

Operating Instructions

Small Load Carrier Grab type CGKG



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1. Introduction

Before you use the small load carrier grab for the first time, read the operating instructions in their entirety. The operating instructions explain how to safely use, maintain, inspect, and dispose of the small load carrier grab. These operating instructions are a component of the product and must be available to all users. Keep the operating instructions in a safe place for re-use.

1.1 Manufacturer/Service

Carl Stahl Hebetchnik GmbH

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We will be happy to answer any questions you may have about your product.

1.2 EU-Declaration of Conformity

Content of the document:

For the product designated below

Designation:	Small load carrier grab
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We hereby declare that it corresponds to the basic requirements specified in the harmonized legislation mentioned below:

DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND COUNCIL of May 17, 2006 about machines and the change of Directive 95/16/EC (new version) – in short: **Machinery Directive**

Specification of the applicable harmonized standards that apply or details of the specifications for which conformity is declared:

Reference	Date of issue	Title
Harmonised standards for the Machinery Directive:		
EN ISO 12100 + Correction 1	2011-03 2013-08	Safety of machines – General principles for design – Risk assessment and risk reduction
EN 13155	2009-08	Cranes – Safety – Not-fixed load lifting attachments
Additional applicable technical specifications (not published on the EU official gazette):		
ISO/TR 14121-2 SPEC 33885	2013-02	Safety of machinery – Risk assessment – Part 2: Practical guidance and example of methods

Authorized within the meaning of Annex II No. 1. A. Nr. 2, 2006/42/EC for the completion of the technical documents:

Company	Carl Stahl Hebeteknik GmbH
Address	Tobelstr. 2 D-73079 Suessen

Sole responsibility for issuing this declaration of conformity with regard to meeting the basic requirements and the preparation of the technical documents is borne by the manufacturer (or installation company):

Company	Carl Stahl Hebeteknik GmbH
Address	Tobelstr. 2 D-73079 Suessen

This declaration certifies conformity with the named harmonization legislation, however it does not promise properties.

Additional information:

This declaration applies to all copies that are manufactured according to the corresponding production drawings which are a component of the technical documents. The attached accompanying documentation that supports the declaration of conformity contains additional details about adherence to the above references

The complete declaration of conformity is attached as a separate document.

2. Preparation of information

These operating instructions contain symbols, designations, instructions, and lists as depicted in Chapters 2.1 to 2.2.

2.1 Symbols and designations

Warnings

The warnings are classified as depicted below:



DANGER

A warning with the signal word "DANGER" indicates a hazard that can immediately and certainly cause death or severe, lasting injuries.



WARNING

A warning with the signal word "WARNING" indicates a hazard that may cause severe injuries or death.



CAUTION

A warning with the signal word "CAUTION" indicates a hazard that may cause minor to moderate injuries.

ATTENTION

A warning with the signal word "ATTENTION" indicates a hazard that may cause property damage.

In a **Warning** steps are marked with ► and structured chronologically.

Pictographs for specific hazards



Meaning:

Warning about suspended load.



Meaning:

Warning about danger of crushing.



Meaning:

Warning about hand injuries.

The pictographs are used in connection with the associated classification and the appropriate signal word.

Useful information and tips



INFO

This symbol identifies useful information and tips.

Disposal



NOTICE ABOUT DISPOSAL

of packaging materials and load lifting devices.

2.2 Instructions and lists

All instructions are structured in chronological order and numbered sequentially, e.g.:

1. Step 1
2. Step 2

The result of an action is marked with an arrow:

- Result or device reaction

Instructions that do not have to be carried out in a particular sequence are marked as follows:

- Step
- Step

The result of an action is marked with an arrow:

- Result or device reaction

Lists are marked with dashes:

- List

3. Safety

Before you use the small load carrier grab, carefully read the following safety instructions.

Chapter 3.1 lists basic behavior rules that you must observe when handling the small load carrier grab. You must absolutely follow the instructions that are marked with a  symbol to prevent danger to people. Warnings that belong to the individual instructions are always listed before the step in question.

