



# Universal FDN Support Arm

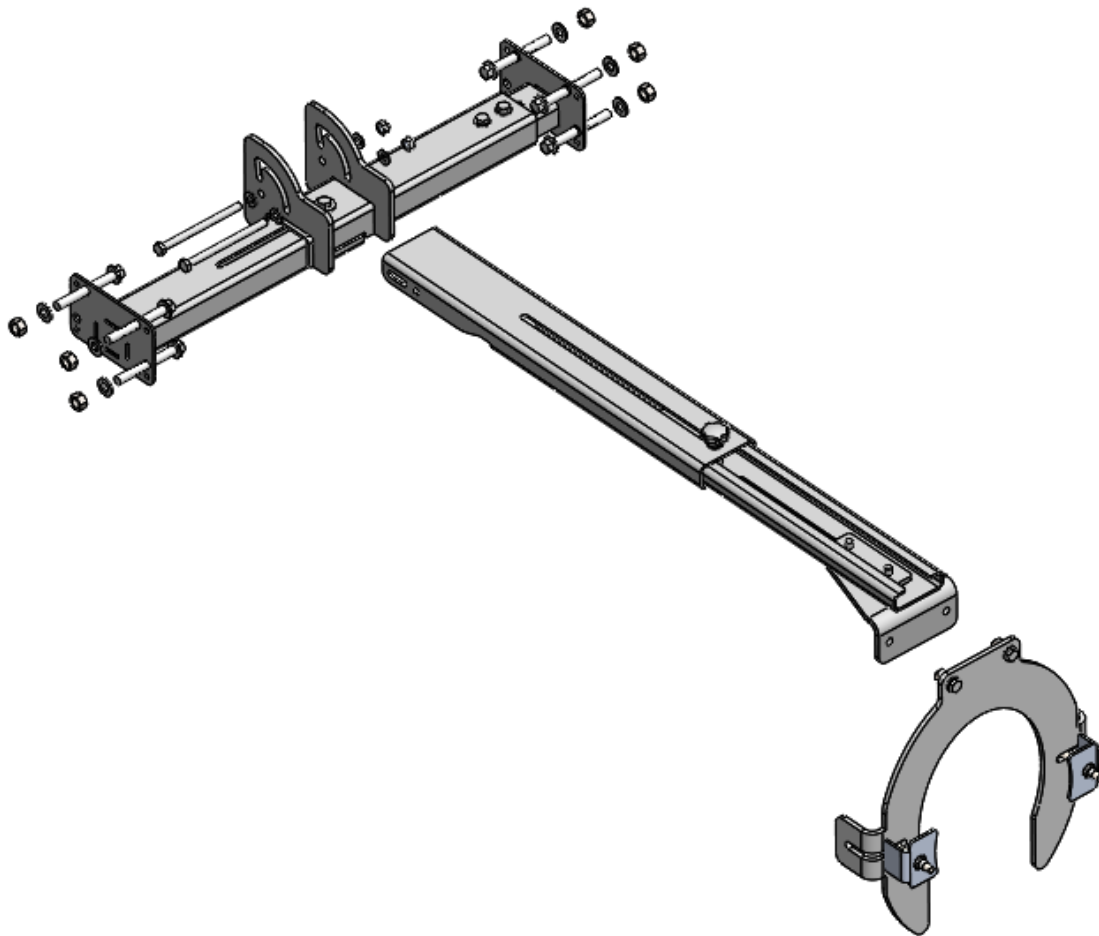


X-TRAS™



## INSTALLATION RECOMMENDATIONS

*This guide addresses the acceptable methods and details for installation of a Universal FDN Support Arm. The purpose is to serve as a guideline, and is not intended for any specific construction project. It is understood there are alternative ways that might be required and/or recommended based on site or project conditions.*



