

# ADVANCED CONCRETE SCREW

**Made in Finland**

- **ETA Option 1 and Part 6 approved.**
- **Higher performance.**
- **New **Multi Layer** -coating for better corrosion resistance.**
- **Requires a small drill hole diameter. No prescribed tightening torque.**
- **No expansion forces allowing for small edge distances and spacings.**
- **Easy and fast to install.**



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A**



## S-CSA P, S-CSA HEX, S-CSA CS, S-CSA I



### S-CSA HEX

## ETA-approved concrete screws for cracked and non-cracked concrete

### VERSIONS

- S-CSA HEX, Steel, Zinc plated
- S-CSA HEX ML, steel, Multi Layer coated
- S-CSA CS, Steel, Zinc plated
- S-CSA CS ML, steel, Multi Layer coated
- S-CSA I, Steel, Zinc plated
- S-CSA P, Steel, Zinc plated

### BASE MATERIALS

- **Approved for:**  
Cracked concrete, Non-cracked concrete, Hollow-core slab
- **Also suitable for:**  
Solid clay brick  
Solid sand-lime brick  
Hollow-core slab

### APPROVALS

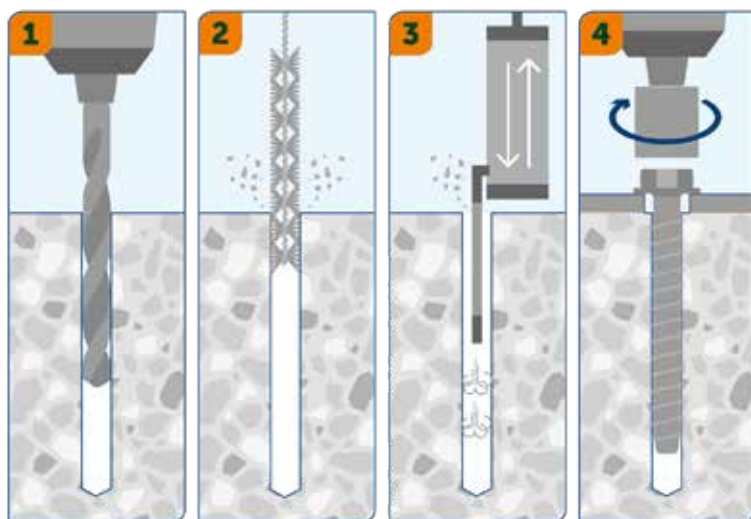


### PRODUCT DESCRIPTION

- Self-tapping, approved screw anchors for push-through installations.
- Requires a small drill hole diameter. No prescribed tightening torque.
- No expansion forces allowing for small edge distances and spacings.
- Fully removable.
- ZP for dry indoor use.
- ML corrosion resistant coating.

### APPLICATIONS

- Facade scaffoldings
- Temporary fixings
- Seatings
- Shelves
- Cable racks
- Handrails
- Battens
- Pipe supports



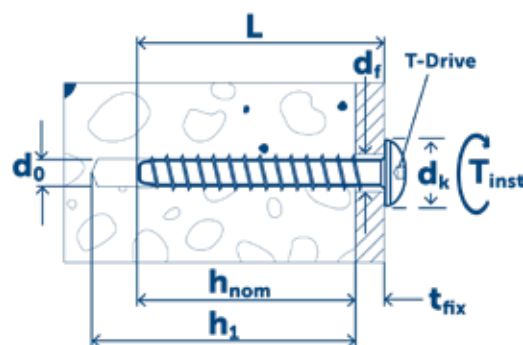
### INSTALLATION

1. Drill a hole according to the product data.
- 2.-3. Clean the hole using a brush and blow-out pump.
4. Install the screw manually using a wrench or with an impact screw-driver.



