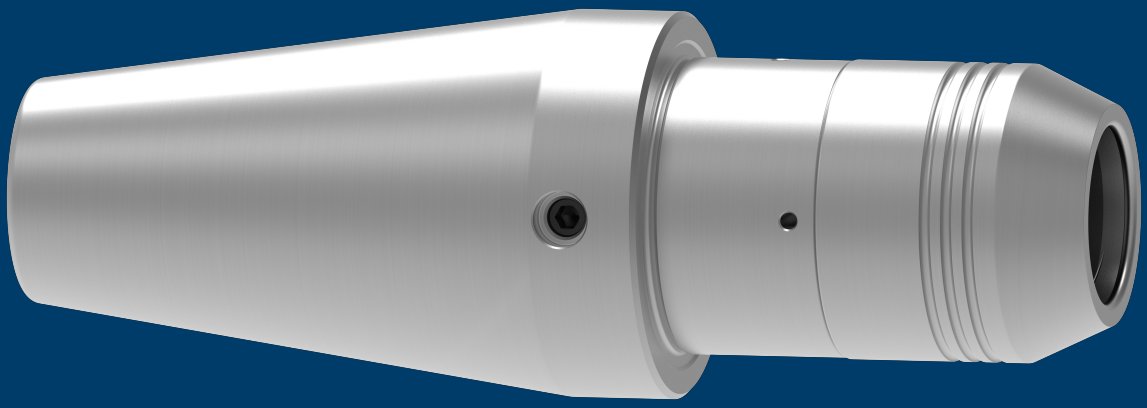
SCHUNK



Assembly and operating manual
HALLER SK 50
Tool grinding toolholder

Translation of original operating manual

Hand in hand for tomorrow

Legal notice

Copyright:
This manual is protected by copyright. The author is SCHUNK SE & Co. KG.
All rights reserved.

Technical changes:
We reserve the right to make technical improvements.

Document number: 1521586

Version: 04.00 | 9/21/2026 | en-US

Dear
Customer,
Thank you for putting your trust in our products and our family-owned company, the leading technology supplier of robots and production machines.
Our team is always available to answer any questions on this product and other solutions. We look forward to your challenging questions. We will find a solution!
Best regards,
The SCHUNK Team

Customer Management
Tel. +49-7133-103-2500
Fax +49-7133-103-2239
cms@de.schunk.com

Please read the operating manual in full and keep it close to the product.

Table of Contents

1 General 5
1.1 About this manual 5
1.1.1 Illustration of safety notes 5
1.1.2 Definition of Terms 6
1.1.3 Symbol definition 6
1.1.4 Applicable documents 6
1.2 Warranty 6
1.3 Scope of delivery 7
1.4 Accessories 7
2 Basic safety notes 8
2.1 Intended use 8
2.2 Inappropriate use 8
2.3 Notes on safe operation 9
2.4 Personnel qualifications 10
2.5 Personal protective equipment 11
2.6 Handling during transport 11
2.7 Structural changes 12
2.8 Behavior in case of malfunctions 12
2.9 Hazardous points on the product 13
3 Technical data 14
3.1 Product data 14
3.2 Ambient conditions and operating conditions 15
4 Design and description 16
4.1 Design 16
4.2 Functional description 17
5 Assembly 18
5.1 Basic information 18
5.2 Assembly of the product 19
6 Settings and functional testing 20
6.1 Basic information 20
6.2 Adjusting the actuation force 22
6.3 Checking the clamping function 24

7 Operation 25
7.1 Basic information 25
7.2 Clamping the workpiece 27
7.3 Unclamping the workpiece 28
7.4 Using the intermediate sleeve 28
7.4.1 Assembly/disassembly of the intermediate sleeve 29
8 Maintenance 33
8.1 Basic information 33
8.2 Intervals and tasks 34
8.2.1 Clean the clamping surface and workpiece stop face 35
8.2.2 Clean the product 35
8.2.3 Clean the pressurized air hole 35
8.2.4 Check the expansion rate 36
8.2.5 Polish the clamping surface 38
8.2.6 Disassembly/changing of the intermediate sleeve 42
9 Troubleshooting 45
10 Disassembly 46
10.1 Basic information 46
10.2 Disassembly of the product 46
11 Storage 47
12 Disposal 48
13 Drawings 49
14 EU Declaration of Incorporation 50
15 UKCA declaration of incorporation 51
16 Information on the RoHS Directive, REACH Regulation and Substances of Very High Concern (SVHC) 52
17 Feedback on the operating instructions 53

1 General

1.1 About this manual

This manual contains important information for the safe, correct use of the product.

The manual is an integral part of the product and must be kept accessible for personnel at all times.

Personnel must have read and understood this manual before beginning any work. The observance of all safety notes in this manual is a prerequisite to ensure safe work processes.

Besides this manual, other documents which apply are those listed under ▸ 1.1.4 [🗋 6].

NOTE: The illustrations in this manual are intended to provide a basic understanding and may deviate from the actual version.

1.1.1 Illustration of safety notes

To make risks clear, the following signal words and symbols are used for safety notes.

⚠ DANGER

Danger to individuals!

Ignoring a safety note such as this will certainly lead to irreversible injury and even death.

⚠ WARNING

Danger to individuals!

Ignoring a safety note such as this can lead to irreversible injury and even death.

⚠ CAUTION

Danger to individuals!

Non-observance can cause minor injuries.

NOTICE

Material damage!

Information about avoiding material damage.

1.1.2 Definition of Terms

The term "product" replaces the product name on the title page in this manual.

1.1.3 Symbol definition

The following symbols are used in this manual:

■ Prerequisite for an action

1. Action 1
2. Action 2
   ⇨ Intermediate results

⇨ Final results

▸ 1.1.3 [🗋 6]: chapter number and [page number] in hyperlinks

1.1.4 Applicable documents

- General terms and conditions *
- Contractual agreements

The documents labeled with an asterisk (*) can be downloaded from **schunk.com/downloads**.

1.2 Warranty

If the product is used as intended, the warranty is valid for 12 months from the date of delivery from the production facility or 50 000 cycles* under the following conditions:

- Refer to the applicable documents, ▸ 1.1.4 [🗋 6]
- Observe the ambient conditions and operating conditions, ▸ 3.2 [🗋 15]
- Observe the specified maintenance instructions, ▸ 8 [🗋 33]

This does not include special agreements detailed in the warranty and wearing parts. Wearing parts can also become worn through appropriate use before the maximum number of clamping cycles has expired. This includes all areas that come into contact with the workpiece or the machine (clamping range and mount) and sealing elements.

* One cycle refers to a complete clamping procedure ("clamping" and "unclamping").

1.3 Scope of delivery

The scope of delivery includes:

1 **Hydraulic expansion toolholder** in the ordered variant (ID 0206676; 0206677; 0206678; 0206679)
1 **Assembly and Operating Manual** (ID 1521586)
1 **Accessory kit, intermediate sleeve lock** (ID 20041397)

1.4 Accessories

The following accessories for the product are available separately:

Intermediate sleeve without lock GZB-S PK
not coolant-proof

Intermediate sleeve without lock GZB-S KD
coolant-proof

Intermediate sleeve with lock GZB-S KD/RS
coolant-proof

Intermediate sleeve with bayonet GZB-S bayonet
coolant-proof

Sleeve remover (ID 9937987)

2 Basic safety notes

2.1 Intended use

- The product is intended for picking up, clamping and reliably holding fully cylindrical workpieces (the tools to be ground are workpieces in this case).
- The product is used for tool grinding.
- The product is intended for industrial use.
- The product may only be used and applied within the scope of the information in the technical data, ▸ 3 [🗋 14].
- The product is intended for installation in a machine/ automated system. The applicable guidelines for the machine/ automated system must be observed and complied with.
- Appropriate use of the product includes compliance with all instructions in this manual.

2.2 Inappropriate use

The product is not being used appropriately, e.g. if:

- Tools or similar are picked up and clamped in order to machine workpieces.
- The product is used for something other than tool grinding.
- The information in the technical data is not observed when using and operating the product ▸ 3 [🗋 14].
- The product is used as a lifting tool.
- The minimum clamping depth is not observed (clamping length is not completely covered).
- The expansion rate check is ignored ▸ 8.2.4 [🗋 36].
- The product is operated in corrosive media.
- The maintenance and storage specifications are not complied with ▸ 8 [🗋 33].

