LOADS

Hammerset anchor EA II

zinc plated steel / stainless steel

Permissible loads of a single anchor in non-cracked normal concrete (concrete compression zone) of strength class C20/25 (~B25) [1) 2) 3)]										Minimum spacings while reducing the load	
Type	Screw material resp. screw surface	Minimum member thickness h_{min} [mm]	Effective anchorage depth h_{ef} [mm]	Maximum installation torque T_{max} [Nm]	Permissible tensile load N_{perm} [4)] [kN]	Permissible shear load V_{perm} [4)] [kN]	Required edge distance (with one edge) for: Max. tension load c [mm]	Required edge distance (with one edge) for: Max. shear load c [mm]	Required spacing for: Max. Load s [mm]	Min. spacing s_{min} [5) 6)] [mm]	Min. edge distance c_{min} [5) 6)] [mm]
EA II M6 x 30[8)]	5.8	80	30	4	3,9	2,9	150	150	90	70	150
	8.8					3,9					
	A4-70					3,2					
EA II M8 x 30[8)]	5.8	80	30	8	3,9	4,9	150	150	90	110	150
	8.8										
	A4-70					5,6					
EA II M8 x 40	5.8	80	40	8	6,1	4,9	150	150	120	200	150
	8.8										
	A4-70					5,6					
EA II M10 x 40	5.8	100	40	15	6,1	6,2	180	180	120	150	180
	8.8										
	A4-70					7,1					
EA II M12	5.8	100	50	35	8,5	11,3	200	200	150	200	200
	8.8										
	A4-70					12,9					
EA II M16	5.8	160	65	60	12,6	18,3	240	240	195	180	240
	8.8										
	A4-70					21,1					
EA II M20	5.8	200	80	120	17,2	29,1	280	285	240	190	280
	8.8										
	A4-70					33,7		340			

For the design the complete assessment ETA-07/0135 has to be considered. [7)]

[1)] The partial safety factors for material resistance as regulated in the ETA-07/0135 as well as a partial safety factor for load actions of γ_L = 1,4 are considered. As an single anchor counts e.g. an anchor with a spacing s ≥ 3-hef and an edge distance c ≥ 1.5-hef. Accurate data see ETA-07/0135.

[2)] For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

[3)] Drill method hammer drilling.

[4)] For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see ETA-07/0135.

[5)] Minimum possible axial spacings resp. edge distance while reducing the permissible load.

[6)] Minimum possible spacing resp. edge distance while reducing the permissible load for the required minimum member thickness. The combination of minimum edge distance and minimum spacing is not possible. One of both values has to be increased acc. ETA-07/0135.

[7)] The given loads refer to the European Technical Assessment ETA-07/0135, issue date 09/12/2016. Design of the loads according ETAG 001, Annex C, Method A (for static resp. quasi-static loads).

[8)] Only approved for statically intederminate systems.

LOADS

Hammerset anchor EA II galvanised / corrosion resistant steel A4

Highest permissible loads for a single anchor[1)6)] for multiple use for non-structural applications in cracked and non-cracked concrete C20/25 up to C50/60[5)].

Type	Effective anchorage depth h_{ef} [mm]	Min. member thickness h_{min}[4)] [mm]	Maximum torque moment $T_{inst, max}$ [Nm]	Permissible load F_{perm}[3)] [kN]	Required spacing for Max. Load s [mm]	Min. spacing s_{min}[2)] [mm]	Min. edge distance c_{min}[2)] [mm]
EA II M6 x 25	25	80	4,0	1,0	75	30	60
EA II M6 x 30	30	80	4,0	1,2	90	65	115
EA II M8 x 25	25	80	8,0	1,4	75	50	100
EA II M8 x 30	30	80	8,0	2,0	90	70	115
EA II M8 x 40	40	80	8,0	2,0	120	70	115
EA II M10 x 25	25	80	15,0	1,9	75	60	100
EA II M10 x 30	30	80	15,0	2,0	90	85	140
EA II M10 x 40	40	80	15,0	3,0	200	95	150
EA II M12 x 25	25	80	35,0	1,9	75	100	110
EA II M12 x 50	50	100	35,0	4,3	300	145	200

For the design the complete approval ETA-07/0142 has to be considered.

[1)] The required partial safety factors for material resistance as well as a partial safety factor for load actions of γ_L = 1,4 are considered.

[2)] Minimum possible axial spacings resp. edge distances while increasing the member thickness. The combination of minimum axial spacing and minimum edge distance with the minimum member thickness is not possible. Exact data see approval.

[3)] Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads as well as bending moments see approval.

[4)] Minimum possible member thickness while increasing the axial spacings and edge distances. The combination of minimum axial spacing and minimum edge distance with the minimum member thickness is not possible. Exact data see approval.

[5)] Further data for concrete C12/15 see approval.

[6)] Screw property class 4.6 and A4-50.

LOADS

Hammerset anchor EA II (screw property class 4.6 and A4-50)

Highest permissible loads[1)] for a single anchor for multiple use for non-structural applications in pre-stressed hollow core slabs[4)]

Type	Bottom flange thickness [mm]	Effective anchorage depth h_{ef} [mm]	Maximum torque moment $T_{inst,max}$ [Nm]	Permissible load F_{perm}[3)] [kN]	Min. spacing s_{min}[2)] [mm]	Min. edge distance c_{min}[2)] [mm]
EA II M6 x 25	≥ 35[5)]	25	4,0	1,0	200	150
EA II M8 x 25			8,0	1,4		
EA II M10 x 25			15,0	1,9		
EA II M12 x 25			35,0	1,9		

For the design the complete approval ETA-07/0142 has to be considered.

[1)] The required partial safety factors for material resistance as well as a partial safety factor for load actions of γ_L = 1,4 are considered.

[2)] Minimum possible axial spacings resp. edge distance. For further measures see approval.

[3)] Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads as well as bending moments see approval.

[4)] Concrete strength class C30/37 up to C50/60.

[5)] 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.