Operator's manual



TruTool TKA 500 (1A1)

english





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1. Safety

1.1 General safety information

WARNING	 Read all the safety information and instructions including those in the brochure also supplied. 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.
A 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. Check the plug, cable and machine for damage each time before using the machine. Keep the machine dry and do not operate it in damp rooms. Connect the fault current (FI) circuit breaker with a maximum breaking current of 30 mA when using the electric tool outside. Only use original TRUMPF accessories.
WARNING	 Damage to the machine due to improper handling. Wear safety glasses, hearing protection, protective gloves and working shoes when working. Connect the plug only when the machine is switched off. Pull the power plug after use. Do not carry the machine by the cable. Have maintenance carried out by specialists. 1.2 Specific safety information for lip trimmer

Risk of injury to hands.

- > Do not reach into the processing line with your hands.
- > Use both hands to hold the machine.



2. Description



TruTool TKA 500: Overview

Fig. 33402

2.1 Intended use

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 500 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

	Other countrie	es		USA	
	Values				
Voltage	230 V	230 V 120 V 100 V			
Frequency	50/60 Hz			50/60 Hz	
Working speed	3 - 4 m/min			10 - 13 ft/min	
Nominal power consumption	1400 W	1400 W	1200 W	1140 W	
Idle stroke rate	8390/min	7300/min	7300/min	7300/min	
Weight with guide handle	3.9 kg	3.9 kg	3.9 kg	8.6 lbs	
Min. material thickness (see Fig. 36835)	Chamfer height/Radius	Chamfer height/Radius	Chamfer height/Radius	Chamfer height/ Radius	
(000 1 1g. 00000)	+1.5 mm	+1.5 mm	+1.5 mm	+0.059 in	
Max. chamfer length (see Tab. 3)					
400 N/mm ²	5 mm/R4	5 mm/R4	5 mm/R4	0.197 in/R0.157 in	
600 N/mm ²	2.5 mm/R2	2.5 mm/R2	2.5 mm/R2	0.098 in/R0.079 in	
800 N/mm ²	1.5 mm	1.5 mm	1.5 mm	0.059 in	
Smallest radius for interior cutouts at:		1	1		
■ 30°, 40°	16 mm	16 mm	16 mm	0.63 in	
■ 45°, 60°	12 mm	12 mm	12 mm	0.47 in	
• R	11 mm	11 mm	11 mm	0.433 in	
Safety class	н / 🗆	н / 🗆	ш / 🗆	н / 🗆	

Tab. 1

2.3 Symbols

Note

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

Symbol	Name	Meaning
	Read operating 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.
\sim	Alternating current	Type or property of current
V	Volt	Voltage
А	Ampere	Current, current input
Hz	Hertz	Frequency (oscillations per second)
W	Watt	Power, power input



Symbol	Name	Meaning
mm	Millimeters	Dimensions e.g.: material thickness, chamfer length
in	Inches	Dimensions e.g.: material thickness, chamfer length
n _o	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

	Noise emission value may be exceeded.> Wear hearing protection.
	Vibration emission value may be exceeded.
WARNING	Select tools correctly and replace them promptly when they show wear.
	Maintenance may be carried out by trained specialist techni- cians only.
	Establish additional safety precautions for the protection of the operator against the effects of vibrations (e.g. keeping hands warm, organizing the work sequences, machining with normal feed power).
	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.
- Times during which the machine works independently and self-propelled do not have to be calculated.

