

Assembly and operating manual TRIBOS LMG-M

Translation of Original Operating
Manual

Hand in hand for tomorrow

Imprint

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Technical changes:

We reserve the right to make alterations for the purpose of technical improvement.

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Dear Customer,

Thank you for trusting 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. Ask us questions and challenge us. We will find a solution!

Best regards,

Your SCHUNK team

Customer Management

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

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1 General

1.1 About this manual

This manual contains important information for a safe and appropriate use of the product.

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

Before starting work, the personnel must have read and understood this operating manual. Prerequisite for safe working is the observance of all safety instructions in this manual.

In addition to these instructions, the documents listed under ▶ 1.1.4 [📄 5] are applicable.

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

1.1.1 Presentation of Warning Labels

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



⚠ DANGER

Dangers for persons!

Non-observance will inevitably cause irreversible injury or death.



⚠ WARNING

Dangers for persons!

Non-observance can lead to irreversible injury and even death.



⚠ CAUTION

Dangers for persons!

Non-observance can cause minor injuries.

CAUTION

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 [📄 5]: chapter number and [page number] in hyperlinks

1.1.4 Applicable documents

- General terms of business *
- Catalog data sheet of the purchased product *

The documents labeled with an asterisk (*) can be downloaded from [schunk.com/downloads](https://www.schunk.com/downloads).

1.2 Warranty

The warranty is valid for 12 months from the date of delivery from the production facility if the product is used as intended and in compliance with the prescribed operating data.

Wear parts and parts that come in contact with the tool or machine are not covered by the warranty.

1.3 Scope of delivery

- Product
- Assembly and operating manual for the product
- User manual for the caliper

2 Basic safety notes

2.1 Appropriate use

- The product is used to measure tool lengths in conjunction with an SVP clamping device and a TRIBOS toolholder.
- The product is intended for industrial use.
- The product may only be used and operated within the scope of the technical data and the specifications in this manual, ▶ 3 [📄 12].

2.2 Inappropriate use

The product is not being used as intended if:

- The product is used to slide the tool into a different position.
- No SVP clamping device is used.
- The information in the technical data is not observed when using and operating the product ▶ 3 [📄 12].
- The storage specifications have not been observed.
- The product is used in explosive environments.

2.3 Notes on safe operation

- Maintain and service the product on a regular basis.
- All repair work must be performed by SCHUNK.
- The operational safety and function of the product must not be impaired by external influences.
- Follow the country-specific applicable safety, accident prevention, and environmental protection regulations for the application field of the product.

2.4 Personnel qualification

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 health & 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 Constructional 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.

3 Technical data

NOTE: Further information on the caliper can be found in the enclosed user manual for the caliper.

3.1 General data

Measuring accuracy [mm]	±0.1
Reading accuracy [mm]	±0.01
Range of measurement [mm]	0 to 210 mm (with measuring pins) 85 to 280 mm (without measuring pins)

3.2 Ambient conditions and operating conditions

Range	Temperature [°C]
Operating temperature	+10 to +40
Storage temperature	+10 to +60

4 Design and description

4.1 Design



NOTE: Illustration may differ from the actual design.

Position	Description
1	Measuring shank
2	Measuring pin
3	Holder for measuring shank
4	Caliper bearing
5	Caliper bearing locking ring
6	Caliper
7	SVP clamping device (provided by customer)

4.2 Functional description

This product is used to measure the tool length of TRIBOS toolholders.

For this purpose, the TRIBOS toolholder is inserted into an SVP clamping device and the measuring pins of the product are placed against the flat surface of the toolholder and the tool.

5 Assembly

5.1 Basic information

CAUTION

Risk of possible damage to the product!

