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The 'Sika Solution'

Aluminium Jointing Chamber and
Security Access Cover Set Package

2100 x 1200 x 700H / 900H
Partial Access

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Assembly Basic Tool Kit

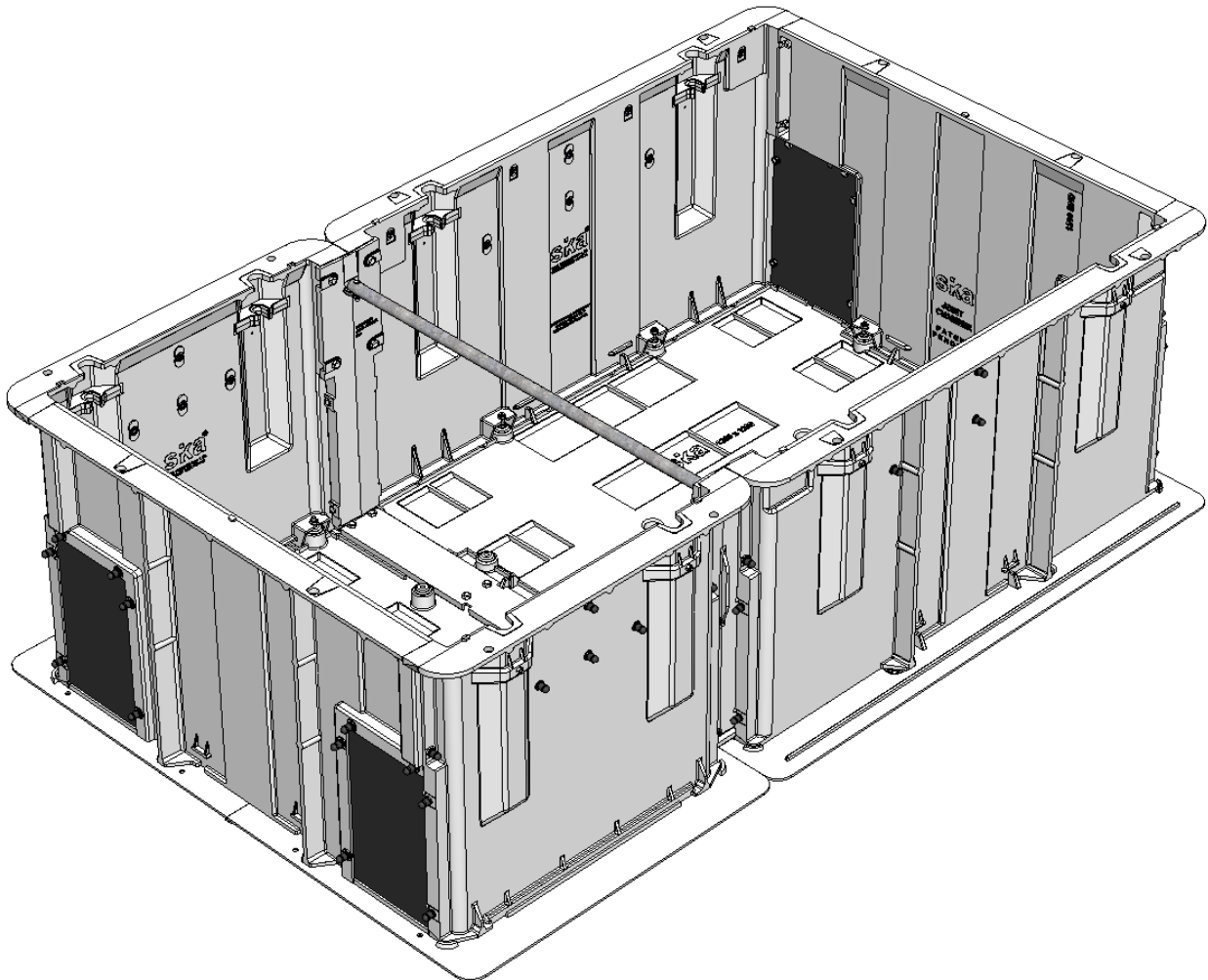
**24mm Open End Spanner
17mm Ratchet Spanner
17 mm Tube Socket
10 mm Allen Key
6 mm Allen Key**



Aluminium Jointing Chamber 2100 x 1200 x 700 / 900H

ASSEMBLY INSTRUCTIONS

Chamber Rating: CLASS D - 210kN - AS3996:2006
Sika 'Chambers' are used for both Pathway & Roadway Installations



Chamber 2100 x 1200 x 700H



1. Place the two 700mm and the two 1200mm **chamber bases** side to side on a flat area adjoining the pit or on a prepared bed of imported material in the excavated pit. Note the “1200 x 1200” scripts and “2100 x 1200” scripts will be face up.

Join the two 700mm **chamber bases** with two **base joiner tabs** and apply 4 – M10 bolts and washers, and tighten. Then join the two 1200mm **chamber bases** with the remaining four **base joiner tabs** and apply 8 – M10 bolts and washers, and tighten.

Place the joined 700mm **chamber bases** and the joined 1200mm **chamber bases** end to end, then join the two sets of **chamber bases** using the **base joiner 1200** and apply 8 – M10 x 40 bolts and washers, and tighten. Note the ends to be joined by the **base joiner 1200** do not have any **chamber base studs** protruding.

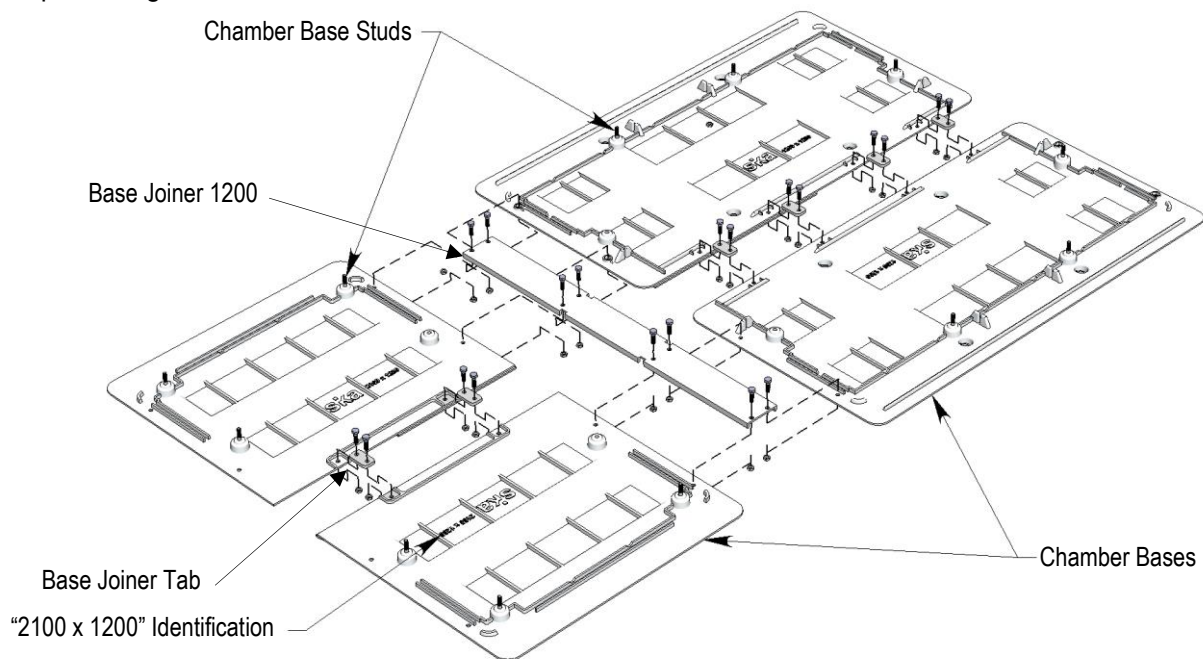


Fig 1

2. The **chamber base** may be assembled around existing duct work. Ref Fig 2

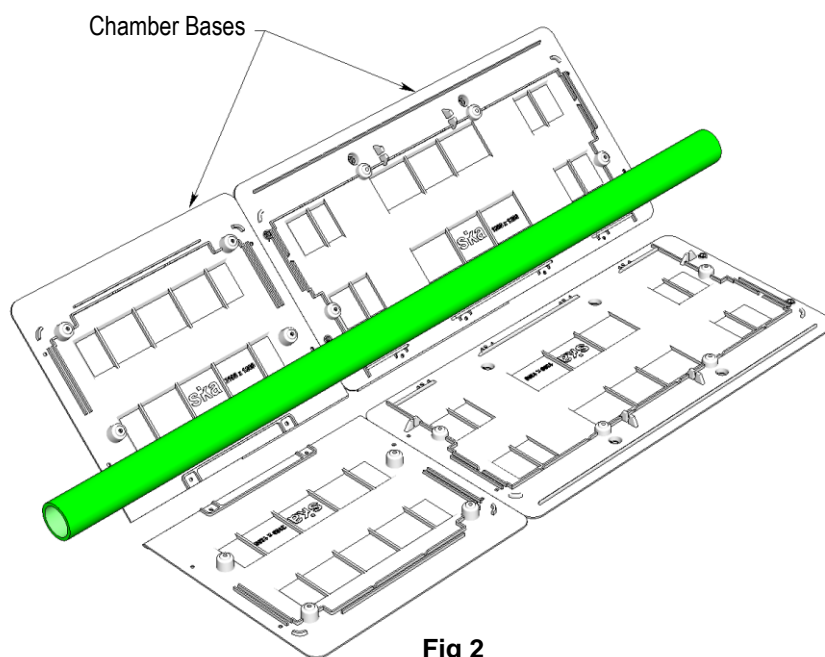


Fig 2

3. Remove the plastic tubes protecting the 8 – M10 studs protruding from the **chamber base** and place the 2 – 1200 and 2 – 700 **chamber sides** into place.

