

Operator's manual



TKA 500-0

english

TRUMPF
[Black square logo]

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Guarantee

Replacement parts list

Addresses

1. Safety

1.1 General safety rules

- USA/CAN** ➤ Read the Operator's Manual and the general safety rules (Material number 1239438, red document) in their entirety before starting up the machine. Follow precisely the directions contained therein.

- Rest of the world** ➤ Read the Operator's Manual and the safety instructions (Material number 125699, red document) in their entirety before starting up the machine. Follow precisely the directions contained therein.
- The safety regulations according to DIN VDE, CEE, AFNOR and other regulations which are valid in individual countries should be adhered to.



Danger

Lethal danger due to electric shock!

- Before carrying out any maintenance work on the appliance, pull the plug out of the socket.
 - Before each time the appliance is used, check the plug, the cable and the appliance for damage.
 - Keep the appliance dry and do not operate in damp rooms.
 - When using the electric tool outside, connect the fault current (FI) protective switch with a maximum breaking current of 30 mA.
-



Warning

Danger of injury due to incorrect handling!

- When working with the machine, wear safety glasses, hearing protection, protective gloves and work shoes.
 - Only insert the plug when the appliance is switched off. After use, pull out the mains plug.
-



Caution

Damage to property can result from incorrect handling.

The device may be damaged or destroyed.

- Do not carry the appliance by its cable.
 - Always guide the cable away from the back of the appliance and do not pull the cable over sharp edges.
 - Arrange for startups and checks on manual electric tools to be carried out by a trained engineer. Only use the original accessories provided by TRUMPF.
-

1.2 Specific safety rules



Warning

Risk of injury to the hands!

- Do not place your hand into the processing line.
 - Use both hands to hold the machine.
-



Caution

Damage to property can result from incorrect handling.

The device may be damaged or destroyed.

- Do not carry the appliance by its cable.
 - Always guide the cable away from the back of the appliance and to not pull the cable over sharp edges.
 - Arrange for startups and checks on manual electric tools to be carried out by a trained engineer. Only used the original accessories provided by TRUMPF.
-



Warning

Risk of injury from high-temperature chips!

High-temperature chips are expelled from the chip ejector at high speed.

