

# ***OPERATION MANUAL FOR CUTTING AND GRINDING MACHINE TSM 16***



**Original manual**  
Please keep for further use !

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# ***EC DECLARATON OF CONFORMITY***

The manufacturer:

Kaindl-Schleiftechnik  
Reiling GmbH  
Remchinger Straße 4

75203 Königsbach-Stein  
Germany

Declares that the machine  
described herein:

**Grinding machine**  
Type: **TSM 16**

Refers to the safety and health requirements  
of the following EC instructions:

EC-Machine instruction (2006/42/EC)  
EC-directive EMV (2004/108/EC)

## **Applied harmonised norms:**

**EN ISO 12100-1 and EN ISO 12100-2; EN ISO 13857; EN ISO 13732-1;  
EN 61029-1; EN 60204 Part 1; EN 61000-6-1; EN 61000-6-2;  
EN 61000-6-3; EN 61000-6-4**

**Changes in design, which affect the technical data, listed in this operation manual  
and the directed use, therefore change the machine substantially, make this  
declaration of conformity invalid!**

The documents had been made up by:

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## ***1. DESCRIPTION***

### ***1.1 DIRECTED USE***

The **cutting grinding machine TSM 16** is exclusively designed for occasional grinding and cutting of various tools as cutters, whole stamps etc.

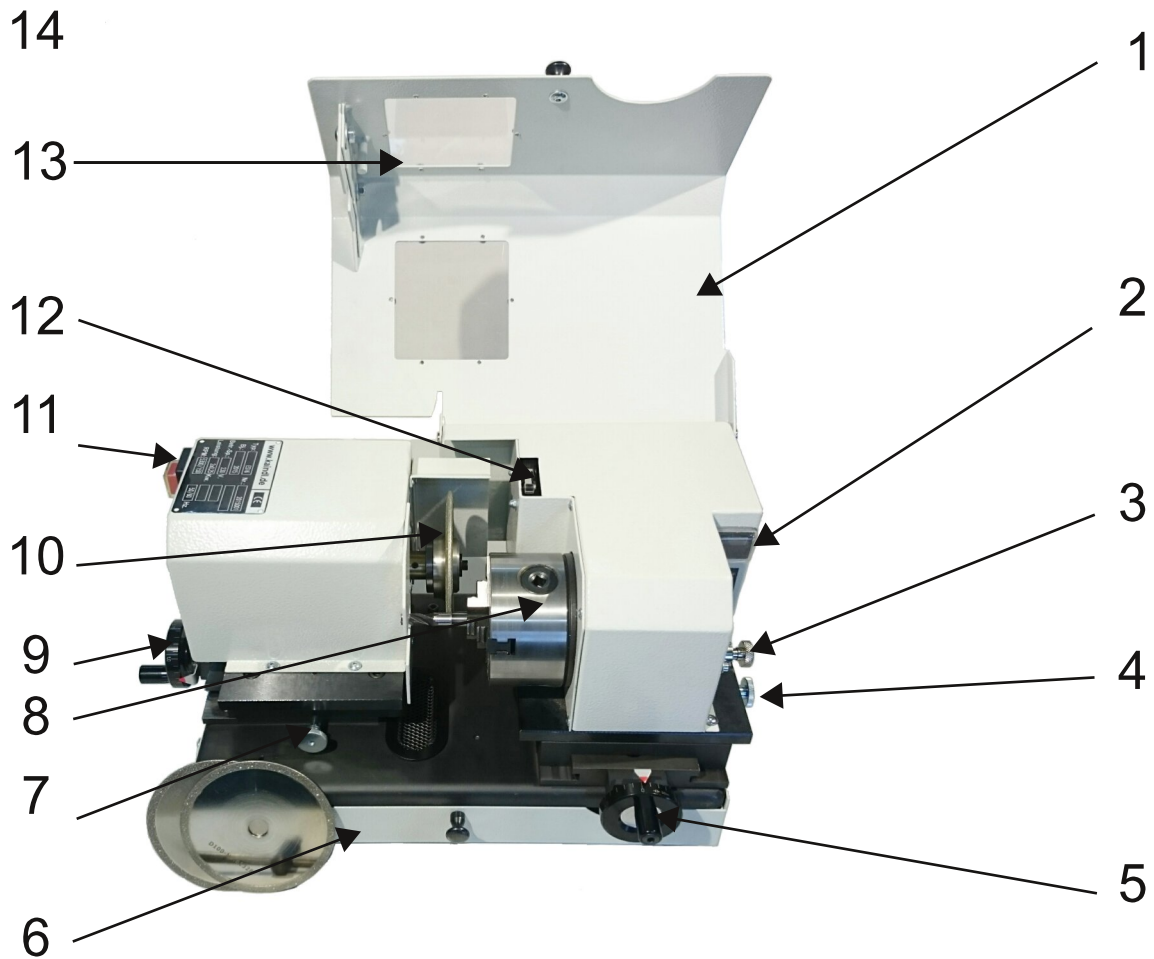
For other use, than listed here the machine is not destined for and is regarded as a matter of adverse use!

