NEW INSTANT LOADING

High Tensile Screw-in, Self-tapping Concrete and Masonry Anchor

Concrete Screw
CS6 - CS10
Stainless Steel A4-70

Concrete Screw
CS 5 - CS14
Steel Zinc Flake Coated

Use Conditions

- Installation in Cracked and Non-Cracked Concrete C20/25 to C50/60 according to EN 206-1:2000-12
- For Static and quasi static loading
- In Dry or Wet Holes
- Structures subject to dry internal and permanent damp internal conditions.
- Structures subject to external atmospheric exposure.

Advantages

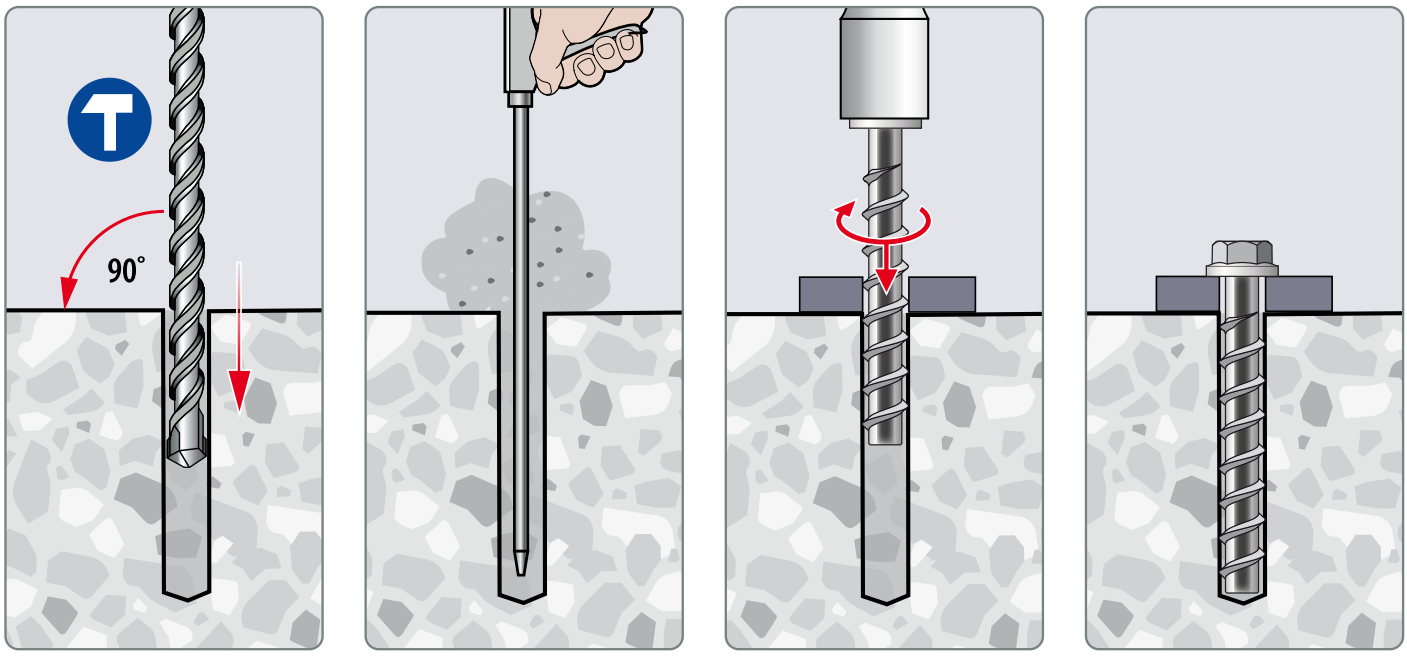
- Removable.
- Simple & Fast Installation
- Instant Loading
- Virtually Stress Free
- Resistant to dynamic and cyclic loading.
- Suitable for close-to-edge fixings.

