

# Assembly and operating manual

## PMP

### Portal module

Original operating manual

Hand in hand for tomorrow

## Imprint

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### Technical changes:

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**Document number:** 389313

**Version:** 07.00 | 03/07/2024 | en

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

Tel. +49-7133-103-2503

Fax +49-7133-103-2189

cmg@de.schunk.com



**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 ▶ 1.1.3 [ 6 ] 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 Applicable documents

- General terms of business \*
- Catalog data sheet of the purchased product \*
- Assembly and operating manuals of the accessories \*

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

### 1.1.4 Sizes

This operating manual applies to the following sizes:

- PMP 16
- PMP 25

## 1.2 Warranty

If the product is used as intended, the warranty is valid for 24 months from the ex-works delivery date under the following conditions:

- Observe the specified maintenance and lubrication intervals
- Observe the ambient conditions and operating conditions

Parts touching the workpiece and wear parts are not included in the warranty.

## 1.3 Scope of delivery

The scope of delivery includes

- Portal module PMP in the version ordered
- Assembly and Operating Manual

## 1.4 Accessories

A wide range of accessories are available for this product

For information regarding which accessory articles can be used with the corresponding product variants, see catalog data sheet.

### 1.4.1 Variable end stop

The stroke and its position along the entire stroke length of the portal module can be adjusted using the variable VE end stops ▶ 4.5.2 [📄 23].

More technical data is included in the catalog data sheet.

Whichever is the latest version.

### 1.4.2 Intermediate stops AS/ZA

The intermediate stop consists of a AS... stop guide which is mounted on the traversing slide and of the actual ZA stops. These can be controlled independently and any number can be distributed along the axis.

The intermediate stop can be supplied for all types and sizes of the portal module ▶ 4.5.1.1 [📄 22].

### 1.4.3 Bellows

The module is optionally available with a bellow. This increases the protection against penetrating materials. This option is only available for fixed stroke variants ▶ 8 [📄 35].

For further information, consult the latest catalog.

### 1.4.4 Cable track

For guiding electric and pneumatic lines

The cable track is available for "horizontal slide" and "vertical slide" versions.

Several attachment variants are possible ▶ 4.7 [📄 27].

### 1.4.5 Columns and mounting material

Columns, adapter plates and mounting materials are available for the portal modules ▶ 4.1 [📄 16].

More technical data is included in the catalog data sheet. Whichever is the latest version.

### 1.4.6 T-nuts

For mounting the linear module on the machine / system.

Designation	Type/ID number
T-nut for PMP S/F	NT-M5 / 0313607

## 2 Basic safety notes

### 2.1 Intended use

The product is exclusively designed for linear movement of useful loads into any desired position.

- The product may only be used within the scope of its technical data, ▶ 3 [15].
- When implementing and operating components in safety-related parts of the control systems, the basic safety principles in accordance with DIN EN ISO 13849-2 apply. The proven safety principles in accordance with DIN EN ISO 13849-2 also apply to categories 1, 2, 3 and 4.
- 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.
- The product is intended for industrial and industry-oriented use.
- Appropriate use of the product includes compliance with all instructions in this manual.

### 2.2 Not intended use

It is not intended use if the product is used, for example, as a pressing tool, stamping tool, lifting gear, guide for tools, cutting tool, clamping device or a drilling tool.

- Any utilization that exceeds or differs from the appropriate use is regarded as misuse.

### 2.3 Constructional changes

#### Implementation of structural changes

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

- Structural changes should only be made with the written approval of SCHUNK.



## 2.4 Spare parts

### Use of unauthorized spare parts

Using unauthorized spare parts can endanger personnel and damage the product or cause it to malfunction.

- Use only original spare parts or spares authorized by SCHUNK.

## 2.5 Environmental and operating conditions

- Make sure that the product is used only in the context of its defined application parameters, ▶ 3 [15].
- Make sure that the product is not exposed to excessive vibrations and/or strokes.
- Make sure that the environment is free from splash water and vapors as well as from abrasion or processing dust. Exceptions are products that are designed especially for contaminated environments.
- Make sure that the environment is clean and the ambient temperature corresponds to the specifications per the catalog.
- Ensure that no strong magnetic fields impair the function of the product.

Contact your SCHUNK partner if the product is to be used in strong magnetic fields.

## 2.6 Personnel qualification

### Inadequate qualifications of the personnel

If the personnel working with the product is not sufficiently qualified, the result may be serious injuries and significant property damage.

- All work may only be performed by qualified personnel.
- Before working with the product, the personnel must have read and understood the complete assembly and operating manual.
- Observe the national safety regulations and rules and general safety instructions.

The following personal qualifications are necessary for the various activities related to the product:

#### Trained electrician

Due to their technical training, knowledge and experience, trained electricians are able to work on electrical systems, recognize and avoid possible dangers and know the relevant standards and regulations.

<b>Qualified personnel</b>	Due to its technical training, knowledge and experience, qualified personnel is able to perform the delegated tasks, recognize and avoid possible dangers and knows the relevant standards and regulations.
<b>Instructed person</b>	Instructed persons were instructed by the operator about the delegated tasks and possible dangers due to improper behaviour.
<b>Service personnel of the manufacturer</b>	Due to its technical training, knowledge and experience, service personnel of the manufacturer is able to perform the delegated tasks and to recognize and avoid possible dangers.

## 2.7 Personal protective equipment

### Use of personal protective equipment

Personal protective equipment serves to protect staff against danger which may interfere with their health or safety at work.

- When working on and with the product, observe the occupational health and safety regulations and wear the required personal protective equipment.
- Observe the valid safety and accident prevention regulations.
- Wear protective gloves to guard against sharp edges and corners or rough surfaces.
- Wear heat-resistant protective gloves when handling hot surfaces.
- Wear protective gloves and safety goggles when handling hazardous substances.
- Wear close-fitting protective clothing and also wear long hair in a hairnet when dealing with moving components.

## 2.8 Notes on safe operation

### Incorrect handling of the personnel

Incorrect handling and assembly may impair the product's safety and cause serious injuries and considerable material damage.

- Avoid any manner of working that may interfere with the function and operational safety of the product.
- Use the product as intended.
- Observe the safety notes and assembly instructions.
- Do not expose the product to any corrosive media. This does not apply to products that are designed for special environments.
- Eliminate any malfunction immediately.
- Observe the care and maintenance instructions.

- Observe the current safety, accident prevention and environmental protection regulations regarding the product's application field.

## 2.9 Transport

### Handling during transport

Incorrect handling during transport may impair the product's safety and cause serious injuries and considerable material damage.

- When handling heavy weights, use lifting equipment to lift the product and transport it by appropriate means.
- Secure the product against falling during transportation and handling.
- Stand clear of suspended loads.

## 2.10 Malfunctions

### Behavior in case of malfunctions

- Immediately remove the product from operation and report the malfunction to the responsible departments/persons.
- Order appropriately trained personnel to rectify the malfunction.
- Do not recommission the product until the malfunction has been rectified.
- Test the product after a malfunction to establish whether it still functions properly and no increased risks have arisen.

## 2.11 Disposal

### Handling of disposal

The incorrect handling of disposal may impair the product's safety and cause serious injuries as well as considerable material and environmental harm.

- Follow local regulations on dispatching product components for recycling or proper disposal.

## 2.12 Fundamental dangers

### General

- Observe safety distances.
- Never deactivate safety devices.
- Before commissioning the product, take appropriate protective measures to secure the danger zone.
- 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.
- Do not reach into the open mechanism or movement area of the product during operation.

### **2.12.1 Protection during handling and assembly**

#### **Incorrect handling and assembly**

Incorrect handling and assembly may impair the product's safety and cause serious injuries and considerable material damage.

- Have all work carried out by appropriately qualified personnel.
- For all work, secure the product against accidental operation.
- Observe the relevant accident prevention rules.
- Use suitable assembly and transport equipment and take precautions to prevent jamming and crushing.

#### **Incorrect lifting of loads**

Falling loads may cause serious injuries and even death.

- Stand clear of suspended loads and do not step into their swiveling range.
- Never move loads without supervision.
- Do not leave suspended loads unattended.

### **2.12.2 Protection during commissioning and operation**

#### **Falling or violently ejected components**

Falling and violently ejected components can cause serious injuries and even death.

- Take appropriate protective measures to secure the danger zone.
- Never step into the danger zone during operation.

### **2.12.3 Protection against dangerous movements**

#### **Unexpected movements**

Residual energy in the system may cause serious injuries while working with the product.

- Switch off the energy supply, ensure that no residual energy remains and secure against inadvertent reactivation.
- Never rely solely on the response of the monitoring function to avert danger. Until the installed monitors become effective, it must be assumed that the drive movement is faulty, with its action being dependent on the control unit and the current

operating condition of the drive. Perform maintenance work, modifications, and attachments outside the danger zone defined by the movement range.

- To avoid accidents and/or material damage, human access to the movement range of the machine must be restricted. Limit/prevent accidental access for people in this area due through technical safety measures. The protective cover and protective fence must be rigid enough to withstand the maximum possible movement energy. EMERGENCY STOP switches must be easily and quickly accessible. Before starting up the machine or automated system, check that the EMERGENCY STOP system is working. Prevent operation of the machine if this protective equipment does not function correctly.

#### **2.12.4 Protection against electric shock**

##### **Possible electrostatic energy**

Components or assembly groups may become electrostatically charged. When the electrostatic charge is touched, the discharge may trigger a shock reaction leading to injuries.

- The operator must ensure that all components and assembly groups are included in the local potential equalisation in accordance with the applicable regulations.
- While paying attention to the actual conditions of the working environment, the potential equalisation must be implemented by a specialist electrician according to the applicable regulations.
- The effectiveness of the potential equalisation must be verified by executing regular safety measurements.

