

**NIUW** **DIRECT DRAGEND**

## Zelftappende Betonschroeven met ETA optie 1 voor gescheurd beton



**Betonschroef**  
CS 5 - CS14  
Vlok verzinkt

**Betonschroef**  
CS6 - CS10  
Roestvrijstaal A4-70

### Gebruikscondities

- Installatie in gescheurd en ongescheurd beton C20/25 tot C50/60 volgens EN 206-1:2000-12
- Voor statische en quasi statische lasten
- In droge of natte boorgaten

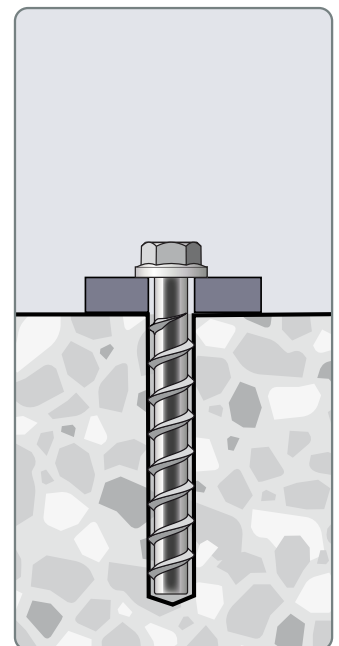
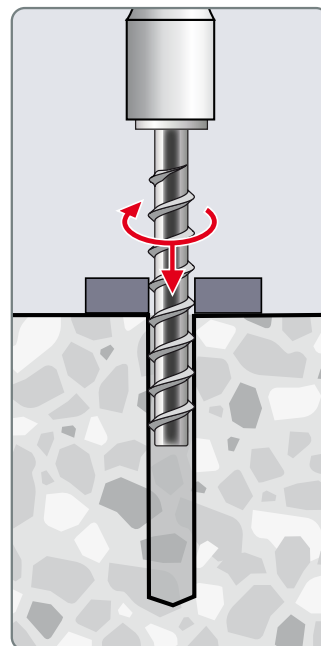
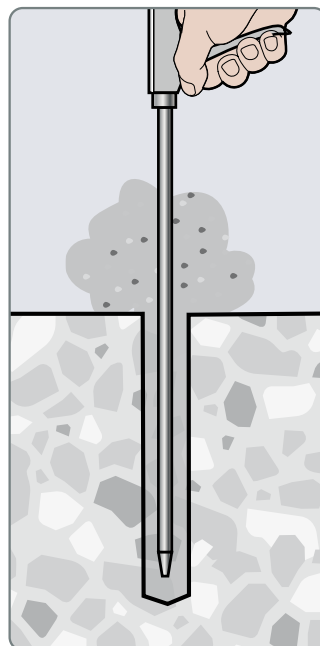
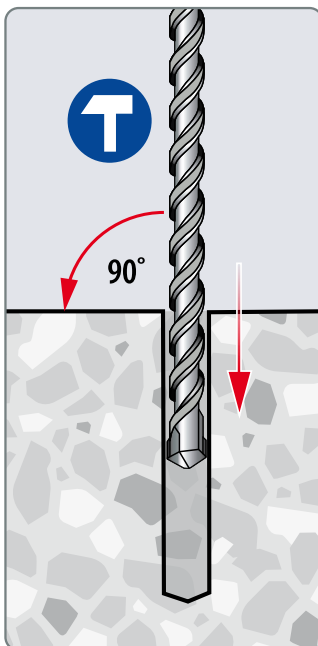
### Voordelen

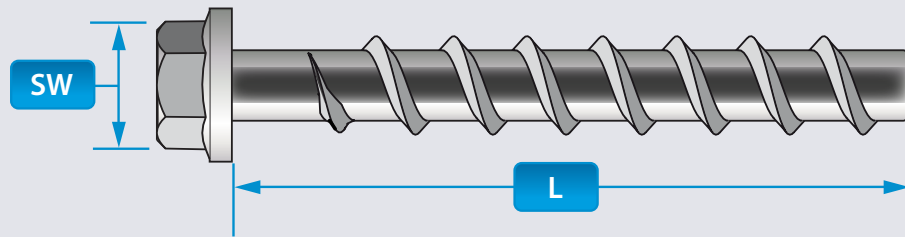
- Verwijderbaar
- Eenvoudige en snelle installatie
- Direct dragend
- Nagenoeg spreidspanningsvrij
- Bestand tegen dynamische en cyclische belasting.
- Kleine randafstanden.