Designation of measured value	Unit	Value according to EN 60745
Vibration emission value a_h (vector sum of three directions)	m/s ²	5.34
Uncertainty K for vibration emission value	m/s ²	1.5
A-class acoustic pressure level L_{PA} typically	dB (A)	85

Designation of measured value	Unit	Value according to EN 60745
A-class acoustic power level L_{WA} typically	dB (A)	98
Uncertainty K for noise emission value	dB	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



Fig. 36835

Material and tensile strength	Max. chamfer height mm/in							Max. chamfer length mm/in	
Angle	30°		45°		60°				
	230 V	110/120 V	230 V	110/120 V	230 V	110/120 V	230 V	110/120 V	
400 N/mm ²	4.3	3.5/00.138	3.5	2.8/00.110	2.5	2.0/00.079	5.0	4.0/00.157	
600 N/mm ²	2.2	1.9/00.079	1.8	1.6/00.061	1.3	1.1/00.043	2.5	2.2/00.087	
800 N/mm ²	1.3	1.1/00.044	1.1	0.9/00.036	0.8	0.7/00.028	1.5	1.3/00.051	
250 N/mm ²	6.5	6.5/00.256	6.4	6.0/00.237	5.0	4.3/00.169	10	8.5/00.335	

Setting the chamfer height



Fig. 33408

Note

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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 chamfer height is calculated as follows:

(value on the scale) + (value on the dial ring) = chamfer height.

Example: 1.5 + 0.7 = 2.2

The values on the dial ring indicate the chamfer height (1) in $\ensuremath{\mathsf{mm}}.$

Each complete rotation (=360° rotation) corresponds to a chamfer height of 1.5 mm.

3. Fix the clamping lever (1) back into place.

Chamfer height is adjusted.



Dial ring



Notes

- The machine is adjusted in zero position during assembly. Zero position means chamfer height zero. The dial ring can be readjusted.
- The integrated multi-edge cutter mount consists of the 45° 3-way multi-edge cutter mount, the 3-way multi-edge cutters and the impeller.
- 4. When deburring or chamfering, insert the 45° 3-way multiedge cutter mount completely.



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3.2 Set up radius tool

3-way multi-edge cutter mount

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 R and the impeller R D20.

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

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

3.3 Select multi-edge cutters

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

- useable for processing steel, aluminum and aluminum alloys as well as plastic material.
- Suitable for processing chamfers of 0, 15°...60°.

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

Tensile strength of	the workpiece	Multi-edge chamfer cut- ter	Multi-edge radius cut- ter
Steel up to	0 - 2.2 x 45°	St Universal	St R2, St R3
400 N/mm ²		St/Cr	St R4
	2.2 - 3.5 x 45°	Cr Universal	-
		St/Cr	
Steel up to 600 N/m	ım ²	Cr	Cr R2
Steel up to 800 N/m	ım²	Cr	-
Aluminum/Aluminum	alloy	Alu	St R2, St R3
up to 250 N/mm ²			St R4
Plastic material (PA6)		Alu	St R2, St R3
			St R4
			Tab. 5

Multi-edge cutters and setting value

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

Tab. 6

Notes

- The values of the chamfer height are recommended values which could differ from the specified values in individual cases.
- Before processing chrome-steel and aluminum and/or aluminum alloys, it is advisable to oil the cutting edges with cutting oil (see "Tab. 8", pg. 23) in order to improve the machinability of the edges and to increase the service life of the tools.

	4. Operation
	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.
	 Damage to property due to excessively high line voltage Motor damage Check the line voltage. The power supply voltage must correspond to the information on the nameplate of the machine. When using an extension cord that is longer than 5 m, the
	Cord must have a line diameter of at least 2.5 mm ² .
A CAUTION	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 Protective device on the motor

Notes

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- The appliance may switch off prematurely when affected by electromagnetic interference. The appliance will resume operation when the faults have been cleared.
- If the motor temperature is too high, the motor will switch off. The red indicator light (LED) on the motor lights up.
- 1. Allow the machine to run in idle until it has cooled down.
- 2. Operate the machine normally after it has cooled down.





4.2 Working with the TruTool TKA 500

- 1. Set the speed controller (1) to the highest level (= level 6).
- 2. Slide the on/off switch (3) on the motor (2) forwards and push the switch downwards until it locks into place.

The motor will start to run.

Working with the TruTool TKA 500

Note

2-hand control device

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 processing point.

3. 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).



