

Sling Components

Grade 10 • Offshore • Grade 8 • Lifting Points



Fa. P.H. Walinga
Hermesweg 17
8861 VN Harlingen
Telf: 0517-413290
E.mail: info@walinga.nl

GrabiQ

GrabiQ	
GrabiQ system	2:3 - 2:5
FlexiLeg	2:6
Chain Slin Solutions	2:7 -2:8
GrabiQ in Box	2:9
Chain Shortener, MIG	2:10
Round Sling Hook, RH	2:11
Master Links, GrabiQ	2:11 - 2:13
Coupling Link, G, GrabiQ	2:12
C-Grab, GrabiQ	2:13
C-Lok	2:13 - 2:14
Chain, GrabiQ	2:14
Grab Hooks	2:15
Safety Hooks, Clevis, GrabiQ	2:15
Safety Hooks, Eye GrabiQ	2:16
Safety Hook, Shank, GrabiQ	2:16
Safety Hooks, Swivel, GrabiQ	2:17
Foundry Hook, OKE, GrabiQ	2:18
Sling Hooks, Clevis, GrabiQ	2:18
Sling Hook, Eye, GrabiQ	2:18 - 2:19
Container Hook, CH, GrabiQ	2:19
Rotating Lifting Points, GrabiQ	2:20 - 2:21

Offshore

Master Links, Offshore	2:25
Determination of WLL as stated in DNV 2.7-1	2:26
Safety Hooks, Offshore	2:26 - 2:27
Double Latch Hook, Offshore	2:27

Classic

SK-system, Classic	2:29
Master Links, Classic	2:30
Coupling Links, Classic	2:30
Chain, Classic	2:31
Safety Hooks, Classic	2:31 - 2:32
Sling Hooks, Classic	2:32 - 2:33
Grab Hook, OG, Classic	2:31
Swivel Hooks, Classic	2:33
SK Products, Classic	2:34 - 2:35
Container Hook, Classic	2:36
Lifting Points, Classic	2:36
Universal Weld-on Hook, Classic	2:37

Spare Parts

Spare Parts	2:38 - 2:41
-------------	-------------

Technical Information

Safe Use and Maintenance	2:42 - 2:43
Quality Assurance	2:44
Working Load Limits	2:45 - 2:47

WARNING:

Failure to read, understand and comply with the following instructions, working load limits and specifications in this publication may result in serious injury or damage to property.



GrabiQTM

2

The Flexible and Cost Efficient Chain Sling System.

GrabiQ stands for:

- "Grab" - Built in shortening function allows the user to instantly adjust the chain sling.
- IQ - Intelligent design gives more efficient lifts which making the user more successful.
- IO - Grade 10 material gives 25% added strength as well as lighter slings.
- i - Innovation has been and still is one of our driving forces. Many of our products are unique on the market and are protected by patents.
- Q - Quality. No product leaves our factories without being proof loaded and visually inspected, so that we can guarantee top quality to all customers



GrabiQ offers:

Cost Efficiency

GrabiQ has been designed to integrate multiple functions in each component. This means fewer components in each sling, but with the same and even better function than the old system. A good example of this is our FlexiLeg system, where one master link combined with one 1-leg sling and two 2-leg sling units, completely replaces four master links and ten legs of chain sling. Read more about FlexiLeg on page 2:6.

Flexibility in Field

We understand how fast the conditions for a lift can change and we also recognize that time is money in lifting operations - big and small. With the GrabiQ system we have included functions that would otherwise demand additional products or a complete change of chain sling. The user gets a quicker and more ergonomic lifting operation each time when using the GrabiQ system.

Reduce the Cost - Increase the Efficiency

The GrabiQ system makes your lift quicker, safer and easier.

The all-inclusive chain sling system for coupling, shortening and lifting in grade 10 is designed to improve your lifting actions and make it as quick and easy as possible. Some of the top features are:

- Less components - cost efficient
- Built in shortening function
- Light weight for better ergonomics

4-leg sling with shortening function



Only **3** GrabiQ components
Used to be **15** components



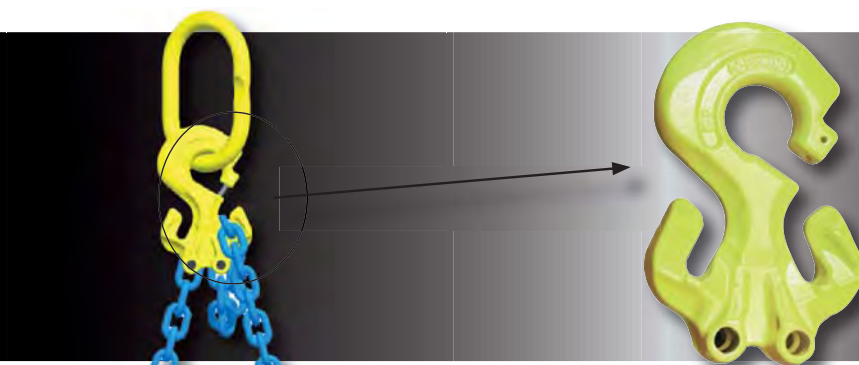
2-leg sling with shortening function



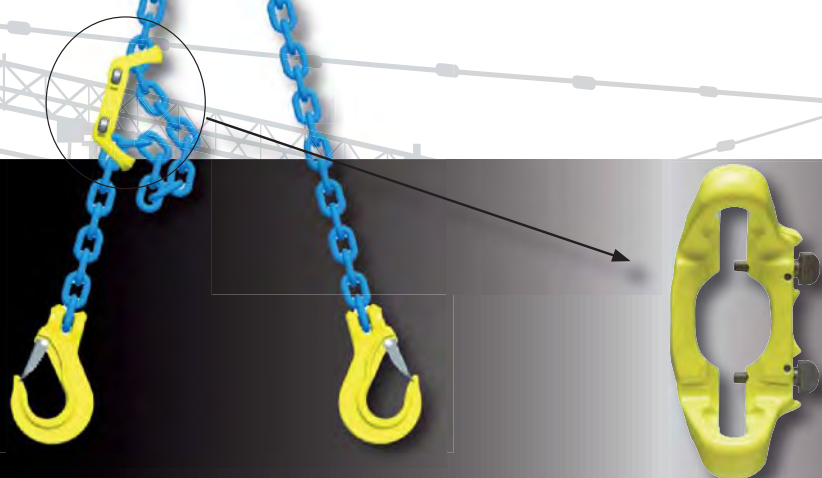
Only **1** GrabiQ component
Used to be **7** components



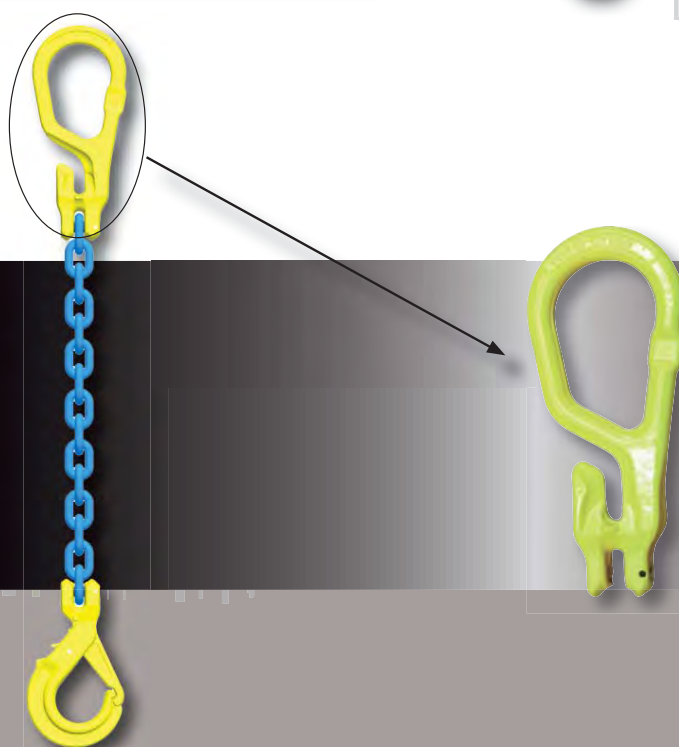
Designed for Flexibility and Efficiency



The C-grab duo, CGD, has a built in shortening function. For technical specification, see page 2:13.



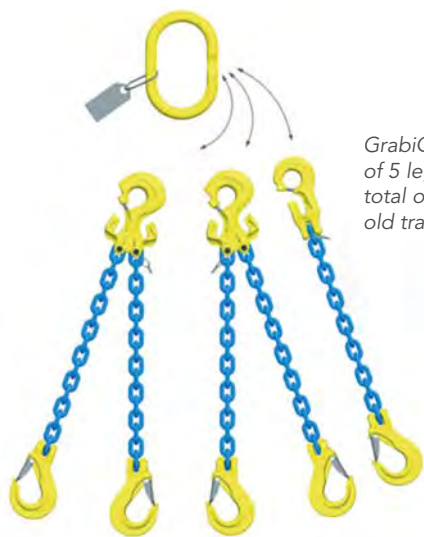
The Midgrab, MIG, offers instant mounting, positioning and shortening on any part of the chain. See page 2:10 for technical specification.



With the "all-in-one" compact top link, MG, every chain leg can instantly be altered. Using the built in shortening function you can alter between a straight lift to a looped sling in a matter of seconds. For technical specification, see page 2:11.

Less is More with *FlexiLeg™*

FlexiLeg is a solution that allows you to have an instant leg change. One single master link and a combination of five legs replace four complete slings, a total of ten legs, with the traditional system. By using the unique features of the GrabiQ range, Gunnebo Industries has increased the flexibility even further.



GrabiQ FlexiLeg – a total of 5 legs replaces the total of 10 legs with the old traditional system.



Old system - 10 legs in 4 separate chain slings.

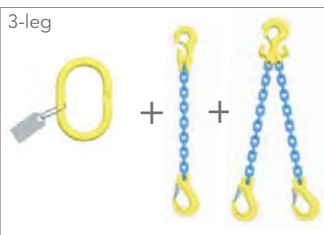
1-leg



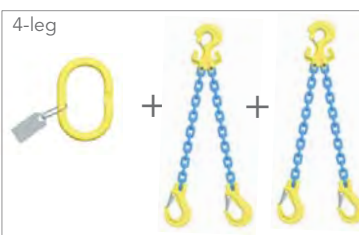
2-leg



3-leg



4-leg



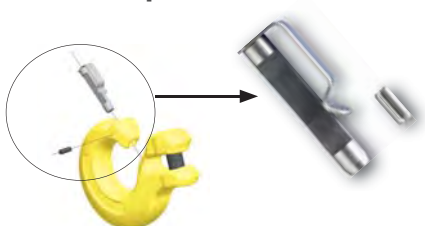
Why do you want instant leg-change?

- It will enable the user to change slings, leg by leg, which will make it lighter and easier to work with.
- Sling legs that are not being used can easily be removed, thereby increasing safety at the work site.
- The quantity of sling material is greatly reduced, providing cost savings.
- The chain sling can be rebuilt on site, thus increasing efficiency.

Art. no.	Code
Z101050	FlexiLeg GBK 6 mm L= 2 m
Z101051	FlexiLeg EGKN 6 mm L= 2 m
Z101052	FlexiLeg GBK 8 mm L= 2 m
Z101053	FlexiLeg EGKN 8 mm L= 2 m
Z101054	FlexiLeg GBK 10 mm L= 2 m

Art. no.	Code
Z101055	FlexiLeg EGKN 10 mm L= 2 m
Z101056	FlexiLeg GBK 13 mm L= 2 m
Z101057	FlexiLeg EGKN 13 mm L= 2 m
Z101058	FlexiLeg GBK 16 mm L= 2 m
Z101059	FlexiLeg EGKN 16 mm L= 2 m

Related products



QuickPin - For safe exchange of sling legs

- Fits all C-components! (CL, CLD, CG, CGD)
- Has instant close/open function, no tools needed!
- Easy to retro-fit!
- Made of stainless steel for long product life span.



FlexiTag - For every GrabiQ sling

- Specially designed for FlexiLeg
- Fits all other GrabiQ slings
- WLL and chain size pre-stamped for 1 - 4 legs
- Leg angle 45/60 degree shown in contour
- Made of stainless steel for use in all weather conditions.

Chain Sling Solutions

1-leg Chain Slings



Type: Master link MG, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*	Total Component length mm
6	1.5	171
8	2.5	296
10	4.0	361
13	6.7	453
16	10.0	527



Type: Master link MG, Chain KLA, Hook with latch EGKN

Dim. mm	WLL t*	Total Component length mm
6	1.5	231
8	2.5	261
10	4.0	331
13	6.7	408
16	10	.0481



Type: Master link MF, C-grab CG, Chain KLA, Safety Hook BKG

Dim. mm	WLL t*	Total Component length mm
6	1.5	200
8	2.5	346
10	4.0	424
13	6.7	504
16	10.0	621
20	16.0	605

2

2-leg Chain Sling



Type: Master link MF, C-grab CG, Chain KLA, Hook with latch EGKN

Dim. mm	WLL t*	Total Component length mm
6	1.5	286
8	2.5	342
10	4.0	415
13	6.7	507
16	10.0	624
20	16.0	605



Type: Master link MGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL tonnes*		Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	235
8	3.5	2.5	296
10	5.6	4.0	361
13	9.5	6.7	453
16	14.0	10.0	527



Type: Master link MGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL tonnes*		Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	230
8	3.5	2.5	261
10	5.6	4.0	331
13	9.5	6.7	408
16	14.0	10.0	481



Type: Master link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*		Components total length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	291
8	3.5	2.5	366
10	5.6	4.0	444
13	9.5	6.7	534
16	14.0	10.0	671



Type: Master link MF, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL t*		Total Component length
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	286
8	3.5	2.5	342
10	5.6	4.0	415
13	9.5	6.7	507
16	14.0	10.0	625



Type: Master link MGD, Chain KLA, C-lok CL

Dim. mm	WLL t*		WLL choked t*		Component total length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	2.1	1.5	1.6	1.2	187
8	3.5	2.5	2.7	2.0	230
10	5.6	4	4.4	3.2	285
13	9.5	6.7	7.4	5.4	359
16	14.0	10.0	11.0	8.0	429

3-leg Chain Sling



Type: Master link MF, C-grab CG, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*		Total component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	311
8	5.2	3.7	392
10	8.4	6.0	474
13	14.0	10.0	604
16	21.0	15.0	680



Type: Master link MF, C-grab CG, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL t*		Total Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	306
8	5.2	3.7	357
10	8.4	6.0	444
13	14.0	10.0	559
16	21.0	15.0	634

4-leg Chain Sling



Type: Master link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t*		Total Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	311
8	5.2	3.7	392
10	8.4	6.0	474
13	14.0	10.0	604
16	21.0	15.0	680



Type: Master link MF, C-grab Duo CGD, Chain KLA, Latch Hook EGKN

Dim. mm	WLL t*		Total Component length mm
	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	3.1	2.2	306
8	5.2	3.7	357
10	8.4	6.0	444
13	14.0	10.0	559
16	21.0	15.0	634

WLL in tonnes, Grade 10 GrabiQ

1-leg		2-leg		3- & 4-leg		Choke hitch	
Chain dim.		β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°
6	1.5	2.1	1.5	3.15	2.24	1.6	1.2
7	2.0	1.8	2.0	4.2	3.0	2.2	1.6
8	2.5	3.5	2.5	5.2	3.7	2.7	2.0
10	4.0	5.6	4.0	8.4	6.0	4.4	3.2
13	6.7	9.5	6.7	14.0	10.0	7.4	5.3
16	10.0	14.0	10.0	21.0	15.0	11.0	8.0
20	16.0	22.4	16.0	33.6	24.0	17.6	12.8
22	19.0	26.9	19.0	40.3	28.5	20.9	15.2
26	27.0	38.2	27.0	57.3	40.5	29.7	21.6

Safety factor 4:1. Working load limits are based upon equally loaded and disposed sling legs.

Pre-Assembled Chain Sling

"GrabIQ-in-a-box" - ready to use at arrival

Gunnebo Industries offers the perfect retail solution - pre-assembled chain slings with information tags, supplied with certificate, packed in boxes. Ready to be used the instant they arrive.

GrabIQ chain sling benefits:

- 25% additional strength in the new grade 10 which gives lighter lifting slings.
- All top assemblies consist of no more than three components.
- Shortening function of chain legs is integral with no extra components.