### Testrapporten



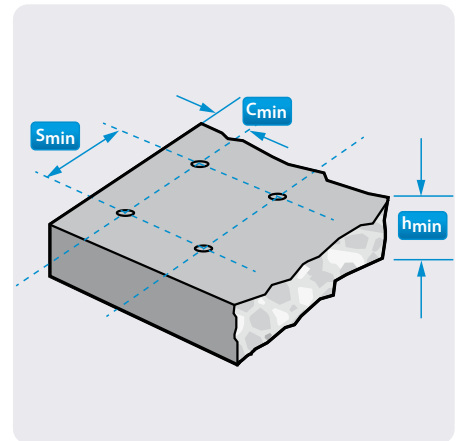
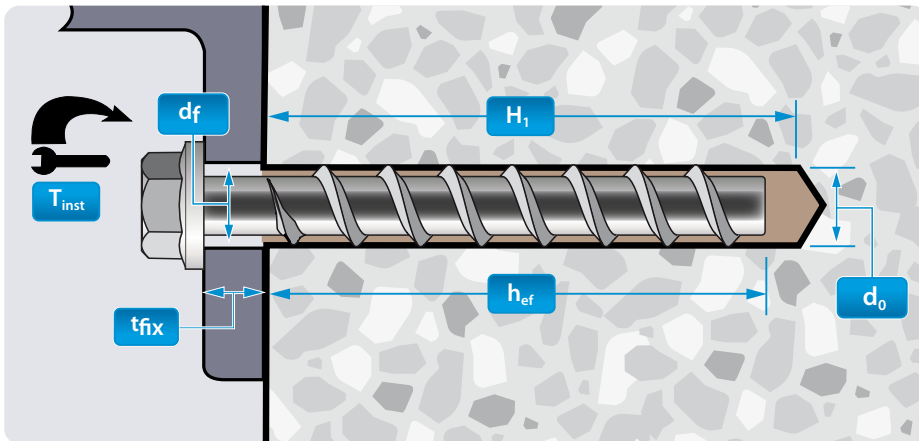
### Installatie Procedures





## Product Dimensions

Anker afmeting <sup>1)</sup>	D <sub>0</sub>	CS5	CS6	CS8	CS10	CS12	CS14
Anker lengte	<b>L</b> [mm]	40 - 60	40 - 100	50 - 140	60 - 160	80 - 150	80 - 150
	<b>SW</b> [mm]	10	13	13	15	17	21



## Installatie Afmetingen

Anker afmeting <sup>1)</sup>		CS5 <sup>1)</sup>	CS6	CS8	CS10	CS12	CS14
Diameter boorgat	<b>d<sub>0</sub></b> [mm]	5	6	8	10	12	14
Boordiepte	<b>H1-1</b> [mm]	40	45	55	65	75	85
	<b>H1-2</b> [mm]		60	65	85	95	110
	<b>H1-3</b> [mm]			75	95	110	125
Eff. verankeringsdiepte	<b>h<sub>ef-1</sub></b> [mm]	27	31	35	43	50	58
	<b>h<sub>ef-2</sub></b> [mm]		44	43	60	67	79
	<b>h<sub>ef-3</sub></b> [mm]			52	68	80	92
Diameter doorvoergat	<b>df</b> [mm]	7	8	12	14	16	18
Opsluit hoogte	<b>t<sub>fix</sub> ≤</b> [mm]	Ankerlengte [L] - Nom. verankeringslengte [h <sub>nom</sub> ]					
Aanbev. Slagschroevendraaier	[Nm]	max. 110	max. 160	max. 300	max. 400	max. 650	max. 650

