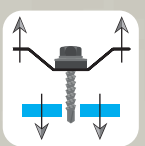
# Bi-metal

FYT
FIJAMOS EL MUNDO

## 11112055 Bi-FYT DK2 5,5

| | | | | |
|---|---|---|---|---|
| Material | AISI 304 stainless steel | Diameter (mm) | | 5,5 |
| Heat treatment | Austenitising + quenching + tempering | Drilling capacity | | 3,5 mm. |
| Corrosion protection | Stainless steel | Hardness | Surface | - |
| Lengths (mm) | 25 - 100 | | Core | - |
| Shear failure load | 9.500 N | Tensile failure load | | 14.000 N |



### Maximum pull-out force (N)*

| Thickness (mm) | 1,00 | 1,13 | 1,25 | 1,50 | 2,00 | 3,00 |
|---|---|---|---|---|---|---|
| Force (N) | 0.700 | 0,800 | 1,000 | 1,4000 | 2,2000 | 3,700 |

*Characteristic value according to ETA 11/0174.

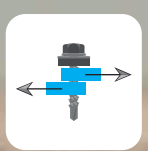


### Maximum pull-over force (N)*




| Thickness (mm) | 0,50 | 0,60 | 0,70 | 0,80 | 4,00AL |
|---|---|---|---|---|---|
| Without washer (N) | 840 | 1.008 | 1.176 | 1.344 | 2.784 |
| P 16 washer (N) | 1.120 | 1.344 | 1.568 | 1.792 | 3,712 |
| P 18 washer (N) | 1.260 | 1.512 | 1.764 | 2.016 | 4.176 |

*. Values obtained from the Spanish structural steel code for an ST37 sheet (350 N/mm2)/aluminium 5005-H111



### Maximum shear force (N)

| Thickness (mm) | 0,63 | 0,75 | 0,63 | 1,00 |
|---|---|---|---|---|
| Section (mm) | 2,00 | 1,50 | 2x 0,63 | 2x 1,00 |
| Force (N) | 1.700 | 2.000 | 1.700 | 2.700 |

*. Characteristic values according to ETA 11/074



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## The values in table 1 are mean test values (ẋ). The following factors are recommended according to CEN/TS 17659:

### Table 2 - Recommended material partial (safety) factors for fastening in structural decks of different marterials

| Material of structural deck | Nominal thickness | Characteristics [a] | γM |
|---|---|---|---|
| Steel according to EN 10346 | 0,50 ≤ t < 0,70 mm | yield strength ≥ 280 N/mm$^2$ | 2,0 |
| | t ≥ 0,70 mm | yield strength ≥ 280 N/mm$^2$ | 1,8 |
| Aluminium according to EN 485 | t ≥ 0,70 mm | yield strength ≥ 195 N/mm$^2$ | 2,0 [b] |
| Concrete according to EN 206 | | Minimum C12/15 | 2,1 [c] |
| Light weight concrete according to EN 12602 | | ≥ 500 kg/m$^3$ | 3,0 [b] |

| Material of structural deck | Nominal thickness | Characteristics [a] | γM |
|---|---|---|---|
| Wood - soft wood according to EN 338 | t ≥ 20 mm | Minimum C24 | 1,86 [d] |
| OSB according to EN 300 | t ≥ 18 mm | Minimum OSC/3 | 1,86 [d] |
| Plywood according to EN 636 | t ≥ 18 mm | Minimum Service class 2 (EN 1995-1-1) Intended application = Structural S | 1,86 [d] |

a. Recommended for new structural decks.
b. This recommended value is based on hnowledge / experience.
c. This value is based on $\gamma_{inst}$ = 1,4.
d. γM is the total safety based on $\kappa_{mod}$ = 0,7 according EC 5.

## Example of fastener strength calculation:

**Data: Steel purlin 2 mm / Sheet 0,6 mm / with screw Bi-FYT DK2 5,5 with washer 18**

**1. Tensile strength:**

- From the data sheet values:

Wtest = 3.800 N/fastener

- Apply 90% reduction factor:

Wchar = 3.420 N/fastener

- Apply safety factor:

Wadm = 1.710 N/fastener

**2. Pull-over resistance:**

- From the data sheet values:

Wadm = 1.512 N/fastener

The lower of these values is used



**Design value of the fasteners: Wadm = 1.512 N/fastener.**



Fire protection



AISI 304


Rolled beam


Screw Self-drilling



Head Hexagonal







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