

Operator's manual



TruTool S 160 (1A5)

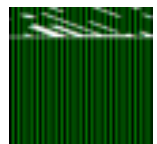




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1. Safety

1.1 General safety information

WARNING

Read all safety warnings and all instructions.

- Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury
- Save all warnings and instructions for future reference.

DANGER

Risk of fatal injury due to electric shock!

- Check recharger and rechargeable battery for damage before each use.
- Do not insert damaged battery casing into the recharger.
- Do not touch electric contacts of the recharger and battery.
- Store recharger and battery in dry places and do not operate them in damp rooms.
- Clean recharger regularly.
- Maintenance may be carried out by trained specialist technicians only.
- Use original accessories of TRUMPF only.

WARNING

Risk of injury from rechargeable battery!

- Remove the rechargeable battery from the machine before all maintenance work.
- Only operate the machine with the listed rechargeable batteries, see table at end of document with consumables and accessories.
- Only charge the machine using the listed rechargers, see table at end of document with consumables and accessories.
- Do not open rechargeable batteries or rechargers.
- Do not throw rechargeable batteries into fire or domestic waste.
- Protect rechargeable batteries against heat, for example, constant exposure to sunlight or fire.

CAUTION

Respiratory irritation due to vapors leaking from damaged rechargeable batteries!

- Make sure there is a supply of fresh air.
- If symptoms develop, consult a doctor.



1.2 Specific safety information for seam locker

 WARNING

Risk of injury to hands.

- Do not reach into the processing line with your hands.
-

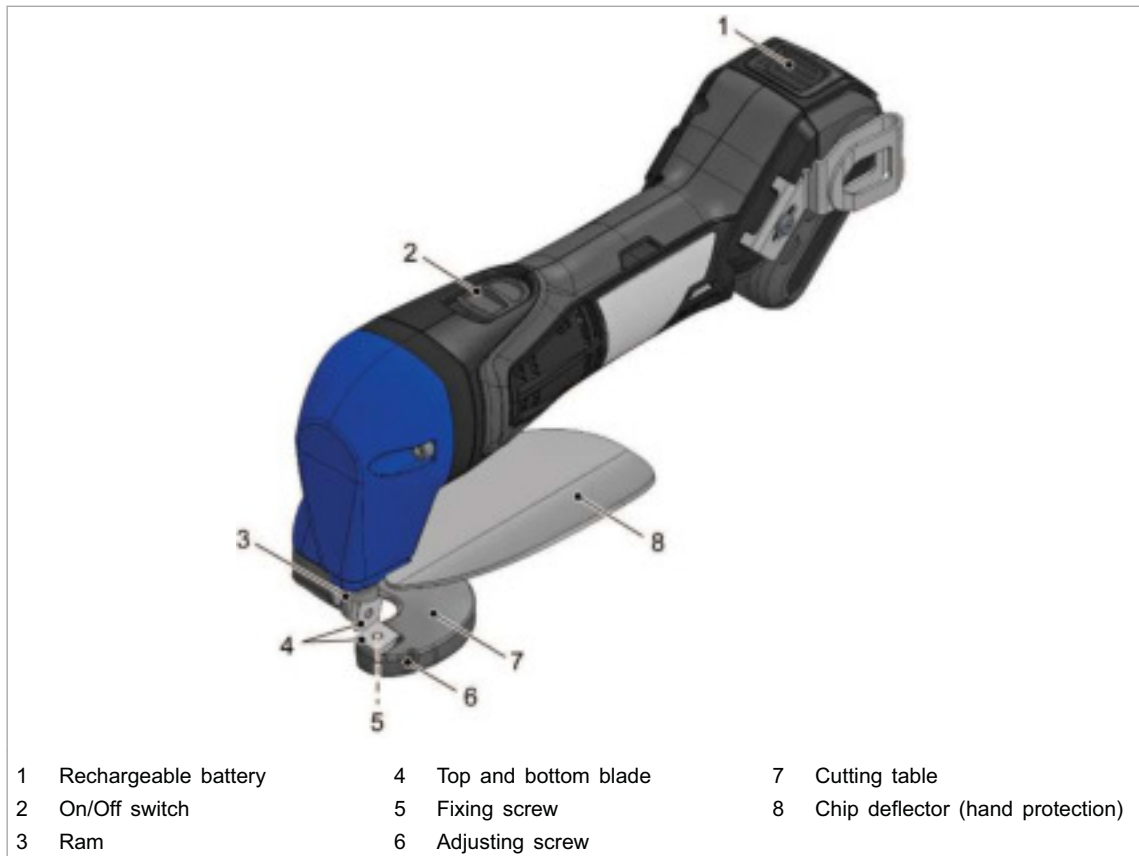
 WARNING

Risk of injury from chips.

