# Shield Anchors
## Zinc and Yellow Plated Hook Bolt

## INFORMATION

The ZYP Hook Bolt shield anchor is an Zinc and Yellow Plated three-way expansion shield suitable for use in concrete and brick

The thick walls of the expanders give the anchor its exceptional grip and allow it to cater for oversized holes caused by powerful drills in weaker materials such as brickwork.

It provides a reliable fixing solution for applications such as:

- Attaching Wires
- Bird Deterrents
- Ladder Restraints

## BASE MATERIAL

- Concrete C20/25 to C50/60
- Non-Cracked Concrete
- Solid Brickwork
- Solid Concrete Blocks

## FEATURES

- Three-way Expansion
- Medium Duty Anchor
- Zinc and Yellow Plated (ZYP)
- Reaction To Fire Class A1

## RELATED PRODUCTS

SDS+ Drill Bits

Hole Cleaning Pump

BOP1

Loose Bolt ZYP

Projecting Bolt ZYP

Shield only ZYP

Shield only A4 Stainless Steel

Eye Bolt Shield Anchor ZYP

Technical Data Sheet

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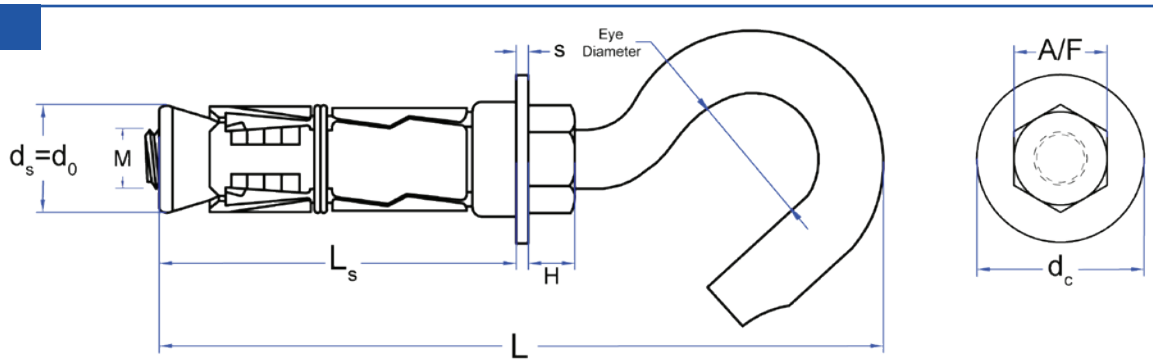
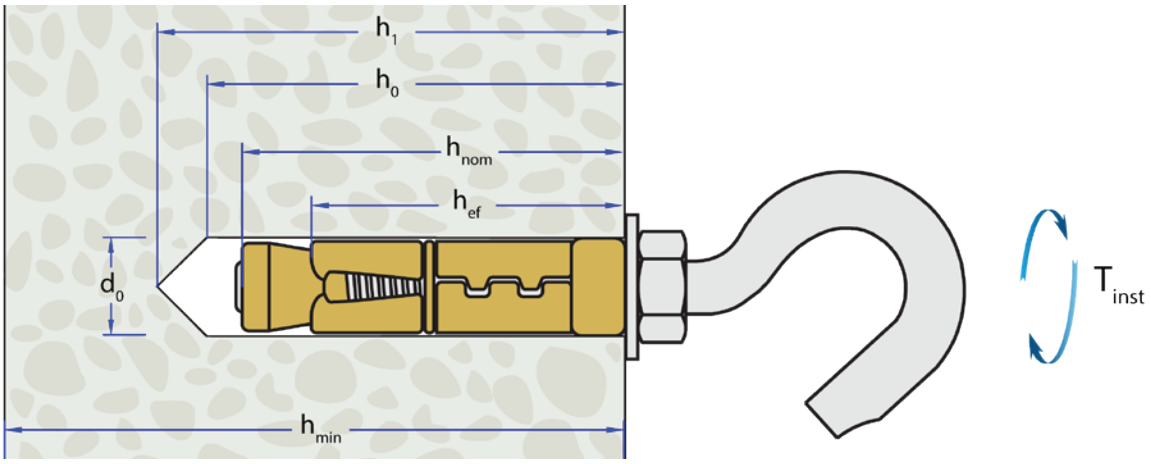
## RANGE DATA




