Translation of the original operating instructions

Chipping hammer FK 103.5

English version D04 · 08.10.2026

For FK 103.5 with R 14.3 × 50 and RS 14.3



Read in full before use. Keep available at the workplace and pass on with the tool.

Item	Shank	Retainer
052-51290	R 14.3 × 50	Spring cap
052-51291	RS 14.3	Spring cap

These instructions apply to the listed variants of the FK 103.5 chipping hammer. Select inserted tools with a shank that matches the respective variant.

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Explanation of symbols

The safety signs help you recognise important information quickly. Always also follow the accompanying text: it describes the hazard and the protective measures required.

Sign	Meaning	What must be observed?
	General warning sign	Warns of a hazard. The accompanying warning describes the possible injury and how to avoid it.
	Hot surface	The inserted tool or workpiece may be hot. Do not touch without protection; allow to cool before changing the tool.
	Read the instructions	Read the instructions in full before first use and keep them available at the workplace.
	Wear eye protection	Wear suitable eye protection with side shields when working. Use any required face protection in addition.
	Wear hearing protection	Wear suitable hearing protection during operation. Also protect people in the affected work area.
	Wear safety footwear	Wear safety footwear when working to protect your feet, particularly against falling parts.
	Wear protective gloves	Choose protective gloves suitable for the task, particularly when handling sharp-edged, hot or cold parts. Do not reach into moving parts.
	Wear respiratory protection	Use respiratory protection appropriate to the material and risk assessment if engineering measures are insufficient. This sign does not specify a particular filter type or protection class.

Signal words in the text

⚠WARNING: The hazard described can result in serious or fatal injury.

⚠CAUTION: The hazard described can result in minor or moderate injury.

NOTICE: This information concerns possible property damage.

Yellow triangles warn of hazards. Blue circles indicate required actions or protective measures. For measures that depend on the task, the conditions described in the text apply; respiratory protection and gloves in particular must be selected to suit the task.

FK 103.5 variants

These instructions cover the FK 103.5 with R 14.3 × 50, article 052-51290, and RS 14.3, article 052-51291. The tool articles are listed on the cover.

Drawing and spare parts

The general drawing and corresponding spare-parts list are in Chapters 9 and 10.

Recommended connection accessories

The hammer is supplied without a hose coupling. Frölich & Klüpfel recommends an optional Variacor swivel joint of the appropriate type for all tool types. It facilitates hose routing and can reduce twisting, coiling and kinking of the hose and ease the strain on the operator. A large unobstructed flow area supports the compressed-air supply.

For the FK 103.5 with G 3/8 female thread: Variacor G 3/8 female × G 3/8 male, swivelling through 90° and rotating through 360° – 306-DV11MFG38

The G 3/8 female air connection is located on nipple 306-0223 of the complete handle. Hose and connecting parts must match it.

Use a suitable coupling system at the hose end away from the hammer. Select connecting components according to thread, unrestricted flow and operating pressure.

Connection sequence: hammer → short hose with threaded connection → quick-release coupling. Optional: threaded Variacor between hammer and hose. No quick-release coupling directly at the tool inlet. Use threaded fittings made of hardened steel or similarly impact-resistant material. Coupling and plug nipple must match. Observe a hose bore of 10 mm, air consumption of 0.5 Nm³/min and no more than 6 bar at the tool. Fit and disconnect components according to their manufacturers’ instructions; blue links open the shop.

Design and assembly

Chapter 6 describes fitting both spring caps and their two O-rings 307-2079 each. Spring cap 304-7804 is fitted; 304-7803 may be used as an alternative. The corresponding spare parts are listed in chapter 10.

1 Use and limitations

The FK 103.5 is a hand-held pneumatic chipping hammer for professional work. The trigger on the handle controls the impact action; the spring cap retains the inserted tool matching the fitted bushing.

Intended use

- Fettling grey iron, steel and malleable iron castings; deburring steel sheet edges and working on weld seams.
- Fettling and chipping boiler, vessel and ship walls.
- Chiselling and chipping masonry, making fixing holes and installation chases, and removing mortar from masonry joints.
- Riveting small-diameter rivet shanks using suitable riveting tools that match the tool holder.

Select the inserted tool to suit the material, task and tool holder. The hammer may only be operated with an effective tool retainer and with feed pressure against the workpiece. A different chisel shank or an arbitrary accessory does not extend the permitted range of applications.

Riveting with small rivets is an intended application. Before starting work, the operator must check that the hammer, riveting tool and backing tool are suitable for the rivet material, rivet dimensions and specific task. Secure the workpiece firmly.

Intended users and working conditions

Operation is restricted to instructed persons who understand these instructions and can assess the hazards of their task. Repairs and work on internal components must be carried out by qualified personnel. Work with secure footing, adequate space to move and a safely supported or secured workpiece. These operating instructions must accompany the hammer whenever it is passed on, including when loaned or hired out. The operator must be instructed in its safe use.

