

steel anchors

**High-performance** 

# The internally threaded anchor with rim for simple hammerset installation





### VERSIONS

- zinc-plated steel
- stainless steel

### **BUILDING MATERIALS**

### Approved for:

- Concrete C20/25 to C50/60, cracked, for the multiple fixings of non-load-bearing systems
- Concrete C20/25 to C50/60, noncracked

### Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

### **APPLICATIONS**

- Pipelines and ventilation systems
- Sprinkler systems
- Cable conduits and wires
- Gratings
- Steel constructions
- Machines
- Consoles
- Shuttering props
- Diamond or core drilling devices (EA II M12 D)



### APPROVALS











### FUNCTIONING

- The EA II is suitable for prepositioned installation.
- Position the hammerset anchor in the drill hole and drive in flush to the surface of the anchor base using the hammer.
- The sleeve is then expanded by driving in the internal bolt with the EAW H Plus setting tool (alternative: EA II-SDS machine setting tool), and expanded against the drill hole wall.
- The setting tools must sit on the rim of the anchor to ensure correct expansion.
- Use the special EA II M12 D with thicker sleeve for fixing diamond and core drilling devices.



### **ADVANTAGES**

- The embossed rim prevents the anchor sleeve from slipping, thus ensuring a trouble-free hammerset installation.
- The metric internal thread means that it is possible to use standard screws or threaded rods for the ideal adaptation to suit the intended use.
- The EA II S-SDS machine setting tool allows for effortless installation, particularly in the case of series installations.
- The embossing that is applied when expanding with the EAW H Plus setting tool offers a simple control of the anchoring and provides increased safety.

## fischer esolutions

### **TECHNICAL DATA**



Hammerset anchor EA II



### galvanized

		Approval	<b>Drill hole diameter</b> d <sub>o</sub>	Anchor length	<b>Internal thread</b> A1
Article name	ArtNo.		[mm]	[mm]	
EA II M 6	048264		8	30	M 6
EA II M 8	048284		10	30	M 8
EA II M 8 x 40	048323		10	40	M 8
EA II M 10	048339		12	40	M 10
EA II M 10 x 30	048332		12	30	M 10
EA II M 12	048406		15	50	M 12
EA II M 16	048408		20	65	M 16
EA II M 20	048409		25	80	M 20

### A4

		Approval	<b>Drill hole diameter</b> d <sub>o</sub>	Anchor length	Internal thread A1
Article name	ArtNo.		[mm]	[mm]	
EA II M 6 A4	048410		8	30	M 6
EA II M 8 A4	048411		10	30	M 8
EA II M 8 x 40 A4	048412		10	40	M 8
EA II M 10 A4	048414		12	40	M 10
EA II M 12 A4	048415		15	50	M 12
EA II M 16 A4	048416		20	65	M 16
EA II M 20 A4	048417		25	80	M 20



### LOADS

### Hammerset anchor EA II (screw property class 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. For the design the complete approval ETA - 07/0142 has to be considered.

				Cracked or non-cracked concrete			
Туре	Effective	Min.	Max.	Permissible load Min. spacing		Min. edge distance	
	anchorage depth	member thickness"	torque moment	<b>F</b> 2)	2)	2)	
	h <sub>ef</sub>	h <sub>min</sub>	l inst,max	<sup>F</sup> perm <sup>37</sup>	<sup>s</sup> min <sup>2</sup>	<sup>c</sup> min <sup>2</sup>	
	[mm]	[mm]	[Nm]	[kN]	[mm]	[mm]	
EA II M6	30	100	4,0	1,2	65	115	
EA II M8	30	100	8,0	2,0	95	140	
EA II M8 x 40	40	100	8,0	2,0	95	140	
EA II M10 x 30	30	120	15,0	2,0	85	140	
EA II M10	40	120	15,0	3,0	95	160	
EA II M12	50	120	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. As an single anchor counts e.g. an anchor with a spacing s  $\geq$  3 x h<sub>eff</sub> and an edge distance c  $\geq$  1,5 x h<sub>eff</sub>.

Minimum possible axial spacing serves. edge distance while reducing the permissible load.
Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile

loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.  $^{\eta}\,$  When the spacing and edge distance will be increased the minimum member thickness can be reduced. Exact data see approval.