3.1 Basic safety instructions

The small load carrier grab has been constructed, tested, and left the company in a perfectly safe condition. In order to maintain this state, you must follow the instructions in these operating instructions.

- Read these operating instructions in their entirety;
- Heed the warnings and safety instructions;
- Make sure that these operating instructions are always available on site;
- Make sure that only qualified staff performs work with and on the small load carrier grab;
- During use, comply with the locally-applicable requirements for occupational safety and the work instructions of the operator;
- Consider the circumstances on-site;
- Observe the maximum load capacity;
- Damage that compromises safety must be repaired by an expert company;
- The admissible load capacity consists of: Dead weight of the single components + load weight;
- The load capacity of the weakest component is always decisive for the load capacity of the overall system;
- Intended for a maximum of 20,000 load changes (cycles), depending on outside conditions the number of cycles may be reduced.

Classification of the qualification areas for load lifting devices

Area of activity	Qualification	Professional knowledge
Delivery and transport	Dealer, forwarder	– Proof of training in load securing – Safe handling of load lifting devices
Storage	Storage specialist	– Safe handling of load lifting devices
Start-up, maintenance, and service	Specialized personnel	– Expert: professional training and experience, sufficient knowledge in the area of load lifting devices – Safe handling of load lifting devices – Product-specific knowledge
Use, simple visual inspection	Specialized personnel	– Safe handling of load lifting devices, professional training and experience
Disposal	Specialized personnel	– Knowledge of the regulations for proper disposal and re-use

Tab. 1: Overview

3.2 Proper Use

The following points comprise proper use:

- Vertical lifting and lowering of unguided loads;
- Only for use at ground level;
- Ambient temperature range -10° to +80°C;
- Indoor use only;
- Symmetric load distribution.

In addition to the points listed here, additional details must be taken from the technical data and observed (Chapter 4)

3.3 Improper use

The following points comprise improper use:

- Exceeding the maximum load capacity;
- Conveying people and animals;
- Transporting fluids and hazardous materials;
- Tearing away stuck loads;
- Diagonal pull of the load;
- Constructive alterations;
- In environments that are subject to explosion, or where there is exposure to salt, acid, toxic, and/or alkaline substances;

Chapter 3.3 does not guarantee completeness. Anything that is not expressly permitted falls under improper use.

4. Technical Data

4.1 Small load carrier grab

The following tables show the specific technical data of the two grabs available. Depending on the type, certain product properties are substantial.

Designation:	Small load carrier grab
Type:	CGKG
Versions:	CGKG 26; CGKG 50

General information	CGKG 26	CGKG 50
Load capacity (WLL)	26 kg	50 kg
Admissible grab range	0 - 25 mm	0 - 25 mm
Max. dimensions of box (LxW)	400 x 300 mm	400 x 300 mm
Overall height	410 mm	435 mm
Overall width	350 mm	370 mm
Dead weight	3.5 kg	4.5 kg

Tab. 2: Technical data CGKG

5. Delivery and transport

5.1 Scope of delivery CGKG 26

Check the delivery for completeness

Qty	Item
1	Small load carrier grab CGKG 26
1	Original operating instructions
1	EU Declaration of Conformity
1	Inspection document

Tab. 3: Scope of delivery CGKG 26

If parts are missing or damaged, contact the manufacturer/dealer (chapter 1.1).

5.2 Scope of delivery CGKG 50

Check the delivery for completeness.

Qty	Item
1	Small load carrier grab CGKG 50
1	Support
2	Bolt M8x16
2	Washer
1	Top support
3	Bolt M5x10
3	Washer
2	Support lug
2	Bolt M4x16
2	Washer
1	Original operating instructions
1	EU Declaration of Conformity
1	Inspection document

Tab. 4: Scope of delivery CGKG 50

If parts are missing or damaged, contact the manufacturer/dealer (chapter 1.1).