## 2.13 Information about special dangers



### **⚠ WARNING**

**Risk of injury caused by crushing and impacts when moving the unit or attachments!**

**Risk of injury due to attachments breaking or becoming loose!**



### **⚠ WARNING**

**Risk of injury from objects falling and being ejected!**

Falling and ejected objects during operation can lead to serious injury or death.

- Take appropriate protective measures to secure the danger zone.



### **⚠ WARNING**

**Risk of injury due to unexpected movements!**

If the power supply is switched on or residual energy remains in the system, components can move unexpectedly and cause serious injuries.

- Before starting any work on the product: Switch off the power supply and secure against restarting.
- Make sure, that no residual energy remains in the system.



### **⚠ WARNING**

**Risk of injury when the machine/system moves unexpectedly in the case of a loss of power supply or control system malfunction.**

Use of a holding brake on the linear axis.

### 3 Technical Data

Size	16 – 25
Ambient temperature [°C]	5 – 60
IP rating	40
Noise emission [dB(A)]	≤ 70
Pressure medium	Compressed air, compressed air quality according to ISO 8573-1:2010 [7:4:4]
Min. pressure [bar]	3
Max. pressure [bar]	10
Nominal working pressure [bar]	6
Repeatability [mm]	± 0.02

More technical data is included in the catalog data sheet. Whichever is the latest version.

#### **CAUTION**

**The gantry modules may not under any circumstances have been operated with oiled air before operation with unoiled air.**

## 4 Assembly

### 4.1 Mechanical connection

**Evenness of the mounting surface**

The values apply to the whole mounting surface to which the product is mounted.

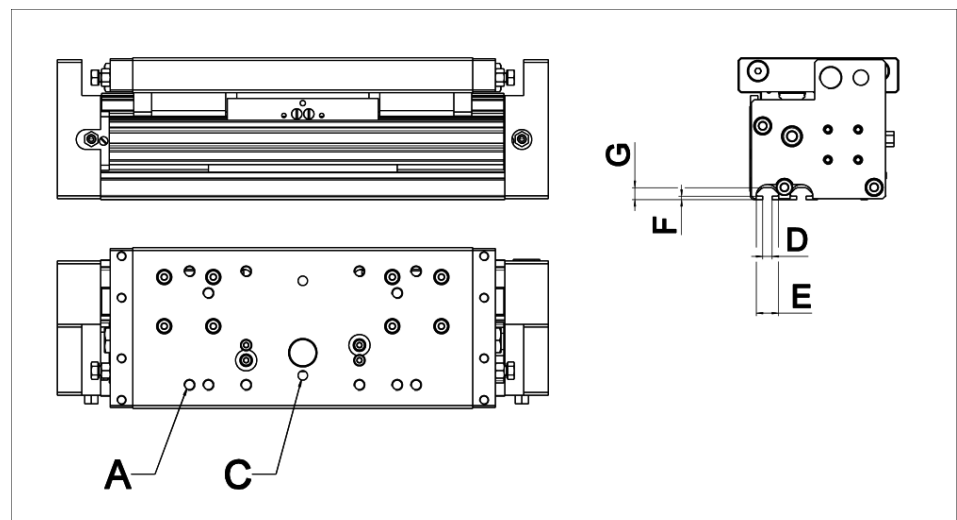
Edge length	Permissible unevenness
< 100	< 0.02
> 100	< 0.05

Tab.: Requirements for evenness of the mounting surface (Dimensions in mm)

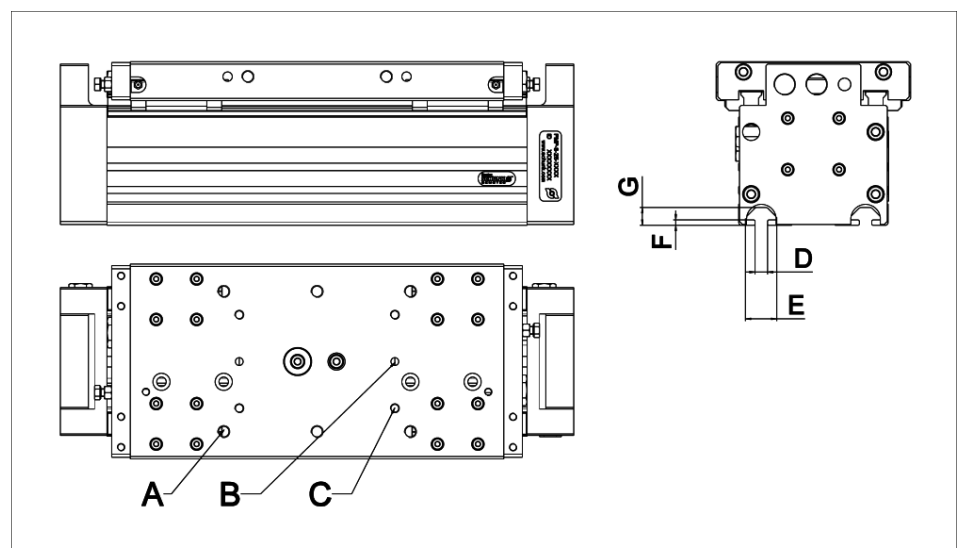
**Mounting**

Grooves fasten the module underneath on the profile, the load can be mounted and fastened on the slide using bore holes and threads.

Position dimensions, etc. → Catalog.



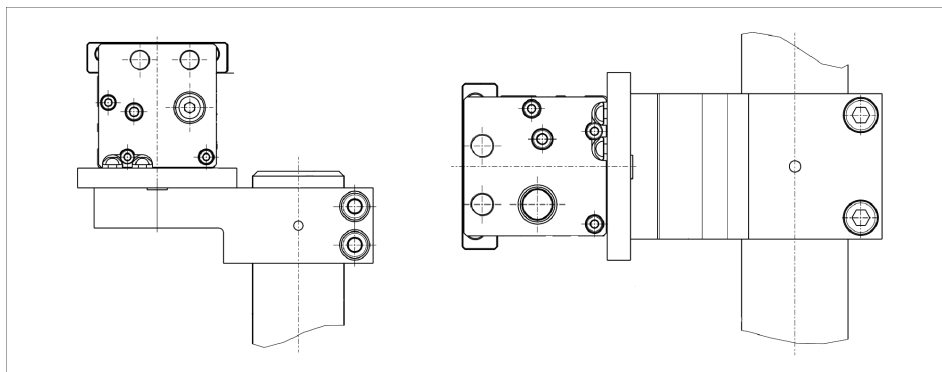
PMPS/F 16 connection geometries




PMPS/F 25 connection geometries



	<b>PMPS/F 16</b>	<b>PMPS/F 25</b>
A [mm]	M6 / 11 (2x)	M8 / 16 (6x)
W [mm]	∅5F7 / 10 (2x)	∅5F7 / 8 (2x)
C	X	M6 / 12 (4x)
D [mm]	5	8
E [mm]	11.77	20.5
F [mm]	1.8	3.5
G [mm]	4.55	7.95



*Fitting example PMPS/F on pillar profile modular system, horizontal and vertical*

Additional information on the pillar profile modular system and mounting elements for attachment  [Catalog](#).

## 4.2 Compressed air supply

### CAUTION

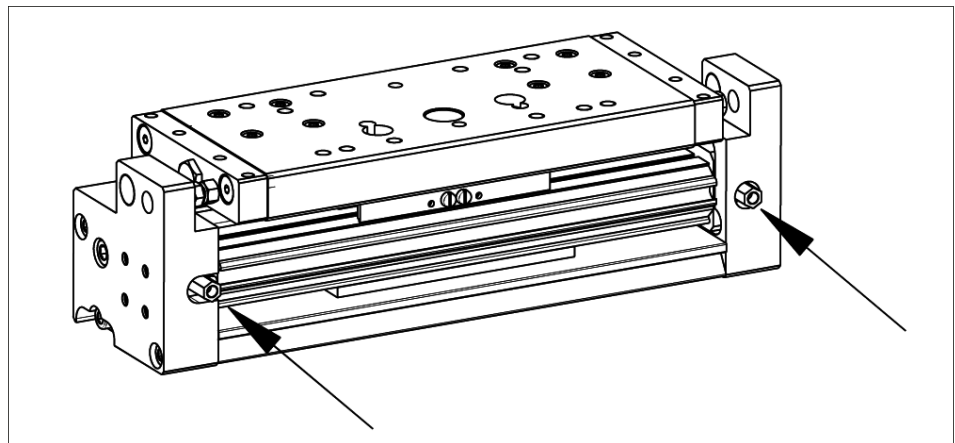
#### Possible damage to the linear module!

If the unit moves too hard into the end position, the linear module may be damaged.

- A linear movement must always be free of impact and bounce.
- For this purpose, carry out sufficient throttling and damping, ▶ 4.4 [ 20].
- Observe the specifications in the catalog data sheet.

### NOTE

- Use connecting wires with the same or a larger cross-section as the connection thread.
- Observe the requirements for the air supply ▶ 3 [ 15].



Compressed air connections PMPS/F .... Axes

	PMP 16	PMP 25
Air connection thread	M5	G 1/8"

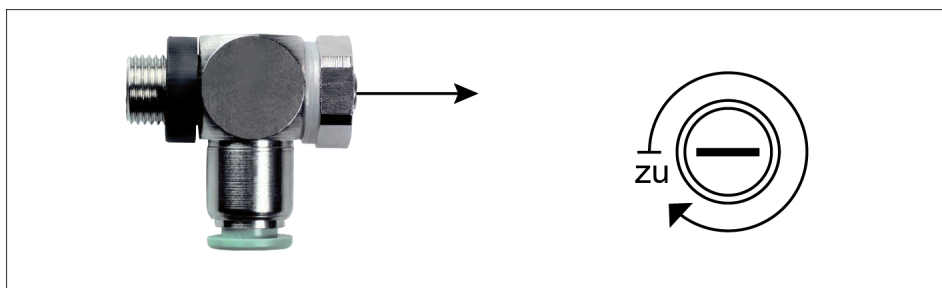
## 4.3 Setting the speed

### CAUTION

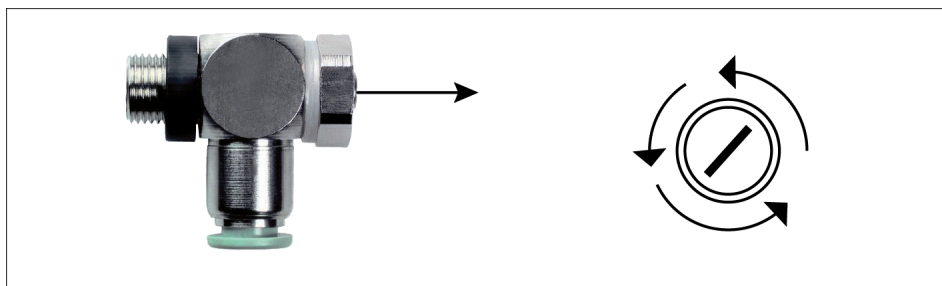
#### Material damage due to erroneous settings!

