OPERATING INSTRUCTIONS
RAPID-SHORTENING CLAWS TWN 1852/1 GRADE 10

Original in the sense of 2006/42/EC

1. DESCRIPTION AND INTENDED USE

THIELE RAPID shortening claws according to TWN 1852/1 (TWN = THIELE factory standard) are intended for shortening individual chain legs of chain slings of grade 10 according to EN 818-4 or lashing chains according to EN 12195.

Due to the two identical claws, each with a safety latch, they can be quickly and universally integrated into existing chain legs. Alternatively, the enclosed dowel pin can be used to mount the shortening claw for permanently fixed positioning within a chain leg. #

The RAPID shortening claws meet EC Machinery Directive 2006/42/EC requirements and feature a safety factor of at least 4 based on working load limit (WLL). #

They are marked with the related nominal size, grade 10, manufacturer's mark, CE mark and traceability code. #

The RAPID shortening claws 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.

Shortening claws must exclusively be used

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

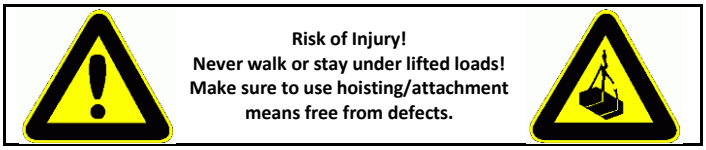
If RAPID shortening claws were **exclusively** used as parts of lashing chains, the maximum lashing capacity (LC) is calculated by doubling the working load limit to LC = 2 x WLL. #

Alternate use for lifting and lashing is only permitted up to the load corresponding to the working load limit (WLL), i.e. LC = WLL! #

Even a single lashing load above the working load limit (LC > WLL) makes the further use for lifting impermissible. #

As a rule, shortening claws are not permitted for the transportation of persons.

2. SAFETY NOTES



- Operators, fitters, and maintenance personnel must in particular observe the operating instructions also from the used chain sling, documentations DGUV V 1, DGUV R 109-017, DGUV I 209-013 and DGUV I 209-021 issued by the German Social Accident Insurance (DGUV), as well as the standard specifications DIN 685-5 and EN 818-4. #
- In the Federal Republic of Germany, the operational safety ordinance (BetrSichV) has to be implemented and the technical rule for industrial safety TRBS 1201, in particular Annex 1, Chapter 2 "Special regulations for the use of working equipment for lifting loads" must be observed.
- 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 operating instructions and specified documentations relating to safety, assembly, operation, inspection, and maintenance must be made available to the respective persons.
- Make sure these operating instructions are available in a place near the product during the time the equipment is used. Please contact the manufacturer if replacements are needed. See also chapter 12.
- 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.
- 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 put to use worn-out, bent or damaged shortening claws.
- Never expose shortening claws to loads exceeding the specified Working Load Limits.
- Do not use force when mounting/positioning the shortening claws.
- Do not twist or knot the chains together.
- Never guide shortening claws over edges or load them sideways.
- Avoid sharp edges. Use edge protectors or reduce the WLL by 20 %.
- In case of multi-leg sling chain assemblies never allow for inclination angles of less than 15 ° and in excess of 60 °.
- Avoid bending loads to act on chain links and components.
- 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).
- 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 only down in flat places/sites where it can be safely deposited.
- Avoid parts of the sling chain assembly to get caught under the load.
- Operation without functioning safety devices (dowel pins, springs, safety latches) is not permitted.
- The shortened part of the chain legs must not be loaded and not used as an endless chain.
- Shortening claws must be able to align themselves freely in the loading direction.
- Take care for sufficient place 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 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 THIELE does not give its general approval to the assembly of components stemming from different manufacturers!

