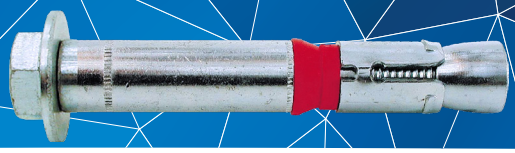
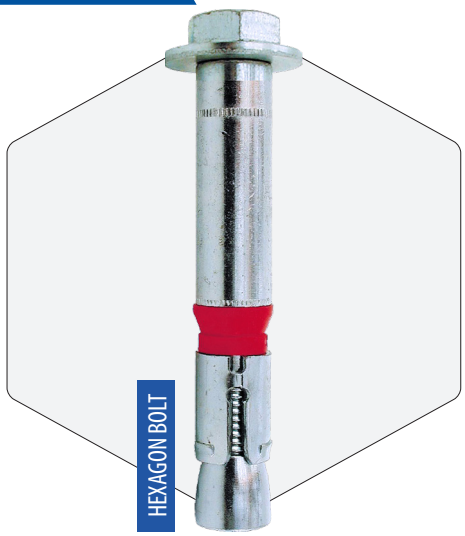
# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated






## INFORMATION

The torque controlled Heavy Duty Anchor Hexagon Bolt is a zinc plated high performance anchor for use in cracked/non-cracked concrete and structural applications such as:

- Columns
- Guard rails
- Façades
- Staircases
- Silo installation
- Machines
- Cantilever beams

The variety of sizes and different embedment depths provide flexibility in selecting the appropriate anchor based on the fixture thickness.

Anchor Calculator Software can be used for detailed verifications based on EN 1992-4 or EOTA guidelines.

## BASE MATERIAL

- Concrete C20/25 to C50/60
- Cracked Concrete
- Non-Cracked Concrete

## FEATURES

- High Performance
- C1, C2 Seismic Performance
- Wide Range Of Sizes
- Fast And Secure Installation
- Through Fixing
- Three way Expansion Sleeve
- Zinc Plated Min. 5µm
- Close Spacing And Edge Distance
- Performance Data for different embedment depth
- Reaction To Fire Class A1
- Fire Resistant Loading

## APPROVALS

European Technical Assessment

ETA-07/0331
Option 1 Structural Applications
C1, C2

Seismic Performance Categories

## SOFTWARE

Click here to download the software

## RELATED PRODUCTS



SDS+ Drill Bits



Hole Cleaning Pump

BOP1



Heavy Duty
Stud and Nut
BZP



Heavy Duty
Countersunk
BZP



Heavy Duty
Hexagon Bolt
A4 Stainless Steel



Heavy Duty
Stud and Nut
A4 Stainless Steel



Heavy Duty
Countersunk
A4 Stainless Steel

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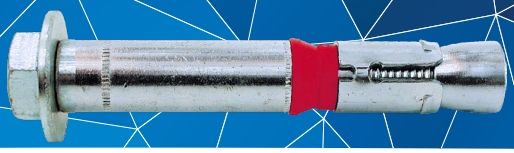
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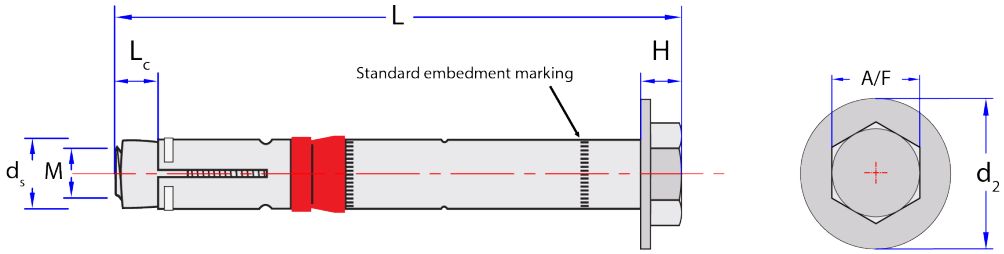
Re04 September 2026

