

Lifting Equipment

Grade 120 | 100 | 80



**For years KWB sling chains
have been synonymous
for quality and a guarantee
for absolute safety.**

The traditional KWB brand originates from the chain forge „Kettenwerk Brückl“, an Austrian company with experience in chain production dating back centuries.

Since 2003 the KWB Star Alloy G 100 programme has been distributed successfully worldwide paving the way for the introduction of KWB's Sun Alloy G 120 range in 2016.

Constant extension and expansion of KWB's lifting product programs over years, today enable us to offer a streamlined and spot on range of products, tailored to meet the growing global demand for top-quality lifting equipment. More than suitable in use; totally reliable.

We offer quality at the highest level.

Our Sun, Star and Super Alloy sling chains and components fulfill maximum requirements with regard to profitability, safety, longevity, easy handling. KWB means safety in action.

Advantages:

- Use of high grade steels and alloys
- Production on specially developed bending and welding machines in Europe
- Process controlled heat and surface procedures
- BG approved – H29 number
- Continuous quality control (ISO 9001, 9002) ongoing research and development of the product
- Worldwide distribution
- The longstanding experience of our employees

Subject to change without prior notice. KWB reserves the right to modify the dimensions of the articles shown in this catalogue according to production requirements, and adaptation of the legal regulations. Errors & omissions excepted.

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Advantages of Sun Alloy G 120

Durability: higher wear resistance due to increased hardness

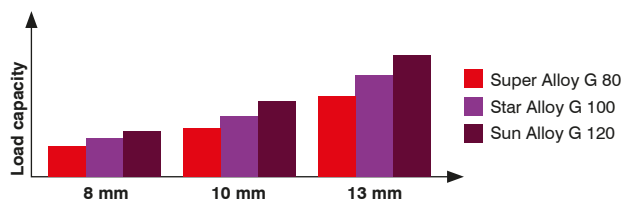
Simple: smart and easy assembling of chain slings

Traceability: appropriate marking on chains & components

Quality: ISO 9001 certified company

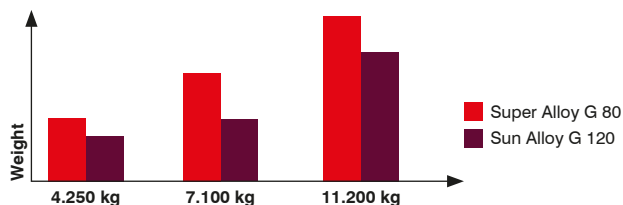
Reliability: Decades of experience

Strong: 50 % higher load capacity compared to G 80, 20 % higher load capacity compared to G 100



e.g. 2-leg chain slings

Light: Obvious weight reduction and consequently easier handling

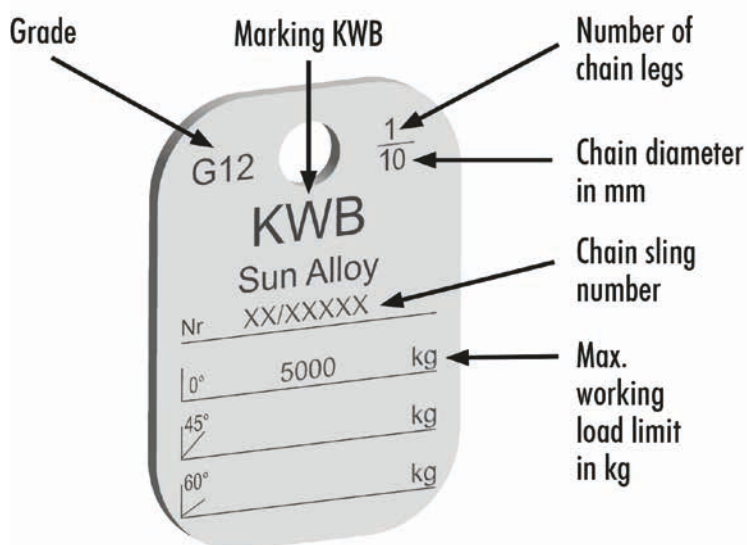


e.g. with 2-leg chain slings 3 m length

Working Load Limit kg	Previous Chain – Ø G 80 mm	Sun Alloy-Chain – Ø mm
4,250	10	8
7,100	13	10
11,200	16	13

Working Load Limit kg	Previous Chain Weight G 80 mm	Sun Alloy-Chain Weight kg
4,250	11	7.5
7,100	19.6	12.9
11,200	31.2	22.4

Clear Identification



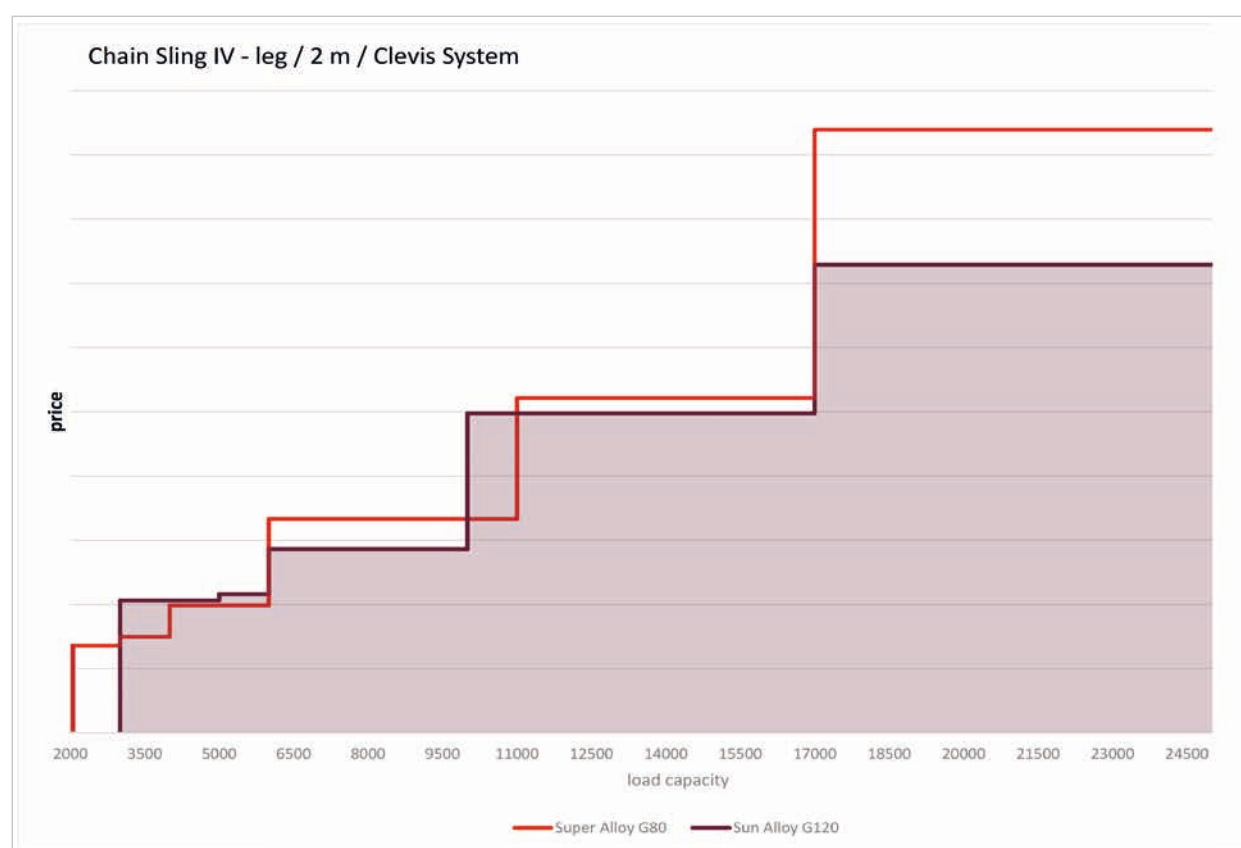
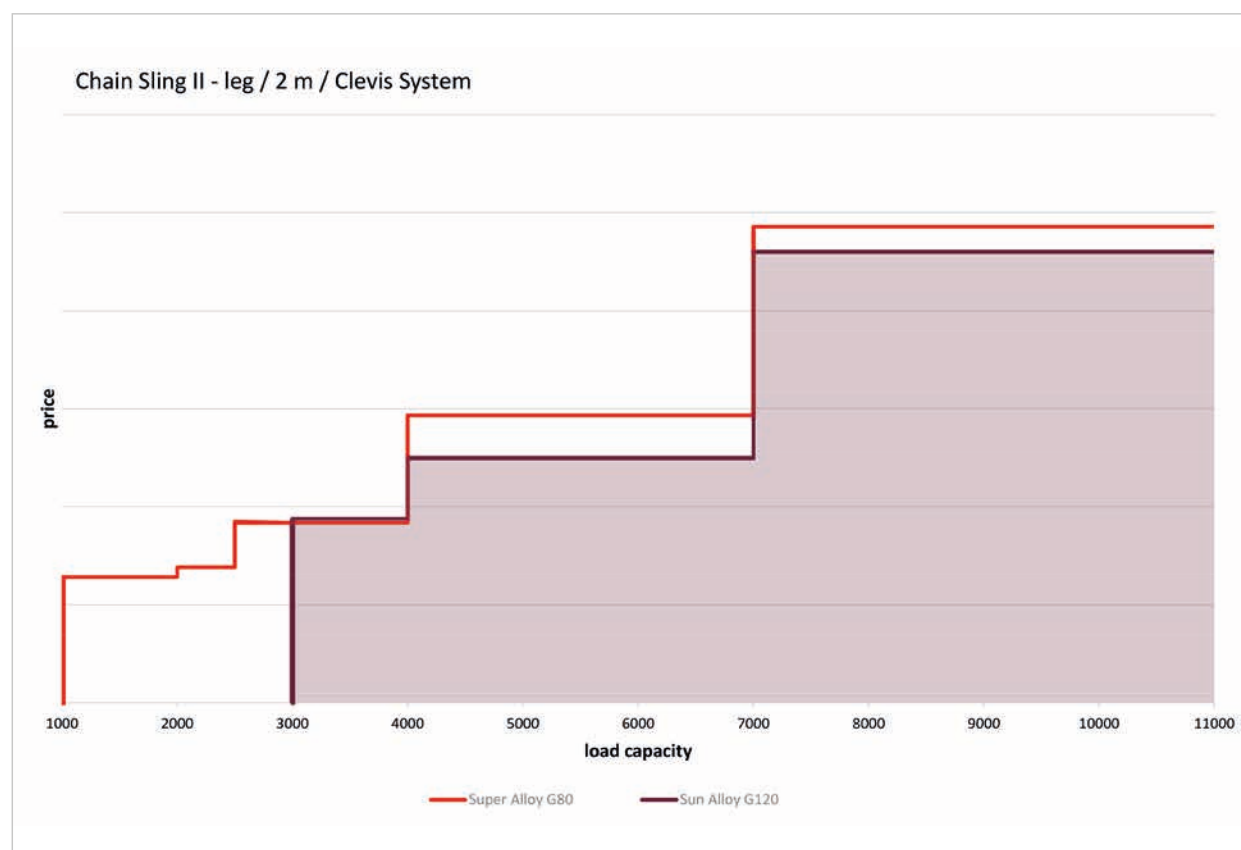
Sample of tag for ready made chain sling

Certificate

A test certificate is issued for all our products which certifies all the specified characteristics.



Economic: cheaper compared to G 80



Sun Alloy G 120 – Characteristics

Chain Quality:	Sun Alloy Chain	SUN	Corresponds with EN 818-2 & machinery directive 2006/42/EC
Stress at Load Capacity Limit:			300 N/mm ²
Test Stress:			750 N/mm ² – corresponds to 2.5 times the load capacity
Breaking Stress:			1.200 N/mm ² – corresponds to 4 times the load capacity
Breaking Elongation:			min. 20 %
Bending acc. to EN 818-2:			0.8 x nominal diameter
Permissible Working Temperature:	Sun Alloy Chain	SUN	max. 200 °C
	Components		max. 200 °C
Grade marking:	Sun Alloy Chain	SUN	12
	Components		12
Surface:	Sun Alloy Chain	SUN	Bordeaux Violet painted
	Components		Bordeaux Violet powder coated

Working Load Tag:



All the required data is shown on the working load tag.

Note: Working load tags should only be assembled acc. EN 818-4 and by competent persons. Working load tags should be used, solely when the respective chain & KWB components are assembled in the chain sling. Should alternative Working load limits arise in the chain sling through the use of special parts, the tags are impermissible. Disregard of these instructions can lead to material damage and personal injury. KWB will not assume liability.

Temperature	-40° to 200 °C		
Load Factor Sun Alloy	1		
Asymmetric Load Distribution	In this case the working load limit must be reduced by at least one chain leg, for example a 3-leg or 4-leg sling is to be classified as a 2-leg chain sling. In case of doubt, it must be supposed that only one of the chain legs carries the entire load.		
Edge Loads	R = larger than 2x chain Ø 	R = larger than chain Ø 	R = chain Ø or smaller 
Load Factor	1	0.7	0.5
Impact Load	slight impact	medium impact	strong impact
Load Factor	1	0.7	impermissible

Sling Examples



I GTKR/SUN - HKS/SUN



I GTVK/SUN - HKS/SUN



II GTKR/SUN - HKS/SUN



II GTVK/SUN - HKS/SUN



IV GTKR/SUN - HKS/SUN



IV GTVK/SUN - HKS/SUN

Example of Order Text:

Chain Sun Alloy SUN 10 mm, 2 legs with Special Clevis Sub-Assembly GTKR/SUN and Clevis Sling Hook HKS/SUN, length 2,000 mm.

SUN 10 II GTKR/SUN - HKS/SUN 2000

Chain Nominal diameter Number of legs Special Clevis Sub-Assembly Hook Length

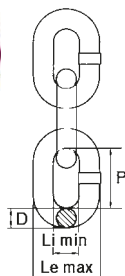
Sub-Assemblies					
		1-leg		2-leg	
					
Sun Alloy Chain Ø SUN		Special Clevis Sub-Assembly GTVK/SUN 1	Special Clevis Sub-Assembly GTKR/SUN 1	Special Clevis Sub-Assembly GTVK/SUN 2	Special Clevis Sub-Assembly GTKR/SUN 2
mm	inch	Code	Code	Code	Code
7	9/32	GTVK/SUN 1-7	GTKR/SUN 1-7	GTVK/SUN 2-7	GTKR/SUN 2-7
8	5/16	GTVK/SUN 1-8	GTKR/SUN 1-8	GTVK/SUN 2-8	GTKR/SUN 2-8
10	3/8	GTVK/SUN 1-10	GTKR/SUN 1-10	GTVK/SUN 2-10	GTKR/SUN 2-10
13	1/2	GTVK/SUN 1-13	GTKR/SUN 1-13	GTVK/SUN 2-13	GTKR/SUN 2-13
16	5/8	GTVK/SUN 1-16	GTKR/SUN 1-16	GTVK/SUN 2-16	GTKR/SUN 2-16
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Sub-Assemblies					
		3 & 4-leg			
					
Sun Alloy Chain Ø SUN		Special Clevis Sub-Assembly GTVK/SUN 4		Special Clevis Sub-Assembly GTKR/SUN 4	
mm	inch	Code	Code	Code	Code
7	9/32	GTVK/SUN 4-7	GTVK/SUN 4-7	GTKR/SUN 4-7	GTKR/SUN 4-7
8	5/16	GTVK/SUN 4-8	GTVK/SUN 4-8	GTKR/SUN 4-8	GTKR/SUN 4-8
10	3/8	GTVK/SUN 4-10	GTVK/SUN 4-10	GTKR/SUN 4-10	GTKR/SUN 4-10
13	1/2	GTVK/SUN 4-13	GTVK/SUN 4-13	GTKR/SUN 4-13	GTKR/SUN 4-13
16	5/8	GTVK/SUN 4-16	GTVK/SUN 4-16	GTKR/SUN 4-16	GTKR/SUN 4-16
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Sling Hooks					
					