2-hand control device

Fig. 61420

4. Edit material.

Switching off TruTool TKA 500

- 5. Remove the machine from the material.
- 6. Firstly push the on/off switch (see "Fig. 33404", pg. 14) on the motor downwards, then slide the switch backwards.

The motor is stopped.

5. Maintenance

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.		
Overheated tool and multi-edge cutter mount! Risk of burns > Wear protective gloves during tool change.		
Damage to property caused by blunt tools. Machine overload.		
Check tools regularly for wear. Sharp multi-edge cutters pro- vide good cutting performance and prevent machine dam- age. Rotate or replace multi-edge cutters in good time.		
Risk of injury due to incorrect repair work		
 Machine does not work properly.		
Maintenance may be carried out by trained specialist techni- cians only.		
Only use original TRUMPF accessories.		





Maintenance positions on TruTool TKA 500

Fig. 33405

Maintenance point	Procedure and interval	Recommended lubricants	Lubricant order no.
Gearbox and gear head (2)	After 100 oper- ating hours, arrange for a trained special- ist to relubricate or to replace the lubricating grease.	Lubricating grease "G1"	0139440
Thread gear housing com- plete and thread support plate complete (3)	Clean and lubri- cate as needed.	Lubricating grease "G3"	0353969
Multi-edge cut- ter mount: all threads and mounting surfa- ces	During change- over	Lubricating grease "G3"	0353969
Multi-edge cut- ters	Rotate or replace as nee- ded.	-	-
Impeller	Replace if required.	-	-
Ventilation slots (1)	Clean as nee- ded.	-	-

Maintenance positions and intervals

Tab. 7

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1





Removing the multi-edge cutter mount

Fig. 33534

- 1. Set the socket wrench (4) to milling cutter.
- 2. Plug the face wrench (3) into the corresponding bore holes on the socket wrench.
- 3. Press the spindle lock (see "Fig. 33534", pg. 18) while simultaneously rotating the face wrench (3) counter-clockwise.
- 4. Remove the integrated multi-edge cutter mount completely.
- 5. Lubricate threads and support areas with "G3" lubricant before installation.





5.2 Replacing multi-edge cutters

- 1. Undo mounting screw (1) and remove multi-edge cutters (2).
- 2. Rotate multi-edge cutters or insert new multi-edge cutters.
- 3. Fasten the multi-edge cutters once again with fixing screws.
- 4. Lubricate threads and support areas with "G3" lubricant before installation.



5.3 Changing the impeller

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



- 1. Undo hexagonal nut (3) with single-head wrench (see "Tab. 8", pg. 23).
- 2. Pull away impeller (2) and replace it.
- 3. Fasten new impeller back on with hexagonal nut.

5.4 Changing the power cable

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.

> Change the carbon brushes.

