pewag
lifting solutions

pewag
winner G12 Plus

always one dimension smaller



English EN

pewag shackles

Built to secure. Made to endure.

Discover pewag shackles – made in Europe to the highest standards for maximum safety and load capacity.



View the catalogue here:

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Subject to technical changes and printing errors.

We are part of the **pewag group**

pewag lifting solutions is part of an internationally operating group of companies. Our success story goes back to the year 1479.

WHAT DRIVES US

Through our entrepreneurial spirit - shaped by the joy of innovation - we strive to offer the best solutions for the market. Today and in the future.

The high quality of our brands, products and services, as well as the passionate commitment of our employees are our most valuable assets to exceed customer expectations and to live up to our corporate responsibility towards people and environment.

LEADING TO EXCELLENCE

striving for excellence in QUALITY

The values of the pewag group brands are demonstrated by our first-class quality and continuous innovation. You can rely on us.

striving for excellence in RESPONSIBILITY

Our goal is CO_2 neutral production by 2030. We live sustainable and fair partnerships and an open way of working together. We take on social as well as environmental responsibility.

striving for excellence in ENTREPRENEURSHIP

Through the specific expertise of each individual and decentralized responsibilities, we ensure healthy growth and a sustainably successful future.

striving for excellence in TECHNOLOGY

We ensure our technological strength by striving for quality, continuous improvement and innovation of our products and production processes.

FROM AUSTRIA....



1479
First documentary mention of the forge

1787
Foundation of the chain forge in Kapfenberg

1803
Foundation of the location in Graz

1836
Establishment of an iron casting plant in Brückl

1912
Production of the first pewag snow chain

2009
pewag develops into an international group of companies

2021
Extensive investment in renewable energies. Goal: CO_2-neutral production by 2030

....ACROSS THE GLOBE



pewag group
LEADING TO EXCELLENCE

IN A SUSTAINABLE WAY

Social Excellence

The corporate ethics of the pewag group are based on our clear commitment to universal human rights. As a globally active group of companies, we bear a social and corporative responsibility. This applies in particular to our employees. Their occupational safety and health protection are our top priority. We promote their personal and professional development and foster a culture of open, honest, non-discriminatory and team-oriented exchange based on transparent communication. We apply the same standards in our dealings with customers, suppliers and other business partners.



Environmental Excellence

We are committed to a careful and sustainable approach to the environment. This applies to all areas and activities of our group of companies. For us, it is a matter of course to use resources as efficiently as possible and to ensure this also in the future through new environmentally friendly and efficient processes. We are continuously working to optimize the durability and recyclability of our products. In this context, one of our core concerns is to continuously improve our energy efficiency and thus reduce energy consumption in the long term. The energy we use comes from renewable energy sources and is already partly generated by ourselves.

WHAT DEFINES US



Snow and forestry chains

Hoist and conveyor chains

Do-it-yourself

Engineering

Lifting solutions

Tire protection chains

Our Expertise.

Our international brands have an extensive and diverse range of products and services.

The portfolio ranges from traction chains for tires, tire protection chains for mining vehicles over a wide range of technical chains and innovative lifting solutions up to products for the do-it-yourself area as well as forming technology.

Our Network.

With over 50 locations on five continents, the pewag group forms a global platform of product specialists, partners and suppliers.

This community is strengthened by a large network of external experts from science, research and development and a wide range of brands and companies within the group.

Our Experience.

Based on centuries of experience, genuine craftsmanship and innovative technologies we process the highest quality materials with the claim to offer the best solutions on the market.

What unites us as people within the pewag group is the strong ambition for continuous development.

Practical overview

Lifting with winner G12 Plus

From an established standard to technological excellence

Many G8 chain slings are still in use worldwide. G8 was the established standard for many years – but today, this technology has clearly reached its limits. Their high dead weight, lower working load limits and relatively high material use make G8 chain slings increasingly inefficient and outdated.

As a market and innovation leader, pewag is consistently driving technological innovation. pewag presents winner G12 Plus, a modern chain system that not only replaces G8 but clearly outperforms it in every respect. Our goal is to replace G8 gradually with a more efficient, lighter and more sustainable solution.

Discover pewag winner G12 Plus in 3D

You can now explore our products virtually: The QR code takes you to interactive 3D models that you can rotate, zoom and view from any angle – complete with all the key product information.

Why winner G12 Plus is the better solution



Higher working load limits
winner G12 Plus impresses with at least 50 % higher working load limits than G8, setting new standards in lifting technology.



Reduced weight with intelligent downsizing
Its higher working load limits allow winner G12 Plus chain slings to be one dimension smaller than equivalent G8 chain slings. This significantly reduces the dead weight, makes handling easier and improves ergonomics.



Top-quality material. Modern manufacturing technologies
Designed in Austria. Made in Europe. Made from premium materials, winner G12 Plus products represent durability, reliability and state-of-the-art technology.



Unique ‘winplus’ profile chain
pewag remains the only manufacturer to offer profile chains for chain slings as part of its standard product range, despite the complexity of their manufacture.

Boost your company's efficiency
- Downsizing enables the use of smaller, lighter chain slings with the same or higher working load limit
- State-of-the-art manufacturing technologies for maximum quality and future-proof performance
- Reduced steel consumption means better sustainability

Less strain on the user
- Significantly lower weight, much easier to handle
- Better ergonomics, reduced physical strain
- State-of-the-art materials deliver maximum safety

Lifting

always one dimension smaller



winner G12 Plus is one dimension smaller than G8 but has at least the same working load limit.





Designation	SA 13 IV G – HSB – P 2000 V	winplus 10 200 IV VSXK – KLH 2000	
Grade – dimension	G8 – dimension 13	winner G12 Plus – dimension 10	
WLL	11,200 kg	11,350 kg	+150 kg
Weight	51 kg	36 kg	-30 %

Comparison of working load limits

Downsizing from G8 to winner G12 Plus is possible across the entire range.

Grade 8

DIM	Working load limit* (WLL) [kg]
7	1,500
8	2,000
10	3,150
13	5,300
16	8,000

Grade 12 Plus

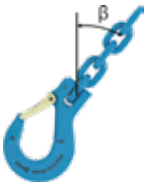
DIM	Working load limit* (WLL) [kg]
7	2,360
8	3,200
10	5,400
13	8,200



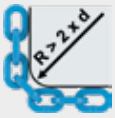
* The working load limits shown are maximum values for single-leg use under the uniform load method.

Note:
To improve readability, all markings on components in this catalogue are shown in black. They are actually the same colour as the powder coating.

pewag winner G12 Plus working load limits

Safety factor 4		1-leg	1-leg (choke hitch)	2-leg		2-leg (choke hitch)		3-leg, 4-leg and 2×2-leg	
									
Inclination angle β		0°	0°	0°-45°	45°-60°	0°-45°	45°-60°	0°-45°	45°-60°
Load factor		1	0.8	1.4	1	1.12	0.8	2.1	1.5
Code	**Dimension**	**Working load limit under general conditions of use [kg]**							
winplus 7	7	2,360	1,900	3,350	2,360	2,650	1,900	5,000	3,550
winplus 8	8	3,200	2,550	4,450	3,200	3,550	2,550	6,700	4,800
winplus 10	10	5,400	4,300	7,550	5,400	6,050	4,300	11,350	8,100
winplus 13	13	8,200	6,550	11,450	8,200	9,150	6,550	17,200	12,300
winplus 16	16	12,800	10,250	17,900	12,800	14,350	10,250	26,500	19,200
Working load limit tag (Examples for dim. 10)			 * see note			 * see note		 3-leg	 4-leg  2×2-leg

* Note: When using this lifting method, the user must limit the working load limit to 80 % of the value shown on the WLL tag.

Thermal loading	< -40 °C	-40 °C to 200 °C	> 200 °C
Load factor	prohibited	1	prohibited
Asymmetrical load distribution	The working load limit must be reduced by at least one leg. Example: Chain slings with three legs or four legs must be rated as chain slings with two legs. If in doubt, only one leg may be considered as load-bearing.		
Edge loading*	R > 2 x d*	R > d*	R ≤ d*
			
Load factor	1	0.7	0.5
Shock loading	Light shocks	Moderate shocks	Heavy shocks
Load factor	1	0.7	prohibited

* d = chain diameter

4-leg and 2×2-leg with load distributor		Endless chain slings	Single lifting slings (basket hitch)		Double lifting slings (basket hitch)	
						
0°-45°	45°-60°	0°	0°-45°	45°-60°	0°-45°	45°-60°
2.8	2	1.6	1.4	1	2.1	1.5
Working load limit under general conditions of use [kg]						
6,700	4,750	3,800	3,350	2,360	5,000	3,550
8,950	6,400	5,100	4,450	3,200	6,700	4,800
15,100	10,800	8,650	7,550	5,400	11,350	8,100
22,500	16,400	13,100	11,450	8,200	17,200	12,300
35,500	25,500	20,500	17,900	12,800	26,500	19,200
						
4-leg	2×2-leg					

Even the best quality products lose some of their working load limit under exceptional operating conditions.

The **working load limits table** shows the working load limits under normal operating conditions.

The **severe operating conditions table** lists exceptional operating conditions and the corresponding load factors. The permissible working load limit under these conditions is the product of the maximum working load limit and the load factor in the table. If more than one severe operating condition applies, apply all corresponding load factors!

You can find further restrictions on use in the operating manuals. All restrictions specified in the following documents apply:

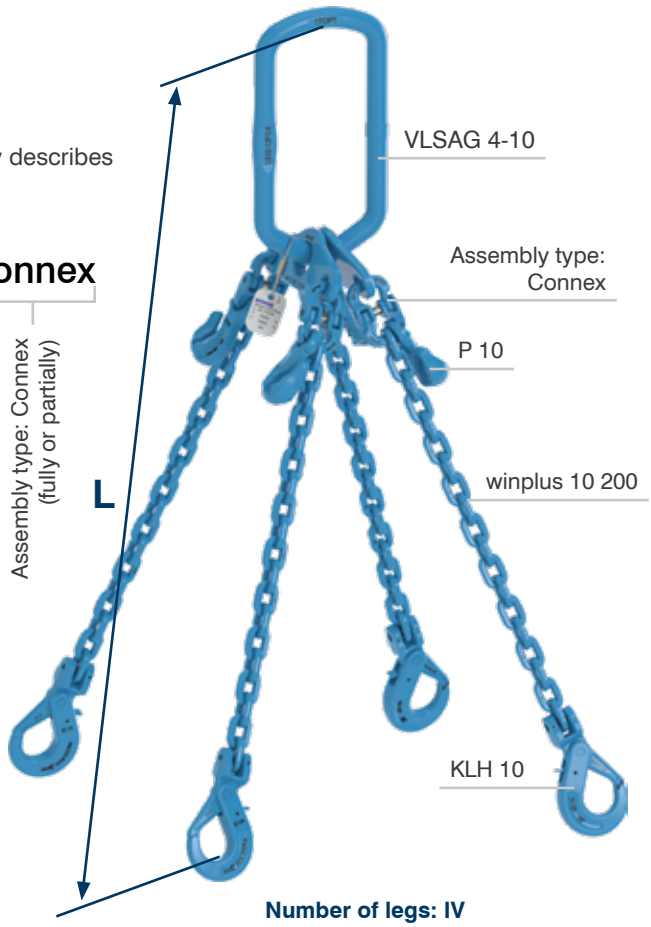
- Original operating manual for pewag winner G12 Plus lifting and lashing components
- Original instruction manual for pewag standard lifting chains (only for chain slings)
- Original operating manual for pewag lashing chain systems in G8, G10, G12 and G12 Plus (only for lashing chains)

Order example for a chain sling

pewag chain slings use a standardised designation system which fully describes their design.

winplus 10 200 IV VLSAG – KLH – P 1200 Connex

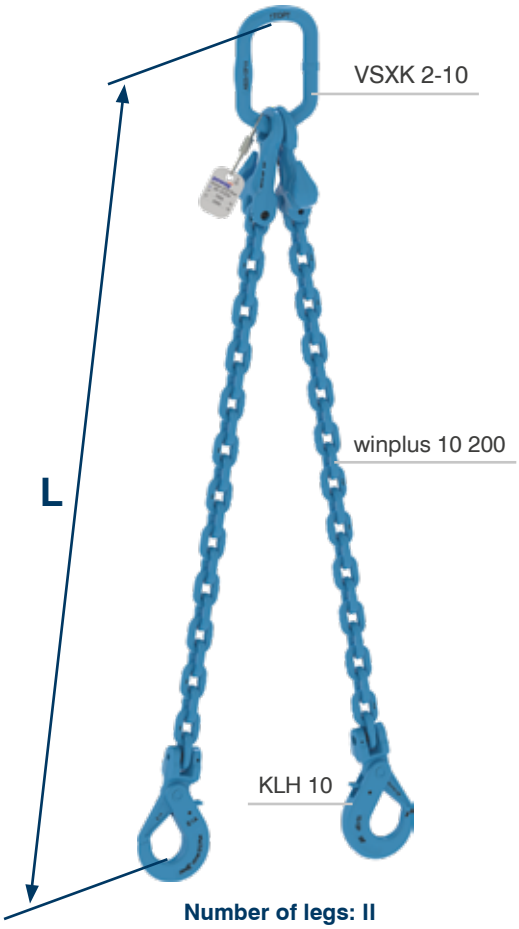
winplus	10	200	IV	VLSAG	–	KLH	–	P	1200	Connex
Chain	Nominal diameter	Chain type	Number of legs	Top component		Bottom component		Shortening element	Length [mm]	Assembly type: Connex (fully or partially)



Number of legs: IV

winplus 10 200 II VSXK - KLH 1250

winplus	10	200	II	VSXK	-	KLH	1250
Chain	Nominal diameter	Chain type	Number of legs	Top component		Bottom component	Length [mm]



Number of legs: II

Custom chain slings

For applications beyond the standard range, pewag offers customised chain slings on request. Please contact your local pewag CSM representative or send an enquiry to **sales@pewag.com**.



Chain sling configurator

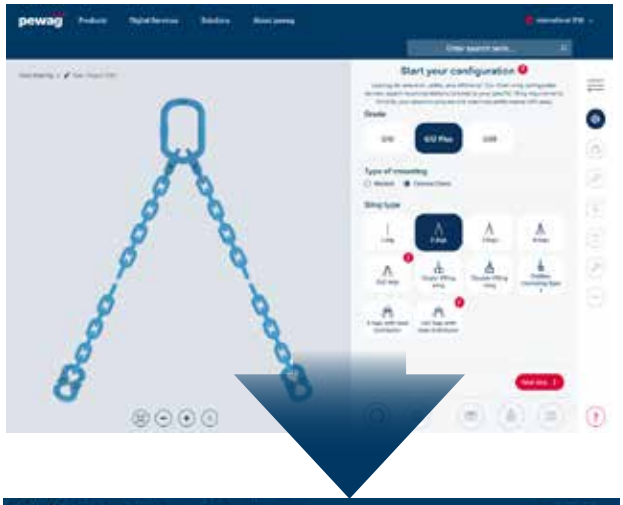
Start

Configure now:

Chain sling configurator

Always the right solution

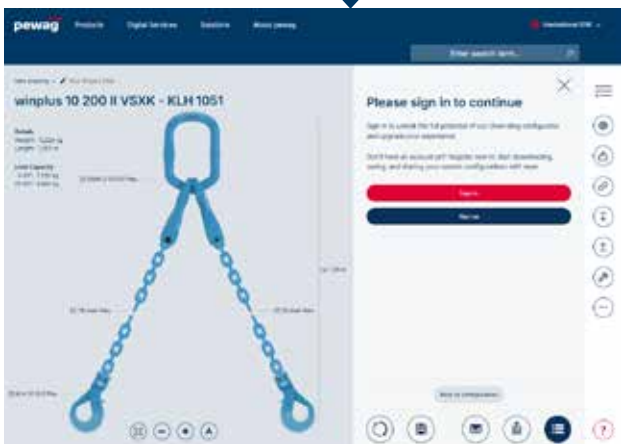
You can use our chain sling configurator to find the right solution for your lifting applications with ease. The system guides you step by step through the configuration process and provides a technically suitable recommendation based on your input.



Configure and get a quote

Select the required grade and sling type, specify the required working load limit and chain length, and add the matching sling components. Within a few minutes, you will get a customised configuration, including all the relevant technical information.

After completing the configuration, you can save your selection, share it or request a personalised quote straight away.



Your advantages at a glance

Select the right chain sling with ease
- ✓ Support for safe and standards-compliant design
- ✓ Access to technical data and specifications
- ✓ A clear overview of all components
- ✓ Save, share and request quotes instantly

Easy access to your certificates

Explore

With our online certification software, customers can create and access their test certificates and annual inspection reports anytime, anywhere. This ensures quick and seamless access to important documents.

✓ **User-friendly interface**

✓ **24/7 availability**

✓ **All certificates in one place**

The service includes certificates for winner G12 Plus and other pewag product ranges.

Working load limit tag

- Corrosion-resistant material: For maximum service life and safety.
- Permanent marking: Key information such as grade and working load limit is precisely and permanently laser-engraved.
- Handy quick-lock link: Quick and secure attachment to the chain sling – also made of corrosion-resistant material.
- QR code integration: Direct access to the latest pewag operating manual for chain slings.
- Optional with peTAG: For digital identification and smart documentation.
- Personalised: Custom laser markings (company logos, etc.) are available on request.