Technical Specification

Art. no.	Code	WLL tonnes*	Length m	Choked WLL	Weight kgs	
B790110	MG1-GBK-6-10	1.5	2	-	4.1	
B790111	MG1-GBK-8-10	2.5	3	-	6.4	
B790112	MG1-GBK-10-10	4.0	3	-	10.1	
B790120	MG1-EGKN-6-10	1.5	2	-	2.8	
B790121	MG1-EGKN-8-10	2.5	3	-	6	
B790122	MG1-EGKN-10-10	4.0	3	-	9.7	
B790220	MG2-EGKN-6-10	2.1	2	-	7.1	
B790221	MG2-EGKN-8-10	3.5	3	-	11.7	
B790222	MG2-EGKN-10-10	5.6	3	-	17.6	
B790210	MG2-GBK-6-10	2.1	2	-	7.3	
B790211	MG2-GBK-8-10	3.5	3	-	12.3	
B790212	MG2-GBK-10-10	5.6	3	-	18.9	
B790130	MG2-CL-6-10	2.1	6	1.6	12.4	
B790131	MG2-CL-8-10	3.5	6	2.7	21.8	
B790132	MG2-CL-10-10	5.6	6	4.4	34.9	

6 mm FlexiLeg Pre-Assembled

Art. no.	Code	Weight kgs
Z101016	FlexiLeg FMG 221 GBK 6 mm L= 2 m	13.8
Z101017	FlexiLeg FMG 221 EGKN 6 mm L= 2 m	13.3

Midgrab Chain Shortener, MIG



Product Features - Customer Benefits

- Instant mounting and positioning on any part of the chain.
- Shortening in either chain direction; up-down.
- Designed to prevent inadvertent chain disengagement.
- Can be set idle on the chain leg when shortening is not required.
- LC version offers secure mounting with locking set on any desired part of the chain with one chain direction open for shortening.
- CC version offers close-open function in both chain directions for safe retention of the chain.

Product Code Guide - Locking options



MIG C



MIG CC



MIG L



MIG LC

Locking Devices for Midgrab MIG

L - fixed locking set



For fixed mounting

Code:

L-8: B14905
L-10: B14915
L-13: B14917

C - close/open locking set



Spring operated locking device. Can be placed either in open or closed position.

Code:

C-8: B14904
C-10: B14914
C-13: B14916

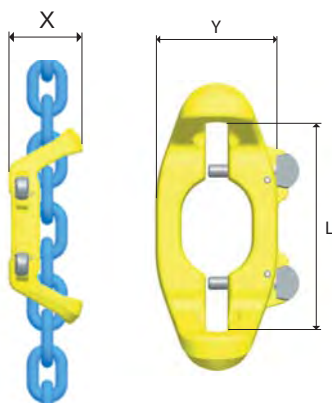
Note! The MIG should be used with at least one locking devices.

MIG with C pins

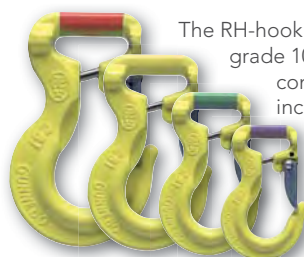
Art. no.	Code	WLL tonnes*	L	X	Y	Weight kgs
B14303	MIG CC-8-10	2.5	95	50	60	0.7
B14313	MIG CC-10-10	4.0	125	70	77	1.1
B14323	MIG CC-13-10	6.7	150	90	80	2.6

MIG without pins

Art. no.	Code	WLL tonnes*	L	X	Y	Weight kgs
B14300	MIG-8-10	2.5	95	50	60	0.6
B14310	MIG-10-10	4.0	125	70	77	1.0
B14320	MIG-13-10	6.7	150	90	80	2.5



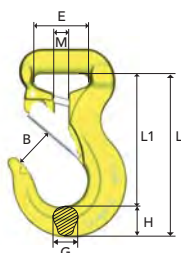
Roundsling Hook RH



The RH-hook is the perfect load connection solution, combining the advantages of both soft lifting slings and grade 100 components. It can be inserted in any softsling and is quicker and safer to use than the commonly used shackle. The RH-hook is a connector as well as a hook, which gives the user increased flexibility, safer use and increased durability of the soft slings.

The RH-hook comes with a blocking pin, but thanks to the narrow opening it may be used without blocking pin.

The roundsling hooks are colour coded in order to match the corresponding size of the roundsling: Red=5T / Yellow=3T / Green=2T / Violet=1T



Art. no.	Code	WLL tonnes*	B	E	G	L	H	M	Weight kgs
B14490	RH-1-10	1	24	35	17	84	19	8	0.5
B14491	RH-2-10	2	28	40	17	96	22	10	0.7
B14492	RH-3-10	3	33	47	24	117	30	12	1.3
B14493	RH-5-10	5	43	73	27	155	36	16.5	3.2

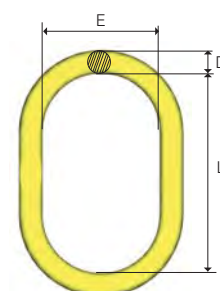


2

Master Link M

Art. no.	Code	WLL tonnes*	L	E	D	Weight kgs
Z101271	M-6-10	1.25	100	60	11	0.2
Z101272	M-86-10	2.5	125	70	14	0.4
Z101273	M-108-10	4.0	140	80	17	0.8
Z101274	M-13-10	5.4	150	90	19	1.0
Z101267	M-1310-10	7.5	160	95	22	1.5
Z101268	M-1613-10	10.0	190	110	28	2.8
Z101247	M-19-10	12.0	200	120	30	3.5
Z101269	M-2016-10	17.0	240	140	34	5.2
Z101270	M-2220-10	25.0	250	150	40	7.3
Z101275	M-2622-10	28.0	250	150	42	8.7
Z101284	M-32-10	33.0	300	180	45	11.7
Z101276	M-3226-10	43.0	300	200	50	14.8
Z101277	M-3632-10	56.0	350	200	55	20.7
Z101278	M-4536-10	70.0	375	210	60	26.4
Z101279	M-90T-10	90.0	450	250	70	42.8
Z101280	M-125T-10**	125.0	450	260	80	57.0

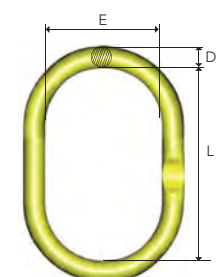
** Dimension L and E not acc. to EN 1677-4.



Master Link MF

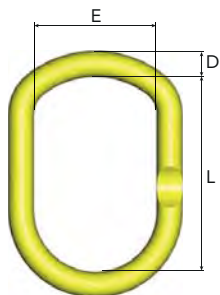
For 1-, 2-, 3- and 4-leg slings. 3- and 4 leg chain slings require CLD / CGD

Art. no.	Code	WLL tonnes*	For chain size, mm			L	E	D	Weight kgs
			1-leg	2-leg	3-4-leg				
B14487	MF-6-10	1.25	6			100	60	11	0.2
B14481	MF-86-10	2.5	6, 8	6	-	125	70	14	0.4
B14482	MF-108-10	4.0	10	8	6	140	80	17	0.8
B14483	MF-1310-10	7.5	13	10	8	160	95	22	1.5
B14484	MF-1613-10	10.0	16	13	10	190	110	28	2.8
B14485	MF-2016-10	17.0	20	16	13	240	140	34	5.2
B14486	MF-2220-10	25.0	22	20	16	250	150	40	7.3



Master Link MFH

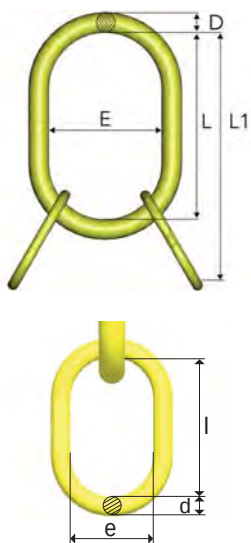
Designed for crane hooks, DIN 15401 MAX. 3- and 4 leg chain slings require CLD / CGD



Art. no.	Code	WLL tonnes*	For chain size, mm			L	E	D	DIN 15401	DIN 15402	Weight kgs
			1-leg	2-leg	3-4 leg						
Z101262	MFH-1310-10	7.5	13	10	8	230	125	22	≤ 12	≤ 16	1.9
Z101263	MFH-1613-10	10	16	13	10	250	135	28	≤ 12	≤ 16	3.2
Z101264	MFH-2016-10	17	20	16	13	280	135	32	≤ 16	≤ 20	4.6
Z101265	MFH-2220-10	28	22	20	16	320	175	40	≤ 25	≤ 32	8.6
Z101266	MFHW-2220-10	25	22	20	16	355	225	40	≤ 50	≤ 63	9.9

Master Link with Sublinks, MT

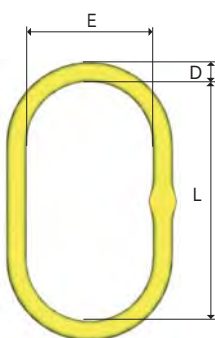
Designed for use with chain or wire rope. For 3- and 4-leg slings.



Art. no.	Code	WLL tonnes*	L1	L	E	D	I	e	d	Weight kgs
Z100902	MT-6-10	3.5	270	150	90	19	120	70	14	1.8
Z100903	MT-8-10	5.2	300	160	95	22	140	80	17	3.0
Z101359	MT-9-10	6.9	340	190	110	28	150	90	19	4.9
Z100904	MT-10-10	11.5	360	200	120	30	160	95	22	6.4
Z100905	MT-13-10	17	450	250	150	40	200	120	30	14.2
Z100906	MT-16-10	28	500	300	200	50	200	120	32	23
Z101074	MT-20-10	35	550	300	200	55	250	150	40	31.5
Z101281	MT-22-10	53	610	350	200	60	260	140	45	46
Z101282	MT-26-10	70	730	450	250	70	280	160	50	71
Z101283	MT-32-10	90	750	450	260	80	280	160	55	91

Master Link, MFX

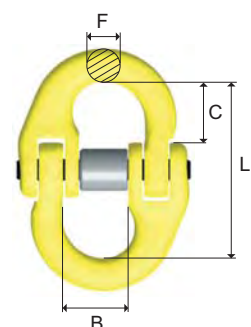
Oversized, for 1- and 2-leg slings.



Art. no.	Code	WLL tonnes*	For chain 1-leg	For chain 2-leg	L	E	D	Weight kgs
Z100550	MFX-108-10	4	8, 10	8	340	180	25	3.7
Z100551	MFX-1310-10	6.7	13	10	340	180	28	4.7
Z100552	MFX-1613-10	10	16	13	340	180	34	7.1
Z101125	MFX-2016-10	16	20	16	340	180	40	8.5

Designed for use with CL, CLD, CG and CGD.

Coupling Link G



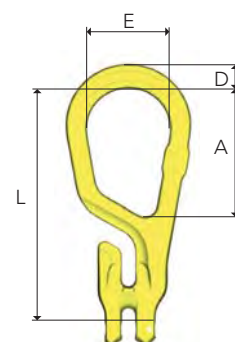
Art. no.	Code	WLL tonnes*	L	B	F	C	Weight kgs
Z100821	G-6-10	1.5	45	15	8	16	0.1
Z101358	G-7-10	2.0	56	18	9	22	0.2
Z100822	G-8-10	2.5	56	18	9	22	0.2
Z100823	G-10-10	4.0	68	25	12	26	0.3
Z100824	G-13-10	6.7	89	29	15	33	0.7
Z100825	G-16-10	10.0	106	36	19	40	1.4
Z101119	G-20-10	16.0	125	43	23	44	2.2
Z101339	G-22-10	20.0	152	50	26	59	3.5
Z101365	G-26-10	27.0	161	58	33	61	5.7

For larger sizes, see Classic Grade 8

Master Grab MG

"All-in-one" compact top link.

Art. no.	Code	WLL tonnes*	L	A	E	D	Weight kgs
B14710	MG-6-10	1.5	145	88	60	15	0.5
B14711	MG-8-10	2.5	171	92	60	18	0.9
B14712	MG-10-10	4	211	113	75	22	1.8
B14713	MG-13-10	6.7	261	138	90	26	3.5
B14714	MG-16-10	10	311	157	105	31	6.1

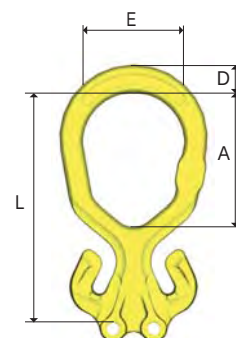


2

Master Grab Duo MGD

"All-in-one" compact top link for 2-leg slings.

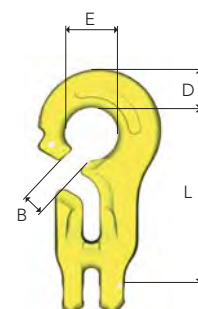
Art. no.	Code	WLL tonnes*	L	A	E	D	Weight kgs
B14700	MGD-6-10	2.1	144	90	60	17	0.7
B14701	MGD-8-10	3.5	171	100	75	21	1.3
B14702	MGD-10-10	5.6	211	124	90	24	2.3
B14703	MGD-13-10	9.5	262	149	105	31	5.2
B14704	MGD-16-10	14	310	175	120	35	7.9



C-Grab CG

For use with master link, eye hooks and choke.

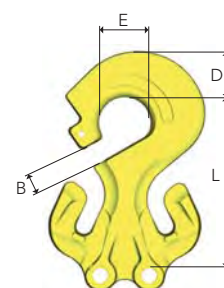
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14730	CG-6-10	1.5	80	11	24	19	0.3
B14731	CG-8-10	2.5	107	12	32	24	0.7
B14732	CG-10-10	4	134	15	40	29	1.5
B14733	CG-13-10	6.7	172	18	52	38	3.2
B14734	CG-16-10	10	215	22	64	47	6.1



C-Grab CGD

For use with master links.

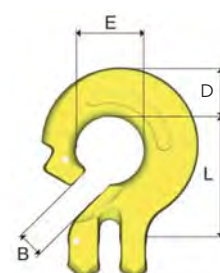
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14720	CGD-6-10	2.1	79	11	24	20	0.6
B14721	CGD-8-10	3.5	107	12	32	29	1.1
B14722	CGD-10-10	5.6	134	15	40	37	2.2
B14723	CGD-13-10	9.5	173	19	48	48	5.4
B14724	CGD-16-10	14	215	22	64	57	9.1



C-Lok CL

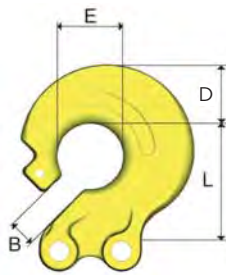
For use with master links, eye hooks and choke.

Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14750	CL-6-10	1.5	43	11	24	18	0.2
B14751	CL-8-10	2.5	58	12	32	24	0.5
B14752	CL-10-10	4	74	15	40	29	1.0
B14753	CL-13-10	6.7	94	18	52	38	2.0
B14754	CL-16-10	10	119	22	64	48	3.8



C-Lok CLD

For use with master links.



Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14740	CLD-6-10	2.1	43	11	24	22	0.4
B14741	CLD-8-10	3.5	58	12	32	29	0.6
B14742	CLD-10-10	5.6	74	15	40	37	1.2
B14743	CLD-13-10	9.5	94	18	52	46	3.1
B14744	CLD-16-10	14	119	25	64	57	5.5

Chain GrabiQ Grade 10 (200)

Short link, KL

Heat treatment

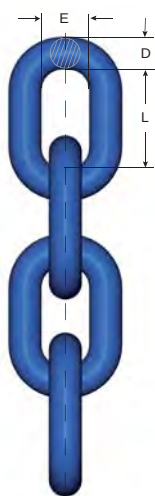
Quenched and tempered.
Note! For chain grade 10 (200) the maximum in service temperature is 200°C.

