GB

User manual

CondorLift

LEVER HOIST

CLLH0008F - CLLH0010F - CLLH0016F - CLLH0025F - CLLH0032F - CLLH0063F

The following information does not claim to be exhaustive. Further information about lever hoists should be taken from the relevant employers' insurance association and state regulations.

Intended use:
For anchoring and lifting loads only

01 - 28/10/2014

www.carlstahl-lifting.com

➔NOTE!

For incomplete machines, the assembly/installation instructions can be found in the ‘Assembly’ section.

Tobelstr. 2 · D-73079 Suessen (Germany)
www.carlstahl.com

The original operating manual is in German.
Versions in other languages have been translated from the German original.
A copy can be requested in writing from Carl Stahl.
Subject to modifications.

Contents

1 Information

The products fulfil the European Union requirements, especially those established by the EC Machinery Directive.
Our entire company is certified to the quality assurance system ISO 9001.
The production of individual parts is subject to ongoing, strict interim checks.
After installation, the products are subjected to a final inspection with overload.
In Germany, lifting operations are subject to the national provisions established by the accident prevention regulations, among other provisions.
The stated performance of the devices and the validity of any warranty claims are subject to compliance with all information in these instructions.
The products are duly packaged but you should still check them for transport damage upon receipt. Please notify the transport company immediately of any complaints.
This manual enables the quick and efficient use of the device.
Figures in the manual are provided to enable a general understanding and may differ from the actual design.

➔NOTE!

Please take note of the tests/inspections that are required prior to the device's initial and subsequent uses, as well as the regularly recurring tests/inspections. In countries other than Germany, the applicable national regulations must also be observed.

2 Safety

2.1 Warnings and icons

Risks and information are classified and presented as follows in this document:

DANGER!	Indicates a hazard with a high level of risk, which, if not avoided, will result in death or serious injury.
WARNING!	Indicates a hazard with a medium level of risk, which, if not avoided, could result in death or serious injury.
CAUTION!	Indicates a hazard with a low level of risk, which, if not avoided, could result in slight or moderate injury or damage to the product or its environment.
➔NOTE!	Indicates user advice and other useful information.


Risk of electric shock.

Risks in potentially explosive atmospheres.

2.2 Operator duties of care

The device has been designed and built under consideration of a risk assessment and following the careful selection of the harmonised standards as well as other technical specifications to be observed. It is therefore in line with the latest technology and guarantees optimum safety.

The interface of our scope of delivery is the complete device from the suspension point to the load hook and control unit, if this is included in the order. Other equipment, tools, slings and main energy supply systems must be installed in accordance with the appropriate regulations and directives. For devices protected against explosions, all of these parts must be approved and suitable for explosion protection. Responsibility for this rests with the operator.

However, the high level of safety can only be achieved during operations if all of the necessary measures have been met. The operator's duty of care for the device involves planning these measures and checking their implementation.

The operating manual should be supplemented with further instructions, including supervisory duties and duties to communicate information in consideration of special operational features, e.g. with regard to the organisation of work, workflows or the personnel used.

The operator must, in particular, ensure that:

- the device is solely used as intended.
- the device is solely operated in a fault-free, fully functional condition and, in particular, that the functioning of the safety equipment is regularly checked.
- necessary personal protective equipment for the operating, maintenance and repair staff is available and used.
- the operating manual is always available in a legible format at the place where the device is used.
- only qualified and authorised personnel operate, service and repair the device.
- these members of personnel receive regular training on all relevant matters relating to occupational health and safety and environmental protection, and they comply with the operating manual and, in particular, the safety instructions this contains.
- any safety and warning notices affixed to the device are not removed and remain legible.
- devices specially designed for explosion protection must be grounded on site with a conductive resistance to earth of $< 10^6\ \Omega$.

⚠ WARNING!

Design modifications to the device are prohibited

2.3 Requirements to be met by operating personnel

Only persons who are suitably qualified, trained and familiar with the devices may independently operate them. They must be instructed to operate the devices by the contractor.

Personnel must have read the operating manual, especially its Safety instructions section, before starting work.

This particularly applies to personnel who only work on the device occasionally, e.g. during its set-up, maintenance or servicing.

⚠ DANGER!

To prevent the most serious injuries, the following must be observed when using the device:

- Use personal protective equipment
- Tie back long hair
- Do not wear rings, chains or other jewellery
- Do not wear loose clothing

2.4 Intended use

The permissible working load limit of the devices must not be exceeded! The only exception to this rule is in the case of a potential load test by an accredited competent person prior to initial use.

- The permissible ambient temperature when operating the devices is -20°C/+50°C, or -20°C/+40°C for all motorised devices!
- Faulty devices and load suspension equipment may only be used again once they have been repaired! Only original equipment spare parts may be used. Non-compliance with this stipulation will void the warranty
- Independent modifications to the devices by the operator will void liability and warranty claims
- Vertical lifting and lowering as well as dragging and tensioning of loads
- It must be possible to align the device to the load

⚠ DANGER!

