PRISMO 3 Precision Grinding Chuck
ID no. 0206601 / 0206602

Assembly and Operating Manual

Imprint

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

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Dear customer,

congratulations on choosing a SCHUNK product. By choosing SCHUNK, you have opted for the highest precision, top quality and best service.

You are going to increase the process reliability of your production and achieve best machining results – to the customer's complete satisfaction.

SCHUNK products are inspiring.

Our detailed assembly and operation manual will support you.

Do you have further questions? You may contact us at any time – even after purchase.

Kindest Regards

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Reg. No. 003496 QM08

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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.

Illustrations in this manual are provided for basic understanding of the product and may differ from the actual product design.

In addition to these instructions, the documents listed under (☞ 1.2, Page 5) are applicable.

1.1 Warnings

To make risks clear, the following signal words and symbols are used for safety notes.

	**⚠ DANGER** **Danger for persons.** Non-compliance will inevitably cause irreversible injury or death.

	**⚠ WARNING** **Dangers for persons.** Ignoring a safety note like this can lead to irreversible injury and even death.

	**⚠ CAUTION** **Dangers for persons.** Non-observance can cause minor injuries.

	***NOTICE***
	Material damage Information about avoiding material damage.

1.2 Applicable documents

- General terms of business *
- Catalog data sheet of the purchased product *

The documents marked with an asterisk (*) can be downloaded on our homepage **www.de.schunk.com**.

2 Basic safety notes

Improper handling, assembly and maintenance of this product may result in risk to persons and equipment if this operating manual is not observed.

Report any failures and damage immediately and repair without delay to keep the extent of the damage to a minimum and prevent compromising the safety of the product.
Only use original SCHUNK spare parts.

2.1 Intended use

The precision grinding chuck is used to clamp tools with cylindrical shanks to grind tools on grinding machines.

- The product may only be used within the scope of its technical data, (☞ 6, Page 14).
- The product is intended for installation in a machine.
  The applicable guidelines must be observed and complied with.
- The product is intended for industrial use.
- Appropriate use of the product includes compliance with all instructions in this manual.

2.2 Not intended use

The precision grinding chuck must not be used for turning or milling.
It must not be used in ATEX areas or outdoors.

The precision grinding chuck is not being used as intended if, for example:

- Tools are not properly clamped
- Safety regulations are disregarded and persons are working at the precision grinding chuck (for example, to machine clamped tools) without additional protective equipment
- The technical data is exceeded when using the precision grinding chuck
- The precision grinding chuck is used for purposes it is not intended for

2.3 Notes on particular risks

The precision grinding chuck may pose a danger to persons (risk of injury) and property if, for example:

- It is not used as intended
- It is not installed or maintained properly
- The safety and installation instructions, local applicable safety and accident prevention regulations or the Machine Directive are not observed

⚠ WARNING

There is a risk of injury for the operating personnel in the event of a jaw break or if a workpiece is lost due to parts flying around!

- When the precision grinding chuck is used, the EC Machinery Directive prescribes the use of protective equipment, so that if the precision grinding chuck or a component of the chuck fails, flying parts will be caught by the protective equipment.
- The machine manufacturer must ensure sufficient wall thickness for its housing/safety mechanisms (with consideration to applicable regulations and standards).

⚠ WARNING

Risk of injury to the operating personnel when the chuck is not used in accordance with its appropriate use and when the technical data is exceeded due to a failure of the precision grinding chuck.

Improper use and exceeding the technical data can cause the precision grinding chuck to fail, resulting in risk to life and limb of operating personnel and significant damage to the system.

- Observe the technical data.
- Use the precision grinding chuck only for its intended purpose.
- Observe valid safety standards and regulations.

⚠ WARNING

Risk of injury due to dropping the precision grinding chuck during transport, installation or removal
During transport and when installing or detaching the precision grinding chuck, ensure it does not fall off.

⚠ CAUTION

Risk of crushing from chuck jaws opening and closing when manually loading and unloading!
Do not reach between the chuck jaws.
Wear protective gloves.
On hand-loaded machines, the workpiece must be loaded using an insertion aid.

⚠ CAUTION

Risk of injury during manual loading and unloading of tools due to sharp cutting edges.
Wear protective gloves when changing tools.
Only remove tools when the machine is shutdown.
Use automatic loading and unloading of tools whenever possible.

2.4 Notes on safe operation

- The smallest tools that can be clamped are cylindrical tools with an outer diameter of at least 3 mm. If smaller tools are inserted, they cannot be clamped securely.
- During manual loading, there is a risk of the operator's limbs being trapped and crushed. As a result, an insertion aid should be used for manual loading. (Available as a spare part from SCHUNK.)
- The actuating force applied via the external actuation device must be coordinated with the machining task and the machining forces. The maximum actuating force must not exceed 10 kN.
- Out-of-round tools damage the precision grinding chuck or have a negative impact on the grinding precision. The true running accuracy of the tools must not exceed 0.006 mm.

- The chuck must not be used in eroding machines. Corrosion may result in the precision grinding chuck no longer conforming to specification.

Follow the care and maintenance instructions.

Clamping depth
The clamping depth is dependent on the clamping diameter.
The minimum clamping depth is twice the clamping diameter.

Stroke position adjustment
If the clamping cylinder does not have the complete stroke required by the grinding chuck (22.5 mm), you can machine using stroke position adjustment. When re-equipping to a different clamping diameter, it may be necessary to adjust this stroke position. It is important to ensure here that the tool is securely clamped.

Design of the precision grinding chuck
Disconnect power sources during installation, modification, maintenance, or calibration. Perform maintenance, modifications, or installations outside of the danger zone.

The precision grinding chuck and associated actuation device must be coordinated with each other. The stroke of the precision grinding chuck must be long enough to safely pick up the largest and smallest diameter to be clamped.

The following safety requirements must be observed when attaching the precision grinding chuck and the clamping cylinder to the grinding machine:

- Do not start the spindle until the clamping pressure is built up in the clamping cylinder and clamping is within the permissible operating range and the machine door is closed.
- Unclamping must not be possible until the spindle is shut down.
- If the clamping energy fails, the tool must remain firmly clamped until the spindle is shut down.
- In the event of a power failure and return, there must be no change in the current switch position.
- The axial movement of the drive cylinder must not exceed 10 mm/s during manual loading.

Functional test
After installation of the precision grinding chuck, its function must be checked prior to start-up.

If the clamping device is changed, the precision grinding chuck must be adapted to the new situation by means of a fresh stroke control.

Speed

The maximum permissible RPM for the specific machining has to be defined by the user on the basis of the required clamping forces. This speed must not exceed the maximum speed of the precision grinding chuck.

