





# **TKHP SERIES "THE GRIZZLY"**

High-Performance cable carriers for long travel lengths and high additional loads

# **TKHP SERIES**

New high-performance cable carriers in solid design in two sizes for extremely long travel distances and high additional loads with integrated rollers

Our new TKHP series is a reliable and efficient cable routing for high-performance applications with travel lengths up to 1500 meters in rough conditions, such as port cranes or the transport of bulk materials. It can absorb a high level of force, is highly durable and dirt-resistant.

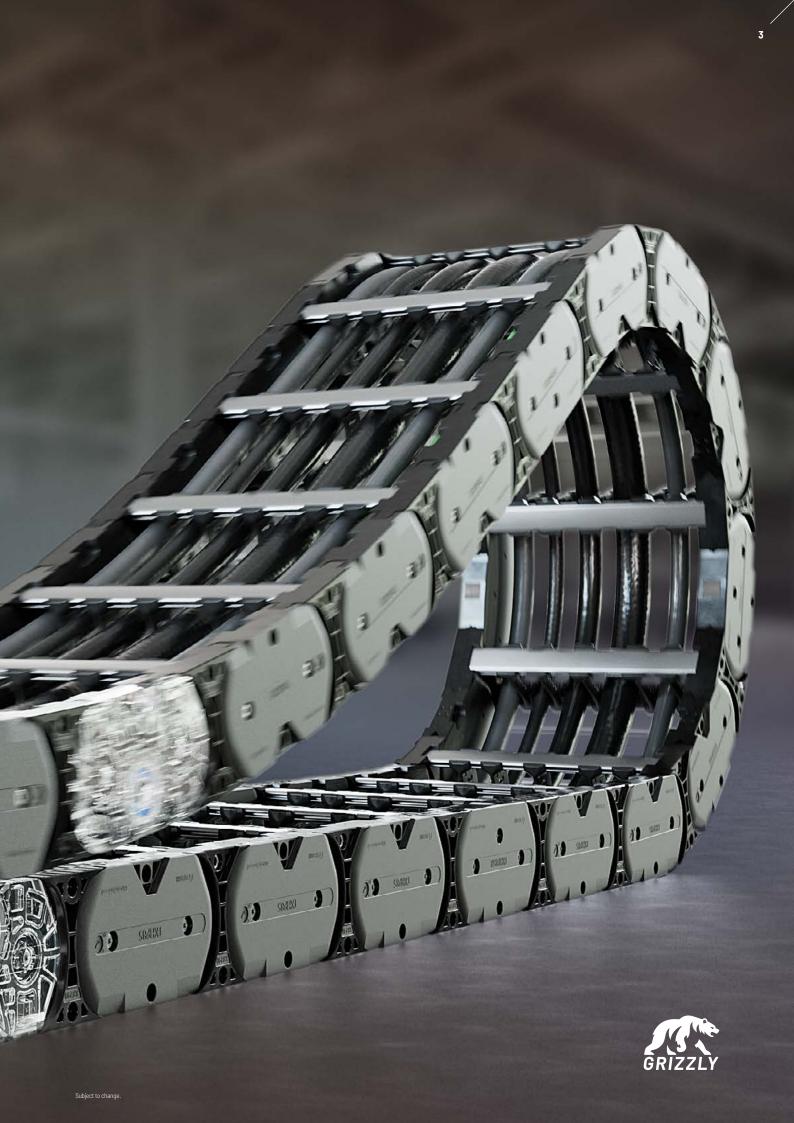
The TKHP is available in three versions: gliding, rolling (R), and rolling with roller damping (RSD). With an inner height of 58 mm or 92 mm and variable widths in 1-mm increments, the series can be flexibly adapted to virtually any installation situation.

The performance of the TKHP is based on a clever design concept: The symmetrically positioned longitudinal axis ensures optimum force transmission and a reduction of the torques occurring in the cable carrier turning point. The encapsulated stroke system, the dirt-resistant, self-cleaning outer contour and the reinforced pin hole connection meet the highest requirements in terms of robustness. The solid sidebands with bolted chain links and a special double-fork and tab design also support the sturdiness of the TKHP. The new TKHP series places a special focus on durability. We optimize this with the right materials, an intelligent cable carrier design and a sustainable service concept for the product. The design aspects include wear-free damping in the stroke system and aluminum opening stays that are gentle on the cables and resistant to seawater.

Thanks to the polygon-optimized outer contour and the virtually gap-free running faces, the cable carriers are particularly quiet. The small pitches of 85 or 90 mm also support the lower noise emissions. The smooth running is also promoted by the innovative roller damping, which lowers the mechanical load when moves over the rollers by up to 50 %.

