# **TKHP series**

Heavy duty cable carriers for long travel lengths and high additional loads



Trademarks are legally protected for the TSUBAKI KABELSCHLEPP GmbH as a national or international registration in the following countries: tsubaki-kabelschlepp.com/trademarks



- 2 Plastic chain link plates
- 3 Quick and easy opening to the inside or outside for cable laying
- no interfering edges
- 5 Fixable dividers
- 6 Dividers and subdivision for separating the cables
- for increased service life in gliding application
- 8 Robust, multiple stop system
- 9 Steel installation brackets
- standard guide channels
- 11 With roller damping
- TKHD

Σ

449

#### **Features**

- » 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



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

Subject to change without notice.



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

- » Maintenance-free
- » Linear force curve in the sideband
- » Quiet and low-wear operating through polygonoptimized contour and radii
- » Reduce drive power through less friction





Coool

Roller chain for travel distances up to 1500 m.



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

XL eries puantum® series TKR eries TKA eries

## TKHP series | Overview

PR0TUM© series	Type	Opening variant	Stay variant	<b>h</b> i [mm]	hg [mm]	Bi [mm]	<b>B</b> k [mm]	Bi- grid [mm]	t [mm]	<b>KR</b> [mm]	Addi- tional load ≤ [kg/m]	Cable- d <sub>max</sub> [mm]	
K series	TKHP85						$\underset{[]}{\longleftrightarrow}$	Xmm ()	t e	Ķ			
p			RMF	58	84	100 - 800	154 - 854	1	85	240 - 400	30	46	
UNIFLEX Advanced series	TKHP90												
R series			RMF	92	117	100 - 800	170 - 870	1	90	250 - 500	100	73	
TKHD series	TKHP85-R / TKH	IP85-R	SD RMF	58	0/ F	100 - 800	154 - 854	1	85	24.0 4.00	60	/0	
			KI'IF	00	84.5	100 - 800	104 - 604	1		240 - 400	00	46	
XL series	TKHP90-R / TKH	HP90-R	SD										
QUANTUM® series			RMF	92	117.5	100 - 800	170 - 870	1	90	250 - 500	100	73	

TKR series

TKA series

## TKHP series | Overview

	Unsuppo	rted arrai	ngement	Glio ar	ding/Rolli rangeme	ng nt	I	nner Dis	tributior	ı	Mo	oveme	nt	Page		3	
	<b>Travel</b> length ≤[m]	<b>v<sub>max ≤[m/s]</sub></b>	<b>a<sub>max</sub></b> ≤[m/s²]	<b>Travel</b> length ≤[m]	<b>v<sub>max ≤[m/s]</sub></b>	<b>a<sub>max</sub></b> ≤[m/s <sup>2</sup> ]	TS0	TS1	TS2	TS3	vertical hanging or standing	lying on the side	rotating arrangement			PR0TUM <sup>®</sup> series	
		(Z			æ						vertic	lying	ar			K series	
	5.8	5	20	200	5	2.5	•	•	-	-	•	-	-	454			
																UNIFLEX Advanced series	
	13.5	8	20	200	5	2.5	•	•	-	-	•	-	-	460		M series	
	_	-	-	1200	5	50	•	•	-	-	•	-	_	466		TKHD series	
																XL series	
		_	-	1500	10	50	•	•	-	-	-	-	-	472		QUANTUM© series	
																TKR series	
Subject to change without notice.																TKA series	
Subjectto																UAT series	

PR0TUM® series

K series

UNIFLEX dvanced series

> M eries

**TKHD** series

XL eries

) puantum® series

TKR eries

TKA series

452

# **TKHP85**

 $\left[ \right]$ 



 <b>Inner height</b> 58 mm





### **Stay variants**



#### Aluminum stay RMF...... page 454

#### Frame stay, solid » Aluminum profile bars for heavy loads and large cable carrier widths. Easy threaded connection.

» Inside/outside: Threaded joint easy to release.



#### TOTALTRAX<sup>®</sup> complete systems

Benefit from the advantages of the TOTALTRAX<sup>®</sup> complete system. A complete delivery from one source – with a warranty certificate on request! Learn more at **tsubaki-kabelschlepp.com/totaltrax** 



#### TRAXLINE® cables for cable carriers

Hi-flex electric cables which were specially developed, optimised and tested for use in cable carriers can be found at tsubaki-kabelschlepp.com/traxline.

