



PRODUCT DATA

Tygabolt® Sleeve Anchor - Mechanical Galvanised

The Tygabolt® is a fully-assembled single unit wedge-type anchors used in solid concrete applications. Fixing is achieved by controlled torquing of the nut which draws the cone section up in the sleeve, thereby expanding it outward and forcing the Tygabolt® against the sidewall of the pre-drilled hole.

Applications	
<ul style="list-style-type: none"> • Hand rail fastening • Form-work support fastening • Mechanical, electrical and pipe bracket fastening 	

Material	 Carbon Steel
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Finish	 Mechanical Galvanised
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Part	QFind	Diam (mm)	Length (mm)	Pack Qty
MTBMSGM080040	MTB111	8	40	100
MTBMSGM080060	MTB112	8	60	50
MTBMSGM080080	MTB113	8	80	50
MTBMSGM100040	MTB114	10	40	50
MTBMSGM100050	MTB115	10	50	50
MTBMSGM100060	MTB116	10	60	50
MTBMSGM100075	MTB117	10	75	50
MTBMSGM100100	MTB118	10	100	25
MTBMSGM120060	MTB119	12	60	25
MTBMSGM120080	MTB120	12	80	25
MTBMSGM120100	MTB121	12	100	20
MTBMSGM120120	MTB122	12	120	20
MTBMSGM160065	MTB123	16	65	20
MTBMSGM160105	MTB124	16	105	10
MTBMSGM160145	MTB125	16	145	10
MTBMSGM200075	MTB126	20	75	10
MTBMSGM200100	MTB127	20	100	5
MTBMSGM200160	MTB128	20	160	5



Features

- Suitable for light to medium duty loads
- Quick and easy to install
- Immediate loading is possible
- Expansion claws that prevent rotation during tightening
- Cold formed cone for efficient expansion of the sleeve

TygaBolt®

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Bolt Tension | Anti-Vibration | Product Reliability | Traceability

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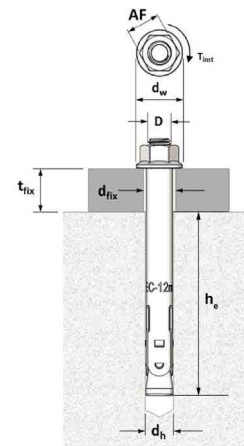


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Installation Guide

Size	Thread Size	Hole	Minimum Depth	Hole on Fixture	Torque Guide	Wrench Size	Flange Head Diameter	Minimum Concrete Thickness	Minimum Spacing	Minimum Edge Distance
	D	d _h (mm)	h _{o min} (mm)	d _{fix} (mm)	T _{inst} (N-m)	AF (mm)	d _w (mm)	h _{min} (mm)	S _{min} (mm)	C _{min} (mm)
M6 x 8	M6	8	40	10	8	10	12.8	100	50	50
M8 x 10	M8	10	50	12	25	13	16.8	100	60	60
M10 x 12	M10	12	60	14	40	15	20.3	100	75	75
M12 x 16	M12	16	70	18	50	18	24.3	125	100	100
M16 x 20	M16	20	80	22	80	24	32.9	150	120	120



Basic Load Performance in 32 MPa non-cracked concrete

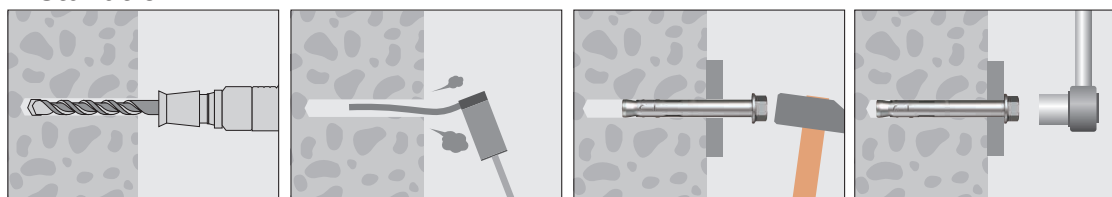
¹ Design Resistance is the governing minimum load resistance obtained by comparing relevant concrete and steel resistances. Strength reduction of $\phi = 0.60$ for concrete and $\phi = 0.80$ for steel are already included.

² Working Load is the governing minimum allowed load obtained by comparing relevant concrete and steel working loads. Factor of safety FOS = 2.5 for steel and FOS = 3.0 concrete are already included.

Size	Embedment Depth	Design Tensile Resistance ¹	Working Load in Tension ²
	h _o (mm)	ø N _d (kN)	N _{WLL} (kN)
ø8 (M6)	40	6.4	3.2
	60	6.4	3.2
	80	6.4	3.2
ø10 (M8)	60	11.7	5.8
	80	11.7	5.8
	100	11.7	5.8
ø12 (M10)	70	17.5	9.2
	90	18.5	9.2
	120	18.5	9.2
ø16 (M12)	80	21.9	12.2
	100	26.9	13.4
	120	26.9	13.4
ø20 (M16)	90	26.5	14.7
	100	31.6	17.6
	125	45.8	25.1

Size	Embedment Depth	Edge Distance	Design Shear Resistance ¹	Working Load in Shear ²
	h _o (mm)	c ₁ (mm)	ø V _d (kN)	V _{WLL} (kN)
ø8 (M6)	50	50	3.2	1.6
		60	3.2	1.6
		80	3.2	1.6
ø10 (M8)	60	60	5.8	2.9
		80	5.8	2.9
		100	5.8	2.9
ø12 (M10)	70	75	9.2	4.6
		90	9.2	4.6
		120	9.2	4.6
ø16 (M12)	80	100	13.4	6.7
		120	13.4	6.7
		150	13.4	6.7
ø20 (M16)	100	120	20.2	10.2
		150	25.1	12.5
		175	25.1	12.5

Installation



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