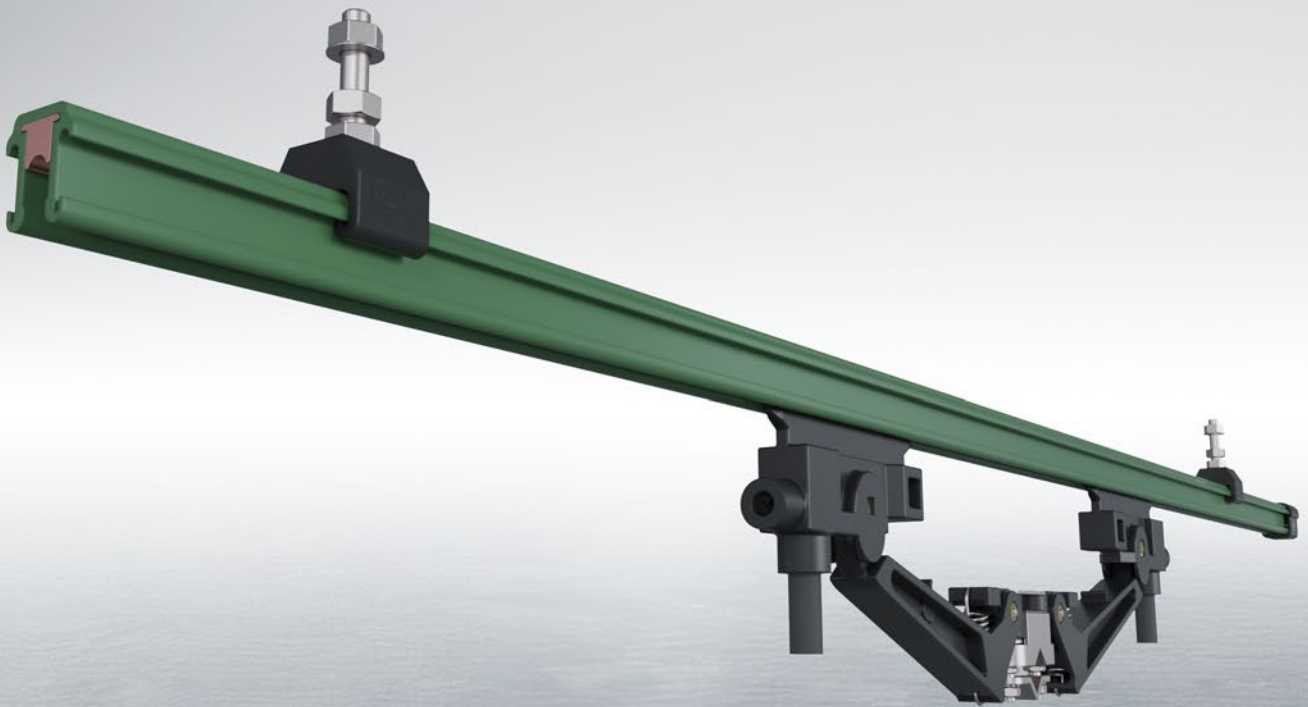


U20 | U30

INSULATED CONDUCTOR SYSTEM



GENERAL INFORMATION

U20

Cranes, transport systems with multiple lifting and conveying units, amusement rides, curves, switches, turntables, sorters, control lines, special designs for pickling plants, galvanizing facilities and electroplating systems etc.

For continuous current up to 210 A and operating temperatures from -30 °C to +85 °C

Pages 6– 23

U30

Overhead cranes (crane and trolley rides), monorails with higher capacities, leisure facilities, rides, tower elevators, etc.

For continuous current up to 210 A and operating temperatures from -30 °C to +85 °C

Pages 24– 37

Arrangement examples

Page 38

Questionnaire

Page 39

Contents U20	U20	U30
General	4–5	4–5
Technical data	6	24
Fixed connector	7	25
Feeds	8	26
Expansion sections	9	27
End caps	10	28
Rail holder	10	29
Fastening and installation materials	11	30
Locating clamp	12	25
Insulated hangers	12	28
Transfer guides.....	-	30
Isolating sections	13	31
Current collectors.....	14–22	32–37
Carbon brushes.....	19	34
Springs.....	19	34
Questionnaire.....	39	39

GENERAL INFORMATION

The insulated conductor systems U20 and U30 are designed according to VDE 0100, meet today's safety requirements for conductor systems and are protected against accidental contact according to DIN VDE 0470, Part 1 (EN 60 529) (protection class IP 23 in a hanging arrangement, IP 21 in a lateral arrangement). Naturally, the current collectors are only protected against contact if the carbon brushes are fully within the conductor rails.

For conductor systems located at arm's length, where under normal operation the current collectors leave the conductor rails, contact protection must be provided on site, e.g. by means of barriers or by switching off. This, however, only applies to voltages above 25 volts AC or 60 volts DC.



Figure 1: VDE finger

The insulating profile, into which the various conductor rail profiles are drawn, offers good insulation and maximum safety. Conductor systems can be assembled with any number of poles.

The standard delivery length is 6 m. Shorter lengths can be supplied.

The ground conductor is marked with a continuous yellow stripe on the insulating profile. The non-exchangeability of the current collectors between ground conductors and phases is ensured.

Approvals

U 20 und U 30: UL approval. Please ask when ordering.

Hangers

Screw or clamp brackets can be used to anchor the cables on the track profile. The maximum support distance between the rail holders is for U 20: see page 6, for U 30: see page 24.

Insulators

The insulated conductor system can be installed with insulators. This extends the leakage distance to prevent electrical flashovers. For systems with difficult operating and environmental conditions (high humidity, electroplating, chemical plants, etc.), installation with insulators is required.

Connector

The rail sections are connected to one another by means of bolted joints. Every connection point is protected against contact with a cover cap. With greater temperature fluctuations and lengths of more than 100 m, expansion sections must be provided (see assembly instructions).

Feeds

The feed terminal is mounted between rail sections instead of a joint. Single-core cables are to be used as supply cables.

End caps

End caps form the contact-protected end of the conductor rails.

Funnels and transfer guides

Transfer guides and funnels are available for use on dead sections, turntables and switches.

Isolating sections

Isolating sections are electrical interruptions of the conductors. Operational overrunning of the current collectors with the aim of switching the voltage off or on is only permissible at low energies (control currents). We supply insulation and air isolating sections for control purposes, feed tracks, repair sections, etc.

Curves

The insulated conductor rails can be used in horizontal and vertical curves. Depending on the type and radius, the rails are bent on site or in our factory.

Current collector

Depending on the application, single or double current collectors are used. The specified continuous currents apply to current collectors in stationary operation on conductor rail profiles with copper contact surfaces. In the case of AE conductor rail, current collectors from current consumers that operate continuously under load in one place or at a very low traveling speed of 10 m/min. may only be loaded with approx. 50% of their continuous current. The length of the current collector connection cable may not exceed 3 m if the downstream overcurrent protection device is not designed to handle the capacity of the connection cable. See also DIN VDE 0100, Part 430 and DIN EN 60204. (Note: the above often occurs when there are multiple current collectors per system.) The cross section of the supplied connecting cables (H 07 RN - F) is designed for the stated nominal currents. The reduction factors according to DIN VDE 0298 must be observed for the various installation procedures.

According to DIN EN 60204-1 and DIN EN 60204-32, the continuity of the protective conductor system via collector contacts must be ensured by applying suitable measures. A simple, suitable measure is to double the PE current collector.

Chemical resistance for both versions:

Insulation profiles in the standard version (color green) and in the heat-resistant version (color gray) are resistant to mineral oil, grease, 25% caustic soda, 50% caustic soda, concentrated hydrochloric acid; sulfuric acid up to 50%

Safety instructions

It must be ensured that the safety distances between fixed and moving parts of the system (0.5 m) are not exceeded due to the installation of conductor rails and current collectors on site in order to prevent crushing hazards!

PLEASE NOTE

If the conductor systems are to be used in galvanizing plants, pickling plants and pressing plants with aggressive environmental influences or with low voltages, please contact us with detailed information, in particular in relation to the environmental influences.

To enable us to prepare offers and orders, we need drawings if the conductor system is to be delivered with curves or rail separation, or if it is intended for dead sections, turntables or switches.

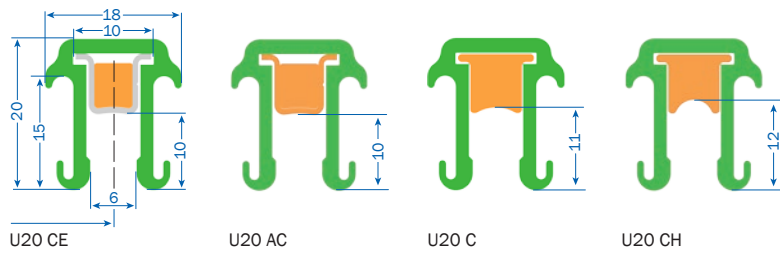
Insulation profile values (electrical)

Type	Dielectric strength according to DIN 53481	Special Volume resistivity according to IEC 60093	Surface resistance according to IEC 60093	Comparative tracking index according to IEC 60112
Standard version, green	30– 40 kV/mm	5×10^{15} ohm/cm	10^{13} ohm	CTI > 600– 2.7
Heat-resistant version, gray	45 kV/mm	5×10^{17} ohm/cm	10^{15} ohm	CTI > 600– 2.7

Insulation profile values (mechanical)

Type	Bending strength according to ISO 178	Tensile strength according to ISO 527	Ambient temperature	Flammability DIN 4102 Part 1
Standard version, green	75 N/mm ² ±10%	50 N/mm ² ±10%	-30 °C to +55 °C	Class B 1 Flame-retardant, self-extinguishing
Heat-resistant version, gray	95 N/mm ² ±10%	50 N/mm ² ±10%	-30 °C to +85 °C	Class B 1 Flame-retardant, self-extinguishing

TECHNICAL SPECIFICATIONS: U20



Rail spacing

For individual installation: min. 50 mm
For compact installation: 23⁽¹⁾–26⁽²⁾ mm

Curving the conductor rail

factory setting from R = 400 mm
On site from R = 4000 mm

Model explanation

U = insulated conductor rails
20 = Housing size
50 = conductor cross section (mm²)
CE = copper core with stainless steel sheath
AC = light metal core with copper sheath
C = copper conductor
CH = copper conductor for lateral arrangement

Delivery length

6 m standard length,
Shorter lengths are possible

Max. support distance

For straight installation and
inner or outer curves: 1000 mm
In horizontal bends RH < 5 m: 500 mm
In horizontal bends RH > 5 m: 1000 mm
With lateral expansion: 500 mm

Conductor rail values

Type	Conductor cross section mm ²			Creepage distance of insulation mm	Max. nominal voltage V (UL)	max. continuous current A at 35 °C	Resistance ⁽³⁾ ohm/1000 m	Impedance ⁽³⁾ ohm/1000 m
	Cu	Al	Stainless steel					
U20/50CE	30		18	45	1000	80	0.587	0.612
U20/50AC	18	30		45	1000	120	0.483	0.600
U20/50C	50			45	1000 ⁽⁶⁰⁰⁾	210	0.376	0.416
U20/50CH	50			45	1000 ⁽⁶⁰⁰⁾	210	0.376	0.416

Versions

Version	Type	Weight kg/m	Order No. ⁽⁴⁾
Phase (Standard), -30 °C to +55 °C, green	U20/50CE-...PH-BA	0.500	12701 •
	U20/50AC-...PH-BA	0.400	12702 •
	U20/50C-...PH-BA	0.580	12703 •
	U20/50CH-...PH-BA	0.560	12704 •
PE (Standard), -30 °C to +55 °C, green	U20/50CE-...PE-AA	0.500	12711 •
	U20/50AC-...PE-AA	0.400	12712 •
	U20/50C-...PE-AA	0.580	12713 •
	U20/50CH-...PE-AA	0.560	12714 •
Phase (Heat-resistant), -30 °C to +85 °C, green	U20/50CE-...PH-DB	0.500	12706 •
	U20/50AC-...PH-DB	0.400	12707 •
	U20/50C-...PH-DB	0.580	12708 •
	U20/50CH-...PH-DB	0.560	12709 •
PE (Heat-resistant), -30 °C to +85 °C, green	U20/50CE-...PE-CB	0.500	12716 •
	U20/50AC-...PE-CB	0.400	12717 •
	U20/50C-...PE-CB	0.580	12718 •
	U20/50CH-...PE-CB	0.560	12719 •

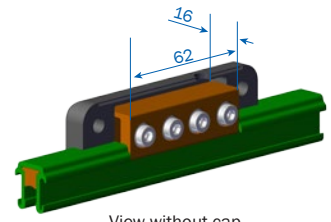
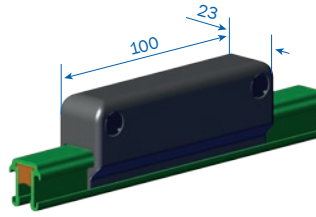
(1) 23 mm only if UV, all UEs, UV and K(D)ST in staggered arrangement

(2) 24 mm to 26 mm only if UE, UEN-A, or UES and UST are in staggered arrangement

(3) At frequency of 50 Hz and 20 °C

(4) The last digit of the order number indicates the individual length in meters. Please add 1, 2, ...6 to the order No. Intermediate values should be rounded up.

