

SLEEVE ANCHOR

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Dogpoint tip that prevent thread damage during installation.

Serrated flange nut that help prevent loosening.

Three corrosion resistance options:



Expansion claws that prevent rotation during tightening.

Cold formed cone for efficient expansion



Hobson Tygabolts® are pre-assembled single unit wedge type anchors that are used in solid concrete applications. Fixing is achieved by controlled torquing 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.

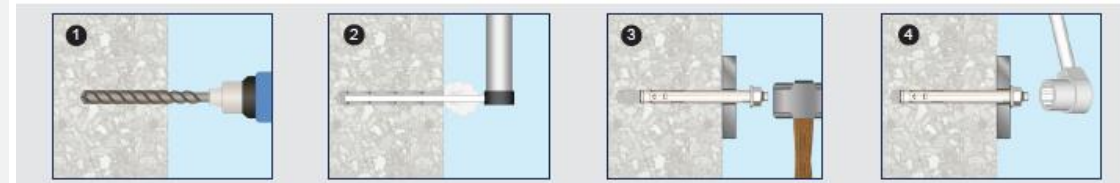
- ✓ Suitable for light to medium duty loads
- ✓ Quick and easy to install
- ✓ Immediate loading is possible

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



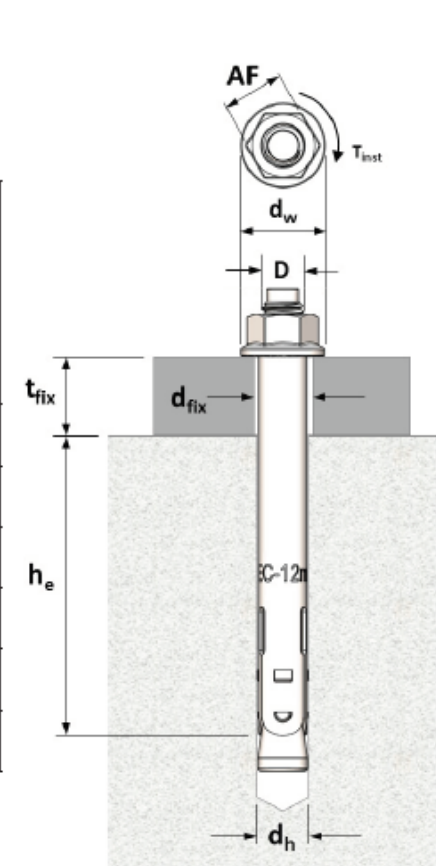
For further technical information please contact Southeast Fasteners direct



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Installation Guide

| Tygabolt Size | Thread Size | Hole \varnothing | Minimum depth | Hole \varnothing 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) |
| $\varnothing 6.5$ | M5 | 6.5 | 25 | 8 | 5 | 8 | 10.9 | 75 | 50 | 50 |
| $\varnothing 8$ | M6 | 8 | 40 | 10 | 8 | 10 | 12.8 | 100 | 50 | 50 |
| $\varnothing 10$ | M8 | 10 | 50 | 12 | 25 | 13 | 16.8 | 100 | 60 | 60 |
| $\varnothing 12$ | M10 | 12 | 60 | 14 | 40 | 15 | 20.3 | 100 | 75 | 75 |
| $\varnothing 16$ | M12 | 16 | 70 | 18 | 50 | 18 | 24.3 | 125 | 100 | 100 |
| $\varnothing 20$ | M16 | 20 | 80 | 22 | 80 | 24 | 32.9 | 150 | 120 | 120 |



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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. Capacity reduction factors of $\phi = 0.60$ for concrete and $\phi = 0.80$ for steel are already included.

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

| Tygabolt Size | Embedment Depth h_e (mm) | Design Tensile Resistance ¹ ϕN_d (kN) | Working Load in Tension ² N_{wll} (kN) |
|---------------|----------------------------------|--|---|
| Ø6.5 (M5) | 25 | 3.6 | 2.0 |
| | 30 | 4.5 | 2.2 |
| | 40 | 4.5 | 2.2 |
| 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 |

| Tygabolt Size | Embedment Depth h_e (mm) | Edge Distance c_1 (mm) | Design Shear Resistance ¹ ϕV_d (kN) | Working Load in Shear ² V_{wll} (kN) |
|---------------|----------------------------------|--------------------------------|--|---|
| Ø6.5 (M5) | 40 | 50 | 2.2 | 1.1 |
| | | 60 | 2.2 | 1.1 |
| | | 70 | 2.2 | 1.1 |
| 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 |



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