PML LIFTING
& Engineering Services

PRODUCT CATALOGUE 2020

pewag

WINNER

Grade 10 Chain Slings

and

Grade 10 Load Lashing Systems

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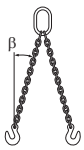
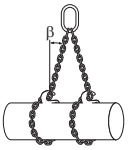
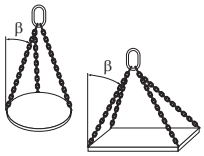
Load Capacities

The load capacities shown are the WORKING LOAD LIMITS of the various sling types, stated according to the standard (Uniform Load) method of rating.

Factor of safety			Single leg chains		2 leg chains				3 and 4 leg chains		Endless chains	Basket chains	
4													
Working angles			-	-	0° - 45°	45° - 60°	0° - 45°	45° - 60°	0° - 45°	45° - 60°	-	0° - 45°	0° - 45°
Load factor			1	0.8	1.4	1	1.12	0.8	2.1	1.5	1.6	1.4	2.1
Ref	Grade	Dia.	Working load limits (tonnes)										
WIN 5	10	5mm	1.00	0.80	1.40	1.00	1.12	0.80	2.00	1.50	1.60	1.40	2.00
WIN 6	10	6mm	1.40	1.12	2.00	1.40	1.60	1.12	3.00	2.12	2.24	2.00	3.00
WIN 7	10	7mm	1.90	1.50	2.65	1.90	2.12	1.50	4.00	2.80	3.00	2.65	4.00
WIN 8	10	8mm	2.50	2.00	3.55	2.50	2.80	2.00	5.30	3.75	4.00	3.55	5.30
WIN 10	10	10mm	4.00	3.15	5.60	4.00	4.25	3.15	8.00	6.00	6.30	5.60	8.00
WIN 13	10	13mm	6.70	5.30	9.50	6.70	7.50	5.30	14.00	10.00	10.60	9.50	14.00
WIN 16	10	16mm	10.00	8.00	14.00	10.00	11.20	8.00	21.20	15.00	16.00	14.00	21.20
WIN 19	10	19mm	14.00	11.20	20.00	14.00	16.00	11.20	30.00	21.20	22.40	20.00	30.00
WIN 22	10	22mm	19.00	15.00	26.50	19.00	21.20	15.00	40.00	28.00	30.00	26.50	40.00
WIN 26	10	26mm	26.50	21.20	37.50	26.50	30.00	21.20	56.00	40.00	42.50	37.50	56.00
WIN 32	10	32mm	40.00	31.50	56.00	40.00	45.00	31.50	85.00	60.00	63.00	56.00	85.00

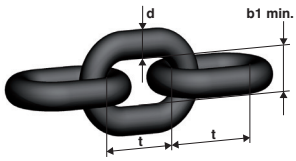
If the chain slings are used in adverse conditions (e.g. high temperature, asymmetric load distribution, edge load, impact or shock loads) the maximum load capacity values in the table above must be reduced by the load factors below. Please also see the user information on this topic.

Demanding Conditions

Temperature	-40°C to 200°C	Above 200°C to 300°C	Above 300°C to 380°C
Load factor Winner 200	1	not permissible	not permissible
Load factor Winner 400	1	0.9	0.75
Asymmetric load distribution	The WLL has to be reduced by at least 1 leg. In case of any doubt only consider 1 leg as load-bearing.		
Edge loading	R = larger than 2 x chain diameter 	R = larger than chain diameter 	R = less than chain diameter 
Load factor	1	0.7	0.5
Shock Load factor	Slight shocks 1	Medium shocks 0.7	Strong shocks Not permissible

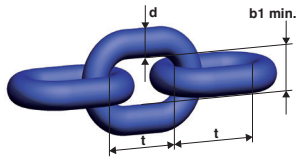
Winner 200 G10 chain - Manufactured in accordance with BS EN 818-2 with increased loadings and reduced temperature rating (max. 200°C)

Proof load tested to 2.5 x WLL
Fatigue tested to 1.5 x WLL for 20,000 cycles
100% Magnaflux crack detected

WIN 200 Round steel chain	Code	Nominal-diameter [d]	Standard delivery length [m]	Pitch [t]	Inside width [b1 min.]	Outside width [b2 max.]	WLL [tonnes]	Breaking force [kN]	Weight [kg/m]
	WIN 5 /2	5	100	16	7.5	18.5	1.00	39.3	0.61
	WIN 6 /2	6	200	18	8.7	21.6	1.40	56.5	0.96
	WIN 7 /2	7	300	21	9.5	25.2	1.90	77	1.20
	WIN 8 /2	8	250	24	10.9	28.8	2.50	101	1.57
	WIN 10 /2	10	150	30	13.5	37	4.00	157	2.46
	WIN 13 /2	13	100	39	17.5	46.8	6.70	265	4.18
	WIN 16 /2	16	100	48	21.5	57.6	10.00	402	6.28
	WIN 19 /2	19	50	57	26.6	69.4	14.00	567	8.92
	WIN 22 /2	22	30	66	29.5	79.2	19.00	760	11.88
	WIN 26 /2	26	25	78	35	94	26.50	1060	16.18
	WIN 32 /2	32	20	96	43.2	115	40.00	1610	24.10

Winner 400 G10 chain - Manufactured in accordance with BS EN 818-2 with increased loadings Max. working temperature 380°C

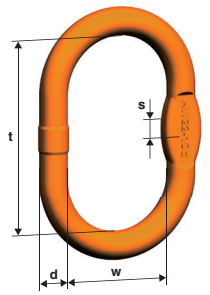
Proof load tested to 2.5 x WLL
Fatigue tested to 1.5 x WLL for 20,000 cycles
100% Magnaflux crack detected

WIN 400 Round steel chain	Code	Nominal-diameter [d]	Standard delivery length [m]	Pitch [t]	Inside width [b1 min.]	Outside width [b2 max.]	WLL [tonnes]	Breaking force [kN]	Weight [kg/m]
	WIN 5 /4	5	50	16	7.5	18.5	1.00	39.30	0.61
	WIN 6 /4	6	50	18	8.7	22.2	1.40	56.50	0.96
	WIN 7 /4	7	50	21	9.5	25.2	1.90	77	1.20
	WIN 8 /4	8	50	24	10.9	28.8	2.50	101	1.57
	WIN 10 /4	10	50	30	13.5	36	4.00	157	2.46
	WIN 13 /4	13	50	39	17.5	46.8	6.70	265	4.18
	WIN 16 /4	16	25	48	21.5	57.6	10.00	402	6.28
	WIN 19 /4	19	25	57	26.6	69.4	14.00	567	8.92
	WIN 22 /4	22	25	66	29.5	79.2	19.00	760	11.88
	WIN 26 /4	26	15	78	35	94	26.50	1060	16.18
	WIN 32 /4	32	15	96	43.2	115	40.00	1610	24.10

Winner G10 components

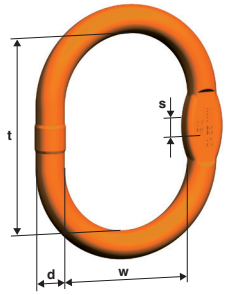
Proof load tested to 2.5 x WLL
Fatigue tested to 1.5 x WLL for 20,000 cycles
100% Magnaflux crack detected

AW
Master link
(BS EN 1677-4 with mechanical values for G10)



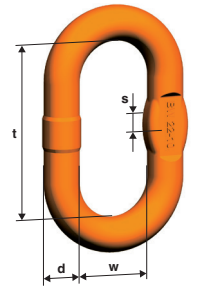
Code	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	Master link for chain Ø 1 leg [mm]	Master link for chain Ø 2 leg [mm]
AW 10	1.40	Nr. 1.6	10	80	50	10	0.14	5	5
AW 13	2.30	Nr. 2.5	13	110	60	10	0.34	6+7	6
AW 16	3.50	Nr. 2.5	16	110	60	14	0.53	8	7
AW 18	5.00	Nr. 5	19	135	75	14	0.92	10	8
AW 22	7.60	Nr. 6	23	160	90	17	1.60	13	10
AW 26	10.00	Nr. 8	27	180	100	20	2.46	16	13
AW 32	14.00	Nr. 10	33	200	110	26	4.14	19	16
AW 36	25.10	Nr. 16	36	260	140	29	6.22	22	19
AW 45	30.80	Nr. 25	45	340	180	-	12.82	26	22
AW 50	40.00	Nr. 32	50	350	190	43	16.55	32	26
AW 56	64.00	Nr. 32	56	400	200	-	27.01	-	32
AW 72	85.00	Nr. 50	70	460	250	-	45.30	-	-

MW
Enlarged master link
(BS EN 1677-4 with mechanical values for G10)



Code	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	Master link for chain Ø 1 leg [mm]	Master link for chain Ø 2 leg [mm]
MW 10	1.40	Nr. 2.5	11	90	65	10	0.22	5	5
MW 13	2.30	Nr. 4	14	120	70	10	0.44	6+7	6
MW 16	3.20	Nr. 5	16	140	80	13	0.71	8	7
MW 18	4.20	Nr. 6	19	160	95	14	1.09	10	8
MW 22	6.70	Nr. 10	23	170	105	17	1.74	13	10
MW 26	10.10	Nr. 10	27	190	110	20	2.65	16	13
MW 32	16.00	Nr. 12	33	230	130	26	4.78	19	16
MW 36	21.20	Nr. 20	38	275	150	29	7.48	22	19
MW 56	40.00	Nr. 50	56	350	250	46	21.98	32	26

BW
Transition link
(BS EN 1677-4 with mechanical values for G10)

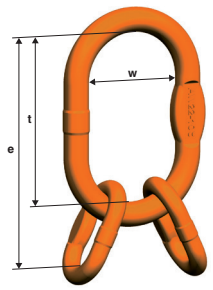


* Only available on welded systems

Code	WLL 0–45° [tonnes]	d [mm]	t [mm]	w [mm]	s [mm]	Weight [kg/pc.]	Transition link for chain Ø 1 + 2 leg [mm]
BW 7	1.00	7	36	16	7	0.03	5
BW 8*	1.40	8	36	16	-	0.05	6
BW 9	1.90	9	44	20	-	0.07	7
BW 10	2.50	10	44	20	-	0.09	8
BW 13	4.00	13	54	25	10	0.17	10
BW 16	6.70	17	70	34	14	0.39	13
BW 20	10.00	20	85	40	14	1.00	16
BW 22	12.50	23	115	50	17	1.16	-
BW 23*	14.00	23	115	45	17	1.16	19
BW 26	16.20	27	140	65	20	1.92	-
BW 27*	19.00	27	140	55	20	1.92	22
BW 32	26.50	33	150	70	26	3.16	26
BW 36	31.00	36	170	75	-	4.35	-
BW 40	40.40	40	170	80	-	5.12	32
BW 45*	42.40	45	170	80	-	7.15	-
BW 50	64.00	50	200	100	-	10.58	-

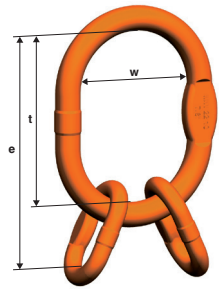
Please note that all dimensions stated are nominal and subject to change without prior notice!

