Original operating instructions
Milling and grinding motor

Type UAD 30-RF

Part No. 78 929

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Contents

1. Safety instructions

1.1 General safety instructions

These operating instructions apply to device UAD 30-RF. Only personnel qualified according to EN 60204-1 may handle the devices.

Observing the enclosed, separate safety instructions is imperative.

1.2 Intended use

This installable milling and grinding motor is intended for the milling of wood and plastics as well as the grinding of wood, plastics, steel and aluminium.

1.3 Improper use

Any use other than that described in Item 1.2 is considered improper and is thus not permissible.

1.4. EC conformity declaration (original)

Otto Suhner GmbH, Trottäcker 50, D- 79713 Bad Säckingen hereby declares in sole responsibility that the product with the serial or batch number (see reverse) complies with the requirements of the directives 2004/108/EG, 2006/42/EG,2011/65/EU. Applicable standards: EN ISO 12100, EN 60745, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3.
Document commissioner: J. Malzacher

Bad Säckingen, Mai 2010

J. Malzacher
Leiter Antriebstechnik/Motoren

1.5. Explanation of symbols

Attention!
Read carefully!
This piece of information is very important to ensure the functionality of the product. Failure to comply may result in a defect.

Safety instruction / warning
This piece of information serves safe operation. If not observed, the operator's safety is not ensured.

Information
This piece of information serves understanding the product's functions. It helps to utilize the full efficiency of the product.

Operating instructions
Read these prior to commissioning the product.

Safety glasses and hearing protection
Wear safety glasses and hearing protection.

Disposal
Environmentally compatible disposal.

Power plug
Pull the power plug prior to performing any works on the device.

2. Commissioning

2.1 Prior to commissioning

Check mains voltage. The voltage of the power supply has to match the specifications on the rating plate.

- Check the tool before using it.
- The tool has to be mounted centrically and inserted until the stop.
- The maximum permissible speed of the chuck must not be exceeded in any case.
- Observe country-specific provisions.
- Take protective measures if working may generate harmful, combustible or explosive dusts. Wear dust protection mask and, if attachable, use dust chip extraction.

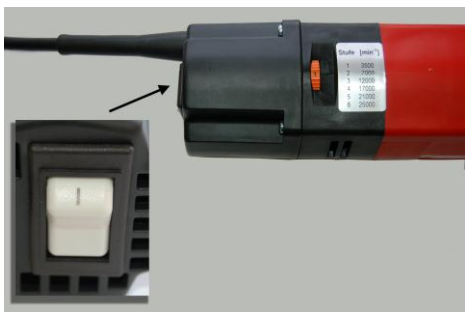
2.2 Commissioning

Set speed at the dial according to the rpm table.

Dial level	min-1/rpm
6	30 000
5	26 000
4	20 000
3	14 000
2	6 000
1	3 500

Never increase the appropriate rotation speed for the insert tool during operation.

Switching on and off



Use toggle switch
Position 1 = On
Position 2 = Off

2.3 Performance data

Mains voltage (see spare part list)	230V 50/60 Hz
Power consumption	1050 W
Rated power	740 W
Idle speed	3 500 – 30 000 min -1
Max. tool Ø	40 mm
Collet chuck - Ø max.	8 mm
Sound pressure level EN 60745	81 dB, K= 3dB
Sound power level	92 dB, K= 3dB
Vibration EN 60745	5.0 m/s², K=1.5m/s²
Weight without cable	2.85 kg
Ingress protection	⧈ / II

The vibration value stated has been measured according to a standardised test procedure and may vary during actual use. It may be used for product comparison or an initial assessment of the exposure.

2.4 Conditions

Operating temperature range	0 to + 50 °C
Relative humidity	10 - 95 % not condensed

3. Handling / operation

3.1 Protective equipment

3.1.1 Machine protection

- Initial current limitation

The electronically controlled soft start ensures jerk-free machine start. Due to the low initial current, a 16 A fuse is sufficient.

- Temperature-dependent overload protection

To protect against overheating, the safety electronics switch to cool-down mode once a critical temperature has been reached. The machine only continues operation only at a strongly reduced speed and the electronic speed control is deactivated.
After a cooling period of approx. 10-20 s, the machine is ready to operate again. Switch off and on again to activate the electronic speed control.

With the device warmed up from operation, the temperature-dependent overload reacts sooner, accordingly.

3.2 Insert tools

Only use insert tools whose permissible speed is equal to or higher than the idle speed of the device.

Attach clean tools only!

Pull the plug from the socket before adjusting the settings of the device, changing accessories or putting the device away. This precaution prevents starting the device unintentionally.

Wear protective gloves during **tool change**. The insert tool can heat up extremely during longer operation and/or the cutting edges of the insert tool are sharp.

3.2.1 Change/assembly of the insert tool

1) Hold the work spindle at the spanner flats using a gauge 18 single open-end spanner.
2) Loosen the clamping nut using a gauge 22 single open-end spanner.

