



Compact Ejectors SCPSb, SCPS, SCPSi, SCPSt and SCPS(i)-L (One and Two-Stage Variants)

Maintenance instructions

Note

The Maintenance 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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1 Important Information

1.1 Note on Using this Document

J. Schmalz GmbH is generally referred to as Schmalz in these Maintenance instructions.

These Maintenance instructions contain 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 Maintenance instructions describe the product at the time of delivery by Schmalz.

1.2 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 Maintenance 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

1.3 Warnings in This Document

Warnings warn against hazards that may occur when handling the product. This document contains three levels of danger that you can recognize by the signal word.

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.

1.4 Symbol



This symbol indicates useful and important information.

- ✓ This symbol represents a prerequisite that must be met prior to an operational step.
- ▶ 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.

1.5 Warranty

IMPORTANT!

A warranty claim can only be accepted if the product has been installed and used in accordance with its corresponding operating and assembly instructions. In the case of inappropriate handling or use of force, any warranty and liability claims shall be void.

Damage and defects resulting from inadequate maintenance and cleaning, improper use, repair or attempted repair by unauthorized persons, as well as damage and defects resulting from alterations or modifications to the product and from replaced parts or materials that do not conform to the original specification are excluded from the warranty.

- i** These instructions are intended as guidelines for customers replacing certain wearing parts. However, we generally recommend professional maintenance in the plant. This also includes a final test for proper function and a warranty extension of 6 months.

2 Maintenance

2.1 Safety Instructions

Maintenance work may only be carried out by qualified personnel.

- ▶ Create atmospheric pressure in the ejector's compressed air circuit before working on the system!



WARNING

Failure to follow the instructions in these Maintenance instructions may result in injuries!

- ▶ Read the Maintenance instructions carefully and observe the contents.



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.



NOTE

Incorrect maintenance work

Damage to the ejector!

- ▶ Always switch off the supply voltage before carrying out maintenance work.
- ▶ Secure it so that it cannot be switched back on.
- ▶ The ejector must be operated only with a silencer and press-in screen(s).

2.2 Illustrations

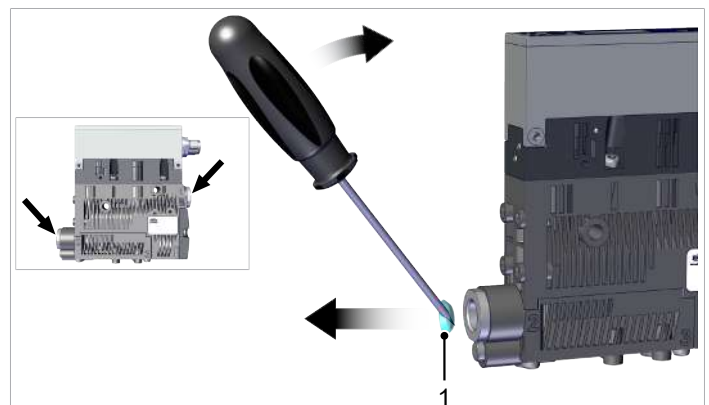
- i** The illustrations shown below may deviate from the customer's version because they serve as examples of different versions of the product.

2.3 Replacing the Press-In Screens

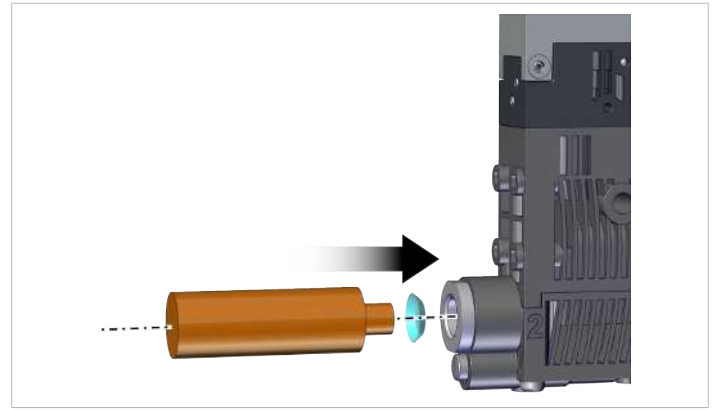
The **vacuum and compressed air connections** of the ejectors contain press-in screens in the **threaded** version. Dust, chippings and other solid materials may be deposited in the screens over time.