Surface treatment

Painted blue

Marking

10G



Art. no. Box	Code	WLL tonnes	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN	Breaking force kN
Z802300 - 1 x 200 m	KLA 6-10	1.5	6	18	8	0.8	35.4	56.6
Z802337 - 1 x 200 m	KLA 7-10	2	7	21	10	1.1	48	77.0
Z802301 - 1 x 200 m	KLA 8-10	2.5	8	24	11	1.4	63	102
Z802302 - 1 x 100 m	KLA 10-10	4	10	30	14	2.3	98	158
Z802303 - 1 x 100 m	KLA 13-10	6.7	13	39	18	3.8	166	268
Z802304 - 1 x 100 m	KLA 16-10	10	16	48	22	5.6	251	402
Z802305 - 1 x 50 m	KLA 20-10	16	20	60	29	9.4	393	762
Z802246 - 1 x 50 m	KLA 22-10	19	22	66	31	11.8	475	806
Z802248 - 1 x 50 m	KLA 26-10	27	26	78	37	14.6	664	1062

For larger sizes, see Classic Grade 8

Chain GrabiQ Grade 10 (400)

Short link, KL

Heat treatment

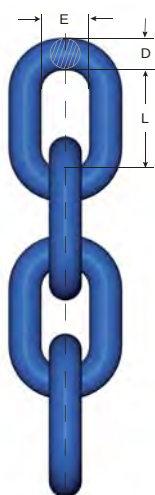
Quenched and tempered.
Note! For chain grade 10 (400) the maximum in service temperature is 400°C.

Surface treatment

Painted blue

Marking

8+

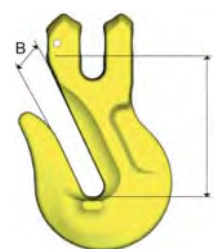


Art. no. Box	Code	WLL tonnes	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN	Breaking force kN
Z802306 - 1 x 200 m	KLA 6-10 (400)	1.5	6.6	18	8.9	1.0	37	60
Z802307 - 1 x 200 m	KLA 8-10 (400)	2.5	8.8	24	11.2	1.7	62.5	100
Z802308 - 1 x 100 m	KLA 10-10 (400)	4	11.0	30	14.4	2.6	100	160
Z802309 - 1 x 100 m	KLA 13-10 (400)	6.7	14.3	39	19.2	4.5	162	260
Z802310 - 1 x 100 m	KLA 16-10 (400)	10	17.3	48	23.0	6.7	250	402

For larger sizes, see Classic Grade 8

Grab Hook GG

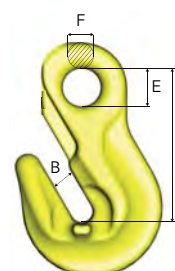
Art. no.	Code	WLL tonnes*	L	B	Weight kgs
Z100845	GG-7-10	2	57	10	0.3
B14771	GG-8-10	2.5	57	10.5	0.4
B14772	GG-10-10	4	76	12	0.9
B14773	GG-13-10	6.7	97	16	1.8
B14774	GG-16-10	10	124	20	3.1
Z101152	GG-20-10	16	147	26	7.0



2

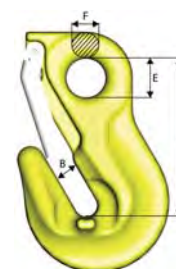
Grab Hook OG

Art. no.	Code	WLL tonnes*	L	B	E	F	Weight kgs
Z101301	OG-22-10	20	187	26	46	32	8.6
Z101302	OG-26-10	27	228	32	55	38	14



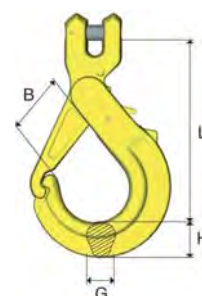
Grab Hook OGN

Art. no.	Code	WLL tonnes*	L	B	E	F	Weight kgs
Z101316	OGN-22-10	20	187	26	46	32	8.8
Z101317	OGN-26-10	27	228	32	55	38	14.7



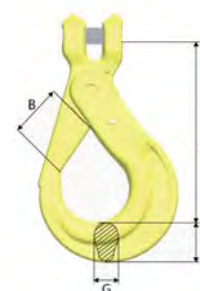
Safety Hook GBK

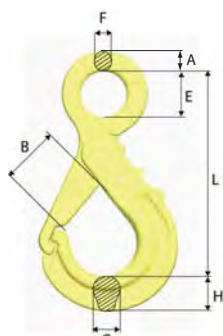
Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z100758	GBK-6-10	1.5	87	26	15	17	0.4
Z100849	GBK-7-10	2	114	36	20	22	0.5
Z100759	GBK-8-10	2.5	119	36	20	22	0.8
Z100760	GBK-10-10	4	150	47	22	29	1.4
Z100761	GBK-13-10	6.7	172	53	29	38	2.7
Z100762	GBK-16-10	10	208	68	30	45	4.4



Safety Hook BKG

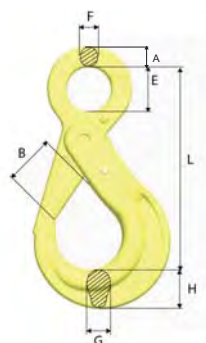
Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z101110	BKG-6-10	1.5	91	29	15	21	0.5
Z101098	BKG-7-10	2	120	37	17	22	0.5
Z101100	BKG-8-10	2.5	121	37	17	26	0.9
Z101026	BKG-10-10	4	144	45	21	31	1.5
Z101034	BKG-13-10	6.7	180	55	30	40	3.0
Z101042	BKG-16-10	10	219	62	37	50	5.5
Z101091	BKG-20-10	16	240	68	44	62	9.6





Safety Hook OBK

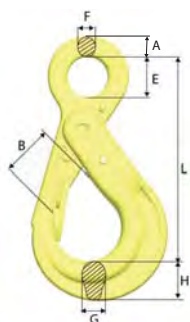
Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101048	OBK-6-10	1.5	12	103	26	22	9	15	17	0.4
Z101143	OBK-7/8-10	2.5	14	139	37	28	10	20	22	0.8
Z101145	OBK-10-10	4.0	16	170	47	34	13	22	29	1.3
Z101147	OBK-13-10	6.7	21	206	53	44	15	29	38	2.6
Z101141	OBK-16-10	10.0	26	251	68	56	19	29	45	4.4
Z101240	OBK-18/20-10	16.0	28	293	74	60	22	44	56	7.3



Safety Hook BK

Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101108	BK-6-10	1.5	12	109	29	22	10	15	21	0.5
Z101097	BK-7/8-10	2.5	14	138	37	28	11	17	26	0.9
Z101024	BK-10-10	4.0	16	168	45	34	13	21	31	1.5
Z101032	BK-13-10	6.7	20	207	55	44	16	30	40	3.0
Z101040	BK-16-10	10.0	26	254	62	56	20	37	50	5.5
Z101089	BK-18/20-10	16.0	30	289	68	60	22	44	62	9.0
Z101325	BK-22-10	20.0	32	320	80	70	24	50	62	11.3
Z101326	BK-26-10	27.0	35	342	100	80	25	54	68	16.5

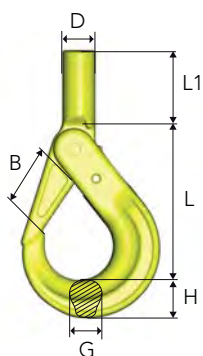
For larger sizes, see Classic Grade 8



Safety Hook BKD

The double latch BK-hook with recessed trigger.

Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101154	BKD-13-10	6.7	20	207	44	45	16	30	40	3.2
Z101155	BKD-16-10	10.0	26	254	48	56	20	37	50	5.8
Z101156	BKD-18/20-10	16.0	30	290	57	60	22	44	62	9.1
Z101373	BKD-26-10 OS	27.0	35	345	72	80	25	50	69	14.5



Shank Safety Hook BKT

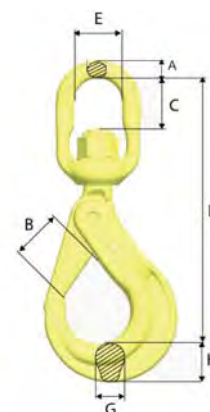
Art. no.	Code	WLL tonnes*	L	B	L1	D	dmin	G	H	Weight kgs
Z1011120	BKT-6-10	1.5	90	29	36	20	11	15	21	0.5
Z1011020	BKT-7/8-10	2.5	111	37	47	24	13	17	26	0.9
Z1010690	BKT-10-10	4.0	133	45	51	29	16	21	31	1.6

d min = the smallest permitted shank dimension after machining.

Note! After machining of the shank, proof loading must be carried out.

Swivel Safety Hook BKL

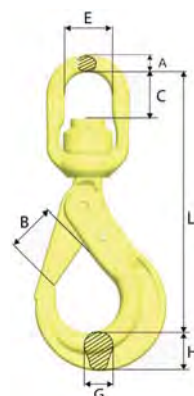
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z101114	BKL-6-10	1.5	149	29	23	33	11	15	21	0.7
Z101104	BKL-7/8-10	2.5	183	37	27	38	12	17	26	1.2
Z101028	BKL-10-10	4.0	218	45	37	44	15	21	31	2.0
Z101036	BKL-13-10	6.7	282	55	49	48	19	30	40	4.0
Z101044	BKL-16-10	10	341	62	65	61	25	37	50	7.2
Z101093	BKL-18/20-10	16	368	68	70	72	31	44	62	11.4



Swivel Safety Hook BKLK with ball-bearing

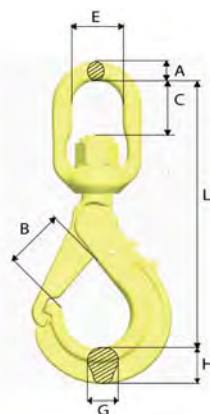
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z101116	BKLG-6-10	1.5	149	29	24	33	11	15	21	0.7
Z101106	BKLG-7/8-10	2.5	183	37	27	38	12	17	26	1.2
Z101030	BKLG-10-10	4.0	218	45	35	44	15	21	31	2.0
Z101038	BKLG-13-10	6.7	280	55	45	48	19	30	40	4.0
Z101046	BKLG-16-10	10.0	339	59	61	61	25	37	50	7.4
Z101095	BKLG-18/20-10	16.0	368	68	59	72	31	44	62	11.5
Z101294	BKLG-22-10 OS	20.0	436	79	80	80	35	50	62	16.8
Z101295	BKLG-26-10 OS	27.0	486	100	110	102	45	54	68	26

For larger sizes, see Classic Grade 8



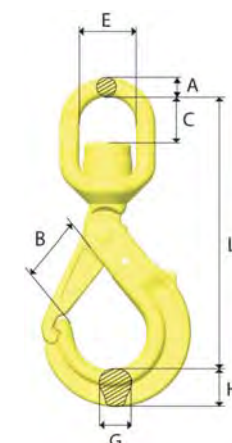
Swivel Safety Hook with Griplatch LBK

Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z100978	LBK-7/8-10	2.5	177	37	27	38	12	20	22	1.1
Z100960	LBK-10-10	4.0	214	47	37	44	15	22	29	1.8
Z100993	LBK-13-10	6.7	262	53	45	48	19	29	38	3.5
Z100995	LBK-16-10	10	324	68	66	61	25	30	45	5.9

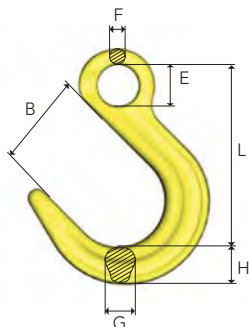


Swivel Safety Hook with Griplatch LKBK with ball-bearing

Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z100980	LKBK-7/8-10	2.5	176	37	27	38	12	20	22	1.1
Z100962	LKBK-10-10	4.0	213	47	35	44	15	22	29	1.9
Z100997	LKBK-13-10	6.7	261	53	43	48	19	29	38	3.6
Z100999	LKBK-16-10	10.0	323	68	61	61	25	30	45	6.2



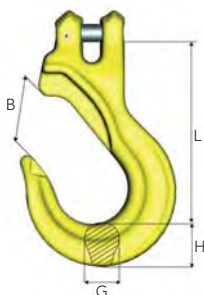
Foundry Hook OKE



Art. no.	Code	WLL tonnes*	L	B	E	F	G	H	Weight kgs
Z100853	OKE-7/8-10	2.5	124	63	28	12	21	26	0.8
Z100854	OKE-10-10	4	151	76	34	15	26	30	1.4
Z100855	OKE-13-10	6.7	184	90	44	19	33	39	2.8
Z100898	OKE-16-10	10	218	102	56	23	40	46	4.9
Z101340	OKE-20-10	16	247	114	60	27	46	60	7.2
Z101341	OKE-22-10	20	275	120	64	31	60	70	11.3
Z774808	OKE-26-10	27	300	113	70	35	64	77	16

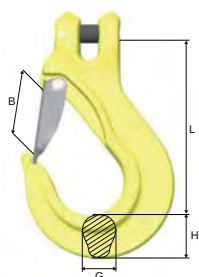
For larger sizes, see Classic Grade 8

Sling Hook EGK



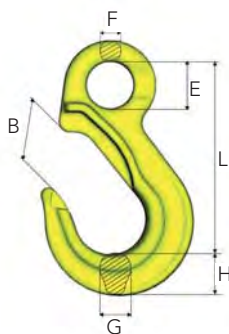
Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z100915	EGK-6-10	1.5	86	28	17	20	0.4
Z100918	EGK-7-10	2	95	32	17	22	0.5
Z100938	EGK-8-10	2.5	95	32	17	23	0.5
Z100942	EGK-10-10	4	121	41	23	31	1.0
Z100946	EGK-13-10	6.7	145	49	28	38	2.0
Z100950	EGK-16-10	10	170	61	36	46	3.8
Z101138	EGK-20-10	16	209	70	42	60	7.3

Sling Hook EGKN with latch



Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
B14460	EGKN-6-10	1.5	86	24,5	17	20	0.4
Z100843	EGKN-7-10	2.5	95	28	17	23	0.5
B14461	EGKN-8-10	2.5	95	28	17	23	0.5
B14462	EGKN-10-10	4	121	35	23	31	1.1
B14463	EGKN-13-10	6.7	145	42	28	38	2.2
B14464	EGKN-16-10	10	170	52	36	46	4.0
Z101127	EGKN-20-10	16	209	61	42	60	7.6

Sling Hook EK



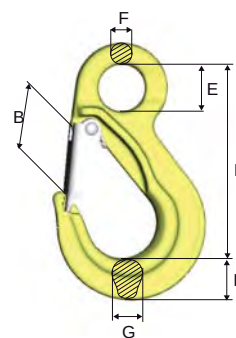
Art. no.	Code	WLL tonnes*	L	B	E	F	G	H	Weight kgs
Z101162	EK- 6-10	1.5	94	29	22	10	17	20	0.4
Z101164	EK- 8-10	2.5	109	32	28	12	17	23	0.5
Z101166	EK-10-10	4	134	42	34	14	23	30	0.9
Z101168	EK-13-10	6.7	166	49	44	18	28	38	2.0
Z101170	EK-16-10	10	203	60	56	22	36	47	3.8
Z101306	EK-20-10	16	229.2	60	60.5	26	42	60	6.3
Z101307	EK-22-10	20	267	83	64	31	43	67	8.5
Z101308	EK-26-10	27	301	95	66	32	51	75	12.6

For larger sizes, see Classic Grade 8

Sling Hook EKN with latch

Art. no.	Code	WLL tonnes*	L	B	E	F	G	H	Weight kgs
Z101128	EKN- 6-10	1.5	94	24	22	10	17	20	0.4
Z101130	EKN- 8-10	2.5	108	28	28	13	17	23	0.5
Z101132	EKN-10-10	4	134	37	34	14	23	30	1
Z101134	EKN-13-10	6.7	166	42	44	18	28	38	2.1
Z101136	EKN-16-10	10	203	50	56	22	36	47	3.9
Z101327	EKN-20-10	16	229.2	60	60.5	26	42	60	6.3
Z101328	EKN-22-10	20	267	73	64	31	43	67	8.7
Z101329	EKN-26-10	27	301	82	66	32	51	75	13.2

For larger sizes, see Classic Grade 8

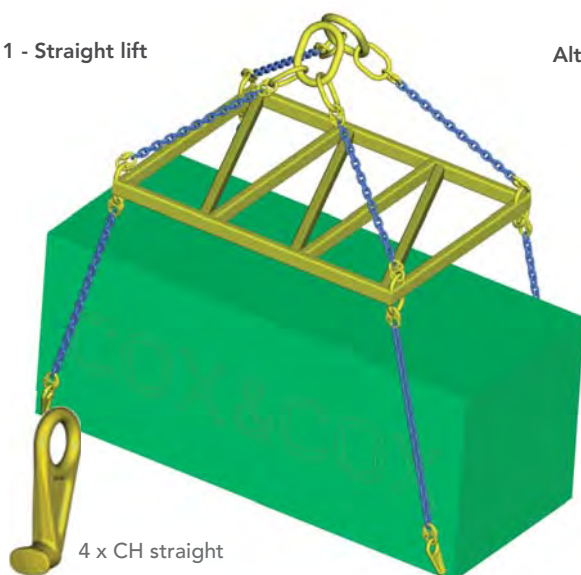


2

Container Hook CH

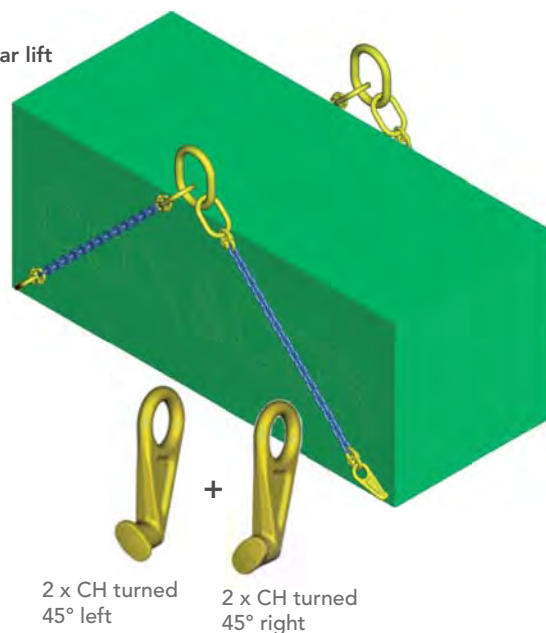
Made for lifting containers in their lower fittings.

