

# Instruction manual for type A anchor point model MAUI, certified according to EN 795 :2012 type A and TS 16415:2013 type A

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Thank you for choosing VERTIQUAL®! You have purchased a high quality product that will reliably protect you, when working at heights and in depths.

This manual must be read and understood before installing and before using the product! Following these instructions accordingly is essential for your safety. Failure to do so can result in serious or even fatal accidents! Keep these instructions close to the product, accessible to all users, so they can consult them whenever is needed!

**WARNING!** These instructions are a basic comprehensive guide to the safe use of the product. They contain general information about the product, intended to help the user, but cannot cover all the situations that may occur in the daily activities and cannot replace the specialized training courses.

**WARNING!** Instructions for use are updated when technical or legislative changes occur. The latest version of the instructions overwrites previous versions and is the only valid version. Please make sure you follow the instructions of the most recent version. You can download the most recent instructions from our website [www.vertiqualsafety.com](http://www.vertiqualsafety.com) by accessing the section of each product. For help or additional questions, please contact us at [office@vertiqualsafety.com](mailto:office@vertiqualsafety.com) or Tel. (+40) 0365/882143.

**WARNING!** The user must be medically fit and capable to ensure his own safety and act accordingly in possible emergency situations! Seek medical approval according to the national legislation in force!

**WARNING!** If the product is re-sold outside the original country of destination, the reseller must provide these instructions manual in the language of the country where the product will be used.

## PRODUCT DESCRIPTION

MAUI was developed for use as an anchor point for working at heights/ in depths and fulfils requirements laid out by **EN 795:2012/A** and **TS 16415:2013 type A**. The anchor point will be installed permanently on suitable steel / concrete structures and is designed to protect maximum 3 persons simultaneously. The installation of the anchor point must follow these instructions accordingly and must be periodically checked. The product must be installed and used in usual environments, without potentially explosive atmosphere, far away from moving machinery, excessive heat or electricity. Installation should also be avoided in places where the anchor may come in contact with aggressive chemicals, corrosive solutions and substances, salt water splash / immersion or any other degrading factors.

## FIELD OF USE

Along with other tested and certified components, MAUI will be used as an anchor point for protection against falling (fall arrest systems) or as load bearing anchor for rope access of one person of Max. 150kg. The anchor must be used for one purpose at a time: either for protection against falling, either as an anchor for rope access. Always attach to this anchor point using a certified EN 362 connector. The anchor point must be used only for its intended purpose and must never be pushed to its limits!

## WARNING!

- When using the anchor point as part of a fall arrest system, make sure that all components of such system are selected correctly! The user must be equipped with certified means connection that will limit the arrest force to a **maximum of 6kN** e.g. a shock absorbing lanyard (EN 354 + EN 355), a retractable type fall arrester (EN 360).
- The user must perform a visual and functional inspection of his equipment before and after each use! During use, it is important to monitor this equipment in order to identify possible damages inflicted in use, without being aware of it.
- These anchor points must be inspected **at least once every 12 months** by an authorized person!
- Remove and discard the anchor point immediately if was involved in a fall arrest, was damaged or was in use for more than **15 years**.
- Read carefully the instructions of every component used! Make sure the components of your system are compatible and their performances and limitations are well understood.
- This product can only be used by well-trained users, who are familiar with the relevant legislation and who have successfully completed a special safety training course for working at heights.
- Do NOT use these anchor points for lifting or handling materials!
- It is essential for your safety that when the anchor point is used in fall arrest systems, it will be installed and used in such way that the potential of falls and potential fall distance are minimized! Install the anchor point as high as possible above the user's workplace and as close as possible to the vertical axis of the user, in order to reduce the fall distance and prevent dangerous swing falls!
- For use in fall arrest systems it is essential for your safety to check with every occasion that the **free space (fall clearance) below the workplace** is enough and there is NO possibility of hitting the ground or any obstacle when the fall is arrested!
- Special care must be given to areas where user may fall over an edge! Installation place must be chose in such way that falling over an edge is not possible!
- The installer must consult and comply with specific national legislation (for occupational health and safety, constructions etc.), before installing the anchor points.
- This equipment is electrically conductive! Take all precautions and follow all relevant legislation regarding lightning protection, occupational health and safety etc.
- Attachment to the anchor point must be done using a certified EN 362 connector!
- The maximum load that could be transmitted to the anchor structure is **22 kN in all directions**! It is thus necessary to make sure that the structure has a proven load bearing capacity **of at least 24 kN in all directions**!

