



[www.krinner.com](http://www.krinner.com)



**Including Ground Screw Driver  
and Accessories**

# PRODUCT CATALOGUE PROFESSIONAL GROUND SCREWS

# EDITORIAL



More than 100 patents and innovations for our customers.

**Dear Partner,**

**We are pleased to present you our latest product catalogue.**

The KRINNER team is proud to see that the ground-breaking invention of ground screws has established itself as a real alternative to conventional concrete foundations. It has also come a long way since its invention: In this product catalogue, we present yet another advancement of the ground screw. The fundamental shape, specific thread and driving methods have been optimized by new and innovative ideas. This has resulted in a further increase in strength values as well as an improvement in handling and driving. At the same time, we have expanded our product range for you and grouped our ground screws into new product classes. This will make it much easier for you to find the right solution among the many different applications.

We have also expanded our service department for you. We have increased our workforce at our headquarters and now offer a range of services with fixed and variable components to support you more on your projects.

With our products and the many applications for them, we are certain that you, as our partner, will continue to grow successfully with us.

Cordially

Hans-Jürgen Sauter  
General Manager, Krinner Schraubfundamente GmbH

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## Drivers



KR E 10 Ground Screw Driver

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S1 Manual Screwing Tool

KR D 55 Ground Screw Driver

KR B 40 Ground Screw Driver

KR B 60 Ground Screw Driver

KR B 250 Ground Screw Driver

Cable Detector

## Accessories

# MODERN FOUNDATION CONSTRUCTION

efficient · safe · sustainable



Respect for the natural environment is a further argument for professional ground screws: The soil remains unsealed, so foundations can be removed cleanly without hassle.

Building modern foundations with KRINNER Ground Screws (KSF) does not only fit right into nature and our environment, but also presents entirely new, rational, time- and cost-saving building processes for the construction worker.

This quick and uncomplicated foundation method allows high quality solutions at low cost. It ecologically and economically outperforms previous building methods.

Using practical and handy drivers and equipment, KRINNER ground screws are quick to install, precisely adjustable and suitable for all types of soil, even on hillsides.

The ground screws made of hot-dip galvanized steel or resilient plastic guarantee utmost stability, safety and durability.

## Advantages at a glance:

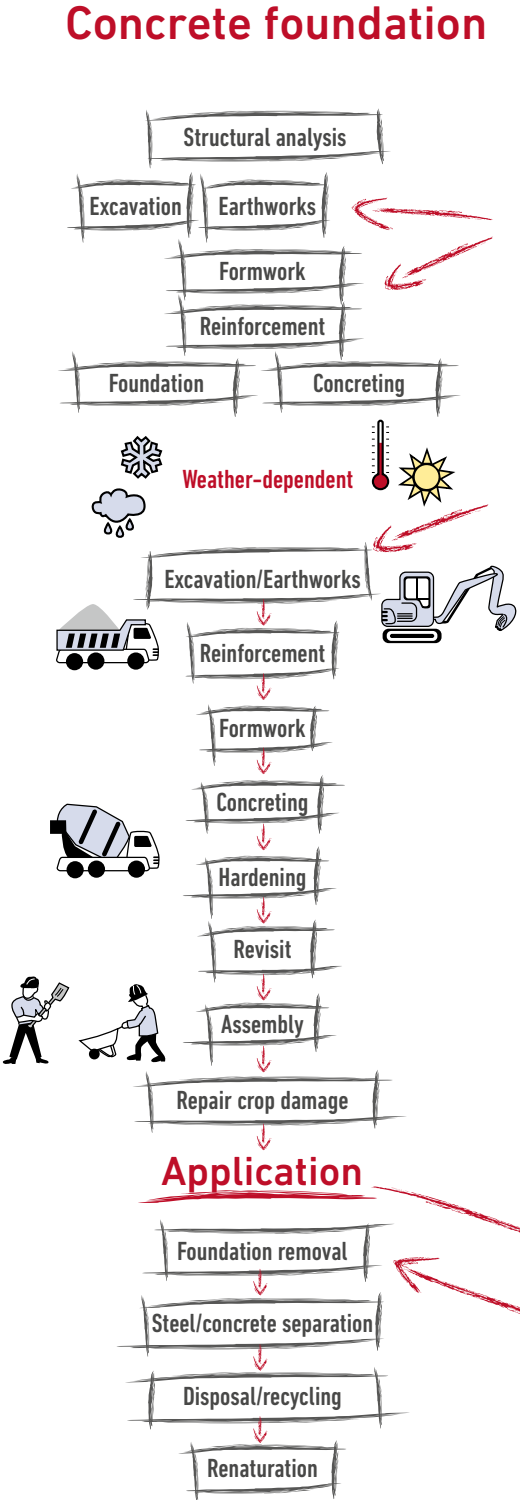
- Time and cost benefits
- Suitable for all types of firm ground
- Statically tested and proven
- No earthworks or concrete pouring
- Short installation time
- Immediately loadable
- Quick changes of position
- Terrain remains undamaged
- Can also be installed into sealed surfaces
- Easily to dismantle and reusable
- Long life and high stability
- Environmentally friendly, ecological, sustainable

# ADVANTAGES – ADDED VALUE

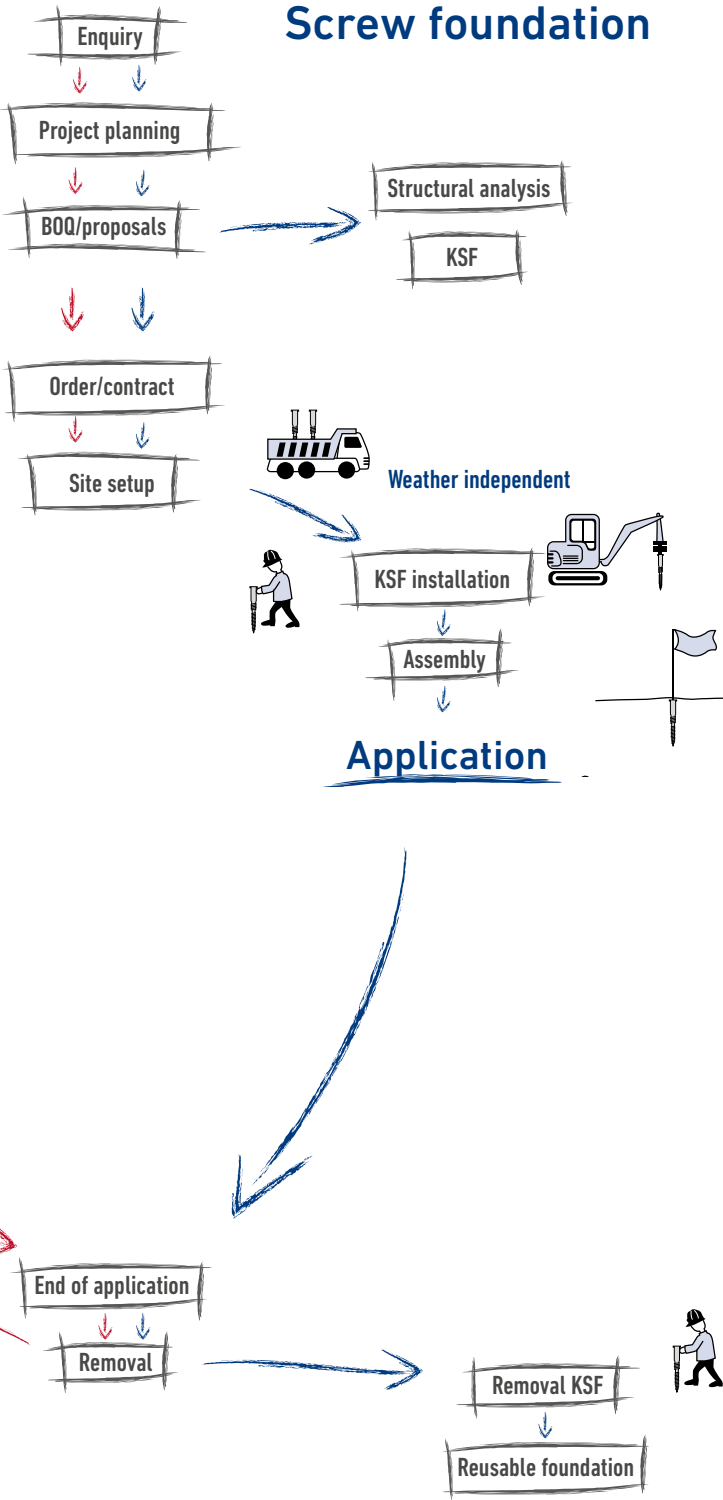
quicker · more efficient · safer

The innovative foundation method of KRINNER Ground Screws simplifies planning and implementation for users, for safer, quicker and more affordable building. It requires no earthworks or concrete pouring, and hence none of the transport costs or logistical effort that comes along with it. No construction site disturbs normal business during installation. The soil structure and vegetation remain largely untouched. Also the soil remains unsealed, so foundations can be removed cleanly.

## Concrete foundation



## Screw foundation



Example sequence of events on construction site

# SERVICES AND SOLUTIONS

individual · competent · comprehensive



Competence from the initial idea to implementation.

## COMPETENCE FROM THE INITIAL IDEA TO IMPLEMENTATION

KRINNER develops customized product solutions using ground screws as foundations for various application fields. As your competent partner, we offer you a comprehensive package from the initial idea to implementation. Every solution is developed individually and tailored specifically to the customer's wishes using the highest quality components.

## EXPERTISE – FOR EVERYONE

KRINNER offers innovative solutions and comprehensive knowledge transfer. We address users directly and make our knowledge available in training courses, seminars and workshops.

## OUR SERVICES – VALUE DISCIPLINES FOR DYNAMIC DEVELOPMENT

In response to the rising demand for our innovative products and individual services, we offer a series of comprehensive packages. With our unique selling points and key differentiators in this sector, we provide our customers and partners a significant edge in the global competition.

# SERVICES AND SOLUTIONS

individual · competent · comprehensive

## CUSTOMER SERVICE – AVAILABILITY WHEN IT IS NEEDED

With expertise, experience and customer-focused thinking and action, our customer service team offers you a comprehensive package of services and solutions:

- National and international customer service
- Pre-sales and after-sales service
- Quick handling of customer inquiries
- Communication interface between partners, sales force and engineering
- Comprehensive partner support and advice for all solutions
- Coordination of on-time deliveries
- Complaints management



## ENGINEERING – BY PROFESSIONALS FOR PROFESSIONALS

Expert engineers and technicians put their competence and expertise into the success of your screw foundation projects and accompany and support you right from the start. Every project has its own requirements, different ground conditions and individual applications. Our engineering service therefore offers individualized, customer-specific solutions.

- Technical advice
- Structural analysis and individual measurements of the KSF
- Performance of load tests
- Project management from planning to control to supervision during KRINNER ground screw installation projects



## RESEARCH AND DEVELOPMENT – LEADING THROUGH INNOVATION

Future technology is the catalyst in our corporate development and innovation our strength. With our engagement we encourage future-oriented and sustainable new developments.

- Market-oriented developments that satisfy the interests of our partners and customers
- Implementation of new, improved and future-oriented solutions to increase the value added
- Effective customer-focused development process that culminates in competitive products
- Sustainable development for economic utilization





# SERVICES AND SOLUTIONS

individual · competent · comprehensive

## Catalogue of Engineering Services

Basic	Service Items	Unit
Technical Advice		
	1. Technical training (basic package, advanced seminars)	Daily rates plus travel expenses
	1.1 Statics training	Accommodation*
	1.2 Training on driver and excavator operation	
	1.3 Product training courses	
	2. Technical advice at events, trade fairs and customer appointments	
	3. Preliminary evaluation and material conception for preparing offers	
Structural Analyses		
	1. Structural analysis of the KSF	Hourly rates plus travel expenses
	2. Structural analysis and development of the adaptation to KSF	Accommodation
Load Tests		
	Planning, performance and analysis of load tests on site including photographic documentation	Daily rates plus travel expenses Accommodation Technical equipment
Project Management		
	1. Planning of projects	Hourly rates plus travel expenses
	1.1 Preliminary evaluation and planning services including preparation of implementation and detailed plans for the KSF	Accommodation Technical equipment
	1.2 Agreement of bills of quantities for specification of terms	
	1.3 Coordination and scheduling of the KSF installation process	
	2. Project control for KSF installation	
	2.1 Project-specific organization, definition of interfaces and responsibilities	
	2.2 Preparation, planning and performance of projects for KSF installation. Project-related negotiations with third parties for conflict management in the interests of the contractee	
	2.3 Scheduling and resource planning	
	3. Site management and supervision for KSF installation	
Service and Maintenance Contracts		
	Service and maintenance of the KSF in the form of monitoring measures	Hourly rates plus travel expenses Accommodation

\*Unless agreed upon in other packages

# SERVICES AND SOLUTIONS

individual · competent · comprehensive

## Individual Items in the Catalogue of Services

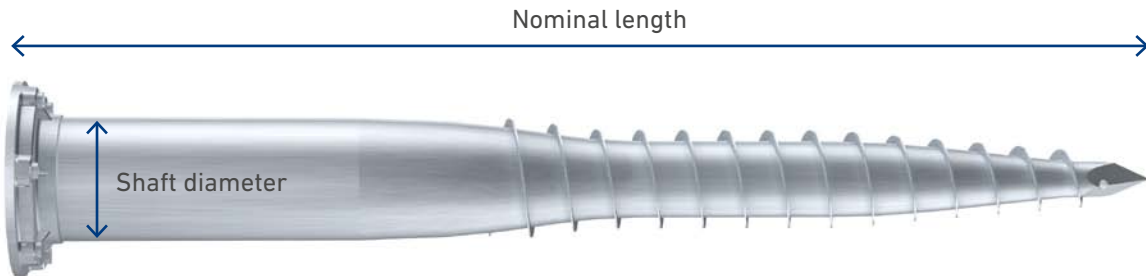
Item	Description	Unit
Technical Equipment		
	KR D 100 Ground Screw Driver incl. 1 machine operator	Hourly rates
	KR D 55 Ground Screw Driver incl. 1 machine operator	Hourly rates
	KR B 60 Ground Screw Driver incl. excavator and 1 machine operator	Hourly rates
	KR B 40 Ground Screw Driver incl. excavator and 1 machine operator	Hourly rates
	Wheel loader/telescopic handler incl. 1 machine operator	Hourly rates
	Compressor for KR D 55 Ground Screw Driver incl. pre-drilling equipment – DTH hammer incl. 1 machine operator	For KSF < 140 mm Hourly rates
	Compressor for KR D 100 Ground Screw Driver incl. pre-drilling equipment – DTH hammer incl. 1 machine operator	For KSF > 140 mm Hourly rates
	KR D 55 Ground Screw Driver incl. pre-drilling equipment – hydraulic hammer incl. 1 machine operator	Hourly rates
	Carriage with vehicle	Hourly rates
	Carriage without vehicle	Hourly rates
Technical Personnel		
	Project Manager	Hourly rates
	Engineer	Hourly rates
	Site Foreman	Hourly rates
	Technician	Hourly rates
	Chief Erector	Hourly rates
	Technical Assistants	Hourly rates
	Assemblers/Machine Operators	Hourly rates
	Commercial Staff	Hourly rates
	Assembly Assistants	Hourly rates
Travel Expenses*		
	Travel to/from, vehicle up to 3.5 t	Per km
	Travel to/from, vehicle from 3.5 t to 7.5 t	Per km
	Travel to/from, vehicle over 7.5 t	Per km
	Travel to/from by rail, air or ship	By receipts
	Fixed rate for accommodation and meals	

\*Toll road/motorway charges calculated separately

# BACKGROUND KNOWLEDGE

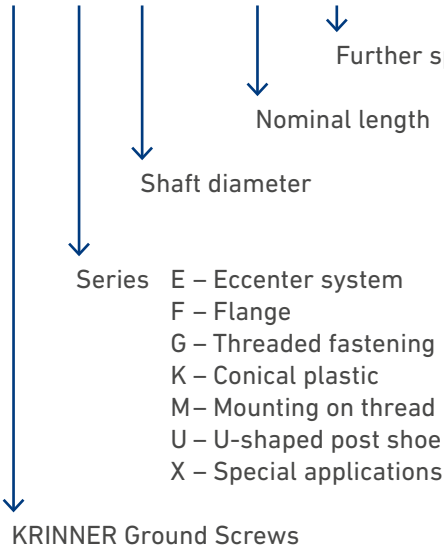
individual · competent · comprehensive

## Designation system for KRINNER Ground Screws



For example

**KSF E 140x1300-E76-100**



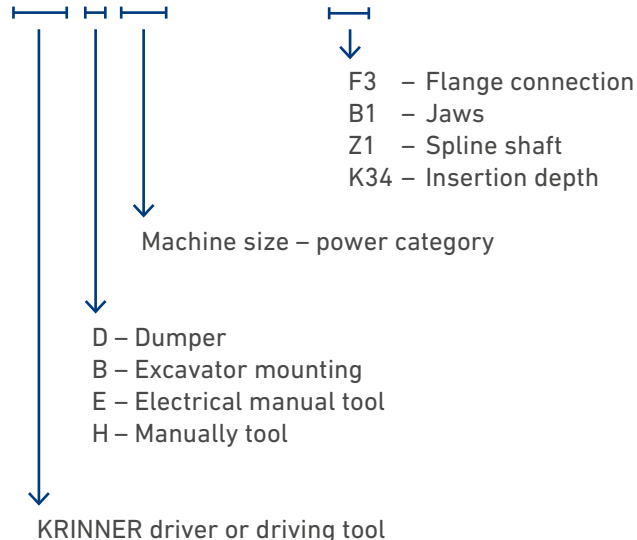
Further specifications: E – Diameter setting  
 R – Rectangular flange plate  
 M – Moment (torque)  
 P – Planar flange  
 M – Number and dimensions of side threads

Series E – Eccenter system  
 F – Flange  
 G – Threaded fastening  
 K – Conical plastic  
 M – Mounting on thread  
 U – U-shaped post shoe  
 X – Special applications

## Designation system for KRINNER Ground Screw Driver

For example

**KR E 20 Driver Z1**



F3 – Flange connection  
 B1 – Jaws  
 Z1 – Spline shaft  
 K34 – Insertion depth

D – Dumper  
 B – Excavator mounting  
 E – Electrical manual tool  
 H – Manually tool



KR E 20 Driver Z1

# BACKGROUND KNOWLEDGE ON INSTALLATION

The following criteria apply to KRINNER Ground Screws made of hot-dip galvanized steel for stable erection of structural elements and for bearing loads by redirection into the ground. These criteria serve as a guideline for professional and qualified execution.

## ASSESSMENT AND PREPARATION

Before installing screw foundations, an assessment and calculation must be made on the basis of the existing loads and respective ground conditions. A reference value and pre-dimensioning table is provided for preselecting the ground screws. The final foundation design must be based on onsite load tests performed in compliance with DIN EN 1537 and DIN EN 4125.

### THE FOLLOWING CONSIDERATIONS ARE ESSENTIAL FOR THE CORRECT CHOICE OF GROUND SCREW:

- Calculation of the maximum service load by taking the ultimate load or characteristic ultimate loads as a basis by dividing the respective ultimate load by a safety factor. Ultimate loads are those loads that either cause rupture or extraction of the ground screws. Their average value is obtained by means of individual tests on the building material. Permissible loads are service loads that already include an appropriately rated safety factor. However, these only apply if the manufacturer's specifications are complied with.
- Rating of the internal load-bearing capacity based on a relevant structural analysis model in compliance with DIN EN 1997-1 Eurocode 7 and DIN 1055-2:2010-11.
- Rating of the external load-bearing capacity of the KRINNER ground screw according to DIN 18800 and based on load tests carried out in compliance with DIN EN 1537, DIN 4125 and DIN 1054:2010-12.
- Service life or usable lifetime of the structures and buildings to be erected on screw foundations.
- For assessment of the soil conditions and the local installation terms, appropriate investigation and testing of the soil must be carried out according to DIN EN ISO 14688-2:2011-06 and a geotechnical report must be produced.

## INSTALLATION

KRINNER Ground Screws are basically installed into firm ground using driving equipment designed to the appropriate performance level. The ground screw is driven into the ground without vibration by a rotary drive with simultaneous downward pressure. Insertion of the screw leads to sideways displacement and compaction of the soil.

- For pinpoint accuracy and perfectly vertical insertion, it is recommended to pre-drill using a hammer drill or rotary hammer with a drill bit approx. 40 mm in diameter and equal in length to the depth of insertion.
- A little water can also be poured into the predrilled borehole before inserting the screw for optimal lubrication.
- If the ground does not allow installation by displacement, then there is the option of partially or fully removing material in the size of the core diameter of the ground screw using suitable drilling means.

Driving a ground screw into the ground generates a turning force or insertion torque. The torque applied during insertion serves to drive the ground screw along its axis. The manufacturing parameters can be automatically determined during quality control. During insertion, the special indications in the operating instructions for the driver or driving tool must strictly be observed. The foundation-specific requirements must be taken into consideration and the installation performed according to the current state of the art.

#### **REQUIREMENTS AND SAFETY AT THE CONSTRUCTION SITE**

All points marked out for installation of ground screws must be tested for possible obstacles such as underground cables, pipelines and building constructions. This must happen with a safety radius. Built drawings and cable/pipeline plans must be presented and inspected. For an optimal preparation for building, it is recommended to inspect the available cabling pipeline plans and to use conventional cable detection devices on the site. The insertion points and the necessary surrounding space for the driving machinery used for installation must be kept freely accessible. Any changes made to the ground after the geological survey has been performed, for instance earthworks, backfill, shifting etc., may require a new survey. Naturally, occurring changes in the earth such as land subsidence, landslide, floods, earthquakes etc. will void all warranty. Liability for damage due to inadequate or faulty structural analysis is excluded. In the case of swampy grounds, high groundwater levels, softening of the terrain by heavy rainfall or flood, ground screws may not be installed.

#### **TYPES OF FAILURE**

Overloading improper assembly or ground of insufficient load-bearing capacity may cause ground screws to be pulled out or lead to steel rupture or material failure in the foundation or to ground subsidence.