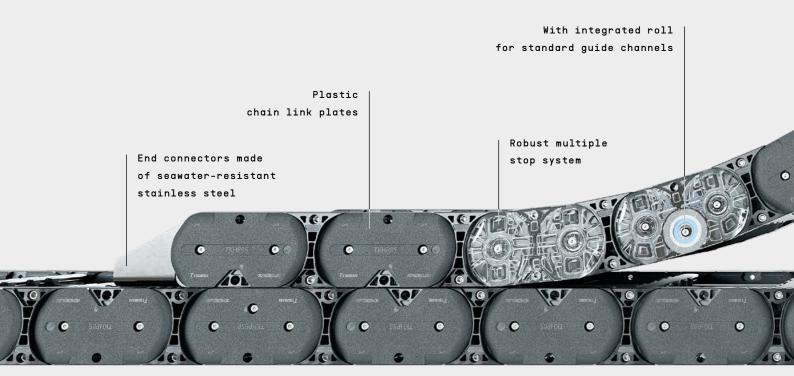
The "grip grooves" on the running faces are another clever detail. These ensure that the rollers have optimum grip even in environments with fine dust. This makes one-sided wear caused by blocked rollers a thing of the past.





# **TKHP SERIES "THE GRIZZLY"**

Cable carriers from the new TKHP series from TSUBAKI KABELSCHLEPP combine everything that an application in a rough environment needs: maximum sturdiness, minimum maintenance effort, and an extremely long service life. The cable carriers are available in the specifications 85 and 90 with two different inner heights – gliding, rolling, or with innovative roller damping.

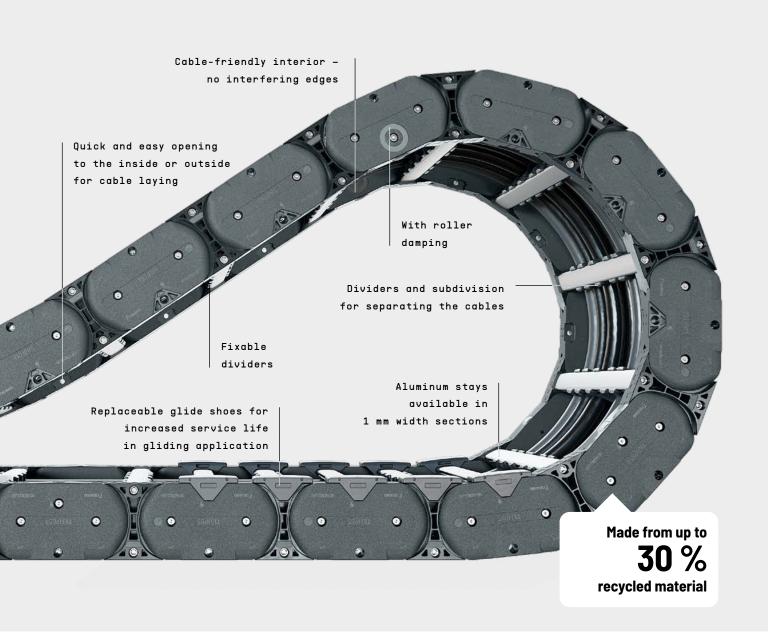


The assigned values are average values. Depending on the specific application, the maximum values may differ significantly. For detailed information please contact us.

### Features

- » High-performance cable carriers in three versions:
  - TKHP85/90
  - TKHP85/90-R with rollers
  - TKHP85/90-RSD with rollers and roller damping
- » Massive, enclosed, stain-repellend stop system
- » Massive sidebands through robust double fork-bracket-construction
- » Sidebands easy to assemble
- » Reinforced symmetrically arranged pin bore connection for better force transmission
- » Integrated noise damping
- » Quick and easy opening to the inside or outside for cable laying

- » Soil-resistant outer contour
- » Easy change of components
- » Easy replacement of chain links within the cable carrier
- » Maintenance-free
- » Linear force curve in the sideband
- » Quiet and low-wear operating through polygon-optimized contour and radii
- » Reduce drive power through less friction
- » Bolted version
- » Standard stay arrangement on every 2nd chain link (HS: half-stayed)





Inner width in 1 mm increments





High additional load







Long travel length



Roller chain



inward/outward

5



Height separation possible



Very smooth running of the roller system due to almost continuous running surface.



A non-slip structure on the running surface prevents one-sided roller wear after a standstill.