Sun Alloy Chain Ø SUN		Clevis Self Locking Hook HKSB/SUN		Clevis Sling Hook with forged Safety Latch HKS/SUN	
mm	inch	Code	Code	Code	Code
7	9/32	HKSB/SUN 7	HKSB/SUN 7	HKS/SUN 7	HKS/SUN 7
8	5/16	HKSB/SUN 8	HKSB/SUN 8	HKS/SUN 8	HKS/SUN 8
10	3/8	HKSB/SUN 10	HKSB/SUN 10	HKS/SUN 10	HKS/SUN 10
13	1/2	HKSB/SUN 13	HKSB/SUN 13	HKS/SUN 13	HKS/SUN 13
16	5/8	HKSB/SUN 16	HKSB/SUN 16	HKS/SUN 16	HKS/SUN 16
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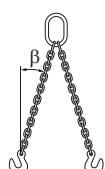
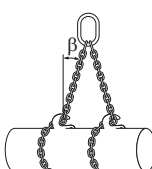
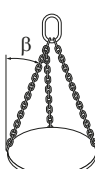
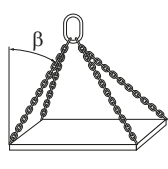
Sun Alloy Chain

Chain Sun Alloy SUN – Measurements, Load Values, Weights



Chain		Pitch	Li/min.	Le/max.	Weight	Working Load limit	Breaking Load
D	P						
mm	inch	mm	mm	mm	kg/m	kg	kN
7	9/32	21	9.8	26.0	1.33	2,360	92.6
8	5/16	24	11.0	30.5	1.69	3,000	118
10	3/8	30	14.3	38.0	2.66	5,000	196
13	1/2	39	18.0	48.5	4.43	8,000	319
16	5/8	48	21.5	59.0	6.73	12,200	479

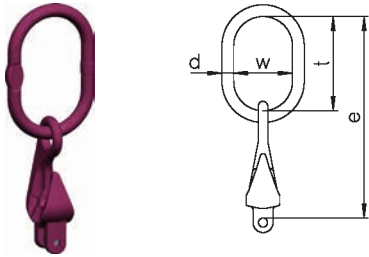
Maximum Working Load Limit for Sun Alloy Chains

Safety factor	1-leg Chains		2-leg Chains				3- and 4-leg Chains	
4								
	-	-	up to 45°	45°-60°	up to 45°	45°-60°	up to 45°	45°-60°
	1	0.8	1.4	1	1.12	0.8	2.1	1.5
	Load Capacity [kg]							
7	2,360	1,900	3,350	2,360	2,650	1,900	5,000	3,550
8	3,000	2,360	4,250	3,000	3,350	2,360	6,300	4,500
10	5,000	4,000	7,100	5,000	5,600	4,000	10,600	7,500
13	8,000	6,300	11,200	8,000	9,000	6,300	17,000	11,800
16	12,200	9,700	17,000	12,200	13,600	9,700	25,600	18,300

If the chain slings are used in more demanding conditions (e.g. high temperature, asymmetric load distribution, edge loads, impacts) the maximum load capacities in the table must be reduced. Please use the load factors on page 8 and refer to the specification in the user information.

Sub-Assemblies

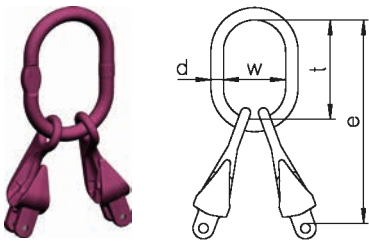
1 Special Clevis Sub-Assembly GTVK/SUN



For 1-leg slings with shortening element.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit
				d	t	w	e		
mm	inch			mm				kg	kg
7	9/32	GTVK/SUN 1-7	4	14	120	70	244	1.21	2,360
8	5/16	GTVK/SUN 1-8	5	17	140	80	264	1.44	3,000
10	3/8	GTVK/SUN 1-10	6	19	160	95	318	2.72	5,000
13	1/2	GTVK/SUN 1-13	10	27	190	110	391	5.83	8,000
16	5/8	GTVK/SUN 1-16	12	30	190	110	423	9.5	12,200

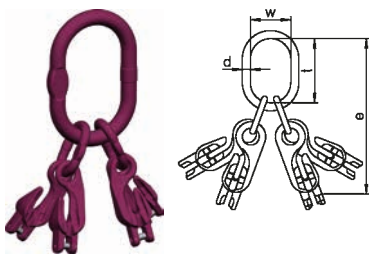
2 Special Clevis Sub-Assembly GTVK/SUN



For 2-leg slings with shortening element.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit β	
Λ				d	t	w	e		up to 45°	45°-60°
mm	inch			mm				kg	kg	kg
7	9/32	GTVK/SUN 2-7	6	19	160	95	284	2.75	3,350	2,360
8	5/16	GTVK/SUN 2-8	6	19	160	95	284	2.75	4,250	3,000
10	3/8	GTVK/SUN 2-10	10	23	170	105	328	4.76	7,100	5,000
13	1/2	GTVK/SUN 2-13	10	30	190	110	391	9.56	11,200	8,000
16	5/8	GTVK/SUN 2-16	12	38	275	150	508	18.66	17,000	12,200

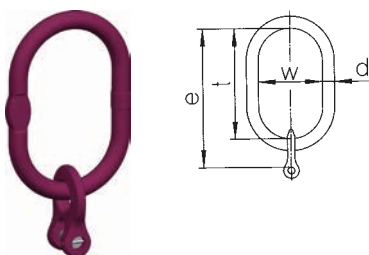
4 Special Clevis Sub-Assembly GTVK/SUN



For 3 and 4-leg slings with shortening element.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit β	
				d	t	w	e		up to 45°	45°-60°
mm	inch			mm				kg	kg	kg
7	9/32	GTVK/SUN 4-7	10	27	190	110	368	6.45	5,000	3,550
8	5/16	GTVK/SUN 4-8	10	27	190	110	368	6.45	6,300	4,500
10	3/8	GTVK/SUN 4-10	12	30	190	110	433	11.7	10,600	7,500
13	1/2	GTVK/SUN 4-13	12	38	275	150	616	23.84	17,000	11,800
16	5/8	GTVK/SUN 4-16	12	38	275	150	658	36.16	25,600	18,300

1 Special Clevis Sub-Assembly GTKR/SUN



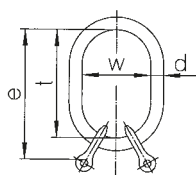
For 1-leg slings.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit
				d	t	w	e		
mm	inch			mm				kg	kg
7	9/32	GTKR/SUN 1-7	4	14	120	70	163	0.66	2,360
8	5/16	GTKR/SUN 1-8	5	17	140	80	183	0.89	3,000
10	3/8	GTKR/SUN 1-10	6	19	160	95	211	1.62	5,000
13	1/2	GTKR/SUN 1-13	10	27	190	110	254	3.47	8,000
16	5/8	GTKR/SUN 1-16	12	30	190	110	268	5.8	12,200

2 Special Clevis Sub-Assembly GTKR/SUN



For 2-leg slings.

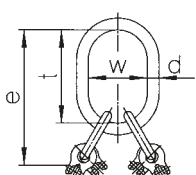


Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit β	
Λ				d	t	w	e		up to 45°	45°-60°
mm	inch			mm				kg	kg	kg
7	9/32	GTKR/SUN 2-7	6	19	160	95	203	1.65	3,350	2,360
8	5/16	GTKR/SUN 2-8	6	19	160	95	203	1.65	4,250	3,000
10	3/8	GTKR/SUN 2-10	10	23	170	105	221	2.56	7,100	5,000
13	1/2	GTKR/SUN 2-13	10	30	190	110	257	4.84	11,200	8,000
16	5/8	GTKR/SUN 2-16	12	38	275	150	353	10.32	17,000	12,200

4 Special Clevis Sub-Assembly GTKR/SUN



For 3 and 4-leg slings.



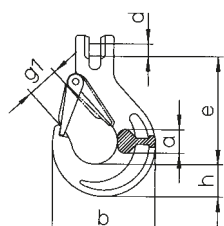
Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit β	
				d	t	w	e		up to 45°	45°-60°
mm	inch			mm				kg	kg	kg
7	9/32	GTKR/SUN 4-7	10	27	190	110	287	4.25	5,000	3,550
8	5/16	GTKR/SUN 4-8	10	27	190	110	287	4.25	6,300	4,500
10	3/8	GTKR/SUN 4-10	12	30	190	110	326	7.34	10,600	7,500
13	1/2	GTKR/SUN 4-13	12	38	275	150	479	14.4	17,000	11,800
16	5/8	GTKR/SUN 4-16	12	38	275	150	503	19.48	25,600	18,300

Sling Hooks

Clevis Sling Hook with Forged Safety Latch HKS/SUN



General purpose hook.

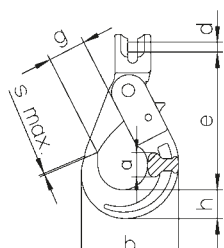


Chain		Code	Dimensions						Weight	Working Load Limit
			e	h	a	b	d	g1		
mm	inch		mm						kg	kg
7	9/32	HKS/SUN 7	93	27	21	89	9,5	26	0.63	2,360
8	5/16	HKS/SUN 8	92	27	21	89	11	26	0.63	3,000
10	3/8	HKS/SUN 10	108	33	25	110	14	31	1.18	5,000
13	1/2	HKS/SUN 13	130	41	34	132	17,5	38	2.35	8,000
16	5/8	HKS/SUN 16	158	49	37	160	21	45	3.82	12,200

Clevis Self Locking Hook HKSB/SUN



Closes and locks automatically.



Chain		Code	Dimensions							Weight	Working Load Limit
			e	h	a	b	d	g	s max.		
mm	inch		mm							kg	kg
7	9/32	HKSB/SUN 7	125	26	21	92	9,5	32	1	0.93	2,360
8	5/16	HKSB/SUN 8	124	26	21	92	11	32	1	0.93	3,000
10	3/8	HKSB/SUN 10	143	31	26	115	14	45	1	1.60	5,000
13	1/2	HKSB/SUN 13	183	42	35	145	17,5	54	2	3.50	8,000
16	5/8	HKSB/SUN 16	218	51	41	169	21	60	2	6.50	12,200

Spare Parts

Forged Safety Latch Kits for Clevis Sling Hooks

	Dimension		Code	Spare Part for
	mm	inch		
	7+8	9/32+5/16	FG/SUN 7/8	HKS/SUN 7, HKS/SUN 8
	10	3/8	FG/SUN 10	HKS/SUN 10
	13	1/2	FG/SUN 13	HKS/SUN 13
	16	5/8	FG/SUN 16	HKS/SUN 16

Pin Kit for Clevis Self Locking Hook & Special Clevis Sub Assembly

	Dimension		Code	Accessory for use
	mm	inch		
	7	9/32	KBG/SUN 7	HKS/SUN 7, HKSB/SUN 7, GTVK/SUN ...-7, GTKR/SUN ...-7
	8	5/16	KBG/SUN 8	HKS/SUN 8, HKSB/SUN 8, GTVK/SUN ...-8, GTKR/SUN ...-8
	10	3/8	KBG/SUN 10	HKS/SUN 10, HKSB/SUN 10, GTVK/SUN ...-10, GTKR/SUN ...-10
	13	1/2	KBG/SUN 13	HKS/SUN 13, HKSB/SUN 13, GTVK/SUN ...-13, GTKR/SUN ...-13
	16	5/8	KBG/SUN 16	HKS/SUN 16, HKSB/SUN 16, GTVK/SUN ...-16, GTKR/SUN ...-16

Trigger Kit for Clevis Self Locking Hooks

	Dimension		Code	Spare Part for
	mm	inch		
	7+8	9/32+5/16	HBG/SUN 7/8	HKSB/SUN 7 + HKSB/SUN 8
	10	3/8	HBG/SUN 10-8	HKSB/SUN 10
	13	1/2	HBG/SUN 13-8	HKSB/SUN 13
	16	5/8	HBG/SUN 16-8	HKSB/SUN 16

Working Load Tag with Wire Rope Binder and Fastener

	Code	Code
	ID-Set	1/2/3/4-legs





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Star Alloy G 100 – Characteristics

Chain Quality:	Star Alloy	SA/S	Corresponds with ASTM A973/A973M-01 & EN 818-2 but with higher working load limit (permissible operating temperature max. 200° C) & machinery directive 2006/42/EC
	Star Alloy Plus PAS	SAPP/S	Corresponds with PAS 1061 & machinery directive 2006/42/EC
	Star Alloy Plus +	SAP/S	Corresponds with EN 818-2 with a higher load capacity & machinery directive 2006/42/EC
Stress at Load Capacity Limit:	250 N/mm ²		
Test Stress:	625 N/mm ² corresponds to 2.5 times the load capacity		
Breaking Stress:	1,000 N/mm ² corresponds to 4 times the load capacity		
Breaking Elongation:	min. 20 %		
Bending acc. to PAS 1061/EN 818-2:	0.8 x nominal diameter		
Permissible Working Temperature:	Star Alloy	SA/S	max. 200 °C
	Star Alloy Plus +	SAP/S	max. 380 °C
	Star Alloy Plus PAS	SAPP/S	max. 380 °C
	Components		max. 380 °C
Grade Marking:	Star Alloy	SA/S	10 at a spacing of approx. 300 mm up to dim. 16 (others 900 mm) and 10 on the back of each link
	Star Alloy Plus +	SAP/S	8S at a spacing of approx. 900 mm up from dim. 19
	Star Alloy Plus PAS	SAPP/S	10 at a spacing of approx. 300 mm up to dim. 16
	Components		10 (some components are still marked with 8S)
Surface:	Star Alloy	SA/S	Purple varnished
	Star Alloy Plus +	SAP/S	Violet varnished
	Star Alloy Plus PAS	SAPP/S	Violet varnished
	Components		Violet powder coated
Working Load Tag:	Star Alloy		
	Star Alloy Plus PAS/ Star Alloy Plus +		

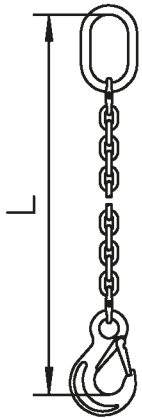
All the required data is shown on the working load tag.

Note: Working load tags should only be assembled acc. EN 818-4 and by competent persons. Working load tags can be used solely when the particular chain & KWB components are assembled in the chain sling. Should alternative Working load limits arise in the chain sling through the use of special parts, the tags are impermissible. Disregard of these instructions can lead to material damage and personal injury. KWB will not assume liability.

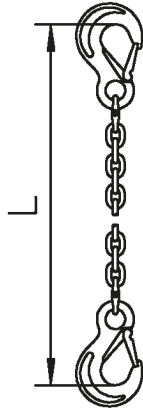
The performance concerning stress crack corrosion is identical to G 80.

