

# EdjPro Lifting Anchor Installation

## EdjPro Lifting System Components

Ancon EdjPro Lifting Anchors are installed using EdjPro Recess Formers and lifted with EdjPro Clutches. The following table shows the correlation between the Lifting Anchor, Recess Formers and Clutches.



WLL	EdjPro Lifting Anchor	EdjPro Recess Former (colour)	EdjPro Clutch
4.0	EPA04	EPRF04 (red)	EPLC05
10.0	EPNA10	EPNRF10 (green)	EPNLC10

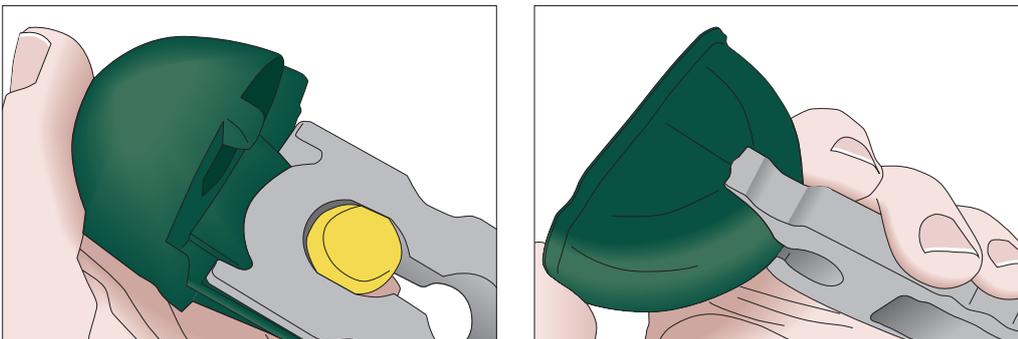
### 1 Recess Former Cleaning

Before use, always inspect recess formers and remove all adhering concrete inside and out. Apply mould release agent to facilitate removal from the hardened concrete.



### 2 Installation of the EdjPro Anchor in the Recess Former

Carefully bend open the recess former and place the EdjPro Anchor with its yellow rubber crossbar into the recess former cavity. Close the recess former completely to prevent the entry of concrete around the anchor head.



## Installation of EdjPro Lifting Anchors

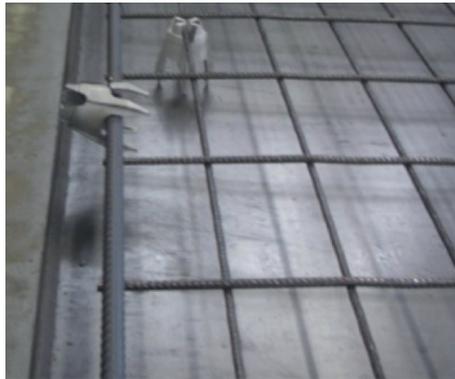
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### Installation of the EdjPro Anchor and Recess Former into the Mould

Install the EdjPro Anchor and its closed recess former at the location specified by the engineer. Make sure that the flat side of the recess former sits firmly against the formwork and that the former is completely closed to avoid concrete entering the recess around the anchor head.



EdjPro Anchor installed with its tension bar. One easy method to ensure the recess and anchor are located hard against the formwork is to push the anchor/recess/tension bar against the sideform and tie the tension bar to the surrounding reinforcement. Fix the reinforcement against the opposite side form to prevent it moving.



A handy method of fixing the reinforcement to prevent it moving, is to use a bar chair propped against the side-form opposite the anchor.

The back of the recess former has brass threaded inserts which may be used for rigidly fixing the former to the side form using metric bolts. This requires holes to be drilled in the side forms.

Recess Former	Metric bolt
EPRF04	M8
EPNRF10	M10

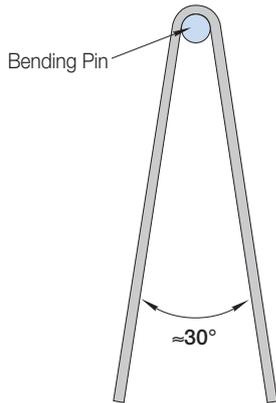


To prevent the entry of concrete into the recess former, the head of the EdjPro Anchor must be completely enclosed within the recess former.

Where recess formers are fixed to the side form, ensure that the EdjPro Anchor, tension bar and component reinforcement are not rigidly attached to the main reinforcement otherwise movement during pouring and vibration can cause the anchor to be displaced from the recess former.

## 4 Tension Bar and Component Reinforcement Installation

Install the tension bar (also called a hanger bar) through the hole in the lifting anchor according to the engineer's specification. "Standard" tension bars have an open U-shape with an opening angle of 30° – 35°. Parallel leg or cogged bars may be specified for complex panel geometries and configurations.