ACCESSORIES FOR U20



View without cap

Fixed connector

Type	Weight kg	Order No.
VM-UV20/50-B	0,161	120180
VM-UV20/50-K4-B ⁽¹⁾	0,161	126504

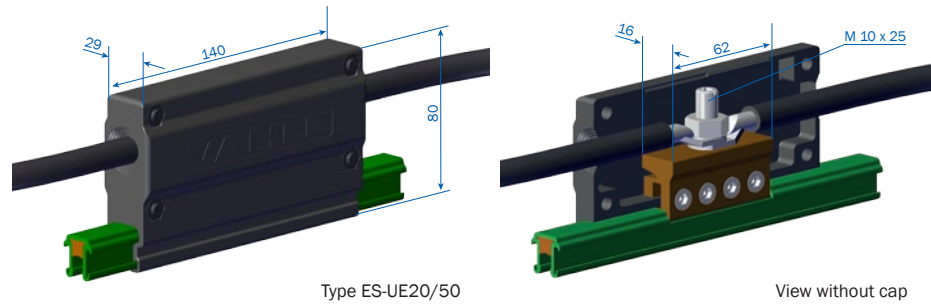
(1) Stainless steel version

ACCESSORIES FOR U20

Feeds UE (up to 210 A)

Can also be used as a fixed connector.

Connection option: 2 cables up to 50 mm²



Type ES-UE20/50

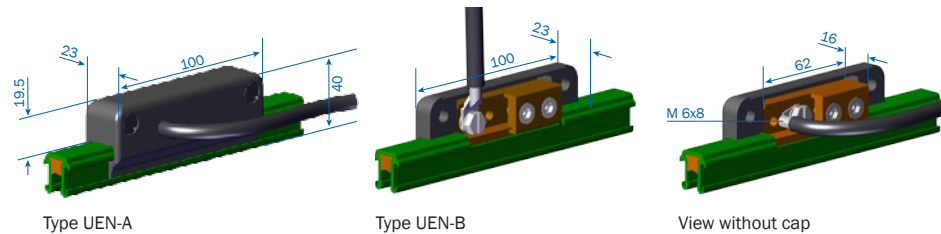
View without cap

Type	Weight kg	Order No.
ES-UE20/50-K4-L ⁽¹⁾	0.338	126522
ES-UE20/50-K4-M ⁽¹⁾	0.338	121459
UE-20/50-35-K4-L ⁽¹⁾⁽²⁾	0.293	121590
UE-20/50-35-K4-M ⁽¹⁾⁽²⁾	0.293	121320

Feeds UEN (up to 54 A)

Not to be used as a fixed connector.

Connection option: 1 cable up to 6 mm²



Type UEN-A

Type UEN-B

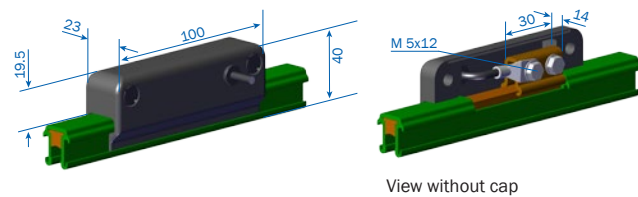
View without cap

Type	Weight kg	Order No.
ES-UEN20/50-K-A-L ⁽¹⁾	0.151	126526
ES-UEN20/50-K-A-M ⁽¹⁾	0.151	121061
ES-UEN20/50-K4-B ⁽¹⁾	0.151	120116
ES-UEN20/50-K4-B-M ⁽¹⁾	0.151	121165

Feeds UES (up to 40 A)

Not to be used as a fixed connector.

Connection option: 1 cables up to 4 mm²



View without cap

Type	Weight kg	Order No.
ES-UES20/50-K4-L ⁽¹⁾	0.071	126530

Contact grease

for joints and feeds

Type	Description	Weight kg	Order No.
MZ-KF-A-100	100 ml for approx. 200 connections	0.112	121502

(1) Stainless steel version

(2) Special design with more compact construction (height: 47 mm, width: 23 mm)

ACCESSORIES FOR U20

Expansion sections

consisting of expansion connectors and connectors mounted on a 1 m long rail section. Used for system lengths of 100 m or more.

UDV 50 C/UDV 50 CH	
up to Δd	max. L/U20
20 °C	88 m
30 °C	58 m
40 °C	44 m
50 °C	35 m

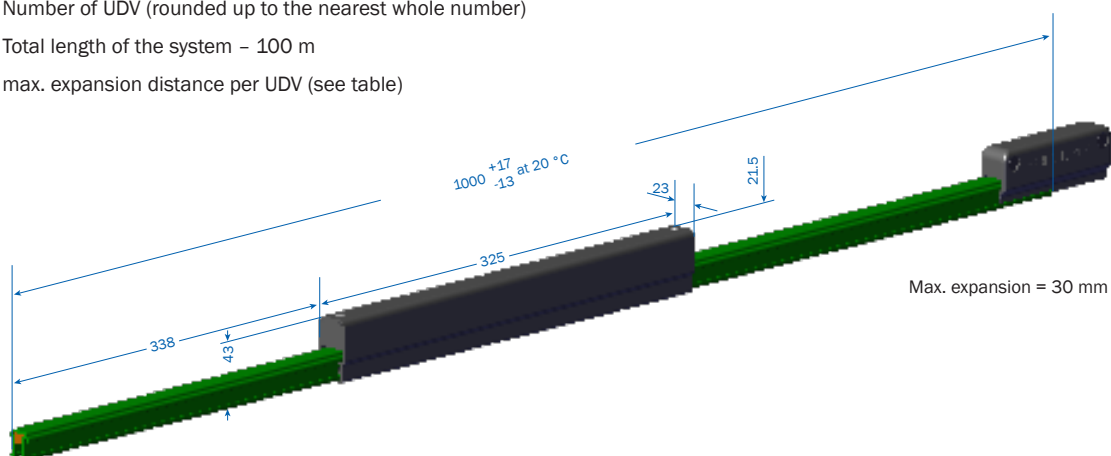
Determining the number of expansion sections

$$n = \frac{L1}{L}$$

n = Number of UDV (rounded up to the nearest whole number)

L1 = Total length of the system - 100 m

L = max. expansion distance per UDV (see table)



Versions

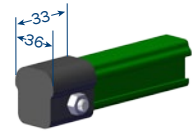
Version	Type	Weight kg	Order No.	
			Phase	PE
Standard version, -30 °C to +55 °C, green	DT-UDV20/50CE-K4-1000PH-BA ⁽¹⁾	1.205	126514	-
	DT-UDV20/50CE-K4-1000PE-AA ⁽¹⁾	1.205	-	126515
	DT-UDV20/50 AC-K4-1000PH-BA ⁽¹⁾	0.966	126516	-
	DT-UDV20/50 AC-K4-1000PE-AA ⁽¹⁾	0.966	-	126517
	DT-UDV20/50C-K4-1000PH-BA ⁽¹⁾	1.236	126518	-
	DT-UDV20/50C-K4-1000PE-AA ⁽¹⁾	1.236	-	126519
	DT-UDV20/50CH-K4-1000PH-BA ⁽¹⁾	1.198	126520	-
	DT-UDV20/50CH-K4-1000PE-AA ⁽¹⁾	1.198	-	126521
Heat resistant version, -30 °C to +85 °C, green	DT-UDV20/50CE-K4-1000PH-DB ⁽¹⁾	1.121	126674	-
	DT-UDV20/50CE-K4-1000PE-CB ⁽¹⁾	1.205	-	126675
	DT-UDV20/50 AC-K4-1000PH-DB ⁽¹⁾	0.966	126676	-
	DT-UDV20/50 AC-K4-1000PE-CB ⁽¹⁾	0.966	-	126677
	DT-UDV20/50C-K4-1000PH-DB ⁽¹⁾	1.236	126678	-
	DT-UDV20/50C-K4-1000PE-CB ⁽¹⁾	1.236	-	126679
	DT-UDV20/50CH-K4-1000PH-DB ⁽¹⁾	1.198	126680	-
	DT-UDV20/50CH-K4-1000PE-CB ⁽¹⁾	1.192	-	126681

(1) Stainless steel version

ACCESSORIES FOR U20

End cap

including tension pin



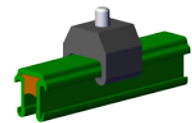
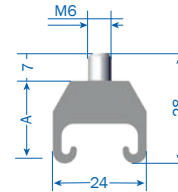
Type	Weight kg	Order No.
EK-UK20-L	0.008	120120
EK-UK20-M	0.008	120987

RAIL HOLDER FOR INSULATORS

Rail holder UAK

Supplied with M 6 x 12 screw

Type	A
U20/50 CH	20
U20/50 C	21
U20/50 AC	22
U20/50 CE	

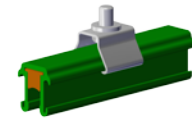
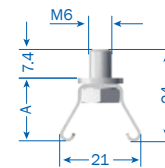


Type	Weight kg	Order No.
AH-UAK20	0.011	126546
AH-UAK20-K4 ⁽¹⁾	0.011	126548

Rail holder UAS

Supplied with M 6 x 10 screw and washer In case of chemical influences

Type	A
U20/50 CH	17
U20/50 C	18
U20/50 AC	19
U20/50 CE	

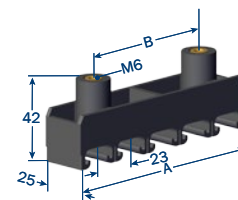


Type	Weight kg	Order No.
AH-UAS20-K4 ⁽¹⁾	0.015	126550
AH-UAS20-K4-H ⁽¹⁾⁽²⁾	0.017	121091

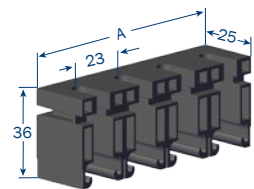
COMPACT HOLDER FOR SCREWING ON AND FOR BRACKET PROFILE

Kompakthalter

Phase spacing 23 mm AH-K-U.. brackets can be screwed on or inserted into Halfene iron. AH-KA20... brackets can only be screwed on.



AH-KA20/5



AH-K-U-20/4-4

Type	A _{mm}	B _{mm}	Number of pins	Weight kg	Order No.
AH-K-U-20/2-2	46		2	0.022	10028735
AH-K-U-20/3-3	69		3	0.033	10028736
AH-K-U-20/4-4	92		4	0.044	10028737
AH-KA20/5	118	75	5	0.041	126613
AH-KA 20/5-PP ⁽²⁾	118	75	5	0.041	120866

(1) Stainless steel version

(2) For aggressive media

FASTENING AND INSTALLATION MATERIALS



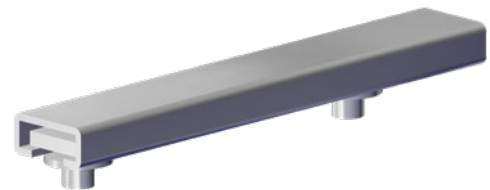
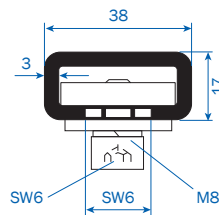
Fixing material for compact holder

Type	For type	Weight kg	Order No.
BE 6	AH-KA20/...	0.015	120406
BE 6 K 4 ⁽¹⁾	AH-KA20/...	0.015	120778
AH-BE6-K-U-20	AH-K-KU-20/...	0.012	10038650
AH-BE6-K-U-20-K4	AH-K-KU-20/...	0.012	10038651

Bracket profile 38/17

Including locating elements

Other lengths available on request



Type	Length mm	max. number of pins	Weight kg	Order No.
HK-HU230-D	230	5	0.398	120833
HK-HU360-D	360	10	0.776	120834
HK-HU490-D	490	15	1.011	120835

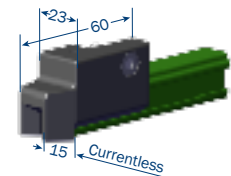
Transfer guides

Transfer guides are used at rail breaks, switches, and turntables.

max. lateral/vertical offset ± 2 mm

The maximum air gap between the transfer guides is 8 mm

Additional conductor rails must be provided and ordered separately



Type	for conductor rails	Weight kg	Order No.
US-US20/50CH-K4	U 20/50 CH	0.044	120849
US-US20/50C-K4	U 20/50 C	0.044	120848
US-US20/50A-K4	U 20/50 AC U 20/50 CE	0.044	120847

(1) Stainless steel version

ACCESSORIES FOR U20

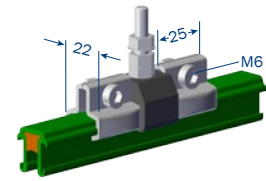


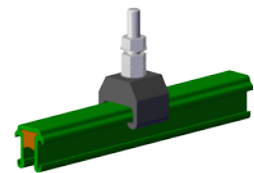
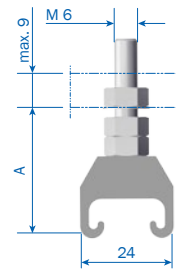
Illustration shows an insulated hanger with 2 locating clamps (fix point)

Locating clamp

Type	Weight kg	Order No.
FP-USK20-K4 ⁽¹⁾	0.026	120140

Insulated bracket⁽²⁾

Typ	A
U20/50 CH	33
U20/50 C	34
U20/50 AC	35
U20/50 CE	



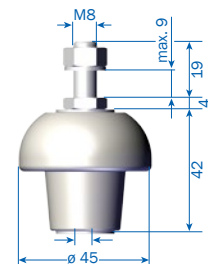
Type	Weight kg	Order No.
AH-UAM20	0.020	126540
AH-UAM20-K4 ⁽¹⁾	0.030	126542

Insulators⁽²⁾

for aggressive media

Permissible breaking force = 1000 N

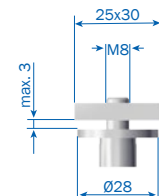
Leakage distance = 62 mm



Type	Weight kg	Order No.
IS-UIK42-M8x19-M6-K4	0.103	120883

Locating elements

for compact holder



Type	Weight kg	Order No.
AH-SE8	0.062	170677
AH-SE8-K4 ⁽¹⁾	0.051	170955

(1) Stainless steel version

(2) When fastening in slotted holes, use washers on both sides in accordance with DIN 9021.

