

WARNING

The following mounting instructions must always be followed to avoid the risk of personal injury or property damage.

Do not use a clevis sling hook before reading these mounting instructions.

1. ABOUT THIS INSTRUCTION

These mounting instructions describes in particular how OCTA STAR clevis sling hooks are to be safely used for lifting purposes.

To comply with these instructions is essential to help avoiding hazards and increases the reliability and service life of the hooks.



DANGER! Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING! Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION! Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE! Is used to address practices not related to physical injury.



Safety Instructions signs indicate specific safety-related instructions or procedures.


DEFINITIONS

Clevis

A U-shaped fitting with pin.

Working Load Limit (WLL)


The maximum load which a hook is designed to support without shock-loading.



NOTICE

Read ASME B30.10 „Hooks“.

2. BASIC SAFETY REQUIREMENTS



WARNING

To prevent the risk of injury never walk or stay under lifted loads!

The working load limit (WLL) must not be exceeded!
 Hooks as well as lifting and attachment means to be used must be free from defects!

Working under the influence of drugs, medications impairing the sense and/or alcohol is strictly forbidden!

SAFETY INSTRUCTIONS

- Operators, fitters and maintenance personnel must in particular observe the operating instructions of the chain slings into which the connecting links are to be installed, as well as standards ASTM A 906/A 906 M (Standard Specification for Grade 80 and Grade 100 Alloy Steel Chain Slings for Overhead Lifting), ASTM A 952/A 952 M (Standard Specification for Forged Grade 80 and Grade 100 Steel Lifting Components and Welded Attachment Links), ISO 3056 (Non-calibrated round steel link lifting chain and chain slings; Use and maintenance), ISO 7593 (Chain slings assembled by methods other than welding; Grade T(8)) and ISO 1837 Lifting hooks - Nomenclature.
- The specific safety and operating regulations and standards issued locally in the country where the items are used must be observed.
- During operation work, wear your personal protective equipment!
- The directions given in these mounting instructions and specified documentations relating to safety, assembly, operation, inspection, and maintenance must be made available to persons operating and using the hooks.
- These mounting instructions must be available in a place near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. Also see chapter 11.
- Improper assembly and use may cause personal injury and/or damage to property.**
- Assembly and removal as well as inspection and maintenance must exclusively be carried out by skilled, qualified, trained and authorized persons only.
- Structural changes are impermissible (e.g. welding, bending).
- Operators must carry out a visual inspection and, if necessary, a functional test of the safety equipment before each use.**
- Never use worn-out, bent or damaged hooks.
- Only lift loads that do not exceed the working load limit of the corresponding chain sling.
- Never expose hooks to loads exceeding the specified working load limit.

SAFETY INSTRUCTIONS

- Do not use force when mounting/positioning the hooks.
- **No one including you (operator) must be in the way of the moving load (hazard area).**
- Do not tip-load a hook.
- Hooks shall have well-functioning safety latches.
- Avoid bending loads to act on chain links and hooks.
- Only lift loads that are freely movable and not attached or fastened.
- Always monitor a suspended load.
- During lifting your hands or other body parts must not come into contact with lifting means. Only remove lifting means manually (use your hands).
- Avoid impacts, e.g. due to abruptly lifting loads with chain in slack condition.
- Avoid sharp edges.
- Usage without working safety elements (cotter pins, dowel pins) is not permissible.
- Make sure the load can take the forces to be applied without suffering deformation.
- Hooks must be allowed to move freely in all tensile directions.
- Put the load only down in flat places/sites where it can be safely deposited.
- Assume for sufficient space for the personnel to move when choosing the route of transportation and storage location. Danger to life and risk of injury by crushing hazards!
- In the event of doubts or concerns about the proper and safe use, inspection, maintenance or similar things contact your safety officer or the manufacturer.

THIELE is not responsible for damage caused by non-observance of the instructions, rules, standards and notes indicated!

As a rule, hooks and chain slings are not permitted for the transportation of persons.

3. DESCRIPTION AND INTENDED USE

OCTA STAR clevis sling hooks are exclusively intended as end fittings for the usage in chains slings according to ASTM A 906/A 906M.

The connection to the sling chain is made directly by the clevis.

! WARNING

OCTA STAR clevis sling hooks must exclusively be used

- within the limits of their permissible working load limits,
- for permissible attachment methods and sling angles,
- within the temperature limits prescribed,
- by trained and authorized persons.

Failure to do so may cause serious injury or property damage.

OCTA-STAR clevis sling hooks feature a safety factor of at least 4 based on the working load limit.

They are designed to withstand 20 000 dynamic load changes under maximum load conditions. In the event of higher loads (e.g. multi-shift/automatic operation) the working load limit must be reduced.

They are marked with nominal chain size and grade, manufacturer's mark "KWS" and traceability code.

The hooks can also be used within lashing chain assemblies. When used within a lashing system the maximum lashing capacity (LC) is obtained by doubling the working load limit.

! WARNING

Any alternating use for lifting and lashing purposes is impermissible!

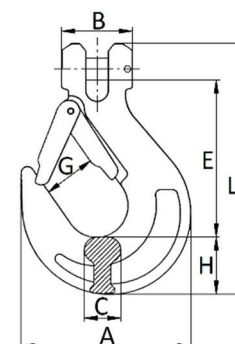
4. COMMISSIONING

Prior to using the components for the first time assure that

- the hooks comply with the order and have not been damaged,
- test certificates and mounting instructions are at hand,
- markings correspond with what is specified in the documentation,
- inspection deadlines and the qualified persons for examinations are determined,
- visibility and functional testings are carried out and documented,
- documentation is safely kept in an orderly manner.

Dispose of the packing in an environmentally compatible way according to local rule.

