Assembly and Operating Manual AOV

Axially-Compliant Orbital Sander Tool

Translation of Original Operating Manual

Hand in hand for tomorrow

Imprint

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

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Dear Customer,

Thank you for trusting our products and our family-owned company, the leading technology supplier of robots and production machines.

Our team is always available to answer any questions on this product and other solutions. Ask us questions and challenge us. We will find a solution!

Best regards,

Your SCHUNK team

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

Table of Contents

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 *

The documents labeled with an asterisk (*) can be downloaded from **schunk.com/downloads**.

1.1.4 Variants

This operating manual applies to the following variations:

- AOV with vacuum
- AOV without vacuum

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 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

- Axially-Compliant Orbital Sander Tool AOV in the version ordered
- 1x wrench (24 mm)
- 1x starter kit (disk set)
- Safety information (product-specific instructions available online)

1.4 Accessories

The following accessories are available for the product, which must be ordered separately:

- Adapter plate
- Media changer

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

2 Basic safety notes

2.1 Intended use

The product is intended exclusively for polishing and grinding workpiece surfaces with robots, in particular cobots and smaller industrial robots.

- The product may only be used within the scope of its technical data, ▶ 3 [🗋 14].
- 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 or for attachment to a robot. The applicable guidelines for the machine/automated system must be observed and complied with.
- The product is intended for industrial and industry-oriented use.
- Ensure that the front of the grinding pad is completely or largely in contact with the surface of the workpiece to be processed.
  Point-based or lateral contact can lead to undesirable results and damage the product. This is particularly important for concave surfaces or surfaces with raised areas.
- Ensure that the product performs the eccentric movement and also that the abrasive material rotates around its own axis. This is the only way to achieve a good grinding pattern and avoid overloading the motor.
- Blocking the rotary movement, e.g. due to excessive contact force or contact with the side of the workpiece, can lead to strong vibrations and damage.
- To determine the right air pressure for compensation, SCHUNK recommends starting with a low value of around 0.5 bar and only increasing this if it is really necessary.
- The diameter of the grinding pad should be between 125 mm and 152 mm. Select the weight of the grinding wheel holder, any intermediate pads and abrasives so that low-vibration operation is guaranteed. The guideline value here is 110 to 140 grams. Smaller or larger diameters in particular generally lead to different weights of the grinding disks and abrasive materials.

- Select the grinding wheel holder, any possible intermediate layers (interface pads) and the grinding wheel so that they are suitable for the workpiece and the AOV in terms of diameter, weight and hardness. Particularly complex workpiece geometries in conjunction with soft abrasives can lead to blocking of the rotary movement, which must be avoided at all costs.
- The product is designed for use in dry processing. Only a small amount of polishing paste may be used when polishing, which may only be applied to the front of the polishing pad.
- The product is designed to withstand axial contact forces. Exceeding the maximum compensation distance can result in damage to the product. Pull or shear forces, e.g. e.g. due to lateral contact, must be avoided. Fluctuations in the positioning of the workpiece must also be taken into account.
- 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.

- Inappropriate use includes using the product as a hand 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 Ambient conditions and operating conditions

Required ambient conditions and operating conditions

Incorrect ambient and operating conditions can make the product unsafe, leading to the risk of serious injuries, considerable material damage and/or a significant reduction to the product's life span.

- Make sure that the product is used only in the context of its defined application parameters, ▸ 3 [🗋 14].

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.
Qualified personnel	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.
Instructed person	Instructed persons were instructed by the operator about the delegated tasks and possible dangers due to improper behaviour.
Service personnel of the manufacturer	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.
- Wear ear protection and safety goggles during the machining process.

2.8 Transport

Handling during transport

Incorrect handling during transport can make the product unsafe and risk the danger of serious injuries and considerable material damage.

- During transport and handling, secure the product to prevent it from falling.
- Do not walk under suspended loads.

2.9 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.

2.10 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.

2.11 Fundamental dangers

General

- Observe safety distances.
- Never deactivate safety installations.
- Install the provided protective product in the danger zone before switching on the product.
- Remove the energy supplies before installation, modification, maintenance, or adjustment work. Ensure there is no residual energy in the system.
- Do not move parts by hand while the energy supply is connected.
- Do not reach into the movement area of the product during operation.

2.11.1 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.

2.11.2 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.

2.11.3 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 Notes on particular risks

⚠ DANGER

Risk of fatal injury from suspended loads!

Falling loads can cause serious injuries and even death.

- Stand clear of suspended loads and do not step within their swiveling range.
- Never move loads without supervision.
- Do not leave suspended loads unattended.
- Wear suitable protective equipment.

⚠ 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.

⚠ CAUTION

Risk of injury from flying chips and dirt particles

During operation, flying chips and dirt particles can cause eye injuries.

- Always wear appropriate personal protective equipment, particularly protective goggles.
- Take suitable protective measures to secure the danger zone.

3 Technical data

3.1 Basic data

Designation	AOV
Weight [kg]	2.68
Compensation path axial Z [mm]	12.7
Compliance force [N] (Extend) Min. Max.	 13.3 66.7
Compliance force [N] (Retract) Min. Max.	 6.7 33.4
Orbit pattern [mm]	5
Nominal operating pressure [bar] Compensation Spindle	 1–4.1 6.2 *
Max. air consumption [l/s]	9.5 *
Oil consumption [drops/h]	2–3
Motor operating data	
Motor	Vane motor (pneumatic)
Idle speed [1/min]	10,000

* Too little pressure or flow reduces the grinding performance. It can also cause the motor to stall, vibrations to occur and the product to be damaged.

3.2 Compressed air supply requirements

Filter and oiler

- **Compressed air**: clean, dry, filtered
- **Oil**:
  - Note: Oil is only required to supply the motor, do *not* supply the compensation with oily air.
  - Quantity: The specified oil quantity should be adhered to for optimal performance and service life. Too little oil can damage the product, too much can cause the abrasive dust to stick. Some commercially available mist lubricators cannot be throttled to such an extent that a suitable quantity of oil is dispensed. An air hose running in parallel can be used here to reduce the amount of oil.
  - The oil must be suitable for air motors with vanes and have a viscosity in accordance with ISO VG 46 or 32. Hydraulic oil or other types of oil can damage the motor. SCHUNK recommends Interflon Lube PN46.

Compressed air supply for motor

Pressure and flow rate

- Ensure sufficient operating pressure (6.2 bar) and the appropriate amount of air.
- Too little pressure/flow will result in a lower performance than specified. It can also cause the motor to stall, vibrations to occur and the product to be damaged.
- A flow meter can be used for this check. The operating pressure can be measured with the motor running for an approximate determination.
- Flow or pressure must be measured while the AOV is running. The pressure should be measured close to the engine (approx. 1 meter) and, for example, with a T-piece on the motor's air line.