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## Kit Assembly Components

### Cross brace assembly

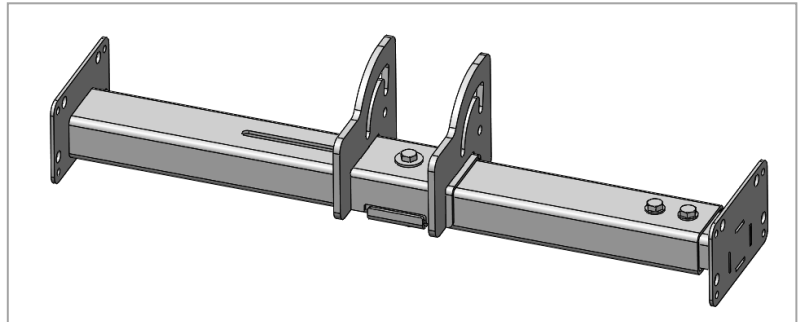


Figure 1

### Arm assembly

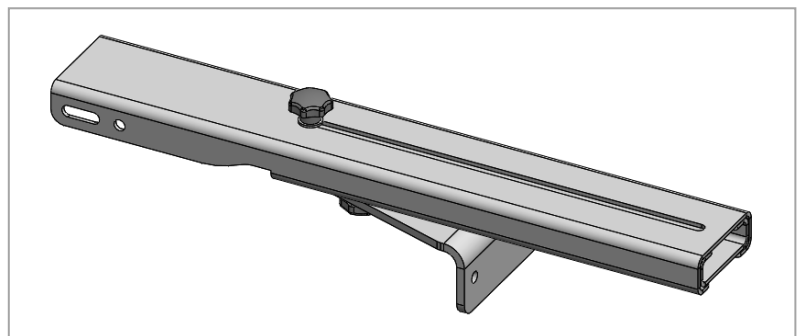
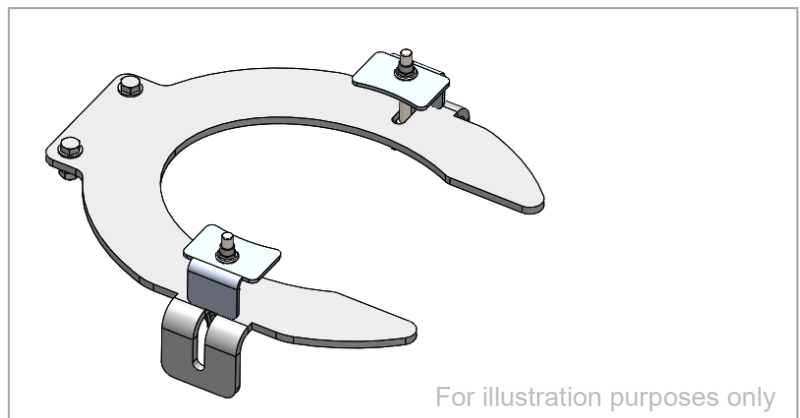


Figure 2

### Node holder assembly

(Note: node holder specific to FDN supplier)



For illustration purposes only

Figure 3

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## Fixing kit

- Cross brace attachment fixings options

### 1. Default – New Installation Thermoplastic Chamber

- (x6) M10x80 Hex HD Screw
- (x12) M10 Form A Washer
- (x6) M10 Nyloc Nut

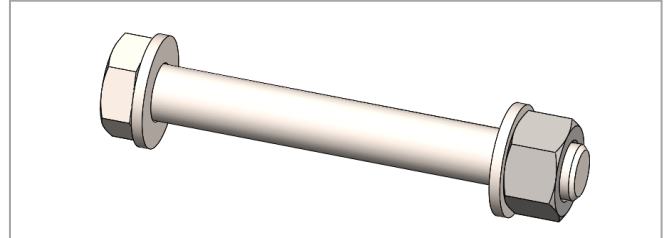


Figure 4

### 2. Retrofit - Thermoplastic Chamber

- (x8) 5.5 x 75mm Self Tapping Screws - Pozi Drive

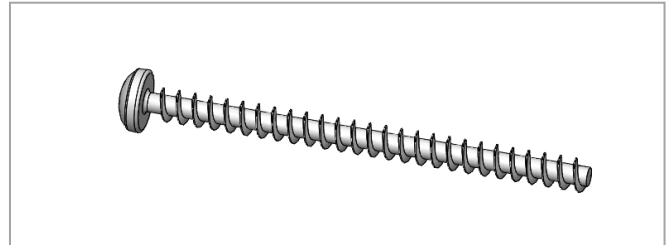


Figure 5

### 3. Retrofit - Concrete / Brick Construction

- (x6) M8x75 Ankerbolt - Torx drive

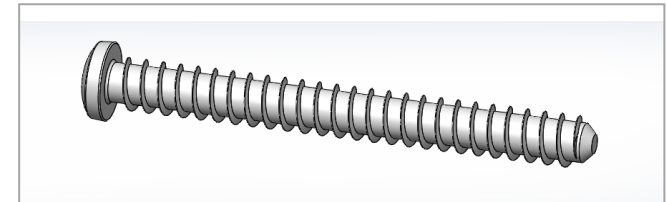


Figure 6

- 2 x Arm attachment fixings

- (x1) M8x110 Bolt
- (x2) M8 Form A Washer
- (x1) M8 Nyloc Nut

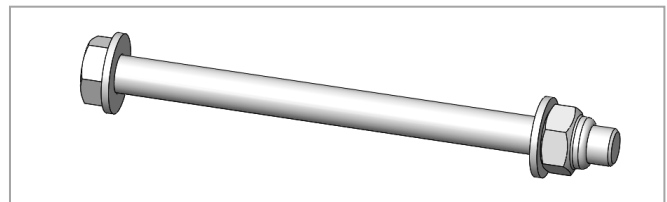


Figure 7

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## Assembly Tool Requirements

- Drill
- 17mm AF Hex Drive (x2)
- 13mm AF Hex Drive (x2)
- Pozi drive
- Torx drive
- Ø3mm drill bit
- Ø6 drill bit
- Ø10 drill bit

## Installation Guide

Cubis Systems Footway Fortress is detailed within installation instructions for illustration purposes only, FDN Support Arm is not limited to this chamber type.

### Step 1: Cross brace positioning

- Place first fixing plate against the chamber wall. Bottom face of plate should line up with the bottom edge of top chamber ring as shown in Figure 8. This method remains the same with all plastic chamber types apart for the Quad box. When using the quad box, utilise the chamber ledge feature to rest the fixing plates on. For concrete chambers locate top face of plate 90-100mm from top of chamber.
- The back of hinge plates should sit 50-60mm from the chamber clear opening as shown in figure 9.
- Having positioned the 'cross brace' as instructed be careful to ensure it is level in both directions before marking out hole centres in next step.

