



Assembly Instructions

Magnetic Gripper SGM-HP 40x121 / SGM-HT-HP 40x121

WWW.SCHMALZ.COM

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Note

The Assembly instructions were originally written in German. Store in a safe place for future reference. Subject to technical changes without notice. No responsibility is taken for printing or other types of errors.

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Contact

J. Schmalz GmbH
Johannes-Schmalz-Str. 1
72293 Glatten, Germany
T: +49 (0) 7443 2403-0
schmalz@schmalz.de
www.schmalz.com

Contact information for Schmalz companies and trade partners worldwide can be found at:
www.schmalz.com/salesnetwork

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1 Important Information

1.1 The technical documentation is part of the product

1. For problem-free and safe operation, follow the instructions in the documents.
 2. Keep the technical documentation in close proximity to the product. The documentation must be accessible to personnel at all times.
 3. Pass on the technical documentation to subsequent users.
- ⇒ Failure to follow the instructions in these Assembly instructions may result in injuries!
- ⇒ Schmalz is not liable for damage or malfunctions that result from failure to heed these instructions.

If you still have questions after reading the technical documentation, contact Schmalz Service at:
www.schmalz.com/services

1.2 Note on Using this Document

J. Schmalz GmbH is generally referred to as Schmalz in this document.

The document contains important notes and information about the different operating phases of the product:

- Transport, storage, start of operations and decommissioning
- Safe operation, required maintenance, rectification of any faults

The document describes the product at the time of delivery by Schmalz and is intended for:

- Installers who are trained in handling the product and can operate and install it
- Technically trained service personnel performing the maintenance work
- Technically trained persons who work on electrical equipment

The displayed figures are only examples. Depending on the particular design, they can differ from the product.

1.3 Symbols



This symbol indicates useful and important information.

- ✓ This symbol represents a prerequisite that must be met before an action is performed.
- ▶ This symbol represents an action to be performed.
- ⇒ This symbol represents the result of an action.

Actions that consist of more than one step are numbered:

1. First action to be performed.
2. Second action to be performed.

1.4 Type Plate

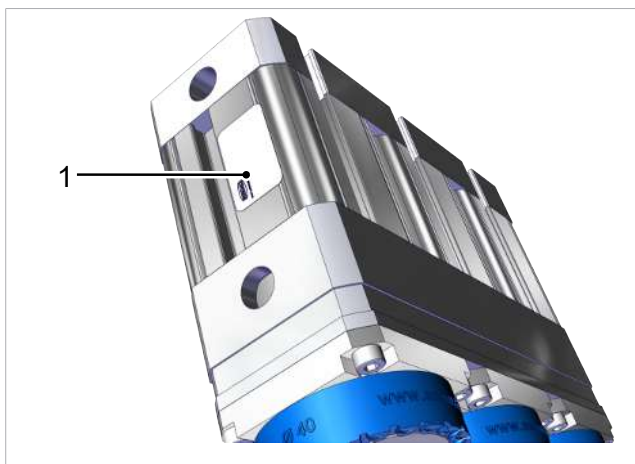
The type plate is permanently attached to the product and must always be clearly legible. It contains product identification data and important technical information.

The QR code enables access to the digital technical documentation for the product.

- ▶ For spare parts orders, warranty claims or other inquiries, have the information on the type plate on hand.

The type plate (1) contains the following data:

- Company logo
- Part sales designation/type
- Coded date of manufacture
- Serial number
- Permitted pressure range
- QR code



2 Fundamental Safety Instructions

2.1 Intended Use

The magnetic gripper is used for handling ferromagnetic workpieces, such as perforated plates, complex laser-cut workpieces, plates with drill holes and apertures.

The operator is required to document the static strength and holding force and to adhere to safety factors.

For system designs, a safety factor of $S=3$ should be applied.

The load to be lifted must be sufficiently rigid so that it is not damaged during gripping and handling.

The magnetic gripper is built in accordance with the latest standards of technology and is shipped in safe condition. However, hazards can arise during use. Observe the warnings in these operating instructions.

The maximum lift capacity must not be exceeded (> See ch. Technical Data).

Do not operate the device in environments where there is a risk of explosion.

Do not operate the product in aggressive environments (e.g. ambient air containing solvent fumes).

2.2 Non-Intended Use

Schmalz accepts no liability for damage caused by the use of the gripper SGM-SV for purposes other than those described under "Intended Use". Use of the gripper SGM-SV for loads that are not specified in the order confirmation or that have different physical properties than those specified in the order confirmation shall be considered non-intended use. In particular, the following types of use are considered non-intended use:

- Storing loads when active
- Removing building components or fixtures

2.3 Personnel Qualifications

Unqualified personnel cannot recognize dangers and are therefore exposed to higher risks!

The operating company must ensure the following points:

- The personnel must be commissioned for the activities described in these instructions.
- The staff must be at least 18 years of age and physically and mentally capable.
- The product must be operated only by persons who have undergone appropriate training.
- Personnel must receive regular safety briefings (frequency as per country-specific regulations).

The following target groups are addressed in these instructions:

The operator of the system must comply with country-specific regulations regarding the age, ability and training of the personnel.

Applicable for Germany:

A qualified employee is defined as an employee who has received technical training and has the knowledge and experience – including knowledge of applicable regulations – necessary to enable him or her to recognize possible dangers and implement the appropriate safety measures while performing tasks. Qualified employees must observe the relevant industry-specific rules and regulations.

2.4 Warnings in This Document

Warnings warn against hazards that may occur when handling the product. The signal word indicates the level of danger.

Signal word	Meaning
 WARNING	Indicates a medium-risk hazard that could result in death or serious injury if not avoided.
 CAUTION	Indicates a low-risk hazard that could result in minor or moderate injury if not avoided.
NOTE	Indicates a danger that leads to property damage.

2.5 Residual Risks

The system integrator must carry out a risk assessment of the entire system for all operating modes and define the danger zone precisely. In doing so, country-specific provisions and regulations must be observed.



 WARNING

The product contains a permanent magnet that generates a continuous magnetic field.

Danger for persons with pacemakers. Devices and data carriers can be damaged.

- ▶ Keep persons with pacemakers away from the product.
- ▶ Keep sensitive electrical devices and data carriers away from the product.



 CAUTION

Risk of crushing if workpiece is abruptly attached

- ▶ Do not activate the magnet until the gripper is on the load.
- ▶ Do not place any body parts between the gripping surface and load.



 CAUTION

Falling product

Risk of injury

- ▶ Securely attach the product at the site of operation.
- ▶ Wear safety shoes (S1) and safety glasses when handling and mounting/dismounting the product.

2.6 Danger Zone

The system integrator must carry out a risk assessment of the entire system and define the danger zone precisely. In doing so, country-specific provisions and regulations must be observed.

Automatic operation on the industrial robot or gantry:

- During automatic operation of the handling system, no persons or animals may be present in the danger zone.
- In other operating modes, ensure that no unauthorized persons or animals are present in the danger zone.
- Ensure that collisions with the surrounding environment and objects are avoided to prevent the load from breaking off.

The system integrator must ensure that in automatic operation, the danger zone is cordoned off to prevent persons from entering (protective fence or sensor system).

The danger zone of the gripper includes the following areas:

- The area directly below the gripper and load.
- The area immediately surrounding the gripper and load.
- The working area of the automated handling system.

