## GRP Concrete Embedment Angle -

## Makes Corrosion-Prone Steel Embed Angle Frames for Grating Obsolete



EZ Angle ${ }^{\oplus}$, a Glass Reinforced Plastic (GRP) embedment angle from Fibergrate Composite Structures Inc. is corrosion-resistant, rugged and lightweight. Manufactured from slate gray vinyl ester, fire-retardant resin, EZ Angle embedment angle is precision designed for solid seating of $25 \mathrm{~mm}, 38 \mathrm{~mm}, 51 \mathrm{~mm}, 64 \mathrm{~mm}$ and 76 mm deep gratings.

Chemically resistant to the widest variety of corrosive atmospheres to which industrial gratings are exposed, EZ Angle provides a secure and durable seat for grating over concrete trenches and pits. Fibergrate's patented design eliminates the pullout factor experienced with unribbed GRP embedment angle and anchor clips. EZ Angle also saves repeated costly replacement of steel frames in corrosive environments.

Another advantage of EZ Angle embedment angle is the relative ease of installation into concrete. Less work is required to vibrate the concrete around EZ Angle embedment ribs than with the more traditional anchored " $Y$ " shaped embedment angle making it easier to cast into concrete. EZ Angle embedment angles do not have the problems with voids that the " $Y$ " angles are prone to. Also, rebar interference is not a problem with the unique design of EZ Angle. Contractors familiar with both the traditional " $Y$ " embed and EZ Angle insist on EZ Angle for future projects!
EZ Angle is stocked in 6.1 m lengths for immediate shipment. Once in the field, the angle is easily cut to length with a circular or hack saw. (Remember to always seal all cut edges of GRP products.)


76mm grating: PN\# 1618005 Install 76 mm side vertical


51mm grating: PN\# 1617900 Install 51mm side vertical


25mm grating: PN\# 1617910 Install 25 mm side vertical
For applications where the traditional design
is mandated, Fibergrate also offers a corrosion
resistant traditional anchored " Y " shaped
embedment angle.
$25 m m-P N 1617980 \quad 38 \mathrm{~mm}-$ PN 16179900
$51 \mathrm{~mm}-P N 1618000$

## EZ Angle ${ }^{\circledR}$ - Design Information

\section*{LEGEND <br> | GW | Grating Width |
| :---: | :--- |
| TW | Trench Width |
| BS | Bearing Surface |
| CS | Clearance Space |}

Noting the dimensional details on the diagram below, grating width should be cut according to this formula*:
$\mathbf{G W}=\mathbf{T W}+\mathbf{( 2 \times B S} \mathbf{~ - ~} \mathbf{1 3}$ (13 reflects 6.5 mm clearance space on each side)
Example: If trench is 381 mm wide, grating should be cut 470 mm wide when using 38 mm grating ( $B S=51 \mathrm{~mm}$ see chart below)

$$
\mathrm{GW}=381 \mathrm{~mm}+(2 \times 51 \mathrm{~mm})-13 \mathrm{~mm} \quad \mathrm{GW}=470 \mathrm{~mm}
$$

*This formula applies only to Fibergrate's EZ Angle embedment angle


Common Grating Width Cuts

| Grating Depth | Trench Width (TW) - Millimetres |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 114 | 152 | 191 | 229 | 267 | 305 | 343 | 381 | 419 | 457 | 495 | 533 | 610 | 686 | 762 |
|  | Grating Width (GW) - Millimetres |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} 25 \mathrm{~mm} \\ (38 \mathrm{~mm} B S) \end{gathered}$ | 177 | 215 | 254 | 292 | 330 | 368 | 406 | 444 | 482 | 520 | 558 | 596 | 673 | 749 | 825 |
| $\begin{gathered} 38 \mathrm{~mm} \\ (51 \mathrm{~mm} B S) \\ \hline \end{gathered}$ | 203 | 241 | 280 | 318 | 356 | 394 | 432 | 470 | 508 | 546 | 584 | 622 | 699 | 775 | 851 |
| $\begin{gathered} 51 \mathrm{~mm} \\ (38 \mathrm{~mm} \text { BS) } \end{gathered}$ | 177 | 215 | 254 | 292 | 330 | 368 | 406 | 444 | 482 | 520 | 558 | 596 | 673 | 749 | 825 |
| $\begin{gathered} 64 \mathrm{~mm} \\ (76 \mathrm{~mm} \text { BS }) \end{gathered}$ | 253 | 291 | 330 | 368 | 406 | 444 | 482 | 520 | 558 | 596 | 634 | 672 | 749 | 825 | 901 |
| $\begin{gathered} 76 \mathrm{~mm} \\ (64 \mathrm{~mm} \text { BS } \end{gathered}$ | 229 | 267 | 306 | 344 | 382 | 420 | 458 | 496 | 534 | 572 | 610 | 648 | 725 | 801 | 877 |

## Installation of EZ Angle in a Concrete Trench

EZ Angle is designed to be an easy solution for trenches requiring grating. In five easy steps, you can have the perfect fit for your grating. (View animated installation instructions in our resource centre at http://fibergrate.uk/resource-center/videos/ez-angle-installation-video/)

STEP 1: Securely attach a wooden nailer to the trench form on the side where grating will fit into the EZ Angle.
STEP 2: Attach EZ Angle to the wooden nailer using small finish nails (predrill holes in EZ Angle to facilitate process) at two-to three-foot intervals. Make certain that the top of the vertical leg of the EZ Angle is flush with the top surface of the nailer. STEP 3: Pour concrete as normal. Limited vibration is needed to obtain complete fillout around the EZ Angle ribs with the concrete.
STEP 4: Adequate curing time before removing the trench form is important to insure maximum strength of trench. Once the concrete has cured, remove the trench form and wooden nailer.
STEP 5: Clip or grind finishing nails flush to surface of EZ Angle and seal holes with a sealing kit.


By carefully following these easy steps, your trench will be ready for years of low maintenance service.