- Use the swarf box.
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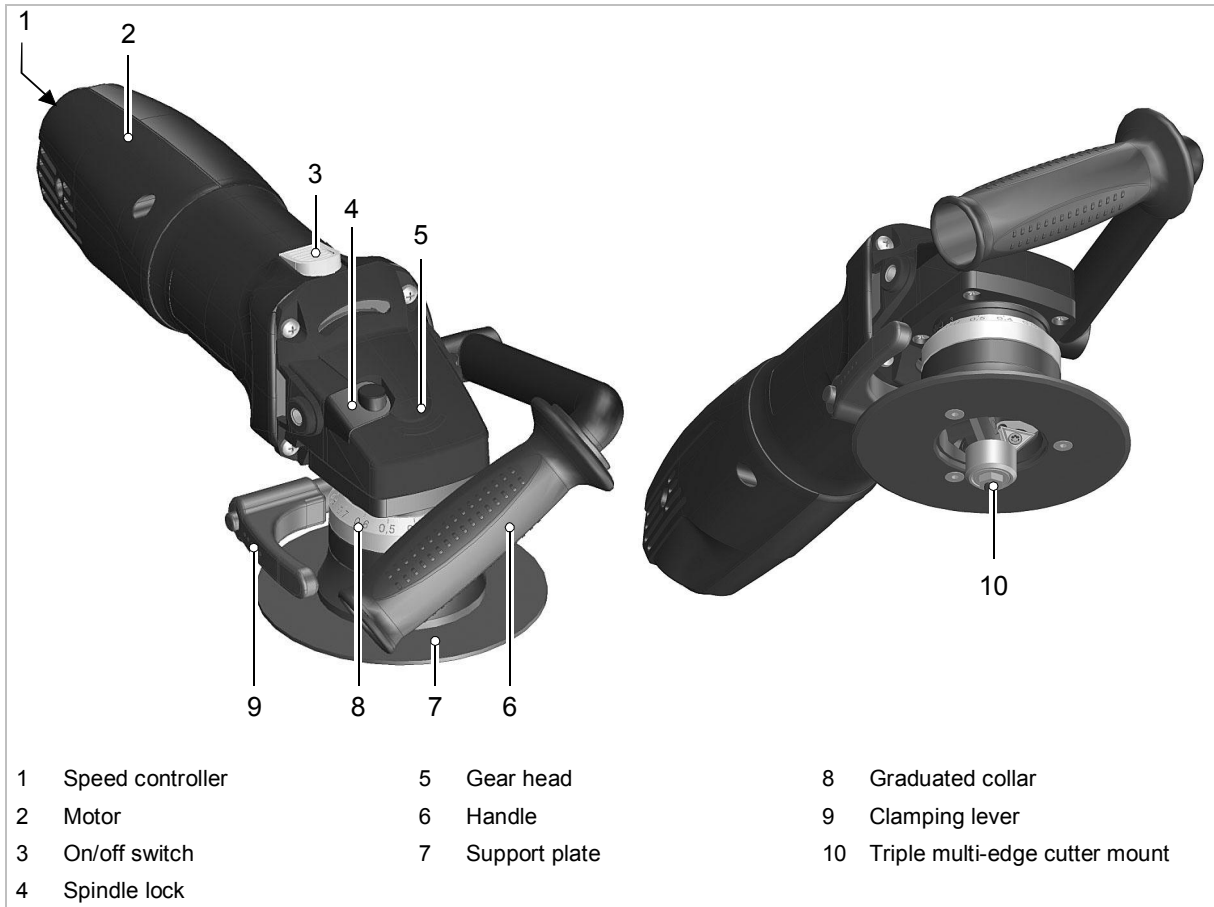


Warning

Danger of injury possible due to improper handling!

- When working with the machine, always ensure that it has a secure base.
 - Never touch the tool while the machine is running.
 - Always guide the machine away from the body while working.
 - Do not work holding the machine above your head.
-

2. Description



Chamfering and deburring tool in overview

Fig. 33402

2.1 Correct use



Warning

Can cause injury or damage to health!

- For processing and materials, only use machines which are named in "Correct use".
 - Do not machine materials which contain asbestos.
-

The TRUMPF TKA 500-0 chamfering and deburring tool is an electrically driven portable machine:

- For machining workpieces in steel, chrome steel, aluminum, aluminum alloys, brass and plastic (PA6).
- For commercial use in industry and trade.
- When adding visible edges in plant, tool and machine construction.
- For rounding off e.g. T-beams in construction and structural steel engineering.
- For removing burrs following cutting processes (e.g. guillotine shearing).
- For use in shipbuilding, to remove sharp corners and edges, owing to the risk of flaking of paint (corrosion protection).
- When machining steel furniture.

2.2 Technical data

	Other countries			USA
	Values	Values	Values	Values
Voltage	230 V	120 V	110 V	120 V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Working speed	3-4 m/min	3-4 m/min	3-4 m/min	10-13 ft/min
Nominal power consumption	1400 W	1400 W	1200 W	1140 W
Stroke rate with idle run	8390/min	7300/min	7300/min	7300/min
Weight with lead handle with cable	3.5 kg	3.5 kg	3.5 kg	7.8 lbs
Min. sheet thickness	1.5 mm R2: 3.5 mm R3: 4.5 mm	1.5 mm R2: 3.5 mm R3: 4.5 mm	1.5 mm R2: 3.5 mm R3: 4.5 mm	0.059 in
Smallest radius with inner cutouts	12 mm	12 mm	12 mm	0.472 in
Edge radius	3 mm	3 mm	3 mm	0.12 in
Protective insulation	Class II	Class II	Class II	Class II

Technical data

Tab. 1

Noise and vibration	Measured values as stated in EN 50 144	
	While idling	When working
A-weighted sound level	typically 85 dB (A)	typically 93 dB (A)
A-weighted sound level	typically 98 dB (A)	typically 106 dB (A)
Hand-arm vibration	typically less than or equal to 2.5 m/s ²	typically less than or equal to 5.8 m/s ²

Measured values for noise and vibration

Tab. 2

Note

The measured values specified above may be exceeded while working.