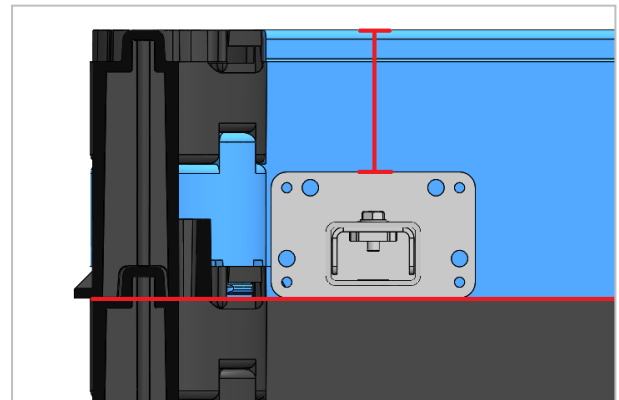


Figure 8

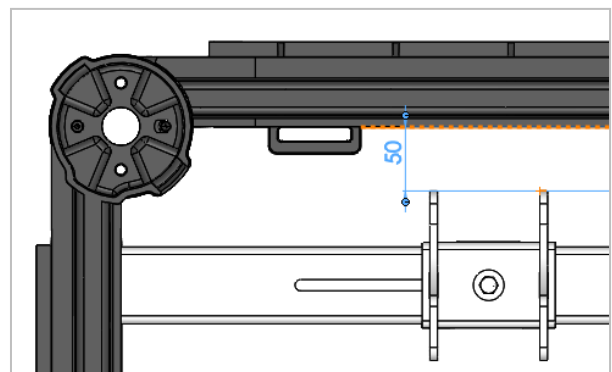


Figure 9

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## Step 2: Drilling of chamber

### Default – New Installation in Thermoplastic Chamber

- Having positioned the 'cross brace', mark out the hole centres highlighted in figure 10.
- Repeat this step for the plate on the other side of cross brace. Ensure brace remains level.
- Once marked, drill 3 x Ø10mm holes through both chamber walls.

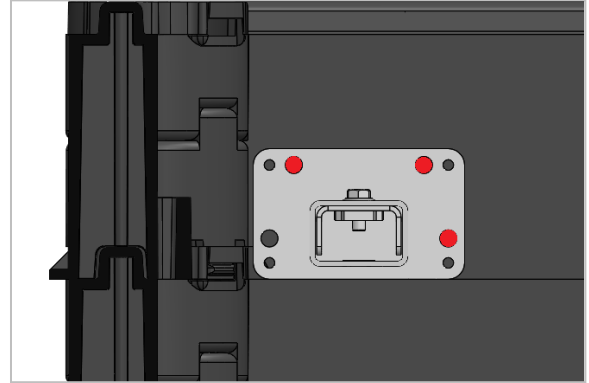


Figure 10

### Retrofit - Thermoplastic Chamber

- Mark out the hole the centres highlighted in figure 11.
- Repeat this step for the plate on the other side of cross brace. Ensure brace remains level.
- Drill 4 x Ø3mm holes through both chamber walls.

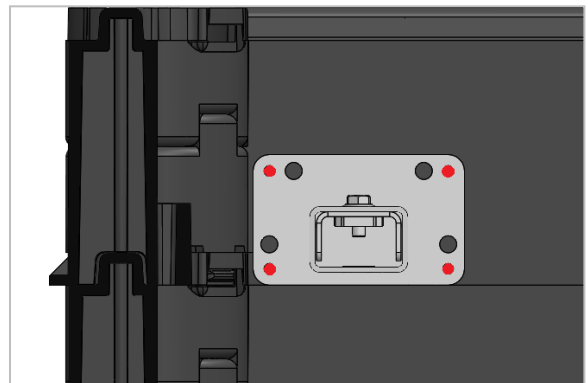


Figure 11

### Retrofit - Concrete / Brick Construction

- Mark out the hole the centres highlighted in figure 12.
- Repeat this step for the plate on the other side of cross brace. Ensure brace remains level.
- Drill 3 x Ø6mm holes with a minimum depth of 80mm.

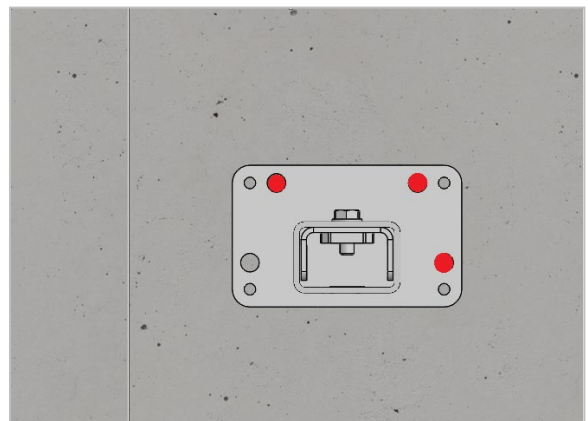


Figure 12

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### Step 3: Fastening cross brace

