AZAM

Denomination: **ANCLAJE ZAMAK**

Codes: **AZAMC, AZAMT, ZTXXL, ZTXXC, AZAME, AZAMA,AZAMG,AZAMAF, AZAMGF**

ZA-CA

ZA-PR

ZA-GA

ZA-TO

ZA-ES

ZA-AF

ZA-TL

ZA-AR

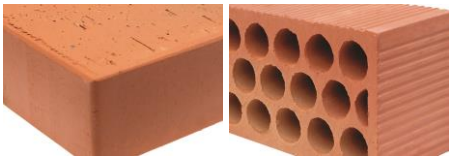
ZA-GF

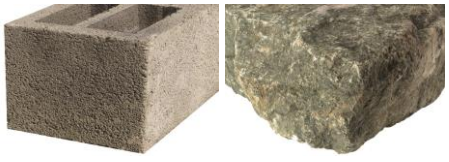
CHARACTERISTICS

Wings and cone manufactured in zamak-5 by injection.
Zinc plated coating
Due to its higher cone expansion capacity, it is recommended in concrete as well as in lower resistance base materials (bricks, hollow bricks, low resistance concrete, etc.) which requires a higher expansion capacity.
Use for high load
Easy installation
Installation before the fixing material
Versions:

- **capsule**
- **loose bolt**
- **long loose bolt**
- **long loose bolt with pipe**
- **projecting bolt**
- **eye bolt**
- **pressed eye bolt**
- **hook bolt**
- **pressed hook bolt**

BASE MATERIAL





APPLICATION EXAMPLES

Fixing of awnings, notices, urban fittings, etc.

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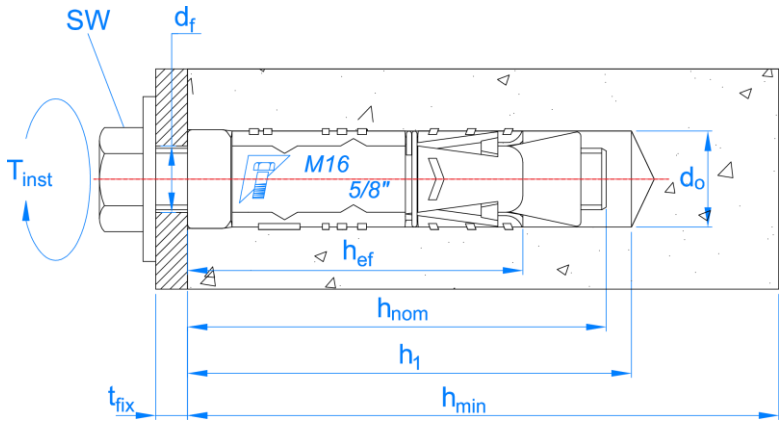
1. RANGE

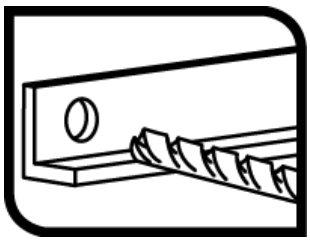
ITEM	CODE	SIZE	PHOTO	COMPONENT	MATERIAL	COATING
1	**AZAMCXX**	M6 a M16		Capsule	Zamak 5	Zinc plated ≥ 5 µm
2	**AZAMTXX**	M6 a M16		Capsule Bolt Washer	Zamak 5 Steel class 6.8 DIN 9021	Zinc plated ≥ 5 µm
3	**ATXXLXX**	M6 a M12		Capsule Bolt Washer	Zamak 5 Steel class 6.8 DIN 9021	Zinc plated ≥ 5 µm
4	**ZPXXCXX**	M6 a M12		Capsule Bolt Washer Tube	Zamak 5 Steel class 6.8 DIN 9021 Tubo EN 10305-2	Zinc plated ≥ 5 µm
5	**AZAMEXX**	M6 a M16		Capsule Stud bolt Washer Nut	Zamak 5 Steel class 6.8 DIN 9021 DIN 934	Zinc plated ≥ 5 µm
6	**AZAMAXX**	M6 a M12		Capsule Eye Washer Nut	Zamak 5 Carbon Steel DIN 9021 DIN 934	Zinc plated ≥ 5 µm
7	**AZAMGXX**	M6 a M12		Capsule Hook Washer Nut	Zamak 5 Carbon Steel DIN 9021 DIN 934	Zinc plated ≥ 5 µm
8	**AZAMAFOXX**	M6 a M12		Capsule Eye Washer Nut	Zamak 5 Carbon Steel DIN 9021 DIN 934	Zinc plated ≥ 5 µm
9	**AZAMGFOXX**	M6 a M12		Capsule Hook Washer Nut	Zamak 5 Carbon Steel DIN 9021 DIN 934	Zinc plated ≥ 5 µm