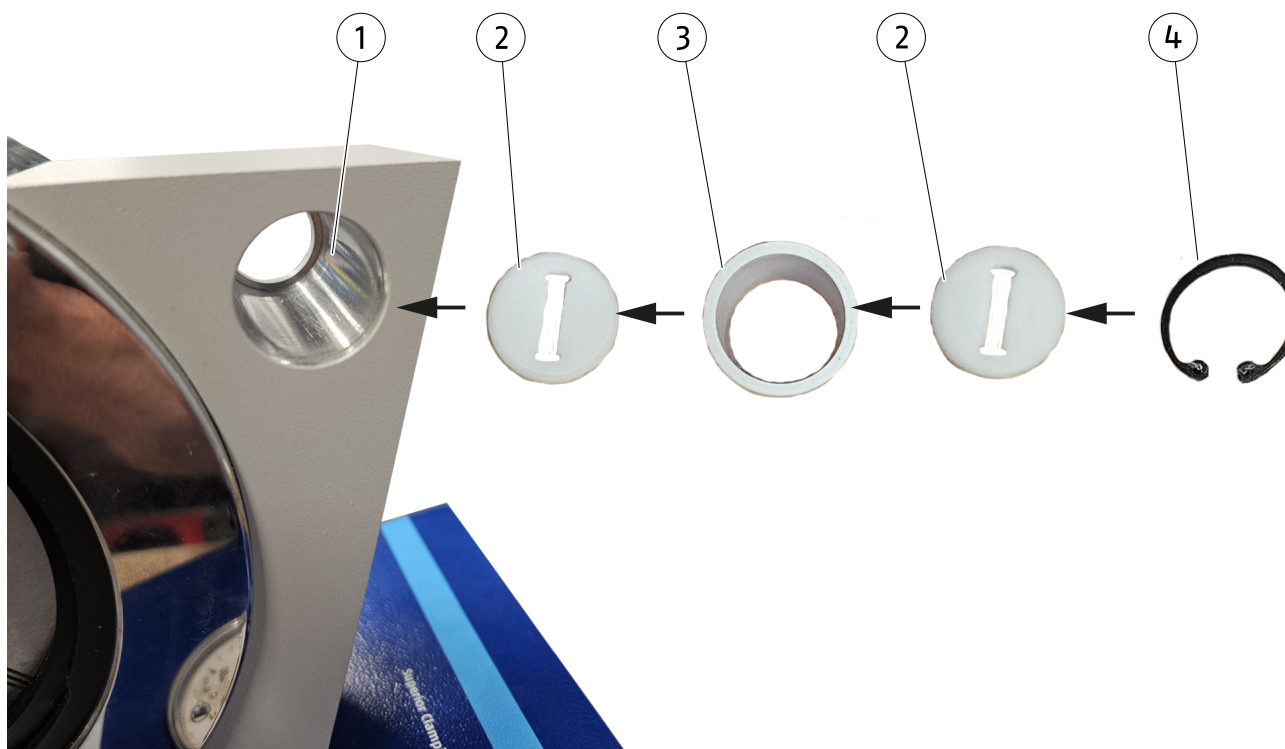
- When transporting and handling the product, ensure that it is not damaged by knocks, impact, etc.
-

