



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](mailto:export@permon.cz)  
[www.permon.cz](http://www.permon.cz)

**SEIT 1826 - SINCE 1826**

# **OPERATION AND MAINTENANCE MANUAL**

## **VK 29**



**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.**

VK29 rock drills are designed for the drilling of low to high strength materials in mines in connection with air leg. Recommended drilling range is 8-10 m with diameter of 45 mm or 10-12 m with diameter 42 mm.

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 1" (25 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 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 centre.

### **SPECIFIC 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 drill steel 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 drill steel. If a drill steel breaks, the tool with the broken drill steel projecting from the tool will suddenly surge forward.
- Do not ride the tool with one leg over the handle. Injury can result if the drill steel 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 one hour 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 5 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 5 cc of oil into the air inlet and operate the tool for 5 seconds to coat the internal parts with oil.

Lubricate regularly (beginning of each shift) with a water resist grease the fronthead (use grease nipple).

### ***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.

### ***Water Supply and Connections***

Always use clean water. Make sure all hoses and fittings are the correct size and are tightly secured.

### ***Air Leg Installation***

Connect the air leg to the yoke of the hammer and tighten firmly the cap nut. Check regularly during operation.

### **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.

1. Open retainer.
2. Insert drill rod into the hammer.
3. Close the retainer.

- 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 drill steel is against the work since this will cause premature wear of parts and reduce the vibration isolation properties of the tool.

The starting lever has 4 positions:

- 1/ The starting lever is perpendicular to the hammer axis – STOP
- 2/ The starting lever is 45 degrees forwards – SLOW DRILLING
- 3/ The starting lever is forwards parallel with the hammer axis – FULL DRILLING OUTPUT
- 4/ The starting lever is backwards – FLUSHING THE HOLE

### **SPECIFICATIONS**

|                        |                     |                     |
|------------------------|---------------------|---------------------|
| Weight                 | kg                  | 26                  |
| Length                 | mm                  | 720                 |
| Height                 | mm                  | 280                 |
| Working Pressure       | bar                 | 4-6                 |
| Air Consumption        | m <sup>3</sup> /min | 4                   |
| Impacts per Revolution | -                   | 12                  |
| Impact Rate            | 1/min               | 1950                |
| Chuck Size             | mm                  | hex. 22X108, 25x108 |
| Air Supply Hose        | mm                  | 25                  |
| Water Supply Hose      | mm                  | 13                  |
| Torque                 | Nm                  | 18                  |

### **DISASSEMBLING THE VK29 ROCK DRILL**

#### *GENERAL INSTRUCTIONS*

- Clean the outer surface of the rock drill.
- Do not disassemble the rock drill any further than is necessary to replace or repair damaged or worn parts.
- Whenever grasping the rock drill in a vice, always use leather or copper covered vice jaws to protect the surface of the part and help to 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 rock drill unless a complete set of seals and o-rings is available for replacement.

All components are held together by 2 side bolts (33). Screw out the nuts (34), remove side bolts (33) and handle (32).

Remove step by step cylinder cover (51) with the stirrup (61) with its fixing parts (62, 63, 64, 65) and drill bushing (49), impact sleeve (46), O-ring (45), cylinder (1), piston (2), bottom distribution cover (42), pin

(60), distribution body (41), distribution ring (43), upper distribution cover (40), ratchet (39), screw driving lug (35), pawls (36), pins (37) and springs (38).

Warning! Tang nut (44) and carrier (50) have left thread!

Disassembly of the flushing valve:

Screw of the plug (20) with the ring (19) from the cylinder head (3). Remove the spring (23), starting rod (16) and the starting pin (15). If necessary, remove inner piece (14) with rings (17, 18).

Disassembly of the starting lever, air and water inlets:

Press out the pins (7) and through the free holes remove balls (6) – on the starting lever 20 pieces, on the air inlet (8) 21 pieces and on the water inlet (10) 10 pieces. Remove the starting lever, air and water inlets. Remove the arresting pin (5) and spring (4) from the starting lever.

Disassembly of the flushing pipes:

Screw out nut (31) and plug (30), remove sealing (28), inner piece (29), water flushing pipe (25) with sealing (28), inner piece (27) and air flushing pipe (26).

Disassembly of the air leg stirrup:

Press in the pin (58), remove ring (54) from the pin (57). Pull out the pin (58) and spring (55) from the pin (57). Press out the pin (57) from the cylinder and release the stirrup (53).

