

技術資料 Technische Documentatie **Documentation**
Documentação técnica Documentación técnica Documentazione tecnica
Technische Dokumentation Technical Documentation Техническая документация
Documentazione tecnica Technische documentatie
Техническая документация **Teknik Doküman** 技术资料
Documentazione tecnica Dokumentacja techniczna
Technische documentatie Documentación técnica 技術資料
기술 자료 Technische documentatie 技術資料
Documentation technique Teknik Doküman Dokumentacja techniczna
Technical Documentation **Documentazione tecnica** Technical Documentation
Dokumentacja techniczna 技术资料 Documentation technique
Техническая документация Technische Dokumentation **Teknik Doküman**
Dokumentacja techniczna Technische documentatie
Documentation technique 기술 자료 Dokumentacja techniczna



Compact Ejector SCPMb

Operating Instructions

Note

The operating 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.

Published by

© J. Schmalz GmbH, 05/19

This document is protected by copyright. J. Schmalz GmbH retains the rights established thereby. Reproduction of the contents, in full or in part, is only permitted within the limits of the legal provisions of copyright law. Any modifications to or abridgments of the document are prohibited without explicit written agreement from J. Schmalz GmbH.

Contact

J. Schmalz GmbH
Johannes-Schmalz-Str. 1
72293 Glatten, Germany
T: +49 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

Contents

1	Important information	5
1.1	Note on Using this Document	5
1.2	The technical documentation is part of the product	5
1.3	Warnings in this document	5
1.4	Symbol	5
1.5	Type Plate	6
2	Fundamental Safety Instructions	7
2.1	Emissions	7
2.2	Intended Use	7
2.3	Non-Intended Use	7
2.4	Personnel Qualification	8
2.5	Modifications to the Ejector	8
3	Product description	9
3.1	Description of the Ejector	9
3.1.1	Suction of the Workpiece (Vacuum Generation)	9
3.1.2	Depositing the Workpiece/Part (Blowing Off)	9
3.2	Ejector Designation	9
3.3	Ejector Structure	10
4	Technical Data	11
4.1	General Parameters	11
4.2	Electrical Parameters	11
4.3	Mechanical Data	11
4.3.1	Performance Data	11
4.3.2	Dimensions	12
4.3.3	Maximum Torque	12
4.3.4	Pneumatic circuit plans	13
5	Blow off modes	14
5.1	Externally Controlled Blow-Off	14
5.2	Blow Off Using External Compressed Air	14
6	Transport and storage	15
6.1	Checking the Delivery	15
7	Installation	16
7.1	Installation Instructions	16
7.2	Installation	16
7.3	Pneumatic Connection	17
7.3.1	Connecting the Compressed Air and Vacuum	18
7.3.2	Instructions for the Pneumatic Connection	18
7.3.3	Optional: External blow-off connection (EB)	19
7.4	Electrical Connection	19
8	Operation	21
8.1	General Preparations	21
8.2	Changing the Blow-Off Flow Rate on the Ejector	21
9	Help with Malfunctions	22

- 10 Maintenance..... 23**
 - 10.1 Safety 23
 - 10.2 Cleaning the Ejector 23
 - 10.3 Replacing the Silencer 23
- 11 Warranty..... 26**
- 12 Spare and Wearing Parts, Accessories..... 27**
 - 12.1 Spare and Wearing Parts 27
 - 12.2 Accessories 27
- 13 Decommissioning and recycling 28**
 - 13.1 Disposing of the Ejector 28
 - 13.2 Materials Used 28
- 14 EC declaration of conformity 29**

1 Important information

1.1 Note on Using this Document

J. Schmalz GmbH is generally referred to as Schmalz in this operating instructions.

These operating 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 operating 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 this operating instructions may result in life-threatening 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 which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a low-risk hazard which, if not avoided, could result in minor or moderate injury.
NOTE	Indicates a danger that leads to property damage.

1.4 Symbol



This sign indicates useful and important information.

- ✓ This symbol represents a prerequisite that must be met before an action is performed.
- ▶ This sign represents an action to be performed.
- ⇒ This sign 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 Type Plate



The type plate (1) is permanently attached to the ejector and must always be clearly legible.

The type plate contains the following data:

- Name, including individual configuration code "AAA"
- Part number
- Serial number
- Pneumatic symbol
- Permitted pressure range

Please specify all the information above when ordering replacement parts, making warranty claims or for any other inquiries.

2 Fundamental Safety Instructions

2.1 Emissions

The ejector emits noise due to its use of compressed air.



⚠ WARNING

Noise pollution due to the escape of compressed air

Hearing damage!

- ▶ Wear ear protectors.
- ▶ The ejector must only be operated with a silencer.

2.2 Intended Use

The ejector is built in accordance with the latest standards of technology and is safe to operate upon delivery; however, hazards can still arise during use.

The ejector is designed to generate a vacuum for gripping and transporting objects when used in conjunction with suction cups. It is operated by a controller via discrete signals.

Neutral gases are approved as evacuation media. Neutral gases include air, nitrogen and inert gases (e.g. argon, xenon and neon).

The product is intended for industrial use.

Intended use includes observing the technical data and the installation and operating instructions in this manual.

2.3 Non-Intended Use



⚠ WARNING

Extraction of hazardous media, liquids or bulk material

Personal injury or damage to property!