6. Accessories and consumables

	Scope of delivery	Consuma- bles	Accessories	Order no.
Pin-type face spanner	Х	-	-	0353531
Socket wrench	Х	-	-	1241272
Torx screwdriver TX 15x60	Х	-	-	0353793
Open-end wrench	Х	-	-	0068012
Safety glasses	Х	-	-	0944950
Case	Х	-	-	1209342
Operator's manual, TruTool TKA 500 (1A1)	Х	-	-	1224871
Safety information, other countries	Х	-	-	0125699
Safety information, USA	Х	-	-	1239438
Cutting oil for steel (0.5 I)	-	X	-	103387
Cutting oil for aluminum (1 I)	-	X	-	125874
Spacer plate	-	-	Х	1236998
Protective foil (5 pieces)	-	X	-	1234851
Waste metal box	-	-	Х	1236997
Impeller 45° - 60° for thin sheet metal D22x14.5	-	-	X	1237451
Support plate (small)	-	-	Х	1315258
_ubricating grease "G1"	-	Х	-	0139440
_ubricating grease "G3"	-	Х	-	0353969
Multi-edge cutter mount 15° triple with impeller	-	-	Х	1412639
Multi-edge cutter mount 20° triple with impeller	-	-	Х	1619933
Multi-edge cutter mount 25° triple with impeller	-	-	Х	1419177
mpeller 15° - 25° D29.6x11.6	-	Х	-	1414170
Multi-edge cutter mount 30° triple with impeller	-	-	Х	1237683
Multi-edge cutter mount 35° triple with impeller	-	-	Х	1256510
Multi-edge cutter mount 40° triple with impeller	-	-	Х	1620265
mpeller 30° - 40° D29.6x12.3	-	Х	-	1237495
Multi-edge cutter mount 45° triple with impeller	Х	-	-	1227954
Multi-edge cutter mount 50° triple with impeller	-	-	Х	1429605
Multi-edge cutter mount 55° triple with impeller	-	-	Х	1251684
Multi-edge cutter mount 60° triple with impeller	-	-	Х	1257861
mpeller 45° - 60° D22x12.5	Х	-	-	1214439
Multi-edge cutter mount R 3-way with impeller	-	-	Х	1663473
Impeller R D20	-	X	-	1227953
Multi-edge cutter mount R 2-way plasma with impeller (conic)	-	-	X	1484142
mpeller plasma D20 conic D15	-	X	-	1484526
Multi-edge cutter mount R2-PLUS with impeller (crowned)	-	-	X	1265985
mpeller R2-PLUS D29 crowned D27	-	Х	-	1266024
Multi-edge cutter mount R4-PLUS with impeller (crowned)	-	-	X	1264547
Impeller R4-PLUS D27 crowned D24	_	X	_	1264586

	Scope of delivery	Consuma- bles	Accessories	Order no.
RPLUS spacer plate and guard plate	-	-	Х	1265501
Tool face edge	-	-	X	1645165
Work station for small parts	-	-	Х	1404742
3 Multi-edge cutters ST (replacement part set)	-	X	-	1241780
3 Multi-edge cutters CR (replacement part set)	Х	-	-	1241851
3 Multi-edge cutters ALU (replacement part set)	-	X	-	1241852
3 Multi-edge cutters ST R4 (replacement part set)	-	Х	-	1693629
3 Multi-edge cutters ST R3 (replacement part set)	-	Х	-	1693742
3 Multi-edge cutters ST R2 (replacement part set)	-	Х	-	1693743
3 Multi-edge cutters CR R2 (replacement part set)	-	Х	-	1693744
3 Multi-edge cutters R3 coated (replacement part set)	-	Х	-	1693745
3 Multi-edge cutters R PLUS ST (R2 and R4)	-	Х	-	1266783
TKA selection card	Х	-	-	1673948
Fixing screw for multi-edge cutter	Х	-	-	0353387

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.



6.2 Accessories

Spacer plate for deburring



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Order number	1234851
Intended use	 Low-scratch guidance to the support plate using an affixed sheet of plastic.
Assembly	For soft work pieces.
Assembly	
	 Clean support plate Stick on foil.
Technical data	Self-sticking foil
	 Diameter Ø = 116 mm Thickness d = 0.3 mm
	Tab. 10

5 Protective foil for low-scratch machining (Set)



Chip box

Order number	1236997
Intended use	 Storage bin for chips for applications with straight edges. Rotatable 360°.
	 Tool not necessary for mounting.
Assembly	
	 Push support plate between the middle hook and the edge of the chip box and clamp. Turn chip box parallel to the direction of machining. Press middle flange (middle hook is lifted out of the plate gutter edge). Release chip box.
Technical data	 Height approx. 100 mm Width approx. 130 mm Depth approx. 80 mm

Tab. 11

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Impeller	for	thin	sheet	metal
----------	-----	------	-------	-------

Order number	1237451
Intended use	a "Rest" material thickness s Material thickness • For applications with small "rest" material thickness a.
	Good workpiece support.Support plate parallel to the workpiece.
Assembly	 Align cup spring. Tighten nut, until impeller is touching multi-edge cutter Undo nut approx 10°.
Technical data	It should now be possible to turn the impeller easily. Minimum "residual" material thickness a = 0.7 mm
	 Impeller dimensions − Ø = 22 mm − Height h = 14.5 mm Multi-edge cutter mount 45° - 60°