General notes

- It must also be taken into account that other consumers in the system or on the same compressed air network can cause fluctuations in the pressure and flow rate.
- Long hose lengths and small hose diameters as well as many diversions reduce the air flow. As a result, there can be considerable differences between the operating pressure applied at the inlet of the robot cell and the pressure that actually arrives at the device.
- In order to achieve sufficient operating pressure on the device, it may be necessary to set the operating pressure on the maintenance unit of the robot/robot cell higher than is necessary for the device itself.

Compressed air supply for compensation

- Only operate with oil-free air.
- SCHUNK recommends starting with a low contact pressure on the compensation and increasing it as required.
- In most cases, a maximum operating pressure of 2 bar is sufficient for the air connection to extend.
- Excessive contact force can cause the motor to jam and/or lead to poorer grinding performance.
- If the motor gets jammed, the contact force needs to be reduced.
- The dead weight of the motor influences the contact force depending on its position in the room.
- The connection for retracting only needs to be used to reduce the contact force. If this is not necessary, this connection does not need to be connected
- The contact force can be adapted to the processing situation and the position of the product in the room by adjusting the air pressure on the compensation.
- The pneumatic compensation system uses a double-acting pneumatic cylinder. In most cases, only one connection needs to be supplied with compressed air, as this moves the cylinder in one direction. If both connections are supplied with compressed air at the same time, the forces can partially cancel each other out.

3.3 Ambient conditions and operating conditions

Designation	AOV
Ambient temperature [°C] Min. Max.	 +5 +35
Noise emission [dB(A)]	≤ 85

3.4 Compliance force

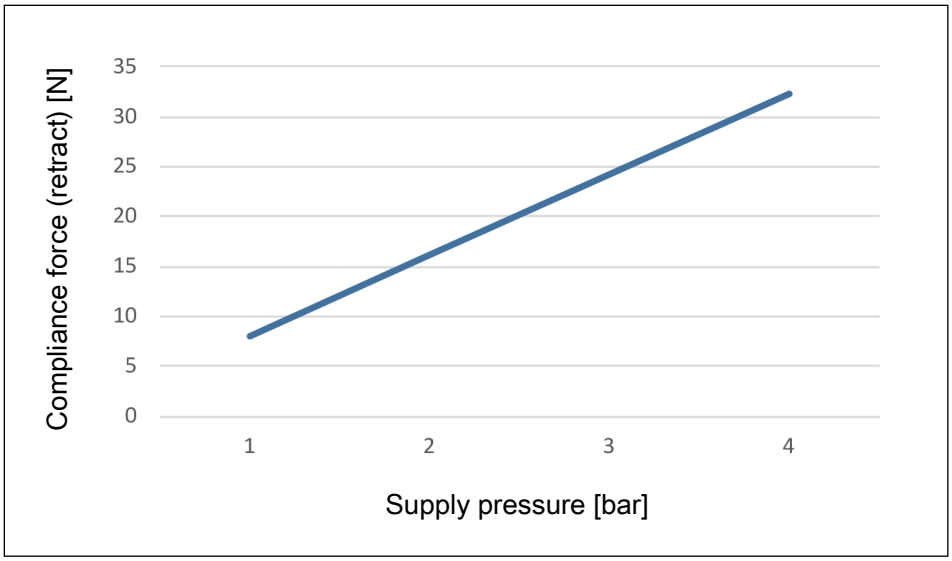
NOTE

The compliance force may vary from product to product and should be treated as a guide value only. The actual force characteristics depend on the installation position and the condition of the product. The compliance pressure should be selected depending on the material of the workpiece, the type of tool and the amount of material to be removed.

NOTE

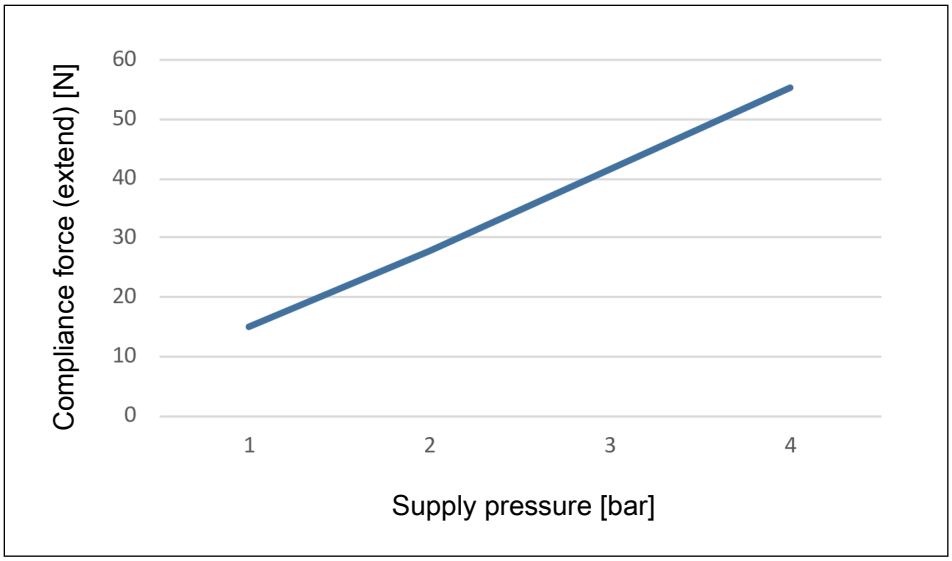
The specified compliance force only corresponds to the actual values when the product is mounted horizontally and the motor is switched off.