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## S-CSA P, S-CSA HEX, S-CSA CS, S-CSA I



### S-CSA P, Steel, Zinc plated

## TECHNICAL DATA

Type	Code	Approval	Length	$\emptyset$	Min. hole depth	Max. fixture thickness	Thread	Head $\emptyset$	Drive		
		ETA	L mm	$d_0$ mm	$h_1$ mm	$t_{fix}$ mm	f mm	$d_k$ mm	$D_2$		
6x45/5	9640071544	•	45	6	50	5	40	14,5	T30	50	250
6x60/5/20	9640071549	•	60	6	65/50	5/20	55	14,5	T30	50	250

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## PERFORMANCE DATA

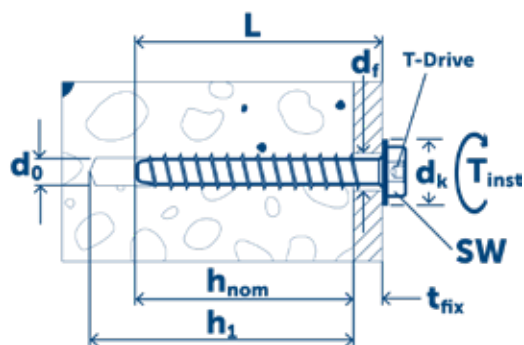
S-CSA P, Steel, Zinc plated

Type	$\emptyset$	Hole in fixture $\emptyset$	Nominal setting depth	Max. installation torque	Recommended loads kN tension / shear		Recommended loads kN tension / shear	
					Non-cracked concrete C20/25	Cracked concrete C20/25	Non-cracked concrete C20/25	Cracked concrete C20/25
	$d_0$ mm	$d_f$ mm	$h_{nom}$ mm	$T_{inst}$ Nm				
6x45/5	6	9	40	14	1,4	3,1	1,4	3,1
6x60/5/20	6	9	55	14	4,5	5,6	2,1	4,5
6x60/5/20	6	9	40	14	1,4	3,1	1,4	3,1

The highest recommended loads (kN) for a single anchor. Visit [sormat.com](http://sormat.com) for European Technical Assessment ETA-16/0945

Load values include the resistances' partial safety factors as per approvals and a partial safety factor on the action of  $\gamma_r = 1.4$ . Load values apply for a rebar spacing  $s \geq 15$  cm or alternatively for a rebar spacing  $s \geq 10$  cm in combination with a rebar diameter of  $d_s \leq 10$  mm. Concrete is considered non-cracked when the value of tension within the concrete is  $\sigma_t + \sigma_r \leq 0$ . In the absence of detailed verification  $\sigma_r = 3$  N/mm<sup>2</sup> can be assumed ( $\sigma_t$  equals the tension within the concrete as a result of external loads, forces on anchor included;  $\sigma_r$  equals the tension coming from shrinkage or creep of the concrete, as well as displacements of supports or temperature variations). Shear load values apply for an anchor without influence of a concrete edge. For shear loads close to an edge ( $c \leq 10 \times h_{ef}$ ), concrete edge failure has to be checked as per ETAG, Annex C, Design Method A. Visit [sormat.com](http://sormat.com) for more information.

