2015

Lifting Product Catalog

Strength Through Innovation Since 1764

GUNNEBO Industries

About Gunnebo Industries

In 1764 a mr Hans Hultman got approval from the Swedish king to set up a forge to manufacture nails and bolts for ship-making and that's where the story of Gunnebo Industries begins. The business became successful and soon expanded to include iron smelting with charcoal and a wrought iron factory. Today our chain factory is still located only steps away from where it all started.

Over the years Gunnebo Industries have lead the development in the industry in a number of ways. For an example we were one of the first in the world, in 1906, to use electric welding for chain manufacturing, which made the chain stronger and more reliable and soon became the standard procedure world-wide.

Product- and manufacturing development has always been a corner stone in our foundation and it's a re-occurring theme in the company's line of history. An example is the coupling link G – an invention by Gunnebo Industries that revolutionized the lifting industry where welded slings had been the only option. This opened up possibilities in the industry that had not existed before.

Other inventions by Gunnebo Industries are: the self-locking hook (BK), the electrically insulated roller-bearing swivel, the Universal Welding hook and - of course – the unique GrabiQ system. GrabiQ is a grade 10, all-inclusive system, with integrated shortening functions designed to make rigging and lifting safer, more efficient and user-friendly. Again Gunnebo Industries changed the conditions for lifting to something new and better that the world had not seen before.

Today we are truly global, having our head office in Sweden, manufacturing units in Sweden, Norway and USA; sales companies in ten countries spread out on all continents. More than that, through our extensive distributor network covering more than 50 countries, Gunnebo Industries' products are readily available all over the world.

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.

Where there is growth and development in the world...









...Gunnebo Industries products can be found.

GUNNEBO Industries

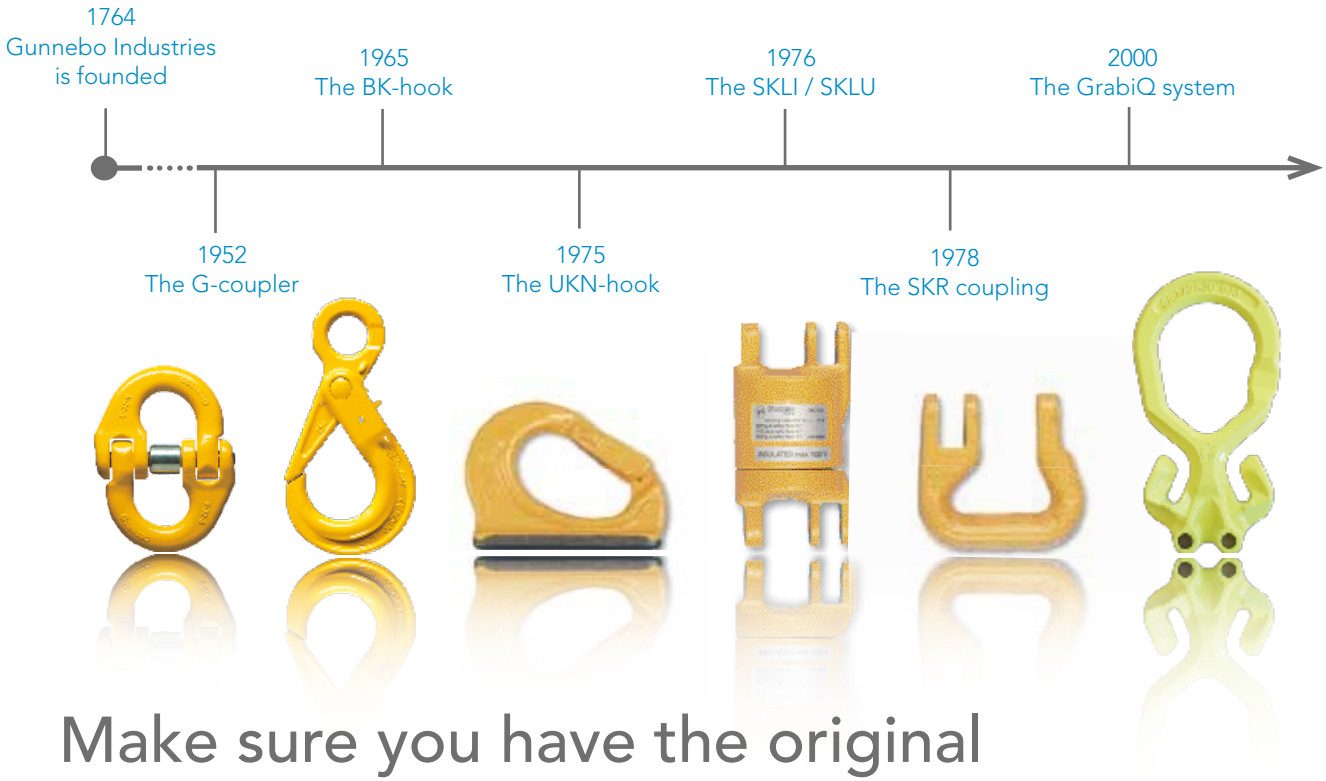
Company Information and Services

Information and Services

Gunnebo Industries - A History of Innovation

In 1764 counsellor Hans Hultman founded Gunnebo Industries in the shape of a hammer-smithy in Småland, Sweden. Today we are an international corporation, well known in many industries all over the world.

Gunnebo Industries continuously works with product development and innovations to create the optimal solutions for each lifting situation. Since the early 1950's we have developed products that are today's standards on the market and copied by almost all manufacturers of lifting equipment. There is however only one original - Gunnebo Industries. With the original you get the perfect fit and smart details.



Make sure you have the original

Traceability code

The traceability code consists of letters and numbers that identifies exactly which plant the product was made in, the year and the batch. This gives us the ability to trace the product back through the manufacturing process, all the way back to the specific raw material.

Approved by BG / DGUV

Our products have the H32-stamp which means they are manufactured in accordance with the rules of Berufsgenossenschaft (BG). This ensures a product that contributes to the safest possible working environment for both personnel and the load.

Flat section

The flat section makes it compatible with our GrabiQ and Classic range.

Manufacturer name

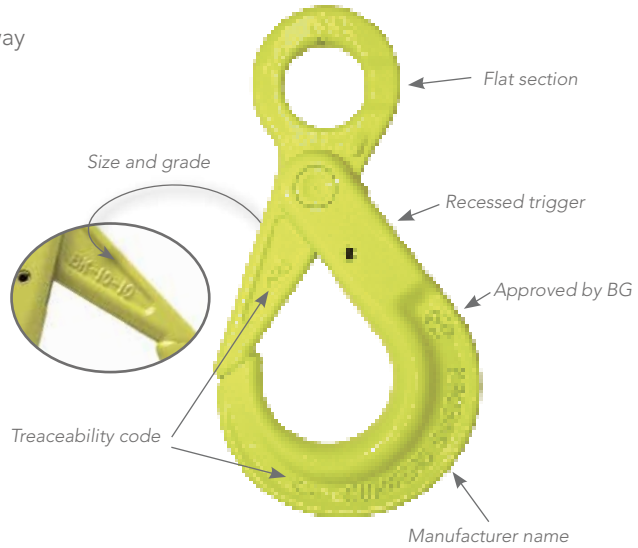
All our forged components are marked with "Gunnebo Sweden".

Component type, size and grade

The size and grade is clearly marked on each component, to avoid errors and ensures correct matching of chain and components

Recessed trigger

To avoid the trigger from being struck or damaged, it has been recessed into the hook. This also helps to prevent the latch from accidentally opening.



About Our Products

Gunnebo Industries - GrabiQ

Gunnebo Industries has been responsible for many of the technological advances in lifting products throughout its history. We have an on-going commitment to constantly investigate new ideas that will make safer, quicker, easier and more cost effective lifting solutions possible. Our GrabiQ Grade 100 range features integral shortening, reduced number of components and more flexible use of chain slings. This provides a modular concept that covers a wide set of applications.

Chain and Lifting Components

Our chain and components are made from special quenched and tempered alloy steel. This guarantees very high strength, low weight, high wear resistance and long life. All lifting components are uniformly marked with equivalent chain size, grade, manufacture's designation and name for positive identification and each individual component and chain link is tested to the Manufacturing Proof Force (MPF) before delivery.

Shackles and Rigging Screws

Gunnebo Industries has its own factory for the production of shackles and rigging screws. The factory is located outside Bergen in Norway and is Scandinavia's leading producer of these products. Gunnebo-Anja Industries AS is also quality assured according to ISO 9001 and parts of their shackle range are Type Approved to DNV 2.7-1.

Gunnebo Johnson Products

Gunnebo Johnson – a name recognized by industries worldwide as a mark of uncompromising excellence. An extensive product line, including e.g. snatch blocks, crane blocks, overhaul balls and sockets. Rigid controls on high quality make Gunnebo Johnson products the standard of choice. All products are manufactured in our own factory in Tulsa, Oklahoma, USA.

Polyester Lifting & Lashing

Gunnebo Industries offers complete lifting and lashing solutions in the soft product assortment. We have the patented RH-hook, a one piece solution that connects straight on to the roundsling, giving the user the most efficient solution with maximum flexibility and operational efficiency. Gunnebo Industries has an extensive quality control of soft products that guarantees that they are following current standards and regulations.

Certificates

Gunnebo Industrier AB, Lifting business area have environmental and quality management approved to ISO 14001:2004 and ISO 9001:2008 as well as a number of different 1st and 3rd party certificates.

Gunnebo Industries - Global Presence

Sales Offices in 10 countries - Distributors in more than 50 additional countries

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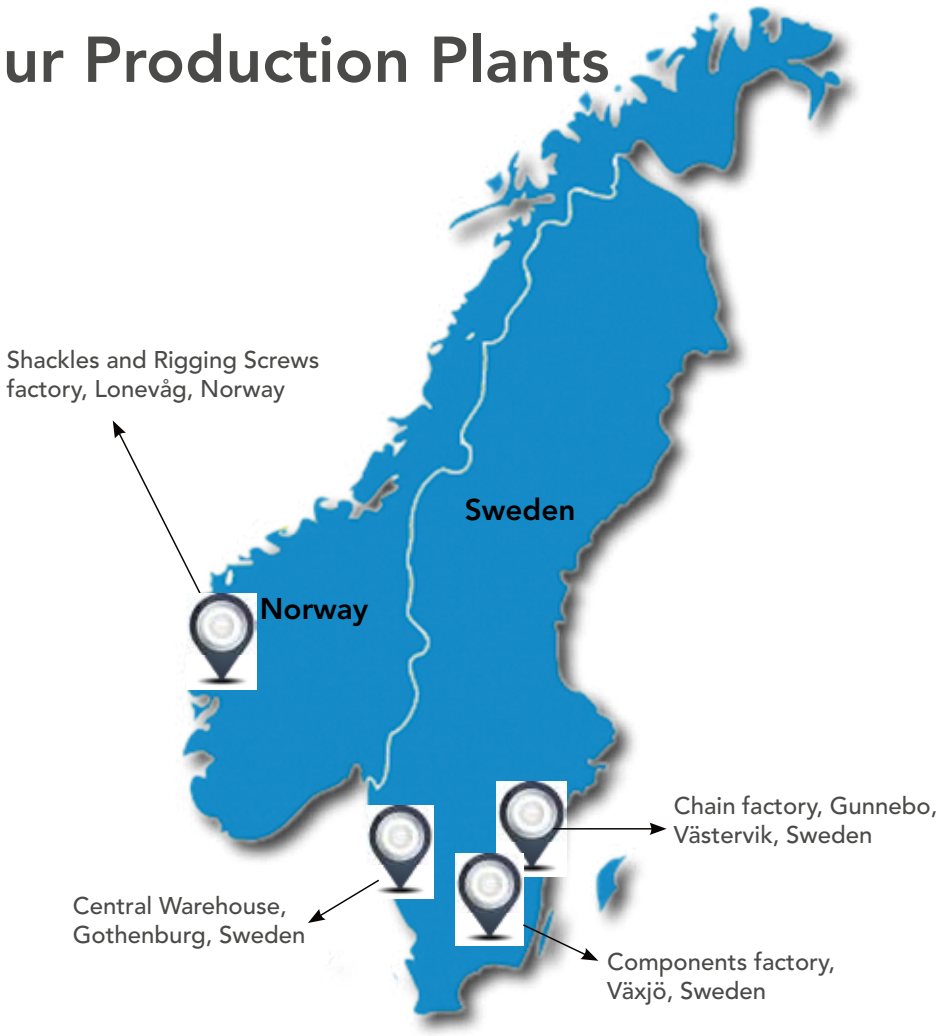
Our Production Plants



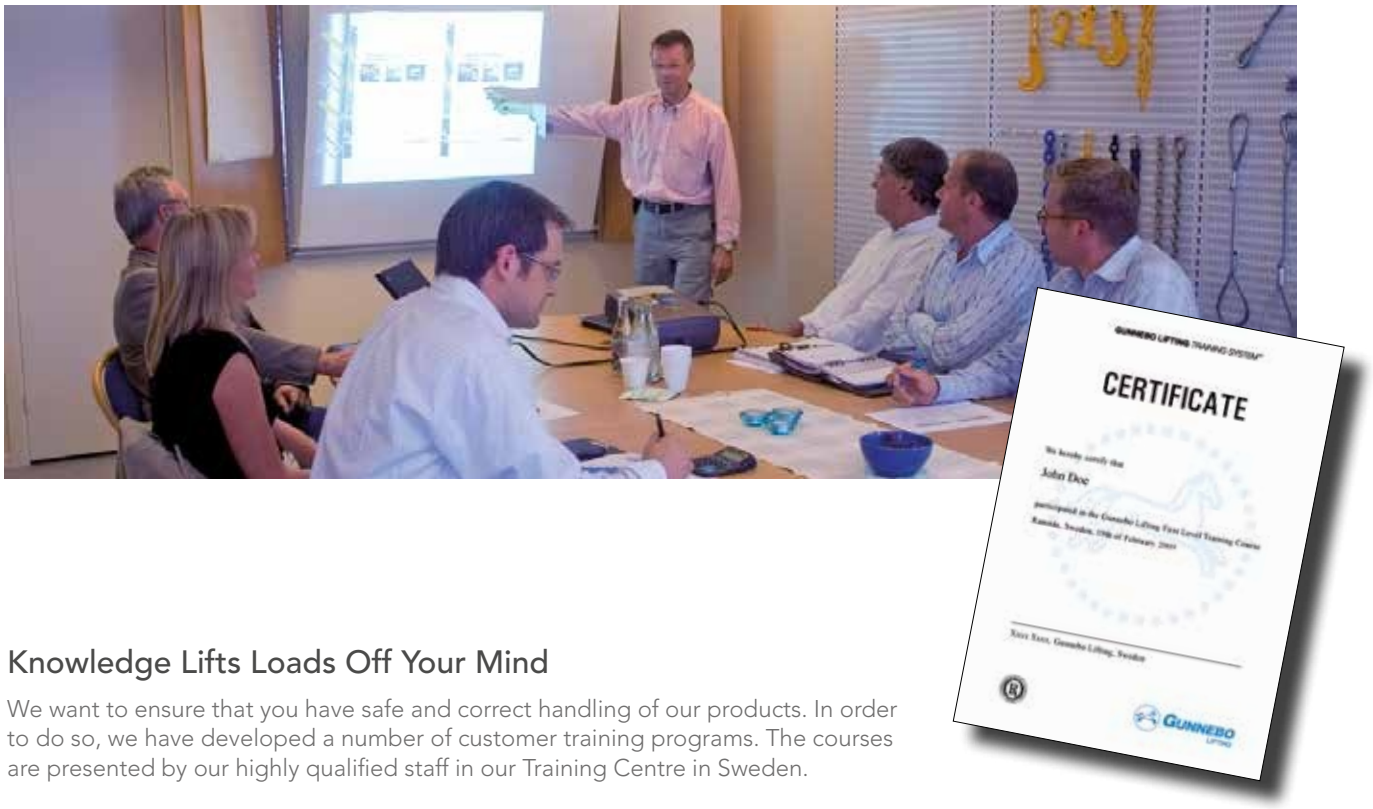
As Manufacturer We Have:

- Full control of the process - from raw material to finished product
- Two forging plants
- Our own production facilities for chain manufacturing
- Our own production facilities for all components and master links
- Our own production facilities for shackles and rigging screws
- All products tested and inspected down to the last detail

Quality Assurance

- Automatic weld checks
- Calibration checks
- Bend test of chain
- Elongation test of chain
- Measurement of breaking load of chain and components
- Magnaflux inspection of chain and components
- Visual inspection
- Removal of blemishes that can have an impact on the strength
- 100 % proof load of each component and every link of chain

GUNNEBO LIFTING *TRAINING SYSTEM™*



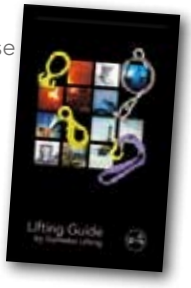
Knowledge Lifts Loads Off Your Mind

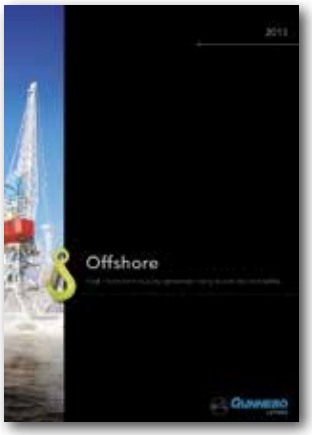
We want to ensure that you have safe and correct handling of our products. In order to do so, we have developed a number of customer training programs. The courses are presented by our highly qualified staff in our Training Centre in Sweden.

We offer a range of training sessions that will increase both your knowledge of our products and how to handle them safely and correctly, as well as give you sales hints on selling in a very competitive market.

Our technical courses will not only help to create a safer working environment, but also increase the life span of our products.

After successful completion of the course, each participant will receive a Certificate, detailing the knowledge achieved, and a Gunnebo Industries Pocket Manual.





Target groups for Gunnebo Industries courses are:

- Gunnebo Industries distributors
- Purchasing personnel
- Safety personnel
- Rigging supervisors

Training Courses

Technical Training		
Level 1	1 day	• Company Information • Current relevant legislation • Lifting equipment selection • Sling configuration including the GrabiQ System • Gunnebo Johnson Products • Shackle Program
Level 2	2 days	• More detailed Level 1 information • Safe Use of Lifting Equipment • Gunnebo Manufacturing Process • Practical Handling and Sling Assembly

Sales Training		
	Half day	• Company Information • Sales Training • Sales Promotion Methods • Practical Tips on Technical Sales

Training Locations

- Gunnebo Industries Training Centre, Sweden
- Gunnebo Industries Global Subsidiaries
- Gunnebo Industries Main Distributor Centres
- On-site at Suitable Training Centres

Post Course Information Service

All participants can also avail of technical advice and information from instructor for a period of 12 months after completion of the course.

Course Dates and Schedules

For more information and course dates, please contact us at export@gunnebolifting.com or contact any of our sales teams.

Sling Components

Grade 10 • Offshore • Grade 8 • Lifting Points

GrabiQ

Offshore

Classic

Spare Parts

Technical Information

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engcon

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

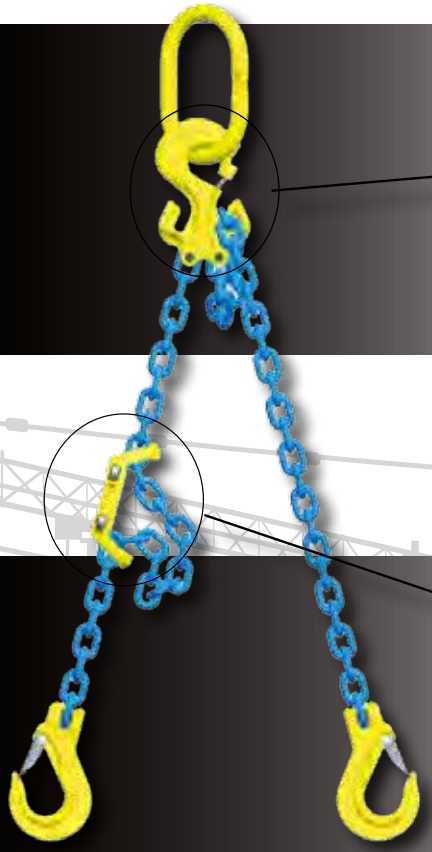
Used to be 15 components

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.

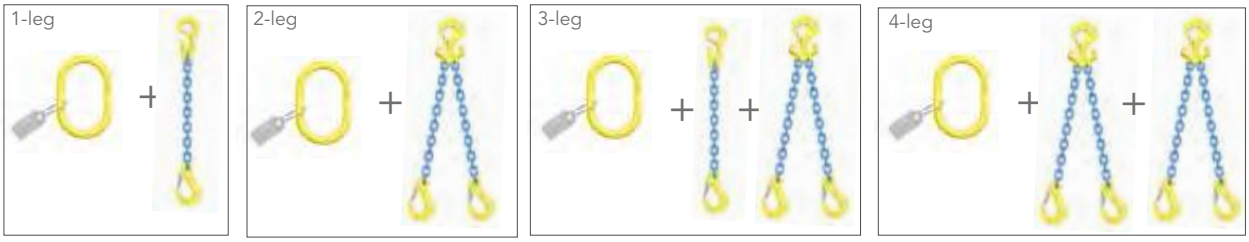
With the "all-in-one" compact top link, MG, every chain leg can instantly be altered. Using the built in shortening function you can alter between a straight lift to a looped sling in a matter of seconds For technical specification, see page 2:11.

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.



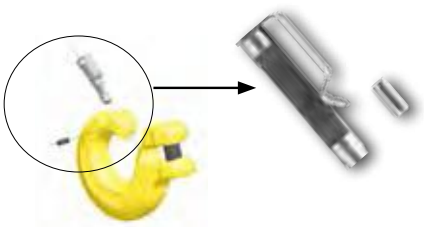
Why do you want instant leg-change?

- 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

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

2-leg Chain Sling

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

Dim. mm	WLL tonnes* ß 0-45° α 0-90°	WLL tonnes* ß 45-60° α 90-120°	Component length mm
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* ß 0-45° α 0-90°	WLL tonnes* ß 45-60° α 90-120°	Component length mm
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* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	Components total length mm
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* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	Total Component length
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* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	WLL choked t* ß 0-45° α 0-90°	WLL choked t* ß 45-60° α 90-120°	Component total length mm
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

*Safety factor 4:1

3-leg Chain Sling

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

Dim. mm	WLL t* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	Total component length mm
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* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	Total Component length mm
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

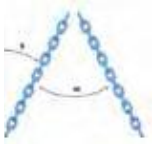
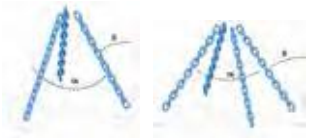
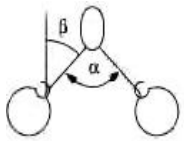
Type: Master link MF, C-grab Duo CGD, Chain KLA, Safety Hook GBK

Dim. mm	WLL t* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	Total Component length mm
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* ß 0-45° α 0-90°	WLL t* ß 45-60° α 90-120°	Total Component length mm
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.		ß 0-45° α 0-90°	ß 45-60° α 90-120°	ß 0-45° α 0-90°	ß 45-60° α 90-120°	ß 0-45° α 0-90°	ß 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	20.0	28.0	20.0	42.0	30.0	22.0	16.0	
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.

*Safety factor 4:1

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

- 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.

Locking Devices for Midgrab MIG

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

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

Product Code Guide - Locking options

MIG C | MIG CC | MIG L | MIG LC

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

*Safety factor 4:1

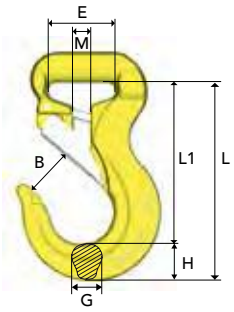
All dimensions in mm

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.

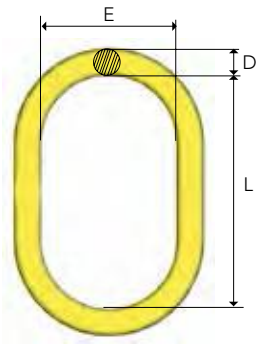
The roundsling hooks are colour coded in order to match the corresponding size of the roundsling: Red=5T / Yellow=3T / Green=2T / Violet=1T



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

Master Link M

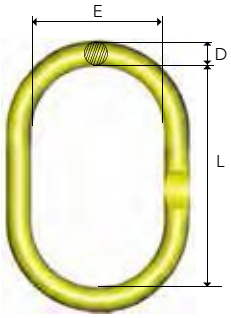
Art. no.	Code	WLL tonnes*	L	E	D	Weight kgs
Z101271	M-6-10	1.25	100	60	11	0.2
Z101272	M-86-10	2.5	125	70	14	0.4
Z101273	M-108-10	4.0	140	80	17	0.8
Z101274	M-13-10	5.4	150	90	19	1.0
Z101267	M-1310-10	7.5	160	95	22	1.5
Z101268	M-1613-10	10.0	190	110	28	2.8
Z101247	M-19-10	12.0	200	120	30	3.5
Z101269	M-2016-10	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

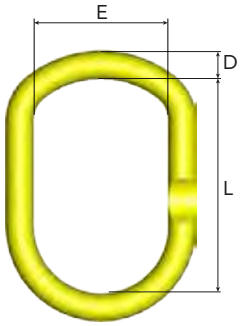
For 1-, 2-, 3- and 4-leg slings. **3- and 4 leg chain slings require CLD / CGD**



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

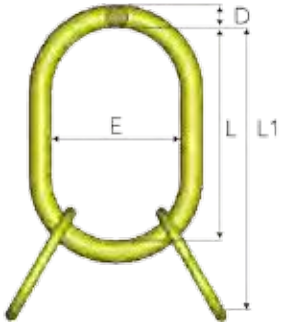
Designed for crane hooks, DIN 15401 MAX. **3- and 4 leg chain slings require CLD / CGD**

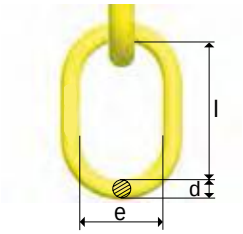


Art. no.	Code	WLL tonnes*	For chain size, mm			L	E	D	DIN 15401	DIN 15402	Weight kgs
			1-leg	2-leg	3-4 leg						
Z101262	MFH-1310-10	7.5	13	10	8	230	125	22	≤ 12	≤ 16	1.9
Z101263	MFH-1613-10	10	16	13	10	250	135	28	≤ 12	≤ 16	3.2
Z101264	MFH-2016-10	17	20	16	13	280	135	32	≤ 16	≤ 20	4.6
Z101265	MFH-2220-10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

*Safety factor 4:1

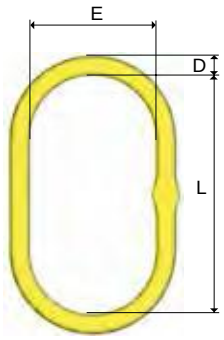
All dimensions in mm

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	9.6

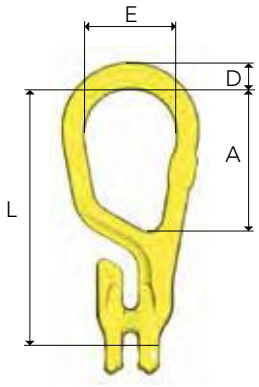
Designed for use with CL, CLD, CG and CGD.