Roller chain for travel distances up to 1200 m.



RSD version with roller damping to reduce noise and wear by up to 50 %.

# TKHP85 / TKHP85-R / TKHP85-RSD

Aluminum stay RMF - Frame stay solid with optional fixing profile

- » Aluminum profile bars for heavy loads and large cable carrier widths. Easy threaded connection.
- » Outside/inside: Threaded joint easy to release

» Stay arrangement on every 2<sup>nd</sup> chain link (HS: half-stayed)

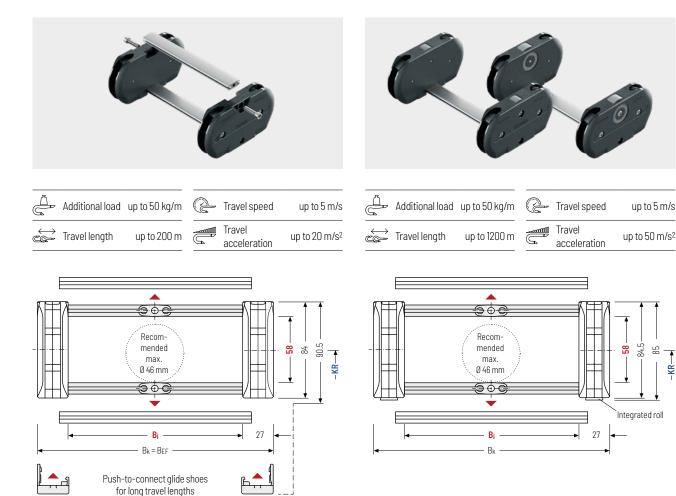
Inner height h <sub>i</sub>	Outer height h <sub>G</sub>	Inner widths B <sub>i</sub>	Outer widths B <sub>k</sub>	B <sub>i-</sub> grid	Pitch t	Bending radii KR	Inner Distribution
58 mm	84 / 84.5 mm	100-800 mm	154-854 mm	1mm	85 mm	240-400 mm	TSO/TS1

### TKHP85

Compact and lightweight high-performance cable carrier for unsupported and gliding applications

### TKHP85-R / TKHP85-RSD

Compact and lightweight high-performance cable carrier with rollers/roller damping for very long travel distances



### End connectors - steel

The connection variants on the fixed point and on the driver can be combined and changed later on, if necessary.

#### **Connection point**

### Connecting surface

### Connection type

- connecting surface inside
  - A connecting surface outside
- A threaded joint outside (standard)I threaded joint inside

#### Subject to change.

F	fixed point
Μ	driver

## **TKHP90 / TKHP90-R / TKHP90-RSD**

Aluminum stay RMF - Frame stay solid with optional fixing profile

- » Aluminum profile bars for heavy loads and large cable carrier widths. Easy threaded connection.
- » Outside/inside: Threaded joint easy to release

- » Stay arrangement on every 2<sup>nd</sup> chain link (HS: half-stayed)

Inner height h <sub>i</sub>	Outer height h <sub>G</sub>	Inner widths B <sub>i</sub>	Outer widths B <sub>k</sub>	B <sub>i-</sub> grid	Pitch t	Bending radii KR	Inner Distribution
92 mm	117 / 117.5 mm	100-800 mm	170-870 mm	1mm	90 mm	250-500 mm	TSO/TS1

### **TKHP90**

Additional load

Travel length

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High-performance cable carrier for unsupported and gliding applications

up to

100 kg/m

up to 200 m

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 $\square$ 

Travel speed

acceleration

Travel

up to 8 m/s

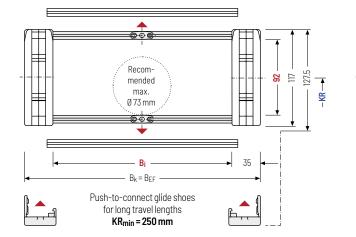
up to 20 m/s<sup>2</sup>

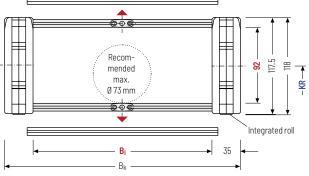
### TKHP90-R / TKHP90-RSD

High-performance cable carrier with rollers/ roller damping for very long travel distances



	Additional load	up to 100 kg/m	Travel speed	up to 10 m/s
${\longleftrightarrow}$	Travel length	up to 1500 m	Travel acceleration	up to 50 m/s²





### **End connectors – steel**

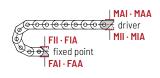
The connection variants on the fixed point and on the driver can be combined and changed later on, if necessary.

