

# DEPRAG

## Operating Instructions

### Drill Spindle

RB50LLUA  
RB50LLUB-1

301717 A  
301717 B

# DEPRAG

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CERTIFIED AS PER DIN EN ISO 9001

Jan-04 Technical alterations reserved

Dear Customer:

Congratulations, you chose the enclosed tool from an extensive DEPRAG product line. This tool is the result of more than 60 years experience in the design and manufacturing of pneumatic tools for the industrial market. We offer a complete program of pneumatic tools, such as Drills, Tappers, Grinders, Screwdrivers, Impact Wrenches, Metal Working Tools and Hammers.

Please don't hesitate to call on us for all of your assembly tool needs, from individual hand tools to the complete automated screwdriving cell. Our products offer solutions to all requirements, which may be needed in the assembly sector. We kindly ask, that you read these operating instructions carefully, so that you will be able to use this tool safely and for many years to come. If you need additional information, please contact your DEPRAG Representative or contact us direct at DEPRAG. We will be happy to answer any questions. We hope you will be pleased with your new tool!

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Before operating tool, make sure to carefully read and observe this operating instruction booklet.

## **1. Safety Tips**

When using a drill spindle, make sure to apply the following basic safety measurements to protect against an electrical short, injury- or fire hazards!

1. Disorder in the work-area yields accident-danger!
2. Don't expose the drill spindle to rain. Provide good illumination. Don't use the drill spindle in close proximity of combustible liquids or gases.
3. Unused tools should be stored in dry, locked area.
4. Use specified drill-inserts only. Test and make sure that the rated speed of the drill-insert is higher than the speed of the drill-spindle.
5. Do **not** alter either drill-spindle or drill-inserts after their delivery!
6. Do not drill nearby inflammable materials or in explosion-endangered areas.
7. Always provide clean air to work facility, if the tool is being used in an unhealthy or explosive environment and if steams or aerosols occur.
8. Observe labeling-, operational restrictions and special application-tips, such as „hearing-protection “, etc.
9. Always sufficiently secure work pieces prior to any operation.
10. Before each operation, visibly check drill-inserts and drill-spindle and assure their intactness and suitability for the application.
11. During the disconnection or reconnection of the drill spindle from the compressed air, an injury is possible because of a whipping pressure-hose. Additionally, it is imperative **NOT** to operate or to press the start-lever.
12. Before setting aside the hand drill, make sure the drill is switched off and has come to a full stand still.
13. The DEPRAG drill-spindle is only allowed to be operated when connected to a maintenance-unit, consisting of Filter, Regulator and Oilier (approximately 1 – 2 drops per m<sup>3</sup>). A performance loss (approximately 15%) occurs, when drill-spindle is operated with oil free air and reduced maintenance interval are necessary. The air-pressure may **NOT** exceed 7 bar.

14. Only operators with product understanding, educated by authorized and responsible specialists, may operate the drill-spindle.
15. With drill-spindles it is necessary to make sure, that the operator wears goggles, gloves, hearing-protection, safety-shoes and a hairnet if operator has long hair.
16. Wear no loose clothing or jewelry, for movable parts may seize them.
17. Use a respiratory mask, if operation generates dust.
18. The drill-spindle should be used exclusively for its designated purpose.
19. We or an authorized specialist may only do the dismantling as well as the reassembly of our DEPRAG drill-spindles.

## 2. Installation

Blow out air hose before connecting it to the drill.

- Connect to a maintenance unit, filled with resin- and acid-free oil (SAE 10. DEPRAG-Oil 790081E, 250 cm<sup>3</sup>) and adjust oilier (1 - 2 drops/min<sup>3</sup>).
- The air pressure should be 6,3 bar (90 PSI). A pressure below 90 PSI reduces tool performance. If air pressure is above 90 PSI, install a regulator
- Make sure the hoses allow unrestricted airflow, avoid bends, etc.

