Pneumatic Pistol Drills

For Underwater working

2 1266 0010

2 1267 0010

2 1268 0010

Operating Instructions

Handling and use are described here

Safety Precautions

Use

Danger Zones

Maintenance and Assembly Instructions

Contains basic information on pneumatic machines, technical specification, notes on maintenance, wear and tear plus disassembly and assembly procedures

Troubleshooting

Spare Parts Documentation

Consisting of parts lists and sectional drawings

Supplementary Sheet

Maintenance of pneumatic tools

Note on oiler setting

Operating Instructions

General

The performance / output power of this machine is designed for drilling of different workpieces and materials. The machine must be held tight against rotation. Make use of the second handle during hammer drilling.

Before operation

- Check the oil level. If necessary add oil to fill up the oiler. (Line oiler or Service Unit).
- Clamp the drill into three-jaw chuck.
- Connect air hose. (In order to remove contaminants, blow out the air hose before connecting). Actuate valve and begin the drilling operation. (Speed can be regulated by opening the valve more or less).

After finishing the operation

- Shut the valve.
- Turn off compressed air and disconnect the air hose.
- Unclamp the drill if necessary.
- Check the oiler.

Safety Precautions

Any power tool can be dangerous. Please follow these simple safety procedures - they are for your protection.

- Do not use this machine in any other way than as directed by these operating instructions.
- Hold the machine tight during operation. When operating with the hammer drill also use the second handle.
- Regular maintenance is essential - check all screws, fittings etc. for tightness.
- Check air hose for damage.
- Make sure the unit is lubricated.
- Never use dull tools or drills.
- Avoid sparks in hazardous environment - created by the drill. Always flush material and drill for cooling with sufficient water.
- Wear protective clothing.
- Wear safety glasses, non-slip gloves and ear protectors.

- Ensure that you maintain a safe working position.
- Never work under the influence of alcohol, drugs or stronger medication.
- Always disconnect machine from the air line for changing drills or working on the machine.
- Remove rings, watches, ties etc. that could be torn by the machine.
- Follow the general current and appropriate **Accident Prevention and Safety Procedures.**

WARNING! Never use the flexible hose as a lifting handle!

Your safety is in your hands!
Observe these instructions!

Noise and vibration levels

Typically the A-weighted noise level of the machine is:

- **Sound pressure level: 84,2 dB(A)**

Wear ear protection.

The typical weighted acceleration is 1.89 m/s².

Use

Intended use

The machine is designed for drilling of different workpieces and materials.
Any use, deviating from the above is not an intended use.

Wrong use

Drive for lifting goods or people.

Working without using safety equipment.

Danger Zones

Operational condition / Life phase	Normal function	Malfunction	Improber use	Expected use
Transport	Transport of the machine in an inoperable condition	Drop of the machine	Transport of the machine in an operable condition	unknown
Start-up	Operating with the machine with designated tools	unknown	Operating with not approved tools	unknown
Operation	The machine is o nly working when valve is actuated	Machine runs without intended actuating	Valve is blocked while open	unknown
	Machine moves tool	Tool blocks	unknown	unknown
Maintenance	Regualar change of vanes			
	Operation on a Service Unit	Failure of the machine	unknown	unknown

Maintenance and Assembly Instructions

Technical Specification

Model No.	2 1267 0010	2 1268 0010	2 1266 0010	
Operating/Flow pressure	6	6	6	bar
Motor power	0,5	0,5	0,5	kW
Free speed	1550	850	950	1/min.
Drill chuck	10	13	13	mm
Drilling in steel in masonry	max. 10 -	max. 13 -	max. 13 max. 20	mm mm
Reversible to	-	-	hammer drilling	
Air connection	R ¼“	R ¼“	R ¼“	female
Hose - ID	10	10	10	mm
Air consumption	0,6	0,6	0,6	m³/min.
Weight	2,1	2,1	3,3	kg
Length with drill chuck	235	245	300	mm
Noise (in 1m distance)	84,2	84,2	84,2	dB(A)
Vibration at free speed	1,89	1,89	1,89	m/s²

Hammer Drilling

Type 2 1266 0010 is designed as Hammer Drill. Switch to hammer drilling by turning the adjusting ring in position of hammer drilling. Only Drilling: Turn backward adjusting ring and let it click into place.