If there is a noticeable reduction in the performance of the ejectors, replace the filter screens (part no. 10.02.02.04404):

1. **NOTE!** When removing the filter screen, do not damage the internal thread of the connector. Remove the filter screens at connectors 1 and 2 using a screwdriver. Pierce filter screens to make them unusable!



2. Press in the new filter screens (1) as far as they will go using a suitable tool or mandrel.

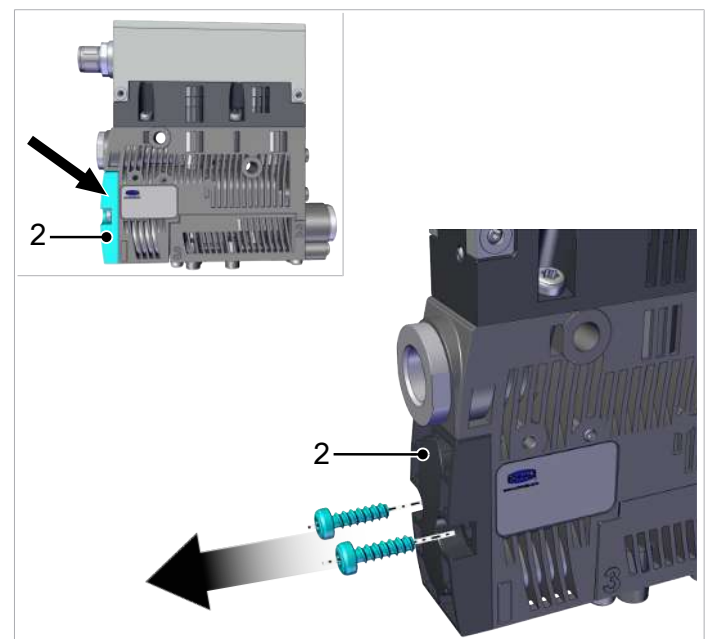


2.4 Replacing the Silencer

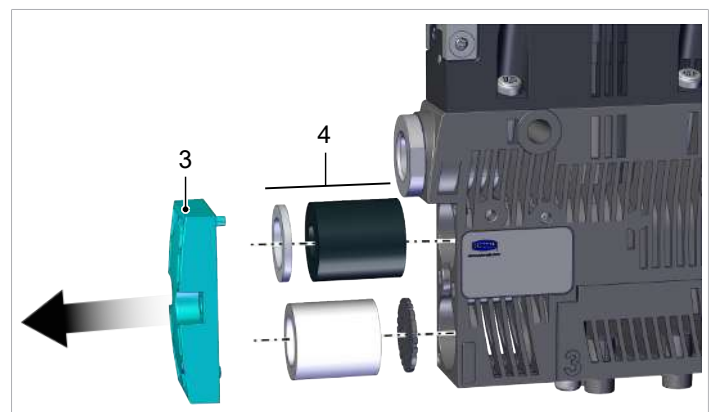
Heavy infiltration of dust, oil, and so on, may contaminate the silencer (2) and reduce the suction capacity. Cleaning the silencer is not recommended due to the capillary effect of the porous material.

If the suction capacity decreases, replace the silencer (2):

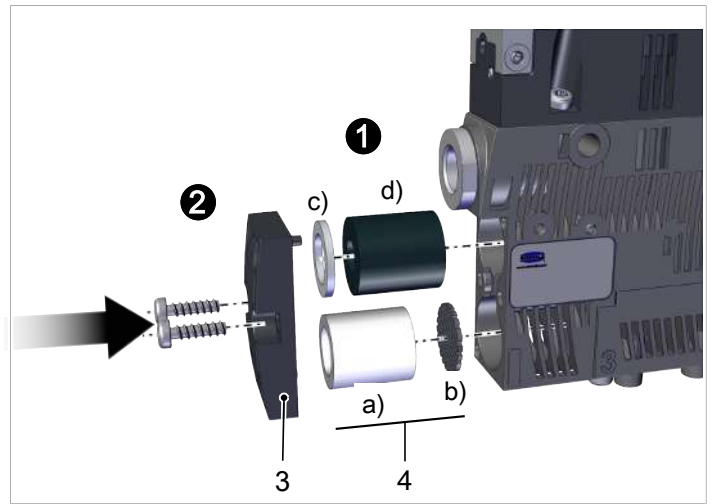
1. Loosen and remove the fastening screws on the silencer (2).