In regards to air-quality according to ISO 8573-1, we recommend:

	Class	Residue of Oil Content mg/m <sup>3</sup>	Residue of Dust		Residue of Water	
			particle size μm	max. concentration mg/m <sup>3</sup>	pressure dewpoint °C	max. concentration g/m <sup>3</sup>
Lubricated Air	4	5	15	8	+3	6
Dry Air	3	1	5	5	-20	0,88

minimum Hose ID: 12 mm  
 maximum hose length: 2 m (6.6 ft.)

## 3. Application Possibilities

The Drills RB50LLUA and RB50LLUB-1 are designed for drilling into steel and aluminum, as well as other material.

## 9. All important data at a glance

Manufacturer: DEPRAG-SCHULZ GMBH & CO.  
 Address: Kurfürstenring 12 - 18 PO Box 1352  
 D-92224 Amberg D-92203 Amberg  
 Phone: 09621/371-0  
 Fax: 09621/371-120

Subsidiary: DEPRAG INC.  
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Technical Data:

	<b>RB50LLUA</b>	<b>RB50LLUB-1</b>
Model No. :	<b>301717 A</b>	<b>301717 B</b>
Order No.		
Drilling into Steel, up to Ø mm	60	80
Speed, (min <sup>-1</sup> ):	100	80
Air Consumption, m3/min	2,8	
Power Output, kW	3,1	
<b>Length mm</b>	448	
Weight kg.	34	
Hose I.D. mm	19	
Connection Thread	G ¾ "	
<b>Vibration m/s<sup>2</sup></b>	<2,5	

## 8. Conformity Declaration

### **EC-Conformity Declaration according to the EC-Machine-Guidelines 98/37/EC, Amendment IIA**

We,

DEPRAG SCHULZ GMBH & CO.  
PO Box 1352  
D-92203 Amberg

hereby confirm, that the  
**Drill Spindle**

RB50LLUA  
RB50LLUB-1


conform to the following, relevant regulation:

- EC-Machine-Guidelines, Version 98/37/EC, Amendment No. 1 and No. 2.2.

Applicable Standard:

- EN 292

Amberg, 19.01. 2004

  
Dipl. Ing. (FH) A. Lanig  
Mr. Design Dept.

## 4. Handling

The tool should only be used when in perfect working condition; in accordance to its designated use and only when all safety- and danger recommendations of the operating instruction booklet are observed. Any malfunction, which would result into injury to an operator, has to be immediately removed. It is required to use safety goggles when operating this drill. To wear safety gloves is recommended.

## 5. Operation

### **Mounting of Drill-Insert:**

Disconnect drill from air supply.

Put drill insert into drill spindle 300693 (taper size 2). Use advance spindle 301665 with pilot wheel 300205 to remove the inserted tools.

Connection:

Connect hose (12 mm I.D.) with quick coupler 804352. Open stopcock (operating pressure 6.3 bar).

For starting of tool:

Actuate valve with twist sleeve 340282 - tool will start.

## 6. Assembly - Disassembly

Use DEPRAG spare parts only. Non-DEPRAG parts may cause a performance reduction and will increase maintenance requirements. If Non-DEPRAG parts are used, DEPRAG is released from all product- and safety liabilities.

## 6.1 Spare Parts Listing

See Pages 5/6, Picture 1

## 7. Inspection and Maintenance

These drills require little maintenance. If the following rules are observed, the tool reaches its promised high life span and remains in a safe condition to use. Check the air filter (exhaust filter condensation on a regular basis) and the oil reservoir, as well as the oiler adjustment (we recommend DEPRAG-Oil, Part No. 790081E (250 cm³)).

Lubrication: approx. 1 - 2 Drops per 1 m³ air consumption Only when repairing, wash and grease ball bearings and gearing (we recommend Grease: Aral HL2, BP Energrease LS2, Esso Beacon2, or Shell Alvania 2. Any other comparable lithium soap grease may be used.

Wear parts: Vanes (5 pieces) part no. 302624.

