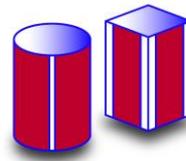


# Assembly Guidelines

## Inner Forms with 3 Panels



**MANHOLE  
FORM HIRE**

These Assembly Guidelines provide guidance for the correct and safe assembly and lifting of Manhole Form Hire inner forms with one (1) key and three (3) panels.

### **Disclaimer**

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

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 task
- 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.
- 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 inner forms are M14 × 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 remain applicable.
- Inner risers must be assembled in accordance with this Assembly Guidelines and bolted together as specified in Usage Guidelines Step 7(b).
- Do not substitute or modify any components. Only components supplied by Manhole Form Hire are to be used.
- If you are unsure about correct assembly, lifting requirements, configuration, 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.

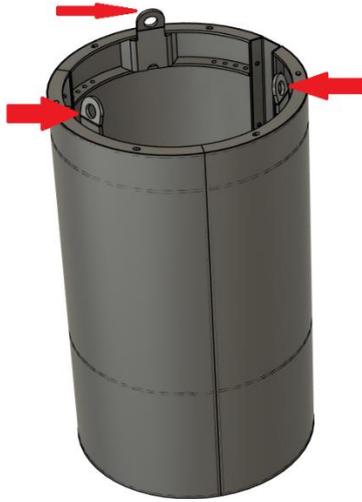


The use of a ladder may be required for access and egress from the drum during the assembly and disassembly phase for drums.

## 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	
Universal Joint	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



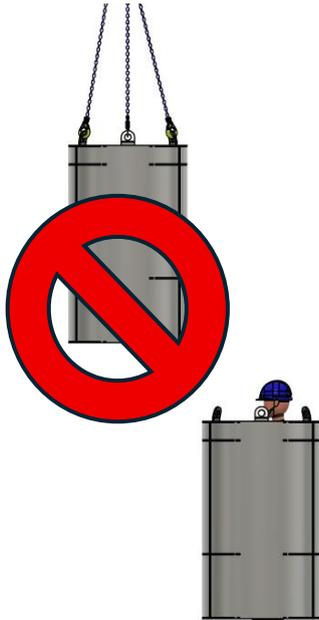
Forms are to be lifted only by the identified lift points.



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

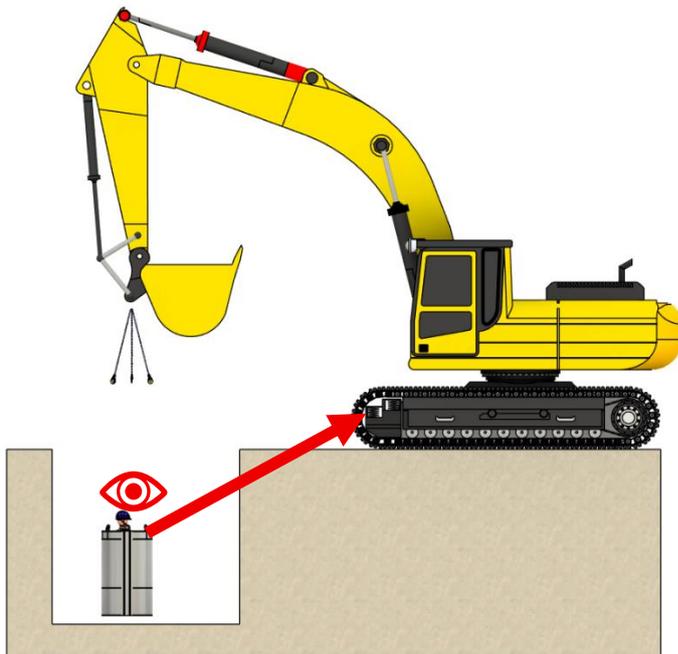


Assembled forms are to be lifted as per the lift diagram. Refer to Manhole Form Hire QR code for the correct lifting arrangement if unsure.



## **! 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 works SWMS.

## Inner Form Weights Fully Assembled

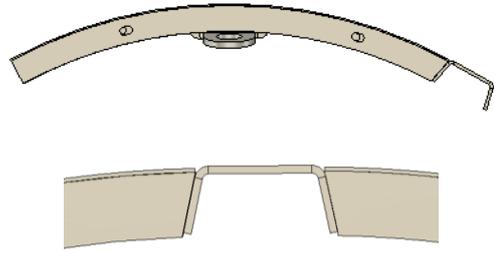
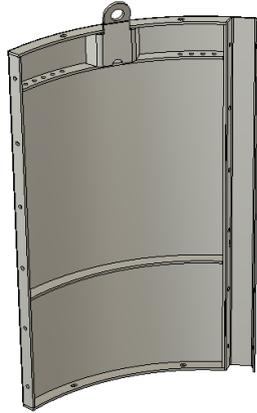
Item	Number of Panels	Total Approximate Weight of Assembled Form (kg)
900 × 1200H Inner Form	3	158
900 × 1500H Inner Form	3	195
1050 × 1200H Inner Form	4	210
1050 × 1500H Inner Form	4	242
1200 × 1200H Inner Form	4	226
1200 × 1500H Inner Form	4	266
1350 × 1200H Inner Form	4	206
1350 × 1500H Inner Form	4	290
1500 × 1200H Inner Form	4	270
1500 × 1500H Inner Form	4	314
1650 × 1500H Inner Form	6	368
1800 × 1200H Inner Form	6	334
1800 × 1500H Inner Form	6	392
2000 × 1500H Inner Form	6	422
2100 × 1500H Inner Form	6	440
2400 × 1200H Inner Form	6	418
2400 × 1500H Inner Form	6	488
2700 × 1500H Inner Form	6	428
2900 × 1200H Inner Form	6	388
3000 × 1500H Inner Form	8	614
3600 × 1200H Inner Form	8	614
3600 × 1500H Inner Form	8	710
4000 x 1500H Inner Form	10	1130
4500 x 1500H Inner Form	10	1340
5000 x 1500H Inner Form	10	1526