If the end position is approached too hard, the product may be damaged.

- Adjust exhaust throttle valve and shock absorber so that the movement is braked smoothly.



1. Close exhaust throttle valve completely.

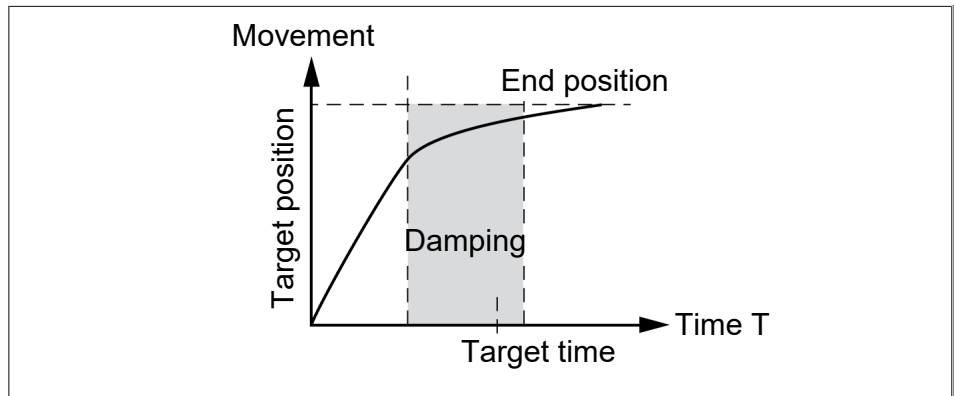


2. Open exhaust throttle valve until the product starts to move.
3. Continue to open the exhaust throttle valve incrementally until the movement decelerates smoothly.
  - ⇒ If the speed is too low, the product will brake too soon and the end position will be reached too slowly.
  - ⇒ If the speed is too high, the product will impact against the end position and the shock absorber will be overloaded.

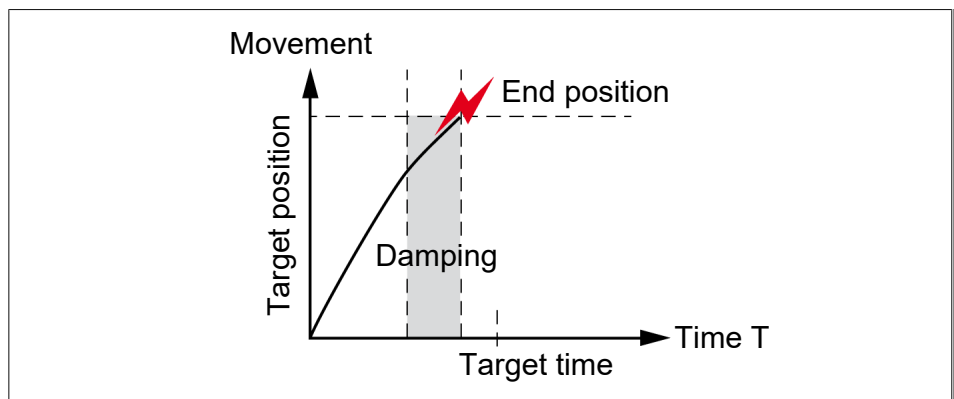
### NOTE

A smooth motion may also be too slow in many use-cases. Further settings can be made via the shock absorbers, ▶ 4.4 [ 20].

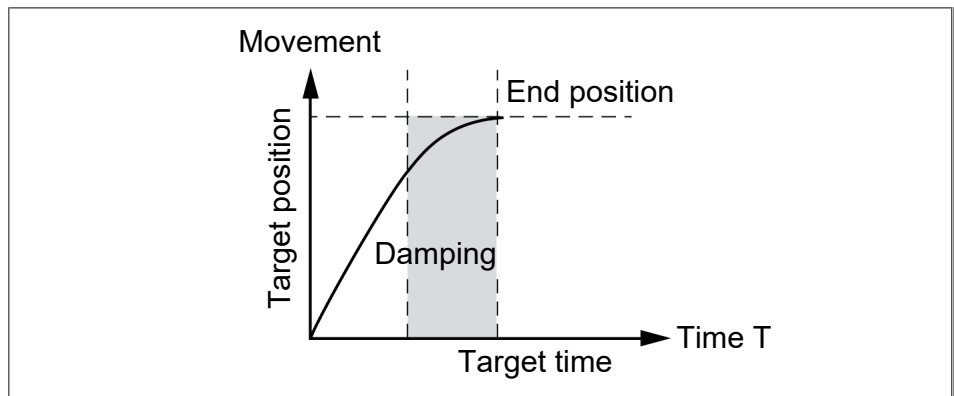
#### 4.4 Adjustment of the shock absorber stroke



The shock absorber stroke is too long and the end position is reached too slowly.



The shock absorber stroke is too short and the unit arrives in the end position too abruptly.



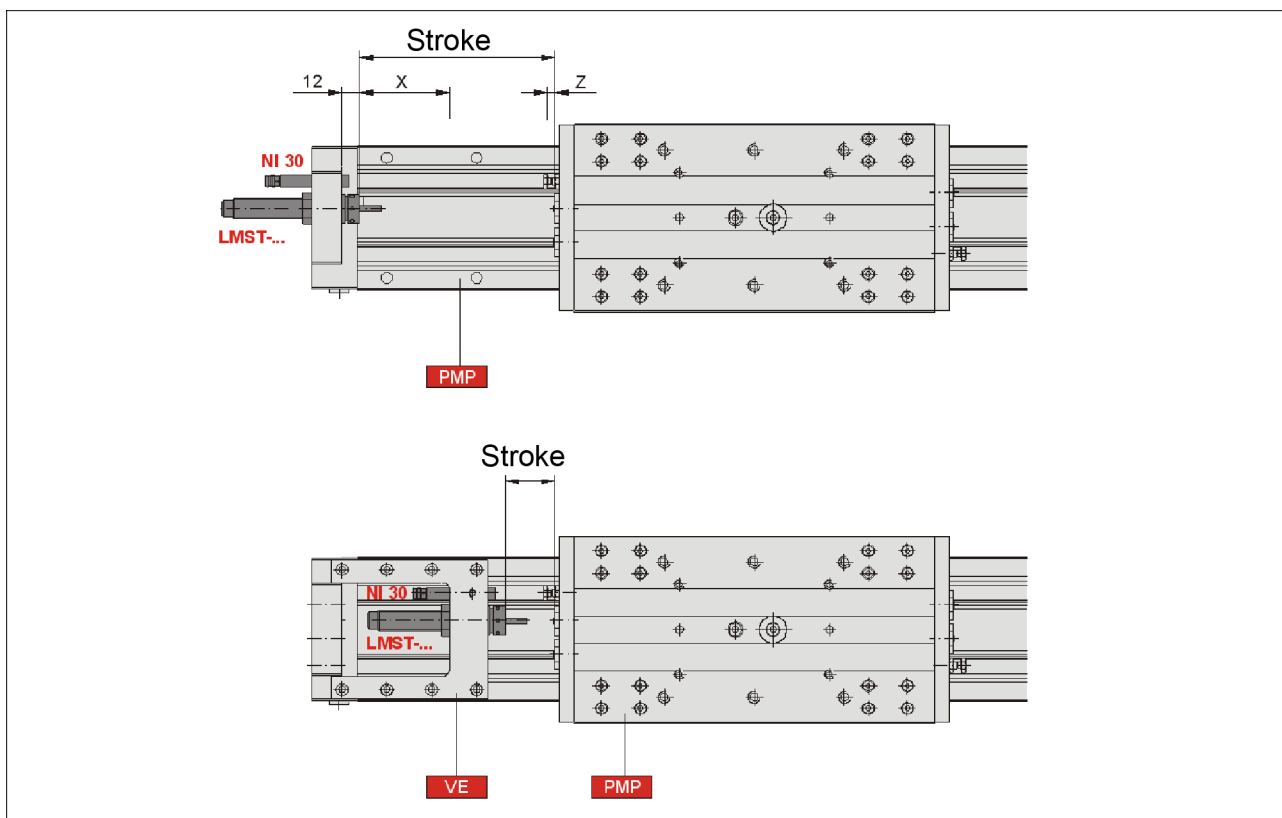
Optimal shock absorber stroke.

## 4.5 End position – sets

For stroke limiting, damping and query of the end positions the following components are available:

- VE (Variable end stop)
- LMST-...(shock absorber – stop collar)
- NI 30 (proximity switch)

Hereinafter the assembly of LMST- and NI 30 in the portal module with and without variable end stop VE is shown.