VW
Quad master link assembly
(BS EN 1677-4 with mechanical values for G10)



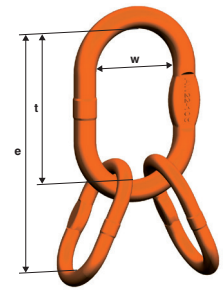
Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VW 5	AW 13 + 2 BW 10	2.30	Nr. 2.5	154	110	60	0.52
VW 6	AW 18 + 2 BW 13	4.20	Nr. 5	189	135	75	1.30
VW 7-8	AW 22 + 2 BW 16	7.60	Nr. 6	230	160	90	2.32
VW 10	AW 26 + 2 BW 20	9.60	Nr. 8	265	180	100	3.82
VW 13	AW 32 + 2 BW 22	14.00	Nr. 10	315	200	110	6.46
VW 16	AW 36 + 2 BW 26	21.20	Nr. 16	400	260	140	10.06
VW 19-20	AW 50 + 2 BW 32	34.10	Nr. 32	500	350	190	22.62
VW 22	AW 50 + 2 BW 36	40.00	Nr. 32	520	350	190	24.54
VW 26	AW 56 + 2 BW 45	56.00	Nr. 32	570	400	200	37.60
VW 32	AW 72 + 2 BW 50	85.00	Nr. 50	660	460	250	66.60

VMW
Enlarged quad master link assembly
(BS EN 1677-4 with mechanical values for G10)



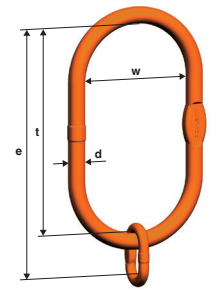
Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VMW 5-6	MW 18 + 2 BW 13	4.20	Nr. 6	214	160	95	1.43
VMW 7-8	MW 22 + 2 BW 16	6.60	Nr. 10	240	170	105	2.46
VMW 10	MW 26 + 2 BW 20	10.10	Nr. 10	275	190	110	4.01
VMW 13	MW 32 + 2 BW 22	15.70	Nr. 12	345	230	130	7.10
VMW 16	MW 36 + 2 BW 26	21.20	Nr. 20	415	275	150	11.30
VMW 19-20	MW 56 + 2 BW 32	34.10	Nr. 50	500	350	250	28.30
VMW 22	MW 56 + 2 BW 36	40.00	Nr. 50	520	350	250	30.22

VAW
Special quad master link assembly
(BS EN 1677-4 with mechanical values for G10)



Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VAW 6-7	AW 18 + 2 AW 14	5.00	Nr. 5	245	135	75	1.72
VAW 8	AW 22 + 2 AW 16	6.30	Nr. 6	270	160	90	2.66
VAW 10	AW 26 + 2 AW 18	9.50	Nr. 8	315	180	100	4.30
VAW 13	AW 32 + 2 AW 26	16.10	Nr. 10	380	200	110	9.06
VAW 16	AW 36 + 2 AW 32	25.10	Nr. 16	460	260	140	14.53
VAW 19-20	AW 50 + 2 MW 36	41.10	Nr. 32	625	350	190	31.51
VAW 22	AW 50 + 2 AW 45	47.40	Nr. 32	690	350	190	42.19
VAW 26	AW 56 + 2 AW 50	58.00	Nr. 32	750	400	200	56.40
VAW 32	AW 72 + 2 AW 56	85.00	Nr. 50	860	460	250	99.02

VLW 1
Oversize master link assembly
(BS EN 1677-4 with mechanical values for G10)



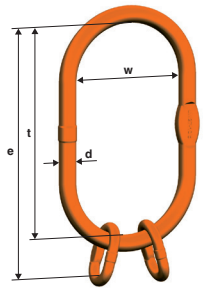
Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VLW 1-6/7/8	LW 22 + BW 13	2.50	Nr. 25	394	23	340	180	3.37
VLW 1-10	LW 27 + BW 16	4.00	Nr. 25	410	27	340	180	4.76
VLW 1-13	LW 27	6.70	Nr. 25	340	27	340	180	4.40
VLW 1-16	LW 32	10.00	Nr. 25	340	33	340	180	6.70
VLW 1-19/22	LW 40	19.00	Nr. 25	340	40	340	180	10.00

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

Please note that all dimensions stated are nominal and subject to change without prior notice!

VLW 2/4

Oversize master link assembly (BS EN 1677-4 with mechanical values for G10)

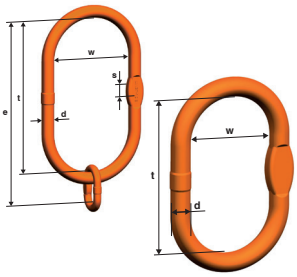


Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VLW 2-6/7/8/4-6	LW 22 + 2 BW 13	3.55	Nr. 25	394	23	340	180	3.54
VLW 2-10/4-7/8	LW 27 + 2 BW 16	5.60	Nr. 25	410	27	340	180	5.12
VLW 2-13/4-10	LW 32 + 2 BW 20	9.50	Nr. 25	425	33	340	180	7.81
VLW 2-16/4-13	LW 40 + 2 BW 22	14.00	Nr. 25	455	40	340	180	12.32
VLW 2-19/4-16	LW 40 + 2BW 26	21.20	Nr. 25	480	40	340	180	13.84

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

VSAW 1

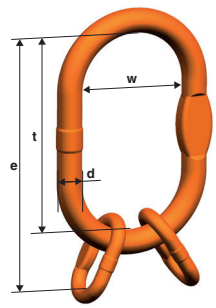
Oversize master link assembly (BS EN 1677-4 with mechanical values for G10)



Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VSAW 1-10/13	SAW32 + BW20	10.00	Nr. 50	585	33	500	250	10.00
VSAW 1-16	SAW 32	10.00	Nr. 50	500	33	500	250	9.32
VSAW 1-19	SAW 40	16.00	Nr. 50	460	40	460	250	13.12
VSAW 1-22	SAW 45	22.40	Nr. 50	500	45	500	250	17.80
VSAW 1-26	SAW 50	33.60	Nr. 50	460	50	460	250	20.98
VSAW 1-32	SAW 56	40.00	Nr. 50	460	56	460	250	26.68
VSAW 1-32 320	SAW 60	40.00	Nr. 100	800	60	800	320	48.00

VSAW 2/4

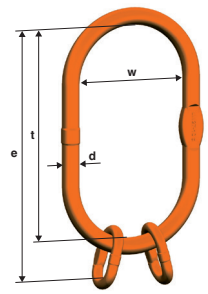
Oversize master link assembly (BS EN 1677-4 with mechanical values for G10)



Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VSAW 2-10/13 / 4-10	SAW 32 + 2 BW 20	9.50	Nr. 50	585	33	500	250	10.68
VSAW 2-16 / 4-13	SAW 40 + 2 BW 22	14.00	Nr. 50	575	40	460	250	15.44
VSAW 2-19/20 / 4-16	SAW 45 + 2 BW 26	21.20	Nr. 50	640	45	500	250	21.64
VSAW 2-22 / 4-19/20	SAW 50 + 2 BW 32	30.00	Nr. 50	610	50	460	250	27.30
VSAW 2-26 / 4-22	SAW 56 + 2 BW 32	40.00	Nr. 50	610	56	460	250	34.92
VSAW 2-26 /4-22 / 320	SAW 60 + 2 BW 32	40.00	Nr. 100	950	60	800	320	56.24

VSW 2/4

Oversize master link assembly (BS EN 1677-4 with mechanical values for G10)

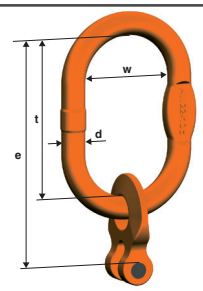


Code	Consisting of	WLL 0–45° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VSW 2-10 / 4-8	SW 30 + 2 BW 20	5.60	Nr. 40	515	30	430	220	8.16
VSW 2-13 / 4-10	SW 33 + 2 BW 20	9.50	Nr. 40	515	33	430	220	9.66
VSW 2-16 / 4-13	SW 36 + 2 BW 22	14.00	Nr. 40	545	36	430	220	12.32
VSW 2-19/20 / 4-16	SW 45 + 2 BW 26	21.20	Nr. 40	570	45	430	220	19.54

Example of multi-leg sling:
VSW 2-10 / 4-8 can be used for 10mm 2-leg slings and for 8mm 4-leg slings.

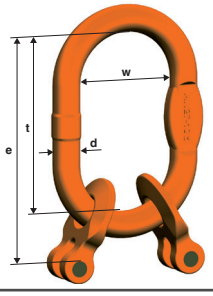
Please note that all dimensions stated are nominal and subject to change without prior notice!

KAGW 1
Clevis master set
(BS EN 818-4 with mechanical values for G10)



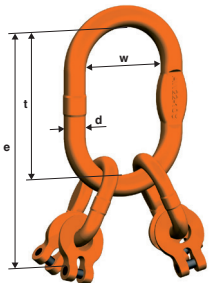
Code	WLL [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
KAGW 1-5/6	1.40	5 + 6	Nr. 2.5	141	13	110	60	0.48
KAGW 1-7	1.90	7	Nr. 2.5	153	13	110	60	0.58
KAGW 1-8	2.50	8	Nr. 2.5	153	16	110	60	0.77
KAGW 1-10	4.00	10	Nr. 5	186	19	135	75	1.34
KAGW 1-13	6.70	13	Nr. 6	223	23	160	90	2.44
KAGW 1-16	10.00	16	Nr. 8	254	27	180	100	3.95
KAGW 1-19/20	14.00	19	Nr. 10	294	33	200	110	7.41
KAGW 1-22	19.00	22	Nr. 16	362	36	260	140	11.11

KAGW 2
Clevis master set
(BS EN 818-4 with mechanical values for G10)



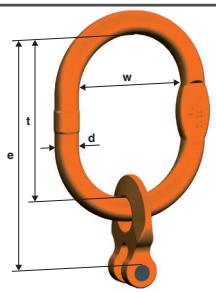
Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
KAGW 2-5/6	2.00 / 1.40	5 + 6	Nr. 2.5	141	13	110	60	0.59
KAGW 2-7	2.65 / 1.90	7	Nr. 2.5	153	16	110	60	0.97
KAGW 2-8	3.55 / 2.50	8	Nr. 5	178	19	135	75	1.38
KAGW 2-10	5.60 / 4.00	10	Nr. 6	211	23	160	90	2.40
KAGW 2-13	9.50 / 6.70	13	Nr. 8	243	27	180	100	4.13
KAGW 2-16	14.00 / 10.00	16	Nr. 10	274	33	200	110	6.97
KAGW 2-19/20	20.00 / 14.00	19	Nr. 16	354	36	260	140	11.75
KAGW 2-22	26.50 / 19.00	22	Nr. 25	442	45	340	180	21.51

KAGW 4
Clevis master set
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
KAGW 4-5/6	3.00 / 2.12	5 + 6	Nr. 5	220	19	135	75	1.77
KAGW 4-7	4.00 / 2.80	7	Nr. 6	273	23	160	90	3.21
KAGW 4-8	5.30 / 3.75	8	Nr. 6	273	23	160	90	3.22
KAGW 4-10	8.00 / 6.00	10	Nr. 8	316	27	180	100	5.36
KAGW 4-13	14.00 / 10.00	13	Nr. 10	378	33	200	110	10.51
KAGW 4-16	21.20 / 15.00	16	Nr. 16	474	36	260	140	16.43
KAGW 4-19/20	30.00 / 21.20	19	Nr. 32	594	50	350	190	32.92
KAGW 4-22	40.00 / 28.00	22	Nr. 32	622	50	350	190	41.07

KMGW 1
Enlarged clevis master set
(BS EN 818-4 with mechanical values for G10)

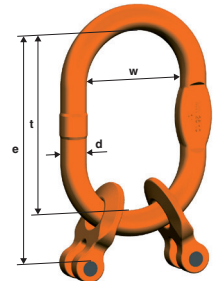


Code	WLL [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
KMGW 1-5/6	1.40	5 + 6	Nr. 4	151	14	120	70	0.63
KMGW 1-8	2.50	8	Nr. 5	183	16	140	80	0.91
KMGW 1-10	4.00	10	Nr. 6	211	19	160	95	1.53
KMGW 1-13	6.70	13	Nr. 10	233	23	170	105	2.58
KMGW 1-16	10.00	16	Nr. 10	264	27	190	110	4.14

Please note that all dimensions stated are nominal and subject to change without prior notice!

