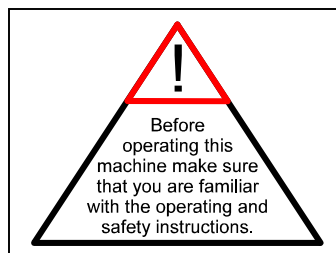


MODEL 2 1701 SERIES AIR CORNER DRILL



OPERATING MANUAL



Pneumatic Corner Drill

Type:

2 1701 0000 / 2 1701 0010

2 1701 0020 / 2 1701 0030

Technical Specification

| | | | |
|----------------------------|---|--------|---------------------|
| Operating Pressure | p | 6 | bar |
| Tool holder / Morse Taper | | 2 | |
| Cutting capacity in steel | Ø | 23 | mm |
| Reaming up to | Ø | 17 | mm |
| Load speed | n | 270 | rpm |
| Air consumption | | 1,4 | m ³ /min |
| Air connection | | R 3/4" | male |
| ID of hose | Ø | 13 | mm |
| Output | P | 1,33 | kW |
| Weight with lever throttle | | 8,5 | kg |
| Weight with twist throttle | | 8,7 | kg |



Pneumatic Corner Drill

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- Operating Instructions

Explain how to handle the machine and how to change drilling tools

- Maintenance and Assembly Instructions

This section contains the fundamentals of pneumatic tools, technical specifications, maintenance instructions, wear, disassembly and reassembly procedures.

- Spare Parts Documentation

Consisting of parts lists, sectional drawings and/or exploded views.

- Supplement

Information sheet „MAINTENANCE OF PNEUMATIC TOOLS“
Information on oiler adjustment

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IMPORTANT!

**BEFORE OPERATING THIS MACHINE MAKE SURE,
THAT YOU ARE FAMILIAR WITH THE OPERATING
AND SAFETY INSTRUCTIONS:**

General

Performance and output power of this machine are designed for a cutting capacity in steel up to 23 mm. **After that free-hand drilling is not possible (DANGER OF INJURY). Therefore , always center the machine and secure it against rotation. NEVER HOLD THE MACHINE ONLY BY HAND dURING DRILLING.**

Drilling / Reaming (see figures1 to 3)

- Check the oil level. If necessary, add oil to fill up the oiler.
- Attach desired tool to the machine (Morse taper 2)
- Screw the feed spindle as far possible (square size 16 mm)
- Center and fix the machine on a suitable support.
- Secure motor part with oiler and valve against rotation (**do not hold by hand**)
- Connect air hose. (In order to remove contaminants, blow out the air hose before connecting).
- Open the valve and begin the drilling or reaming. (Speed can be regulated by opening the valve more or less.)
- Produce uniform feed by screwing out the spindle. (A capstan is available).
- Take care for sufficient cooling of tools and workpieces (by appropriate coolants).

After finishing the operation

- Shut the valve.
- Turn off compressed air and disconnect the air hose.
- Take the machine out of device.
- Loosen the drills and reamers and pull them out of morse taper.
- Clean the arbor hole.
- Check oiler.

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SAFETY PRECAUTIONS

THESE SAFETY PRECAUTIONS ARE GIVEN FOR YOUR SAFETY. REVIEW THEM CAREFULLY BEFORE OPERATING THE MACHINE AND BEFORE PERFORMING MAINTENANCE AND REPAIRS.

- **Wear safety glasses (DANGER OF INJURY BY MEANS OF METAL CHIPS).**
- **Wear safety gloves (DANGER OF INJURY BY BUTTING ONESELF ON SHARP-EDGED WORKPIECES).**
- **Wear protective clothing.**
- **Ensure that you maintain a good footing and proper balance at all times.**
- **Never work under the influence of alcohol, drugs or stronger medication.**
- **After use, shut valve immediately.**
- **Disconnect machine from the air line (AVOIDANCE OF UNINTENTIONALLY TURNING OF THE MACHINE).**
- **Follow the general current and appropriate**