Portal module with and without variable end stop VE

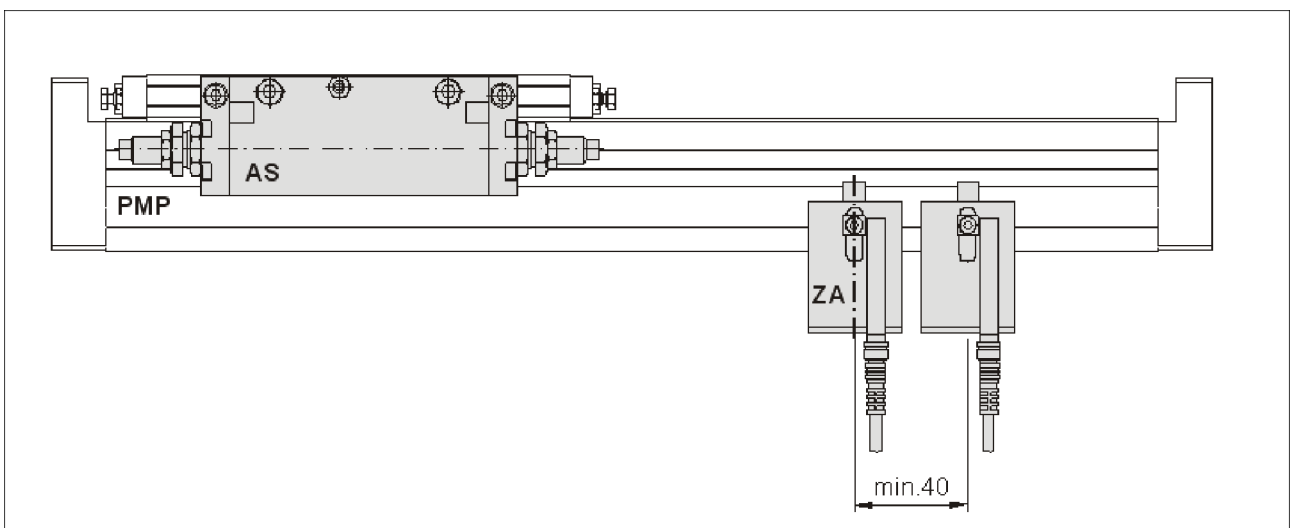
#### 4.5.1 End position adjustment "X"

The end positions can be finely adjusted by the shock absorbers – stop collar LMST

the maximum possible setting range X is included in the catalog  
**modular assembly automation**

##### 4.5.1.1 Intermediate stops AS/ZA

The stop slide AS-... is mounted on the carriage of the portal actuator and, depending on the design, is suitable for approaching the intermediate position from one side or both sides.



Installation of AS and ZA

### 4.5.2 Variable end stop VE

The stroke and its location along the entire stroke of the portal module can be adjusted by the variable end stops. For the assembly remove the cover caps and the fastening screws of the profiled rail guide in the selected area.

#### CAUTION

Ensure that the slots residual in the nuts don't move.

After placing the variable end stop with the supplied centering sleeves it must be screwed together with the profiled rail guides.

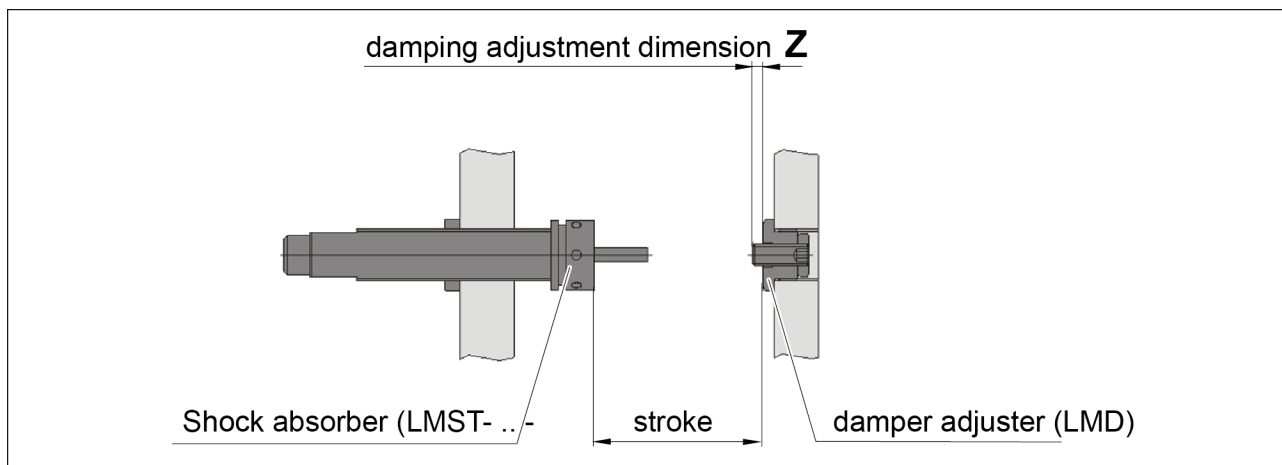
Further information  catalog **modular assembly automation**

### 4.5.3 Damping adjustment "Z"

The adjustment screw of the damper adjustment mechanism can be used to adjust the stroke of the shock absorber and thereby the damping curve to the kinetic energy occur-ring.

The counternut is loosened and the appropriate setting value is adjusted by turning the adjustment screw.

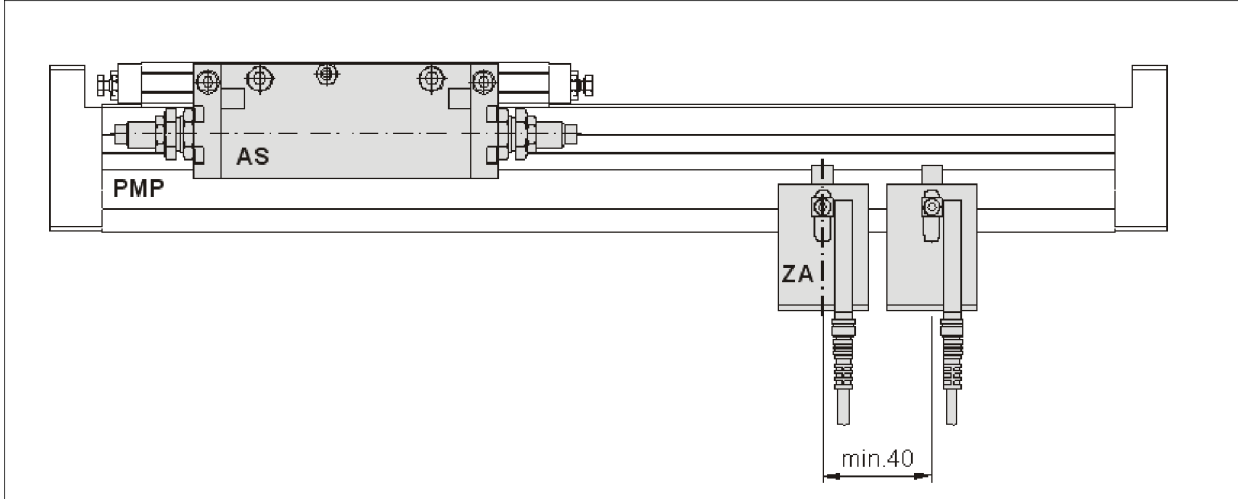
The permissible setting values Z are given in the SCHUNK standard catalog **modular assembly automation**.



damping adjustment dimension "Z"

## 4.6 Intermediate stop AS/ZA

The intermediate stop consists of a stop slide AS... which is mounted on the traversing slide and the actual ZA stops. These can be controlled independently and any number can be distributed along the axis.

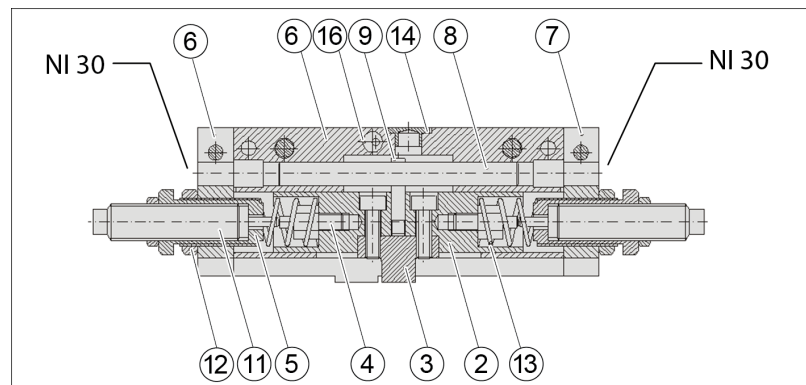


Installation of AS and ZA

### 4.6.1 Stop collar AS ...

The stop collar AS-... is mounted at the guide carriage of the portal module.

- Depending on the model suitable for one- or two-sided to approach the intermediate position.
- The stop collar (Pos.5) can be used for precision adjustment of the intermediate position within a  $\pm 3\text{mm}$  range.
- With an appropriate version and setting, the intermediate position can be approached from both sides without a loss of position.
- Independently of this, it is also possible to match the end position damping to the specific mass by adjusting the shock absorber (11).
- The cover plate (6 and 7) is prepared for installation of a proximity switch NI 30 that interrogates the precision position of the stop slide



: Section drawing stop collar AS



In accordance with the section drawing above, all parts can be ordered individually.