Front
(single-leg)

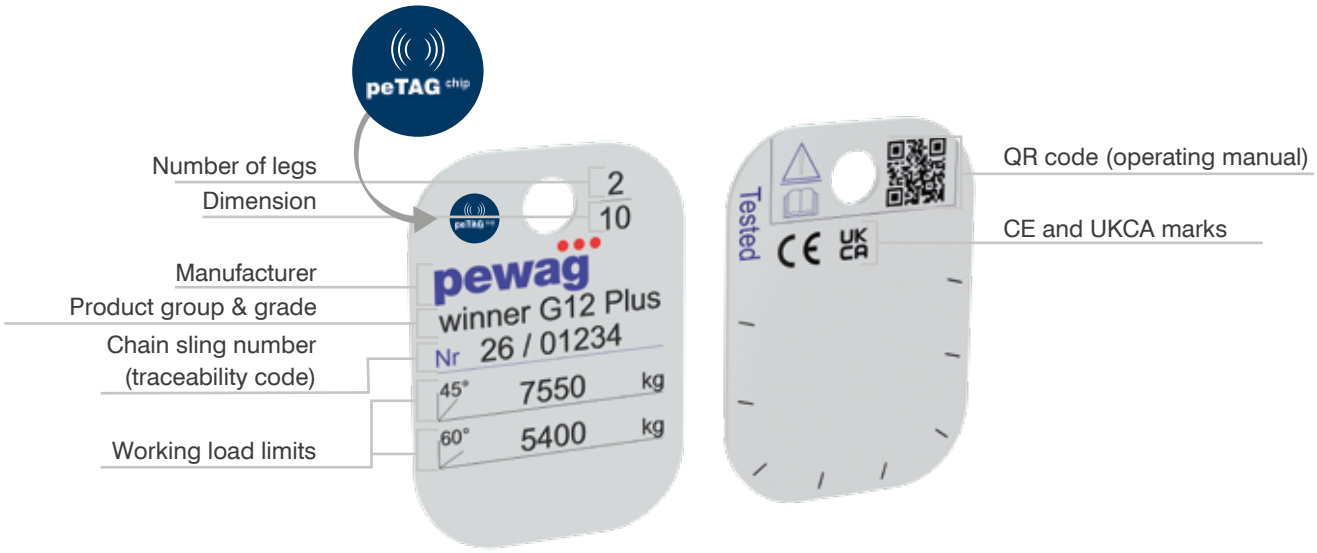


Front
(multiple-leg)



Back

Example (for the chain sling ‘winplus 10 200 II VSXK - KLH 1250’):



peTAG for winner G12 Plus

On request, the working load limit tag can be supplied with the pewag peTAG – an integrated NFC (RFID) transponder chip for digital identification and management. Combined with the peTAG Manager software solution, the system ensures efficient and transparent data management throughout its entire lifecycle. This makes it easy to record and document product data, which can be accessed at any time. The software also assists with service and maintenance tasks, as well as with the preparation of test reports and certificates. More information on page 38.



winplus Lifting and lashing chain

Characteristics

- The well-proven profile design guarantees optimal handling in lifting and lashing applications
- High-quality powder coating provides effective corrosion protection and an attractive surface finish
- Suitable for operating temperatures up to 200 °C



Standards

EN 818-2*

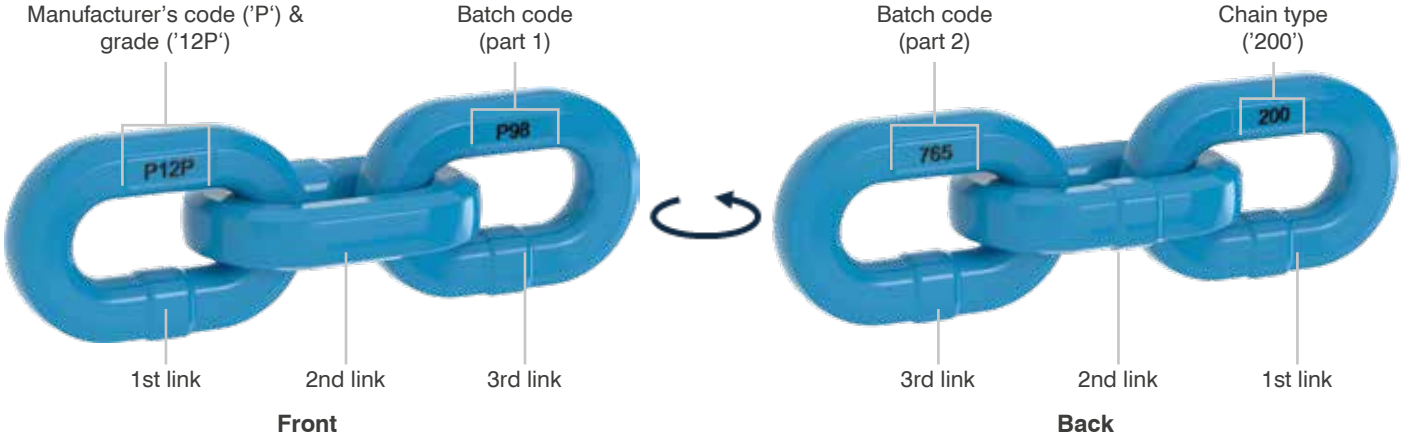
Technical details



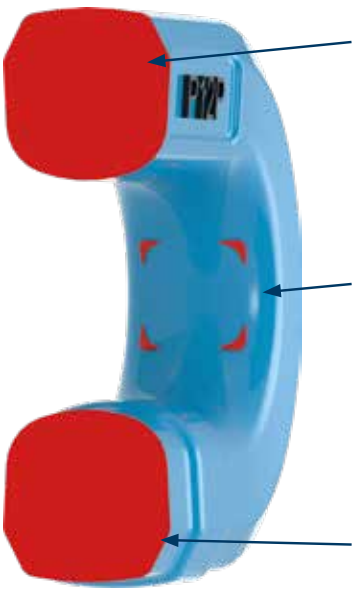
Code	dn [mm]	WLL [kg]	LC [kN]	L [m]	t [mm]	b1 (min.) [mm]	b2 (max.) [mm]	BF [kN]	Weight [kg/m]
winplus 7 200	7	2,360	47	50	22.3	10.3	26.6	94.0	1.4
winplus 8 200	8	3,200	63	50	25.8	11.5	30.4	130	1.9
winplus 10 200	10	5,400	100	50	34.6	15.0	39.5	214	3.1
winplus 13 200	13	8,200	160	50	41.6	18.3	48.7	322	4.8

dn = nominal diameter, WLL = working load limit, LC = lashing capacity, L = standard supply length, t = pitch,
b1 (min.) = (minimum) inside width, b2 (max.) = (maximum) outside width

Marking



Special features



Unique profile
- Material redistributed from less critical to highly critical areas

Improved mechanical properties
- Better wear resistance
- Greater bending stiffness

Improved handling
- Lifting: Better grip (basket and choke hitches)
- Lashing: Less chain twist

*with modifications for grade G12 Plus

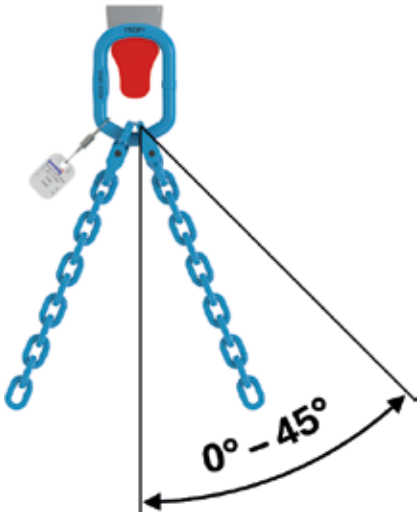
Practical knowledge

winner G12 Plus master links

Sophisticated in every detail
The master links in the winner G12 Plus product range were specially designed for everyday use. Their clever design delivers outstanding safety, easy handling and a long service life.

Easy identification of the inclination angle
The lower section of the master links is angled. This allows the inclination angle to be identified quickly and reliably, even without specialist knowledge.
However, it can still be determined using conventional methods. This additional verification is recommended if in doubt.

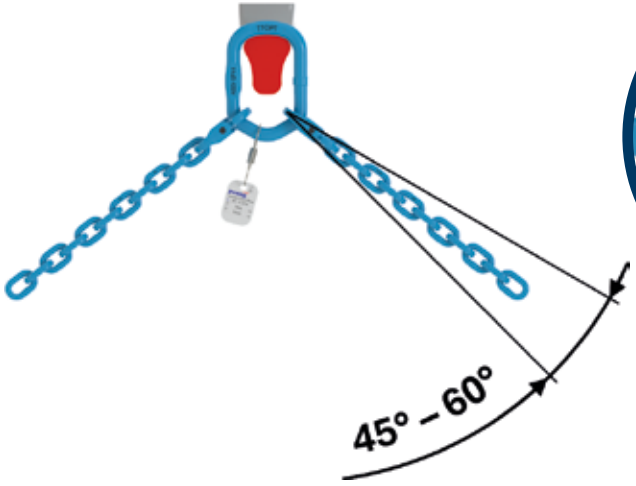
Inclination angle 0° – 45°:
When the connecting links are at the lowest point of the master link, the applicable working load limit is the value for 0°–45° shown on the WLL tag.

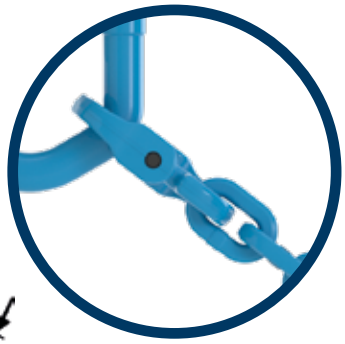






Inclination angle 45° – 60°:
When the connecting links are at the outermost points of the master link, the applicable working load limit is the value for 45°–60° shown on the WLL tag.







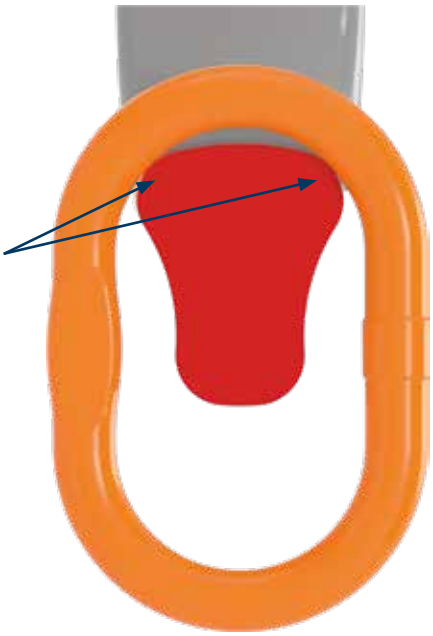
Perfect fit for the crane hook

The upper section of the master links is shaped to fit the crane hook. This creates broad, firm contact between the crane hook and the master link.
This shape significantly reduces friction and stress on the material. This protects the master link, minimises wear and extends its service life – a clear advantage in everyday use.



Surface contact
Less friction
Less wear

2-point contact
High friction
Heavy wear at
contact points



Clear marking for maximum safety

All master links in the winner G12 Plus product range are clearly and permanently marked with '↑TOP↑' to prevent any confusion.

This clearly visible marking indicates the correct orientation at a glance and helps the user ensure safe and correct use.



AS Master link

Characteristics

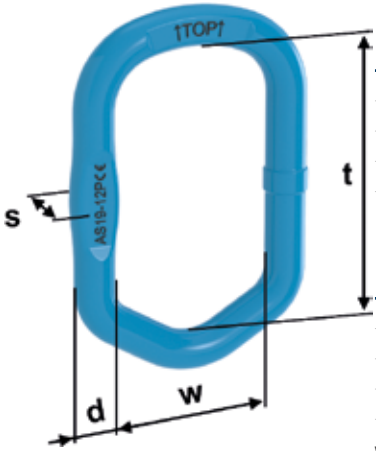
- It is intended for use as a master link in 1-leg or 2-leg chain slings
- Patented, angled design for indicating the inclination angle (0°–45° and 45°–60°)
- Patented, optimised contact surface for ideal force transmission between the master link and the crane hook
- Clear, easily legible '↑TOP↑' marking for correct orientation in the crane hook



Standards

EN 1677-4*

Technical details



Code	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	1-leg chain slings	2-leg chain slings
AS 16	3,350	2,360	2.5	4	7 & 8	7
AS 19	5,400	3,850	5	6	10	8
AS 23	8,200	5,850	6	8	13	10
AS 27	12,800	9,100	8	10	16	13

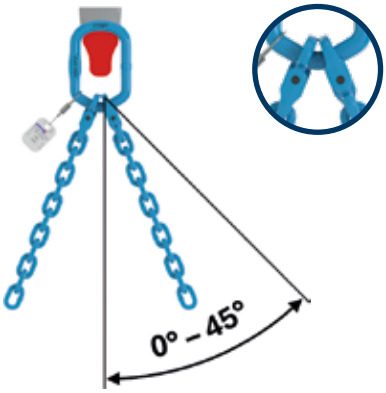
Code	t [mm]	w [mm]	d [mm]	s [mm]	Weight [kg]
AS 16	100	56	16.5	13	0.54
AS 19	130	75	19.0	15	0.93
AS 23	147	84	23.0	18	1.5
AS 27	168	93	27.0	21	2.4

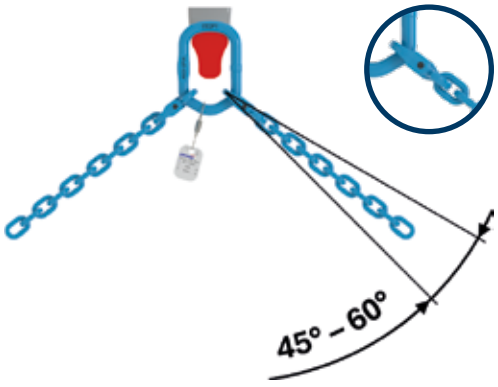
WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook





0°-45°: Connecting links are at the lowest point of the master link
45°-60°: Connecting links are at the outermost points of the master link

*with modifications for grade G12 Plus

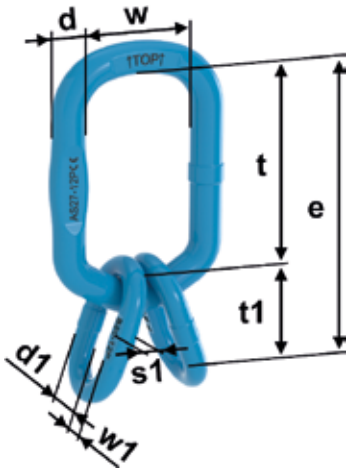
VS Master link assembly

- It is intended for use as a master link assembly in 3-leg or 4-leg chain slings
- Patented, angled master link design for indicating the inclination angle (0°–45° and 45°–60°)
- Patented, optimised contact surface for ideal force transmission between the master link and the crane hook
- Clear, easily legible '↑TOP↑' marking for correct orientation in the crane hook



Standards

EN 1677-4*



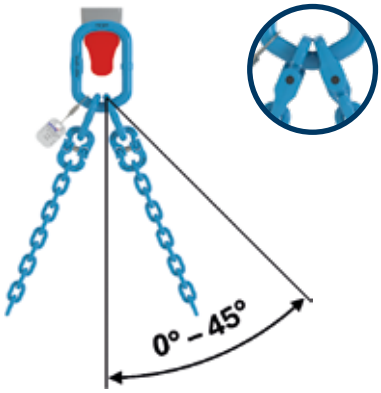
Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	3-leg and 4-leg chain slings
VS 4-7	AS 19 + 2 x B 16	5,000	3,550	5	6	7
VS 4-8	AS 23 + 2 x B 16	6,700	4,800	6	8	8
VS 4-10	AS 27 + 2 x B 20	11,350	8,100	8	10	10
VS 4-13	AS 33 + 2 x B 26	17,200	12,300	10	12	13

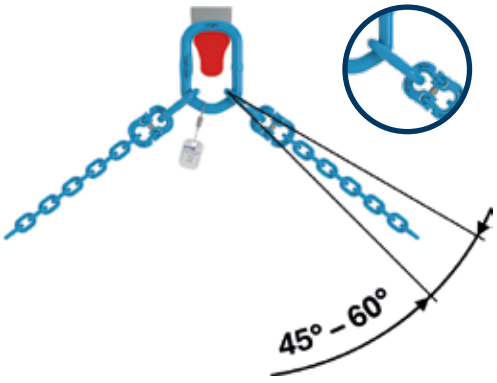
Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	w1 [mm]	d1 [mm]	s1 [mm]	Weight [kg]
VS 4-7	200	130	75	19.0	70	34	16.5	14	1.7
VS 4-8	217	147	84	23.0	70	34	16.5	14	2.3
VS 4-10	253	168	93	27.0	85	40	19.5	16	3.8
VS 4-13	330	190	110	33.0	140	65	27.0	20	8.0

WLL = working load limit
** The largest crane hook for which the respective product is suitable.



The contact surface is optimised for the shape of the crane hook





0°-45°: Transition links are at the lowest point of the master link
45°-60°: Transition links are at the outermost points of the master link

*with modifications for grade G12 Plus

Characteristics

Technical details

Special features

VLS 1 Oversize master link assembly

Characteristics

- It is intended for use as a master link assembly in 1-leg chain slings
- Oversize version for larger crane hooks (suitable up to DIN 15401 No. 25 & DIN 15402 No. 32)
- Patented, angled master link design for indicating the inclination angle (0°–45° and 45°–60°)
- Clear, easily legible '↑TOP↑' marking for correct orientation in the crane hook

Standards

EN 1677-4*

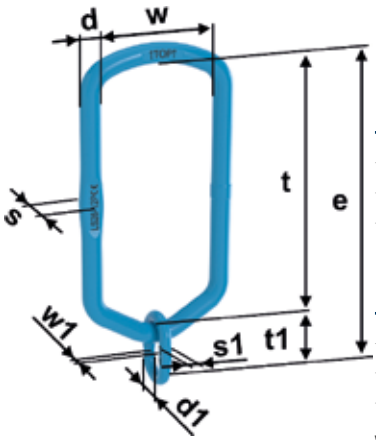


VLS 1-7/8 - VLS 1-10



VLS 1-13

Technical details



Code	Consisting of	WLL [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	1-leg chain slings
VLS 1-7/8	LS 22 + B 13	3,200	25	32	7 & 8
VLS 1-10	LS 26 + B 16	5,400	25	32	10
VLS 1-13	LS 26	8,200	25	32	13

Code	e [mm]	t [mm]	w [mm]	d [mm]	s [mm]	t1 [mm]	w1 [mm]	d1 [mm]	s1 [mm]	Weight [kg]
VLS 1-7/8	394	340	155	23.0	17	54	25	13.0	10	3.3
VLS 1-10	410	340	155	27.0	21	70	34	16.5	14	4.8
VLS 1-13	340	340	155	27.0	21	-	-	-	-	4.4

WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook

*with modifications for grade G12 Plus

VLS 2 | 4 Oversize master link assembly

Characteristics

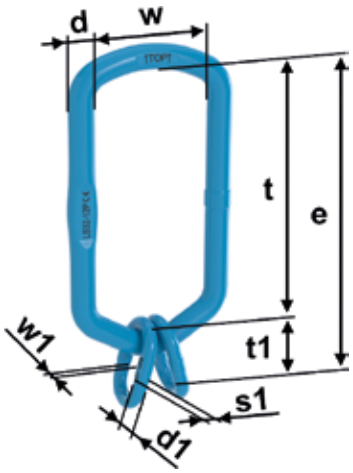
- It is intended for use as a master link assembly in 2-leg, 3-leg or 4-leg chain slings
- Oversize version for larger crane hooks (suitable up to DIN 15401 No. 25 & DIN 15402 No. 32)
- Patented, angled master link design for indicating the inclination angle (0°–45° and 45°–60°)
- Clear, easily legible '↑TOP↑' marking for correct orientation in the crane hook



Standards

EN 1677-4*

Technical details



Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	2-leg chain slings	3-leg and 4-leg chain slings
VLS 2-7/8	LS 22 + 2 x B 13	4,450	3,200	25	32	7 & 8	-
VLS 2-10 | 4-7/8	LS 26 + 2 x B 16	7,550	5,400	25	32	10	7 & 8
VLS 2-13 | 4-10	LS 32 + 2 x B 20	11,450	8,200	25	32	13	10
VLS 2-16 | 4-13	LS 36 + 2 x B 26	17,900	12,800	25	32	16	13

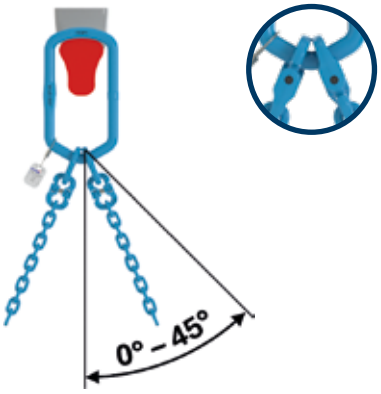
Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	w1 [mm]	d1 [mm]	s1 [mm]	Weight [kg]
VLS 2-7/8	394	340	155	23.0	54	25	13.0	10	3.5
VLS 2-10 | 4-7/8	410	340	155	27.0	70	34	16.5	14	5.2
VLS 2-13 | 4-10	425	340	155	33.0	85	40	19.5	16	8.0
VLS 2-16 | 4-13	480	340	155	38.0	140	65	27.0	20	13.0