ACCIDENT PREVENTION AND SAFETY PROCEDURES

Pneumatic Corner Drill

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Figure 1

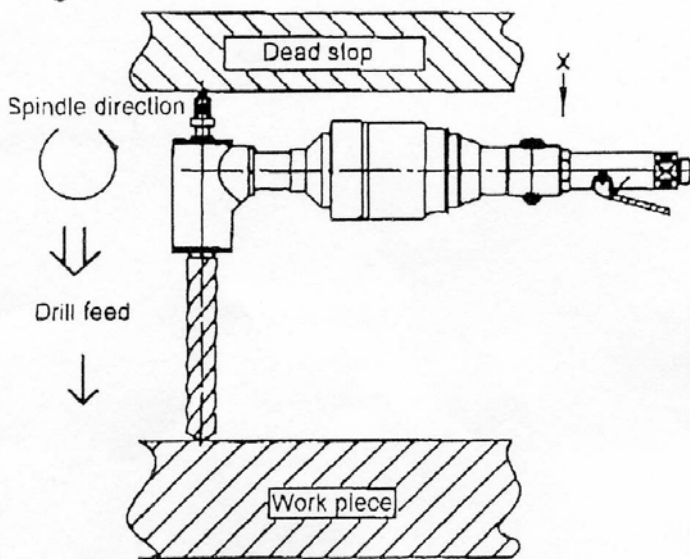


Figure 2

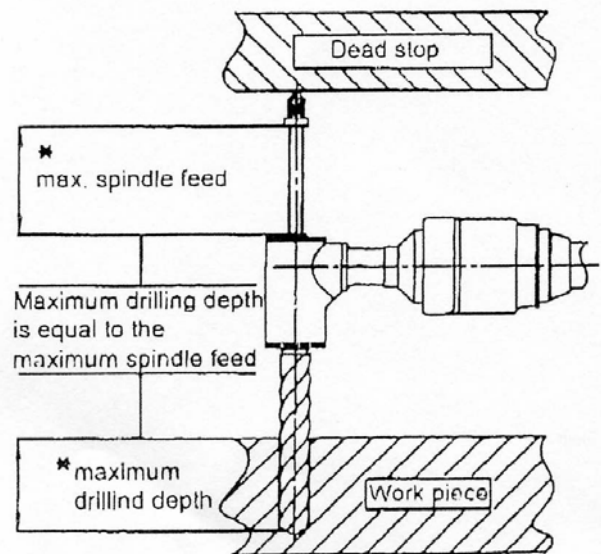
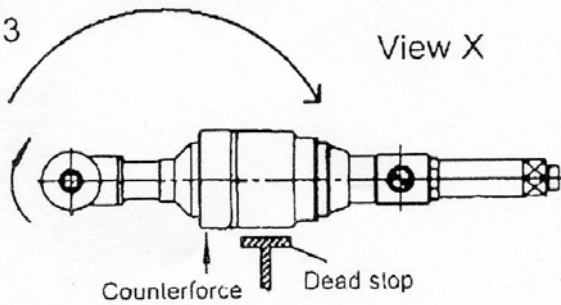


Figure 3



Maintenance and Assembly Instructions

Pneumatic Corner Drills

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Our machines are designed for an operating pressure of 4 – 6 bar.

Service life and performance of the machine are decisively determined by:

- a) the air purity
- b) the lubrication conditions and maintenance

a): Blow the air hose clear before connecting it to the machine.

Install dirt and water separator upstream of the machine, if it is not possible to prevent the formation of rust and water condensation in the air distribution lines.

b): Only proper maintenance can ensure constant performance, reduction in wear and thus, a decrease in operating costs and an increase in service life.

It is recommended to check always contents of the built-in oiler which is located between machine and valve. Regularly check and clean the air inlet screen.

Use always acid- and resin-free SAE 5W – SAE 10W oil. Thick flowing oil will clog the vanes and affect the start-up and performance of the machine. We therefore highly recommend to install a service unit and line oiler upstream of the machine.

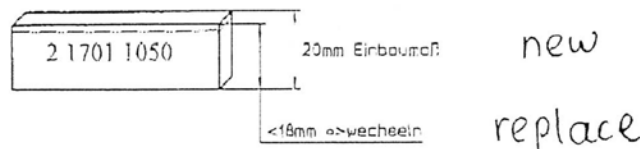
In winter, or if the compressed air is very moist, an antifreeze lubricant, e.g. „BP Energol AX 10“, „Kilfrost“ or „Kompranol N74“ should be used.

