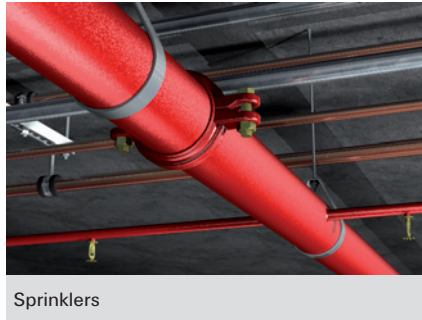


The internally threaded anchor with rim for simple hammer-set installation



VERSIONS

- Zinc-plated steel
- Stainless steel

BUILDING MATERIALS

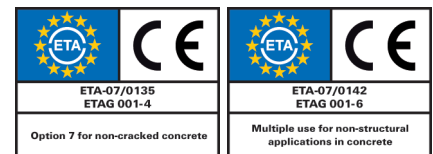
Approved for:

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

Also suitable for:

- Concrete C12/15
- Natural stone with dense structure

ASSESSMENT/APPROVAL



ADVANTAGES

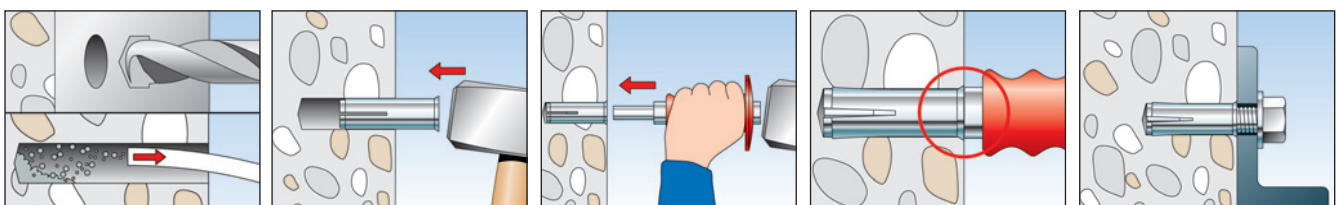
- The embossed rim prevents the anchor sleeve from slipping, thus ensuring a trouble-free hammer-set installation.
- The metric internal thread means that it is possible to use standard screws or threaded rods for the ideal adaptation to suit the intended use.
- The EMS machine setting tool allows for effortless installation, particularly in the case of series installations.
- The embossing that is applied when expanding with the EHS Plus setting tool offers a simple control of the anchoring and provides increased safety.
- Fixing point at h_{ef} 25 mm prevents anchor of falling out of the drill hole before being expanded.

APPLICATIONS

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

FUNCTIONING

- The EA II is suitable for pre-positioned installation.
- Position the hammer-set 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 EHS Plus setting tool (alternative: EMS 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 x 50 D / EA M 12 x 50 N D with thicker sleeve for fixing diamond and core drilling devices.



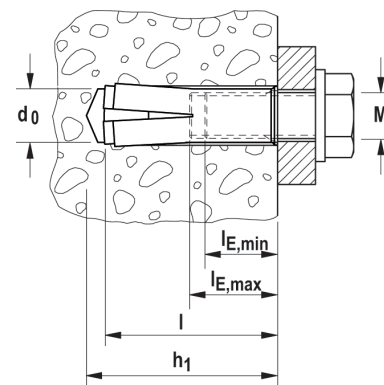
TECHNICAL DATA



Hammerset anchor **EA II**, with reduced anchorage depth h_{ef} 25 mm.



Hammerset anchor **EA II**. Not suitable for diamond drilling appliances and diamond saws.



| | zinc-plated steel | stainless steel | Approval | Drill hole diameter | Min. drill hole depth for pre-positioned installation | Anchor length | Internal thread | Min. bolt penetration | Max. bolt penetration | Sales unit |
|-----------------|-------------------|-----------------|----------|---------------------|---|---------------|-----------------|-----------------------|-----------------------|------------|
| | Art.-No. | Art.-No. | ETA | d_0 [mm] | h_1 [mm] | l [mm] | A1 | $l_{E,min}$ [mm] | $l_{E,max}$ [mm] | [pcs] |
| Item | gvz | A4 | | | | | | | | |
| EA II M 6 x 25 | 532230 | — | ■ | 8 | 27 | 25 | M 6 | 6 | 14 | 100 |
| EA II M 6 x 30 | 048264 | 048410 | ■ | 8 | 32 | 30 | M 6 | 6 | 14 | 100 |
| EA II M 8 x 25 | 532231 | — | ■ | 10 | 27 | 25 | M 8 | 8 | 14 | 100 |
| EA II M 8 x 30 | 048284 | 048411 | ■ | 10 | 33 | 30 | M 8 | 8 | 14 | 100 |
| EA II M 8 x 40 | 048323 | 048412 | ■ | 10 | 43 | 40 | M 8 | 8 | 14 | 50 |
| EA II M 10 x 25 | 532232 | — | ■ | 12 | 27 | 25 | M 10 | 10 | 14 | 50 |
| EA II M 10 x 30 | 048332 | — | ■ | 12 | 33 | 30 | M 10 | 10 | 14 | 50 |
| EA II M 10 x 40 | 048339 | 048414 | ■ | 12 | 43 | 40 | M 10 | 10 | 17 | 50 |
| EA II M 12 x 25 | 532233 | — | ■ | 15 | 27 | 25 | M 12 | 12 | 14 | 25 |
| EA II M 12 x 50 | 048406 | 048415 | ■ | 15 | 54 | 50 | M 12 | 12 | 22 | 25 |
| EA II M 16 x 65 | 048408 | 048416 | ■ | 20 | 70 | 65 | M 16 | 16 | 28 | 20 |
| EA II M 20 x 80 | 048409 | 048417 | ■ | 25 | 85 | 80 | M 20 | 20 | 34 | 10 |

