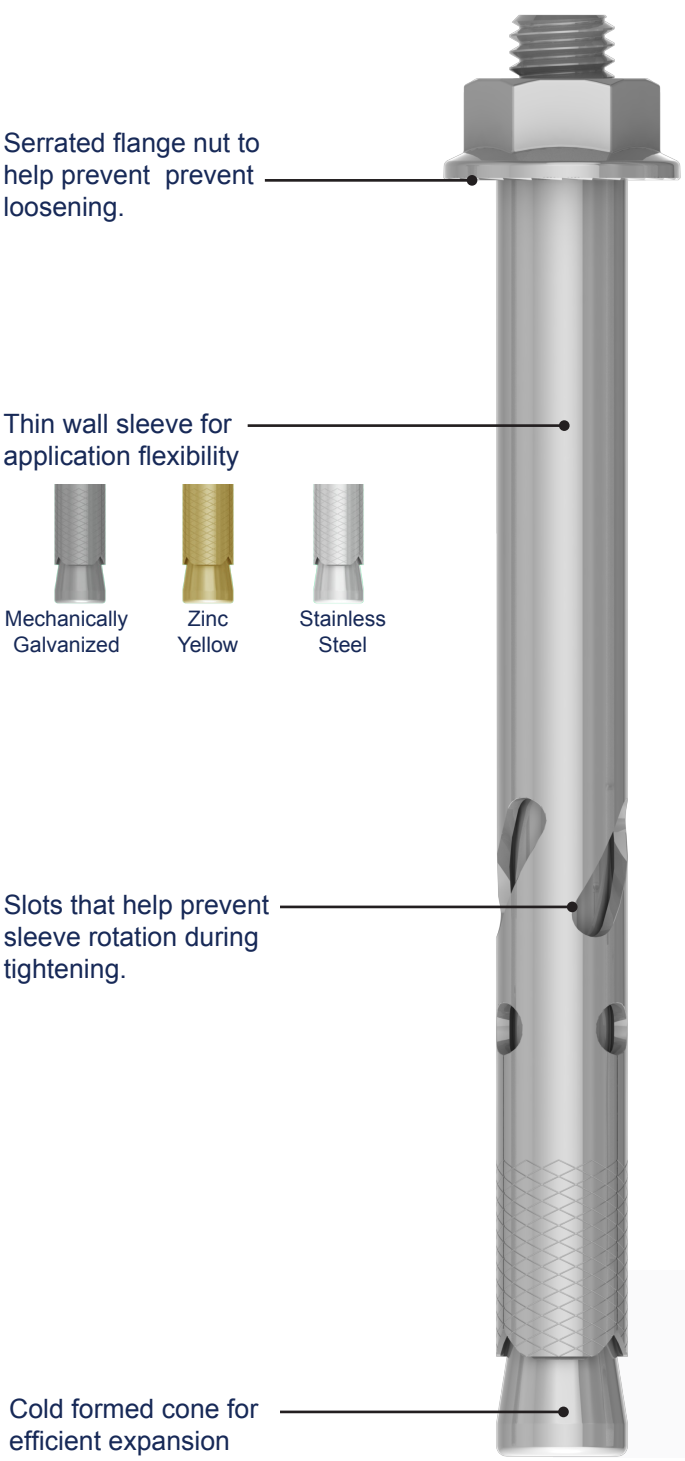


HobSpec DataSheet

Ty9aBolt® Sleeve Anchor



Serrated flange nut to help prevent loosening.

Thin wall sleeve for application flexibility



Slots that help prevent sleeve rotation during tightening.

Cold formed cone for efficient expansion

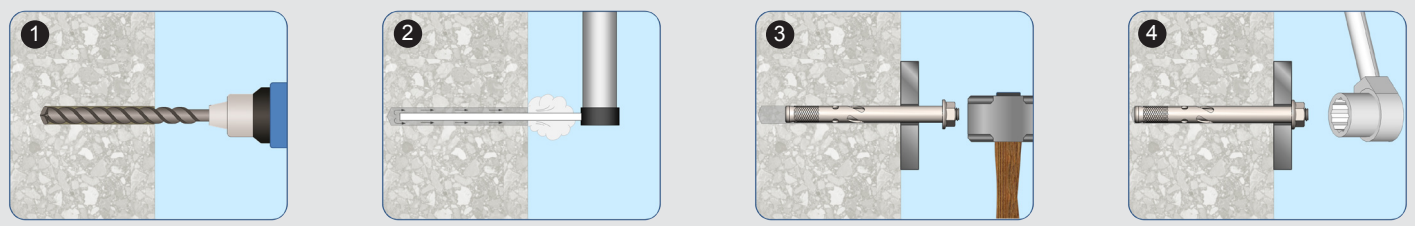
Hobson Tygabolt® are pre-assembled single unit wedge type anchors that are used in solid concrete applications. Fixing is achieved by controlled torqueing of the nut which draws the cone section up into the sleeve, thereby expanding it outward and forcing the Tygabolt™ against the sidewall of the pre-drilled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

