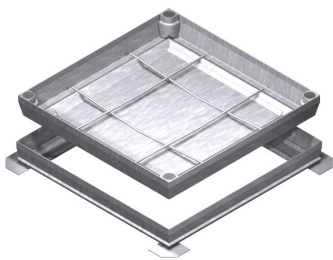


URBANFIL – GALVANISED STEEL ACCESS COVERS

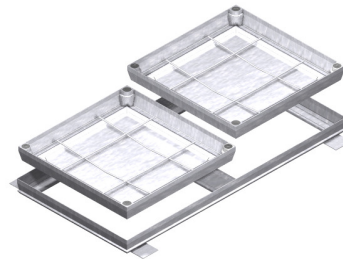
– INSTALLATION GUIDE

ACO ACCESS 

Installation of Single Part Covers and Trench Run Systems



Single Part Cover



2 Part Cover

Identification and Preparation

1. Form the access pit and rebate to the size required. See Figures 7, 8 & 9 for the recommended rebate dimensions for the required class load.
2. Remove all the dust caps and locking bolts from the covers and remove the covers from the frame.
3. Position the frame centrally over the clear opening in the rebate. The frame must not protrude into the pit opening.
4. Pack under the corners of the frame to raise the level of the frame to the finished floor level. Ensure the packing does not protrude into the pit opening. For trench run systems, pack under the additional frame joints to prevent the frame from sagging.
5. Set up the internal formwork to ensure that the frame will be fully supported after the concrete pour.
6. Thoroughly clean the seat areas of the covers and frame. It is important that these surfaces are dirt and dust free.
7. Place the covers back into the frame ensuring that the top edges of the frame and cover are level with each other. Check the covers for any diagonal rocking movement and adjust the packing under the frame where required. It is critical that the covers are properly seated in the frame and are not obstructed by any internal formwork.
8. Insert the plastic spacing pieces, one at the centre of each side between the cover and the frame at the top surface level. This is to ensure that clearance is maintained during the concrete pour.
9. Replace all the locking bolts and dust caps in the covers.
10. Check that the top level edges of the covers and frame are level over the entire perimeter of the access cover. If the covers are not level, the covers and frame seats may not be dirt and dust free (Step 6) and/or the frame is damaged.
11. Prior to the concrete pour, place clear sticky tape over the gap between the cover and frame and the locking recesses to prevent concrete from falling into the gap.

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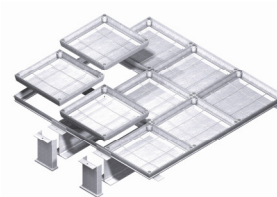
Concrete Pour

12. Fill the rebate gap with concrete as specified in Table 1, to a depth to accommodate the installation of the floor finish such as tiles or pavers and mortar at a later time. Tap the cover/frame to ensure that the concrete is well compacted. Ensure all cavities and pockets are completely filled with concrete. Allow to set before infilling covers. Take precautions to protect the exposed unit.
13. Fill the cover to a depth to accommodate the installation of the floor finish such as tiles or pavers and mortar at a later time. The cover must be filled with a minimum concrete depth of 45mm and must cover all the reinforcement. Tap the cover/frame to ensure that the concrete is well compacted.
14. The plastic spacing pieces should be removed soon after filling and before concrete hardens.
15. Concrete must be allowed to cure for at least 24 hours before removing the covers from the frame. Early removal of the covers may cause twisting of the frame and damage to the supporting concrete. This may prevent covers from fitting back into the frame.
16. After the concrete has cured, remove the covers and strip the internal formwork.
17. Clean the seat area of the covers and frame. It is important that these surfaces are dirt and dust free.
18. Replace the cover and all the locking bolts and dust caps. Care must be taken to ensure that the exposed frame and cover edges are protected against damage.
19. Infill cover with tiles/pavers or other floor finishes. The finished level of the floor finish must be flush with the top of the cover and frame.

Installation of Multi-part Cover Systems

Identification and Preparation

1. Using ACO's Multipart Cover Rebate Detail, provided once order is placed with ACO (example shown in Figure 1), form the access pit and rebate. Ensure that the pit clear opening, beam pockets and pit wall rebates are consistent with the detail. The numbering system on the drawing represents the position and order of installation of the covers. The frames and beams are numbered to help locate the covers.
2. The frame is delivered in sections. Ensure the end frame (containing the beam locating boxes) components mate with the side frame components.
3. Set the end frames so that the beam locating boxes are positioned with the corresponding beam pocket/s in the slab. Pack under the beam locating boxes and the corner of the frame joints to raise the level of the frame to the finished floor level.
4. Place the side frames into position and bolt (finger tight) to the end frames. Ensure that the frames are level and square. Check carefully along the frames and across the diagonals. Surveying equipment is recommended. The frame and packing must not protrude into the pit opening.
5. Lower the beams into the corresponding boxes. Set up the internal formwork to ensure that the frame will be fully supported after the concrete pour.
6. Place the removable cross bars into position. Remove all the dust caps and locking bolts from the covers.
7. Place the covers into the frame according to the numbering system (Step 1), ensuring that the top edges of the frame and covers are level with each other. Check the covers for any diagonal rocking movement and adjust the packing under the frame where required. It is critical that the covers are properly seated in the frame and are not obstructed by any internal formwork.