## TECHNICAL DATA



### S-CSA HEX, Steel, Zinc plated (ZP) or Multi Layer (ML)

Typ	Code	Code	Length	Min. hole depth	Max. fixture thickness	Head ø	Width across flats		Drive	D <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>
							Zinc plated	Multilayer				
5x40/5	9640071301	-	40	5	45	5	11,5	8		100	500	500
5x50/5	9640071302	-	50	5	55	5	11,5	8		100	500	500
6x45/5	9640071306	9640071405	45	6	50	5	14,5	13	T30	100	500	500
6x50/10	9640071308	9640071407	50	6	50	10	14,5	13	T30	100	500	500
6x60/5/20	9640071310	9640071409	60	6	65/50	5/20	14,5	13	T30	100	500	500
6x80/25/40	9640071314	9640071413	80	6	65/50	25/40	14,5	13	T30	100	500	500
6x100/45/60	9640071318	9640071417	100	6	65/50	45/60	14,5	13	T30	50	250	250
8x60/5	9640071331	9640071431	60	8	65	5	17,5	13	T40	50	250	250
8x70/5(15)	9640071333	9640071433	70	8	75/65	5/15	17,5	13	T40	50	250	250
8x80/15(25)	9640071335	9640071435	80	8	75/65	15/25	17,5	13	T40	50	250	250
8x100/35(45)	9640071339	9640071439	100	8	75/65	35/45	17,5	13	T40	50	250	250
8x120/55(65)	9640071343	9640071443	120	8	75/65	55/65	17,5	13	T40	50	250	250
10x80/10	9640071359	9640071459	80	10	80	10	20,5	15	-	25	125	125
10x90/5(20)	9640071361	9640071461	90	10	95/80	5/20	20,5	15	-	25	125	125
10x100/15(30)	9640071363	9640071463	100	10	95/80	15/30	20,5	15	-	25	125	125
10x120/35(50)	9640071367	9640071467	120	10	95/80	35/50	20,5	15	-	25	125	125
10x140/55(70)	9640071369	9640071469	140	10	95/80	55/70	20,5	15	-	25	125	125

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**S-CSA P, S-CSA HEX, S-CSA CS, S-CSA I**

**PERFORMANCE DATA**

**S-CSA HEX, Steel, Zinc plated (ZP) or Multi Layer (ML)**

Type	Ø	Approval	Max. fixture thickness	Hole in fixture Ø	Nominal setting depth	Min. base material thickness	Max. installation torque	Recommended loads kN tension / shear Non-cracked concrete C20/25	
								T <sub>inst</sub> Nm	→ kN
5x40/5*	5	ETA	t <sub>fix</sub> mm	d <sub>f</sub> mm	h <sub>nom</sub> mm	h <sub>min</sub> mm	T <sub>inst</sub> Nm	→ kN	↘ kN
5x50/5*	5	OPT1 Part6	5	7	35	80	12	1,1	1,1
6x45/5	6	•	5	9	40	100	14	1,4	3,1
6x50/10	6	•	10	9	40	100	14	1,4	3,1
6x60/5/20	6	•	5	9	55	100	14	4,5	5,6
6x60/5/20	6	•	20	9	40	100	14	1,4	3,1
6x80/25/40	6	•	25	9	55	100	14	4,5	5,6
6x80/25/40	6	•	40	9	40	100	14	1,4	3,1
6x100/45/60	6	•	45	9	55	100	14	4,5	5,6
6x100/45/60	6	•	60	9	40	100	14	1,4	3,1
8x60/5*	8		5	12	55	110	40	5,9	5,9
8x70/5(15)	8	•	5	12	65	110	40	7,6	7,9
8x70/5(15)*	8		15	12	55	110	40	5,9	5,9
8x80/15(25)	8	•	15	12	65	110	40	7,6	7,9
8x80/15(25)*	8		25	12	55	110	40	5,9	5,9
8x100/35(45)	8	•	35	12	65	110	40	7,6	7,9
8x100/35(45)*	8		45	12	55	110	40	5,9	5,9
8x120/55(65)	8	•	55	12	65	110	40	7,6	7,9
8x120/55(65)*	8		65	12	55	110	40	5,9	5,9
10x80/10*	10		10	14	70	125	90	7,8	8,0
10x90/5(20)	10	•	5	14	85	125	90	10,5	16,6
10x90/5(20)*	10		20	14	70	125	90	7,8	8,0
10x100/15(30)	10	•	15	14	85	125	90	10,5	16,6
10x100/15(30)*	10		30	14	70	125	90	7,8	8,0
10x120/35(50)	10	•	35	14	85	125	90	10,5	16,6
10x120/35(50)*	10		50	14	70	125	90	7,8	8,0
10x140/55(70)	10	•	55	14	85	125	90	10,5	16,6
10x140/55(70)*	10		70	14	70	125	90	7,8	8,0