2.7 Technical Condition / Manufacturer's Liability

If the product is operated while in a defective state, safety and function will be impaired.

- If the operating behavior changes, check the gripper for faults. Rectify faults immediately!

Schmalz assumes no liability for consequences if the following points have not been complied with:

- Only operate the gripper when in perfect working order as originally delivered.
- Follow the maintenance plan (> See ch. Maintenance).
- Only use original Schmalz spare parts and accessories.
- Do not independently modify or alter the gripper.
- Safety features must not be disabled under any circumstances.

2.8 Responsibility of the Integrator

The system integrator must carry out a risk assessment of the entire system for all operating modes and define the danger zone precisely. In doing so, country-specific provisions and regulations must be observed.

- Ensure that the gripper cannot be started up by unauthorized persons.
- During maintenance or repair work, ensure that the gripper cannot be operated.
- In automatic operation, ensure that the danger zone is cordoned off to prevent persons from entering (protective fence or sensor system).
- In other operating modes, ensure that no unauthorized persons or animals are present in the danger zone.
- Ensure that collisions with the surrounding environment and objects are avoided to prevent the load from breaking off.
- Before handling unfamiliar loads, carry out tests to ensure safe operation.

- The load to be lifted is sufficiently rigid so that it cannot be damaged during gripping and handling.

2.9 Country-Specific Regulations for the Operating Company

1. Observe the country-specific regulations regarding accident prevention, safety testing and environmental protection.
2. The gripper is used in combination with an automated handling system (gantry/robot). Ensure that the appropriate country-specific regulations and safety regulations are adhered to.

3 Product Description

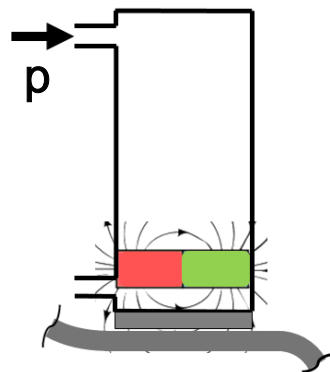
3.1 Description of the Magnetic Gripper

Magnetic grippers lift ferromagnetic workpieces using magnetic force. They are used for handling sheet metal, perforated plates, complex laser-cut workpieces, sheets with drill holes as well as apertures, corrugated sheets, and pipes.

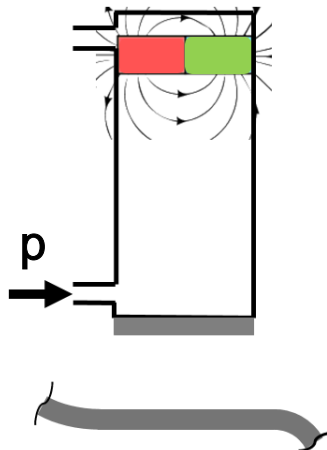
By applying compressed air, the permanent magnets are moved towards the gripping surface (gripping the workpiece) or away from the gripping surface (depositing the workpiece).

The compressed air must be applied for at least one second to ensure reliable switching.

Gripping the workpiece

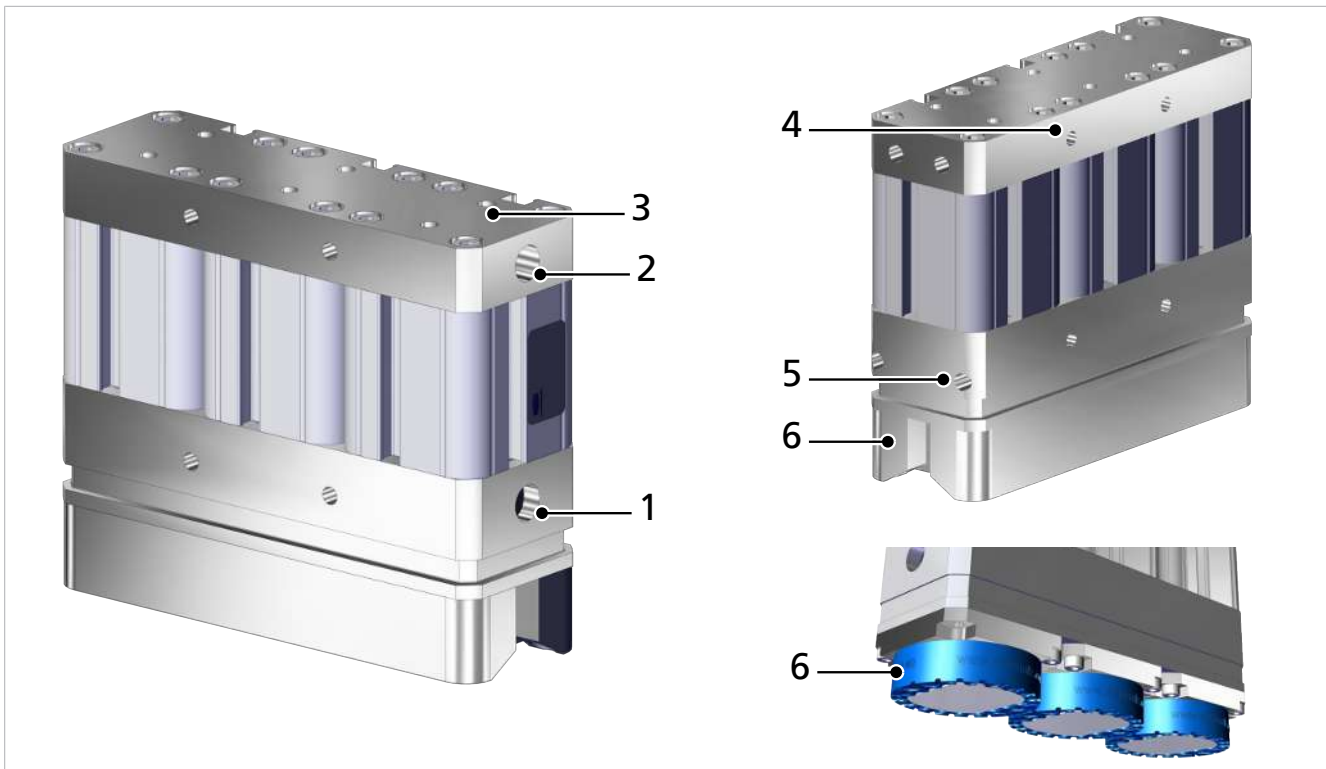


Depositing the workpiece



The (external) compressed air generation is not included in the scope of delivery. If you have any questions about the design, please contact the Schmalz service team at:

www.schmalz.com/services



1	1/8" compressed air connection (depositing workpiece)	2	1/8" compressed air connection (gripping workpiece)
3	M5 mounting thread (6x) for universal connection	4	M5 mounting thread (4x) for lateral holder systems (> See ch. Acces- sories)
5	M6 mounting thread (4x) for front holder systems (> See ch. Acces- sories)	6	Support rail (2x) or friction ring elements (3x)

3.2 Variants and Type Key

The magnetic gripper is available in two different versions. The version is indicated in the item designation. The item designation is composed as follows:

The gripper is available in four different versions:

