

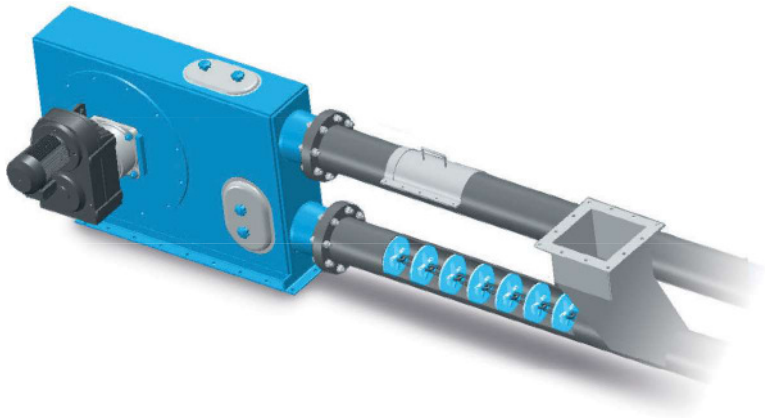


SCHRAGE

System partner for bulk conveying

RK

Tube Chain Conveyors in 3 different designs



Tube chain conveyors – the all-rounders of bulk material processing

Most mechanical continuous conveyors can only transport material in a straight line. **Tube chain conveyors** are the exception: they offer turnarounds in terms of level and space. Applicable almost everywhere they often are the only conveying solution under difficult spatial conditions.

To plan your conveying plant we make use of the **SCHRAGE modular construction system**. We amend its ready, made standards such as driving and tensioning unit with optimally fitted conveying pipes to construct your individual conveying solution. Thus we can integrate cost efficiently reliable tube chain conveyors in 5 sizes and 3 different designs into your system.

Subcategories / Tube chain conveyor designs

RKB

Vertical tube chain conveyors

RKS

Upright tube chain conveyors

RKL

Horizontal tube chain conveyors



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Performance-related specifications of all designs

- completely dust and product tight
- design in accordance with ATEX (dust explosion categories)
- self-sealing, in certain circumstances a chamber may not be necessary
- three-dimensional routing
- low energy consumption
- low maintenance
- space-saving
- low-stress transport of the conveyed material
- lengths up to 60 m dependent on the intended use
- redirection via corner station or pipe bend
- nearly dead-leg-free design
- five different sizes
- capacities up to 80 m³/h (as a function of layout and bulk)
- gas and pressure tight configuration

Sector compendium



Oil industry



Food industry



Animal disposal



Waste management industry



Seed industry



Chemical industry



Steel industry



Cement industry



Tire industry



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Specifications



Vertical tube chain conveyors

bridge flexibly differences in height and location.

Features:

- without tensioning unit
- low feed height
- low maintenance

*design details please see inside



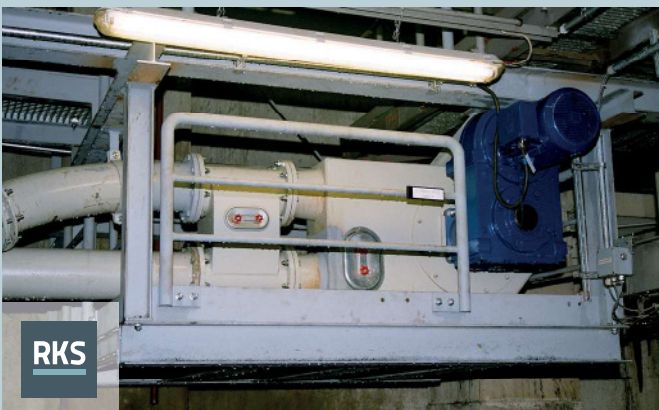
Horizontal tube chain conveyors

are very flat solutions for bridging horizontal distances in confined areas.

Features:

- suitable for filtration fume hoods
- low feed height

*design details please see inside



Upright tube chain conveyors

are very space-saving solutions for bridging narrow routes within confined areas.