| RANGE DATA | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Part Number | Size of Thread | Sleeve Diameter = Drill Hole Diameter | Length | Shield Length | Head Height* | Width Across Flats* | Washer Diameter* | Washer Thickness* | Eye Diameter |
| | M | $d_s = d_0$ | L | $L_s$ | H | A/F | $d_c$ | s | $d_{eye}$ |
| | mm | mm | mm | mm | mm | mm | mm | mm | mm |
| AHBM06 | 6 | 12 | 80 | 45 | 5.0 | 10 | 12 | 1.5 | 8 |
| AHBM08 | 8 | 14 | 100 | 50 | 5.5 | 13 | 16 | 1.5 | 10 |
| AHBM10 | 10 | 16 | 120 | 60 | 8.0 | 17 | 20 | 2.0 | 12 |
| AHBM12 | 12 | 20 | 145 | 75 | 10.0 | 19 | 24 | 2.5 | 16 |

## INSTALLATION INTO CONCRETE




| RANGE DATA | | | | | | | |
|---|---|---|---|---|---|---|---|
| Part Number | Drill Hole Diameter | Minimum Concrete Thickness | Minimum Hole Depth | Nominal Embedment Depth | Installation Torque | Minimum Spacing | Minimum Edge Distance |
| | $d_0$ | $h_{min}$ | $h_1$ | $h_{nom}$ | $T_{inst}$ | $(s_{min})$ | $(c_{min})$ |
| | mm | mm | mm | mm | Nm | mm | mm |
| AHBM06 | 12 | 100 | 50 | 45 | 6 | 150 | 100 |
| AHBM08 | 14 | 100 | 55 | 50 | 14 | 150 | 100 |
| AHBM10 | 16 | 100 | 65 | 60 | 27 | 200 | 150 |
| AHBM12 | 20 | 120 | 85 | 75 | 46 | 250 | 200 |

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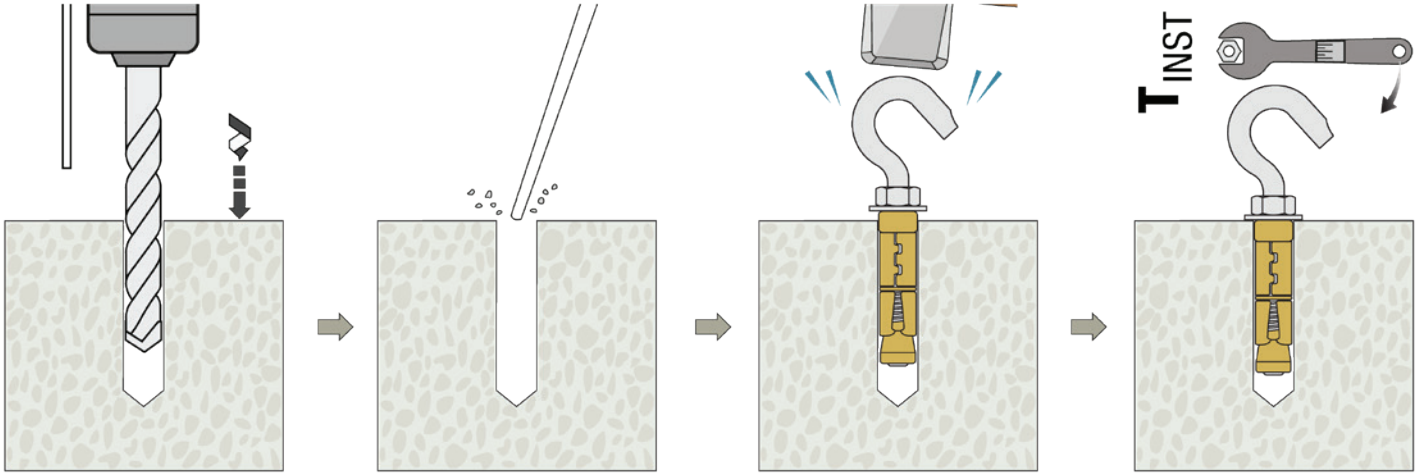
## INSTALLATION INSTRUCTIONS INTO SOLID CONCRETE