⚠ WARNING

Risk of injury due to precision grinding chuck failure (jaw breakage and flying parts) when the maximum speed of rotation is exceeded.

If the grinding machine can reach a higher speed than the precision grinding chuck's top speed, a reliable speed limiter must be installed and proof must be provided that the speed limiter is effective.

Maintenance instructions

Precision grinding chuck reliability can only be guaranteed if the maintenance instructions in the operating manual are precisely followed. Please observe the following in particular:

- To lubricate the clamping device, we recommend Interflon Fin Grease LS2 heavy duty grease (SCHUNK Id-No. 9954784). Unsuitable lubricants can have a negative impact on the functioning of the clamping device (clamping force, coefficient of friction, wear behavior).
- All areas to be lubricated must be reached during lubrication. (The tight fittings of the components require a high injecting pressure. Therefore use a high-pressure grease press.)
- For good distribution of the grease, move the clamping piston to its end positions several times, lubricate again, and then check the clamping force.
- It is useful to travel the clamping piston through to its end position several times after 500 clamping strokes, at the latest. (This moves lubricant that has been pushed away back to the pressure surfaces. This means that the clamping force is retained for longer).

Safety during servicing

- Avoid any unsafe manner of working.
- Only operate the precision grinding chuck when all protective equipment has been fitted and is in full working order.
- Check the precision grinding chuck at least once per shift for externally visible damage and faults.

- Report any changes including changes in operating behavior to the responsible place/persons immediately. If necessary, immediately shut down and lock out the machine on which the precision grinding chuck is mounted.
- Do not start up the machine that the chuck is mounted on again until the malfunction has been eliminated.

2.4.1 Constructional changes, attachments or modifications

Modifications and rework (additional threads or bore holes) or attaching fittings that are not offered as accessories by SCHUNK may be performed only with permission of SCHUNK. This also applies to the installation of safety devices.

2.5 Personnel qualification

The precision grinding chuck must only be installed, removed, started up, operated and serviced by qualified specialist personnel with the relevant safety training.

All persons charged with operating, maintaining and servicing this precision grinding chuck must have access to the operating manual, especially the chapter "Basic safety notes". We recommend that the operator creates in-house safety operating instructions.

Trainees may work on machines and technical equipment in which a precision grinding chuck is installed, provided that they are supervised at all times by qualified specialist personnel.

2.6 Organizational measures

Obeying the rules
Via suitable organizational measures and instructions, the operator must ensure that the relevant safety rules are obeyed by the persons asked to operate, maintain and repair the precision grinding chuck.

Checking the behavior of personnel
The operator must at least occasionally check that the personnel are behaving in a safety conscious manner and are aware of the potential hazards.

Danger signs
The operator must ensure that the signs concerning safety and hazards mounted on the machine where the precision grinding chuck is mounted are clearly legible and are observed.

Faults

If a fault occurs on the precision grinding chuck and this fault endangers safety or if a problem is suspected due to production characteristics, the machine where the precision grinding chuck is mounted must be immediately stopped and remain shut down until the fault has been located and remedied. Only allow specialists to remedy faults.

Spare parts

Only use original SCHUNK spare parts.

Environmental regulations

The applicable environmental regulations must be observed for all maintenance and repair work.
The use of petroleum ether is prohibited. It is extremely flammable, can build up an electrostatic charge and can form an explosive gas air mixture. When selecting greases and lubricating oils, pay attention to environmental compatibility, health risks, disposal regulations and to local options for disposal according to regulations.

2.7 The use personal protective equipment

Using personal protective equipment

If no personal protective gear is worn while working with the product, the safety and health of the personnel may be compromised.

- Observe the health and safety regulations and wear the necessary personal protective equipment while working with the product.
- Observe the applicable safety accident prevention regulations.
- Use protective gloves for sharp edges, sharp corners and rough surfaces.
- Use protective gloves for hot surfaces.
- Use protective gloves and googles when handling hazardous substances.
- Wear tight protective clothing for moving components.

3 Torque per screw

Tightening torques to mount the PRISMO precision grinding chuck (screw quality 12.9)

Screw size	M4	M5
Tightening torque (Nm)	3	10

4 Warranty

If the product is used as intended, the warranty is valid for 12 months from the date of delivery from the production facility under the following conditions:

- Observe the applicable documents (☞ 1.2, Page 5)
- Observe the environmental and operating conditions.
- Observe the maximum number of clamping cycles (☞ 6, Page 14)
- Observe the mandatory maintenance and lubrication intervals.(☞ 9, Page 23)

Parts touching the work piece and wearing parts are not part of the warranty.

5 Scope of delivery

1 PRISMO3 precision grinding chuck

1 Assembly key

1 Alignment key

1 Insertion aid ≤ Ø 6

1 Insertion aid ≤ Ø 12

1 Assembly and Operating Manual

6 Technical data

Max. actuating force	10 kN
Max. total clamping force	12.5 kN
Clamping moment for Ø 20, min. clamping depth 42 mm:	18 Nm
Stroke per jaw:	8.5 mm
Piston stroke:	22.5 mm
Minimum clamping depth:	2.5 x clamping Ø
Clamping range:	Ø 3 mm to Ø 20 mm
Max. speed at max. actuating force:	2500 rpm
Air purge connection:	Max. 0.1 MPa
Weight:	6.4 kg
Installation position:	Any
Balancing grade at 2500 rpm	G 6.3
Protection class:	IP 40
Operating temperature:	+ 8° C to + 44° C

Warranty and maximum clamping cycles

Length of warranty	12 Months
Maximum clamping cycle number	50 000 Cycles

Loss of clamping force due to rotation and speed:
The speed must be coordinated with the actuating force selected and the clamping force required.

The mass and the eccentricity of the center of gravity of the chuck jaws result in a centrifugal force of 0.5 kg × m.
This results in a loss of clamping force for the selected speed of
$Fr\ [N] = 0.5\ [kg \times m] \times n^2\ [1/sec]$

Example:
Speed selected: 1000 rpm
Loss of clamping force Fr: $Fr\ [N] = 0.5\ [kg \times m] \times (1000/60)^2\ [1/sec^2] = 138\ N$
Speed selected: 2500 rpm
Loss of clamping force Fr: $Fr\ [N] = 0.5\ [kg \times m] \times (2500/60)^2\ [1/sec^2] = 868\ N$

7 Assembly and installation

The numbers shown for the individual components refer to Fig. 0206601, Fig. 0206602 and the drawings chapter.
(☞ 13, Page 28)

7.1 Pre-assembly measures

Carefully lift the product (e.g. using suitable lifting gear) from the packaging.

