

Injection Resin Mortar Guide



Technical services from VJT

As a leading independent UK distributor of fixings, fasteners and building consumables, we pride ourselves on providing our customers with the very best service from enquiry through to delivery and everything in between. With a focus on technical connections to timber, concrete, masonry and steel, we have a qualified technical department offering guidance to support specification, impartial advice, testing and technical anchor calculations.

The technical team at VJT work in partnership with suppliers, major contractors and trade associations, whilst ensuring compliance with European/British Industry Standards and Regulations relating to the performance and safe use of fixings and consumables. Our qualified team of technical experts are on hand to help with product support and specification and performance calculations using DesignFiX anchor software. Our experts are also CFA or UKAS compliant and can perform on- and off site anchor proof or allowable load resistance pull tests and toolbox talks.

Our technical specialists are on hand to help with:

Design & Specification:

- Assistance with technical anchor design complying to responsibilities outlined in BS8539:2012+A1:2021
- Anchor guidance/recommendations covering a wide range of applications
- Early design intervention
- DesignFiX impartial software - the mechanical and chemical anchor and post-installed rebar calculation software. Latest update allows design for up to 100 years working life to EN 1992-4 (on selected products)

Technical Seminars- available on and off site:

- Introduction to BS8539:2012+A1:2021 - code of practice for selection and installation of post installed anchors, latest design standard EN1992-4 (Eurocode 2 part 4) and DesignFiX anchor calculation software

Site Support & Training:

- CFA Approved on-site testing to BS 8539:2012+A1:2021 (up to 600 kN). UKAS testing on and or off site also available
- Anchor installation training and toolbox talks
- PAT and Gas Tool Training

Compliance:

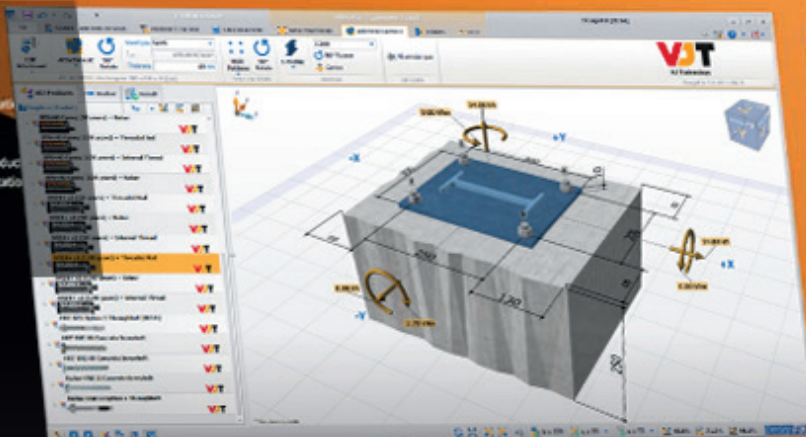


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VJT Anchor Design Software - DesignFiX (Windows Only)

DesignFiX is the Chemical Anchor and Post installed rebar Calculation Software for the range of Injection Resins from VJ Technology. DesignFiX enables calculations to be made in accordance with European Technical Approvals and provides a list of suitable products from which you can choose the most appropriate for your application.

Download Now



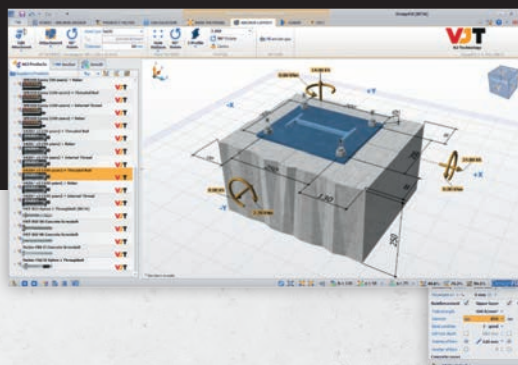
DesignFiX

DesignFiX is the chemical and mechanical anchor and post installed rebar calculation software, designed to meet EN 1992-4:2018 Eurocode 2 - Design of concrete structures part 4, for the range of Injection Resins from VJ Technology. DesignFiX enables calculations to be made while providing a selection of suitable products for the required application.