ACCESSORIES FOR U20

Insulated isolating sections

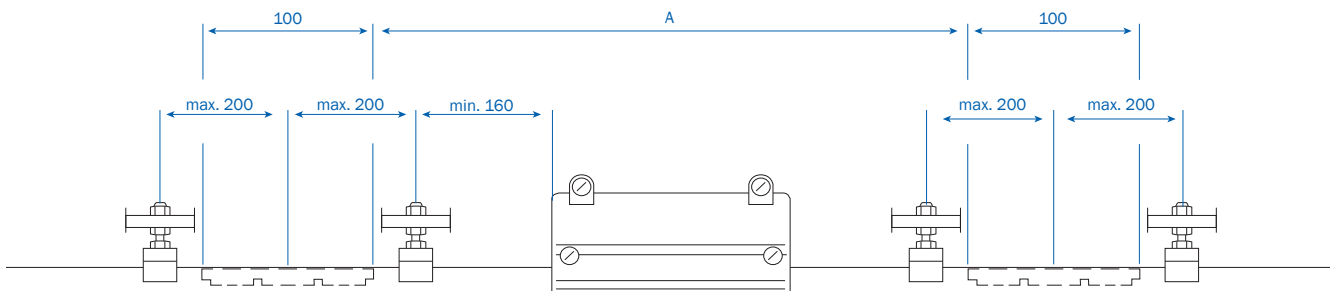
Type M: Factory installation according to installation plan

Type L: Loose delivery as single item with 2 tension pins 3 x 10

Insulation distance: 100 mm

A hanger must be provided on both sides at a maximum distance of 200 mm from the center of the air isolation section. Maximum distance of 200 mm from the center of the separation point.

Conductor rails, hangers, and feeds must be ordered separately.



Two insulated isolating sections are used as protection against voltage bridging and to separate repair, control, and feed sections. For distance "A", the number and type of current collectors and the stopping distance of current consumers must be taken into account.

Type	for conductor rails	Weight kg	Order No.
ST-IT/U20/50CH-M	U 20/50 CH	0.006	120950
ST-IT/U20/50CH-L	U 20/50 CH	0.006	120010
ST-IT/U20/50C-M	U 20/50 C	0.005	120940
ST-IT/U20/50C-L	U 20/50 C	0.005	120009
ST-IT/U20/50A-M	U 20/50 AC U 20/50 CE	0.006	126536
ST-IT/U20/50A-L	U 20/50 AC U 20/50 CE	0.006	120008

Transfer funnel

Funnels (systems) are available on request.

CURRENT COLLECTORS FOR U20⁽¹⁾

At least 2 carbon brushes should be used for emergency stop, data transmission, FU drives, and low voltage.

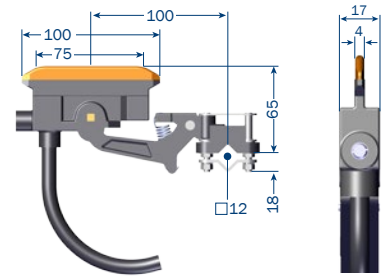
Current collector KST

With 2 m connection cable

Lift and Swivel: ± 20 mm

Contact pressure: approx. 9 N

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KST15PH-2000	15	2.5	4.4	0.263	150891	-
SA-KST15PE-2000	15	2.5	4.4	0.258	-	150892
SA-KST40PH-2000	40	6.0	11.0	0.447	152840	-
SA-KST40PE-2000	40	6.0	11.0	0.338	-	152850
SA-KST60PH-2000	60	10.0	12.5	0.593	153675	-
SA-KST60PE-2000	60	10.0	12.5	0.442	-	153676

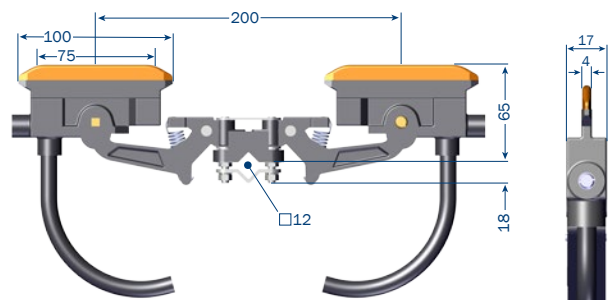
Double current collector KDST

With 2 x 2 m connection cable

Lift and Swivel: ± 20 mm

Contact pressure: Approx. 9 N per carbon brush

Installation height: 65 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KDST30PH-2000	30	2.5	4.4	0.470	150897	-
SA-KDST30PE-2000	30	2.5	4.4	0.462	-	150898
SA-KDST80PH-2000	80	6.0	11.0	0.838	152960	-
SA-KDST80PE-2000	80	6.0	11.0	0.622	-	152970
SA-KDST120PH-2000	120	10.0	12.5	1.130	153679	-
SA-KDST120PE-2000	120	10.0	12.5	0.830	-	153680

(1) In the case of AE conductor rail, current collectors from current consumers that operate continuously under load in one place or at a very low traveling speed of $v = 10$ m/min. may only be loaded with approx. 50% of their continuous current.

CURRENT COLLECTORS FOR U20⁽¹⁾

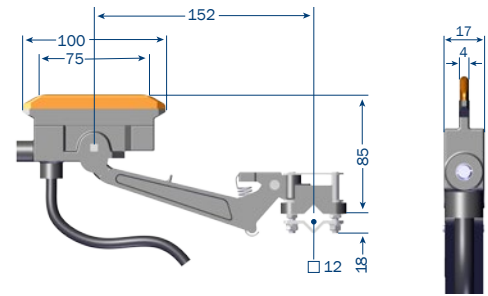
Current collector KSTL

With 2 m connection cable

Lift and Swivel: ± 40 mm

Contact pressure: approx. 9 N

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KSTL15PH-2000	15	2.5	4.4	0.261	150893	-
SA-KSTL15PE-2000	15	2.5	4.4	0.273	-	150894
SA-KSTL40PH-2000	40	6.0	11.0	0.445	152860	-
SA-KSTL40PE-2000	40	6.0	11.0	0.353	-	152870
SA-KSTL60PH-2000	60	10.0	12.5	0.591	153677	-
SA-KSTL60PE-2000	60	10.0	12.5	0.457	-	153678

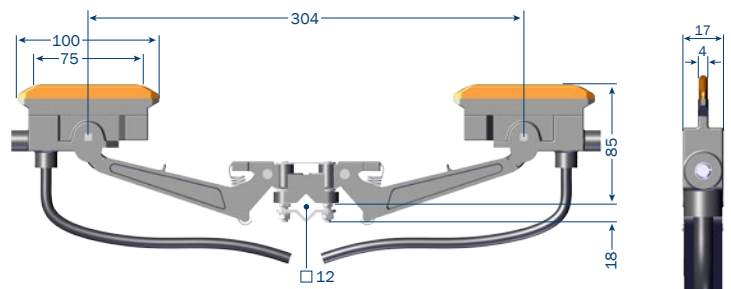
Double current collector KDSTL

With 2 x 2 m connection cable

Lift and Swivel: ± 40 mm

Contact pressure: Approx. 9 N per carbon brush

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KDSTL30PH-2000	30	2.5	4.4	0.496	150899	-
SA-KDSTL30PE-2000	30	2.5	4.4	0.496	-	150901
SA-KDSTL80PH-2000	80	6.0	11.0	0.864	152980	-
SA-KDSTL80PE-2000	80	6.0	11.0	0.656	-	152990
SA-KDSTL120PH-2000	120	10.0	12.5	1.156	153681	-
SA-KDSTL120PE-2000	120	10.0	12.5	0.864	-	153682

(1) In the case of AE conductor rail, current collectors from current consumers that operate continuously under load in one place or at a very low traveling speed of $v = 10$ m/min. may only be loaded with approx. 50% of their continuous current.

CURRENT COLLECTORS FOR U20⁽¹⁾

Current collector KSTLU

Use for funnel EMK 20

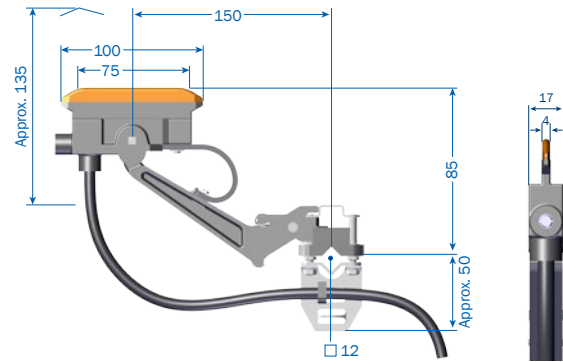
With 2 m connection cable

Lift: ± 20 mm

Swivel: ± 40 mm

Contact pressure: approx. 9 N

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KSTLU15PH-2000	15	2.5	4.4	0.298	150895	-
SA-KSTLU15PE-2000	15	2.5	4.4	0.300	-	150896
SA-KSTLU40PH-2000	40	6.0	11.0	0.396	153791	-
SA-KSTLU40PE-2000	40	6.0	11.0	0.382	-	153792
SA-KSTLU60PH-2000	60	10.0	12.5	0.522	153793	-
SA-KSTLU60PE-2000	60	10.0	12.5	0.486	-	153794

Double current collector KDSTLU

Use for funnel EMK 20

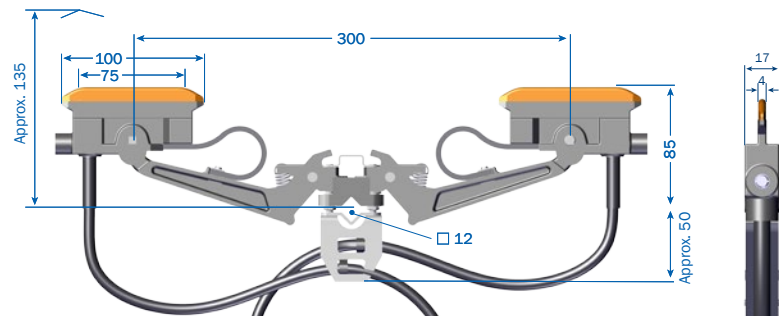
With 2 x 2 m connection cable

Lift: ± 20 mm

Swivel: ± 40 mm

Contact pressure: Approx. 9 N per carbon brush

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KDSTLU30PH-2000	30	2.5	4.4	0.537	150902	-
SA-KDSTLU30PE-2000	30	2.5	4.4	0.527	-	150903
SA-KDSTLU80PH-2000	80	6.0	11.0	0.733	153786	-
SA-KDSTLU80PE-2000	80	6.0	11.0	0.693	-	153787
SA-KDSTLU120PH-2000	120	10.0	12.5	0.985	153795	-
SA-KDSTLU120PE-2000	120	10.0	12.5	0.901	-	153796

(1) In the case of AE conductor rail, current collectors from current consumers that operate continuously under load in one place or at a very low traveling speed of $v = 10$ m/min. may only be loaded with approx. 50% of their continuous current.

