pewag

WORLD'S STRONGEST CHAIN

www.pewag.com

pewag winner
Chain system in G10

Lifting and Lashing

Content

Lifting and lashing customized with safety

pewag offers the widest range of G10 chains and components for lifting and lashing. Providing customized solutions are standard with our company.

Innovative products and services guarantee safety and longevity.

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 Repbulic
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.

AUSTRIA

ISO 14001 TÜV SÜD ISO 9001

Business areas

Working with pewag products

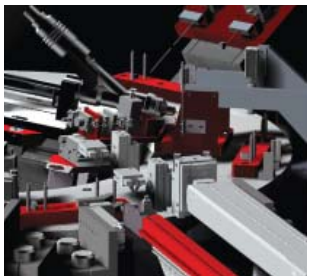
The pewag group has a substantial and diverse spectrum of products and services.

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 and lashing chains and accessories

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	OOO „pewag", Moscow
Sweden	pewag sweden AB, Emmaboda
Slovakia	pewag slovakia s.r.o., Kršk̆any
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

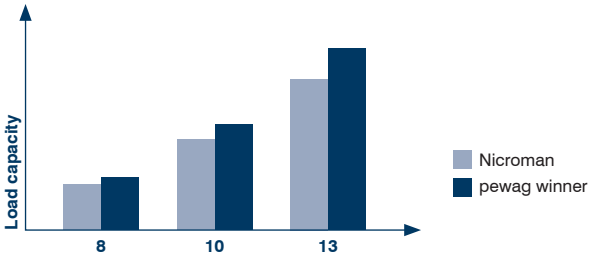
Chain and Accessory System in G10

Advantages and information

Features and benefits of pewag lifting chains in G10 quality

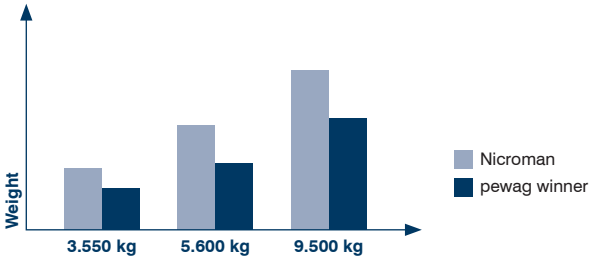
User friendlyness and safety are based on clearly defined and measurable characteristics, which are incorporated in the product development and production process of our products.

- 25% higher load capacity than grade 8.



Load capacity	Previous chain Ø	pewag winner chain Ø
3.550	10	8
5.600	13	10
9.500	16	13

- Approx. 30% weight saved resulting in easier handling.



Load capacity	Previous chain weight	Winner chain weight	% Weight reduction
3.550	16,2 kg	11,0 kg	32%
5.600	27,6 kg	17,6 kg	36%
9.500	42,2 kg	29,6 kg	30%

- Attractive price/performance ratio thanks to the small price differential compared to grade 8.
- One dimension smaller than grade 8 slings, for many load ranges – thus providing excellent value.
- Extended service life due to higher wear resistance.
- Identification made easy – each link is marked „W“.
- Traceability of all production data by use of codes on chains and components.
- Individual and distinctive tag with precise information to avoid confusion with grade 8.
- Simple visual identification of pewag winner components thanks to orange high visibility powder coating.
- Broad range of components in special grade 10 quality – for 11 chain dimensions.
- Fastest and simplest assembly of slings thanks to VXKW set with patented shortening element.
- Avoiding danger through improperly shortened chains – an additional saftey feature of our shortening hooks.
- Easier daily/annual inspection – easier and faster in comparison to grade 8, because fewer components are in use.

- Compatible with our grade 8 range – used slings easy to repair. Note: Grade 10 components can be used to repair G8 slings but not at an increased working load
- First company to offer grab hooks with 100% load capacity – shortening of the sling chain does not require a reduction in load caused by shear effect of the hook
- 3 assembly systems for slings: welded, Connex and Clevis system
- Experience – in 1989 pewag where the first company to manufacture G100 chain slings in the USA
- Quality-approved European production by an ISO 9001 certified company
- Worldwide distribution network – smooth supply of spare and replacement parts
- Components meet the requirements of EN 1677-1, -2, -3, -4.
- The WIN 400 chain meets the EN 818-2 with higher working load limit or PAS 1061 up to 16mm.

pewag winner – the environmentally friendly chain

The ISO 14001 certification is also fully implemented with our G10 lifting chains.

- reduced energy consumption during production
- less material used – protection of raw material reserve
- low weight – less to transport
- less material to be recycled

pewag winner Data

- **Chain qualities:**
  pewag winner 200 – meets the requirements of ASTM A973/ A973M-01 and of EN 818-2 but with higher load capacity (however admissible operating temperature of 200°C max.) and 98/37/EC Machinery Directive
  pewag winner 400 – meets the requirements of EN 818-2 with higher load capacity, and those of the 98/37/EC Machinery Directive

- **Stress at load capacity limit:** 250 N/mm²

- **Test stress:** 625 N/mm² – corresponds to 2.5 times the load capacity

- **Breaking stress:** 1.000 N/mm² – corresponds to 4 times the load capacity

- **Breaking elongation:** min. 20%

- **Bending according to EN 818-2 or PAS 1061:**
  0,8 x nominal diameter

- **Admissible operating temperature:**
  pewag winner 200 – 200°C max.
  pewag winner 400 – 380°C max.

- **Quality grade stamps:**
  pewag winner 200 – 100 at a spacing of approx. 300 mm till 16 mm chain (other 0,9 m) and 10 additionally on the back of each link
  pewag winner 400 – 8W at a spacing of approx. 300 mm up to 16 mm chain (other 0,9 m) and W on the back of each link
  Components – 10

- **Manufacturer's name or symbol:**
  PW and/or pewag and/or H16

- **Surface:**
  pewag winner 200 – shot-blasted and clear coated
  pewag winner 400 – blue painted
  Components – orange powder coated
  Welded system – blue painted

- **Compatibility:**
  pewag winner chains and components may be combined by a competent person with all components of Grad 80 meeting the requirements of EN818 and EN1677. Furthermore, the pewag winner chains may be combined with all competitors chains and components, being compatible with EN818 and EN1677 qualified items. The competent person has to check and approve the functionality of the chain sling. (In consequence, it is not allowed to combine winner chains with competitors items that follow neither the EN818 nor the EN1677 requirements.) Only original pewag spare parts (esp. pins and bolts, safety catches, etc.) may be used for pewag articles. The maximum working load capacity of pewag sling chains is always defined by their weakest part.

- Performance concerning stress crack corrosion is identical to our grade 8.

pewag winner Identification

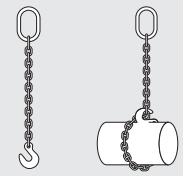
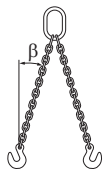
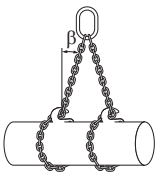
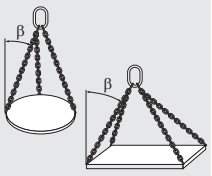
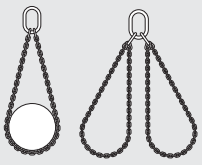
All necessary technical data is attached on the chain ID Tag. For easier identification of the chain grade and quality a seperate ID Tag is used.

pewag winner 200

pewag winner 400

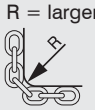
pewag winner
Load capacities

The load capacities listed are maximum values of the various ling types, stated according to the standard (Uniform Load) method of rating.

Safety factor 4		I-leg chains		II-leg chains				III- + IV-leg chains		Endless chain sling	Loop chains	
												
Angle of inclination		-	-	up to 45°	45°–60°	up to 45°	45°–60°	up to 45°	45°–60°	-	up to 45°	0°–45°
Load factor		1	0,8	1,4	1	1,12	0,8	2,1	1,5	1,6	1,4	2,1
Code	**d**	**Load capacity [kg]**										
WIN 5	5	1.000	800	1.400	1.000	1.120	800	2.000	1.500	1.600	1.400	2.000
Ni 5 G8	5	800	640	1.120	800	900	640	1.600	1.180	1.250	1.120	1.600
WIN 6	6	1.400	1.120	2.000	1.400	1.600	1.120	3.000	2.120	2.240	2.000	3.000
Ni 6 G8	6	1.120	900	1.600	1.120	1.250	900	2.360	1.700	1.800	1.600	2.360
WIN 7	7	1.900	1.500	2.650	1.900	2.120	1.500	4.000	2.800	3.000	2.650	4.000
Ni 7 G8	7	1.500	1.200	2.120	1.500	1.700	1.200	3.150	2.240	2.500	2.120	3.150
WIN 8	8	2.500	2.000	3.550	2.500	2.800	2.000	5.300	3.750	4.000	3.550	5.300
Ni 8 G8	8	2.000	1.600	2.800	2.000	2.240	1.600	4.250	3.000	3.150	2.800	4.250
WIN 10	10	4.000	3.150	5.600	4.000	4.250	3.150	8.000	6.000	6.300	5.600	8.000
Ni 10 G8	10	3.150	2.500	4.250	3.150	3.550	2.500	6.700	4.750	5.000	4.250	6.700
WIN 13	13	6.700	5.300	9.500	6.700	7.500	5.300	14.000	10.000	10.600	9.500	14.000
Ni 13 G8	13	5.300	4.250	7.500	5.300	5.900	4.250	11.200	8.000	8.500	7.500	11.200
WIN 16	16	10.000	8.000	14.000	10.000	11.200	8.000	21.200	15.000	16.000	14.000	21.200
Ni 16 G8	16	8.000	6.300	11.200	8.000	9.000	6.300	17.000	11.800	12.500	11.200	17.000
WIN 19	19	14.000	11.200	20.000	14.000	16.000	11.200	30.000	21.200	22.400	20.000	30.000
Ni 19 G8	19	11.200	8.950	16.000	11.200	12.500	8.950	23.600	17.000	18.000	16.000	23.600
WIN 22	22	19.000	15.000	26.500	19.000	21.200	15.000	40.000	28.000	30.000	26.500	40.000
Ni 22 G8	22	15.000	12.000	21.200	15.000	17.000	12.000	31.500	22.400	23.600	21.200	31.500
WIN 26	26	26.500	21.200	37.500	26.500	30.000	21.200	56.000	40.000	42.500	37.500	56.000
Ni 26 G8	26	21.200	16.950	30.000	21.200	23.700	16.950	45.000	31.500	33.500	30.000	45.000
WIN 32	32	40.000	31.500	56.000	40.000	45.000	31.500	85.000	60.000	63.000	56.000	85.000
Ni 32 G8	32	31.500	25.200	45.000	31.500	35.200	25.200	67.000	47.500	50.000	45.000	67.000

If the chain slings are used in severe conditions (e.g. high temperature, asymmetric load distribution, edge load, impact/shock loads) the maximum load capacity values in the table must be reduced by the load factors below. Please also note the user information on this topic.

Demanding conditions

Temperature	-40°C – 200°C	above 200°C – 300°C	above 300°C – 380°C
Load factor pewag winner 200	1	not permissible	not permissible
Load factor pewag winner 400	1	0,9	0,75
Asymmetric load distribution	The WLL has to be reduced by at least 1 leg. In case of doubt only consider 1 leg as load-bearing.		
Edge load *	R = larger than 2 x d 	R = larger than d 	R = smaller than d 
Load factor	1	0,7	0,5
Shock	slight shocks	medium shocks	strong shocks
Load factor	1	0,7	not permissible

* d = thickness of the material

pewag winner Lifting Example of order text

Complete chain slings are marked with a clear identification system that covers all components and measurements.

pewag winner 400 – 13mm – double-leg chain sling with shortening device and hooks. Length: 3.000 mm

Clevis System

WIN 13 200 II VXKW – KLHW 3.000

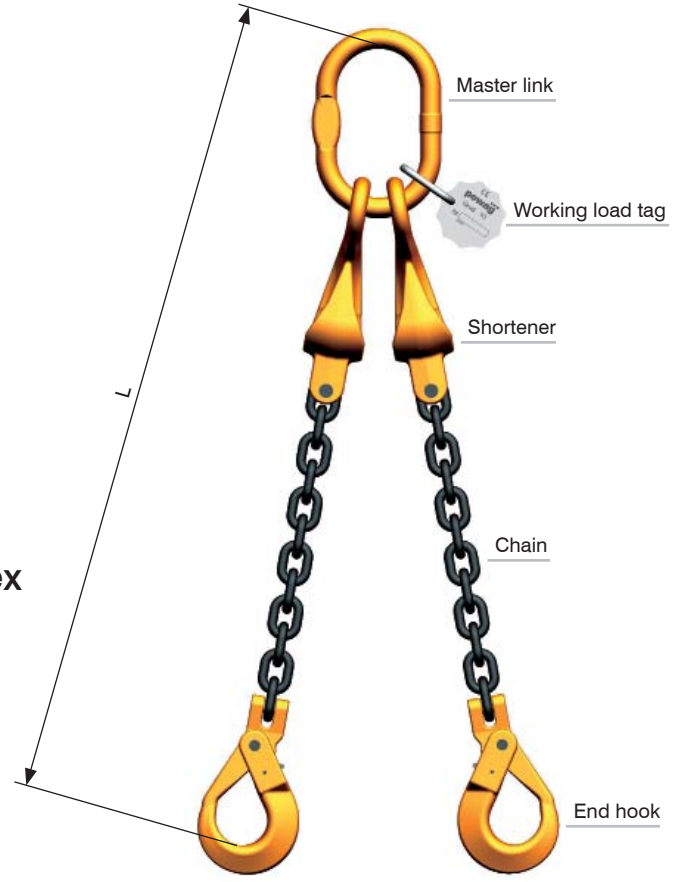
Nominal diameter	Short designation	Number of legs	Master link	End hook	Lenght [mm]

Connex System:

WIN 13 200 II VXKW – HSW 3.000 Connex

Welded System:

WIN 13 200 II VXKW – HSW 3.000

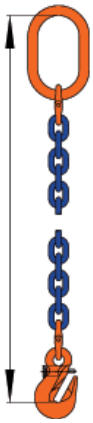


pewag winner
Standard sling types

The chain slings shown here are standard sling types. They can – to some degree – also be produced and supplied in other assembly systems than the ones listed below. If you assemble them yourself, use only original pewag Winner components! For any sling types not shown below, please submit a small sketch indicating the required type. The usual tolerance of length „L“ is +2 chain pitches. Unless stated otherwise, any securing links needed are mounted in the middle of the leg.
The sling designation system is the same as that of G8. The additional „W“ in the code of the individual parts points to the higher quality grade.

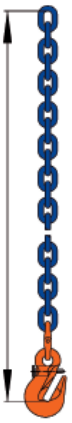
I AW-HSW Connex

I AW-LHW Connex



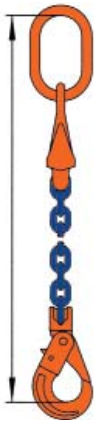
I AW-PSW Connex

I AW-E Connex

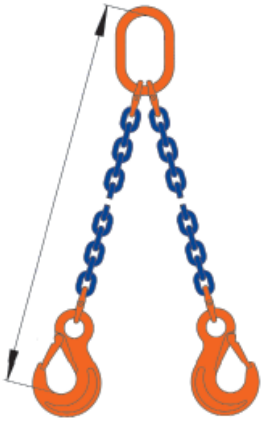


I PSW Connex

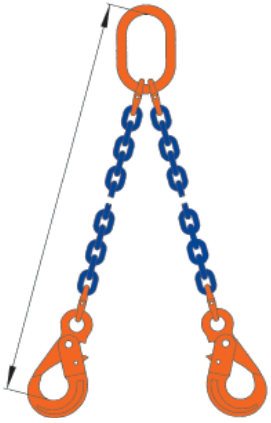
I HSW-HSW Connex



I VXKW-KLHW



II AW-HSW Connex



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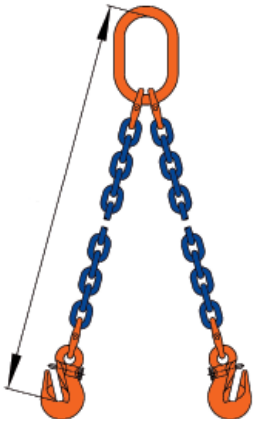
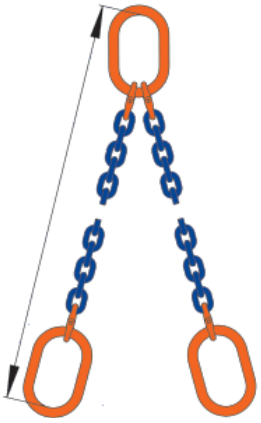


II AW-PSW Connex



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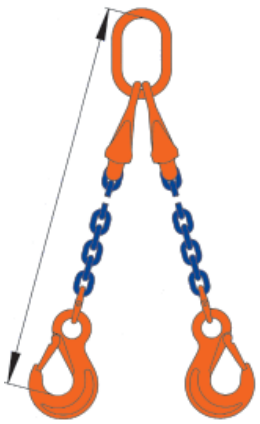
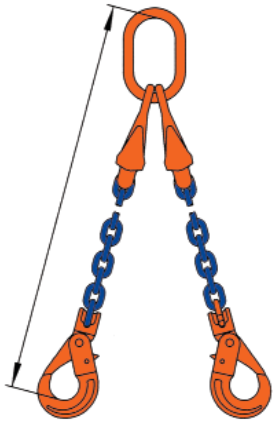
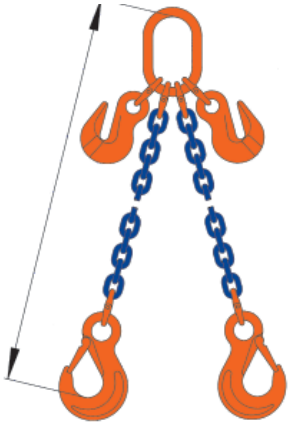


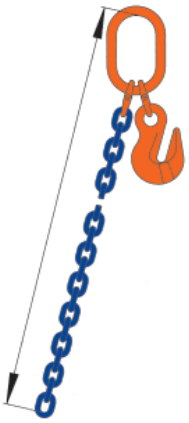
II VXKW-HSW Connex



II VXKW-KLHW



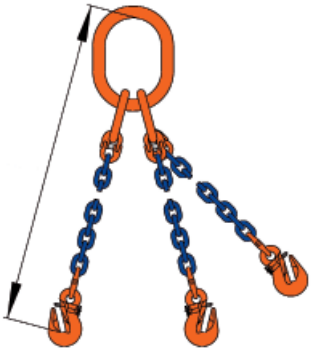
II AW-HS-PW Connex



II AW-S-PW Connex

III AW-HSW Connex

III AW-LHW Connex



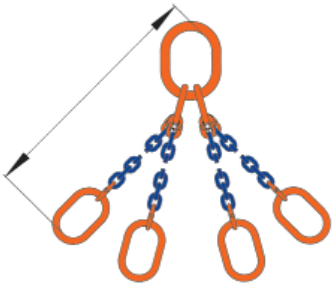
III AW-PSW Connex

III AW-E Connex

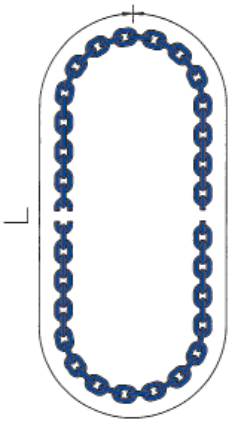
IV VXKW-HSW Connex

IV VXKW-KLHW

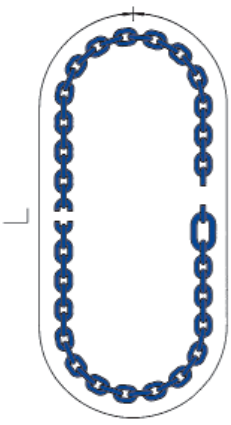
IV AW-HSW Connex



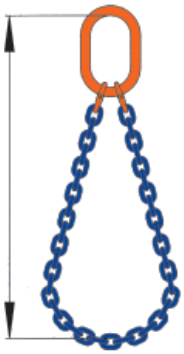
IV AW-E Connex



S



SK (up from dimension 8!)

