



Design, manufacture, sales & service
of pneumatic tools

PERMON s.r.o.
Roztoky
27023 Křivoklát
CZECH REPUBLIC

tel: +420 (0)313 558145
+420 (0)313 558271-4
fax: +420 (0)313 558313
email: export@permon.cz
www.permon.cz

SEIT 1826 - SINCE 1826

OPERATION AND MAINTENANCE MANUAL

KK9-L



IMPORTANT SAFETY INFORMATION ENCLOSED. READ THIS MANUAL BEFORE OPERATING TOOL.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

KK9-L Plug Hammer is designed for stoke works like splitting of stone blocks and surface finish.

Permon is not responsible for customer modifications of tools for applications on which Permon was not consulted.

PLACING TOOL IN SERVICE

- Always operate, inspect and maintain this tool in accordance with all regulations (local, state, federal and country), that may apply to hand held/hand operated pneumatic tools.
- For safety, top performance, and maximum durability of parts, operate this tool at 6.0 bar/600 kPa maximum air pressure at the inlet with 3/4" (19 mm) inside diameter air supply hose.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Be sure all hoses and fittings are the correct size and are tightly secured.
- Always use clean, dry lubricated air at 6.0 bar/600 kPa maximum air pressure. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool.
- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel.
- Do not remove any labels. Replace any damaged label.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Keep hands, loose clothing and long hair away from rotating end of tool.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Keep body stance balanced and firm. Do not overreach when operating this tool.
- Tool accessories may continue to impact briefly after throttle is released.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Use accessories recommended by Permon.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.
- The chisel is not locked in the hammer if you lift the hammer.

The use of other than genuine Permon replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.

Repairs should be made only by authorised trained personnel. Consult your nearest Permon authorised service center.

WARNINGS

- Always wear eye protection when operating or performing maintenance on this tool.
- Always wear hearing protection when operating this tool.
- Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.
- Do not use damaged, frayed or deteriorated air hoses and fittings.
- Air powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- Do not carry the tool by the hose.
- Keep body stance balanced and firm. Do not overreach when operating this tool.
- Operate at 6.0 bar/600 kPa maximum air pressure)
- When wearing gloves and operating models with inside trigger, always be sure that the gloves will not prevent the trigger from being released.
- Wear safety shoes, hard hat, safety goggles, gloves, dustmask and any other appropriate protective clothing while operating the tool.
- Do not indulge in horseplay. Distraction can cause accidents.

- Keep hands and fingers away from the throttle lever until it is time to operate the tool.
- Never rest the tool or chisel on your foot.
- Never point the tool at anyone.
- Compressed air is dangerous. Never point an air hose at yourself or co-workers.
- Never blow clothes free of dust with compressed air.
- Be sure all hose connections are tight. A loose hose not only leaks but can come completely off the tool and while whipping under pressure, can injure the operator and others in the area. Attach safety cables to all hoses to prevent injury in case a hose is accidentally broken.
- Never disconnect a pressurised air hose. Always turn off the air supply and bleed the tool before disconnecting a hose.
- The operator must keep limbs and body clear of the chisel. If a chisel breaks, the tool with the broken chisel projecting from the tool will suddenly surge forward.
- Do not ride the tool with one leg over the handle. Injury can result if the chisel breaks while riding the tool.
- Know what is underneath the material being worked. Be alert for hidden water, gas, sewer, telephone or electric lines.
- Use only proper cleaning solvents to clean parts. Use only cleaning solvents, which meet current safety and health standards. Use cleaning solvents in a well-ventilated area.
- Do not flush the tool or clean any parts with diesel fuel. Diesel fuel residue will ignite in the tool when the tool is operated, causing damage to internal parts. When using models with outside triggers or throttle levers, take care when setting the tool down to prevent accidental operation.
- Do not operate the tool with broken or damaged parts.
- Never start the tool when it is lying on the ground.
- This tool is not designed for working in explosive atmospheres.
- This tool is not insulated against electric shock.

OPERATION

Lubrication

Always use an air line lubricator with these tools.

