

## Through bolt anchor for medium to heavy loads with ETA Assessment Option 1



SMD-CC M8 - M20 Zinc Plated



SMD-CC M6 - M20 Sherardized



SMD-CC M6 - M16 Stainless Steel A4 (316)

**new** SEISMIC

## Use Conditions

- Installation in reinforced or unreinforced concrete C20/25 to C50/60
- For static and quasi static loading
- Seismic loading
- Cracked and non-cracked concrete
- Fire Rating R30 - R120
- Dry internal conditions

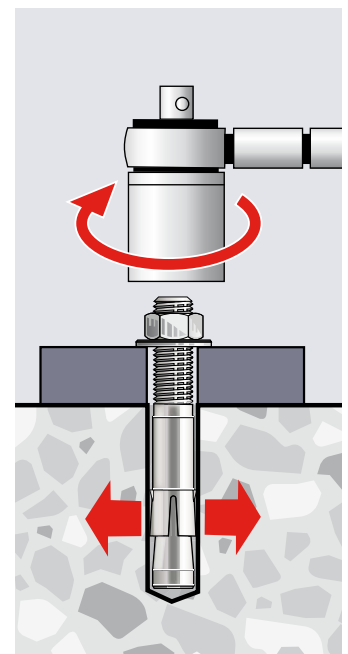
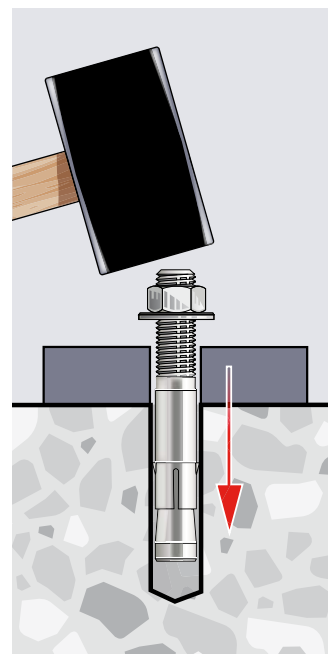
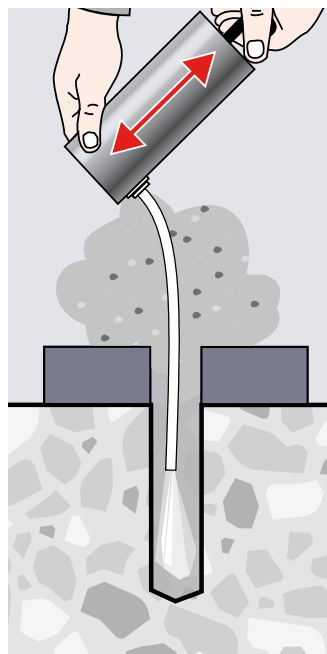
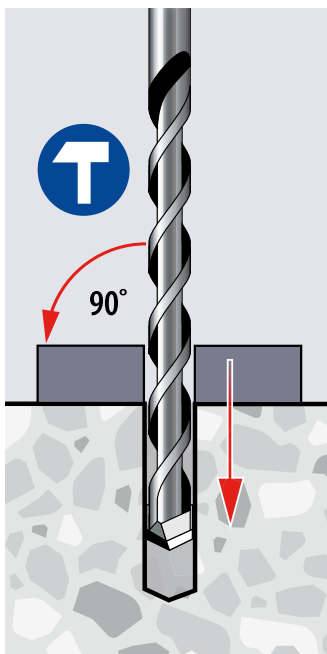
## Typical Applications

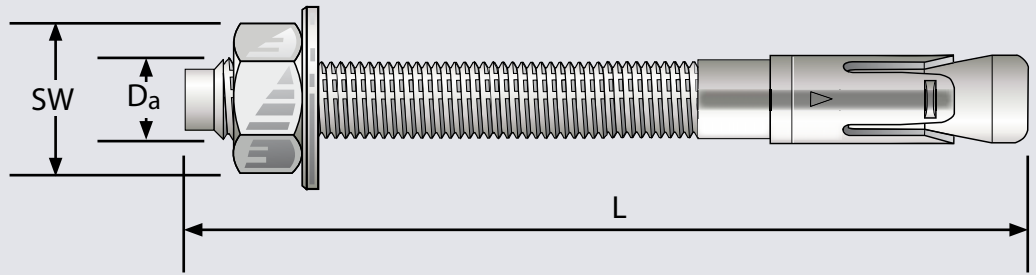
- Medium to heavy duty anchoring in cracked and non-cracked concrete.
- Steel beams
- Base plates
- Channels
- Tracks
- Wood structures.