Compliance force (retract)



Compliance force (retract) as a function of the operating pressure

Compliance force (extend)

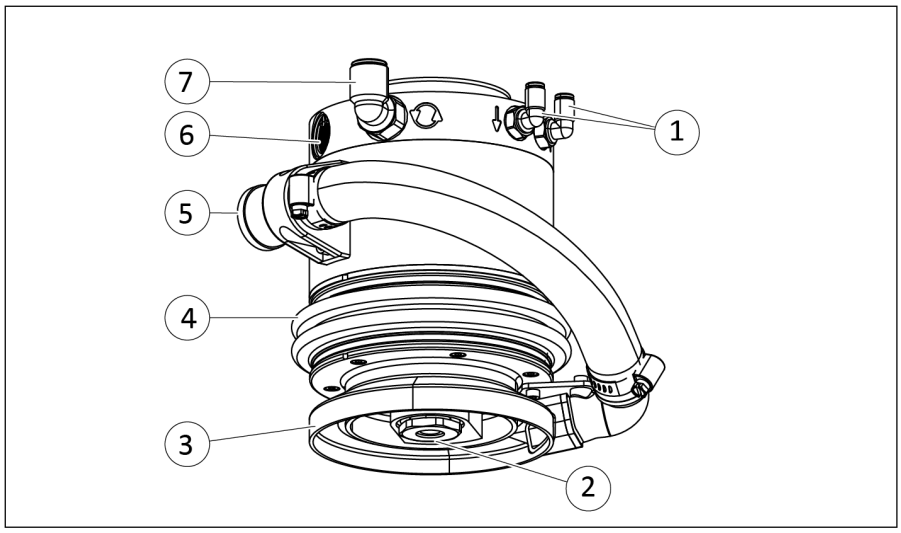


Compliance force (extend) as a function of the operating pressure

4 Design and description

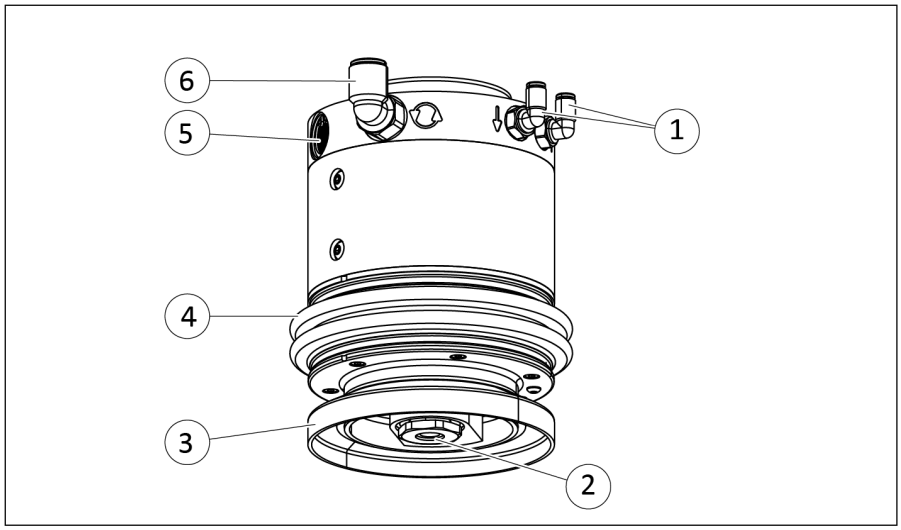
4.1 Design

AOV with vacuum



1	Compensation air connection
2	Internal thread for mounting the grinding disc
3	Vacuum shroud
4	Bellows
5	Vacuum connector
6	Exhaust air opening
7	Motor air connection

AOV without vacuum



1	Compensation air connection
2	Internal thread for mounting the grinding disc
3	Shroud
4	Bellows
5	Exhaust air opening
6	Motor air connection

4.2 Description

Pneumatic, compact and lightweight random orbital sander with axial compensation for surface finishing with robots, especially cobots and smaller industrial robots.

5 Assembly and settings

5.1 Assembling and connecting

⚠ 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.

⚠ CAUTION

Risk of injury from flying chips and dirt particles

During operation, flying chips and dirt particles can cause eye injuries.

- Always wear appropriate personal protective equipment, particularly protective goggles.
- Take suitable protective measures to secure the danger zone.

1. Check the evenness of the mounting surface, ▸ 5.2.1 [🗋 21].
2. Connect compressed air supply, ▸ 5.2.2 [🗋 22].
3. Attach the product to the robot, ▸ 5.2.1 [🗋 21].
   ⇨ If necessary, use appropriate connection elements (adapter plates).
4. Mounting the backer pad, ▸ 5.3 [🗋 24].

5.2 Connections

5.2.1 Mechanical connection

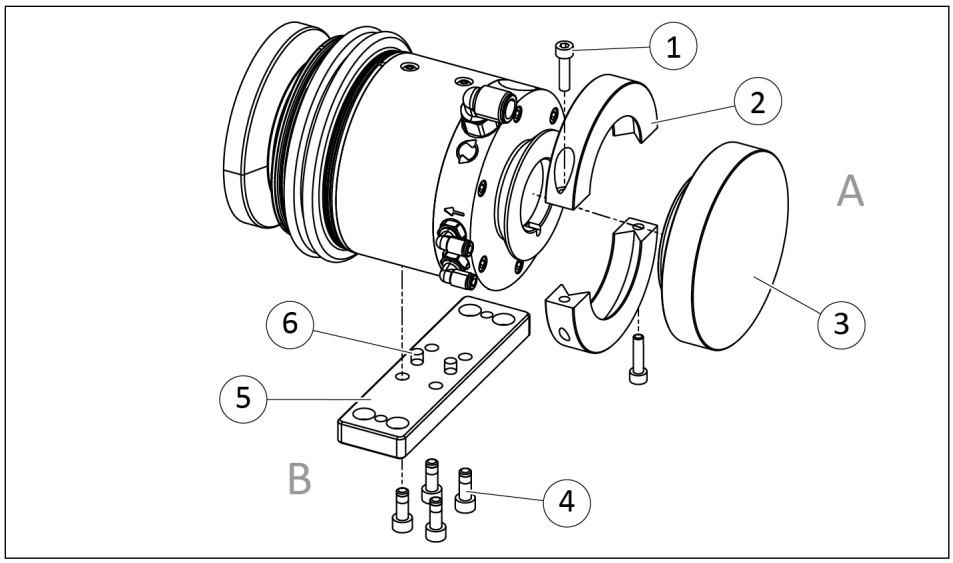
Check the flatness of the bolting surface

The values refer to the mounting surface to which the attachments provided are mounted (e.g. grippers, rotary modules).

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

Tab.: Requirements for the flatness of the bolting surface (dimensions in mm)

The product can be assembled from two sides.