⚠ CAUTION

Danger of injury due to sharp edges and rough or slippery surfaces
Use personal protective gear, especially safety gloves.

Check the delivery for completeness and for transport damage.

7.2 Handling prior to attachment

Before attaching the chuck to the machine, check the chuck for damage.

⚠ CAUTION

Risk of crushing from chuck jaws opening and closing!
Do not reach between the chuck jaws.
Wear protective gloves.

Remove the set-screws (item 59) from the housing (item 4). The mounting screws (item 53) for fastening the chuck to the machine are built into the tool grinding chuck. The thread depth on the machine flange must be longer than the screw projection on the mounting surface. The centering sleeve (item 10) must not project beyond the mounting surface on the chuck body (item 1).

7.3 Preparing the chuck attachment

- Check the spindle nose or the ready-machined intermediate flange for radial and axial run-out. The permissible limit is 0.005 mm as per DIN 6386 and ISO 3089. To reduce lateral run-out on the precision grinding chuck, the axial-run out deviation should not exceed 0.002 mm.

- The draw tube connection is equipped with lateral run-out compensation. The center sleeve is designed to be slightly floating and it feels loose.
- The contact surface must be chamfered and clean at the bores. Rectify any damage of the spindle nose supporting surfaces. For the flange spindle, check the contact surface with a straight edge.

When mounting with an intermediate flange, never allow contact with the base of the centering sleeve (item 10). The flange must support on the entire surface of the chuck body (item 1).

- Check the front position of the draw bar.
  To do this, move the machine's clamping cylinder to its front end position.
- Check the overall stroke of the clamping cylinder.

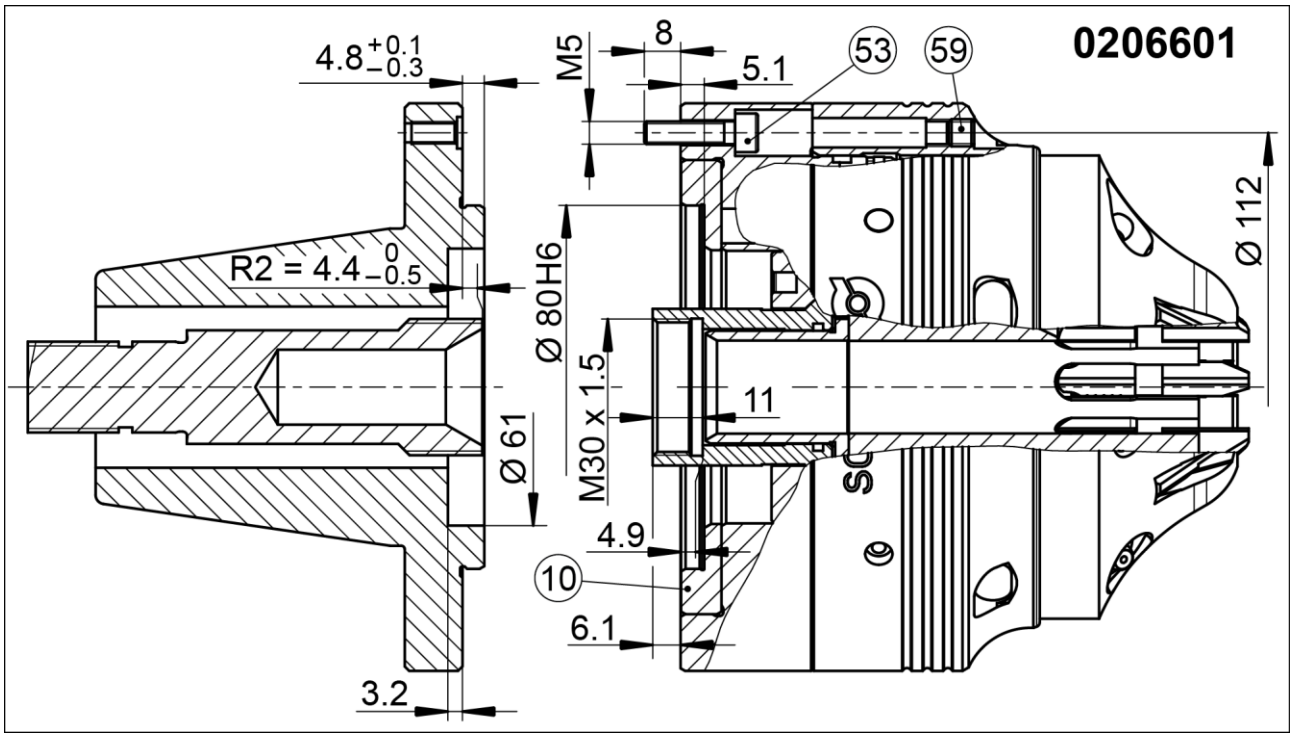


Fig. 0206601

NOTE on Fig. 0206601 and 0206602:

Cylinder piston in foremost position.
R 1 = move the chuck piston to its foremost position and measure with a depth gage.
R 2 = R 1 – 0.5 mm

