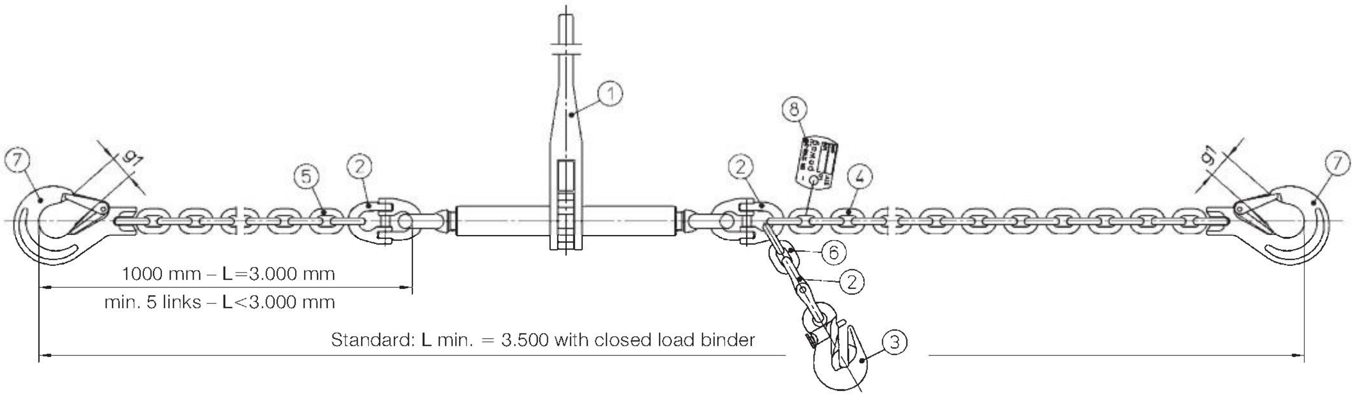
According EN 12195-3

ZRSW Lashing chain G10

- For load securing with 25% higher lashing capacity (LC) than conventional G8 lashing chains
- Kit system
- According EN 12195-3
- Standard length 3.500 mm
- Customised length available on short call
- Supplied with ID-tag according EN 12195-3 with G10 values



1 Load binder RSW
2 Connex connecting link CW
3 Grab hook with safety catch PSW
4–6 Chain WIN 400
7 Clevis sling hook KHSW
8 Identification tag

Type	LC Lashing capacity [kN]	Length RSW closed position [mm]	Length RSW open position [mm]	Tensioning Length [mm]	STF – standard tension force [daN]	Opening g1 [mm]	Weight kg/pc. approx.
ZRSW 7 400 I KHSW-KHSW 3500	38	365	540	175	-	26	8,4
ZRSW 8 400 I KHSW-KHSW 3500	50	360	505	145	-	26	9,7
ZRSW 10 400 I KHSW-KHSW 3500	80	370	515	145	3.150	31	14,5
ZRSW 13 400 I KHSW-KHSW 3500	134	613	913	300	4.800	39	26,1
ZKSW 16 400 I KHSW-KHSW 3500*	200	530	780	250	4.000	45	37,7

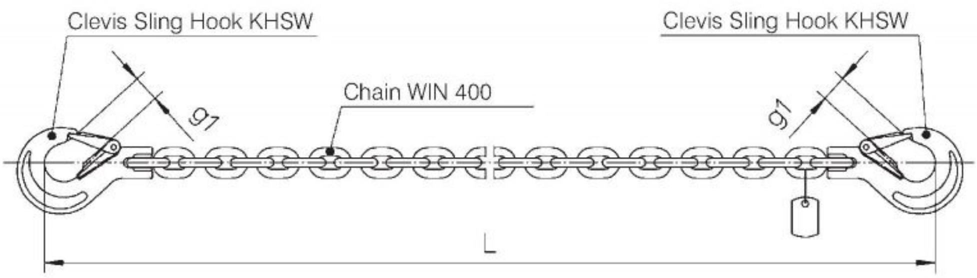
* Size 16 only with clevis turnbuckle KSSW 16 available

Please find further information regarding selection and dimensioning on page 13.