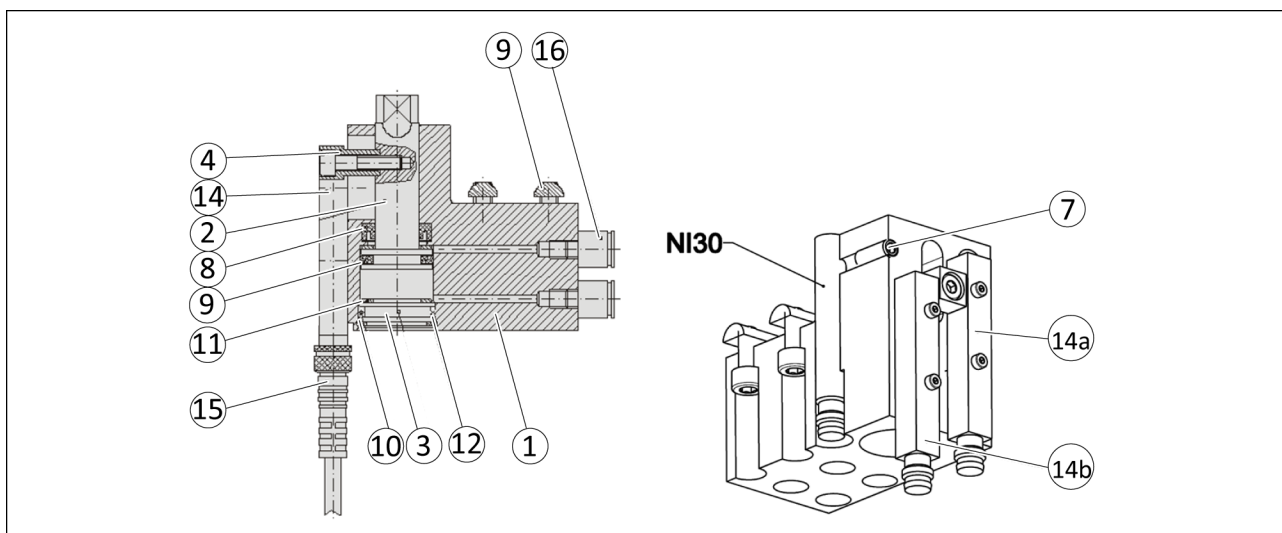
**Ordering numbers are as indicated in the following example**

- Part-No.: AS 25-02

#### 4.6.2 Intermediate stop ZA

The intermediate stop ZA-... is located by means of the slots in the support rail.

- It can be moved steplessly.
- It is thereby possible to approach several intermediate positions **CAUTION Observe minimum distance**.
- The position at which the portal actuator (2) is actually located is determined by the proximity switch NI 40 (14a). Query of the interactive position by the proximity switch NI40 (14b) is optionally possible.



Section drawing and installation of the sensors ZA...

In accordance with the section drawing all parts can be ordered individually.

**Ordering numbers are as indicated in the following example:**


- Part-No: 2 ZA 25-02

As standardized wear part sets, seal sets are available under the following ordering numbers:

- **ZADI 16** for intermediate stop ZA 16
- **ZADI 25** for intermediate stop ZA 25

### 4.6.3 Handling

#### Controlling

Further movement from the intermediate position is possible at the portal of corresponding control module via a 5/3-way valve without repeating stroke (center position = both chambers ventilated). ▶ 5 [  29].

#### determination of the position / sensors

To determine the position of several intermediate positions in which the portal module is currently a installation of the proximity switch NI 30 is intended.

It will be fixed with the clamping screw (20).

A switch cam will be requested at the stop slide.

Achieving a precise end position is sensed by the sensors NI30 on the stop slide.

Thus any intermediate position and end position can be requested exactly.

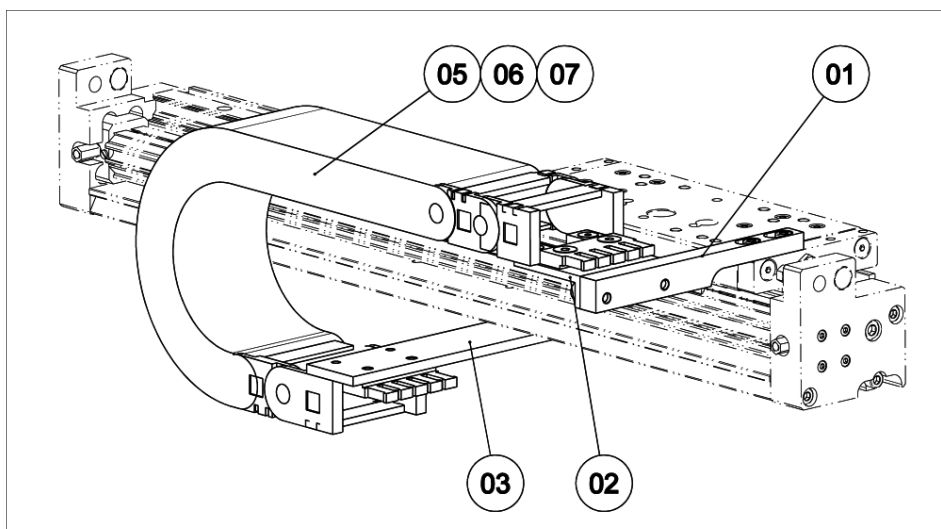
## 4.7 Cable track

There are different possibilities to mount the cable tracks on the module.

In the following chapter there is always only one variant mapped exemplarily.

Detailed information about the attachment variants you can get form of the contact person.

### 4.7.1 Cable track horizontal KSH...



Cable track horizontal KSH...

In accordance with the drawing all wear parts and individual parts are available as single items.

**Ordering numbers are as indicated in the following example**

- Part-No1: KSH...-01

---

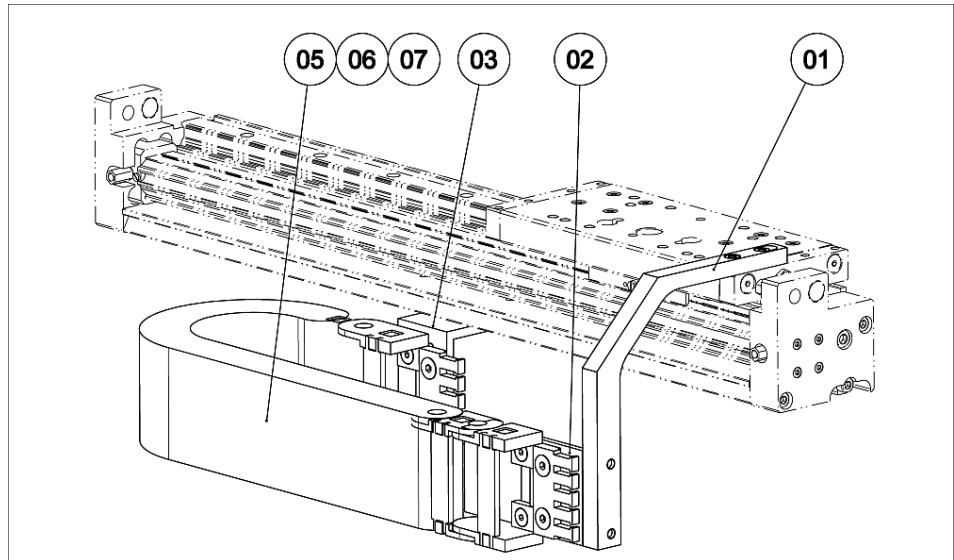
#### NOTE

**Always quote the stroke or the Id.-No. of the axis at part 05**

► 8 [ 35]

---

#### 4.7.2 Vertical KSV... cable drag chain



Vertical KSV... cable drag chain

All parts can be ordered individually in accordance with the figure.

**Order numbers as given in the following example:**

- • Part no. 1: KSV...-01

---

#### **NOTE**

For part 05, always specify the stroke or the axis Id-No.

▶ 8 [ 35].

---

## 5 Commissioning

### CAUTION

#### Before commissioning !

Please read these instructions carefully. Only with the knowledge of this manual errors can be prevented, and trouble-free operation is ensured.

### CAUTION

#### Possible damage to the linear module!

If the unit moves too hard into the end position, the linear module may be damaged.

- A linear movement must always be free of impact and bounce.
  - For this purpose, carry out sufficient throttling and damping, ▶ 4.4 [15].
  - Observe the specifications in the catalog data sheet.
- 
- Check technical specifications ▶ 3 [15].
  - Do not use the linear module until you have determined that it is in perfect operating condition, after having checked for compliance with all permissible operating parameters.
  - For operation, use only a 5/3-directional control valve which ventilates both chambers of the drive cylinder in center position. This ensures, each time the system is started up, that both cylinder chambers are filled equally and thus prevents the slide from shooting out.
  - Regulate the operating speed of the cylinder with regulator valves ▶ 4.2 [18]. Starting slow, increase the speed until the desired operating speed is reached.
  - Do not load the portal module beyond the operating range limit. Excessive loading can cause damage or result in guide unit inaccuracies. The maximum permissible loads are listed in the catalog.

## 6 Troubleshooting

### 6.1 Module does not move?

Possible cause	Corrective action
Pressure drops below minimum.	Check air supply. ▶ 4.2 [18]
Compressed air lines switched.	Check compressed air lines.
Mechanical damage	Check mechanical parts

### 6.2 Power / speed / power of the module is declining?

Possible cause	Corrective action
Pressure drops below minimum.	Check air supply., ▶ 4.2 [18]
Compressed air lines are leaking	Check compressed air lines.
Rodless cylinder is leaking	Check cylinder for leaks and replace if necessary, ▶ 7.4 [34]
Guide carriage or rail is defective	Send the product to SCHUNK with a repair order.
Guide carriage or rail is very dirty	Clean guide rails, relubricate guide carriage and rails, ▶ 7.2 [32]

### 6.3 End position signal not present?

Possible cause	Corrective action
Sensor is adjusted inaccurately to the stop.	Adjust sensor or if necessary change sensor., ▶ 4.5 [21] ▶ 4.5.1.1 [22]
Proximity switch defective or set incorrect.	Change sensor.
Cable breakage.	Replacing the sensor cable.

### 6.4 Module impacts on end position?

Possible cause	Corrective action
Damping wrong adjustet.	Adjusting damping., ▶ 4.5.3 [23] ▶ 4.6.1 [24]
Shock absorber defective.	Change the shock absorber., ▶ 4.5.3 [23] ▶ 4.6.1 [24]
Stroke speed too high.	Check / reduce stroke speed with ventilation valves. Change defective exhaust ait throttle if necessary.

## 6.5 Service load vibrates in end position?

Possible cause	Corrective action
Stroke speed too high.	Check / reduce stroke speed with ventilation valves. Change defective exhaust air throttle if necessary.
Bad damping.	Adjusting damping., ▶ 4.5.3 [23], ▶ 4.6.1 [24]
Unfavorable installation.	Check construction.
PMPS/F type too small	Use larger PMPS/F type

## 7 Maintenance

### 7.1 Notes

The following recommendations apply if the unit is operated as intended in compliance with the specified operating parameters, operating conditions and settings.

