hire's shoring shields, first make sure you have all of the panels to the depth required and enough struts, pins and clips.

1. Remove panels from the truck by lifting panels with 4 point lift lugs.
2. Place a panel flat on the ground with the collars/channel/ribs facing up.
3. Connect the struts to the panel using the pins and clips.
4. Lift the second panel onto the struts and secure with the pins and clips.
5. Lifting the unit slowly into a standing position, check to make sure all pins and clips are secure.
6. The unit is now ready to be installed into the trench. See further instructions below for "Lifting & Installing".

Lifting & Installing

1. Using either a four leg chain or sling, connect to the lifting lugs provided (2 per panel at the top edge). A four leg chain or sling is required as this will ensure an even lift.
DO NOT LIFT THE SHIELD WITH THE CHAINS OR SLINGS ATTACHED TO THE SPREADER BARS.
2. Upon lifting the shield, position over the excavation and lower in gently.
3. Once the shield is in place, remove the chains or slings.
4. If the shield is not on the base of the excavation, gently with the machine push each corner down to make sure the shield is safely in place, and will not suddenly slide down into the excavation.

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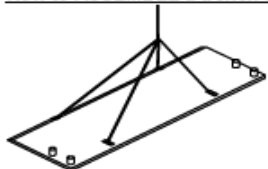
Removal of Trench Shield from Trench

1. To extract the shield from the excavation, attach the chain or sling (as for installation) and lift the shield vertically out of the excavation.
2. If the shield is tight in the excavation, place the lifting chains on the two lifting lugs at one end of the shield. Lift this end of the shield and then reposition at the other end of the shield. Keep swapping the chains from one end of the shield to the other and lifting the shield slowly until it is loose in the excavation. You should now be able to lift the shield vertically out of the excavation as per point above.

Possible Hazards To Consider

1. In windy conditions after assembling the shields, secure with ropes to stop them from being blown over.
2. On sloping ground it is recommended that shields be laid on their sides, or secured in some way (ie. A star picket in the ground) to stop it sliding into the excavation.
3. Keep both the machine and the shield away from soft ground around the excavation. If excavating in very soft ground, make sure you have a machine with enough reach, so as not to be putting a surcharge load on top of the excavation.
4. If in doubt as to the type of ground you are excavating, assume the worst, Type "C".

How to ASSEMBLE a trench shield:



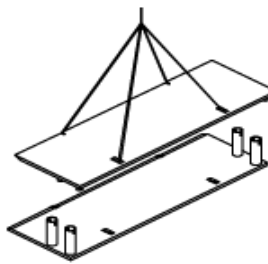
1. Remove from truck by lifting panels with 4 point lift lugs. Always use OSHA approved slings.



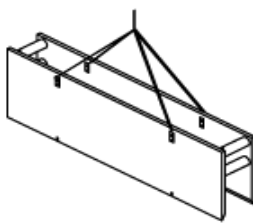
2. Place one sidewall flat on the ground with collars pointing up.



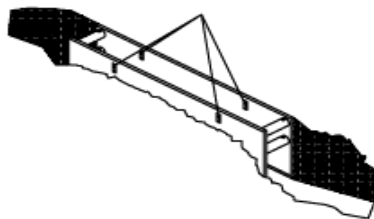
3. Set the spreader pipes over the collars and insert pins and keepers.



4. Set matching panel over bottom panel. Install Spreader pipes in collars and insert pins and keepers.

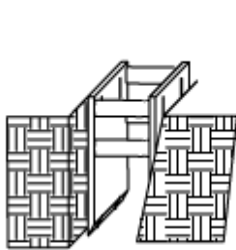


5. Place sling in top 4 lift lugs. Stand shield and install into trench.

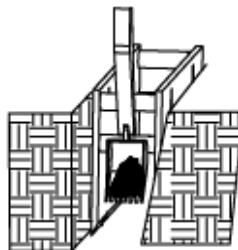


6. **WARNING:** Lift eyes are designed and intended for assembly and lifting only. Do not pull or lift by eyes when shield is stuck or has pressure against it. Loosen shield by pulling on spreader or digging along sides before using lift eyes.

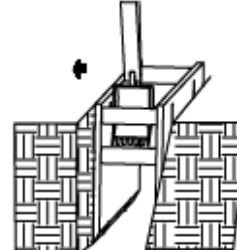
How to use a trench shield in STABLE soils:



1. Excavate trench to grade, slightly wider than shield. Lift and lower shield into trench.

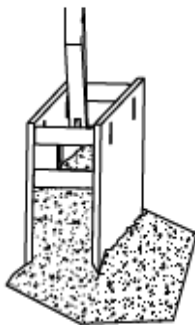


2. Perform desired work, then excavate in front of shield.

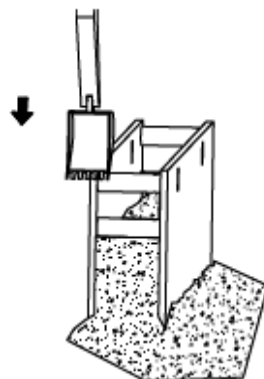


3. Pull shield forward by front spreaders or pulling eyes. Continue excavating and pull shield forward. Back fill as work progresses.

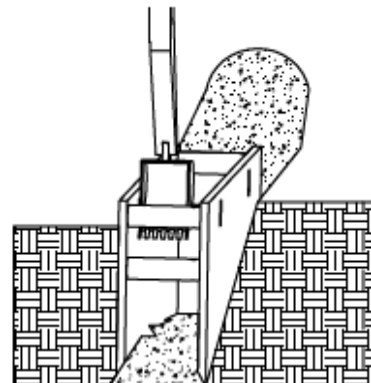
How to use a trench shield in UNSTABLE soils:



1. Excavate until soil begins to crumble beyond desired trench width. Place shield on line of excavation and excavate from within.



2. Continue excavating with in shield while alternately pushing down on shield corners, until proper grade is reached.



3. Perform desired work, then pull shield forward and up at appropriate angle and repeat steps (2) and (3) as necessary.