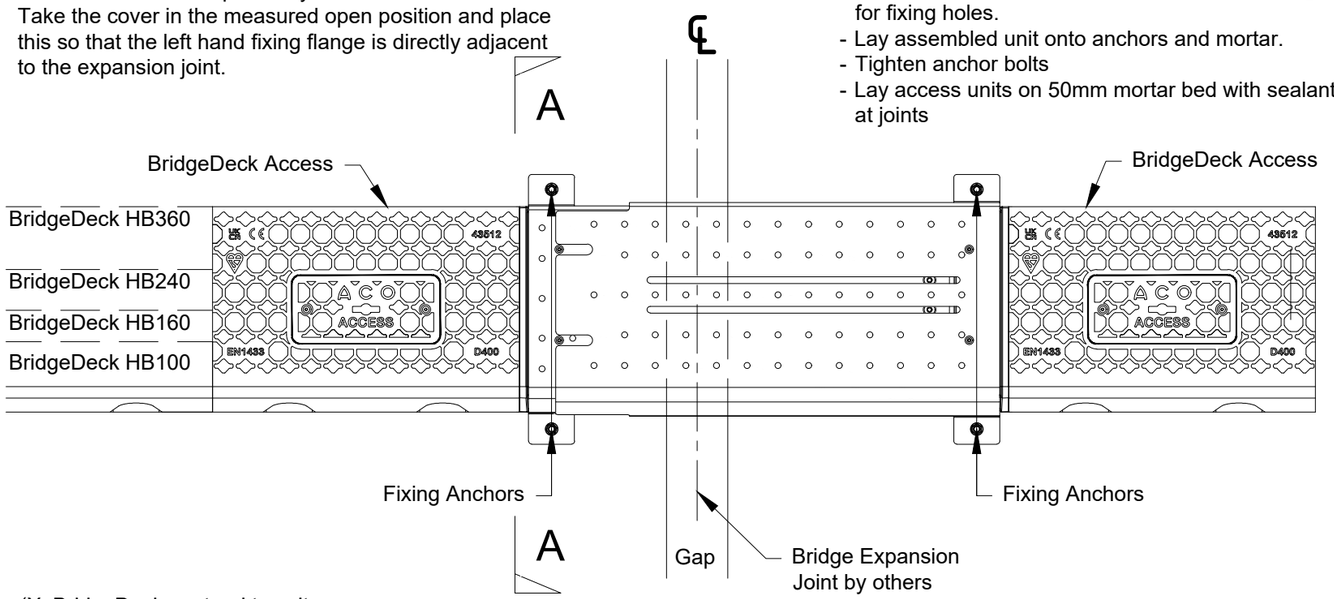
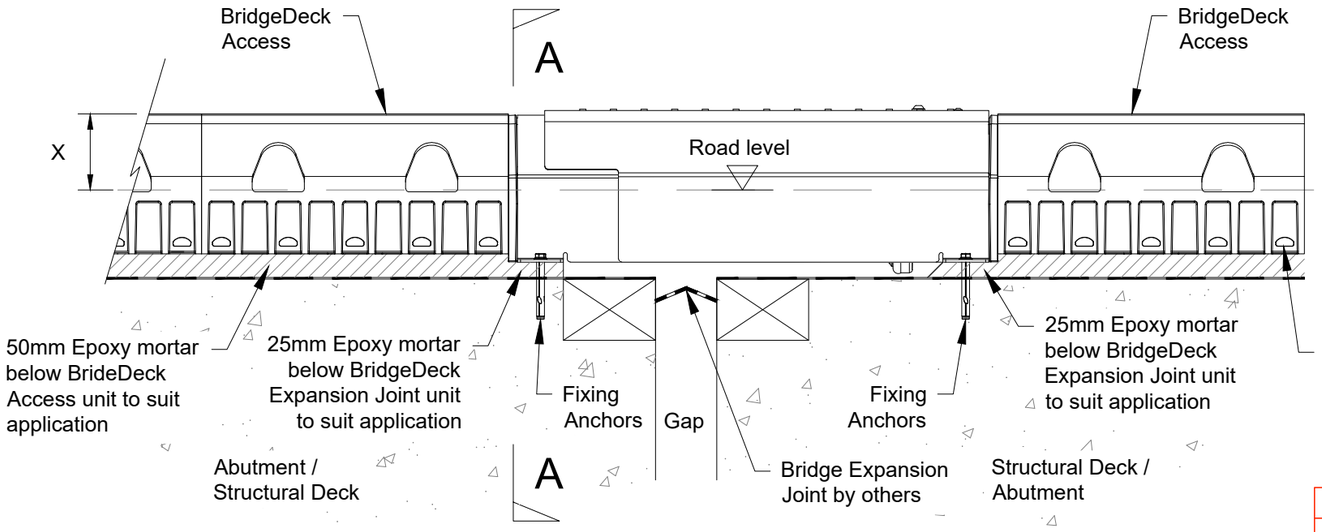
The ACO BridgeDeck expansion joint cover & end-caps can be set out by measuring the bridge expansion gap on the day of installation.
The difference between the joint at 0% expansion and the measurement taken on the day (+10%) will be the amount the cover is opened by.
Take the cover in the measured open position and place this so that the left hand fixing flange is directly adjacent to the expansion joint.

