

These Assembly Guidelines provide guidance for the correct and safe assembly and lifting of Manhole Form Hire outer forms and risers

### **Disclaimer**

These Assembly Guidelines are provided as a general guide only and represent recommended best practice for assembling and handling Manhole Form Hire outer forms.

Manhole Form Hire does not control site conditions, supervision, competency of personnel, or the manner in which equipment is assembled, lifted, used, or maintained. As such, Manhole Form Hire accepts no responsibility or liability for any loss, damage, injury, or incident arising from the use, misuse, incorrect assembly, modification, lifting, or application of the equipment.

It is the responsibility of the end user to:

- ensure all persons involved are competent, trained, and suitably supervised
- conduct a site-specific risk assessment for the use of the equipment that captures the equipment's use in the Safe Work Method Statement (SWMS), including manual handling and lifting tasks
- assess individual physical capabilities prior to undertaking any manual handling
- use mechanical lifting aids wherever reasonably practicable
- verify that the equipment is suitable for the intended application and site conditions
- comply with all relevant Work Health and Safety legislation, Australian Standards, and industry requirements.

These guidelines do not replace professional engineering advice, site-specific procedures, or statutory obligations.

### **Note:**

- Weights for Manhole Form Hire products can be found within the relevant product assembly guides which must be consulted prior to lifting or manual handling.
- Always assess your own physical capabilities before attempting any manual handling task. If there is any doubt, seek assistance from a coworker or use mechanical aids.
- Bolts are supplied with all forms and stored in the bolt holder.

- Additional bolts will be supplied for stacked form configurations.
- If bolts are missing or additional bolts are required, contact your nearest Manhole Form Hire branch on 1300 MH FORM (1300 643 676).
- Approved alternative bolts for use with Manhole Form Hire outer forms are M14 x 60 Grade 8.8 hex bolt and nut only.
- Any configuration outside the scope of these Assembly Guidelines is supported by a separate build drawing. The general assembly principles outlined in this document still apply.
- Outer risers must be assembled in accordance with these Assembly Guidelines and bolted together as specified in Usage Guidelines Step 7(b).
- If you are unsure about correct assembly, lifting, compatibility, or require further documentation, contact your nearest Manhole Form Hire branch on 1300 MH FORM (1300 643 676).

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## Minimum PPE Requirements

The following minimum PPE requirements are recommended for the assembly of manhole forms in addition to any site requirements.

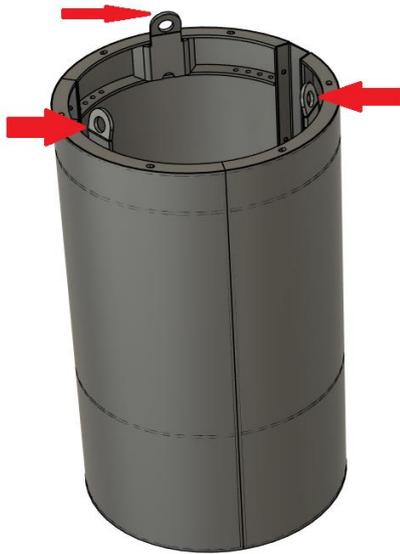


The use of a ladder may be required for access and egress from the drum during the assembly and disassembly phase for drums.

## Equipment Required

Item	Qty	Illustration
27mm Ratchet Podger or adjustable spanner. An impact driver with a 27mm socket can also be used as a substitution	2	
Tape Measure	1	
Nylon Mallet	1	
1 x 4 Leg 8mm 3m Grade 100 Chain Sling or 2 x 2 Leg 8mm 3m Grade 100 Chain Sling	1	
Platform Ladder or Step Ladder	2	

## Lifting Guidelines



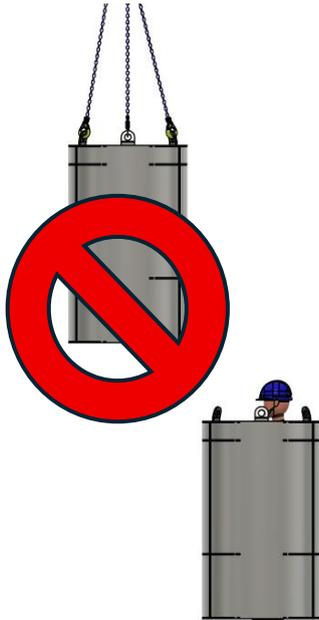
Forms are to be lifted only by the identified lift points.