## INSTALLATION

### WARNING!

- This anchor point must be installed by a competent person / competent organization (e.g. an engineer, a qualified designer etc).
- It is essential for safety that the installation is verified appropriately, by calculation or testing!
- The installer (competent person) must make sure that the base materials / structure have suitable strength in order to ensure a safe installation of the anchor point!
- If the marking of the anchor device is not accessible after installation, it is recommended to place an additional marking near the anchor point.
- The installer is fully responsible for the correctness of installation! Neither the manufacturer or distributor shall be held responsible for a careless installation, that does not take into account manufacturer's recommendations.
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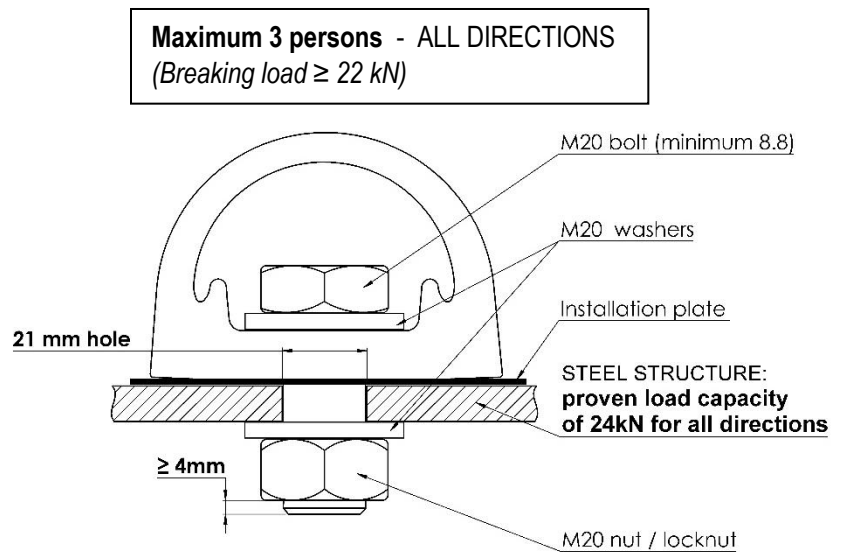
## A. INSTALLATION ON A STEEL STRUCTURE

### Tools:

- drilling machine;
- Ø 21mm drill bit for steel;
- countersink (to chamfer the hole 1x45° and remove burrs);
- paint (NOTE! Provide anti-corrosion layer for all drilled holes!);
- thread locking fluid;
- calibrated torque wrench (to ensure a proper fastening torque);

### REQUIREMENTS:

- The installation area on the steel structure must have a proven loading capacity of **minimum 24kN**. **The load capacity must be demonstrated by approved structural calculations or by test!**
- Use a zinc plated **M20 fastener (minimum grade 8.8)** not longer than 160mm, with M20 nut and washers.
- Prevent unintentional loosening of the nut by using thread locking fluid or a locking nut.
- The entire flat surface of the anchor point must rest on the installation structure.
- Ensure a **230 Nm** fastening torque for the nut.