Minimum bending diameters in accordance with AS 3600:

Bar	Minimum Diameter of the Bending Pin (mm)
N12	48
N16	64
N20	80

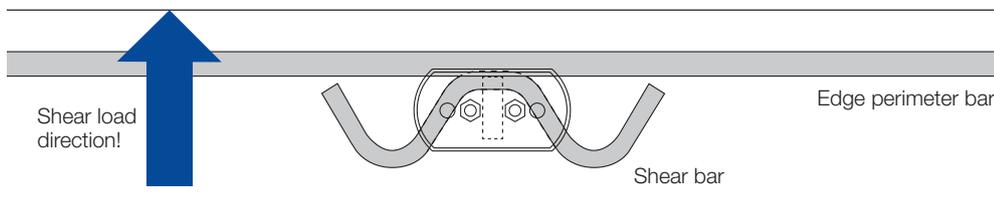


The capacity of EdjPro Anchor depends on the correct installation of a tension bar as specified by the Design Engineer.

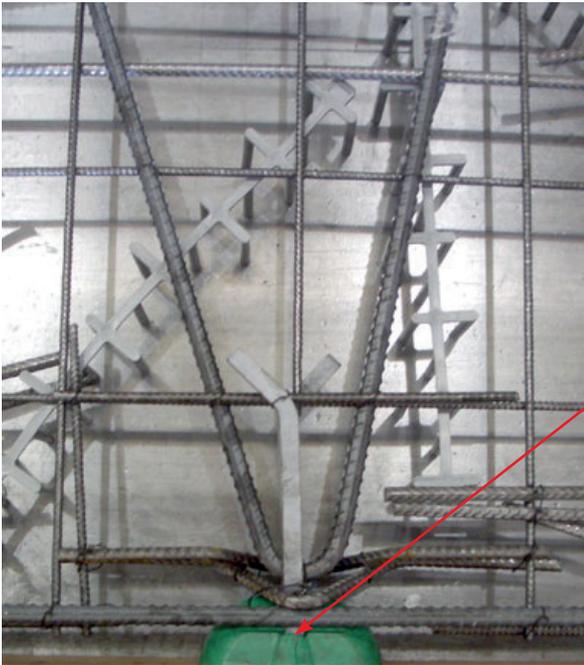
The engineer should specify the tension bar diameter, length, shape and fitting instructions, according to the capacity required and concrete element geometry.

Install additional component reinforcement as specified by the engineer. Perimeter bars are advisable for flexural crack control and in some high load cases, shear bars may also be required.

For Ancon EdjPro EPA04 Anchors optional W-bars EPSB4-7-150G are available to increase the shear capacity of the anchor in thin concrete members. If the W-bar is specified, please install the bars as shown in the image below.



## Installation of EdjPro Lifting Anchors



Reinforcement Groove

The picture above shows the correct installation of an EdjPro Anchor. The recess former is fully closed, preventing the ingress of concrete. EdjPro Anchors have a groove for the location of perimeter and shear bars for optimum concrete cover, edge capacity and crack control.

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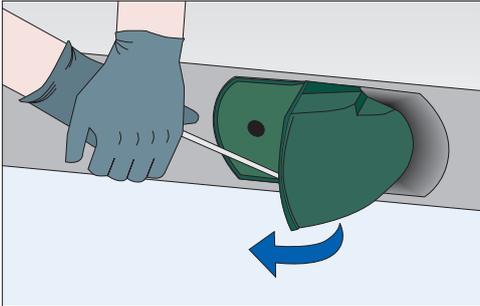
## Concrete Pouring and Vibration

Extra care should be taken to compact the concrete near the EdjPro Anchors because their capacity depends on thorough concrete compaction.

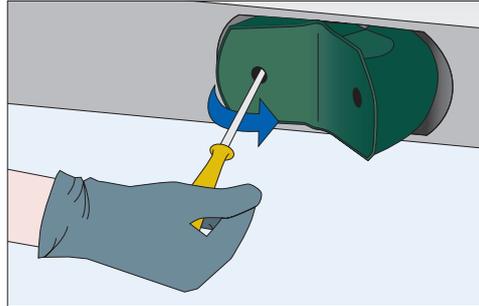


## 6 Recess Former Removal

As the concrete shrinks during the hardening process, it normally separates from the recess former. Remove the former by opening both halves one after another using a blunt-ended tool or a small reinforcing bar inserted into the holes in the back of the former.



Opening the first half



Opening the second half

After removal, inspect and clean the recess formers, removing all adhered concrete inside and out. Damaged recess formers should be replaced.

EdjPro Recess Formers should be thoroughly coated with mould release agent prior to use. This makes removal easy and keeps the recesses clean. The synthetic rubber of Edjpro Recess Formers is resistant to attack by mould release agents.

Many users have found that the best way to maintain EdjPro Recess Formers is to store them in a metal basket, soak them overnight in release agent and drain to remove excess prior to use.



