

Operator's manual



TruTool TKA 1500 (1A1)

Deburrer

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1. Safety

1.1 General safety information

WARNING

Read all the safety information and instructions.

- Failure to comply with the safety information and instructions can cause electric shock, burns and/or serious injury.
- Retain all the safety information and instructions for future use.

1.2 Specific safety information for deburrers



Handles for guiding the deburrer

Fig. 103199

WARNING

Risk of injury to hands.

- Do not reach into the processing line with your hands. When switching off the motor, the drive will run down.
- Hold the machine with both hands.



1.3 Additional safety warnings

Personal safety Note

Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.

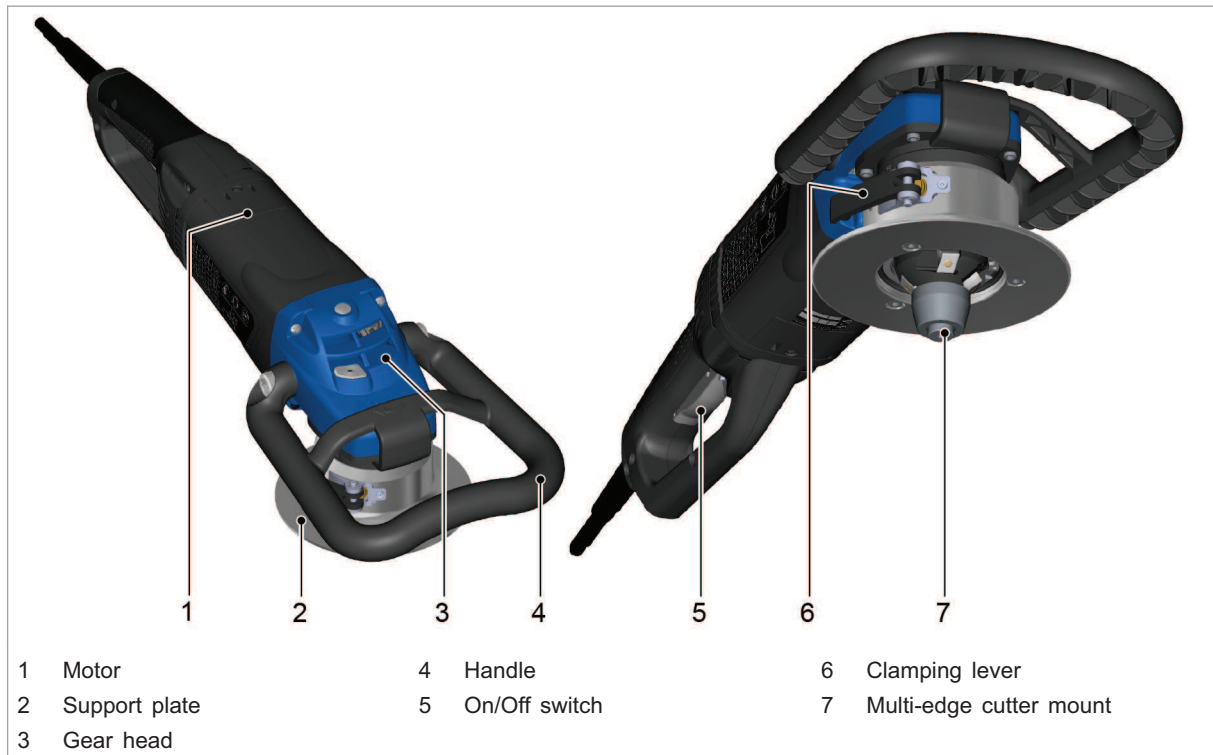
A careless action can cause severe injury within a fraction of a second.

Power tool use and care Note

Keep handles and grasping surfaces dry, clean and free from oil and grease.

Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

2. Description



TruTool TKA 1500: Overview

Fig. 97289

2.1 Intended use

⚠ WARNING

Damage to the machine due to improper handling.

- Only use the machine for work and materials as described under "Intended use."





The TRUMPF TruTool TKA 1500 lip trimmer is an electrical powered hand-held device designed for the following applications:

- Processing of workpieces made of steel, chromium steel, aluminum, aluminum alloys, brass or plastic material (PA6).
- Utilization in industry and trade.
- Attachment of visible edges
- Rounding off of T-beams etc.
- Removal of cutting burrs after splitting procedures (e.g. guillotine shearing).

2.2 Technical data

Note

The power supply on site must match the voltage on the nameplate of the machine.





	Other countries			USA
	Values			
Voltage	230 V 220 V (China)	120 V	100 V	120 V
Frequency	50/60 Hz			50/60 Hz
Working Speed	1 - 1.5 m/min			3.3 - 4.9 ft/min
Nominal power consumption	2600 W	2000 W	2000 W	2000 W
Idle stroke rate	5940/min	6700/min	6700/min	6700/min
Weight with guide handle	9.9 kg	10.0 kg	10.0 kg	22.1 lbs
Min. material thickness (See figure)	Chamfer height/ Radius +3 mm	Chamfer height/ Radius +3 mm	Chamfer height/ Radius +3 mm	Chamfer height/ Radius +0.118 in
Max. chamfer length in one operation				
Smallest radius with inner cut-outs	55 mm	55 mm	55 mm	2.17 in
Safety classification:	II / 	II / 	II / 	II / 

Tab. 1

2.3 Icons

Note

The following symbols are important for reading and understanding the operator's manual. The correct interpretation of the symbols will help you operate the machine better and safer.