-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

-Clean the hole by blowing three times to remove drilling debris and dust

- Insert the shield with the hook assembled into the concrete using a hammer, making sure to tap gently to avoid deforming the hook

-Tighten the nut with a torque wrench to the recommended value

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

| Performance Data* (C20/25 to C50/60 non-cracked concrete) | | | | | | |
|---|---|---|---|---|---|---|
| Size of Thread | Drill Hole Diameter | Minimum Hole Depth | Minimum Concrete Thickness | Characteristic Resistance | Design Resistance | Recommended Resistance |
| M | $d_0$ | $h_1$ | $h_{min}$ | Tensile ($N_{Rk}$) | Tensile ($N_{Rd}$) | Tensile($N_{Rrec}$) |
| mm | mm | mm | mm | kN | kN | kN |
| 6 | 12 | 50 | 100 | 2.0 | 1.1 | 0.7 |
| 8 | 14 | 55 | 100 | 3.0 | 1.6 | 1.1 |
| 10 | 16 | 65 | 100 | 5.5 | 3.0 | 2.1 |
| 12 | 20 | 85 | 120 | 8.0 | 4.4 | 3.1 |

* Important notes:

- Fasteners subject to static and quasi-static tensile loads only.
- This product can not be used as lifting points or for use with safety restraint harnesses.
- 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 to C50/60 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 JCP internal technical data.
- 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.



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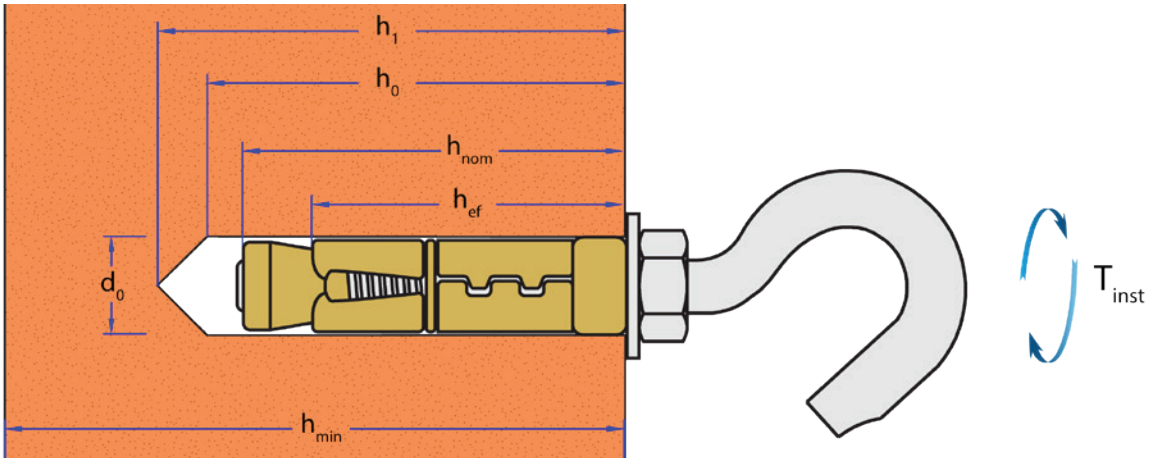
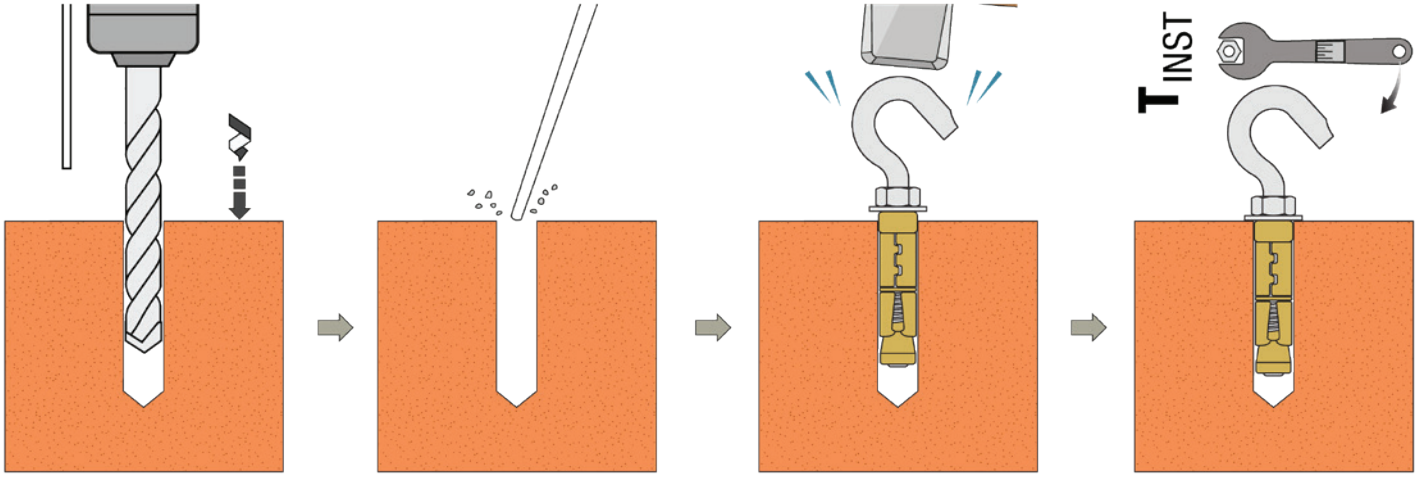
## INSTALLATION INTO SOLID BRICKWORK (20 N/mm²)