Multi-part Cover

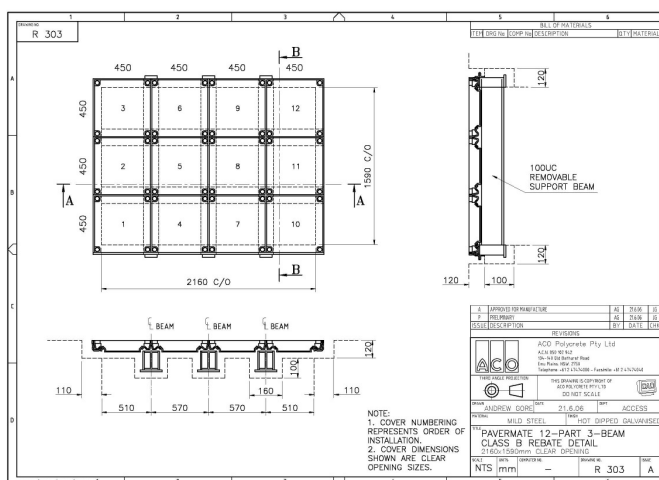


Figure 1 – Multi-part Cover Rebate Detail

8. Insert the plastic spacing pieces, one at the centre of each side, between the covers and between the cover and frames at the top surface level. This is to ensure that clearance is maintained during the concrete pour.
9. Check that the top edges of the covers and frame are level over the entire perimeter of the multi-part system.
10. Tighten the (finger tight) bolts joining the frames with a wrench. Replace all the locking bolts and dust caps in the covers.
11. Prior to the concrete pour, place clear sticky tape over the gap between the cover and frame and the locking recesses to prevent concrete from falling into the gap.



Figure 2 – Frame & Beam



Figure 3 – Cross Bars



Figure 4 – Cover & Frame

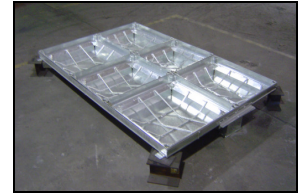


Figure 5 – Covers Assembled

Concrete Pour

Follow concrete pour procedure for single part covers and trench run systems.

Key Installation Requirements

Clear Opening

The clear opening is the unobstructed opening inside the frame, see Figure 6. The clear opening of the frame must be equal to or larger than the clear opening of the pit.

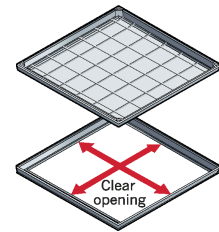


Figure 6 – Clear Opening

Dimensions

Dimensions are given as width (W) by length (L). Refer to ACO Access brochure for the complete dimensions of all the Urbanfil and Pavermate covers available.

Rebate Dimensions

To support the anticipated loads, the rebate must be cast according to Figures 7, 8 & 9. ACO's standard installation recommendations can be downloaded from ACO's website: http://www.acoaus.com.au/install_drawings_access.htm

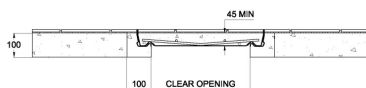


Figure 7 – Rebate for 330kg nominal wheel load

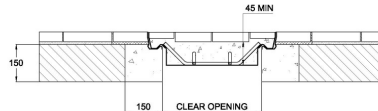


Figure 8 – Rebate for 2670kg nominal wheel load

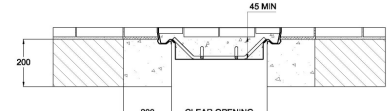


Figure 9 – Rebate for 5000kg nominal wheel load

Concrete Specification

- Minimum compressive strength of 32 MPa at 28 days
- Minimum cement content of 400 kg/m³

Table 1 – Concrete Specification

Load Class

Select the correct Urbanfil galvanised steel access cover to suit the required load class and application, refer to pages 6-9 in the ACO Access brochure for further details.

Covers & Frames

Covers and frames are a matching pair and should never be mixed with other covers and frames as the seal may be compromised.

Urbanfil Lifting Keys

It is important that the Urbanfil lifting key and locking (14mm allen) key are used, see Figure 10 and 11. To remove an Urbanfil cover, remove the locking bolts using the locking key from each corner and insert two short handle lifting keys in adjacent corners and rotate clockwise a quarter turn. Then lift both lifting keys and slide the cover out. Note square covers will fit diagonally through the frame so care should be taken not to drop the cover through the clear opening.



**Figure 10 – Short Handle Lifter
Part No. 84306**



**Figure 11 – Locking (14mm Allen) Key
Part No. 84313**

Decorative Edging

A strip of brass can be fixed to the edge of the cover and frame for an attractive finish, see Figure 12.

For these applications, keyhole bosses will also have extensions to match the decorative edge. The top of the decorative edge corresponds with the finished floor level of the cover.

Infill Materials

For Urbanfil covers, a maximum tile depth of 25mm is recommended. For Pavermate covers, a maximum paver depth of 40mm is recommended.

Tiles or pavers positioned on the cover and in the first course outside the frame must be fully restrained and bonded to the concrete bed. An epoxy mortar is recommended.

Site Support

Dependent on the location of the installation, ACO can provide supervisory support if requested.

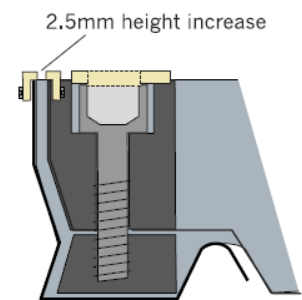


Figure 12 – Decorative Edging