Associated setting tool for manual installation (EHS Plus), for installation with hammer drill (EMS)

TECHNICAL DATA



Hammerset anchor **EA II M 12 x 50 D**. Suitable for diamond drilling appliances and diamond saws.



Hammerset anchor **EA M 12 x 50 N D**. Suitable for diamond drilling machines and diamond saws.

| | zinc-plated steel | Approval | Drill hole diameter | Min. drill hole depth | Anchor length | Internal thread | Min. bolt penetration | Max. bolt penetration | Sales unit |
|-------------------|-------------------|----------|---------------------|-----------------------|---------------|-----------------|-----------------------|-----------------------|------------|
| | Art.-No. | ETA | d_0 [mm] | h_1 [mm] | l [mm] | A1 | $l_{E,min}$ [mm] | $l_{E,max}$ [mm] | [pcs] |
| Item | gvz | | | | | | | | |
| EA II M 12 x 50 D | 048407 | ■ | 16 | 54 | 50 | M 12 | 12 | 22 | 25 |
| EA M 12 x 50 N D | 500872 | — | 16 | 54 | 50 | M 12 | 12 | 22 | 50 |

Associated setting tool for manual installation (EHS Plus), for installation with hammer drill (EMS)

ACCESSORIES



Stop drill **EBB**

| Item | Art.-No. | Tool holder | Drill hole diameter | Drill hole depth | Match | Sales unit |
|-------------|----------|-------------|---------------------|------------------|-----------------|------------|
| | | | [mm] | [mm] | | [pcs] |
| EBB 8 x 25 | 532607 | SDS plus | 8 | 27 | EA II M 6 x 25 | 1 |
| EBB 10 x 25 | 532608 | SDS plus | 10 | 27 | EA II M 8 x 25 | 1 |
| EBB 12 x 25 | 532609 | SDS plus | 12 | 27 | EA II M 10 x 25 | 1 |
| EBB 15 x 25 | 532610 | SDS plus | 15 | 27 | EA II M 12 x 25 | 1 |

ACCESSORIES



Machine setting tool **EMS**

| Item | Art.-No. | | Tool holder | Match | Sales unit [pcs] |
|-------------------------|-----------------------------|--|-------------|--|------------------|
| EMS M 6 x 25/30 | 048065 | | SDS plus | EA II M 6 x 25, EA II M 6 x 30 | 1 |
| EMS M 8 x 25/30 | 048066 | | SDS plus | EA II M 8 x 25, EA II M 8 x 30 | 1 |
| EMS M 8 x 40 | 048067 | | SDS plus | EA II M 8 x 40 | 1 |
| EMS M 10 x 25/30 | 048068 ¹⁾ | | SDS plus | EA II M 10 x 25, EA II M 10 x 30 | 1 |
| EMS M 10 x 40 | 048070 | | SDS plus | EA II M 10 x 40 | 1 |
| EMS M 12 x 25 | 532569 | | SDS plus | EA II M 12 x 25 | 1 |
| EMS M 12 x 50 | 048071 | | SDS plus | EA II M 12 x 50 D / EA II M 12 x 50 / EA M 12 x 50 N D | 1 |
| EMS M 16 x 65 | 048072 ¹⁾ | | SDS max | EA II M 16 x 65 | 1 |
| EMS M 20 x 80 | 048073 ¹⁾ | | SDS max | EA II M 20 x 80 | 1 |

¹⁾ Delivery time on request.

ACCESSORIES



Setting tool **EHS Plus** with hand impact protection for your safety and embossing tool.