Check the material, coatings, service lines and ambient conditions before starting. Work inside vessels or confined spaces requires workplace authorisation, safe ventilation and the necessary protective measures. Do not work on vessels that are closed, pressurised or have not been safely cleaned.

Avoid foreseeable misuse

- Do not operate without a secured inserted tool, without feed pressure or with a damaged retainer.
- Do not use as a lever or strike the housing with a hammer. Do not free a jammed chisel by continuing to hammer or by forcing it sideways.
- Do not lock the trigger in the operating position or remove or modify safety components. Do not point at people or animals.
- Do not use in potentially explosive atmospheres or on live electrical components. Electrical insulation and suitability for potentially explosive areas have not been established.

This version does not cover FK 103 G, FK 103.4 or other special versions.

2 Mechanical safety

WARNING indicates a hazard that can result in serious or fatal injury. CAUTION indicates a hazard that can result in minor or moderate injury. NOTICE concerns possible property damage.

⚠WARNING Compressed air and unintended starting

Unintended movements and whipping hoses can cause serious injury. A pressurised hose can whip if disconnected or torn off. Before every tool change, cleaning or maintenance operation, shut off the air supply and disconnect the hammer from the compressed-air supply. No separate venting step is required at the tool. When disconnecting, follow the instructions for the hose coupling used. The full procedure is described in Chapter 5.

- Before use, check hoses, couplings and connections for damage and secure fitting. Have defective connections replaced.
- Use only suitable compressed-air components rated for the supply pressure. Maximum 6 bar at the tool. Do not use other compressed gases.
- Never direct compressed air at the body. Do not grab a whipping hose; shut off the supply at a safely accessible point.
- Protect hoses against being driven over, sharp edges and hot surfaces; route them to avoid trip hazards and tensile loads on the hammer.

⚠WARNING Ejected tools and fragments

A damaged chisel, worn holder or incompletely assembled spring cap can cause parts to be ejected. Use only suitable, undamaged inserted tools with the correct retainer. Check the complete threads, secure seating of the spring cap and the required damping rings.

Wear eye protection with side shields; also wear face protection where the task requires it. Screen the work area against flying fragments and keep bystanders away. A face shield does not replace the required eye protection. Keep body parts out of the direction of impact and ejection.

⚠WARNING Unloaded blows, loss of control and crushing

Place the inserted tool firmly against the workpiece before pressing the trigger. Guide the hammer by the handle; the second hand may support it at the silencer. Do not reach for the chisel or between moving parts. Avoid idle blows: they can damage the hammer and put strain on the tool retainer, hands and arms.

Wear safety footwear and suitable protective clothing. Keep the handle clean and free of oil. Secure small workpieces with a suitable clamping device. Do not hold them with your free hand close to the inserted tool. Maintain secure footing even when breaking through the material.

Do not continue using blunt, broken or deformed tools. The striking face must be flat and undamaged. Do not quench heated tools in water; damage to the material creates a risk of fracture.

3 Health and working environment

⚠WARNING Dust and harmful substances

Inhaling hazardous dust or fumes can cause serious respiratory disease. Working on castings, masonry, mortar, plaster and coated components can release harmful dust or fumes. Check the material, including any coatings, before starting work. If substances are unknown or particularly hazardous, stop work until the situation has been clarified.

Reduce emissions as close as possible to their source using suitable workplace extraction installed independently of the hammer. Direct exhaust air and dust away from the breathing zone. Avoid raising dust during cleaning; do not blow it off with compressed air. Use the respiratory protection selected through the risk assessment if engineering measures are insufficient. The filter type and protection class depend on the substance present.

⚠WARNING Noise

High sound levels can permanently damage hearing. The hammer produces high noise levels. Wear suitable hearing protection and also protect people nearby. Operate only with the silencer fully fitted and functioning. If the noise becomes noticeably louder, stop the hammer and have it checked. Arrange work procedures, screening and time spent in the area to reduce noise exposure.

⚠WARNING Hand-arm vibration and repetitive strain

Vibration can damage nerves, blood vessels and joints. Guide the hammer with the force required for safe control and effective pressure; avoid unnecessarily high gripping forces. Use suitable, sharp tools and remedy wear in good time.

Plan task changes and recovery periods according to the workplace risk assessment. Keep hands warm and dry. If you experience tingling, numbness, pain or unusual discolouration of the fingers, stop work, inform the responsible person and seek medical assessment. Emission values alone cannot be used to determine a safe daily operating time.

⚠WARNING Hot and cold surfaces

Hot tools and workpieces, and handle areas that have become very cold, can cause burns or cold injury. Allow hot parts to cool before touching them and wear suitable gloves.

The inserted tool and material being worked on can become hot; expanding compressed air can cool areas of the handle. Allow parts to cool before changing the tool and use suitable gloves. Select gloves according to the cutting, heat and cold hazards; they must allow a secure grip. Gloves are not a substitute for vibration reduction.