- Use a chip deflector that is neither damaged nor bent.
-



2. Description



TruTool S 160 shears (1A5)

Fig. 73109

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 S 160 shears (1A5) is an electrically powered hand-held device designed for the following applications:

- Slitting of plate-shaped workpieces made of steel, aluminum, plastic, etc.
- Slitting of straight and curved exterior and interior cutouts.
- Slitting from scribed lines.



2.2 Technical data

	Other countries	USA
	Values	Values
Voltage	10.8 V	
Permissible material thickness: steel up to 400 N/mm ²	1.6 mm	0.063 in
Permissible material thickness: steel up to 600 N/mm ²	1.2 mm	0.048 in
Permissible material thickness: steel up to 800 N/mm ²	1.0 mm	0.039 in
Permissible material thickness: aluminum up to 250 N/mm ²	2.0 mm	0.079 in
Working speed	5 - 9 m/min	16- 24 ft/min
Idle stroke rate	4300/min	
Weight with rechargeable battery (2.0 Ah)	1.6 kg	3.6 lbs
Starting hold diameter	50 mm	1.97 in
Smallest radius for curved cut- outs	16 mm	0.59 in
Starting hole diameter	27 mm	1.06 in

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.
	Disposal	Batteries may not be disposed of in domestic waste! They contain harmful substances which are damaging to health and the environment. All dealers of TRUMPF machines in the EU and the USA accept empty batteries without charge.
Ni Cd		The characters under the symbols stand for: Battery contains nickel Battery contains cadmium



Icon	Name	Description
	Information symbol	Do not throw batteries into fire.
	Information symbol	Do not charge a damaged battery, but replace it immediately.
	Direct current	Type or property of current
V	Volt	Voltage
Ah	Ampere hours	Electrical load
Wh	Watt hours	Electrical work
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

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	5.5
Uncertainty K for vibration emission value	m/s^2	1.5
A-class acoustic pressure level L_{PA} typically	dB (A)	75.1
A-class acoustic power level L_{WA} typically	dB (A)	86.1
Uncertainty K for noise emission value	dB	3

Tab. 3



3. Setting work

3.1 Selecting blades

NOTICE

Damage to property as a result of incorrect blade selection!

This strongly impairs the cut quality and the individual tools become overstressed.

- Use suitable tools only.

The cutter is characterized by the following points:

- Moving cutter blade (upper blade) and cutting table blade (lower blade) are the same size and can be used (top or bottom) as much as desired.
- All cutters have four blades.
- They are "4-fold multi-edge cutters" which cannot be grinded again.

Notes

- Depending on the sheet thickness or the tensile strength of the workpiece, two different types of blade can be selected for machining.
- Standard configuration blades for sheets with a tensile strength $\leq 400 \text{ N/mm}^2$ do not have any special identification. Chromium steel blades are identified with "Cr".
- For this reason, it is recommended that the tools only be used in accordance with the details mentioned in the table.

Cutter type	Sheet thickness ranges mm	Material type and tensile strength
Standard	0.3 - 2.0	Aluminum 250 N/mm ²
Standard	0.3 - 1.6	Mild steel 400 N/mm ²
Cr	0.3 - 1.2	Stainless steel 600 N/mm ²
Cr	0.3 - 1.0	Stainless steel 800 N/mm ²

Tab. 4



3.2 Setting cutting clearance

The blade clearance is set to a sheet thickness of 1 mm on delivery of the machine. To attain optimum cutting results, set the following values:

Examples:

Sheet thickness mm	Blade clearance = Cutting clearance a mm
0.3 - 0.6	0.1
0.8 - 1.2	0.2
1.3 - 1.6	0.3

Values cutting clearance

Tab. 5

1. Tap the on/off switch several times until the moving cutter blade has reached the lower dead point.
2. Loosen lower blade.
3. Using the adjusting screw, set the blade to the required clearance.
4. Retighten blade.
5. Gently tighten the adjusting screw.
6. Check clearance using setting gauge.