1) Insert tool shaft into the chuck until hitting the stop.

1) Tighten clamping nut.

Abrasives must run smoothly and true. Do not use out-of-centre abrasives any longer.

Trial run!

Check abrasive tools prior to use. The abrasive tool must be mounted perfectly and rotate freely. Perform a trial run for min. 30 seconds without applying any load. Do not use damaged or out-of-centre abrasive tools!

3.3 Working instructions

Working with the milling motor

Wear glasses and hearing protection.

When using a drill upright or a boring or milling bench – possibly in combination with a milling table – the instructions in the operating manuals enclosed with such devices are to be observed.

In addition, please make sure that the T-squares are brought as closely as possible to the cutter, the hand rejector (screen) is set as closely as possible to the work piece surface and that such equipment is used during milling which ensures safe guidance of the work piece, e.g. T-square, auxiliary stop, feed pusher or kick-back block during insert milling.

The feed direction must go against the rotation of the cutter (counter rotation):

Caution! Always mill with counter rotation!

Use only sharp and well-perserved milling tools! The best is to use our original milling tools.
When using other milling tools, the manufacturer's rpm ratings permanently marked on the rotating tools must not be exceeded!

Milling process

Keep hands away from the milling area and cutter. Hold the additional handle with your other hand.
If you hold the milling machine with both hands, they cannot be injured by the cutter.

Only approach the work piece with the power tool switched on. *Otherwise, you risk kick-backs if the insert tool gets caught in the work piece.*

4. Maintenance

4.1 Preventive maintenance

4.1.1 Exchanging the brush

Pull the plug prior to any maintenance work.
The device has two brushes.

Exchange the brushes as follows:

Fig. 1

Loosen the four fastening screws by a few rotations and pull out the switch housing a little.

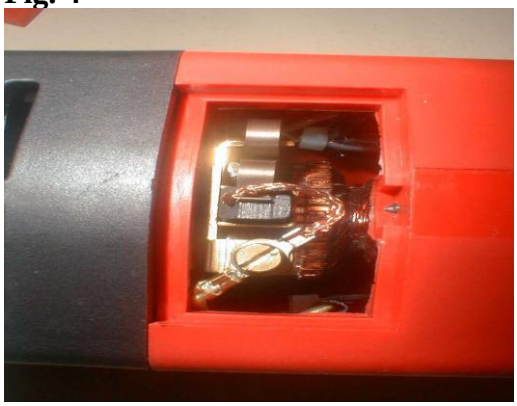
Fig 2

Push the two covers back and remove them from the housing.

Fig. 3

Remove the screw at the brush holder completely and take out the worn brushes.

Fig. 4



Assemble new brushes in reverse order. The brushes must be able to move easily. After exchanging the brushes, they will initially show more sparking, which will decrease after a while until it is back to the normal bluish-white brush sparking.

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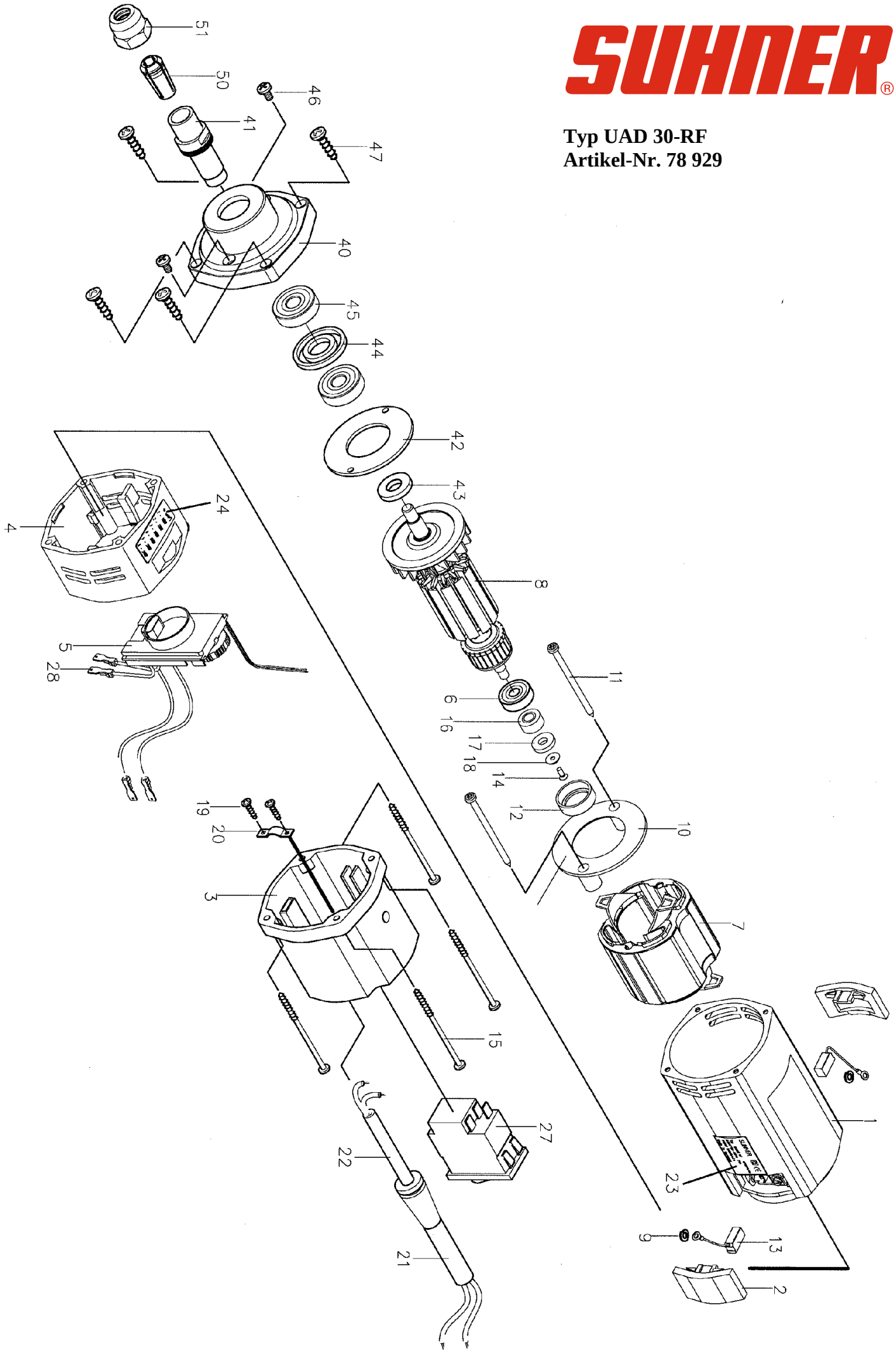
Typ UAD 30-RF
Artikel-Nr. 78 929



