

## W-FRA 10

### FRAME FIXING W-FRA 10

**W-FRA H 10** with hexagon screw and pressed-on washer



#### Benefits:

- Can be loaded immediately – no waiting time
- Very strong twist lock
- Universal frame-fixing anchor (concrete, masonry of perforated and solid brick, aerated concrete)
- The anchor sleeve and special screw are pre-assembled. Reduces installation efforts.

#### Applications:



#### Approvals and Certificates:

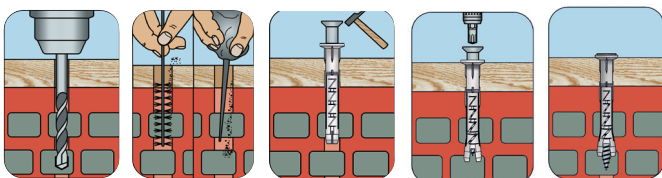


#### Technical Data:

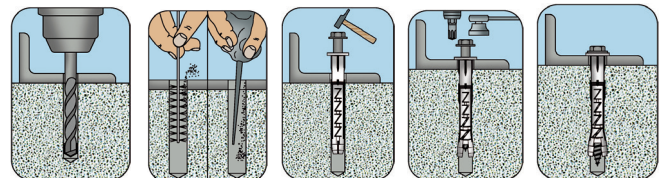
|                          |                                                                       |
|--------------------------|-----------------------------------------------------------------------|
| Head configuration       | Hexagon, Countersunk and Pan Head                                     |
| Environmental conditions | Indoor, Outdoor                                                       |
| Material composition     | Steel, galvanized / A4 stainless steel                                |
| Type of fastening        | Through fastening                                                     |
| Suitable for             | Multiple attachment of non-structural systems in concrete and masonry |

The attachment of facade, ceiling, or roof substructures (made of wood or steel), wood beams, wood laths, metal brackets, metal rails, suspended ceilings, cable routes, angle brackets, profiles, wall-mounted cabinets, shelf units

#### Installation: Setting Instruction I



#### Setting Instruction II



## W-FRA 10



ETA-12/0272

ETAG 020

A B C D

According to the technical report TR 020 "Fire resistance evaluation of concrete anchoring", it can be stated that for the purpose of fixing facade systems, W-FRA 10 fixings have sufficient fire resistance of at least 90 minutes (R90) if the design load per one anchor is  $N \leq 0,8 \text{ KN}$  (with no permanent centric loading)



### Load characteristics for masonry and concrete:

| Substrate                                                                           | Description                                               | Density<br>(kg/dm <sup>3</sup> ) | Standard | Characteristics<br>pull-out<br>resistance (kN) |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------|----------|------------------------------------------------|
|    | Concrete C12/15                                           | $\geq 1,8$                       | EN 206-1 | 3,0*                                           |
|                                                                                     | Concrete $\geq \text{C20/25}$                             | $\geq 2,3$                       | EN 206-1 | 4,0*                                           |
|   | Clay brick <b>Mz</b>                                      | $\geq 1,7$                       | EN 771-1 | 3,5                                            |
|                                                                                     | Clay brick <b>Mz</b>                                      | $\geq 2,0$                       | EN 771-1 | 3,5                                            |
|  | Calcium silicate brick <b>KS-NF-20-2.0-DIN106</b>         | $\geq 2,0$                       | EN 771-2 | 3,5                                            |
|  | Calcium silicate hollow block <b>KSL-R(P)-8-DF-DIN106</b> | $\geq 1,6$                       | EN 771-2 | 2,5                                            |
|  | Vertical perforated porous block <b>PoroTherm 25 P+W</b>  | $\geq 0,8$                       | EN 771-1 | 1,2                                            |
|  | Vertical perforated ceramic block <b>MAX 250</b>          | $\geq 0,8$                       | EN 771-1 | 0,9                                            |
|  | Perforated ceramic brick <b>Hlz12</b>                     | $\geq 1,2$                       | EN 771-1 | 2,0                                            |
|  | <b>VBL 2</b>                                              | $\geq 0,8$                       | EN 771-2 | 2,0                                            |
|  | <b>HBL 2</b>                                              | $\geq 0,8$                       | EN 771-2 | 2,0                                            |
|  | Autoclaved aerated concrete <b>AAC2</b>                   | $\geq 0,35$                      | EN 771-4 | 0,6                                            |
|                                                                                     | Autoclaved aerated concrete <b>AAC7</b>                   | $\geq 0,65$                      | EN 771-4 | 1,5                                            |

**Frame fixing W-FRA H 10**  
with hexagon screw +  
pressed-on washer

Technical drawing of a shaft-hub assembly. The drawing shows a shaft (hatched) inserted into a hub (grey). The shaft has a central section with a keyway. Dimensions are indicated:  $d_{nom}$  is the nominal diameter of the shaft;  $h_{nom}$  is the nominal height of the hub;  $h_0$  is the height of the shaft; and  $t_{fix}$  is the thickness of the hub's flange. The shaft is shown with a keyway and a key.