Recommended environmentally friendly oils:

SETUZA PRIMOL EKO PNEU

BP BIOHYD SE46

ÖMV BIOHYD M 32

TOTAL HYDROBIO 46

Attach the lubricator as close to the tool as practical. After each two or three hours of operation and at the beginning of each work shift, if an air line lubricator is not used, disconnect the air hose and pour about 3 cc of oil into the air inlet of the tool.

Before storing the tool or if the tool is to be idle for a period exceeding twenty-four hours, pour about 3 cc of oil into the air inlet and operate the tool for 5 seconds to coat the internal parts with oil.

Air Supply and Connections

Always use clean, dry lubricated air. Dust, corrosive fumes and/or excessive moisture can ruin the motor of an air tool. An air line filter can greatly increase the life of an air tool. The filter removes dust and moisture.

Make sure all hoses and fittings are the correct size and are tightly secured.

The tool is shipped from the factory with 3/4" G male inlet thread.

Accessory Installation

Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool or before performing any maintenance on this tool. Failure to do so could result in injury.

Insert the chisel into the hammer. If you lift the hammer, the chisel can fall out.

15 kg is the recommended amount of downforce to apply to the tool when working. The amount of downforce is correct when the tool hits rhythmically, is comfortable to hold and works efficiently.

- Do not repair the tool at the work site. Always take the tool to a repair shop. Never drag the tool on the ground. The air port and other openings will become clogged with dirt and debris.
- Compressed air is dangerous. When blowing the line clear of dirt, wear eye protection and keep the air line directed toward a safe, clear area.
- Always blow out the air line before using to clear the line of dirt.
- Do not operate the tool unless the chisel is against the work since this will cause premature wear of parts and reduce the vibration isolation properties of the tool.
- Always break material to the point of “give.” Cracking does not result in a complete break. Clear away rubble as it is broken since uncleared rubble blocks the point of “give.”
- Always take the right size “bite” with the tool. When working new material, experiment to find the right size “bite” required for breaking that material efficiently.
- If “bites” are too big, the operator will try to pry with the tool. This could break the chisel.
- The tool is designed for demolition, not prying. Always use a pick for prying. If “bites” are too small, the operator will be working too slowly.
- If the chisel or accessory should become stuck, do not use excessive force or mechanical means on the tool to pull out the chisel. Doing so will damage the vibration isolation unit. Break out the stuck chisel with a spare chisel or tool.

DISASSEMBLING THE KK9-L PLUG HAMMERS

General instructions

- Clean the hammer outer surface.
- Do not disassemble the hammer any further than necessary to replace or repair damaged or worn parts.
- Whenever grasping a hammer or a part in a vice, always use leather or copper-covered vice jaws to protect the surface of the part and help prevent distortion. Take extra care with threaded parts and housings.
- Do not remove any part that is a press fit in or on a subassembly unless the removal of the part is necessary for repairs or replacement.
- **Do not disassemble the hammer unless a complete set of O-rings is available for replacement.**

Main Disassembly

Grip handle body (2) firmly in a vice (use leather or copper covered vice jaws).

Unscrew retainer nut (4) off the cylinder (1) and remove nozzle (3) from the cylinder (1).

Using a screwdriver lift the retaining lip of the muffler moulding (13) (small diameter end) from the groove in the cylinder (1) and insert three or four pieces of thin sheet steel approximately 8 mm wide, beneath the retaining lip of the muffler. Split them around the muffler. These will allow the rubber retaining lip of the muffler to slide along over the groove in the cylinder and ease removal of the muffler.

Slide off muffler (13) over the cylinder.

Remove locking pin (15) from its hole in cylinder, the pin is provided with an M5 internal thread to assist removal.

Remove the handle from the vice, invert the hammer and grip the flats of the cylinder (1) in the vice. Use a pipe about 1.5 Meters long positioned through the loop of the handle (2) to first loosen and then completely unscrew the handle assembly from the cylinder and remove. – *Warning – once the handle is unscrewed from the cylinder the piston and valve parts will be free to fall and could cause injury.*

Remove valve plate (8) and sliding valve (6). Allow piston (5) to slide out of the cylinder bore and be caught.

