HALDER

TRANSLATION OF THE ORIGINAL OPERATING INSTRUCTIONS

threaded lifting pins

CE

Keep for future use!

Erwin Halder KG
Erwin-Halder-Straße 5-9
88480 Achstetten-Bronnen

Phone +49 7392 7009-0
Fax +49 7932 7009-160
Email info@halder.de
Internet www.halder.de

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Product changes

Year	Type	Changes

Revisions to the document

Date	Version	Changes
27.05.2021	01	First draft
02.08.2021	02	Additions for usage
19.04.2022	03	Reduction of load cycles
07.09.2022	04	Complement of the Thread Lifting Pin Table
14.11.2022	05	Inscription of the Lifting Pins
29.06.2023	06	Patent number added, year of manufacture since 2019
28.11.2023	07	Tested according EN 13155; reattaching after each lifting operation

Approvals

This document requires the following approvals:

Name	Title

Content

List of figures

1 Introduction

These original operating instructions provide you with all the information you need for the smooth operation of the threaded lifting pins (hereinafter also referred to as lifting accessory).

The original operating instructions must be read, understood and applied by all persons assigned to the operation, maintenance, cleaning and troubleshooting of the lifting accessory. This applies in particular to the listed safety instructions.

After studying the original operating instructions you can

- use the threaded lifting pins in a safe manner,
- maintain the threaded lifting pins according to regulations,
- clean the threaded lifting pins according to regulations,
- and take the appropriate action when a malfunction occurs.

In addition to the original operating instructions, general, statutory and other binding regulations on accident prevention and environmental protection of the country of use must be observed.

The original operating instructions must always be kept at the place of use of the threaded lifting pins.

These original operating instructions are valid for the following product groups and article numbers:

Threaded lifting pins, self-locking (article group 22352)	
Heat-treated steel, tempered, manganese-phosphated	**Stainless steel 1.4542, precipitation-hardened**
22352.0008	22352.1008
22352.0010	22352.1010
22352.0012	22352.1012
22352.0014	-
22352.0016	22352.1016
22352.0020	22352.1020
22352.0024	22352.1024
22352.0027	-
22352.0030	-
2B352.0012	2B352.1012
2B352.0020	2B352.1020
2B352.0024	2B352.1024

Threaded lifting pins, self-locking, for centre holes according to DIN 332 (article group 22352)	
Heat-treated steel, tempered, manganese-phosphated	**Stainless steel 1.4542, precipitation-hardened**
22352.2008	22352.3008
22352.2010	22352.3010
22352.2012	22352.3012
22352.2014	-
22352.2016	22352.3016
22352.2020	22352.3020
22352.2024	22352.3024

Threaded lifting pins, self-locking, with rotatable shackle (article group 22353)	
Heat-treated steel, tempered, manganese-phosphated	**Stainless steel 1.4542, precipitation-hardened**
22353.0008	22353.1008
22353.0010	22353.1010
22353.0012	22353.1012
22353.0016	22353.1016
22353.0020	22353.1020
22353.0024	22353.1024
2B353.0012	2B353.1012
2B353.0020	2B353.1020
2B353.0024	2B353.1024

1.1 Method of presentation

Texts in these original operating instructions that require special attention are marked as follows as a notice and as a direct warning of dangers:

1.1.1 Warnings pertaining to sections

Warnings pertaining to sections apply not only to a specific action, but to all actions within a section.

Structure

⚠ SIGNAL WORD

Symbol for more detailed explanation of the danger

Nature and source of the danger!

Possible consequence(s) in case of non-compliance!

– Measure(s) to avoid the danger.

Danger levels

⚠ DANGER

Hazard with a high degree of risk which, if not avoided, will result in death or serious injury.

⚠ WARNING

Hazard with a medium degree of risk which, if not avoided, can result in death or serious injury.

⚠ CAUTION

Low-risk hazard which, if not avoided, may result in minor or moderate injury.

NOTICE

Hazard with a low degree of risk which, if not avoided, may result in damage to property.

1.1.2 Embedded warnings

Embedded warnings apply to specific actions and are directly integrated into the action.

Structure

⚠ **SIGNAL WORD** Type and source of danger

Possible consequences in case of non-compliance

– Measures to avoid the danger

Danger levels

– ⚠ **DANGER** / **WARNING** / **CAUTION** (see 1.1.1 Warnings pertaining to sections)

– ***NOTICE*** (without warning triangle, see 1.1.1 Warnings pertaining to sections)

1.1.3 Other methods of presentation

The info symbol provides useful information.

– Texts that follow this mark are lists.

• Texts that follow this mark describe activities that are to be carried out in the specified order.

“” Texts in quotation marks are references to other chapters or sections.

1.1.4 Symbols used in the original operating instructions

In warning notices, special dangers are additionally marked as follows:

Warning against hand injuries

This symbol warns of hand injuries.

Warning against danger of cutting

This symbol warns of cutting dangers.

Hot surface warning

This symbol warns of the danger of burns from hot surfaces.

Warning against suspended load

This symbol warns of dangers when standing under suspended loads.

No trespassing by unauthorised persons

This symbol prohibits unauthorised persons from entering the danger zone. Dangers cannot be identified by unauthorised persons.

Observe original operating instructions

This symbol indicates that the original operating instructions must be observed.

Recycling

This symbol stands for the return of various materials into recycling.

CE marking

The CE marking on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation.

1.2 Warranty and liability

The obligations agreed in the supply contract, the general terms and conditions as well as the terms of delivery of the threaded lifting pins and the legal regulations valid at the time of the conclusion of the contract apply.

All information and notices in these original operating instructions have been compiled taking into account the applicable standards and regulations, the state of the art and our many years of knowledge and experience.

These original operating instructions are not intended to be, and should not be used as a substitute means of determining the suitability or reliability of the threaded lifting pins for any particular user application. It is the duty of the manufacturer or distributor to carry out an adequate and complete risk assessment, and evaluation and testing of the threaded lifting pins with regard to the respective specific application or use in question.

Warranty and liability claims for personal injury and damage to property are excluded if they are attributable to one or more of the following causes:

- improper or inappropriate use of the threaded lifting pins,
- improper assembly, commissioning, operation, servicing and cleaning of the threaded lifting pins,
- use of the threaded lifting pins with defective components or improperly installed or non-functional components,
- a failure to observe the original operating instructions and the notices in the original operating instructions regarding assembly, commissioning, operation, servicing and cleaning of the threaded lifting pins,
- use of unqualified or untrained personnel,
- structural changes to the threaded lifting pins (Conversions or other changes to the lifting accessory may not be made without the prior written consent of Erwin Halder KG. In case of infringement, the threaded lifting pins lose their EC conformity),
- improperly performed repairs,
- use of non-approved spare parts or use of spare parts that do not meet the technically specified requirements,
- disasters, effects of foreign bodies, and force majeure.

Furthermore, Erwin Halder KG reserves the right to revise this publication at any time if technical changes are made in the course of improvements to usage properties and further development, without obligation to notify any person of the revisions.

1.3 Copyright

These original operating instructions are protected by copyright and intended for internal use only.

Transfer of the original operating instructions to third parties, reproduction in any form and in any manner – even in extracts – as well as exploitation and/or communication of the contents are not permitted without the written consent of Erwin Halder KG, except for internal purposes.

Contraventions obligate to compensation for damages. We reserve the right to make further claims.

1.4 Warranty conditions

The warranty conditions are contained in the general terms and conditions of Erwin Halder KG.

1.5 Service / Customer service

For technical information, our customer service is at your disposal:

Phone: +49 7392 7009-0

In addition, our employees are always interested in new information and experience which is derived from use and can be valuable for the improvement of our products.

2 Safety

WARNING

A failure to observe the following safety instructions can have serious consequences:

Danger to persons due to mechanical or chemical influences or failure of important lifting accessory functions!

- Please read the safety and danger information in this section thoroughly before putting the threaded lifting pins into operation.
- In addition to the instructions in these original operating instructions, observe the generally applicable safety and accident prevention regulations.
- In addition to the instructions in these original operating instructions, observe the existing national occupational, operating and safety regulations. Also comply with existing internal factory regulations.

2.1 Intended use

The operational safety of the threaded lifting pins is only guaranteed if they are used as intended.

The threaded lifting pins are not suitable for rotating the load. It should be noted that the version with a rotating shackle optimally aligns in the direction of force. Damaged threaded lifting pins can endanger lives. **Before each use** the threaded lifting pins must be inspected for visible defects (e.g. deformations, fractures, cracks, damage, missing threaded elements, corrosion, function of the release).

The threaded lifting pins must be completely inserted into a thread that is true to gauge and rest fully on the bearing surface (on the 30° bevel for threaded lifting pins for centre holes according to DIN 332). If the threaded lifting pins are not fully screwed in and are not in full contact with the supporting surface (the 30° bevels for the threaded lifting pins for centre holes according to DIN332), the full force cannot be absorbed by the thread. The permissible loads cannot be achieved as a result. In the event of transverse loads, the threaded lifting pin can be deformed and thereby also the push pin inside. This can lead to the loss of a threaded element. After each lifting operation, the threaded lifting pin must be fully reattached to the support surface if it has come loose.

When inserting threaded lifting pins, the rotation of the load must be prevented. Contamination (e.g. grinding sludge, oil and emission deposits, dust, chips, etc.) can impair the function of the threaded lifting pins. Damaged threaded lifting pins must be immediately withdrawn from further use. To release the threaded elements, press in the push element (A). The threaded elements are locked again by releasing the push element (A).

Attention: The push element (A) is locked when it is sprung back to its original position by the spring force. The push element must **not** be actuated under load! Before operation, the threaded lifting pins must be checked for the possibility of accidental or unintentional actuation

of the push element to release the threaded lifting pins. Any accidental or unintentional release of the push element during operation of the threaded lifting pins must be ruled out by the operator / user.

The intended standard method of use of threaded lifting pins is operation by one person, and they may only be operated by instructed specialist personnel. The threaded lifting pins may only be used within the scope of their technical data. The specified maximums in the technological data must not be exceeded. The load values F1, F2 and F3 apply to lifting in a steel receptacle. The field of application of threaded lifting pins is in the industrial sector. The threaded lifting pins are not intended for different modes of operation, as it is a manual tool. threaded lifting pins are not intended for any other use than the use listed here; other uses would be considered improper use. In particular, it is prohibited

- to mark the threaded lifting pins subsequently in colour (especially in red), to avoid confusion with high-strength anchor points,
- to exceed the maximum load of the threaded lifting pins (see "3.3 Technical data"),
- to use the threaded lifting pins after exceeding the maximum permissible load cycles (see "3.3 Technical data"). After exceeding the maximum permissible load cycles (see "3.3 Technical data"), the threaded lifting pins must be permanently taken out of operation,
- to use the threaded lifting pins as a protective device or safety function,
- to use the threaded lifting pins as a pulling element,
- not to produce the installation sketch according to the specifications of the company Erwin Halder KG,
- to use defective or unsuitable accessories,
- to operate the threaded lifting pins if the functional components are deactivated, manipulated or defective,
- to operate the threaded lifting pins while untrained persons are in the danger zone,
- to operate the threaded lifting pins if they are not ready for operation or have been modified,
- to operate the threaded lifting pins without instruction.
- to use the threaded lifting pins only inserted, without using locking,
- to use the threaded lifting pins for constantly rotating loads,
- to use the threaded lifting pins for lifting, holding or carrying persons,
- to actuate the locking push element under load,
- to place objects on the threaded lifting pins. Remove all objects that are on the threaded lifting pins.

Proper use also includes

- the observance of all notices in the original operating instructions and the third-party documentation,
- noting that in case of an overhead or horizontal use, the load must be secured against falling down before opening the threaded lifting pins,
- compliance with the inspection and servicing intervals,
- the use of operating and auxiliary materials in accordance with applicable safety regulations,
- compliance with the operating conditions,
- inspecting the threaded lifting pins for visible defects or damage before each use.

The technical specifications given in the technical data must be observed without exception.

Only use the threaded lifting pins for their intended purpose, otherwise safe operation is not guaranteed.

For all personal injury and damage to property resulting from improper use, the operator of the threaded lifting pins and not the manufacturer is responsible!

In relation to the minimum breaking load, threaded lifting pins have specified load capacities per threaded lifting pins. They must not be added together for multiple-strand lifting accessories. For such applications, the relevant rules must be observed. The load values F1 / F2 / F3 apply to lifting in a steel receptacle.

For alternating use on different objects to be transported, such as large tools, threaded lifting pins with the next largest thread diameter must be used. When using multi-strand slings, the relevant rules must be observed.

The load capacity specifications are only valid if

- the threaded lifting pins are fully screwed in with sufficient thread depth,
- the full surface of the threaded lifting pins lies flat on the bearing surface,
- the forces that are introduced can be absorbed by the base material without deformations affecting safety,
- the blind holes are drilled deep enough for the bearing surface to rest on.

The load capacity applies up to max. 90° angle of inclination.