3. Tool assembly



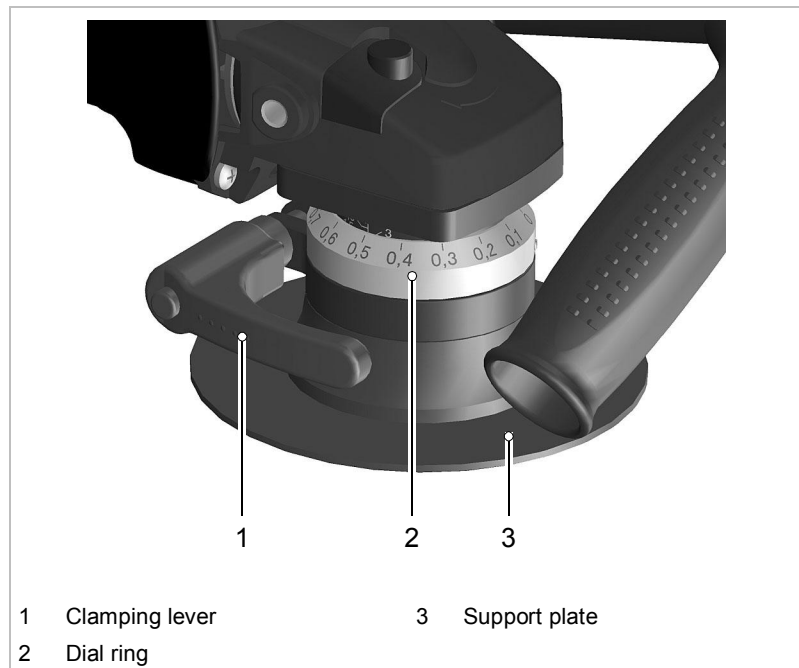
Caution

Support plate and dial ring become hot!

Danger of burns

- When configuring the chamfer height wear protective gloves.

3.1 Setting chamfer height



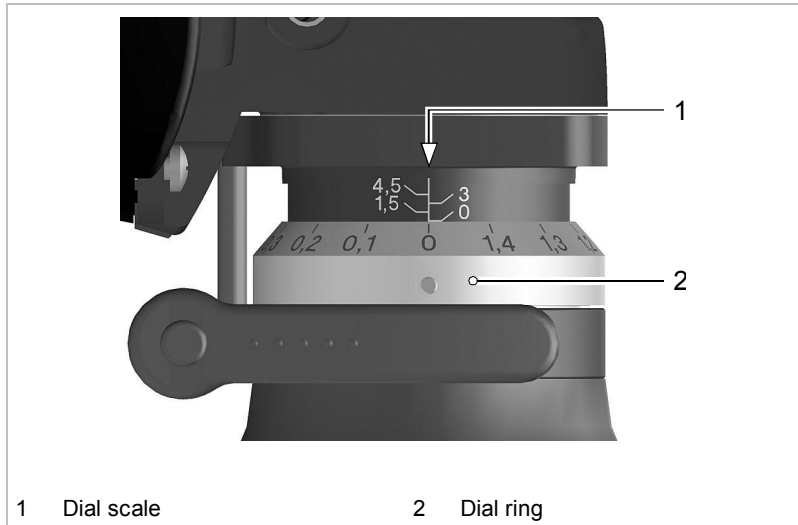
Setting chamfer height

Fig. 33408

The chamfer height is set with the aid of the support plate and can be read off the numeric scale on the dial ring.

1. Loosen clamping lever (1).
 2. Rotate support plate (3) until desired chamfer height can be read at the dial ring (2). Chamfer height is calculated as follows:
(Value on dial scale) + (value on dial ring) = chamfer height.
Example: 1.5 + 0.7 = 2.2
 3. Retighten the clamping lever (1).
- Chamfer height is set.

