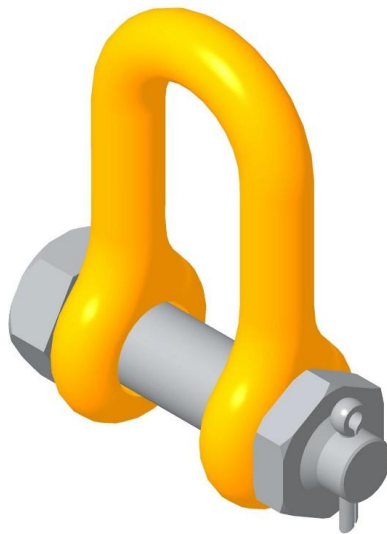


User Manual

Shackle SA Classic



SA-7/8-8 | SA-10-8 | SA-13-8 | SA-16-8
SA-19-8 | SA-22-8 | SA-26-8

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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, Grade 8.

This manual is valid for the following products:

SA-7/8-8, SA-10-8, SA-13-8, SA-16-8, SA-19-8, SA-22-8, SA-26-8.

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 Engineering Manager is the authorized person to compile the technical file.

We declare that the CE-marked products described in this user manual fulfil all the relevant provisions of the Directive 2006/42/EC.

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, July 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!

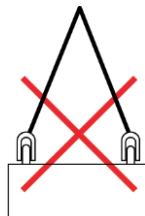
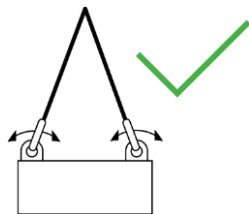
Notes are added to give more information.

2.2 Lifting precautions



Warning!

Avoid side loading. Fit the SA shackle to the load in a manner that allows the shackle body to take the load in a true line along its centerline to avoid undue bending stresses that will reduce the load capacity of the shackle.



Warning!

Avoid rotation of the SA shackle bolt. Avoid applications where, due to load movement, the shackle bolt can roll and possibly unscrew.

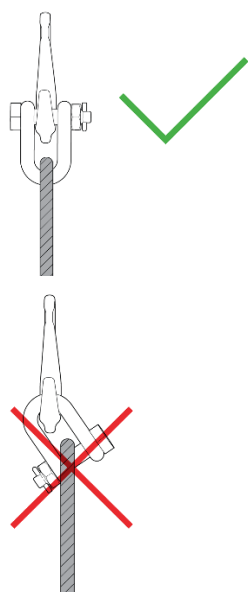
**Warning!**

If two SA shackles are fitted together, it is recommended to connect the bows.

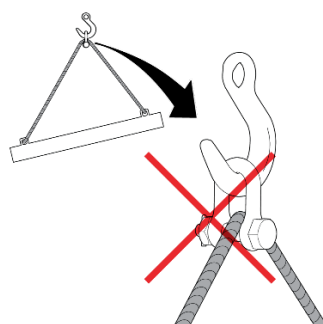
**Warning!**

Avoid eccentric load distribution. It is recommended to distribute the load evenly across the total length of the SA shackle bolt. Loose distance spacers may be used on both ends of the bolt.

Do not force together the opening. Do not weld parts onto the bolt to facilitate centering of the load. This will negatively impact the mechanical properties of the SA shackle.

**Warning!**

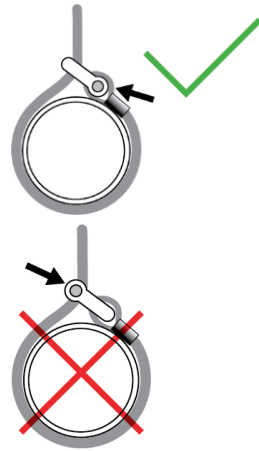
Avoid unstable loads.

**Warning!**

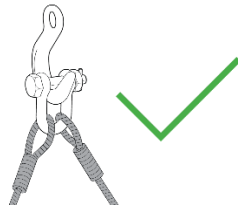
Avoid contact with sharp edges that could damage the SA shackle.

**Warning!**

When securing the load, put the bow of the SA shackle into the running side of a choke.

**Warning!**

Multiple sling legs can be attached to the SA shackle body. Consider the effect of the angle between the sling legs. The stated WLL is valid for leg angles up to 120°. Do not have larger leg angles.

**Warning!**

When fitting shackles together with fiber and textile lifting slings, ensure that the contact diameter matches the sling manufacturer's recommendations. If necessary, use a bushing on the shackle bolt to achieve the necessary contact diameter.

**Warning!**

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.

3 General description

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

The SA shackle is a lifting shackle consisting of a U-shaped body, a bolt, a nut, and a safety cotter pin.