Item	Mounting	AOV
Side A		
1	Mounting screw *	–
2	Clamping collar *	
3	Adapter plate axial *	
Side B		
4	Mounting screw *	M6
	Max. depth of engagement [mm]	9.1
5	Adapter plate radial *	–
6	Centering pin [mm]	6

* Mounting material is not included in the scope of delivery. (available from SCHUNK on request)

5.2.2 Pneumatic connection

CAUTION

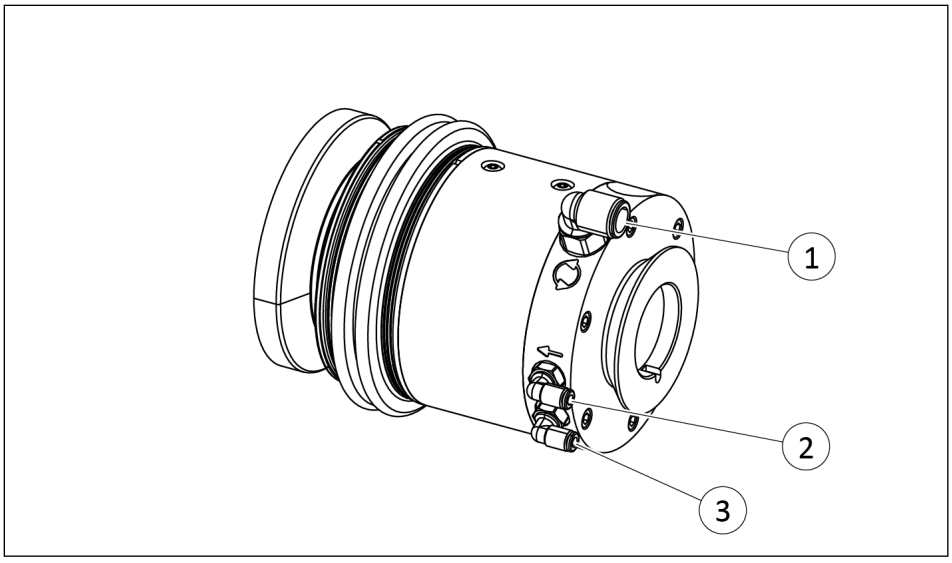
Damage to the air hoses possible!

The hoses connected to the air connection spindle can be damaged if the mounting is too tight.

- Allow hoses to hang flexibly so as not to impair the compensating movements of the motor.

NOTE

- Observe the requirements for the compressed air supply, ▸ 3.2 [🗋 15].
- **For compensation air connection**: For better regulation of the compressed air, use a self-relieving regulator with air bleed.
- **For air connection spindle**: For better regulation of the compressed air, use a 2-way valve and a pressure regulator set at max. 6.2 bar.



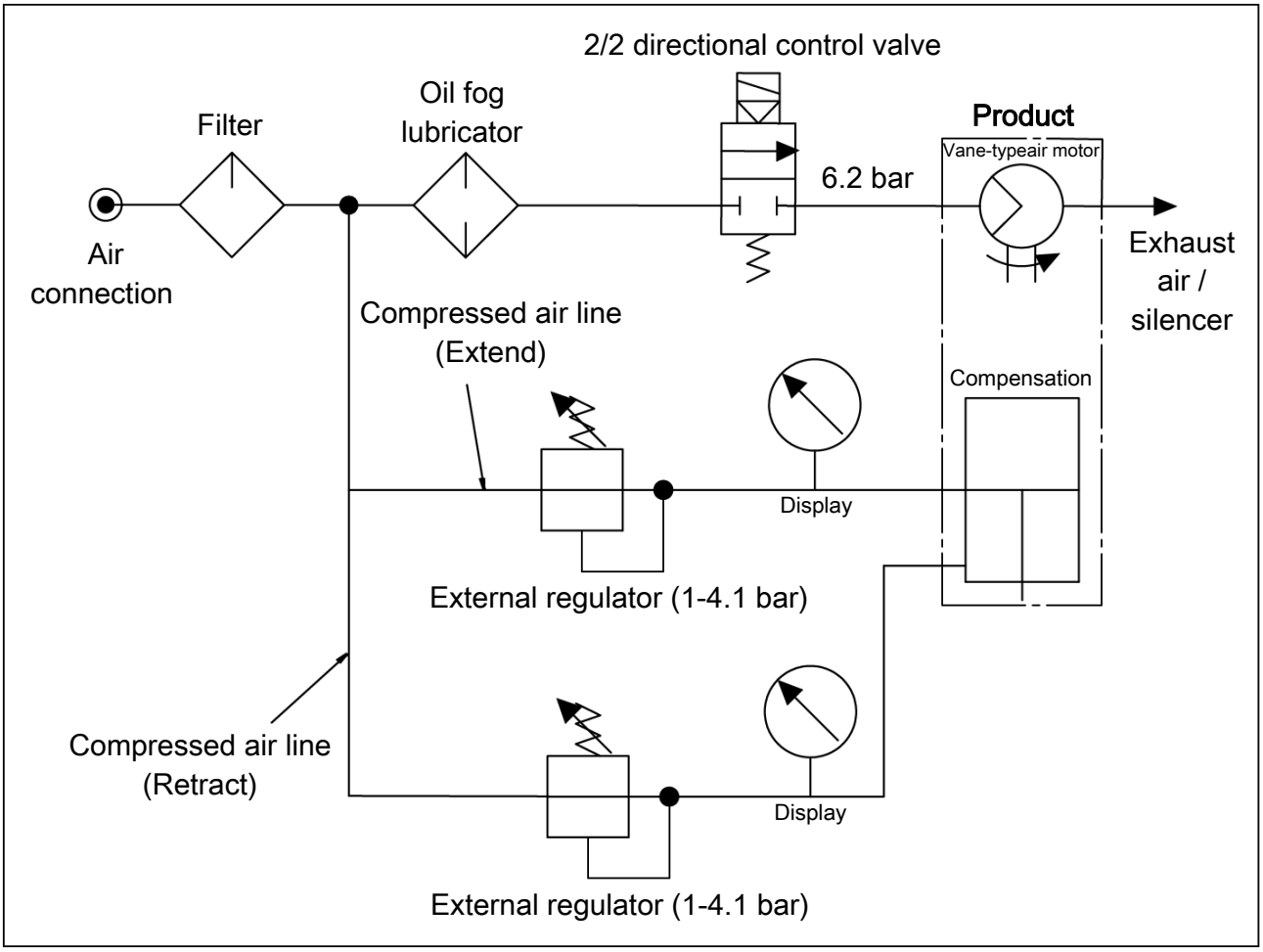
1	Motor air connection
2	Compensation air connection (extension)
3	Compensation air connection (retraction)

Item	Mounting	AOV
1	Hose connection [mm]	10
	Thread	G1/4
2	Hose connection [mm]	4
3	Thread	G1/8

