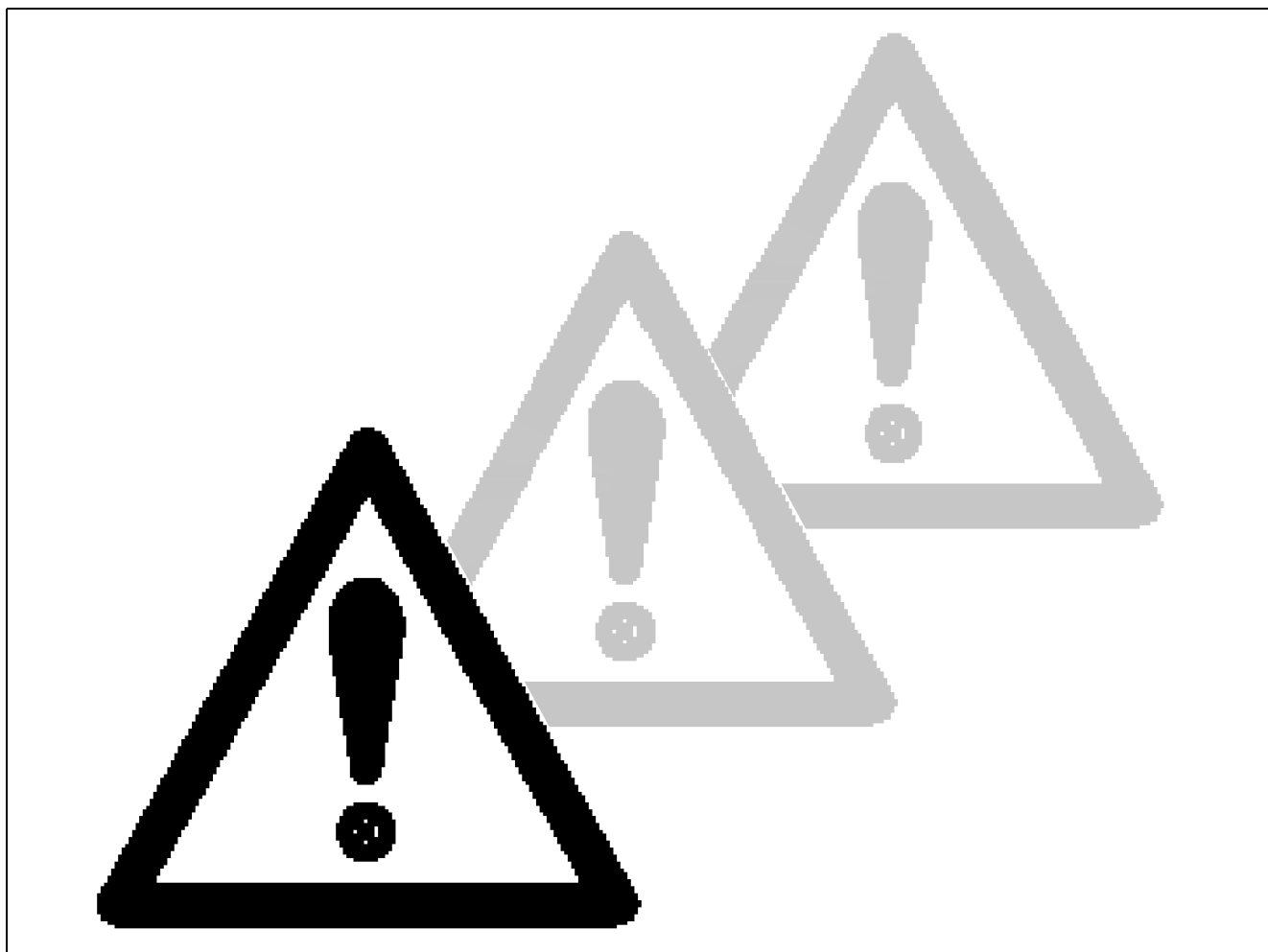


Accessories and Spare Parts



Instructions for use

GE-30-1108-en

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Key to symbols

Different symbols used in this user's manual draw your attention to safety aspects and useful tips. The symbols are explained in the following.



Warning!

The **warning triangle** indicates potential sources of danger which may constitute a risk of injury for the user or a health hazard.



Caution:

The **square** indicates situations which may lead to malfunction, defects, collision or damage of the instrument.



Note:

The **hand** indicates hints on the use of the instrument or other tips for the user.

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The accessories and spare parts comply with the essential requirements stipulated in Annex I to the 93/42/EEC Directive governing medical devices.



General notes on safety

This manual is intended to supplement existing manuals for Carl Zeiss medical devices. It describes the safe mounting of newly supplied accessories and spare parts.

The correct mounting of the accessories or spare parts and the correct use of the medical device are vital for safe operation. Please familiarize yourself in detail with the contents of both the user's manual for the medical device concerned and this supplementary manual.

Special notes

Accessories and spare parts can also be purchased separately. In this case, the user's manual of the complete Carl Zeiss medical device is not included in the delivery package and the following must be observed:

- The accessory or spare part is not suitable for use by itself, but is an integral component of a Carl Zeiss medical device.
- For this reason, it is vital that you observe the notes on instrument safety applicable to the Carl Zeiss medical device (Zeiss instrument) concerned!

Directives and standards

The accessory or spare part has been designed and produced in compliance with the requirements of the applicable regulations.

The accessory or spare part has been assessed as part of the conformity assessment of Carl Zeiss medical devices and, if required, has been provided with the CE marking in accordance with the 93/42/EEC Directive, either on the part itself or on its packaging.

The classification corresponds to the classification of the medical device on which the accessory or spare part is used.

The use of the accessory or spare part on instruments not provided with the CE marking is admissible if the component in question is a replacement (spare part). If in doubt, please contact our sales or service staff.