#### **CORROSION PROTECTION**

KRINNER Ground Screws and accessories such as fasteners and connectors are protected against corrosion by hot-dip galvanization according to DIN EN ISO 1461. Depending on the ground characteristics, a soil analysis must be performed according to DIN 50929 to assess any aggressiveness against galvanized steels. Corrosive attack is a critical factor in the service life of the ground screws and determines the necessity of corrosion protection measures. If the head plates of the ground screws ever need to be drilled on the construction site, then they must be subsequently treated with a zinc-dust-based coating. Wherever required by the application, approved coatings are to be recommended for the surrounding area for the connections to the foundation.

Other technical details and information to be taken into consideration are provided in the technical data sheets on the KRINNER ground screws at [www.schraubfundamente.de](http://www.schraubfundamente.de).

# SUSTAINABILITY

## Environment & Safety: KRINNER's obligation



When developing new products, KRINNER always focuses on sustainable and nature-friendly solutions.

With our professional Ground Screws, we do not only achieve cost and time savings for our customers, by simple and ecologically sound installation – we also allow clean removal without any sealing of soil. Furthermore, KRINNER Ground Screws do not require cost intensive construction site roads that impact vegetation – but moreover offers vehicles for ground conserving transport.

Partners, planners, architects, dealers, tradesmen, specialists, and private and public building owners all benefit from our innovations and the synergies of our environmental and sustainability policy.

### ENVIRONMENTAL POLICY & GUIDELINES

KRINNER commits itself to make resources available for necessary measures and to support the requirements of environmental management. We do this by:

- Promoting the use of high quality, regional and environmentally sound products
- Selecting and using environmentally safe equipment and materials
- Saving energy and water
- Reducing waste quantities through selected procurement and reasonable waste separation
- Adherence to environmental regulations
- Continuous improvement of our environmental performance
- Covering our own electricity consumption with renewable energy sources

# QUALITY MANAGEMENT

Innovations for the present and the future



The satisfaction of our customers and economic efficiency of our actions are the primary concerns behind our quality policy. This includes improving all procedures and processes in our operations in order to deliver products and services of consistently high quality and to minimize nonconformity costs.

All employees are integrated into the continuous improvement process and contribute with motivation and dedication. Every individual plays his or her part in reaching the quality objectives in his or her department.

- Satisfied customers thanks to cost-efficient products of the desired quality on the desired deadline
- Qualified and motivated employees with personal responsibility and team spirit
- Products and services of consistently high quality

## QUALITY MANAGEMENT SUPPORTS THE ACHIEVEMENT OF THESE OBJECTIVES

Consistent implementation and continuous improvement of the QM system by all employees increases the sense of responsibility and motivation and improves the identification with the company and its products. Clear definition of processes, responsibilities and interfaces ensures greater transparency and efficiency in organization, function and procedure. Friction losses within the company are reduced and the possibility of error is diminished. Specific training and professional development of employees as well as the use of efficient working methods and techniques increase qualifications and motivation.

Bundesanstalt  
für Straßenwesen

Prüf- und Zertifizierungsstelle für  
Straßenausstattung  
Notifizierungsnummer 0760



der Bundeswehr  
Universität  München

 Institut für Bodenmechanik und Grundbau



# APPLICATIONS

versatile · individual · flexible



Optimal stability and installation within minutes impress users from all industries.

KRINNER Ground Screws offer the ideal solution for creating foundations for an extensive range of applications.

Objects mounted on ground screws range from advertising structures and traffic installations, to hall and container building construction, to applications in timber-frame construction and fencing, to urban development and landscaping.

This includes event stands, sports facilities and grandstands, production, storage and exhibition halls, school buildings, container and detached buildings, disaster control centers, garden sheds, urban furniture, transport facilities and noise protection systems, large-format advertising, flagpoles, pedestrian bridges, fencing and gate systems, and much more.

The high load capacity of the ground screws and their efficient installation allow architects and building owners to produce a modern, long-lasting foundation with clear economic advantages.

Customers using KRINNER Ground Screws all around the world are impressed with their handling, stability and versatility.

The application examples given in this product catalogue provide first cues for selecting the right kind of ground screw.





# APPLICATIONS

versatile · individual · flexible



## TIMBER-FRAME CONSTRUCTION

Ideal for sustainable, efficient and long-term building ideas made with or entirely of wood.



## ADVERTISING AND TRAFFIC SYSTEMS

The attractive and cost-efficient alternative thanks to quick and uncomplicated installation.



## URBAN, GARDEN AND LANDSCAPE CONSTRUCTION

An ecologically and economically optimal and modern solution.



## HALL AND CONTAINER CONSTRUCTION

Quick, flexible and economical: This is modern construction.



## FENCING SYSTEMS

The optimal solution for almost every terrain: fast, stable and professional.



## SOLAR SYSTEMS

Long-term environmental soundness and cost savings:  
The perfect foundation for every ground mounted system.



## TIMBER-FRAME CONSTRUCTION

ecological · no concrete · durable



# TIMBER-FRAME CONSTRUCTION

ecological · no concrete · durable



Building with wood is a sustainable and future-oriented solution, hence it is only logical to choose KRINNER Ground Screws for the foundation. The terrain remains untouched and since no soil sealing is required the overall logistical effort is minimal.

A **big advantage**, since the designs and the building process can be planned much more effectively and without loss of time.

## EXAMPLE SOLUTIONS AND APPLICATIONS:



Multi-level timber constructions



Carports



Tree houses



Jetties on water



Wooden houses



Bridges



Grape gardens



Fencing



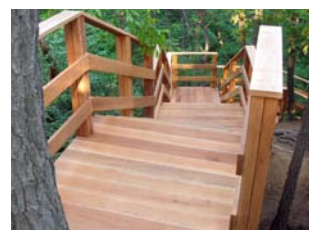
Pergolas/pavilions



Decks



Pathways



Stairs

## RECOMMENDED GROUND SCREWS:

Depending on your project requirements, the **E Series**, **F Series** and **U Series** of ground screws as well as most of the **G Series** are especially suitable for timber-frame construction.



# ADVERTISING AND TRAFFIC SYSTEMS

efficient · no concrete · stable



# ADVERTISING AND TRAFFIC SIGNPOSTING



efficient · no concrete · stable

Saving time and costs, gaining customers and new space – being quick and easy to install, KRINNER Ground Screws create attractive and effective alternatives with enormous savings potential.

At the same time, creating an entirely new innovative placement for opportunities – foundations can namely be built onto asphalted, paved or greened areas without interfering with the site.

## EXAMPLE SOLUTIONS AND APPLICATIONS:



Advertising pylons



Sign plates



Advertising on buildings



Perimeter advertising



Flagpoles



Traffic signposts



Delineator posts



Expressway signposting



Guideposts



Info boards



Large-format advertising



Advertising boards

## RECOMMENDED GROUND SCREWS:

Depending on your project requirements, the **E Series**, **F Series**, **M Series** and **X Series** of ground screws as well as most of the **G Series** are especially suitable for advertising and traffic signposting.



# URBAN, GARDEN AND LANDSCAPE CONSTRUCTION

economical · no concrete · flexible



# URBAN, GARDEN AND LANDSCAPE CONSTRUCTION

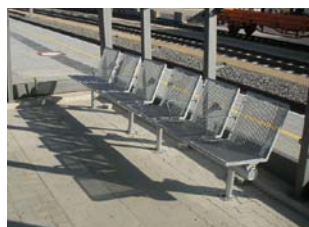


**economical · no concrete · flexible**

Optimize the cityscape quickly, safely and ecologically and simultaneously save costs – KRINNER Ground Screws allow selective construction without major construction sites. The installation of the foundation is completed within few minutes – resulting in an optimal economical as well as ecological solution.

**No earth removal and no concrete.** That not only saves enormous amounts of time, but also saves residents the burden of major construction sites.

## EXAMPLE SOLUTIONS AND APPLICATIONS:



Shelters & benches



Barriers



Turnstiles



Public sculptures



Noise barriers



Art objects



Playground equipment



Bike sheds



Privacy and sound screens



Awnings & shade systems



Trashcans



Pylon art

## OTHER POSSIBLE APPLICATIONS:

Video and surveillance systems, shelter and event facilities, streetlamps, ball screens, parking meters and cabinets.

## RECOMMENDED GROUND SCREWS:

Depending on your project requirements, the **E Series**, **F Series**, **K Series** and **M Series** of ground screws as well as most of the **G Series** are especially suitable for urban development and landscaping.



# HALL AND CONTAINER CONSTRUCTION

safe · no concrete · uncomplicated





# HALL AND CONTAINER BUILDING CONSTRUCTION



**safe · no concrete · uncomplicated**

Foundation depths of up to 3.5 meters and the high quality of KRINNER Ground Screws allow even expansive constructions to be completed on a tight schedule. Whether for halls or stages, container buildings or pre-fabricated garages: All ground screws are structurally tested and certified for compressive, tensile and horizontal loads according to the most stringent guidelines..

Safety and long service life are guaranteed – even under extreme loads.

## EXAMPLE SOLUTIONS AND APPLICATIONS:



Production halls & warehouses



Office container buildings



Container systems on piers



Container systems for temporary buildings



Vehicle depots



Event stands & grandstands



Container buildings with wood facades



Futuristic modules



Glass houses & greenhouses



Cube modules



Loading ramps



Pre-fabricated garages



Modular constructions



Closed modules



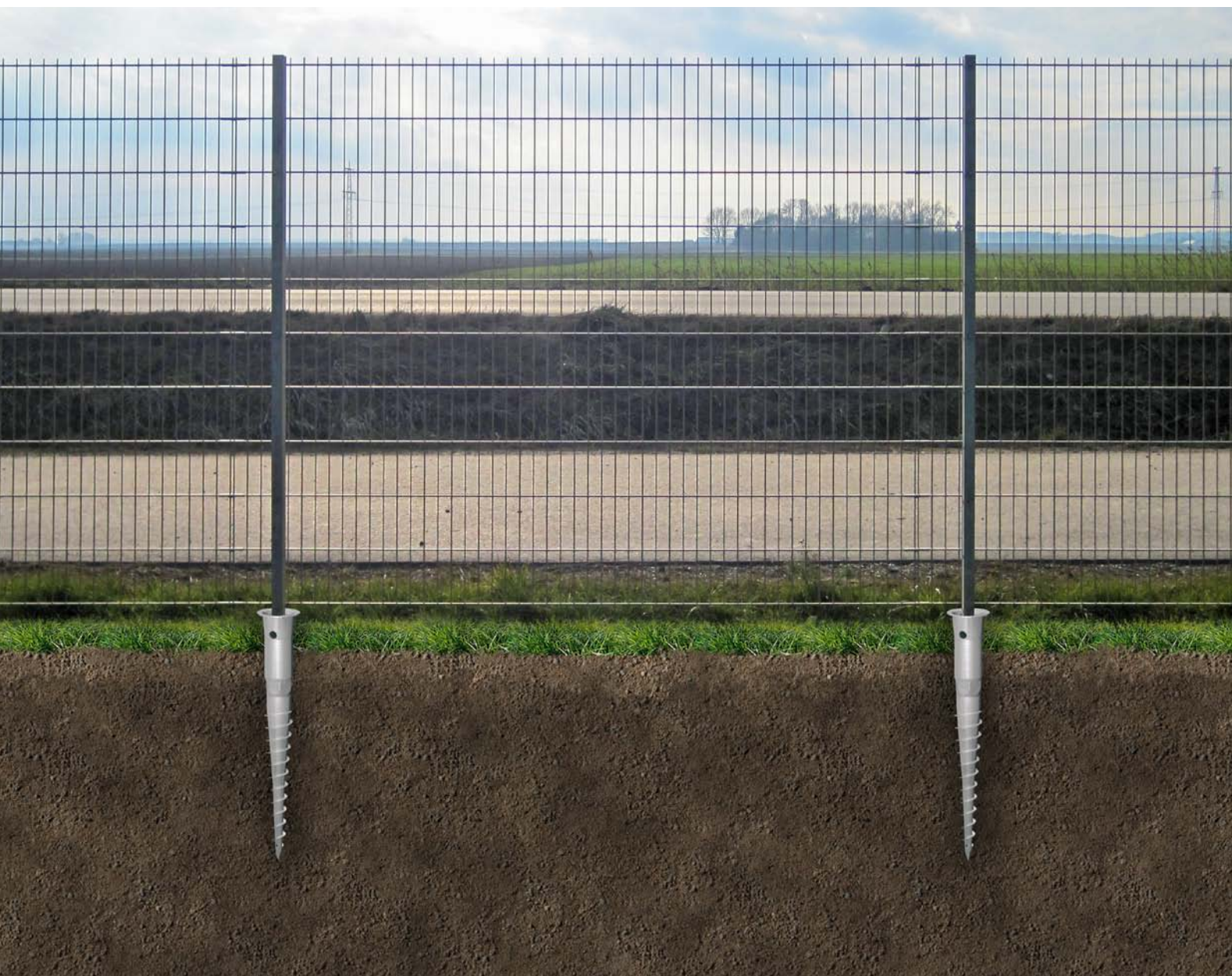
Transformer stations



Multi-level container constructions

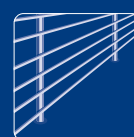
## RECOMMENDED GROUND SCREWS:

Depending on your project requirements, the **E Series**, **M Series** and **F Series** of ground screws as well as most of the **G Series** are especially suitable for hall and container building construction.



## FENCING SYSTEMS

rational · no concrete · professional



# FENCING

rational · no concrete · professional



Garden, industrial or high-security fences; for safety, decoration or security purposes: The KRINNER Ground Screws developed specifically for fencing systems present unlimited possibilities for efficient implementation of any project.

Patented **eccenter** and **granulate systems** allow precise installation with pinpoint accuracy, regardless of whether the terrain is flat or hilly.

## EXAMPLE SOLUTIONS AND APPLICATIONS:



Industrial fences



Construction site fences



Chicken wire fences



Ball screens



Fences on hillsides



Wildlife fences



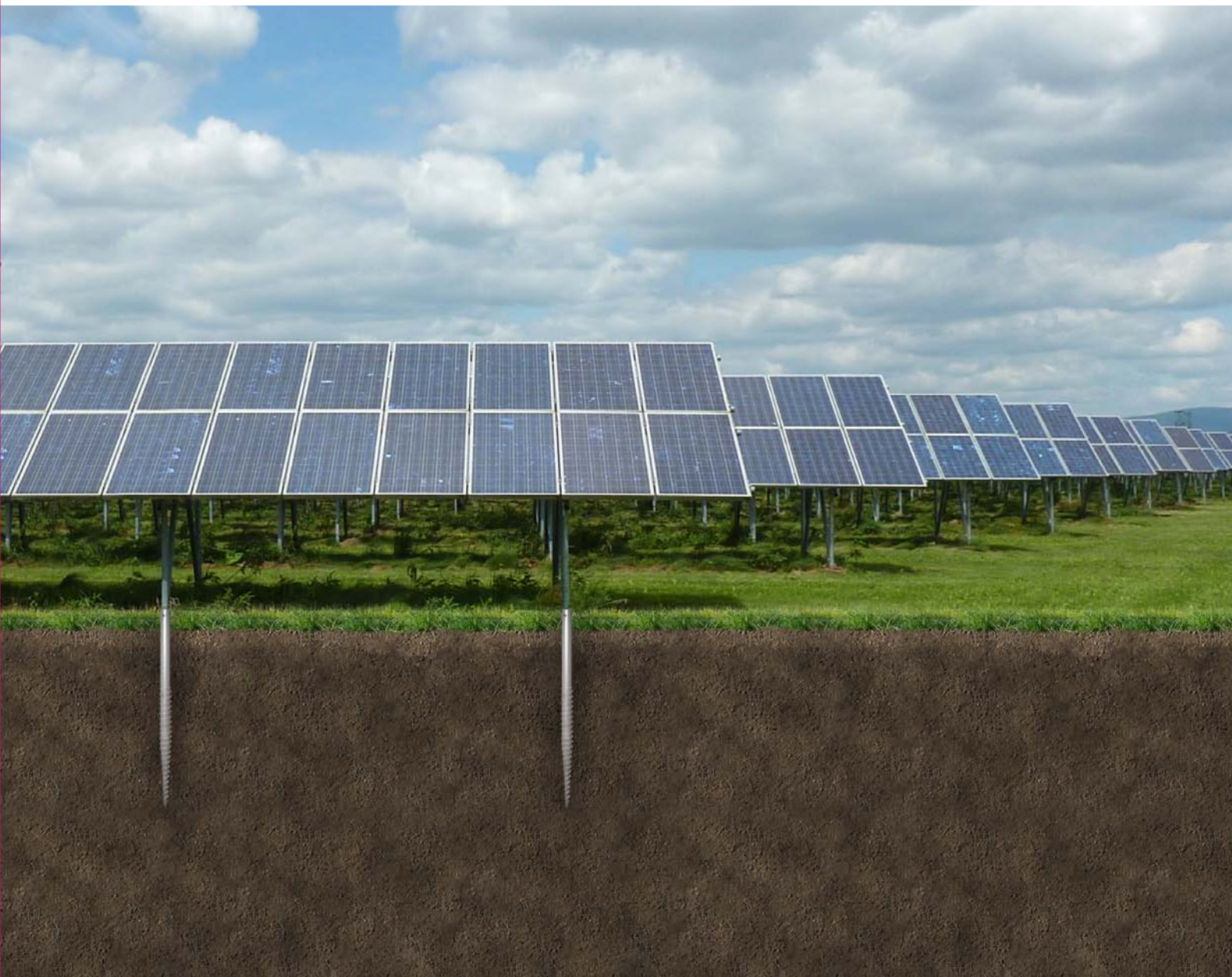
Wooden fences



Gate systems

## RECOMMENDED GROUND SCREWS:

Depending on your project requirements, the **E Series**, **F Series**, **K Series** and **U Series** of ground screws as well as most of the **G Series** are especially suitable for fencing.



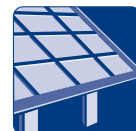
## SOLAR SYSTEMS

modular · no concrete · ecological



# SOLAR SYSTEMS

modular · no concrete · ecological



Rising energy prices and growing scarcity of fossil resources are driving factors for the development and utilization of renewable energy sources. Especially, when it comes to solar energy KRINNER bundles extensive knowledge in foundation construction, energy technology and solar technology to offer alternatives in the field of renewable energies – alternatives for people and the environment! From system planning, to installation, to the maintenance of customized ground mounted solar solutions for entrepreneurs and investors, we realize the best solutions for obtaining clean energy.

## EXAMPLE SOLUTIONS AND APPLICATIONS:



Gänsdorf, Germany



Gänsdorf, Germany



Großenpinning, Germany



Senftenberg, Germany



Leiwen, Germany



Leibertingen, Germany



Schwarzhof, Germany



Carlino, Italy



Melbourne, Australia



Sault Ste. Marie, Canada



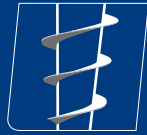
Southern Spain



Veprek, Czech Rep.

## RECOMMENDED SYSTEM:

The KRINNER Flex III system is perfectly suited for use in free-standing photovoltaic and CSP systems. Concrete-free and flexible screw foundations do not seal the soil and can also be ideally aligned to the sun.



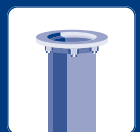
**KRINNER**  
The Ground Screw

[www.krinner.com](http://www.krinner.com)



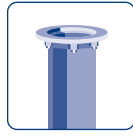
## E SERIES

The KRINNER Ground Screw with eccentric adjustment for exact alignment



## E SERIES

### The KRINNER Ground Screw with eccentric adjustment for exact alignment



The E Series of ground screws can be optionally equipped with excenter to suit the application conditions. The excenter allows fine adjustment and ensures perfect vertical alignment of the erected object. The system is especially well suited to resonance- and vibration-damped installation of poles and masts.

#### RECOMMENDED DRIVERS:

For correct insertion of E Series ground screws, use the Ground Screw Driver **KR E 10** or **KR E 20**, **KR D 55** driver, or **KR B 40**, **KR B 60** or **KR B 250** Lot-o-Mat.

#### TIPS FOR INSTALLATION:

Before inserting the excenter, fill a small amount of granulate into the screw foundation. Tap the fixing ring down with a hammer before fixing with screws.

- Facilitates tightening of the excenter
- Dampens resonance and vibrations

Overview of E Series

KSF E 140x2100-E76-100	KSF E 140x1600-E76-100	KSF E 140x1300-E76-100	KSF E 89x1000-E60	KSF E 89x800-E60	KSF E 89x550-E60
<b>Length (mm)</b>					
2100	1600	1300	1000	800	550
<b>Tube diameter (mm)</b>					
139.70	139.70	139.70	88.90	88.90	88.90
<b>Weight (kg)</b>					
23.50	18.50	15.00	5.50	4.30	3.50
<b>Item number</b>					
25500	26160	25502	24100	24080	24055





## Technical Data Sheet E Series

### Basic Info

KSF E 140x2100- E76-100	KSF E 140x1600- E76-100	KSF E 140x1300- E76-100
Nominal length (mm)		
2100	1600	1300
Tube diameter (mm)		
139.70	139.70	139.70
Weight (kg)		
23.50	18.50	15.00
Item number		
25500	26160	25502



KSF E 140x1300-  
E76-100

### Construction

- Flange: GP240GH
- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Continuous welded helix

### Applications



### Accessories



Excenter Set-E76  
Item No. 26810



Excenter Set-E80  
Item No. 26814



Excenter Set-E90  
Item No. 26813



Excenter Set-E100  
Item No. 26809



Reducer-E76-E60  
Item No. 26821



Reducer-E76-E70  
Item No. 26822



Cover Plate  
2 mm-E76-100  
Item No. 26819



Cover Plate  
8 mm-E76-100  
Item No. 26829



Attachment  
Screw-E76-100  
Item No. 21837



Countersunk-E76-100  
Item No. 26830

Subject to technical change!

