



SUSTAINABLE CONSTRUCTION

The pioneer in sustainable foundation construction

GROUND SCREWS

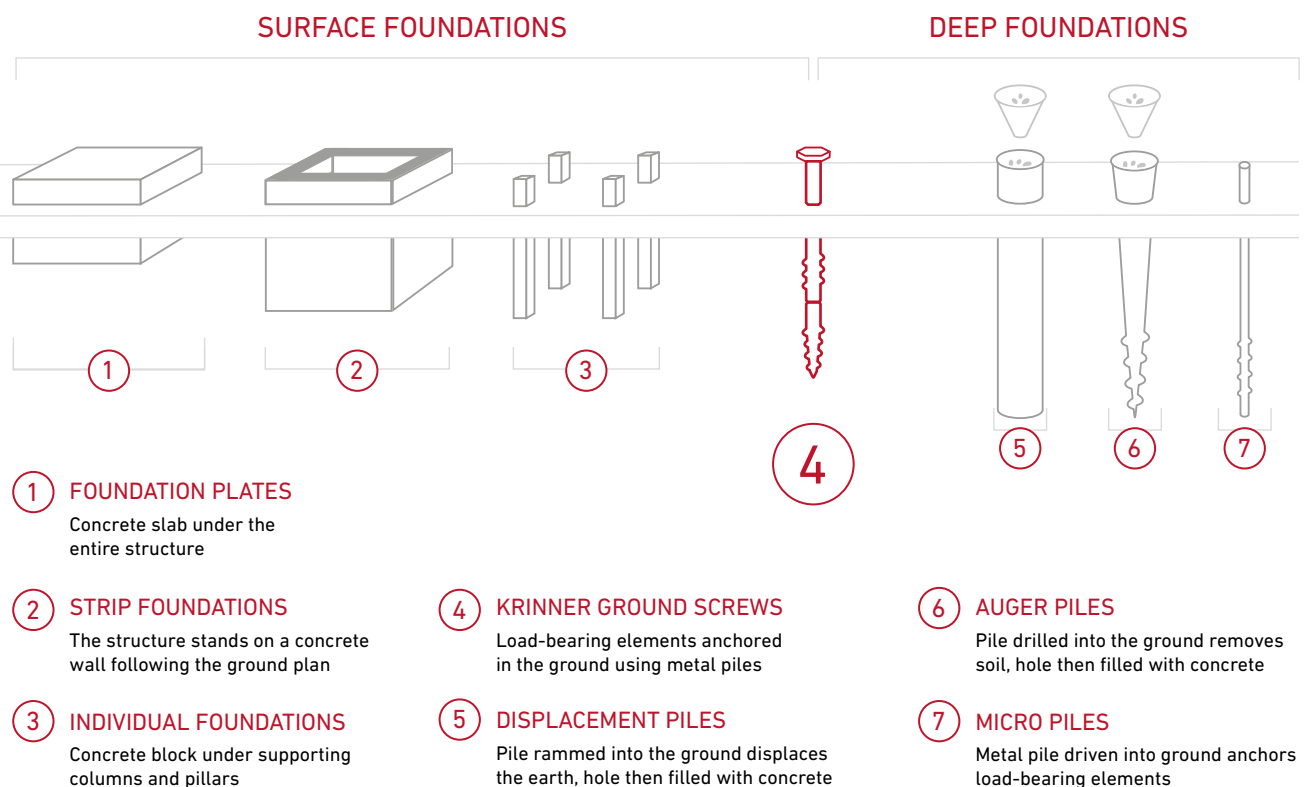
Easy special geotechnical works with KRINNER

Ground screws are based on the principle of pile foundations; one of the oldest and most reliable types of foundation. It consists of a galvanised steel pipe with a welded on thread which is designed to support horizontal and vertical loads in the floor and is installed with the help of a ground screw driver.

➔ Depending on the soil conditions, it is basically possible to use ground screws in any foundation.

CLASSIFICATION OF THE GROUND SCREW

in surface and deep foundations



THE ADVANTAGE

of KRINNER ground screws

Ground screws are an excellent alternative for sustainable construction and offer clear advantages compared to a conventional concrete foundation.