Insert the four **chamber sides** into the appropriately marked positions on the **chamber base**. **Chamber side supports** cast into the **chamber base** will hold the **chamber sides** vertical until the 8 – M10 nuts and washers are applied to hold them down. *(Do not tighten these yet.)*

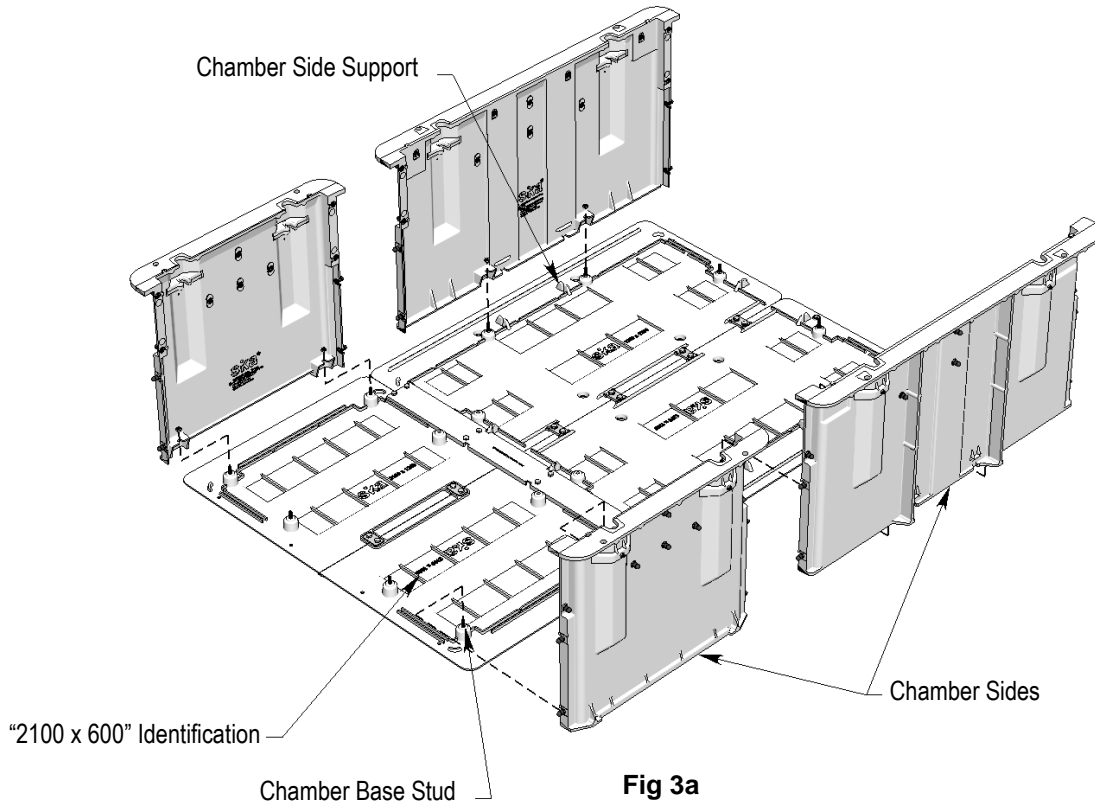


Fig 3a

Add the two **side joiners 700** adjacent to the **base joiner 1200** using 16 – M10 x 30 bolts and washers.

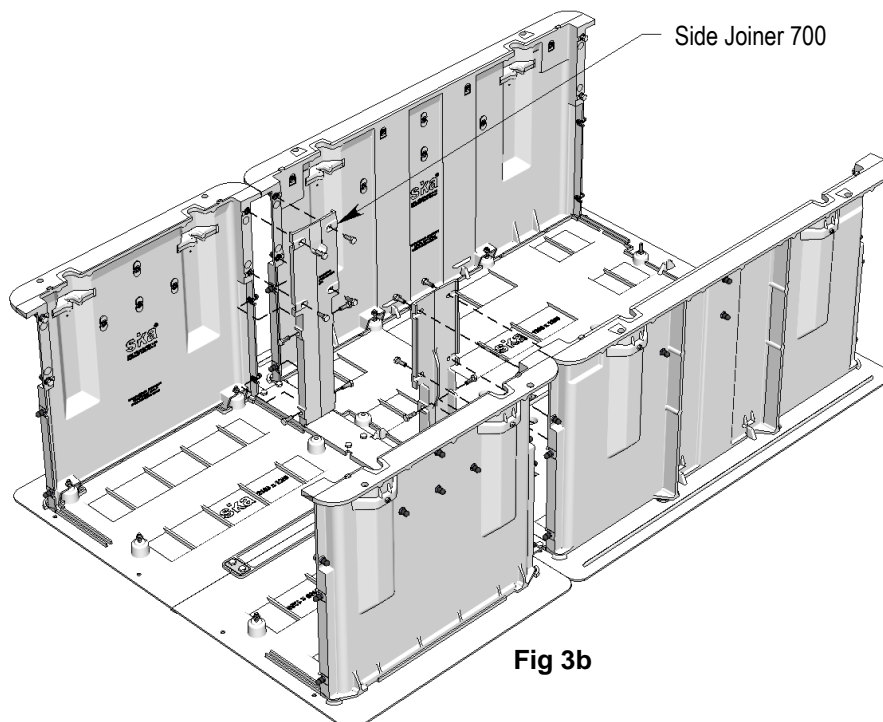


Fig 3b

4. Remove the plastic tubes protecting the 4 – M10 studs protruding from the **chamber base** and place the two **chamber ends 1200** into place.

Insert the two **chamber ends** into the appropriately marked positions on the **chamber base** and secure them to the **chamber base** and **chamber sides** with the 12 – M10 x 30 bolts and washers.
(Now tighten all the aforementioned fixings)

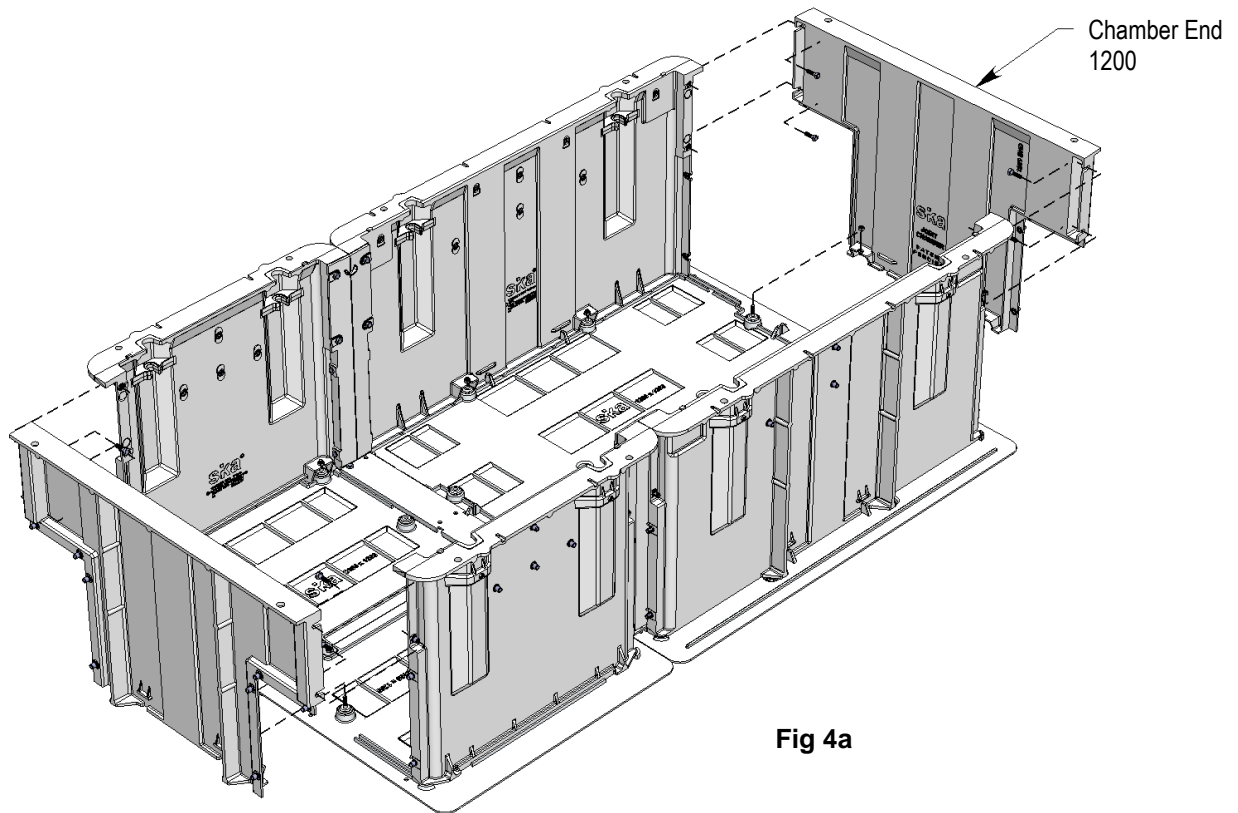


Fig 4a

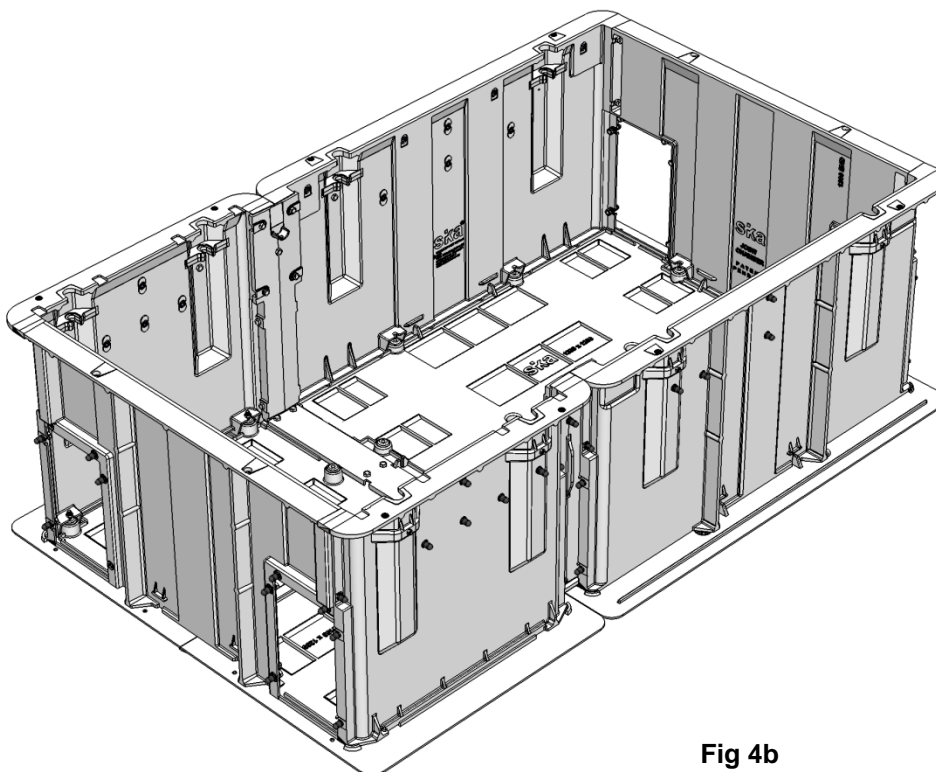


Fig 4b

5. Apply the four polypropylene **duct entry panels** to each end recess and secure each one with 6 - M10 x 30 bolts and washers supplied.