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## Technical Data

	KSF E 140x2100- E76-100	KSF E 140x1600- E76-100	KSF E 140x1300- E76-100
<b>a</b> Length (mm) ( $\pm 25$ mm)	2110	1640	1310
<b>b</b> Outer diameter (mm)	139.70	139.70	139.70
<b>c</b> Inner diameter (mm)	132.50	132.50	132.50
<b>d</b> Diameter setting* (mm)	100   90   80   76**	100   90   80   76**	100   90   80   76**
<b>e</b> Depth setting (mm) ( $\pm 25$ mm)	975   1010   1040   1040	730   775   810   810	565   630   650   650
<b>f</b> Thread	3 x M12	3 x M12	3 x M12
<b>g</b> Pitch circle diameter (mm)	192	192	192
<b>h</b> Flange outer diameter (mm)	220	220	220
<b>i</b> Flange thickness (mm)	14	14	14

\* The diameter setting (d) determines the depth setting (e)

\*\*Tip for installation: To adjust the depth setting, it is recommended to fill in ballast or insert an accessory plate

## Online Service

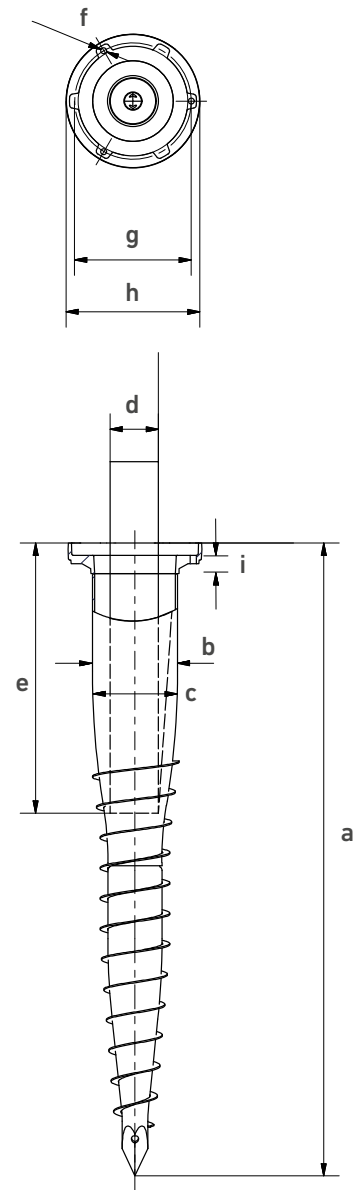
KSF E 140x2100- E76-100	KSF E 140x1600- E76-100	KSF E 140x1300- E76-100
----------------------------	----------------------------	----------------------------

Webkey

E2550011D

E2616011D

E2550211D



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## Technical Data Sheet E Series

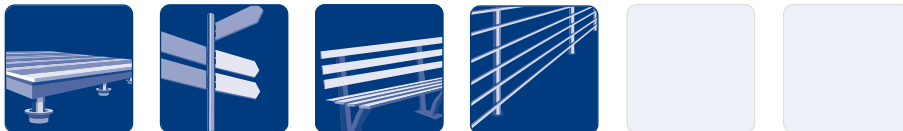
### Basic Info

KSF E 89x1000-E60	KSF E 89x800-E60	KSF E 89x550-E60
<b>Nominal length (mm)</b>		
1000	800	550
<b>Tube diameter (mm)</b>		
88.90	88.90	88.90
<b>Weight (kg)</b>		
5.50	4.30	3.50
<b>Item number</b>		
24100	24080	24055

### Construction

- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Continuous welded helix
- Patented conical body forged from a single piece of tubing

### Applications



KSF E 89x800-E60

### Accessories



**Cover Plate 2 mm-E60**  
Item No. 24808



**Clamp Ring-E60**  
Item No. 24802



**Excenter-E60**  
Item No. 24801



**Fair Level-E60**  
Item No. 24803



**Excenter Set-E60**  
Item No. 24817



**Fixing Screw-E60**  
Item No. 21808

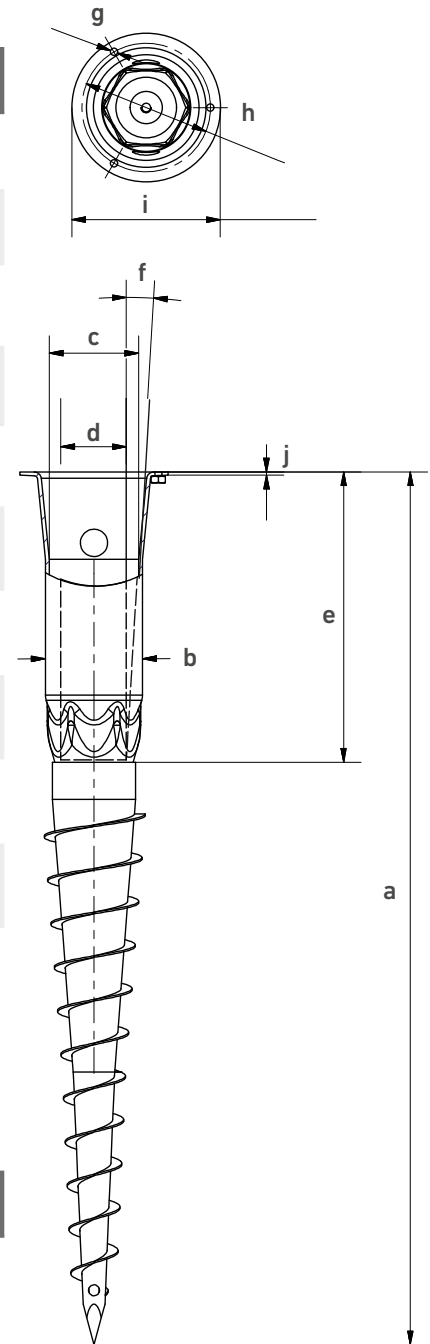
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### Technical Data

	KSF E 89x1000-E60	KSF E 89x800-E60	KSF E 89x550-E60
<b>a</b>	<b>Length (mm) (<math>\pm 25</math> mm)</b> 1000	800	550
<b>b</b>	<b>Outer diameter (mm)</b> 88.90	88.90	88.90
<b>c</b>	<b>Inner diameter (mm)</b> 81.70	81.70	81.70
<b>d</b>	<b>Diameter setting* (mm)</b> 60	60	60
<b>e</b>	<b>Depth setting (mm) (<math>\pm 25</math> mm)</b> 270	270	270
<b>f</b>	<b>Alignment range</b> 3° (incl. Excenter)	3° (incl. Excenter)	3° (incl. Excenter)
<b>g</b>	<b>Thread</b> 3 x M8	3 x M8	3 x M8
<b>h</b>	<b>Pitch circle diameter (mm)</b> 118	118	118
<b>i</b>	<b>Flange outer diameter (mm)</b> 136	136	136
<b>j</b>	<b>Flange thickness (mm)</b> 3	3	3



\*Diameter setting (a) result in depth setting (e) and alignment range (f)

### Online Service

KSF E 89x1000-E60	KSF E 89x800-E60	KSF E 89x550-E60
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Webkey

E2410011D

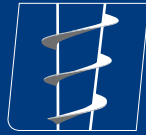
E2408011D

E2405511D



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F SERIES



## F SERIES

The KRINNER Ground Screw with flange plates  
for modular use



## F SERIES

### The KRINNER Ground Screw with flange plates for modular use



The F Series of ground screws are equipped with round or rectangular flanges. This allows the supported object to be fastened to ensure the greatest stability and safety of heavy or even extreme static loads.

#### RECOMMENDED DRIVERS:

For correct insertion of F Series ground screws, use the Ground Screw Driver **KR E 10** or **KR E 20**, **KR D 55**, or **KR B 40**, **KR B 60\*** or **KR B 250\*** Lot-o-Mat.

\*Only partially suitable for flat flange.

#### INSTRUCTIONS FOR INSTALLING A GROUND SCREW WITH RECTANGULAR FLANGE (-R):



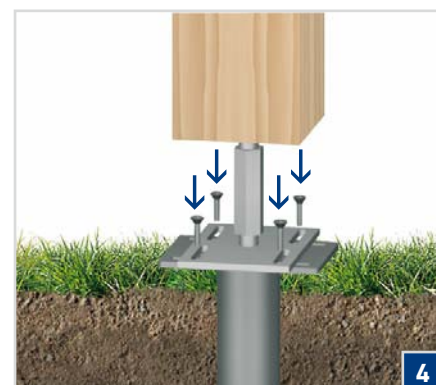
Drive the ground screw vertically into the earth.



Connect the post anchor to the wood beam.



Place the post anchor (with post) onto the flange plate and align it.



Screw the post anchor onto the flange plate. Done.

### Overview of F Series

KSF F 140x2100-M	KSF F 140x1600-M	KSF F 140x1600-P	KSF F 140x1300-P	KSF F 76x1600-R	KSF F 76x1300-R	KSF F 76x1000-R	KSF F 76x800-R
<b>Length (mm)</b>							
2100	1600	1600	1300	1600	1300	1000	800
<b>Tube diameter (mm)</b>							
139.7	139.70	139.70	139.70	76.10	76.10	76.10	76.10
<b>Weight (kg)</b>							
24.00	20.00	17.00	13.50	12.00	7.50	6.00	4.50
<b>Item number</b>							
25490	25489	25484	25483	25478	25477	25476	25475



KSF F 140x2100-M



KSF F 140x1600-M



KSF F 140x1600-P



KSF F 140x1300-P



KSF F 76x1600-R



KSF F 76x1300-R



KSF F 76x1000-R



KSF F 76x800-R

## Technical Data Sheet F Series

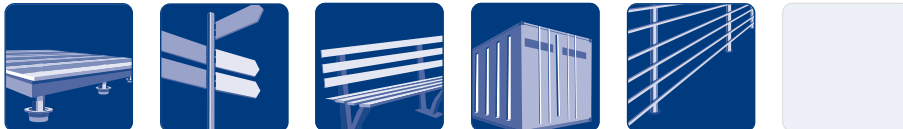
### Basic Info

KSF F 140x1600-P	KSF F 140x1300-P
<b>Nominal length (mm)</b>	
1600	1300
<b>Tube diameter (mm)</b>	
139.70	139.70
<b>Weight (kg)</b>	
17.00	13.50
<b>Item number</b>	
25484	25483

### Construction

- Flange: Sheet metal S355
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



### Accessories



**Cover Plate 2 mm-P**  
Item No. 26818

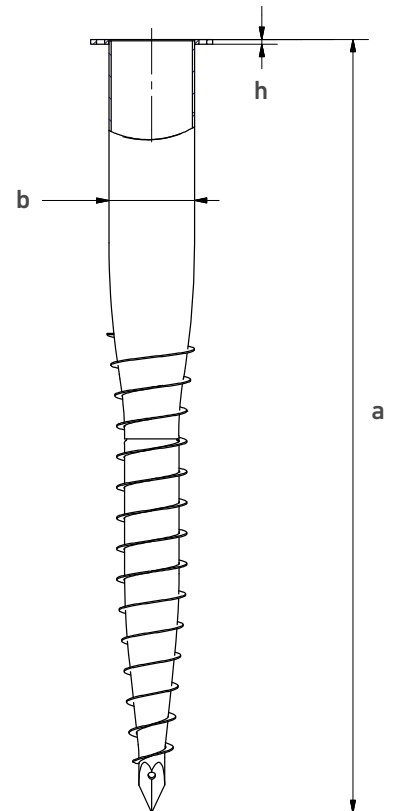
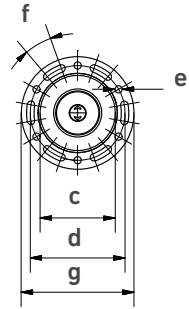


KSF F 140x  
1300-P



## Technical Data

	KSF F 140x1600-P	KSF F 140x1300-P
a	Length (mm) ( $\pm 25$ mm)	
	1592	1262
b	Shaft outer diameter (mm)	
	139.70	139.70
c	Inner diameter (mm)	
	132.50	132.50
d	Pitch circle diameter (mm)	
	167	167
e	Pitch circle holes (mm)	
	6 x $\varnothing 13$	6 x $\varnothing 13$
f	Oblong hole	
	6 x $\varnothing 13$ - <math>20^\circ</math>	6 x $\varnothing 13$ - <math>20^\circ</math>
g	Flange outer diameter (mm)	
	199	199
h	Flange thickness (mm)	
	8	8



## Online Service

KSF F 140x1600-P	KSF F 140x1300-P
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Webkey

F2548411D

F2548311D



Subject to technical change!

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## Technical Data Sheet F Series

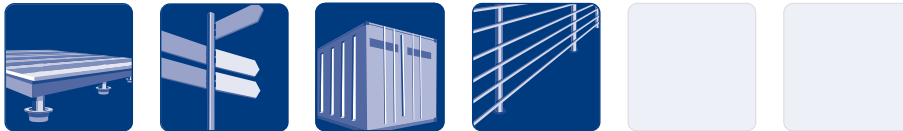
### Basic Info

KSF F 140x2100-M	KSF F 140x1600-M
Nominal length (mm)	
2100	1600
Tube diameter (mm)	
139.70	139.70
Weight (kg)	
24.00	20.00
Item number	
25490	25489

### Construction

- Flange: Sheet metal S355
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



KSF F 140x  
1600-M

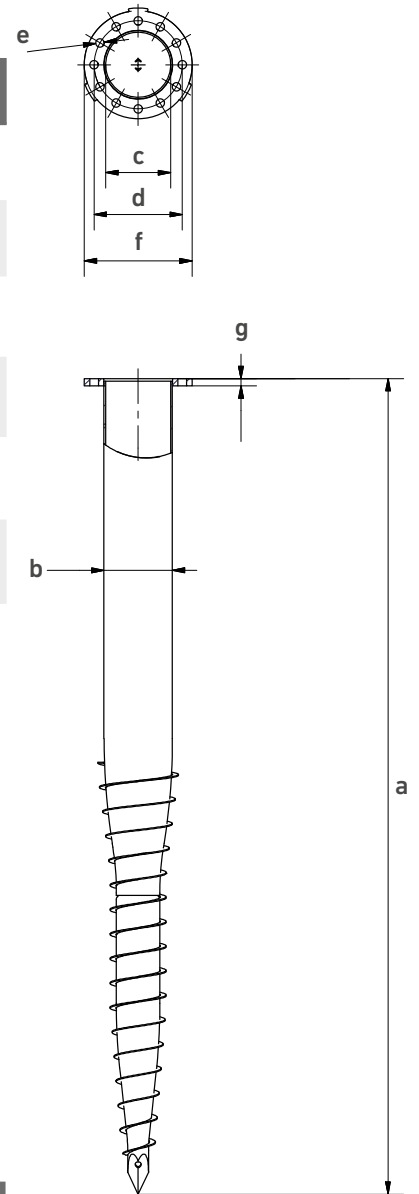
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### Technical Data

	KSF F 140x2100-M	KSF F 140x1600-M
a	Length (mm) ( $\pm 25$ mm)	
	2065	1665
b	Shaft outer diameter (mm)	
	139.70	139.70
c	Inner diameter (mm)	
	132.50	132.50
d	Pitch circle diameter (mm)	
	180	180
e	Pitch circle holes (mm)	
	12 x $\varnothing 17$	12 x $\varnothing 17$
f	Flange outer diameter (mm)	
	220	220
g	Flange thickness (mm)	
	15	15



### Online Service

KSF F 140x2100-M	KSF F 140x1600-M
------------------	------------------

Webkey

F2549011D

F2548911D



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## Technical Data Sheet F Series

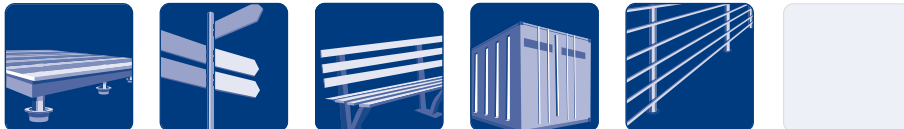
### Basic Info

KSF F 76x1600-R	KSF F 76x1300-R	KSF F 76x1000-R	KSF F 76x800-R
<b>Nominal length (mm)</b>			
1600	1300	1000	800
<b>Tube diameter (mm)</b>			
76.10	76.10	76.10	76.10
<b>Weight (kg)</b>			
12.00	7.50	6.00	4.50
<b>Item number</b>			
25478	25477	25476	25475

### Construction

- Flange: Sheet metal S355
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



### Accessories



**Post Bearer Plane-R**  
Item No. 28006



**Post Bearer M24-R**  
Item No. 28007



**Post Bearer M44-R**  
Item No. 28008



**Post Bearer Sword-R**  
Item No. 28009



**Post Bearer Side Flaps-R**  
Item No. 28010



**Post Bearer Vario PS150-R**  
Item No. 28019



KSF F 76x1300-R

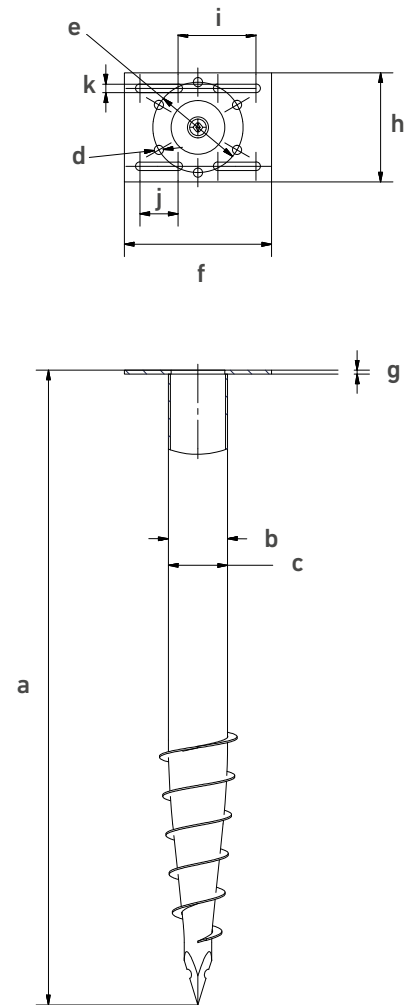
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### Technical Data

	KSF F 76x1600-R	KSF F 76x1300-R	KSF F 76x1000-R	KSF F 76x800-R
<b>a</b>	Length (mm) ( $\pm 25$ mm)			
	1575	1275	1045	815
<b>b</b>	Shaft outer diameter (mm)			
	76.10	76.10	76.10	76.10
<b>c</b>	Inner diameter (mm)			
	68.90	70.90	70.90	70.90
<b>d</b>	Hole diameter (mm)			
	6 x $\varnothing 11$	6 x $\varnothing 11$	6 x $\varnothing 11$	6 x $\varnothing 11$
<b>e</b>	Pitch circle diameter (mm)			
	116	116	116	116
<b>f</b>	Flange length (mm)			
	189	189	189	189
<b>g</b>	Flange thickness (mm)			
	5	5	5	5
<b>h</b>	Flange width (mm)			
	140	140	140	140
<b>i</b>	Oblong hole grid size (mm)			
	100	100	100	100
<b>j</b>	Oblong hole length (mm)			
	49	49	49	49
<b>k</b>	Oblong hole diameter (mm)			
	11	11	11	11



### Online Service

KSF F 76x1600-R	KSF F 76x1300-R	KSF F 76x1000-R	KSF F 76x800-R
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#### Webkey

F2547811D



F2547711D



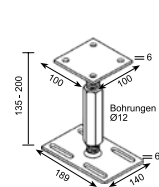
F2547611D



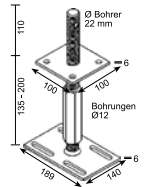
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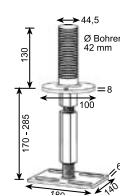
#### Post Anchor



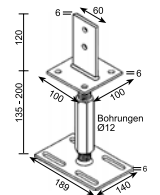
Flat R



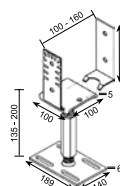
M24-R



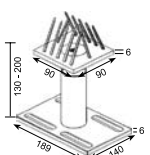
M44-R



Blade R

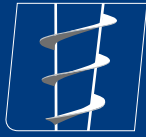


Side Tabs R



Vario PS 150-R

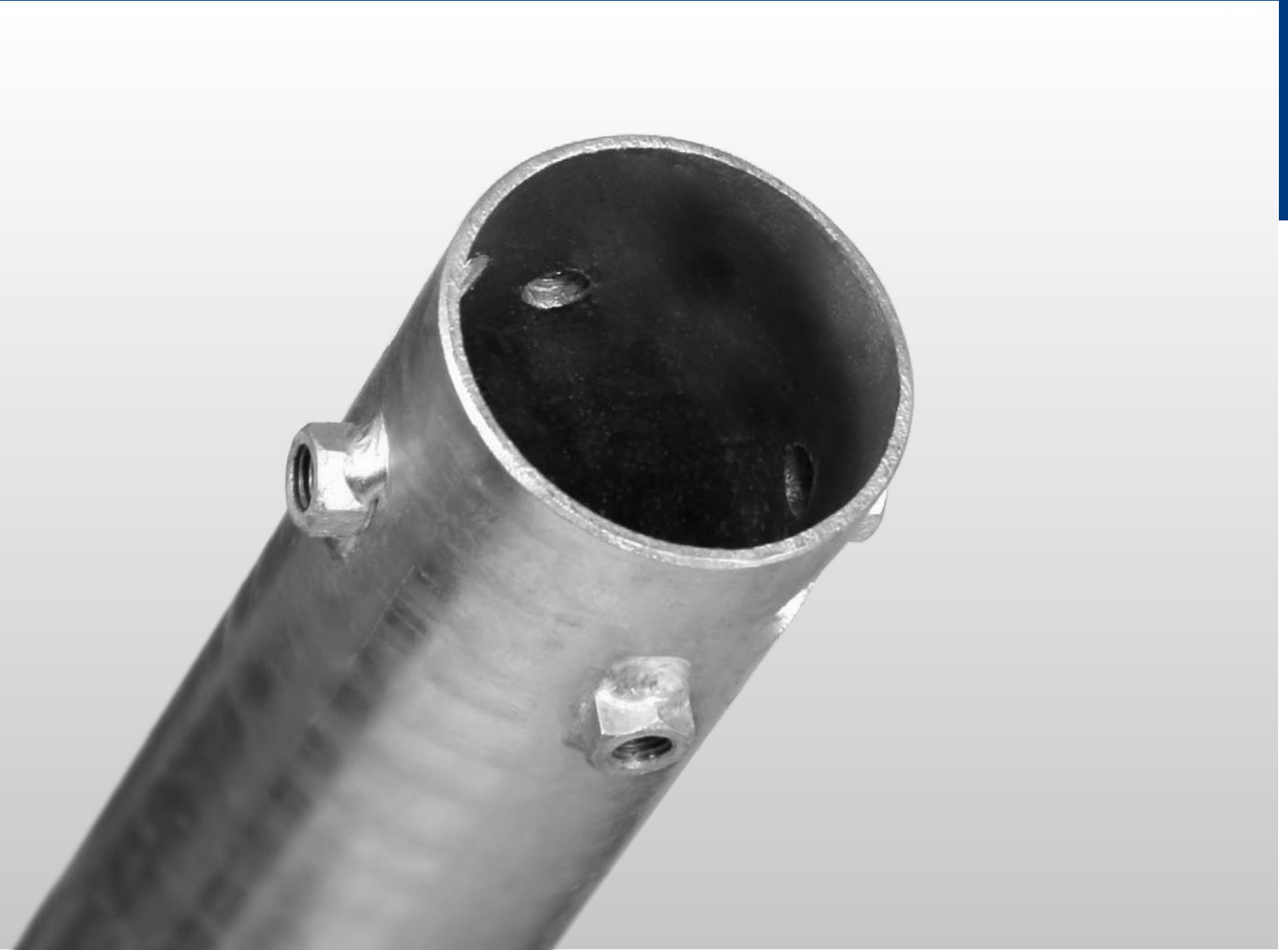
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**KRINNER**  
The Ground Screw

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G SERIES



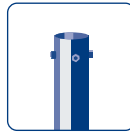
## G SERIES

The KRINNER Ground Screw  
with thread fixing



## G SERIES

### The KRINNER Ground Screw with thread fixing



The G Series of ground screws are equipped with one, three or four threaded screw connections. They are ideally suited to quick, vertical and permanent assembly of objects such as masts and fence posts.