Temperature	-40° to 200 °C	above 200° to 300 °C	above 300° to 380 °C
Load Factor Star Alloy	1	impermissible	impermissible
Load Factor Star Alloy Plus+/PAS	1	0.9	0.75
Asymmetric Load Distribution	In this case the working load limit must be reduced by at least one chain leg, for example a 3-leg or 4-leg sling is to be classified as a 2-leg chain sling. In case of doubt, it must be supposed that only one of the chain legs carries the entire load.		
Edge Loads	R = larger than 2x chain Ø 	R = larger than chain Ø 	R = chain Ø or smaller 
Load Factor	1	0.7	0.5
Impact Load	slight impact	medium impact	strong impact
Load Factor	1	0.7	impermissible

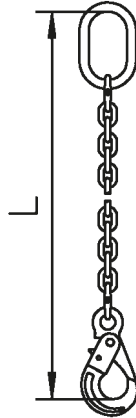
Sling Examples



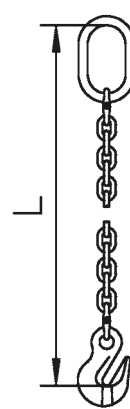
I A/S-HS/S V/S



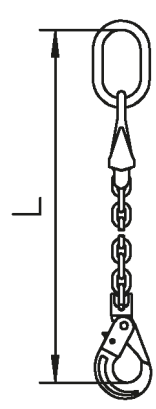
I HS/S-HS/S V/S



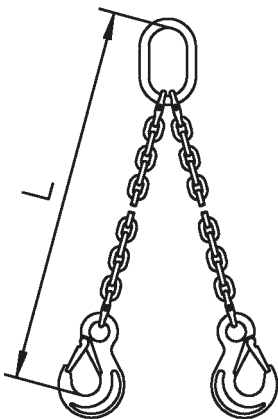
I A/S-HSB/S V/S



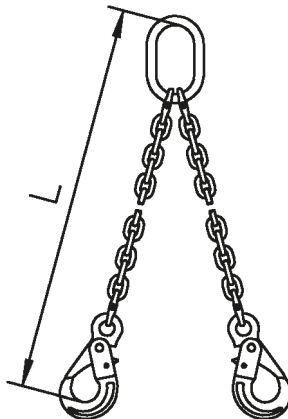
I A/S-P/S V/S



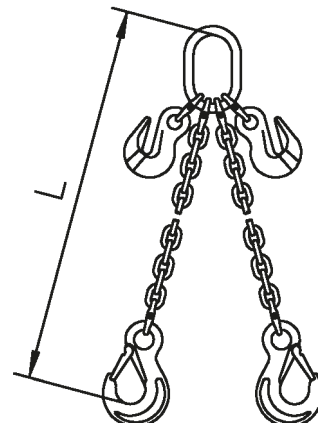
I GTVK/S-HKSB/S



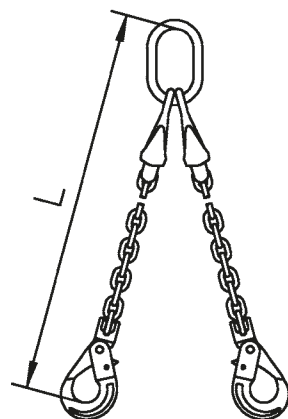
II A/S-HS/S V/S



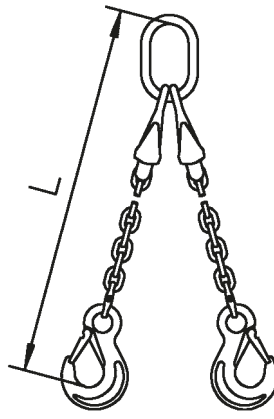
II A/S-HSB/S V/S



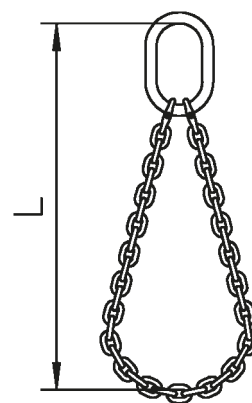
II A/S-HS/S-P/S V/S



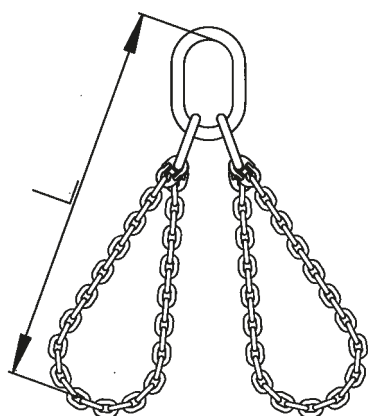
II GTVK/S-HKSB/S



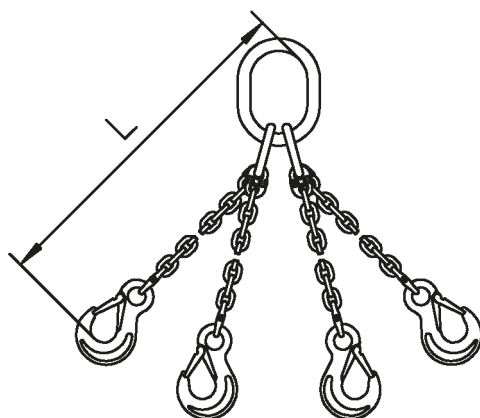
II GTVK/S-HS/S V/S



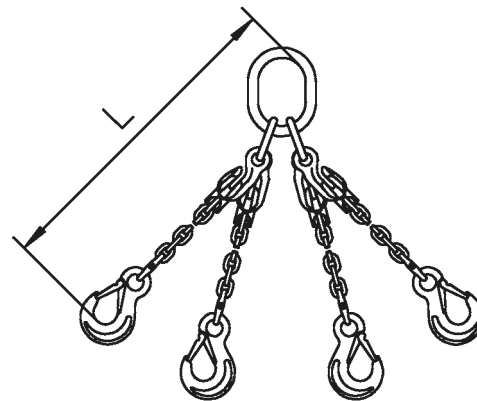
II A/S-S V/S



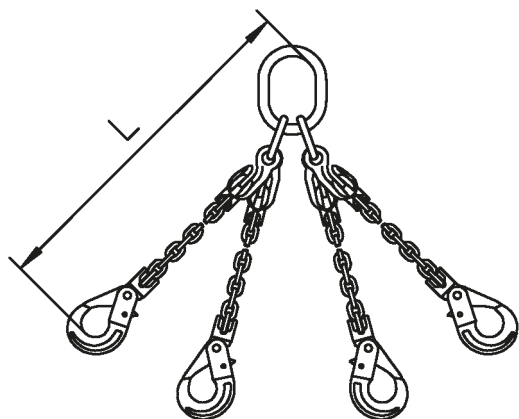
IV G/S-S V/S



IV G/S-HS/S V/S



IV GTVK/S-HS/S V/S



IV GTVKS/S-HKSB/S

Example of Order Text:

Chain Star Alloy SA/S 10 mm, 2 legs with Masterlink A/S and Eye Sling Hook with Forged Safety Latch HS/S, length 3,000 mm assembled with Connecting Link V/S.

SA/S 10 II A/S - HS/S 3000 V/S

Chain Nominal diameter Number of legs Master Link Hook Length Connecting link

Master Links & Sub-Assemblies 1-leg

					
Chain Star Alloy Chain Star Alloy Plus PAS Chain Star Alloy Plus + Ø		Master Link	Special Master Link	Special Master Link Assembly	Special Clevis Sub-Assembly
		A/S	T/S	GL/S	GTVK/S 1
mm	inch	Code	Code	Code	Code
6	1/4	A/S 13	T/S 13		GTVK/S 1-6
7	9/32	A/S 13	T/S 13		GTVK/S 1-7
8	5/16	A/S 16	T/S 16		GTVK/S 1-8
10	3/8	A/S 18	T/S 18	GL/S 1-10	GTVK/S 1-10
13	1/2	A/S 22	T/S 22	GL/S 1-13	GTVK/S 1-13
16	5/8	A/S 26	T/S 26	GL/S 1-16	GTVK/S 1-16
19	3/4	A/S 32	T/S 32	GL/S 1-19/22	
22	7/8	A/S 36	T/S 36	GL/S 1-19/22	
26	1	A/S 45			
Page 24		Page 25	Page 25	Page 26	Page 27

Master Links & Sub-Assemblies 2-leg

					
Chain Star Alloy Chain Star Alloy Plus PAS Chain Star Alloy Plus + Ø		Master Link	Special Master Link	Special Master Link Assembly	Special Clevis Sub-Assembly
		A/S	T/S	GL/S	GTVK/S 2
mm	inch	Code	Code	Code	Code
6	1/4	A/S 13	T/S 13	GL/S 2-6/7/8/4-6	GTVK/S 2-6
7	9/32	A/S 16	T/S 16	GL/S 2-6/7/8/4-6	GTVK/S 2-7
8	5/16	A/S 18	T/S 18	GL/S 2-6/7/8/4-6	GTVK/S 2-8
10	3/8	A/S 22	T/S 22	GL/S 2-10/4-7/8	GTVK/S 2-10
13	1/2	A/S 26	T/S 26	GL/S 2-13/4-10	GTVK/S 2-13
16	5/8	A/S 32	T/S 32	GL/S 2-16/4-13	GTVK/S 2-16
19	3/4	A/S 36	T/S 36	GL/S 2-19/4-16	
22	7/8	A/S 45			
26	1	A/S 50	T/S 56		
Page 24		Page 25	Page 25	Page 26	Page 27

Master Links & Sub-Assemblies 3 & 4-leg

						
Chain Star Alloy Chain Star Alloy Plus PAS Chain Star Alloy Plus + Ø		Sub-Assembly	Special Sub-Assembly	Special Sub-Assembly	Special Sub-Assembly	Special Clevis Sub-Assembly
		G/S	GT/S	TG/S	GL/S	GTVK/S 4
mm	inch	Code	Code	Code	Code	Code
6	1/4	G/S 6	GT/S 6	TG/S 6	GL/S 2-6/7/8/4-6	GTVK/S 4-6
7	9/32	G/S 7/8	GT/S 7/8	TG/S 7/8	GL/S 2-10/4-7/8	GTVK/S 4-7
8	5/16	G/S 7/8	GT/S 7/8	TG/S 7/8	GL/S 2-10/4-7/8	GTVK/S 4-8
10	3/8	G/S 10	GT/S 10	TG/S 10	GL/S 2-13/4-10	GTVK/S 4-10
13	1/2	G/S 13	GT/S 13	TG/S 13	GL/S 2-16/4-13	GTVK/S 4-13
16	5/8	G/S 16	GT/S 16	TG/S 16	GL/S 2-19/4-16	GTVK/S 4-16
19	3/4	G/S 19/20				
22	7/8	G/S 22				
26	1	G/S 26				
Page 24		Page 25	Page 26	Page 26	Page 26	Page 27

Connecting & Shortening Elements

							
Chain Star Alloy Chain Star Alloy Plus PAS Chain Star Alloy Plus + Ø		Connecting Link V/S	Webbing Coupling Link RSK/S	Shortening Hook VK/S	Eye Grab Hook P/S	Eye Grab Hook with Safety Pin PS/S	Clevis Grab Hook PK/S
mm	inch	Code	Code	Code	Code	Code	Code
6	1/4	V/S 6		VK/S 6	P/S 6		PK/S 6
7	9/32	V/S 7		VK/S 7	P/S 7/8	PS/S 7/8	PK/S 7
8	5/16	V/S 8	RSK/S 8	VK/S 8	P/S 7/8	PS/S 7/8	PK/S 8
10	3/8	V/S 10	RSK/S 10	VK/S 10	P/S 10	PS/S 10	PK/S 10
13	1/2	V/S 13	RSK/S 13	VK/S 13	P/S 13	PS/S 13	PK/S 13
16	5/8	V/S 16	RSK/S 16	VK/S 16	P/S 16		PK/S 16
19	3/4	V/S 19/20			P/S 19/20		PK/S 19/20
22	7/8	V/S 22	RSK/S 22		P/S 22		PK/S 22
26	1	V/S 26			P/S 26		
Page 24		Page 28	Page 28	Page 28	Page 29	Page 29	Page 29

Sling Hooks

									
Chain Star Alloy Chain Star Alloy Plus PAS Chain Star Alloy Plus + Ø		Clevis Sling Hook with Forged Safety Latch HKS/S	Wide Bowl Clevis Sling Hook VHKS/S	Clevis Self Locking Hook HKSB/S	Clevis Foundry Hook GHK/S	Eye Sling Hook with Forged Safety Latch HS/S	Eye Self Locking Hook HSB/S	Swivel Safety Hook WSB/S	Foundry Hook GH/S
mm	inch	Code	Code	Code	Code	Code	Code	Code	Code
6	1/4	HKS/S 6		HKSB/S 6		HS/S 6	HSB/S 6	WSB/S 6	
7	9/32	HKS/S 7		HKSB/S 7		HS/S 7/8	HSB/S 7/8	WSB/S 7/8	GH/S 7/8
8	5/16	HKS/S 8	VHKS/S 8	HKSB/S 8	GHK/S 8	HS/S 7/8	HSB/S 7/8	WSB/S 7/8	GH/S 7/8
10	3/8	HKS/S 10	VHKS/S 10	HKSB/S 10	GHK/S 10	HS/S 10	HSB/S 10	WSB/S 10	GH/S 10
13	1/2	HKS/S 13		HKSB/S 13	GHK/S 13	HS/S 13	HSB/S 13	WSB/S 13	GH/S 13
16	5/8	HKS/S 16		HKSB/S 16		HS/S 16	HSB/S 16	WSB/S 16	GH/S 16
19	3/4	HKS/S 19/20				HS/S 19/20	HSB/S 19/20		GH/S 19/20
22	7/8	HKS/S 22				HS/S 22	HSB/S 22		
26	1					HS/S 26			
Page 24		Page 30	Page 30	Page 30	Page 30	Page 31	Page 31	Page 31	Page 31

Special Accessories

			
Chain Star Alloy Chain Star Alloy Plus PAS Chain Star Alloy Plus + Ø		Sheet Metal Plate Hook BH/S	Ratchet Load Binder RLS/S
mm	inch	Code	Code
6	1/4		
7	9/32	BH/S 7/8	
8	5/16	BH/S 7/8	RLS/S 8
10	3/8	BH/S 10	RLS/S 10
13	1/2	BH/S 13	RLS/S 13
16	5/8	BH/S 16	
19	3/4	BH/S 19/20	
22	7/8	BH/S 22	
26	1		
Page 24		Page 32	Page 32

Star Alloy Chain and Star Alloy Plus+ /PAS Chain

Chain Star Alloy SA/S – Measurements, Load Values, Weights

Chain		Pitch	Li/min.	Le/max.	Weight	Working Load limit	Breaking Load
D	P						
mm	inch	mm	mm	mm	kg/m	kg	kN
6	1/4	18	9	22	0.96	1,400	56.5
7	9/32	21	10	25	1.20	1,900	77
8	5/16	24	11	29	1.57	2,500	101
10	3/8	30	14	36	2.46	4,000	157
13	1/2	39	18	47	4.18	6,700	265
16	5/8	48	22	58	6.28	10,000	402
19	3/4	57	27	69	8.90	14,000	567
22	7/8	66	30	79	11.88	19,000	760
26	1	78	35	94	16.18	26,500	1,060

Chain acc. ASTM A973/A973M-01

Chain Star Alloy Plus PAS SAPP/S - Chain Star Alloy Plus+ SAP/S – Measurements, Load Values, Weights

Chain		Pitch	Li/min.	Le/max.	Weight	Working Load Limit	Breaking Load
D	P						
mm	inch	mm	mm	mm	kg/m	kg	kN
6	1/4	18	9	22	0.96	1,400	56.5
7	9/32	21	10	25	1.20	1,900	77
8	5/16	24	11	29	1.57	2,500	101
10	3/8	30	14	36	2.46	4,000	157
13	1/2	39	18	47	4.18	6,700	265
16	5/8	48	22	58	6.28	10,000	402
19	3/4	57	27	69	8.90	14,000	567
22	7/8	66	30	79	11.88	19,000	760
26	1	78	35	94	16.18	26,500	1,060

Dimension 6 to 16 acc. PAS 1061 (SAPP/S).
Dimension 19 to 26 acc. EN 818-2
with higher working load limit (SAP/S).

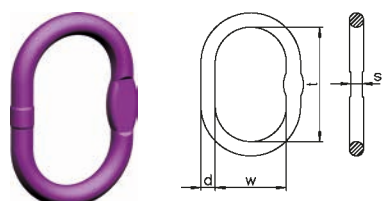
Maximum Working Load Limit for Star Alloy Chains

Safety factor	1-leg Chains		2-leg Chains				3- and 4-leg Chains		
4									
	Angle of Inclination	-	-	up to 45°	45°-60°	up to 45°	45°-60°	up to 45°	45°-60°
	Load Factor	1	0.8	1.4	1	1.12	0.8	2.1	1.5
	Ø	Load Capacity [kg]							
6	1,400	1,120	2,000	1,400	1,600	1,120	3,000	2,120	
7	1,900	1,500	2,650	1,900	2,120	1,500	4,000	2,800	
8	2,500	2,000	3,550	2,500	2,800	2,000	5,300	3,750	
10	4,000	3,150	5,600	4,000	4,250	3,150	8,000	6,000	
13	6,700	5,300	9,500	6,700	7,500	5,300	14,000	10,000	
16	10,000	8,000	14,000	10,000	11,200	8,000	21,200	15,000	
19	14,000	11,200	20,000	14,000	16,000	11,200	30,000	21,200	
22	19,000	15,000	26,500	19,000	21,200	15,000	40,000	28,000	
26	26,500	21,200	37,500	26,500	30,000	21,200	56,000	40,000	

If the chain slings are used in more demanding conditions (e.g. high temperature, asymmetric load distribution, edge loads, impacts) the maximum load capacities in the table must be reduced. Please use the load factors on page 19 and refer to the specification in the user information.

