User Manual

Midgrab Shortener MIG



MIG-8-10 | MIG-10-10 | MIG-13-10

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1 Introduction and EC declaration

This manual is an original instruction in accordance with:

Directive 2006/42/EC on machinery, section 1.7.4 Instructions and Annex II Declarations.

It also meets the requirements in:

Standard EN 1677-1:2000+A1:2008, Components for slings - Safety - Part 1: Forged steel components.

This manual is valid for:

- MIG-8-10
- MIG-10-10
- MIG-13-10

This manual is valid together with Gunnebo Industries' instruction for slings and lifting guide.

All manuals are continuously updated and are only valid in their latest version, which can be downloaded from www.kitocrosby.com.

1.1 EC declaration of conformity

The R&D Manager is the authorized person to compile the technical file.

We declare that the lifting component described in this user manual fulfils all the relevant provisions of the Directive 2006/42/EC as a partly completed machine.

The main use of the product is to be incorporated as part of a CE-marked lifting assembly but must not be put into service until the final lifting assembly has been declared to be in conformity with the provisions of the Directive 2006/42/EC.

Our quality management system complies with ISO 9001:2015 and is certified by LRQA Sverige AB for and on behalf of Lloyd's Register Quality Assurance Limited (certificate identity number: 10140613).

Information about harmonized and national standards/technical specifications that apply, and the valid version of this user instruction are available at www.kitocrosby.com.

If the products are modified without approval from Gunnebo Industries, this declaration becomes invalid.

Växjö June 2025

Fredrik Sandberg

Engineering Manager

1.2 Abbreviations

EC	European Commission
LRQA	Lloyd's Register Quality Assurance
WLL	Working Load Limit

Table 1: Abbreviations

2 Safety precautions

2.1 Warnings, cautions and notes

Carefully read the instructions before using the lifting equipment.

The following signs are used in the instructions, to alert about potential dangers and safety related issues.



Warning!

A warning alerts about a situation which, if not avoided, could result in injury, or death.



Caution!

A caution alerts about a situation which, if not avoided, could result in minor or moderate injury, or damage to the equipment or other property.

!

Note!

Notes are added to give more information.

2.2 General safety precautions

The rigger is responsible for the lifting operation, and for following all related safety regulations. The rigger must understand the limitations of the equipment.

The rigger is a competent person, with the knowledge to select correctly dimensioned lifting equipment, and to ensure its safe condition.

Before each lifting operation, check that the lifting system parts and connecting parts are correctly attached to each other.

2.3 Lifting precautions



Warning!

Do not insert/load anything other than a Gunnebo short link KLA chain into the MIG.



Warning!

Do not lift with a twisted sling.

Warning!
Side loading is not allowed on any lifting components.

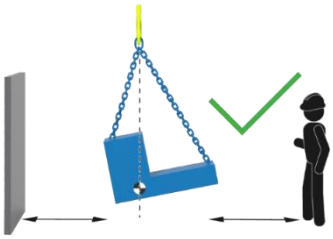


Warning!
The MIG cannot be used as an end component to hook back to the lifting chain leg to make a basket lift.



Note!

When lifting asymmetric loads, be aware of sudden movement of the load. Keep distance.





3 General description

All measurments shown in images, and technical data can be found on the website www.kitocrosby.com.

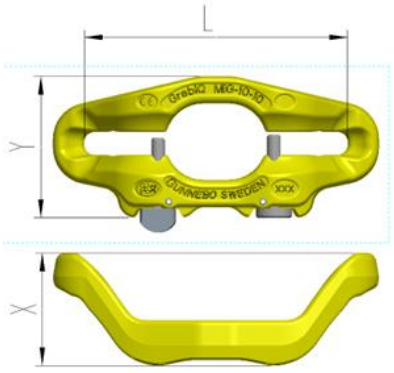


Figure 1: Midgrab Shortener MIG

Each Midgrab Shortener MIG is marked as follows:

- Manufacturer identification (GUNNEBO SWEDEN)
- Midgrab Shortener MIG, size, material Grade 10
- Batch/traceability code
  The traceability code consists of letters and numbers that identify which plant the product was made in, the year and the batch. This enables tracing the product back through the manufacturing process, all the way back to the specific raw material.
- German professional worker association (BG H32)
- CE mark

Gunnebo Industries issue:

- manufacturer´s certificate according to EN 1677-1 and
- 3.1 material certificate acc. to EN 10204

The following standards apply:

- Product name, Grade 10: EN 1677 (WLL+25%)
- ASTM A952/A952M-02
- ASTM 906/A906M-02

WLL refers to the maximum working load a lifting accessory or lifting assembly can be subjected to.

Authorized resellers may provide their own documentation and will be able to provide the original certificates upon request.

4 Intended use and restrictions

4.1 Intended use

Authorized resellers may provide their own documentation and will be able to provide the original certificates upon request.

The Midgrab Shortener MIG is intended for shortening of chain lifting slings and lashing (securing load during transport).



Figure 2: MIG-10-10 with chain KLA-10-10

The Midgrab Shortener can be used when lifting asymmetric loads that require different leg lengths.

With the MIG the chain length can be adjusted at the lower part of the lifting assembly.

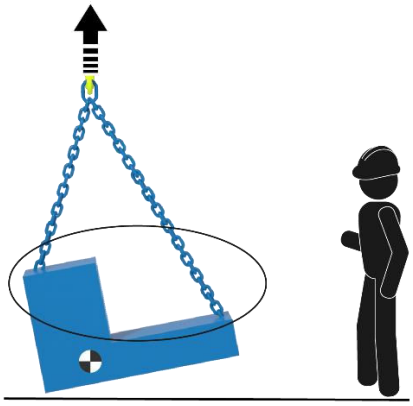


Figure 3: Adjustment of chain length with Midgrab Shortener MIG in close reach

Compared to many other shortening hooks, the MIG is flexible and offers the option of removal from the lifting/lashing assembly.

It can be put on a sling leg at a position where the chain length needs to be shortened.

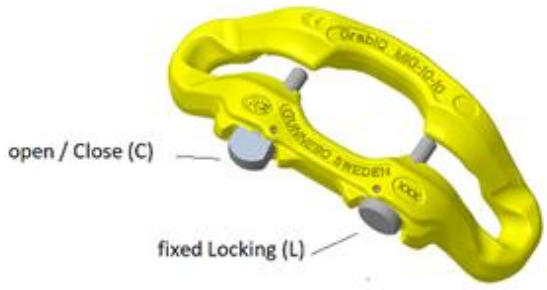
For example, if only one of four lifting chain legs needs to be adjusted, it is sufficient to detach the MIG and put it where it is required.

The Midgrab Shortener could be part of a lashing assembly to secure load during transport.

When the MIG is used for shortening chain in lashing applications, use the Gunnebo Tensioner GT to secure correct chain pretension.

To ensure that the MIG stays in place on the chain, use locking devices. The two available devices are:

- L = fixed Locking set
- C = Close/open locking set



The fixed Locking set fixes the MIG at one chain position.
The Close/open device is spring-operated and can be placed in either open or close position.

Before lifting or lashing, secure the chain with two locking devices either of type L or C.

For special applications, the MIG may require securing only with fixed locking sets. This must be judged by a competent person responsible for the lifting operation.

The Midgrab Shortener and the locking devices are ordered separately. Be sure to always order the locking sets together with the Midgrab Shortener MIG.

See www.kitocrosby.com for product code numbers.

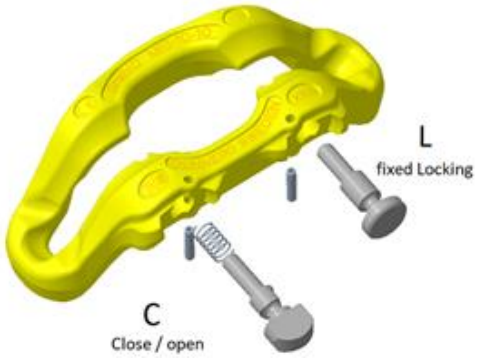


Figure 4: Available locking devices

The Midgrab Shortener MIG can be used in a CE marked assembly for lifting in two ways:

- As a fixed part in the assembly connected with at least one fixed locking device.
- As an accessory (which is possible to assemble/ disassemble) connected with open/close locking devices when the lifting assembly/sling has been CE marked.