5.3 Transport

The small load carrier grab is tested, checked and packed properly before delivery. Delivery is made using a suitable transport System.

- Always transport the small load carrier grab using a suitable transport system.

5.4 Storage

ATTENTION**Damage to device due to improper storage!**

Improper storage can damage the small load carrier grab.

- ▶ Store the small load carrier grab in a suitable location.
 - ▶ Store the small load carrier grab in a clean, dry and dark place indoors.
 - ▶ Protect the small load carrier grab against:
 - Temperature influences that exceed or fall below the permissible temperature range (see chapter 4),
 - Humidity,
 - Dirt,
 - Damages,
 - Corrosion.
-

6. Layout and function

6.1 CGKG 26

The small load carrier grab CGKG 26 mainly consists of the following components:

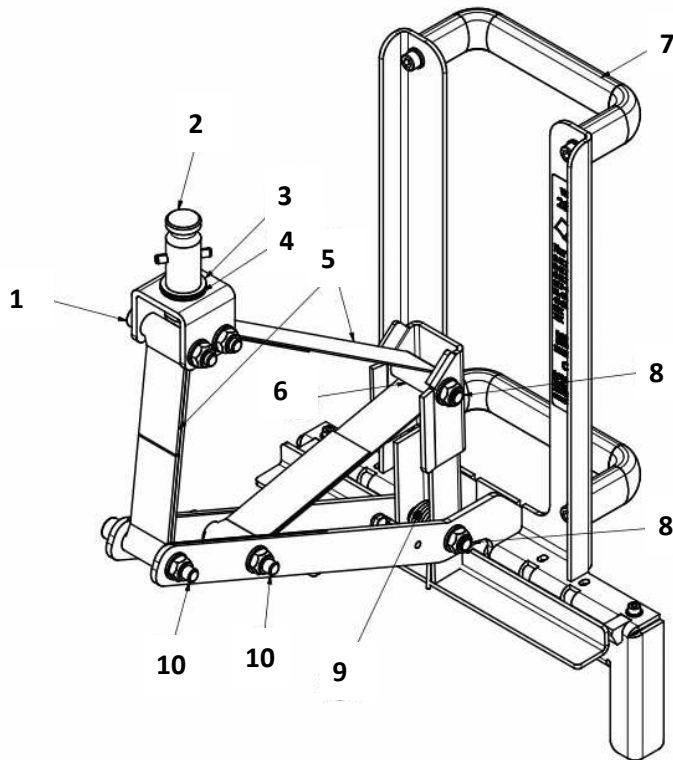


Fig.1: CGKG 26

Position	Designation
1	Bolt M8x60
2	Manulift DSM 5 adapter
3	Bearing washer
4	Axial bearing collar
5	Webbing set
6	Slide bearing
7	Handle
8	Bolt
9	Torsion spring
10	Bolt M8x55

Tab.5: Layout and function CGKG 26

6.2 CGKG 50

The small load carrier grab CGKG 50 mainly consists of the following components:

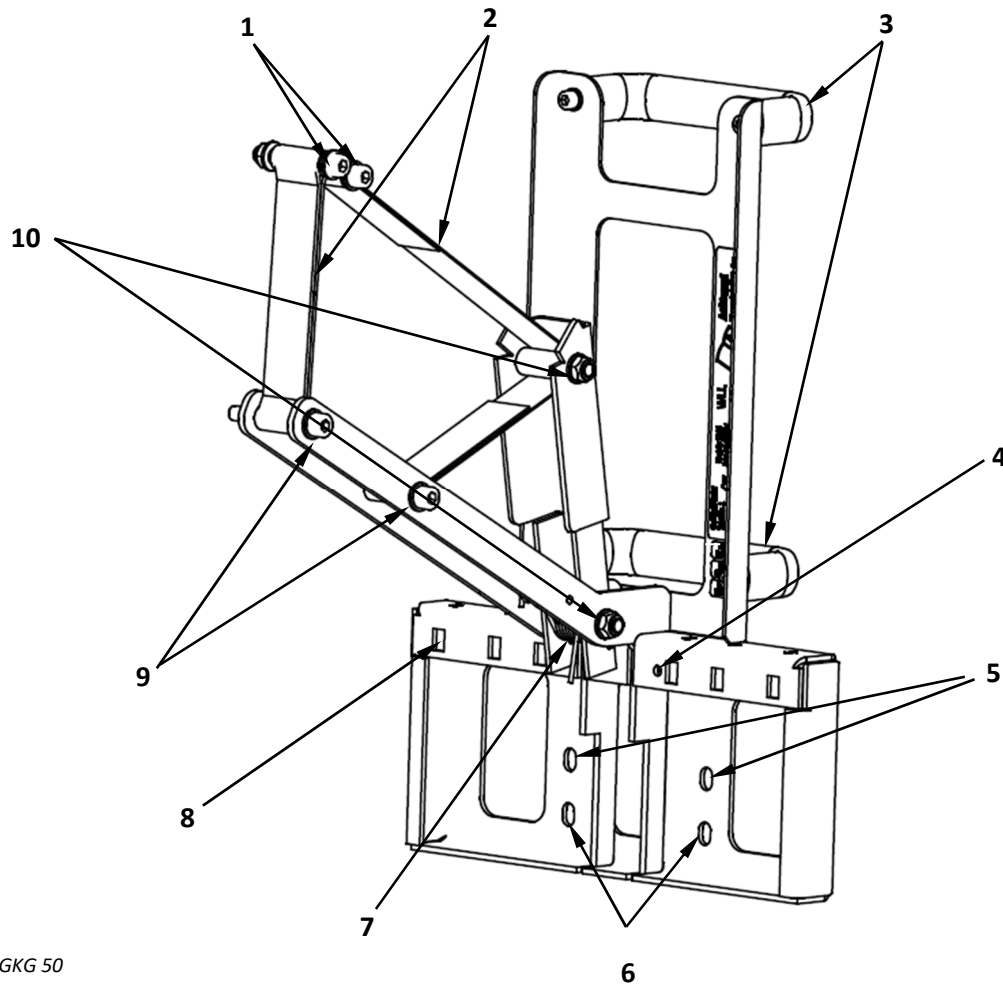


Fig.2: CGKG 50

Position	Designation
1	Bolt M8x55
2	Webbing set
3	Handles
4	Bore (3 pcs centred) for top support
5	Bore for support
6	Bore for support
7	Torsion spring
8	Square slots (6 pcs) for support lugs
9	Bolt M8x60
10	Bolt set

Tab.6: Layout and function CGKG 50

7. Use

7.1 Inspection before use

An inspection must be conducted before each use. You must conduct an inspection before first use (initial start-up), before each recurring use or after each servicing. For the precise details of the corresponding inspections, see the maintenance/inspection plan. Read Chapter 8.

The inspection is intended to ensure that the small load carrier grab is in perfect condition and ready for operation.

Before using the small load carrier grab, you must observe the following with regard to the work environment:



DANGER

Danger to life due to falling load!

A falling load can cause severe injuries or death.

- ▶ Never linger under a suspended load.
- ▶ Never pass under a suspended load.
- ▶ Ensure there is enough free space to work.
- ▶ Ensure that there are no people in the working area.



WARNING

Danger of crushing due to lack of space!

There is a danger of crushing due to clearances that are too small at the load pick-up point, on the load transport path or at the load drop-off point.

- ▶ Inspect your work environment.
- ▶ Ensure there is sufficient space at the load pick-up point, on the load transport path, and at the load drop-off point..

8. Assembly CGKG 50

8.1 Support profile

The small load carrier grab type CGKG50 comes with an unassembled support profile (see fig. 3). There are three different support profiles to choose from (see fig. 3-6). The choice of the support profile depends on shape and material of the box (load carrier).



Fig. 3: Without support profile



Fig. 4: Support



Fig. 5: Top support



Fig. 6: Support lugs

8.2 Choice of load carrier type and support profile



WARNING

Danger of injury due to falling load!