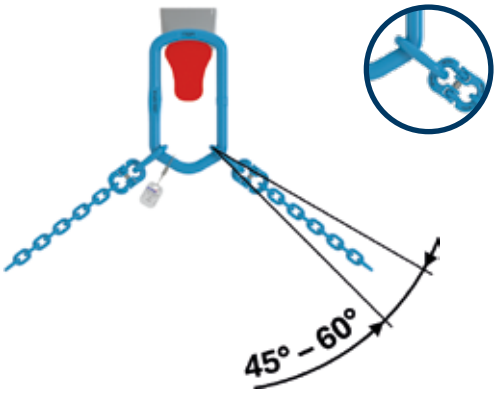
WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook





0°-45°: Transition links are at the lowest point of the master link
45°-60°: Transition links are at the outermost points of the master link

*with modifications for grade G12 Plus

VSXK 1 Master link assembly with shortening hooks

Characteristics

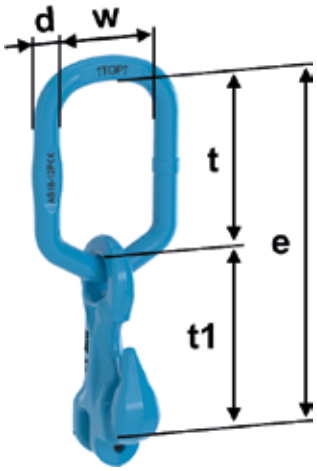
- It is intended for use as a master link assembly in 1-leg chain slings
- Integrated shortening hooks mean a more compact design compared with conventional systems
- Connection between the chain and the master link assembly using the proven, user-friendly clevis system



Standards

EN 1677-4*
EN 1677-1*

Technical details



Code	Consisting of	WLL [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	1-leg chain slings
VSXK 1-7	AS 16 + XK 7	2,360	2.5	4	7
VSXK 1-8	AS 16 + XK 8	3,200	2.5	4	8
VSXK 1-10	AS 19 + XK 10	5,400	5	6	10
VSXK 1-13	AS 23 + XK 13	8,200	6	8	13

Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	Weight [mm]
VSXK 1-7	212	100	56	16.5	112	1.3
VSXK 1-8	211	100	56	16.5	111	1.3
VSXK 1-10	262	130	75	19.0	132	2.4
VSXK 1-13	317	147	84	23.0	170	4.4

WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook

*with modifications for grade G12 Plus

VSXK 2 Master link assembly with shortening hooks

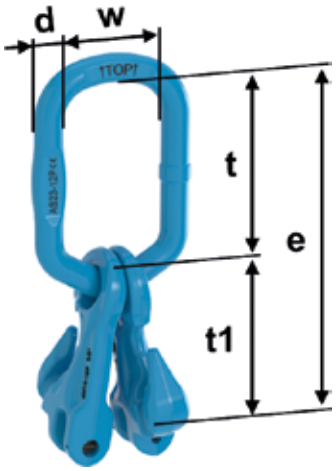
Characteristics

- It is intended for use as a master link assembly in 2-leg chain slings
- Integrated shortening hooks mean a more compact design compared with conventional systems
- Easy access to the shortening slots due to the opposing orientation of the shortening hooks
- Connection between the chain and the master link assembly using the proven, user-friendly clevis system



Standards

EN 1677-4*
EN 1677-1*



Technical details

Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	2-leg chain slings
VSXK 2-7	AS 16 + 2 x XK 7	3,350	2,360	2.5	4	7
VSXK 2-8	AS 19 + 2 x XK 8	4,450	3,200	5	6	8
VSXK 2-10	AS 23 + 2 x XK 10	7,550	5,400	6	8	10
VSXK 2-13	AS 27 + 2 x XK 13	11,450	8,200	8	10	13

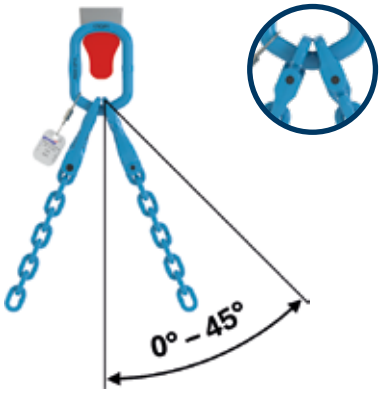
Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	Weight [kg]
VSXK 2-7	212	100	56	16.5	112	2.0
VSXK 2-8	241	130	75	19.0	111	2.3
VSXK 2-10	279	147	84	23.0	132	4.5
VSXK 2-13	338	168	93	27.0	170	8.1

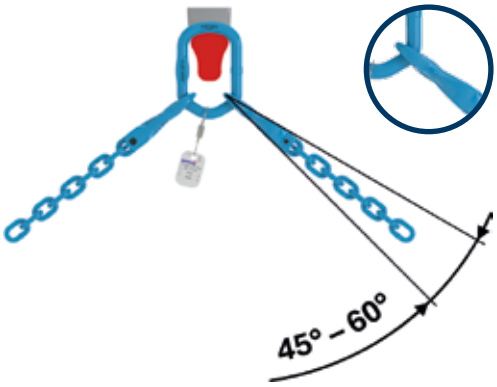
WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook





0°-45°: Shortening hooks are at the lowest point of the master link
45°-60°: Shortening hooks are at the outermost points of the master link

*with modifications for grade G12 Plus

VSXK 4 Master link assembly with shortening hooks

Characteristics

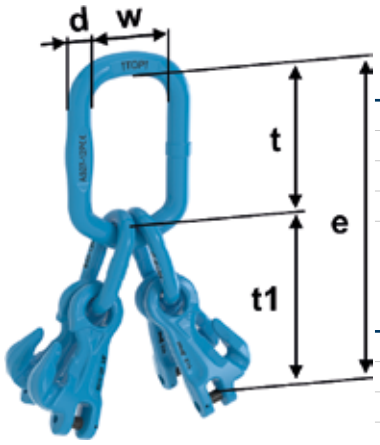
- It is intended for use as a master link assembly in 3-leg or 4-leg chain slings
- Integrated shortening hooks mean a more compact design compared with conventional systems
- Easy access to the shortening slots due to the opposing orientation of the shortening hooks
- Connection between the chain and the master link assembly using the proven, user-friendly clevis system



Standards

EN 1677-4*
EN 1677-1*

Technical details



Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	3-leg and 4-leg chain slings
VSXK 4-7	AS 19 + 2 x B 16 + 4 x XK 7	5,000	3,550	5	6	7
VSXK 4-8	AS 23 + 2 x B 16 + 4 x XK 8	6,700	4,800	6	8	8
VSXK 4-10	AS 27 + 2 x B 20 + 4 x XK 10	11,350	8,100	8	10	10
VSXK 4-13	AS 33 + 2 x B 26 + 4 x XK 13	17,200	12,300	10	12	13

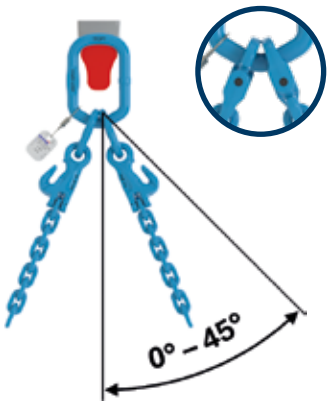
Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	Weight [kg]
VSXK 4-7	312	130	75	19.0	182	4.5
VSXK 4-8	328	147	84	23.0	181	5.1
VSXK 4-10	385	168	93	27.0	217	9.6
VSXK 4-13	500	190	110	33.0	310	19.4

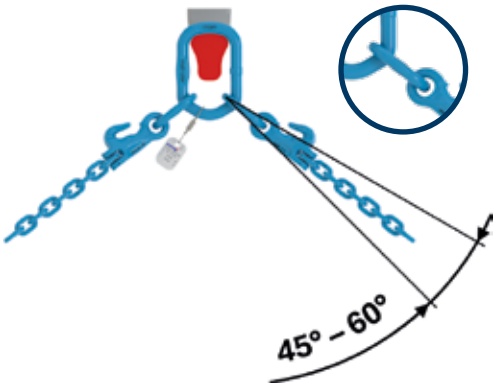
WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook





0°-45°: Transition links are at the lowest point of the master link
45°-60°: Transition links are at the outermost points of the master link

*with modifications for grade G12 Plus

VLSXK 1 Oversize master link assembly with shortening hooks

Characteristics

- It is intended for use as a master link assembly in 1-leg chain slings
- Oversize version for larger crane hooks (suitable up to DIN 15401 No. 25 & DIN 15402 No. 32)
- Integrated shortening hooks mean a more compact design compared with conventional systems



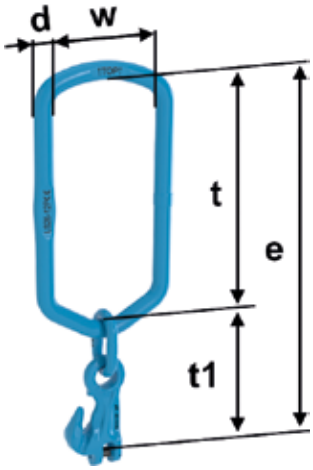
VLSXK 1-7 - VLSXK 1-10



VLSXK 1-13

Standards

EN 1677-4*
EN 1677-1*



Technical details

Code	Consisting of	WLL [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	1-leg chain slings
VLSXK 1-7	LS 22 + B 13 + XK 7	2,360	25	32	7
VLSXK 1-8	LS 22 + B 13 + XK 8	3,200	25	32	8
VLSXK 1-10	LS 26 + B 16 + XK 10	5,400	25	32	10
VLSXK 1-13	LS 26 + XK 13	8,200	25	32	13

Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	Weight [kg]
VLSXK 1-7	506	340	155	23.0	166	4.1
VLSXK 1-8	505	340	155	23.0	165	4.1
VLSXK 1-10	542	340	155	27.0	202	6.2
VLSXK 1-13	510	340	155	27.0	170	7.2

WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook

*with modifications for grade G12 Plus

VLSXK 2 Oversize master link assembly with shortening hooks

Characteristics

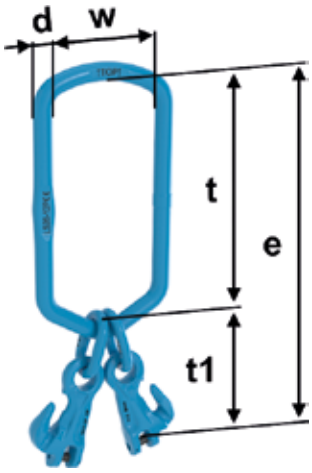
- It is intended for use as a master link assembly in 2-leg chain slings
- Oversize version for larger crane hooks (suitable up to DIN 15401 No. 25 & DIN 15402 No. 32)
- Integrated shortening hooks mean a more compact design compared with conventional systems
- Easy access to the shortening slots due to the opposing orientation of the shortening hooks



Standards

EN 1677-4*
EN 1677-1*

Technical details



Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	2-leg chain slings
VLSXK 2-7	LS 22 + 2 x B 13 + 2 x XK 7	3,350	2,360	25	32	7
VLSXK 2-8	LS 22 + 2 x B 13 + 2 x XK 8	4,450	3,200	25	32	8
VLSXK 2-10	LS 26 + 2 x B 16 + 2 x XK 10	7,550	5,400	25	32	10
VLSXK 2-13	LS 32 + 2 x B 20 + 2 x XK 13	11,450	8,200	25	32	13

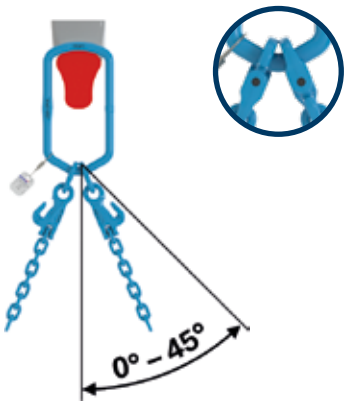
Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	Weight [kg]
VLSXK 2-7	506	340	155	23.0	166	5.0
VLSXK 2-8	505	340	155	23.0	165	5.0
VLSXK 2-10	542	340	155	27.0	202	8.0
VLSXK 2-13	595	340	155	33.0	255	13.6

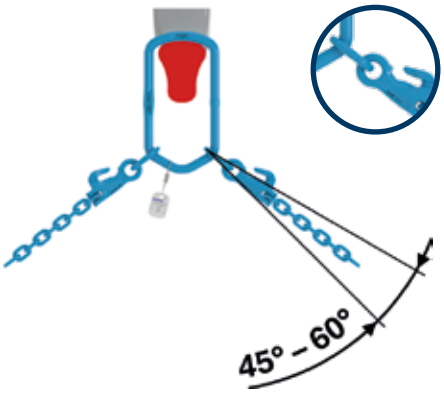
WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



The contact surface is optimised for the shape of the crane hook





0°-45°: Transition links are at the lowest point of the master link
45°-60°: Transition links are at the outermost points of the master link

*with modifications for grade G12 Plus

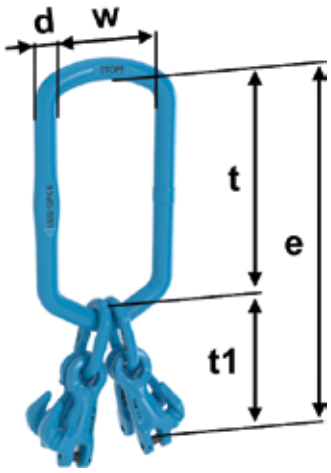
VLSXK 4 Oversize master link assembly with shortening hooks

- It is intended for use as a master link assembly in 4-leg chain slings
- Oversize version for larger crane hooks (suitable up to DIN 15401 No. 25 & DIN 15402 No. 32)
- Integrated shortening hooks mean a more compact design compared with conventional systems
- Easy access to the shortening slots due to the opposing orientation of the shortening hooks



Standards

EN 1677-4*
EN 1677-1*



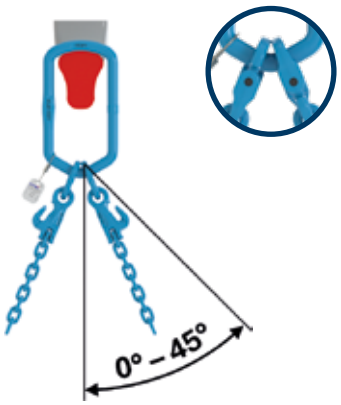
Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	3-leg and 4-leg chain slings
VLSXK 4-7	LS 26 + 2 x B 16 + 4 x XK 7	5,000	3,550	25	32	7
VLSXK 4-8	LS 26 + 2 x B 16 + 4 x XK 8	6,700	4,800	25	32	8
VLSXK 4-10	LS 32 + 2 x B 20 + 4 x XK 10	11,350	8,100	25	32	10
VLSXK 4-13	LS 36 + 2 x B 26 + 4 x XK 13	17,200	12,300	25	32	13

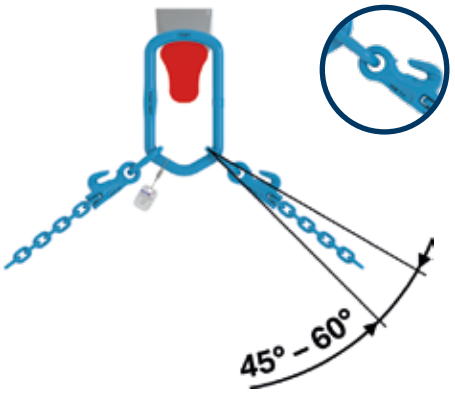
Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	Weight [kg]
VLSXK 4-7	522	340	155	27.0	182	8.0
VLSXK 4-8	521	340	155	27.0	181	8.0
VLSXK 4-10	557	340	155	33.0	217	13.8
VLSXK 4-13	650	340	155	38.0	310	24.1

WLL = working load limit
** The largest crane hook for which the respective product is suitable.



The contact surface is optimised for the shape of the crane hook





0°-45°: Transition links are at the lowest point of the master link
45°-60°: Transition links are at the outermost points of the master link

*with modifications for grade G12 Plus

Practical knowledge

Load distributors

In chain slings with four chain legs, load distributors ensure that the load is distributed evenly across all legs. Without load distributors, one leg usually remains unloaded, which reduces the working load limit and impairs load distribution. Load distributors make it possible to use the full working load limit of the chain sling.



The load is distributed evenly across all four legs.



Only three legs bear the load.
One leg carries no load.

Innovative solution from pewag

The welded master link assembly is an innovative and unique solution. Unlike conventional systems, in which load distributors are fitted with connecting links, the VLSAG 4 and VLSAG 2x2 SET feature two load distributors welded directly into the master link assembly. The result is a compact, rugged and low-maintenance system.



Welded master link

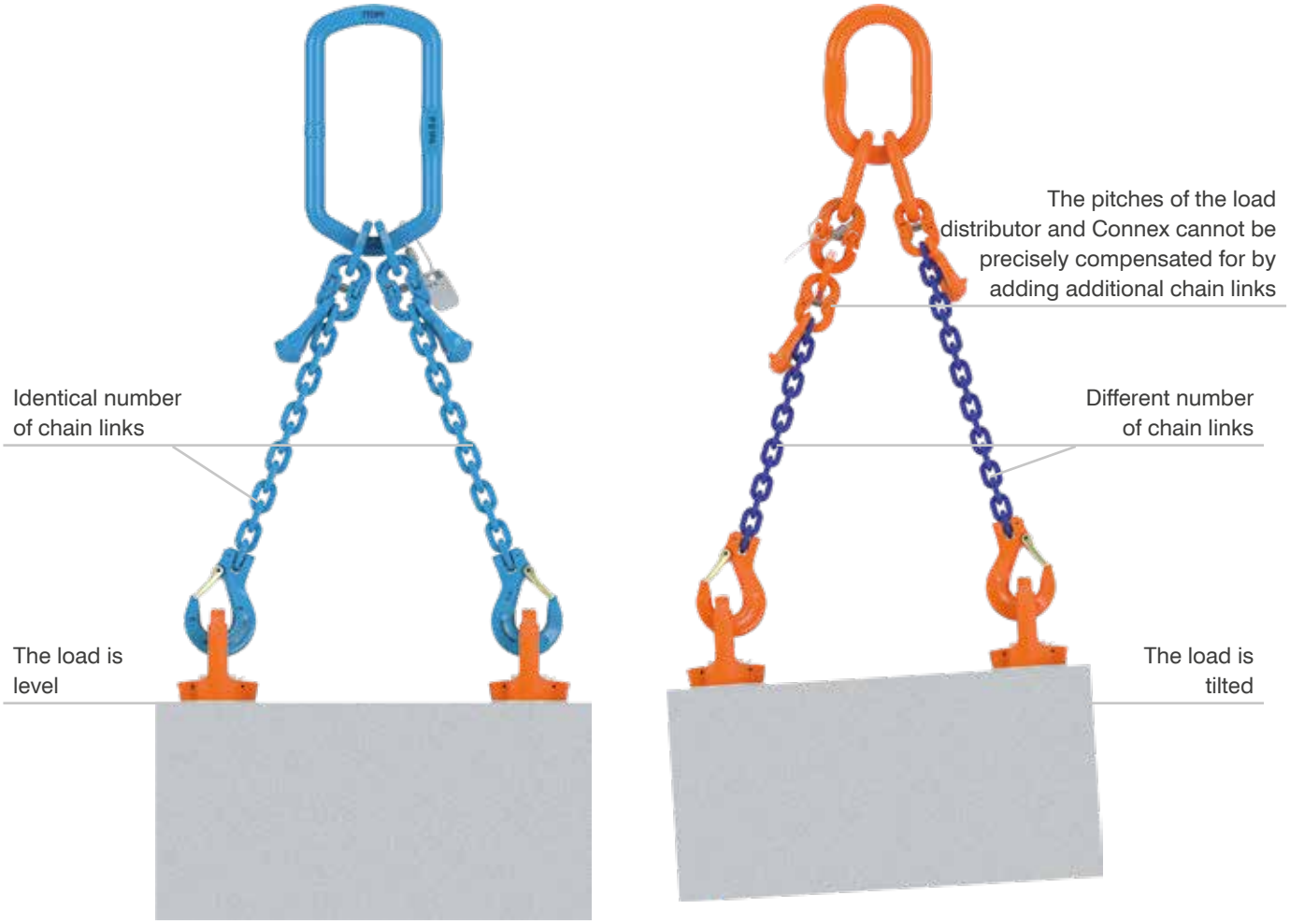
An innovative, compact system



Market-standard system: no pre-assembled assembly – the load distributor is mounted using a connecting link

Lifting operations without tilting

The advantage of the welded master link assembly with load distributor is that all chain legs in the chain sling have the same length. This keeps the load almost level during lifting. In contrast to this, systems with unequal chain lengths, as found in many products on the market, inevitably cause the load to tilt slightly.