Lever hoists with ship hooks must only be used for tensioning purposes!
Only in this case may the tip of the hook be subjected to a load!

The lever hoist is classed as a ‘ready-to-use device’ according to the valid national regulations with an appropriate CE declaration of conformity.

➔NOTE!

If the devices are not properly used, their safe operation cannot be guaranteed. The operator bears sole responsibility for any personal injuries or damage to property arising as a result of improper use.

⚠ DANGER!

The following are prohibited in particular:

- Use for towing stationary loads or angled pulling if the device cannot be aligned to the load
- Use in potentially explosive environments
- Use to transport people
- Use in entertainment and production sites for scenic representations
- Use if people are under the suspended load
- Use as a motorised drive
- Use if the loose chain end is blocked
- Use if the loose chain end is subjected to a load
- Use for dragging loads with motorised devices

2.5 Basic safety measures

- Observe the installation, operating and maintenance manuals
- Observe warning notices on the devices and in the manuals
- Observe safety clearances
- Ensure clear visibility during work
- Only use the devices as intended
- The devices are solely intended to be used to move goods. People must never be transported
- Never exceed the specified permissible working load limit
- Observe the German accident prevention regulations (UVV)
- During use outside Germany, observe the relevant national regulations
- Building walls, ceilings, floors or structures to/on which the devices are attached or suspended must be sufficiently stable. In the event of doubt, always consult a structural engineer
- After a prolonged period of non-use of the device, conduct a visual inspection of all components that affect its functioning and replace any damaged components with new original spare parts
- Never use a faulty device; listen for abnormal operating noises
- In the event of faults, immediately stop work and eliminate the fault
- Immediately report damage or faults to a responsible person
- Warn people in the immediate vicinity when using the device
- Observe the provisions on load suspension equipment established in the UVV on the positive and non-positive slinging of loads

- The sling or load must be securely hung in the load hook and positioned on the base of the hook
- The safety catches on hooks must be closed
- The housing must not lie against anything
- Stop lowering the load if the lower block or load has been set down or is prevented from being lowered any further
- The load chain must not be twisted
- Twisted chains must be untwisted before the load is hung
- The weld seam indicates that the chain links are running correctly
- The chain links must always be aligned in a single direction

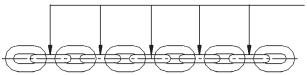


Figure 1

- To prevent overloads when using the device for rigging, we recommend using devices with a slipping clutch
- Motorised operation is not permitted

⚠ WARNING!

The following are prohibited:
- Lifting a load that exceeds the devices' nominal load
- Manipulating the slipping clutch
- Continued use of worn out or damaged chains. Immediately replace worn chains with new original chains
- Using the load chain to encircle a load and placing the chain over an edge or dragging it
- Reshaping damaged load hooks (e.g. by hitting them with a hammer). They must be replaced with original hooks
- Operating the device by stepping on the lever
- Using a lever extension
- Attaching loads to the tip of the load hook (exception: versions with a ship hook)
- Conducting welding or cutting work on attached loads
- Swinging the load
- Using the load for earthing purposes while welding
- Using the device if it makes abnormal noises
- Operating the lever without a rubber handle
- Leaving the hoisted load unattended for a prolonged period

3 Transport and storage

⚠ CAUTION!

Transport activities must only be conducted by qualified personnel.
No liability is accepted for damage caused by improper transportation or storage.

3.1 Transport

The devices are inspected and, where applicable, duly packaged before delivery.

- Do not drop or throw the devices.
- Use suitable means of transport.

The form and means of transport are based on the local conditions.

3.2 Transport locks

➔NOTE!

On devices with a transport lock, this must be removed before the device is used for the first time.

3.3 Storage

- Store the device in a clean, dry place
- Use a suitable cover to protect the device against dirt, moisture and damage
- Protect chains, hooks, ropes and brakes against corrosion

4 Description

4.1 Application areas

Wherever possible, the devices should be installed in a room with a roof.
When installing the devices outdoors, they must be protected against influences that can cause weathering, e.g. rain, snow, hail, direct sunlight, dust etc. We recommend using a weather protection roof in the park position. In damp environments with major temperature fluctuations the formation of condensation poses a risk to the functioning of the device.
Ambient temperature of -20°C/+50°C, for all motorised devices -20°C/+40°C.
Humidity 100% or less, but not under water.

⚠ DANGER!

EX Use in potentially explosive atmospheres is prohibited!

4.2 Structure

CARL STAHL lever hoists are compact devices with a suspension hook for stationary use.

Figure 2

4.3 Functional description

The load is lifted, lowered or tensioned by operating the lever. A load pressure brake prevents the load from automatically lowering.

➔NOTE!

Undefined forces can occur during ‘overhead’ work and ‘rigging’. In such situations, we recommend using a device with a slipping clutch.