Optionally, fence posts can also be secured quickly and permanently using the special granulate.

#### RECOMMENDED DRIVERS:

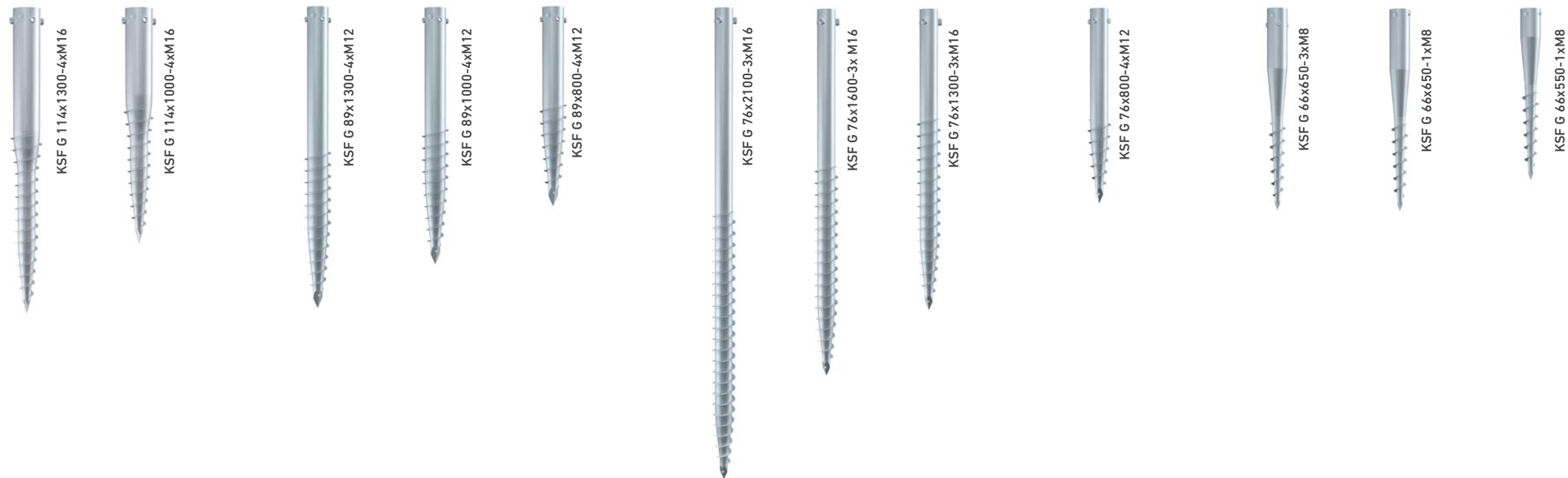
For correct insertion of G Series ground screws, use the Ground Screw Driver **KR E 10** or **KR E 20**, **KR D 55** driver, or **KR B 40**, **KR B 60** or **KR B 250** Lot-o-Mat.

These ground screws can also be driven into loose soil using manual driving tools or lever bars.

### Overview of G Series

KSF G 114x1300-4xM16	KSF G 114x1000-4xM16	KSF G 89x1300-4xM12	KSF G 89x1000-4xM12	KSF G 89x800-4xM12
<b>Length (mm)</b>				
1300	1000	1300	1000	800
<b>Tube diameter (mm)</b>				
114.30	114.30	88.90	88.90	88.90
<b>Weight (kg)</b>				
11.00	8.50	7.80	6.60	5.80
<b>Item number</b>				
25461	25460	25459	25458	25457

KSF G 76x2100-3xM16	KSF G 76x1600-3xM16	KSF G 76x1300-3xM16	KSF G 76x800-4xM12	KSF G 66x650-3xM8	KSF G 66x650-1xM8	KSF G 66x550-1xM8
<b>Length (mm)</b>						
2100	1600	1300	800	650	650	550
<b>Tube diameter (mm)</b>						
76.10	76.10	76.10	76.10	66	66	66
<b>Weight (kg)</b>						
14.00	10.50	8.50	3.80	1.85	1.60	1.60
<b>Item number</b>						
25456	25455	25454	24083	25452	20065	20055





## Technical Data Sheet G Series

### Basic Info

#### KSF G 114x1300-4xM16 KSF G 114x1000-4xM16

##### Nominal length (mm)

1300 1000

##### Tube diameter (mm)

114.30 114.30

##### Weight (kg)

11.00 8.50

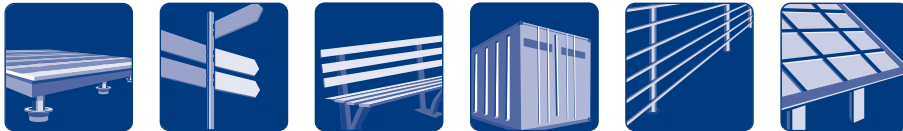
##### Item number

25461 25460

### Construction

- Nut: DIN EN ISO 4032 - 8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



### Accessories



**Special  
Granulate 1500 g**  
Item No. 21824



**Special  
Granulate 500 g**  
Item No. 21823



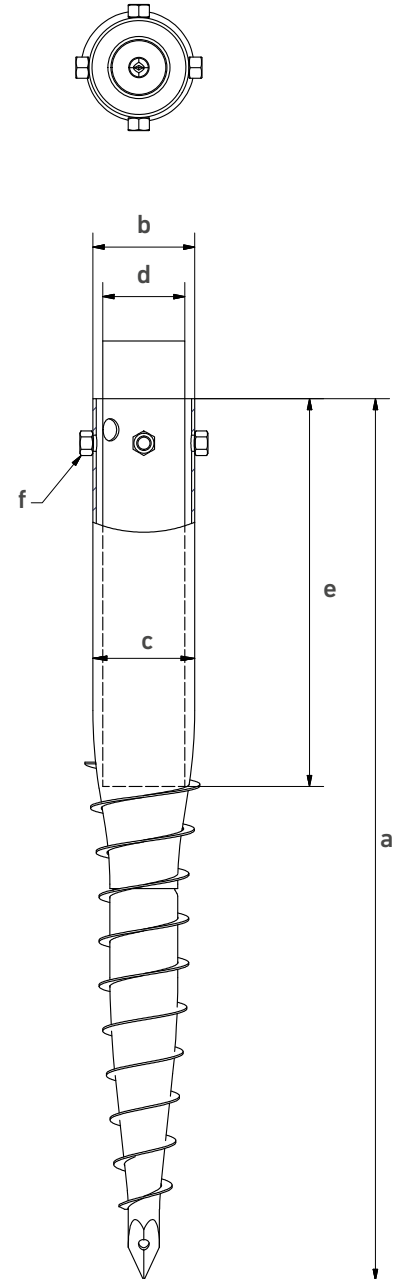
**Screwing Bar long**  
2.40 kg  
Item No. 24805



KSF G 114x  
1300-4xM16

### Technical Data

	KSF G 114x1300-4xM16	KSF G 114x1000-4xM16
<b>a</b>	<b>Length (mm) (<math>\pm 25</math> mm)</b>	
	1300	990
<b>b</b>	<b>Shaft outer diameter (mm)</b>	
	114.30	114.30
<b>c</b>	<b>Inner diameter (mm)</b>	
	107.10	107.10
<b>d</b>	<b>Diameter setting (mm)</b>	
	100   90   80   76	100   90   80   76
<b>e</b>	<b>Depth setting (mm) (<math>\pm 25</math> mm)</b>	
	490   540   570   590	350   400   440   460
<b>f</b>	<b>Thread</b>	
	4 x M16	4 x M16



### Online Service

	KSF G 114x1300-4xM16	KSF G 114x1000-4xM16
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Webkey

G2546111D

G2546011D



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## Technical Data Sheet G Series

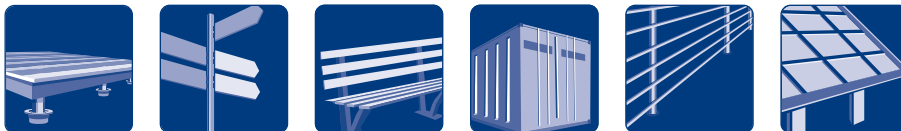
### Basic Info

KSF G 89x1300-4xM12	KSF G 89x1000-4xM12	KSF G 89x800-4xM12
Nominal length (mm)		
1300	1000	800
Tube diameter (mm)		
88.90	88.90	88.90
Weight (kg)		
7.80	6.60	5.80
Item number		
25459	25458	25457

### Construction

- Nut: DIN EN ISO 4032 - 8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



### Accessories



Special  
Granulate 1500 g  
Item No. 21824



Special  
Granulate 500 g  
Item No. 21823



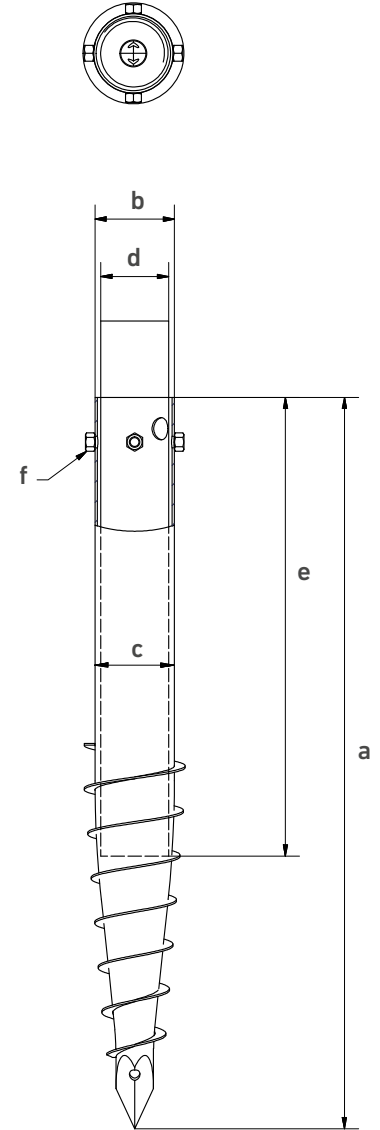
Screwing Bar long  
2.40 kg  
Item No. 24805



KSF G 89x  
1300-4xM12

### Technical Data

	KSF G 89x1300-4xM12	KSF G 89x1000-4xM12	KSF G 89x800-4xM12
<b>a</b>	<b>Length (mm) (<math>\pm 25</math> mm)</b>		
	1280	1080	830
<b>b</b>	<b>Shaft outer diameter (mm)</b>		
	88.90	88.90	88.90
<b>c</b>	<b>Inner diameter (mm)</b>		
	83.70	83.70	83.70
<b>d</b>	<b>Diameter setting (mm)</b>		
	76   40x60   60   48	76   40x60   60   48	76   40x60   60   48
<b>e</b>	<b>Depth setting (mm) (<math>\pm 25</math> mm)</b>		
	970   1020   1055   1090	780   830   855   900	520   570   600   640
<b>f</b>	<b>Thread</b>		
	4 x M12	4 x M12	4 x M12



### Online Service

KSF G 89x1300-4xM12	KSF G 89x1000-4xM12	KSF G 89x800-4xM12
---------------------	---------------------	--------------------

Webkey

G2545911D



G2545811D



G2545711D



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## Technical Data Sheet G Series

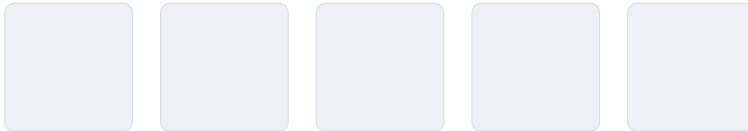
### Basic Info

KSF G 76x2100-3xM16	KSF G 76x1600-3xM16	KSF G 76x1300-3xM16
Nominal length (mm)		
2100	1600	1300
Tube diameter (mm)		
76.10	76.10	76.10
Weight (kg)		
14.00	10.50	8.50
Item number		
25456	25455	25454

### Construction

- Nut: DIN EN ISO 4032 - 8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

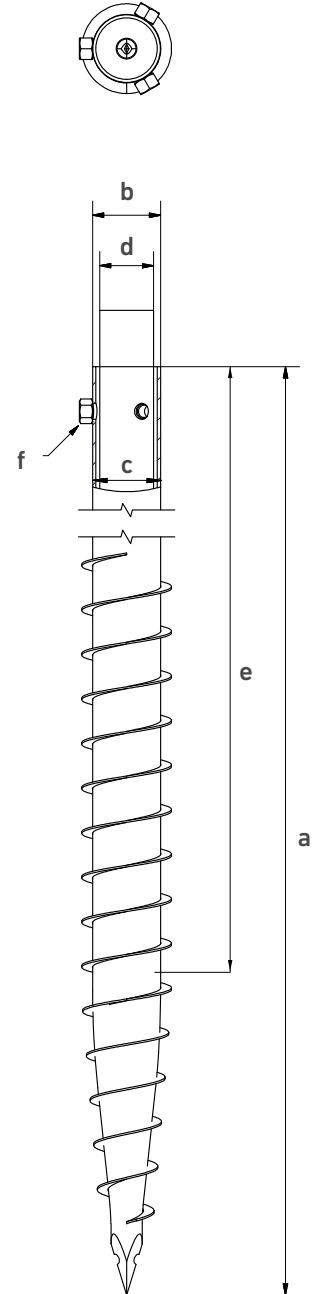
### Applications



KSF G 76x  
1300-3xM16

### Technical Data

	KSF G 76x2100-3xM16	KSF G 76x1600-3xM16	KSF G 76x1300-3xM16
a	Length (mm) ( $\pm 25$ mm)		
	2080	1580	1280
b	Shaft outer diameter (mm)		
	76.10	76.10	76.10
c	Inner diameter (mm)		
	68.90	68.90	68.90
d	Diameter setting (mm)		
	60	60	60
e	Depth setting (mm) ( $\pm 25$ mm)		
	1815	1315	1020
f	Thread		
	3 x M16	3 x M16	3 x M16



### Online Service

KSF G 76x2100-3xM16	KSF G 76x1600-3xM16	KSF G 76x1300-3xM16
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Webkey

G2545611D

G2545511D

G2545411D



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## Technical Data Sheet G Series

### Basic Info

#### KSF G 76x800-4xM12

Nominal length (mm)

800

Tube diameter (mm)

76.10

Weight (kg)

3.80

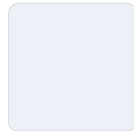
Item number

24083

### Construction

- Nut: DIN EN ISO 4032 - 8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



### Accessories



**Special  
Granulate 1500 g**  
Item No. 21824



**Special  
Granulate 500 g**  
Item No. 21823



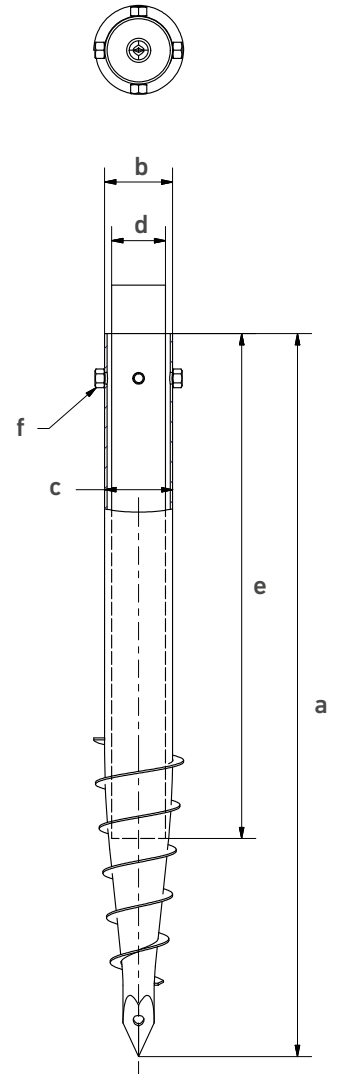
**Screwing Bar long**  
2.40 kg  
Item No. 24805



KSF G 76x800-  
4xM12

## Technical Data

KSF G 76x800-4xM12	
a	Length (mm) ( $\pm 25$ mm) 810
b	Shaft outer diameter (mm) 76.10
c	Inner diameter (mm) 70.90
d	Diameter setting (mm) 70   60   48   40   34
e	Depth setting (mm) ( $\pm 25$ mm) 460   590   650   690   730
f	Thread 4 x M12



## Online Service

**KSF G 76x800-4xM12**

Webkey  
G2408311D





## Technical Data Sheet G Series

### Basic Info

#### KSF G 66x650-3xM8

Nominal length (mm)

650

Tube diameter (mm)

66

Weight (kg)

1.85

Item number

25452



KSF G 66x650-3xM8

### Construction

- Nut: DIN EN ISO 4032 - 8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Patented conical body forged from a single piece

### Applications



### Accessories



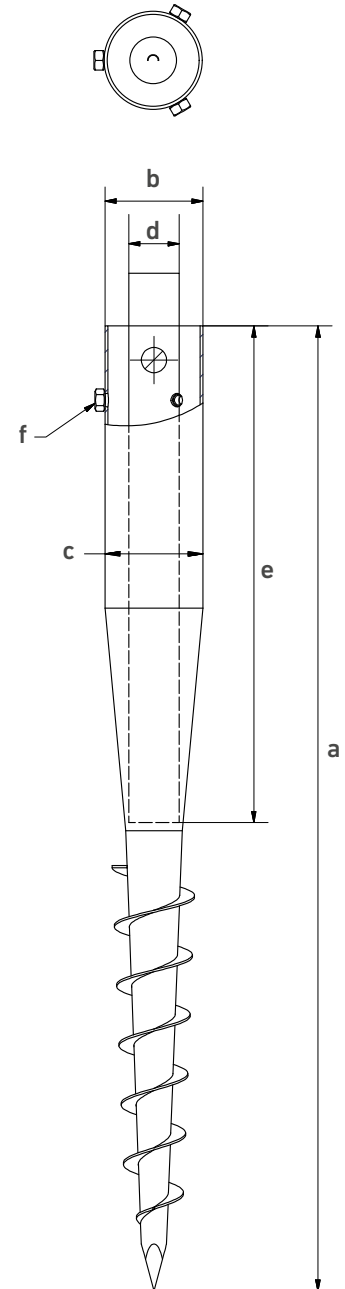
Special  
Granulate 500 g  
Item No. 21823



Screwing Bar short  
0.60 kg  
Item No. 20070

## Technical Data

KSF G 66x650-3xM8	
a	Length (mm) ( $\pm 25$ mm) 650
b	Shaft outer diameter (mm) 66
c	Inner diameter (mm) 62
d	Diameter setting (mm) 62   55.5   50   43   38.5   34
e	Depth setting (mm) ( $\pm 25$ mm) 210   228   245   276   317   395
f	Thread 3 x M8



## Online Service

KSF G 66x650-3xM8	
-------------------	--

Webkey  
G2545211D



## Technical Data Sheet G Series

### Basic Info

KSF G 66x650-1xM8	KSF G 66x550-1xM8
Nominal length (mm)	
650	550
Tube diameter (mm)	
66	66
Weight (kg)	
1.80	1.60
Item number	
20065	20055

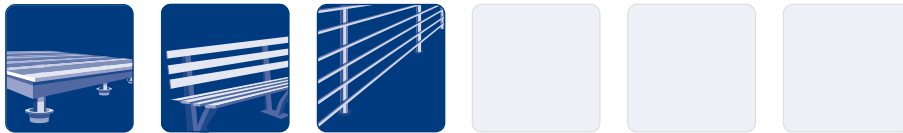


KSF G 66x650-1xM8

### Construction

- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Patented conical body forged from a single piece

### Applications



### Accessories



Special Granulate 500 g  
Item No. 21823



Reduction Sleeve Set-G66  
0.10 kg  
Item No. 21806



Pivot Linkage Cover-G66  
0.30 kg  
Item No. 21804



Twisting Element-G 66  
0.10 kg  
Item No. 21839



Screwing Bar short  
0.60 kg  
Item No. 20070



Foundation Cap-G 66  
0.20 kg  
Item No. 21805



Cover Plate-G 66  
0.10 kg  
Item No. 21856

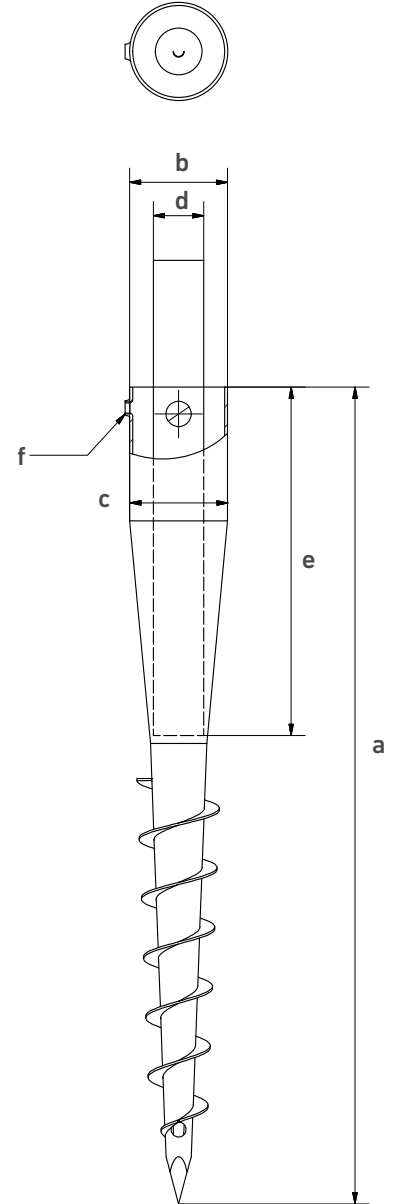
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### Technical Data

	KSF G 66x650-1xM8	KSF G 66x550-1xM8
a	Length (mm) ( $\pm 20$ mm)	
	650	550
b	Shaft outer diameter (mm)	
	66	66
c	Inner diameter (mm)	
	62	62
d	Diameter setting (mm)	
	62   55.5   50   43   38.5   34	62   55.5   50   43   38.5   34
e	Depth setting (mm) ( $\pm 20$ mm)	
	210   228   245   276   317   395	110   128   145   176   217   295
f	Thread	
	1 x M8	1 x M8



### Online Service

KSF G 66x650-1xM8	KSF G 66x550-1xM8
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Webkey

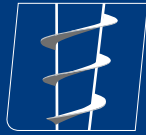
G2006511D

G2005511D



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**KRINNER**  
The Ground Screw

[www.krinner.com](http://www.krinner.com)



K SERIES

## K SERIES

The resistant KRINNER Ground Screw  
made of plastic



## K SERIES

### The resistant KRINNER Ground Screw made of plastic

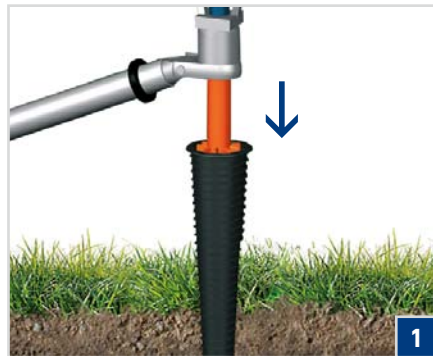


The affordable K Series of ground screws are made of extremely durable plastic and guarantee a long service life. With their conical shape and by using special granulate as a ballast, these foundations achieve remarkable stability values. This series is especially suited to putting up fence posts and signposts.