- Magnetic gripper **SGM-HP 40x121** and **SGM-HP 40x121 3RR** with very high holding forces
For demanding applications with an operating temperature of up to 70° C
- Magnetic gripper **SGM-HT-HP 40x121** with very high holding forces
For demanding high-temperature applications with an operating temperature of up to 150° C and workpiece temperature of up to 350° C
- Magnetic gripper **SGM-HT-HP 40x121 3RR** with very high holding forces
For demanding high-temperature applications with an operating temperature of up to 150° C and workpiece temperature of up to 200° C (250° C for less than 30 seconds)

Part number	Type name	High-temperature	Gripping surface
10.01.17.00566	SGM-HP 40x121	---	40x121 mm with support rails
10.01.17.00544	SGM-HT-HP 40x121	HT	
10.01.17.00643	SGM-HP 40x121 3RR	---	40x121 mm with 3 friction ring elements
10.01.17.00664	SGM-HT-HP 40x121 3RR	HT	

4 Technical Data

4.1 General Parameters

Parameter	Gripper type	
	SGM-HP Support rail / friction ring ele. (3RR)	SGM-HT-HP Support rail / friction ring ele. (3RR)
Holding force ¹ ≥ 0.5 mm, sheet metal	65 N / 90 N	75 / 85
Holding force ¹ ≥ 0.7 mm, sheet metal	120 N / 165 N	140 N / 165 N
Holding force ¹ ≥ 1 mm, sheet metal	270 N / 295 N	230 N / 270 N
Holding force ¹ ≥ 2 mm, sheet metal	580 N / 600 N	600 N / 600 N
Max. holding force ¹	1070 N / 730 N	1170 N / 680 N
Lateral force, dry ²	210 N / 240 N	190 N / 390 N
Lateral force, oily ²	160 N / 155 N	175 N / 195 N
Residual holding force	≤ 2.5 N / ≤ 0.5 N	
Ambient temperature	5 to 70 °C	Max. 150° C
Contact temperature	Max. 70° C	Max. 350° C ³ / max. 200° C (250° C for a short time)
Operating principle	Bistable	
Mounting position	Any	
Weight	1500 g / 1220 g	
Opt. operating pressure	2.5 to 6.0 bar	
Operating medium	Air or neutral gas, 40 µm filtered, with or without oil, class 7-4-4 compressed air quality acc. to ISO 8573-1	

¹ All holding forces are static and unsecured when gripper active surfaces are fully covered on steel plate S235 at +20° C

² 2 mm steel plate

³ Can be used for workpiece temperatures up to 350° C (depending on process conditions). The influence of temperature can reduce holding forces by up to 30%.



As the operating temperature increases, the holding force of the grippers decreases. We recommend performing tests before continuous operation.



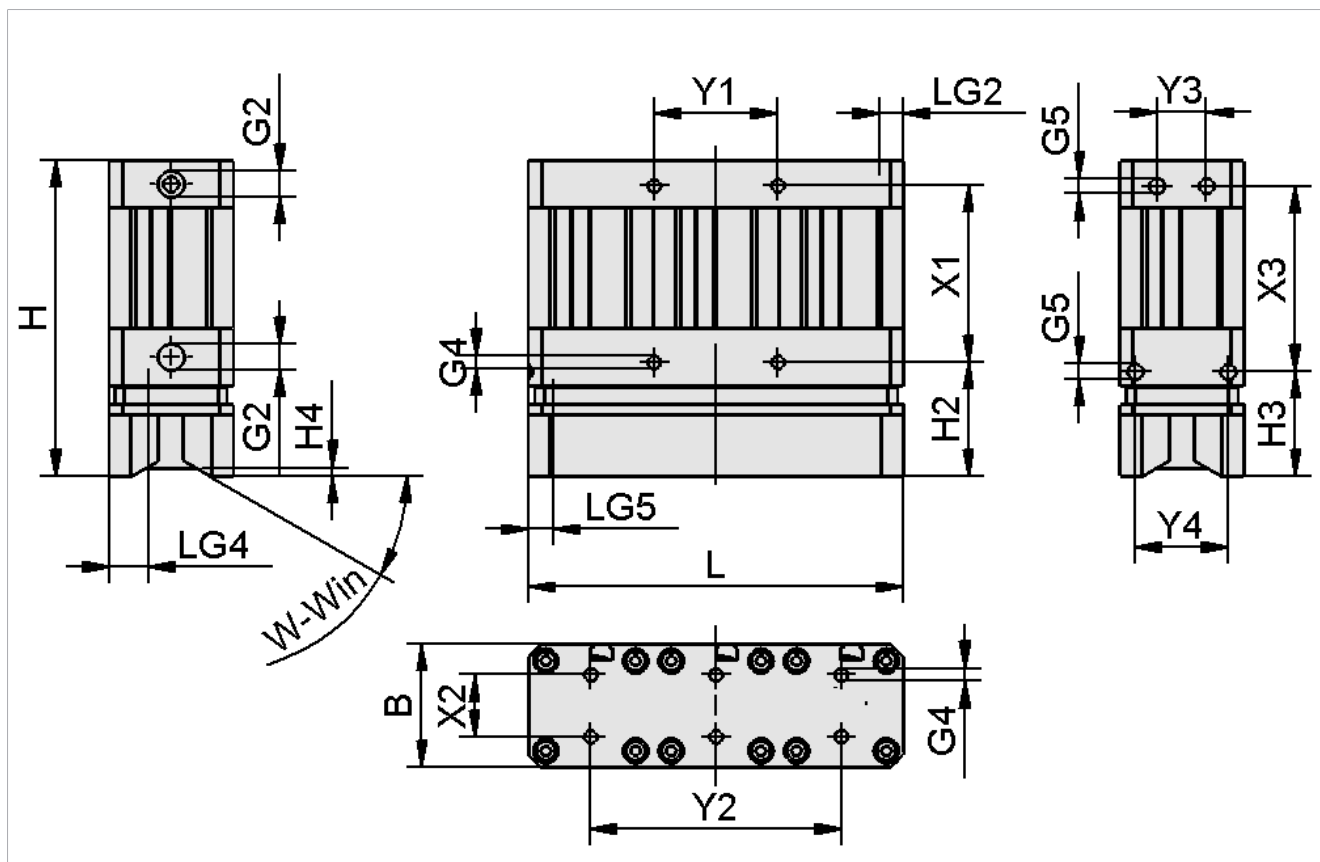
The specified values apply to clean, smooth surfaces for low-carbon steel sheets. Dirty, rough, and highly alloyed steel sheets reduce the holding force.



For maximum holding forces, the component to be handled must completely cover the gripping surface.
Due to the design of the gripper, it is not possible to centrally grip parts that are smaller than the gripping surface.