The ‘Plus’ in working load limit and ergonomics

The combination of optimum load distribution and grade 12 Plus delivers a maximum working load limit with minimum dead weight. This means: lifting heavy loads safely while handling lightweight chain slings – a clear benefit in everyday work.



VLSAG 4 Oversize master link assembly with load distributors

Characteristics

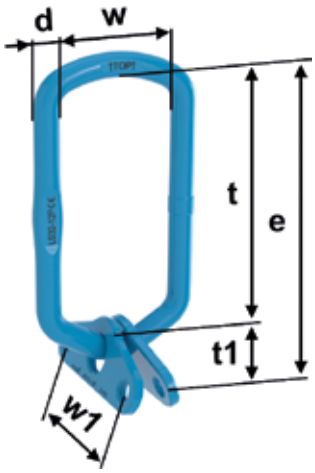
- It is intended for use as a master link assembly in 4-leg chain slings
- Optimal load distribution results in a maximum working load limit with minimum dead weight
- Welded-in load distributors create a compact, rugged system
- Specifically designed for applications where even load distribution across all four chain legs is essential



Standards

EN 1677-4*
EN 1677-1*

Technical details



Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	4-leg chain slings
VLSAG 4-7/8	LS 26 + 2 x AG 7/8	8,950	6,400	25	32	7 & 8
VLSAG 4-10	LS 32 + 2 x AG 10	15,100	10,800	25	32	10
VLSAG 4-13	LS 36 + 2 x AG 13	22,500	16,400	25	32	13

Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	w1 [mm]	Weight [kg]
VLSAG 4-7/8	385	340	155	27.0	45	160	6.7
VLSAG 4-10	394	340	155	33.0	54	180	9.8
VLSAG 4-13	412	340	155	38.0	72	230	15.7

WLL = working load limit
** The largest crane hook for which the respective product is suitable.

Special features



Four load-bearing chain legs when using VLSAG 4



'AG': Load distributor

Working load limit tag marked with 'AG'



*with modifications for grade G12 Plus

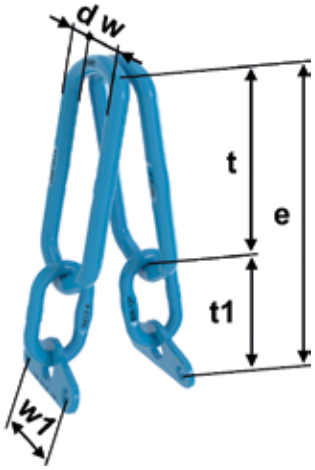
VLSAG 2x2 Oversize master link assemblies with load distributors

- They are intended for use as master link assemblies in 2×2-leg chain slings
- Optimal load distribution results in a maximum working load limit with minimum dead weight
- Welded-in load distributors create a compact, rugged system
- Specifically designed for applications where even load distribution across all four chain legs is essential



Standards

EN 1677-4*
EN 1677-1*



Code	Consisting of	WLL 0° – 45° [kg]	WLL 45° – 60° [kg]	Single hook ** DIN 15401	Double hook ** DIN 15402	2×2-leg chain slings
VLSAG 2x2-7/8 SET	2 x LS 26 + 2 x B 16 + 2 x AG 7/8	8,950	6,400	25	32	7 & 8
VLSAG 2x2-10 SET	2 x LS 32 + 2 x B 26 + 2 x AG 10	15,100	10,800	25	32	10
VLSAG 2x2-13 SET	2 x LS 36 + 2 x B 26 + 2 x AG 13	22,500	16,400	25	32	13

Code	e [mm]	t [mm]	w [mm]	d [mm]	t1 [mm]	w1 [mm]	Weight *** [kg]
VLSAG 2x2-7/8 SET	455	340	155	27.0	115	160	11.8
VLSAG 2x2-10 SET	534	340	155	33.0	194	180	20.2
VLSAG 2x2-13 SET	552	340	155	38.0	212	230	28.4

WLL = working load limit
** The largest crane hook for which the respective product is suitable.
*** Note: The listed weight applies to the complete 2x2 set



Four load-bearing chain legs when using VLSAG 2x2



Four legs, for use as a set

'AG': Load distributor

'PAIRS': To be used as a set

Working load limit tag marked 'PAIRS AG'

*with modifications for grade G12 Plus

Characteristics

Technical details

Special features

C Connex connecting link

Characteristics

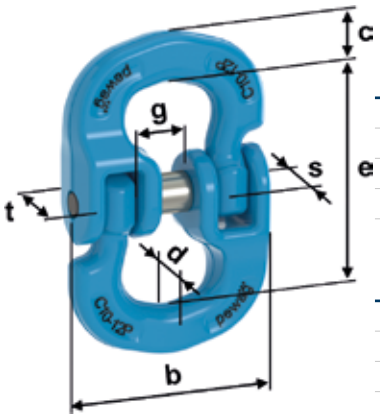
- It is intended for use as a connecting link in chain slings and lashing chains
- Connex connecting links provide a simple and reliable connection between different components (chains, links, hooks, etc.)



Standards

EN 1677-1*

Technical details



Code	WLL [kg]	LC [kN]	Weight [kg]
C 7	2,360	47	0.20
C 8	3,200	63	0.29
C 10	5,400	100	0.63
C 13	8,200	160	1.2

Code	e [mm]	c [mm]	s [mm]	t [mm]	d [mm]	b [mm]	g [mm]
C 7	63	12	13	16	9	53	17
C 8	62	14	15	20	10	58	20
C 10	78	17	21	27	14	72	22
C 13	107	22	25	34	17	90	25

WLL = working load limit (for use in lifting applications)
LC = lashing capacity (for use in lashing applications)

Special features



Extra-large inside width: The shortening hook and chain both fit into a Connex connecting link



Conventional systems (e.g. G8) require one Connex connecting link for the shortening hook and another for the sling chain

*with modifications for grade G12 Plus

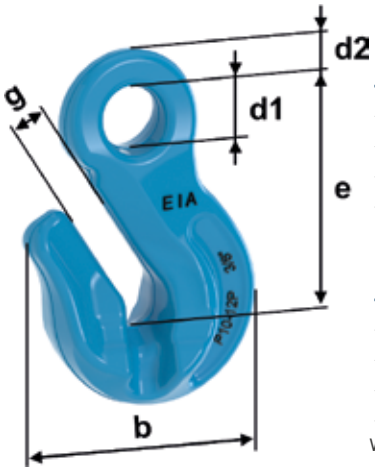
P Shortening hook

- It is intended for use as a shortening component in chain slings
- A particularly safe design for lifting applications, owing to an extra-deep shortening slot (min. 5 x dn)
- Can be integrated into suitable systems using a Connex connecting link (C G12 Plus)



Standards

EN 1677-1*



Code	WLL [kg]	Weight [kg]
P 7	2,360	0.60
P 8	3,200	0.60
P 10	5,400	1.2
P 13	8,200	2.2

Code	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]
P 7	69	71	18	12	10.5
P 8	69	71	18	12	10.5
P 10	89	90	23	14	13.0
P 13	111	113	26	20	16.5

WLL = working load limit (for use in lifting applications)



Incorrect shortening is prevented



Correct shortening: The chain is hooked into the shortening slot

*with modifications for grade G12 Plus

PS Shortening hook with locking pin

Characteristics

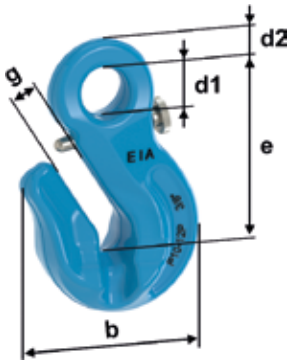
- It is intended for use as a shortening component in chain slings and lashing chains
- A locking pin prevents accidental removal of the chain from the shortening slot
- Can be integrated into suitable systems using a Connex connecting link (C G12 Plus)



Standards

EN 1677-1*

Technical details





Code	WLL [kg]	LC [kN]	Weight [kg]
PS 7	2,360	47	0.60
PS 8	3,200	63	0.60
PS 10	5,400	100	1.2
PS 13	8,200	160	2.2

Code	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]
PS 7	69	71	18	12	10.5
PS 8	69	71	18	12	10.5
PS 10	89	90	23	14	13.0
PS 13	111	113	26	20	16.5

WLL = working load limit (for use in lifting applications)
LC = lashing capacity (for use in lashing applications)

Special features



Incorrect shortening is prevented



Correct shortening: The chain is hooked into the shortening slot



*with modifications for grade G12 Plus

KHS Clevis sling hook

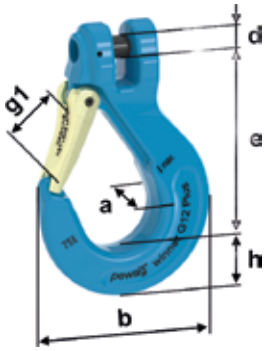
Characteristics

- It is intended for use as a sling hook in chain slings and lashing chains
- The extra-large throat opening provides optimum handling when attaching the load
- The extra-wide clevis encloses and protects the chain links seated inside it
- Forged discard marks indicate whether the hook was loaded beyond the working load limit



Standards

EN 1677-2*





Technical details

Code	WLL [kg]	LC [kN]	Weight [kg]
KHS 7	2,360	47	0.85
KHS 8	3,200	63	0.85
KHS 10	5,400	100	1.7
KHS 13	8,200	160	3.0

Code	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	b [mm]
KHS 7	106	26	19	9.8	36	101
KHS 8	105	26	19	11.0	36	101
KHS 10	121	33	29	14.3	41	118
KHS 13	148	43	30	17.5	49	147

WLL = working load limit (for use in lifting applications)
LC = lashing capacity (for use in lashing applications)

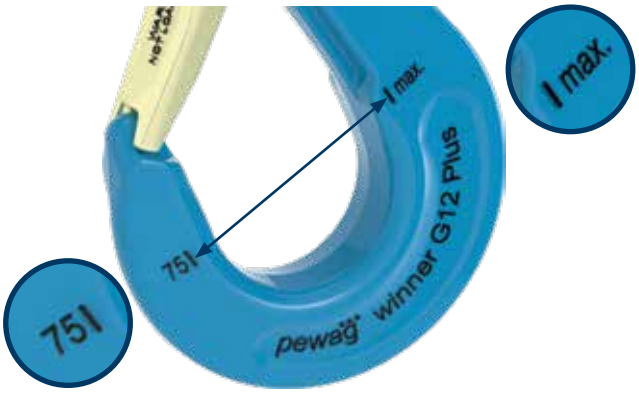
Special features



Extra-large throat opening



An extra-wide clevis section protects the chain link seated inside it



Forged discard marks indicate possible deformation

*with modifications for grade G12 Plus

KLH Clevis safety hook

Characteristics

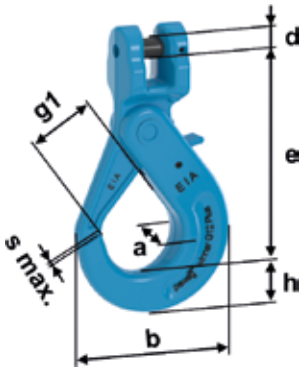
- It is intended for use as a safety hook in chain slings and lashing chains
- A stop that limits the opening angle prevents thumb injuries when opening the hook
- Patented discard marks indicate whether the hook was loaded beyond the working load limit



Standards

EN 1677-3*

Technical details





Code	WLL [kg]	LC [kN]	Weight [kg]
KLH 7	2,360	47	0.98
KLH 8	3,200	63	0.98
KLH 10	5,400	100	1.9
KLH 13	8,200	160	4.3

Code	e [mm]	h [mm]	a [mm]	b [mm]	d [mm]	g1 [mm]	s max. [mm]
KLH 7	118	25	23	91	9.8	32	1.0
KLH 8	117	25	23	91	11.0	32	1.0
KLH 10	149	31	27	113	14.3	45	1.0
KLH 13	185	43	35	151	17.5	54	1.5

WLL = working load limit (for use in lifting applications)
LC = lashing capacity (for use in lashing applications)

Special features



Plenty of space (the thumb cannot become trapped)



An extra-wide clevis section protects the chain link seated inside it



Forged discard marks indicate possible deformation

*with modifications for grade G12 Plus

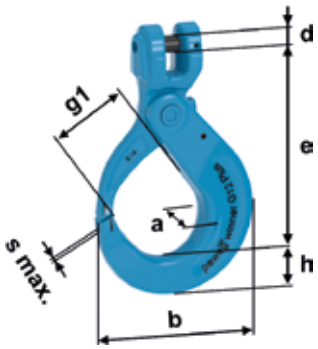
KLHG Oversize clevis safety hook

- It is intended for use as a safety hook in chain slings and lashing chains
- Extra-large throat opening and inside width for use with large lifting points
- A recessed trigger prevents accidental opening of the hook
- Patented discard marks indicate whether the hook was loaded beyond the working load limit



Standards

EN 1677-3*





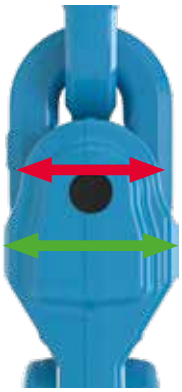
Code	WLL [kg]	LC [kN]	Weight [kg]
KLHG 7	2,360	47	1.1
KLHG 8	3,200	63	1.1
KLHG 10	5,400	100	2.2
KLHG 13	8,200	160	4.3

Code	e [mm]	h [mm]	a [mm]	b [mm]	d [mm]	g1 [mm]	s max. [mm]
KLHG 7	131	27	21	107	9.8	48	1.0
KLHG 8	130	27	21	107	11.0	48	1.0
KLHG 10	166	35	26	136	14.3	61	1.0
KLHG 13	208	44	32	174	17.5	78	1.5

WLL = working load limit (for use in lifting applications)
LC = lashing capacity (for use in lashing applications)



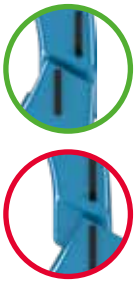
Extra-large throat opening and a positive fit at the hook tip



An extra-wide clevis section protects the chain link seated inside it



Forged discard marks indicate possible deformation



*with modifications for grade G12 Plus

Characteristics

Technical details

Special features

KP Clevis shortening hook

Characteristics

- It is intended for use as a shortening component in chain slings
- A particularly safe design for lifting applications, owing to an extra-deep shortening slot (min. 5 x dn)
- Can be integrated into suitable systems using a Connex connecting link (C G12 Plus)



Standards

EN 1677-1*

Technical details



Code	WLL [kg]	Weight [kg]
KP 7	2,360	0.72
KP 8	3,200	0.72
KP 10	5,400	1.4
KP 13	8,200	2.6

Code	e [mm]	b [mm]	d [mm]	g [mm]
KP 7	76	71	9.8	10.5
KP 8	75	71	11.0	10.5
KP 10	93	91	14.3	13.0
KP 13	123	113	17.5	16.5

WLL = working load limit (for use in lifting applications)

Special features



Incorrect shortening is prevented



Correct shortening: The chain is hooked into the shortening slot

*with modifications for grade G12 Plus

RK Ratchet load binder

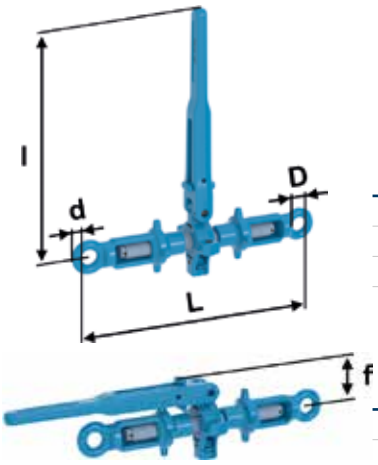
Characteristics

- It is intended for use as a tensioning element in lashing chains and as a shortening component in chain slings
- Can be used in chain slings for lifting operations, e.g. for precise load positioning
- Easy access to thread rod for cleaning and maintenance



Standards

EN 1677-1*
EN 12195-3*



Technical details

Code	WLL [kg]	LC [kN]	STF [daN]	Weight [kg]
RK 7/8	3,200	63	2,350	5.1
RK 10	5,400	100	4,000	5.7
RK 13	8,200	160	3,000	8.4

Code	L (closed) [mm]	L (open) [mm]	Tension range [mm]	l [mm]	f [mm]	D [mm]	d [mm]
RK 7/8	360	536	176	238	75	23	16
RK 10	360	536	176	361	75	23	16
RK 13	569	894	325	411	75	35	23

WLL = working load limit (for use in lifting applications)
LC = lashing capacity (for use in lashing applications)
STF = standard tension force (for use in lashing applications)

Special features





Suitable for lifting



Suitable for lashing

*with modifications for grade G12 Plus

pewag peTAG solution

Your smart solution for efficient product management

The peTAG solution supports flexible, company-wide maintenance and management of a wide range of items.

peTAG solution

The smart solution for easy item identification, seamless data transfer, hassle-free maintenance, secure data archiving, efficient collaboration with partner companies and much more.

peTAG info

Smart, free access to product-specific information via the mobile web.

peTAG manager

This adaptable, powerful platform works seamlessly and reliably with PCs and mobile devices in any working environment while improving data quality. Costly additional readers and manual data transfers are a thing of the past.