Authorized resellers may provide their own documentation but will be able to provide the original certificates upon request.

Attach only Gunnebo short link chain of corresponding size and grade to the Midgrab Shortener MIG.

Example of Midgrab Shortener MIG assemblies

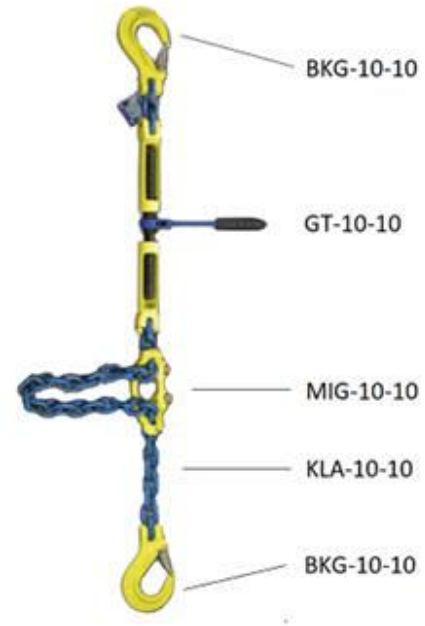


Figure 5: Example of a Lashing assembly

4.2 General limitations of use

- Never modify, repair, or reshape the product by welding, heating or bending as this will affect the nominal WLL.
- Never heat-treat the product as this may affect the WLL.
- Do not galvanize or subject the product to any plating or coating process without approval of the manufacturer.
- Do not use the product in alkaline or acidic conditions.
- Do not expose the product to aggressive chemicals, such as acids, alkalines and their vapors.

4.3 Use in exceptionally hazardous conditions

The rating of lifting accessories in European Standards assumes the absence of exceptionally hazardous conditions.

Exceptionally hazardous conditions include offshore activities, the lifting of persons, and lifting of potentially dangerous loads such as molten metals, corrosive materials, or fissile materials.

In such cases a competent person should assess the degree of hazard and adjust the working load limit accordingly.

4.4 WLL reduction at elevated temperatures

The general service temperature is -40 °C/-40 °F to +200 °C/392 °F.

For temperatures higher than +200° C/392 °F, the following apply:

Service temperature	New load capacity in % of original WLL
200-300 °C 392-572 °F	90%
300-400 °C 572-752 °F	75%
> 400 °C > 752 °F	Not allowed

Table 2: WLL reduction at elevated temperatures

The Midgrab shortener MIG adapted to US market, can only be used within the general service interval:
-40 °C/-40 °F to +200 °C/392 °F.

4.5 Fatigue

It is important to understand that fatigue failure can occur even if the prescribed WLL is not exceeded.

Scenarios in which the Midgrab Shortener MIG is subjected to variable load over a prolonged period of time, will carry the risk of fatigue. Consider this when dimensioning and deciding service intervals.

The Midgrab Shortener MIG are designed for a maximum of 20 000 load cycles.

4.6 Additional marking

If markings such as project code, and serial number are added, it must be done in a way that does not reduce the strength, corrosion resistance, or the legibility of the manufacturer's own marking.

The following methods are recommended for marking:

- marking tape
- engraving tool
- low stress punches

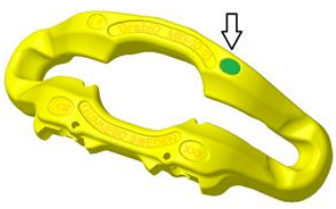


Figure 6: Recommended area for punched or engraved marking

5 Instructions prior to use

Read and understand this manual before using the Midgrab Shortener MIG. Read the Safety precautions.