Master Grab MG

"All-in-one" compact top link.

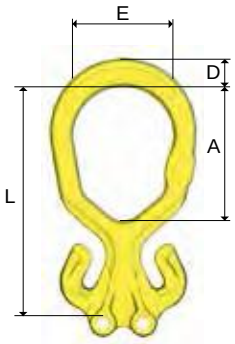
Art. no.	Code	WLL tonnes*	L	A	E	D	Weight kgs
B14710	MG-6-10	1.5	145	88	60	15	0.5
B14711	MG-8-10	2.5	171	92	60	18	0.9
B14712	MG-10-10	4	211	113	75	22	1.8
B14713	MG-13-10	6.7	261	138	90	26	3.5
B14714	MG-16-10	10	311	157	105	31	6.1



Master Grab Duo MGD

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

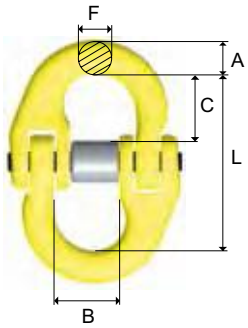
Art. no.	Code	WLL tonnes*	L	A	E	D	Weight kgs
B14700	MGD-6-10	2.1	144	90	60	17	0.7
B14701	MGD-8-10	3.5	171	100	75	21	1.3
B14702	MGD-10-10	5.6	211	124	90	24	2.3
B14703	MGD-13-10	9.5	262	149	105	31	5.2
B14704	MGD-16-10	14	310	175	120	35	7.9



Coupling Link G

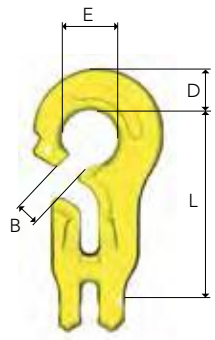
Art. no.	Code	WLL tonnes*	L	B	F	A	C	Weight kgs
Z100821	G-6-10	1.5	45	15	7	8	16	0.1
Z101358	G-7-10	2.0	56	18	9	11	22	0.2
Z100822	G-8-10	2.5	56	18	9	11	22	0.2
Z100823	G-10-10	4.0	68	25	12	13	26	0.3
Z100824	G-13-10	6.7	89	29	15	17	33	0.7
Z100825	G-16-10	10.0	106	36	19	20	40	1.4
Z101119	G-20-10	16.0	125	43	23	26	44	2.2
Z101339	G-22-10	20.0	152	50	26	28	59	3.5
Z101365	G-26-10	27.0	161	58	32	34	61	5.7

For larger sizes, see Classic Grade 8



*Safety factor 4:1

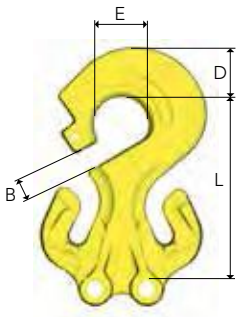
All dimensions in mm



C-Grab CG

For use with master link, eye hooks and choke.

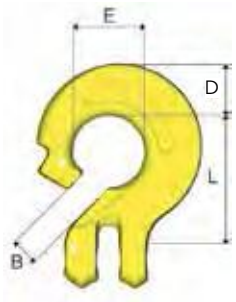
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14730	CG-6-10	1.5	80	11	24	19	0.3
B14731	CG-8-10	2.5	107	12	32	24	0.7
B14732	CG-10-10	4	134	15	40	29	1.5
B14733	CG-13-10	6.7	172	18	52	38	3.2
B14734	CG-16-10	10	215	22	64	47	6.1



C-Grab CGD

For use with master links.

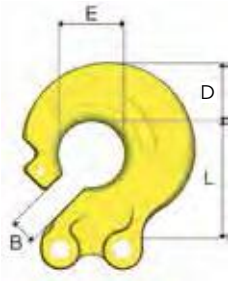
Art. no.	Code	WLL tonnes*	L	B	E	D	Weight kgs
B14720	CGD-6-10	2.1	79	11	24	20	0.6
B14721	CGD-8-10	3.5	107	12	32	29	1.1
B14722	CGD-10-10	5.6	134	15	40	37	2.2
B14723	CGD-13-10	9.5	173	19	48	48	5.4
B14724	CGD-16-10	14	215	22	64	57	9.1



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

*Safety factor 4:1

All dimensions in mm

Chain GrabiQ Grade 10 (200)

Short link, KL

Heat treatment

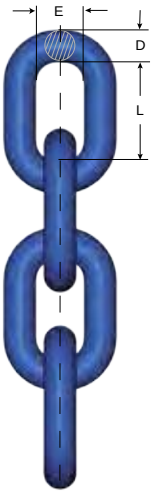
Quenched and tempered.
Note! For chain grade 10 (200) the maximum in service temperature is 200°C.

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	20	22	66	31	11.8	490	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

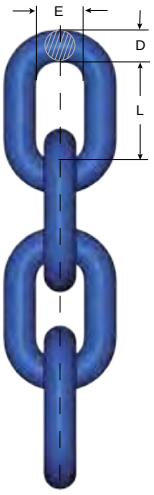
Quenched and tempered.
Note! For chain grade 10 (400) the maximum in service temperature is 400°C.

Surface treatment

Painted blue

Marking

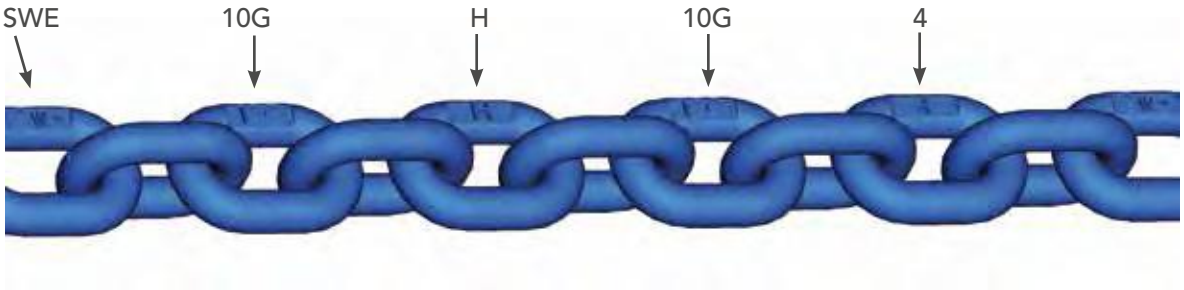
8+



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

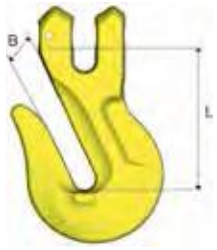
Marking and Traceability of Gunnebo industries Chain



*Safety factor 4:1

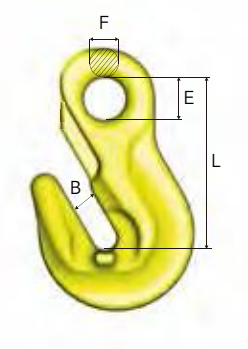
All dimensions in mm

Grab Hook GG



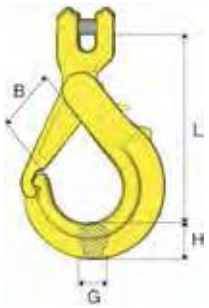
Art. no.	Code	WLL tonnes*	L	B	Weight kgs
Z100845	GG-7-10	2	57	10	0.3
B14771	GG-8-10	2.5	57	10.5	0.4
B14772	GG-10-10	4	76	12	0.9
B14773	GG-13-10	6.7	97	16	1.8
B14774	GG-16-10	10	124	20	3.1
Z101152	GG-20-10	16	147	26	7.0

Grab Hook OG



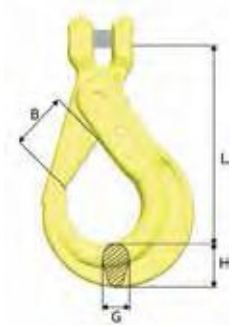
Art. no.	Code	WLL tonnes*	L	B	E	F	Weight kgs
Z101296	OG-7/8-10	2.5	65	10.5	17	12	0.3
Z101297	OG-10-10	4.0	85	12	20	16	0.7
Z101298	OG-13-10	6.7	104	16.2	26	22	1.6
Z101299	OG-16-10	10	131	20	32	24	2.8
Z101300	OG-20-10	16	167	26.4	41	28	6.1
Z101301	OG-22-10	20	187	26	46	32	8.6
Z101302	OG-26-10	27	228	32	55	38	14

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



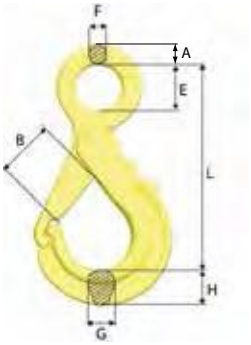
Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
Z101110	BKG-6-10	1.5	91	29	15	21	0.5
Z101098	BKG-7-10	2	120	37	17	22	0.5
Z101100	BKG-8-10	2.5	121	37	17	26	0.9
Z101026	BKG-10-10	4	144	45	21	31	1.5
Z101034	BKG-13-10	6.7	180	55	30	40	3.0
Z101042	BKG-16-10	10	219	62	37	50	5.5
Z101091	BKG-20-10	16	240	68	44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

*Safety factor 4:1

All dimensions in mm

Safety Hook OBK

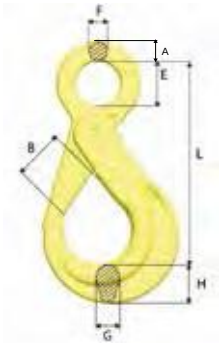
Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101048	OBK-6-10	1.5	12	103	26	22	9	15	17	0.4
Z101143	OBK-7/8-10	2.5	14	139	37	28	10	20	22	0.8
Z101145	OBK-10-10	4.0	16	170	47	34	13	22	29	1.3
Z101147	OBK-13-10	6.7	21	206	53	44	15	29	38	2.6
Z101141	OBK-16-10	10.0	26	251	68	56	19	29	45	4.4
Z101240	OBK-18/20-10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

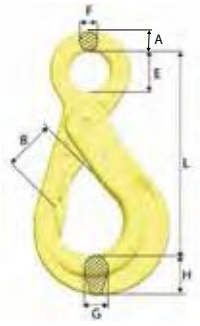
For larger sizes, see Classic Grade 8



Safety Hook BKD

The double latch BK-hook with recessed trigger.

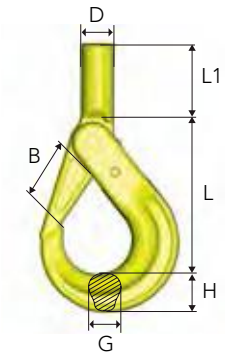
Art. no.	Code	WLL tonnes*	A	L	B	E	F	G	H	Weight kgs
Z101154	BKD-13-10	6.7	20	207	44	45	16	30	40	3.2
Z101155	BKD-16-10	10.0	26	254	48	56	20	37	50	5.8
Z101156	BKD-18/20-10	16.0	30	290	57	60	22	44	62	9.1
Z101373	BKD-26-10 OS	27.0	35	345	72	80	25	50	69	14.5



Shank Safety Hook BKT

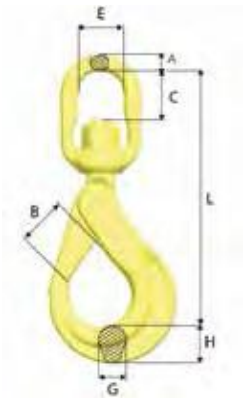
Art. no.	Code	WLL tonnes*	L	B	L1	D	dmin	G	H	Weight kgs
Z1011120	BKT-6-10	1.5	90	29	36	20	11	15	21	0.5
Z1011020	BKT-7/8-10	2.5	111	37	47	24	13	17	26	0.9
Z1010690	BKT-10-10	4.0	133	45	51	29	16	21	31	1.6

d min = the smallest permitted shank dimension after machining.
Note! After machining of the shank, proof loading must be carried out.



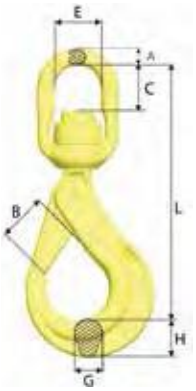
*Safety factor 4:1

All dimensions in mm



Swivel Safety Hook BKL

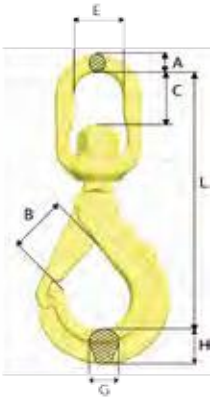
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z101114	BKL-6-10	1.5	149	29	23	33	11	15	21	0.7
Z101104	BKL-7/8-10	2.5	183	37	27	38	12	17	26	1.2
Z101028	BKL-10-10	4.0	218	45	37	44	15	21	31	2.0
Z101036	BKL-13-10	6.7	282	55	49	48	19	30	40	4.0
Z101044	BKL-16-10	10	341	62	65	61	25	37	50	7.2
Z101093	BKL-18/20-10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



Swivel Safety Hook BKLK with ball-bearing

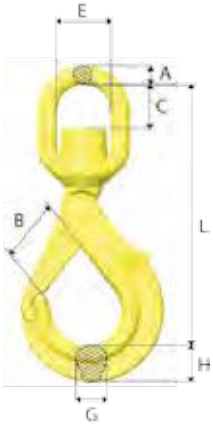
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z101116	BKLK-6-10	1.5	149	29	24	33	11	15	21	0.7
Z101106	BKLK-7/8-10	2.5	183	37	27	38	12	17	26	1.2
Z101030	BKLK-10-10	4.0	218	45	35	44	15	21	31	2.0
Z101038	BKLK-13-10	6.7	280	55	45	48	19	30	40	4.0
Z101046	BKLK-16-10	10.0	339	59	61	61	25	37	50	7.4
Z101095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

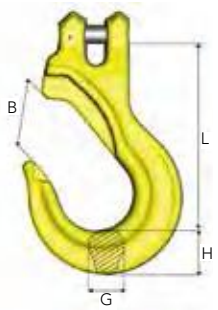
Art. no.	Code	WLL tonnes*	L	B	C	E	A	G	H	Weight kgs
Z100980	LKBK-7/8-10	2.5	176	37	27	38	12	20	22	1.1
Z100962	LKBK-10-10	4.0	213	47	35	44	15	22	29	1.9
Z100997	LKBK-13-10	6.7	261	53	43	48	19	29	38	3.6
Z100999	LKBK-16-10	10.0	323	68	61	61	25	30	45	6.2

*Safety factor 4:1

All dimensions in mm

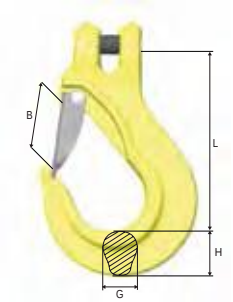
Sling Hook EGK

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	2.0	95	32	17	22	0.5
Z100938	EGK-8-10	2.5	95	32	17	23	0.5
Z100942	EGK-10-10	4.0	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

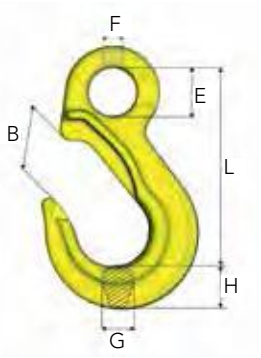
Art. no.	Code	WLL tonnes*	L	B	G	H	Weight kgs
B14460	EGKN-6-10	1.5	86	24,5	17	20	0.4
Z100843	EGKN-7-10	2.0	95	28	17	23	0.5
B14461	EGKN-8-10	2.5	95	28	17	23	0.5
B14462	EGKN-10-10	4.0	121	35	23	31	1.1
B14463	EGKN-13-10	6.7	145	42	28	38	2.2
B14464	EGKN-16-10	10	170	52	36	46	4.0
Z101127	EGKN-20-10	16	209	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	4.0	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	71	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

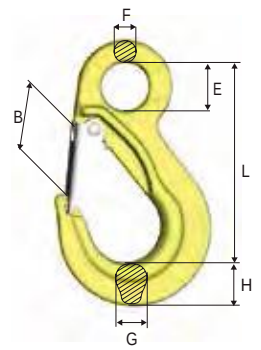
For larger sizes, see Classic Grade 8



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

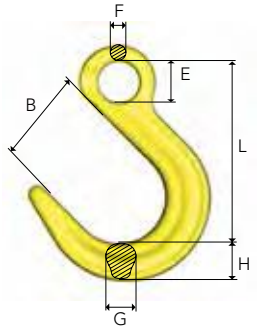
For larger sizes, see Classic Grade 8



*Safety factor 4:1

All dimensions in mm

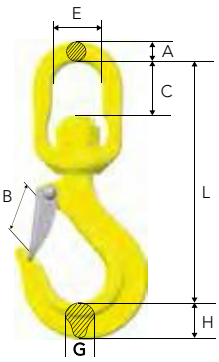
Foundry Hook OKE



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
Z101342	OKE-26-10	27	300	113	70	35	64	77	16

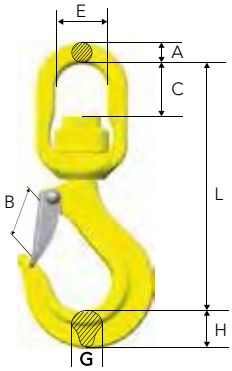
For larger sizes, see Classic Grade 8

Swivel Latch Hook LKN



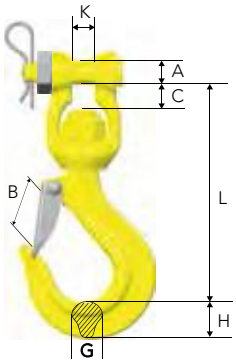
Art. no.	Code	WLL tonnes*	For chain dim. mm	L	B	C	E	A	G	H	Weight appr. kgs
Z101345	LKN-7/8-10	2.5	7, 8	155	28	28	38	12	18	24	0.8
Z101346	LKN-10-10	4.0	10	192	35	37	44	15	23	31	1.5
Z101347	LKN-13-10	6.7	13	238	40	47	48	19	28	38	3.1
Z101348	LKN-16-10	10.0	16	295	53	65	61	25	34	43	5.3

Swivel Latch Hook LKNK with ball bearing



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	E	A	G	H	Weight appr. kgs
Z101349	LKNK-7/8-10	2.5	7, 8	154	28	28	38	12	18	24	0.9
Z101350	LKNK-10-10	4.0	10	191	35	35	44	15	23	31	1.6
Z101351	LKNK-13-10	5.4	13	236	40	45	48	19	28	38	3.3
Z101352	LKNK-16-10	10.0	16	293	53	62	61	25	34	43	5.6

Clevis Swivel Hook LKNG



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	A	G	H	K	Weight appr. kgs
Z101353	LKNG-16-10	10.0	16	258	53	30	28	34	43	27	5.7

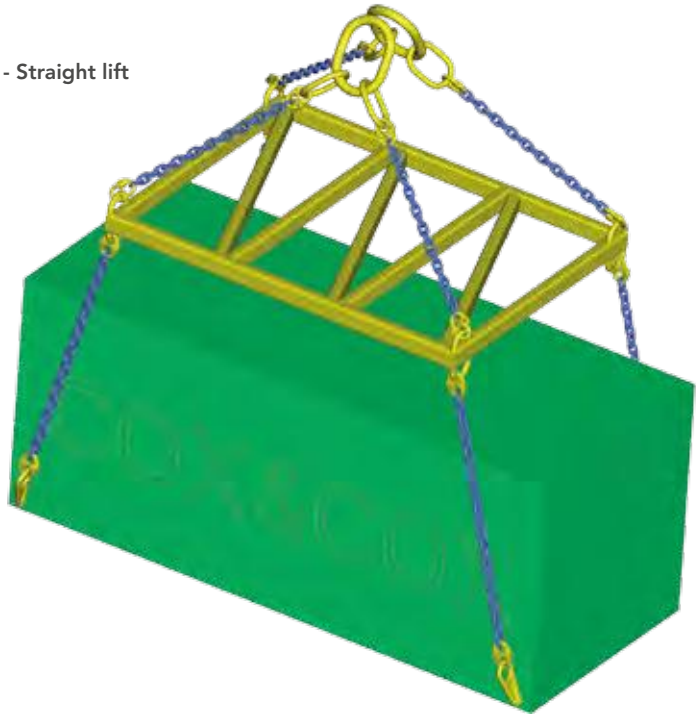
*Safety factor 4:1

All dimensions in mm

Container Hook CH

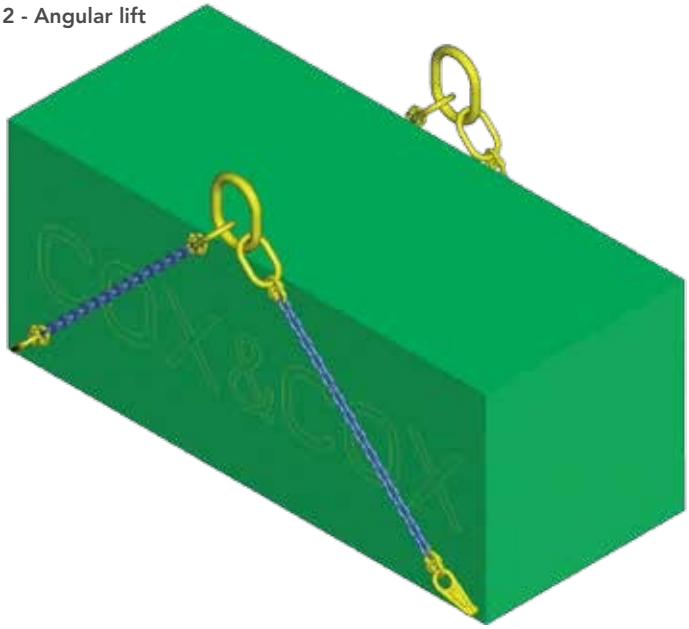
Made for lifting containers in their lower fittings.

Alt. 1 - Straight lift



4 x CH straight

Alt. 2 - Angular lift

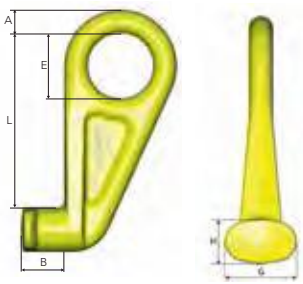


+

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



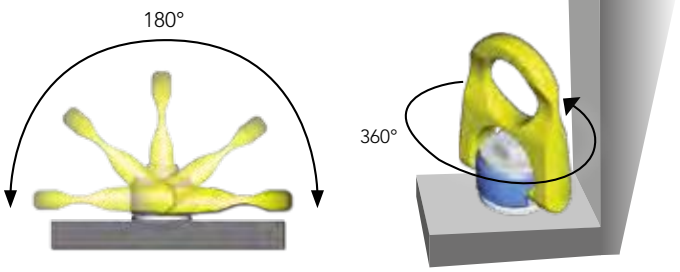
*Safety factor 4:1

All dimensions in mm

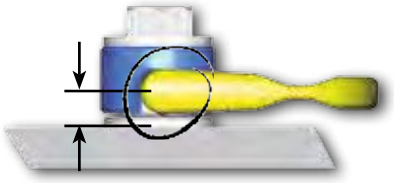
Rotating Lifting Points RLP and ERLP

Gunnebo Industries' Rotating Lifting Point (RLP) has a dismountable D-ring to enable assembly of roundsling, master link, link or hook directly onto the lifting point. It is equipped with a hexagon screw to make it easy to disassemble/ assemble with a wrench. The ERLP is designed to fit more confined spaces to where the space for rotation is limited and has a fixed eye. Both lifting points rotates 360° and pivots 180°, making them strong, flexible and reliable.

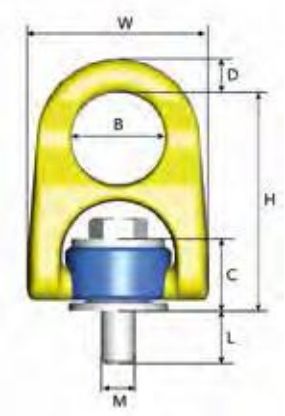
Optimal rotation and pivot



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.

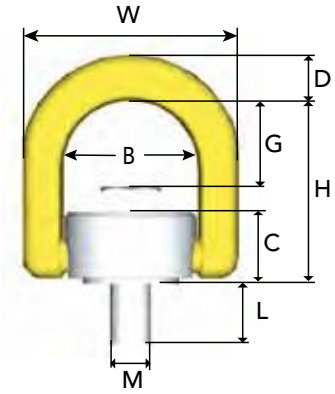
Art. no.	Code	L	M	B	D	C	H	W	Weight (kgs)
Z101260	ERLP-M8-10	15	M8	Ø27	10	20	63	52	0.2
Z101261	ERLP-M10-10	20	M10	Ø27	10	20	63	52	0.2
Z101252	ERLP-M12-10	19	M12	Ø38	15	31	91.8	73	0.8
Z101253	ERLP-M16-10	24	M16	Ø38	15	31	91.8	73	0.8

*Safety factor 4:1

All dimensions in mm

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

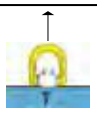
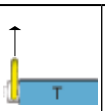
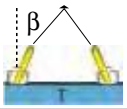
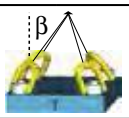
Art. no.	Code	Threads/ inch	L	B	D	G	C	H	W	Weight kgs
Z100838	RLP-UNC-5/16"	18	21	Ø42	12	35	17.5	60	64	0.3
Z100839	RLP-UNC-3/8"	16	27	Ø42	12	34	17.5	60	64	0.3
Z100840	RLP-UNC-7/16"	14	23	Ø57	19	47	28	85	91	1.0
Z100841	RLP-UNC-5/8"	11	29	Ø57	19	44	28	85	91	1.0
Z100842	RLP-UNC-3/4"	10	37	Ø83	28	56	39.3	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	045
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 on the next page.

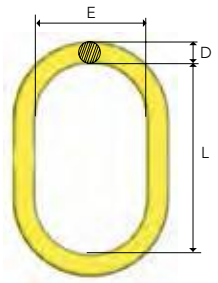
100% Proof Loading

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

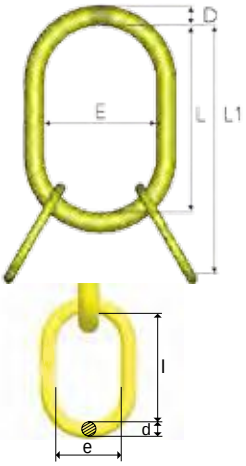


* For further information, see DNV 2.7-1

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	l	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

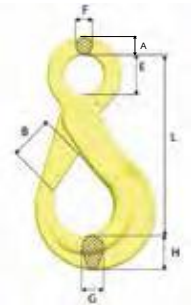


* For further information, see DNV 2.7-1

All dimensions in mm

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		
1000	-	7		
1500	-	7	M-7T-10 OS	MT-7T-10 OS
2000	3.500	7		
2500	2.880	7.20		
3000	2.600	7.80		
3500	2.403	8.41		
4000	2.207	8.83		
4500	1.962	8.83		
5000	1.766	8.83	M-12T-10 OS	MT-12T-10 OS
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		
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	M-18T-10 OS	MT-18T-10 OS
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

*Safety factor 4:1

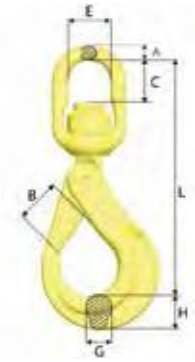
All dimensions in mm

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
Z101356	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



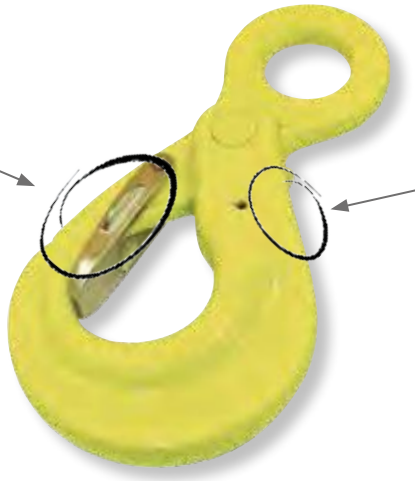
Safety Hook BK and BKLK with Double Latch

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

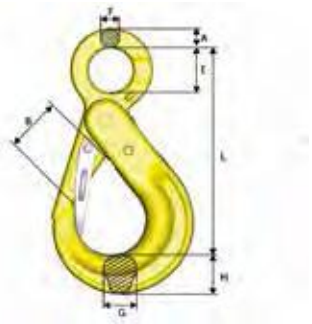
Should the hook latch accidentally open, either through direct impact or excessive wear on the trigger, the extra latch is there to retain the load safely. The latch does not cause inconvenience for the operator and may save their lives if something goes wrong



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

*Safety factor 4:1

All dimensions in mm

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.