Mounting

- Please mount the accessory or spare part supplied by following the instructions given in the user's manual of the respective medical device. Please contact our sales or service staff if anything is unclear.
- After you have completed the mounting procedure, please make sure that all parts are seated correctly and that all screw and plug-in connections have been made firmly and securely.

Shaft connections, earlier type

Shaft connections are used, for example, with surgical microscopes and couplings.

Description

Shaft connections are secured by securing screw (1) and by an additional screw (2) or spring-loaded locking pin (2). Depending on the version used, a friction adjustment system (3) is provided.



Warning!

Before every use and after re-equipping the system, make sure that securing screw (1) is firmly tightened.

Check

- Hold the microscope or coupling.
- Loosen locking screw (4).
- If friction adjustment system (3) is provided, loosen this system also.
- Slightly push the microscope or coupling upward and at the same time
- firmly tighten securing screw (1).
- Adjust friction as required using (3).
- Tighten locking screw (4).

Couplings or suspension systems without end stop:



Warning!

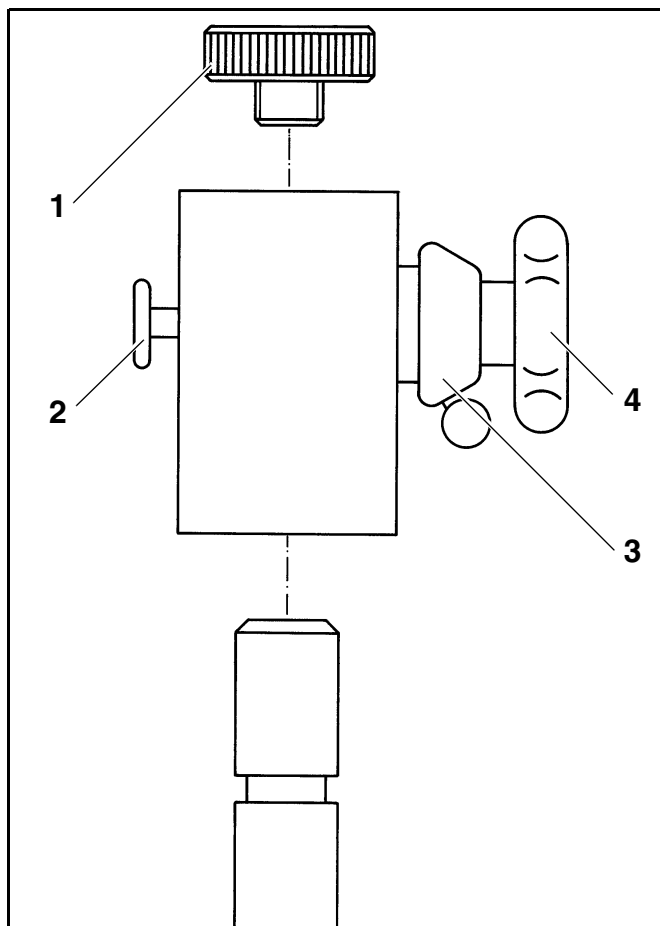
When using couplings or suspension systems without end stop (5), make sure to remove screw (6) before mounting the surgical microscope to permit the shaft to be inserted far enough into the coupling.

Mounting

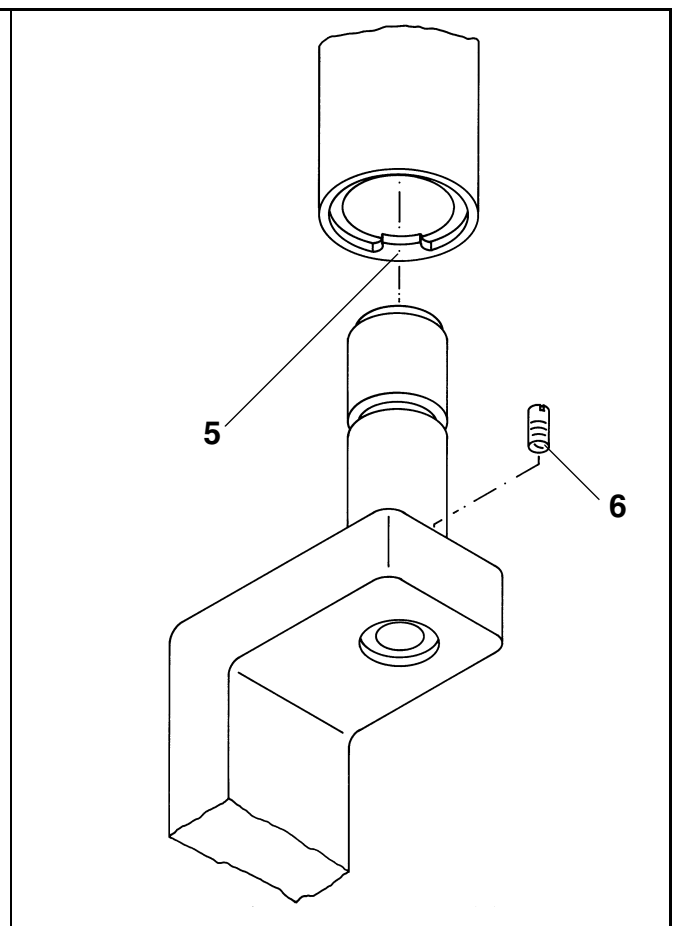
- When mounting the accessory or spare part to be used, it is vital that you observe the user's manual for the medical device concerned.

- 1 Securing screw
- 2 Additional screw or spring-loaded locking pin
- 3 Friction adjustment
- 4 Locking screw
- 5 End stop
- 6 Stop screw

Shaft connection



Shaft connection with stop screw



Shaft connections, new type

Shaft connections of the new type are used to connect surgical microscopes and X-Y couplings with coupling piece (3).



