



Bevestigingssysteem door spreidkracht.



[ETA-08/0276](#), [NL-DoP-e08/0276](#)

## KENMERKEN



## Materiaal

- Roestvrij staal A4 overeenkomstig NF EN 10088.

## Voordelen

- Eenvoudige en snelle plaatsing : beperkte verankeringsdiepte; draad-Ø = boorgat-Ø,
- Schroefdraad over de volledige lengte,
- Schroefdraad blijft beschermd tijdens plaatsing : inslagpunt.



## TOEPASSINGEN

### Ondergrond

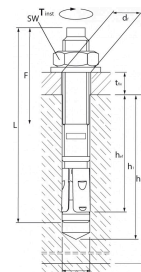
- Ongescheurd beton,
- Harde natuursteen.

### Toepassingsgebieden

- **Bevestiging van houtconstructies** : ophangbeugels voor kapconstructies, ...
- **Bevestiging van metaalprofielen** : borstweringen, consoles en kabelgoten,
- **Bevestiging voor statische of quasi-statische belastingen** : portalen en machines.

TECHNISCHE GEGEVENS

Afmetingen en karakteristieke waarden

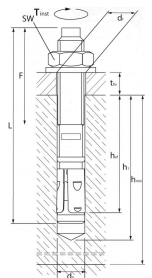


Referentie	Artikelcode	Draad- Ø [mm]	Totale lengte [L] [mm]	Max. dikte te bevestigen bouwdeel [tfix] [mm]	Schroefdraadlengte [F] [mm]	Max. Ø te bevestigen bouwdeel [df] [mm]	Verankeringsdiepte [hef] [mm]	Boorgat- Ø x min. boorgatdiepte [d0 x h1] [mm]	Verpakking [pcs]
BOAX-II M8-72/10 A4	BOAXII08045010	8	72	10	32	9	45	8x60	50
BOAX-II M8-92/30 A4	BOAXII08045030	8	92	30	52	9	45	8x60	50
BOAX-II M8-112/50 A4	BOAXII08045050	8	112	50	72	9	45	8x60	40
BOAX-II M10-92/10 A4	BOAXII10060010	10	92	10	47	12	60	10x75	40
BOAX-II M10-102/20 A4	BOAXII10060020	10	102	20	57	12	60	10x75	25
BOAX-II M10-112/30 A4	BOAXII10060030	10	112	30	67	12	60	10x75	25
BOAX-II M10-132/50 A4	BOAXII10060050	10	132	50	87	12	60	10x75	25
BOAX-II M12-103/5 A4	BOAXII12070005	12	103	5	53	14	70	12x90	20
BOAX-II M12-118/20 A4	BOAXII12070020	12	118	20	68	14	70	12x90	20
BOAX-II M12-128/30 A4	BOAXII12070030	12	128	30	78	14	70	12x90	20
BOAX-II M12-148/50 A4	BOAXII12070050	12	148	50	98	14	70	12x90	20
BOAX-II M12-163/65 A4	BOAXII12070065	12	163	65	113	14	70	12x90	20

Referentie	Artikelcode	Draad-Ø [mm]	Totale lengte [L] [mm]	Max. dikte te bevestigen bouwdeel [tfix] [mm]	Schroefdraadlengte [F] [mm]	Max. Ø te bevestigen bouwdeel [df] [mm]	Verankeringsdiepte [hef] [mm]	Boorgat-Ø x min. boorgatdiepte [d0 x h1] [mm]	Verpakking [pcs]
BOAX-II M16-138/20 A4	BOAXII16085020	16	138	20	80	18	85	16x110	10
BOAX-II M16-168/50 A4	BOAXII16085050	16	168	50	110	18	85	16x110	10

\* Productreferenties die niet vallen onder ETA-08/0276.