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.

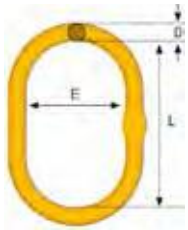
By using the SKLI/SKLU with the SK-system you get a versitile solution that will fit almost any situation.

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

*Safety factor 4:1

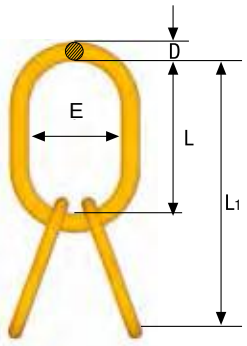
All dimensions in mm

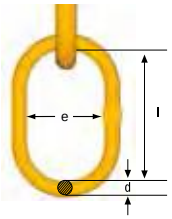
Master Link MF EN 1677–4



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

Master Link with Sub Links MT EN 1677–4

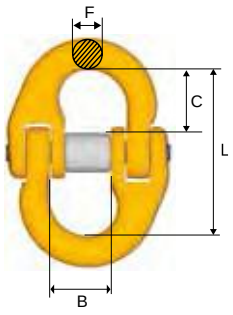




Art. no.	Code	WLL tonnes*	For chain 3-4-leg	L1	L	E	D	l	e	d	Weight kgs
Z100888	MT-6-10**	3.5	6	270	150	90	19	120	70	14	1.8
Z100889	MT-8-10**	5.2	7, 8	300	160	95	22	140	80	17	3
Z100890	MT-10-10**	11.5	10	360	200	120	30	160	95	22	6.4
Z100891	MT-13-10**	17	13	450	250	150	40	200	120	30	14.2
Z100892	MT-16-10**	28	16	500	300	200	50	200	120	32	23

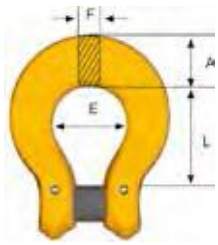
** With flattened section for use with BL

Coupling Link G EN 1677-1



Art. no.	Code	WLL tonnes*	For chain dim.	L	B	F	A	C	Weight. kgs
Z622882	G-6-8	1.12	6	45	15	7	8	17	0.1
Z279333	G-7/8-8	2	7, 8	56	18	9	11	22	0.2
Z279430	G-10-8	3.2	10	68	25	9	11	26	0.3
Z279537	G-13-8	5.4	13	89	29	12	13	33	0.7
Z279634	G-16-8	8	16	105	36	15	17	40	1.2
Z279731	G-18/20-8	12.5	19	125	43	19	20	47	1.9
Z279838	G-22-8	15.5	22	152	50	23	26	59	3.0
Z349171	G-26-8	21.6	26	161	58	26	28	61	5.2
Z349189	G-32-8	32.8	32	200	70	32	34	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

*Safety factor 4:1

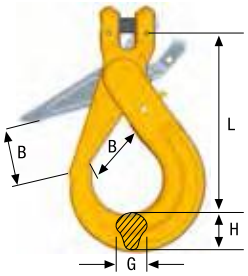
All dimensions in mm

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

Heat treatment	Surface treatment	Marking
Quenched and tempered.	Painted black Painted yellow	8E

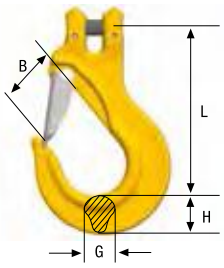
Art.no Box	Code	D nom.	L	E	Weight kgs/m	WLL tonnes *	Manufact. proof force kN	Breaking force kN
Z802174 - 1 x 200 m	KLB 6-8E	6	18	8.5	0.8	1.1	28.3	45.2
Z802175 - 1 x 200 m	KLB 7-8E	7	21	10	1.1	1.5	38.5	61.6
Z802176 - 1 x 200 m	KLB 8-8E	8	24	11	1.4	2.0	50.3	80.4
Z802156 - 1 x 100 m	KLB 10-8E	10	30	14	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	32.8	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

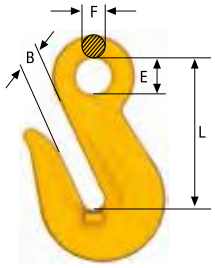
Sling hook EGKN with latch EN 1677-2



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

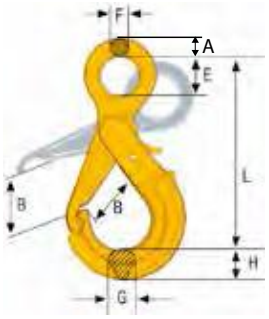
Not for use with Berglok. No reduction of working load limit, thanks to supporting lugs on either side of hook to prevent chain link deformation.



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

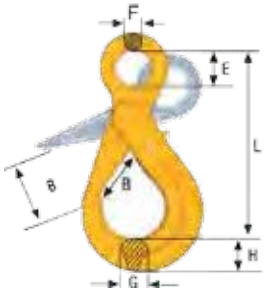
*Safety factor 4:1

All dimensions in mm



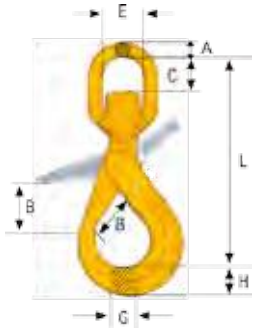
Safety Hook OBK with griplatch EN 1677-3

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



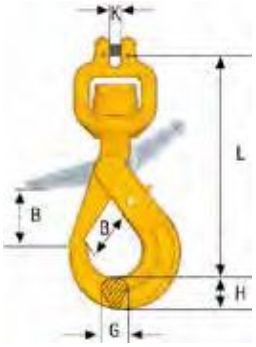
Safety Hook BK EN 1677-3

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 BKLK EN 1677-3

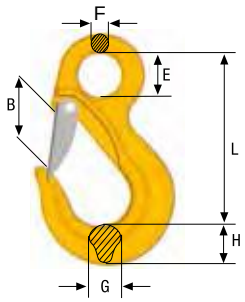
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	C	E	A	G	H	Weight kgs
Z101344	BKLK-32-8 OS	32.8	32	533	120	110	102	45	62	86	32.3



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)

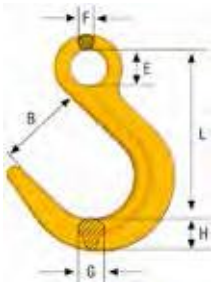
Art. no.	Code	WLL tonnes*	For chain dim.	L	B	E	F	G	H	Weight kgs
EN 1677-2										
Z100720	EK-32-8	32	32	333	105	76	38	61	80	17.7
Z100725	EKN- 32-8	32.8	32	333	93	76	38	61	80	17.9
DIN 7540 - Also available in ROV version										
Z101382	DK-50T-8	50		442	124	84	50.5	89	116	
Z101361	DKN-50T-8	50		442	124	84	50.5	89	116	
Z101384	DK-80T-8	80		610	155	102	63	110	145	
Z101363	DKN-80T-8	80		610	155	102	63	110	145	

*Safety factor 4:1

All dimensions in mm

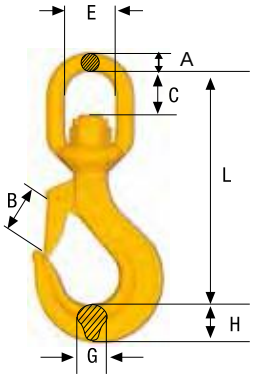
Foundry Hook OKE EN 1677-1

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



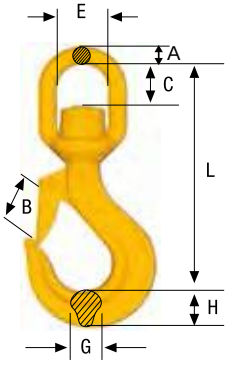
Swivel Latch Hook LKN EN 1677-2

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



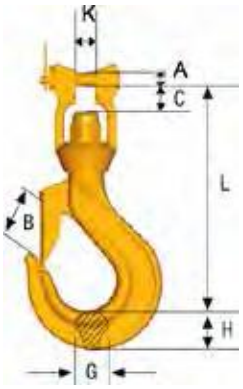
Swivel Latch Hook LKNK with ball bearing EN 1677-2

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



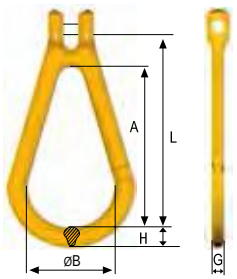
Clevis Swivel Hook LKNG EN 1677-2

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



*Safety factor 4:1 **Converted to Grade 10

All dimensions in mm

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.

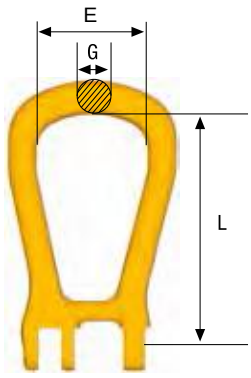
Art. no.	Code	WLL tonnes*	For chain dim.	L	D	Weight kgs
Z100316	SKLI-7/8-8	2	7, 8	75	48	0.7
Z100414	SKLI-10-8	3.2	10	97	59	1.3
Z100415	SKLI-13-8	5.4	13	120	75	2.8
Z100416	SKLI-16-8	8	16	137	90	4.6
Z100417	SKLI-18/20-8	12.5	19	159	104	7.3
RS16520	SKLU-22-8*	15.5	22	160	109	9.2
RS16530	SKLU-26-8*	21.6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



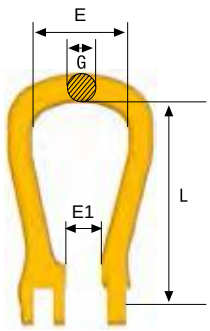
Art. no.	Code	WLL tonnes*	For chain dim.	L	E	G	Weight kgs
Z419684	SKG-7/8-8	2	7, 8	99	50	14	0.3
Z419781	SKG-10-8	3.2	10	127	66	18	0.6
Z419888	SKG-13-8	5.4	13	145	72	22	1.1
Z419985	SKG-16-8	8	16	175	82	25	1.5
Z420086	SKG-18/20-8	12.5	19	204	105	30	3.0

*Safety factor 4:1

All dimensions in mm

Master Link SKO (open) EN 1677-1

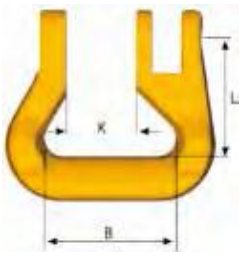
Art. no.	Code	WLL tonnes*	For chain dim.	L	E	G	E1	Weight kgs
Z418683	SKO-7/8-8	2	7, 8	99	50	14	15	0.3
Z418780	SKO-10-8	3.2	10	127	66	18	20	0.6
Z419383	SKO-13-8	5.4	13	145	72	22	25	1
Z419480	SKO-16-8	8	16	175	82	25	30	1.5
Z419587	SKO-18/20-8	12.5	19	204	105	30	36	2.9



Roundsling Coupling SKR EN 1677-1

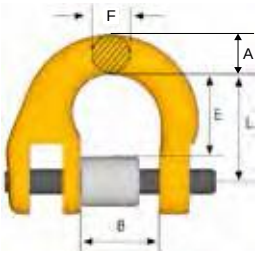
Special shape for full WLL of the roundsling

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



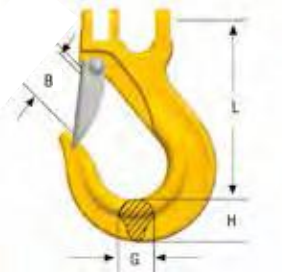
Half-link SKT (incl. locking set) EN 1677-1

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	F	A	E	Weight kgs
Z426286	SKT-7/8-8	2	7, 8	28	18	9	11	22	0.1
Z426383	SKT-10-8	3.2	10	34	25	11	13	26	0.2
Z426480	SKT-13-8	5.4	13	44	30	15	16	33	0.4
Z426587	SKT-16-8	8	16	52	36	19	20	40	0.6
Z426684	SKT-18/20-8	12.5	19	63	43	22	23	48	1.1
Z100225	SKT-22-8	15.5	22	76	50	24	26	60	1.7
Z100226	SKT-26-8	21.6	26	80	58	30	33	61	2.6
Z100227	SKT-32-8	32.8	32	100	70	38	40	78	4.9



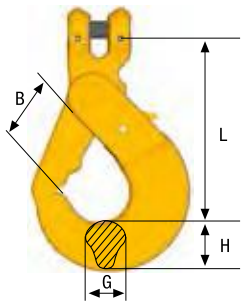
Sling Hook ESKN/SKN with latch EN 1677-2

Art. no.	Code	WLL tonnes*	For chain dim.	L	B	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



*Safety factor 4:1

All dimensions in mm

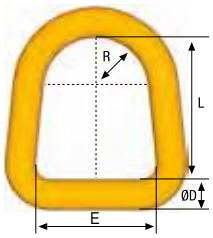


Container Hook BKGC

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

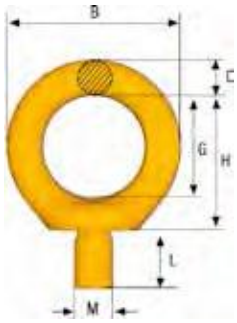
(Spare part: RDOBK-16 to both sizes)



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

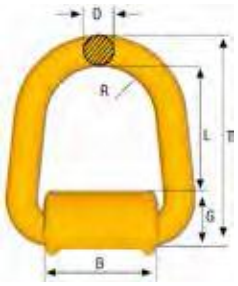
The loadbearing width must be at least 0.5 x E



Eye Lifting Point ELP

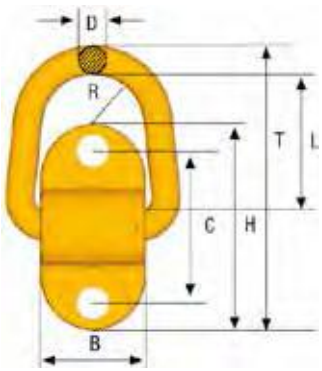
Art. no.	Code	WLL tonnes*	B	D	G	H	L	M	Weight kgs
Z100434	ELP-16-8	1**	72	16	42	55	24	M16	0.4
Z100435	ELP-20-8	1**	72	16	42	58	30	M20	0.4
Z100436	ELP-24-8	2**	88	19	48	69	36	M24	0.9
Z100437	ELP-30-8	3**	106	22	60	84	45	M30	1.4

** 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
Z700986	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

*Safety factor 4:1

All dimensions in mm

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.

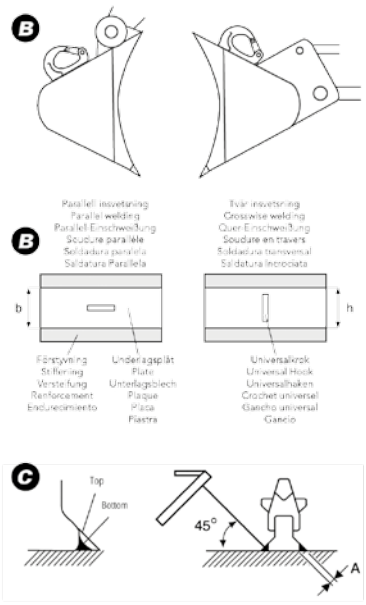
B. POSITIONING

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 thiockness of the supporting material. Proof load testing may be required



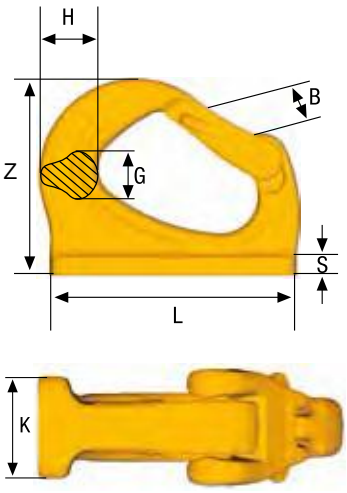
C. WELDING

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 maybe 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**

Can also be provided unpainted

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.

All dimensions in mm

Spare Part RDBK (with assembly kit)

Set for BK/BKG Safety hooks consists of trigger, stainless steel spring, retaining pin and 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
Z100287	RDBK-22	0.20
Z100280	RDBK-26	0.50
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
Z100292	RDBK-28/32	0.45

Spare Part RDOBK / GBK (with assembly kit)

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

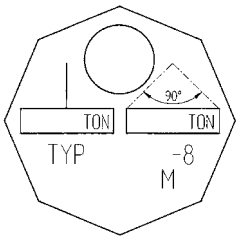
Spare Part UKN

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

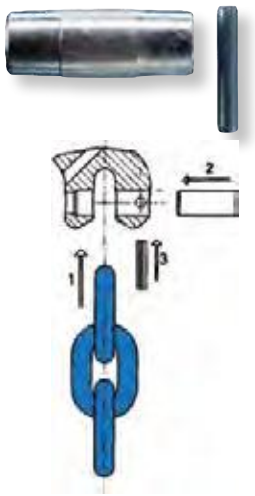
Art.no.	Code
Z100004	Id-tag



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

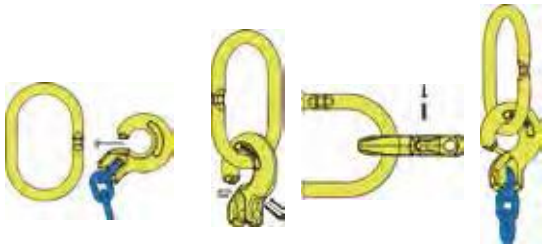
Clevis connection set (CLS) consists of one load pin and one spring retaining pin.

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
Z100989	SKA- 6-10	0.01
Z100933	SKA- 7/8-10	0.02
Z100934	SKA-10-10	0.04
Z100990	SKA-13-10	0.08
Z100991	SKA-16-10	0.14
Z101176	SKA-20-10	0.26
Z650555	SKA-22-10	0.35
Z650556	SKA-26-10	0.63

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
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 - Permanent locking function

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

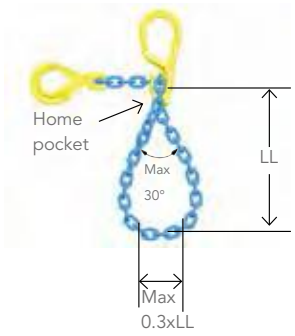
A chain sling is usually attached to the load and the crane by means of terminal fittings such as hooks, links etc.

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)



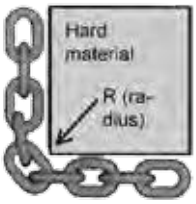
Endless chain slings shall be rated in the same way as a 2-legged sling.

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 x chain Ø*	*R > chain Ø*	*R < chain Ø*
Reduction factor	*1.0*	*0.7*	*0.5*

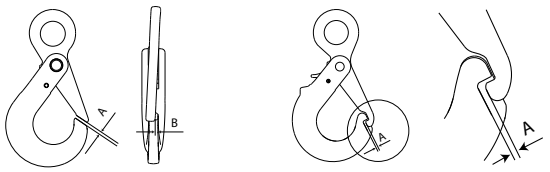
- The angle of the edge must not be below 90°.
- Chain links shall be protected from being bent or deformed and from receiving cuts or gouges.
- Chain sling WLL is to be reduced when chain is rigged over an edge radius R less than two (2) x chain diameter (d).
- Reduced WLL equals chain sling WLL from 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

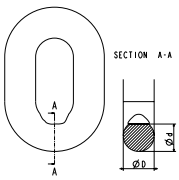
Periodic thorough examination must be carried out at least every 12 months or more frequently according to local statutory regulations, type of use and past experience.

1. Overloaded chain slings must be taken out of service.
2. 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.
3. 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.
4. Check the function of latches, triggers and retaining pins / bushes, replace when necessary. Always use Gunnebo Lifting original spare parts.
5. 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

6. 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.



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

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.

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.

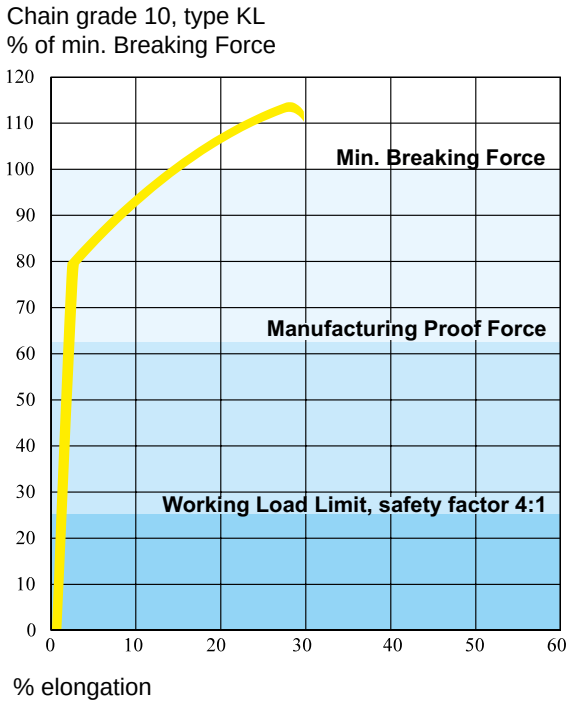
Static Tensile and Ultimate Elongation test

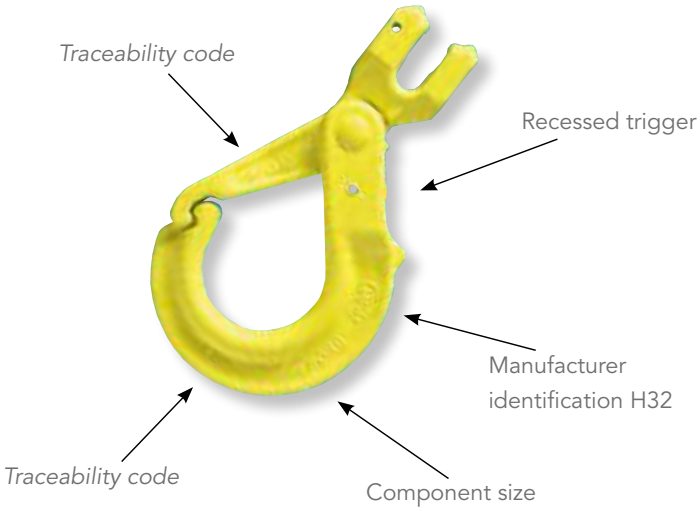
During manufacture, samples are tested and the Minimum Breaking Force (MBF) value and the total ultimate elongation are verified.

Bending Deflection

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

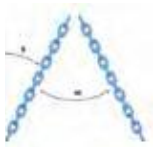
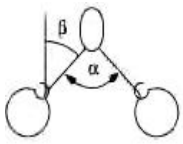
Stress / Elongation Diagram





Working Load Limits

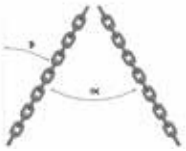
Grade 10 GrabiQ (tonnes)

	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	4.0	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	20.0	28.0	20.0	42.0	30.0	22.0	16.0
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

					β		β	
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	045
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

*) 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	20.0	20.0	16.0	34.6	28.2	20.0	26.0	21.2	15.0
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	26.0	21.2	15.0	30.0	-	-	-
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.

Shackles & Rigging Screws

Gunnebo Lifting • Commercial • Classic

GUNNEBO Industries

Shackles

Rigging Screws

Technical Information, Shackles

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.

Feel Confident in Every Situation

Our lifting systems are valued for their long durability and high quality. Whether the working environment is hot or cold, our systems assure lifting operations with high safety and functionality.

Gunnebo Lifting shackles are made from a range of steel qualities, including acid proof stainless steel and high grade alloy steel to comply with the most stringent specifications. Our workshops comprise all facilities and systems for the manufacturing and control of a top quality product. This includes tool design, an advanced tool shop, forging, heat treatment, machining, hot dip galvanizing and quality control.

We offer a range of DNV 2.7-1 Type approved lifting shackles of offshore for containers, developed for the tough conditions of the offshore industry, where safety must be of highest priority at all times. The heat treatment of these products ensures the proper ductility and strength to sustain shock loads which may be imposed when the container is lifted from the deck of a vessel.

Furthermore we offer Standard shackles, Super lifting shackles with increased working load limit, ROV shackles, Heavy duty shackles, Wide-Body shackles, Mooring shackles, Stainless Steel shackles etc.

Make sure you have the original

- High quality shackles acc. EN 13889 and U.S. Fed.Spec RR-C. 271 (grade A and grade B)
- Consistent product quality
- Long experience of shackle production using modern manufacturing methods
- Local availability expertise from Gunnebo Lifting subsidiary or distributors

To ensure you have a genuine Gunnebo Lifting Shackle, it should be marked as below:

- Company logo
- Grade
- Working load
- The bolt is marked with: Company logo, traceability code and grade

- Traceability code
- CE marking
- Dimension

Product documentation

Upon request at time of order, load rated products can be supplied with:

- Works certificate acc. EN 10204 - 2.1
- Sample certificate of raw material acc. EN 10204 - 3.1
- Test certificate
- Traceable rawmaterial / inspection certificate acc. EN 10204 - 3.1
- Third part proof load documentation

Gunnebo Lifting Standard Shackle No 834 and No 835

Dee shackles

Standard: DNV 2.7-1 Type-Approved, EN-13889 and U.S Fed. Spec. RR-C-271

Material: High Tensile Carbon Steel, Quenched and tempered, Grade 6

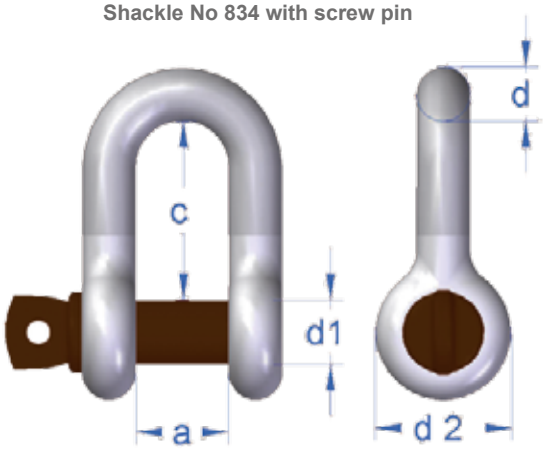
Finish: All parts hot dip galvanized, brown painted pins on top of galv.