Master Links, Sub-Assemblies & Accessories

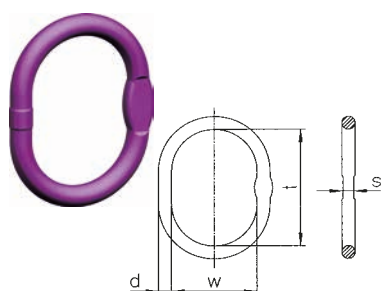
Master Link A/S



Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit 0°-45° *)
⊥	∧			d	t	w	s		
mm	mm			mm				kg	kg
6+7	6	A/S 13	2.5	13	110	60	10	0.34	2,300
8	7	A/S 16	2.5	17	110	60	14	0.58	3,500
10	8	A/S 18	5	19	135	75	14	0.92	5,000
13	10	A/S 22	6	23	160	90	17	1.60	7,600
16	13	A/S 26	8	27	180	100	20	2.46	10,000
19	16	A/S 32	10	33	200	110	26	4.04	14,000
22	19	A/S 36	16	36	260	140		6.22	25,100
26	22	A/S 45	25	45	340	180		12.82	30,800
	26	A/S 50	32	50	350	190		16.60	40,000
		A/S 56	32	56	400	200		23.3	64,000

*) Please refer to table „Maximum working load Limit“ on page 24 when using in chain slings.

Special Master Link T/S

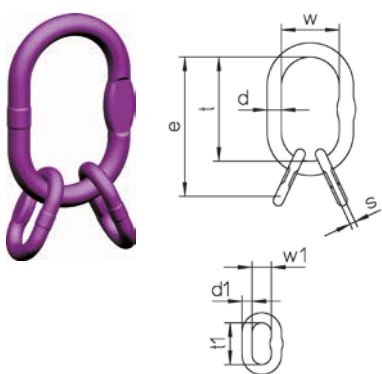


Similar to master link A/S, but due to larger inside dimensions suitable for next sized crane hook or special hook.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit 0°-45° *)
⊥	∧			d	t	w	s		
mm	mm			mm				kg	kg
6+7	6	T/S 13	4	14	120	70	10	0.44	2,300
8	7	T/S 16	5	16	140	80	13	0.67	3,200
10	8	T/S 18	6	19	160	95	14	1.09	4,200
13	10	T/S 22	10	23	170	105	17	1.74	6,700
16	13	T/S 26	10	27	190	110	20	2.65	10,100
19	16	T/S 32	12	33	230	130	26	4.78	16,000
22	19	T/S 36	20	38	275	150	29	7.48	21,200
	26	T/S 56	50	56	350	250		21.98	40,000

*) Please refer to table „Maximum working load Limit“ on page 24 when using in chain slings.

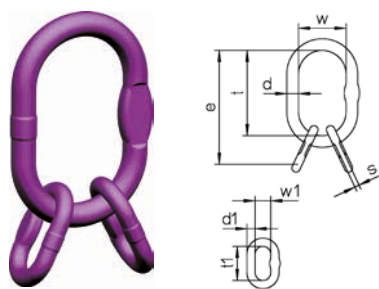
Sub-Assembly G/S



Chain Ø	Code	Can be used to single hook acc. to DIN15401 no.	Dimensions								Weight	Working Load Limit 0°-45° *)
			e	d	t	w	d1	t1	w1	s		
mm			mm								kg	kg
6	G/S 6	5	189	19	135	75	13	54	25	10	1.26	4,200
7+8	G/S 7/8	6	230	23	160	90	17	70	34	14	2.32	7,600
10	G/S 10	8	265	27	180	100	20	85	40	14	3.68	9,600
13	G/S 13	10	315	33	200	110	23	115	50	17	6.46	14,000
16	G/S 16	16	400	36	260	140	27	140	65	20	10.06	21,200
19	G/S 19/20	32	500	50	350	190	33	150	70	26	22.87	34,100
22	G/S 22	32	520	50	350	190	36	170	75		24.79	40,000
26	G/S 26	32	570	56	400	200	45	170	80		41.31	56,000

*) Please refer to table „Maximum working load Limit“ on page 24 when using in chain slings.

Special Sub-Assembly GT/S

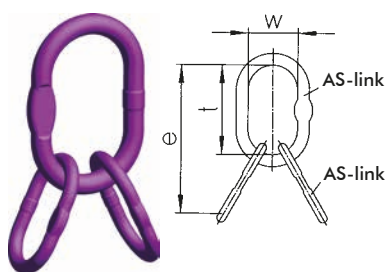


Similar to G/S but also suitable for larger crane hooks and special hooks.

Chain Ø	Code	Can be used to single hook acc. to DIN15401 no.	Dimensions								Weight	Working Load Limit 0°-45° *)
			e	d	t	w	d1	t1	w1	s		
mm			mm								kg	kg
6	GT/S 6	6	214	19	160	95	13	54	25	10	1.43	4,200
7+8	GT/S 7/8	10	240	23	170	105	17	70	34	14	2.41	6,600
10	GT/S 10	10	275	27	190	110	20	85	40	14	4.01	10,100
13	GT/S 13	12	345	33	230	130	23	115	50	17	7.10	15,700
16	GT/S 16	25	415	38	275	150	27	140	65	20	11.32	21,200

*) Please refer to table „Maximum working load Limit“ on page 24 when using in chain slings.

Special Sub-Assembly TG/S

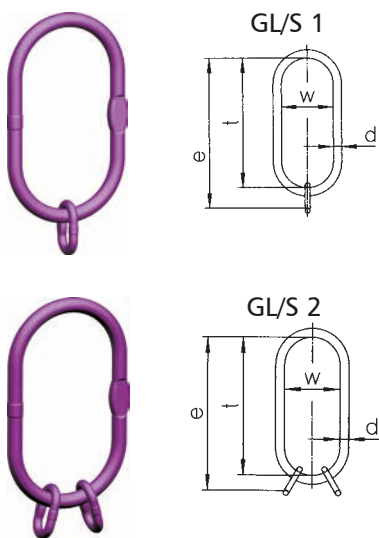


For 4-leg slings, when shortening hooks are to be assembled separately, and for slings with thimble eyes.

Chain Ø	Code	Can be used to single hook acc. to DIN15401 no.	Dimensions					Weight	Working Load Limit 0°-45° *)
			d	e	t	w	d1		
mm			mm					kg	kg
6	TG/S 6	5	19	245	135	75	13	1.60	3,000
7+8	TG/S 7/8	6	23	270	160	90	16	2.66	5,300
10	TG/S 10	10	33	360	200	110	23	7.34	10,100
13	TG/S 13	16	36	440	260	140	27	11.14	14,300
16	TG/S 16	25	45	540	340	180	33	21.10	22,200

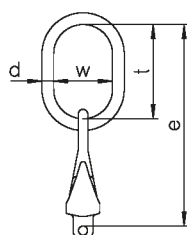
*) Please refer to table „Maximum working load Limit“ on page 24 when using in chain slings.

Special Master Link Assembly GL/S



Chain Ø			Code	Consisting of	Dimensions				Can be used to single hook acc. to DIN15401 no.	Weight	Working Load Limit 0°-45°
					d	t	w	e			
⊥	∧	⋈									
mm	mm	mm			mm						kg
10			GL/S 1-10	L/S27+B/S16	27	340	180	410	25	4.80	4,000
13			GL/S 1-13	L/S27	27	340	180	340	25	4.40	6,700
16			GL/S 1-16	L/S32	33	340	180	340	25	6.70	10,000
19+22			GL/S 1-19/22	L/S40	40	340	180	340	25	10.00	19,000
0°-45°**											
	6+7+8	6	GL/S 2-6/7/8/4-6	L/S 22+2B/S13	23	340	180	394	25	3.50	3,550
	10	7+8	GL/S 2-10/4-7/8	L/S 27+2B/S16	27	340	180	410	25	5.10	5,600
	13	10	GL/S 2-13/4-10	L/S 32+2B/S20	33	340	180	425	25	8.00	9,500
	16	13	GL/S 2-16/4-13	L/S 40+2B/S22	40	340	180	455	25	12.30	14,000
	19	16	GL/S 2-19/4-16	L/S 40+2B/S26	40	340	180	480	25	13.80	21,200

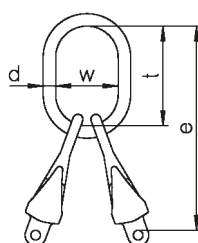
1 Special Clevis Sub-Assembly GTVK/S



For 1-leg slings with shortening element.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit
				d	t	w	e		
mm	inch			mm				kg	kg
6	1/4	GTVK/S 1-6	4	14	120	70	204	0.74	1,400
7	9/32	GTVK/S 1-7	4	14	120	70	242	1.06	1,900
8	5/16	GTVK/S 1-8	5	16	140	80	262	1.30	2,500
10	3/8	GTVK/S 1-10	6	19	160	95	319	2.34	4,000
13	1/2	GTVK/S 1-13	10	23	170	105	373	4.39	6,700
16	5/8	GTVK/S 1-16	10	27	190	110	424	7.45	10,000

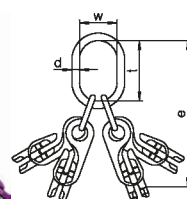
2 Special Clevis Sub-Assembly GTVK/S



For 2-leg slings with shortening element.

Chain Ø		Code	Can be used to single hook acc, to DIN15401 no.	Dimensions				Weight	Working Load Limit β	
				d	t	w	e		up to 45°	45°-60°
mm	inch			mm				kg	kg	kg
6	1/4	GTVK/S 2-6	4	14	120	70	204	1.04	2,000	1,400
7	9/32	GTVK/S 2-7	5	16	140	80	262	1.91	2,650	1,900
8	5/16	GTVK/S 2-8	6	19	160	95	282	2.35	3,550	2,500
10	3/8	GTVK/S 2-10	10	23	170	105	329	4.19	5,600	4,000
13	1/2	GTVK/S 2-13	10	27	190	110	393	8.05	9,500	6,700
16	5/8	GTVK/S 2-16	12	33	230	130	464	14.38	14,000	10,000

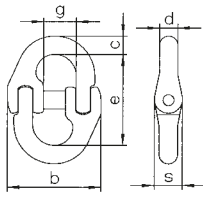
4 Special Clevis Sub-Assembly GTVK/S



For 3 and 4-leg slings with shortening element.

Chain Ø		Code	Can be used to single hook acc. to DIN15401 no.	Dimensions				Weight	Working Load Limit β	
				d	t	w	e		up to 45°	45°-60°
mm	inch			mm				kg	kg	kg
6	1/4	GTVK/S 4-6	6	19	160	95	298	2.63	3,000	2,120
7	9/32	GTVK/S 4-7	10	23	160	110	352	4.89	4,000	2,800
8	5/16	GTVK/S 4-8	10	23	170	105	362	4.93	5,300	3,750
10	3/8	GTVK/S 4-10	10	27	190	110	434	9.01	8,000	6,000
13	1/2	GTVK/S 4-13	12	33	230	130	548	17.90	14,000	10,000
16	5/8	GTVK/S 4-16	20	38	275	150	649	30.52	21,200	15,000

Connecting Link V/S

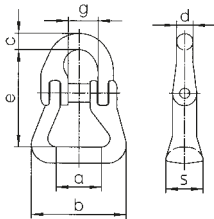


Connecting link for:
Master Link – Chain
Chain – Chain
Hook – Chain
Only for straight pull!

Load pin and bush are also
separately available.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	c	s	d	b	g		
mm	inch		mm						kg	kg
6	1/4	V/S 6	44	8	11	8	39	14	0.06	1,400
7	9/32	V/S 7	51	10	13	9	47	17	0.12	1,900
8	5/16	V/S 8	62	12	14	10	55	18	0.23	2,500
10	3/8	V/S 10	72	15	18	13	64	24	0.42	4,000
13	1/2	V/S 13	88	20	22	17	79	28	0.84	6,700
16	5/8	V/S 16	103	21	29	21	106	33	1.40	10,000
19/20	3/4	V/S 19/20	115	30	35	24	123	42	2.40	16,000
22	7/8	V/S 22	161	34	39	25	148	51	4.15	19,000
26	1	V/S 26	190	40	46	30	175	60	6.70	26,500

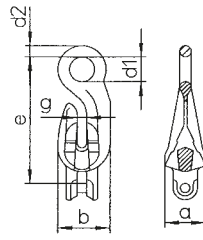
Webbing Coupling Link RSK/S



Link for webbing slings mounted in one
V/S-half. Reduced risk of damage
due to wide surface.

Chain		Code	Dimensions						Weight	Working Load Limit
			a	e	c	d	b	s		
mm	inch		mm						kg	kg
8	5/16	RSK/S 8	29	66	12	10	68	18	0.40	2,500
10	3/8	RSK/S 10	40	81	15	13	82	21	0.55	4,000
13	1/2	RSK/S 13	44	104	20	17	101	28	1.20	6,700
16	5/8	RSK/S 16	47	113	21	21	110	40	2.00	10,000
22	7/8	RSK/S 22	110	190	34	25	215	58	6.50	19,000

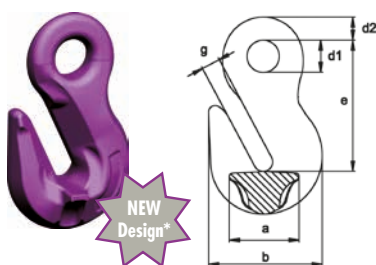
Shortening Hook VK/S



Can be mounted in any chain leg due
to Clevis part. No WLL reduction.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	b	a	d1	d2	g		
mm	inch		mm						kg	kg
6	1/4	VK/S 6	84	37	29	18	9	8	0.30	1,400
7	9/32	VK/S 7	122	54	39	24	12	11	0.62	1,900
8	5/16	VK/S 8	122	54	39	24	12	11	0.63	2,500
10	3/8	VK/S 10	159	70	50	31	14	13	1.25	4,000
13	1/2	VK/S 13	203	92	64	37	18	15	2.70	6,700
16	5/8	VK/S 16	234	102	80	48	24	20	4.80	10,000

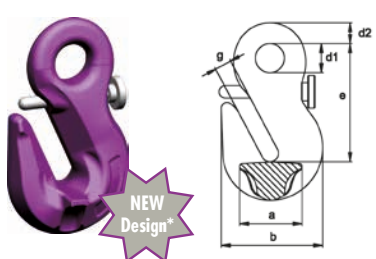
Eye Grab Hook P/S



For shortening and for any slings that must not tighten.
Reduction of load capacity not required due to 4-fold safety.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	b	d1	d2	g	a		
mm	inch		mm						kg	kg
6	1/4	P/S 6 *	50	42	12	9	7	26	0.15	1,400
7+8	9/32+5/16	P/S 7/8 *	65	56	16	12	9	35	0.37	2,500
10	3/8	P/S 10 *	77	70	20	14	12	46	0.70	4,000
13	1/2	P/S 13 *	101	91	26	19	15	60	1.52	6,700
16	5/8	P/S 16 *	121	113	32	23	19	69	2.90	10,000
19/20	3/4	P/S 19/20	151	150	36	27	25	84	6.15	16,000
22	7/8	P/S 22	170	165	42	31	27	91	8.30	19,000
26	1	P/S 26	201	195	50	37	32	107	13.80	26,500

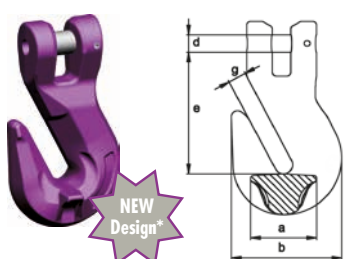
Eye Grab Hook with Safety Pin PS/S



Shortening hook protected against accidental release of the chain.
Reduction of load capacity not required due to 4-fold safety.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	b	d1	d2	g	a		
mm	inch		mm						kg	kg
7+8	9/32+5/16	PS/S 7/8 *	65	42	16	12	9	35	0.37	2,500
10	3/8	PS/S 10 *	77	70	20	14	12	46	0.70	4,000
13	1/2	PS/S 13 *	101	91	26	19	15	60	1.52	6,700

Clevis Grab Hook PK/S



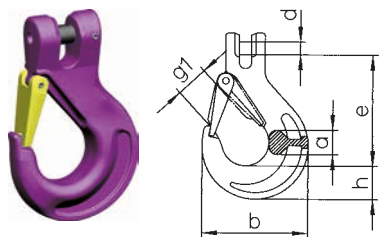
For shortening and for slings that must not tighten.
Reduction of load capacity not required due to 4-fold safety.