- ▶ Do not extract harmful media such as dust, oil mists, vapors, aerosols etc.
- ▶ Do not extract aggressive gases or media such as acids, acid fumes, bases, biocides, disinfectants or detergents.
- ▶ Do not extract liquids or bulk materials, e.g. granulates.

Schmalz accepts no liability for damages caused by non-intended usage of the ejector. In particular, the following are considered non-intended use:

- Use in potentially explosive atmospheres
- Use in medical applications
- Lifting people or animals
- Evacuation of objects that are in danger of imploding

2.4 Personnel Qualification

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

1. Task only qualified personnel to perform the tasks described in this operating instructions.
2. The product must be operated only by persons who have undergone appropriate training.

This operating instructions is intended for fitters who are trained in handling the product and who can operate and install it.

2.5 Modifications to the Ejector

Schmalz assumes no liability for consequences of modifications over which it has no control:

1. The ejector must be operated only in its original condition as delivered.
2. Use only original spare parts from Schmalz.
3. The ejector must be operated only in perfect condition.

3 Product description

3.1 Description of the Ejector

3.1.1 Suction of the Workpiece (Vacuum Generation)

The ejector is designed for vacuum handling of airtight parts in combination with suction systems. The vacuum is generated in a nozzle according to the Venturi principle, i.e. by using suction generated by the flow of accelerated compressed air. Compressed air is channeled into the ejector and flows through the nozzle. A vacuum is generated immediately downstream of the motive nozzle; this causes the air to be sucked through the vacuum connection. The air and compressed air that have been removed by the suction exit together via the silencer.

The venturi nozzle on the ejector is activated and deactivated using the suction command:

- In the NO (normally open) variant, the venturi nozzle is deactivated when the suction signal is received.
- In the NC (normally closed) variant, the venturi nozzle is activated when the suction signal is received.

When objects with airtight surfaces are picked up, the integrated non-return valve prevents the vacuum from dropping.

3.1.2 Depositing the Workpiece/Part (Blowing Off)

In blow off mode, the vacuum circuit of the ejector is supplied with compressed air. This ensures that the vacuum drops quickly, thereby depositing the workpiece quickly.

The blow off function can be triggered by the ejector in two ways:

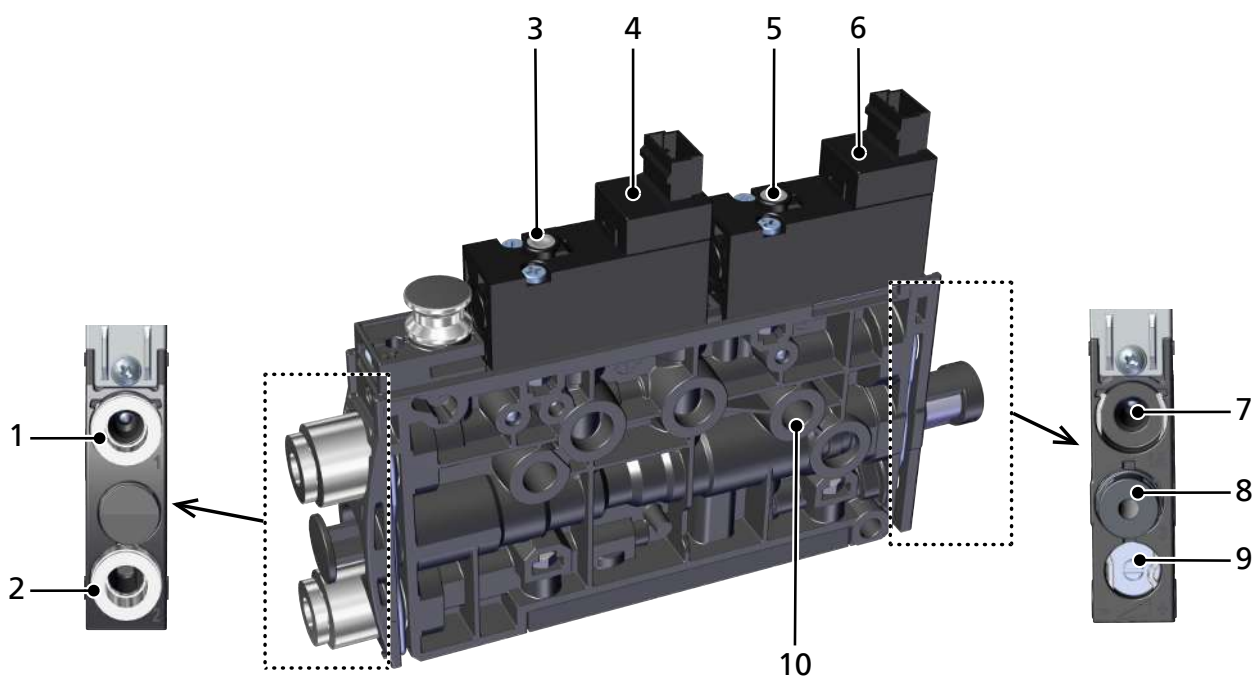
- Externally controlled actuation of the blow off valve
- Optional: external blow off

3.2 Ejector Designation

The breakdown of the item designation (e.g. SCPMb 07 S01 NO AAE) is as follows:

Feature	Variants	
Type	SCPM	
Version	Basic: b	
Nozzle size	0.3, 0.5, 0.7 and 1.0 mm	
Fluid connector	S01 (push-in, 4/2 2x)	G01 (M5 female 2x)
	S04 (push-in, 6/4 2x)	G06 (M7 female 2x)
	S07 (push-in, 4/2 3x)	G07 (M5 female 3x)
	S08 (push-in, 6/4 2x, 4/2)	G08 (M7 female 2x, M5 female)
	S09 (push-in, 4/2, 6/4 2x)	G09 (M5 female, M7 female 2x)
Electrical connector EMV	Connector JPC 2x	
Suction valve control	NO (normally open), sucks when no voltage is applied NC (normally closed), does not suck when no voltage is applied	
Individual configuration code	The 3-digit code "AAA" uniquely describes an ejector disk.	