#### Default – New Installation in Thermoplastic chamber

- Use 'cross brace' fixing option 1 in fixing kit section.
  - (x6) M10x80 Hex HD Screw
  - (x12) M10 Form A Washer
  - (x6) M10 Nyloc Nut

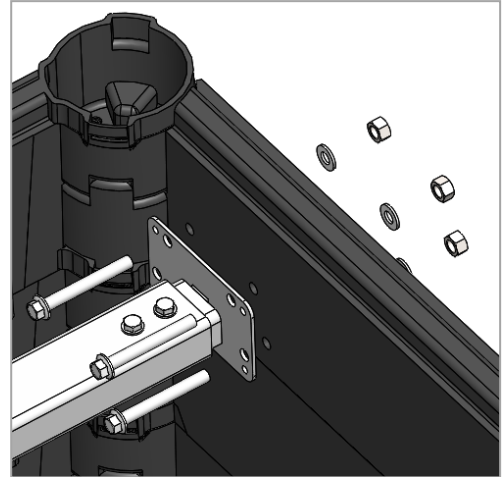


Figure 13

#### Retrofit - Thermoplastic Chamber

- Use 'cross brace' fixing option 2 in fixing kit section.
  - (x8) 5.5 x 75mm Self Tapping Screws - Pozi Drive

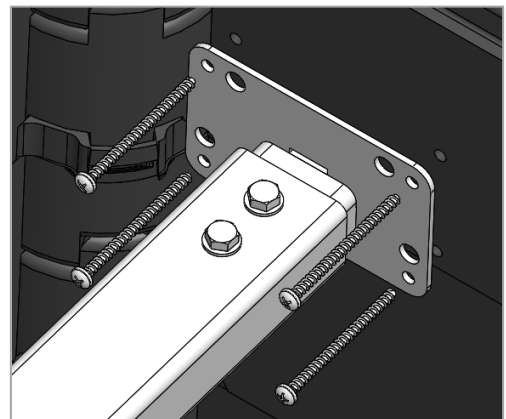


Figure 14

#### Retrofit - Concrete / Brick Construction

- Use 'cross brace' fixing option 3 in fixing kit section.
  - (x6) M8x75 Ankerbolt - Torx drive

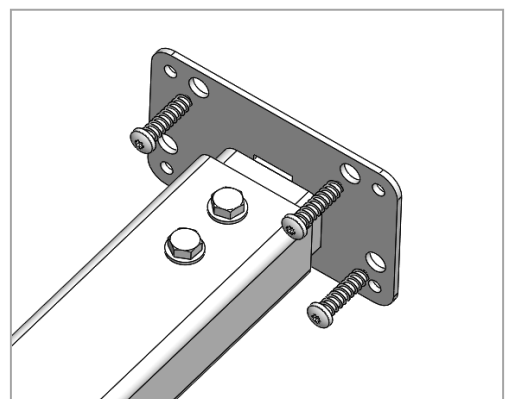


Figure 15

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## Step 4: Tighten cross brace fixings

- Having fixed the 'cross brace' to the relevant chamber, ensure lengthening fixings are fully tightened using a 13mm AF Hex Drive.

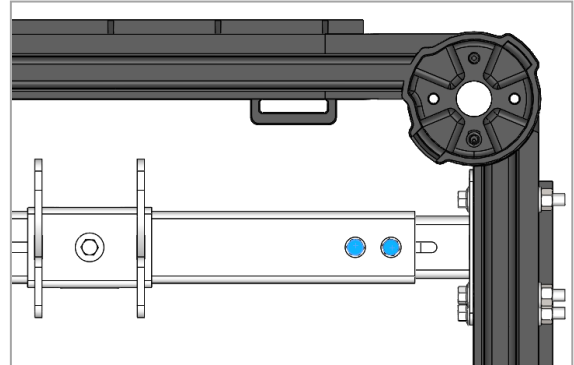


Figure 16

## Step 5: Attachment of Arm Assembly

- Line up 'arm assembly' with the pivot bracketry of 'cross brace'.

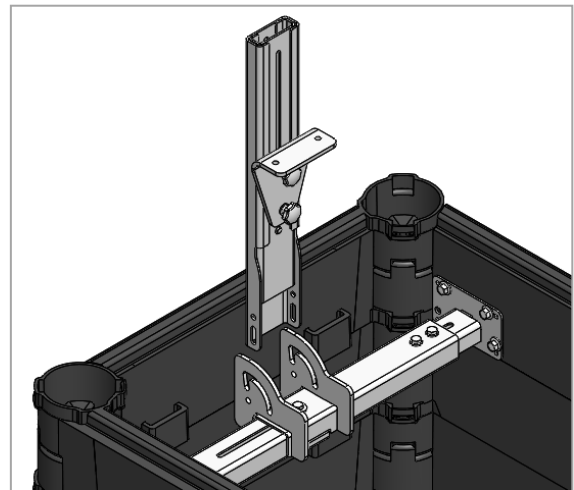


Figure 17

- Insert fixings as shown. Use the specified 'Arm attachment fixings' from the fixing kit section.
  - (x1) M8x110 Bolt
  - (x2) M8 Form A Washer
  - (x1) M8 Nyloc Nut
- Tighten fixings using two 13mm AF Hex Drives. To be fully threaded on nyloc nuts with sufficient slack to allow movement.

