

Conveyor Chains and Components

Conveying – Moving





Content

Conveyor Chains and Components

Customer satisfaction is our primary operating principle. Our customers benefit from our metallurgical expertise, our many years of experience in a wide variety of industries, and our unfailing commitment to the highest quality standards.

Content	3
----------------	----------

pewag group

Welcome to the pewag group	4-5
History, Quality management	6
Business areas, Environment	7
Production and sales locations	8

Overview

pewag Conveyor Chains – highly wear resistant	12-14
Chain system with chain sprockets and pocket wheels	15-35
pewag chains as per works standard and components	36-47

Chains and Components

Chain couplings	16-18
Chain sprockets	19-22
Flight attachments for chain sprockets	23-30
Pocket wheels	31
Flight attachments for pocket wheels	29
	32-34
Tail and idler wheels	35
pewag conveyor chains as per works standard	38
Connecting links	39-40
Flight attachments	41-42
Chain and pocket wheels	43-47

Assembly and Maintenance Instructions

Instructions	49-51
Questionnaire	52-53

Welcome to the pewag group

We are an internationally operating group of companies. Our track record goes back to the year 1479.

Determination to innovate pewag group's Mission Statement expresses the goals of our actions:

Driven by our determination to innovate, we at pewag manufacture the world's best chains today and in the future. The high quality of our products and services as well as the passionate commitment of our employees guarantee safety for moving people and goods. Our customers set the benchmark for our achievements.

Principles of pewag group

Brands

The values of our premium brands are demonstrated by our first class quality and innovations and are communicated consistently and coherently. We anticipate market demands and changes in the environment and adapt our strategies, organization and actions accordingly.

Due diligence

In all our processes we use due diligent business practices and efficiency and strive to improve these continuously. In the long run, high profits secure the future of the organization and the growth of the corporate group.

Technological leadership

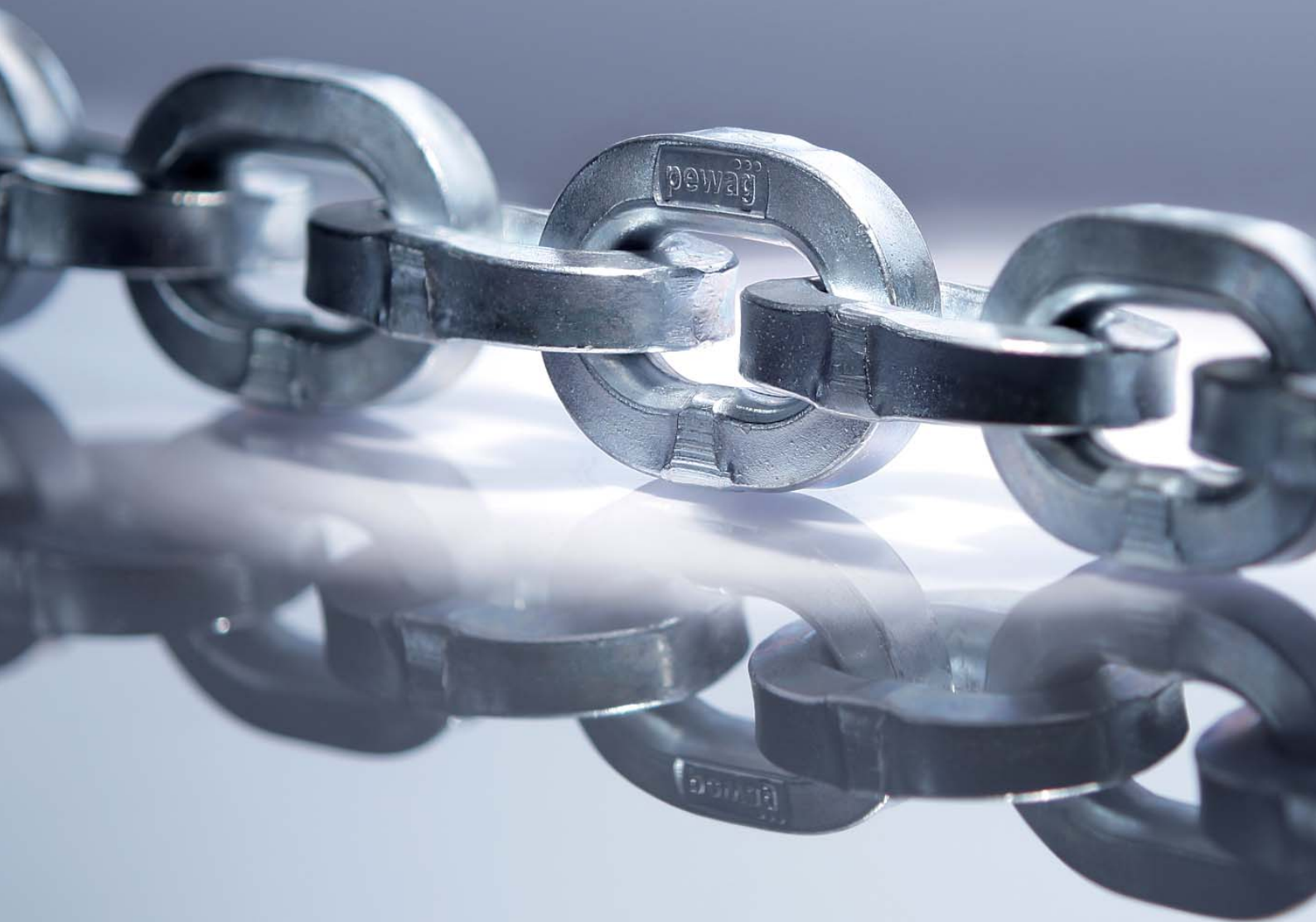
We secure our technological leadership through highest product quality, constant improvements and innovations of products, as well as manufacturing processes. We commit ourselves to careful treatment of the environment by reducing the use of energy and raw materials, ensuring the longevity of our products and making them recyclable.

People within our group

We value open, honest and team-oriented work-style, which is based on transparent communication. The ideas, opinions and experience of our employees are valuable inputs for our decision making process. We strive for stable and fair partnerships with our customers, suppliers and other business partners. Social aspects are considered when making business decisions.

We are a modern group of companies which looks back to a tradition and experience of more than 500 years. Since our founding years, a lot has changed, but the values that made our success possible from the beginning remain.

**pewag group –
Innovation. Quality. Partnership.**



History of the pewag group

Advantage through tradition

The history of pewag group goes back to the 15th century and therefore makes us the oldest chain manufacturer worldwide. With our experience we are ready for the future.

Timetable of important events

- 1479** First documented references of a forging plant in Brückl
- 1787** Foundation of a chain forgery in Kapfenberg
- 1803** Foundation of a chain forgery in Graz
- 1836** Establishment of an iron casting plant in Brückl
- 1912** Production of the First Snow Chain worldwide
- 1923** Merger of plants in Graz and Kapfenberg –
Creation of the name “pewag”
- 1972** Foundation of a sales company in Germany
- 1975** Foundation of a sales company in the USA
- 1993** Foundation of pewag austria GmbH
- 1994** Foundation of the first subsidiary in Czech Republic
- 1999** Acquisition of the Weissenfels Group
- 2003** Separation from the Weissenfels Group
- 2005** Reorganization into 2 groups:
Schneeketten Beteiligungs AG Group – Snow Chains
pewag austria GmbH Group – Technical Chains
- 2009** Acquisition of Chaineries Limousines S.A.S.



Lithography forging plant Brückl 1855



Anchor chain forgery 1878



Chain forgers 1956

Quality management

Our ultimate goal is to achieve customer satisfaction

To reach this goal, the quality management of the pewag group is determined by the principle: “We supply our customers with high-quality products which fully meet technological standards and its usage requirements,” this is summarized in the four following mandatory principles:

Market oriented quality

To maintain and improve its competitive position, the quality of products and services of the pewag group must meet both the specifications of our customers and the standards one can expect from the technological leader in the industry.

Economic quality

As a profit-oriented company the quality is also determined by the material used, labor costs and financial possibilities, i.e. also within the framework awarded by the customer.

Responsibility for Quality

Quality management is the task and obligation of executives at all levels. Every employee of the pewag group has to be integrated by management in the preparations, execution and evaluation of the quality management measures.

Every employee takes the responsibility for the quality of his work.

Process oriented quality assurance

The close interaction between sales, product development, production and customer service is regulated within the individual companies by fixed processes and activities, as well as responsibilities with the aim to reach and maintain the defined quality standards.



Business areas

Working with pewag products

The pewag group has a substantial and diverse spectrum of products and services.

Our range of products varies from traction chains for tires (snow chains for passenger cars, trucks and special-purpose vehicles, tire protection chains for mining vehicles) over different industrial chains to products for the do-it-yourself sector (light chains, belts, etc.)



Segment A
Snow and forestry
chains



Segment B
Hoist and
conveyor chains



Segment C
Do-it-yourself



Segment D
Engineering



Segment F
Lifting accessories
and lashing chains



Segment G
Tire protection
chains

Environment – we take responsibility

Ecological awareness in all areas



We continuously strive to keep the influence of our business on the environment as low as possible. Our production and warehousing is organized so that all legal requirements on environmental protection are fulfilled. Furthermore, we consider ecological aspects for our product development, processes and distribution channels and include these in our business planning.

Consequently, we are permanently striving for a continuous improvement and development of our established products to reach higher load capacities and safety for our customers with lighter weights and longer life spans.

Wherever we cannot avoid an environmental impact, we strive to reduce the use of energy, environmentally harmful emissions and keep the production of waste to a minimum. When investing in new machines we consider the technically most adequate and economically feasible state-of-the-art designs for their designated area of use.

Our environmental management is certified according to ISO 14001:2004. Regular internal audits assist to supervise compliance, test the effectiveness of our set standards and serve as a basis to determine improvement potentials.

Out of this long-lasting tradition we take responsibility for our products, employees, our sites and the environment very seriously.

We commit to comply with all environment-related regulations and continually improve our performance for the environment by defined goals. For that purpose we use modern production technologies. We enhance the ecological awareness of our employees by regular trainings.

We engage with our customers, neighbors and government agencies in an open communication and inform them about our environmental management wherever appropriate.

By providing advice, we want to inform our customers about the environmental aspects related to the use of our products – especially their long life spans. We are striving to motivate our customers and suppliers to consider environmental protection in their sphere of influence and use the same environmental standards as we do.

Customer proximity

International presence

After a changing history pewag has established itself today as one of the world's leading chain manufacturers with 22 sales locations and 6 production sites on two continents - Europe and North America.

pewag as an international corporate group is supported by a strong and professional partner network. This cooperation allows for optimized customer service and support.

Production and sales locations

Europe

Austria	pewag austria GmbH, Graz pewag austria GmbH, Kapfenberg pewag Schneeketten GmbH & Co KG, Graz pewag Schneeketten GmbH & Co KG, Brückl pewag engineering, Kapfenberg AMW Grünberger Handelsgesellschaft mbH, Wien
Germany	pewag Deutschland GmbH, Unna pewag Schneeketten Deutschland GmbH, Unna
France	J3C S.A.S. pewag France, Seyssins Chaineries Limousines S.A.S., Bellac
Italy	pewag italia s.r.l., Andrian
Netherlands	pewag nederland B.V., Hillegom APEX International BV, Hillegom

Europe

Poland	pewag polska Sp. z o.o., Buczkowice
Russia	ООО „pewag“, Moscow
Sweden	pewag sweden AB, Emmaboda
Slovakia	pewag slovakia s.r.o., Krškany
Czech Republic	Řetězárna Česká Třebová s.r.o., Česká Třebová pewag s.r.o, Vamberk
Ukraine	TOV „pewag Ukraine“, Lviv

North America

USA	pewag Inc., Bolingbrook, Illinois pewag Inc., Rocklin, California
-----	--

pewag group presents
itself on the internet.
More ...

www.pewag-group.com
www.pewag.com



Scraper Conveyors

pewag Scraper Conveyor Chains	12–14
Chain system with chain sprockets and pocket wheels	15–35



Scraper Conveyors

Overview



pewag Conveyor Chains

pewag – high quality Conveyor Chains

pewag conveyor chains are made from fine – grained, non – ageing special CrNi-, CrNiMo-, MnCr - alloyed steel. By ensuring optimum heat treatment pewag maintain high quality standards.

pewag conveyor chains have consistently high core quality which gives resistance to shock loadings and ensures maximum breaking loads and excellent fatigue strength can be achieved.