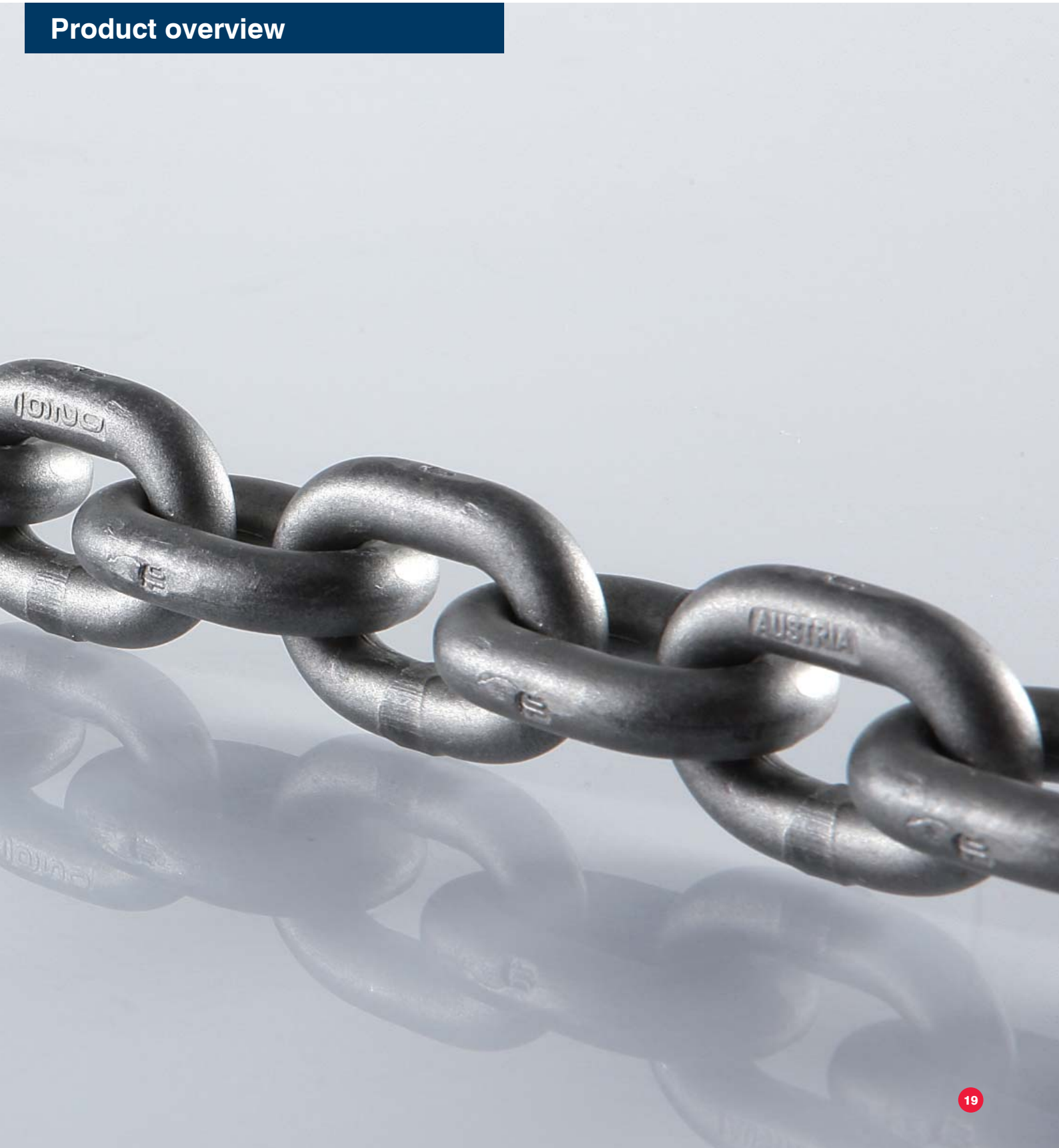


II AW-S Connex

IV AW-S Connex

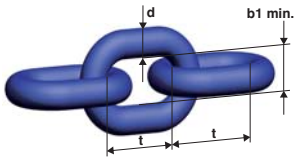
Chains in G10

Product overview



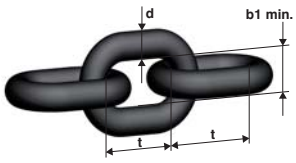
Lifting chain
pewag winner 400

According to EN 818-2, modified. The high duty chain in grade 10.
Round steel chains for use in lifting or lashing chains. Not allowed for lifting chains in Austria. Maximum working temperature: 200 °C
Standard surface: blasted, clear painted.
Please consider the user information.

WIN 400 Lifting chain	Code	Nominal-diameter [d]	Standard delivery length [m]	Pitch [t]	Inside width [b1 min.]	Inside width [b2 max.]	Load capacity [kg]	Breaking force [kN]	Weight [kg/m]
	WIN 5 400	5	50	16	8	19	1.000	39,30	0,61
	WIN 6 400	6	50	18	9	22	1.400	56,50	0,96
	WIN 7 400	7	50	21	10	25	1.900	77	1,20
	WIN 8 400	8	50	24	11	29	2.500	101	1,57
	WIN 10 400	10	50	30	14	36	4.000	157	2,46
	WIN 13 400	13	50	39	18	47	6.700	265	4,18
	WIN 16 400	16	25	48	22	58	10.000	402	6,28
	WIN 19 400	19	25	57	27	69	14.000	567	8,92
	WIN 22 400	22	25	66	30	79	19.000	760	11,88
	WIN 26 400	26	25	78	35	94	26.500	1.060	16,18
	WIN 32 400	32	20	96	43	115	40.000	1.610	24,10

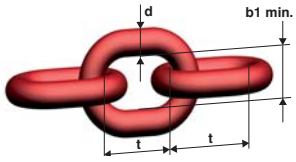
Round steel chain
pewag winner 200

According to EN 818-2, modified. The high duty chain in grade 10.
Round steel chains for use in lifting or lashing chains. Not allowed for lifting chains in Austria. Maximum working temperature: 200 °C.
Standard surface: blasted, clear painted.
Please consider the user information.

WIN 200 Round steel chain	Code	Nominal-diameter [d]	Standard delivery length [m]	Pitch [t]	Inside width [b1 min.]	Inside width [b2 max.]	Load capacity [kg]	Breaking force [kN]	Weight [kg/m]
	WIN 5 200	5	100/50	16	8	19	1.000	39,3	0,61
	WIN 6 200	6	150/50	18	9	22	1.400	56,5	0,96
	WIN 7 200	7	300/50	21	10	25	1.900	77	1,20
	WIN 8 200	8	250/50	24	11	29	2.500	100	1,57
	WIN 10 200	10	150/50	30	14	36	4.000	157	2,46
	WIN 13 200	13	80/50	39	18	47	6.700	266	4,18
	WIN 16 200	16	50/25	48	22	58	10.000	402	6,28
	WIN 19 200	19	40/25	57	27	69	14.000	567	8,92
	WIN 22 200	22	30/25	66	30	79	19.000	760	11,88
	WIN 26 200	26	25	78	35	94	26.500	1.062	16,18
	WIN 32 400	32	20	96	43	115	40.000	1.610	24,10

Round steel chain
Nicroman G8

According to EN 818-2. Currently only available in grade 8.
Round steel chains for use in lifting or lashing chains.
Maximum working temperature: 380 °C. Standard surface: red
Please consider the user information.

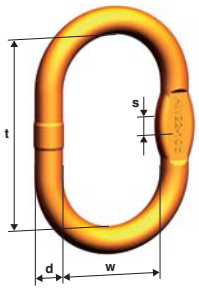
Ni Round steel chain	Code	Nominal-diameter [d]	Standard delivery length [m]	Pitch [t]	Inside width [b1 min.]	Inside width [b2 max.]	Load capacity [kg]	Breaking force [kN]	Weight [kg/m]
	Ni 32	32	25	96	42	118	31.500	1.290	24,10

Master links and Subassemblies in G10

Product overview

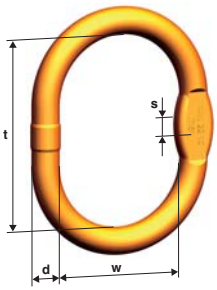
AW Master link

According to EN 1677-4 with increased load capacity.
For pewag connex and welded system.
Master link for 1-leg chain A I.
Master link for 2-leg chain AII.
Master link for 3- and 4-leg chain AIII/IV - only with transition link BW as on VW. Can also be used as end link A I - for chain classification see column A I.

AW Master link	Code	Load capacity 0–45° [2] [kg]	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	Master link for chain Ø in mm 1-leg A I [mm]	2-leg A II [mm]	3-+4 -leg A III/IV [mm]
	AW 10	1.400	Nr. 1,6	10	80	50	10	0,14	5	5	-
	AW 13	2.300	Nr. 2,5	13	110	60	10	0,34	6+7	6	5
	AW 16	3.500	Nr. 2,5	16	110	60	14	0,53	8	7	-
	AW 18	5.000	Nr. 5	19	135	75	14	0,92	10	8	6
	AW 22	7.600	Nr. 6	23	160	90	17	1,60	13	10	7+8
	AW 26	10.000	Nr. 8	27	180	100	20	2,46	16	13	10
	AW 32	14.000	Nr. 10	33	200	110	26	4,14	19	16	13
	AW 36	25.100	Nr. 16	36	260	140	-	6,22	22	19	16
	AW 45	30.800	Nr. 25	45	340	180	-	12,82	26	22	-
	AW 50	40.000	Nr. 32	50	350	190	-	16,55	32	26	19+22
	AW 56	64.000	Nr. 32	60	400	200	-	27,01	-	32	26
	AW 72	85.000	Nr. 50	70	460	250	-	45,00	-	-	32
	A72	81.500	Nr. 50	70	460	250	-	45,00	-	-	32

MW Enlarged master link

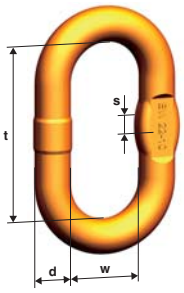
According to EN 1677-4 with increased load capacity.
For pewag connex and welded system.
Similar to master link AW, but due to larger inside dimensions suitable for next sized crane hook or special hook.
Master link SAW: Without flattened part for transition link and special color.

MW Enlarged master link	Code	Load capacity 0–45° [2] [kg]	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	Master link for chain Ø in mm 1-leg A I [mm]	2-leg A II [mm]	3-+4 -leg A III/IV [mm]
	MW 10	1.400	Nr. 2,5	11	90	65	10	0,22	5	5	-
	MW 13	2.300	Nr. 4	14	120	70	10	0,44	6+7	6	5
	MW 16	3.200	Nr. 5	16	140	80	13	0,67	8	7	-
	MW 18	4.200	Nr. 6	19	160	95	14	1,09	10	8	6
	MW 22	6.700	Nr. 10	23	160	110	17	1,69	13	10	7+8
	MW 26	10.100	Nr. 10	27	190	110	20	2,65	16	13	10
	MW 32	16.000	Nr. 12	33	230	130	26	4,78	19	16	13
	MW 36	21.200	Nr. 20	38	275	150	29	7,48	22	19	16
	MW 56	40.000	Nr. 50	56	350	250	-	21,98	32	26	19+22
	SAW 32	10.000	Nr. 50	33	540	250	26	9,25	-	-	-
	SAW 45	22.500	Nr. 50	45	540	250	39	18,70	-	-	-
	SAW 60	31.500	Nr. 100	60	800	320	55	48,00	-	-	-

[2] For load capacity of chain slings please refer to the table on page 14

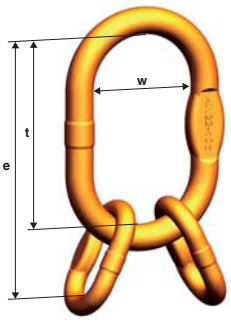
BW Transition link

According to EN 1677-4 with increased load capacity.
For pewag welded system.
Intermediate link or transition link and securing link.

BW Transition link	Code	Load capacity 0–45° [2] [kg]	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	Transition link for chain Ø 1- + 2-leg B I/II [mm]	3- + 4-leg B III/IV [mm]
	BW 7	1.000	7	36	16	7	0,03	5	-
	BW 8	1.400	8	36	16	-	0,03	6	-
	BW 9	1.900	9	44	20	-	0,07	7	-
	BW 10	2.500	10	44	20	-	0,09	8	5
	BW 13	4.000	13	54	25	10	0,17	10	6
	BW 16	6.700	17	70	34	14	0,36	13	7+8
	BW 20	10.000	20	85	40	-	0,68	16	10
	BW 22	12.500	23	115	50	17	1,16	-	13
	BW 23	14.000	23	115	45	17	1,15	19	-
	BW 26	16.200	27	140	65	20	1,92	-	16
	BW 27	19.000	27	140	55	20	1,92	22	-
	BW 32	26.500	33	150	70	26	3,16	26	19
	BW 36	31.000	36	170	75	-	4,12	-	22
	BW 40	40.400	40	170	80	-	5,37	32	-
	BW 45	42.400	45	170	80	-	7,15	-	26
	BW 50	64.000	50	200	100	-	10,80	-	32
	B 50	58.000	50	200	100	-	10,80	-	32

VW Master link assembly

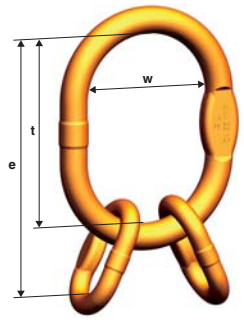
According to EN 1677-4 with increased load capacity.
For pewag connex and welded system.
For assembling 3- and 4-leg chains with connex links, and for rope slings
For assembling of welded chain slings with BW by pewag.

VW Master link assembly	Code	Consisting of	Load capacity 0–45° [2] [kg]	Can be used up to single hook according to DIN 15401	e [mm]	t [mm]	w [mm]	Weight [kg/pc.]
	VW 5	AW 13 + 2 BW 10	2.300	Nr. 2,5	154	110	60	0,52
	VW 6	AW 18 + 2 BW 13	4.200	Nr. 5	189	135	75	1,26
	VW 7/8	AW 22 + 2 BW 16	7.600	Nr. 6	230	160	90	2,32
	VW 10	AW 26 + 2 BW 20	9.600	Nr. 8	265	180	100	3,68
	VW 13	AW 32 + 2 BW 22	14.000	Nr. 10	315	200	110	6,46
	VW 16	AW 36 + 2 BW 26	21.200	Nr. 16	400	260	140	10,06
	VW 19/20	AW 50 + 2 BW 32	34.100	Nr. 32	500	350	190	22,87
	VW 22	AW 50 + 2 BW 36	40.000	Nr. 32	520	350	190	24,79
	VW 26	AW 56 + 2 BW 45	56.000	Nr. 32	570	400	200	41,31
	VW 32	AW 72 + 2 BW 50	85.000	Nr. 50	660	460	250	66,60
	V 32	A 72 + 2 B 50	76.000	Nr. 50	660	460	250	66,60

[2] For load capacity of chain slings please refer to the table on page 14

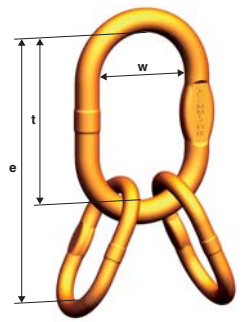
VMW Enlarged master link assembly

According to EN 1677-4 with increase load capacity.
For pewag connex and welded system. For assembling 3- and 4-leg chains with connex links CW.
For assembling of welded chain slings with BW by pewag.
Similar to VW 4-leg set, but also suitable for larger crane hooks and special hooks.

VMW Enlarged master link assembly	Code	Consisting of	Load capacity 0–45° [2] [kg]	Can be used up to single hook according to DIN 15401	e [mm]	t [mm]	w [mm]	Weight [kg/pc.]
	VMW 6	MW 18 + 2 BW 13	4.200	Nr. 6	214	160	95	1,43
	VMW 7/8	MW 22 + 2 BW 16	6.600	Nr. 10	230	160	110	2,41
	VMW 10	MW 26 + 2 BW 20	10.100	Nr. 10	275	190	110	4,01
	VMW 13	MW 32 + 2 BW 22	15.700	Nr. 12	345	230	130	6,90
	VMW 16	MW 36 + 2 BW 26	21.200	Nr. 20	415	275	150	11,12
	VMW 19/20	MW 56 + 2 BW 32	34.100	Nr. 50	500	350	250	28,08
	VMW 22	MW 56 + 2 BW 36	40.000	Nr. 50	520	350	250	30,62

VAW Special master link assembly

According to EN 1677-4 with increased load capacity.
For pewag connex and welded system.
For assembling 3- and 4-leg chains with connex links CW, when shortening hooks are to be assembled separately, and for slings with thimbled eyes.
For use in rope slings please consider that load capacity is listed according to EN 1677-4 with safety factor 4.
For assembling of welded slings with BW by pewag.

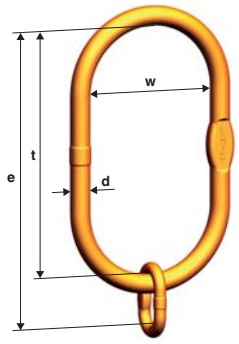
VAW Special master link assembly	Code	Consisting of	Load capacity 0–45° [2] [kg]	Can be used up to single hook according to DIN 15401	e [mm]	t [mm]	w [mm]	Weight [kg/pc.]
	VAW 6/7	AW 18 + 2 AW 14	5.000	Nr. 5	245	135	75	1,72
	VAW 8	AW 22 + 2 AW 16	6.300	Nr. 6	270	160	90	2,66
	VAW 10	AW 26 + 2 AW 18	9.500	Nr. 8	315	180	100	4,30
	VAW 13	AW 32 + 2 AW 26	16.100	Nr. 10	380	200	110	9,06
	VAW 16	AW 36 + 2 AW 32	25.100	Nr. 16	460	260	140	14,50
	VAW 19/20	AW 50 + 2 MW 36	41.100	Nr. 32	625	350	190	31,51
	VAW 22	AW 50 + 2 AW 45	47.400	Nr. 32	690	350	190	42,19
	VAW 26	AW 56 + 2 AW 50	58.000	Nr. 32	750	400	200	56,40
	VAW 32	AW 72 + 2 AW 56	85.000	Nr. 50	860	460	250	99,02
	VA 32	A 72 + 2 AW 56	78.700	Nr. 50	860	460	250	99,02

[2] For load capacity of chain slings please refer to the table on page 14

VLW 1 Oversize master link assembly

According to EN 1677-4 with increased load capacity.
For pewag connex and welded system.
For hook no. 25 DIN 15401. For assembling 1-leg slings with connex CW.
For assembling of welded slings with BW pewag.

VLW 1 Oversize master link assembly



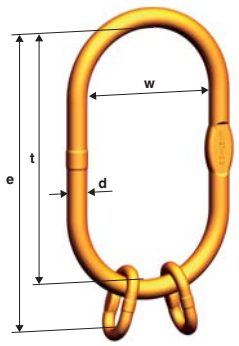
Code	Consisting of	Load capacity 0–45° [kg]	Can be used up to single hook according to DIN 15401	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VLW 1-6/7/8	LW 22 + BW 13	2.500	Nr. 25	394	22	340	180	3,40
VLW 1-10	LW 27 + BW 16	4.000	Nr. 25	410	27	340	180	4,80
VLW 1-13	LW 27	6.700	Nr. 25	340	27	340	180	4,40
VLW 1-16	LW 32	10.000	Nr. 25	340	33	340	180	6,70
VLW 1-19/22	LW 40	19.000	Nr. 25	340	40	340	180	10,00

Example: VLW 1-6/7/8 can be used for 1-leg slings with 6 mm, 7mm and 8mm chain

VLW 2/4 Oversize master link assembly

According to EN 1677-4 with increased load capacity.
For pewag connex and welded system.
For hook no. 25 DIN DIN 15401. For assembling multi-leg slings with connex CW. For assembling of welded slings with BW by pewag.