Notes:

- As a rule, shaft connections of the new type are removed and mounted by the Zeiss service staff. You as a customer should remove and mount these shaft connections in exceptional cases only.
- Surgical microscopes with an integrated coupling do not permit separation at this point.

Description

Shaft connections of the new type are secured in coupling piece (3) by mounting screw (2) and securing screw (5). In addition, mounting screw (2) is held by securing screw (1).

Assembly

- Loosen locking screw (4) by a few turns.
- Give securing screw (5) a few turns to loosen it.
- Slightly lubricate microscope shaft (6) (e.g. with instrument grease or vaseline).
- Slide coupling piece (3) from above over microscope shaft (6).
- Screw in mounting screw (2) from above and firmly tighten securing screw (1) using a 4 mm hex key.
- Screw in securing screw (5) and firmly tighten it using a 5 mm hex key. Securing screw (5) must go into groove (7). This is ensured when the securing screw is flush with the outer surface.

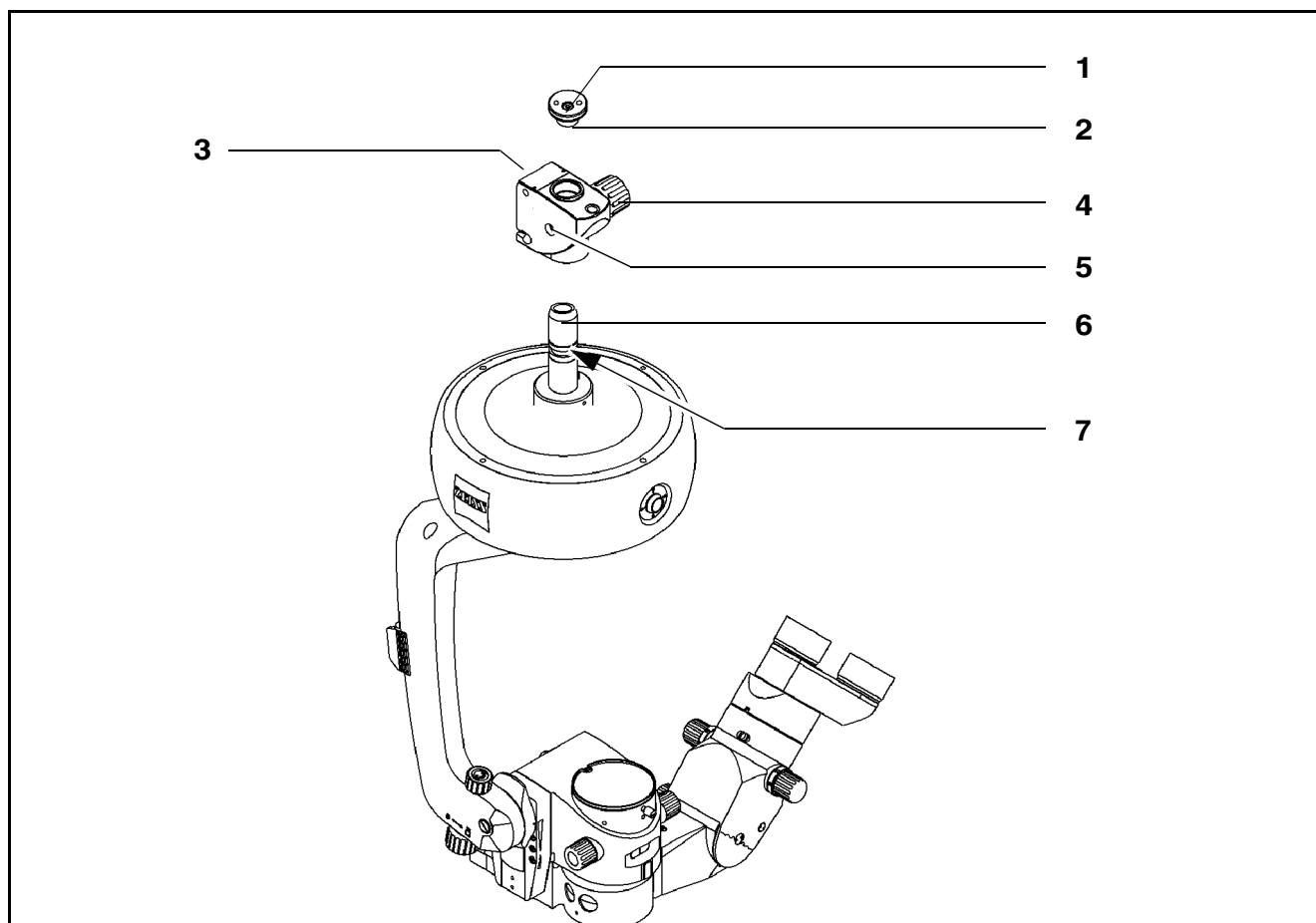


Warning!

Before every use and after re-equipping the instrument, make sure that mounting screw (2) and securing screws (1) and (5) are firmly tightened.

- 1 Securing screw
- 2 Mounting screw
- 3 Coupling piece
- 4 Locking screw
- 5 Securing screw
- 6 Microscope shaft
- 7 Groove in microscope shaft

Shaft connection, new type



Coupling piece for surgical microscopes

With recent suspension systems, coupling piece (2) is used to mount the surgical microscope on the system's suspension arm.

A Removing the coupling piece

- Bring the suspension arm into its horizontal position, pull out locking knob (1) and turn it clockwise or counterclockwise through 180°. At the same time, slightly move the suspension arm up and down until the lock snaps in. This prevents the suspension arm from uncontrollably moving upward when insufficient weight is attached.
- Use a 5 mm hex key to loosen securing screw(3) by a few turns.
- Tilt coupling piece (2) upward and remove it in the upward direction.