Working under the influence of drugs and alcohol (including residual alcohol) as well as medicines that impair the senses is strictly prohibited! #

3. COMMISSIONING

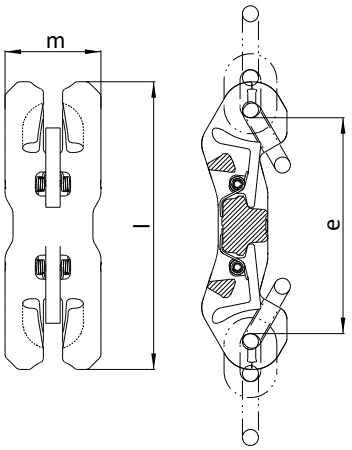
Prior to using the components for the first time make sure that

- the components comply with the order and have not been damaged,
- test certificate, statement of compliance and operating 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 testing are carried out and documented,
- 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

The table contains standard part numbers and data, not custom versions.



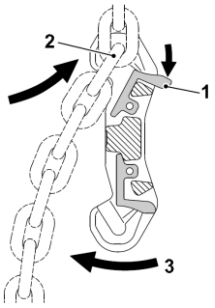
Nominal size	Article no.	Working load limit WLL [t]	Dimensions [mm] e	l	m	Mass # [kg]
8-10	F34775	2,5	111	148	48	1,11
10-10	F34780	4,0	134	180	60	2,09
13-10	F34785	6,7	179	240	78	4,76
16-10	F34790	10,0	222	296	96	9,07

5. ASSEMBLY

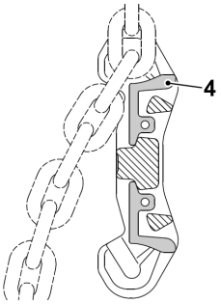
The assembly is carried out on the chain leg to be shortened first with the upper side of the shortening claw.

A) Unload the sling chain assembly totally!

B) Take the shortening claw in one hand and open the upper safety latch with your forefinger (1).
Take the chain slightly below the desired position in the other hand and insert a chain link (2) from below into the upper pocket. Slightly tilt the RAPID shortening claw (3) so that the shortening claw easily fits into the chain leg.

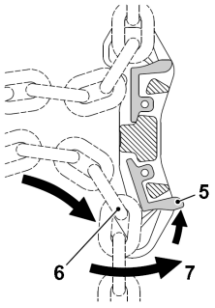


C) Push the chain link (2) into the pocket until it stops. Release the safety latch (4) so that it returns to its basic position (securing position).

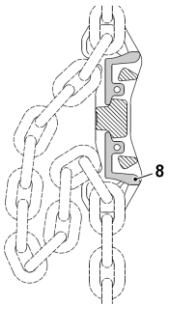


D) Check the correct fit of the chain.

E) Take the shortening claw in one hand and grab the chain leg to be shortened with the other.
Fix the chain link (6) to be positioned in the lower pocket between thumb and forefinger.



F) Slide this chain link (6) into the pocket. Press the lower next chain link against the safety latch (5). Tilt the shortening claw a bit (7) so that it easily fits into the chain leg. Push the chain link (6) into the pocket until it stops.



G) Make sure that the safety latch (8) returns to its basic position (securing position).
Check that the chain links are in the correct position within the pockets.

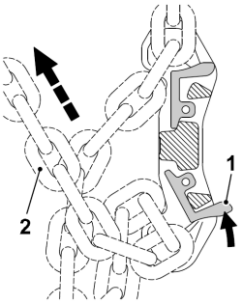
The chain leg to be loaded must not be twisted in itself!

The chain links of the forming loop must not be loaded or under tension!

6. DISASSEMBLY

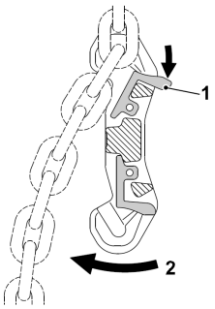
The disassembly is carried out first with the lower side of the shortening claw.

A) Unload the sling chain assembly totally!



B) Unlock the lower safety latch with one hand. With the other hand grab the chain leg below the shortening claw and lift it up so that the chain moves out of the pocket. Be quite energetic. As a result, the chain dissolves better out of the pocket. But do not tear so hard that the flinging chain will hurt you or others!

C) Take the shortening claw in one hand and open the upper safety latch with your forefinger (1). Tilt the shortening claw slightly (2). Lift the shortening claw and thread the chain from the top of the shortening claw.