3.3 Ejector Structure



1	Compressed air connector (marking 1)	2	Vacuum connector (marking 2)
3	Button for operating the "suction" solenoid valve manually	4	"Suction" solenoid valve
5	Button for operating the "blow off" solenoid valve manually	6	"Blow off" solenoid valve
7	Optional: Compressed air connector for external blow off EB (marking 1A)	8	Silencer (marking 3)
9	Valve screw for blow off volume flow	10	Mounting holes 2x

4 Technical Data

4.1 General Parameters

Parameter	Type	Symbol	Limit value			Unit	Note
			min.	typ.	max.		
Working temperature		T_{amb}	0	—	50	° C	—
Storage temperature		T_{sto}	-10	—	60	° C	—
Humidity		H_{rel}	10	—	85	% r.h.	Free from condensation
Degree of protection		—	—	—	IP40	—	—
Operating pressure (flow pressure)	03 and 05	P	2	4	6	bar	—
	07 and 10	P	3	4	6	bar	—
Operating medium	Air or neutral gas, filtered to 5 μ m, without oil, class 3-3-3 compressed air quality in acc. with ISO 8573-1						

4.2 Electrical Parameters

Supply voltage	DC 24 V \pm 10% (PELV ¹⁾)		
Polarity reversal protection	Yes		
Current consumption (at 24 V)	—	Typical current consumption	Max. current consumption
	SCPMb – xx – NC	50 mA	70 mA
	SCPMb – xx – NO	75 mA	115 mA

¹⁾ The power supply must correspond to the regulations in accordance with EN60204 (protected extra-low voltage).

4.3 Mechanical Data

4.3.1 Performance Data

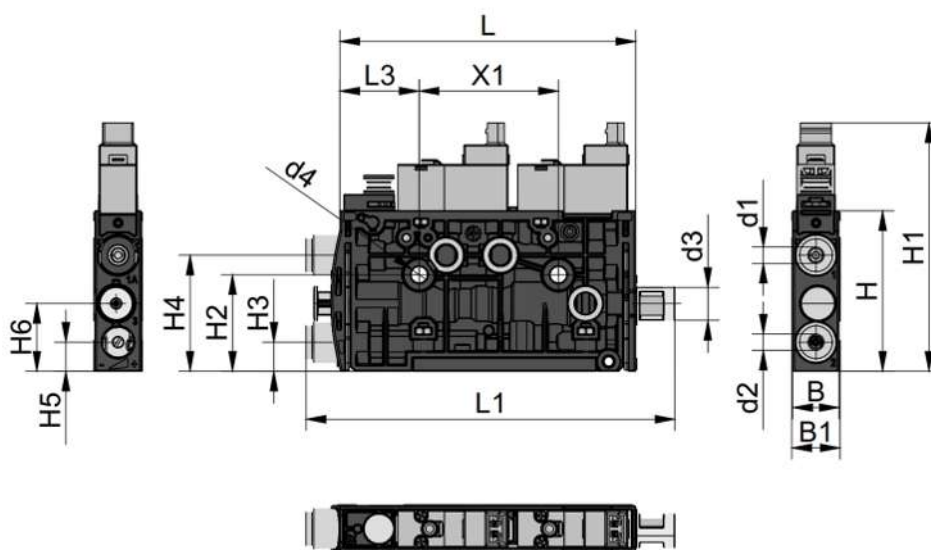
Type	Nozzle 03	Nozzle 05	Nozzle 07	Nozzle 10
Nozzle size [mm]	0.3	0.5	0.7	1.0
Degree of evacuation [%]	87			
Max. suction rate [l/min] ¹⁾	2.2	7.5	15	28
Air consumption for suction [l/min]	3.5	9	22	45
Air consumption for blow off [l/min]	10			
Sound pressure level, unobstructed suction [dB(A)] ¹⁾	51	66	70	71
Sound pressure level, suction [dB(A)]	42	55	70	72
Pressure range [bar]	2 to 6		3 to 6	

Type	Nozzle 03	Nozzle 05	Nozzle 07	Nozzle 10
Recommended diameter of compressed air hose [mm] ²⁾	2			4
Recommended diameter of vacuum hose [mm] ²⁾	2			4
Weight [g]	80		85	

¹⁾ At optimal operating pressure (SCPM...03/05/07: 4 bar; SCPM...10: 4.5 bar)

²⁾ For max. length of 2 m

4.3.2 Dimensions



L	B	H	L1	L3	X1	H1	H2	H3
76.5	12	41.5	95.3	20.5	36	64.2	24.95	7.5
H4	H5	H6	d1	d2	d3	d4	B1	—
30	7.5	17.5	Depending on the particular ejector, see chapter 3.2 "Ejector designation"		9	4.3	12.5	—