Alt. 1 - Straight lift



4 x CH straight

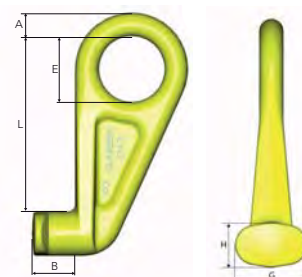
Alt. 2 - Angular lift



2 x CH turned
45° left

2 x CH turned
45° right

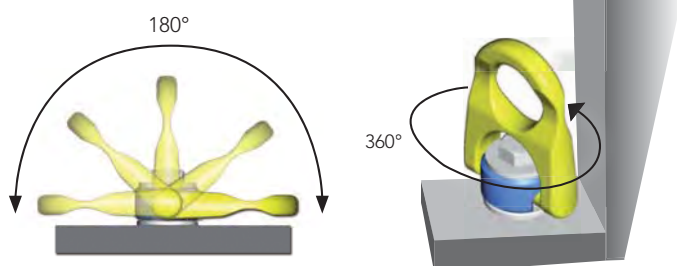
Art. no.	Code	WLL tonnes*	A	L	E	B	H	G	Weight kgs
Z101220	CH-3	12.5	25	187	70	46	47	75	3.8
Z101221	CH-3, 45° left	12.5	25	187	70	46	47	75	3.8
Z101219	CH-3, 45° right	12.5	25	187	70	46	47	75	3.8



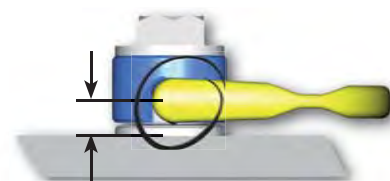
Rotating Lifting Points RLP and ERLP



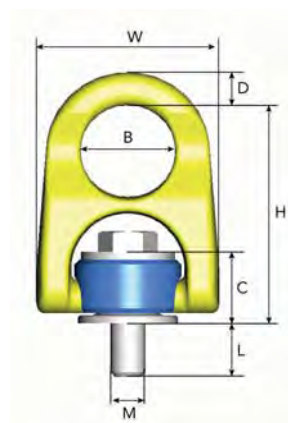
Optimal rotation and pivot



Optimal load distribution



The bow on both the RLP and the ERLP have a low position, greatly reducing the stress on the bolt, as well as the impact on the surface that the lifting points are screwed in to. This makes the RLP/ERLP strong and reliable lifting points that are gentle to the loads being transported.



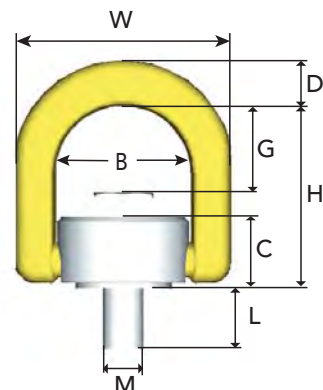
Rotating Lifting Point ERLP

Slim design to fit in confined spaces.

Art. no.	Code	L	M	B	D	C	H	W	Weight (kgs)
Z101260	ERLP-M8-10	15	M8	Ø27	10	20	63	52	0.2
Z101261	ERLP-M10-10	20	M10	Ø27	10	20	63	52	0.2
Z101252	ERLP-M12-10	19	M12	Ø38	15	31	91.8	73	0.8
Z101253	ERLP-M16-10	24	M16	Ø38	15	31	91.8	73	0.8

Rotating Lifting Point RLP

Art. no.	Code	L	M	B	D	G	C	H	W	Weight kgs
Z100095	RLP-M8-10	15	M8	Ø42	12	35	17.5	60	64	0.3
Z100096	RLP-M10-10	20	M10	Ø42	12	34	17.5	60	64	0.3
Z100097	RLP-M12-10	19	M12	Ø57	19	46.5	28	85	91	1.0
Z100098	RLP-M16-10	24	M16	Ø57	19	44	28	85	91	1.0
Z100092	RLP-M20-10	32	M20	Ø83	28	56	39.3	111	133	2.8
Z100094	RLP-M24-10	37	M24	Ø83	28	53	39.3	111	133	3.0
Z100714	RLP-M30-10	49.5	M30	Ø114	34	69.5	56	144	182	7.0
Z100713	RLP-M36-10	61	M36	Ø114	34	65.5	56	144	182	7.3
Z100707	RLP-M42-10	65.5	M42	Ø149	40.4	90	70	185	229	14.0
Z100708	RLP-M48-10	75.5	M48	Ø149	40.4	86	70	185	229	14.5



RLP with UNC thread

Art. no.	Code	Threads/ inch	L	B	D	G	C	H	W	Weight kgs
Z100838	RLP-UNC-5/16"	18	21	Ø42	12	35	17.5	60	64	0.3
Z100839	RLP-UNC-3/8"	16	27	Ø42	12	34	17.5	60	64	0.3
Z100840	RLP-UNC-7/16"	14	23	Ø57	19	47	28	85	91	1.0
Z100841	RLP-UNC-5/8"	11	29	Ø57	19	44	28	85	91	1.0
Z100842	RLP-UNC-3/4"	10	37	Ø83	28	56	39.3	111	133	2.8

L= The effective thread length below RLP house.

Extra Long Bolt for RLP

Art. no.	Bolt	L (mm)	Weight (kgs)
Z7681688	M8 x 120	99	0.44
Z7681695	M10 x 120	99	0.73
Z7681707	M12 x 120	89	1.05
Z7681716	M16 x 200	169	2.92
Z7681725	M20 x 200	158	4.84
Z7681740	M24 x 200	158	7.22
Z7681795	M30 x 200	141	1.21
Z7681808	M36 x 200	141	1.81



Working Load Limits (tonnes) for RLP/ERLP

No. of legs	1	1	2	2	2 symmetric		3 & 4 symmetric	
β	0°	90°	0°	90°	0-45°	45-60°	0-45°	45-60°
Load factor	*)	1	*)	2	1.4	1	2.1	1.5
M8-10 and 5/16 UNC	0.60	0.30	1.20	0.60	0.42	0.30	0.63	0.45
M10-10 and 3/8 UNC	1.00	0.50	2.00	1.00	0.70	0.50	1.05	0.75
M12-10 and 7/16 UNC	1.50	0.75	3.00	1.50	1.00	0.75	1.60	1.13
M16-10 and 5/8 UNC	3.00	1.50	6.00	3.00	2.10	1.50	3.15	2.25
M20-10 and 3/4 UNC	5.00	2.50	10.00	5.00	3.50	2.50	5.25	3.75
M24-10	7.00	3.50	14.00	7.00	4.90	3.50	7.35	5.25
M30-10	12.00	6.00	24.00	12.00	8.40	6.00	12.60	9.00
M36-10	14.00	8.00	28.00	16.00	11.20	8.00	16.80	12.00
M42-10	16.00	14.00	32.00	28.00	19.60	14.00	29.40	21.00
M48-10	20.00	16.00	40.00	32.00	22.40	16.00	33.60	24.00

In case of asymmetric loading we recommend following loading:

- 2-leg as corresponding 1-leg.
- 3- or 4-leg as corresponding 2-leg.

*) Provided only axial loading takes place, i.e. no bending force applied in the direction of the thread

Offshore Components



GUNNEBO
Industries

Innovation and Quality With a Purpose

We have developed products to meet the stringent requirements of the offshore oil & gas industry for many years. The working conditions are tough and products have to be able to sustain extreme conditions. Our double latch hook, BKD, was developed with the aerospace industry as a role model; if one system fails another one is ready to save the situation. The extra latch on the BKD will retain the load in case an unintended opening of the first latch should occur. Read more about the BKD on page 2:27.

Our lifting systems have been valued for their long durability and quality. Regardless of the environmental conditions, our systems have provided lifting operations with high safety. Our quality systems give us the tools to work with continuous improvements and we will always put our great efforts into our mission to create the best available in the market. Our quality is there with a purpose

DNV 2.7-1 certificate

We are type-approved by DNV to manufacture master links and shackles in accordance with DNV 2.7.1 specification. The approval verifies that Gunnebo Industries has a high consistent level of production stability in the entire process, from raw material to the finished product.



Arctic Offshore Master Links

Type Approved to DNV 2.7-1



Adverse weather and rough sea conditions - sometimes in combination with extremely low temperatures - must be included in the design and safety factor of container lifting sets. The heat treatment of the components must ensure proper ductility and strength to sustain shock loads which may be imposed when the container is lifted from the deck of a vessel.

The lifting sets (chain or wire rope sling, shackles and master links) must be specially designed for the purpose to lift offshore containers. One of the main differences compared to the onshore standard or specification, is that it allows for the dynamic forces at sea by adding an extra enhancement factor to increase the level of safety. Another difference is that the requirements and testing of materials that will be used in cold environments, are more extensive.

Arctic Offshore Master Link MT



Arctic Offshore Master Link M



Design Temperature -40 °C

The Arctic Offshore Master links are highly suitable to withstand shock loads and fatigue, even in extremely cold conditions. The new master link range has a design temperature of -40 °C, making it suitable for even the harshest weather conditions such as the North Sea.

High Visibility colour

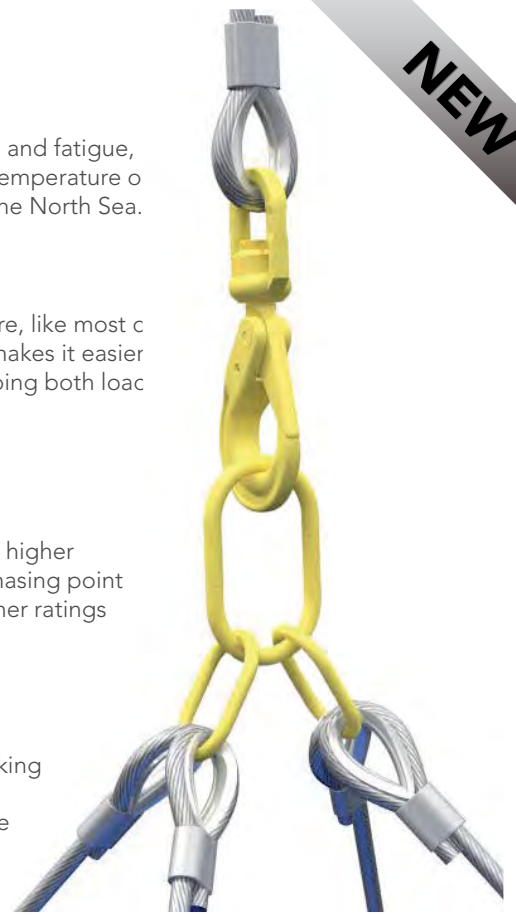
To even further increase the safety on the work site, the Arctic master links are, like most of Gunnebo Industries' offshore range, painted in a high visibility colour. This makes it easier for the operator to detect the lifting gear in severe weather conditions, keeping both load and personnel safe.

Improved Working Load Limits

It comes in an optimized range where each master link will have a wider and higher working load limit span than the old range. This makes it easier from a purchasing point of view, as well as decreasing the risk of incorrect use. A table for the container ratings and recommended master links can be found at the back of this leaflet.

100% Proof Loading

All lifts require reliable products with the highest safety to ensure a safe working environment as well as to protect the load. Gunnebo Industries perform rigorous testing in their factories before the product is released. 100 % of the components of all batches are proof loaded 2.5 times their working load limit and visually inspected by competent personnel. This is done without exception to guarantee highest quality and safety for the end user. For the Arctic master links there is also a stress relieving additional heat treatment to make the product as suitable as possible for the harsh marine environment.

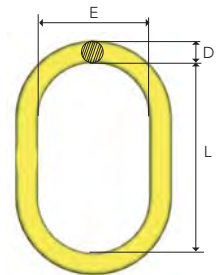


Arctic Offshore Master Link M

DNV 2.7-1 Type Approved

Art. no.	Code	WLL tonnes 4:1	Max. Container rating* (kgs)	L	E	D	Weight kgs
Z101397	M-7T-10 OS	7.6	2 500	160	95	22	1.5
Z101387	M-12T-10 OS	12.5	7 500	270	140	28	3.8
Z101388	M-18T-10 OS	18.5	13 500	270	140	32	5.1
Z101389	M-29T-10 OS	29.2	25 000	270	140	40	8.2
Z101394	M-40T-10 OS	40.0	N/A	300	180	45	11.9
Z101395	M-48T-10 OS	48.0	N/A	300	200	50	15.2
Z101396	M-60T-10 OS	60.0	N/A	350	200	55	20.6

* For further information, see DNV 2.7-1

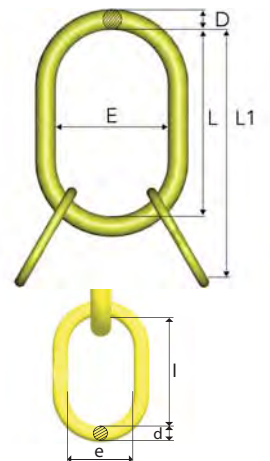


Arctic Offshore Master Link MT

DNV 2.7-1 Type Approved

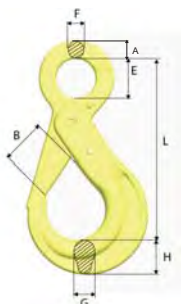
Art. no.	Code	WLL tonnes 4:1	Max. Container rating* (kgs)	L1	L	E	D	I	e	d	Weight kgs
Z101398	MT-7T-10 OS	7.8	3 000	340	190	110	28	150	90	19	5.0
Z101390	MT-12T-10 OS	12.5	7 500	430	270	140	28	160	95	22	6.8
Z101391	MT-18T-10 OS	18.5	13 500	460	270	140	32	190	110	28	10.8
Z101392	MT-29T-10 OS	29.2	25 000	470	270	140	40	200	120	32	16.2
Z101393	MT-40T-10 OS	40.0	N/A	570	300	180	45	270	140	40	28.2

* For further information, see DNV 2.7-1



Determination of WLL as stated in DNV 2.7-1

Container rating (kgs)	Enhancement factor	Min. required WLL (t)	Recommended Masterlink M	Recommended Masterlink MT
500	-	7	M-7T-10 OS	MT-7T-10 OS
1000	-	7		
1500	-	7		
2000	3.500	7		
2500	2.880	7.20		
3000	2.600	7.80	M-12T-10 OS	MT-12T-10 OS
3500	2.403	8.41		
4000	2.207	8.83		
4500	1.962	8.83		
5000	1.766	8.83		
5500	1.766	9.71		
6000	1.766	10.59		
6500	1.733	11.26		
7000	1.700	11.90		
7500	1.666	12.50		
8000	1.633	13.07	M-18T-10 OS	MT-18T-10 OS
8500	1.600	13.60		
9000	1.567	14.10		
9500	1.534	14.57		
10000	1.501	15.01		
10500	1.479	15.53		
11000	1.457	16.02		
11500	1.435	16.50		
12000	1.413	16.95		
12500	1.391	17.38		
13000	1.368	17.79		
13500	1.346	18.18		
14000	1.324	18.54		
14500	1.302	18.88		
15000	1.280	19.20		
15500	1.267	19.64		
16000	1.254	20.06		
16500	1.240	20.47		
17000	1.227	20.86		
17500	1.214	21.24		
18000	1.201	21.61		
18500	1.188	21.97		
19000	1.174	22.31	M-29-10 OS	MT-29-10 OS
19500	1.161	22.64		
20000	1.148	22.96		
20500	1.143	23.44		
21000	1.139	23.92		
21500	1.135	24.39		
22000	1.130	24.86		
22500	1.126	25.33		
23000	1.121	25.79		
23500	1.117	26.25		
24000	1.112	26.70		
24500	1.108	27.15		
25000	1.104	27.59		