Safety factor: 6:1

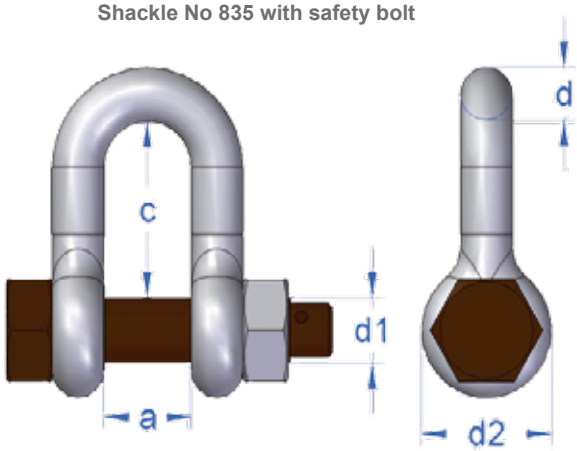
Documentation: Test certificate and traceable raw material / inspection certificate acc. EN 10204 - 3.1.
Sizes from 2 - 25 tonnes can be supplied with DNV 2.7-1 Type Approval Certification.

Temperature: -20°C to 200°C

Shackle No 834 with screw pin



Shackle No 835 with safety bolt



Measurement in mm

Art. no. Screw pin	Art. no. Safety bolt	Dim. d1	Dim. d (mm - inch)	Inner width a*	Inner length c*	Eye outer d2	WLL (tonnes) 6:1	Screw pin (kgs)	Safety bolt (kgs)
A083405	-	6	5 - 3/16"	10	22	13	0.33	0.02	-
A083406	-	8	7 - 1/4"	12	25	12	0.5	0.06	-
A083408	-	10	9 - 5/16"	13.5	27	16	0.75	0.11	-
A083409	-	11	10 - 3/8"	17	31	20	1	0.15	-
A083411	-	13	11 - 7/16"	18.5	37	22	1.5	0.21	-
A083413	A083513	16	13 - 1/2"	21	41	33	2	0.25	0.30
A083416	A083516	19	16 - 5/8"	27	51	40	3.25	0.55	0.60
A083419	A083519	22	19 - 3/4"	31	60	47	4.75	1.00	1.10
A083422	A083522	25	22 - 7/8"	37	71	50	6.5	1.30	1.50
A083425	A083525	28	25 - 1"	43	81	58	8.5	1.90	2.20
A083428	A083528	32	28 - 1.1/8"	46	90	64	9.5	2.80	3.10
A083432	A083532	35	32 - 1.1/4"	52	100	72	12	3.60	4.20
A083435	A083535	38	35 - 1.3/8"	57	111	74	13.5	4.60	5.60
A083438	A083538	42	38 - 1.1/2"	60	122	84	17	6.50	7.50
A083445	A083545	50	45 - 1.3/4"	74	149	105	25	11.50	13.00
A083452	A083552	57	50 - 2"	83	171	127	35	16.00	18.00
-	A083564	70	65 - 2.1/2	105	203	152	55	-	39.00

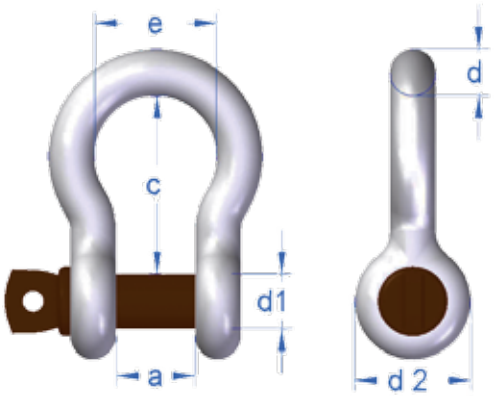
* Forging tolerance: +/- 5% on inside width/length.

Gunnebo Lifting Standard Shackle No 854 and No 855

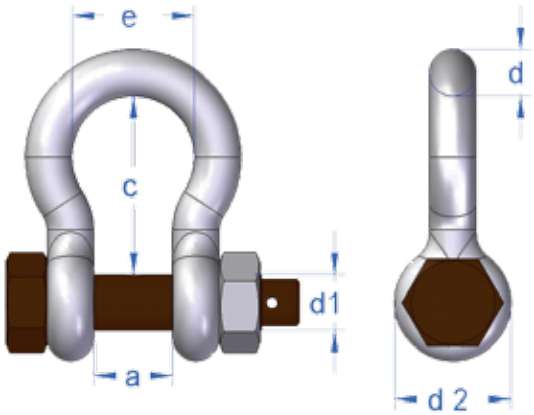
Bow shackles

Standard:	DNV 2.7-1 Type-Approved, EN-13889 and U.S Fed. Spec. RR-C-271
Material:	High Tensile Carbon Steel, Quenched and tempered, Grade 6
Finish:	All parts hot dip galvanized, brown painted pins on top of galv.
Safety factor:	6:1
Documentation:	Test certificate and traceable raw material / inspection certificate acc. EN-10204 - 3.1. Sizes from 2 - 25 tonnes can be supplied with DNV 2.7-1 Type Approval Certification.
Temperature:	-20°C to 200°C

Shackle No 854 with screw pin



Shackle No 855 with safety bolt



		Measurement (mm)								
Art. no. Screw pin	Art. no. Safety bolt	Dim. d1	Dim. d (mm - inch)	inner width a*	inner length c*	Bow width e	Eye outer d2	WLL (tonnes) 6:1	Screw pin (kgs)	Safety bolt (kgs)
A085405	-	6	5 - 3/16"	10	22	16	13	0,33	0.02	-
A085406	A085506	8	6 - 1/4"	12	29	20	16	0.5	0.06	0.07
A085408	A085508	10	8 - 5/16"	13	32	21	20	0.75	0.11	0.13
A08409	A085509	11	9 - 3/8"	16	36	26	22	1	0.15	0.17
A085411	A085511	13	11- 7/16"	18	43	29	26	1.5	0.21	0.25
A085413	A085513	16	13 - 1/2"	21	47	33	33	2	0.37	0.42
A085416	A085516	19	16 - 5/8"	27	60	42	40	3.25	0.65	0.70
A085419	A085519	22	19 - 3/4"	31	71	51	47	4.75	1.10	1.20
A085422	A085522	25	22 - 7/8"	37	84	58	50	6.5	1.50	1.70
A085425	A085525	28	25 - 1"	43	95	68	58	8.5	2.20	2.50
A085428	A085528	32	28 - 1.1/8"	46	108	74	64	9.5	3.10	3.40
A085432	A085532	35	32 - 1.1/4"	52	119	83	72	12	4.20	4.80
A08545	A085535	38	35 - 1.3/8"	57	132	89	74	13.5	6.00	7.00
A085438	A085538	42	38 - 1.1/2"	60	146	98	84	17	8.00	9.00
A085445	A085545	50	45 - 1.3/4"	74	178	127	105	25	13.50	15.00
A085452	A085552	57	50 - 2"	83	197	138	127	35	19.00	21.00
-	A085556	65	57 - 2.1/4"	95	222	160	140	42.5	-	28.50
A085464	A085564	70	65 - 2.1/2"	105	255	185	152	55	38.00	39.00
-	A085576	83	75 - 3"	127	330	190	165	85	-	62.00
-	**A085589	95	89 - 3.1/2	146	380	235	203	120 (5:1)	-	110.00

* Forging tolerance: +/- 5% on inside width/length.
** Safety factor 5:1

Gunnebo Lifting Arctic No 856

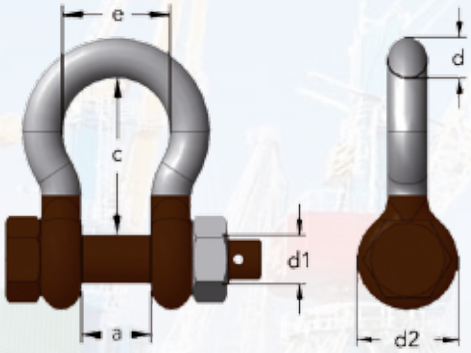
Bow shackle with safety bolt

Unique Benefits with The Arctic Shackle

Adverse weather and rough sea conditions in combination with extremely low temperatures, as often encountered in the North Sea for instance, places tough requirements on the products used. Gunnebo Lifting has a range of shackles specially designed for these conditions: The Arctic Shackle. This shackle is type approved to DnV 2.7-1 Offshore containers and meets the impact requirements of 42 J at – 40 degrees °C.

The Arctic Shackle is a grade 8 shackle with all parts hot dipped galvanized, including the safety pin, and has the characteristic brown colour marking.

Standard:	DNV 2.7-1, U.S. Fed. Spec. RR.C-271 and EN-13889
Material:	Special Alloy Steel, Quenched and Tempered, Grade 8
Finish:	All parts hot dip galvanized + brown colour marking
Safety factor:	As specified in the table below
Documentation:	Test certificate and traceable raw material / inspection certificate acc. EN-10204 - 3.1 All sizes can be supplied with DNV 2.7-1 Type Approval Certification.
Temperature:	- 40 °C to 200 °C



Art. no.	d1	Dim. d (mm - inch)	a	c	d 2	e	WLL (tonnes)	Weight (kgs)	Safety factor
A085613	16	13 - 1/2"	21	47	33	33	2	0.42	8.00
A085616	19	16 - 5/8"	27	60	40	42	3.3	0.7	8.00
A085619	22	19 - 3/4"	31	71	47	51	4.8	1.2	8.00
A085622	25	22 - 7/8"	37	84	52	58	6.5	1.7	7.85
A085625	28	25 - 1"	43	95	58	68	8.5	2.5	7.25
A085628	32	28 - 1.1/8"	46	108	64	74	9.5	3.4	6.94
A085632	35	32 - 1.1/4"	52	119	72	83	12	4.8	6.40
A085635	38	35 - 1.3/8"	57	132	74	89	13.5	7	6.10
A085638	42	38 -1.1/2"	60	146	84	98	17	9	6.00
A085645	50	45 - 1.3/4"	74	178	105	127	25	15	6.00
A085652	57	50 - 2"	83	197	119	138	35	21	6.00
A085664	70	65 - 2.1/2"	105	255	145	185	55	39	6.00
A085676	83	75 - 3"	127	330	165	190	85	62	6.00

Gunnebo Lifting Super Shackle No 858

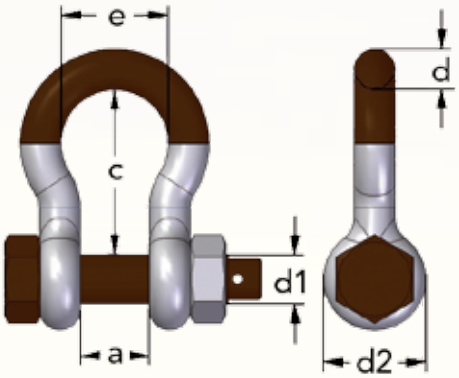
Bow shackle with safety bolt

Unique Benefits with The Super Shackle

In certain situations, a demand for extra Working Load Limit occurs, in others the lifting environment has limited space for the lifting application. Gunnebo Lifting has therefore added the Super Shackle to the range, enabling the same Working Load Limit on a 22 mm Super shackle as for a 28 mm Standard shackle.

The Gunnebo Lifting Super shackle meets the US Federal Specification RR.C-271. It is a grade 8 shackle and has all parts hot dipped galvanized, including the safety pin.

Standard:	U.S. Fed. Spec. RR.C-271 Type IVA Class 3, Grade B
Material:	High Tensile Steel. Quenched and Tempered, Grade 8
Finish:	All parts hot dip galvanized + brown colour marking
Safety factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate



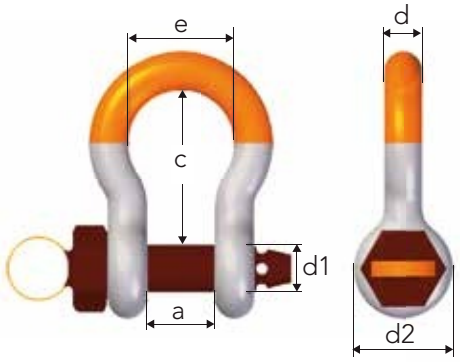
Art.no	d1	Dim. d (mm - inch)	a	c	d2	e	WLL (tonnes)	Weight (kgs)
A085813	16	13 - 1/2"	21	51	33	33	3.3	0.4
A085816	19	16 - 5/8"	27	60	40	42	5	0.7
A085819	22	19 - 3/4"	31	71	47	51	7	1.2
A085822	25	22 - 7/8"	37	84	52	58	9.5	1.7
A085825	28	25 - 1"	43	95	58	68	12.5	2.5
A085828	32	28 - 1 1/8"	46	108	64	74	15	3.4
A085832	35	32 - 1 1/4"	52	119	72	83	18	4.8
A085835	38	35 - 1 3/8"	57	132	74	89	21	7
A085838	42	38 - 1 1/2"	60	146	89	99	30	8.8
A085845	50	45 - 1 3/4"	74	178	105	126	40	15
A085857	57	57 - 2 1/4"	83	197	117	138	55	22
A085870	70	70 - 2 3/4"	105	260	143	180	85	38
A085883	83	83 - 3 3/4"	127	329	162	190	120	70
A085895	95	95 - 3 3/4"	144	400	208	238	150	112

Gunnebo Lifting ROV Shackles

ROV Shackle no. 860 Threaded bolt with locking pin

Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	6:1
Documentation:	Test certificate and traceable 3.1 certificate can be supplied on request
Temperature:	-20 °C to 200 °C

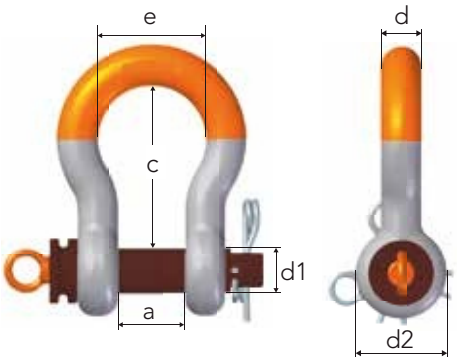
Art. no.	d1	d	a	c	d2	e	WLL (tonnes)	Weight (kgs)
A086025	28	25	43	95	60	68	8.5	2.7
A086028	32	28	46	108	64	74	9.5	3.4
A086032	35	32	52	119	72	83	12	5.0
A086038	42	38	60	146	84	98	17	7.8
A086045	50	45	74	178	105	127	25	13.9
A086052	57	50	83	197	127	138	35	17.0
A086064	70	65	105	255	152	185	55	37.0



ROV Release Shackle no. 863

Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate can be supplied on request
Temperature:	-20 °C to 200 °C

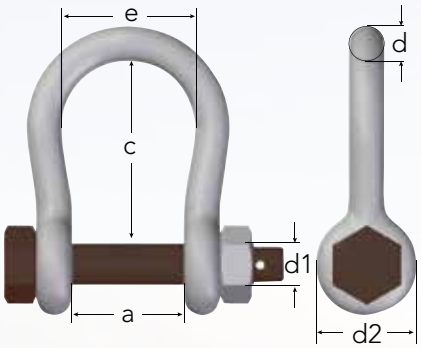
Art. no.	d1	d	a	c	d2	e	WLL (tonnes)	Weight (kgs)
A086322	25	22	37	84	52	58	6.5	1.6
A086328	32	28	46	108	64	74	9.5	3.4
A086332	35	32	52	119	72	83	12	5.0
A086338	42	38	60	146	84	98	17	7.8
A086345	50	45	74	178	105	127	25	13.9
A086352	57	50	83	197	127	138	35	17.0
A086364	70	65	105	255	152	185	55	37.0



Gunnebo Lifting Mooring Products

For fishing and aquaculture

Gunnebo Lifting Mooring Shackle no. 852



Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown colour marking

Art.no	Dim. d (mm - inch)	MBL (tonnes)	a	c	e	d2	d1
A085219	19 - 3/4"	28	44	100	58	47	22
A085222	22 - 7/8"	40	52	125	68	50	25
A085228	28 - 1 1/8"	60	62	150	89	58	28
A085232	32 - 1 1/4"	90	82	170	98	72	32
A085245	45 - 1 3/4"	150	126	248	140	105	50

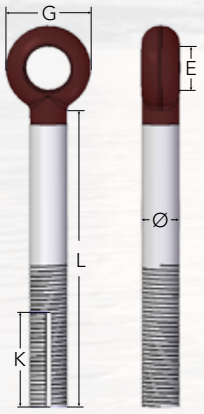
Safety pins

Plastic clip (28T-40T Yellow / 60-90 Blue)
- Copper core (Ø4,0 mm PVC coated)

Green seizing wire
- Steel core with 5-10 mm zinc coat and also PVC coated

Yellow/green seizing wire (dim Ø5,5 mm x 250 mm)
- Copper core (Ø4,0 mm PVC coated)

Split pin (dim Ø 5,5 mm x 40 mm)
- Can be delivered electric plated or acid proof

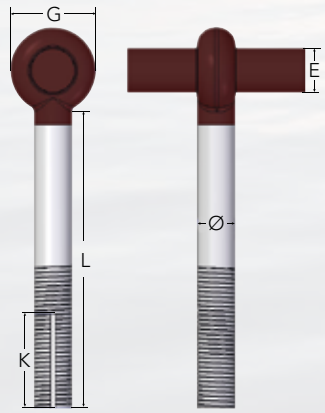


Gunnebo Lifting Mooring bolts - Eye Bolt no. 8250

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown colour marking

Art.no	dim Ø x L	MBL	G	E
A825032	Ø32 x 400	40 T	72	38
A825038	Ø38 x 500	60 T	84	46
A825045	Ø45 x 600	80 T	105	54



Gunnebo Lifting Mooring bolts - T-bolt no. 8252

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown colour marking

Art.no	dim Ø x L	MBL	G	E	L
A825232	Ø32 x 400	40 T	72	35	400
A825235	Ø35 x 400	50 T	76	38	400
A825238	Ø38 x 500	60 T	84	42	500
A825245	Ø45 x 600	80 T	105	45	600
A825250	Ø50 x 700	100 T	110	50	700

Long Link Chain LLZ, Grade 6/7

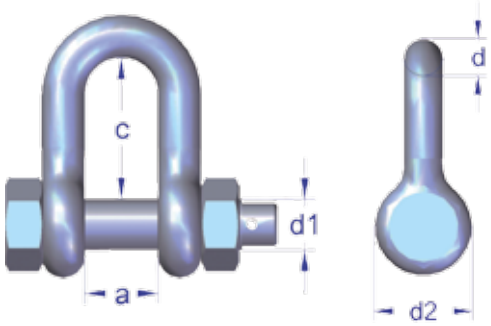
Heat treatment	Surface treatment	Marking
Quenched and tempered	Hot Dip Galvanized (HDG)	GF

See page 4:5 for technical specifications

Gunnebo Lifting Stainless Steel Shackle no. 735

Dee shackle with safety bolt

Material: AISI 316
Finish: Highly Polished
Safety factor: 6:1
Documentation: Test certificate and traceable 3.1 certificate can be supplied

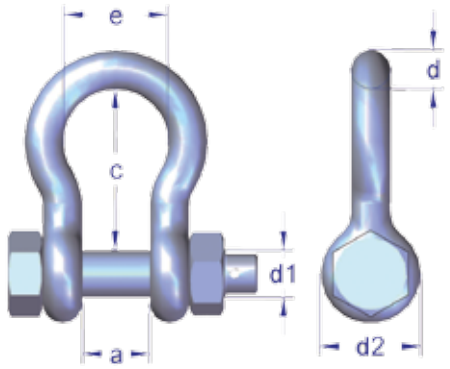


Art. no.	WLL (tonnes)	d1	d	a	c	d2	Weight (kgs)
A073510	0.6	10	10	20	38	20	0.2
A073512	0.9	12	12	26	50	24	0.3
A073516	1.5	16	13	24	52	33	0.4
A073520	2.5	19	16	28	65	40	0.7
A073522	3	22	19	31	60	48	1.5
A073524	4.5	25	22	37	71	52	1.3
A073533	7.5	32	28	46	90	64	3.0
A073536	10	35	32	52	100	72	4.1

Gunnebo Lifting Stainless Steel Shackle no. 755

Bow shackle with safety bolt

Material: AISI 316
Finish: Highly Polished
Safety factor: 6:1
Documentation: Test certificate and traceable 3.1 certificate can be supplied

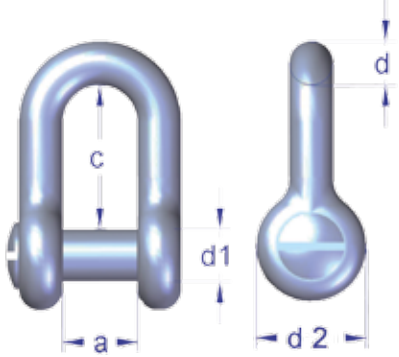


Art. no.	WLL (tonnes)	d1	d	a	c	e	d2	Weight (kgs)
A075510	0.6	10	10	20	36	27	20	0.2
A075512	0.9	12	12	25	47	37	26	0.3
A075516	1.5	16	13	25	47	33	33	0.4
A075520	2.5	20	16	28	60	42	40	0.8
A075522	3	22	19	31	71	51	48	1.3
A075524	4.5	25	22	37	84	58	52	1.7
A075533	7.5	32	28	46	108	74	64	3.2
A075536	10	35	32	52	119	83	72	5.2

Gunnebo Lifting Stainless Steel Shackle no. 732

Dee shackle with countersunk pin

Material: AISI 316
Finish: Highly Polished
Safety factor: 6:1
Documentation: Test certificate

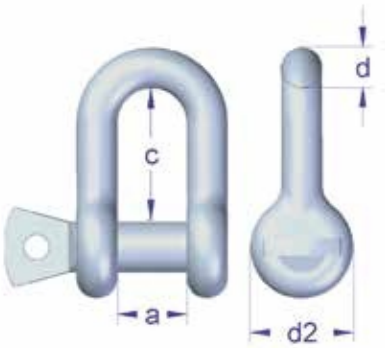


Art. No.	WLL (tonnes)	Dim. d1 mm	d1w	d	a	(c)	d2	Weight (kgs)
A073216	2.0	M16	16	13	24	52	32	0.3
A073217	2.0	M16	16	16	32	64	32	0.3
A073220	3.0	M20	20	16	28	65	40	0.6
A073222	3.0	M22	22	19	31	60	46	1.4

Stainless Steel Shackle no. 730

Dee shackle with screw pin AISI 316

Art. no.	Dim. d1 (mm)	d	a	c	d 2	MBL	Weight (kgs)
A073004	M4	4	8	15	9		0.01
A073005	M5	5	10	17	10	1.2	0.01
A073006	M6	6	12	24	12	1.8	0.03
A073008	M8	8	16	30	16	2.8	0.06
A073010	M10	10	20	38	20	4.3	0.1
A073012	M12	12	26	50	24	6.5	0.2
A073016	M16	13	24	52	33	12	0.3
A073020	M20	16	28	65	40	16	0.6
A073022	M22	19	30	72	48	20	0.9
A073024	M25	22	37	71	52	27	1.3

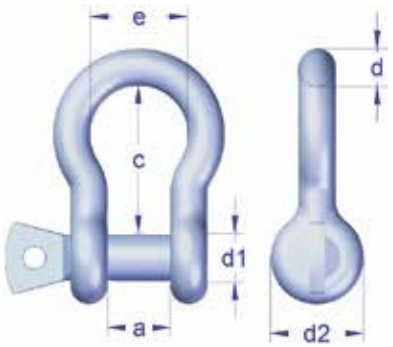


3

Stainless Steel Shackle no. 750

Bow shackle with screw pin AISI 316

Art. no.	Dim. d1 (mm)	d1	d	a	c	e	d2	MBL (tonnes)	Weight (kgs)
A075004	M4	4.0	4	8	18	13	9		0.01
A075005	M5	5.0	5	10	18	15	10	1.2	0.02
A075006	M6	6.0	6	12	22	17	12	1.8	0.03
A075008	M8	8.0	8	16	30	23	16	2.8	0.07
A075010	M10	10.0	10	20	36	27	20	4.3	0.11
A075012	M12	12.0	12	25	47	37	26	6.5	0.25
A075016	M16	13.0	13	25	47	33	33	12.0	0.33
A075020	M20	16.0	16	28	60	42	40	16.0	0.96
A075022	M22	19.0	19	31	71	51	48	20.0	1.0
A075024	M24	22.0	22	37	84	58	52	27.0	2.0

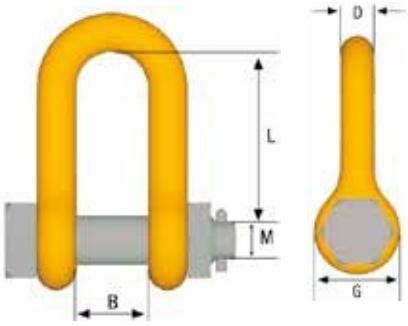


Gunnebo Lifting Shackle SA

Acc. to EN 1677-1

Grade 8

Art. no.	Code	WLL (tonnes)	For chain dim. mm	L	B	D	G	M	Weight (kgs) appr.
Z100706	SA-7/8-8	2.0	7, 8	30	15	8	20	M10	0.1
Z298728	SA-10-8	3.2	10	52	24	13	35	M16	0.4
Z292528	SA-13-8	5.4	13	65	28	16	42	M20	0.7
Z293024	SA-16-8	8.0	16	72	30	18	46	M22	1
Z299622	SA-19-8	11.5	19	86	36	22	55	M27	1.7
Z294122	SA-22-8	15.5	22	94	40	25	62	M30	2.5
Z304328	SA-26-8	21.6	26	116	48	32	75	M39	5.2



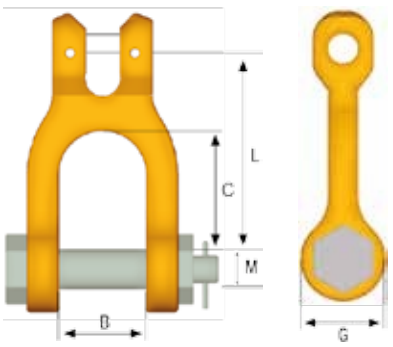
Finish: Painted yellow
Material: Alloy steel
Safety factor: 4:1

Gunnebo Lifting Clevis Shackle GSA

Acc. to EN 1677-1

Grade 8

Art. no.	Code	WLL (tonnes)	For chain dim. (mm)	B	C	G	L	M	Weight (kgs) appr.
Z700882	GSA-7/8-8	2.0	7, 8	32	36	34	60	16	0.4
Z700883	GSA-10-8	3.15	10	34	48	40	80	20	0.8
Z700884	GSA-13-8	5.3	13	50	65	44	98	22	1.4
Z700885	GSA-16-8	8.0	16	60	70	54	114	27	2.4

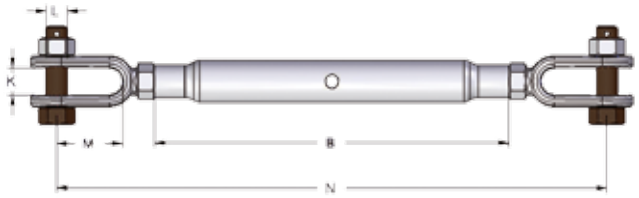


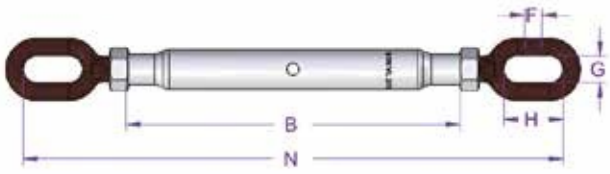
Finish: Painted yellow
Material: Alloy steel
Safety factor: 4:1

Alloy Steel Rigging Screw, no. 801

Grade 6

Standard: Working load acc. to U.S. Fed. spec. FF-T-791.b
Supplied with closed body from 2,5-17 T, larger dimensions open body.
Material: Quenched and tempered alloy steel
Surface treatment: Hot dip galvanized
Safety factor: 5:1
Certificate: Test certificate and traceable 3.1 certificate can be supplied on request.