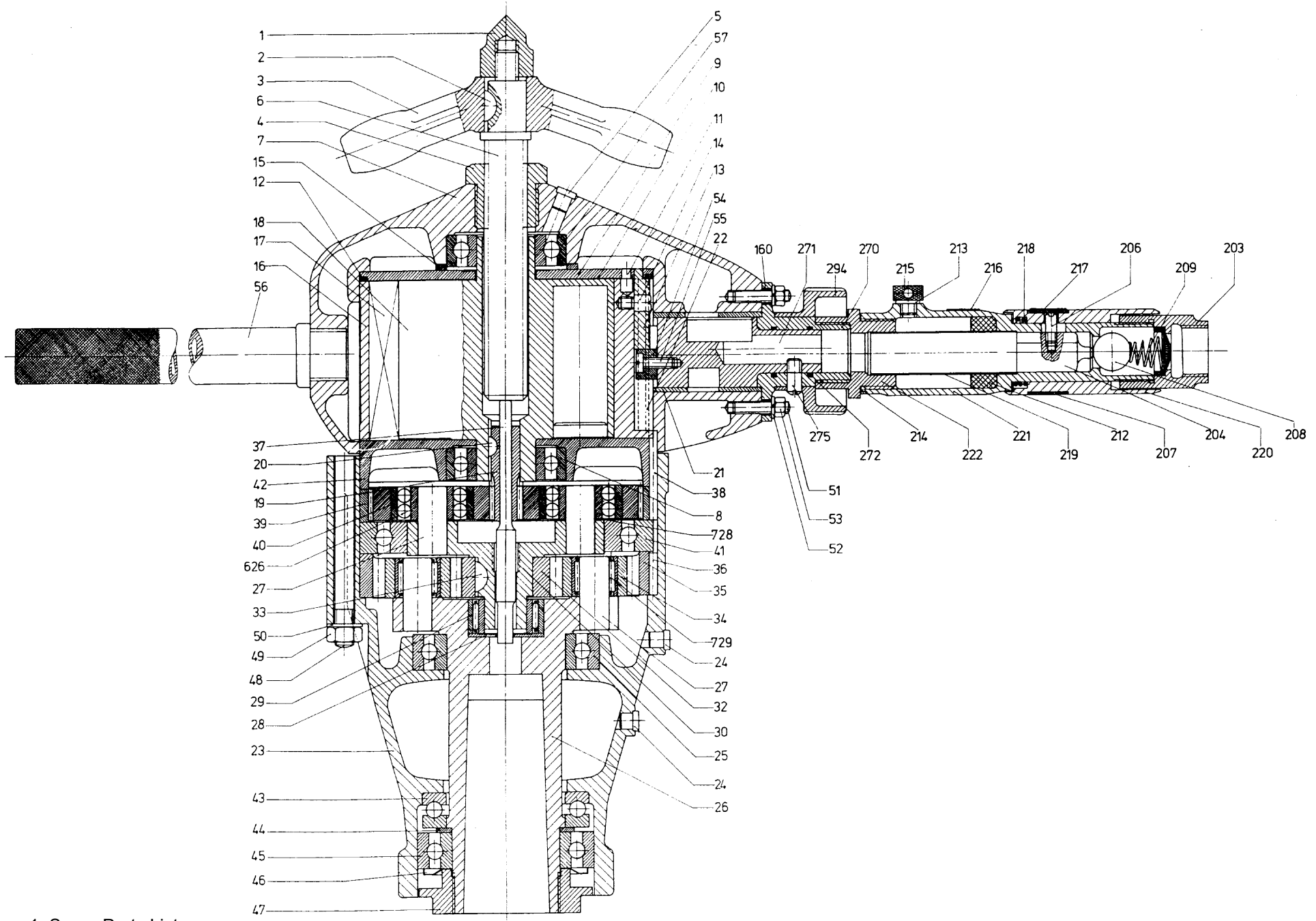
Quantity 301717 A	Quantity 301717 B	Name	Part	Part No.
-	2	Pinion	40	302057
2	-	Pinion	40	301966
1	1	Ball Bearing	41	802041
1	1	Bearing Cover	42	300954
1	1	Axial Ball Bearing	43	802125
1	1	Washer	44	300309
1	1	Ball Bearing	45	802017
1	1	Ring	46	802566
1	1	Seal Ring	47	300529
4	4	Screw	48	300754
4	4	Hex. Nut	49	800679
4	4	Washer	50	800242
4	4	Screw	51	400412
4	4	Ring	52	800173
4	4	Hex.Nut	53	800678
1	1	Reverse Cam	54	320963
2	2	Cylinder Screw	55	800107
1	1	Tube	56	300110
1	1	Ball Bearing	57	802027
1	1	Screen Support	203	340084
1	1	Slide	204	340083
1	1	Screw	206	800230
1	1	Clamp Ring	207	301582
1	1	Ball	208	802215
1	1	Spring	209	400722
1	1	Felt Ring	212	340080
1	1	Washer	213	340087
1	1	Seal Washer	214	340089
1	1	Plug Screw	215	340090
1	1	Tag	216	190048
1	1	Tag	217	190049
1	1	Spring	218	340186
1	1	Tube	219	340211
1	1	Twistsleeve	220	340189
1	1	Valvehousing	221	340190
1	1	Connection Piece	222	340277
1	1	Valvehousing	270	320853/2
1	1	Control Slide	271	320852
2	2	O-Ring	272	802521
1	1	Screw	275	800227
1	1	Twistsleeve	294	340293
2	2	Ball Bearing	626	802170
2	2	Needle Bearing	729	802238
2	2	Axial Washer	728	802325