Technical Data Sheet

# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated



## RANGE DATA




| RANGE DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | Size of Thread | Sleeve Diameter | Total Length | Cone Length | Head height | Width Across Flats | Washer Outer diameter |
| | M | ($d_s$) | (L) | ($L_c$) | (H) | (A/F) | ($d_2$) |
| | mm | mm | mm | mm | mm | mm | mm |
| JHD0610 | M6 | 10 | 75 | 10 | 6.8 | 10 | 18 |
| JHD0630 | | | 95 | | | | |
| JHD0650 | | | 115 | | | | |
| JHD0810 | M8 | 12 | 85 | 11 | 8.8 | 13 | 20 |
| JHD0830 | | | 105 | | | | |
| JHD0850 | | | 125 | | | | |
| JHD1015 | M10 | 15 | 106 | 14 | 10.9 | 17 | 25 |
| JHD1025 | | | 116 | | | | |
| JHD1045 | | | 136 | | | | |
| JHD1210 | M12 | 18 | 117 | 16 | 13.8 | 19 | 30 |
| JHD1220 | | | 127 | | | | |
| JHD1240 | | | 147 | | | | |
| JHD1270 | | | 177 | | | | |
| JHD1610 | M16 | 24 | 130 | 22 | 18.8 | 24 | 40 |
| JHD1620 | | | 150 | | | | |
| JHD1650 | | | 180 | | | | |
| JHD2030 | M20 | 28 | 192 | 26 | 21.8 | 30 | 50 |
| JHD2060 | | | 222 | | | | |
| JHD2460 | M24 | 32 | 262 | 32 | 26.5 | 36 | 60 |

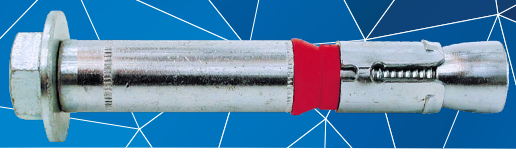
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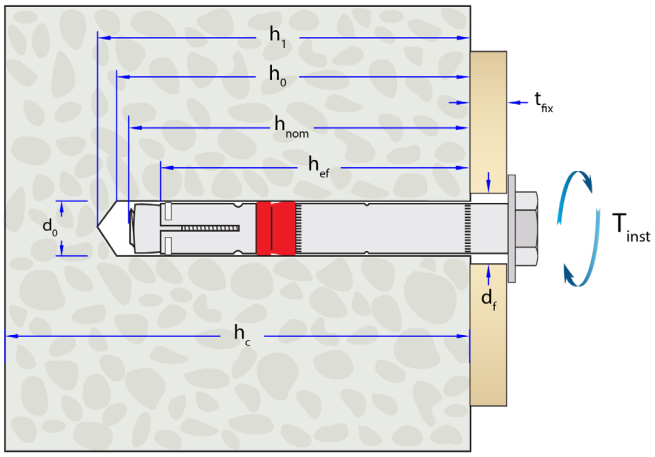
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# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated



## Installation Into Concrete




**Installation Parameters**

| Part Number | Drill Hole Diameter | Standard Embedment | | | | Deep Embedment | | | | Fixture Clearance Hole | Tightening Torque |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Min Hole Depth | Embedment Depth | Anchorage depth | Max Fixture Thickness N/A | Min Hole Depth | Embedment Depth | Anchorage depth | Max Fixture Thickness | | |
| | ($d_0$) | ($h_1$) | ($h_{nom}$) | ($h_{ef}$) | ($t_{fix}$) | ($h_1$) | ($h_{nom}$) | ($h_{ef}$) | ($t_{fix}$) | ($d_f$) | ($T_{inst}$) |
| | mm | mm | mm | mm | mm | mm | mm | mm | mm | mm | Nm |
| JHD0610 | 10 | 65 | 60 | 50 | 10 | N/A | | | | 12 | 15 |
| JHD0630 | | | | | 30 | 90 | 85 | 75 | 5 | | |
| JHD0650 | | | | | 50 | | | | 25 | | |
| JHD0810 | 12 | 80 | 70 | 60 | 10 | N/A | | | | 14 | 30 |
| JHD0830 | | | | | 30 | | | | | | |
| JHD0850 | | | | | 50 | 120 | 110 | 100 | 10 | | |
| JHD1015 | 15 | 95 | 85 | 71 | 15 | N/A | | | | 17 | 50 |
| JHD1025 | | | | | 25 | | | | | | |
| JHD1045 | | | | | 45 | 130 | 120 | 106 | 10 | | |
| JHD1210 | 18 | 105 | 95 | 80 | 10 | N/A | | | | 20 | 80 |
| JHD1220 | | | | | 20 | | | | | | |
| JHD1240 | | | | | 40 | 130 | 120 | 105 | 15 | | |
| JHD1270 | | | | | 70 | | | | 45 | | |
| JHD1610 | 24 | 130 | 120 | 100 | 10 | N/A | | | | 26 | 160 |
| JHD1620 | | | | | 20 | 140 | 130 | 110 | 10 | | |
| JHD1650 | | | | | 50 | | | | 40 | | |
| JHD2030 | 28 | 160 | 150 | 125 | 30 | N/A | | | | 31 | 280 |
| JHD2060 | | | | | 60 | 200 | 190 | 165 | 20 | | |
| JHD2460 | 32 | 180 | 170 | 150 | 60 | 220 | 210 | 190 | 20 | 35 | 280 |

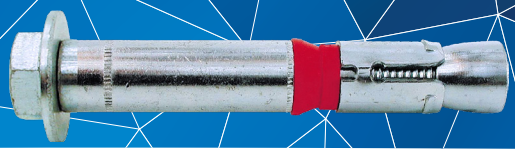
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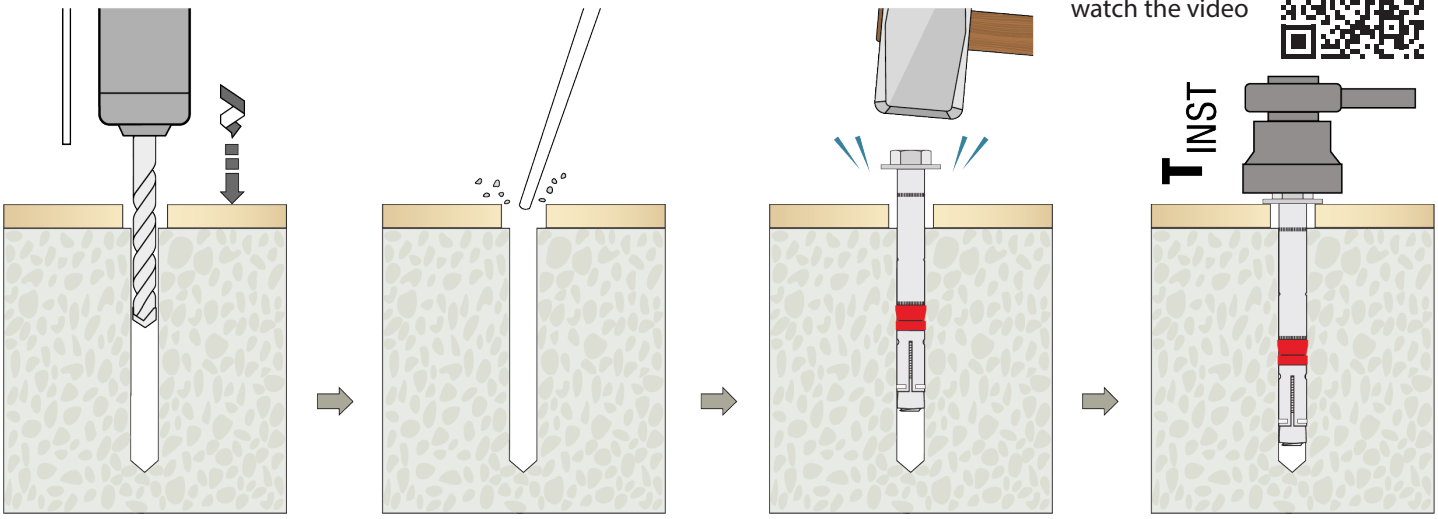
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# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated



## INSTALLATION INSTRUCTIONS

Click on the QR code or scan it to watch the video




-Position fixture and drill correct diameter hole to corresponding depth

-Clean hole by blowing to remove drilling debris and dust

-Insert anchor through fixture into concrete and lightly hammer into concrete

-Tighten with torque wrench to recommended torque

## PERFORMANCE DATA FOR STRUCTURAL APPLICATIONS (NON-CRACKED CONCRETE)

**Performance Data (C20/25 non-cracked concrete) Standard Embedment**

| Size Of Thread | Embedment Depth | Minimum Concrete Thickness | Characteristic Resistance | | Design Resistance | | Recommended Resistance | |
|---|---|---|---|---|---|---|---|---|
| | $h_{nom}$ | $h_{min}$ | Tensile ($N_{Rk}$) | Shear ($V_{Rk}$) | Tensile ($N_{Rd}$) | Shear ($V_{Rd}$) | Tensile($N_{Rrec}$) | Shear ($V_{Rrec}$) |
| - | mm | mm | kN | kN | kN | kN | kN | kN |
| M6 | 60 | 100 | 16 | 18 | 10.6 | 14.4 | 7.6 | 10.2 |
| M8 | 70 | 120 | 20 | 30 | 13.3 | 24 | 9.5 | 17.1 |
| M10 | 85 | 140 | 29.4 | 48 | 20 | 38.4 | 14 | 27.4 |
| M12 | 95 | 160 | 35.2 | 70.4 | 23.4 | 46.9 | 16.7 | 33.5 |
| M16 | 120 | 200 | 49.1 | 98.3 | 32.8 | 65.5 | 23.4 | 46.8 |
| M20 | 150 | 250 | 68.7 | 137.5 | 45.8 | 91.6 | 32.7 | 65.4 |
| M24 | 170 | 300 | 90.3 | 180.7 | 60.2 | 120.5 | 43 | 86 |

**Performance Data (C20/25 non-cracked concrete) Deep Embedment**

| Size Of Thread | Embedment Depth | Minimum Concrete Thickness | Characteristic Resistance | | Design Resistance | | Recommended Resistance | |
|---|---|---|---|---|---|---|---|---|
| | $h_{nom}$ | $h_{min}$ | Tensile ($N_{Rk}$) | Shear ($V_{Rk}$) | Tensile ($N_{Rd}$) | Shear ($V_{Rd}$) | Tensile($N_{Rrec}$) | Shear ($V_{Rrec}$) |
| - | mm | mm | kN | kN | kN | kN | kN | kN |
| M6 | 85 | 125 | 16 | 18 | 10.6 | 14.4 | 7.6 | 10.2 |
| M8 | 110 | 160 | 20 | 30 | 13.3 | 24 | 9.5 | 17.1 |
| M10 | 120 | 175 | 30 | 48 | 20 | 38.4 | 14.2 | 27.4 |
| M12 | 120 | 185 | 36 | 73 | 24 | 58.4 | 17.1 | 41.7 |
| M16 | 130 | 210 | 50 | 113.5 | 33.3 | 75.6 | 23.8 | 54 |
| M20 | 190 | 290 | 70 | 150 | 46.6 | 120 | 33.3 | 85.7 |
| M24 | 210 | 340 | 128.8 | 200 | 85.8 | 160 | 61.3 | 114.2 |

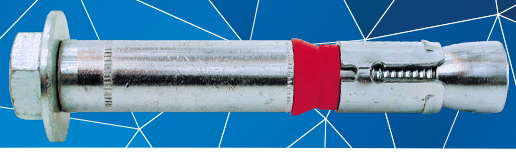
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# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated



## PERFORMANCE DATA FOR STRUCTURAL APPLICATIONS (CRACKED CONCRETE)

| Performance Data* (C20/25 cracked concrete) Standard Embedment | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Size Of Thread | Embedment Depth | Minimum Concrete Thickness | Characteristic Resistance | | Design Resistance | | Recommended Resistance | |
| | $h_{nom}$ | $h_{min}$ | Tensile ($N_{Rk}$) | Shear ($V_{Rk}$) | Tensile ($N_{Rd}$) | Shear ($V_{Rd}$) | Tensile($N_{Rrec}$) | Shear ($V_{Rrec}$) |
| - | mm | mm | kN | kN | kN | kN | kN | kN |
| M6 | 60 | 100 | 5 | 18 | 3.3 | 14.4 | 2.3 | 10.2 |
| M8 | 70 | 120 | 12 | 32 | 8 | 21.3 | 5.7 | 15.2 |
| M10 | 85 | 140 | 16 | 41.2 | 10.6 | 27.4 | 7.6 | 19.6 |
| M12 | 95 | 160 | 24.6 | 49.2 | 16.4 | 32.8 | 11.74 | 23.4 |
| M16 | 120 | 200 | 34.4 | 68.8 | 22.9 | 45.9 | 16.4 | 32.7 |
| M20 | 150 | 250 | 48.1 | 96.2 | 32 | 64.1 | 22.9 | 45.8 |
| M24 | 170 | 300 | 63.2 | 126.5 | 42.1 | 84.3 | 30.1 | 60.2 |

| Performance Data* (C20/25 cracked concrete) Deep Embedment | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Size Of Thread | Embedment Depth | Minimum Concrete Thickness | Characteristic Resistance | | Design Resistance | | Recommended Resistance | |
| | $h_{nom}$ | $h_{min}$ | Tensile ($N_{Rk}$) | Shear ($V_{Rk}$) | Tensile ($N_{Rd}$) | Shear ($V_{Rd}$) | Tensile($N_{Rrec}$) | Shear ($V_{Rrec}$) |
| - | mm | mm | kN | kN | kN | kN | kN | kN |
| M6 | 85 | 125 | 5 | 18 | 3.3 | 14.4 | 2.3 | 10.2 |
| M8 | 110 | 160 | 12 | 30 | 8 | 24 | 5.7 | 17.1 |
| M10 | 120 | 175 | 16 | 48 | 10.6 | 38.4 | 7.6 | 27.4 |
| M12 | 120 | 185 | 25 | 74.1 | 16.6 | 49.4 | 11.9 | 35.2 |
| M16 | 130 | 210 | 36 | 79.4 | 24 | 52.9 | 17.1 | 37.8 |
| M20 | 190 | 290 | 50 | 145.9 | 33.3 | 97.3 | 23.8 | 69.5 |
| M24 | 210 | 340 | 65 | 180.3 | 43.3 | 120.2 | 30.9 | 85.8 |

* Important notes:

- Fasteners subject to static and quasi-static loads. Please refer to ETA approval or the JCP Anchor Calculation Program for the seismic loads.
- Performance data stated for a single anchor, without the effect of spacing and edge distances. The influence of these parameters must be verified where applicable.
- Minimum concrete thickness, hole diameter, and embedment depth shall correspond to the dimensions stated in this document.
- Concrete strength class C20/25 is assumed.
- Drill holes produced using rotary hammer drilling, unless otherwise noted.
- Installation carried out strictly in accordance with the product's Installation Instructions and performed by a trained operator.
- Characteristic and design resistances derived from ETA approval.
- Design resistances are calculated from characteristic values using the appropriate partial safety factors corresponding to the decisive failure mode.
- The Recommended Resistance is calculated using an additional safety factor ($\gamma_{Add}$) equal to 1.4.
- Performance data is valid for shear loading without a lever arm; installations involving a lever arm require additional verifications.
- Performance data is not valid for combined tensile and shear loading; where combined loading occurs, further checks shall be performed.
- When concrete-related strength factors are applied, ensure that the resulting resistance value does not exceed the steel design resistance.
- For project-specific assessments or conditions not explicitly covered, download the JCP Anchor Calculation Program.