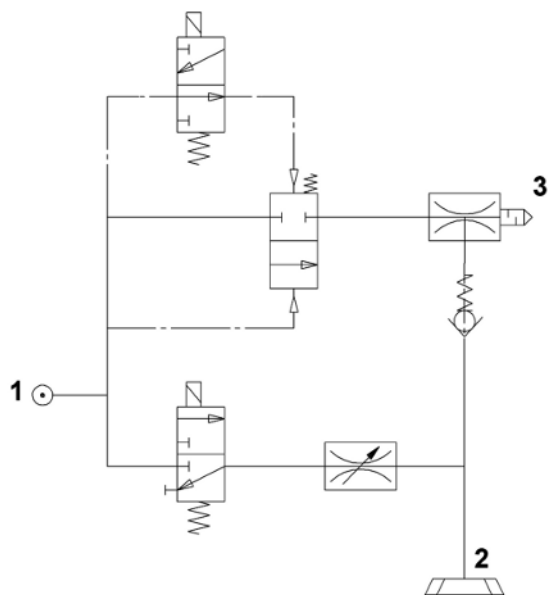
All specifications are in mm

4.3.3 Maximum Torque

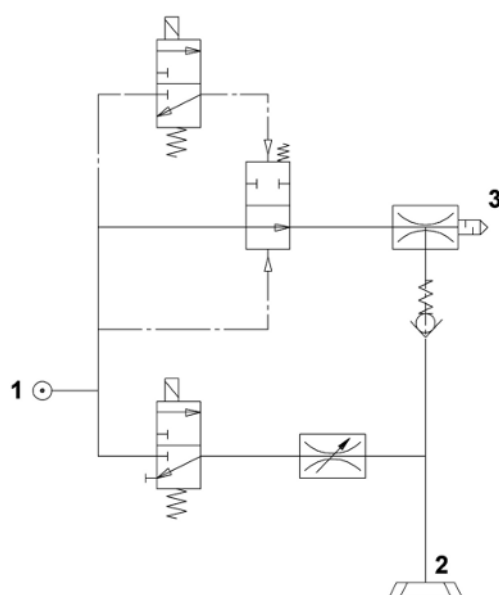
Connector	Max. torque
Mounting hole d4	1 Nm

4.3.4 Pneumatic circuit plans

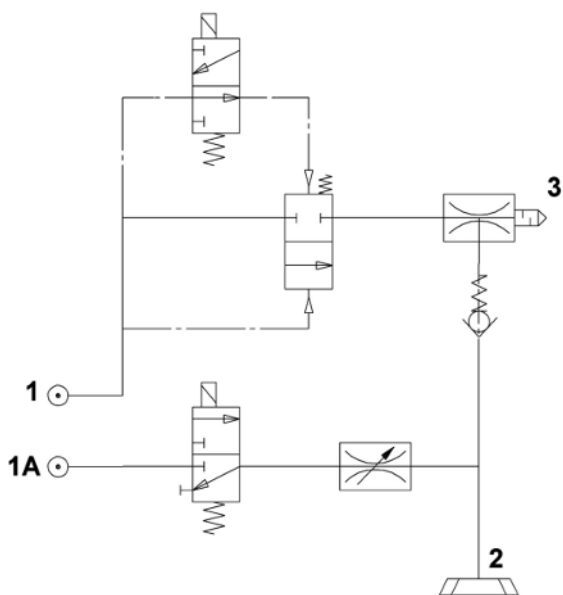
NC



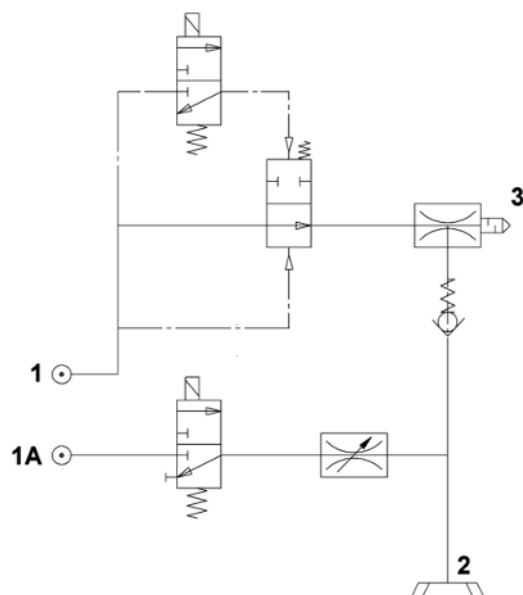
NO



NC-EB



NO-EB



5 Blow off modes

You can choose between two blow off modes.

5.1 Externally Controlled Blow-Off

The "blow off" valve is controlled directly by the "blow off" command. The ejector switches to blow off mode for as long as the "blow off" signal is present.

The "blow off" signal is given priority over the "suction" signal.

5.2 Blow Off Using External Compressed Air

The ejector is also available with an additional compressed air connector to supply the blow off pulse separately (external blow off function = "EB").

While the vacuum is interrupted, small workpieces are carefully deposited using a blow off pulse. Through fine adjustment of the vacuum, the blow off of small workpieces is prevented.

The air supply opening for blow off is controlled separately. Therefore, it is easy to fine-tune the blow off air using either the conventional flow rate setting or an external regulator.

The release pressure can be adapted to the workpiece.

6 Transport and storage

6.1 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 in transit must be reported immediately to the carrier and J. Schmalz GmbH.