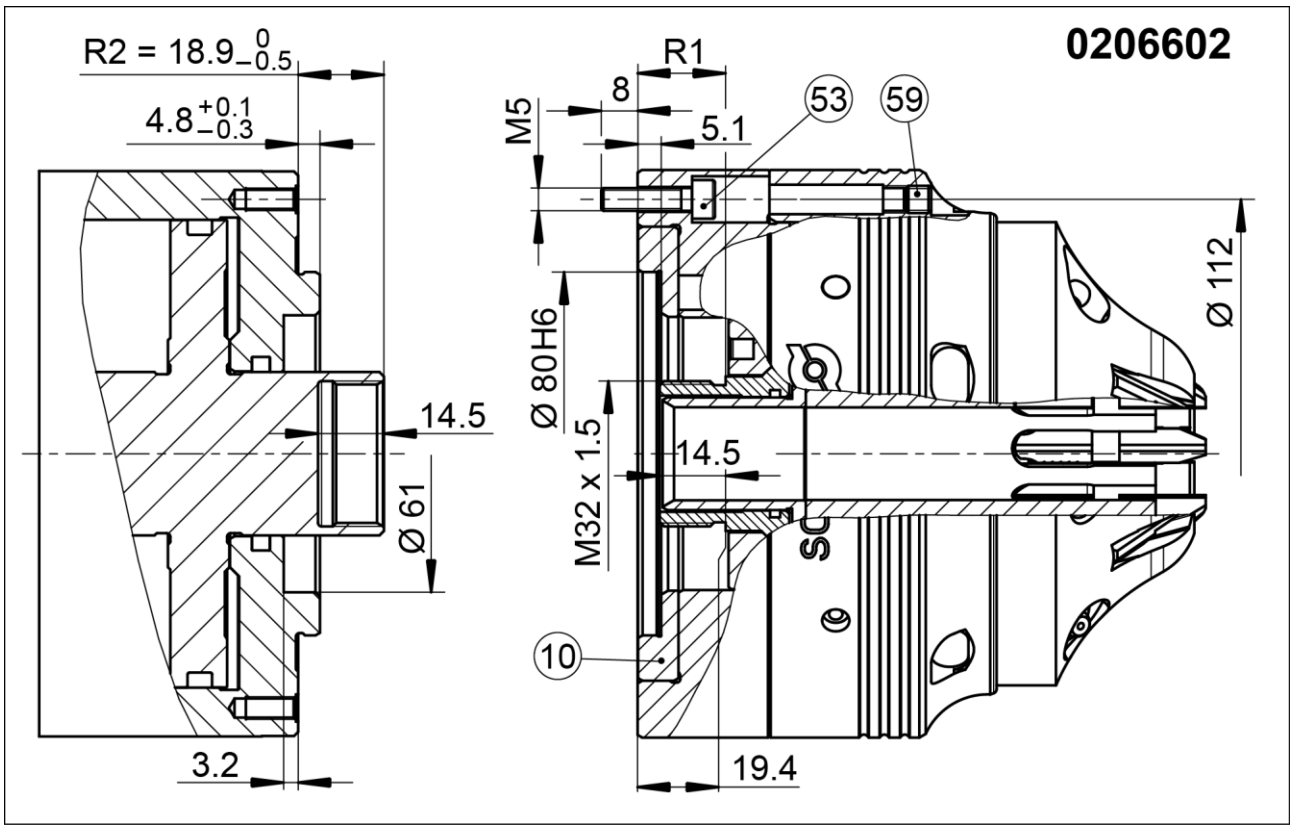


Fig. 0206602

- Measure the length of the centering collar on the flange and offset it against the length of the chuck side. The length of the flange side must be smaller than the length of the clamping chuck side so that the right flat surfaces make contact. The lateral and radial run-out adjustment screws must be screwed back.
- Check the connection dimensions. When it is in its foremost end position, the piston rod must not project by more than the dimension required for the draw tube adapter.

7.4 Assembly of the precision grinding chuck on the machining center

Before placing the chuck on the spindle nose, carefully clean and lightly oil the centering and contact surfaces of both parts.

Move the precision grinding chuck to its completely open end position. Screw the precision grinding chuck onto the draw bar until the locating surfaces touch. Then continue to turn the chuck until the threaded holes on the machine line up with the mounting screws (item 53).

Screw in all the mounting screws and tighten them alternately (☞ 3, Page 13).

Then move the cylinder to its rear end position and check whether the test shaft with the smallest clamping diameter can no longer be joined or whether this test shaft can still be clamped securely and there is sufficient stroke reserve available.

Next, move the cylinder to its foremost end position and use a test shaft to check whether the largest clamping diameter can be joined or if the chuck opens wide enough.

Clamp a test shaft with a diameter of 12 mm into the chuck to a depth of about 40 mm. Adjust the run-out accuracy using the alignment screws (item 58). To do this, adjust the deepest point with a suitable dial indicator and screw in the alignment screw (item 58) in the same angular position. Once the highest point on the dial indicator is adjusted, the opposite alignment screw (item 58) must be screwed in.

NOTICE

Make sure that the alignment screw is released again immediately after adjustment and that it is not trapped on the centering sleeve (item 10).

NOTE:
The alignment screws (item 58) cannot be unscrewed from the chuck body (item 1).

Check the run-out accuracy and, if necessary, repeat the adjustment until you have achieved the desired run-out accuracy.

Check that the mounting screws (item 53) are secure. Then screw in the set-screws (item 59) until they are flush with the housing and, if necessary, secure them with a detachable screw connection.

NOTICE

Never screw the set-screws (item 59) all the way into the housing.

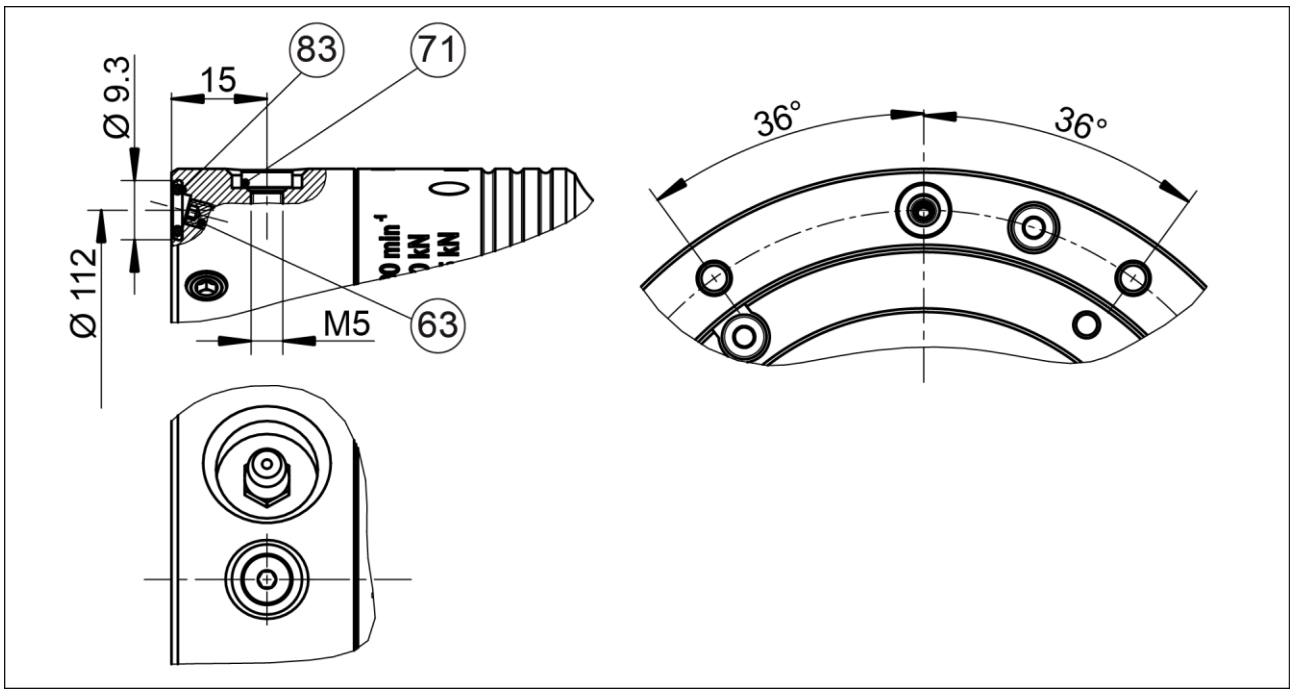
Disassembly is performed in the reverse order.