## Elementdikte, Rand- & Hart-op-Hartafstanden

Anker afmeting <sup>1)</sup>	D <sub>0</sub>	CS5 <sup>1)</sup>	CS6	CS8	CS10	CS12	CS14
Min. Elementdikte	<b>h<sub>min-1</sub></b> [mm]	80	100	100	100	120	130
	<b>h<sub>min-2</sub></b> [mm]		100	100	130	130	150
	<b>h<sub>min-3</sub></b> [mm]		100	120	130	150	170
Min. Randafstand	<b>C<sub>min-1</sub></b> [mm]	35	40	40	50	50	50
	<b>C<sub>min-2</sub></b> [mm]		40	50	50	50	70
	<b>C<sub>min-3</sub></b> [mm]		40	50	50	70	70
Min. H-op-H afstand	<b>S<sub>min-1</sub></b> [mm]	35	40	40	50	50	50
	<b>S<sub>min-2</sub></b> [mm]		40	50	50	50	70
	<b>S<sub>min-3</sub></b> [mm]		40	50	50	70	70

## Belastingswaarden<sup>2)</sup>

### Ontwerplasten in droge/natte boorgaten

Staalbreuk

Ongescheurd beton			CS5 <sup>1)</sup>	CS6	CS8	CS10	CS12	CS14
Staal 5.8	Treklast	<b>NR<sub>d</sub>, Hef1</b> [kN]	0,83	2,67	5,00	8,00	10,67	14,87
		<b>NR<sub>d</sub>, Hef2</b> [kN]		6,00	8,00	13,33	18,46	23,64
		<b>NR<sub>d</sub>, Hef3</b> [kN]			10,67	16,67	24,09	29,71
	Afschuiflast <sup>3)</sup>	<b>VR<sub>d</sub>, Hef1</b> [kN]	3,52	5,60	6,97	9,49	11,90	14,87
		<b>VR<sub>d</sub>, Hef2</b> [kN]		5,60	9,49	27,20	32,00	44,80
		<b>VR<sub>d</sub>, Hef3</b> [kN]			12,62	27,20	32,00	44,80
A4-70	Treklast	<b>NR<sub>d</sub>, Hef1</b> [kN]		2,67	5,00	8,00		
		<b>NR<sub>d</sub>, Hef2</b> [kN]		6,00	8,00	13,33		
		<b>NR<sub>d</sub>, Hef3</b> [kN]			10,67	16,67		
	Afschuiflast <sup>3)</sup>	<b>VR<sub>d</sub>, Hef1</b> [kN]		5,60	6,97	9,49		
		<b>VR<sub>d</sub>, Hef2</b> [kN]		5,60	9,49	27,20		
		<b>VR<sub>d</sub>, Hef3</b> [kN]			12,62	27,20		

Gescheurd beton			CS5 <sup>1)</sup>	CS6	CS8	CS10	CS12	CS14
Staal 5.8	Treklast	<b>NR<sub>d</sub>, Hef1</b> [kN]	0,83	1,33	3,33	6,00	8,00	10,60
		<b>NR<sub>d</sub>, Hef2</b> [kN]		2,67	6,00	11,15	13,16	16,85
		<b>NR<sub>d</sub>, Hef3</b> [kN]			8,00	13,46	17,17	21,18
	Afschuiflast <sup>3)</sup>	<b>VR<sub>d</sub>, Hef1</b> [kN]	3,37	4,14	4,97	6,77	8,49	10,60
		<b>VR<sub>d</sub>, Hef2</b> [kN]		5,60	6,77	22,31	26,32	33,70
		<b>VR<sub>d</sub>, Hef3</b> [kN]			9,00	26,92	32,00	42,36
A4-70	Treklast	<b>NR<sub>d</sub>, Hef1</b> [kN]		1,33	3,33	6,00		
		<b>NR<sub>d</sub>, Hef2</b> [kN]		2,67	6,00	11,15		
		<b>NR<sub>d</sub>, Hef3</b> [kN]			8,00	13,46		
	Afschuiflast <sup>3)</sup>	<b>VR<sub>d</sub>, Hef1</b> [kN]		4,14	4,97	6,77		
		<b>VR<sub>d</sub>, Hef2</b> [kN]		5,60	6,77	22,31		
		<b>VR<sub>d</sub>, Hef3</b> [kN]			9,00	26,92		