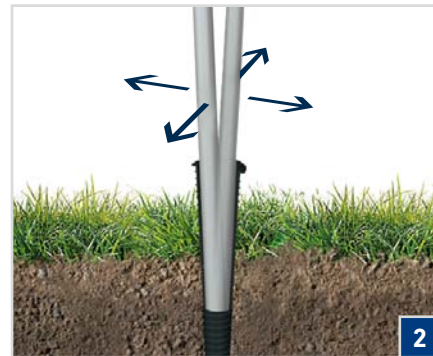
#### RECOMMENDED DRIVERS:

For correct insertion of K Series ground screws, use the Ground Screw Driver **KR E 10** or **KR E 20**, **KR D 55**, or **KR B 40**, **KR B 60** or **KR B 250** Lot-o-Mat. These ground screws can also be driven into loose soil using manual driving tools.

#### INSTRUCTIONS FOR INSTALLING K SERIES GROUND SCREWS:



1 Drive the ground screw vertically into the earth using a manual driver or driving tool.



2 Insert the post into the screw foundation and align it vertically.



3 Fill special granulate into the screw foundation around the vertical post.



4 Tap the post, e.g. with the handle of a hammer, to compact the granulate. Done.

**Recommendation for installation:** If tensile loads are to be applied, e.g. on a corner post, then a cement emulsion must be poured in after installation.

Overview of K Series

KSF K 60x800	KSF K 42x650	KSF K 34x550
Length (mm)		
800	650	550
Weight (kg)		
1.00	0.60	0.35
Item number		
22080	22065	22000



## Technical Data Sheet K Series

### Basic Info

KSF K 60x800	KSF K 42x650	KSF K 34x550
Nominal length (mm)		
800	650	550
Weight (kg)		
1.00	0.60	0.35
Item number		
22080	22065	22000

### Construction

- Material: PP-EPDM
- UV-stabilized
- Conical plastic shell with screw thread
- Surface matt black

### Applications



### Accessories



Special  
Granulate 1500 g  
Item No. 21824



Special  
Granulate 500 g  
Item No. 21823

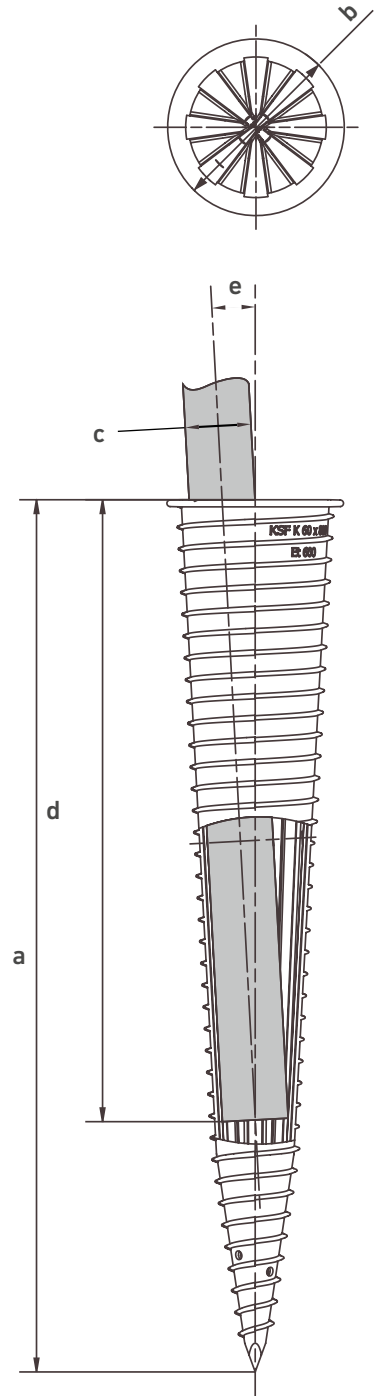


KSF K 60x800



### Technical Data

	KSF K 60x800	KSF K 42x650	KSF K 34x550
a	Length (mm)		
	800	650	550
b	Outer diameter (mm)		
	163	136	98
c	Diameter setting (mm)		
	75   60x40 = Ø 72   70   60   48   42   34	48   42   34	42   34
d	Depth setting (mm)		
	425   470   480   575 640   660   690	455   500   530	325   400
e	Alignment range		
	3°	2.7°	2.5°



### Online Service

KSF K 60x800	KSF K 42x650	KSF K 34x550
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Webkey

K2208011D

K2206511D

K2200011D



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M SERIES

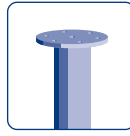
## M SERIES

The KRINNER Ground Screw  
for direct mounting on the thread



## M SERIES

### The KRINNER Ground Screw for direct mounting on the thread



The M Series of ground screws have a central M thread that allows the supported object to be bolted directly onto the screw foundation. They are suitable for pre-assembled garages and container buildings, for example.

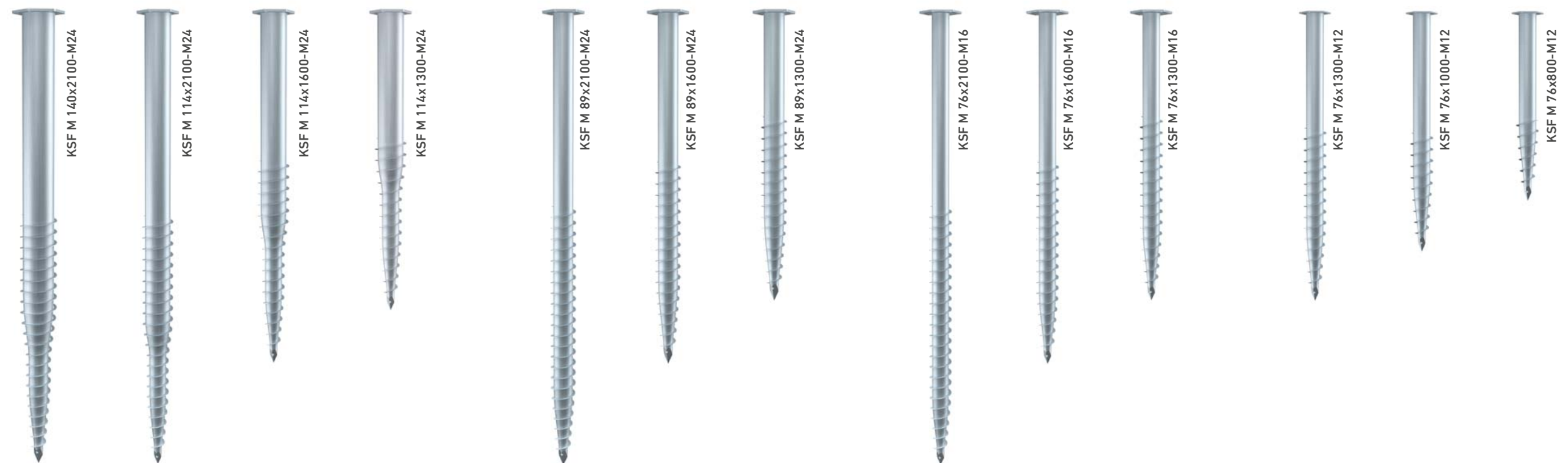
#### RECOMMENDED DRIVERS:

For correct insertion of M Series ground screws, use the Ground Screw Driver **KR E 10** or **KR E 20**, **KR D 55**, or **KR B 40**, **KR B 60** or **KR B 250** Lot-o-Mat.

### Overview of M Series

KSF M 140x2100-M24	KSF M 114x2100-M24	KSF M 114x1600-M24	KSF M 114x1300-M24	KSF M 89x2100-M24	KSF M 89x1600-M24	KSF M 89x1300-M24
Nominal length (mm)						
2100	2100	1600	1300	2100	1600	1300
Tube diameter (mm)						
139.70	114.30	114.30	114.30	88.90	88.90	88.90
Weight (kg)						
26.00	21.00	16.00	13.00	18.00	14.00	11.50
Item number						
25400	25352	25351	25350	25302	25301	25300

KSF M 76x2100-M16	KSF M 76x1600-M16	KSF M 76x1300-M16	KSF M 76x1300-M12	KSF M 76x1000-M12	KSF M 76x800-M12
Nominal length (mm)					
2100	1600	1300	1300	1000	800
Tube diameter (mm)					
76.10	76.10	76.10	76.10	76.10	76.10
Weight (kg)					
16.00	12.50	10.00	7.00	5.30	4.20
Item number					
25204	25203	25202	25201	25205	25200



## Technical Data Sheet M Series

### Basic Info

KSF M 140x2100- M24	KSF M 114x2100- M24	KSF M 114x1600- M24	KSF M 114x1300- M24
<b>Nominal length (mm)</b>			
2100	2100	1600	1300
<b>Tube diameter (mm)</b>			
139.70	114.30	114.30	114.30
<b>Weight (kg)</b>			
26	21	16	13
<b>Item number</b>			
25400	25352	25351	25350

### Construction

- Flange: Sheet metal S355
- Nut: DIN EN ISO 4032-8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



KSF M 140x  
2100-M24

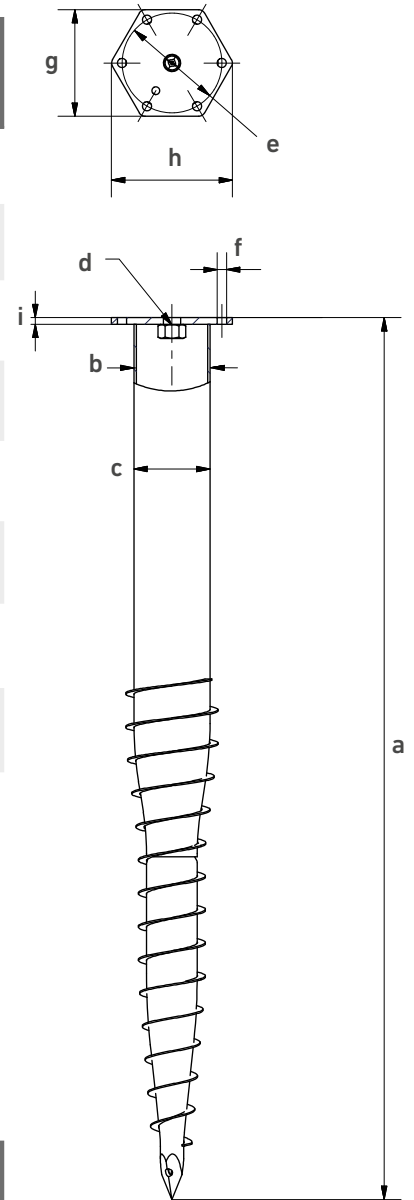
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### Technical Data

	KSF M 140x2100- M24	KSF M 114x2100- M24	KSF M 114x1600- M24	KSF M 114x1300- M24
<b>a</b> Length (mm) ( $\pm 25$ mm)	2070	2075	1575	1325
<b>b</b> Shaft outer diameter (mm)	139.70	114.30	114.30	114.30
<b>c</b> Inner diameter (mm)	132.50	107.10	107.10	107.10
<b>d</b> Thread	M24	M24	M24	M24
<b>e</b> Pitch circle diameter (mm)	180	150	150	150
<b>f</b> Pitch circle holes (mm)	6 x $\varnothing$ 14	6 x $\varnothing$ 14	6 x $\varnothing$ 14	6 x $\varnothing$ 14
<b>g</b> Flange wrench size (mm)	200	160	160	160
<b>h</b> Flange outer diameter (mm)	225	182	182	182
<b>i</b> Flange thickness (mm)	10	10	10	10



### Online Service

KSF M 140x2100- M24	KSF M 114x2100- M24	KSF M 114x1600- M24	KSF M 114x1300- M24
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**Webkey**

M2540011D

M2535211D

M2535111D

M2535011D



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## Technical Data Sheet M Series

### Basic Info

KSF M 89x2100-M24	KSF M 89x1600-M24	KSF M 89x1300-M24
Nominal length (mm)		
2100	1600	1300
Tube diameter (mm)		
88.90	88.90	88.90
Weight (kg)		
18.00	14.00	11.50
Item number		
25302	25301	25300

### Construction

- Flange: Sheet metal S355
- Nut: DIN EN ISO 4032-8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

### Applications



KSF M 89x  
1600-M24

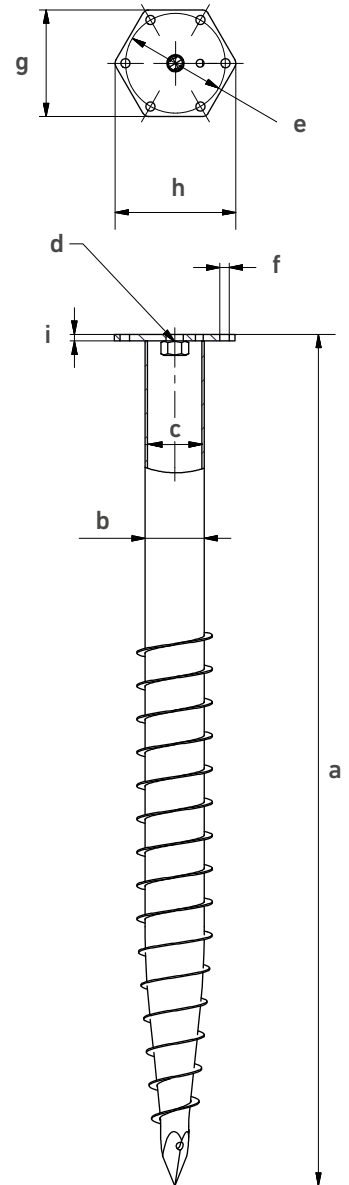
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## Technical Data

	KSF M 89x2100-M24	KSF M 89x1600-M24	KSF M 89x1300-M24
<b>a</b>	<b>Length (mm) (<math>\pm 25</math> mm)</b>		
	2080	1580	1280
<b>b</b>	<b>Shaft outer diameter (mm)</b>		
	88.90	88.90	88.90
<b>c</b>	<b>Inner diameter (mm)</b>		
	81.70	81.70	81.70
<b>d</b>	<b>Thread</b>		
	M24	M24	M24
<b>e</b>	<b>Pitch circle diameter (mm)</b>		
	150	150	150
<b>f</b>	<b>Pitch circle holes (mm)</b>		
	6 x $\varnothing 14$	6 x $\varnothing 14$	6 x $\varnothing 14$
<b>g</b>	<b>Flange wrench size (mm)</b>		
	160	160	160
<b>h</b>	<b>Flange outer diameter (mm)</b>		
	182	182	182
<b>i</b>	<b>Flange thickness (mm)</b>		
	10	10	10



## Online Service

KSF M 89x2100-M24	KSF M 89x1600-M24	KSF M 89x1300-M24
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Webkey

M2530211D

M2530111D

M2530011D



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## Technical Data Sheet M Series

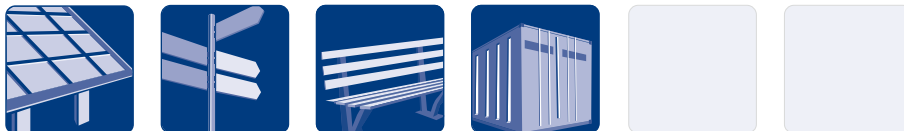
### Basic Info

KSF M 76x2100-M16	KSF M 76x1600-M16	KSF M 76x1300-M16
Nominal length (mm)		
2100	1600	1300
Tube diameter (mm)		
76.10	76.10	76.10
Weight (kg)		
16.00	12.50	10.00
Item number		
25204	25203	25202

### Construction

- Flange: Sheet metal S355
- Nut: DIN EN ISO 4032-8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

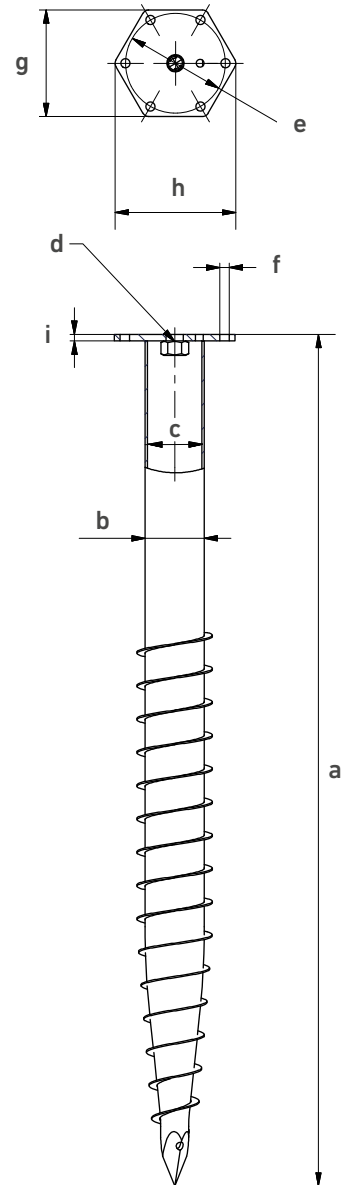
### Applications



KSF M 76x  
1300-M16

### Technical Data

	KSF M 76x2100-M16	KSF M 76x1600-M16	KSF M 76x1300-M16
a	Length (mm) ( $\pm 25$ mm)		
	2078	1578	1278
b	Shaft outer diameter (mm)		
	76.10	76.10	76.10
c	Inner diameter (mm)		
	68.90	68.90	68.90
d	Thread		
	M16	M16	M16
e	Pitch circle diameter (mm)		
	150	150	150
f	Pitch circle holes (mm)		
	6 x $\varnothing 14$	6 x $\varnothing 14$	6 x $\varnothing 14$
g	Flange wrench size (mm)		
	160	160	160
h	Flange outer diameter (mm)		
	182	182	182
i	Flange thickness (mm)		
	8	8	8



### Online Service

KSF M 76x2100-M16	KSF M 76x1600-M16	KSF M 76x1300-M16
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Webkey

M2520411D



M2520311D



M2520211D



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## Technical Data Sheet M Series

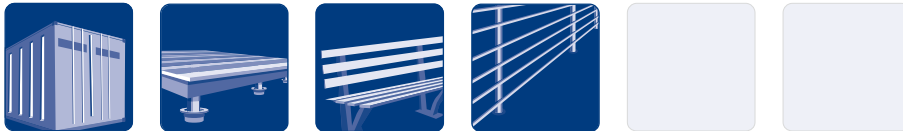
### Basic Info

KSF M 76x1300-M12	KSF M 76x1000-M12	KSF M 76x800-M12
<b>Nominal length (mm)</b>		
1300	1000	800
<b>Tube diameter (mm)</b>		
76.10	76.10	76.10
<b>Weight (kg)</b>		
7.00	5.30	4.20
<b>Item number</b>		
25201	25205	25200

### Construction

- Flange: Sheet metal S355
- Nut: DIN EN ISO 4032-8
- Continuous welded helix
- Coating: Hot-dip galvanized according to DIN EN ISO 1461

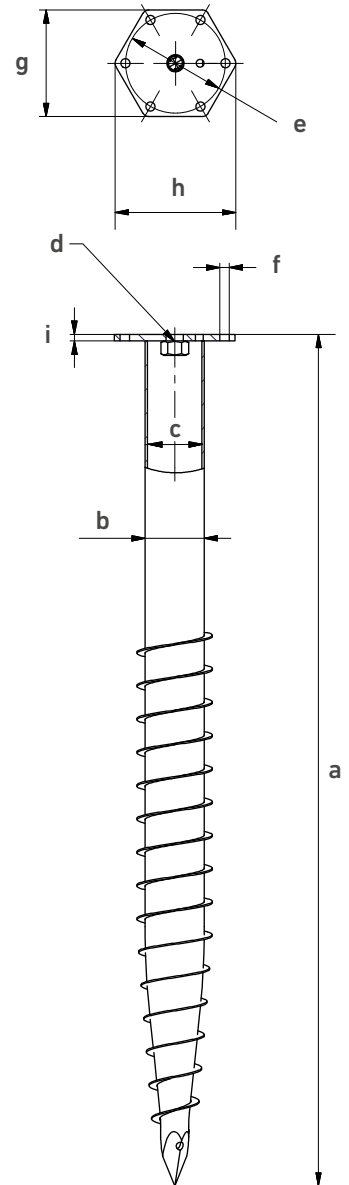
### Applications



KSF M 76x  
1000-M12

### Technical Data

	KSF M 76x1300-M12	KSF M 76x1000-M12	KSF M 76x800-M12
<b>a</b> Length (mm) ( $\pm 25$ mm)	1275	1045	815
<b>b</b> Shaft outer diameter (mm)	76.10	76.10	76.10
<b>c</b> Inner diameter (mm)	70.90	70.90	70.90
<b>d</b> Thread (mm)	M12	M12	M12
<b>e</b> Pitch circle diameter (mm)	116	116	116
<b>f</b> Pitch circle holes (mm)	6 x $\varnothing$ 11	6 x $\varnothing$ 11	6 x $\varnothing$ 11
<b>g</b> Flange wrench size (mm)	120	120	120
<b>h</b> Flange outer diameter (mm)	136	136	136
<b>i</b> Flange thickness (mm)	5	5	5



### Online Service

KSF M 76x1300-M12	KSF M 76x1000-M12	KSF M 76x800-M12
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Webkey

M2520111D

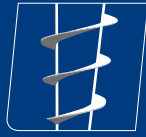
M2520511D

M2520011D



Subject to technical change!