Choice of the wrong load carrier (box) type may lead to injury caused by falling loads.

- ▶ Only use strong box types.
- ▶ Only use box types (load carriers) with a capacity of 50 kg.
- ▶ Check boxes for material flaws.
- ▶ Check stability of the box rim that serves for load attachment.
- ▶ Only use box types with a wide rim (see fig. 7). A narrow box rim is not suitable.
- ▶ Only use high-quality load carriers (boxes).

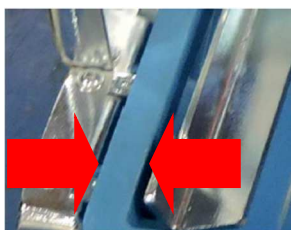


Fig. 7: Example box rim width

The choice of the support profile depends on the box type and especially on the box rim. The chosen support profile must fit precisely under the box rim.



WARNING

Danger of injury due to falling load!

Choice of the wrong support profile may reduce the load capacity and lead to a falling load.

- ▶ Check which support fits your box type.
- ▶ Choose the suitable support profile for this box type.
- ▶ Make sure that the chosen support profile fits precisely under the box rim.

8.3 Support assembly

Depending on the box type, there are different possibilities to mount the support (see fig. 8). The support is suitable for both, the top and centre rim of the box.

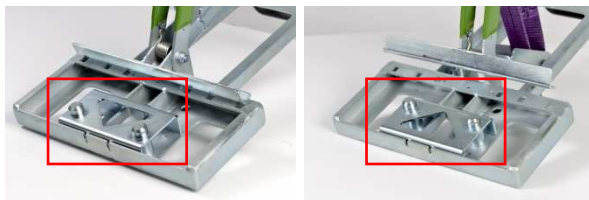


Fig. 8: Support mounted in different ways depending on box type



WARNING

Danger of injury due to falling load!

If the support is mounted laterally reversed, not aligned with the position of the box rim this may result in a falling load.

- ▶ Check position of box rim.

1. Depending on the position of the box rim choose either the top or bottom bores of the small load carrier grab type CGKG50 (see fig. 9).
2. Screw-fasten the support with small load carrier grab type CGKG50.
3. Check correct alignment of the box rim and the support.



Fig. 9: Position with bores on top

8.4 Top support assembly

WARNING

Danger of injury due to sharp-edged components

The small load carrier grab type CGKG50 has some sharp-edged components that may lead to injury.

- ▶ Handle the small load carrier type CGKG50 with great caution and due care.

1. Place the support from the top on the bores. Ensure correct alignment.
2. Screw-fasten the top support from the inside to the small load carrier grab type CGKG50 (see fig. 10-11).
3. Check correct alignment of the box rim and the top support.



Fig. 10: Top support



Fig. 11: Close-up of screw-fastening

8.5 Assembly of support lugs

Depending on the box type, there are different possibilities to mount the support lugs. The mounting position depends on box type and thickness of the box rim.



WARNING

Danger of injury due to falling load!

A wrong mounting position may reduce the load capacity and result in a falling load.

- ▶ Check thickness of the box rim.
- ▶ Choose mounting position of the support lugs depending on thickness of the box rim.
- ▶ Thickness of box rim allowing, prefer the outermost position (see fig. 12-13).

1. Choose position of the support lugs.
2. Place the first support lug from the front upwards into the intended position (see fig. 12-13).
3. Screw-fasten the support lug.
4. Place the second support lug on the other side from the front upwards into the intended position.
5. Screw-fasten the support lug.



Fig. 12: Position of support lugs



Fig. 13: Side view of position of support lug

8.6 Initial use

Inspection before initial use must be performed independently from the chosen support profile. It must also be carried out after an exchange of the support profile or after repairs.

This inspection should ensure that the chosen support profile is suitable for the box type. Furthermore, it makes sure that the small load carrier grab type CGKG50 is in proper condition and ready for use. Before initial use, carry out a visual, functional and load test. Please refer to chapter 9.