⚠WARNING Electric shock, fire and explosion

Damaged electricity or gas lines can cause serious or fatal injury. Identify vulnerable service lines before starting work and have them secured or isolated. Take account of ignition sources and flammable materials in the work area.

Before working on walls or components, determine the location of electrical wiring and gas, water and other service lines. Have affected energy sources safely isolated. Chiselling can produce sparks. Remove or secure flammable materials and observe any required work permits. The hammer is not an electrically insulated tool.

Residual risks

Even when used correctly, risks remain from flying fragments, noise, vibration, dust, hot or cold surfaces and unintended movements when breaking through. Adapt protective measures to the specific task before starting work.

4 Technical data and emissions

Characteristic	Value
Maximum operating pressure	6 bar
Weight	3.4 kg
Length	358 mm
Air consumption	0.5 Nm³/min
Air connection	G 3/8 female
Hose bore	10 mm
Impact rate	2,200 min^{-1}
Piston stroke	90 mm
Piston diameter	20 mm
Piston weight	145 g

Controls

- Trigger on the handle: starts the percussion movement when pressed; release to stop.
- Air connection on the handle: connection to a supply regulated to a maximum of 6 bar.
- Spring cap at the front end of the cylinder: retains the matching inserted tool.
- Silencer on the cylinder: check condition and completeness regularly.

Vibration and noise emission values

Measured quantity	Value	Measurement method and uncertainty
Vibration total value	8.5 m/s²	DIN EN ISO 28927-10; three axes (X, Y, Z)
Sound pressure level	97.0 dB(A)	DIN EN ISO 15744; measurement uncertainty ±3.0 dB(A)

Vibration measured according to DIN EN ISO 28927-10 in three directions (X, Y, Z). Noise measured according to DIN EN ISO 15744.

Notes on measured values and workplace exposure

The stated emission values were measured under specified laboratory conditions. Comparison with other tools requires the same measurement standards and comparable test conditions. The stated measurement uncertainties must be taken into account.

These measured values do not describe actual exposure at every workplace and are not sufficient on their own for the workplace risk assessment. Exposure during work may be higher. It depends, among other things, on the working method, inserted tool, workpiece, condition of the hammer, workplace layout and exposure duration. A person’s physical condition also influences the health risk.

The employer must assess the actual conditions of use and exposure times and specify suitable protective measures. Workplace measurements are required if the available data are insufficient. The stated measured values cannot be used to derive a universally safe daily operating time.

Prolonged or high exposure to hand-arm vibration can damage blood vessels, nerves and joints. Follow the protective measures in Chapter 3. If you experience tingling, numbness, pain or unusual discolouration of the fingers, stop work, inform the responsible person and seek medical assessment.

Frölich & Klüpfel recommends involving the occupational physician in the assessment and ensuring the necessary occupational health surveillance. Symptoms should be identified early and work procedures and protective measures adjusted accordingly.

5 Connection and safe shutdown

Before each start-up

1. Check the tool type and shank against these instructions. Check the condition and completeness of the hammer, handle, trigger, silencer, spring cap, inserted tool and lines. Do not start if anything is damaged.
2. Check the workplace, material and surroundings. Secure the workpiece, arrange protection against flying fragments and dust reduction, keep people away and put on personal protective equipment.
3. Check that the spring cap is correctly fitted and securely retains the inserted tool. The required damping rings must be present and undamaged; see chapter 6.
4. Hold the hammer vertically to start it. Once running, it can be operated in any working position, including horizontally and overhead. Maintain secure footing and controlled guidance of the hammer. Start only with the inserted tool against the workpiece and with feed pressure; no idle blows.

Connection

⚠WARNING Unintended starting and whipping hose

When compressed air is admitted, unintended starting or a loose hose connection can cause serious injury. Do not press or lock the operating control. Check the seating of the inserted tool and the connections before admitting air; secure the hammer and hose. Admit air slowly and shut it off immediately if anything unusual occurs.

1. Shut off the supply. Prepare the hose and coupling for safe connection according to their manufacturers’ instructions.
2. Connect a short, suitable hose to the hammer with a threaded connection, optionally via a threaded Variacor; position the quick-release coupling only at the hose end away from the hammer. Do not press the trigger. Route the hose so that the hammer can be guided freely.
3. Provide clean, dry, lubricated compressed air; check the filter and air preparation unit. The employer must limit the pressure at the tool to a maximum of 6 bar using an upstream pressure regulator. The hammer has no pressure limiter of its own. A flow control does not replace a pressure regulator.
4. Hold the hammer securely, point the tool away from people and admit air slowly. Watch for leaks or unexpected movement. Shut off the air immediately if anything unusual occurs.