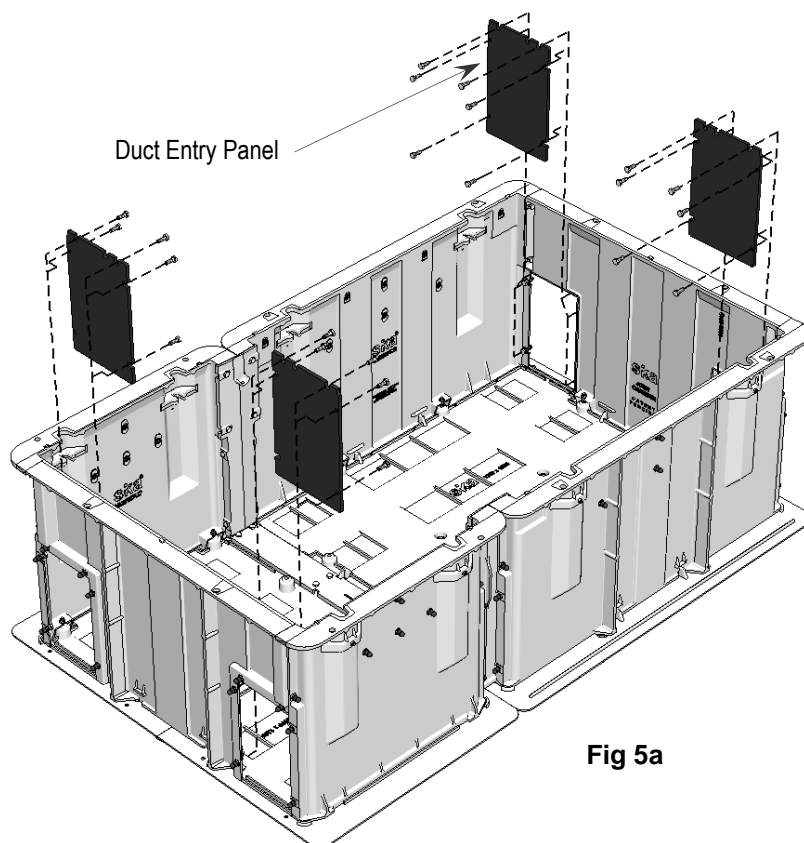


Fig 5a

Align and fit the **chamber spreader 1200** in place between the two **side joiners 700**. Ref Fig 5b

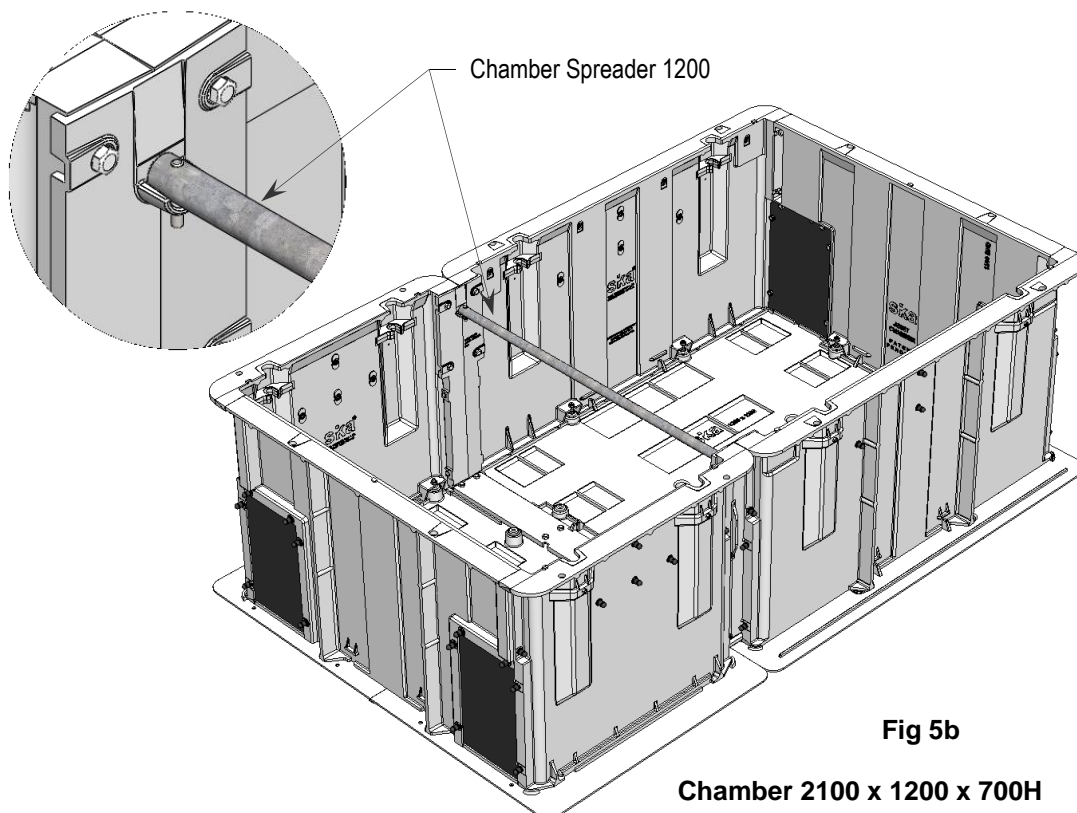
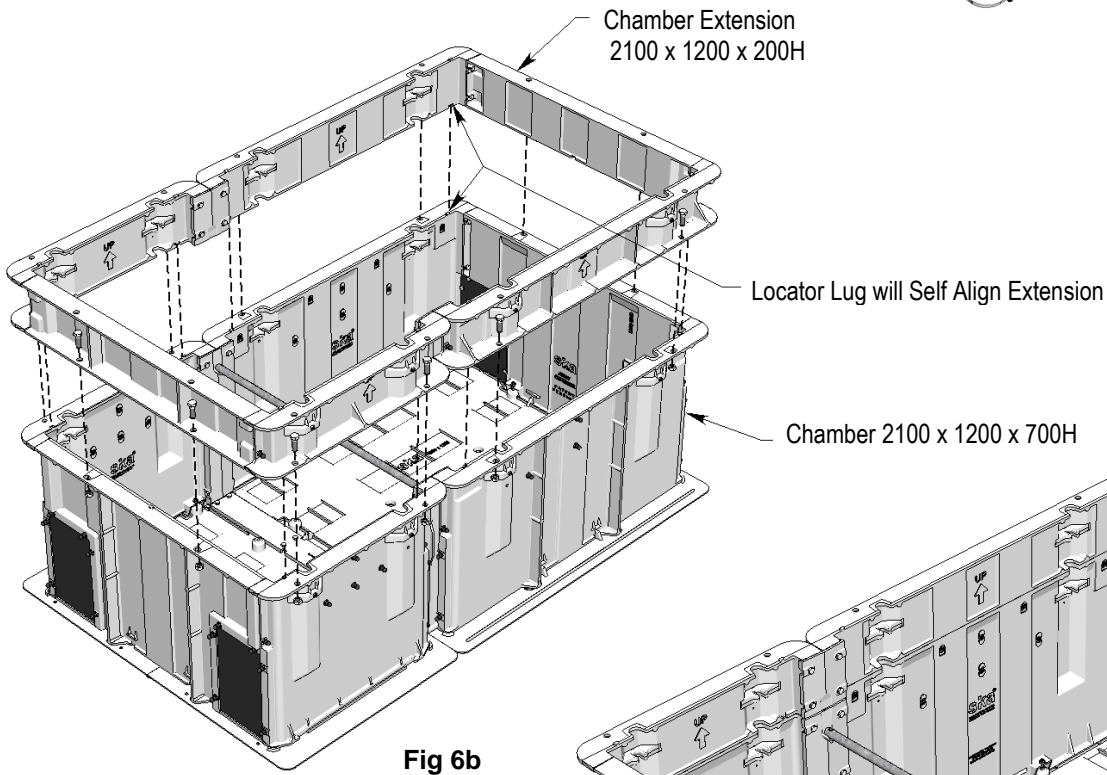
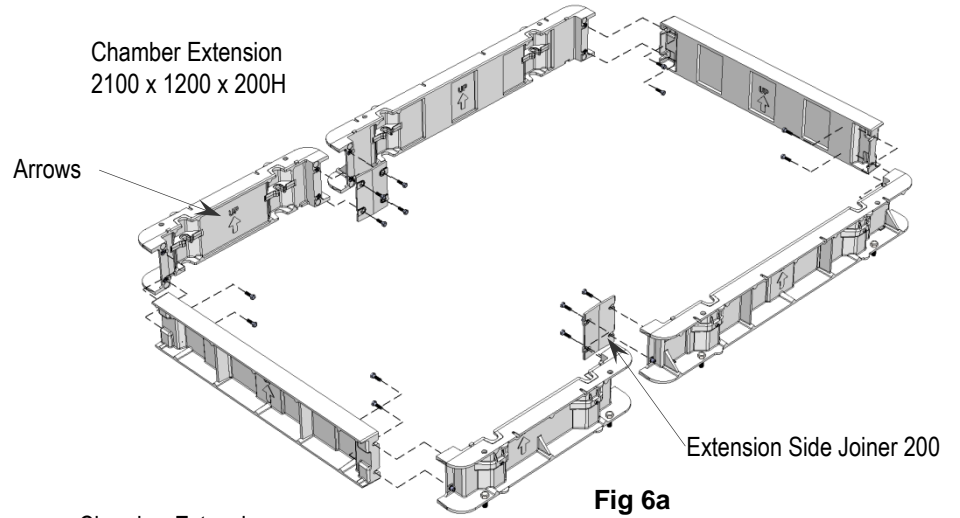


Fig 5b

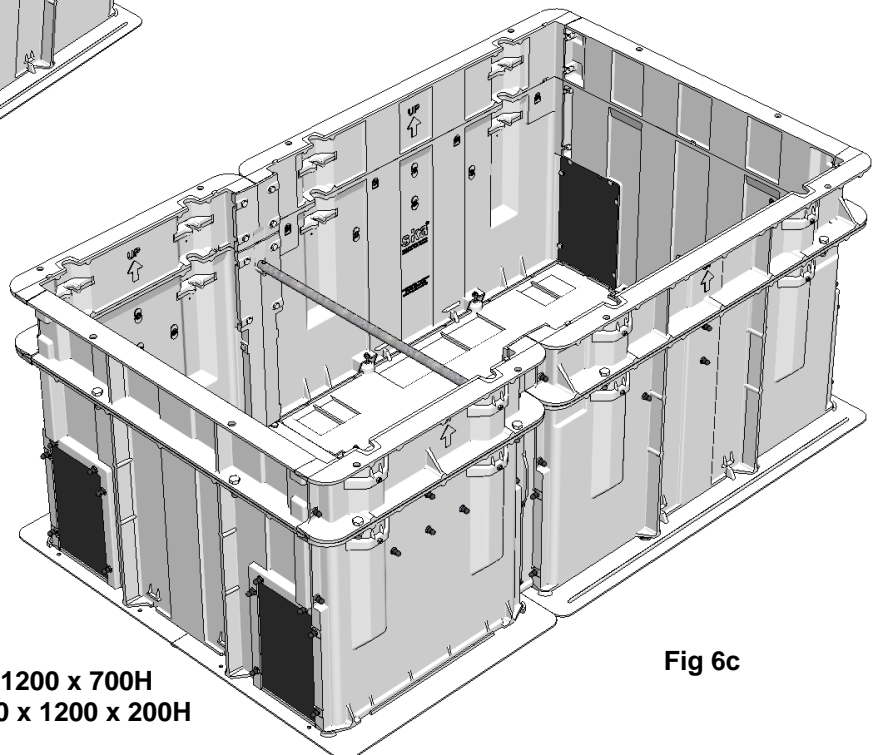
Chamber 2100 x 1200 x 700H

Chamber Extension 200mm

- Assemble **chamber extension** as per Fig 6a using the **extension side joiners 200** and 16 – M10 x 30 bolts and washers supplied. Place on top of chamber flange. See arrows for right way up.



Bolt assembled **chamber extension** to the chamber with the 12 – M16x40 bolts, nuts and spring washers supplied.