According EN 12195-3

ZKW Lashing chain G10 as two part system

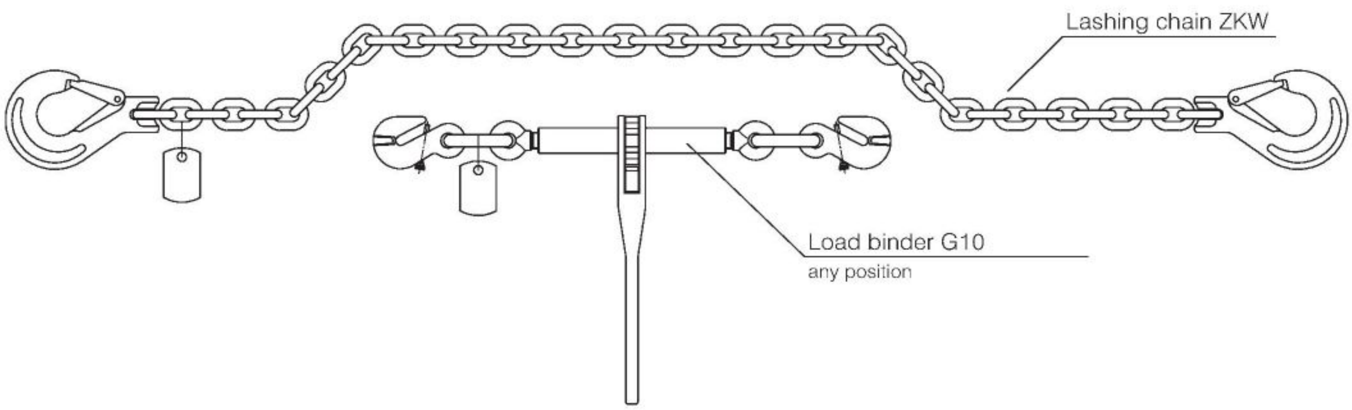
- Usable with separate loadbinder in G10 quality – Advantage: the load binder can be attached to the chain in any position
- For load securing with 25% higher lashing capacity (LC) than conventional G8 lashing chains
- Kit system
- According EN 12195-3
- Standard length 3.500 mm
- Customised length available on short call
- Supplied with ID-tag according EN 12195-3 with G10 values



Type	LC Lashing capacity [kN]	L [mm]	g1 [mm]	Weight kg/pc. approx.
ZKW 7 400 I KHSW-KHSW 3500	38	3.500	26	5,17
ZKW 8 400 I KHSW-KHSW 3500	50	3.500	26	6,4
ZKW 10 400 I KHSW-KHSW 3500	80	3.500	31	10,27
ZKW 13 400 I KHSW-KHSW 3500	134	3.500	39	17,49

Please note: Identification tag only marked with G10 values when you order exactly according to column data.
Upon request we can supply the lashing chain system with G8 values. If it will be used with a G8 load binder. In this case please order type ZK from page 10.

Basic application principle of a two part Lashing chain system in G10

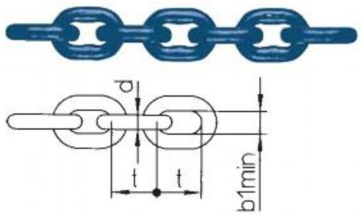


Please find further information regarding selection and dimensioning on page 13.

Round steel chains and accessories in G10 quality

- 25% higher lashing capacity (LC) than conventional G8 Lashing Chains.
- An easy and fast assembly of the lashing chains with the help of clevis parts or connex connecting links by a competent person is possible.

Chain Winner 400

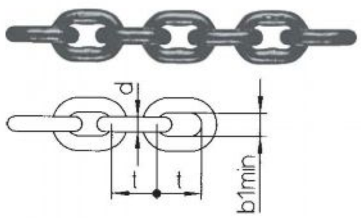


Code	Nominal diameter d	Standard delivery length [m]	Pitch t	Inside Width b1 min.	Outside Width b2 max.	Lashing capacity [kN]	Breaking force [kN]	Weight kg/m
WIN 7 400	7	50	21	9,5	25,2	38	77	1,2
WIN 8 400	8	50	24	10,9	28,8	50	100	1,57
WIN 10 400	10	50	30	13,5	36	80	157	2,46
WIN 13 400	13	50	39	17,5	46,8	134	266	4,18
WIN 16 400	16	25	48	21,5	57,6	200	402	6,28

Please find more detailed information about Winner 400 chains in our lifting catalogue.

