

# LOADS

## Hammerset anchor EA II (screw/threaded rod property class $\geq 4.6$ )

**Highest permissible loads for a single anchor<sup>1)</sup>** for multiple use for non-structural applications in concrete C20/25 up to C50/60<sup>5)</sup>.

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

Type	Effective anchorage depth $h_{ef}$ [mm]	Minimum member thickness $h_{min}^{4)}$ [mm]	Maximum torque moment $T_{inst,max}$ [Nm]	Cracked or non-cracked concrete		
				Permissible load $F_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
<b>EA II M 6 x 25</b>	25	80	4,0	1,0	30	60
<b>EA II M 6 x 30</b>	30	80	4,0	1,2	65	115
<b>EA II M 8 x 25</b>	25	80	8,0	1,4	50	100
<b>EA II M 8 x 30</b>	30	80	8,0	2,0	70	115
<b>EA II M 8 x 40</b>	40	80	8,0	2,0	70	115
<b>EA II M 10 x 25</b>	25	80	15,0	1,9	60	100
<b>EA II M 10 x 30</b>	30	80	15,0	2,0	85	140
<b>EA II M 10 x 40</b>	40	80	15,0	3,0	95	150
<b>EA II M 12 x 25</b>	25	80	35,0	1,9	100	110
<b>EA II M 12 x 50</b>	50	100	35,0	4,3	145	200

<sup>1)</sup> The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of  $\gamma_L = 1,4$  are considered.

<sup>2)</sup> 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.

<sup>3)</sup> 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.

<sup>4)</sup> 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.

<sup>5)</sup> Further data for concrete C12/15 see approval.

## LOADS

### Hammerset anchor EA II (screw property class 4.6)

**Highest permissible loads<sup>1)</sup> for a single anchor** for multiple use for non-structural applications in pre-stressed hollow core slabs<sup>4)</sup>.

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

Type	Bottom flange thickness  [mm]	Effective anchorage depth $h_{ef}$ [mm]	Maximum torque moment $T_{inst,max}$ [Nm]	Pre-stressed hollow core slabs		
				Permissible load $F_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
EA II M 6 x 25	≥ 35 <sup>5)</sup>	25	4,0	1,0	200	150
EA II M 8 x 25			8,0	1,4		
EA II M 10 x 25			15,0	1,9		
EA II M 12 x 25			35,0	1,9		

<sup>1)</sup> The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of  $\gamma_L = 1,4$  are considered.

<sup>2)</sup> Minimum possible axial spacings resp. edge distances. Further data see approval.

<sup>3)</sup> 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.

<sup>4)</sup> Concrete strength class C30/37 up to C50/60.

<sup>5)</sup> 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.

## LOADS

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

**Highest permissible loads for a single anchor<sup>1)</sup>** for multiple use for non-structural applications in concrete C20/25 up to C50/60<sup>5)</sup>.

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

Type	Effective anchorage depth $h_{ef}$ [mm]	Min. member thickness $h_{min}^{4)}$ [mm]	Max. torque moment $T_{inst,max}$ [Nm]	Cracked or non-cracked concrete		
				Permissible load $F_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
EA II M 6 x 30 A4	30	80	4,0	1,2	65	115
EA II M 8 x 30 A4	30	80	8,0	2,0	70	115
EA II M 8 x 40 A4	40	80	8,0	2,0	70	115
EA II M 10 x 30 A4	30	80	15,0	2,0	85	140
EA II M 10 x 40 A4	40	80	15,0	3,0	95	150
EA II M 12 x 50 A4	50	100	35,0	4,3	145	200

<sup>1)</sup> The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of  $\gamma_L = 1,4$  are considered.

<sup>2)</sup> 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.

<sup>3)</sup> 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.

<sup>4)</sup> 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.

<sup>5)</sup> Further data for concrete strength class C12/15 see approval.