3.3 Setting the speed

- Set setting wheel for the speed controller to the corresponding value, depending on the use.



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.
-

4.1 Switching TruTool S 160 (1A5) on and off

Switching on the machine
Switching off the machine

1. Slide the On/Off switch forwards.
2. Slide the On/Off switch to the rear.

4.2 Working with TruTool S 160 (1A5)

Cutting radii

- Do not cant machine.
- Work only with low feed.

Cutting at the edge

- Cutting in upside-down position.
- The cutting table faces upwards.

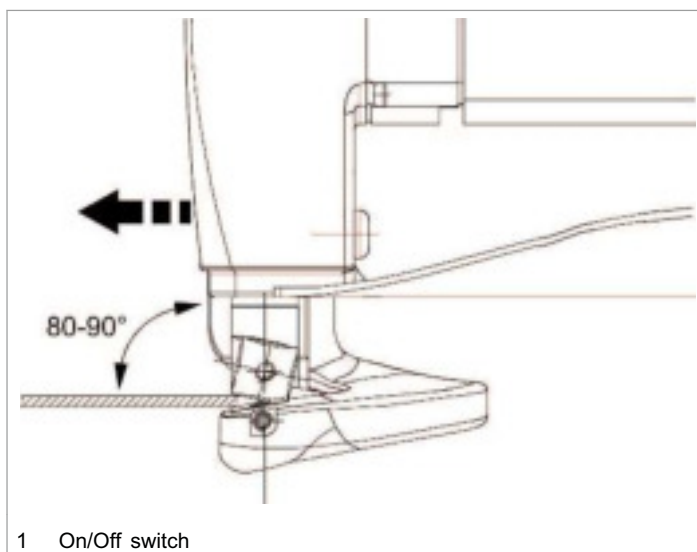


Fig. 24014

1. Do not move the machine towards the workpiece until full speed has been reached.
2. Edit material.
 - Bring device to the sheet surface at an angle of 80 to 90°.



5. Maintenance

WARNING

Risk of injury from rechargeable battery!

- Remove the rechargeable battery before changing the tool or undertaking any maintenance work on the machine.

WARNING

Risk of injury due to incorrect repair work

Machine does not work properly.

- Maintenance may be carried out by trained specialist technicians only.

CAUTION

Damage to property caused by blunt tools!

Machine overload.

- Check the cutting edge of the blade hourly for wear. Sharp blades have a good cutting performance and prevent damage to the machine.
- Change blades in a timely manner.

Maintenance point	Procedure and interval	Recommended lubricants
Ram guide	Every 300 operating hours	Lubricating grease "G1"
Gearbox and gear head	After 300 operating hours, arrange for a trained specialist to relubricate or to replace the lubricating grease.	Lubricating grease "G5"
Cutting table blade	Turn if necessary	-
Cutting table blade	Change as needed	-
Moving cutter blade	Turn if necessary	-
Moving cutter blade	Change as needed	-
Ventilation slots	Clean as needed	-
Tools	Check for wear hourly	-
rechargeable battery	Change as needed	-

Maintenance positions and maintenance intervals

Tab. 6

5.1 Changing blade

Top and bottom blades are the same. They both have four cutting edges and are interchangeable. If the cutting performance is not satisfactory, turn each blade by 90° or replace them.



Note

Make sure that the adjusting screw (18) is directly at the bottom blade.