KMGW 2

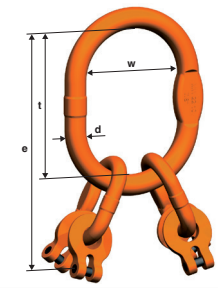
Enlarged clevis master set
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
KMGW 2-5/6	2.00 / 1.40	5 + 6	Nr. 4	151	14	120	70	0.69
KMGW 2-8	3.55 / 2.50	8	Nr. 6	203	19	160	95	1.58
KMGW 2-10	5.60 / 4.00	10	Nr. 10	221	23	170	105	2.54
KMGW 2-13	9.50 / 6.70	13	Nr. 10	253	27	190	110	4.32
KMGW 2-16	14.00 / 10.00	16	Nr. 12	304	33	230	130	8.47

KMGW 4

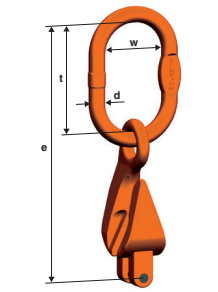
Enlarged clevis master set
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
KMGW 4-5/6	3.00 / 2.12	5 + 6	Nr. 6	245	19	160	95	1.94
KMGW 4-8	5.30 / 3.75	8	Nr. 10	283	23	170	105	3.36
KMGW 4-10	8.00 / 6.00	10	Nr. 10	326	27	190	110	5.55
KMGW 4-13	14.00 / 10.00	13	Nr. 12	408	33	230	130	11.15
KMGW 4-16	21.20 / 15.00	16	Nr. 20	489	38	275	150	17.67

VXKW 1

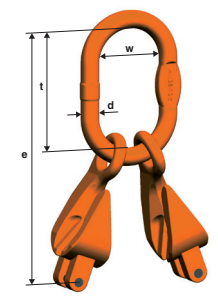
Clevis master set with integral shortener
(BS EN 818-4 with mechanical values for G10)



Code	WLL [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VXKW 1-5	1.00	5	Nr. 1.6	164	10	80	50	0.38
VXKW 1-6	1.40	6	Nr. 2.5	194	13	110	60	0.58
VXKW 1-7	1.90	7	Nr. 2.5	232	13	110	60	1.00
VXKW 1-8	2.50	8	Nr. 2.5	232	16	110	60	1.21
VXKW 1-10	4.00	10	Nr. 5	294	19	135	75	2.27
VXKW 1-13	6.70	13	Nr. 6	363	23	160	90	4.50
VXKW 1-16	10.00	16	Nr. 8	413	27	180	100	7.38

VXKW 2

Clevis master set with integral shorteners
(BS EN 818-4 with mechanical values for G10)

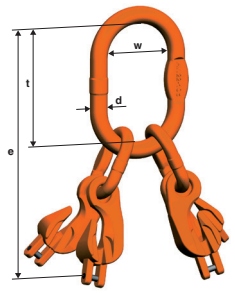


Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VXKW 2-5	1.40 / 1.00	5	Nr. 1.6	164	10	80	50	0.59
VXKW 2-6	2.00 / 1.40	6	Nr. 2.5	194	13	110	60	0.79
VXKW 2-7	2.65 / 1.90	7	Nr. 2.5	232	16	110	60	1.87
VXKW 2-8	3.55 / 2.50	8	Nr. 5	257	19	135	75	2.29
VXKW 2-10	5.60 / 4.00	10	Nr. 6	319	23	160	90	4.30
VXKW 2-13	9.50 / 6.70	13	Nr. 8	383	27	180	100	7.98
VXKW 2-16	14.00 / 10.00	16	Nr. 10	433	33	200	110	13.98

Please note that all dimensions stated are nominal and subject to change without prior notice!

VXKW 4

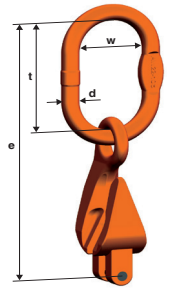
Clevis master set with integral shorteners
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VXKW 4-5	2.00 / 1.50	5	Nr. 2.5	238	13	110	60	1.43
VXKW 4-6	3.00 / 2.12	6	Nr. 5	273	19	135	75	2.17
VXKW 4-7	4.00 / 2.80	7	Nr. 6	352	23	160	90	4.99
VXKW 4-8	5.30 / 3.75	8	Nr. 6	352	23	160	90	5.05
VXKW 4-10	8.00 / 6.00	10	Nr. 8	424	27	180	100	8.88
VXKW 4-13	14.00 / 10.00	13	Nr. 10	518	33	200	110	17.50
VXKW 4-16	21.20 / 15.00	16	Nr. 16	633	36	260	140	29.74

VMXKW 1

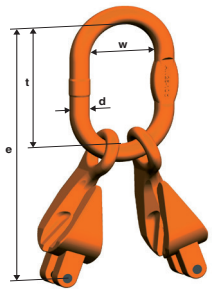
Clevis master set with enlarged master link & integral shortener
(BS EN 818-4 with mechanical values for G10)



Code	WLL [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VMXKW 1-6	1.40	6	Nr. 4	204	14	120	70	0.74
VMXKW 1-7	1.90	7	Nr. 4	242	14	120	70	1.06
VMXKW 1-8	2.50	8	Nr. 5	262	16	140	80	1.30
VMXKW 1-10	4.00	10	Nr. 6	319	19	160	95	2.34
VMXKW 1-13	6.70	13	Nr. 10	373	23	170	105	4.39
VMXKW 1-16	10.00	16	Nr. 10	424	27	190	110	7.45

VMXKW 2

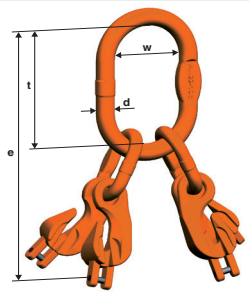
Clevis master set with enlarged master link & integral shortener
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VMXKW 2-6	2.00 / 1.40	6	Nr. 4	204	14	120	70	1.04
VMXKW 2-7	2.65 / 1.90	7	Nr. 5	262	16	140	80	1.91
VMXKW 2-8	3.55 / 2.50	8	Nr. 6	282	19	160	95	2.35
VMXKW 2-10	5.60 / 4.00	10	Nr. 10	329	23	170	105	4.19
VMXKW 2-13	9.50 / 6.70	13	Nr. 10	393	27	190	110	8.05
VMXKW 2-16	14.00 / 10.00	16	Nr. 12	464	33	230	130	14.38

VMXKW 4

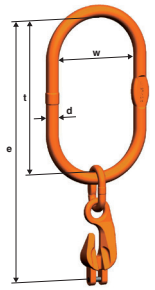
Clevis master set with enlarged master link & integral shortener
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	For chain dia. Ø	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
VMXKW 4-6	3.00 / 2.12	6	Nr. 6	298	19	160	95	2.63
VMXKW 4-7	4.00 / 2.80	7	Nr. 10	362	23	170	105	4.84
VMXKW 4-8	5.30 / 3.75	8	Nr. 10	362	23	170	105	4.93
VMXKW 4-10	8.00 / 6.00	10	Nr. 10	434	27	190	110	9.01
VMXKW 4-13	14.00 / 10.00	13	Nr. 12	548	33	230	130	17.90
VMXKW 4-16	21.20 / 15.00	16	Nr. 20	649	38	275	150	30.52

LXKW 1

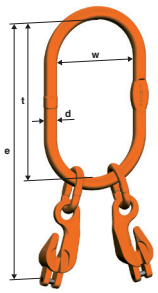
Oversize clevis master set with integral shortener
(BS EN 818-4 with mechanical values for G10)



Code	WLL [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
LXKW 1-6	1.40	Nr. 25	478	23	340	180	3.72
LXKW 1-8	2.50	Nr. 25	516	23	340	180	4.03
LXKW 1-10	4.00	Nr. 25	569	27	340	180	6.05
LXKW 1-13	6.70	Nr. 25	629	27	340	180	8.82
LXKW 1-16	10.00	Nr. 25	688	33	340	180	13.54

LXKW 2

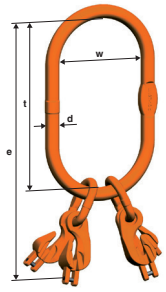
Oversize clevis master set with integral shorteners
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
LXKW 2-6	2.00 / 1.40	Nr. 25	478	23	340	180	3.97
LXKW 2-8	3.55 / 2.50	Nr. 25	516	23	340	180	4.84
LXKW 2-10	5.60 / 4.00	Nr. 25	569	27	340	180	7.69
LXKW 2-13	9.50 / 6.70	Nr. 25	629	33	340	180	14.28
LXKW 2-16	14.00 / 10.00	Nr. 25	688	40	340	180	23.17

LXKW 4

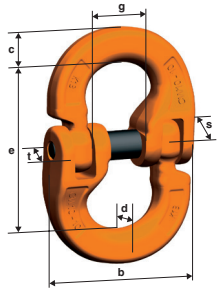
Oversize clevis master set with integral shorteners
(BS EN 818-4 with mechanical values for G10)



Code	WLL 0°–45° / 45°–60° [tonnes]	Can be used on DIN 15401 specification hook	e [mm]	d [mm]	t [mm]	w [mm]	Weight [kg/pc.]
LXKW 4-6	3.00 / 2.12	Nr. 25	478	23	340	180	4.70
LXKW 4-8	5.30 / 3.75	Nr. 25	532	27	340	180	7.60
LXKW 4-10	8.00 / 6.00	Nr. 25	584	33	340	180	13.10
LXKW 4-13	14.00 / 10.00	Nr. 25	659	40	340	180	23.10
LXKW 4-16	21.20 / 15.00	Nr. 25	713	40	340	180	33.10

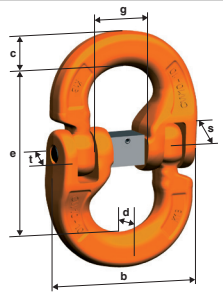
Please note that all dimensions stated are nominal and subject to change without prior notice!

