

Operating Instructions

Lashing Cassette - ZK Module - TWN 1470

THIELE GmbH & Co. KG
Werkstraße 3
58640 Iserlohn

Tel: +49 (0) 2371 / 947 - 0
www.thiele.de

Table of Contents

1	Introduction	2
2	Intended Use.....	2
3	Storage	3
4	Safety Notes	3
4.1	Personnel.....	3
4.2	Product Safety.....	3
5	Product Description.....	3
6	Dimensions	5
7	Mounting	6
8	Conditions of Use.....	7
9	Marking.....	7
10	Maintenance	8
10.1	Inspections.....	8
10.2	Repairs	8
10.3	Inspection Service.....	8

1 Introduction

THIELE lashing cassette modules (for short ZK modules) are mounted within the frames of road trucks and serve as lashing points via which loads can be safely secured.

These operating instructions describe in particular how ZK modules are to be safely installed and put to use.

2 Intended Use

ZK modules are exclusively intended for attachment by means of welding to road truck bodywork and they are designed to secure lashing means, for example lashing chains.

ZK modules must only be used

- within the limits of their permissible loads (lashing capacity - LC),
- for the permissible lashing methods and inclination angles,
- within the temperature limits prescribed,
- by trained and authorized persons.

ZK modules must not be used for lifting service or the transportation of persons.

3 Storage

Store the ZK modules in clean and dry spaces at temperatures between 0 °C and +40 °C.

4 Safety Notes

4.1 Personnel

- Fitters must in particular follow these operating instructions, any truck-specific regulations as well as standard specifications EN 12640 and EN 12195-3.
- Mounting and removal as well as inspection and maintenance must exclusively be carried out by authorized persons.
- Welding work must be performed only by persons qualified as prescribed by EN 287.

Outside the Federal Republic of Germany the specific provisions issued locally in the country where the items are used must also be observed.

4.2 Product Safety



Risk of Injury

Make sure to use ZK modules which are free from defects.

- Never use worn-out, bent or damaged ZK modules.
- Do not make structural modifications to ZK modules.

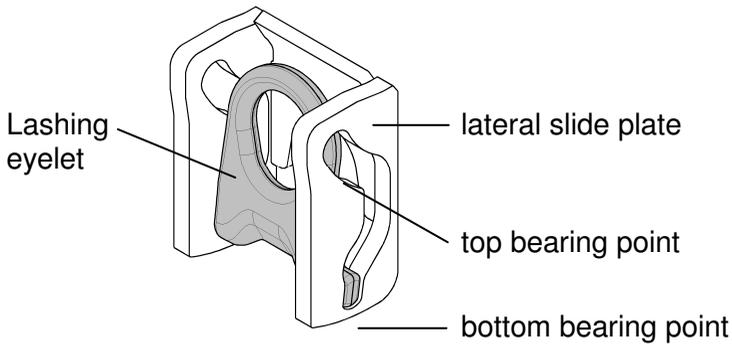
5 Product Description

The following types of THIELE ZK modules are available:

- LC 5.000 daN Article No. F35236 (1 daN = 10 N)
- LC 10.000 daN Article No. F35237

ZK modules consist of a movable centrally arranged lashing eyelet surrounded by a cassette or box-like structure in the form of three welded plates.

The lashing eyelet is forged of high-grade chain steel and satisfies requirements as per EN 1677-1 and EN 12640.

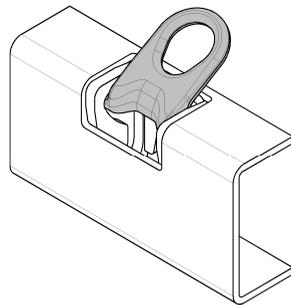


ZK modules are delivered in pre-assembled condition.

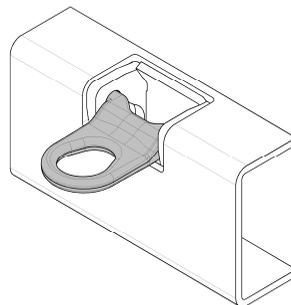
ZK modules have been designed for installation into the longitudinal C-shaped frame sections of low-bed trailers, with the open side of these sections pointing to the middle of the vehicle.