Safe shutdown and disconnection

⚠WARNING Pressurised hose connection

Disconnecting a pressurised connection can cause the hose to whip and inflict serious injury. Shut off the air supply and secure it against reopening. Secure the hose and coupling and disconnect them according to the coupling manufacturer’s instructions. Do not loosen a pressurised threaded connection.

1. Release the trigger and wait until movement stops. Secure the hammer and inserted tool against falling or uncontrolled movement.
2. Close the air supply at the designated shut-off device and secure it against unintended reopening.
3. Secure the hose and coupling against uncontrolled movement. Follow the disconnection sequence and protective measures specified by the coupling manufacturer; the supply line may be pressurised independently of the tool.
4. Release the coupling according to its instructions and disconnect the hammer completely from the compressed-air supply. Secure it against unintended reconnection.

The tool does not require separate venting. This does not replace safe disconnection of the hose connection. Do not loosen a pressurised threaded connection.

Supplied without hose coupling. Connection sequence: hammer → short hose with threaded connection → quick coupling. Variacor is optional. No quick coupling directly at the hammer. Accessory links are under “FK 103.5 variants”. Follow the component manufacturers’ instructions.

6 Changing the inserted tool

⚠WARNING Unintended blows during tool changes

Unintended blows can cause serious hand injuries. Disconnect the hammer completely from the compressed-air supply before removing the chisel. With no chisel fitted, the piston can be reached with a finger: never reach into the chisel holder. Do not operate without an inserted, secured chisel. Do not press the trigger during tool changes; allow hot parts to cool.

Selecting a suitable tool

Chisels to DIN 8530 are permitted regardless of manufacturer. Shank, collar and dimensions must match the fitted bushing and retaining cap. R 14.3 × 50 and RS 14.3 are different variants; observe the article assignment. Do not modify the retainer to fit an unsuitable chisel.

Check the cutting edge, shank, collar and striking face. Reject tools with cracks, chips, severe deformation or wear. The spring cap must match the inserted tool; the spare-parts list specifies another spring cap for chisel cutting edges of 40 mm and wider.

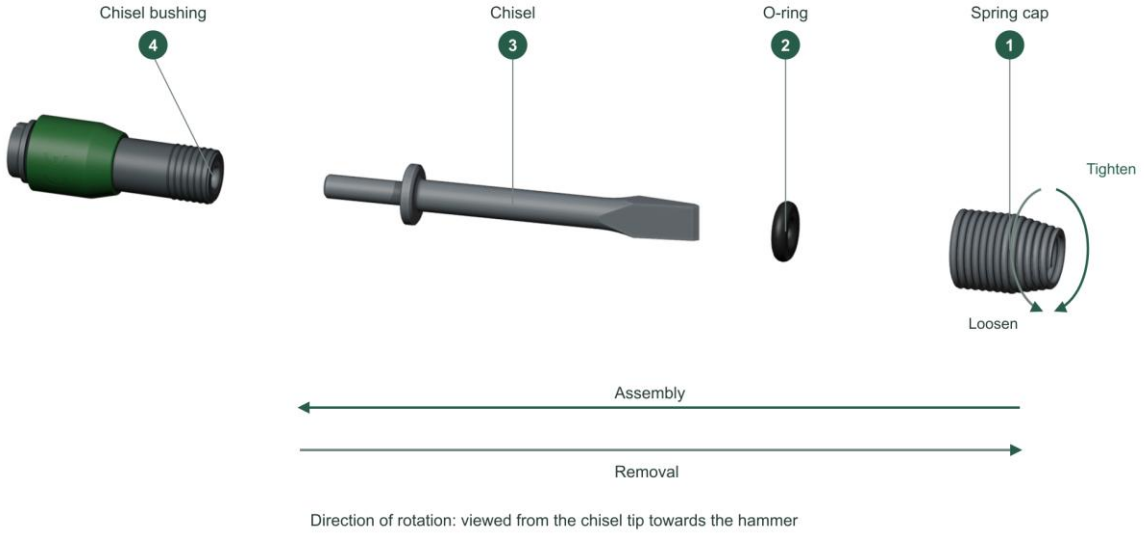


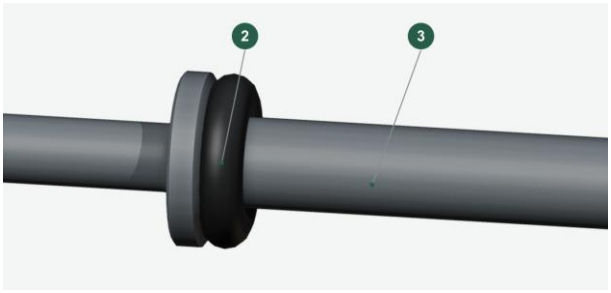
Figure items: 1 spring cap · 2 O-ring · 3 chisel · 4 chisel bushing. Principle illustration; shape may differ. Each spring cap requires two O-rings 307-2079. The illustration shows one ring as an example.

