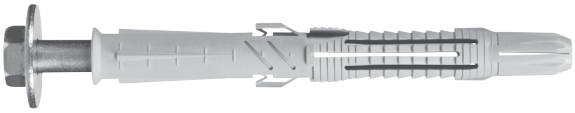
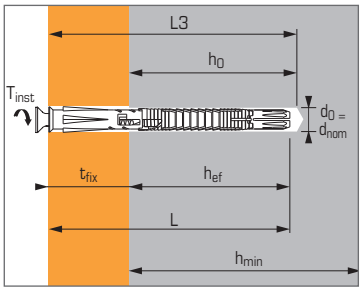
# PROLONG

**zinc coated steel version**



## Universal frame fixing for concrete, in hollow and solid masonries

ETAG 020 - 17/0202
PROLONG Ø10




## APPLICATION

- Roofing clamps
- Sanitary equipement
- Fixing wall plates
- Timbers

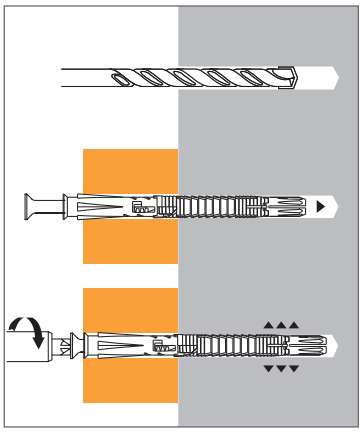
## MATERIAL

- **Body :** polyamid 6 (halogene free)
- **Screw :** zinc coated steel 5.8 (5 µm)
- **Head type:**

F : Countersunk head
TORX 40 (Ø10)

HS : Hexagonal head
+ large washer for Ø12 and Ø16
**Ø10** : Sw = 13 mm
**Ø12**: Sw = 17 mm
**Ø16**: Sw = 19 mm

## INSTALLATION



## Technical data

| Anchor size | Anchor depth (mm) $h_{ef}$ | Max. thickness of part to be fixed (mm) $t_{fix}$ | Anchor external diameter (mm) $d_{nom}$ | Base material thickness (mm) $h_{min}$ | Drilling diameter (mm) $d_0$ | Drilling depth (mm) $h_0$ | Min. drilling depth through part to be fixed (mm) L3 | Total sleeve length (mm) L | Tighten torque (Nm) $T_{inst}$ | Code Head version F | Code Head version H |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10X80/10 | 70 | 10 | 10 | 140 | 10 | 80 | 80 | 80 | 10 | 566653 | - |
| 10X100/30 | | 30 | | | | | 110 | 100 | | 566654 | |
| 10X115/45 | | 45 | | | | | 125 | 115 | | 566655 | |
| 10X145/75 | | 75 | | | | | 155 | 145 | | 566656 | |
| 10X160/90 | | 90 | | | | | 170 | 160 | | 566657 | |
| 10X185/115 | | 115 | | | | | 195 | 185 | | 566658 | |
| 10X210/140 | | 140 | | | | | 220 | 210 | | 566659 | |
| 12X120/50 | 70 | 50 | 12 | 200 | 12 | 85 | 135 | 120 | 10 | - | 566675 |
| 12X145/75 | | 75 | | | | | 160 | 145 | | | 566676 |
| 12X165/95 | | 95 | | | | | 180 | 165 | | | 566677 |
| 12X185/115 | | 115 | | | | | 200 | 185 | | | 566678 |
| 12X210/140 | | 140 | | | | | 225 | 210 | | | 566679 |
| 16X145/55 | 90 | 55 | 16 | 200 | 16 | 110 | 165 | 145 | 20 | - | 566680 |
| 16X165/75 | | 75 | | | | | 185 | 165 | | | 566681 |
| 16X185/95 | | 95 | | | | | 205 | 185 | | | 566682 |
| 16X200/110 | | 110 | | | | | 220 | 200 | | | 566683 |
| 16X240/150 | | 150 | | | | | 260 | 240 | | | 566428 |
| 16X270180 | | 180 | | | | | 290 | 270 | | | 566484 |