Features:

- product recirculation possible
- suitable for self-supporting drawing roads

*design details please see inside

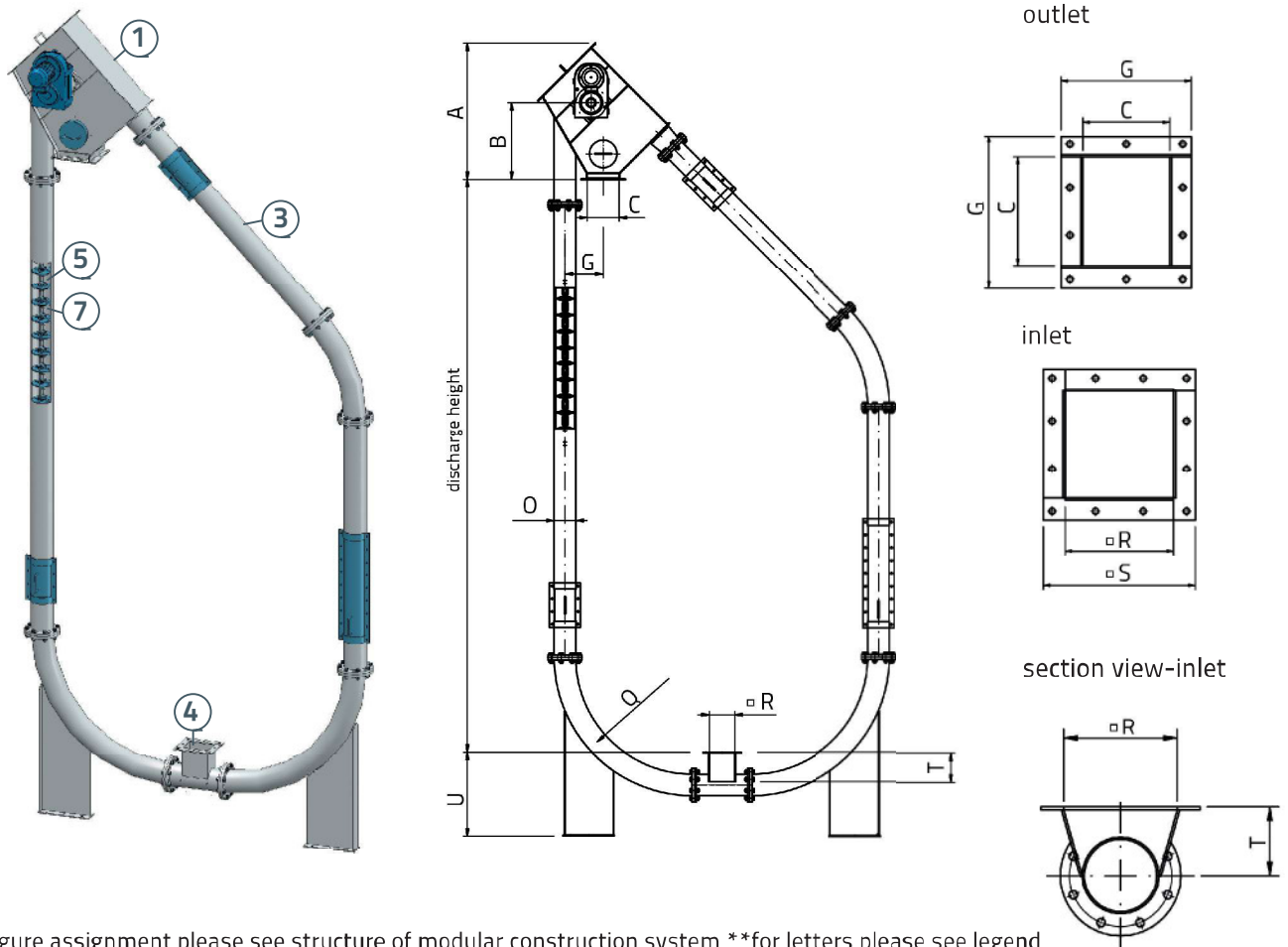


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RKB

Tube chain conveyor vertical „Pear” (high)