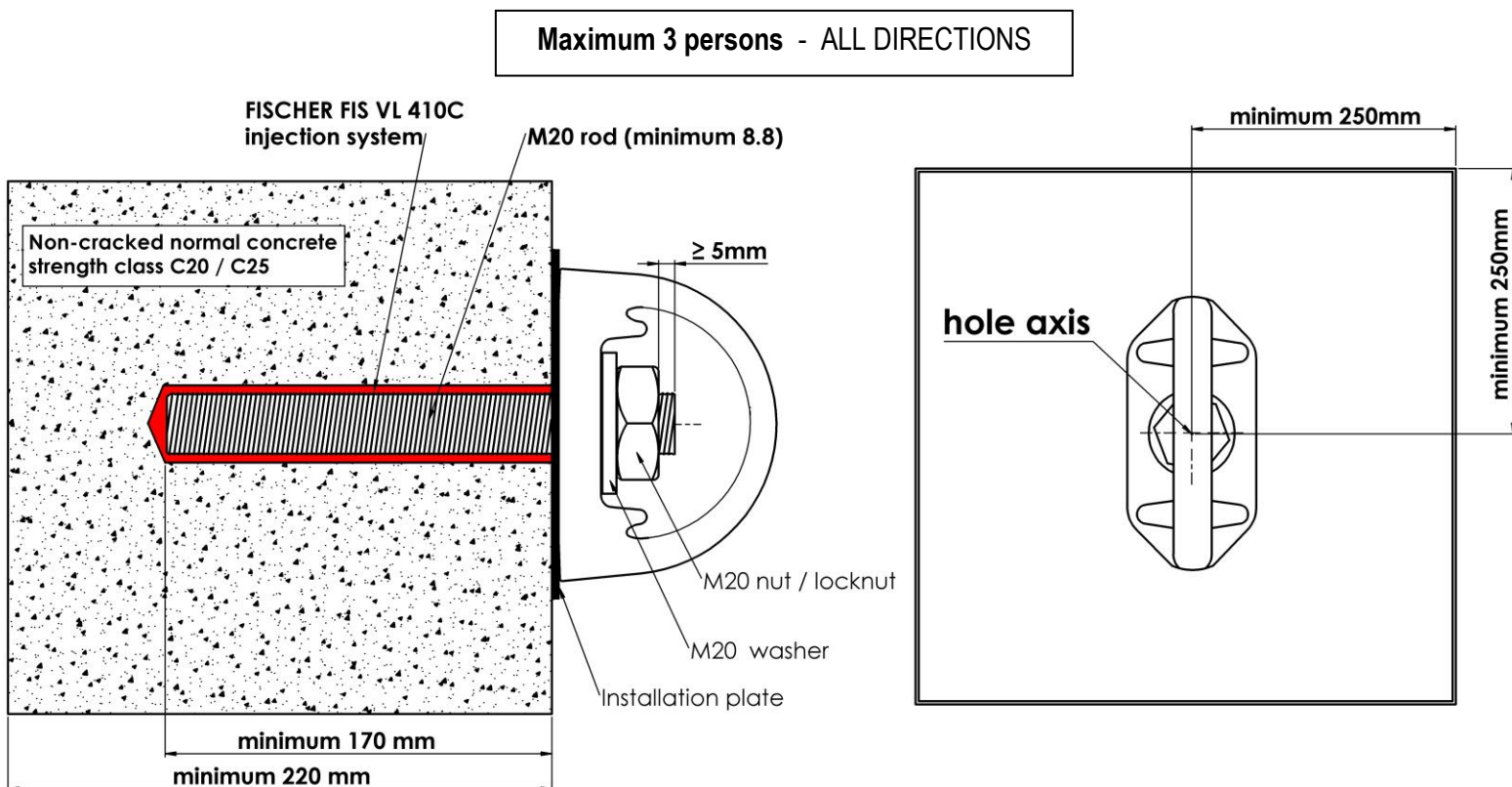


## B. INSTALLATION ON A CONCRETE STRUCTURE

This anchor point can be installed only on suitable concrete structures of **minimum strength class C20 / C25 (NON-CRACKED)**! The concrete structure and the injection system used must be able to provide the necessary strength for the anchor point of minimum 22 kN in all directions! Use corrosion protected fasteners: **M20 (minimum 8.8) threaded rod of appropriate length with M20 nut and washer**. Anti-loosening of the nut must be ensured by using thread locking fluid or a locking nut!

**WARNING!** The installer must make sure that the structure and components used meet all safety requirements and that the installation is performed correctly!

VERTIQUAL Engineering SRL herewith rejects any liability resulted from faulty installation, bad selection of components or installation structure!