➔NOTE!

The best way to prevent malfunctions when the device is subject to extreme ambient conditions is to use it regularly.

4.4 Important components

- Gear unit
  Gear unit parts are made from premium quality materials.
- Load pressure brake
  For holding the load in any position. A new kind of brake system has been used for the devices. The brake discs are made from sintered-on pad segments and are wear-free for the life of the devices providing they are used as intended. According to DIN 13157, the service life is 1500 work cycles (lifting/lowering processes) with a 300 mm stroke under a nominal load.

Figure 3

- Housing
  Made from sheet steel
- Load chain
  Pursuant to EN 818-7-T in special grades. All individual components are precisely aligned. Only use original chains.
- Load hook
  Forged steel. Pivotable, thereby preventing the chain from twisting during attachment. With hook locking mechanism.
- Chain free-run
  For pulling through the chain without a load.

5 Specifications

Working load limit	t	0.8	1	1.6	2.5	3.2	6.3
Product code		CLLH008	CLLH010	CLLH016	CLLH025	CLLH032	CLLH063
Number of chain legs		1	1	1	1	1	2
Load chain dimensions	mm	5.6x15.8	5.6x15.8	7.1x20.1	9.0x24.8	10x28.1	10x28.1
Smallest hook dimensions	mm	280	300	335	375	395	540
Approx. lever force	N	290	360	340	370	370	380
Approx. weight with standard lift	kg	5.7	5.9	8.0	11.2	15.0	26.0
Approx. additional weight per m lift	kg	0.7	0.7	1.1	1.7	2.3	4.7

5.1 Main dimensions

Working load limit in t	0.8	1	1.6	2.5	3.2	6.3
Product code	CLLH008	CLLH010	CLLH016	CLLH025	CLLH032	CLLH063
A	119	119	126	150	159	217
B	144	144	159	173	190	190
C	35.5	42.5	42.5	47	50	60
D	245	245	265	265	415	415
E	97	97	100	102	112	112
F	14	15	19	21	24.5	34
G	26.5	29	32	36.5	39	50
H	280	300	335	375	395	540

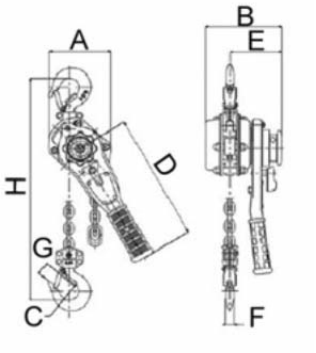


Figure 4

6 Installation

The following instructions must be observed in order to avoid personal injury and damage to property:

- Read the ‘Safety’ section.
- When using the device with a load, ensure the hook is securely fitted. The hook locking mechanism must be closed.
- Ensure that the attachment position cannot be changed by either the load or other influences.

7 Operation

Lifting devices and cranes must only be operated by people who have been suitably trained. They must be instructed to operate the device by the contractor. The contractor must ensure that the operating manual is provided with the device and accessible to the operating personnel.

7.1 Devices from 0.8 t to 6.3 t

Before starting work, ensure that the chain free-run is switched off.

Violent pulling can potentially close the brake and stop the chain being transported. Set the switch knob to the lowering position '▼', conduct several lowering processes and then re-start the lifting process.

Lifting or dragging

Turn the switch knob to the mark (1) indicated on the rating plate for lifting or dragging and move the load by ratcheting the hand lever

Lowering or releasing

Turn the switch knob to the mark (2) for lowering or releasing and move the load with the hand lever

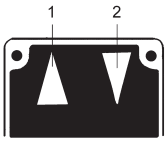


Figure 5

7.1.1 Chain free-run

When the device is used properly and as intended, it is not possible to accidentally activate the chain free-run function while subject to a load. The brake system can be released with only a low load; this is not a malfunction. The brake system functions automatically if the load is greater than 30 kg for working load limits of up to 1000 kg and more than 3% of the working load limit for devices over 1000 kg.

⚠ DANGER!

Never use force to try and activate the chain free-run under load.

Switching ON the chain free-run

- Turn the switch knob to the central position

Figure 6

- Pull up the free-run wheel in the direction of the arrow ▲

- The chain can be pulled through in both directions

A Free-run is OFF
B Switch ON free-run

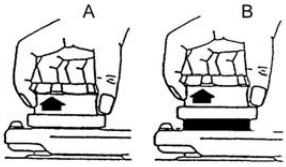


Figure 7

Switching OFF the chain free-run

- Use one hand to turn the free-run wheel in the direction of the arrow ◂ while simultaneously pulling on the load chain leg.
- The free-run wheel jumps back to the OFF position.
- Chain free-run is switched off.