Pneumatics wiring diagram

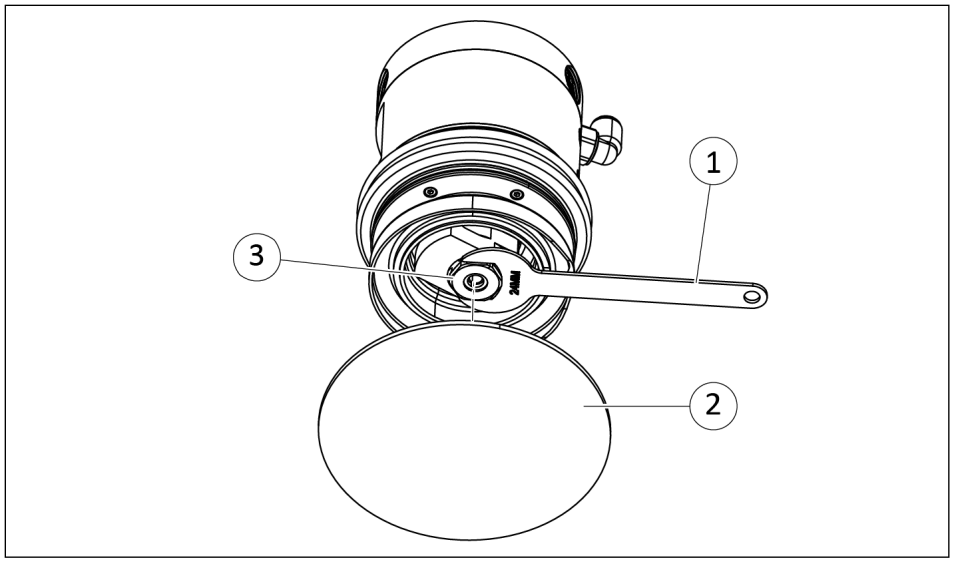
NOTE

Depending on the application, only one of the retract and extend air connections may be necessary.



Pneumatic wiring diagram

5.3 Mounting the backer pad



1. Using the wrench (1) from the accessory kit, grasp the nut (3) between the shroud or vacuum shroud and the backer pad (2).
2. Insert the bolt on the backer pad into the nut.
3. Turn the backer pad (2) clockwise and fasten.
4. Fasten the media on the backer pad.

Item	Mounting	AOV
2	Backer pad ["]	5 6
3	Internal thread for mounting the grinding disc	5/16" – 24 UNF

6 Operation

CAUTION

Damage due to radial load!

A radial load on the tool will result in a premature failure of the product.

- Product was completely assembled.

1. Adjust the robot control system so that the product approaches the workpiece surface slowly and vertically. If necessary, the compliance pressure should be lowered for the moment of contact with the workpiece in order to protect the workpiece. The motor may only be supplied with air at the moment of touchdown or shortly after.
2. Adjust feed rate.
3. Plan the robot path so that 50% of the compensation function of the product is used at the theoretical workpiece surface. This allows the product to use its flexibility to machine areas evenly despite different initial geometries without losing contact with the workpiece. If this is not possible, several rounds of machining may be necessary.

7 Troubleshooting

7.1 Uneven machining result

Possible cause	Corrective action
The pressure valve is defective.	Change pressure valve.

7.2 No compensation possible

Possible cause	Corrective action
Jammed compliance slide.	Remove the dust boot, clean the compliance slide and lubricate the compliance slide rods.
Piston is dirty.	

7.3 Residues on the workpiece after machining

Possible cause	Corrective action
Feed rate not set correctly.	Readjust feed rate.
Worn grinding or polishing media or damaged backer pad.	Change the grinding / polishing wheel or backer pad.
Tool is not suitable for the workpiece.	Select the tool that matches the properties of the workpiece.
Motor bearings are worn.	Change motor, ▸ 8.5 [🗋 28].
Too much material is being removed.	Check process parameters, reduce infeed, reduce air pressure for compensation, perform machining in several passes., ▸ 6 [🗋 25].
Workpiece is approached too fast or at an incorrect angle.	
Insufficient or no compressed air supply.	Check compressed air lines.
	Check that the pressure valve is set to 6.2 bar. Pressure must be maintained while the spindle is running.

8 Maintenance

CAUTION

Material damage due to incorrect assembly and disassembly!

Incorrect disassembly and reassembly may cause damage to the product and/or accessories.

- SCHUNK recommends having the product and/or accessories checked and repaired by SCHUNK if necessary.

8.1 Notes

⚠ WARNING

Risk of injury from electric shock due to contact with live parts!

- Before starting any work: Disconnect the power supply from the mains and secure against accidental switch-on.
- Work may only be performed by appropriately qualified personnel.

Original spare parts

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

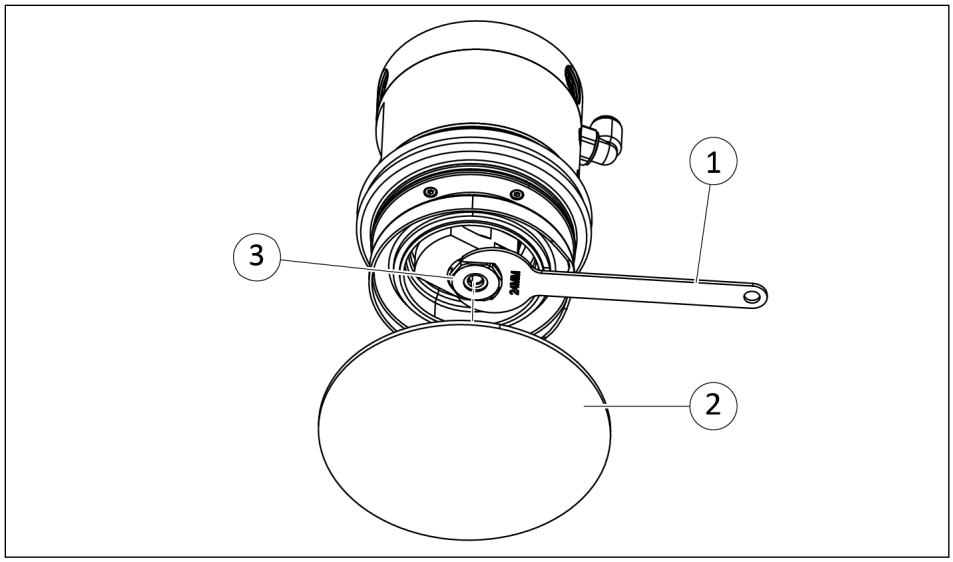
8.2 Maintenance interval

Maintenance interval	Maintenance work
daily	Check the backer pad for damage and wear, change if necessary, ▶ 8.4 [🗋 28].
as required	Change the motor, ▶ 8.5 [🗋 28].
	Changing the dust boot, ▶ 8.7 [🗋 30].
	Changing the vacuum shroud, ▶ 8.7 [🗋 30]
	Send damaged products to SCHUNK for repair.

8.3 Lubricating the motor

To maximize the service life, only operate the motor for the product with lubrication in the air supply. To do this, lubricate the air supply to the motor with 2-3 drops of a standard pneumatic tool oil per hour.