VLW 2/4 Oversize master link assembly

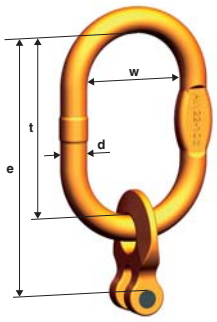


Code	Consisting of	Load capacity 0–45° [kg]	Can be used up to single hook according to DIN 15401	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VLW 2-6/7/8/4-6	LW 22 + 2 BW 13	3.550	Nr. 25	394	22	340	180	3,50
VLW 2-10/4-7/8	LW 27 + 2 BW 16	5.600	Nr. 25	410	27	340	180	5,10
VLW 2-13/4-10	LW 32 + 2 BW 20	9.500	Nr. 25	425	33	340	180	8,00
VLW 2-16/4-13	LW 40 + 2 BW 22	14.000	Nr. 25	455	40	340	180	12,30
VLW 2-19/4-16	LW 40 + 2BW 26	21.200	Nr. 25	480	40	340	180	13,80

Example of multi-leg sling:
VLW 2-10/4-7/8 can be used for 10 mm 2-leg slings and for 7+8 mm 4-leg sling. BW durch pewag.

KAGW 1 Clevis master set

According EN 818-4 with increased load capacity.
For pewag clevis system.
Master set for single-leg chains with welded-in captive couplings.

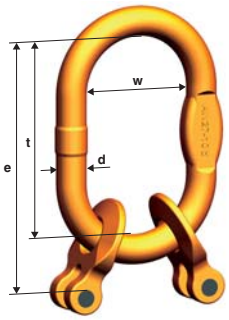


KAGW 1 Clevis master set	Code	Load capacity [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	KAGW 1-6	1.400	6	Nr. 2,5	13	110	60	141	0,42
	KAGW 1-7	1.900	7	Nr. 2,5	13	110	60	153	0,54
	KAGW 1-8	2.500	8	Nr. 2,5	16	110	60	153	0,73
	KAGW 1-10	4.000	10	Nr. 5	19	135	75	186	1,28
	KAGW 1-13	6.700	13	Nr. 6	23	160	90	223	2,30
	KAGW 1-16	10.000	16	Nr. 8	27	180	100	254	3,67
	KAGW 1-19/20	14.000	19	Nr. 10	33	200	110	290	6,52
	KAGW 1-22	19.000	22	Nr. 16	36	260	140	357	9,43

Example: KAGW 1-10 can be used for 1-leg sling with 10 mm chain.

KAGW 2 Clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for 2-leg chains with welded-in captive couplings.

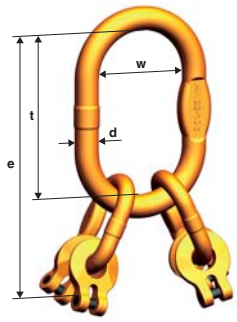


KAGW 2 Clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	KAGW 2-6	2.000 / 1.400	6	Nr. 2,5	13	110	60	141	0,50
	KAGW 2-7	2.650 / 1.900	7	Nr. 2,5	16	110	60	153	0,93
	KAGW 2-8	3.550 / 2.500	8	Nr. 5	19	135	75	178	1,26
	KAGW 2-10	5.600 / 4.000	10	Nr. 6	23	160	90	211	2,32
	KAGW 2-13	9.500 / 6.700	13	Nr. 8	27	180	100	243	3,86
	KAGW 2-16	14.000 / 10.000	16	Nr. 10	33	200	110	274	6,56
	KAGW 2-19/20	20.000 / 14.000	19	Nr. 16	36	260	140	350	10,98
	KAGW 2-22	26.500 / 19.000	22	Nr. 25	45	340	180	437	19,24

Example: KAGW 2-10 can be used for 2-leg slings with 10 mm chain.

KAGW 4 Clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for 4-leg chains with welded-in captive couplings.

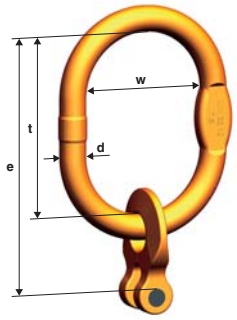


KAGW 4 Clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	KAGW 4-6	3.000 / 2.120	6	Nr. 5	19	135	75	220	1,52
	KAGW 4-7	4.000 / 2.800	7	Nr. 6	23	160	90	273	3,12
	KAGW 4-8	5.300 / 3.750	8	Nr. 6	23	160	90	273	3,12
	KAGW 4-10	8.000 / 6.000	10	Nr. 8	27	180	100	316	5,12
	KAGW 4-13	14.000 / 10.000	13	Nr. 10	33	200	110	378	9,26
	KAGW 4-16	21.200 / 15.000	16	Nr. 16	36	260	140	474	14,90
	KAGW 4-19/20	30.000 / 21.200	19	Nr. 32	50	350	190	590	32,39
	KAGW 4-22	40.000 / 28.000	22	Nr. 32	50	350	190	617	37,63

Example: KAGW 4-10 can be used for 4-leg slings with 10 mm chain.

KMGW 1 Enlarged clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for single-leg chains with welded-in captive couplings.
Similar to KAGW clevis master set, but suitable for larger crane hooks and special hooks.

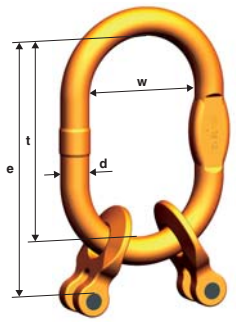


KMGW 1 Enlarged clevis master set	Code	Load capacity [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	KMGW 1-6	1.400	6	Nr. 4	14	120	70	151	0,52
	KMGW 1-8	2.500	8	Nr. 5	16	140	80	183	0,87
	KMGW 1-10	4.000	10	Nr. 6	19	160	95	211	1,45
	KMGW 1-13	6.700	13	Nr. 10	23	160	110	223	2,39
	KMGW 1-16	10.000	16	Nr. 10	27	190	110	264	3,86

Example: KMGW 1-10 can be used for 1-leg slings with 10 mm chains.

KMGW 2 Enlarged clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for für 2-leg chains with welded-in captive couplings
Similar to KAGW clevis master set, but suitable for larger crane hooks and special hooks.

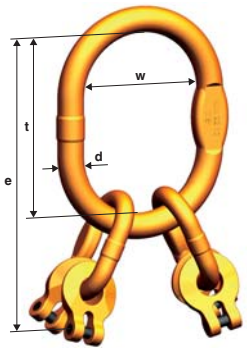


KMGW 2 Enlarged clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	KMGW 2-6	2.000 / 1.400	6	Nr. 4	14	120	70	151	0,60
	KMGW 2-8	3.550 / 2.500	8	Nr. 6	19	160	95	203	1,49
	KMGW 2-10	5.600 / 4.000	10	Nr. 10	23	160	110	211	2,41
	KMGW 2-13	9.500 / 6.700	13	Nr. 10	27	190	110	253	4,05
	KMGW 2-16	14.000 / 10.000	16	Nr. 12	33	230	130	304	7,20

Example: KMGW 2-10 can be used for 2-leg slings with 10 mm chain.

KMGW 4 Enlarged clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for 4-leg chains with welded-in captive couplings.
Similar to KAGW clevis master set, but suitable for larger crane hooks and special hooks.

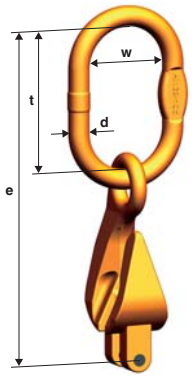


KMGW 4 Enlarged clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	KMGW 4-6	3.000 / 2.120	6	Nr. 6	19	160	95	245	1,75
	KMGW 4-8	5.300 / 3.750	8	Nr. 10	23	160	110	273	3,21
	KMGW 4-10	8.000 / 6.000	10	Nr. 10	27	190	110	326	5,45
	KMGW 4-13	14.000 / 10.000	13	Nr. 12	33	230	130	408	9,90
	KMGW 4-16	21.200 / 15.000	16	Nr. 20	38	275	150	489	16,00

Example: KMGW 4-10 can be used for 4-leg slings with 10 mm chain.

VXKW 1 Clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master set for 1-leg chains with welded-in XKW shortening element.

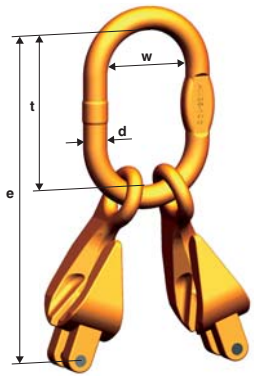


VXKW 1 Clevis master set	Code	Load capacity [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	VXKW 1-5	1.000	5	Nr. 1,6	10	80	50	164	0,44
	VXKW 1-6	1.400	6	Nr. 2,5	13	110	60	194	0,64
	VXKW 1-7	1.900	7	Nr. 2,5	13	110	60	232	0,96
	VXKW 1-8	2.500	8	Nr. 2,5	16	110	60	232	1,16
	VXKW 1-10	4.000	10	Nr. 5	19	135	75	294	2,11
	VXKW 1-13	6.700	13	Nr. 6	23	160	90	363	4,30
	VXKW 1-16	10.000	16	Nr. 8	27	180	100	413	7,26

Example: VXKW 1-10 can be used for 1-leg slings with 10 mm chain.

VXKW 2 Clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master set for 2-leg chains with welded-in XKW shortening element.

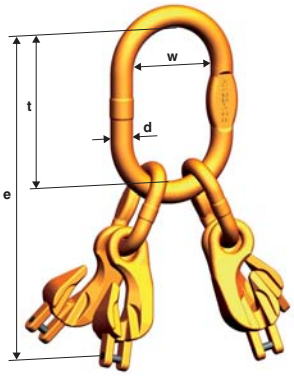


VXKW 2 Clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	VXKW 2-5	1.400 / 1.000	5	Nr. 1,6	10	80	50	164	0,74
	VXKW 2-6	2.000 / 1.400	6	Nr. 2,5	13	110	60	194	0,94
	VXKW 2-7	2.650 / 1.900	7	Nr. 2,5	16	110	60	232	1,77
	VXKW 2-8	3.550 / 2.500	8	Nr. 5	19	135	75	257	2,12
	VXKW 2-10	5.600 / 4.000	10	Nr. 6	23	160	90	319	4,10
	VXKW 2-13	9.500 / 6.700	13	Nr. 8	27	180	100	383	7,86
	VXKW 2-16	14.000 / 10.000	16	Nr. 10	33	200	110	433	13,74

Example: VXKW 2-10 can be used for 2-leg slings with 10 mm chain.

VXKW 4 Clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master set for 4-leg chains with welded-in XKW shortening element.

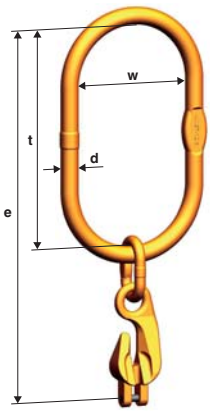


VXKW 4 Clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	For chain Ø	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	VXKW 4-5	2.000 / 1.500	5	Nr. 2,5	13	110	60	238	1,72
	VXKW 4-6	3.000 / 2.120	6	Nr. 5	19	135	75	273	2,40
	VXKW 4-7	4.000 / 2.800	7	Nr. 6	23	160	90	352	4,84
	VXKW 4-8	5.300 / 3.750	8	Nr. 6	23	160	90	352	4,84
	VXKW 4-10	8.000 / 6.000	10	Nr. 8	27	180	100	424	8,82
	VXKW 4-13	14.000 / 10.000	13	Nr. 10	33	200	110	518	17,26
	VXKW 4-16	21.200 / 15.000	16	Nr. 16	36	260	140	633	29,26

Example: VXKW 4-10 can be used for 4-leg slings with 10 mm chain.

LXKW 1 Oversize clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for 1-leg chains with welded-in XKW shortening element.
For hook no. 25 DIN 15401.
Particularly for large crane hooks (mobile crans).
Very useful, because each leg can be shortened.

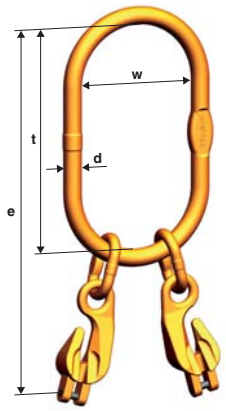


LXKW 1 Oversize clevis master set	Code	Load capacity [kg]	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	LXKW 1-6	1.400	Nr. 25	23	340	180	478	3,70
	LXKW 1-8	2.500	Nr. 25	23	340	180	516	4,00
	LXKW 1-10	4.000	Nr. 25	27	340	180	569	6,00
	LXKW 1-13	6.700	Nr. 25	27	340	180	629	7,80
	LXKW 1-16	10.000	Nr. 25	33	340	180	688	12,70

Example: LXKW 1-10 can be used for 1-leg slings with 10 mm chain.

LXKW 2 Oversize clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for 2-leg chains with welded-in XKW shortening element.
For hook no. 25 DIN 15401.
Particularly for large crane hooks (mobile crans).
Very useful, because each leg can be shortened.

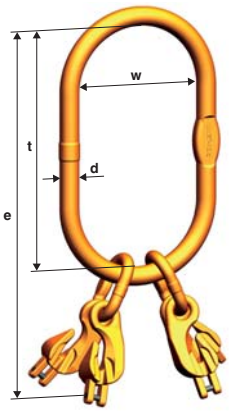


LXKW 2 Oversize clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	LXKW 2-6	2.000 / 1.400	Nr. 25	23	340	180	478	4,14
	LXKW 2-8	3.550 / 2.500	Nr. 25	23	340	180	516	4,80
	LXKW 2-10	5.600 / 4.000	Nr. 25	27	340	180	569	7,60
	LXKW 2-13	9.500 / 6.700	Nr. 25	33	340	180	629	13,50
	LXKW 2-16	14.000 / 10.000	Nr. 25	40	340	180	688	21,90

Example: LXKW 2-10 can be used for 2-leg slings with 10 mm chain

LXKW 4 Oversize clevis master set

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Master sets for 4-leg chains with welded-in XKW shortening element.
For hook no. 25 DIN 15401.
Particularly for large crane hooks (mobile crans).
Very useful, because each leg can be shortened.



LXKW 4 Oversize clevis master set	Code	Load capacity 0°–45° / 45°–60° [kg]	Can be used up to single hook according to DIN 15401	d [mm]	t [mm]	w [mm]	e [mm]	Weight [kg/pc.]
	LXKW 4-6	3.000 / 2.120	Nr. 25	23	340	180	478	4,70
	LXKW 4-8	5.300 / 3.750	Nr. 25	27	340	180	532	7,60
	LXKW 4-10	8.000 / 6.000	Nr. 25	33	340	180	584	13,10
	LXKW 4-13	14.000 / 10.000	Nr. 25	40	340	180	659	23,10
	LXKW 4-16	21.200 / 15.000	Nr. 25	40	340	180	713	33,10

Example: LXKW 4-10 can be used for 4-leg slings with 10 mm chain.

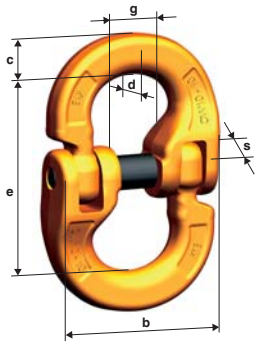
Accessories in G10 – Lifting

Accessories in G10 Lifting

Product overview

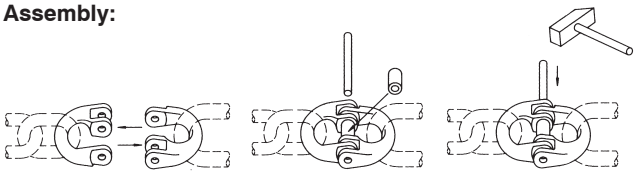
CW Connex connecting link

According to EN 1677-1 with increased load capacity.
Connecting link for pewag connex system.
Load pin and collar CBH are also separately available.
Connecting link for: Master link - chain, Chain - chain, Hook - chain.
Only for straight pull.



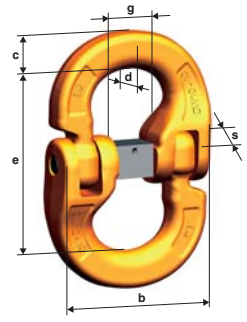
CW Connex connecting link	Code	Load capacity [kg]	e [mm]	c [mm]	s [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
	CW 5	1.000	36	7	9	7	35	13	0,05
	CW 6	1.400	44	8	11	8	39	14	0,06
	CW 7	1.900	51	10	13	9	47	17	0,12
	CW 8	2.500	62	12	14	10	55	18	0,23
	CW 10	4.000	72	15	18	13	64	24	0,42
	CW 13	6.700	88	20	22	17	79	28	0,84
	CW 16	10.000	103	21	29	21	106	33	1,40
	CW 19/20	16.000	115	30	35	25	118	42	2,40
	CW 22	19.000	161	34	39	25	148	51	4,15
	CW 26	26.500	190	40	46	30	175	60	6,70
	CW 32	40.000	206	47	56	35	216	80	11,20
	C32	31.500	194	40	50	32	195	80	8,46

Assembly:



CLW Connex connecting link

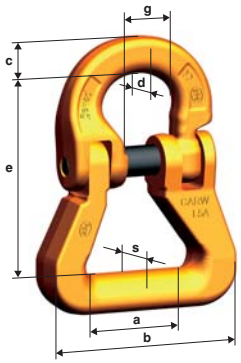
According to EN 1677-1 with increased load capacity.
Connecting link for pewag connex system.
For applications where the pin must not be removed or must be secured by positive locking.
Only for straight pull.



CLW Connex connecting link	Code	Load capacity [kg]	e [mm]	c [mm]	s [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
	CLW 7	1.900	51	10	13	9	47	17	0,12
	CLW 10	4.000	72	15	18	13	64	24	0,42
	CLW 13	6.700	88	20	22	17	79	28	0,84
	CLW 16	10.000	103	21	29	21	106	33	1,14

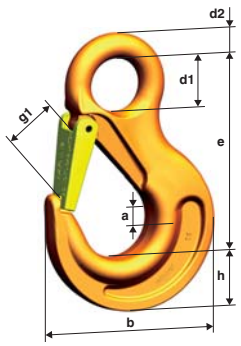
CARW Round sling connecting link

According to EN 1677-1 with increased load capacity.
For pewag connex system.
Link for webbing slings mounted in one connex half.
Reduced risk of damage thanks to wide surface.
Supplied complete with connex half, load pin and collar.

CARW Round sling connecting link	Code	Load capacity [kg]	a [mm]	e [mm]	c [mm]	d [mm]	b [mm]	s [mm]	g [mm]	Weight [kg/pc.]
	CARW 8	2.500	29	66	12	10	65	18	18	0,40
	CARW 10	4.000	40	81	15	13	82	21	24	0,55
	CARW 13	6.700	50	104	20	17	100	28	28	1,20
	CARW 16	10.000	47	113	21	21	110	40	33	2,00
	CARW 22	19.000	109	178	29	27	215	59	48	6,50

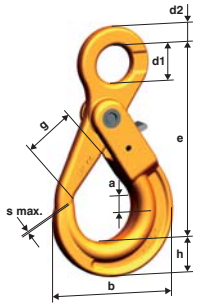
HSW Eye sling hook

According to EN 1677-2 with increased load capacity.
For pewag connex and welded system.
For general lifting applications.
All hooks with forged safety catch.