2.3 Notes on safe operation

Disregarding the instructions for safe operation can make the product unsafe and risks serious injuries and considerable material damage.

- Observe and comply with all safety instructions and warnings as well as the specifications in the assembly and operating manual.
- Use the product as intended ▸ 2.1 [🗋 8].
- All work may only be performed by appropriately qualified personnel ▸ 2.4 [🗋 10].
- Rectify malfunctions as soon as they occur ▸ 2.8 [🗋 12].
- Never deactivate safety installations.
- Observe safety distances.
- Before commissioning the product, take suitable protective measures to secure the danger zone.
- Secure the system against accidental operation during all work.
- Disconnect power sources before installation, modification, maintenance, or calibration. Ensure that no residual energy remains in the system.
- If the energy supply is connected, do not move any parts by hand.
- Never step into the danger zone during operation.
- Do not reach into the movement area of the product or into the open mechanism during operation.
- Avoid any manner of working that may interfere with the function and operational safety of the product.
- Comply with the current safety, accident prevention, and environmental protection regulations for the application field of the product.

If you have any questions regarding safe operation, our technical after-sales service is available during our business hours:
Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

2.4 Personnel qualifications

Work conducted on and with the product by inadequately qualified personnel can lead to serious injuries and considerable material damage.

- Personnel must have read and understood the complete manual before beginning any work on the product.
- All work may only be performed by appropriately qualified personnel:
  - **Specialist personnel**

    Specialist personnel have the specialized training, knowledge, and experience to perform the tasks entrusted to them, to recognize and avoid potential dangers, and know the relevant standards and regulations.
  - **Instructed person**

    An instructed person has been instructed by the operator regarding the tasks entrusted to them and the potential dangers of inappropriate handling of the product.

Work on the product	Necessary qualification
Transport	Qualified personnel/ instructed person
Assembly/disassembly	Specialist personnel
Settings/functional testing	Specialist personnel
Operation	Qualified personnel/ instructed person
Maintenance/troubleshooting	Specialist personnel/ SCHUNK service personnel
Disposal	Specialist personnel/ SCHUNK service personnel

2.5 Personal protective equipment

Personal protective equipment is necessary to protect staff in the event of a danger that may interfere with their health or safety at work.

- Observe the valid safety and accident prevention regulations and heath & safety at work rules.
- When working on and with the product, wear the required personal protective equipment.
  - Always wear safety boots.
  - Wear close-fitting protective clothing and place a hairnet over long hair when dealing with moving components.
  - Wear protective gloves to guard against sharp edges and corners and rough surfaces.
  - Wear heat-resistant protective gloves when handling hot surfaces.
  - Wear protective gloves and safety goggles when handling hazardous substances.

2.6 Handling during transport

Incorrect handling during transport can make the product unsafe and risks the danger of serious injuries and considerable material damage.

- During transport and handling, secure the product to prevent it from falling.
- Do not walk under suspended loads.
- Do not leave suspended loads unattended.
- Observe the assembly and operating manual specifications for transport.
- Use suitable assembly and transport devices*.
- Take precautions against pinching and crushing.

* Assembly and transportation devices must be able to carry at least twice the attached weight.

2.7 Structural changes

Modifications, changes or reworking, e.g. additional threads or holes, can damage the product or impair its functionality or safety.

- Structural changes should only be made with the written approval of SCHUNK.
- Use only original spare parts and spares authorized by SCHUNK.

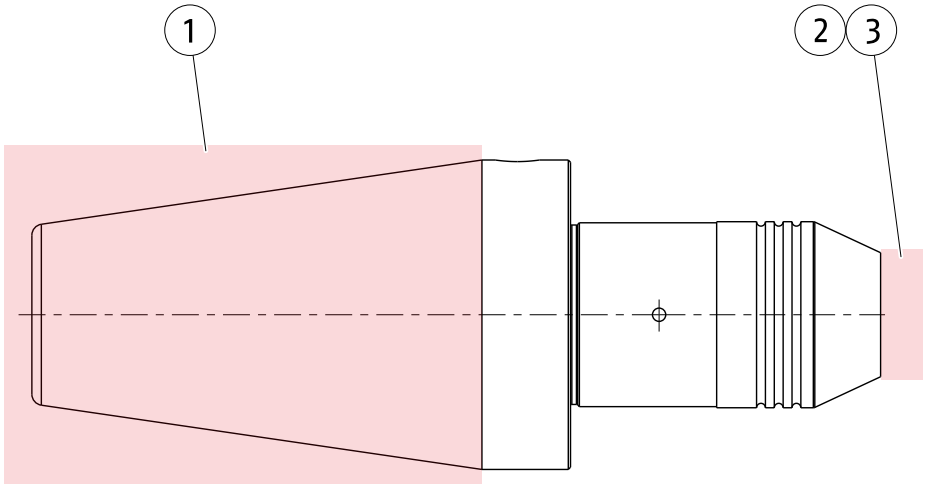
2.8 Behavior in case of malfunctions

Incorrect handling during a malfunction can make the product unsafe and risks the danger of serious injuries and considerable material damage.

- Immediately remove the product from operation and report the malfunction to the responsible departments/persons.
- Get appropriately qualified personnel ▶ 2.4 [🗋 10] to rectify the malfunction.
- Observe the information on troubleshooting in the assembly and operating manual.
- Faults not described in the assembly and operating manual may only be rectified after consultation with SCHUNK.
- After a malfunction, ensure that the product is able to function properly and no increased risks have arisen.
- Do not recommission the product until the malfunction has been rectified.

2.9 Hazardous points on the product

Hazardous points on the product pose a particular risk. Failure to observe the warnings in the relevant chapters of this manual can result in serious injury and considerable damage to property.



NOTE: Illustration may differ from the actual design.

Position	Danger when	Danger due to
1	Assembling/disassembling the product	Crushing risk
2	Operating/clamping the product	The expansion sleeve bursting
3	Workpiece change	Crushing risk

3 Technical data

3.1 Product data

ID	0206676; 0206677; 0206678; 0206679
Operation	Grinding
Insertion position	Horizontal
Clamping actuation	Pressure actuated to stop
Maximum permissible speed of rotation [RPM]	1000
Maximum permissible speed of rotation without workpiece [RPM]	10
Product mount	Similar to taper SK50 DIN 69871

ID	0206676	0206677	0206678	0206679
Minimum clamping depth [mm]	37.6	37	41	48.5
Piston stroke, theoretical [mm]	7.5	10	10.5	8
Actuation force, theoretical [kN]	2.0	1.8	2.0	2.7
Clamping force, theoretical [kN]	5	25	46	84
Maximum transmittable torque, theoretical [Nm]	4.5	30	59	157
Expansion rate [mm]	0.034	0.052	0.057	0.080
Clamping diameter, product [mm]	12 +0.005/+0.002	20 +0.006/+0.003	22 +0.006/+0.003	32 +0.006/+0.003
Clamping length [mm]	32.1	31.5	35.5	42.5
Workpiece diameter [mm]	12 h7 (0/−0.018)	20 h7 (0/−0.021)	22 h7 (0/−0.021)	32 h7 (0/−0.025)
Set-screw, intermediate sleeve lock	M4	M4	M4	M4
Weight [kg]	approx. 2.8	approx. 2.8	approx. 2.9	approx. 3.2