CW
Connex connecting link
(BS EN 1677-1 with mechanical values for G10)



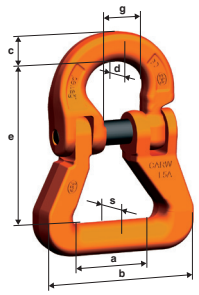
Code	WLL [tonnes]	e [mm]	c [mm]	s [mm]	t [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
CW 5	1.00	38	7	9	12	7	34	13	0.06
CW 6	1.40	44	8	11	13	8	39	14	0.08
CW 7	1.90	53	10	13	16	9	46	17	0.14
CW 8	2.50	62	12	14	20	10	55	19	0.24
CW 10	4.00	72	15	18	22	13	64	24	0.42
CW 13	6.70	88	20	22	26	17	79	28	0.85
CW 16	10.00	112	24	29	35	20	105	34	1.90
CW 19-20	16.00	126	32	35	45	25	126	44	3.10
CW 22	19.00	157	36	39	46	26	148	52	4.60
CW 26	26.50	179	40	46	57	30	175	62	6.80
CW 32	40.00	206	47	56	63	35	216	80	11.36

CLW
Connex connecting link
(Tamper proof)
(BS EN 1677-1 with mechanical values for G10)



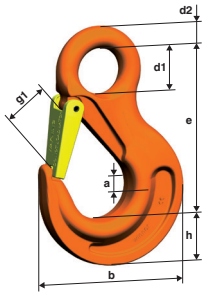
Code	WLL [kg]	e [mm]	c [mm]	s [mm]	t [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
CLW 7	1.90	53	10	13	16	9	46	17	0.14
CLW 10	4.00	72	15	18	22	13	64	24	0.43
CLW 13	6.70	88	20	22	26	17	79	28	0.85
CLW 16	10.00	112	24	29	35	20	105	34	1.39

CARW
Round sling connecting link
(BS EN 1677-1 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	a [mm]	c [mm]	d [mm]	b [mm]	s [mm]	g [mm]	Weight [kg/pc.]
CARW 8	2.50	66	29	12	10	68	18	19	0.33
CARW 10	4.00	81	40	15	13	82	21	24	0.71
CARW 13	6.70	104	44	20	17	101	28	28	1.34
CARW 16	10.00	113	47	24	20	110	40	34	1.83
CARW 22	19.00	190	110	36	25	215	58	52	7.98

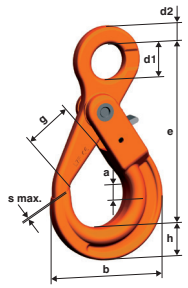
HSW
Eye sling hook
(BS EN 1677-2 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
HSW 5-6	1.40	85	21	17	20	10	19	68	0.34
HSW 7-8	2.50	106	27	19	25	11	26	88	0.57
HSW 10	4.00	131	33	26	34	16	31	109	1.25
HSW 13	6.70	164	44	33	43	19	39	134	1.86
HSW 16	10.00	183	50	40	50	25	45	155	3.86
HSW 19-20	16.00	205	55	48	55	27	53	178	6.01
HSW 22	19.00	225	62	50	60	29	62	196	8.19
HSW 26	26.50	259	75	70	70	37	73	235	12.76
HSW 32	40.00	299	97	82	66	45	87	291	27.86

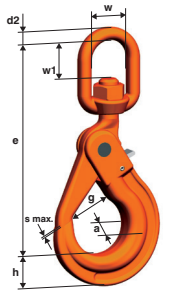
Please note that all dimensions stated are nominal and subject to change without prior notice!

LHW
Eye safety hook
(BS EN 1677-3 with mechanical values for G10)



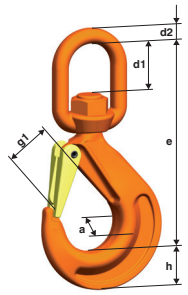
Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
LHW 5-6	1.40	110	20	17	71	21	11	28	1	0.53
LHW 7-8	2.50	136	26	20	88	25	12	34	1	0.92
LHW 10	4.00	169	30	29	107	35	15	45	1	1.57
LHW 13	6.70	205	40	35	138	40	20	52	1.50	3.19
LHW 16	10.00	251	50	41	168	50	27	60	2	6.24
LHW 19-20	16.00	290	62	50	194	60	30	70	2	9.75
LHW 22	19.00	322	65	52	211	70	32	81	2	12.45
LHW 26	26.50	383	79	61	253	82	42	100	2	20.00

WLHW / WLHBW
Eye swivel safety hook
(* WLHBW with ball bearing)
(BS EN 1677-3 with mechanical values for G10)



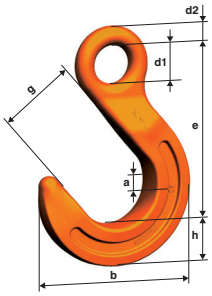
Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	w [mm]	w1 [mm]	d2 [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
WLHW 5-6	1.400	161	20	17	35	36	12	28	1	1.20
WLHW 7-8	2.500	182	26	20	35	36	12	34	1	1.54
WLHW 10	4.000	218	30	29	42	41	16	45	1	2.14
WLHW 13	6.700	269	40	35	49	47	20	52	1.50	4.42
WLHW 16	10.0	319	50	41	60	60	24	60	2	7.34
WLHBW 5-6 *	1.40	161	20	17	35	36	12	28	1	1.20
WLHBW 7-8 *	2.50	182	26	20	35	36	12	34	1	1.55
WLHBW 10 *	4.00	218	30	29	42	41	16	45	1	2.14
WLHBW 13 *	6.70	269	40	35	49	47	20	52	1.50	4.43
WLHBW 16 *	10.00	319	50	41	60	60	24	60	2	7.35

WSBW
Eye swivel hook with bearing
(Max. working temp. 120°C)
(BS EN 1677-2 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g1 [mm]	Weight [kg/pc.]
WSBW 7-8	2.50	154	28	19	37	12	26	1.24
WSBW 10	4.00	183	33	25	41	16	30	1.84
WSBW 13	6.70	221	40	30	47	20	38	3.45

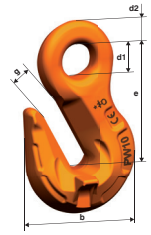
FW
Eye foundry hook
(BS EN 1677-1 with mechanical values for G10)



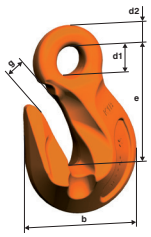
Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	d1 [mm]	d2 [mm]	g [mm]	b [mm]	Weight [kg/pc.]
FW 7-8	2.50	131	29	25	24	11	64	118	0.94
FW 10	4.00	158	35	32	31	14	76	143	1.62
FW 13	6.70	190	42	40	39	17	89	170	3.24
FW 16	10.00	224	50	46	47	22	102	200	5.65
FW 19-20	16.00	260	61	54	56	28	114	231	9.50
FW 22	19.00	265	70	61	47	30	127	260	9.31
FW 26	26.50	305	80	72	54	34	136	280	19.21
FW 32	40.00	327	93	83	60	37	152	336	28.00

Please note that all dimensions stated are nominal and subject to change without prior notice!

PW
Eye grab hook
(BS EN 1677-1 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
PW 5	1.00	47	40	11	9	7	0.16
PW 6	1.40	50	44	12	9	7	0.16
PW 7-8	2.50	65	57	16	12	9	0.38
PW 10	4.00	77	77	20	14	12	0.72
PW 13	6.70	101	92	26	19	15	1.56
PW 16	10.00	121	113	32	23	19	2.67

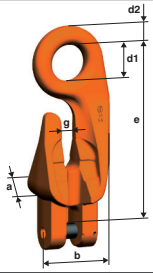


Code	WLL [tonnes]	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
PW 19-20	16.00	151	150	36	27	25	6.16
PW 22	19.00	170	165	42	31	27	8.30
PW 26	26.50	201	195	50	37	32	13.65
PW 32	40.00	243	242	60	43	38	25.00

PSW
Eye grab hook with safety catch
(BS EN 1677-1 with mechanical values for G10)

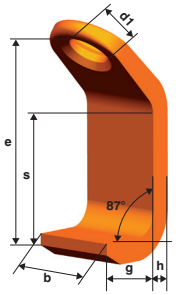
Code	WLL [tonnes]	e [mm]	b [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
PSW 7-8	2.50	65	57	16	12	9	0.40
PSW 10	4.00	77	71	20	14	12	0.75
PSW 13	6.70	101	92	26	19	15	1.61
PSW 16	10.00	121	113	32	23	19	2.73

XKW
Clevis shortening hook
(BS EN 1677-1 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	b [mm]	a [mm]	d1 [mm]	d2 [mm]	g [mm]	Weight [kg/pc.]
XKW 5-6	1.40	84	37	29	18	9	8	0.22
XKW 7	1.90	122	54	39	24	12	11	0.66
XKW 8	2.50	122	54	39	24	12	11	0.67
XKW 10	4.00	160	70	50	31	14	13	1.31
XKW 13	6.70	203	92	64	37	18	15	2.83
XKW 16	10.00	234	102	80	48	24	20	5.06

BWW
Sheet metal plate hook
(BS EN 1677-1 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	s [mm]	b [mm]	h [mm]	d1 [mm]	g [mm]	Weight [kg/pc.]
BWW 7-8	2.50	131	80	50	15	28	55	1.50
BWW 10	4.00	170	100	70	20	36	65	2.80
BWW 13	6.70	209	130	80	25	40	90	5.30
BWW 16	10.00	263	160	100	30	50	110	10.50
BWW 19-20	16.00	306	185	120	40	60	130	17.50
BWW 22	19.00	368	220	140	50	75	150	30.50

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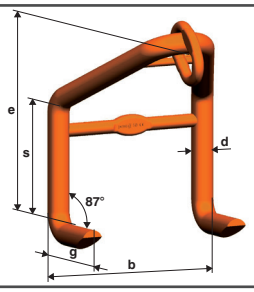
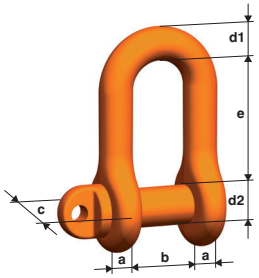
GHW
Fork hook
(BS EN 1677-1 with mechanical values for G10)



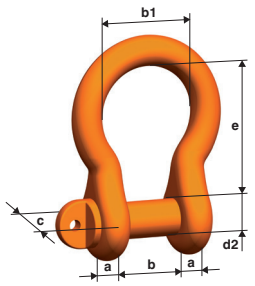
Code	WLL [tonnes]	e [mm]	s [mm]	b [mm]	g [mm]	d [mm]	BW link type	Weight [kg/pc.]
GHW 5-6	1.40	203	100	190	65	23	BW 13	2.84
GHW 7-8	2.50	300	150	254	100	30	BW 16	7.25
GHW 10	4.00	402	200	380	130	40	BW 22	17.01

SCHW
Screw pin D-Shackle



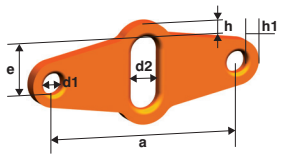
Code	WLL [tonnes]	e [mm]	b [mm]	a [mm]	d1 [mm]	c [mm]	d2 [mm]	Weight [kg/pc.]
SCHW 5	1.00	24	11	7	8	16	8	0.11
SCHW 6	1.40	30	14	8	10	20	10	0.20
SCHW 7-8	2.50	36	17	10	12	24	12	0.41
SCHW 10	4.00	49	21	13	15	32	16	0.61
SCHW 13	6.70	61	27	17	19	40	20	1.42
SCHW 16	10.00	73	33	21	23	48	24	2.62