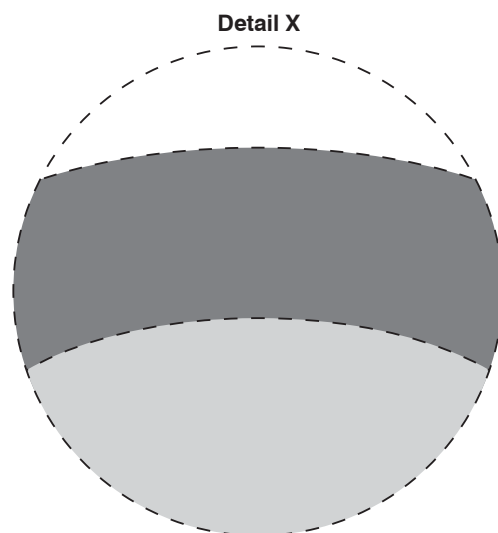
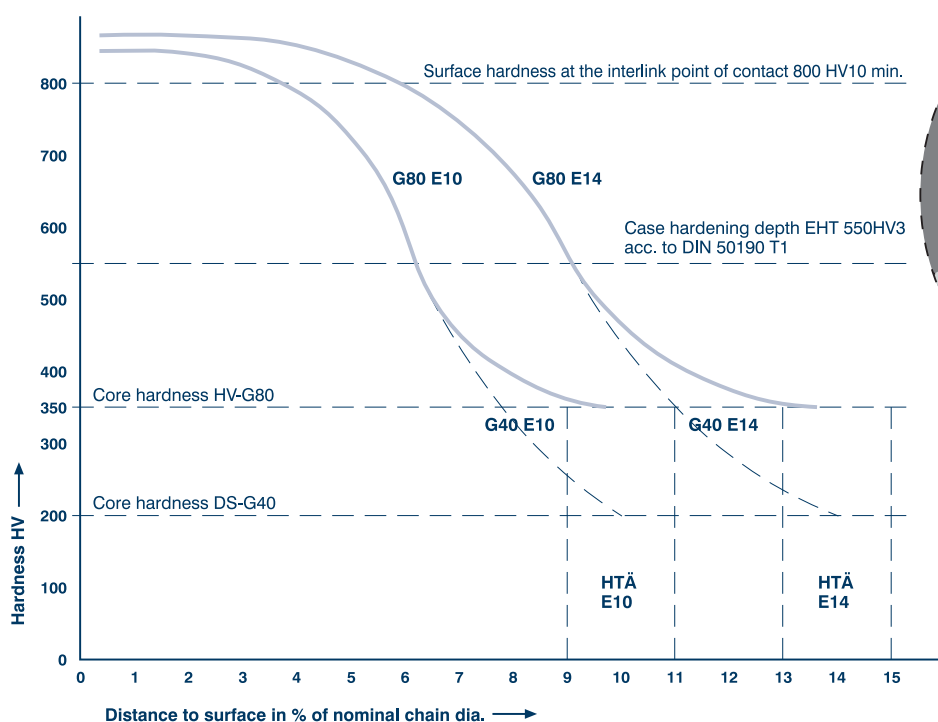
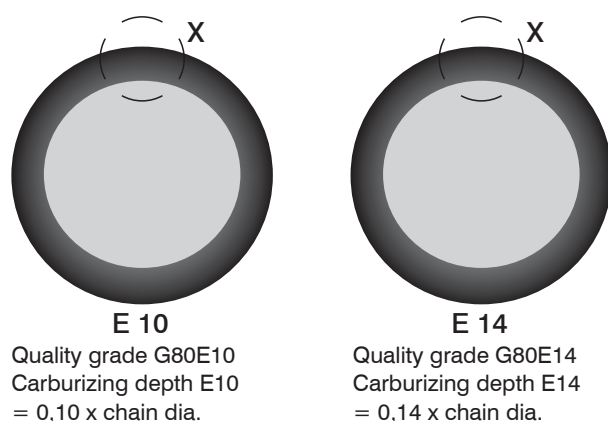
Case hardened conveyor chains can be used for operating temperatures of up to 200 °C (392°F) without loss of surface hardness.

The chains are manufactured with very close production tolerances to ensure a smooth, parallel run over the sprockets.

All round steel chains and components are matched regarding to strength and uniform hardness, to minimize the wear and provide the greatest possible wear life and maximum chain life, to guarantee a long lasting chain system.

Extensive range of pewag conveyor chains up to 38 mm, chain couplings, chain sprockets, guide wheels, flight bars with flight attachments provide the optimum design for scraper conveyors in the bulk industry.

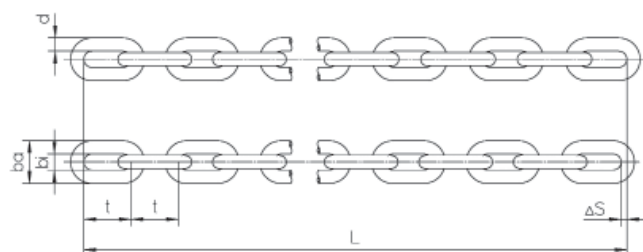
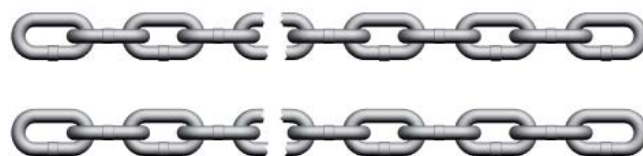
Cross section at the interlink point of contact



HV Round steel chains

HV-chains made from CrNi- or CrNiMo-special alloyed steel are suitable for scraper conveyors with high dynamic and static loads. Supplied as matched pairs – for an exact parallel run of the chain links.

Surface finish: polished and waxed



HV

Chain d x t	Chain with bi min.	Chain with ba max.	Weight	Standard length Links	Standard length L	G80 E10 Proof load	G80 E10 Breaking- load	G80 E14 Proof load	G80 E14 Breaking- load
[mm]	[mm]	[mm]	[kg/m]	[mm]	[mm]	[kN]	[kN]	[kN]	[kN]
10 x 38	12,5	34	2,10	527	20.026	38	64	-	-
14 x 50	16,3	47	4,10	215	10.750	74	128	65	110
16 x 64	20	55	5,30	167	10.688	96	160	84	140
19 x 75	22	63	7,40	143	10.725	135	227	117	198
22 x 86	26	74	9,90	119	10.234	182	304	160	266
26 x 100	31	87	13,80	83	8.300	255	425	220	370
30 x 120	36	102	18,70	47	5.640	340	566	300	500
34 x 136	39	113	23,80	35	4.760	425	710	375	630
38 x 144	44	127	30,00	29	4.176	530	910	480	800

Further dimensions and qualities on request.

Technical Datas

Chain length L production tolerance = $+0,3 / -0,15\% = 0,45\%$ total; this means that the difference between chain lengths of 10 m is max. 45 mm.

Chain length production tolerance ΔS of matched chain lengths is 0,05% or max. 3 mm for two or multiple chain strand conveyors

Example of the order

16 pcs. HV-chains 22 x 86 G80E10 L = 119 links = 10.234 mm each, supplied as matched pairs

Quality grade	G80 E10	G80 E14
Breaking stress [N/mm ²]	400	350
Proof stress [N/mm ²]	240	210
Breaking elongation apprx. [%]	2	2
Surface hardness at interlink HV 10	800	800
Carburizing depth HTÄ ... d +/- 0,01d	0,10 ¹⁾	0,14 ²⁾
Case hardening depth EHT 550 HV 3 ... d min.	0,06 ³⁾	0,09 ⁴⁾
Material incl. d = 22 mm: CrNi-alloyed Material from d = 26 mm: CrNiMo-alloyed		

Proof/Breaking load tolerance -10% permissible depending on the batches

Carburizing depth HTÄ after macroetching:

- ¹⁾ 30 Ø u. 34 Ø - 0,09 d; 38 Ø - 0,08 d
²⁾ 30 Ø - 0,12 d; 34 Ø - 0,11 d; 38 Ø - 0,09 d

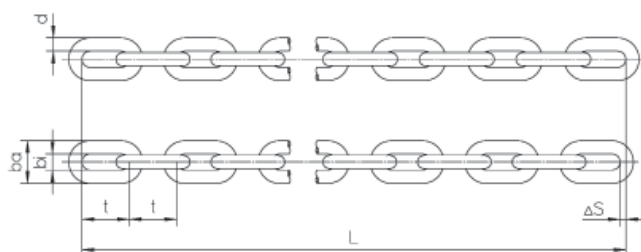
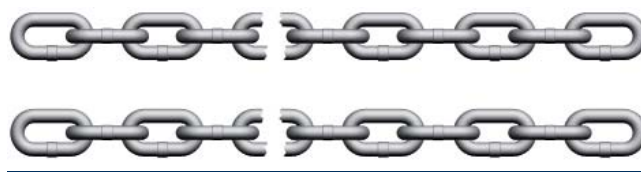
Case hardening depth EHT 550 HV 3:

- ³⁾ 30 Ø u. 34 Ø - 0,05 d; 38 Ø - 0,04 d
⁴⁾ 30 Ø - 0,08 d; 34 Ø - 0,07 d; 38 Ø - 0,05 d

DSZ Round steel chains

DSZ-chains made from MnCr-special alloyed steel for scraper conveyors with medium dynamic and static loads. Supplied as matched pairs – for an exact parallel run of the chain links.

Surface finish: polished and waxed



DSZ

Chain d x t	Chain with bi min.	Chain with ba max.	Weight	Standard length Links	Standard length L	G40 E10 Proof load	G40 E10 Breaking- load	G40 E14 Proof load	G40 E14 Breaking- load
[mm]	[mm]	[mm]	[kg/m]	[mm]	[mm]	[kN]	[kN]	[kN]	[kN]
14 x 50	16,3	47	4,10	215	10.750	39	78	32	64
16 x 64	20	55	5,30	167	10.688	50	100	42	84
19 x 75	22	63	7,40	143	10.725	71	142	60	120
22 x 86	26	74	9,90	119	10.234	95	190	80	160
26 x 100	31	87	13,80	83	8.300	128	255	110	220
30 x 120	36	102	18,70	47	5.640	171	342	148	296
34 x 136	39	113	23,80	35	4.760	250	500	190	380

Further dimensions and qualities on request.

Technical Datas

Chain length L production tolerance = $+0,3 / -0,15\%$ = 0,45% total; this means that the difference between chain lengths of 10 m is max. 45 mm.

Chain length production tolerance ΔS of matched chain lengths is 0,05% or max. 3 mm for two or multiple chain strand conveyors

Example of the order

16 pcs. DSZ-chains 22 x 86 G40E10 L = 119 links = 10.234 mm each, supplied as matched pairs

Quality grade	G40 E10	G40 E14
Breaking stress [N/mm ²]	250	210
Proof stress [N/mm ²]	125	105
Breaking elongation appr. [%]	2	2
Surface hardness at interlink HV 10	800	800
Carburizing depth HTÄ ... d +/- 0,01d	0,10 ¹⁾	0,14 ²⁾
Case hardening depth EHT 550 HV 3 ... d min.	0,063 ³⁾	0,09 ⁴⁾
Material: MnCr-alloyed		

Proof/Breaking load tolerance -10% permissible depending on the batches

Carburizing depth HTÄ after macroetching:

¹⁾ 30 ø u. 34 ø – 0,09 d

²⁾ 30 ø – 0,12 d; 34 ø – 0,11 d

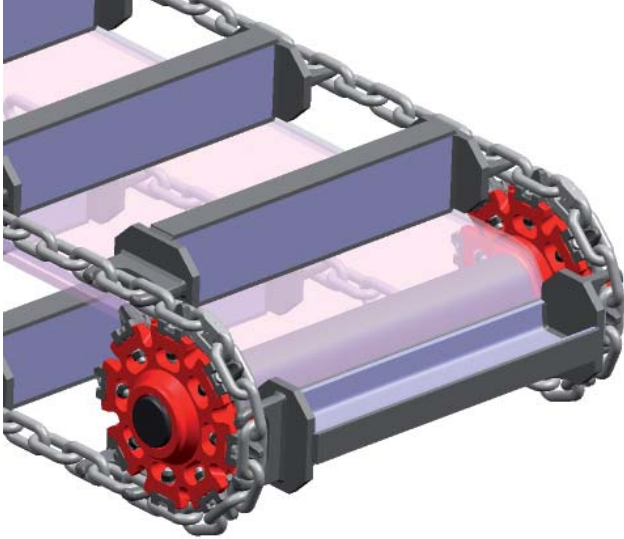
Case hardening depth EHT 550 HV 3

³⁾ 30 ø u. 34 ø – 0,05 d

⁴⁾ 30 ø – 0,08 d; 34 ø – 0,07 d

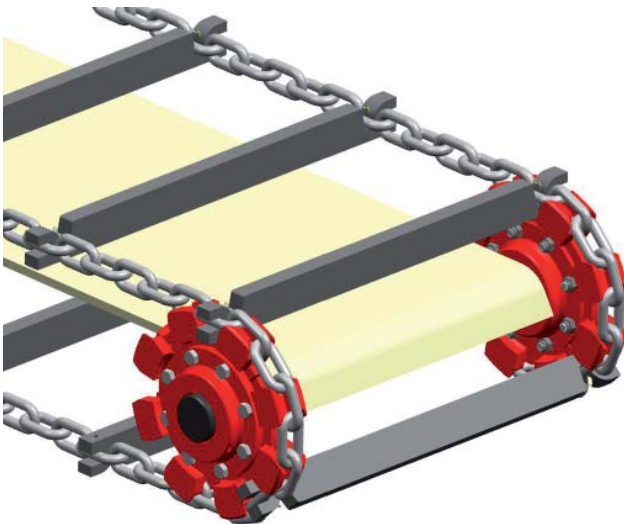
Chain system with chain sprockets

highly wear resistant



Chain system with pocket wheels

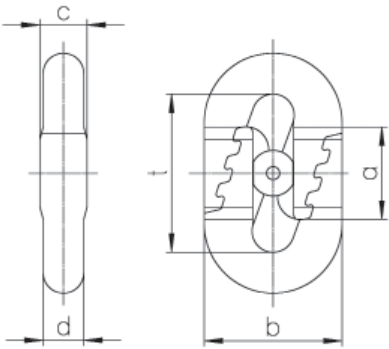
highly wear resistant




KHV Chain couplings

Chain coupling for individual chain lengths HV and DSZ. The chain couplings have the same technological characteristics as the corresponding highly wear resistant chains. Pay attention that the couplings should be assembled and installed according to the instructions included in the packaging. These couplings can only be mounted as vertical links. Run over sprockets, pocket wheels, plain chain wheels with or without groove.