Ecological

- No soil sealing
- Barely any crop damage
- Return to a green space
- Recyclable and reusable

Efficient

- Makes it possible to access hard to reach construction sites
- No need to move earth
- Quick installation
- Immediately loadable
- Simple deep foundation construction

Safe

- Has been used for centuries
- Proven
- High load bearing capacity
- Highest quality standards



V-SERIE

The solution for economical surface and deep foundations

V89



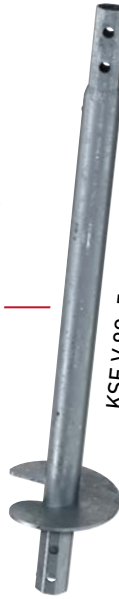
KSF V 89x5xM24



KSF V 89x5x2000 PT



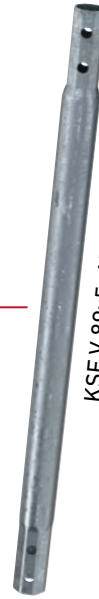
KSF V 89x5x1500 PT



KSF V 89x5x1500 EH



KSF V 89x5x1500 ET



KSF V 89x5x1500 E



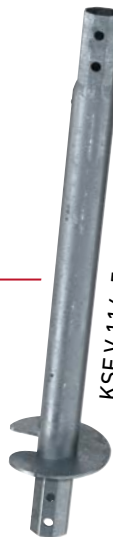
KSF V 89x5x860 E



KSF V 114x5 M24



KSF V 114x5x2000 PT



KSF V 114x5x1500 EH

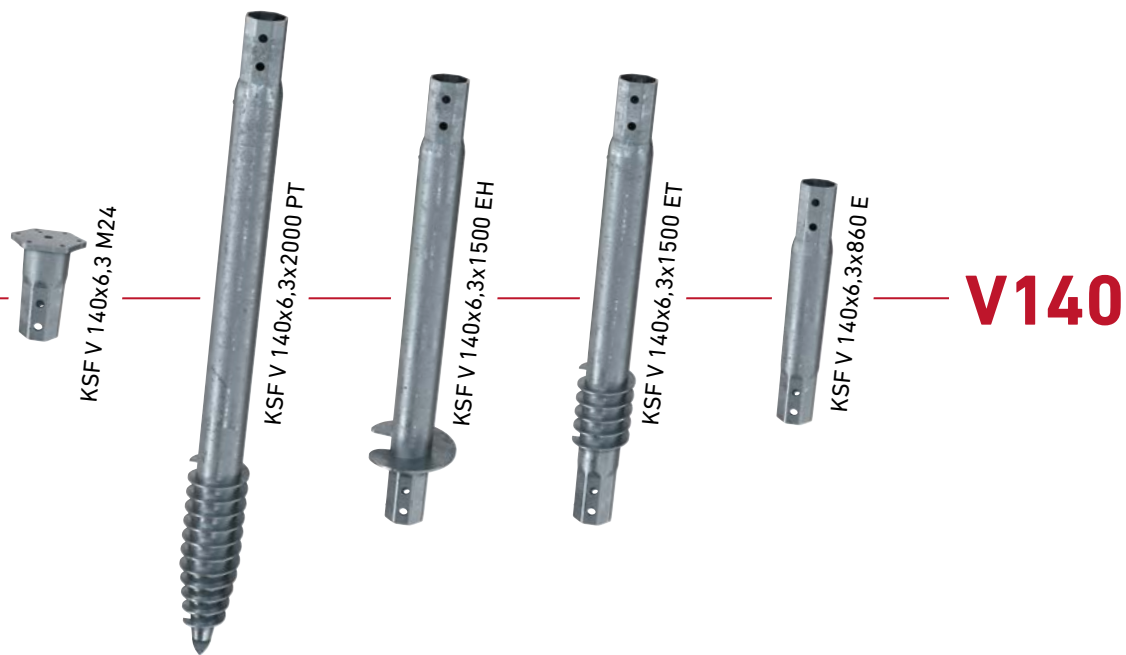


KSF V 114x5x1500 ET



KSF V 114x5x860 E

V114



PRODUCTS



Base element – PT: The PT is the base element of the V-series and is always needed for the installation. The point and the thread help facilitate a quick feed into the soil. In addition, the thread ensures a higher load transfer into the ground compared to the pure surface friction on the pile shaft. Depending on the soil composition, an extension may be used. However, the PT may already be sufficient for a surface foundation if the soil composition is suitable. If this is the case, then only the head with the connecting flange needs to be installed afterwards.

