

Hammer-set anchor EA Plus

Permissible loads for a single anchor¹⁾ for multiple use of redundant non-structural applications* in normal concrete C20/25 up to C50/60.

For the design the complete current assessment ETA-19/0169 has to be considered.

Type	Material/ surface ²⁾	Screw material	Effective anchorage depth h_{ef} [mm]	Minimum member thick- ness h_{min} [mm]	Maximum torque moment $T_{inst,max}$ [Nm]	Cracked and non-cracked concrete		
						Permissible load (F_{perm}); minimum spacing (s_{min}) and edge distances (c_{min}) with reduced loads	$F_{perm}^{3)}$ [kN]	s_{min} [mm]
EA PLUS M6 x 25	gvz	C8C	25	100	4	0.8	120	110
EA PLUS M8 x 25	gvz	C8C	25	100	8	0.3	100	50
EA PLUS M8 x 30	gvz	C8C	30	100	8	0.8	130	140
EA PLUS M8 x 40	gvz	C8C	40	100	15	0.5	120	80
EA PLUS M10 x 25	gvz	C8C	25	100	15	0.6	110	55
EA PLUS M10 x 30	gvz	C8C	30	100	15	1.0	150	60
EA PLUS M10 x 40	gvz	C8C	40	120	15	1.6	120	90
EA PLUS M12 x 25	gvz	C8C	25	100	35	0.7	200	100
EA PLUS M12 x 50	gvz	C8C	50	140	35	1.2	130	140
EA PLUS M16 x 65	gvz	C8C	65	160	60	2.9	140	125

* 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.