## Approvals & Test Reports



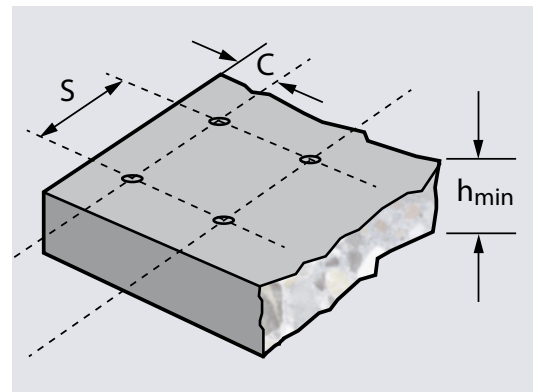
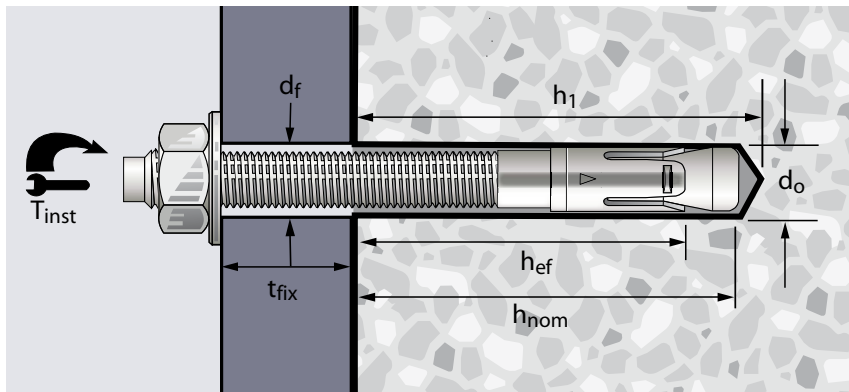
## Installation Procedures





## Product Dimensions

SMD-CC	$D_a$		M8	M10	M12	M16	M20
Min. Anchor Length	$L_{min}$	[mm]	68	82	98	119	140
Max. Anchor Length	$L_{max}$	[mm]	200	200	250	250	300
Hexagon Nut	$SW$	[mm]	13	17	19	24	30



## Installation Dimensions

SMD-CC	$D_a$		M8	M10	M12	M16	M20
Hole Diameter	$d_o$	[mm]	8	10	12	16	20
Hole Depth	$h_1$	[mm]	60	75	85	105	125
Overall Embedment Depth	$h_{nom}$	[mm]	55	68	80	97	114
Eff. Anchorage Depth	$h_{ef}$	[mm]	48	60	70	85	100
Diameter Fixture Hole	$d_f$	[mm]	9	12	14	18	22
Fixture Height	$t_{fix}$	[mm]	L - 66	L - 80	L - 96	L - 117	L - 138
Recommended torque	$T_{inst}$	[Nm]	20	40	60	100	200

## Member Thickness, Edge Distance & Spacing

SMD-CC	$D_a$		M8	M10	M12	M16	M20
Min. Member Thickness	$h_{min}$	[mm]	100	120	140	170	200
Min. Edge Distance	$C_{min}$	[mm]	50	60	70	85	100
Min. Spacing	$S_{min}$	[mm]	50	60	70	85	100

## Performance Data<sup>1)</sup>

### Design Resistance

Steel Failure

Non Cracked Concrete		D <sub>a</sub>		M8	M10	M12	M16	M20
Zinc Plated	Tensile	<b>N<sub>Rd</sub></b>	[kN]	5,0	10,7	13,3	23,3	33,3
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	8,8	13,9	20,2	37,7	58,5
Sherardized	Tensile	<b>N<sub>Rd</sub></b>	[kN]	5,0	10,7	19,7	23,3	33,3
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	8,8	13,9	20,2	37,7	58,5
Stainless Steel A4	Tensile	<b>N<sub>Rd</sub></b>	[kN]	6,0	10,7	13,3	23,3	
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	9,2	14,5	21,1	39,2	

Cracked Concrete		D <sub>a</sub>		M8	M10	M12	M16	M20
Zinc Plated	Tensile	<b>N<sub>Rd</sub></b>	[kN]	2,8	6,0	8,0	16,7	20,0
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	8,0	13,9	20,2	37,7	48,0
Sherardized	Tensile	<b>N<sub>Rd</sub></b>	[kN]	3,3	6,0	10,7	16,7	20,0
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	8,0	13,9	20,2	37,7	48,0
Stainless Steel A4	Tensile	<b>N<sub>Rd</sub></b>	[kN]	3,3	6,0	8,0	16,7	
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	8,0	14,5	21,1	38,3	

