



# PRODUCT DATA

## Tygabolt® Sleeve Anchor - Zinc Yellow Passivate

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"> <li>• Hand rail fastening</li> <li>• Form-work support fastening</li> <li>• Mechanical, electrical and pipe bracket fastening</li> </ul>	

<b>Material</b>	 Carbon Steel
-----------------	--

<b>Finish</b>	 Zinc Yellow Passivate
---------------	--

Part	QFind	Diam (mm)	Length (mm)	Pack Qty
MTBMSYM0650025	<b>MTB129</b>	6.5	25	100
MTBMSYM0650035	<b>MTB130</b>	6.5	35	100
MTBMSYM0650055	<b>MTB131</b>	6.5	55	100
MTBMSYM080040	<b>MTB132</b>	8.0	40	100
MTBMSYM080060	<b>MTB133</b>	8.0	60	50
MTBMSYM080080	<b>MTB134</b>	8.0	80	50
MTBMSYM100040	<b>MTB135</b>	10.0	40	50
MTBMSYM100050	<b>MTB136</b>	10.0	50	50
MTBMSYM100060	<b>MTB137</b>	10.0	60	50
MTBMSYM100075	<b>MTB138</b>	10.0	75	50
MTBMSYM100100	<b>MTB139</b>	10.0	100	25
MTBMSYM100120	<b>MTB140</b>	10.0	120	25
MTBMSYM120060	<b>MTB141</b>	12.0	60	25
MTBMSYM120080	<b>MTB142</b>	12.0	80	25
MTBMSYM120100	<b>MTB143</b>	12.0	100	20
MTBMSYM120120	<b>MTB144</b>	12.0	120	20
MTBMSYM160065	<b>MTB145</b>	16.0	65	20
MTBMSYM160105	<b>MTB146</b>	16.0	105	10
MTBMSYM160145	<b>MTB147</b>	16.0	145	10
MTBMSYM200075	<b>MTB148</b>	20.0	75	10
MTBMSYM200100	<b>MTB149</b>	20.0	100	5
MTBMSYM200160	<b>MTB150</b>	20.0	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

### Note

Other head types are available to suit a variety of applications.

# TygaBolt®

Disclaimer: While every reasonable effort has been made to ensure that this document is correct at the time of printing, Hobson Engineering®, its agencies and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance upon the whole or any part of this document.

Bolt Tension | Anti-Vibration | Product Reliability | Traceability

[hobson.com.au](http://hobson.com.au) **QUALITY FASTENERS SINCE 1935**



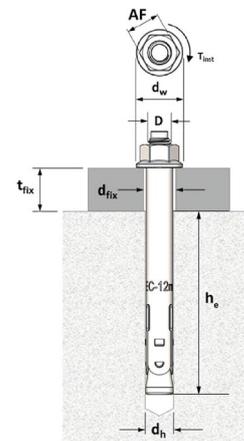


# PRODUCT DATA

## Tygabolt® Sleeve Anchor - Zinc Yellow Passivate

### 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 <sub>h</sub> (mm)	h <sub>o min</sub> (mm)	d <sub>fix</sub> (mm)	T <sub>inst</sub> (N-m)	AF (mm)	d <sub>w</sub> (mm)	h <sub>min</sub> (mm)	S <sub>min</sub> (mm)	C <sub>min</sub> (mm)
M5 x 6.5	M5	6.5	25	8	5	8	10.9	75	50	50
M6 x 8	M6	8.0	40	10	8	10	12.8	100	50	50
M8 x 10	M8	10.0	50	12	25	13	16.8	100	60	60
M10 x 12	M10	12.0	60	14	40	15	20.3	100	75	75
M12 x 16	M12	16.0	70	18	50	18	24.3	125	100	100
M16 x 20	M16	20.0	80	22	80	24	32.9	150	120	120



### Basic Load Performance in 32 MPa non-cracked concrete

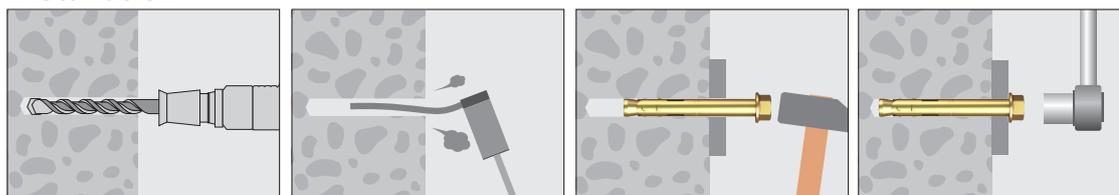
<sup>1</sup> Design Resistance is the governing minimum load resistance obtained by comparing relevant concrete and steel resistances. Strength reduction of  $\phi = 0.60$  for concrete and  $\phi = 0.80$  for steel are already included.

<sup>2</sup> 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 <sup>1</sup>	Working Load in Tension <sup>2</sup>
	h <sub>o</sub> (mm)	∅ N <sub>d</sub> (kN)	N <sub>WLL</sub> (kN)
∅6.5 (M5)	25	3.6	2.0
	30	4.5	2.2
	40	4.5	2.2
∅8 (M6)	40	6.4	3.2
	60	6.4	3.2
	80	6.4	3.2
∅10 (M8)	60	11.7	5.8
	80	11.7	5.8
	100	11.7	5.8
∅12 (M10)	70	17.5	9.2
	90	18.5	9.2
	120	18.5	9.2
∅16 (M12)	80	21.9	12.2
	100	26.9	13.4
	120	26.9	13.4
∅20 (M16)	90	26.5	14.7
	100	31.6	17.6
	125	45.8	25.1

Size	Embedment Depth	Edge Distance	Design Shear Resistance <sup>1</sup>	Working Load in Shear <sup>2</sup>
	h <sub>o</sub> (mm)	c <sub>1</sub> (mm)	∅ V <sub>d</sub> (kN)	V <sub>WLL</sub> (kN)
∅6.5 (M5)	40	50	2.2	1.1
		60	2.2	1.1
		70	2.2	1.1
∅8 (M6)	50	50	3.2	1.6
		60	3.2	1.6
		80	3.2	1.6
∅10 (M8)	60	60	5.8	2.9
		80	5.8	2.9
		100	5.8	2.9
∅12 (M10)	70	75	9.2	4.6
		90	9.2	4.6
		120	9.2	4.6
∅16 (M12)	80	100	13.4	6.7
		120	13.4	6.7
		150	13.4	6.7
∅20 (M16)	100	120	20.2	10.2
		150	25.1	12.5
		175	25.1	12.5

### Installation



Disclaimer: While every reasonable effort has been made to ensure that this document is correct at the time of printing, Hobson Engineering®, its agencies and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance upon the whole or any part of this document.

Bolt Tension | Anti-Vibration | Product Reliability | Traceability

[hobson.com.au](http://hobson.com.au) **QUALITY FASTENERS SINCE 1935**