## TKHP85 | Installation dim. | Unsupported · Gliding

#### **Unsupported arrangement**



KR	н	Hz	LB	UB
[mm]	[mm]	[mm]	[mm]	[mm]
240	574	704	930	300
300	694	824	1120	360
350	794	924	1270	410
400	894	1024	1430	460

Load diagram for unsupported length depending on the additional load.

Sagging of the cable carrier is technically permitted for extended travel lengths, depending on the specific application.

Intrinsic cable carrier weight  $q_k = 10 \text{ kg/m}$ . For other inner widths, the maximum additional load changes.





#### Gliding arrangement | GO module with chain links optimized for gliding



KR	Н	GO module RKR	LB	UB	q <sub>z max</sub>
[mm]	[mm]	[mm]	[mm]	[mm]	[kg/m]
240	252	500	1780	1050	60
300	252	500	2190	1270	60
350	252	500	2490	1450	40
400	252	500	2820	1630	20

The gliding cable carrier must be guided in a channel. See p. 816.

The GO module mounted on the driver is a defined sequence of adapted KR/RKR link plates.

Glide shoes must be used for gliding applications.

Our technical support can provide help for gliding arrangements: technik@kabelschlepp.de

PROTUM® series

> K series

UNIFLEX dvanced series

> M eries

**TKHD** eries

XL teries

QUANTUM® series

TKR eries

## TKHP85 RMF | Dimensions · Technical data



Push-to-connect glide shoes for long travel lengths The maximum cable diameter strongly depends on the bending radius and the desired cable type. Please contact us.

#### Calculating the cable carrier length

Cable carrier length Lk

 $L_k \approx \frac{L_S}{2} + L_B$ 

Cable carrier length L<sub>k</sub> rounded to pitch t for odd number of chain links

Subject to change without notice.

h <sub>i</sub>	hg	<b>h<sub>Gʻ</sub></b>	Bi	B <sub>k</sub>	B <sub>EF</sub>		KR							<b>q</b> k
[mm]	[mm]	[mm]	[mm]*	[mm]	[mm]		[mm]							[kg/m]
58	84	90.5	100 - 800		B <sub>i</sub> + 54	240 300 350 400							6.02 - 13.12	



QUANTUM® series

TKR series

## TKHP85 RMF | Inner distribution | TS0 · TS1

#### **Divider systems**

As a standard, the divider system is mounted on every 2<sup>nd</sup> chain link on the inside plate.

As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A)**.

For applications with lateral acceleration and free hanging on the side, the dividers can be attached by simple insertion of a fixing profile into the RMF stay, available as an accessory (version B).

\*\*

#### Divider system TSO without height separation

Vers.				a <sub>x Raster</sub> [mm]	
Α	7.5/10.5*	15	11	-	-
В	7.5/10.5*	15	11	5	-

\* With glide shoes

The dividers can be moved within the cross section (version A) or fixed (version B).

#### Divider system TS1 with continuous height separation

Vers.				a <sub>x Raster</sub> [mm]	n <sub>T</sub> min
Α	7.5/10.5*	15	11	-	2
В	7.5/10.5*	15	11	5	2

\* With glide shoes

The dividers can be moved within the cross section (version A) or fixed (version B).



**↓** 

ac

a⊤ a<sub>x</sub>

#### Order example



Please state the designation of the divider system (TS0, TS1,...), the version, and the number of dividers per cross section  $[n_T]$ .

When using divider systems with height separation **(TS1)**, please additionally state the position (e.g. VD1) viewed from the left driver belt. You are welcome to add a sketch to your order.

PROTUM® series

K eries

UNIFLEX dvanced series

> M eries

**KHD** eries

XL eries

) DUANTUM® series

TKR eries

## **TKHP85** | End connectors

#### End connectors - steel short (standard)

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



#### End connectors LF - steel long

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



#### Additional product information online



Installation instructions, etc.: Additional info via your smartphone or check online at tsubaki-kabelschlepp.com/ downloads



Configure your cable carrier here: online-engineer.de

#### 458

K series

UNIFLEX dvanced series

M eries

**TKHD** series

XL eries

) puantum® series

TKR eries

TKA series

# TKHP90



	Inner height
	92 mm
_	





## **Stay variants**



#### Aluminum stay RMF...... page 460

- Frame stay, solid » Aluminum profile bars for heavy loads and large cable carrier widths. Easy threaded connection.
- » Inside/outside: Threaded joint easy to release.