| RANGE DATA | | | | | | |
|---|---|---|---|---|---|---|
| Part Number | Drill Hole Diameter | Minimum Hole Depth | Nominal Embedment Depth | Installation Torque | Minimum Spacing | Minimum Edge Distance |
| | $d_0$ | $h_1$ | $h_{nom}$ | $T_{inst}$ | ($s_{min}$) | ($c_{min}$) |
| | mm | mm | mm | Nm | mm | mm |
| AHBM06 | 12 | 50 | 45 | 5 | * | * |
| AHBM08 | 14 | 55 | 50 | 12 | * | * |
| AHBM10 | 16 | 65 | 60 | 22 | * | * |
| AHBM12 | 20 | 85 | 75 | 38 | * | * |

* Fixings shall be installed only in solid structural load-bearing brickwork and positioned centrally within the body of the brick. Anchors shall not be installed in the edge brick adjacent to a free edge. It is assumed that one fixing only is installed per brick unit, and spacing shall be such that anchors are not set in the same or in adjacent bricks, leaving at least one clear brick unit between fixings.

## INSTALLATION INSTRUCTIONS INTO SOLID BRICKWORK (20 N/mm²)




-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

-Clean the hole by blowing three times to remove drilling debris and dust

- Insert the shield with the hook assembled into the masonry using a hammer, making sure to tap gently to avoid deforming the hook

-Tighten the nut with a torque wrench to the recommended value

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# Shield Anchors
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## PERFORMANCE DATA FOR APPLICATIONS INTO SOLID BRICKWORK (20 N/mm²)

| Performance Data* (Solid Brickwork 20N/mm²) | | | | |
|---|---|---|---|---|
| Size of Thread | Drill Hole Diameter | Characteristic Resistance | Design Resistance | Recommended Resistance |
| M | $d_0$ | Tensile ($N_{Rk}$) | Tensile ($N_{Rd}$) | Tensile($N_{Rrec}$) |
| mm | mm | kN | kN | kN |
| 6 | 12 | 2.0 | 1.1 | 0.7 |
| 8 | 14 | 3.0 | 1.6 | 1.1 |
| 10 | 16 | 5.5 | 3.0 | 2.1 |
| 12 | 20 | 8.0 | 4.4 | 3.1 |