*for figure assignment please see structure of modular construction system **for letters please see legend

Constructional data:

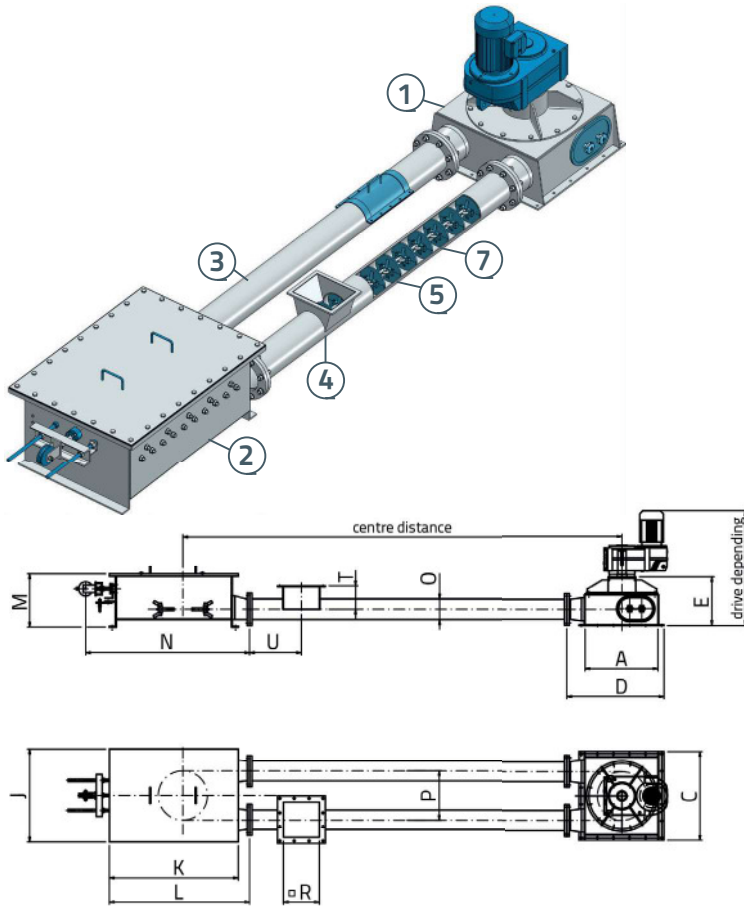
RKF TYPE	①			③				④			
	driving unit		outlet	pipe housing		inlet					
	A mm	B mm	C mm	C mm	G mm	O ∅ mm	Q mm	R mm	S mm	T mm	U mm
100	921	526	200	200	300	114,3	750	200	300	100	235
160	1068	600	250	200	300	168,3	1000	250	350	150	295
200	1148	626	250	250	350	219,1	1000	250	350	175	345
250	1637	900	350	350	450	273,0	1250	350	450	250	450
300	1806	900	400	400	500	323,9	1250	450	550	250	470



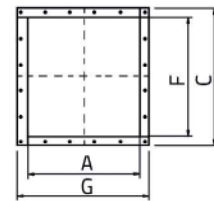
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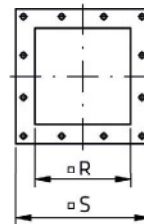
RKL Tube chain conveyor horizontal (flat)



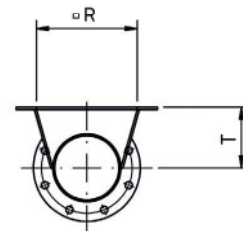
outlet



inlet



section view-inlet



*for figure assignment please see structure of modular construction system **for letters please see legend

Constructional data:

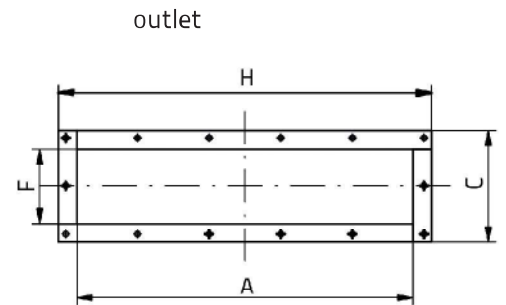
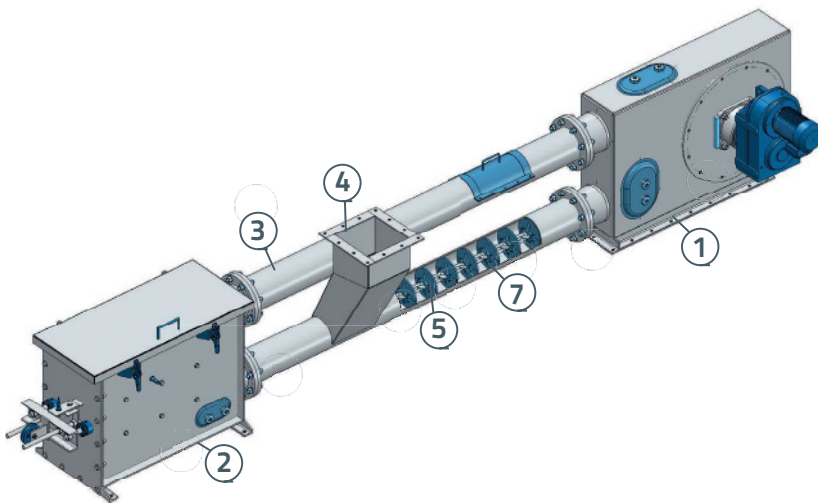
RKF TYPE	①				②				③		④							
	driving unit				outlet				tensioning unit				pipe housing		inlet			
	A	C	D	E	A	F	G	C	J	K	L	M	N	O	P	R	S	T
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Ø mm	mm	mm	mm	mm
100	480	560	650	335	480	480	560	560	610	680	772	335	967	114,3	333	200	300	115
160	608	740	810	405	608	640	708	740	770	1065	1167	464	1373	168,3	410	250	350	150
200	630	790	858	495	630	690	730	790	820	1090	1208	480	1404	219,1	410	250	350	200
250	940	1080	1193	548	940	980	1040	1080	1100	1345	1498	588	1709	273,0	640	350	450	210
300	1155	1320	1535	618	1155	1220	1255	1320	1336	1580	1850	673	2051	323,9	830	450	550	250



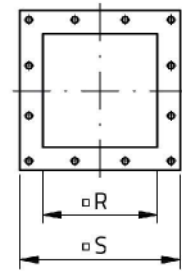
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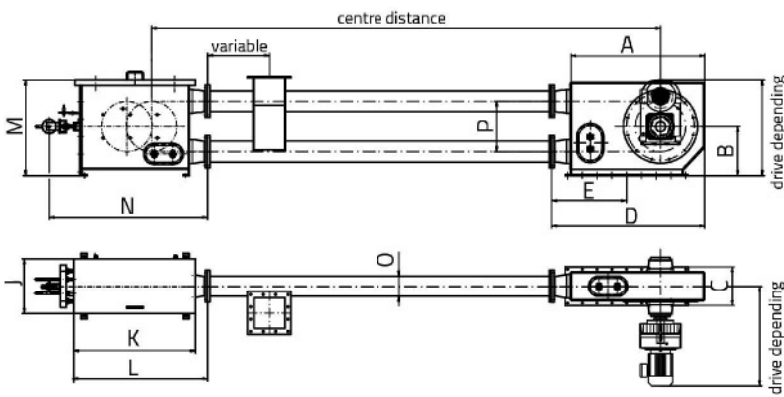
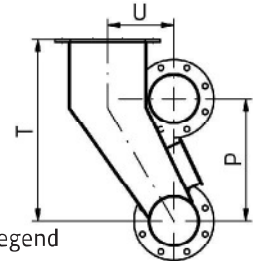
RKS Tube chain conveyor upright (narrow)



inlet



section view-inlet



*for figure assignment please see structure of modular construction system **for letters please see legend