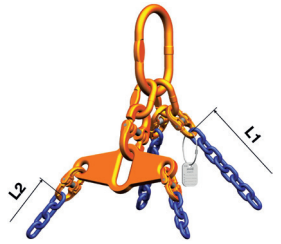
GSCHW
Screw pin Bow shackle



Code	WLL [tonnes]	e [mm]	b [mm]	b1 [mm]	a [mm]	c [mm]	d2 [mm]	Weight [kg/pc.]
GSCHW 7-8	2.50	51	22	32	13	34	16	0.46
GSCHW 10	4.00	64	27	43	16	40	19	0.85
GSCHW 13	6.70	76	31	51	19	46	22	1.27
GSCHW 16	10.00	95	43	68	25	59	28	2.90

AGWW
Load distributor





Code	Connex for connection to top link	WLL 0-45° [tonnes]	WLL 45-60° [tonnes]	e [mm]	a [mm]	d1 [mm]	d2 [mm]	h [mm]	h1 [mm]	s [mm]	Difference L1 / L2 [chain links]	Weight [kg/pc.]
AGWW 5-6	CW 8	2.00	1.40	35	148	16	22	11	9	10	6 for 5mm chain 5 for 6mm chain	0.54
AGWW 7-8	CW 10	3.55	2.50	51	210	22	25	15.50	14	15	6 for 7mm chain 5 for 8mm chain	1.75
AGWW 10	CW 13	5.60	4.00	32	180	25	32	23	15.50	15	4	1.56
AGWW 13	CW 16	9.50	6.70	53	240	32	40	27	20	20	4	3.60
AGWW 16	CW 19/20	14.00	10.00	77	300	40	50	32	25	25	4	7.00
AGWW 19-20	CW 32	20.00	14.00	79	390	50	70	45	30	30	5	13.20
AGWW 22	CW 32	26.50	19.00	124	350	60	70	50	35	30	5	14.70
AGWW 26	55t shackle	37.50	26.50	130	400	70	75	60	40	40	5	25.80

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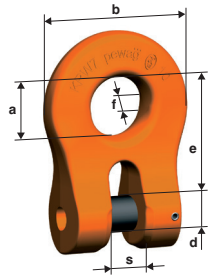
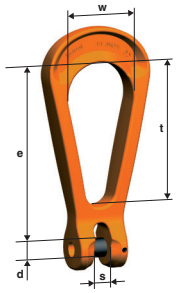
KRW
Coupling ring
(BS EN 1677-1 with mechanical values for G10)



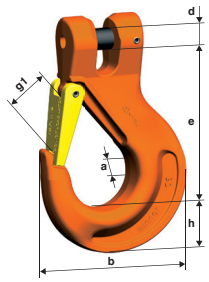
Code	WLL [tonnes]	e [mm]	s [mm]	a [mm]	b [mm]	f [mm]	d [mm]	Weight [kg/pc.]
KRW 5-6	1.40	31	7	18	38	8	7.40	0.12
KRW 7	1.90	43	10	24	54	11	9	0.21
KRW 8	2.50	43	10	24	54	11	10	0.21
KRW 10	4.00	51	12	28	63	14	12.50	0.37
KRW 13	6.70	63	15	33	76	17	16	0.77
KRW 16	10.00	74	18	40	88	20	20	1.36
KRW 19-20	16.00	94	23	50	114	24	24	2.33
KRW 22	19.00	102	25	50	122	27	27	3.95

KOW
Clevis reeving link
(BS EN 1677-1 with mechanical values for G10)



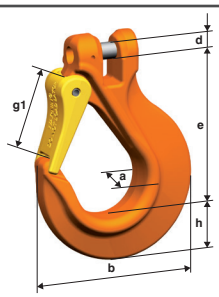
Code	WLL [tonnes]	e [mm]	t [mm]	w [mm]	d [mm]	s [mm]	Weight [kg/pc.]
KOW 7	1.900	92	70	34	9	9	0.33
KOW 8	2.500	91	70	34	10	9	0.33
KOW 10	4.000	128	102	50	12.50	12	0.75
KOW 13	6.700	169	136	66	16	15	1.08
KOW 16	10.000	214	172	83	20	18	2.93

KHSW
Clevis sling hook
(BS EN 1677-2 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
KHSW 5-6	1.40	69	20	15	7.40	19	66	0.29
KHSW 7	1.90	95	28	19	9	26	90	0.61
KHSW 8	2.50	95	28	19	10	26	90	0.62
KHSW 10	4.00	109	35	25	12.50	31	108	1.19
KHSW 13	6.70	136	41	34	16	39	131	2.12
KHSW 16	10.00	155	49	37	20	45	153	3.49
KHSW 19-20	16.00	184	53	51	24	53	177	5.64
KHSW 22	19.00	214	62	52	27	62	196	9.05

BKHSW
Clevis wide bowl sling hook
(BS EN 1677-2 with mechanical values for G10)



Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	d [mm]	g1 [mm]	b [mm]	Weight [kg/pc.]
BKHSW 8	2.50	93	27	25	10	32	98	1.01
BKHSW 10	4.00	111	33	30	12.50	38	119	1.57

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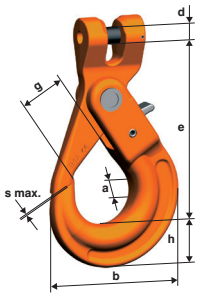
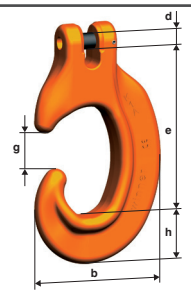
KLHW
Clevis safety hook
(BS EN 1677-3 with mechanical values for G10)



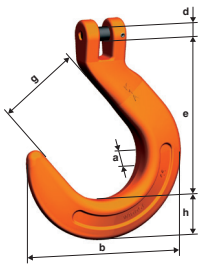
Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	b [mm]	d [mm]	g [mm]	s max. [mm]	Weight [kg/pc.]
KLHW 5-6	1.40	94	20	17	71	7.40	28	1	0.56
KLHW 7	1.90	123	26	20	88	9	34	1	0.87
KLHW 8	2.50	123	26	20	88	10	34	1	1.00
KLHW 10	4.00	144	30	29	107	12.50	45	1	1.61
KLHW 13	6.70	180	40	35	138	16	52	1.50	3.25
KLHW 16	10.00	218	50	41	168	20	60	2	5.95
KLHW 19-20	16.00	259	62	50	194	24	70	2	12.89
KLHW 22	19.00	286	65	52	211	27	81	2	15.91
KLHW 26	26.50	338	79	61	253	33	100	2	21.33

KCHW
Clevis C-hook
(BS EN 1677-1 with mechanical values for G10)



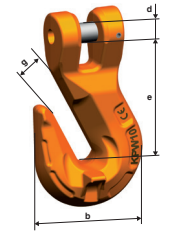
Code	WLL [tonnes]	e [mm]	h [mm]	d [mm]	b [mm]	g [mm]	Weight [kg/pc.]
KCHW 7	1.90	91	28	9	74	20	0.52
KCHW 8	2.50	90	28	10	74	20	0.51
KCHW 10	4.00	129	39	12.50	107	28	1.51
KCHW 13	6.70	166	51	16	137	41	3.13
KCHW 16	10.00	205	60	20	166	45	5.56

KFW
Clevis foundry hook
(BS EN 1677-1 with mechanical values for G10)

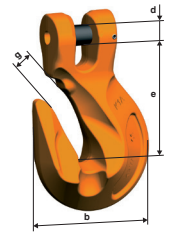


Code	WLL [tonnes]	e [mm]	h [mm]	a [mm]	g [mm]	d [mm]	b [mm]	Weight [kg/pc.]
KFW 7	1.90	121	29	25	64	9	118	1.02
KFW 8	2.50	120	29	25	64	10	118	1.04
KFW 10	4.00	140	35	32	76	12.50	143	1.74
KFW 13	6.70	170	42	40	89	16	170	3.38

KPW
Clevis grab hook
(BS EN 1677-1 with mechanical values for G10)



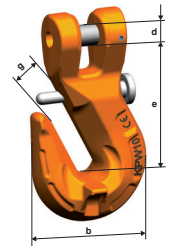
Code	WLL [tonnes]	e [mm]	b [mm]	d [mm]	g [mm]	Weight [kg/pc.]
KPW 6	1.40	47	44	7.40	7	0.19
KPW 7	1.90	63	57	9	9	0.46
KPW 8	2.50	63	57	10	9	0.46
KPW 10	4.00	78	71	12.50	12	0.90
KPW 13	6.70	93	92	16	15	1.85
KPW 16	10.00	115	113	20	19	3.49



Code	WLL [tonnes]	e [mm]	b [mm]	d [mm]	g [mm]	Weight [kg/pc.]
KPW 19-20	16.00	141	150	24	25	6.88
KPW 22	19.00	158	165	27	27	9.68

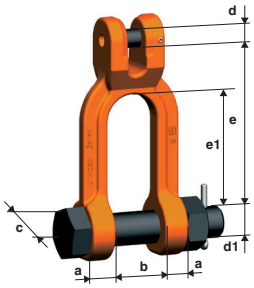
Please note that all dimensions stated are nominal and subject to change without prior notice!

KPSW
Clevis grab hook with safety latch
(BS EN 1677-1 with mechanical values for G10)



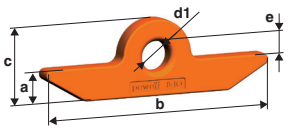
Code	WLL [tonnes]	e [mm]	b [mm]	d [mm]	g [mm]	Weight [kg/pc.]
KPSW 7	1.90	63	57	9	9	0.48
KPSW 8	2.50	63	57	10	9	0.48
KPSW 10	4.00	78	71	12.50	12	0.93
KPSW 13	6.70	93	92	16	15	1.90
KPSW 16	10.00	115	113	20	19	3.55

KSCHW
Clevis shackle
(BS EN 1677-1 with mechanical values for G10)



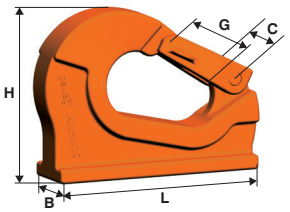
Code	WLL [tonnes]	e [mm]	e1 [mm]	b min. [mm]	a [mm]	d [mm]	c [mm]	d1 [mm]	Weight [kg/pc.]
KSCHW 7	1.90	76	54	26	12	9	31	16	0.64
KSCHW 8	2.50	76	54	26	12	10	31	16	0.66
KSCHW 10	4.00	105	76	32	16	12.50	39	20	1.22
KSCHW 13	6.70	113	77	42	21	16	50	24	2.64

KNEW
Toggle
(BS EN 1677-1 with mechanical values for G10)



Code	For chain	WLL [tonnes]	e [mm]	a [mm]	b [mm]	c [mm]	d1 [mm]	d min. [mm]	d max. [mm]	Connecting link
KNEW 8	8	2.50	10	17	120	38	15	40	60	WIN 10

AWHW
Weld-on hook
(BS EN 1677-1 with mechanical values for G10)

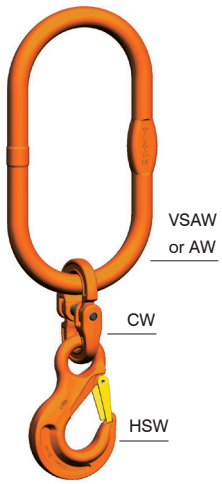


Code	WLL [tonnes]	L [mm]	H [mm]	G [mm]	B [mm]	C [mm]	Weight [kg/pc.]
AWHW 1.3	1.30	95	74	20	25	34	0.67
AWHW 3.8	3.80	132	106	26	35	40	1.40
AWHW 6.3	6.30	167	133	29	45	49	2.95
AWHW 10	10.00	175	136	29	50	49	4.02

Please note that all dimensions stated are nominal and subject to change without prior notice!