C Switch OFF free-run
D Free-run is OFF

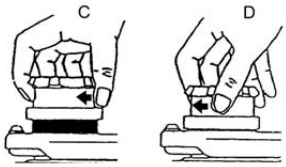


Figure 8

7.2 Brake and retaining catch

The brake remains closed (clamped shut) if:

- the load is removed from the lever hoist without being lowered – this is possible e.g. in the case of vertical lifting/lowering if the load is 'transferred' or in the case of horizontal dragging/tensioning.
- the load hook is pulled against the housing and becomes clamped shut there.

The chain does not move and the load cannot be released.
Troubleshooting:

- Re-subject the lever hoist to a load
- Release the brake by setting down the load
- Alternatively, set the switch knob to the 'lower' mark and release the hand lever by forcefully jerking it in the ▾ direction

7.3 Transferring loads

In work processes such as the 'transferral of loads', the device from which the load has been transferred cannot be used for lifting or lowering as the brake was not closed during the transfer.
In such instances, please proceed as follows:

- Use device (A) to lift the load
- Hang the load in the hook on device (B) and lift it until it hangs securely in the hook but has not yet been removed from device (A)
- Continue the lowering process with device (A) until device (B) supports the entire load
- The load has now been removed from device (A) and the brake is open again

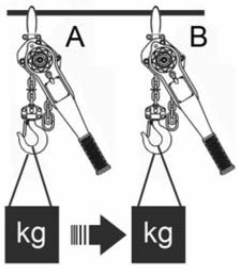


Figure 9

8 Commissioning

8.1 General information

Use in the Federal Republic of Germany:
Observe the valid national accident prevention regulations.
Use in other countries:
Inspections as above. Observe the national regulations and the information in this manual!

➔NOTE!

Devices with a working load limit of up to 1000 kg and without motorised transport or lifting drives must be approved by a ‘competent person’ before their initial use.

Devices with a working load limit of over 1000 kg or with more than one motorised crane movement, e.g. cross travel in addition to lifting, must be approved by an ‘accredited competent person’ before their initial use.

‘Ready-to-use devices’ according to the valid national regulations with an appropriate CE declaration of conformity are exceptions in this regard.

Definition of a ‘competent person’ (formerly ‘expert’)
A ‘competent person’ means a person who has the technical knowledge necessary for inspecting the work equipment because of his/her vocational training, professional experience and current activity on the job.

Definition of an ‘accredited competent person’ (formerly ‘accredited expert’)
An ‘accredited competent person’ means a person who has knowledge in the field of the work equipment to be inspected and is familiar with the applicable national regulations on occupational health and safety, employers’ insurance association regulations and generally acknowledged technical standards because of his/her specialist training and experience. This competent person must regularly inspect and provide expert evaluations on work equipment in line with the model and provisions. The accreditation is issued by authorised monitoring bodies.

8.2 Load chain

- The load chain must be correctly positioned and oiled before its initial use.
- Remove the warning sign and fixing wire from the chain.

⚠CAUTION!

Do not use grease to lubricate the load chain
The liability and warranty shall become void without lubrication

➔NOTE!

Consistently good lubrication vastly extends the chain service life

9 Safety inspection

The following must be checked before the initial use and prior to subsequent use:

- Any mounting screws are tight and pins, linchpins and safety fittings are present and secured.
- The chains are correctly positioned, oiled and in a good condition.

10 Servicing

10.1 General information

The purpose of all monitoring, maintenance and servicing work is to ensure that the device operates safely and reliably. It must therefore be conducted carefully.

- Only allow work to be conducted by ‘competent people’.
- Only conduct work when the device is not subject to a load.
- Keep a written record of all inspection results and any measures taken.

10.2 Monitoring

The monitoring and maintenance intervals specified apply to normal conditions and single-shift operation. In the case of tougher usage conditions, e.g. frequent use under full load or certain ambient conditions such as heat, dust etc. the intervals must be accordingly shortened.

10.3 Replacing the load chain

⚠ CAUTION!

The chain must be replaced in the event of visible damage but in all events by no later than upon reaching the discard stage, i.e. if e.g. one or more dimensions shown in the table are reached when inspecting the chain or if the chain has become corroded or malleably elongated.
Whenever the chain is replaced, the chain wheels must also be inspected and replaced if necessary.

Procedure:

- Only retract the new chains without a load and exactly as the existing chains in the device.
- Loosen the chain from the end attachment and hang a laterally open chain link on it.
- To create a laterally open chain link simply grind out a piece. The opening must have the same thickness as the chain link.

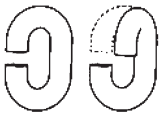


Figure 10

- Also hang a new and oiled original chain of the same size in the laterally open chain link and retract.
- Do not install the chain twisted.
- Ensure the chain links are aligned.
- Attach the chain to the end attachment.

11 Inspection

11.1 Recurring inspections

Regardless of the regulations in the individual countries, the functional reliability of the lifting devices must be inspected at least once a year by a competent person or an accredited competent person in the case of cranes.