7. PERMANENT POSITIONING

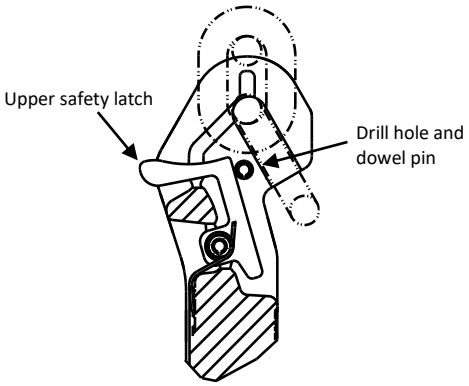
If the shortening claw is to remain in a fixed position, the upper safety catch can be blocked using the loose dowel pin provided.

A) Position the shortening claw with its upper claw pocket at the place required.

B) Pull back the upper safety latch.

C) Drive the dowel pin into the drill hole shown below so that it secures the upward-facing chain link against removal.

D) If required, remove the dowel pin, spring and pawl of the upper claw system.



8. CONDITIONS OF USE

8.1 Normal use

The shortening of individual chain legs in a multi-leg chain sling indicates a non-symmetrical load distribution. In this case, pay attention to the necessary reduction of the working load limit.

Note that safety elements must not be loaded during operation.

If a RAPID shortening claw was not used, it should be removed as far as possible from the chain leg and stored safely.

A RAPID shortening claws can remain unused in the chain leg as assembled under Chapter 5, if it is ensured that it does not form a disturbing contour for the further use of the chain sling.

8.2 Environmental influence

Shortening claws 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.

RAPID shortening claws should not be used in blasting plants.

RAPID shortening claws may be used on construction sites if the contamination of the pockets and safety systems is precluded.

8.3 Influence of temperature

The temperature range for use is -30 °C to +200 °C.

If shortening claws have been exposed to temperatures exceeding the maximum values specified they must no longer be used.

9. INSPECTIONS, MAINTENANCE, DISPOSAL

9.1 General

Inspections and maintenance must be arranged for by the owner!

Inspection deadlines 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 shortening claws 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 shortening claws that show the following defects

- missing or illegible identification/marking,
- deformation, cuts, notches, cracks, incipient cracks,
- pocket wear by more than 10 % of the associated chain diameter,
- missing or damaged dowel pins, springs or safety latches,
- heating beyond permissible limits,
- severe corrosion.

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 Inspection service

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

9.3 Maintenance

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

Minor notches or 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.

9.4 Disposal

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

10. SPARE PARTS

The spare parts sets consist of 2 pawls, 2 springs and 2 dowel pins.

Nominal size	TWN 1931/0 Article no.	Mass [kg]
8-10	F347750	0,023
10-10	F347800	0,088
13-10	F347850	0,088
16-10	F347900	0,169

11. STORAGE

Shortening claws are to be stored in dry locations at temperatures ranging between +5 °C and +40 °C.

12. THIELE OPERATING AND MOUNTING INSTRUCTIONS

Current operating and installation instructions are available as a PDF download on the homepage.

13. IMPRINT

THIELE GmbH & Co. KG
Werkstrasse 3
58640 Iserlohn, Germany
Tel.: +49(0)2371/947-0

14. DECLARATION OF CONFORMITY

EC DECLARATION OF CONFORMITY

acc. to Machinery Directive 2006/42/EC, Annex II A for a machine

THIELE GmbH & Co. KG herewith declares as manufacturer that

RAPID_SHORTENING CLAWS, TWN 1852/1

are placed on the market in the form of a complete machine by THIELE together with the relevant test certificate and are in compliance with the applicable provisions of the EU Machinery Directive 2006/42/EC.

The following harmonized standards have been observed:

- EN ISO 12100
- EN 1677-1

The following document of the German Social Accident Insurance (DGUV) was applied:

- GS-HM 37 Principles for the testing and certification of chains and chain components

This declaration/statement is not meant to warrant any product properties. Safety notes and instructions pertinent to the products must be observed.

Responsible for the documentation
Markus Monegel
(QA and EP)
Tel.: +49(0)2371/947-579

Iserlohn, 13th January 2025
Dr. Michael Hartmann
(General manager)