## Example: Installation on CONCRETE STRUCTURE using the injection mortar FISCHER FIS VL 410C

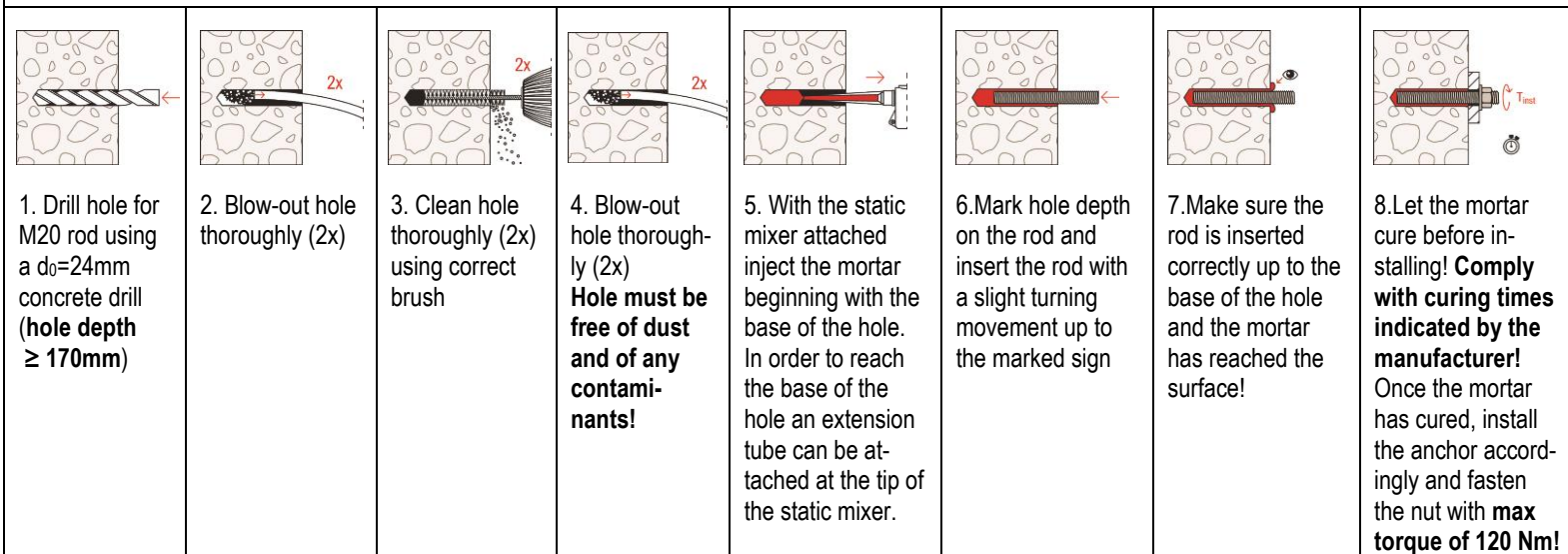
### Tools:

- Hammer drilling machine;
- Concrete drill ( $d_0=24mm$  for M20);
- Blow-out hand pump or Blow-out gun and compressor (at 6 bar - OIL FREE!);
- Cleaning brush (Fischer BS size  $\varnothing 24mm$  for 24mm bore);
- Gun type dispenser for coaxial cartridge;
- Static mixer (will attach to the cartridge and mix the two components of the mortar);
- thread locking fluid (will prevent anti-loosening of the nut);
- calibrated torque wrench;

**WARNING! Check all required tools, accessories and their parameters against the user manual supplied with the injection mortar!**

Below, the main steps of the installation are illustrated:

**WARNING! The installer must first read and comply with the instructions of FISCHER FIS VL injection system and also check information printed on the cartridge! These contain essential information for achieving a successful installation! e.g. expiry date, allowed installation temperatures, curing times, compatible tools and accessories for installation etc.**



**RESCUE:** A rescue plan must be made before starting the work at heights or depths! It is mandatory to set up and know the specific rescue plan for every situation and to have designated personnel and appropriate means of intervention! Perform a complete risk assessments for your sites and determine the safest and most efficient form of rescue!

**Repairs** or any other modifications can be performed only by the manufacturer! Any repairs, modifications or additions (even minor ones) performed by anyone else are strictly forbidden, lead to the loss of the manufacturers guarantee and any responsibility related to this product!

**WARNING!** This equipment can be used only for its intended purpose! Do NOT assign other uses to your equipment and never push it beyond its limits!

**WARNING!** The user must make sure that all components of his fall arrest system are compatible and are used in a way which will not allow one component to interfere with the safe function of another!

### PERIODIC INSPECTIONS AND CHECKS

The user must perform a visual and functional inspection of his equipment before and after each use! During use, it is important to monitor your equipment in order to identify possible damages inflicted in use, without being aware of it. The equipment must be inspected **at least once every 12 months** or more often if required, depending on the working conditions and compulsory after every incident it has been involved in. Inspections can be carried out only by the manufacturer or by an authorized person.

**If the periodic inspections were not performed at least once every 12 months, were carried out by unqualified persons, or without strictly respecting the manufacturer's instructions, the warranty is lost and the manufacturer declines any responsibility related to the equipment!**

**WARNING! The safety of users depends upon the continued efficiency and durability of the equipment, thus performing the periodic inspections is very important!**

**NOTE: The label must be always present and readable!**

**WARNING!** It is recommended that at every periodic inspection, the **date of next inspection** is added (e.g. an inspection sticker)

**Service Life:** The service life, under normal conditions of use is **maximum 15 years**, from the **date of installation**. The date of installation must be written in the **inspection log!** Heavy working conditions or intensive use will reduce the service life of the product.