Art. no. Jaw/Jaw	Art. no. Jaw/Eye	Art. no. Eye/Eye	Thread M/UNC	WLL tonnes	Take up range mm	B	N	K	L	M	F	G	H	Weight kgs/ea
A801420	A802420	A804420	M 20	2.5	210	270	455	20	16	50	16	24	50	2.3
A801424	A802424	A804424	M 24	5	250	340	570	28	22	65	19	28	56	4.6
A801432	A802432	A804432	1.1/4"	7	270	370	680	38	28	85	22	35	70	8
A801438	A802438	A804438	1.1/2"	10	300	420	790	45	32	100	25	40	78	14
A801445	A802445	A804445	1.3/4"	13	360	500	870	50	39	105	30	45	90	24
A801450	A802450	A804450	2"	17	450	600	1030	58	45	120	35	45	100	38
A801464			*2.1/2"	27.2	600	800	1490	75	57	140				73
A801470			*2.3/4"	34	600	800	1570	89	70	145				98

* Open turnbuckle body without nut and split pin

Rigging Screw no. 401, Hot Dip Galvanized

Design: Jaw-Jaw (jaw-eye and eye-eye on request)
Standard: Acc.to B.S. 4429, closed body - with locking nut
Material: St. 42/St. 52, normalized
Surface treatment: Hot dip galvanized (M6 & M8 zinc plated)
Safety factor: 5:1
Note: **Not for lifting, except for items marked with * below**

Art. no. Jaw/ Jaw	Art. no. Jaw/ Eye	Thread M/ UNC	WLL tonnes	Take up range (mm)	B	N	L	M	K	Weight kg/pcs
A401406	A402406	M 6	-	80	100	175	5	18	8	0.13
A401408	A402408	M 8	-	85	110	210	6	25	9	0.25
A401510 *	A402410	M 10	0.5	90	125	225	8	20	10	0.3
A401512 *	A402412	M 12	0.7	155	195	315	10	30	13	0.65
A401516 *	A402416	M 16	1.2	185	230	380	12	44	18	1.25
A401520 *	A402420	M 20	1.5	210	270	450	16	50	20	2.2
A401422	A402422	M 22	2.2	230	295	500	20	60	25	3.3
A401424	A402424	M 24	3.2	250	325	555	22	65	28	4.6
A401432	A402432	1.1/4"	4.8	290	370	680	28	85	38	8.5
A401438	A402438	1.1/2"	6	300	400	760	32	100	45	14.5
A401445	A402450	1.3/4"	8.5	290	400	760	38	105	50	20.9
A401452	A402452	2"	11	290	400	820	45	120	58	24

*Can be used for lifting

Technical Information

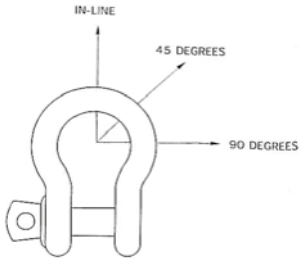
The Machinery Directive 2006/42/EC highlights the responsibility of the manufacturer, distributor and end user of lifting gear.

Gunnebo shackles are specified, monitored and documented in compliance with the most stringent requirements for the product concerned. A certified ISO 9001-2000 system is an evidence of our quality standard.

Instructions For Safe Use

1. The user is obliged to keep a valid Test Certificate for any shackle being used in a lifting operation.
2. Before use each shackle should be inspected to ensure that:
   - all markings in the body and the pin of the shackle are legible and in compliance with the relevant Test Certificate.
   - the shackle pin is of the correct type.
   - the body and pin shall not be distorted or unduly worn.
   - The body and pin are free from nicks, cracks, grooves and corrosion.
   - If there is any doubt with regards to the above criteria being met, the shackle should not be used for a lifting operation.
3. It is important to ensure that the pin is safely locked after assembly. For repeated lifting between inspections of the gear, it is recommended to use a safety bolt type shackle with nut and split-pin - the user must ensure that the split-pin is fitted, to prevent the nut from unscrewing during use.
4. Incorrect seating of a pin may be due to a bent pin, damaged threads or misalignment of the holes. Do not use the shackle under these circumstances, but refer the matter to a competent person (i.e. dealer, manufacturer)
5. Shackles should be fitted to the load in a manner that allows the shackle body to take the load in a true line along its centreline to avoid undue bending stresses which will reduce the load capacity of the shackle. When using shackles in conjunction with multi-leg slings, due consideration should be given to the effect of the angle between the sling legs. When a shackle is used to secure the top block of a set of rope blocks the load on this shackle is increased by the value of the hoisting effect.
6. To avoid eccentric loading of the shackle it is recommended to distribute the load as for as possible over the total length of the pin or to use loose spacers.
7. Never modify, repair or reshape a shackle by welding, heating or bending as this will affect the nominal WLL.
8. Never heat treat a shackle as this may affect the WLL.

Side loads should be avoided as the products are not designed for this purpose. If side loads cannot be avoided, the following reduction factors must be taken into account:

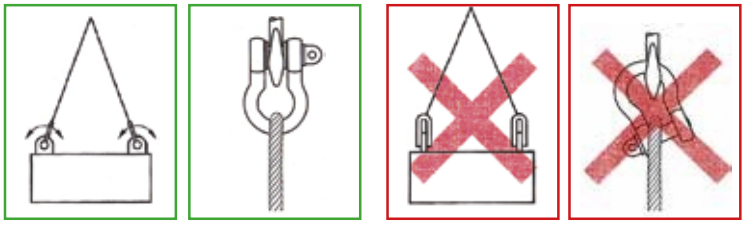


Reduction for side loading

Load angle	New Working Load Limit
0°	100% of original WLL
45°	70% of original WLL
90°	50% of original WLL

Avoid applications where, due to load movement, the shackle pin can rotate

Shackle must be loaded in straight direction



Temperature

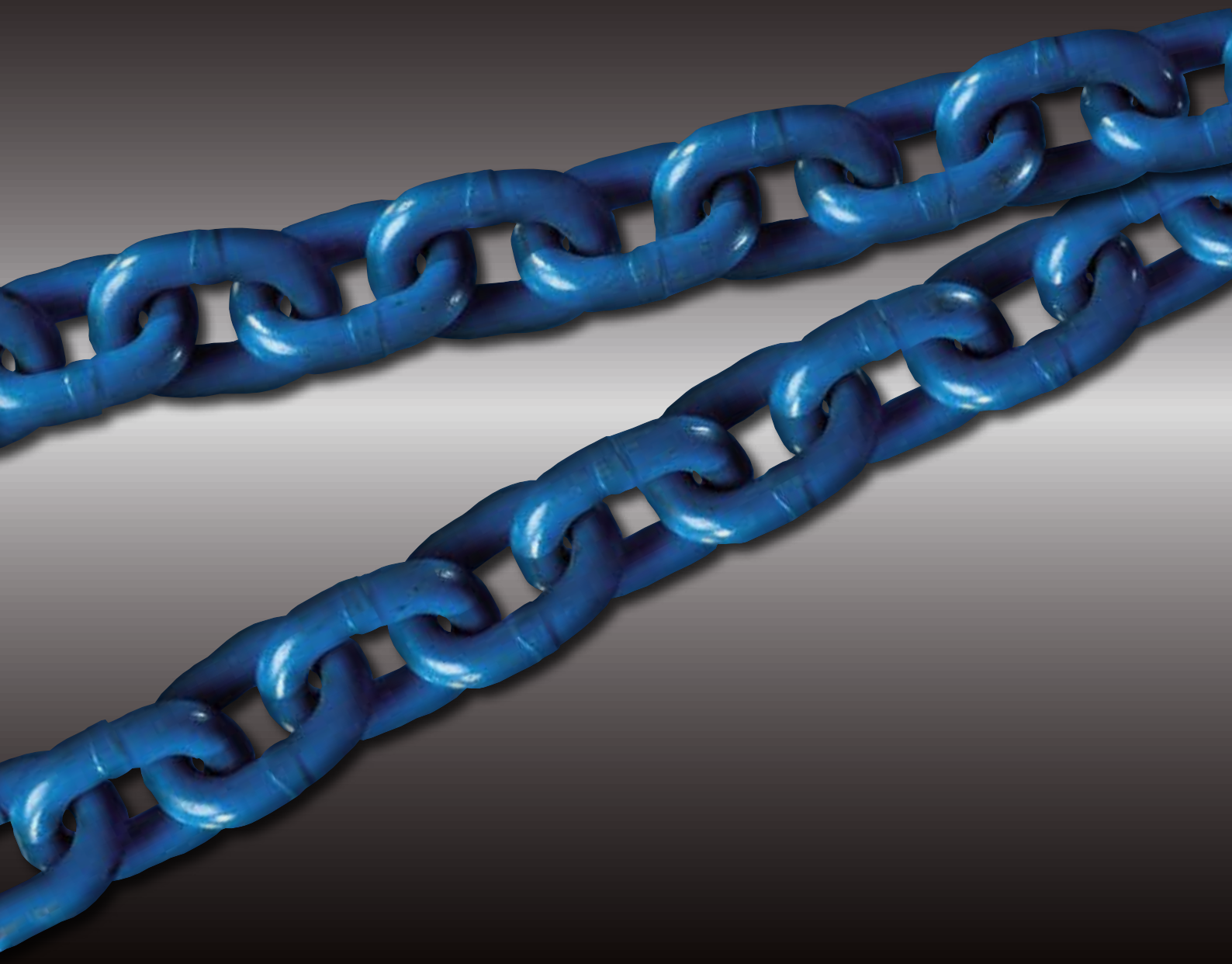
If extreme temperature situations are applicable, the following load reductions must be taken into account

Reduction for elevated temperatures

Temperature:	New Working Load Limit
0 - 200 °C	100% of original Working Load Limit
200 - 300 °C	90% of original Working Load Limit
300 - 400 °C	75% of original Working Load Limit
> 400 °C	not allowed

Chain

Grade 10 • Grade 8 • Short Link • Mid-link • Long-link



GUNNEBO Industries

Chain

Technical Information

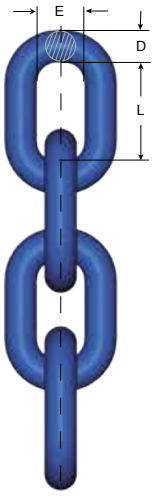
WARNING:
Failure to read, understand and comply with the following instructions, working load limits and specifications in this publication may result in serious injury or damage to property.

Short Link KLA, GrabiQ Grade 10 (200)

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



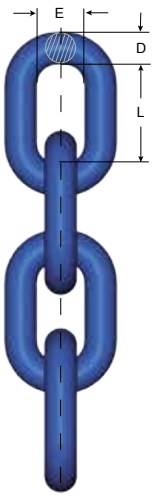
Art. no. Box	Code	WLL tonnes	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN	Breaking force kN
Z802300 - 1 x 200 m	KLA 6-10 (200)	1.5	6	18	8	0.8	35.4	60
Z802337 - 1 x 200 m	KLA 7-10 (200)	2	7	21	10	1.1	48	77
Z802301 - 1 x 200 m	KLA 8-10 (200)	2.5	8	24	11	1.4	63	100
Z802302 - 1 x 100 m	KLA 10-10 (200)	4	10	30	14	2.3	98	160
Z802303 - 1 x 100 m	KLA 13-10 (200)	6.7	13	39	18	3.8	166	260
Z802304 - 1 x 100 m	KLA 16-10 (200)	10	16	48	22	5.6	251	402
Z802305 - 1 x 50 m	KLA 20-10 (200)	16	20	60	29	9.4	393	630
Z802246 - 1 x 50 m	KLA 22-10 (200)	20	22	66	31	11.8	490	806
Z802248 - 1 x 50 m	KLA 26-10 (200)	27	26	78	37	14.6	664	1062

Short Link KLA, GrabiQ Grade 10 (400)

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

Short link KLB, Classic Grade 8 EN 818-2

Heat treatment
Quenched and tempered

Surface treatment
Painted black
Painted yellow

Marking
8G

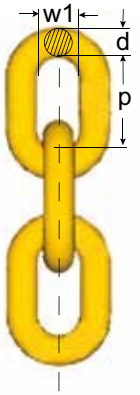
Charge no.
SWE

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

*Safety factor 4:1

All dimensions in mm

Short Link Chain KLFU, Grade 8

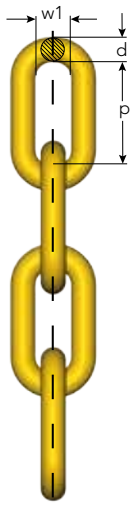


Heat treatment	Surface treatment	Marking
Quenched and tempered, Stress relieved	Painted yellow	GF

Not for lifting purposes.

Art. no.	Code	Link dimensions d nom.	P »	w1 »	Weight kgs/m	Min. breaking load (tonnes)	Delivery length
Z802330	KLFU-10-8	10	30	14.6	2.2	12.6	1 x 100 m
Z802331	KLFU-13-8	13	39	18.4	3.7	21.4	1 x 100 m
Z801146	KLFU-16-8	16	48	22.6	5.8	32.2	1 x 100 m
Z327377	KLFU-19-8	19	57	26	8.0	45.4	1 x 100 m
Z327385	KLFU-22-8	22	66	30	11.0	61.0	1 x 50 m
Z801505	KLFU-26-8	26	78	35	14.8	86.0	1 x 50 m

Mid-link Chain MLFU, Grade 8

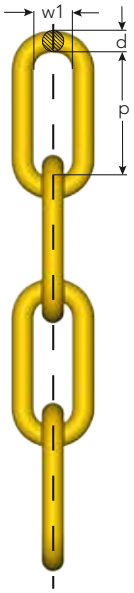


Heat treatment	Surface treatment	Marking
Quenched and tempered, Stress relieved	Painted yellow	GF

Not for lifting purposes.

Art. no.	Code	Link dimensions d nom. mm	P » mm	w1 » mm	Weight kgs/m	Min. breaking load (tonnes)	Delivery length
Z802332	MLFU-10-8	10	40	14	2.0	12.6	1 x 100 m
Z802333	MLFU-13-8	13	55	20	3.3	21.4	1 x 100 m
Z800564	MLFU-16-8	16	65	22	5.0	32.2	1 x 100 m
Z800476	MLFU-19-8	19	75	29	7.1	45.4	1 x 100 m
Z800661	MLFU-22-8	22	88	30	9.4	61.0	1 x 50 m
Z801770	MFLU-26-8	26	91	35	13.9	86.0	1 x 50 m

Long-link Chain LLU, Grade 8



Heat treatment	Surface treatment	Marking
Quenched and tempered, Stress relieved	Painted yellow	GF

Not for lifting purposes.

Art. no.	Code	Link dimensions d	p	w1	Weight kgs/m	Min. breaking load (tonnes)	Delivery length
Z801933	LLU-6-8	6	35	10	0.6	4.5	5 x 100 m
Z801934	LLU-9-8	9	53	15	1.4	10.2	4 x 100 m
Z801935	LLU-11-8	11	64	18	2.1	15.4	4 x 100 m
Z801936	LLU-13-8	13	80	22	2.9	21.4	3 x 100 m
Z802160	LLU-16-8	16	100	27	4.6	32.2	1 x 100 m
Z601983	LLU-19-8	19	100	28	6.5	45.4	1 x 100 m
Z700526	LLU-22-8	22	120	36	8.7	61.0	1 x 50 m

*Safety factor 4:1

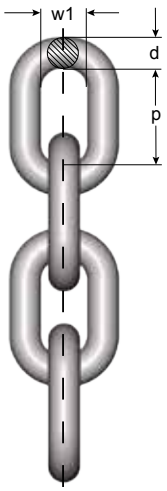
All dimensions in mm

Short Link Chain - KLFZ, Grade 7

Heat treatment	Surface treatment	Marking
Quenched and tempered	Hot Dip Galvanized (HDG)	GF

Not for lifting purposes.

Art. No	Code	Link dimensions			Min. breaking load (tonnes)	Weight kgs/m	Delivery length
		d nom.	P »m	w1 »			
Z800666	KLFZ-10-7	10	30	14.6	11	2.2	1 x 100 m
Z802329	KLFZ-13-7	13	39	18.4	18	3.7	1 x 100 m
Z801644	KLFZ-16-7	16	48	22.6	28	5.8	1 x 100 m
Z801409	KLFZ-17-7	17	48	24	30	6.4	1 x 100 m
Z801407	KLFZ-19-7	19	57	26	40	8.0	1 x 100 m

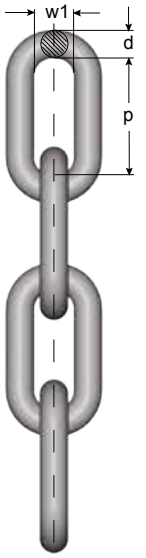


Mid-link Chain MLFZ, Grade 7

Heat treatment	Surface treatment	Marking
Quenched and tempered	Hot Dip Galvanized (HDG)	GF

Not for lifting purposes.

Art. No	Code	Link dimensions			Min. breaking load (tonnes)	Weight kgs/m	Delivery length
		d nom.	P »	w1 »			
Z801561	MLFZ-10-7	10	40	14	11	2.0	1 x 100 m
Z802335	MLFZ-13-7	13	55	20	18	3.3	1 x 100 m
Z801645	MLFZ-16-7	16	65	22	28	5.0	1 x 100 m
Z801477	MLFZ-19-7	19	75	29	40	7.1	1 x 100 m

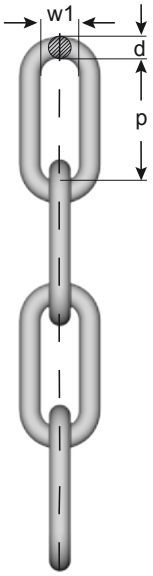


Long Link Chain LLZ, Grade 6/7

Heat treatment	Surface treatment	Marking
Quenched and tempered	Hot Dip Galvanized (HDG)	GF

Not for lifting purposes.

Art. No	Code	Link dimensions			Min. breaking load (tonnes)	Weight kgs/m	Delivery length
		d nom.	p »	w1 »			
Z487081	LLZ-6-7	6	35	10	3.9	0.6	1 x 100 m
Z801553	LLZ-9-7	9	53	15	9	1.4	1 x 100 m
Z360314	LLZ-11-7	11	64	18	13	2.1	4 x 100 m
Z800676	LLZ-13-6	13	80	22	16	2.9	3 x 100 m
Z801567	LLZ-16-6	16	100	27	24	4.6	1 x 100 m
Z801458	LLZ-19-6	19	100	28	34	6.5	1 x 100 m
Z801887	LLZ-22-6	22	120	36	46	8.7	1 x 50 m



Chain Manufacturing - Quality and Strength Requirements

Chains are divided into grades based on minimum nominal breaking load.

Chain Grade	Surface treatment	Code	Minimum breaking load N/mm²	Load factors			Typical use
				WLL	MPF	Breaking force	
8	Yellow U Black B	KL	800	1	2.5	4	General lifting (KL), Container lashing (LL). Extra heavy towing (ML), Lashing (KL, LL). Fishing (KL, ML, LL)
		ML	800	1	2.5	5	
		LL	800	1	2.5	5	
10	Blue A	KL	1000	1	2.5	4	General lifting

Testing and Quality Control- GrabiQ & Classic Chain (Grade 10 & 8)

In each step of the manufacturing of the chain, our systematic quality monitoring will ensure the highest safety and the longest life span in the product. Here are some especially important aspects of quality:

Material

The incoming material is supplied with test certificates only from qualified manufacturers and according to our stated material specifications.

Manufacturing

During forming and welding, the operators continuously control that the links meet the specified dimensions both before and after welding.

Single link samples are continuously mandrel tested on the weld. Shape, dimensions and deburring are then inspected visually.
Sample lengths are heat treated and then destruction load tested. Following these tests, the chain is heat treated.

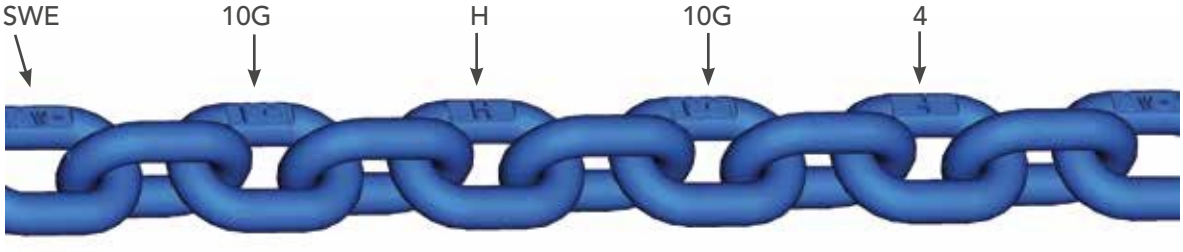
Hardening and tempering is carried out continuously in computer controlled induction furnaces with regular samplings.

Proof Load

The entire chain is test loaded. The test force for short link chain is 2.5 times the permitted working load limit. This gives the chain high safety in use. The chain is then visually inspected and cut into delivery lengths. A sample is taken from every length and tested to destruction. Dimensions and shape are also checked Dimensions and shape are also checked. All results are documented.

Marking and traceability

The international standards for lifting chain require that the chain is marked with Grade and Manufacturers ID. On our chain we stamp “SWE - 10G - H - 10G - 4”, where the “H” and the “4” is the combination for the traceability code. In case of the unlikely event of chain failure, we can trace the specific chain link back to the very batch and raw material as well as the year and place of manufacture.



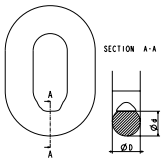
Use

- Never lift with a twisted chain.
- Use shortening hooks, knotting is not allowed.
- Use edge protectors to prevent sharp edges from damaging the chain.

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.

1. Overloaded chain slings must be taken out of service.
2. 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 nicks and burrs
3. Additional testing by magnetic particle inspection and/or proof loading at max. 2 x WLL may be carried out. The wear of the chain and component shall in no place exceed 10% of the original dimensions.
4. The chain link wear - max. 10% - is defined as the reduction of the mean diameter measured in two directions.



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Severe Environment

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 Lifting dealer.

Extreme Temperature Conditions

The in service temperature effects the WLL as following :

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 %

After short heat exposure, maximum one hour, the sling reverts to its fully capacity. 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. **For chain grade 10 the maximum in service temperature is 200° C.**

Definitions

Proof force:
Each individual 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.

Breaking force (BF):
The highest static force a chain is exposed to during test loading before breaking.

Working load limit (WLL):
The maximum permitted load on a lifting chain under normal (vertical) lifting conditions.

Total ultimate elongation:
The elongation of the test item, relative to the original length, at the moment of breaking.

Gunnebo Johnson Products

Crane Blocks • Snatch Blocks • Oilfield Blocks • Swivels • Overhaul Balls • Construction

GUNNEBO JOHNSON

Gunnebo Johnson Products

Snatch Blocks

Gunnebo Johnson Snatch Blocks have the convenient side opening feature. This is true even of our heavy duty top dead-end models, and makes it easy to reeve the block without removing any fitting from the end of the wire rope. Other features include choice of swivel hook, shackle, eye fittings or Tailboard Blocks which have no fittings at all.

Standard Features

- Rugged and reliable
- 4:1 design factor
- Easy-open side plates
- Metric rated
- Large hand nuts
- Retainer on latch pin
- Anchor shackle with retainer pin
- Bronze bushing

Optional Features

- Proof load
- Roller bearings
- Marine epoxy paint
- Heavy duty J-latch
- Larger sizes

Wide Range
Now over 250 models and sizes, from 2 to 30 tonnes. Sheave sizes from 80 to 600 mm in diameter. Multiple rope sizes and end fittings available.

Rugged
Johnson's famous durability is well established in the industry. These blocks stand up to the toughest applications, whether in blistering sun or under icy blizzard conditions.

Reliable
From built-in strength comes the reliability long associated with the Johnson name. These blocks are performers, day after day and year after year. American quality you can count on.

Many Choices
Singles, doubles, top dead end, towing, oilfield, pipe laying and general construction. Sizes and specific models for all.

Convenient
Large, easy to grip hand nuts on all models, especially on the smallest models. Makes it easier to open and close under all conditions without removing gloves, and easy to tap with a hammer to loosen or lock down.

Secondary Securement
All hand nuts and shackles are fitted with "R" pins as a secondary securement device, for example where inspection is limited or infrequent due to location or other factors.

Art.no.	Model	WLL (tonnes)	Sheave diameter	Description	Weight (kgs)
474602012QR3	SB2S3BS	2	3" / 80 mm	Suits 8 - 10 mm wire rope	2.3
474603016QR3	SB4S4BS	4	4" / 100 mm	Suits 10 - 13 mm wire rope	7.3
474620016QR3	SB4S6BS	4	6" / 150 mm	Suits 10 - 13 mm wire rope	9.5
474365024QR3	SB8S6BS	8	6" / 150 mm	Suits 16-20 mm wire rope	13.2
474377024QR3	SB8S10BS	8	10" / 250 mm	Suits 16-20 mm wire rope	19.5
474418028QR3	SB12S8BS	12	8" / 200 mm	Suits 20 - 22 mm wire rope	27.7
474424028QR3	SB12S10BS	12	10" / 250 mm	Suits 20 - 22 mm wire rope	33.6
474455028QR3	SB15S8BS	15	8" / 200 mm	Suits 20 - 22 mm wire rope	28.1
474461028QR3	SB1510BS	15	10" / 250 mm	Suits 20 - 22 mm wire rope	34.0
474731036QR3	SB20S16BS	20	16" / 400 mm	Suits 26 - 30 mm wire rope	43.1
474740040QR3	SB30S20BS	30	20" / 500 mm	Suits 30 - 32 mm wire rope	123.8

Single Sheave Snatch Block with Hook

Art.no.	Model	Description	Weight (kgs)
475092012QR3	SB2S3BH	WLL 2 MT, Sheave OD 3" / 80 mm, suits 8 - 10 mm wire rope	2.3
474655016QR3	SB4S4BH	WLL 4 MT, Sheave OD 4" / 100 mm, suits 10 - 13 mm wire rope	6.8
474601024QR3	SB8S8BH	WLL 8 MT, Sheave OD 8" / 200 mm, suits 16-20 mm wire rope	15.9
474577028QR3	SB12S8BH	WLL 12 MT, Sheave OD 8" / 200 mm, suits 20 - 22 mm wire rope	25.9
475131036QR3	SB20S10BH	WLL 20 MT, Sheave OD 10" / 250 mm, suits 26 - 30 mm wire rope	43.1

Manhandler Snatch Block

Gunnebo Johnson's Manhandler Snatch Blocks (MHSB) are suitable for personnel hoisting when properly incorporated into a compliant personnel hoist system and maintained in good working order.

See the *Manhandler Warnings* and *Use Limitations Brochure available* from Gunnebo Johnson Corp. and your distributor.