2. Pull off the cover (3) and the silencer elements (4).



3. The new silencer elements (4)
 - a) 10.02.02.04141 Silencer insert
 - Only with single-stage version:
 - b) 25.03.02.00006 Perforated disk
 - c) 10.07.08.00020 Sealing ring
 - d) 10.02.02.04152 Slide the insulating plate into the ejector body ①.
 Put on the cover and fasten with two screws – tightening torque 0.7 Nm ②.

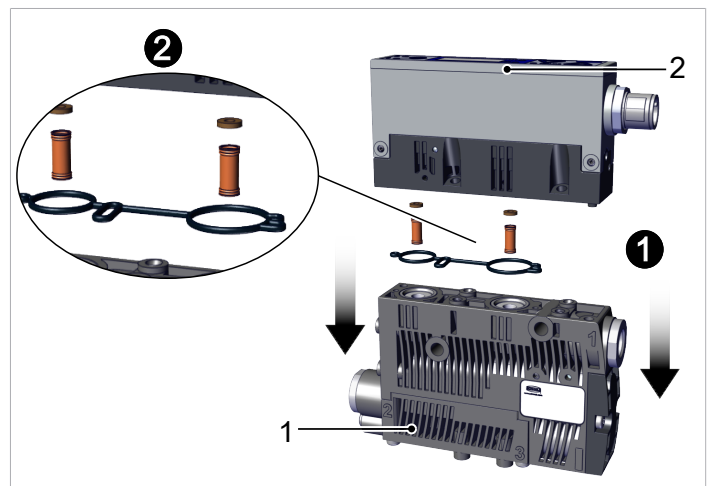


2.5 Changing the Piston

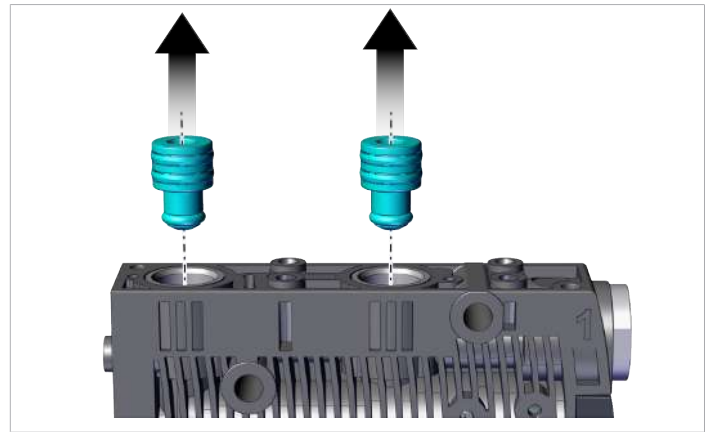
1. Loosen the four fastening screws on the plastic main body.



2. Disconnect the vacuum module (1) from the control (2) ① and remove the compression springs and sealing ②. Note the position and orientation of the sealing and springs.