Spare parts for UAD 30-RF – 78 929

Spare parts supplied by SUHNER.
When ordering spare parts, please state machine type, serial No. and part No.

Quantity	Description	Item	Part No.
1	Housing compl. red	1	49 671 13
2	Cover	2	48 886 03
1	Cap	3	49 763 04
1	Intermediate flange	4	78 868 02
1	Electronics with pot.	5	64 619 08
1	Groove ball bearing	6	27 684 09
1	Stator	7	78 249 07
1	Rotor with fan	8	57 773 01
2	Spring washer A	9	27 799 04
1	Fan cover	10	48 888 03
2	LS sheet metal screw	11	28 019 01
1	Insulating ring	12	57 937 01
2	Brush	13	64 597 01
1	Countersunk screw	14	28 134 01
4	Sheet metal screw	15	57 791 01
1	Support ring	16	59 004 01
1	Ring magnet	17	57 287 01
1	Disc	18	57 289 01
2	Sheet metal screw	19	27 997 12
1	Cable relief clamp	20	50 714 01
1	Antikink device	21	46 457 01
1	Power cable	22	49 452 01
1	Rating plate	23	64 018 01
1	Rotation plate	24	64 559 09
1	Switch	27	49 772 09
1	Pressed cable lug	28	27 854 17
1	Motor flange	40	78 930 01
1	Spindle	41	64 170 01
1	Thrust plate	42	78 935 01
1	Stop ring	43	78 936 01
1	Spacer pair	44	78 937 01
2	Groove ball bearing	45	78 518 10
2	Oval-head screw	46	78 932 05
4	Sheet metal screw	47	27 995 16
1	Collet chuck	50	78 933 02
1	Clamping nut	51	78 934 01
1	Gauge 18 single open-end wrer	52	37 857 04
1	Gauge 22 single open-end wrer	53	37 857 05
1	Bearing rubber	65	52 731 01
1	Varnished glass fibre tubing	66	300 011 83

Please note: Repair work, changes and testing of hand-held tools is to be performed properly. The safety provisions according to DIN, ISO and other provisions applicable in the respective country are to be observed.

4.3 Repair

Should the device break down despite careful manufacturing and testing procedures, any repair work is to be carried out by an authorised SUHNER customer service provider. If the power cord needs to be replaced, this is to be performed by the manufacturer or its representative in order to avoid any safety risks.

4.4 Warranty

There shall not be any claim to warranty for any damages / consequential damages due to improper handling, improper use, failure to adhere to the repair and maintenance provisions as well as handling by non-authorised persons.

Complaints shall only be accepted if the device is returned without having been disassembled.

4.5 Storage

Temperature range	-15 °C to + 50 °C
Max. relative humidity	90 % - +30 °C 65 % - +50 °C

4.6 Disposal / environmental compatibility

The machine is composed of recyclable materials.

Dismantle device prior to disposal. Do not throw device into the waste.

According to national provisions, this device has to be recycled in an environmentally friendly manner.