CS UNITEC, Inc.
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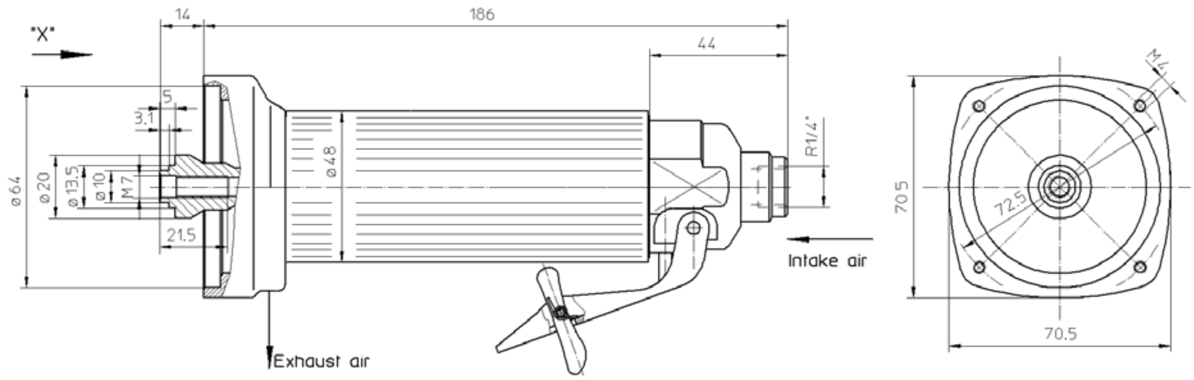
Pneumatic Drive Motor

Type: 5 6058 0050



Technical Specification

Operating pressure (Flow pressure)	p	6	bar (90PSI)
Output	P	700	W
Speed (under load)	nbel	10000	rpm
Speed (free)	nleer	19000	rpm
Direction of rotation (looked at "X")	counter-clockwise		
Air consumption (under load)	approx.	0.95	m³/min
ID of Hose	min.	10	mm
Air connection (internal thread)		R ¼"	
Noise level, (average; 1 m distance)		87	dB(A)

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Maintenance and Assembly Instructions for Drive Motor 5 6058 0050

The service life and the performance of the motor are determined to a significant extent by:

a) the degree of air purity
b) the lubrication and mainteanance

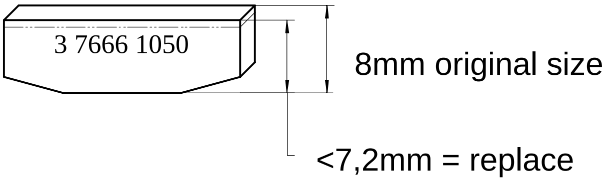
to a) Blow the air hose clear before connecting it to the machine. Install dirt and water separator upstream of the machine, if it is not possible to prevent the formation of rust and water in the air distribution lines.

to b) The distance between machine and oiler should be no more than 5 m. The oiler should be set so that 2 – 5 drops are atomized per m³/min. air consumption.

Use always acid- and resin-free SAE 5W – SAE 10W oil. Thick flowing oil will stick the vanes and as a result reduce the efficiency of the start-up and the performance of the motor. The service life of the motor is greatly increased by an optimum lubrication. We thus particularly recommend to install a service unit upstream of the maschine. Observe instructions on the supplementary sheet:

„Maintenance of Pneumatic Tools “

The lubricated and sealed ball bearings may not be flushed and the motor in general should not not be flushed with kerosene or similar agents. After ending a working task rinse the motor with light oil or provide alternate corrosion protection. Regularly check and clean the air inlet screen.
In winter or if the compressed air is very moist, an antifreeze lubricant, e.g. **„BP Energol AX 10“**, **„Kilfrost“** or **„Kompranol N 74“** should be used. Replace wear parts – in particular the vanes – when necessary. Vanes are considered worn, **if their width is less than 7.2 mm**.



The antifriction bearings must be cleaned thoroughly after about 900 hours of operation and re-packed with new ball-bearing grease. The space between inner and outer race must be packed only about one third capacity in order to prevent excessive heat generation in the bearings. The proper quantity of grease is very important from the point of good lubrication and low generation.

Maintenance and Assembly Instructions
for Drive Motor **5 6058 0050**

Greases (acid- and resin-free)	Multi-purpose greases for antifriction 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 and Reassembly:

Disassembly and reassembly should only be performed with assistance of the sectional drawing.
Never use force during motor disassembly. All parts are designed in a way that they are removable through slight pushing on a wooden block or tapping with a rubber hammer.