Dial ring The unit is adjusted in zero position on assembly. Zero position means chamfer height zero. The dial ring can be readjusted.



Zero position

Fig. 33409

To deburr and chamfer the integrated 45° multi-edge cutter mount is used. The integrated multi-edge cutter mount consists of the 45° multi-edge cutter mount, the triple multi-edge cutter and the impeller.

3.2 Select triple multi-edge cutter as tool

The triple multi-edge cutters, which are actually tools for chamfering and deburring:

- For machining steel, aluminum and aluminum alloys as well as plastic material.
- Suitable for processing bevels with 45°.

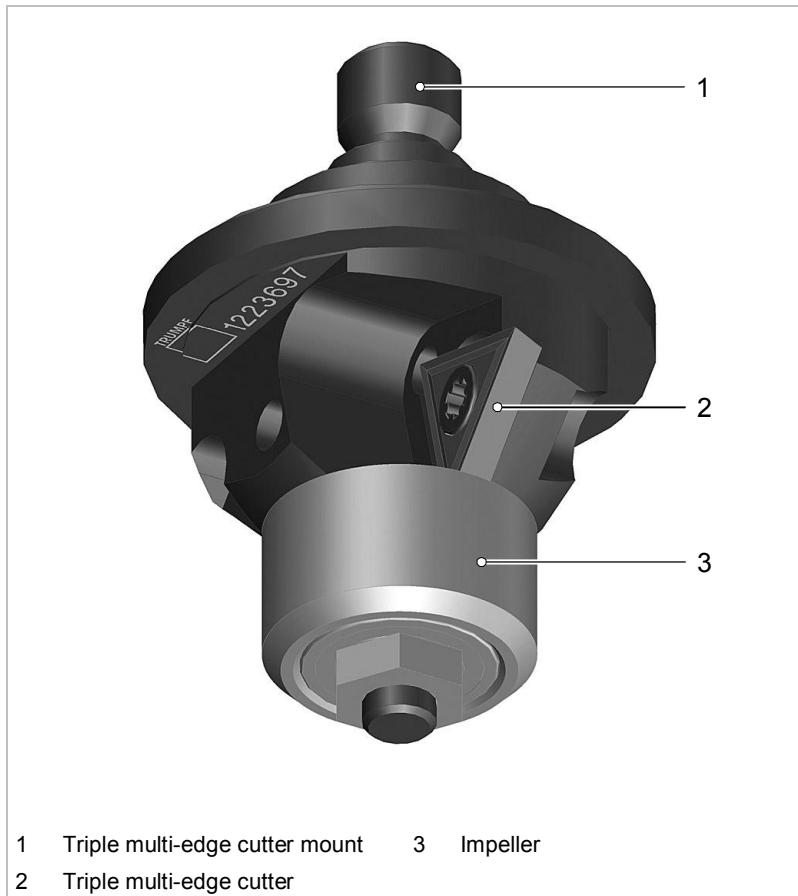
For each material there are the appropriate multi-edge cutters:

Tensile strength of workpiece		Multi-edge cutter
Steel up to 400 N/mm ²	0 – 2.2 x45°	St
	2.2 – 3.5 x45°	Cr
Steel up to 600 N/mm ²		Cr
Steel up to 800 N/mm ²		Cr
Aluminum/aluminum alloy up to 250 N/mm ² 250 N/mm ²		Alu
Plastic material (PA6)		Alu

Tab. 4

3.3 Use radius tool and multi-edge cutters as a tool

Triple multi-edge cutter mount



Triple multi-edge cutter mount

Fig. 33407

When deburring or chamfering with radius the multi-edge cutter mount R is inserted completely. The integrated multi-edge cutter mount consists of the multi-edge cutter mount R, the multi-edge cutters and the impeller R.

The multi-edge cutters, the actual tools as radius tools, are:

- useable for processing steel, aluminum and aluminum alloys as well as plastic material.
- suitable for processing bevels with radius R2 or R3.

