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MODERN FOUNDATION CONSTRUCTION

efficient · no concrete · durable

MODERN FOUNDATION CONSTRUCTION WITH KRINNER GROUND SCREWS

efficient · no concrete · durable

The best ideas are those that are easy to apply and that do also function easily. **Easily the best**, if you will. With its ground screws, KRINNER Schraubfundamente has been revolutionising foundation construction for almost ten years now.

Doing without an arduous process of excavation, concreting and refilling, KRINNER Schraubfundamente simply uses the screw concept.

What has been working in walls for decades, KRINNER Schraubfundamente has successfully realised at the vertical level as well.

This versatile system saves time and money, goes easy on resources and provides new opportunities for an innovative design. Its worldwide success attests to and rewards the company's courage in challenging what seemed to be an iron law of architecture, viz., a foundation has to be made of concrete.

The company behind these ideas is as innovative as its products. KRINNER Schraubfundamente has signified unusual but highly practical solutions for about twenty years now.

The lateral displacement of soil and the ensuing compaction make for utmost stability, statically verified (here exemplified by an E-series ground screw).

❶ TUBULAR POST:

Allow adjustment during inserting into the ground screws. This will always ensure a correctly vertical position. Larger pole diameters and loads will be installed by means of flange plates on the foundations.

❷ CONE BODY:

Serves for guiding the tubular post to be inserted. This will be centred either by means of broken granite split or the patented eccentric system for fine adjustment.

❸ FIXING:

Sharp edged broken granite split ensures optimum support and stability.

❹ SOIL:

Is pressed and compacted by screw in the ground screws, which makes for utmost stability. No soil has to be excavated and removed.

THE GROUND SCREWS:

Made of battered steel, galvanized and fully welded screw-in spiral.

The pros at a glance:

- Cost and time savings
- No digging, no concreting
- Structurally tested repeatedly, incl. TÜV (Technical Control Board) and BASt (Federal Office for Structural Analysis)
- Proven high pressures, pulling-out force and lateral pressure loads
- Utmost stability and durability
- Instantly loadable, no waiting period
- Sustainable and environmentally friendly
- No soil sealing
- Surroundings not impacted
- Easy deconstruction allows instant relocation



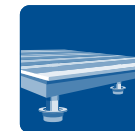
FAST, EFFECTIVE AND SAFE

KRINNER solutions for your foundation



Be it a traffic sign or a marquee, a carport or a large event hall, flagpoles up to 12m tall, fences or huge billboards: Our simple idea provides plenty of opportunities.

Our ground screws' utmost stability, fast assembly (a matter of minutes) and guaranteed safety, even when subjected to the strongest winds and vertical loads, are indeed compelling.



TIMBER-FRAME CONSTRUCTION

Ideal for sustainable, efficient and long-term timber construction concepts



ADVERTISING AND TRANSPORT TECHNOLOGY

An attractive and cost-efficient alternative thanks to an uncomplicated and fast assembly.



URBAN AND GARDEN AND LANDSCAPE CONSTRUCTION

An ideal and modern solution, in both ecological and business terms



SHED AND CONTAINER CONSTRUCTION

Flexible, economically efficient and fast: modern construction at its best



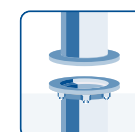
FENCES

The ideal solution for almost any terrain: fast, stable and professional



PHOTOVOLTAIC INSTALLATIONS

A durably environmentally friendly and cost-saving technology: the perfect foundation for any photovoltaic installation



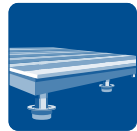
FASTENING SOLUTIONS

The right aid for all situations – at any time



SCREW-IN MACHINES

Effective solutions, optimising the screw-in process in a customised manner



TIMBER-FRAME CONSTRUCTION

ecological · no concrete · professional

ADVERTISING AND TRANSPORT TECHNOLOGY

effective · no concrete · durable



Carport:
10 ground screws
E89x1000-E60



Advertising sign BMW Welt, Munich
6 ground screws
M 114x1600-M24



Bird-watching footbridge
(Switzerland)



Timber bridge,
Baden-Württemberg

If you want to use timber you have automatically opted for a sustainable and forward-looking solution. So the next step, opting for ground screws, is a logical one.