Motor

Draw off output shaft (item 20 - plugged in loose). Unscrew complete valve (item 30 - size 38) and push motor housing (item 1) with the open side several times on a wooden block. So motor parts as end plates, vanes, cylinder bushing, rotor, grooved ball bearings etc. can be removed completely out of motor housing for inspection. Loosen snap ring (item 19) and pull out thrust washer (item 17) and silencer (item 16).

Valve

After loosening the connecting piece, clean the screen in the connecting piece. Additionally valve ball and compression spring can be checked and replaced if necessary. For further disassembly see also special list and sectional view.

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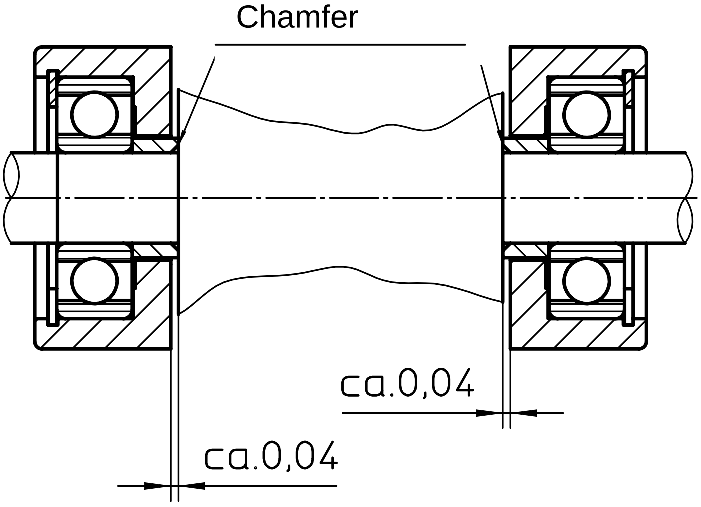
Maintenance and Assembly Instructions
for Drive Motor **5 6058 0050**

Reassembly:

Reassembly is performed essentially the same as disassembly, but in revers order.
Make sure that motor clearance is correct. The longitudinal clearance between rotor (item 10) and end plates (items 4 and 12) should be approx. 0.04 mm in both ends. (Cylinder bushing should be 0.08 mm longer than the rotor). The chamfered edges of the spacers (items 7 and 15) should point towards to centre of the rotor.



Before inserting the vanes (item 11) remove any oil and resin residues from the rotor slots. The new vanes should fit easily into the slots.
Grease ball bearings (item 5 and item 13).

After assembly of motor, rotor (item 10) has to be turned easily by hand. Should the rotor to be turned only heavy or not at all, light tapping with a rubber hammer lateral or straight on motor housing (item 1) is helpful to bring the rotor in a free-wheel position.
After completion of reassembly make functional gauging by checking the free speed and air consumption as shown in **„Technical Specification“.**

Use only ORIGINAL SPARE PARTS for repairs!

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SPARE PARTS LIST

DESCRIPTION: **Drive Motor**
with Lever Throttle / Front Exhaust

PART NUMBERG / DRAWING NUMBER : **5 6058 0050**

Page: 1/2 | Date: 07/02

Item	Qty.	Description	Part Number Drawing Number			Remarks
1	1	Motor housing, Assy.	5 6057 1910			
2	1	Belleville spring	9 1801 0380			DIN 2093 - C 31.5
	1	End plate, Assy.	5 6057 1940		*	Items 4-7
4	1	End plate	5 6057 1110			
5	1	Grooved ball bearing	9 1001 0120			608 2Z
6	1	Snap ring	9 1703 0030			DIN 472 - 22x1
7	1	Spacer	1 3801 1080			
8	1	Cylinder bushing	5 60571020			
9	1	Brace	9 1630 0090			DIN 1481 - 2.5x12
10	1	Rotor	5 6057 1030			
11	5	Vane	3 7666 1050		*	
	1	End plate, Assy.	5 6057 1930		*	Items 12-15
12	1	End plate	5 6057 1100			
13	1	Grooved ball bearing	9 1001 0460			619/8-2RS
14	1	Snap ring	9 1703 0350			DIN 472 - 19x1
15	1	Spacer	1 3801 1080			
16	1	Silencer tube	9 3801 1080			
17	1	Thrust plate	5 6057 1280			
19	1	Snap ring	9 1703 0160			DIN 472 - 55x2
20	1	Output shaft	5 6057 7020			
21	1	O-Ring	9 1901 2060		*	DIN 3770 - 32x1.5
30	1	Lever throttle, Assy.	1 3528 3000			
	*	**Wear Parts!**				