Forms are to be lifted in a straight lift for assembly.

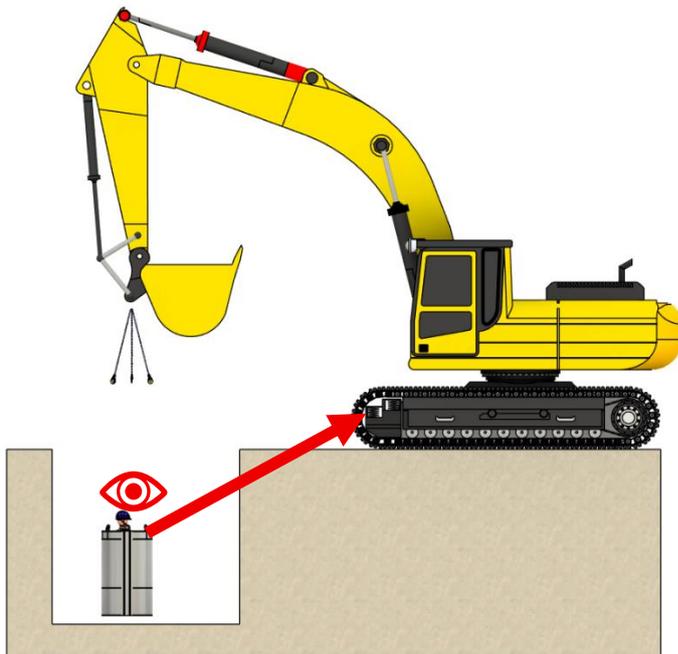


Assembled forms are to be lifted as per the lift diagram. Refer to Manhole Form Hire QR code for the correct lifting arrangement if unsure.



## **! WARNING!!**

DO NOT ALLOW PEOPLE TO BE INSIDE THE FORM WHEN LIFTING FORMS ON TOP OF EACH OTHER.



## **! CAUTION!!**

Any lifts that are not in the operator's line of site or require adjustment of chain legs due to the centre of gravity of the formwork a licensed dogger or rigger is required for the lift. For lifts not in the line of site, the dogman must use whistle signals or radio for communication with the operator. The operator must know whistle signals if this is used as a means of signalling. It is highly recommended that this is captured in the SWMS.