11.1.1 Parts to be checked

The following must be checked:

- Dimensions of the load chain, load hook, retaining catches, screws, locking wheels and brake pads. These must be compared with the dimensions in the table.
- Visual inspection to check for deformities, wear, cracks and corrosion.

⚠ CAUTION!

On reaching the relevant wear limit, the part must be replaced with a new original part.

	On commis-sioning	Daily inspec-tions	1st main-tenance After 3 months	Inspection mainte-nance every 3 months	Inspection mainte-nance every 12 months
Check screw connections	x				x
Check the lifting and lowering functions	x	x			
Check the brake function	x	x			
For lever hoists: check the chain free-running function	x	x			
Brake – check for brake pad wear					x
Check the chain wheels, locking wheels, retaining catches and screws					x
Clean and oil the load chain	x		x	x	
Load chain – check for elongation and wear					x
Load hook – check for cracks and deformation					x
Load hook – check the hook locking mechanisms	x	x			
Chain pulley bearings – check and lubricate			x		x
Check the chain pulley			x	x	
Have a competent person inspect the device (recurring inspection)					x

⚠ WARNING!

If the upper or lower thresholds are breached for one or more dimensions, or if cracks or corrosion are found, the parts must be replaced with original spare parts.

11.2 Inspection - load chain

pursuant to DIN EN 685, part 5

L11 = pitch increase over 11 chain links

L1 = pitch increase over 1 chain link

dm = average link thickness

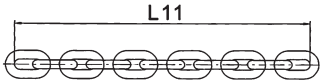


Figure 11

Chain dimensions

Dimensions mm	Chain size			
	5.6x15.8	7.1x20.1	9x24.8	10x28.1
L11	179.1	227.9	281.2	318.6
L1	16.6	21.2	26.1	29.6
dm	5.0	6.4	8.1	9.0

⚠ WARNING!

If the table dimensions are reached due to wear or deformation, the chain must be replaced!

11.3 Inspection - load hook

Load hook

X = measuring distance hook mouth width
Y = measuring distance from hook no. 6
H = hook basic thickness

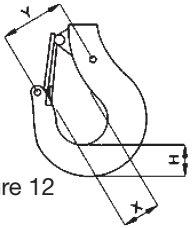


Figure 12

Dimensions for load and suspension hooks

Dimensions mm	Working load limit in t/chain leg					
	0.8/1	1/1	1.6/1	2.5/1	3.2/1	6.3/2
X or Y	26.5/41.5	31.5/49.4	35.5/52	41/58.6	43/61.9	53/84.3
H	20	22	26.5	29	31.2	45.5

Enter the measurement data before initial use:

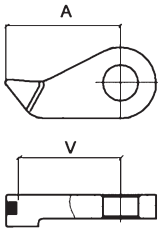
WLL	t
X or Y	mm
H	mm

⚠ CAUTION!

If the hook mouth width dimensions are exceeded by 10% due to deformation or the minimum hook base thickness is breached by 5% due to wear, the hook must be replaced!

11.4 Inspection - retaining catch

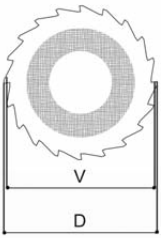
Type		A	Vmin
CLLH	t	mm	mm
	0.800-1.6	22	20.5
	2.5	29.2	27.7
	3.2-6.3	31	29.5



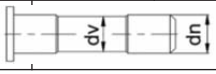
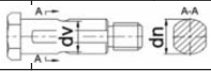
11.5 Inspection - brake system

Locking wheel with brake pads

	D	Vmin	tn	tvmin
t	mm	mm	mm	mm
0.8	64	61	8	6
1	64	61	8	6
1.6	64	61	8	6
2.5	64	61	8	6
3.2	74	71	8	6
6.3	74	71	8	6



11.6 Inspection - suspension and load hook bolts

Type		Suspension bolt		Load hook bolt	
CLLH	t	dn	dvmin	dn	dvmin
	0.8/1	12	11.1	7.5	6.9
	1.6	12	11.4	10.2	9.7
	2.5	14	13.3	11.5	11
	3.2	16	15.2	13	12.4
	6.3	16	15.2	13	12.4
					

Dimensions in mm

12 Maintenance

12.1 Load chain

Chain wear in the link points is usually caused by insufficient chain maintenance. To ensure the optimum lubrication of the links, the chain must be lubricated at regular intervals tailored to the usage.

- Use penetrative lubricant, e.g. transmission oil, to lubricate the chain.
- Always lubricate the chain without a load so that the oil can moisten the links subject to wear. It is not sufficient to simply lubricate the chains externally as this does not ensure that a film of lubricant forms in the link points. The adjacent link points must always have a film of lubricant as increased chain wear otherwise occurs.
- In the case of a constant chain travel length, particular attention must be paid to the deflection point of the lifting and lowering movements.
- Carefully lubricating the chain extends its service life to about 20 times that of a dry, non-lubricated chain.
- Use petroleum or a similar cleaning agent to clean dirty chains; never heat the chain.
- In the case of ambient influences that promote wear (e.g. sand), a rock lubricant such as graphite powder should be used.
- When lubricating the chain, also check its wear status.