In the case of through holes, a nut should be completely and firmly fitted or screwed on from the opposite side. If the thread length of the threaded lifting pins is sufficient, the use of a washer is also recommended.

2.1.1 Structural changes to the threaded lifting pins

Design and manufacturer's acceptance are based on the Product Safety Act (ProdSG). No changes, additions or conversions may be made to the threaded lifting pins without the prior written consent of Erwin Halder KG.

In case of non-compliance, the threaded lifting pins lose their EC conformity. With this, the manufacturer of the threaded lifting pins is outside of the warranty.

Immediately replace components that are not in problem-free condition.

Only use original spare parts / wear parts / accessories. These parts are specially designed for the threaded lifting pins. For parts purchased from third parties it cannot be guaranteed that they have been designed and manufactured to meet the requirements on stress and safety.

Parts and optional equipment not supplied by Erwin Halder KG are not approved for use on the threaded lifting pins.

2.1.2 Foreseeable misuse

Any use of the threaded lifting pins beyond the intended use, and/or other use, can lead to serious injuries.

- Do not use the threaded lifting pins in case of lack of maintenance or inspection.
- Never use the threaded lifting pins without the locking.
- Do not use the threaded lifting pins with constantly rotating loads.
- Do not use the threaded lifting pins to lift, hold or carry people.
- Avoid jerky loads.
- Never use the threaded lifting pins in a nut thread that is not true to gauge,
- Never use the threaded lifting pins if they are not fully inserted into the nut thread; thread flanks can be on top of each other when inserted - push element does not come out and threaded pin does not lock.
- Overload or misuse can lead to failure of the lifting equipment. Load can fall.
- The push element must not be actuated under load. If the threaded lifting pin is hand tightened, then the pressure piece cannot be pushed down or can only be pushed down with a finger force >40N. The more the threaded lifting pin is tightened, the more force is required (at 2 Nm approx. 65N release force). If the threaded lifting pin is only inserted and not tightened, then the threaded lifting pin can no longer be actuated with strong finger force at F1 at 500N, at F2 at 1500N and at F3 at 2500N. The release force is at least 10N-15N due to the spring force. In the F1-case, the button can only be deliberately operated because of the bar on the shackle. The locking is carried out by self-locking of the push element and fully screwing in the threaded lifting pin.

2.2 Staff requirements

The threaded lifting pins may only be transported, installed, operated, maintained, repaired, commissioned and decommissioned, inspected or disposed of by persons who are qualified and / or instructed to do so. These persons must know the original operating instructions and act accordingly. The respective powers of the staff should be clearly defined.

The following qualifications for various fields of activity are specified in the original operating instructions:

Personnel to be trained

Personnel to be trained, such as an apprentice or a temporary worker, are not aware of all the dangers that can occur when operating the threaded lifting pins. They may only perform work on the threaded lifting pins under the supervision of qualified or instructed personnel.

Instructed personnel

Instructed personnel have been instructed by the operator or by qualified personnel about the tasks assigned to them and possible dangers in case of improper behaviour.

Qualified personnel

Due to their technical training, knowledge and experience as well as knowledge of the relevant regulations, qualified personnel are able to carry out the work assigned to them and to independently recognise and avoid possible dangers.

2.2.1 Responsibilities

Improper handling can lead to considerable personal injury and damage to property. Therefore, have all activities carried out only by personnel qualified for them.

- Only persons who can be expected to carry out their work reliably are permitted as personnel. No persons may work on the threaded lifting pins if their ability to react is impaired by drugs, alcohol, medication or similar.
- All persons working on the threaded lifting pins must read the original operating instructions and confirm that they have understood them by signing them.
- Personnel to be trained may initially only work on the threaded lifting pins under the supervision of qualified personnel. The completed and successful instruction must be confirmed in writing.

The operator is responsible for instructing the personnel.

2.2.2 Obligation of the staff

Before starting work, all persons charged with working on the threaded lifting pins undertake

- to observe the basic regulations on work safety and accident prevention,
- to read the safety instructions and warnings in these original operating instructions and confirm by signature that they have understood them.

2.2.3 Unauthorised persons

Unauthorised persons who do not meet the qualification requirements for the personnel are not aware of the dangers in the work area.

- Keep unauthorised persons away from the work area.
- If in doubt, speak to such persons and instruct them to leave the work area.
- Interrupt work as long as unauthorised persons are in the work area.

2.2.4 Instruction

The personnel must be instructed regularly by the operator. Record the execution of the instruction to better keep track.

Date	Name	Type of instruction	Instruction given by	Signature

2.3 General safety instructions

- The threaded lifting pins may be put into operation and serviced only after these original operating instructions have been taken notice of.
- Only use the threaded lifting pins for their intended purpose (see “2.1 Intended use“).
- Do not release the threaded lifting pins if there are other people in the danger zone (under a suspended load, for example).
- When operating the threaded lifting pins, refrain from any kind of work that could impair the safety of persons or the threaded lifting pins.
- Never operate the threaded lifting pins with defective components. Never put built-in safety features out of operation.
- Always keep the work area of the threaded lifting pins clean and tidy to avoid danger from dirt and parts lying around.
- Do not exceed the technical performance data (see "3.3 Technical data").
- Keep all safety and danger warnings on the threaded lifting pins in a legible condition and renew them as necessary.
- Operation and work on the threaded lifting pins may only be carried out by qualified or instructed personnel (see “2.2 Staff requirements“).
- In case of malfunctions, stop using the threaded lifting pins immediately. Have faults rectified by appropriately trained specialists or by Erwin Halder KG .
- Always keep the original operating instructions at the place the threaded lifting pins is used. It must be ensured that all persons who carry out activities on or with the threaded lifting pins can read the original operating instructions at any time.

2.4 Safety measures for environmental protection

During all work, comply with the regulations on waste avoidance and proper waste recycling or disposal.

Particularly during assembly and maintenance work as well as during decommissioning, care must be taken to ensure that groundwater-polluting substances such as cleaning liquids (containing solvents) and other chemical substances or emissions do not pollute the ground or enter the sewer system. These substances must be collected in suitable containers, and stored, transported and disposed of in accordance with national regulations.

2.5 Special danger warnings / residual dangers

2.5.1 Symbols used on the lifting accessoryn

Observe the original operating instructions

This symbol indicates that the original operating instructions must be observed.

CE marking

The CE marking on the product is the manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation.

Keep all safety and danger information on the threaded lifting pins in a legible condition. Renew this information as necessary.

2.5.2 Dangers due to falling loads

WARNING

Risk of injury due to loads falling down when opening the threaded lifting pins!

A failure to observe this can result in death or serious injury!

- Ensure that the locking push element can never be actuated under load.
- Please note that during operation an opening of the threaded lifting pins must be ruled out by suitable countermeasures.
- During use or at work always wear the protective equipment necessary for the work in question.

2.5.3 Dangers from hot surfaces

WARNING

Burning danger due to hot surfaces!

Non-compliance may result in minor injuries!

Hot loads can transfer heat to the threaded lifting pins !

- Wear protective gloves when handling hot loads.

2.5.4 Dangers due to incorrect use

DANGER

When working with the threaded lifting pins there is a danger due to incorrect use!

A failure to observe this will result in death or serious injury!

- Note that contamination (e.g. grinding sludge, oil and emission deposits, dust, etc.) can impair the function of the threaded lifting pins.
- Never use the threaded lifting pins as a protective device or safety function.
- Never use the threaded lifting pins as a pulling element.
- Prepare the installation sketch according to the specifications of the company Erwin Halder KG.
- Never use the threaded lifting pins without locking.
- Insert or turn the threaded lifting pins completely into a thread that is true to gauge and make sure that it rests completely on the bearing surface (on the 30° bevel threaded lifting pins for centre holes according to DIN 332). If the threaded lifting pins are not fully screwed in and are not in full contact with the supporting surface (the 30° bevels for the threaded lifting pins for centre holes according to DIN332), the full force cannot be absorbed by the thread. The permissible loads cannot be achieved as a result. In the event of transverse loads, the threaded lifting pin can be deformed and thereby also the push pin inside. This can lead to the loss of a threaded element.
- Never use the threaded lifting pins with constantly rotating loads.
- Never use the threaded lifting pins to lift, hold or carry people,
- Before each use, check the threaded lifting pins for visible defects (e.g. deformations, breaks, cracks, damage, missing threaded elements, corrosion, function of the release).
- During use or at work always wear the personal protective equipment necessary for the work in question (protective clothing, protective gloves, safety helmet, and for overhead use, safety shoes).
- Never colour-code the threaded lifting pins (especially red), to avoid confusion with high-strength anchor points.
- Note that the load values only apply to lifting in a steel receptacle.

2.5.5 Crushing hazards

WARNING

Risk of injury due to crushing!

Serious injuries may occur during operation!

- Never operate the threaded lifting pins with defective components. Never put built-in safety components out of operation.
- Make sure that the threaded lifting pins are properly fastened.
- Make sure that no limbs of your own or other persons are under suspended loads.

2.5.6 Dangers due to suspended loads

WARNING

The following special hazards must be expected when operating the threaded lifting pins:

Hanging loads can fall down, causing a danger to life!

With suspended loads a risk of injuries such as scrapes, piercing, crushing or broken bones exists!

- During use or at work always wear the personal protective equipment necessary for the work in question (protective clothing, protective gloves, safety helmet and safety shoes).
- Make sure that you and other persons are not under suspended loads.
- Place or set down the load safely.
- The maximum load must not be exceeded (see "3.3 Technical data").
- Perform a daily function test before each start-up.
- In the event of mechanical damage, take the threaded lifting pins out of operation immediately.
- Make sure that you use sufficiently dimensioned threaded lifting pins for loads.
- Note that the locking push element must never be actuated under load.

2.5.7 Dangers due to improper storage

DANGER

Danger due to improper placement of objects!

Improper placement of objects on the threaded lifting pins can lead to damage, malfunctions or total failure and impair safety!

- Please note that it is forbidden to place objects on the threaded lifting pins. Remove all objects that are on the threaded lifting pins.
- Make sure that workpieces are properly fastened.

2.5.8 Dangers due to the use of incorrect spare parts

DANGER

Danger due to use of incorrect spare parts!

Incorrect or faulty spare parts can lead to damage, malfunction or total failure and impair safety!

- Only use original spare parts.
- Obtain the spare parts from Erwin Halder KG. You will find the necessary information on spare parts in the enclosed parts lists or in "1.5 Service / Customer service".

2.5.9 Crushing and cutting hazards for hands

WARNING

On the lifting accessory there are crushing and cutting hazards for hands (movements of mechanical parts).

A failure to observe this can result in serious injuries!

- While using the lifting accessory do not carry out any manual work on the lifting accessory.
- During use or at work always wear the personal protective equipment necessary for the work in question (protective clothing, safety goggles, protective gloves and safety shoes).

2.5.10 Dangers for unauthorised persons

DANGER

On the lifting accessory there are dangers for unauthorised persons!

A failure to observe this will result in death or serious injury!

- Check that there are no unauthorised persons on site.
- Prevent unauthorised persons from entering the operating area.

2.5.11 Dangers due to insufficient qualification

DANGER

Risk of injury in case of insufficient qualification!

Improper handling of the threaded lifting pins can lead to considerable personal injury and material damage!

- Have all activities carried out only by personnel qualified for them.

2.5.12 Dangers when the lifting accessory are used by multiple persons

DANGER

On the threaded lifting pins there are dangers when the lifting accessory are used by multiple persons!

A failure to observe this will result in death or serious injury!

- Note that the threaded lifting pins may only be used by one person.
- Keep a sufficient distance away for safety during operation.

2.5.13 Hazards due to contamination

WARNING

Danger from contamination (e.g. grinding sludge, oil and emission deposits, dust, chips, etc.) can impair the function of the threaded lifting pins!

A failure to observe this can result in death or serious injury!

- Always keep the threaded lifting pins clean.
- Ensure a clean working environment.
- During use always wear the protective equipment necessary for the work in question.

2.5.14 Dangers due to damaged threaded lifting pins

WARNING

Danger of life-threatening injuries due to damaged threaded lifting pins!

A failure to observe this can result in death or serious injury!

- Before each use, check the threaded lifting pins for visible defects (e.g. deformations, breaks, cracks, damage, corrosion, function of the release).
- Remove damaged threaded lifting pins immediately from any further use.

2.5.15 Hazards due to cleaning liquids (containing solvents) and other chemical substances or emissions

WARNING

On the threaded lifting pins there are dangers due to cleaning liquids (containing solvents) and other chemical substances or emissions!

A failure to observe this can result in death or serious injury!

- Observe the safety regulations applicable to the product when handling cleaning liquids (containing solvents) and other chemical substances or emissions.
- During use or at work always wear the protective equipment required for the work in question (respiratory protection, protective clothing, safety goggles, and protective gloves).

2.6 Personal protective equipment

When operating the threaded lifting pins, regardless of the workplace risk assessment, personal protective equipment must be worn in order to minimise health hazards.

- During use or at work always wear the protective equipment necessary for the work in question.
- Do not wear rings, chains or other jewellery.
- Follow the instructions on personal protective equipment.