- ✓ Suitable for light to medium duty loads
- ✓ Quick and easy to install
- ✓ Immediate loading is possible

Because of the Tygabolt's unique features, it can be used for many fastening applications, including but not limited to the following:

- Hand rail fastening
- Formwork support fastening
- Mechanical, electrical and pipe bracket fastening
- and many more...

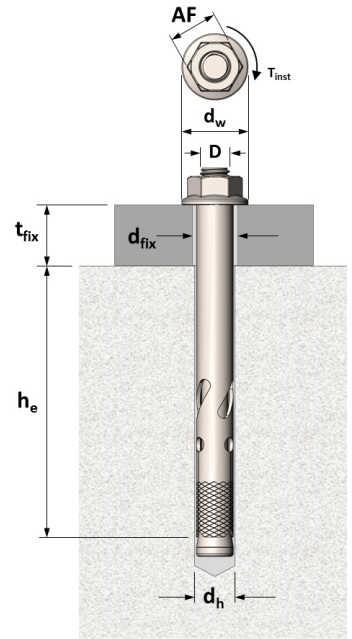
Tygabolt . Simple . Easy . Reliable



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Installation Guide

Tygabolt Size	Thread Size	Hole ϕ	Minimum depth	Hole ϕ on fixture	Torque Guide	Wrench size	Flange Head Diameter	Minimum concrete thickness	Minimum spacing	Minimum edge distance
	D	d_h (mm)	$h_{e,min}$ (mm)	d_{fix} (mm)	T_{inst} (N-m)	AF (mm)	d_w (mm)	h_{min} (mm)	S_{min} (mm)	c_{min} (mm)
Ø6.5	M5	6.5	25	8	5	8	10.9	75	50	50
Ø8	M6	8	40	10	8	10	12.8	100	50	50
Ø10	M8	10	50	12	25	13	16.8	100	60	60
Ø12	M10	12	60	14	40	15	20.3	100	75	75
Ø16	M12	16	70	18	50	18	24.3	125	100	100
Ø20	M16	20	80	22	80	24	32.9	150	120	120



Basic Load Performance in 32 MPa non-cracked concrete

¹ Limit State strengths are obtained by comparing the concrete and steel relevant strengths. Strength reduction of $\phi = 0.60$ for concrete and $\phi = 0.80$ for steel are already included.

² Working Loads (WLL) are obtained by comparing the concrete and steel relevant working loads. The factor of safety (FOS) used for steel is FOS = 2.5 and FOS = 3.0 is used for concrete.

Tygabolt Size	Embedment Depth h_e (mm)	Limit State Strength ¹ ϕN (kN)	Working Load Limit in Tension ² N_{WLL} (kN)	Tygabolt Size	Embedment Depth h_e (mm)	Edge Distance c_1 (mm)	Limit State Strength ¹ ϕV (kN)	Working Load Limit in Shear ² V_{WLL} (kN)
Ø6.5	25	1.60	0.90	Ø6.5	40	50	2.60	1.30
	30					60	3.30	1.30
	40					70	3.30	1.30
Ø8	40	3.20	1.80	Ø8	50	50	4.70	1.90
	60					60	4.70	1.90
	80					80	4.70	1.90
Ø10	60	4.80	2.70	Ø10	60	60	8.60	3.10
	80					80	8.60	3.40
	100					100	8.60	3.40
Ø12	70	9.40	5.20	Ø12	70	75	13.70	4.80
	90					90	13.70	5.40
	120					120	13.70	5.40
Ø16	80	19.00	10.50	Ø16	80	100	19.90	7.90
	100					120	19.90	7.90
	120					150	19.90	7.90
Ø20	90	22.90	12.70	Ø20	100	120	36.00	12.00
	100					150	37.20	14.80
	125					175	37.20	14.80

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