Icon	Name	Description
 / 	Read operator's manual	Read the operator's manual and safety information in their entirety before starting up the machine. Closely follow the instructions given.
	Safety class II	Indicates a doubly insulated tool.
	Alternating current	Type or property of current
V	Volt	Voltage
A	Ampere	Current, current input

Icon	Name	Description
Hz	Hertz	Frequency (oscillations per second)
W	Watt	Power, power input
mm	Millimeters	Dimensions e.g.: material thickness, chamfer length
in	Inch	Dimensions e.g.: material thickness, chamfer length
n_0	Idle speed	Revolution speed without load
.../min	Revolutions/strokes per minute	Revolution speed, stroke rate per minute

Tab. 2

2.4 Noise and vibration information

WARNING

Noise emission value may be exceeded.

- Wear hearing protection.

WARNING

The vibration emission value can be exceeded!

- Select the right tools and exchange them in time in the event of wear.
- Have maintenance carried out by trained specialized technicians.
- Define additional safety measures for protecting the operator from the effect of vibrations (e. g. keep hands warm, organization of working procedures, machining at normal feed force).
- Depending on the operating conditions and state of the electric tool, the actual load might be higher or lower than the specified measured value.

Notes

- The specified vibration emission value was measured in accordance with a standardized testing procedure and can be used to compare one electric tool with another.
- The specified vibration emission value can also be applied for a provisional estimate of the vibration load.
- Times during which either the machine is switched off or running but not actually in use can considerably reduce the vibration load during the entire working period.

Designation of measured value	Unit	Value according to EN 60745
Vibration emission value a_h (vector sum of three directions)	m/s^2	5.7
Uncertainty K for vibration emission value	m/s^2	1.5



Designation of measured value	Unit	Value according to EN 60745
A-class acoustic pressure level L_{PA} typically	dB (A)	90
A-class acoustic power level L_{WA} typically	dB (A)	101
Uncertainty K for noise emission value	dB	3

Tab. 3

3. Setting work

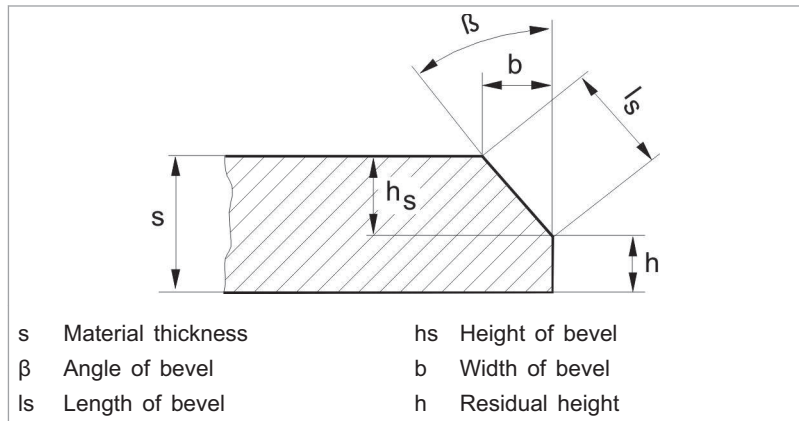


Overheated support plate and dial ring!

Risk of burns

- Wear protective gloves when setting the chamfer height.

3.1 Chamfer height



Length of bevel and angle of bevel

Fig. 9664

Material and tensile strength	Max. chamfer height (h_s) mm			Max. chamfer length (l_s) mm
	30°	45°	60°	
400 N/mm ²				
Operation 1	9.5	7.8	7.5	11
Operation 2	13.0	10.6	7.5	15.0
600 N/mm ²				
Operation 1	6.1	4.9	3.5	7
Operation 2	8.7	7.1	5	10.0
Operation 3	10.4	8.5	6	12.0
800 N/mm ²				
Operation 1	4.3	3.5	2.5	5
Operation 2	6.1	4.9	3.5	7.0
Operation 3	8.7	7.1	5	10.0
Aluminum/250 N/mm ²				
Operation 1	9.5	7.8	5.5	11
Operation 2	13.0	10.6	7.5	15.0

Chamfer height (230 V)