#### TOTALTRAX<sup>®</sup> complete systems

Benefit from the advantages of the TOTALTRAX® complete system. A complete delivery from one source - with a warranty certificate on request! Learn more at tsubaki-kabelschlepp.com/totaltrax



#### TRAXLINE® cables for cable carriers

Hi-flex electric cables which were specially developed, optimised and tested for use in cable carriers can be found at tsubaki-kabelschlepp.com/traxline.

## TKHP90 | Installation dim. | Unsupported · Gliding

#### **Unsupported arrangement**



KR	н	Hz	LB	UB
[mm]	[mm]	[mm]	[mm]	[mm]
250	675.5	860	965	510
310	795.5	980	1154	570
360	895.5	1080	1311	620
500	1175.5	1360	1751	680
	••••••			

Load diagram for unsupported length depending on the additional load.

Sagging of the cable carrier is technically permitted for extended travel lengths, depending on the specific application.

Intrinsic cable carrier weight  $q_k = 10 \text{ kg/m}$ . For other inner widths, the maximum additional load changes.





#### Gliding arrangement | GO module with chain links optimized for gliding



KR [mm]	H [mm]	GO module RKR [mm]	L <sub>B</sub> [mm]	U <sub>B</sub> [mm]	<b>q<sub>z max [kg/m]</sub></b>
250	351	600	1840	1030	100
310	351	600	2200	1230	100
360	351	600	2520	1400	90
500	351	600	3410	1880	75

The gliding cable carrier must be guided in a channel. See p. 816.

The GO module mounted on the driver is a defined sequence of adapted KR/RKR link plates.

Glide shoes must be used for gliding applications.

Our technical support can provide help for gliding arrangements: technik@kabelschlepp.de

PR0TUM® series

K series

UNIFLEX dvanced series

> M eries

**TKHD** eries

XL teries

QUANTUM® series

TKR eries

## TKHP90 RMF | Dimensions · Technical data



]	h <sub>G</sub> [mm]	<b>h<sub>Gʻ</sub></b> [mm]		Bi [mm]*	<b>B<sub>k</sub></b> [mm]	<b>KR</b> [mm]							<b>q<sub>k</sub></b> [kg/m]	
	117	127.5	-	100 - 800	B <sub>i</sub> + 70	250		310		360		500	10.37 - 17.47	
	sections													



TKR

TKA series **h**i [mm] 92 \* in 1mm w

## TKHP90 RMF | Inner distribution | TS0 · TS1

#### **Divider systems**

As a standard, the divider system is mounted on every 2<sup>nd</sup> chain link on the inside plate.

As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A)**.

For applications with lateral acceleration and free hanging on the side, the dividers can be attached by simple insertion of a fixing profile into the RMF stay, available as an accessory (version B).

#### Divider system TSO without height separation

Vers.				<b>a<sub>x grid</sub></b> [mm]	n <sub>T</sub> min
Α	7.5	15	11	-	-
В	10	15	11	5	-



The dividers can be moved within the cross section (version A) or fixed (version B).

#### Divider system TS1 with continuous height separation

Vers.				<b>a<sub>x grid</sub></b> [mm]	n <sub>T</sub> min
Α	7.5	15	11	-	-
В	10	15	11	5	-

The dividers can be moved within the cross section (version A) or fixed (version B).

TS1

Divider system

Version



Please state the designation of the divider system **(TSO, TS1,...)**, the version, and the number of dividers per cross section [n<sub>T</sub>].

When using divider systems with height separation **(TS1)**, please additionally state the position (e.g. VD1) viewed from the left driver belt. You are welcome to add a sketch to your order.

PR0TUM® series

K eries

UNIFLEX dvanced series

> M eries

TKHD

XL eries

)UANTUM® series

TKR eries

TKA eries

Order example

## **TKHP90** | End connectors

#### End connectors - steel short (standard)

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



#### End connectors LF - steel long

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





Installation instructions, etc.: Additional info via your smartphone or check online at tsubaki-kabelschlepp.com/ downloads



Configure your cable carrier here: online-engineer.de

UAT

## TKHP85-R TKHP85-RSD High-Performance cable carrier with integrated roller









Stainless steel ball bearings with application-specific lubrication and plastic rollers ensure quiet and smooth operation. Integrated, low-wear damping systems minimize the mechanical load for the entire system.