For further recommendations regarding safe use of the Midgrab Shortener MIG in sling applications, see Gunnebo Industries' instruction for safe use of slings and lifting guide. Download the Lifting guide and Instructions for sling at www.kitocrosby.com.

5.1 Verification prior to first use

Before first use ensure that:

- The Midgrab Shortener MIG is precisely as ordered.
- The manufacturer's certificate is in order.

5.2 Inspection prior to each use

Inspect the Midgrab Shortener MIG for obvious damage or deterioration before each use in accordance with local regulations.

Check also against the items listed under Inspection. If there is any doubt regarding meeting these criteria, do not use the Midgrab Shortener MIG for lifting operation.

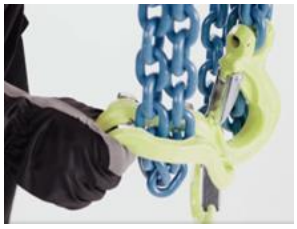
5.3 Before loading

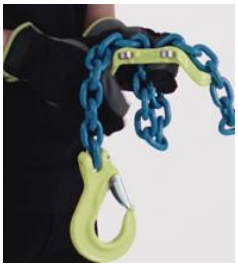
- Determine the weight of the load and the center of gravity.
- Check the conformity of the load with the WLL of the lifting equipment for the specific working configuration.
- Ensure that the Midgrab Shortener MIG has been correctly assembled in accordance with the Assembly instructions.
- Ensure that no obstacles obstruct the lift, and prepare the landing site

5.4 General instructions for safe use

Rigging sequence - how to work safely with the Midgrab Shortener MIG equipped with two open/Close devices:

1 Select a sling leg and insert the double folded chain into the MIG.



2	Position the chain in the chain slots. Do not twist the chain.	
3	Push in the pen/Close pin.	
4	Turn the open/Close pin 180° degrees.	
5	Check that the open/Close pin locks the chain.	
6	Lock the upper chain connection in the same way as the lower, see sequence 3-5.	

7	MIG-10-10 assembled with KLA-10-10.	
8	Lifting assembly equipped with: • MIG-10-10 • KLA-10-10 • BKG-10-10	  
9	Rigging safe with the Midgrab Shortener, MIG, equipped with one open/Close and one fixing devices.	

When the MIG should stay fixed at a certain chain position, use the Fixed Locking Device in either the upper or lower position of the MIG. The Fixed Locking Device secures the chain to the MIG with a retainer pin in the same way as the open/Close device but always in locked position.

For some hazardous lifting operations, you may need to secure the MIG with the Fixed Locking Device. This must be judged by a competent person responsible for the lift. An example could be tough weather conditions.

6 Assembly

Only a qualified person may assemble the Midgrab Shortener MIG.

The Midgrab Shortener MIG can be fixed mounted and incorporated as part of a lifting sling and is then part of the certification of the WLL (Working Load Limit) rating of the complete sling.

The MIG can also be used as an accessory where it is removed from one sling and used in another. When used as a flexible accessory, it must be rigged by a competent person.

The MIG can only be used together with Gunnebo Grade 10 chain of the correct size.

When assembling the Midgrab Shortener MIG note the following:

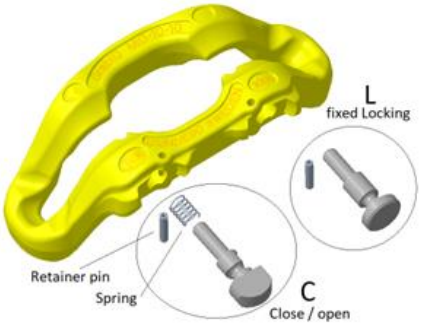


Figure 7: Midgrab Shortener MIG with Close/open and fixed Locking devices

Assembly sequence of MIG-10-10 with two open/Close locking devices C-10. See assembly film at www.kitocrosby.com.

Verify that all markings are readable on the Midgrab Shortener MIG.