Chamber Roof Set 2100 x 1200mm

7. Assemble **chamber roof extension side** and **chamber roof 400** as per Fig 7a using the 8 – M10 x 30 bolts and washers supplied. Place on top of chamber flange. See arrows for right way up.

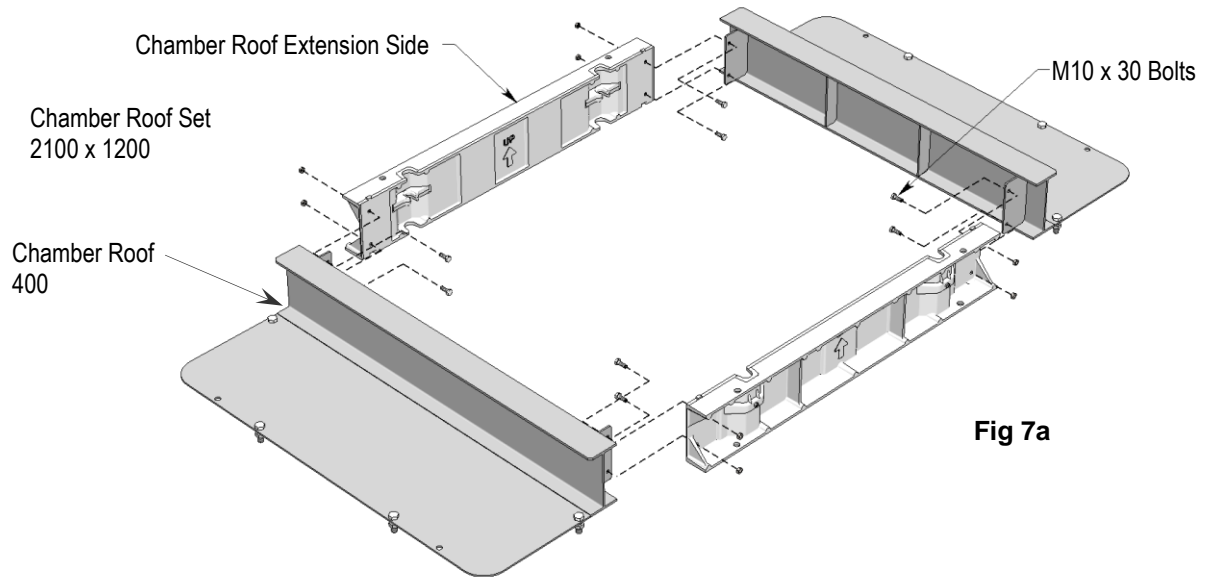


Fig 7a

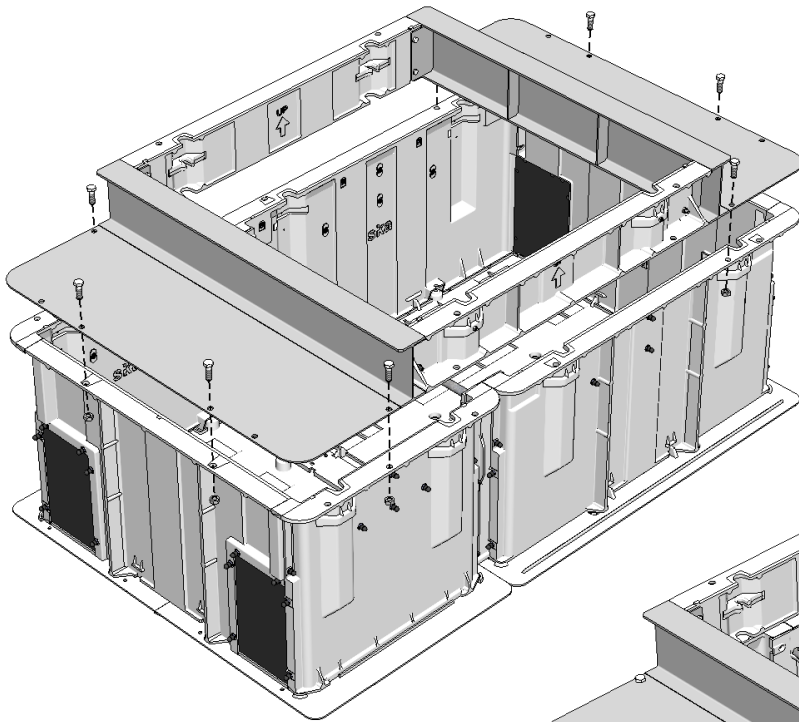
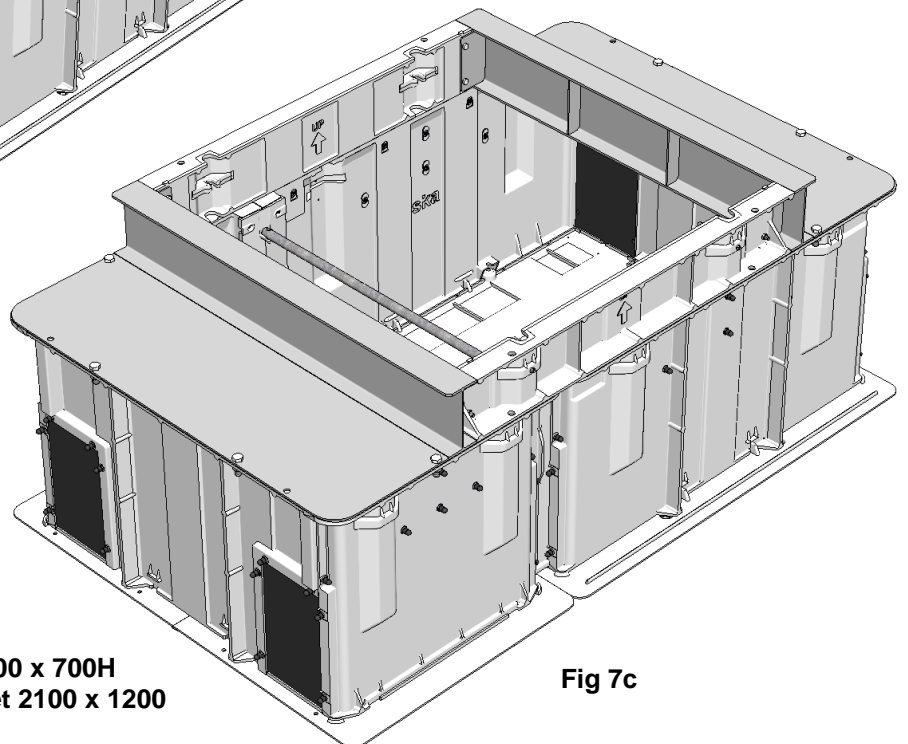


Fig 7b

Bolt **chamber roof set** to the chamber flange using 8 – M16 x 40 bolts, nuts and washers supplied.

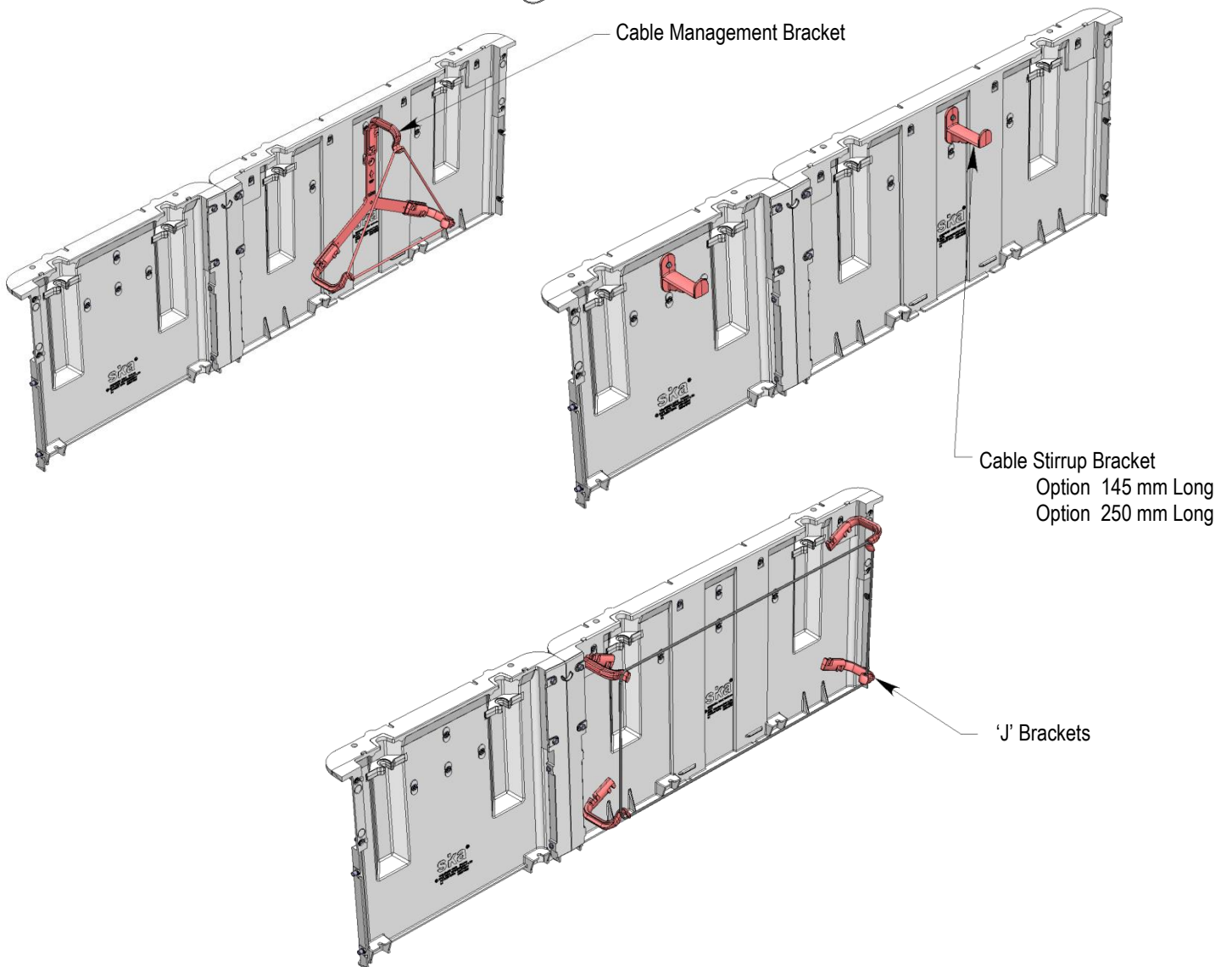
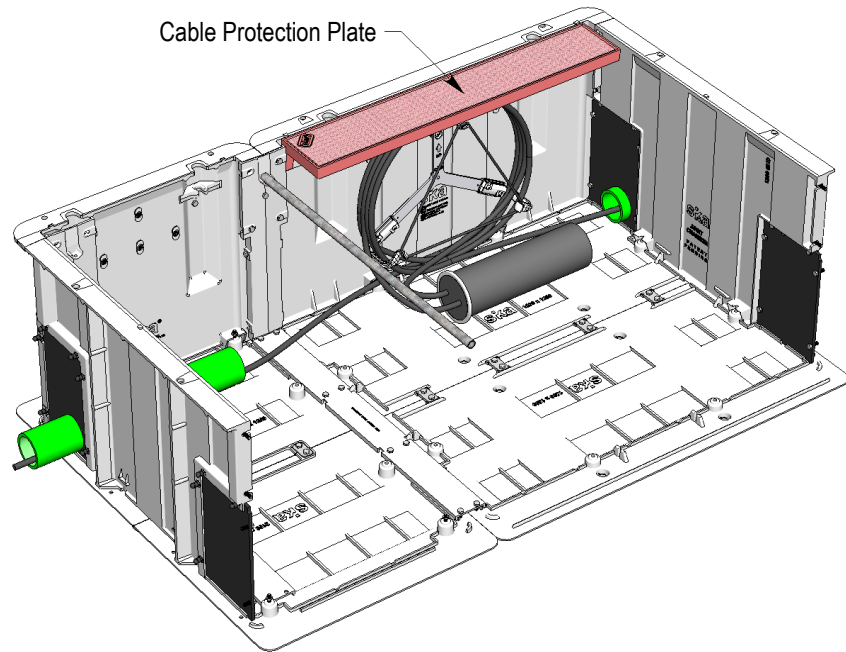