Preparation and removal

1. Disconnect the hammer completely from the compressed-air supply and set it down safely.
2. Unscrew the spring cap (1) anticlockwise from the cylinder. Remove the chisel (3) and pull off the tightly fitted O-rings (2). Remove the normal spring cap towards the cutting edge; after removing the O-rings, remove the spring cap for wide chisel cutting edges over the collar towards the shank.
3. Clean and inspect the holder, thread, spring cap (1) and O-rings (2). Replace damaged parts. Do not lever on the spring cap or bend the spring open.

Fitting the normal spring cap

1. Select a suitable chisel (3) and an undamaged spring cap (1). Pull both O-rings (2) onto the chisel (3) from the cutting edge up to the collar.



Detail: O-rings (2) against the chisel collar (3), on the chisel-tip side. One ring is shown as an example; fit both rings. The ring position is the same for both spring caps.

2. Fully insert the chisel shank (3), with both O-rings (2) fitted, into the matching chisel bushing (4).
3. Slide the spring cap (1) over the chisel (3) from the cutting-edge side and screw it fully onto the cylinder clockwise.

Fitting the spring cap for wide chisel cutting edges

1. Slide the spring cap, narrow opening first, over the chisel collar from the shank side. This assembly sequence applies to the cap for chisel cutting edges of 40 mm and wider.
2. Pull both O-rings (2) over the collar from the shank side so that both rest against the chisel collar.
3. Fully insert the chisel shank (3) into the chisel bushing (4) and screw the spring cap fully onto the cylinder clockwise.

Checks for both spring caps

With the hammer still disconnected from the compressed-air supply, check that both O-rings are present, the spring cap is fully screwed on and the chisel is securely retained. Do not connect if retention is uncertain or insufficient.

Figure numbers apply only to the assembly illustrations. Use the matching spring cap and both O-rings according to the parts assignment in these instructions.

Restarting

Reconnect only after completing all checks in Chapter 5. For the functional test, place the secured tool against a suitable workpiece and operate briefly with feed pressure. Do not test with the tool striking freely. Stop immediately if the seating is loose, the noise is unusual or operation is irregular.

NOTICE Damping rings reduce component loads; they do not permit idle blows. Without the required rings, the spring cap may be destroyed.

7 Operation and handling malfunctions

Chiselling and chipping

⚠WARNING Tool ejection and flying fragments

An unsecured inserted tool or flying fragments can cause serious injury. Work only with a matching, fully secured inserted tool. Wear eye protection and, where necessary, face protection, secure the workpiece and keep bystanders away. Apply the tool to the workpiece with feed pressure before pressing the trigger; do not deliver unloaded blows.

1. Choose the working position so that the material and tool can be controlled. Take account of the direction of material removal and possible breakthrough; nobody may be endangered behind the working area.
2. Guide the hammer by the handle. The second hand may support it at the silencer; do not reach for the chisel, openings or moving parts. Place the secured tool against the material and stand firmly.
3. Press the trigger and work with sufficient feed pressure. Avoid unnecessarily high gripping forces, sideways levering and unloaded blows.
4. Release the trigger and wait until movement stops before withdrawing the chisel from the material or changing the working position. Do not drive the chisel in too deeply or force it sideways when withdrawing it.

Interrupting work

Release the trigger (the only stopping function). Before putting the hammer down or leaving it, disconnect it as described in Chapter 5. Put it down securely; do not touch hot parts and keep them away from flammable materials. If the air supply fails, release the trigger and shut off the supply: if the trigger remains pressed, the hammer will start when pressure returns. Restart according to Chapter 5. With the hammer disconnected, check the retaining cap for secure seating at every chisel change and every interruption of work. If it loosens, stop immediately, disconnect and check or correctly fit the retainer.

If the chisel jams

⚠WARNING Sudden release of forces

When a jam is released, the hammer, chisel or material being worked on can move suddenly and cause serious injury. Release the control, secure the tool and material, and shut off and disconnect the compressed-air supply as described in Chapter 5. Release the jam only in a controlled manner; consult qualified personnel if the forces acting on the parts are unclear.

1. Release the trigger immediately. Do not continue hammering, use the hammer as a lever or pull on the hose.
2. Secure the hammer and workpiece against uncontrolled movement. Shut off and disconnect the supply as described in Chapter 5.
3. Have an assessment made of how the jam can be removed without an uncontrolled release of forces. Do not release clamped or stressed parts in an uncontrolled manner. If safe release is not possible, consult qualified personnel.
4. After releasing the jam, check the inserted tool, holder and retainer for damage. Have damaged parts replaced before operating the hammer again.

In the event of a dangerous malfunction

⚠WARNING Uncontrolled movement and loose parts

A hammer that continues running, a loose inserted tool or a whipping hose can cause serious injury. Stop work immediately. If the tool does not stop, close the air supply at a safely accessible shut-off point. Keep your distance, do not reach into moving parts and do not attempt to restart while the fault remains unexplained.