Tab. 4

Material and tensile strength	Max. chamfer height (hs) mm/in			Max. chamfer length (ls) mm/in
	30°	45°	60°	
400 N/mm ²				
Operation 1	7.6 / 0.300	6.2 / 0.245	4.4 / 0.173	8.8 / 0.346
Operation 2	10 / 0.409	8.5 / 0.334	6 / 0.236	12 / 0.472
Operation 3	13 / 0.511	11 / 0.418	7.5 / 0.295	15.0 / 0.591
600 N/mm ²				
Operation 1	4.8 / 0.191	4 / 0.156	2.8 / 0.110	5.6 / 0.220
Operation 2	6.9 / 0.273	5.7 / 0.223	4 / 0.157	8 / 0.315
Operation 3	8.3 / 0.327	6.8 / 0.267	4.8 / 0.189	9.6 / 0.378
800 N/mm ²				
Operation 1	3.5 / 0.136	2.8 / 0.111	2 / 0.079	4 / 0.157
Operation 2	4.8 / 0.191	4 / 0.156	2.8 / 0.110	5.6 / 0.220
Operation 3	6.9 / 0.273	5.7 / 0.223	4 / 0.157	8 / 0.315
Aluminum/250 N/mm ²				
Operation 1	7.6 / 0.300	6.2 / 0.245	4.4 / 0.173	8.8 / 0.346
Operation 2	10 / 0.409	8.5 / 0.334	6 / 0.236	12 / 0.472

Chamfer height (110–120 V)

Tab. 5

Setting the chamfer height

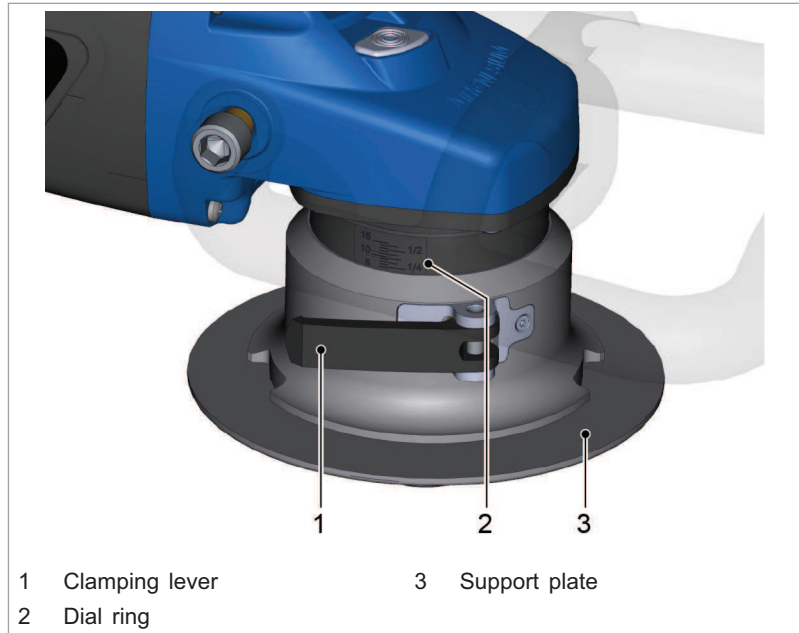


Fig. 97292

Note

The chamfer height is set with the aid of the support plate and read by means of the number scale on the dial ring.

1. Undo the clamping lever (1).
2. Rotate the support plate (3) until the desired chamfer height can be read off the dial ring (2).

The values on the dial ring indicate the chamfer height (1) in mm.

Chamfer height in mm	Chamfer length in mm		
	30°	45°	60°
1	1.2	1.4	2
2	2.3	2.8	4
3	3.5	4.2	6
4	4.6	5.7	8
5	5.8	7.1	10
6	6.9	8.5	12
7	8.1	9.9	14
8	9.2	11.3	16
9	10.4	12.7	-
10	11.5	14.1	-
11	12.7	15.6	-
12	13.9	-	-
13	15.0	-	-
14	16.2	-	-

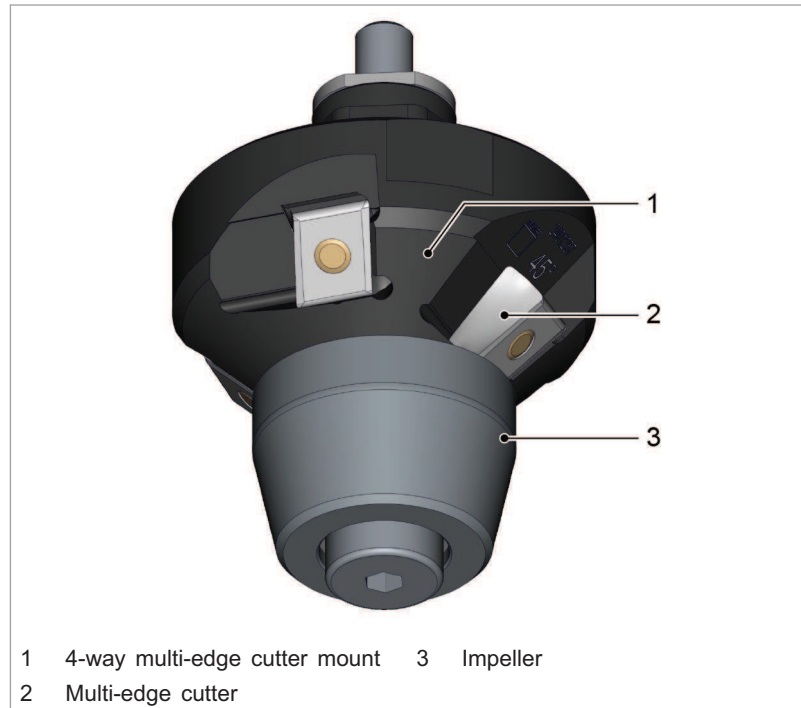
Calculating chamfer height to chamfer length

Tab. 6

3. Fix the clamping lever (1) back into place.
Chamfer height is adjusted.

3.2 Setting up the chamfer tool

45° chamfer multi-edge
cutter mount



45° chamfer multi-edge cutter mount

Fig. 97293

To chamfer, the 30°, 45° and 60° multi-edge cutter mounts are used. The complete multi-edge cutter mount consists of the multi-edge cutter mount, the multi-edge cutters and the impeller.