The symbols have the following meaning:

Protective clothing

Protective clothing is close-fitting work clothing with low tear resistance, with tight sleeves and no protruding parts. It mainly serves as protection against getting caught by moving parts of the lifting accessory.

Safety shoes

Wear non-slip safety shoes to protect against heavy falling parts or slipping on smooth surfaces.

Protective gloves

Wear protective gloves to protect your hands from friction, abrasions, piercing or deeper injuries, and from contact with hot surfaces or chemical substances.

Safety goggles

Wear safety goggles to protect against media escaping under high pressure or flying parts.

Safety helmet

Wear a safety helmet to protect against falling or flying debris.

Respiratory protection

Wear appropriate respiratory protection if applicable material-specific dust limits are exceeded.

The personal protective equipment must be provided by the operator and must comply with the applicable requirements.

In addition, the national regulations as well as specifications from the workplace risk assessment and, if necessary, internal instructions of the operator must be observed.

2.7 Notices for emergencies

Preventive measures

- Always be prepared for accidents.
- Keep first aid equipment (first aid kit, blankets, etc.) within easy reach.
- Familiarise personnel with accident reporting, first aid, fire fighting and rescue facilities.
- Keep the access routes for rescue vehicles clear.

Measures to be taken in the event of accidents

- Trigger an emergency stop on the lifting mechanism on which the threaded lifting pins are used.
- Rescue people from the danger zone.
- In case of cardiac and/or respiratory arrest, initiate resuscitation immediately.
- In the event of personal injury, notify the first aid representative and an emergency doctor or the emergency services.
- Clear the access routes for rescue vehicles. If necessary, assign someone to instruct the rescue services.

2.8 Obligation of the operator

The threaded lifting pins are used in the commercial sector. The operator of the threaded lifting pins is therefore subject to the legal obligations for occupational safety.

In addition to the safety instructions in these original operating instructions, the safety, accident prevention and environmental protection regulations valid for the area of application of the threaded lifting pins must be observed. The following applies in particular:

- The operator must ensure that the threaded lifting pins are only used for their intended purpose (see "2.1 Intended use“).
- The operator must always make the original operating instructions available in legible condition and in full at the place of use of the threaded lifting pins.
- The operator must clearly regulate and define the responsibilities for installation, commissioning, operation, maintenance and cleaning.
- The operator may only allow persons to work on the threaded lifting pins who have reached the minimum legal age.
- The operator may only allow sufficiently qualified and instructed personnel to work on the threaded lifting pins.
- The operator must ensure that all employees who interact with the threaded lifting pins have read and understood the original operating instructions.
  In addition, he must demonstrably train the personnel at regular intervals and inform them about the dangers.
- The operator must provide personal protective equipment for the personnel and ensure that it is used.
- The operator must ensure that no persons work on the threaded lifting pins whose ability to react is impaired by drugs, alcohol, medication or similar.
- The operator must ensure there is adequate lighting in the work area of the threaded lifting pins.

Furthermore, the operator is responsible for ensuring that the threaded lifting pins are always technically in perfect condition. The following therefore applies:

- The operator must ensure that the servicing intervals described in these original operating instructions are adhered to.
- The operator must have all components of the threaded lifting pins checked regularly for proper functioning and completeness.
- The operator must regularly check that all safety and warning notices attached to the threaded lifting pins are clearly legible and remain permanently attached to the threaded lifting pins.

3 Description of the threaded lifting pins

3.1 Overview

All illustrations in this document are for providing a basic understanding and may differ from the actual design.

3.1.1 Overview of functional elements - EH 22352 / EH 2B352

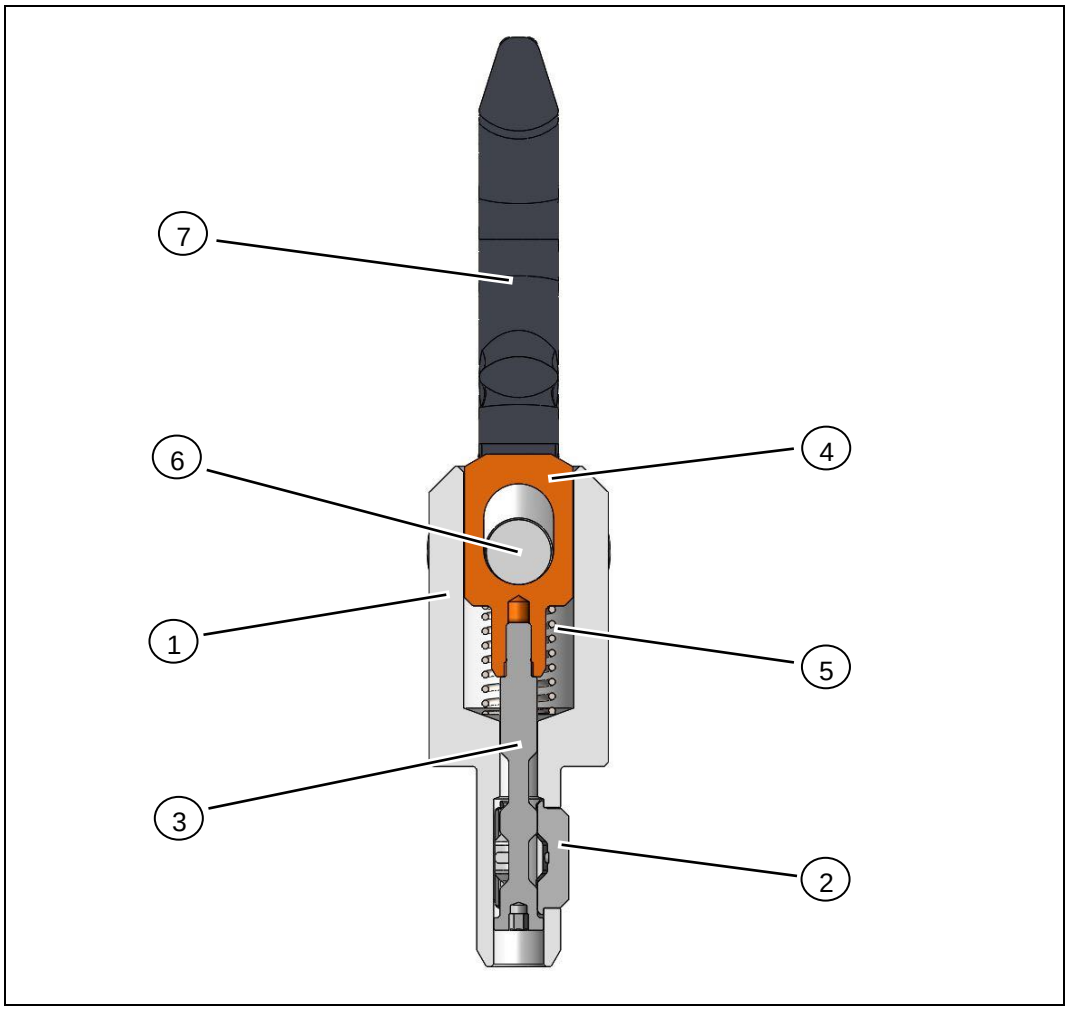


Figure 1: Overview of functional elements - EH 22352 / EH 2B352

1	Sleeve	5	Spring
2	Threaded elements	6	Bolt + nut
3	Push pin	7	Shackle
4	Push element	8	Cone for centre holes according to DIN 332 (not shown)

3.1.2 Overview of functional elements - EH 22353 / EH 2B353

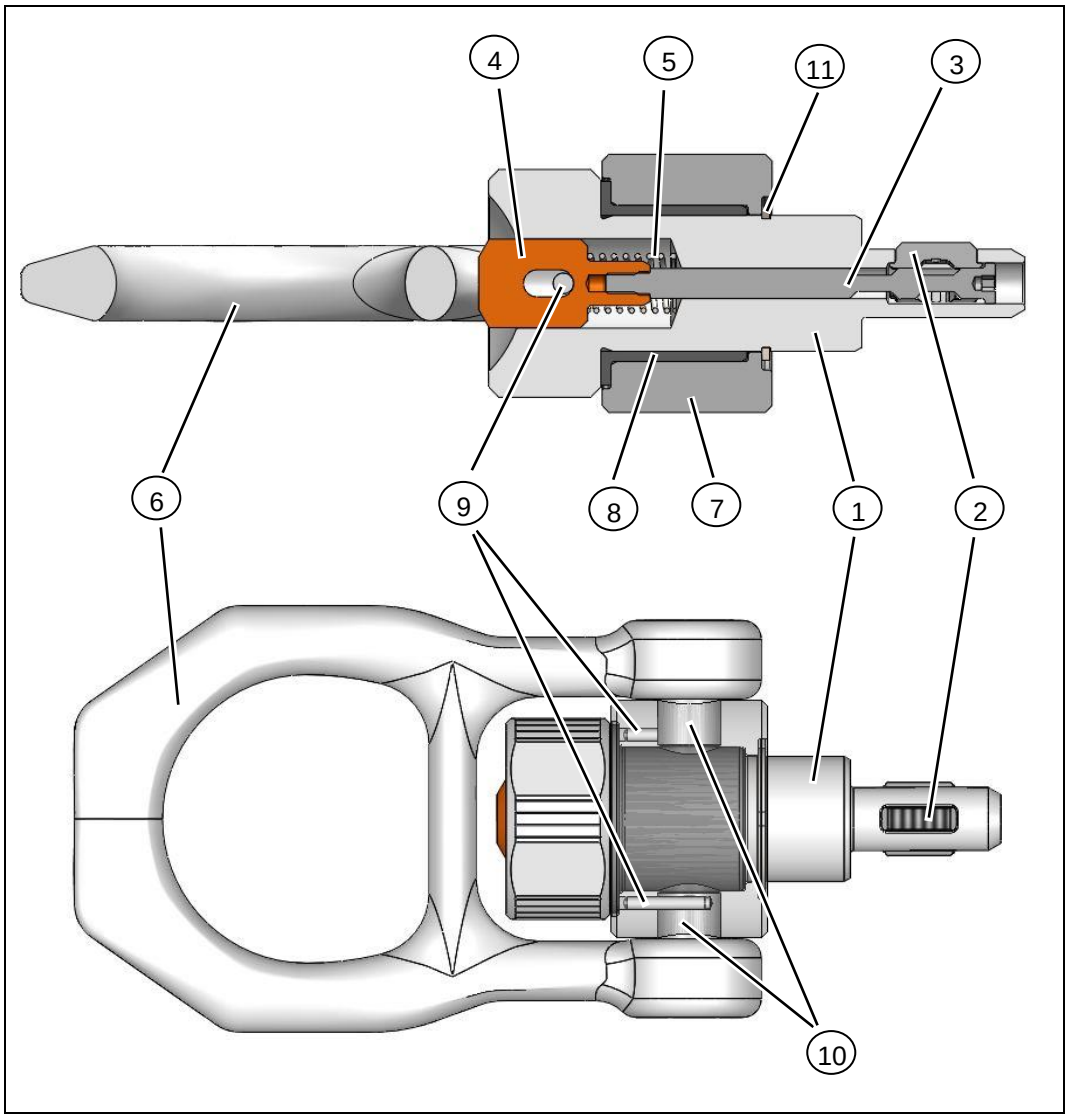


Figure 2: Overview of functional elements - EH 22353 / EH 2B353

1	Sleeve	7	Bearing ring
2	Threaded elements	8	Bearing
3	Push pin	9	Dowel pins
4	Push element	10	Bolt
5	Spring	11	Circlip
6	Shackle		

3.1.3 Type plate overview / inscription

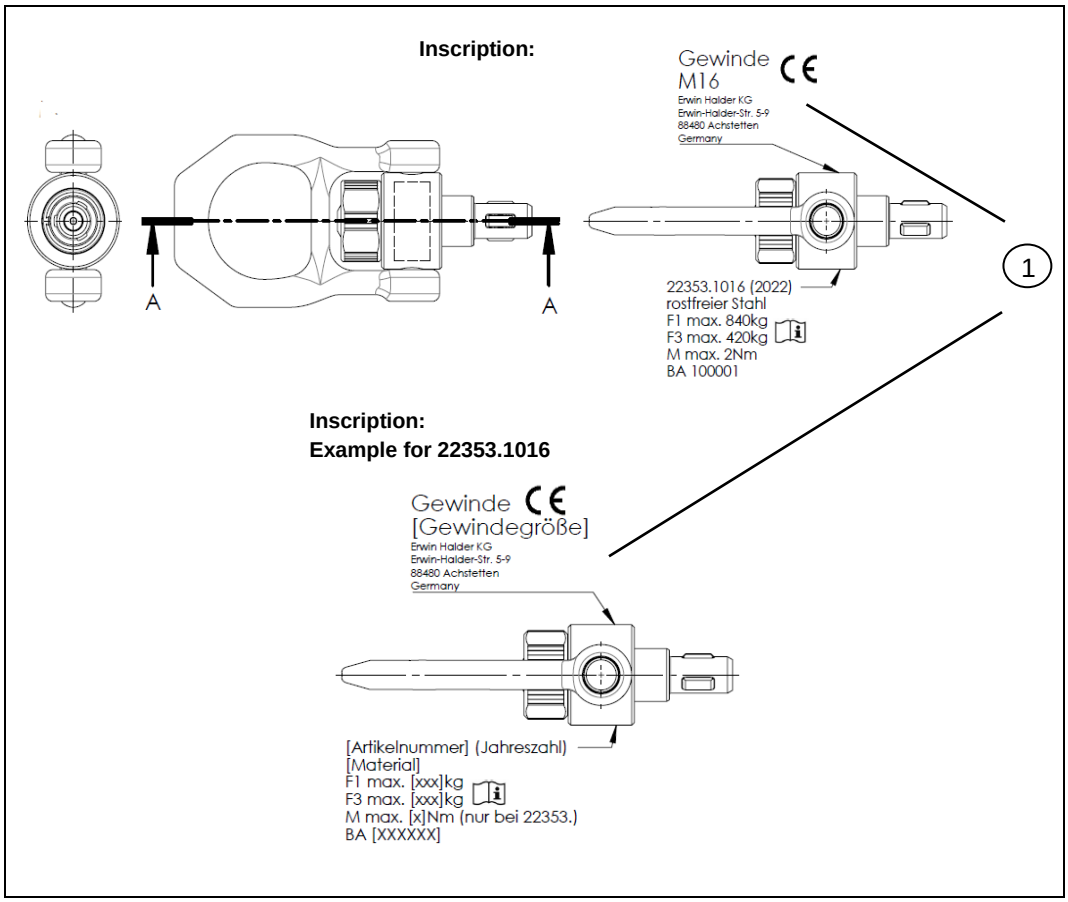


Figure 3: Type plate overview / inscription

1 Type plate / inscription, threaded lifting pins

3.2 Functional description

The threaded lifting pins are intended solely as lifting accessory / lifting equipment in standard threads.