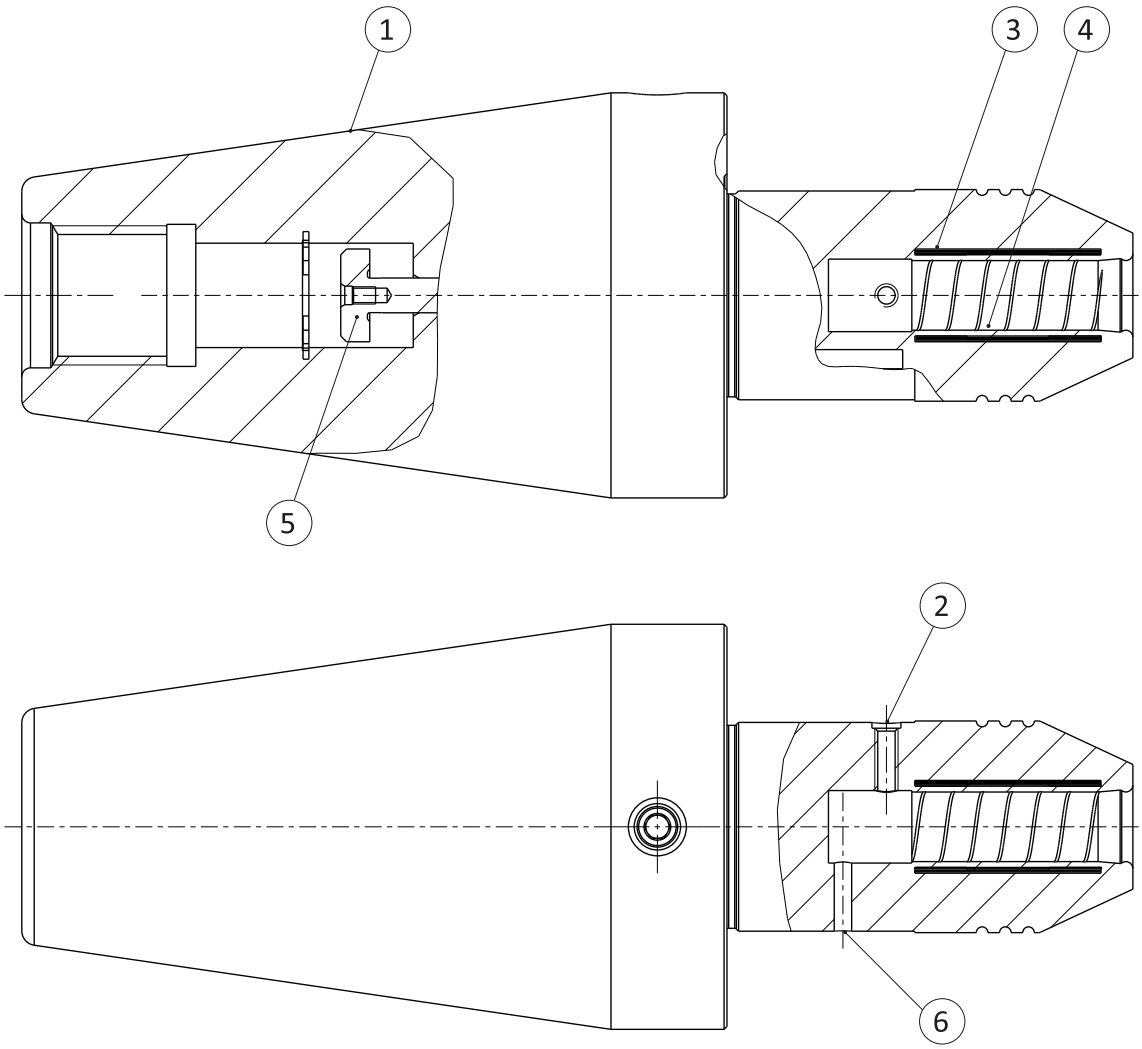
3.2 Ambient conditions and operating conditions

Specification	Value
Operating temperature range	+18°C to +25°C
Maximum product temperature	+ 35°C
Test temperature range for the expansion rate check	+ 23°C ± 2°C
Storage temperature range	+ 20°C ± 10°C
Relative air humidity	20 to 80%

NOTE: The temperatures refer to the product.

4 Design and description

4.1 Design



NOTE: Illustration may differ from the actual design.

Position	Description
1	Product mount
2	Locking screw thread, intermediate sleeve
3	Active clamping length
4	Clamping surface
5	Clamping piston
6	Pressurized air hole

4.2 Functional description

This product clamps hydraulically using compression force actuation. For this purpose, the clamping piston of the product is actuated by a machine piston and retracted up to the stop.

In order to achieve the full expansion rate and the associated maximum clamping force, the corresponding actuating force must be applied by the machine. Stroke limitation protects the product against over-expansion.

The volume of oil that is squeezed out of the piston chamber is pressed in measured amounts against the thin-walled expansion sleeve. The resulting internal pressure presses radially against the thin-walled expansion sleeve, causing the clamping range to expand evenly along the entire active clamping length, uniformly central to the middle axis. The workpiece is clamped.

Reducing the actuating force causes a reduction of the pressure in the piston chamber and in the expansion chamber. The thin-walled expansion sleeve then returns radially to its exact home position. The workpiece can be removed.

5 Assembly

5.1 Basic information

⚠ WARNING

Risk of injury due to incorrect assembly!

If assembled incorrectly, the product may be flung out during rotation, causing severe injuries.

- Regularly check the fastening of the product.
- Secure the danger zone by taking suitable protective measures.
- Wear suitable protective equipment.

⚠ WARNING

Risk of injury if the product falls during transport, assembly or disassembly!

Due to the oily surface required to preserve it, the product can slip through your hands, resulting in injury.

- Take appropriate safety measures to prevent the product from falling.
- Only install the product on machines with the appropriate connection dimensions.
- Wear suitable protective equipment, especially safety gloves.

⚠ CAUTION

Risk of crushing and impact when assembling and disassembling the product!

- Do not reach between the product and machine.
- Wear suitable protective equipment.

NOTICE

Possible damage to the expansion sleeve!

- When transporting and handling the product, ensure that it is not damaged by knocks, impacts, etc.
- It is essential that the thin-walled clamping face (expansion sleeve) is protected against shocks and impacts.

5.2 Assembly of the product

To ensure optimal machining results, the product must be precisely positioned and secured on the machine interface.

NOTE: Only mount the product and attachments on machines with suitable connection dimensions. Observe the mounting instructions from the machine interface manufacturer.

NOTE: Cap nut and safety ring are not included in the scope of delivery.

1. Clean all interfaces on the product and machine.
2. Place the product on the machine interface in the correct position and fit it as far as the stop.
3. Fasten the product to the mount with a suitable cap nut (provided by the customer) in accordance with the manufacturer's specifications. The cap nut can be additionally secured with a safety ring (provided by the customer).

NOTICE! Safe and correct mounting of the product on the machine interface must be ensured!

6 Settings and functional testing

6.1 Basic information

⚠ WARNING

Risk of injury and material damage due to the expansion sleeve cracking.

If the expansion sleeve cracks, oil may be emitted at high pressure and chips or broken pieces may fly off, causing severe injuries.

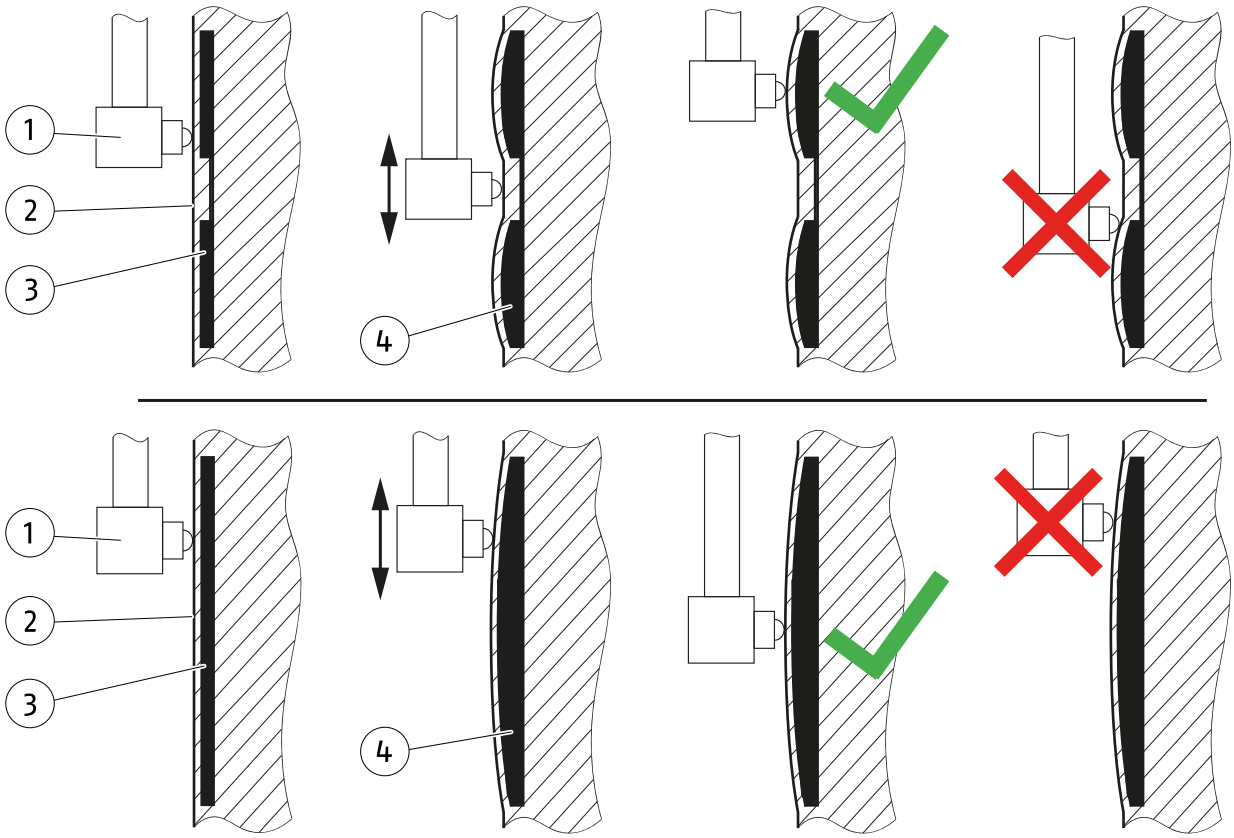
- Avoid knocking or banging the expansion sleeve.
- The specified expansion rate may not be exceeded.
- Observe the inspection temperature specified in the technical data to check the expansion rate.
- Secure the danger zone by taking suitable protective measures.
- Wear suitable protective equipment.