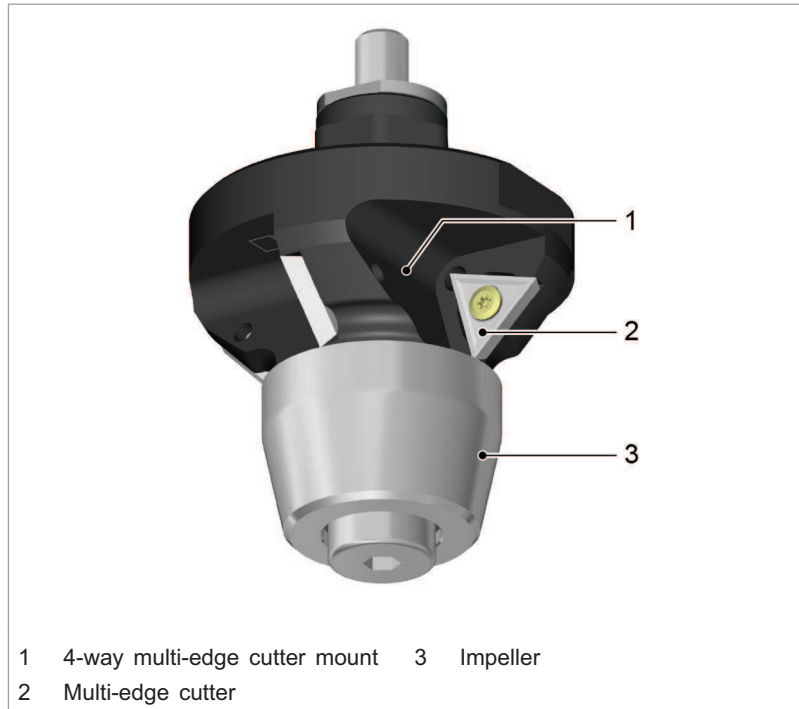
The multi-edge cutters are the actual wear parts. They can be used to machine steel, aluminum and aluminum alloys as well as plastic.

Recommended torque for fastening the multi-edge cutters: 4.8 Nm.

Recommended torque for fastening the complete multi-edge cutter mount: 15 Nm.

3.3 Set up radius tool

4-way multi-edge cutter mount



4-way multi-edge cutter mount

Fig. 103985

To deburr or chamfer with radius, the complete multi-edge cutter mount for radii is used. The complete multi-edge cutter mount for radii consists of the multi-edge cutter mount, the multi-edge cutters and the impeller.

The multi-edge cutters are the actual wear parts. They are:

- useable for machining steel, aluminum and aluminum alloys as well as plastic material.
- suitable for working with radii R2, R3 or R4.

Recommended torque for fastening the multi-edge cutters: 4.8 Nm.

Recommended torque for fastening the complete multi-edge cutter mount for radii: 15 Nm.

Radius multi-edge cutter setting dimension

Radius	Chamfer height (approx.) mm
R2	1.1
R3	1.7
R4	2.3

Tab. 7

Notes

- The values of the chamfer height are recommended values which could differ from the specified values in individual cases.
- Before machining chromium steel and aluminum or aluminum alloys, it is recommended to oil the cutting edges with cutting oil in order to improve the machinability of the edges and to increase the durability of the tools.

4. Operation

⚠ WARNING**Damage to the machine due to improper handling.**

- Make sure the machine is always in a stable position when operating it.
 - Never touch the tool while the machine is running.
 - Always operate the machine away from your body.
 - Do not operate the machine above your head.
-

⚠ CAUTION**Damage to property due to excessively high line voltage!****Motor damage.**

- Check the power supply voltage. The line voltage must correspond to the information on the nameplate of the machine.
 - When using an extension cord that is longer than 5 m, it must have a conductor cross-section of at least 2.5 mm².
-

⚠ CAUTION**Damage to property!****Wear and destruction of the multi-edge cutter and of the multi-edge cutter mount, failure of the tool.**