7 Installation

7.1 Installation Instructions



⚠ CAUTION

Improper installation or maintenance

Personal injury or damage to property

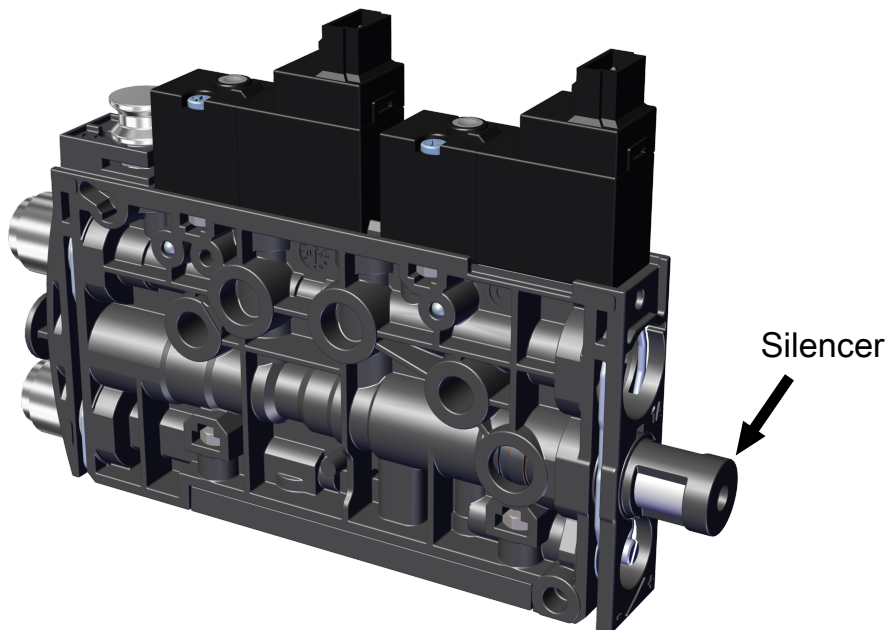
- ▶ During installation and maintenance, make sure that the ejector is disconnected and depressurized and that it cannot be switched on again without authorization.

For safe installation, the following instructions must be observed:

1. Use only the connections, mounting holes and attachment materials that have been provided.
2. Carry out mounting and removal only when the device is in an idle, depressurized state.
3. Pneumatic and electrical line connections must be securely connected and attached to the ejector.

7.2 Installation

The ejector may be installed in any position.

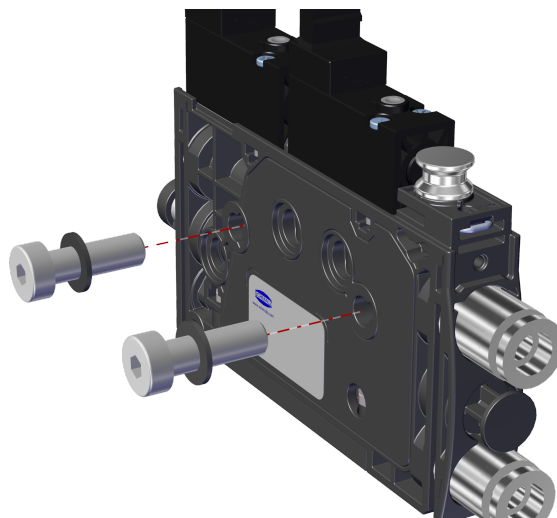


When installing the ejector, make sure that the area around the silencer remains free, so that unimpeded discharge of the escaping air is ensured.

The ejector is usually mounted using the holes on the side. Alternatively, it can be mounted using a DIN rail or a mounting bracket (> See *ch. Accessories, Page 27*).

Side mounting

- ▶ There are two 4.3 mm through-holes for mounting the ejector. Use screws at least 20 mm in length. Use washers if you are using fastening screws M4 for the mounting process. The ejector is to be fixed with at least 2 screws, the maximum tightening torque is 1 Nm.



For start of operations, the ejector must be connected to the controller via the connection plug with a connection cable. The compressed air supply must be supplied by the higher-level machine.

The installation process is described and explained in detail below.

7.3 Pneumatic Connection



⚠ CAUTION

Compressed air or vacuum in direct contact with the eye

Severe eye injury

- ▶ Wear eye protection
- ▶ Do not look into compressed air openings
- ▶ Do not look into the silencer air stream
- ▶ Do not look into vacuum openings, e.g. suction cups



⚠ CAUTION

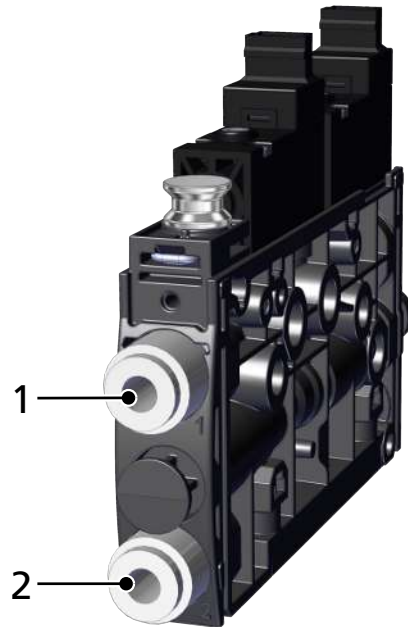
Noise pollution due to incorrect installation of the pressure and vacuum connections

Hearing damage

- ▶ Correct installation.
- ▶ Wear ear protectors.