To ensure correct operation and to test the product functions, various settings and functional checks must be carried out before initial operation. These may vary depending on the version and are described in the following sub-chapters.

NOTE: The product may only be operated without a workpiece for the settings and functional tests!

If you have any questions regarding settings and functional tests, our technical after-sales service is available during our business hours:
Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

6.2 Adjusting the actuation force



NOTE: Illustration is for reference only. Shape of the expansion chamber may differ.

Position	Description
1	Measuring device
2	Clamping face
3	Expansion chamber (unclamped)
4	Expansion chamber (clamped)

Before initial operation, check the expansion rate to adjust the actuation force.

To do this, use a measuring device that meets the following requirements:

- Either two-point inside caliper
  or dial gauge outside micrometer
  NOTE: The measuring device must be spring-loaded!
- Measuring resolution of 0.001 mm
- Analog dial gauge
- Sufficiently large range of measurement (greater than expansion rate)

CAUTION! Observe the test temperature for the expansion rate check ▶ 3.2 [🗋 15]!

1. Observe the technical data ▶ 3 [🗋 14] and the marking on the product.
2. Make sure that the product is mounted correctly.
3. Make sure that the product is in an unclamped state.
4. Clean the clamping surface.
5. Place the measuring device at the center of the clamping surface and set it to zero. **NOTE:** Make sure that the dirt groove (if present) on the clamping surface does not influence the measuring device!
6. Carefully apply a constantly increasing actuation force to the product via the machine starting from 0 until a change in the clamping diameter becomes visible on the measuring device.
   ⇨ Product is pre-loaded, the expansion chamber has deformed the clamping surface.
7. Move the measuring device on the clamping surface until the point with the highest deflection is determined.
8. Position the measuring device at the point with the highest deflection.
9. **CAUTION! As soon as the expansion rate is reached, do not increase the actuation force any further!** Carefully apply a constantly increasing actuation force to the product until the difference on the measuring device matches the expansion rate ▶ 3 [🗋 14] specified in the technical data.
10. Note the actuating force applied when the expansion rate is reached.
11. Return the actuating force of the machine to 0.
12. **CAUTION! The duration of actuation must be longer than 2 seconds!** Apply previously determined actuation force to the product and measure the time until the expansion rate ▶ 3 [🗋 14] specified in the technical data is reached.
13. Return the actuating force of the machine to 0.

NOTE

If the expansion rate given in the technical data is not reached, our technical after-sales service is available during our business hours:

Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

6.3 Checking the clamping function

1. Observe the technical data ▸ 3 [🗋 14] and the marking on the product.
2. Make sure that the product is mounted correctly.
3. Make sure that the product is in an unclamped state.
4. Place the test workpiece on the product in the correct position and up to the stop without exerting too much force. **IMPORTANT! Observe the minimum clamping depth ▸ 3 [🗋 14]!**
5. Clamp the test workpiece with the previously determined actuating force.
6. Check that the test workpiece is firmly in place.

NOTICE! The actuating duration must be longer than 2 seconds.

7 Operation

7.1 Basic information

⚠ WARNING

Risk of injury when the product is rotating, due to the possibility of parts flying off!

- Observe the technical data.
- Make sure the attachments and operating components present are installed and fitted correctly.
- Check the clamping force regularly.
- Take appropriate protective measures to secure danger zones.
- Wear suitable protective equipment.

⚠ WARNING

Risk of injury due to the workpiece being flung out if the speed of rotation is too high or not suitable!

- Observe the technical data.
- Do not exceed the maximum speed.
- Reduce the speed of rotation appropriately in case of far protruding workpieces or workpieces balanced asymmetrically.
- Take appropriate protective measures to secure danger zones.
- Wear suitable protective equipment.

⚠ WARNING

Risk of injury and material damage due to the expansion sleeve cracking.

If the expansion sleeve cracks, oil may be emitted at high pressure and chips or broken pieces may fly off, causing severe injuries.

- Avoid knocking or banging the expansion sleeve.
- Always cover the entire clamping length of the product.
- The specified expansion rate may not be exceeded.
- When the product is tensioned, do not exceed the maximum permissible operating temperature.
- Only operate the product within the optimum operating temperature range.
- Secure the danger zone by taking suitable protective measures.
- Wear suitable protective equipment.

⚠ WARNING

Risk of injury due to the workpiece being flung out if the actuation force is too low or not applied!

- Observe the technical data.
- Regularly check actuating force and machine piston.
- Take appropriate measures to secure the danger zones.
- Wear suitable protective equipment.

⚠ CAUTION

Risk of crushing, knocks, and cutting when changing workpieces!

- When changing the workpiece, do not reach in between the product and the workpiece.
- Prevent unintentional actuation of the product.
- Wear suitable protective equipment, especially protective gloves.

NOTICE

Possibility of increased wear, reduced service life, and reduced accuracy of the expansion sleeve.

If the surface to be clamped on the workpiece is interrupted, the thin-walled expansion sleeve will over-expand at these points (lack of back pressure!).

- Interruptions should be avoided along the surface of the workpiece to be clamped.
- Cover the complete active clamping length of the product.

7.2 Clamping the workpiece

The product must be unclamped when loading the workpiece. Initial tension inhibits loading and could damage the expansion sleeve.

CAUTION! The workpiece to be clamped must be deburred at the surfaces that come into contact with the product, may not have sharp contours and must be free of oil, grease and dirt.

When fitting and clamping the workpiece, the following points must be taken into account:

- It is important to ensure that the product is first securely clamped on the machine interface before the workpiece is loaded and clamped.
- During operation, the product heats up, causing the oil to expand. The clamping piston therefore needs to be able to move back 2–3 mm beyond the initial position when unclamping.
- The workpiece must be inserted to at least the minimum clamping depth before clamping.

For clamping, proceed as follows:

1. Observe the technical data ▸ 3 [🗋 14] and the marking on the product.
2. Make sure that the product is mounted correctly.
3. Make sure that the product is in an unclamped state.
4. Clean any dust and dirt from all product surfaces that come into contact with the workpiece.
5. If necessary, mount a suitable intermediate sleeve ▸ 7.4 [🗋 28].
6. Place the workpiece on the product in the correct position as far as the stop without exerting too much force.
   IMPORTANT! Observe the minimum clamping depth ▸ 3 [🗋 14]!
7. **CAUTION! The duration of actuation must be longer than 2 seconds!** Clamp the workpiece with the previously set actuation force.
8. Check that the workpiece is firmly in place.

NOTICE! To guarantee reliable clamping during operation, the actuating force must not be more or less than the calculated value.

7.3 Unclamping the workpiece

1. Secure the workpiece against falling.
2. Return the actuating force of the machine to 0.
3. Remove workpiece.

7.4 Using the intermediate sleeve

⚠ WARNING

Risk of injury due to the intermediate sleeve being hurled out or breaking

The intermediate sleeve may break or be ejected when the product is operated without a workpiece.

- Only operate the product with a clamped workpiece.
- Take suitable protective measures to secure the danger zone.

NOTICE

Impairment of the clamping function and damage to the product!

The use of incorrect or unsuitable intermediate sleeves may impair the clamping function of the product or damage the product.