To download the latest version of DesignFiX visit our website <https://www.vjtechnology.com/designfix> or contact our Technical Department for training and further information.

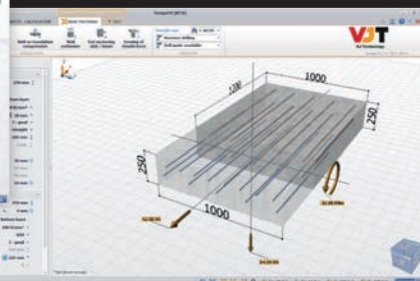


The calculation tab offers a print preview option and/or PDF which produces a results report. Anchor loads and potential modes of failure are detailed as well as installation information.



Live calculations change accordingly displaying product optimisation (design life of 50-100 years). Embedment depths are easily adjusted via a drop down menu whilst a series of tabs along the top allow the user to quickly make the amendments to concrete strength, geometry, properties and loads required.

Anchor type can be selected using the menu if injection mortar, screwbolt or expansion fastening is required.



The graphic input tab shows an image of your fixing application. You can adjust load directions and numeric factors on this page, and the image can be rotated, which may provide a better view of the application.

XPE440 06000005

The Ultimate Performing Pure Epoxy Injection Mortar

The pure epoxy injection mortar with approvals for anchoring and rebar connections in cracked and non-cracked concrete, is assessed for a working life of 100 years. XPE440 is ideal for heavy duty connections including applications with very large diameter and deeper hole depth. This product is used in conjunction with an applicator tool and static mixer nozzle.

Applications

XPE440 injection mortar can be used in conjunction with:

- Threaded rods eg. VJT Chemical Anchor Studs (zinc, HDG, A2, A4, HCR, available in various tensile strengths)
- VJT Internally Threaded Sockets
- Rebar - designed as anchors according to EN 1992-4 or as post-installed rebars according to EN 1992-1

Key Benefits

- ETA for cracked and non-cracked concrete
- ETA for post-installed rebar
- Anchors designed according to the new EN 1992-4 standard (Eurocode 2 Part 4) for maximum safety and efficiency
- Additional provisions within ETA-20/0202 for a working life of 100 years
- Approved for seismic performance categories C1 and C2
- Compatible with hammer or diamond drilled holes
- Compatible with hollow dustless drill bits
- Suitable for dry and wet concrete including flooded holes (bonded anchors)
- Suitable for overhead application
- Fire rating resistance ~ R120
- NSF approval for potable water
- High chemical resistance
- Low odour
- Small allowable edge distance and anchor spacing
- Hole cleaning and installation accessories are also available
- Design check can be performed using free DesignFiX software



V420+[®] v3 06000075

The Ultimate Performing Hybrid Injection Mortar

The hybrid injection mortar with approvals for anchoring and rebar connections in cracked and non-cracked concrete now assessed for a working life of 100 years and ideal for heavy duty connections. This product is used in conjunction with an applicator tool and static mixer nozzle.

Applications

V420+ v3 injection mortar can be used in conjunction with:

- Threaded rods eg. VJT Chemical Anchor Studs (zinc, HDG, A2, A4, HCR, available in various tensile strengths)
- VJT Internally Threaded Sockets
- Rebar - designed as anchors according to EN 1992-4 or as post-installed rebars according to EN 1992-1

Key Benefits

- ETA for cracked and non-cracked concrete
- ETA for post-installed rebar
- Anchors designed according to the new EN 1992-4 standard (Eurocode 2 Part 4) for maximum safety and efficiency
- Additional provisions within ETA-17/0570 for a working life of 100 years
- Approved for seismic performance categories C1 and C2
- Compatible with hollow dustless drill bits
- Suitable for dry and wet concrete including flooded holes (bonded anchors)
- Suitable for overhead application
- Fire rating resistance ~ R120
- NSF approval for potable water
- High chemical resistance
- Low odour
- Small allowable edge distance and anchor spacing
- Hole cleaning and installation accessories are also available
- Design check can be performed using free DesignFiX software



E410+® Injection Mortar 06000010

E410+ is a high performance epoxy acrylate injection mortar with approvals for concrete and masonry substrates. This product is used in conjunction with a hand, battery or pneumatic tool and static mixer nozzle.