Handle Disassembly

Grip handle body (2) in leather or copper covered vice jaws and unscrew quick release coupling (11) from inlet bushing (10).

Unscrew inlet bushing (10). Withdraw throttle spring (16), trigger pin (9) with O-ring (17).

Remove the trigger (7) by pressing or drifting out trigger pin (19).

ASSEMBLY OF THE KK9-L PLUG HAMMERS

General Instructions

- Before assembly of the hammer, clean all parts thoroughly and lubricate surfaces with a thin film of recommended oil – (see lubrication).
- Apply a thin film of O-ring lubricant to all O-rings before final assembly.
- It is recommended that the assembly of the nozzle (2) be carried out by the manufacturer or authorised distributor.
- The existence of a piston air cushion should be determined. Hold the cylinder vertically and allow the piston to drop down the bore small diameter first. An air cushion is present if the piston “bounces”, at the bottom of the cylinder and no metal to metal contact noise can be heard. If a cushion is not present contact your authorised Permon repair centre for advise.

Cylinder assembly

Grip the cylinder (1) vertically in a vice protected with leather or copper covered vice jaws.

Lubricate and insert the piston (5) small end first into the bore. Check for air cushion.

Lubricate and slide the sliding valve (6) into the cylinder and replace the valve plate (8).

Handle assembly

Position trigger (7) in its slot in the handle body and align the holes in each part.

Drift or press home the trigger pin (19). Check the throttle lever is free to move easily.

Grip the handle body (2) in a vice protected with leather or copper covered vice jaws.

Lubricate and insert throttle pin (9) with new O-ring (17) into the handle.

Replace the throttle spring (16) and refit the air inlet (10) into the handle body using Loctite 243 and screw home fully.

Replace the quick release coupling (11) – apply Loctite 243 on the thread.

Main assembly

Firmly grip the cylinder assembly vertically across the flats, in a vice protected with leather or copper covered vice jaws.

Check for correct location of the valve plate (8).

Carefully lower the handle assembly (2) onto the cylinder and engage the threads. Tighten the handle down by hand.

Fully tighten the handle using the 1.5 meters long pipe until the lock pin (15) can be replaced in position – thread to the outside.

Slide the muffler (13) down the cylinder until the muffler retaining lip engages with the groove in the cylinder.

Inspect the nozzle (3) for wear and replace if necessary. Insert it into the cylinder.

Screw the retainer nut onto the cylinder assembly and tighten firmly.

Assembly checks

Following service or repair the hammer should be checked for correct operation before being sent back to the job site.