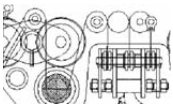
Do not use grease to lubricate the load chain

Use		Recommendation		Interval
Load chain		Transmission oil E.g.: FUCHS RENOLIN PG 220 or chain lubricant Do NOT use grease!	0.2 l	3 months

⚠ CAUTION!

The liability and warranty shall become void without lubrication

12.2 Pulleys

Use		Recommendation		Interval
Pulleys		FUCHS RENOLIT FEP2	As required	12 months

12.3 Load hook

- Check the load hook and pulleys once a year
- Clean the hook bearings and pulleys once a year and lubricate them with grease
- Plain bearing bushings are maintenance free
- If the bearings or plain bearing bushings are worn, the entire pulley must be replaced

12.4 Gear unit

Use		Recommendation		Interval
Load hook bearing (plain bearing bushings are maintenance free)		FUCHS RENOLIT FEP2	As required	12 months

Regular lubricant checks are required. Clean and re-lubricate the teeth after approx. 3 years. We recommend using a class EP2 lubricant or similar products. Shorter maintenance intervals are required for tougher operating conditions (e.g. dust, permanent use with nominal load etc.).

12.5 Threaded load-actuated brake

The brake pad wear is checked during the inspection. Replace the brake pads if the wear limit is reached at any point on the pad, as may be the case if the pads are unevenly worn.

⚠ CAUTION!

The brake pads must be free from cracks. Oil, grease, dirt and moisture on the pads should be avoided wherever possible as this causes increased wear.

The brake pad has been tested for the entire service life of the device under intended use and should only be replaced in the event of unusual wear.

➔NOTE!

According to EN 13157, the service life is 1500 work cycles (lifting/lowering processes) with a 300 mm stroke under a nominal load and normal conditions

As harsher working conditions can shorten the service life, the brake pad thickness must be checked more than once a year in such situations. The lever hoist with the brake pad must in all events be replaced if the wear limit is reached or the pad has clearly become worn on one side.

12.6 Range of lubricants

FUCHS	SHELL	ESSO	MOBIL	TOTAL	CASTROL	KLÜBER
Renolit FEP 2	Alvania EP 2	Unirex EP 2	Mobilux EP 2	MULTIS EP2	-	-
Stabylan 5006	-	-	-	-	Optimol Viscoleb 1500	Klüberoil 4UH 1-1500

12.7 Range of lubricants for the food industry (optional*)

	SHELL	MOBIL	CASTROL
Gear unit	FM Grease HD2	Mobilegrease FM 222	-
Load chain	-	Lubricant FM 100	Optimol Viscoleb 1500
Load hook Pulleys Sprockets Drive pinion	FM Grease HD2	Mobilegrease FM 222	-

13 Faults

In the event of faults, the following must be noted:

- Faults must only be eliminated by qualified personnel
- Safeguard the devices against accidental start-up
- Use a warning sign to indicate that the device is not ready for operation
- Secure the action area of the moving device parts
- Read the ‘General safety instructions’ section

Troubleshooting information can be found in the table below.
To eliminate faults, contact our service department.

⚠CAUTION!

Faults caused by worn or damaged components such as ropes, chains, chain wheels, axles, bearings, brake parts etc. must be eliminated by replacing the respective parts with original spare parts.

14 Troubleshooting

Check the lever hoist by listening for noises:
When lifting: move the lever backwards and forwards – it should click

When lowering: only move the lever backwards, not forwards – it should click

Fault	Cause	Troubleshooting
Load not lifted	Overload	Reduce the load to the nominal load
	Load stuck	Release the load
	Brake pads worn	Conduct maintenance and replace the brake pads
	Load chain twisted	Straighten out the load chain
	Faulty chain, gear unit or chain wheels	Conduct maintenance and replace faulty parts with original spare parts
	Retaining catch not correctly engaged	Check the retaining catch and replace it if necessary
	Switch knob – incorrect setting	Select the correct setting
	Retaining catch spring missing	Conduct maintenance and replace faulty parts with original spare parts
Load difficult to lift	Overload	Reduce the load to the nominal load
	Dirty chains, gear unit or chain wheels	Conduct maintenance; lubricate chains, gear unit and chain wheels
	Faulty chain, gear unit or chain wheels	Conduct maintenance and replace faulty parts with original spare parts
Load lifted intermittently	Retaining catch spring missing or faulty	Conduct maintenance and replace faulty parts with original spare parts
Hoist will not lift without a load	Brake spring missing	Conduct maintenance and replace faulty parts with original spare parts
Hoist does not lift over the whole distance	Hook tilted, chain twisted	Move the hook and chain into the correct positions
Brake remains closed (clamped shut)	The load has been removed from the lever hoist without being lowered	Re-attach the load, lower the load, detach the load
	The load hook has been pulled against the housing and clamped shut there	Release the hook, re-attach the load, lower the load, detach the load
Hoist does not lower the load	Brake too tight	Set the switch knob to '▾' or 'DN'. Move the lever while simultaneously pulling on the load-side chain leg
	Rust has stopped the brake from working	Conduct an inspection and replace rusty parts
Parts of the load sag when lowered	Foreign bodies between the brake parts	Remove foreign bodies; clean the area. (Do not grease)
Load sags when lowered	Brake pad missing, incorrectly installed or worn	Replace or correctly install the brake pad
Switch knob does not work	Faulty or deformed	Inspect and replace parts
Load sags if the switch knob is set to free-run	Missing or faulty chain springs	Conduct maintenance and replace faulty parts with original spare parts