8.4 Changing the backer pad



Disassembling the backer pad

1. Remove media from the backer pad.
2. Using the wrench (1) from the accessory kit, grasp the nut (3) between the shroud or vacuum shroud and the backer pad (2).
3. Loosen the backer pad (2) counterclockwise.

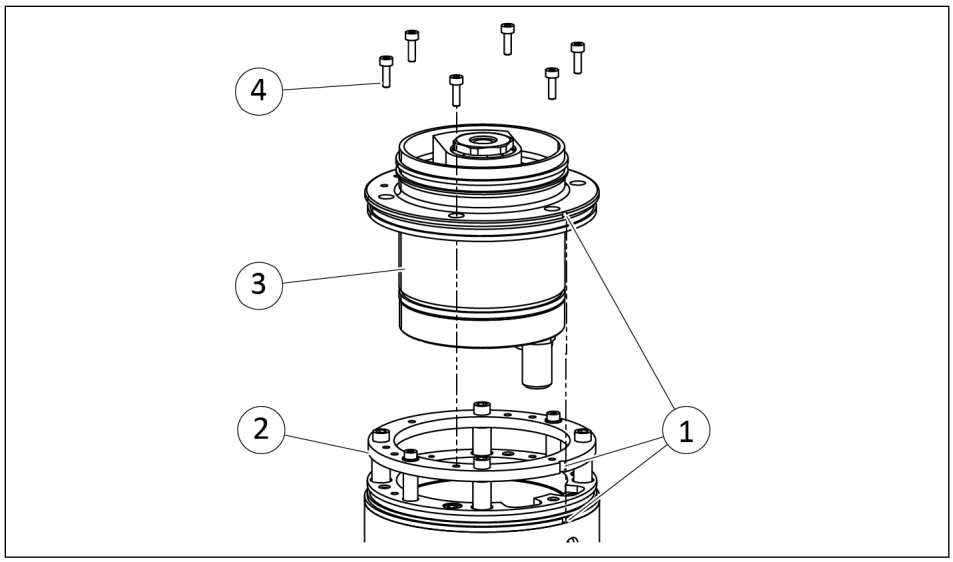
Mounting the backer pad

1. Using the wrench (1) from the accessory kit, grasp the nut (3) between the shroud or vacuum shroud and the backer pad (2).
2. Insert the bolt on the backer pad into the nut.
3. Turn the backer pad (2) clockwise and fasten.
4. Fasten the media on the backer pad.

8.5 Changing the motor

NOTE

The motor is held by four guide pins which are fixed to the motor plate. To prevent jamming, the guide pins are fixed to the motor plate with some clearance. This allows the motor assembly to make a smooth compensating movement and the torque of the motor is still supported. Too little clearance prevents the proper compensating movement. Therefore, do not remove the clearance.



Disassembling a damaged motor

1. Remove the compressed air hose.
2. Disassembling the backer pad, ▸ 8.4 [🗋 28].
3. Disassembling the shroud or vacuum shroud, ▸ 8.7 [🗋 30].
4. Disassembling the dust boot, ▸ 8.7 [🗋 30].
5. Loosen the mounting screws (4) and carefully pull out the motor housing (3).
6. Remove the flexible tubing to the air motor housing inside the housing.
7. Clean the inside of the housing.

Inserting the new motor

1. Connect the flexible tubing to the air motor housing inside the housing.
2. Lubricate the vent pipe at the bottom of the motor.
3. Insert the new motor into the housing.
   ⇨ Observe the alignment marks (1) on the housing, on the motor plate (2) and on the motor housing (3).
4. Fasten the motor housing (3) with screws (4).
5. Mounting the dust boot, ▸ 8.7 [🗋 30].
6. Mounting the shroud or vacuum shroud, ▸ 8.7 [🗋 30].
7. Mounting the backer pad, ▸ 8.4 [🗋 28].
8. Connect all compressed air lines.

8.6 Retrofitting the vacuum connection

NOTE

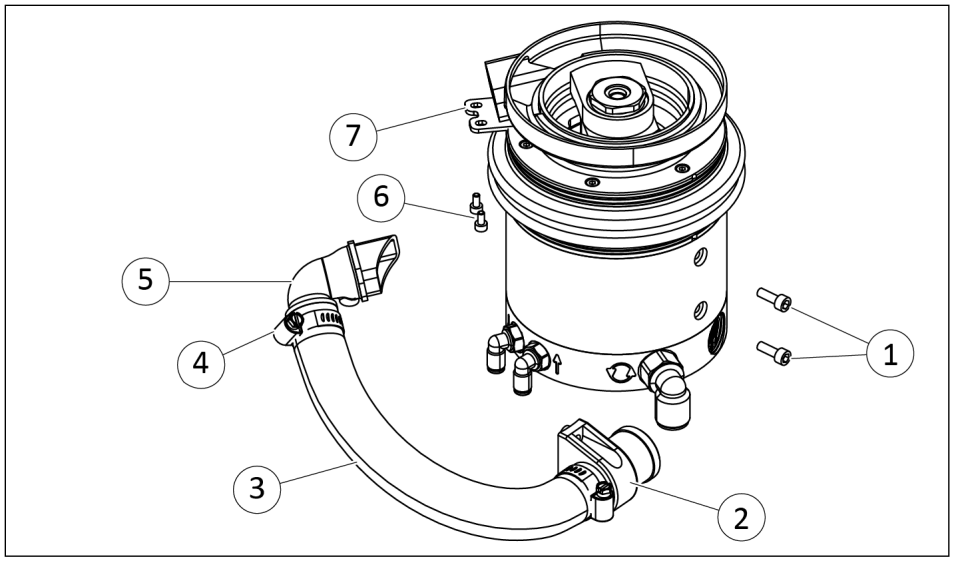
The vacuum connection can be retrofitted. To do this, remove the shroud and replace it with a vacuum shroud, ▸ 8.7 [🗋 30].

8.7 Disassembly and assembly

NOTE

This chapter describes the disassembly and assembly of the AOV with vacuum. For the AOV without vacuum, start at the sub-heading "Disassembling the shroud".