Stop immediately if there is unusual noise, increased vibration, a loose inserted tool, leakage or a trigger that does not return. If the hammer does not stop when the trigger is released, close the air supply at the safely accessible shut-off point. Stay out of the danger area and do not touch moving parts.

Once movement has stopped, disconnect the hammer from the compressed-air supply and label it to prevent reuse. Have qualified personnel rectify the cause of the fault; do not attempt to restart while the fault remains unexplained. If a hose is whipping, keep your distance and shut off the air supply.

After work

With the hammer disconnected from the compressed-air supply, check it for damage, clean it and lubricate it according to Chapter 8. Report defects. Allow the inserted tool to cool and store the tool and accessories safely.

8 Care and maintenance

⚠WARNING Starting during maintenance

Unexpected starting during maintenance can cause serious impact and crushing injuries. Shut off and disconnect as described in Chapter 5 before any work. Only qualified personnel may work on internal components. Item numbers refer to Chapters 9 and 10.

Checks and care by instructed persons

Time or occasion	Check and action
Before every use and after changing the tool	Check tool retention, spring cap, damping rings, chisel, trigger, handle and air connections. Do not start if defects are found.
After use and when dirty	Clean external surfaces gently. Do not push dirt into the holder or air connection; do not blow off dust.
During operation	Ensure lubrication and correct operation of the air preparation unit; watch for leakage and changes in sound, vibration and performance.
After damage, jamming or repair	Inspection by qualified personnel and documented release before returning to service.

The hammer must be operated with lubricated compressed air. Use a suitable resin-free lubricating oil. Recommended product: compressed-air lubricating oil in the 10 ml Liquid bottle, part number 307-1654. The 10 ml refers to the container size, not the dosage. Adjust the oil supply to the conditions of use and operating duration. Avoid running dry. If excessive oil escapes, reduce the oil supply; adequate lubrication must still be ensured.

After approximately 120 operating hours or at least every six months, whichever comes first: qualified personnel must dismantle and clean the hammer. Check the tool retainer, trigger, silencer, threads, threaded joints and air connections for wear, damage and secure seating. After assembly, inspect and release as described below.

Work by qualified personnel

⚠WARNING Unintended starting during dismantling

Unintended starting can cause serious impact and crushing injuries. Before opening the hammer, disconnect the air supply completely as described in Chapter 5 and prevent reconnection. Secure parts against falling. Internal work is restricted to qualified personnel.

1. Use only spare parts obtained from Frölich & Klüpfel. Do not clamp the handle (9) or clamping nut (10).
2. Loosen the clamping nut by hand or with a strap wrench (right-hand thread). Dismantle according to the drawing; replace worn parts, especially buffer (8), ring (12) and O-rings (14).
3. Have the valve (19) repaired only by qualified personnel. We recommend replacing all wear parts with part numbers starting with 307- every twelve months. Replace sooner if worn or damaged.
4. Insert piston (3) into cylinder (2). Fit lower cover (4), valve plate (5) and upper cover (6); the smooth side of the lower cover closes the cylinder.
5. The cover and cylinder markings for the pin holes must align.
6. Continue assembly according to the checked manufacturer’s drawing; see chapter 6 for ring assembly. Qualified personnel assess the chisel bushing, chisel shank and tool retainer for condition, play and secure retention. Chisel bushings may be replaced only by F+K Service.
7. Undamaged O-rings may be reused after inspection; before fitting, apply suitable silicone grease compatible with O-rings. This is not a complete repair procedure.