Winner 400 – meets the requirements of EN 818-2 with higher load capacity, and those of the 98/37/EC Machinery Directive

Chain Winner 200

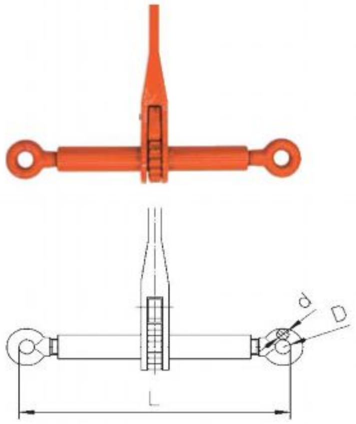


Code	Nominal diameter d	Standard delivery length [m]	Pitch t	Inside Width b1 min.	Outside Width b2 max.	Lashing capacity [kN]	Breaking force [kN]	Weight kg/m
WIN 7 200	7	300/50	21	9,5	25,2	38	77	1,2
WIN 8 200	8	250/50	24	10,9	28,8	50	100	1,57
WIN 10 200	10	150/50	30	13,5	36,0	80	157	2,46
WIN 13 200	13	80/50	39	17,5	46,8	134	266	4,18
WIN 16 200	16	50/25	48	21,5	57,6	200	402	6,28

Please find more detailed information about Winner 200 chains in our lifting catalogue.

Winner 200 – meets the requirements of ASTM A973/A973M-01 and of EN 818-2 but with higher load capacity (however admissible operating temperature of 200°C max.) and 98/37/EC Machinery Directive

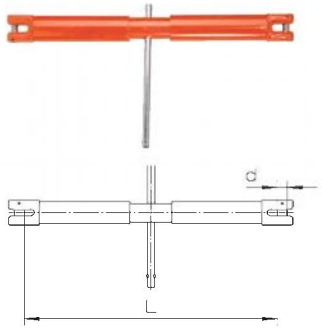
Load binder RSW for lashing chains



Type	LC Lashing capacity [kN]	STF – Standard tension force [daN]	Length RSW closed [mm]	Length RSW open [mm]	Tensioning Length [mm]	D [mm]	d [mm]	Weight kg/pc.
RSW 7	38	-	365	540	175	20	17	3,5
RSW 8	50	-	360	505	145	22	16	3,5
RSW 10	80	3.150	370	515	145	24	20	3,9
RSW 13*	134	4.800	613	913	300	31	22	9

* Loadbinder also usable for a 16 mm G8 chain. Please consider that for this application the correct lashing capacity LC = 160 kN.

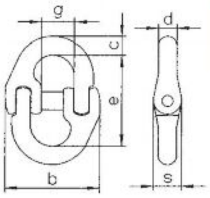
Clevis turnbuckle KSSW for lashing chains



Type	LC Lashing capacity [kN]	STF – Standard tension force [daN]	Length KSSW closed [mm]	Length KSSW open [mm]	Tensioning Length [mm]	d [mm]	Weight kg/pc.
KSSW 16	200	4.000	520	770	250	20	10

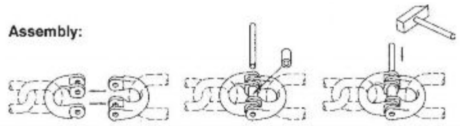
Please find further information regarding selection and dimensioning on page 13.

CW connex connecting link



Type	LC Lashing capacity [kN]	e mm	c mm	s mm	d mm	b mm	g mm	Weight kg/pc.
CW 7	38	51	10	12,9	9	46,5	16,3	0,12
CW 8	50	61,5	11,5	15	10	53	18,35	0,18
CW 10	80	72	12,6	17,8	12,6	63	23	0,33
CW 13	134	88	19	22	16,7	79	27,6	0,7
CW 16	200	103	21	29	21	106	33	1,14

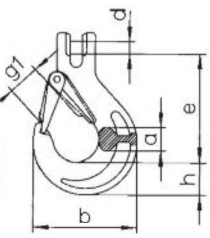
Assembly:



Load pin and bush CBH are also available separately.

