

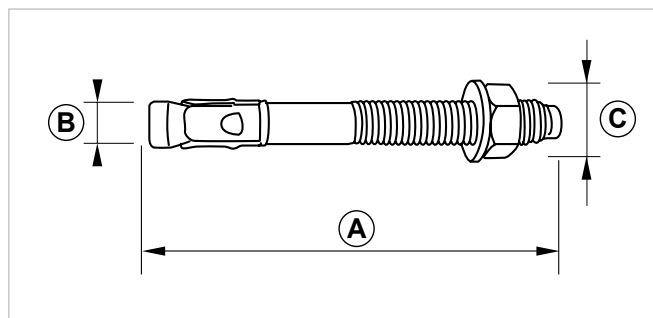
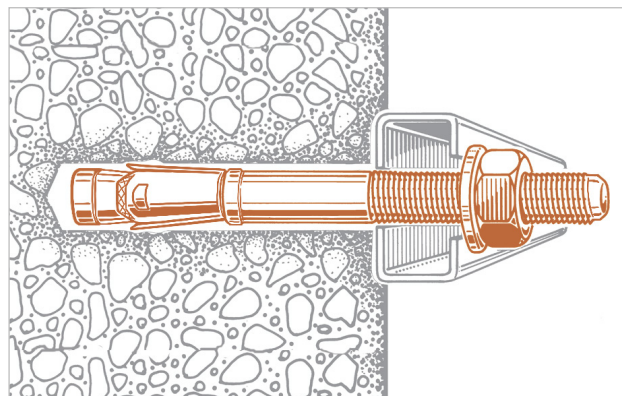
TLA SM Class C1-C2 anti-seismic anchor

APPLICATION

It is used in seismic zones for installations on concrete.

FEATURES AND BENEFITS

- > High performing anchor ranked **C1-C2 seismic class**, according to EAD 330232-00-0601.
- > It is approved for installations on **concrete and cracked concrete**.
- > It is also approved for **fire resistance**, but only with standard inserting depth, according to TR020 R30-R120 regulations.
- > Provided with **Shock Approval** by the Swiss Federal Office.



COD	TYPE	A	B	C	Anchoring depth	Min. hole depth	Fixable thickness	Tightening torque
130162	TLA SM 8x80	80	8	13	46/35	60/49	15/26	20
130164	TLA SM 8x95	95	8	13	46/35	60/49	30/41	20
130172	TLA SM 10x90	90	10	17	60/40	75/55	10/30	25
130174	TLA SM 10x110	110	10	17	60/40	75/55	30/50	25
130182	TLA SM 12x105	105	12	19	70/50	90/70	10/30	45
130184	TLA SM 12x125	125	12	19	70/50	90/70	30/50	45

ANCHORS AND SEALANTS

METAL ANCHORS

MATERIALS TECHNICAL DATA

ANCHOR

Steel 8.8 EN ISO 898-1:2013, zinc plated and provided with stainless steel washer AISI 304 EN ISO 10088

TECHNICAL DATA

			M8	M10	M12
Nominal diameter	d ₀	mm	8	10	12
Tightening torque	T _{inst}	Nm	20	25	45
Wrench size	SW	mm	13	17	19
Standard inserting depth	h _{nom}	mm	46	60	70
Min. concrete thickness	h _{min}	mm	100	120	140
Hole depth	h ₁	mm	60	75	90
Hole diameter of the item to be fixed	d _f	mm	9	12	14

Declared performance according to EAD 330232-00-0601

				M8	M10	M12
Steel breaking point	Tension	N _{Rk,s}	kN	16	27	40
	Safety coefficient	Y _{Ms}		1,53	1,53	1,5
	Shear	V _{Rk,s}	kN	12,2	20,1	30
	Safety coefficient	Y _{Ms}		1,25	1,25	1,25
	Bending moment	M ⁰ _{Rk,s}	Nm	23	47	82
	Safety coefficient	Y _{Ms}		1,25	1,25	1,25
	Tension (class C1)	N _{Rk,s, C1}	kN	16	27	40
	Tension (class C2)	N _{Rk,s, C2}	kN	16	27	40
	Safety coefficient	Y _{Ms, seis}		1,53	1,53	1,5
	Shear (class C1)	V _{Rk, seis, C1}	kN	9,3	20	27
	Shear (class C2)	V _{Rk, seis, C2}	kN	6,7	14	16,2
	Safety coefficient	Y _{Ms, seis}		1,25	1,25	1,25
Pull-out breaking point	Non-cracked C20/25 concrete characteristic resistance	N _{Rk,p,ucr}	kN	12	16	25
	Cracked C20/25 concrete characteristic resistance	N _{Rk,p,cr}	kN	5	9	16
	Characteristic resistance in seismic performance category C1	N _{Rk,seis,C1}	kN	5	9	16
	Characteristic resistance in seismic performance category C2	N _{Rk,seis,C2}	kN	2,3	3,6	10,2
Breaking point by concrete cone and cracking	Anchoring depth	h _{ef}	[mm]	46	60	70
		S _{cr,sp}	[mm]	138	180	210
		C _{cr,sp}	[mm]	69	90	105

Fire resistance by standard inserting depth on cracked and non-cracked concrete - from class C20/25 up to C50/60

				M8	M10	M12
Tensile strength	R30	NRk,s,fi	kN	1,4	2,2	3,2
	R60	NRk,s,fi	kN	1,1	1,8	2,8
	R90	NRk,s,fi	kN	0,8	1,4	2,4
	R120	NRk,s,fi	kN	0,7	1,2	2,2
Shear	R30	VRk,s,fi	kN	1,6	2,6	3,8
	R60	VRk,s,fi	kN	1,5	2,5	3,6
	R90	VRk,s,fi	kN	1,2	2,1	3,5
	R120	VRk,s,fi	kN	1,0	2,0	3,4
Bending moment	R30	M°Rk,s,fi	Nm	1,7	3,3	5,9
	R60	M°Rk,s,fi	Nm	1,6	3,2	5,6
	R90	M°Rk,s,fi	Nm	1,2	2,7	5,4
	R120	M°Rk,s,fi	Nm	1,1	2,5	5,3

RECOMMENDATIONS FOR INSTALLATION

- > Choose an anchor with the right size, depending on the object that must be fixed.
- > Check payload values to guarantee grip performance.
- > Follow installation data.
- > Make sure the hole is properly clean before installing the item.
- > Whether the hole has been made in the wrong way: the new hole must be placed at the right distance from the discarded hole. Indeed, it should be placed far at least twice as much the depth of the previous hole. It can be placed closer as well, but only if the discarded hole has been filled with mortar, and whether no oblique tensile or shear loads act on the fixing.
- > After installation the anchor cannot be spinned or turned anymore.

INSTALLATION

The anchor passes through the object that must be fixed.

PACKAGING

In cardboard box

RELATED ITEMS

- > Anti-seismic fixing product range
- > G-Strut - Industrial fixing product range

DATE 06-2023 REV. 01

The current technical data sheet substitutes and cancels the previous ones. The details provided fit our current knowledge of the product. It cannot lead us to any sort of responsibility or compensation.

Gia S.p.A. reserves the right of changing technical features and molds without notice.

This company is subject to "Ethica Global Investments S.p.A." management.

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