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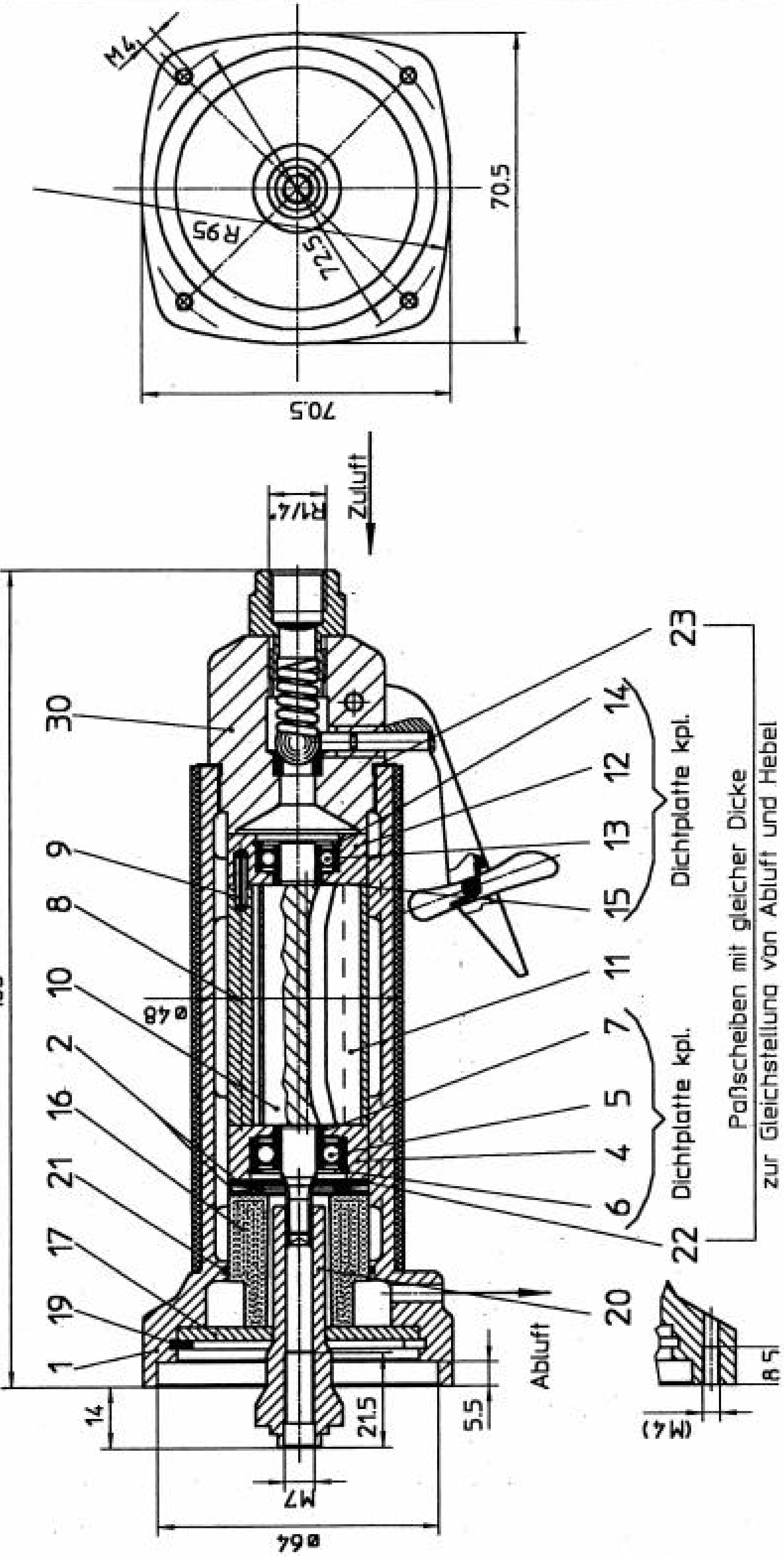
Air Motor for Polisher

SACH- UND ZEICHNUNGS-NR. :	
5 6058 0050	
Blatt-Nr. : 2/2	Ausgabe: 12/97



MAINTENANCE OF PNEUMATIC TOOLS

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

Our pneumatic tools are equipped for an operating pressure of 6 bar. A regulator setting for an operating pressure of 4 bar is possible as well as expedient for grinding machines with a built-in regulator, so as to take full advantage of the speed prescribed for the corresponding grinding wheels.