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

Service telephone: +49-7133-103-2956

service.toolholder@de.schunk.com

5.2 Mounting the bearing

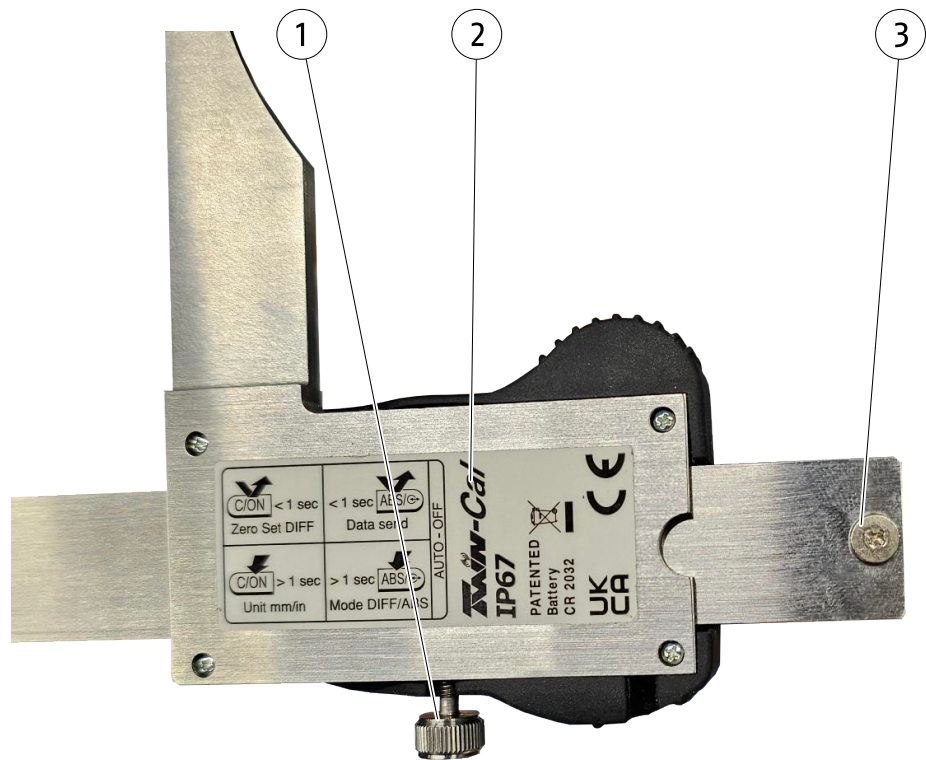


NOTE: Illustration may differ from the actual design.

Position	Description
1	Hole for bearing
2	Bearing cover (2x)
3	Bearing bush
4	Safety ring

1. Clean hole for bearing.
2. Place the bearing cover on the end of the bearing bush.
3. Insert the bearing cover together with the bearing bush into the bore and push it in as far as the stop.
4. Insert the bearing cover into the bore and push it as far as the stop of the bearing bush.
5. Use a suitable tool to insert the locking ring into the corresponding groove on the hole.
 - ⇒ The bearing is fitted.

5.3 Mounting the caliper

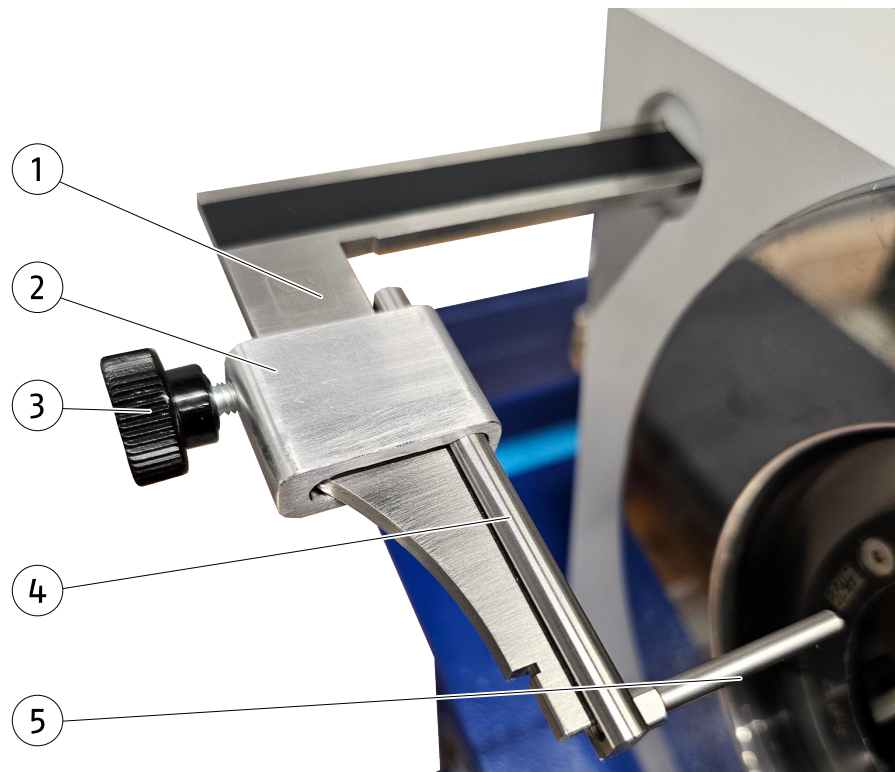


NOTE: Illustration may differ from the actual design.