Intelligent software
Customizable item data, inspection processes and workflow steps. Automated generation, distribution and archiving of inspection reports. A sophisticated permission concept.

Save time and money
Efficient documentation of work processes simplifies day-to-day workflows. Seamless and error-free data communication.

Mobile solution
Direct, location-independent access to data (e.g. working load limit, safety information, latest inspection report, etc.). Smart item maintenance via the mobile app. Available offline.

Seamless collaboration with partners
Easy communication and efficient interaction between service providers, dealers and customers. Improved service and data quality. Greater customer satisfaction and loyalty.

Always up to date
Access to the latest product data and information. Overview of all inspection data. Documented inspections. Full traceability of the asset history.

INNOVATIVE SOLUTIONS SOLUTIONS
for your needs

Start learning today!

pewag academy

Knowledge for you.

What you will learn

Discover the latest products and the cutting-edge technologies behind their performance, quality and durability! At the pewag academy, we provide customers, partners and staff with expert training in installation, safety inspections and maintenance. We provide valuable insights into key topics such as sustainability, cyber security and much more. Join us to explore how these innovations are shaping the future and build your expertise!

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The pewag academy offers a wide range of exciting courses, available as both e-learning and blended learning. Our experts use a dynamic blend of multimedia teaching methods and innovative teaching approaches to create a truly lasting learning experience. From e-learning to immersive virtual reality – our courses deliver specialist knowledge in an engaging and interactive way. Are you ready to discover and learn more?

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We ensure the highest quality of our teaching materials, as confirmed by our ISO 29993 certification for learning services outside formal education. This certification guarantees that our courses meet international standards of excellence and effectiveness. Our programmes are designed to provide valuable, practical knowledge that promotes your personal and professional development.

Please contact us for more information:
academy@pewag.com



Practical overview

Lashing with winner G12 Plus

From an established standard to technological excellence

Many G8 lashing systems are still in use worldwide. G8 was the established standard for many years – but today, this technology has clearly reached its limits. Their high dead weight, lower lashing capacities and relatively high material use make G8 lashing chains increasingly inefficient and outdated.
As a market and innovation leader, pewag is consistently driving technological innovation. pewag presents winner G12 Plus, a modern chain system that not only replaces G8 but clearly outperforms it in every respect. Our goal is to replace G8 gradually with a more efficient, lighter and more sustainable solution.

Why winner G12 Plus is the better solution



Higher lashing capacities
winner G12 Plus impresses with at least 50 % higher lashing capacities than G8, setting new standards in lashing technology.



Reduced weight with intelligent downsizing
Its higher lashing capacity allows winner G12 Plus lashing chains to be one dimension smaller than equivalent G8 lashing chains. This significantly reduces the dead weight, makes handling easier and improves ergonomics.



Top-quality material. Modern manufacturing technologies
Designed in Austria. Made in Europe. Made from premium materials, winner G12 Plus products represent durability, reliability and state-of-the-art technology.

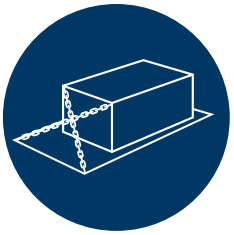


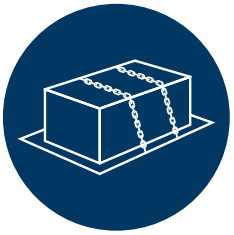
Unique ‘winplus’ profile chain
pewag remains the only manufacturer to offer profile chains for lashing chains as part of its standard product range, despite the complexity of their manufacture.

Boost your company's efficiency
- Downsizing enables the use of smaller, lighter lashing chains with the same or higher lashing capacities
- State-of-the-art manufacturing technologies for maximum quality and future-proof performance
- Reduced steel consumption means better sustainability

Less strain on the user
- Significantly lower weight, much easier to handle
- Better ergonomics, reduced physical strain
- State-of-the-art materials deliver maximum safety

Lashing





always one dimension smaller

winner G12 Plus is one dimension smaller than G8 but still has at least the same lashing capacity.

			
Designation	**SA 13 I HKS – HKS – KVS 2000 V**	**ZRS 10 200 I KHS – KHS – PS 2000**	
Grade – dimension	G8 – dimension 13	winner G12 Plus – dimension 10	
LC	100 kN	100 kN	identical
Weight	16.2 kg	13.5 kg	-17 %

Lashing capacity comparison

Downsizing from G8 to winner G12 Plus is possible across the entire range.

Grade 8

DIM	Lashing capacity* LC [kN]
7	30
8	40
10	63
13	100
16	160

Grade 12 Plus

DIM	Lashing capacity* LC [kN]
7	47
8	63
10	100
13	160



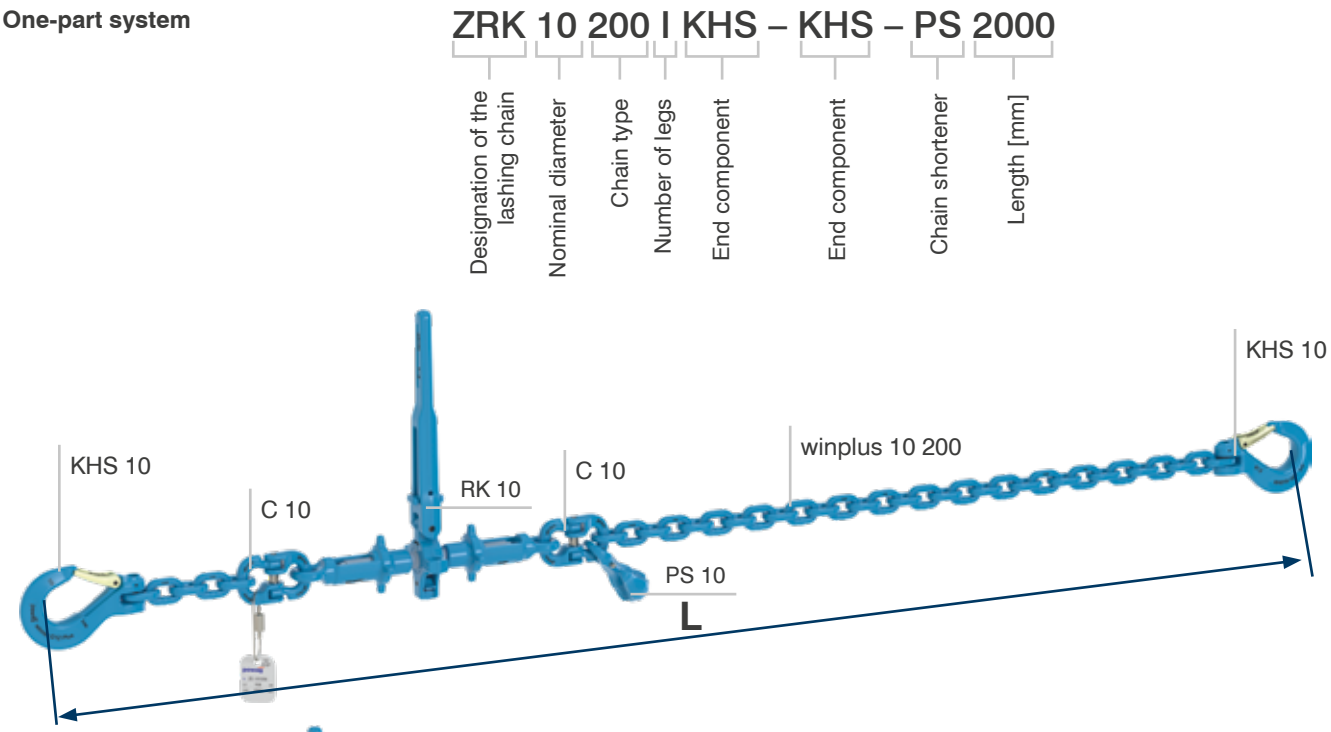
* The lashing capacities indicated are maximum values.

Note:
To improve readability, all markings on components in this catalogue are shown in black. They are actually the same colour as the powder coating.

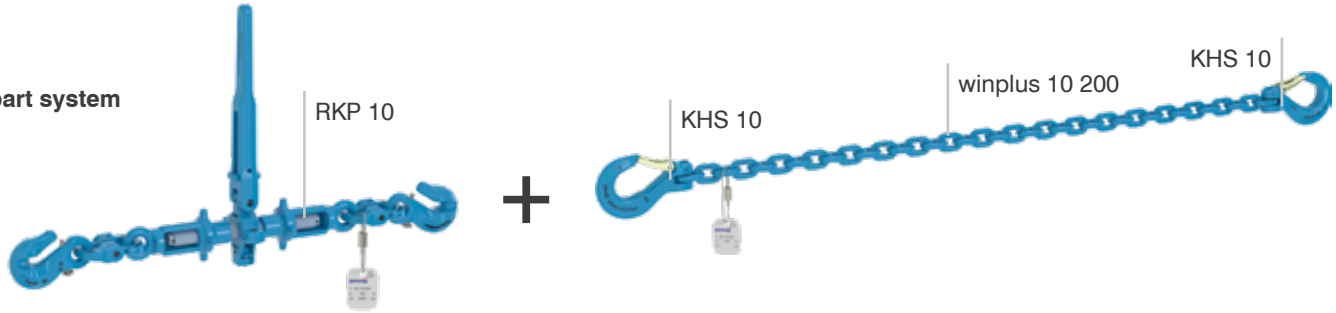
Order examples for lashing chains

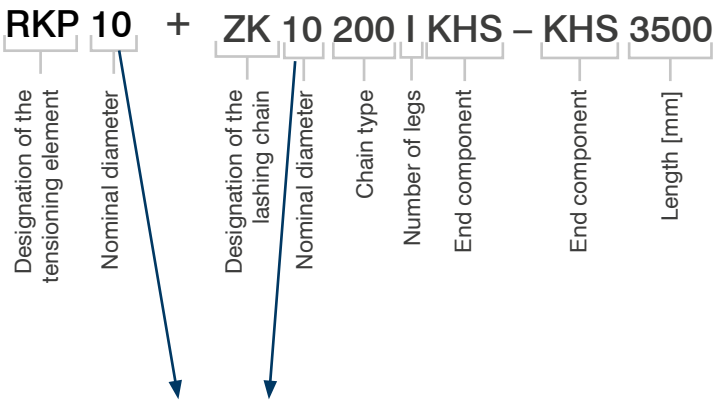
pewag lashing chains use a standardised designation system which fully describes their design.

One-part system



Two-part system





Nominal diameters must match

Custom lashing chains

For applications beyond the standard range, pewag offers customised lashing chains on request.
Please contact your local pewag CSM representative or send an enquiry to **sales@pewag.com.**

Lashing tag



Front Back

Example (for the lashing chain ‘ZRK 10 200 I KHS – KHS – PS 2000’):



peTAG for winner G12 Plus

On request, the lashing tag can be supplied with the pewag peTAG – an integrated NFC (RFID) transponder chip for digital identification and management.
Combined with the peTAG Manager software solution, the system ensures efficient and transparent data management throughout its entire lifecycle. This makes it easy to record and document product data, which can be accessed at any time. The software also assists with service and maintenance tasks, as well as with the preparation of test reports and certificates. More information on page 38.

Reference tables for selecting the correct lashing equipment for direct lashing

The decisive factor in selecting the correct lashing equipment for direct lashing is the lashing capacity LC in [kN]. This depends on the nominal dimension and grade of the lashing chain. The LC value must be stamped on the lashing tag. Otherwise, do not use the lashing equipment for direct lashing.

Direct lashing with G12 Plus lashing chains

Lashing system: winplus 7 chain with dimension 7 ratchet load binder (LC 47 kN; for 4 lashing chains)

Angle α	Angle β	Max. load with dynamic friction coefficient 0.01	0.1	0.2	0.3	0.4	0.5	0.6
20 - 35°	21 - 30°	-	-	10,150	13,700	16,550	20,400	25,950
20 - 35°	31 - 40°	7,450	8,650	10,300	12,350	15,000	18,600	23,450
20 - 35°	41 - 50°	6,250	7,350	8,850	10,700	13,100	16,150	20,350
20 - 35°	51 - 60°	4,900	5,850	7,150	8,800	10,750	13,200	16,750
36 - 50°	21 - 30°	-	-	9,250	11,900	14,750	18,650	24,200
36 - 50°	31 - 40°	-	7,100	8,750	10,850	13,550	17,200	22,450
36 - 50°	41 - 50°	4,950	6,100	7,600	9,550	12,050	15,450	20,350
36 - 50°	51 - 60°	-	4,900	6,300	8,050	10,350	13,450	17,850

Lashing system: winplus 8 chain with dimension 8 ratchet load binder (LC 63 kN; for 4 lashing chains)

Angle α	Angle β	Max. load with dynamic friction coefficient 0.01	0.1	0.2	0.3	0.4	0.5	0.6
20 - 35°	21 - 30°	-	-	13,650	18,350	22,200	27,400	34,800
20 - 35°	31 - 40°	10,000	11,650	13,800	16,550	20,100	24,950	31,450
20 - 35°	41 - 50°	8,400	9,850	11,850	14,350	17,600	21,700	27,250
20 - 35°	51 - 60°	6,550	7,850	9,600	11,800	14,400	17,700	22,450
36 - 50°	21 - 30°	-	-	12,400	15,950	19,800	25,000	32,450
36 - 50°	31 - 40°	-	9,550	11,750	14,550	18,150	23,100	30,100
36 - 50°	41 - 50°	6,650	8,150	10,200	12,800	16,200	20,750	27,250
36 - 50°	51 - 60°	-	6,550	8,450	10,800	13,850	18,000	23,950

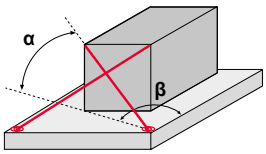
Lashing system: winplus 10 chain with dimension 10 ratchet load binder (LC 100 kN; for 4 lashing chains)

Angle α	Angle β	Max. load with dynamic friction coefficient 0.01	0.1	0.2	0.3	0.4	0.5	0.6
20 - 35°	21 - 30°	-	-	21,650	29,150	35,250	43,500	55,250
20 - 35°	31 - 40°	15,900	18,450	21,950	26,300	31,950	39,650	49,900
20 - 35°	41 - 50°	13,350	15,700	18,800	22,800	27,900	34,450	43,300
20 - 35°	51 - 60°	10,400	12,450	15,200	18,700	22,850	28,100	35,600
36 - 50°	21 - 30°	-	-	19,700	25,350	31,450	39,700	51,500
36 - 50°	31 - 40°	-	15,150	18,650	23,100	28,850	36,650	47,800
36 - 50°	41 - 50°	10,550	12,950	16,200	20,350	25,700	32,950	43,300
36 - 50°	51 - 60°	-	10,450	13,400	17,150	22,000	28,600	38,050

Lashing system: winplus 13 chain with dimension 13 ratchet load binder (LC 160 kN; for 4 lashing chains)

Angle α	Angle β	Max. load with dynamic friction coefficient 0.01	0.1	0.2	0.3	0.4	0.5	0.6
20 - 35°	21 - 30°	-	-	34,700	46,650	56,400	69,600	88,450
20 - 35°	31 - 40°	25,500	29,550	35,100	42,100	51,150	63,400	79,850
20 - 35°	41 - 50°	21,400	25,100	30,150	36,450	44,700	55,100	69,250
20 - 35°	51 - 60°	16,700	19,950	24,350	29,950	36,600	45,000	57,000
36 - 50°	21 - 30°	-	-	31,550	40,550	50,300	63,500	82,400
36 - 50°	31 - 40°	-	24,250	29,850	36,950	46,200	58,700	76,500
36 - 50°	41 - 50°	16,900	20,750	25,950	32,550	41,150	52,700	69,250
36 - 50°	51 - 60°	-	16,700	21,450	27,450	35,250	45,800	60,900

This table provides information that will help you make the best use of pewag lashing equipment.
The table shows the maximum loads that can be secured using four identical items of lashing equipment at the specified angles and with the specified dynamic friction coefficients. Additional securing methods such as wedges or similar were not considered. This would allow even heavier loads to be secured. Please contact our customer service team for further information. There is a separate table for each type of pewag lashing equipment. The maximum forces occurring in road traffic due to the vehicle accelerating, braking and cornering, as specified in EN 12195-1, have been considered.
Different tables apply to rail transport and shipping. Please contact our customer service team for further information.



Reference tables for selecting the correct lashing equipment for tie-down lashing

The decisive factor in selecting the correct lashing equipment for tie-down lashing is the standard tension force (STF) of the tensioning element at a standard hand force of 50 daN. This means that the table below does not depend on the grade of the lashing chain, but on the type of load binder! The STF value must be stamped on the lashing tag. Otherwise, do not use the lashing equipment for tie-down lashing. For safety reasons, pewag recommends using at least two lashing chains.

Tie-down lashing with G12 Plus

Lashing system: Ratchet load binder with STF 2350 [daN]

Angle to the loading surface α	Max. load per chain with dynamic friction coefficient 0.1	0.2	0.3	0.4	0.5	0.6
90°	530	1,250	2,250	3,760	6,260	11,280
80°	520	1,230	2,220	3,700	6,170	11,100
70°	500	1,170	2,110	3,530	5,880	10,590
60°	460	1,080	1,950	3,250	5,420	9,760
50°	410	960	1,720	2,880	4,800	8,640
40°	340	800	1,450	2,410	4,020	7,250
30°	260	620	1,120	1,880	3,130	5,640

Lashing system: Ratchet load binder with STF 3000 [daN]

Angle to the loading surface α	Max. load per chain with dynamic friction coefficient 0.1	0.2	0.3	0.4	0.5	0.6
90°	680	1,600	2,880	4,800	8,000	14,400
80°	670	1,570	2,830	4,720	7,870	14,180
70°	640	1,500	2,700	4,510	7,510	13,530
60°	590	1,380	2,490	4,150	6,920	12,470
50°	520	1,220	2,200	3,670	6,120	11,030
40°	440	1,020	1,850	3,080	5,140	9,250
30°	340	800	1,440	2,400	4,000	7,200

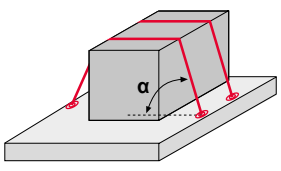
Lashing system: Ratchet load binder with STF 4000 [daN]

Angle to the loading surface α	Max. load per chain with dynamic friction coefficient 0.1	0.2	0.3	0.4	0.5	0.6
90°	910	2,130	3,840	6,400	10,660	19,200
80°	900	2,100	3,780	6,300	10,500	18,900
70°	850	2,000	3,600	6,010	10,020	18,040
60°	790	1,840	3,320	5,540	9,230	16,620
50°	700	1,630	2,940	4,900	8,170	14,700
40°	580	1,370	2,460	4,110	6,850	12,340
30°	450	1,060	1,920	3,200	5,330	9,590

Lashing system: Ratchet load binder with STF 5000 [daN]

Angle to the loading surface α	Max. load per chain with dynamic friction coefficient 0.1	0.2	0.3	0.4	0.5	0.6
90°	1,140	2,660	4,800	8,000	13,330	24,000
80°	1,120	2,620	4,720	7,870	13,130	23,630
70°	1,070	2,500	4,510	7,510	12,520	22,550
60°	980	2,300	4,150	6,920	11,540	20,780
50°	870	2,040	3,670	6,120	10,210	18,380
40°	730	1,710	3,080	5,140	8,570	15,420
30°	570	1,330	2,400	4,000	6,660	12,000

This table provides information that will help you make the best use of pewag lashing equipment. The table shows the maximum loads that can be secured using one item of lashing equipment at the specified angles and with the specified dynamic friction coefficients. Please note that you must use at least two items of lashing equipment for tie-down lashing. Additional securing methods such as wedges, blocking against the side wall, or similar were not considered. This would allow even heavier loads to be secured. Please contact our customer service team for further information. The values in the table apply when the standard tension force (STF) in the lashing equipment differs on the two sides of the load due to deflection across the edges. If this can be ensured (using a pre-tensioning gauge, for example), the values in the table may be increased by a factor of 1.3. The maximum load weight depends on the STF rating of the tensioning element used – this rating is shown on the lashing tag. Therefore, there is a separate table for each tensioning element. The maximum forces occurring in road traffic due to the vehicle accelerating, braking and cornering, as specified in EN 12195-1, have been considered. Different tables apply to rail transport and shipping. Please contact our customer service team for further information.