CURRENT COLLECTOR FOR USE IN AGGRESSIVE MEDIA⁽¹⁾

such as pickling plants, galvanizing plants, and electroplating plants

Single current collector KSTL for aggressive media

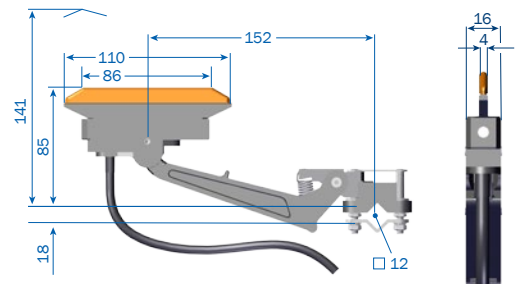
With 2 m connection cable

Lift: +30 mm/-40 mm.

Swivel: ±35 mm

Contact pressure: approx. 9 N

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KSTL35PH-13-2000-W	35	6.0	11.0	0.403	121186	-
SA-KSTL35PE-13-2000-V	35	6.0	11.0	0.295	-	121187

Double current collector KDSTL for aggressive media

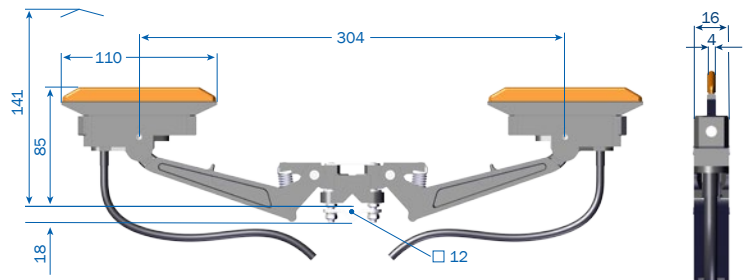
With 2 m connection cable

Lift: +30 mm/-40 mm.

Swivel: ±35 mm

Contact pressure: Approx. 9 N per carbon brush

Installation height: 85 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max _{mm}		Phase , black	PE, yellow
SA-KDSTL70PH-13-2000-W	70	6.0	11.0	0.760	121188	-
SA-KDSTL70PE-13-2000-V	70	6.0	11.0	0.542	-	121189

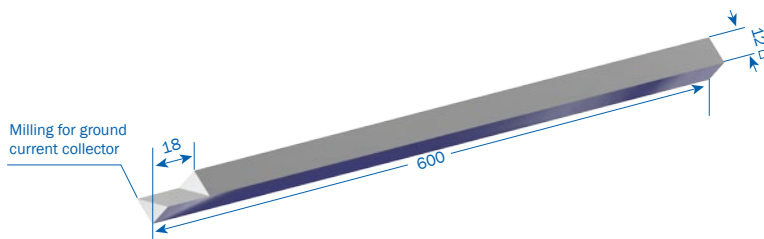
(1) In the case of AE conductor rail, current collectors from current consumers that operate continuously under load in one place or at a very low traveling speed of $v = 10$ m/min. may only be loaded with approx. 50% of their continuous current.

ACCESSORIES FOR CURRENT COLLECTOR U20

Towing arm for current collector KST

If the length of the towing arm exceeds 600 mm, support (provided by the customer) must be provided to prevent the towing arm from bending or twisting.

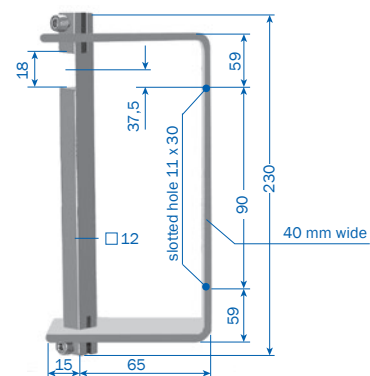
Longer lengths are available.



Type	Weight kg	Order No.
MN-UM12HS-600-Z3	0.691	153506
MN-UM12HS-A-12-55-600-K4	0.678	121162

Towing arm

Suitable for conductor spacing max. 55 mm (3-pin + PE)



for current collector KST/KDST

Type	B	Weight kg	Order No.
MN-UMAS12HS-A-200-Z3-PE22-LA90	for current collector KST/KDST (see page 14)	0.712	121092

Cable attachment clamp

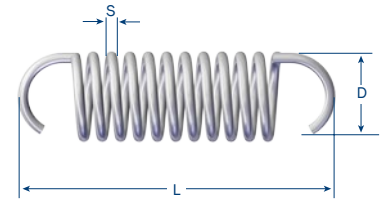
for current collectors type KSTLU, KDSTLU



Type	Weight kg	Order No.
SA-KBK ⁽¹⁾	0.030	153 519

(1) Stainless steel version

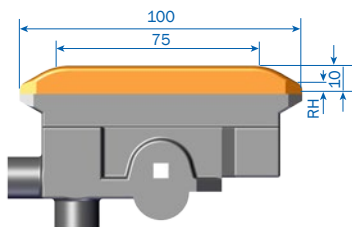
ACCESSORIES AND SPARE PARTS FOR CURRENT COLLECTOR U20



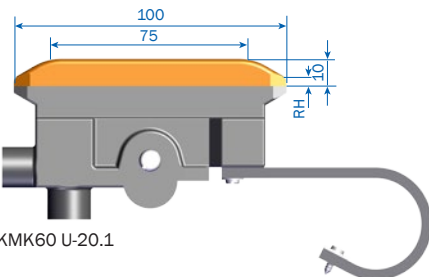
Tension springs

Type	for current collector	Weight kg	Color	S mm	D mm	L mm	Order No.
SA-ZF3-B-1,2-11,5-28,4-CFR	KST 15 bis KDST 120	0.004	Blank	1.2	10.8	28.5	153516
SA-ZF4-A-1,3-11-29-CFS FD.-ST DIN17224	KSTL 15 to KDSTL 120 and KSTLU 15 to KDSTLU 120	0.004	Red	1.3	11.0	29.0	153517
SA-ZF4-H-1,3-10,9-29-CFT	KST 35 to KDST 70	0.004	Blue	1.3	11.0	29.0	170601

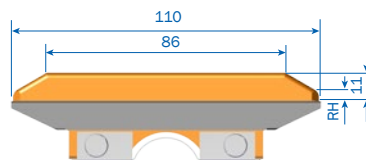
Carbon brush



SK-KMK60-20



SK-KMK60 U-20.1



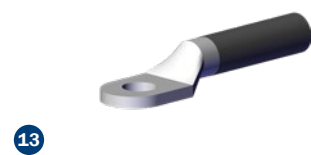
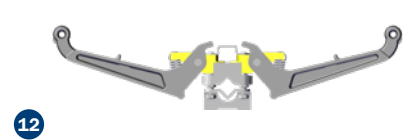
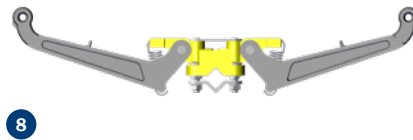
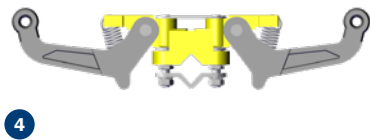
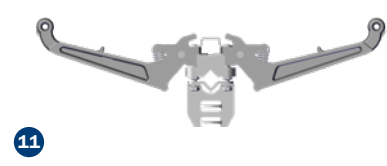
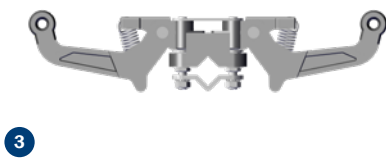
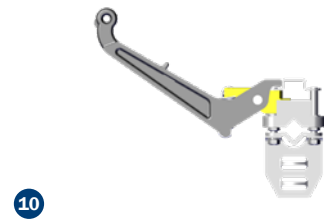
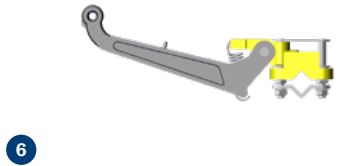
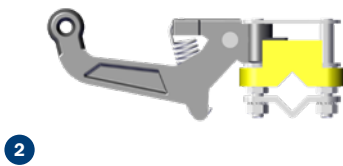
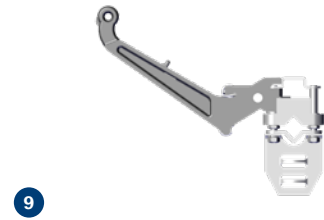
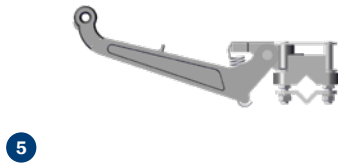
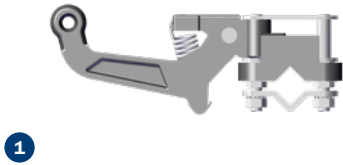
SK-KMK35-13-PH-VB



SK-KMK35-13-PE-V

Type	for current collector	RH mm	Weight kg	Order No.
SK-KMK60-20	KST 15, KST 40, KDST 30, KDST 80, KSTL 15, KSTL 40, KDSTL 30, KDSTL 80, KST 60, KDST 120, KSTL 60, KDSTL 120	3	0.071	153512
SK-KMK60 U-20.1	KSTLU 15, KSTLU 40, KSTLU 60, KDSTLU 30, KDSTLU 80, KDSTLU 120	3	0.086	153513
SK-KMK35-13-PH-VB	KSTL 35 VB, KDSTL 70 VB	5	0.030	121063
SK-KMK35-13-PE-V	KSTL 35 V, KDSTL 70 V	14	0.030	121062