4.2 Dimensions

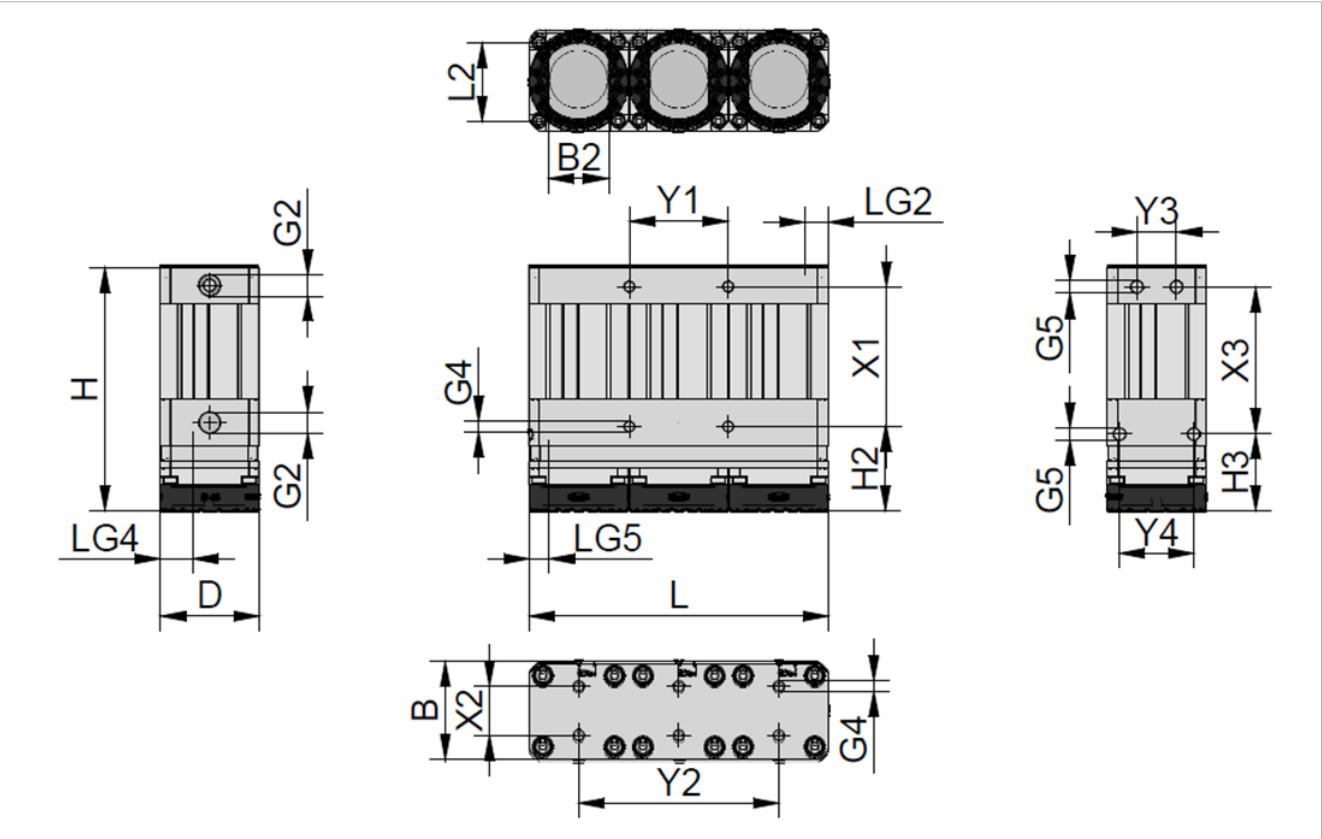
Variants with rails



L	B	H	H2	H3	H4	X1	X2	X3	Y1
121	40	102	36.7	33.6	2.6	57	20	60	40
Y2	Y3	Y4	G2	LG2	G4	LG4	G5	LG5	W
81	16	30	1/8" internal thread	6	M5 internal thread	7	M6 internal thread	6.5	30°

All specifications except angles are stated in millimeters [mm].

Variants with friction ring elements



L	B	H	H2	H3	X1	X2	X3	Y1	D	L2
121	40	99.4	34.7	31.3	57	20	60	40	40	32
B2	Y2	Y3	Y4	G2	LG2	G4	LG4	G5	LG5	
24.2	81	16	30	1/8" internal thread	6	M5 internal thread	7	M6 internal thread	6.5	

All specifications except angles are stated in millimeters [mm].

5 Transportation and Storage

5.1 Checking the Delivery

The scope of delivery can be found in the order confirmation. The weights and dimensions are listed in the delivery notes.

1. Compare the entire delivery with the supplied delivery notes to make sure nothing is missing.
2. Damage caused by defective packaging or occurring in transit must be reported immediately to the carrier and J. Schmalz GmbH.

5.2 Reusing the Packaging

The product is delivered in cardboard packaging. The packaging should be reused to safely transport the product at a later stage.



Keep the packaging for future transport or storage.

6 Installation

6.1 Installation Instructions



⚠ WARNING

The product contains a permanent magnet that generates a continuous magnetic field.

Danger for persons with pacemakers. Devices and data carriers can be damaged.

- ▶ Keep persons with pacemakers away from the product.
- ▶ Keep sensitive electrical devices and data carriers away from the product.

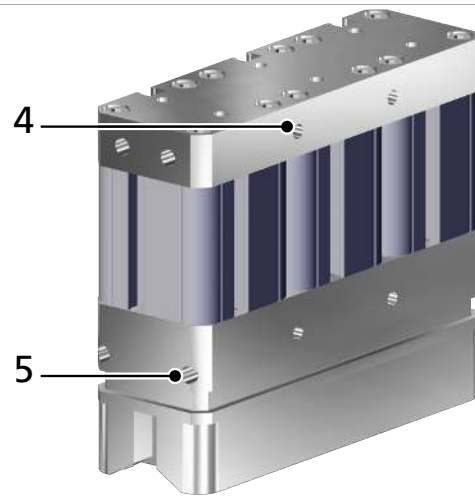
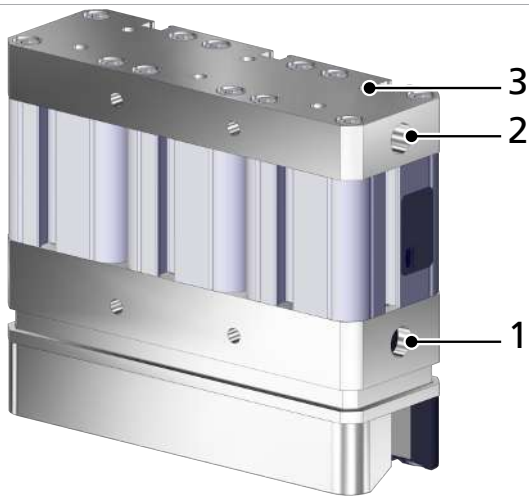


⚠ CAUTION

Improper installation or maintenance

Personal injury or damage to property

- ▶ Prior to installation and before maintenance work, the product must be disconnected from the power supply, depressurized (vented to the atmosphere) and secured against unauthorized restart.



- | | |
|----------------------------|--|
| <p>1</p> <p>3</p> <p>5</p> | <p>1/8" compressed air connection (depositing workpiece)</p> <p>M5 mounting thread (6x) for universal connection</p> <p>M6 mounting thread (4x) for holder systems (> See ch. Accessories)</p> |
|----------------------------|--|

- | | |
|-------------------|--|
| <p>2</p> <p>4</p> | <p>1/8" compressed air connection (gripping workpiece)</p> <p>M5 mounting thread (4x) for holder systems (> See ch. Accessories)</p> |
|-------------------|--|

6.2 Mechanical Attachment

The gripper is adapted to the handling system either directly or by using interchangeable holder systems. The holder systems can be chosen from the range of accessories ([> See ch. 11 Accessories, Spare Parts and Wearing Parts, p. 30](#)).

