User Manual

Container Hook CH



CH-3-10 | CH-3.45 Left | CH-3-45 Right
CH-3-10 Right

12.5 WLL (t, Metric)

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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 the CH-3 Container Hook. See the cover page for an overview of the included variants.

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 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 xx, 2025

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 shall be a competent person, with knowledge to select correctly dimensioned lifting equipment, and to ensure its safety.

Before each operation, visually check if the Container Hook is fully engaged in the container fitting. There should be a minimum 15 degrees rotational lock and max 7-degree angle outwards from vertical side of container.

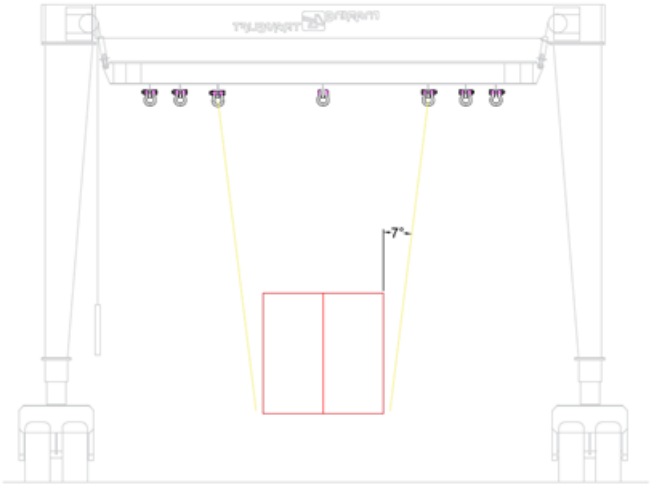


Figure 1: Maximum lifting angle to vertical side of container

2.3 Lifting precautions

Warning!
Having your fingertips inside the Container Hook can cause crushing damage to the hand.



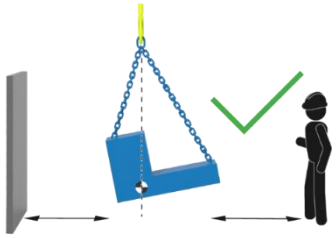
Warning!

Only insert one object into the Container Hook.

Warning!

Make sure that the Container Hook aligns with the pull direction. Check that the lifting chain is not twisted or rotated.

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.

The Container Hook is designed to meet the requirements in standard for container corners, ISO-1161.

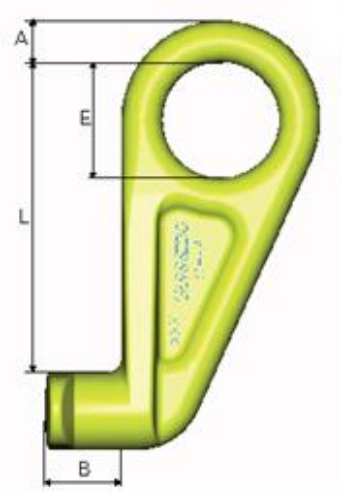


Figure 2: CH-3

Each Container Hook is marked as follows:

Manufacturer identification (GUNNEBO SWEDEN)

CH hooks are marked clearly with “L” and “R” for left and right.

- Container Hook CH

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.

Gunnebo Industries issue:

Manufacturer´s certificate according to EN 1677-1 and

- 3.1 material certificate acc. to EN 10204

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

The Container Hook CH is intended to be used for lifting containers in their lower fittings. There are three Hook variants available. Choose the variants depending on leg position and type of opening in the container fitting. All three variants have the same WLL.

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.
- The product must not be galvanized or subjected 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

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 Container Hook 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.

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

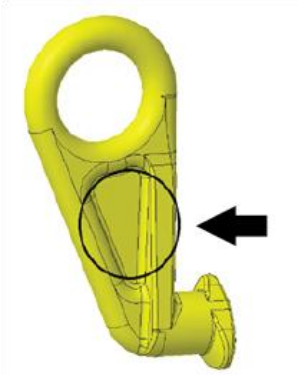


Figure 3: Recommended areas for punched or engraved marking

5 Instructions prior to use

Read and understand this manual before using the Container Hook. Read the Safety precautions.

For further recommendations regarding safe use of the Container Hook in sling applications, refer to the 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 Container types

Only use the Container Hook with the following container variants.