**Chamber 2100 x 1200 x 700H
& Chamber Roof Set 2100 x 1200**

Fig 7c

Chamber Accessories

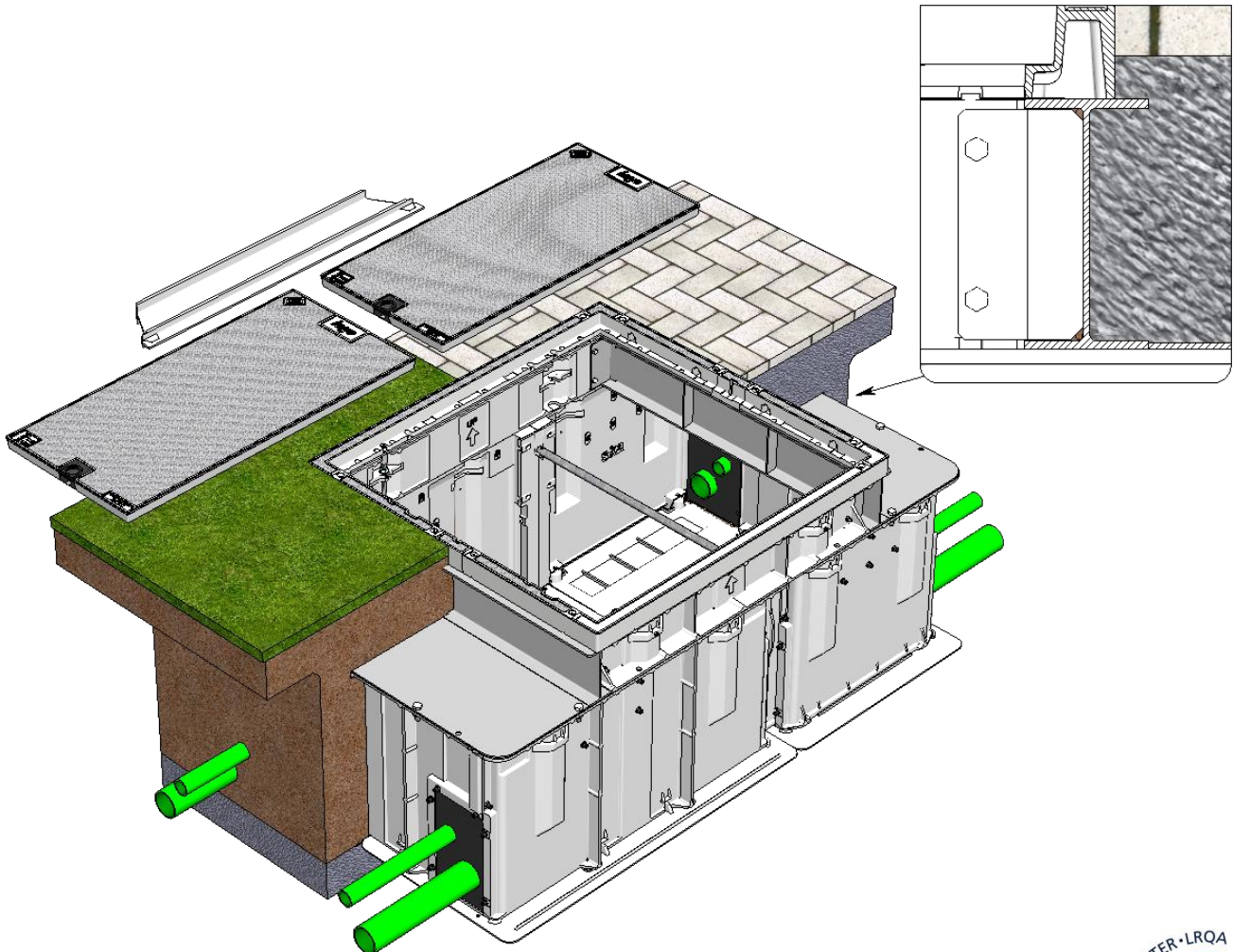
Cable Support & Protection Options





Aluminium Jointing Chamber & Partial Access Cover Set GUIDELINES FOR PATHWAY INSTALLATION

COVER SET RATING: CLASS B - 80 kN - AS3996:2006

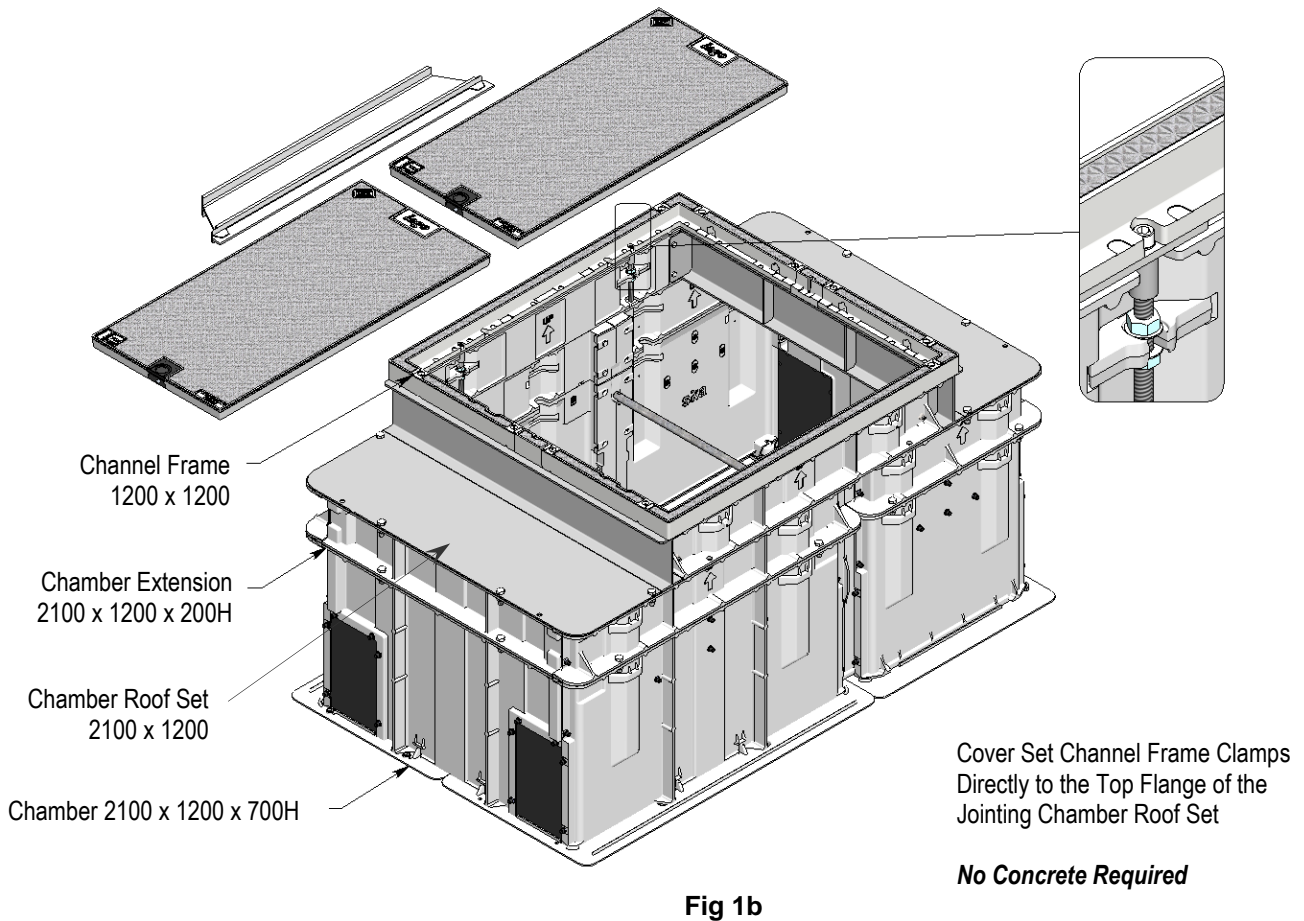
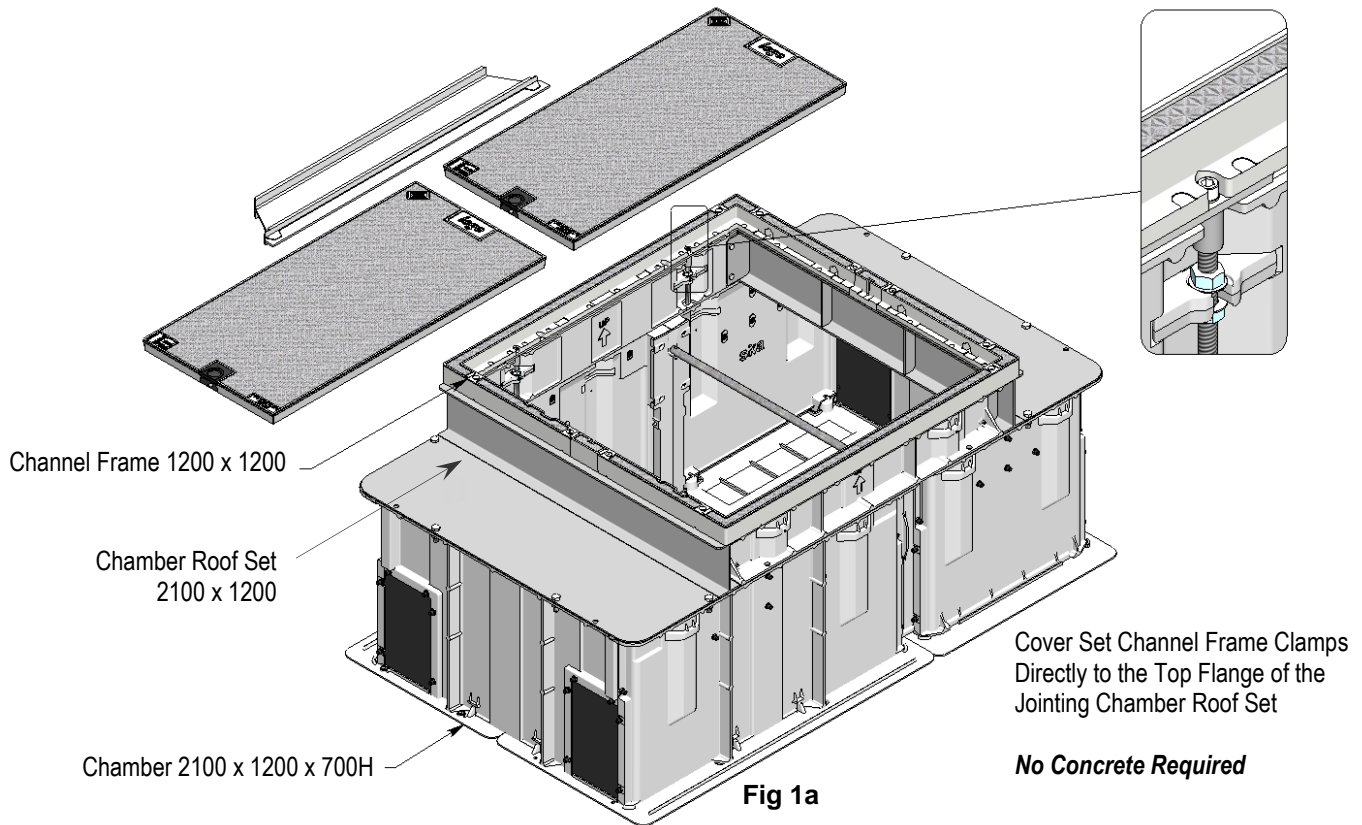