Constructional data:

RKF TYPE	①					②									③		④			
	driving unit					outlet				tensioning unit					pipe housing		inlet			
	A	B	C	D	E	A	F	C	H	J	K	L	M	N	O	P	R	S	T	U
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	∅ mm	mm	mm	mm	mm	mm
100	490	296,5	240	777	402	490	160	240	570	410	820	892	610	1090	114,3	333	200	300	430	155
160	900	400	320	1244	609	900	220	320	1000	450	985	1084	708	1282	168,3	410	250	350	610	220
200	900	400	380	1270	635	900	280	380	1000	450	985	1110	778	1308	219,1	410	250	350	610	270
250	950	550	450	1510	685	950	350	450	1050	550	1346	1485	1071	1699	273,0	640	350	450	990	390
300	1070	670	500	1750	865	1070	400	500	1170	660	1561	1833	1361	2036	323,9	830	450	550	1180	410



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Structure tube chain conveyor modular construction system

- ① **driving unit:**
with shaft-mounted geared motor,
gear motor with chain drive
(other designs upon request)
- ② **tensioning unit:**
gravity tension
spring tension
chain tension via pneumatic cylinder
- ③ **conveying pipes with flange connection:**
according to DIN
seamless or seam heat sealed
pipe bend, ovality up to 2 %
- ④ **inlet:**
variable
- ⑤ **conveyor chain:**
special round link chain,
normal steel 21 MnS,
stainless steels such as 1.4404 or 1.4461 (Duplex)
- ⑥ **housing:**
material:
normal steel (S235JRG2),
stainless steels such as 1.4301 or 1.4571,
heat-resistant steels like 16Mo3,
wear-protected design
by HVOF process coating
or lined with basalt,
material selection dependent on intended use.
- ⑦ **carrier:**
Extract materials or stainless steel for use
depending
MS 97 (plastics)
MS 404 (coated metal disc, surface hardness
= approx. 750 HV)
Special cast discs
MS 150 (plastics)
MS 9395 (food grade)
MS 340 (high-performance plastics, tempera-
ture-resistant up to 160 °C)
- ⑧ **monitoring:**
Motor load monitor, speed monitor,
Torque monitoring
Tension path monitoring via proximity switch
Return path monitoring via proximity switch
Fill level monitoring

Theoretical transport capacity at 80 % filling level

RKF TYPE	v [m/s]	0,1	0,2	0,3	0,4
100	Q [m³/h]	2,5	5,0	7,5	10,0
	n [1/min]	5,7	11,5	17,2	22,9
160	Q [m³/h]	6,4	12,7	19,1	25,5
	n [1/min]	4,7	9,3	14,0	18,6
200	Q [m³/h]	10,0	19,9	29,9	39,8
	n [1/min]	4,7	9,3	14,0	18,6
250	Q [m³/h]	15,6	31,1	46,7	62,2
	n [1/min]	3,0	6,0	9,0	11,9
300	Q [m³/h]	20,5	40,9	61,3	81,8
	n [1/min]	2,5	5,0	7,0	9,5



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Get to know our technique/procedure



At our technical centre at Sande we can conduct test series for you.



We are also pleased to bring our mobile test conveying equipment to your site.

Conveying techniques:

We offer information material as well as accessory for the following conveying techniques:

SF Screw Conveyors

TK Trough Chain Conveyors

BW Bucket Elevators

GF Belt Conveyors

DA Dosing / Gates

Services:

Read more about our services for the various conveying techniques in our overview brochure.

BE Basic engineering

DE Detail engineering

MI Realisation / implementation

SW Service / maintenance

EL Replacement delivery

SCHRAGE GMBH Plant Engineering System partner for Bulk Material Processing

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