Key Benefits

- ETA for non-cracked concrete
- ETA for use in masonry applications
- Slower cure formulation, ideal for warmer temperature months
- Suitable for dry and wet concrete including flooded holes
- Suitable for overhead application
- High chemical resistance
- Low odour

Applications

E410+ injection mortar is designed to be used in conjunction with the following:

- Threaded rods eg. VJT Chemical Anchor Studs, available in carbon steel (zinc/ HDG) and stainless steel (A2/A4). High corrosion resistant anchor studs available on request. Available in various tensile strengths.
- Rebar (non-ETA)



EC410+® Injection Mortar 06000020

EC410+ is an express cure, high performance epoxy acrylate injection mortar with approvals for concrete and masonry substrates. This product is used in conjunction with a hand, battery or pneumatic tool and static mixer nozzle.

Key Benefits

- ETA for non-cracked concrete
- ETA for use in masonry applications
- Special express cure formulation, ideal for colder temperature months
- Suitable for dry and wet concrete including flooded holes
- Suitable for overhead application
- High chemical resistance
- Low odour

Applications

EC410+ injection mortar is designed to be used in conjunction with the following:

- Threaded rods eg. VJT Chemical Anchor Studs, available in carbon steel (zinc/ HDG) and stainless steel (A2/A4). High corrosion resistant anchor studs available on request. Available in various tensile strengths.
- Rebar (non-ETA)



Setting Equipment & Anchor Accessories

Chemical anchor studs and all thread studding

M8 up to M30 mild steel in various grades (self-colour, zinc plated and HDG), A2-70 and A4-70 stainless steel. Other materials or coatings available upon request, HCR 1.4529 and other diameters of studding also available to order.



Applicator tools

Co-axial applicator tools to suit V420+ v3, E410+, EC410+ and P410+ cartridges.



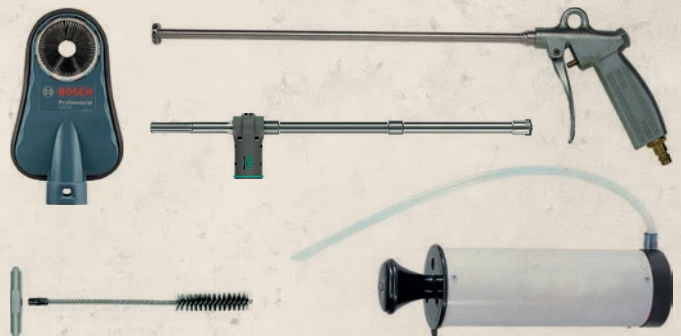
Shuttle applicator tools to suit XPE440, HPE385 and most 3:1 ratio epoxy mortar cartridges.



Hole cleaning equipment

Please refer to injection mortar ETA data sheet prior to ordering cleaning equipment to remain compliant to the products ETA, bond strength performance can be reduced if installation instructions are not followed.

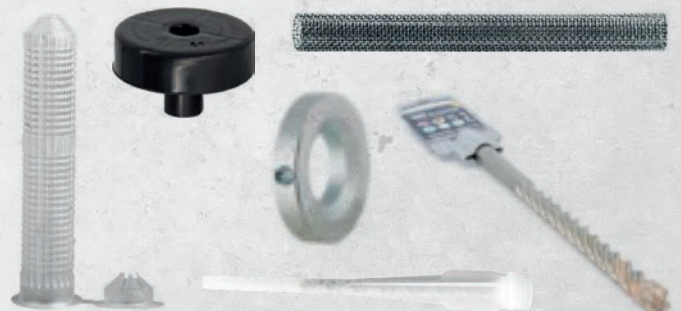
Extractor hoods for M-class dust extraction machines, a wide range of metal wire hole brushes, compressed air tools, hand dust pumps and wide range of SDS plus and SDS Max hollow drill bits.



Additional Installation equipment

Please refer to injection mortar ETA data sheet prior to ordering installation equipment to remain compliant to the products ETA, bond strength performance can be reduced if installation instructions are not followed.

Filling washer packs, PGM marked drill bits, plastic sieves, mixer nozzles and extensions, piston plugs and 1m length metal sieves (not part of ETA).





For technical information:

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For order enquiries:

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Call: Ashford **08000 828 828** or Glasgow **08000 828 830**