- Avoid collisions during processing.
-

4.1 Overload protective device on the motor

Note

1. Let the machine cool down while idling.
2. Operate the machine normally after it has cooled down.

4.2 Working with the TruTool TKA 1500

Switching on TruTool TKA 1500

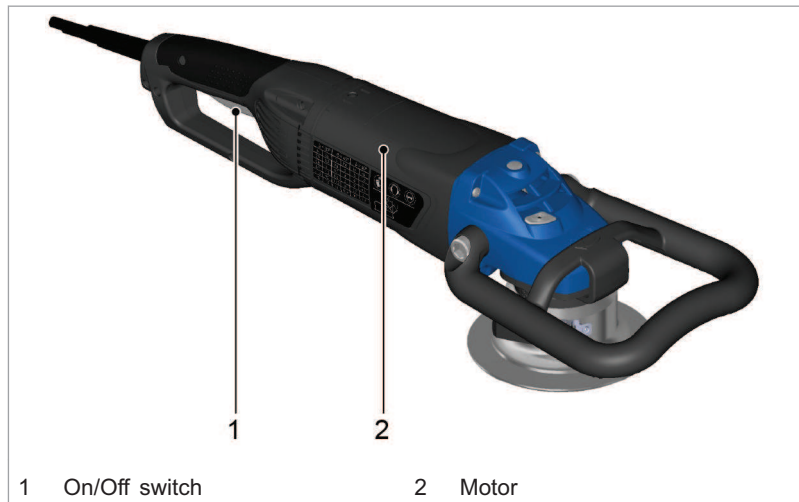


Fig. 97294

1. Press the on/off switch (1) until it engages.

Working with the TruTool TKA 1500

Notes

- Two-hand operation

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

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 machining point. Your right hand should be on the bow-handle.

- A run-in guide makes running in easier.

⚠ DANGER

Risk of injury from the workpiece.

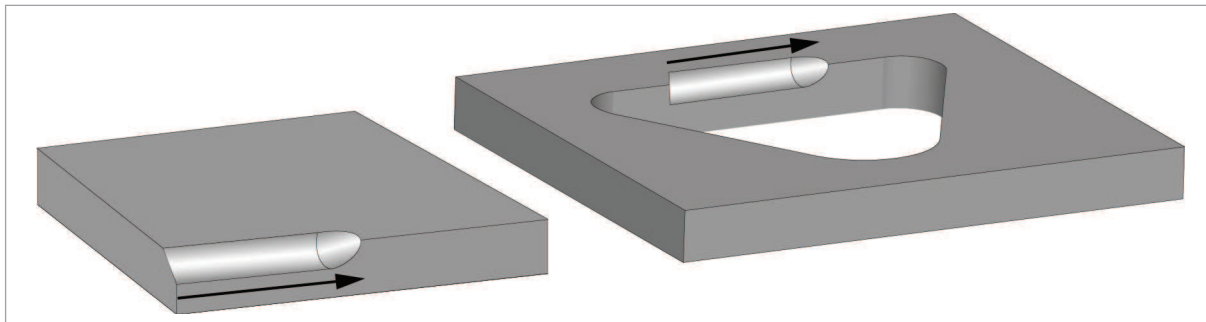
Since the workpiece is occasionally exposed to extreme pressure during machining, it can move uncontrollably.

- Fix the workpiece in place.

2. Do not move the machine towards the workpiece until full speed has been reached.

Note

When deburring or chamfering, the machine must always be guided from left to right (**conventional milling**).



Machining direction on outer and inner edge

Fig. 103987

3. Edit material.

Switching off TruTool TKA 1500

4. Remove the machine from the material.
5. Press the engaged on/off switch.

4.3 Using the run-in guide

A run-in guide makes it easier to run the deburrer into the material.