JCP PRO Suite
Click here to download the software

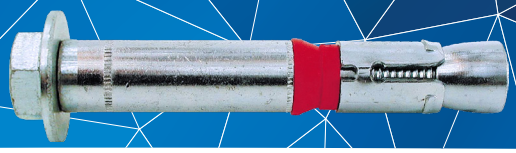
For variations in structure thickness, reduced spacing and edge calculations download the free **A**nchor **C**alculation **P**rogram from www.jcpfixings.co.uk

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# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated



## FIRE RESISTANCE DATA

| Fire Resistance Data (C20/25 to C50/60 cracked or non-cracked concrete) Standard Embedment* | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size Of Thread | Embedment Depth $h_{nom}$ | Minimum Concrete Thickness ($h_{min}$) | Design Resistance | | | | | | | | Recommended Resistance | | | | | | | |
| | | | 30min (R30) | | 60min (R60) | | 90min (R90) | | 120min (R120) | | 30min (R30) | | 60min (R60) | | 90min (R90) | | 120min (R120) | |
| | | | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) |
| | mm | mm | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) |
| M6 | 60 | 100 | 1 | 1 | 0.8 | 0.8 | 0.6 | 0.6 | 0.4 | 0.4 | 0.7 | 0.7 | 0.5 | 0.5 | 0.4 | 0.4 | 0.2 | 0.2 |
| M8 | 70 | 120 | 1.9 | 1.9 | 1.5 | 1.5 | 1 | 1 | 0.8 | 0.8 | 1.3 | 1.3 | 1 | 1 | 0.7 | 0.7 | 0.5 | 0.5 |
| M10 | 85 | 140 | 4 | 4.3 | 3.2 | 3.2 | 2.1 | 2.1 | 1.5 | 1.5 | 2.8 | 3 | 2.2 | 2.2 | 1.5 | 1.5 | 1 | 1 |
| M12 | 95 | 160 | 6.2 | 6.3 | 4.6 | 4.6 | 3 | 3 | 2 | 2 | 4.4 | 4.5 | 3.2 | 3.2 | 2.1 | 2.1 | 1.4 | 1.4 |
| M16 | 120 | 200 | 9 | 11.6 | 8.6 | 8.6 | 5 | 5 | 3.1 | 3.1 | 6.4 | 8.2 | 6.1 | 6.1 | 3.5 | 3.5 | 2.2 | 2.2 |
| M20 | 150 | 250 | 12.5 | 18.3 | 12.5 | 13.5 | 7.7 | 7.7 | 4.9 | 4.9 | 8.9 | 13 | 8.9 | 9.6 | 5.5 | 5.5 | 3.5 | 3.5 |
| M24 | 170 | 300 | 16.2 | 26.3 | 16.2 | 19.5 | 12.6 | 12.6 | 9.2 | 9.2 | 11.6 | 18.7 | 11.6 | 13.9 | 9 | 9 | 6.5 | 6.5 |