- Observe the technical data.
- Only use suitable and approved intermediate sleeves.

Depending on the design of the product, an intermediate sleeve is required to reduce the clamping diameter. It is possible to use different types of intermediate sleeves with this product. We generally recommend the use of intermediate sleeves by SCHUNK.

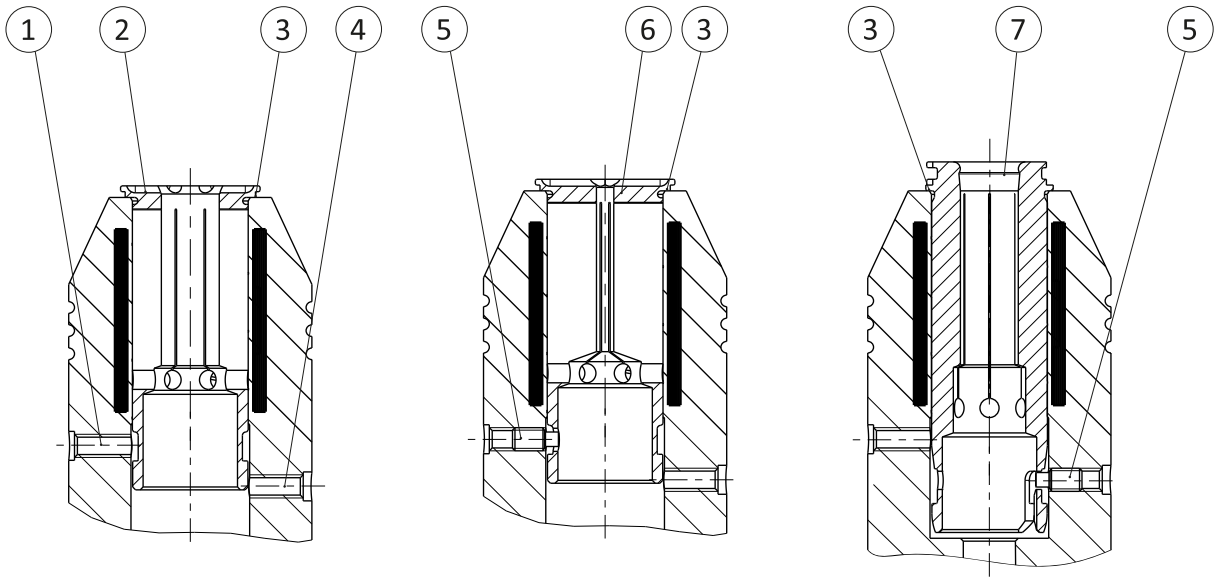
NOTICE! Only mount or change the intermediate sleeve when the product is unclamped!

NOTICE! When using an intermediate sleeve, never operate the product without a clamped workpiece!

7.4.1 Assembly/disassembly of the intermediate sleeve

The following intermediate sleeves can be used to reduce the clamping diameter:

- Intermediate sleeve without lock
  Suitable for manual intermediate sleeve change and manual tool change
- Intermediate sleeve with lock via set-screw
  Suitable for manual intermediate sleeve change and automatic tool change
- Intermediate sleeve with bayonet locking mechanism via set-screw
  Suitable for automatic intermediate sleeve change and automatic tool change



NOTE: Illustration may differ from the actual design.

Position	Description
1	Threaded hole for intermediate sleeve with lock
2	Intermediate sleeve without lock
3	Stop face, intermediate sleeve
4	Threaded hole for intermediate sleeve with bayonet locking mechanism
5	Set-screw with pin
6	Intermediate sleeve with lock
7	Intermediate sleeve with bayonet locking mechanism

7.4.1.1 Intermediate sleeve without lock

Assembly

1. Return the actuating force of the machine to 0.
2. Make sure that the product is in an unclamped state.
3. Place the intermediate sleeve on the product in the correct position and fit it as far as the stop without exerting too much force.

Disassembly

1. Remove workpiece ▸ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Pull out the intermediate sleeve carefully and evenly, keeping it parallel. For this purpose, we recommend the use of a sleeve remover.

NOTICE! Danger of cutting injuries when changing the intermediate sleeve with workpiece! We always recommend using the workpiece and intermediate sleeve separately.

7.4.1.2 Intermediate sleeve with lock via set-screw

Assembly

1. Return the actuating force of the machine to 0.
2. Make sure that the product is in an unclamped state.
3. Place the intermediate sleeve onto the product in the correct position and fit it as far as the stop without exerting too much force, ensuring it remains parallel.
   CAUTION! Make sure that the bore hole of the intermediate sleeve matches the position of the set-screw bore hole. If this is not the case, the intermediate sleeve cannot be secured.
4. Screw in the set-screw only so far that the intermediate sleeve cannot be removed, but still has some clearance.
   CAUTION! If the set-screw is screwed in too far, workpiece loading will be obstructed and run-out errors may occur!

Disassembly

1. Remove workpiece ▸ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Unscrew the set-screw.
4. Pull out the intermediate sleeve carefully and evenly, keeping it parallel. For this purpose, we recommend the use of a sleeve remover.

NOTICE! If no other intermediate sleeve is fitted after disassembly, unscrew the set-screw completely.

7.4.1.3 Intermediate sleeve with bayonet and lock via set-screw

Assembly

1. Return the actuating force of the machine to 0.
2. Make sure that the product is in an unclamped state.
3. Only screw in the set-screw until the bayonet lock of the intermediate sleeve can grip securely.
   CAUTION! If the set-screw is screwed in too far, run-out errors may occur!
4. Place the intermediate sleeve on the product in the correct position and join it up to the stop, ensuring it remains parallel.
   NOTE: Make sure that the opening of the bayonet lock is aligned with the position of the set-screw. If this is not the case the intermediate sleeve cannot be joined.
5. Turn the intermediate sleeve counterclockwise as far as the stop.

Disassembly

1. Remove workpiece ▸ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Turn the intermediate sleeve clockwise as far as the stop.
   NOTE: Set-screw does not have to be unscrewed for this purpose.
4. Pull out the intermediate sleeve carefully and evenly, keeping it parallel. For this purpose, we recommend the use of a sleeve remover.

NOTICE! If no other intermediate sleeve is fitted after disassembly, unscrew the set-screw completely.

8 Maintenance

8.1 Basic information

⚠ WARNING

Risk of injury and material damage due to the expansion sleeve cracking.

If the expansion sleeve cracks, oil may be emitted at high pressure and chips or broken pieces may fly off, causing severe injuries.

- Avoid knocking or banging the expansion sleeve.
- The specified expansion rate may not be exceeded.
- Observe the inspection temperature specified in the technical data to check the expansion rate.
- Secure the danger zone by taking suitable protective measures.
- Wear suitable protective equipment.

⚠ CAUTION

Injury of the eyes due to dirt particles!

When cleaning with compressed air, the eyes may be injured by flying dirt particles.

- Wear suitable protective equipment, particularly protective goggles.

NOTICE

Possible damage to the product and function restrictions!

Removing components of the product may disable an additional function or damage the product by allowing an ingress of particles.

- Attachments are only allowed to be removed if this is expressly described in the operating manual or if written approval has been obtained from SCHUNK.

For trouble-free, long-lasting use, clean, maintain and check the functionality of the product regularly.

Repair work may only be carried out by SCHUNK!

If you have any questions regarding maintenance and servicing, our technical after-sales service is available during our business hours:
Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

8.2 Intervals and tasks

Operation	Interval period
Clean the clamping surface and workpiece stop face	after every clamping procedure
Cleaning the product	daily
Cleaning the pressurized air hole	weekly or after 1000 clampings
Monitoring the expansion rate	weekly or after 1000 clampings
Polish the clamping surface	weekly or after 1000 clamping operations as required
Disassembly/changing of the intermediate sleeve	for workpiece changes, for maintenance purposes, in the event of damage or signs of wear

The specified maintenance intervals are based on empirical data gathered by SCHUNK and are a recommendation. Depending on the ambient and operating conditions, as well as the clamping frequency of the product, the maintenance intervals need to be adapted and noted accordingly. For maintenance intervals with two or more specifications, the specification that applies first is valid.

After completing essential maintenance work, any settings and functional tests must be carried out again ▸ 6 [🗋 20].

8.2.1 Clean the clamping surface and workpiece stop face

1. Remove workpiece ▶ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Clean clamping face and workpiece stop face with compressed air.
4. Wipe the surfaces dry with a clean cloth.