B Mounting the coupling piece on the microscope shaft



Notes:

- A shaft connection of the new type is used to connect the coupling piece with the surgical microscope or X-Y coupling. For information, please see page 8
- These procedures need not be performed on surgical microscopes equipped with an integrated coupling.

C Mounting the surgical microscope with the coupling piece.

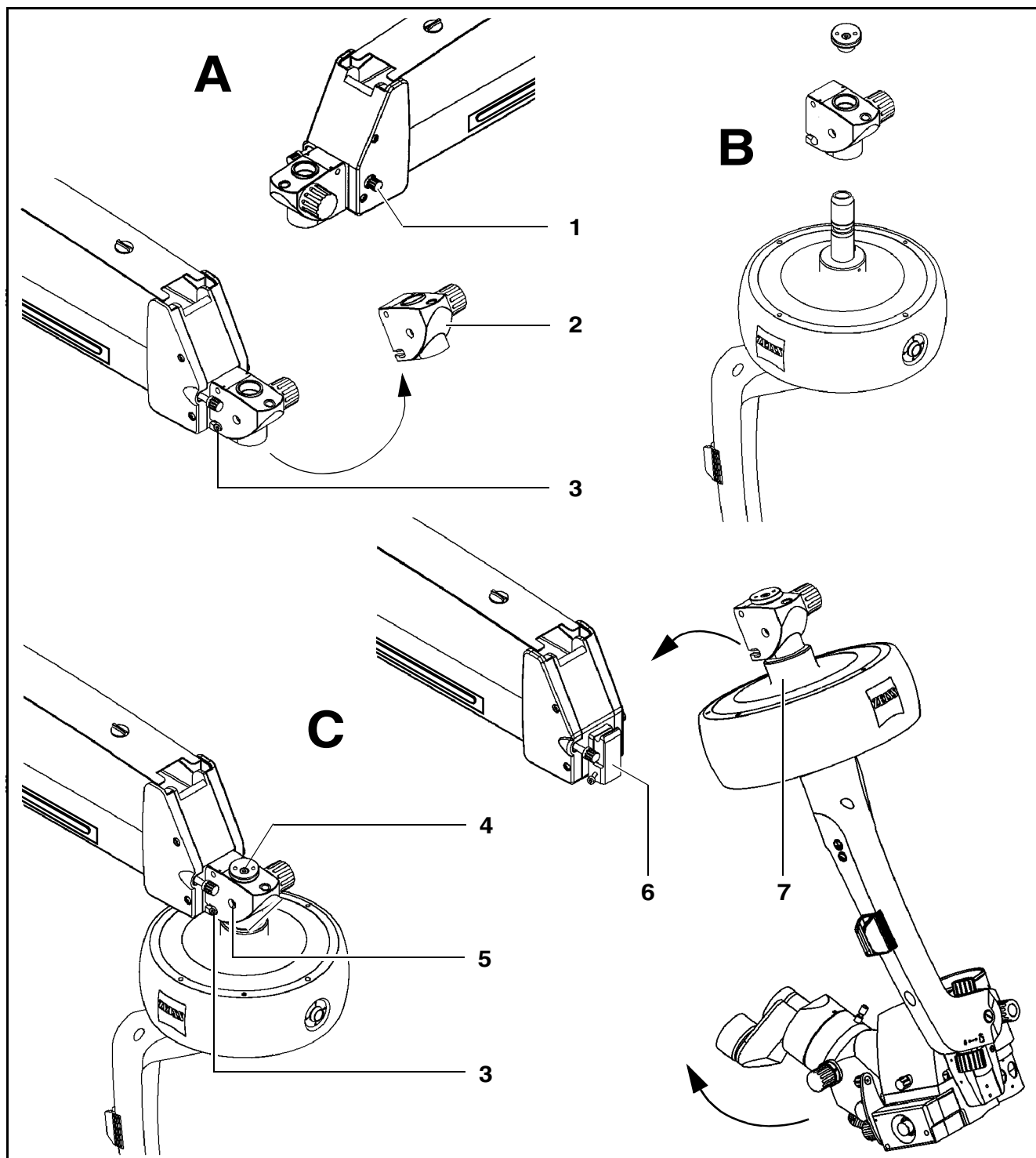
- Hook the coupling piece with the attached surgical microscope (7) from above into receptacle (6) on the suspension arm, and tilt the coupling piece downward into its vertical position.
- Firmly tighten securing screw (3) using a 5 mm hex key.



Warning!

Prüfen Sie vor jedem Einsatz und nach jedem Umbau des Gerätes, ob die Befestigungsschraube (3) und die Sicherungsschrauben (4) und (5) fest angezogen sind!

Coupling piece for surgical microscopes



Ring-shaped dovetail joints

Ring-shaped dovetail joints are used, for example, with binocular tubes.

Description

Ring-shaped dovetail (1) is held and secured in dovetail mount (2) by securing screw (3) (knurled screw or hex socket head screw).



Warning!

Before every use and after re-equipping the system, make sure that securing screw (3) is firmly tightened.

