

**! The motors have no On/Off switch.**  
**Therefore they may not be operated as hand-held equipment, but exclusively be built into machines.**  
**■ It must be guaranteed, that the motor is fixed tight, before the voltage supply is conected.**

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### 1. Description

The milling motor **UFM 500** is an universal motor with **230 V** operating voltage, the milling motor **UFM 500-11** is an universal motor with **110 V** operating voltage.

Both motor types are provided with integrated tacho control electronics as well as a collet chuck seat system □ of collet chuck □ (optional) and tension nut □ for optimal guidance of the tool shank as well as for exact concentricity. Because of the slim design the motors are optimally applicable also at close space conditions.

### 2. Application

The milling motors UFM 500 and UFM 500-11 are particularly suitable for high performance milling operations.

These are for example:

- Profile milling, edge machining
- Dowel joints
- Drilling and 3D milling in Aluminum

### 5. General Notes

The milling motors UFM 500 and UFM 500-11 are

- certified by the SEV exam. authority and correspond to the spec. sheets EN 50144, IEC 60745, EN 55014, EN 61000, IEC 61000
- all-insulated (Protection class II)
- with noise suppression according to VDE standard 0875

### 3. Operation

1. Load a suitable tool
2. Select the desired speed with the speed adjusting wheel □ (make sure that the desired speed is allowed for the used tool)
3. Attach the voltage supply for the milling motor

### 4. Working notes

The motor is equipped with electronics and an overload protection and works as follows:

- soft accelerating without jerking
- the current consumption rises with increasing load, whereby the speed is kept almost constant
- when the motor gets overloaded, the overload protection cuts the current supply automatically

*In this case, immediately disconnect the motor from the power supply and then re-connect the motor to the power supply in unloaded status as soon as possible in order to ensure the re-cooling in the no-load operation.*

Please pay attention to the following:

- keep the motor dry and clean
- keep the cooling air openings □ free
- regularly check the leads and let damaged cables be replaced in any case
- **Repairs may only be executed by an electrical specialist**

## 6. Setting of the working speed

For safety reasons, the speed, matched to the tool and set before the initiation, may never be changed during operation.

- Make sure, that the desired speed is suitable for the tool being used
- The speed sticker shows the respective speed adjusting wheel level (1 to 6)
- Turn the wheel □ until the correct wheel level points to the arrowhead of the speed sticker

Setting wheel level

6 = 25.000 rpm

5 = 22.000 rpm

4 = 19.000 rpm

3 = 16.000 rpm

2 = 13.000 rpm

1 = 11.000 rpm

The motor may not be operated with an additional speed control unit. The electronics of the motor would be influenced

in an illegal way by that. A safe function can no more be insured in such case.

### Attention:

High-energy high frequency interferences can cause speed fluctuations of up to 20 %. However, they'll disappear as soon as the interferences faded away. With low speed settings, the motor can switch off prematurely for safety reasons because of electromagnetic interferences. Please switch off and on the motor in this case.

## 7. Technical data

	UFM 500	UFM 500-11
<b>Voltage</b>	230 V	110 V
<b>Idling speed</b>	11.000 - 25.000 rpm	
<b>On-load speed</b>	22.600 rpm	
<b>Input power</b>	500 W	
<b>Output power</b>	345 W	
<b>Efficciency</b>	68 %	
<b>Torque</b>	0,14 Nm	

## 8. Collet chuck seat

The collet chucks are precision clamping devices according to DIN 6388-A.

These collet chucks are bolted with the collet chuck seat by a tension nut.

1. Unscrew the tension nut (fig. 1) from the collet chuck seat.
2. Press the collet chuck (fig. 2) into the tension nut (fig. 3) in such a way, that the nose (arrow) locks into the tension nut.
3. Screw this combination on the thread of the collet chuck seat (fig. 4)
4. Now you can clamp the drill bit or the milling cutter into the collet chuck.  
Tighten the nut with the enclosed hook wrench. The wrench (size 17) serves as holder-up at the collet chuck seat.

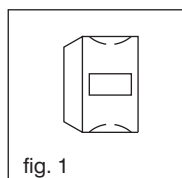


fig. 1

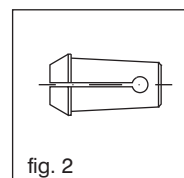


fig. 2

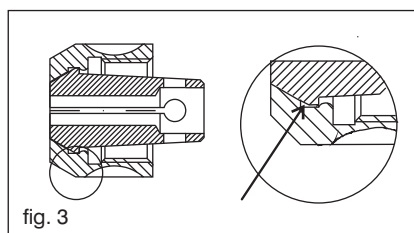


fig. 3

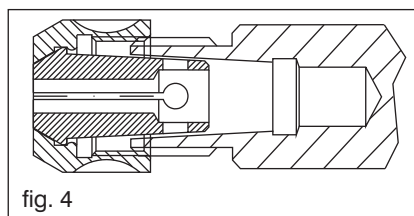


fig. 4

## 9. Scope of delivery, accessories

The scope of delivery contains:

- Milling motor
- Tension nut □
- Hook wrench □
- Wrench, size 17 □

Accessories (optionally)

- Collet chucks 1 mm - 6,35 mm □
- Clamping blocks (for attaching the

Collet chucks	Item number
1,0 mm	239110 1000
1,5 mm	239110 1500
2,0 mm	239110 2000
2,5 mm	239110 2500
3,0 mm	239110 3000
3,175 mm	239110 3175
3,5 mm	239110 3500
4,0 mm	239110 4000
4,5 mm	239110 4500
5,0 mm	239110 5000
5,08 mm	239110 5080
5,5 mm	239110 5500
6,0 mm	239110 6000
6,35 mm	239110 6350
Set (14 pieces from 1 mm to 6,35 mm)	239110

Clamping blocks	Item number
Attachments Ra 100 and Ra 150 mm	290 902
Attachment Ra 100 mm	290 903
Attachment Ra 125 mm	290 904