Safety Hook BK Offshore

Requirements acc. to DNV 2.7-1

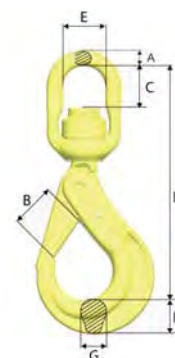
Art. no.	Code	WLL tonnes 4:1	WLL tonnes 5:1	L	B	E	F	G	H	Weight kgs
Z101355	BK-26-10 OS	27	21.8	342	100	80	25	50	68	14.6
Z101364	BK-32-8 OS	32.8	26.2	400	120	90	30	62	86	23.6

Swivel Safety Hook BKLK Offshore

Requirements acc. to DNV 2.7-1

Art. no.	Code	WLL tonnes 4:1	WLL tonnes 5:1	L	B	C	E	A	G	H	Weight kgs
Z700928	BKLK-13-10 W OS	6.7	5.3	307	55	72	61	25	30	40	4.9
Z100174	BKLK-16-10 W OS	10	8	367	62	88	82	26	37	50	8.4
RS1422	BKLK-18/20-10 OS	16	12.8	368	68	60	72	31	44	65	11.9
Z101294	BKLK-22-10 OS	20	16	436	79	80	80	35	50	62	16.8
Z101295	BKLK-26-10 OS	27	21.6	486	100	110	102	45	54	68	26.5
Z101344	BKLK-32-8 OS	32.8	26.2	533	120	110	102	45	62	86	32.3

13-20 mm and 26 mm can be supplied with double latch



Safety Hook BK and BKLK with Double Latch

With recessed trigger

Due to the motion of the sea when loading and unloading offshore, direct impact on the hook could cause the latch to unintentionally open when not being under load, risking the load to unhitch. The double latch safety hook has an extra latch retaining the load in this case, keeping both load and personnel safe.

Double Latch

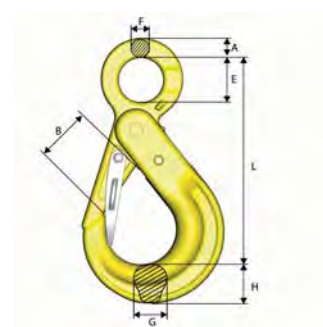
Should the hook latch accidentally open, either through direct impact or excessive wear on the trigger, the extra latch is there to retain the load safely. The latch does not cause inconvenience for the operator and may save their lives if something goes wrong



Recessed Trigger

To avoid the trigger from being hit or damaged it has been recessed into the hook. This prevents the latch further from accidentally opening.

Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101154	BKD-13-10	6.7	20	207	44	45	16	30	40	3.2
Z101155	BKD-16-10	10	26	254	48	56	20	37	50	5.8
Z101156	BKD-18/20-10	16	30	290	52	60	22	44	62	9.1
Z101373	BKD-26-10 OS	27	35	345	72	80	25	54	69	14.5



See our offshore shackles in Chapter 3



Standard Shackle No 855



Super Shackle No 858

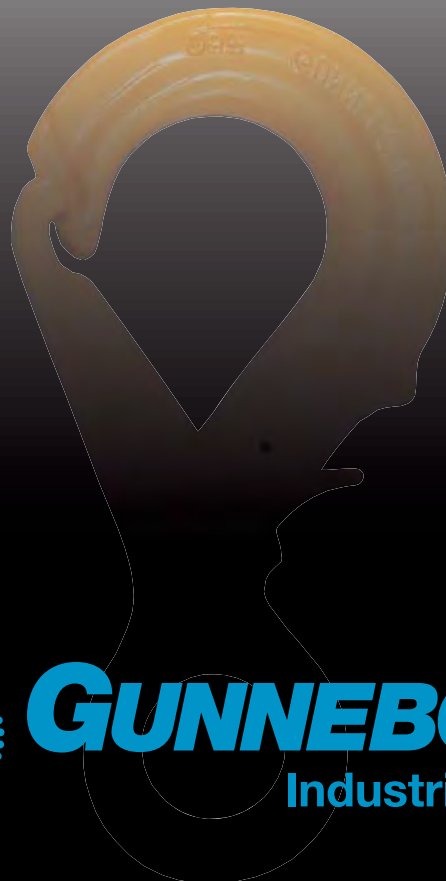


Arctic Shackle No 856



ROV Shackle No 860

Classic Components



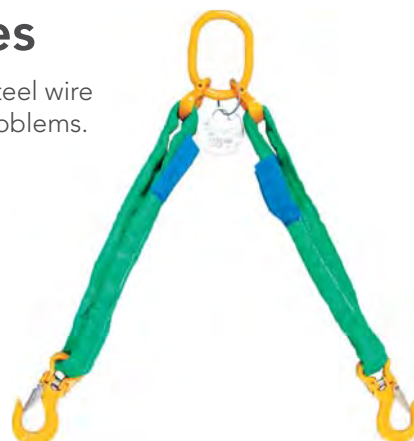
GUNNEBO
Industries

The SK-system - Endless Possibilities

A range of specialized components for safe and easy assembly to chain, steel wire rope, webbing and roundsling, designed to solve your below-the-hook problems.

The Polyester Sling System provides:

- Universal coupling of components to chain, wire and synthetic slings.
- Quick and simple assembly - only a hammer needed.
- Easy assembly - standardized dimensions within each size range effectively eliminates the incorrect assembly of components with different safe working loads.
- Heavy hoisting with strong yet lightweight equipment, all components are manufactured from alloy steel for use with Grade 8 chain.

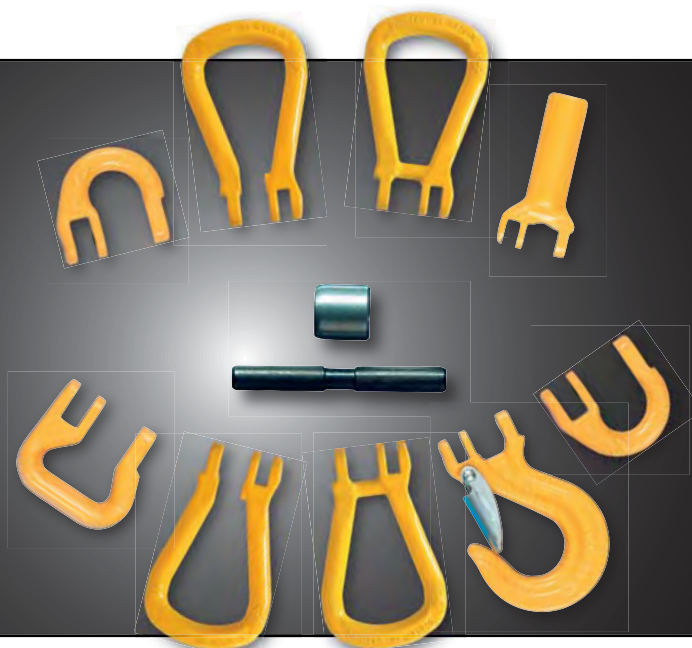


2

SKA - pin & collar

The SKA set, containing pin and collar, can be used to connect all products in the SK-range. This creates a multitude of available combinations, each adaptable to the unique lifting situation.

The SKA-set gives you flexibility - it can be disassembled and put in new combinations, to provide solutions for a versatile lifting environment.



SKLI/SKLU

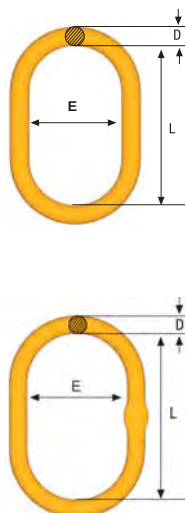
Electrically insulated, lubricated, sealed roller bearing swivel. Fully rotational even at maximum load. Tested to resist 1.000 V. Suitable for protection of overhead cranes during welding operations on suspended loads.

By using the SKLI/SKLU with the SK-system you get a versatile solution that will fit almost any situation.

For technical specifications see page 2:30 - 2:31

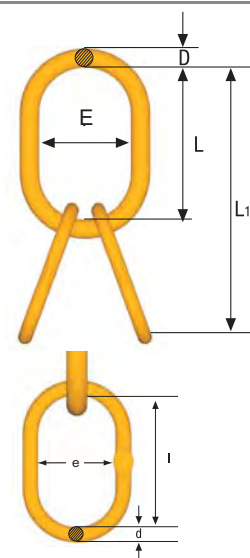
Master Link M / MF

EN 1677-4



Art. no.	Code	WLL tonnes*	L	E	D	Weight kgs
Z100860	MF-86-10	2.5	125	70	14	0.4
Z100861	MF-108-10	4	140	80	17	0.8
Z100862	MF-1310-10	7.5	160	95	22	1.5
Z100863	MF-1613-10	10	190	110	28	2.5
Z100864	MF-2016-10	17	240	140	34	5.2
Z100865	MF-2220-10	25	250	150	40	7.3
Z101244	M-2622-10	28	250	150	42	7.8
Z100876	M-32-10	33	300	180	45	11.7
Z100877	M-3226-10	43	300	200	50	14.8
Z100878	M-3632-10	56	350	200	55	20.7

** MF is with flattened section for use with BL

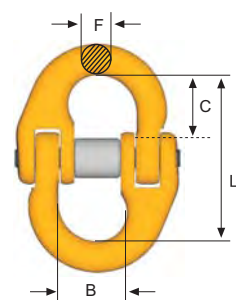


Master Link with Sub Links MT

EN 1677-4

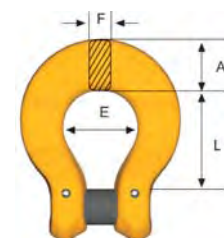
Art. no.	Code	WLL tonnes*	For chain 3-4-leg	L1	L	E	D	I	e	d	Weight kgs
Z100888	MT-6-10**	3.5	6	270	150	90	19	120	70	14	1.8
Z100889	MT-8-10**	5.2	7, 8	300	160	95	22	140	80	17	3
Z100897	MT-9-10	6.9	9	340	190	110	28	150	90	19	4.3
Z100890	MT-10-10**	11.5	10	360	200	120	30	160	95	22	6.4
Z100891	MT-13-10**	17	13	450	250	150	40	200	120	30	14.2
Z100892	MT-16-10**	28	16	500	300	200	50	200	120	32	23
Z100893	MT-20-10**	35	19, 20	550	300	200	55	250	150	40	31.5
Z100894	MT-22-10	53	22	610	350	200	60	260	140	45	46
Z100895	MT-26-10	70	26	730	450	250	70	280	160	50	71
Z100896	MT-32-10	90	32	750	450	260	80	280	160	55	91

** With flattened section for use with BL



Coupling Link G EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	F	C	Weight kgs
Z622882	G-6-8	1.12	6	45	15	7	17	0.1
Z279333	G-7/8-8	2	7, 8	56	18	9	22	0.2
Z279430	G-10-8	3.2	10	68	25	12	26	0.3
Z279537	G-13-8	5.4	13	89	29	15	33	0.7
Z279634	G-16-8	8	16	105	36	19	40	1.2
Z279731	G-18/20-8	12.5	19	125	43	22	47	1.9
Z279838	G-22-8	15.5	22	152	50	24	59	3.0
Z349171	G-26-8	21.6	26	161	58	30	61	5.2
Z349189	G-32-8	32	32	200	70	38	77	9.5



Berglok Chain Coupler BL EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	E	F	A	Weight kgs
Z622036	BL-6-8	1.12	6	27	20	9	14	0.1
Z195823	BL-7/8-8	2.0	7, 8	35	25	11	18	0.2
Z208022	BL-10-8	3.2	10	45	32	14	22	0.4
Z217820	BL-13-8	5.4	13	56	40	17	28	0.8
Z208226	BL-16-8	8.0	16	68	50	22	35	1.4

Chain Classic Grade 8 EN 818-2 Short link chain, KL

Heat treatment

Quenched and tempered.

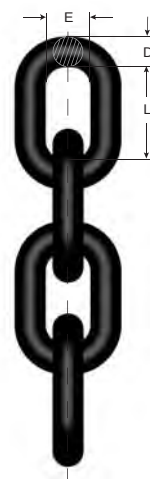
Surface treatment

Painted black
Painted yellow

Marking

8E

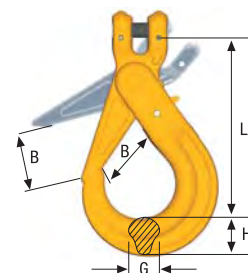
Art.no Box	Code	D nom.	L	E	Weight kgs/m	WLL tonnes *	Manufact. proof force kN	Breaking force kN
Z802174 - 1 x 200 m	KLB 6-8E	6	18	8.5	0.8	1.1	28.3	45.2
Z802175 - 1 x 200 m	KLB 7-8E	7	21	10	1.1	1.5	38.5	61.6
Z802176 - 1 x 200 m	KLB 8-8E	8	24	11	1.4	2.0	50.3	80.4
Z802156 - 1 x 100 m	KLB 10-8E	10	30	14	2.2	3.2	78.5	126
Z802157 - 1 x 100 m	KLB 13-8E	13	39	18	3.7	5.4	133	212
Z802177 - 1 x 100 m	KLB 16-8E	16	48	22	5.6	8.0	201	322
Z801203 - 1 x 100 m	KLB 19-8E	19	57	26	7.8	11.6	284	454
Z801228 - 1 x 50 m	KLB 22-8E	22	66	30	10.6	15.5	380	608
Z801231 - 1 x 50 m	KLB 26-8E	26	78	35	14.8	21.6	531	849
Z801232 - 1 x 25 m	KLB 32-8E	32	96	43	21.6	32.0	804	1290



Safety hook BKG

EN 1677-3

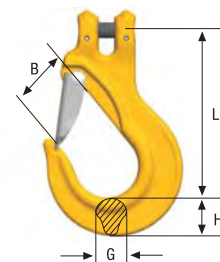
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight appr. kgs
Z297222	BKG-7/8-8	2.0	7, 8	120	37	17	26	0.9
Z295929	BKG-10-8	3.2	10	143	45	21	30	1.5
Z291527	BKG-13-8	5.4	13	179	55	30	39	2.8
Z291624	BKG-16-8	8.0	16	217	62	37	48	5.1



Sling hook EGKN with latch

EN 1677-2

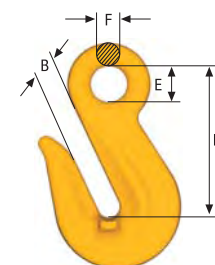
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight appr. kgs
Z100744	EGKN-7/8-8	2.0	7, 8	95	29	17	22	0.5
Z100772	EGKN-10-8	3.2	10	121	37	19	29	0.9
Z100773	EGKN-13-8	5.4	13	147	42	27	36	2.0
Z100774	EGKN-16-8	8.0	16	170	49	34	44	3.6

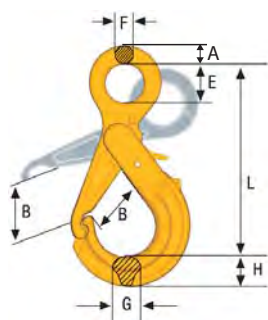


Grab hook OG EN 1677-1

Not for use with Berglok. No reduction of working load limit, thanks to supporting lugs on either side of hook to prevent chain link deformation.