8.2.2 Clean the product

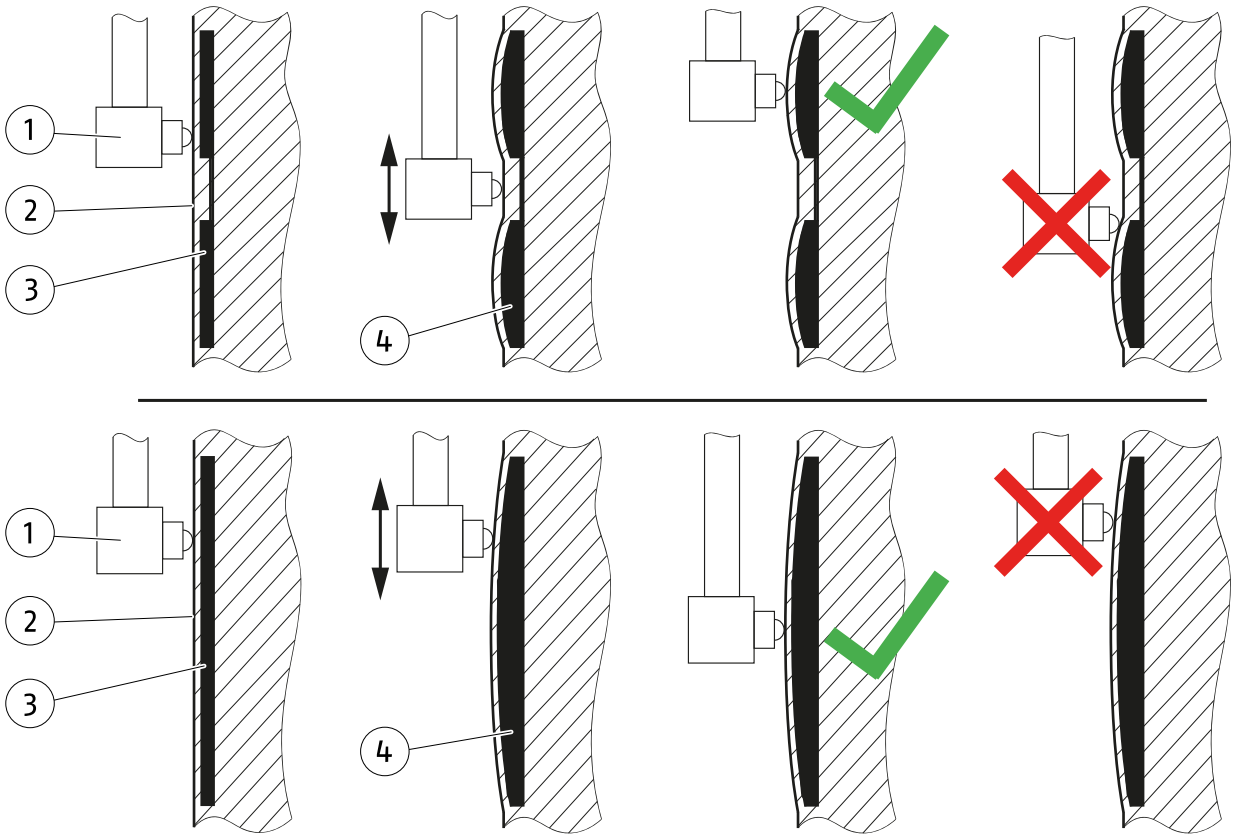
1. Remove workpiece ▶ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Clean the entire product with compressed air.
4. Carefully remove any stubborn dirt with a suitable tool.
5. Wipe all surfaces dry with a clean cloth.
6. Check the product for deformation, damage or wear, in particular the surfaces that come in contact with the workpiece and replace if necessary.

NOTE: Damage or wear can compromise the functioning of the product. If non-replaceable parts of the product are worn or damaged, return the product to SCHUNK for inspection.

8.2.3 Clean the pressurized air hole

1. Remove workpiece ▶ 7.3 [🗋 28].
2. Clean the pressurized air hole with compressed air.
3. Carefully remove any stubborn dirt with a suitable tool.

8.2.4 Check the expansion rate



NOTE: Illustration is for reference only. Shape of the expansion chamber may differ.

Position	Description
1	Measuring device
2	Clamping face
3	Expansion chamber (unclamped)
4	Expansion chamber (clamped)

Check the expansion rate according to the information in the maintenance table.

To do this, use a measuring device that meets the following requirements:

- Either two-point inside caliper
  or dial gauge outside micrometer
  NOTE: The measuring device must be spring-loaded!
- Measuring resolution of 0.001 mm
- Analog dial gauge
- Sufficiently large range of measurement (greater than expansion rate)

CAUTION! Observe the test temperature for the expansion rate check ▸ 3.2 [🗋 15]!

1. Observe the technical data ▸ 3 [🗋 14] and the marking on the product.
2. Remove workpiece ▸ 7.3 [🗋 28].
3. Remove the intermediate sleeve if mounted ▸ 8.2.6 [🗋 42].
4. Make sure that the product is in an unclamped state.
5. Clean the clamping surface.
6. Place the measuring device at the center of the clamping surface and set it to zero.
   NOTE: Make sure that the dirt groove (if present) on the clamping surface does not influence the measuring device!
7. Apply the set actuation force to the product.
8. Move the measuring device on the clamping surface until the point with the highest deflection is determined.
9. The difference on the measuring device must match the expansion rate ▸ 3 [🗋 14] specified in the technical data.
10. Return the actuating force of the machine to 0.

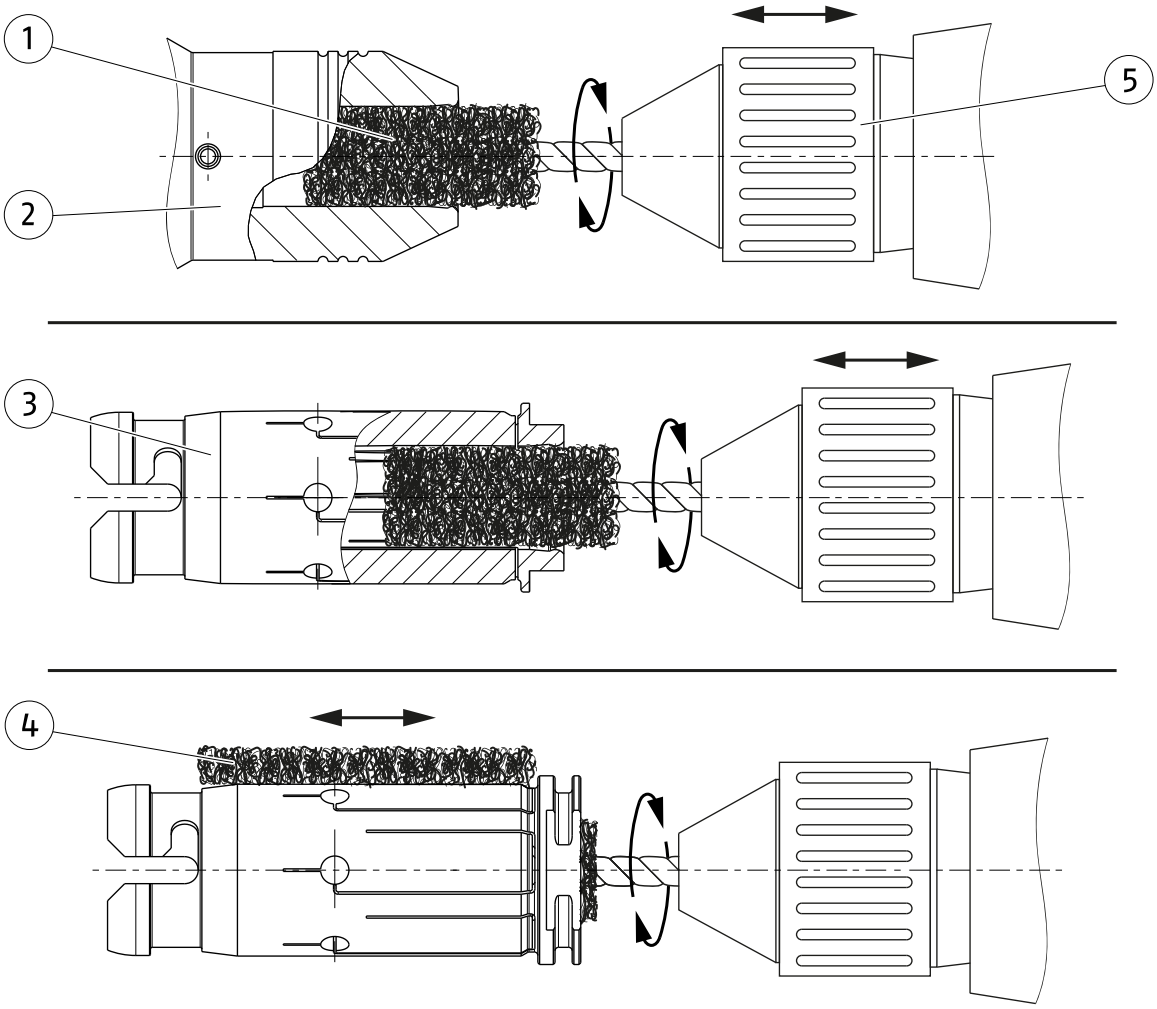
If the expansion rate specified in the technical data is not achieved, then

- the hydraulic system has lost too much oil,
- the clamping diameter is heavily worn,
- or the settings of the machine have been changed.