Support plate (small)

Order number	1315258
Intended use	 For restricted spaces. For all multi-edge cutter mounts. Note : Small diameter makes guidance of the TKA difficult.
Assembly	Countersunk screws M4x6 (1646214) 1. Remove support plate.
Technical data	 2. Install small support plate with new M4x6 screws. d = 76 mm
Technical data	- u - /o mm



Pipe and tube processing with all multi-edge cutter mounts	5
15° - 60° R	

Order number	(see "Tab. 8", pg. 23)	
Intended use	 Process on the face-side to chamfer the contrary angle. 	
Assembly	1 Screw 0353387 (3x)	
	2 Impeller	
	3 Nut M6	
	 Select and install multi-edge cutter and multi-edge cutter mount. Desired chamfer = 30° → Selection: multi-edge cutter mount 60°. Install multi-edge cutter mount Set chamfer size as per the data sheet. Lock multi-edge cutter mount into place with bracket. Bevel pipe or tube on the face-side. 	
Technical data	and the second s	
	See data sheet	b Chamfer length
	a Chamfer height	c Pipe or tube chamfer height
	b Chamfer length	d Support plate position
	d Support plate position	s Material thickness
	s Material thickness	



Multi-edge	cutter	mount	plasma
------------	--------	-------	--------

Order number	1484142	
Intended use	 Round off from plasma cut edges. Can also be used with spacer plate (126998). 	
Assembly	 Select and install multi-edge cutter. Most suitable: R3 coated (1320639). Fastened with screws 0353387. Install multi-edge cutter mount. Setting the chamfer size. Lock into place with bracket. Usage: chamfer, radius, pipe and tube processing. 	0353387 (2x) 1484526 (Ø19.75) 0022330
Technical data	 R radius R2, R3 c Max. angle 12° Impeller diameter approx. d = 15 / d = 20 mm Note : The impeller can not be used with other multi-edge cutter mounts because of its small inside diameter. 	P C C C C C C

Tab. 15

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Multi-edge cutter mount R2 and R4 PLUS for corner weld processing









Tool face edge





Technical data	-	Back stop dimensions: 120 x 80 x 14 mm
	•	Adjustment gauge for 0.2, 0.4, 0.5 und 1 mm

Tab. 17

Abrasion	TKA 500-0 / TKA 500 (1A1)			
	230 V		110 V / 120 V	
Material Material	a Cutting depth milling deepth max. mm	b Material thick- ness sheet thickness max. mm	a Cutting depth milling deepth max. mm	b Material thick- ness sheet thickness max. mm
Steel 400 N/mm ²	0.5	8.0	0.5	8.0
Steel 600 N/mm ²	0.4	6.0	0.4	6.0
Steel 800 N/mm ²	0.2	4.0	0.2	4.0
Aluminum 250 N/mm ²	1.0	8.0	1.0	8.0



Workstation for small parts

Order number	1404742	
Intended use	 Bevel or round off small parts, on fixed TKA 500 Defined chip removal. Note : Use only with TKA 500 (restart protection). 	
Assembly	1 Clamping lever for internal thread screw	1
	2 TKA 500	
	3 Workstation	
	4 Screw	2
	5. Screw clamps or pedestal	
	 Pull out the mains plug. Change clamping lever. Push TKA 500 into the workstation. Tighten screw. Bevel/round off as per the operator's manual. 	
Technical	Minimum material thickness = 1	mm
data	Workpiece dimensions: 50 x 50	mm (min.) - 300 x 300 mm (max.)



Strength	Maximum chamfer length without workstation in mm	Maximum chamfer length with workstation in mm
Steel 400 N/mm ²	5.0	3.0
Steel 600 N/mm ²	2.5	2.0
Steel 800 N/mm ²	1.5	1.0
Aluminum 250 N/mm ²	10	5.0



7. Appendix: Guarantee, declaration of conformity, replacement parts lists