The cable carrier type TKHP85-RSD (Shock Damping) uses roller damping. The rollers of the RSD variant are damped when they pass over each other, which reduces both the mechanical load and the noise pollution when they roll over by up to 50%.

The use of roller damping is not always necessary. An undamped cable carrier system can also be used for low-speed applications.

- » TKHP85-R with rollers
- » TKHP85-RSD with rollers and shock absorber
- » suitable for all long travel applications
- » quiet and low-vibration operation
- » space-saving and cost-optimized
- » long service life low maintenance
- » easy access to rollers

- » minimized loads on cable carrier and cables
- » low push and pull forces
- » high travel speed and acceleration
- » large additional loads possible
- » retrofit of existing systems
- $\,$  » exchange other makes up to 100 %
- » integration of existing guide channels

#### Stay variants



#### Aluminum stay RMF...... page 466

#### Frame stay, solid

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

PR0TUM® series

K

UNIFLEX dvanced series

> M eries

**TKHD** series

XL eries

DUANTUM® series

TKR eries

## TKHP85-R / -RSD | Installation dim. | Rolling

#### Rolling arrangement | Cable carrier with integrated roller PR0TUM® series KR Н GO module RKR LB UB q<sub>z max</sub> [mm] [mm] [mm] [mm] [mm] [kg/m] 60 240 252 500 1780 1050 RKR 300 252 500 2190 1270 60 40 1450 350 252 500 2490 400 252 500 2820 1630 20 ŔR K series Fixed point Driver Speed The rolling cable carrier must be guided in a channel. Acceleration mmn up to 50 m/s<sup>2</sup> up to 5 m/s See p. 816. The GO module mounted on the driver is a defined UNIFLEX Advanced series sequence of 4 adapted KR/RKR link plates. Travel length Additional load up to 1200 m up to 60 kg/m Our technical support can provide help for rolling arrangements: technik@kabelschlepp.de M eries With bump absorbing Without bump absorbing **TKHD** series XL series QUANTUM® series TKR series 0 D TKA series 0

UAT teries

## TKHP85-R / -RSD RMF | Dimensions · Technical data





## TKHP85-R / -RSD RMF | Inner distribution | TSO · TS1

a⊤ a<sub>x</sub>

#### **Divider systems**

As a standard, the divider system is mounted on every 2<sup>nd</sup> chain link on the inside plate.

As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A)**.

For applications with lateral acceleration and free hanging on the side, the dividers can be attached by simple insertion of a fixing profile into the RMF stay, available as an accessory (version B).

----

#### Divider system TSO without height separation

Vers.				<b>a<sub>x grid</sub></b> [mm]	<b>η</b> min
Α	7.5/10.5*	15	11	-	-
В	7.5/10.5*	15	11	5	-

\* With glide shoes

The dividers can be moved within the cross section (version A) or fixed (version B).

#### Divider system TS1 with continuous height separation

Vers.	<b>a<sub>T min</sub></b> [mm]			<b>a<sub>x grid</sub></b> [mm]	n <sub>T</sub> min
Α	7.5/10.5*	15	11	-	2
В	7.5/10.5*	15	11	5	2

\* With glide shoes

The dividers can be moved within the cross section (version A) or fixed (version B).



**↓** 

ac

#### Order example



Please state the designation of the divider system **(TSO, TS1,...)**, the version, and the number of dividers per cross section [n<sub>T</sub>].

When using divider systems with height separation **(TS1)**, please additionally state the position (e.g. VD1) viewed from the left driver belt. You are welcome to add a sketch to your order.

PROTUM® series

K eries

UNIFLEX dvanced series

> M eries

**KHD** eries

XL eries

) DUANTUM® series

TKR eries

## TKHP85-R / -RSD | End connectors

End connectors - steel short (standard)

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



## TKHP85-R / -RSD | End connectors

#### End connectors LF - steel long

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





Installation instructions, etc.: Additional info via your smartphone or check online at tsubaki-kabelschlepp.com/ downloads



Configure your cable carrier here: online-engineer.de

PROTUM® series

## **TKHP90-R TKHP90-RSD** High-Performance cable carrier with integrated roller









Stainless steel ball bearings with application-specific lubrication and plastic rollers ensure quiet and smooth operation. Integrated, low-wear damping systems minimize the mechanical load for the entire system.