Chain		Code	Dimensions					Weight	Working Load Limit
			e	b	d	g	a		
mm	inch		mm					kg	kg
6	1/4	PK/S 6 *	47	42	7.4	7	26	0.17	1,400
7	9/32	PK/S 7 *	63	56	9	9	35	0.44	1,900
8	5/16	PK/S 8 *	63	56	10	9	35	0.44	2,500
10	3/8	PK/S 10 *	78	70	12.5	12	46	0.85	4,000
13	1/2	PK/S 13 *	93	92	16	15	60	1.75	6,700
16	5/8	PK/S 16 *	115	113	20	19	70	3.30	10,000
19/20	3/4	PK/S 19/20	141	150	24	25	84	6.15	16,000
22	7/8	PK/S 22	158	165	27	27	91	9.00	19,000



It is very important and intended from the technical point of view that the middle chain link no longer contacts the bearing surface of the KWB Eye Grab Hook P/S and Clevis Grab Hook PK/S, since the Star Alloy chain is supported by the side faces of the KWB Grab Hook. Reduction of load capacity is not required due to 4-fold safety!

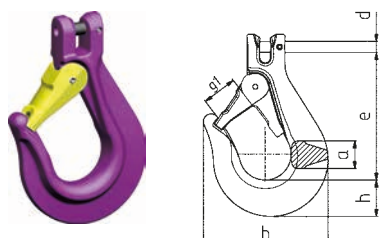
Clevis Sling Hook with Forged Safety Latch HKS/S



General purpose hook.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	h	a	d	g1	b		
mm	inch		mm						kg	kg
6	1/4	HKS/S 6	69	20	15	7	19	66	0.20	1,400
7	9/32	HKS/S 7	95	28	19	9	26	90	0.60	1,900
8	5/16	HKS/S 8	95	28	19	10	26	90	0.60	2,500
10	3/8	HKS/S 10	109	35	25	12.5	31	108	1.10	4,000
13	1/2	HKS/S 13	136	41	34	16	39	131	2.00	6,700
16	5/8	HKS/S 16	155	49	37	20	45	153	3.48	10,000
19/20	3/4	HKS/S 19/20	184	53	51	24	53	177	5.00	16,000
22	7/8	HKS/S 22	214	62	52	27	62	196	12.10	19,000

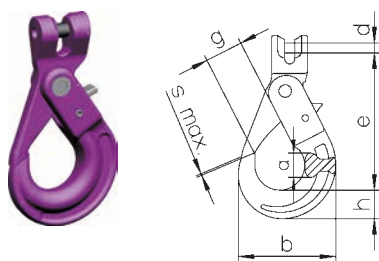
Wide Bowl Clevis Sling Hook with Forged Safety Latch VHKS/S



Alternative for the HKS/S with wider throat opening.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	h	a	d	g1	b		
mm	inch		mm						kg	kg
8	5/16	VHKS/S 8	116	33	25	10	32	113	1.10	2,500
10	3/8	VHKS/S 10	126	40	30	12.5	35	132	1.70	4,000

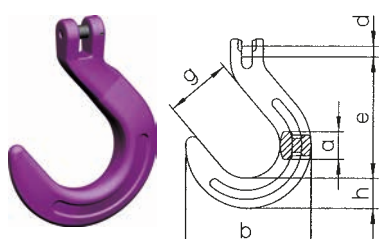
Clevis Self Locking Hook HKSB/S



Closes and locks automatically.

Chain		Code	Dimensions							Weight	Working Load Limit
			e	h	a	b	d	g	s max.		
mm	inch		mm							kg	kg
6	1/4	HKSB/S 6	94	20	17	71	7.5	28	1	0.50	1,400
7	9/32	HKSB/S 7	123	26	20	88	9	34	1	0.90	1,900
8	5/16	HKSB/S 8	123	26	20	88	10	34	1	0.90	2,500
10	3/8	HKSB/S 10	144	30	29	107	12.5	45	1	1.60	4,000
13	1/2	HKSB/S 13	180	40	35	138	16	52	1.5	2.90	6,700
16	5/8	HKSB/S 16	218	50	41	168	20	60	2	5.80	10,000

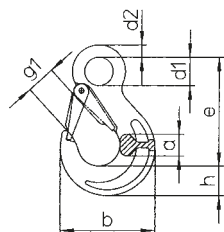
Clevis Foundry Hook GHK/S



For applications where jaw size „g“ of the VHKS/S hook is inadequate; mainly in foundries. Before using the hook, check whether hooks without safety latch are allowed to be used for this particular application.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	h	a	g	d	b		
mm	inch		mm						kg	kg
8	5/16	GHK/S 8	120	29	25	64	10	118	1.00	2,500
10	3/8	GHK/S 10	140	35	32	76	12.5	143	1.78	4,000
13	1/2	GHK/S 13	170	42	40	89	16	170	2.96	6,700

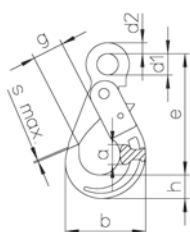
Eye Sling Hook with Forged Safety Latch HS/S



For general lifting applications.

Chain		Code	Dimensions							Weight	Working Load Limit
			e	h	a	d1	d2	g1	b		
mm	inch		mm							kg	kg
6	1/4	HS/S 6	85	21	17	20	10	19	68	0.30	1,400
7+8	9/32+5/16	HS/S 7/8	106	27	19	25	11	26	88	0.50	2,500
10	3/8	HS/S 10	131	33	26	34	16	31	109	1.10	4,000
13	1/2	HS/S 13	164	44	33	43	19	39	134	2.20	6,700
16	5/8	HS/S 16	183	50	40	50	25	45	155	3.50	10,000
19	3/4	HS/S 19/20	205	55	48	55	27	53	178	5.80	16,000
22	7/8	HS/S 22	225	62	50	60	29	62	196	8.00	19,000
26	1	HS/S 26	259	75	70	70	37	73	235	13.40	26,500

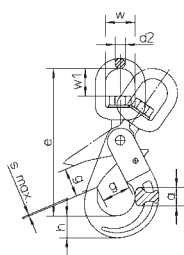
Eye Self Locking Hook HSB/S



Large eye, therefore suitable for ropes and webbing slings. Automatically closes and locks under load, and requires the load to be grounded before load can be released. Not for welded system!

Chain		Code	Dimensions								Weight	Working Load Limit
			e	h	a	b	d1	d2	g	s max.		
mm	inch		mm								kg	kg
6	1/4	HSB/S 6	110	20	17	71	21	11	28	1	0.50	1,400
7+8	9/32+5/16	HSB/S 7/8	136	26	20	88	25	12	34	1	0.90	2,500
10	3/8	HSB/S 10	169	30	29	107	35	15	45	1	1.50	4,000
13	1/2	HSB/S 13	205	40	35	138	40	20	52	1.50	2.70	6,700
16	5/8	HSB/S 16	251	50	41	168	50	27	60	2	5.70	10,000
19	3/4	HSB/S 19/20	290	62	50	194	60	30	70	2	9.80	16,000
22	7/8	HSB/S 22	322	65	52	211	70	32	81	2	12.40	19,000

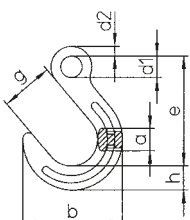
Swivel Safety Hook WSB/S



Standard type can not be swiveled when loaded. Not for welded system!

Chain		Code	Dimensions								Weight	Working Load Limit
			e	h	a	w	w1	d2	g	s max.		
mm	inch		mm								kg	kg
6	1/4	WSB/S 6	161	20	17	35	36	12	28	1	0.60	1,400
7+8	9/32+5/16	WSB/S 7/8	182	26	20	35	36	12	34	1	1.10	2,500
10	3/8	WSB/S 10	218	30	29	42	40	16	45	1	2.00	4,000
13	1/2	WSB/S 13	269	40	35	49	47	20	52	1.5	4.00	6,700
16	5/8	WSB/S 16	319	50	41	60	60	24	60	2	6.80	10,000

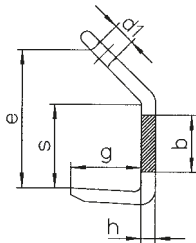
Foundry Hook GH/S



Chain		Code	Dimensions								Weight	Working Load Limit
			e	h	a	d1	d2	g	b			
mm	inch		mm								kg	kg
7+8	9/32+5/16	GH/S 7/8	131	29	25	24	11	64	118	0.92	2,500	
10	3/8	GH/S 10	158	35	32	31	14	76	143	1.77	4,000	
13	1/2	GH/S 13	190	42	40	39	17	89	170	2.82	6,700	
16	5/8	GH/S 16	224	50	46	47	22	102	200	5.03	10,000	
19	3/4	GH/S 19/20	260	61	54	56	28	114	231	7.60	16,000	

Special Accessories

Sheet Metal Plate Hook BH/S

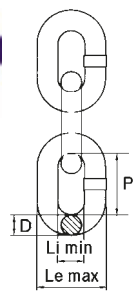


For lifting sheet metal stacks and boards.
Recommended angle of inclination of the sling: 15-30°. Use min. 3-leg chain sling.

Chain		Code	Dimensions						Weight	Working Load Limit
			e	s	b	h	d1	g		
mm	inch		mm						kg	kg
7+8	9/32+5/16	BH/S 7/8	131	80	50	15	28	55	1.20	2,500
10	3/8	BH/S 10	170	100	70	20	36	65	2.89	4,000
13	1/2	BH/S 13	209	130	80	25	40	90	5.23	6,700
16	5/8	BH/S 16	263	160	100	30	50	110	9.79	10,000
19	3/4	BH/S 19/20	306	185	120	40	60	130	18.39	16,000
22	7/8	BH/S 22	368	220	140	50	75	150	31.65	19,000

Special types available upon request

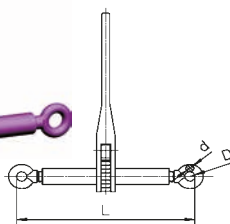
Lashing Chain Star Alloy SA/S – Measurements, Load Values, Weights



Chain acc. ASTM A973/A973M-01

Chain		Pitch	Li/min.	Le/max.	Weight	LC Lashing Capacity	Breaking Force
D	P						
mm	inch	mm	mm	mm	kg/m	kN	kN
8	5/16	24	11	29	1.57	50	101
10	3/8	30	14	36	2.46	80	157
13	1/2	39	18	47	4.18	134	265

Ratchet Load Binder RLS/S



According to EN-specifications

Code	Max. Permissible Lashing Capacity	Normal Tension Force	Dimensions					Weight
			Length L closed	Length L open	Tension range	D	d	
	LC	STF						
	kN	daN	mm					kg
RLS/S 8	50	1,900	355	500	145	20	16	3.20
RLS/S 10	80	3,000	365	510	145	26	18	3.80
RLS/S 13	134	2,500	576	866	290	31	22	9.90

Spare Parts

Forged Safety Latch Kits for Eye Sling Hooks and Clevis Sling Hooks

	Chain		Code	Spare Part for
	mm	inch		
	6	1/4	FG 6	HKS/S 6 + HS/S 6
	7+8	9/32+5/16	FG 7/8	HKS/S 7 + HKS/S 8 + HS/S 7/8
	10	3/8	FG 10	HKS/S 10 + HS/S 10
	13	1/2	FG 13	HKS/S 13 + HS/S 13
	16	5/8	FG 16	HKS/S 16 + HS/S 16
	19	3/4	FG 19	HKS/S 19/20 + HS/S 19/20
	22	7/8	FG 22	HKS/S 22 + HS/S 22
	26	1	FG 26	HS/S 26

Forged Safety Latch Kits for Wide Bowl Clevis Sling Hook with Safety Latch VHKS/S

	Chain		Code	Spare Part for
	mm	inch		
	8	5/16	FG-V 8	VHKS/S 8
	10	3/8	FG-V 10	VHKS/S 10

Pin Kits for Clevis Sling Hook and Shortening Hook

	Chain		Code	Spare Part for
	mm	inch		
	6	1/4	KBG/S 6	HKS/S 6 + VK/S 6 + PK/S 6
	7	9/32	KBG/S 7	HKS/S 7 + VK/S 7 + PK/S 7 + GHK/S 7
	8	5/16	KBG/S 8	HKS/S 8 + VK/S 8 + PK/S 8 + VHKS/S 8 + GHK/S 8
	10	3/8	KBG/S 10	HKS/S 10 + VK/S 10 + PK/S 10 + VHKS/S 10 + GHK/S 10
	13	1/2	KBG/S 13	HKS/S 13 + VK/S 13 + PK/S 13 + GHK/S 13
	16	5/8	KBG/S 16	HKS/S 16 + VK/S 16 + PK/S 16
	19	3/4	KBG/S 19	HKS/S 19/20 + PK/S 19/20
	22	7/8	KBG/S 22	HKS/S 22 + PK/S 22

Pin Kit for Clevis Self Locking Hook

	Chain		Code	Spare Part for
	mm	inch		
	6	1/4	KBG - HKSB/S 6	HKSB/S 6
	7	9/32	KBG - HKSB/S 7	HKSB/S 7
	8	5/16	KBG - HKSB/S 8	HKSB/S 8
	10	3/8	KBG - HKSB/S 10	HKSB/S 10
	13	1/2	KBG - HKSB/S 13	HKSB/S 13
	16	5/8	KBG - HKSB/S 16	HKSB/S 16

Pin Kit for Connecting Link and Webbing Coupling Link

Chain		Code	Spare Part for
mm	inch		
6	1/4	BG-V/S 6	V/S 6
7	9/32	BG-V/S 7	V/S 7
8	5/16	BG-V/S 8	V/S 8 + RSK/S 8
10	3/8	BG-V/S 10	V/S 10 + RSK/S 10
13	1/2	BG-V/S 13	V/S 13 + RSK/S 13
16	5/8	BG-V/S 16	V/S 16 + RSK/S 16
19	3/4	BG-V/S 19	V/S 19
22	7/8	BG-V/S 22	V/S 22 + RSK/S 22
26	1	BG-V/S 26	V/S 26

Trigger Kit for Self Locking Hooks

Chain		Code	Spare Part for
mm	inch		
6	1/4	HBG/S 06-8	HSB/S 6 + HKSB/S 6 + WSB/S 6
7+8	9/32+5/16	HBG/S 7/8-8	HSB/S 7/8 + HKSB/S 7 + HKSB/S 8 + WSB/S 7/8
10	3/8	HBG/S 10-8	HSB/S 10 + HKSB/S 10 + WSB/S 10
13	1/2	HBG/S 13-8	HSB/S 13 + HKSB/S 13 + WSB/S 13
16	5/8	HBG/S 16-8	HSB/S 16 + HKSB/S 16 + WSB/S 16
19+22	3/4, 7/8	HBG/S 19+22	HSB/S 19+22

Safety Catch Kit for Eye Grab Hook with Safety Pin PS/S

Chain		Code	Spare Part for
mm	inch		
7+8	9/32+5/16	PGS/S 7/8	PS/S 7/8
10	3/8	PGS/S 10	PS/S 10
13	1/2	PGS/S 13	PS/S 13

Working Load Tag with Wire Rope Binder and Fastener

Code	Code
ID-Set	1/2/3/4-legs



Star Alloy G 100 – whenever 100 % is required, the best answer is to trust in a star.