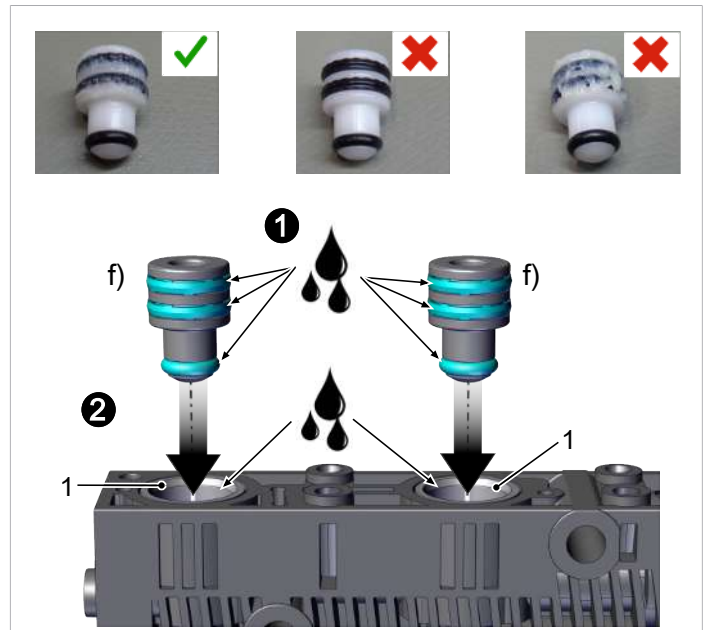


3. Carefully lever the two plastic pistons out of the holes in the housing using a small screwdriver.

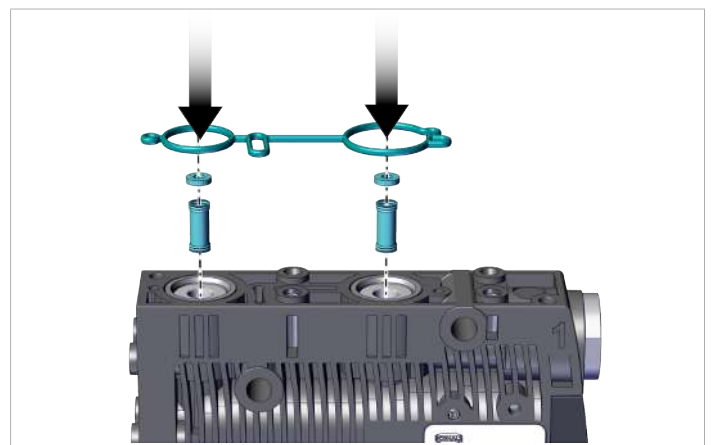


4. Clean the boreholes with a lint-free cloth.

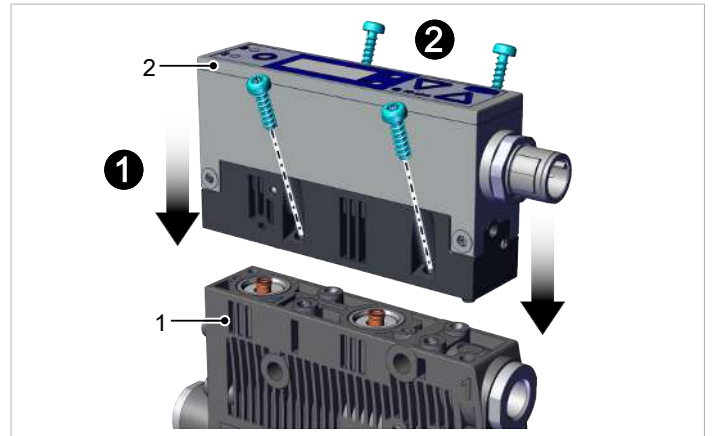
5. Grease the piston seals of the new piston rods (f) and the guide bushes (1) with pneumatic grease **1**.
Insert the piston rods (f) in the guide bushes (1) in the correct position **2**.
f) Piston rod part no. 10.02.02.04075
To determine the amount of grease required, follow the instructions in the illustration.



6. Insert pressure springs and seals.
g) Compression springs part no. 20.08.02.00375
i) Sealing washer part no. 10.02.02.04079
h) Sealing frame part no. 10.02.02.04007

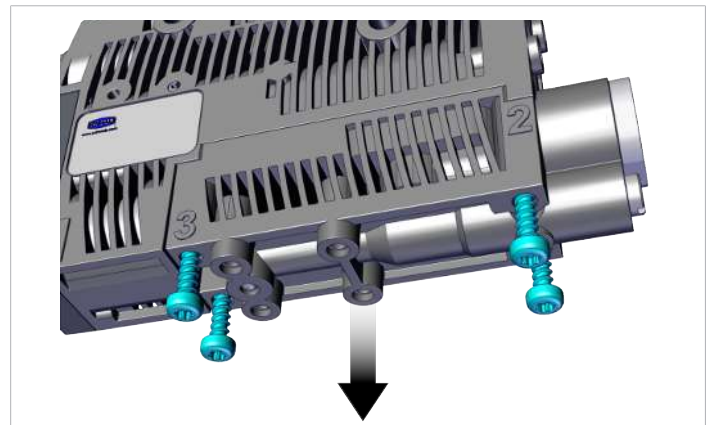


7. Connect the vacuum module (1) and control (2) together ① and tighten the fastening screws with a tightening torque of 0.7 Nm ②.