Extension element with thread – ET: The ET is an extension element which can be used to penetrate through to deeper layers. With its thread, the ET supports the feed into the ground to prevent any “empty turning” of the ground screw element and on the other hand guarantees an even higher load transfer through the thread.

Extension element with plate – EH: An EH can be used as an extension when the ground screw has to carry even more additional load. The „plate“ on the ground screw increases the load-bearing capability of the screw thanks to its large surface area. The use of this extension is recommended in very soft and homogeneous soils.

E extension elements: The E extensions are levelling elements that can be used to level out any height differences. This can be useful for construction projects in sloping areas for example.

Head element – M24: The M24 is a head element which is needed as a connection part in the foundation construction.

EQUIPMENT

Related equipment for deep and system construction using ground screws

KRINNER sees itself as a system provider for sustainable foundation construction, so it naturally offers suitable made by KRINNER test and ground screw driver equipment for its ground screws.



KRL – DRILL ATTACHMENT

- In accordance with EN 16228-1
- Hydraulic connections, supply and return flow (see torque motor)
- Carrier vehicle wheel and telescopic loader with a lifting force at max. reach of 1.5 t
- Crawler or mobile excavator with a lifting force at max. reach of 1.5 t
- Mounting plate, quick-change device see operating instructions (depending on the carrier vehicle)



KRD 30 – CATERPILLAR

- Self-driving caterpillar, light and manoeuvrable design
- Approx. 8,000 Nm torque
- 2.4 m drill lift
- Only 1,1 t transport weight
- Precisely-defined feed force

LOAD TESTING EQUIPMENT

- For load tests up to 200 kN Test load in compression and tension direction
- According to the applicable ISO 22477-1 regulations designed for a distance of 2.5 m between the test foundation and abutment foundation