When not in use the lashing eyelet is positioned in the bottom area of the cassette and does not protrude beyond the carrier section.

To make use of the lashing eyelet pull it upward from its lower resting point thus moving both eyelet side pegs into the top bearing position of the lateral slide plates.

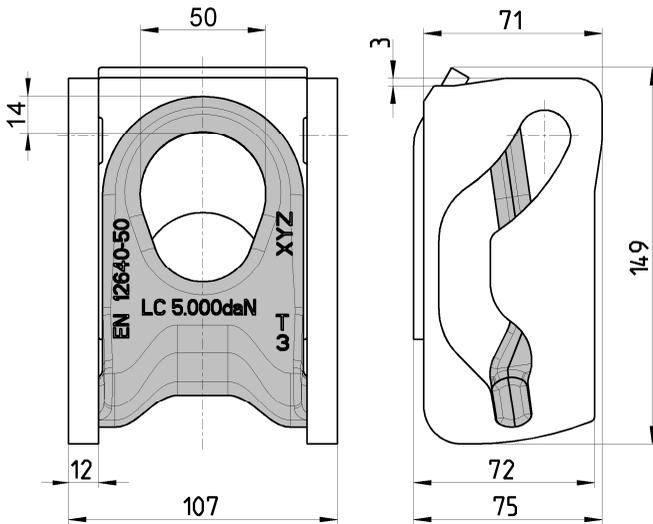


In this position the lashing eyelets can be pivoted through 60° towards the vehicle center and through 90° towards the outer side of the vehicle (with respect to vertical) as necessary to securely attach the relevant fixing means of the load to be lashed. In this manner even loads can be secured that protrude beyond the vehicle contour.

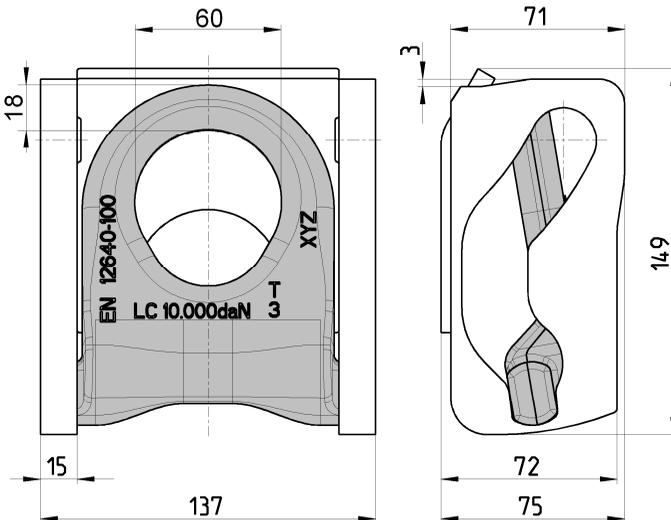


6 Dimensions

Module LC 5.000 daN:



Module LC 10.000 daN:



7 Mounting

Convince yourself that all components to be assembled are in perfect condition. Check whether the lashing capacity is adequate to safely secure the expected loads.

Check the documentation for completeness.

The eyelet can be removed from the cassette until the module is finally mounted.

Therefore, make sure the eyelet is correctly positioned inside the cassette when the module is finally mounted.

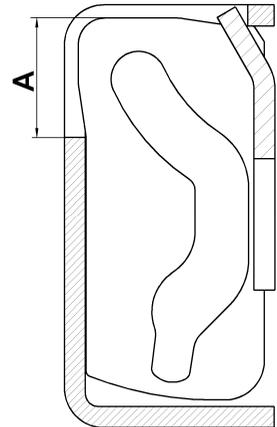
In correct position the lettering on the eyelet points towards the outer side of the vehicle.

The cut-out in the longitudinal section must suit the width of the cassette (107 or 137 mm) such that the cassette fits into the frame and a proper root bead can be laid to attach the slide plates.

