

# Mounting Instructions

Original in compliance with 2006/42/EG

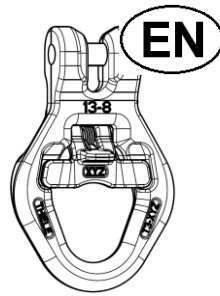


## Skip Suspension Links

Grade 8, TWN 0869

Grade 10/XL, TWN 1869

Grade 12/TXL, TWN 2469



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### 1 Description and Intended Use

THIELE skip suspension links with clevis are exclusively intended as end fittings of permanently mounted sling chain assemblies on skip loader vehicles for the attachment of corresponding containers according to DIN 30720 or similar. The skip suspension link covers one suspension pin of each container.

THIELE skip suspension links have a forged spring-loaded safety latch, which can support itself against the safety plate at the end of the suspension pin. The safety latch prevents the skip suspension link from loosening automatically when the chain is unloaded.

The integrated clevis is used to attach a chain strand.

Skip suspension links may only be used:

- within the permissible working load limits,
- within the permissible temperature limits,
- only with the original components of the corresponding nominal size.

THIELE skip suspension links comply with the EC Machinery Directive and have an operating coefficient of at least 4 in relation to the working load limit (WLL).

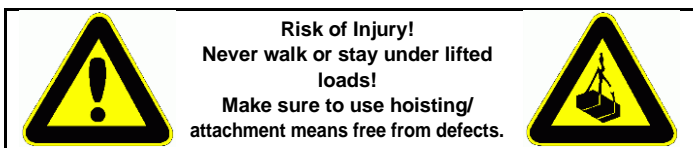
The skip suspension links are marked with the nominal chain size and grade, manufacturer's mark and traceability code

THIELE skip suspension links are designed to withstand 20,000 dynamic load changes under maximum load conditions. In the event of higher loads the working load limit must be reduced.

The skip suspension links must not be used for transportation of persons or lashing!

The link body is powder-coated in colour depending on the grade, the safety latch is CrVI-free galvanised.

### 2 Safety Notes



- Operators, fitters, and maintenance personnel must in particular observe the Operating Instructions of the sling chain assemblies and loads to which the skip suspension links are mounted, documentations DGUV V 1, DGUV R 100-500 Chapter 2.8, DGUV I 209-013 and DGUV I 209-021 issued by the German Employers' Liability Insurance Association, as well as standard specifications DIN EN 818-6.
- Outside the Federal Republic of Germany the specific provisions issued locally in the country where the items are used must also 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 the respective persons.
- Make sure these Mounting Instructions are available in a place near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed.
- When performing work make sure to wear your personal protective equipment!
- **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 and authorized persons.
- Only fit sling chains of the same nominal size (nominal chain diameter - grade) according to DIN EN 818.
- Structural changes (e.g. welding, bending) are impermissible. Never attempt to make the opening of the skip suspension links smaller by bending or welding in intermediate elements.
- Visually inspect the equipment prior to each use.
- Usage without safety devices (safety latch, dowels pins) is not permitted.
- Never put to use worn-out, bent or damaged skip suspension links.
- Do not overload skip suspension links.
- Do not use force when mounting/positioning the skip suspension links.
- Make sure the load can take the forces to be applied without suffering deformation.
- Lateral loads are not permitted due to the design. Skip suspension links must be able to align themselves in the direction of loading. Avoid sharp edges..
- Do not start lifting before you have made sure the load has been correctly attached.
- Make sure no one including you (operator) is in the way of the moving load (hazard area).
- During lifting/hoisting make sure your hands or other body parts do not come into contact with hoisting means. Only remove hoisting means manually (use your hands).
- Make sure that the sling chains are not twisted.
- Avoid impacts, e.g. due to abruptly lifting loads with hoisting means in slack condition.
- Never cause suspended loads to swing.
- Avoid skip suspension links to get caught under the load.
- In the event of doubts about the use, inspection, maintenance or similar things contact your safety officer or the manufacturer!

**THIELE will not be responsible for damage caused through non-observance of the instructions, rules, standards and notes indicated!**

**As regards quality grade 10/XL and 12/TXL THIELE does not give its general approval to the assembly of components stemming from different manufacturers!**

**Working under the influence of drugs or alcohol is strictly forbidden!**

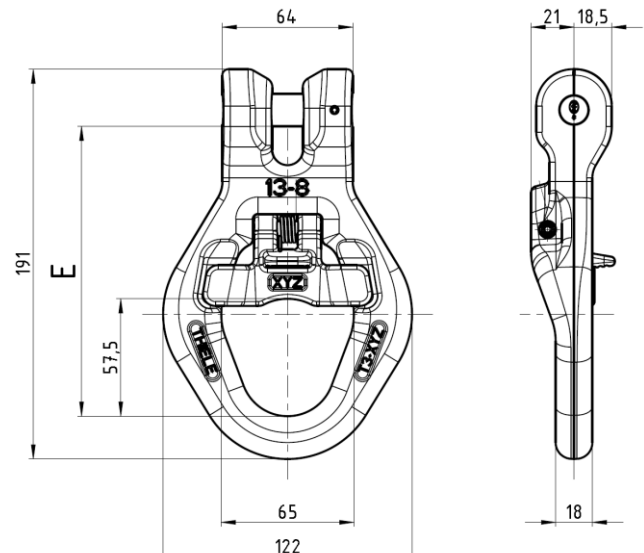
### 3 Commissioning

Prior to using the components for the first time make sure 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,
- the documentation is safely kept in an orderly manner.