Position	Description
1	Clamping screw
2	Slide
3	Stop screw

1. Loosen the clamping screw.
2. Loosen the screw and remove it.
3. Pull the slide off the caliper rail and remove it. **NOTE:** There is a copper strip between the slide and the rail. This copper strip must not be disposed of.
 - ⇒ The caliper can be mounted.
4. Insert the caliper into the openings on the bearing cover in the bearing and push it through the bearing. **NOTE:** If the bearing covers are not evenly aligned, it will not be possible to push the caliper through the bearing. In this case, push the caliper through the first bearing cover, turning it until it is correctly aligned to the second bearing cover.
5. Refit the slide on the rail of the caliper. When doing so:
 - ⇒ Twist the rail of the caliper so that the caliper shanks are pointing upwards.
 - ⇒ Insert the copper strip into the slide. Ensure that the groove in the copper strip is positioned over the corresponding pin in the slide.
 - ⇒ Push the slide with the copper strips onto the rail.
 - ⇒ Insert stop screw.

5.4 Mounting the measuring shanks



NOTE: Illustration may differ from the actual design.

Position	Description
1	Caliper shank
2	Measuring shank holder
3	Clamping screw
4	Measuring shank
5	Measuring pin

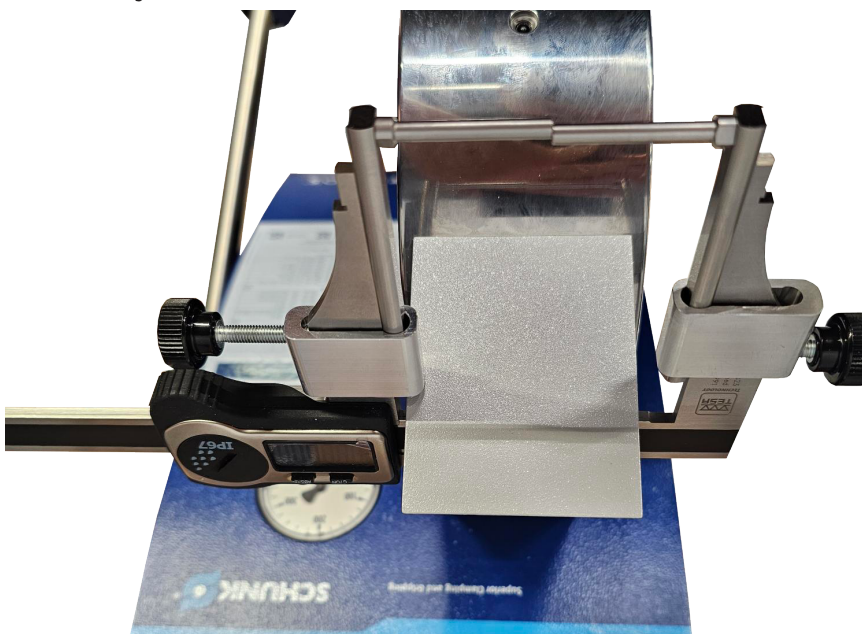
NOTE

A clamping screw of the appropriate length must be used depending on the position of the measuring shank holder.

1. Clean the shank surfaces of the caliper and the measuring shanks.
2. Ensure that the measuring pin is mounted on the measuring shank.
3. Insert the measuring shank into the measuring shank holder.
NOTE: Ensure that the flattened side is oriented towards the clamping screw.
4. Slide the measuring shank holder with measuring shank to the desired position over the measuring shank.
5. Insert the clamping screw. **NOTE:** A clamping screw of the appropriate length must be used depending on the position of the measuring shank holder.



6. Repeat the procedure for the second measuring shank.
7. Move the slide of the caliper to bring both measuring pins together. **NOTE:** Correct the position of the measuring shanks if necessary.