The threaded lifting pins consist of the following components:

- EH 22352 / EH 2B352:
  - Sleeve
  - Threaded elements
  - Push pin
  - Push element
  - Spring
  - Bolt and nut
  - Shackle
- EH 22353 / EH 2B353:
  - Sleeve
  - Threaded elements
  - Push pin
  - Push element
  - Spring
  - Shackle
  - Bearing ring
  - Bearing
  - Dowel pins
  - Bolt
  - Circlip

To insert the threaded lifting pins, the operator must keep the push element pressed. This causes the threaded elements to be retracted via the push pin. The operator can now insert the threaded lifting pins into the nut thread and then release the push element. The push element and the push pin are reset by the spring and the threaded elements are pushed out again. The threaded lifting pin must then be fully screwed in by the operator.

To release, the operator must first turn the threaded lifting pins slightly out of the nut thread (approx. ¼ turn). Subsequently, by pressing and holding the push element, he can retract the threaded elements and take the threaded lifting pins out of the nut thread. The push element can then be released again.

Installation examples:

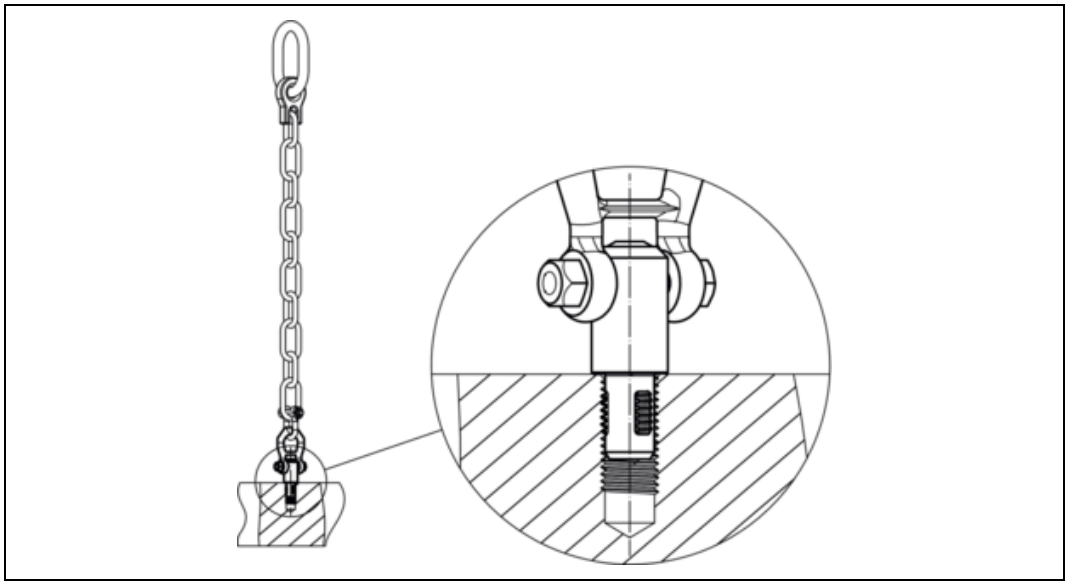


Figure 4: Installation examples - threaded lifting pins, self-locking

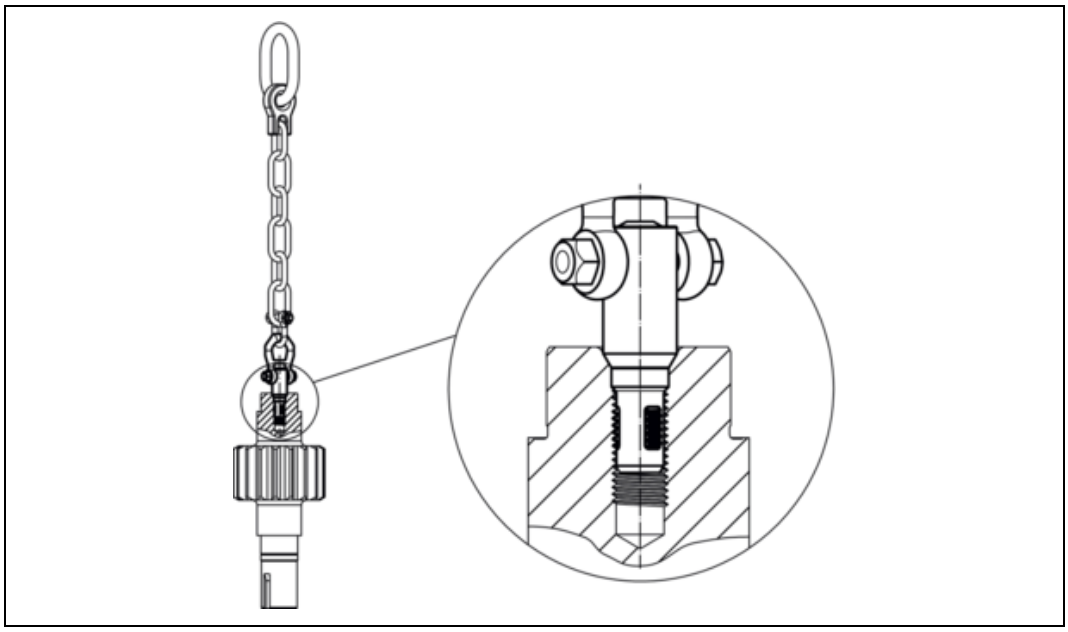


Figure 5: Installation examples - threaded lifting pins, self-locking, for centre holes according to DIN 332

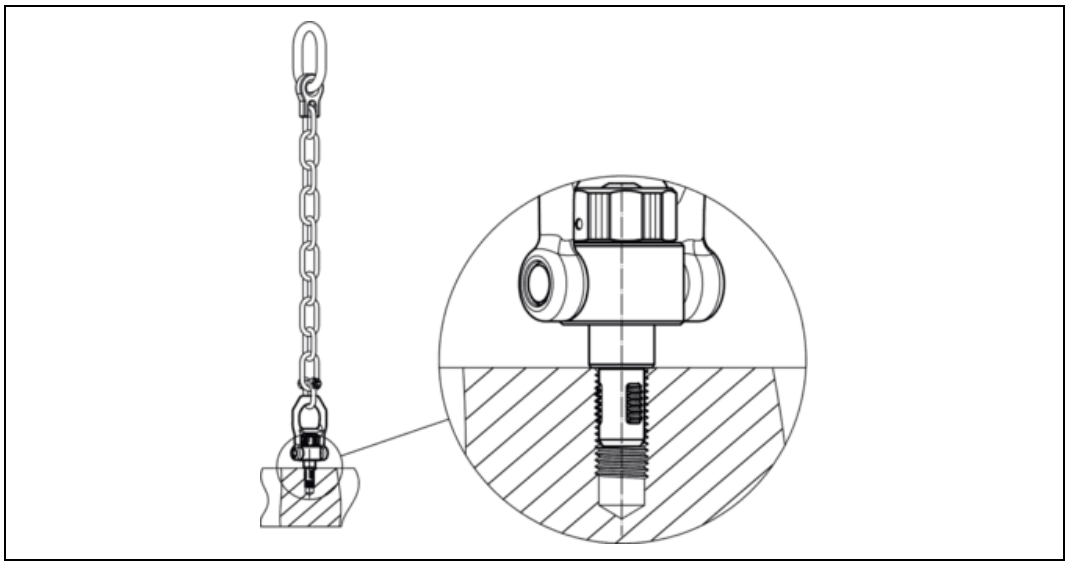


Figure 6: Installation examples - threaded lifting pins, self-locking, with rotatable shackle