| Fire Resistance Data (C20/25 to C50/60 cracked or non-cracked concrete) Deep Embedment* | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Size Of Thread | Embedment Depth $h_{nom}$ | Minimum Concrete Thickness ($h_{min}$) | Design Resistance | | | | | | | | Recommended Resistance | | | | | | | |
| | | | 30min (R30) | | 60min (R60) | | 90min (R90) | | 120min (R120) | | 30min (R30) | | 60min (R60) | | 90min (R90) | | 120min (R120) | |
| | | | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rd,fi}$) | Shear ($V_{Rd,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) | Tensile ($N_{Rrec,fi}$) | Shear ($V_{Rrec,fi}$) |
| | mm | mm | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) | (kN) |
| M6 | 85 | 125 | 1 | 1 | 0.8 | 0.8 | 0.6 | 0.6 | 0.4 | 0.4 | 0.7 | 0.7 | 0.5 | 0.5 | 0.4 | 0.4 | 0.2 | 0.2 |
| M8 | 110 | 160 | 1.9 | 1.9 | 1.5 | 1.5 | 1 | 1 | 0.8 | 0.8 | 1.3 | 1.3 | 1 | 1 | 0.7 | 0.7 | 0.5 | 0.5 |
| M10 | 120 | 175 | 4 | 4.3 | 3.2 | 3.2 | 2.1 | 2.1 | 1.5 | 1.5 | 2.8 | 3 | 2.2 | 2.2 | 1.5 | 1.5 | 1 | 1 |
| M12 | 120 | 185 | 6.2 | 6.3 | 4.6 | 4.6 | 3 | 3 | 2 | 2 | 4.4 | 4.5 | 3.2 | 3.2 | 2.1 | 2.1 | 1.4 | 1.4 |
| M16 | 130 | 210 | 9 | 11.6 | 8.6 | 8.6 | 5 | 5 | 3.1 | 3.1 | 6.4 | 8.2 | 6.1 | 6.1 | 3.5 | 3.5 | 2.2 | 2.2 |
| M20 | 190 | 290 | 12.5 | 18.3 | 12.5 | 13.5 | 7.7 | 7.7 | 4.9 | 4.9 | 8.9 | 13 | 8.9 | 9.6 | 5.5 | 5.5 | 3.5 | 3.5 |
| M24 | 210 | 340 | 16.2 | 26.3 | 16.2 | 19.5 | 12.6 | 12.6 | 9.2 | 9.2 | 11.6 | 18.7 | 11.6 | 13.9 | 9 | 9 | 6.5 | 6.5 |

* The determination covers anchors with a fire attack from one side only. If the fire attack is from more than one side, the design method may be taken only, if the edge distance of the anchor is $c \geq 300$ mm and $\geq 2\ h_{ef}$.

**For combined loads, use Anchor Calculation Program.

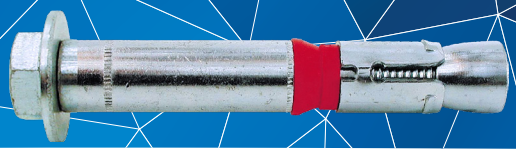


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# Heavy Duty Anchor
## Hexagon Bolt Bright Zinc Plated



## SUPPLEMENTARY DATA

| Influence Of Concrete Strength (Cracked/Non-cracked Concrete) | | | | | |
|---|---|---|---|---|---|
| Concrete strength | | C20/25 | C30/37 | C40/50 | C50/60 |
| Cylinder | $N/mm^2$ | 20 | 30 | 40 | 50 |
| Cube | $N/mm^2$ | 25 | 37 | 50 | 60 |
| Factor | - | 1.0 | 1.22 | 1.41 | 1.55 |

Important Note:
When using concrete factors ensure that loads do not exceed Steel Design Resistance.

| Steel Failure | | | | | | |
|---|---|---|---|---|---|---|
| Size Of Thread | Tensile Resistance | | | Shear Resistance | | |
| | Characteristic Resistance ($N_{Rk,s}$) | Design Resistance ($N_{Rd,s}$) | Recommended Resistance ($N_{Rrec,s}$) | Characteristic Resistance ($V_{Rk,s}$) | Design Resistance ($V_{Rd,s}$) | Recommended Resistance ($V_{Rrec,s}$) |
| - | kN | kN | kN | kN | kN | kN |
| M6 | 16 | 10.6 | 7.5 | 18 | 14.4 | 10.2 |
| M8 | 29 | 19.3 | 13.8 | 30 | 24 | 17.1 |
| M10 | 46 | 30.6 | 21.8 | 48 | 38.4 | 27.4 |
| M12 | 67 | 44.6 | 31.8 | 73 | 58.4 | 41.7 |
| M16 | 126 | 84.0 | 60 | 126 | 100.8 | 72 |
| M20 | 196 | 130.6 | 93.2 | 150 | 120 | 85.7 |
| M24 | 282.0 | 188.0 | 134.2 | 200.0 | 160.0 | 114.2 |

Technical Data Sheet

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