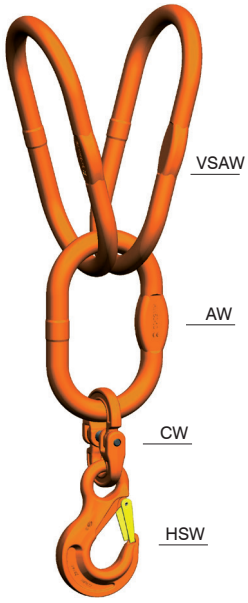
UW Transition assembly for single crane hook according to DIN 15401

In accordance with EN 818-4 with increased load capacity.
For attaching smaller sized chain slings which will not fit on single DIN15401 crane hooks.
Observe the stated load capacity!

UW Transition assembly for single crane hook (BS EN 818-4 with mechanical values for G10)	Code	For single hook DIN 15401	WLL [tonnes]	Comprising	Weight [kg/pc.]
	UW 32/16 I AW-HSW Connex	32	16.00	AW 50/CW 26/HSW 19/20	28.86
	UW 32/19 I AW-HSW Connex	32	19.00	AW 50/CW 26/HSW 22	30.54
	UW 32/26.5 I AW-HSW Connex	32	26.50	AW 50/CW 26/HSW 26	36.89
	UW 50/4 I VSAW-HSW Connex	50	4.00	VSAW 1-16/CW 16/HSW 10	12.54
	UW 50/6.7 I VSAW-HSW Connex	50	6.70	VSAW 1-16/CW 16/HSW 13	13.73
	UW 50/10 I VSAW-HSW Connex	50	10.00	VSAW 1-16/CW 16/HSW 16	15.05
	UW 50/16 I VSAW-HSW Connex	50	16.00	VSAW 1-22/CW 22/HSW 19/20	28.22
	UW 50/19 I VSAW-HSW Connex	50	19.00	VSAW 1-22/CW 22/HSW 22	29.90
	UW 50/26.5 I VSAW-HSW Connex	50	26.50	VSAW 1-26/CW 26/HSW 26	41.89
	UW 50/40 I AW-HSW Connex	50	40.00	AW 72/CW 32/HSW 32	80.76
	UW 100/26.5 I VSAW-HSW Connex	100	26.50	VSAW 1-32/320/CW 26/HSW 26	68.89
	UW 100/40 I VSAW-HSW Connex	100	40.00	VSAW 1-32/320/CW 32/HSW 32	87.26

UW Transition assembly for double crane hook according to DIN 15402

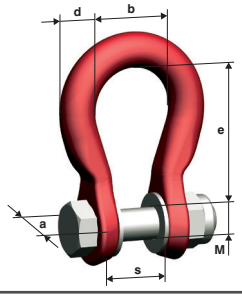
In accordance with EN 818-4 with increased load capacity.
For attaching smaller sized chain slings which will not fit on double DIN15402 crane hooks.
Observe the stated load capacity!

UW Transition assembly for double crane hook (BS EN 818-4 with mechanical values for G10)	Code	Double hook DIN 15402	WLL * [tonnes]	Comprising	Weight [kg/pc.]
	ÜW 50/4 II VSAW-HSW Connex	50	4.00	2xVSAW 1-16/AW36/ CW16/HSW10	28.09
	ÜW 50/6,7 II VSAW-HSW Connex	50	6.70	2xVSAW 1-16/AW36/ CW16/HSW13	29.28
	ÜW 50/10 II VSAW- HSW Connex	50	10.00	2xVSAW 1-16/AW36/ CW16/HSW16	30.60
	ÜW 50/16 II VSAW-HSW Connex	50	16.00	2xVSAW 1-16/AW36/ CW19/20/HSW19/20	33.10
	ÜW 50/19 II VSAW-HSW Connex	50	19.00	2xVSAW 1-22/AW50/ CW26/HSW22	67.09
	ÜW 50/26,5 II VSAW-HSW Connex	50	26.50	2xVSAW 1-22/AW50/ CW26/HSW26	73.44
	ÜW 50/36 II VSAW-HSW Connex	50	36.00	2xVSAW 1-22/AW50/ CW32/HSW32	91.81
	ÜW 100/26,5 II VSAW-HSW Connex	100	26.50	2xVSAW 1-32/320/AW50/ CW26/HSW26	133.44
	ÜW 100/40 II VSAW-HSW Connex	100	40.00	2xVSAW 1-32/320/AW50/ CW32/HSW32	151.81

* Angle of inclination of VSAW: 35° max.

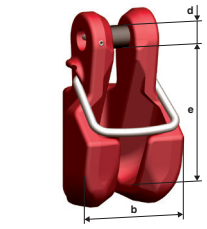
Please note that all dimensions stated are nominal and subject to change without prior notice!

U
Unilock connecting link
(BS EN 1677-1)



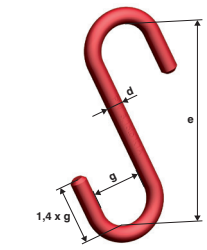
Code	WLL [tonnes]	e [mm]	b [mm]	d [mm]	s [mm]	a [mm]	M [mm]	Weight [kg/pc.]
U 5-6	1.12	34	21	9	11	16	7	0.09
U 7	1.50	49	28	13	16	22	8	0.22
U 8	2.00	48	28	13	16	22	10	0.23
U 10	3.15	60	35	16	20	27	12	0.39
U 13	5.30	72	39	18	24	34	16	0.65
U 16	8.00	80	47	23	32	44	20	1.34
U 19-20	12.50	96	56	26	36	52	24	2.03
U 26	21.20	121	77	36	49	74	30	4.70

KVS
Clevis shortening clutch
(BS EN 1677-1)



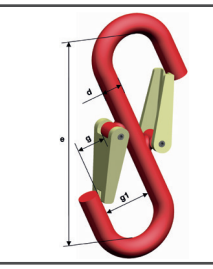
Code	WLL [tonnes]	e [mm]	b [mm]	d [mm]	Weight [kg/pc.]
KVS 6	1.12	45	36	7,4	0.27
KVS 7	1.50	58	44	9	0.50
KVS 8	2.00	58	44	10	0.50
KVS 10	3.15	70	55	12,5	0.80
KVS 13	5.30	90	70	16	1.53

SM
S-hook
(Special designs possible on request)
(BS EN 1677-1)



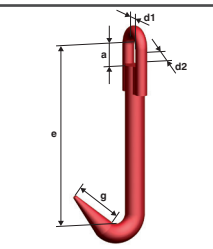
Code	WLL [tonnes]	e [mm]	g [mm]	d [mm]	Weight [kg/pc.]
SM 5	0.80	180	42	16	0.60
SM 7/8	2.00	220	53	23	1.50
SM 10	3.15	280	58	31	3.40
SM 13	5.30	400	90	40	8.40
SM 16	8.00	500	120	50	16.00
SM 19	11.20	550	130	60	26.00

SSM
S-hook with safety latches
(BS EN 1677-1)



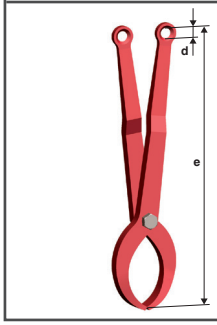
Code	WLL [tonnes]	e [mm]	g [mm]	d [mm]	Weight [kg/pc.]
SSM 5	0.80	180	42	16	0.65
SSM 7/8	2.00	220	53	23	1.55
SSM 10	3.15	280	58	31	3.50
SSM 13	5.30	400	90	40	8.50

BA
Bale and structural steel
wire mesh hook



Code	WLL [tonnes]	e [mm]	d1 [mm]	g [mm]	a [mm]	d2 [mm]	Weight [kg/pc.]
BA 5/6	1.12	160	16	40	24	7	0.36
BA 7/8	2.00	200	19	50	30	10	0.72
BA 10	3.15	260	27	65	39	13	1.78

HZ
High-tensile lifting tong

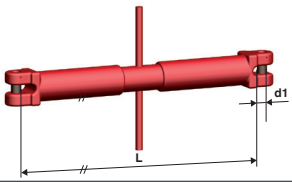


Code	WLL [kg]	Range [mm]	e [mm]	d [mm]	Weight [kg/pc.]	Required chain sling
HZ 0.125	125	100 – 200	310	15	2.43	WIN 5 II AW-CW 310
HZ 0.25	250	130 – 300	466	20	4.77	WIN 6 II AW-CW 410
HZ 0.5	500	160 – 400	629	28	12.00	WIN 7 II AW-CW 570
HZ 1	1000	215 – 500	808	30	24.00	WIN 8 II AW-CW 730
HZ 2	2000	250 – 600	959	30	41.00	WIN 8 II AW-CW 830

BRG
Concrete pipe lifting sling
(Complete 3 leg chain sling assembly)

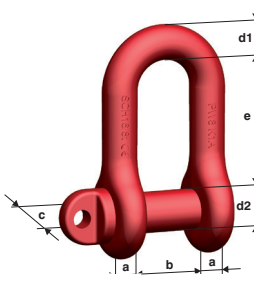
Code	Leg length [metre]	WLL up to 30° [tonnes]	Max pipe dia. [mm]	Weight [kg/pc.]
WIN 7 400 III AW-BRG 1500	1.50	2.50	1300	32.80
WIN 7 400 III AW-BRG 1500 Unilock	1.50	2.50	1300	33.50
WIN 7 400 III AW-BRG 2000	2.00	2.50	1800	34.68
WIN 7 400 III AW-BRG 2000 Unilock	2.00	2.50	1800	35.20
Special lengths upon request!				
Universal chain sling with shortening hook				
WIN 7 400 III VXKW-BRG 2000	2.00	2.50	1800	38.89
WIN 7 400 III VXKW-BRG 2500	2.50	2.50	2300	39.47

KSS
Clevis turnbuckle
(BS EN 1677-1)



Code	WLL [tonnes]	Tension distance [mm]	L min. [mm]	L max. [mm]	d1 [mm]	Weight [kg/pc.]
KSS 6-7	1.50	85	225	310	8	1.04
KSS 8	2.00	120	330	450	10	2.01
KSS 10	3.15	225	460	685	12	4.24
KSS 13	5.30	265	520	785	16	6.55
KSSW 16 (G10)	10.00	250	530	780	20	10.00

SCH
Alloy D-Shackle



Code	WLL [tonnes]	e [mm]	b [mm]	a [mm]	d1 [mm]	c [mm]	d2 [mm]	Weight [kg/pc.]
SCH 6/1,12 T*	1.12	24	11	7	8	16	8	0.05
SCH 10/3,15 T*	3.15	36	17	10	12	24	12	0.20
SCH 13/5,3 T*	5.30	49	21	13	15	32	16	0.30
SCH 19/11,2 T*	11.20	73	33	21	23	48	24	1.30
* To be discontinued								

Chain Load Lashing Systems For The Road Transport Industry

Load lashing or load restraint is a vital component for the safe transport of goods whether this be by road, rail or sea.

Outside forces applied to the load caused by the effects of breaking, accelerating or cornering have a dramatic effect on how the load is to be restrained.

In a similar way to how we select lifting equipment, the shape and type of load as well as the effects of the working angles of the lashings, can increase the forces considered and consequently these factors affect the choice of both the type of lashing that should be selected and the method of how they should be used (friction or direct lashing).

