# PRODUCT DATA

**HOBSON ENGINEERING**

## Drop-In Anchor - 316 Stainless

Drop-In Anchor is a versatile medium duty anchor that delivers ample load bearing performance at shallow embedments. An expansion wedge inside the anchor is pushed towards the bottom end, thus producing expansion forces. The generated expansion force produces frictional resistance during anchor loading.

| Applications | Trades |
|---|---|
| • Hand rail fastening<br>• Form-work support fastening<br>• Mechanical, electrical and pipe bracket fastening<br>• Hanger systems for pipes, cable trays, ducts and ceiling fans.<br>• Reusable anchor point | • Installation of mechanical services<br>• Plumbers<br>• Electricians<br>• HVAC Installers<br>• Ceiling and partitioning contractors |

| Material | 316 | 316 Stainless |
|---|---|---|

| Finish | 316 | 316 Stainless |
|---|---|---|

| Part | QFind | Internal Thread Size | Length | Drill Diameter Size | Pack Qty |
|---|---|---|---|---|---|
| | | | L (mm) | D (mm) | |
| MDI16PCM060025 | **MDI100** | M6 | 25 | 8 | 100 |
| MDI16PCM080030 | **MDI101** | M8 | 30 | 10 | 100 |
| MDI16PCM100040 | **MDI102** | M10 | 40 | 12 | 50 |
| MDI16PCM120050 | **MDI103** | M12 | 50 | 15 | 50 |
| MDI16PCM160065 | **MDI104** | M16 | 65 | 20 | 25 |
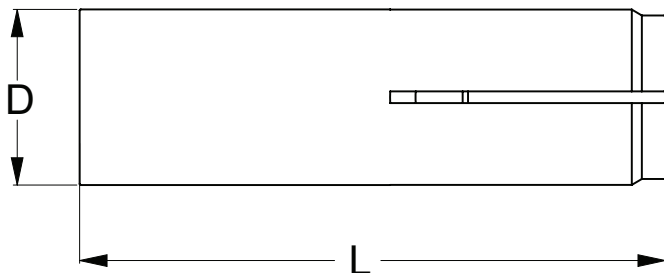
### Features

• Suitable for light to medium duty loads
• Setting tool provides visual check for correct installation
• Quick and easy to install
• Immediate loading once correctly installed
• Stainless steel for corrosive environments

### Recommended Installation Tools

**Drop-In Setting Tool**

| Part | QFind | Suit Anchor Size |
|---|---|---|
| MATMSZM060175 | **MAT102** | M6 |
| MATMSZM080178 | **MAT103** | M8 |
| MATMSZM100185 | **MAT105** | M10 |
| MATMSZM120190 | **MAT106** | M12 |
| MATMSZM160200 | **MAT107** | M16 |

Bolt Tension | Anti-Vibration | Product Reliability | Traceability

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## Drop-In Anchor - 316 Stainless

## Installation Guide

| Size | Thread Size | Hole Diameter | Anchor Length | Max. Thread Engagement | Guide Torque | Min. Concrete Thickness | Min. Edge Concrete | Min. Anchor Spacing |
|---|---|---|---|---|---|---|---|---|
| | D | $d_h$ (mm) | L=$h_0$ (mm) | $t_{e,max}$ (mm) | $T_{inst}$ (N-m) | $h_{min}$ (mm) | $c_{min}$ (mm) | $S_{min}$ (mm) |
| M6 x 25 | M6 | 8 | 25 | 10 | 4 | 100 | 95 | 55 |
| M8 x 30 | M8 | 10 | 30 | 12 | 8 | 100 | 95 | 60 |
| M10 x 40 | M10 | 12 | 40 | 15 | 15 | 120 | 135 | 100 |
| M12 x 50 | M12 | 15 | 50 | 20 | 35 | 130 | 165 | 120 |
| M16 x 65 | M16 | 20 | 65 | 25 | 60 | 160 | 200 | 150 |
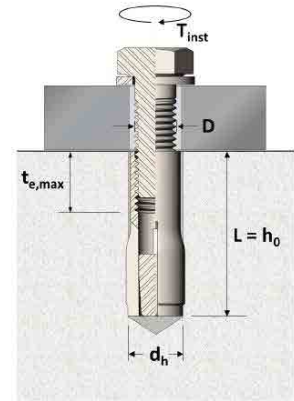
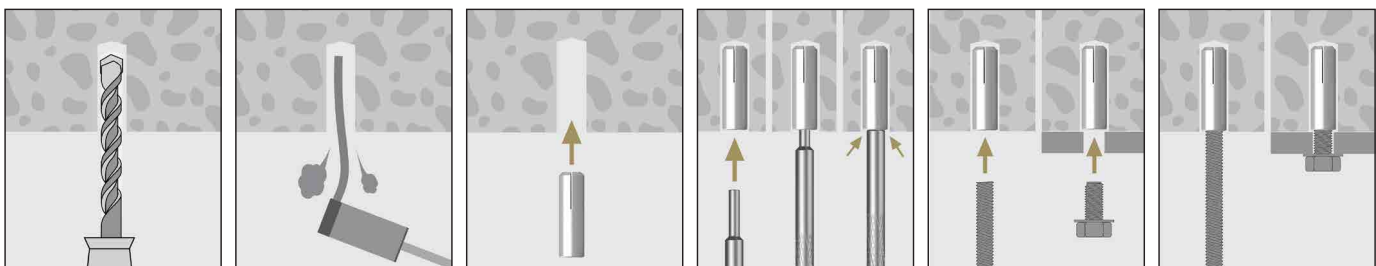## Basic Load Performance in 32 MPa non-cracked concrete

[1] *Design Resistance* is the governing minimum load resistance obtained by comparing relevant concrete and steel resistances. Strength reduction of φ = 0.60 for concrete and φ =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 | Depth | Design Tensile Resistance[1] | Working Load in Tension[2] |
|---|---|---|---|
| | $h_e$ (mm) | $\phi N_d$ (kN) | $N_{WLL}$ (kN) |
| M6 x 25 | 25 | 4.1 | 2.3 |
| M8 x 30 | 30 | 5.4 | 3.0 |
| M10 x 40 | 40 | 8.4 | 4.6 |
| M12 x 50 | 50 | 11.7 | 6.5 |
| M16 x 65 | 65 | 17.4 | 9.6 |

| Size | Depth | Edge Distance | Design Shear Resistance[1] | Working Load in Shear[2] |
|---|---|---|---|---|
| | $h_e$ (mm) | $c_1$ (mm) | $\phi V_d$ (kN) | $V_{WLL}$ (kN) |
| M6 x 25 | 25 | 95 | 8.6 | 4.7 |
| | | 110 | 10.7 | 5.9 |
| | | 125 | 12.9 | 7.2 |
| M8 x 30 | 30 | 95 | 9.7 | 5.4 |
| | | 120 | 13.8 | 7.6 |
| | | 150 | 19.2 | 10.7 |
| M10 x 40 | 40 | 135 | 19.7 | 10.9 |
| | | 150 | 23.0 | 12.8 |
| | | 175 | 29.0 | 16.1 |
| M12 x 50 | 50 | 165 | 30.3 | 16.8 |
| | | 180 | 34.5 | 19.2 |
| | | 200 | 40.5 | 22.5 |
| M16 x 65 | 65 | 200 | 42.6 | 23.7 |
| | | 220 | 49.2 | 27.3 |
| | | 250 | 59.6 | 33.1 |

## Installation

Bolt Tension | Anti-Vibration | Product Reliability | Traceability

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