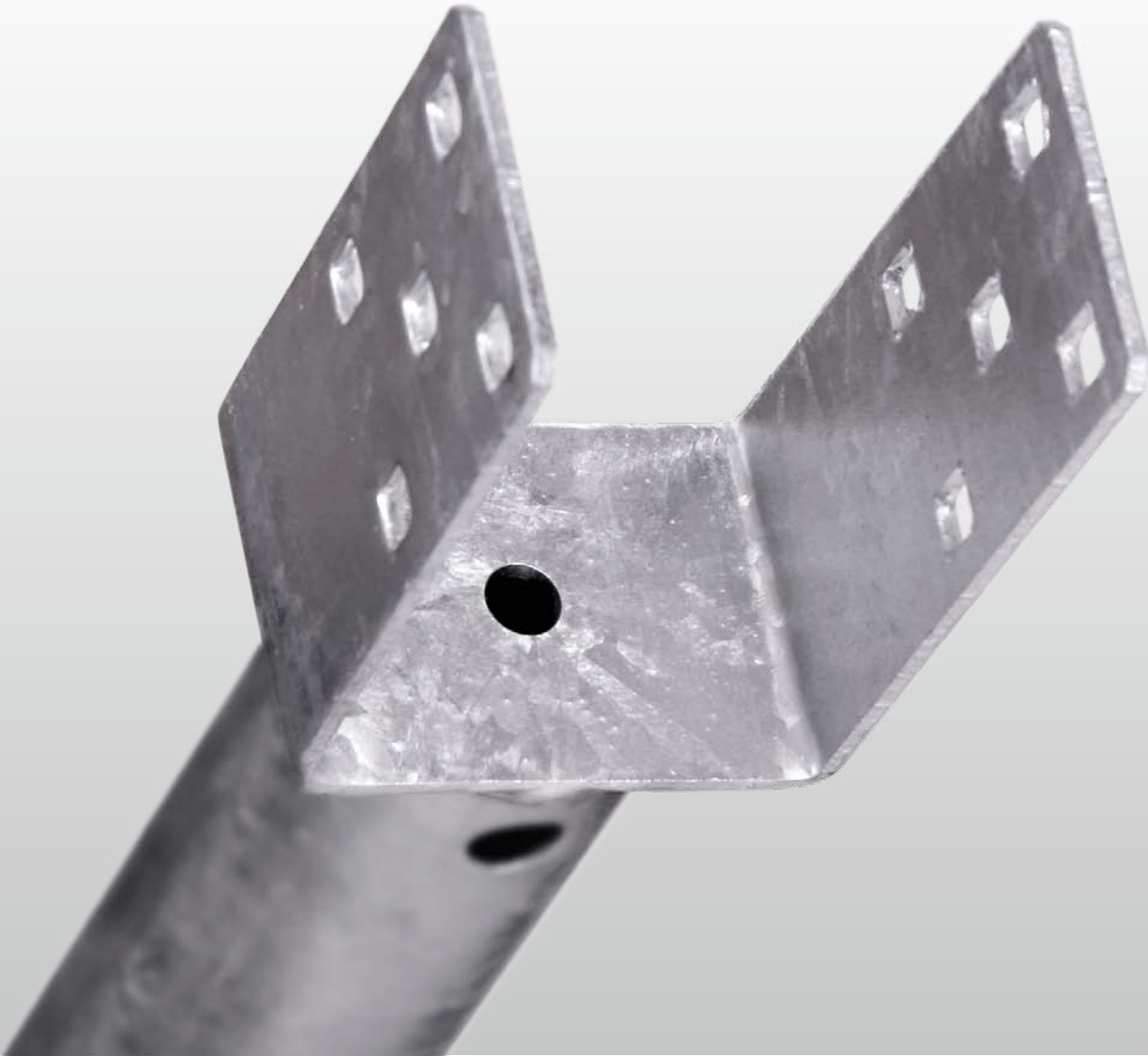
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# KRINNER

The Ground Screw

[www.krinner.com](http://www.krinner.com)



U SERIES

## U SERIES

The KRINNER Ground Screw  
for easy beam assembly



## U SERIES

### The KRINNER Ground Screw for easy beam assembly



The U Series of ground screws are specially designed for all common dimensions of wood beams. They are optimally suited to quick and easy fastening of lying beams or standing posts as well as for constructing carports and wooden decks.

#### RECOMMENDED DRIVERS:

For correct insertion of U Series ground screws, use the Ground Screw Driver **KR E 10** or **KR E 20**. These Ground Screws can also be driven into loose soil using screwing bar short or manual Ground Screw Drivers.

#### INSTRUCTIONS FOR INSTALLING U SERIES GROUND SCREWS:



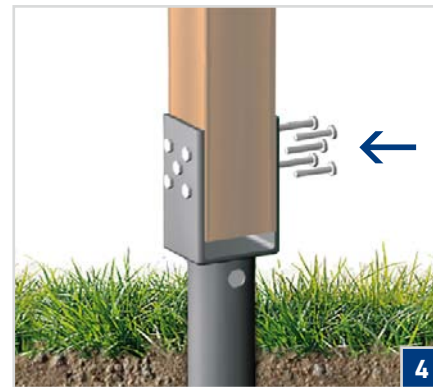
Place the wood post centered in the post shoe with about a 1 to 2 cm gap at the base.



For optimum stabilization, we recommend fixing the center with a through-bolt. Drill the hole for this from both sides.



Fasten the post to one of the U tabs with the first screw. Then align the post vertically and fasten with the second screw.



Now press the fastened post down vertically and screw it tight to the tab on the other side of the U.

Overview of U Series

KSF U 66x865-111	KSF U 66x730-111	KSF U 66x865-91	KSF U 66x730-91	KSF U 66x730-71	KSF U 66x550-71
Length (mm)					
865	730	865	730	730	550
Tube diameter (mm)					
66	66	66	66	66	66
Weight (kg)					
2.90	2.80	2.90	2.70	2.60	2.20
Item number					
21066	21062	21065	21061	21063	21060



KSF U 66x865-111



KSF U 66x730-111



KSF U 66x865-91



KSF U 66x730-91



KSF U 66x730-71



KSF U 66x550-71

## Technical Data Sheet U Series

### Basic Info

KSF U 66x865-111	KSF U 66x730-111
Nominal length (mm)	
865	730
Tube diameter (mm)	
66	66
Weight (kg)	
2.90	2.80
Item number	
21066	21062

### Construction

- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Continuous welded helix
- Patented conical body forged from a single piece of tubing

### Applications



### Accessories



Screwing Bar short  
0.60 kg  
Item No. 20070



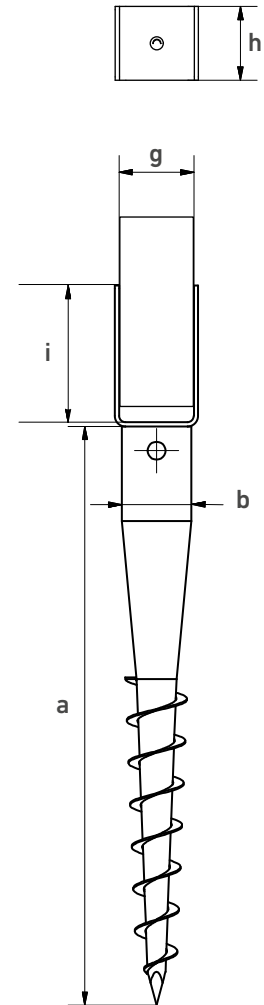
KSF U 66x  
730-111



### Technical Data

	KSF U 66x865-111	KSF U 66x730-111
<b>a</b>	<b>Length (mm)</b>	
	865	730
<b>b</b>	<b>Shaft outer diameter (mm)</b>	
	66	66
<b>c</b>	<b>Square hole spacing (mm)</b>	
	42	42
<b>d</b>	<b>Middle square hole spacing (mm)</b>	
	90	90
<b>e</b>	<b>Square hole spacing (mm)</b>	
	50	50
<b>f</b>	<b>Square hole diameter* (mm)</b>	
	11	11
<b>g</b>	<b>Gauge (mm)</b>	
	111	111
<b>h</b>	<b>U profile width (mm)</b>	
	70	70
<b>i</b>	<b>U profile depth (mm)</b>	
	130	130

\* To fit M10 carriage bolts



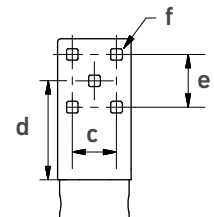
### Online Service

KSF U 66x865-111	KSF U 66x730-111
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Webkey

U2106611D

U2106211D



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## Technical Data Sheet U Series

### Basic Info

KSF U 66x865-91	KSF U 66x730-91
Nominal length (mm)	
865	730
Tube diameter (mm)	
66	66
Weight (kg)	
2.90	2.70
Item number	
21065	21061

### Construction

- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Continuous welded helix
- Patented conical body forged from a single piece of tubing

### Applications



### Accessories



Screwing Bar short  
0.60 kg  
Item No. 20070

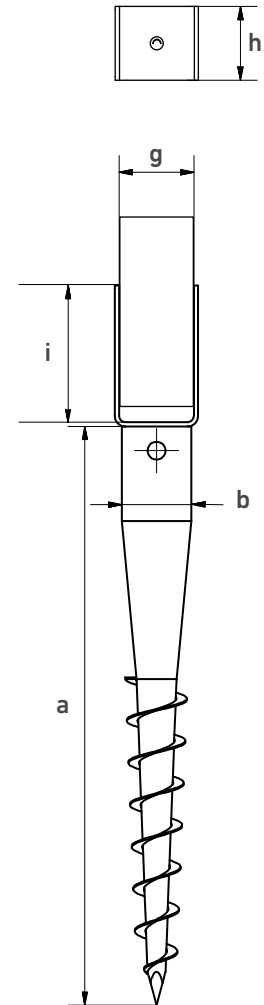


KSF U 66x  
730-91

### Technical Data

	KSF U 66x865-91	KSF U 66x730-91
<b>a</b>	<b>Length (mm)</b>	
	865	730
<b>b</b>	<b>Shaft outer diameter (mm)</b>	
	66	66
<b>c</b>	<b>Square hole spacing (mm)</b>	
	42	42
<b>d</b>	<b>Middle square hole spacing (mm)</b>	
	90	90
<b>e</b>	<b>Square hole spacing (mm)</b>	
	50	50
<b>f</b>	<b>Square hole diameter* (mm)</b>	
	11	11
<b>g</b>	<b>Gauge (mm)</b>	
	91	91
<b>h</b>	<b>U profile width (mm)</b>	
	70	70
<b>i</b>	<b>U profile depth (mm)</b>	
	130	130

\* To fit M10 carriage bolts



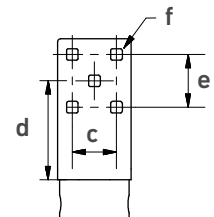
### Online Service

KSF U 66x865-91	KSF U 66x730-91
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Webkey

U2106511D

U2106111D



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## Technical Data Sheet U Series

### Basic Info

KSF U 66x730-71	KSF U 66x550-71
Nominal length (mm)	
730	550
Tube diameter (mm)	
66	66
Weight (kg)	
2.60	2.20
Item number	
21063	21060

### Construction

- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Continuous welded helix
- Patented conical body forged from a single piece of tubing

### Applications



### Accessories



Screwing Bar short  
0.60 kg  
Item No. 20070

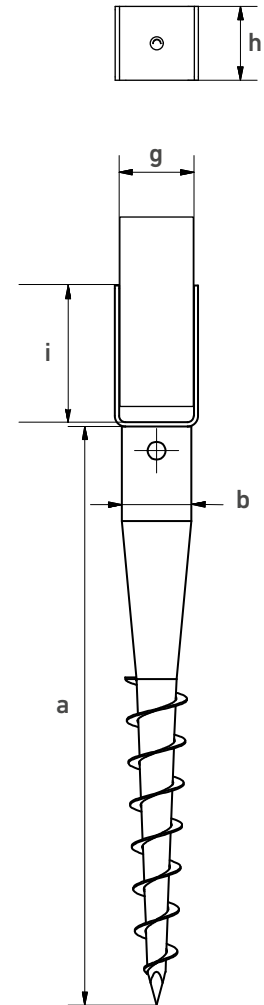


KSF U 66x  
730-71

### Technical Data

	KSF U 66x730-71	KSF U 66x550-71
<b>a</b>	<b>Length (mm)</b>	
	730	550
<b>b</b>	<b>Shaft outer diameter (mm)</b>	
	66	66
<b>c</b>	<b>Square hole spacing (mm)</b>	
	42	42
<b>d</b>	<b>Middle square hole spacing (mm)</b>	
	90	90
<b>e</b>	<b>Square hole spacing (mm)</b>	
	50	50
<b>f</b>	<b>Square hole diameter* (mm)</b>	
	11	11
<b>g</b>	<b>Gauge (mm)</b>	
	71	71
<b>h</b>	<b>U profile width (mm)</b>	
	70	70
<b>i</b>	<b>U profile depth (mm)</b>	
	130	130

\* To fit M10 carriage bolts



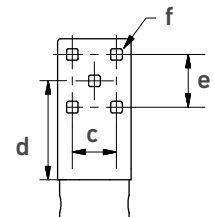
### Online Service

KSF U 66x730-71	KSF U 66x550-71
-----------------	-----------------

Webkey

U2106311D

U2106011D



Subject to technical change!

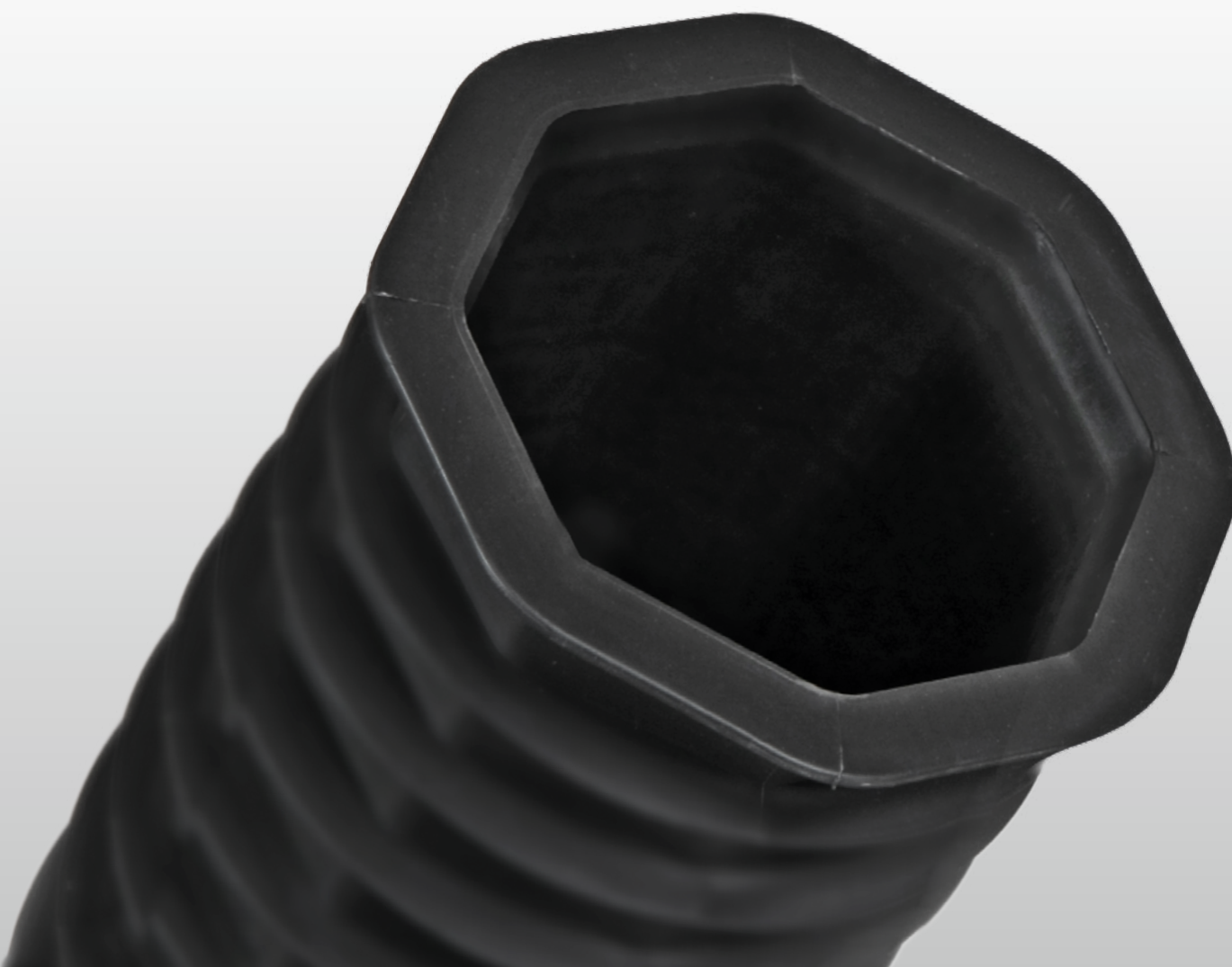
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# KRINNER

The Ground Screw

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## X SERIES

The KRINNER Ground Screw  
for special applications



X SERIES

## X SERIES

### The KRINNER Ground Screw for special applications



The X series of ground screws have been developed for special applications – a kind of tailored foundation. The foundations are custom manufactured to fit requirements exactly.

#### RECOMMENDED DRIVERS:

For correct insertion of X Series Ground Screws, use the Ground Screw Driver **KR E 10** or **KR E 20** or the **KR D 55** driver.

These Ground Screws can also be driven into loose soil using manual screwing bar short or Ground Screw Driver.

