WARNING

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

Do not use a connecting link before reading these mounting instructions.

1. ABOUT THIS INSTRUCTION

These mounting instructions describe in particular how OCTA STAR connecting links 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 chain slings.

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

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

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

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

SAFETY INSTRUCTIONS — **Safety Instructions** signs indicate specific safety-related instructions or procedures.

DEFINITIONS

Working Load Limit (WLL)

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

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!

Only use lifting and attachment means 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) and ISO 7593 (Chain slings assembled by methods other than welding; Grade T(8)).
- The specific safety and operating regulations and standards issued locally in the country where the items are used must be observed.
- 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 connecting links.
- 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.
- During operation work, wear your personal protective equipment!
- **Improper assembly and use may cause personal injury and/or damage to property.**
- Assembly and removal as well as inspections 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 connecting links.
- Never expose connecting links to loads exceeding the specified working load limits.
- Do not use force when mounting/positioning the attachment components.

SAFETY INSTRUCTIONS

- Avoid sharp edges. Use edge protectors or reduce the working load limit by 20 %.
- Only lift loads that are freely movable and not attached or fastened.
- Do not bend loads to act on chain links and components.
- Do not start lifting before you have made sure the load has been correctly attached and balanced.
- **No one including you (operator) must be in the way of the moving load (hazard area).**
- 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.
- Never move a suspended load over persons.
- Never cause suspended loads to swing.
- Always monitor a suspended load.
- Put the load down only in flat places/sites where it can be safely deposited.
- Do not allow the chain slings or part of getting caught under the load.
- 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, connecting links are not permitted for the transportation of persons.

3. DESCRIPTION AND INTENDED USE

OCTA STAR connecting links are intended for use with chain slings for lifting loads. They are exclusively meant to connect individual chain sections/legs with suspension or intermediate links or attachment elements with eyelets and must only be arranged in one load-carrying chain section.

OCTA STAR connecting links consist of two symmetrical halves attached to each other by means of a secured pin. The link is marked with nominal chain size and quality grade, manufacturer's mark "KWS" and traceability code.

The connecting links 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, magnetic spreaders) the working load limit (WLL) must be reduced before the links are put to use.

WARNING

Connecting links must only be used

- within the limits of their permissible working load limit,
- 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.

Any alternating use for lifting and lashing purposes is impermissible!

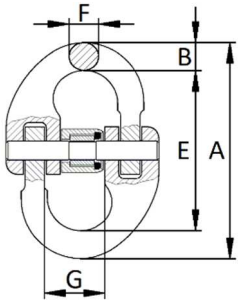
4. COMMISSIONING

Prior to using the components for the first time assure that

- the components comply with the order and have not been damaged,
- test certificate 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	A	B	F	G	
1/4	6-8	Z09346	2 500	43	58	7.5	7	15.5	0.18
9/32 5/16	7/8-8	Z06899	4 500	56	77	11	9.3	23	0.44
3/8	10-8	Z06900	7 100	77	101	12	11.5	27.5	0.73
1/2	13-8	Z06901	12 000	95	129	17	15	36	1.46
5/8	16-8	Z06902	18 100	119	161	21	20	42	2.69

6. ASSEMBLY AND REMOVAL

6.1 Preparations

All components to be installed or used must be in perfect condition and the relevant working load limits of all parts must accommodate the respective load to be handled.

In mounted chain slings the chains are, for example, joined to other components by the use of connecting links. In this way, components can be mounted the nominal size of which deviates from that of the chain.

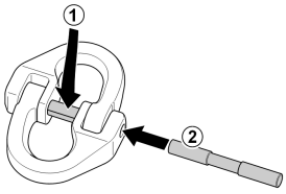
WARNING

Size and grade of the sling chain and connecting link to be assembled must always coincide!
Do not use a connecting link to replace a broken chain link, as most probably the entire chain has been overloaded.