Prerequisites:

- The MIG
- 2 x retainer pins
- 2 x springs
- 2 x open/close locking pins
- a soft hammer
- a pair of pliers



1 Tap the retainer pin halfway into position with a soft hammer. Hold the retainer pin in place with a pair of pliers.

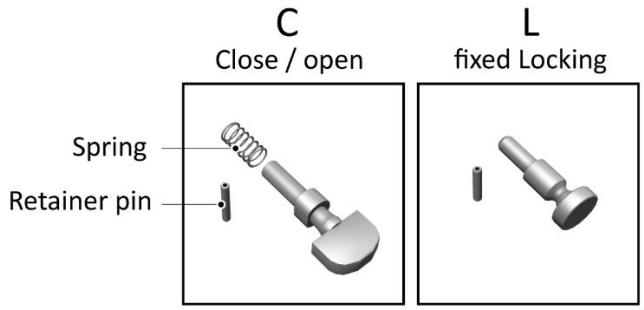


2	Check that the retainer pin is halfway in position through the hole for the spring.	
3	Insert the spring.	
4	Check that the spring is in position.	
5	Insert the open/Close locking pin into the spring.	
6	Check that the open/close locking pin is in position.	
7	Secure the open/Close locking pin by tapping the retainer pin further down with a soft hammer.	
8 !	Make sure both open/Close locking pins are secured by the retainer. Check the function of the open/Close locking pin. **Note!** The open/Close locking pin should lock the chain and only open when rotated 180° degrees axially.	

6.1 Spare parts

Available spare parts:

- Replacement of open/Close and fixed Locking sets



To replace, remove the retainer pin with a hammer and the round pin and take away the old parts.

To assemble the new spare parts, see the assembly steps above.

Replace the old retainer pin with a new one.

See www.kitocrosby.com for article numbers or the Gunnebo Industries Product Catalogue.

6.2 Limitations

The Midgrab Shortener MIG is designed to relate to the appropriate short link chain and load pin, grade and size. Do not use any other connecting part.

Check that the spring function of the retainer pin is working and that it secures the load pin. If it does not work, do not use the Midgrab Shortener MIG.

7 Maintenance

When performing maintenance or inspection, always read and follow the Safety Precautions.

7.1 Inspection

During service, lifting equipment are subjected to conditions which affect their safety. Therefore ensure that the equipment is safe for continued use. See Safety Precautions.

Withdraw the Midgrab Shortener MIG from service and refer the product to a competent person for thorough examination if any of the following is observed:

- The Midgrab Shortener MIG markings are illegible.
- More than 10% reduction of dimension at any point.
- Cuts, nicks, gouges, cracks, excessive pitting or corrosion, heat discoloration, bends, distortion, or other defects.

7.2 Examination

A competent person should thoroughly examine the product at least once every year. The inspection should be carried out more frequently if deemed necessary, taking into consideration the following points.

- Local, national, or branch-specific regulation.
- The service condition of the Midgrab Shortener MIG.
- Use in demanding environments (such as corrosive or extreme temperature).
- Use where the Midgrab Shortener MIG is subjected to repeated loads that may induce metal fatigue.

Maintain records of examinations. Before examination, clean the product so it is free from oil, dirt, and rust.

Any cleaning method which does not damage the parent metal is acceptable. Methods to avoid are those using acids, overheating, removal of metal or movement of metal which may cover cracks or surface defects.

See also Safety Precautions.

7.3 Repair

A competent person with relevant knowledge and technical skills must do the repairs. The product shall only be returned to service after approval by a designated person.

Maintain records of repairs.

Any replacement component or part of the Midgrab Shortener MIG should be in accordance with the appropriate European Standard for that component or part. Use only original Gunnebo spare parts.

Discard or replace components that are cracked, visibly distorted or twisted, severely corroded or have deposits which cannot be removed.

Remove minor damage such as nicks and gouges by careful grinding or filing. The surface should blend smoothly into the adjacent material without abrupt change in the section. The complete removal of the damage should not reduce the thickness of the section at that point

to lesser than the manufacturer’s specified minimum dimensions or by more than 10% of nominal thickness of the section.

7.4 End of use/Disposal

Recycle as general steel scrap.