3.2.1 Materials

Figure 7: Materials

1 Heat-treated steel, tempered, manganese-phosphated
2 Stainless steel 1.4542, precipitation-hardened

3.3 Technical data

3.3.1 Threaded lifting pins, self-locking - EH 22352

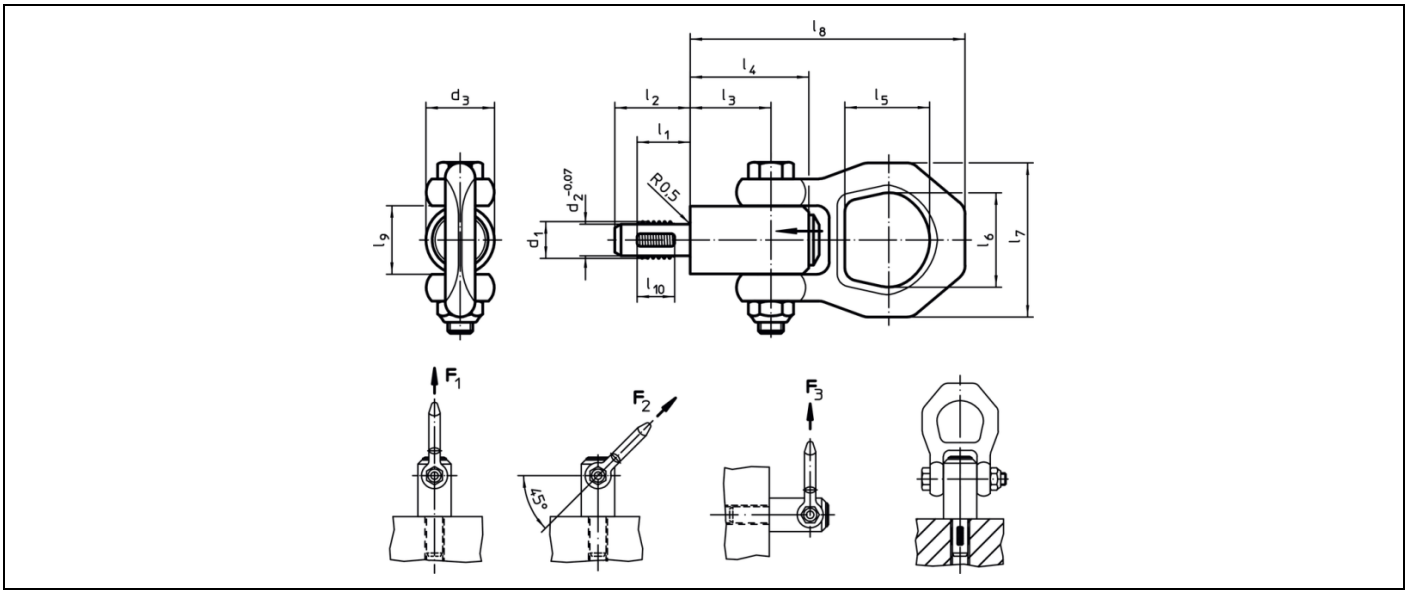


Figure 8: Dimensioned drawing - threaded lifting pins, self-locking - EH 22352

Dimensions													Load capacity according to DIN EN 13155			Mounting thread	Temperature (max.)	Weight	Item no.
d_1	l_1	d_2 -0.07	d_3	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	F_1	F_2	F_3				
[mm]													[kN]			[mm]	[°C]	[g]	
Heat-treated steel																			
M8	12	6.62	21.5	17.8	25.7	36.0	27.0	30.0	49.0	87.5	21.5	8.0	2.1	0.9	0.8	M8	250	229	**22352.0008**
M10	14	8.35	21.5	20.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	10.0	3.9	1.5	1.5	M10	250	237	**22352.0010**
M12	17	10.07	21.5	24.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	12.0	6.2	2.5	2.3	M12	250	247	**22352.0012**
M14	17	11.80	21.5	24.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	12.0	7.8	4.2	2.9	M14	250	259	**22352.0014**
M16	17	13.80	21.5	24.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	12.0	8.4	4.5	4.2	M16	250	270	**22352.0016**
M20	22	17.25	30.0	30.0	36.5	52.0	32.6	36.0	56.0	114.0	30.0	17.0	16.6	7.7	5.8	M20	250	559	**22352.0020**
M24	27	20.70	36.0	36.0	42.0	60.0	50.6	49.8	82.0	152.0	36.0	22.0	23.0	11.1	8.6	M24	250	1256	**22352.0024**
M27	31	23.67	45.0	40.0	42.0	60.0	50.6	49.8	82.0	152.0	36.0	26.0	33.8	15.7	13.7	M27	250	1520	**22352.0027**
M30	35	26.10	45.0	45.0	42.0	60.0	50.6	49.8	82.0	152.0	36.0	30.0	42.3	21.5	15.5	M30	250	1568	**22352.0030**
Stainless steel																			
M8	12	6.62	21.5	17.8	25.7	36.0	27.0	30.0	49.0	87.5	21.5	8.0	2.1	0.9	0.8	M8	250	229	**22352.1008**
M10	14	8.35	21.5	20.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	10.0	3.9	1.5	1.5	M10	250	237	**22352.1010**
M12	17	10.07	21.5	24.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	12.0	6.2	2.5	2.3	M12	250	247	**22352.1012**
M16	17	13.80	21.5	24.0	25.7	36.0	27.0	30.0	49.0	87.5	21.5	12.0	8.4	4.5	4.2	M16	250	270	**22352.1016**
M20	22	17.25	30.0	30.0	36.5	52.0	32.6	36.0	56.0	114.0	30.0	17.0	10.0	7.7	5.8	M20	250	559	**22352.1020**
M24	27	20.70	36.0	36.0	42.0	60.0	50.6	49.8	82.0	152.0	36.0	22.0	23.0	11.1	8.6	M24	250	1256	**22352.1024**

3.3.2 Threaded lifting pins, self-locking - EH 2B352

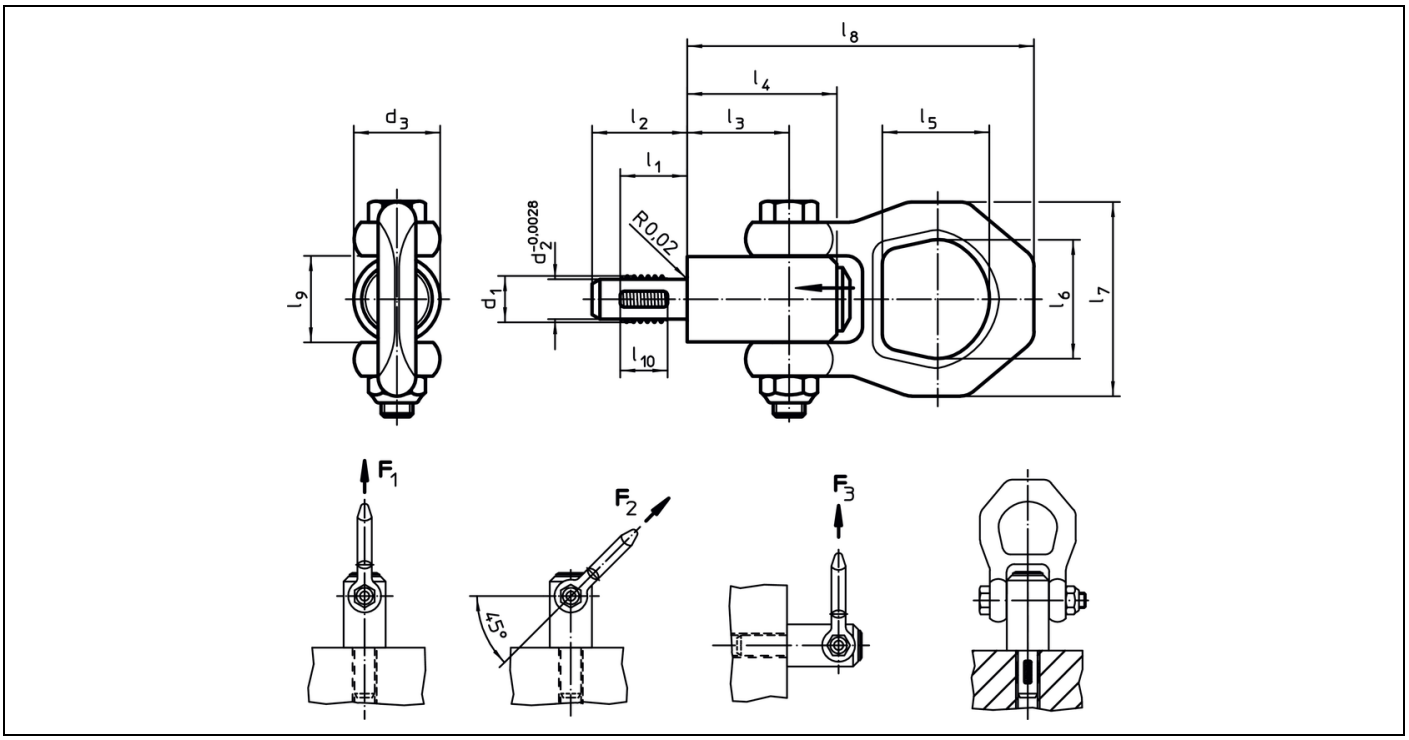


Figure 9: Dimensioned drawing - threaded lifting pins, self-locking - EH 2B352

Dimensions													Load capacity according to DIN EN 13155			Mounting thread	Temperature(max.)	Weight	Item no.
d_1	l_1	d_2 -0.0028	d_3	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	F_1	F_2	F_3				
[inch]													[lbf]				[°F]	[lb]	
Heat-treated steel																			
1/2-13	0.669	0.416	0.846	0.945	1.012	1.417	1.063	1.181	1.929	3.445	0.846	0.472	1528	764	607	1/2-13	482	0,5	**2B352.0012**
3/4-10	0.866	0.640	1.181	1.181	1.437	2.047	1.283	1.417	2.205	4.488	1.181	0.669	3619	1731	1281	3/4-10	482	1,2	**2B352.0020**
1-8	1.063	0.863	1.417	1.417	1.654	2.362	1.992	1.961	3.228	5.984	1.417	0.866	6766	3147	2225	1-8	482	2,8	**2B352.0024**
Stainless steel																			
1/2-13	0.669	0.416	0.846	0.945	1.012	1.417	1.063	1.181	1.929	3.445	0.846	0.472	1528	764	607	1/2-13	482	0,5	**2B352.1012**
3/4-10	0.866	0.640	1.181	1.181	1.437	2.047	1.283	1.417	2.205	4.488	1.181	0.669	2248	1731	1281	3/4-10	482	1,2	**2B352.1020**
1-8	1.063	0.863	1.417	1.417	1.654	2.362	1.992	1.961	3.228	5.984	1.417	0.866	6766	3147	2225	1-8	482	2,8	**2B352.1024**

3.3.3 Threaded lifting pins, self-locking, for centre holes according to DIN 332 - EH 22352

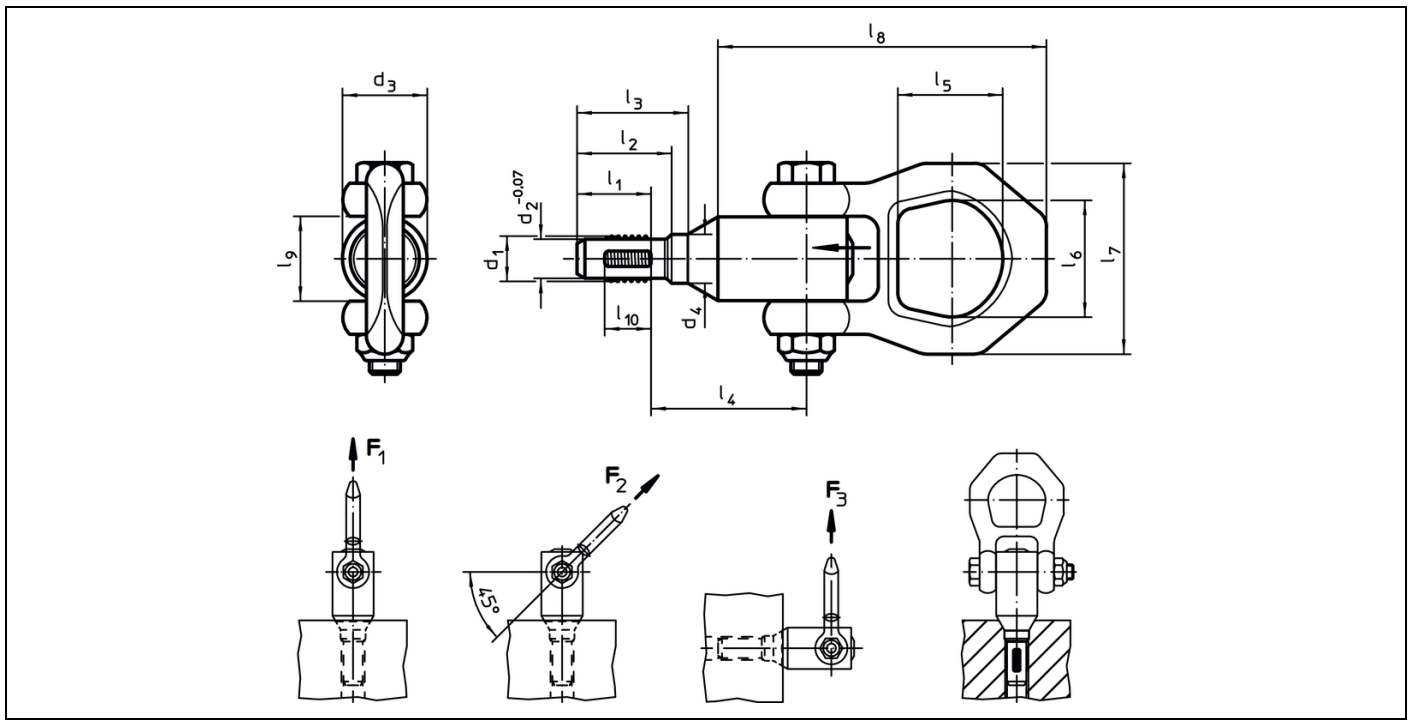


Figure 10: Dimensional Drawing - threaded lifting pins, self-locking, for centre holes according to DIN 332

Dimensions														Load capacity according to DIN EN 13155			Mounting thread	Temperature (max.)	Weight	Item no.
d_1	l_1	d_2 -0.07	d_3	d_4	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	F_1	F_2	F_3				
[mm]														[kN]			[mm]	[°C]	[g]	
Heat-treated steel																				
M8	13.9	6.62	21.5	8.1	17.6	19.5	34.6	27.0	30.0	49.0	82.3	21.5	8.0	2.1	0.9	0.8	M8	250	230	**22352.2008**
M10	16.0	8.35	21.5	10.2	20.0	22.9	36.4	27.0	30.0	49.0	83.6	21.5	10.0	3.9	1.5	1.5	M10	250	244	**22352.2010**
M12	19.0	10.07	21.5	12.7	24.0	28.1	39.1	27.0	30.0	49.0	84.3	21.5	12.0	6.2	2.5	2.3	M12	250	261	**22352.2012**
M16	19.0	13.80	21.5	16.7	25.0	30.5	42.3	27.0	30.0	49.0	88.5	21.5	12.0	8.4	4.5	4.2	M16	250	299	**22352.2016**
M20	25.0	17.75	30.0	20.7	31.8	39.1	53.7	32.6	36.0	56.0	109.2	30.0	17.0	16.6	7.7	5.8	M20	250	596	**22352.2020**
M24	31.0	20.70	36.0	24.7	38.9	47.3	61.4	50.6	49.8	82.0	145.4	36.0	22.0	23.0	11.1	8.6	M24	250	1315	**22352.2024**
Stainless steel																				
M8	13.9	6.62	21.5	8.1	17.6	19.5	34.6	27.0	30.0	49.0	82.3	21.5	8.0	2.1	0.9	0.8	M8	250	230	**22352.3008**
M10	16.0	8.35	21.5	10.2	20.0	22.9	36.4	27.0	30.0	49.0	83.6	21.5	10.0	3.9	1.5	1.5	M10	250	244	**22352.3010**
M12	19.0	10.07	21.5	12.7	24.0	28.1	39.1	27.0	30.0	49.0	84.3	21.5	12.0	6.2	2.5	2.3	M12	250	261	**22352.3012**
M16	19.0	13.80	21.5	16.7	25.0	30.5	42.3	27.0	30.0	49.0	88.5	21.5	12.0	8.4	4.5	4.2	M16	250	299	**22352.3016**
M20	25.0	17.75	30.0	20.7	31.8	39.1	53.7	32.6	36.0	56.0	109.2	30.0	17.0	10.0	7.7	5.8	M20	250	596	**22352.3020**
M24	31.0	20.70	36.0	24.7	38.9	47.3	61.4	50.6	49.8	82.0	145.4	36.0	22.0	23.0	11.1	8.6	M24	250	1315	**22352.3024**