Observe the comments in the information sheet

„Maintenance of Pneumatic Tools“

The lubricated and sealed ball bearings may not be flushed.

Replace wear parts – in particular the vanes – when necessary. **Vanes are considered worn if their width is less than 18 mm.**



After ending a working task, flush the machine with a thin oil, or protect some other way against corrosion.

Maintenance and Assembly Instructions for Pneumatic Corner Drills 2 1701 0000
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Disassembly and Reassembly:

Disassembly and reassembly should only be performed with assistance of the exploded views and sectional drawings.

Motor:

Remove gearbox neck item 2 from motor housing item 1 while watching out for the planetary gears item 15, the shims item 14 and the bearing needles item 16. Then knock out the inner motor parts by slightly tapping the motor housing item 1 on a wooden block.

Disassemble motor. Check vanes item 50 for wear.

Governor:

Remove segment bridge item 27 from rotor shaft item 7 (left-hand thread). Check the governor parts for wear.

Angular Drive:

Remove output housing item 3 from gearbox neck item 2 (watching out for the end plates). Unscrew fillister-head screws item 66 and pull the cross bar item 12 (by means of M12 screw) carefully from taper pinion item 17. Then remove feather key item 53 and pull out taper pinion of the gearbox neck item 2. Unscrew feed sleeve item 19 and cover item 24 and remove bevel gear item 22 from drill sleeve item 21. After removing feather key item 54 pull out drill sleeve item 21 of output housing item 3.

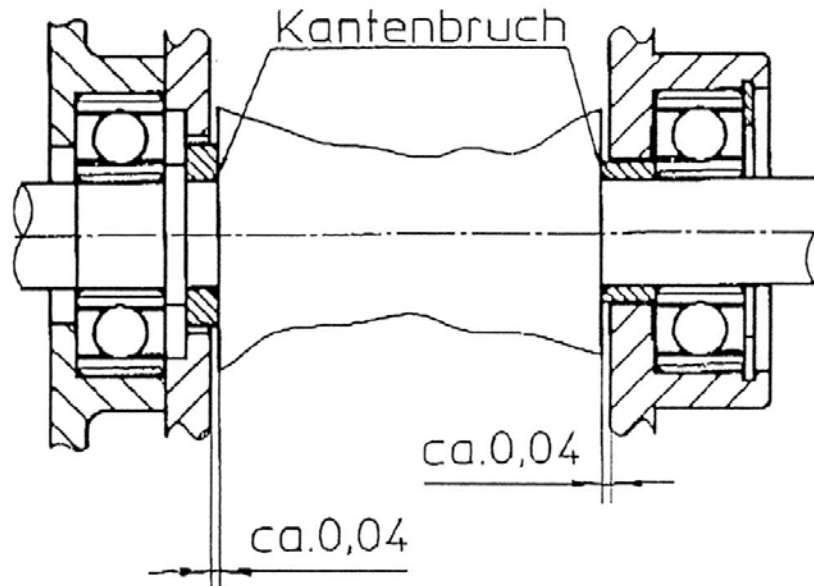
Oiler:

The oiler adjustment screw item Pos.61 should be readjusted only if the oil throughput rate no longer meets the requirements. For adding oil just unscrew the plug item 59. To adjust the oiler under operating pressure turn regulating screw item 61 counter-clockwise to open it until air bubbles slightly drift upwards through the oil.

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Reassembly:

Reassembly is performed essentially in the reverse order. Ensure correct spacing. The axial play between rotor item 6 and end plates items 8 and 9 should be 0.04 mm per side. The chamfered edges of spacers items 52 and 55 should point towards the centre of the rotor.



Remove any oil and resin residue from the rotor slots. The new vanes item 50 should fit easily into the slots. Insert cylinder bushing item 5 into the right side.

For the angular drive ensure the correct setting of the tooth engagement. Note the location of the spacers. Use low viscosity grease (e.g. Calypsol D 6024) for the gearbox. After completion of reassembly make functional gauging by checking free speed (540 rpm) and air consumption (1.4 m³/min).

Use only Original Spare Parts for repairs!