Surface finish: shotblasted and waxed



KHV

KHV Chain couplings	Type	d [mm]	t [mm]	a [mm]	b [mm]	c [mm]	Weight [kg/pc.]
	KHV 22 x 86	22	86	58	74	27	1,70
	KHV 26 x 100	26	100	62	87	30	2,20
	KHV 30 x 120	30	120	70	105	36	3,00
	KHV 34 x 136	34	136	82	117	40	4,70
	KHV 38 x 144	38	144	95	134	47	5,50

Scope of delivery

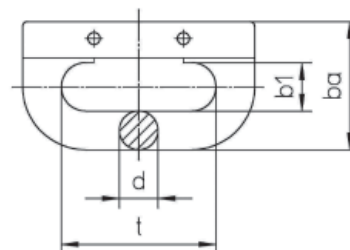
2 pcs. KHV-halves, 2 pcs. safety pins and safety nut or 1 pc. locking pin and 1 pc. safety pin DIN 1481

Example of the order


20 pcs. chain couplings KHV 22 x 86

VHV Connecting links

Connecting link for individual chain lengths HV and DSZ. The connecting links have the same technological characteristics as the corresponding highly wear resistant chains. Pay attention that the connecting links should be assembled and installed according to the instructions. These couplings are mounted as vertical or horizontal links in scraper conveyors with horizontal or only inclined conveying sections, but only as horizontal links in conveyors with horizontal and additional inclined conveying sections. Run as vertical and horizontal links over sprockets, plain chain wheels with or without groove, but are only mounted as vertical links for pocket wheels. Surface finish: shotblasted and waxed



VHV

VHV Connecting links	Type	d [mm]	t [mm]	bi [mm]	ba [mm]	Pin D x L	Weight [kg/pc.]
	VHV 14 x 50	14	50	16	46	4 x 14	0,25
	VHV 16 x 64	16	64	20	54	5 x 16	0,40
	VHV 19 x 75	19	75	22	65	5 x 20	0,65
	VHV 19 x 120	19	120	22	65	5 x 20	0,85
	VHV 22 x 86	22	86	26	76,5	6 x 22	1,00
	VHV 26 x 100	26	100	31	87	8 x 26	1,50
	VHV 30 x 120	30	120	36	102	10 x 32	2,55
	VHV 34 x 136	34	136	39,5	112	12 x 36	3,70

Scope of delivery

Connecting link, locking plate and 2 pcs. safety pins DIN 1481

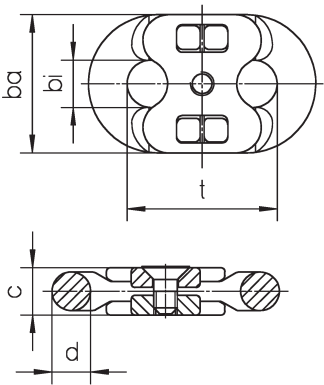
Example of the order

20 pcs. Connecting links VHV 22 x 86 G40E10

VGS Connecting links

Connecting link for individual chain lengths, these connecting links are always mounted as vertical links. Run over sprockets, pocket wheels, plain and grooved wheels.

Surface finish: electro galvanized



VGS

VGS Connecting links	Type	t [mm]	d [mm]	bi [mm]	ba [mm]	c [mm]	Screw	Weight [kg/pc.]
	VGS 10 x 38	10	38	12	35	12	M 6 x 12	0,12



Scope of delivery

2 pcs. VGS-connecting halves, 2 pcs. locking plates and
1 pc. screw DIN 7991-8.8

Example of the order

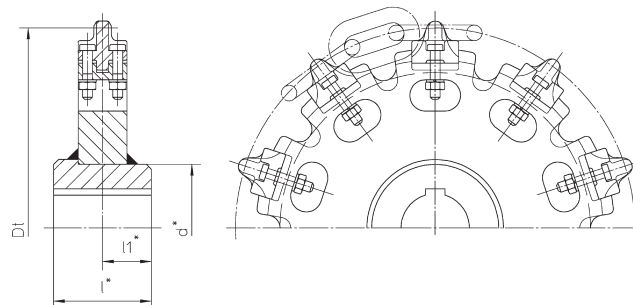
20 pcs. connecting links VGS 10 x 38

RHV-A and RHV-AG Chain sprockets



Sprockets for use with HV and DSZ – round steel chains with replaceable and adjustable individual teeth, made from MnCr alloyed steel, case hardened – highly wear resistant. Sprockets are welded steel fabrications, any number of teeth or hub design is available. Keyways are machined in the hubs of matched wheels to ensure precise alignment of the teeth. Hub design, bore diameter and key size can be specified by the customer. Shimplates can be fitted to adapt the pitch circle dia. of the sprocket to a chain lengthened due to wear in the interlink points of contact. This ensures continued smooth running of the chain over the sprocket and the maximum use of the case hardened layer in the chain. Shimplates and new teeth can be mounted without disassembly the chain.

Chain sprockets RHV-A: with cleaning slots

Chain sprockets RHV-AG: with cleaning slots and tooth segments

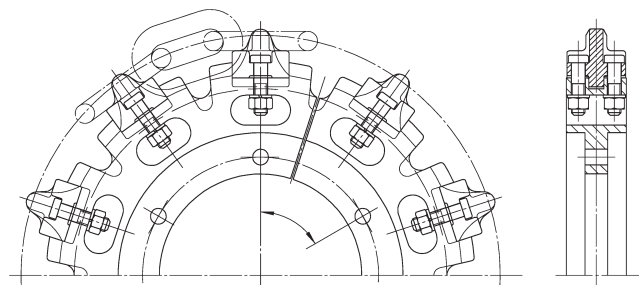


RHV-A

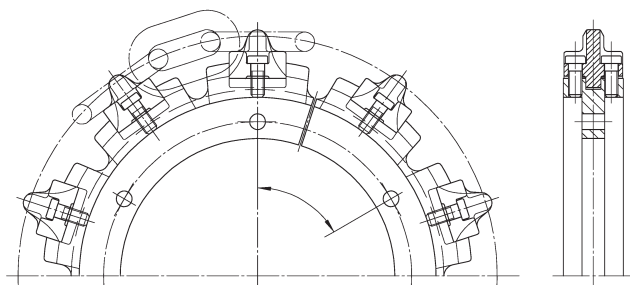
RHV-A and RHV-AG Chain sprockets	Type	Chain d x t	No. of teeth Z*	Pitch circle-ø Dt [mm]	Weight appr. [kg/pc.]
 RHV-A	RHV 14/8-50	14 x 50	8	256	10,00
	RHV 14/9-50	14 x 50	9	288	13,00
	RHV 14/10-50	14 x 50	10	319	17,00
	RHV 14/12-50	14 x 50	12	383	27,00
	RHV 16/8-64	16 x 64	8	327	17,00
	RHV 16/9-64	16 x 64	9	369	26,00
	RHV 16/10-64	16 x 64	10	409	36,00
	RHV 16/12-64	16 x 64	12	490	54,00
	RHV 19/8-75	19 x 75	8	384	33,00
	RHV 19/9-75	19 x 75	9	432	43,00
	RHV 19/10-75	19 x 75	10	479	56,00
	RHV 19/12-75	19 x 75	12	574	86,00
 RHV-AG	RHV 22/8-86	22 x 86	8	440	47,00
	RHV 22/9-86	22 x 86	9	495	62,00
	RHV 22/10-86	22 x 86	10	549	82,00
	RHV 22/12-86	22 x 86	12	659	134,00
	RHV 26/8-100	26 x 100	8	512	72,00
	RHV 26/9-100	26 x 100	9	575	100,00
	RHV 26/10-100	26 x 100	10	639	137,00
	RHV 26/12-100	26 x 100	12	766	190,00
	RHV 30/8-120	30 x 120	8	615	118,00
	RHV 30/9-120	30 x 120	9	691	160,00
	RHV 30/10-120	30 x 120	10	767	205,00
	RHV 30/12-120	30 x 120	12	919	280,00
	RHV 34/8-136	34 x 136	8	697	194,00
	RHV 34/9-136	34 x 136	9	783	230,00
	RHV 34/10-136	34 x 136	10	869	327,00
	RHV 34/12-136	34 x 136	12	1041	450,00
	RHV 38/8-144	38 x 144	8	738	240,00
	RHV 38/9-144	38 x 144	9	829	341,00
	RHV 38/10-144	38 x 144	10	920	405,00
	RHV 38/12-144	38 x 144	12	1103	498,00

* Any other number of teeth and sizes on request.

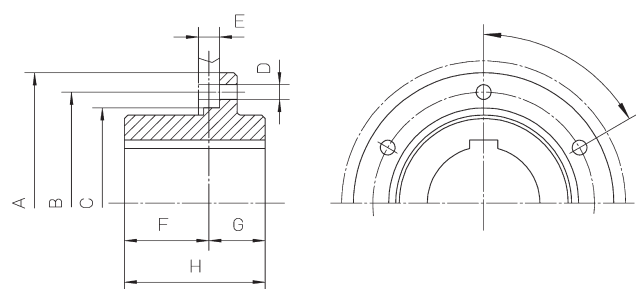
Hub length and hub diameter can be specified by the customer.



RHV-AG – style S1



RHV-AG – style S2



Hub



RHV-AG – style S1

RHV-AG – style S2

Sprocket tooth segments RHV-AG for existing hubs:

Style S1:

Individual teeth bolted to segmented disc

Style S2:

Individual teeth bolted into segmented disc

Required dimensions of the existing hub have to be specified.

Scope of delivery

Sprocket RHV-A with cleaning slots, replaceable and adjustable individual teeth and machined hub.

Sprocket RHV-AG with cleaning slots, 2 pcs. tooth segments with replaceable and adjustable individual teeth, machined hub, counter plate and mounting bolts and nuts.

Example of the order

2 pcs. drive sprockets RHV-A 22/10-86 - ready to install

for chain 22 x 86, No. of teeth $z = 10$

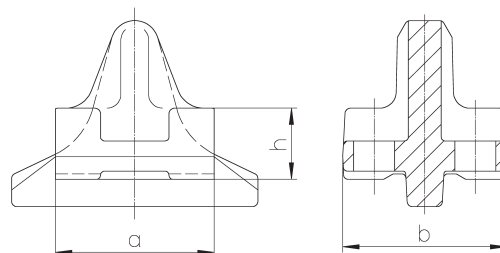
Hub length central $l = 160 \text{ mm}$ ($80 + 80$)

Hub bore dia. = 140 H7 and keyway acc. to DIN 6885


EHV Individual teeth

Individual EHV made from MnCr - alloyed steel, case hardened - highly wear resistant; surface hardness 800 HV10. The individual teeth can be adjusted with shimplates to adapt the pitch circle diameter of the RHV – sprocket to a chain lengthened due to wear in the interlink points of contact. This ensures continued smooth running of the chain.

Surface finish: shotblasted and waxed



EHV

EHV Individual teeth	Type	a [mm]	b [mm]	h [mm]	Screw*	Weight [kg/pc.]
	EHV 14 x 50	40	40	19	M 8 x 40	0,22
	EHV 16 x 64	48	48	23	M 10 x 50	0,40
	EHV 19 x 75	58	58	26	M 14 x 60	0,60
	EHV 22 x 86	68	70	30	M 16 x 70	1,10
	EHV 26 x 100	76	78	36	M 18 x 70	1,50
	EHV 30 x 120	90	90	42	M 20 x 90	2,50
	EHV 34 x 136	105	105	48	M 24 x 100	4,00
	EHV 38 x 144	110	110	54	M 24 x 110	5,50

EHV without shims

* Mounting parts: hex. socket head cap screw DIN 7984 - 8.8; spring washer DIN 127 and hex. nut DIN 934 - 8. Individual teeth with shimplates the screw length has to be advised.



EHV with shims

Scope of delivery

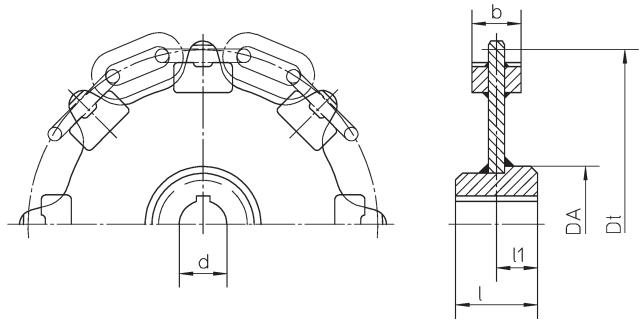
Individual teeth EHV with or without mounting screws and nuts

Example of the order



30 pcs. individual teeth EHV 22 x 86 – without mounting screws and nuts

IR Chain sprockets

Sprockets are welded steel fabrications either in one piece or with replaceable tooth segments for drive and tail sections; case hardened – highly wear resistant; fabricated steel sprockets can be provided for every medium and long chain pitch-tooth combination; any number of teeth available; hub design, bore diameter, and key size can be specified by the customer.