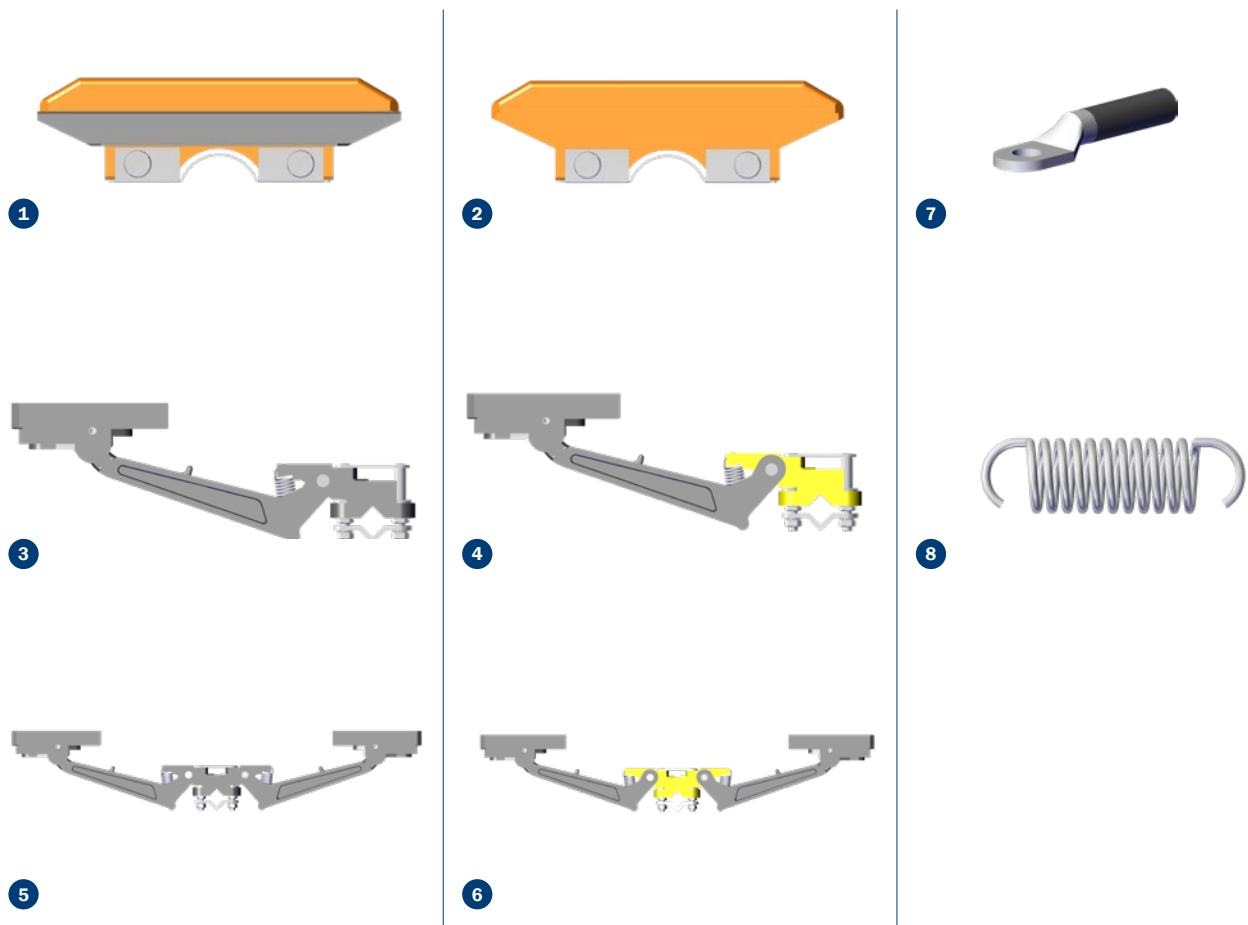
CURRENT COLLECTORS FOR KST, KSTL, KDST, KDSTL, KSTLU, AND KDSTLU SERIES



CURRENT COLLECTORS FOR KST, KSTL, KDST, KDSTL, KSTLU, AND KDSTLU SERIES

Type	Fig.	Description	Weight kg	Order No.	
				Phase , black	PE, yellow
SA-UT-001-PH	1	Lower part for KST 15 to KST 60	0.080	153736	-
SA-UT-001-PE	2	Lower part for KST 15 to KST 60	0.080	-	153737
SA-UT-002-PH	3	Lower part for KDST 30 to KDST 120 (double arm)	0.100	153738	-
SA-UT-002-PE	4	Lower part for KDST 30 to KDST 120 (double arm)	0.100	-	153739
SA-UT-003-PH	5	Lower part for KSTL 15 to KSTL 60	0.090	153740	-
SA-UT-003-PE	6	Lower part for KSTL 15 to KSTL 60	0.090	-	153741
SA-UT-004-PH	7	Lower part for KDSTL 30 to KDSTL 120 (double arm)	0.130	153742	-
SA-UT-004-PE	8	Lower part for KDSTL 30 to KDSTL 120 (double arm)	0.130	-	153743
SA-UT-005-PH	9	Lower part for KSTLU 15 to KSTLU 60	0.090	153804	-
SA-UT-005-PE	10	Lower part for KSTLU 15 to KSTLU 60	0.090	-	153805
SA-UT-006-PH	11	Lower part for KDSTLU 30 to KDSTLU 120 (double arm)	0.130	153806	-
SA-UT-006-PE	-	Lower part for KDSTLU 30 to KDSTLU 120 (double arm)	0.130	-	153807
AL-AEA2,5/PH-2000-A	13	Connecting cable AEA 2,5 PH, 2 m long	0.077	151374	-
AL-AEA2,5/PE-2000-A	13	Connecting cable AEA 2,5 PE, 2 m long	0.073	-	151375
AL-AEA2,5/PH-2000-A	13	Connecting cable AEA-KSTLU-2,5 PH, 2 m long	0.072	156431	-
AL-AEA2,5/PE-2000-A	13	Connecting cable AEA-KSTLU-2,5 PE, 2 m long	0.070	-	156432
AL-AEA6/PH-2000-C	13	Connecting cable AEA 6 PH, 2 m long	0.261	153744	-
AL-AEA6/PE-2000-D	13	Connecting cable AEA 6 PE, 2 m long	0.153	-	153745
AL-AEA6/PH-2000-A	13	Connecting cable AEA-KSTLU-6 PH, 2 m long	0.172	156433	-
SA-AEA6/PE-2000-D	13	Connecting cable AEA-KSTLU-6 PE, 2 m long	0.152	-	156434
AL-AEA10/PH-2000-C	13	Connecting cable AEA 10 PH, 2 m long	0.407	153746	-
AL-AEA10/PE-2000-D	13	Connecting cable AEA 10 PE, 2 m long	0.257	-	153747
AL-AEA10/PH-2000-A	13	Connecting cable AEA-KSTLU-10 PH, 2 m long	0.298	156427	-
AL-AEA10/PE-2000-D	13	Connecting cable AEA-KSTLU-10 PE, 2 m long	0.256	-	156435
SA-GF12X4X85-E-KPL	14	Rubber spring for KSTLU 15 to 60, KDSTLU 30 to 120	0.015	153748	-

CURRENT COLLECTORS FOR THE KSTL 35 V AND KDSTL 70 V SERIES



Type	Fig.	Description	Weight kg	Order No.	
				Phase , black	PE, yellow
SK-KMK35-13-PH-VB	1	Carbon brush KMK 35 VB	0.030	121063	-
SK-KMK35-13-PE-V	2	Carbon brush KMK 35 V	0.030	-	121062
SA-UT-003-PH-W-X	3	Lower part with carbon brush holder for KSTL 35 VB	0.110	121203	-
SA-UT-003-PE-W-X	4	Lower part with carbon brush holder for KSTL 35 V	0.110	-	121204
SA-UT-004-PH-VB	5	Lower part with carbon brush holder for KDSTL 70 VB	0.174	121207	-
SA-UT-004-PE-V	6	Lower part with carbon brush holder for KDSTL 70 V	0.172	-	121208
AL-RKA6/5PH-54-11-2000-C	7	Connecting cable RKA 6/5	0.263	127437	-
AL-RKA6/5PE-54-11-2000-D	7	Connecting cable RKA 6/5	0.155	-	127438
SA-ZF4-H-1,3-10,9-29-CFT	8	Tension spring ZF 4 H	0.004	170601	

ORDER EXAMPLE: 1 CONDUCTOR SYSTEM 120 A, 3-PIN + PE, 31 M LONG

	Quantity	Type	Description	Order No.
	15	U20/50CH-6000-PH-BA	Insulated conductor system, 6 m long, phase	127046
	3	U20/50CH-1000-PH-BA	Insulated conductor system, 1 m long, phase	127041
	5	U20/50CH-6000-PE-BA	Insulated conductor system, 6 m long, PE	127146
	1	U20/50CH-1000-PE-BA	Insulated conductor system, 1 m long, PE	127141
	20	VM-UV20/50-B	Fixed connector	120180
	4	ES-UE20/50-K4-L	Feeds	126522
	8	FP-USK20-K4	Locating clamp	120140
	8	EK-UK20-L	End caps	120120
	32	AH-K-U-20/4-4	Compact hanger, 4-pin	10028737
	32	HK-HU230-D	Bracket profile, 230 mm long	120833
	3	SA-KST40PH-2000	Current collector Phase	152840
	1	SA-KST40PE-2000	Current collector PE	152850
	1	MN-UM12HS-600-Z3	Towing arm (not shown)	153506
	1	MZ-KF-A-100	Contact grease	121502

INSTALLATION ACCESSORIES

Curve tool

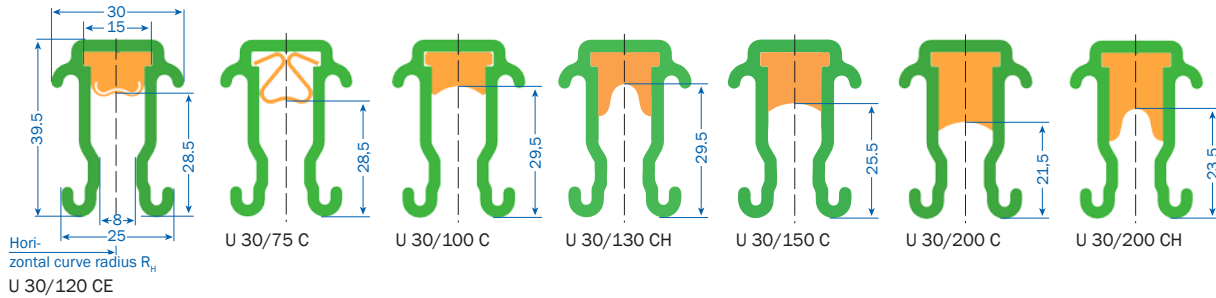
Curving the U20 conductor rails vertically and horizontally

Curve tool rental is possible



Type	Description	Weight kg	Order No.
MZ-BVU20	Curve tool BVU 20	14.149	120411

TECHNICAL SPECIFICATIONS: U30



Model explanation

U	= insulated conductor rails
30	= Housing size
75– 225	= Conductor cross section(mm ²)
CE	= copper core with stainless steel sheath
C	= copper conductor
CH	= Copper conductor for lateral arrangement

Delivery length

6 m standard length,
Shorter lengths are possible

Support distance

for straight installation and inner or outer curves:	1500 mm
In horizontal bends $RH < 10m$:	750 mm
In horizontal bends $RH > 10m$:	1500 mm

Rail spacing

For individual installation: 80 mm
For compact installation: 50 mm⁽³⁾

Curving the conductor rail

Only factory-fitted, upon request

Heating

Heating of the U30/75C on request

Versions

Version	Type	Weight kg/m	Order No. Phase ⁽²⁾	Order No. PE ⁽²⁾
Standard version, -30 °C to +55 °C, green	U30/120CE-...PH-BA	1.440	13024 •	13025 •
	U30/75C-...PH-BA	1.100	13028 •	13029 •
	U30/100C-...PH-BA	1.360	13032 •	13033 •
	U30/130CH-...PH-BA	1.540	13036 •	13037 •
	U30/150C-...PH-BA	1.780	13040 •	13041 •
	U30/200C-...PH-BA	2.180	13044 •	13045 •
	U30/200CH-...PH-BA	2.180	13048 •	13049 •
Heat resistant version, -30 °C to +85 °C, green	U30/120CE-...PH-DB	1.440	13026 •	13027 •
	U30/75C-...PH-DB	1.100	13030 •	13031 •
	U30/100C-...PH-DB	1.360	13034 •	13035 •
	U30/130CH-...PH-DB	1.540	13038 •	13039 •
	U30/150C-...PH-DB	1.780	13042 •	13043 •
	U30/200C-...PH-DB	2.180	13046 •	13047 •
	U30/200CH-...PH-DB	2.180	13050 •	13051 •

Conductor rail values

Type	Conductor cross section mm ²			Creepage distance of insulation mm	max. nominal voltage ⁽¹⁾	max. continuous current A	Resistance ⁽³⁾ ohm/1000 m	Impedance ⁽³⁾ ohm/1000 m
	Cu	Al	Stainless steel					
U30/120 CE	100		18	100	1000	330	0.178	0.222
U30/ 75 C	75			100	1000	280	0.238	0.28
U30/100 C	100			105	1000 ⁽⁶⁰⁰⁾	330	0.178	0.264
U30/130 CH	130			95	1000 ⁽⁶⁰⁰⁾	400	0.137	0.221
U30/150 C	150			95	1000 ⁽⁶⁰⁰⁾	440	0.126	0.219
U30/200 C	200			90	1000 ⁽⁶⁰⁰⁾	530	0.09	0.195
U30/200 CH	200			90	1000	530	0.09	0.195

(1) The last digit of the order number indicates the individual length in meters. Please add 1, 2, ...6 to the order No. Intermediate values should be rounded up.

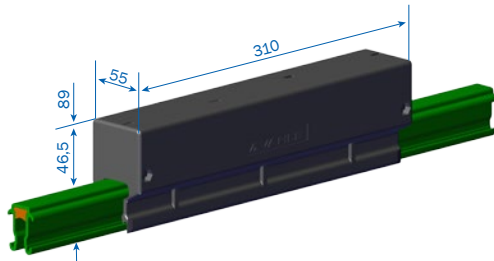
(2) Joints, feed and expansion section must be arranged in a staggered manner.

(3) At frequency of 50 Hz and 20 °C.

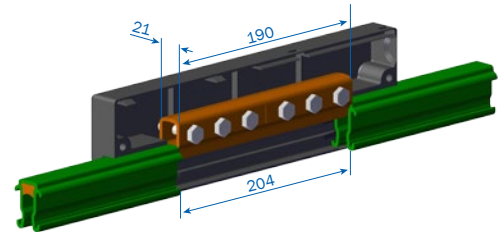
ACCESSORIES FOR U30

Fixed connector⁽¹⁾

All listed fixed connectors can also be used as feeds (identical design)
Use contact grease to protect against corrosion



Type UV 30/75 C
Type UV 30/100-225, same dimension



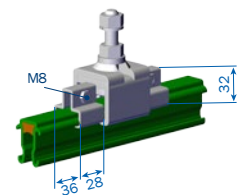
Type UV 30/75 C

Type	Weight kg	Order No.
VM-UV30/75C-B	0.768	130525
VM-UV30/75C-K4-B ⁽²⁾	0.768	130526
VM-UV30/100-225-B	1.248	130527
VM-UV30/100-225-K4-B ⁽²⁾	1.248	130528

Contact grease

for joints and feeds

Type	Description	Weight kg	Order No.
MZ-KF-A-100	100 ml for approx. 200 connections	0.112	121502



Locating clamp

Type	Weight kg	Order No.
FP-USK30-K4 ⁽¹⁾	0.065	133537

(1) Screws intended for connecting the ground conductor must not be used as connectors.
(2) Stainless steel version