HSW Eye sling hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
	HSW 5/6	1.400	85	21	17	20	10	19	68	0,30
	HSW 7/8	2.500	106	27	19	25	11	26	88	0,50
	HSW 10	4.000	131	33	26	34	16	31	109	1,10
	HSW 13	6.700	164	44	33	43	19	39	134	2,20
	HSW 16	10.000	183	50	40	50	25	45	155	3,50
	HSW 19/20	16.000	205	55	48	55	27	53	178	5,80
	HSW 22	19.000	225	62	50	60	29	62	196	8,00
	HSW 26	26.500	259	75	60	70	37	73	235	13,40
	HSW 32	40.000	299	97	82	66	45	87	291	27,50
	HS 32	31.500	299	89	78	66	42	87	281	22,40

LHW Safety hook

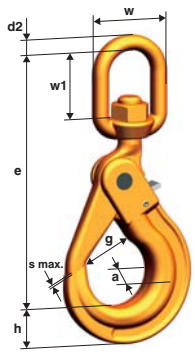
According to EN 1677-3 with increased load capacity.
For pewag connex system.
Large eye, therefore suitable for ropes and webbing slings.
Automatically closes and locks under load, and requires the load to be grounded before load can be released.
Not for welded system!



LHW Safety hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
	LHW 5/6	1.400	110	20	17	71	21	11	28	1	0,50
	LHW 7/8	2.500	136	26	20	88	25	12	34	1	0,90
	LHW 10	4.000	169	30	29	107	35	15	45	1	1,50
	LHW 13	6.700	205	40	35	138	40	20	52	2	2,70
	LHW 16	10.000	251	50	41	168	50	27	60	2	5,70
	LHW 19/20	16.000	290	62	50	194	60	30	70	2	9,80
	LHW 22	19.000	322	65	52	211	70	32	81	2	12,40

WLHW Swivel safety hook

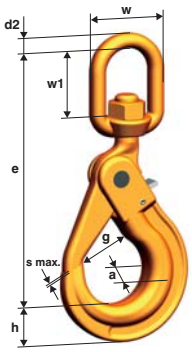
According to EN 1677-1 with increased load capacity.
For pewag connex system.
Standard type must not be swiveled when loaded.
Not for welded system!



WLHW Swivel safety hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	w [mm]	w1 [mm]	d2 [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
	WLHW 6	1.400	160	20	17	35	35	13	28	1	0,60
	WLHW 7/8	2.500	181	26	20	35	35	13	34	1	1,10
	WLHW 10	4.000	218	30	29	42	40	16	45	1	2,00
	WLHW 13	6.700	269	40	35	49	47	20	52	2	4,00
	WLHW 16	10.000	319	50	41	60	60	24	60	2	6,80

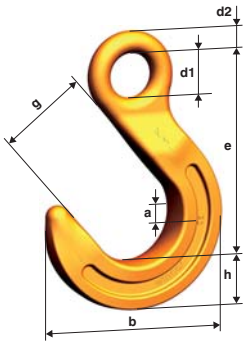
WLHBW Swivel safety hook

According to EN 1677-1 with increased load capacity.
For pewag connex system.
Swivel hook with bearing to rotate when loaded.
Not for welded system!

WLHBW Swivel safety hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	w [mm]	w1 [mm]	d2 [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
	WLHBW 6	1.400	160	20	17	35	35	13	28	1	0,60
	WLHBW 7/8	2.500	181	26	20	35	35	13	34	1	1,10
	WLHBW 10	4.000	218	30	29	42	40	16	45	1	2,00
	WLHBW 13	6.700	269	40	35	49	47	20	52	2	4,00
	WLHBW 16	10.000	319	50	41	60	60	24	60	2	6,80

FW Foundry hook

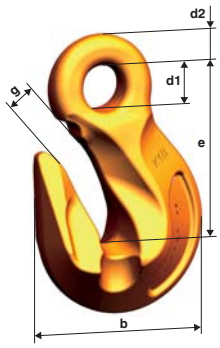
According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
For applications wher jaw size „g“ of the HSW hook is inadequate, mainly foundries.
Before using the hook, chech whether hooks without safety catch are allowed to be used for this particular application.
Can‘t be mounted with Unilock U!

FW Foundry hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g [mm]	b [mm]	Weight [kg/pc.]
	FW 7/8	2.500	131	29	25	24	11	64	118	0,92
	FW 10	4.000	158	35	32	31	14	76	143	1,77
	FW 13	6.700	190	42	40	39	17	89	170	2,82
	FW 16	10.000	224	50	46	47	22	102	200	5,03
	FW 19/20	16.000	260	61	54	56	28	114	231	7,60
	F 22	15.000	265	69	65	47	32	127	260	13,40
	F 26 *	21.200	305	80	72	54	34	136	280	19,21
	F 32	31.500	327	93	83	60	37	152	336	28,00

* can‘t be mounted with Unilock U

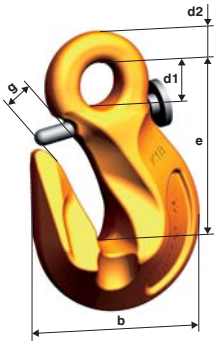
PW Grab hook

According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
For shortening and for slings that must not tighten. First grab hook in grade 10 quality on the market.
Reduction of load capacity not required thanks to 4-fold safety.
For G8 slings not attachable with Unilock U.

PW Grab hook	Code	Load capacity [kg]	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
	PW 5/6	1.400	51	48	12	9	8	0,18
	PW 7/8	2.500	71	58	20	12	11	0,40
	PW 10	4.000	88	76	22	15	13	0,90
	PW 13	6.700	98	98	24	17	16	1,60
	PW 16	10.000	129	118	32	23	19	3,60
	PW 19/20	16.000	151	150	36	27	25	6,15
	PW 22	19.000	170	165	42	31	27	8,30
	PW 26	26.500	201	195	50	37	32	13,80
	PW 32	40.000	243	242	60	43	38	25,00
	P32	31.500	240	210	60	40	39	18,60

PSW Grab hook with safety catch

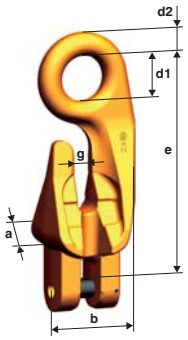
According to EN 1677-1 with increased load capacity.
For pewag connex system.
Shortening hook with safety catch against accidental release of the chain. First grab hook with safety catch in grade 10 quality on the market. Reduction of load capacity not required thanks to 4-fold safety. For G8 slings not attachable with Unilock U.
Not for welded chains slings.

PSW Grab hook with safety catch	Code	Load capacity [kg]	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
	PSW 7/8	2.500	71	58	20	12	11	0,40
	PSW 10	4.000	88	76	22	15	13	0,90
	PSW 13	6.700	98	98	24	17	16	1,60
	PSW 16	10.000	129	118	32	23	19	3,60

With help of the latest upgraded pewag design the optical misinterpretation that the fitting of the Winner chain is not correct will be avoided. It is very important and intended from the technical point of view that the middle chain link no longer contacts the bearing surface of the pewag grab or clevis grab hook, since the Winner chain is supported by the side faces of the pewag grab hook.

XKW Clevis shortening hook

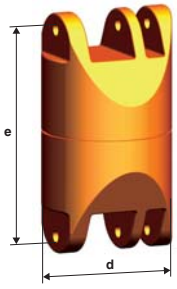
According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
Shortening hook for VXKW and LXKW master link assemblies.
Can be mounted in any chain leg thanks to clevis connecting link.



XKW Clevis shortening hook	Code	Load capacity [kg]	e [mm]	b [mm]	a [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
	XKW 5/6	1.400	84	37	29	18	9	8	0,30
	XKW 7	1.900	122	54	39	24	12	11	0,62
	XKW 8	2.500	122	54	39	24	12	11	0,63
	XKW 10	4.000	159	70	50	31	14	13	1,25
	XKW 13	6.700	203	92	64	37	18	15	2,70
	XKW 16	10.000	234	102	80	48	24	20	4,80

DFW Swivel

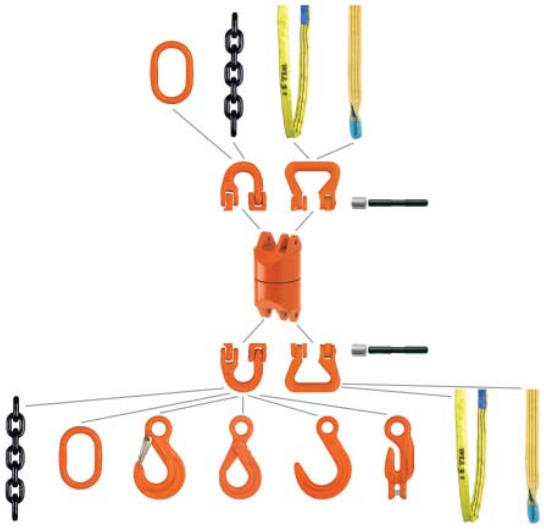
According to EN 1677-1 with increased load capacity.
For pewag connex system.
Can be rotated when loaded because of roller bearing.
Can be mounted with accessories for the connex system with CW or CARW.
Admissible operating temperature: 100 °C.



DFW Swivel	Code	Load capacity [kg]	e [mm]	d [mm]	Weight [kg/pc.]
	DFW 7 Complete	1.900	91	53	1,12
	DFW 8 Complete	2.500	92	53	1,12
	DFW 10 Complete	4.000	111	63	2,00

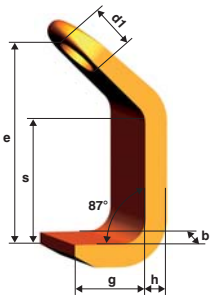
Scope of delivery: 1 swivel, 1 bolt and 1 bush with adaptor sleeve. For mounting the swivel, an additional connecting link Connex CW or a round sling connecting link CARW is needed.

Assembly options: Many other combinations with our wide product range are possible.



BWW Sheet metal plate hook

According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
For lifting sheet metal stacks and boards.
Recommended angle of inclination of the sling: ß 15-30°.
Use min. 3-leg chain sling.

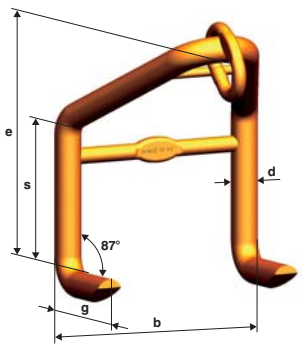


BWW Sheet metal plate hook	Code	Load capacity [kg]	e [mm]	s [mm]	b [mm]	h [mm]	d1 [mm]	g [mm]	Weight [kg/pc.]
	BWW 7/8	2.500	131	80	50	18	28	55	1,50
	BWW 10	4.000	168	100	70	20	36	65	2,80
	BWW 13	6.700	207	130	80	26	40	90	5,30
	BWW 16	10.000	261	160	100	33	50	110	10,50
	BWW 19/20	16.000	302	185	120	40	60	130	17,50
	BWW 22	19.000	363	220	140	50	75	150	30,50

Other types available upon request!

GHW Fork hook

According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
For lifting large sheet metal stacks and large boards. Use only in pairs.
Recommended angle of inclination of the sling: 30-45°.

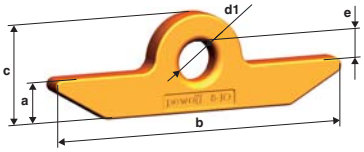


GHW Fork hook	Code	Load capacity [kg]	s [mm]	b [mm]	g [mm]	d [mm]	e [mm]	BW-Glied	Weight [kg/pc.]
	GHW 5/6	1.400	100	190	65	23	203	BW 13	2,70
	GHW 7/8	2.500	150	254	100	30	300	BW 16	6,50
	GHW 10	4.000	200	380	130	40	402	BW 22	16,10
	GH 13	5.300	300	500	195	50	592	BW 26	36,50
	GH 16	8.000	400	600	250	60	781	BW 26	64,50

Other types available upon request!

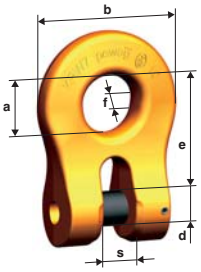
KNEW Toggle

According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
Toggle chains will be used mainly for the transport of sheet piles in the building industry.

KNEW Toggle	Code	For chain	Load capacity [kg]	e [mm]	a [mm]	b [mm]	c [mm]	d1 [mm]	d min. [mm]	d max. [mm]	Connecting link
	KNEW 8	8	2.500	10	17	120	38	15	40	60	WIN 10

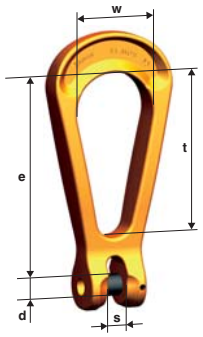
KRW Coupling ring

According to EN 1677-1 witch increased load capacity.
For pewag clevis system.
Connecting part for clevis master links, and as a chain-connecting component in specific designs.

KRW Coupling ring	Code	Load capacity [kg]	e [mm]	s [mm]	a [mm]	b [mm]	f [mm]	d [mm]	Weight [kg/pc.]
	KRW 5/6	1.400	31	7	18	38	8	7	0,08
	KRW 7	1.900	43	10	24	54	11	9	0,20
	KRW 8	2.500	43	10	24	54	11	10	0,20
	KRW 10	4.000	51	12	28	63	14	12,50	0,36
	KRW 13	6.700	63	15	33	76	17	16	0,70
	KRW 16	10.000	74	18	40	88	20	20	1,21
	KRW 19/20	16.000	94	23	50	114	24	24	2,38
	KRW 22	19.000	102	25	50	122	27	27	3,21

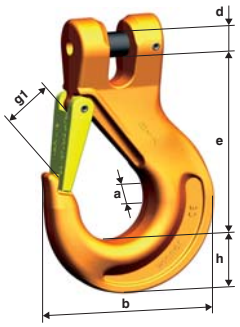
KOW Clevis reeving link

According to EN 818-4 with increased load capacity.
For pewag clevis.
Master set for 1-leg chains. No danger of confusing this master link with any other master link. Can also be used as an end link.

KOW Clevis reeving link	Code	Load capacity [kg]	e [mm]	t [mm]	w [mm]	d [mm]	s [mm]	Weight [kg/pc.]
	KOW 7	1.900	92	70	34	9	9	0,28
	KOW 8	2.500	91	70	34	10	9	0,30
	KOW 10	4.000	128	102	50	13	12	0,70
	KOW 13	6.700	169	136	66	16	15	1,40
	KOW 16	10.000	214	172	83	20	18	2,74

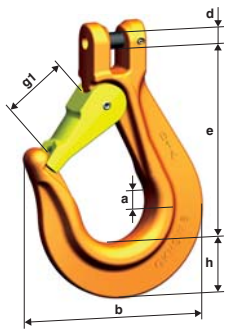
KHSW Clevis sling hook

According to EN 1677-2 with increased load capacity.
For pewag clevis system.
General purpose hook, can be used without transition link and without connecting link. With forged safety catch.

KHSW Clevis sling hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
	KHSW 5/6	1.400	69	20	15	7	19	66	0,20
	KHSW 7	1.900	95	28	19	9	26	90	0,60
	KHSW 8	2.500	95	28	19	10	26	90	0,60
	KHSW 10	4.000	109	35	25	12,50	31	108	1,10
	KHSW 13	6.700	136	41	34	16	39	131	2,00
	KHSW 16	10.000	155	49	37	20	45	153	3,48
	KHSW 19/20	16.000	184	53	51	24	53	177	5,00
	KHSW 22	19.000	214	62	52	27	62	196	9,00

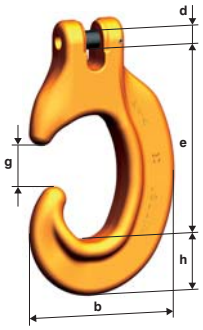
GKHSW Wide bowl sling hook

According to EN 1677-2 with increased load capacity.
For pewag clevis system.
Alternative for the KHSW with wider throat opening.

GKHSW Wide bowl sling hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
	GKHSW 8	2.500	116	33	25	10	32	113	1,10
	GKHSW 10	4.000	126	40	30	12,50	35	132	1,70

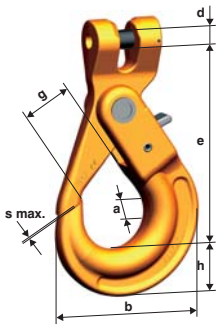
KCHW Clevis C-hook

According to EN 1677-1 with increased load capacity.
For pewag clevis system.
Suitable for simple and fast hooking and removal.
Only for applications without safety catch requirement.

KCHW Clevis C-hook	Code	Load capacity [kg]	e [mm]	h [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
	KCHW 7	1.900	91	28	9	74	20	0,50
	KCHW 8	2.500	90	28	10	74	20	0,50
	KCHW 10	4.000	129	39	12,50	107	28	1,40
	KCHW 13	6.700	166	51	16	137	41	3,00
	KCHW 16	10.000	205	60	20	166	45	5,30

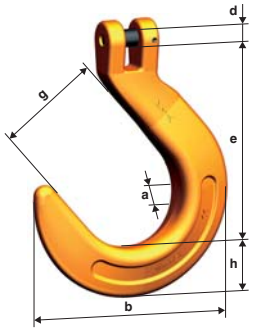
KLHW Clevis safety hook

According to EN 1677-3 with increased load capacity.
For pewag clevis system.
Closes and locks automatically.

KLHW Clevis safety hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	b [mm]	d [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
	KLHW 5/6	1.400	94	20	17	71	7	28	1	0,50
	KLHW 7	1.900	123	26	20	88	9	34	1	0,90
	KLHW 8	2.500	123	26	20	88	10	34	1	0,90
	KLHW 10	4.000	144	30	29	107	12,50	45	1	1,60
	KLHW 13	6.700	180	40	35	138	16	52	2	2,90
	KLHW 16	10.000	218	50	41	168	20	60	2	5,80
	KLHW 19/20	16.000	259	62	50	194	24	70	2	9,90
	KLHW 22	19.000	286	65	52	211	27	81	2	12,80
	KLHW 26	26.500	338	79	61	253	33	100	2	20,50

KFW Clevis foundry hook

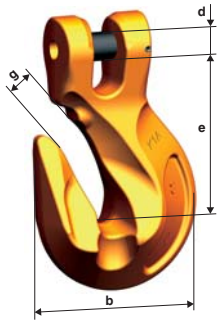
According to EN 1677-1 with increased load capacity.
For pewag clevis system.
For applications where jaw size „g“ of the KHSW hook is inadequate; mainly in foundries.
Before using the hook, check whether hooks without safety catch are allowed to be used for this particular application.



KFW Clevis foundry hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	g [mm]	d [mm]	b [mm]	Weight [kg/pc.]
	KFW 7	1.900	121	29	25	64	9	118	1,00
	KFW 8	2.500	120	29	25	64	10	118	1,00
	KFW 10	4.000	140	35	32	76	12,50	143	1,78
	KFW 13	6.700	170	42	40	89	16	170	2,96

KPW Clevis grab hook

According to EN 1677-1 with increased load capacity.
For pewag clevis system. For shortening and for slings that must not tighten.
First clevis grab hook in grade 10 quality on the market.
Reduction of load capacity not required thanks to 4-fold safety.

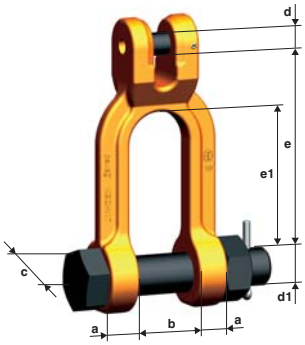


KPW Clevis grab hook	Code	Load capacity [kg]	e [mm]	b [mm]	d [mm]	g [mm]	Weight [kg/pc.]
	KPW 5/6	1.400	45	47	7	8	0,19
	KPW 7	1.900	61	58	9	11	0,38
	KPW 8	2.500	61	58	10	11	0,38
	KPW 10	4.000	76	76	12,50	13	0,85
	KPW 13	6.700	104	101	16	17	1,90
	KPW 16	10.000	116	120	20	20	3,60
	KPW 19/20	16.000	141	150	24	25	6,15
	KPW 22	19.000	158	165	27	27	9,00

With help of the latest upgraded pewag design the optical misinterpretation that the fitting of the Winner chain is not correct will be avoided. It is very important and intended from the technical point of view that the middle chain link no longer contacts the bearing surface of the pewag grab or clevis grab hook, since the Winner chain is supported by the side faces of the pewag grab hook.