2. INSTALLATION DATA



SIZE		M6	M8	M10	M12	M16
d_0: drill diameter	[mm]	12	14	16	20	25
d_2: washer diameter	[mm]	28	25	30	40	50
d_f: fixture hole diameter	[mm]	7	9	12	14	18
$d_{f,\ ZA\text{-}PR}$: fixture hole diameter, long loose bolt with pipe	[mm]	14	16	18	22	18
h_{nom}: nominal depth	[mm]	48	50	58	72	107
h_{ef}: effective depth	[mm]	41	43	51	61	96
h_1: drill depth ≤	[mm]	60	65	75	90	125
h_{min}: base material minimum thickness≤	[mm]	100	100	102	122	192
s_{min}: minimum spacing	[mm]	125	130	155	185	290
c_{min}: minimum distance to edge	[mm]	65	65	80	95	145
t_{ins}: torque	[Nm]	7	15	30	50	120
$t_{fix,}$: fixture thickness	[mm]	1	10	20	25	30
$t_{fix,\ ZA\text{-}TL}$: fixture thickness long loose bolt	[mm]	10-30	15-45	10-80	15-65	--
$t_{fix,\ ZA\text{-}PR}$: fixture thickness long loose bolt with pipe	[mm]	40	15-45	50-80	15-65	--
d_3: inside diameter eye bolt/pressed eye bolt	[mm]	10/10	13/12	14/14	22/17	--
e: minimum hook opening/ pressed hook	[mm]	10/10	13/11	14/14	22/18	--
S_w: nut wrench	[mm]	10	13	17	19	24

3. INSTALLATION PROCEDURE



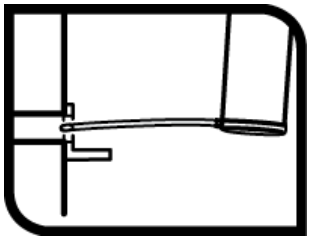
1. DRILL

Check the concrete base is compact and porosity is insignificant.

Suitable for wet, dry or flooded drill holes.

Use drill in hammer mode. In case of hollow materials do not use the hammer mode to prevent damages inside the base material. Reduce the speed when are about to finish the drill.

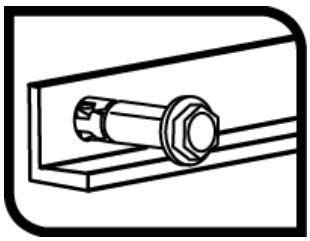
Drill to the specified diameter and depth values in previous table.



2. BLOW AND CLEAN

Clear the drill holes completely of dust and fragments.

Use air pump and brush.

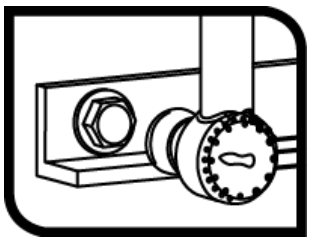


3. INSTALL

Insert the anchor in the hole until the red ring mark is flat with concrete surface.

Use hammer in case of need; DOMTA tool could be used alternatively.

The installation could be done through the fixture baseplate.



4. APPLY TORQUE

Apply nominal installation torque using a torque wrench.

4. RESISTANCES

Characteristic resistance in non-cracked concrete C20 / 25 for an isolated anchor (no effects edge distance or distances between anchors) is indicated in the following table:

CHARACTERISTIC RESISTANCE								
METRICA				M6	M8	M10	M12	M16
Loose bolt		N_{Rk} : tension	[KN]	10,3	13,0	18,0	22,5	28,5
		V_{Rk} : shear	[KN]	6.0	11.0	18.3	25.3	47.1
Long loose bolt		N_{Rk} : tension	[KN]	10,3	13,0	18,0	22,5	--
		V_{Rk} : shear	[KN]	6.0	11.0	18.3	25.3	--
Long loose bolt with pipe		N_{Rk} : tension	[KN]	10,3	13,0	18,0	22,5	--
		V_{Rk} : shear	[KN]	6.0	11.0	18.3	25.3	--
Projecting bolt		N_{Rk} : tension	[KN]	8.4	13.0	18.0	22.5	28.5
		V_{Rk} : shear	[KN]	4.2	7.7	12.2	17.7	33.0
Eye bolt		N_{Rk} : tension	[KN]	1,5	3,0	5,0	6,0	--
		V_{Rk} : shear	[KN]	--	--	--	--	--
Hook bolt		N_{Rk} : tension	[KN]	1,5	3,0	5,0	6,0	--
		V_{Rk} : shear	[KN]	--	--	--	--	--
Pressed eye bolt		N_{Rk} : tension	[KN]	4,2	11,4	15,8	16,8	--
		V_{Rk} : shear	[KN]	--	--	--	--	--
Pressed hook bolt		N_{Rk} : tension	[KN]	1,64	3,1	5	8,1	--
		V_{Rk} : shear	[KN]	--	--	--	--	--

DESIGN RESISTANCE								
SIZE				M6	M8	M10	M12	M16
Loose bolt		N_{Rd} : tension	[KN]	5,7	7,2	10,0	12,4	15,8
		V_{Rd} : shear	[KN]	4,8	8,7	12,2	20,2	37,6
Long loose bolt		N_{Rd} : tension	[KN]	5,7	7,2	10,0	12,4	--
		V_{Rd} : shear	[KN]	4,8	8,7	12,2	20,2	--
Long loose bolt with pipe		N_{Rd} : tension	[KN]	5,7	7,2	10,0	12,4	--
		V_{Rd} : shear	[KN]	4,8	8,7	12,2	20,2	--
Projecting bolt		N_{Rd} : tension	[KN]	5,7	7,2	10,0	12,4	15,8
		V_{Rd} : shear	[KN]	3,3	6,1	9,7	14,1	26,3
Eye bolt		N_{Rd} : tension	[KN]	1,0	2,0	3,3	4,0	--
		V_{Rd} : shear	[KN]	--	--	--	--	--
Hook bolt		N_{Rd} : tension	[KN]	1,0	2,0	3,3	4,0	--
		V_{Rd} : shear	[KN]	--	--	--	--	--
Pressed eye bolt		N_{Rd} : tension	[KN]	2,8	7,6	10,2	11,2	--
		V_{Rd} : shear	[KN]	--	--	--	--	--
Pressed hook bolt		N_{Rd} : tension	[KN]	1	2,1	3,3	5,4	--
		V_{Rd} : shear	[KN]	--	--	--	--	--

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RECOMMENDED RESISTANCE

SIZE				M6	M8	M10	M12	M16
Loose bolt		N_{recom} : tension	[KN]	4,0	5,1	7,1	8,9	11,3
		V_{recom}: shear	[KN]	3,4	6,2	8,7	14,43	26,8
Long loose bolt		N_{recom} : tension	[KN]	4,0	5,1	7,1	8,9	--
		V_{recom}: shear	[KN]	3,4	6,2	8,7	14,4	--
Long loose bolt with pipe		N_{recom} : tension	[KN]	4,0	5,1	7,1	8,9	--
		V_{recom}: shear	[KN]	3,4	6,2	8,7	14,4	--
Projecting bolt		N_{recom} : tension	[KN]	4,0	5,1	7,1	8,9	11,3
		V_{recom}: shear	[KN]	2,3	4,3	6,9	10,0	18,7
Eye bolt		N_{recom} : tension	[KN]	0,7	1,4	2,3	2,8	--
		V_{recom}: shear	[KN]	--	--	--	--	--
Hook bolt		N_{recom} : tension	[KN]	0,7	1,4	2,3	2,8	--
		V_{recom}: shear	[KN]	--	--	--	--	--
Pressed eye bolt		N_{recom} : tension	[KN]	2,0	5,4	7,2	8,0	--
		V_{recom}: shear	[KN]	--	--	--	--	--
Pressed hook bolt		N_{recom} : tension	[KN]	0,7	1,5	2,3	3,8	--
		V_{recom}: shear	[KN]	--	--	--	--	--

1KN ≈ 100 Kg

*The *italic and underlined* values indicate steel failure