#### Original spare parts

Use only original spare parts of SCHUNK when replacing spare and wear parts.

### 7.2 Maintenance and lubrication intervals

#### CAUTION

#### Material damage due to hardening lubricants!

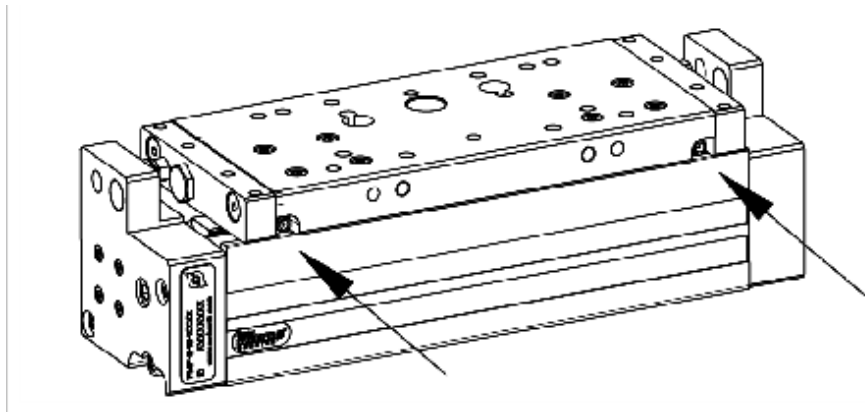
Lubricants harden more quickly at temperatures above 60°C, leading to possible product damage.

- Reduce the lubricant intervals accordingly.

interval	Component	Activity
every 3 months / 500km	Guide rails / Carriage	Clean it with an oil-soaked cloth Remove all incrustations of dust and grease residues Visual inspection for traces of wear. Mechanical testing on backlash and ease of movement of the guides. Grease the intended lubrication points ▶ 7.3 [ 33]
regularly	rodless cylinder	Checking for leaks



### 7.3 Lubricants/Lubrication points (basic lubrication)



*Guide carriage greasing areas*

During maintenance, treat all greased areas with lubricant. Thinly apply lubricant with a lint-free cloth.

SCHUNK recommends the lubricants listed.

Greasing area	Lubricant
Guide carriage	SCHUNK grease 10
Guide rails	SCHUNK grease 10

Details regarding SCHUNK lubricant designations are available at [schunk.com/lubricants](https://www.schunk.com/lubricants).

The product contains food-compliant lubricants as standard.

**The requirements of standard EN 1672-2:2020 are not fully met.**

#### **NOTE**

- Change contaminated food-compliant lubricant.
- Observe information in the safety data sheet from the lubricant manufacturer.

## 7.4 Disassembling the product

### CAUTION

A high degree of expertise is required for the disassembly and assembly of the product ▶ 2.6 [📄 9].

The repair or elimination of product faults by the customer will result in termination of the warranty and liability for all subsequent warranty infringements and consequential damage.

- We recommend having repairs to damaged or defective products carried out at our plant. Please consult your SCHUNK contact person in this regard.
- 

## 7.5 Assembling the product

Assemble the product as shown in the chapter "Assembly" ▶ 8 [📄 35].

### CAUTION

#### Assembly measures

- Select suitable tightening torques for screws when assembling the product in accordance with the generally applicable guidelines for screw connections.
  - Note the specified lubrication and greasing areas ▶ 7.3 [📄 33].
  - Secure all screws using a suitable chemical screw adhesive.
-

## 8 Assembly / spare parts

Wearing parts and individual components are available individually according to the following sectional drawings ▶ 8.1 [ 35 ] / ▶ 8.2 [ 36 ].

### Order numbers are composed as follows:

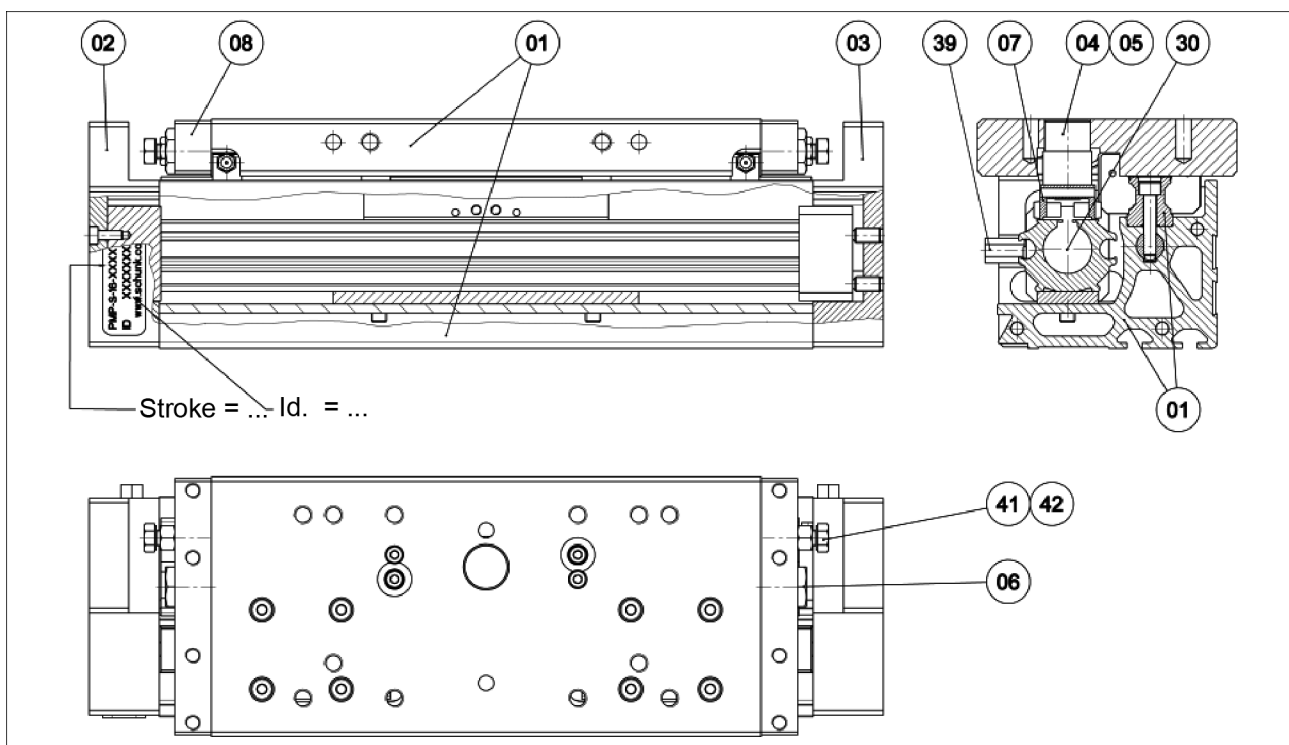
- PMPS16 part no. 4: PMPS 16-04
- PMPF16 part no. 4: PMPF 16-04
- PMPS25 part no. 4: PMPS 25-04
- PMPF25 part no. 4: PMPF 25-04

Always order the cylinder (30) without piston rod as a complete component.

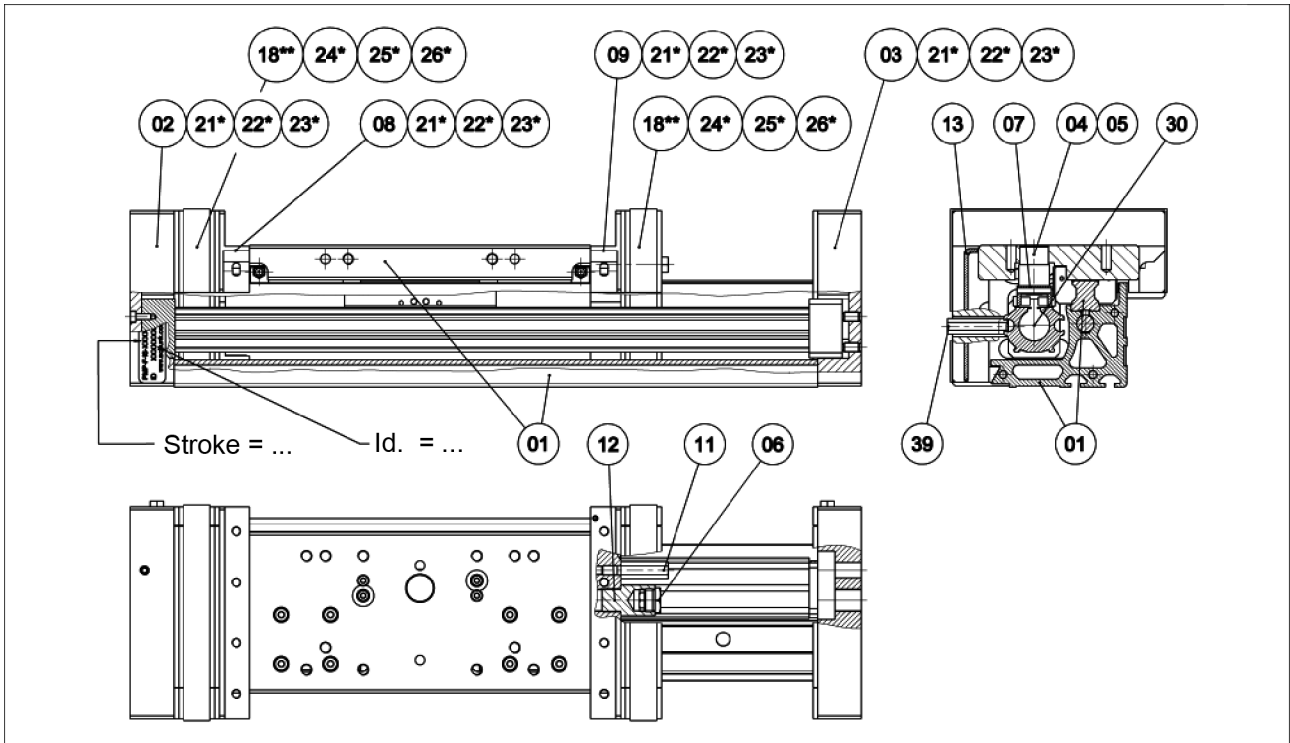
Always state the module stroke or the Id-No. when placing orders.