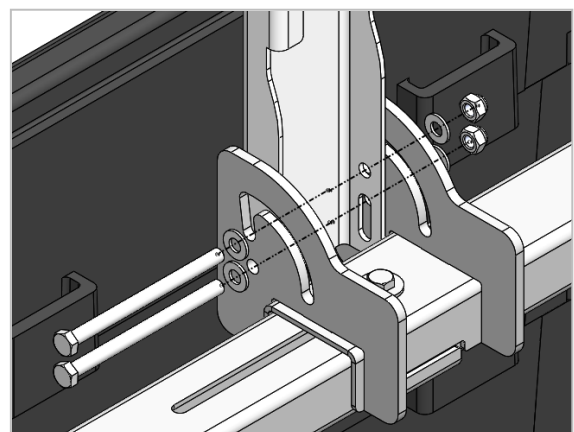


Figure 18

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- When fully assembled onto the 'cross brace' in the vertical, the arm will self-lock into the drop-down slot.

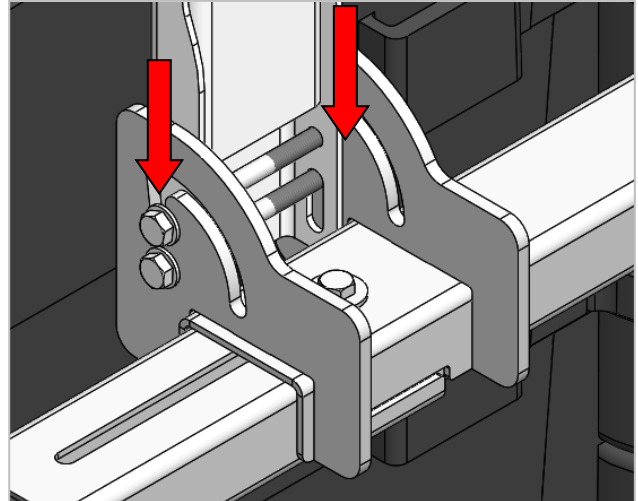
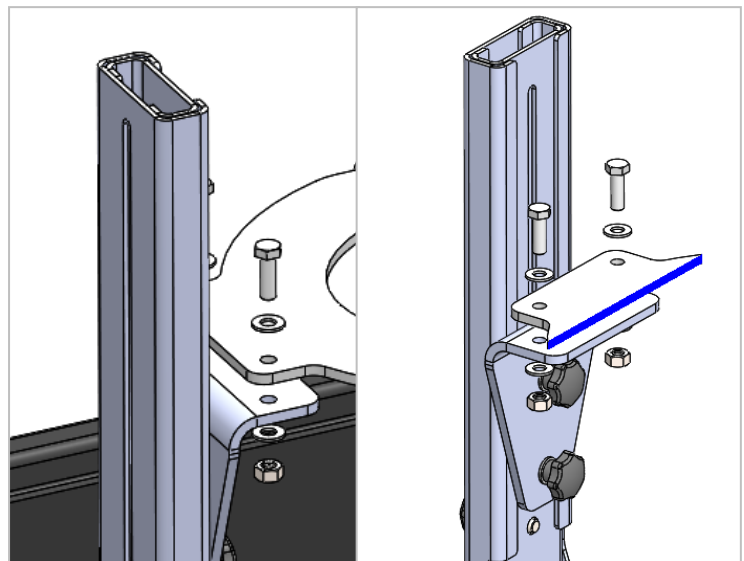


Figure 19

## Step 6: Attachment of Node Holder Assembly

- Use the fixings supplied within the 'node holder assembly' provided
  - (x2) M8x25 Screw
  - (x2) M8 Form A Washer
  - (x2) M8 Hex Nut



For illustration purposes only

Figure 20

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## Operational Guide

### Positioning/Fixing of Arm

The position of the pivot point within the 'cross brace assembly' can be adjusted. This enables the 'arm assembly' and therefore the node to be positioned off centre within the chamber if required.

This can be achieved by loosening the highlighted bolt using a 13mm AF Hex Drive. The pivot bracketry should then slide along the slot in the cross brace. When in the required position, the highlighted bolt should be re-tightened to lock off the position on the arm.

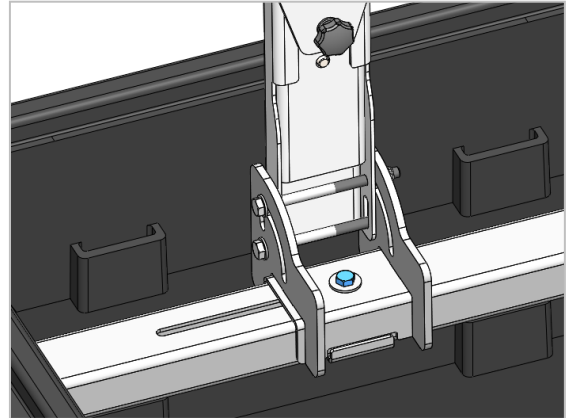


Figure 21

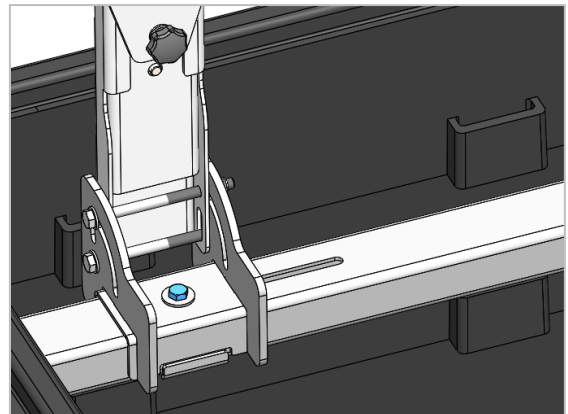


Figure 22

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## Moving the arm from the open to closed position