15 Decommissioning

⚠ WARNING!

To prevent damage to the device or life-threatening injuries when decommissioning the device, the following points must be observed:
Always conduct the steps to decommission the devices in the following order:

- Secure a work area of an adequate size.
- Read the ‘Safety instructions’ section.
- De-installation occurs in the reverse order to installation.
- Dispose of the equipment in an environmentally-sound manner.

15.1 Temporary decommissioning

- Measures as previously.
- Read the ‘Storage’ and ‘Transport’ sections

15.2 Final decommissioning/disposal

- Measures as previously.
- Following de-installation dispose of devices in an environmentally-sound manner based on the substances contained.

16 Documents on request

Installation instructions – brake system
This work must only be conducted by ‘competent persons’.

17 Spare parts list

Top hook for lever hoist

7311F4187430840	CLLH - 0.8 t
7311F4187451040	CLLH - 1.0 t
7311F4187511640	CLLH - 1.6 t
7311F4187562540	CLLH - 2.5 t
7311F4187603240	CLLH - 3.2 t
7311F4187676340	CLLH - 6.3 t

Hook locking mechanism for lever hoist

7311F4187430837	CLLH - 0.8 t
7311F4187451037	CLLH - 1.0 t
7311F4187511637	CLLH - 1.6 t
7311F4187562537	CLLH - 2.5 t
7311F4187603237	CLLH - 3.2 t
7311F4187676337	CLLH - 6.3 t

Gear unit cover for lever hoist

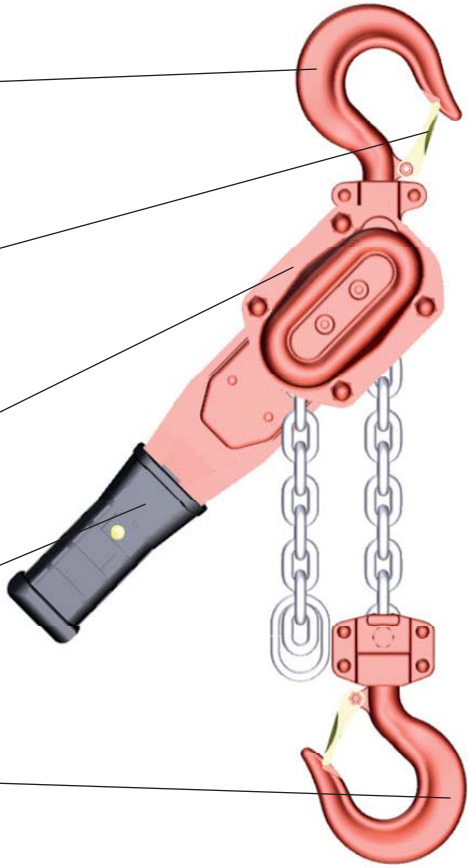
7311F4187451001	CLLH - 0.8 t + 1.0 t
7311F4187511601	CLLH - 1.6 t
7311F4187562501	CLLH - 2.5 t
7311F4187603201	CLLH - 3.2 t + 6.3 t

Ratchet lever for lever hoist

7311F4187451024	CLLH - 0.8 t + 1.0 t
7311F4187511624	CLLH - 1.6 t + 2.5 t
7311F4187603224	CLLH - 3.2 t + 6.3 t

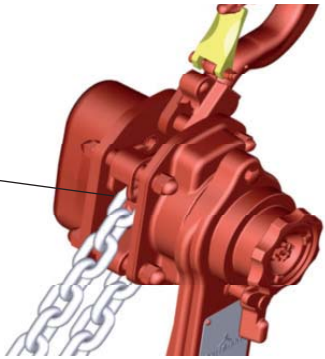
Bottom hook for lever hoist

7311F4187430838	CLLH - 0.8 t
7311F4187451038	CLLH - 1.0 t
7311F4187511638	CLLH - 1.6 t
7311F4187562538	CLLH - 2.5 t
7311F4187603238	CLLH - 3.2 t
7311F4187676338	CLLH - 6.3 t



Brake housing for lever hoist

7311F4187451016	CLLH - 0.8 t + 1.0 t
7311F4187511616	CLLH - 1.6 t
7311F4187562516	CLLH - 2.5 t
7311F4187603216	CLLH - 3.2 t + 6.3 t



EC Declaration of Conformity

Acc. to the EC Machinery Directive 2006/42/EC, Appendix IIA

We hereby declare that the machine/equipment indicated below, in its design and construction and in the version that we market, conforms to the fundamental safety and health requirements of the EC Machinery Directive 2006/42/EC and the harmonized and national standards and the technical specifications below.