Please contact your SCHUNK contact if damage should occur to the heavy-duty guide (01).

### 8.1 PMPS/F 16



PMPS 16

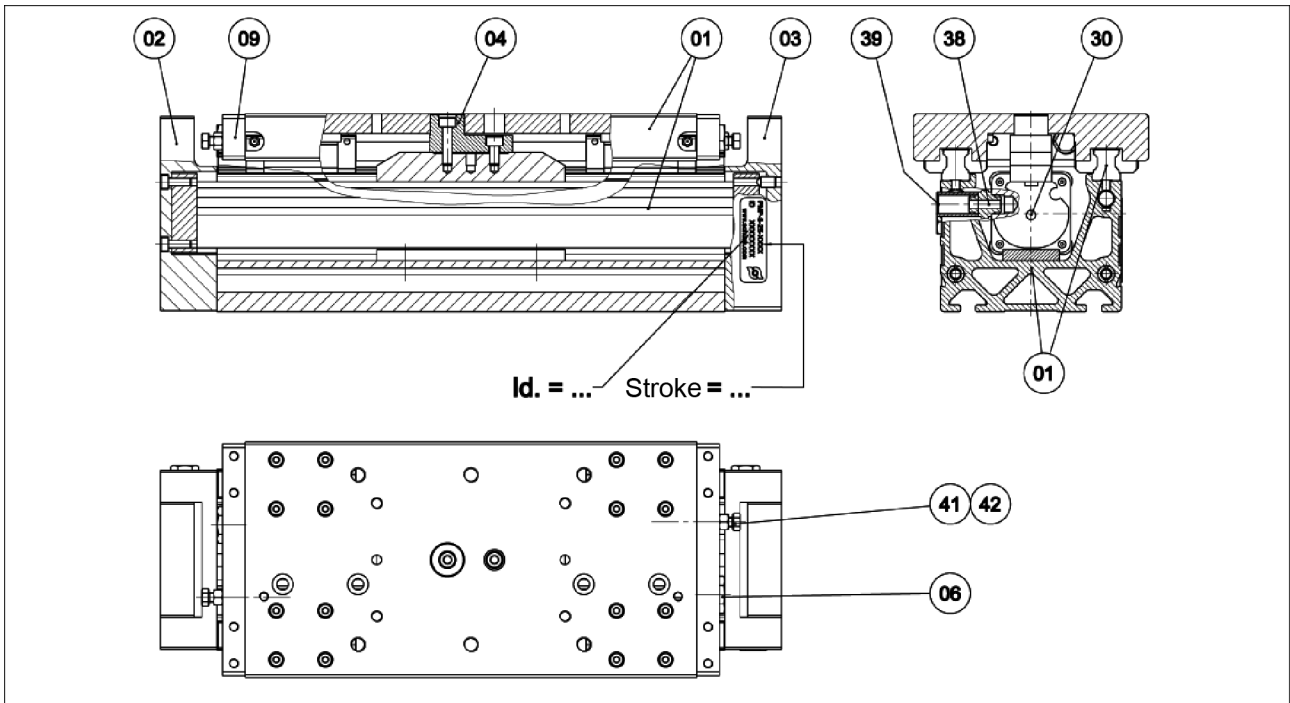


PMPF 16

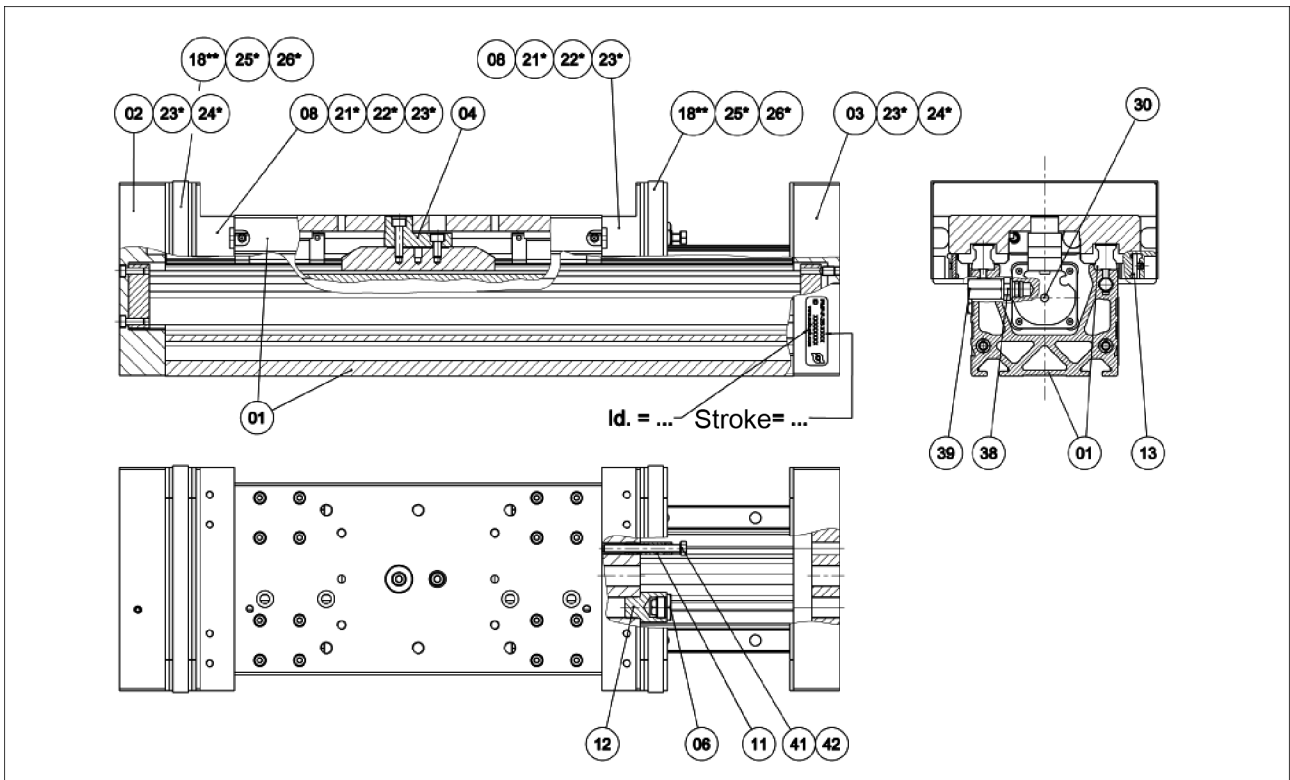
\* Glued to the base part, order together

\*\* stroke- dependent, always indicate the stroke or the Id.-No. to the order

## 8.2 PMPS/F 25



PMPS 25



PMPF 25

- \* Glued to the base part, order together
- \*\* stroke- dependent, always indicate the stroke or the Id.-No. to the order

## 9 Translation of the original declaration of incorporation

in terms of the Directive 2006/42/EG, Annex II, Part 1 Section B.

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

We hereby declare that the partly completed machine described below

Product designation:        Portal module / PMP / pneumatic

meets the following basic occupational health and safety of the Machinery Directive 2006/42/EC:  
No. 1.1.1, No. 1.1.2, No. 1.1.3, No. 1.1.5, No. 1.3.2, 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

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 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.

Person authorized to compile the technical documentation:  
Stefanie Walter, Address: see manufacturer's address

*Signature: see original declaration*

Lauffen/Neckar, April 2024

Dr.-Ing. Manuel Baumeister,  
Head of Systems Engineering,  
Technology & Innovation