ACCESSORIES FOR U30

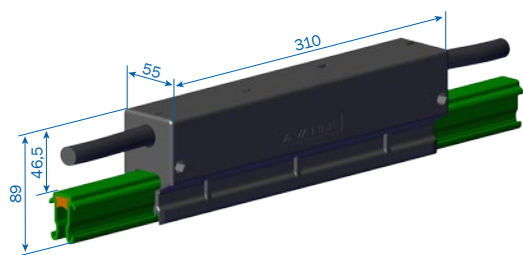
Feeds⁽¹⁾

Cover UE30 identical in construction to fixed connector UV30

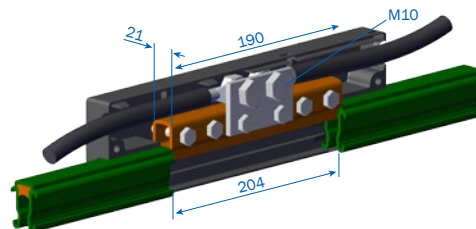
Use contact grease to protect against corrosion

Cable lugs and connection cable must be provided on site

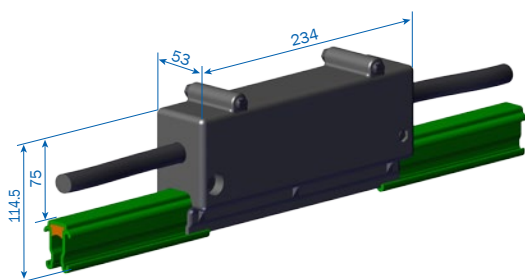
Type	Connection max. mm ²	Weight kg	Order No.
ES-UE30/75C-L-B	2x70	0.995	130601
ES-UEG30/75C-L-B	2x95	1.003	130605
ES-UE30/75C-K4-L-B ⁽²⁾	2x70	0.997	130602
ES-UEG30/75C-K4-L-B ⁽²⁾	2x95	1.003	130606
ES-UE30/100-225-L-B	2x70	1.438	130603
ES-UEG30/100-225-L-B	2x120	1.669	130607
ES-UE30/100-225-K4-L-B ⁽²⁾	2x70	1.438	130604
ES-UEG30/100-225-K4-L-B ⁽²⁾	2x120	1.657	130608



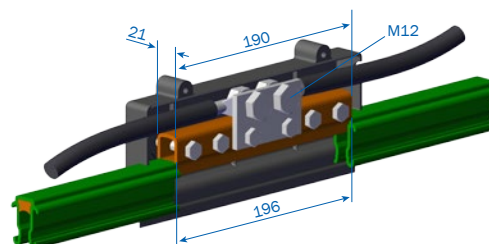
Type UE 30/100-225
Type UE 30/75 C, same dimension



Type UE 30/75 C



Type UEG 30/100 - 225
Type UEG 30/75 C, same dimension



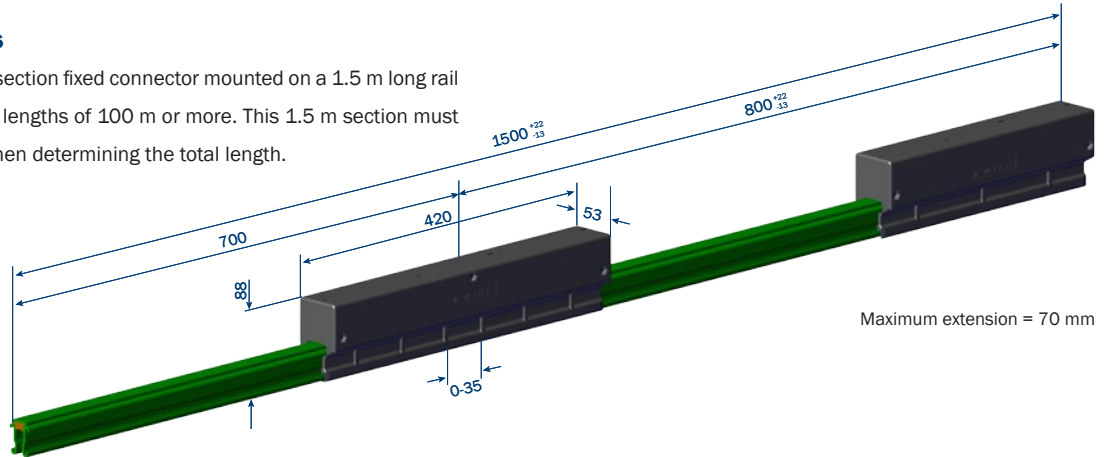
Type UEG 30/75 C

(1) Screws intended for connecting the ground conductor must not be used as connectors.
(2) Stainless steel version

ACCESSORIES FOR U30

Expansion sections

Consisting of expansion section fixed connector mounted on a 1.5 m long rail section. Used for system lengths of 100 m or more. This 1.5 m section must be taken into account when determining the total length.



Determining the number of expansion sections

$$n = \frac{L1}{L}$$

n = Number of UDV (rounded up to the nearest whole number)

L1 = Total length of the system - 100 m

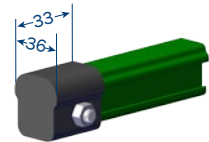
L = max. expansion distance per UDV (see table)

up to Δd	max. L/U30
20 °C	100 m
30 °C	68 m
40 °C	50 m
50 °C	40 m

Not applicable to CE

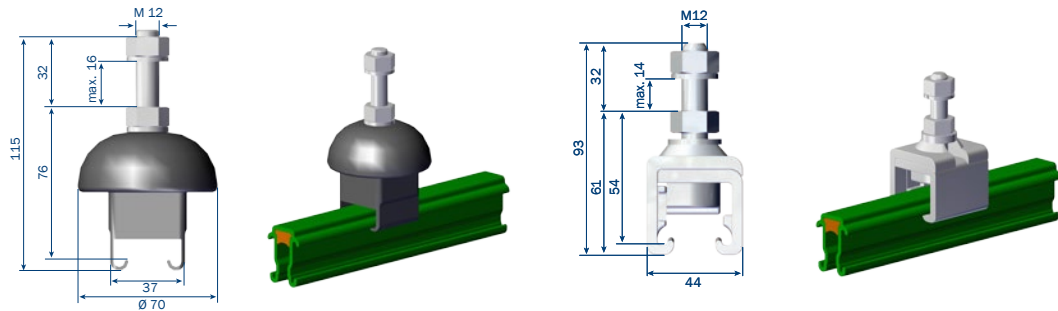
Version	Type	Weight kg	Order No.	
			Phase	PE
Standard, -30 °C to +55 °C, green	DT-UDV30/120CE-K4-1500PH-BA	5.189	130551	-
	DT-UDV30/120CE-K4-1500PE-AA	5.189	-	130552
	DT-UDV30/75C-K4-1500PH-BA	2.954	130553	-
	DT-UDV30/75C-K4-1500PE-AA	2.954	-	130554
	DT-UDV30/100C-K4-1500PH-BA	5.255	130555	-
	DT-UDV30/100C-K4-1500PE-AA	5.255	-	130556
	DT-UDV30/130CH-K4-1500PH-BA	5.558	130557	-
	DT-UDV30/130CH-K4-1500PE-AA	5.558	-	130558
	DT-UDV30/150C-K4-1500PH-BA	5.895	130559	-
	DT-UDV30/150C-K4-1500PE-AA	5.895	-	130560
	DT-UDV30/200C-K4-1500PH-BA	6.533	130561	-
	DT-UDV30/200C-K4-1500PE-AA	6.533	-	130562
	DT-UDV30/200CH-K4-1500PH-BA	6.535	130563	-
	DT-UDV30/200CH-K4-1500PE-AA	6.535	-	130564
Heat resistant version, -30 °C to +85 °C, grey	DT-UDV30/120CE-K4-1500PH-DB	5.189	130587	-
	DT-UDV30/120CE-K4-1500PE-CB	5.189	-	130588
	DT-UDV30/75C-K4-1500PH-DB	2.954	130589	-
	DT-UDV30/75C-K4-1500PE-CB	2.954	-	130590
	DT-UDV30/100C-K4-1500PH-DB	5.255	130591	-
	DT-UDV30/100C-K4-1500PE-CB	5.255	-	130592
	DT-UDV30/130CH-K4-1500PH-DB	5.558	130593	-
	DT-UDV30/130CH-K4-1500PE-CB	5.558	-	130594
	DT-UDV30/150C-K4-1500PH-DB	5.895	130595	-
	DT-UDV30/150C-K4-1500PE-CB	5.895	-	130596
	DT-UDV30/200C-K4-1500PH-DB	6.533	130597	-
	DT-UDV30/200C-K4-1500PE-CB	6.533	-	130598
	DT-UDV30/200CH-K4-1500PH-DB	6.533	130599	-
	DT-UDV30/200CH-K4-1500PE-CB	6.533	-	130600

ACCESSORIES FOR U30



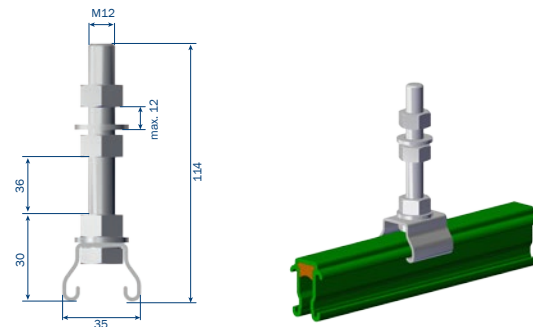
End cap

Type	Weight kg	Order No.
EK-UK30-L	0.025	132120
EK-UK30-M	0.025	130158



Insulated hangers⁽¹⁾

Type	Weight kg	Order No.
AH-UIM30-K4 ⁽²⁾⁽³⁾	0.179	133768
AH-UAM30 ⁽³⁾	0.163	132690
AH-UAM30-K4 ⁽²⁾⁽³⁾	0.165	132700



Hangers⁽¹⁾

Type	Weight kg	Order No.
AH-UA30	0.193	132 150
AH-UA30-K4 ⁽¹⁾	0.193	132 510

(1) When fastening in slotted holes, use washers on both sides in accordance with DIN 9021.

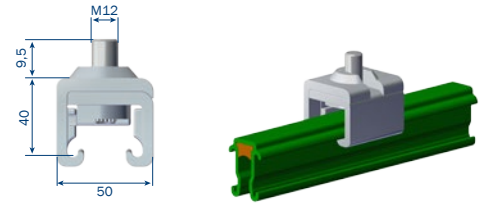
(2) Stainless steel version.

(3) Do not use with synthetic oils.

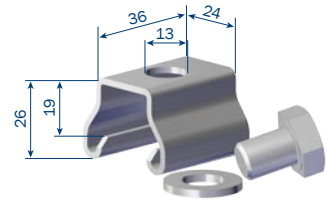
ACCESSORIES FOR U30

Rail holder

für Isolatoren



Type	Weight kg	Order No.
AH-UAK30-K4 ⁽¹⁾	0.097	133568



Supplied with M 12 x 12 screw and washer

Type	Weight kg	Order No.
AH-UAS30-K4 ⁽²⁾	0.075	132710

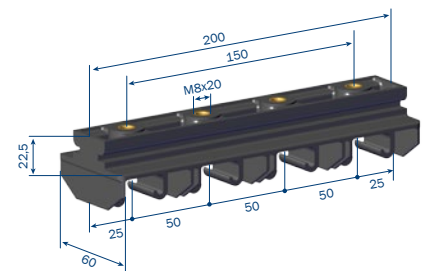
COMPACT HOLDER

With the compact hangers, any number of poles can be assembled.

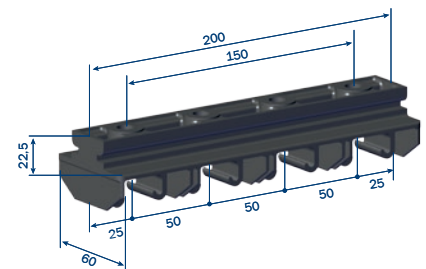
Joints and feeds must be arranged in a staggered manner.

Compact holder

4-pin for screwing on



Type	Weight kg	Order No.
AH-KA30/4 ⁽³⁾	0.169	133570



Compact holder

4-pin for bracket profile 38/17

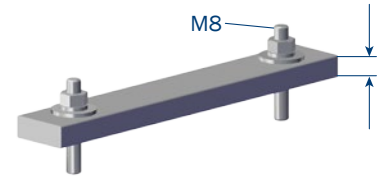
Type	Weight kg	Order No.
AH-KH30/4 ⁽³⁾	0.165	133571

(1) Stainless steel version.

(2) Do not use with synthetic oils.

(3) When fastening in slotted holes, use washers on both sides in accordance with DIN 9021.