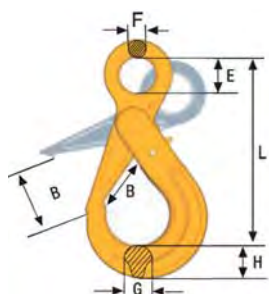
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	Weight appr. kgs
Z100811	OG-7/8-8	2	7, 8	65	10	16	10	0.3
Z291022	OG-10-8	3.2	10	85	12	20	12	0.6
Z295220	OG-13-8	5.4	13	104	15	25	16	1.2
Z296221	OG-16-8	8	16	130	19	30	19	2.4





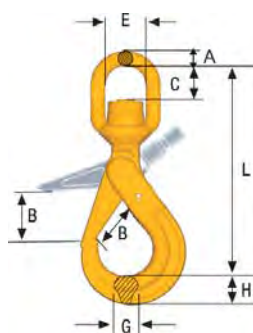
Safety Hook OBK with griplatch EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	A	L	B	E	F	G	H	Weight kgs
Z100218	OBK-22-8	15.5	22	30	335	87	70	22	40	57	10.2



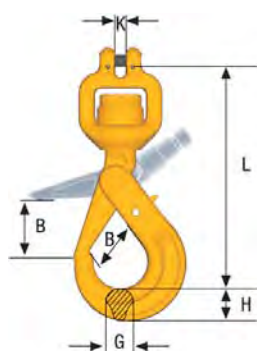
Safety Hook BK EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight kgs
Z101357	BK-32-8	32.8	32	400	120	90	30	62	86	23.8



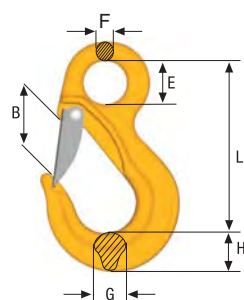
Safety Hook BCLK EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	E	A	G	H	Weight kgs
Z101344	BCLK-32-8 OS	32.8	32	533	120	110	102	45	62	86	32.3



Clevis Swivel Safety Hook BKH with ball bearing EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	K	G	H	Weight kgs
Z336222	BKH-6-8	1.12	6	145	28	6.8	15	21	0.7
Z700809	BKH-7/8-8	2.0	7,8	181	37	8.8	17	26	1.2



Sling Hook EK (without latch) and EKN (with latch)

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight kgs
EN 1677-2										
Z100720	EK-32-8	32	32	333	105	76	38	61	80	17.7
Z100725	EKN- 32-8	32	32	333	93	76	38	61	80	17.9

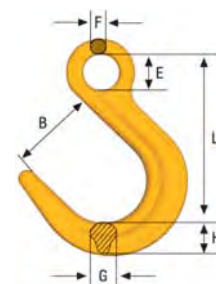
DIN 7540 - Also available in ROV version

Z101382	DK-50T-8	50		442	124	84	50.5	89	116	48
Z101361	DKN-50T-8	50		442	124	84	50.5	89	116	49
Z101384	DK-80T-8	80		610	155	102	63	110	145	80
Z101363	DKN-80T-8	80		610	155	102	63	110	145	81

Foundry Hook OKE

EN 1677-1

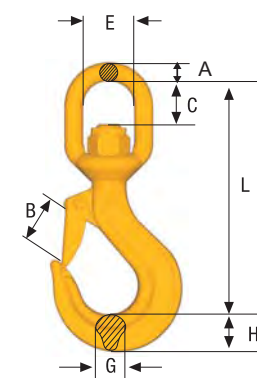
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight appr. kgs
Z645564	OKE-32-8	32	32	384	145	90	42	77	94	30



Swivel Latch Hook LKN

EN 1677-2

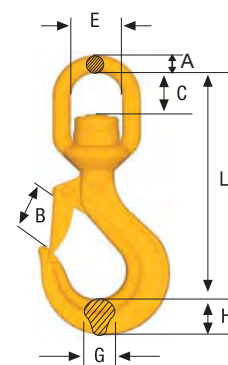
Art. no.	Code	WLL tonnes*	For chain dim. mm	L	B	C	E	A	G	H	Weight appr. kgs
Z142647	LKN-7/8-8	2	7, 8	154	28	28	38	12	18	24	0.8
Z142744	LKN-10-10**	4.0	10	192	35	37	44	15	23	31	1.5
Z142841	LKN-13-8	5.4	13	238	40	47	48	19	28	36	3
Z142948	LKN-16-8	8	16	295	53	65	61	25	35	44	5.1



Swivel Latch Hook LKNK with ball bearing

EN 1677-2

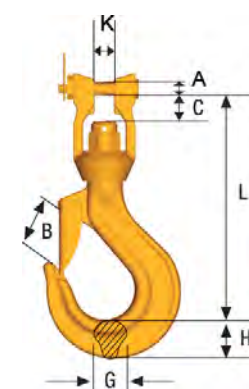
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	E	A	G	H	Weight appr. kgs
Z700908	LKNK-7/8-8	2	7, 8	156	29	28	38	12	18	24	0.9
Z700909	LKNK-10-10**	4.0	10	191	35	35	44	15	23	31	1.6
Z700910	LKNK-13-8	5.4	13	236	40	45	48	19	28	36	3.2
Z700911	LKNK-16-8	8	16	295	53	63	61	25	35	44	5.3



Clevis Swivel Hook LKNG

EN 1677-2

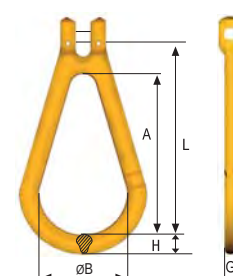
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	A	G	H	K	Weight appr. kgs
Z700494	LKNG-16-8	8	16	258	53	30	28	35	44	27	5.6



Clevis Egglink CEL

EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	A	B	G	H	L	Weight kgs
Z700968	CEL-7/8-8	2	7, 8	80	40	14	15	100	0.4
Z700969	CEL-10-8	3.2	10	100	50	18	19	126	0.7
Z700970	CEL-13-8	5.4	13	130	65	23	25	162	1.5

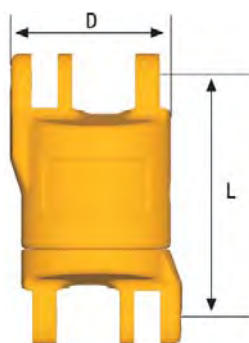


Roller-Bearing Swivel, SKLI/SKLU

EN 1677-1

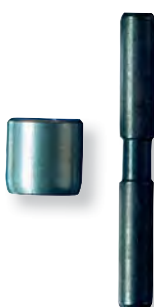
Electrically insulated, lubricated, sealed roller bearing swivel. Fully rotational even at maximum load. Tested to resist 1.000 V. Suitable for protection of overhead cranes during welding operations on suspended loads.

The Gunnebo Industries SKLI is equipped with a heavy duty roller bearing, enabling high durability and safe use also under severe load. It also has heavy duty nylon insulation inside to decrease friction when in use. The SKLI is compatible with the entire Gunnebo Industries SK-range for versatile use.

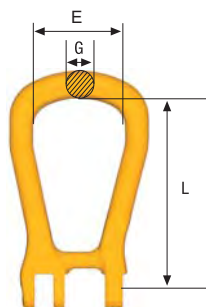


Art. no.	Code	WLL tonnes*	For chain dim.	L	D	Weight kgs
Z100316	SKLI-7/8-8	2	7, 8	75	48	0.7
Z100414	SKLI-10-8	3.2	10	97	59	1.3
Z100415	SKLI-13-8	5.4	13	120	75	2.8
Z100416	SKLI-16-8	8	16	137	90	4.6
Z100417	SKLI-18/20-8	12.5	19	159	104	7.3
RS16520	SKLU-22-8*	15.5	22	160	109	9.2
RS16530	SKLU-26-8*	21.6	26	207	135	18.3

* Uninsulated



Art. no.	Code	Weight kgs
Z700674	SKA-6-8	0.01
Z323624	SKA-7/8-8	0.02
Z318024	SKA-10-8	0.04
Z303822	SKA-13-8	0.08
Z303725	SKA-16-8	0.14
Z145048	SKA-18/20-8	0.26
Z133530	SKA-22-8	0.35
Z605407	SKA-26-8	0.63

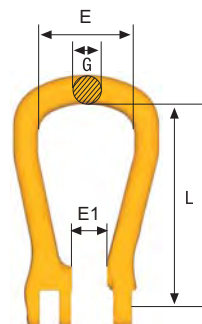


Master Link SKG (closed) EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	E	G	Weight kgs
Z419684	SKG-7/8-8	2	7, 8	99	50	14	0.3
Z419781	SKG-10-8	3.2	10	127	66	18	0.6
Z419888	SKG-13-8	5.4	13	145	72	22	1.1
Z419985	SKG-16-8	8	16	175	82	25	1.5
Z420086	SKG-18/20-8	12.5	19	204	105	30	3.0

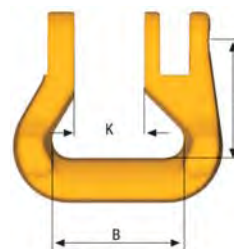
Master Link SKO (open)**EN 1677-1**

Art. no.	Code	WLL tonnes*	For chain dim.	L	E	G	E1	Weight kgs
Z418683	SKO-7/8-8	2	7, 8	99	50	14	15	0.3
Z418780	SKO-10-8	3.2	10	127	66	18	20	0.6
Z419383	SKO-13-8	5.4	13	145	72	22	25	1
Z419480	SKO-16-8	8	16	175	82	25	30	1.5
Z419587	SKO-18/20-8	12.5	19	204	105	30	36	2.9

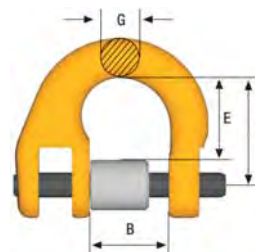
**Roundsling Coupling SKR****EN 1677-1**

Special shape for full WLL of the roundsling

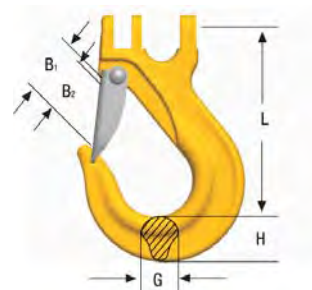
Art. no.	Code	WLL tonnes*	L	B	K	Weight kgs
Z127840	SKR-7/8-8	2	35	40	18	0.2
Z143143	SKR-10-8	3.2	42	47	24	0.4
Z302538	SKR-13-8	5.4	50	53	29	0.7
Z143240	SKR-16-8	8	62	67	35	1.3
Z143347	SKR-18/20-8	12.5	71	80	43	1.9
Z100057	SKR-22-8	15.5	111	125	50	5.3
Z100055	SKR-26-8	21.6	129	150	58	8.9

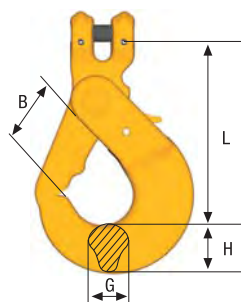
**Half-link SKT (incl. locking set)****EN 1677-1**

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	E	Weight appr. kgs
Z426286	SKT-7/8-8	2	7, 8	28	18	9	22	0.1
Z426383	SKT-10-8	3.2	10	34	25	12	26	0.2
Z426480	SKT-13-8	5.4	13	44	30	15	33	0.4
Z426587	SKT-16-8	8	16	52	36	19	40	0.6
Z426684	SKT-18/20-8	12.5	19	63	43	22	48	1.1
Z100225	SKT-22-8	15.5	22	76	50	24	60	1.7
Z100226	SKT-26-8	21.6	26	80	58	29	61	2.6
Z100227	SKT-32-8	32	32	100	70	36	78	4.9

**Sling Hook ESKN/SKN with latch****EN 1677-2****Sling Hook ESKH/SKH without latch****EN 1677-1**

Art. no.	Code	WLL tonnes*	For chain dim.	L	B ₁	B ₂	G	H	Weight kgs
Z424682	SKN-7/8-8	2.0	7, 8	90		27	18	21	0.4
Z424789	SKN-10-8	3.2	10	115		34	23	29	0.8
Z101214	ESKN-13-8	5.4	13	145		42	28	36	1.8
Z100786	ESKN-16-8	8.0	16	178		54	38	43	3.4
Z100781	ESKN-18/20-8	12.5	19	197		59	49	51	5.1
Z425188	SKH-7/8-8	2.0	7, 8	90	32		18	21	0.4
Z425285	SKH-10-8	3.2	10	115	40		23	29	0.8
Z101213	ESKH-13-8	5.4	13	145	51		28	36	1.7
Z100787	ESKH-16-8	8.0	16	178	62		38	43	3.2
Z100780	ESKH-18/20-8	12.5	19	197	67		49	51	4.5



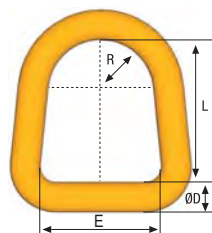


Container Hook BKGC

EN 1677-3

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	G	H	Weight kgs
Z100240	BKGC-13-8	5.4	13	164	55	27	43	3.2
Z100242	BKGC-16-8	8	16	160	55	27	43	3.4

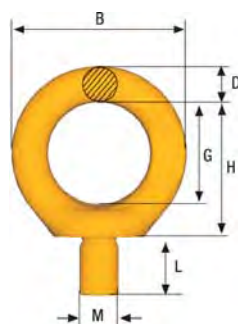
(Spare part: RDOBK-16 to both sizes)



Master Link D

Art. no.	Code	WLL tonnes*	E	D	L	R	Weight kgs
Z700877	D-14-8	2.5	55	14	65	24	0.4
Z700878	D-17-8	4	64	17	62	29	0.5
Z700880	D-22-8	8	76	22	90	33	1

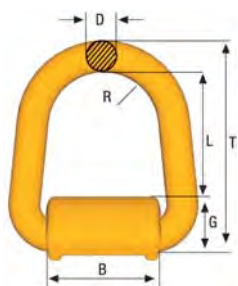
The loadbearing width must be at least 0.5 x E



Eye Lifting Point ELP

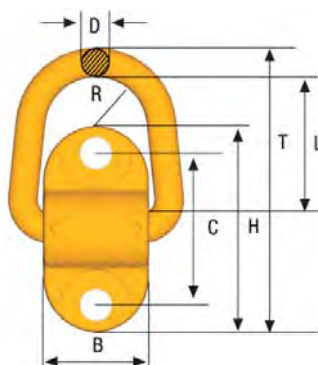
Art. no.	Code	WLL tonnes*	B	D	G	H	L	M	Weight kgs
Z100434	ELP-16-8	1**	72	16	42	55	24	M16	0.4
Z100435	ELP-20-8	1**	72	16	42	58	30	M20	0.4
Z100436	ELP-24-8	2**	88	19	48	69	36	M24	0.9
Z100437	ELP-30-8	3**	106	22	60	84	45	M30	1.4

** In case of 1-leg application where loading is limited to straight loading in the direction of thread (no bending force) it is possible to use ELP with four times higher WLL. Note! Threaded depths need to be at least 1xM for steel, 1,25xM for cast iron and 2xM for aluminium alloy.



Weldable Lifting Point WLP

Art. no.	Code	WLL tonnes*	B	D	G	L	R	T	Weight kgs
Z700900	WLP-1T	1	50	14	27	53	24	95	0.5
Z700901	WLP-3T	3	58	17	34	48	29	97	0.8
Z700902	WLP-5T	5	64	22	41	73	33	135	1.8



Screw-on Lifting Point SLP

Art. no.	Code	WLL tonnes*	B	C	D	H	L	M	T	R	Weight kgs
Z700903	SLP-1T	1	50	72	14	98	55	M14	139	24	0.8
Z700904	SLP-3T	3	58	84	17	114	50	M16	144	29	1.3
Z700905	SLP-5T***	5	64	116	22	160	74	M20	203	33	2.6

*** Can be supplied with spring for stay up function

Working Load Limits for ELP / WLP / SLP on page 2:44

How do you transform your excavator into a crane?

Universal Weld-On Hook, UKN

For excavators, construction machinery, lifting beams etc. Specified by leading excavator manufacturers.

Welding Instructions for UKN

WARNING! WELDING OPERATION SHOULD BE CARRIED OUT BY A TRAINED WELDER.

ELECTRODES

Electrodes or wire must be for use with non-alloy or low-alloy steel. Electrodes must not be wet. Do not use rusty welding wire.

Following types are recommended:

ISO 2560, DIN EN 499, BS EN 499, AWS A 5.1 E 7018 or equal.

B. POSITIONING

These are universal hooks and can be welded on to different supporting materials (e.g. girder). If the hook is welded on to a bucket it should be placed so that:

1. it will withstand all strains caused by different positions of the bucket.
2. any damage to the coupling element which might be caused by the other parts of the excavator is avoided.
3. the user will not be injured (pinched or cut).
4. any unintentional unhooking of the coupling element will be made impossible.
5. the coupling element can be easily hooked and unhooked.
6. it doesn't hamper excavation and lifting.