## **ASSEMBLY OF THE VK29 ROCK DRILL**

### *GENERAL INSTRUCTIONS*

- Before assembly of the rock drill, clean all parts thoroughly dry off and inspect carefully for signs of wear.
- Lubricate all moving parts with recommended oil (see Lubrication).
- Replace all rubber parts and plastic pins (7) – if removed.
- Apply a thin film of O-ring lubricant to all O-rings before final assembly.

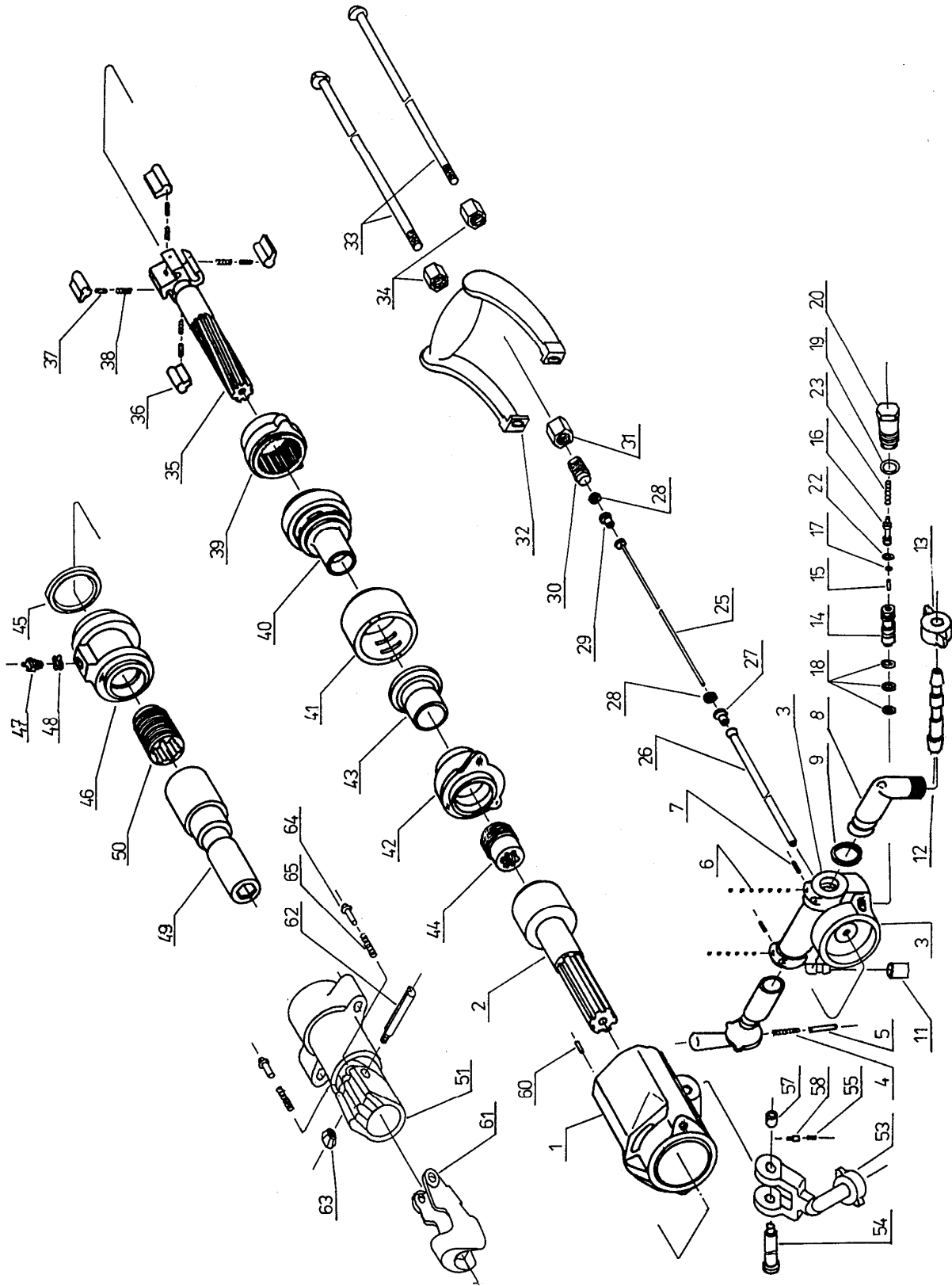
Assembly is made opposite way to disassembly. Be careful when placing the distribution body (41) not to place it opposite. Between the impact sleeve (46) and cylinder (1) must be O-ring (45) and between cylinder (1) and bottom distribution cover must be pin (60).