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Super Alloy G 80 – Characteristics

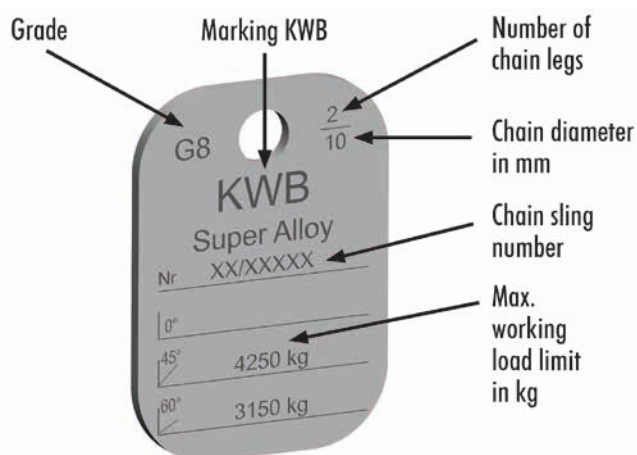
Chain Quality:	Super Alloy Chain	SA	Corresponds with EN 818-2 & machinery directive 2006/42/EC
Stress at Load Capacity Limit:			200 N/mm ²
Test Stress:			500 N/mm ² – corresponds to 2.5 times the load capacity
Breaking Stress:			800 N/mm ² – corresponds to 4 times the load capacity
Breaking Elongation:			min. 20 %
Bending acc. to EN 818-2:			0.8 x nominal diameter
Permissible Working Temperature:	Super Alloy Chain	SA	max. 400 °C
	Components		max. 400 °C
Grade marking:	Super Alloy Chain	SA	8
	Components		8
Surface:	Super Alloy Chain	SA	Black painted
	Components		Powder coated
Working Load Tag:	Super Alloy Chain	SA	

All the required data is shown on the working load tag.

Note: Working load tags should only be assembled acc. EN 818-4 and by competent persons. Working load tags should be used, solely when the respective chain & KWB components are assembled in the chain sling. Should alternative Working load limits arise in the chain sling through the use of special parts, the tags are impermissible. Disregard of these instructions can lead to material damage and personal injury. KWB will not assume liability.

Temperature	-40° to 200 °C	above 200° to 300 °C	above 300° to 400 °C
Load Factor Super Alloy	1	0.9	0.75
Asymmetric Load Distribution	In this case the working load limit must be reduced by at least one chain leg, for example a 3-leg or 4-leg sling is to be classified as a 2-leg chain sling. In case of doubt, it must be supposed that only one of the chain legs carries the entire load.		
Edge Loads	R = larger than 2x chain Ø 	R = larger than chain Ø 	R = chain Ø or smaller 
Load Factor	1	0.7	0.5
Impact Load	slight impact	medium impact	strong impact
Load Factor	1	0.7	impermissible

Clear Identification



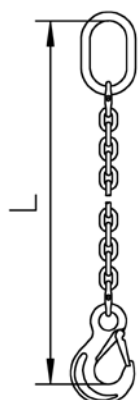
Sample of tag for ready made chain sling

Certificate

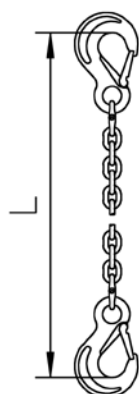
A test certificate is issued for all our products which certifies all the specified characteristics.



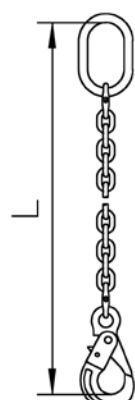
Sling Examples



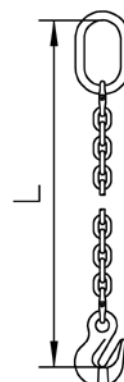
I A-HS V



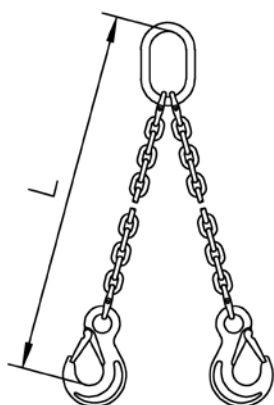
I HS-HS V



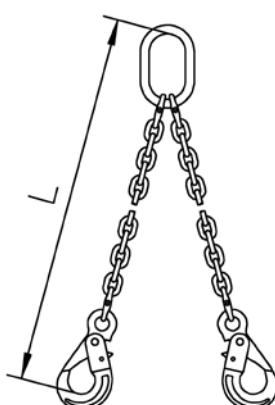
I A-HSB V



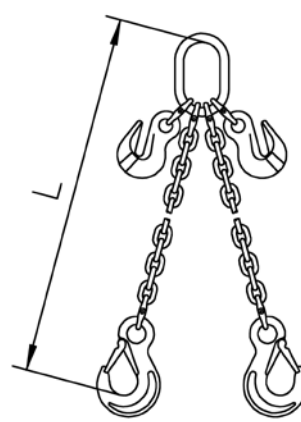
I A-P V



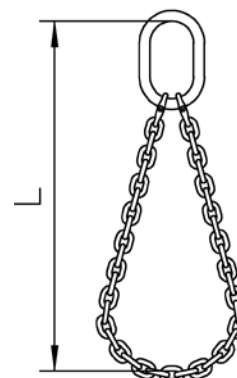
II A-HS V



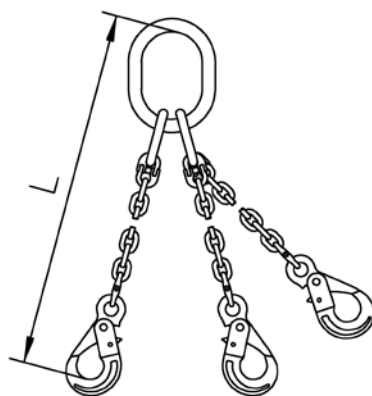
II A-HSB V



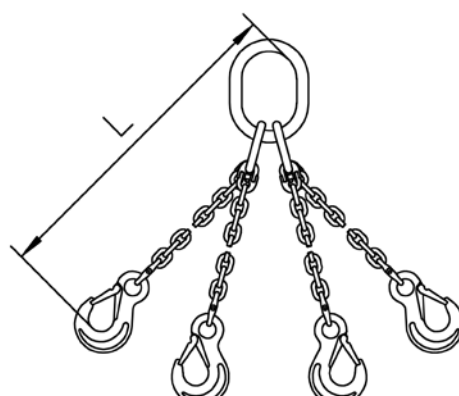
II A-HS-P V



II A-S V



III G-HSB V



IV G-HS V

Example of Order Text:

Super Alloy chain SA 10 mm, 2 legs with masterlink A and eye sling hook with forged safety latch HS, length 3,000 mm assembled with connecting link V.

SA 10 II A - HS 3000 V

Chain Nominal diameter Number of legs Master Link Hook Length Connecting link

Master Links & Sub-Assemblies							
		1-leg		2-leg		3 & 4-leg	
							
Super Alloy Chain Ø		Master Link	Special Master Link	Master Link	Special Master Link	Sub-Assembly	Special Sub-Assembly
SA		A	T	A	T	G	TG
mm	inch	Code	Code	Code	Code	Code	Code
6	1/4	A 13	T 13	A 13	T 13	G 06/7.8	
7	9/32	A 13	T 13	A 16	T 13	G 06/7.8	TG 07.8
8	5/16	A 16	T 13	A 18	T 16	G 08.8	TG 08.8
10	3/8	A 18	T 16	A 22	T 20	G 10.8	TG 10.8
13	1/2	A 22	T 20	A 26	T 26	G 13.8	TG 13.8
16	5/8	A 26	T 26	A 32	T 32	G 16.8	TG 16.8
18	11/16	A 32	T 32	A 36	T 38	G 18.8	
20	3/4	A 36	T 32	A 36	T 38	G 20.8	
22	7/8	A 36	T 38	A/T 45	A/T 45	G 22.8	
26	1	A/T 45	A/T 45	A/T 50	A/T 50	G 26.8	
32	1 1/4	A/T 50	A/T 50	A/T 56	A/T 56	G 32.8	
36		A/T 56	A/T 56	A/T 56	A/T 56		
40		A/T 56					
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Connecting & Shortening Elements							
							
Super Alloy Chain Ø		Connecting Link	Omega Shackle	Webbing Coupling Link	Eye Grab Hook	Clevis Grab Hook	Clevis Shortening Clutch (with Securing Part) VKL
SA		V	VU	RSK	P	PK	VKL
mm	inch	Code	Code	Code	Code	Code	Code
6	1/4	V 06.8 U	VU 06.8		P-06.8		VKL 06.8
7	9/32	V 07.8 U	VU 07.8		P 07/8.8	PK 07/8.8	VKL 07.8
8	5/16	V 08.8 U	VU 08.8	RSK 08.8 U	P 07/8.8	PK 07/8.8	VKL 08.8
10	3/8	V 10.8 U	VU 10.8	RSK 10.8 U	P 10.8	PK 10.8	VKL 10.8
13	1/2	V 13.8 U	VU 13.8	RSK 13.8 U	P 13.8	PK 13.8	VKL 13.8
16	5/8	V 16.8 U	VU 16.8	RSK 16.8 U	P 16.8	PK 16.8	
18	11/16						
20	3/4	V 20.8 U	VU 20.8		P 20.8	PK 20.8	
22	7/8	V 22.8			P 22.8		
26	1	V 26.8	VU 26.8		P 26.8		
32	1 1/4	V 32.8 U			P 32.8		
Page 42		Page 44	Page 44	Page 44	Page 45	Page 45	Page 45

Sling Hooks

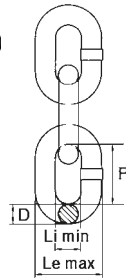
								
Super Alloy Chain Ø		Eye Sling Hook with Forged Safety Latch	Clevis Sling Hook with Forged Safety Latch	Wide Bowl Clevis Sling Hook with Forged Safety Latch	Eye Self Locking Hook	Clevis Self Locking Hook	Swivel Safety Locking Hook	Foundry Hook
SA		HS	HKS	VHKS	HSB	HKSB	WSB	GH
mm	inch	Code	Code	Code	Code	Code	Code	Code
6	1/4	HS 06.8 U	HKS 06.8 U		HSB 06.8	HKSB 06.8 U	WSB 06.8	
7	9/32	HS 07/8.8 U	HKS 07/8.8 U	VHKS 07/8.8	HSB 07/8.8	HKSB 07/8.8 U	WSB 07/8.8	GH 07/8.8
8	5/16	HS 07/8.8 U	HKS 07/8.8 U	VHKS 07/8.8	HSB 07/8.8	HKSB 07/8.8 U	WSB 07/8.8	GH 07/8.8
10	3/8	HS 10.8 U	HKS 10.8 U	VHKS 10.8	HSB 10.8	HKSB 10.8 U	WSB 10.8	GH 10.8
13	1/2	HS 13.8 U	HKS 13.8 U		HSB 13.8	HKSB 13.8 U	WSB 13.8	GH 13.8
16	5/8	HS 16.8 U	HKS 16.8 U		HSB 16.8	HKSB 16.8 U	WSB 16.8	GH 16.8
18	11/16	HS 20.8 U			HSB 20.8			GH 20.8
20	3/4	HS 20.8 U	HKS 20.8 U		HSB 20.8			GH 20.8
22	7/8	HS 22.8 U	HKS 22.8 U		HSB 22.8			
26	1	HS 26.8 U						
32	1 1/4	HS 32.8 U						
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Special Accessories

		
Weld-on Hook	Ratchet Load Binder with Grab Hooks	Ratchet Load Binder
HAS	RLSP	RLS
Code	Code	Code
HAS 1.3	RLSP 08	RLS 08
HAS 3.8	RLSP 10	RLS 10
HAS 6.3	RLSP 13	RLS 13
HAS 10		
Page 48	Page 48	Page 48

Super Alloy Chain

Super Alloy Chain SA acc, EN 818-2 – Measurements, Load Values, Weights



Safety factor 4:1

Chain		Tolerance		P	Tolerance		Li / min.	Le / max.	Weight	Working Load Limit	Breaking Load
D											
mm	inch	mm		mm	mm	mm	mm	mm	kg/m	kg	kN
6	1/4	±0.24		18	±0.5	7.8	22.2	0.8	1,120	45.2	
7	9/32	±0.28		21	±0.6	9.1	25.9	1.1	1,500	61.6	
8	5/16	±0.32		24	±0.7	10.4	29.6	1.4	2,000	80.4	
10	3/8	±0.40		30	±0.9	13	37	2.2	3,150	126	
13	1/2	±0.52		39	±1.2	16.9	48.1	3.8	5,300	212	
16	5/8	±0.64		48	±1.4	20.8	59.2	5.7	8,000	322	
18	11/16	±0.90		54	±1.6	23.4	66.6	7.3	10,000	407	
20	3/4	±1.00		60	±1.8	26	74	9	12,500	503	
22	7/8	±1.10		66	±2.0	28.6	81.4	10.9	15,000	608	
26	1	±1.30		78	±2.3	33.8	96.2	15.2	21,200	849	
32	1 1/4	±1.60		96	±2.9	41.6	118	23	31,500	1,290	

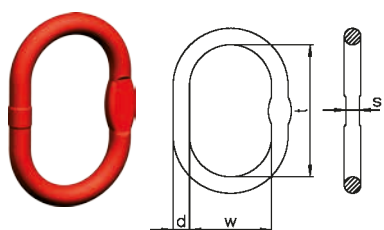
Maximum Working Load Limit for Super Alloy Chains

Chain Ø	1-leg Chains	2-leg Chains		3- & 4-leg Chains	
Angle of Inclination		0 < β ≤ 45°	0 < β ≤ 60°	0 < β ≤ 45°	0 < β ≤ 60°
Load Factor	1	1.4	1	2.1	1.5
Ø	Load Capacity [kg]				
6	1,120	1,600	1,120	2,360	1,700
7	1,500	2,120	1,500	3,150	2,240
8	2,000	2,800	2,000	4,250	3,000
10	3,150	4,250	3,150	6,700	4,750
13	5,300	7,500	5,300	11,200	8,000
16	8,000	11,200	8,000	17,000	11,800
18	10,000	14,000	10,000	21,200	15,000
20	12,500	17,000	12,500	26,500	19,000
22	15,000	21,200	15,000	31,500	22,400
26	21,200	30,000	21,200	45,000	31,500
32	31,500	45,000	31,500	67,000	47,500

If the chains are used in more demanding conditions (e.g. high temperature, asymmetric load distribution edge loads, impacts) the maximum load capacities in the table must be reduced. Please use the load factors on page 38 and refer to the specification in the user information.