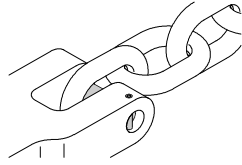
5. TECHNICAL DATA



Nom. size	Mark.	Article no.	WLL [lbs]	Dimensions [mm]							Mass [lbs]
				E	L	H	A	B	C	G	
9/32 5/16	7/8-8	Z09124	4 500	86	128	25	84	37	18	22	1.17
3/8	10-8	Z09125	7 100	104	158	31	103	49	23	30	2.16
1/2	13-8	Z09130	12 000	128	198	43	132	57	28	37	3.99
5/8	16-8	Z09131	18 100	148	234	54	160	71	35	46	7.80

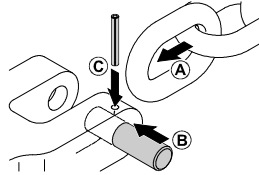
6. CLEVIS FASTENING SYSTEM

The clevis fastening system only permits attachment of the nominal chain size that suits the attachment component.



6.1 Assembly

- If necessary, remove dowel pin and pin.
- (A) Place end of chain leg between the lateral clevis elements.
- (B) Push pin from the side fully into the clevis and through the last chain link of the leg.
- (C) Drive dowel pin fully in (must not project) to secure the pin. The slot must face away from the pin.



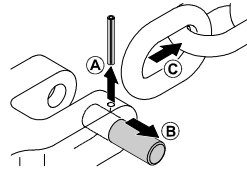
Check whether the chain runs smoothly.

The dowel pins must only be installed once.

Only connect pins and attachment components of identical grades. Starting with $\varnothing \frac{1}{2}$ " the pins are marked on the front end.

6.2 Disassembly

- Slacken the respective chain leg.
- (A) Drive dowel pin out using hammer and drift punch ¹⁾.
- (B) Push pin out using a drift punch.
- (C) Remove the chain.



Suitable drift punches are available by Article No. Z03303.

7. CONDITIONS OF USE

7.1 Normal use



Hooks must always be freely movable when attached to the load and must not rest on or be supported by other structural parts.

When using hooks without safety latch, e.g. due to operational necessities, special care is to be taken, and a separate risk analysis must be prepared.

7.2 Influence of temperature



Using hooks at elevated temperatures will cause the working load limit (WLL) to be reduced as indicated below.

Temperature range	Remaining WLL
-40 °C ≤ t ≤ 205 °C -40 °F ≤ t ≤ 400 °F	100 %
205 °C < t ≤ 300 °C 400 °F < t ≤ 572 °F	90 %
300 °C < t ≤ 400 °C 572 °F < t ≤ 752 °F	75 %



If a hook has been exposed to temperatures exceeding the maximum value specified, it must not be used furthermore.

7.3 Environmental influence



Hooks must not be used in environments where acids, aggressive or corrosive chemicals or their fumes are present. Hot-dip galvanizing or a galvanic treatment is prohibited. Hooks with clevis are not intended to be used for abrasive blasting environments.

8. SPARE PARTS



Use only original spare parts.

8.1 Spare part sets for clevis fastening system

Sets consist of pins and dowel pins.

Nominal size	Marking	Article no.
9/32 5/16	7/8-8	Z07147
3/8	10-8	Z07148
1/2	13-8	Z07149
5/8	16-8	Z07150

8.2 Spare part sets safety latches

Sets consist of safety latch, spring, screw and safety nut.

Nominal size	Marking	Article no.
9/32 5/16	7/8-8	Z09133
3/8	10-8	Z09134
1/2	13-8	Z09135
5/8	16-8	Z09136

Notes concerning assembling see chapter 9.3.

9. INSPECTION, MAINTENANCE, DISPOSAL

9.1 General



Inspections and maintenance must be arranged by the owner!

Inspection intervals must be determined by the owner!

Visual inspections must be regularly carried out and documented by competent and trained persons, at least once a year or more frequently if the hooks are in heavy duty service. After three years at the latest they must additionally be examined for cracks. A load test is not a substitute for this examination.

The results of the inspection shall be kept in a file that has to be set up for each sling chain before first use. The register shall show characteristic data of the sling chains and components as well as identity details.

Immediately stop using hooks that show the following defects:

- missing or illegible identification/markings,
- deformation, elongation or fractures,
- cuts, notches, cracks, incipient cracks, pinching,
- heating beyond permissible limits,
- severe corrosion,
- broken springs,
- not sufficient working safety devices,
- wear in excess of 10 %, e.g. in the receiving area of the pin diameter,
- missing or damaged pin locks.



Cleaning (e.g. prior to inspections) must not take place by using flames or methods that might cause hydrogen embrittlement (e.g. pickling or immersion in acidic solutions).

9.2 Maintenance



Minor notches and cracks may be eliminated by careful grinding observing the maximum cross section reduction requirement of max. 10 % and avoid making more severe cuts or scores.

All maintenance and repair activities must be documented properly.

9.3 Replacement of the safety latch

Disassemble the worn-out safety latch.

Assembling by correct positioning of safety latch together with spring and driving in the screw through the holes of the safety latch. Afterwards screw the nut onto the bolt so that the locking part is completely covered by the thread.

Check the correct operability of the safety latch.

9.4 Disposal

NOTICE

All steel components and accessories taken out of service must be scrapped in accordance with local regulations and provisions.

10. STORAGE

NOTICE

Hooks must be stored properly sorted and in dry conditions at temperatures between 32 °F and 104 °F.

Do not store in a manner that cause mechanical damage.

11. INSTRUCTIONS DOWNLOAD

NOTICE

Current mounting and operating instructions are available as a PDF download on the website www.kwschain.com.



12. PUBLISHING INFORMATION

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