Overview of X Series

KSF X 130x350-LP	KSF X 135x480-LPS
Length (mm)	
350	480
Tube diameter (mm)	
178	107,96 x 127,26
Weight (kg)	
0.60	1,8
Item number	
22040	22044



KSF X 130x350-LP



KSF X 135x480-LPS



## Technical Data Sheet X Series

### Basic Info

#### KSF X 130x350-LP

Nominal length (mm)

350

Tube diameter (mm)

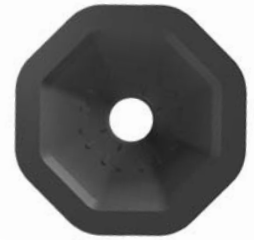
178

Weight (kg)

0.60

Item number

22040

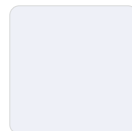


KSF X 130x350-LP

### Construction

- Material: PP-EPDM
- UV-stabilized
- Conical plastic shell open at both ends with screw thread
- Surface matt black

### Applications



### Accessories

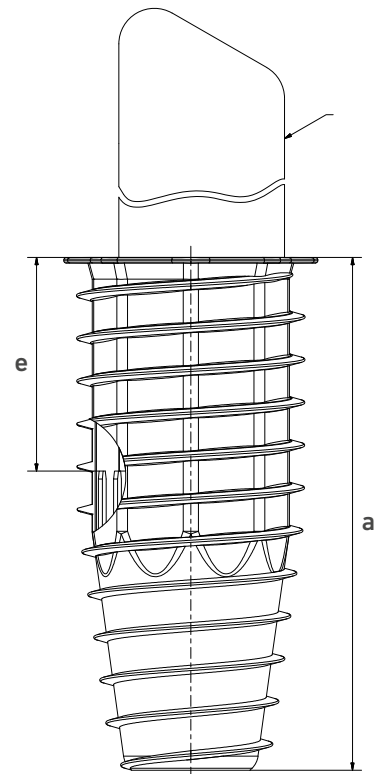
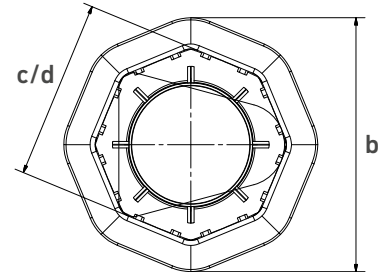


Cover Sleeve-LP  
Item No. 22801

## Technical Data

### KSF X 130x350-LP

a	Length (mm)	350
b	Outer diameter (mm)	178
c	Inner diameter (mm)	125
d	Diameter setting (mm)	125
e	Depth setting (mm)	150



## Online Service

### KSF X 130x350-LP

Webkey  
X2204011D



## Technical Data Sheet X Series

### Basic Info

#### KSF X 135x480-LPS

Nominal length (mm)

480

Tube diameter (mm)

107,96 x 127,26

Weight (kg)

1,8

Item number

22044

### Construction

- Material: hot-dip galvanised steel
- Cone-shaped, two-side open metal bushing with screw thread
- Coating: Hot-dip galvanized according to DIN EN ISO 1461
- Continuous welded helix

### Applications



### Accessories



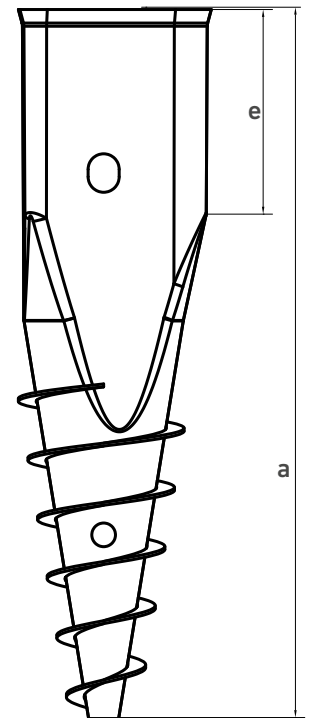
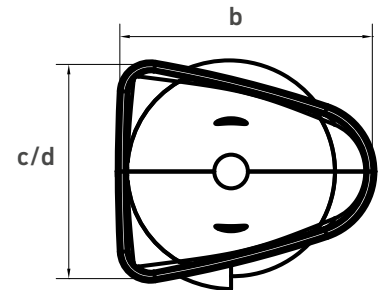
Cover Sleeve-LP  
Item No. 22801



KSF X 135x480-LPS

## Technical Data

KSF X 135x480-LPS	
a	Length (mm) 380
b	Outer diameter (mm) 107,96 x 127,26
c	Inner diameter (mm) 102,60 x 121,90
d	Diameter setting (mm) 102,60 x 121,90
e	Depth setting (mm) 138



## Online Service

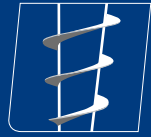
**KSF X 135x480-LPS**

Webkey  
X2204413E



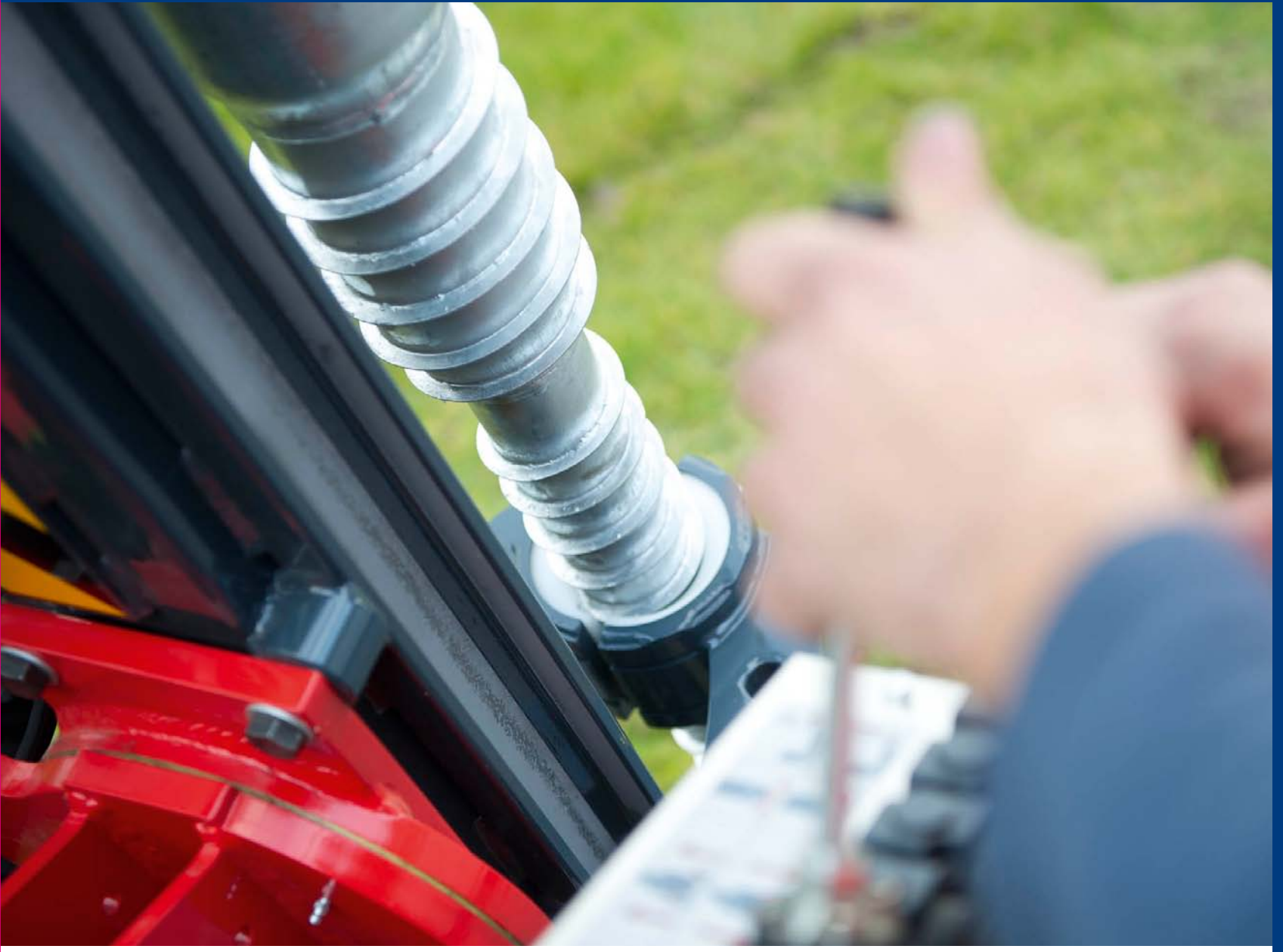
Subject to technical change!

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## DRIVERS

Effective solutions to optimize driving in every situation.



DRIVERS

# DRIVERS

**Effective solutions to optimize driving in every situation.**



KRINNER Ground Screws are driven into the ground using machinery and equipment specially developed by KRINNER promising a quick, easy and accurate performance. KRINNER offers optimal driving solutions for everything from simple grass meadows to stiff soil conditions (Class V) and difficult rock conditions (Class VII). The range includes pre-drilling gear for difficult rock conditions.

## Technical Data Sheet KR E 10 Ground Screw Driver

### Basic Info

#### KR E 10 Ground Screw Driver-Z1\*

**Electrical connection**

230 V

**Load torque**

1st gear up to max. 3,000 Nm

**Power**

1,800 W

**Direction of rotation**

Right/left

**Weight**

20 kg

**Item number**

22925

**Webkey**

MA2292511D



To drive small to medium-sized ground screws into the soil up to Class III manually. As for pinpoint accuracy and easy installation, we recommend pre-drilling with a hammer drill or rotary hammer. The drill bit should be at least 40 mm in diameter and approximately 800 mm long. A little water can also be poured into the borehole after drilling for optimal lubrication.



\*Sales is subject to approval

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## Accessories



**KR E 10 Linkage**  
10.00 kg,  
Length: 1.70–2.80 m  
Item No. 22926



**KR E 10/20 Bar**  
4.30 kg  
Item No. 21899



**Z1 Attachment-E140**  
6.80 kg  
Item No. 21838



**Z1 Attachment-P89**  
4.20 kg  
Item No. 21829



**Z1 Attachment-F1234567**  
4.20 kg  
Item No. 21841



**Z1 Attachment-I114**  
8.90 kg  
Item No. 21894



**Z1 Attachment-I114**  
8.90 kg  
Item No. 21889



**Z1 Attachment-A76-3**  
3.40 kg  
Item No. 21892



**Z1 Attachment-A76-4**  
3.40 kg  
Item No. 21845



**Z1 Attachment-T66**  
3.70 kg  
Item No. 21833



**Z1 Attachment-V66**  
5.30 kg  
Item No. 22910



**Z1 Attachment-K60**  
10.50 kg  
Item No. 22907



**Z1 Displacement-K60**  
8.60 kg  
Item No. 22908



**Z1 Attachment-K42**  
7.50 kg  
Item No. 22909



**Z1 Attachment-K34**  
3.80 kg  
Item No. 22904



**Z1 Attachment-U66**  
2.40 kg  
Item No. 21832



**Z1 Attachment-X130**  
14.80 kg  
Item No. 22901



**Z1 Extension-L03-Z1**  
3.80 kg  
Item No. 21850

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## Technical Data Sheet KR E 20 Ground Screw Driver

### Basic Info

#### KR E 20 Ground Screw Driver-Z1

**Electrical connection**

230 V

**Load torque**

2nd gear up to max. 3,600 Nm

**Power**

1,800 W

**Direction of rotation**

Right/left

**Weight**

17.50 kg

**Item number**

21880

**Webkey**

MA2188011D



To drive small to medium-sized ground screws into the soil up to Class III manually. As for pinpoint accuracy and easy installation, we recommend pre-drilling with a hammer drill or rotary hammer. The drill bit should be at least 40 mm in diameter and approximately 800 mm long. A little water can also be poured into the borehole after drilling for optimal lubrication.



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## Accessories



**KR E 20 Linkage**  
17.50 kg, Length:  
Min.: 1.70 m, Max.: 2.80 m  
Item No. 21883



**KR E 10/20 Bar**  
4.30 kg  
Item No. 21899



**Z1 Attachment-E140**  
6.80 kg  
Item No. 21838



**Z1 Attachment-P89**  
4.20 kg  
Item No. 21829



**Z1 Attachment-F1234567**  
4.20 kg  
Item No. 21841



**Z1 Attachment-I114**  
8.90 kg  
Item No. 21894



**Z1 Attachment-A89-4**  
4.90 kg  
Item No. 21889



**Z1 Attachment-A76-3**  
3.40 kg  
Item No. 21892



**Z1 Attachment-A76-4**  
3.40 kg  
Item No. 21845



**Z1 Attachment-T66**  
3.70 kg  
Item No. 21833



**Z1 Attachment-V66**  
5.30 kg  
Item No. 22910



**Z1 Attachment-K60**  
10.50 kg  
Item No. 22907



**Z1 Displacement-K60**  
8.60 kg  
Item No. 22908



**Z1 Attachment-K42**  
7.50 kg  
Item No. 22909



**Z1 Attachment-K34**  
3.80 kg  
Item No. 22904



**Z1 Attachment-U66**  
2.40 kg  
Item No. 21832



**Z1 Attachment-X130**  
14.80 kg  
Item No. 22901



**Z1 Extension-L03-Z1**  
3.80 kg  
Item No. 21850

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## Technical Data Sheet KR H Manual Screwing Tool

### Basic Info

#### KR H Manual Screwing Tool-Z1

**Weight**

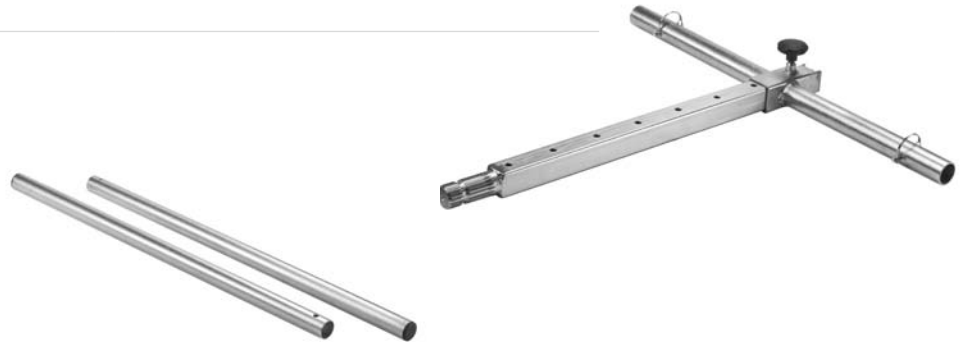
12.00 kg

**Item number**

21842

**Webkey**

MA2184211D



To drive small to medium-sized ground screws into the soil up to Class III manually. As for pinpoint accuracy and easy installation, we recommend pre-drilling with a hammer drill or rotary hammer. The drill bit should be at least 40 mm in diameter and approximately 800 mm long. A little water can also be poured into the predrilled borehole before inserting the screw for optimal lubrication.



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## Accessories



**Z1 Attachment-E140**  
6.80 kg  
Item No. 21838



**Z1 Attachment-P89**  
4.20 kg  
Item No. 21829



**Z1 Attachment-F1234567**  
4.20 kg  
Item No. 21841



**Z1 Attachment-I114**  
8.90 kg  
Item No. 21894



**Z1 Attachment-A89-4**  
4.90 kg  
Item No. 21889



**Z1 Attachment-A76-3**  
3.40 kg  
Item No. 21892



**Z1 Attachment-A76-4**  
3.40 kg  
Item No. 21845



**Z1 Attachment-T66**  
3.70 kg  
Item No. 21833



**Z1 Attachment-V66**  
5.30 kg  
Item No. 22910



**Z1 Attachment-K60**  
10.50 kg  
Item No. 22907



**Z1 Displacement-K60**  
8.60 kg  
Item No. 22908



**Z1 Attachment-K42**  
7.50 kg  
Item No. 22909



**Z1 Attachment-K34**  
3.80 kg  
Item No. 22904



**Z1 Attachment-U66**  
2.40 kg  
Item No. 21832



**Z1 Attachment-X130**  
14.80 kg  
Item No. 22901



**Z1 Extension-L03-Z1**  
3.80 kg  
Item No. 21850

## Technical Data Sheet S1 Manual Screwing Tool

### Basic Info

#### S1 Manual Screwing Tool-K34

Weight

6.70 kg

Item number

22900

Webkey

MA2290011D



To drive KSF K34 x 550 ground screws into soft to medium soil types manually. As for pinpoint accuracy and easy installation, we recommend pre-drilling with a hammer drill or rotary hammer. The drill bit should be at least 40 mm in diameter and approximately 800 mm long. A little water can also be poured into the predrilled borehole before inserting the screw for optimal lubrication.



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## Technical Data Sheet KR D 55 Ground Screw Drivers

### Basic Info

#### KR D 55 Ground Screw Driver-L30-F3

#### KR D 55 Ground Screw Driver-L40-F3

##### Load torque

Max. 5,000 Nm

Max. 5,000 Nm

##### Dimensions

1.20 m wide x 3.00 m  
long (incl. mast)

1.20 m wide x 4.00 m  
long (incl. mast)

##### Height of mast

3.75 m (erected)

4.75 m (erected)

##### Direction of rotation

Right/left

Right/left

##### Weight

1,300 kg

1,400 kg

##### Item number

27500

27510

##### Webkey

MA2750011D

MA2751011D

The KR D 55 Ground Screw Driver is designed for easy insertion into soil class VII (difficult rock) within minutes in combination with appropriate pre-drilling equipment. The powerful, self-turning KR D 55 Ground Screw Driver is suited to medium to large-scale projects. It easily drives in ground screws up to 2 m in length.



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## Accessories



**F3 Attachment-E140**  
10.00 kg  
Item No. 21901



**F3 Attachment-P89**  
7.00 kg  
Item No. 21904



**F3 Attachment-F1234567**  
7.40 kg  
Item No. 21902



**F3 Extension-L04-W80**  
9.00 kg  
Item No. 27125



**W80 Attachment-F1234567**  
9.00 kg  
Item No. 21912



**F3 Attachment-A114-3**  
8.40 kg  
Item No. 21907



**F3 Attachment-A89-4**  
10.00 kg  
Item No. 21906



**F3 Attachment-A76-3**  
11.70 kg  
Item No. 21903



**F3 Attachment-A76-4**  
10.60 kg  
Item No. 21905



**F3 Connection Flange-F2**  
2.00 kg  
Item No. 21908



**F3 Attachment-W160**  
6.50 kg  
Item No. 21911



**F3 Attachment-Q60**  
4.00 kg  
Item No. 27133



**F2-W140 Attachment-K60**  
10.00 kg  
Item No. 22912



**F2-W140 Displacement-K60**  
8.00 kg  
Item No. 22911



**F2-W140 Gimlet 80 x 2000**  
21.00 kg  
Item No. 28032



**F2-W140 Gimlet 135 x 2000**  
37.00 kg  
Item No. 28033



**F2-W140 Rock Hammer**  
72 mm  
60.00 kg  
Item No. 28059



**F2-W140 Rock Hammer**  
90 mm  
90.00 kg  
Item No. 28058



**F2-W140 Rock Hammer**  
140 mm  
120.00 kg  
Item No. 28065



**RV50 Hydraulic Hammer**  
215.00 kg  
Item No. 27080

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## Technical Data Sheet KR B 40-B1 Ground Screw Driver

### Basic Info

#### KR B 40-B1 Ground Screw Driver

**Load torque**

Max. 5,000 Nm

**Direction of rotation**

Right/left

**Weight**

240 kg

**Item number**

27501

**Webkey**

MA2750111D

The KR B 40 Ground Screw Driver is designed for easy insertion into soil class VII (difficult rock) within minutes in combination with appropriate pre-drilling equipment. The machine is to be mounted on a carrier machine (excavator) of 1.5 t to 3.0 t deadweight, in compliance with the tipping load chart of the excavator. The excavator-mounted machine is equipped with a Lehnhoff 01/03 quick coupling. Please inquire about compatibility with other models.



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## Accessory Chart

Ground Screw		Accessory	Quantity/pcs
<b>E SERIES</b>			
KSF E 140x2100-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 140x1600-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 140x1300-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 89x1000-E60	KR B	F2-W140 Attachment-P89	3
KSF E 89x800-E60	KR B	F2-W140 Attachment-P89	3
KSF E 89x550-E60	KR B	F2-W140 Attachment-P89	3
<b>F SERIES</b>			
KSF F 140x1600-P	KR B	B1 Clamping Jaw-W220	3
KSF F 140x1300-P	KR B	B1 Clamping Jaw-W220	3
KSF F 140x2100-M	KR B	B1 Clamping Jaw-W220	3
KSF F 140x1600-M	KR B	B1 Clamping Jaw-W220	3
KSF F 76x1600-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x1300-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x1000-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x800-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
<b>G SERIES</b>			
KSF G 114x1300-4xM16	KR B	B1 Clamping Jaw-G114	4
KSF G 114x1000-4xM16	KR B	B1 Clamping Jaw-G114	4
KSF G 89x1300-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 89x1000-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 89x800-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 76x2100-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x1600-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x1300-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x800-4xM12	KR B	B1 Clamping Jaw-G76	4
KSF G 66x650-3xM8	KR B	B1 Clamping Jaw-G66	3
<b>K SERIES</b>			
KSF K 60x800	KR B	F2-W140 Attachment-K60	3
KSF K 60x800	KR B	F2-W140 Displacer-K60	3
<b>M-SERIES</b>			
KSF M 140x2100-M24	KR B	B1 Clamping Jaw-W200	3
KSF M 114x2100-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 114x1600-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 114x1300-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x2100-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x1600-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x1300-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 76x2100-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1600-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1300-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1300-M12	KR B	B1 Clamping Jaw-W120	3
KSF M 76x1000-M12	KR B	B1 Clamping Jaw-W120	3
KSF M 76x800-M12	KR B	B1 Clamping Jaw-W120	3

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Technical Data Sheet

Accessories for KR B Drivers



**B1 Clamping Jaw-W120**  
1.50 kg  
Item No. 28060



**B1 Clamping Jaw-W140**  
1.30 kg  
Item No. 28012



**B1 Clamping Jaw-W160**  
1.25 kg  
Item No. 28036



**B1 Clamping Jaw-W180**  
1.20 kg  
Item No. 28073



**B1 Clamping Jaw-W200**  
1.20 kg  
Item No. 28013



**B1 Clamping Jaw-W220**  
1.10 kg  
Item No. 28014



**B1 Clamping Jaw-W245**  
1.10 kg  
Item No. 28026



**B1 Clamping Jaw-W300**  
1.40 kg  
Item No. 28047



**B1 Clamping Jaw-G60 PLUS**  
2.30 kg  
Item No. 27142



**B1 Clamping Jaw-G60**  
2.21 kg  
Item No. 28021



**B1 Clamping Jaw-S60**  
2.35 kg  
Item No. 27141



**B1 Clamping Jaw-G66**  
2.10 kg  
Item No. 28015



**B1 Clamping Jaw-G76**  
2.00 kg  
Item No. 28016



**B1 Clamping Jaw-G89**  
2.10 kg  
Item No. 28017



**B1 Clamping Jaw-G114**  
1.85 kg  
Item No. 28018



**F2-W140 Attachment-K60**  
10.30 kg  
Item No. 22912



**F2-W140 Displacement-K60**  
10.30 kg  
Item No. 22911



**F2-W140 Attachment-P89**  
7.00 kg  
Item No. 22913

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Technical Data Sheet

Accessories for KR B Ground Screw Drivers (to be continued)



**W160 Adapter-F2**  
1.30 kg  
Item No. 27505



**W200 Adapter-F23**  
3.50 kg  
Item No. 27508



**W220 Adapter-F23**  
3.00 kg  
Item No. 27507



**F2-W140 Gimlet 80x2000**  
21.00 kg  
Item No. 28032



**F2-W140 Gimlet 135x2000**  
37.00 kg  
Item No. 28033



**F2-W140 Rock Hammer**  
72 mm  
60.00 kg  
Item No. 28059



**F2-W140 Rock Hammer**  
90 mm  
90.00 kg  
Item No. 28058



**F2-W140 Rock Hammer**  
140 mm  
120.00 kg  
Item No. 28065

## Technical Data Sheet KR B 60-B1 Ground Screw Driver

### Basic Info

#### KR B 60-B1 Ground Screw Driver

**Load torque**

Max. 10,000 Nm

**Direction of rotation**

Right/left

**Weight**

330 kg

**Item number**

27502

**Webkey**

MA2750211D

The KR B 60 Ground Screw Driver is designed for easy insertion into soil class VII (difficult rock) within minutes in combination with appropriate pre-drilling equipment. The machine is to be mounted on a carrier machine (excavator) of 5.0 t to 12.0 t deadweight, in compliance with the tipping load chart of the excavator. The excavator-mounted machine is equipped with a Lehnhoff 08 quick coupling. Please inquire about compatibility with other models.