IR-W

IR .. / .. - W Chain sprockets IR .. / .. - W-SEG Chain sprockets	Type	Chain d x t	No. of teeth z*	Pitch circ- le ø Dt* [mm]	b [mm]	Hub** l [mm]	Hub** DA [mm]	Weight [kg/pc.]
	IR 10 / 6 - 38	10 x 38	6	147	34	65	70	3,50
	IR 10 / 8 - 38	10 x 38	8	195	34	65	70	4,60
	IR 10 / 10 - 38	10 x 38	10	243	34	90	100	9,70
	IR 14 / 6 - 50	14 x 50	6	193	45	70	80	6,20
	IR 14 / 8 - 50	14 x 50	8	256	45	90	100	12,00
	IR 14 / 10 - 50	14 x 50	10	320	45	100	110	17,00
	IR 14 / 15 - 50	14 x 50	15	478	45	130	140	37,00
	IR 16 / 6 - 64	16 x 64	6	247	50	100	110	14,00
	IR 16 / 7 - 64	16 x 64	7	288	50	100	110	16,00
	IR 16 / 8 - 64	16 x 64	8	328	50	130	140	27,00
	IR 16 / 10 - 64	16 x 64	10	409	50	130	160	35,00
	IR 16 / 12 - 64	16 x 64	12	490	50	150	180	55,00
	IR 19 / 6 - 75	19 x 75	6	290	55	130	140	25,00
	IR 19 / 8 - 75	19 x 75	8	384	55	150	170	43,00
	IR 19 / 10 - 75	19 x 75	10	479	55	150	170	53,00
	IR 19 / 12 - 75	19 x 75	12	575	55	200	220	97,00
	IR 22 / 6 - 86	22 x 86	6	332	64	150	160	38,00
	IR 22 / 7 - 86	22 x 86	7	387	64	150	200	57,00
	IR 22 / 8 - 86	22 x 86	8	441	64	200	200	75,00
	IR 22 / 10 - 86	22 x 86	10	550	64	200	230	105,00
	IR 22 / 12 - 86	22 x 86	12	659	64	220	250	142,00

IR-W

IR-W-SEG

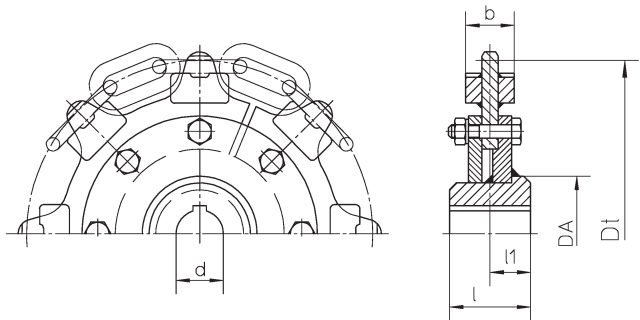
* Any other number of teeth and sizes on request.
** Hub length and hub diameter can be specified by the customer.

Scope of delivery

Chain sprocket IR ... W, in one piece, case hardened and with machined hub
Chain sprocket IR ... W-Seg, machined hub, 2 pcs. case hardened tooth segments, counter plate with mounting bolts and nuts

Example of the order

2 pcs. chain sprockets IR 16/10-64 W-Seg
ready to install
for chain 16 x 64, Number of teeth z = 10
Offset hub: length l = 130, length l1 = 50
Hub bore dia. = 100 H7 and keyway acc. to DIN 6885

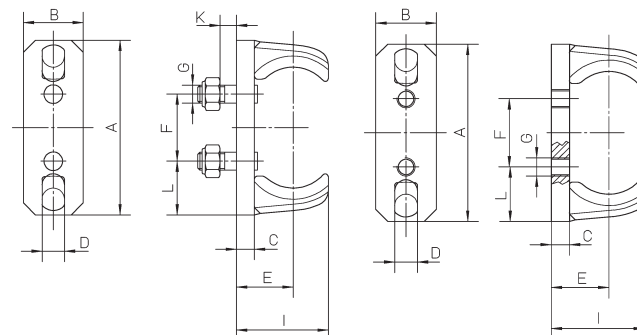


IR-W-SEG


FDD Flight attachments

Flight attachment for severe service in two strand and multiple chain strand conveyors, runs over chain sprockets and plain chain wheels with or without groove, two pins made from MnCr-alloyed steel, forged and case hardened, highly wear resistant, welded into steel plate, simple assembly and disassembly on the slack chain, suitable for reverse operation, insert flight attachment in vertical chain links, assembly flight bars and tighten the nuts or bolts to the specified torque.

Surface finish: shotblasted-oiled



FDD

FDD Flight attachments	Type	Chain d x t	A [mm]	B	C	D	E	F	G	I	L	K	Weight [kg/pc.]
	FDD 14 x 50	14 x 50	117	40	12	15	38	45	M 12	61,5	36	12	0,70
	FDD 16 x 64	16 x 64	150	50	15	19	48	52	M 16	76	49	15	1,20
	FDD 19 x 75	19 x 75	175	60	20	21	58	65	M 20	90	55	20	2,00
	FDD 22 x 86	22 x 86	200	70	20	25	68	71	M 20	106	64,5	20	3,00
	FDD 26 x 100	26 x 100	235	80	20	30	72	85	M 20	116	75	20	4,50
	FDD 30 x 120	30 x 120	280	90	25	35	85	98	M 24	136	91	24	6,70
	FDD 34 x 136	34 x 136	320	100	30	38	98	110	M 27	155	105	30	10,00

Scope of delivery

FDD with tapped holes: without screws and nuts

FDD with threaded bolts: incl. 2 pcs. locking nuts DIN 980-8

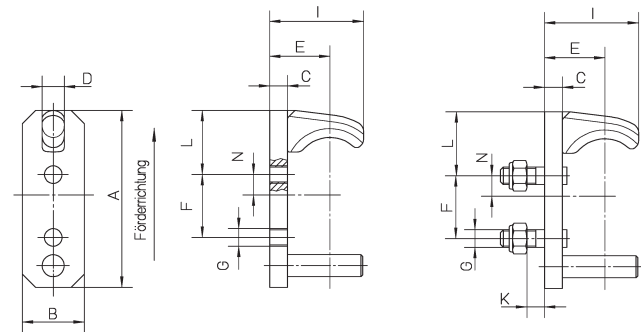
Example of the order

100 pcs. flight attachments FDD 22 x 86 with threaded bolts


FDB Flight attachments

Flight attachment for severe service in two strand and multiple chain strand conveyors, runs over chain sprockets and plain chain wheels with or without groove; one forged pin and round pin made from MnCr-alloyed steel, case hardened, highly wear resistant, welded into steel plate, simple assembly and disassembly even on the tensioned chain; insert flight attachment in vertical chain links, assembly flight bars and tighten the nuts or bolts to the specified torque.

Surface finish: shotblasted-oiled



FDB

FDB Flight attachments	Type	Chain d x t	A [mm]	B	C	D	E	F	G	I	L	K	N	Weight [kg/pc.]
	FDB 14 x50	14 x 50	117	40	12	15	38	45	M 12	61,5	40	12	18	0,70
	FDB 16 x 64	16 x 64	150	50	15	19	48	52	M 16	76	52	15	20	1,20
	FDB 19 x 75	19 x 75	175	60	20	21	58	65	M 20	90	62,5	20	24	2,00
	FDB 22 x 86	22 x 86	200	70	20	25	68	71	M 20	106	72,5	20	23	3,00
	FDB 26 x 100	26 x 100	235	80	20	30	72	85	M 20	116	85	20	28	4,50
	FDB 30 x 120	30 x 120	280	90	25	35	85	98	M 24	136	100	25	36	6,70
	FDB 34 x 136	34 x 136	320	100	30	38	98	110	M 27	155	115	30	42	10,00

Scope of delivery

- FDB with tapped holes: without screws and nuts
- FDB with threaded bolts: incl. 2 pcs. locking nuts DIN 980-8

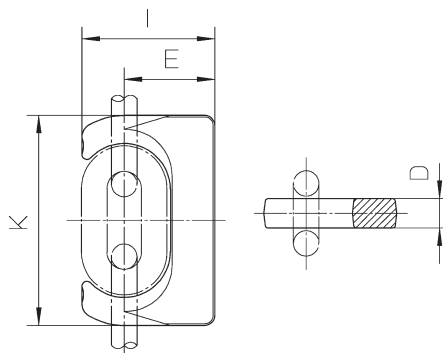
Example of the order

100 pcs. flight attachments FDB 22 x 86 with threaded bolts


KFB Flight attachments

Flight attachment for severe service in two strand and multiple chain strand conveyors, runs over chain sprockets and plain chain wheels with and without groove, made from MnCr-steel, forged and case hardened, highly wear resistant, welding area prepared for welding to flight bar, simple assembly and disassembly on the slack chain, suitable for reverse operation.

Surface finish: shotblasted-oiled



KFB

KFB Flight attachments	Type	Chain d x t	K [mm]	D [mm]	E [mm]	L [mm]	Weight [kg/pc.]
	KFB 16 x 64	16 x 64	135	19	59	83	0,80
	KFB 19 x 75	19 x 75	156	21	69	100	1,20
	KFB 22 x 86	22 x 86	182	25	80	116	2,00
	KFB 26 x 100	26 x 100	220	30	92	135	3,40
	KFB 30 x 120	30 x 120	252	35	110	160	5,30
	KFB 34 x 136	34 x 136	284	38	122	177	7,80
	KFB 38 x 144	38 x 144	318	43	118	180	9,90

Stick electrode

ISO 3580: E Mo B, EN 1599: E Mo B 4 2 H5,
AWS A5.5-ASME II/C, SFA5.5: E 7018-A 1

Scope of delivery

Flight attachment

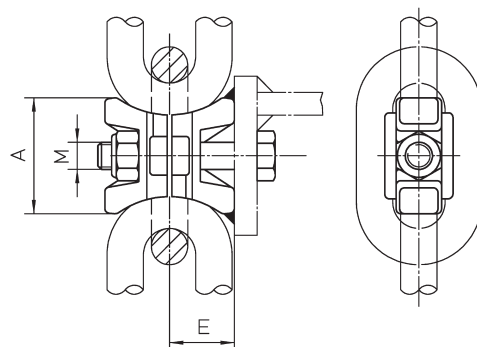
Example of the order

100 pcs. flight attachments KFB 22 x 86


SDS Flight attachments

Flight attachment for severe service in two strand and multiple chain strand conveyors, runs over chain sprockets and plain chain wheels with or without groove, two SDS-halves – forged and case hardened, highly wear resistant, one SDS-half to weld onto the head plate of the flight bar, simple assembly and disassembly even on the tensioned chain system, install the flight bar on the vertical chain links in the required flight spacing, insert 2nd locking half and tighten the attachment bolt to the specified torque; alternativ one SDS-half already welded to distance plate available.

Surface finish: shotblasted – waxed



SDS

SDS Flight attachments	Type	Chain d x t	E* [mm]	A [mm]	M [mm]	K** [mm]	Weight [kg/pc.]
	SDS 14 x 50	14 x 50	34	40	10	10	0,20
	SDS 14 x 64	14 x 64	23,5	53	10	10	0,30
	SDS 16 x 64	16 x 64	37	51	12	10	0,50
	SDS 19 x 75	19 x 75	33,5	61	14	10	0,70
	SDS 22 x 86	22 x 86	52	70	16	15	1,00
	SDS 26 x 100	26 x 100	60	80	20	15	1,30
	SDS 30 x 120	30 x 120	71	100	20	15	1,80

* Any other sizes and dimensions E on request.

** Recommended plate thickness.

Stick electrode

ISO 2560: E 51 5 B110 20 (H)

EN 499: E 42 5B4 2 H5

AWS A5.1-ASME II/C, SFA5.1: E 7018-1

Scope of delivery

2 pcs. halves, 1 pc. hex. bolt DIN 931-8.8, 1 pc. locking nut DIN 980-8.

Size of the distance plate and bolt length has to be specified

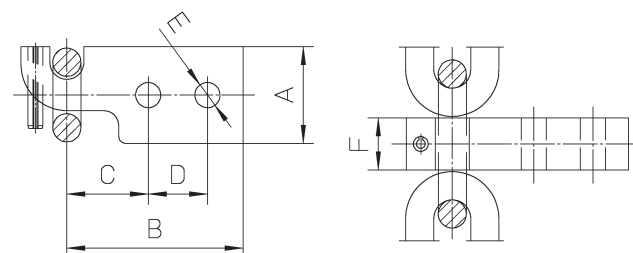
Example of the order

80 pcs. flight attachments SDS 22 x 86 with mounting bolt and nut


KBE-I Flight attachments

Flight attachment for medium to severe service in two strand and multiple chain strand conveyors, runs over chain sprockets and plain chain wheels without groove, made from steel – wear resistant; for welding or bolting to flight bar, simple assembly and disassembly on the chain, pivot chain link into the flight attachment and secure with locking pin.

Surface finish: shotblasted – waxed



KBE-I

KBE-I Flight attachments	Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Weight [kg/pc.]
	KBE-I 14 x 50	50	105	58	30	13	20	0,70
	KBE-I 16 x 64	56	130	70	40	17	28	1,20
	KBE-I 19 x 75	65	130	70	40	17	35	2,00
	KBE-I 22 x 86	75	140	80	40	21	40	3,20

Any other sizes and dimensions on request.

Scope of delivery

Flight attachment and safety pin DIN 1481 without bolts and nuts

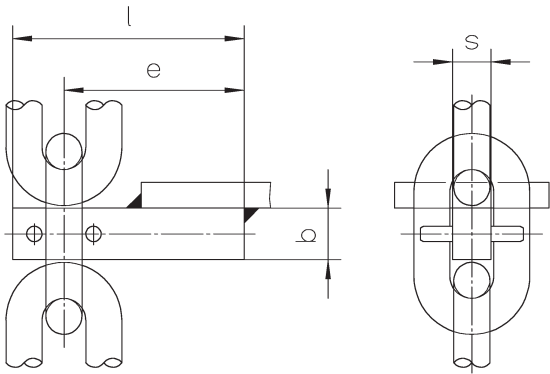
Example of the order

100 pcs. flight attachments KBE-I 22 x 86


ST Flight attachments

Flight attachment made from steel for welding to flight bar; suitable for light operating conditions in two strand chain conveyors, runs over chain sprockets and plain chain wheels without groove.

Surface finish: shotblasted – oiled



ST

ST Flight attachments	Type	Chain d x t	e [mm]	l [mm]	b [mm]	s [mm]	Weight [kg/pc.]
	ST 8 x 31	8 x 31	62	75	14	10	0,10
	ST 10 x 38	10 x 38	73	90	16	12	0,10
	ST 14 x 50	14 x 50	90	110	20	15	0,30
	ST 16 x 64	16 x 64	105	130	30	20	0,70
	ST 19 x 75	19 x 75	110	140	35	20	0,90
	ST 22 x 86	22 x 86	125	160	40	25	1,30

Any other sizes and dimensions on request.