Sequence of Works:
- Set out bolt locations
- Drill holes and insert anchor bolts with sleeve. Waterproofing seal to be introduced
- Lay 25mm mortar below fixing flanges and end plates. Ensure mortar bed does not exceed flanges for fixing holes.
- Lay assembled unit onto anchors and mortar.
- Tighten anchor bolts
- Lay access units on 50mm mortar bed with sealant at joints

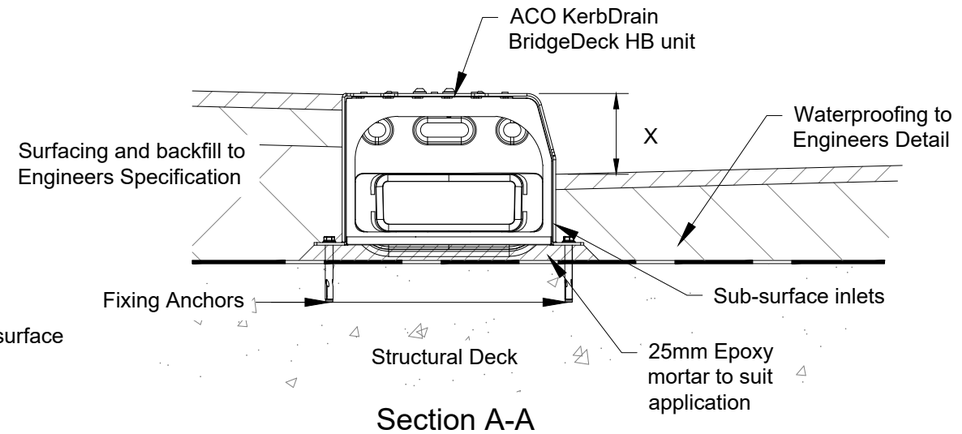


(X: BridgeDeck upstand to suit application - See Note 6.0)

Plan View



Front Elevation



Section A-A

1.0 Load Class
Installation recommendations shown are ACO minimum recommendations for BS EN 1433:2002 load class requirements.

2.0 Ground Conditions
The long term performance of a channel installation to sustain vertical and lateral loads depends upon A) bridge deck conditions B) stability of the adjacent pavement and C) a durable mortar bed

3.0 Cutting and Jointing
Mitre joints are formed by cutting the channels to the required angle and butting them together with appropriate sealant (e.g. Sikaflex 11FC Purform or similar). For further details please contact ACO Design Services Team. Avoid cutting through the inlet aperture, we recommend any cuts should be a minimum of 25mm away.

4.0 Block Pavements
Blocks or slabs bedded on sand remote from the channel should be set at a higher level to compensate for possible settlement of the paving in service.

5.0 Watertight Installation to BS EN 1433:2002
Where ACO channel joints/fittings and channel/pavement interfaces are to be sealed, an appropriate sealant should be used (e.g. Sikaflex 11FC Purform or similar). Guidance on the necessary surface preparation and/or priming should be sought from the sealant manufacturer.

For Guidance a typical method of application follows:
- The end faces of the channels are to be sound and free from dust, oil, and grease, with any loose material or dirt removed, e.g. by mechanical wire brush. No water drops should be evident.
- Using a standard cartridge gun, apply the sealant evenly and with no flaws. The detail on the ends of a channel varies from one product to another:
- Products with a basically flat face - apply the sealant in a layer approximately 5mm thick to one face of the joint.
- Products with a sealing groove within the end face - apply the sealant in a bead of approximately 10mm diameter into the sealing groove.
- Products with a sealing groove following the inside shape of the channel - apply the sealant to the end face of the channel and to the sealant groove, such that when the joint is completed, the sealant will both cover the end face and fill the groove.
- The channel unit should be placed on the prepared concrete or mortar bedding and pressed against the previously placed channel unit. A sealed joint of approximately 1-2mm width should be formed between adjacent channel units.
- Excess sealant should be wiped from the inside face of the channel to leave a smooth finish.
- The sealant is to be left to cure for 24 hours, during which time the sealant should be kept as dry as possible.

6.0 Installation Upstand Heights
The dimension (X), as shown within the detail, shows different upstand heights for each profile. This would be governed by the kerb upstand required for the highway. The channels should always be installed with a kerb face height of between 100mm and 125mm for Half Battered and between 75mm and 100mm for Splay KerbDrain BridgeDeck

7.0 Joint Lubrication
Prior to installation the joint should be lubricated using a white lithium grease. Once installed, additional lubrication should be applied as part of a regular maintenance regime. Grease can be applied through the use of the Access Unit or in the slots of the expansion joint cover.

8.0 Setting out
As shown within the detail, the location of the BridgeDeck Expansion Joint fixing anchors should take into account site ambient temperature and the likely expansion and contraction of the joint to be encountered following installation. They should also avoid the Bridge Expansion Joint fixings.

Highways Specification - Appendix 5/5:
The Appendix 5/5 will need to be completed for each project. A model Appendix 5/5 for ACO KerbDrain® BridgeDeck is available from the ACO Water Management Design Services Team.

Best Practice and Workmanship:
ACO can give guidance with respect to the most suitable methods of installation for each of the products in the ACO KerbDrain® range. ACO KerbDrain® should be installed using acceptable levels of workmanship according to the National Code of Practice (UK: BS8000-0:2014) in keeping with EN 1433:2002 (Drainage channels for vehicular and pedestrian areas).

Detailed installation statements and methodologies will vary for all sites as each will have different aspects deserving particular consideration, consequently the relevant approvals should be sought from the consulting engineer and/or the installer.

Version	Date	Description	Name

ACO Technologies plc
ACO Business Park
Hitchin Road
Shefford
Bedfordshire
SG17 5TE, UK
Tel: 01462 816666
www.aco.co.uk

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Title: ACO BRIDGEDECK MOULDED EXPANSION JOINT HB INSTALLATION DETAIL DRAWING

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Created at: 22.02.2023	Released at: 12/5/2023		Scale: 1 : 10
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