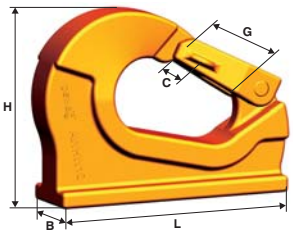
KSCHW Clevis shackle

According to EN 1677-1 with increased load capacity.
For pewag clevis system.
Directly attached to the cain. Allows direct connection with other components such as spreader beams.

KSCHW Clevis shackle	Code	Load capacity [kg]	e [mm]	e1 [mm]	b min. [mm]	a [mm]	d [mm]	c [mm]	d1 [mm]	Weight [kg/pc.]
	KSCHW 7	1.900	76	54	26	12	9	31	16	0,49
	KSCHW 8	2.500	76	54	26	12	10	31	16	0,49
	KSCHW 10	4.000	105	76	32	16	12,50	39	20	0,95
	KSCHW 13	6.700	113	77	42	21	16	50	24	1,89

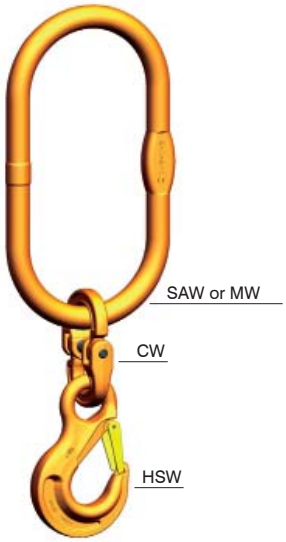
AWHW Weld-on hook

According to EN 1677-1 with increased load capacity.
Safety hook to be welded on the excavator bucket.
Meets safety specifications.
Observe welding instructions!

AWHW Weld-on hook	Code	Load capacity [kg]	L	H	G	B	C	Weight [kg/pc.]
	AWHW 1,3	1.300	95	71	25	25	34	0,60
	AWHW 3,8	3.800	132	105	29	35	40	1,30
	AWHW 6,3	6.300	167	130	34	45	49	2,80
	AWHW 10	10.000	175	133	34	50	49	3,70

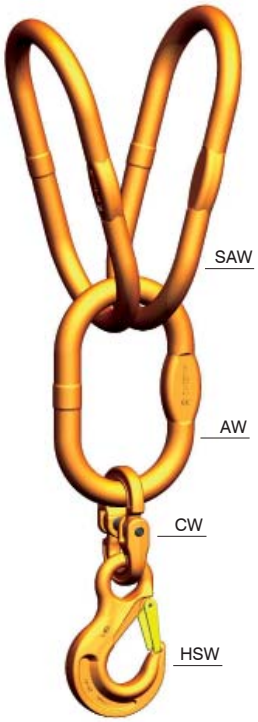
ÜW Transition assembly for single hook according DIN 15402

According to EN 818-4 with increased load capacity.
Transition assemblies for single hooks according DIN 15401,
for hooking in of small chain slings which do not fit on single hook.
Observe the listed load capacity!

ÜW Transition assembly for single hook	Code	Single hook DIN 15401	Load capacity [kg]	Comprising of	Weight [kg/pc.]
	ÜW 32/4 IAW-HSW Connex	- Nr. 32	4.000	SAW32 / CW16 / HSW10	11,50
	ÜW 32/6,7 IAW-HSW Connex	- Nr. 32	6.700	SAW32 / CW16 / HSW13	12,40
	ÜW 32/10 IAW-HSW Connex	- Nr. 32	10.000	SAW32 / CW16 / HSW16	13,90
	ÜW 32/16 IAW-HSW Connex	- Nr. 32	16.000	AW50 / CW26 / HSW19/20	26,40
	ÜW 32/19 IAW-HSW Connex	- Nr. 32	19.000	AW50 / CW26 / HSW22	29,00
	ÜW 32/26,5 IAW-HSW Connex	- Nr. 32	26.500	AW50 / CW26 / HSW26	33,70
	ÜW 50/6,7 IAW-HSW Connex	- Nr. 50	6.700	SAW45 / CW22 / HSW13	23,90
	ÜW 50/10 IAW-HSW Connex	- Nr. 50	10.000	SAW45 / CW22 / HSW16	25,40
	ÜW 50/16 IAW-HSW Connex	- Nr. 50	16.000	SAW45 / CW22 / HSW19/20	26,60
	ÜW 50/19 IAW-HSW Connex	- Nr. 50	19.000	SAW45 / CW22 / HSW22	29,20
	Ü 50/21,2 IAW-HSW Connex	- Nr. 50	21.200	SAW45 / CW26 / HSW26	35,80
	ÜW 50/40 I AW-HSW Connex	- Nr. 50	40.000	AW72 / CW32 / HSW32	75,80
	ÜW 100/26,5 IA8W-HSW Connex	- Nr. 100	26.500	SAW60 / CW26 / HSW26	65,10
	Ü 100/31,5 IAW-HSW Connex	- Nr. 100	31.500	SAW60 / CW32 / HSW32	78,80

ÜW Transition assembly for double hook according DIN 15402

According to EN 818-4 with increased load capacity.
Transition assemblies for double hooks according DIN 15402,
for hooking in of small chain slings which do not fit on double hooks.
Observe the listed load capacity!

ÜW Transition assembly for double hook	Code	Double hook DIN 15402	Load capacity [1] [kg]	Comprising of	Weight [kg/pc.]
	ÜW 50/4 IIAW-HSW Connex	- Nr. 50	4.000	2xSAW32 / AW36 / CW16 / HSW10	27,00
	ÜW 50/6,7 IIAW-HSW Connex	- Nr. 50	6.700	2xSAW32 / AW36 / CW16 / HSW13	27,90
	ÜW 50/10 IIAW-HSW Connex	- Nr. 50	10.000	2xSAW32 / AW36 / CW16 / HSW16	29,40
	ÜW 50/16 IIAW-HSW Connex	- Nr. 50	16.000	2xSAW32 / AW36 / CW19/20 / HSW19/20	31,60
	ÜW 50/19 IIAW-HSW Connex	- Nr. 50	19.000	2xSAW45 / AW50 / CW26 / HSW22	66,40
	ÜW 50/26,5 IIAW-HSW Connex	- Nr. 50	26.500	2xSAW45 / AW50 / CW26 / HSW26	71,10
	Ü 50/31,5 IIAW-HSW Connex	- Nr. 50	31.500	2xSAW45 / AW50 / CW32 / HSW32	84,80
	ÜW 100/26,5 IIAW-HSW Connex	- Nr. 100	26.500	2xSAW60 / AW50 / CW26 / HSW26	129,70
	ÜW 100/40 IIAW-HSW Connex	- Nr. 100	40.000	2xSAW60 / AW50 / CW32 / HSW32	143,40

[1] Angle of inclination of SAW: 35° max.

Special accessories in G10 – Lifting

Special accessories in G10 Lifting

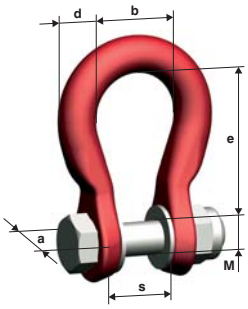
Product overview

U Unilock connecting link

Corrensponds to EN 1677-1. Special accessory in grade 8.
UB bolts, UM safety nut and US washers are also separately available.

General connecting link for:
Master link - chain or rope
Hook - chain or rope
Chain - various securing eyes

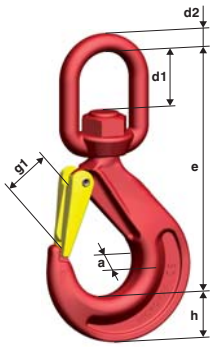
Alwasy ensure that the nut is not overtightened and that the bolt can rotate. Cannot be assembled to PW (PSW).



U Unilock connecting link	Code	Load capacity [kg]	e [mm]	b [mm]	d [mm]	s [mm]	a [mm]	M [mm]	Weight [kg/pc.]
	U 5/6	1.120	34	21	9	11	16	7	0,07
	U 7	1.500	49	28	13	16	22	8	0,20
	U 8	2.000	48	28	13	16	22	10	0,22
	U 10	3.150	60	35	16	20	27	12	0,38
	U 13	5.300	72	39	18	24	34	16	0,67
	U 16	8.000	80	47	23	32	44	20	1,21
	U 19/20	12.500	96	56	26	36	52	24	1,97
	U 26	21.200	132	77	33	49	66	30	4,06

WS Swivel hook

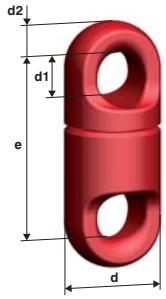
According to EN 1677-1. Special accessory in grade 8.
WS 7/8 to WS 13 with forged safety catch (bolt and spring also separately available). Must not be swiveled when loaded.
Observe load capacity - does not correspond to grade 10.



WS Swivel hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g1 [mm]	Weight [kg/pc.]
	WS 7/8	2.000	150	28	19	33	12	26	0,80
	WS 10	3.150	186	33	25	38	15	30	1,50
	WS 13	5.300	223	40	30	40	16	38	2,46
	WS 16	8.000	269	46	33	58	21	43	4,15

DF Swivel

According to pewag works standard.
Special accessory in grade 8.
Cannot be mounted with Unilock U.
Maximum working temperature: 130°C!
Observe load capacity - does not coresond to grad 10.
Size 13 in stock, other sizes on demand.

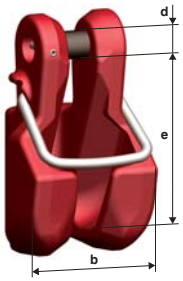


DF Swivel	Code	Load capacity [kg]	e [mm]	d [mm]	d1 [mm]	d2 [mm]	Weight [kg/pc.]
	DF 5/6 *	1.120	44	22	12	7	0,10
	DF 7/8 *	2.000	60	27	16	8	0,20
	DF 10 *	3.150	74	32	20	10	0,30
	DF 13	5.300	92	40	25	13	0,60

* available on request

KVS Clevis connector

According to EN 1677-1. Special accessory in grade 8.
For securing and shortening chains. Also for forming slings that must not tighten.
Observe load capacity - does not correspond to grade 10.



KVS Clevis connector	Code	Load capacity [kg]	e [mm]	b [mm]	d [mm]	Weight [kg/pc.]
	KVS 6	1.120	45	36	7	0,27
	KVS 7	1.500	58	44	9	0,50
	KVS 8	2.000	58	44	10	0,50
	KVS 10	3.150	70	55	13	0,80
	KVS 13	5.300	90	70	16	1,53

Warning instruction:
- Only load inside chain
- Only using with safety device
- Make sure that the chain fits properly

BRG Concrete pipe lifting sling

Special accessory. Three-leg chain sling with three self-tightening grips.
For the transport of upright concrete pipes and concrete tubing rings, as well as for pipe-laying. Leaflet with details available.
Avoid skewed lifting - may not be used as two-leg sling.
Observe load capacity - does not correspond to grade 10.

BRG Concrete pipe lifting sling	Code	Leg length [mm]	Load capacity up to 30° [kg]	Up to tube diameter ø [mm]	Weight [kg/pc.]
	WIN 7 III AW-BRG 1500	1.500	2.500	1.300	35,40
	WIN 7 III AW-BRG 2000	2.000	2.500	1.800	36,60
	WIN 7 III AW-BRG 1500 Unilock	1.500	2.500	1.300	35,30
	WIN 7 III AW-BRG 2000 Unilock	2.000	2.500	1.800	36,50

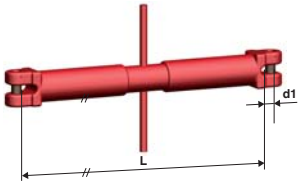
Special lengths upon request!

Universal chain sling with shortening hook

	WIN 7 III AW-BRG-XKW 2000	2.000	2500	1.800	38,50
	WIN 7 III AW-BRG-XKW 2500	2.500	2500	2.300	39,70

KSS Clevis turnbuckle

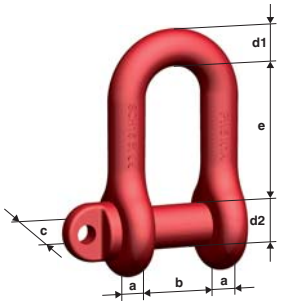
Special accessory in grade 8.
For lashing and tying down heavy loads on truck and train.
For lifting purposes also available with additional securing chain.
Observe load capacity - does not correspond to grade 10.



KSS Clevis turnbuckle	Code	Load capacity [kg]	Tension distance	L min.	L max.	d1 [mm]	Weight [kg/pc.]
	KSS 7	1.500	90	230	320	8	2,90
	KSS 8	2.000	120	330	450	10	3,20
	KSS 10	3.150	215	455	670	12	3,90
	KSS 13	5.300	280	515	795	16	6,50
	KSSW 16	10.000	250	530	780	20	10,00

SCH Shackle

Special accessory in grade 8.
General purpose. Connecting rope - hook.
Cannot be mounted directly into chain.
Observe load capacity - does not correspond to grade 10.

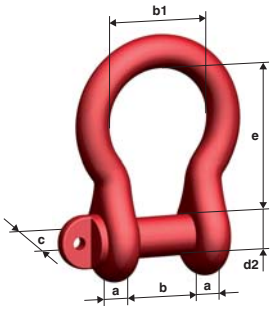


SCH Shackle	Code	Load capacity [kg]	e [mm]	b [mm]	a [mm]	d1 [mm]	c [mm]	d2 [mm]	Weight [kg/pc.]
	SCH 5/0,8 T	800	18	8	5	6	12	6	0,02
	SCH 6/1,12 T	1.120	24	11	7	8	16	8	0,05
	SCH 7/8/2 T	2.000	30	14	8	10	20	10	0,09
	SCH 10/3,15 T	3.150	36	17	10	12	24	12	0,20
	SCH 13/5,3 T	5.300	49	21	13	15	32	16	0,30
	SCH 16/8 T	8.000	61	27	17	19	40	20	0,70
	SCH 19/11,2 T	11.200	73	33	21	23	48	24	1,30

Other types available upon request!

GSCH Shackle

Special accessory in grade 8.
General purpose. Cannot be mounted directly into chain.



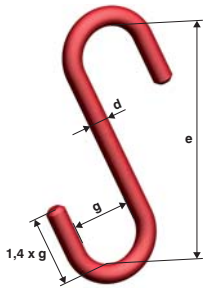
GSCH Schackle	Code	Load capacity [kg]	e [mm]	b [mm]	b1 [mm]	a [mm]	c [mm]	d2 [mm]	Weight [kg/pc.]
	GSCH 10/3,15 T	3.150	51	22	32	14	32	16	0,34
	GSCH 13/5,3 T	5.300	64	27	43	16	38	19	0,60
	GSCH 16/8 T	8.000	76	31	51	19	45	22	0,97
	GSCH 19/11,2 T	11.200	95	43	68	25	57	28	2,20

Other types available upon request!

SM S-hook

According to EN 1677-1. Special accessory in grade 8.

Intermediate hook if jaw „g“ of HSW is too small.
Also as an intermediate hook with wire rope loops.
Special design possible upon request.
Observe load capacity - does not correspond to grade 10.

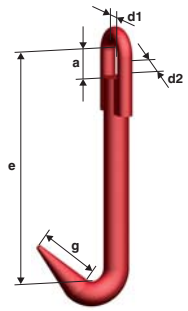


SM S-hook	Code	Load capacity [kg]	e [mm]	g [mm]	d [mm]	Weight [kg/pc.]
	SM 5	800	180	42	16	0,60
	SM 7/8	2.000	220	53	23	1,50
	SM 10	3.150	280	58	31	2,90
	SM 13	5.300	400	90	40	8,20
	SM 16	8.000	500	120	50	16,00
	SM 19	11.200	550	130	60	26,00
	SM 22	15.000	750	175	80	64,50

Other types available upon request!

BA Bale and structural steel wire mesh hook

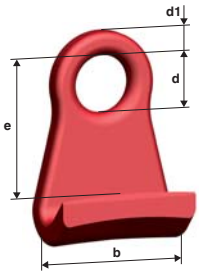
According to pewag works standard.
Special accessory in grade 8.
For transporting bales and steel wire mesh.
Before using, check whether hooks without safety catch are allowed to be used.
Observe load capacity - does not correspond to grade 10.



BA Bale and structural steel wire mesh hook	Code	Load capacity [kg]	e [mm]	d1 [mm]	g [mm]	a [mm]	d2 [mm]	Weight [kg/pc.]
	BA 5/6	1.120	160	16	40	24	7	0,40
	BA 7/8	2.000	200	19	50	30	10	0,70
	BA 10	3.150	260	27	65	39	13	1,50

FA Barrel hook

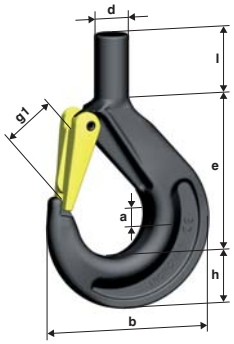
Special accessory in grade 8.
For the transport of barrels, chain sling complete:
Type WIN 6 II AW-S-FA 2.500 or
Type WIN 6 II AW-S-FA 1.000
Load capacity 500 kg - angle ordination 30°.
Only for use in pairs.

FA Barrel hook	Code	Load capacity [kg]	e [mm]	d [mm]	d1 [mm]	b [mm]	Weight [kg/pc.]
	FA 5/6	500	90	40	17	70	0,80

Length = Length of sling L as with sling type II AW-S

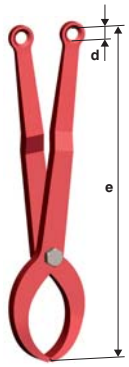
EHS Shank hook

According to EN 1677-1.
Special accessory in grade 8.
Also available as EH type without safety catch.
Observe load capacity - does not correspond to grade 10.

EHS Shank hook	Code	Load capacity [kg]	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	g [mm]	b [mm]	l [mm]	Weight [kg/pc.]
	EHS 7/8	2.000	85	27	19	18	26	32	88	33	3,53
	EHS 10	3.150	102	33	25	22	30	39	108	43	1,10
	EHS 13	5.300	125	40	30	26	38	48	130	50	1,80

HZ High-tensile lifting tong

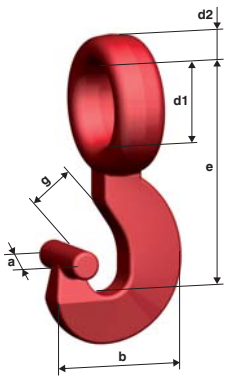
According to pewag works standard. Special accessory.
For lifting short steel bars. Tips of tongs reinforced. On demand.
Observe load capacity - does not correspond to grade 10.



HZ High-tensile lifting tong	Code	Load capacity [kg]	Range mm	e [mm]	d [mm]	Weight [kg/pc.]	Required chain sling
	HZ 0,125	125	100 – 200	310	15	2,43	WIN 5 II AW-CW 310
	HZ 0,25	250	130 – 300	466	20	4,77	WIN 6 II AW-CW 410
	HZ 0,5	500	160 – 400	629	28	12,00	WIN 7 II AW-CW 570
	HZ 1	1.000	215 – 500	808	30	24,00	WIN 8 II AW-CW 730
	HZ 2	2.000	250 – 600	959	30	41,00	WIN 8 II AW-CW 830

SH Sling hook

Special accessory in grade 8.
Sling hook for choker type chains.
Observe load capacity - does not correspond to grade 10.