Soaking in mould oil



Drain and re-use

## Installation of EdjPro Lifting Anchors

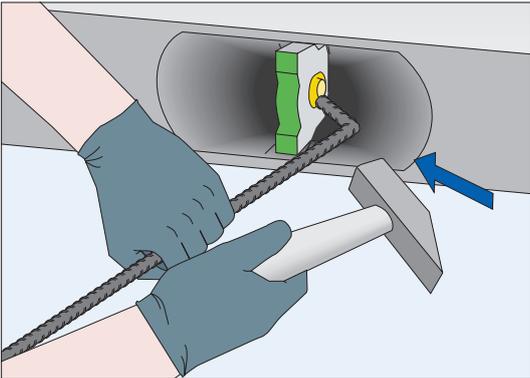
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### Rubber Cross-Bar Removal

The cross-bar prevents concrete entering and blocking the lifting hole. The EdjPro Lifting System delivers a clean, fast clutch connection - every time.

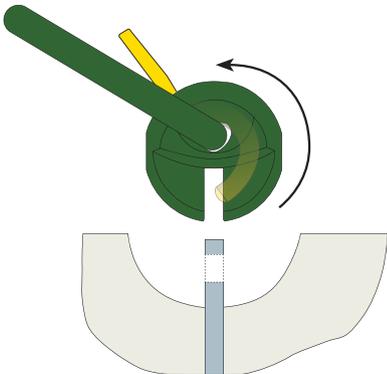
The crossbar is normally easy to remove by hand.

Some users have found it faster to tap out the crossbar with a simple tool made from a 12mm bar bent with a right-angled nib of about 25mm.

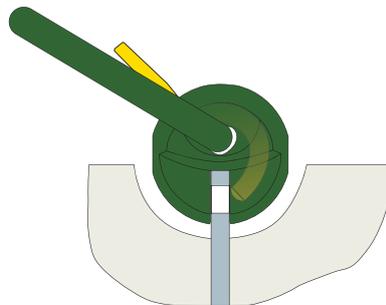


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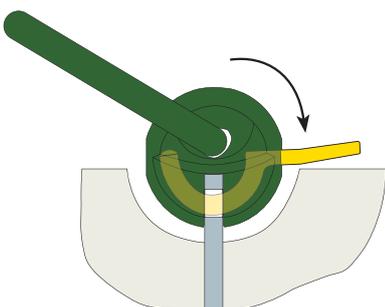
### EdjPro Clutch Connection



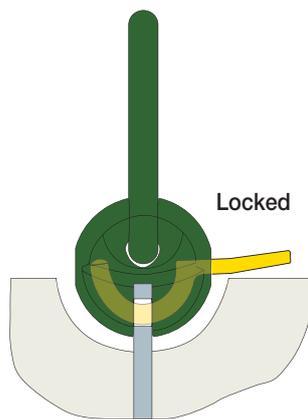
Move link and locking ring to one side to allow the connection of the clutch.



Fit the clutch over the EdjPro Anchor



Close the locking ring.

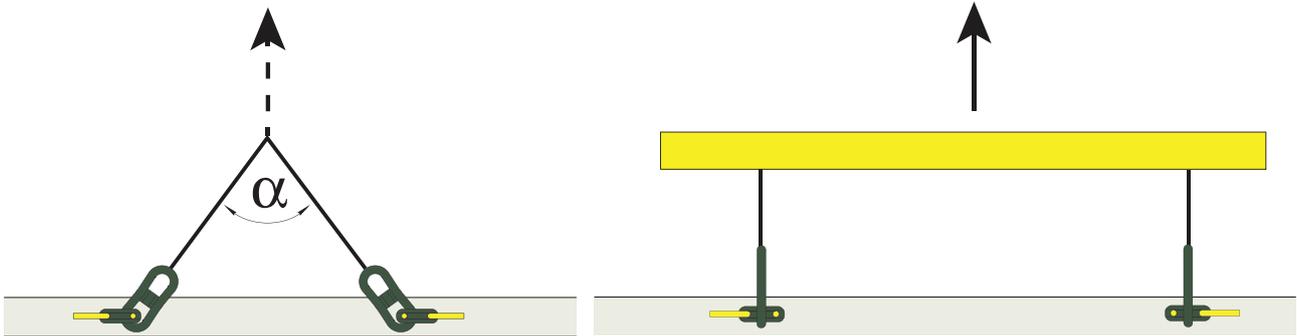


The clutch is now securely connected and ready to use!

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## EdjPro Lifting

To lift the concrete member use the rigging configuration as specified by the engineer responsible for the lifting procedure. Different rigging arrangements can be specified for various lifting procedures during manufacture, transport and erection. Make sure the correct configuration is used for each handling process. Every modification to the rigging needs to be approved by the engineer.



It is critical to use the specified rigging to ensure that the lifting anchors, clutches and the concrete element itself are not overloaded.

Ensure that the sling angle  $\alpha$  does not exceed the sling angle specified by the designer!

Do not lift unless the concrete has reached the minimum specified concrete strength!

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