The hook should be placed in the middle at the upper part of the bucket. The position should be protected, but also easy to reach. Figure shows two different positions.

Before use a competent person shall certify that the hook may be taken into use. Always take into consideration the tensile strength and thickness of the supporting material. Proof load testing may be required

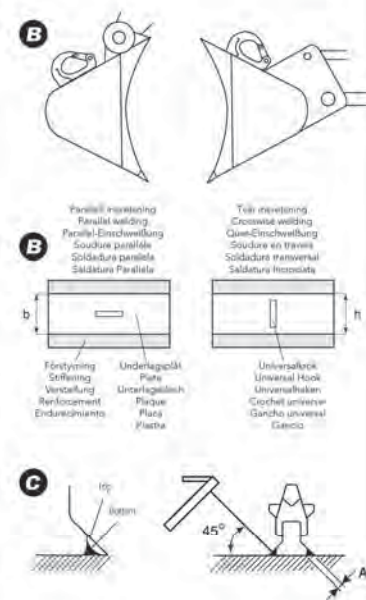
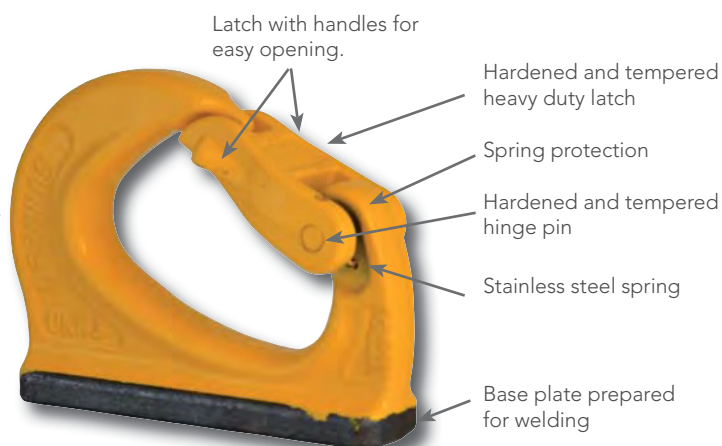
C. WELDING

Before welding, the surfaces must be cleaned thoroughly from rust, paint or similar.

NOTE! At temperatures below 0°C the welding surfaces should be preheated.

Positioning of the hook should be done by spot welding in each corner. Next, the bottom joint is to be welded and must be carried out continuously (well filled all around). Welding torch or electrode should be held at 45° (see figure), to obtain required penetration. When the top joint is to be welded, a larger electrode may be chosen. Minimum value of throat thickness, A, (see table) must be achieved. Cracks or pores are not permitted.

NOTE! The welded joint must NOT be cooled by water. Only non-forced air cooling, is allowed. The pin (axle) should be lubricated until the hook has reached ambient temperature

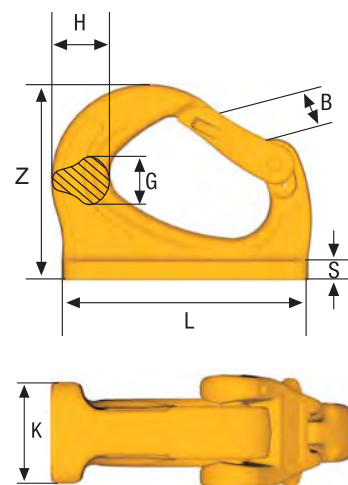


In service temperature: -40 °C to +200 °C without reduction of the WLL

Art. no.	Code	WLL tonnes**	B	G	H	K	L	S	Z	Weight kgs
Z1002560	UKN-0,75*	0.75	20	13	20	19	81.5	5	56	0.2
Z6511810	UKN-1*	1	27	17	25	25	95	6	72	0.6
Z7009060	UKN-2*	2	33	20	30	30	114	8	86	0.9
Z6455730	UKN-3	3	30	23	32	35	132	10	105	1.3
Z6521160	UKN-4	4	30	29	38	42	140	11	114	2.0
Z6455800	UKN-5	5	34	30	47	45	165	12	131	3.2
Z6515390	UKN-8	8	34	40	51	50	172	13	133	3.6
Z6456030	UKN-10	10	47	43	58	55	220	14	170	8.2
Z1007850	UKN-15	15	55	50	67	60	240	15	188	9.8

* Welding plate slightly curved

** Safety factor 5:1



If welding on to an excavator or its accessories we recommend that when necessary the working load limit is reduced, to meet legislative requirements. Please contact your distributor for further information.



Set for BK/BKG Safety hooks consists of trigger, stainless steel spring, retaining pin and assembly kit.

Spare Part RDBK (with assembly kit)

Recessed trigger

Art. no.	Code	Weight kgs
Z100282	RDBK-6	0.02
Z100283	RDBK-8	0.03
Z100284	RDBK-10	0.03
Z100285	RDBK-13	0.05
Z100286	RDBK-16	0.10
Z100297	RDBK-18/20	0.21
Z100294	RDBK-32-8	0.40

Standard trigger

Art. no.	Code	Weight kgs
Z1002820	RDBK-6	0.01
Z1002830	RDBK-8	0.03
Z1002840	RDBK-10	0.03
Z1002850	RDBK-13	0.05
Z1002860	RDBK-16	0.12
Z1002970	RDBK-18/20	0.28
Z100292	RDBK-28/32	0.45



Set for OBK/GBK Safety hooks consists of trigger, stainless steel spring, retaining pin and assembly kit.

Spare Part RDOBK / GBK (with assembly kit)

Art. no.	Code	Weight kgs
Z100281	RDOBK-6	0.01
Z100288	RDOBK-7/8	0.02
Z100289	RDOBK-10	0.03
Z100290	RDOBK-13	0.05
Z100291	RDOBK-16	0.08
Z100297	RDOBK-18/20	0.21
Z100323	RDOBK-22-8	0.35



Spare Part RDBKD (with assembly kit)

Art. no.	Code	Weight kgs
Z101157	RDBKD-13 double latch	
Z101158	RDBKD-16 double latch	
Z101159	RDBKD-18/20 double latch	



Spare Part GKN / OKN

Art. no.	Code	Weight kgs
Z622175	GKN/OKN-7/8-8	0.05
Z622183	GKN/OKN-10-8	0.09
Z622206	GKN/OKN-13-8	0.13
Z622214	GKN-16-8	0.22

Set consists of latch, stainless steel spring and rivet.

Spare Part LKN / LKNK / EKN / OKN / EGKN / RH / ESKN

Art.no.	Code	Weight kgs
Z100445	RDEKN- 6 / OKN / RH 1	0.03
Z100447	RDEKN- 7/8 /LKN / RH 2	0.05
Z100450	RDEKN-10 / LKN / RH 3	0.06
Z100449	RDEKN-13 / LKN / RH 5	0.13
Z100217	RDEKN-16 / LKN	0.20
Z100453	RDEKN-18/20	0.26
Z100452	RDEKN-22	0.42
Z100742	RDEKN-26	0.53
Z100743	RDEKN-32	0.60



Set consists of latch, stainless steel spring and rivet.

Spare Part Set SKN, OKN and LKN (old version)

Art. no.	Code	Weight kgs
Z420581	SKN/LKN-7/8-8	0.05
Z420688	SKN/LKN-10-8	0.10
Z420785	SKN/LKN-13-8	0.14
Z420989	SKN/OKN-16-8	0.22
Z421087	SKN/OKN-18/20-8	0.27
Z700698	OKN-22-8	0.48



Set consists of latch, stainless steel spring and rivet.

Spare Part UKN

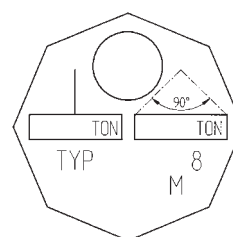
Art. no.	Code	Weight kgs
Z100258	RDUKN-0.75	0.06
Z700264	RDUKN-1	0.12
Z700958	RDUKN-2	0.20
Z700266	RDUKN-3/4	0.20
Z700268	RDUKN-5/8	0.36
Z700269	RDUKN-10	0.88
Z700984	RDUKN-15	1.20



Spare part set RDUKN (msp) consists of forged latch, pin, stainless steel spring and retaining pin.

Id-tag Stainless

Art.no.	Code
Z100004	Id-tag

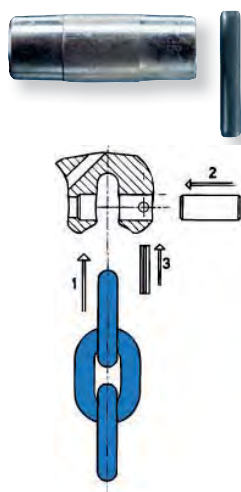


Sling Id-tag Stainless steel



Art. no.	Code
B14841	Flexitag 6 mm with ferrule and wire
B14842	Flexitag 8 mm with ferrule and wire
B14843	Flexitag 10 mm with ferrule and wire
B14844	Flexitag 13 mm with ferrule and wire
B14845	Flexitag 16 mm with ferrule and wire
Z100971	Flexitag 6 mm
Z100972	Flexitag 8 mm
Z100973	Flexitag 10 mm
Z100974	Flexitag 13 mm
Z100975	Flexitag 16 mm
Z101077	Flexitag 20 mm
Z100899	Flexitag Neutral

Load Pin Set CLS



Art. no.	Code	Weight kgs/ea
B14930	CLS- 6	0.01
B14931	CLS- 8	0.02
B14932	CLS-10	0.04
B14933	CLS-13	0.09
B14934	CLS-16	0.16
B14935	CLS-20	0.26

Clevis connection set (CLS) consists of one load pin and one spring retaining pin.

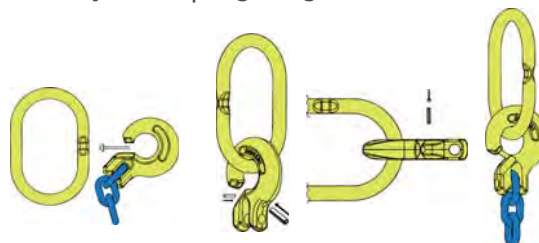
Spare Part CS



Art. no.	Code	Weight kgs/ea
B14920	CS- 6-10	0.01
B14921	CS- 8-10 / RH-1& -2	0.01
B14922	CS-10-10 / RH-3	0.01
B14923	CS-13-10	0.03
B14924	CS-16-10 / RH-5	0.05

The C-connection set CS, for CG, CGD, CL, CLD and RH hook, consists of one blocking pin and one spring retaining pin, for locking.

Assembly: C-coupling - C-grab/C-lok with MF



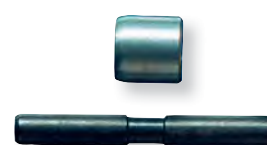
Close/Open Locking Set FlexiLeg Quick Pin

Art. no.	Code	Weight kgs
Z101010	QP-6-10	0.01
Z101011	QP-8-10	0.01
Z101012	QP-10-10	0.01
Z101013	QP-13-10	0.03
Z101014	QP-16-10	0.06



Spare Part Set SKA

Art. no.	Code	Weight kgs	Art. no.	Code	Weight kgs
Z100989	SKA- 6-10	0.01	Z700674	SKA-6-8	0.01
Z100933	SKA- 7/8-10	0.02	Z323624	SKA-7/8-8	0.02
Z100934	SKA-10-10	0.04	Z318024	SKA-10-8	0.04
Z100990	SKA-13-10	0.08	Z303822	SKA-13-8	0.08
Z100991	SKA-16-10	0.14	Z303725	SKA-16-8	0.14
Z101176	SKA-20-10	0.26	Z145048	SKA-18/20-8	0.26
Z650555	SKA-22-10	0.35	Z133530	SKA-22-8	0.35
Z650556	SKA-26-10	0.63	Z605407	SKA-26-8	0.63
			Z650554	SKA-32-8	1.05



SKA locking set for G-link, consists of a load pin and locking collar.

Spare Part Set Berglok BLA

Art. no.	Code	Weight kgs
Z275649	BLA-6-8	0.01
Z275347	BLA-7/8-8	0.02
Z275444	BLA-10-8	0.04
Z275648	BLA-13-8	0.08
Z276047	BLA-16-8	0.15
Z276241	BLA-19-8	0.26

Set for Berglok and Clevis type connections. Consists of one load pin and two retaining pins.



Locking Set Midgrab MIG

Art. no.	Code	Weight kgs
B14904	C-8	0.02
B14905	L-8	0.02
B14914	C-10	0.02
B14915	L-10	0.02
B14916	C-13	0.08
B14917	L-13	0.05



L



C - Close/open function

Information For Safe Use and Maintenance

The following information aims to give advice and explain the most common questions in order to ensure safe and proper use of lifting equipment.

It is of the utmost importance that this information is known to the user, and in accordance with the Machinery Directive 2006/42/EC this information must be delivered to the customer.

Extreme Environments

The in-service temperature effects the WLL as follows:

Temperature (°C)	Reduction of WLL			
	Grade 10 chain (400)	Grade 10 chain (200)	Grade 10 components	Grade 8 chain & components
-40 to +200 °C	0 %	0 %	0 %	0 %
+200 to +300 °C	10 %	Not allowed	10 %	10 %
+300 to +400 °C	25 %	Not allowed	25 %	25 %

Upon return to normal temperature, the sling reverts to its full capacity within the above temperature range. Chain slings should not be used above or below these temperatures. **Note! A chain sling with Grade 10 (200) chain must not be used in temperatures above 200 °C.**

- Chain and components must not be used in alkaline (>pH10) or acidic conditions (<pH6).
- Comprehensive and regular examination must be carried out when used in severe or corrosive inducing environments.
- In uncertain situations consult your Gunnebo Industries dealer.

Surface Treatment

Note! Hot-dip galvanizing or plating is not allowed outside the control of the manufacturer.

Protect Yourself and Others

- Before each use the chain sling should be checked for obvious damage or deterioration.
- Know the weight of the load, the centre of gravity and ensure it is ready to move and no obstacles will obstruct the lift.
- Check the conformity of the load with the WLL of the ID tag for the specific working configuration. *Never use a sling without a legible valid ID tag!*
- Prepare the landing site.
- Never overload a sling and avoid shock loading.
- Never use an improper sling configuration.
- Never use a worn out or damaged sling.
- Never ride on the load.
- Never walk or stand under a suspended load.
- Take into consideration that the load may swing or rotate.
- Watch your feet and fingers while loading/unloading.
- Always ensure that your back is clear.

General Advice

- Ensure that the sling is precisely as ordered.
- Ensure that the manufacturers certificate is in order.
- Ensure that the ID-tag corresponds to the information on the certificate (the following ID tag information is compulsory: WLL, number of chain legs, nominal size (mm) individual ID-mark, manufacturer, CE-marking and year of manufacturing).
- Ensure that all details of the chain sling are recorded.
- Ensure that the staff using the chain sling has received the appropriate information and training.

Asymmetrical Loading Conditions

For unequally loaded chain legs we recommend that the WLL are determined as follows:

- 2-leg slings calculated as the corresponding 1-leg sling
- 3 and 4-leg slings calculated as the corresponding 1-leg sling. (If it is certain that 2-legs are equally carrying the major part of the load, it can be calculated as the corresponding 2-leg sling.

Safe Use

A chain sling is usually attached to the load and the crane by means of terminal fittings such as hooks, links etc.

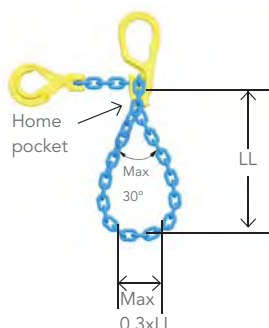
When frequently using a sling to it's maximum load, we recommend increasing the sling size by one dimension.



Chain should be without twists or knots, if the chain leg needs length adjustment use a shortening device. The lifting point should be seated well down in the terminal fitting, never on the point or wedged in the opening. The terminal fitting should be free to incline in any direction.

The chain may be passed under or through the load to form a choke hitch or basket hitch. The chain should be allowed to assume it's natural angle and should not be hammered down.

Where choke hitch is employed the WLL of the chain sling should be reduced by 20% (unless the LK choker hook is used)



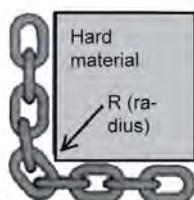
Endless chain slings shall be rated in the same way as a 2-legged sling.