8. Calibrate the caliper according to the enclosed manual for the caliper.

6 Operation

6.1 Basic information



⚠ CAUTION

Risk of injury from tools with sharp edges!

Sharp edges on tools can cause cuts.

- Wear protective gloves when measuring the tool length.

NOTE

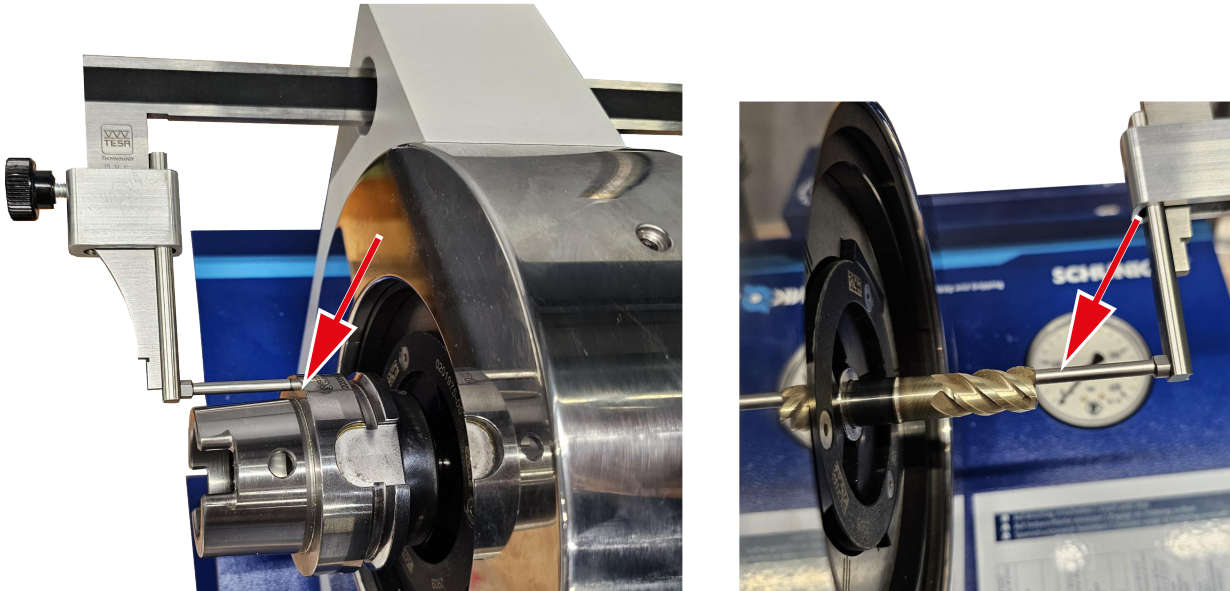
The tool length can also be transmitted via Bluetooth!

Follow the operating manual for the caliper.

6.2 Measuring the tool length

NOTE

The product may only be used with an SVP clamping device. Observe the operating manual of the corresponding SVP clamping device.



CAUTION! The toolholder and the tool must be free of dirt at the measuring points.

1. Move the measuring pins together.
2. Calibrate the caliper according to the enclosed manual for the caliper.
3. Clean the toolholder and tool.
4. Insert the toolholder into the SVP clamping device.
5. Place the measuring pin on the flat surface of the toolholder.
6. Place the measuring pin at the highest point of the tool (e.g., drill tip or milling cutter cutting edge).
7. Read off the tool length on the caliper.

NOTE: To increase the range of measurement, the measuring pins can be unscrewed and replaced.