There is an appropriate multi-edge cutter for each material:

Multi-edge cutter and Setting dimension

Tensile strength of the workpiece	Radius	Multi-edge cutter	Chamfer height [mm]
Steel up to 400 N/mm ²	R2	St R2	1.1
Steel up to 400 N/mm ²	R3	St R3	1.7
Steel up to 600 N/mm ²	R2	Cr R2	1.1
Steel up to 800 N/mm ²	R2	Cr R2	1.1
Aluminum/aluminum alloy ²	R2	Cr R2	1.1
Steel up to 600 N/mm ²	R2	Cr R2	1.1
Plastic material (PA6)	R2	Cr R2	1.1

Multi-edge cutter and setting dim.

Tab. 5

Note

The values for chamfer height are guidance values which may differ from the stated values.

Note

Before processing steel and aluminum or aluminum alloys it is recommended to oil the cutting edges with cutting, to achieve edges that can be better processed and a higher tool service life.

4. Operating instructions



Caution

Damage to property due to an oversupply of power!

Damage to the motor

- Check the power supply. The power supply must correspond to the information on the machine type plate.
-



Warning

Danger of injury due to incorrect handling!

- When working with the machine, always ensure that it has a secure base.
 - Never touch the tool while the machine is running.
 - Always guide the machine away from the body when operating.
 - Do not work above your head with the appliance.
-



Caution

Damage to property!

Wear and destruction of the multi-edge cutters and the multi-edge cutter mount, tool failure.

- Avoid collisions when working.
-

Electromagnetic faults

The appliance may switch off prematurely when affected by electromagnetic faults. The appliance will continue to operate when the faults have been cleared.

Overload protection motor

When the motor temperature is too high the motor switches off. The red indicator lamp (LED) at the motor will light up.

- Let the unit run idle until it has cooled down.

After cooling the unit can be operated again as normal.

4.1 Working with chamfering and deburring tool

Switch on chamfering and deburring tool

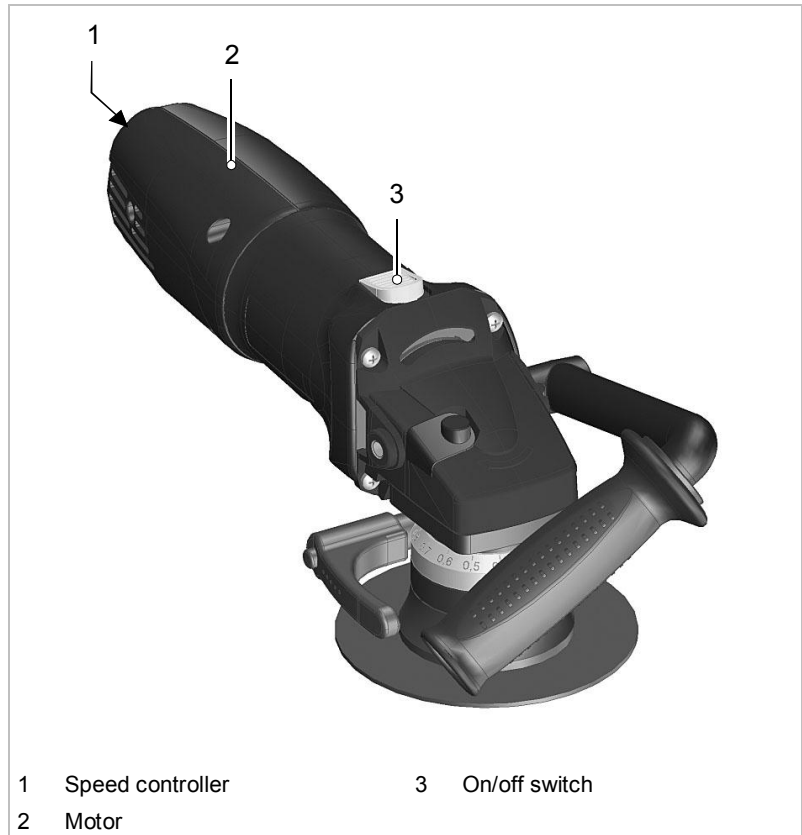


Fig. 33404

1. Set the speed controller (1) to the highest level (= level 6).
2. Push the On/off switch (3) on the motor (2) and press the switch down till it catches.