If the machine settings are unchanged or if a readjustment of the actuation force is unsuccessful, send the product to SCHUNK for inspection.

8.2.5 Polish the clamping surface

If the clamping surface becomes soiled during operation, it can be difficult to insert workpieces. To remove the impurities, the affected surfaces must be polished.



NOTE: Illustration is for reference only.

Position	Description
1	Tube brush wrapped with abrasive fleece
2	Product
3	Intermediate sleeve (if present)
4	Abrasive fleece
5	Cordless screwdriver

NOTE

If you have any questions regarding polishing, our technical after-sales service is available during our business hours.

Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

8.2.5.1 Polishing the product's clamping surface

1. Remove workpiece ▸ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. If present, remove the: intermediate sleeve ▸ 7.4 [🗋 28].
4. If present, remove all intermediate sleeve locks such as set-screws.
5. Select a suitable pipe brush. **NOTE:** The diameter of the pipe brush must be 2 mm less than the clamping diameter of the product.
6. Clamp the pipe brush in the cordless screwdriver. Observe the specifications in the cordless screwdriver operating manual.
7. Wrap the abrasive fleece around the pipe brush.
8. Secure product against twisting.
9. Insert the pipe brush wrapped with abrasive fleece into the clamping bore.
10. Actuate cordless screwdriver, thereby
    - ⇨ not exceeding a speed of 1200 RPM and
    - ⇨ move the pipe brush wrapped with the abrasive fleece back and forth several times.
11. Remove the pipe brush wrapped with abrasive fleece from the clamping bore.
12. Clean the clamping bore with a clean cloth and compressed air to remove residue from the polishing process.
13. Insert the test workpiece. **NOTE:** If the test workpiece cannot be inserted smoothly, repeat steps 7 to 12.
14. If required, install intermediate sleeve fuses.
15. If required, install the intermediate sleeve ▸ 7.4 [🗋 28].

8.2.5.2 Polishing the clamping surfaces of the intermediate sleeve

For polishing the bore of the intermediate sleeve:

1. Remove the intermediate sleeve ▸ 7.4 [🗋 28].
2. Select a suitable pipe brush. **NOTE:** The diameter of the pipe brush must be 2 mm less than the borehole of the intermediate sleeve.
3. Clamp the pipe brush in the cordless screwdriver. Observe the specifications in the cordless screwdriver operating manual.
4. Wrap the abrasive fleece around the pipe brush.
5. Secure the intermediate sleeve against twisting.
6. Insert the pipe brush wrapped with abrasive fleece into the clamping bore.
7. Actuate cordless screwdriver, thereby
   - ⇨ not exceeding a speed of 1200 RPM and
   - ⇨ move the pipe brush wrapped with the abrasive fleece back and forth several times.
8. Clean the clamping bore with a clean cloth and compressed air to remove residue from the polishing process.
9. Remove any dirt stuck in the slots of the intermediate sleeve using a suitable feeler gauge.
10. Insert the test workpiece. **NOTE:** If the test workpiece cannot be inserted easily, repeat steps 4 to 9.
11. Mount intermediate sleeve ▸ 7.4 [🗋 28].

Polishing the sheath surface of the intermediate sleeve:

1. Remove the intermediate sleeve ▸ 7.4 [🗋 28].
2. Select a suitable pipe brush. **NOTE:** The diameter of the pipe brush must be 2 mm less than the borehole of the intermediate sleeve.
3. Clamp the pipe brush in the cordless screwdriver. Observe the specifications in the cordless screwdriver operating manual.
4. Wrap the abrasive fleece around the pipe brush.
5. Insert the pipe brush wrapped with abrasive fleece into the clamping bore.
   ⇨ The intermediate sleeve is clamped and rotates when the cordless screwdriver is actuated.
6. Actuate cordless screwdriver, thereby
   ⇨ not exceeding a speed of 1200 RPM.
7. Press the abrasive fleece against the sheath surface and move it back and forth several times.
8. Clean the sheath surface of residue from the polishing procedure using a clean cloth and compressed air.
9. Remove any dirt stuck in the slots of the intermediate sleeve using a suitable feeler gauge.
10. Insert the intermediate sleeve into an unclamped product (e.g. tool grinding chuck). **NOTE:** If the intermediate sleeve cannot be inserted easily, repeat steps 4 to 9 or check the clamping bore of the product and polish if necessary.
11. Mount intermediate sleeve ▸ 7.4 [🗋 28].

8.2.6 Disassembly/changing of the intermediate sleeve

Any inserted intermediate sleeve must be disassembled for maintenance. If there are signs of wear or damage, the intermediate sleeve must be replaced.

NOTICE! Only change the intermediate sleeve when the product is unclamped!

8.2.6.1 Intermediate sleeve without lock

Disassembly

1. Remove workpiece ▸ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Pull out the intermediate sleeve carefully and evenly, keeping it parallel. For this purpose, we recommend the use of a sleeve remover.

Assembly

1. Return the actuating force of the machine to 0.
2. Make sure that the product is in an unclamped state.
3. Place the intermediate sleeve on the product in the correct position and fit it as far as the stop without exerting too much force.

8.2.6.2 Intermediate sleeve with lock via set-screw

Disassembly

1. Remove workpiece ▶ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Unscrew the set-screw.
4. Pull out the intermediate sleeve carefully and evenly, keeping it parallel. For this purpose, we recommend the use of a sleeve remover.

NOTICE! If no other intermediate sleeve is fitted after disassembly, unscrew the set-screw completely.

Assembly

1. Return the actuating force of the machine to 0.
2. Make sure that the product is in an unclamped state.
3. Place the intermediate sleeve onto the product in the correct position and fit it as far as the stop without exerting too much force, ensuring it remains parallel.
   CAUTION! Make sure that the bore hole of the intermediate sleeve matches the position of the set-screw bore hole. If this is not the case, the intermediate sleeve cannot be secured.
4. Screw in the set-screw only so far that the intermediate sleeve cannot be removed, but still has some clearance.
   CAUTION! If the set-screw is screwed in too far, workpiece loading will be obstructed and run-out errors may occur!

8.2.6.3 Intermediate sleeve with bayonet and lock via set-screw

Disassembly

1. Remove workpiece ▸ 7.3 [🗋 28].
2. Make sure that the product is in an unclamped state.
3. Turn the intermediate sleeve clockwise as far as the stop.
   NOTE: Set-screw does not have to be unscrewed for this purpose.
4. Pull out the intermediate sleeve carefully and evenly, keeping it parallel. For this purpose, we recommend the use of a sleeve remover.

NOTICE! If no other intermediate sleeve is fitted after disassembly, unscrew the set-screw completely.

Assembly

1. Return the actuating force of the machine to 0.
2. Make sure that the product is in an unclamped state.
3. Only screw in the set-screw until the bayonet lock of the intermediate sleeve can grip securely.
   CAUTION! If the set-screw is screwed in too far, run-out errors may occur!
4. Place the intermediate sleeve on the product in the correct position and join it up to the stop, ensuring it remains parallel.
   NOTE: Make sure that the opening of the bayonet lock is aligned with the position of the set-screw. If this is not the case the intermediate sleeve cannot be joined.
5. Turn the intermediate sleeve counterclockwise as far as the stop.