The product can be mounted in any position.

To ensure the specified holding forces, the following minimum distances must be observed when using two grippers side by side:

- If adjacent grippers are aligned the same way (i.e. the pneumatic connections are positioned next to each other), maintain a minimum distance of **5 mm**.



- If adjacent grippers face opposite directions (i.e. the pneumatic connections are positioned opposite each other), maintain a minimum distance of **80 mm**.



6.3 Pneumatic connection

- Where possible, use pipelines instead of hoses.
- Shorten the hoses and pipelines as much as possible to keep the response times as short as possible.
- Keep hose lines free of bends and crimps.
- Observe the minimum bend radius of the hoses.
- Route the hoses so that they do not rub against or collide with other components.
Observe the travel paths of the gripper!
- To minimize pipeline/hose damage, the bending radii should be as large as possible ($> 90^\circ$).
- The hoses must be of sufficient size.



NOTE

Using a component with a mounting thread that is too long

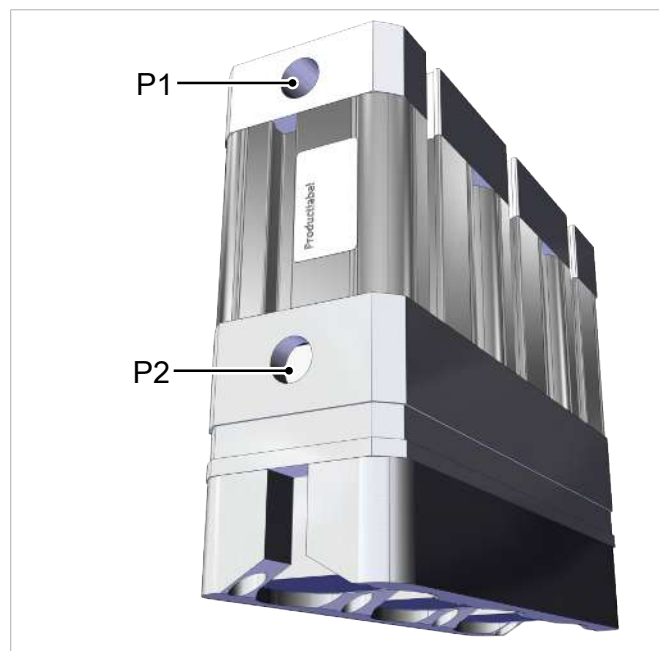
Product damage and malfunction

- Ensure that the specified thread depth is not exceeded.

1. Remove the transport safety guard from the compressed air connection.

2. Mount the (customer-provided) components for connecting the hoses to compressed air connections P1 and P2.

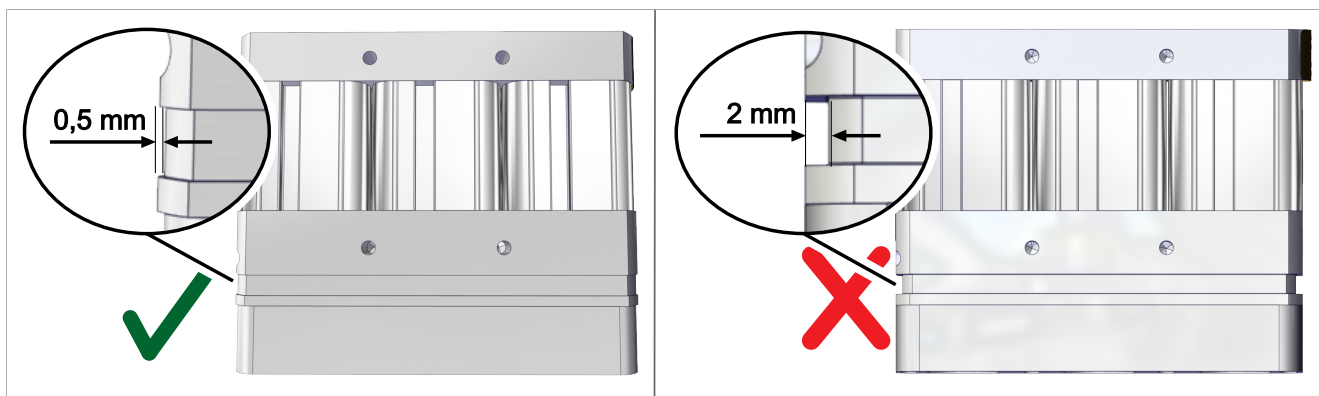
Do not exceed the thread depth (see Chapter "Dimensions").



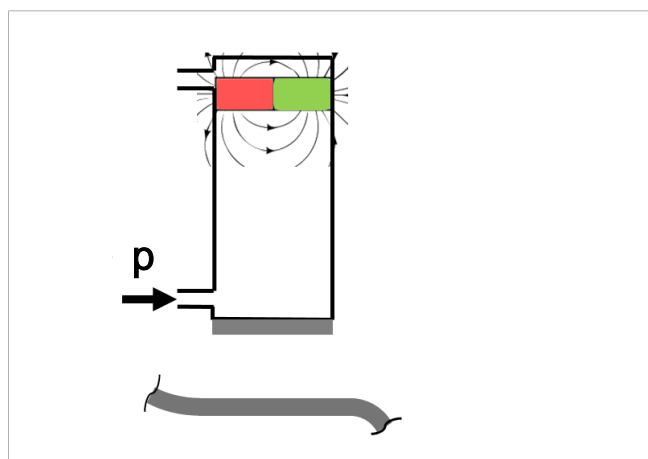
3. Connect the compressed air hose for gripping the workpiece to the compressed air connection (P1).
4. Connect the compressed air hose for depositing the workpiece to the compressed air connection (P2).

6.4 Mounting the Conversion Kit (3RR)

From index status 3, grippers from the previous series without friction rings (part number: 10.01.17.00566, 10.01.17.00544) can be converted to the variant with friction ring elements (variant: 3RR).



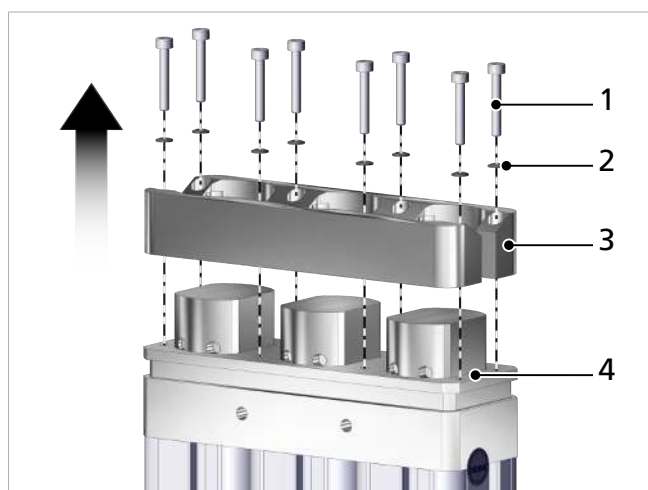
- ✓ The gripper to be converted has index status 03 (at least). You can tell whether this is the case by the groove depth of 0.5 mm shown above.



- ▶ Make sure that the piston position is "deposit workpiece".