Beginning machining on the workpiece edge

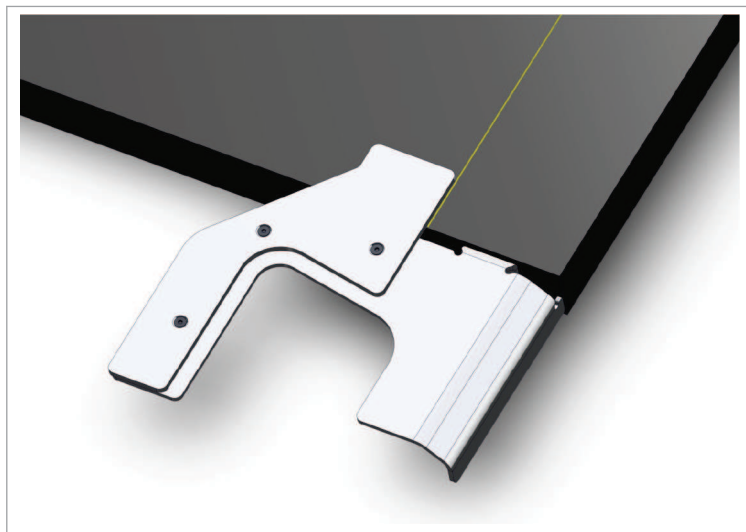


Fig. 94177

1. Place the run-in guide flush against the edge of the workpiece and fix it in place with a screw clamp.

Beginning machining on the workpiece

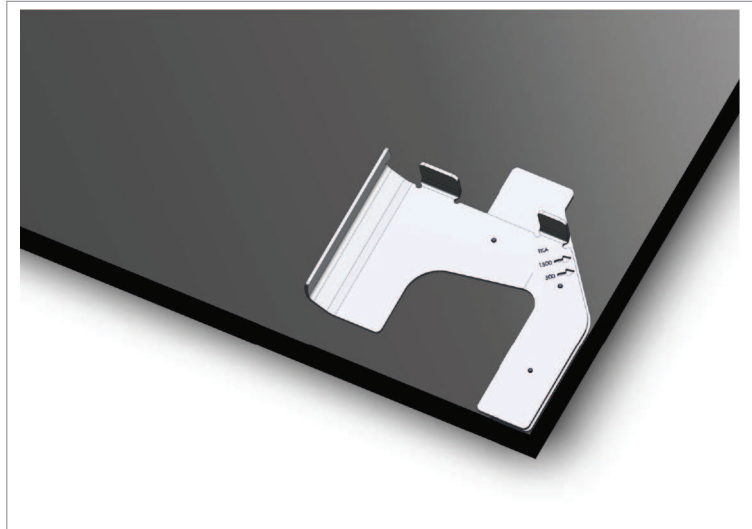


Fig. 96597

2. Rotate the run-in guide and place it on the workpiece edge. Fix the run-in guide in place with a screw clamp.
3. Now run the deburrer along the edge of the run-in guide. The deburrer begins running into the material at the arrow on the run-in guide.

4.4 Mounting the chip guard

The chip guard protects against flying chips.



Chip guard

Fig. 104353

- Place the chip guard down into the recesses of the rings and rotate it into position.

5. Maintenance

⚠ DANGER

Electrical voltage! Risk of fatal injury due to electric shock.

- Remove the plug from the plug socket before undertaking any maintenance work on the machine.

⚠ CAUTION

Overheated tool and multi-edge cutter mount!

Risk of burns

- Wear protective gloves during tool change.

⚠ CAUTION

Damage to property caused by blunt tools.

Machine overload.

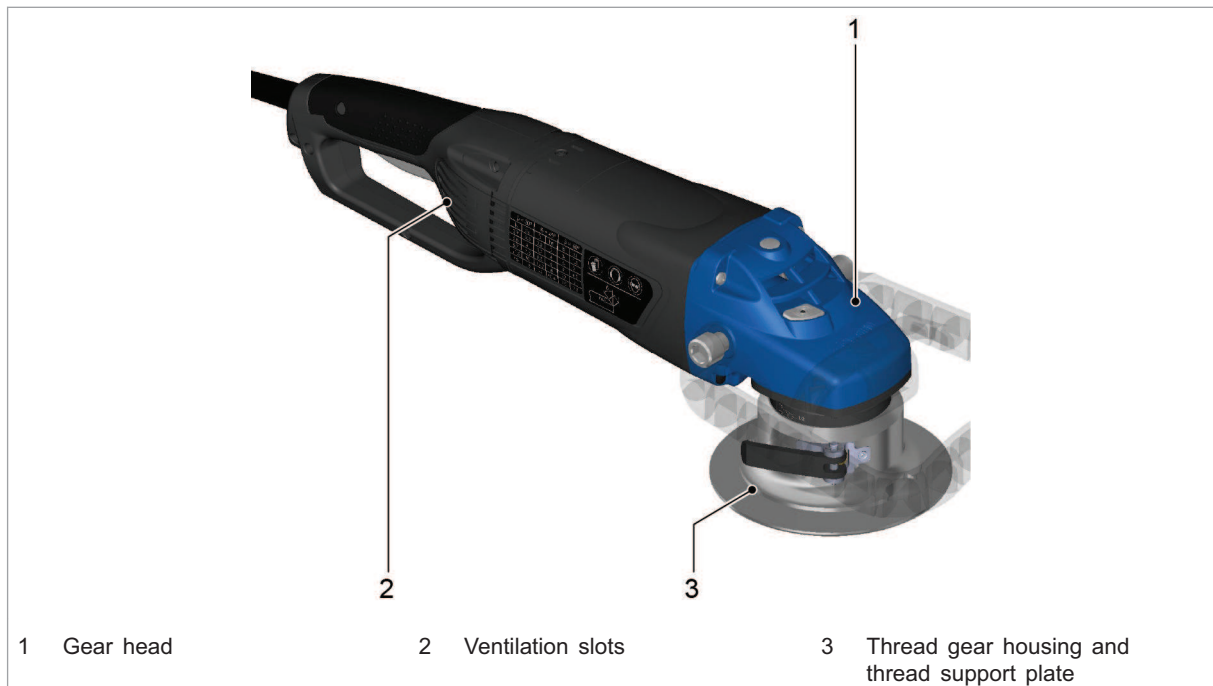
- Check tools regularly for wear. Sharp multi-edge cutters provide good cutting performance and prevent machine damage. Rotate or replace multi-edge cutters in good time.

⚠ WARNING

Risk of injury due to incorrect repair work

Machine does not work properly.

- Maintenance may be carried out by trained specialist technicians only.
- Only use original TRUMPF accessories.