3.3.4 Threaded lifting pins, self-locking, with rotatable shackle - EH 22353

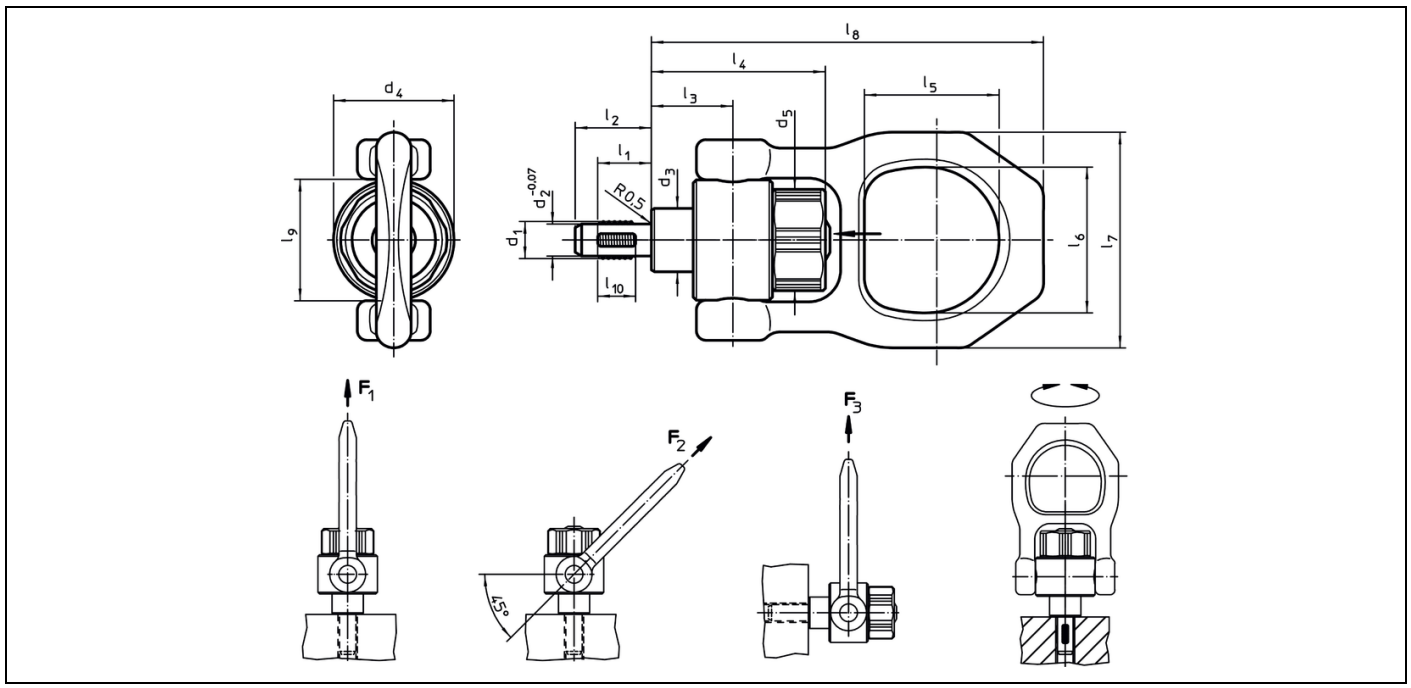


Figure 11: Dimensioned drawing - threaded lifting pins, self-locking, with rotatable shackle - EH 22353

Dimensions															Load capacity according to DIN EN 13155			Mounting thread	Temperature (max.)	Tightening torque (max.)	Weight	Item no.
d_1	l_1	d_2 -0.07	d_3	d_4	d_5	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	F_1	F_2	F_3					
[mm]															[kN]			[mm]	[°C]	[Nm]	[g]	
Heat-treated steel																						
M8	12	6.62	20	38	33.5	17.8	25.7	54.9	42.5	46	68	123.7	38	8	2.1	0.9	0.8	M8	250	2	612	**22353.0008**
M10	14	8.35	20	38	33.5	20.0	25.7	54.9	42.5	46	68	123.7	38	10	3.9	1.5	1.5	M10	250	2	612	**22353.0010**
M12	17	10.07	20	38	33.5	24.0	25.7	54.9	42.5	46	68	123.7	38	12	6.2	2.5	2.3	M12	250	2	618	**22353.0012**
M16	17	13.80	20	38	33.5	24.0	25.7	54.9	42.5	46	68	123.7	38	12	8.4	4.5	4.2	M16	250	2	618	**22353.0016**
M20	22	17.25	35	59	50.0	30.0	36.5	73.7	55.6	70	102	167.5	59	17	16.6	7.7	5.0	M20	250	3	1833	**22353.0020**
M24	27	20.70	35	59	50.0	36.0	42.0	79.2	55.6	70	102	173.0	59	22	18.5	11.1	8.6	M24	250	3	1860	**22353.0024** [1)]
Stainless steel																						
M8	12	6.62	20	38	33.5	17.8	25.7	54.9	42.5	46	68	123.7	38	8	2.1	0.9	0.8	M8	250	2	612	**22353.1008**
M10	14	8.35	20	38	33.5	20.0	25.7	54.9	42.5	46	68	123.7	38	10	3.9	1.5	1.5	M10	250	2	612	**22353.1010**
M12	17	10.07	20	38	33.5	24.0	25.7	54.9	42.5	46	68	123.7	38	12	6.2	2.5	2.3	M12	250	2	618	**22353.1012**
M16	17	13.80	20	38	33.5	24.0	25.7	54.9	42.5	46	68	123.7	38	12	8.4	4.5	4.2	M16	250	2	618	**22353.1016**
M20	22	17.25	35	59	50.0	30.0	36.5	73.7	55.6	70	102	167.5	59	17	16.6	7.7	5.0	M20	250	3	1833	**22353.1020**
M24	27	20.70	35	59	50.0	36.0	42.0	79.2	55.6	70	102	173.0	59	22	18.0	11.1	8.6	M24	250	3	1860	**22353.1024** [1)]

3.3.5 Threaded lifting pins, self-locking, with rotatable shackle - EH 2B353

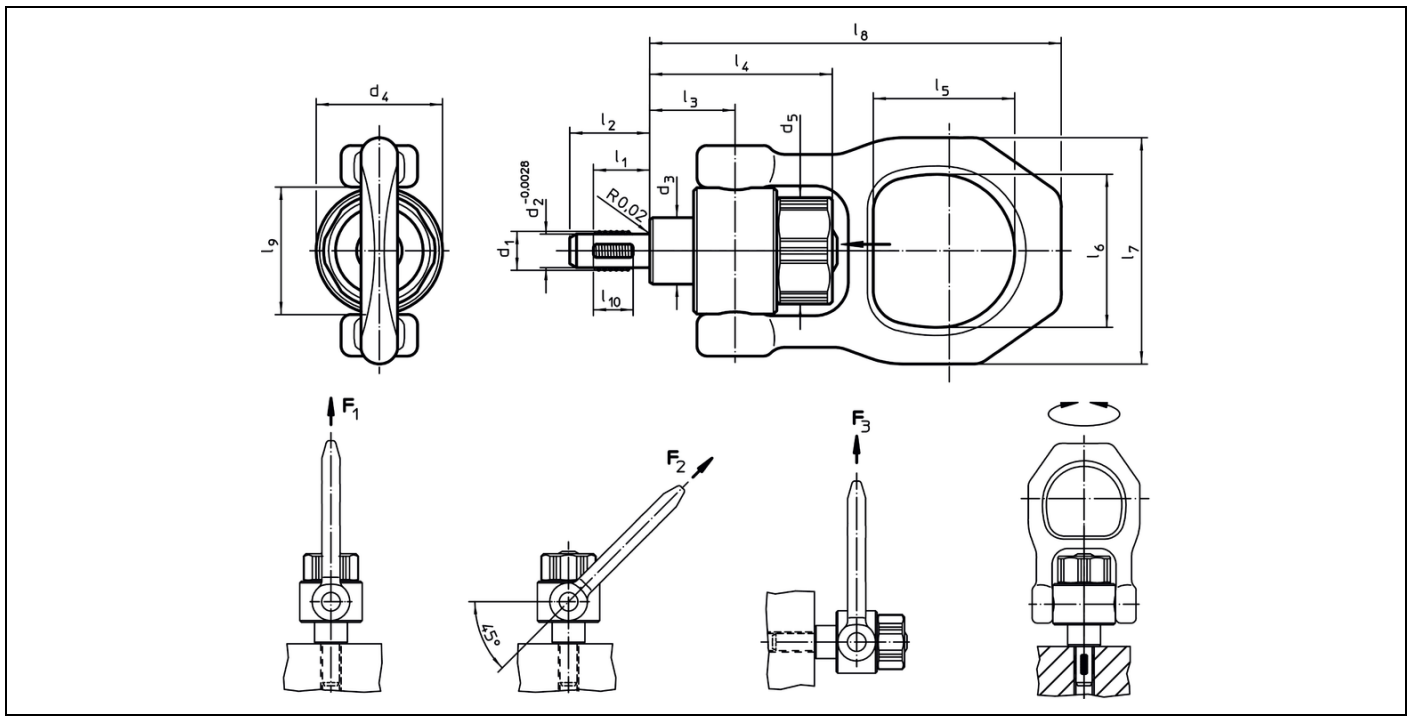


Figure 12: Dimensioned drawing - threaded lifting pins, self-locking, with rotatable shackle - EH 2B353

Dimensions															Load capacity according to DIN EN 13155			Mounting thread	Temperature (max.)	Tightening torque (max.)	Weight	Item no.
d_1	l_1	d_2 -0.0028	d_3	d_4	d_5	l_2	l_3	l_4	l_5	l_6	l_7	l_8	l_9	l_{10}	F_1	F_2	F_3					
[inch]															[lbf]				[°F]	[lbf ft]	[lb]	
Heat-treated steel																						
1/2-13	0.669	0.416	0.787	1.496	1.319	0.945	1.012	2.161	1.673	1.811	2.677	4.870	1.496	0.472	1528	764	607	1/2-13	482	1.48	1,4	**2B353.0012**
3/4-10	0.866	0.640	1.378	2.323	1.969	1.181	1.437	2.902	2.189	2.756	4.016	6.594	2.323	0.669	3619	1731	1124	3/4-10	482	2.21	4,1	**2B353.0020**
1-8	1.063	0.863	1.378	2.323	1.969	1.417	1.654	3.118	2.189	2.756	4.016	6.811	2.323	0.866	4159	3147	2225	1-8	482	2.21	4,2	**2B353.0024**[1)]
Stainless steel																						
1/2-13	0.669	0.416	0.787	1.496	1.319	0.945	1.012	2.161	1.673	1.811	2.677	4.870	1.496	0.472	1528	764	607	1/2-13	482	1.48	1,4	**2B353.1012**
3/4-10	0.866	0.640	1.378	2.323	1.969	1.181	1.437	2.902	2.189	2.756	4.016	6.594	2.323	0.669	3619	1731	1124	3/4-10	482	2.21	4,1	**2B353.1020**
1-8	1.063	0.863	1.378	2.323	1.969	1.417	1.654	3.118	2.189	2.756	4.016	6.811	2.323	0.866	4046	3147	2225	1-8	482	2.21	4,2	**2B353.1024**[1)]

[1)] from 150 °C linear decrease of load capacity by 23%

3.3.6 Ambient conditions

Permissible ambient temperature during operation	-30 °C to +250 °C
Permissible ambient temperature during storage	-10 °C to +60 °C
Permissible humidity	max. 60%

3.3.7 Intended service life

The intended service life of threaded lifting pins, taking into account the intended use and maintenance intervals, is a maximum of **16,000** load cycles for all article numbers.

4 Transport and storage

The lifting accessory are delivered to the customer by a transport company authorised by Erwin Halder KG .

4.1 Controls at the time of acquisition by the recipient

On arrival of the threaded lifting pins at the customer's premises, they must be inspected for visible transport damage.

- Report any transport damage immediately to the delivering agent.

4.2 Packaging

A contributing factor to the choice of packaging is the transportation route. Unless otherwise contractually agreed, the packaging shall comply with the HPE packaging guidelines laid down by the Bundesverband Holzmittel, Paletten, Exportverpackung e.V. (Federal Association of Wood Products, Pallets, Export Packaging) and the Verein Deutscher Maschinenbauanstalten (Mechanical Engineering Industry Association).