#### **Connection point**

### **Connecting surface**

### **Connection type**

- A threaded joint outside (standard)
- I threaded joint inside



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F fixed point I connecting surface inside A connecting surface outside

M driver

### STANDARDIZED MONITORING SYSTEM TKCMS Floating moving device tkfmd

### SAFETY DEVICES FOR CRANES AND LONG TRAVEL APPLICATIONS

Better safe than sorry – this is also true for cable carrier systems. With the two solutions "Standardized Monitoring System" and "Floating Moving Device" we have two very useful helpers in our portfolio.



### Wear monitoring for cranes

- » determine and evaluate real-time wear values of glide shoes
- » operating system independent
- » easy to retrofit and to install
- » no sensor-cables inside the cable carrier
- » no radio transmission
- » using standard components
- » easy access to all sensors
- » maintenance free
- » outcoming signal PLC usable
- » internal data storage

### Floating Moving Device TKFMD

- » compensate horizontal misalignment
- » misalignment compensation: vertical +/-60 mm
- » easy installation, less maintenance
- » roller supported
- » integrated strain relief system
- » safe cable guidance
- » combinable with "Standardized Monitoring System"
- » for M series and TKHP series

### Standardized Monitoring System TKCMS

- » programmable for different tasks
- » different tasks available
- » less program effort
- » different interfaces
- » standardized top-hat-rail-module
- » operating system independent
- » independently programmable

### Force monitoring for cranes

- » usable for automatic emergency stop-system
- » direct measurement of the push/pull-forces at the moving point
- » force limits free programmable (lower/upper)
- » error indication if the limits are exceeded
- » outcoming signal PLC usable internal
- » data storage
- » maintenance free
- » no speed limit

# STEEL GUIDE SYSTEM TKSG

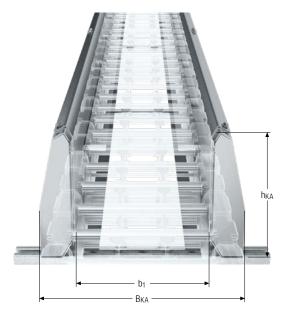
### GUIDE CHANNELS IN THE MODULAR SYSTEM

Easy-to-install modular system with optimized design for long travel lengths in standard lengths of 1000 and 2000 mm. Available in galvanized sheet steel or stainless steel.

#### Features

- » Especially suitable for cranes and applications with long travel lengths
- » Simple design for short installation times
- » No accumulation of dirt through open construction
- » Fast and easy installation thanks to pre assembled sidebands and channel brackets
- » Complete system for screw fitting
- » All components without welds

Туре	Outer height h <sub>KA</sub>	Inner width bı	Outer width B <sub>KA</sub>	Sheet metal thickness
TKHP85 TKHP85-R + RSD	209 mm	B <sub>k</sub> + 6 mm	B <sub>k</sub> + 136 mm	2 mm
TKHP90 TKHP90-R + RSD	258 mm	B <sub>k</sub> + 6 mm	B <sub>k</sub> + 136 mm	2 mm



# ALU GUIDE SYSTEM TKAL

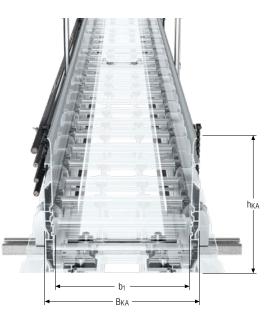
### ALUMINIUM GUIDE CHANNELS IN THE MODULAR SYSTEM

Lightweight modular system for high speeds with many mounting options/mounting sets in standard lengths of 1000 and 2000 mm.

#### Features

- » Safe operation on long travel length
- » Seawater resistant
- » Twin channel connectors for parallel arrangement of several channels
- » Slide and roller support made of high quality plastic
- » Standard and Heavy Duty Version
- » Variable fixation in standard stainless steel
- » UMB mounting kit for assembly of the cable carrier

Туре	Outer height h <sub>KA</sub>	Inner width bı	Outer width BKA
TKHP85 TKHP85-R + RSD	254 mm	B <sub>k</sub> + 6 mm	B <sub>k</sub> + 40.6 mm
TKHP90 TKHP90-R + RSD	274 mm	B <sub>k</sub> + 6 mm	B <sub>k</sub> + 40.6 mm



### **TRAXLINE® CABLES** FOR CABLE CARRIERS

Our Series 700 and 1000 meets the highest quality standards to ensure the continuous availability of your application. The TRAXLINE® product range offers high-flex cables that are extremely durable and especially designed for being used in cable carriers. A main feature is their tested and proven operational reliability, which meets the applicable standards and directives. Competent, objective-driven system consultation and a global onsite service are part of our ongoing commitment to technical and commercial optimization.