## Spare Parts Listing

Quantity 301717 A	Quantity 301717 B	Name	Part	Part No.
1	1	Lathe Centre	1	300135
1	1	Key	2	801108
1	1	Cross Handle	3	300204
1	1	Threaded Bushing	4	300134
1	1	Nipple	5	802802
1	1	Spindle	6	300752
1	1	Cap	7	440456
1	1	Ball Bearing	8	802027
1	1	Seal Plate	9	320961
1	1	Deventing Plate	10	320960
1	1	Locking Pin	11	320966
1	1	Ring	12	320962
1	1	Lever	13	320964
1	1	Screw	14	320965
1	1	Seal Ring	15	300436
1	1	Rotorcylinder	16	320967
5	5	Vanes	17	320845
1	1	Rotor	18	320954
-	1	Pinion	19	300735
1	-	Pinion	19	300734
1	1	Key	20	801107
1	1	Bushing	21	300267
4	4	Sealing Strip	22	300750
1	1	Gear Housing	23	300897
2	2	Nipple	24	802802
1	1	Ball Bearing	25	802018
-	1	Drill Spindle	26	300732
1	-	Drill Spindle	26	300976
2	2	Bolt	27	300974
1	1	Washer	28	300724/1
1	1	Needle Bearing	29	802250
-	1	Cam Spindle	30	300736/1
1	-	Cam Spindle	30	300977
-	1	Pinion	32	300303
1	-	Pinion	32	300980
2	1	Key	33	801108
-	2	Planetary Gear	34	302054
2	-	Planetary Gear	34	301965
-	1	Tooth Ring	35	300300
1	-	Tooth Ring	s	300978
1	1	Key	36	801083
1	1	Pin	37	300740
1	1	Spring	38	400604
-	1	Tooth Ring	39	300367
1	-	Tooth Ring	39	300220

## 7.1 Trouble Shooting

Error	Reason	Solution
Insufficient Power	Restriction in air hose	Remove bends or other restrictions
	Air pressure too low	Minimum air pressure should be 90 PSI for maximum performance
	Hose I.D. is too small	Use required hose I.D.
	Screen Support or silencers are clogged	Clean or replace screen support or silencers.
	Vanes are worn	Exchange vanes
Drill does not start	No air, Shut-Off valve is closed	Open Shut-Off valve
	Vanes are worn	Exchange vanes
Tool does not stop	Valve Bottun or Valve Disc inhibited	Exchange Valve Bottun or Valve Disc



Picture 1: Spare Parts List  
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