Maintenance of the Pneumatic Motor

The service life and the performance of this motor are decisively determined by:

a) the air purity

b) the lubrication conditions and maintenance

to a):
Blow out the air hose before connecting it to the machine.
Install dirt and water separator upstream of the motor, if it is not possible to prevent the formation of rust and water condensation in the air distribution lines.

to b):
Use only resin- and acid-free lubricating oils SAE 5W - SAE 10W.
Oils of higher viscosity cause vane sticking (difficult start-up and lower performance).

Optimal lubrication will increase the service life.
We thus particularly recommend to install a service unit and line oiler upstream of the motor. Observe the comments on the supplementary sheet

„MAINTENANCE OF PNEUMATIC TOOLS“

Do not wash out sealed and greased ball bearings and do not rinse the machine with petroleum or similar cleaning fluids.

Use anti-freeze lubricants, such as **„BP-Energol AX 10“, „Killfrost“ or „Kompranol N 74“** in wintertime or if the compressed air is very moist.

Air connection:

Line, fitting and hose must have the required cross-section to obtain sufficient air (600 litres per minute).

Regularly check and clean the air inlet screen (item 78).

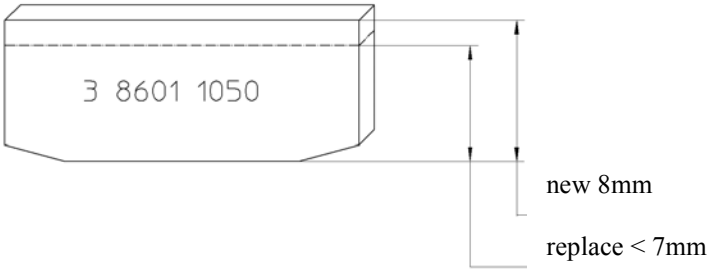
Operating pressure must not exceed 6 bar.

Cleaning the motor:

Rins the motor with cleansing oil after approx. 10 working hours. (Cleansing and oil-ampoule Part Number Nr. 9 9902 0100). Fill the oil into the air connection. Connect air and start the motor (approx. 20 seconds at free speed).

Wear of vanes:

Vanes are main wear parts. Replace them in due time. They are considered to be worn when the height "H" is less than 7 mm.



Greases (free of resins and acids)	Multi-purpose greases for antrifriction bearings and gears
Designation according to DIN 51502	KL 2 k
Consistency class (DIN 51818)	2
Saponification type	lithium
Dripping point	185°C
Worked penetration	265 - 295
Temperature range	-25°C bis +125°C

Disassembly

Disassembly and assembly should only be performed with the assistance of the sectional drawing.

All parts can be dismantled by light pushing or knocking (wooden base / rubber hammer).

Motor

Clamp the machine at the gearbox housing (itm 40) into the vice. Use plastic jaws that enclose the gearbox housing as far as possible and unscrew the handle (item 1). Pull out the motor. Open the motor on the toothed side for changing the vanes (item 8), the front end plate (item 9), the cylinder bushing (item 6) or the grooved ball bearings (items 3 and 11). This will be done by holding the motor on the cylinder bushing and knocking the toothed side of the rotor (item 7) against a wooden base. During installation of new vanes take care that the vanes do not jut out of the rotor.

Gearbox 2 1267 0010 / 2 1268 0010

Attention! The planetary gear can be completely removed from the gearbox housing. Lever up the three-jaw chuck (item 100) with the help of two levers (or special tool) from the planet carrier output shaft. Lightly knock the edge of the gearbox housing (on the thread) on a wooden base. The gearbox comes off and can be drawn out of the housing easily. Grease the gearbox at reassembly.

Gearbox 2 1266 0010

Screw off the three-jaw chuck (item 100) from the output shaft (item 113).

Remove the additional handle. Knock the gearbox housing (item 40) with the inner thread side lightly on a wooden base. The gearbox stages come off and can be drawn out of the housing easily. Remove snap rings (items 44 and 126) and pull out bearing ring (item 110) with bearings. At this light pushing or knocking on a wooden base could be helpful. Clamp the gearbox housing and turn the bushing with adjusting ring (items 129, 128) left-hand till to the stop. To screw off the bushing from the adjusting ring warm up the bushing with a hot air blower before. Remove steel rollers (item 127). Remove snap ring (item 123) and draw out the complete output shaft (item 113). If necessary, continue to disassemble.

Handle

Screw out connecting nipple (item 78) and nipple (item 82). Loosen screws (item 76) and take off the air and damper connection (item 75) as well as the intermediate washer (item 71). Pull the guide sleeve (item 70) out of the seat.

Assembly hints

Repairs should be executed by authorized professionals only and with assistance of the sectional drawing.