- Standard painted finish
- For lifting personnel
- Sealed roller bearings
- Interlocking internal design
- R-pins retainers
- Secondary tether attachment points

Art. no	Model	Wire rope mm	Sheave diameter mm	WLL kgs	Weight kgs
687431014	MHSB1S8RS	10 - 11	200	680	22

Galvanized Derrick Block

- 4 - 12 tonnes WLL
- Standard galvanized finish
- Handling slots in the body
- Large knock-off handles
- Interlocking internal design
- For lifting materials
- R-Pin retainers

Art. no	Model	Wire rope mm	Sheave diameter mm	WLL tonnes	Weight kgs
687710016	MHSB4S8TS	10 - 13	200	4	15
687334018	MHSB12S10TS	13 - 14	250	12	37.6

Swivel, jaw-jaw

Art.no.	Model	Description	Weight (kgs)
670665	3 JJM	3 T Thrust bearing swivels, jaw-jaw	3.6
670667	7 JJ	7 T Thrust bearing swivels, jaw-jaw	9.9
670668	12 JJ	12 T Thrust bearing swivels, jaw-jaw	18.9
670379	19 JJ	19 T Thrust bearing swivels, jaw-jaw	21.6

For availability, see pricelist

Oilfield Blocks

Gunnebo Johnson has been producing oilfield equipment for over five decades. Because of our expertise in sheaves and blocks, Gunnebo Johnson has become a respected manufacturer for the Petroleum industry. We know the needs and we have the know-how to fulfil them with quality lifting devices. High capacity, custom engineered oilfield blocks available upon request.


Tong Line Block


Laydown Block


Hayfork Pulley


Guy Line Block

Swivels

Standard designs are available in a wide variety of styles. Engineered for long life at a reasonable cost. Features include roller thrust bearings, recessed grease fittings and hooks of drop forged steel. All swivels have a 4:1 design factor. High capacity, custom engineered swivels available upon request. Heavy duty J-latch standard on hook models.


Eye and Eye


Eye and jaw


Jaw Hook


Eye Hook


Jaw Jaw

Open Wedge Sockets

Open Wedge Sockets combine positive attachment with optimum versatility. Easy-to-change Gunnebo Johnson Wedge Sockets are a high strength cast alloy steel with Charpy value of 34 Joules at -20 °C. Each socket accepts at least two different ductile iron wedges. This allows the socket to be used with more than one rope size. Together, wedge and body act as a vise which grips the wire rope and locks it into place. The headed attachment pin is standard and has a Charpy value of 34 Joules at -20 °C.

Overhaul Balls

Provide the overhaul weight necessary to counter bearing friction and winch-to-boom-tip line weight. Because these units must meet a wide range of field applications, we offer an equally wide range of unit sizes. It is in fact, one of the widest ranges available. Over 240 models; 3 - 30 tonnes WLL. Non-swivel balls are also available.

Standard Features

- 3 to 30 tonnes
- 4:1 design factor
- Heavy duty J-Latch standard

Optional Features

- High capacity, custom engineered balls available upon request.


Split Ball


Non-Swivel


Top Swivel


Bottom Swivel


Gunnebo BK Safety Hook

For availability, see pricelist

Wire Rope Sheaves

Gunnebo Johnson sheaves are a highly trusted and popular product, both in its own right as well as the original equipment most preferred by major O.E.M. accounts. Sheaves by Gunnebo Johnson fall into two major categories:

» First is our wide range of conventional cast steel and ductile iron sheaves which range in size from 3 to 14 inches in O.D.

» Second is the revolutionary ForgeFab® – a superior strength line of wire rope sheaves which can be supplied without long delays. The ForgeFab® sheaves will add value through increased product life, for the sheave as well as the wire rope, and gives the user the advantage of flexibility in field.

Standard features

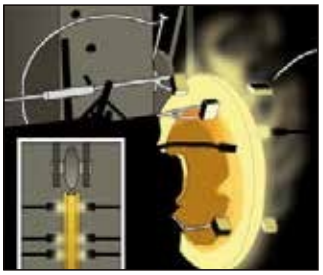
- 80 - 2740 mm sheave diameters
- 6 - 80 mm wire rope sizes
- 4:1 design factor
- Cast iron, ductile iron, cast steel, ForgeFab® steel types.

Optional features

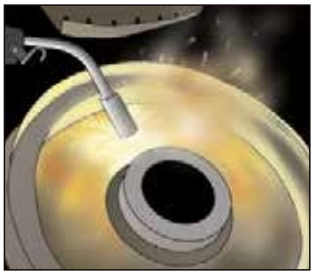
- Custom designs to customer shaft, bearing mounting, hub, sheave O.D. or wire rope size requirement.
- Electroplate inorganic zinc compound and other corrosion resistant coatings available.
- Hub-located grease fittings
- Modifications as required to API and other applicable industry standards.
- Special shaft, furnished for any sheave listed.
- AISE No. 6 specifications.
- Cold weather properties.

What Makes ForgeFab® Superior?

Each ForgeFab® sheave begins as driven, precision disc cut from proprietary chemistry alloy steel plate.



The steel disc is heated to forging temperature and its edge rotated against a system of staged rollers to forge the sheave rim and wire rope groove.



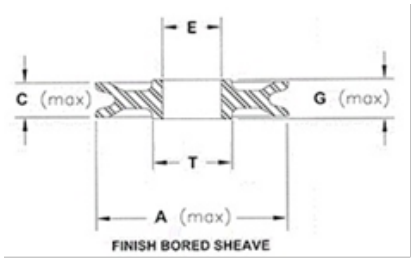
A precisely machined hub is arc welded to the forged disc. A variety of welding techniques is used, including: fillet, submerged arc, partial penetration and full penetration, depending on the application.

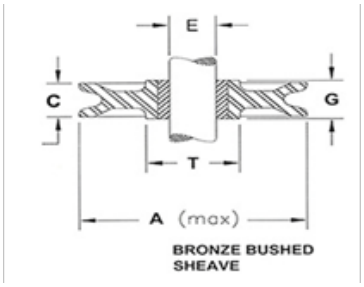
The result: A precision built ForgeFab® sheave, resistant to wear giving a long product life span as well as decreased wear on the wire rope.

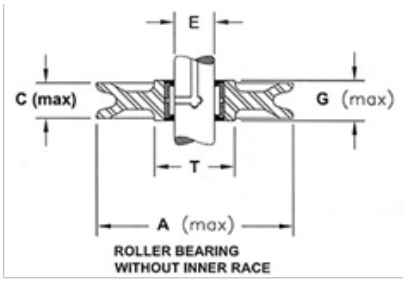
Quotation of Sheaves

To be able to quote Gunnebo Johnson Sheaves we need as much as possible of the following information provided:

- Application
- Quantity
- Sheave outside diameter (A)
- Tread diameter or Pitch diameter
- Wire rope diameter
- Is Flamed Hardened Groove required (standard feature on16”and up)?
- Rim width (C)
- Hub width (G)
- Hub Outside Diameter (T)
- Bore size if plain or finished bore (E) or shaft size with bronze bush or bearing (E)
- Bearing type (if required); e.g. Bronze bushed or other type of bearing
- Is there any weight restrictions?
- Is grease fitting in hub is needed?
- Is there any paint or finish requirements?
- Line Load, Line Speed and Degree of Wrap







For availability, see pricelist

Quick Reeve - Mobile Crane Block

Standard Features

- Quick release, zinc plated, rope retention pin meets OSHA requirements for rope retention. Cannot be completely removed from block to avoid pin loss.
- Johnson J-Latch™ heavy duty, steel, lockable, spring loaded latch meets OSHA personnel lifting requirements.
- The Johnson J-Latch™ provides a fast hook deformation inspection point.
- Available tonnage capacities from 5 - 300 tonnes. Larger capacities available upon request.
- Quick Reeve™ upright design rests on its own hook for a stable base while reeving.
- No bulky, drop down, trap door to handle or damage.
- Wire rope end fitting will pass through block without removal from wire rope.

Fixed Bail Construction and Marine Rigging Blocks

Beginning with 100 standard models, you are assured of selections that fit your every need. The lowest weight to capacity ratios, the quickest rigging and the easiest maintenance are a few additional benefits that prove once again that Johnson Blocks are consistent in quality and value.

Standard Features

- 10 to 135 tonnes capacity
- 4:1 design factor
- 1 to 6 sheaves
- Full coverage side plates and centre plates
- Top dead-end shackle
- Tapered roller bearings
- Oval pattern side plates

Optional Features

- Bronze bushings
- Diamond pattern side plates
- Fully galvanized for corrosion resistance
- High capacity, custom engineered blocks available upon request

Shorty "J" Crane Blocks

Shorty "J" represents the broadest line of standard crane blocks in the industry. In all, this company manufactures more than 1500 standard models of crane blocks not including options.

Standard Features

- 5 - 450 tonnes capacity
- 4:1 design factor
- 1 - 8 sheaves
- 250 - 760 mm sheave diameters
- Reeving guides for all models
- Bronze bushed and roller bearing sheaves
- Direct-channel sheave bearing lubrication through centre pin
- Flame hardened grooves on sheave sizes 400 - 760 mm diameters
- Dual action (swing/swivel) roller thrust bearing hooks
- Forged steel hooks, 3 - 30 tonnes
- Total disassembly capacity

Optional Features

- Forged steel hooks, 35 - 300 tonnes
- Cast alloy steel duplex hooks with bar latch 25 - 1750 tonnes
- Forged steel duplex hooks
- Anti-rotation locking devices, all models
- Swivel safety anchor shackles, all models
- Sheave shrouds, all models
- All models have detachable cast iron and steel cheek weights.
- Proof test and certification, radiographic, magnetic particle, and other non-destructive testing to specification by customer

Custom Engineered Products

Custom engineering is a Gunnebo Johnson speciality. We provide quotations and product delivery of custom engineered blocks, as well as a wide variety of lifting tackle, in the shortest time possible. Gunnebo Johnson blocks are available to 3000 tonnes and above capacity with the design factor to your specifications. Proof testing is available to 500 tonnes.

Bottom Fitting Options

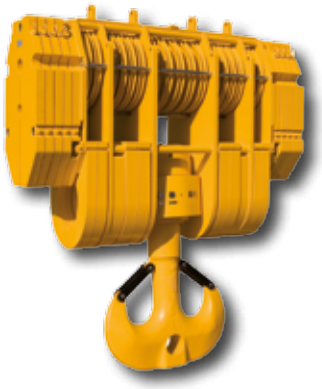
- Single hooks
- Duplex hooks
- Quad hooks
- Fixed shackles
- Swivel shackles
- Custom-fabricated fittings

Corrosion-Resistant Finishes Available

- Zinc plating
- Hot dip galvanize and carbo-zinc 11
- Three part marine epoxy
- Dimetcote No. 3 and 6
- Various mil specs.

Mega Lift 3000 tonnes WLL Crane Ship Lifting System

500 tonnes WLL Crane Block Duplex Hook



700 tonnes WLL Flexi-Weight™ Block Duplex Hook Removable Weights

600 tonnes WLL Offshore Service Block. Quadruplex Hook

5

For the full range of Gunnebo Johnson products, see the Johnson Product Catalog. Contact your local sales rep for a copy, or see our web: www.gunneboindustries.com

For availability, see pricelist

Polyester Lifting

Sling • Webbing

GUNNEBO Industries

Polyester Lifting

Technical Information

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

Roundsling, Single Cover EN 1492-2

Max WLL: 1–12 tonnes.

Gunnebo Lifting Roundsling with seamless single cover and protected label, made of 100% high tensile polyester, close-woven sealed material for high wear resistance.

CE-marked

Safety factor 7:1

Gunnebo Lifting roundsling for safe lifting - marked with Gunnebo Lifting manufacturer ID.

Eff. length	WLL 1 tonnes		WLL 2 tonnes		WLL 3 tonnes		WLL 4 tonnes		WLL 5 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
0.5	M57P101	0.2	M57P201	0.3	M57P301	0.4				
1	M57P102	0.4	M57P202	0,5	M57P302	0.6	M57P402	0.8	M57P502	1
1,5	M57P103	0.5	M57P203	0.7	M57P303	1.1	M57P403	1.2	M57P503	1.4
2	M57P104	0.7	M57P204	1.1	M57P304	1.3	M57P404	1.6	M57P504	1.9
2.5	M57P105	0.7	M57P205	1.7	M57P305	1.4	M57P405	2	M57P505	2.3
3	M57P106	1	M57P206	1.5	M57P306	1.8	M57P406	2,.3	M57P506	2.7
4	M57P108	1.4	M57P208	2	M57P308	2.6	M57P408	3.1	M57P508	3.6
5	M57P110	1.9	M57P210	2.5	M57P310	3.2	M57P410	3.9	M57P510	4.4
6	M57P112	2.4	M57P212	2.8	M57P312	3.9	M57P412	4.7	M57P512	5.3

Eff. length	WLL 6 tonnes		WLL 8 tonnes		WLL 10 tonnes		WLL 12 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	M57P604	2.3	M57P804	3.1	M571004	3.9	M571204	4.9
2.5	M57P605	3.4	M570805	3.8	M571005	4.8	-	
3	M57P606	3.4	M57P806	4.5	M571006	5.8	M571206	7.3
4	M57P608	4.6	M57P808	6	M571008	7.7	M571208	9.6
5	M57P610	5.7	M57P810	7.5	M571010	9.6	M571210	12
6	M57P612	6.8	M57P812	9	M571012	11.4	M571212	14.2
7	-	-	-	-	M571014	13.2	M571214	16.5
8	-	-	-	-	M571016	15.1	M571216	18.8

Other sizes can be produced upon request.

Roundsling, Double Cover EN 1492-2

WLL: 15–30 tonnes

Gunnebo Lifting Roundsling with side seam, double cover, made of 100% high-tensile polyester, close-woven sealed material for high wear resistance.
CE-marked.

Safety factor 7:1

Gunnebo Lifting roundsling for safe lifting marked with Gunnebo Lifting manufacturer ID.

Eff. length	WLL 15 tonnes		WLL 20 tonnes		WLL 25 tonnes		WLL 30 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	M471504	6.8	-			-	-	
2.5	M471505	8.5	-			-	-	
3	M471506	10.2	M472006	15		-	-	
4	M471508	13.5	M472008	20	M472508	25.2	M473008	32
5	M471510	16.9	M472010	24.9	M472510	31.5	M473010	38.7
6	M471512	20.2	M472012	29.8	M472512	37.7	M473012	46.4

Webbing Sling Duplex with folded and sleeved eyes

EN 1492-1

WLL: 1 – 15 tonnes.
Gunnebo Lifting flat webbing slings with eyes, made of 100% high-tensile polyester, close woven sealed material for high wear resistance.
According to standard specifications.
Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.

Eff. length m	WLL 1 tonnes Web. width 30 mm		WLL 2 tonnes Web. width 60 mm		WLL 3 tonnes Web. width 90 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M37P101	0.3	M37P201	0.6	-	
2	M37P102	0.5	M37P202	1	M37P302	1.4
3	M37P103	0.7	M37P203	1.3	M37P303	2
4	M37P104	0.9	M37P204	1.7	M37P304	2.5
5	M37P105	1	M37P205	2	M37P305	3.1
6	M37P106	1.3	M37P206	2.4	M37P306	3.6
8	M37P108	1.4	M37P208	2.8	M37P308	4.6
10	M37P110	1.8	M37P210	3.7	M37P310	5.7
12	M37P112	2.1	M37P212	4.8	M37P312	6.1

Eff. length m	WLL 4 tonnes Web. width 120 mm		WLL 5 tonnes Web. width 150 mm		WLL 6 tonnes Web. width 180 mm		WLL 8 tonnes Web. width 240 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
6	M37P406	5.1	M033506	6.7	M033606	6.7	M033806	9.1
8	M37P408	6.7	M033508	8.9	M033608	8.8	M033808	11.7
10	M37P410	8.4	M033510	11	M033610	10.8	M033810	14.5
12	M37P412	9.7	M033512	13.1	M033612	12.9	M033812	17.3

Other sizes can be produced upon request.

All dimensions in mm

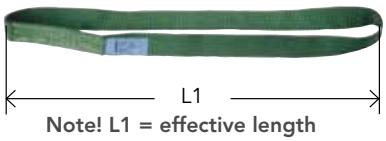
Webbing sling - Endless

EN 1492-1

WLL: 1–4 Tonnes.

- Gunnebo Lifting flat webbing endless sling made of 100% high-tensile polyester, close-woven sealed material for high wear resistance.
- CE-marked.
- Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.

Eff. length	WLL 1 tonnes Webb. width 30 mm		WLL 2 tonnes Webb. width 60 mm		WLL 3 tones Webb. width 90 mm		WLL 4 tonnes Webb. width 120 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M30P102	0.2	M30P202	0.4	M030030	0.7	M030040	0.9
1.5	M30P103	0.3	M30P203	0.6	M30P303	0.9	M030041	1.3
2	M30P104	0.4	M30P204	0.8	M30P304	1.2	M030042	1.6
2.5	M30P105	0.5	M30P205	1	M30P305	1.5	M030043	2
3	M30P106	0.6	M30P206	1.2	M30P306	1.7	M030044	2.4
4	M30P108	0.7	M30P208	1.5	M30P308	2.3	M030045	3.1
5	M030008	0.9	M30P210	1.9	M30P310	2.2	M030046	3.8
6	M030009	1.1	M30P212	2.3	M30P312	3.4	M030047	4.5



Note! L1 = effective length

Other sizes can be produced upon request.

Polyurethane Protective Sleeves

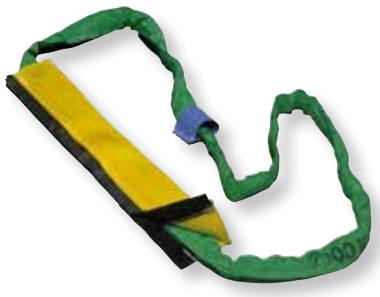
Protective sleeves made of polyurethane for roundslings and flat webbing slings can be supplied upon request.

Art. no.	Inside measurement width x depth	For webbing width	Length	Suits
M890611	32 x 11	30 mm	1000	Web. sling 1 tonnes
M890612	32 x 11	30 mm	2000	Web. sling 1 tonnes
M890613	62 x 11	60 mm	1000	Web. sling 2 tonnes
M890614	62 x 11	60 mm	2000	Roundsling 1 tonnes
M890615	105 x 11	90 mm	1000	Web. sling. 3 tonnes
M890616	105 x 11	90 mm	2000	Roundsling 4 tonnes
M890623	130 x 11	120 mm	1000	Web. sling 3 tonnes
M890624	130 x 11	120 mm	2000	Roundsling 5 tonnes
M890625	156 x 11	150 mm	1000	Web. sling 4 tonnes
M890626	156 x 11	150 mm	2000	Roundsling 6/8 tonnes

Protective Sleeve for Roundslings

Protective sleeve made of polyester for fitting on roundslings. Velcro tape for easy attachment, no sewing necessary.

Art. no.	Roundsling (t)	Length
M040124	1 - 3	500
M040125	4 - 8	500
M040126	1 - 3	1000
M040127	4 - 8	1000



Other sizes can be produced upon request.

All dimensions in mm

Recommended Contact Surface for Polyester Roundsling 7:1

Tonnes	Min. diameter bolt	Min. free contact width
1	23	35
2	32	40
3	35	47
4	38	50
5	42	53
6	46	60
8	50	67
10	56	75
12	58	80
15	70	96
20	78	104
25	84	112
30	90	120
35	96	128
40	102	136
50	120	160

Smaller diameter connections and insufficient free contact width, may adversely affect lifting safely and cause serious damage to the roundsling.

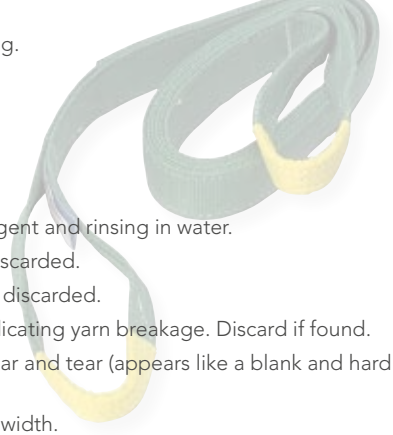
Polyester Lifting Information

When using the sling for the first time, read the manufacturers certificate and instructions/ education.

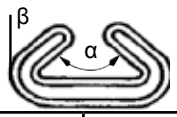
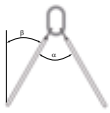
1. Always plan the lift carefully before proceeding with the operation.
2. Always check that the length and WLL stated on the sling label are suitable for the intended use.
3. Examine the sling for damage and defects before use. Never use a damaged or defective sling.
4. Never overload!
5. Make sure that the load is lifted vertically, centred above the point of gravity.
6. Use identical slings in case of multi- legged lifting and take the lifting angles into account when choosing equipment.
7. Do not tie knots on the slings to shorten or join them.
8. Never lift with twisted or entwined slings.
9. Place load-bearing seams and joints between the hook and the load.
10. Protect the sling from sharp edges using edge protection or protective sleeves.
11. Avoid shock loading and snatch lifting.
12. Do not drag the sling, with or without load, on the ground.
13. Keep polyester slings away from alkalis (for example ammonia and caustic soda). If in doubt about exposure to chemicals, check with your supplier.
14. Do not use polyester slings in temperatures over +100°C.
15. Examine slings after use and remove from service if visible damage is discovered.
16. Do not stand under the suspended load or between load and other objects in proximity, to avoid being injured from falling or moving load.
17. To avoid injuries, keep hands, feet and body away from sling, when lifting.

Maintenance

1. Store the equipment in a dry place.
2. Ensure that seams and labelling are undamaged.
3. The equipment can be cleaned by washing in a petroleum-based detergent and rinsing in water.
4. Roundslings with damaged sleeving, allowing dirt to enter, should be discarded.
5. Roundslings with broken yarns as a result of damaged sleeving must be discarded.
6. Roundslings must be inspected regularly for knots and irregularities, indicating yarn breakage. Discard if found.
7. Webbing slings: Discard in case of serious damage due to friction or wear and tear (appears like a blank and hard or "hair-like" surface.
8. Webbing slings: Discard if/when edge wear/ damage exceeds 5% of its width.
9. Webbing slings: Repair or discard when eye sleeving is worn out.
10. Slings must be regularly inspected, according to local statutory requirements. Records of inspections must be maintained.



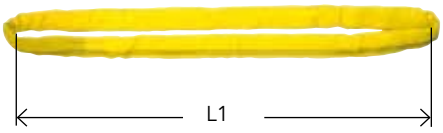
Working Load Limits (tonnes)

	Straight lift	Choked lift	Straight basket hitch			Two part choker		Three and four part choker	
									
			Parallel	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°
Cover colour	Working Load Limits								
	1	0.8	2	1.4	1	1.4	1	2.1	1.5
Purple	1	0.8	2	1.4	1	1.4	1	2.1	1.5
Green	2	1.6	4	2.8	2	2.8	2	4.2	3
Yellow	3	2.4	6	4.2	3	4.2	3	6.3	4.5
Grey	4	3.2	8	5.6	4	5.6	4	8.4	6
Red	5	4	10	7	5	7	5	10.5	7.5
Brown	6	4.8	12	8.4	6	8.4	6	12.6	9
Blue	8	6.4	16	11.2	8	11,2	8	16.8	12
Orange	10	8	20	14	10	14	10	21	15
Orange	12	9.6	24	16.8	12	16.8	12	25	18
Orange	15	12	30	21	15	21	15	31.5	22.5
Orange	20	16	40	28	20	28	20	42	30
Orange	25	20	50	35	25	35	25	52.5	37.5
Orange	30	24	60	42	30	42	30	63	45
Orange	35	28	70	49	35	49	35	73.5	52.5
Orange	40	32	80	56	40	56	40	84	60
Orange	50	40	100	70	50	70	50	105	75
Orange	60	48	120	84	60	84	60	126	90

Properties of polyester fibre

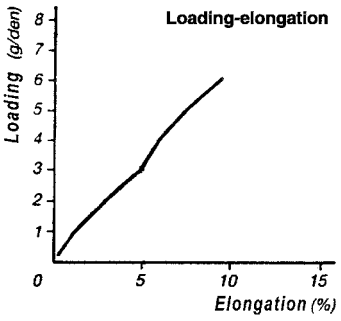
Physical properties

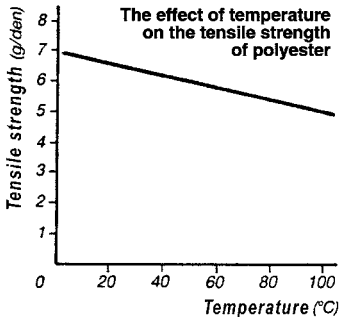
Specific weight: ca 1.38
Melting point: 260°C
Sensitivity to low temperature: No effect down to -40°C
Aging: Very low



L1 = Effective length

Examples of the properties of polyester fibre





Elongation properties webbing

Polyester webbing has an elongation to break of approximately 15-20%. The first time a webbing lashing or lifting assembly is loaded, it can elongate slightly when the fibres settle.

Chemical properties

Polyester offers good resistance to most acids provided the concentration does not exceed 50%.

Lashing and Transport

GUNNEBO
Industries

Lashing

Technical Information

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

Chain Tensioner - GT

The chain tensioner from Gunnebo Lifting, GT, is integral in one set. It is made of light weight Grade 10 material and the ratchet handle contributes to a fast and ergonomic lashing procedure. The GT is fitted with safety pins to prevent unintended release of the threaded end fittings.

Our chain tensioner is designed to be compatible with the GrabiQ product range, enabling the choice of robust end-hooks with latches. Can also be provided as approved for lifting purposes.

Unique Benefits With our Chain Tensioner

Short Handle

- Fully protected ratched mechanism with 8 steps per 90 degree pull, enabling use in very narrow spaces.
- Easy to change direction
- The rubber handle decreases the risk of slipping and is convenient in cold climates

Open Design

- For easier and faster cleaning and lubrication
- Allows dirt to fall through instead of building up
- Two drain holes in the body prevent water residue.

Trapezoidal Thread

- Makes the thread less sensitive to dirt and particles
- Low-friction treated for trouble free operation
- Makes lashing faster
- Safety pins prevents unintended unwinding

All dimensions in mm

The Gunnebo Lifting Chain Lashing System

Gunnebo Lifting offers a complete chain lashing system approved according to EN 12195-3. The system has been developed with focus on the user's needs and working environment, and with safety as highest priority. The unique Midgrab chain shortener saves valuable time and effort, and is a natural part of an efficient and effective chain lashing system.

End Fitting

Lashing hooks in grade 10, such as the EGKN Sling Hook with a heavy duty latch or the GBK Griplatch Safety Hook. Marked with positive indication of the manufacturer, product designation, size, batch number and grade.