The directed use includes also reading the operation manual, as well as keeping all containing directions of use - especially the safety information.

In case **the cutting grinding machine TSM 16** is not used as per the intended purpose a save operation cannot be granted.

For all personal- and material damages, arising by not intended use, not the manufacturer but the user of the **TSM 16** is responsible!

### 2. STRUCTURE



1. Safety cover complete
2. Switch for motor & spindle
3. Locking device for jaw chuck
4. Locking device for feeding (jaw chuck)
5. Infeed for feeding (jaw chuck)
6. Drawer
7. Locking device for feeding (grinding motor)
8. 3-jaw chuck
9. Infeed for feeding (grinding motor)
10. Grinding- or cutting disk
11. ON-OFF switch
12. Contact switch
13. Sight glass
14. Extractor connection (behind the machine and not visible here)

### **3. TECHNICAL DATA**

Dimension: L x D x H	450 x 250 x 250 mm
Weight net:	28,5 Kg
Travel range motor slide:	48 mm
Travel range jaw chuck:	45 mm
Electrical connection:	Schuko plug 230 Volt/50 Hz; 2x0,25 Watt; 5300/150 RPM
Clamping range jaw chuck:	30mm / 16mm feed through
Noise emission:	< 70 dB(A)

Speed run out time of the grinding wheel approx. 10 seconds

**Technical changes may be done without notification**

### **4. GENERAL SAFETY ADVICE**

#### **4.1 DUTY OF TAKING CARE BY USER**

The cutting and grinding machine TSM 16 has been designed and constructed under consideration of an endangerin analysis and carefull selectrion of observed harmonized norms, as well as further specifications. The TSM 16 meets the state of the art and grants a maximum of safety.

This safety can only be achieved in daily work, when all necessary steps are taken. It is the duty of taking care by user to control these steps.

The user has to take care that:

- the TSM 16 is used as directed (see chapter description)
- the TSM 16 is used in flawless workable condition, especially that the safety installations are checked for function
- the requested personal equipment for the operator is available and will be used
- the operation manual of the TSM 16 is always kept in a readable conditions and available near the machine
- the cutting and grinding machine TSM 16 is only operated by staff, who knows the operation manual, especially the included safety information
- all safety and warning instructions are not removed from the machine and keps readable.

### **6.2 BASIC SAFETY ADVICE**



Always wear protection glasses when working with the TSM-16



Only operate the BSG TSM-16 with the complete grinding wheel protection!



Before changing the grinding wheel or moving, disconnect from electric current!

### **5. DEMANDS FOR THE OPERATING PERSONNEL**

Only persons who are familiar with this manual are allowed to work with the machine.