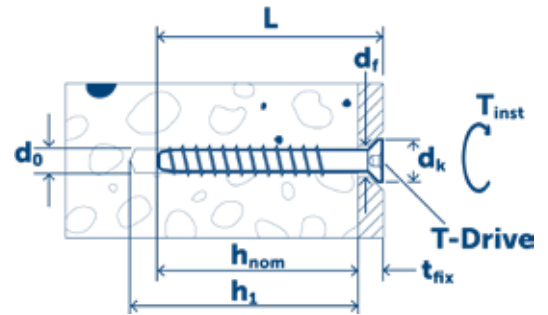
\* Not part of ETA approvals. Values are manufacturer's recommendation. The highest recommended loads (kN) for a single anchor. Visit [sormat.com](http://sormat.com) for European Technical Assessment ETA-16/0945

Load values include the resistances' partial safety factors as per approvals and a partial safety factor on the action of  $\gamma_c = 1.4$ . Load values apply for a rebar spacing  $s \geq 15$  cm or alternatively for a rebar spacing  $s \geq 10$  cm in combination with a rebar diameter of  $d_s \leq 10$  mm. Concrete is considered non-cracked when the value of tension within the concrete is  $\sigma_c + \sigma_r \leq 0$ . In the absence of detailed verification  $\sigma_r = 3$  N/mm<sup>2</sup> can be assumed ( $\sigma_c$  equals the tension within the concrete as a result of external loads, forces on anchor included;  $\sigma_r$  equals the tension coming from shrinkage or creep of the concrete, as well as displacements of supports or temperature variations). Shear load values apply for an anchor without influence of a concrete edge. For shear loads close to an edge ( $c \leq 10 \times h_{eff}$ ), concrete edge failure has to be checked as per ETAG, Annex C, Design Method A. Visit [sormat.com](http://sormat.com) for more information.





## TECHNICAL DATA



### S-CSA CS, Steel, Zinc plated (ZP) or Multi Layer (ML)

Type	Code	Code	Approval	Length	$\emptyset$	Min. hole depth	Max. fixture thickness	Head $\emptyset$	Drive		
	Zinc plated	Multi layer	ETA	L mm	$d_0$ mm	$h_1$ mm	$t_{fix}$ mm	$d_k$ mm	$D_2$		
5x50/5	9640071601	-		50	5	55	5	9,8	T25	100	500
5x75/30	9640071602	-		75	5	55	30	9,8	T25	100	500
5x100/55	9640071603	-		100	5	55	55	9,8	T25	100	500
6x60/5/20	9640071609	9640071659	•	60	6	65/50	5/20	14	T30	100	500
6x80/25/40	9640071613	9640071663	•	80	6	65/50	25/40	14	T30	100	500
6x100/45/60	9640071617	9640071667	•	100	6	65/50	45/60	14	T30	50	250

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## PERFORMANCE DATA

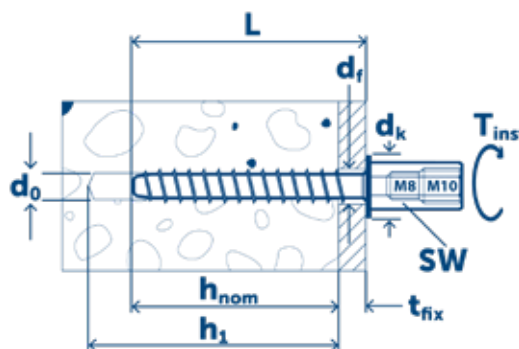
### S-CSA CS, Steel, Zinc plated (ZP) or Multi Layer (ML)