Dynamic coefficients of friction for common goods

Combination of materials at the contact surface	Coefficient of friction
Sawn timber	
Sawn timber on laminated timber/plywood	0.45
Sawn timber on chequer plate aluminium	0.40
Sawn timber on sheet steel	0.30
Sawn timber on shrink wrap	0.30
Planed timber	
Planed timber on laminated timber/plywood	0.30
Planed timber on chequer plate aluminium	0.25
Planed timber on sheet steel	0.20
Plastic pallet	
Plastic pallet on laminated timber/plywood	0.20
Plastic pallet on chequer plate aluminium	0.15
Plastic pallet on sheet steel	0.15
Steel and metal	
Steel crate on laminated timber/plywood	0.45
Steel crate on chequer plate aluminium	0.30
Steel crate on sheet steel	0.20
Concrete	
Rough concrete on sawn timber battens	0.70
Smooth concrete on sawn timber battens	0.55
Anti-slip mat	
Rubber	0.60[1)]
Other materials	As certified[2)]

[1)] Suitable for use with a coefficient of friction of 1.0 for direct lashing.

[2)] When special materials designed to increase friction, such as anti-slip mats, are used, a certificate confirming the coefficient of friction is required.

Please note the following:

- The coefficients of friction specified in EN 12195-1 apply to clean surfaces under optimal conditions.
- Caution: Contamination, ice or moisture reduce the coefficient of friction – depending on the season, changes may also occur whilst driving!
- Use a high value only if it can be reliably assumed; if in doubt, use the lower value for safety!

Lashing capacities

The following table provides a concise overview of pewag's lashing accessories.

Dimension		7	8	10	13
Lashing capacity LC [kN]		47	63	100	160
winplus		winplus 7	winplus 8	winplus 10	winplus 13
AS		AS 16	AS 16	AS 19	AS 23
VLS		VLS 1-7/8	VLS 1-7/8	VLS 1-10	VLS 1-13 *
C		C 7	C 8	C 10	C 13
KHS		KHS 7	KHS 8	KHS 10	KHS 13
KLH		KLH 7	KLH 8	KLH 10	KLH 13
KLHG		KLHG 7	KLHG 8	KLHG 10	KLHG 13
PS		PS 7	PS 8	PS 10	PS 13

* without transition link

Please note: The lashing capacity differs from the maximum working load limit for lifting and must be assessed separately.

Practical knowledge

winner G12 Plus ratchet load binder

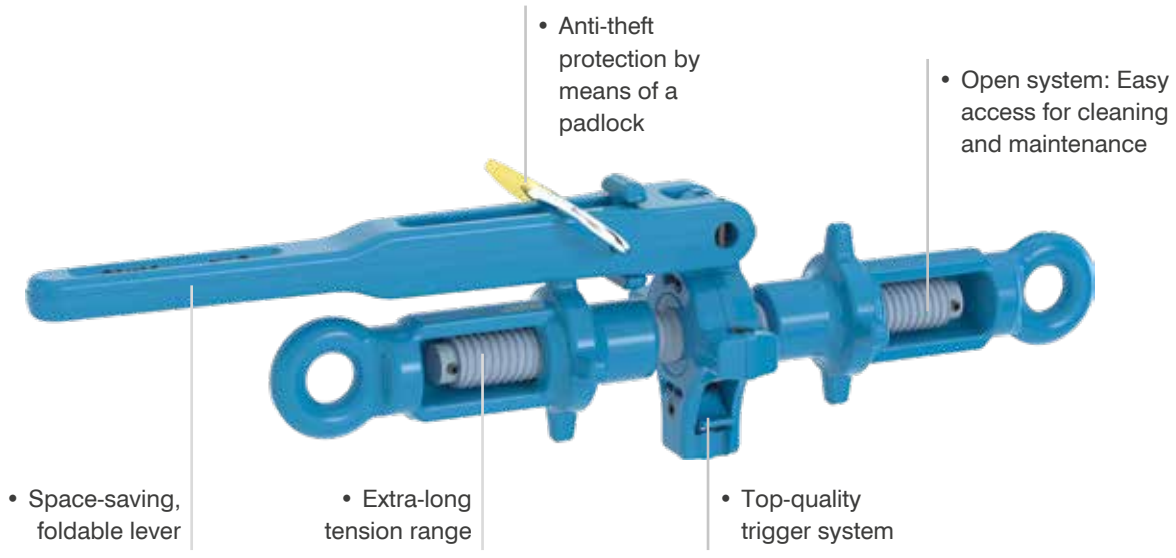
pewag offers two high-performance ratchet load binder models to meet a wide range of customer requirements: RK for the most demanding applications and RS as a proven, cost-effective solution. Both systems offer the quality associated with pewag, but differ in terms of application, functionality and performance.

RK – the high-end ratchet load binder

The RK G12 Plus was developed specifically for demanding applications where maximum safety, durability and ease of use are required. The rugged design and premium workmanship ensure a long service life and reliable performance, even under demanding operating conditions.

The RK G12 Plus sets new standards in quality, performance and ease of use compared with typical economy-class ratchet load binders on the market. Alongside its use in lashing chains, it is also designed for use in chain slings, giving it a significantly wider range of applications.

- High-end ratchet load binder
- Designed for demanding applications
- Suitable for lifting & lashing
- Spare part sets available for common wear parts

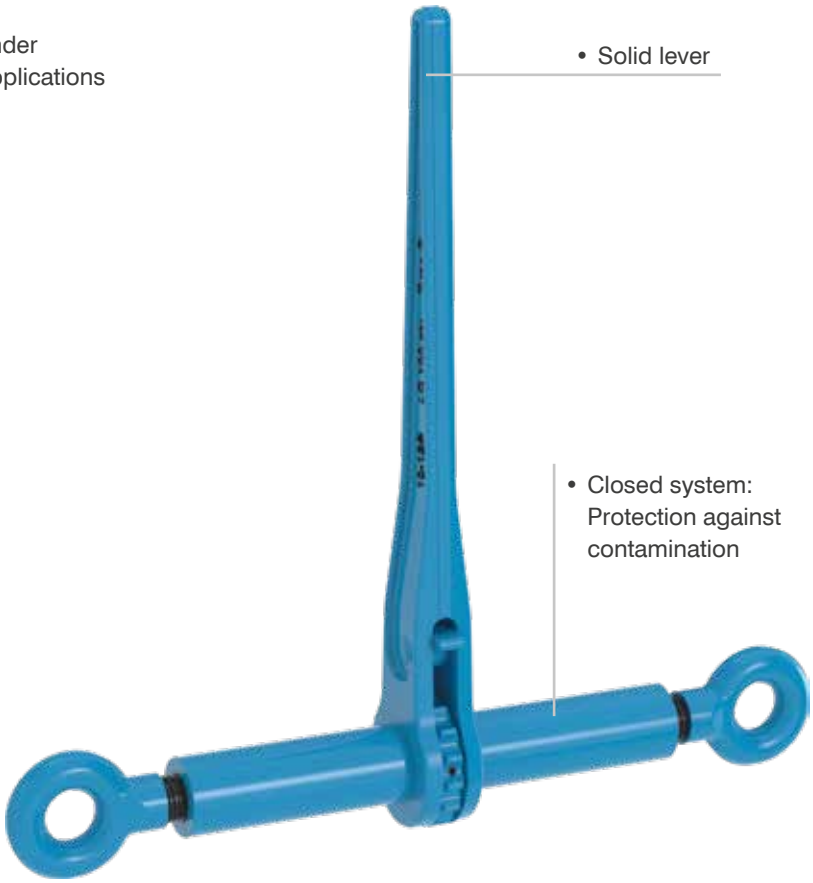


RS – The functional solution for standard applications

The RS G12 Plus is designed with a focus on the essentials. As a standard ratchet load binder for lashing chains, it reliably meets the basic requirements of typical applications. With its simple, cost-effective design, the RS focuses on functional load securing. It is not designed for additional applications such as lifting with chain slings.

Whether you're looking for maximum performance or cost-effectiveness, with RK and RS you'll get what you need: safe, reliable and controlled load securing. Both systems are designed for practical use and help you to streamline your workflows and minimise risks.

- Standard ratchet load binder
- Designed for standard applications
- Suitable for lashing



RK Ratchet load binder

Characteristics

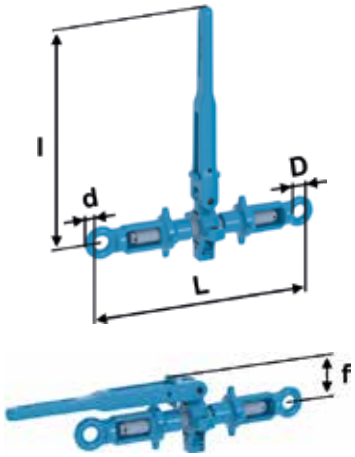
- Suitable for direct and tie-down lashing
- High-quality trigger system
- Extra-long tension range length
- The lever can be folded away
- Lockable with a padlock to prevent theft of goods
- Spare parts available



Standards

EN 1677-1*
EN 12195-3*

Technical details

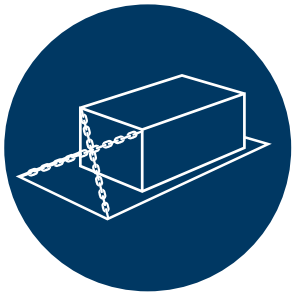


Code	LC [kN]	STF [daN]	Weight [kg]
RK 7/8	63	2,350	5.1
RK 10	100	4,000	5.7
RK 13	160	3,000	8.4

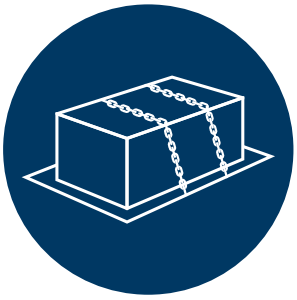
Code	L (closed) [mm]	L (open) [mm]	Tension range [mm]	l [mm]	f [mm]	D [mm]	d [mm]
RK 7/8	360	536	176	238	75	23	16
RK 10	360	536	176	361	75	23	16
RK 13	569	894	325	411	75	35	23

LC = lashing capacity (for use in lashing applications)
STF = standard tension force (for use in lashing applications)

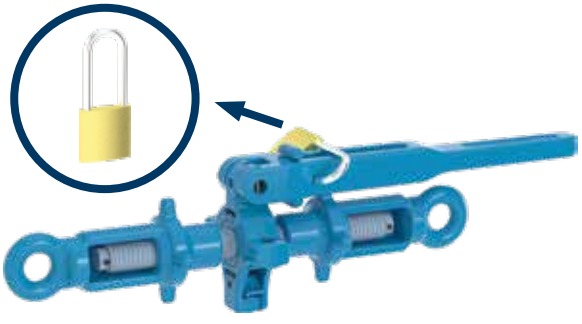
Example of use



Suitable for direct lashing



Suitable for tie-down lashing



Lockable with a padlock to prevent theft of goods

*with modifications for grade G12 Plus

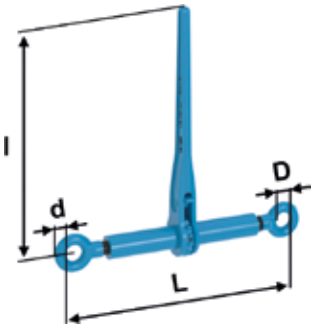
RS Ratchet load binder

- Suitable for direct and tie-down lashing
- A proven system that offers a balance between cost-effectiveness and functionality



Standards

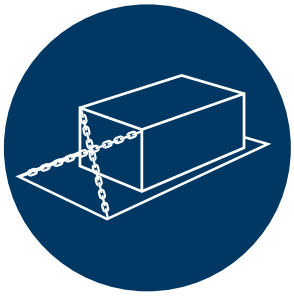
EN 12195-3*



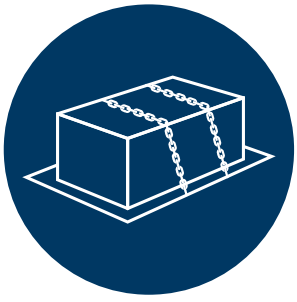
Code	Marking	LC [kN]	STF [daN]	Weight [kg]
RS 7/8	Type A	63	2,350	3.2
RS 10	Type B	100	5,000	4.0
RS 13	Type C	160	3,000	8.1

Code	L (closed) [mm]	L (open) [mm]	Tension range [mm]	l [mm]	D [mm]	d [mm]
RS 7/8	355	497	142	237	20	17
RS 10	365	505	140	355	27	18
RS 13	576	865	289	359	31	22

LC = lashing capacity (for use in lashing applications)
STF = standard tension force (for use in lashing applications)



Suitable for direct lashing



Suitable for tie-down lashing

*with modifications for grade G12 Plus

Characteristics

Technical details

Example of use

RKP Ratchet load binder with shortening hooks

Characteristics

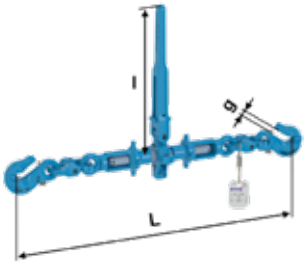
- For use as a tensioning element in two-part lashing systems
- Consisting of the high-quality RK ratchet load binder and PS shortening hook with safety catch
- The ZK lashing chain is required for use in a two-part lashing system
- Suitable for direct and tie-down lashing

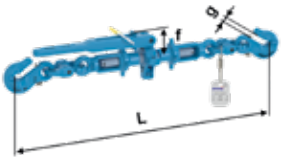


Standards

EN 12195-3*

Technical details





Code	LC [kN]	STF [daN]	Weight [kg]
RKP 7	47	2,350	6.8
RKP 8	63	2,350	6.9
RKP 10	100	4,000	9.4
RKP 13	160	3,000	15.3

Code	L (closed) [mm]	L (open) [mm]	Tension range [mm]	l [mm]	f [mm]	g [mm]
RKP 7	624	800	176	238	75	10.5
RKP 8	622	798	176	238	75	10.5
RKP 10	694	870	176	361	75	13.0
RKP 13	1,005	1,330	325	411	75	16.5

LC = lashing capacity
STF = standard tension force

Example of use



Example of a two-part system: For use in conjunction with the ZK lashing chain

*with modifications for grade G12 Plus

RSP Ratchet load binder with shortening hooks

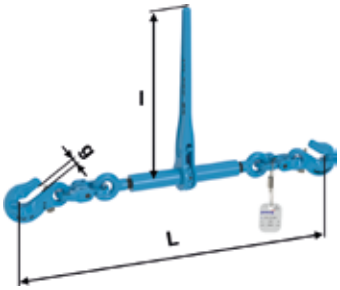
Characteristics

- For use as a tensioning element in two-part lashing systems
- Consisting of the RS ratchet load binder and PS shortening hook with safety catch
- The ZK lashing chain is required for use in a two-part lashing system
- Suitable for direct and tie-down lashing



Standards

EN 12195-3*



Technical details

Code	LC [kN]	STF [daN]	Weight [kg]
RSP 7	47	2,350	4.9
RSP 8	63	2,350	5.1
RSP 10	100	5,000	7.7
RSP 13	160	3,000	15.0

Code	L (closed) [mm]	L (open) [mm]	Tension range [mm]	l [mm]	g [mm]
RSP 7	619	761	142	237	10.5
RSP 8	617	759	142	237	10.5
RSP 10	699	839	140	355	13.0
RSP 13	1,012	1,301	289	359	16.5

LC = lashing capacity
STF = standard tension force

Example of use



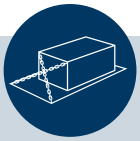
Example of a two-part system: For use in conjunction with the ZK lashing chain

*with modifications for grade G12 Plus

Practical knowledge

Lashing

Direct lashing



The load is secured to lashing points on the vehicle and the load itself using lashing chains. The tensioned lashing chains prevent slipping or tipping of the load.

Tie-down lashing



The lashing chains press the load onto the loading surface. Friction between the load and the loading surface prevents the load from slipping.

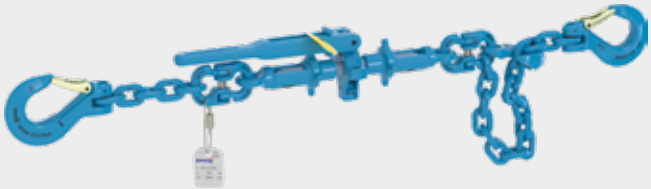
One-part system

All the components required for lashing (chain, hook, shortening hook, tensioning element, etc.) are incorporated into a single product.

Advantages:
- Easy handling
- Reduced risk of errors
- Lower weight



Not shortened



Shortened

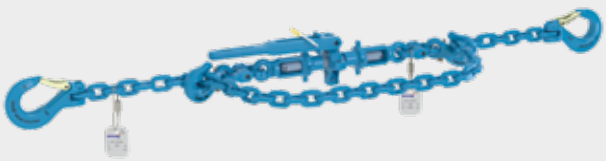
Two-part system

The two-part system consists of two separate products, which are both required to secure the load: the lashing chain and the tensioning element. The lashing chain consists of a chain and end fittings. The tensioning element has integrated components for shortening and tensioning the lashing chain (shortening hook and tensioning element).