Stick electrode

ISO 2560: E 51 5 B110 20 (H)
EN 499: E 42 5B4 2 H5
AWS A5.1-ASME II/C, SFA5.1: E 7018-1

Scope of delivery

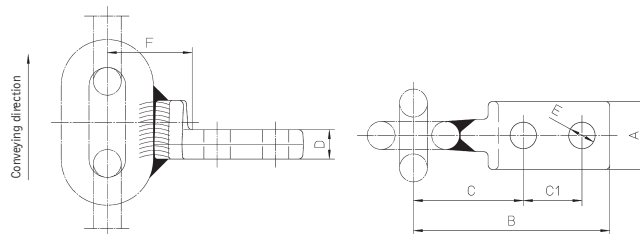
Flight attachment and 2 pcs. safety pins DIN 1481

Example of the order


100 pcs. flight attachments ST 19 x 75

Attachments – weld-on plate

Attachment made from steel; welded to round steel chain for bolting on flight bar; suitable for medium to severe operating conditions in two strand and multiple chain strand conveyors, runs over chain sprockets, pocket wheels and plain chain wheels with or without groove; tighten hex. bolts to the specified torque.



Weld on plate

Attachments – weld-on plate	Type	Chain d x t	A [mm]	B [mm]	C [mm]	C1 [mm]	D [mm]	E [mm]	F [mm]	Weight [kg/pc.]
	Weld on plate 18 x 64	18 x 64	35	126	51	40	30	17	48	0,63
	Weld on plate 19 x 75	19 x 75	46	134	75	40	20	18	58	0,75
	Weld on plate 22 x 86	22 x 86	46	139	80	40	20	18	63	0,75

Any other sizes and dimensions on request.

Scope of delivery

Round steel chain with weld-on plates without mounting bolts and nuts

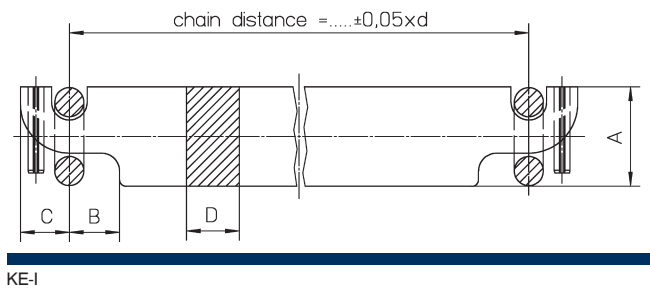
Example of the order


10 pcs. HV-chains 22 x 86 G80 E10 L = 119 links = 10234 mm,
supplied as matched pairs, with weld on plates 22 x 86,
flight spacing = 6 links

KE-I Flight bars

Flight bar suitable for severe service in two strand and multiple chain strand conveyors, made from steel or high resistant Hardox-steel available, flight bar length resp. chain center distance as specified by the customer, simple assembly and disassembly on the slack chain, pivot chain links in the flight bar and secure with locking pins. Runs over chain sprockets and plain chain wheels without groove.

Surface finish: natural black-oiled



KE-I Flight bars	Type	Chain d x t	A [mm]	B [mm]	C [mm]	D [mm]
	KE-I 14 x 50	14 x 50	50	27	23	20
	KE-I 16 x 64	16 x 64	56	30	27	28
	KE-I 19 x 75	19 x 75	65	33	31	35
	KE-I 22 x 86	22 x 86	75	38	37	40

Any other sizes and dimensions on request.

Scope of delivery

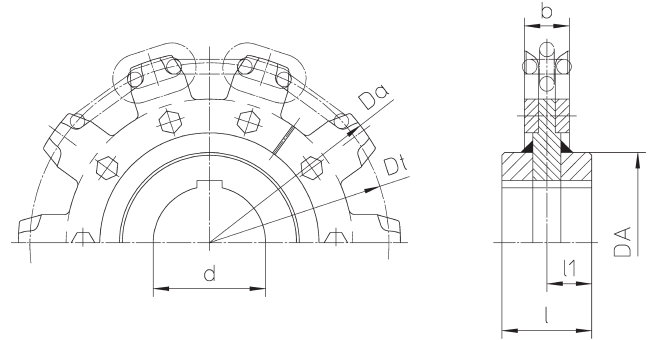
Flight bar with 2 pcs. safety pins DIN 1481

Example of the order



100 pcs. flight bars KE-I 22 x 86, Chain center distance = 600 mm

KR Pocket wheels

Pocket wheels are welded steel fabrications either in one piece or with replaceable pocket segments for drive, guide and tail sections; case hardened – highly wear resistant, fabricated steel pocket wheels can be provided for every chain pitch-tooth combination; any number of pockets available; hub design, bore diameter, and key size can be specified by the customer.



KR-W-SEG

	Type	Chain	No. of teeth	Pitch circle diameter	b	Hub**	Hub**	Weight
KR ../...W Pocket wheel								
KR ../...W-SEG Pocket wheel		d x t	z*	[mm]	[mm]	l	DA	[kg/pc.]
 KR-W-SEG 	KR 10 / 5 - 38	10 x 38	5	124	40	65	70	4,80
	KR 10 / 6 - 38	10 x 38	6	147	40	65	70	6,30
	KR 14 / 5 - 50	14 x 50	5	162	60	65	70	9,90
	KR 14 / 6 - 50	14 x 50	6	194	60	65	70	14,00
	KR 14 / 8 - 50	14 x 50	8	257	60	90	100	27,00
	KR 14 / 10 - 50	14 x 50	10	320	60	100	110	42,00
	KR 16 / 8 - 64	16 x 64	8	329	70	130	150	57,00
	KR 16 / 9 - 64	16 x 64	9	368	70	130	150	69,00
	KR 19 / 8 - 75	19 x 75	8	385	70	150	170	82,00
	KR 19 / 10 - 75	19 x 75	10	479	70	150	170	78,00
	KR 22 / 8 - 86	22 x 86	8	440	80	170	180	70,00
	KR 22 / 10 - 86	22 x 86	10	549	80	170	200	105,00
	KR 26 / 8 - 100	26 x 100	8	513	105	220	250	227,00
	KR 26 / 10 - 100	26 x 100	10	639	105	220	250	321,00
	KR 34 / 7 - 136	34 x 136	7	612	150	220	250	381,00

* Any other number of pockets and sizes on request.

** Hub length and hub diameter can be specified by the customer.

KR-W

Scope of delivery

Pocket wheel KR ... W1, in one piece, case hardened and with machined hub

Pocket wheel KR ... W-Seg, machined hub, 2 pcs. case hardened tooth segments, counter plate with mounting bolts and nuts

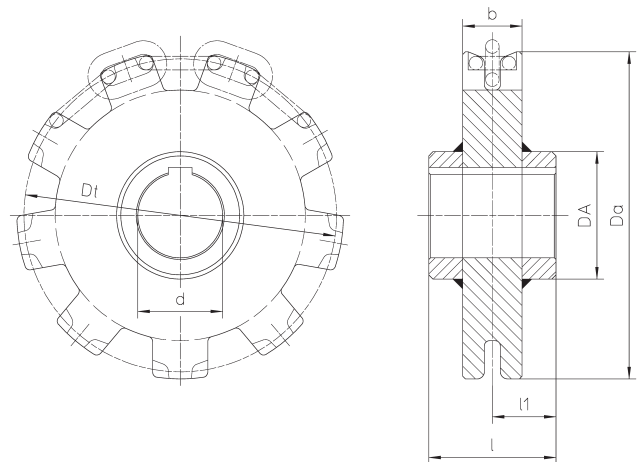
Example of the order

2 pcs. pocket wheels KR 19/10-75 W-Seg
ready to install

for chain 19 x 75, Number of teeth z = 10

Offset hub: length l = 150, length l1 = 50

Hub bore dia. = 100 H7 and keyway acc. to DIN 6885

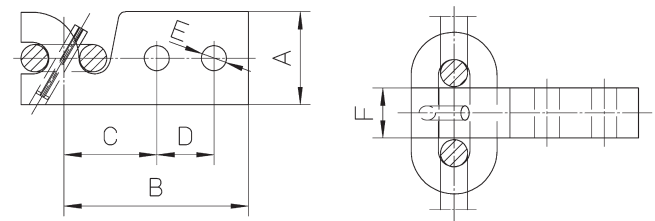


KR-W

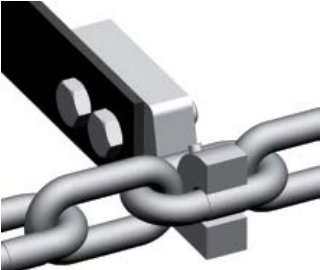
KBE-A Flight attachments

Flight attachment for medium to severe service in two strand and multiple chain strand conveyors, runs over pocket wheels and plain chain wheels without groove, made from steel – wear resistant; for welding or bolting to flight bar, simple assembly and disassembly on the chain, pivot chain link into the flight attachment and secure with locking pin.

Surface finish: shotblasted – waxed



KBE-A

KBE-A Flight attachments	Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	Weight [kg/pc.]
	KBE-A 14 x 50	50	105	58	30	13	20	0,70
	KBE-A 16 x 64	56	130	70	40	17	28	1,20
	KBE-A 19 x 75	65	130	70	40	17	35	2,00
	KBE-A 22 x 86	75	140	80	40	21	40	3,20

Any other sizes and dimensions on request.

Scope of delivery

Flight attachment and safety pin DIN 1481 without bolts and nuts

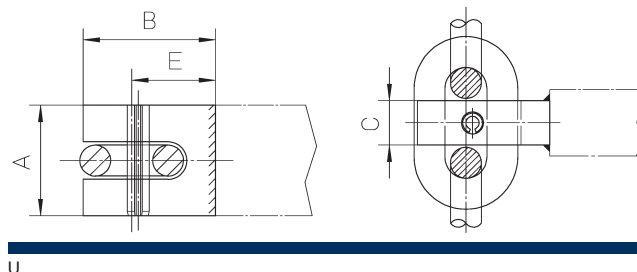
Example of the order


100 pcs. flight attachments KBE-A 22 x 86

U Flight attachments

Flight attachment made from steel for welding to flight bar; suitable for light to medium operating conditions in two strand and multiple chain strand conveyors, runs over pocket wheels and plain chain wheels without groove.

Surface finish: shotblasted – oiled



U Flight attachments	Type	Chain d x t	A [mm]	B [mm]	C [mm]	E [mm]	Weight [kg/pc.]
	U 14 x 50	14 x 50	50	60	20	38	0,35
	U 16 x 64	16 x 64	55	70	28	44	0,60
	U 19 x 75	19 x 75	65	80	35	50	1,00
	U 22 x 86	22 x 86	75	95	40	60	1,60
	U 26 x 100	26 x 100	90	111	45	70	2,50

Any other sizes and dimensions on request.

Stick electrode

ISO 2560: E 51 5 B110 20 (H)

EN 499: E 42 5B4 2 H5

AWS A5.1-ASME II/C, SFA5.1: E 7018-1

Scope of delivery

Flight attachment and 1 pc. safety pin DIN 1481

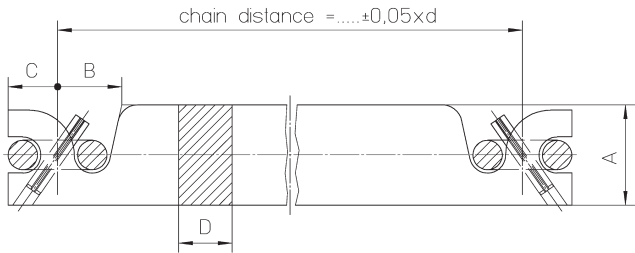
Example of the order

100 Stk. flight attachments U 19 x 75

KE-A Flight bars

Flight bar suitable for severe service in two strand and multiple chain strand conveyors, made from steel or high resistant Hardox-steel available, flight bar length resp. chain center distance as specified by the customer, simple assembly and disassembly on the slack chain, pivot chain links in the flight bar and secure with locking pins. Runs over chain sprockets and plain chain wheels without groove,

Surface finish: natural black-oiled



KE-A

KE-A Flight bars	Type	Chain d x t	A [mm]	B [mm]	C [mm]	D [mm]
	KE-A 14 x 50	14 x 50	50	30	23	20
	KE-A 16 x 64	16 x 64	56	35	27	28
	KE-A 19 x 75	19 x 75	65	40	31	35
	KE-A 22 x 86	22 x 86	75	48	37	40

Any other sizes and dimensions on request.

Scope of delivery

Flight bar with 2 pcs. safety pins DIN 1481

Example of the order

100 pcs. flight bars KE-A 22 x 86, Chain center distance = 600 mm

Plain tail and idler wheels

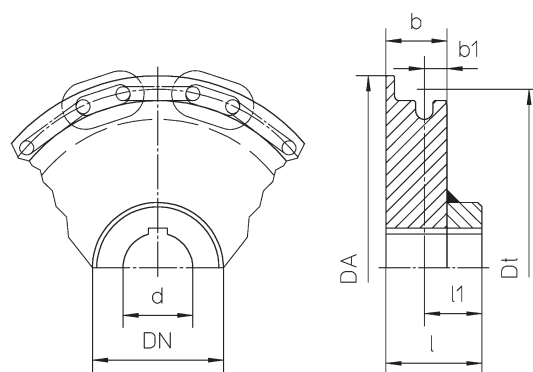
Plain tail and idler wheels ULR, ULS, UL and UK for scraper conveyors, are welded steel fabrications with case hardened chain contact points – highly wear resistant; any outside resp. pitch circle dia. available; hub design, bore diameter and key size can be specified by the customer.