9. Operation of the small load carrier grab

1. Make sure that the small load carrier (box) is in proper technical condition.
2. Check if the correct support profile is mounted. It must correspond with the box type.
3. Make certain that the small load carrier grab is in proper technical condition.
4. Ensure equal load distribution in the box.
5. Insert the small load carrier grab in the crane hook, or – depending on version – into the DSM5-adapter.
6. Place the small load carrier grab in a centred position on the front side of the box.
7. Ensure that the small load carrier grab is properly aligned with the box.
8. Lift the small load carrier grab carefully by means of the crane control. It locks automatically.
9. Move the load to the desired position.
10. Carefully lower the small load carrier grab, it will open automatically.

10. Maintenance

The small load carrier grab must be cleaned, maintained, and inspected regularly. For maintenance/inspection intervals, see the maintenance/inspection plan.

10.1 Cleaning



INFO

Regular cleaning and careful handling mean that the small load carrier grab will be in good condition throughout its life cycle.

The entire small load carrier grab must be dust- and dirt-free. Clean if dirty!

10.2 Inspection document

The inspection document serves as proof of the inspections conducted. Furthermore, all noted defects must be repaired and the proof thereof that is kept presented to the authorities if necessary. The original inspection document is attached as a separate document.

10.3 Maintenance/inspection plan

Maintenance/Inspection interval	Activity
Before first use (initial start-up)	– Visual inspection and functional check
Before each recurring use of the small load carrier grab without extraordinary events	– Visual inspection
Annually	– Visual and functional inspection, condition of components
Extraordinary inspection	Depending on external conditions, the annual inspection cycle may be shortened. This includes the following points: – After damage events, servicing or special incidents, – Permanent use in shift operation, – Increased wear, – Corrosion, effects of heat due to environmental influences, etc.

Tab. 7: Maintenance/inspection plan

10.4 Inspection criteria

The readiness for discarding of the small load carrier grab is determined based on the test criteria in the table below. If one of the test criteria applies, the small load carrier grab must be taken out of operation and contact made with the manufacturer / service.

Component	Inspection criteria	Measures
Grab arm or grab lever	Grab arm or grab lever deformed irreparable	Decommission and contact manufacturer/service
Webbing	Webbing wear	Decommission and contact manufacturer/service
Support profile	No or only limited force and/or form lock	Decommission and contact manufacturer/service
Type plate	Legibility	Decommission and contact manufacturer/service

Tab. 8: Inspection criteria

10.5 Visual inspection and function check

Before each use, the small load carrier grab must be checked and inspected. The table in Chapter 10.4 lists criteria which may indicate that you must take the small load carrier grab out of service.



DANGER

Danger to life due to falling load!

Due to deformation and wear of the individual components, the load capacity may be reduced, and the load can fall.

- ▶ Check the small load carrier grab for defects.
- ▶ Check to what extent the individual components are functional.
- ▶ Take the small load carrier grab out of service by marking it appropriately, if it is no longer functional or if it is damaged beyond repair (see chapter 11.1)
- ▶ If necessary, contact the manufacturer/service (see chapter 1.1).
- ▶ If necessary, dispose of the small load carrier grab (see chapter 11.2)

11. Taking out of service and disposal

11.1 Taking out of service

1. Take the small load carrier grab out of service by marking it.
2. Contact the manufacturer/service (see chapter 1.1).
3. Dispose of the small load carrier grab if necessary.

11.2 Disposal

Disposal of small load carrier grab

**NOTICE ABOUT DISPOSAL**

If the small load carrier grab can no longer be repaired or if it is no longer functional, it must be disposed of in accordance with the applicable legal provisions.

Disposal of packaging material

**NOTICE ABOUT DISPOSAL**

According to the Packaging Ordinance, the dealer must take back for re-use and/or ensure disposal of the packaging for its products that do not bear the symbol of a system for complete disposal.