The surroundings are not impacted, there is no soil sealing, nor is much logistics involved. Why not make use of the many advantages state-of-the-art foundation construction technology provides?

Exemplary solutions and applications:

- Timber terraces
- Carports
- Roofs
- Noise barriers
- Framehouses
- Footbridges and bridges
- Sports and play equipment
- Fences
- Pergolas/pavilions
- Wooden wallboard sheds

Saving time and costs, getting new customers and new advertising space. The optimised and fast assembly makes for huge saving potentials, while, at the same time, the ecological, economic and material quality is increased.

And another advantage is that the uncomplicated assembly permits new and innovative locations and methods. Raise your sales fast and easy.

Exemplary solutions and applications:

- Advertising pylons
- Large-sized advertising
- Flagpoles
- Perimeter advertising
- Construction signs
- Traffic control systems
- Traffic lights
- Sign gantries
- Motorway signage
- Noise barriers
- Warning signs etc.
- Traffic signs (as set forth in traffic regulations)
- Reflector posts



KRINNER Schraubfundamente
signboard in Straßkirchen



Traffic signs, pursuant to StVo



URBAN AND GARDEN AND LANDSCAPE CONSTRUCTION

economical · no concrete · flexible

Bicycle shed (900 m²)
Schiedam (Netherlands):
86 ground screws
M 76x1200-M24



SHED AND CONTAINER CONSTRUCTION

safe · no concrete · uncomplicated



Gaggenau exhibition space on
Lago Maggiore (Switzerland):
24 ground screws
M 89x1600-M24



Playground, Bavaria

A fast, safe and ecological optimisation of the townscape and cost savings, too: Construction projects using KRINNER ground screws allow a targeted construction without construction sites, excavations and concreting. This means huge time savings in such projects and thus also a citizen-friendly construction policy.

Exemplary solutions and applications:

- Bus shelters/benches
- Barriers
- Parking meters
- Street lamps
- Guardrails
- Barrier systems
- Solar lamps
- Noise barriers and screen walls
- Awnings/shading systems
- Protective and event equipment
- Playground equipment
- CCTV and surveillance systems
- Greenhouses
- Industrial and security fences
- Wire-netting fences
- Ball-catching systems



Awning, Brandenburg

A foundation construction depth of up to 3.5 m and the ground screw's huge quality also allow the construction of large buildings – and in a short time, mind you!

Be it containers or prefab garages: All foundations are tested and certified according to strict directives regarding static loads of pressure, pulling-out forces and lateral pressure.

Exemplary solutions and applications:

- Production and storage sheds
- Waiting halls
- Equipment and car sheds
- Timber and steel sheds
- Exhibition buildings
- Event and stage construction
- Marquees
- Large screens
- Glass- and greenhouses
- Construction containers
- Office containers
- Prefab garages



Nomadhome, Salzburg (Austria)



Two-storey school building, Chur (Switzerland)

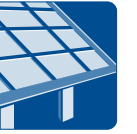


FENCES

stable · no concrete · fast

PHOTOVOLTAIC INSTALLATIONS

modular · no concrete · environmentally friendly



Industrial fence:
Ground screws
E 90x800-E60



Open-space installation,
Straßkirchen:
set up with ground screws
using rack system Flex-III



Timber fence

Be it garden, industrial or high-security fences, be they for protection, decoration or security: Our fence ground screws provide you with whatever you need for the realisation of whatever you want – no matter how flat or hilly your property might be.

Exemplary solutions and applications:

- Industrial fences
- Construction fences
- Wire-netting fences
- Ball-catching fences
- Garden fences
- Safety fences
- Security fences



Wire-netting fence

Special and large foundations are built into all solar power systems known in the market. Compatibility is a huge advantage of this system technology. It means that all materials and dimensions, connections and joints are compatible with all systems.

In the global photovoltaic sector, more than 600 MWp were built with more than 750,000 KRINNER ground screws. And in CSP, too, there is a number of installations on various continents.