### High Flexdesign PUR Cables – 700 Series

#### **Developed for**

- Properties
- » long travel length applications
- » 35 to + 90 °C
- » outdoor/indoor
- » offshore/onshore
- » very high electrical voltages
- » small bend radii
- » high speed (up to 50 m/s)
- » high acceleration (up to 50 m/s<sup>2</sup>)

### Top Flexdesign TPE Cables – 1000 Series

### **Developed for**

- » heavy load and long travel length
- » 40 to + 90 °C
- » crane and conveyor equipment
- » systems, mechanical and crane engineering
- » clean room duties
- » limited space solutions
- » permafrost using
- » outdoor applications

### **Technical details**

- » shielded continuous bending top FLEXdesign TPE power cables
- » TPE inner jacket
- » special shielding with 85 % coverage
- » top FLEXdesign copper wires
- » KS-Special compound core insulation
- » outer jacket color: black

- » high flex design
- » side pressure strength
- » seawater-resistant
- » ozone-resistant
- » UV-stable
- » crude oil resistant
- » flame-retardant
- »CE

- » c**SU**us
- » cut resistant
- » halogen-free
- » silicone-free
- » CFC-free
- » REACH/RoHS II conform
- » metermarked
- » MUD resistant

#### **Premium properties**

- » low-capacitive
- » top flexdesign
- » oil-resistant
- » UV-resistant
- » REACH/RoHS II-conform
- » halogen-free
- » microbe resistant
- » metermarked
- » CFC-free
- » silicone-free
- » spark tested 10 kV
- » ozone-resistant
- » hydrolysis durable
- » test voltage 4 kV
- » CE



### CUT COSTS WITH TOTALTRAX® COMPLETE CABLE CARRIER SYSTEMS

Use our know-how. Working closely with you, our experienced system specialists can provide pre-sale support, including planning and design services through post sales service and support.

Our system experts work with you to develop the technical solution as a reliable assembly for your product. Only one contact person for the complete system. All components match each other perfectly, including your cable carriers, electrical cables, hydraulic and pneumatic hoses as well as connectors. You'll receive the complete system in one delivery, with guarantee certificate if desired – in short: TOTALTRAX<sup>®</sup>. Reduce your storage costs for cable and hose carriers, cables and connectors with TOTALTRAX<sup>®</sup>. We supply all components Just-In-Time to your production facility or directly to the installation site.

### EFFICIENT DESIGN ENGINEERING -PRECISE AND FAST

### OnlineEngineer Configurator for cable carriers

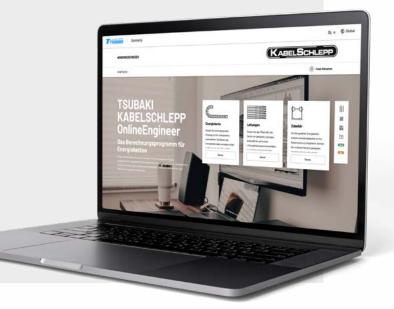
We are continuously investing in providing productrelated data online to make your work easier.

Our web-based OnlineEngineer platform with worldwide online access provides a variety of functions to support you with the selection and configuration of products for your application. All necessary technical and calculation information for the individual products from the areas of cable carriers, cables and other accessories are provided on a central, clearly structured platform. Selection of the suitable products is made substantially easier by entering different parameters.

- » optimal price/performance ratio in the configuration of cable carrier system
- » time savings through automatic configuration function
- » all information of the cable carrier system is displayed as a glance
- » online price inquiry to KABELSCHLEPP

### CADENAS 3D CAD catalog

CADENAS is an internationally used platform for providing 3D component models in a variety of CAD formats. It includes a large number of renowned companies from mechanical engineering, plant engineering and other industry sectors. We are currently offering CAD models in all standard CAD formats for the entire product portfolio. The database also contains the corresponding models for guide channels and support trays. The catalog is continu ously expanded and supplemented.



### CONTACT

### TSUBAKI KABELSCHLEPP GmbH

Daimlerstraße 2 D-57482 Wenden-Gerlingen

Tel: +49 2762 4003-0 E-Mail: info@kabelschlepp.de kabelschlepp.de



#### Your personal contact

HIX Papler | Fördert SCC WWW.fsc.org FSC® C113472







The complete product range under: tsubaki-kabelschlepp.com