## Inner Form Risers Fully Assembled

Item	Number of Panels	Total Approximate Weight of Assembled Form (kg)
900 × 350H Inner Form	3	76
1050 × 350H Inner Form	4	90
1200 × 350H Inner Form	4	98
1350 × 350H Inner Form	4	110
1500 × 350H Inner Form	4	118
1650 × 350H Inner Form	6	140
1800 × 350H Inner Form	6	152
2000 × 350H Inner Form	6	164
2100 × 350H Inner Form	6	170
2400 × 350H Inner Form	6	188
2700 × 350H Inner Form	6	164
3000 × 350H Inner Form	8	234
3600 × 350H Inner Form	8	274
4000 x 350H Inner Form	10	502
4500 x 350H Inner Form	10	552
5000 x 350H Inner Form	10	652

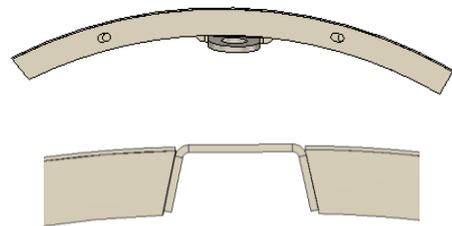
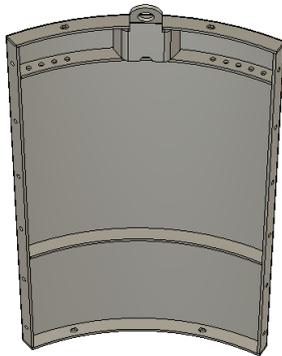
## Panel Terminology

### Left Panel & Key



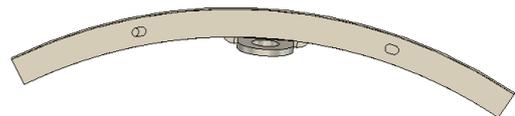
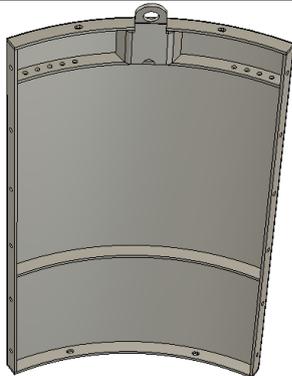
Note angle of panels joining key

### Right Panel



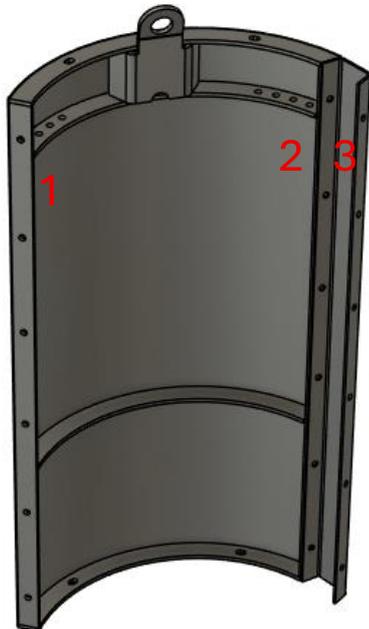
Note angle of panels joining key

### Mid Panel



## Assembly Process of Inner Form Drum with 3 Panels

### STEP 1



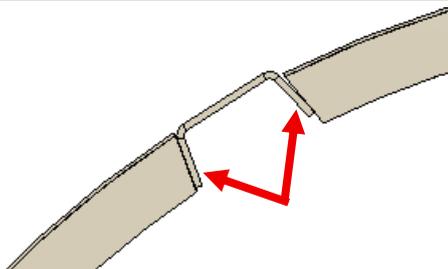
- Start the assembly process of the drum with the inner form with the key.
- The key will be attached to the left panel.
- Follow the numbers welded in the top corner of each panel.

### STEP 2



- Move the right panel into place on the opposite side of the key and using the bolts supplied in the bolt holder do up the bolts loose.

### IMPORTANT



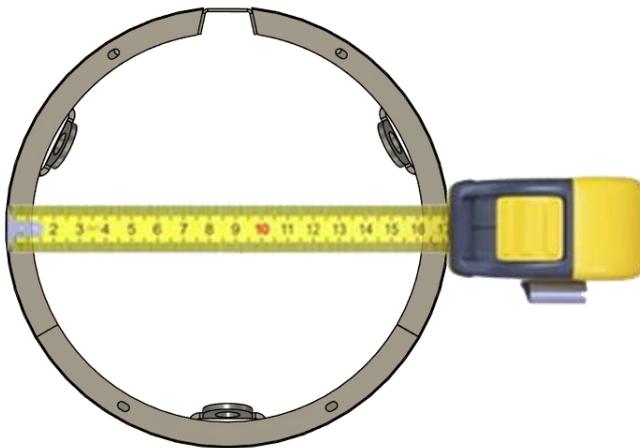
- Make sure that the angled panels are attached to the key.

### STEP 3



- Join the last panel together with the bolts provided then do the rest of the bolts up tight.

### STEP 4



- Check the drum with a tape measure 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 top and bottom plates in the slotted holes to join the drums together.
  - c. Use a ladder or appropriate scaffold to gain access to the inner drum or riser to do up the bolts.
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.

## Extraction

11. Once the concrete surround has set, the manhole form can be removed from the trench.
12. Simply reverse the installation process:
  - a. Removing the key will allow for easier drum extraction.
13. 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.
14. Call to off hire once forms have been disassembled.