* Important notes:

- Fasteners subject to static and quasi-static tensile loads only.
- This product can not be used as lifting points or for use with safety restraint harnesses.
- 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.
- It is assumed that anchors are installed centrally within the body of a 20 N/mm² brick, with one fixing only per brick unit.
- Anchors shall not be installed in the edge brick adjacent to a free edge, and spacing shall be arranged such that anchors are not installed in the same or in adjacent bricks.
- 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 JCP internal technical data.
- 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.

**Due to the variable nature of bricks and blocks, the above figures are for guidance only. Site tests are recommended to determine the allowable resistance under the actual site conditions and specific base material characteristics.**

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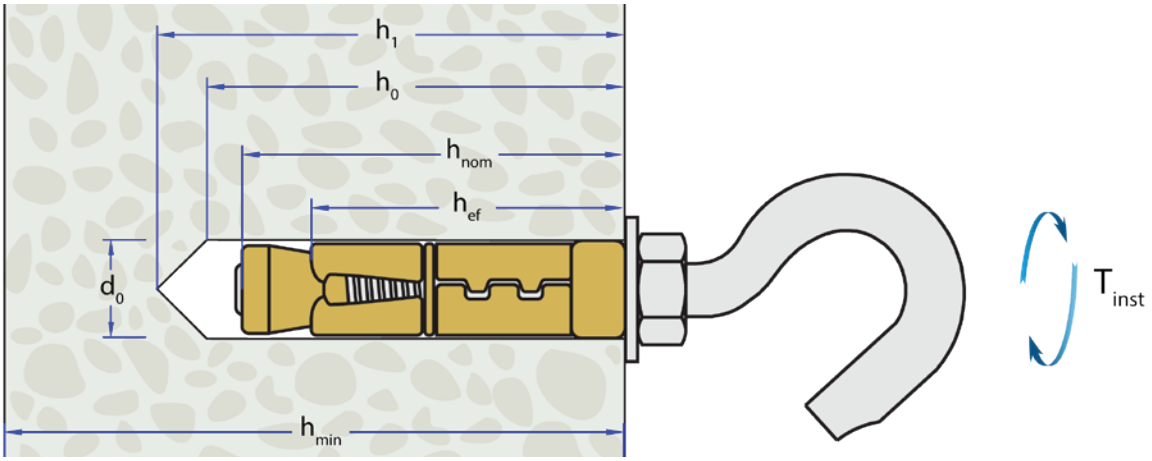
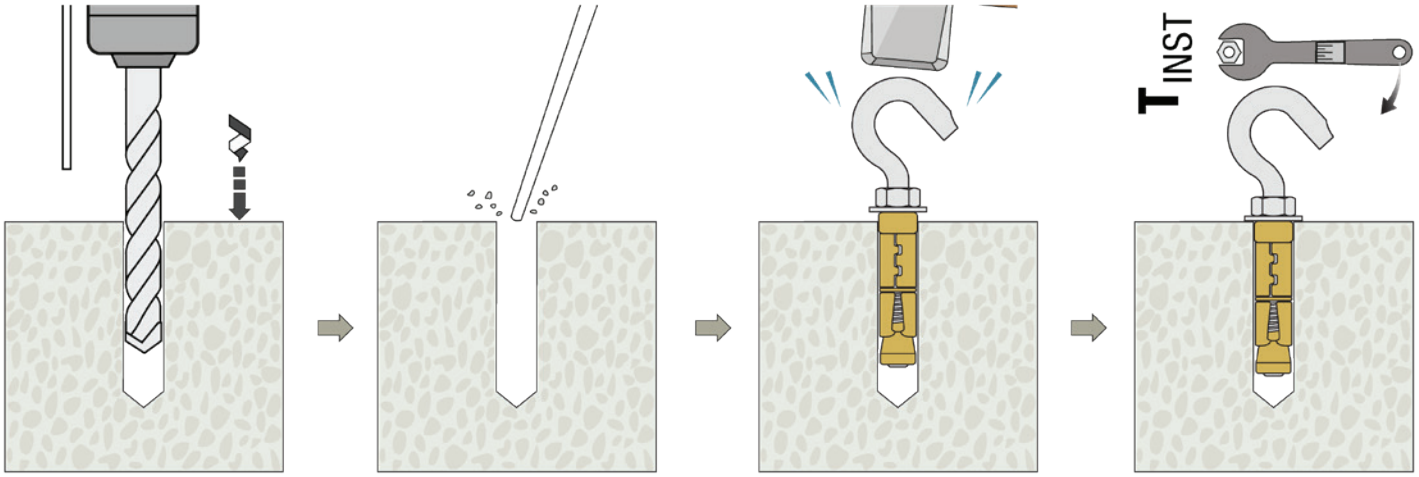
## INSTALLATION INTO SOLID CONCRETE BLOCKS (7 N/mm²)




