

HIGH LOAD ANCHOR



Class 8.8 Bolt available in three head versions



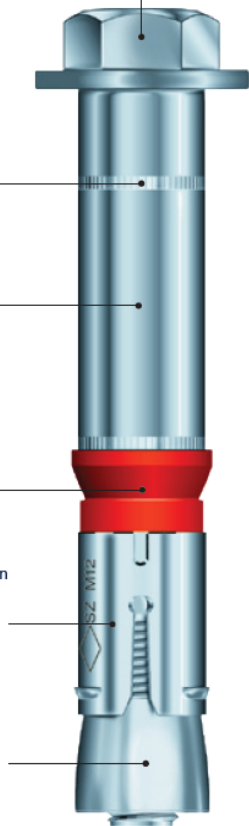
Embedment depth and fixture thickness mark.

Thick anchor sleeve that improves anchor stiffness in shear.

Collapsible element that ensures firm contact between fastened material and base material.

Thick and hard expansion clip that is geometrically designed to prevent rotation during tightening and allows for optimum delivery of expansion forces.

Optimally designed cone for superior force transfer mechanism, even in cracked concrete applications.



The MKT SZ Highload Anchor is a high-performance mechanical anchor system suitable for fastenings that demand reliable performance and flexibility.

- Suitable for heavy loads
- Suitable for shock loads
- Suitable for cracked concrete
- Fire rated

The MKT SZ approvals attest to its reliability and performance.



Compatible with the new Australian Standard for Anchor Design (SA TS 101)



European Technical Approval (ETA-02/0030)



American ICC-ES Evaluation Report (ESR-3137)



Approved for Shock Loads Bundesamt für Bevölkerungsschutz, Bern Germany



Fire Rated load bearing performance data as per DIN 4102-2



Tested and approved for fire sprinkler system fastening as per VdS Schadenverhütung GmbH, Germany

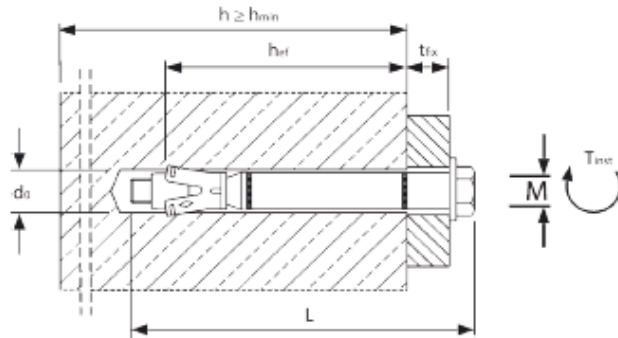


For further technical information please contact Southeast Fasteners direct



Southeast Fastener	ABN 30117890114	
Larapinta Branch:	71 Axis Place, LARAPINTA QLD 4110	TEL: 07 3273 4400 FAX: 07 3272 4999
Eagle Farm Branch:	109A Links Avenue South, EAGLE FARM QLD 4009	TEL: 07 3268 77 88 FAX: 07 3268 5689

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¹ c_b and h_{ef} are used in the calculation of the basic shear strength of concrete edge. h_b alone is used in the calculation of concrete relevant tensile strengths, thus, assuming that the anchor is free from the influence of any concrete edge.

¹ The design tensile strength is comparatively calculated from steel strength, concrete cone strength and pullout strength. h_b is the embedment depth used while the strength reduction factors of $\phi = 0.80$ for concrete and $\phi = 0.80$ for zinc plated steel are used.

² The design shear strength is comparatively calculated from steel strength and concrete edge strength. c_b is the edge distance used while the strength reduction factors of $\phi = 0.60$ for concrete, $\phi = 0.80$ for zinc plated steel are used.

For Working Load Limit (WLL) the factor of safety are FOS = 2.5 for steel and FOS = 3.0 for concrete.



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Setting Details								
	Anchor Size	10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20
Thread size	d_n (mm)	M6	M8	M10	M12	M16	M16	M20
Nominal hole diameter	d_0 (mm)	10	12	15	18	24	24	28
Effective embedment depth	h_{ef} (mm)	50	60	71	80	100	115	125
Hole Depth	h_f (mm)	65	80	95	105	130	145	160
Fixture thickness for SZ-S and SZ-B	t_{fmin} (mm)	0	0	0	0	0	0	0
	t_{fmax} (mm)	200	200	200	250	300	300	300
Fixture thickness for SZ-SK	t_{fmin} (mm)	8	10	14	18	-	-	-
	t_{fmax} (mm)	200	200	200	250	-	-	-
Max. diameter of hole on fixture	d_f (mm)	12	14	17	20	26	26	31
Tightening torques								
Electroplated, SZ-S or SZ-B	T_{int} (N-m)	15	30	50	80	160	160	280
Electroplated, SZ-SK	T_{int} (N-m)	10	25	55	70	160	160	280
A4 Stainless, SZ-B	T_{int} (N-m)	-	35	55	90	170	-	-
A4 Stainless, SZ-S	T_{int} (N-m)	-	30	50	80	170	-	-
A4 Stainless, SZ-SK	T_{int} (N-m)	-	17.5	42.5	50	-	-	-
Socket wrench size	SZ-S and SZ-B	AF (mm)	10	13	17	19	24	30
	SZ-SK	AF _{int} (mm)	4	5	6	8	-	-

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		Placement Limits							
		Anchor Size	10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20
Minimum concrete thickness	h_{min} (mm)		100	120	140	160	200	230	250
Steel, Zinc Plated	Minimum spacing	S_{min} (mm)	50	60	70	80	100	100	125
		edge distance (mm)	≥ 80	≥ 100	≥ 120	≥ 160	≥ 180	≥ 180	≥ 300
	Minimum edge distance	c_{min} (mm)	50	60	70	80	100	100	180
		spacing (mm)	100	120	175	200	220	220	540
Stainless Steel A4, HCR	Minimum spacing	S_{min} (mm)	-	70	85	100	180	-	-
		edge distance (mm)	-	≥ 100	≥ 130	≥ 170	≥ 180	-	-
	Minimum edge distance	c_{min} (mm)	-	75	85	100	180	-	-
		spacing (mm)	-	≥ 135	≥ 185	≥ 210	≥ 180	-	-
		Basic Load Bearing Performance in 32 Mpa Non-Cracked Concrete (Zinc Plated Version)							
		Anchor Size	10/M6	12/M8	15/M10	18/M12	24/M16	24/M16L	28/M20
Basic edge distance ⁶		c_s (mm)	50	70	100	100	150	200	200
Basic embedment ⁶		h_b (mm)	50	60	71	80	100	115	125
Limit State Strengths	Tensile Strength ¹	ϕN (kN)	10.7	15.2	22.9	27.4	38.3	47.2	53.5
	Shear Strength ²	ϕV (kN)	4.9	8.6	15.3	15.8	30.4	46.7	48.5
Working Load Limit (WLL)	WLL for Tension	N_{WLL} (kN)	6.4	8.5	12.7	15.2	21.3	26.2	29.7
	WLL for Shear	V_{WLL} (kN)	2.7	4.8	8.5	8.8	16.9	26.0	27.0

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