1) CS5 maakt geen onderdeel uit van de ETA. 2) Alle Lasten in kN voor één anker in droge/hatte boorgaten. Beton C20/25 - C50/60 zonder invloed van rand- of hart-op-hartafstanden. 3) Staal sterkte in kN zonder buigend moment. 3) Aanbevolen Lasten incl. veiligheidsfactor  $\gamma_g = 1,4$ .

## Belastingswaarden<sup>2)</sup>

### Aanbevolen lasten in droge/natte boorgaten

Staalbreuk

Ongescheurd beton				CS5 <sup>1)</sup>	CS6	CS8	CS10	CS12	CS14
Staal 5.8	Treklast	N <sub>Rec, Hef1</sub>	[kN]	0,60	1,90	3,57	5,71	7,62	10,62
		N <sub>Rec, Hef2</sub>	[kN]		4,29	5,71	9,52	13,19	16,89
		N <sub>Rec, Hef3</sub>	[kN]			7,62	11,90	17,21	21,22
	Afschuiplast <sup>3)</sup>	V <sub>Rec, Hef1</sub>	[kN]	2,51	4,00	4,98	6,78	8,50	10,62
		V <sub>Rec, Hef2</sub>	[kN]		4,00	6,78	19,43	22,86	32,00
		V <sub>Rec, Hef3</sub>	[kN]			9,02	19,43	22,86	32,00
A4-70	Treklast	N <sub>Rec, Hef1</sub>	[kN]		1,90	3,57	5,71		
		N <sub>Rec, Hef2</sub>	[kN]		4,29	5,71	9,52		
		N <sub>Rec, Hef3</sub>	[kN]			7,62	11,90		
	Afschuiplast <sup>3)</sup>	V <sub>Rec, Hef1</sub>	[kN]		4,00	4,98	6,78		
		V <sub>Rec, Hef2</sub>	[kN]		4,00	6,78	19,43		
		V <sub>Rec, Hef3</sub>	[kN]			9,02	19,43		

Gescheurd beton				CS5 <sup>1)</sup>	CS6	CS8	CS10	CS12	CS14
Staal 5.8	Treklast	N <sub>Rec, Hef1</sub>	[kN]	0,60	0,95	2,38	4,29	5,71	7,57
		N <sub>Rec, Hef2</sub>	[kN]		1,90	4,29	7,97	9,40	12,04
		N <sub>Rec, Hef3</sub>	[kN]			5,71	9,61	12,27	15,13
	Afschuiplast <sup>3)</sup>	V <sub>Rec, Hef1</sub>	[kN]	2,41	2,96	3,55	4,83	6,06	7,57
		V <sub>Rec, Hef2</sub>	[kN]		4,00	4,83	15,93	18,80	24,07
		V <sub>Rec, Hef3</sub>	[kN]			6,43	19,23	22,86	30,25
A4-70	Treklast	N <sub>Rec, Hef1</sub>	[kN]		0,95	2,38	4,29		
		N <sub>Rec, Hef2</sub>	[kN]		1,90	4,29	7,97		
		N <sub>Rec, Hef3</sub>	[kN]			5,71	9,61		
	Afschuiplast <sup>3)</sup>	V <sub>Rec, Hef1</sub>	[kN]		2,96	3,55	4,83		
		V <sub>Rec, Hef2</sub>	[kN]		4,00	4,83	15,93		
		V <sub>Rec, Hef3</sub>	[kN]			6,43	19,23		

1) CS5 maakt geen onderdeel uit van de ETA. 2) Alle Lasten in kN voor één anker in droge/natte boorgaten. Beton C20/25 - C50/60 zonder invloed van rand- of hart-op-hartafstanden. 3) Staal sterkte in kN zonder buigend moment. 3) Aanbevolen Lasten incl. veiligheidsfactor  $\gamma_s = 1,4$ .