Any modification to the machine/equipment that the manufacturer has not authorized voids this declaration.

This declaration shall also become invalid if the machinery/equipment is not used in line with the intended use illustrated in the user manual and if the regular inspections required in accordance with the Industrial Health and Safety Ordinance and DGUV regulation 100-500 are not conducted.

Description	**Lever hoist** **CLLH0008F - CLLH0010F - CLLH0016F - CLLH0025F** **CLLH0032F - CLLH0063F**
Manufacturer	Carl Stahl GmbH Tobelstr. 2 D-73079 Süßen
Applied harmonized standards	DIN EN ISO 12100 DIN EN 13157 DIN EN 818-7
Applied national standards and technical specifications	DGUV regulation 100-500 DGUV regulations 52 and 54 Industrial Health and Safety Ordinance
Person authorised to compile the Declaration of Conformity	Michael Baumann Carl Stahl GmbH D-73079 Süßen
Süßen, 26/01/2015	Michael Baumann - CE agent Name, position and signature of the agent

Kontroll- und Prüfbescheinigung

Hiermit wird bescheinigt, dass die Abmessungen, Qualitätsmerkmale und Funktionsfähigkeiten des im Folgenden beschriebenen Gegenstandes entsprechend den geltenden Bestimmungen für Maschinen gründlich kontrolliert und unter Verwendung von öffentlich beglaubigten Prüfgeräten unter Anwendung der vorgeschriebenen Prüflast geprüft worden sind und dass die Prüfungen ausnahmslos gute Ergebnisse erbracht haben.

Certification of Inspection and Test

This is to certify, that the designated size, quality and faculties of the following article have been thoroughly inspected and tested with authorized testing device by the pre-determinded test load in accordance with concerned Machinery Directives and all of the are satisfactory.

Carl Stahl GmbH
Tobelstr. 2
73079 Süßen
www.carlstahl.de

Stirnradflaschenzug Spur wheel chain block		Ratschzug Lever Hoist		Ratschzug/Flaschenzug Mini Lever Hoist/Spur wheel chain block Mini	
					
	CLCB 005F / 500 kg Prüflast / Test load 750 kg		CLLH 0008F / 800 kg Prüflast / Test load 1200 kg		CLLM 003F / 250 kg Prüflast / Test load 375 kg
	CLCB 010F / 1000 kg Prüflast / Test load 1500 kg		CLLH 0010F / 1000 kg Prüflast / Test load 1500 kg		CLLM 005F / 500 kg Prüflast / Test load 750 kg
	CLCB 015F / 1500 kg Prüflast / Test load 2250 kg		CLLH 0016F / 1600 kg Prüflast / Test load 2400 kg		CLLM 075F / 750 kg Prüflast / Test load 1125 kg
	CLCB 030F / 3000 kg Prüflast / Test load 4500 kg		CLLH 0025F / 2500 kg Prüflast / Test load 3750 kg		CLLM 150F / 1500 kg Prüflast / Test load 2250 kg
	CLCB 050F / 5000 kg Prüflast / Test load 7500 kg		CLLH 0032F / 3200 kg Prüflast / Test load 4800 kg		
			CLLH 0063F / 6300 kg Prüflast / Test load 9450 kg		

Carl Stahl GmbH, Süßen

Datum
Date

Unterschrift Michael Baumann, Dokumentationsverantwortlicher
Signature Michael Baumann, Responsible for Documentation

Prüfnachweis zur Überwachung des Handhebezeuges			Inspection certificate for manual lifting devices	
1. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
2. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
3. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
4. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
5. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
6. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
7. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
8. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
9. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
10. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
11. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:
12. Sicht- und Funktionsgeprüft: Visual inspection and functional test	Datum/Date:	Befund/Result:	Name des Prüfenden/Name of inspector:	Unterschrift/Signature:

Bemerkungen/Comments:

Die Prüfung wurde nach der Betriebssicherheitsverordnung (BetrSichV), der DGUV-Regel 100-500 Kap. 2.8 durchgeführt.
The inspection has been performed according to the national German Industrial Safety Regulation (BetrSichV) and German Social Accident Insurance (DGUV) 100-500 Chapter 2.8.

Carl Stahl GmbH
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www.carlstahl-lifting.com