### **6. EXPLANATION OF THE USED SAFETY ICONS**

In this manual the following safety icons are used.

The reader should pay attention to these icons, shown here.

Danger



This icon points that there exists a danger for life and health of persons.

Attention



This icon points that there exists a danger for machines, material and environment.

### **7. MOVING TO ANOTHER PLACE**

Only with disconnected plug!



Grab the cutting and grinding machine TSM 16 on the right- and left side below the machine

The cutting and grinding machine TSM 16 is made for placing on a work table.  
Take care for a solid stand on your work table.

### **8. ENVIRONMENTAL CONDITIONS FOR SET UP**

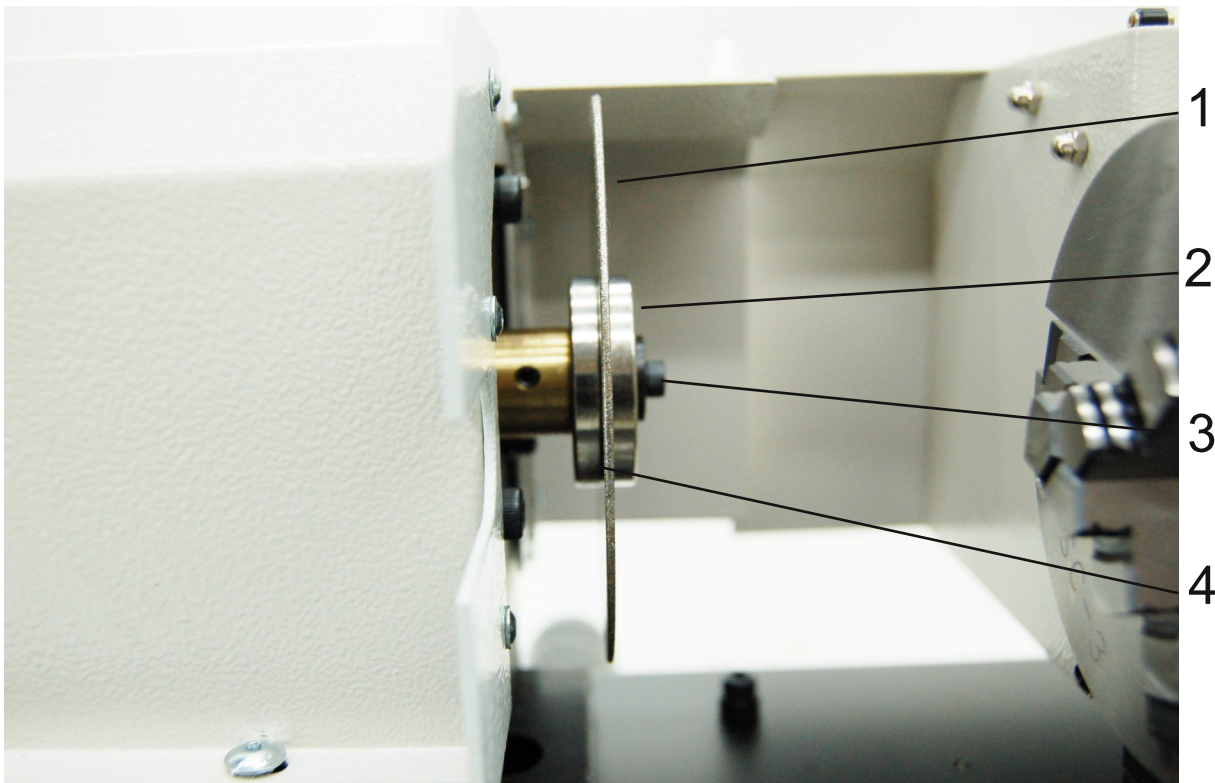
Only in dry rooms.

Environmental temperature: from +5 to +50° Celsius  
Humidity: up to 90%, not condensing



### **9. MOUNTING OF THE GRINDING WHEEL BEFORE THE FIRST OPERATION**

After you have moved the machine to its final place, take out the grinding- or cutting wheel. Make a optical check for damage.