7.3.1 Connecting the Compressed Air and Vacuum

Description of the pneumatic connector



1	Compressed air connector (marking 1)	2	Vacuum connector (marking 2)
---	--------------------------------------	---	------------------------------

The threaded or push-in compressed air connector is marked with the number 1 on the ejector.

- ▶ Connect compressed air hose. For threaded connectors, the maximum tightening torque is 1 Nm.

The threaded or push-in vacuum connector is marked with the number 2 on the ejector.

- ▶ Connect the vacuum hose. For threaded connectors, the maximum tightening torque is 1 Nm.

7.3.2 Instructions for the Pneumatic Connection

To ensure problem-free operation and a long service life of the ejector, only use adequately maintained compressed air and consider the following requirements:

- Use air or neutral gas in accordance with EN 983, filtered to 5 µm, unoiled.
- Dirt particles or foreign bodies in the ejector connections, hoses or pipelines can lead to partial or complete ejector malfunction.

1. Shorten the hoses and pipelines as much as possible.
2. Keep hose lines free of bends and crimps.
3. Use only pipes or hoses with the recommended inner diameter to connect the ejector:

Use hoses with sufficient internal diameter...	Internal Ø for nozzle size 0.3 / 0.5 / and 0.7 mm	Internal Ø for nozzle size 1 mm
on the compressed air side to ensure that the ejector achieves its performance data.	4 mm	6 mm
on the vacuum side to avoid high flow resistance. If the internal diameter is too small, the flow resistance and the evacuation times increase and the blow off times are extended.	4 mm	6 mm

Internal diameters are based on a maximum hose length of 2 m.

7.3.3 Optional: External blow-off connection (EB)

The ejector is also available with an additional compressed air connector for the blow off function.

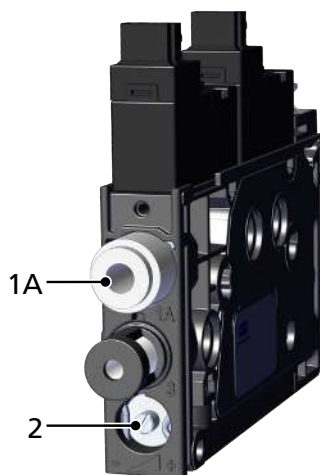
With the external blow off function (EB), the blow off pulse is controlled separately and independently of the compressed air supply for vacuum generation, allowing you to use a different medium (e.g. nitrogen) for the blow off function.

It also allows you to precisely set the blow off pressure using an external pressure regulator (between 2 and 6 bar).

The blow off flow rate can also be set between 0% and 100% directly on the ejector. This can be used, for example, to set down small and lightweight workpieces with high positioning precision.

The hose size and the thread on the connector depend on the particular ejector and can have the following dimensions:

- Push-in: 4/2
- Female thread M5



- ▶ Connect the compressed air hose for external blow off (connector marked with 1A) and adjust the blow off flow rate using the adjusting screw (2).

7.4 Electrical Connection



NOTE

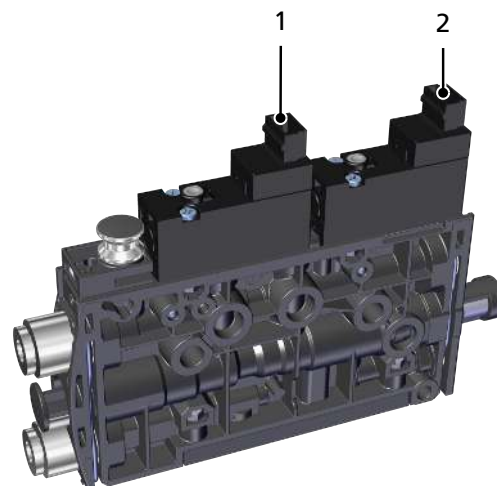
Incorrect power supply

Destruction of the integrated electronics

- ▶ Operate the product using a power supply unit with protected extra-low voltage (PELV).
- ▶ The system must incorporate safe electrical cut-off of the power supply in compliance with EN60204.
- ▶ Do not connect or disconnect the connector under tension and/or when voltage is applied.

The electrical connection is established directly via the connection plugs of the valves. The connection of the valves is independent of the polarity.

- ✓ Provide connection cable (for example, 2x item no.: 21.04.06.00086)



- ▶ Insert the connection cables into the electrical connections (1 and 2) until they click into place.

8 Operation

8.1 General Preparations



⚠ WARNING

Extraction of hazardous media, liquids or bulk material

Personal injury or damage to property!

- ▶ Do not extract harmful media such as dust, oil mists, vapors, aerosols etc.
- ▶ Do not extract aggressive gases or media such as acids, acid fumes, bases, biocides, disinfectants or detergents.
- ▶ Do not extract liquids or bulk materials, e.g. granulates.

Always carry out the following tasks before activating the system:

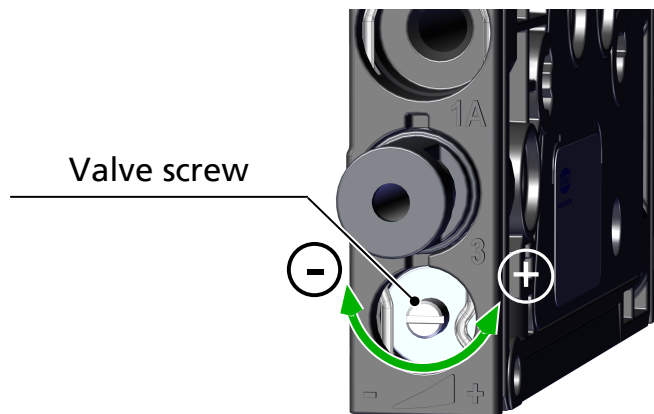
1. Before each use, check that the safety devices are in perfect condition.
2. Check the ejector for visible damage and deal with any problems immediately (or notify your supervisor).
3. Ensure that only authorized personnel are present in the working area of the machine or system and that no other personnel are put in danger by switching on the machine.