ULR ... grooved and flanged chain wheel

ULS ... grooved and flanged chain wheels with replaceable segments

UK ... grooved chain wheel

UL ... plain flanged chain wheel

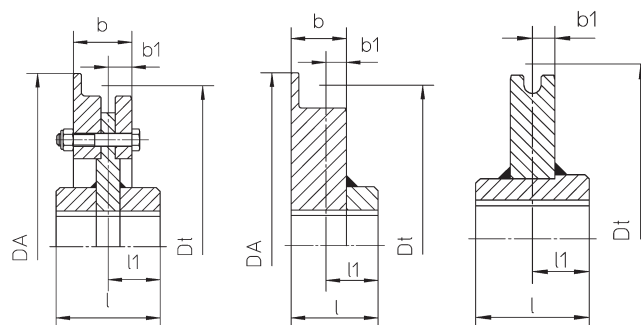


ULR

	Type	Chain	Dt	DA	b	b1	Hub** l	Hub** DN	Corresponding No. of teeth
		d x t	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	
ULR	U ... 10/147	10 x 38	147	175	45	14,7	65	70	6
	U ... 10/195	10 x 38	195	225	45	14,7	65	70	8
	U ... 14/256	14 x 50	256	280	60	22	90	100	8
	U ... 14/288	14 x 50	288	310	60	22	90	100	9
	U ... 14/319	14 x 50	319	345	60	22	90	110	10
	U ... 14/383	14 x 50	383	410	60	22	90	110	12
	U ... 16/328	16 x 64	328	360	70	24,5	100	140	8
	U ... 16/369	16 x 64	369	400	70	24,5	100	140	9
	U ... 16/409	16 x 64	409	440	70	24,5	100	160	10
	U ... 16/490	16 x 64	490	520	70	24,5	100	160	12
ULS	U ... 19/384	19 x 75	384	420	80	29,5	120	170	8
	U ... 19/432	19 x 75	432	465	80	29,5	120	170	9
	U ... 19/479	19 x 75	479	515	80	29,5	120	170	10
	U ... 22/440	22 x 86	440	480	95	34,5	130	190	8
	U ... 22/495	22 x 86	495	540	95	34,5	130	190	9
	U ... 22/550	22 x 86	550	595	95	34,5	130	190	10
	U ... 26/513	26 x 100	513	560	105	40	155	200	8
	U ... 26/576	26 x 100	576	630	105	40	155	200	9
	U ... 30/615	30 x 120	615	675	125	47	160	200	8
	U ... 30/691	30 x 120	691	750	125	47	160	250	9
UK	U ... 34/697	34 x 136	697	760	140	52	180	250	8
	U ... 34/783	34 x 136	783	850	140	52	180	250	9

* Any other sizes and dimension on request.

** Hub length and hub diameter can be specified by the customer.



ULS

UL

UK

Example of the order

2 pcs. idler wheels ULR 22/550

for chain 22 x 86, pitch circle dia. = 550 mm

Offset hub: length l = 150 mm, length l1 = 100 mm

Hub bore dia. = 80 H7 and keyway acc. to DIN 6885

Scraper Conveyors

pewag Conveyor Chains as per works standard
and components

38-47



Scraper Conveyors

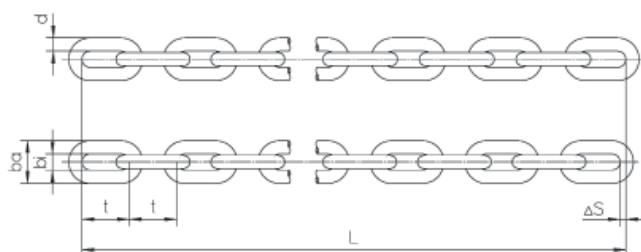
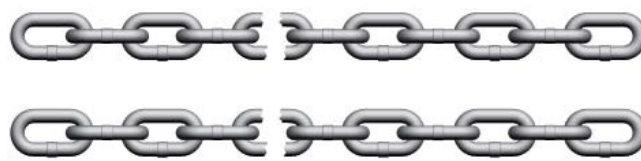
Chains and Components



Round steel chains for conveyors as per works standard

Round steel chains for conveyors with low conveying capacities and service hours, e.g. agricultural applications or cleaning scraper conveyors under belt conveyors etc; further special application are e.g. chains 8 x 25,4 G50 E7 electro galvanized in poultry processing plants.

Surface finish: up to chain diameter 11 mm natural black - oiled, polished and waxed or as specified by the customer



WN

Standard and quality	Chain d x t	Chain width b1 min. [mm]	Chain width ba max. [mm]	Length 11 x t Tolerance Type A [mm]	Weight [kg/m]	Proof- load [kN]	Breaking- load [kN]
WN G60	7 x 22	8,3	23,7	242 + 1,5/-0,5	1,04	32,00	50,00
WN G80	7 x 22	8,3	23,7	242 + 1,5/-0,5	1,04	40,00	60,00
WN G60	8 x 24	9,2	26,8	264 + 1,2/-0,6	1,38	40,00	63,00
WN G80	8 x 24	9,2	26,8	264 + 1,2/-0,6	1,38	50,00	80,00
WN G50 E7	8 x 25,4	9,4	26,6	279,4 + 1,1/-0,4	1,35	24,00	40,00
WN G80	8 x 31	10,3	28	341 + 1,4/-0,5	1,26	40,50	80,00
WN G80 E10	8 x 31	10,3	28	341 + 1,4/-0,5	1,26	24,00	40,00
WN G60	9 x 27	11	31	297 + 2,5/-0,8 + 1,3/-0,7	1,80	50,00	80,00
WN G80	9 x 27	11	31	297 + 2,5/-0,8 + 1,3/-0,7	1,80	63,00	100,00
WN G80	9 x 31	11	31	341 + 1,4/-0,5	1,67	63,00	100,00
WN G60	10 x 28	14	35,9	308 + 1,4/-0,7	2,28	63,00	100,00
WN G80	10 x 31	11	33	341 + 1,4/-0,5	2,10	80,00	125,00
WN G40 E10	10 x 35	14	36	385 + 1,7/-0,9	2,00	20,00	40,00
WN G60	10 x 35	14	36	385 + 1,7/-0,9	2,00	63,00	100,00
WN G80	10 x 35	14	36	385 + 1,7/-0,9	2,00	80,00	125,00
WN G80 E10	10 x 38	12,5	34	418 + 1,9/-0,55	1,97	38,00	64,00
WN G40 E10	10 x 50	14	36	550 + 3,9/-2,2	1,80	20,00	40,00
WN G50	10 x 50	14	36	550 + 3,9/-2,2	1,80	40,00	80,00
WN G80	11 x 31	12,8	37,2	341 + 1,5/-0,8	2,70	95,00	150,00
WN G40 E10	13 x 45	18	47	495 + 2,2/-1,1	3,50	32,00	63,00
WN G60	13 x 45	18	47	495 + 2,2/-1,1	3,50	106,00	170,00
WN G40 E10	13 x 65	18,2	46,8	715 + 5,0/-2,9	3,07	32,00	64,00
WN G60	13 x 65	18,2	46,8	715 + 5,0/2,9	3,07	85,00	170,00
WN G40 E10	16 x 80	22,4	57,6	880 + 6,2/-3,5	4,70	50,00	100,00
WN G50	16 x 80	22,4	57,6	880 + 6,2/-3,5	4,70	105,00	210,00

Proof/Breaking load tolerance -10% permissible depending on the batches.

Technical Datas

Chain length L production tolerance = $+0,3 / -0,15\% = 0,45\%$ total; this means that the difference between chain lengths of 10 m is max. 45 mm.

Chain length production tolerance ΔS of matched chain lengths is 0,05% or max. 3 mm for two or multiple chain strand conveyors.

Chain length tolerance ΔS of matched chain ends max. 0,5 mm.

Tolerance

for nominal diameter d: ca. $\pm 0,4\%$

for 1x pitch t: ca. 1,93%

for measured length 11 x t: ca. 0,48%

divided into $+2/3$ and $-1/3$

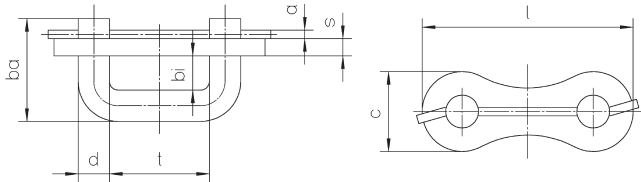
Example of the order

50 pcs. chains WN - A 8 x 31 G80 L = 281 links, supplied as matched pairs

VG Connecting links

Connecting link with closing plate and locking pin for chains;
run over pocket wheels as vertical mounted chain link; breaking
load as corresponding chain in quality G80.

Surface finish: PCP-coated



VG

VG Connecting links	Type	d	t	ba	bi	c	s	a	l	Weight
		[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg/pc.]
	VG 7 x 22	7	22	27	10	20	4	2,5	52	0,04
	VG 8 x 24	8	24	29	11	20	4	3	52	0,05
	VG 9 x 27	9	27	32	12	22	4	3	62	0,07
	VG 9/8 x 31	9	31	31	11	22	4	3	62	0,07
	VG 10 x 28	11	28	36	14	22	4	3	62	0,09
	VG 11/10 x 31	11	31	36	14	28	5	3	73	0,11

Scope of delivery

Connecting link, closing plate and locking pin

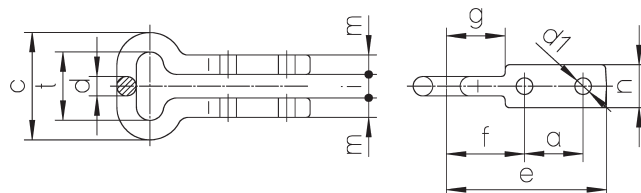
Example of the order

100 pcs. connecting links VG 8 x 31


BM Flight attachments

Flight attachment for use with chain ends and for bolting on the flight bars, forged, through hardened and with inductively hardened interlink points of contact; hardening depth 0,1 x d; surface hardness min. 600 HV10; runs over chain sprockets or pocket wheels and plain chain wheels with or without groove.

Surface finish: PCP-coated



BM

			t	d	i	m	c	e	f	g	a	n	d1	Weight [kg/pc.]
BM Flight attachments	Type	Chain d x t	[mm]											
	BM 8 x 31*	8 x 31	31	8	21	10	47	62	30	11	20	20	9	0,18
	BM 10 x 35	10 x 35	35	10	12	10	55	82	40	30	30	22	8,5	0,25
	BM 13 x 45	13 x 45	45	13	15	12	71	100	50	34	35	28	12,5	0,50

Any other sizes on request.

* Only trough hardened.

Scope of delivery

Flight attachment without mounting bolts and nuts

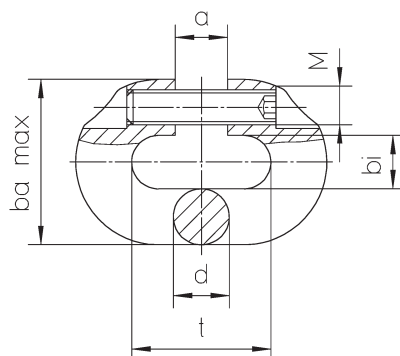
Example of the order

100 pcs. flight attachments BM 10 x 35


Screw connecting links, Screw-VG

Connecting link for chains; run over sprockets and/or pocket wheels depending on the chain pitch; recommended assembly as vertical mounted chain links; breaking load approx. 1,5 times of the proof load.

Surface finish: PCP-coated



Screw-VG

Screw connecting links Screw-VG	Type	Chain	d	t	ba max.	a	bi min.	Screw	Proof load [kn]	Weight [kg/pc.]
		d x t	[mm]	[mm]	[mm]	[mm]	[mm]			
	Schraub-VG 6 x 18,5	6 x 18,5 ¹⁾	6	18,5	20,6	6,7	7,4	M 4	13,3	0,013
	Schraub-VG 7 x 22	7 x 22	7	22	24	8	9	M 5	20	0,02
	Schraub-VG 8 x 24	8 x 24	8	24	27	9	10	M 5	24	0,03
	Schraub-VG 8 x 25,4	8 x 25,4	8	25,4	26	9	9	M 5	24	0,03
	Schraub-VG 9 x 27	9 x 27	9	27	31	10	12	M 6	30	0,05
	Schraub-VG 8/9 x 31	9 x 31	9	31	31	9,5	11	M 6	30	0,05
	Schraub-VG 10 x 28	10 x 28	10	28	34	11	14	M 7	37	0,06
	Schraub-VG 10 x 35	10 x 35	10	35	36	11	14	M 7	37	0,07
	Schraub-VG 10 x 50	10 x 50	10	50	36	11	14	M 7	37	0,09
	Schraub-VG 11 x 31	11 x 31 ²⁾	11	31	37	12	14	M 8	45	0,08
	Schraub-VG 13 x 65	13 x 65	13	65	47	15	18	M 8	35	0,21
	Schraub-VG 16 x 80	16 x 80	16	80	58	17	22	M 10	80	0,38

Any other sizes on request.

¹⁾ Screw-VG 6x18,5 also suitable for chain 5x18,5 as vertical mounted link.

²⁾ Screw-VG 11x31 also suitable for chain 10x31 as vertical mounted link.

Scope of delivery

Screw connecting link with screw

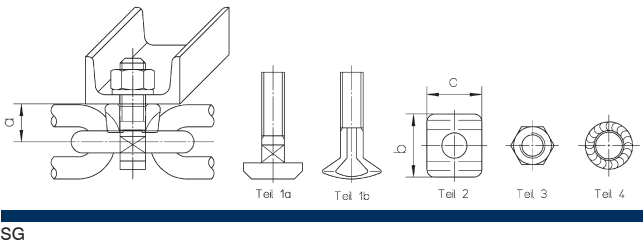
Example of the order


100 pcs. screw-VG 8 x 25,4

SG Flight attachments

Flight attachment for bolting on the flight bar; run over pocket wheels on horizontal mounted chain links.