6.2 Assembly

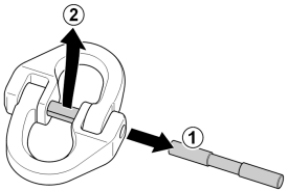
Install the connecting link halves in the components to be connected and join both halves.

1. Position split sleeve as shown.
2. Push pin up to the split sleeve, align pin bevels to suit split sleeve and drive the pin in using a hammer.
3. Check to make sure split sleeve safely embraces the pin centrally.



6.3 Disassembly

1. Use drift to drive pin out.
2. Remove the split sleeve.
3. Separate connecting link halves from the components they joined.



A set of drifts is available by article no. Z03303.
The split sleeves must only be installed once.

WARNING

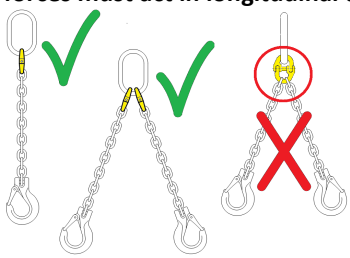
The components to be connected must be able to move freely within the connecting link halves they are placed in.

7. CONDITIONS OF USE

7.1 Normal use

DANGER

When attaching components, observe the correct position of the connecting links.
Relevant forces must act in longitudinal direction.



If two chain legs are assembled into one connecting link half for alternate use of the legs, only one chain leg must be subjected to loads!

7.2 Influence of temperature

WARNING

The respective temperature range limits must be considered for all components used. Using connecting links in high temperatures will cause the working load limit 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 %

DANGER

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

7.3 Environmental influence

WARNING

Connecting links must not be used in environments where acids, aggressive or corrosive chemicals or their fumes are present. Hot-dip galvanizing or an electro galvanic treatment is prohibited as well. Connecting links are not intended to be used for abrasive blasting environments.

7.4 Special hazardous conditions

WARNING

The degree of danger when used in offshore applications, the lifting of hazardous loads, such as for example liquid metal or similar, risk potentials must be assessed by a competent person in the form of a risk analysis. Any additional rules and directives must be followed in this case.

8. INSPECTION, MAINTENANCE, DISPOSAL

8.1 General

WARNING

Inspections and maintenance must be arranged by the owner!

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

Immediately stop using connecting links that show the following defects:

- missing or illegible identification/marking,
- deformation, elongation or fractures,
- cuts, notches, cracks, incipient cracks, pinching,
- links heated beyond permissible limit,
- severe corrosion,
- limited hinging capability of connecting links (e.g. halves get stuck),
- wear in excess of 10 %, e.g. in the receiving area of the connecting link halves or of the pin diameter,
- missing or damaged pin locks.

WARNING

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).

8.2 Maintenance and repair

DANGER

Maintenance and repair work must only be performed by competent and trained persons.

WARNING

Do not repair or replace individual chain links but replace complete chain legs only.

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.

8.3 Disposal

NOTICE

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

9. SPARE PARTS

WARNING

Use only original spare parts.

Spare part sets consist of pin and split sleeve.

Nominal size	Marking	Article no.
9/32 5/16	7/8-8	Z07366
3/8	10-8	Z07367
1/2	13-8	Z07368
5/8	16-8	Z07369

10. STORAGE

NOTICE

Connecting links must be stored in dry conditions at temperatures between 32 °F and 104 °F.

Do not store in a manner that causes mechanical damage.

11. INSTRUCTIONS DOWNLOAD

NOTICE

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

12. PUBLISHING INFORMATION

Company	KWS Inc. (Distributor)	THIELE GmbH & Co. KG (Manufacturer)
Postal address	P.O. Box 470487 Tulsa, OK 74147 USA	Werkstrasse 3 58640 Iserlohn Germany
Phone number	+1 (539) 367 2274	+49 2371/947-0
Fax number	+1 (539) 367 2278	+49 2371/947-241
Email	sales@kwschain.com	info@thiele.de