- Pay attention to the symbols on the packaging:

Examples of symbols on packaging:

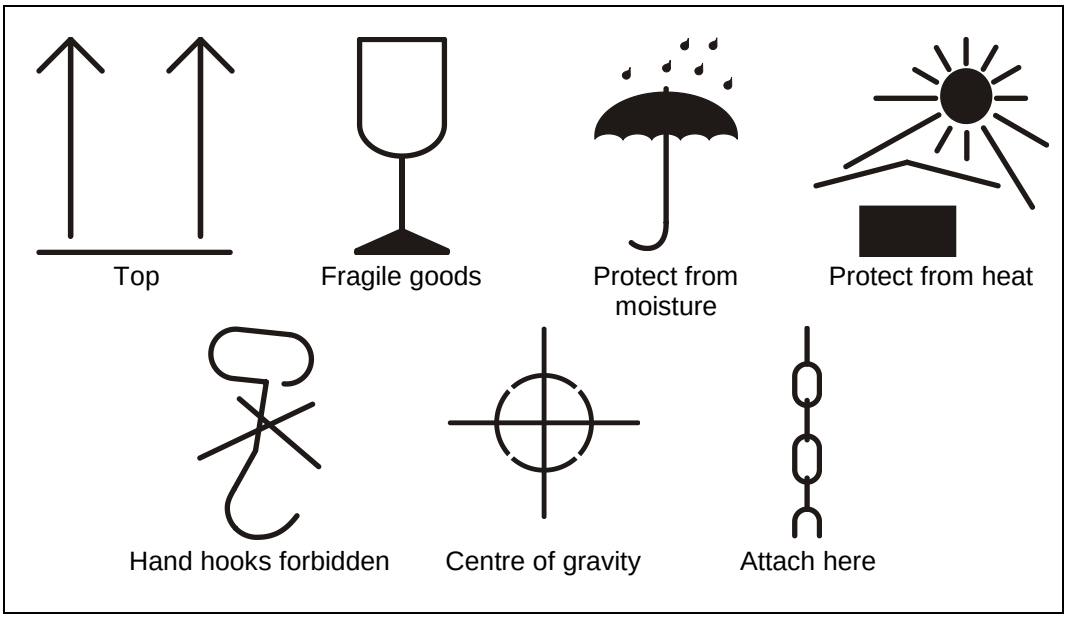


Figure 13: Examples of symbols on packaging

4.2.1 Unpacking

Proceed as follows when unpacking the threaded lifting pins

- Remove the packaging. Dispose of packaging materials such as foils and adhesive tapes properly.
- Do not throw away the original packaging. Keep it for re-transport.
- Check the delivery for completeness by comparing it to your order.
- It is essential that you keep the supplied documents; they contain important information on how to use the threaded lifting pins.
- Check the package contents for visible transport damage.
- If you notice any transport damage or discrepancies between the contents of the package and your order, please inform Erwin Halder KG.

4.2.2 Re-packaging

See chapter 4.2.1 Unpacking.

4.3 Notes on hazards during transport

⚠ WARNING

The following special hazards must be expected when transporting the threaded lifting pins (package units or pallets):

Hanging loads can fall down, causing a danger to life!

A danger of tipping over exists during unsecured transport!

Protruding edges can lead to bruising or cuts!

- Only use approved load carrying devices.
- During use or at work always wear the personal protective equipment necessary for the work in question (protective clothing, protective gloves, safety helmet and safety shoes).
- Make sure that you and other persons are not under suspended loads.

- Please also read the chapter "2 Safety".
- The threaded lifting pins (or package units or pallets) may only be transported by appropriately qualified and instructed personnel (forklift / crane driver with qualification certificate) and in compliance with all safety instructions.
- When selecting suitable lifting devices and lifting accessories, always consider the weight of the heaviest component.
- Wear protective clothing, safety shoes, protective gloves and a safety helmet when working.
- Always secure the transport route with an additional person.
- Ensure that no persons are standing in the path of transport or under suspended loads.

- Always lift the packing units or pallets of the threaded lifting pins slowly and carefully to ensure stability and safety.
- Remove transport safeguards (if present).

4.4 Permitted aids for transport

Shackles or hooks must be selected according to the transport weight of the packaging units or pallets of the threaded lifting pins and are only to be attached to the holding points provided for this purpose.

Avoid contact of the carrying chains or ropes with the packing units or pallets of the threaded lifting pins. If this is not possible, take appropriate precautions to prevent damage to the packing units or pallets of the threaded lifting pins .

Adjust the length of the carrying means so that the packaging units or pallets of the threaded lifting pins can be transported horizontally.

4.5 Scope of delivery

The scope of delivery of the threaded lifting pins consists of the following components:

- threaded lifting pins
- original operating instructions

4.6 Interim storage

If the threaded lifting pins are not used immediately after delivery, they must be stored carefully in a protected place. The threaded lifting pins must be stored temporarily in such a way that they are protected from cold, moisture, dirt and mechanical influences.

For the recommended storage conditions for the threaded lifting pins, please refer to chapter “3.3.6 Ambient conditions“.

In case of improper storage, no liability will be accepted for any damage caused!

5 Assembly

The threaded lifting pins are completely assembled by Erwin Halder KG.

5.1 Notes on hazards during assembly

WARNING

Risk of injury due to unsuitable assembly materials!

Unsuitable assembly materials can lead to serious injuries during operation!

– Only use the supplied assembly materials.

5.2 Preparatory measures

Before assembling the threaded lifting pins, make sure that

– Additional lighting equipment (hand-held lamps) is available for the work,

– The assembly area is cleaned and dust-free,

– The necessary tools are available for the assembly.

5.3 Choice of location of use

5.3.1 Necessary operating and maintenance areas

When selecting the location of use, take into account the ambient conditions (see “3.3.6 Ambient conditions”).

When selecting the location of use, take into account the necessary operating and maintenance areas.

Make sure there is a clear space all around the threaded lifting pins.

The operator must ensure there is adequate lighting in the location of use of the threaded lifting pins.

5.3.2 Requirements for the location of use

WARNING

Risk of injury due to instability!

If incorrectly assembled, a risk of serious injury exists due to instability of the individual component groups when using the threaded lifting pins!

- Note that the location of use must be:
  - flat, horizontal,
  - temperature resistant, non-flammable and
  - vibration-free

  .
- Have the installation work carried out only by authorised and instructed personnel.
- During assembly, observe the tightening torques of all screw connections.
- During use or at work always wear the protective equipment required for the work in question (such as protective clothing and safety shoes).

WARNING

Risk of injury due to lack of space!

A risk of serious injuries such as scratches, piercing or broken bones exists from work equipment and/or components being arranged too closely together!

- The location of use of the threaded lifting pins must be selected in such a way that the room to manoeuvre necessary for personnel in the work area is not restricted or impeded.
- Maintain the room to manoeuvre according to ergonomic guidelines and standards.
- Cordon off the danger area.
- Keep unauthorised persons away.
- Designate a person to be in charge.

When selecting the set-up location, take into account the necessary operating and maintenance areas.

The free space at the threaded lifting pins should not be less than the required room to manoeuvre all around.

6 Commissioning

6.1 Safety measures before commissioning

WARNING

Risk of injury due to lack of space!

A risk of injuries such as scratches, piercing or broken bones exists from work equipment and/or components being arranged too closely together!

- The place of use of the threaded lifting pins must be selected in such a way that the room to manoeuvre necessary for personnel in the work area is not restricted or impeded.
- Only allow qualified personnel to carry out commissioning.
- Cordon off the danger area.
- Keep unauthorised persons away.
- Designate a person to be in charge.

Make yourself sufficiently familiar with

- the operating elements of the threaded lifting pins,
- the equipment of the threaded lifting pins,
- the way the threaded lifting pins works,
- the immediate vicinity of the threaded lifting pins,
- the measures for emergencies.

Perform the following activities before initial commissioning or recommissioning:

- Check and make sure that all components are installed and working.
- Check the threaded lifting pins for visible damage; immediately rectify any defects found or report them to the supervisory staff – the threaded lifting pins may only be operated in perfect condition.
- Check and make sure that only authorised persons are in the work area of the threaded lifting pins and that no other persons are endangered by use of the threaded lifting pins.
- Remove all objects and other materials from the place of use that are not required for the operation of the threaded lifting pins.
- Keep a commissioning log.

7 Operation

7.1 Safety measures during normal operation

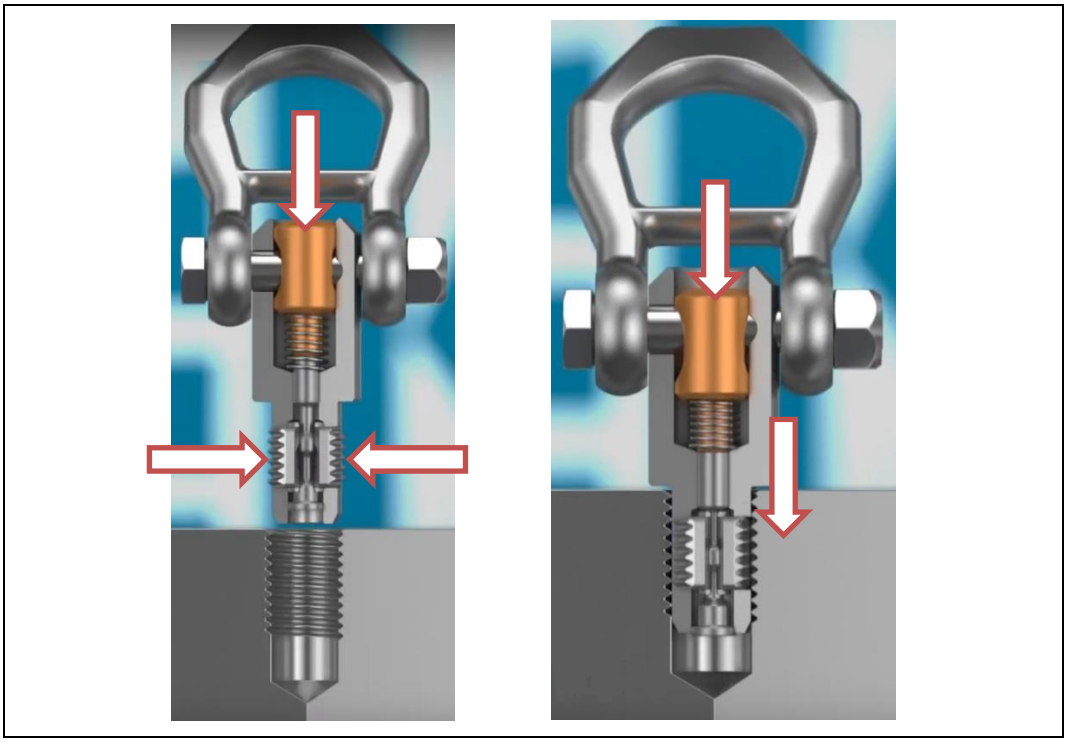
- Do not remove or disable any components while the threaded lifting pins are being used.
- Make sure that no unauthorised persons are in the work area of the threaded lifting pins.
- Make sure that no persons or limbs of persons are under suspended loads during operation.

Perform the following control activities once a day:

- Check the threaded lifting pins for externally visible damage.
- Check the function of all components of the threaded lifting pins.