Checks after repair

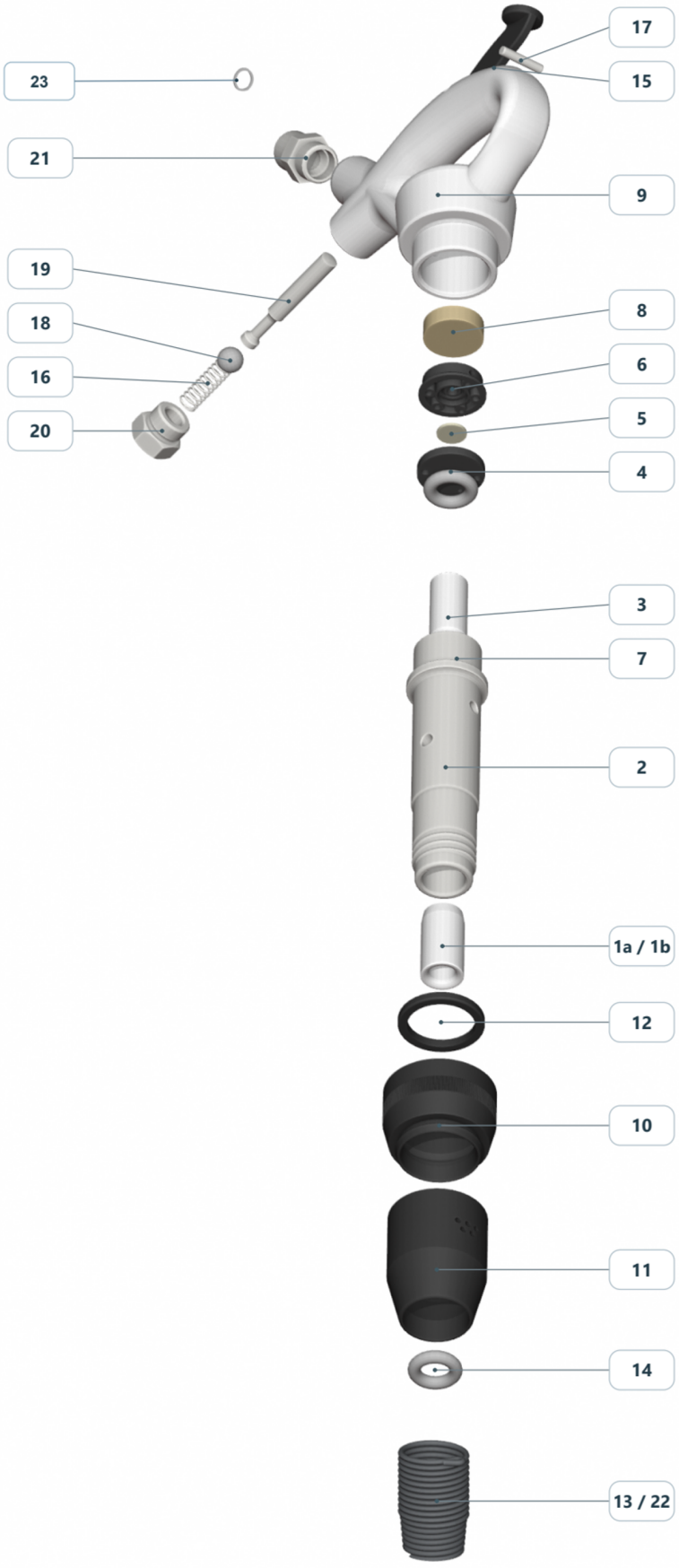
⚠WARNING Incorrect assembly and inadequate tool retention during testing

Incorrect assembly or inadequate tool retention can cause uncontrolled movement or tool ejection and serious injury. Before connecting, check completeness, assembly and tool retention. Test only with a fitted, secured tool and feed pressure against a suitable workpiece. No unloaded blows.

1. After every repair, qualified personnel must check completeness, assembly, tool retention and leak-tightness. Test with a chisel and feed pressure against the workpiece; check that the hammer stops automatically when the trigger is released.
2. Do not deliver unloaded blows. Document the test results, the person performing the test and the release for service.
3. Return to service only after a successful inspection.

9 Exploded view FK 103.5

FK 103.5: Schematic parts identification, shared view with FK 102.5. The adjacent FK 103.5 parts list is authoritative. Blue article numbers open the shop.



10 Spare parts

Item	Qty.	Description	Part number
1a	1	Bushing R 14.3 × 50	052-8247
1b	1	Bushing RS 14.3	052-8248
2	1	Cylinder	052-0034
3	1	Piston	052-0015
4	1	Lower cover	052-0053
5	1	Valve plate	307-2501
6	1	Upper cover	052-0052
7	1	Pin	304-5646
8	1	Buffer	307-2503
9	1	Handle, complete	052-0095
9a	1	Handle body for complete handle (9)	052-0094 on request
10	1	Clamping nut	052-0103
11	1	Silencer	307-2539
12	1	Ring	307-2560
13	1	Spring cap round Ø 23	304-7804
14	2	O-ring	307-2079
15	1	Trigger	052-0057
16	1	Spring	304-7018
17	1	Pin	304-3442
18	1	Ball	307-1987
19	1	Valve	052-0116
20	1	Plug	306-0202
21	1	Nipple	306-0223
22	1	Spring cap alternative	304-7803
23	1	Sealing ring OK-1/2 for complete handle (9)	313-531774

NOTICE – Damage to the cylinder
Incorrect removal or replacement of the chisel bushing can damage the cylinder. Have chisel bushings replaced exclusively by F+K Service. Do not remove or replace them yourself.

NOTICE – Damage to the hammer
Reusing the old buffer when replacing the upper cover, lower cover or valve plate can damage the hammer. Always replace buffer 307-2503 during this work.

Variants and spare-parts orders
1a / 1b: alternative bushes. Spring cap 13 (304-7804) is fitted; 22 (304-7803) is the alternative. Two O-rings 307-2079 per cap. Sealing ring 23 belongs to complete handle (9) and is shown separately. Handle body 9a is not individually labelled. For O-ring fitting see chapter 6.