Container length (m)	Container type
12	1AAA, 1AA, 1A, 1AX
9	1BBB, 1BB, 1B, 1BX
6	1CC, 1C, 1CX
3	1D, 1DX

5.2 Lifting performance

The possible container weight depends on the lifting angles α and β and if the container weight is divided equally on the four lifting legs.

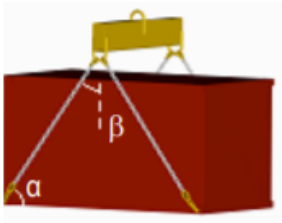


Figure 4: Lifting angles α and β

If all four legs carry equal weight and the angles α and β are according to the table below, the maximum working load limit for the container is 50t.

Container length (m)	Container type	Angle α	Angle β	Container weight (t)
3, 6, 9, 12	All	90°	0°	50

Table 2: Maximum lifting performance

Reduce the lifting capacity according to the table below depending on the sling leg lifting angle.

Angle α	Maximum Angle β	Container weight (t)
30°	60°	25
37°	53°	30
45°	45°	35
60°	30°	43

Table 3: Reduced lifting performance

5.3 Limitation

Make sure the hooks and chains can move freely to the intended load angles without obstruction. Only lift in the bottom corners. Use edge protection to prevent sharp edges from damaging the lifting equipment. A general rule is that the radius of the edge >2 x chain diameter.

5.4 Verification prior to first use

Before first use ensure that:

- The Container Hook is precisely as ordered.
- The manufacturer's certificate is in order

5.5 Inspection prior to each use

Inspect the Container Hook for obvious damage or deterioration before each use.

The inspection should be done 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 Container Hook for lifting operation.

5.6 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 Container Hook has been correctly assembled in accordance with the instructions under Assembly.
- Ensure that no obstacles obstruct the lift and prepare the landing site.

6 Assembly

The Container Hook is designed to be used as end component in a Grade 10 chain sling leg. Connection to the chain can be made with Coupling Link G or a Grade 10 Hook.

For full use of the WLL of the Container Hook, connect it with Coupling Link G-20-10 and Chain KLA-20-10.

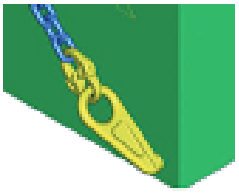


Figure 5: CH-3 Connected to Coupling Link G-22-10 and Lifting Chain KLA-22-10

Select correct CH-3 variant to ensure that the Container Hook is locked in the container fitting when the lifting sling assembly is in lifting position. The minimum rotational lock in container fitting from nominal insertion is 15 degrees.

The CH-3 should be used with a spreader, either a 2 or a 4-point spreader.

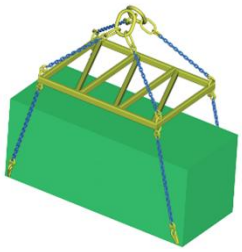


Figure 6: 4-leg spreader

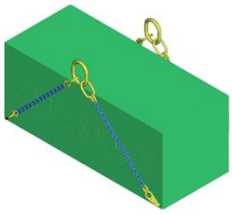


Figure 7: 2-leg spreader

Design the spreader so the sling leg is never in contact with the container side during lifting. The sling leg can have a maximum outward angle of 7 degrees from the vertical container side.

The CH-3 can only be used for lifting when the user has a valid certificate.

If the Container Hook is incorporated as a part of a lifting sling, it must be part of the certification and WLL rating of the complete sling.

Only a qualified person may execute the assembly of the Container Hook.

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

6.1 Spare parts

No available spare parts.

6.2 Limitation

Only lift in the lower lifting fittings.

Check that the Container Hook is secured in the container fitting. It should not be possible to pull out the Hook from the container fitting when the sling is in lifting position. It must be secured with a minimum 15-degree rotation lock in the container fitting.

The lifting chain leg should never be in contact with the vertical container side. The maximum allowed angle between the vertical container side and outwards from the container is 15 degrees.

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

- The Container Hook 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 Container Hook.
- Eventual use in demanding environments (such as corrosive or extreme temperature).
- Eventual use where the Container Hook is subjected to repeated loads that may induce metal fatigue.

Maintain records of examinations. Before examination, clean the Container Hook 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 Container Hook 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 less 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.