Exemplary solutions and applications:

- Photovoltaic open-space installations, System "KRINNER Flex I to Flex III"
- Photovoltaic open-space installations, various system suppliers with KRINNER foundation solutions
- Photovoltaic trackers
- CSP (concentrated solar power) installations
- Fences for photovoltaic open-space installations



One of the globally largest
solar farms (54 MWp), Gänsdorf



Tracked PV installation (Spain)

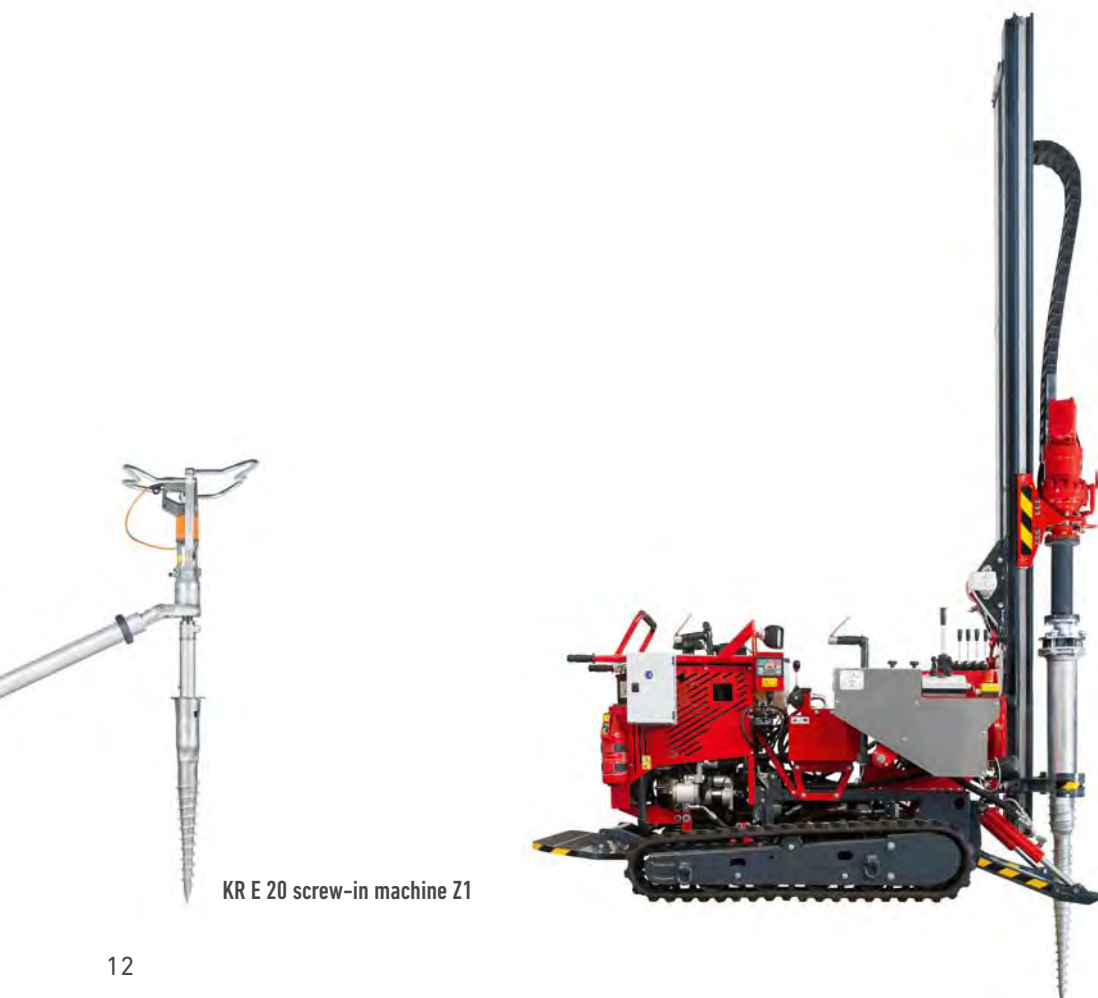


SCREW-IN MACHINES

precise · user-friendly · safe



It takes specially developed machines and equipment to screw in the ground screws fast and precisely. Be it meadowland or soil that is hard to remove (class V) or solid rock (class VII) even: KRINNER Schraubfundamente provides you with effective solutions that optimise screw-in in our ground screws in a customised fashion. KRINNER Schraubfundamente also has the right gimlets for solid rock.