**Design capacities - single anchor - no edge distances - Non-cracked concrete**

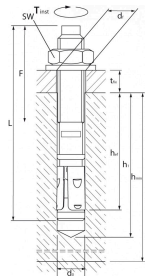


Referentie	Design capacity - Non-cracked concrete								Bending moment - M <sub>Rd</sub> [Nm]
	Tension - N <sub>Rd</sub> [kN]				Shear - V <sub>Rd</sub> [kN]				
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	
BOAX-II M8-72/10 A4	5	5.5	6	6.4	8.8	8.8	8.8	8.8	17.6
BOAX-II M8-92/30 A4	5	5.5	6	6.4	8.8	8.8	8.8	8.8	17.6
BOAX-II M8-112/50 A4	5	5.5	6	6.4	8.8	8.8	8.8	8.8	17.6
BOAX-II M10-92/10 A4	8.9	9.8	10.7	11.4	13.6	13.6	13.6	13.6	36
BOAX-II M10-102/20 A4	8.9	9.8	10.7	11.4	13.6	13.6	13.6	13.6	36
BOAX-II M10-112/30 A4	8.9	9.8	10.7	11.4	13.6	13.6	13.6	13.6	36
BOAX-II M10-132/50 A4	8.9	9.8	10.7	11.4	13.6	13.6	13.6	13.6	36
BOAX-II M12-103/5 A4	11.1	12.2	13.3	14.2	20	20	20	20	63.2
BOAX-II M12-118/20 A4	11.1	12.2	13.3	14.2	20	20	20	20	63.2
BOAX-II M12-128/30 A4	11.1	12.2	13.3	14.2	20	20	20	20	63.2

Referentie	Design capacity - Non-cracked concrete								Bending moment - $M_{Rd}$ [Nm]
	Tension - $N_{Rd}$ [kN]				Shear - $V_{Rd}$ [kN]				
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	
BOAX-II M12-148/50 A4	11.1	12.2	13.3	14.2	20	20	20	20	63.2
BOAX-II M12-163/65 A4	11.1	12.2	13.3	14.2	20	20	20	20	63.2
BOAX-II M16-138/20 A4	23.3	25.7	28	29.9	37.6	37.6	37.6	37.6	160
BOAX-II M16-168/50 A4	23.3	25.7	28	29.9	37.6	37.6	37.6	37.6	160

- The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing  $s \geq 15$  cm (any diameter) or with a rebar spacing  $s \geq 10$  cm, if the rebar diameter is 10mm or smaller.
  - The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ( $c \leq \max [10 \text{ hef}; 60d]$ ) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.
  - Concrete is considered non-cracked when the tensile stress within the concrete is  $\sigma_L + \sigma_R \leq 0$ . In the absence of detailed verification  $\sigma_R = 3 \text{ N/mm}^2$  can be assumed ( $\sigma_L$  equals the tensile stress within the concrete induced by external loads, anchors loads included).
- \*Not covered by ETA-08/0276

Design capacities - single anchor - no edge distances - Cracked concrete



Referentie	Design capacity - Non-cracked concrete								Bending moment - $M_{Rd}$ [Nm]
	Tension - $N_{Rd}$ [kN]				Shear - $V_{Rd}$ [kN]				
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	
BOAX-II M8-72/10 A4	2.8	3.1	3.3	3.6	7.2	8.8	8.8	8.8	17.6
BOAX-II M8-92/30 A4	2.8	3.1	3.3	3.6	7.2	8.8	8.8	8.8	17.6
BOAX-II M8-112/50 A4	2.8	3.1	3.3	3.6	7.2	8.8	8.8	8.8	17.6
BOAX-II M10-92/10 A4	5	5.5	6	6.4	13.6	13.6	13.6	13.6	36
BOAX-II M10-102/20 A4	5	5.5	6	6.4	13.6	13.6	13.6	13.6	36
BOAX-II M10-112/30 A4	5	5.5	6	6.4	13.6	13.6	13.6	13.6	36

Referentie	Design capacity - Non-cracked concrete								Bending moment - $M_{Rd}$ [Nm]
	Tension - $N_{Rd}$ [kN]				Shear - $V_{Rd}$ [kN]				
	C20/25	C30/37	C40/50	C50/60	C20/25	C30/37	C40/50	C50/60	
BOAX-II M10-132/50 A4	5	5.5	6	6.4	13.6	13.6	13.6	13.6	36
BOAX-II M12-103/5 A4	6.7	7.3	8	8.5	20	20	20	20	63.2
BOAX-II M12-118/20 A4	6.7	7.3	8	8.5	20	20	20	20	63.2
BOAX-II M12-128/30 A4	6.7	7.3	8	8.5	20	20	20	20	63.2
BOAX-II M12-148/50 A4	6.7	7.3	8	8.5	20	20	20	20	63.2
BOAX-II M12-163/65 A4	6.7	7.3	8	8.5	20	20	20	20	63.2
BOAX-II M16-138/20 A4	13.3	14.7	16	17.1	37.6	37.6	37.6	37.6	160
BOAX-II M16-168/50 A4	13.3	14.7	16	17.1	37.6	37.6	37.6	37.6	160

1. The design loads have been calculated using the partial safety factors for resistances stated in ETA-approval(s). The loading figures are valid for unreinforced concrete and reinforced concrete with a rebar spacing  $s \geq 15$  cm (any diameter) or with a rebar spacing  $s \geq 10$  cm, if the rebar diameter is 10mm or smaller.