## Outer Form Weights Fully Assembled

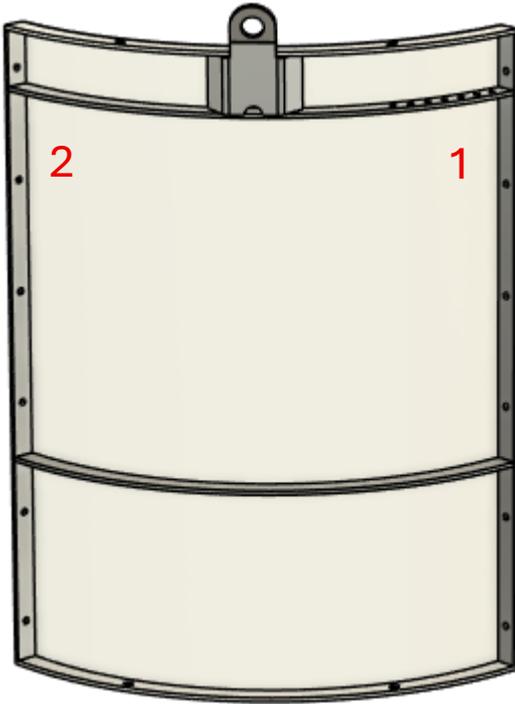
Item	Number of Panels	Total Approximate Weight of Assembled Form (kg)
1150 × 1500H Outer Form	4	248
1200 × 1200H Outer Form	4	220
1200 × 1500H Outer Form	4	256
1350 × 1200H Outer Form	4	244
1350 × 1500H Outer Form	4	280
1500 × 1200H Outer Form	4	264
1500 × 1500H Outer Form	4	304
1600 x1500 H Outer Form	4	354
1650 × 1200H Outer Form	6	312
1650 × 1500H Outer Form	6	360
1700 × 1500H Outer Form	6	366
1800 × 1500H Outer Form	6	384
1950 x 1500H Outer Form	6	624
2000 × 1500H Outer Form	6	420
2100 × 1200H Outer Form	6	372
2100 × 1500H Outer Form	6	432
2200 × 1500H Outer Form	6	450
2250 × 1500H Outer Form	6	456
2300 × 1500H Outer Form	6	462
2400 × 1500H Outer Form	6	480
2450 × 1500H Outer Form	6	492
2550 × 1500H Outer Form	8	536
2600 × 1500H Outer Form	8	536
2700 × 1500H Outer Form	6	560
2800 × 1500H Outer Form	6	576
2900 × 1500H Outer Form	6	512
3000 × 1200H Outer Form	8	528
3000 × 1500H Outer Form	8	616
3600 × 1500H Outer Form	8	704
4200 x 1500H Outer Form	10	830
4600 x 1500H Outer Form	12	1308
5100 x 1500H Outer Form	12	1620
5700 x 1500H Outer Form	12	1560

## Outer Riser Weights Fully Assembled

Item	Number of Panels	Total Approximate Weight of Assembled Form (kg)
1200 × 350H Outer Form	4	104
1350 × 350H Outer Form	4	112
1450 × 350H Outer Form	4	120
1500 × 350H Outer Form	4	124
1600 × 350H Outer Form	4	138
1650 × 350H Outer Form	6	144
1700 × 350H Outer Form	6	150
1800 × 350H Outer Form	6	156
1950 × 350H Outer Form	6	216
2000 × 350H Outer Form	6	168
2100 × 350H Outer Form	6	168
2200 × 350H Outer Form	6	180
2250 × 350H Outer Form	6	186
2300 × 350H Outer Form	6	186
2400 × 350H Outer Form	6	192
2450 × 350H Outer Form	6	198
2550 × 350H Outer Form	8	216
2600 × 350H Outer Form	8	216
2700 × 350H Outer Form	6	224
2800 × 350H Outer Form	6	232
2900 × 350H Outer Form	6	240
3000 × 350H Outer Form	8	248
3300 × 350H Outer Form	8	264
3600 × 350H Outer Form	8	280
4200 × 350H Outer Form	10	330
4600 × 350H Outer Form	12	600
5100 × 350H Outer Form	12	696
5700 × 350H Outer Form	12	708