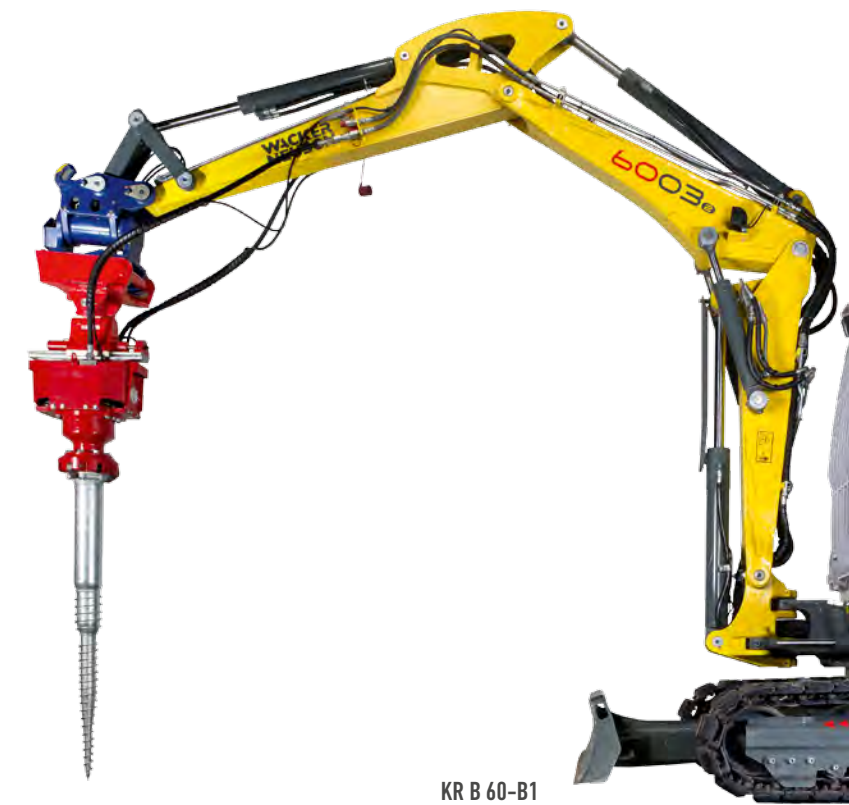


KR E 20 screw-in machine Z1

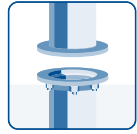
KR D 55 screw-in machine L40-F3



KR B 40-B1



KR B 60-B1



FASTENING SOLUTIONS

versatile · future-proof · productive

For all applications the right accessories for a fast and effective use.

We have the right accessories even for the most unusual foundation work.

Geared to general and individual needs.



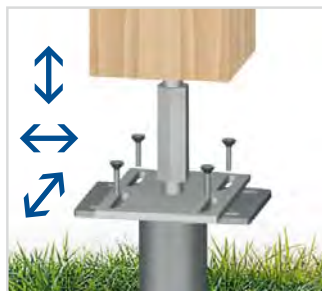
CONICAL SHAPE/GRANULATE:

Tapering foundation made of special plastic for highest stability and long service life for fences and sign posts.



THREADED SCREWS:

Three or four, respectively, threaded screws for quick and easy installation.



POST SUPPORT:

Well fitting connections due to variable axis and height adjustment.



FOUNDATION COVER:

Precise to the point adaptation of wood structures and variable height compensation.



WOODEN BEAM SUPPORT:

Modular usable with flange plates, adapted to the respective structural loads.



U-FIXING:

Simple fixing by means of axis and height adjustment for lying or standing beams.



FLANGE PLATES:

Modular usable with flange plates, adapted for the respective structural loads.