Maintenance positions on TruTool TKA 1500

Fig. 97295

Maintenance point	Procedure and interval	Recommended lubricants	Lubricant order no.
Gearbox and gear head (2)	After 100 operating hours, arrange for a trained specialist to relubricate or to replace the lubricating grease.	Lubricating grease "G1"	0139440
Thread gear housing complete and thread support plate complete (3)	Clean and lubricate as needed.	Lubricating grease "G3"	0353969
Multi-edge cutter mount: all threads and mounting surfaces	During changeover	Lubricating grease "G3"	0353969
Multi-edge cutters	Rotate or replace as needed.	-	-
Impeller	Replace if required.	-	-
Ventilation slots (1)	Clean as needed.	-	-

Maintenance positions and intervals

Tab. 8

5.1 Replacing the tool

Removing the multi-edge cutter mount

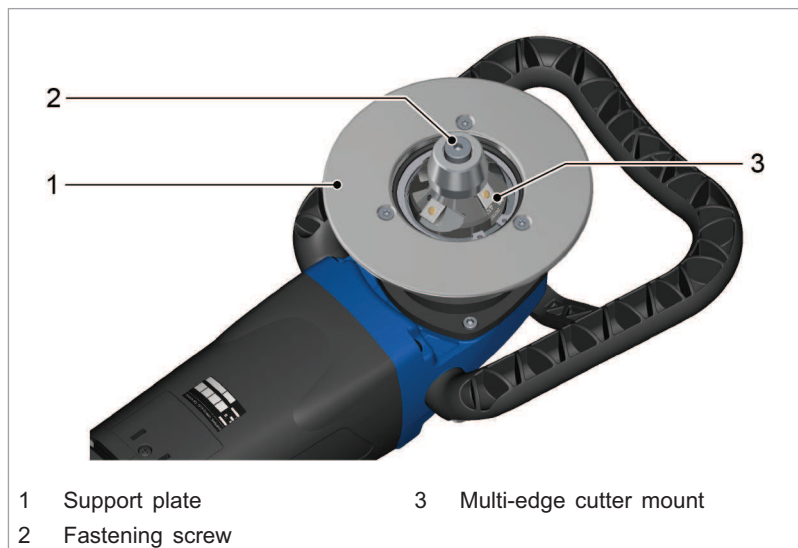


Fig. 97831

1. Press the spindle lock while turning the multi-edge cutter mount (3) counter-clockwise until the spindle lock engages.
2. Loosen the fastening screw (2) for the track roller.
3. Remove the multi-edge cutter mount fastening screw and pull out the multi-edge cutter mount.
4. Lubricate threads and support areas with "G3" lubricant before installation.

Recommended torque for fastening the multi-edge cutter mount: 15 Nm.

5.2 Replacing multi-edge cutters

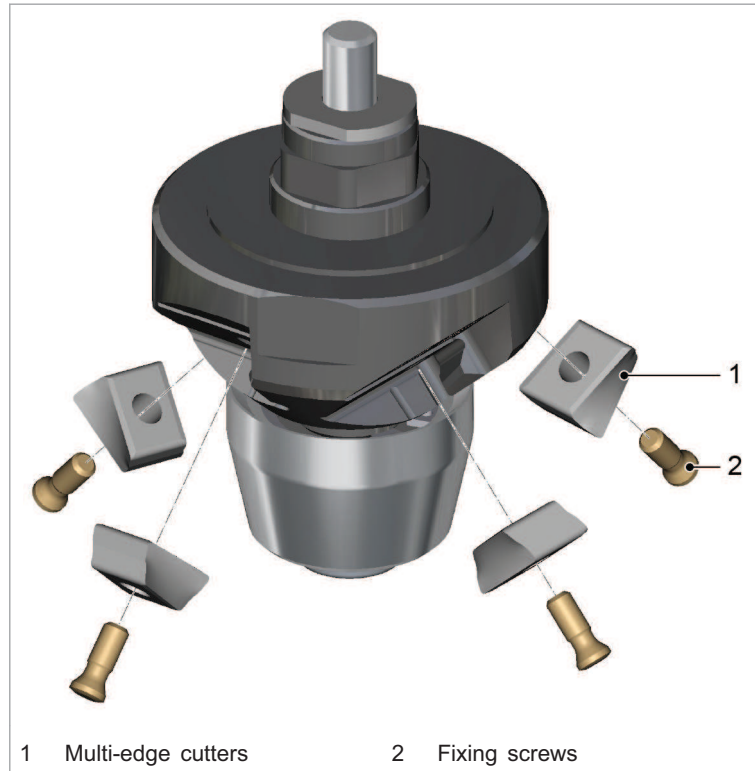


Fig. 33406

1. Undo mounting screw (2) and remove multi-edge cutters (1).
 2. Thoroughly clean the multi-edge cutter seat.
 3. Rotate multi-edge cutters or insert new multi-edge cutters.
 4. Lubricate threads and support areas with "G3" lubricant before installation.
 5. Fasten the multi-edge cutters once again with fixing screws.
- Recommended torque for fastening the multi-edge cutters:
4.8 Nm.

5.3 Changing the impeller

The impeller must be replaced when there is wear, because otherwise the chamfer surfaces will not receive even machining.