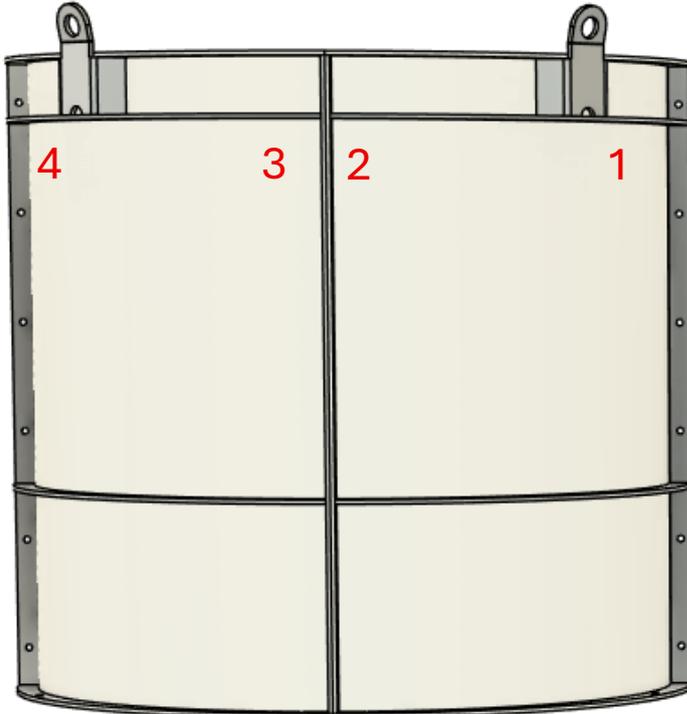
## Assembly Process of Outer Form Drum

### STEP 1



- Start the assembly process of the outer drum following the numbers welded in the top corner of each panel.

### STEP 2



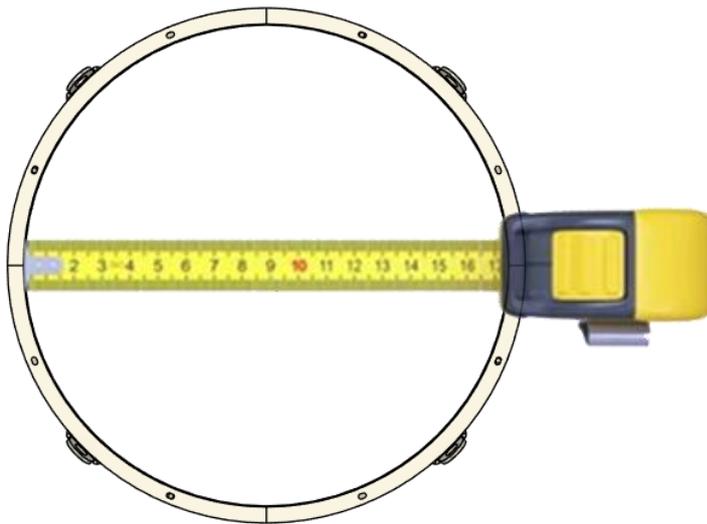
- Move the next number sequence panel into place and using the bolts supplied in the bolt holder do up the bolts loose.

### STEP 3



- Continue joining the numbers in sequence until you have all the panels bolted together.
- Go around the drum and do all the bolts uptight.

### STEP 4



- Check the drum with a tape measure on the internal side to ensure it is at the required finished size.

## Usage Guidelines

1. Once the manhole forms have been assembled to the required size, they are now ready to use.
2. Apply release agent to the face of the form.
3. Using a certified lifting chain sling, attach the lifting hooks to the lift points as per the lift plan. Always ensure that the hook's gate is correctly closed and the lifting eye is seated correctly in the hook.
4. Check that personnel are clear from the immediate area and the required location when lifting.
5. Carefully raise the manhole form just off the ground and check for balance.
6. Carefully transport the manhole form to their required destination.
7. Position the manhole form in the required location
8. Once in position, release the lifting equipment from the manhole form lifting points.
  - a. Repeat step 7 if adding another drum or riser.
  - b. Insert bolts into the join plates in the slotted holes to join the drums together.
9. The concrete can now be cast.
10. If a greater pour height is required more than 3m, this will need to be done in stages – the concrete will need to be poured, set and the excavation backfilled to the new height, before casting the next level.
11. Apply release agent to the face of the form before recasting.

## Extraction

12. Once the concrete surround has set, the manhole form can be removed from the trench.
13. Simply reverse the installation process:
  - a. Removing the key will allow for easier drum extraction.
14. Clean any excess concrete off the form.
  - a. If reusing for another pour, clean the face of the form and apply release agent prior to pouring concrete.
  - b. Remember to refit the key to the correct panel if reusing.
15. Call to off hire once forms have been disassembled.