1: Grinding wheel 2: Grinding wheel support front flange  
3: Fixation screw 4: Grinding wheel support back flange

After the control, mount the grinding wheel support with the grinding wheel on it, on the motor shaft

Fix the support with the wheel on the motor shaft with the supplied allen screw.

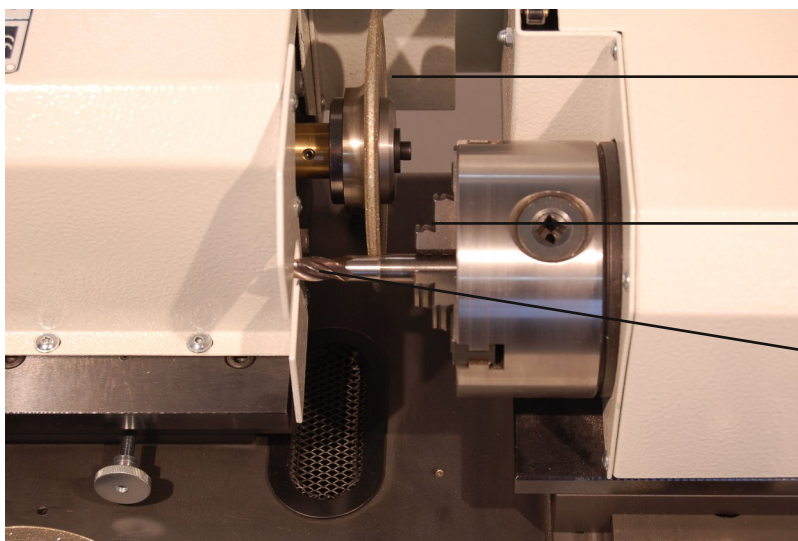
Only after observing these steps, a save and correct operation is possible !

### 10. OPERATION

Use the corresponding grinding- or cutting wheel, depending on the requested application.

After you have mounted the corresponding grinding- or cutting wheel, fix the processing workpiece in the jaw chuck.

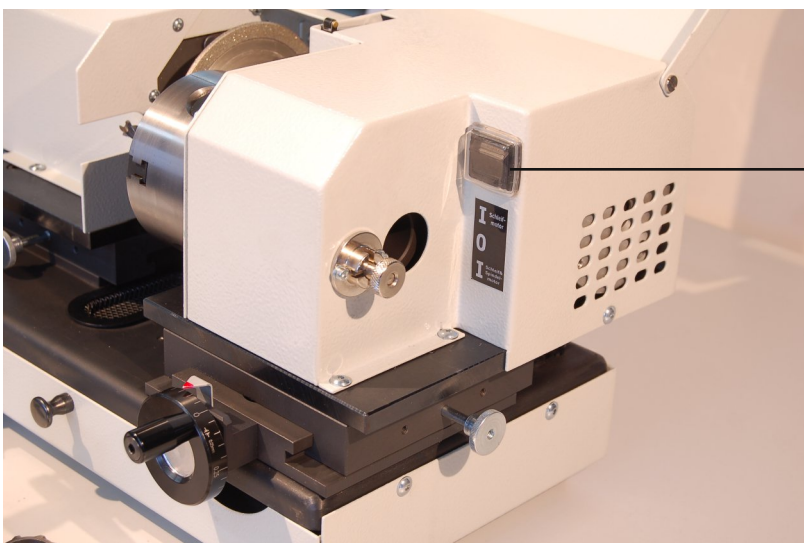
After you have fixed the tool, select on the right side of the machine: power on of the grinding- or spindle motor.