BS EN 12195 Parts 1 to 4 were introduced to provide a means of conforming to the essential safety requirements for lashing and load restraint in the Common European market and thus enabling the free movement of goods.

Lashing equipment supplied by Brindley Chains is of high quality.

We are able to offer lashing chains and components in various grades, from our LINX-8 Grade 8 system, to Pewag Grade 10 which offers the user a 25% increase in lashing capacity for the same size chain over G8 (as the minimum requirement under the standard), to the new Pewag Grade 12 profiled chain system (for further details please refer to the sales brochures for these systems).

Whatever Brindley chain system you choose, it will meet or exceed the British and European standards.

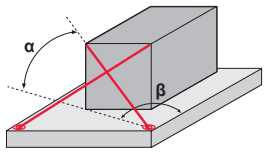
This brochure contains all the information necessary to select the correct type and grade of equipment to suit your specific requirements. Whether you require direct or friction lashings, this guide will assist you in making an informed decision for selecting and specifying all manner of chain lashing equipment. With the aid of pre-calculated selection charts you will be able to choose the correct chain size and number of lashings to safely restrain the load.

Further details of chains, components, lashing points and other ancillary equipment can also be found within the brochure as well as details of certification and maintenance criteria and other services offered by us to the transport industry.

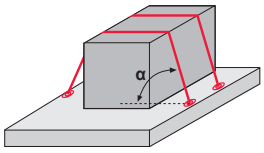
Common Materials With Dynamic Friction Factors Of 0.3μD

- Aluminium against sawn wood
- Steel sheets against sawn wood
- Cardboard against wooden pallet
- Large bags against wooden pallet
- Flat steel bars against sawn wood
- Unpainted rough steel against sawn wood
- Unpainted rough steel against unpainted rough steel
- Rubber tyre against sawn wood
- Rubber tyre against rough steel

For full details refer to BS EN 12195.



Example of direct lashing



Example of friction lashing

Direct Lashing Load Table (amended May 2018)

For materials with dynamic friction factors of 0.3μD with capacities based on FOUR equally loaded lashing chains

Working Angles		Lashing Size = 8mm			Lashing Size = 10mm			Lashing Size = 13mm		
α	β	Grade 8 LC = 40kN	Grade 10 LC = 50kN	Grade 12 LC = 60kN	Grade 8 LC = 63kN	Grade 10 LC = 80kN	Grade 12 LC = 100kN	Grade 8 LC = 100kN	Grade 10 LC = 134kN	Grade 12 LC = 160kN
20 to 35	21 - 30	11.65t	14.55t	17.45t	18.35t	23.30t	29.15t	29.15t	39.05t	46.65t
	31 - 40	10.50t	13.15t	15.75t	16.55t	21.05t	26.30t	26.30t	35.25t	42.10t
	41 - 50	9.10t	11.40t	13.65t	14.35t	18.20t	22.80t	22.80t	30.55t	36.45t
	51 - 60	7.45t	9.35t	11.20t	11.80t	14.95t	18.70t	18.70t	25.10t	29.95t
36 to 50	21 - 30	10.10t	12.65t	15.20t	15.95t	20.25t	25.35t	25.35t	33.95t	40.55t
	31 - 40	9.20t	11.55t	13.85t	14.55t	18.45t	23.10t	23.10t	30.95t	36.95t
	41 - 50	8.10t	10.15t	12.20t	12.80t	16.25t	20.35t	20.35t	27.25t	32.55t
	51 - 60	6.85t	8.55t	10.30t	10.80t	13.70t	17.15t	17.15t	23.00t	27.45t

The above table provides guidance information on how to get the best use from your chosen lashing system.

The table shows the maximum load that can be secured for road transport in a direct lashing arrangement with the load capacity of four equally loaded assemblies.

The table is formulated using a coefficient of dynamic friction of 0.3μD for the material on both the load and the bed of the vehicle and also the maximum forces which can occur in transit due to acceleration, braking and cornering (according to BS EN 12195-1 2010) have been taken in to account. Load figures are based upon a 50 daN (approx. 50kg) maximum hand force applied to the ratchet handle in accordance with BS EN 12195-1.

Using this table you can select the correct lashing system in both grade and chain diameter.

Friction Lashing Load Table

For materials with dynamic friction factors of 0.3μD with capacities based on EACH lashing chain assembly. (Minimum of 2 x lashing chains must be used). STF = standard tension force.

Working Angles α	Chain size 8mm diameter - G8	Chain size 8mm diameter - G10	Chain size 10mm diameter - G8	Chain size 10mm diameter - G10	Chain size 13mm diameter - G8	Chain size 13mm diameter - G10
	G8 STF value 1000 daN	G10 STF value 1900 daN	G8 STF value 1574 daN	G10 STF value 3000 daN	G8 STF value 1500 daN	G10 STF value 2500 daN
90°	900 kg	1710 kg	1420 kg	2700 kg	1350 kg	2250 kg
85°	895 kg	1700 kg	1410 kg	2680 kg	1340 kg	2240 kg
80°	885 kg	1680 kg	1395 kg	2650 kg	1325 kg	2210 kg
70°	840 kg	1600 kg	1330 kg	2530 kg	1265 kg	2110 kg
60°	780 kg	1480 kg	1225 kg	2330 kg	1160 kg	1940 kg
50°	685 kg	1600 kg	1085 kg	2060 kg	1030 kg	1720 kg
40°	575 kg	1090 kg	910 kg	1730 kg	865 kg	1440 kg
30°	450 kg	850 kg	710 kg	1350 kg	670 kg	1120 kg

The above table provides guidance information on how to get the best use from your chosen lashing system.

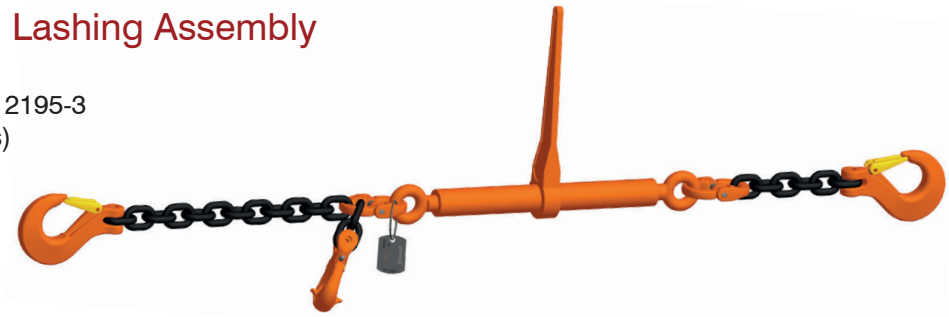
The table shows the maximum load that can be secured for road transport in a friction lashing arrangement with the load capacity for EACH assembly. Important note: a minimum of 2 x lashings must be applied per load.

The table is formulated using a coefficient of dynamic friction of 0.3μD for the material on both the load and the bed of the vehicle and also the maximum forces which can occur in transit due to acceleration, braking and cornering (according to BS EN 12195-1 2010) have been taken in to account. Load figures are based upon a 50 daN (approx. 50kg) maximum hand force applied to the ratchet handle in accordance with BS EN 12195-1.

Using this table you can select the correct lashing system in both grade and chain diameter and by a simple process of knowing the load weight divided by each lashing chain capacity value, you can determine the number of lashing assemblies required to secure the load.

Single Part Chain Lashing Assembly

ZRSW
In accordance with EN 12195-3
(Basic length 3.5 metres)

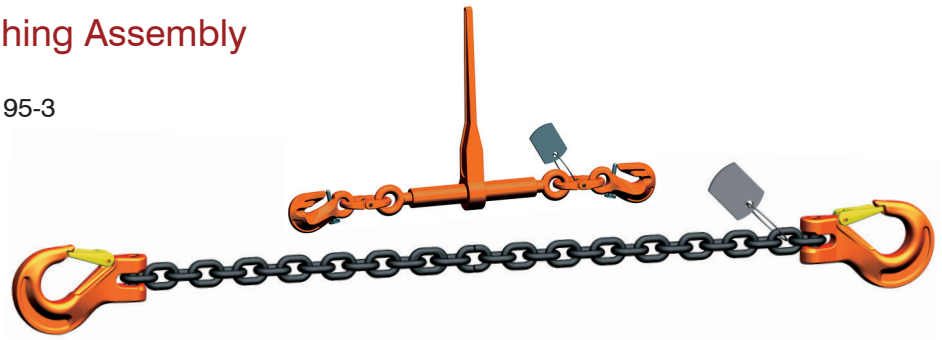


Code	Chain diameter mm	Lashing capacity kN	Ratchet length (closed) mm	Ratchet length (open) mm	Tensioning range mm	Standard tension force (STF) daN	Hook jaw opening mm
ZRSW 7 EN G10 / 3.5	7	38	346	501	155	1900	26
ZRSW 8 EN G10 / 3.5	8	50	346	501	155	1900	26
ZRSW 10 EN G10 / 3.5	10	80	358	513	155	3000	31
ZRSW 13 EN G10 / 3.5	13	134	571	868	297	2500	39
ZRSW16 EN G10 / 3.5*	16	200	530	780	250	4000	45

* 16mm lashing only available with KSSW16 turnbuckle

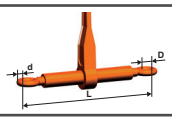
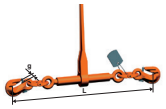
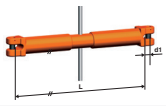
Two Part Chain Lashing Assembly

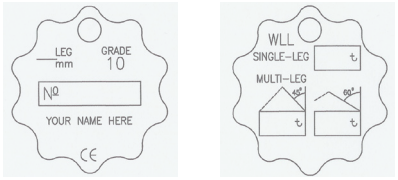
ZKW
In accordance with EN 12195-3
(Basic length 3.5 metres)



Code	Chain diameter mm	Lashing capacity kN	Ratchet length (closed) mm	Ratchet length (open) mm	Tensioning range mm	Standard tension force (STF) daN	Hook jaw opening mm
ZKW 7 EN G10 / 3.5	7	38	591	736	145	1900	26
ZKW 8 EN G10 / 3.5	8	50	609	754	145	1900	26
ZKW10 EN G10 / 3.5	10	80	663	808	145	3000	31
ZKW13 EN G10 / 3.5	13	134	954	1244	290	2500	39

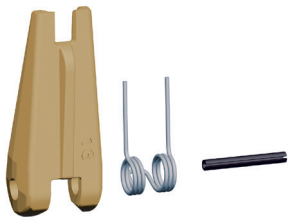
Pewag G10 Ratchet Loadbinders and Turnbuckles

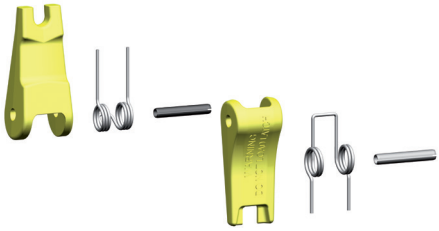
RSW / RSPSW / KSSW Ratchet load binder / Turnbuckle (BS EN 12195)	Code	Lashing capacity [kN]	Length closed L [mm]	Length open L [mm]	Tension range [mm]	Weight [kg/pc.]
	RSW 7/8	50	355	500	145	3.2
	RSW 10	80	365	510	145	3.8
	RSW 13	134	576	866	290	9.9
	RSPSW 7	38	591	736	145	4.20
	RSPSW 8	50	609	754	145	4.40
	RSPSW 10	80	663	808	145	6.30
	RSPSW 13	134	954	1244	290	15.00
	KSSW16	200	530	780	250	10.0