Advantages:
- Greater flexibility
- Better access to the ratchet load binder



Not shortened



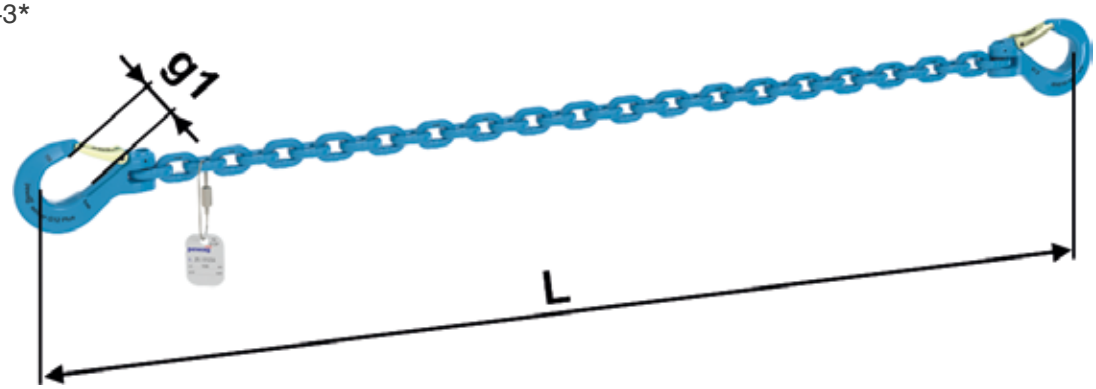
Shortened

ZK Lashing chain

- For use as a lashing chain in two-part lashing systems
- Consisting of winplus and KHS clevis sling hooks
- An RKP or RSP ratchet load binder with shortening hooks is required for use in a two-part lashing system
- Suitable for direct and tie-down lashing

Standards

EN 12195-3*



Code	LC [kN]	L ** [mm]	g1 [mm]	Weight [kg]
ZK 7 I KHS - KHS 3500	47	3,500	36	6.4
ZK 8 I KHS - KHS 3500	63	3,500	36	7.9
ZK 10 I KHS - KHS 3500	100	3,500	41	13.7
ZK 13 I KHS - KHS 3500	160	3,500	49	20.6

LC = lashing capacity
** Other lengths are available on request for L. Tolerance for L: +2 | -0 chain links.



Example of a two-part system: For use in conjunction with ratchet load binders with shortening hooks, such as RKP or RSP

*with modifications for grade G12 Plus

Characteristics

Technical details

Example of use

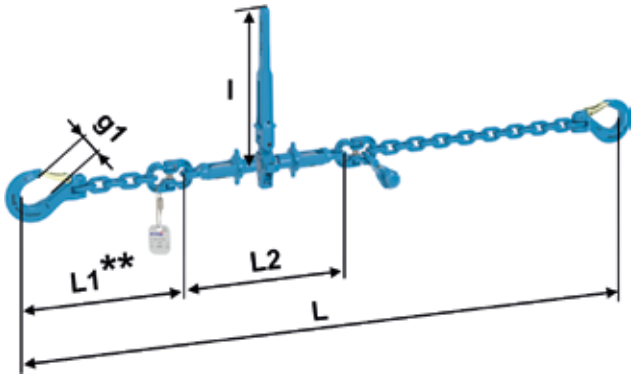
ZRK Lashing chain

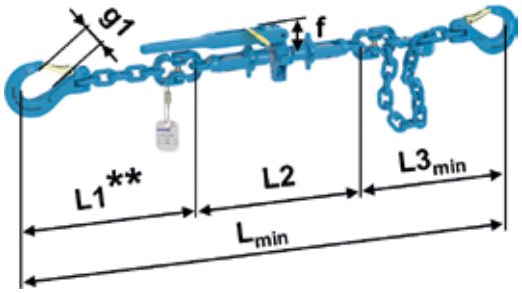
Characteristics

- Complete lashing chain in a one-part lashing system
- Consisting of winplus, RK ratchet load binder, C Connex connecting links, PS shortening hook and KHS sling hooks
- Suitable for direct and tie-down lashing

Standards

EN 12195-3*





Technical details

Code	LC [kN]	STF [daN]	Weight [kg]
ZRK 7 I KHS - KHS - PS 3500	47	2,350	11.8
ZRK 8 I KHS - KHS - PS 3500	63	2,350	13.2
ZRK 10 I KHS - KHS - PS 3500	100	4,000	20.2
ZRK 13 I KHS - KHS - PS 3500	160	3,000	30.0

Code	L *** [mm]	L_{min} **** [mm]	L2 (closed) [mm]	L2 (open) [mm]	$L3_{min}$ [mm]	Tension range [mm]	l [mm]	f [mm]	g1 [mm]
ZRK 7 I KHS - KHS - PS 3500	3,500	1,659	360	536	283	176	238	75	36
ZRK 8 I KHS - KHS - PS 3500	3,500	1,666	360	536	288	176	238	75	36
ZRK 10 I KHS - KHS - PS 3500	3,500	1,747	360	536	357	176	361	75	41
ZRK 13 I KHS - KHS - PS 3500	3,500	2,022	569	894	449	325	411	75	49

LC = lashing capacity
STF = standard tension force

** If the tensioning element is closed:
L < 3 m: L1 = 5 chain links
L ≥ 3 m: L1 = 1 m

*** Unshortened & L2 closed. Tolerance for L: +2 | -0 chain links
**** Shortened & L2 closed & L1 = 1 m
Other lengths are available on request for L, Lmin and L1

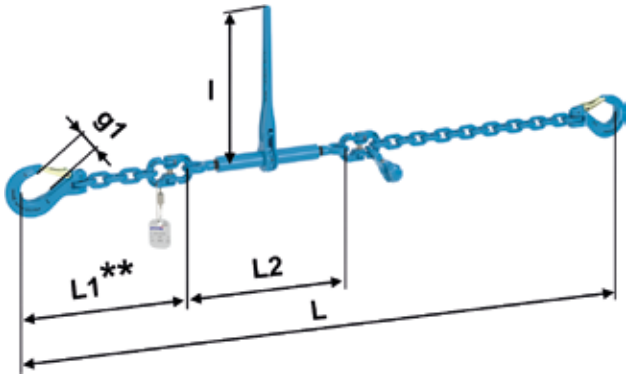
*with modifications for grade G12 Plus

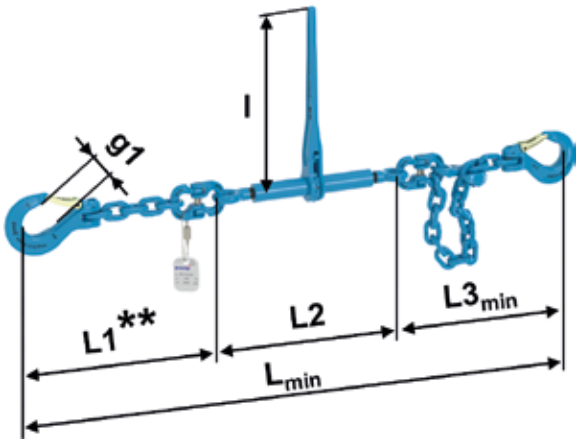
ZRS Lashing chain

- Complete lashing chain in a one-part lashing system
- Consisting of winplus, RS ratchet load binder, C Connex connecting links, PS shortening hook and KHS sling hooks
- Suitable for direct and tie-down lashing

Standards

EN 12195-3*





Code	LC [kN]	STF [daN]	Weight [kg]
ZRS 7 I KHS - KHS - PS 3500	47	2,350	9.9
ZRS 8 I KHS - KHS - PS 3500	63	2,350	11.3
ZRS 10 I KHS - KHS - PS 3500	100	5,000	18.5
ZRS 13 I KHS - KHS - PS 3500	160	3,000	29.7

Code	L *** [mm]	L_{min} **** [mm]	L2 (closed) [mm]	L2 (open) [mm]	$L3_{min}$ [mm]	Tension range [mm]	l [mm]	g1 [mm]
ZRS 7 I KHS - KHS - PS 3500	3,500	1,650	355	497	283	142	237	36
ZRS 8 I KHS - KHS - PS 3500	3,500	1,661	355	497	288	142	237	36
ZRS 10 I KHS - KHS - PS 3500	3,500	1,752	365	505	357	140	355	41
ZRS 13 I KHS - KHS - PS 3500	3,500	2,029	576	865	449	289	359	49

LC = lashing capacity
STF = standard tension force

** If the tensioning element is closed:
L < 3 m: L1 = 5 chain links
L ≥ 3 m: L1 = 1 m

*** Unshortened & L2 closed. Tolerance for L: +2 | -0 chain links
**** Shortened & L2 closed & L1 = 1 m
Other lengths are available on request for L, Lmin and L1

*with modifications for grade G12 Plus

Spare parts

KBS Clevis pin set



Code	For winner G12 Plus products
KBS 7	KHS 7, KLH 7, KLHG 7, KP 7, KPS 7, XK 7
KBS 8	KHS 8, KLH 8, KLHG 8, KP 8, KPS 8, XK 8
KBS 10	KHS 10, KLH 10, KLHG 10, KP 10, KPS 10, XK 10
KBS 13	KHS 13, KLH 13, KLHG 13, KP 13, KPS 13, XK 13

Note: Use only KBSWP G12 spare parts sets for products of winner pro G12.

Assembly



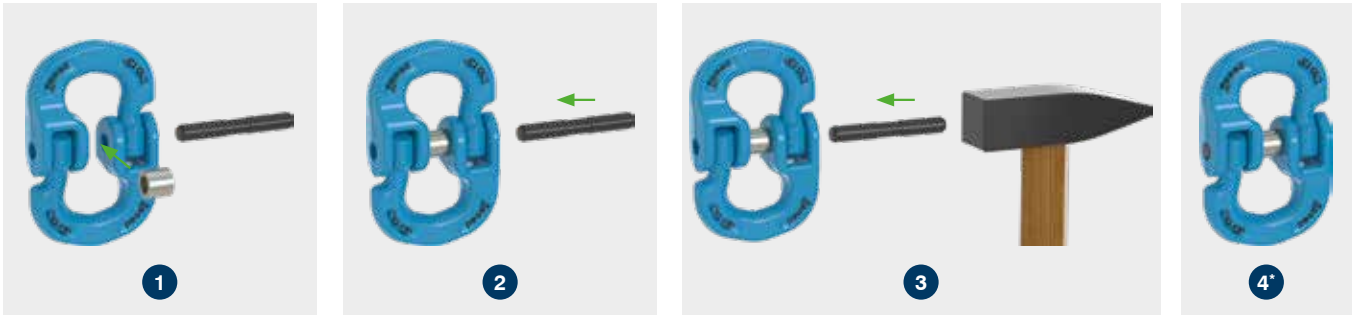
CBH Connex pin set



Code	For winner G12 Plus products
CBH 7	C 7
CBH 8	C 8
CBH 10	C 10
CBH 13	C 13

Note: Use only CBHWP G12 spare parts sets for products of winner pro G12.

Assembly



* Install the Connex pin so that the sleeve can rotate freely on the central, tapered section of the pin.

PSG Locking pin set



Code	For winner G12 Plus products	For winner pro G12 products
PSG 7/8	PS 7, PS 8	PSWP 7/8
PSG 10	PS 10	PSWP 10
PSG 13	PS 13	PSWP 13

Assembly



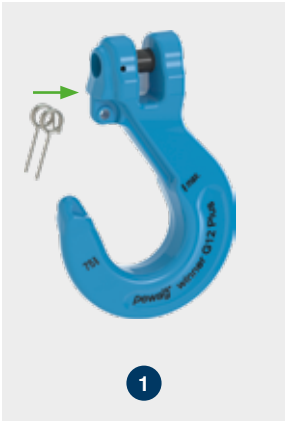
* Secure the locking pin's nut against loosening either by striking it at least three times with a centre punch or by using a suitable threadlocker (e.g. Loctite 278).

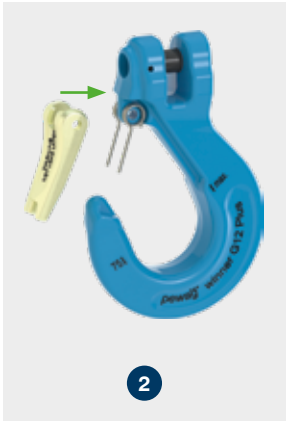
SFG-K Safety catch set



Code	For winner G12 Plus products	For winner pro G12 products
SFG-K 7/8	KHS 7, KHS 8	KHSWP 7, KHSWP 8
SFG-K 10	KHS 10	KHSWP 10
SFG-K 13	KHS 13	KHSWP 13

Assembly







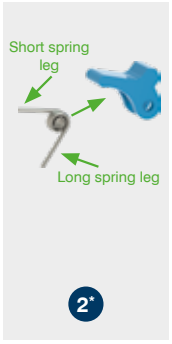
VLH Trigger set



Code	For winner G12 Plus products	For winner pro G12 products
VLH 7/8	KLH 7, KLH 8	KLHWP 7, KLHWP 8
VLH 10	KLH 10	KLHWP 10
VLH 13	KLH 13	KLHWP 13

Assembly

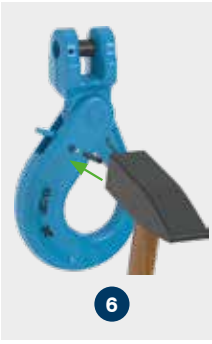














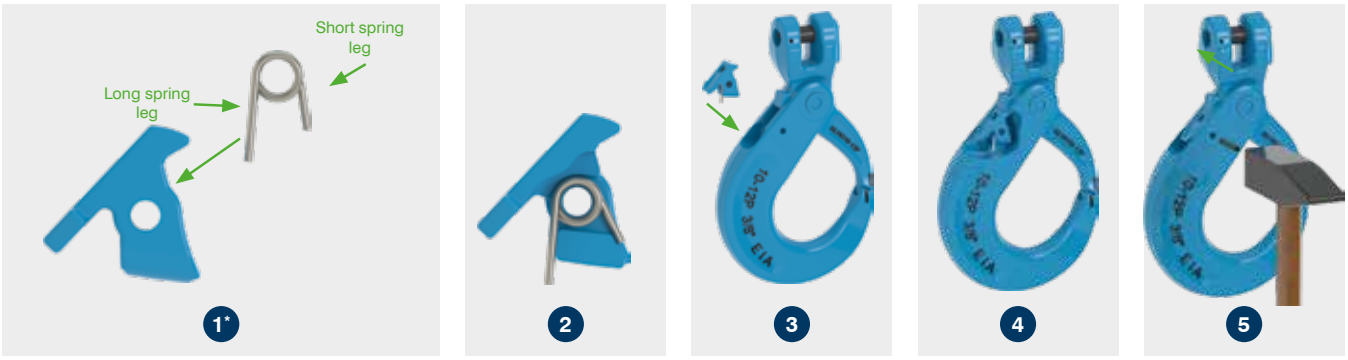
* Make sure the spring is installed correctly. Please note which is the long leg and which is the short leg of the spring.
** The set contains either one or two retaining pins, depending on the dimension.

VLHG Trigger set



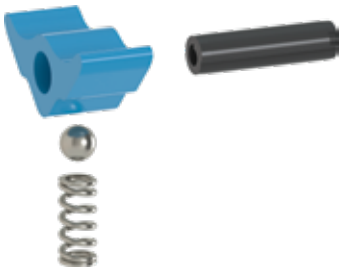
Code	For winner G12 Plus products	For winner pro G12 products
VLHG 7/8	KLHG 7, KLHG 8	KLHGWP 7, KLHGWP 8
VLHG 10	KLHG 10	KLHGWP 10
VLHG 13	KLHG 13	KLHGWP 13

Assembly



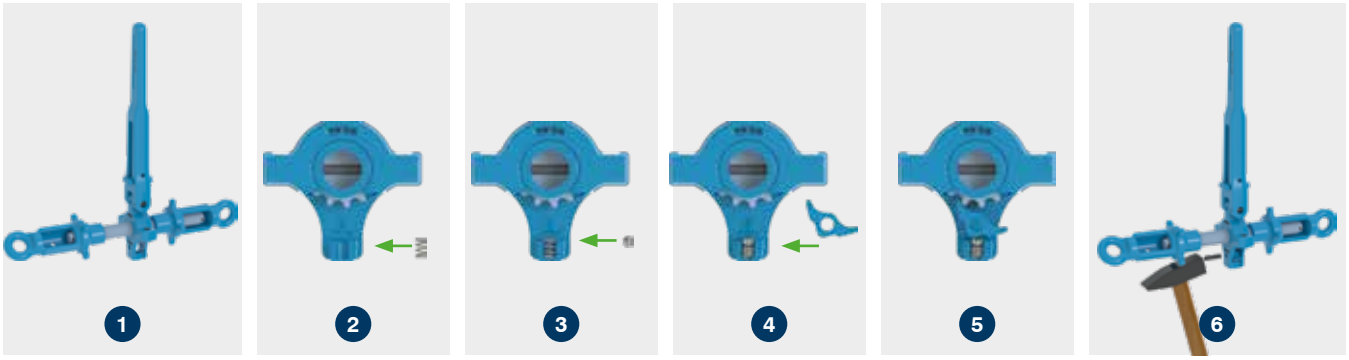
* Make sure the spring is installed correctly. Please note which is the long leg and which is the short leg of the spring.