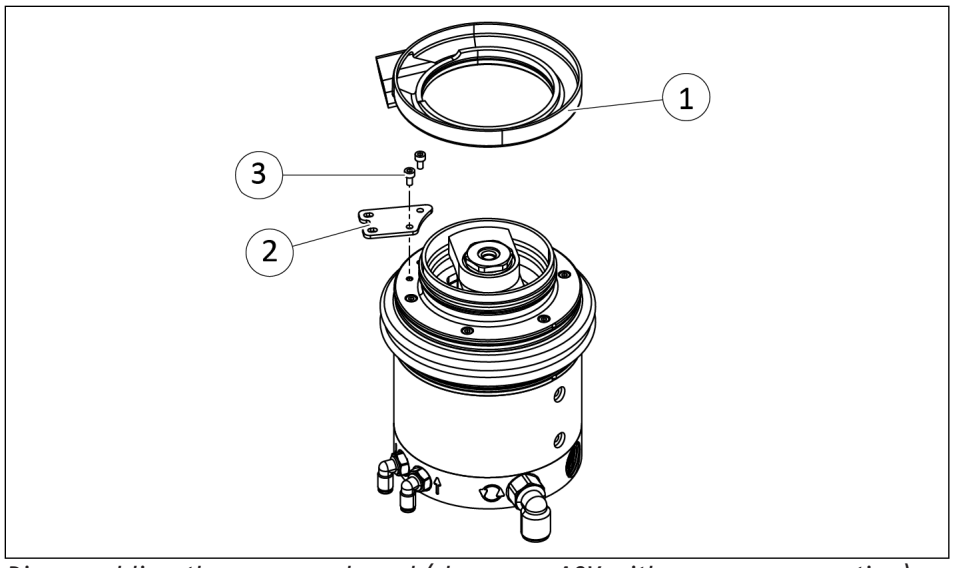
Disassembling the vacuum connection



Disassembling the vacuum connection

1. Remove the compressed air hose.
2. Disassembling the backer pad, ▸ 8.4 [🗋 28].
3. Loosen the mounting screws (6).
4. Remove the vacuum elbow (5) from the elbow mount (7).
5. Loosen the mounting screws (1).
6. Remove the vacuum connector (2) from the housing.
7. Loosen the clamping collars (4).
8. Disassemble the vacuum elbow (5) and vacuum connector (2) from the hose (3).

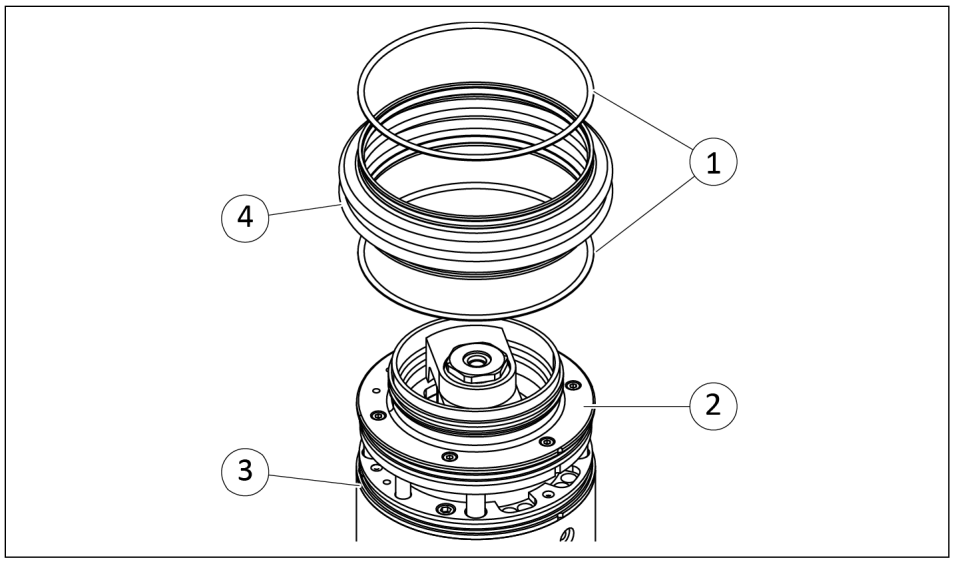
Disassembling the vacuum shroud



Disassembling the vacuum shroud (shown on AOV with vacuum connection)

1. Carefully pull the vacuum shroud (1) off the motor housing.
2. **Only for AOV with vacuum:** Loosen screws (3) and remove the elbow mount (2).