ACCESSORIES FOR U30



Fastening and installation materials

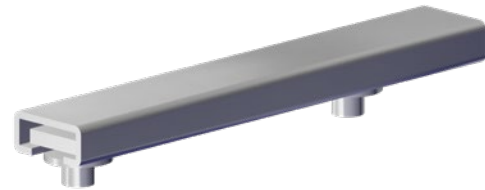
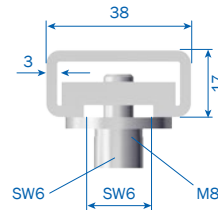
for compact hangers, hangers and insulators

Type	Weight kg	Order No.
AH-BE8	0.027	130060
AH-BE8-K4 ⁽²⁾	0.027	130111

Bracket profile 38/17

Includes 2x mounting screws

Other lengths available on request



Type	Length mm	Number of pins	Weight kg	Order No.
HK-HU400-D	400	5	0.848	130113
HK-HU600-D	600	10	1.211	130114

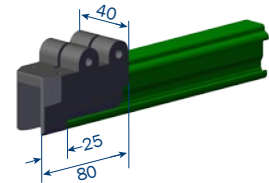
Transfer guides

Transfer guides are used at rail breaks.

max. lateral/vertical offset ± 4 mm

The maximum air gap between the transfer guides is 10 mm.

Additional conductor rails must be provided and ordered separately.



Type	Weight kg	Order No.
US-US30/120CE-K4	0.110	133587
US-US30/75C-K4	0.110	133250
US-US30/100C-K4	0.110	133260
US-US30/130CH-K4	0.110	133280
US-US30/150C-K4	0.110	133290
US-US30/200C-K4	0.110	133300
US-US30/200CH-K4	0.110	133791

(1) Stainless steel version

ACCESSORIES FOR U30

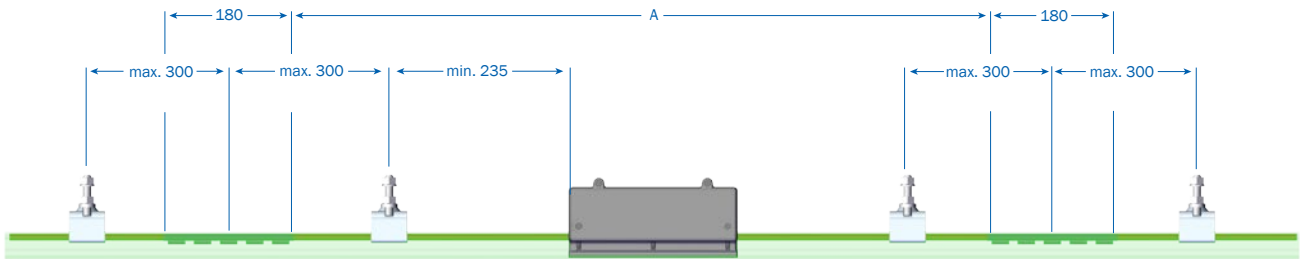
Insulated isolating section

Insulation distance A = 180 mm

Type M: Factory installation

Type L: Loose delivery as single item with 2 tension pins (+) 4 x 18

A hanger must be provided on both sides at a maximum distance of 300 mm from the center of the air isolating section



Conductor rails, hangers, and feeds must be ordered separately. Two insulated isolating sections are used as protection against voltage bridging and to separate repair, control, and feed sections. For distance

"A", the number and type of current collectors and the stopping distance of current consumers must be taken into account.

Type	Weight kg	Order No.
ST-IT/U30/120CE-M	0.023	133588
ST-IT/U30/75C-M	0.033	133070
ST-IT/U30/100C-M	0.018	133080
ST-IT/U30/130CH-M	0.026	133100
ST-IT/U30/150C-M	0.029	133110
ST-IT/U30/200C-M	0.035	133120
ST-IT/U30/200CH-M	0.021	133792
ST-IT/U 30/120CE-L	0.023	132580
ST-IT/U30/75C-L	0.033	132560
ST-IT/U30/100C-L	0.018	132570
ST-IT/U30/130CH-L	0.026	132600
ST-IT/U30/150C-L	0.029	132610
ST-IT/U30/200C-L	0.035	132620
ST-IT/U30/200CH-L	0.032	132640

Transfer funnel

Funnels (systems) are available on request.

CURRENT COLLECTOR FOR U30

Current collector

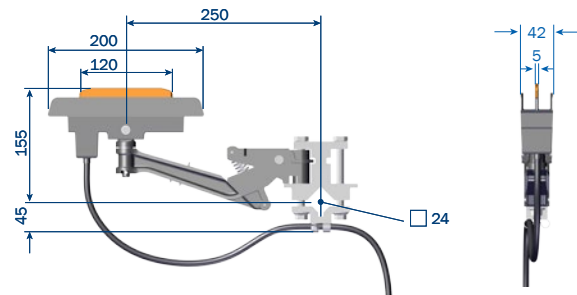
With 2 m connection cable

Lift: + 45/-40 mm

Swivel: ± 60 mm

Contact pressure: approx. 30 N

Installation height: 155 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max. mm		Phase , black	PE, yellow
SA-KST100/30PH-20-2000	100	16	14.5	1.724	133938	-
SA-KST100/30PE-20-2000	100	16	14.5	1.724	-	133939
SA-KST125/30PH-20-2000	125	25	16.5	1.960	130863	-
SA-KST125/30PE-20-2000	125	25	16.5	1.960	-	130864

Double current collector

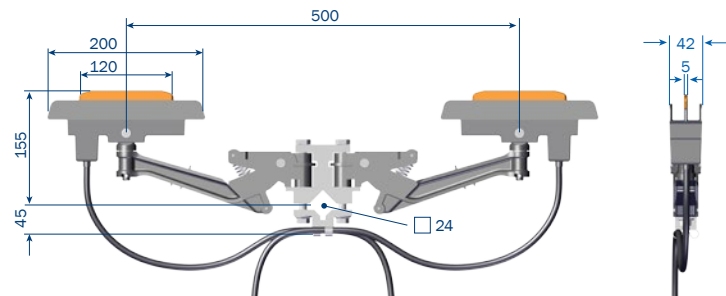
With 2 x 2 m connection cable

Lift: + 45/-40 mm

Swivel: ± 60 mm

Contact pressure: Approx. 30 N per carbon brush

Installation height: 155 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max. mm		Phase , black	PE, yellow
SA-KDST200/30PH-20-2000	200	16	14.5	3.111	133940	-
SA-KDST200/30PE-20-2000	200	16	14.5	3.111	-	133941
SA-KDST250/30PH-20-2000	250	25	16.5	3.583	130865	-
SA-KDST250/30PE-20-02000	250	25	16.5	3.583	-	130866

CURRENT COLLECTOR FOR U30

Current collector

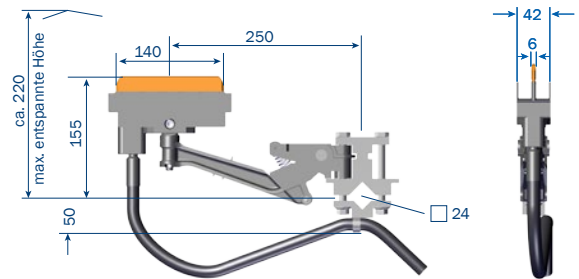
With 2 m connection cable

Lift: + 45/-40 mm

Swivel: ± 60 mm

Contact pressure: approx. 29 N

Installation height 155 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max. mm		Phase , black	PE, yellow
SA-KST140/30PH-20-2000	140	25	16.5	1.935	130048	-
SA-KST140/30PE-20-2000	140	25	16.5	1.935	-	130049
SA-KSTU140/30PH-20-2000	140	25	16.5	1.990	130050	-
SA-KSTU140/30PE-20-2000	140	25	16.5	1.990	-	130051
SA-KST175/30PH-20-2000	175	35	18.5	2.183	130869	-
SA-KST175/30PE-20-2000	175	35	18.5	2.183	-	130870
SA-KSTU175/30PH-20-2000	175	35	18.5	2.238	130871	-
SA-KSTU175/30PE-20-2000	175	35	18.5	2.238	-	130872

Double current collector⁽¹⁾

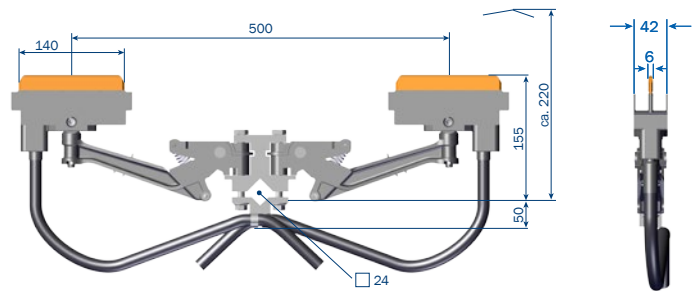
With 2 x 2 m connection cable

Lift: + 45/-40 mm

Swivel: ± 60 mm

Contact pressure: Approx. 29 N per carbon brush

Installation height: 155 mm



Type	Continuous current A	Connection cable		Weight kg	Order No.	
		A mm ²	d max. mm		Phase , black	PE, yellow
SA-KDST280/30PH-20-2000	280	25	16.5	3.395	130052	-
SA-KDST280/30PE-20-2000	280	25	16.5	3.395	-	130053
SA-KDSTU280/30PH-20-2000	280	25	16.5	3.535	130054	-
SA-KDSTU280/30PE-20-2000	280	25	16.5	3.535	-	130055
SA-KDST350/30PH-20-2000	350	35	18.5	3.891	130873	-
SA-KDST350/30PE-20-2000	350	35	18.5	3.891	-	130874
SA-KDSTU350/30PH-20-2000	350	35	18.5	4.031	130875	-
SA-KDSTU350/30PE-20-2000	350	35	18.5	4.031	-	130876

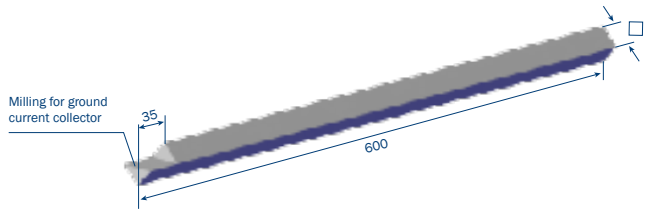
(1) Special design for acid plants available. Continuous current when using stainless steel grinding surfaces on request.

ACCESSORIES AND SPARE PARTS FOR CURRENT COLLECTOR U30

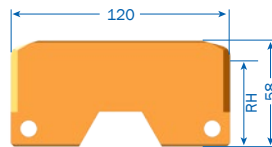
Towing arm

If the length of the towing arm exceeds 600 mm, support (provided by the customer) must be provided to prevent the towing arm from bending or twisting.

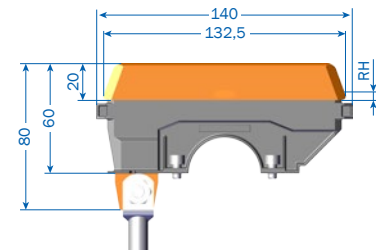
Longer lengths are available.



Type	Weight kg	Order No.
MN-UM24HS-600-Z3	2.713	175076
MN-UM24HS-600-K4	2.713	130757