TS Trigger set



Code	For winner G12 Plus products	For winner pro G12 products
TS 7/8 - 16	RK 7/8 RK 10 RK 13	RSKWP 7/8 RSKWP 10 RSKWP 13 RSKWP 16

Assembly

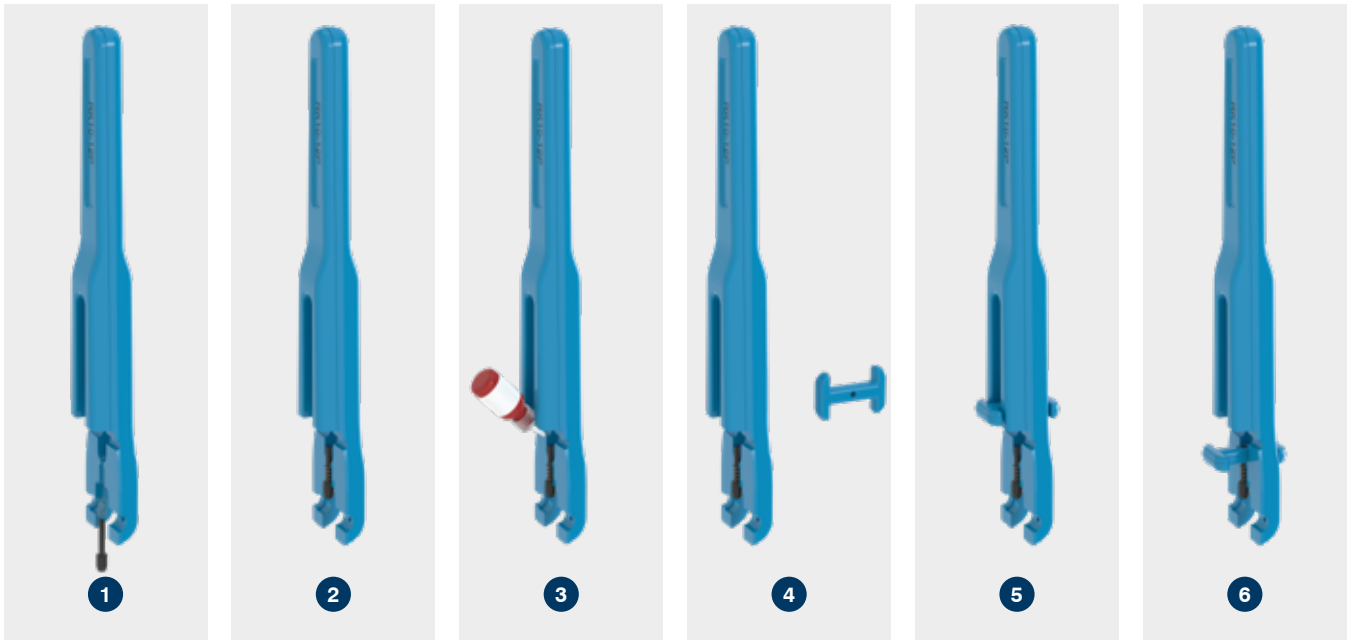


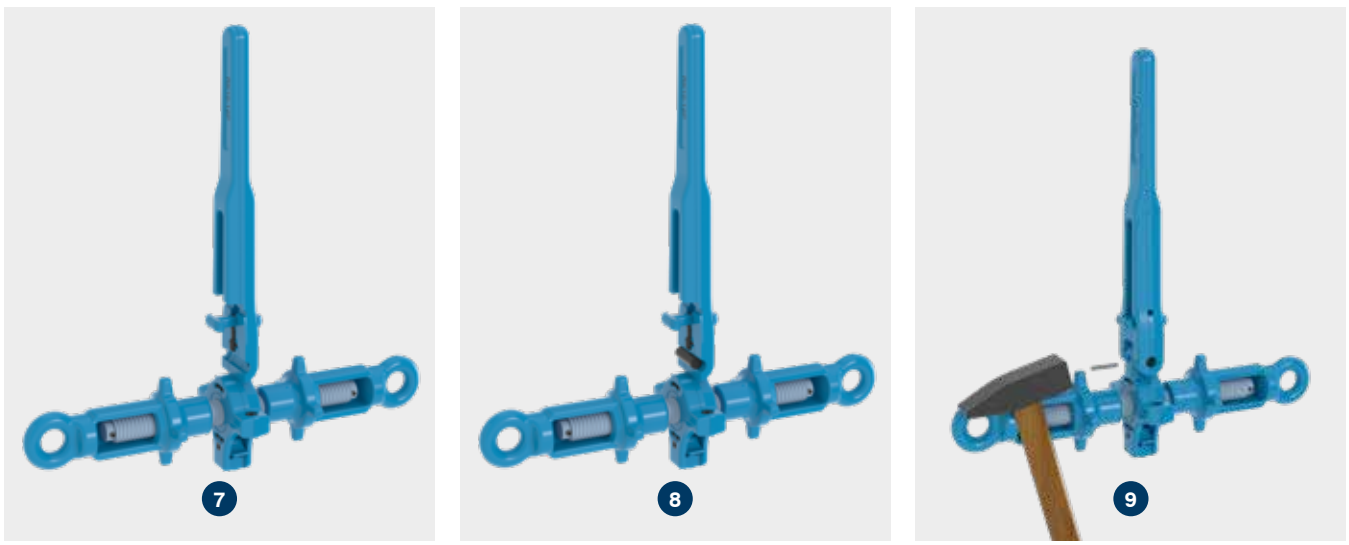
SHS Lever locking set



Code	For winner G12 Plus products	For winner pro G12 products
SHS 7/8 - 16	RK 7/8 RK 10 RK 13	RSKWP 7/8 RSKWP 10 RSKWP 13 RSKWP 16

Assembly





ID Lifting tag set



Code	For products	Consisting of
ID set lifting neutral	Chain slings	Neutral tag and quick-lock cord

ID Lashing tag set



Code	For products	Consisting of
ID set lashing neutral	Lashing chains	Neutral tag and quick-lock cord

User information (general)

The following information has been extracted from the operating manuals and is provided for information purposes only. Only the current version of the operating manual is binding.

- Original operating manual for pewag winner G12 Plus lifting and lashing components
- Original instruction manual for pewag standard lifting chains
- Original operating manual for pewag lashing chain systems in G8, G10, G12 and G12 Plus

User

Only trained personnel are permitted to use the components.

Restrictions on use

Under certain conditions, components may only be used with restrictions – see the “Severe operating conditions” table (pages 8–9).
The components listed in this catalogue are not intended for use with food, cosmetic or pharmaceutical products or in highly corrosive environments, such as acids, chemicals (including their vapours), sewage, etc. Furthermore, they may not be used for the transport of people. Use in potentially explosive environments must always be agreed with pewag in advance. The information contained in this operating manual is based on the assumption that no particularly hazardous conditions apply, such as offshore use or the lifting of potentially hazardous loads such as liquid metals or nuclear material. In such cases, the permissibility of the application and the degree of danger must be clarified with pewag in advance.

Alterations to the condition as supplied

The condition as supplied must not be altered. In particular, do not weld pewag lifting equipment or expose it to temperatures above the permitted maximum – see 'Thermal loading' in the tables for the relevant grades.

Assembly

Only a competent person with the necessary skills and knowledge may carry out the installation.

Maintenance

Clean the components regularly. After use in a wet environment, dry the components and then protect them against corrosion, for example by applying a light coat of oil. Make sure that the components are kept lightly oiled at all times, including during use, to prevent corrosion.

Repairs

Only a competent person with the necessary skills and knowledge may carry out the repair.

Spare parts

Only original pewag spare parts may be used for repairs.

Inspections

Components must be inspected in a clean condition – they must be free from oil, dirt and rust. Remove any connecting pins (Connex pins, clevis pins, bolts) and their retaining devices, and inspect them after cleaning. Paint is permitted only if the condition can still be assessed. Cleaning methods that can embrittle the material (e.g. pickling), overheat it (e.g. burning off) or remove material (e.g. blasting) are prohibited. Cracks or other defects must not be concealed in the process.

- **Inspection before each use**
  Check for visible damage prior to each use.
- **Annual inspection**
  A competent person must inspect them at least once a year. Depending on the operating conditions, shorter inspection intervals may be required, for instance if components are frequently used at the maximum working load limit or in conditions that entail restrictions on use.
- **Inspection following exceptional events**
  A competent person must also inspect them immediately after any exceptional event.
- **Biennial inspection**
  They must undergo crack testing every two years. The necessity and frequency of this inspection may vary depending on national regulations. The options are: Loading test at twice the working load limit, followed by a visual inspection, dye penetrant testing and magnetic particle inspection (MPI).

Documentation

Inspections carried out by a competent person, their results and any repairs must be recorded in the chain log and retained for the entire service life of the chain. These records and the manufacturer's test certificate or works certificate must be available for inspection by the relevant national authority upon request.

Discard criteria

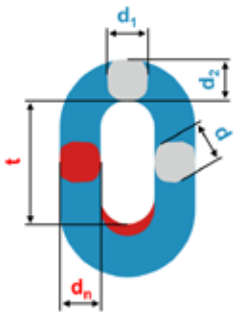
If one or more of the following criteria apply, chains and accessories must be withdrawn from service immediately:

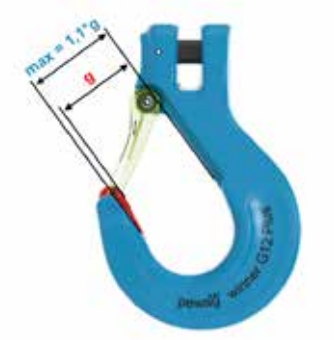
- Breakage.
- Illegible markings.
- Deformation of an accessory or the chain itself.
- Chain elongation: Discard the chain if the inside link pitch is t > 1.05 tn, with tn being the nominal pitch of the chain link.
- Wear of the average diameter dm down to 90 % of the nominal diameter dn is permitted. It is calculated from the mean of two diameter measurements, d1 and d2, taken at right angles to each other on the cross-section being measured (see image).

The chain must be withdrawn from service if:

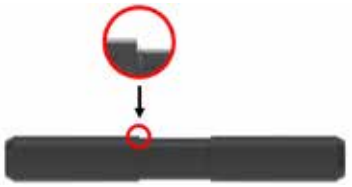
- Edge wear where d < dn.
- Cuts, notches, grooves, superficial cracks: These defects, particularly those running transverse to the direction of loading, can lead to sudden failure!
- Wear or chemical material deterioration including pitting, heat discolouration or signs of subsequent welding.
- Missing or inoperative safety catch, as well as signs of hook widening. The enlargement of the throat opening must not exceed 10 % of the nominal throat opening. A safety catch that has snapped open indicates that the hook was overloaded.
- If there is any doubt about the functionality and/or safety of the components.

$$d_m = \frac{d_1 + d_2}{2} \leq 0{,}9\, d_n$$





Designation	Dimension	Maximum permissible deviation
Chains (winplus)	dn	-10 %
	t	+5 %
	Wear at edges	d = dn
Links (AS, B, LS)	d	-10 %
	t	+10 %
Hooks (KHS, KLH, KLHG, KP, KPS, P, PS, XK)	e	+5 %
	d2	-10 %
	h	-10 %
	g & g1	+10 %
	a	-10 %
Safety hooks (KLH, KLHG)	Tip opening s	2 x s max.
Connecting links (C)	Freedom of movement of the Connex halves	The halves must move freely
	e	+5 %
	c	-10 %
Load distributors (AG)	e1	+5 %
	h2	-10 %
	d1	+5 %
	d2	+5 %
Ratchet load binders (RK, RS)	d	-10 %
	D	+5 %
Clevis pins (used in various products)	d	-10 %
Connex pins (used in various products)	d	No deformation permitted. In particular, the edges must not be rounded or deformed. See the illustration.



User information (lifting)

If the chains and accessories described in this catalogue are used to assemble chain slings, the information provided under User information (general) also applies, with the following changes and additions:

Purpose

Slinging and lifting or transporting loads.

Working load limit

The maximum working load limit of the chain sling depends on the chain dimension, number of chain legs, inclination angle (β) and sling configuration – see the working load limit table on pages 8–9.

The maximum working load limit is also indicated on the tag.

Load

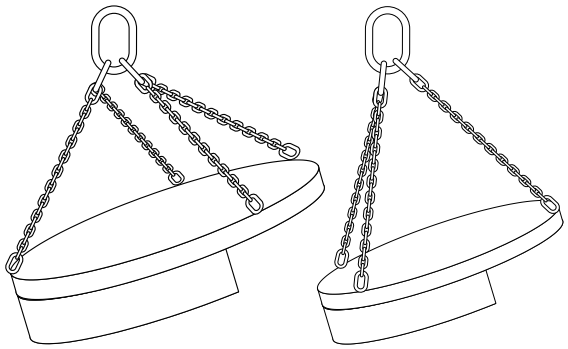
The chain legs must run untwisted and straight (not knotted) and must not be bent over edges. Master links and hooks, or other components used to connect the load to the crane hook, must also be free to move and align themselves with the direction of loading.

Inclination angle

The inclination angle is the angle between the chain leg and a vertical line. When using multi-leg chain slings, the inclination angles must fall within the specified ranges of 0°–45° or 45°–60°, and must not differ by more than 15°. Avoid inclination angles of less than 15°. The weight of the load to be lifted must be distributed evenly across all chain legs.

Asymmetry

If the chain legs are not all arranged symmetrically and at the same inclination angle – as described under “Inclination angle” – the load is asymmetrical and its weight is not distributed evenly across all chain legs.



In this case, the permissible load and the lifting procedure must be determined by a competent person.
In doubt, assume only one chain leg is load-bearing and reduce the working load limit of the chain sling accordingly.

Shocks

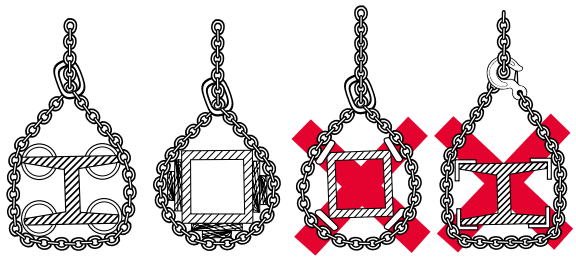
The load must be applied without shock.
If shock loading cannot be avoided, reduce the working load limit according to the “Severe operating conditions” table (pages 8–9).

Thermal loading

The table ‘Severe operating conditions’ (pages 8–9) sets out the permitted temperatures and the applicable reduction factors.
The reduction in working load limit at raised temperatures applies until the chain or its components have cooled down to room temperature. Chain slings must not be used outside the specified temperature range.
Chain slings must be decommissioned if they accidentally reach a higher temperature than their permissible limit.

Edge loading

Where a chain leg touches the load, it may be necessary to use spacers to protect the load, the chain leg or both, as sharp edges on hard material could otherwise bend or damage the chain links. On the other hand, the chain leg may damage the load if the contact pressure is too high. Spacers, such as wooden blocks, can help prevent such damage.



The criterion for proper protection and the degree of reduction if protection is poor or lacking depend on the radius of the edge round which the chain is wrapped. It does not matter whether it is the edge of the load or the edge protection.
The criteria and the corresponding reduction factors are specified in the “Severe operating conditions” table (pages 8–9).

Chain slings with load distributors

A competent person must determine for each lifting operation whether all four chain legs may be treated as load-bearing, to prevent overloading.
A load variation of up to 10 % in the chain legs may be disregarded. This is the case when the inclination angles between individual chain legs differ by no more than:
- Maximum 6° difference at an inclination angle up to 45°
- Maximum 3° difference at an inclination angle up to 60°

Not using all chain legs

In practice, there are lifting situations in which not all individual legs of a chain sling can be used at once. In such cases, the working load limit stamped on the tag is not applicable. The applicable load can be found in the working load limit table, depending on the chain dimension, the number of legs used and the grade. Under no circumstances must a chain sling be loaded beyond the working load limit shown on the tag!
The following table provides an overview:

Type of chain sling	Number of single legs used	Utilisation factor for the specified working load limit shown on the WLL tag
2-leg	1	1 / 2
3-leg and 4-leg	1	1 / 3

Any unused individual legs must be hooked back into the master link to prevent the risk of free swinging or accidental catching.
Before using several chain slings at the same time, ensure that their master links have sufficient space in the hook and cannot become dislodged during the lifting operation. Inclination angles exceeding 45° must not occur. Use only chain slings of the same nominal thickness and grade together.

Chain shortening

Where available, use chain shorteners to adjust the chain length.
Chain shorteners can retain engaged chain links of the same nominal dimension. To do this, insert a chain link into the designated slot.



Correct°



Wrong!

Chain shorteners are usually installed at the top end of the chain legs to shorten them.
If these hooks (except for XK and XKS) are fitted at the bottom of the chain leg, they can also be used to form loops that do not tighten. To do this, each of them must be hooked back into its own chain leg.
A chain shortener attached to one chain leg may not be used to shorten another chain leg.
Shortening hooks may be fitted into one Connex half together with the chain. No load may be applied to the loop created when shortening the chain leg.

User information (lashing)

If the chains and accessories described in this catalogue are used to assemble lashing chains, the information provided under User information (general) also applies, with the following changes and additions:

General description

pewag lashing chains have a long service life and provide maximum safety when used correctly. Damage to property and personal injury can only be avoided if the product is used correctly. Reading and understanding our operating manual is therefore a prerequisite for using pewag lashing chains. However, this does not replace responsible and forward-looking load securing.
pewag lashing chains must only be adjusted by competent persons as defined in EN 12195-1 and EN 12195-3, and must only be used by trained personnel.

Conformity

Lashing equipment is not subject to the Machinery Directive 2006/42/EC. The lashing tags are therefore not CE marked and the previously made declarations of incorporation and of conformity do not apply.

Selection of lashing equipment

The dimension, shape and weight of the load, and the transport environment (additional aids, coefficient of friction between the load and the loading surface, etc.) determine the correct choice of lashing equipment. Lashing chains must have sufficient length and lashing capacity for their intended use. If in doubt, choose lashing chains one dimension larger to prevent overloading in use.

Purpose

Lashing equipment is used to assemble lashing chains in accordance with EN 12195-3, to secure loads during transport using either direct or tie-down lashing.
Securing loads during transport using the direct lashing method: The key factor here is the permissible lashing capacity LC in [kN], which must be stamped on the lashing tag. Use at least four lashing chains to ensure stability.
Securing loads during transport using the tie-down lashing method: The key factor here is the STF value in [daN], which must be stamped on the lashing tag. If there is no stamped STF value, do not use the lashing chain for tie-down lashing. For safety reasons, we recommend using at least two lashing chains.

Lashing points

Select lashing points so that the lashing angles are within the ranges specified in the reference tables and the lashing equipment is arranged symmetrically to the direction of travel. Only use lashing points that have sufficient strength.

Assembly

- Release the tensioning elements before lashing.
- Connect one end of the lashing chain to the load and the other to the lashing point. Both hooks and master links can be attached to the load or to the lashing point.
- Then shorten and tension the chain as much as possible using the shortening hook.

For the assembly of lashing chains, only use components which correspond to the examples shown in Figure 1 of EN 12195-3.
Only use components fitted with a safety mechanism against unintentional release, such as a safety catch or locking pin.
The lashing chain tag must bear the warning '**Must not be used for lifting**'.
When lashing directly, make sure that the lashing chains do not become entangled or jammed where they cross, as this could compromise the lashing.

Load

Loads may only be applied in the longitudinal direction, up to the maximum specified lashing capacity (LC), with all lashing chain components aligned in the direction of the load. Bending stress on accessories and stress on the hook tips are not permitted.
Lashing chains are designed with a safety factor of 2. The permissible lashing capacity is therefore about double the maximum working load limit.

Shock loading

If the lashing arrangement is designed in accordance with EN 12195-1, occasional shock loads during normal operating conditions can be disregarded. They are absorbed by the vehicle's suspension system and the elasticity of the lashing equipment.
Impacts caused by emergency braking or a collision/accident are considered exceptional events and require immediate inspection of chains and components.

Improper use

Chains and components assembled into lashing chains must not be used for lifting loads (e.g. as part of chain slings) due to the lower safety factor associated with lashing.
A maximum hand force of 50 daN may be applied to the load binder by hand. No mechanical aids such as bars, levers or similar items may be used for tensioning.

Empower your team with lifting know-how

The pewag lifting expert training is a practical, on-site program designed to enhance knowledge and safety awareness in lifting operations.

Developed by pewag specialists, this course combines essential theory with hands-on demonstrations to ensure lasting understanding and safe application. This training is available free of charge for pewag customers and takes place exclusively on-site at your company or a pewag location.

Training content

The program covers key aspects of safe lifting:

- Lifting basics, preparation, and risk awareness
- Sling angles and their effects
- Sling materials and correct selection
- Application and safe use of lifting components (hooks, shackles, lifting points, wire rope terminations)
- Inspection and maintenance
- Visual checks and removal criteria

Certification

After completing the training, each participant receives a personalized pewag certificate, confirming their participation and competence in safe lifting practices.

Your benefits

- Conducted by experienced pewag lifting experts
- Hands-on, practical training at your site
- Free of charge for pewag customers
- Strengthens safety, competence, and confidence in lifting operations





Notes



pewag lifting solutions

Lifting has never been so easy – **with the new pewag online shop**

pewag has been setting new standards in the lifting industry for decades, providing dependable, robust and efficient solutions.

Now we're taking it one step further: Ordering your well-proven lifting equipment and accessories is even easier, quicker and fully digital with our new online shop – available around the clock, direct from the manufacturer.

Your digital advantage with pewag:

- Quick and hassle-free checkout
- Secure payment and buyer protection
- Durable, high-quality products at a fair price
- Clear, detailed product overviews
- Access to catalogues, operating manuals and other downloads
- Expert customer service & advice

The pewag online shop offers more than just products – discover clever solutions and useful information to help you shop efficiently and sustainably.

Scan the QR code
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EN English