Leviat®
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# Ancon EdjPro EPHIMini

## Edge Lifting System

**The optimum solution for most plain and step-joint precast panels**

The EdjPro EPHIMini Edge Lifting System has been specifically developed to be used in the Australian construction industry for 125-200mm thick precast panels. The unique I-shaped anchor combines maximum capacity and stiffness with a narrow anchor design for thin, heavily reinforced panels. As with all anchors in the Ancon EdjPro series, the EPHIMini complies with the latest revision of Australian Standard AS3850.

**Ultra narrow, HI working load**
- 8.5T WLL, 40mm wide anchor, 50mm recess
- For all panels from 100mm thickness

**New I-beam head**
- Restricts clutch rotation
- Lowers the risk of concrete cracking and spalling

**Plain & 'Step-Joint' Panels**
- Perfect solution for step-joint, 'weather seal' panels
- Narrow shape for maximum edge distances
- EdjPro clutch clears the concrete when edge lifting
- Stronger performance: factory, transportation and erection

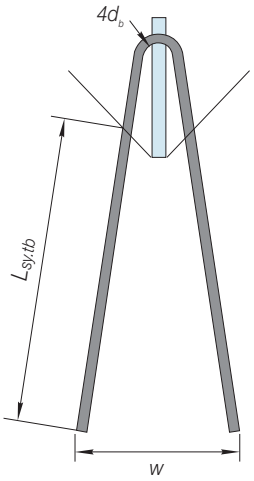
**Safe**
- 8.5T WLL when used with a 20mm tension bar
- Complies with AS3850.1:2015

## System Performance

### Working Loads in Tension

| Anchor CODE Colour | Tension bar | Recommended development length $L_{sy.tb}$ (mm) | Total cut length (mm) | Spread width W (mm) | WLL (tonnes) |
|---|---|---|---|---|---|
| EPHIMini Purple | **N12** | 365 | 900 | 285 | **4.0** |
| | **N16** | 496 | 1220 | 400 | **7.0** |
| | **N20** | 580 | 1375 | 440 | **8.5** |

***Note:*** *An N12, N16 or N20 tension bar may be used according to the required WLL. The development length for the tension bars are based on a concrete strength of 15MPa and a panel thickness of 100mm for N12 and 120mm for N16 and N20.*




### Working Loads in Shear

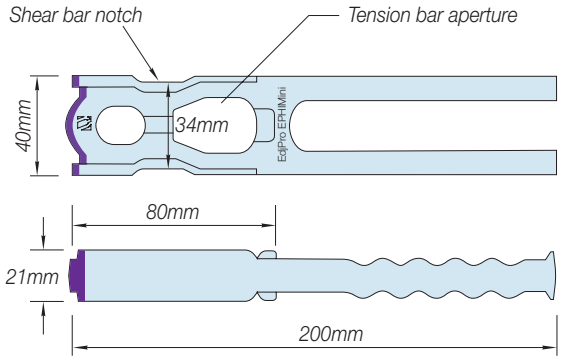
| Panel thickness (mm) | Perimeter (edge) bar | Concrete strength at time of lift $f_{lift}$ (MPa) | Edge lift capacity (tonnes) | |
|---|---|---|---|---|
| | | | Trimmer bar only | Trimmer bar plus N12 shear bar |
| Maximum recommended shear load to avoid concrete cracking | | | | |
| 100-125 | N12 or N16 | 15 | 1.7 | 2.0 |
| | | 30 | 2.0 | 2.5 |
| 150 | N16 | 15 | 2.0 | 2.5 |
| | | 30 | 2.3 | 3.0 |
| 175 | N16 | 15 | 2.5 | 3.0 |
| | | 30 | 2.7 | 3.5 |
| 200 | N16 | 15 | 3.0 | 3.5 |
| | | 30 | 3.5 | 3.5 |

**Notes:** *Locate the perimeter bar above the EdjPro anchor to control flexural cracking. N12 shear 'omega' bars and edge reinforcement e.g. hooked or U-bars help control shear cracking at higher loads. The standard shear bar is optimised for 125-150mm thick panels. Multiple bars or larger diameter bars with deeper embedment may improve crack control in thick (175-200mm) panels. Panel cracking and shear spalling is possible if the designed loads are exceeded. Some anchor deflection is normal, particularly at large sling angles.*

*For other panel thicknesses, please consult the Leviat technical team for design advice. The WLLs shown in the tables above are based on a minimum distance equal to the panel thickness between an anchor and any edge or penetration (e.g. a duct) and twice this distance between any two anchors.*

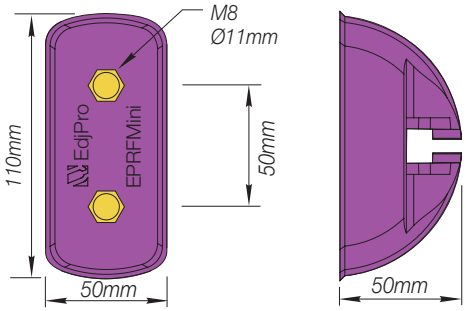
### EdjPro EPHIMini Anchor

Narrow body and high capacity, perfect for thin panels.

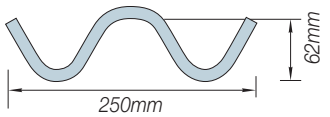



### EdjPro Recess Former EPRFMini

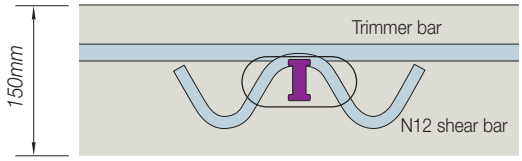
Ultra narrow design, oil resistant synthetic rubber.



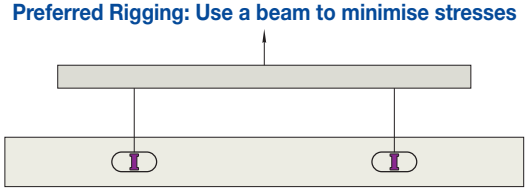

### Standard Hot Dip Galvanised N12 'W' Shear Bar EPSB4-7-150G




### EPHIMini Trimmer Bar & EPSB4-7-150G Shear Bar in 150mm Panel




### Preferred Rigging: Use a beam to minimise stresses



A lifting beam rigged with vertical slings is always preferred i.e. sling angle = 0° to minimise concrete stress in the thin edge. Always limit sling angles to 60° when lifting with or without a beam.

**Important!** The EPHIMini must be installed with the EPRFMini (or EPNRF07) recess and lifted with the EPLCMini clutch (or the compatible but now superseded EPLC07). This system is not compatible with other components without written authorisation from Leviat.

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