Motor runs.

Working with chamfering and deburring tool

1. Only move the machine towards the workpiece when full speed has been reached.
2. Processing material.
When deburring or chamfering the device must always be moved **from left to right** (up-milling).

Two-hand operation Work is performed with two-hand operation for all machine positions.



Two-hand operation

Fig. 31628

When operating the machine ensure that the machine is held with both hands in such a way that both hands are kept away from the processing point.

Switch off chamfering and deburring tool

1. Remove machine from material.
 2. On/off switch first press down on motor then push switch back.
- The motor is stopped.

5. Maintenance



Danger

Lethal danger due to electric shock!

- When carrying out a tool change, and above all, when carrying out maintenance work on the appliance, pull the plug out of the socket.
-



Caution

Tool and multi-edge cutter mount become hot!

Danger of burns

- For tool change wear protective gloves.
-



Caution

Damage to property due to blunt tools!

Overloading of the appliance.

- Check tools regularly for wear. Sharp multi-edge cutters ensure high quality cutting and protect the device. Rotate or replace multi-edge cutters in good time.
-



Warning

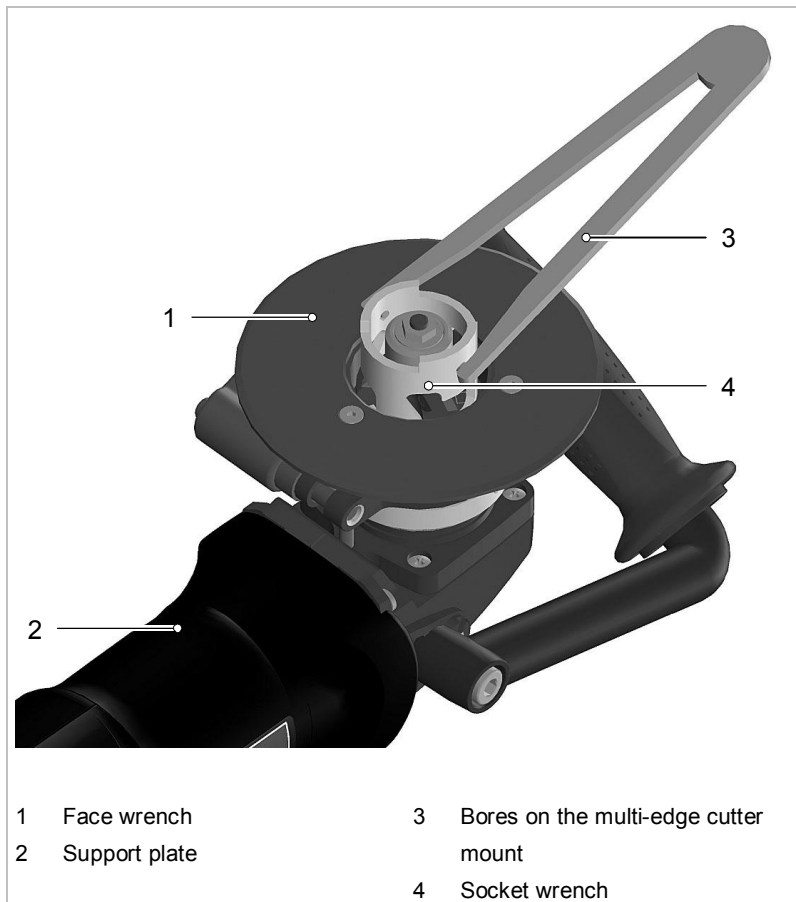
Risk of injury due to incorrect repairs!

The appliance will not function properly.