ID-tag

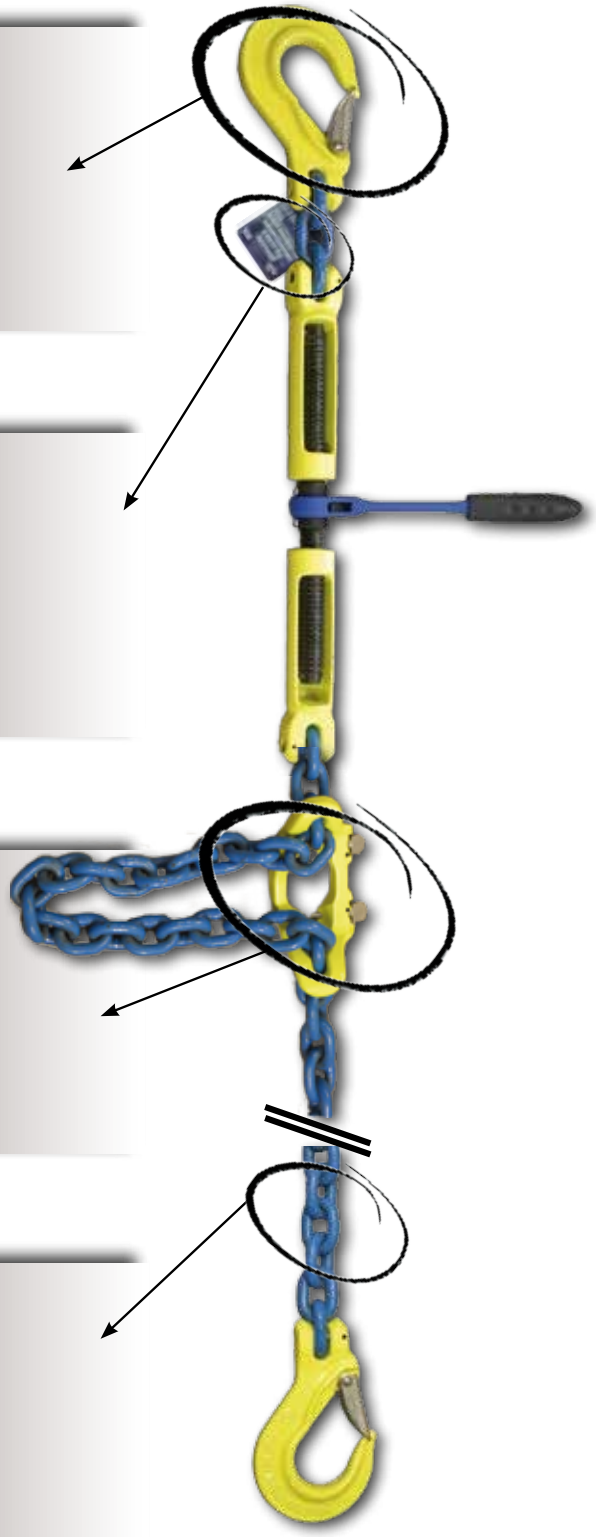
The ID-tag must state the lashing Standard, capacity, tension force, traceability and name of manufacturer. It must also clearly say that the set is for lashing only, lifting is prohibited

Shortening Function

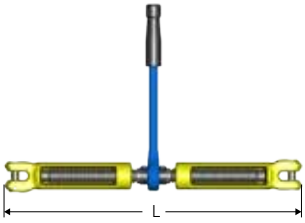
The Midgrab offers instant mounting on any part of the chain, with the ability to shorten the chain in either direction. It is designed to prevent the chain from disengaging. Marked with positive indication of the manufacturer, product designation, size, batch numberand grade

Chain

Gunnebo Lifting's high tensile short link chain, grade 10 = 1000 N/mm^2 type KLA-10-10, LC = 8000 daN. Surface treatment: Powder coated. ID-marking of the chain: 10G

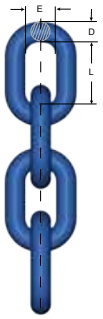


All dimensions in mm



Chain Tensioner GT

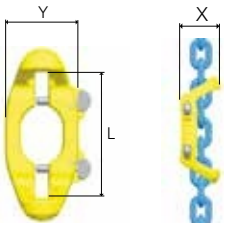
Model	Lashing capacity (kN)	STF (daN)	L = Min. length (mm)	L = Max. length (mm)	Weight (kgs)
GT-8-10	50	2400	400	600	3.3
GT-10-10	80	2400	400	600	3.3



Chain GrabiQ Grade 10

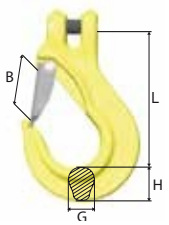
Short link, KL

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	D nom. mm	L » mm	E » mm	Weight kgs/m	MPF kN
Z802301	KLA-8-10	2.5	50	8	24	11	1.5	63
Z801921	KLA-10-10	4	80	10	30	14	2.3	100



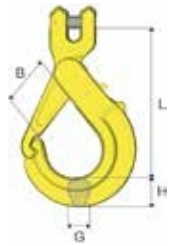
Midgrab MIG with locking pins

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	L	X	Y	Weight kgs
B14303	MIG CC-8-10	2.5	50	95	50	60	0.7
B14313	MIG CC-10-10	4.0	80	125	70	77	1.1



Sling Hook EGKN

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	L	B	G	H	Weight kgs
B14461	EGKN-8-10	2.5	50	95	28	17	23	0.5
B14462	EGKN-10-10	4	80	121	35	23	31	1



Safety Hook GBK

Art. no.	Code	WLL tonnes	Lashing capacity (kN)	L	B	G	H	Weight kgs
Z100759	GBK-8-10	2.5	50	119	36	20	22	0.8
Z100760	GBK-10-10	4	80	150	47	22	29	1.4

All dimensions in mm

Lashing 4 - 10 Tonnes

European standard EN 12195-2

Art. no.	Description	Colour	Width	Breaking strength (t)	EN 12195-2 LC daN	EN 12195-2 STF daN
Complete lashing						
M275141	0.4+9.5 m with wire hook	Yellow	75	10	3000	305
Complete lashing						
M135098	0.4+7.5 m with wire hook	Blue	50	5	2000	340
M136090	0.4+9.5 m with wire hook	Blue	50	5	2000	340
Complete lashing						
M134098	0.4+ 7.5 m wire hook	Blue	50	4	1700	340
M134090	0.4+9,5 m wire hook	Blue	50	4	1700	340
M24595W	10m endless	Blue	50	5	4000	340
Ratchet with short straps						
M135051K	0.4m with wire hook	Blue	50	4 & 5	200	

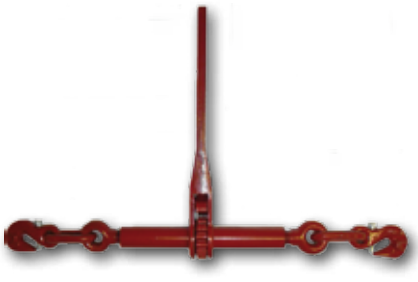
Lashing 1 - 4 Tonnes

European standard EN 12195-2

Art. no.	Description	Colour	Width mm	Breaking strength (t)	EN 12195-2 LC daN	EN 12195-2 STF daN
Complete lashing						
M140090	0.5+4.5 m with wire hook	Orange	35	2.5	1000	180
M140091	0.5+5.5 m with wire hook	Orange	35	2.5	1000	180
M14P00W	5 m endless (single web.)	Orange	35	2.5	1000	
Complete lashing stainless						
M22210K	0.4+9.5 m with wire hook	Blue	50	3	1500	305
Complete lashing						
M150101	0,4+3,6 m with sewn-on eyes	Blue	26	1.5	700	150
M150102	0,4+3,6 m with wire hook	Blue	26	1.5	700	150
M150110	0,5+4,5 m with wire hook	Blue	26	1.5	700	150
M150103	5 m endless	Blue	26	1.5	700	150
Complete lashing						
M151002	0.4+3.6 m with sewn-on eyes	Orange	25	0.7	300	100
M151003	0.4+3.6 m with wire hook	Orange	25	0.7	300	100
M151005	0.4+4.5 m with wire hook	Orange	25	0.7	300	100
M151001	5 m endless	Orange	25	0.7	300	100

Rigging Screw with Ratchet Handle

Art. no.	Code	For chain diam. mm	Breaking strength approx. tonnes
G009860018	RS 15 T	10 mm	12.6
G009860023	RS 20 T	13 mm	21.6



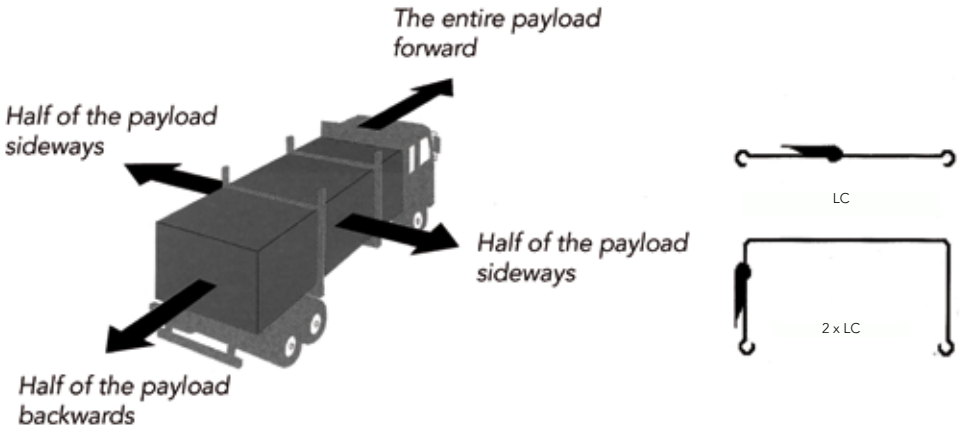
7

All dimensions in mm

Information for Use and Maintenance of Web Lashing

1. In selecting and using web lashings, consideration shall be given to the required lashing capacity, taking into account the mode of use and the nature of the load to be secured. The size, shape and weight of the load, together with the intended method of use, transport environment and the nature of the load will affect the correct selection. For stability reasons free-standing load units must be secured with a minimum of one pair of web lashings for frictional lashing and two pairs of web lashing for diagonal lashing.
2. The selected web lashings shall both be strong enough and of the correct length for the mode of use. Basic lashing rules:
   - Plan the fitting and removal operations of lashing before starting a journey
   - Keep in mind that during journeys parts of the load may have to be unloaded
   - Calculate the number of web lashings
   - Only web lashings designed for frictional lashing, marked with STF on the label, are to be used for frictional lashing
   - Check the tension force periodically, especially shortly after starting the journey.
   - The handle must be in a closed position during transport.
3. Because of different behaviour and elongation under load conditions, different lashing equipment (i.e lashing chain and web lashings) shall not be used to lash the same load. Consideration shall also be given to ancillary fittings (components) and lashing devices in the load restraint assembly are compatible with the web lashing.
4. During use flat hooks shall engage over the complete width of the bearing surface of the strap.
5. Release of the web lashing: Care should be taken to ensure that the stability of the load is independent of the lashing equipment and that the release of the web lashing does not cause the load to fall off the vehicle, thus endangering the personnel. If necessary, attach lifting equipment for further transportation, before releasing the tensioning device in order to prevent accidental falling and/or tilting of the load.
6. Before attempting to unload, the web lashings shall be released so that it can be lifted freely from the load platform.
7. During loading and unloading attention has to be paid to proximity of any low overhead power lines.
8. The materials from which web lashings are manufactured have a selective resistance to chemical attack. Seek the advice of the manufacturer or supplier if exposure to chemicals is anticipated. It should be noted that the effects of chemicals may increase with rising temperature. Polyester has good resistance to mineral acids but is attacked by alkalis. Solutions of acids or alkalis which are harmless may become sufficiently concentrated by evaporation to cause damage. Take contaminated webbings out of service at once, thoroughly soak them in cold water, and dry naturally.
9. Web lashings complying with EN 12195-2 are suitable for use in the following temperature ranges: – 40 °C to + 120 °C for polyester (PES). These ranges may vary in a chemical environment. In this case the advice of the manufacturer or supplier shall be sought.
10. Changing the environmental temperature during transport may affect the forces in the web lashing. Check the tension force after entering warm areas. Web lashings shall be rejected or returned to the manufacturer for repair if they show any signs of damage. The following criteria are considered to be signs of damage:
    - Only web lashings bearing identification labels should be repaired.
    - If there is any accidental contact with chemical products, a web lashing shall be removed from service and the manufacturer or supplier shall be consulted
    - for web lashings (to be rejected): tears, cuts, nicks and breaks in load bearing fibres and retaining stitches; deformations resulting from exposure to heat
    - for end fittings and tensioning devices: deformations, splits, pronounced signs of wear, signs of corrosion.
11. Care should be taken that the web lashing is not damaged by the sharp edges of the load on which it is used. A visual inspection before and after each use is recommended.
12. Only legibly marked and labelled web lashings shall be used.
13. Web lashings shall not be overloaded: Only the maximum hand force of 500 N (50 daN on the label; 1 daN _ 1 kg) shall be applied. Mechanical aids such as levers, bars etc. as extensions are not to be used unless they are part of the tensioning device.
14. Never use a knotted web lashing.
15. Damage to labels shall be prevented by keeping them away from sharp edges of the load and, if possible, from the load itself.
16. The webbing shall be protected against friction, abrasion and damage from loads with sharp edges by using protective sleeves and/or corner protectors.

The lashing must take:



Gunnebo Lifting lashings with a breaking load of 500 kg and above are clearly marked with labels.

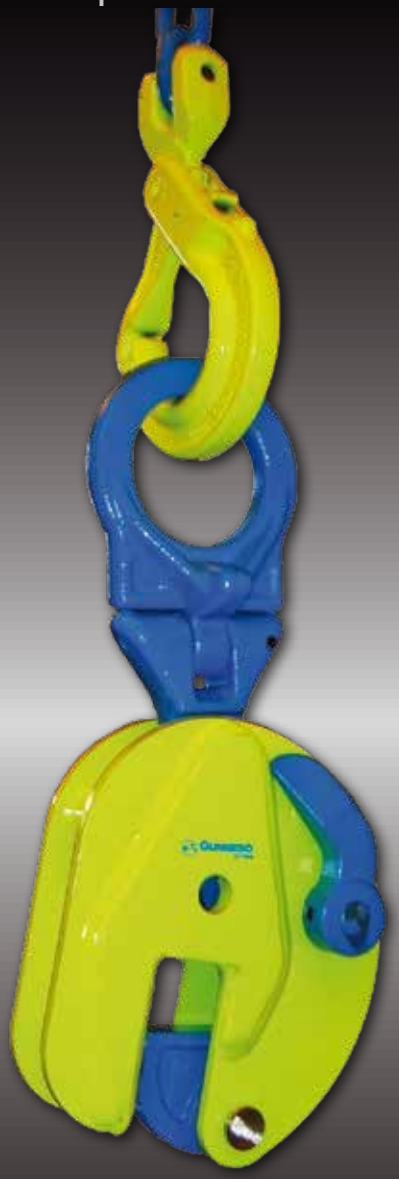
The dimensioning of a lashing arrangement must be based on local regulations

Technical Explanations for: Standard EN 12195-2

LC = Lashing capacity:	Maximum force for use in straight pull that a web lashing is designed to sustain in use.
Safety factor:	2:1 complete system and metal parts. 3:1 non-sewn polyester webbing.
Elongation:	Maximum 7% when polyester webbing subjected to the LC.
Marked:	Traceability code similar to lifting products. A protected label ensures traceability at all circumstances.

Clamps

Vertical Clamps • Horizontal Clamps • Pipe Clamps •
Screw Clamps • Drum Clamps

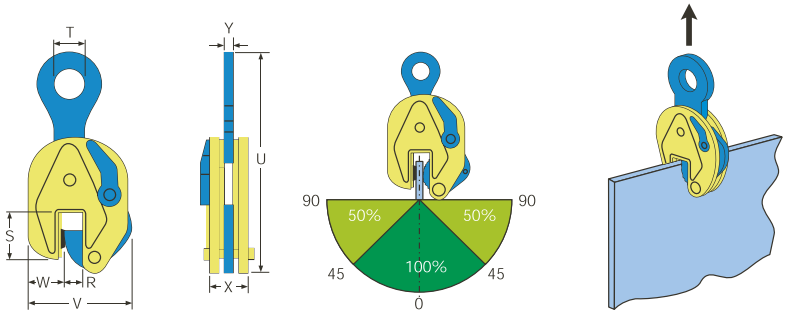


GUNNEBO
Industries

Clamps

Vertical Clamps, Standard, CV / CVS

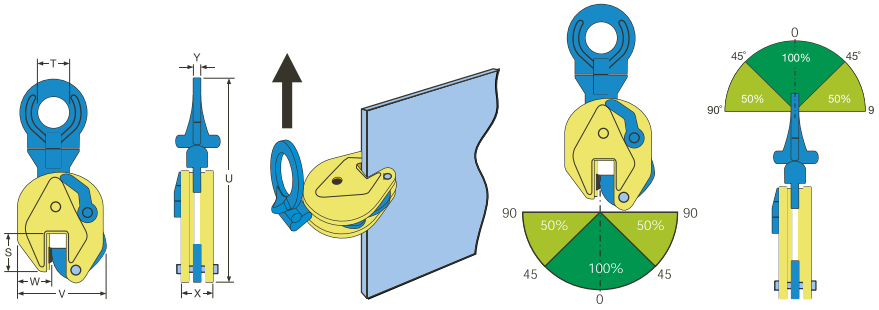
- For vertical lifting and transportation of steel plates and structures
- Equipped with safety mechanism ensuring the clamp does not slip when lifting force is applied or load is lowered
- Clamp can be locked in closed as well as open position
- Lifting capacity and jaw opening clearly marked in the body
- Type CVS are supplied with enlarged jaw opening
- Minimum WLL is 10% of the maximum WLL



Art. no.	Code	Capacity kgs	Jaw opening (mm)	S	T	U	V	W	X	Y	Weight kgs
Clamps available from stock, GrabiQ colours											
G005627398	0.75 CV	750	0 - 13	47	30	205	100	35	37	10	1.5
G005627400	1 CVE	1000	0 - 25	55	45	265	142	38	47	15	3.6
G005627407	2 CVE	2000	0 - 35	80	65	335	185	55	56	17	6.5
G005627402	3 CVE	3000	0 - 35	80	65	335	185	55	56	17	6.7
Clamps available on request, standard colour: red/yellow											
G005627399	1 CV	1000	0 - 18	55	45	265	125	38	47	15	3.6
G005627401	1.5 CV	1500	0 - 20	80	65	335	165	55	56	17	6.3
G005627403	4.5 CV	4500	0 - 25	85	70	430	200	60	77	20	14.8
G005627404	4.5 CVE	4500	0 - 45	85	70	430	230	60	77	20	15.9
G005627405	6 CV	6000	0 - 32	114	75	490	225	78	78	20	18.6
G005627409	7.5 CV	7500	0 - 40	112	75	530	245	76	86	20	24
G005627406	7.5 CVE	7500	0 - 55	112	75	530	267	70	86	20	25
G005627415	9 CV	9000	0 - 55	112	75	530	267	70	86	20	26
G005627513	12 CV	12000	0 - 52	148	85	617	295	100	94	44	42
G005627514	15 CV	15000	0 - 76	159	86	760	375	135	105	50	71
G005627515	17 CV	17000	0 - 76	159	86	760	375	135	105	50	71
G005627516	20 CV	20000	0 - 80	195	100	880	465	150	140	66	140
G005627517	25 CV	25000	5 - 85	195	100	880	465	150	140	66	140
G005627518	30 CV	30000	10 - 90	195	100	880	465	145	140	66	145
G005627411	6 CVS	6000	40 - 90	115	75	490	275	70	78	20	22
G005627412	7.5 CVS	7500	28 - 62	110	75	525	315	70	82	20	26
G005627413	9 CVS	9000	50 - 100	110	75	525	315	70	82	20	27
G005627524	12 CVS	12000	50 - 100	153	86	615	345	100	94	44	46
G005627525	15 CVS	15000	80 - 150	175	86	755	450	136	106	50	77
G005627526	20 CVS	20000	80 - 150	185	100	875	640	153	140	66	145
G005627527	25 CVS	25000	80 - 150	185	100	875	640	156	140	66	145
G005627528	30 CVS	30000	80 - 150	185	100	880	640	153	155	62.5	148

Vertical Clamps, Standard, CVU / CVEU

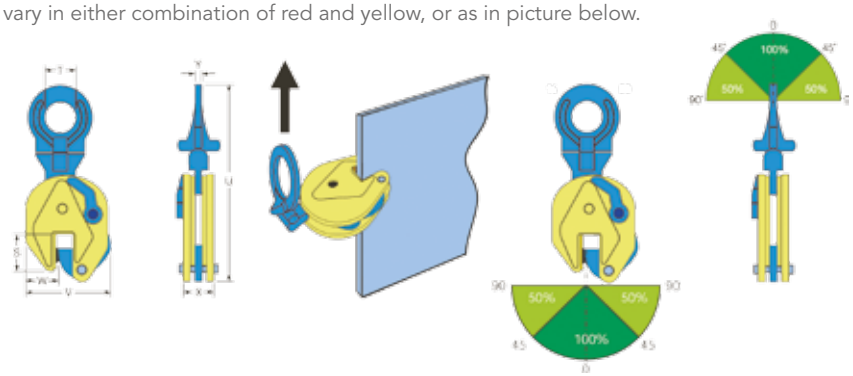
- For lifting and transportation of steel plates and structures from all positions (horizontal, vertical and sideways).
- Articulated lifting shackle.
- CVU/CVSU-lifting clamps are equipped with a safety mechanism, ensuring that the clamp does not slip when lifting force is applied and when load is being lowered
- The clamp is lockable in both closed as well as in open position.
- Lifting capacity and jaw opening are clearly engraved in the body.
- CVSU is supplied with enlarged jaw opening.
- Minimum WLL is 10% of the maximum WLL.



Art. no.	Code	Capacity kgs	Jaw opening (mm)	S	T	U	V	W	X	Y	Weight kgs
Clamps available from stock, GrabiQ colours											
G005627418	0.75 CVU	750	0 - 13	47	30	203	100	35	37	10	1.7
G005627420	1 CVEU	1000	0 - 25	55	50	295	142	38	47	14	3.9
G005627427	2 CVEU	2000	0 - 35	80	70	370	185	55	56	16	7.3
G005627422	3 CVEU	3000	0 - 35	80	70	370	185	55	56	16	8
Clamps available on request, standard colour: red/yellow											
G005627419	1 CVU	1000	0 - 18	55	50	295	125	38	47	14	3.5
G005627421	1.5 CVU	1500	0 - 20	80	70	370	165	55	56	16	7.2
G005627423	4.5 CVU	4500	0 - 25	85	70	430	200	60	77	20	15.6
G005627424	4.5 CVEU	4500	0 - 45	85	70	430	230	60	77	20	16.7
G005627425	6 CVU	6000	0 - 32	114	78	527	225	78	78	32	21
G005627429	7.5 CVU	7500	0 - 40	112	78	565	245	76	86	32	26
G005627426	7.5 CVEU	7500	0 - 55	112	78	565	267	70	86	32	30
G005627435	9 CVU	9000	0 - 55	112	78	565	267	70	86	45	30
G005627555	12 CVU	12000	0 - 52	148	85	650	295	100	94	48	42
G005627556	15 CVU	15000	0 - 76	159	85	765	373	136	106	48	75
G005627557	17 CVU	17000	0 - 76	159	85	765	373	136	106	48	77
G005627558	20 CVU	20000	0 - 80	195	100	900	465	150	140	71	145
G005627559	25 CVU	25000	5 - 85	195	100	900	465	150	140	71	148
G005627560	30 CVU	30000	10 - 90	195	100	900	465	145	140	71	150
G005627431	6 CVSU	6000	40 - 90	115	75	527	275	70	78	20	24
G005627432	7.5 CVSU	7500	50 - 100	110	75	565	315	70	82	20	28
G005627433	9 CVSU	9000	50 - 100	110	75	565	315	70	82	20	28
G005627566	12 CVSU	12000	50 - 100	153	86	650	345	100	94	44	45
G005627567	15 CVSU	15000	80 - 150	175	86	765	450	136	106	50	80
G005627568	20 CVSU	20000	80 - 150	185	100	900	640	153	140	66	150
G005627569	25 CVSU	25000	80 - 150	185	100	900	640	153	140	66	150
G005627570	30 CVSU	30000	80 - 150	185	100	900	640	153	155	62.5	155

Vertical Clamps, Hardened Pivot and Cam, CVH / CVUH

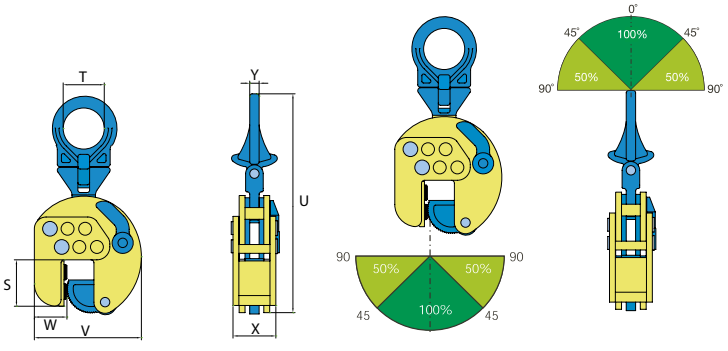
- Equipped with an extra hardened pivot and cam for lifting and transporting steel plates with a hardness of max. 50 HRC (for Hardox 400 and 500)
- Can be delivered as CV and CVU model.
- Other capacities and jaw-openings on request.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs	Jaw opening (R) (mm)	S	T	U	V	W	X	Y	Weight kg
G005627669	0.75 CVH	750	0 - 13	47	30	205	100	35	37	10	1.5
G005627670	1 CVEH	1000	0 - 25	55	45	265	142	38	47	15	3.6
G005627671	2 CVEH	2000	0 - 35	80	65	335	185	55	56	17	6.5
G005627672	3 CVEH	3000	0 - 35	80	65	335	185	55	56	17	6.7
G005627673	4.5 CVEH	4500	0 - 45	85	70	430	230	60	77	20	15.9
G005627674	6 CVH	6000	0 - 32	114	75	490	225	78	78	20	18.6
G005627675	7.5 CVEH	7500	0 - 55	112	75	530	267	70	86	20	25
G005627683	0.75 CVUH	750	0 - 13	47	30	203	100	35	37	10	1.7
G005627684	1 CVEUH	1000	0 - 25	55	50	295	142	38	47	14	3.9
G005627685	2 CVEUH	2000	0 - 35	80	70	370	185	55	56	16	7.3
G005627686	3 CVEUH	3000	0 - 35	80	70	370	185	55	56	16	7.5
G005627687	4.5 CVEUH	4500	0 - 45	85	70	430	230	60	77	20	16.7
G005627688	6 CVUH	6000	0 - 32	114	78	527	225	78	78	32	21
G005627689	7.5 CVEUH	7500	0 - 55	112	78	565	267	70	86	32	26

Vertical Clamps, Flexible, CVF

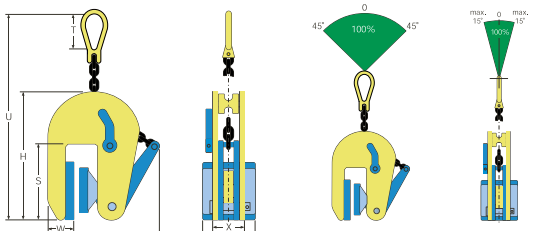
- Only 1 clamp needed for different kind of jobs.
- The same clamp can also be used if a big jaw opening is necessary.
- For lifting and transporting of steel plates and structures from all positions.
- Jaw opening from 0 - 95 mm. Adjustable by steps of 30 mm.
- Strong and lightweight construction.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs	Jaw opening (mm)	S	T	U	V	W	X	Y	Weight kgs
G005627667	3 CVF	3000	0 - 95	80	70	370	185-245	55	73	16	11

Vertical Clamps, Non-Marking, CVNM / CVNMA

- CVNM is a NON-MARKING clamp with 2 special synthetic pads. The clamp can be used for lifting, handling and transporting (stainless)steel, aluminium, wood and marble plates.
- After lifting and handling, the clamps leave no markings.
- The clamp is locked in closed as well as in open position.