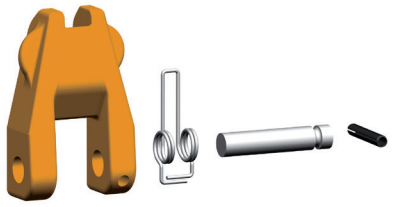
Identification Tags For G10 Chain Slings & Lashing Chains	Code	Application
	PLAINTAG G10	Single & Multi Leg G10 Chain Slings
	LASHTAG	Load lashing assemblies (any grade)

ID Tag Attachment Wire (self locking)	Code	application
	TAGWIRE	Use with tag

KBSW Clevis load pins	Code	for clevis fittings [mm]
	KBSW 5-6	5 + 6
	KBSW 7	7
	KBSW 8	8
	KBSW 10	10
	KBSW 13	13
	KBSW 16	16
	KBSW 19-20	19 + 20
	KBSW 22	22
	KBSW 26	26

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

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

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

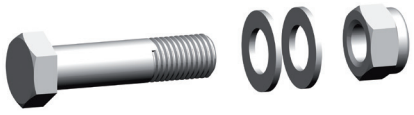
SFG-W16 Forged safety catch	Code	for hook type
	SFG-W16	WS 16

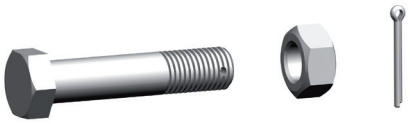
CBHW / CBH Connex bolts & retaining sleeve	Code	for part
	CBHW 5	CW 5
	CBHW 6	CW 6
	CBHW 7	CW 7
	CBHW 8	CW 8, CARW 8
	CBHW 10	CW 10, CARW 10
	CBHW 13	CW 13, CARW 13
	CBHW 16	CW 16, CARW 16
	CBHW 19-20	CW 19-20
	CBHW 22	CW 22, CARW 22
	CBHW 26	CW 26
	CBHW 32	CW 32

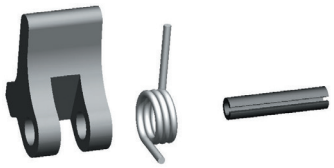
CLBHW Tamper proof Connex bolt & retaining sleeve	Code	for part
	CLBHW 7	CLW 7
	CLBHW 10	CLW 10
	CLBHW 13	CLW 13
	CLBHW 16	CLW 16

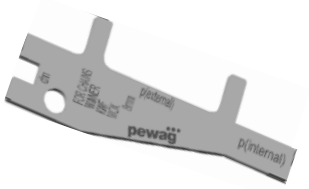
Pewag Spare Parts

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

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

KBMSW Bolt + nut + split pin	Code	for part
	KBMSW 7-8	KSCHW 7, KSCHW 8
	KBMSW 10	KSCHW 10
	KBMSW 13	KSCHW 13

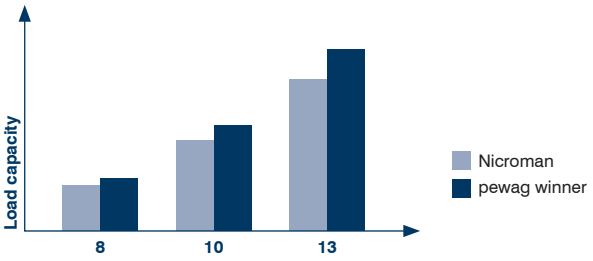
VLHW Trigger sets	Code	for part
	VLHW 5-6	LHW 5-6, KLHW 5-6, WLH(B)W 6
	VLHW 7-8	LHW 7-8, KLHW 7, KLHW 8, WLH(B)W 7-8
	VLHW 10	LHW 10, KLHW 10, WLH (B)W 10
	VLHW 13	LHW 13, KLHW 13, WLH(B)W 13
	VLHW 16	LHW 16, KLHW 16, WLH(B)W 16
	VLHW 19/20/22/26	LHW 19-20, LHW 22, KLHW 19-20, KLHW 22, KLHW 26

CGW Chain gauge	Code	for chain
	CGW 5	WINNER G10 5mm
	CGW 6	WINNER G10 6mm
	CGW 7	WINNER G10 7mm
	CGW 8	WINNER G10 8mm
	CGW 10	WINNER G10 10mm
	CGW 13	WINNER G10 13mm
	CGW 16	WINNER G10 16mm

Features & Benefits Of Pewag Winner G10 Chain Slings

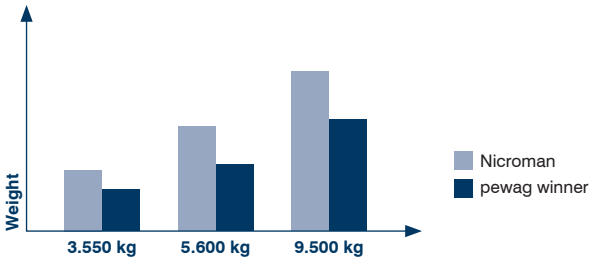
User friendlyness and safety are based on clearly defined and measurable characteristics, which are incorporated in the product development and production process of our products.

- 25% higher load capacity than grade 8.



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

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



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

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

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

The environmentally friendly chain

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

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

Pewag Winner G10 Data

- **Chain qualities:**
  pewag winner 200 – meets the requirements of ASTM A973/A973M-01 and of EN 818-2 (with higher load capacity and max. operating temperature of 200°C max.) and the Machinery Directive 2006/42/EC.
  pewag winner 400 – meets the requirements of EN 818-2 (with higher load capacity) and the Machinery Directive 2006/42/EC.

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

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

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

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

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

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

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

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

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

- **Compatibility:**
  Pewag Winner G10 chains and components may be combined by a competent person with Grade 8 fittings meeting the requirements of EN818 and EN1677. Furthermore, Pewag Winner G10 chains may be combined with chains and components from other manufacturers systems which are compatible with EN818 and EN1677. The competent person has to check and approve the functionality of the chain sling. (In consequence, it is not allowed to combine winner chains with competitors items that follow neither the EN818 nor the EN1677 requirements.) Only original pewag spare parts (esp. pins and bolts, safety catches, etc.) may be used for pewag articles. The maximum working load capacity of pewag sling chains is always defined by their weakest part.

- Performance concerning stress crack corrosion is identical to Grade 8.

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

General

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

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

Limitations on use

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

Restrictions of use

Due to hazardous or dangerous conditions (see table on page 4)

Effects of temperature

Reduction of the load capacity caused by high temperatures, as stated on page 4, ceases once the chain and/or lifting component returns to room temperature. pewag winner pro lifting accessories may not be used outside the temperature range stated. If this has nevertheless been the case, do not use the chain slings and remove them from service.

Effects of acids, caustics and chemicals

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

Working load limit

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

Inspection and tests

Before using any lifting equipment for the first time, it should be ensured that:

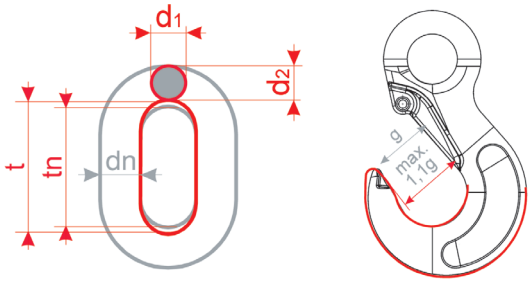
- The chain sling corresponds exactly to the order;
- The inspection certificate or certificate of conformity has been supplied;
- Marking and load capacity stated on the chain sling correspond to the information given on the inspection certificate or certificate of conformity;
- All particularities of the chain sling have been entered into a register of lifting equipment, if required;
- Instructions for the proper use of chain sling has been supplied and read and understood by personnel.

Check the chain slings before each use for visible damage or signs of wear. In case of doubt or damage do not use the chain slings and have them inspected by a competent person.

After extraordinary, unusual events that could cause impairment of the chain sling, the chain sling must be checked by an expert (e.g. after exposure to uncontrolled heat). As per EN818 we recommend subjecting the chain sling every two years to a load test with 1.5 times the load capacity, followed by a visual inspection, or another type of crack test (fluxing).

Elimination criteria following visual inspection

- Broken part
- Missing or illegible marking of the chain sling, i.e. identification data and/or load capacity data
- Deformation of suspension or sling parts or the chain itself
- Elongation of the chain. The chain must be discarded if $t > 1{,}05\ t_n$
- Wear is determined as the mean value of two measurements of diameters d1 and d2 carried out at a right angle (see picture). The chain must be discarded if $dm = \frac{d_1 + d_2}{2} \leq 0{,}9\ dn$
- Cuts, notches, grooves, surface cracks, excessive corrosion, discoloration due to heat, signs of subsequent welding, bent or twisted links or other flaws.
- Cracks: Chains with cross-cracks that are visible to the naked eye must be discarded.
- Missing or non-functional safety device (safety catches if fitted) as well as signs of widening or twisting of hooks, i.e. noticeable enlargement of the opening or other forms of deformation. The enlargement of the opening must not exceed 10% of the nominal value.



Maximal approved dimensional change:

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

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

Repair

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

Documentation

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

Storage

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

Correct use of pewag winner chain slings

Angle of inclination – sling points

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

Edge load – protection of load and chain

The maximum load capacity of pewag chain slings was defined under the assumption that the individual chain legs are pulled straight under load, i.e. that they do not run over edges.

In the case of edge loading, load protection (packing) should to be used to avoid damage. For correct and incorrect use see the illustrations below.

If chains are guided over edges without proper protection,

their load capacity is reduced. For the corresponding load factors please refer to the table on page 4.

But if chains looped at a beam or other round shaped loads the diameter should be minimum twice or 3 times the chain pitch. For smaller diameters the WLL of the chains must be reduced by 50%.

Impact
The maximum load capacity of pewag chain slings are defined under the assumption that the load on the individual chain strands (legs) is applied without any impact or shock loading. In cases of possible impact/ shock, the load factors on page 4 must be taken into consideration.

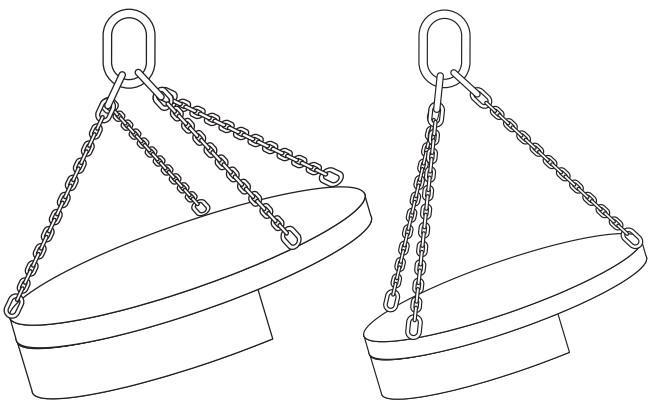
Impact/shock is defined as follows:
- Slight impact: created, for example, when accelerating the lifting or lowering movement
- Medium impact: created, for example, when the chain slips when adjusting to the shape of the load
- Heavy impact: created, for example, when the load falls into the unloaded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

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

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

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

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



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

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

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

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

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

Additional detailed information

Do not tip load the hook!

wrong!

right!

Issue 1- 3.20

PML LIFTING
& Engineering Services

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