- Repairs should only be carried out by a trained engineer.
-

5.1 Change tool

Dismantle multi-edge cutter mount



Tool changes

Fig. 33534

1. Place socket wrench (see Fig. 33534, p. 18, 4) on the milling cutter.
2. Insert face wrench (see Fig. 33534, p. 18, 3) into the corresponding bore holes in the socket wrench.
3. Press the spindle lock and simultaneously turn the face wrench (see Fig. 33534, p. 18, 3) counter-clockwise.
4. Completely remove the multi-edge cutter mount.

5.2 Change multi-edge cutter

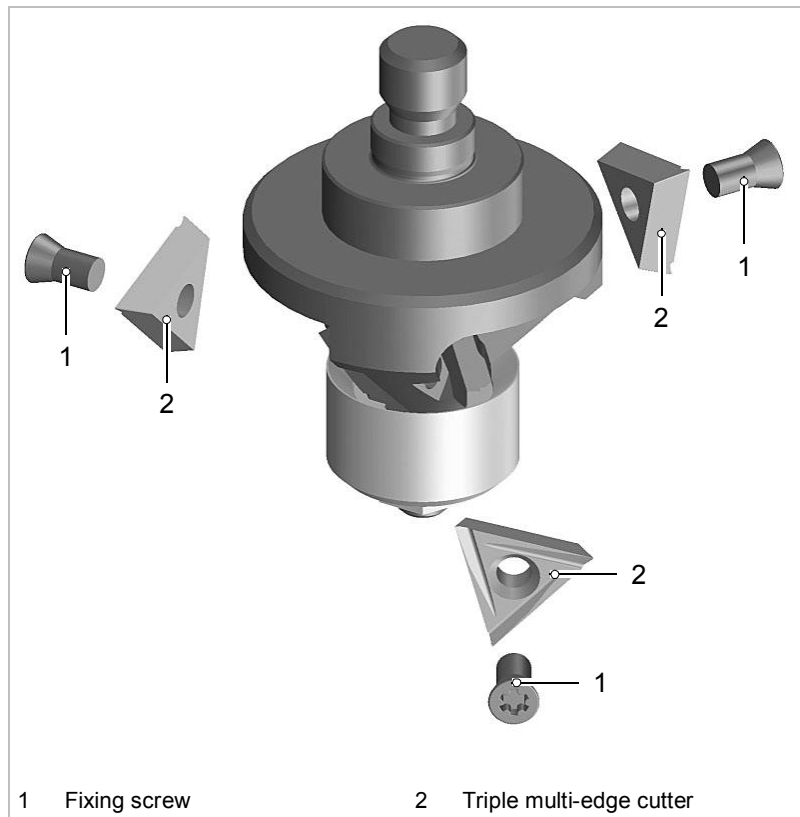


Fig. 33406

1. Loosen fixing screw (1) and take out multi-edge cutter (2).
2. Turn multi-edge cutter or insert a new one.
3. Refasten multi-edge cutter with fixing screws.

5.3 Change impeller

The impeller must be changed if worn, or else the chamfer surfaces will be unevenly machined.