7 Troubleshooting

Malfunction/ error	Possible cause	Solution(s)
Caliper shows incorrect value	Caliper not correctly zeroed	Zero the caliper again
	Dirt on contact surfaces	Clean contact surfaces before measurement
Caliper not showing a value	Caliper is switched off	Switch on the caliper
	Caliper battery is empty	Replace the battery

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

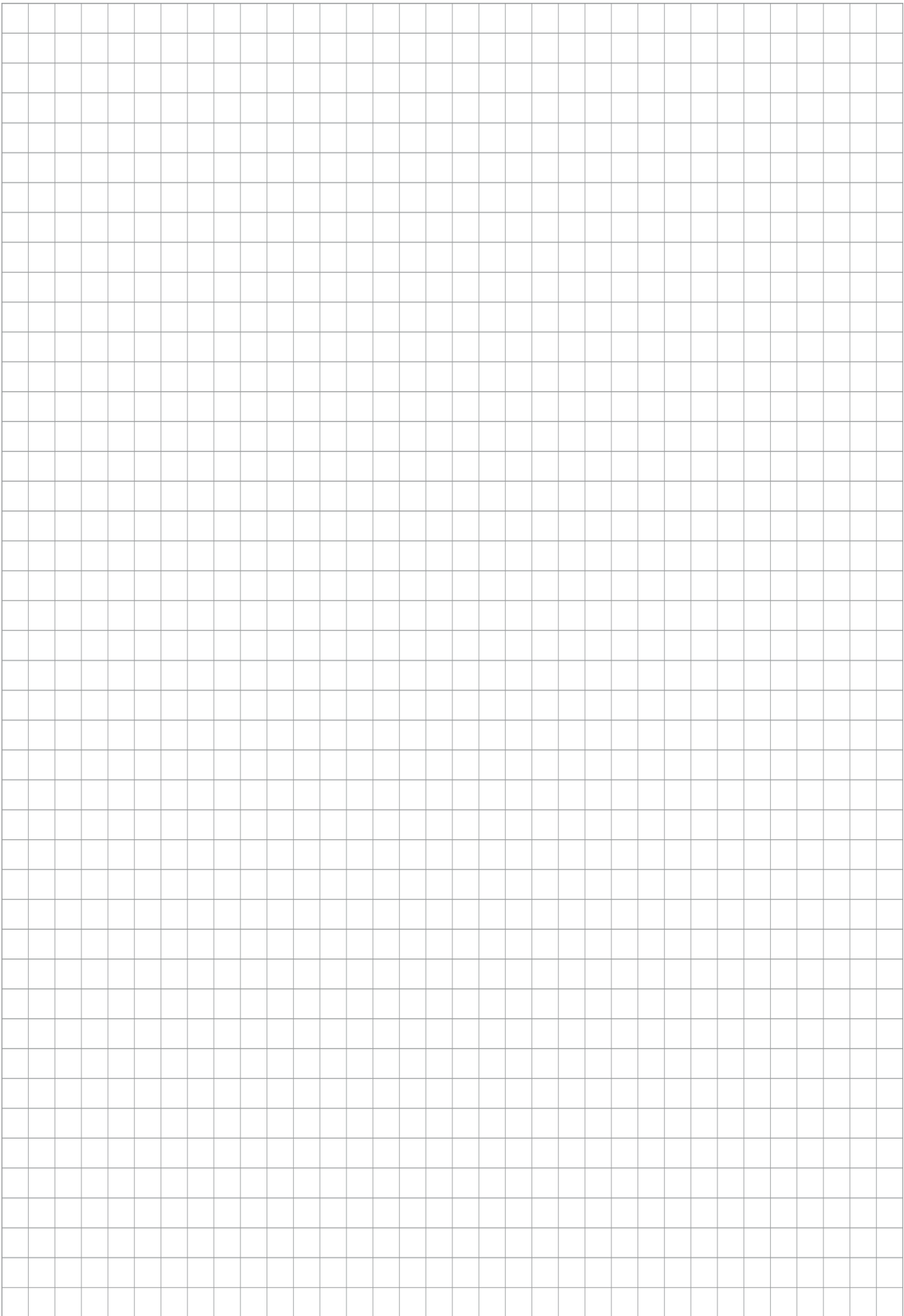
8 Storage

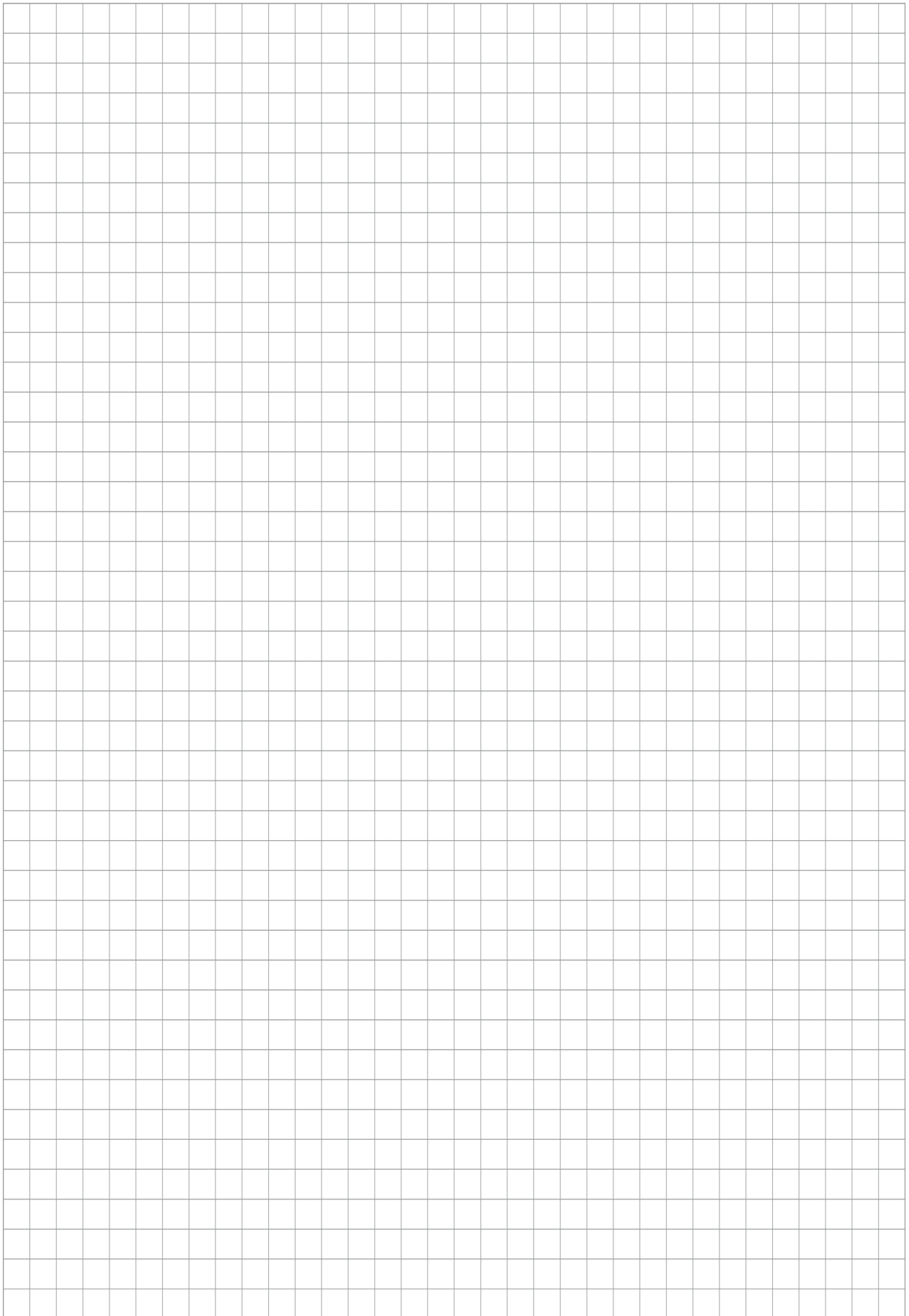
When storing the product for a longer period of time, observe the following points:

- Clean the product.
- Only store the product in dry rooms.
- Protect the product from major temperature fluctuations.
- Comply with the storage temperature specified in the technical data.

9 Disposal

- Follow local regulations on dispatching product components for recycling or proper disposal.
- Alternatively, you can return the product to SCHUNK for correct disposal.









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