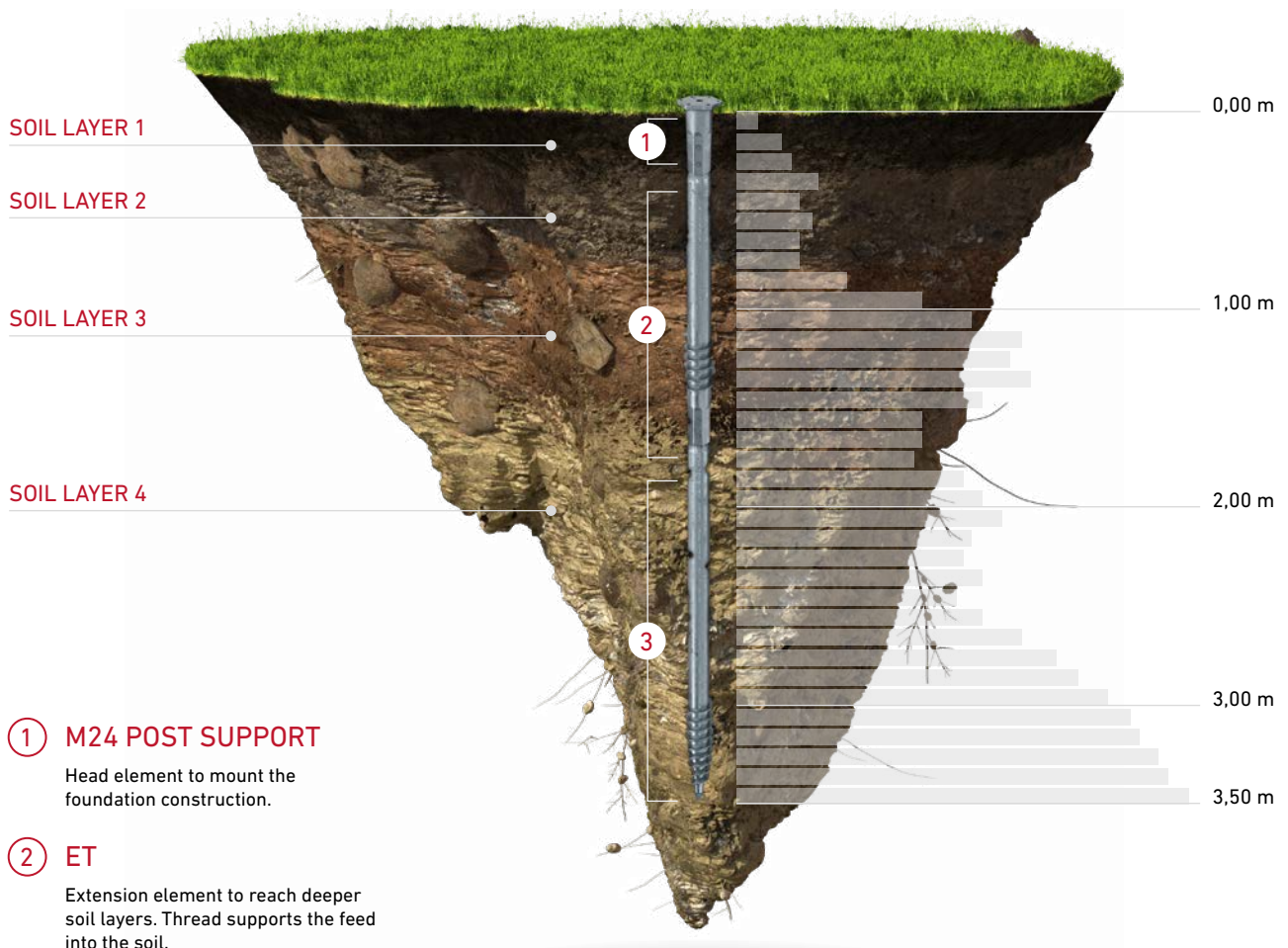




**CUBUS-
HOME**

APPLICATION

V-series in the ground – with illustration Dynamic probing and soil layers



SOIL LAYER 1

COHESIVE SOIL

Humus layer, clayey and muddy, strongly rooted

SOIL LAYER 2

NON-COHESIVE SOIL

Very fine sand to slightly coarse-grained sand

SOIL LAYER 3

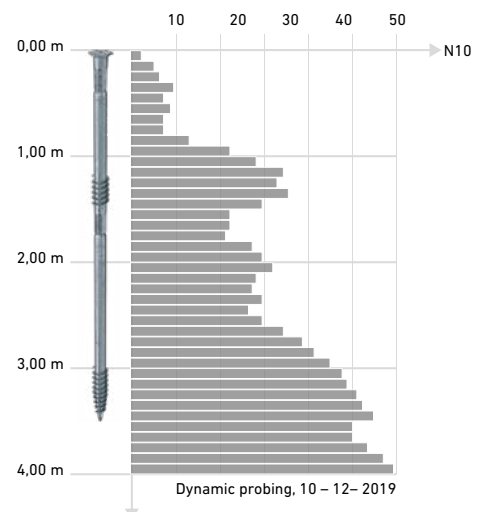
SLIGHTLY COHESIVE SOIL

Slightly muddy, fine sand to strongly coarse-grained sand

SOIL LAYER 4

NON-COHESIVE SOIL

Fine to coarse-grained sand





THE TREE TOP HOTEL

CONNECTION OPTIONS

for ground screws

Ground screw foundations can be designed with different interfaces. Connections by steel trusses are common solutions but superstructures can also be connected directly to the ground screw.




➤ Illustration of a group foundation using steel beams for load distribution or higher individual load absorption.



➤ Illustration of a building connection: KRINNER ground screws on a building substructure clamping systems.



**STUDENT
ACCOMMODATION**



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