7.5 Assembly with air purge connection

The precision grinding chuck has an air purge connection on the flat surface to the machine flange. This connection serves to protect the chuck against dirt and chips from entering into it.

The air purge connection can be connected axially to the machine flange via the flat surface. Alternatively, if the locking screw (item 71) is removed radially on the chuck body and is replaced by a suitable air connection, the air purge can also be connected via a hose line.

If the air purge is to be connected via the flat surface, the set-screw (item 63) must be removed from the chuck body before assembly.



Air purge connection

Note:
If the sealing bolts were removed, the connection and air purge will not function properly. (See chapter "Disassembling and assembling the precision grinding chuck" (☞ 8.1, Page 21).)

8 Function and handling

The item numbers specified for the corresponding individual components relate to chapter drawings.(☞ 13, Page 28)

The precision grinding chuck is actuated by a rotating clamping cylinder. The clamping and opening path of the chuck jaws is determined by the clamping cylinder.

The axial tensile forces are diverted into the radial jaw clamping force via wedge hook kinematics.

The precision grinding chuck is only designed for shaft or shank clamping. Workpieces cannot be clamped in bore holes (I.D. clamping).

The precision grinding chuck is suitable for machines with automatic and manual loading. Automatic loading is preferred. In the case of automatic loading, the feed must be designed to compensate radially, otherwise the true running accuracy is affected.

In the case of manual loading, there is a risk of limbs being trapped and crushed because the chuck always moves to the completely open position when opening. As a result, manual loading should only take place during set-up and only with specially trained personnel.

⚠ CAUTION

Risk of crushing from chuck jaws opening and closing when manually loading and unloading!
Do not reach between the chuck jaws.
Wear protective gloves.
On hand-loaded machines, the workpiece must be loaded via an insertion mandrel.

NOTICE

Risk of damage to precision grinding chuck and loss of clamping precision in the event of eccentric tool clamping between the chuck jaws.
If the workpiece is not fed in centrally but is clamped eccentrically between the chuck jaws, the precision grinding chuck may be seriously damaged. This will invalidate clamping precision.

If the machining process permits, the sealing bolts (item 12) may be permanently removed from the housing (item 4) so that dirt in the interior of the chuck can be shaken out by the kinematics ((☞ 8.1, Page 21)).

8.1 Disassembling and assembling the precision grinding chuck

The precision grinding chuck can only be disassembled once it has been removed.

Disassembly steps for cleaning work or for removing the sealing bolts (item 12).

- Unscrew the screws (item 52) on the face side of the chuck body (item 1).
- Remove the housing (item 4). The housing may come away suddenly due to the seal groove for the quad ring (item 80).

Remove the sealing bolts (item 12) from the housing (item 4).

- Unscrew the safety set-screws (item 61) in the tapping of the screws (item 52).
- Press out the sealing bolts (item 12) with a suitable tool (punch etc.).
- Check the seal (item 82) for damage and wear.

Assembly is done in reverse order.

NOTE:
To assemble the sealing bolts (item 12), the chamfer must face inward and the safety set-screws (item 61) must catch in the groove of the sealing bolts.

Complete disassembly of the tool grinding chuck

NOTICE

Assembling the precision grinding chuck requires expertise and special assembly and inspection equipment.
Have maintenance and repair work performed by SCHUNK to guarantee the precision of the grinding chuck.

8.2 True running check

True running accuracy is affected by the clamping length of the test shaft, the measuring distance to the chuck jaws (measuring shaft reach) and the clamp pressure or the clamping force with which the test shaft is clamped.

If the run-out accuracy is measured at a different measuring distance to the chuck jaws, it is possible to determine whether there is parallel shifting of the test shaft in relation to the rotary axis and/or there is additional lateral run-out.

To check the radial and axial run-out accuracy, hardened and ground test pins are clamped.

When checking the actuating force, a test shaft with a diameter of 12 mm and a clamping depth of 42 mm should be used. Check that the actuating force is within a permitted range, preferably between 4 kN and 8 kN.

To measure run-out accuracy, arrange a suitable dial indicator at a distance of about 5 mm in front of the chuck jaws. To measure lateral run-out, a second indicator dial indicator must be arranged about 45 mm in front of the chuck jaws. The alignment screws (item 58) can be used to adjust the run-out accuracy (see Assembly of the precision grinding chuck on the machining center (☞ 7.4, Page 17)).

The permissible values must be less than 0.01 mm.

The precision of the chuck is affected by the operating temperature. Accuracy is guaranteed in a temperature range of 12° to 36° C.

8.3 Repeat clamping accuracy test

To check the repeat clamping accuracy, the test shaft must be marked in the turning position and a marking must be made on the tool grinding chuck.

The test shaft must always be unclamped and clamped with the markings lined up.

Make a note of the individual run-out accuracy values after opening and closing. In addition, make a note of the highest or lowest points of the indicator dial values with the corresponding angular position. The angular positions can be noted in a range of about 45°.

The clamping range of the individual run-out accuracy measurement in relation to the highest or lowest point or the tool change point results in the repeat clamping accuracy.

When testing for **one clamping diameter**, always measure with the same test shaft.

When testing for **the clamping range**, measure with test shafts with different diameters.

9 Maintenance

The item numbers specified for the corresponding individual components relate to chapter drawings.(☞ 13, Page 28)

A high bearing load capacity with a secure workpiece clamping device can only be guaranteed with regular lubrication using a high-performance lubricant. For this reason, clean the chuck at regular intervals and grease it with Interflon Fin Grease LS2 (SCHUNK Id-No. 9954784).

The chuck will have to be disassembled and cleaned at regular intervals according to its application.

The maintenance interval and the minimum clamping force can be checked with a 20 mm diameter torque bolt. At an actuating force of 10 kN, the minimum clamping torque should be 10 Nm. Smaller actuating forces result in a reduced clamping torque of the same ratio.

Once a week, at the latest after 2500 clamping operations

Move the chuck into the completely open position.
Lubricate the chuck with SCHUNK special lubricant ID 9954784 using a manual press via the lubrication nipple (item 70) around the circumference of the chuck body (item 1).

The chuck jaws (item 2) are greased via five lubrication nipples in the piston (item 3) with one stroke each.

The piston (item 3) is greased via three lubrication nipples in the chuck body (item 1) with three strokes each.