Nuts (34) should be tightened step by step on both sides.

After assembly check with rotating drill bushing (49) if the pawl mechanism is working correctly.

Run in the assembled rock drill for a short time using lower air pressure and increased lubrication.

PARTS LIST VK29:



| REF. | QTY. | PART NAME                | PART NO. |
|------|------|--------------------------|----------|
| 1    | 1    | CYLINDER                 | 5091463  |
| 2    | 1    | PISTON                   | 5002333  |
| 3    | 1    | CYLINDER HEAD            | 5253721  |
| 4    | 1    | SPRING                   | 4500731  |
| 5    | 1    | ARRESTING PIN            | 3071040  |
| 6    | 51   | BALL                     | 324393   |
| 7    | 3    | PIN 6X31 3040-690        | 321020   |
| 8    | 1    | SUPPLY ELBOW             | 4424100  |
| 9    | 1    | RING O 40X32             | 273034   |
| 10   | 1    | SUPPLY ELBOW             | 4022190  |
| 11   | 1    | DIRECT VALVE JS13        | 9421060  |
| 12   | 1    | SOCKET JS 25             | 4023240  |
| 13   | 1    | CAP NUT RD 40            | 0871222  |
| 14   | 1    | INNER PIECE              | 0501080  |
| 15   | 1    | STARTING PIN             | 3040910  |
| 16   | 1    | STARTING ROD             | 3011141  |
| 17   | 1    | RING O 10X6              | 273019   |
| 18   | 4    | RING O 20X16             | 273025   |
| 19   | 1    | RING O 25X21             | 273090   |
| 20   | 1    | PLUG                     | 0010150  |
| 22   | 1    | RING 16X12               | 273023   |
| 23   | 1    | SPRING                   | 4500721  |
| 25   | 1    | FLUSHING PIPE            | 8019070  |
| 26   | 1    | AIR FLUSHING PIPE        | 4307080  |
| 27   | 1    | INNER PIECE              | 4070040  |
| 28   | 2    | SEALING                  | 273158   |
| 29   | 1    | INNER PIECE              | 4070030  |
| 30   | 1    | PLUG                     | 4072020  |
| 31   | 1    | NUT                      | 0682030  |
| 32   | 1    | HANDLE - COMPLETE        | 1327071  |
| 33   | 2    | TIGHTENING SCREW         | 0562420  |
| 34   | 2    | NUT                      | 0600240  |
| 35   | 1    | SCREW DRIVING LUG        | 5151370  |
| 36   | 4    | PAWL                     | 3792090  |
| 37   | 4    | PIN                      | 3043170  |
| 38   | 4    | SPRING                   | 315017   |
| 39   | 1    | RATCHET                  | 3782110  |
| 40   | 1    | DISTRIBUTION COVER       | 3925124  |
| 41   | 1    | DISTRIBUTION BODY        | 3924132  |
| 42   | 1    | DISTRIBUTION COVER       | 3925130  |
| 43   | 1    | DISTRIBUTION RING        | 3902091  |
| 44   | 1    | TANG NUT                 | 2068330  |
| 45   | 1    | RING O 75X3              | 273114   |
| 46   | 1    | IMPACT SLEEVE            | 2261200  |
| 47   | 1    | GREASE NIPPLE R 1/4" S14 | 425007   |
| 48   | 1    | DRILL BUSHING #25X108    | 2089332  |
| 49   | 1    | DRILL BUSHING #22X108    | 2089420  |
| 50   | 1    | CARRIER                  | 0441040  |

| <b>REF.</b> | <b>QTY.</b> | <b>PART NAME</b> | <b>PART NO.</b> |
|-------------|-------------|------------------|-----------------|
| 51          | 1           | CYLINDER COVER   | 5131830         |
| 53          | 1           | STIRRUP          | 8011062         |
| 54          | 1           | RING             | 2045170         |
| 55          | 1           | SPRING           | 4501330         |
| 57          | 1           | PIN              | 3140101         |
| 58          | 1           | PIN              | 3050080         |
| 60          | 1           | 3X12             | 311198          |
| 61          | 1           | STIRRUP 25X108   | 1186200         |
| 61          | 1           | STIRRUP 22X108   | 1186240         |
| 62          | 1           | STIRRUP PIN      | 3044140         |
| 63          | 1           | NUT              | 0762050         |
| 64          | 2           | PIN              | 3150031         |
| 65          | 2           | SPRING           | 315029          |