Grinding-or cutting wheel

3 jaw chuck

Workpiece

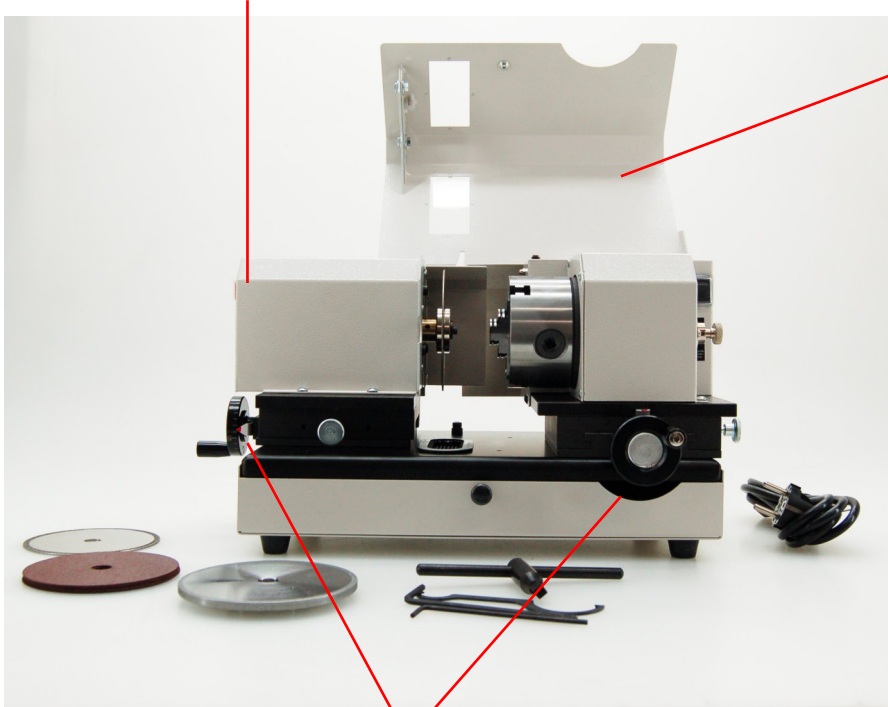


Switch for grinding motor or grinding- and spindle motor

### 10. OPERATION

ON-OFF switch

Safety cover



Hand wheel for feeding

After you have finished the corresponding adjustments, you have to close the safety cover.

Afterwards switch on the machine with the side- on ON-OFF switch.

Now you can feed and move with both hand wheels.

## ***11. SPARE PART LIST***

### **Description**

1. Cutting wheel CBN grit 100
2. Cutting wheel diamond grit D 100
3. Cutting wheel corundum
4. Grinding wheel diamond grit D200
5. Extractor connection
6. Power plug
7. Grinding wheel support
8. Knurled screw for locking of feeding

Only use original KAINDL spare parts.!

## ***12. MAINTENANCE***

The cutting and grinding machine TSM 16 should be cleaned from grinding dust with a soft brush. Persistent dirt, please clean with usual in trade machine cleaner. After cleaning, please grease all movable parts with some drops of machine oil. To prevent erosion of the blank parts, also grease with little oil and rug with a soft rag.

## ***13. REPAIRS***

All parts listed in the spare part list can be replaced by the user. Repairs of assembly groups as reversing prism of the base plate with guide and spindle can only be repaired in our company, as these parts are mainly responsible for the precision of the TSM 16.

### **14. WARRANTY**

The warranty is **12 month** and refers to **one shift work** on condition of an appropriate use. The warranty comprises the costs for replacement of defect parts and assembly groups including the necessary working time (the replaced parts can also be overhauled parts or assembly groups).

Excluded from any warranty are:

- Wear parts due to operating conditions
- Transport damage
- Inappropriate use of the machine
- Damages by use of force
- Damages and consequential damages by violation of duty for taking care by the user.

***In case of a warranty claim, we please ask you to form us about the serial No. of your machine!***

Return have to be authorized by us before back-shipment. We reserve the right to charge you with the shipping costs, in case the return was not authorized.