23: Sealing ring at nipple 21, shown separately; part of handle 9.

11 Troubleshooting, storage and disposal

⚠WARNING Unintended starting during troubleshooting

With compressed air connected, unexpected movement or a whipping hose can cause serious injury. Before inspection, stop, shut off and disconnect completely as described in Chapter 5; secure against reconnection. Do not attempt to start while the fault remains unexplained. Only qualified personnel may inspect and repair internal components.

The following table helps identify faults with the tool stopped and disconnected.

Fault	Possible cause	Action
Does not operate	Rust, dirt or wear in the valve mechanism, piston, piston bore or bushing	Inspection by qualified personnel; have the tool cleaned, lubricated or repaired.
Does not operate after assembly	Incorrect assembly or defective compression spring	Have qualified personnel check assembly and the spring.
Irregular operation	Defective valve plate or excessive lubrication	Shut down; have inspected and repaired.
Low impact performance	Insufficient air supply or dirty strainer	Check the supply; do not raise pressure above 6 bar. Have the strainer cleaned correctly with the system depressurised.
Air blows through the hammer	Foreign matter in the piston bore	Have the tool professionally dismantled and cleaned.
Does not stop or retainer is loose	Fault in the operating control or retainer	Shut off the air supply; do not continue using the tool; contact Service.

Transport and storage

Disconnect the hammer from the compressed-air supply before transport. Carry it by the handle, never by the hose. Pack the inserted tool securely for transport; hot or sharp-edged parts must not endanger anyone. Secure the tool against sliding and falling.

Clean and lubricate before extended periods out of use. Store in a dry, clean place protected against unauthorised use; protect the air connection against dirt. Before using again, perform the checks in Chapter 5.

⚠WARNING Health hazards from cleaning agents

Cleaning agents can harm the skin, eyes and respiratory tract; flammable agents also present a fire hazard. Work only with the tool completely disconnected from the compressed-air supply. Observe material compatibility and the safety data sheet, provide adequate ventilation, keep ignition sources away and apply the specified protective measures.

Internal cleaning and preservation must be carried out only by qualified personnel at the customer’s premises or by the manufacturer’s service department. Flush the assembled hammer with dearomatised kerosene only while disconnected from the compressed-air supply; do not operate it with compressed air during flushing. Allow the flushing agent to drain and immediately lubricate according to Chapter 8. Use degreasing cleaners that do not attack O-rings for individual parts; clean plastic parts only with suitable cleaners. Follow the safety data sheet, ventilate well and keep ignition sources away.

Decommissioning and disposal

Disconnect the tool from the compressed-air supply. Collect lubricant residues and contaminated cleaning agents and dispose of them according to the safety data sheet and local requirements; do not allow them to enter the ground or wastewater system. Have the tool professionally dismantled and send the materials for appropriate recycling.

Service

“F. u. K.” Frölich & Klüpfel Drucklufttechnik GmbH & Co. KG
Wernerstr. 32 · 42285 Wuppertal
Telephone +49 (0) 202 89002-0 · info@froelich-kluepfel.de

12 Conformity and documents

These instructions apply to the variants listed below. The individually completed and signed EC declaration of conformity is supplied separately with the tool on paper.

Associated EC declaration of conformity

Details of the EC declaration of conformity under Directive 2006/42/EC, Annex II, Part 1, Section A. The specific machine is clearly identified in the enclosed declaration.

The manufacturer declares that the designated machine, in its design, construction and the version placed on the market by the manufacturer, complies with the relevant essential health and safety requirements of Directive 2006/42/EC. Any modification not agreed with the manufacturer invalidates the declaration.

Field	Details
Manufacturer	„F. u. K.“ Frölich & Klüpfel Drucklufttechnik GmbH & Co. KG, Wernerstr. 32, 42285 Wuppertal
Product covered by these instructions	Chipping hammer FK 103.5; articles 052-51290 and 052-51291
Directive	2006/42/EC
Applied standards	DIN EN ISO 12100:2011-03 with Corrigendum 1:2013-08; DIN EN ISO 11148-4:2013-05
Signatory	M. Aschhoff, Managing Director
Person authorised to compile the technical file	M. Aschhoff, Managing Director Frölich & Klüpfel Drucklufttechnik GmbH & Co. KG Wernerstr. 32, 42285 Wuppertal
Individual machine details	Type, item number, serial number and year of manufacture as stated in the enclosed paper declaration

Place of issue: Wuppertal. The date of issue, specific machine details and signature are stated in the separately enclosed EC declaration of conformity.

Document version and enquiries

Identification: BA FK103-5 EN D04 · 08.10.2026. For enquiries, state the tool type, article number and existing serial number. Agree spare parts, technical changes and different applications with the manufacturer’s service department.

Keep these instructions and the declaration of conformity with the tool and pass the documents on with it.