1. Release screw on the respective blade.

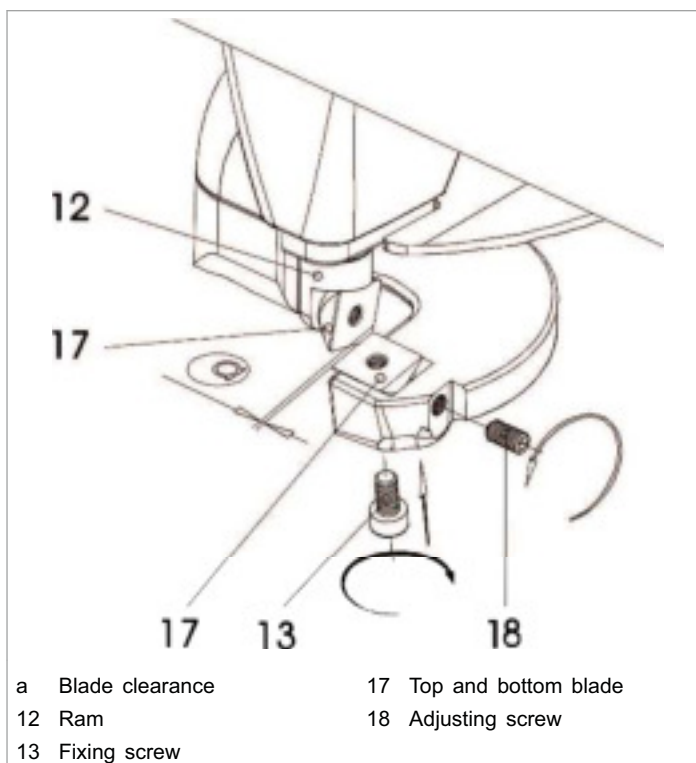


Fig. 24015

2. Turn blade by 90°.
3. Tighten the screws.

5.2 Checking loading status

Color of the lamp	Loading status
Green	Full
Orange	Half-full
Red	Load soon.

Tab. 7

- Switch on the machine.

The lamp which shows the loading status illuminates for 5 seconds.



5.3 Changing rechargeable battery

Condition

- Machine is switched off.

Taking out exchangeable battery



Changing rechargeable battery

Fig. 73106

Inserting exchangeable battery

1. Trigger locking mechanism and pull out exchangeable battery in arrow direction.
2. Insert rechargeable battery into the mounting device from above until the battery snaps into place.



6. Accessories and consumables

Note

Moving cutter blade (upper blade) and cutting table blade (lower blade) are the same size and can be used (top or bottom) as much as desired. All cutters have four blades.

They are "4-fold multi-edge cutters" which cannot be grinded again.

Name	Scope of delivery	Consumables	Accessories	Order number
2 standard cutters for machining mild steel	x	-	-	0126471
10 standard cutters for machining mild steel	-	x	-	1264320
2 chromium steel cutters for machining high-tensile sheets	x	-	-	0919760
Allen key DIN 911-2	x	-	-	0002946
Allen key DIN 911-3	-	-	X	0094840
Lubricating grease "G1" tube (25 g)	-	x	-	0344969
Lubricating grease "G5", can (900 g)	-	x	-	1954202
TRUMPF Box S1	x	-	X	1763681
TRUMPF Box S105 lining	x	-	X	1936845
Operator's manual	x	-	-	1892513
Safety notes	x	-	-	0125699
TRUMPF 10.8 V 2.0 Ah	x ¹	-	-	1886525
TRUMPF 10.8 V 4.0 Ah	-	-	X	1886526
Recharger 100 - 240 V, 50/60 Hz (D)	X ¹	-	-	1886527
Recharger 100 - 240 V, 50/60 Hz (USA)	X ¹	-	-	1886528
Recharger 100 - 240 V, 50/60 Hz (CH)	X ¹	-	-	1886529
Recharger 100 - 240 V, 50/60 Hz (GB)	X ¹	-	-	1886530

Tab. 8

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:

¹ Depending on the type of machine ordered



-
- 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



Operator's manual



Recharger

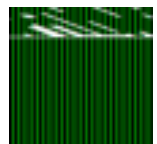




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1. Safety

1.1 General safety information

WARNING

Read all safety warnings and all instructions.

- Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury
- Save all warnings and instructions for future reference.

DANGER

Risk of fatal injury due to electric shock!

- Check recharger and rechargeable battery for damage before each use.
- Do not insert damaged battery casing into the recharger.
- Do not touch electric contacts of the recharger and battery.
- Store recharger and battery in dry places and do not operate them in damp rooms.
- Clean recharger regularly.
- Maintenance may be carried out by trained specialist technicians only.
- Use original accessories of TRUMPF only.

WARNING

Risk of injury from rechargeable battery!