Check

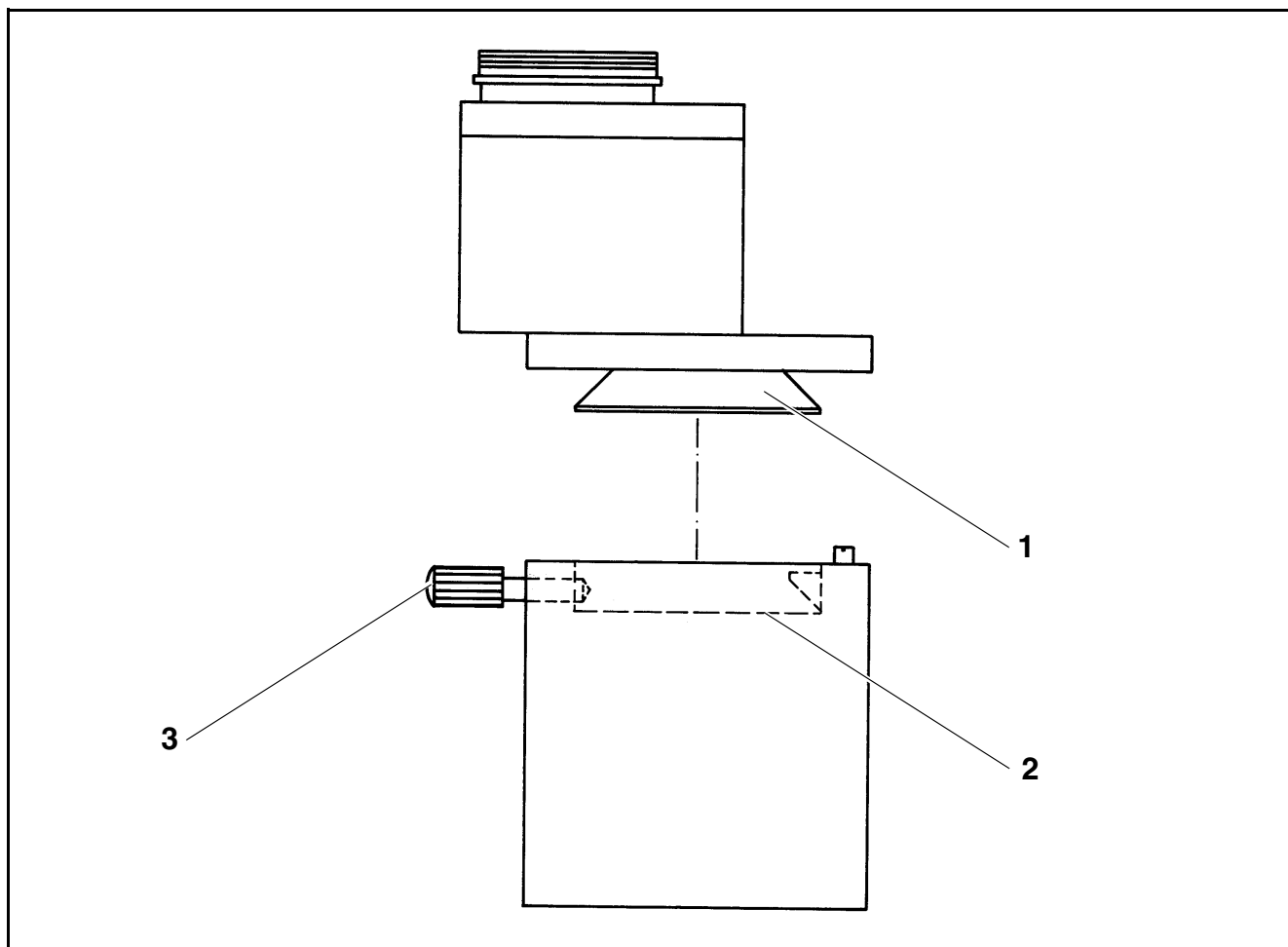
- Visually check that the dovetail joint is correctly seated.
- Firmly tighten securing screw (3).
- Manually check that the module is securely seated.

Mounting

- When mounting the accessory or spare part to be used, it is vital that you observe the user's manual for the medical device concerned.

- 1 Ring-shaped dovetail
- 2 Dovetail mount
- 3 Securing screw

Ring-shaped dovetail joint



Dovetail joint

Dovetail joints are used, for example, with illumination modules and micromanipulators.

Description

Dovetail key (1) is held and secured in dovetail groove (2) by securing screw (3) (knurled screw, hex socket head screw or spring-loaded locking pin).



Warning!

Before every use and after re-equipping the system, make sure that securing screw (3) is firmly tightened.