Reassembly

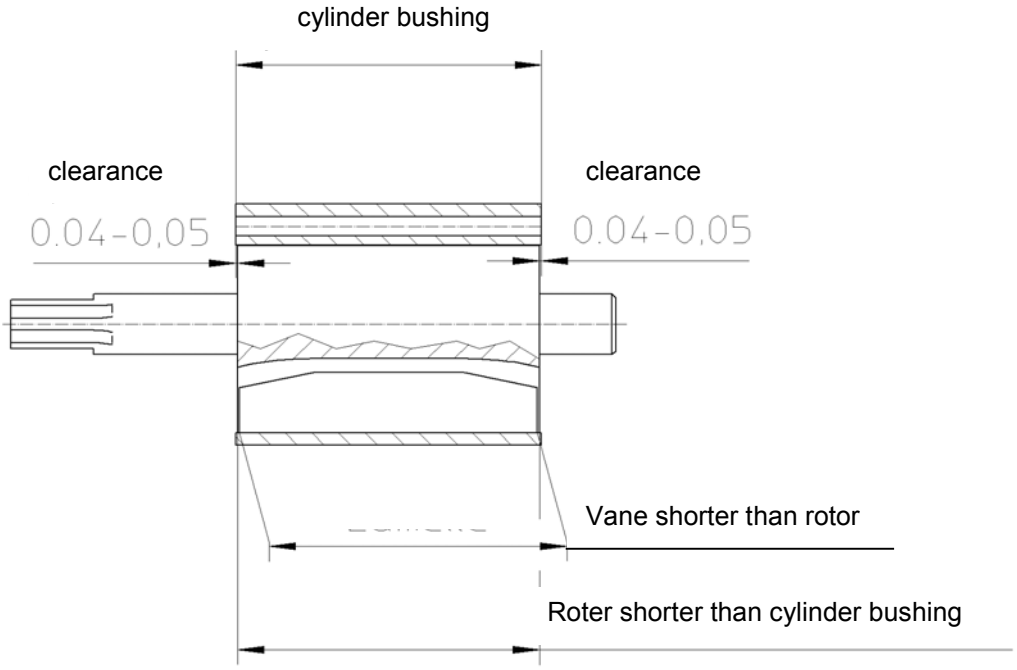
After checking and replacing worn parts perform reassembly. It will be done essentially in the reverse order than the disassembly. Lightly grease all parts to avoid falling apart during reassembly. Remove any oil and resin residue from the rotor slots. The vanes should fit easily into the rotor slots.

Motor running

If motor to be turned, does not at all of heavily after reassembly, light tapping with a rubber hammer on motor housing is helpful. The rotor places and comes into a free-wheel position between the end plates. If not, check lengths of the rotor, cylinder bushing and vanes.

a. the vanes shall not jut out lateral of the rotor slots, but not project on the rotor.

b. cylinder bushing has to be 0.08 mm to 0.10 mm longer than the rotor.



After finishing of reassembly make functional gauging by checking free speed and air consumption as specified in "TECHNICAL SPEFICIFATION".

Use only original SPITZNAS spare parts for repairs !

Trouble / Probable Cause / Solution

Trouble	Probable cause	Solution
Machine does not start	Air not connected	Connecting and open air line
	Rotor rusted by huminity	Disasseble and clean motor, check and test service unit for function
	Vanes jam (worn)	Disassemble motor, clean it and replace worn parts
	Gearbox blocks	Disassemble and clean gearbox and replace worn parts
Trigger clamps	Contaminates in valve	clean sit
Machine rotates too slowly	Operating pressure too low	Increase operating pressure (on the machine) to 6 bar
	Rotor grinds on end plates / cylinder bushing	Disassemble and clean motor, replace worn parts
	Gear parts jam	Disassemble and clean gear, replace worn or damaged parts
Motor sticks / jams	Vanes worn or broken, broken parts stick between rotor and cylinder bushing	Disassemble and clean motor, replace worn parts
	No lubrication - ball bearings have run dry, rotor has rubbed on end plates	Disassemble and clean motor, replace worn parts
	Coarse impurities in motor area jammes between rotor and cylinder bushing	Disassemble and clean motor, replace worn parts
Gearbox makes loud noises	Needle cages defective	Disassemble and clean gearbox, replace worn parts
	Toothing is clattering	
	Ball bearing defectiv	
Tool not able to be clamped	Drill chuk defective	Change drill chuck
	diameter of tool too small	use bigger tool
Reversing	Dirt in reversing area	Clean machine
„drilling / hammering" clamps	Steel rollers clamps	Disassemble gear and replace defective parts