| RANGE DATA | | | | | | |
|---|---|---|---|---|---|---|
| Part Number | Drill Hole Diameter | Minimum Hole Depth | Nominal Embedment Depth | Installation Torque | Minimum Spacing | Minimum Edge Distance |
| | $d_0$ | $h_1$ | $h_{nom}$ | $T_{inst}$ | ($s_{min}$) | ($c_{min}$) |
| | mm | mm | mm | Nm | mm | mm |
| AHBM06 | 12 | 50 | 45 | 5 | * | * |
| AHBM08 | 14 | 55 | 50 | 12 | * | * |
| AHBM10 | 16 | 65 | 60 | 22 | * | * |
| AHBM12 | 20 | 85 | 75 | 38 | * | * |

* Fixings shall be installed only in solid structural load-bearing concrete block-work and positioned centrally within the body of the block. The minimum edge distance from the edge of the block shall be not less than $1.5 \times h_{nom}$. Where block dimensions permit, two or more anchors may be installed within the same block or in adjacent blocks, provided that the centre-to-centre spacing between anchors is not less than $3 \times h_{nom}$.

## INSTALLATION INSTRUCTIONS INTO SOLID CONCRETE BLOCKS (7 N/mm²)




-Drill correct diameter hole to the corresponding depth by using the rotary hammer drilling mode

-Clean the hole by blowing three times to remove drilling debris and dust

- Insert the shield with the hook assembled into the masonry using a hammer, making sure to tap gently to avoid deforming the hook

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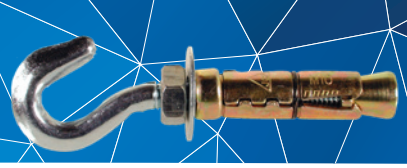

## PERFORMANCE DATA FOR APPLICATIONS INTO SOLID CONCRETE BLOCKS (7 N/mm²)

| Performance Data* (Solid Concrete Block 7N/mm²) | | | | |
|---|---|---|---|---|
| Size of Thread | Drill Hole Diameter | Characteristic Resistance | Design Resistance | Recommended Resistance |
| M | $d_0$ | Tensile ($N_{Rk}$) | Tensile ($N_{Rd}$) | Tensile($N_{Rrec}$) |
| mm | mm | kN | kN | kN |
| 6 | 12 | 2.0 | 1.1 | 0.7 |
| 8 | 14 | 3.0 | 1.6 | 1.1 |
| 10 | 16 | 5.5 | 3.0 | 2.1 |
| 12 | 20 | 8.0 | 4.4 | 3.1 |

* Important notes:

- Fasteners subject to static and quasi-static tensile loads only.
- This product can not be used as lifting points or for use with safety restraint harnesses.
- 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.
- It is assumed that anchors are installed centrally within the body of a 7 N/mm² concrete block, with one fixing only per block unit.
- Anchors shall not be installed in the edge block adjacent to a free edge.
- 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 JCP internal technical data.
- 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.

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