Check

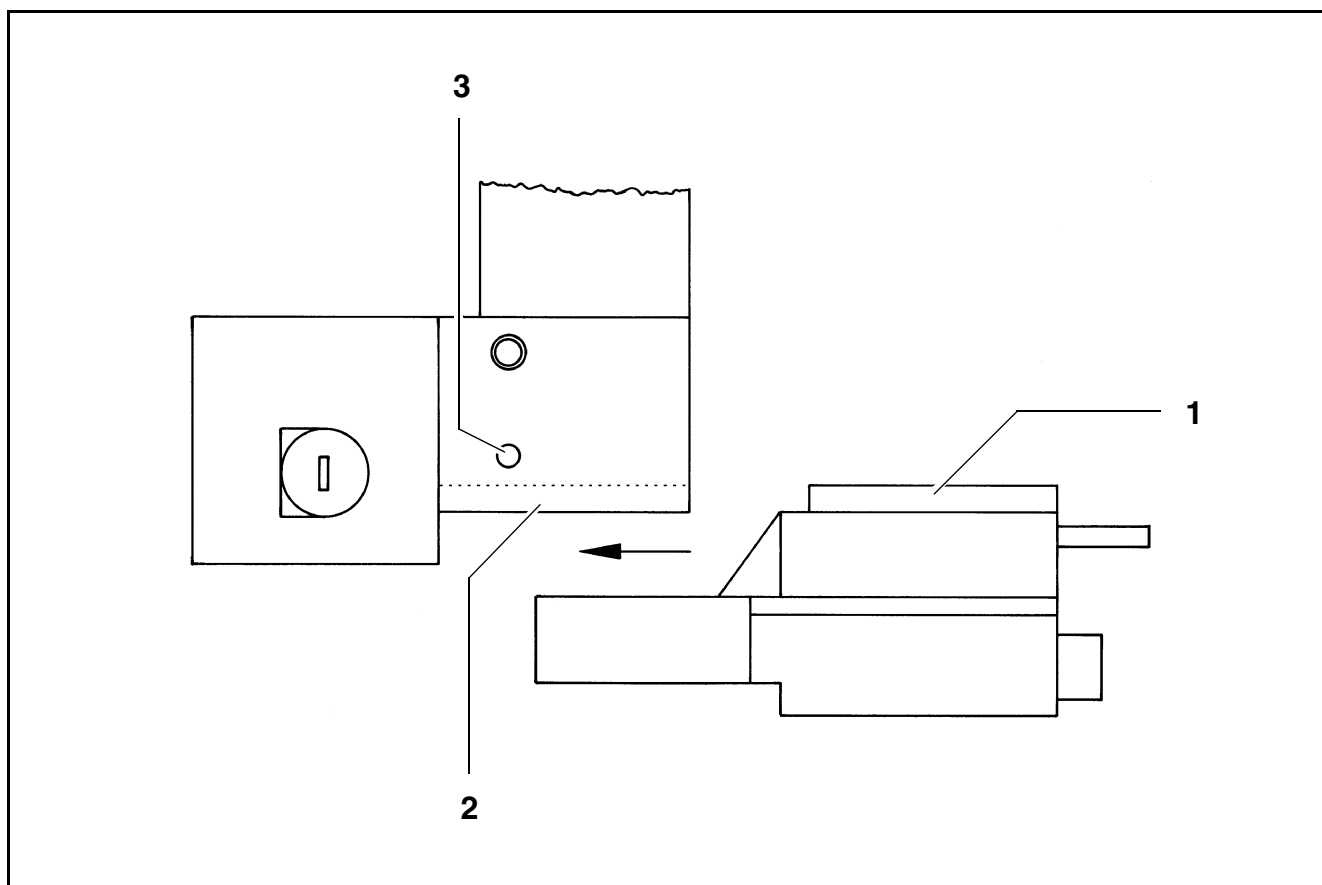
- Visually check that the dovetail joint is correctly seated.
- Firmly tighten securing screw (3).
- Manually check that the module is securely seated.

Mounting

- When mounting the accessory or spare part to be used, it is vital that you observe the user's manual for the medical device concerned.

- 1 Dovetail key
- 2 Dovetail groove
- 3 Securing screw

Dovetail joint



Screw connections, e.g. for objective lenses

Screw connections of this type are used, for example, with objective lenses.

Description

Objective lens (1) is held by fine screw thread (2).



Note:

When handling fine screw threads, take special care to avoid damage. Always insert fine screw threads carefully without canting them. The fine screw thread must turn easily without the application of pressure.



Warning!

Before every use and after re-equipping the system, make sure that objective lens (1) is firmly seated.

Check

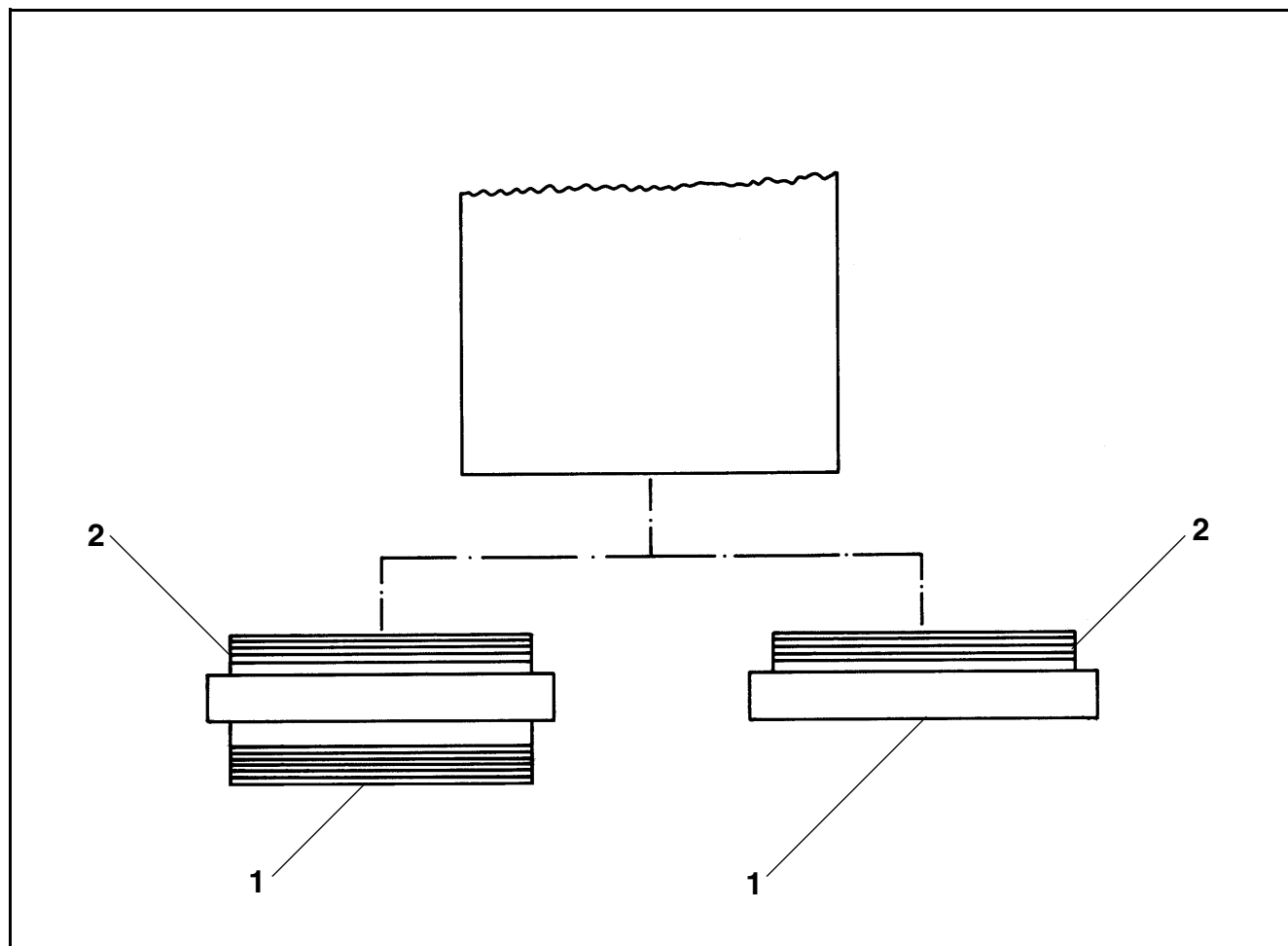
- Firmly tighten objective lens (1).
- Visually check that the objective lens is correctly mounted.
- Manually check that the objective lens is securely seated.