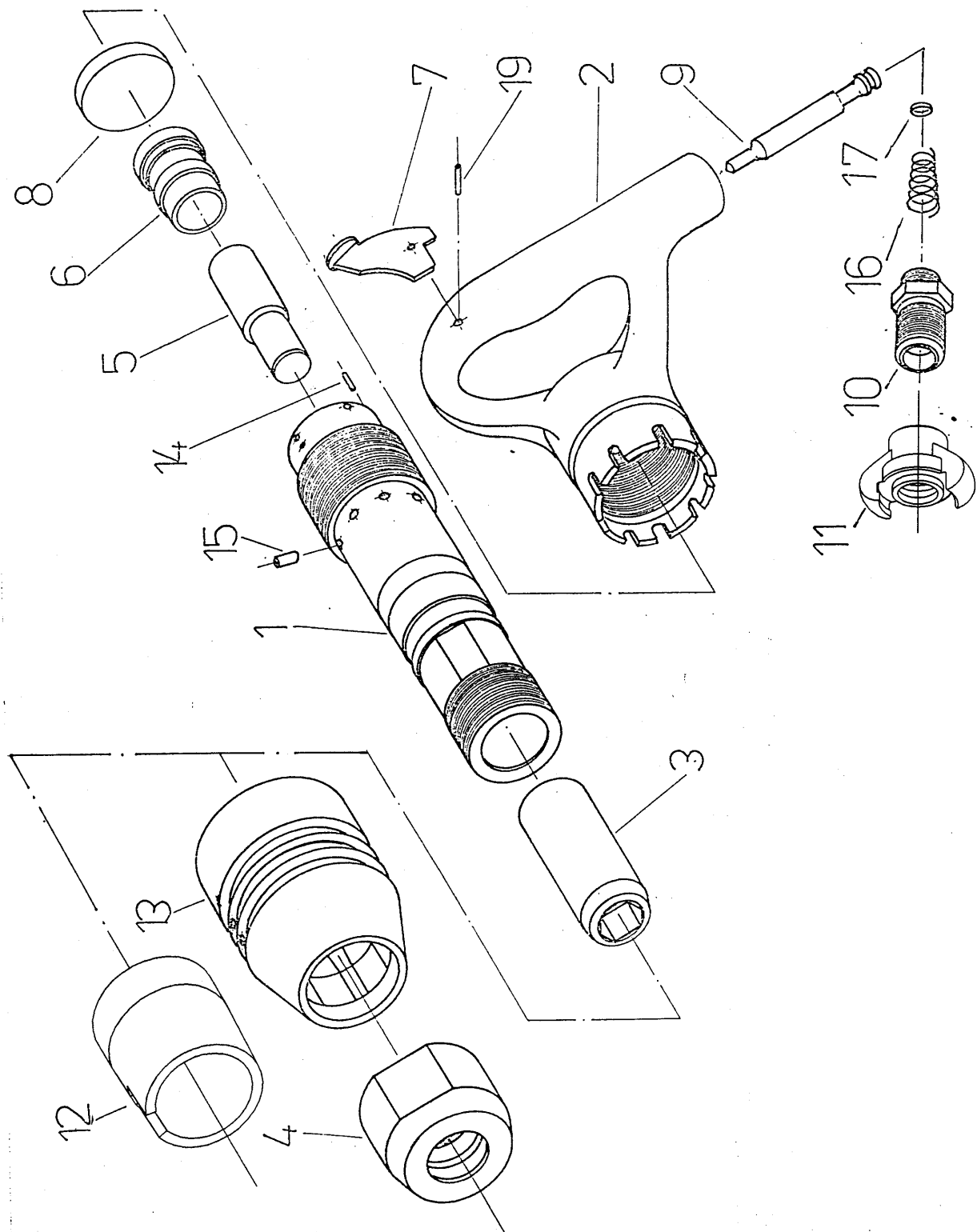
Fit the correct size accessory into the hammer and connect to an airline. Using low pressure 2 bar (30psi) check to ensure the hammer is free of air leaks around the inlet connection and also that the hammer does not automatically start to operate without the trigger being depressed.

Increase the air pressure to 6 bar (90psi) and run the tool in short bursts to check the tools starts and stops cleanly and without hesitation.

Plug hammer operating frequency should be as given in the specification table at the end of this manual.

SPECIFICATIONS

Weight	<i>kg</i>	9
Length	<i>mm</i>	350
Width	<i>mm</i>	275
Max. Working Pressure	<i>bar</i>	4-6
Air Consumption	<i>m³/min</i>	1,1
Impact Rate	<i>1/min</i>	1980
Chuck Size	<i>mm</i>	16,4 cone 1:12
Vibration Level	<i>m/s²</i>	6,5 m/s ²
Guarranteed Noise Level	<i>L_{WA}</i>	104



PARTS LIST

Ref.	Part Name	Part No.	Qty
	Plug Hamer KK9-L	9490040	
1	Cylinder	5095880	1
2	Handle	5259840	1
3	Nozzle #16,4 cone 1:12	2090640	1
3*	Nozzle # 15 cone 1:10	2090660	1
4	Retainer Nut	0820151	1
5	Piston	5003292	1
6	Sliding Valve	2108080	1
7	Trigger	1418230	1
8	Valve Plate	0901900	1
9	Trigger Pin	3011260	1
10	Inlet Bushing 3/4"	4087330	1
10*	Inlet Bushing Rd 32	4087022	1
11	Quick Coupling 3/4" D	414 259	1
12*	Exhaust Cover	1534060	1
13	Muffler 1730-182	273 406	1
14	Not used	-	
15	Pin	3051011	1
16	Spring	315 043	1
17	O-Ring 14x10	273 103	1
19	Pin 6x20	311 418	1

* Delivered only on demand