SH Sling hook	Code	Load capacity [kg]	e [mm]	d1 [mm]	d2 [mm]	g [mm]	b [mm]	a [mm]	Weight [kg/pc.]	Transition link to be used
	SH 7/8	2.000	95	31	11	16	51	32	0,34	BW 9
	SH 10	3.150	118	41	15	19	62	43	0,69	BW 13
	SH 13	5.300	148	51	19	26	82	50	1,85	BW 16
	SH 16	8.000	180	63	22	30	99	64	3,06	BW 20

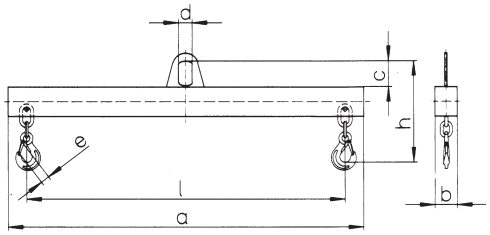
Spreaderbeams and Special Components

Spreaderbeams with two fixed and one adjustable Hook.
Hook distance is fixed or adjustable.

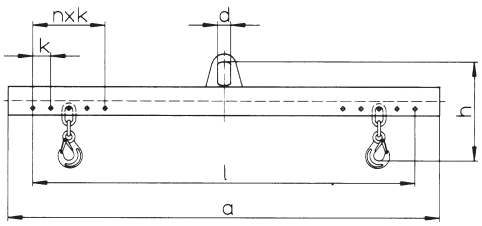
Load capacity	a	b	h	c	d	e	Hook distance fixed l	Weight	Hook distance adjustable l max.		Weight apprx.
[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm	apprx. [kg]	[mm]	n x k	[kg]
500	1.080	45	380	100	40	22	1.000	16	1.000	3 x 150	20,00
500	3.100	50	380	130	40	22	3.000	60	3.000	4 x 250	70,00
500	5.200	55	420	130	40	22	5.000	140	5.000	6 x 250	160,00
1.000	1.080	55	380	130	50	22	1.000	20	1.000	3 x 150	25,00
1.000	3.100	65	420	130	50	22	3.000	90	3.000	4 x 250	100,00
1.000	5.200	70	500	130	50	22	5.000	180	5.000	6 x 250	200,00
3.000	1.080	80	500	185	80	29	1.000	60	1.000	3 x 150	80,00
3.000	2.100	100	550	185	80	29	2.000	90	2.000	4 x 150	120,00
3.000	3.100	100	550	185	80	29	3.000	200	3.000	4 x 250	250,00
3.000	5.200	120	600	185	80	29	5.000	400	5.000	6 x 250	500,00
3.000	8.300	150	650	185	80	29	8.000	600	8.000	6 x 250	800,00
5.000	1.080	150	600	240	100	35	1.000	100	1.000	3 x 150	130,00
5.000	2.100	170	650	240	100	35	2.000	200	2.000	4 x 150	250,00
5.000	3.100	200	700	240	100	35	3.000	300	3.000	4 x 250	400,00
5.000	5.200	250	750	240	100	35	5.000	600	5.000	6 x 250	800,00
5.000	8.300	250	750	240	100	35	8.000	1.200	8.000	6 x 250	1.500,00
10.000	1.080	250	700	330	140	43	1.000	120	1.000	3 x 150	150,00
10.000	2.100	250	750	330	140	43	2.000	250	2.000	4 x 150	300,00
10.000	3.100	300	800	330	140	43	3.000	500	3.000	4 x 250	700,00
10.000	5.200	300	900	330	140	43	5.000	900	5.000	6 x 250	1.300,00
10.000	8.300	300	1.000	330	140	43	8.000	1.500	8.000	6 x 250	2.000,00

Other lengths and working loads upon request

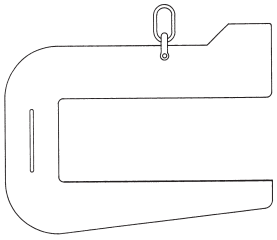
Spreaderbeams with two fixed hooks.
Hook distance fixed.



Spreaderbeams with two fixed hooks.
Hook distance adjustable.



Upon request, we will provide spreader beams with special components and adjusted
working load limits/different applications/hook configurations/lifting options/designs for specific applications



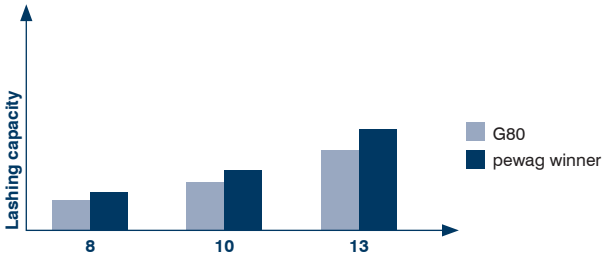
Lashing in G10

Advantages and information

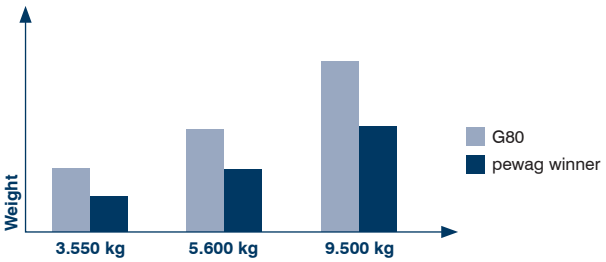
Features and benefits of pewag lashing chains in G10 quality

User friendliness and meeting all legal requirements for lashing is based on clear and measurable parameters, which are already considered and defined in the planning and production process.

- **25% higher load capacity** than grade 8



- **With the same chain dimension** it is possible to secure more and heavier loads. Plus 25% compared to G8 (direct lashing).



Lashing capacity LC	Previous chain weight	pewag winner pro chain weight	% Reduction
50	14,5	9,7	33%
80	37,7	14,5	44%

- **Large product range** with 5 chain dimensions.
- In most cases when direct lashing you can downsize to a smaller chain dimension thus obviously reducing weight and costs. Example of direct lashing: 7 mm G10 (LC=38 kN) replaces 8mm G8 (LC=40 kN).

Lashing capacity LC	Previous chain ø	pewag winner pro chain ø
50	10	8
80	13	10
134	16	13

- **When friction lashing** at the same securing capacity (STF) you can downsize to a smaller chain dimension thus obviously reducing weight and costs.
- **Considerably lower weight** when using pewag winner for lashing and therefore easier handling.
- **Highest safety** due to clear identification tag according to EN12195-3 with G10 values.

pewag winner Data

- **Chain quality:** pewag winner pro meets the EN818-2 standard with modifications (higher mechanical values, reduced application temperature)
- **Lashing force:** 500 N/mm²
- **Fatigue test:** 20.000 cycles at 375 N/mm² nominal stress
- **Test stress:** 625 N/mm²
- **Breaking stress:** 1.000 N/mm²
- **Breaking elongation:** min. 20%
- **Bending:** 0,8 x d
- **Stress corrosion:** The characteristics in regards to stress-crack corrosion is equal to G8.
- **Admissible operating temperature:** -40°C – 200°C (please note WLL reduction at high temperatures)
- **Quality grade stamping:** pewag winner chain – 100 at a distance of 300 mm and 10 on the back of each link pewag winner pro components – 10
- **Manufacturer's name or symbol:** PW and/or pewag and/or H16
- **Surface:**
  Chain – transparent lacquer finish
  Components – orange powdercoated – RAL 2004
- **Lashing tag:** all the required data is shown on the lashing tag.
- **Compatibility:** pewag winner chains and components can be used in combination with class G8 products that fulfill the EN818 and EN1677 standards. Furthermore, they may be combined with G10 chains and components from competitors, as long as these products meet the EN818 and EN1677 standards. It is not permissible to combine our chains and components with other products that are not in compliance with EN818 and EN1677!

For spare parts (for example bolts, saftey catches, trigger sets) for the entire pewag product line, only genuine pewag spare parts may be used. The working load limit of the entire unit is determined by the weakest component in the system.

Identification, Documentation

Lashing chains meet the EN 12195-3 standard and are supplied with:

- Identification tag
- Manufacturer Certificate
- User Information
- Test certificate

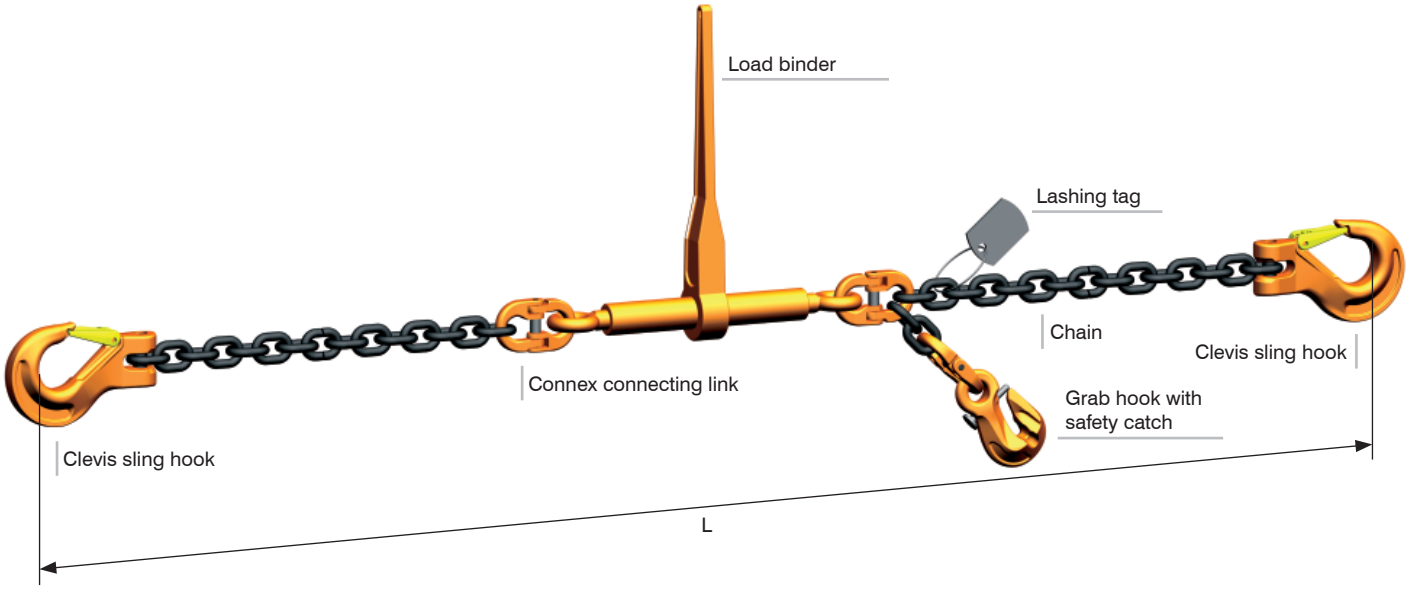
pewag winner lashing
Example of order text

Below you will find a detailed example of a finished and commercially available pewag lashing chain.

pewag winner 8 mm – single lashing chain with shortening hooks and Hook mounted with Connex connecting links, length: 3.500 mm

ZRSW 8 200 I – KHSW – KHSW 3500

Nominal diameter		1-part	Clevis sling hook	Clevis sling hook	Lenght [mm]



Direct lashing

ZRSW 7 with RSW 7/8 Loadbinder

Max. load α	Max. load β	Dynamic friction factor 0,01	0,1	0,2	0,3	0,4	0,5	0,6
15 - 35°	21 - 30°	-	-	-	13.350	17.800	24.450	37.650
15 - 35°	31 - 40°	6.050	7.400	9.400	12.150	16.000	22.000	34.000
15 - 35°	41 - 50°	5.100	6.300	8.100	10.600	13.750	19.000	29.450
15 - 35°	51 - 60°	3.950	5.050	6.600	8.500	11.100	15.500	24.250
36 - 50°	21 - 30°	-	-	8.950	11.950	16.350	23.800	38.600
36 - 50°	31 - 40°	4.800	6.150	8.150	10.950	15.150	22.150	36.150
36 - 50°	41 - 50°	4.000	5.300	7.150	9.750	13.650	20.150	33.150
36 - 50°	51 - 60°	-	4.300	6.000	8.350	11.900	17.650	28.750

ZRSW 8 with RSW 7/8 Loadbinder

Max. load α	Max. load β	Dynamic friction factor 0,01	0,1	0,2	0,3	0,4	0,5	0,6
15 - 35°	21 - 30°	-	-	17.600	23.450	32.150	49.550	-
15 - 35°	31 - 40°	8.000	9.750	12.350	15.950	21.050	28.950	44.750
15 - 35°	41 - 50°	6.700	8.300	10.650	13.950	18.100	25.000	38.800
15 - 35°	51 - 60°	5.250	6.650	8.700	11.200	14.650	20.400	31.900
36 - 50°	21 - 30°	-	-	11.800	15.700	21.550	31.300	50.800
36 - 50°	31 - 40°	6.300	8.100	10.750	14.400	19.950	29.150	47.600
36 - 50°	41 - 50°	5.300	6.950	9.400	12.850	17.950	26.500	43.600
36 - 50°	51 - 60°	-	5.650	7.900	11.000	15.650	23.250	37.850

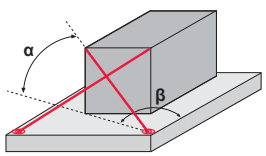
ZRSW 10 with RSW 10 Loadbinder

Max. load α	Max. load β	Dynamic friction factor 0,01	0,1	0,2	0,3	0,4	0,5	0,6
15 - 35°	21 - 30°	-	-	-	28.200	37.550	51.500	79.300
15 - 35°	31 - 40°	12.800	15.650	19.750	25.550	33.700	46.350	71.600
15 - 35°	41 - 50°	10.750	13.300	17.100	22.350	28.950	40.000	62.050
15 - 35°	51 - 60°	8.400	10.650	13.950	17.900	23.450	32.650	51.050
36 - 50°	21 - 30°	-	-	18.900	25.150	34.500	50.100	81.300
36 - 50°	31 - 40°	10.100	13.000	17.200	23.100	31.950	46.650	76.150
36 - 50°	41 - 50°	8.500	11.150	15.100	20.550	28.750	42.450	69.800
36 - 50°	51 - 60°	-	9.050	12.650	17.600	25.100	37.200	60.550

ZRSW 13 with RSW 13 Loadbinder

Max. load α	Max. load β	Dynamic friction factor 0,01	0,1	0,2	0,3	0,4	0,5	0,6
15 - 35°	21 - 30°	-	-	47.200	62.900	86.250	132.900	-
15 - 35°	31 - 40°	21.450	26.200	33.150	42.850	56.500	77.650	119.950
15 - 35°	41 - 50°	18.050	22.350	28.600	37.400	48.500	67.000	104.000
15 - 35°	51 - 60°	14.050	17.850	23.400	30.000	39.250	54.700	85.500
36 - 50°	21 - 30°	-	-	31.700	42.150	57.800	83.900	136.150
36 - 50°	31 - 40°	16.950	21.750	28.800	38.700	53.500	78.200	127.550
36 - 50°	41 - 50°	14.250	18.750	25.250	34.450	48.200	71.100	116.900
36 - 50°	51 - 60°	-	15.200	21.150	29.500	42.050	62.350	101.450

This table provides information on how to get the best use from the pewag lashing systems. This table also shows you the maximum load which can be secured with 4 equal lashing systems given the angles and dynamic friction factors referred to. Additional securing methods (i.e. wedges, or similar) have not been taken into account. These could be used to secure loads with even higher weights. Please contact our customer service. Every lashing system has its own table. The maximum forces occurring due to acceleration, braking and avoidance maneuvers in road traffic acc. EN 12195-1 were taken into account. Other tables are applicable for transport by rail and sea. Please contact our customer service.



Frictional lashing

ZRSW 7 with RSW 7/8 Loadbinder

Angle to the surface	Max. load/chain [daN]	Dynamic friction factor 0,1	0,2	0,3	0,4	0,5	0,6
α	90	400	950	1.710	2.850	4.750	8.550
α	85	400	940	1.700	2.830	4.730	8.510
α	80	400	930	1.680	2.800	4.670	8.420
α	70	380	890	1.600	2.670	4.460	8.030
α	60	350	820	1.480	2.460	4.110	7.400
α	50	310	720	1.300	2.180	3.630	6.540
α	40	260	610	1.090	1.830	3.050	5.490
α	30	200	470	850	1.420	2.370	4.270

ZRSW 8 with RSW 7/8 Loadbinder

Angle to the surface	Max. load/chain [daN]	Dynamic friction factor 0,1	0,2	0,3	0,4	0,5	0,6
α	90	400	950	1.710	2.850	4.750	8.550
α	85	400	940	1.700	2.830	4.730	8.510
α	80	400	930	1.680	2.800	4.670	8.420
α	70	380	890	1.600	2.670	4.460	8.030
α	60	350	820	1.480	2.460	4.110	7.400
α	50	310	720	1.300	2.180	3.630	6.540
α	40	260	610	1.090	1.830	3.050	5.490
α	30	200	470	850	1.420	2.370	4.270

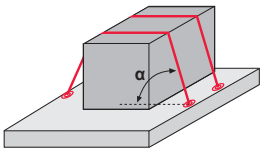
ZRSW 10 with RSW 10 Loadbinder

Angle to the surface	Max. load/chain [daN]	Dynamic friction factor 0,1	0,2	0,3	0,4	0,5	0,6
α	90	640	1.500	2.700	4.500	7.500	13.500
α	85	640	1.490	2.680	4.480	7.470	13.440
α	80	630	1.470	2.650	4.430	7.380	13.290
α	70	600	1.400	2.530	4.220	7.040	12.680
α	60	550	1.290	2.330	3.890	6.490	11.690
α	50	490	1.140	2.060	3.440	5.740	10.340
α	40	410	960	1.730	2.890	4.820	8.670
α	30	320	750	1.350	2.250	3.750	6.750

ZRSW 13 with RSW 13 Loadbinder

Angle to the surface	Max. load/chain [daN]	Dynamic friction factor 0,1	0,2	0,3	0,4	0,5	0,6
α	90	530	1.250	2.250	3.750	6.250	11.250
α	85	530	1.240	2.240	3.730	6.220	11.200
α	80	520	1.230	2.210	3.690	6.150	11.070
α	70	500	1.170	2.110	3.520	5.870	10.570
α	60	460	1.080	1.940	3.240	5.410	9.740
α	50	410	950	1.720	2.870	4.780	8.610
α	40	340	800	1.440	2.410	4.010	7.230
α	30	260	620	1.120	1.870	3.120	5.620

This table provides information on how to get the best use from the pewag lashing systems. This table also shows you the maximum load which can be secured with 1 lashing system given the angles and dynamic friction factors referred to. Please note that when friction lashing min. 2 lashing systems are needed. Additional securing methods (i.e. wedges, or similar) have not been taken into account. These could be used to secure loads with even higher weights. Please contact our customer service.The values in the table are applicable in the event that the same tension force (STF) is not effective in the lashing system on both sides of the load due to the deflection and edges. If this can be determined (e.g. using a pretensioning gauge), the values in the table may be increased by a factor of 1.3. The maximum loading weight depends on the STF value of the tensioning system - the value is shown on the lashing system's tag. Every lashing system has its own table.
The maximum forces occurring due to acceleration, braking and avoidance maneuvers in road traffic acc. EN 12195-1 were taken into account. Other tables are applicable for transport by rail and sea. Please contact our customer service.