After lubricating, open and close the chuck 2 – 3 times without a tool to evenly distribute the grease across all the functional surfaces.

The chuck can be partially disassembled or opened for cleaning.
Do not disassemble the precision grinding chuck completely. If the precision grinding chuck has to be completely disassembled, have the maintenance and repair work performed by SCHUNK to guarantee the precision of the grinding chuck.

- Move the chuck into the completely open position.
- Unscrew the screws (item 52) on the face side of the chuck body (item 1).
- Unscrew the screws (item 54) on the face side of the chuck body (item 1).

- Remove the housing (item 4) from the chuck body (item 1).
- Unscrew and remove the screws (item 53) from the chuck body (item 1).
- Remove the retainer ring (item 7) with the center sleeve (item 8 or 9) from the chuck body.
- Remove the seal (item 80) from the piston (item 3) and check it for damage and wear.
- Remove the seal (item 81) from the center sleeve (item 8 or 9) and check it for damage and wear.

Assembly is done in reverse order.

Before installation, lubricate all individual components with SCHUNK special lubricant ID 9954784.

Only original SCHUNK spare parts may be used.

Note:
Screw in all the screws (item 54) completely and then tighten them alternately with 5 Nm.

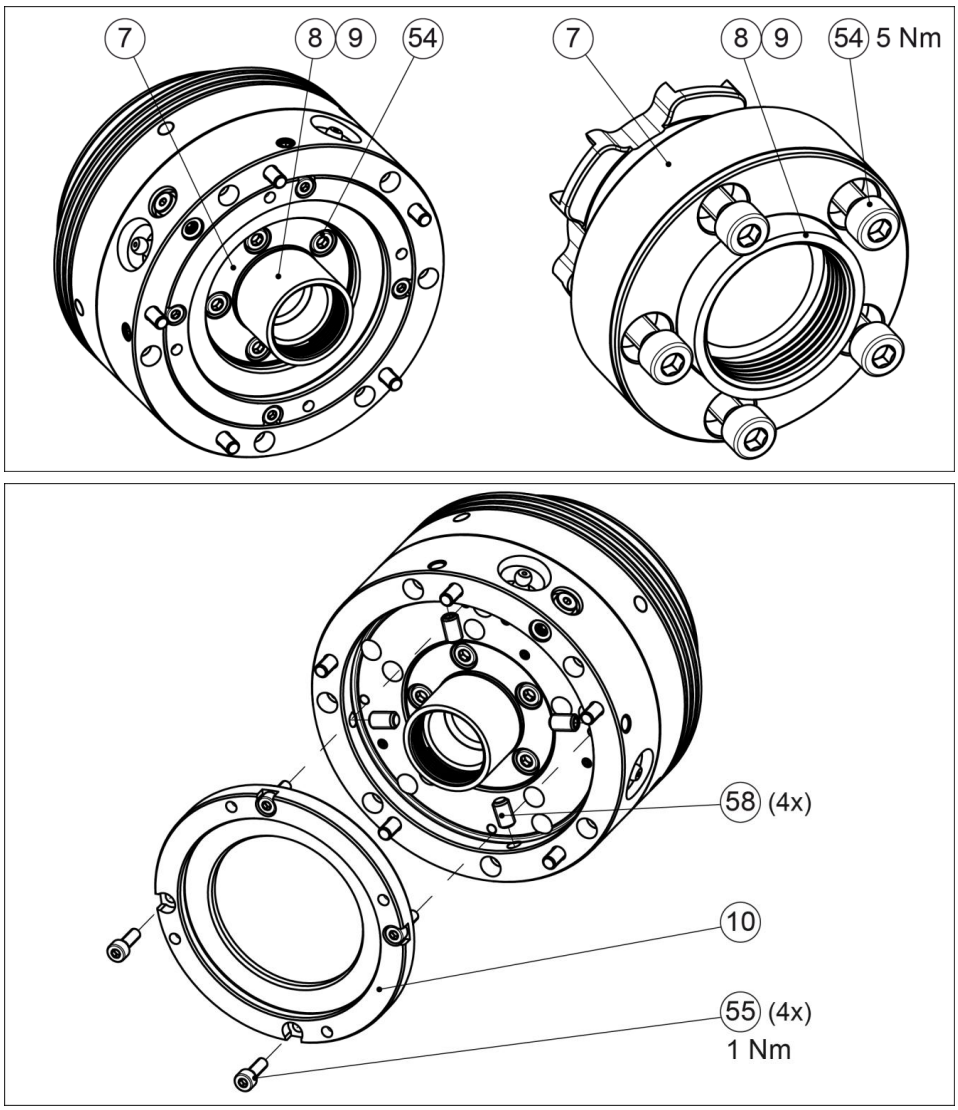
Radial run-out adjustment screws
If the radial run-out adjustment screws are damaged or worn, they can be replaced.

The radial run-out adjustment screws cannot be unscrewed radially outward.

- Remove the screws (item 55) on the face side of the chuck body (item 1) and press the centering sleeve (item 10) against the threaded extraction hole with suitable screws and remove it.
- Screw in the radial run-out adjustment screws (item 58) radially inward until you can remove them.

Assembly is done in reverse order.

Installation instructions for the centering ring
Screw in all screws completely with "LOCTITE" screw securing and tighten them with **1 Nm**.



For wear assessment, we recommend to check the runout at regular intervals . Depending on the application, the runout-examination must be determined individually.

Within the warranty period, maintenance can be requested from SCHUNK to evaluate the application and define the maintenance intervals.

Within the warranty period, we recommend that the maintenance is performed by SCHUNK.

10 Storage

The chuck must be oiled with a suitable rust-proofing oil before transport or storage and, if possible, stored in its original packaging.

- Make a note of the storage date on the packaging.
  Do not store the chuck for more than 18 months.
- The storage location must be dry and well ventilated.
- The permissible storage temperature is +4° to +45° C.
- Do not store outdoors.
- To avoid condensation, the dew point must not be reached if the temperature falls.
  (Example: at 65% relative air humidity, the max. permissible pressure drop is 8 K).

11 Disposal

After decommissioning, place the precision grinding chuck in a position that enables any liquids in the chuck to drain out.

- Collect the escaping liquids and dispose of them properly in line with the statutory provisions.
- Remove any identifiable plastic or aluminum parts installed in or on the precision grinding chuck and dispose of them properly in line with the statutory provisions.
- Dispose of the precision grinding chuck's metal parts as scrap metal.