Approvals & Test Reports

ETA OPTION 1

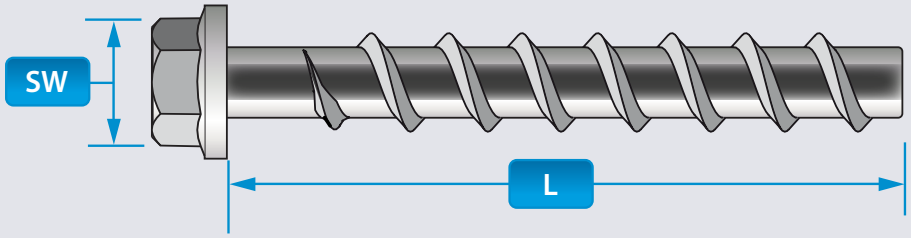
FIRE F120

Installation Procedures



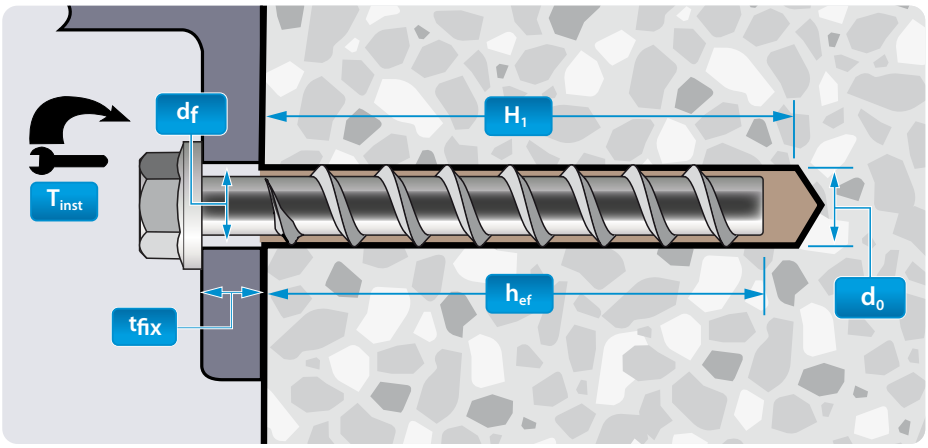
CS Concrete Screw

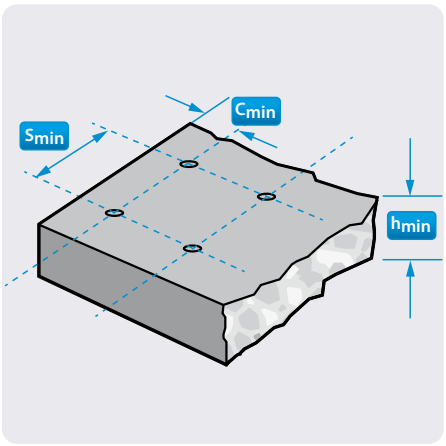
ETA - 17/0001



Product Dimensions

Anchor Size[1]	D_0		CS5	CS6	CS8	CS10	CS12	CS14
Anchor Length	L	[mm]	40 - 60	40 - 100	50 - 140	60 - 160	80 - 150	80 - 150
	SW	[mm]	10	13	13	15	17	21





Installation Dimensions

Anchor Size[1]			CS5[1]	CS6	CS8	CS10	CS12	CS14
Hole Diameter	d_0	[mm]	5	6	8	10	12	14
Drilling Depth	h_{1-1}	[mm]	40	45	55	65	75	85
	h_{1-2}	[mm]		60	65	85	95	110
	h_{1-3}	[mm]			75	95	110	125
Eff. Anchorage Depth	h_{ef-1}	[mm]	27	31	35	43	50	58
	h_{ef-2}	[mm]		44	43	60	67	79
	h_{ef-3}	[mm]			52	68	80	92
Diameter Fixture Hole	df	[mm]	7	8	12	14	16	18
Fixture Thickness	$t_{fix}\leq$	[mm]	Anchor Length [L] - Nom. Anchorage Length [h_{nom}]					
Recomm. Impact Screw Driver		[Nm]	max.110	max. 160	max. 300	max. 400	max. 650	max. 650

Member Thickness, Edge Distance & Spacing

Anchor Size[1]	D_0		CS5[1]	CS6	CS8	CS10	CS12	CS14
Min. Member Thickness	h_{min-1}	[mm]	80	100	100	100	120	130
	h_{min-2}	[mm]		100	100	130	130	150
	h_{min-3}	[mm]		100	120	130	150	170
Min. Edge Distance	c_{min-1}	[mm]	35	40	40	50	50	50
	c_{min-2}	[mm]		40	50	50	50	70
	c_{min-3}	[mm]		40	50	50	70	70
Min. Spacing	s_{min-1}	[mm]	35	40	40	50	50	50
	s_{min-2}	[mm]		40	50	50	50	70
	s_{min-3}	[mm]		40	50	50	70	70

Performance Data[2]

Design Resistance Dry/Wet Holes

Steel Failure

Non-Cracked Concrete				CS5[1]	CS6	CS8	CS10	CS12	CS14
Steel 5.8	Tensile	$N_{Rd, Hef1}$	[kN]	0,83	2,67	5,00	8,00	10,67	14,87
		$N_{Rd, Hef2}$	[kN]		6,00	8,00	13,33	18,46	23,64
		$N_{Rd, Hef3}$	[kN]			10,67	16,67	24,09	29,71
	Shear[3]	$V_{Rd, Hef1}$	[kN]	3,52	5,60	6,97	9,49	11,90	14,87
		$V_{Rd, Hef2}$	[kN]		5,60	9,49	27,20	32,00	44,80
		$V_{Rd, Hef3}$	[kN]			12,62	27,20	32,00	44,80
A4-70	Tensile	$N_{Rd, Hef1}$	[kN]		2,67	5,00	8,00		
		$N_{Rd, Hef2}$	[kN]		6,00	8,00	13,33		
		$N_{Rd, Hef3}$	[kN]			10,67	16,67		
	Shear[3]	$V_{Rd, Hef1}$	[kN]		5,60	6,97	9,49		
		$V_{Rd, Hef2}$	[kN]		5,60	9,49	27,20		
		$V_{Rd, Hef3}$	[kN]			12,62	27,20		