CVNMA
A min. 3 mm/max. 180 mm
B min. 220 mm/max. 400 mm
Adjustable in steps of 20 mm.

Art. no.	Code	Capacity kg	Jaw opening (R) (mm)	H	S	T	U	V	W	X	Z	Weight kg
Clamps available from stock, GrabiQ colours												
G005627575	0.5 CVNM	500	1 - 20	200	93	65	360	220	48	48	80	5.5
G005627578	1 CVNM	1000	1 - 30	235	95	80	400	275	46	54	80	6.5
Clamps available on request, standard colour: red/yellow												
G005627576	0.5 CVSNM	500	17 - 37	200	93	65	360	240	48	48	80	6
G005627577	0.5 CVNMA	500	1 - 180	223	143	65	360	220 - 340	60	66	80	10
G005627579	1.5 CVNM	1500	1 - 40	235	95	80	400	275	46	54	80	7.2
G005627580	2 CVNM	2000	1 - 50	360	120	100	710	406	63	65	80	14
G005627581	3 CVNM	3000	1 - 60	360	120	100	710	406	63	65	80	15

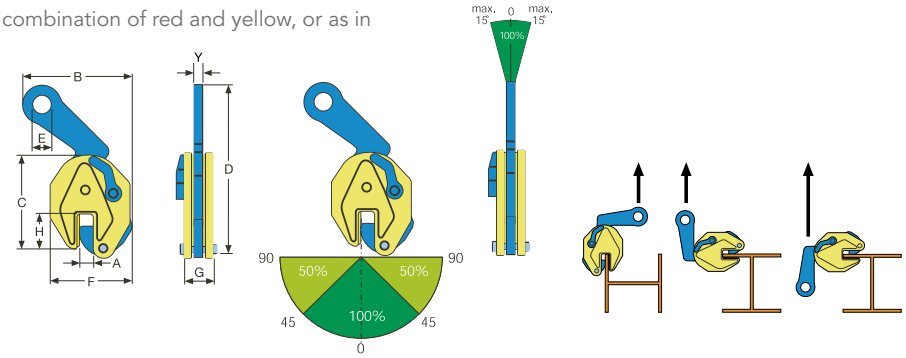
Vertical Clamps, Beam, CVB / CVOB

CVB

- For lifting and transportation of steel beams, profiles and structures where the load must stay in position.
- The special shape of the lifting shackle, places the centre of the gravity of the beam to be lifted directly beneath the lifting shackle.
- This maintains the equilibrium of the beam once it has been lifted and keeps the flanges of the vertical so that the beam can easily be stacked or positioned.
- Especially recommended for transportation and stacking of steel beams (e.g. when sawing of steel beams, stacking of steel beams and building of steel construction).
- Lifting capacity and jaw-opening are clearly engraved in the body.
- Colours may vary in either combination of red and yellow, or as in picture below.

CVOB

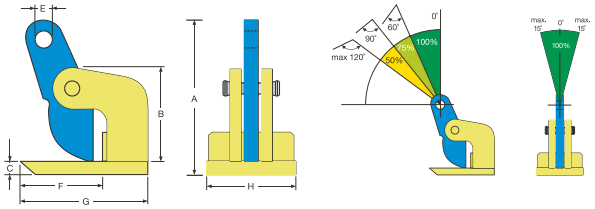
- For lifting and transportation of steel beams, profiles and structures.
- Because of the safety mechanism, the clamp is locked in closed as well as in open position.
- The clamp is suitable to lift steel beams on the flange as well as on the rear ends of the beam.
- Other capacity and jaw-opening on request.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs	Jaw opening (R) (mm)	B	C	D	E	F	G	H	Y	Weight kgs
G005627618	1 CVB	1000	0 - 15	175	148	226	35	130	35	47	15	3
G005627619	1.5 CVB	1500	0 - 20	265	200	345	60	165	56	67	16	8
G005627620	3 CVB	3000	0 - 25	325	235	410	72	192	77	65	20	16
G005627621	2 CVOB	2000	3 - 20	285	157	295	64	155	67	65	17	9.5

Horizontal Clamp, Deflecting Sheet, CHD

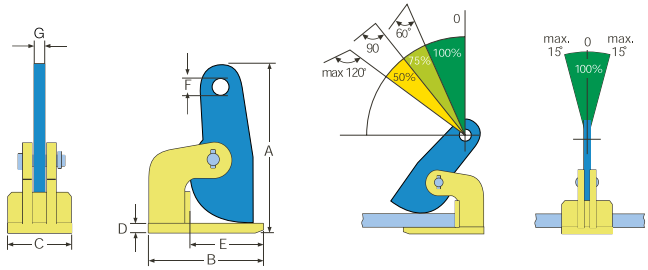
- For lifting and transporting of thin sheets that deflect when being lifted.
- Compact shape and relatively low own weights, with a high lifting capacity.
- The CHD horizontal lifting clamps must always be used in pairs (or multiples thereof).
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs/ pair	Jaw opening (R) (mm)	A	B	C	E	F	G	H	Weight kgs/pcs
G005627598	1 CHD	1000	0 - 15	167	85	10	22,5	100	140	65	3
G005627599	2 CHD	2000	0 - 35	235	135	20	26	115	180	80	8
G005627693	4 CHD	4000	0 - 50	310	157	35	40	130	235	130	20
G005627694	6 CHD	6000	0 - 50	310	157	35	40	130	235	130	20

Horizontal Clamps, Standard, CH / CHE

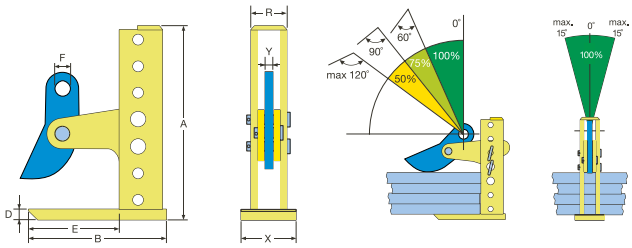
- For horizontal lifting and transporting of steel plates.
- The compact shape and relatively own light weight with a high lifting capacity.
- The CH / CHE lifting clamps must always be used in pairs (or multiples thereof).
- Lifting capacity and jaw opening are clearly engraved in the body.
- The CHE has an enlarged jaw opening.



Art. no.	Code	Capacity kgs/pair	Jaw opening (R) (mm)	A	B	C	D	E	F	G	Weight kgs/pcs
Clamps available from stock, GrabiQ colours											
G005627582	1 CH	1000	0 - 35	188	140	65	10	100	25	15	2.6
G005627583	2 CH	2000	0 - 60	290	180	90	15	115	30.5	16	7.5
G005627584	3 CH	3000	0 - 60	293	180	90	20	118	30.5	16	8
G005627585	4 CH	4000	0 - 60	306	220	105	25	145	30.5	20	13
G005627586	6 CH	6000	0 - 60	306	220	110	25	145	30.5	20	13
Clamps available on request, standard colour: red/yellow											
G005627587	8 CH	8000	0 - 60	335	225	120	35	135	30.5	30	18
G005627588	10 CH	10000	0 - 60	335	225	120	35	135	30.5	30	20
G005627589	12 CH	12000	0 - 60	335	225	120	35	135	30.5	30	21
G005627590	2 CHE	2000	0 - 100	380	180	90	15	120	30.5	15	9
G005627591	3 CHE	3000	0 - 100	390	180	90	20	120	30.5	15	14
G005627592	4 CHE	4000	0 - 100	415	220	105	25	145	30.5	20	15
G005627593	6 CHE	6000	0 - 100	415	220	120	25	145	30.5	20	22
G005627594	8 CHE	8000	0 - 100	430	225	120	35	135	30.5	30	22
G005627595	10 CHE	10000	0 - 100	430	225	120	35	135	30.5	30	22
G005627596	12 CHE	12000	0 - 100	430	225	120	35	135	30.5	30	22
G005627597	15 CHE	15000	0 - 150	665	350	140	35	240	45	35	50

Horizontal Clamp, Steel Plate Packages, CHP

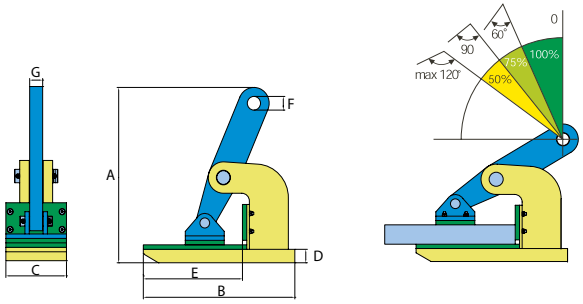
- For lifting, handling and transporting of packages and single steel plates.
- The CHP horizontal lifting clamps must always be used in pairs (or multiples thereof).
- Opening 3 - 180, 3 - 300 and 3 - 420 mm.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs/pair	Jaw opening (mm)	A	B	D	E	F	R	X	Y	Weight kgs/pcs
G005627600	1.5 CHP/180	1500	3 - 180	290	200	15	135	30	60	90	20	9
G005627601	1.5 CHP/300	1500	3 - 300	410	200	15	135	30	60	90	20	11.5
G005627602	3 CHP/180	3000	3 - 180	300	235	20	165	30	70	105	20	14.5
G005627603	3 CHP/300	3000	3 - 300	410	235	20	165	30	70	105	20	13
G005627604	4.5 CHP/180	4500	3 - 180	300	235	20	165	30	70	105	20	13
G005627605	4.5 CHP/420	4500	3 - 420	535	235	20	170	30	70	105	20	15
G005627606	6 CHP/180	6000	3 - 180	305	250	25	160	30	90	120	20	20
G005627607	6 CHP/420	6000	3 - 420	540	250	25	165	30	90	120	20	23
G005627608	9 CHP/180	9000	3 - 180	305	250	25	160	30	90	120	20	25.5
G005627609	9 CHP/420	9000	3 - 420	540	250	25	165	30	90	120	20	29.5

Horizontal Clamps, Non-Marking, CHNM

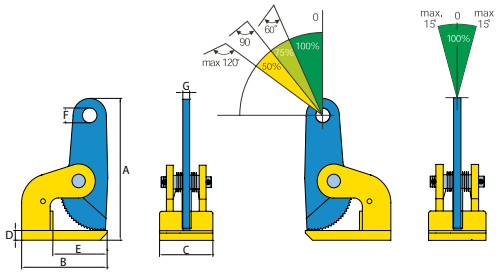
- The CHNM lifting clamp is suited for transporting and lifting objects with a fragile surface. E.g. stainless steel, wood panels, aluminium etc.
- The jaw and cam is covered with a high quality pressure resistant material.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs/pair	Jaw opening (mm)	A	B	C	D	E	F	G	Weight kgs/pcs
G005627613	1 CHNM	1000	0 - 25	154	140	65	15	95	20	15	2.5
G005627614	2 CHNM	2000	0 - 45	270	225	90	23	150	30.5	15	9
G005627615	3 CHNM	3000	0 - 45	275	225	90	28	150	30.5	15	13
G005627616	4 CHNM	4000	0 - 50	305	250	105	28	160	30.5	20	16
G005627617	6 CHNM	6000	0 - 50	310	250	120	33	160	30.5	20	17

Horizontal Clamp, Safety Spring, CHS

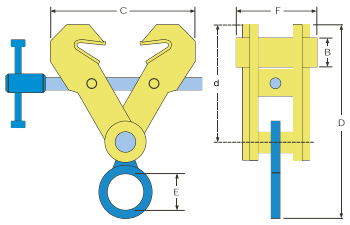
- The CHS Lifting clamp has a spring attached to the cam assembly. The spring makes sure that the clamp will be closed on any desired spot.
- One of the major advantages of this clamp is that only one person is able to place the clamps and to guide the hoist.
- Colours may vary in either combination of red and yellow, or as in picture below.

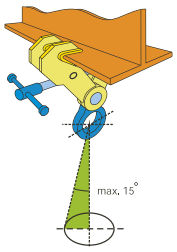


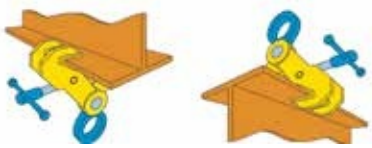
Art. no.	Code	Capacity kgs/ pair	Jaw opening (R) (mm)	A	B	C	D	E	F	G	Weight kgs/pcs
G005627695	1 CHS	1000	0 - 35	193	140	85	10	100	25	15	3
G005627696	2 CHS	2000	0 - 60	290	180	125	15	115	30.5	16	9
G005627697	3 CHS	3000	0 - 60	293	180	125	20	115	30.5	16	10
G005627698	4 CHS	4000	0 - 60	310	220	165	30	140	30.5	20	15
G005627699	6 CHS	6000	0 - 60	310	220	165	30	140	30.5	20	15

Screw Clamps, Beam, CSB / CSBW

- For horizontal lifting and transporting of steel beams and structures.
- Can also be attached upside down and be used as a (temporary) lifting point.
- Has equal opening and closing of both jaws for simple and quick assembly.
- Lifting capacity and jaw opening are clearly engraved in the body.
- The screw clamp CSBW is identical to CSB but is delivered without a lifting eye allowing you to choose your own means of connection.



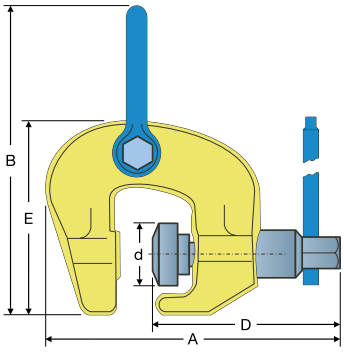


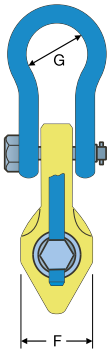


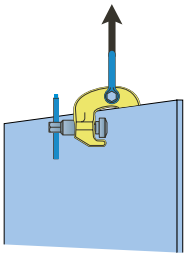
Art. no.	Code	Capacity kg	Jaw opening (R) (mm)	B	C max	D max	E	F	Weight kg
Clamps available on request, standard colour: red/yellow									
G005627622	1 CSB	1000	75 - 190	30	285	310	73	120	4
G005627623	2 CSB	2000	75 - 190	30	285	310	73	120	5
G005627624	3 CSB	3000	75 - 190	30	285	310	73	120	5
G005627625	4 CSB	4000	150 - 300	50	460	430	79	180	13
G005627626	5 CSB	5000	150 - 300	50	460	430	79	180	14
G005627627	10 CSB	10000	350 - 450	130	670	670	85	200	50
G005627628	1 CSBW	1000	75 - 190	30	285	150	73	120	3
G005627629	2 CSBW	2000	75 - 190	30	285	150	73	120	4
G005627630	3 CSBW	3000	75 - 190	30	285	150	73	120	4
G005627631	4 CSBW	4000	150 - 300	30	460	245	79	180	12
G005627632	5 CSBW	5000	150 - 300	30	460	245	79	180	12

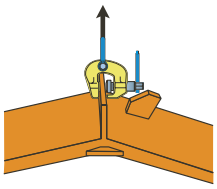
Screw Clamps, Universal, SCC

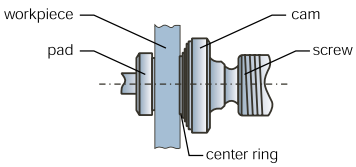
- Universal screw clamp for vertical and horizontal lifting and transporting of a large variety of steel structures.
- The SCC screw clamp is fitted with a moveable cam on the thread spindle which provides a powerful clamping force on the workpiece.
- The articulated lifting eye ensures an effective clamping force in every position.
- Colours may vary in either combination of red and yellow, or as in picture below.



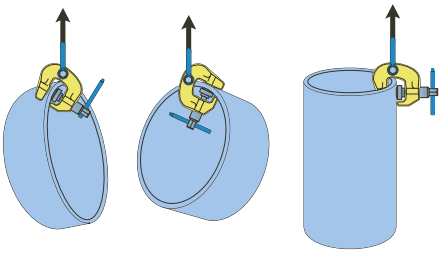


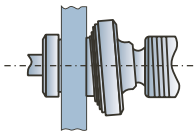




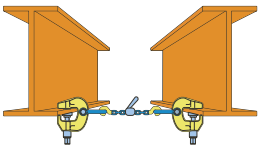


When under the initial tightening force





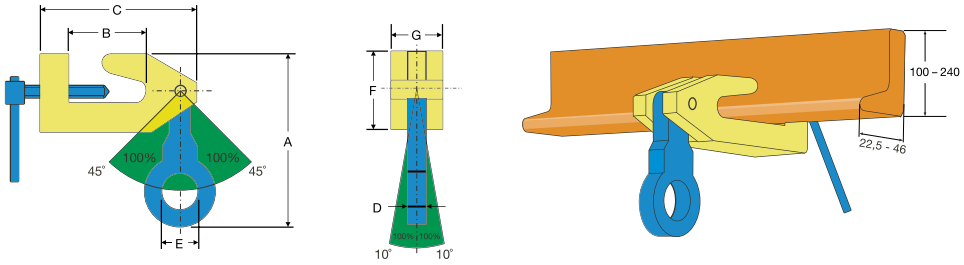
When under load



Art. no.	Code	Capacity kgs	Jaw opening (R) (mm)	A	B	D	d	E	F	G	Weight kgs
G005627633	0.5 SCC	500	0 - 28	156	113	89	26	76	30	17	0.8
G005627634	1 SCC	1000	0 - 30	175	204	126	42	128	46	38	3.2
G005627635	1.5 SCC	1500	0 - 32	187	229	135	42	143	46	45	4
G005627636	3 SCC	3000	0 - 50	224	265	165	49	165	54	50	7
G005627637	6 SCC	6000	0 - 75	291	365	215	63	214	69	80	18
G005627700	1 SCCW	1000	50 - 100	258	273	155	42	190	46	45	3.2
G005627701	3 SCCW	3000	25 - 75	250	291	165	49	191	54	50	7.8

Screw Clamps, Shipbuilding, CSS

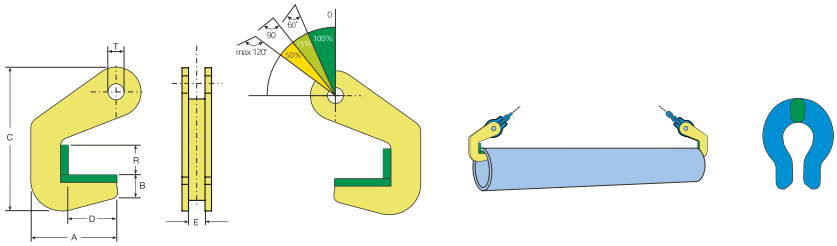
- For use as a temporary lifting point in any room where HP-profile is being used, such as sectional ship parts and ship engine rooms.
- The clamp is used for HP-100 to HP-240
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs/pair	Jaw opening (mm)	A	B	C	D	E	F	G	Weight kg
G005627611	1.5 TBS	1500	HP 100 - 240	180	75	150	16	45	75	40	3
G005627612	3 TBS	3000	HP 100 - 240	205	75	150	16	45	75	80	6.5

Horizontal Clamps, Pipe Hook, CHPH

- For horizontal lifting and transporting of steel and concrete pipes.
- Compact shape and relatively low self-weight with a high lifting capacity.
- The bearing surface are fitted with a special material.
- Delivered in pairs.
- Plastic cover is easy to change.
- Can be delivered with Berglok-coupling BL.

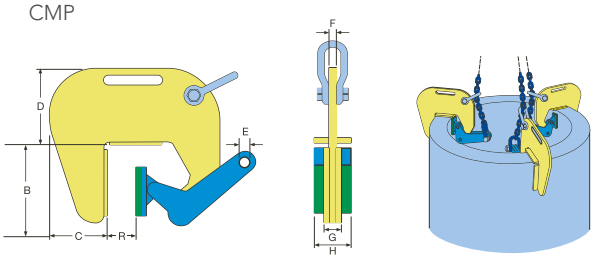


Art. no.	Code	Capacity kg	Jaw opening (R) (mm)	A	B	C	D	E	T	Weight kgs/pcs
Clamps available from stock, GrabiQ colours										
G005627640	1.5 CHPH	1500	40	120	32	185	70	41	16	1.6
G005627641	3 CHPH	3000	40	120	32	185	70	41	16	1.6
G005627643	6 CHPH	6000	50	120	32	195	70	41	26	3
G005627642	4 CHPH	4000	50	120	32	195	70	41	26	3
G005627644	8 CHPH	8000	70	120	32	215	70	45	26	3.6
Clamps available on request, standard colour: red/yellow										
G005627645	10 CHPH	10000	70	120	32	215	70	85	26	5
G005627646	12 CHPH	12000	70	120	32	215	70	85	26	6
G005627647	15 CHPH	15000	70	120	32	215	70	100	26	10
G005627648	20 CHPH	20000	70	120	32	215	70	100	26	16

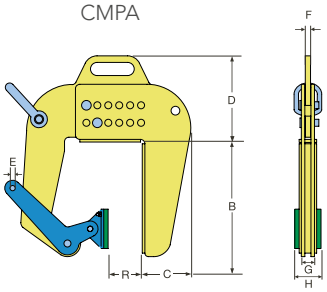
Pipe Lifting Clamp CMP / CMPA

- For vertical lifting and transporting of concrete pipe and wells.
- The CMP clamps must always be used in pair or per three clamps.
- Higher capacities or other jaw opening upon request.
- The moveable side is fitted with a special high pressure plastic surface.
- Colours may vary in either combination of red and yellow, or as in picture below.

CMP



CMPA

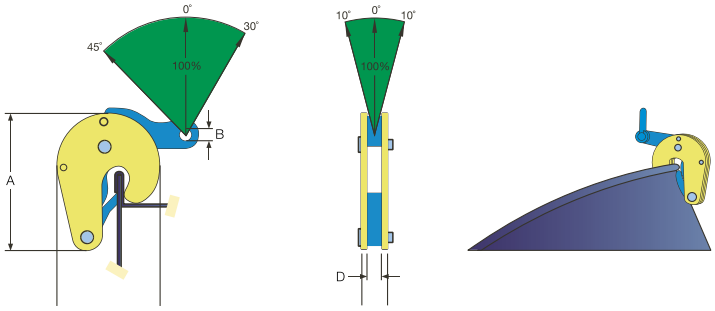


A min. 60mm/mx. 220 mm.
Adjustable in steps f 25 mm.

Art. no.	Code	Capacity kgs/pc	Jaw opening (mm)	B	C	D	E	F	G	H	Weight kgs/pcs
G005627650	1 CMP	1000	60 - 120	170	110	160	12	12	40	60	10
G005627652	1 CMPA	1000	50 - 220	262	110	197	12	12	40	60	11

Drum Clamps, Vertical, CDV

- For safe lifting and transportation of steel (oil) drums
- With automatic locking mechanism
- Can be used singles or in pairs

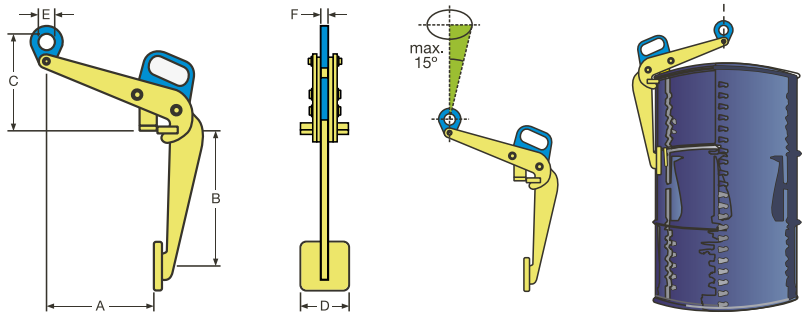


Clamps available from stock, GrabiQ colours

Art. no.	Code	Capacity kgs	Jaw opening (mm)	A	B	C	D	E	Weight kgs
G005627653	CDV	500	0 - 17	129	12	96	15	28	1.6

Drum Clamps, Horizontal, CDH

- For lifting, handling and transporting of (oil) drums, where the drums have to stay in a horizontal position.

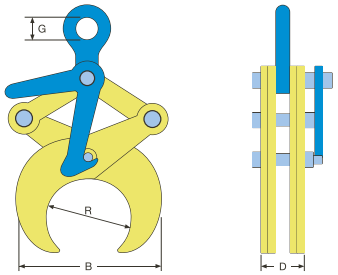


Clamps available from stock, GrabiQ colours

Art. no.	Code	Cpacity kgs	A	B	C	D	E	F	Weight kgs
G005627654	CDH	600	300	375	290	80	50	10	7.0

Lifting Clamp CMT

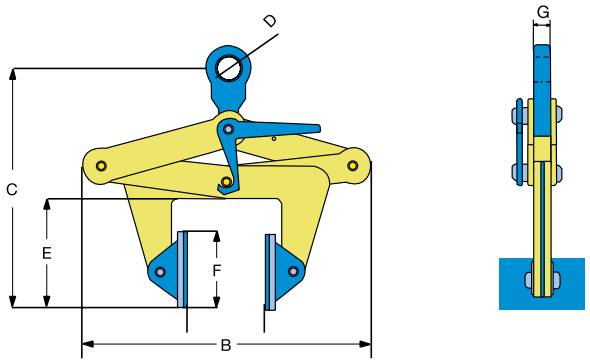
- For vertical lifting of tubes, bundles of tubes and solid round material.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs	Jaw opening (R) (mm)	B max	D	G	Weight kgs
G005627656	0.5 CMT	500	48.3 - 114.3	215	47	45	4
G005627657	1 CMT	1000	114.3 - 219.1	345	51	45	9
G005627658	2 CMT	2000	219.1 - 368	610	60	65	31
G005627659	3 CMT	3000	368 - 508	770	60	65	40

Lifting Clamp CMBL

- For vertical lifting and transporting without marking of products with parallel sides in various materials as steel, wood, plastic, concrete, marble etc.
- De pads are covered with special plastic to avoid damaging of the load.
- Colours may vary in either combination of red and yellow, or as in picture below.



Art. no.	Code	Capacity kgs	Jaw opening (R) (mm)	B min-max	C min-max	D	E	F	G	Weight kgs
G005627661	0.5 CMBL	500	30 - 110	275 - 325	270 - 420	45	100	70 * 80	15	7
G005627662	1 CMBL	1000	100 - 230	440 - 530	360 - 610	45	140	100 * 120	17	12
G005627664	2 CMBL	2000	220 - 360	600 - 675	400 - 680	45	170	100 * 120	17	18
G005627665	3 CMBL	3000	350 - 500	740 - 840	490 - 840	65	200	100 * 120	20	32

Repair Sets

The repair sets contain: Cam assembly, Locking spring, Cam pin, Pivot set

Art. no.	Code
G005627720	0.75 RSCV
G005627722	1 RSCVE
G005627724	2 RSCV
G005627726	3 RSCV
G005627728	4.5 RSCVE

INDEX

Index from A - Z

A

C

D

F

G

H

I

L

M

O

P

Q

R

S

U

W

Index by Chapters

Chapter 1 - Company Information

Chapter 2 - Chain and Components

Chapter 3 - Shackles

Chapter 4

Chapter 5 - Johnson Blocks

Chapter 6 - Polyester products

Chapter 7 - Lashing

Chapter 8 - Lifting Clamps

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