The cable carrier type TKHP90-RSD (Shock Damping) uses roller damping. The rollers of the RSD variant are damped when they pass over each other, which reduces both the mechanical load and the noise pollution when they roll over by up to 50 %.

The use of roller damping is not always necessary. An undamped cable carrier system can also be used for low-speed applications.

- » TKHP90-R with rollers
- » TKHP90-RSD with rollers and shock absorber
- » suitable for all long travel applications
- » quiet and low-vibration operation
- » space-saving and cost-optimized
- » long service life low maintenance
- » easy access to rollers

- » minimized loads on cable carrier and cables
- » low push and pull forces
- » high travel speed and acceleration
- » large additional loads possible
- » retrofit of existing systems
- » exchange other makes up to 100 %
- » integration of existing guide channels

### Stay variants



#### Aluminum stay RMF...... page 472

#### Frame stay, solid

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

PR0TUM® series

K

UNIFLEX dvanced series

> M eries

**TKHD** series

XL eries

DUANTUM® series

TKR eries

## TKHP90-R / -RSD | Installation dim. | Rolling

#### PR0TUM® series KR Н GO module RKR LB UB q<sub>z max</sub> [mm] [mm] [mm] [mm] [mm] [kg/m] 100 250 351 600 1840 1030 RKR 310 351 600 2200 1230 100 90 1400 360 600 2520 500 351 600 3410 1880 75 ŔR K series Fixed point Driver Speed The rolling cable carrier must be guided in a channel. Acceleration mmn up to 50 m/s<sup>2</sup> up to 10 m/s See p. 816. The GO module mounted on the driver is a defined UNIFLEX Advanced series sequence of 6 adapted KR/RKR link plates. Travel length Additional load up to 1500 m up to 100 ka/m Our technical support can provide help for rolling arrangements: technik@kabelschlepp.de M eries With bump absorbing Without bump absorbing **TKHD** series XL series QUANTUM® series TKR series 0 D TKA series 0 UAT teries

## TKHP90-R / -RSD RMF | Dimensions · Technical data



RMF

Stay variant

VS

Stay arrangement

UAT

**Order example** 

TKHP90-R

Туре

## TKHP90-R / -RSD RMF | Inner distribution | TSO · TS1

#### **Divider systems**

As a standard, the divider system is mounted on every 2<sup>nd</sup> chain link on the inside plate.

As a standard, dividers and the complete divider system (dividers with height separations) can be moved in the cross section **(version A)**.

For applications with lateral acceleration and free hanging on the side, the dividers can be attached by simple insertion of a fixing profile into the RMF stay, available as an accessory (version B).

#### Divider system TSO without height separation

Vers.				<b>a<sub>x grid</sub></b> [mm]	<b>η</b> min
Α	7.5	15	11	-	-
В	10	15	11	5	-



The dividers can be moved within the cross section (version A) or fixed (version B).

#### Divider system TS1 with continuous height separation

Vers.				<b>a<sub>x grid</sub></b> [mm]	n <sub>T</sub> min
Α	7.5	15	11	-	-
В	10	15	11	5	-

The dividers can be moved within the cross section (version A) or fixed (version B).

TS1

Divider system

Version



Please state the designation of the divider system **(TSO, TS1,...)**, the version, and the number of dividers per cross section [n<sub>T</sub>].

When using divider systems with height separation **(TS1)**, please additionally state the position (e.g. VD1) viewed from the left driver belt. You are welcome to add a sketch to your order.

PR0TUM® series

K eries

UNIFLEX dvanced series

> M eries

TKHD

XL eries

)UANTUM® series

TKR eries

TKA eries

Order example

## TKHP90-R / -RSD | End connectors

End connectors - steel short (standard)

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



## TKHP90-R / -RSD | End connectors

#### End connectors LF – steel long

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





Installation instructions, etc.: Additional info via your smartphone or check online at tsubaki-kabelschlepp.com/ downloads



Configure your cable carrier here: online-engineer.de

PROTUM® series