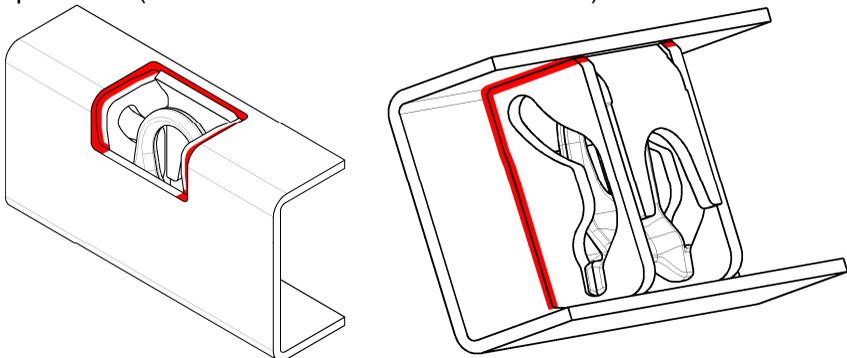
The profile of the cassette open at the front must be closed off by the frame to an extent ruling out the lashing eyelet can be removed inadvertently. This is achieved by providing an opening that does not exceed dimension A as shown in the adjacent sketch.

Module LC 5.000 daN: $A_{\max.} = 47 \text{ mm}$

Module LC 10.000 daN: $A_{\max.} = 56 \text{ mm}$



The following sketches show the welding seam runs that are at least to be provided (recommended weld thickness $a=5$).



The lateral slide plates are made of material S700MC, the connecting back plate of S355. The filler metals used and welding energy applied must suit the frame material and are to be selected to prevent softening of the slide plates and make sure the notch-bar impact strength is 40 J min. at -20 °C.

The person installing the modules must ensure

- 1. the selected mounting configuration and frame design are adequately and safely sized and meet the specified requirements so that the lashing capacity forces indicated on the eyelet can be safely absorbed,**
- 2. the welding seams are expertly laid as per the requirements given in EN 288,**
- 3. other criteria specified in EN 12640 are satisfied with respect to the structural design and test records.**

THIELE GmbH & Co. KG will not assume any liability for damage resulting from a mounting situation other than described in this document or the use of the lashing eyelets in cassettes furnished by other manufacturers.

8 Conditions of Use

Inclination angles more shallow than 30° in relation to the vehicle floor will give rise to detrimental bending loads acting on the lashing eyelet and for this reason are impermissible.

Operating temperature range is between -30°C and +80°C.

Never use the modules if adverse chemical conditions exist.

9 Marking

The lashing eyelets of the ZK modules are marked with applicable lashing capacity in daN, designation as per EN 12640, manufacturer's sign as well as a traceability code.

10 Maintenance

10.1 Inspections

Check the ZK modules visually at regular intervals. The results of the inspection should be entered into a register to be prepared when the vehicle is initially taken into service. The register will show characteristic data of the components as well as details as to their origin and identity.

An inspection must be carried out at least once a year or more frequently if the modules are in heavy-duty service. After three years at the latest the modules should additionally be examined for cracks.

The condition of the components must be documented in the register during these inspections. If items require repair the respective cause of damage and remedial steps should be documented.

Immediately stop using ZK modules that show the following defects:

- Deformation, expansion,
- local material wear/removal (max. 10 %),
- cuts, notches, cracks, incipient cracks, pinching,
- severe corrosion
- identification marks are unreadable.

10.2 Repairs

Only use THIELE spare parts.

10.3 Inspection Service

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

Please do not hesitate to contact us at:

Phone: +49 (0) 2371 / 947 – 0

E-mail: info@thiele.de

The information included in this manual has been carefully checked with respect to correctness and completeness.

THIELE GmbH & Co. KG will not assume any liability for failures or damage that may result from the use of the information provided in the documentation. This document is subject to change without notice.

THIELE reserves the right to modify or change products without prior notice.

Copyright on this documentation remains with THIELE GmbH & Co. KG.

Any use not authorized by the copyright owner (e.g. reproduction) is liable to prosecution and gives rise to damages claims.