## Ultimate loads ($N_{Ru,m}$, $V_{Ru,m}$) in kN

### TENSILE

| Base material \ Anchor size | Ø10 | Ø12 | Ø16 |
|---|---|---|---|
| **Concrete** (C20/25) | | | |
| $N_{Ru,m}$ | 5,0 | 7,8 | 11,0 |
| **Clay bricks** | | | |
| $N_{Ru,m}$ | 5,75 | 7,4 | 10,4 |
| **Hollow concrete blocks not rendered** | | | |
| $N_{Ru,m}$ | 1,4 | 2,2 | 4,2 |
| **Hollow clay bricks not rendered** | | | |
| $N_{Ru,m}$ | 1,4 | 1,2 | 1,2 |
| **Aerated concrete** | | | |
| $N_{Ru,m}$ | 1,25 | 1,9 | 2,6 |

### SHEAR

| Base material \ Anchor size | Ø10 | Ø12 | Ø16 |
|---|---|---|---|
| **Concrete** (C20/25) | | | |
| $V_{Ru,m}$ | 5,0 | 12,5 | 27,0 |
| **Clay bricks** | | | |
| $V_{Ru,m}$ | 5,75 | 11,2 | 24,3 |
| **Hollow concrete blocks not rendered** | | | |
| $V_{Ru,m}$ | 1,4 | 3,4 | 4,8 |
| **Hollow clay bricks not rendered** | | | |
| $V_{Ru,m}$ | 1,4 | 3,5 | 5,1 |
| **Aerated concrete** | | | |
| $V_{Ru,m}$ | - | - | - |

## Design loads ($N_{Rd}$, $V_{Rd}$) and recommended loads ($N_{rec}$, $V_{rec}$) for one anchor without edge or spacing influence in kN

### TENSILE

| Base material \ Anchor size | Ø10 | Ø12 | Ø16 |
|---|---|---|---|
| **Concrete** (C20/25) | | | |
| $N_{Rd}$ | 1,4 | 2,23 | 3,14 |
| $N_{rec}$ | 1,0 | 1,56 | 2,2 |
| **Clay bricks** | | | |
| $N_{Rd}$ | 1,6 | 2,11 | 2,97 |
| $N_{rec}$ | 1,15 | 1,48 | 2,08 |
| **Hollow concrete blocks not rendered** | | | |
| $N_{Rd}$ | 0,4 | 0,63 | 1,2 |
| $N_{rec}$ | 0,28 | 0,44 | 0,84 |
| **Hollow clay bricks not rendered** | | | |
| $N_{Rd}$ | 0,4 | 0,3 | 0,3 |
| $N_{rec}$ | 0,28 | 0,24 | 0,24 |
| **Aerated concrete** | | | |
| $N_{Rd}$ | 0,35 | 0,54 | 0,74 |
| $N_{rec}$ | 0,25 | 0,38 | 0,52 |

### SHEAR

| Base material \ Anchor size | Ø10 | Ø12 | Ø16 |
|---|---|---|---|
| **Concrete** (C20/25) | | | |
| $V_{Rd}$ | 1,4 | 3,57 | 7,71 |
| $V_{rec}$ | 1,0 | 2,5 | 5,4 |
| **Clay bricks** | | | |
| $V_{Rd}$ | 1,6 | 3,2 | 6,94 |
| $V_{rec}$ | 1,15 | 2,24 | 4,86 |
| **Hollow concrete blocks not rendered** | | | |
| $V_{Rd}$ | 0,4 | 0,97 | 1,37 |
| $V_{rec}$ | 0,28 | 0,7 | 0,96 |
| **Hollow clay bricks not rendered** | | | |
| $V_{Rd}$ | 0,4 | 1 | 1,45 |
| $V_{rec}$ | 0,28 | 0,7 | 1,02 |
| **Aerated concrete** | | | |
| $V_{Rd}$ | - | - | - |
| $V_{rec}$ | - | - | - |

## Spacing data

### IN CONCRETE AND SOLID MASONRIES

| Mini. distance between anchors and from edge (mm) | $S_{cr,N}$ | $C_{cr,N}$ | $C_{cr,V}$ | $S_{min}$ | $C_{min}$ |
|---|---|---|---|---|---|
| **Ø10** | 140 | 70 | 70 | 50 | 60 |
| **Ø12** | 140 | 70 | 90 | 50 | 60 |
| **Ø16** | 140 | 70 | 105 | 50 | 60 |

### IN HOLLOW MASONRIES

The anchor must be installed at the minimum distance of:
- 200 mm from another anchor,
- 105 mm from one edge.