9 Troubleshooting

Malfunction/error	Possible cause	Solution(s)
Workpiece is not clamped	Intermediate sleeve not mounted	Mount intermediate sleeve ▶ 7.4 [🗋 28]
	The machine settings have been changed	Check actuation force ▶ 6.2 [🗋 22]
	Wear on the clamping diameter	Send the product to SCHUNK for inspection
	Oil loss on the product	Send the product to SCHUNK for inspection
Workpiece cannot be fitted	Product is not completely unclamped	Unclamping the product ▶ 7.3 [🗋 28]
	Solidified dirt on the clamping surface	Polish the clamping surface ▶ 8.2.5 [🗋 38]
Workpiece cannot be removed	Product is not completely unclamped	Unclamping the product ▶ 7.3 [🗋 28]
Insufficient run-out accuracy	If intermediate sleeve is secured with a set-screw: set-screw screwed in too far	Unscrew the set-screw slightly.
	Product is not correctly positioned on the machine interface	Clean the contact surfaces of the product and machine
	With flange mounting: mounting screws are not tightened correctly	Adhere to the specified tightening torque ▶ 3 [🗋 14]

If you have any questions regarding troubleshooting, our technical after-sales service is available during our business hours:
Service telephone: +49-7133-103-2956
service.toolholder@de.schunk.com

10 Disassembly

10.1 Basic information

⚠ WARNING

Risk of injury if the product falls during transport, assembly or disassembly!

Due to the oily surface required to preserve it, the product can slip through your hands, resulting in injury.

- Take appropriate safety measures to prevent the product from falling.
- Only install the product on machines with the appropriate connection dimensions.
- Wear suitable protective equipment, especially safety gloves.

⚠ CAUTION

Risk of crushing and impact when assembling and disassembling the product!

- Do not reach between the product and machine.
- Wear suitable protective equipment.

NOTICE

Possible damage to the expansion sleeve!

- When transporting and handling the product, ensure that it is not damaged by knocks, impacts, etc.
- It is essential that the thin-walled clamping face (expansion sleeve) is protected against shocks and impacts.

10.2 Disassembly of the product

1. Remove workpiece ▸ 7.3 [🗋 28].
2. If present, remove the safety ring of the cap nut.
3. Remove the cap nut.
4. Remove the product.

NOTE: To avoid damage, only place the product on a clean and soft surface.

11 Storage

When storing the product for a longer period of time, observe the following points:

- Clean and lightly oil the product and intermediate sleeve.
- Store the product and intermediate sleeve in a suitable transport container.
- Only store the product and intermediate sleeve in dry rooms.
- Protect the product and intermediate sleeve from excessive temperature fluctuations.
- Comply with the storage temperature specified in the technical data.

NOTE: Before reassembling, clean the product and all attachments ▸ 8.2.2 [🗋 35], and check for damage, functionality and tightness. After assembly, all settings and function tests must be carried out ▸ 6 [🗋 20].

12 Disposal

When disposing of the product, observe the following points:

- Collect any escaping liquids and dispose of them properly in line with the statutory provisions.
- Follow local regulations on dispatching product components for recycling or proper disposal.

NOTE: Alternatively, you can return the product to SCHUNK for correct disposal.

13 Drawings

The assembly and operating manual as well as the valid drawing can be requested in digital format by stating the product ID.

For this, contact our technical after-sales service:
service.toolholder@de.schunk.com

14 EU Declaration of Incorporation

Valid from January 20, 2027, in accordance with the EU Machinery Regulation 2023/1230, Annex V, Part B.

Valid from January 19, 2027, in accordance with the (Machinery) Directive 2006/42/EC, Annex II, Part 1, Section B.

The manufacturer bears sole responsibility for issuing this EU Declaration of Incorporation:

Manufacturer/ distributor	SCHUNK SE & Co. KG Spanntechnik | Greiftechnik | Automatisierungstechnik Bahnhofstr. 106 – 134 D–74348 Lauffen/Neckar

We hereby declare that the partly completed machinery listed below complies with the following essential health and safety requirements of the EU Machinery Directive 2023/1230 (Annex III) / *Machinery Directive 2006/42/EC (Annex I)*:

No. 1.1.1, no. 1.1.2, no. 1.1.3, no. 1.1.5, no. 1.3.2, no. 1.3.4, no. 1.5.3, no. 1.5.4, no. 1.5.6, no. 1.5.8, no. 1.5.10, no. 1.5.11, no. 1.5.13

Product designation:	Tool grinding toolholder
ID:	0206676; 0206677; 0206678; 0206679

The partly completed machinery may not be put into operation until it has been confirmed that the machine into which the partly completed machinery is to be installed complies with the provisions of the EU Regulation 2023/1230 / *Machinery Directive (2006/42/EC)*. The declaration shall be rendered invalid if modifications are made to the product.

Applied harmonized standards, especially:

EN ISO 12100:2010	Safety of machinery – General principles for design – Risk assessment and risk reduction

The special technical documentation according to *Annex VII, Part B*, belonging to the partly completed machine, has been created.

The manufacturer agrees to provide the national authorities with the relevant technical documents in electronic form upon reasoned request.

Signature: see original declaration

Lauffen/Neckar, September 2026

p.p. Patryk Hoff;
Head of Special Toolholding and Workholding Technology

15 UKCA declaration of incorporation

in accordance with the Supply of Machinery (Safety) Regulations 2008.

Manufacturer/ distributor	SCHUNK Intec Limited Clamping and gripping technology 3 Drakes Mews, Crownhill MK8 0ER Milton Keynes

We hereby declare that the partly completed machinery described below complies with all essential health and safety requirements of the "Supply of Machinery (Safety) Regulations 2008" as of the date of this declaration. This declaration becomes invalid if any changes are made to the product.

Product designation:	Tool grinding toolholder
ID:	0206676; 0206677; 0206678; 0206679

The partly completed machine may not be put into operation until it has been confirmed that the machine into which the partly completed machine is to be installed complies with the provisions of the "Supply of Machinery (Safety) Regulations 2008".

Applied harmonized standards, especially:

EN ISO 12100:2010	Safety of machinery – General principles for design – Risk assessment and risk reduction

The special technical documentation according to Annex VII, Part B, belonging to the partly completed machine, has been created.

Person authorized to compile the technical documentation:
Marcel Machado, address: refer to manufacturer's address

Lauffen/Neckar, September 2026

p.p. Patryk Hoff;
Head of Special Toolholding and Workholding Technology

16 Information on the RoHS Directive, REACH Regulation and Substances of Very High Concern (SVHC)

RoHS Directive

SCHUNK products are classified as "large-scale stationary installations" or as "large-scale stationary industrial tools" within the meaning of Directive 2011/65/EU and its extension 2015/863/EU "on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)", or fulfill their intended function only as part of one. Therefore products from SCHUNK do not fall within the scope of the directive at this time.

REACH Regulation

Products from SCHUNK fully comply with the regulations of Regulation (EC) No. 1907/2006 "concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)" and its amendment 2022/477. SCHUNK attaches great importance to completely avoiding chemicals of concern to humans and the environment wherever possible.

Only in rare exceptional cases do SCHUNK products contain SVHC substances on the candidate list with a mass content above 0.1%. In accordance with Article. 33 (1) of Regulation (EC) No. 1907/2006, SCHUNK complies with its duty to "communicate information on substances in articles" and lists the components concerned and the substances used in an overview that can be viewed at **schunk.com\SVHC**.

Signature: see original declaration

Lauffen/Neckar, September 2026

p.p. Patryk Hoff;
Head of Special Toolholding and
Workholding Technology

17 Feedback on the operating instructions

Your feedback is important to us

Our operating manual is designed to make using the product as easy, understandable and safe as possible. Please let us know if anything is unclear, if any information is missing or if you have any suggestions for improvement.

Please state the material number of the product or the operating instructions in your feedback. This will help us to assign your feedback directly to the correct instructions.

Please contact:

technische-redaktion.lauffen@de.schunk.com

Your feedback will help us to continuously improve our operating manual and respond even better to your needs.
Thank you for your support!

SCHUNK SE & Co. KG
Spanntechnik | Greiftechnik | Automatisierungstechnik

Bahnhofstr. 106 – 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
info@de.schunk.com
schunk.com

Folgen Sie uns | *Follow us*

Wir drucken nachhaltig | *We print sustainable*

09–2026
© 2026 SCHUNK SE & Co. KG
04.00 | HALLER SK 50 | Assembly and operating manual | en-US | 1521586