Surface finish: natural black (nsw) or electro galvanized (gzn)



SG Flight attachments	Type	Chain	Part 1 a + b	a	b	c	Weight
		d x t	Screw	[mm]	[mm]	[mm]	per set [kg]
	SG 7 x 22	7 x 22	M 8 x 35	13,5	26	20,5	5,70
	SG 8 x 24	8 x 24	M 8 x 35	14	29	21	5,95
	SG 8 x 31	8 x 31	M 10 x 40	16	31	25	8,30
	SG 9 x 27	9 x 27	M 8 x 35	15,5	30	22	5,95
	SG 9 x 31	9 x 31	M 10 x 40	16,5	31	25	8,30
	SG 10 x 31	10 x 31	M 10 x 40	19,5	36	30	8,68
	SG 10 x 38	10 x 38	M 10 x 40	19,5	38	0	8,68
	SG 14 x 50	14 x 50	M 16 x 60	23	48	35	28,67

Scope of delivery per set

- Part 1a highly durable special T-head bolt or
- Part 1b highly durable profiled bolt
- Part 2 intermediary fitting piece (drop-forged)
- Part 3 nut or locking nut
- Part 4 lock washer

Example of the order

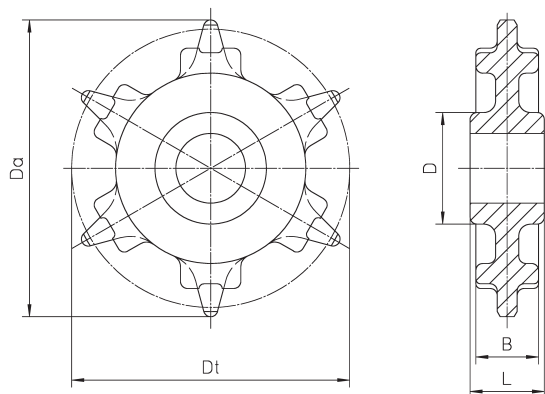
200 pcs. flight attachments SG 8 x 31

IR Chain sprockets, various cast qualities


Chain sprockets in one piece – various cast qualities.

Material

GG gray cast
GS 52 cast steel
GS 52 E case-hardened cast steel



IR

	Type	Chain	No. of teeth	Pitch circle ø Dt	Out-side ø Da	Rim width B	Hub D	Hub L	Hub L1	Model type	Weight
	IR Chain sprockets	d x t	z	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]		[kg/pc.]
	IR 8/5-31	8 x 31	5	100	104	29	60	40		D	1,20
	IR 8/6-31	8 x 31	6	120	126	25	60	40		D	1,65
	IR 8/7-31	8 x 31	7	139	152	25	70	45		C	2,40
	IR 8/10-31	8 x 31	10	198	205	29	80	50		D	4,35
	IR 10/10-35	10 DIN 764	10	224	235	35	83	65	30	D	5,60
	IR 10/8-38	10 x 38	8	195	208	35	90	60	27	D	5,00
	IR 10/10-38	10 x 38	10	243	257	35	98	80	26	D	8,40
	IR 10/6-50		6	193	214	35	70	50		D	4,00
	IR 10/8-50	10 DIN 762	8	256	269	36	118	70	50	D	9,20
IR 10/11-50	10 DIN 762	11	350	380	37	82	90		D	16,10	
IR 13/8-65	13 DIN 762	8	333	344	48	128	102	31	D	18,70	

Any other sizes on request.

For all listed dimensions the usual cast tolerances are valid.

Model type

- A full sprocket with hub on one side
- B full sprocket with hub on both sides
- C plate body sprocket with hub on both sides
- D arm body sprocket with hub on both sides

Scope of delivery

chain sprocket, bore dia. and key size as specified by the customer

Example of the order

4 pcs. chain sprockets IR 10/10-38 GS 52 E
for chain 10 x 38, No. of teeth $z = 10$
Hub bore dia = 50 H7 and keyway acc. to DIN 6885

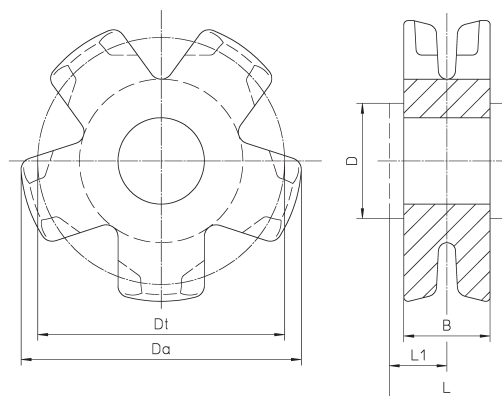
KR Pocket wheels, various cast qualities

Pocket wheels – various cast qualities


Material

GG gray cast
GS 52 cast steel
GS 52 E case-hardened cast steel

Hub



KR

	Type	Chain	No. of po- ckets	Pitch circle ø Dt [mm]	Out- side ø Da [mm]	Rim witdh B [mm]	Hub D [mm]	Hub L [mm]	Hub L1 [mm]	Mo- del Type	Weight [kg/pc.]
KR Pocket wheels		d x t	z								
	KR 5/8	5x18,5 DIN 766	8	107	113	33		33		A	1,40
	KR 6/8	6x18,5 DIN 766	8	95	105	29	53	53	37	B	1,50
	KR 7/5	7x22 DIN 766	5	71	90	41		41		A	0,90
	KR 7/6	7x22 DIN 766	6	85	99	42		42		A	1,40
	KR 8/5	8x24 DIN 766	5	78	93	51		51		A	1,50
	KR 8/6	8x24 DIN 766	6	93	108	49		49		A	1,90
	KR 8/7	8x24 DIN 766	7	108	119	45		45		A	2,95
	KR 8/5-31	8 x 31	5	100	115	46		46		A	1,95
	KR 8/5-31	8 x 31	5	100	115	46	65	61	36	C	2,50
	KR 8/6-31	8 x 31	6	120	135	45		45		A	2,95
	KR 8/7-31	8 x 31	7	139	156	46		46		A	4,40
	KR 9/7	9x27 DIN 766	7	121	140	51		51		A	3,30
	KR 10/8-35	10 x 35	8	179	203	53	100	60		C	16,00
	KR 10/10-38	10 x 38	10	243	266	40	110	60	40	C	20,00
	KR 13/9-45	16x56 DIN 764	9	259	296	65	170	90		C	24,00
	KR 14/6-50	14 x 50	6	193	226	76	100	113	72	B	15,00
	KR 16/6-56	16x56 DIN 764	6	217	245	88		88		A	19,40

Any other sizes on request.

For all listed dimensions the usual cast tolerances are valid.

Model type

- A full wheel without hub
- B full wheel with hub on one side
- C full wheel with hub on both sides
- D plate body wheel with hub on both sides

Scope of delivery

pocket wheel, bore dia. and key size as specified by the customer

Example of the order

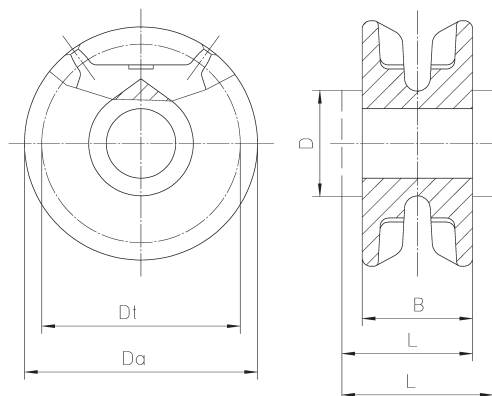
4 pcs. pocket wheels KR 10/10-38 GS 52 E

for chain 10 x 38, No. of teeth z = 10


Hub bore dia = 50 H7 and keyway acc. to DIN 6885

TR .. FB Pocket wheels, machined

For further applications, e.g. for hoists or any other type of chain drives machined pocket wheels with different materials and heat treatment can be supplied. Any number of pockets available, hub design, bore diameter, and key size can be specified by the customer.



TR .. FB

	Type	Chain	No. of teeth	Pitch circle ø Dt [mm]	Outside ø Da [mm]	Rim width B [mm]
TR .. FB Pocket wheels		d x t	z			
	TR 7/5-22 FB	7 x 22	5	72	78,5	37
	TR 7/6-22 FB	7 x 22	6	85	95	35
	TR 7/7-22 FB	7 x 22	7	99	110	30
	TR 8/5-24 FB	8 x 24	5	78	90	38
	TR 8/24-24 FB	8 x 24	24	366	374	40
	TR 8/30-24 FB	8 x 24	30	457	465	40
	TR 8/9-31 FB	8 x 31	9	179	187	40
	TR 9/5-27 FB	9 x 27	5	88	97	43
	TR 9/8-27 FB	9 x 27	8	138	160	45
	TR 10/7-28 FB	10 x 28	7	127	137	42
	TR 10/10-28 FB	10 x 28	10	179	190	54
	TR 10/12-28 FB	10 x 28	12	214	225	49
	TR 10/14-28 FB	10 x 28	14	250	262	50
	TR 14/10-50 FB	14 x 50	10	320	340	65
	TR 16/7-45 FB	16 x 45	7	203	219	90
	TR 16/8-45 FB	16 x 45	8	231	247	90
	TR 16/11-45 FB	16 x 45	11	231	247,5	90
	TR 20/6-70 FB	20 x 70	6	271	290	100
	TR 22/7-86 FB	22 x 86	7	388	420	90
	TR 26/8-92 FB	26 x 92	8	473	510	120
	TR 30/8-105 FB	30 x 105	8	540	600	140

Any other sizes on request.

Material

St 52-3, natural hard or case hardened
CrMo-alloyed steel, through hardened
MnCr-alloyed steel, case hardened

Scope of delivery

Pocket wheel machined, material has to be specified

Example of the order

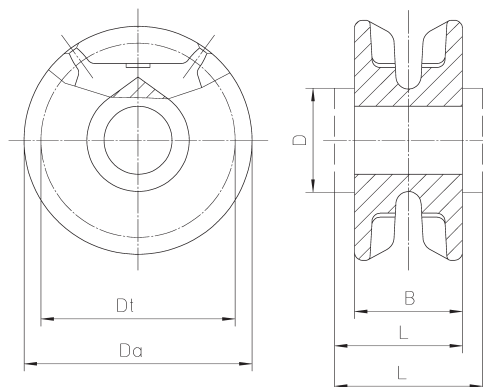
4 pcs. pocket wheels TR 10/12-28 FB
for chain 10 x 28, No. of teeth $z = 12$
Hub length central = 80 mm (40 + 40)
Hub bore dia = 50 H7 and keyway acc. to DIN 6885

TR Pocket wheels, in various cast qualities


The pocket wheels can be supplied in different model types with different hub designs.

Material

GG gray cast
GS 52 cast steel
GS 52 E case-hardened cast steel



TR

	Type	Chain	No. of teeth	Pitch circle ø Dt [mm]	Out-side ø Da [mm]	Rim width B [mm]	Hub D [mm]	Hub L [mm]	Model type-type	Weight [kg/pc.]
		d x t	z							
	TR 5/5	5 x 18,5 DIN 766	5	60	73	27		27	A	0,55
	TR 5/8	5 x 18,5 DIN 766	8	95	107	28		28	A	1,30
	TR 5/14	5 x 18,5 DIN 766	14	165	188	33	51	46	D	2,80
	TR 6/7	5,5u.6x18,5DIN 766	7	83,4	104	36		36	A	1,50
	TR 6/10	5,5u.6x18,5DIN 766	10	118	136	36	60	36	D	2,20
	TR 6/15	5,5u.6x18,5DIN 766	15	177	190	37	70	45	E	3,20
	TR 6/20	5,5u.6x18,5DIN 766	20	236	256	35	61	55	E	4,30
	TR 6/26	5,5u.6x18,5DIN 766	26	307	328	38	65	52	E	8,25
	TR 7/5	7 x 22 DIN 76	5	71	84	40		40	A	1,10
	TR 7/6	7 x 22 DIN 766	6	85	100	41		41	A	1,60
	TR 7/7	7 x 22 DIN 76	7	99	113	41		41	A	2,10
	TR 8/5	8 x 24 DIN 766	5	78	94	43		43	A	1,25
	TR 8/6	8 x 24 DIN 766	6	93	103	45		45	A	1,90
	TR 8/6	8 x 24 DIN 766	6	93	104	45	41	83	C	2,30
	TR 8/7	8 x 24 DIN 766	7	108	123	40	52	40	D	1,85
	TR 8/8	8 x 24 DIN 766	8	123	130	47	60	59	C	4,00
	TR 8/12	8 x 24 DIN 766	12	184	200	38	74	55	D	4,30
	TR 8/12	8 x 24 DIN 766	12	184	198	46	85	62	B	9,60
	TR 8/17	8 x 24 DIN 766	17	262	279	44	86	61	D	9,20
	TR 8/19	8 x 24 DIN 766	19	290	311	47	210	55	C	26,00
	TR 8/5-31	8 x 31	5	100	114	46		46	A	2,35
	TR 8/6-31	8 x 31	6	120	136	46		46	A	3,50
	TR 8/9-31	8 x 31	9	179	194	49	80	54	D	5,40
	TR 8/9-31	8 x 31	9	179	197	45	101	59	D	7,30
	TR 9/5-31	9 x 31	5	100	127	50		50	A	2,80
	TR 9/8	9 x 27 DIN 766	8	139	159	52	72	67	D	4,30
	TR 9/8-31	9 x 31	8	159	182	49	66	58	D	5,20
	TR 9,5/18	9,5 x 27 DIN 766	18	309	340	54	148	80	E	19,10
	TR 10/8	10 x 28 DIN 766	8	144	163	54	75	60	D	5,00
	TR 10/10	10 x 28 DIN 766	10	179	205	55	84	80	D	7,00
	TR 10/10	10 x 28 DIN 766	10	179	201	54	80	80	C	10,80
	TR 10/7-35	10 x35 DIN 764	7	157	184	60	83	70	C	10,00

	Type	Chain	No. of teeth	Pitch circle ø Dt [mm]	Out- side ø Da [mm]	Rim width B [mm]	Hub D [mm]	Hub L [mm]	Model type- type	Weight [kg/ pc.]
TR Pocket wheels		d x t	z							
	TR 11/5		5	100	130	57	71	93	B	4,00
	TR 11/6	11 x 31 DIN 766	6	120	145	55		55	A	3,70
	TR 11/12		12	238	260	60	80	70	C	18,80
	TR 11/16		16	317	330	61	162	112	D	30,20
	TR 13/5		5	117	139	71		71	A	4,40
	TR 13/9	13 x 36 DIN 766	9	207	231	66	88	90	D	13,20
	TR 13/9		9	207	231	68	158	103	B	21,00
	TR 13/9		9	207	231	68	158	113	C	22,00
	TR 13/8-45		8	231	257	67	106	91	D	14,30
	TR 13/8-45	13 x 45 DIN 764	8	231	257	72		72	A	21,80
	TR 16/7-56	16 x 56 DIN 764	7	251	288	76		76	A	23,40
	TR 16/9-56		9	322	359	85	165	100	D	46,40

Any other sizes on request.