2. The figures for shear are based on a single anchor without influence of concrete edges. For anchorages close to edges ( $c \leq \max [10 \text{ hef}; 60d]$ ) the concrete edge failure shall be checked per ETAG 001, Annex C, design method A.

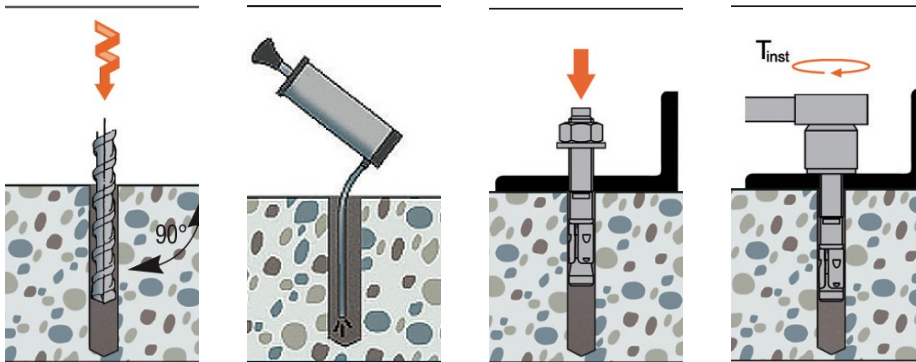
3. Concrete is considered non-cracked when the tensile stress within the concrete is  $\sigma_L + \sigma_R \leq 0$ . In the absence of detailed verification  $\sigma_R = 3 \text{ N/mm}^2$  can be assumed ( $\sigma_L$  equals the tensile stress within the concrete induced by external loads, anchors loads included).

\*Not covered by ETA-08/0276

PLAATSING

Plaatsing

Bij het aandraaien gaat de kegelpunt door de uitzettingsring waardoor de segmenten openbreken en platgedrukt worden tegen de wand. Daardoor ontstaat hechtingskracht door wrijving op het ondergrondmateriaal. Hierdoor ontstaat een **verankering door spreidkracht** via momentgecontroleerd inschroeven.



Gat boren

Boorgat stofvrij maken

Plug plaatsen vóór bouwdeel schroeven

Vastzetten met het juiste aandraaimoment

Plaatsingsgegevens

Referentie	Boorgat-# [d0] [mm]	Verankeringsdiepte [h1] [mm]	Max. Ø te bevestigen bouwdeel [df] [mm]	Sleutelwijdte [SW]	Aandraaimoment [Tinst] [Nm]	Verankeringsdiepte [hef] [mm]	Karakteristieke hartafstand (4) - Scr,N [scr,N] [mm]	Min. hartafstand [smin] [mm]	Karakteristieke randafstand (4) - Ccr,N [ccr,N] [mm]	Min. randafstand [cmin] [mm]	Min. ondergrondsdikte [hmin] [mm]
BOAX-II M8-72/10 A4	8	60	9	13	20	45	135	50	68	50	100
BOAX-II M8-92/30 A4	8	60	9	13	20	45	135	50	68	50	100
BOAX-II M8-112/50 A4	8	60	9	13	20	45	135	50	68	50	100
BOAX-II M10-92/10 A4	10	75	12	17	35	60	180	55	90	50	120
BOAX-II M10-102/20 A4	10	75	12	17	35	60	180	55	90	50	120
BOAX-II M10-112/30 A4	10	75	12	17	35	60	180	55	90	50	120
BOAX-II M10-132/50 A4	10	75	12	17	35	60	180	55	90	50	120
BOAX-II M12-103/5 A4	12	90	14	19	70	70	210	60	105	55	140
BOAX-II M12-118/20 A4	12	90	14	19	70	70	210	60	105	55	140
BOAX-II M12-128/30 A4	12	90	14	19	70	70	210	60	105	55	140
BOAX-II M12-148/50 A4	12	90	14	19	70	70	210	60	105	55	140
BOAX-II M12-163/65 A4	12	90	14	19	70	70	210	60	105	55	140
BOAX-II M16-138/20 A4	16	110	18	24	120	85	255	70	128	85	170
BOAX-II M16-168/50 A4	16	110	18	24	120	85	255	70	128	85	170

**Scr,N** : Karakteristieke hartafstand (5)

**Smin** : Minimale hartafstand

**Ccr,N** : Karakteristieke randafstand

**Cmin** : Minimale randafstand

**hmin** : Min. ondergrondsdikte