**Expiry date/End of service life: date of installation + 15 years!**




 **Check before each use and DO NOT USE the equipment if:**

1. The marking/label is missing or is unreadable.
2. **DAMAGE has been identified (cracks, burns, melted areas, rust, bends, distortions and other deformations) or if the product had suffered any changes compared to its original condition!**
3. **The anchor point is not fastened correctly! In the case the anchor point is able to move by hand (loose), the threaded rod can be moved by hand or nut are loose and can be moved by hand!**
5. Contact with paints or unknown chemicals had occurred (irreversible contaminations).
6. The equipment was involved in a fall arrest or had been subjected to heavy loading.
7. The integrity of the equipment is questionable and the inspection log is incomplete or missing.
8. The equipment was in service longer than **15 years**.
9. **If there is any doubt regarding the condition of the equipment!**

**WARNING!** If the equipment was involved in a fall arrest or if there is any doubt regarding its condition, seek for a professional inspection from a competent person! The equipment cannot be used until a written authorization is issued by the competent person that performed the inspection!

**Inspection Log!** The product is delivered with an Inspection Log. This document must be kept safely and sent along with the product for every inspection.

The Log (table) contains important data regarding your equipment. The date, signature of the inspector and the results are also recorded. The **date of first use (date of installation)** must be written in the Inspection Log by the user!

**MARKING:** This product is marked with the following elements: manufacturer (**VERTIQUAL**), model name (**MAUI**), manufacturing date ( **mm/yy**), standards/norms (**EN 795:2012/A** and **TS 16415:2013/A**), minimum breaking load of the anchor point (**22 kN**), the international symbol/icon for reading the instructions before use  and the maximum number of persons that can use the anchor point simultaneously <sup>Max.</sup>  (three persons).

Additionally the installation plate contains essential information like: **Date of installation, Serial No.**

**STORAGE, MAINTENANCE, TRANSPORT:** The product should be stored in a dry, cool and well-ventilated room, if possible, in its original packaging. While in storage and during transport the product must be protected from any factor that could damage it. While being in use (installed) the product can be cleaned only if necessary, using a dry or slightly wet cloth (clean water), then left to dry natu-

rally.

**WARRANTY AND LIABILITY:** The manufacturer offers a **24 month** warranty for this product. The warranty is applicable only for material or manufacturing defects! Damage resulting from normal wear and tear, corrosion, poor maintenance (or no maintenance at all), those resulted from carelessness, accidents, unauthorized repairs or modifications, wrong use or any other reasons are NOT covered by the warranty! Warranty claims apply only to the product. VERTIQUAL Engineering SRL herewith rejects any liability claims for direct, indirect, accidental or consequential damages resulting from the use of this equipment. Claims of third parties and any other consequential damages arising directly or indirectly from the use are excluded from guarantee and liability claims.

#### DOCUMENTS TO BE PROVIDED AFTER AN INSTALLATION:

##### Documentation should contain at least the following information:

- address and location of the installation;
- name and address of the company responsible for the installation;
- name of the person responsible for the installation;
- product identification (manufacturer, type, model...);
- fixation device (manufacturer, product, admissible constraints);
- schematic drawing of the installation, for example from the roof, and the pertinent information for the user, such as the anchor points positioning.

##### Declarations made by the installer should be signed and at minimum assure that the system:

- has been installed according to the manufacturer installation instructions;
- is conform to the drawing;
- has been fixed on the specified support;
- has been fixed as specified (for example, bolts quantity, correct materials, correct location);
- has been put in service according to the instructions provided by the manufacturer;
- has been provided with photographic information/documentation, especially when the fixations (for example the bolts) and the fixing interfaces are no longer visible the installation complete.

When the system has several fixings, each one has to be photographed for identification, numbering marking is recommended. The numbering has to be included in the inspection folders and the installation drawing.

Here below an example of schematic plan of installation. It is up to each installer to determine the best and clearest way to design it.

### SCHEMATIC PLAN OF THE INSTALLATION

#### Structure/ Building

Address:  
Remarks:

Order number:  
Building type:  
Shape of the roof:  
Anchor device: ***type A anchor point***

#### Customer:

Name:  
Address:

Contact person:  
Tel:  
Email:

#### Installer:

Name:  
Address:

Chief installer:  
Tel:  
Email:

#### Anchor device:

Manufacturer: ***VERTIQUAL ENGINEERING srl***

Model/type identification: ***MAUI***