Chamber & Cover Set 2100 x 1200 x 700H



Pathway Class B 80kN Cover Set Frame Attachment

1. Bolt cover set channel frame down using adjustable threaded rods supplied.



Pathway Typical Installation - *No concrete collar required*

2. Sika Pathway Cover Sets can be **clamped directly onto the top flange of the chamber roof set.**

Compacted bedding of nominal depth **200mm** is to be Sand, Blue Chip, etc

Place the assembled **chamber and cover set channel frame**, including the **support beam**, into the prepared pit, or assemble all of the above in the pit, particularly if over existing duct work. Make level on compacted bedding to accommodate the chamber base at the required height so that the **cover set matches the finished ground level**. Ref Fig 2c

Backfill chambers with mechanically compacted layers of evacuated material if the material is of a suitable type. The compaction shall be of a standard equivalent or more than that of the surrounding ground. **If the evacuated earth is unsuitable imported hard fill shall be utilised.** Ref Fig 2c

Ensure the **chamber spreader** is fitted to the chamber prior to backfilling and compacting to maintain accurate chamber opening distance. If the chamber spreader needs to be removed temporarily after backfilling, **use alternative spreader** to prevent the *chamber walls moving in under backfill pressure*.

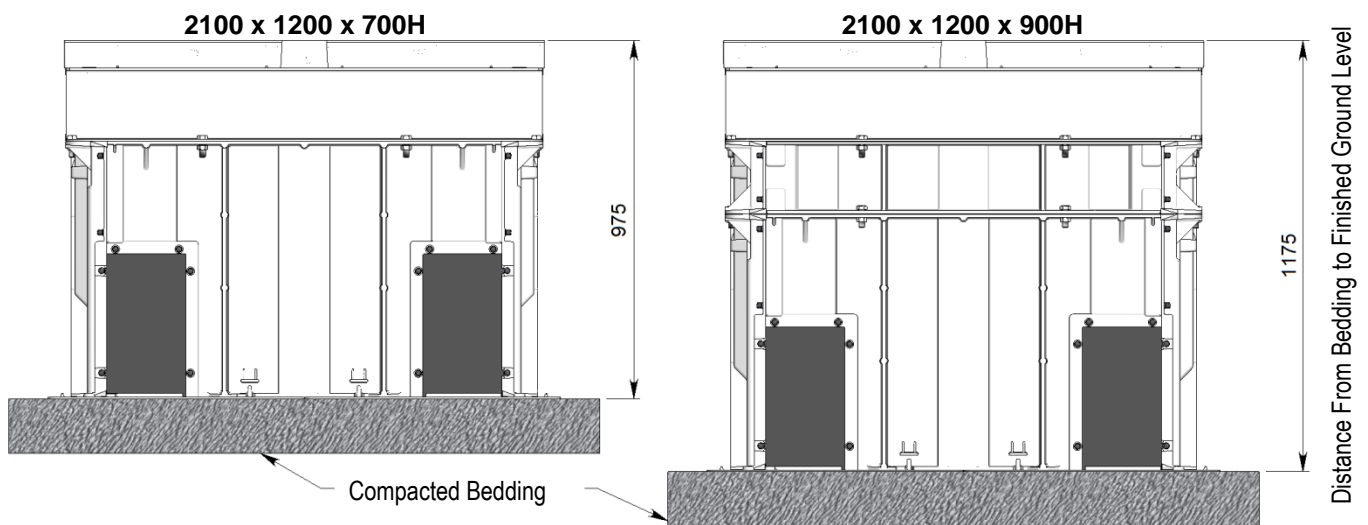


Fig 2a

Fig 2b

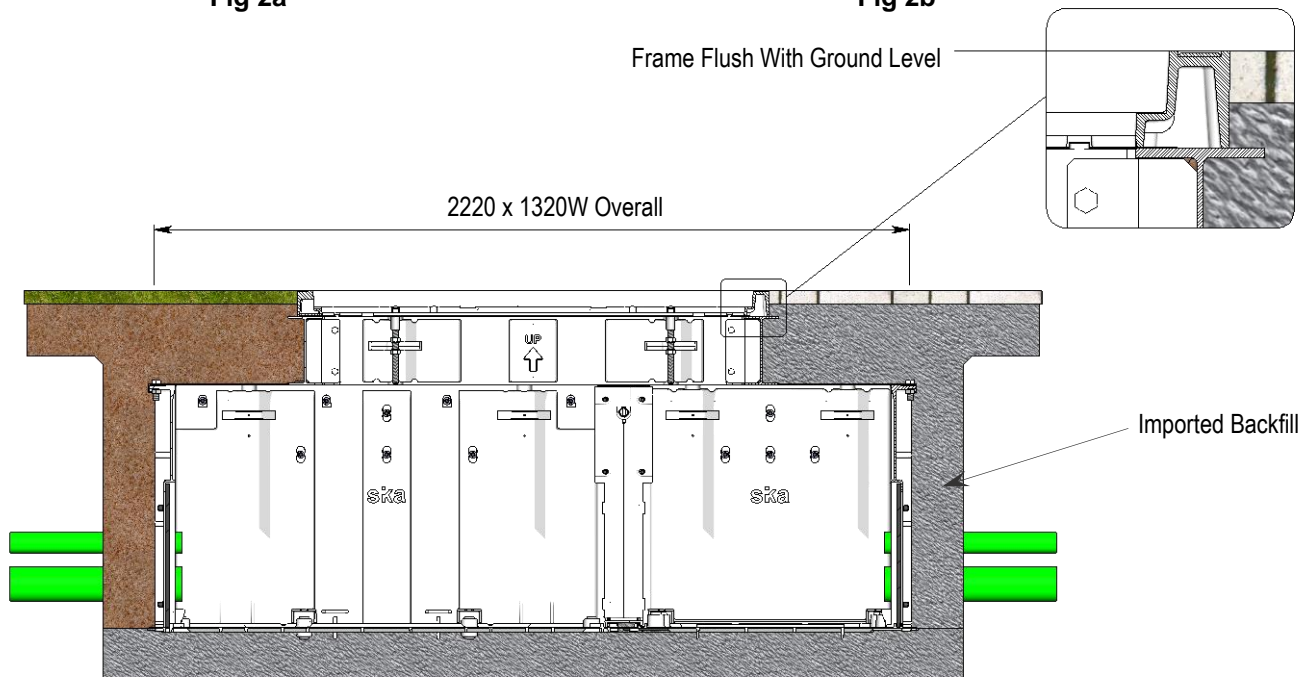


Fig 2c

Pathway Concrete Installation - *Concrete collar is required*

3. Sika Pathway Cover Sets can be **positioned at a required height and ground slope** where difficult ground slope conditions exist.

In this case adjust the 4 - M16 S/S rods and nuts provided to locate frame in place, then use Sika **reusable chamber shutters** between the suspended access cover frame and the chamber top flange to facilitate pouring the concrete support nib. Also available from Sika is a complete **reinforcing steel kitset** and **thread protector**. Refer *Individual Instructions*

The cover can be locked down on top of the concrete shutters to provide chamber security until the concreting detail has been completed.