When the 'arm assembly' is in the upright locked position it should be lifted upward aligning the upper bolt with the curved positioning slot. The 'arm assembly' can now be rotated to the horizontal rest position.

Arm to be lowered with the weight being supported by operator – **Not to be dropped freely.**

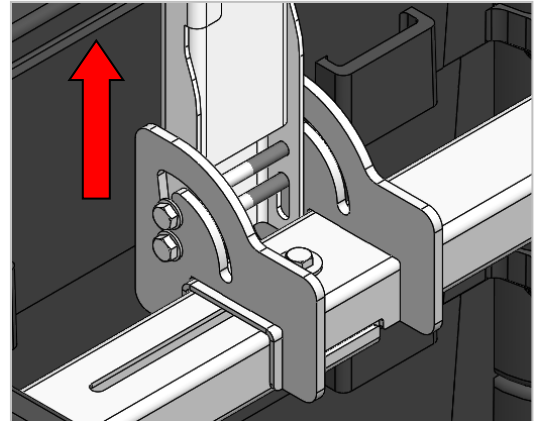


Figure 23

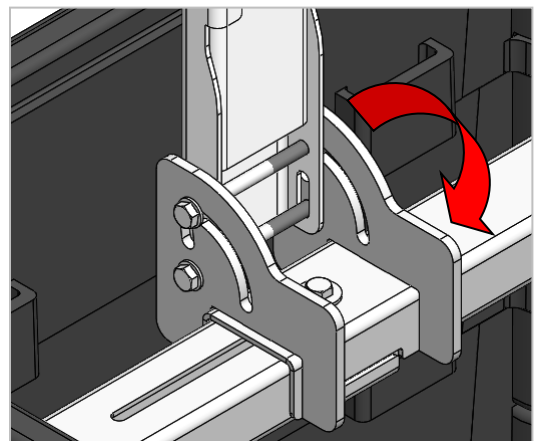


Figure 24

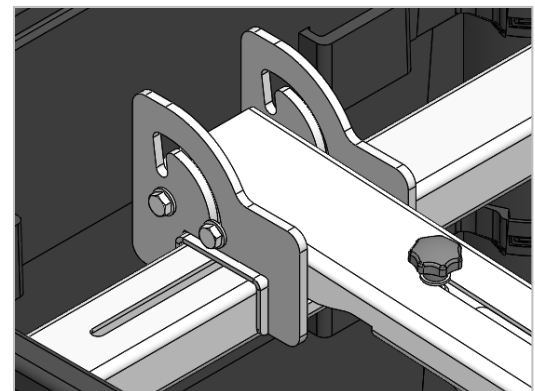


Figure 25

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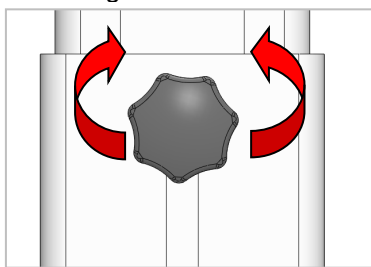
## Extension of the arm assembly

The Mobra arm has two levels of extension, please refer below to see..

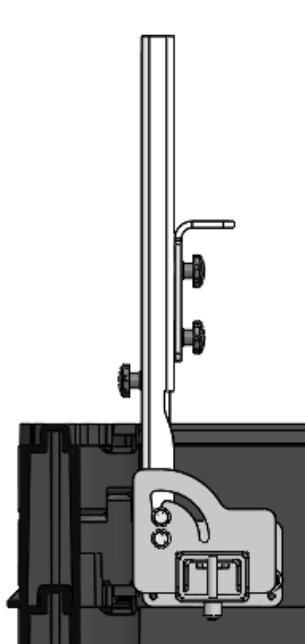
1. The arm in the fully retracted position
2. Extension of the node holder attachment bracket
3. Full extension of the inner telescopic arm

Extension is enabled by loosening the highlighted handwheels at each stage. When the appropriate position has been found, handwheels should be re-tighten to avoid unwanted movement along slots.