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

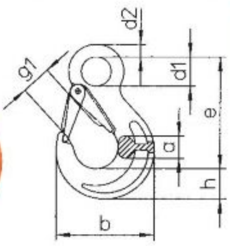
KHSW clevis sling hook



Type	LC Lashing capacity [kN]	e mm	h mm	a mm	d mm	g1 mm	b mm	Weight kg/pc.
KHSW 7	38	95	28	19	9	26	90	0,6
KHSW 8	50	94,5	28	19	10	26	90	0,6
KHSW 10	80	109	34,5	25	12,5	31	108	1,1
KHSW 13	134	136	41	34	16	39	131	2
KHSW 16	200	155	49	37	20	45	153	3,48

General purpose hook, can be used without transition link and without connecting link.
With forged safety catch.

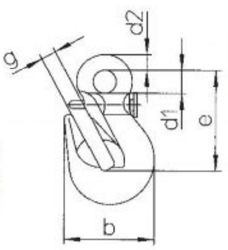
HSW eye sling hook



Type	LC Lashing capacity [kN]	e mm	h mm	a mm	d1 mm	d2 mm	g1 mm	b mm	Weight kg/pc.
HSW 7-8	50	106	27	19	25	11	26	88	0,5
HSW 10	80	131	33	26	34	16	31	108,5	1,1
HSW 13	134	164	43,5	33	43	19	39	133,7	2
HSW 16	200	182,5	50	40	50	24,5	45	154,6	3,5

To be connected to the chain with connex connecting link CW. All hooks with forged safety catch.
Safety catch set also available as spare part.

PSW grab hook with safety catch

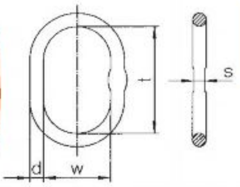


Type	LC Lashing capacity [kN]	e mm	b mm	d1 mm	d2 mm	g mm	Weight kg/pc.
PSW 7-8	50	70,5	58	20	11,5	10,5	0,4
PSW 10	80	88	76	22	15	13	0,9
PSW 13	134	113	101	26	18	17	1,8
PSW 16	200	129	118	32	23	19	3,6

Shortening hook, protects against accidental release of the chain.
Safety catch set also available as spare part.

Please find further information regarding selection and dimensioning on page 13.

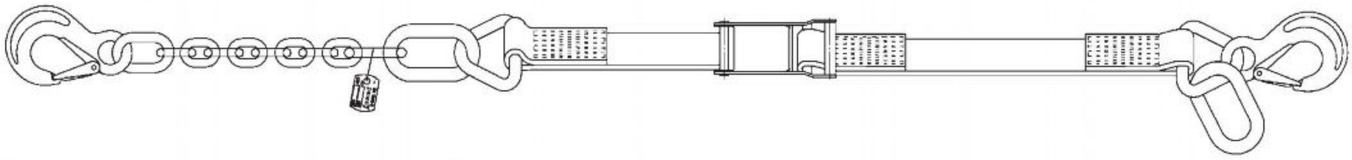
A8W master link



Type	for chain-ø	LC Lashing capacity [kN]	d mm	t mm	w mm	s mm	Weight kg/pc.
A8W 13	7	46	13	110	60	10	0,34
A8W 16	8	70	16	110	60	14	0,53
A8W 18	10	100	18	135	75	14	0,86
A8W 22	13	152	23	160	90	17	1,6
A8W 26	16	200	27	180	100	20	2,46

Combination of lashing chain and lashing straps

Lashing chains can be combined with lashing straps. This combination unites the advantages of both. Easy shortening of the straps with a ratchet and use of the resistant chain in the loading region. For the chain-end attachment there are a large number of accessories available from the Winner programme.