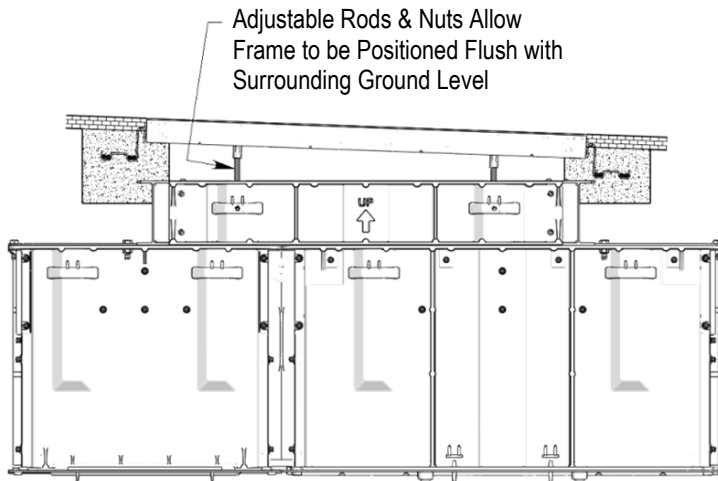


Fig 3a

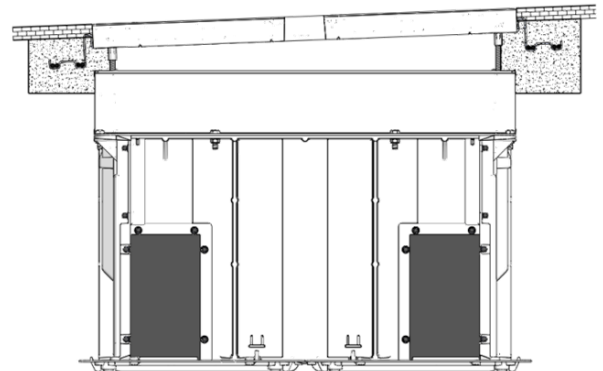


Fig 3b

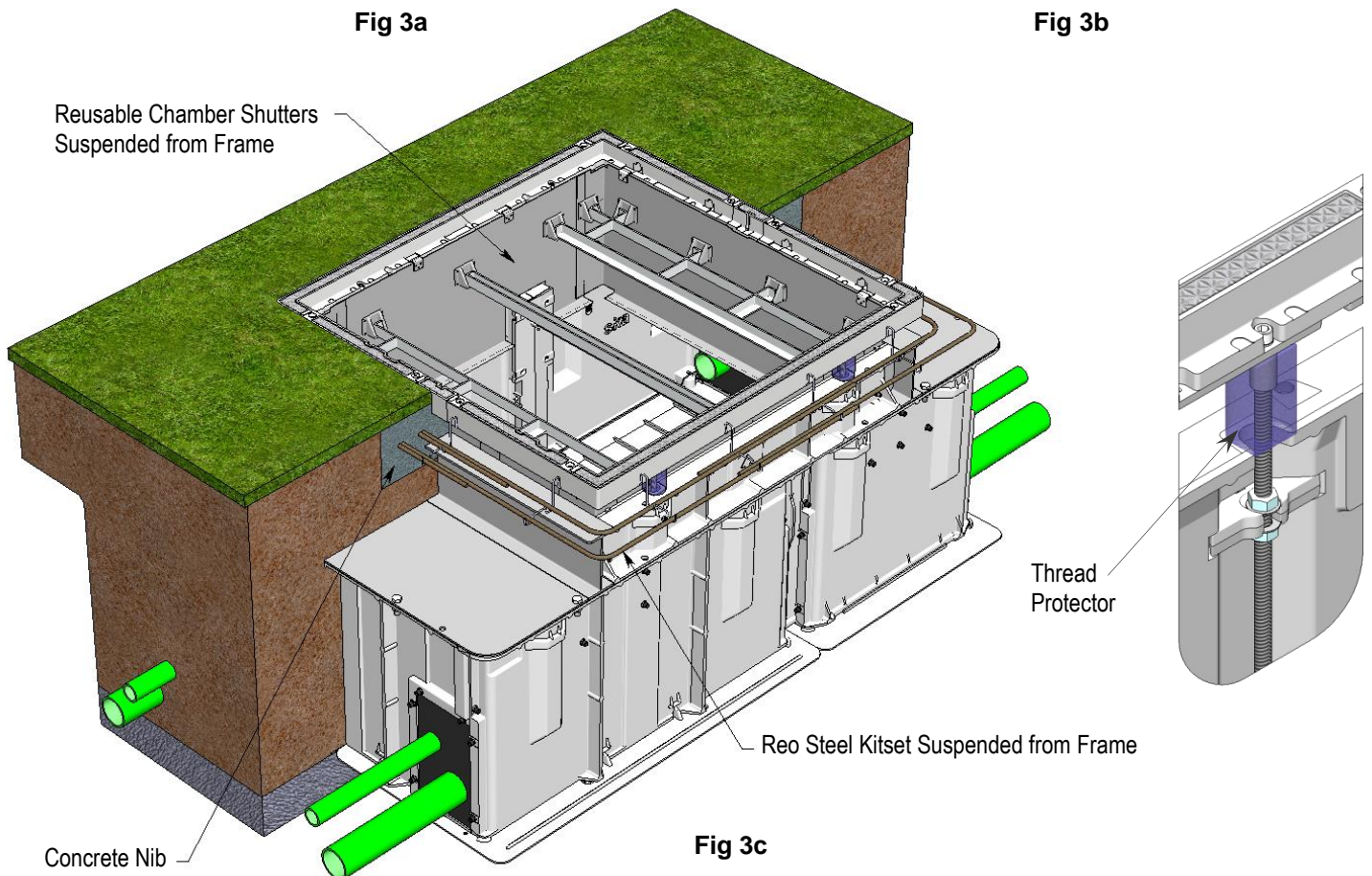


Fig 3c

NOTE: A concrete collar must be poured if the cover set frame is raised more than 30 mm away from the support offered by the chamber top flange (refer "Frame Support Gap" notes on page 13 for details). The threaded raiser rods alone NOT constitute a support structure.

Pathway Concrete Installation & Backfill Details

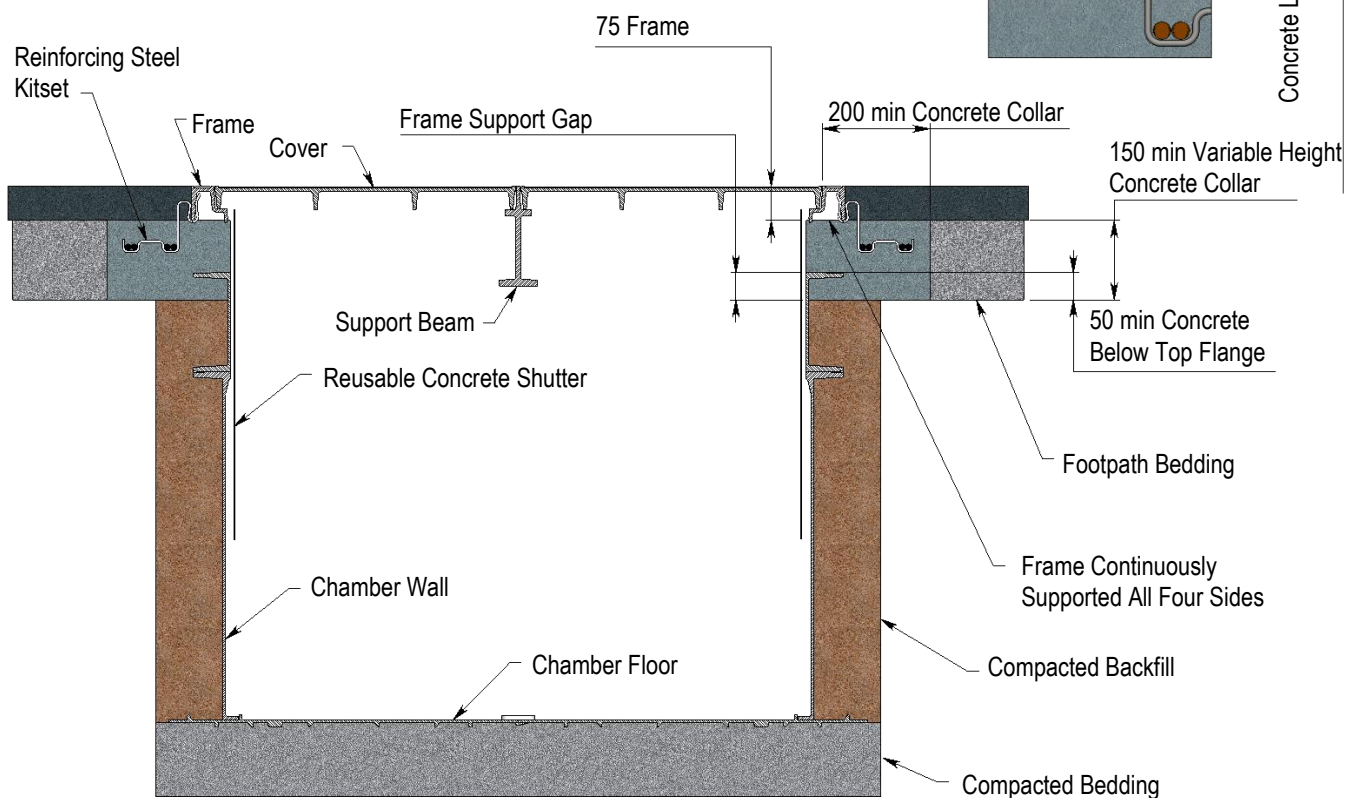


Fig 4

4. **Backfill** chambers with mechanically compacted layers of evacuated material if the material is of a suitable type. The compaction shall be of a standard equivalent or more than that of the surrounding ground. If the evacuated ground is unsuitable imported hard fill shall be utilised.

Ensure the **chamber spreader** is fitted to the chamber prior to backfilling and compacting to maintain accurate chamber opening distance. If the chamber spreader needs to be removed temporarily after backfilling, **use alternative spreader** to prevent the *chamber walls moving in under backfill pressure*.

The maximum **backfill** level for jointing chambers will be **50mm below the chamber top flange**. This means the concrete support collar will always envelop the chamber flange. See Fig 4.

The cover set cannot comply with the 80kN loading required by AS:3996 Standards without the correct Continuous Frame Support as follows:

Frame Support Gap >30mm Use minimum concrete strength 25 MPa at 28 Days complete with Reinforcing Steel Kit Set. The minimum support collar is 200 x 150mm.

Frame Support Gap <30mm Use High Strength Grout directly supported by the top flange of the chamber or the extension. No concrete collar required.

The distribution of concrete / grout under the load bearing face of the aluminium frame must be complete (**no voids**). Use a portable concrete vibrator.

Fit the covers into the frames and lock them into place **before pouring the concrete** surrounds to avoid any possible *frame distortion during the curing cycle*.

Remove all debris from the frame seating area before installing each cover and the support beam.

Replace dust covers.

Ducting

5. Mark and cut the polypropylene duct entry panel to suit duct work. Cut the duct entry holes through the polypropylene panels using a jig saw or hole saw approximately 5mm larger than the duct. Seal the duct to the polypropylene panels using Wurth MS1 epoxy mortar. Ref Fig 5a (*refer Price List for Epoxy Mortar*).

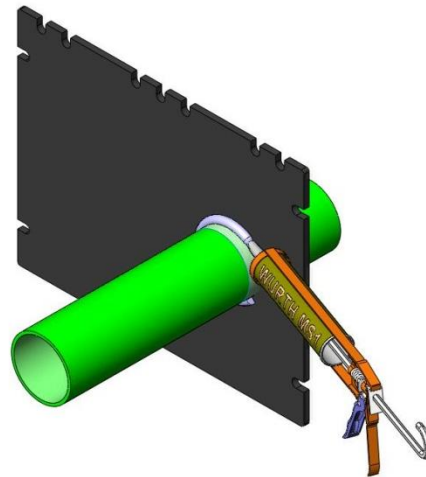


Fig 5a

If a chamber has been assembled over the existing ducts mark the position of the duct entry hole on the polypropylene panel and cut it out using a jig saw and split the poly panel horizontally through the centre of the hole. Ref Fig 5b

Reassemble the polypropylene panel around the duct using H section extrusion to help stiffen the panel against back fill pressures. H section extrusion is available from Sika (*refer Price List*)