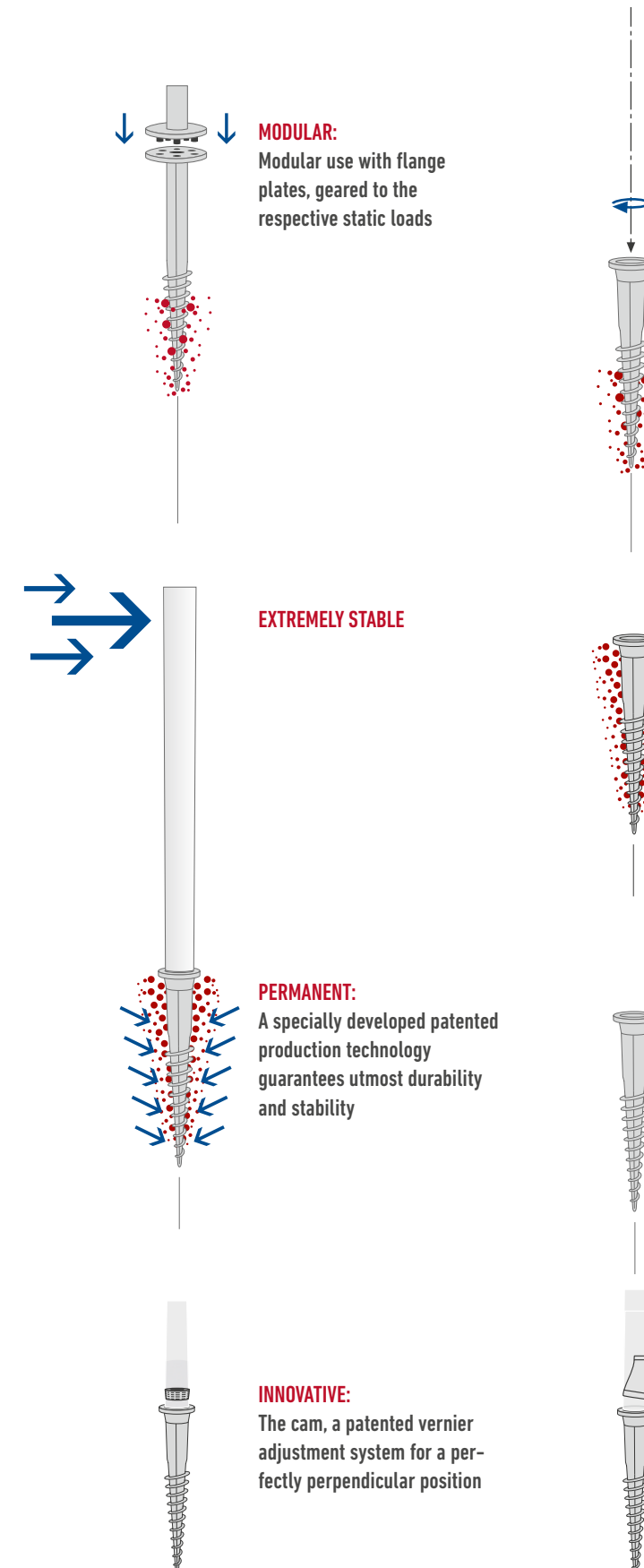


ECCENTRIC ADJUSTMENT:

Fine adjustment and perfectly perpendicular position for resonance and vibration free mounting.

STATICS

perpendicular · safe · permanent



MODULAR:
Modular use with flange plates, geared to the respective static loads

EXTREMELY STABLE

PERMANENT:
A specially developed patented production technology guarantees utmost durability and stability

INNOVATIVE:
The cam, a patented vernier adjustment system for a perfectly perpendicular position

FAST:
The newly developed ground screw system makes for very short assembly times

PERPENDICULAR:
Vernier adjustment and perpendicular position through a patented cam or granulate system

SAFE:
The ground screws' conic form compacts the soil and guarantees stability and safety

ENVIRONMENTALLY FRIENDLY & MOBILE:
The ground screws' deconstruction is possible at any time

FAST:
With granulate made of sharp-edged crushed granite for a fast, perpendicular and inexpensive assembly

Bundesanstalt für Straßenwesen

Prüf- und Zertifizierungsstelle für Straßenausstattung
Notifizierungsnummer 0760