- Remove the rechargeable battery from the machine before all maintenance work.
- Only operate the machine with the listed rechargeable batteries, see table at end of document with consumables and accessories.
- Only charge the machine using the listed rechargers, see table at end of document with consumables and accessories.
- Do not open rechargeable batteries or rechargers.
- Do not throw rechargeable batteries into fire or domestic waste.
- Protect rechargeable batteries against heat, for example, constant exposure to sunlight or fire.



⚠ CAUTION

Improper handling of the charging device!

- The recharger may be used by persons (including children) with limited physical, sensory or mental capabilities if they have been instructed how by authorized persons beforehand.
 - Do not charge any non-rechargeable batteries.
 - The recharger is not a toy. It may be used by children of eight years of age or older. Before use, explain to the child how to use the recharger.
 - Children may not handle the recharger unsupervised.
-

⚠ CAUTION

Respiratory irritation due to vapors leaking from damaged rechargeable batteries!

- Make sure there is a supply of fresh air.
 - If symptoms develop, consult a doctor.
-

1.2 Specific information for recharger

⚠ DANGER

Risk of fatal injury due to electric shock!

- Check the cables, plugs and casing of the recharger for damage before every use.
 - Do not use damaged rechargers.
-

⚠ CAUTION

Fire hazard as a result of heat generating during the recharging process!

- Do not place recharger on easily flammable material (e.g. paper, textiles, etc.).
 - Do not use charger in flammable environments.
-



2. Description

2.1 Intended use

The following batteries can be charged with the recharger:

- TRUMPF rechargeable battery Li-ion 2.0 Ah (order number 1886525).
- TRUMPF rechargeable battery Li-ion 4.0 Ah (order number 1886526).

The durability of a rechargeable battery depends on how it is used. The battery has been developed to ensure a long and trouble-free service life. It is possible however, that the battery will be subject to wear.

To ensure the maximum service life, the battery should be used under the following recommended conditions:

- Store and recharge the battery in a cool place. Temperatures above and below normal room temperature shorten the service life of the battery.
- Never store the battery when it has no charge. Immediately recharge empty batteries.
- The capacity of a rechargeable battery gradually decreases. The higher the temperature the faster this occurs. If the battery is not used for a longer period of time, charge it every month or two. This procedure will lengthen the service life of the battery.

2.2 Technical data

Recharger	Values
Voltage	100 – 240 V
Frequency	50/60 Hz
Output voltage	12 VDC

Tab. 1



3. Operation

3.1 Recharging the battery

Condition

- The plug is attached to the recharger and plugged into a socket.

After approx. 5 seconds all three recharger display lights on for 2 seconds and then off again - the necessary voltage is now available to the recharger.

1. Put a rechargeable battery properly into place in the recharger.

The charging process begins. The recharger display lights show the charging status.

The charging procedure takes 30-60 minutes depending on the battery.

Note

The charging times may also be longer, depending on the ambient temperature and the condition of the battery.

2. After charging the rechargeable battery, remove it from the recharger.



4. Help in the case of problems

Problem	Reason	Correction
Overheating	If the recharger detects that a rechargeable battery is overheating, all three recharger display lights will blink at the same time.	Remove the rechargeable battery and let it cool down for 15-30 minutes.
Rechargeable battery or recharger malfunctioning	Two recharger display light blink at the same time.	Remove the rechargeable battery and let it cool down for 15-30 minutes. Put the rechargeable battery back in the recharger. If two recharger display lights continue to blink the battery or the recharger has to be serviced.

Tab. 2



5. Accessories and consumables

Name	Scope of delivery	Consumables	Accessories	Order number
TRUMPF 10.8 V 2.0 Ah	-	-	X	1886525
TRUMPF 10.8 V 4.0 Ah	-	-	X	1886526
Recharger 100 - 240 V, 50/60 Hz (D)	x ¹	-	-	1886527
Recharger 100 - 240 V, 50/60 Hz (USA)	x ¹	-	-	1886528
Recharger 100 - 240 V, 50/60 Hz (CH)	x ¹	-	-	1886529
Recharger 100 - 240 V, 50/60 Hz (GB)	x ¹	-	-	1886530

Tab. 3

5.1 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.

¹ Depending on the type of machine ordered