### Recommended Loads<sup>3)</sup>

Steel Failure

Non Cracked Concrete		D <sub>a</sub>		M8	M10	M12	M16	M20
Zinc Plated	Tensile	<b>N<sub>Rd</sub></b>	[kN]	3,6	7,6	9,5	16,7	23,8
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	6,3	9,9	14,5	26,9	41,8
Sherardized	Tensile	<b>N<sub>Rd</sub></b>	[kN]	3,6	7,6	14,1	16,7	23,8
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	6,3	9,9	14,5	26,9	41,8
Stainless Steel A4	Tensile	<b>N<sub>Rd</sub></b>	[kN]	4,3	7,6	9,5	16,7	
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	6,5	10,3	15,1	28,0	

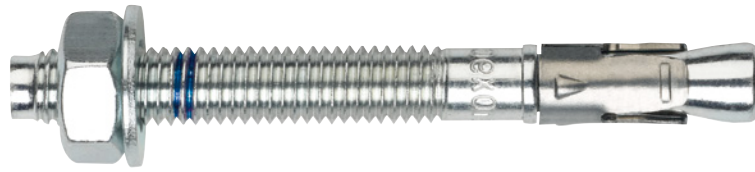
Cracked Concrete		D <sub>a</sub>		M8	M10	M12	M16	M20
Zinc Plated	Tensile	<b>N<sub>Rd</sub></b>	[kN]	2,0	4,3	5,7	11,9	14,3
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	5,7	9,9	14,5	26,9	34,3
Sherardized	Tensile	<b>N<sub>Rd</sub></b>	[kN]	2,4	4,3	7,6	11,9	14,3
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	5,7	9,9	14,5	26,9	34,3
Stainless Steel A4	Tensile	<b>N<sub>Rd</sub></b>	[kN]	2,4	4,3	5,7	11,9	
	Shear <sup>2)</sup>	<b>V<sub>Rd</sub></b>	[kN]	5,7	10,3	15,1	27,4	

1) All Loads in kN for a Single anchor in Dry/Wet concrete C20/25 without edge or spacing influences. 2) Steel strength in kN without bending moment. 3) Incl. Safety factor  $\gamma_G = 1,4$

# SMD-CC

## SMD-CC Zinc Plated

ETA Assessed,  
Option 1



	Art.-Nr.	Description	EAN	Qty.
<b>M 8</b>	<b>3.508.001</b>	SMD-CC M 8 x 50	8714345169521	100
	<b>3.508.002</b>	SMD-CC M 8 x 60	8714345169538	100
	<b>3.508.003</b>	SMD-CC M 8 x 75	8714345169545	100
	<b>3.508.004</b>	SMD-CC M 8 x 95	8714345169552	100
	<b>3.508.005</b>	SMD-CC M 8 x 115	8714345169569	100
<b>M10</b>	<b>3.510.001</b>	SMD-CC M10 x 70	8714345169576	100
	<b>3.510.002</b>	SMD-CC M10 x 90	8714345169583	100
	<b>3.510.003</b>	SMD-CC M10 x 105	8714345169590	50
	<b>3.510.004</b>	SMD-CC M10 x 115	8714345169606	50
	<b>3.510.005</b>	SMD-CC M10 x 135	8714345169613	50
	<b>3.510.006</b>	SMD-CC M10 x 165	8714345169620	50
	<b>3.510.007</b>	SMD-CC M10 x 185	8714345169637	50
	<b>3.510.008</b>	SMD-CC M10 x 200	8714345169644	50
<b>M12</b>	<b>3.512.001</b>	SMD-CC M12 x 80	8714345187013	50
	<b>3.512.002</b>	SMD-CC M12 x 100	8714345169651	50
	<b>3.512.003</b>	SMD-CC M12 x 110	8714345187020	50
	<b>3.512.004</b>	SMD-CC M12 x 120	8714345169668	50
	<b>3.512.005</b>	SMD-CC M12 x 130	8714345169675	50
	<b>3.512.006</b>	SMD-CC M12 x 150	8714345169682	50
	<b>3.512.007</b>	SMD-CC M12 x 180	8714345169699	50
	<b>3.512.008</b>	SMD-CC M12 x 200	8714345169705	50
<b>M16</b>	<b>3.516.001</b>	SMD-CC M16 x 125	8714345169712	25
	<b>3.516.002</b>	SMD-CC M16 x 145	8714345169729	25
	<b>3.516.003</b>	SMD-CC M16 x 175	8714345169736	25
	<b>3.516.004</b>	SMD-CC M16 x 220	8714345187037	25
	<b>3.516.005</b>	SMD-CC M16 x 250	8714345169743	25
<b>M20</b>	<b>3.520.001</b>	SMD-CC M20 x 170	8714345169750	20
	<b>3.520.002</b>	SMD-CC M20 x 200	8714345169750	20