Pneumatic tools should not run empty, because this results in heat and higher wear. The compressed air should be clean and dry. This is guaranteed by a proper pneumatic system. Blow through the pneumatic hose before connecting it. For the economical use of pneumatic tools, the prescribed air quantities are necessary, i.e., the line, armatures and hoses must have the required cross sections so that the flow pressure remains constant. Proper lubrication is a must; for this reason, our pneumatic tools usually have built-in oilers, which are located between the inlet valve and the motor, and which function in any position. In smaller and lighter hand tools, these oilers must often be left out, because the machines would then be too heavy and not easy to manage. In such cases, lubrication must be carried out by service units or by manual hose oilers. We recommend service units for permanently installed workplaces (see accessories list). However, where longer hose lines are necessary, line oilers built into the hose lines are more effective. The distance between the tool and oiler should not be more than 5 m.

Most of pneumatic tools have located at the connection a lined-up screen, which is to be regularly checked and cleaned.

After ending a working task, the machines are to be flushed with a thin oil, or protected some other way against corrosion.

Visible grease nipples are provided for regular lubrication of the gears with a grease gun. Note the following for grease lubrication: Every 60 hours of operation check striking mechanismus, friction bearings and antifriction bearings; if necessary, grease them. Every 300 hours of operation grease the gears and antifriction bearings anew. In the case of impact wrenches, use a grease gun to grease the anvil guide before beginning daily work or every 6 to 8 hours. All inner parts must be lubricated before storing for longer periods of time in order to prevent rusting. It is recommend to check the vanes and bearings at regular intervals. Store pneumatic tools in dry rooms only.

Lubricating oils to be used:
Generally SAE 5 W to SAE 10

For gearless impact wrenches and small grinders, only SAE 5 W

For damp compressed air, oils are to be used that take up water (without losing the lubricating effect) and that contain anticorrosive additives. At lower temperatures (especially for work outside) it may be necessary to use an antifreeze lubricant (e.g., Kilfrost, BP Energol AX 10, Kompranol N 74).

For saw-chain lubrication on chain saws:
Machine oil **with adhesive additive,** viscosity c ST 49-55' (6.5-7,5 E) / 50° C

Greases (free of resins and acids)	Multi-purpose greases for antifriction and friction bearings and gears	Special greases for high-speed miter gears
Designation in accordance with DIN 51502	KL 2 K	G 00 h
Consistency class (DIN 51818)	2	00
Saponification type	lithium	sodium
Dripping point	185° C	145° C
Worked penetration	265 to 295	400 to 410
Temperature range	−25° C to 125° C	−25° C to + 100° C

Before Starting: Check Correct Oiler Setting!

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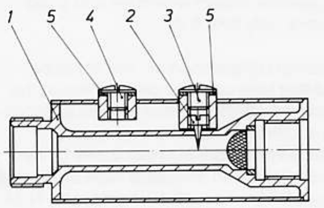
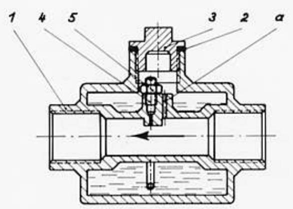
OILER TYPES USED ON OR WITH OUR TOOLS



Oiler to mount on the machine or connect in the hose line

Setting the oiler: The adjustment screw (Item 2) is visible after removing the screw plug (Item 3). The oil supply is decreased by tightening the screw, and by loosening the screw, more oil gets into the machine. In most cases it is sufficient to tighten or loosen the screw by 1/4 or 1/2 of a turn. When plugged, clean borehole (dia. 2 mm) with wire.

Correct setting: When under pressure and with the filler screw (Item 4) open, the oil must bubble slightly. The filling lasts for approx. 8 operating hours.

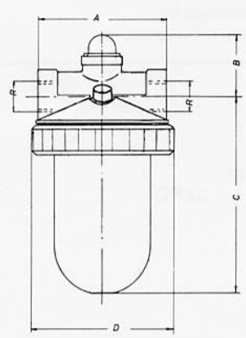


Line oiler

For stationary pneumatic machines and motors, the lubrication is carried out by lined-up oilers for horizontal or vertical installation.

Setting of oilers: Shut off air supply. Open plug (Item 3). Loosen visible lock nut (Item 5) with a socket wrench. Using a screw driver turn back the tightened screw plug (Item 4) by 1/4 to 1/2 of a turn and then lock again. No oil is to get into the borehole "a" when filling. Close plug (Item 3) and open the air supply.

Correct setting: A piece of paper held for a short time in front of the outlet must be coated with oil without drops forming.



Transparent oiler

For installing in permanently equipped workplaces.

(especially for type using service units — see accessories list)

The transparent supply containers allow for good checking as well as for good setting possibility by means of a screw driver via a set screw with visible dripping. (The set screw is above the lateral thread connection — turning to the right for less oil; turning to the left for more oil). The setting (2 to 5 drops per m³/min air consumption) is to be carried out when air is flowing through, i.e., when the machine is running.

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