Mounting

- When mounting the accessory or spare part to be used, it is vital that you observe the user's manual for the medical device concerned.

- 1 Objective lens
- 2 Fine screw thread

Screw connection, e.g. for objective lenses



Screw connections, e.g. for assistant's microscopes

These screw connections with fine screw threads are used, for example, with assistant's microscopes.

Description

Assistant's microscope 1) is slid onto mount (2) and secured in position with retaining ring (3) (fine screw thread).



Note:

When handling fine screw threads, take special care to avoid damage. Always insert fine screw threads carefully without canting them. The fine screw thread must turn easily without the application of pressure.



Warning!

Before every use and after re-equipping the system, make sure that retaining ring (3) is firmly seated.

Check

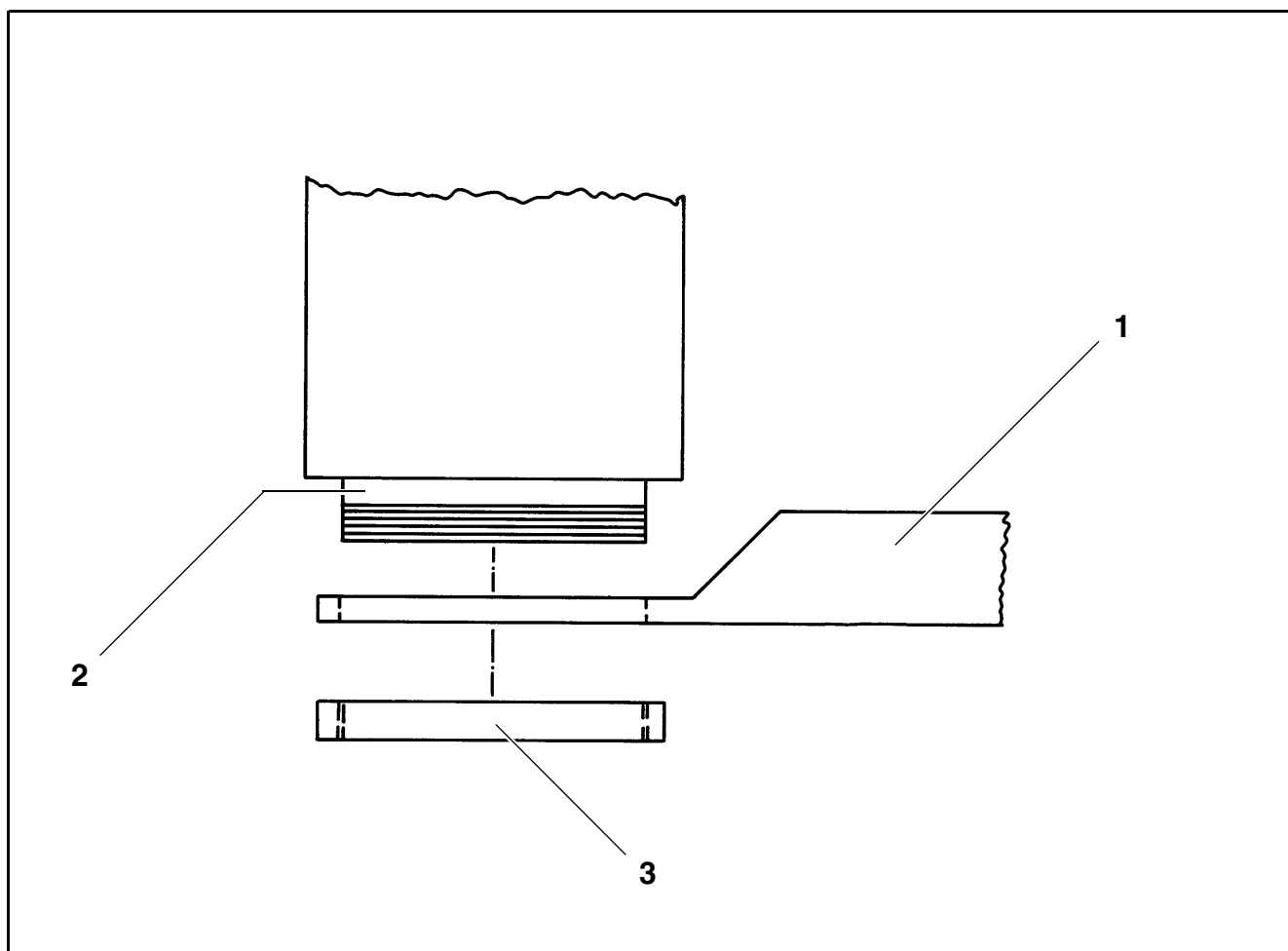
- Visually check that the assistant's microscope is correctly mounted.
- Firmly tighten retaining ring (3).
- Manually check that the assistant's microscope is securely seated.