Home pocket loop shall have an internal loop top angle of max. 30°. Rule of thumb: Cross dimension of the load shall be max. 0.3 times the loop length (LL)

Definition: The home pocket is the shortening pocket of the top component directly above the clevis to which the chain is connected.

Sharp edges

Use edge protectors to prevent sharp edges from damaging the chain. If lifting over sharp edges reduce the working load with the following reduction tor.



Edge load	$R > 2 \times \text{chain } \varnothing$	$R > \text{chain } \varnothing$	$R < \text{chain } \varnothing$
Reduction factor	1.0	0.7	0.5

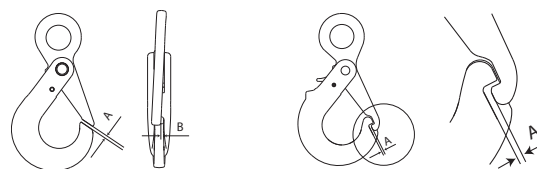
- The angle of the edge must not be below 90°.
- Chain links shall be protected from being bent or deformed and from receiving cuts or gouges.
- Chain sling WLL is to be reduced when chain is rigged over an edge radius R less than two (2) x chain diameter (d).
- Reduced WLL equals chain sling WLL from identification tag x reduction factor.
- Slings shall be padded or protected from the edges of their loads when the edge radius is less than 0.5 of the chain diameter(d).
- Slings shall be rigged to prevent chain from sliding over a load edge radius while lifting.
- Slings used in basket hitch shall have the loads balanced to prevent slipping.

When lifting with chain directly on lugs the lug diameter > 3x the pitch of the chain, otherwise the WLL must be reduced by 50%.

Maintenance

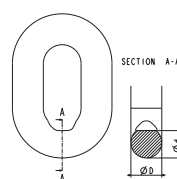
Periodic thorough examination must be carried out at least every 12 months or more frequently according to local statutory regulations, type of use and past experience.

- Overloaded chain slings must be taken out of service.
- If the lifting equipment is more than 25 years old, it must be recorded in the inspection register. An investigation into both its previous operating history and its current use should be made, as there is a potentially significant risk of fatigue, environmental impact etc.
- Chain and components including load pins which have been damaged, deformed, elongated, bent or showing signs of cracks or gouges shall be replaced. Carefully grind away small sharp cuts and burrs. Additional testing by magnetic particle inspection and/or proof loading at max. 2 x WLL may be carried out.
- Check the function of latches, triggers and retaining pins / bushes, replace when necessary. Always use Gunnebo Lifting original spare parts.
- Max. clearance between hook and latch. Note: For a Griplatch hook measure the difference between dimension A with unloaded spring and dimension A when the latch is pressed against the hook. Clearance B not applicable.



Size	Max. A (mm).	Max. B (mm).
6	2,2	3,5
7/8	2,7	4,5
10	3	6
13	3,3	7
16	4	9
18/20	5,5	10
22	6	11
26	6,5	12
28	7	13

- The wear of the chain and component shall in no place exceed 10% of the original dimensions. The chain link wear - max. 10% - is defined as the reduction of the mean diameter measured in two directions.



$$\frac{d_1 + d_2}{2} > 0,9d_n$$

d_n = nominal diameter

Quality Assurance

Type Testing

In order to prove the design, material, heat treatment and method of manufacture, each size of component and chain has been type tested in the finished condition in order to demonstrate that the component and chain possesses the required mechanical properties. The following testing procedures are particularly relevant:

Test for Deformation

The Manufacturing Proof Force (MPF) for the relevant size of the component is applied and removed. The dimensions after proof loading shall not alter from the original dimensions within the tolerances prescribed in our specifications and in the international standards.

Static Tensile Test

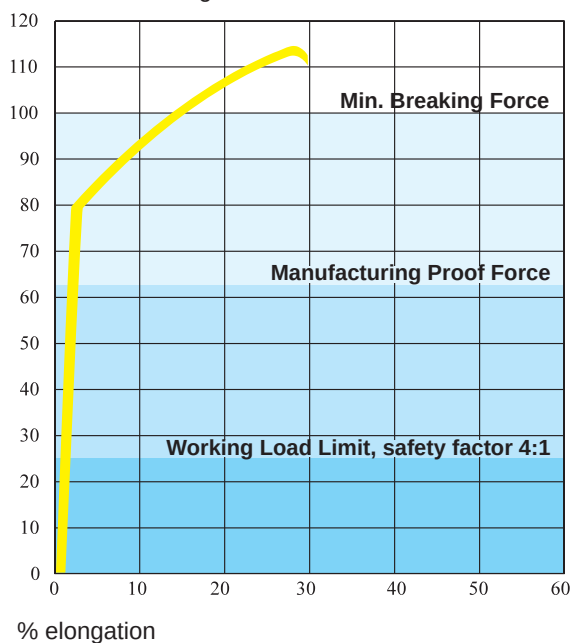
The Breaking Force (BF) for each component and size is verified. The verified value shall be at least equal to the Minimum Breaking Force (MBF) value. The MBF value is equal to the Working Load Limit (WLL) multiplied by the safety factor.

Fatigue Test

By fatigue testing in pulsator testing machines the toughest conditions of service are simulated.

Stress / Elongation Diagram

Chain grade 10, type KL
% of min. Breaking Force



Manufacturing Testing

During manufacture continuous process tests are carried out according to the requirements in our specifications and in the latest international standards. The following testing procedures are particularly relevant:

Proof Force

Each individual component and chain link is tested to the Manufacturing Proof Force (MPF) level before delivery. The MPF level is 2.5 times the WLL, equal to 62,5% of the Minimum Breaking Force.

Non Destructive Test / Visual Inspection

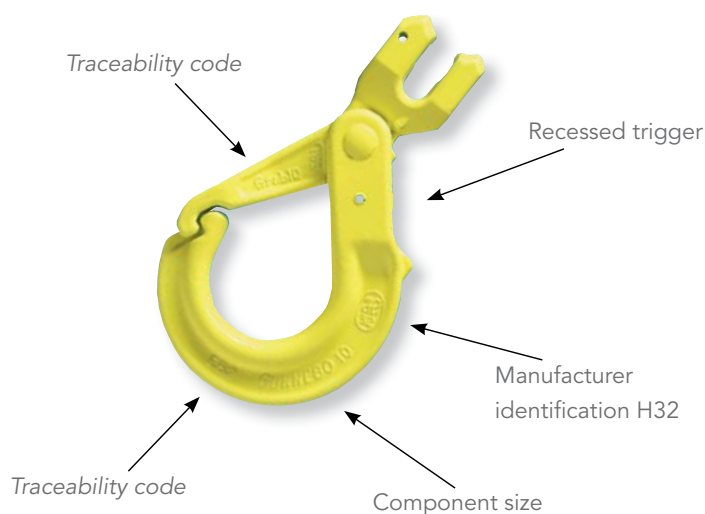
3% of every production batch of forged components are subject to magnetic particle or dye penetrating examination. Visual inspection is carried out on each chain link and each forged component to detect defects.

Static Tensile and Ultimate Elongation test

During manufacture, samples are tested and the Minimum Breaking Force (MBF) value and the total ultimate elongation are verified.

Bending Deflection

During manufacturing, of chain and master links, samples are taken and the minimum bend deflection is verified.



Working Load Limits

Grade 10 GrabiQ (tonnes)

1-leg		2-leg		3- & 4-leg		Choke hitch	
Chain dim.		β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°
6	1.5	2.1	1.5	3.15	2.2	1.6	1.2
7	2.0	2.8	2.0	4.2	3.0	2.2	1.6
8	2.5	3.5	2.5	5.2	3.7	2.7	2
10	4.0	5.6	4	8.4	6	4.4	3.2
13	6.7	9.5	6.7	14.0	10	7.4	5.3
16	10	14	10	21.0	15	11	8
20	16	22.4	16	33.6	24	17.6	12.8
22	19	26.9	19.0	40.3	28.5	20.9	15.2
26	27.0	38.2	27.0	57.3	40.5	29.7	21.6

Safety factor 4:1. Working load limits are based upon equally loaded and disposed sling legs.

Grade 8 Classic (tonnes)

EN 818-4:1996

1-leg		2-leg		3-leg & 4-leg		Choked endless sling
Chain dim. mm		β 0-45° α 0-90°	β 45-60° α 90-120°	β 0-45° α 0-90°	β 45-60° α 90-120°	
6	1.1	1.6	1.1	2.36	1.7	1.8
7	1.50	2.12	1.5	3.15	2.24	2.5
8	2.0	2.8	2.0	4.25	3.0	3.15
10	3.15	4.25	3.15	6.7	4.75	5.0
13	5.3	7.5	5.3	11.2	8.0	8.5
16	8.0	11.2	8.0	17.0	11.8	12.5
19	11.2	16.0	11.2	23.6	17.0	18.0
22	15.0	21.2	15.0	31.5	22.4	23.6
26	21.2	30.0	21.2	45.0	31.5	33.5
32	31.5	45.0	31.5	67.0	47.5	50.0

Safety factor 4:1. Working load limits are based upon equally loaded and disposed sling legs.

Rules for Correct WLL

Where choke hitch is employed, the WLL of the chain sling should be reduced by 20 % (unless the LK choker hook is used).

Asymmetrical Loading Conditions

For unequally loaded chain slings, the following approach to permissible loads is recommended:

- A two-legged system is treated as a single-legged system.
- A three- or four-legged system is treated as a two-legged system.

Note! Different standards apply for Australia, see page 2:47 for further information.

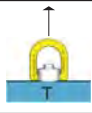
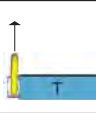
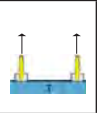
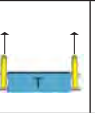
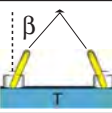
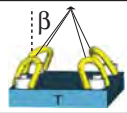
Working Load Limits (tonnes) for ELP / WLP / SLP

1-leg		2-leg		3- and 4-leg	
Typ	WLL tonnes*	α 0-90° β 0-45°	α 90-120° β 45-60°	α 0-90° β 0-45°	α 90-120° β 45-60°
ELP-16-8	1**	1.4	1	2.1	1.5
ELP-20-8	1,5**	2.1	1.5	3.2	2.3
ELP-24-8	2**	2.8	2	4.2	3
ELP-30-8	3**	4.2	3	6.3	4.5
ELP-36-8	4**	5.6	4	8.4	6
WLP-1T	1	1.4	1	2.1	1.5
WLP-3T	3	4.2	3	6.3	4.5
WLP-5T	5	7	5	10.5	7.5
SLP-1T	1	1.4	1	2.1	1.5
SLP-3T	3	4.2	3	6.3	4.5
SLP-5T	5	7	5	10.5	7.5

**Note! The above loads apply to normal usage and equally loaded legs. For asymmetric loaded chain slings, the following is recommended:

- A two-legged system is rated as a single-legged system.
- A three- or four-legged system is rated as a two-legged system.

Working Load Limits (tonnes) for RLP

						
No. of legs	1	1	2	2	2 symmetric	3 & 4 symmetric
β	0°	90°	0°	90°	0-45°	0-45°
Load factor	*)	1	*)	2	1.4	1
M8-10 and 5/16 UNC	0.60	0.30	1.20	0.60	0.42	0.30
M10-10 and 3/8 UNC	1.00	0.50	2.00	1.00	0.70	0.50
M12-10 and 7/16 UNC	1.50	0.75	3.00	1.50	1.00	0.75
M16-10 and 5/8 UNC	3.00	1.50	6.00	3.00	2.10	1.50
M20-10 and 3/4 UNC	5.00	2.50	10.00	5.00	3.50	2.50
M24-10	7.00	3.50	14.00	7.00	4.90	3.50
M30-10	12.00	6.00	24.00	12.00	8.40	6.00
M36-10	14.00	8.00	28.00	16.00	11.20	8.00
M42-10	16.00	14.00	32.00	28.00	19.60	14.00
M48-10	20.00	16.00	40.00	32.00	22.40	16.00

*) Provided only axial loading takes place, ie no bending force applied in the direction of the thread

In case of asymmetric loading we recommend following loading:

- 2-leg as corresponding 1-leg
- 3 and 4-leg slings calculated as the corresponding 1-leg sling. (If it is certain that 2-legs are equally carrying the major part of the load, it can be calculated as the corresponding 2-leg sling)

Working Load Limits for Australia



WLL tonnes Grade 10 GrabiQ in Australia

Sling type	1-leg	1-leg	1-leg	2-, 3-, and 4-leg straight slings			2-, 3-, and 4-leg reeved slings		
Condition of use	Straight	Adjustable	Choke hitch	60°	90°	120°	60°	90°	120°
Load factor	1	1	0.8	1.73	1.41	1	1.3	1.06	0.75
Chain size (mm)									
6	1.5	1.5	1.2	2.6	2.1	1.5	1.95	1.6	1.1
7	2.0	2.0	1.6	3.5	2.8	2.0	2.6	2.1	1.5
8	2.5	2.5	2.0	4.3	3.5	2.5	3.2	2.7	1.9
10	4.0	4.0	3.2	6.9	5.7	4.0	5.2	4.2	3.0
13	6.7	6.7	5.4	11.6	9.5	6.7	8.7	7.1	5.0
16	10.0	10.0	8.0	17.3	14.1	10.0	13.0	10.6	7.5
20	16.0	16.0	12.8	27.7	22.6	16.0	20.8	17.0	12.0
22	19.0	19.0	15.2	32.9	26.9	19.0	24.7	20.2	14.3
26	26.5	26.5	21.2	45.9	37.5	26.5	34.4	28.1	19.9

Sling type	Basket slings			Endless choke sling	Home pocket loop		
	1-leg				2-, 3- and 4-leg		
Condition of use	60°	90°	120°		α max 30°	60° α max 30°	90° α max 30°
Load factor	1.3	1.06	0.75	1.5	1	1.73	1.4
Chain size (mm)							
6	1.95	1.6	1.1	2.3	1.5	2.6	2.1
7	2.6	2.1	1.5	3.0	-	-	-
8	3.2	2.7	1.9	3.8	2.5	4.3	3.5
10	5.2	4.2	3.0	6.0	4.0	6.9	5.7
13	8.7	7.1	5.0	10.1	6.7	11.6	9.5
16	13.0	10.6	7.5	15.0	10.0	17.3	14.1
20	20.8	17.0	12.0	24.0	-	-	-
22	24.7	20.2	14.3	28.5	-	-	-
26	34.4	28.1	19.9	39.8	-	-	-

WLL tonnes Grade 8 Classic According to AS 3775.2-2004 (see Note 1)

										Endless sling			
Diam.	Direct load	Adjustable sling with deration	Reeved sling	Straight sling (see Note 2)			Reeved sling (see Note 2)			Basket hitch (see Note 2)			Reeved sling
				60°	90°	120°	60°	90°	120°	60°	90°	120°	
6	1.1	1.1	0.8	1.9	1.6	1.1	1.5	1.2	0.8	1.5	1.2	0.8	1.7
7	1.5	1.5	1.1	2.6	2.1	1.5	2.0	1.6	1.1	2.0	1.6	1.1	2.3
8	2.0	2.0	1.5	3.5	2.8	2.0	2.6	2.1	1.5	2.6	2.1	1.5	3.0
10	3.2	3.2	2.4	5.5	4.5	3.2	4.1	3.4	2.4	4.1	3.4	2.4	4.8
13	5.3	5.3	4.0	9.2	7.5	5.3	6.9	5.6	4.0	6.9	5.6	4.0	8.0
16	8.0	8.0	6.0	13.8	11.3	8.0	10.4	8.5	6.0	10.4	8.5	6.0	12.0
19	11.2	11.2	8.4	19.4	15.8	11.2	14.6	11.9	8.4	14.6	11.9	8.4	16.8
22	15.0	15.0	11.3	26.0	21.2	15.0	19.5	15.9	11.3	19.5	15.9	11.3	22.5
26	21.2	21.2	15.9	36.7	29.9	21.2	27.6	22.5	15.9	27.6	22.5	15.9	31.8
32	31.5	31.5	23.6	54.5	44.4	31.5	41.0	33.4	23.6	41.0	33.4	23.6	47.3

NOTE:

1) For engineered lifts, see Clause 7.2(b) in AS 3775.2-2004

2) The determination of the angle of the multi-leg sling is the largest included angle at the apex of the configuration.