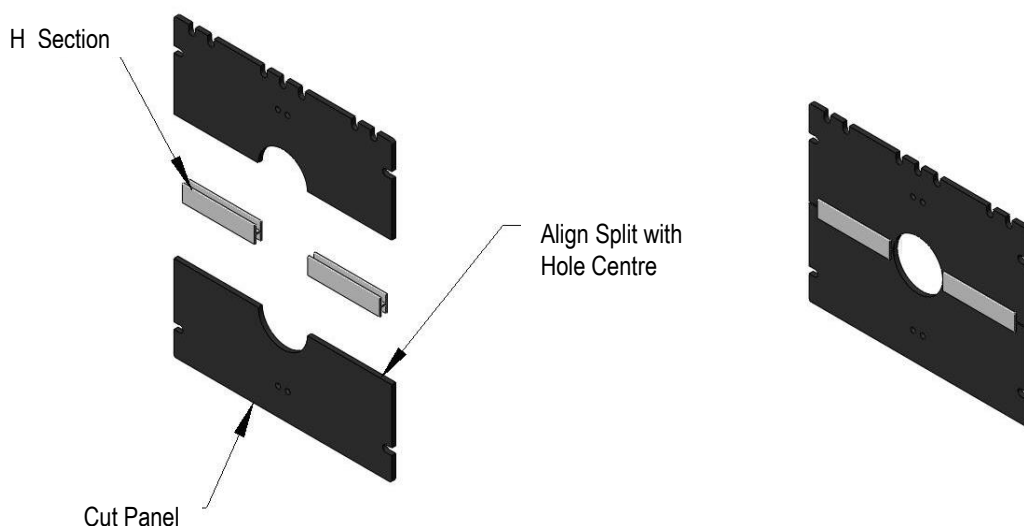


Fig 5b

Pathway Concrete Installation Accessories

Reinforcing Steel Kitset

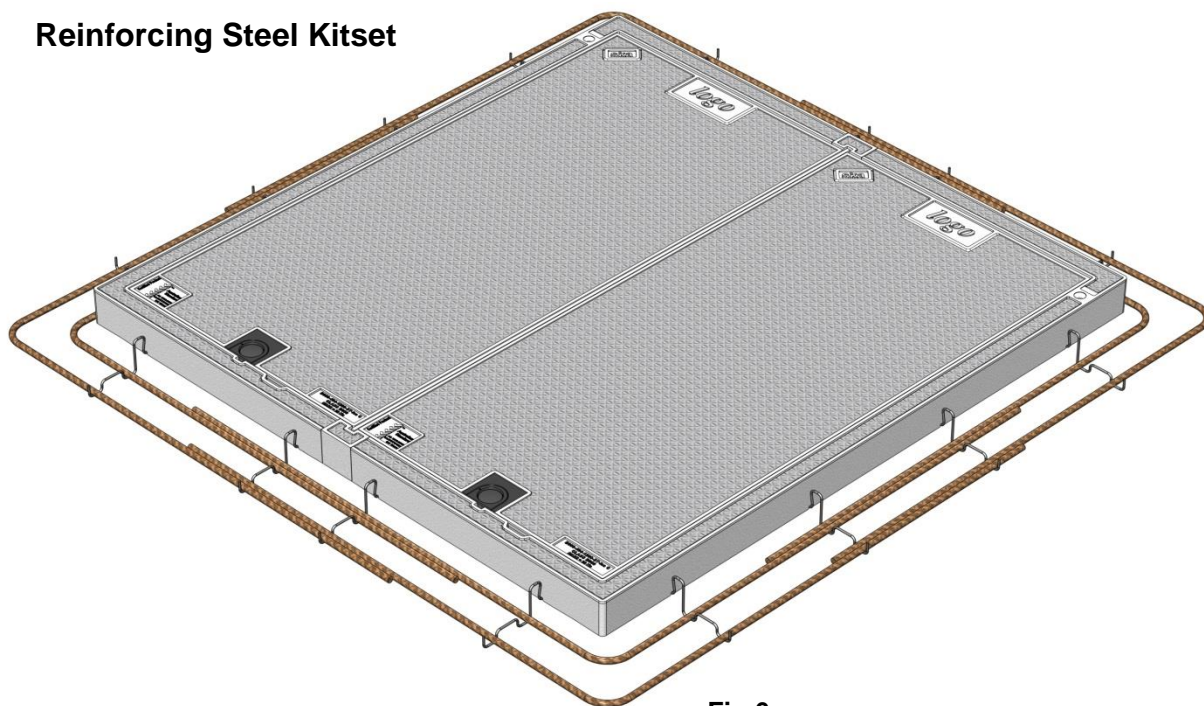


Fig 6

Thread Protector

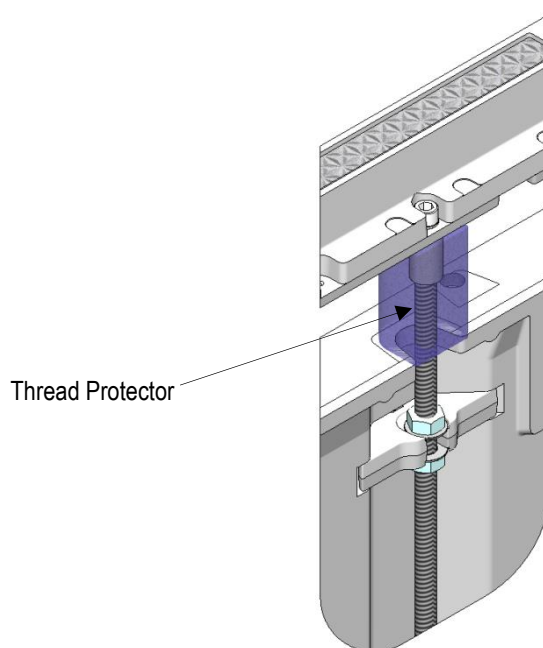


Fig 7

Fit the **thread protector** when the frame is raised and concrete is required.

The **thread protector** will both protect the thread and seal the chamber cavity to prevent any concrete entering the chamber.

The **thread protector** polyethylene foam tubing can be cut to length with a sharp knife if required.

Reusable Chamber Shutters

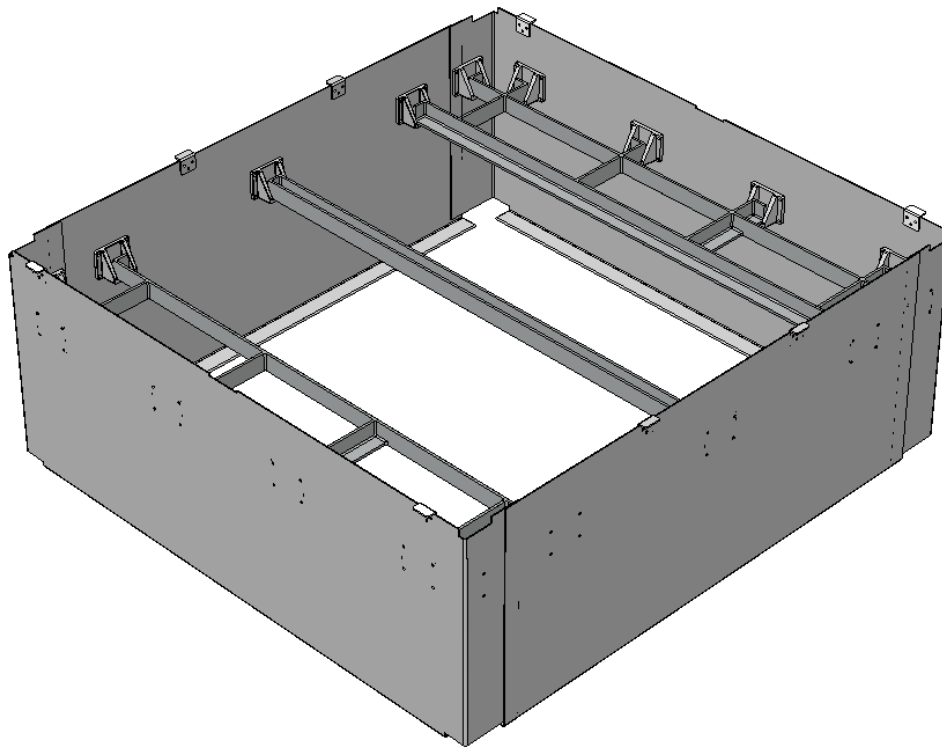


Fig 8a

Insert Side Shutters First
Then End Shutters

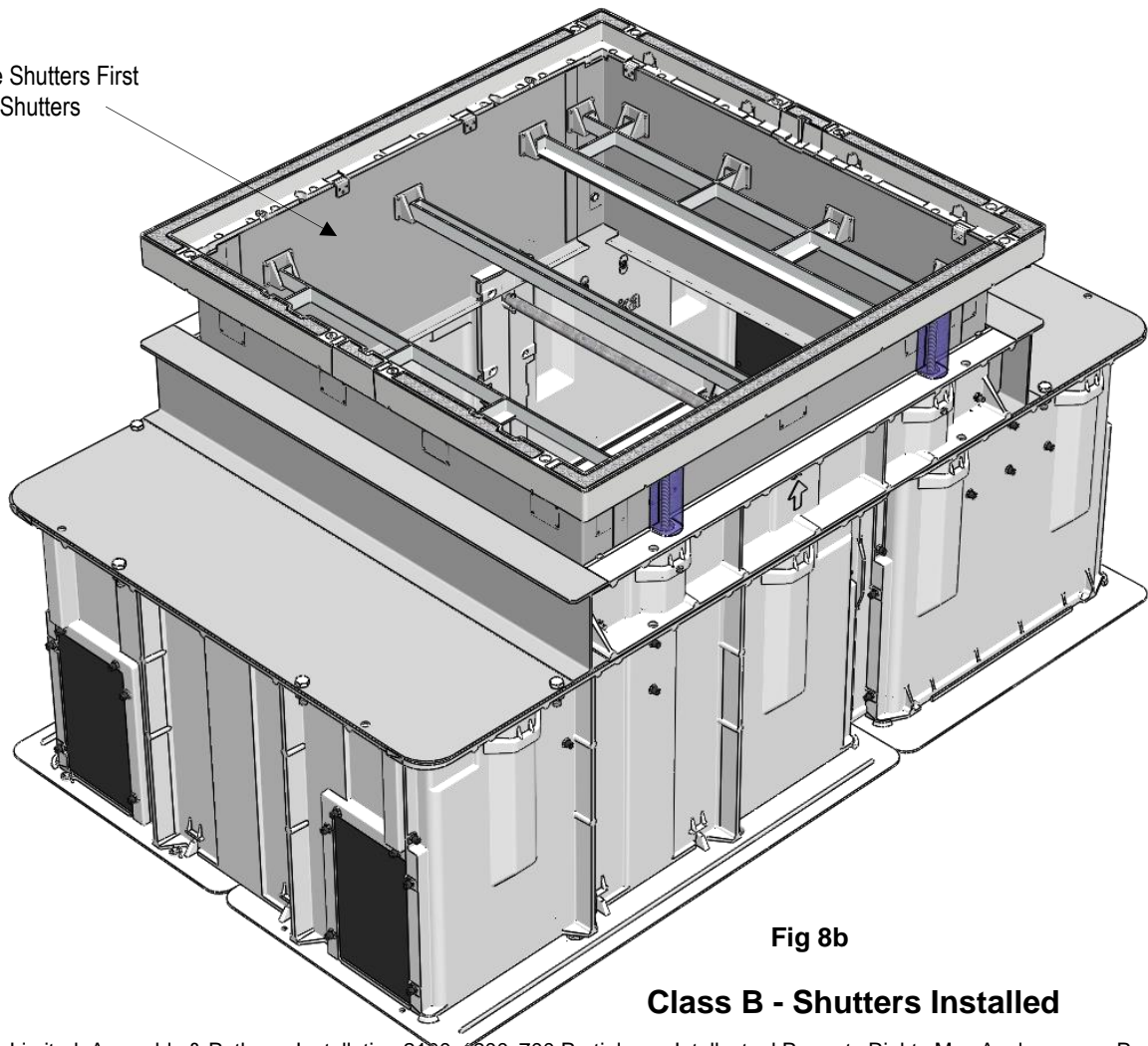


Fig 8b

Class B - Shutters Installed