Type	$\emptyset$	Hole in fixture $\emptyset$	Nominal setting depth	Min. base material thickness	Max. installation torque	Recommended loads kN tension / shear Non-cracked concrete C20/25	
	$d_0$ mm	$d_f$ mm	$h_{nom}$ mm	$h_{min}$ mm	$T_{inst}$ Nm		
5x50/5*	5	7	45	80	12	1,7	1,7
5x75/30*	5	7	45	80	12	1,7	1,7
5x100/55*	5	7	45	80	12	1,7	1,7
6x60/5/20	6	9	55	100	14	4,5	5,6
6x60/5/20	6	9	40*	100	14	1,4	3,1
6x80/25/40	6	9	55	100	14	4,5	5,6
6x80/25/40	6	9	40*	100	14	1,4	3,1
6x100/45/60	6	9	55	100	14	4,5	5,6
6x100/45/60	6	9	40*	100	14	1,4	3,1

\* Not part of ETA approvals. Values are manufacturer's recommendation. The highest recommended loads (kN) for a single anchor. Visit [sormat.com](http://sormat.com) for European Technical Assessment ETA-16/0945

Load values include the resistances' partial safety factors as per approvals and a partial safety factor on the action of  $\gamma_c = 1.4$ . Load values apply for a rebar spacing  $s \geq 15$  cm or alternatively for a rebar spacing  $s \geq 10$  cm in combination with a rebar diameter of  $d_s \leq 10$  mm. Concrete is considered non-cracked when the value of tension within the concrete is  $\sigma_1 + \sigma_r \leq 0$ . In the absence of detailed verification  $\sigma_r = 3$  N/mm<sup>2</sup> can be assumed ( $\sigma_1$  equals the tension within the concrete as a result of external loads, forces on anchor included;  $\sigma_r$  equals the tension coming from shrinkage or creep of the concrete, as well as displacements of supports or temperature variations). Shear load values apply for an anchor without influence of a concrete edge. For shear loads close to an edge ( $c \leq 10 \times h_{ef}$ ), concrete edge failure has to be checked as per ETAG, Annex C, Design Method A. Visit [sormat.com](http://sormat.com) for more information.

# TECHNICAL DATA



## S-CSA I, Steel, Zinc plated

Type	Code	Approval	Length	$\phi$	Min. hole depth	Max. fixture thickness	Head $\phi$	Width across flats		
		ETA	L mm	$d_0$ mm	$h_1$ mm	$t_{fix}$ mm	$d_k$ mm	SW mm		
6x45 M8/M10	9640071504	•	45	6	50	5	17	13	50	250
6x60 M8/M10	9640071509	•	60	6	65	5	17	13	50	250

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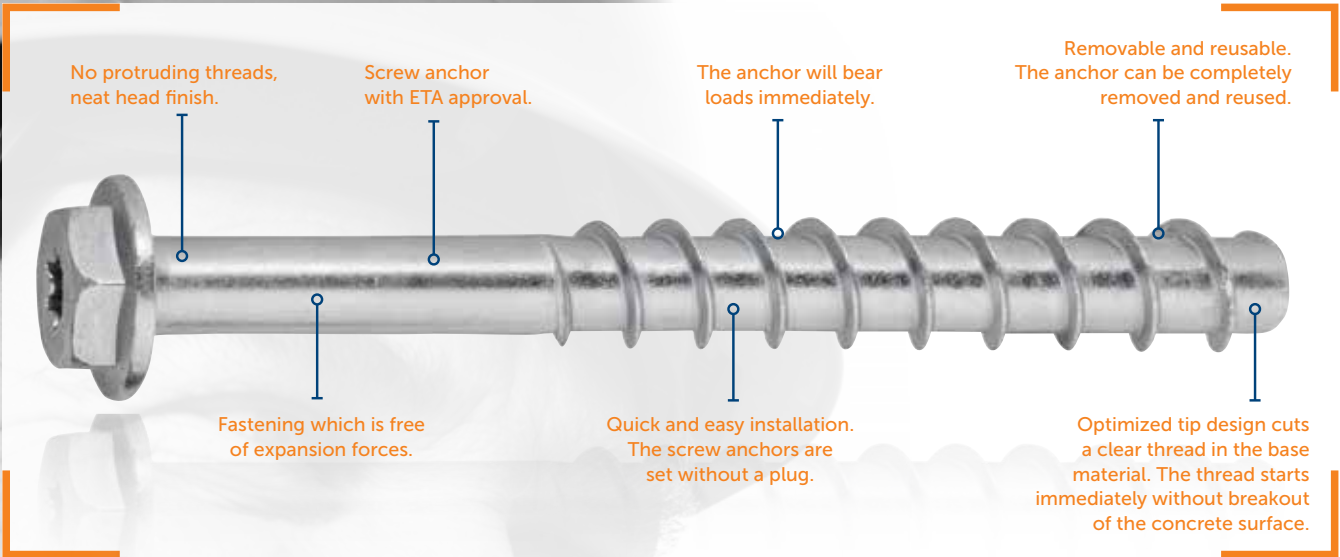
# PERFORMANCE DATA