Mounting

- When mounting the accessory or spare part to be used, it is vital that you observe the user's manual for the medical device concerned.

- 1 Assistant's microscope
- 2 Mount
- 3 Retaining ring

Screw connection, e.g. for assistant's microscopes



Dokumentacijos arba stebėjimo modulio priedas

1.2. Port for documentation or coobservation module

Documentation and coobservation modules - accessory modules in short - are inserted in the mount of the image exit port. When inserting the module, make sure that the locating blocks fit in the corresponding grooves on the accessory module. After this, screw the knurled ring by hand onto the accessory module and tighten it firmly.

The illustration on the opposite page shows a camera adapter as an example of the documentation and coobservation modules which can be attached.

Description

- Loosen knurled ring (1).



Note:

An arrow with the labeling "open" is located on the shaft next to knurled ring (1).

- If necessary, remove the dust cover and store it in a safe place.
- Slide accessory module (3) in the mount of image exit port (2). Make sure that locating blocks (5) fit in grooves (4) on the accessory module.
- Screw knurled ring (1) onto accessory module (3).
- Firmly tighten knurled ring (1).



Warning!

Before every use and after re-equipping the system, make sure that knurled ring (1) is firmly tightened.

Check

- Visually check that the orientation of the accessory module is correct.
- Firmly tighten knurled ring (1) manually.
- Manually check that the accessory module is securely seated.

Mounting

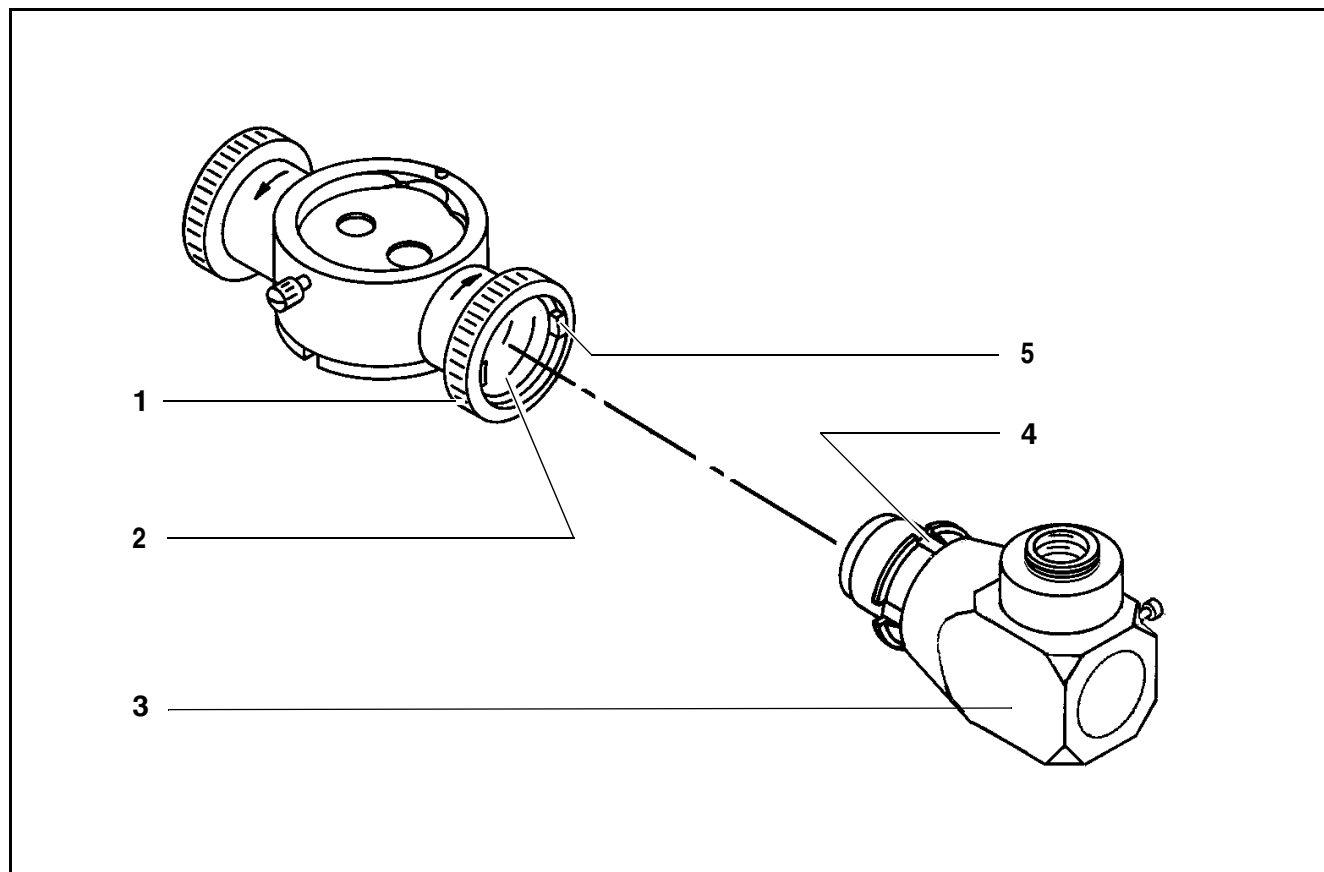
- When mounting the accessory or spare part to be used, it is vital that you observe the user's manual for the medical device concerned.

- 1 Knurled ring
- 2 Image exit
- 3 Accessory module
- 4 Groove
- 5 Locating block

Dokumentācijas arba stebėjimo modulio prievadas

1.2.

Port for documentation or coobervation module



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