Dynamic friction factors of some usual goods

Combination of materials in the contact surface	Friction factor
Sawn wood	
Sawn wood against fabric base laminate/plywood	0,35
Sawn wood against grooved aluminium	0,30
Sawn wood against steel sheets	0,30
Sawn wood against crimped foils	0,20
Crimped foils	
crimped foils against fabric base laminate/plywood	0,30
crimped foils against grooved aluminium	0,30
crimped foils against grooved aluminium steel sheets	0,30
crimped foils against crimped foils	0,30
Cardboard boxes	
Cardboard box against cardboard box	0,35
Cardboard box against wood pallet	0,35
Large bags	
Large bags against wood pallet	0,30
Steel and metal sheets	
Oiled metal sheets against oiled metal sheets	0,10
Flat steel bars against sawn wood	0,35
Unpainted rough steel sheets against sawn wood	0,35
Painted rough steel sheets against sawn wood	0,35
Unpainted rough steel sheets against unpainted rough steel sheets	0,30
Painted rough steel sheets against painted rough steel sheets	0,20
Painted steel barrel against painted steel barrel	0,15
Concrete	
Wall on wall without intermediate layer (concrete/concrete)	0,50
Finished part with wooden intermediate layer on wood (concrete/wood/wood)	0,40
Ceiling on ceiling without intermediate layer (concrete/lattice girder)	0,60
Steel frame with wooden intermediate layer (steel/wood)	0,40
Ceiling on steel frame with wooden intermediate layer (concrete/wood/steel)	0,45

Combination of materials in the contact surface	Friction factor
Paletts	
Resin bonded plywood, smooth – Europallet	0,20
Resin bonded plywood, smooth – box pallet (steel)	0,25
Resin bonded plywood, smooth – plastic pallet (PP)	0,20
Resin bonded plywood, smooth – wooden pressboard pallets	0,15
Resin bonded plywood, sieve structure – Europallet (wood)	0,25
Resin bonded plywood, sieve structure – box pallet (steel)	0,25
Resin bonded plywood, sieve structure – plastic pallet (PP)	0,25
Resin bonded plywood, sieve structure – wooden pressboard pallets	0,20
Aluminium beams in the load-carrying platform (punched bars) – Europallet (wood)	0,25
Aluminium beams in the load-carrying platform (punched bars) – box pallet (steel)	0,35
Aluminium beams in the load-carrying platform (punched bars) – plastic pallet (PP)	0,25
Aluminium beams in the load-carrying platform (punched bars)– wooden pressboard pallets	0,20

- Friction coefficients based on EN12195-1, values are for clean surfaces under ideal conditions
- Warning: dirty, wet or icy surfaces will reduce friction factors. Consider, that changes in the friction coefficients can occur during different seasons and even during transportation.
- Choose only values that you can safely estimate will be met. If you are unsure, choose the lower value – it is your safety.

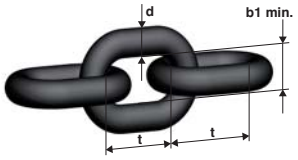
pewag winner
Lashing Systems

Accessories in G10 Lashing

Product overview

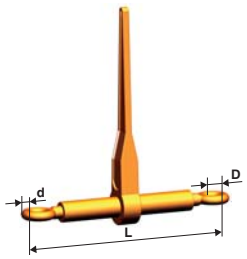
Lashing chain pewag winner 200

Meets EN 12195-3 standard with higher working load limit. The premium chain in Grade 10 quality. Round link chain for use in friction lashing applications. Approx. 25% higher lashing capacity than Grade 8 chains. Maximum permissible operating temperature 200 C. Please read user manual before use.

WIN Lashing chain	Code	Nominal diameter d [mm]	Standard-delivery length [m]	Pitch t [mm]	Inside width b1 min. [mm]	Outside width b2 max. [mm]	LC Lashing capacity [kN]	Breaking force [kN]	Weight [kg/m]
	WIN 7 200	7	50	21	10	25	38	77	1,20
	WIN 8 200	8	50	24	11	29	50	101	1,57
	WIN 10 200	10	50	30	14	36	80	157	2,46
	WIN 13 200	13	50	39	18	47	134	265	4,18
	WIN 16 200	16	25	48	22	58	200	402	6,28

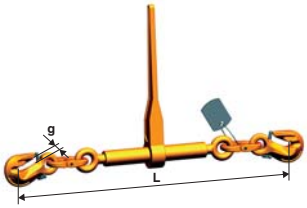
RSW Load binder G10

Meets EN 12195-3 with higher working load limit.
25% higher lashing capacity than Grade 8 ratchet.

RSW Load binder	Code	Marking	LC Lashing capacity [kN]	STF Standard tension force [daN]	Length RSW closed L [mm]	Length RSW open L [mm]	Tension distance [mm]	Lever length l [mm]	D [mm]	d [mm]	Weight [kg/pc.]
	RSW 7/8	Type A	50	1.900	355	500	145	237	20	16	3,20
	RSW 10	Type B	80	3.000	365	510	145	355	26	18	3,80
	RSW 13	Type C	134	2.500	576	866	290	359	31	22	9,90

RSPSW Load binder G10

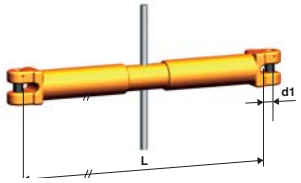
Meets EN 12195-3. Ratchet for a two part chain lashing system, with lashing chain ZKW and lashing chain G10. Variable in length.

RSPSW Load binder	Code	Marking	LC Lashing capacity [kN]	STF Standard tension force [daN]	Length closed L [mm]	Length open L [mm]	Tension range [mm]	Lever length l [mm]	Maul-weite g [mm]	Weight [kg/pc.]
	RSPSW 8	Type A	50	1.900	621	766	145	237	11	4,40
	RSPSW 10	Type B	80	3.000	685	830	145	355	13	6,30
	RSPSW 13	Type C	134	2.500	978	1.268	290	359	17	15,00

Also usable with a 7 mm chain. LC with 7 mm chain = 38kN!

KSSW Clevis turnbuckle for lashing chain

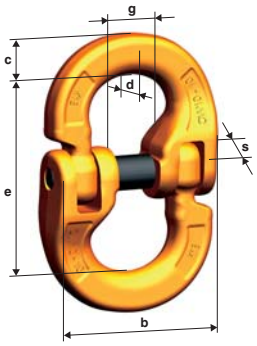
Meets EN 12195-3 with higher lashing capacity.
For lashing and load security of heavy loads on trucks and rail. 25% higher lashing capacity than Grade 8 Clevis turnbuckles.

KSSW Clevis turnbuckle	Code	LC Lashing capacity [kN]	STF Standard tension force [daN]	Length KSSW closed [mm]	Length KSSW open [mm]	Tension distance [mm]	d [mm]	Weight [kg/pc.]
	KSSW 16	200	-	530	780	250	20	10,00

CW Connex connecting link

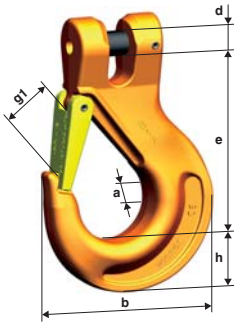
According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
Load pin and bush CBH are also available separately.

Connecting link for:
Load binder - chain
Master link - chain
Chain - chain
Hook - chain

CW Connex connecting link	Code	LC Lashing capacity [kN]	e [mm]	c [mm]	s [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
	CW 7	38	51	10	13	9	47	17	0,12
	CW 8	50	62	12	14	10	55	18	0,23
	CW 10	80	72	15	18	13	64	24	0,42
	CW 13	134	88	20	22	17	79	28	0,84
	CW 16	200	103	21	29	21	106	33	1,40

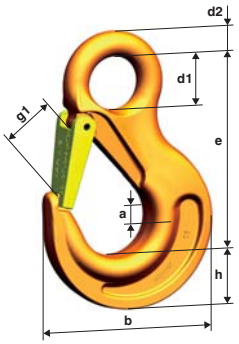
KHSW Clevis sling hook

According to EN 818-4 with increased load capacity.
For pewag clevis system.
Can be mounted directly into chain - no connecting link is needed.
With forged safety catch.
Safety catch and bolts are also available as spare parts.

KHSW Clevis sling hook	Code	LC Lashing capacity [kN]	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
	KHSW 7	38	95	28	19	9	26	90	0,60
	KHSW 8	50	95	28	19	10	26	90	0,60
	KHSW 10	80	109	35	25	12,50	31	108	1,10
	KHSW 13	134	136	41	34	16	39	131	2,00
	KHSW 16	200	155	49	37	20	45	153	3,48

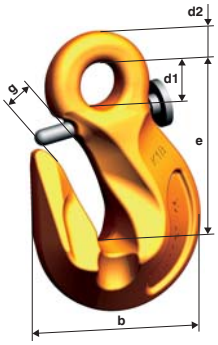
HSW Eye sling hook

According to EN 1677-1 with increase load capacity.
For pewag connex and welded system.
To be connected to the chain with connex connecting link CW.
All hooks with forged safety catch.
Safety catch set also available as spare part.

HSW Eye sling hook	Code	LC Lashing capacity [kN]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
	HSW 7/8	50	106	27	19	25	11	26	88	0,50
	HSW 10	80	131	33	26	34	16	31	109	1,10
	HSW 13	134	164	44	33	43	19	39	134	2,20
	HSW 16	200	183	50	40	50	25	45	155	3,50

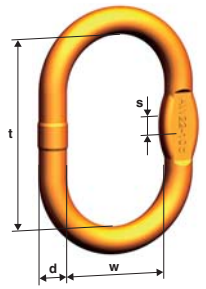
PSW Grab hook with safety catch

According to EN 1677-1 with increased load capacity.
For pewag connex and welded system.
Shortening hook, protects against accidental release of the chain.
Safety catch set also available as spare part.

PSW Grab hook with safety catch	Code	LC Lashing capacity [kN]	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
	PSW 7/8	50	71	58	20	12	11	0,40
	PSW 10	80	88	76	22	15	13	0,90
	PSW 13	134	98	98	24	17	16	1,60
	PSW 16	200	129	118	32	23	19	3,60

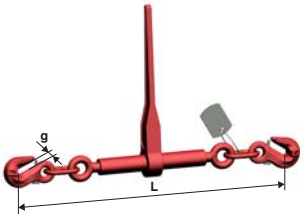
AW Master link

According to EN 1677-4 with increase load capacity.
For pewag connex and welded system.

AW Master link	Code	For chain-ø	LC Lashing capacity [kN]	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]
	AW 13	7	46	13	110	60	10	0,34
	AW 16	8	70	16	110	60	14	0,53
	AW 18	10	100	19	135	75	14	0,92
	AW 22	13	152	23	160	90	17	1,60
	AW 26	16	200	27	180	100	20	2,46

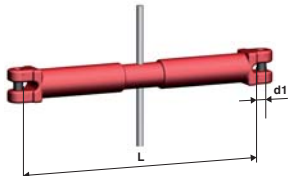
RSPS Load binder G8

Meets EN 12195-3. Ratchet for a two part chain lashing system, with lashing chain ZKW and lashing chain G8. Variable in length.

RSPS Load binder	Code	LC Lashing capacity [kN]	STF Standard tension force [daN]	Length closed L [mm]	Length open L [mm]	Tension range [mm]	Lever length l [mm]	Opening g [mm]	Weight [kg/pc.]
	RSPS 8	40	1.900	586	731	145	237	12	4,60
	RSPS 10	63	1.900	626	771	145	237	15	5,40
	RSPS 13	100	3.000	708	853	145	355	19,5	8,00

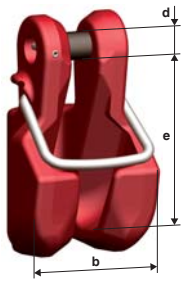
KSS Clevis turnbuckle G8

Meets EN 12195-3. Ratchet for a fixed installation in a single lashingchain.

KSS Clevis turnbuckle	Code	LC Lashing capacity [kN]	Tension range [mm]	L min. [mm]	L max. [mm]	d [mm]	Weight [kg/Stk.]
	KSS 7	30	90	230	320	8	2,90
	KSS 8	40	120	330	450	10	3,20
	KSS 10	63	215	455	670	12	3,90
	KSS 13	100	280	515	795	16	6,50

KVS Clevis connector G8

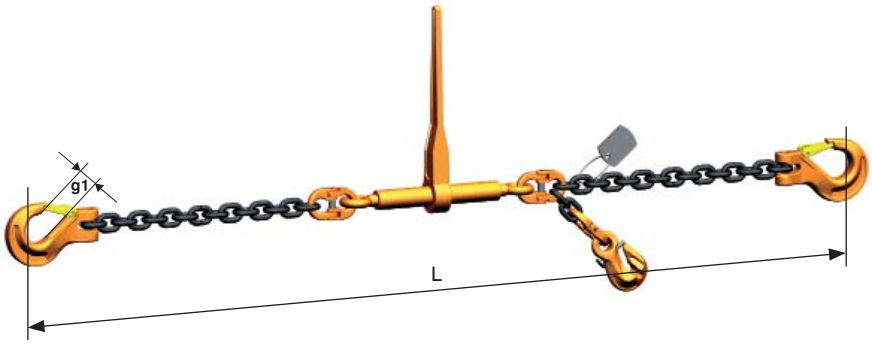
Meets EN 12195-3. Shortening device for corse shortening of lashing chains.

KVS Clevis connector	Code	LC Lashing capacity [kN]	e [mm]	b [mm]	d [mm]	Weight [kg/Stk.]
	KVS 7	30	58	44	9	0,50
	KVS 8	40	58	44	10	0,50
	KVS 10	63	70	55	12,5	0,80
	KVS 13	100	90	70	16	1,53

ZRSW Lashing Chain G10

Exceeds EN 12195-3. For load security with a 25% higher lashing capacity compared to standard G8 systems. Component system. Standard length 3.500mm.
Other lengths available upon request. Short delivery times.

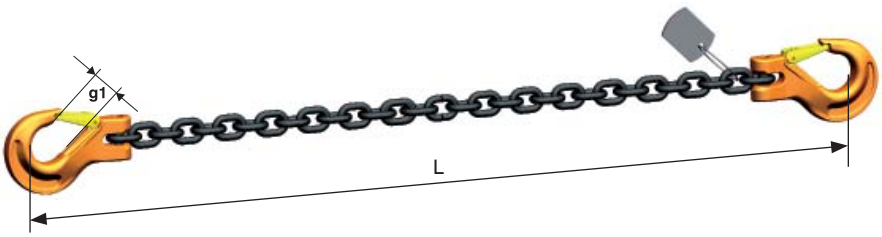
Code	LC Lashing capacity [kN]	Length RSW closed [mm]	Length RSW open [mm]	Tension range [mm]	STF Standard tension force [mm]	Opening g1 [mm]	Weight [kg/pc.]
ZRSW 7 200 I KHSW-KHSW 3500	38	355	500	145	1.900	26	8,40
ZRSW 8 200 I KHSW-KHSW 3500	50	355	500	145	1.900	26	9,70
ZRSW 10 200 I KHSW-KHSW 3500	80	365	510	145	3.000	31	14,50
ZRSW 13 200 I KHSW-KHSW 3500	134	576	866	290	2.500	39	26,10
ZKSW 16 200 I KHSW-KHSW 3500	200	530	780	250	-	45	37,70



ZKW Lashing Chain for a two component G10 system

Exceeds EN 12195-3. Can be used with G10 ratchet and shortening device. Benefit: The ratchet can be positioned in any locaction. Standard length: 3.500mm. Other lengths available upon request, available with short delivery times. The system will be supplied with an EN 12195-3 ID Tag with G10 values.

Code	LC Lashing capacity [kN]	L [mm]	g1 [mm]	Weight [kg/pc.]
ZKW 7 200 I KHSW-KHSW 3500	38	3.500	26	5,17
ZKW 8 200 I KHSW-KHSW 3500	50	3.500	26	6,40
ZKW 10 200 I KHSW-KHSW 3500	80	3.500	31	10,27
ZKW 13 200 I KHSW-KHSW 3500	134	3.500	39	17,49



Spare parts

Product overview

Clevis load pins

According to EN 1677-1 with increased load capacity.
Alternative bolts for pewag clevis parts.
Standard clevis load pins KBSW. For a few parts special pins must be used. (2. table).

Clevis load pins standard	Code	L	d	L1	d1	Weight [kg/pc.]
	KBSW 5/6	16,50	7,40	16,00	2,50	0,006
	KBSW 7	23,00	9,00	22,00	3,00	0,01
	KBSW 8	23,00	10,00	22,00	3,00	0,01
	KBSW 10	29,50	12,50	28,00	3,50	0,03
	KBSW 13	37,00	16,00	36,00	4,00	0,06
	KBSW 16	52,00	20,00	40,00	4,50	0,10
	KBSW 19/20	73,00	24,00	50,00	5,00	0,20
	KBSW 22	71,00	27,00	55,00	5,00	0,32
	KBSW 26	86,00	33,00	55,00	5,00	0,58

Clevis load pins Special	Code	d x l	for accessory part
	KBS-KLH/KLHW PWH 6	7,5 x 17,5 + 7,4 x 16,5	KLH/KLHW-PWH 5/6
	KBS-KLH/KLHW PWH 7	9 x 22,5	KLH/KLHW-PWH 7
	KBS-KLH/KLHW PWH 8	10 x 22,5 + 10 x 23	KLH/KLHW-PWH 8
	KBS-KLH/KLHW PWH 10	13 x 31,5 + 12,5 x 29,5	KLH/KLHW-PWH 10
	KBS-KLH/KLHW PWH 13	16 x 42 + 16 x 37	KLH/KLHW-PWH 13
	KBS-KLH/KLHW PWH 16	21 x 51,5 + 20 x 52	KLH/KLHW-PWH 16
	KBS-KSS 7	8 x 22,5	KSS 7
	KBS-KSS 8	10 x 27,2	KSS 8
	KBS -KSS 10	12 x 32,2	KSS 10
	KBS-KSS 13	16 x 45,7	KSS 13

Please indicate the hook design on your order.

Safety catch sets

Safety catch sets for pewag accessories. For finding out the correlation between sets and hooks please look at the tables.

Forged safety catch for SFGW	Code	for hook type
	SFGW 5/6	HSW 5/6, KHSW 5/6
	SFGW 7/8	HSW 7/8, KHSW 7, KHSW 8, WS 7/8, EHS 7/8
	SFGW 10	HSW 10, KHSW 10, WS 10, EHS 10
	SFGW 13	HSW 13, KHSW 13, WS 13, EHS 13
	SFGW 16	HSW 16, KHSW 16
	SFGW 19/20	HSW 19/20, KHSW 19/20
	SFGW 22	HSW 22, KHSW 22
	SFGW 26–32	HSW 26, HSW 32, HS 32

Forged safety catch for GKHSW	Code	for hook type
	SFGW-G 8	GKHSW 8
	SFGW-G 10	GKHSW 10

Forged safety catch for AWHW	Code	for hook type
	SFG-A 1	AWHW 1.3, UKN 1
	SFG-A 3	AWHW 3.8, UKN 3
	SFG-A 6	AWHW 6.3 , UKN 5, AWHW 10 , UKN 8

Forged safety catch for WS16	Code	for hook type
	SFG-W16	WS 16

CW Bolts + safety catch

Spare parts for CW connex.

Connex bolts + safety catch	Code	for accessory part
	CBHW 5 G10	CW 5
	CBHW 6 G10	CW 6
	CBHW 7 G10	CW 7
	CBHW 8 G10	CW 8, CARW 8
	CBHW 10 G10	CW 10, CARW 10
	CBHW 13 G10	CW 13, CARW 13
	CBHW 16 G10	CW 16, CARW 16
	CBHW 19/20 G10	CW 19/20
	CBHW 22 G10	CW 22, CARW 22
	CBHW 26 G10	CW 26
	CBH 26	C 26
	CBHW 32 G10	CW 32
	CBH 32	C 32

CLW Retaining sleeves

Spare parts for für CLW not demountable connex.

CLW Retaining sleeves	Code	for accessory part
	CLBHW 7 G10	CLW 7
	CLBHW 10 G10	CLW 10
	CLBHW 13 G10	CLW 13
	CLBHW 16 G10	CLW 16

PSW Safety catches

Spare parts for PSW grab hooks with safety catch.

PSW Safety catches	Code	for accessory part
	PSGW 7/8 G10	PSW 7/8
	PSGW 10 G10	PSW 10
	PSGW 13 G10	PSW 13
	PSGW 16 G10	PSW 16

U Bolt + washer + nut

Spare parts for U Unilock.