There must be no people in the system danger area while it is in operation.

8.2 Changing the Blow-Off Flow Rate on the Ejector



Do not overwind past the stop on the valve screw. The blow off flow rate can be adjusted within the range between 0% and 100%.



The figure shows the position of the valve screw, which can be used to adjust the blow off flow rate. The valve screw is equipped with a stop on both sides.

1. Turn the valve screw clockwise to reduce the flow rate.
2. Turn the valve screw counterclockwise to increase the flow rate.

9 Help with Malfunctions

Fault	Possible cause	Solution
Power supply disrupted	Electrical connection	▶ Make sure device is properly connected to power
Ejector does not respond	No power supply	▶ Check electrical connection
	No compressed air supply	▶ Check the compressed air supply
Vacuum level is not reached or vacuum is built up too slowly	Silencer is dirty	▶ Replace the silencer
	Leakage in hose line	▶ Check hose connections
	Leakage at suction cup	▶ Check suction cup
	Operating pressure too low	▶ Increase operating pressure. Note the maximum limits!
	Internal diameter of hose line too small	▶ Observe recommendations for hose diameter
Load cannot be held	Suction cup too small	▶ Select a larger suction cup
	Vacuum level too low	▶ Increase operating pressure (observe max. permissible limits)

10 Maintenance

10.1 Safety

Maintenance work may only be carried out by qualified personnel.



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 supply voltage before carrying out any maintenance work.
- ▶ Secure it so that it cannot be switched back on.
- ▶ The ejector must only be operated with a silencer.

- ▶ Before carrying out any work on the system, ensure that the ejector's compressed air circuit is vented to atmospheric pressure!

10.2 Cleaning the Ejector

1. For cleaning, do not use aggressive cleaning agents such as industrial alcohol, white spirit or thinners. Only use cleaning agents with pH 7–12.
2. Remove dirt on the exterior of the device with a soft cloth and soap suds at a maximum temperature of 60° C. Make sure that the silencer is not soaked in soapy water.
3. Ensure that no moisture can reach the electrical connection or other electrical components.

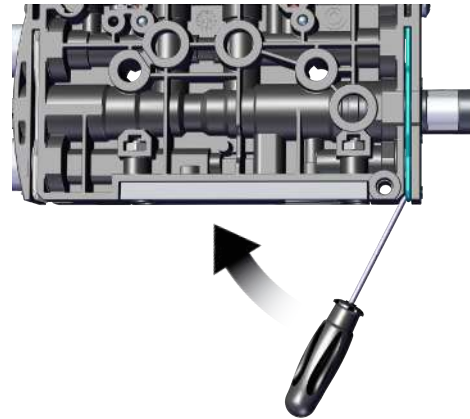
10.3 Replacing the Silencer

Heavy infiltration of dust, oil, etc. may contaminate the silencer 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:

- ✓ Deactivate the ejector and depressurize the pneumatic systems.

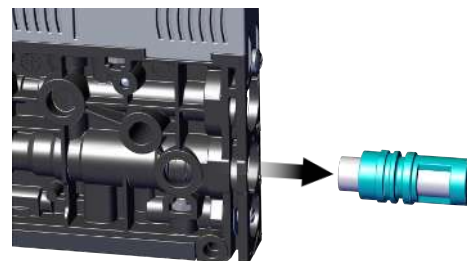
1. Place a small flat screwdriver on the ejector as shown and loosen the clamp.



2. Remove the clamp.



3. Then remove the silencer and filter from the ejector.



4. Pull the filter out of the housing and dispose of it.



5. Insert the new filter into the housing and re-install the silencer.



6. Mount the clamp in the correct position!



- ⇒ The clamp is mounted flush with the underside of the ejector and the clamp legs both lie in the grooves. It does not protrude from the ejector.



7. Check that the silencer is held tightly by pulling on the housing (hand-tight).

11 Warranty

This system is guaranteed in accordance with our general terms of trade and delivery. The same applies to spare parts, provided that these are original parts supplied by us.

We are not liable for any damage resulting from the use of non-original spare parts or accessories.

The exclusive use of original spare parts is a prerequisite for the proper functioning of the ejector and for the validity of the warranty.

Wearing parts are not covered by the warranty.

Opening the ejector will damage the "tested" labels. This voids the warranty.

12 Spare and Wearing Parts, Accessories

12.1 Spare and Wearing Parts

Maintenance work may only be carried out by qualified personnel.



⚠ 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.

The following list contains the primary spare and wearing parts.

Designation	Part no.	Type
Silencer	10.02.02.05403	W
NO ejector suction valve for nozzle size 03	10.05.01.00396	S
NO ejector suction valve for nozzle size 05/07/10	10.05.01.00395	S
NC ejector suction valve for nozzle size 03	10.05.01.00395	S
NC ejector suction valve for nozzle size 05/07/10	10.05.01.00396	S
Blow off valve (NC valve)	10.05.01.00395	S

Legend:	S ...	Spare part
	W ...	Wearing part

When tightening the fastening screws on the valves, observe the maximum tightening torque of 0.1 Nm.