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## Accessory Chart

Ground Screw		Accessory	Quantity/pcs
<b>E SERIES</b>			
KSF E 140x2100-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 140x1600-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 140x1300-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 89x1000-E60	KR B	F2-W140 Attachment-P89	3
KSF E 89x800-E60	KR B	F2-W140 Attachment-P89	3
KSF E 89x550-E60	KR B	F2-W140 Attachment-P89	3
<b>F SERIES</b>			
KSF F 140x1600-P	KR B	B1 Clamping Jaw-W220	3
KSF F 140x1300-P	KR B	B1 Clamping Jaw-W220	3
KSF F 140x2100-M	KR B	B1 Clamping Jaw-W220	3
KSF F 140x1600-M	KR B	B1 Clamping Jaw-W220	3
KSF F 76x1600-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x1300-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x1000-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x800-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
<b>G SERIES</b>			
KSF G 114x1300-4xM16	KR B	B1 Clamping Jaw-G114	4
KSF G 114x1000-4xM16	KR B	B1 Clamping Jaw-G114	4
KSF G 89x1300-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 89x1000-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 89x800-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 76x2100-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x1600-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x1300-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x800-4xM12	KR B	B1 Clamping Jaw-G76	4
KSF G 66x650-3xM8	KR B	B1 Clamping Jaw-G66	3
<b>K SERIES</b>			
KSF K 60x800	KR B	F2-W140 Attachment-K60	3
KSF K 60x800	KR B	F2-W140 Displacer-K60	3
<b>M-SERIES</b>			
KSF M 140x2100-M24	KR B	B1 Clamping Jaw-W200	3
KSF M 114x2100-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 114x1600-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 114x1300-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x2100-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x1600-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x1300-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 76x2100-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1600-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1300-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1300-M12	KR B	B1 Clamping Jaw-W120	3
KSF M 76x1000-M12	KR B	B1 Clamping Jaw-W120	3
KSF M 76x800-M12	KR B	B1 Clamping Jaw-W120	3

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Technical Data Sheet

Accessories for KR B Ground Screw Drivers



**B1 Clamping Jaw-W120**  
1.50 kg  
Item No. 28060



**B1 Clamping Jaw-W140**  
1.30 kg  
Item No. 28012



**B1 Clamping Jaw-W160**  
1.25 kg  
Item No. 28036



**B1 Clamping Jaw-W180**  
1.20 kg  
Item No. 28073



**B1 Clamping Jaw-W200**  
1.20 kg  
Item No. 28013



**B1 Clamping Jaw-W220**  
1.10 kg  
Item No. 28014



**B1 Clamping Jaw-W245**  
1.10 kg  
Item No. 28026



**B1 Clamping Jaw-W300**  
1.40 kg  
Item No. 28047



**B1 Clamping Jaw-G60 PLUS**  
2.30 kg  
Item No. 27142



**B1 Clamping Jaw-G60**  
2.21 kg  
Item No. 28021



**B1 Clamping Jaw-S60**  
2.35 kg  
Item No. 27141



**B1 Clamping Jaw-G66**  
2.10 kg  
Item No. 28015



**B1 Clamping Jaw-G76**  
2.00 kg  
Item No. 28016



**B1 Clamping Jaw-G89**  
2.10 kg  
Item No. 28017



**B1 Clamping Jaw-G114**  
1.85 kg  
Item No. 28018



**F2-W140 Attachment-K60**  
10.30 kg  
Item No. 22912



**F2-W140 Displacement-K60**  
10.30 kg  
Item No. 22911



**F2-W140 Attachment-P89**  
7.00 kg  
Item No. 22913

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Technical Data Sheet

Accessories for KR B Ground Screw Drivers (to be continued)



**W160 Adapter-F2**  
1.30 kg  
Item No. 27505



**W200 Adapter-F23**  
3.50 kg  
Item No. 27508



**W220 Adapter-F23**  
3.00 kg  
Item No. 27507



**F2-W140 Gimlet Bit 80x2000**  
21.00 kg  
Item No. 28032



**F2-W140 Gimlet Bit 135x2000**  
37.00 kg  
Item No. 28033



**F2-W140 Rock Hammer**  
72 mm  
60.00 kg  
Item No. 28059



**F2-W140 Rock Hammer**  
90 mm  
90.00 kg  
Item No. 28058



**F2-W140 Rock Hammer**  
140 mm  
120.00 kg  
Item No. 28065

## Technical Data Sheet KR B 250 Ground Screw Drivers

### Basic Info

#### KR B 250 Ground Screw Driver-B1

Load torque

Max. 30,000 Nm

Direction of rotation

Right/left

Weight

500 kg

Item number

27503

Webkey

MA2750311D

The KR B 250 Ground Screw Driver is designed for easy insertion into soil class VII (difficult rock) within minutes in combination with appropriate predrilling equipment. The machine is to be mounted on a carrier machine (excavator) of 8.0 t to 16.0 t deadweight, in compliance with the tipping load chart of the excavator. The excavator-mounted machine is equipped with a Lehnhoff 10 quick coupling. Please inquire about compatibility with other models.



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## Accessory Chart

Ground Screw		Accessory	Quantity/pcs
<b>E SERIES</b>			
KSF E 140x2100-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 140x1600-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 140x1300-E76-100	KR B	B1 Clamping Jaw-W220	3
KSF E 89x1000-E60	KR B	F2-W140 Attachment-P89	3
KSF E 89x800-E60	KR B	F2-W140 Attachment-P89	3
KSF E 89x550-E60	KR B	F2-W140 Attachment-P89	3
<b>F SERIES</b>			
KSF F 140x1600-P	KR B	B1 Clamping Jaw-W220	3
KSF F 140x1300-P	KR B	B1 Clamping Jaw-W220	3
KSF F 140x2100-M	KR B	B1 Clamping Jaw-W220	3
KSF F 140x1600-M	KR B	B1 Clamping Jaw-W220	3
KSF F 76x1600-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x1300-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x1000-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
KSF F 76x800-R	KR B	B1 Clamping Jaw-W140 and B1 Clamping Jaw-W200	2 each
<b>G SERIES</b>			
KSF G 114x1300-4xM16	KR B	B1 Clamping Jaw-G114	4
KSF G 114x1000-4xM16	KR B	B1 Clamping Jaw-G114	4
KSF G 89x1300-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 89x1000-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 89x800-4xM12	KR B	B1 Clamping Jaw-G89	4
KSF G 76x2100-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x1600-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x1300-3xM16	KR B	B1 Clamping Jaw-G76	3
KSF G 76x800-4xM12	KR B	B1 Clamping Jaw-G76	4
KSF G 66x650-3xM8	KR B	B1 Clamping Jaw-G66	3
<b>K SERIES</b>			
KSF K 60x800	KR B	F2-W140 Attachment-K60	3
KSF K 60x800	KR B	F2-W140 Displacer-K60	3
<b>M SERIES</b>			
KSF M 140x2100-M24	KR B	B1 Clamping Jaw-W200	3
KSF M 114x2100-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 114x1600-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 114x1300-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x2100-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x1600-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 89x1300-M24	KR B	B1 Clamping Jaw-W160	3
KSF M 76x2100-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1600-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1300-M16	KR B	B1 Clamping Jaw-W160	3
KSF M 76x1300-M12	KR B	B1 Clamping Jaw-W120	3
KSF M 76x1000-M12	KR B	B1 Clamping Jaw-W120	3
KSF M 76x800-M12	KR B	B1 Clamping Jaw-W120	3

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Technical Data Sheet

Accessories for KR B Ground Screw Drivers



**B1 Clamping Jaw-W120**  
1.50 kg  
Item No. 28060



**B1 Clamping Jaw-W140**  
1.30 kg  
Item No. 28012



**B1 Clamping Jaw-W160**  
1.25 kg  
Item No. 28036



**B1 Clamping Jaw-W180**  
1.20 kg  
Item No. 28073



**B1 Clamping Jaw-W200**  
1.20 kg  
Item No. 28013



**B1 Clamping Jaw-W220**  
1.10 kg  
Item No. 28014



**B1 Clamping Jaw-W245**  
1.10 kg  
Item No. 28026



**B1 Clamping Jaw-W300**  
1.40 kg  
Item No. 28047



**B1 Clamping Jaw-G60 PLUS**  
2.30 kg  
Item No. 27142



**B1 Clamping Jaw-G60**  
2.21 kg  
Item No. 28021



**B1 Clamping Jaw-S60**  
2.35 kg  
Item No. 27141



**B1 Clamping Jaw-G66**  
2.10 kg  
Item No. 28015



**B1 Clamping Jaw-G76**  
2.00 kg  
Item No. 28016



**B1 Clamping Jaw-G89**  
2.10 kg  
Item No. 28017



**B1 Clamping Jaw-G114**  
1.85 kg  
Item No. 28018



**F2-W140 Attachment-K60**  
10.30 kg  
Item No. 22912



**F2-W140 Displacement-K60**  
10.30 kg  
Item No. 22911



**F2-W140 Attachment-P89**  
7.00 kg  
Item No. 22913

Subject to technical change!

Technical Data Sheet

Accessories for KR B Ground Screw Drivers (to be continued)



**W160 Adapter-F2**  
1.30 kg  
Item No. 27505



**W200 Adapter-F23**  
3.50 kg  
Item No. 27508



**W220 Adapter-F23**  
3.00 kg  
Item No. 27507



**F2-W140 Gimlet 80x2000**  
21.00 kg  
Item No. 28032



**F2-W140 Gimlet 135x2000**  
37.00 kg  
Item No. 28033



**F2-W140 Rock Hammer**  
72 mm  
60.00 kg  
Item No. 28059



**F2-W140 Rock Hammer**  
90 mm  
90.00 kg  
Item No. 28058



**F2-W140 Rock Hammer**  
140 mm  
120.00 kg  
Item No. 28065

## Technical Data Sheet Cable Detector

### Basic Info

#### Cable Detector C-Scope MXL

**Weight**

4.50 kg

**Item number**

28042

**Webkey**

Z2804211D



High-performance precision cable detector: All-Scan modus allows you to search across all frequencies between 50 Hz and 33 kHz to detect signals that would otherwise be overlooked in conventional detection modes. Classical CURRENT mode will easily locate most underground power lines. The precise and sensitive RADIO mode lets you locate many other underground metal lines as well. The innovative ALL-SCAN mode monitors all frequencies from the lowest current signal up to and including 33 kHz. The Depth Estimation function reveals the depth of underground cables and lines at the push of a button. The Signal Current Measurement function is an advancement on depth estimation. The MXL receiver can monitor the true strength of the MXT emitter signal sent along an underground cable, irrespective of depth. Ideal for identifying the layout of cables and supply line networks.

### Accessories



**Transmitter C-Scope MXT**

4.50 kg

Item No. 28043

Webkey Z2804311D

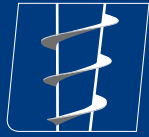
The MXT Emitter performs three times the power output compared to standard emitters. You can choose between a pulsed or continuous signal. You can also choose between three signal frequencies (33 kHz, 8 kHz and 640 Hz). The multi-segment LC display shows clear information about each selected function.



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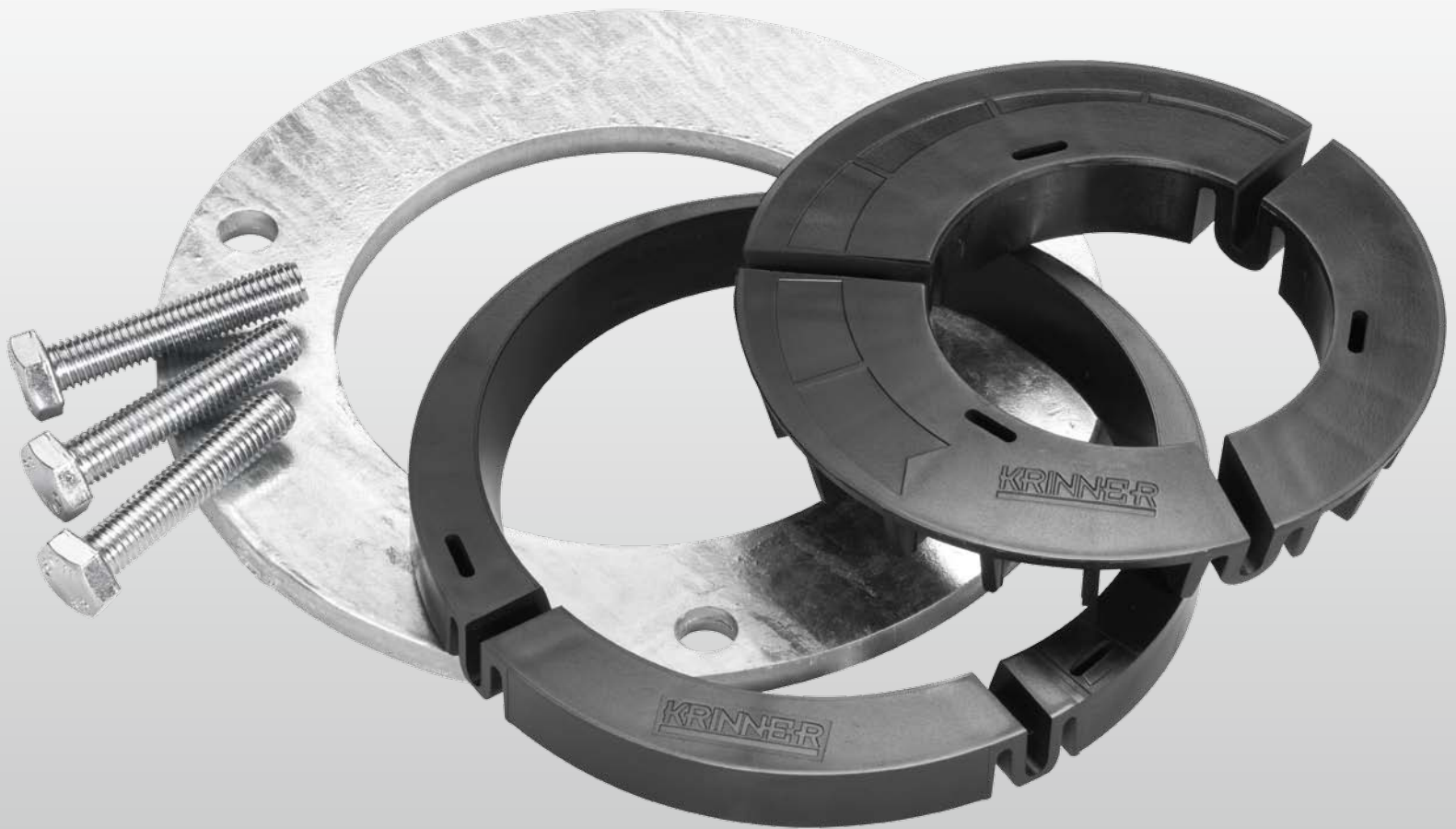
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The Ground Screw

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## ACCESSORIES

Materials and supplies for use with  
KRINNER Ground Screws

## Accessories for E Series



### Excenter Set-E 100

Excenter set for tube diameter 96.5–101.0 mm; Contents: Clamp ring (bolt-on for permanent pipe fastening); fixing screws (for fastening the clamp ring)

**Material** Steel/plastic

**Item No.** 26809



### Excenter Set-E 90

Excenter set for tube diameter 86.0–91.0 mm; Contents: Clamp ring (bolt-on for permanent pipe fastening); fixing screws (for fastening the clamp ring)

**Material** Steel/plastic

**Item No.** 26813



### Excenter Set-E 80

Excenter set for tube diameter 77.0–81.5 mm; Contents: Clamp ring (bolt-on for permanent pipe fastening); fixing screws (for fastening the clamp ring)

**Material** Steel/plastic

**Item No.** 26814



### Excenter Set-E 76

Excenter set for tube diameter 72.5–76.7 mm; Contents: Clamp ring (bolt-on for permanent pipe fastening); fixing screws (for fastening the clamp ring)

**Material** Steel/plastic

**Item No.** 26810



### Cover Plate 2 mm-E 76–100

Cover plate for E Series ground screws when not in use (E 76–100)

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 26819



### Cover Plate 8 mm-E 76–100

Cover plate for E Series ground screws when not in use (E 76–100)

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 26829

**Excenter Set-E 100**

Webkey Z2680911D



**Excenter Set-E 90**

Webkey Z2681311D



**Excenter Set-E 80**

Webkey Z2681411D



**Excenter Set-E 76**

Webkey Z2681011D



**Cover Plate 2 mm-E 76-100**

Webkey Z2681911D



**Cover Plate 8 mm-E 76-100**

Webkey Z2682911D



## Accessories for E Series



### Attachment Screw-E 76-100

Attachment screw for E Series Ground Screws (E 76-100)

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 21837



### Countersunk-E 76-100

Countersunk for E Series Ground Screws (E 76-100)

**Material** Stainless steel A2

**Item No.** 26830



### Reducer-E 76-E 60

Reducer for eccentric set E 76 to 60 mm

**Material** Plastic

**Item No.** 26821



### Reducer-E 76-E 70

Reducer for eccentric set E 76 to 70 mm

**Material** Plastic

**Item No.** 26822



### Excenter Set-E 60

Excenter set for tube diameter 72.5-76.7 mm; Contents: Clamp ring (bolt-on ring for permanent pipe fastening); fixing screws (for fastening the fixing clamp ring)

**Material** Steel/plastic

**Item No.** 24817



### Cover Plate 2 mm-E 60

Cover plate for E Series Ground Screws (E 60) when not in use

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 24808



Attachement Screw-E 76-100

Webkey Z2183711D



Countersunk-E 76-100

Webkey Z2683011D



Reducer-E 76-E 60

Webkey Z2682111D



Reducer-E 76-E 70

Webkey Z2682211D



Excenter Set-E 60

Webkey Z2481711D



Cover Plate 2 mm-E 60

Webkey Z2480811D



## Accessories for E Series



### Fixing Screw-E 60

Fixing screw for E Series Ground Screws (E 60)

**Material** Stainless steel A2

**Item No.** 21808



### Excenter-E 60

Excentric bushing for aligning and fastening E Series Ground Screws (E 60)

**Material** Plastic

**Item No.** 24801



### Clamp Ring-E 60

Clamp ring for E Series Ground Screws (E 60)

**Material** Steel

**Item No.** 24802



### Fair Level-E 60

Fair level for adjustment of the E 60 eccentric bushing

**Material** Plastic

**Item No.** 24803

Fixing Screw-E 60

Webkey Z2180811D



Excenter-E 60

Webkey Z2480111D



Clamp Ring-E 60

Webkey Z2480211D



Fair Level-E 60

Webkey Z2480311D



## Accessories for F Series



### Cover Plate 2 mm-P

Cover plate for F Series (P) Ground Screws

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 26818



### Post Bearer Plane-R

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 28006



### Post Bearer M24-R

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 28007



### Post Bearer M44-R

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 28008



### Post Bearer Sword-R

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 28009



### Post Bearer Side Flaps-R

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 28010



### Post Bearer Vario PS 150-R

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 28019

Cover Plate 2 mm-P

Webkey Z2681811D



Post Bearer Plane-R

Webkey Z2800611D



Post Bearer M24-R

Webkey Z2800711D



Post Bearer M44-R

Webkey Z2800811D



Post Bearer Sword-R

Webkey Z2800911D



Post Bearer Side Flaps-R

Webkey Z2801011D



Post Bearer Vario PS 150-R

Webkey Z2801911D



## Accessories for G Series



### Cover Plate-G 66

Cover Plate for KSF G 66x550-1xM8 and G 66x650-1xM8

**Material** Plastic

**Item No.** 21856



### Pivot/Linkage Cover for-G 66

Pivot cover for cross-bracing on chicken wire fences in conjunction with KSF G 66x550-1xM8 and KSF G 66x650-1xM8

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 21804



### Foundation Cap-G 66

Insert cap for ground screws G 66x550-1xM8 and G 66x650-1xM8 incl. Allen screw

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 21805



### Reduction Sleeve Set-G 66

5-piece reducer insert set for Ground Screws KSF G 66x550-1xM8, KSF G 66x650-1xM8; Reducer to 55.5 mm/50.0 mm/43.0 mm/38.5 mm/34.0 mm

**Material** Plastic

**Item No.** 21806



### Twisting Element-G 66

Twisting insert to fit KSF 66

**Material** Plastic

**Item No.** 21839

Cover Plate-G 66

Webkey Z2185611D



Pivot/Linkage Cover for-G 66

Webkey Z2180411D



Foundation Cap-G 66

Webkey Z2180511D



Reduction Sleeve Set-G 66

Webkey Z2180611D



Twisting Element-G 66

Webkey Z2183911D



## Universal Accessories

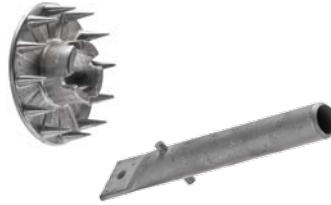


### Foundation Cap (Outer)

Foundation cap cover to fit 60 mm pipes

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 21831



### Disc for Wood

Disc for fastening wood beams

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 21802



### Screwing Bar long

Screwing bar to assist manual driving of Ground Screws

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 24805



### Screwing Bar short

Screwing bar to assist manual driving of Ground Screws

**Material** Steel, galvanized according to DIN EN ISO 1461

**Item No.** 20070



### Triangular Spirit Level

Triangular spirit level for precisely leveling pipes/posts in Ground Screws

**Material** Plastic

**Item No.** 21885



### Special Granulate

Special granulate for all Ground Screws of Series G, E and K for quick and permanent pipe fastening

**Material** Granite

**Item No.** 21823 (Fine, 500 g)

21824 (Coarse, 1,500 g)



### Cover Sleeve LP

Cover sleeve for delineator posts

**Material** Plastic

**Item No.** 22801



### Cover Sleeve-E 60

Cover sleeve for poles of 60 mm diameter

**Material** Plastic

**Item No.** 22803



### Cover Sleeve-E 76

Cover sleeve for poles of 76 mm diameter

**Material** Plastic

**Item No.** 22804



**Foundation Cap (Outer)**

Webkey Z2183111D



**Disc for Wood**

Webkey Z2180211D



**Screwing Bar Long**

Webkey Z2480511D



**Screwing Bar Short**

Webkey Z2007011D



**Triangular Spirit Level**

Webkey Z2188511D



**Special Granulate**

Webkey Z2182311D (Fine)  
Z2182411D (Coarse)



Special Granulate  
(Fine, 500 g)

Special Granulate  
(Coarse, 1,500 g)

**Cover Sleeve LP**

Webkey Z2280111D



**Cover Sleeve-E 60**

Webkey Z2280311D



**Cover Sleeve-E 76**

Webkey Z2280411D



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Krinner Ground Screws revolutionize the Foundation Construction worldwide in more than 40 countries.