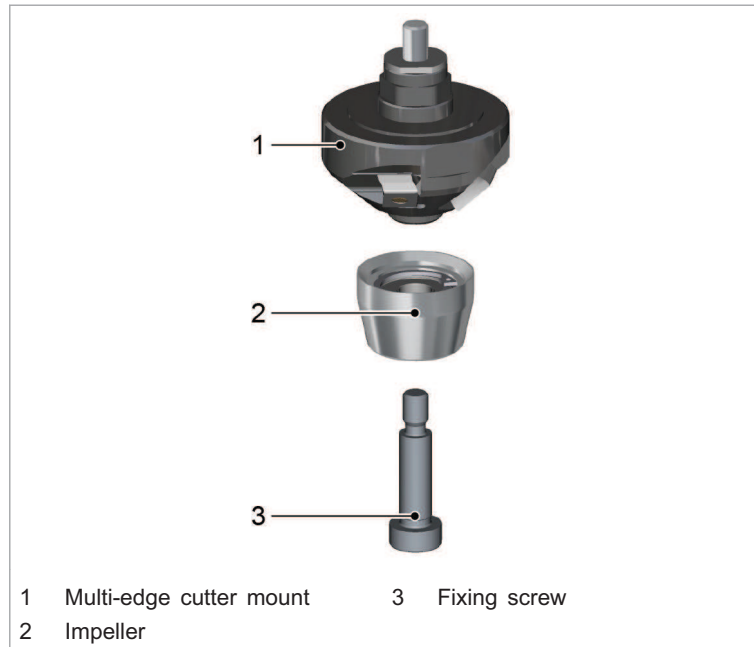


Fig. 97833

1. Loosen the fastening screw (3).
2. Pull away impeller (2) and replace it.
3. Fasten new impeller back on with hexagonal nut.

5.4 Changing cable connection

If the power cable is to be replaced, it should be procured from the manufacturer or an authorized dealer to avoid safety hazards.

Note

For TRUMPF service addresses, see www.trumpf-power-tools.com.

5.5 Replacing carbon brushes

The motor comes to a standstill whenever the carbon brushes are worn out.

Note

For TRUMPF service addresses, see www.trumpf-power-tools.com.

Note

Change the carbon brushes on both sides.

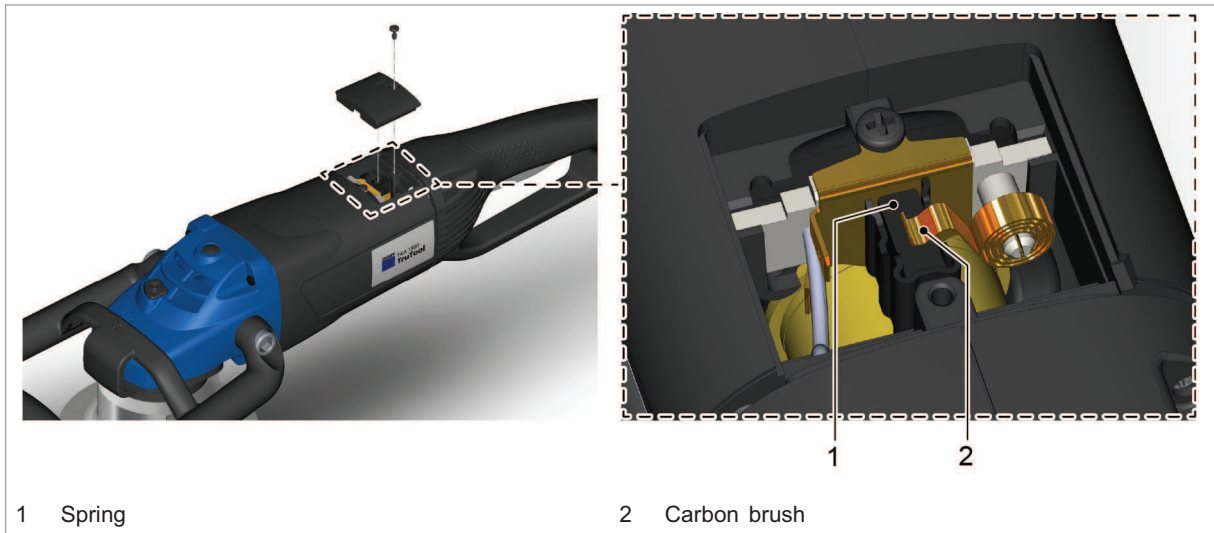


Fig. 104050

1. Loosen the screw and remove the cover.
2. Remove the spring (2) from the worn-out carbon brush (1).
3. Insert the new carbon brush and position the spring.
4. Put the cover in place and tighten the screw.

6. Accessories and consumables

6.1 Ordering consumables

Note

The following data must be specified in order to ensure that parts are delivered correctly and without delay.

1. Specify the order number.
2. Enter further order data:
 - Voltage data
 - Quantity
 - Machine type
3. Specify the complete shipping information:
 - Correct address.
 - Desired delivery type (e.g. air mail, courier, express mail, ordinary freight, parcel post).

Note

For TRUMPF service addresses, see www.trumpf-powertools.com.

4. Send the order to the TRUMPF representative office.

**7. Appendix: Declaration of conformity,
guarantee, replacement parts lists**