7.2 Example application

Insert:



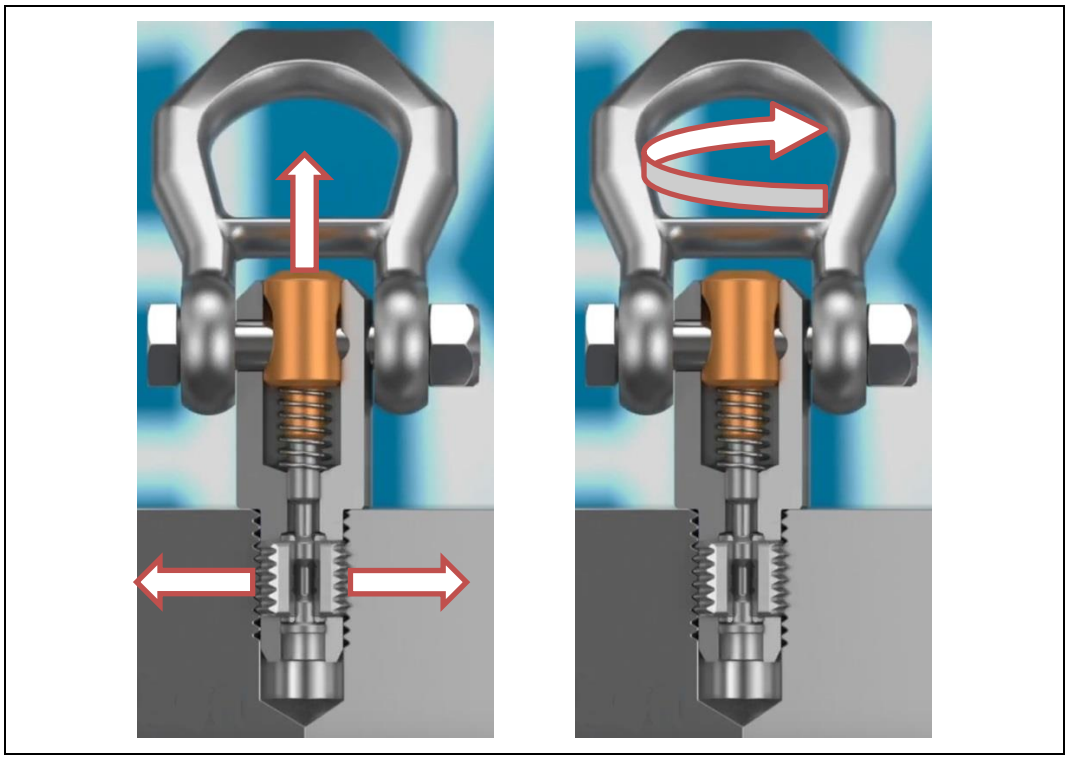
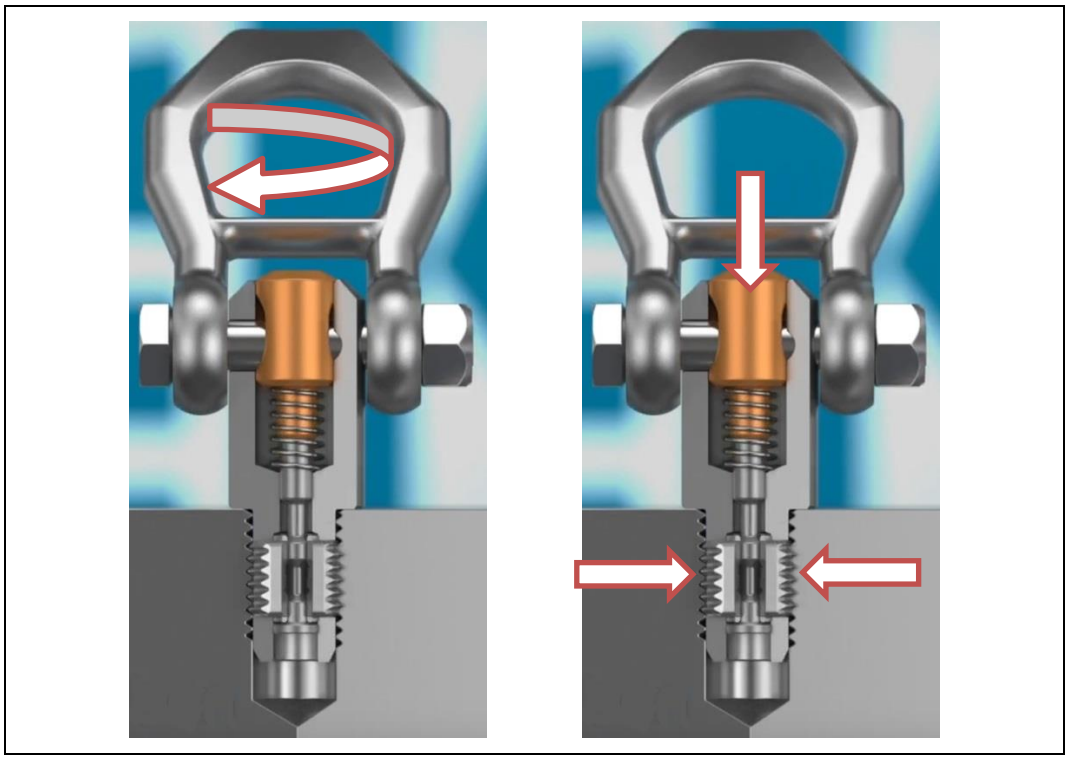


Figure 14: Example application - Inserting

Withdraw:



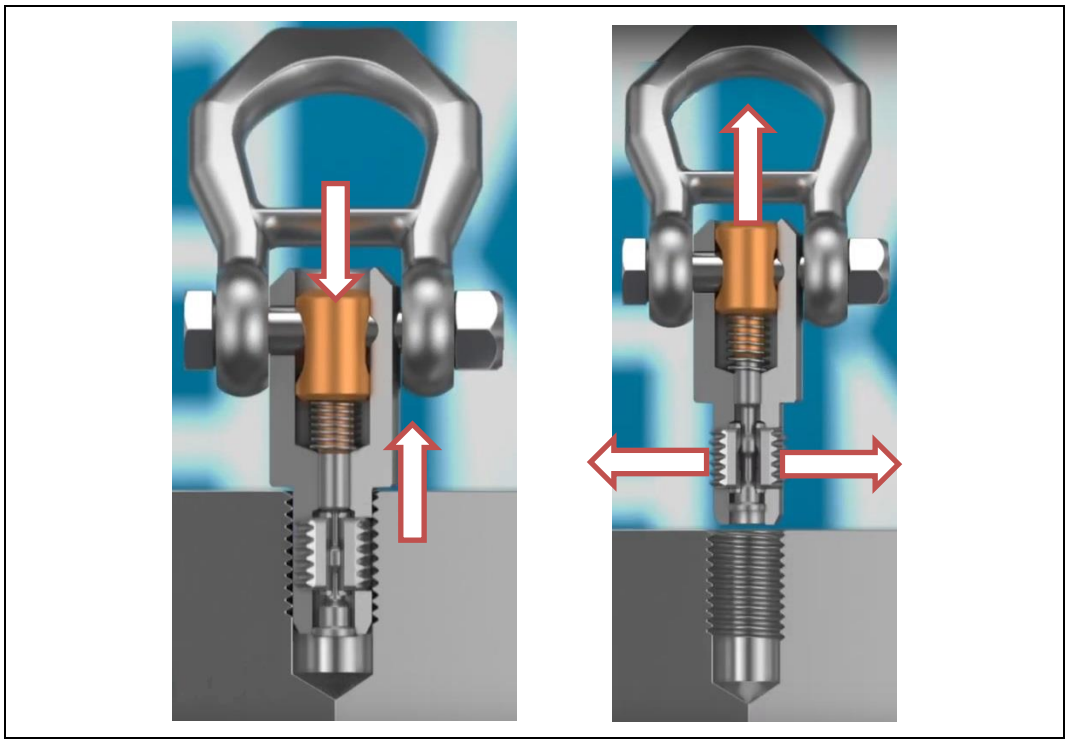


Figure 15: Example application - Withdrawing

8 Malfunctions

DANGER

On the lifting accessory hazards exist during troubleshooting!

Failure to observe the instructions may result in damage, malfunctions or total failure of the threaded lifting pins, as well as impairment of the safety of the threaded lifting pins!

- Only allow qualified personnel to carry out troubleshooting.
- Take damaged threaded lifting pins out of service immediately.

8.1 Malfunctions and corrective measures

Malfunction	Cause	Corrective measures
Threaded elements can no longer be retracted or pushed out	Contamination in the openings	Clean the threaded lifting pins
Threaded elements can no longer be retracted or pushed out	Service life exceeded or overloading by user	threaded lifting pins must be replaced
Threaded elements missing	Improper handling	threaded lifting pins must be replaced
Shackles are no longer movable	Overloading	threaded lifting pins must be replaced

9 Maintenance

9.1 Safety measures during maintenance work

Carry out the prescribed maintenance work such as cleaning, lubricating, servicing and inspection on time.

Observe the maximum permissible load cycles (see "3.3 ") and make the threaded lifting pins unusable and dispose of them as soon as the maximums are reached. This applies even if no external wear is visible.

Note the following points before carrying out the maintenance work:

- Cordon off access to the work area of the threaded lifting pins. Make sure that no unauthorised persons are in the work area of the threaded lifting pins.
- Make sure that all components have cooled down to ambient temperature.
- Only carry out work on low-mounted components in a squatting position, not in a bent position. Carry out work on components mounted high up in an upright, straight posture.
- Immediately replace all threaded lifting pins that are not in perfect working order.
- Only use original spare parts.
- Make sure that suitable collection containers are available for all substances (cleaning agents or other chemical substances) hazardous to groundwater.

After the servicing work has been completed and before using the threaded lifting pins, carry out the following activities:

- Check all previously loosened screw connections once again for tightness.
- Check that all previously removed components are properly reinstalled.
- Make sure that all tools, materials and other equipment used have been removed from the work area.
- Clean the area of use. Remove any fluids that may have leaked out (such as cleaning agents) and similar substances.
- Make sure that all components of the threaded lifting pins are working properly again.

9.2 Inspection and maintenance work

9.2.1 Maintenance intervals

Maintenance item	Maintenance work	see section
Daily		
Entire threaded lifting pins	Visual inspection	9.2.2.1
Weekly		
Entire threaded lifting pins	Cleaning	9.2.3.1
Entire threaded lifting pins	Functional test	9.2.3.2
Entire threaded lifting pins	Visual inspection, warning and information signs	9.2.3.3
Annually		
Entire threaded lifting pins	Inspection by an expert	9.2.4.1

9.2.2 Maintenance - daily

9.2.2.1 Visual inspection

- Check the threaded lifting pins for
  - mechanical damage,
  - wear on the threads,
  - Dirt deposits (such as grinding sludge, oil and emulsion deposits, dusts, etc.) and
  - unfamiliar noises.
- Report any damage immediately to your supervisor.

9.2.3 Maintenance - weekly

9.2.3.1 Cleaning

Proceed as follows to clean the threaded lifting pins:

- Thoroughly clean all lifting accessory components and remove dirt, dust and foreign objects from the entire lifting accessory area. Use machine cleaning agents for this purpose. Never clean the threaded lifting pins with high-pressure cleaners or degreasing cleaning agents.

9.2.3.2 Functional test

- Check whether the threaded elements are automatically reset (pushed out) by the spring force.
- Check all other components for functionality.
- Report any damage immediately to your supervisor.

9.2.3.3 Visual inspection of warning and information signs

- Check all warning and information signs of the threaded lifting pins for completeness and legibility.
- Report any damage immediately to your supervisor.

9.2.4 Maintenance - annual

9.2.4.1 Inspection by an expert

- Have load bearing equipment inspected by an expert at least once a year.
- Please also note that additional tests may be required according to the conditions of use and operational conditions or as extraordinary tests according to "Operation of load bearing equipment in hoisting operations”, DGUV regulation 100-500 (previously BGR 500).

10 Dismantling and disposal

DANGER

Risk of serious injury due to improper decommissioning / disposal!

A failure to observe this will result in death or serious injury!

- Have the disassembly work carried out only by qualified or instructed personnel. Note that the personnel must have practical experience in dismantling the lifting accessory .
- Do not stand under suspended loads during disassembly work.
- Please note that in the case of overhead or horizontal use, the load must be secured against falling before opening the threaded lifting pins .
- During use or at work always wear the protective equipment required for the work in question (e.g. protective clothing, safety shoes, protective gloves and safety helmet).
- In case of doubt, please contact Erwin Halder KG.

10.1 Disassembly

WARNING

Danger from disassembly work!

During disassembly there is a risk of injuries such as scratches, piercing or crushing!

- Only allow instructed and authorised personnel to carry out disassembly work.
- Please note that in the case of overhead or horizontal use, the load must be secured against falling before opening the threaded lifting pins .
- During use or at work always wear the protective equipment required for the work in question (e.g. protective clothing, safety goggles, safety shoes and safety helmet).

WARNING

Danger of injury due to work equipment arranged too closely together!

A failure to observe this can result in death or serious injury!

- Cordon off the danger area.
- Keep unauthorised persons away from the danger area.
- Appoint a person to be responsible for the disassembly work.
- During use or at work always wear the protective equipment required for the work in question (e.g. protective clothing, safety goggles, safety shoes and safety helmet).

10.2 Disposal

WARNING

Risk of environmental pollution / waste of resources!

A failure to comply can cause environmental damage!

- Only allow instructed and authorised personnel to carry out disposal work.
- Collect and separate liquids.
- Cleansers and auxiliary materials used to clean the threaded lifting pins must be disposed of in accordance with local regulations and in compliance with the instructions in the manufacturer's safety data sheets.
- Separate materials and packaging waste by type and recycle them.
- Observe local recycling regulations.

11 Annex

11.1 EC Declaration of Conformity

On the following pages you will find the EC Declaration of Conformity for these threaded lifting pins and the attached documents.

EC Declaration of Conformity

(Translation of the original declaration of conformity)

Manufacturer / Authorised Representative:	Erwin Halder KG Erwin-Halder-Straße 5-9 88480 Achstetten-Bronnen
Authorised person, for the compilation of the technical documentation:	Erwin Halder KG Erwin-Halder-Straße 5-9 88480 Achstetten-Bronnen
Product:	threaded lifting pins
Article group:	EH 22352 / EH 2B352 EH 22353 / EH 2B353
Function:	The threaded lifting pins are intended solely as lifting accessory / lifting equipment in standard threads.
Patent:	US 11649847 B2

We hereby declare that the lifting accessory described above complies with all relevant provisions of the Machinery Directive 2006/42/EC.

Other standards applied:

- EN ISO 12100
- EN 13155
- DIN 580

88480 Achstetten-Bronnen, 01.12.2023

Stefan Halder, Management