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

### 4 Technical Data



Nominal size	TWN <sup>1)</sup>	Article-No.	Working load limit [t]	Dimension E [mm]	Colour	Mass [kg]
13-8	0869	F313800	5,3	142	ruby red	1,93
16-8	0869	F313850	8,0	141	ruby red	
13-10/XL	1869	F313805	6,7	142	ultramarine blue	
13-12/TXL	2469	F31384	8,0	140	midnight blue	

TWN = THIELE company standard

## 5 Assembly and Removal

Allways assemble/remove skip suspension links in load-free condition!

Disassemble the parts in reverse order.

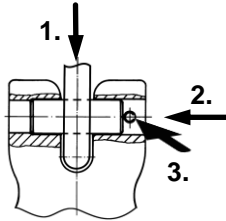
Use a suitable drift punch to drive the dowel pins out.

Suitable drift punches are available by Article No. Z03303.

Dowel pins must only be installed once.

### Assembly of Clevis System

1. Remove load bolt and dowel pin.
2. Place end of chain leg between the lateral clevis elements.
3. Push pin from the side fully into the clevis and through the last chain link of the leg.
4. Drive dowel pin fully in (must not project) to secure the pin. The slot must face away from the pin.
5. Check the chain can move freely.



### Assembly of Safety Latch

1. Position the safety latch with the leg spring in the closed position and insert an auxiliary bolt ( $\varnothing \leq 8$  mm, length > 60 mm) laterally into the holes for the two dowel pins and the safety latch as well as through the spring coils.
2. First drive in the dowel pin 8 x 60 instead of the auxiliary bolt. If the safety latch is then difficult to move, remove the dowel pin and knock it in again in the reversed position. #
3. Then drive the dowel pin 5 x 60 into the already mounted dowel pin, making sure that the slots of the two dowel pins are opposite each other.
4. Check that the safety latch assumes its safety position smoothly after actuation.

## 6 Operation

### 6.1 Nomal Use

To place the skip suspension link on the suspension pin, press the safety latch on the grooved handle surface upwards by hand (preferably with the thumb) and slide the link body over the safety plate of the suspension pin. If necessary, the link body must be swivelled slightly to the side.

As soon as the link body is positioned behind the safety plate, the safety latch must be unloaded so that it can come into contact with the safety plate.

Check that the skip suspension link is held by the safety plate on the suspension pin and cannot slide off it on its own.

It must be possible for the skip suspension links to align in the direction of loading and the force must be applied in the longitudinal direction.

The skip suspension links must always be able to move freely on the suspension pins. Supporting on other components is not permitted. Avoid any bending stress on the skip suspension links.

### 6.2 Influence of Temperature

The temperature range of use depends on the grade according to the following table:

Grade	Temperature range
8	$-40 \text{ °C} \leq t \leq 200 \text{ °C}$
10/XL	$-30 \text{ °C} \leq t \leq 200 \text{ °C}$
12/TXL	$-20 \text{ °C} \leq t \leq 200 \text{ °C}$

After the skip suspension links have heated up above the max. operating temperature, they may no longer be put into operation.

### 6.3 Environmental Influence

Skip suspension links 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 as well.

## 7 Spare Parts

Only use original THIELE spare parts.

Nominal size	TWN	Working load limit [t]	Spare parts set	Spare parts set
			TWN 0968	TWN 0969
			Clevis pin + Dovel pin	Safety latch + Spring + Dovel pins
13-8	0869	5,3	F480131	F314081
16-8	0869	8,0	F480161	
13-10/XL	1869	6,7	F486741	
13-12/TXL	2469	8,0	F3138411	

## 8 Inspections, Maintenance, Disposal

Inspections and maintenance must be arranged for by the Owner!

Inspection intervals shall be determined by the Owner!

Inspections must be carried out and documented by competent persons regularly but at least once a year, or more frequently if the skip suspension links are in heavy-duty service. After three years at the latest they must additionally be examined for cracks. A load test shall never be considered a substitute for this examination.

The results of the inspection shall be entered into a register (DGUV I 209-062 or DGUV I 209-063) to be prepared at first use. The register will show characteristic data as well as identity details.

Immediately stop using skip suspension links that show the following defects:

- missing or illegible identification/markings,
- deformation, elongation or fractures,
- cuts, notches, cracks, incipient cracks, pinching,
- damaged parts (spring, pin, dowel pins),
- heating beyond permissible limits,
- severe corrosion,
- strong partial material removal,
- impaired or missing safety latch.

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).

### Inspection Service

THIELE offers inspection, maintenance and repair services by trained and competent personnel.

### Maintenance

Maintenance work may only be carried out by qualified persons.

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

All maintenance and repair activities are to be documented.

### Disposal

All components and accessories of steel taken out of service are to be scrapped in line with local regulations and provisions.

## 9 Storage

Skip suspensions link should be stored in dry locations at temperatures ranging between 0 °C and +40 °C.

## 10 Publishing Information

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„#“ Changes to previous edition.