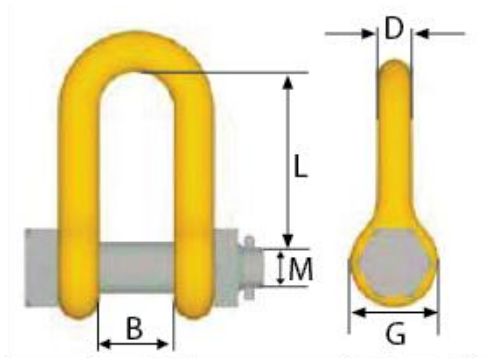


Figure 1: SA Shackle

The SA shackle is designed, manufactured and tested to be a sling component according to EN 1677-1. The SA shackle is marked as follows:

On the bow:

- Manufacturer identification (GBO or GBO SWE)
- Product name, size, material Grade 8
- CE mark
- WLL in tonnes
WLL refers to the maximum working load a lifting accessory or lifting assembly can be subjected to. For the SA shackle the stated WLL is valid when the shackle is loaded in a straight direction.
- 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.

On the bolt:

- Material Grade 8
- Batch/traceability code

Gunnebo Industries issue:

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

The SA Shackle can be used for lifting only when the user has a valid certificate.

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

Bolt-nut-and-cotter-pin type of shackles like the SA Shackle provide the most secure pin (bolt) arrangement. They are suitable for applications where the shackle is semi-permanent with infrequent removal.

The SA range is designed to be a sling component and applies to the normal sizes and WLL for Grade 8 chain slings according to EN 818-4. The SA Shackle can also be used in steel wire rope slings and textile slings.

The SA shackle can be used as an end component in slings or lugs.

It can also be used as a connecting component in different constructions, provided the necessary technical calculations have been made with regard to load and environmental factors.

This manual primarily covers the use of shackles for lifting.

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.
- Do not 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
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Table 2: WLL reduction at elevated temperatures

If the service temperature exceeds 200 °C, the corrosion protection of the bolt is lost.

4.5 Do not side load

The SA shackle is designed to carry the load at the center/bottom of the bow, evenly distributed on the shackle bolt.

4.6 Fatigue

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

Scenarios in which the SA shackle 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 SA Shackle is designed for a maximum of 20 000 load cycles.

4.7 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

5 Instructions prior to use

Read and understand this manual before using the SA Shackle. Read the [Safety precautions](#).

For further recommendations regarding safe use of the SA Shackle 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 SA Shackle is precisely as ordered.
- The manufacturer's certificate is in order.
- The identification and working load limit marking on the SA Shackle corresponds to the information on the certificate.
- Full details of the shackle are recorded.

5.2 Inspection prior to each use

Inspect the SA Shackle 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 SA Shackle 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 SA Shackle has been correctly assembled in accordance with the [Assembly](#) instructions.
- Ensure that no obstacles obstruct the lift; and prepare the landing site.
- If multiple sling legs are attached to the shackle body, consider the effect of the angle between the sling legs. The stated WLL is valid for leg angles up to 120°. Do not have larger leg angles.



Figure 2: From the book *Sikker bruk av løfteredskap* (Safe Use of Lifting Equipment) and used with the publisher's permission (www.Lsi-bok.no).

6 Assembly

Only a qualified person may assemble the SA Shackle.

When the SA product is incorporated as a part of a sling it must be part of the certification and WLL rating of the complete sling.

While assembling the SA shackle observe the following:

- Verify that all markings are readable and that all parts of the shackle are of the correct type and size.
- Do not tighten the bolt in a way that prevents free rotation. In most cases, hand tightening is sufficient.
- Ensure that the bolt and nut are properly secured with the safety cotter pin attached.
- A bent bolt, damaged threads, or misalignment of the bolt holes can cause poor-fitting between the shackle bow and bolt. Do not use the SA shackle under these circumstances.

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 SA Shackle from service and refer the product to a competent person for thorough examination if any of the following is observed:

- The SA Shackle markings are illegible.
- More than 10% reduction of dimension at any point.
- Incomplete bolt engagement.
- Cuts, nicks, gouges, cracks, excessive pitting or corrosion, heat discoloration, bends, distortion, or other defects.
- The threads of the bolt, or the shackle body is damaged.

7.2 Examination

A competent person should thoroughly examine the SA Shackle at intervals not exceeding six months. 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 SA Shackle.
- Use in demanding environments (such as corrosive or extreme temperature).
- Use where the SA Shackle is subjected to repeated loads that may induce metal fatigue.

Maintain records of examinations. Before examination, clean the SA Shackle 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 SA Shackle 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 of 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.