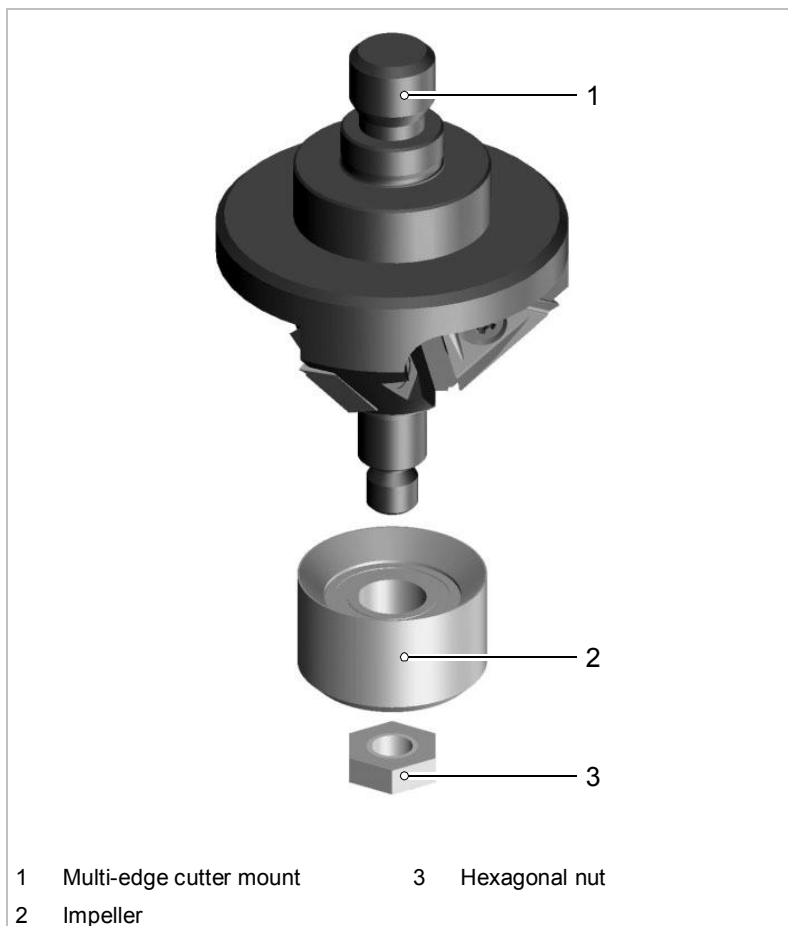


Fig. 33410

1. Loosen hexagonal nut (3) with single end spanner.
2. Pull impeller (2) away and exchange it.
3. Refasten the new impeller with hexagonal nut.

5.4 Replace carbon brushes

The motor remains at a standstill when the carbon brush is worn out.

- Have carbon brushes checked and replaced by an expert when required.

Note

Only use original replacement parts and take note of the information on the rating plate.

6. Original accessories and expendable parts

TKA 500-0	Original accessories delivered	Wearing parts	Options	Order number
Face wrench	+			0353531
Torx screwdriver TX15x60	+			0353793
Single end spanner	+			0068012
Safety glasses	+			0944950
Case	+			1209342
Operator's manual	+			1224871
Safety instructions (red document), other countries	+			0125699
General safety rules (red document), USA	+			1239438
Cutting oil for steel (0.5 l)			+	103387
Cutting oil for aluminum (1 l)			+	125874
Triple multi-edge cutter mount 45° with impeller	+			1227954
Triple multi-edge cutter mount 30° with impeller			+	1237683
Triple multi-edge cutter mount 60° with impeller			+	1257861
Multi-edge cutter mount R with impeller	+			1227952
Spacer plate			+	1236998
Protective foil (set of 5)			+	1234851
Waste metal box			+	1236997
45° impeller for thin sheet metal			+	1237451
Support plate (small)			+	1315258
Lubricating grease "G1"			+	0139440
Lubricating grease "G3"			+	0353969

TKA 500-0	Original accessories delivered	Wearing parts	Options	Order number
3 multi-edge cutters ST (replacement part set)		+	+	1241780
3 multi-edge cutters CR (replacement part set)	+	+		1241851
3 multi-edge cutters ALU (replacement part set)		+	+	1241852
2 multi-edge cutters ST R3 (replacement part set)		+	+	1232630
2 multi-edge cutters ST R2 (replacement part set)		+	+	1232672
2 multi-edge cutters CR R2 (replacement part set)		+	+	1232680

Original accessories, wearing parts and options

Tab. 7

Ordering expendable parts

To ensure fast delivery of the correct original and expendable parts:

1. Give the order number.
2. Enter further order data:
 - Tension data
 - Number of pieces
 - Machine type
3. Give complete dispatch data:
 - Correct address.
 - Required delivery type (e.g. air mail, courier, express mail, ordinary freight, parcel post).
4. Send the order to the TRUMPF representative office. For TRUMPF service addresses, see the address list at the end of the document.