U Bolt + washer + nut	Code	for accessory part
	UBMS 5/6	U 5/6
	UBMS 7	U 7
	UBMS 8	U 8
	UBMS 10	U 10
	UBMS 13	U 13
	UBMS 16	U 16
	UBMS 19/20	U 19/20
	UBMS 26	U 26

KSCHW Bolt + nut + split + pin

Spare parts for KSCHW clevis shackles.

KSCHW Bolt + nut + split + pin	Code	for accessory part
	KBMSW 7/8 G10	KSCHW 7, KSCHW 8
	KBMSW 10 G10	KSCHW 10
	KBMSW 13 G10	KSCHW 13

Trigger sets

Trigger sets for LHW, KLHW, WLHW trigger sets.

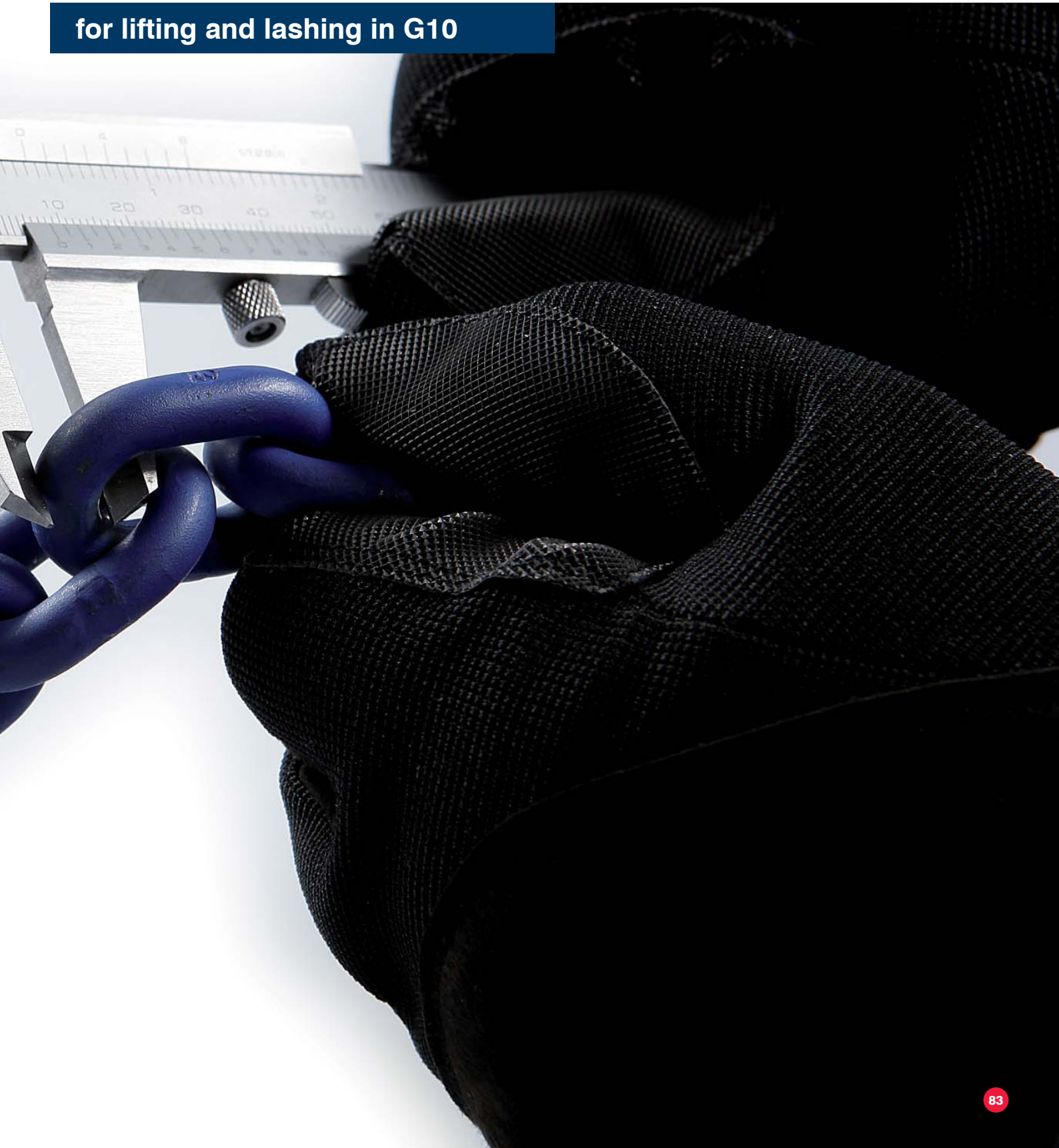
Trigger sets	Code	for accessory part
	VLHW 5/6* G10	LHW 5/6, KLHW 5/6, WLH(B)W 6
	VLHW 7/8* G10	LHW 7/8, KLHW 7, KLHW 8, WLH(B)W 7/8
	VLHW 10* G10	LHW 10, KLHW 10, WLH (B)W 10
	VLHW 13* G10	LHW 13, KLHW 13, WLH(B)W 13
	VLHW 16* G10	LHW 16, KLHW 16, WLH(B)W 16
	VLHW 19/20/22/26 G10	LHW 19/20, LHW 22, KLHW 19/20, KLHW 22, KLHW 26

Please indicate the correct design of the hook on your order – see also order form.

User manual

User manual

for lifting and lashing in G10



User manual

User manual for assembly, use, storage and maintenance of pewag winner pro chain slings.

General

pewag lifting accessories can be used for general lifting purposes covering a wide range of designs, loads and slings. Detailed information of all chain, components and chain slings are given in this catalogue and follows the Uniformed Load Method of Rating as standard. In addition, there is also an alternative method of rating the capacity of chain slings (Trigonmetric Method). This method should only be used where the weight and distribution of the load and the angles of the sling legs are known, and when the lift has be carefully planned and is supervised by a competent person. In such applications please contact our technical department, as the information given in this catalogue does not include details on chain sling rating using this alternative method of rating!

Chain slings shall be used only by trained personnel. If properly used, pewag chain slings have a long service life and offer a high degree of safety. Personal injury and damage to property can only be prevented by proper use. It is therefore highly important that you read and understand this user information and act in a responsible and forward-thinking manner when using lifting equipment.

Limitations on use

When modifying or repairing pewag chain slings use only pewag supplied original parts (e.g. bolts, safety pins, screws, etc.). The shape of the slings must not be modified – e.g. by bending, grinding, separating individual parts, drilling, etc. Avoid heating of the chains to more than 380°C (pewag winner 400) or 200°C (pewag winner 200). Do not remove any safety components, such as latches, safety pins, safety catches, etc.
Do not apply any surface coatings to pewag chain slings, i.e. do not subject them to hot galvanizing or electrogalvanizing.
Dipping or removing the coating with chemicals is also dangerous and must be agreed upon by pewag.
If required please contact our technical department who will be pleased to provide information.

Restrictions of use

due to hazardous or dangerous conditions (see table on page 14 of catalogue)

Effects of temperature
Reduction of the load capacity caused by high temperatures, as stated on page 9, ceases once the chain and/or lifting component returns to room temperature. pewag winner pro lifting accessories may not be used outside the temperature range stated. If this has nevertheless been the case, do not use the chain slings and remove them from service.

Effects of acids, caustics and chemicals
Do not subject pewag winner pro lifting accessories to acid or caustic solutions or use them in acid or caustic-laden atmospheres. Important: Certain production procedures release acids and/or fumes. Use of pewag winner pro lifting accessories in highly concentrated chemicals in combination with high temperatures is only permitted with explicit prior approval.

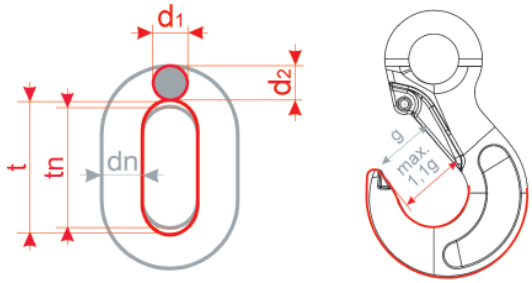
Working load limit
The working load limits in this catalogue and those on the chain sling have been determined on the basis that the loading of the chain sling is symmetrical and there are no particularly hazardous conditions. Such hazardous conditions would be offshore applications, the lifting of people and potentially dangerous loads, such as liquid metals, corrosive or caustic substances or nuclear material. If the chain sling is to be used for such purposes, the extent of the risk is to be assessed by an expert and the safe working load be adjusted accordingly.

Inspection and tests
Before using any lifting equipment for the first time, it should be ensured that:
- The chain sling corresponds exactly to the order;
- The inspection certificate or certificate of conformity has been supplied;
- Marking and load capacity stated on the chain sling correspond to
  the information given on the inspection certificate or certificate of conformity;
- All particularities of the chain sling have been entered into a register of lifting equipment, if required;
- Instructions for the proper use of chain sling has been supplied and read and understood by personnel.

Check the chain slings before each use for visible damage or signs of wear. In case of doubt or damage do not use the chain slings and have them inspected by a competent person.
After extraordinary, unusual events that could cause impairment of the chain sling, the chain sling must be checked by an expert (e.g. after exposure to uncontrolled heat). As per EN818 we recommend subjecting the chain sling every two years to a load test with 1.5 times the load capacity, followed by a visual inspection, or another type of crack test (fluxing).

Elimination criteria following visual inspection

- Broken part
- Missing or illegible marking of the chain sling, i.e. identification data and/or load capacity data
- Deformation of suspension or sling parts or the chain itself
- Elongation of the chain. The chain must be discarded if
  $t > 1{,}05\ t_n$
- Wear is determined as the mean value of two measurements of diameters d1 and d2 carried out at a right angle (see picture). The chain must be discarded if
  $dm = \frac{d_1 + d_2}{2} \leq 0{,}9\ dn$



Maximal approved dimensional change:

Designation	Dimensions	Admissible deviation
chain	dm	-10%
	t	+5%
links	d	-10%
	t	+10%
hooks *	e	+5%
	d2 and h	-10%
	g	+10%
CW, CARW, CLW	Halves loose	no changing admissible
	e	+5%
	c	-10%
BWW, GHW	e	+5%
	d	-15%
	d1	+5%
	angle change	≤3%
SCH, GSCH, U	bolt loose	no changing admissible
	e	+5%
	d, d1, d2 und M	-10%
SM	e	+5%
	g	+10%
	d	-10%
BA	d2	-10%
FA	d1	-10%
goupille Connex	d	-10%
LHW, KLHW, WLH(B)W	d2	-10%
	h	-10%
	opening of hook	2x s max.

* HSW, WS, FW, PW, KHSW, DFW, GKHSW, SH, KSCHW, KCHW KFW, KPW, KVS, XKW, KOW, KRW

- Cuts, notches, grooves, surface cracks, excessive corrosion, discoloration due to heat, signs of subsequent welding, bent or twisted links or other flaws.
- Cracks: Chains with cross-cracks that are visible to the naked eye must be discarded.
- Missing or non-functional safety device (safety catches if fitted) as well as signs of widening or twisting of hooks, i.e. noticeable enlargement of the opening or other forms of deformation. The enlargement of the opening must not exceed 10% of the nominal value.

Repair

pewag lifting accessories and chain slings should only be repaired by qualified personnel using genuine pewag parts.

Documentation

Records of inspections, and in particular their findings, as well as details of repairs carried out must be kept on file during the entire service life the chain sling.

Storage

pewag sling chains should be stored in cleaned and dried condition and protected from corrosion, e.g. lightly lubricated.

Correct use of pewag winner chain sling

Angle of inclination – sling points

Select slinging points and chain sling type in such a way that the angles of inclination of all chain strands (legs) lie within the data given on the CE marked plate. All angles of inclination should preferably be the same. Avoid angles of inclination of less than 15°, because of the high risk of load instability. Never use chain slings with the angle of inclination exceeding 60°.

Edge load – protection of load and chain

The maximum load capacity of pewag chain slings was defined under the assumption that the individual chain legs are pulled straight under load, i.e. that they do not run over edges.
In the case of edge loading, load protection (packing) should to be used to avoid damage. For correct and incorrect use see below mentioned illustrations.

If chains are guided over edges without proper protection, their load capacity is reduced. For the corresponding load factors please refer to the table on page 14.
But if chains looped at a beam or other round shaped loads the diameter should be minimum twice or 3 times the chain pitch. For smaller diameters the WLL of the chains must be reduced by 50%.

Impact
The maximum load capacity of pewag chain slings are defined under the assumption that the load on the individual chain strands (legs) is applied without any impact or shock loading. In cases of possible impact/shock, the load factors on page 10 must be taken into consideration.

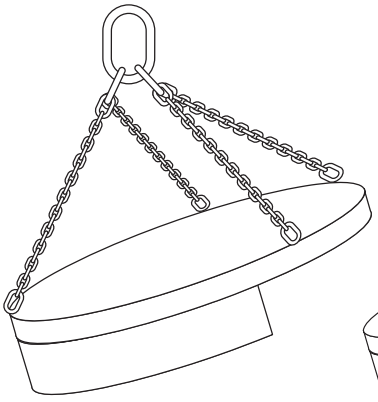
Impact/shock is defined as follows:
- Slight impact: created, for example, when accelerating the lifting or lowering movement
- Medium impact: created, for example, when the chain slips when adjusting to the shape of the load
- created, for example, when the load falls into the unloaded chain

Vibrations
pewag winner chains and accessories are rated according to regulations for 20,000 load cycles. At high dynamic forces there may nevertheless be a risk of damage to the chain and accessories. According to the employer's liability insurance association Metall Nord Süd this risk may be prevented if the stress at load capacity limit is reduced by using a larger chain dimension.

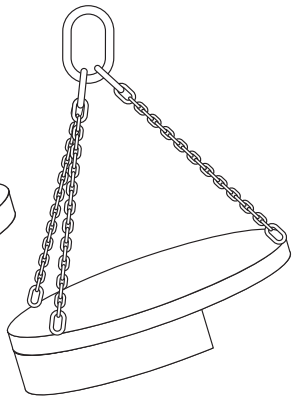
Symmetrical loading
The load capacities of pewag chain slings are defined with the assumption that the load of the individual chain strands (legs) is symmetrically distributed. Lifting of the load then leads to identical angles of inclination, and the individual strands (legs) are symmetrical to each other.

The load can still be considered symmetrical when the following conditions are met:
- The load is smaller than 80% of the stated load capacity (WLL)
- The chain sling leg angles to the vertial are all not less than 15°
- The angles to the vertical of all chain legs are identical or deviate max. 15° from each other
- In the case of three and four strand sling chains, the corresponding plan angles are within 15° of each other.

Example of asymmetry
If all of the listed parameters are not met, load is considered to be asymmetric and an expert must be called in to assess the lifting process. In case of doubt, only one chain strand (leg) should be considered as load-bearing. For the corresponding load capacity please refer to the load capacity table.



The majority of the load is carried by 1 strand (leg)



The majority of the load is carried by 2 strand (legs)

Use of pewag chain slings for other than the intended purposes
Use chain sling only for the intended purpose. In cases where not all individual strands (legs) are used simultaneously or where several sling chains are used at the same time, please refer to the load capacity table to find out the load capacity. In case of doubt or as an alternative, change the load capacity according to the following rating tags of the following table.

Type of sling chain	Number of individual strands used	Use factor in relation to the load capacity given on the tag
two-stranded (2-leg)	1	1/2
three- and four-stranded (3/4-leg)	2	2/3
three- and four-stranded (3/4-leg)	1	1/3
2 x single-stranded (single leg)	2	1,4 up to 45°
2 x two-stranded (2 leg)	3 or 4	1,5 from 45°–60°

Hang any individual strands (leg) that you do not use, back into the master link to prevent hazards caused by freely swinging chains or unintended hooking.
Before using several chain slings at the same time, make sure that the crane hook is big enough for all the master rings. Make sure that the master rings cannot fall out of the hook during lifting. No angles of inclination of more than 45° allowed. Use only chain slings of the same nominal thickness and grade at the same time.

Additional detailed information

Do not tip load the hook!

wrong!

right!

Detailed user manuals for individual products are available for download under www.pewag.com. Manuals underlie an ongoing improvement process and are only valid in their latest version.

NEW

User manual

User manual for pewag winner pro lashing system

General

The information regarding the use of the pewag winner pro system for lifting can also be used by analogy for the lashing system. Attention must be paid to the following additional information:

pewag winner pro lashing chains have been developed for securing loads during transport. If properly used pewag winner pro lashing chains are have a long service life and offer a high level of safety. Personal injury and damage to property may result from improper use. It is therefore very important that you read and understand this user manual and act in a responsible and forward-thinking manner when using lashing equipment.

We offer tools to assist with selection and proper usage of the lashing chain assemblies. Nevertheless, adequate experience of load securing and use of lashing equipment is indispensable. Only authorized people as defined by EN 12195-1 and 2 are allowed to assemble and use pewag Winner Pro lashing chain systems.

Important: lashing chains have safety factor = 2, lifting chains have safety factor = 4. This means that for safety reasons lashing chains must not be used as lifting chains. Therefore lashing chains must have the correct identification tag with the appropriate warning note.

The number of the lashing assemblies should be calculated according to EN 12195-1. Some impact loads may arise which will be balanced by the vehicle and by the flexibility of the lashing system.

Information on use

Lashing points
Choose lashing points so that the angles of the lashing chain assemblies are within the range given in our lashing table and so that the lashing chain assemblies are symmetrical to the driving direction. Use only lashing points with adequate strength. Deviations from this should only be considered after consulting our technical department.

Selection
Consider the lashing method required and the load that needs to be secured when selecting the lashing chain systems. Size, form and weight of the load as well as the intended usage category (friction lashing, direct lashing, …) and the transport environment (additional utilities, lashing points, …). determine proper selection.
Lashing chain systems should be used because of the high lashing capacity and the low elongation. We recommend to use the direct lashing method especially for the securing of heavy loads with the least possible lashing systems.

The number of the lashing systems should be calculated according to the EN standard 12195-1. In accordance with this standard pewag has integrated the commonly used lashing methods in an easy to use lashing table. Please look for more detailed info on pages 18 and 19.

Use at least two pairs of lashing chain systems for stability for the direct lashing method.

The chosen lashing chain systems must be strong and long enough for the intended purpose.

In case of doubt safety is a priority rather than overloading the lashing chain system. The connecting parts (hooks, links) of the lashing chain systems must be moveable in the lashing point and adjustable in the tensile direction. Bending stress on the accessories and tip loading of the hooks are not permissible. Hooks must be loaded at the bearing area. Please use either lashing chain systems or lashing straps for the load securing because of the different performance and elongation of different lashing equipment under load (e.g. lashing chains and lashing straps made of synthetic fibre). If required please contact our technical customer service department.

Use
Always consider proper lashing practice. Before lashing, plan the lashing and the release/opening of the lashing system. During a long trip consider possible partial unloading.

Pay attention to overhead lines during loading and unloading. Remove lifting equipment before lashing. The maximum hand force of 50 daN for tightening the tensioning device should only be applied manually. Use of mechanical utilities ie. Rods or levers is forbidden. Consider sufficient edge protection. During transport check the tension of the lashing chain system repeatedly. Before opening the lashing chain system make sure that the load is safe also without securing and the people who unload are not in danger through goods that fall off or topple down. If necessary assemble the lifting equipment for possible further transport on the load to avoid the goods falling off or toppling down. Release the lashing chain systems as appropriate so that the load is free standing.

Avoid the risk of the lashing chain getting caught during unloading.

Dynamic friction factor:
The dynamic friction factor depends on the combination of the various materials used. The following table gives several „Dynamic friction factor“ of different material pairings (in case of doubt, please consider the lower value as significant – poor adhesion). Further information can be found at page 66.

Material	Dry	Wet	Oiled
Wood/Metal	0,20–0,50	0,20–0,25	0,05–0,15
Metal/Wood	0,20–0,50	0,20–0,25	0,02–0,10
Metal/Metal	0,10–0,25	0,10–0,20	0,01–0,10
Concrete/Wood	0,30–0,60	0,30–0,50	0,10–0,20

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