Cracked Concrete				CS5[1]	CS6	CS8	CS10	CS12	CS14
Steel 5.8	Tensile	$N_{Rd, Hef1}$	[kN]	0,83	1,33	3,33	6,00	8,00	10,60
		$N_{Rd, Hef2}$	[kN]		2,67	6,00	11,15	13,16	16,85
		$N_{Rd, Hef3}$	[kN]			8,00	13,46	17,17	21,18
	Shear[3]	$V_{Rd, Hef1}$	[kN]	3,37	4,14	4,97	6,77	8,49	10,60
		$V_{Rd, Hef2}$	[kN]		5,60	6,77	22,31	26,32	33,70
		$V_{Rd, Hef3}$	[kN]			9,00	26,92	32,00	42,36
A4-70	Tensile	$N_{Rd, Hef1}$	[kN]		1,33	3,33	6,00		
		$N_{Rd, Hef2}$	[kN]		2,67	6,00	11,15		
		$N_{Rd, Hef3}$	[kN]			8,00	13,46		
	Shear[3]	$V_{Rd, Hef1}$	[kN]		4,14	4,97	6,77		
		$V_{Rd, Hef2}$	[kN]		5,60	6,77	22,31		
		$V_{Rd, Hef3}$	[kN]			9,00	26,92		

1) **CS5** is not included in the ETA. 2) **All Loads** in kN for a Single anchor in Dry/Wet Concrete C20/25 - C50/60 without edge or spacing influences. 3) **Steel strength** in kN without bending moment. 3) **Recommended Loads** incl. Safety factor $\gamma_G = 1,4$.

Performance Data[2)]

Recommended Loads Dry/Wet Holes

Steel Failure

Non-Cracked Concrete				CS5[1)]	CS6	CS8	CS10	CS12	CS14
Steel 5.8	Tensile	$N_{Rec, Hef1}$	[kN]	0,60	1,90	3,57	5,71	7,62	10,62
		$N_{Rec, Hef2}$	[kN]		4,29	5,71	9,52	13,19	16,89
		$N_{Rec, Hef3}$	[kN]			7,62	11,90	17,21	21,22
	Shear[3)]	$V_{Rec, Hef1}$	[kN]	2,51	4,00	4,98	6,78	8,50	10,62
		$V_{Rec, Hef2}$	[kN]		4,00	6,78	19,43	22,86	32,00
		$V_{Rec, Hef3}$	[kN]			9,02	19,43	22,86	32,00
A4-70	Tensile	$N_{Rec, Hef1}$	[kN]		1,90	3,57	5,71		
		$N_{Rec, Hef2}$	[kN]		4,29	5,71	9,52		
		$N_{Rec, Hef3}$	[kN]			7,62	11,90		
	Shear[3)]	$V_{Rec, Hef1}$	[kN]		4,00	4,98	6,78		
		$V_{Rec, Hef2}$	[kN]		4,00	6,78	19,43		
		$V_{Rec, Hef3}$	[kN]			9,02	19,43		

Cracked Concrete				CS5[1)]	CS6	CS8	CS10	CS12	CS14
Steel 5.8	Tensile	$N_{Rec, Hef1}$	[kN]	0,60	0,95	2,38	4,29	5,71	7,57
		$N_{Rec, Hef2}$	[kN]		1,90	4,29	7,97	9,40	12,04
		$N_{Rec, Hef3}$	[kN]			5,71	9,61	12,27	15,13
	Shear[3)]	$V_{Rec, Hef1}$	[kN]	2,41	2,96	3,55	4,83	6,06	7,57
		$V_{Rec, Hef2}$	[kN]		4,00	4,83	15,93	18,80	24,07
		$V_{Rec, Hef3}$	[kN]			6,43	19,23	22,86	30,25
A4-70	Tensile	$N_{Rec, Hef1}$	[kN]		0,95	2,38	4,29		
		$N_{Rec, Hef2}$	[kN]		1,90	4,29	7,97		
		$N_{Rec, Hef3}$	[kN]			5,71	9,61		
	Shear[3)]	$V_{Rec, Hef1}$	[kN]		2,96	3,55	4,83		
		$V_{Rec, Hef2}$	[kN]		4,00	4,83	15,93		
		$V_{Rec, Hef3}$	[kN]			6,43	19,23		

1) **CS5** is not included in the ETA. 2) **All Loads** in kN for a Single anchor in Dry/Wet Concrete C20/25 - C50/60 without edge or spacing influences. 3) **Steel strength** in kN without bending moment. 3) **Recommended Loads** incl. Safety factor $\gamma_G = 1,4$.