Master Links, Sub-Assemblies & Accessories

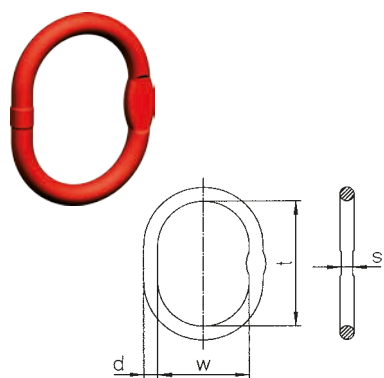
Master Link A



Chain Ø		Code	Commercial Code	Measurements				Weight	Working Load Limit 0°-45° *)
⊥	∧			d	t	w	s		
mm	mm			mm				kg	kg
6+7	6	A 06/76.8	A 13	13	110	60	10	0.34	2,300
8	7	A 87.8	A 16	16.5	110	60	14	0.58	3,500
10	8	A 108.8	A 18	19	135	75	14	0.92	5,000
13	10	A 1310.8	A 22	23	160	90	17	1.60	7,600
16	13	A 1613.8	A 26	27	180	100	20	2.46	9,600
18	16	A 1816.8	A 32	33	200	110	26	4.04	13,600
20	18	A 2018.8	A 36	36	260	140		6.22	25,100
22	20	A 2220.8	A 36	36	260	140		6.22	25,100
26	22	A 2622.8	A/T 45	45	340	180		12.82	30,800
32	26	A 3226.8	A/T 50	50	350	190		16.60	40,000
36	32	A 3632.8	A/T 56	56	400	200		23.30	60,000
40	36	A 4036.8	A/T 56	56	400	200		23.30	60,000

*) Please refer to table „Maximum Working Load Limit“ on page 42 when using in chain slings.

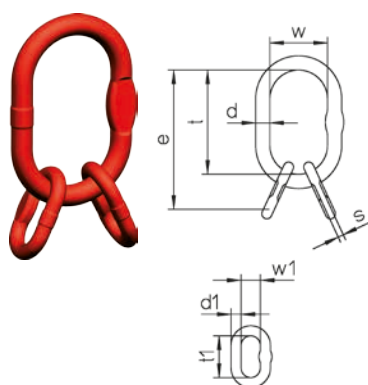
Special Master Link T



Chain Ø		Code	Commercial Code	Measurements				Weight	Working Load Limit 0°-45° *)
⊥	∧			d	t	w	s		
mm	mm			mm				kg	kg
6+7+8	6+7	T 87.8	T 13	14	120	70	10	0.44	2,300
10	8	T 108.8	T 16	16.5	140	80	14	0.67	3,200
13	10	T 1310.8	T 20	20	160	95	14	1.21	5,400
16	13	T 1613.8	T 26	27	190	110	20	2.65	10,100
18+20	16	T 2016.8	T 32	33	230	130	26	4.78	15,700
22	18+20	T 2220.8	T 38	38	275	150	29	7.48	20,500
26	22	T 2622.8	A/T 45	45	340	180		12.82	30,800
32	26	T 3226.8	A/T 50	50	350	190		16.60	40,000
36	32	T 3632.8	A/T 56	56	400	200		23.30	60,000

*) Please refer to table „Maximum Working Load Limit“ on page 42 when using in chain slings.

Sub-Assembly G



Chain Ø		Code	Commercial Code	Measurements								Weight	Working Load Limit 0°-45° *)
				d	t	w	d1	t1	w1	s	e		
mm				mm								kg	kg
6+7	G 06/7.8	G 06/7.8	G 06/7.8	19	135	75	13	60	38	10	195	1.32	4,200
8	G 08.8	G 08.8	G 08.8	23	160	90	16.5	70	34	14	230	2.32	7,600
10	G 10.8	G 10.8	G 10.8	27	180	100	19.5	85	40	14	265	3.52	9,600
13	G 13.8	G 13.8	G 13.8	33	200	110	23	115	50	17	315	6.26	13,780
16	G 16.8	G 16.8	G 16.8	36	260	140	27	140	65	20	400	9.86	20,800
18	G 18.8	G 18.8	G 18.8	45	340	180	33	150	70		490	18.92	30,700
20	G 20.8	G 20.8	G 20.8	50	350	190	33	150	70		500	22.65	34,100
22	G 22.8	G 22.8	G 22.8	50	350	190	36	170	75		520	25.19	40,000
26	G 26.8	G 26.8	G 26.8	56	400	200	40	170	80		570	38.01	54,000
32	G 32.8	G 32.8	G 32.8	70	460	250	50	200	100		660	66.6	76,000

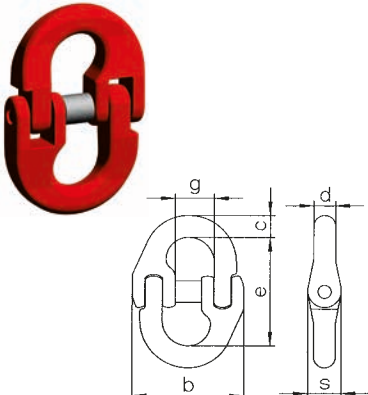
*) Please refer to table „Maximum Working Load Limit“ on page 42 when using in chain slings.

Special Sub-Assembly TG

Chain Ø mm	Code	Commercial Code	Measurements			Weight kg	Working Load Limit 0°-45° *)
			e	f	w		
			mm	mm	mm	kg	kg
7	TG 07.8	TG 07.8	280	160	95	2.09	3,150
8	TG 08.8	TG 08.8	310	170	105	3.08	4,250
10	TG 10.8	TG 10.8	350	190	110	5.08	7,000
13	TG 13.8	TG 13.8	420	230	130	10.09	13,200
16	TG 16.8	TG 16.8	505	275	150	17.05	20,500

*) Please refer to table „Maximum Working Load Limit“ on page 42 when using in chain slings.

Connecting Link V



Chain		Code	Measurements						Weight	Working Load Limit
			g	s	b	e	c	d		
mm	inch		mm						kg	kg
6	1/4	V 06.8 U	14.1	11	39	44.4	7.8	7.6	0.06	1,120
7	9/32	V 07.8 U	17	13	47	51	10	9	0.12	1,500
8	5/16	V 08.8 U	18.35	14	55	61.5	11.5	10	0.18	2,000
10	3/8	V 10.8 U	23	18	64	72	12.6	12.6	0.33	3,150
13	1/2	V 13.8 U	27.6	22	79	88	19	16.7	0.7	5,300
16	5/8	V 16.8 U	33	29	106	103	21	21	1.14	8,000
20	3/4	V 20.8 U	41.7	35	123	115	29.5	23.5	2.1	12,500
22	7/8	V 22.8	48	39	150	133	27	27	2.2	15,000
26	1	V 26.8 U	61	46	159	164	32	30	5.1	21,200
32	1 1/4	V 32.8 U	80	50	195	194	40	32	8.5	31,500

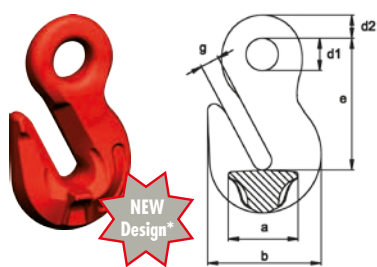
Omega Shackle VU

Chain		Code	Measurements						Weight	Working Load Limit
			e	b	d	s	a	M		
mm	inch		mm						kg	kg
6	1/4	VU 06.8	34	21	9	11	16	7	0.07	1,120
7	9/32	VU 07.8	49	28	13	16	22	8	0.2	1,500
8	5/16	VU 08.8	48	28	13	16	22	10	0.22	2,000
10	3/8	VU 10.8	60	35	16	20	27	12	0.38	3,150
13	1/2	VU 13.8	72	39	18	24	34	16	0.67	5,300
16	5/8	VU 16.8	80	47	23	32	44	20	1.21	8,000
20	3/4	VU 20.8	96	56	26	36	52	24	1.97	12,500
26	1	VU 26.8	132	77	33	49	66	30	4.06	21,200

Webbing Coupling Link RSK

	Chain		Code	Measurements						Weight	Working Load Limit
				b	e	s	a	g	d		
	mm	inch		mm						kg	kg
	8	5/16	RSK 08.8 U	68	66	18	29	19	10	12	0.3
10	3/8	RSK 10.8 U	82	81	21	40	23	12.6	12.6	0.5	3,150
13	1/2	RSK 13.8 U	100	104	28	50	28	16.5	19.5	1.10	5,300
16	5/8	RSK 16.8 U	110	112.5	40	47	33	21	21	2	8,000

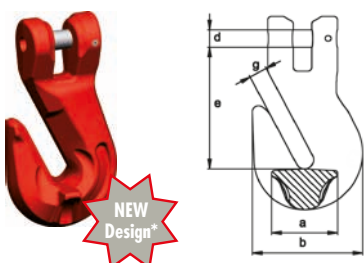
Eye Grab Hook P



NEW
Design*

Chain		Code	Measurements						Weight	Working Load Limit
			g	d2	d1	e	a	b		
mm	inch		mm						kg	kg
6	1/4	P 06.8 *	7	9	12	50	26	41	0.14	1,120
7+8	9/32+5/16	P 07/8.8 *	9	12	16	65	34	55	0.34	2,000
10	3/8	P 10.8 *	12	14	20	77	46	69	0.65	3,150
13	1/2	P 13.8 *	15	19	26	101	60	89	1.44	5,300
16	5/8	P 16.8 *	19	23	32	121	70	110	2.60	8,000
18+20	11/16+3/4	P 20.8	25	27	36	151	84	150	6.15	12,500
22	7/8	P 22.8	27	31	42	170	91	165	8.30	15,000
26	1	P 26.8	32	37	50	201	107	195	13.80	21,200
32	1 1/4	P 32.8	39	44	60	245	139	231	21.80	31,500

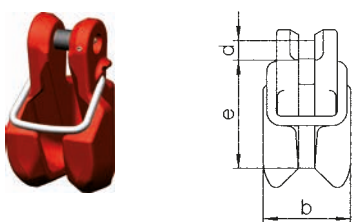
Clevis Grab Hook PK



NEW
Design*

Chain		Code	Measurements					Weight	Working Load Limit
			g	d	e	a	b		
mm	inch		mm					kg	kg
7+8	9/32+5/16	PK 07/8.8 *	9	9	63	34	55	0.40	2,000
10	3/8	PK 10.8 *	12	12.5	78	46	69	0.79	3,150
13	1/2	PK 13.8 *	15	16	93	60	89	1.61	5,300
16	5/8	PK 16.8 *	19	20	115	70	110	3.10	8,000
20	3/4	PK 20.8	25	24	141	84	150	6.15	12,500

Clevis Shortening Clutch VKL



¹⁾ clevis connector with bent hitch pin, see figure

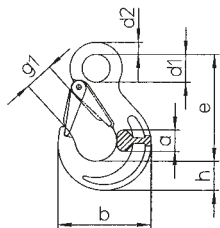


Chain		Code	Measurements			Weight	Working Load Limit
			e	b	d		
mm	inch		mm			kg	kg
6	1/4	VKL 06.8	45	36	7.4	0.27	1,120
7	9/32	VKL 07.8	58	44	9	0.5	1,500
8	5/16	VKL 08.8	58	44	10	0.5	2,000
10	3/8	VKL 10.8	70	55	12.5	0.8	3,150
13	1/2	VKL 13.8 ¹⁾	90	70	16	1.53	5,300

Warning Instructions:

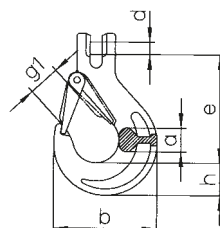
- only load the inside chain
- only to be used with safety device
- make sure that the chain fits properly

Eye Sling Hook with Forged Safety Latch HS



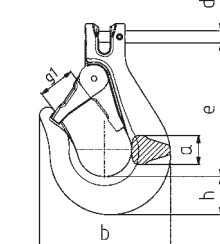
Chain		Code	Measurements							Weight	Working Load Limit
			g1	d2	d1	e	a	h	b		
mm	inch		mm							kg	kg
6	1/4	HS 06.8 U	19	10	20	85	17	21	68	0.3	1,120
7+8	9/32+5/16	HS 07/8.8 U	26	11	25	106	19	27	88	0.5	2,000
10	3/8	HS 10.8 U	31	16	34	131	26	33	109	1.1	3,150
13	1/2	HS 13.8 U	39	19	43	164	33	44	134	2.2	5,300
16	5/8	HS 16.8 U	45	25	50	183	40	50	155	3.5	8,000
18+20	11/16+3/4	HS 20.8 U	53	27	55	205	48	55	178	5.8	12,500
22	7/8	HS 22.8 U	62	29	60	225	50	62	196	8	15,000
26	1	HS 26.8 U	73	37	70	260	70	75	235	13.4	21,200
32	1 1/4	HS 32.8 U	87	42	66	299	87	97	291	22.4	31,500

Clevis Sling Hook with Forged Safety Latch HKS



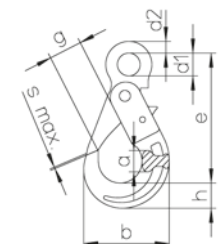
Chain		Code	Measurements						Weight	Working Load Limit
			g1	a	h	d	e	b		
mm	inch		mm						kg	kg
6	1/4	HKS 06.8 U	19	15	20	7.4	69	66	0.2	1,120
7+8	9/32+5/16	HKS 07/8.8 U	26	19	28	9	95	90	0.6	2,000
10	3/8	HKS 10.8 U	31	25	35	12.5	109	108	1.1	3,150
13	1/2	HKS 13.8 U	39	34	41	16	136	131	2	5,300
16	5/8	HKS 16.8 U	45	37	49	20	155	153	3.5	8,000
20	3/4	HKS 20.8 U	53	51	53	24	184	177	5	12,500
22	7/8	HKS 22.8 U	62	52	62	27	214	196	9.0	15,000

Wide Bowl Clevis Sling Hook with Forged Safety Latch VHKS



Chain		Code	Measurements						Weight	Working Load Limit
			e	h	a	d	g1	b		
mm	inch		mm						kg	kg
7+8	9/32+5/16	VHKS 07/8.8	116	33	25	9	32	113	1.1	2,000
10	3/8	VHKS 10.8	126	40	30	12.5	35	132	1.7	3,150

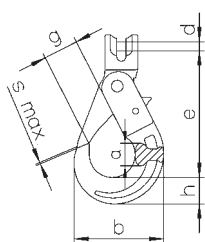
Eye Self Locking Hook HSB



Not for welded system!

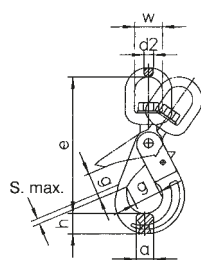
Chain		Code	Measurements								Weight	Working Load Limit
			g	d2	d1	e	b	a	h	s max.		
mm	inch		mm								kg	kg
6	1/4	HSB 06.8	28	11	21	110	71	17	20	1	0.5	1,120
7+8	9/32+5/16	HSB 07/8.8	34	12	25	136	88	20	26	1	0.9	2,000
10	3/8	HSB 10.8	45	15	35	169	107	29	30	1	1.5	3,150
13	1/2	HSB 13.8	52	20	40	205	138	35	40	1.5	2.7	5,300
16	5/8	HSB 16.8	60	27	50	251	168	41	50	2	5.7	8,000
18+20	11/16+3/4	HSB 20.8	70	30	60	290	194	50	62	2	9.8	12,500
22	7/8	HSB 22.8	81	32	70	322	211	52	65	2	12.4	15,000

Clevis Self Locking Hook HKSB



Chain		Code	Measurements						S max.	Weight	Working Load Limit
			g	d	e	a	b	h			
mm	inch		mm						mm	kg	kg
6	1/4	HKSB 06.8 U	28	7.4	94	17	71	20	1	0.5	1,120
7+8	9/32+5/16	HKSB 07/8.8 U	34	9	123	20	88	26	1	0.9	2,000
10	3/8	HKSB 10.8 U	45	12.5	144	29	107	30	1	1.6	3,150
13	1/2	HKSB 13.8 U	52	16	180	35	138	40	1.5	2.9	5,300
16	5/8	HKSB 16.8 U	60	20	218	41	168	50	2	5.8	8,000

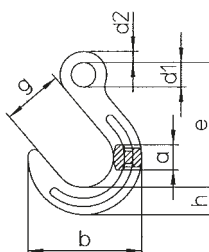
Swivel Self Locking Hook WSB



Standard type can not be swivelled when loaded. Not for welded system!