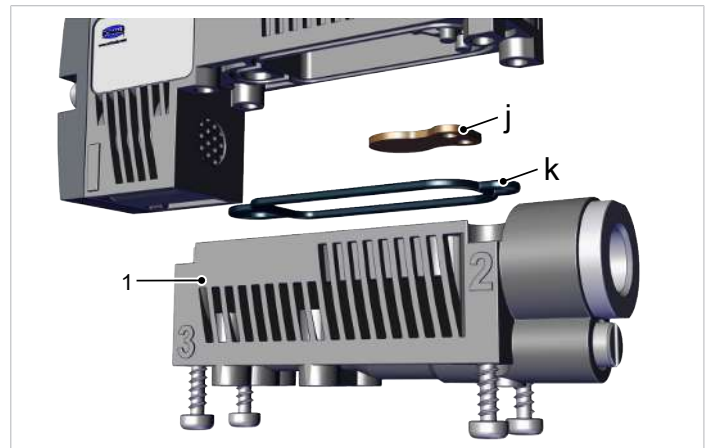


2.6 Changing the Non-Return Valve

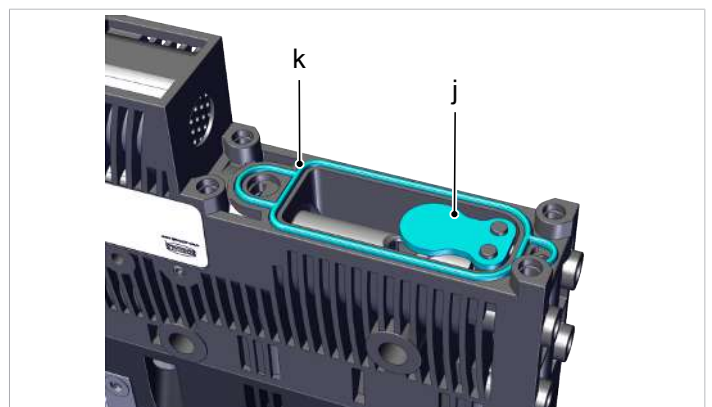
1. Loosen the four fastening screws of the ejector module.



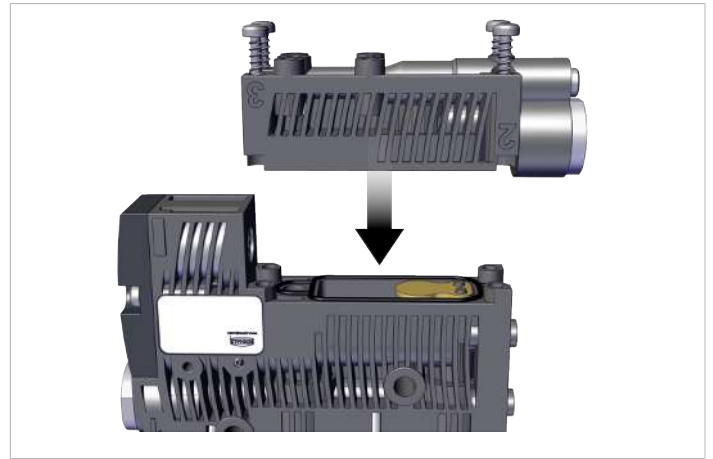
2. Remove the ejector module (1) and remove the non-return valve or the valve flap and sealing.



3. Insert the new non-return valve or the new valve flap and sealing in the correct position.
 j) Valve flap part no. 10.02.02.04059
 k) Sealing frame part no. 10.02.02.04006



4. Connect the ejection module (1) and vacuum module (2) together and tighten the four fastening screws with a tightening torque of 0.7 Nm.



3 Spare and wearing parts

Maintenance work may only be carried out by qualified personnel.

- ▶ **WARNING! Risk of injury due to improper maintenance!** After performing any maintenance or repair work, check that the system is functioning correctly, particularly the safety features.

The following list contains the primary spare parts.

Part no.	Designation	Part type
10.02.02.04737	VST SCPS single-stage silencer Wearing part set for ejector Screens, silencer insert, non-return valve, pistons, springs and sealing	Spare part
10.02.02.04738	VST SCPS two-stage silencer Wearing part set for two-stage ejector Screens, silencer insert, non-return valve, pistons, springs and sealing	Spare part