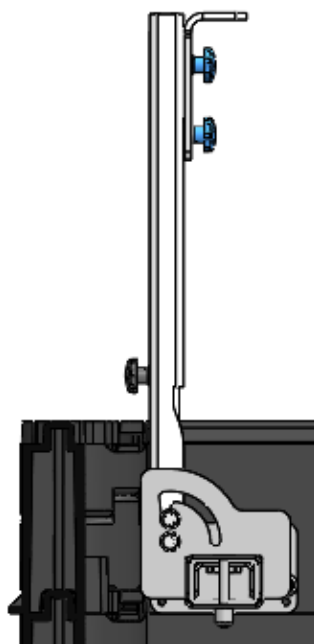
Tighten / Loosen



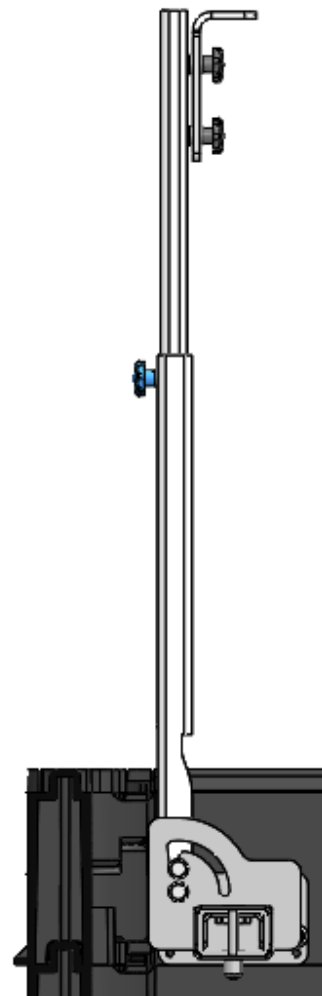
*Figure 26*



**1 : Figure 27**



**2 : Figure 28**



**3 : Figure 29**

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### Fitting of node to holder

Fit / retain node as per node holder.

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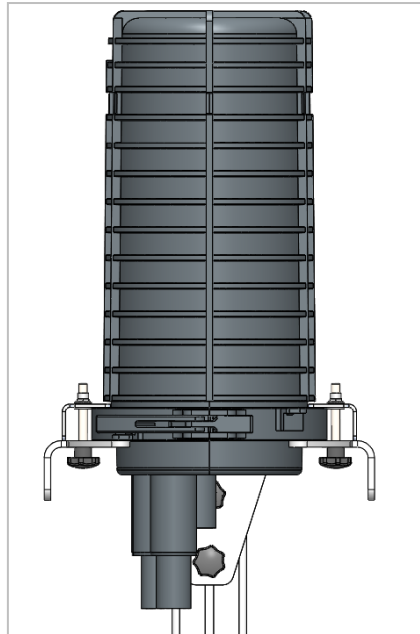


Figure 30

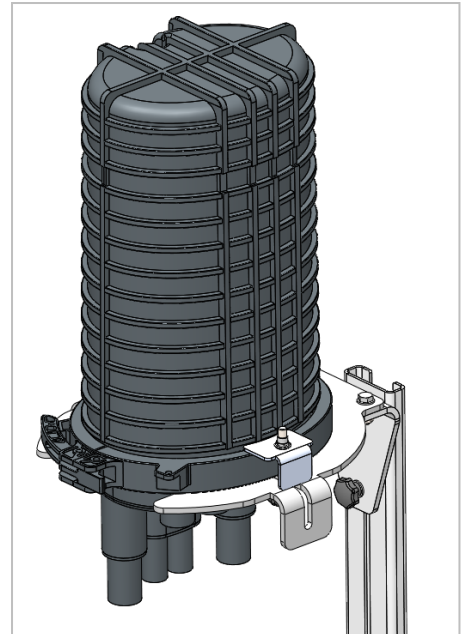


Figure 31

### Closed Node / Arm Position

When FDN Support Arm is in the closed state, It is recommended to have the node positioned 50mm-100mm from the internal chamber wall to maximise cable bend radius allowance.

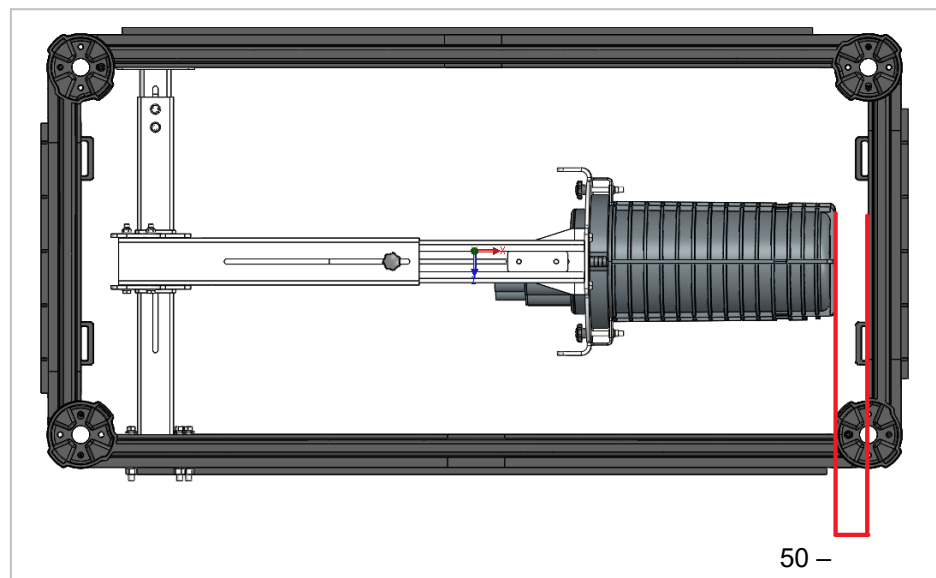


Figure 32

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## Attention

The FDN Support Arm has been designed for the requirements of its intended purpose. At no point should the 'Cross Brace' or 'Arm Assembly' be utilised as a step.