## LOADS

### Hammerset anchor EA II (screw property class 8.8)

**Highest permissible loads for a single anchor<sup>1)</sup>** in concrete C20/25<sup>4)</sup>

For the design the complete approval ETA - 07/0135 has to be considered.

Type	Effective anchorage depth $h_{ef}$ [mm]	Min. member thickness $h_{min}$ [mm]	Max. torque moment $T_{inst,max}$ [Nm]	Non-cracked concrete			
				Permissible tensile load $N_{perm}^{3)}$ [kN]	Permissible shear load $V_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
EA II M 6 x 30 <sup>5)</sup>	30	80	4,0	4,0	3,9	65	115
EA II M 8 x 30 <sup>5)</sup>	30	80	8,0	4,0	4,9	70	115
EA II M 8 x 40	40	80	8,0	6,1	4,9	70	115
EA II M 10 x 30 <sup>5)</sup>	30	80	15,0	4,0	6,2	85	140
EA II M 10 x 40	40	80	15,0	6,1	6,2	95	150
EA II M 12 x 50	50	100	35,0	8,5	11,3	145	200
EA II M 12D x 50	50	100	35,0	8,5	15,4	145	200
EA II M 16 x 65	65	160	60,0	12,6	18,3	180	240
EA II M 20 x 80	80	200	120,0	17,2	29,1	190	280

<sup>1)</sup> The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of  $\gamma_L = 1,4$  are considered. As an single anchor counts e.g. an anchor with a spacing  $s \geq 3 \times h_{ef}$  and an edge distance  $c \geq 1,5 \times h_{ef}$ .

<sup>2)</sup> Minimum possible axial spacings resp. edge distance while reducing the permissible load.

<sup>3)</sup> For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.

<sup>4)</sup> For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

<sup>5)</sup> Only for multiple use for non-structural applications.

# LOADS

## Hammerset anchor EA II A4 (screw property class A4-70)

Highest permissible loads for a single anchor<sup>1)</sup> in concrete C20/25<sup>4)</sup>

For the design the complete approval ETA - 07/0135 has to be considered.

Type	Effective anchorage depth $h_{ef}$ [mm]	Min. member thickness $h_{min}$ [mm]	Max. torque moment $T_{inst,max}$ [Nm]	Non-cracked concrete			
				Permissible tensile load $N_{perm}^{3)}$ [kN]	Permissible shear load $V_{perm}^{3)}$ [kN]	Min. spacing $s_{min}^{2)}$ [mm]	Min. edge distance $c_{min}^{2)}$ [mm]
<b>EA II M 6 x 30 A4<sup>5)</sup></b>	30	80	4,0	4,0	3,2	65	115
<b>EA II M 8 x 30 A4<sup>5)</sup></b>	30	80	8,0	4,0	5,6	70	115
<b>EA II M 8 x 40 A4</b>	40	80	8,0	6,1	5,6	70	115
<b>EA II M 10 x 30 A4<sup>5)</sup></b>	30	80	15,0	4,0	6,9	85	140
<b>EA II M 10 x 40 A4</b>	40	80	15,0	6,1	7,1	95	150
<b>EA II M 12 x 50 A4</b>	50	100	35,0	8,5	12,9	145	200
<b>EA II M 12 D x 50 A4</b>	50	100	35,0	8,5	13,5	145	200
<b>EA II M 16 x 65 A4</b>	65	160	60,0	12,6	21,1	180	240
<b>EA II M 20 x 80 A4</b>	80	200	120,0	17,2	33,7	190	280

<sup>1)</sup> The partial safety factors for material resistance as regulated in the approval as well as a partial safety factor for load actions of  $\gamma_L = 1,4$  are considered. As an single anchor counts e.g. an anchor with a spacing  $s \geq 3 \times h_{ef}$  and an edge distance  $c \geq 1,5 \times h_{ef}$ .

<sup>2)</sup> Minimum possible axial spacings resp. edge distance while reducing the permissible load.

<sup>3)</sup> For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.

<sup>4)</sup> For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

<sup>5)</sup> Only for multiple use for non-structural applications.