For all listed dimensions the usual cast tolerances are valid.

Model type

A full wheel without hub

B full wheel with hub on one side

C full wheel with hub on both sides

D plate body wheel with hub on both sides

E arm body wheel with hub on both sides

Scope of delivery

Pocket wheel, bore dia. and key size as specified by the customer

Example of the order

4 pcs. pocket wheels TR 8/9-31 GS 52

for chain 8 x 31, No. of teeth z = 9

Hub bore dia = 50 H7 and keyway acc. to DIN 6885

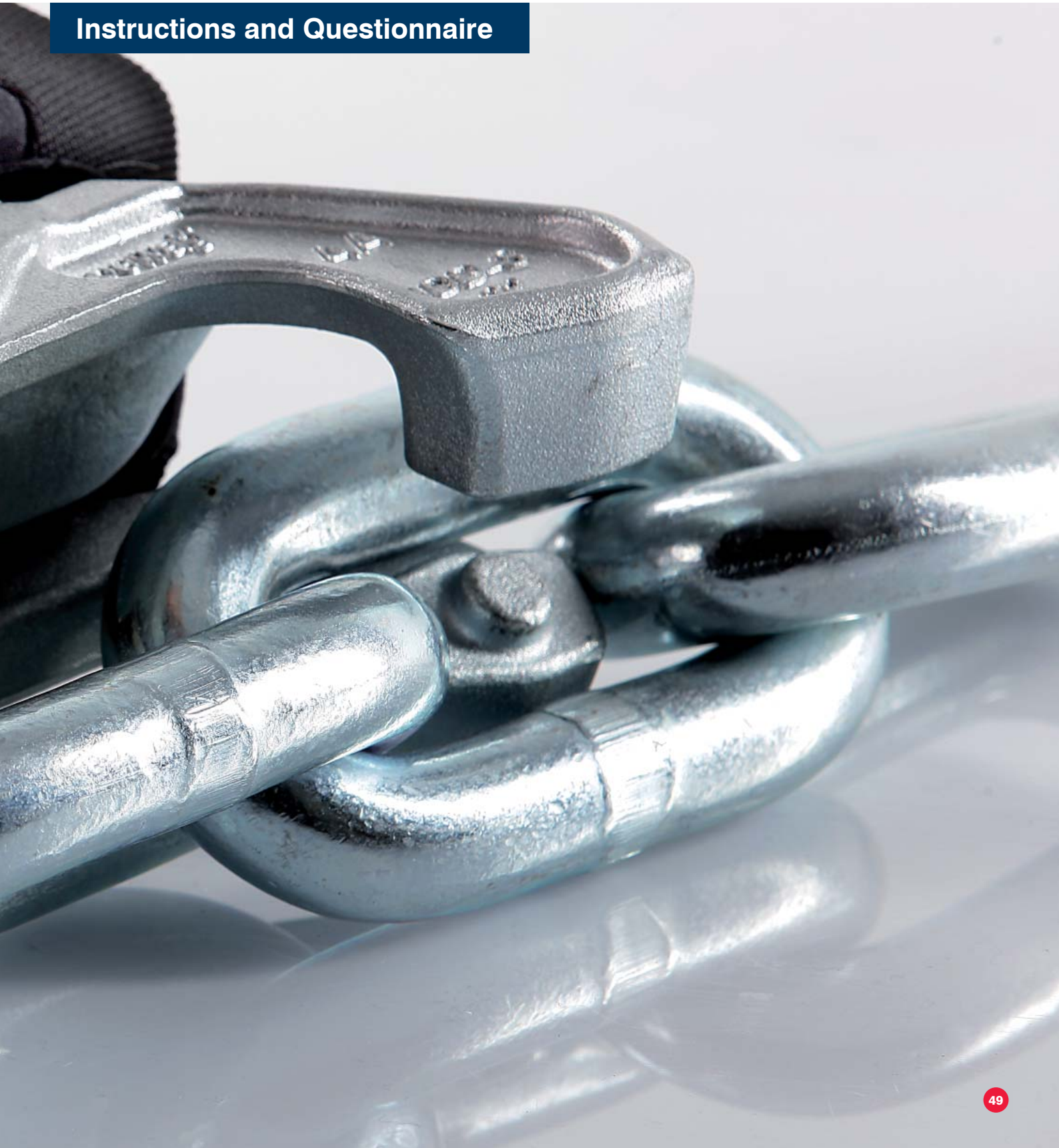
Assembly and Maintenance Instructions

Instructions	50–51
Questionnaire – Scraper Conveyor	52–53



Assembly and Maintenance Instructions

Instructions and Questionnaire

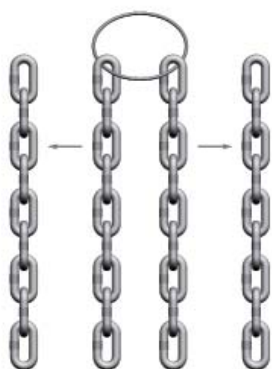


Assembly of the drive and tail wheels

Pay attention to maintaining the correct chain center distance; Drive, guide and tail shafts must be installed parallel and all the wheels must be in line.

Recommended assembly of the chain lengths

- Connect individual chain lengths with connecting links
- Install the connected chain lengths into the conveyor trough
- Connect into an endless loop
- Assemble the flight attachments and flight bars
- Tension the assembled system



The chain lengths are supplied bundled in pairs. In order to avoid mixing up of the chain lengths, the wire for the bundling should only be opened in the course of the assembly; the chain lengths must be assembled in the conveyor lying parallel, this is the only way to guarantee that chain loops will be of the same length; if the chain lengths are mixed before installation the final links of every chain lengths are marked with the chain length number and are colour coded.

It is possible to get the chain lengths perfectly matched with the chain length numbers resp. the colour marking; during the assembly of the chain lengths please take care that the welds of the vertical chain links point to the wheel center. The position of the other links can be as required.

Pay attention that the chain couplings are installed in the correct position

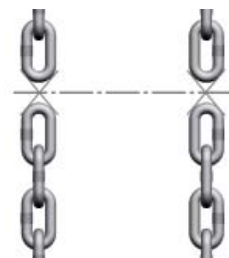
Chain couplings KHV can only be mounted as vertical chain links for all conveyors and chain systems.

Connecting links VHV are mounted as vertical or horizontal chain links and the locking lash with the marking must point outwards but only as horizontal

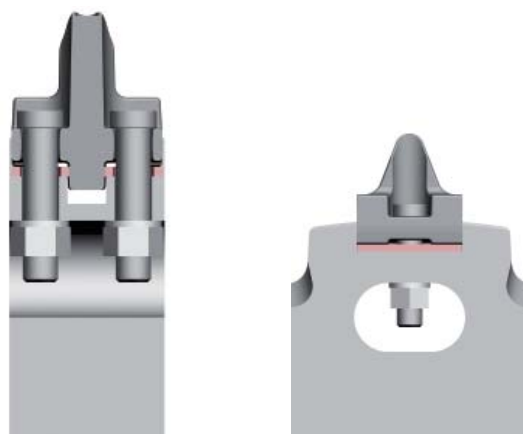


chain links with horizontal and additional inclined conveying sections with sprockets.

Shortening of the chain may be necessary to shorten the chain in order to obtain the exact required chain length of the make – up lengths, or if the chain lengthens due to wear. If chain shortening is necessary an even number of chain links (2, 4, 6, and so on) must be cut out from both chain loops. Links must be cut out with a cutting disc or a burner. Pay attention not damage or overheat the neighboring links.



The pitch circle dia. of the sprocket RHV is adapted with shimplates to the individual teeth. Shimplates and new teeth can be installed without disassembly the chain. The thickness of the shimplates can only be determined by measuring the chain lengthened due to wear. As soon as the case hardened layer is worn off the wear will increase rapidly. Chains and sprocket teeth will wear out under normal operating condition at the same time.



Shimplates should be fitted when the chain is lengthened due to wear by approx. 2,5%. The replacement of the chain is recommended with the quality grade E10 by a chain wear of approx. 3,5% and quality grade E14 by 5%.

Pay attention to a uniform charging over the full trough width of the conveyor. Both chain loops must be equally loaded due to conveying material and chain tractive forces. Asymmetric loading on the chain loops lead sooner or later of an increase in pitch due to wear and to slanting flight bars.

The conveying speed should be adjusted to the conveying capacity so that a maximum loading of the flight bars is achieved.

The chain tension must be checked regularly, especially during commissioning of new chains to check the elongation of the chain due to wear.

Basically, the chain tension should only be as high as necessary for trouble-free operation. Both chain loops must be equally tensioned. Excessive tension will increase the chain wear rate and will reduce the chain life.

Thread size	Nm	Lbf/ft.
M 6	10	7
M 8	25	18
M 10	49	35
M 12	85	62
M 14	135	98
M 16	210	152
M 18	300	217
M 20	425	307
M 22	580	420
M 24	730	528
M 27	1.100	796
M 30	1.450	1.049
M 33	1.900	1.136
M 36	2.450	1.772

Tightening torque Nm and Lbf/ft for bolts and hex. nuts strength class 8.8 and 8,
Overall Friction Coefficient of $\mu = 0.14$

Conveyors designed with long sections of unsupported round steel chains require very high pre-tensioning loads. This can be avoided by supporting the chain with guide rails.

Densely packed material may cause the chain to disengaging from sprockets or idler rollers. To prevent this strong rigid chain guide assemblies should be located before, after and around the contact points of changes in chain travel.

Questionnaire Scraper Conveyor

Fax to: +43 (0) 3862 / 29 90-700

Company _____ **Date** _____

From _____

Phone _____ **Fax** _____

E-Mail _____

Name and No. of units _____

1. Material handled

Specific weight [kg/dm³] _____ Grain size [mm] _____

Temperature [°C] _____ Moisture content _____

Abrasiveness low ☐ normal ☐ very ☐

Corrosiveness _____

Chemical influences _____

2. Capacity [t/h] _____ or [m³/h] _____

Chain speed [m/s] _____

3. Shaft centers [m] _____

4. Design of the conveyor

Single chain strand conveyor ☐ Top chain strand conveyor ☐ Multiple chain strand conveyor ☐

5. New installation ☐ Replacement component ☐ Modification ☐

Reasons for the modification _____

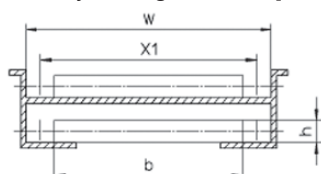
6. Service hours per year _____

7. Power [kW] _____ Max. pull per chain strand [Nm] _____

Max. torque on the drive shaft [kN] _____

8. Dimension of the conveyor trough

Conveyor trough width W [mm] _____ Chain centers X1 [mm] _____



Questionnaire Scraper Conveyor

Fax to: +43 (0) 3862 / 29 90-700

9. Attachment type _____

10. Flight bar dimensions

Length [mm] _____ Height [mm] _____ Weight [kg] _____

Number of flight bars _____ Flight spacing _____

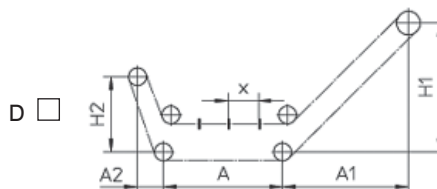
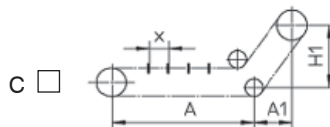
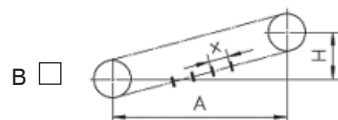
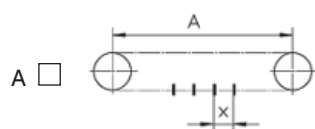
11. Drive sprockets

toothed ☐ No. of teeth _____ Pitch circle dia. _____

12. Chain dia. [mm] _____ Pitch [mm] _____ Quality _____

Number of links per chain end _____

13. Design of the scraper conveyor



Dimension of conveyor [mm]

A = _____ A 1 = _____ A 2 = _____

H = _____ H 1 = _____ H 2 = _____

14. Notes _____

Note



Helevar Comércio e Importação de Produtos Metalúrgicos Ltda
Endereço: Francisco Silveira Bittencourt, 1359 Prédio 12
CEP: 91150-010 Bairro Sarandi – Porto Alegre – RS – Brasil
Fone: +55 51 3364 6211
Site: www.helevar.com.br
Email: contato@helevar.com.br