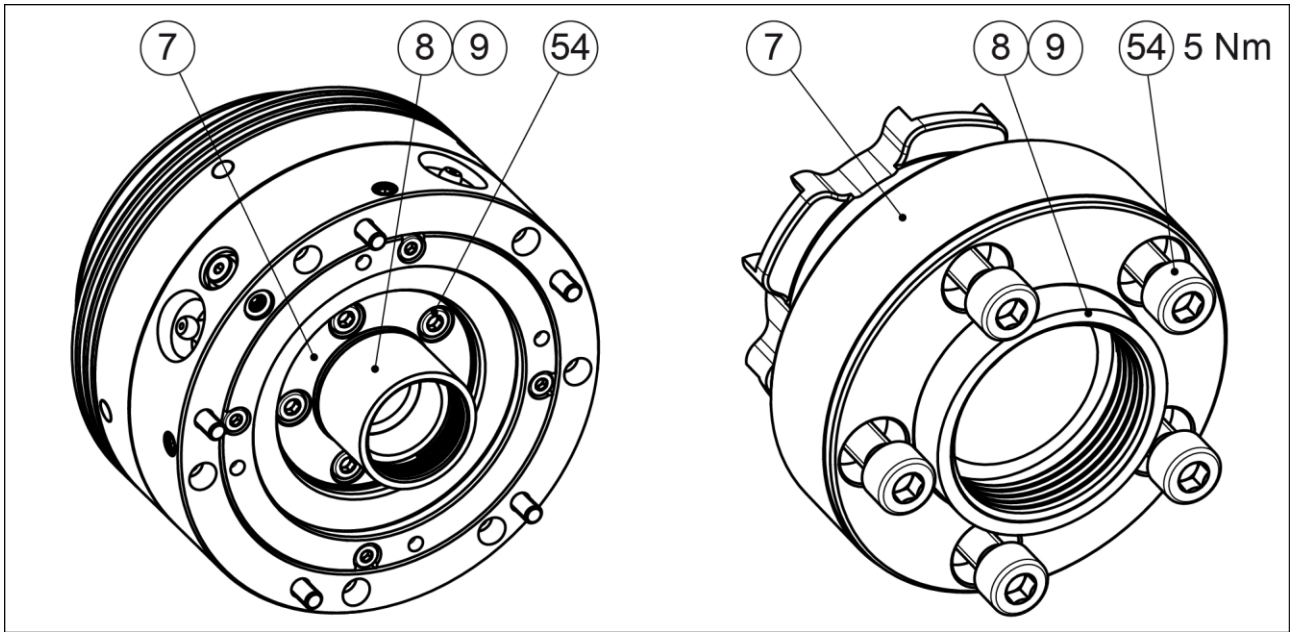
Alternatively, you can return the precision grinding chuck to SCHUNK for proper disposal.