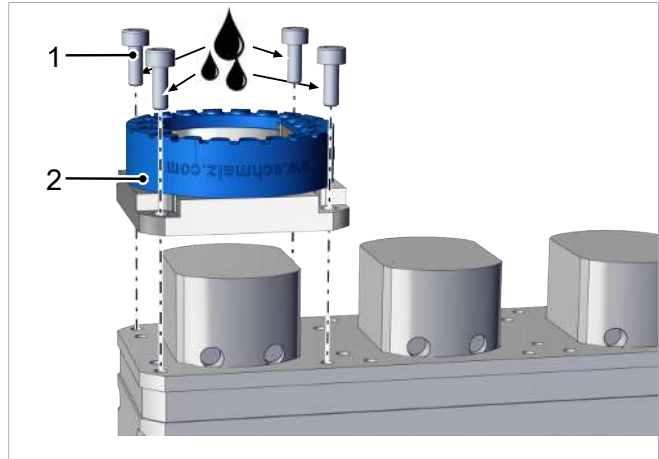
- ✓ The gripper has been disconnected from the compressed air supply.
- ✓ The conversion kit with part no. 10.01.17.00662 or 10.01.17.00663 (HT variant) is available for use.
- ✓ Low-strength bolt adhesive (e.g. Loctite 221) is available for use.

1. Release the screws (1).

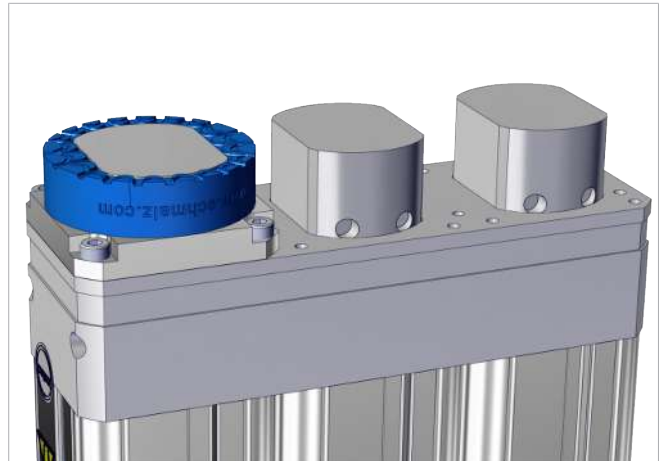


2. Remove the screws, locking washers, and support rails (1–3).
3. Clean the installation environment (housing base with integrated pole shoes (4)) if necessary.

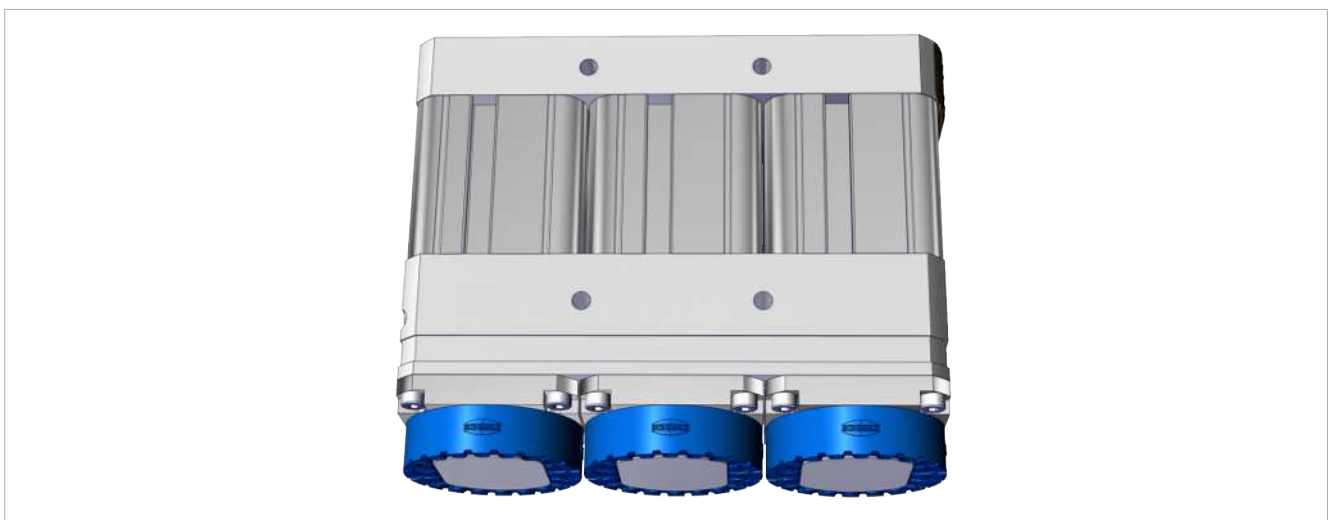
4. Glue the friction ring element (2) to the gripper using the four supplied screws (1) with thread locking compound (low-strength thread lock, e.g. Loctite 221) as shown in the figure and fasten with a tightening torque of 1.4 Nm.



⇒ The figure shows the gripper with the friction ring element (2) affixed.



5. Mount the other two friction ring elements (2) accordingly.



⇒ The gripper has been fully converted to the friction ring elements.

7 Start of Operations

7.1 Personnel Qualification

Unqualified personnel cannot recognize dangers and are therefore exposed to higher risks!

1. Only instruct qualified personnel to perform the tasks described in these operating instructions.
2. The product may only be operated by persons who have undergone appropriate training.
3. Electrical work and installations may only be carried out by qualified electrical specialists.
4. Assembly and maintenance work must only be carried out by qualified personnel.

7.2 Before Initial Start of Operations

Before the initial start of operations following installation, repair, servicing or maintenance work, you must check the following:

- All mechanical connectors are properly attached and secured.
- All screws and nuts are tightened to specified torques.
- All components are installed.
- The safety distances have been maintained.
- The supply hoses are properly routed.
- The EMERGENCY STOP switch for the overall system is working.
- The type plate and "Warning of Magnetic Field" sign are present and easy to read.



⚠ CAUTION

Noise pollution due to incorrect installation of the pressure and vacuum connections

Hearing damage!

- ▶ Correct installation.
- ▶ Wear ear protectors.



⚠ CAUTION

Risk of crushing if workpiece is abruptly attached

- ▶ Do not activate the magnet until the gripper is on the load.
- ▶ Do not place any body parts between the gripping surface and load.

8 Operation

8.1 Preparations

- ▶ The product must be operated only by persons who have undergone appropriate training.



WARNING

The product contains a permanent magnet that generates a continuous magnetic field.

Danger for persons with pacemakers. Devices and data carriers can be damaged.

- ▶ Keep persons with pacemakers away from the product.
- ▶ Keep sensitive electrical devices and data carriers away from the product.

To avoid injury, always use appropriate protective equipment that is suitable for the situation. The protective equipment must meet the following standards:

- Protective work shoes in safety class S1 or higher
- Eye protection class F

Before each activation of the gripping system, the following measures must be taken:

1. Check the device for visible damage. Correct any faults or report them to the supervising personnel.
2. Ensure that only authorized persons are present in the working area of the machine or system in order to prevent any hazard from switching on the machine.
3. Ensure that the danger zone of the machine or system is free of persons during automatic operation.

9 Troubleshooting

9.1 Safety Instructions for Maintenance

Personnel must have read and understood the instructions.