Disassembling the dust boot



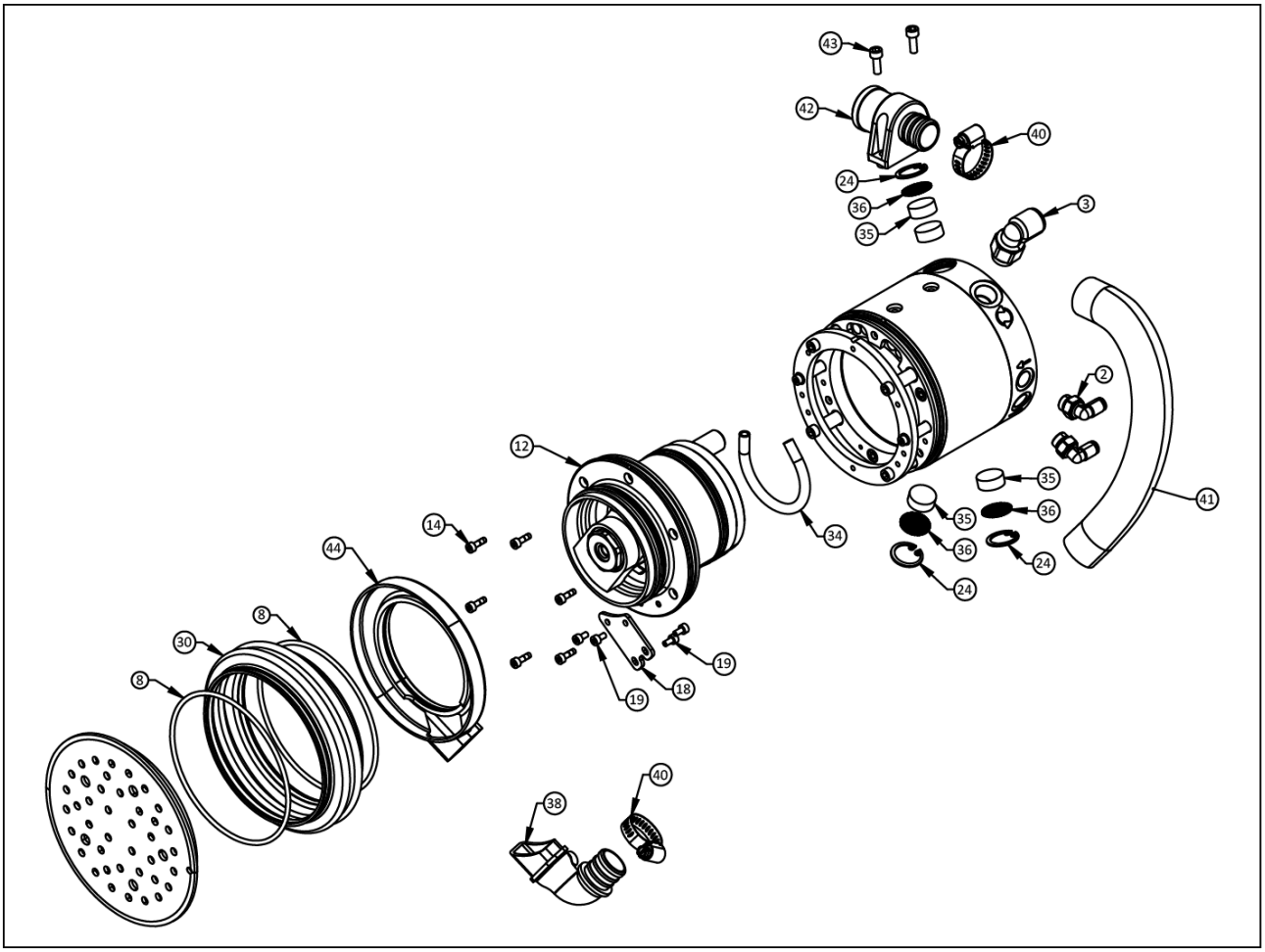
Disassembling the dust boot

1. Remove the O-ring (1) that connects the dust boot (4) to the backer pad.
2. Remove the O-ring (1) that attaches the dust boot (4) to the housing (2).
3. Remove the dust boot (4).

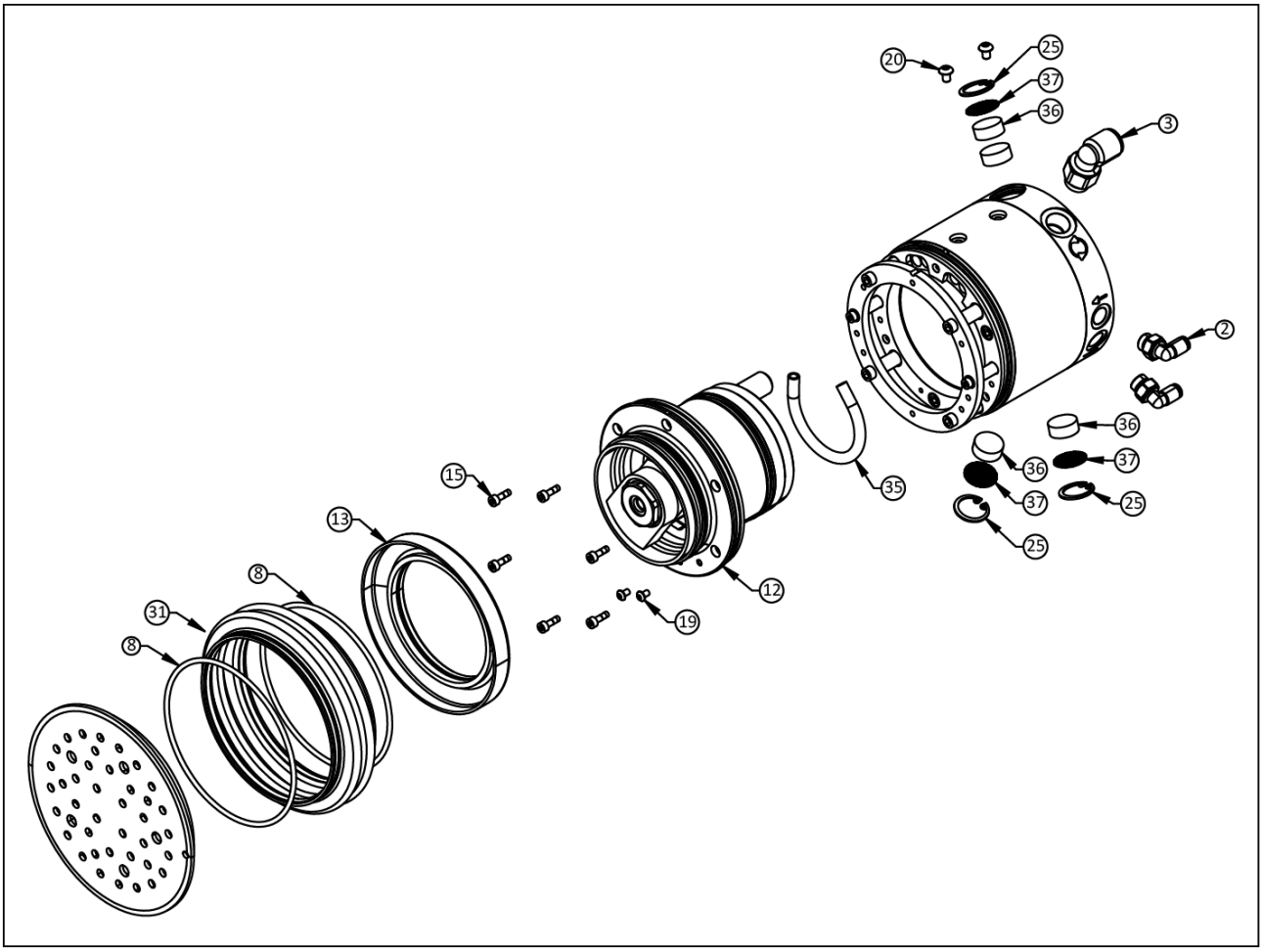
Assembling

1. Assemble product in the reverse order. Observe the following when doing this:
   ⇨ Clean all parts thoroughly, check for damage and wear, if necessary replace wearing parts
2. Connect all compressed air lines.
3. Mount product onto the system/machine.

8.8 Assembly drawings



A0V with vacuum



A0V without vacuum

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: Axially–Compliant Orbital Sander Tool / AOV / 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

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

Lauffen/Neckar, September 2024

10 UKCA declaration of incorporation

in accordance with the Supply of Machinery (Safety) Regulations 2008.

Manufacturer/ Distributor	SCHUNK Intec Limited Clamping and gripping technology 3 Drakes Mews, Crownhill MK8 0ER Milton Keynes

We hereby declare that on the date of the declaration the following partly completed machine complied with all basic safety and health regulations found in the
"Supply of Machinery (Safety) Regulations 2008".
The declaration shall be rendered invalid if modifications are made to the product.

Product designation:	Axially-Compliant Orbital Sander Tool / AOV / pneumatic
ID number	

The partly completed machine may not be put into operation until it has been confirmed that the machine into which the partly completed machine is to be installed complies with the provisions of the "Supply of Machinery (Safety) Regulations 2008".

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:
Marcel Machado, address: refer to manufacturer's address

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

Lauffen/Neckar, September 2024

SCHUNK SE & Co. KG
Spanntechnik | Greiftechnik | Automatisierungstechnik

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