## 11 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.

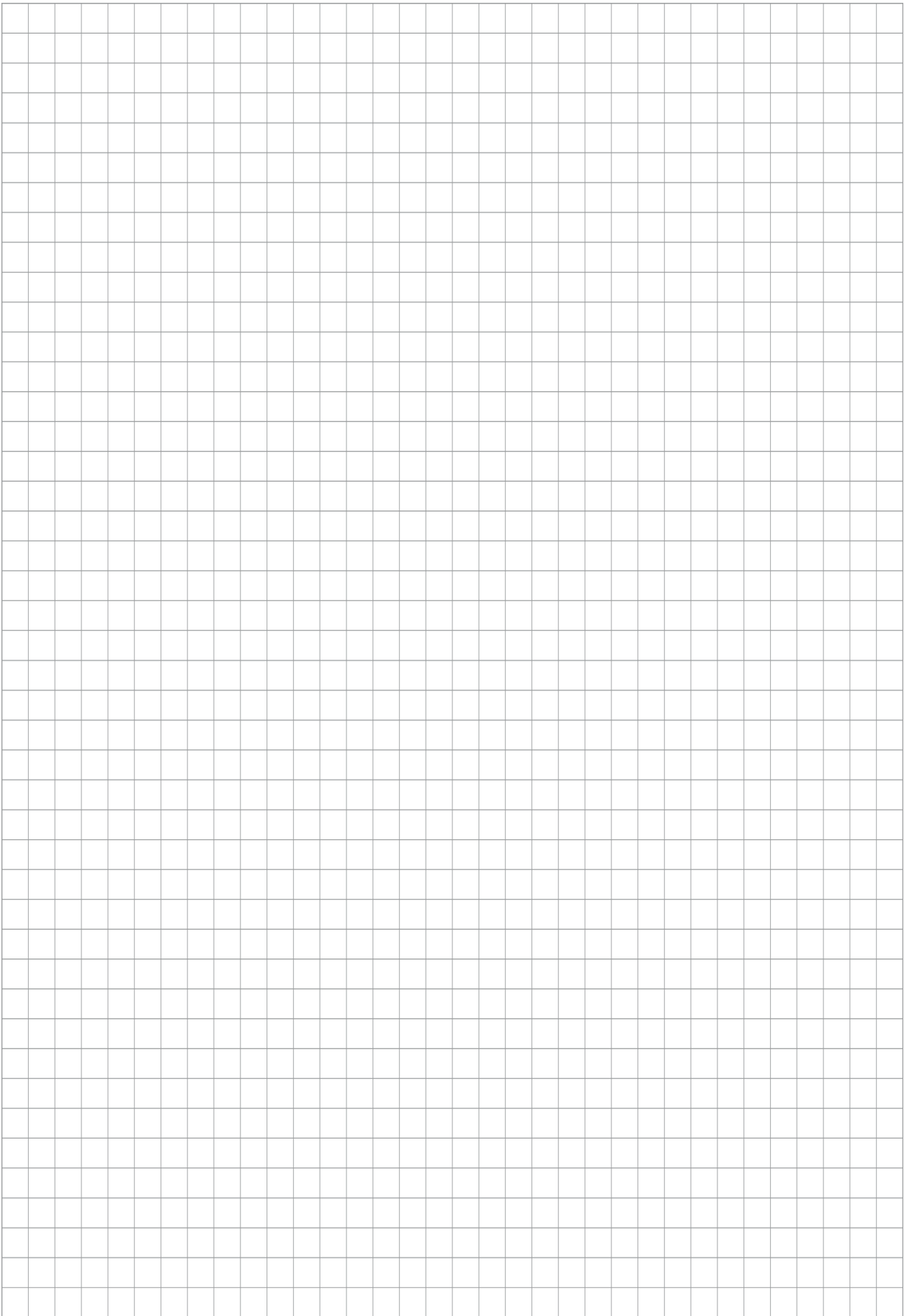
Only in rare exceptional cases do SCHUNK products contain SVHC substances on the candidate list with a mass content above 0.1%. In accordance with Article. 33 (1) of Regulation (EC) No. 1907/2006, SCHUNK complies with its duty to "communicate information on substances in articles" and lists the components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

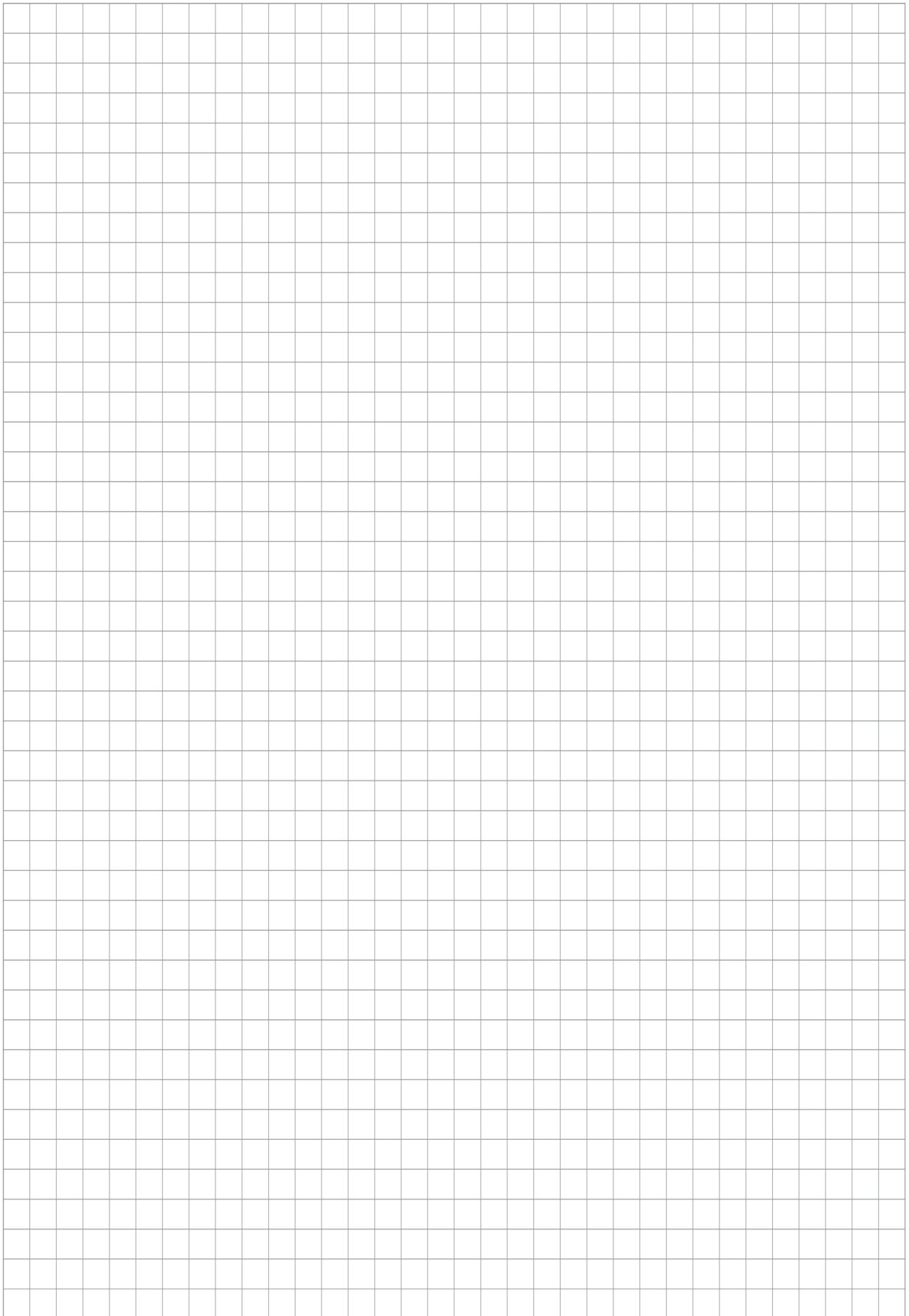
*Signature: see original declaration*

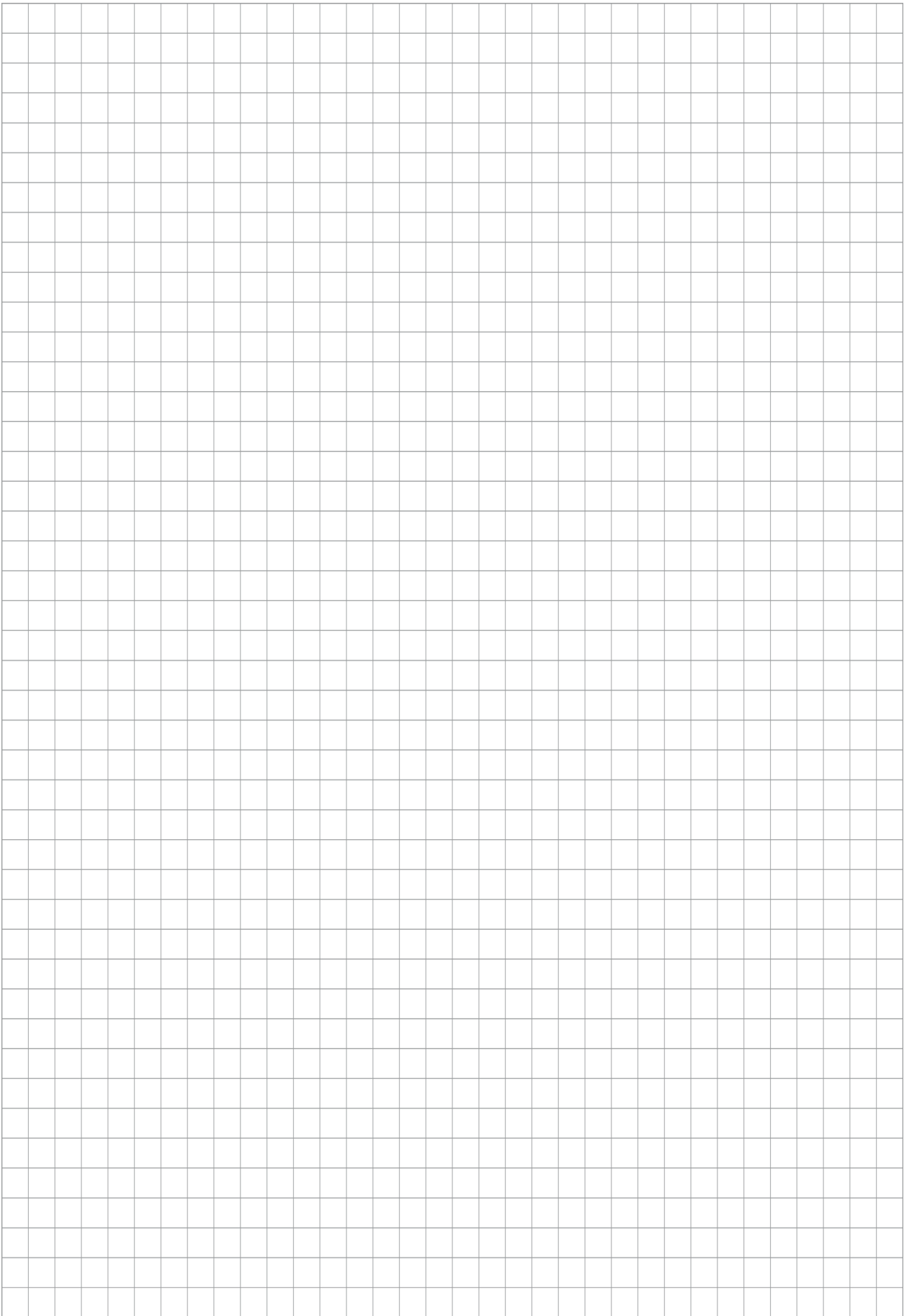
Lauffen/Neckar, April 2024

Dr.-Ing. Manuel Baumeister,  
Head of Systems Engineering,  
Technology & Innovation











**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

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