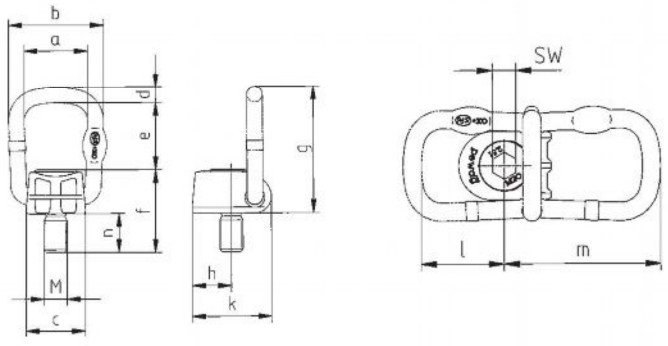
Type	Winner Chain	LC Lashing capacity [kN]
ZG 60 Z	WIN 5	15
ZG 80 Z	WIN 5	20
ZG 100 Z	WIN 6	25
ZG 200 Z	WIN 8	50

Data required for an inquiry:

- Length of chain and straps
- Required lashing capacity
- Type of attachment, hook, shackle, etc.
- Sketch if possible

PLAW profilift alpha

Lashing point rotates and foldable with special captive screw – metric thread and interchangeable clamping spring.



Type	LC Lashing capacity [kN]	M	n	a	b	c	d	e	f	g	h	k	l	m	SW	Weight kg/pc.	Tightening torque [Nm]
PLAW 0,63	12,6	10	33	54	81	50	13	57	70	107,5	33	67	60	113,5	17	0,93	40
PLAW 1,5	30	16	33	54	81	50	13	57	70	107,5	33	67	60	113,5	17	0,97	160
PLAW 2,5	50	20	33	54	81	50	13	57	70	107,5	33	67	60	113,5	17	1	300

Please find further information regarding selection and dimensioning on page 13.

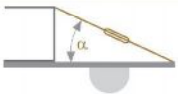
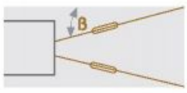
pewag G10 lashing table for the load restrained during road transport

Direct lashing

The tables shows the maximum loading when using 4 lashing chain Systems ZRSW and ZKSW.

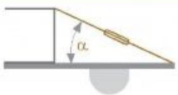
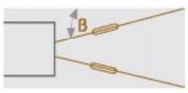
ZRSW 7 with RSW 7 load binder

marking of the load binder: pewag LC 40kN

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

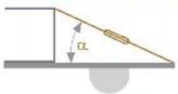
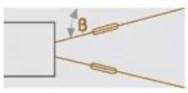
ZRSW 8 with RSW 8 load binder

marking of the load binder: pewag LC 63kN

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

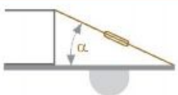
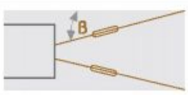
ZRSW 10 with RSW 10 load binder

marking of the load binder: pewag LC 100kN

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

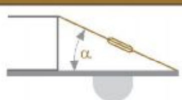
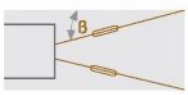
ZRSW 13 with RSW 13 load binder

marking of the load binder: pewag LC 160kN

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

ZKSW 16 with KSSW 16 clevis turn buckle

marking of the clevis turn buckle: 16–8W

Angle	Max. load [daN ~ kg]		Dynamic friction factor						
	α	β	0,01	0,1	0,2	0,3	0,4	0,5	0,6
Angle α side view 	15–35	21–30				70.500	93.850	128.750	198.350
		31–40	32.050	39.100	49.450	63.950	84.300	115.900	179.000
		41–50	26.950	33.350	42.750	55.850	72.400	100.000	155.200
		51–60	21.000	26.650	34.950	44.800	58.600	81.600	127.650
Angle β plan view 	36–50	21–30			47.300	62.900	86.300	125.250	203.250
		31–40	25.300	32.500	43.000	57.750	79.850	116.700	190.400
		41–50	21.300	27.950	37.750	51.400	71.950	106.150	174.500
		51–60		22.700	31.600	44.050	62.750	93.100	151.400

Please consider detailed explanation and further information on page 13.