WARNING

Risk of injury due to incorrect maintenance or troubleshooting

- ▶ Check the proper functioning of the product, especially the safety features, after every maintenance or troubleshooting operation.



CAUTION

Improper installation or maintenance

Personal injury or damage to property

- ▶ Prior to installation and before maintenance work, the product must be disconnected from the power supply, depressurized (vented to the atmosphere) and secured against unauthorized restart.

9.2 Faults, Causes, Solutions

Error	Cause	Solution
Workpiece is not gripped	Magnets are not in the corresponding end position	▶ Check compressed air supply - Check hose connections and plug-in screw unions
	Pressure too low	
Magnetic gripper leaks when compressed air is applied	Sealing elements damaged; use at too high contact or ambient temperature	▶ Adhere to the defined temperature ranges.
Workpiece is only gripped with reduced holding force	The workpiece to be handled does not completely cover the gripping surface.	▶ Make sure that the workpiece to be handled completely covers the gripping surface.
	Contact elements damaged	▶ Replace damaged contact elements.
	Ferromagnetic pollutants on the gripping surface (e.g. iron shavings)	▶ Clean the gripping surface.
	Contact elements make insufficient or no contact with the pole shoes	▶ Make sure that the pole shoes are in flat contact when mounting the contact elements.
	The workpiece to be gripped has a dirty and/or rough surface or is highly alloyed.	▶ If possible, only handle low-carbon workpieces (steel sheets) with a clean and smooth surface.
	The operating or ambient temperature is too high.	▶ Adhere to the defined temperature ranges; if necessary, tests should be performed before continuous use.

When using sensors

Error	Cause	Solution
Sensor (for monitoring the piston position) cannot be taught	Sensor defective	▶ Replace the sensor.
Sensor cannot be taught or can only be taught with errors	Teaching is performed using a magnetizable tool (e.g. ballpoint pen refill, hexagon wrench, etc.).	▶ Use the teach-in tool supplied with the sensor or a comparable plastic pen.
Sensor signal is lost or faulty	Sensor not fully inserted into the corresponding sensor slot; sensor fastening screw is loose	▶ Push the sensor in as far as possible and tighten the fastening screw with the specified torque.
	Magnetic interference fields	▶ Avoid magnetic interference fields and maintain minimum distances.
	Ferromagnetic pollutants in the area of the sensor slot (e.g. iron shavings)	▶ Check the sensor slot(s) at regular intervals and clean them if necessary.

10 Maintenance

10.1 Safety Instructions for Maintenance

Personnel must have read and understood the instructions.



WARNING

Risk of injury due to incorrect maintenance or troubleshooting

- ▶ Check the proper functioning of the product, especially the safety features, after every maintenance or troubleshooting operation.



CAUTION

Improper installation or maintenance

Personal injury or damage to property

- ▶ Prior to installation and before maintenance work, the product must be disconnected from the power supply, depressurized (vented to the atmosphere) and secured against unauthorized restart.

10.2 Maintenance Schedule



Schmalz stipulates the following checks and inspection intervals. The operator must comply with the legal regulations and safety regulations applicable at the location of use. These intervals apply to single-shift operation. For heavier use such as multi-shift operation, the intervals must be shortened accordingly.

Maintenance task	Daily	Weekly	Monthly	Every six months	Yearly
Check the wear of the support rails or friction rings		X			

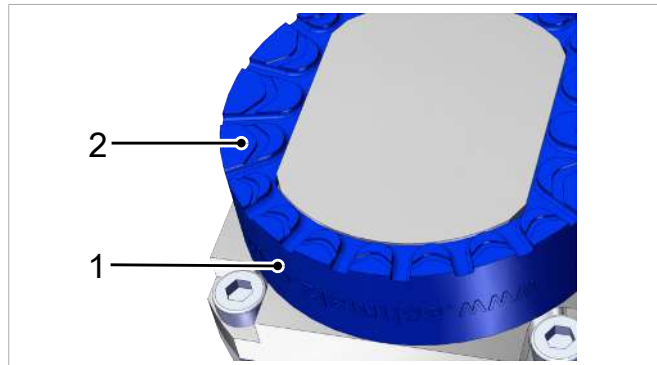
10.3 Cleaning the Magnetic Gripper

1. For cleaning, do not use aggressive cleaning agents such as industrial alcohol, white spirit or thinners. Only use cleaning agents with a pH between 7 and 12.
2. Remove dirt on the exterior of the device with a soft cloth and soap suds.
3. If using sensors, make sure that no moisture gets into the sensors.

10.4 Replacing the Friction Ring

The friction ring (1) must be replaced at the latest when the V structure (2) on the friction ring (1) is no longer visible.

1. Pry off the friction ring (1) from the gripper using a screwdriver or similar tool.

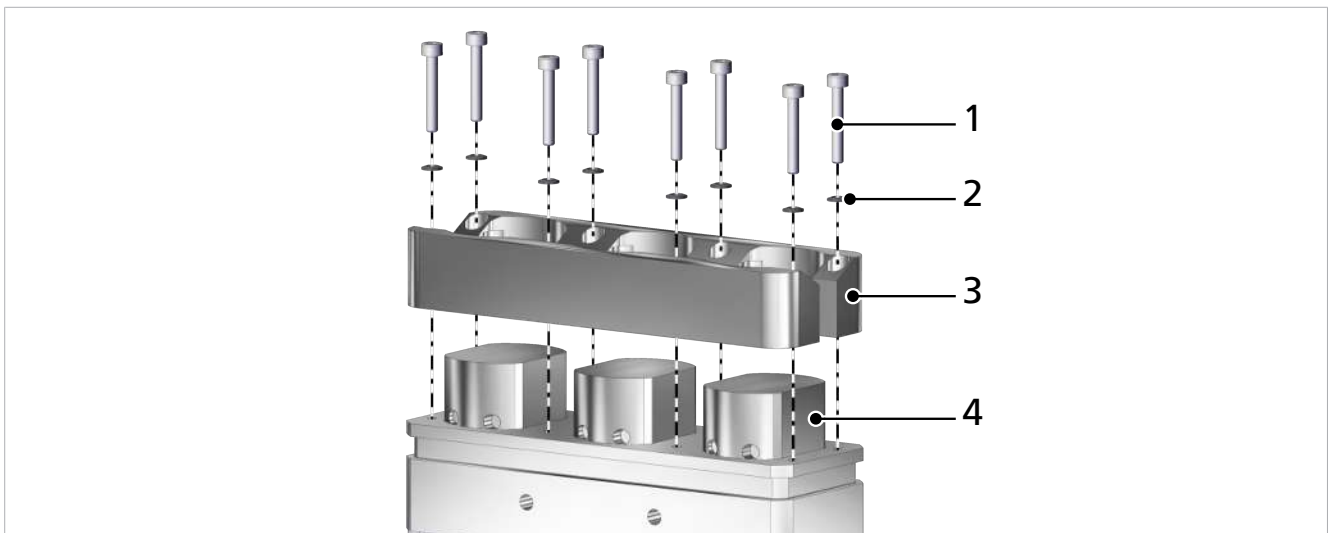


2. Press on the new friction ring.

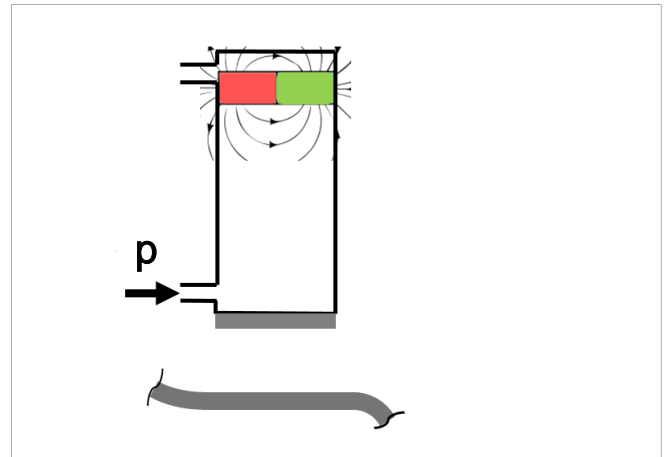
10.5 Replacing the Support Rails

The wearing part set contains the following single components:

- Support rails (2x)
- Locking washers (8x)
- Machine screws (8x)



1. Make sure that the piston position is "deposit workpiece".



2. Release the screws (1).
3. Dispose of screws, locking washers, and support rails (1-3).
4. Clean the installation environment (housing base with integrated pole shoes (4)) if necessary.
5. Put on new support rails.
6. Insert new screws and locking washers from the spare parts set into the counterbores.
7. Tighten the screws to 1.4 Nm.

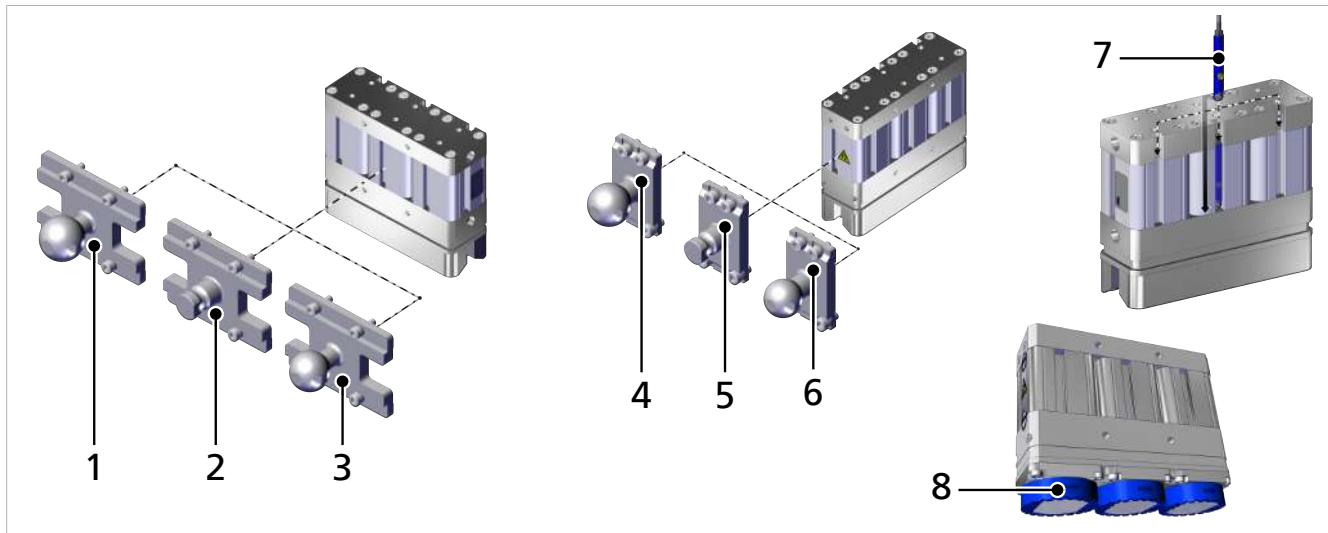


During tightening, ensure that the contact rails are completely in contact with the pole shoes (4).

A possible air gap reduces the holding forces.

11 Accessories, Spare Parts and Wearing Parts

Accessories



Item	Designation	Part no.	Note
1	Holder system HTS-A5 SGM-HP 40x121	10.01.17.00559	Ball diameter 32 mm
2	Holder system HTS-A2 SGM-HP 40x121	10.01.17.00570	
3	Holder system HTS-A3 SGM-HP 40x121	10.01.17.00546	Ball diameter 28.5 mm
4	Holder system HTS-A5 EW SGM-HP 40x121	10.01.17.00589	Ball diameter 32 mm
5	Holder system HTS-A2 EW SGM-HP 40x121	10.01.17.00591	
6	Holder system HTS-A3 EW SGM-HP 40x121	10.01.17.00590	Ball diameter 28.5 mm
7	PNP proximity switch ¹ PNP sensor	10.01.17.00199	SGM-HP-40x121 only
	NPN proximity switch ¹ NPN sensor	10.01.17.00215	
8	UMR-SET-SGM-HP-3RR ²	10.01.17.00662	
Not shown	Sensor screw (left-hand thread) ZUB SGM-S NAEH-SCHA SCREW	10.01.17.00509	
	Plastic pin for sensor ZUB SGM-S NAEH-SCHA PIN	10.01.17.00510	
	Straight plug-in screw union STV-GE G1/8-AG 6	10.08.02.00204	
	Plug-in screw union bracket STV-W G1/8-AG 6	10.08.02.00158	
	Vacuum hose VSL 6-4 PU	10.07.09.00002	
	Straight plug-in screw union STV-GE G1/8-AG 6 HT	10.08.02.00389	SGM-HT-HP-40x121 only

Item	Designation	Part no.	Note
8	Plug-in screw union bracket STV-W G1/8-AG 6 HT	10.08.02.00391	
	Vacuum hose VSL 6-4 PTFE	10.07.09.00157	
	UMR-SET-SGM-HT-HP-3RR ²	10.01.17.00663	

¹ There are three sensor slots available to accommodate the sensor(s).

When using only one sensor, the middle sensor slot is recommended. If all three piston positions are to be queried, proximity switches must be provided in all three sensor slots.

² 10.01.17.00544 & 10.01.17.00566 can be converted as of delivery date 01/01/2023

Spare and Wearing Parts

Designation	Part no.	Note
Spare parts set ERS SGM-40x121 2RAILS	10.01.17.00572	Wearing part
REIB-RING SGM 40 PU-55 ³ for SGM-HP 40x121 3RR	10.01.17.00373	Wearing part
REIB-RING-SGM-40-HT2-65 ³ for SGM-HT-HP 40x121 3RR	10.01.17.00411	Wearing part

³ Three friction rings are required for the entire gripper.

12 Disposal

Recover the disassembled parts for recycling or reuse (provided no agreement on return or disposal has been made).

1. Dispose of the product properly after replacement or decommissioning.
2. Observe the country-specific guidelines and legal obligations for waste prevention and disposal.



For proper disposal, please contact a company specializing in the disposal of technical goods and instruct the company to observe the applicable disposal and environmental regulations. Schmalz is happy to assist you in finding a suitable company.

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J. Schmalz GmbH

Johannes-Schmalz-Str. 1
72293 Glatten, Germany
T: +49 (0) 7443 2403-0
schmalz@schmalz.de
WWW.SCHMALZ.COM