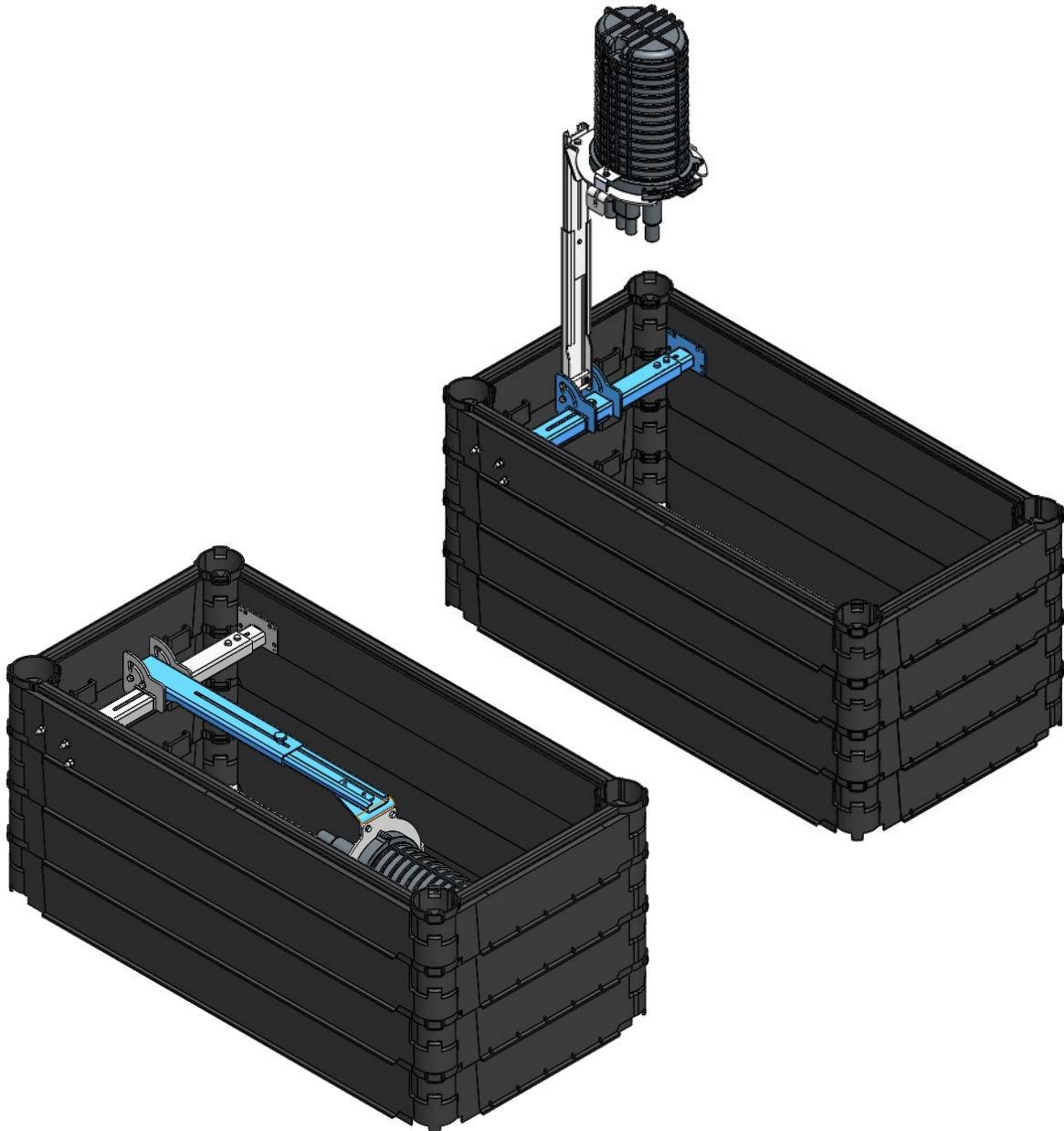


Figure 33

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## Driven by Innovation

Innovation is the engine that has driven Cubis Systems to its position as global leader in the design and manufacture of access chambers and cable ducting systems.

Inspired by innovation, we have developed quality products that replace traditional construction materials like bricks and concrete. Our lightweight plastics, incorporating intelligent design features, are used in the construction of infrastructure networks for the rail, telecoms, water, construction and power markets worldwide. Cubis products can be installed much faster than traditional methods and therefore save our customers both time and money.

Cubis manufactures the preformed STAKKAbox™ network access chamber systems, the AX-S™ access covers range, a MULTIduct™ multiple duct system and the PROtrough cable troughing system at sites throughout the UK and Ireland. These innovative products are exported to more than 25 countries throughout the world.

At Cubis we are committed to ongoing innovation and dedicated to delivering absolute product quality, detailed technical customer support and the highest levels of customer satisfaction.