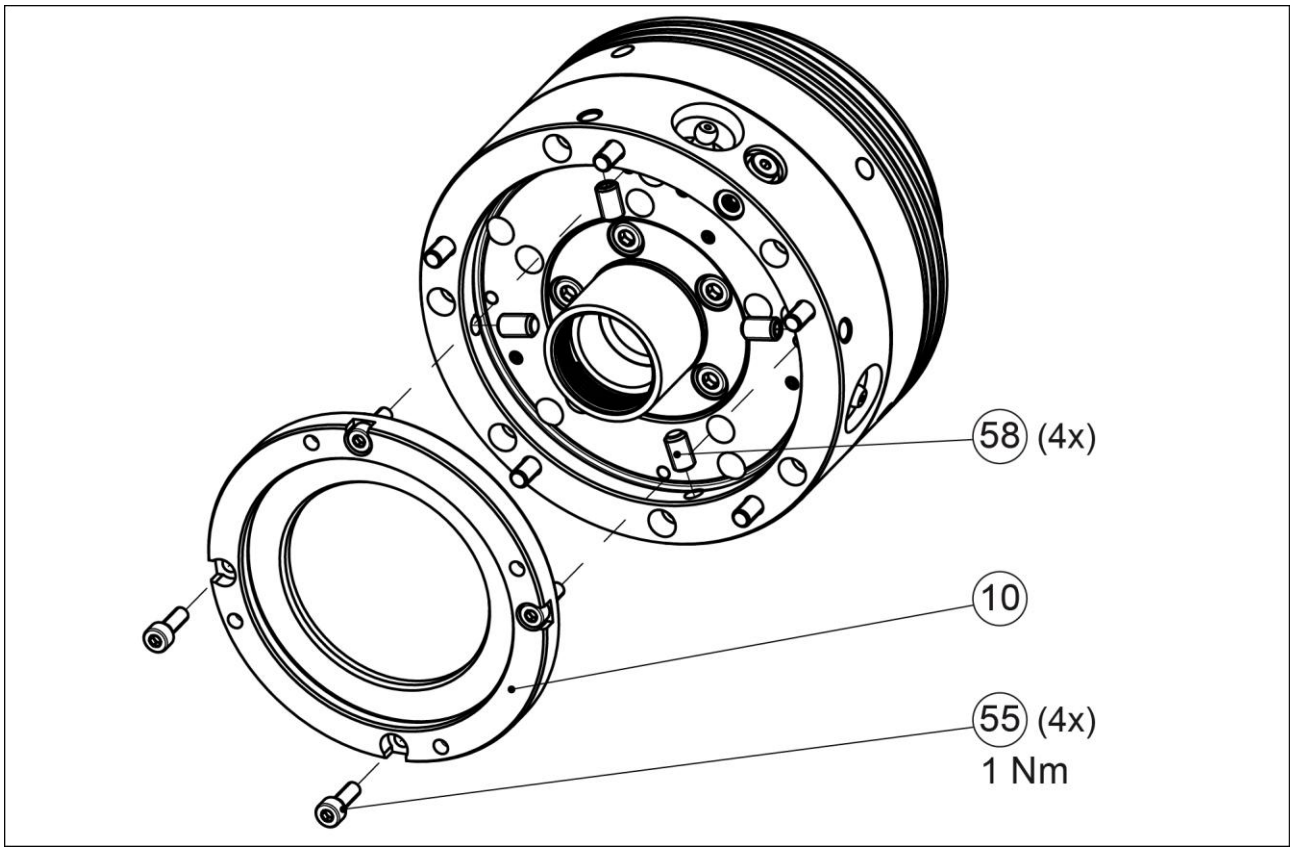
12 Spare parts

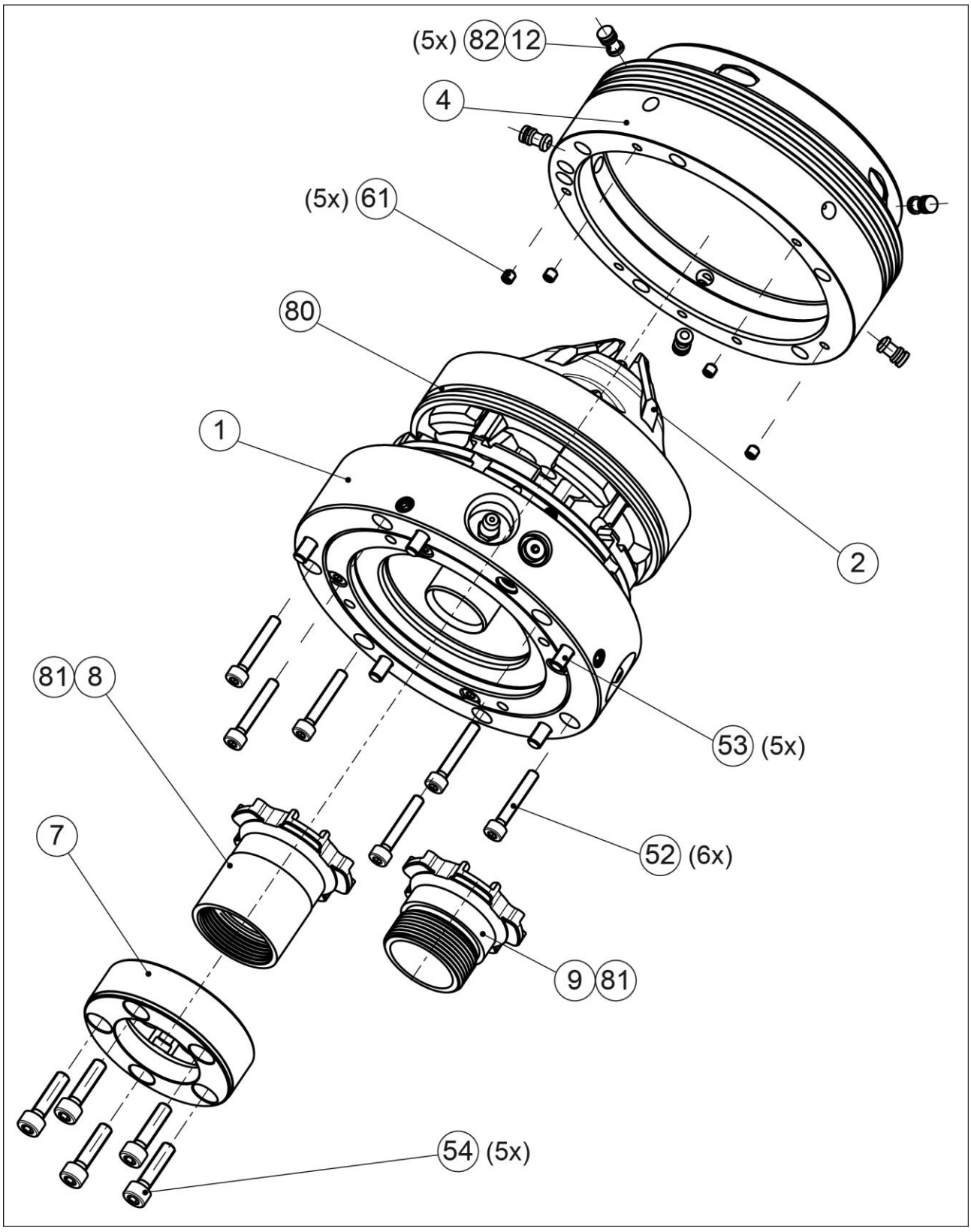
Item	Designation	Quantity
1	Chuck body	1
2	Chuck jaws	5
3	Piston	1
4	Housing	1
6*	Plate	5
7	Retainer ring	1
8	Center sleeve with internal thread	
9	Center sleeve with external thread	
10	Centering sleeve	1
11*	Protection sleeve	1
12	Sealing bolt	5
13*	Insertion aid DR ≤ 6 mm	1
13*	Insertion aid DR ≤ 12 mm	1
14*	Nut	10
51*	Screws M4 x 25	10
52	Screws M4 x 25	6
53	Screws M5 x 20	5
54	Screws M5 x 20	5
55	Screws M4 x 12	4
58	Set-screw M6 X 10	4
59	Set-screw M6 x 6	5
61	Set-screw M4 x 4	5
63	Set-screw M4 x 4	1
65*	Screws M2.5 x 14	10
66*	Screws M3 x 14	5
70*	Conical lubrication nipple	8
71	Locking screw M5 x 5	1
80	Quad ring 94.92 x 2.62	1
81*	Quad ring 23.52 x 1.78	1
82*	O-ring 3.50 x 1.00	5
83	O-ring 5.00 x 2.00	1
90*	Allen key SW 4 x 150	1
91*	Allen key SW 3 long version	1

* not shown in the illustrations

13 Drawings






(5x) 82 12
4
(5x) 61
80
1
2
81 8
53 (5x)
7
52 (6x)
9 81
54 (5x)

14 Translation of original declaration of incorporation

in terms of the Directive 2006/42/EG, Annex II, Part 1.B of the European Parliament and of the Council on machinery.

Manufacturer/ Distributor	SCHUNK GmbH & Co. KG Spann- und Greiftechnik Bahnhofstr. 106 – 134 D-74348 Lauffen/Neckar

We hereby declare that on the date of the declaration the following incomplete machine complied with all basic safety and health regulations found in the directive 2006/42/EC of the European Parliament and of the Council on machinery. The declaration is rendered invalid if modifications are made to the product.

Product designation:	PRISMO3 Precision Grinding Chuck
ID number	0206601 / 0206602

The incomplete machine may not be put into operation until conformity of the machine into which the incomplete machine is to be installed with the provisions of the Machinery Directive (2006/42/EC) is confirmed.

Applied harmonized standards, especially:

EN ISO 12100:2013-08	Safety of machinery - General principles for design - Risk assessment and risk reduction
EN 1550:1997+A1:2008	Machine-tools safety – Safety requirements fort the design and constructions of work holding chucks

Angewandte sonstige technische Normen und Spezifikationen:

DIN ISO 1940-1:2004	Mechanical vibration - Balance quality requirements for rotors in a constant (rigid) state - Part 1: Specification and verification of balance tolerances (ISO 1940-1:2003)

The manufacturer agrees to forward on demand the relevant technical documentation for the partly completed machinery to state offices.

The special technical documents according to Appendix VII, Part B belonging to the incomplete machine have been compiled.

Person authorized to compile the technical documentation:
Robert Leuthner, Address: see manufacturer's address

Lauffen/Neckar, January 2016 p.p. Thomas Retzbach Head of Development Clamping Technology