KMK 100/30

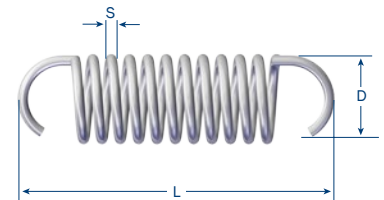


KMK 175/30

Carbon brush

Dimension H: Permissible wear height for U 30/100 C

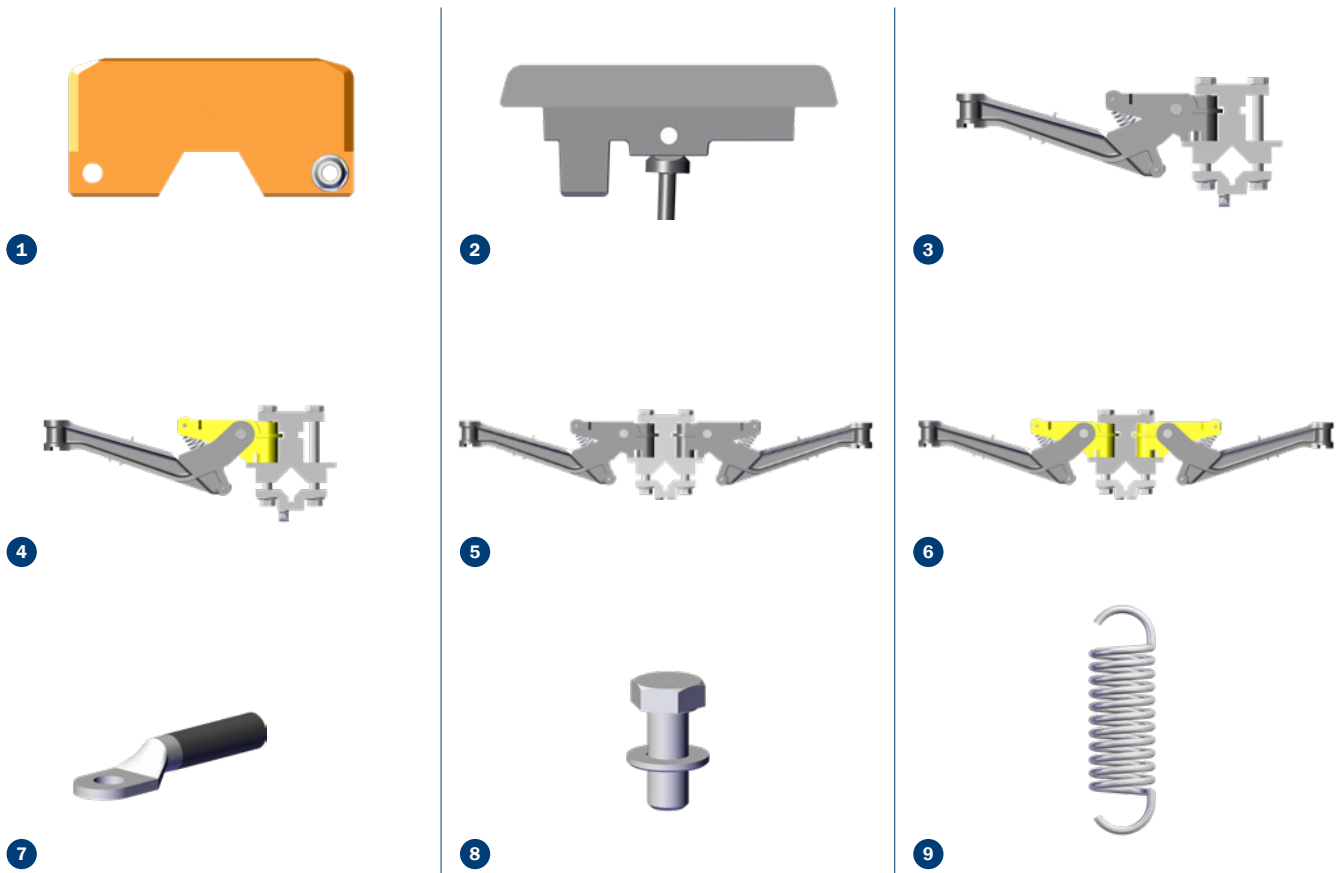
Type	for current collector	RH mm	Weight kg	Order No.
SK-KMK100/30-20	KST 100/30, KDST 200/30	54	0.198	130609
SK-KMK175/30-20	KST 140/30, KDST 280/30, KSTU 140/30, KDSTU 280/3, KST 175/30, KDST 350/30	3	0.180	171648/00-1



Tension springs

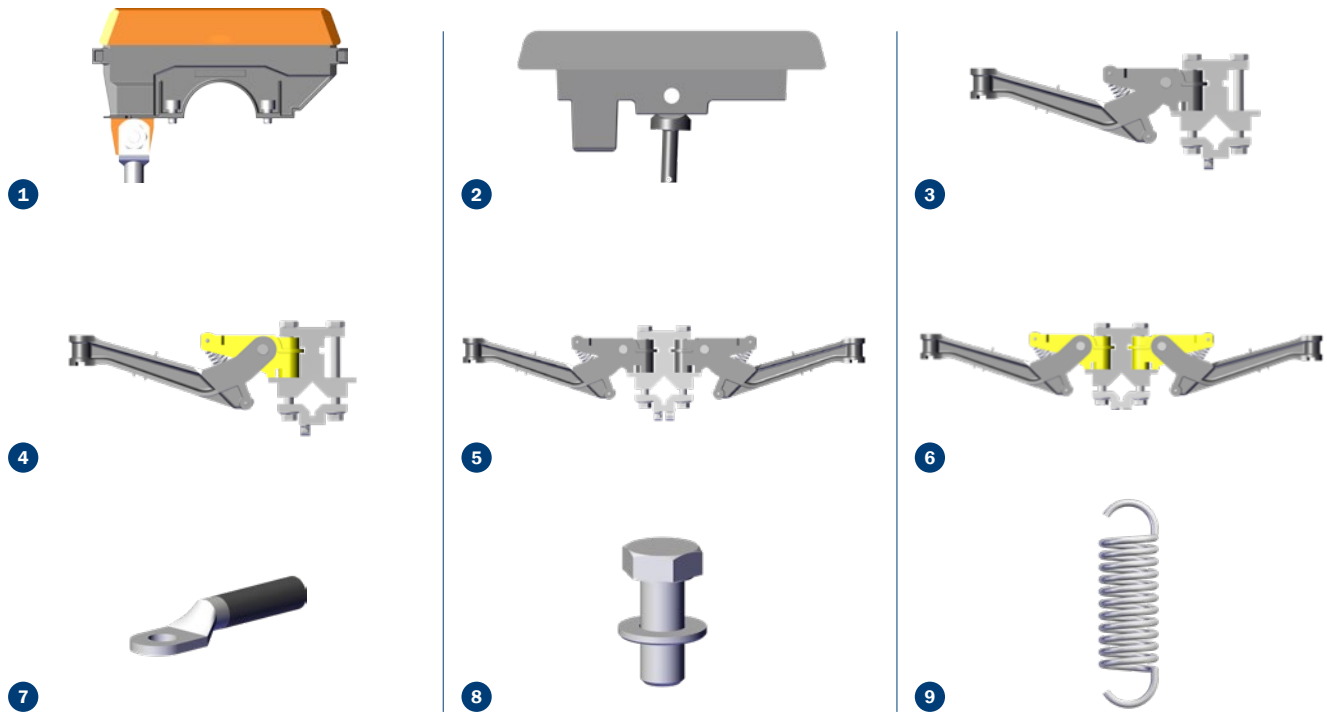
Type	for current collector	Weight kg	Color	S mm	D mm	L mm	Order No.
SA-ZF6-B-2,25-17,3-56,5-CFS FD.-ST	KST 100/30, KST 140/30, KDST 200/30, KST 140/30, KDST 280/30, KSTU 140/30, KDSTU 280/30	0.023	Red	56.50	17.30	2.25	170167

SPARE PARTS FOR THE KST 100/30 AND KDST 200/30 SERIES



Type	Fig.	Description	Weight kg	Order No.	
				Phase , black	PE, yellow
	1	Carbon brush (see page 44)	-	-	
SA-KF007	2	Carbon brush holder for KST 100	0.198	170338	-
SA-KF007	2	Carbon brush holder for KST 100	0.195	-	170338
SA-UT-007-PH	3	Lower part for KST 100	0.662	170340	-
SA-UT-007-PE	4	Lower part for KST 100	0.731	-	170341
SA-UT-009-PH	5	Lower part for KDST 200	0.887	170342	-
SA-UT-009-PE	6	Lower part for KDST 200	0.953	-	170343
AL-RKA16/8PH-100-14,5-2000-C	7	Connecting cable RKA 16/8 PH, 2 m long	0.568	170344	-
AL-RKA16/8PE-100-9,5-2000-D	7	Connection cable RKA 16/8 PE, 2 m long	0.390	-	170345
SA-AS-M8X20-K4	8	Connecting screw M8 x 20 K4	0.021	170818	
	9	Tension spring (see page 38)	-	-	

SPARE PARTS FOR KST 140/30 AND KDSTU 280/30 SERIES



Type	Fig.	Description	Weight kg	Order No.	
				Phase , black	PE, yellow
	1	Carbon brush (see page 34)	-	-	-
	2	Carbon brush holder for KST 140, KDST 280, KST 175, KDST 350	0.375	170169	-
	2	Carbon brush holder ⁽⁴⁾ for KSTU 140, KDSTU 280, KSTU 175, KDSTU350	0.375	-	170169
SA-UT-007-PH	3	Lower part for KST 140 to KST 175	0.662	170340	-
SA-UT-007-PE	4	Lower part for KST 140 to KST 175	0.731	-	170341
SA-UT-008-PH	3	Lower part for KSTU 140 to KSTU 175	0.555	170555	-
SA-UT-008-PE	4	Lower part for KSTU 140 to KSTU 175	0.555	-	170556
SA-UT-009-PH	5	Lower part for KDST 280 to KDST 350	0.887	170342	-
SA-UT-009-PE	6	Lower part for KDST 280 to KDST 350	0.953	-	170343
SA-UT-010-PH	5	Lower part for KDSTU 280 to KDSTU 350	0.795	170557	-
SA-UT-010-PE	6	Lower part for KDSTU 280 to KDSTU 350	0.795	-	170558
AL-RKA25/8PH-129-16,5-2000-C	7	Connecting cable RKA 25/8 PH, 2 m long	0.756	170173	-
AL-RKA25/8PE-140-10,5-2000-D	7	Connection cable RKA 25/8 PE, 2 m long	0.619	-	170174
AL-RKA35/8PH-158-15,5-2000-C	7	Connecting cable RKA 35/8 PH, 2 m long	1.103	170997	-
AL-RKA35/8PE-158-15,5-2000-D	7	Connection cable RKA 35/8 PE, 2 m long	0.742	-	170998
SA-AS-M8X12-K4	8	Connecting screw M 8 x 12 K 4	0.001	170871	
SA-GF25X4X90-E-KPL	-	Rubber spring, complete, for KSTU 140, KDSTU 280	0.036	170412	
	10	Tension spring (see page 44)	-	-	

ORDER EXAMPLE: 1 CONDUCTOR SYSTEM 530 A, 3-PIN + PE, 160 M LONG

	Quantity	Type	Description	Order No.
	78	U30/200C-6000PH-BA	Insulated conductor rails, 6 m long, phase	130446
	3	U30/200C-1000PH-BA	Insulated conductor rails, 1 m long, phase	130441
	26	U30/100C-6000PE-AA	Insulated conductor rails, 6 m long, PE	130336
	1	U30/100C-1000PE-AA	Insulated conductor system, 1 m long,	130331
	6	DT-UDV30/200C-1500PH-BA	Expansion sections, 1.5 m long, phase (not shown)	130543
	2	DT-UDV30/100C-1500PE-AA	Insulated conductor rails, 1.5 m long, PE (not shown)	130538
	104	VM-UV30/100-225-B	Fixed connector	130527
	8	ES-UE30/100-225-L-B	Feeds	130603
	24	FP-USK30-K4	Locating clamp	133537
	8	EK-UK30-L	End caps	132120
	432	AH-UAM30	Insulated hangers	132690
	6	SA-KDST280/30PH-20-2000	Double current collector, phase	130052
	1	SA-KDST280/30PE-20-2000	Double current collector, PE	130053
	2	MN-UM24HS-600-Z3	Towing arm	175076
	1	MZ-KF-A-100	Contact grease	121502

QUESTIONNAIRE

Company: _____ Date: _____

Tel: _____ Email: _____

Internet: _____

1. Number of conductor systems: _____
2. Type of crane or device to be fed: _____
3. Operating voltage: _____ volts Frequency: _____ Hz
 Rotating voltage Alternating voltage Direct voltage
4. Line length: _____
5. Number of phase rails: _____ N rails: _____ Control rails: _____ Ground conductors: _____
6. Installation position of the conductor system:
 Suspended conductor system current collector cable in the direction of travel⁽¹⁾ or downwards (only for safety conductor system)
 Lateral conductor system vertical conductor system (only for conductor rails)
 Support distance _____ m Other: _____
7. Number of cranes or devices on a conductor system: _____
8. Indoor system Outdoor system
9. Special operating conditions (humidity, dust, chemical influences, etc.) _____
10. Ambient temperature: _____ °C min. _____ °C max.
11. Expansion sections _____ pcs. _____ max. expansion
12. Location and number of feeds⁽¹⁾: _____
13. Location and number of Isolating sections (e.g. repair sections) ⁽¹⁾: _____
14. Where should the conductor system be positioned? ⁽¹⁾: _____
15. Supply brackets: yes no Distance between center of support and center of conductor system _____
 Flange width of the carrier _____
16. Travel speed when traveling straight ahead: _____ in curves: _____ at crossings: _____
17. Power consumption of individual power consumers: _____
(Please use the table below.)
18. Max. voltage drop from the conductor system feed to the current collectors, taking into account the start-up currents:
 3% or _____ % relative to the nominal current.

Motor data	Crane/device 1						Crane/device 2							
	Power kW	Nominal current			Start-up current		Drive type ⁽²⁾	Power kW	Nominal current			Start-up current		Drive type ⁽²⁾
		A	cos φ _N	% ED	A	cos φ _A			A	cos φ _N	% ED	A	cos φ _A	
Lifting device														
Auxiliary lifting device														
Traveling winch														
Trolley traveling winch														

Mark motors that can be switched on simultaneously with *.

Mark motors that can be switched on simultaneously with Δ.

Further information: _____

Signature: _____

(1) Sketches required for preparing quotation
 (2) Enter the drive type: K for squirrel-cage rotor, S for slip ring rotor, F for frequency-controlled motor.
 We reserve the right to make technical changes due to further developments.

NOTES



A large grid of small dots for taking notes, consisting of 20 columns and 30 rows of dots.



Paul Vahle GmbH & Co. KG

Westicker Str. 52
59174 Kamen
Germany

+49 2307 7040
info@vahle.com
vahle.com

You can find your local contact at:

vahle.com/contact