Setting tool **EA-ST**

| Item | | Match | Sales unit [pcs] |
|------------------------------|---------------|------------------------------------|------------------|
| EHS M 6 x 25/30 Plus | 044630 | EA II M 6 x 25, EA II M 6 x 30 | 1 |
| EHS M 8 x 25/30 Plus | 044631 | EA II M 8 x 25, EA II M 8 x 30 | 1 |
| EHS M 8 x 40 Plus | 044632 | EA II M 8 x 40 | 1 |
| EHS M 10 x 25/30 Plus | 048487 | EA II M 10 x 25, EA II M 10 x 30 | 1 |
| EHS M 10 x 40 Plus | 044633 | EA II M 10 x 40 | 1 |
| EHS M 12 x 25 Plus | 532568 | EA II M 12 x 25 | 1 |
| EHS M 12 x 50 Plus | 044634 | EA II M 12 x 50, EA II M 12 x 50 D | 1 |
| EHS M 16 x 65 Plus | 044635 | EA II M 16 x 65 | 1 |
| EHS M 20 x 80 Plus | 044636 | EA II M 20 x 80 | 1 |
| EA-ST 12 | 504585 | EA M 12 x 50 N D | 1 |

LOADS

Hammerset anchor EA II (screw/threaded rod property class ≥ 4.6)

Highest permissible loads for a single anchor¹⁾ for multiple use for non-structural applications in concrete C20/25 up to C50/60⁵⁾. 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] |
| EA II M 6 x 25 | 25 | 80 | 4,0 | 1,0 | 30 | 60 |
| EA II M 6 x 30 | 30 | 80 | 4,0 | 1,2 | 65 | 115 |
| EA II M 8 x 25 | 25 | 80 | 8,0 | 1,4 | 50 | 100 |
| EA II M 8 x 30 | 30 | 80 | 8,0 | 2,0 | 70 | 115 |
| EA II M 8 x 40 | 40 | 80 | 8,0 | 2,0 | 70 | 115 |
| EA II M 10 x 25 | 25 | 80 | 15,0 | 1,9 | 60 | 100 |
| EA II M 10 x 30 | 30 | 80 | 15,0 | 2,0 | 85 | 140 |
| EA II M 10 x 40 | 40 | 80 | 15,0 | 3,0 | 95 | 150 |
| EA II M 12 x 25 | 25 | 80 | 35,0 | 1,9 | 100 | 110 |
| EA II M 12 x 50 | 50 | 100 | 35,0 | 4,3 | 145 | 200 |

¹⁾ 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.

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.

LOADS

Hammerset anchor EA II (screw property class 4.6)

Highest permissible loads¹⁾ for a single anchor for multiple use for non-structural applications in pre-stressed hollow core slabs⁴⁾. 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 | $\geq 35^{5)}$ | 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 | | |

¹⁾ 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.

²⁾ Minimum possible axial spacings resp. edge distances. Further 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⁾ 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.

LOADS

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

Highest permissible loads for a single anchor¹⁾ for multiple use for non-structural applications in concrete C20/25 up to C50/60⁵⁾. 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 |

¹⁾ 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.

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 strength class C12/15 see approval.

LOADS

Hammerset anchor EA II (screw property class 8.8)

Highest permissible loads for a single anchor¹⁾ in concrete C20/25⁴⁾

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 ⁵⁾ | 30 | 80 | 4,0 | 4,0 | 3,9 | 65 | 115 |
| EA II M 8 x 30 ⁵⁾ | 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 ⁵⁾ | 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 |

¹⁾ 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 a single anchor counts e.g. an anchor with a spacing $s \geq 3 \times h_{ef}$ and an edge distance $c \geq 1,5 \times h_{ef}$.

²⁾ Minimum possible axial spacings resp. edge distance while reducing the permissible load.

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

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

⁵⁾ 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 anchor¹⁾ in concrete C20/25⁴⁾

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 A4 ⁵⁾ | 30 | 80 | 4,0 | 4,0 | 3,2 | 65 | 115 |
| EA II M 8 x 30 A4 ⁵⁾ | 30 | 80 | 8,0 | 4,0 | 5,6 | 70 | 115 |
| EA II M 8 x 40 A4 | 40 | 80 | 8,0 | 6,1 | 5,6 | 70 | 115 |
| EA II M 10 x 30 A4 ⁵⁾ | 30 | 80 | 15,0 | 4,0 | 6,9 | 85 | 140 |
| EA II M 10 x 40 A4 | 40 | 80 | 15,0 | 6,1 | 7,1 | 95 | 150 |
| EA II M 12 x 50 A4 | 50 | 100 | 35,0 | 8,5 | 12,9 | 145 | 200 |
| EA II M 12 D x 50 A4 | 50 | 100 | 35,0 | 8,5 | 13,5 | 145 | 200 |
| EA II M 16 x 65 A4 | 65 | 160 | 60,0 | 12,6 | 21,1 | 180 | 240 |
| EA II M 20 x 80 A4 | 80 | 200 | 120,0 | 17,2 | 33,7 | 190 | 280 |

¹⁾ 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 $c \geq 1,5 \times h_{ef}$.

²⁾ Minimum possible axial spacings resp. edge distance while reducing the permissible load.

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

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

⁵⁾ Only for multiple use for non-structural applications.