## SMD-CC Sherardized

ETA Assessed,  
Option 1



	Art.-Nr.	Description	EAN	Qty.
<b>M 6</b>	<b>3.606.001</b>	SMD-CC M 6 x 60	8714345188676	200
	<b>3.606.002</b>	SMD-CC M 6 x 70	8714345188683	200
	<b>3.606.003</b>	SMD-CC M 6 x 100	8714345188690	200
<b>M 8</b>	<b>3.608.001</b>	SMD-CC M 8 x 50	8714345188706	100
	<b>3.608.002</b>	SMD-CC M 8 x 60	8714345188713	100
	<b>3.608.003</b>	SMD-CC M 8 x 75	8714345188720	100
	<b>3.608.004</b>	SMD-CC M 8 x 95	8714345188737	100
	<b>3.608.005</b>	SMD-CC M 8 x 115	8714345188744	100
<b>M10</b>	<b>3.610.001</b>	SMD-CC M10 x 70	8714345188751	100
	<b>3.610.002</b>	SMD-CC M10 x 90	8714345188768	100
	<b>3.610.003</b>	SMD-CC M10 x 105	8714345188775	50
	<b>3.610.004</b>	SMD-CC M10 x 115	8714345188782	50
	<b>3.610.005</b>	SMD-CC M10 x 135	8714345188799	50
	<b>3.610.006</b>	SMD-CC M10 x 165	8714345188805	50
	<b>3.610.007</b>	SMD-CC M10 x 185	8714345188812	50
<b>M12</b>	<b>3.612.001</b>	SMD-CC M12 x 80	8714345188829	50
	<b>3.612.002</b>	SMD-CC M12 x 110	8714345188836	50
	<b>3.612.003</b>	SMD-CC M12 x 130	8714345188843	50
	<b>3.612.004</b>	SMD-CC M12 x 150	8714345188850	50
	<b>3.612.005</b>	SMD-CC M12 x 180	8714345188867	50
	<b>3.612.006</b>	SMD-CC M12 x 200	8714345188874	50
<b>M16</b>	<b>3.616.001</b>	SMD-CC M16 x 125	8714345188881	25
	<b>3.616.002</b>	SMD-CC M16 x 145	8714345188898	25
	<b>3.616.003</b>	SMD-CC M16 x 175	8714345188904	25
	<b>3.616.004</b>	SMD-CC M16 x 220	8714345188911	25
<b>M20</b>	<b>3.620.001</b>	SMD-CC M20 x 170	8714345188928	20
	<b>3.620.002</b>	SMD-CC M20 x 200	8714345188935	20

# SMD-CC

## SMD-CC Stainless Steel A4-70

ETA Assessed,  
Option 1



	Art.-Nr.	Description	EAN	Qty.
M 8	<b>3.630.801</b>	SMD-CC M 8 x 68	8714345188942	100
	<b>3.630.802</b>	SMD-CC M 8 x 75	8714345188959	100
	<b>3.630.803</b>	SMD-CC M 8 x 90	8714345188966	100
	<b>3.630.804</b>	SMD-CC M 8 x 115	8714345188973	100
	<b>3.630.805</b>	SMD-CC M 8 x 135	8714345188980	50
	<b>3.630.806</b>	SMD-CC M 8 x 165	8714345188997	50
M10	<b>3.631.001</b>	SMD-CC M10 x 90	8714345189000	100
	<b>3.631.002</b>	SMD-CC M10 x 105	8714345189017	50
	<b>3.631.003</b>	SMD-CC M10 x 115	8714345189024	50
	<b>3.631.004</b>	SMD-CC M10 x 135	8714345189031	50
	<b>3.631.005</b>	SMD-CC M10 x 155	8714345189048	50
	<b>3.631.006</b>	SMD-CC M10 x 185	8714345189055	50
M12	<b>3.631.201</b>	SMD-CC M12 x 110	8714345189062	50
	<b>3.631.202</b>	SMD-CC M12 x 120	8714345189079	50
	<b>3.631.203</b>	SMD-CC M12 x 145	8714345189086	50
	<b>3.631.204</b>	SMD-CC M12 x 170	8714345189093	50
	<b>3.631.205</b>	SMD-CC M12 x 200	8714345189109	50
M16	<b>3.631.601</b>	SMD-CC M16 x 130	8714345189116	50
	<b>3.631.602</b>	SMD-CC M16 x 150	8714345189123	25
	<b>3.631.603</b>	SMD-CC M16 x 185	8714345189130	25
	<b>3.631.604</b>	SMD-CC M16 x 220	8714345189147	20