## S-CSA I, Steel, Zinc plated

Type	$\phi$	Hole in fixture $\phi$	Nominal setting depth	Min. base material thickness	Width across flats	Max. installation torque	Recommended loads kN tension / shear Non-cracked concrete C20/25	
	$d_0$ mm	$d_f$ mm	$h_{nom}$ mm	$h_{min}$ mm	SW mm	$T_{inst}$ Nm		
6x45 M8/M10*	6	9	40	100	13	14	1,4	3,1
6x60 M8/M10	6	9	55	100	13	14	4,5	5,6

\* ETA Part 6 (ETA-17/1009).

Load values include the resistances' partial safety factors as per approvals and a partial safety factor on the action of  $\gamma_f = 1.4$ . Load values apply for a rebar spacing  $s \geq 15$  cm or alternatively for a rebar spacing  $s \geq 10$  cm in combination with a rebar diameter of  $d_s \leq 10$  mm. Concrete is considered non-cracked when the value of tension within the concrete is  $\sigma_t + \sigma_R \leq 0$ . In the absence of detailed verification  $\sigma_R = 3$  N/mm<sup>2</sup> can be assumed ( $\sigma_t$  equals the tension within the concrete as a result of external loads, forces on anchor included;  $\sigma_R$  equals the tension coming from shrinkage or creep of the concrete, as well as displacements of supports or temperature variations). Shear load values apply for an anchor without influence of a concrete edge. For shear loads close to an edge ( $c \leq 10 \times h_{ef}$ ), concrete edge failure has to be checked as per ETAG, Annex C, Design Method A. Visit [sormat.com](http://sormat.com) for more information.



## S-CSA



	Type	t <sub>fix</sub>	Length	ZP / ML	ZP / ML	ZP	ZP
<b>S-CSA 5</b>	5x40/5	5	40	■ (ZP)			
	5x50/5	5	50	■ (ZP)	■ (ZP)		
	5x75/30	30	75		■ (ZP)		
	5x100/55	55	100		■ (ZP)		
<b>S-CSA 6</b>	6x45/5	5	45	●		●	
	6x45 M8/M10		45				●
	6x50/10	10	50	●			
	6x60/5/20	5/20	60	● ●	● ●	● ●	
	6x60 M8/M10		60				● ●
	6x80/25/40	25/40	80	● ●	● ●		
6x100/45/60	45/60	100	● ●	● ●			
<b>S-CSA 8</b>	8x60/5	5	60	■			
	8x70/5(15)	5(15)	70	●			
	8x80/15(25)	15(25)	80	●			
	8x100/35(45)	35(45)	100	●			
	8x120/55(65)	55(65)	120	●			
<b>S-CSA 10</b>	10x80/10	10	80	■			
	10x90/5(20)	5(20)	90	●			
	10x100/15(30)	15(30)	100	●			
	10x120/35(50)	35(50)	120	●			
	10x140/55(70)	55(70)	140	●			

- Option 1
- Part 6
- No ETA-approval