Chain		Code	Measurements						S max.	Weight	Working Load Limit
			e	h	d2	w	a	g			
mm	inch		mm						mm	kg	kg
6	1/4	WSB 06.8	161	20	12	35	16	28	1	0.6	1,120
7+8	9/32+5/16	WSB 07/8.8	182	26	12	35	20	34	1	1.1	2,000
10	3/8	WSB 10.8	218	30	16	42	25	45	1	2.0	3,150
13	1/2	WSB 13.8	269	40	20	49	35	52	1.5	4.0	5,300
16	5/8	WSB 16.8	319	50	24	60	35	60	2	6.8	8,000

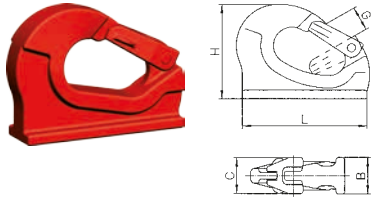
Foundry Hook GH



Chain		Code	Measurements								Weight	Working Load Limit
			g	d1	d2	e	a	h	b			
mm	inch		mm								kg	kg
7+8	9/32+5/16	GH 07/8.8	64	11	24	131	25	29	118	0.92	2,000	
10	3/8	GH 10.8	76	14	31	158	32	35	143	1.77	3,150	
13	1/2	GH 13.8	89	17	39	190	40	42	170	2.82	5,300	
16	5/8	GH 16.8	102	22	47	224	46	50	200	5.03	8,000	
18+20	11/16+3/4	GH 20.8	114	28	56	260	54	61	231	9.24	12,500	

Special Accessories (Note Working Load Limits!)

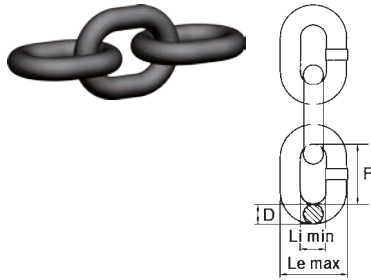
Weld-on Hook HAS



Weldable Safety Hook e.g. excavator buckets. According to safety specifications. Please consider welding instructions!

Code	Measurements					Weight	Working Load Limit
	L	H	G	B	C		
	mm					kg	kg
HAS 1.3	95	74	25	25	34	0.6	1,300
HAS 3.8	132	106	29	35	40	1.3	3,800
HAS 6.3	167	133	34	45	49	2.8	6,300
HAS 10	175	136	34	50	49	3.7	10,000

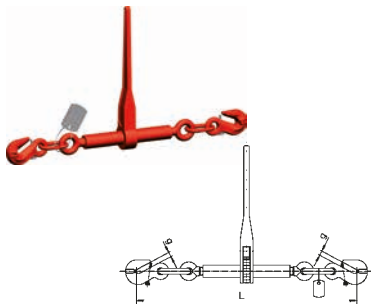
Lashing Chain Super Alloy SA acc. EN 818-2 – Measurements, Load Values, Weights



Safety factor 2:1

Chain		Pitch	Li/min.	Le/max.	Weight	LC Lashing Capacity	Breaking Force
D	P						
mm	inch	mm	mm	mm	kg/m	kN	kN
8	5/16	24	10.4	29.6	1.4	40	80.4
10	3/8	30	13	37	2.2	63	126
13	1/2	39	16.9	48.1	3.8	100	212

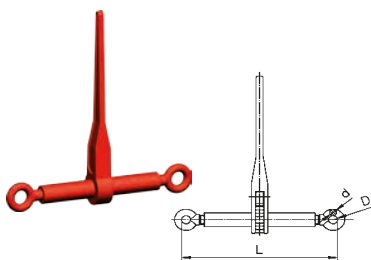
Ratchet Load Binder with Grab Hooks RLSP



Only for lashing. Not for lifting purposes!

Code	Max. Permissible Lashing Capacity	Normal Tension Force	Length Closed	Length Open	Tension Range	Width Opening	Weight
	LC	STF	L	L		g	
	kN	daN	mm				kg
RLSP 08	40	1,900	586	731	145	12	4.6
RLSP 10	63	1,900	626	771	145	15	5.4
RLSP 13	100	3,000	708	853	145	19.5	8

Ratchet Load Binder RLS



Only for lashing. Not for lifting purposes!

Code	Max. Permissible Lashing Capacity	Normal Tension Force	Length Closed	Length Open	Tension Range	D	d	Weight
	LC	STF	L	L				
	kN	daN	mm					kg
RLS 08	40	1,900	355	500	145	20	16	3.2
RLS 10	63	1,900	355	500	145	20	16	3.2
RLS 13	100	3,000	365	510	145	26	18	3.8

Spare Parts

Forged Safety Latch Kit for Clevis and Eye Sling Hooks

	Chain		Code Forged Latch	Spare Part for
	mm	inch		
	6	1/4	FG 06	HKS/HS 06.8U
	7+8	9/32+5/16	FG 07.8	HKS/HS 07/8.8 U
	10	3/8	FG 10	HKS/HS 10.8 U
	13	1/2	FG 13	HKS/HS 13.8 U
	16	5/8	FG 16	HKS/HS 16.8 U
	20	3/4	FG 20	HKS/HS 20.8 U
	22	7/8	FG 22	HKS/HS 22.8 U
	26	1	FG 26	HS 26.8 U
	32	1 1/4	FG 32	HS 32.8 U

Forged Safety Latch Kit for Wide Bowl Clevis Sling Hooks VHKS

	Chain		Code Forged Latch	Spare Part for
	mm	inch		
	7 + 8	9/32+5/16	FG-V 07.8	VHKS 07/8.8
	10	3/8	FG-V 10	VHKS 10.8

Safety Latch Kit for Weld-on Hooks HAS

	Chain	Spare Part for
	SFG-A1	HAS 1.3
	SFG-A3	HAS 3.8
	SFG-A6	HAS 6.3; HAS 10

Trigger Kit for Self Locking Hooks

	Chain		Code for HSB/WSB/HKSB...U	Spare Part for
	mm	inch		
	6	1/4	HBG 06.8 U	HSB/HKSB/WSB 06.8 U
	7+8	9/32+5/16	HBG 7/8.8 U	HSB/HKSB/WSB 7/8.8 U
	10	3/8	HBG 10.8 U	HSB/HKSB/WSB 10.8 U
	13	1/2	HBG 13.8 U	HSB/HKSB/WSB 13.8 U
	16	5/8	HBG 16.8 U	HSB/HKSB/WSB 16.8 U
	18+20+22	11/16+ 3/4+7/8	HBG 20/22.8 U	HSB 20.8+HSB 22.8 U

Load Pin Kit for Clevis Self Locking Hook

	Chain		Code	Spare Part for
	mm	inch		
	6	1/4	KBG-HKSB 06.8 U	HKSB 06.8 U
	7+8	9/32+5/16	KBG-HKSB 07/8.8 U	HKSB 07/8.8 U
	10	3/8	KBG-HKSB 10.8 U	HKSB 10.8 U
	13	1/2	KBG-HKSB 13.8 U	HKSB 13.8 U
	16	5/8	KBG-HKSB 16.8 U	HKSB 16.8 U
	20	3/4	KBG-HKSB 20.8 U	HKSB 20.8 U
	22	7/8	KBG-HKSB 22.8 U	HKSB 22.8 U

Load Pin Kit for Clevis Sling Hook and Shortening Clutch

	Chain		Code	Spare Part for
	mm	inch		
	6	1/4	KBG 06 U	HKS 06.8 U; VKL 06.8
	7+8	9/32+5/16	KBG 07/8 U	HKS 7/8.8; U VKL 07.8
	8	5/16	KBG 08 U	VKL 08.8
	10	3/8	KBG 10 U	HKS 10.8 U; VKL 10.8
	13	1/2	KBG 13 U	HKS 13.8; U VKL 13.8
	16	5/8	KBG 16 U	HKS 16.8
	20	3/4	KBG 20 U	HKS 20.8
	22	7/8	KBG 22 U	HKS 22.8

Load Pin Kit for Clevis Shortening Hook PK

	Chain		Code	Spare Part for	Code	Spare Part for
	mm	inch				
	7+8	9/32 + 5/16	KBG 07/8	PK 07/8.8	KBG 07/8 U	PK 07/8.8 NEW design
	10	3/8	KBG 10	PK 10.8	KBG 10 U	PK 10.8 NEW design
	13	1/2	KBG 13	PK 13.8	KBG 13 U	PK 13.8 NEW design
	16	5/8	KBG 16	PK 16.8	KBG 16 U	PK 16.8 NEW design
	20	3/4	KBG 20	PK 20.8	KBG 20 U	

Load Pin Kit for Connecting Link

	Chain		Code	Spare Part for	Code	Spare Part for
	mm	inch				
	6	1/4	BG-V 06.8 U	V 06.8 U	BG-V 06.8	V 06.8
	7	9/32	BG-V 07.8 U	V 07.8 U	BG-V 07.8	V 07.8
	8	5/16	BG-V 08.8 U	V 08.8 U/RSK 08.8 U	BG-V 08.8	V 08.8
	10	3/8	BG-V 10.8 U	V 10.8 U/RSK 10.8 U	BG-V 10.8	V 10.8/RSK 10
	13	1/2	BG-V 13.8 U	V 13.8 U/RSK 13.8 U	BG-V 13.8	V 13.8/RSK 13
	16	5/8	BG-V 16.8 U	V 16.8 U/RSK 16.8 U	BG-V 16.8	V 16.8
	18+20	11/16+3/4	BG-V 20.8 U	V 20.8 U	BG-V 20.8	V 20.8
	22	7/8	BG-V 22.8 U	V 22.8 U	BG-V 22.8	V 22.8
	26	1	BG-V 26.8 U	V 26.8 U	BG-V 26.8	V 26.8
	32	1 1/4	BG-V 32.8 U	V 32.8 U	BG-V 32.8	V 32.8

Screw Set for Omega Shackle VU

	Code	Spare Part for
	mm	
	UBMS 05.6	VU 06.8
	UBMS 07	VU 07.8
	UBMS 08	VU 08.8
	UBMS 10	VU 10.8
	UBMS 13	VU 13.8
	UBMS 16	VU 16.8
	UBMS 19	VU 20.8
	UBMS 26	VU 26.8

Working Load Tag with Wire Rope Binder and Fastener

	Code		
	ID-Set	1/2/3/4-legs	

User Information G12, G10, G8

General

KWB sling chains and accessories can be used for general lifting purposes acc. EN 818-4. Chains should only be used by trained personnel, who have read and understood the instructions for use. KWB sling chains and components should not be altered e.g. twisting, grinding, removing of parts and drilling. The surface of the chains and accessories should not be subjected to acids or caustic solutions. If necessary please contact the KWB technical department.

Only use the KWB chains and accessories up to the indicated temperature. Should the temperature be exceeded the reduction of the load capacity must be taken into consideration (see pages 8, 19, 38). In the event of temperatures outside this range, do not use the chain slings.

Do not use KWB lifting chains and accessories in acids, alkalines or chemicals or expose them to their fumes. Important: Certain production procedures release acids and or fumes. If necessary please contact KWB. In especially dangerous conditions (e.g. offshore applications, lifting of persons or potentially dangerous loads i.e. molten metals, corrosive materials, nuclear substances) the working load limit must be adjusted according to the risk level by an expert.

Inspection & Maintenance

Before using any lifting equipment for the first time please check the following:

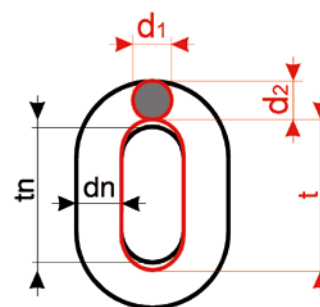
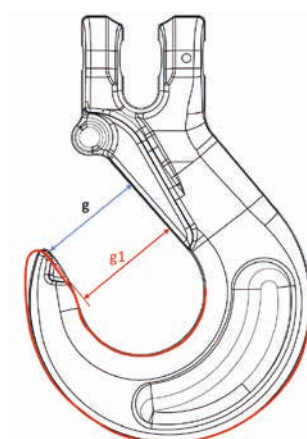
- The sling chain corresponds exactly to the order.
- The test certificate or certificate of conformity have been supplied.
- Marking & working load limit of the chain correspond with the information on the test certificate or certificate of conformity.
- All the data regarding the sling chain has been entered in a register for lifting equipment, if required.
- Before use check the chains for visible damage or signs of wear. In case of damage do not use the chains. In case of doubt likewise.
- Sling chains depending on use should be inspected by an expert once a year i.e. after unusual events that could cause impairment of the chain sling.
- Every two years it is recommended that the chain be subjected to a load test 1.5 times the working load limit, followed by a visual inspection.

When one or more of the following criteria is fulfilled, the chain must be taken out of use:

- Broken link.
- Missing working load tag on the chain sling or illegible marking on the tag.
- Elongation of the chain. The chain must be discarded if $t > 1.05 t_n$ (see catalogue).
- Wear: Wear is determined as the mean value of two measurements of diameters d_1 and d_2 carried out at a right angle (see drawing). The chain must be discarded.

$$dm = \frac{d_1 + d_2}{2} \leq 0.9 d_n$$

- Cuts, notches, grooves, surface cracks, excessive corrosion, discoloration due to heat, signs of additional welding, twisted links or other faults.
- Missing i.e. non-functioning safety device or signs of widening of the hook i.e. noticeable enlargement of the opening or other forms of deformation.



Some of the imagery featured in the catalog are artistic depictions and do not show the actual application of the products.

Designation	Dimensions	Max. Change Permitted
Chain	D	-10 %
	P	+5 %
Rings	d	-10 %
	t	+10 %
Hooks *)	e	+5 %
	h, d2	-10 %
	g, g1	+10 %
V, RSK	Both halves must be free to move	No change permitted
	e	+5 %
	c	-10 %
Connecting link VU	Bolts must be free to move	No change permitted
	e	+5 %
	d and M	-10 %
Clevis Bolts and Bolts for Connecting Links + Webbing Coupling Links	d	-10 %
HSB, HKSB, WSB	Tip opening	2 x s max.

*) HKSB/SUN, HKS/SUN

VK/S, P/S, PS/S, PK/S, HKS/S, VHKS/S, HKSB/S, GHK/S, HS/S, HSB/S, WSB/S, GH/S, BH/S, HS, GH, P, HKS, PK, VHKS, VKL, WSB, HKSB, HSB

KWB chain slings should only be repaired by qualified personnel.

Records of the inspections and repairs must be kept on file for the entire service life of the chain sling.

KWB chain slings should be stored in dry condition & protected from corrosion (preferably oiled).

Correct Use of Chain Slings

KWB chain slings should only be used with the angle of inclination indicated on the working load tag.

Avoid angles of inclination under 15°. Never use the chain slings with an angle of inclination exceeding 60°.

If KWB chains are guided over edges protective padding should be used to avoid damage or the load capacity reduced (see pages 8, 19, 38). But if chains looped at a beam or other round shaped loads the diameter should be minimum thrice the chain pitch. For smaller diameters the WLL of the chain must be reduced by 50 %.

In cases of possible impact load the working load limit of the KWB chains should be scaled down acc. to the table on pages 8, 19, 38. Impact/shock can be defined as follows:

- Slight impact: arises e.g. when the lifting or lowering movement is accelerated.
- Medium impact: occurs e.g. when the chain slips during adjustment to the shape of the load.
- Strong impact: arises e.g. when the load falls into the unloaded chain.

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

The load capacities of KWB chain slings are defined with the assumption that the load of the individual chain legs is distributed symmetrically. The load can still be considered symmetrical when all the following conditions are complied with:

- The load is smaller than 80 % of the indicated working load limit.
- The angle of inclination of all chain legs is not less than 15°.
- The angle of inclination of all chain legs are equal or deviate max. 15° from each other.
- In the case of 3- and 4-leg chain slings, the corresponding angles in the sling level deviate max. 15° from each other.

Should these parameters not be met, then the load is considered asymmetric and an expert must be called to evaluate the lifting process. In case of doubt the load capacity must be reduced to that of a single-leg chain sling. Individual chain legs which are not in use must be hung back into the master link and the working load limit reduced accordingly.

Notes

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