# Loads

## Hammerset anchor EA II

Permissible loads for a single anchor[1] for multiple use of redundant non-structural applications* in pre-stressed hollow core slabs of concrete C30/37 up to C50/60.
For the design the complete current assessment ETA-07/0142 has to be considered.

| | | | | | | Cracked and non-cracked concrete | | |
|---|---|---|---|---|---|---|---|---|
| | Material/ surface[2] | Screw material | Effective anchorage depth | Bottom flange thickness[4] | Maximum installation torque | Permissible load ($F_{perm}$); minimum spacing ($s_{min}$) and edge distances ($c_{min}$) with reduced loads | | |
| Type | | | $h_{ef}$ [mm] | $d_b$ [mm] | $T_{inst,max}$ [Nm] | $F_{perm}$[3] [kN] | $s_{min}$ [mm] | $c_{min}$ [mm] |
| **EA II M6 x 25** | gvz | 4.6 | 25 | ≥ 35 | 4 | 1.0 | 200 | 150 |
| **EA II M8 x 25** | gvz | 4.6 | 25 | ≥ 35 | 8 | 1.4 | 200 | 150 |
| **EA II M10 x 25** | gvz | 4.6 | 25 | ≥ 35 | 15 | 1.9 | 200 | 150 |
| **EA II M12 x 25** | gvz | 4.6 | 25 | ≥ 35 | 35 | 1.9 | 200 | 150 |

* In addition to the load table above, the following must be considered for multiple fastening of non-structural redundant systems:
A multiple fixing (redundant system) according to EN 1992-4 and CEN/TR 17079 is defined by
- at least 3 fixing points (per attached element) with at least one anchor at each fixing point and a permissible load per fixing point of 1.4 kN
- or by at least 4 fixing points with at least one anchor each fixing point and a permissible load per fixing point of 2.1 kN
- Additionally, it has to be proven that the stiffness of the attached element shall be large enough to ensure that in case of excessive slip or failure of a fastener the load on this fastener or fixing point can be transferred to neighbouring fixing points without significantly violating the requirements on the attached element in the serviceability and ultimate limit state.

For further details see EN 1992-4 section 7.3 and CEN/TR 17079.

[1] Design according to EN 1992-4:2018 (for static resp. quasi-static loads). The partial safety factors for material resistance as regulated in the ETA as well as a partial safety factor for load actions of $\gamma_L = 1.4$ are considered.

[2] For details of steel grade and variants, see ETA.

[3] Valid for tensile load, shear load and oblique load under any angle. In the case of combinations of tensile, shear loads and bending moments, the design must be carried out in accordance with the provisions of the complete ETA and the provisions of the EN 1992-4:2018.

[4] The anchor may be used in a flange thickness $d_b = 30$ mm with the same characteristic resistance, but the drill hole must not cut a cavity.