### LOADS

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

Highest permissible loads for a single anchor<sup>1)</sup> in concrete C2O/25<sup>4)</sup>

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

				Non-cracked concrete			
Туре	Effective anchorage depth	Min. member thickness	Max. torque moment	Permissible tensile load	Permissible shear load	Min. spacing	Min. edge distance
	h <sub>ef</sub>	h <sub>min</sub>	T <sub>inst,max</sub>	N <sub>perm</sub> <sup>3)</sup>	V <sub>perm</sub> <sup>3)</sup>	s <sub>min</sub> <sup>2)</sup>	c <sub>min<sup>2)</sup></sub>
	[mm]	[mm]	[Nm]	[kN]	[kN]	[mm]	[mm]
EA II M6 <sup>5)</sup>	30	100	4,0	4,0	3,9	65	115
EA II M8 <sup>5)</sup>	30	100	8,0	4,0	4,9	95	140
EA II M8 x 40	40	100	8,0	6,1	4,9	95	140
EA II M10 x 30 <sup>5)</sup>	30	120	15,0	4,0	6,2	85	140
EA II M10	40	120	15,0	6,1	6,2	95	160
EA II M12	50	120	35,0	8,5	11,3	145	200
EA II M12D	50	120	35,0	8,5	15,4	145	200
EA II M16	65	160	60,0	12,6	18,3	180	240
EA II M20	80	200	120,0	17,2	29,1	190	280

 $^{1\!\mathrm{j}}$  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  $s \geq 3~x~h_{ef}$  and an edge distance  $c \geq 1,5~x~h_{ef}$ 

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

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

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

				Cracked or non-cracked concrete			
Туре	Effective anchorage depth	Min. member thickness <sup>7)</sup>	Max. torque moment	Permissible load Min. spacing		Min. edge distance	
	h <sub>ef</sub>	h <sub>min</sub>	T <sub>inst,max</sub>	F <sub>perm</sub> <sup>3)</sup>	s <sub>min</sub> <sup>2)</sup>	c <sub>min<sup>2)</sup></sub>	
	[mm]	[mm]	[Nm]	[kN]	[mm]	[mm]	
EA II M6 A4	30	100	4,0	1,2	65	115	
EA II M8 A4	30	100	8,0	2,0	95	140	
EA II M8 x 40 A4	40	100	8,0	2,0	95	140	
EA II M10 x 30 A4	30	120	15,0	2,0	85	140	
EA II M10 A4	40	120	15,0	3,0	95	160	
EA II M12 A4	50	120	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. As an single anchor counts e.g. an anchor with a spacing  $s \geq 3~x~h_{ef}$  and an edge distance  $c \geq 1,5~x~h_{ef}.$ 

<sup>2)</sup> Minimum possible axial spacings resp. edge distance while reducing the permissible load. <sup>3)</sup> Valid for tensile load, shear load and oblique load under any angle. For combinations of tensile loads, shear loads, bending moments as well as reduced edge distances or spacings (anchor groups) see approval.

 $^{\eta}$  When the spacing and edge distance will be increased the minimum member thickness can be reduced. Exact data see approval.



# **High-performance steel anchors**

### 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.

				Non-cracked concrete			
Туре	Effective	Min.	Max.	Permissible	Permissible	Min.	Min.
	anchorage depth	member thickness	torque moment	tensile load	shear load	spacing	edge distance
	h <sub>ef</sub>	h <sub>min</sub>	T <sub>inst,max</sub>	N <sub>perm</sub> <sup>3)</sup>	V <sub>perm</sub> <sup>3)</sup>	s <sub>min<sup>2)</sup></sub>	c <sub>min<sup>2)</sup></sub>
	[mm]	[mm]	[Nm]	[kN]	[kN]	[mm]	[mm]
EA II M6 A4 <sup>5)</sup>	30	100	4,0	4,0	3,2	65	115
EA II M8 A4 <sup>5)</sup>	30	100	8,0	4,0	5,6	95	140
EA II M8 x 40 A4	40	100	8,0	6,1	5,6	95	140
EA II M10 x 30 A4 <sup>5)</sup>	30	120	15,0	4,0	6,9	85	140
EA II M10 A4	40	120	15,0	6,1	7,1	95	160
EA II M12 A4	50	120	35,0	8,5	12,9	145	200
EA II M12D A4	50	120	35,0	8,5	13,5	145	200
EA II M16 A4	65	160	60,0	12,6	21,1	180	240
EA II M20 A4	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 x h<sub>ef</sub> and an edge distance c  $\geq$  1,5 x h<sub>ef</sub>.

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

 $^{\rm 4)}\,$  For higher concrete strength classes up to C50/60 higher permissible loads may be possible.

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

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