

product safe user guide



Title: Mabey Ultra Shield Aluminum Shoring and Manhole Boxes

Issue: 3

Date: July 2016

The following pages relate to the safe use of Mabey's Standard, Super and Super Deep Aluminium Shoring Shields and Manhole Boxes.

Mabey's Ultra Shields and Manhole Boxes meet the safety requirements of AS 4744.1-2000.

Clear Working Dimensions									
Panel Type	Panel Length (mm)	Panel Height (mm)	Panel Width (mm)	Clearance Length (mm, Strut - Strut)	Min Width (mm)	Max Width (mm)	Understrut Clearance (mm)	Safe Working Load (kPa)	Weight (incl 1m strut) (kg)
Standard Base	2,400	1,200	56	2,100	600	1,800	300	20-50*	130
Manhole Base	2,000	2,000	56	1,850	2,000	2,000	560	30	376
Manhole Base	2,400	2,400	9	2,200	2,000	4,000	1,150	50	900
Lower	1,800	2,000	90	1,500	600	4,000	900	50	300
Extension	1,800	1,600	90	1,500	600	4,000	350	50	240
Lower	3,100	2,000	90	2,730	600	4,000	900	50	620
Extension	3,100	2,000	90	2,730	600	4,000	550	50	620
Lower	3,600	2,400	90	3,280	600	4,000	1,350	36	900
Extension	3,600	2,000	90	3,280	600	4,000	950	36	750
Lower	4,000	2,400	150	3,690	600	4,000	1,350	50	1200
Extension	4,000	2,000	150	3,690	600	4,000	950	50	960
Lower	7,200	2,400	150	6,900	600	4,000	1,350	36	2100
Extension	7,200	2,400	150	6,900	600	4,000	1,100	36	2100

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
1.8 m - 3.6 m Ultra Shield Pins	20	200	6	5 mm R Clip
4.0 m - 7.0 m Ultra Shield Pins	20	200	6	5 mm R Clip

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

Assembly (Dismantling is reverse procedure)

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. ("R" clips should always be on the inside of the channel for any Ultra Shields to protect them).
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 for "Lifting & Installing" p3.

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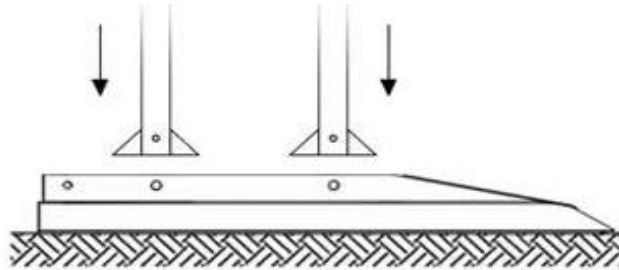


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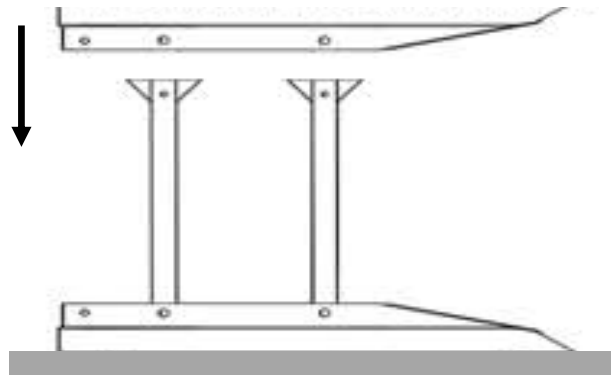
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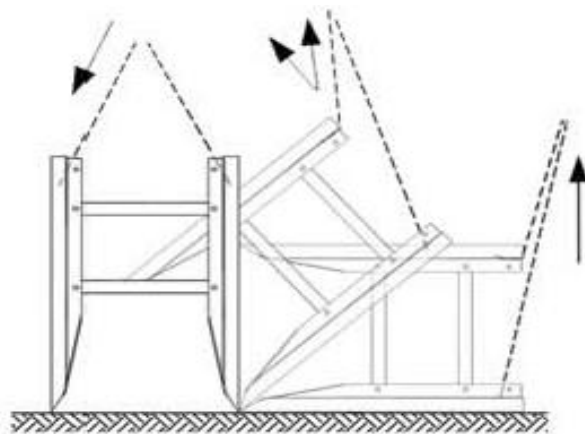
Assembly steps 2-3



Assembly step 4



Assembly step 5



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Lifting & Installing

1. Using either a four leg chain or cling, 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.

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 start 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".