12.2 Accessories

Designation	Part no.	Note
Connection cable, ASK B-MIC10 3000 K-2P	21.04.06.00086	Connector 1: Vent Micro10 mm connector; Cable length: 3000 mm; Connector 2: Cable, 2-pin; Material: PUR cable
Plug-in screw union M5	10.08.02.00468	—
Plug-in screw union M7	10.08.02.00469	—
DIN rail mounting kit	10.02.02.05805	—
Mounting kit (mounting bracket)	10.02.02.05824	—

13 Decommissioning and recycling

13.1 Disposing of the Ejector

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

13.2 Materials Used

Component	Material
Housing	PA6-GF
Inner components	Aluminum alloy, anodized aluminum alloy, stainless steel, POM
Silencer insert	Porous PE
Screws	Galvanized steel
Sealing	Nitrile rubber (NBR)
Lubrication	Silicone-free

14 EC declaration of conformity

EC Declaration of Conformity

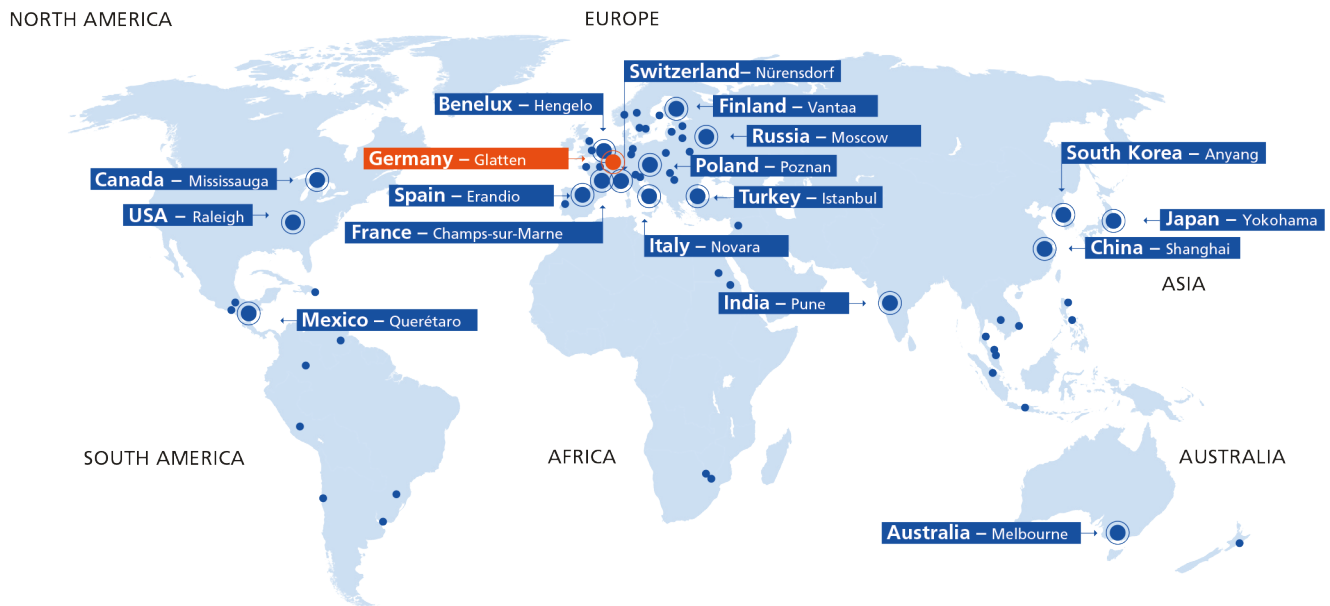
The manufacturer Schmalz confirms that the Ejector described in these operating instructions fulfill the following applicable EC directives:

2014/30/EU	Electromagnetic Compatibility
2011/65/EU	Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

The following harmonized standards were applied:

EN 61000-6-4	Electromagnetic Compatibility - Emission
EN 61000-6-2	Electromagnetic Compatibility – Immunity
EN 61000-4-2	Electromagnetic Compatibility (EMC) – Part 4-2: Testing and measuring procedures

At your side worldwide



Headquarters

Schmalz Germany – Glatten

Sales Partners

You can find the Schmalz sales partner in your country at:
WWW.SCHMALZ.COM/SALESNETWORK

Subsidiaries

Schmalz Australia – Melbourne
 Schmalz Benelux – Hengelo (NL)
 Schmalz Canada – Mississauga
 Schmalz China – Shanghai
 Schmalz Finland – Vantaa
 Schmalz France – Champs-sur-Marne
 Schmalz India – Pune
 Schmalz Italy – Novara
 Schmalz Japan – Yokohama

Schmalz Mexico – Querétaro
 Schmalz Poland – Suchy Las (Poznan)
 Schmalz Russia – Moscow
 Schmalz South Korea – Anyang
 Schmalz Spain – Erandio (Vizcaya)
 Schmalz Switzerland – Nürens Dorf
 Schmalz Turkey – Istanbul

Vacuum Automation

WWW.SCHMALZ.COM/AUTOMATION

Handling Systems

WWW.SCHMALZ.COM/HANDLINGSYSTEMS

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